OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

JULY & AUG. VOL. 792-793

1963

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 2, 1963 Volume 792 Number 1

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1963

Examiner affirmed	351
Examiner affirmed in part	52
Examiner reversed	103
Total	506

Foreign Patents Received in the Scientific Library as of May 31, 1963

Source	Date received	Highest number
Australia:		
(*Abstracts*)	May 14, 1963	2,793/61
(*Patents*)	May 20, 1963	241,460
Austria	Mar. 11, 1963	225,650
Belgium	Oct. 16, 1962	573,100
Canada	May 24, 1963	663,711
Czechoslovakia	Feb. 27, 1963	103,500
Denmark	Apr. 25, 1963	94,830
East Germany	May 31, 1963	25,330
Egypt	Jan. 8, 1963	3,417
Finland	May 27, 1963	32,900
France:		
(*Patents*)	May 27, 1963	1,315,950
(*Additions*)	May 22, 1963	79,750
(*Medicaments*)	May 1, 1963	1,400 M
(*Additions*)	May 13, 1963	15 CAM
Germany:		
(*Auslegeschriften*)	May 17, 1963	1,145,110
(*Patents*)	May 17, 1963	1,136,271
Great Britain	May 22, 1963	925,890
India	Apr. 19, 1963	79,433
Ireland	Feb. 12, 1963	23,400
Italy	Apr. 25, 1963	616,900
Japan	May 24, 1963	5,000/63
Netherlands	May 15, 1963	104,625
Norway	May 24, 1963	101,753
Pakistan	Apr. 25, 1963	111,199
Philippine Republic	Apr. 13, 1962	458
Poland	May 22, 1963	46,772
Rumania	May 31, 1963	42,141
Sweden	May 27, 1963	183,072
Switzerland	May 17, 1963	368,109
U.S.S.R.	May 17, 1963	152,628

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Directory for Reorganized Patent Examining Operations

The movement of all Examining Groups incident to the reorganization of the Patent Examining Corps is now complete.

For your convenience, a yellow tear sheet, which provides a complete listing of room and telephone numbers of each Director and Supervisory Examiner as of May 15, 1963, is included as the last page of this issue of the OFFICIAL GAZETTE.

United States District Court for the District of Columbia

Pre-Trial Briefs—Patent Cases

So long as I am assigned to hearing patent cases in the District Court, all pre-trial briefs in such cases shall be filed with the Assignment Commissioner 48 hours prior to the trial date, *and shall not be accepted for filing by the Clerk's Office.*

May 21, 1963. JOSEPH R. JACKSON,
Judge.

Transcripts—Patent Cases

Stipulations reflecting modifications in transcripts of patent cases shall be in all cases approved by the Court prior to their being filed with the Clerk of the District Court.

June 3, 1963. JOSEPH R. JACKSON,
Judge.

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

Patents Available for Licensing or Sale

2,602,735. Making Pig Iron. John J. Howard, 86 Knollwood Road, Short Hills, N.J.

3,089,277. Revolvable Toy. Milaus Reese, Jr., 2117 18th St., Birmingham 8, Ala.

General Electric Company is prepared to grant non-exclusive licenses under the following 12 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 4, N.Y.

3,024,156. Composition and Process for the Production of Laminates.

New Applications Received During May 1963

Patents	7,692
Designs	475
Plant Patents	7
Reissues	23
Total	8,197

Issue

Patents	950	No. 3,095,572 to No. 3,096,521, incl.
Designs	76	No. 195,541 to No. 195,616, incl.
Reissues	3	No. 25,408 to No. 25,410, incl.
Total	1029	

Applications for license under the following 3 patents may be addressed to: General Electric Company, Housewares and Commercial Equipment Division, 1285 Boston Ave., Bridgeport 2, Conn.

3,033,100. Expansible Broiling Rack.

3,051,813. Temperature Control Systems.

3,081,690. Window Filter Fan.

Applications for license under the following 7 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

3,062,032. Treating Agent Dispenser for Washing Machines.

3,075,296. Vapor Condensing Clothes Dryer With Pulsed Flow Condenser.

3,077,244. Damping Assembly.

3,082,512. Compressor Valve Assembly.

3,082,678. Air Control Device.

3,082,936. Lubricating Arrangement for Compressors.

3,083,248. Thermoelectric Module.

Applications for license under the following patent may be addressed to: Patent Attorney, Specialty Control Department, General Electric Company, Waynesboro, Va.

3,089,555. Weighing Control Systems.

GUIDELINES OF PATENTABILITY

On June 17, 1963, the memorandum reproduced below was distributed to the Examiners in the Patent Office. It is presented here for the information of all applicants and their representatives.

Memorandum #1 (GP1)

The following principles have been formulated after careful consideration of the applicable court decisions and after consultation with the Board of Appeals of the Patent Office, and will be supplemented or revised from time to time as circumstances may require. The principles stated here and in future "Guidelines of Patentability" memoranda should be uniformly followed until further notice.

GP1(*a*) : *Uniform Application of the Statutory Requirements for Patentability*

The standards of patentability applied in the examination of claims must be the same throughout the Office. In every art, whether it be considered "complex," "newly developed," "crowded," or "competitive," all of the requirements for patentability (e.g., novelty, usefulness and unobviousness, as provided in 35 U.S.C. 101, 102 and 103) must be met before a claim is allowed. Hence, the mere fact that a claim recites in detail all of the features of applicant's alleged invention (i.e., a "redbutton" or "picture" claim) is never, in itself, justification for the allowance of such a claim.

GP1(*b*) : ***Multiple Rejections***

As a general rule, an Examiner should reject each claim of an application on all distinct, valid grounds that are available to him. Stated in another manner, each claim should be rejected on any ground available which, if not applied, could subsequently be utilized by a court to hold the same claim in a patent invalid.

Thus rejections on such grounds as insufficient disclosure, indefiniteness, and res judicata should be applied where appropriate even though there may be a seemingly sufficient rejection on the basis of prior art. However, prior art rejections should not be needlessly multiplied but should ordinarily be confined to the best available art. Rejections which are merely cumulative or which would clearly fall if the primary rejection is not sustained should be avoided. Exceptions may properly be made where the most pertinent reference seems likely to be antedated or where a claim is met only in terms by a reference which does not disclose the inventive concept involved. Such rejections should be backed up by the best other art available.

A number of situations have been found to exist where examination of an application is best accomplished by limiting action on the claims thereof to the particular issue involved. These situations are as follows:

(1) Where an application is too informal for a complete action on the merits—see section 702.01, M.P.E.P.;
(2) Where there is an undue multiplicity of claims—see section 706.03(1), M.P.E.P.;
(3) Where there is a misjoinder of invention—see section 806.02, M.P.E.P.;
(4) Where the disclosure is directed to perpetual motion—note *Ex parte Payne*, 1904 C.D. 42, 108 O.G. 1049.

However, in such cases, the best prior art readily available should be cited without specifically applying it to the claims.

On the other hand, a rejection on the grounds of inoperativeness (not involving perpetual motion), *res judicata*, no *prima facie* showing for reissue, or new matter should be accompanied by all other available grounds of rejection.

GP1(*c*) : *Old Combination*

A rejection on the ground of old combination should be made whenever proper.

Whether subcombination claims have been presented or allowed in the same application, or whether other grounds for rejection of the combination claims exist, are not determinative of the propriety of this rejection.

The rejection is proper when a single reference discloses broadly a combination of elements functionally cooperating in substantially the same manner to produce substantially the same results as that of the claimed combination under consideration. *Ex parte Silverstein*, 125 U.S.P.Q. 238.

The fact that an applicant has improved one element of a combination which may be per se patentable does not entitle him to a claim to the improved element in combination with old elements where the elements perform no new function in the claimed combination. *In re Hall*, 41 CCPA 759. The test to be applied to claims of this character is whether or not the action of any of the elements embraced by the claim is modified in any material manner by the fact that another element has the specific structure recited. *In re Allatt*, 28 CCPA 1367.

Accordingly, the rejection should make it clear exactly what the combination is and why it is thought that any improved element does not modify the action of the combination.

A suggested form for use in making an old combination rejection is as follows:

> Claim 1 is rejected as being drawn to the old combination of a bell, a battery and a switch connected in series by wire conductors. This combination is shown to be old by the patent to Jones which discloses broadly the same elements functionally interrelated in the same manner to produce substantially the same results. The combination of claim 1 differs from that shown in Jones in setting forth a specific construction of the battery itself. Since the latter does not modify the action of the other elements recited in the claim in any material manner, no new combination is seen to exist. *In re Hall*, 41 CCPA 759.

GP1(*d*) : *Inherent Function of the Apparatus*

Process or method claims which merely define the function of applicant's machine or apparatus are not allowable.

A rejection on this ground is proper where the disclosed machine will inherently carry out the steps set forth in the process claims regardless of whether an apparatus claim is allowed, unless it appears that the process claimed can be carried out either by some machine which is not the functional equivalent, i.e., having materially different functional characteristics from the disclosed machine, or by hand. *In re Gartner et al.*, 42 CCPA 1022. The performance of a process by hand is not necessarily limited to the use of hands alone, but includes the use of prior art apparatus actuated by hand. *In re Winder*, 44 CCPA 795.

GP1(*e*) : *Obvious Method*

It is well settled that a process which amounts to nothing more than an obvious manner of producing an article or product is not patentable.

While a rejection on this ground does not require the citation of art or the allowance of any claim, it must be apparent to a person ordinarily skilled in the art, without reference to any method disclosure contained in the application, how the article was made. In other words, the rejection is proper if such a person would be able, upon the basis of his own knowledge, to produce the article merely by having it shown to him or by being told what ingredients it contained. Note *In re Larsen*, 49 CCPA 711.

June 17, 1963.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	10-6-61	9-14-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	2-2-62	2-9-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	12-7-61	11-17-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6-27-61	7-20-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-1-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	12-4-61
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilisers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	11-24-61	10-11-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-11-62	1-25-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-28-61	10-16-61
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	12-1-61	1-3-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-6-61	10-9-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	11-16-61	11-7-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	11-1-61	11-3-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	11-9-61	11-3-61

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1963

Total number of pending applications (excluding Designs)	200, 178
Total number of Design applications pending	6, 195
Total number of applications awaiting action (excluding Designs)	115, 956
Total number of Design applications awaiting action	2, 329
Date of oldest new application awaiting action	June 27, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,402,939 to 2,405,106, inclusive

Plant Patents ..... Numbers 702 to 708 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-5-62	2-26-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	12-13-61	12-21-61
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	1-31-62	12-4-61
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner.. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	1-16-62	1-15-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	1-12-62	9-20-61
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner..... Fluid Handling; Valves, Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	2-26-62	3-12-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner..... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-5-62	3-5-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner..... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	1-17-62	1-5-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner..... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	5-25-62	7-2-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner..... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-19-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-6-62	2-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner..... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-2-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner..... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	2-12-62	2-5-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner..... Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	4-18-62	5-23-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner..... Printing; Typewriters; Stationery; Material Treatment.	1-15-62	12-12-61
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner..... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	3-9-62	3-5-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner..... Industrial Arts; Household, Personal and Fine Arts.	12-26-62	12-18-62
(CLASSIFICATION) GORECKI, O. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....	6-8-62	6-1-62
93. PURDY, W. F. (acting), Wire Working.....	8-6-62	10-15-62
94. BERLOWITZ, W.....		
95. ANGEL, C. D., (REZNEK, J., acting).....		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

JAN A. RAJCHMAN *v.* JOHN M. HERBERT AND ANTHONY W. SIMPSON

No. 6903. Decided February 13, 1963

[50 CCPA —; 317 F.2d 926; 136 USPQ 465]

1. INTERFERENCE—CONSTRUCTION OF COUNT—RIGHT TO MAKE.

"The count requires that the holes be 'closely spaced to each other whereby the central hole serves as the opening in a core defined by the ferromagnetic material between the central hole and the array of holes.' Since 'closely' is a relative term, it is proper to consider the 'whereby' clause as defining the term. This clause indicates just how close the spacing should be, so that it is unnecessary to refer to the appellees' specification for a definition. The count not being ambiguous, it is not necessary to refer to the specification in which it originated. The appellant's specification supports the 'whereby' clause, inasmuch as the function of serving as a core around a hole within an array of apertures is the same in appellant's disclosure as in appellees'. The holes are 'closely spaced' in that they are close enough to be effective. The competing objectives of close spacing of core holes to provide the most cores per sheet of ferromagnetic material, close spacing of isolating holes to minimize 'cross-coupling,' wide spacing of holes to provide sheet strength, etc., must be balanced. Nothing in the count precludes the pattern of holes shown by appellant which is merely a design variation over the specific example illustrated in appellees' disclosure."

2. SAME—SAME—SAME.

"Laying the relevant elements of the two structures side by side; according the terms of the count the broadest meaning which they reasonably support; finding no ambiguity therein sufficient to warrant resort to consideration of the disclosure of the patent, and indulging the 'reasonable presumption' that the inventor 'intended to patent his invention broadly,' it is our opinion that the appellant's application supports the count in issue. * * *"

3. SAME—BENEFIT OF FOREIGN FILING DATE—35 U.S.C. 119.

"Inasmuch as appellees did not meet the requirement of 35 U.S.C. 119 by claiming priority before the patent was granted nor claim priority before payment of the final fee, they are not entitled to rely on the foreign filing date for convention priority."

APPEAL from the Patent Office. Interference No. 89,400.

REVERSED.

John V. Regan (*Albert Russinoff* of counsel) for appellant.

Frank L. Durr, *Greene*, *Pineles & Durr* for appellees.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, *J.*, delivered the opinion of the court.

This is an appeal by appellant, Rajchman, the senior party, from a decision of the Board of Patent Interferences awarding priority to the junior party, Herbert et al. The interference No. 89,400 involves a pending application and a patent. The application, Serial No. 455,724, was filed September 13, 1954, by Jan A. Rajchman for "Magnetic Storage Devices." The patent, No. 2,825,046, for "Production of Magnetic Material for Use in Computers or Magnetic Memory Systems," issued February 25, 1958, upon an application of John M. Herbert and Anthony W. Simpson, Serial No. 517,223, filed June 22, 1955.

The invention in issue relates to a magnetic memory system in which a perforated sheet of magnetic material (e.g., ferrite) is provided as

an element of a storage device for information signals, such as is used in electronic computers.

The holes in the sheet have electrical windings threaded through them so that when suitable currents flow therein, magnetic flux is produced in the material of the sheet surrounding the hole. The material has two stable magnetic states (i.e., it is bipolar). Thus, a current pulse in one direction produces a magnetic flux of a given polarity or direction in the material surrounding the hole in question. A second current pulse of opposite polarity causes a "reversal" of the flux in the material to its other stable state. In this way, the magnetic material is said to "store information" in storage areas adjacent each hole in that the retained flux polarity or direction is a record of the effect of the last preceding current pulse applied to it. At any given time, such information may be "read out" of the memory system.

One of the problems with an apertured sheet in such a storage device is that current flowing in a selected winding tends undesirably to influence the information stored in an adjacent storage area. Both appellant and appellees recognized this problem and each seeks to separate the core apertures to avoid interference. The approach of appellant Rajchman is to prevent "cross-coupling" interference between the magnetic memory areas by "proper geometrical proportioning of the apertures and shaping of the plates." The Herbert et al. (appellees) approach is to magnetically "isolate" the cores formed in a single sheet of ferromagnetic material by an array of holes surrounding each core hole.

The single count in issue is:

> In a magnetic memory system, a panel member comprising a sheet of ferromagnetic material, said sheet including at least two clusters of holes, each of said clusters of holes comprising a central hole and an array of equally spaced holes surrounding the central hole, said array of equally spaced holes being closely spaced to each other whereby the central hole serves as the opening in a core defined by the ferromagnetic material between the central hole and the array of holes.

The count under consideration is a verbatim copy of claim 1 of the Herbert et al. patent.

Priority was awarded to appellees as a result of the Board's sustaining their motion to dissolve on the ground appellant could not make the count because the term "clusters" and the relative phrase "closely spaced" were material limitations unsupported by the appellant's disclosure. It is significant that these words are not to be found in appellees' specification nor was any special meaning attributed to them during the course of the prosecution of appellees' patent.

In support of their motion to dissolve the interference, both before the Primary Examiner and the Board, the appellees contended that the limitation of count 1 that:

> * * * said array of equally spaced holes being closely spaced to each other * * *

did not find support in appellant's disclosure, and that "closely spaced" is a relative term, and reference should be had to the appellees' specification for the meaning thereof. The specification to which special reference was made is:

> For instance, the holes can be uniformly spaced so that each has six equidistant neighbours, and so that the space between the holes is less than the diameter of a hole.

It is pertinent to here point out that an examination of the entire passage of the specification germane to the several aspects of the invention discloses that this "For instance" sentence suggests but one

example as to how, "The holes in the matrix *may be disposed at a suitable distance apart*; * * *." [Emphasis supplied.] It is apparent that appellees' concept is not intended to be as restrictive as suggested in the "For instance" sentence. This conclusion is emphasized by the following descriptive language in appellees' specification:

> According to one aspect of this invention the magnetic material consists of thin sheets having a large number of small holes arranged in patterns to suit a particular wiring arrangement, the arrangement being such that each hole having a conductor threaded therethrough is isolated magnetically by adjacent holes to avoid magnetic coupling between adjacent threaded elements.

We perceive no significant distinction in the scope of this description from the broad description contained in the count relative to the spacing between isolating holes. It would seem to us to logically follow that appellees employed the relative term "closely spaced" in their claim to afford adaptation to any suitable arrangement productive of the desired result of isolating the storage aperture "to avoid magnetic coupling between adjacent threaded elements."

In denying appellees' motion to dissolve the interference, the Examiner applied the well settled rule that the terms of a count should be given the broadest meaning which they reasonably support. *Deibel* v. *Heise and Schumacher*, 18 CCPA 907, 46 F.2d 570, 8 USPQ 162. The Examiner stated that:

> * * * while "closely spaced" is a relative term and is not exact, it is not so ambiguous as to necessitate reference to the Herbert et al. specification for the meaning thereof. Therefore, there is nothing repugnant to the ordinary definition of this term in applying it to FIG. 7*d* of the Rajchman disclosure. It is held to be an entirely reasonable application of this limitation to say that the holes in plate 4 of Rajchman's FIG. 7*d* are "equally spaced holes being closely spaced to each other."

In reversing the Examiner, the Board stated:

> Were it proper here too construe "closely spaced" by itself, we would be hesitant to deny Rajchman's argument, however, we feel that such a construction lifts the phrase from its context.

As pointed out hereinabove, the Board found that the term "clusters" and the phrase "closely spaced" relating thereto were material limitations unsupported by appellees' disclosure, deeming it proper to consider "closely spaced" in context "as referring to or as a *restatement of the clustering feature*." [Emphasis added.]

In support of its interpretation of the count and the significance attributed to "cluster," the Board resorted to dictionary definition of that word. We do not deem it necessary to launch upon a detailed discussion of the reasoning advanced by the Board productive of its conclusion. Suffice it to say, we do not ascribe to the term "clusters" that "unique significance" accorded to it by the Board, thus rendering irrelevant, in our judgment, the pursuit of lexicographical discussion. The count defines a "cluster" as "comprising a central hole and an array of equally spaced holes surrounding the central hole." It seems clear to us that appellant's disclosure shows this.

In *Liebscher* v. *Boothroyd*, 46 CCPA 701, 258 F.2d 948, 119 USPQ 133, this court said:

> Indiscriminate reliance on definitions found in dictionaries can often produce absurd results. * * * But the words in which a claim is couched may not be read in a vacuum. One need not arbitrarily pick and choose from the various accepted definitions of a word to decide which meaning was intended as the word is used in a given claim. The subject matter, the context, etc., will more often than not lead to the correct conclusion.

[1] The count requires that the holes be "closely spaced to each other whereby the central hole serves as the opening in a core defined by the ferromagnetic material between the central hole and the array of holes." Since "closely" is a relative term, it is proper to consider the "whereby" clause as defining the term. This clause indicates just how close the spacing should be, so that it is unnecessary to refer to the appellees' specification for a definition. The count not being ambiguous, it is not necessary to refer to the specification in which it originated. The appellant's specification supports the "whereby" clause, inasmuch as the function of serving as a core around a hole within an array of apertures is the same in appellant's disclosure as in appellees'. The holes are "closely spaced" in that they are close enough to be effective. The competing objectives of close spacing of core holes to provide the most cores per sheet of ferromagnetic material, close spacing of isolating holes to minimize "cross-coupling," wide spacing of holes to provide sheet strength, etc., must be balanced. Nothing in the count precludes the pattern of holes shown by appellant which is merely a design variation over the specific example illustrated in appellees' disclosure.

[2] Laying the relevant elements of the two structures side by side; according the terms of the count the broadest meaning which they reasonably support; finding no ambiguity therein sufficient to warrant resort to consideration of the disclosure of the patent, and indulging the "reasonable presumption" that the inventor "intended to patent his invention broadly," it is our opinion that the appellant's application supports the count in issue. *Kean* v. *Wheelan*, 26 CCPA 1010, 102 F.2d 824, 41 USPQ 226; *Kirby* v. *Clements*, 44 App. D.C. 12, 1915 C.D. 163.

In the tribunals below the appellees moved to shift the burden of proof asserting entitlement to the benefit of the filing date of their British application, filed June 24, 1954. The record discloses, however, that appellees did not file claim for priority before the issue of their patent, on February 25, 1958. The Board held this matter moot in view of its findings as to appellant's right to make the count in issue. Our decision however on the issue relating to the count revives the matter.

The second paragraph of 35 U.S.C. 119 reads in part:

> No application for patent shall be entitled to this right of priority unless a claim therefor and a certified copy of the original foreign application, specification and drawings upon which it is based are filed in the Patent Office before the patent is granted, * * *.

Rule 55 of the Patent Office Rules of Practice requires that the priority claim be filed before the final fee is paid.

[3] Inasmuch as appellees did not meet the requirement of 35 U.S.C. 119 by claiming priority before the patent was granted nor claim priority before payment of the final fee, they are not entitled to rely on the foreign filing date for convention priority.

For the foregoing reasons, we reverse the decision of the Board of Patent Interferences in awarding priority of invention of the subject matter in the count in issue to John M. Herbert and Anthony W. Simpson.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,439,452, Reiner and Braga, Clamp, filed Apr. 1, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63/337, *The I. Leon Co., Inc.* v. *Kaynar Mfg. Co., Inc.*

2,616,174, E. E. Goldsmith, Dentures and artificial teeth; **2,709,301**, same, filed Feb. 4, 1959, D.C., S.D.N.Y., Doc. 142–318, *Ernest E. Goldsmith* v. *Overseas Scientific Corp. et al.* Decree for plaintiff Mar. 27, 1963.

2,622,878, W. T. Mooney, Exercising apparatus; **2,937,022**, Koller and Parks, Hobby horse frame; **Re. 23,849**, W. Baltz, Suspended horse, filed Mar. 13, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c613, *William Baltz et al.* v. *Globe Wholesale Co., Inc., et al.* Consent judgment; patents held valid and infringed; defendants enjoined Mar. 19, 1963.

2,657,618, W. Elsbein, Developing apparatus, filed Mar. 28, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c526, *American Photocopy Equipment Co.* v. *Transcopy Inc. et al.*

2,709,301. (See 2,616,174.)

2,710,461, G. A. Stasinos, Shoe or slipper and the like, filed Sept. 20, 1960, D.C., S.D.N.Y., Doc. 60/3647, *Ripple Sole Corporation* v. *New York Merchandise Co., Inc.* Stipulation and order of dismissal Mar. 28, 1963.

2,772,994, G. H. Lacy, Laminated thread, filed June 29, 1962, D.C., S.D.N.Y., Doc. 62/2332, *Riegel Paper Corp.* v. *The Dow Chemical Co., Inc.* Consent judgment; plaintiffs' complaint for declaratory judgment denied with prejudice; defendant's counterclaim for infringement granted; Regal Paper Corp. enjoined Mar. 26, 1963.

2,859,880, H. S. Hoffar, Vibratory flexible silencers, filed Dec. 11, 1958, D.C. Oreg. (Portland), Doc. 10123, *Henry S. Hoffar* v. *Griffith Rubber Mills.* District Court decree reversed Mar. 15, 1963.

2,937,023. (See 2,622,878.)

2,937,699, A. A. Lachance, Wheel hub construction, filed Oct. 26, 1962, D.C., E.D. Pa. (Philadelphia), Doc. 32248, *American Metal Products, Inc.* v. *Penn Fruit Co., Inc.* Stipulation of dismissal Mar. 25, 1963.

2,944,415, Smith and Burkland, Filter for washing machine; **2,976,711**, T. R. Smith, Washing agitator with fluid pumping means, filter, and dispenser, filed Mar. 26, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c501, *The Maytag Company* v. *Borg-Warner Corp.*

2,946,699, J. D. Bozza, Method of manufacturing moccasins, filed Mar. 25, 1963, D.C., W.D. Texas (San Antonio), Doc. 3263, *The Jo-An Shoe Manufacturing Company, Inc.* v. *Bimbi Manufacturing Co., Inc.* Consent judgment; injunction granted Apr. 19, 1963.

2,953,206, Haugen and Henrikson, Pipe joint, filed Mar. 26, 1963, D.C., W.D. Washington (Seattle), Doc. 5833, *United States Pipe and Foundry Company* v. *Western Utilities Supply Co. et al.*

2,957,480, Widoff and Powers, Hair treating method and apparatus, filed June 19, 1962, D.C., S.D.N.Y., Doc. 62–2159, *Alden Sundries Inc.* v. *Betty Dain Creations Inc. et ano.* Stipulation and order of dismissal Jan. 10, 1963.

2,959,906, J. Bochan, Joining member for providing a flexible connection between two relatively movable members, filed Mar. 21, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–326–WM, *General Electric Company* v. *Elfstrom Corporation et al.*

2,971,703, F. E. Rath, Process for cleaning and recovering scrap metal from slag and the like; **3,049,305**, same, Process for recovering substantially clean magnetic metal pieces and magnetic oxides from steel plant debris, filed Mar. 27, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63–212, *Spang and Company* v. *Columbia Iron & Metal Co., Inc.*

2,976,711. (See 2,944,415.)

2,990,064, R. F. Reifers, Molded pulp egg carton, filed Mar. 25, 1963, D.C. Md. (Baltimore), Doc. 14510, *Diamond National Corporation* v. *Harry C. Walterhoefer, Jr. et al.*

3,005,273, J. H. Milne, Dixie dredge; **Des. 188,477**, same, Dredge, filed Mar. 26, 1963, D.C., M.D. Tenn. (Nashville), Doc. 3428, *The Dixie Dredge Corporation* v. *American Marine & Machinery Co., Inc. et al.*

3,033,156, H. E. Pickrell, Cargo vessel, filed Mar. 21, 1963, D.C. Oreg. (Portland), Doc. 63–109, *RPTZ-PATCO, Inc.* v. *Pacific Inland Navigation Co.*

3,049,305. (See 2,971,703.)

3,054,215, A. E. Neumann, Toy, filed Sept. 19, 1962, D.C., S.D.N.Y., Doc. 62/3182, *Marvin Glass & Associates et ano.* v. *Jolly Toys Inc.* Cause dismissed May 8, 1963. Same, filed Mar. 29, 1963, D.C., S.D.N.Y., Doc. 63/881, *Marvin Glass & Associates et ano.* v. *Mangel Molding Corp.* Same, filed Apr. 5, 1963, D.C., S.D.N.Y., Doc. 63C–362, *Marvin Glass & Associates et ano.* v. *Gyro Dynamic Inc.*

3,069,562, Potts and Cairelli, Loose leaf binder, filed Mar. 19, 1963, D.C. Mass. (Boston), Doc. 63–223–C, *Wilson Jones Company* v. *Elbe File & Binder Co., Inc.*

Re. 23,849. (See 2,622,878.)

Re. 25,138, Brown and Waller, Method of and apparatus for handling raw materials in the production of hydrolyzed feather meal and other poultry by-product meal, filed Mar. 28, 1963, D.C., S.D. Miss. (Jackson), Doc. 3895, *El Dorado Poultry By-Products Company* v. *A.B.C. Rendering of San Antonio, Inc. et al.*

Des. 185,165, S. Ullman, Coin tray, filed Mar. 26, 1963, D.C., S.D.N.Y., Doc. 63/841, *Seymour Ullman* v. *Damar Products, Inc.*

Des. 188,505, M. Bobrick, Combined hospital and bed light fixture and service outlet control panel, filed Mar. 22, 1963, D.C., N.D. Calif. (San Francisco), Doc. 41391, *Sunbeam Lighting Company* v. *Pacific Associated Lighting, Inc.*

Des. 188,477. (See 3,005,273.)

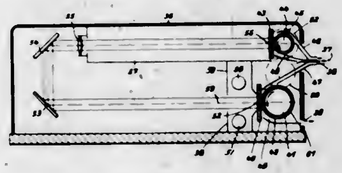
Des. 192,943, R. H. Gray, Hand winch, filed Mar. 27, 1963, D.C. Oreg. (Portland), Doc. 63–118, *Robert H. Gray* v. *Montgomery Ward & Company.*

REISSUES

JULY 2, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

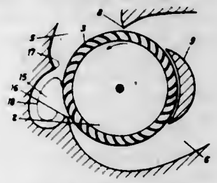
25,408
CONTINUOUS EXPOSURE APPARATUS FOR PRODUCING PHOTOCOPIES FROM FLAT PATTERNS
Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany
Original No. 2,930,284, dated Mar. 29, 1960, Ser. No. 586,162, May 21, 1956. Application for reissue June 7, 1961, Ser. No. 121,805
Claims priority, application Germany, May 20, 1955
7 Claims. (Cl. 88—24)



1. A continuous-exposure apparatus for producing photocopies from substantially flat originals, comprising means providing an exposure slot arranged perpendicularly to the path of movement of [the] *an* original to be copied, means providing an image slot arranged perpendicularly to the path of movement of [the] *a* film to be exposed, the slots being approximately linear in form and parallel to each other, a system of mirrors inclined to the slots for reflecting light from the original and directing the light [on to] *onto* the film, an optical system included in the path of light reflected from said original to the film, means for feeding the original and the film past the slots at proportional speeds, *means providing* a common feed slot for the original and the film having diverging guideways, pressure feed means associated with each of the slots, the guideways being arranged to feed the original and the film separately between the appropriate slot and the pressure feed means associated therewith, an enclosing casing through which the common feed slot opens and in which the means providing the slots and associated components are housed, and *means providing* ejection slots extending from the exposure and image slots through the casing.

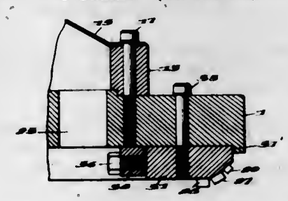
25,409
TURBO MACHINE
Robert Coester, Zumikon, Zurich, Switzerland, assignor to Maschinenfabrik Benninger A.-G., Uzwill, Switzerland
Original No. 2,968,436, dated Jan. 17, 1961, Ser. No. 766,229, Oct. 9, 1958. Application for reissue Aug. 22, 1961, Ser. No. 134,052
Claims priority, application Switzerland Oct. 10, 1957
10 Claims. (Cl. 230—125)

1. A transverse flow blower, comprising a rotor, a housing around said rotor and extending along the periphery of the rotor, said rotor having a plurality of blades spaced around the periphery thereof and having a hollow annular center into which the spaces between the blades open, said rotor being mounted in said housing for rotation in one direction, a low pressure inlet opening into said rotor housing along one portion of the periphery of said rotor, and a high pressure outlet opening out of said rotor housing from another portion of the periphery of said rotor, the rotor separating said inlet and outlet, and said housing having a swirl chamber therein opening into said rotor housing along the periphery of said rotor from a point immediately preceding the point where the blades of said rotor enter said high pressure outlet and back along the periphery of said rotor toward said low pressure inlet, the swirl chamber having a wall defining the chamber which has a shape of a portion of a spiral extending outwardly away from said rotor and back along the periphery of said rotor in a direction opposite to the direction of rotation of said rotor with the portion of the smaller radius of curvature being toward said high pressure outlet, said wall intersecting said housing along the periphery of said rotor adjacent said point immediately



preceding the point where the blades of said rotor enter the high pressure outlet to form a first cut-off point, and intersecting the wall of said housing along the periphery of the rotor adjacent the inlet to form a second cut-off point, whereby fluid being drawn into said inlet is deflected inwardly through the blades of said rotor by said second cut-off point, thereby causing a reduced pressure in said swirl chamber which causes the fluid to be moved outwardly between the blades of the rotor into said swirl chamber, so that fluid is moved through the spaces between the blades as the blades enter the outlet.

25,410
GRINDING WHEELS
Hubert E. Wayland, Knoxville, Tenn., assignor, by mesne assignments, to Tysaman Machine Company, Inc., Knoxville, Tenn., a corporation of Delaware
Original No. 2,980,098, dated Apr. 18, 1961, Ser. No. 748,046, July 11, 1958. Application for reissue Aug. 25, 1961, Ser. No. 136,386
8 Claims. (Cl. 125—3)



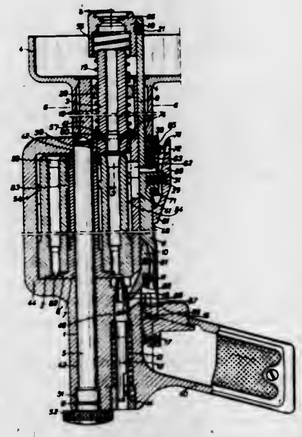
8. A grinding wheel comprising a device adapted for turning movement about an upright axis, said device having a bottom face, mounting members abutting against said bottom face, means for detachably securing said mounting members to the device, abrasive cutting segments secured to the mounting members, some of said cutting segments having abrasive surfaces in a plane normal to said upright axis, and others of the cutting segments having abrasive surfaces spaced radially outward from the first-mentioned abrasive surfaces and turned at acute angles to the plane of said first-mentioned abrasive surfaces.

PATENTS

GRANTED JULY 2, 1963

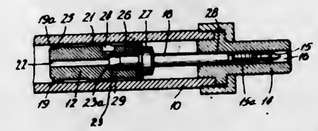
GENERAL AND MECHANICAL

3,095,572
PLUGGING GUN OF THE REPEATING TYPE
Jean-Marie Frédéric Massacrier, 29 Rue Camelinat, Saint-Etienne, France
Filed Apr. 4, 1961, Ser. No. 100,736
Claims priority, application France Jan. 19, 1961
6 Claims. (Cl. 1—44.5)



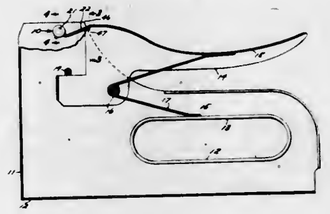
1. A gun for plugging a surface, comprising a body having a front and rear end, said body including an enlarged housing portion, said body being provided with a first longitudinal bore in the front end thereof, said housing portion being provided with a bore of larger diameter than the first said bore and opening thereinto, said bores being parallel to one another and eccentrically arranged, a shield encircling the front end of the body and removably coupled thereto, a cylinder removably and revolvably supported inside the bore in the housing portion of the body and provided with a plurality of annularly distributed cartridge chambers each of which is adapted to register in succession with the first said bore, a ring slidingly supported inside the first bore, a hollow barrel slidingly supported inside said ring and including a forwardly facing shoulder at the rear thereof and a rearwardly tapering terminal section slidingly supported in the rear end of the first said bore, a slider, an end-piece detachably secured to the slider and extending forwardly of the barrel, said end-piece being adapted for being urged against the surface to be plugged to move said slider, means including a trigger, striker and sear supported in the body and cooperating with the slider to cock the gun and adapt the same for being operated to fire the cartridge in the chamber registering with the barrel in the first said bore, two aligned springs located on either side of the sliding ring, one of said springs being supported between the ring and the end-piece, the other spring being supported between the ring and the shoulder of the barrel, to urge the barrel rearwardly into engagement with the cylinder, said cylinder in turn being urged rearwardly into engagement with the housing portion of the body at the rear end of the bore therein.

3,095,573
EXPLOSIVE-CHARGE OPERATED FASTENING TOOLS
John Royston Siddons, Lower Plenty, Victoria, Australia
Filed Nov. 7, 1961, Ser. No. 150,828
Claims priority, application Great Britain Nov. 10, 1960
7 Claims. (Cl. 1—44.5)



1. In an explosive-charge operated fastening tool of the kind described a driving piston and a separate pusher, the pusher being adapted to move axially relative to the driving piston and also being adapted to seat on the driving piston, and the driving piston having a through bore for gaseous pressure, whereby gas pressure resulting from the firing of an explosive charge in the fastening tool causes relative movement between the pusher and the driving piston.

3,095,574
HANDLE LOCK FOR STAPLING DEVICES
Albert L. Robbins, New York, N.Y. (163—64 22nd Ave., Whitestone, N.Y.)
Filed Dec. 27, 1961, Ser. No. 162,520
1 Claim. (Cl. 1—49)



In a stapling device of the class described, including a frame element, a handle element mounted for pivotal movement with respect to said frame element, and resilient means normally urging said handle element in a given angular direction of rotation, improved locking means for selectively fixing said handle element against the action of said spring comprising: a shaft element and a latch element; said shaft element being of cylindrical configuration and transversely projecting through said frame element and having first and second ends extending outwardly thereof; said latch element being of elongated U shaped configuration and having first and second resilient hook means at opposite first and second ends thereof freely pivotally engaged upon said first and second ends of said shaft element, and a transverse member interconnecting said hook means and selectively projectable into the path of movement of said handle element to engage a portion thereof.

3,095,575
WELDER'S HOOD
Samuel J. Radov, Los Angeles, Calif., assignor to David F. Krumme, Jr., El Monte, Calif.
Filed June 14, 1960, Ser. No. 35,997
5 Claims. (Cl. 2—8)



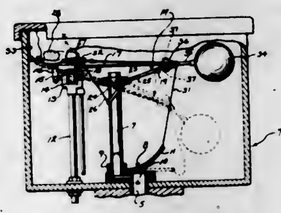
1. In a welder's hood having a vertical front section provided with a viewing aperture, a head harness secured to the hood and adjustable so that said aperture may be disposed in the wearer's line of vision, and a lens adapted to slide into and out of alignment with said aperture, mechanism for so sliding said lens; said mechanism including a chin-operable actuator embodying a slide member mounted on said hood for sliding movement in a substantially vertical plane, and a chin extension pivotally connected to said slide member for bodily movement with said slide member and for swinging movement relative to said slide member about a substantially horizontal axis, adjustable means accessible exteriorly of said hood for limiting the extent of swinging movement, in a downward direction, of said chin extension, a chin plate mounted on said chin extension, means on said chin extension and said chin plate accessible exteriorly of said hood for independently adjusting the horizontal spacing of said chin plate from said front section and the angular orientation of said chin plate with respect to said chin extension, a pair of levers pivotally mounted on said hood and operatively engaged by said slide member, said levers being operatively connected to said slidable lens in a manner whereby pivotal movement of said levers slides said lens.

3,095,576
APRON FOR USE WHEN TREATING SMALL PIGS
Ellsworth W. Jenter, Rte. 1, Arlee, Mont.
Filed May 24, 1962, Ser. No. 197,367
3 Claims. (Cl. 2—51)



1. An apron for use when treating small pigs comprising, a body portion, the lower section of said body portion being bifurcated so as to form two spaced depending leg portions, a downwardly tapered pocket secured to the body portion centrally thereof substantially in line with the space between the leg portions, the lower edge of the pocket substantially coinciding with the upper limit of the bifurcation, said pocket being open at the top and bottom, and a hollow tapered metallic receptacle provided in said pocket.

3,095,577
TOILET TANK FLUSHING MECHANISM
Charles J. Clark, 6237 W. Lincoln Creek Drive, Milwaukee, Wis.
Filed Mar. 5, 1962, Ser. No. 177,314
5 Claims. (Cl. 4—19)



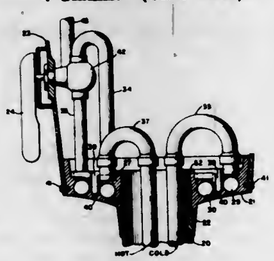
1. In a flushing mechanism for toilets, a flush tank, an outlet pipe for water extending into the tank having a valve seat on its upper end, an overflow pipe disposed in the tank and communicating with the pipe, an inlet pipe for water extending into the tank, valve means for controlling the flow of water from the inlet pipe into the tank, a normally open flush valve carried by the overflow pipe for the valve seat of the inlet pipe, a frame rockably mounted on the overflow pipe above the flush valve, a float carried by the frame for rocking the frame to a raised position when water is flowing into the tank, spring means normally holding the frame and float in a raised position, means operatively connecting the frame with the water inlet valve and normally holding the valve closed with the frame in a raised position, means operatively connecting the frame with the flush valve and for holding the flush valve in a raised position off of its seat with the frame in a raised position, and manual means for rocking the frame and float to a lowered position with the water inlet valve in an open position and the flush valve in a lowered closed position, the float functioning to raise the frame upon the raising of water in the tank to open the flushing valve and close the water inlet valve.

3,095,578
DISPOSABLE URINAL BAG
George A. Stanford, Jacksonville, Ill.
(% V. A. Hospital, Knoxville, Iowa)
Filed Dec. 27, 1961, Ser. No. 162,398
5 Claims. (Cl. 4—110)



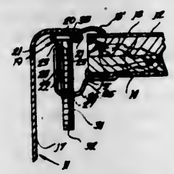
1. A container for the collection of disposable matter comprising,
(*a*) a tubular supporting collar having an outwardly projecting flange,
(*b*) a bag having its open end embrasing and peripherally adhered to the collar,
(*c*) a tear strip integrated with the bag below the adherence to the collar and severable from the bag to release the bag from the collar, and
(*d*) a band of pressure-sensitive adhesive disposed interiorly around the bag below the tear strip to reseal the open end of the bag remaining after release of the bag from the collar.

3,095,579
COLUMN SHOWER
Clarence C. Gerow, Claymont, Del., Herman F. Bottcher, Plainfield, N.J., and Charles F. Molzen, Philadelphia, and Harper Landell, Whitemarsh, Pa., assignors to Speakman Company, Wilmington, Del.
Filed Oct. 30, 1961, Ser. No. 148,526
4 Claims. (Cl. 4—145)



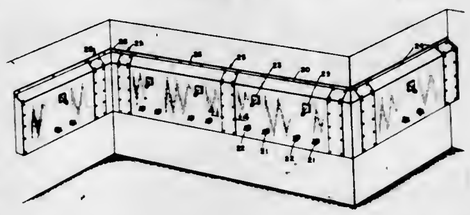
1. A vertically disposed free standing multi-person shower bath accessible from all directions thereabout, comprising:
(*a*) a vertical hollow standard,
(*b*) means cooperating with the bottom of the standard to support the latter,
(*c*) a housing carried by said standard in a zone spaced above the standard supporting means, said housing having a series of shower heads located near the top thereof,
(*d*) a manifold block having two horizontally spaced, substantially parallel circular manifolds therein, said block being supported by the top of said standard, said housing being attached to and supported by said block, one manifold being connected to a source of supply of hot water and a second manifold being connected to a source of supply of cold water, each manifold having a plurality of take-off conduits, one conduit from each manifold being connected to a mixing valve, said mixing valve being controlled through said housing, and a conduit from each mixing valve carrying mixed hot and cold water to a shower head.

3,095,580
SINK MOUNTING CONSTRUCTION
Matyas J. Just, 3000 Sheridan Road, Chicago, Ill.
Filed June 5, 1962, Ser. No. 200,199
1 Claim. (Cl. 4—187)



In a sink structure including a drainboard having a certain thickness dimension and an opening, a sink positioned within said opening, said sink including a bowl and a horizontal rim extending around said bowl, said rim having an edge portion engaging the upper surface of said drainboard; a clamping structure for securing said sink to said drainboard comprising a channel bracket connected to said rim and projecting downwardly within said opening, said bracket including a pair of horizontal inwardly extending flanges having edges spaced apart to provide on said bracket a slot, a downwardly extending lip on one of said flanges and being substantially horizontally coextensive therewith, said lip providing on opposite sides thereof opposed vertical seating portions substantially the thickness dimension of said drainboard, a plurality of securing clamps supported on said bracket, said clamps each having a horizontal leg extending underneath said drainboard, said horizontal leg including a first horizontal portion engaging the underneath side of said drainboard, said leg further including a downwardly extending second portion connected to said first portion and a third horizontal portion disposed vertically in alignment with said channel bracket, and a vertical member on each clamp connected to said third horizontal portion, said vertical member including at least one pair of vertical fingers horizontally spaced from each other and having opposed flat faces to provide a slot of greater width than said lip, said flat faces of said fingers overlapping and engaging said opposed seating portions whereby the greater portion of said lip is disposed in said slot of said clamp, said third horizontal portion of said leg having a threaded opening, a vertical threaded fastener extending through said opening, said fastener extending through the slot of said bracket and having at its upper end a head which is slidable horizontally within said bracket whereupon tightening of said fastener said sink is secured to said drainboard.

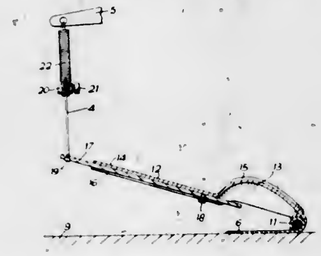
3,095,581
PANEL SHOWERS
Clarence C. Gerow, Claymont, Del., and Herman F. Bottcher, Plainfield, N.J., assignors to Speakman Company, Wilmington, Del.
Filed Feb. 1, 1962, Ser. No. 170,602
7 Claims. (Cl. 4—192)



1. An expansion unit for a prefabricated, surface mounted, plumbing fixture, comprising in combination:
(*a*) two front panels, each having rearwardly offset flanges at opposite edges for seating against a building wall, said front panels having an opening therebetween,
(*b*) means to attach said flanges to said wall,
(*c*) a joining plate wider than said opening having a contour similar to each of said front panels, said joining plate having a series of matching holes at one edge thereof for attachment to one of said front panels,
(*d*) said joining plate having an interior strip on the interior surface of said joining plate to receive said other panel between the rear surface of said joining plate and said interior strip, in sliding engagement therewith,
(*e*) and bolts through said front plate and said in-

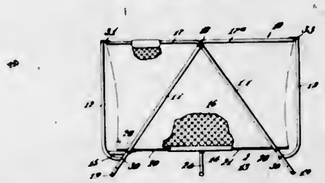
terior strip to draw the said interior strip towards said front plate.

3,095,582
FOOT FLUSH ASSEMBLIES FOR USE WITH A WATER CLOSET
Arthur P. Booth, The Elms, Bushby, Thurnby, Leicestershire, England
Filed Feb. 27, 1961, Ser. No. 91,850
Claims priority, application Great Britain Mar. 3, 1960
3 Claims. (Cl. 4—249)



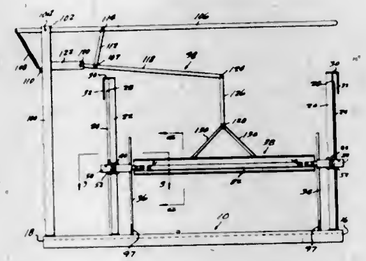
1. A foot flush assembly for use with a water closet having a flush lever, comprising a foot pedal device including a carrier plate, means to fasten said plate to a supporting surface, a pedal arm hinged at one end thereof to said plate, an extension piece slidably mounted on said arm at the other end thereof, and a foot step portion formed on said arm intermediate the two ends thereof, draw means adapted to be coupled between said extension piece and said flush lever, said draw means incorporating return spring means attached at one end thereof to said draw means and at the other end to said flush lever, and connecting means loosely attached to said return spring means and having means for adjustably clamping the draw means so as to vary the effective length of the latter.

3,095,583
PLAY PEN
Leo Golub, Marblehead, and Max Zalger, Swampscott, Mass., assignors, by mesne assignments, to Paul R. Engel, Rochester, N.Y.
Filed Jan. 6, 1960, Ser. No. 728
8 Claims. (Cl. 5—99)



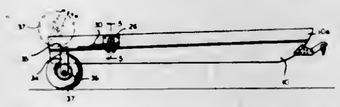
1. A foldable play pen comprising, in combination,
(*a*) an upper frame having two sections pivoted with respect to each other on an axis,
(*b*) a pair of legs carried on each opposing side of the upper frame and being pivoted with respect to each other approximately on said axis between open and closed positions,
(*c*) a lower frame comprising the lower portions of said legs and means rigidly connecting opposing ones of said pairs of legs for supporting a foldable floor thereon,
(*d*) a pair of end support means pivoted on said lower frame at opposite ends of the play pen, each support means being releasably lockable with a corresponding one of said upper frame sections at said opposite ends for supporting opposing ends of said upper frame relative to said lower frame when the legs are in the open position.

3,095,584
HONEYCOMB UNCAPPING MACHINE
Earl R. J. Cusden, Dearborn, Mich.
(8251 Bryce Road, Goodells, Mich.)
Filed May 19, 1961, Ser. No. 111,202
8 Claims. (Cl. 6—12)



4. A honeycomb uncapping machine comprising an elongated honeycomb supporting base having first and second ends, longitudinally spaced first and second posts fixed to and rising from the base, a horizontally elongated knife assembly extending between and slidably mounted for vertical movement on the posts, and an operating assembly mounted on the base longitudinally outwardly of a post and operatively connected to the knife assembly, said knife assembly comprising a pair of coextensive, laterally spaced knife elements, said operating means comprising a standard fixed to and rising from the base, a normally horizontal handle lever pivoted intermediate its ends on said standard on a level above the posts, flexible arm means individually fixed to and rising from the knife elements, and link and lever means operatively connected to the handle lever and said arm means.

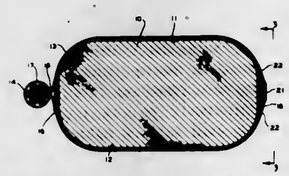
3,095,585
TRAILER MECHANISM
John L. Thomas, 2259 N. 65th St., Wauwatosa, Wis.
Filed Feb. 19, 1962, Ser. No. 174,169
1 Claim. (Cl. 9—1)



In combination with a water craft having a stern, relatively spaced side walls and a prow, of a shaft extending between and through each wall to the exterior thereof, a pair of brackets each having a semi-spherical surface and embracing said shaft, one bracket disposed in side of said craft and the other bracket disposed in the other side of said craft, a side plate secured to each side exteriorly thereof and having a portion contoured and complementary to the semi-spherical surface of an adjacent bracket, means securing said bracket to said shaft and to said side plates, said semi-spherical portion of each bracket having exteriorly of said craft provided with a serrated edge disposed annularly about and radially of said shaft, a pair of spring mountings each rotatably and slidably disposed on said shaft exteriorly of said craft and adjacent one of said brackets, each of said mountings having a serrated edge complementary to the serrated edge of an adjacent bracket and normally engaged therewith, whereby said mounting is normally held against

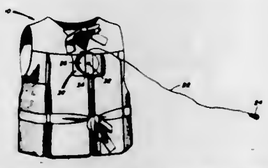
rotation on said shaft, releasable means carried by each end of said shaft and normally holding said mountings with said serrated edges in engagement and said mountings against sliding motion on said shaft, a pair of leaf springs each having one end releasably secured to one of said mountings, said leaf springs extending from said mountings in a direction relatively parallel to each other and normal to the axis of said shaft, an inverted U-like yoke member secured to the free end of each of said leaf springs and depending therefrom, a wheel disposed between the depending legs of each yoke member and rotatably carried thereby, and a hitch attached to the bow of said craft adapted for connection with the rear of a vehicle to be towed thereby.

3,095,586
RING BUOY LIFE PRESERVER
Ludwig S. Baier, 4538 SW. Macadam Ave., Portland 1, Oreg.
Filed Apr. 22, 1959, Ser. No. 808,272
2 Claims. (Cl. 9—340)



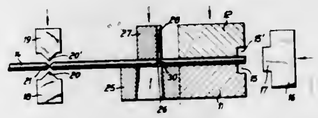
2. A ring buoy life preserver comprising a substantially rigid annular core pre-formed in one piece of molded plastic material having a cellular structure of low density, and a relatively thin two-piece substantially rigid plastic shell enclosing and adhesively secured to said core, said shell comprising a pair of pre-formed circular shell members of channel shape in cross section adhesively secured together by lap joints extending around the inner and outer margins of the buoy, each of said shell members being molded of resin-impregnated fiber glass.

3,095,587
LIFE JACKET
Milton W. Whalen, 1135 Newfield Road, Baltimore 7, Md.
Filed Feb. 10, 1961, Ser. No. 88,406
1 Claim. (Cl. 9—342)



In combination, a wearable life preserver having buoyant portions and garment portions to unite said buoyant portions into a vest shape having an opening in its front so as to be fittable onto a person and having said opening adapted to be closed to retain said life preserver on said person, said life preserver having an adjacent portion on each side of said opening composed only of garment portions and surrounded, except at their co-extensive sides, at least partly by buoyant portions so as to form a cavity when said opening is closed, fastening means mounted within said cavity on one side of said opening, and a reel assembly including a frame mounted within said cavity on the other side of said opening and having means to detachably engage said fastening means, whereby said frame serves to close said opening, a reel rotatably mounted in said frame, said frame having an aperture, and a line passing through said aperture and having one end secured to said reel and its other end provided with detachable means for securement to an object.

3,095,588
APPARATUS FOR FORMING NAILS FROM WIRE STOCK
Dieter Haubold, Lutzowstrasse 8–10, Hannover, Germany
Filed Feb. 1, 1960, Ser. No. 5,865
Claims priority, application Germany Jan. 30, 1959
1 Claim. (Cl. 10—43)



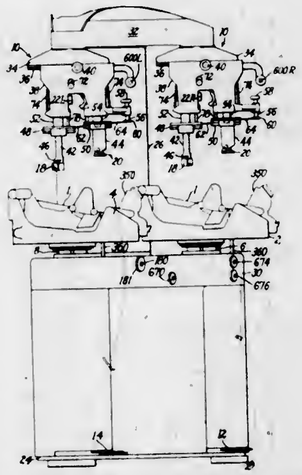
An apparatus for manufacturing nails, comprising, in combination, a die body consisting of an upper part and a lower part, said parts having opposed surfaces and a plurality of parallel opposed grooves formed in said surfaces, said grooves lying in parallel juxtaposition with respect to each other, said upper part being movable into engagement with said lower part, said die body parts having an open recessed portion, having parallel side walls the ends of said grooves being uniformly spaced from said walls of said recessed portion, a stamp having a part fitting into the recessed portion of said die body, two opposed movable cheeks spaced from said die body and having cutting edges extending the entire width of said plurality of grooves transversely to the direction of said grooves, said cutting edges having points movable to a cutting position wherein they are located adjacent a plane extending through the interengaging opposite surfaces of the die body parts, a matrix located between said cheeks and said die body and having a supporting surface extending substantially in the plane of the bottoms of the grooves of said lower part, said matrix having an inner space, a serrated cutting edge located in said space and close to said die body, said cutting edge extending substantially perpendicularly to the direction of said grooves to said supporting surface, and a movable cutter stamp located above said matrix and having a cutting edge extending substantially parallel to the last-mentioned cutting edge and cooperating therewith, the cutting edges of said cheeks having surfaces extending substantially perpendicularly to the surfaces of the cutting edges of the matrix and cutter.

3,095,589
MACHINES FOR APPLYING PRESSURE TO SHOE BOTTOMS
Charles H. Anniss, Thomas Aubrey Kestell, and Ernest Tipper, Leicester, England, assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Dec. 19, 1961, Ser. No. 160,483
Claims priority, application Great Britain Jan. 7, 1961
15 Claims. (Cl. 12—33)

1. A machine for applying pressure to shoe bottoms having fluid pressure applying members providing between them a separating gap to enable an operator freedom in presenting a shoe to the machine, having:
(*a*) a hydraulic system actuated through a predetermined cycle, first to close up the separating gap quickly between the shoe pressure members, then to apply a relatively low pressure, and thereafter to apply a heavy working pressure to the shoe,
(*b*) a treadle for starting the hydraulic cycle, and
(*c*) means acting to halt the hydraulic cycle just before heavy pressure is exerted on the shoe,

in combination with

(*d*) a safety control for slowing down to the speed with which the pressure applying members are actuated before applying heavy pressure to the shoe to prevent the hands of the operator while presenting the shoe to the machine from being subject to impact between the pressure applying members.



3,095,590
SHOE ASSEMBLING AND LOCATING ATTACHMENT
Max Neckrich, Shamokin, Pa.
(1515 Mifflin St., Huntingdon, Pa.)
Filed Aug. 24, 1962, Ser. No. 219,289
3 Claims. (Cl. 12—141)



1. In combination with a last, a shoe assembling and locating attachment embodying a flexible flat strip adapted to be disposed vertically so as to extend transversely about the rear end of the last spaced below and adjacent the upper edge thereof, means provided on said strip adapted to receive securing elements disposed on opposite sides of the rear end of the last and driven into the last to fixedly secure the strip to the last in the disposed relation thereto, and abutment means overhanging the front face of said strip and supported from the mid-portion of the upper edge of said strip, said abutment means being constructed and arranged to engage the top rear edge portion of a shoe upper at each side of the middle seam thereof.

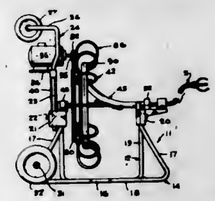
3,095,591
TRAVELING RAMP FOR LOADING VEHICLES ONTO MULTIPLE DECK TRANSPORT
Steward T. Buck, % Buck Equipment Corp., 720 Anderson Ferry Road, Cincinnati 38, Ohio
Filed Sept. 6, 1960, Ser. No. 54,028
7 Claims. (Cl. 14—72)

1. An adjustable ramp structure for loading vehicles onto multiple tiered transports, said structure comprising an elongated base frame mounting a plurality of spaced apart pairs of vertically disposed standards projecting upwardly from said base frame at spaced apart intervals with the standards in each pair lying on opposite sides of said base frame, ramp bars extending transversely of said base frame between said pairs of standards with the opposite ends of said ramp bars slidably received by said pairs of standards, a ramp section extending between each adjacent pair of said standards so as to define a continuous ramp extending lengthwise of said structure, said ramp sections each being hingedly connected at its leading end to one of said ramp bars with its opposite end overlying and supported for sliding movement on the next adjacent ramp section, with the pivoted ends of said ramp sections all extending in the same direction, cable means mounting said ramp



bars for joint vertical movement along said pairs of vertical standards, said cable means comprising sets of cables operatively connected to the opposite ends of said ramp bars and extending to a common cable actuating means capable of simultaneously paying out and reeling in said sets of cables, said sets of cables being arranged, upon actuation of said cable actuating means, to move said ramp sections from a lower position to an upper position, said ramp sections being aligned when in said lower position to define an inclined ramp leading to an underlying tier of a vehicle transport, and aligned when in the upper position to define a ramp leading to the uppermost tier of the vehicle transport, and releasable locking means automatically operable to engage and secure said ramp bars in their upper positions.

3,095,592
PIPE CLEANING MACHINE
Robert G. Hunt, Los Angeles, Calif., assignor to Marco Products Company, Los Angeles, Calif., a firm
Filed June 5, 1961, Ser. No. 114,766
2 Claims. (Cl. 15—104.3)



1. A reel for housing a flexible plumbers' snake formed of helically coiled spring wire, comprising a circular wheel disk having a central hub and having a rim with a drive belt-receiving peripheral groove therein, a plurality of rod-like members mounted in said rim at circumferentially spaced points in a plane adjacent but axially spaced from the groove, said members each including a straight radially projecting section immediately beyond the rim and a circularly curved forwardly projecting arcuate section therebeyond extending through about 270°, and a ring of somewhat greater diameter than said wheel disk spaced axially forward thereof, the arcuate sections of said rod-like members having their ends mounted in and supporting said ring, said ring and wheel disk defining an annular opening into the annular snake-receiving space defined by said rod-like members.

3,095,593
FEATHER DUSTER
Henry Krause, 1609–11 Cuming St., Omaha 2, Nebr.
Filed Sept. 13, 1960, Ser. No. 55,760
1 Claim. (Cl. 15—234)



A feather duster of the character described, comprising a cylindrical plastic casing having a closed base and a splayed opening in the upper end thereof, and a cylindrical plug slidably mounted within the said cylindrical plastic casing, the said plug having a series of annular spaced apart tapering grooves encompassing the upper end thereof, and in which is secured the quills of a plurality of feathers, and a wire encompassing the upper end of the said plug to which it is secured, the said wire encompassing said quills and lying in the said grooves which prevents the said wire from coming in contact with the inside wall of the said cylindrical plastic casing when the said cylindrical plug is manually moved from end to end of the said cylindrical casing, a thumb screw having one end secured in the lower portion of the said cylindrical plug and projecting outward through a longitudinally extending slot in the said cylindrical plastic casing, whereby the said feathers may be projected from the said splayed end of the said plastic casing when it is desired to dust an object, and retracted within the said splayed end of the said plastic casing when the said feather duster is to be stored.

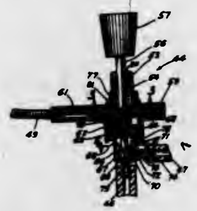
3,095,594
PLASTERER'S FINISHING TOOL
Peter B. Dornbos, 1929 McIlwraith St., Muskegon, Mich.
Filed Apr. 29, 1960, Ser. No. 25,574
3 Claims. (Cl. 15—235.4)



1. A plastering finishing tool for densifying and smoothing the surface of a wall during the plastering thereof including a member having at least one flexible, thin, flat working surface for movement along the wall, an elongated flat rigid strip of small cross section secured along the edge of said surface used for applying pressure to the wall, said strip extending from said working surface a uniform distance.

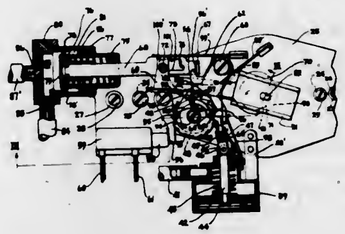
3,095,595
WINDSHIELD CLEANER CONTROL DEVICE
Ernest E. Lovell, Detroit, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Filed Dec. 16, 1960, Ser. No. 76,289
2 Claims. (Cl. 15—250.01)

1. In a windshield cleaning system, wiper means and a washer means, a power unit associated with each of said means for operating the same, a common control means for said power units comprising a bearing and an elongated manipulating element supported thereby for relative axial and rotatable movement, a first actuating means operated by said element upon rotatable movement thereof for rendering said wiper means power unit operative and inoperative, a second actuating means operated by said element upon axial movement thereof for rendering such washer means power unit operative and inoperative, including a fluid chamber means secured to said bearing, said manipulating element having an end portion projected from said bearing into said chamber means, said chamber means having an inlet and a fluid bleed means arranged opposite each other at positions spaced axially of said element, an outlet for said chamber means, said inlet being



connectible with a source of fluid pressure and said outlet being connectible with said second actuating means, a one piece valve member formed of a resilient material and mounted on the projected end portion of said manipulating element so as to constitute an extension therefor, said valve member being of a greater diameter than said end portion so that on axial movement of said element in one direction to a first position, one end face of said valve member acts to close said inlet whereby said outlet and bleed means are in fluid communication, and on axial movement of said element in an opposite direction to a second position the opposite end face of said valve member acts to close said bleed means whereby said inlet and outlet are in fluid communication, and means for yieldably holding said element in said first position therefor.

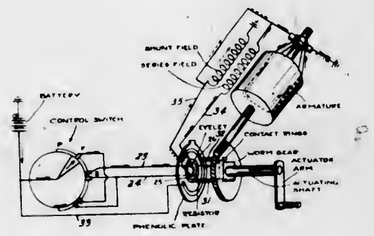
3,095,596
WINDSHIELD CLEANING APPARATUS
John R. Oishei, Buffalo, and Martin Bitzer, Kenmore, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed July 30, 1959, Ser. No. 830,543
3 Claims. (Cl. 15—250.02)



1. A windshield cleaning system comprising a wiper unit including a wiper motor, a wiping element, and transmission means therebetween; a combined pump and coordinator unit constituting an entity separate and distinct from said wiper motor and adapted to be mounted proximate thereto; first control means for producing sole operation of said wiper unit without accompanying op-

eration of said combined pump and coordinator unit; second control means for providing joint operation of said wiper unit and said combined pump and coordinator unit; said combined pump and coordinator unit comprising a base, a shaft journaled in said base, a pump including a pump shaft mounted on said base, means on said shaft adapted to be coupled to said wiper motor output whereby said wiper motor drives said shaft, eccentric disk means mounted on said shaft, a first strap mounted on said eccentric disk means, means for selectively coupling said first strap to said pump shaft, a second strap coupled to said eccentric disk means, a ratchet and cam assembly mounted for rotation on said base, a pawl driven by said second strap for engagement with said ratchet, means mounted on said base member and responsive to the manipulation of said second control means for rotating said ratchet and cam assembly, switch means adapted to be actuated incidental to rotation of said ratchet and cam assembly to thereby energize said wiper motor, means responsive to the rotation of said ratchet and cam assembly for coupling said pump shaft to said first strap and thereby causing the rotation of said shaft produced by the operation of said wiper motor to drive said pump to thereby provide a period of joint wiper motor and washer pump operation and thereafter terminate said connection thereby permitting said wiper motor to continue in operation without accompanying pump operation, said ratchet including means associated therewith to permit said wiper motor to operate without producing accompanying operation of said pump when said first control means are actuated.

3,095,597
WINDSHIELD WIPER
Claude F. Waldron, Columbus, Miss., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Mar. 9, 1960, Ser. No. 13,930
10 Claims. (Cl. 15—250.17)



1. In a device of the character described, an electric motor, a source of power, a wiper member operatively connected to said motor and adapted to be actuated thereby and means for parking said wiper motor in predetermined position, said means comprising a contact ring, a first contact member adapted to contact said ring, an arcuate contact member and a second contact member adapted to contact said arcuate contact member, said first and second contact members being electrically connected, and means for energizing said contact ring through energization of said arcuate contact member, said motor having series field and shunt field windings, and switch means for controlling the energization of said motor, said switch means having high speed, low speed and park settings, said switch means being connected to said motor whereby when said switch means is on its park setting that said shunt and field windings will be energized and said contact finger will move until it reaches the end of said arcuate contact.

3,095,598
DISPENSING CONTAINER
Carmen J. Gonnella, Succasunna, N.J., and Paul A. Marchant, Kansas City, Mo., assignors, by direct and mesne assignments, to The Mennen Company, a corporation of New Jersey, and Consolidated Thermoplastics Company, a corporation of Delaware
Filed May 16, 1960, Ser. No. 29,528
5 Claims. (Cl. 15—571)

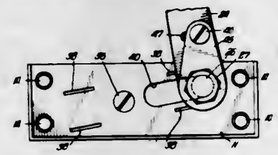


1. A roller assembly for dispensing containers comprising a roller element having an elliptical cross section along one dimension and a substantially circular cross section normal to said one dimension; a fitment including an elliptical socket adapted to receive said roller element for rotation in the elliptical socket about said one dimension of the roller element, said roller element being movable in the elliptical socket to and from dispensing and non-dispensing positions portions of said elliptical socket closely engaging said roller element to maintain the roller element in the socket, a portion of said roller element being exposed outside said elliptical socket; said elliptical socket having an opening therein; a second socket located outside of and integral with said elliptical socket, said second socket being located around the opening in the elliptical socket thereby providing communication between the sockets; a resilient element positioned in and substantially conforming in shape to said second socket, a portion of said resilient element extending into the elliptical socket sufficient to be engageable by the roller element when the latter is in non-dispensing position and spaced from the roller element when the latter is in dispensing position an opening through said resilient element and portion thereof; an opening in said second socket located remote from the opening in the elliptical socket; said opening through the resilient element being in substantial alignment with the opening in the elliptical socket and the opening in the second socket; said roller element being movable from said dispensing position to said non-dispensing position upon the application of pressure on said exposed portion of the roller element; said dispensing position spacing the roller element from the resilient element such that an unimpeded passage is provided through said aligned openings into said elliptical socket, said non-dispensing position locating the roller element such that a portion of the roller element is in sealing engagement around the opening in said portion of the resilient element thereby closing said unimpeded passage; and said resilient element normally urging said elliptical roller element from said non-dispensing position toward said dispensing position.

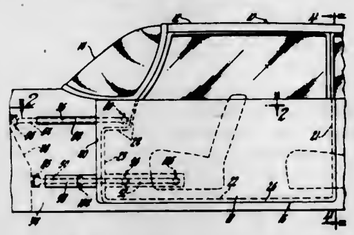
3,095,599
ADJUSTABLE SOFFIT PLATE
David R. Lasier, Princeton, Ill., assignor, by mesne assignments, to Schlage Lock Company, a corporation of California
Filed Oct. 29, 1954, Ser. No. 465,507
8 Claims. (Cl. 16—49)

4. A soffit plate for use in combination with a door, a door frame, and a door closing and checking device having a crank arm pivotally connected to one end of a forearm, said soffit plate comprising a bracket having a slot formed therein adapted to be mounted in said door frame, said bracket having downwardly projecting flanges defining a housing, a channel member above said slot, a slidable member within said channel member mounted for sliding movement along said slot, a shank member

connected to said slidable member and depending through said slot for pivotally holding the other end of said forearm about an axis, and holding means including a set screw spaced from the axis of said shank member operatively associated with said slidable member and said bracket for maintaining said shank member at a selected position, said channel member coacting with and guiding said slidable member to selected positions wherein the latter member is fastened by said holding means.



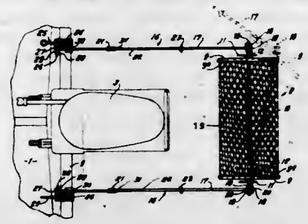
3,095,600
DOOR HINGING ARRANGEMENT FOR VEHICLE BODIES
Hans S. Bretzner, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 18, 1960, Ser. No. 15,919
3 Claims. (Cl. 16—163)



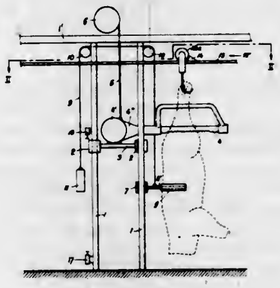
3. Hinge means for mounting a closure member on a body member for movement of the closure member between open and closed positions with respect to the body member comprising, in combination, a pair of hinge arms swingably mounted on said body member, a pair of pivotal connecting means, one for each of said hinge arms for mounting said closure member on said hinge arms for bodily movement between said open and closed positions, said connecting means permitting simultaneous pivotal movements of said closure member relative to said hinge arms about a common horizontal axis extending through both said connecting means and vertical axes extending through each of said connecting means during movement of said closure member, pivotal movement of said closure member about said horizontal axis permitting said closure member to swing inboard and outboard with respect to said body member, and means interconnecting said closure member and said body member and controlling pivotal movement of said closure member about said horizontal axis during bodily movement of said closure member between said positions thereof to thereby control movement of said closure member inboard and outboard with respect to said body member.

3,095,601
FISH SCALER AND CLEANER DEVICE
Harvey J. Wier, Sr., P.O. Box 124, Opelousas, La.
Filed Jan. 16, 1961, Ser. No. 82,809
6 Claims. (Cl. 17—5)

1. In a device for cleaning fish adapted to be towed behind a boat; an elongated hollow cylindrical container having a perforated wall and end closures; a plurality of blade-members extending angularly inwardly of the wall, arranged to contact fish placed in said container to remove the scales therefrom as the container rotates in the water as it is being towed behind a boat; a plurality of angularly disposed offset elements extending outwardly of the wall arranged to contact the water as the container is towed through the water by a boat to thereby rotate the container; towing means attachable to a boat in position to extend rearwardly thereof; said towing means including spaced arms embracing opposite ends of the container; and means for rotatively attaching the ends of the container to the ends of the arms.



3,095,602
DEVICE FOR HALVING THE BODIES OF SLAUGHTERED ANIMALS
Antonín Köttner, Hybesova 42, Slapanice, near Brno, Czechoslovakia
Filed Feb. 3, 1961, Ser. No. 86,974
Claims priority, application Czechoslovakia Feb. 19, 1960
1 Claim. (Cl. 17—23)



A machine for halving bodies of slaughtered animals, such as cattle, pigs, or the like, suspended by their hind legs, comprising in combination

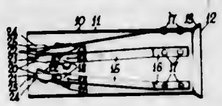
(*a*) a cutting tool reciprocable in substantially horizontal direction and located to start its downwardly directed operation between said hind legs;
(*b*) an electric motor reciprocatively operating said cutting tool;
(*c*) a support for said electric motor mounted for reciprocable movement in vertical direction between an uppermost and lowermost position;
(*d*) vertical guide means for said support;
(*e*) reversible driving means effecting said reciprocable movement of the support;
(*f*) stabilizing means holding the suspended animal body in operating position relative to the cutting tool and slidingly mounted on said guide means to be pushed downwardly by the downwardly moving support during the halving operation;
(*g*) a pair of rails horizontally extending above the uppermost position of the cutting tool and parallel thereto, said rails spaced to support the hind legs of the animal body in spread position;
(*h*) suspending means movable on said rails holding the animal body by its hind legs;
(*i*) first electric switch means for the electric motor

and for said reversible driving means, said switch means actuated by said suspending means in their rest position when holding the animal body in contact with said stabilizing means and causing the downward movement of said support for the electric motor and the operation of the cutting tool;

(*j*) a second electric switch means actuated by said support in its lowermost position to switch off the motor operating the saw and to reverse said driving means causing said support to move upward;

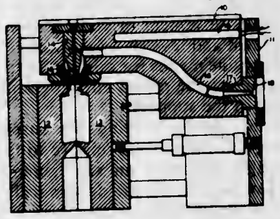
(*k*) and third electric switch means actuated by said support in its uppermost position to stop said driving means.

3,095,603
SAUSAGE SLITTING HAND TOOL
Matthew A. May, 287 Union Road, West Seneca, N.Y.
Continuation of application Ser. No. 838,318, Sept. 4, 1959. This application Mar. 5, 1962, Ser. No. 177,940
5 Claims. (Cl. 17—25)



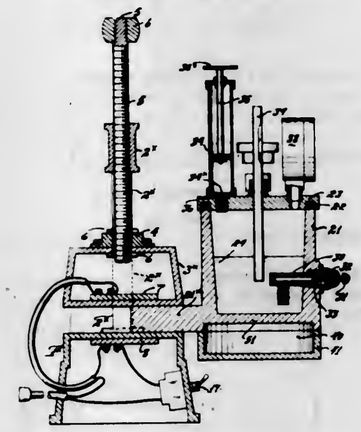
1. A hand tool for slitting sausages of different diameters and lengths comprising, in combination, an open-ended tubular body of a diameter freely to receive a sausage and to permit its movement in an axial direction, one end of the body being an entrance end and being available for the introduction of the sausage and the other end being a discharge end and being available for the removal of the sausage, and a plurality of spaced radially disposed flat leaf spring arms, each having one end portion rigidly secured to and within the body adjacent its entrance end, the spring arms terminating within the body and extending inward and downward in parallel relation from their secured ends whereby their free end portions act in cooperation resiliently to receive and center the sausage as manually moved in an axial direction through the body, the arms severally being provided adjacent their free ends with inwardly projecting knives, each having an inclined cutting edge whereby it operates with a shearing action to slit the skin of the sausage and penetrate the meat to a predetermined extent, the knives acting conjointly to form a plurality of parallel slits in the sausage during its movement through the body.

3,095,604
HOT RUNNER FOR MOLDING MACHINE
Robert L. Ackaret, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 6, 1961, Ser. No. 101,113
6 Claims. (Cl. 18—5)



1. A molding machine comprising molding means, plasticizing means for supplying moldable plastic material to said molding means, a hot runner for conducting moldable material from said plasticizing means to said molding means, said runner comprising a solid metal member having a passageway therethrough formed by a curved unitary seamless metal tubular conduit and heating means encased within said member.

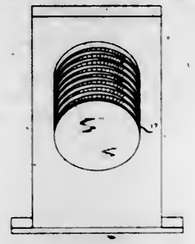
3,095,605
VULCANIZER PRESS WAX INJECTORS FOR MOLDS
Aron Finelt, 130—17 236th St., Laurelton, N.Y.
Filed June 7, 1961, Ser. No. 115,445
4 Claims. (Cl. 18—6)



1. A vulcanizer press-wax injector for molds comprising a platen-press adapted as a vulcanizer and a wax injector coactive to transfer heat by conduction from the press to the injector after a pressing and thermal action of the press, and coactive to revert said heat transfer, and consisting of a press base-member formed with a horizontal platen and an electrically induced heating element carried by the platen, a movable press platen overlying the base platen, and an electrically induced heating element carried by said movable press platen, an electric circuit leading to said heating elements and including a preset thermostatic switch, and a manually operated switch, each for make-and-break of the circuit, a wax injector body having a lateral thermal-conducting plate adapted to be brought under the press platen of the vulcanizer means for clamping said plate between the press platen and the base platen of the vulcanizer press, an electric circuit in the wax injector and including a thermostatic switch, the circuit for the vulcanizer press including a plug-in member having three contacts, and the circuit for the wax injector having a coacting plug-in device with at least two contacts corresponding with like contacts in the plug-in device of the vulcanizer press and to be received therein, the connecting contacts for the two plug-in devices and their circuits, being adapted to restore the circuit in the vulcanizer press broken by operation of said manual switch, and thermal operation of the thermostatic switch in the wax injector being adapted to break said circuit to the heating plate of the press.

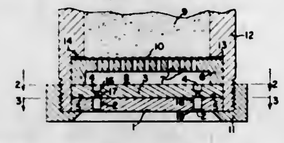
3,095,606
METHOD AND APPARATUS FOR PRODUCING COLD DRAWN MONOFILAMENTS
John N. Scott, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 97,089
3 Claims. (Cl. 18—8)

2. In an apparatus for producing a plurality of cold drawn thermoplastic filaments simultaneously which comprises, in combination, an extruder having a die to form said filaments, quenching means for cooling the extruded filaments, first roller means for removing quenched filaments from the bath, second roller means for drawing said filaments from said first roller through a drawing means, means for storing said drawn filaments, and a grooved, stationary, and cylindrical drawing means disposed between said first and second roller means so positioned as to apply simultaneous stretch to each filament drawn through separate grooves on said drawing means, said drawing means comprising an internally heated cylinder having on the outer peripheral surface thereof a plurality of circumferentially spaced, parallel tapered grooves



lying in spaced planes, which planes are perpendicular to the longitudinal axis of said cylinder, extending in length at least approximately one-half the circumference of said cylinder, the number of grooves provided on said cylinder being sufficient to allow drawing a separate filament through each groove, each of said grooves having a channel shape corresponding substantially to the cross-sectional shape of the filament being drawn through the groove and having a width varying from the undrawn filament diameter at one end to the drawn filament diameter at the other end so as to apply circumferential pressure to the filament.

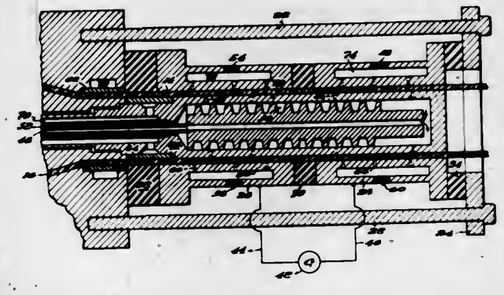
3,095,607
SPINNERET ASSEMBLY
James S. Cobb, Jr., Martinsville, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 10, 1962, Ser. No. 208,748
4 Claims. (Cl. 18—8)



1. In a spinneret assembly for the extrusion of fiber-forming material into a plurality of shaped filaments by passage through a bank of non-circular orifices in a spinneret plate, the improvement comprising a metering plate directly adjacent the upstream face of the spinneret plate and having a plurality of substantially identical circular apertures therein in alignment with said orifices, each aperture communicating directly with a single orifice, the apertures providing substantially equal flow of fluid to the respective orifices with which they are aligned and providing a resistance to flow of fluid at least twice the resistance offered by the orifices of the spinneret plate to the same fluid flowing to the same extent through the orifices.

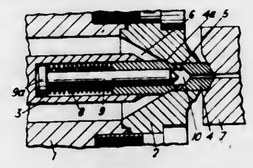
3,095,608
PROCESS AND APPARATUS FOR EXTRUDING AND CURING POLYMERIC COMPOSITIONS
David D. Munsell, Manchester, Mass., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,396
7 Claims. (Cl. 18—14)

6. In extrusion apparatus for continuously extruding and simultaneously curing to tubular form a polymeric composition the minimum practical curing temperature for which is substantially above the temperature required for satisfactory extrusion thereof, an improved die assembly located at the discharge end of said extrusion apparatus comprising an elongated inner mandrel member concentrically mounted within an elongated outer die member thereby forming a uniform annular channel between said mandrel and die members, said mandrel member being electrically isolated from said die member,



confined fluid circulating means for indirectly cooling the inner surface of said die member, a helically grooved passage positioned within said mandrel member near the outer surface of same with enclosed conduit means for introducing a fluid coolant internally to one end of said passage and enclosed conduit means for withdrawing fluid coolant from the other end of said passage, and means for imposing a high frequency dielectric field across said annular channel.

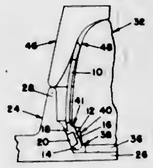
3,095,609
NOZZLE CLOSURE FOR INJECTION MOULDING PRESS
Lucien Lievre, Chazay D'Azergues, France, assignor to Societe Rhodiaceta, Paris, France, a French body corporate
Filed Jan. 22, 1962, Ser. No. 167,640
6 Claims. (Cl. 18—30)



1. In an injection moulding press provided with an injection cylinder movable to and from a mould between an injection position and a retracted position and with an injection nozzle carried by this cylinder, a closure for said nozzle, such closure comprising a valve slidably mounted in said nozzle for limited movement relatively thereto and having an injection channel for the passage of material to be injected from the interior of the cylinder through the valve and outwardly thereof into the mould, means defining a chamber within said valve immediately upstream of said injection channel, the said valve having ducts leading into said chamber and positioned so that, when the cylinder is in its injection position, the valve is in such a position in the nozzle that the said ducts provide communication between the interior of the injection cylinder and the said chamber while when the cylinder is in its retracted position and relative movement between the nozzle and valve having occurred, the said nozzle closes this communication, and a plunger movable

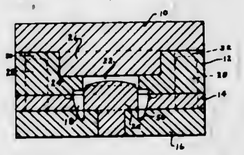
with the said injection cylinder and so resiliently connected to the said valve that, when the cylinder moves away from its injection position, the said plunger moves relatively to the valve and creates a suction in said chamber.

3,095,610
HAIR RETAINING COMB AND METHOD OF MAKING THE SAME
Lester T. Sawyer, % Diadem, Inc., Leominster, Mass.
Original application Nov. 17, 1960, Ser. No. 70,066. Divided and this application Sept. 26, 1961, Ser. No. 140,855
2 Claims. (Cl. 18—34)



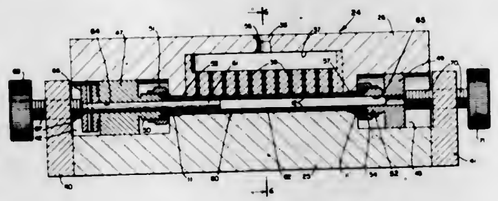
1. A die for converting a generally flat annular blank having an internal annular ring-like member which is solid and includes an inner rib, an outer rib, and an intervening groove, with teeth on the outer ring, into a generally cylindrical or crown-like object, in which the general plane of the bottom of the groove is at an incline with respect to the general plane of the teeth, said mold comprising a base member having an upstanding annular ridge and a vertical inner surface in the upper portion and a downwardly and inwardly directed inclined surface in the lower portion thereof, said surface also being annular, an upper cylindrical die member adapted to fit into the ridge on the base member, said upper die member having a circumferential inwardly directed slanted surface conforming in general to the aforementioned inclined surface, and having means to engage the flat blank at the inner portion thereof and carry the same down to a point near the bottom of the lower member, the ridge bending the teeth relatively upwardly with respect to said back member, said means including an annular shoulder adjacent the lower portion of the inwardly directed slanted surface area on the cylindrical member, said shoulder being adapted to engage the innermost portion of said flat blank in order to catch it and force it downwardly.

3,095,611
MOLD
John E. Borah, 815 Mishawaka Ave., Mishawaka, Ind.
Filed Jan. 12, 1960, Ser. No. 1,924
5 Claims. (Cl. 18—36)



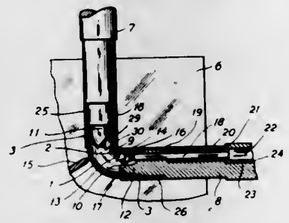
2. A mold for embedding an endless, normally limp chain of beads connected to one another by stems in a gasket of rubber and rubber-like material with the beads forming the chain partially exposed in the gasket as removed from the mold, comprising a pot well member having a recess therein for moldable material, a plunger in said recess, a bottom plate having an annular mold cavity, and a continuous series of upwardly-facing circular recesses in the bottom of said bottom plate forming a portion of the wall of said cavity, said recesses being of substantially the same radius as the beads of said chain with a spacing from one another substantially the same distance as the spacing between the beads of said chain when taut.

3,095,612
APPARATUS FOR MAKING CONDUIT
Harold Pendorf, Sidney, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Original application Nov. 2, 1956, Ser. No. 620,023, now Patent No. 2,981,982, dated May 2, 1961. Divided and this application Jan. 15, 1960, Ser. No. 2,633
3 Claims. (Cl. 18—36)



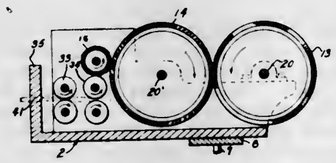
1. Apparatus adapted for lining and impregnating with a sluggish fluid compound the porous walls of a conduit having sleeve-like terminal fittings with flanges adjacent their outer ends, comprising a longitudinally divided mold having an elongated cavity formed between confronting parts of the mold, said cavity in its generally central part being in the form of a mold cavity receiving the conduit in extended condition, at portions thereof immediately outwardly of the mold cavity being in the form of counterbores of larger diameter than the mold cavity and of such diameter as snugly to receive the adjacent end portions of the sleeve-like terminal fittings on the conduit, and at its outer ends being in the form of passages of larger diameter than the counterbores and receiving the flanges of the terminal fittings on the conduit, the junctions between the mold cavity and the counterbores and the junctions between the counterbores and the passages being in the form of generally transverse annular shoulders, the sleeves on the terminal fittings lying within the counterbores and having generally transverse inner end surfaces overlying the shoulders at the opposite ends of the mold cavity, a block beyond each end of the mold cavity, each block being supported in and guided by the respective passage for movement toward and away from the respective end of the mold cavity and for easy removal from the passage, means for detachably securing each respective terminal fitting and its block together in the form of an assembly, each assembly having a generally transverse annular shoulder, each said last named annular shoulder closely confronting the junction between the counterbore and the respective passage in the mold, each block having an inwardly facing abutment surface thereon engaging the outer face of the respective terminal fitting when the block and fitting are in assembled relationship, means mounted on the mold for thrusting each of the assemblies toward the mold cavity so as forcibly to thrust at least one of the inner end surfaces of the sleeve and the last named annular shoulder of the assembly into sealing engagement with the inner end of the respective counterbore and the junction between the respective counterbore and the passage, respectively, and means in the mold for introducing the compound under pressure to the outer surface of the conduit over an area disposed generally longitudinally of the conduit, whereby the conduit and blocks may be inserted and removed from said cavity as a conduit-block assembly when the mold sections are separated.

3,095,613
METHOD AND MEANS FOR THE PRODUCTION OF HOLLOW BENT ARTICLES OF PLASTIC MATERIAL
Børge Johannes Ravn Christensen, Copenhagen-Bagsvaerd, and Ib Refsholm, Copenhagen N, Denmark (both % Patentbureau Erik Larsen, Reventlowsgade 18, Copenhagen V, Denmark)
Filed Dec. 16, 1960, Ser. No. 76,237
Claims priority, application Denmark, Dec. 17, 1959
2 Claims. (Cl. 18—42)



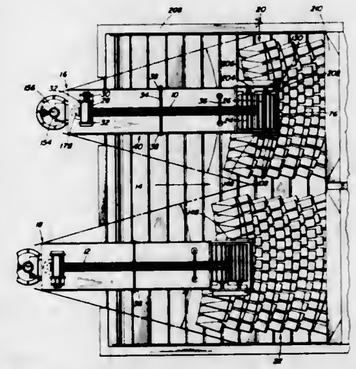
1. A mold for injection molding of bent plastic articles having through cavities, the mold having a pair of separable mold parts having cavities therein conforming the exterior shape of the article to be molded, and cores movable into and out of the mold cavity where the molded article has an interior through cavity, the cores substantially conforming the shape thereof and thereby abutting closely together in this cavity, the cores each having an extractable additional segmental core part which core parts during the molding abut closely against each other and in their associated cores and each have an arci-formed surface which surfaces together conform an inner rounded and concave curved wall portion in the cavity in the article and which core parts are so extractable from their associated cores and movable that they can be drawn completely inside the limitation of the remaining part of their associated cores when these are drawn out of the cavity in the molded article.

3,095,614
FIBER TRANSFER DEVICES
David Pelton Moore, Marlow, N.H. (9210 Flower Ave., Silver Spring, Md.)
Filed Aug. 10, 1961, Ser. No. 131,057
5 Claims. (Cl. 19—99)



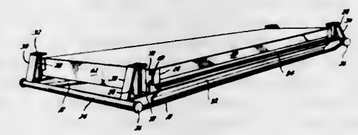
1. A fiber transfer device, including in combination, a main supporting frame, a main drum having a fiber receiving surface mounted in the frame, a plurality of pairs of feed-in rollers at one end of the frame for feeding fibers to the main drum, a doffer brush mounted on the frame at the end remote from the feed-in rollers to remove fibers from the main drum, the active surface of the brush being of greater width than the active surface of the main drum, and a slotted transparent sliver guide and finger protector mounted in the frame in advance of the feeding rollers.

3,095,615
PLAITING APPARATUS
Lloyd J. Ponson, Gulf Breeze, and Robert H. Becker, Pensacola, Fla., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Aug. 22, 1961, Ser. No. 133,214
7 Claims. (Cl. 19—163)



1. Plaiting apparatus comprising a stationary support; a plaiter arm pivotally mounted at its rearward end to the upper part of said support and at an angle of approximately 90° thereto; a housing attached to the forward end of said arm, said housing being adapted to permit the direct passage therethrough of a tow of filamentary material; means for oscillating, for a controlled distance, said arm and the housing attached to its forward end; drawing means including cooperating star rolls for drawing the said tow to the said housing; means for driving said star rolls; and a plurality of guide means positioned above and along the said arm for guiding the said tow to the said drawing means.

3,095,616
PORTABLE BUILDING AND APPARATUS FOR THE TRANSPORTATION AND ERECTION OF THE SAME
Floyd E. Bigelow, Jr., 6614 Lindyann, Houston, Tex.
Filed May 2, 1960, Ser. No. 26,234
2 Claims. (Cl. 20—2)

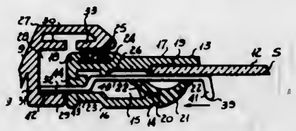


1. In a portable building the combination with a floor, separate walls laid in superposed relation on the floor and a roof positioned over the walls, coacting with the floor and enclosing the walls, of a supporting frame upon which the floor is positioned and having upwardly and inwardly sloping end faces and horizontally extending portions extending inwardly from the upper ends of said faces above said roof in position for engagement with another such supporting frame to support the same above said roof.

3,095,617
MEANS TO PRECLUDE WIND FLEXING OF A STORM SASH
John Bruno, 495 E. 22nd St., Paterson, N.J.
Filed July 6, 1959, Ser. No. 825,129
6 Claims. (Cl. 20—55)

5. In a storm sash assembly of the class wherein a sash unit having side walls and inherently susceptible to

lateral flexing in either direction between the ends of the walls is disposed within a frame unit effective to preclude the lateral flexing in one direction, the combination with a slidable bar member extending into each of the walls between its ends and having an anchoring



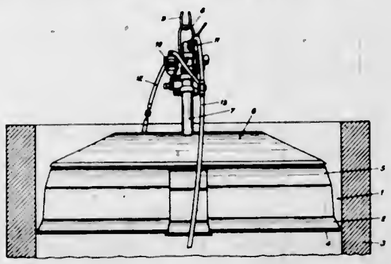
offset end section encased within the respective wall and projectable therefrom into the frame unit for anchoring engagement therewith to preclude lateral flexing of the sash unit in the opposite direction when each of the members is so projected.

3,095,618

CASING FOR THE PRODUCTION OF A SHRINKAGE FUNNEL INHIBITOR COATING IN AN INGOT OR LIKE MOLD

Georges Roussos, Paris, France, assignor to Anstalt fur Technische Entwicklung und Verwertung, Vaduz, Liechtenstein

Filed Dec. 5, 1961, Ser. No. 157,060
Claims priority, application Switzerland Dec. 9, 1960
2 Claims. (Cl. 22—9)



1. In a casing for the production of hot tops and the like, an expansible set of plates defining an inner enclosure, means defining a supporting frame within said enclosure, means defining sector members, means pivotally connecting said sector members with said frame, locking means for securing said sector members to said frame in different pivotal positions, telescopic arms connecting said plates to said sector members, means defining fluid operated control jacks secured to said frame and having rectilinearly movable elements, means pivotally connecting said rectilinearly movable elements with said plates, conduit means connecting said control jacks with a source of operating fluid, valve means in said conduit means for controlling the admission of said operating fluid to said control jacks whereby to vary the cross-section of said casing, and pipe means connected to said casing for supplying carbon dioxide gas for hardening an exothermic mixture to form said hot top.

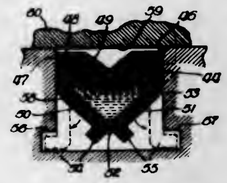
3,095,619

METHOD AND MEANS FOR SEALING ADJACENT COACTING CLOSURE SURFACES OF CAVITY CONTOURING STRUCTURES

Edwin F. Peterson, P.O. Box 151, Neponset, Ill.

Filed Dec. 16, 1958, Ser. No. 780,775
40 Claims. (Cl. 22—10)

1. The method of providing a seal strip in a surface of one of two separable coacting meeting surface areas of a pair of parts as a sealing means between the meeting surfaces of said parts to counteract fluid flow between such parts under differential pressure conditions existing on opposite sides of said parts comprising forming a recess in the meeting surface of said one part, applying a quantity of activated puffable material in the recess, placing an independent seal element in said recess in contact with said material to one side of the meeting



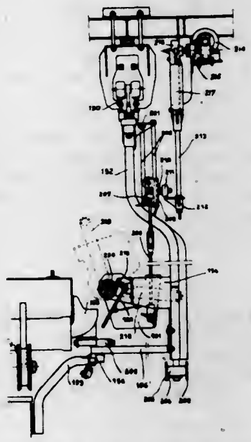
surfaces of said parts, uniting the two coacting parts along their meeting surfaces to confine said puffable material and said seal element between the meeting surfaces of said parts and the inner confines of the recess in said one part, and maintaining said parts in such united surface to surface position until the permissible expansion of said material ceases.

3,095,620

FOUNDRY MACHINES

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, Seine, France

Filed June 26, 1961, Ser. No. 119,672
Claims priority, application France July 26, 1960
1 Claim. (Cl. 22—64)



A foundry installation for filling molds continuously rotated on a horizontal platform from molten metal ladle devices carried by a continuously driven conveyor system comprising a rotating circular platform, a plurality of circumferentially spaced molds carried thereon, a ladle conveyor system including an endless driven conveyor circuit, a plurality of ladle pouring devices carried on said conveyor circuit and movable around said circuit, a by-pass conveyor circuit disposed between two points of said endless circuit and adjacent said platform, with the opposite ends of said by-pass circuit intersecting said endless circuit at said points, said by-pass circuit comprising a casting station between said points, said by-pass circuit provided with spaced horizontal rails, the ladle device including rollers carried on said rails, a main vertical frame member depending from said rollers, forks on the lower end of said frame member, trunnion members carried on said forks, a molten metal ladle carried by said trunnion members, upset means on said frame

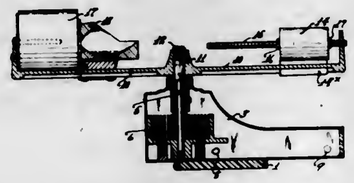
member for upturning said ladle to pour metal into a mold, a horizontal driven arm member on said frame member extending toward said platform with a roller on its outer end, a horizontal arm drive member on said platform extending toward said arm roller for engaging it to move said ladle device along said by-pass circuit, recess means on said platform, pin means on said horizontal arm driven member adapted to project into said recess means to center the ladle with respect to a mold at said casting station, friction brake means disposed along said by-pass circuit, roller means on the bottom of said frame member for engaging said friction brake means to stop movement of a ladle device until said horizontal arm drive member engages said arm driven member, and motor driven cam means on said by-pass circuit disposed thereon at said casting station to operate said upset means to upturn a ladle and pour its contents into a mold when said ladle and a mold on said platform come into alignment with each other at said casting station, and ramp means on said frame member to actuate said motor driven cam means when a ladle arrives at said casting station.

3,095,621

MULTI-ROTATIONAL CASTING MACHINE

Aron Finelt, 130—17 236th St., Laurelton, N.Y.

Filed June 7, 1961, Ser. No. 115,426
2 Claims. (Cl. 22—65.1)



1. A multi-rotational casting machine comprising an elongated hollow body member, a shaft extending transversely through said body member, power means in the body member for rotating said shaft, an end of the shaft extending through the body member, a supporting bracket having spaced arms adapted to embrace said body member at its base and also centrally thereof when the hollow body is positioned vertically or horizontally, an arm carried by said shaft exterior of the body member and releasable means for holding the arm firmly upon the shaft, means at one end of the last named arm for rigidly holding a mold containing flask and a supply chamber for a charge of wax or metal means carried by the opposite end of the last named arm and adapted to adjustably hold a counterweight movable longitudinal of the arm, and a counterweight held by said last named means.

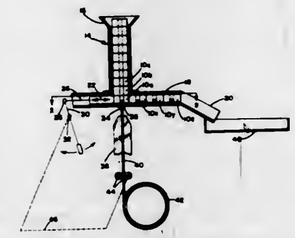
3,095,622

APPARATUS FOR MANUFACTURE OF ALLOYED SEMICONDUCTOR DEVICES

Walter Otto Ramser, Nurnberg, Germany, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed June 10, 1959, Ser. No. 819,365
Claims priority, application Germany June 11, 1958
8 Claims. (Cl. 22—75)

1. Apparatus for manufacture of semiconductor devices comprising: a plurality of coaxially apertured discoid mold elements constructed of highly polished refractory material not wet by molten alloy materials effective to form rectifying junctions in semiconductors; a tubular magazine open at at least one end and adapted to contain a plurality of said mold elements in coaxial juxtaposition; guide means adjacent said one end of said magazine and extending substantially perpendicular thereto, said one end of the magazine opening into said guide means, said guide means having one surface remote from said magazine spaced from said one end thereof by a distance at least slightly larger than thickness of one of said elements but less than twice said thickness; means defining an aperture in said one surface of the guide means coaxially aligned with said magazine, at least



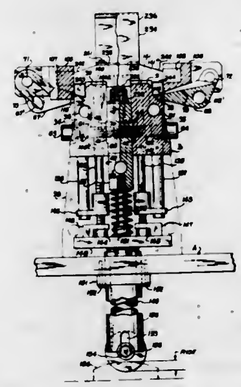
one side of said aperture being bounded by a cutting edge substantially flush with said bottom surface; wire guide means disposed adjacent said one surface and coaxially aligned with said aperture therein and said tubular magazine; and plunger reciprocably mounted for movement in said guide means along a rectilinear path with the head end of said plunger traversing to and fro across said open end of the magazine.

3,095,623

MOLDING DEVICES

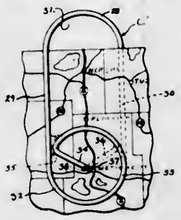
Fred R. Kerns, Cleveland Heights, and Robert R. Mease, Eastlake, Ohio, assignors to The Electric Storage Battery Company, a corporation of New Jersey

Filed May 31, 1960, Ser. No. 32,997
6 Claims. (Cl. 22—155)



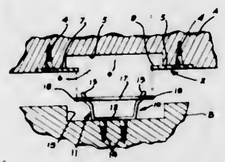
1. In a molding device, means having a mold cavity for receiving liquid molding material, said cavity having a side open throughout the length of the cavity, a gate having a trough portion for receiving molding material and guiding the received material to the cavity through the open side, means mounting said gate for movement about a first axis generally parallel to the length of the cavity between an operative position wherein the trough is aligned with the open side to permit guiding of material thereto, and an inoperative position wherein the trough is misaligned from the open side, a shear lever independent of said gate, and means mounting said lever for pivotal movement about a second axis transverse to the first axis across the open side of the cavity, said gate being secured to said shear lever for movement therewith.

3,095,624
MAP HOLDER AND CLIP
Elmer E. Croisant, Rte. 1, Omro, Wis.
Filed Apr. 3, 1961, Ser. No. 100,258
2 Claims. (Cl. 24—66)



2. A map holder and clip formed of a resilient plastic stock molded to provide an arcuate shaped upper loop portion, an intermediate body portion, including a pair of depending legs each secured to a respective end of said arcuate loop, lower depending resilient jaws at the end terminations of said legs and being of a generally enlarged circular shape to confine and surround an immediate general area of said map, and straight stretches each defining a pointer extending inwardly from each jaw towards the axial center thereof to indicate a specific point of interest on the map, said intermediate body portion and depending legs thereof being of a sufficient length in relation to said upper loop portion and said lower resilient jaws to space said resilient jaws a substantial distance from said loop portion, whereby the immediate general area of said map confined by said jaws may lie well within the body of the map held therein.

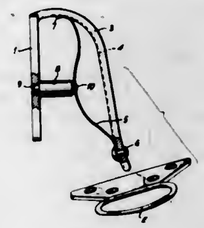
3,095,625
CONNECTOR
Robert L. Propst, Englewood, Colo., assignor to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan
Filed Aug. 15, 1960, Ser. No. 49,740
14 Claims. (Cl. 24—217)



1. A device for connecting two pieces of material, comprising: a first connector means secured to one piece of material; a second connector means secured to the other piece of material, said second connector means including a resilient tensioned member; said tensioned member including portions held under tension with respect to each other, said portions thereby normally exerting pressure toward said second means; and an element releasably holding said portions under said tension; said first connector means engaging said element upon being positioned behind said portions; and said element yieldingly movable upon pressure, thereby releasing said portions from said tension, whereby said portion draw said first and second means together and prevent removal of said first connector means.

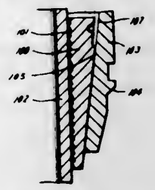
3,095,626
HOOK FASTENER
Christoph Gubbels, Osterstrabe 103, Hamburg, Germany
Filed Oct. 9, 1961, Ser. No. 143,650
2 Claims. (Cl. 24—225)

1. A hook fastener device for fur garments, comprising a perforated flat base plate having a plurality of spaced holes for attaching the plate to a garment, a projection on the base plate curved to form a hook, there being a channel on the inside of said projection, a curved blade spring having one end fixedly secured to the free end of said projection and another end slidable in that part of the channel adjacent the base plate, said spring having an intermediate convex portion spaced from said plate, a pin



mounted in the base plate and normally engaging said convex portion, said other spring end, said convex portion and said plate defining a closed, yieldable and separable loop portion, a ring member adapted to be secured in locking engagement in said separable loop portion without contacting the fur and means for securing said ring to a garment.

3,095,627
PIPE ANCHOR
Charles F. Johnson, Houston, Tex., assignor to McEvoy Company, Houston, Tex., a corporation of Texas
Original application May 14, 1954, Ser. No. 429,870. Divided and application June 6, 1958, Ser. No. 740,228. Divided and application Feb. 9, 1960, Ser. No. 7,673, now Patent No. 2,887,754, dated May 26, 1959. Again divided and this application July 7, 1960, Ser. No. 41,447
11 Claims. (Cl. 24—263)

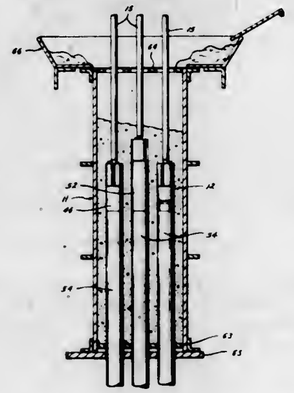


9. A slip having a generally segmental cylindrical face with sharp teeth on said cylindrical face and having an opposite face tapering relative to the axis of said cylindrical face, said tapering face having particles of irregular size and surface configuration secured on said tapering face in abutting surface contact with the outer surface thereof with said particles being harder than the base material of said slip.

3,095,628
CONDUIT FORMING MACHINE
Douglas N. Norton, West University, and Marion C. McKinley, Houston, Tex., assignors of small interests to various assignees
Filed Feb. 15, 1957, Ser. No. 640,502
3 Claims. (Cl. 25—36)

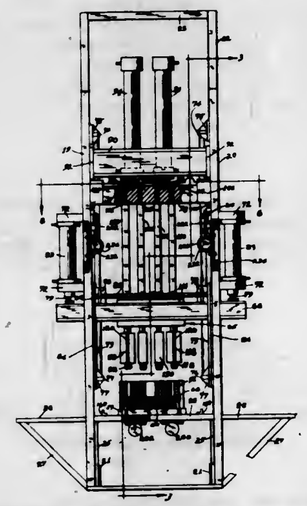
1. A conduit forming machine comprising, a form having in-line openings in opposite ends thereof, a plurality of packer heads mounted for rotational and axial movement in said form, said packer heads entering and leaving the form through one of said openings, each of said heads having a slinger section and a trowel section with the slingers arranged to precede the trowels in forming conduit and certain of said slinger sections being radially opposed to a trowel section of an adjacent head, cylindrical followers mounted for rotational and closely

guided axial movement along the axes of rotational and axial movement of the heads, said followers entering and leaving the form through the other opening in the form and each having a releasable concentric engagement with one of the heads, said followers being of slightly less diameter than the troweling sections of the heads and



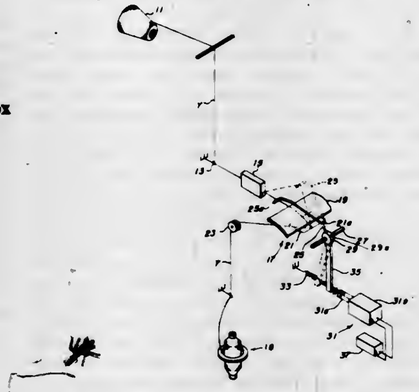
providing trowels, and means anchored relative to said form for driving the heads and followers including means separately connected to the heads and followers, respectively, for rotating the heads and followers and simultaneously moving them along said axes with the heads preceding the followers to form slurry in the mold into a multi-hole conduit.

3,095,629
APPARATUS FOR MAKING PRE-CAST CORED BUILDING BLOCKS
Leonard D. Long, % Long Construction Co., P.O. Box 288, 2110 Mount Pleasant St., Charleston, S.C.
Filed Nov. 17, 1959, Ser. No. 853,475
5 Claims. (Cl. 25—45)



1. An apparatus for making cored building blocks, comprising a supporting frame having a horizontally disposed worktable mounted thereon, a mold on said worktable defining the outer faces of the blocks to be produced, said mold including a bottom palette longitudinally slidable upon said worktable into an operative position in which it is interposed between a pair of opposed sidewall-forming members, said sidewall members being slidable upon said worktable normal to said bottom palette between operative positions overlying said bottom palette and retracted positions remote therefrom, and a removable top palette supported above the bottom palette on said sidewall-forming members, said top palette and worktable having a first set of aligned openings formed therein and said bottom palette having a second set of openings formed therein and disposed in alignment with said first set of openings upon movement of said bottom palette into its operative position, a plurality of vertically movable shafts supported from the supporting frame above the mold and extending through said top palette, a plurality of end-formers and expandable core-formers slidably carried on said shafts below said top palette and adapted to form the end faces and cores of the blocks, and means for moving the shafts vertically with respect to the worktable to move said end and core-formers to and from operative position in the mold in alignment with said first and second sets of openings, said shafts being movable through the planes of the end and core-formers and said first and second sets of openings to cause the core-formers to expand to compress the aggregate in the mold.

3,095,630
METHODS AND APPARATUS FOR PRODUCING INTERMITTENTLY ELASTICIZED YARNS
Edgar Henry Pittman, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Nov. 12, 1959, Ser. No. 852,508
9 Claims. (Cl. 28—1)

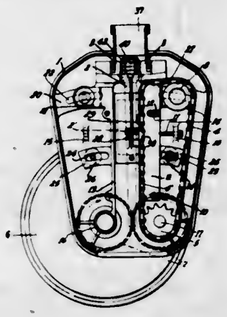


1. The method of processing thermoplastic yarn comprising heating said yarn and passing said yarn in a heated state over and past a sharp-bend surface with a sharp angle of bend in the path of said yarn as it passes over said bend surface, and intermittently altering the degree of heating of said yarn substantially immediately preceding passage over said bend surface whereby succeeding increments of yarn passing over said bend surface are at different temperatures as they pass over said bend surface and are thereby differentially crimp-modified.

6. Apparatus for processing thermoplastic textile yarn comprising a yarn supply source, a yarn take-up, a yarn crimping device disposed in intermediate flow relation between said supply means and said take-up means, said yarn crimping means comprising a sharp-bend crimping element disposed in yarn-bending relation at a point along the path of said yarn, heater means disposed in substantially immediate preceding flow relation to said yarn crimping element, and means for intermittently altering

the degree of heating of said yarn by said heating means whereby succeeding increments of yarn passing over said sharp-bend crimping element are at different temperatures as they pass in a sharp bend over said element and are thereby differentially crimp-modified.

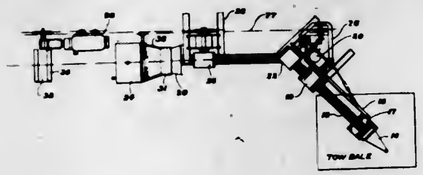
3,095,631
STRIPPING DEVICE FOR BOBBINS
Georg Röhl, 1 Haidschlagweg, Regensburg, Bavaria, Germany
Filed July 12, 1960, Ser. No. 42,407
Claims priority, application Germany July 30, 1959
7 Claims. (Cl. 28—20)



1. In a stripping device for removing yarn from a bobbin and having means for supporting a bobbin from which yarn is to be removed, a pair of endless flexible members, means guiding said endless flexible members for movement of the latter along paths having runs extending along the axis of a bobbin carried by said supporting means and being disposed at opposite sides of the bobbin, and stripping elements carried by said endless flexible members to axially remove yarn from a bobbin carried by said supporting means during movement of said stripping elements along said runs; each of said endless flexible members including an endless chain of pivotally connected links and an endless flexible band extending along the outer periphery of said chain and drivingly connected with the latter, said band projecting laterally beyond the related chain to avoid entanglement of the removed yarn in said chain, and said means guiding each of the endless flexible members including a driving sprocket in meshing engagement with said chain of the related endless flexible member and being mechanically connected with the driving sprocket of the means guiding the other of said endless flexible members so that the movements of said endless flexible members are synchronized to ensure the simultaneous action of said stripping elements against the yarn on a bobbin carried by said supporting means.

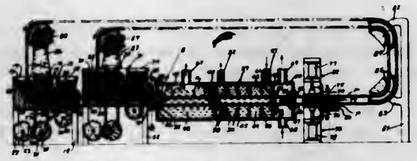
3,095,632
METHOD FOR CONTINUOUSLY OPENING CRIMPED TOW
John Winston Smith, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Original application Nov. 7, 1957, Ser. No. 695,080, now Patent No. 3,016,581, dated Jan. 16, 1962. Divided and this application July 14, 1961, Ser. No. 127,437
3 Claims. (Cl. 28—72)

1. A method for continuously opening a crimped continuous multi-filament tow which comprises subjecting substantially equal lengths of the filaments in the tow to a first tension sufficient to stretch the filaments and temporarily straighten out the crimps, subjecting said filaments to a second tension sufficient to maintain the crimps in the straightened condition, said second tension being applied to adjacent filaments of the tow at different lengths thereof and at an angle to said first tension whereby the crimps in adjacent filaments are drawn out of registry



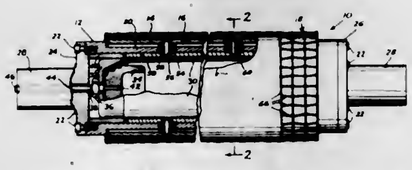
with one another, expanding the cross-sectional dimensions of the tow and restoring the crimps in the tow in the out-of-registry position by abruptly relaxing said second tension.

3,095,633
METHOD AND APPARATUS FOR MAKING STORAGE BATTERY PLATES
John K. Shannon, 2028 63rd Place, Kenosha, Wis.
Filed Mar. 3, 1960, Ser. No. 12,612
4 Claims. (Cl. 29—2)



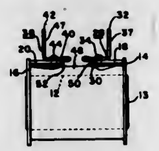
1. The method of continuously and simultaneously manufacturing positive and negative battery plates which consists in first making upper and lower superimposed continuous strips from molten metal in a pot with spaced battery plate grid structures in the strips; second, advancing the strips away from the forming means; third, filling the voids of the grid structures of the spaced strips with lead oxide paste; fourth, activating the paste by oppositely charging the strips and passing the strips through a tank containing electrolyte; fifth, rinsing the strips; sixth, drying the strips; and seventh, simultaneously punching out plates from the spaced strips with each plate embodying a pasted grid structure, both of said fourth and fifth steps being performed in a closed chamber and out of the atmosphere.

3,095,634
ROLLER FOR SURFACING PURPOSES
Arthur T. Williams and Willis D. Smith, Camas, Wash.; said Smith assignor to Charles R. Tidland
Filed Oct. 9, 1961, Ser. No. 143,945
2 Claims. (Cl. 29—113)



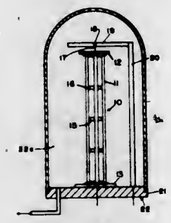
1. A roller for surfacing purposes comprising a substantially cylindrical hollow core, elongated rigid segments extending axially along and spaced circumferentially about said core and forming substantially a cylinder with said cylinder concentrically disposed about said core, anchoring means disposed along the length of each segment secured to the segment and extending into said core, said anchoring means accommodating radial play in each segment, a flexible covering encircling the segments, thin-walled flexible sheathing means detachably mounted about said covering, said sheathing means along its length being uniformly stressed upon radially outward movement of said segments, and pressure-fluid inflated means mounted within said core and operatively bearing upon said anchoring means to produce radially outward movement of said segments upon inflation with pressure fluid.

3,095,635
METHOD OF MAKING A COIL
Donald W. Laviana, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Sept. 11, 1956, Ser. No. 609,274, now Patent No. 2,992,370, dated Dec. 16, 1960. Divided and this application June 21, 1960, Ser. No. 41,715
5 Claims. (Cl. 29—155.57)



1. A method of making a coil having a spool with a core and flanges at each end, each flange having an outwardly extending tab to which a terminal having portions extending axially and radially of the core is attached, comprising the steps of, winding a wire coil around the core, wrapping the ends of the wire coil around the radially extending portions of the terminals, dipping only the radially extending portions of the terminals in molten solder, bending the tabs inwardly to overlay the wire coil, and securing the tabs to the wire coil.

3,095,636
MASS PRODUCTION OF RESISTORS
John G. Ruckelshaus, 110 Pomeroy Road, Madison, N.J.
Filed July 17, 1959, Ser. No. 827,937
3 Claims. (Cl. 29—155.62)



1. A method of making metal film resistors comprising arranging a plurality of dielectric material selected from the group consisting of glazed material, Alundum, porcelain, glass or the like, having internally threaded cylindrical shape, arranging said units in tandem, providing spacers, between each of the units arranged in tandem, assembling said units while in tandem as a whole and arranging the same in an evacuating chamber, subjecting the assembled whole to the action of outgassing, then subjecting the assembled whole to the action of vacuum in said chamber in a range from 10^{-3} to 10^{-7} mm. of Hg, sublimating onto the exposed surface of said dielectric material in the vacuum chamber an alloy material from a coaxial filament of incandescent alloy material, selected from the group consisting of chromium, copper and nickel for a period of 5 minutes to 5 hours at a temperature of 150° C. to 450° C. allowing the vacuum chamber to cool while the vacuum action therein and heating of the filament have been discontinued, removing the whole unit from the vacuum chamber, and then reheating in open air so as to stabilize the unit and grinding the lands to increase resistance to a predetermined value.

3,095,637
METHOD OF MAKING BLOWER BLADE SHEET
Marion I. Levy, Shaker Heights, Ohio, assignor, by mesne assignments, to The Lau Blower Company, Dayton, Ohio, a corporation of Ohio
Filed Jan. 26, 1959, Ser. No. 788,821
3 Claims. (Cl. 29—156.8)

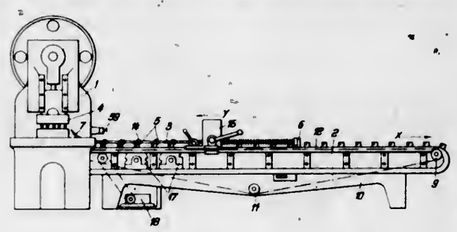


1. The method of forming a blower blade sheet which comprises the steps of blanking out a flat sheet of metal by cutting through said sheet a series of parallel slits extending crosswise thereof to define the leading and trailing edge of a series of blade portions, cutting through said sheet a series of disconnected slots located at the ends of said blade portions with said slots extending generally lengthwise of said sheet and spaced a short distance inwardly of the sides thereof to create a continuous marginal strip along each side of said sheet, said slots diverging laterally at a predetermined angle from the trailing edge of said blade portions to define an inner edge of said marginal strips, trimming the outer edge of said marginal strip opposite said slots to said predetermined angle so that said marginal strips have a uniform width opposite said slots, said slots spaced apart a predetermined distance to leave a gusset of metal between said slots and between each said marginal strip and the remainder of said blade including the leading edge thereof, deforming said blade portions out of the plane of said sheet to form blades, and bending said gussets generally at right angles to the plane of said sheet and straightening said marginal strips to substantially parallel relation with the longitudinal axis of said sheet for increasing the spacing between said blades.

3,095,638
METHOD AND APPARATUS FOR THE AUTOMATIC PRODUCTION OF TUBES PROVIDED WITH TRANSVERSE RIBS ESPECIALLY FOR HEAT EXCHANGERS
Günter Seien, Wanne-Eickel, Germany, assignor to GEA Luftkuhlergesellschaft Happel Gesellschaft m.b.H. & Co. K.G., Bochum, Germany, a firm
Filed Oct. 12, 1960, Ser. No. 62,227
Claims priority, application Germany Oct. 13, 1959
13 Claims. (Cl. 29—202)

1. In an apparatus for placing rib elements on an elongated object, in combination, conveyer means including a set of spaced carrier means movable between an operative position for supporting at least one rib element and an inoperative position, and locking means for locking said carrier means in said operative position, said conveyer means being movable in one direction for moving

said carrier means and rib elements thereon along a path; stationary holding means for holding an elongated object in a position in which at least a portion of the object extends along said path in such a manner that said carrier means in said operative position move along said portion toward said holding means for successively placing rib elements on said portion and for moving rib elements along said portion; and control means moving in a direction opposite to said direction and including a device moving along said path for successively releasing said locking means and for moving successive carrier means from said operative position to said inoperative position so that said carrier means separate from rib elements placed on said portion of the elongated object whereby the rib elements are disposed on said portion in spaced positions corresponding to the positions of said device relative to the elongated object at the time of the release of said locking means and of the movement of said carrier means to said inoperative position.

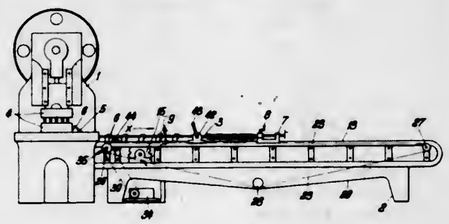


3,095,639

APPARATUS FOR AUTOMATICALLY THREADING TRANSVERSE RIBS ON TO TUBES, ESPECIALLY FOR HEAT EXCHANGERS

Günter Seien, Wanne-Eickel, Germany, assignor to GEA Luftkuhlergesellschaft Happel Gesellschaft m.b.H., & Co. K.G., Bochum, Germany, a firm

Filed Oct. 12, 1960, Ser. No. 62,228
Claims priority, application Germany Oct. 13, 1959
24 Claims. (Cl. 29—202)



1. In an apparatus for placing rib elements on an elongated object, in combination, conveyor means including a set of carriers for rib elements and being movable in one direction for moving the rib elements along a path; stationary holding means for holding an elongated object in a position in which at least a portion of the object extends along said path in such a manner that said carriers move along said portion toward said holding means for successively placing the rib elements on said portion and for moving the rib elements along said portion; and control means moving along said path in a direction opposite to said one direction for successively actuating said carriers to separate from the rib elements on said portion so that the rib elements are disposed on said portion of said elongated object in spaced positions corresponding to the positions of said control means relative to the elongated object at the time of the actuation of the respective carrier.

3,095,640

TOOLS FOR UNWRAPPING WRAPPED ELECTRICAL CONNECTIONS

Arnold William Butterworth, Chadderton, Oldham, and James Edgar Roberts, Wythenshawe, Manchester, England, assignors to Ferranti, Limited, Hollinwood, England, a company of Great Britain and Northern Ireland

Filed Oct. 24, 1960, Ser. No. 64,558
Claims priority, application Great Britain Nov. 4, 1959
3 Claims. (Cl. 29—203)



1. A tool for unwrapping wrapped electrical connections of the type wherein one end of the connecting portion of a wire is wrapped closely against a terminal pin and the other end projects outwardly away from the pin, comprising at least one rotatable tubular member having one end adapted to fit loosely over a wrapped connection, said tubular member containing adjacent but spaced axially from said one end a slot closed at one end and extending transversely to the longitudinal axis of said tubular member and an access to said slot from said one end of said tubular member so formed that when said tubular member is fitted over a wrapped connection the projecting end of the wire may pass by way of said access into said slot, whereby rotation of said tubular member in the opposite direction to that in which said wire is wrapped first causes the closed end of said slot to engage the projecting end of said wire and thereafter causes unwrapping of the wire, the internal diameter of said tubular member being large enough to permit expansion of the wrapped wire therewithin sufficiently to relase the terminal pin, and means for ejecting the unwrapped piece of wire from said tubular member including an outer sleeve mounted on said tubular member in such manner that it is rotatable about the longitudinal axis of said tubular member, said outer sleeve having an axial projection for engaging the projecting portion of said unwrapped wire in said transverse slot and moving it to said access, and an inner sleeve slidable axially within said tubular member for thereafter pushing the unwrapped wire out of said tubular portion.

3,095,641

METHOD FOR MAKING A HANDLE

Rubin Siegel, Cedarhurst, N.Y., assignor to A. Siegel Handles, Inc., New York, N.Y., a corporation

Filed May 10, 1960, Ser. No. 28,051
5 Claims. (Cl. 29—411)



1. The method of making handles which comprises attaching a bendable reinforcing member between each of a plurality of longitudinally spaced insert members to make a continuous strip, encasing the continuous strip in a continuous outer cover, and cutting the strip in approximately the center of each of the reinforcing members to form a handle with covered reinforcing sections at each end.

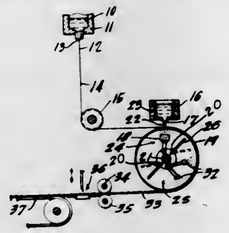
3,095,642

METAL AND FIBER COMPOSITE MATERIALS AND METHODS OF PRODUCING

Paul A. Lockwood, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Nov. 26, 1957, Ser. No. 698,984
5 Claims. (Cl. 29—419)

1. Method of producing a flat sheet of metal and fiber comprising advancing fibers as they are formed from a supply of molten material, arranging the fibers in a parallel pattern as they are advanced, directing the fibers onto an advancing supporting surface, introducing molten metal onto the prearranged fibers to flow the metal between and around the fibers on the advancing surface, solidifying the metal to set the fibers in the pattern formed and thereby create a sheet of metal and fiber, and removing the flat sheet of metal and fiber from said advancing surface.

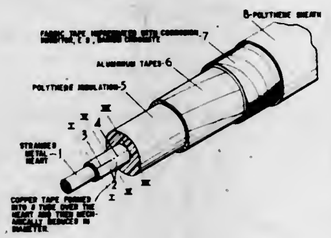


3,095,643

METHOD OF MANUFACTURING SUBMARINE CABLES

Edward Ingram Cooke, London, and James Arthur Donelan, Harrow, England, assignors to Submarine Cables Limited and Pirelli General Cable Works Limited, both of London, England

Filed Feb. 23, 1960, Ser. No. 10,311
Claims priority, application Great Britain Feb. 27, 1959
5 Claims. (Cl. 29—460)



1. A method of manufacturing a submarine cable, said method comprising the steps of applying a longitudinally extending tape of copper of high electrical conductivity with its edges abutting around a torsionally balanced stranded metal heart, butt welding the abutting edges of the tape together in a continuous impermeable seam by means of inert-gas shielded electric arc welding so as to form an ensheathing tube, reducing the diameter of said tube so as to tightly compress said tube on the heart and thus mechanically connect the conductor and the heart together and thereby to inhibit relative movement between them, and thereafter heat extruding a plastic sheath over said tube and in contact therewith.

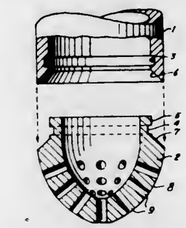
3,095,644

METHOD FOR ATTACHING OVERLAPPED MEMBERS

John L. Curry, Fort Worth, Tex., assignor to Rector Well Equipment Company, Inc., Fort Worth, Tex., a corporation of Texas

Filed Apr. 3, 1958, Ser. No. 726,207
5 Claims. (Cl. 29—527)

5. A method of joining overlapped members, at least one of which has a hollow bore, comprising the steps of: Forming an annular groove on the inner side of the hollow bore of one member; forming an annular groove about the outer surface of the other member; inserting the second named member in the bore of the first named member in position so that the grooves coincide; forming a plurality of holes at approximately equally spaced intervals through the wall of the first named member to communicate with the grooves; introducing molten metallic material through said holes into the grooves; and allowing the molten material to cool and solidify to form an integral metallurgical bond between the members.

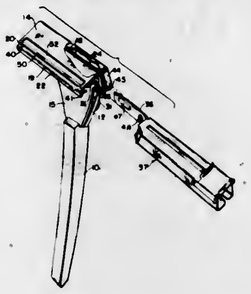


3,095,645

ADJUSTABLE INJECTOR RAZOR AND THE LIKE

Gerald Stahl, Rye, N.Y., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia

Filed July 28, 1961, Ser. No. 127,654
5 Claims. (Cl. 30—63)



1. An injector razor comprising an upwardly-extending support arm, a cap extending forwardly from the top thereof, blade stops on a forward portion of said cap, a spring beneath said cap and forward of said arm for urging forwardly against the blade stops on the cap, a blade lying against the underside of said cap and arranged to be released by the key of an injector magazine, a forwardly-and-rearwardly movable blade seat beneath the cap and adapted to bear upwardly against said blade lying between it and said cap, guard means fixed to the forward end of said seat and adjustable with the seat, a rearwardly-urged forwardly-movable seat-supporting member extending downwardly from said seat, and adjustable means carried by said support arm and having a forward portion variably bearing against said supporting member to move said support member in opposition to said rearward urge to carry said seat and said guard means forwardly to adjust the shaving angle between said guard means and a blade held against said stops.

3,095,646

SLICING KNIFE

George Szekely, 2320 Valentine Ave., Bronx 58, N.Y.

Filed Dec. 6, 1961, Ser. No. 157,502
5 Claims. (Cl. 30—283)

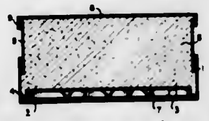
1. An adjustable knife for slicing meat, bread and like products, comprising elongated substantially plate-like handle means having an elongated front edge portion and

a pair of elongated spaced parallel channels; elongated guide means rigid with said edge portion and having a substantially flat outer face disposed in a plane substantially perpendicular to the plane of said handle means; an elongated flat cutting blade; carrier means comprising a pair of substantially L-shaped brackets each having a first arm slidably received in one of said channels and a second arm connected with one longitudinal end of said



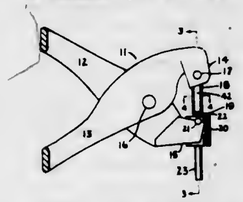
blade so as to maintain the blade in a plane which is substantially parallel with the plane of said outer face, and an elongated connecting member having ends secured to the first arms of said brackets; and means mounted on said handle means and operatively connected with said connecting member for reciprocating said brackets in the respective channels so as to move said blade toward and away from said guide means.

3,095,647
CHEESE MOULD AND INSERT FOR SUCH CHEESE MOULD
Hans Andreas Rossen, Tiset pr Gram, Denmark
Filed Oct. 29, 1959, Ser. No. 849,552
Claims priority, application Denmark Nov. 1, 1958
5 Claims. (Cl. 31—45)



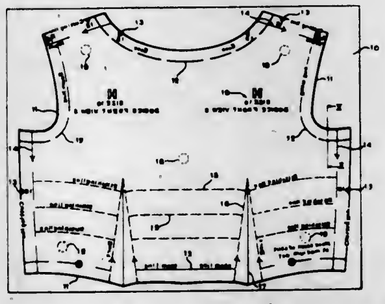
1. A cheese mold comprising a mould wall, a slit single piece shell made of plate material mounted in telescoping contact against the inner sides of the mould wall, a lid having means gripping the uppermost edge of the shell and a bottom member having a bent portion cooperating with said inner mould wall to define a groove of suitable height along the entire circumference of said mould wall, the width of said groove not substantially exceeding the plate thickness of the shell so as to receive the lowermost part of the shell when the lowermost part of the shell is introduced below the upper surface of said bottom member.

3,095,648
PRESS FOR AMALGAMS AND THE LIKE
Norman Landon Ray, 111 84th St., Niagara Falls, N.Y.
Filed June 15, 1960, Ser. No. 36,239
6 Claims. (Cl. 32—40)



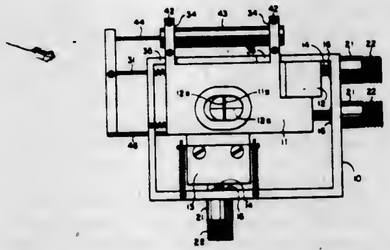
1. As a new article of manufacture, a press comprising a pair of jaws supported in movable relationship, a piston pivotally supported by one of said jaws, the other of said jaws being bifurcated, and having a chamber pivotally supported between the branches of said bifurcation, said chamber having a compaction cavity therein located below the longitudinal axis of the pivotal support of said chamber and; being open at its pivoted end and positioned to receive the free end of said piston in said open end, and means for moving said piston into said compacting cavity.

3,095,649
PATTERNS FOR THE MANUFACTURE OF GARMENTS
Audrey Wightwick, 23 Jameson Road, Bexhill-on-Sea, England
Filed Apr. 17, 1959, Ser. No. 807,051
Claims priority, application Great Britain Apr. 17, 1958
8 Claims. (Cl. 33—12)



1. A pattern for the manufacture of textile garments from a textile comprising a sheet of flexible material, and pattern marking lines and indicia printed in transferable color thereon, each of said lines and indicia being formed of a plurality of transferable colors, at least one of which colors will contrast sufficiently with the color of the textile.

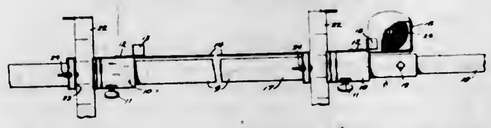
3,095,650
MULTIFILAR MEASURING DEVICE
Bertram Stiller, Washington, D.C., and Frank I. Louckes, Jr., Arlington, Va., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 13, 1959, Ser. No. 813,043
2 Claims. (Cl. 33—46)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device adapted to be secured to the tube of a microscope to measure the width of particles in a microscopic field which comprises a housing, including a cover plate and a bottom plate, said cover plate having an aperture centrally disposed therein, an eyepiece secured in said aperture, said bottom plate having an aperture therein in alignment with said aperture in said cover plate, a sleeve element secured to said aperture in said bottom plate and adapted to fit over the tube of a microscope, three carriages movably mounted in said housing, each of said carriages having an aperture therein in alignment with said apertures in said top and bottom plates, crosshairs mounted on each of said carriages across the center of their respective apertures in said carriages, two of said cross-

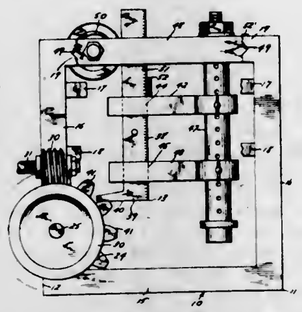
hairs being arranged in parallel relationship and adapted independently to move across the field of view along a line in parallel relationship with movement of their respective carriages, the other of said crosshairs adapted to be moved across the field of view perpendicular to said parallel crosshairs by movement of its respective carriage, a transducer adapted to be connected to said carriages having said parallel crosshairs thereon, said transducer adapted to produce a voltage signal proportional to the movement of said parallel crosshairs as said crosshairs are positioned along opposite sides of said particle to be measured, and recorder means adapted to receive said signal and to record the distance of movement of said crosshairs, said record being a measure of the width of said particle measured.

3,095,651
TRAM GAGE
Alexander H. Luedicke, Jr., Milwaukee, Wis., assignor to Applied Power Industries, Inc., a corporation of Wisconsin
Filed Mar. 28, 1960, Ser. No. 18,067
7 Claims. (Cl. 33—158)



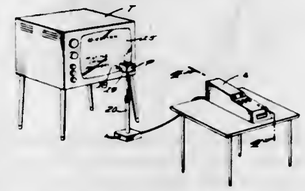
1. In a tram gage which utilizes a flexible housed tape to measure distances between spaced points, an elongated rigid element disposable in proximity to the spaced points to be measured, and a pair of brackets attachable to the element adjacent to said points, one of said brackets being formed to position the tape housing relative to the bar and each of the brackets having thereon a resilient clip for receiving and frictionally clamping the tape to its respective bracket to hold the tape stretched across the gap between said brackets.

3,095,652
MEANS FOR ANALYZING INVOLUTE GEAR PROFILES
William J. Pick, 163 E. St. Marks Place, Valley Stream, N.Y.
Filed Aug. 11, 1959, Ser. No. 832,935
1 Claim. (Cl. 33—179.5)



A device for analyzing involute gear teeth profiles, comprising: a frame element, a shaft mounted for rotation about an axis passing through said frame element, said shaft having means for supporting a gear to be tested coaxially thereupon for rotation therewith, worm drive means mounted upon said frame element and selectively driving said shaft about its own axis through measured predetermined angular increments, locking means operating upon said worm drive means for selectively locking said worm drive means against movement with respect to said frame element; an elongated feeler element having a principal axis substantially perpendicular to said first-mentioned axis, and a shoe member extending laterally with respect to said last-mentioned axis to project into the path of the teeth of a gear mounted upon said shaft for testing thereby to selectively contact successive tooth profiles on said gear as said shaft is rotated; a carriage element slidably mounted upon said frame element for movement substantially at right angles with respect to the principal axis of said feeler element, post means mounted on said carriage element, worm drive means interconnecting said carriage element and said frame element for critically adjusting the relative positions therebetween, at least one support bar means connected to said post means and supporting said feeler element for translational displacement with respect to said frame element, and means on said support bar for measuring axial movement of said feeler element relative to said frame element.

3,095,653
METHOD OF TESTING THE LEARNING OF PERSONS
Robert E. Corrigan, Garden Grove, Calif., assignor to Corrigan Communications, Inc., Garden Grove, Calif., a corporation of California
Filed Apr. 11, 1960, Ser. No. 21,167
14 Claims. (Cl. 35—9)

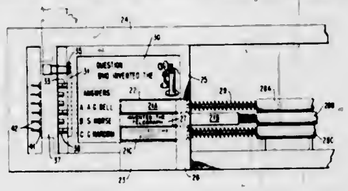


1. Apparatus for use with a communications receiver in testing the learning of a person wherein there is simultaneously displayed by said receiver both correct and incorrect bits of information and a coded signal representing the individual correctness of said bits comprising, a selector comprising a device for each bit of information individually actuable to indicate the person's selection of the correct bit, indicating means on said selector responsive to said devices, control means for said indicating means responsive to the coded signal on said receiver to cause said indicating means to indicate the correctness of the person's selection, and means interposed between said control means and said indicating means to vary the correspondence between the coded signal and the indication afforded by said indicating means whereby the coded signals for succeeding displays by said receiver are caused to have different relationships to the bits of information in such succeeding displays.

3,095,654
EDUCATIONAL DEVICE
Thomas F. Cummings, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 14, 1961, Ser. No. 138,134
15 Claims. (Cl. 35—9)

2. An educational device comprising a screen; a projector for displaying on said screen data comprising a question, a plurality of answers, and a corresponding group of instructions; a plurality of slides each carrying a related grouping of said data; a mount for each slide; a motor driven slide changer adapted to hold and feed said mounts seriatim; said changer feeding an individual mount into a display position; means for masking that

portion of said slide containing said instructions when in display position; a "yes" circuit controlling said slide changer motor and a "no" circuit controlling said masking



means; a plurality of keys one associated with each answer; and contact pins selectively positioned in said mount whereby one of said circuits associated with each answer is prepared for completion by one of said keys.

3,095,655
RANDOM SAMPLING DEMONSTRATION DEVICE
David Bruce Berglund, Dallas, and John H. Drew, Arlington, Tex., assignors to Texas Electronic Products Corp., Dallas, Tex., a corporation of Texas
Continuation of application Ser. No. 145,292, Oct. 16, 1961. This application June 21, 1962, Ser. No. 207,141
8 Claims. (Cl. 35—30)



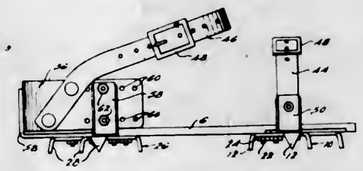
1. A random sampling demonstrating device including a container having an upright marginal wall, a top wall overlying the marginal wall, plate means underlying the marginal walls and having a plurality of openings therein, a shuttle member slidably mounted in the container in overlying relation to the plate means and having a plurality of openings for alinement and misalinement with the openings of said plate means upon reciprocation of the member, and a plurality of spherical articles of slightly less diameter and of greater quantity than the openings for passage through the shuttle member openings and confinement in said plate means openings upon alinement and misalinement of said openings, a percentage of the articles having a different appearance so as to be distinguishable from the articles, the articles confined in said plate means openings being visible through the lower ends of said openings.

3,095,656
ELASTIC CRADLE GRIP FOR FOOTWEAR
Frank Lipare, 112 W. 34th St., New York, N.Y.
Filed Sept. 17, 1962, Ser. No. 223,910
2 Claims. (Cl. 36—2.5)



1. In an article of footwear having an outer sole and an arched upper attached to the sole an elastic band, means securing opposite ends of the band to opposite inner sides of the upper, the remainder of the band being unattached and said band extending across the outer sole and freely expansible to grip the arch and sides of the instep of the foot of a wearer and an insole secured to said outer sole at all points except at a central portion thereof to define a passage with said outer sole, said unattached remainder of the band passing through said passage and freely expansible therein, said securing means including two spaced lines of stitching at each side of the upper extending substantially parallel to the outer sole, whereby the securement of the band to the upper is strengthened, and whereby removal of one line of stitching at each side of the upper lengthens the free central portion of the band for accommodating a larger foot.

3,095,657
TRACTION FOOTWEAR
Lawrence E. Fradette, 915 Mill St., Algonac, Mich.
Filed July 10, 1962, Ser. No. 208,862
4 Claims. (Cl. 36—7.6)



1. An ice creeper comprising an elongated central strap, a toe cleat including a plurality of downwardly depending spikes which is pivotally secured to the forward end portion of said strap, a heel cleat including a plurality of downwardly depending spikes which is pivotally secured to the rearward end portion of said strap, stop means for restricting the independent pivoting movement of said toe cleat and said heel cleat relative to said strap, and means for removably securing said ice creeper to the underside of a shoe.

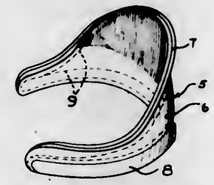
3,095,658
LAMINATED INSOLE OF VARYING THICKNESS
Noel Hetherington Midgley, Caulfield, Victoria, Australia, assignor to Midgley Shoe Systems, Inc., Nashua, N.H., a corporation of New Hampshire
Filed Oct. 30, 1959, Ser. No. 849,960
3 Claims. (Cl. 36—44)



1. An improved insole having a toe portion, a ball portion, a shank portion and a heel portion, and formed from a multi-ply blank consisting of a layer of relatively thin flexible material and a layer of relatively rigid material of varying thickness along the length of the insole, said rigid layer having a thickness in the toe portion which is less than the maximum thickness of the relatively rigid material, and having the maximum thickness in at least a part of the width of the central longitudinal part of the shank portion and in the entire area of the heel portion, said rigid layer in the shank portion tapering from the edges of the part of the width of the central longitudinal part toward the opposite side edges and toward the front of the shank portion, the ball portion comprising at least the layer of said flexible material.

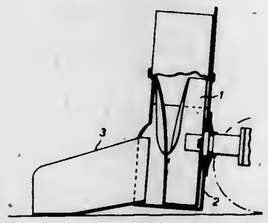
3,095,659
SHOE PROTECTOR
Allen McClellan, 3715 E. 33rd St., Kansas City, Mo.
Filed Mar. 14, 1962, Ser. No. 179,705
2 Claims. (Cl. 36—72)

1. A shoe protector comprising a soft leather body, having the configuration of a letter U when viewed from the top which terminates in a rounded edge, the said body extending below the sole of the shoe on which it is placed, and a steel wire embedded within the said soft leather body, the said wire being located parallel and near the



edge of the said soft leather body, having its lower edge terminating in a steel U-shaped clamp spring adapted to encompass in part the heel of the shoe on which the said shoe protector is placed.

3,095,660
SNOW DISINTEGRATING AND BLOWING DEVICE
Knut Eng, Askim, Norway, assignor to A/S Norsk Lettmetall, Askim, Norway
Filed Jan. 19, 1962, Ser. No. 167,253
Claims priority, application Norway Jan. 26, 1961
3 Claims. (Cl. 37—43)

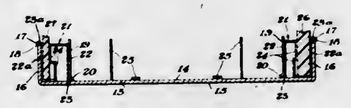


1. A snow disintegrating and throwing device of the type moved forward by a motive means comprising a shaft operatively connected to said motive means to impart rotary movement thereto, said shaft being disposed longitudinally in the direction of motion, a throwing wheel mounted on said shaft for rotation thereby, said throwing wheel being provided at the front portion thereof with a plate member which is circular when viewed in an axial direction and which has a helical disposition when viewed in a horizontal direction, said plate member having a radial slot disposed therein which extends below the central axis thereof, said radial slot forming a leading edge thereby providing a cutting edge, a housing encompassing said throwing wheel and being provided with a first opening disposed in front of said throwing wheel through which snow is directed thereto and a second opening disposed in the top portion of said housing through which the snow is directed upon being thrown by said throwing wheel, and a snow-guiding funnel disposed in front of said throwing wheel and communicating with said first opening.

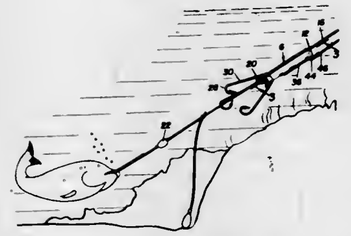
3,095,661
STRUCTURE FOR DETACHABLY MOUNTING PANELS
Henry A. Ellis, University City, Mo., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 19, 1961, Ser. No. 146,164
6 Claims. (Cl. 40—156)

1. A frame having interconnected opposed peripheral elements, each of said elements comprising a channel member having a web, an outer flange extending from a surface of said web, an intermediate flange extending from said surface, each of said flanges having a slot

therein, and a removable substantially S-shaped invertible member, the arms of said S-shaped member being engageable with the slots in said outer and intermediate flanges of said web of the channel member and each of the arms on opposite sides of the integral intermediate web of said S-shaped member being at a different predetermined distance away from said intermediate web of said S-shaped member thereby to provide for accommodation of a panel of a corresponding predetermined thickness between said integral intermediate web of said S-shaped member and a given arm of said member thereby adapting said frame to panels of different thicknesses.

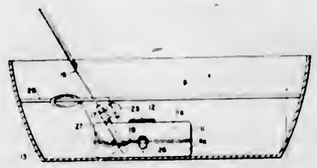


3,095,662
FISH GRAPPLING AND LANDING DEVICE
Prentiss S. Puckett, Juliaetta, Idaho
(120 N. 7th St., Klamath Falls, Oreg.)
Filed Dec. 6, 1961, Ser. No. 157,464
1 Claim. (Cl. 43—5)



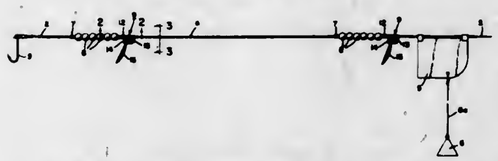
A fish landing device comprising a rigid elongated tubular sleeve having a lengthwise slot in one side, the ends of said sleeve being open and defining a leading and trailing end when said sleeve is placed on a fishing line, the leading end of said sleeve being circular in cross-section and having means formed integral therewith for enabling the sleeve to clear the sinker on said fishing line, said means comprising an outwardly flaring flange defining a bell mouth having a lip, a plurality of circumferentially spaced self-setting resilient grappling hooks placed on said sleeve adjacent the leading end and said bell mouth, the hooked forward ends being turned in toward each other, and the shank portions being resilient and converging towards each other at their rearward ends by engaging the marginal edge of the lip of the bell mouth flange and having rearward ends affixed to the leading end portion of the sleeve just rearwardly of but adjacent to said lip, said sleeve being provided along the major portions of the opposed longitudinal edges of said slot with elongated spaced parallel fixedly mounted heavy rods providing weights for enabling the sleeve to gravitate down the fishing line, the rearward end of one rod having a terminal eye for attachment thereto of a retrieving line, said sleeve further being provided with, in the interior of the trailing end portion opposite said slot a fishing line seat and sleeve-guiding groove, the latter being V-shaped in plan and varying in depth, its deeper end located at the trailing end of said sleeve, the outwardly flaring flange defining said bell mouth being formed continuous with the tubular sleeve body and the leading edges of said slot being flared outwardly widening the entrance to the interior of the sleeve for passage of said sinker and merging with said bell mouth.

3,095,663
ROD HOLDER FOR FISHING TACKLE BOXES
Marcell J. Miller, Penfield, N.Y., assignor to The Liberty Steel Chest Corporation, Rochester, N.Y., a corporation of New York
Filed Nov. 8, 1961, Ser. No. 150,978
2 Claims. (Cl. 43—21.2)



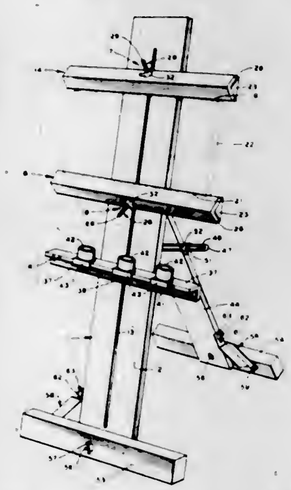
1. A fishing tackle box, comprising a bottom section and a cover section hinged thereto along the rear edges, said bottom section having a front wall, a handle mounted on one of said sections in the central portion between opposite ends thereof, a holder loop having a length of wire formed with a curved outer end portion, a pair of spaced substantially parallel side portions extending from opposite ends of said curved outer end portion and having the free ends of said length of wire formed with terminal portions extending inwardly toward each other at the ends of said side portions opposite to said curved outer end portion, a pair of collars formed with bearing portions rotatably receiving said terminal portions with said collars arranged between said side portions in spaced relation, and means securing said collars to a side wall of said bottom section in spaced relation from the bottom wall and intermediate the central portion and one end thereof, said holder loop having the dimension between the side portions thereof approximately ten percent greater than the dimension between said terminal portions and said outer end portion, whereby the handle of a fishing rod will just clear the inner sides of said loop for insertion through and cooperation of said loop about an intermediate portion of said handle with the free end of said handle engaging the front wall of said bottom section below said loop and the other end carrying the fishing rod extending upwardly above the top of said tackle box in upwardly and outwardly inclined relation at an angle closer to vertical than horizontal for detachably locking said fishing rod handle to said bottom section.

3,095,664
TROLLING SPINNER
William O. Nichols, 2020 Montgomery St., Oroville, Calif.
Filed Aug. 31, 1961, Ser. No. 135,297
4 Claims. (Cl. 43—42.19)



1. A clevis and a lure for attachment to a fishing line, said clevis comprising a tubular body adapted to receive the line therethrough and rotatable about the line, a loop member for attaching a lure thereto at one end of said tubular body and projecting therefrom, said loop having first and second ends, the first end of said loop member being joined to said tubular body at said one end and the second end forming a hook for releasable engagement with another portion of the loop member adjacent said one end of said tubular body, said loop member being bendable toward and away from said body whereby the rate of rotation of the body under impetus from a lure attached to said loop member may be accelerated by bending the loop member toward the body and the rotational rate decelerated by bending the loop member away from the body.

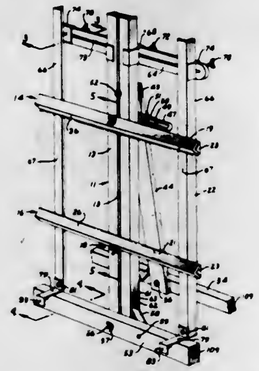
3,095,665
FOLDING EASEL
Duncan C. Killen, 2521 Durant Ave., Berkeley, Calif.
Filed Jan. 23, 1961, Ser. No. 84,309
7 Claims. (Cl. 45—129)



1. An easel for supporting the stretcher frame of an artist's canvas or the like, comprising a generally upright standard having a flat front face formed with a vertically extending slot, a pair of elongated clamping devices extending laterally across said front face, said clamping devices being formed with confronting longitudinal V-shaped edges adapted for engaging the stretcher frame with the apexes of the V-shaped edges in spaced relation to the front surface of the canvas whereby the artist may extend his brush strokes past the edges of the canvas, and locking means on said clamping devices engaging said slot and formed for adjustably securing said devices to said standard in clamping engagement against the top and bottom edges of the stretcher frame.

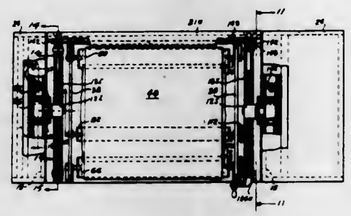
3,095,666
WIDE FRAME FOLDING EASEL
Duncan C. Killen, 2521 Durant Ave., Berkeley, Calif.
Filed Oct. 3, 1961, Ser. No. 142,613
12 Claims. (Cl. 45—129)

1. An easel for supporting the stretcher frame of an artist's canvas or the like, comprising a generally upright standard having a flat front face formed with a vertically extending slot, a first substantially horizontal member carried on said upright standard at the lower end therof, a second substantially horizontal member carried by said upright standard above said first horizontal member, a pair of generally vertical members carried on and extending between said first and second horizontal members, said pair of generally vertical members having front faces substantially in a plane including the front face of the upright standard, bracket means for adjustably securing said vertical members to said horizontal members, a pair of elongated clamping devices fitting on the standard at positions located between said horizontal members and extending laterally across said front face and said vertical members, said clamping devices being formed with confronting longitudinal V-shaped edges adapted for engaging the stretcher frame in spaced relation to the front surface of the canvas whereby the artist may extend his brush strokes past the edges of the canvas, locking means on said devices engaging said slot and formed for adjustably securing said devices to said



standard in clamping engagement against the top and bottom edges of the stretcher frame, and a pair of extension assemblies adapted to fit each side of the easel each comprising a member having front faces substantially in the plane of the front faces of the generally vertical members.

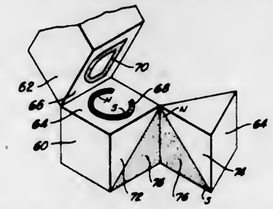
3,095,667
ROTATABLE AND TRANSLATABLE DRAWING BOARD
Leslie Royce Huff, 266 Mill St., Westwood, N.J.; Hazel Shuman Huff, administratrix of the estate of Leslie Royce Huff, deceased
Filed Dec. 15, 1961, Ser. No. 159,581
9 Claims. (Cl. 45—131)



1. A drawing board mounting comprised by a carriage arranged to travel over a horizontal surface, a drawing board supported on said carriage, an arrangement of rollers over which the drawing paper is trained comprised by a winding roller along one edge of the drawing board, a tension roller along the opposite edge of the drawing board, a second winding roller intermediate the first winding roller and the tension roller, parallel tread members on the opposite sides of said carriage, and supports including parallel plates slidable along the opposite edges of said parallel tread members and rollers carried by said plates and engaging said parallel tread members.

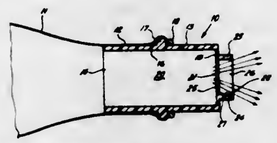
3,095,668
MAGNETIC BLOCKS
Clarence T. Dorsett, 1020 Holly Ave., Arcadia, Calif.
Filed Feb. 10, 1959, Ser. No. 792,343
2 Claims. (Cl. 46—25)

1. A set of blocks, each of said blocks of said set being formed out of a non-magnetic material, said blocks of said set having surfaces adapted to be held against other surfaces of other blocks of said set by magnetic force, said surfaces also being adapted to be repelled from other surfaces of other blocks of said set by magnetic forces, some of said surfaces being at least partially covered with an adherent non-self supporting coating consisting of permanent magnetic particles sized so as to pass a 200 mesh standard Tyler sieve and a non-magnetic binder holding said permanent magnet particles in place, other of said surfaces being at least partially covered with an adherent non-self supporting coating consisting of non-permanent magnet magnetic particles sized so as to pass a 200 mesh



standard Tyler sieve and a non-magnetic binder holding said non-permanent magnet magnetic particles in place, said coatings containing not more than one part by weight of binder for each part by weight of particles, said permanent magnet particles being oriented within the coating on each of said some of said surfaces so as to provide poles concentrating magnetic flux in order to provide the forces necessary to hold and repel similarly coated surfaces of blocks within said set, said other of said surfaces of blocks within said set being capable of being held against surfaces covered with a coating including said oriented permanent magnet particles.

3,095,669
SOUND EMITTING DEVICE
Joseph B. Barricks, Des Moines, Iowa, assignor of five percent to Marjory Zerin and ninety-five percent to Rudolph L. Lowell, both of Des Moines, Iowa
Original application Jan. 8, 1960, Ser. No. 1,330, now Patent No. 3,025,634, dated Mar. 20, 1962. Divided and this application Jan. 31, 1962, Ser. No. 170,074
2 Claims. (Cl. 46—179)

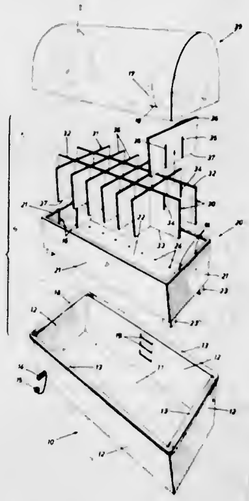


1. A whistle comprising:
(*a*) a tubular body member including
(*b*) a pair of tubular sections, with one of said sections having a bore of a reduced diameter and of a shorter length relative to the bore and length of the other of said sections, and
(*c*) an annular shoulder at the junction of said bores projected inwardly of the bore of said one section so as to form an opening at said junction having a diameter smaller than the diameter of the bore of said one section.

3,095,670
SEED STARTER AND PLANT PROPAGATOR
Alexander Raab, % White Rose Nurseries, Unionville, Ontario, Canada
Filed Mar. 10, 1961, Ser. No. 94,815
1 Claim. (Cl. 47—17)

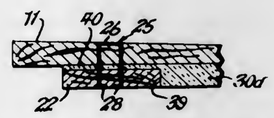
A seed starter and plant propagator comprising an open-topped, outer receptacle having side walls and a

base, an open-topped, inner receptacle having side walls and a base and positioned within said outer receptacle in spaced apart relationship therewith, said base of said inner receptacle being adjacent said base of said outer receptacle, said inner receptacle being adapted to receive soil therewithin, the space between said inner receptacle and said outer receptacle being adapted to receive water therewithin, at least portions of said inner receptacle being porous, whereby water in said space may be absorbed by the soil, means for draining water from said space, and a roof of transparent material positione dover said inner receptacle and, with said outer receptacle, forming an enclosure completely enclosing said inner receptacle, the inner surface of at least the portion of said roof over said inner receptacle being smoothly and uninterruptedly curved, at least one first divider removably located in said inner receptacle, at least one second divider removably located in said inner receptacle, said first divider having at least one notch therein extending from the top edge of said first divider toward the bottom edge thereof to a point less than one-half way through said first divider, said second divider having at least one notch therein extending from the bottom edge of said second divider toward the top edge thereof, said first and second dividers being angularly interlocked with said first divider being inserted into said notch in said second divider and said second divider being inserted into said notch in said first divider, whereby a plurality of individual seed starting and plant propagating receptacles are formed, said top edges of said first and second dividers being positioned contiguous to the open top of said inner receptacle and lying in substantially the same plane, said bottom edges of said first and second dividers resting on said base of said inner receptacle.



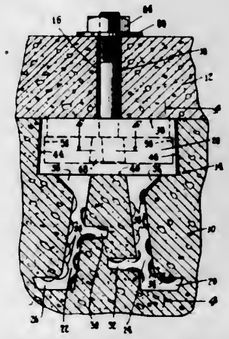
3,095,671
MULTIPLE SHINGLE STRUCTURE
Carl J. Fink, Clarence, and Charles E. Heintz, Elma, N.Y., assignors to Creo-Dipt Company, Inc., North Tonawanda, N.Y., a corporation of New York
Filed July 17, 1956, Ser. No. 598,310
2 Claims. (Cl. 50—251)

1. As an article of manufacture, a multiple shingle structure comprising a row of separate nailable shingles arranged in edge-to-edge relation, a separate single preformed felted fiber relatively rigid backing panel extending in face-to-face relation along the greater part of the rear of said row and of each individual shingle, a separate narrow nailing strip capable of receiving and securely anchoring nails, said strip extending along the rear of said row substantially the full length and adjacent the lower edge of said row and remote from the upper edge thereof, the upper edge of said nailing strip extending along close to and opposing the lower edge of said felted fiber backing panel whereby said nailing strip forms a downward continuation of said felted fiber backing panel,



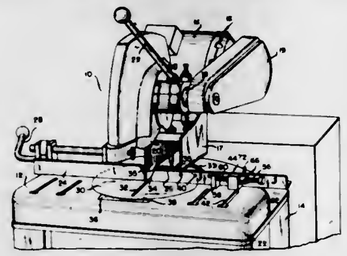
means securing each shingle adjacent its lower edge to said nailing strip, means securing said felted fiber backing panel to at least some of said shingles, and a layer of water repellant material interposed between said nailing strip and said row of shingles, said layer of water repellant material being in the form of an integral continuation of said felted fiber backing panel, with said nailing strip arranged in a rabbet provided in the lower rear part of said felted fiber backing panel.

3,095,672
ANCHORAGE BOLT AND BLOCK FOR CONCRETE STRUCTURES
Alfred Di Tullio, 253 Marion St., and Patsy Di Tullio, 25 Cleveland Ave., both of Bridgeport, Conn., and Elio S. Di Tullio, 38 Smith Place, Trumbull, Conn.
Filed Nov. 1, 1960, Ser. No. 66,647
2 Claims. (Cl. 50—477)



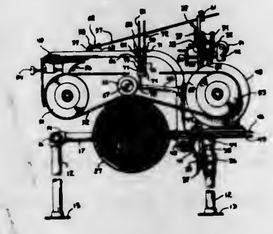
1. An anchorage and fastening means for use with concrete and like structures, comprising in combination:
(*a*) a block adapted to be imbedded in concrete with one face thereof exposed,
(*b*) said block having a recess with oppositely disposed undercut walls constituting a T-slot, which T-slot opens at the said face, said recess having a pair of straight, opposite wall surfaces,
(*c*) an anchor bolt having a shank and a flatted and elongate shaped head, the latter being received in said T-slot with the shank protruding from the said exposed face of the block,
(*d*) said head having a size and elongate shape which prevents it from being completely turned when in the slot but enabling a partial turning to be effected, locating the outermost portions of the head in the undercut portions of the walls to prevent pull-out of the bolt from the block,
(*e*) said head portion of the bolt having oppositely disposed end faces comprising a pair of curved eccentric cam surfaces, said cam surfaces cooperating with the straight opposite wall surfaces of the block recess to hold the bolt. the portions of the cam surfaces which engage the said straight opposite wall surfaces, together with the axis of the bolt being all in alignment along a line which is normal to the said wall surfaces for the purpose of holding the bolt firmly wedged against lateral movement and fixedly supported in the slot in various locations solely in response to the bolt being slightly turned.

3,095,673
WORKPIECE GAUGING STOP FOR METAL CUT-OFF MACHINE
Lester R. Born, Jr., and Warren Dean Weikart, Bellefontaine, Ohio, assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 9, 1961, Ser. No. 130,375
18 Claims. (Cl. 51—98)



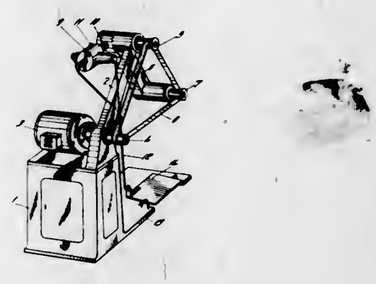
1. For use with a metal cut-off machine having a supporting table and a workpiece guide fence against which a workpiece may be held in fixed position on the table while being cut, a work stop adapted for selective positioning along the guide fence, comprising: a support block adapted for attachment to a fixed part of the cut-off machine; an abutment stop adapted to contact an end of a workpiece to predetermine the length thereof to be cut; means to adjust the position of the abutment stop relative to the support block; means to lock said adjusting means in adjusted position; and back-off means, carrying said adjusting means and cooperable with said support block, operable to back-off said abutment stop from contact with the end of a workpiece without affecting the adjustment of said adjusting means.

3,095,674
ABRASIVE BELT FINISHING MACHINE
Herbert P. Lee, 3025 Madison Ave., Indianapolis, Ind.
Filed Feb. 2, 1961, Ser. No. 86,682
9 Claims. (Cl. 51—141)



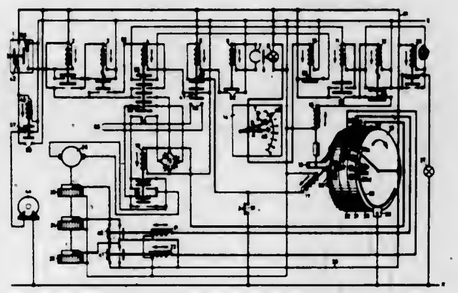
1. A finishing machine for cylindrical articles and comprising: a frame; means coupled to said frame for supporting an article to be finished and facilitating rotation of the article about an axis; means pivotally coupled to said frame and carrying an abrasive belt, said belt being engageable with the article to be finished; a workwheel mounted to a carrier movably mounted to said belt carrying means, the pivotal mounting of said carrying means and the movable mounting of said carrier to said carrying means cooperating to accommodate engagement of said work-wheel with said belt opposite a point of engagement of said belt with the article to be finished; resilient means coupled to said belt carrying means and to said workwheel carrier to engage said workwheel with said belt opposite a point of engagement of said belt with the article to be finished and apply a desired load on said workwheel to compressively load said belt between said workwheel and the article to be finished when said belt is engaged with said article whereby the machine is adapted to rapidly remove comparatively large irregularities in an unsmooth cylindrical surface of said article when said article is rotated, and simultaneously remove at a slower rate smaller irregularities in said surface; and means coupled to said belt carrying means to determine the extent of engagement of said belt with said article.

3,095,675
ABRASIVE BELT GRINDING MACHINE
Fritz Gegauf, Steckborn, Switzerland, assignor to Fritz Gegauf Aktiengesellschaft Bernina-Nahmaschinenfabrik, Steckborn, Switzerland
Filed Feb. 19, 1960, Ser. No. 9,986
Claims priority, application Switzerland Feb. 19, 1959
1 Claim. (Cl. 51—148)



A grinding machine comprising a raised pedestal, a rigid bearing arm on said pedestal including a first bearing opening directly above said pedestal, said arm having an extension extending laterally and upwardly from said pedestal and having a second bearing opening therein, a driving motor mounted on said pedestal and having a shaft extending through said first bearing opening and terminating in a first guide roller, a tensioning arm member having a mounting shaft portion connected thereto extending through said second bearing opening and terminating in a second guide roller said tensioning arm with said shaft being rotatable in said second bearing, said tensioning arm having at its free end an outwardly extending shaft portion constituting a third guide roller aligned in a plane with said first and second guide rollers, an endless abrasive belt trained to run around each of said guide rollers, a weighted arm member connected to said tensioning arm and biasing said tensioning arm in a direction toward engagement with said abrasive belt and away from said first guide roller for tensioning said belt, and pedestal means connected to said weighted member and movable to deflect said weighted arm member to rotate said tensioning arm member to increase the tension on said abrasive belt.

3,095,676
AUTOMATIC BALANCING ARRANGEMENT FOR GRINDING WHEELS
Rolf Völler, Dagersheim, Kreis Boblingen, Germany, assignor to Fortuna-Werke Spezialmaschinenfabrik Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany
Filed Mar. 22, 1962, Ser. No. 181,640
Claims priority, application Germany Mar. 25, 1961
11 Claims. (Cl. 51—169)



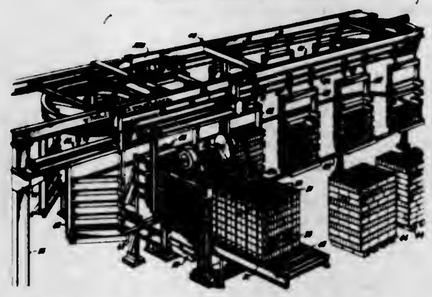
1. In an arrangement for the static and dynamic balancing of grinding wheels on grinding machines, the combination comprising an oscillation imbalance indicator having a damped indicator pointer and a trailing pointer pushed by said indicator pointer in the direction of decreasing imbalance indication, there being engageable electrical contacts on said pointers, a first adjusting drive for adjusting the radial direction of counterweights with respect to a grinding wheel, a second adjusting drive for adjusting the quantity of the counterweights, a third adjusting drive for axially displacing the counterweights with respect to the axis of a grinding wheel, a reversible servomotor drivingly engageable with said adjusting drives, a control circuit for drivingly connecting said first adjusting drive to said servomotor, a second control circuit including a step switch mechanism for reversing the direction of rotation of said servomotor and for successively connecting said second and third adjusting drives to said servomotor, a third control circuit connected to said pointer contacts for actuating said step switch mechanism upon separation of said pointer contacts, and means actuated by a predetermined minimum position of said trailing pointer for terminating the balancing operation.

3,095,677
METHOD OF PACKAGING ARTICLES
Robert L. Dreyfus, Arlington, and Wylie C. Kirkpatrick, Wayland, Mass., assignors to W. R. Grace & Co., Duncan, S.C., a corporation of Connecticut
Filed July 20, 1960, Ser. No. 44,196
10 Claims. (Cl. 53—30)



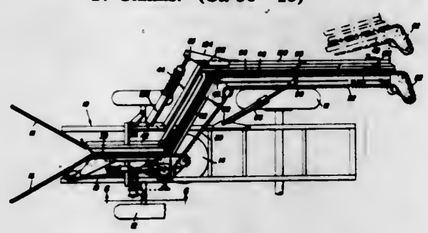
1. A method of packaging a relatively thin object which comprises placing said object upon a substantially flat sheet of heat shrinkable material and subjecting the heat shrinkable material to heat except for that portion of said material which lies directly under said object whereby said material shrinks up the sides and at least partially over the top of the object and thereby partially encloses said object.

3,095,678
ARTICLE STACKING AND STRAPPING MACHINE
George John Cliff, Chicago, Bert B. Parshall, Wood Dale, William H. Braun, Brookfield, John G. Feldkamp, Homewood, and Robert E. Hager, Park Forest, Ill.; said Cliff, said Parshall, and said Braun, assignors to Link-Belt Company, a corporation of Illinois, and said Feldkamp and said Hager, assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed May 18, 1959, Ser. No. 813,769
18 Claims. (Cl. 53—124)



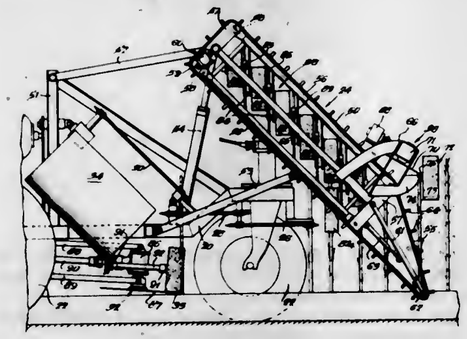
2. A machine for packaging articles, comprising a jig for receiving and supporting a plurality of articles in a given loosely stacked arrangement, means for conveying said jig along an endless path past a number of loading stations at each of which a desired number of articles are placed thereon to progressively build a complete stack comprising a desired number of superimposed tiers, unloading means at a station in the path of jig movement beyond said loading stations for removing a completed stack of loose articles from the jig, means at said unloading station for receiving the completed stack of loose articles as it is removed from said jig and including a second conveyor along which said unloaded stack of articles is advanced to a discharge point, first means associated with the second conveyor for independently compacting the articles of each tier relative to each other as the stack is advanced along said second conveyor to eliminate spaces between the articles, and second means associated with the second conveyor for applying a strap around the compacted stack of articles to form the latter into a self-sustaining package before it arrives at said discharge point.

3,095,679
CANE CONVEYOR ASSEMBLY FOR HARVESTERS
Joseph M. Pugh and James H. Edley, Jeanerette, La., assignors to J. & L. Engineering Co., Inc., Jeanerette, La., a corporation of Louisiana
Filed Oct. 30, 1959, Ser. No. 849,841
17 Claims. (Cl. 56—15)



1. In a cane harvesting and piling machine having a frame,
(*a*) a horizontally extending cane piling arm having a front end and a rear discharge end,
(*b*) means pivotally mounting said arm at its front end upon said frame for swinging movement in a horizontal plane to thereby adjust said discharge end laterally of said frame,
(*c*) cane conveying means supported by and projecting laterally from the side of said frame and arm and having laterally projecting holding elements for conveying the stalks of cane while individually gripped and held in a vertical position rearwardly and laterally of the machine and then longitudinally and rearwardly of said arm to said discharge end,
(*d*) presser means upon said frame and arm fixed against longitudinal movement relative to said frame and arm and including a member having a smooth, flat presser surface opposed to and cooperating with said holding elements and disposed along the side of said conveying means for resiliently pressing stalks of cane against the holding elements of the latter,
(*e*) means pivotally mounting said presser means upon said frame for swinging movement in a horizontal plane about a vertical axis which is displaced from the pivotal axis of said arm.

3,095,680
CANE STALK GATHERING, TOPPING, DETRASHING AND SEVERING MEANS
Samuel A. Thornton, Jeanerette, La.
Filed Nov. 5, 1959, Ser. No. 851,038
11 Claims. (Cl. 56—17)



1. Stalk gathering and detrashing means for cane combines comprising a gather chain having a leading end and a trailing end, a rectangular supporting frame for said chain having guide sheaves at the corners thereof for guiding the chain for movement about said frame, said frame being inclined rearwardly upward longitudinally thereof from the leading end to the trailing end of said chain and being inclined laterally downward from one longitudinal edge to the other longitudinal edge thereof, a plurality of rotary detrashers mounted on said frame in the space between the longitudinal edges thereof, said detrashers being mounted for rotation about vertically spaced horizonal axes generally paralleling the longitudinal edges of said frame, each detrasher including a peripheral portion extending beyond the vertical plane of said one longitudinal edge of said frame and into the vertical plane of the run of the chain adjacent said one longitudinal edge, said sheaves on said frame guiding said chain around said detrashers and spacing the said run thereof vertically above the said portion of each detrasher, an arm pivotally mounted on said frame adjacent the lower forward edge thereof and extending forwardly downward therefrom, and a guide sheave for said chain mounted on said arm adjacent the forward end thereof, said sheave guiding said chain forwardly downward and rearwardly upward relative to the lower end of said frame, said arm being pivotally adjustable on said frame to vary the direction of forward extension of the lead end of said chain.

3,095,681
HAND-OPERATED IMPLEMENT FOR PICKING ON THE PLANT OLIVES AND SIMILAR HANGING DOWN FRUITS
Aristide Lucio Sartorio, Piazza del Teatro 21, Velletri, Rome, Italy
Filed Mar. 24, 1961, Ser. No. 98,170
Claims priority, application Italy Mar. 26, 1960
2 Claims. (Cl. 56—339)



1. A hand-operated implement for picking olives and downwardly hanging fruit, comprising a fork having the shape of pincers, a plurality of spaced teeth on the inner side of the fork situated relative to each other so that they will not contact or overlap each other, said teeth permitting the branches to be gripped by the picking implement to slide there along without damaging the fruit with which it contacts when being detached from the branches, a handgrip controlled by the operator and divided into two parts and pivoted to each other, and a spring to urge the implement in the open position in the absence of pressure of the operator's hand on the inner surface of the handgrip.

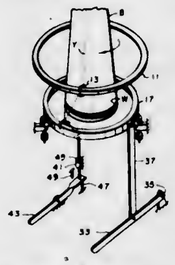
3,095,682
COMBINATION RAKE AND CARRIER
Tony A. Pasquine, 1750 Lucretia Drive, Girard, Ohio
Filed June 30, 1961, Ser. No. 127,783
3 Claims. (Cl. 56—400.12)



1. A combined rake and carrier, comprising a flat body member having a top part formed for the attachment of a handle thereto, said member having a forward side, a rearward side, and lateral widely spaced side edges, hinge ear members on and extending rearwardly from said side edges, a plurality of rake tines, each attached at one end to and extending downwardly from the body member, said tines lying in a common plane and being spaced apart transversely of the body member, each of said tines having a portion of its other, and lower, end extending at an obtuse angle downwardly and rearwardly, a second body member extending across the rear side of the first body member and spaced rearwardly from and substantially paralleling the first body member, means pivotally coupling said second body member to said hinge ear members for pivoting on an axis extending transversely of the members, a plurality of secondary tines each secured at one end to and extending downwardly from the second

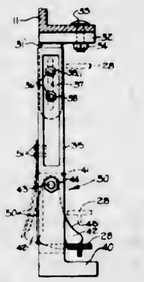
body member, said secondary tines being spaced apart transversely of the second body member and lying in a common plane, each of said secondary tines having a portion of its other, and lower end extending at an obtuse angle downwardly and forwardly and terminating an appreciable distance above, or short of, the said other, lower ends of the rake tines when the secondary tines are pivoted forwardly into a closed relation with the rake tines, and spring means operatively connecting said body members and biased to urge the same and the tines into said closed relation.

3,095,683
YARN HANDLING APPARATUS
Raymond G. Tessmer, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,655
3 Claims. (Cl. 57—34)



1. Apparatus for forming wraps of yarn on a yarn carrier comprising a spindle for mounting a yarn carrier, a first yarn guide disposed laterally adjacent said spindle, said first yarn guide and said spindle being longitudinally relatively movable with respect to one another for forming a package of yarn on a yarn carrier on said spindle, a second yarn guide disposed in longitudinally spaced apart position from said first guide and being also disposed laterally adjacent said spindle, said second yarn guide being angularly movable about the axis of said spindle, and a normally yarn-disengaged yarn-retarding element adapted to be moved into contact with the yarn at a position adjacent said second yarn guide for selectively disengaging yarn from said second yarn guide during laying of yarn thereby onto a yarn carrier on said spindle while not disengaging the yarn from said first yarn guide.

3,095,684
RING RAIL LATCH FOR SPINNING FRAMES AND THE LIKE
Bobo B. Rogers, 2407 Wallace Ave., Spartanburg, S.C.
Filed Nov. 8, 1961, Ser. No. 151,052
5 Claims. (57—54)

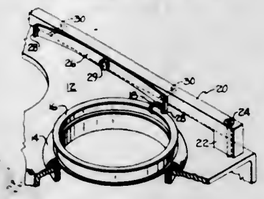


1. In a spinning frame having a plurality of rotating spindles, a ring rail mounted for traversing movement longitudinally of said spindles, a builder mechanism for moving said ring rail in said traversing movement, and a treadle member connected to said ring rail and movable therewith, said treadle member being adapted to be manually lowered to move said ring rail to a bobbin doffing position; the combination of

(*a*) a latch member mounted for movement between a first position wherein at least a portion thereof is disposed in the path of travel of said treadle to the lowered position and being adapted to overlie said treadle when the same is in the lowered position, and a second position spaced from said first position and out of the path of travel of said treadle, said latch member having a cam surface on said portion which is adapted to be engaged by said treadle as the treadle moves to the lowered position for moving said latch member from said first position to said second position to allow said treadle to move thereby, and

(*b*) spring means biasing said latch member toward said first position to normally maintain the latch member in the path of travel of said treadle.

3,095,685
TRAVELER CLEANER
Bobo B. Rogers, 2407 Wallace Ave., Spartanburg, S.C.
Filed Nov. 24, 1961, Ser. No. 154,619
10 Claims. (Cl. 57—57)

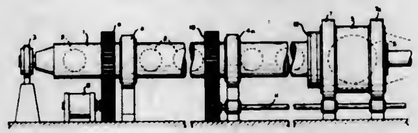


1. A traveler cleaner for a spinning frame or the like having a ring about which a traveler revolves, said traveler cleaner comprising:

(*a*) an elongate resilient member carried by said frame and having a free end portion; and

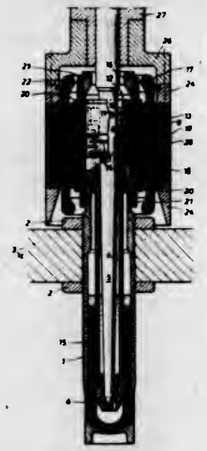
(*b*) means carried by said frame in association with said resilient member for maintaining said resilient member in a deflected position with said free end portion thereof adjacent said ring.

3,095,686
SPEED-STRANDING MACHINE
Max Steinlein, Stuttgart-Stammheim, Germany, assignor to Kreidler's Metall- und Drahtwerke G.m.b.H., Stuttgart-Zuffenhausen, Germany, a corporation of Germany
Filed May 31, 1961, Ser. No. 113,801
1 Claim. (Cl. 57—58.3)



A speed-stranding machine, comprising an elongated, tubular stranding body, a plurality of supply drums disposed in series relative to each other and received by said stranding body, a forwardly disposed cage larger than said supply drums adapted to receive the drum for a core-strand, and separate bearing means for said stranding body and said cage, respectively, means for coupling said stranding body with said cage for joint rotary movement, said coupling means including means for damping of oscillations between said stranding body and said cage and for connecting said stranding body with said cage elastically in a rotary direction.

3,095,687
ELECTROMOTOR-DRIVEN TEXTILE MILL SPINDLES
Karl Beerli, Niederuster, Zurich, Switzerland, assignor to Spindel-, Motoren- und Maschinenfabrik A.G., Uster, Switzerland
Filed Feb. 5, 1962, Ser. No. 170,982
Claims priority, application Switzerland Feb. 17, 1961
4 Claims. (Cl. 57—100)



1. An electromotor-driven textile mill spindle comprising:

(*a*) a substantially rigid tubular bearing sleeve,

(*b*) a foot bearing, and

(*c*) a collar bearing both rigidly connected to said bearing sleeve,

(*d*) a spindle shaft rotatably supported in said foot bearing and in said collar bearing,

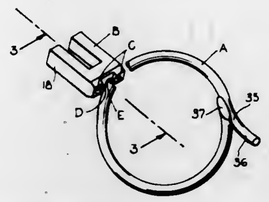
(*e*) electromotor means comprising a stator rigidly connected to said bearing sleeve and a rotor rigidly connected to said spindle shaft,

(*f*) a housing, and

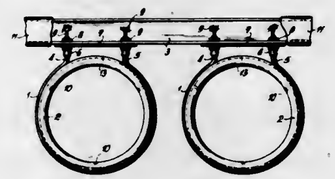
(*g*) yielding connecting means swingably connecting said bearing sleeve to said housing and the center of gravity of said stator and rotor substantially coinciding with the position of said yielding connecting means.

3,095,688
BALLOON CONTROL RING
James S. Russell, Greer, S.C., assignor to Steel Heddle Manufacturing Company, Paris, S.C., a corporation of Pennsylvania
Filed May 5, 1961, Ser. No. 108,015
3 Claims. (Cl. 57—106)

1. A balloon control ring comprising a substantially enclosed strand confining member having a threading slot about its periphery, a shank having an intermediate recess and first and second spaced seats in the side walls defining said recess in which first and second portions of the periphery of said member, remote from said slot, are alternatively supported in first and second positions, said first position being when said first portion is in said first seat and second portion is in said second seat and said second position being when said first portion is in said second seat and said second portion is in said first seat, means biasing said portions of the periphery into said depressions, a shaft extending outwardly from said member at a point between said first and second portions rotatably supporting said member to said shank whereby the strand confining member can be unseated against the force of said means and rotated to either of said first and second positions.



3,095,689
LUBRICATING HOLDER FOR SPINNING AND TWISTING RINGS
Johann Jacob Keyser, Grabenallee 16, Aarau, Switzerland
Filed Sept. 12, 1960, Ser. No. 55,522
Claims priority, application Germany Sept. 12, 1959
6 Claims. (Cl. 57—120)

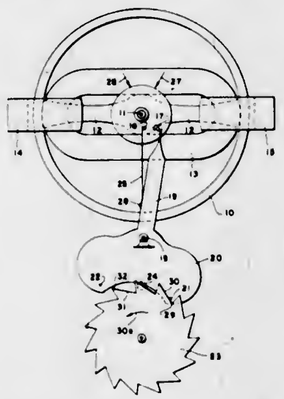


2. In combination with a rail member for connection with spinning and twisting machines: a holder for receiving individual spinning and twisting rings, said holder being formed by a tube having a loop-shaped portion and leg portions angled off from the ends of said loop-shaped portion and connected to said rail member, said rail member comprising lubricant conveying passage means communicating with the interior of at least one of said leg portions and thereby also with said loop-shaped portion, said leg portions being spaced from each other by such a distance that said loop-shaped portion will extend around and engage the ring to be received thereby by an angle varying from a maximum of 330° to a minimum angle just in excess of 180°.

3,095,690
CONTACT AND INDEX SYSTEM FOR AN ELECTRIC WATCH
Helmut Epperlein, Ersingen, near Pforzheim, Germany, assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1959, Ser. No. 801,212
10 Claims. (Cl. 58—28)

1. In an electric watch adapted to be driven by a battery and having a train, an index wheel connected to drive said train, and an oscillating balance staff carrying one portion of a periodically energized magnetic impulsing system having a second portion mounted on the frame of said watch, wherein the axes of rotation of said train, index wheel and said balance staff are parallel, the improvement comprising; support means on said staff carry-

ing a contact member and a separate spaced cam; and pallet means pivotally mounted on said watch frame for rotation about an axis parallel to said aforementioned axes, and having a first portion positioned for engagement with said cam, a second portion positioned for engagement with said contact member, and a third portion



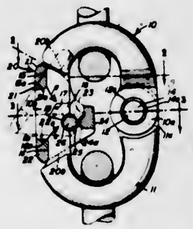
engageable with said index wheel for both driving and indexing said wheel as said staff oscillates, said contact member and pallet member establishing an electrical circuit between said battery and said magnetic impulsing system through said pallet means when said second portion engages said contact member.

3,095,691

CHAIN LINKS OR THE LIKE

William C. Waller, 4142 Madelia Ave., Sherman Oaks, Calif.

Filed Oct. 3, 1958, Ser. No. 765,159
7 Claims. (Cl. 59—88)



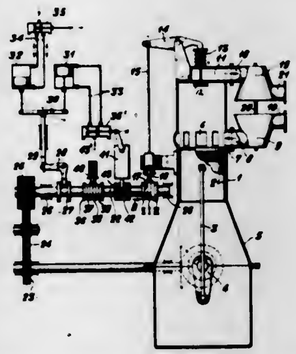
1. In a coupling for the aligned and engaging terminal ends of a two section link limb or the like, each of said section ends constituted by a single heavy duty stud, one of said studs being designated as the first stud and the other as the second stud, each of said studs having a single longitudinal limb load-sustaining lug projecting laterally in the same direction, each lug having a planar longitudinal load-receiving shoulder of substantial area, said shoulders being spaced inwardly of the related stud-defined section end, interfitting portions provided by the stud-defined meeting ends of said limb sections and cooperating with the end to end engagement of said limb sections to resist movement of said limb section ends in a direction contra to said lateral direction of stud lug projection; the combination of a rigid connector which is open at each end, said connector providing a laterally opening socket receiving and seating said limb terminal-provided studs, longitudinal limb load-supporting shoulders incorporated in said connector socket and engaging the respective stud lug shoulders, a rigid but removable connector-carried backing means for at least said first stud, said backing means having a dimension measured on a line normal to the limb axis which is greater than the thickness of said stud lugs in the direction of said line, whereby to retain the studs and projections in said connector-provided socket, and said backing means located between the plane of the first lug shoulder and the closest end portion of the first lug-provided limb section end so as to prevent eccentric bending of said first stud and its lug in a direction contra to the direction of stud lug projection, laterally spaced and opposed walls provided by said connector and extending beyond the plane of said first stud backing means to support the latter, said connector walls having extensions, and a bridge connecting said wall extensions and engaging and sustaining said stud-backing means when the latter is in operative position, whereby said backing means will be in compression between said bridge and first stud when the two section limb is under longitudinal load.

3,095,692

TWO-STROKE DIESEL ENGINE WITH AN EXHAUST GAS DRIVEN TURBOBLOWER

Gottlieb Wolf, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed June 26, 1961, Ser. No. 119,611
Claims priority, application Switzerland July 11, 1960
1 Claim. (Cl. 60—13)



In a reversible two-stroke diesel engine operating under variable load and having an exhaust gas driven turbocharger, an exhaust valve for controlling flow of exhaust gas to said turbocharger, and control means for said exhaust valve, said control means including an axially movable shaft rotating at a speed corresponding to the engine speed: a cam mounted on said shaft and having three cam surfaces, cam follower means operatively connected to said valve and engaged by one of said cam surfaces for operating the engine in one direction of rotation and engaged by the second or third cam surface, depending on the axial position of said shaft for operating the engine in the opposite direction of rotation, means responsive to the speed of the engine and connected to said shaft for axial movement thereof to effect engagement of said second cam surface by said cam follower means upon an engine speed below a predetermined value and to effect engagement of said third cam surface by said cam follower means upon an engine speed above said predetermined value, to stepwisely advance beginning of the opening of said exhaust valve upon a reduction of the engine speed below said predetermined value and to retard beginning of the opening of said exhaust valve upon increase of the engine speed above said predetermined value.

3,095,693

OXIDIZER COMPRISING TETRANITROMETHANE AND NITROGEN PENTOXIDE AND METHOD OF PRODUCING THRUST THEREWITH

Christian A. Wamser, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Feb. 9, 1960, Ser. No. 7,527
3 Claims. (Cl. 60—35.4)

1. A normally-liquid oxidizing composition consisting essentially of about 10 to 20% by weight of tetranitro methane and about 80–90% by weight of nitrogen pentoxide.

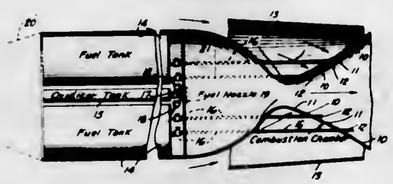
3. A method for producing thrust which comprises injecting into a combustion chamber of a rocket a liquid fuel and a liquid oxidizer consisting essentially of about 10 to 20% by weight of tetranitro methane and about 80 to 90% by weight of nitrogen pentoxide, reacting said fuel and said oxidizer to produce a gas and directing said gas through a nozzle.

3,095,694

REACTION MOTORS

Hermine Johanna Walter, Dover, N.J. (P.O. Box 61, Manchester, Tenn.)

Filed Oct. 28, 1959, Ser. No. 849,329
3 Claims. (Cl. 60—35.6)



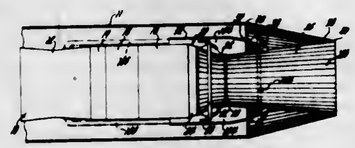
2. A reaction motor comprising a casing, means within the casing for producing high temperature combustion products having an unburned fuel constituent, a nozzle having walls forming a convergent section and a divergent section, said nozzle being connected to the casing and in fluid communication with said means, said nozzle dimensioned to accelerate the combustion products to supersonic velocities in the divergent section, ducts in the wall of said divergent section for inducting ambient air into said divergent section, and means, mounted within said ducts, for generating sound waves in the inducted air to enhance mixing of the inducted air and the unburned fuel constituent whereby combustion of the unburned fuel constituent occurs in the divergent section.

3,095,695

CONVERGENT-DIVERGENT JET NOZZLE

Arthur W. Gaubatz, Indianapolis, and James W. Moore, West Lafayette, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 23, 1959, Ser. No. 854,968
3 Claims. (Cl. 60—35.6)



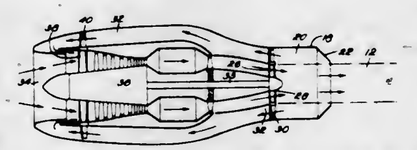
1. A convergent-divergent jet nozzle for an aircraft type gas turbine engine having an exhaust duct with an outlet for the passage of exhaust gases therethrough, said nozzle comprising annular convergent and divergent sections axially aligned with said outlet and each other and pivotally connected to each other at their adjacent ends, the opposite end of said convergent section being pivotally connected to said duct, the pivotal connection between the convergent and divergent sections constituting a throat, each of said sections comprising a plurality of circumferentially spaced flaps operatively pivotally connected to each other at their adjacent lateral edges to form a continuous annular surface, the pivotal connection between said flaps comprising means both radially and circumferentially movable permitting increase or decrease in the area enclosed by said flaps, the movement of said pivotal connection varying the area of said throat, cam follower means secured to each of said flaps, said cam follower means having an arcuate slot therein, annular shroud means having a plurality of pins thereon engageable in each of said slots, said shroud means being axially movable to radially vary the position of said flaps, and means for moving said shroud means to vary the area of said throat, the passage of the exhaust gases through said throat exerting forces on said throat tending to increase its area, air conduit means secured at one end to said divergent section and surrounding portions of the same and the convergent section to define an air compartment therebetween, the opposite end of said conduit means being in communication with ram air upon forward flight of said aircraft, said ram air acting in said compartment against the exterior of said sections in a direction balancing the forces of the said exhaust gases permitting the axial movement of said shroud means to selectively vary the area of said throat.

3,095,696

COMPUTER-ENGINE EXHAUST SYSTEMS

Roy W. Rumble, Johannesburg, Transvaal, Republic of South Africa (P.O. Box 357, Germiston, Transvaal, Republic of South Africa)

Filed Sept. 19, 1960, Ser. No. 57,003
Claims priority, application Republic of South Africa Sept. 25, 1959
14 Claims. (Cl. 60—35.6)



1. A jet propulsion engine including a conduit for the jet stream and comprising a convergent nozzle having an inlet mouth disposed at the discharge end of said conduit, a jacket coaxially disposed at and surrounding said nozzle and having a portion extending downstream of said nozzle, said portion having inwardly directed flanges which define an aperture having substantially the same diameter as said convergent nozzle exit mouth, and means being provided in said jacket to reduce the pressure in the space formed between said convergent nozzle and said jacket to reduce the noise level.

3,095,697

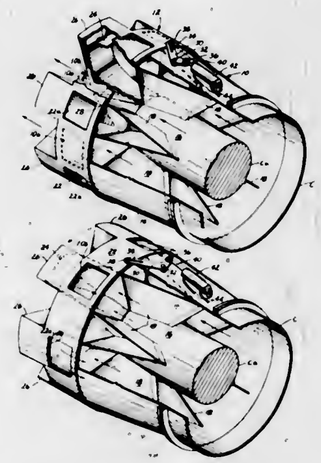
NOISE SUPPRESSION NOZZLES WITH THRUST REVERSAL PROVISION FOR JET ENGINES

William A. Reinhart, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Feb. 7, 1956, Ser. No. 563,953
4 Claims. (Cl. 60—35.54)

1. Jet engine nozzle means comprising rearwardly directed nozzle discharge duct means including an outer wall having a plurality of ports therein located forwardly of the after end thereof and spaced apart in successive

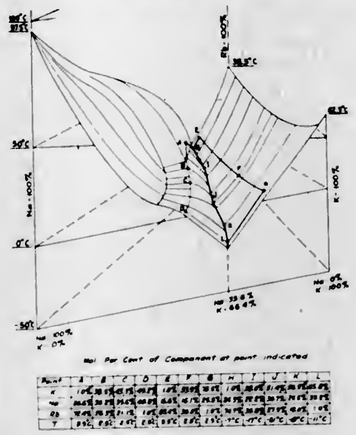
serial relationship transversely of the direction of discharge through said duct means, a like plurality of stream dividers mounted in said duct means at respective transversely spaced locations between said ports, thereby to confine the rearward discharge flow transversely to the regions adjacent to said ports, the transverse spacing between such stream dividers at the after end thereof being substantially equal to their width at such ends, cover means longitudinally overlapping said outer wall and ports and having a like plurality of openings therein registrable with said ports, said cover means being movable transversely of the duct means to position its openings in the spaces between said ports, thereby to open and close said ports, and discharge directing means connected with said cover means to be movable therewith,



said directing means comprising a like plurality of generally transversely disposed deflectors including deflecting surfaces extending inwardly from the outer wall and rearwardly from the vicinity of the after edges of the respective openings, said deflectors having a width and spacing substantially to close the respective spaces between said stream dividers against rearward discharge and to direct such discharge outwardly and forwardly through said openings with the latter in registry with said ports, thereby to reverse nozzle thrust, said deflectors having after ends longitudinally positioned substantially at the after end of said outer wall and of a width, measured transverse to the direction of discharge and parallel to the series extent of the ports and openings, substantially equal to said stream divider after end width, thereby to form stream divider extensions with bluff after ends to suppress jet noise while producing forward thrust.

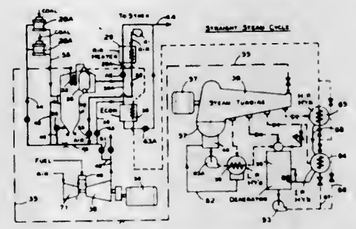
3,095,698
HEAT TRANSFER MEDIUM
David R. Stern, Fullerton, Calif., assignor to American Potash & Chemical Corporation, a corporation of Delaware
Filed Sept. 18, 1957, Ser. No. 684,719
2 Claims. (Cl. 60—36)

1. A method of heat transfer comprising heating a ternary mixture of sodium, potassium and rubidium to provide a stream of hot rubidium vapor and a liquid residue lean in rubidium, extracting energy from the rubidium vapor whereby the vapor is cooled, condensing the cooled rubidium vapor, and returning the condensed rubidium to said liquid residue to provide said mixture for reuse, said mixture having a percentage composition



falling along the line connecting points I, J and K of the drawing.

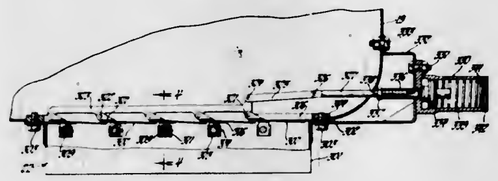
3,095,699
COMBINED GAS-STEAM TURBINE POWER PLANT AND METHOD OF OPERATING THE SAME
Clyde B. Baver, Akron, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 18, 1958, Ser. No. 781,289
9 Claims. (Cl. 60—39.02)



8. In a combined gas turbine-steam turbine electrical generating plant including a steam generating and heating unit for supplying steam to said steam turbine and which includes walls forming a furnace and a connected convection gas pass, fuel burning means for supplying freshly generated heating gases to the furnace, steam generating tubes lining the walls of the furnace, steam heating tubes disposed in said convection gas pass and connected for flow of fluid from said steam generating tubes and to said steam turbine, and an economizer downstream gas-wise of said steam heating tubes and supplying feedwater to said steam generating tubes, the method for improving the thermal efficiency of said unit during low load operation thereof comprising the steps of operating the gas turbine at substantially full load for generating the base electrical output of said plant, and varying the load of said steam generating unit to compensate for any swing in the electrical output of said plant above said base output during the combined gas-steam cycle operation thereof, recovering the hot exhaust gases from the gas turbine to increase the cycle efficiency of the steam generating unit during such load swings by dividing the recovered exhaust gases, combining at the inlet end of the economizer a divided portion

of the exhaust gases together with the freshly generated heating gases of the unit and directing said combined gases over all the economizer heating surface to heat the feedwater by recovering the heat from said combined gases by indirect heat exchange, delivering another divided portion of said exhaust gases directly to the fuel burning means for utilization as a preheated combustion supporting medium, introducing still another divided portion of the exhaust gases directly into the furnace to reduce the amount of radiant heat transmission of the products of combustion to the steam generating tubes lining the walls of the furnace and to increase the gas mass flow through the unit, increasing the rate of flow of gas turbine exhaust to said furnace as the load of the steam generating unit decreases, and decreasing the rate of supply of freshly generated heating gases to the furnace as the load of the steam generating unit decreases.

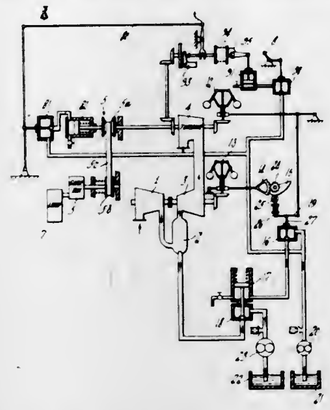
3,095,700
REGENERATIVE GAS TURBINE
Charles A. Amann, Birmingham, John S. Collman, Detroit, Roger W. Haushalter, St. Clair Shores, James M. Ricketts, Oxford, William A. Turunen, Birmingham, and Paul T. Vickers, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Jan. 16, 1956, Ser. No. 559,475. Divided and this application Jan. 20, 1960, Ser. No. 3,556
1 Claim. (Cl. 60—39.2)



A power plant comprising, in combination, a gas turbine engine, means defining an exhaust chamber receiving the exhaust from the engine, means defining a first constantly open outlet from the chamber of dimensions sufficient to handle the exhaust during idling operation of the engine, means defining a second outlet from the chamber substantially larger than the first outlet, the second outlet including valve means normally closed during idling operation of the engine and normally open at higher power levels, means responsive to pressure in the chamber operative to open the valve means in response to a predetermined pressure level above the level normal in idling operation of the engine; a power control for the engine operable to set the engine power output level, and means actuated by the power control operative to open the valve means when the power control is advanced above a predetermined power setting.

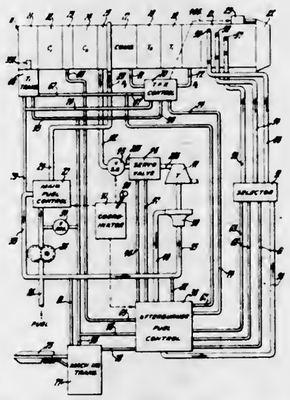
3,095,701
GAS TURBINE POWER PLANT CONTROL SYSTEMS
Robert A. Grosselfinger, Washington, D.C., and Jacques J. Schoch, Seattle, Wash., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,711
13 Claims. (Cl. 60—39.28)

1. A gas turbine power plant system including a variable fuel input, an output shaft for driving a load, and a control system comprising means for sensing first and second engine operating characteristics, control means connected to both of said sensing means and said variable fuel input for determining the fuel supply rate to maintain a predetermined line of relationship between said characteristics under steady state conditions throughout the power range of the power plant, means for selecting a desired power output and thus an operating point on said line, and a variable speed ratio transmission, con-



trolled by said last named means for unloading said output shaft during a transient upset caused by selection of higher power output level, whereby during such transient upset said speed will recover faster than said characteristic.

3,095,702
AFTERBURNER FUEL CONTROL
Arthur E. Brown, Cincinnati, Ohio, Edward G. Gaeke, Waukesha, Wis., John D. Hiller, Cincinnati, Ohio, and Harry C. Zeisloft, Brookfield, Wis., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,286
5 Claims. (Cl. 60—39.28)



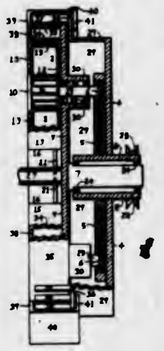
1. A fuel control for a jet engine comprising, in combination, manually operable control means, fuel-air ratio control means set by the manually operable control means, fuel limiting means responsive to engine inlet air temperature, fuel metering means, and means responsive to inlet air temperature operable to couple the fuel-air ratio control means to the fuel metering means below a predetermined air temperature and to couple the fuel limiting means instead of the fuel-air ratio control means to the fuel metering means above said predetermined air temperature.

3,095,703

SUPER-CHARGED JET TORQUE AND PROPULSION REVERSE REACTION ENGINE

James N. Preston, 1633 W. Campbell, Phoenix, Ariz.

Filed Sept. 19, 1961, Ser. No. 139,137
2 Claims. (Cl. 60—39.35)



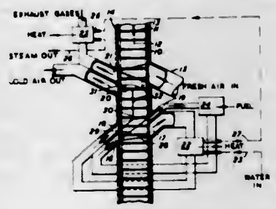
1. A reaction engine comprising; a combustion chamber is provided which is contained on its periphery by means of a combustion outer cylinder, on one end by means of a concentric combustion ring disc which concentrically adjoins one end of said combustion outer cylinder, on the oposite end by means of a concentric stationary center disc which concentrically adjoins the opposite end of said combustion outer cylinder; said combustion chamber is contained on its axis-toward side by means of a concentric combustion inner cylinder which concentrically adjoins said combustion ring disc and said stationary center disc; said combustion chamber is provided with at least one combustion air intake port which is located generally in the combustion inner cylinder; said combustion chamber is provided with at least one combustion exhaust port which is located generally in the combustion outer cylinder; said combustion exhaust port is provided with a substantially larger cross-section area than that of the combustion air intake port; said combustion chamber is provided with at least one fuel intake jet which is located generally in the combustion inner cylinder; an axle is provided which is in connection with the stationary center disc and located generally concentric with the combustion outer cylinder; a back-pressure disc is provided which rotates concentrically around the axis of the axle on bearings; a plurality of back-pressure vanes are provided; each back-pressure vane is in connection with the back-pressure disc and extends in a general axial direction for a distance generally across the plane of the combustion chamber generally closely adjacent to the periphery of the combustion outer cylinder; each said back-pressure vane extends outward for a distance in a radial direction from an axially concentric perimeter which is provided with a diameter generally slightly greater than that of the periphery of the combustion outer cylinder; each said back-pressure vane is provided with a cross-section surface area at least as large as the cross-section area of the combustion exhaust port and located on a perimeter whereby rotating generally closely adjacent past the combustion exhaust port during each revolution of the back-pressure disc around the axis of the axle; at least one generally centrifugal-type axle-driven planetary air compressor is provided which is in connection with the stationary center disc and located geenrally at a distance from the axis of the axle; said planetary air compressor is activated by means of a planetary axle which is provided with rotation around its own axis at a greater r.p.m. velocity than that of the back-pressure disc by means of a suitable torque transmission train, generally a gear train, which gears said planetary axle to the back-pressure disc for the purpose of activating said planetary air compressor which provides compression of expandable fluid, generally air, continuously through the combustion air intake port into the combustion chamber when said back-pressure disc is rotated around the axis of the axle; thermal energy is provided within said combustion chamber for the purpose of providing said expandable fluid therein with a substantially larger fluid volume therein by means of fluid expansion thereby providing a fluid exhaust velocity and p.s.i. pressure to said larger fluid volume at the combustion exhaust port to a degree approaching the intake fluid velocity and p.s.i. pressure of compressed expandable fluid within the combustion air intake port prior to entering said combustion chamber; any combustible fuel is forced through the fuel intake jet into said combustion chamber generally by pump means wherein igniting with compressed expandable fluid, normally compressed air, thereby providing thermal energy and a larger fluid volume; larger fluid volume, consisting normally of ignited and expanding combustion gases, exhausts from the combustion chamber through the combustion exhaust port generally directly into the plane and influence of the back-pressure vanes generally from the axis-toward side of said back-pressure vanes; a means is provided, located generally within the combustion chamber, to direct the exhausting larger fluid volume from the combustion chamber and the combustion exhaust port generally directly into the plane and influence of the back-pressure vanes in a tangential general axially transverse direction generally from the axis-toward side of said back-pressure vanes whereupon said larger fluid volume impinges against a surface area of each back-pressure vane in the path of the exhausting larger fluid volume which provides said back-pressure vanes and back-pressure disc with continuous rotation around the axis of the axle thereby providing torque energy which provides rotation to the planetary axle of the planetary air compressor by torque transmission means which provides continuous compression of fluid into the combustion chamber thereby continuing the cycle which provides continuous torque energy and propulsion thrust.

3,095,704

PRESSURE EXCHANGER APPARATUS

Dudley Brian Spalding, 2 Vineyard Hill Road, London SW. 19, England

Filed Dec. 9, 1960, Ser. No. 74,941
4 Claims. (Cl. 60—39.45)



1. According to the present invention heat pump apparatus includes
a pressure exchanger having cells for the compression and expansion of at least one fluid, the cells having open ends,
means defining common end-walls at each end of the cells, each end-wall having circumferentially spaced ports therein,
a series of ducts communicating with the cells through the circumferentially spaced ports in the end-walls,
means for causing relative motion between the cells and the end-walls,
the series of ducts including in succession in the direction of relative motion of the cells,

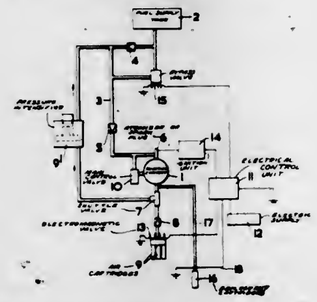
an inlet duct for admitting low-temperature fluid to the cells through the other one of said end-walls,
an inlet duct for admitting cooled high-pressure fluid to the cells, the opening edge of the port of which immediately follows the closing edge of the port communicating with the duct for admitting high-temperature compressed fluid to the cells,
a second outlet duct for leading high-pressure fluid derived from the first-mentioned inlet duct from the cells, the opening edge of the port of which immediately follows the closing edge of the port communicating with the first outlet duct,
an outlet duct for leading cooled low-pressure fluid from the cells through a port in the said other end-wall,
and an outlet duct for leading fluid from the cells, which fluid is derived from the inlet duct for admitting high-pressure high-temperature fluid to the cells and the opening edge of the port through which the outlet duct communicates with the cells immediately following the closing edge of the port which communicates with the duct leading cooled low-pressure fluid from the cells,
ducting forming
a first closed circuit between the second outlet duct and the inlet duct for admitting high-pressure high-temperature fluid to the cells and a second closed circuit between the first outlet duct and the inlet duct for admitting cooled high-pressure fluid to the cells,
a combustion chamber in the first-named closed circuit,
a heat-exchanger in the second-named closed circuit,
and a further heat-exchanger the hot pass of which communicates with the duct for leading fluid from the cells which fluid is derived from the inlet duct for admitting high-pressure high-temperature fluid to the cells and the cold pass of which heat-exchanger is in communication with the cold pass of the first-mentioned heat-exchanger.

3,095,705

MONOFUEL REACTION CHAMBER APPARATUS

George Tabberer and Derek Henry Wallace, Coventry, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Apr. 26, 1961, Ser. No. 105,668
Claims priority, application Great Britain May 9, 1960
4 Claims. (Cl. 60—39.46)



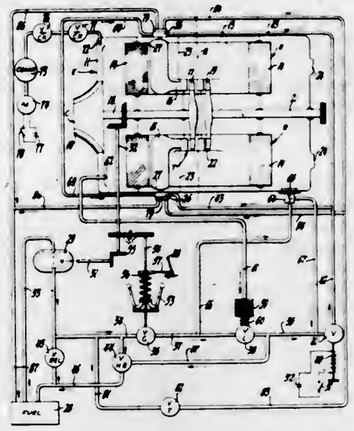
1. Apparatus for producing a flow of gaseous working fluid comprising a reaction chamber in which decomposition of a monofuel takes place to provide said flow, a source of monofuel, a connection between said source and said chamber, said connection including a main valve, a pressure intensifier, a connection between the high pressure side of said pressure intensifier and said source to enable fuel under pressure to be injected into said chamber through said main valve, a cartridge containing an oxygen-containing gas, a shuttle valve having a floating valve member, conduit means connecting said shuttle valve to the low pressure side of said pressure intensifier, to said reaction chamber and to said cartridge, said shuttle valve in one position of said floating valve member connecting both said reaction chamber and said pressure intensifier to said cartridge, electrical control means for initiating the flow of oxygen-containing gas from said cartridge, and ignition means for igniting the resulting mixture in said reaction chamber of said gas and said monofuel, said shuttle valve being so constructed that as the pressure obtained by the release of the contents from said cartridge diminishes and the pressure produced in the reaction chamber increases by the decomposition of monofuel therein, the floating valve member of said shuttle valve moves to another position to connect the supply of gas from the cartridge to the atmosphere and connect the reaction chamber directly to the low pressure side of the pressure intensifier, the pressure developed in the reaction chamber being utilized, on its rising to a predetermined value, to open said main valve permitting a continuing supply of monofuel to be injected into said reaction chamber from the high pressure side of the pressure intensifier.

3,095,706

GAS TURBINE FUEL NOZZLE COOLING

Eugene E. Flanigan, Detroit, and Richard M. Zeek, Utica, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Sept. 8, 1958, Ser. No. 759,689. Divided and this application Sept. 21, 1960, Ser. No. 57,505
2 Claims. (Cl. 60—39.66)



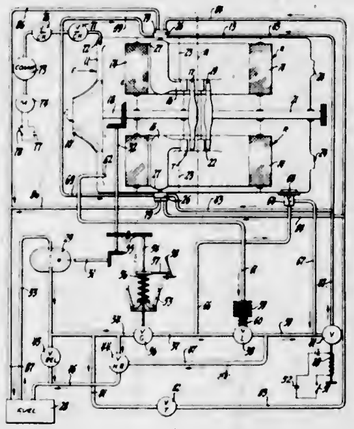
2. A fuel spray nozzle for a gas turbine engine comprising, in combination, a fuel nozzle body adapted to be mounted on an engine, a spray head projecting from the body and adapted to extend into the engine for discharge of fuel into the engine, and a cooler fixed to the body comprising a cup means providing a chamber one wall of which is defined by the body, an inlet conduit for cooling fluid entering the chamber, an outlet conduit for cooling fluid communicating with the chamber, the inlet conduit being so disposed in the chamber as to impart swirling motion to cooling fluid circulating through the chamber, and means for supplying fuel to the inlet conduit under pressure independent of fuel supplied to the nozzle for discharge into the engine.

3,095,707
GAS TURBINE FUEL NOZZLE AIR SUPPLY SYSTEM

Eugene E. Flanigan, Detroit, and Richard M. Zeek, Utica, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Sept. 8, 1958, Ser. No. 759,689. Divided and this application Sept. 21, 1960, Ser. No. 57,506

3 Claims. (Cl. 60—39.74)



1. A gas turbine engine comprising, in combination, a compressor, combustion apparatus supplied by the compressor, and a turbine energized by the combustion apparatus and connected to drive the compressor, a regenerator for transfer of heat from the turbine exhaust to air discharged by the compressor, the regenerator being connected between the compressor and the combustion apparatus for flow of air through the regenerator and being connected to the turbine for flow of combustion products discharged by the turbine through the regenerator; the compressor including a diffuser providing an outlet from the compressor connected to discharge into the regenerator, the flow of air through the regenerator causing a pressure drop in the air between the regenerator inlet and the combustion apparatus, a fuel nozzle in the combustion apparatus supplying fuel to the combustion apparatus, the fuel nozzle being of an air-atomizing type and including a fuel inlet and an air inlet, and means for supplying air to the said air inlet at a pressure differential above that within the combustion apparatus based at least in part upon the said air pressure drop in the regenerator comprising an open-ended pickup tube projecting into the diffuser in a direction opposite to the direction of air flow therein at the location of the tube so as to provide a total pressure recovery, and conduit means connecting the pickup tube openly and directly to the fuel nozzle air inlet so that the said air inlet is supplied with air substantially at compressor total discharge pressure.

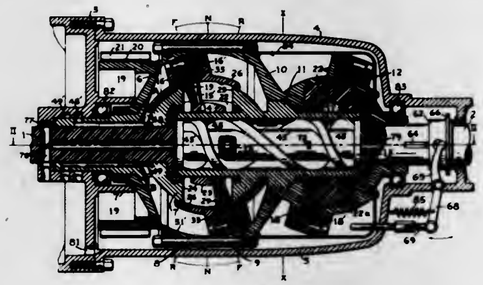
3,095,708
VARIABLE DISPLACEMENT HYDRAULIC ASSEMBLY

Lee T. Harris, 511 William St., Rome, N.Y.

Original application July 9, 1957, Ser. No. 670,814, now Patent No. 3,044,409, dated July 17, 1962. Divided and this application Aug. 24, 1961, Ser. No. 141,555

9 Claims. (Cl. 60—53)

1. A variable speed transmission of the hydraulic type comprising a housing having therein a driving pump chamber and a driven pump chamber; input and output shafts respectively mounted in said chambers; driving and driven pump assemblies respectively mounted in said chambers, said assemblies including a rotor connected to said input and output shafts and a plurality of radial vanes mounted on said rotors; a divider disk supporting assembly mounted in said housing and having therein an annular groove, a divider disk having a plurality of radial slots therein mounted in said groove and adapted to intermesh with said vanes, a plurality of peripheral chambers on each side of said divider disk in the portion thereof disposed in said annular groove, each of said peripheral chambers being connected by a duct to a corresponding



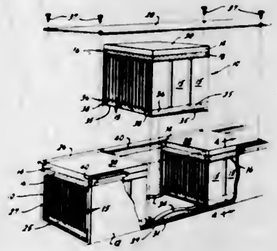
pump chamber formed between adjacent vanes on the opposite sides of said divider disk, said disk support assembly being pivotally mounted about a diameter thereof in said housing about said driving pump assembly; a ducting core extending from said driving pump chamber to said driven pump chamber, said ducting core having at least a pair of channels cut therein to sequentially connect together corresponding pump chambers of said rotor assembly whereby oil may flow from one to the other; and control means for varying the pitch of said driving pump divider disk assembly.

3,095,709
HEAT TRANSFER APPARATUS

Erhart E. Demand, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Dec. 29, 1961, Ser. No. 163,266

9 Claims. (Cl. 62—3)



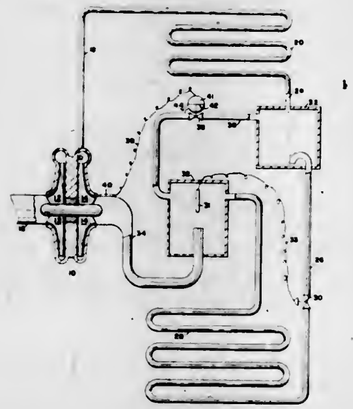
1. A thermoelectric module comprising thermocouple means including a heat-rejecting side, an array of elongated heat-dissipating fins each having a first end portion arranged in heat exchange relation with said heat-rejecting side and a second end portion disposed remotely from said side, and electrically insulative material spaced from said side and arranged in stabilizing and insulating engagement with said second end portion of each fin, the portion of each fin between said first and second end portions being exposed in the space between said material and said heat-rejecting side.

3,095,710
ANTI-SURGE CONTROL FOR FLUID COMPRESSOR

William E. Clark, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed May 18, 1960, Ser. No. 29,962

3 Claims. (Cl. 62—117)



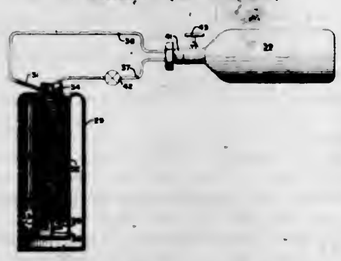
1. The method of controlling operation of a compressor subject to surging action in a refrigeration system including in addition to the compressor a condenser for liquefying refrigerant, an evaporator for vaporizing refrigerant and means for metering refrigerant flow to said evaporator, which consists in the steps of providing a path of flow for refrigerant from the high pressure side of the system to the low pressure side of the system without flow through said metering means, controlling flow of refrigerant in said path in response to a predetermined difference in the temperature of the gaseous refrigerant at the inlet of the compression means and the saturated temperature of the gaseous refrigerant in the evaporator as determined by a measured characteristic of the refrigerant indicative of the saturated temperature of said refrigerant in the evaporator.

3,095,711
DOUBLE CRYOSTAT

Howard P. Wurtz, Jr., Santa Barbara, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Jan. 31, 1962, Ser. No. 170,293

5 Claims. (Cl. 62—514)



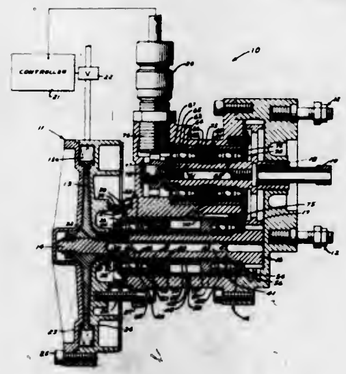
2. A Joule-Thomson effect cryostat comprising a hollow envelope closed at one end, a hollow mandrel disposed at the center of said hollow envelope, a pair of hollow heat exchanging tubes disposed within said envelope, one of said tubes being disposed within said hollow mandrel and the other of said tubes being wound on said mandrel, each of said tubes having a gas discharging opening at the closed end of said hollow envelope, means for introducing high pressure gas at the other end of said tubes for flow therethrough and valve means for closing one of said tubes to gas flow therethrough.

3,095,712
DRIVE COUPLING

George Y. Ono, Mayfield Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio

Filed Sept. 23, 1957, Ser. No. 685,603

1 Claim. (Cl. 64—3)



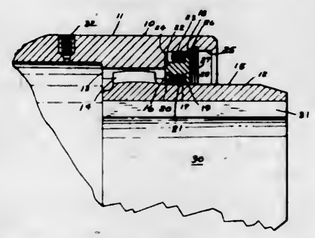
In a drive coupling for connecting a load to a high temperature motive power source which includes a casing, a housing, means including an annular sleeve member for mounting said casing on one end of said housing, and a shaft journalled in said housing and having an end portion projecting from said one end of said housing through said annular member and into said casing, said sleeve member having a plurality of circumferentially spaced radial ports therethrough for flow of hot gases radially outwardly therethrough and said sleeve having a low thermal conductivity cooperating with the ports to minimize axial heat conduction across the sleeve between the casing and said housing.

3,095,713
SEAL AND FLEXIBLE GEAR TYPE COUPLING

Louis H. Sahlmann and John J. Kane, Erie, Pa., assignors to Zurn Industries, Inc., Erie, Pa., a corporation of Pennsylvania

Filed Nov. 20, 1961, Ser. No. 153,432

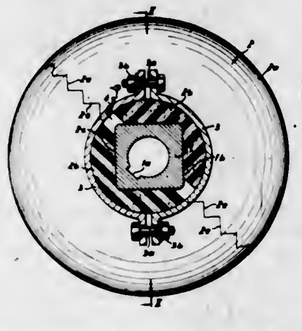
3 Claims. (Cl. 64—9)



1. A coupling comprising a hollow, generally cylindrical member having inwardly directed teeth and a counterbore in one end thereof outward of said teeth, a generally cylindrical hub having outwardly directed crowned teeth adjacent one end thereof and engaging said inwardly directed teeth, a sealing ring having a shape in cross section of an H with one outer leg removed, the inner legs thereof being adjacent the outer periphery of said hub, said sealing ring being disposed in said counterbore, the bar of said H being chamfered, an O-shaped

sealing ring in the space defined by the outside bottom of said bar and the outer outwardly extending leg of said H-shaped ring, an O-ring disposed in the groove defined by said inner legs of said H-shaped sealing ring, said inner ring being slightly greater in cross sectional diameter than the distance from the outer peripheral surface of said hub to the bar of said H, an outer peripheral groove in said cylindrical member in the surface defining the counterbore thereof outwardly of said H-shaped ring, and a snap washer disposed in said groove, said snap washer extending inwardly and forming a stop, preventing said H-shaped ring from sliding outwardly.

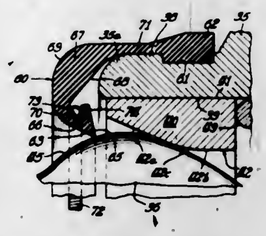
3,095,714
FLEXIBLE COUPLINGS
Karl Schlotmann, Unna, Westphalia, Germany, assignor to Maschinenfabrik Stromag G.m.b.H., Unna, Westphalia, Germany, a firm of Germany
Filed May 24, 1961, Ser. No. 127,414
3 Claims. (Cl. 64—11)



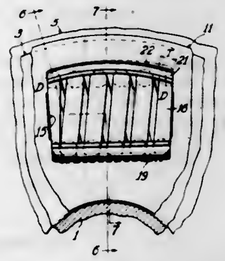
1. A flexible coupling for coupling coaxial shafts comprising a torque-transmitting member of an elastomer including a central substantially annular portion substantially U-shaped in cross-section and a pair of integral hub-extensions projecting in opposite axial directions at right angles from the flange portions of said central portion, said torque-transmitting member being subdivided substantially radially into a plurality of separate complementary torque-transmitting units, means for precluding relative rotational movement between said pair of hub-extensions and a pair of coaxial shafts, said precluding means including a pair of substantially annular clamping members each mounted on one of said pair of hub-extensions and each adapted to exert radial clamping pressure upon one of said pair of hub-extensions, said means for precluding relative movement further including a pair of coaxial metallic hub-members adapted to be mounted directly upon and keyed to a pair of coaxial shafts and to form a pair of mounting supports for said pair of hub-extensions, each of said pair of hub-extensions having a radially inner surface in the shape of a multilateral prism abutting against the radially outer surface of one of said pair of hub-members in the shape of a congruent multilateral prism, gaps being defined between said plurality of torque-transmitting units in the regions of said pair of hub-extensions thereof allowing compression of portions of said pair of hub-extensions into said gaps.

3,095,715
UNIVERSAL JOINT
Raymond E. Stokely, Rockford, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 22, 1961, Ser. No. 111,632
13 Claims. (Cl. 64—21)

1. A sealing ring or sleeve adapted for effecting a fluid seal between generally concentric surfaces of relatively movable members said sleeve comprising: an annular unitary body of elastic and pliable material generally arcuate in cross-section, said body having an annular stiffening portion located at one terminal thereof and adapted to sealably engage one of said surfaces, said body having at the other terminal thereof an annular portion adapted to sealingly and wipingly engage the other of said surfaces, said body being particularly characterized by an annular web disposed intermediate said wiping portion and said stiffening portion with said web being flanged by relatively thin annular neck portions connecting said respective wiping portion so that a first one of said neck portions will being spaced axially and radially inwardly of said stiffening portion so that a first one of said neck portions will serve as a primary flexing segment whereby the wiping element is made to resiliently seal against said surface of said other element and said other of said neck portions provides a secondary flexing segment whereby the body is permitted to accommodate irregular deformation of the wiping element caused by relative movement between said members while maintaining an annular fluid sealing relationship with said surfaces.

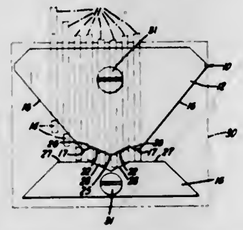


3,095,716
TORSIONAL VIBRATIONAL DAMPENER DEVICE
Richard L. Smirl, La Grange Park, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 7, 1961, Ser. No. 157,721
8 Claims. (Cl. 64—27)



1. A torsional vibration dampening device comprising: a hub having a radially extending flange; a plate assembly comprising a pair of disc portions disposed on opposite sides of said hub flange and spaced therefrom, said flange and disc portions each having means defining a plurality of openings therein with adjacent openings on said flange and portions being arranged in general alignment so as to cooperate in forming a plurality of variable receptacles; and resilient means disposed in each of said receptacles and adapted to be flexed upon relative rotation between said flange and disc portions, said resilient means having a generally rectangular configuration within the plane of each of said openings, said opening defining means providing a radially outermost wall for each of said disc portion openings and a radially outermost wall for each of said flange openings, each said disc portion outermost wall being disposed at an angle with respect to each generally aligned flange opening outermost wall as viewed in an axial direction, said outermost walls in each of said aligned openings cooperating to maintain engagement with said resilient means at substantially the same areas under all operating conditions whereby parasitic friction between said resilient means and outermost opening walls, tending to reduce the elastic response of said resilient means, is substantially eliminated and said opening defining means and resilient means cooperating to support said disc portions independent of said hub whereby heretofore parasitic friction losses due to interengagement between the hub and disc portions may be substantially eliminated.

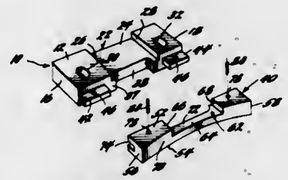
3,095,717
CIRCULAR KNITTING MACHINE
Benjamin Franklin Colle, Athens, Ga., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Oct. 31, 1958, Ser. No. 771,035
2 Claims. (Cl. 66—8)



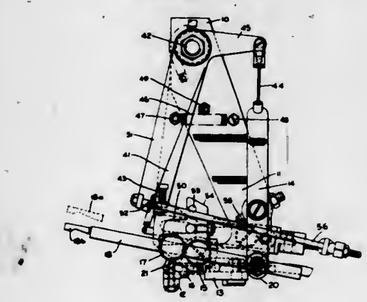
1. In a circular knitting machine having independent latch needles adapted to be operated in both rotary and reciprocatory movements of the machine and sinkers cooperating with said needles, said sinkers having upper stitch drawing surfaces and lower knockover surfaces, in combination with a stitch cam having upper straight needle draw-down surfaces for moving said needles to draw yarn stitches over the upper surfaces of said sinkers during reciprocatory movements of said needles in opposite directions, straight lower horizontal surfaces into which each of said draw-down surfaces merges, and corresponding to the maximum depth to which said needles are moved to draw said stitches, a portion intermediate said horizontal surfaces having draw-down surfaces for moving said needles to draw said stitches onto the knockover surfaces of said sinkers during reciprocatory movement of said needles in opposite directions, and upwardly inclined surfaces joining the inner ends of said horizontal surfaces to said draw-down surfaces of said intermediate portion, said upwardly inclined surfaces acting on said needles to relieve the tension in the stitches between the draw-down movements of said needles by said upper draw-down surfaces and said draw-down surfaces of said intermediate portion.

3,095,718
WEAR-RESISTANT THROAT PLATE FOR KNITTING MACHINE
Gus T. Smith, Paducah, Ky., assignor to Ace Engineering Company, Paducah, Ky.
Filed Sept. 7, 1960, Ser. No. 54,418
6 Claims. (Cl. 66—125)

1. A wear-resistant yarn guide comprising a base member and an insert member formed of wear-resistant ceramic materials arranged in abutting relation, at least one tongue projecting from one of said members, a recess formed in the other of said members for each such tongue and adapted to receive the same, aligned apertures formed in the tongue and in an adjacent portion of said other member, the latter aperture having an opening in only one face of the member, the axis of said apertures extending generally transversely of the tongue axis, and a rigid retaining pin inserted into said apertures through said opening, said pin passing at least substantially through said tongue and extending into said other member on at least one side of the tongue.



3,095,719
CIRCULAR KNITTING MACHINES
Charles F. Manger and George A. Smith, Leicester, England, assignors to The Bentley Engineering Company Limited
Filed Mar. 22, 1960, Ser. No. 16,845
Claims priority, application Great Britain Mar. 26, 1959
9 Claims. (Cl. 66—133)

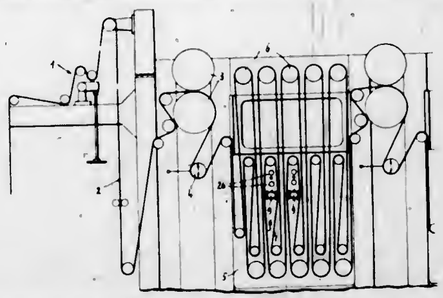


1. An auxiliary yarn feeder control mechanism for a knitting machine comprising a yarn feeder, means for intermittently moving said yarn feeder into and out of a position in which the yarn is fed to part only of a set of needles arranged in a circle in the knitting machine for circular knitting, means for interrupting the first-named means as to its actuation for moving the feeder out of feeding position and means, including a platform, and brackets, for mounting said feeder on a knitting machine, a pivot plate screw-pivoted to said platform and formed with a bearing offset from its pivotal axis in which a stub spindle carrying a feeder arm turns freely to rocket about the axis of a second stub spindle through which it is slidable, and a slotted slide member with an associated masking plate for rocking the pivot plate to operate the feeder.

3,095,720
WASHING AND DYEING MACHINES
Hans Jakob, Arbon am Bodensee, Switzerland, assignor to Ferdinand Zoellig, Steinach, Switzerland
Filed Feb. 20, 1962, Ser. No. 174,617
Claims priority, application Germany Feb. 23, 1961
10 Claims. (Cl. 68—43)

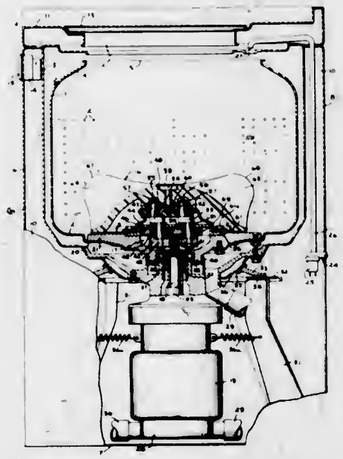
1. A processing machine for textile fabric webs, comprising at least one vat, at least one roller vibrator arranged in each such vat, each vibrator being mounted on a hollow shaft, means for advancing said web in loops through such vat, means for passing a fresh liquid supply through said hollow shaft, each said hollow shaft having mounted thereon a roller vibrator body studded

with rows of teeth and having radially arranged outlet openings for said liquid, the outer extremities of said



teeth being adapted to contact adjacent loops of said web.

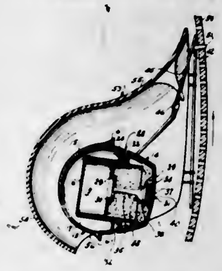
3,095,721
CLOTHES WASHING MACHINE
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 9, 1962, Ser. No. 185,921
4 Claims. (Cl. 68—133)



1. A clothes washing machine comprising:
(*a*) receptacle means for containing liquid and clothes to be washed;
(*b*) an agitator positioned in said receptacle means;
(*c*) driving means;
(*d*) a first elliptical gear secured to be rotated by said driving means;
(*e*) a second identical elliptical gear rotatably mounted in meshing engagement with said first gear, said first and second gears each being secured for rotation on a focus thereof;
(*f*) and first and second members secured to said first and second gears respectively at their second foci respectively;
(*g*) said agitator having a portion secured to said members so that said agitator moves on a path determined by the movement of a line between said second foci, said agitator being formed to effect a washing action during such movement.

3. An agitator member for a vertical axis-type clothes washing machine comprising:
(*a*) a base;
(*b*) substantially vertical wall portions extending upwardly substantially along a line through the center of said agitator on either side thereof, said wall portions both facing in substantially the same direction;
(*c*) and a smoothly contoured sloping back surface extending from said wall portions down to said base of said agitator.

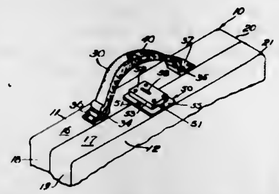
3,095,722
DEVICE FOR DISPENSING WATER OR FABRIC CONDITIONING SUBSTANCES IN CLOTHES WASHERS
Donald L. Fox, 7 Chapel Lane, Riverside, Conn.
Filed June 2, 1961, Ser. No. 114,531
12 Claims. (Cl. 68—207)



1. A device for dispensing a water or fabric treating substance into the deep rinse water in an automatic clothes washer having a tub which is rotated at high speed for a brief spin cycle prior to the introduction of the deep rinse water; said device comprising a support adapted to be secured to the side wall of the tub of a clothes washer, a housing pivotally suspended in said support and defining first and second chambers, said housing tending to maintain said second chamber below said first chamber and having a first opening between said first and second chambers and a second opening between said second opening and the exterior of the housing and normally disposed at the bottom of said housing, a valve assembly movable in said housing and operative to initially close said first opening for retaining a charge of treating substance initially placed in said first chamber, said valve assembly being displaced by centrifugal force acting thereon during the high-speed spin cycle prior to the introduction of the deep rinse water to open said first opening and close said second opening so that the charge of treating substance can enter said second chamber, and resilient means acting on said valve assembly to urge the latter to an intermediate position where both said first and second openings are open when the centrifugal force is removed at the conclusion of the spin cycle so that the charge of treating substance can discharge from said second chamber and mix with the introduced deep rinse water.

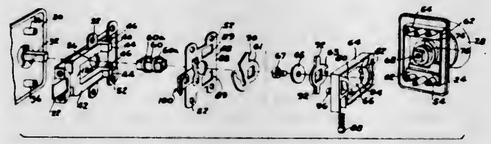
3,095,723
LOCK AND MAGNETIC RELEASE DEVICE
Harry F. McKnight, Crest and Park Ave., Box 182, Bensenville, Ill., and John Noble, 3321 W. Pierce Ave., Chicago 51, Ill.
Filed May 23, 1962, Ser. No. 196,967
7 Claims. (Cl. 70—69)

6. A magnetic locking device for a container, said container having a supporting section and a movable section hingedly connected together and separable from each other at the top, a flexible handle mounted on said supporting section, a latch plate mounted on said supporting section and beneath said handle, a locking frame mounted on said movable section and adapted to have an end portion thereof extend over said latch plate, a locking member attached to said locking frame and adapted to enter an opening in said latch plate, and a permanent magnet concealed and embedded within said handle intermediate its ends for releasing said locking member from said opening in said latch plate, and said handle coacting with said



supporting section for positioning said magnet in latch member releasing position.

3,095,724
DOOR LOCK
John A. Truhon, Detroit, Mich., assignor to Theodore Bargman Co., Detroit, Mich., a corporation of Michigan
Filed Nov. 6, 1961, Ser. No. 150,511
10 Claims. (Cl. 70—146)

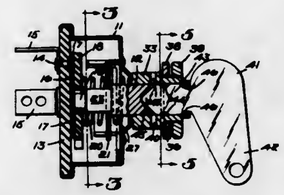


1. In a door lock, the combination of an axially reciprocable bolt projectable into locking position with a keeper, means normally biasing the bolt to the projected locking position, individually operable inside and outside spindles for operating said bolt, said bolt having an abutment thereon, each spindle having a cam which, when the spindle is rotated, is effective to engage the abutment and retract the bolt, an outside plate in which said outside spindle is journalled, said outside plate having a guideway thereon, a slide movable in said guideway in a direction parallel to the path of travel of the bolt, said outside spindle having a key actuated lock cylinder co-axial therewith, said lock cylinder having a radial projection engageable with said slide to reciprocate the slide in the guideway when the cylinder is key actuated, said outside cam being disposed axially adjacent said slide and having a recess therein, said slide having a projection normally radially aligned with said recess in said outside cam and engageable therein when the slide is actuated by said cylinder in one direction to thereby lock the outside cam against rotation, said slide having a second projection thereon, the inside cam having a cam edge thereon engageable with said second projection to shift the slide in the opposite direction out of locking engagement with the outside cam in response to rotation of the inside cam.

3,095,725
NON-TUMBLER LOCK FOR TUMBLERLESS KEY
Thomas Ungworth, Wellesley, Mass., assignor to Cole-Hersee Company, South Boston, Mass., a corporation of Massachusetts
Filed Dec. 22, 1961, Ser. No. 161,744
1 Claim. (Cl. 70—346)

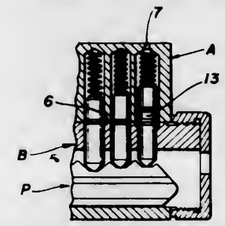
A non-tumbler lock operable by a tumblerless key having a central, straight, solid shank provided with a portion of reduced width remote from its inner end, said lock comprising a cylindrical shaft and a bushing in which the shaft is rotatable, the outer end of the shaft having a hollow portion, providing a chamber defined by a substantially cylindrical wall, and said wall having opposed slots therein adapted to receive the opposite edges of the key

shank, and the bushing having a key-receiving slot consisting of relatively narrow end portions in which the edges of the key shank are freely slidable and an enlarged central opening in which the reduced width of the key shank is adapted to rotate when the key is inserted in the



lock and turned therein; said narrow end portions of the slot being normally aligned with said opposed slots in the wall of the hollow portion of the shaft; and said shaft wall having a peripheral groove intersecting said wall slots, and a spring ring in said groove adapted resiliently to retain the key shank in the lock.

3,095,726
PIN TUMBLER CYLINDER KEY SYSTEM
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Filed Jan. 23, 1961, Ser. No. 84,378
5 Claims. (Cl. 70—383)

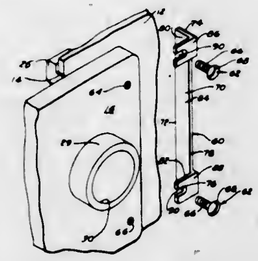


4. In a pin tumbler cylinder lock having a rotatable plug, and a single row of aligned tumbler columns with upper and lower spring actuated pin tumblers in each column, an intermediate pin tumbler disposed between an upper and a lower tumbler in one of the columns, resilient means on the intermediate tumbler for temporarily securing said intermediate tumbler in the plug with its upper surface aligned with the shear line of the plug, the tumblers in the other columns being liftable by a temporary key to the shear line, thereby permitting rotation of the plug, and a final key for lifting the intermediate tumbler and freeing it from its secured position, so that when the final key is removed, the intermediate tumbler will assume its normal position intersecting the shear line, thereby permanently preventing rotation of the plug by the temporary key.

3,095,727
QUICK-RELEASE MEANS FOR SECURING LOCK ASSEMBLIES IN FITTED DOOR OPENINGS
William J. Kerr, Glenview, Ill., assignor to Chicago Lock Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 24, 1961, Ser. No. 154,436
2 Claims. (Cl. 70—451)

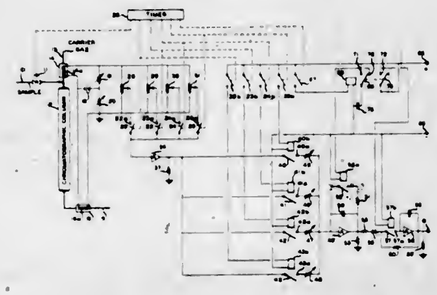
2. The combination with a flat door panel having a lock opening therein presenting a pair of opposed parallel straight side edges, and a lock housing presenting a pair of oppositely facing planar side faces fitting closely against said opposed pair of side edges and extending normal to the plane of said door panel, a rear face disposed rearwardly of the door panel, and a rim flange

bearing against the outside face of the door panel and surrounding said opening, said rear face being formed with two threaded holes disposed in spaced relationship adjacent to but spaced inwardly of each of said side faces, of a pair of identical sheet metal clamping brackets for fixedly securing the lock housing in position on said door panel, each of said backets comprising an elongated flat body portion in face-to-face coextensive contact with one of said side edges of the housing, and having a longitudinal edge thereof bearing coextensively against the inner face of the door panel, and a pair of spaced laterally turned reaction flanges on the other longitudinal



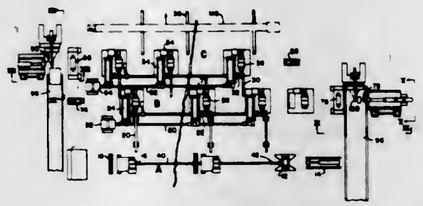
edge and overlying but spaced from the rear face of the housing, each reaction flange being formed with an open-ended slot therein extending inwardly from the distal edge of the flange and in register with one of the tapped holes, and a clamping screw for each slot and having a shank projecting through the slot and threadedly received in the adjacent threaded hole, and an enlarged head in engagement with the flange in which the slot is formed, the clamping screws serving collectively to draw the lock housing rearwardly of the panel and thus draw the rim flange of the housing tightly against the front face of the door panel.

3,095,728
FLUID MIXTURE ANALYSIS
Raymond L. Kindred and Melvin M. Fourroux, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,637
7 Claims. (Cl. 73—23)



4. The method of measuring the heating value of a fluid mixture of known constituents which comprises analyzing said mixture to establish a plurality of first signals representative of the concentrations of the respective constituents of the fluid mixture to be measured, multiplying each of said first signals by a factor representative of the heat of combustion of the corresponding fluid constituent to establish a plurality of second signals, and summing said second signals.

3,095,729
PIPE TESTER WITH AUTOMATIC SCREW-OFF STATIONS
William Mynard McConnell, Pittsburgh, Pa., assignor to Taylor-Wilson Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 29, 1960, Ser. No. 39,705
18 Claims. (Cl. 73—49.1)

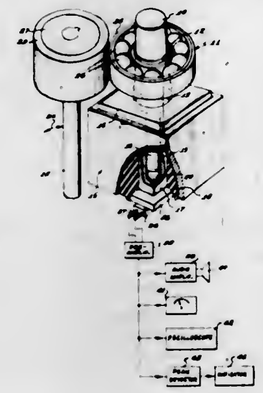


1. In treating apparatus for pipe members which have been pre-plugged with test closure members at the ends, and including stands arranged in alignment in a row extending lengthwise of the apparatus, combined operating and handling stations spaced apart from one another laterally of the row and including a plurality of automatic unplugging mechanism stations in which the pipe members are automatically operated on at one end of each and for purposes of which the pipe members are moved on the stands to predetermined positions endwise, said stands presenting a line of pipe support structures for supporting the pipe members, an individual gripper aligned with each of said pipe support structure lines for clamping a pipe member axially fast and also fast against rotation to enable the closure member to be removed, the mechanism at one of said automatic unplugging mechanism stations comprising a closure member support supporting said closure member for rotation by tool but holding it axially fast, preventing endwise withdrawal of the pipe member without complete removal of the closure member therefrom, a rotatable tool to unplug the pipe member and adapted to be power driven, and operating means individually connected to said gripper, to said pipe support structures, and to said closure member support at said station respectively, whereby upon completion of removal of said closure member by said tool, operation of one means unclamps said gripper from said pipe member, operation of another means withdraws said pipe member axially on said pipe support structures, and operation of the other means withdraws the support supporting said closure member.

3,095,730
APPARATUS FOR TESTING BEARINGS
Stuart N. Matheson, Norwalk, Calif., assignor to Bearing Inspection, Inc., Huntington Park, Calif., a corporation of California
Filed Mar. 2, 1960, Ser. No. 12,424
2 Claims. (Cl. 73—67)

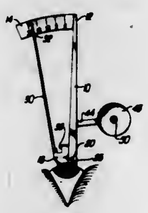
1. A system for establishing whether a flaw in a bearing is in the outer race, the inner race, or a ball between the races, and signifying the nature and magnitude of the flaw, comprising: a hollow housing; a vertical noncircular metal rod extending through said housing, said rod having a cylindrical opening extending from one end of said rod to a point adjacent the opposite end thereof; a mass of resilient material filling said housing and holding said rod against rotation, said mass permitting said rod to undergo translatory vibrations; a cylindrical metal arbor matingly received in said cylindrical opening so as to be rotatable but not capable of transverse movement relative to said rod, the length of said arbor being greater than the length of said opening; a metal bearing adapter releasably mounted on the outer

end of said arbor to snugly receive and hold the inner race of a bearing; drive means including a vertical padded drive wheel for frictionally engaging and rotating the outer race of a bearing to be placed on the adapter, the axis of said drive wheel being parallel to the axis of said arbor, said drive wheel biasing the outer race laterally so the minimum distance between the outer and



inner races is along the horizontal line through the races and between said arbor and drive wheel; and means coupled to said rod and operable to develop and display, for a flaw in the inner race, voltage waveforms of substantially uniform magnitude, and, for a flaw in the outer race, voltage waveforms with generally cyclical variations in magnitude, and, for a flaw in a ball, voltage waveforms of randomly varying magnitude.

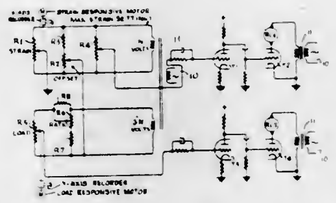
3,095,731
TONOMETER
Robert J. Schillinger, 1717 Pablo Place, Palos Verdes Estates, Calif.
Filed Oct. 13, 1960, Ser. No. 62,477
7 Claims. (Cl. 73—80)



1. A sterilizable tonometer, comprising a frame having a scale at its upper end, a footplate attached to the bottom of the lower end of the frame and having a slot, an indentation wheel pivotally mounted at the lower end of the frame and rotatable through the slot, a pointer attached to the indentation wheel and swingable over said scale, and means on the frame providing a hand support.

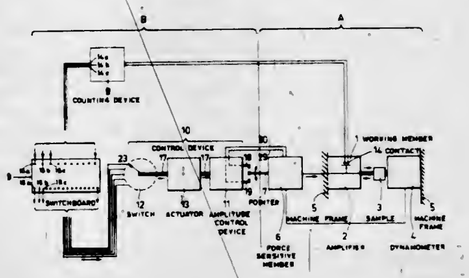
3,095,732
YIELD POINT DETECTING MEANS
William D. Macgeorge, Berwyn, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 19, 1960, Ser. No. 3,315
8 Claims. (Cl. 73—88)

2. An electronic circuit having a voltage source for energizing a print-out utilization device at a predetermined yield point of a specimen, an X—Y recorder having a strain drive motor and a stress drive motor, a first potentiometer having two fixed connections and a movable connection, said movable connection being mechanically coupled to said strain drive motor, a second potentiometer having two fixed connections and a movable connection, said movable connection being coupled to said stress drive motor, a voltage source connected in parallel to said fixed connections of said potentiometers, a third potentiometer having two fixed connections connected in parallel with said fixed connections of said first potentiometer, said third potentiometer having a movable con-



nection connected in series with one of said fixed connections of said second potentiometer, the movable connection of said first and said second potentiometers being driven by said drive motors in a fixed proportionate ratio before said specimen reaches a yield point, said movable connection of said first potentiometer being driven at an increased rate lowering said fixed ratio at said yield point, a utilization circuit coupled to the movable connection of said second potentiometer for sensing a predetermined voltage difference caused by the change in said fixed ratio, and a utilization device responsive to said voltage difference to indicate a predetermined yield point of said specimen.

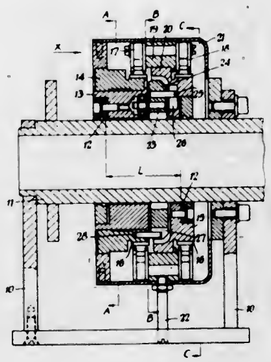
3,095,733
DEVICES FOR AUTOMATIC CONTROL OF A MACHINE IN ACCORDANCE WITH A PREDETERMINED PROGRAM
Sverker Wilson Sjöström, Varsta, Sweden, assignor to Aktiebolaget Scania-Vabis, Sodertalje, Sweden, a corporation of Sweden
Filed Oct. 22, 1957, Ser. No. 691,695
5 Claims. (Cl. 73—91)



1. A device for automatic control of a machine in accordance with a predetermined program comprising a single counting device for counting a series of mutually equal operations of the machine and then emitting an impulse, a control device connected to the machine to change the mode of operation thereof upon receipt of an impulse from said counting device, an actuator connected to said control device and to said counting device and controlled by impulses received from said last named device, said actuator being adapted, upon receipt of an impulse to adjust said counting device to emit the next

impulse after another, but different, predetermined number of mutally equal operations different from the preceding series.

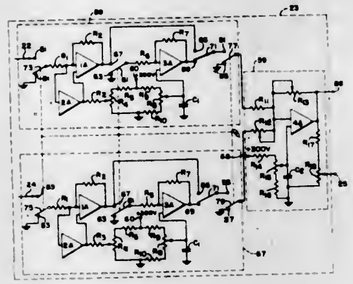
3,095,734
APPARATUS FOR FURNISHING ELECTRICAL SIGNALS FOR TORQUE MEASUREMENT
Friedrich Mayer, Sarnen, Switzerland, assignor to G.A. Messen-Jaschin, Sarnen, Switzerland, a corporation of Switzerland
Filed June 14, 1961, Ser. No. 117,142
Claims priority, application Switzerland June 16, 1960
8 Claims. (Cl. 73—136)



1. Apparatus for furnishing electrical signals for torque measurement, comprising a shaft, the torque on which is to be measured, first and second wheels co-axial with the shaft and secured to the shaft at first and second locations spaced apart along the shaft so as to turn in accordance with the turning of the shaft at said first and second locations, respectively, a third wheel co-axial with the shaft and mounted to turn with respect thereto, a ring of teeth of magnetic material on the second wheel, a ring of teeth of magnetic material on the third wheel of equal pitch to the teeth on the second wheel, coupling means coupling the third wheel to the first and second wheels such that relative turning between the first and second wheels brings about a proportionally greater relative turning between the second and third wheels, a stator adjacent the rings of teeth, means in the stator for co-operating with the teeth of the second wheel for the generation of alternating current when the shaft turns and means in the stator for cooperating with the teeth of the third wheel for the generation of alternating current, when the shaft turns, which is phase-displaced from the first-mentioned alternating current by an amount dependent upon the torque on the shaft.

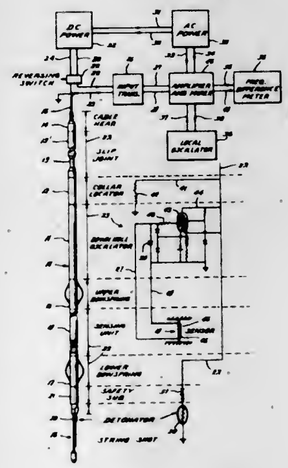
3,095,735
AERODYNAMIC COMPUTER AND METHOD
Wolfgang A. Menzel, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 14, 1960, Ser. No. 22,371
4 Claims. (Cl. 73—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)

4. A method of calibrating wind tunnel test equipment, comprising the steps of placing a weight at several positions along a balance sting in succession, applying a first output voltage from an electrical strain gage located in the forward part of said balance sting to a first input resistor of a computer amplifier, applying a second voltage output from an electrical strain gage located in the rearward part of said balance sting to a second input resistor of said computer amplifier, adjusting said second resistor until the output of said computer amplifier remains



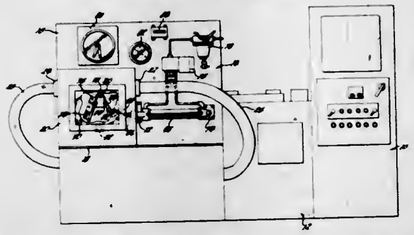
constant when said weight is placed at any position along the length of said balance sting.

3,095,736
STUCK PIPE LOCATOR
Austin S. Rogers, Houston, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Filed Oct. 21, 1959, Ser. No. 847,737
9 Claims. (Cl. 73—151)



1. An apparatus for determining the point at which pipe is stuck in a well bore comprising, a rigid magnetically permeable member, first releasably connecting means connected to the member for releasably connecting the member inside of and to the wall of the pipe, clutch elements one of which is connected to said permeable member, said clutch elements being actuated on movement relative to each other, second releasably connected means spaced from said first means and connected to the second of said clutch elements for releasably connecting said member to the inside of and at a point of the wall of the pipe spaced from the first means, means electrically coupled to said permeable member for measuring changes in the permeance of said member caused by a change in the stress applied to said member whereby when force is applied to said pipe and transmitted to said permeable member the location of the stuck point may be determined.

3,095,737
FABRIC TESTER
William J. Hollenbaugh and Herbert G. Winter, Medina, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,617
6 Claims. (Cl. 73—159)



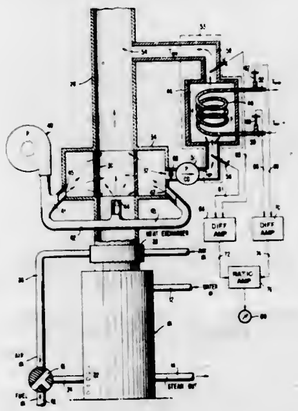
1. Sheet material testing apparatus comprising a base platen having a portion recessed from a test material pressing surface thereon, a material flexing platen having a portion recessed from a test material pressing surface thereon, means for pivotally mounting said flexing platen for swinging movement relative to said base platen about a pivotal axis spaced from said recessed platen portions between a test material stretching opened position wherein said flexing platen is spaced from and angularly inclined to said base platen and a test material creasing closed position wherein folding engagement occurs between the test material and the pressing surfaces of said platens, power means operable to actuate said flexing platen between its opened and closed positions, fastening means for securing opposite ends of a test sample of sheet material within the recessed portions of said platens, and platen carried spring means for resiliently biasing the fastened end portions of the test sample sheet material against said recessed platen portions at a point adjacent the pressing surfaces thereof whereby said test sample sheet material is alternately stretched between said platen carried spring means and creased between said pressing surfaces upon actuation of said platens between their opened and closed positions.

3,095,738
MARINE SPEEDOMETERS
William G. Salo, 6 Crescent St., Springfield, Vt.
Filed Dec. 13, 1960, Ser. No. 75,573
2 Claims. (Cl. 73—181)



1. A speedometer for use with power boats comprising; a generally L-shaped tube having upper and lower portions, a calibrated rod within said upper portion of said tube, a piston mounted at the lower end of said rod for movement therewith within said upper portion, said upper portion provided with a plurality of vertically arranged apertures for controlling the flow of water entering said lower portion and exiting from said upper portion, holding means for maintaining said lower portion in a projected position at a level below that of the boat bottom, and spring means for retracting said lower portion to a position above the level of the boat bottom on release of said holding means.

3,095,739
SPECIFIC HEAT MEASURING DEVICE
Charles M. Doolittle, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 29, 1961, Ser. No. 120,586
1 Claim. (Cl. 73—190)

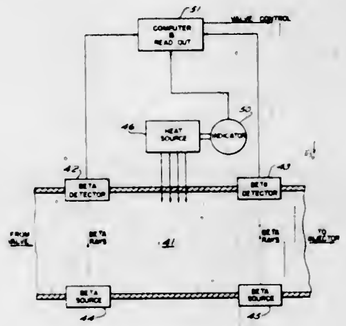


Apparatus for determining the specific heat of the stack gas in a heat generating unit comprising; an alternate path in parallel with said stack; filter means concentrically positioned with said stack for coupling the input of said alternate path to said stack; said filter means having an inner diameter substantially equal to the inner diameter of said stack and effective to prevent the entry into said alternate path of particles resulting from combustion in said unit; means maintaining the flow rate of stack gas through said alternate path substantially constant; heat exchange means positioned in said alternate path effective to remove a portion of the heat of said stack gas; means supplying said heat exchange means with a fluid at a constant rate; said fluid having a predetermined specific heat and effective to absorb the heat removed from said stack gas; means determining the temperature decrease of said stack gas and the temperature increase of said fluid; and means responsive only to said last named means generating an indication of the specific heat of said stack gas.

3,095,740
MASS FLOW MEASUREMENT
Wendell C. Peacock, Dover, Mass., assignor, by mesne assignments, to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,443
2 Claims. (Cl. 73—204)

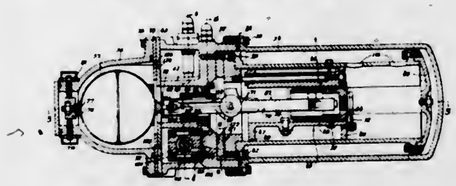
1. Apparatus for determining the mass flow of a liquid stream comprising, a source of heat coupled to said stream

and adapted to provide a predetermined quantity of heat per unit time to said stream; density gauging means coupled to said stream and adapted to determine continuously the difference in density of said stream occasioned by



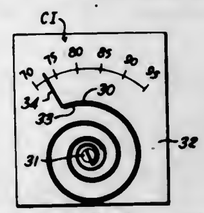
the addition of the said predetermined quantity of heat per unit time, means responsive to said density gauging means and adapted to generate an output signal related to the change in temperature represented by said change in density as indicative of said mass flow.

3,095,741
LIQUID METERS
Frederick Edward John Wilson, Chessington, England, assignor to Avery-Hardoll Limited, Chessington, England
Filed Feb. 14, 1961, Ser. No. 89,187
5 Claims. (Cl. 73—233)



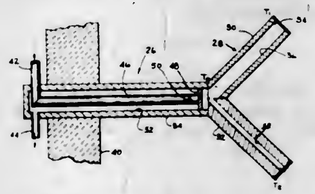
1. In a liquid metering device of the type having a rotary member driven by the flow of liquid through the meter and connected by driving means to an indicator, a float mounted in a chamber having an inlet and outlet through which a proportion of the liquid passing through the meter flows, a piston movable to and fro responsive to movement of the float by liquid pressure acting on the piston, a counterweight carried by the piston and reciprocal with respect thereto connected to the float to vary its buoyancy, and a ratio changing member of a continuously variable change speed device included in said driving means connected to said piston for varying the velocity readings of said indicator in accordance with changes of density of liquid passing through the meter, the improvement comprising the addition to said metering device of a reciprocable pilot valve, hydraulic passages connecting opposite ends of said pilot valve to both said liquid inlet and outlet of the float chamber, means in said passages responsive to movements of said float to hydraulically apply a pressure differential to said pilot valve, and hydraulic means connecting said pilot valve to opposite ends of said piston whereby the control of pressure of liquid flowing to opposite ends of the piston is effected by movements of said pilot valve.

3,095,742
COMFORT INDEX INDICATING MEANS
Roy A. Pelishek, 4419 Washington Road, Kenosha, Wis.
Filed Sept. 22, 1960, Ser. No. 57,716
4 Claims. (Cl. 73—336)



4. An instrument for indicating comfort index including, a support frame, a scale on said frame and developed in accordance with the formula $(DB+WB)(.4)+15$ where DB is the dry bulb temperature and WB is the wet bulb temperature of the air to be measured, shiftable indicating means for movement over said scale, coil spring means mounted on said frame and connected directly with said indicating means whereby winding and unwinding of said spring means causes said indicating means to move over said scale, said spring means including a bi-metal portion for measuring dry bulb temperature of the air and a moisture absorbent portion for measuring the wet bulb temperature of the air, said portions being formed together as an integral unit and both acting directly on said indicating means to cause the latter to indicate on said scale the net effect of said measuring portions.

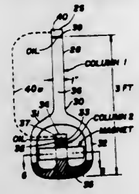
3,095,743
APPARATUS FOR MEASURING ELEVATED TEMPERATURES
Richard C. Teasel, Sylvania, and Edward D. Buckley, Toledo, Ohio, assignors to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware
Filed Dec. 18, 1959, Ser. No. 860,603
7 Claims. (Cl. 73—339)



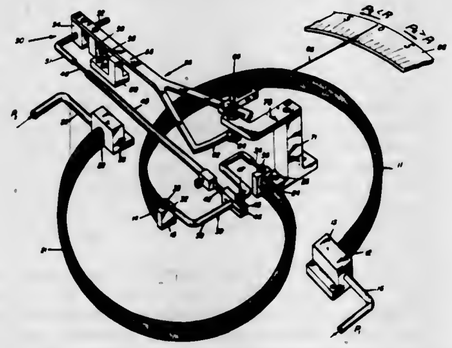
5. A device for measuring temperatures of fluids, said device comprising a probe including two elongate arms, said arms being of heat conducting material and of different cross-sectional area, means adjacent the base for maintaining its temperature substantially different than the temperature of the fluid being measured, means for measuring a first temperature at said base, means for measuring a second temperature at a point on one of said arms spaced a known distance from said base, and means for measuring a third temperature on the other of said arms at a second point spaced from said base a distance equal to the distance between the first point and said base.

3,095,744
GRAVITY GRADIENT MEASURING DEVICE
Roger William Hutchins, Toronto, Ontario, and Donald F. D'Arcy, Scarborough, Ontario, Canada, assignors to Hunting Survey Corporation Limited, Toronto, Ontario, Canada
Filed Aug. 11, 1960, Ser. No. 49,094
14 Claims. (Cl. 73—382)

2. A gravity gradient sensing device comprising: two columns in the form of two substantially vertically disposed tubes, the upper closed ends of which are at equal pressure, the bottom ends thereof being joined by a common communicating tube therebetween; a different liquid in each of said columns, said liquids being in hydrostatic equilibrium at a predetermined gravitational gradient and movable in said tube under the influence of a different gravitational gradient to re-establish hydrostatic equilibrium at a new position in said tube; a volume of gas separating each of said liquids from the closed ends of the tubes describing the columns therefor; means for generating an electrical current in a predetermined direction in one of said liquids proportional to a local gravitational gradient and biassing said liquids in equilibrium; at least two spaced apart electrodes located to communicate said electrical current transversely through one of said liquids; means establishing a magnetic field about said electrodes and oriented to establish direction for the magnetic flux of said field substantially at right angles to the direction of electrical current flow through said electrodes; and means responsive to said electrical current to indicate the magnitude of said gravitational gradient.

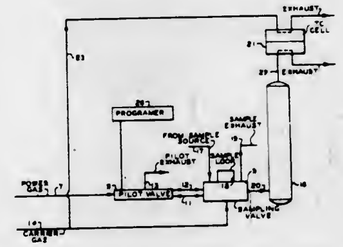


3,095,745
DIFFERENTIAL PRESSURE INSTRUMENT
John O. Kirwan, Livingston, N.J., assignor to Wallace & Tiernan Incorporated, Belleville, N.J., a corporation of Delaware
Filed May 28, 1959, Ser. No. 816,619
9 Claims. (Cl. 73—412)



1. In a differential pressure instrument, in combination, a pair of Bourdon tubes, each having a free movable end and disposed relative to each other so that their free ends are movable along spaced, substantially parallel paths, said disposition of the tubes being such that their free ends move respectively in opposite directions when the pressure in both tubes increases relative to the pressure outside them and when the pressure in both tubes decreases relative to the pressure outside them, linking means extending crosswise of the paths and pivotally connected at its ends respectively to the free ends of the tubes for linking said ends of the tubes, said linking means including two flexures respectively connected to the free ends of the tube and to the ends of the linking means and constituting the aforesaid pivotal connection of the linking means to the tube ends, each of the tubes being arranged so that the path of movement of its free end is a substantially straight line, and each of the flexures comprising a spring strip lying in the substantially straight line path of the tube end to which such flexure is connected, and means comprising a movable element connected to the linking means at a locality intermediate said ends of the linking means for displacement by said linking means upon displacement of one of said tube ends differentially relative to the other, to move said element only in accordance with the change of the pressure in the interior of one tube relative to the pressure in the interior of the other tube.

3,095,746
FLUID-ACTUATED VALVE
Marvin E. Reinecke and Donald V. Eckert, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,548
3 Claims. (Cl. 73—422)



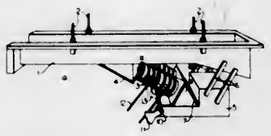
1. A two-position fluid-actuated diaphragm valve comprising, in combination: a central disc; a first outer set of six spaced perforations disposed near the periphery of said disc; a second inner set of six spaced perforations disposed within the circle described by said first set of spaced perforations; each of said perforations defining an upper and lower pair of ports in the faces of said disc; a plurality of passages in said disc connecting radially aligned perforations of said first and second sets of perforations; a first and second diaphragm means disposed on opposing sides of said disc, the upper of said diaphragm means provided with a set of spaced perforations disposed adjacent said first set of spaced perforations in said central disc; a first and second gasket means disposed adjacent said first and second diaphragm means, respectively; said first and second gasket means being each provided with a plurality of slots for receiving therein the adjacent portions of said first and second diaphragm means; said slots in said first gasket means being disposed so that the first of said slots extends over the upper ports of the first and second inner disc perforations, the second of said slots extends over the upper ports of said third and fourth inner disc perforations, and the third of said slots extends over the upper ports of said fifth and sixth inner disc perforations; said second gasket means being so disposed that the first of said slots thereof extends over the lower ports of said second and third inner disc perforations, the second of said slots extends over the lower ports of said fourth and fifth inner disc perforations, and the third of said slots extends over the lower ports of said sixth and first inner disc perforations; the upper of said gasket means further provided with a set of spaced perforations disposed adjacent said set of perforations in said upper diaphragm means; a first and second passage means for conducting a power gas from a source thereof to the respective pluralities of slots in said first and second gasket means, and sealing said adjacent portions of said diaphragm means

against said central disc, thereby closing off communication between certain of the adjacent members of said inner second set of spaced perforations, as desired; a third passage means for conducting a carrier gas from a source thereof to one of said first set of spaced perforations; a fourth passage means for conducting vaporized sample from a source thereof to a second of said first set of spaced perforations; a sample conduit communicating between a third and fourth perforations of said first set; a fifth passage means for venting sample gas from a fifth of said first set of spaced perforations; and sixth passage means for conducting carrier gas and vaporized sample to a chromatographic column from a sixth of said first set.

3,095,747
AMPLITUDE CONTROL OF RESONANT VIBRATION EXCITER

John M. Morris, Louisville, Ky., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin

Filed July 22, 1957, Ser. No. 673,416
22 Claims. (Cl. 74—26)

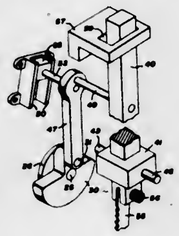


1. In a device of the class described, in combination, a first member that does work by vibration, an exciter member, spring means connecting said members and forming with said members a vibratory system having a natural frequency, an eccentric weight journaled in the exciter member, means to rotate said weight at a speed substantially equal to said natural frequency, supplementary springs connected to one of said members, and lost motion means connecting said supplementary springs to the other of said members.

3,095,748
ORBITAL MOTION TOOL

Charles R. Stelljes, Fayetteville, and Lars Frostad and Hugh K. Leach, Syracuse, N.Y., assignors to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of Delaware

Filed June 16, 1961, Ser. No. 117,690
9 Claims. (Cl. 74—44)

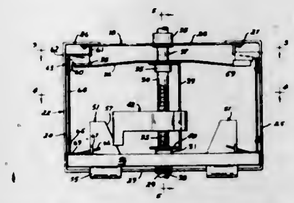


1. An orbital motion, power-operated tool comprising a housing, a crank shaft journalled in said housing, a motor mounted in said housing and operatively connected to said shaft to effect rotation thereof, a crank affixed to said shaft, a tool carrier mounted for orbital movement in said housing in a plane normal to the axis of said crank, a connecting rod pivotally attached to said crank, a guide member mounted in the housing in spaced relation to said shaft in a direction lengthwise of said connecting rod, means for restraining movement of said guide member relative to said housing, said connecting rod having linear sliding and pivotal connection with said guide, and means pivotally connecting said connecting rod to said tool carrier, said latter connection being spaced in a direction lengthwise of said connecting rod from said first connection.

3,095,749
INTERMITTENT MOTION MECHANISM

Dillon K. Kilcup, W. 1012 Cleveland, Spokane, Wash.

Filed July 29, 1960, Ser. No. 46,197
5 Claims. (Cl. 74—84)



1. An intermittent motion mechanism adapted to convert continuous rotary motion of a given velocity in a given direction to intermittent rotary motion of the same velocity and in the same direction, comprising:
a rigid supporting framework;
a drive shaft mounted on said framework for rotation about its longitudinal central axis, said drive shaft being adapted to be continuously rotated by a prime mover;
a driven shaft mounted on said framework for independent rotation coaxially with said drive shaft;
a stop mounted on said frame and extending along a portion of said drive shaft at a radially spaced distance therefrom;
an extension fixed to said driven shaft and extending alongside said drive shaft at a radially spaced distance therefrom;
coupling means operatively connecting said drive shaft and said extension adapted to normally transmit rotational motion from said drive shaft to said driven shaft through said extension at a one to one ratio;
a carrier mounted on one of said shafts for selective rotational and longitudinal motion relative thereto and extending radially outward therefrom so as to be engageable with both said stop and said extension, said carrier being biased longitudinally parallel to said shaft axis so as to normally abut said stop following rotation of said carrier about the shaft axis to thereby interrupt the transmission of rotational motion between said drive and driven shafts through said coupling means by blocking rotation of said extension;
and means on said carrier engageable with said one shaft during abutment of said stop by said carrier adapted to effect longitudinal motion of said carrier parallel to said shaft axis during such abutment to thereby enable said carrier to periodically clear said stop.

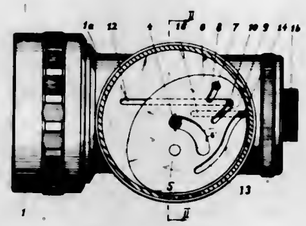
3,095,750
CONTROL MECHANISM FOR THE AXIAL DISPLACEMENT OF COMPONENTS OF PHOTOGRAPHIC OR CINEMATOGRAPHIC OBJECTIVES AND THE LIKE

Herbert Mahn, Kreuznach, Germany, assignor to Optische Werke Jos. Schneider & Co., Kreuznach, Germany, a corporation of Germany

Filed Dec. 6, 1960, Ser. No. 74,118
Claims priority, application Germany Dec. 12, 1959
9 Claims. (Cl. 74—107)

1. A control mechanism for an optical system having at least one component displaceable along the optical

axis of the system, comprising a housing for said system, a stud on said housing extending generally transversely to said axis, a knob rotatable on said stud with freedom of displacement thereon between a first and a second axial location, co-operating indexing means on said housing and said knob effective in said first axial location for yieldably arresting the latter in a selected one of several angular positions, said indexing means being ineffectual in said second axial location, an axially fixed

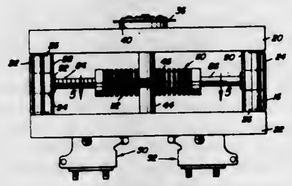


disk disposed adjacent said knob in a plane transverse to said stud and rotatable in said plane, said housing being provided with a guiding slot extending parallel to said axis, said disk being provided with a camming slot inclinedly intersecting said guiding slot, a pin on said movable component extending outwardly from said housing through said guide and camming slots, and coupling means connecting said disk with said knob for joint rotation.

3,095,751
HIGH RATIO DOUBLE ACTION STEPPER UNIT

Arthur W. Enslein, 3815 Trevor Ave., Cheviot, Cincinnati, Ohio; George W. Rapp, administrator of said Arthur W. Enslein, deceased

Filed Aug. 5, 1960, Ser. No. 47,630
5 Claims. (Cl. 74—142)

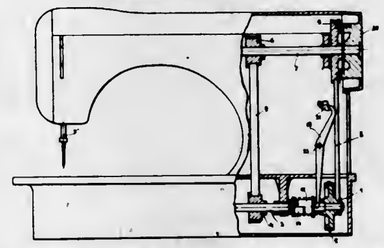


1. A high reduction ratio drive mechanism adapted to convert a plurality of intermittent driving pulses from independent sources into movement of a single control member by different incremental amounts and different directions for digital summation of values corresponding to said driving pulses from the respective independent sources, comprising, a plurality of incremental drive assemblies each selectively adjusted for displacement by a preset amount in response to a driving pulse from an associated source, positive drive means operatively connected to each of said incremental drive assemblies for movement thereof at a fixed speed ratio and in a selected direction by different amounts, and means drivingly connecting said drive means to the control member for movement thereof in one of said selected directions and by one of said different amounts dependent upon the source from which the driving pulse is derived.

3,095,752
CHANGE SPEED ARRANGEMENT FOR SEWING MACHINES

Luigi Bono, Pavia, Italy, assignor to Necchi Societa per Azioni, Pavia, Italy, a company of Italy

Filed Apr. 25, 1960, Ser. No. 24,554
Claims priority, application Italy May 11, 1959
2 Claims. (Cl. 74—217)

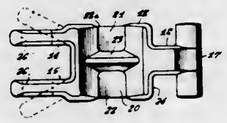


1. In a sewing machine having first and second mainshafts, a drive system for driving said mainshafts in timed relation and at selected relative speeds, a first pulley rotatably journaled on said first mainshaft, a manually controllable positive drive clutch between said first pulley and said first mainshaft for connecting the same together for rotation in unison, a second pulley rigidly connected to said first mainshaft, a third pulley rigidly connected to said second mainshaft, a first flexible drive member entrained over and coupling together said second and third pulleys in driving relation, a fourth pulley rotatably journaled on said second mainshaft in alignment with said first pulley, a second flexible drive member entrained over and coupling together said first and fourth pulleys in driving relation, an automatic clutch between said fourth pulley and said second mainshaft, and means for driving one of said first and fourth pulleys whereby said first mainshaft is driven from said second mainshaft when said positive drive clutch is disengaged and said second mainshaft is driven from said first mainshaft when said positive drive clutch is engaged, said automatic clutch being of the overrunning type and said second and third pulleys driving said second main shaft at a greater speed than said first and fourth pulleys.

3,095,753
CONVEYOR CHAIN LINK

Charles N. Lengyel, Chicago, Ill., assignor to Kropp Forge Company, Chicago, Ill., a corporation of Illinois

Filed Feb. 1, 1960, Ser. No. 5,730
3 Claims. (Cl. 74—248)



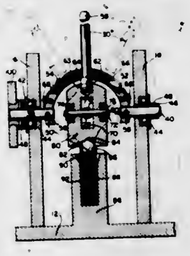
1. A conveyor chain link member which comprises,
an integral one-piece metal forging having a central body portion with end walls,
a top wall,
side walls and a recessed bottom wall adapted to receive a sprocket tooth,
a tongue portion projecting longitudinally away from one end wall of said body portion centrally thereof,
a transverse pin portion formed integrally with the end of said tongue portion and projecting equal amounts beyond opposite sides of said tongue portion,
and a clevis portion projecting from the opposite end wall of said body portion from said tongue portion and including a pair of fingers initially extending angularly outwardly of said end wall and body por-

tion and each having an aperture extending transversely therethrough,

said fingers being adapted to receive the tongue portion of an identical chain link member therebetween and being sufficiently ductile to accommodate bending from initial positions diverging laterally from said body portion to register with the pin portion of an identical link member into positions substantially parallel with the longitudinal axis of the identical link member and being quench hardenable after assembly to remain in fixed parallel relation with respect to each other and thereby retain the pin portion of a next adjacent link member in articulated relationship therewith,

and said pin portion having a total length greater than the distance between said fingers when in fixed parallel relation with respect to each other.

3,095,754
CONTROL APPARATUS
Leon Mayon, Philadelphia, and Donald P. Schnorr, Paoli, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 30, 1960, Ser. No. 40,007
3 Claims. (Cl. 74—471)



1. Control apparatus comprising, in combination,

(*a*) first rotatable shaft means,

(*b*) second rotatable shaft means,

(*c*) said two shaft means being arranged to rotate about mutually perpendicular intersecting, longitudinal shaft axes,

(*d*) first gimbal means fixedly connected to said first shaft means,

(*e*) second gimbal means connected to said second shaft means,

(*f*) said first gimbal means including a semi-circular portion having an arcuate slot therein,

(*g*) said second gimbal means being provided with two substantially perpendicularly disposed openings therein,

(*h*) means rotatably mounting said second shaft means in one of said openings in said second gimbal means,

(*i*) a control element extending through the arcuate slot in said semi-circular portion,

(*j*) bearing means mounting said control element for slidable arcuate movement in said slot,

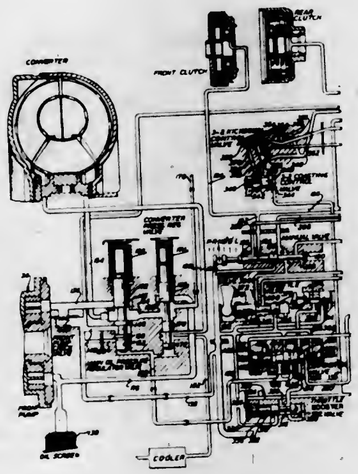
(*k*) said control element being rigidly fixed to one end of said second gimbal means and being effective to move the latter in response to forces applied to said control element,

(*l*) the opposite end of said second gimbal means having a conical depression forming a cam surface therein, and

(*m*) means mounting a coiled spring adjacent said second gimbal means,

(*n*) said coil spring carrying a spherical member at one end thereof engaging said cam surface whereby the forces developed by said spring causes said spherical member to constantly urge said control element into a position wherein it is perpendicular to both said shaft means.

3,095,755
CONTROL CIRCUIT FOR A POWER TRANSMISSION MECHANISM
James J. Duffy, Scottsdale, Ariz., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Feb. 4, 1960, Ser. No. 6,703
37 Claims. (Cl. 74—472)

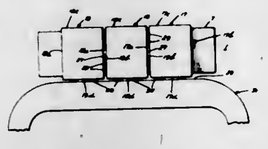


1. In a power transmission mechanism for a wheeled vehicle having an internal combustion engine, a power input member drivably connected to said engine, a power output member, a gear element interconnecting said power input member and said power output member and forming plural torque delivery paths therebetween, a fluid pressure operated servo means for controlling the relative motion of said gear elements, a source of fluid pressure, conduit structure interconnecting said servo means and said fluid pressure source, a shift valve disposed in and partly defining said conduit structure including a movable valve element adapted alternately to distribute fluid pressure to said servo means and to block the distribution of fluid pressure thereto, valve means for establishing a fluid pressure signal related functionally in magnitude to engine torque, a passage extending from said valve means to said shift valve for distributing said pressure signal to said shift valve to actuate the same, and booster valve means disposed in and partly defining said passage including a valve chamber and a movable valve element disposed in said chamber, said chamber communicating with a high pressure region of said conduit structure when said valve element is moved in one direction, said valve element being subjected to said pressure signal and urged thereby in said one direction when said pressure signal exceeds a precalibrated value.

3,095,756
MULTIPLE PUSH-BUTTON SWITCH
Stewart A. Woodward, Stratford, Conn., assignor to General Electric Company, a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,807
8 Claims. (Cl. 74—503)

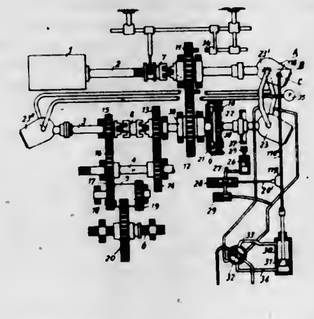
1. In a multiple push-button switch, at least two side-by-side reciprocating actuating members for controlling said switch by the selective reciprocation thereof along parallel spaced apart axes, each of said members having a vertical

wall in close proximity to an associated vertical wall of the other of said members, and at least one protuberance formed on each said wall, the protuberance of each



of the walls being positioned to ride along the other wall thereby to maintain the members in substantially uniform spaced relationship thereto during and after reciprocating movement of said actuating members of said switch.

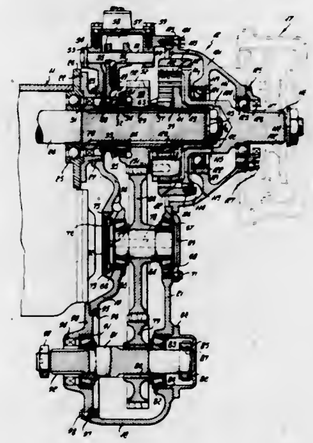
3,095,757
TRANSMISSION WITH HYDROSTATIC CONTROL
Hans Johannes Thoma, Rotfluhstrasse 10, Zollikon-Zurich, Switzerland
Filed Nov. 25, 1957, Ser. No. 698,783
21 Claims. (Cl. 74—687)



5. A transmission adapted to be interposed between a power supply shaft and a power delivery shaft comprising in combination, a multi-ratio change speed gear, a coupling operatively connected to said power supply shaft having two driving members for selectively engaging one of two driven members operatively connected through gears to said power delivery shaft, a first hydrostatic drive unit having a rotary power transmitting a shaft operatively connected to the driving members of said coupling, a second hydrostatic drive unit having a rotary power transmitting shaft operatively connected to the driven members of said coupling, conduits hydraulically interconnecting said first and second hydrostatic units, sensing means producing an output dependent upon the difference in speed of said two coupling members and the speed of a disengaged driven coupling member and means to control the output speed of said second hydrostatic drive unit in accordance with said output.

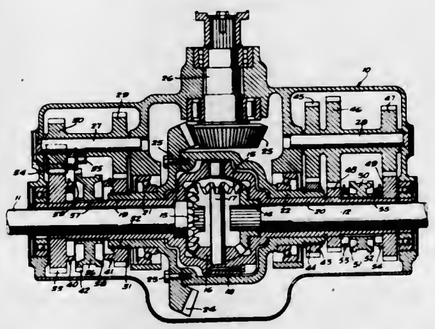
3,095,758
POWER TRANSMISSION
Leo A. Bixby, Niles, Mich., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Filed Sept. 3, 1958, Ser. No. 758,822
9 Claims. (Cl. 74—701)

1. In a transfer case having a rear wall opening, a housing member removably secured over said opening, an input shaft, a coaxial first output shaft journalled on and extending rotatably through said housing member, a spaced parallel second output shaft, a planetary gear system contained by said housing member and comprising a carrier non-rotatably mounted on said input shaft said carrier mounting preventing axial movement of the carrier on said input shaft duing operation but permitting ready removal of the carrier from said input shaft, a sun gear journalled on said input shaft, a ring gear non-rotatably mounted on said first output shaft and rotatable



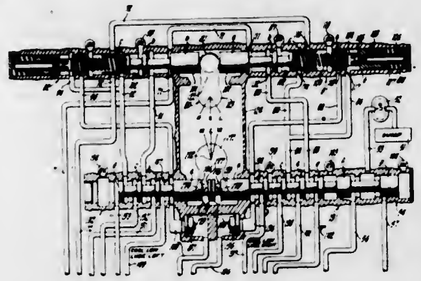
pinions on said carrier meshed with said sun and ring gears, and a drive gear train constantly connecting said sun gear to said second output said ring gear and first output shaft being removable from the casing along with said housing member shaft.

3,095,759
COMBINATION TRANSMISSION AND DIFFERENTIAL
J. T. Herrod, 606 B St., Taft, Calif.
Filed Mar. 31, 1961, Ser. No. 99,814
1 Claim. (Cl. 74—701)



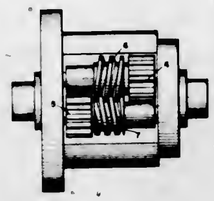
In combination, two aligned axles having differential gearing therebetween, sleeve means rotatable about said axles and operatively connected to the differential gearing so as to drive the same, countershafts arranged parallel to said axles on opposite sides of the differential gearing, countershaft gearing on said countershafts, gears rotatable on said sleeve means meshing with the countershaft gearing, means for selectively locking said gears against rotation relative to the sleeve means, a second sleeve means rotatable about said first sleeve means, gears keyed on the second sleeve means meshing with the countershaft gearing on the countershafts so as to drive the same, and means for driving the second sleeve means.

3,095,760
TRANSMISSION
Howard W. Christenson, Indianapolis, Mark E. Fisher, Carmel, and Robert H. Schaefer, Westfield, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,177
25 Claims. (Cl. 74—710.5)



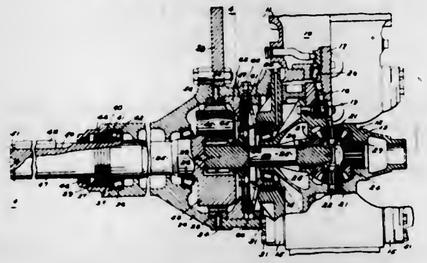
1. In a transmission, a fluid operated drive engaging device, a sump, a pump supplying fluid from said sump, a pressure regulator valve, control valve means having a neutral position connecting said pump substantially freely to said sump and a drive position connecting said pump to said regulator valve to regulate the pressure of the fluid supplied by said pump and controlling the supply of fluid under the pressure regulated by said regulator valve to said fluid operated drive engaging device.

3,095,761
SELF LOCKING DIFFERENTIAL MECHANISM
Alfonso Hilado, Paranaque, Rizal, Republic of the Philippines (Rufino Bldg., Ayala Ave., Makti, Rizal, Republic of the Philippines)
Filed Mar. 18, 1960, Ser. No. 16,105
Claims priority, application Republic of the Philippines Dec. 21, 1959
5 Claims. (Cl. 74—715)



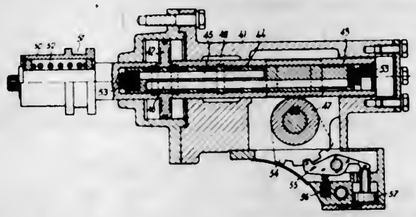
1. In a differential mechanism, a rotatable gearing box or carrier, drivable members extending into opposite ends of said carrier, a gear element splined to each member respectively and lying within said carrier, each gear element having spur teeth thereon, mating planetary gear for each gear element journaled in said carrier, in pairs, each planetary gear mating with the corresponding gear element being provided with a hardened worm integrally co-axial with said mating plenetary gear, and said planetary gear with integral co-axial worm set in pairs with their worms in mesh with each other, one worm of each pair being left handed and the other right handed, and one worm slightly larger in diameter than is called for by the ratio of revolutions between the two worms and both planetary gears and worms being constrained from moving longitudinally along their axes.

3,095,762
REAR AXLE CONSTRUCTION
Willard C. Baker, Columbus, Ohio, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,183
6 Claims. (Cl. 74—720.5)



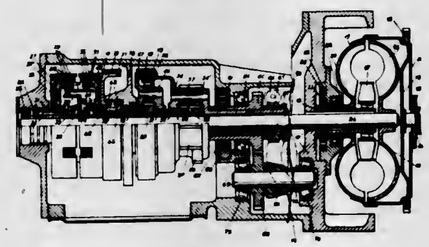
1. In a tractor rear axle construction, a center housing, a differential within the center housing, a sun gear shaft extending from one side of the differential and having a sun gear on its outer end and a splined portion adjacent the sun gear, a brake disc splined to said portion and movable axially of the shaft, a rear axle housing surrounding the sun gear shaft and having a radially extending surface adapted to be frictionally engaged by one side of the brake disc, an annular piston concentric with the sun gear shaft and supported by the rear axle housing, an annular pressure plate concentric with the shaft and movable against the brake disc, a deformable frustoconical plate connecting the pressure plate with the piston for actuation thereby, a ring gear fixed to the housing concentric with the sun gear, a rear axle shaft journalled in the axle housing coaxially with the sun gear shaft, the axle shaft having at least one planetary gear mounted on the end thereof adjacent the sun gear shaft and meshing with the sun gear and ring gear to form a speed reduction gearing, the reduction gearing being located a short distance from the differential and the brake disc and pressure plate being located between the ring gear and differential, and the inner end of the axle housing being enlarged and secured to the center housing, the enlarged end of the rear axle housing and the center housing forming a chamber receiving the reduction gearing and brake.

3,095,763
CONTROL SYSTEM FOR HYDRAULICALLY OPERATED VARIABLE SPEED TRANSMISSIONS FOR MOTOR VEHICLES
Sven-Olof Kronogård, Karuvedsgatan 19, Gothenburg, Sweden
Filed Dec. 22, 1959, Ser. No. 861,301
Claims priority, application Sweden Dec. 23, 1958
8 Claims. (Cl. 74—754)



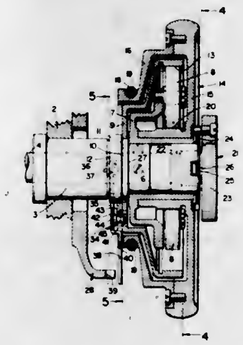
1. A control system for controlling the operation of a hydraulically-operated variable speed motor vehicle transmission system of the type including a hydraulic torque converter, mechanical gearing means connected to said converter and including an output shaft, clutch means operably connected to said mechanical gearing means for alternately causing forward and reverse drive of said output shaft, said clutch means being of the jaw clutch type including two clutch members one of which is movable into and out of engagement with the other, and manually-operable selector lever means for operating said clutch means; said control system comprising a hydraulic servo motor of the double acting piston type having one working chamber on each side of the piston thereof, said piston being connected to said clutch means by means of a piston rod, said piston rod having a bore therein, a control valve member slidable in said bore and spring means biasing said control valve member to a neutral position in said bore of said piston rod, said piston rod having ports therein controlled by said control valve member for supplying pressure liquid to and discharging liquid from said servo motor chambers to move said piston and thus operate said clutch means, said selector lever being connected to said control valve member to move the same relative to said piston rod.

3,095,764
CHANGE-SPEED GEARS FOR ENGINE AND TRANSMISSION MECHANISM UNITS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Jan. 10, 1961, Ser. No. 81,778
Claims priority, application France Jan. 15, 1960
4 Claims. (Cl. 74—763)



1. A transmission box for vehicles including an engine-transmission unit comprising a differential and, at the side of said differential opposite of the engine, a change-speed box having an outlet shaft and an input shaft inside the outlet shaft, said outlet shaft being drivingly connected to the differential, a first and a second clutch having a common input element and each an output element, a first and second epicyclic train each having a first, second and third element rotating about the axis of the train and interconnected by satellites, the input element of said clutches being connected at the free end of the input shaft that traverses axially the said epicyclic trains, the output element of the first clutch comprising a shaft surrounding the said input shaft and carrying the first element of the first epicyclic train forming a sun gear, the outlet shaft of the second clutch comprising a shaft surrounding the said output shaft of the first clutch and carrying the first element of the second epicyclic train forming a sun gear, the second element of the first train forming a satellite support being connected for rotation to the outlet shaft and carrying two satellite groups meshing with each other, one of said groups meshing with the first element of said epicyclic train and the other groups meshing with the third element of said train which is connected for rotation to the second element of the second epicyclic train forming a satellite support, the third element of the second epicyclic train being connected for rotation to an element of the first epicyclic train other than the said third element of said train, a first brake cooperating with the satellite support of the second epicyclic train and a second brake cooperating with the output element of the second clutch, said brakes and clutches being selectively operable for obtaining a transmission comprising a plurality of speeds and a reverse speed.

3,095,765
TWO-SPEED DRIVE FOR SEWING MACHINES
Martin R. Perla, Fairfield, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Sept. 28, 1960, Ser. No. 59,070
6 Claims. (Cl. 74—785)

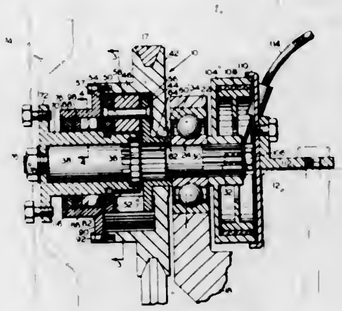


1. In a sewing machine having a frame, a main drive shaft journaled for rotation in said frame, and a planetary drive unit for said shaft comprising a planet carrier mounted on said shaft, means for securing said planet carrier to said shaft for unitary rotation, a driving element and a reaction element mounted on said shaft for independent rotation relatively to said shaft, said driving element and said reaction element having coaxial planet engaging surfaces, a plurality of planets carried by said planet carrier and disposed between and in operative engagement with said planet engaging surfaces, and a locking element having a laterally extending arm, means for pivotally mounting said locking element on said reaction element for unitary rotation with said reaction element and for pivotal movement about an axis in a plane normal to the axis of said shaft relative to said reaction element for moving said arm between a locking position relative to said driving element and a locking position relative to said frame, and means on said frame and on said driving element for engaging with said arm when in said locking position relative thereto for securing said reaction element respectively against rotation relatively to said frame and for unitary rotation with said driving element.

3,095,766
FAN REVERSING MECHANISM
Henry C. Cox, 4305 SE. Bybee Blvd., Portland, Oreg.
Filed Mar. 31, 1961, Ser. No. 99,768
1 Claim. (Cl. 74—792)

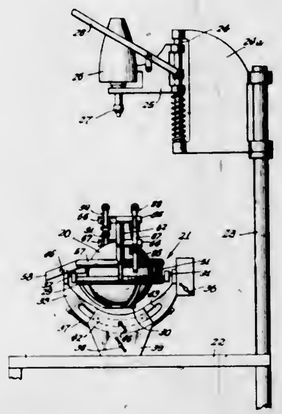
A fan reversing mechanism for a vehicle engine comprising a pulley having a forwardly projecting annular flange the inner surface of which has gear teeth to form a driving gear member, a shaft, bearing bracket means disposed rearwardly of and adjacent said pulley and engageable with said shaft, said bracket having a projecting portion adapted to be secured to a vehicle engine and support the mechanism on a vehicle engine, a planet gear assembly splined to said shaft and disposed interiorly of said flange, said planet gear assembly being in meshing relation with said driving gear member, a fan supporting sun gear rotatably mounted on said shaft and meshing with said planet gear assembly, a one-way clutch having a positive drive connection between said fan supporting

sun gear and said driving gear member in forward drive, radially expandable locking means engageable with said shaft rearwardly of said bearing bracket means for locking said shaft in a non-rotative position to hold said planet gear assembly stationary and produce reverse rotation of said fan supporting sun gear, said planet gear



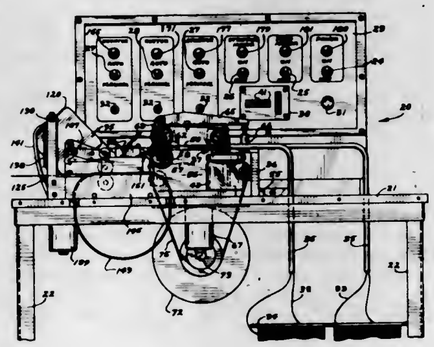
assembly establishing a ratio drive in reverse rotation for driving said fan supporting sun gear at a greater speed than said driving gear member, and anchor bracket means on said locking means adapted to be secured to a vehicle engine to assist said bearing bracket in supporting the mechanism on the engine.

3,095,767
APPARATUS AND METHOD FOR DRILLING HOLES
Alexander Jesonis, 1105 Ewing Ave., Clearwater, Fla.
Filed May 15, 1961, Ser. No. 110,018
2 Claims. (Cl. 77—62)



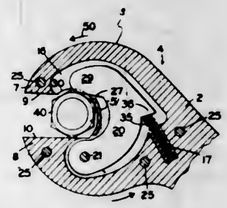
1. An apparatus for drilling two finger holes in a bowling ball comprising a ball cradle including a fixed ring for supporting the ball, and a movable ring pivotally mounted for movement between a ball removing position and a ball clamping position and means for clamping the ball in the cradle; cradle mounting means for mounting the cradle for pivotal movement about a pair of transverse horizontal axes; a first pair of spaced apart drill support means adapted to support a drill for drilling one finger hole; a second pair of spaced apart drill support means adapted to support another drill for drilling the other finger hole; each support means including a shank having a swivelly mounted member at an end with a through aperture formed therein; means for mounting each drill support member on the movable ring for independent movement of each with respect to the movable ring; and drill powering means mounted for vertical movement and adapted to power the drills.

3,095,768
AUTOMATIC WIRE STRIPPING DEVICE
Leslie R. Walstrom, Amery, Wis., assignor to Fabri-Tek Incorporated, Hopkins, Minn., a corporation of Wisconsin
Filed June 12, 1961, Ser. No. 116,473
10 Claims. (Cl. 81—9.51)



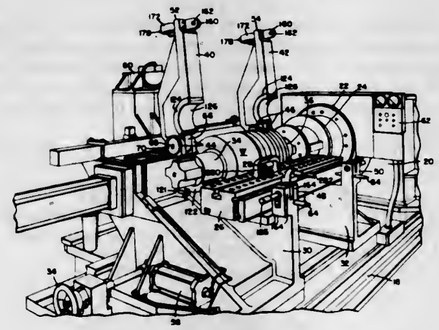
10. A wire stripping device for removing insulation from an insulated wire, said device including a base, a stripping unit mounted with respect to said base and having at least one rotatably mounted stripping wheel, control means mounted with respect to said base for rotating said stripping wheel, drive means mounted with respect to said base to move said insulated wire in a direction along its longitudinal axis past said wheel, support means on said stripping unit for supporting said insulated wire, said stripping unit being movable to a first position wherein said insulated wire and said stripping wheel are in engaging relationship, resilient means for normally holding said stripping wheel and said wire separated, an adjustable stop member mounted with respect to said base limiting the engagement of said wire and said wheel, actuating means mounted with respect to said base for moving said stripping unit to said first position, and control means to cause said actuating means to move said stripping unit to said first position at predetermined intervals.

3,095,769
RATCHET WRENCH
Abraham S. Weinstein, 15 Garrison Road, Brookline, Mass.
Filed Mar. 8, 1960, Ser. No. 13,517
4 Claims. (Cl. 81—97)



1. A ratchet wrench comprising a casing having a head and handle, said head having a pair of jaws with fixed opposed parallel surfaces, means forming an opening transversely through said head adjacent the inner edges of said surfaces with said opening having transverse measurements greater than the distance between said surfaces, means forming a recess within said head bordering and continuous with said opening, a C-shaped jaw positioned within said recess with a pair of opposed legs with one leg having a flattened inner surface, means pivotally supporting said C-shaped jaw within said recess on an axis passing through said other leg with said flattened inner surface of said one leg adapted to be pivoted into coplanar alignment with one of said parallel surfaces and with said one leg partially projecting from said recess into said opening, and spring means engaging said C-shaped jaw and tensioning said one leg toward the other of said parallel surfaces.

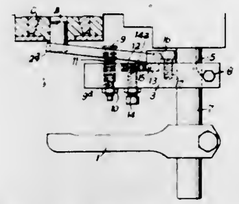
3,095,770
CONTOUR ROLL-TURNING LATHE
Jack N. Binns, 4886 Oaklawn Drive, Cincinnati, Ohio
Filed Oct. 26, 1959, Ser. No. 848,751
12 Claims. (Cl. 82—2)



1. Mechanism for rotatably supporting a roll workpiece by end journal portions thereof, comprising in combination a pair of spaced open bearings for reception of end journal portions of a roll or workpiece, and a second pair of cooperating open bearings movable into position to overlie said first pair of bearings to engage and retain the said end journal portions in position on said first pair of bearings, means supported upon the individual second pair of bearings for establishing maximum accuracy of axial rotation and equalized terminal rotational resistance of a workpiece with respect to the mechanism during rotation of the workpiece, said means including individual pressure clamping means for urging the individual bearings of the second pair in the direction of the respective bearings of the first pair to secure the workpiece therebetween, said pressure clamping means each further including a sensitive pressure indicator, said pressure indicators being correspondingly calibrated whereby said clamping means may be set and maintained at effective pressures establishing desired radial loads on the workpiece journals for and during a machining operation irrespective of varying bearing conditions.

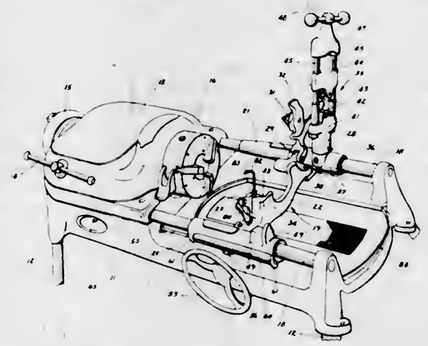
3,095,771
STOP DEVICES FOR FACILITATING AUTOMATIC FEEDING OF BAR STOCK INTO MACHINE TOOLS
Henry E. Vann, Leicester, and Thomas C. Keeling, Birstall, Leicester, England, assignors to Ratby Engineering Company Limited, Earl Shilton, Leicestershire, England, a company of Great Britain
Filed May 14, 1958, Ser. No. 735,256
Claims priority, application Great Britain May 15, 1957
8 Claims. (Cl. 82—34)

1. In apparatus for cutting lengths of bar stock from sections thereof including a collet through which the sections are fed, means for limiting outward feed of each section from the outlet end of the collet along its axis, and means movable in a plane traversing the collet axis between said outlet end and said limiting means to cut the section at a predetermined length from the limiting means, means for forming the forward end of each section comprising an interceptor member, retractable means for movably mounting the interceptor member in a first plane traversing the collet axis between the cutting traverse plane and said limiting means including first resilient means urging the interceptor member to traverse



the collet axis, second resilient means urging the interceptor member toward said outlet end of the collet and into a second plane traversing the collet axis between said outlet end and said cutting traverse plane, and abutment means disposed between said cutting traverse plane and said limiting means to restrict lateral movement of the interceptor member against the action of the second resilient means to the space defined between said first and second traverse planes thereof whereby said member intercepts the forward end of each section and stations it in said space for forming by said cutting means.

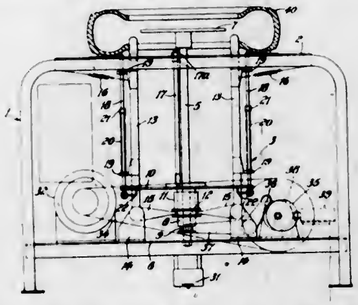
3,095,772
POWER THREADING TOOL
Carl H. Ingwer and Clyde E. Wright, Elyria, and Herman Weibel, Westlake, Ohio, assignors to Ridge Tool Company, Elyria, Ohio
Continuation of application Ser. No. 568,730, Mar. 1, 1956. This application Aug. 16, 1960, Ser. No. 53,572
2 Claims. (Cl. 82—100)



1. In a power driven pipe tool having means for rotating a pipe for performing a cutting off operation thereon in the presence of orbital movement of the pipe including a support means, a tool carrier slidably disposed on support means, a pipe cutter mounted for orbital movement in a plane transverse to the rotating means on said carrier comprising a journal member rotatably mounted on said carrier for free rotation in a plane transverse to the pipe rotating means, means to restrict the rotary movement of said journal member in both directions on said carrier comprising cooperating means between the journal member and the carrier and a pipe cutting tool freely slidably disposed on said journal mem-

ber for movement toward and away from said pivotal member.

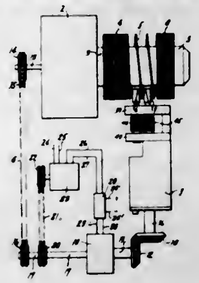
3,095,773
PERFORATOR FOR PNEUMATIC TIRE SIDEWALL
Norman Ashcroft Hurst, Four Oaks, and Walter James Edney, Birmingham, England, assignors to Dunlop Rubber Company Limited, County of London, England, a company of Great Britain
Filed Jan. 6, 1960, Ser. No. 814
Claims priority, application Great Britain June 10, 1959
11 Claims. (Cl. 83—2)



4. A machine for piercing the side wall of a pneumatic tire which comprises a support for a penumatic tire having a tire bead, a guide pillar normal to said support, said support having slots radial to said pillar, an inner sleeve slidable on said pillar beneath said support towards and away from said support and said sleeve having an outwardly extending flange, said sleeve having a recess, an outer sleeve slidable on said inner sleeve beneath said flange and into contact with said flange for controlling the upward and downward movement of the outer sleeve and having an annular groove, centering arms, one for each said slot, extending upwardly through its respective slot and pivotally supported below said support to swing in its respective slot toward and from said pillar and having an extension engaging said annular groove of said outer sleeve, at least one spring associated with the outer sleeve and the arms and operable upon movement of the inner sleeve towards the support to move the outer sleeve with the inner sleeve towards the support and to bias each arm radially outwardly, the radially outward movement of the arms and the upward movement of the outer sleeve being arrested upon engagement of the tire bead by the arms, needle elements one for each said centering arm slidably mounted along the radially outer edge of its arm to slide longitudinally of the arm and through one of said slots into engagement with the side wall of a tire positioned on said support, each said needle element engaging said flange of said inner sleeve to be moved downwardly thereby, a spring on each said centering arm to bias the needle element mounted thereon upwardly upon the arrest of upward movement of the outer sleeve and upon continued upward movement of the inner sleeve thereby to pierce the tire side wall, an actuating arm engaging the recess of said inner sleeve and a cam engaging said actuating arm and rotatable to tilt said actuating arm to depress said inner sleeve and flange subsequent to the piercing operation.

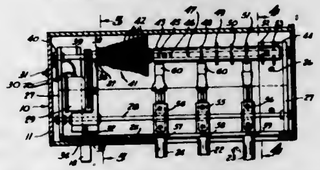
3,095,774
METHOD AND APPARATUS FOR SEVERING A MOVING HELICAL STRIP
Benjamin F. Hart, Ballston Lake, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 8, 1959, Ser. No. 858,200
12 Claims. (Cl. 83—37)

12. In a method for severing a helically wound strip having a plurality of turns rotatable about a first axis, driving the turns individually between two cutting edges at least one of which includes a rotary member rotatable about a second axis substantially perpendicular to the first axis, moving the edges from nonoperated positions into cutting engagement to sever the strip transversely across its width while concurrently moving said



cutting edges substantially at the same speed as that of the continuously moving strip, and returning each of the cutting edges to the nonoperated position in which the edges are spaced apart a sufficient lineal distance to permit continuous and unimpeded passage of the strip therebetween.

3,095,775
MULTI-BEAT INSTRUMENT
Paul Billotti, 881 7th Ave., New York, N.Y., and Leonard Werner Weiss, 68—04 52nd Drive, Maspeth, N.Y.
Filed Nov. 19, 1959, Ser. No. 854,116
6 Claims. (Cl. 84—484)

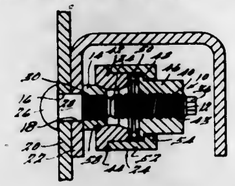


1. A multi-beat instrument, comprising a motor having a motor shaft, a rotatable driven shaft, means driven by said motor shaft for driving said driven shaft, engaging means mounted on said driven shaft for selectively engaging the first-mentioned means to rotate said driven shaft at various selected speeds, a plurality of beat-producing elements, actuating means connected to said driven shaft for actuating said beat-producing elements, and means for selectively placing said beat-producing elements in intermittent contact with at least one of said actuating means, whereby a selected ratio of simultaneous beats is obtained at selected rates of speed.

3,095,776
LOCK BOLT WITH COLLAR THAT IS SWAGED BY A ROTATABLE DRIVING TOOL
Harold G. Brilmyer, Grosse Pointe, and Gerald Edward Wehlann, Detroit, Mich., assignors to Huck Manufacturing Company, a corporation of Michigan
Filed July 31, 1958, Ser. No. 752,303
1 Claim. (Cl. 85—7)

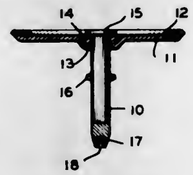
A fastener adapted to be applied with a tubular anvil rotatably mounted on and axially aligned with a nut member, said fastener comprising a pin having a head at one end, said pin having a cylindrical portion axially next to said head, an externally and circumferentially grooved portion next to said cylindrical portion having circumferential locking grooves formed therein, a stem portion at the end of said pin opposite said head, an annular section weaker than the remaining portion of said pin providing a breakneck between said grooved

portion and said stem portion, and a collar positioned on said pin and adapted to be swaged into said locking grooves when the fastener is set, said stem portion having screw threads formed on the surface thereof for rotatably supporting the nut for travel lengthwise thereof for forcing said anvil into swaging engagement with said collar when said collar is positioned on said pin about



said grooved portion, said stem portion terminating at the terminal end of said pin opposite said head in an unthreaded, non-circular section, said unthreaded section being of a configuration such that a wrench can be applied thereto for exerting a torque on said pin and being of a reduced cross sectional size relative to the threaded portion of said stem.

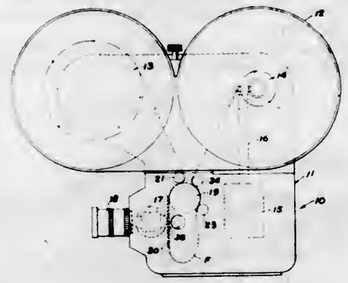
3,095,777
DRIVEN FASTENER HAVING PENETRATING POINT FOR ATTACHING OBJECTS TO METAL
Robert Lay Hallock, 32 Vine Road, Larchmont, N.Y.
Filed June 2, 1960, Ser. No. 33,572
7 Claims. (Cl. 85—31)



1. A fastener comprising a shank having driving and driven end portions, said driving end portion having an external taper decreasing in size toward its driving extremity, said shank having an axially extending cavity in its driving extremity extending inwardly sufficiently to allow the necessary penetration of the fastener into the metal into which it is driven, the penetrating extremity of said fastener terminating in a blunt substantially flat end the surface of which is transverse to the wall of said cavity with the joint between such blunt end surface and cavity wall and between the external taper and blunt end each becoming cutting edges when the fastener is driven into metal, the relation of the external taper and the wall thickness of the blunt end surface of the driving end of the shank of said fastener being of such character that the endwise application of impact force to said shank will cause penetration of the metal into which the fastener is driven and will cause the cutting end to be directed inwardly toward the axis of the shank in a manner to cause cutting as its travels with a gradually progressive contractual movement and with a bulbous mass of metal collected and retained within said cavity while maintaining its connection with said metal.

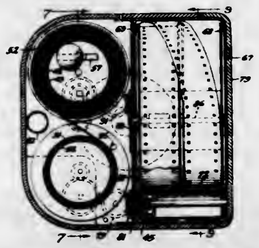
3,095,778
FILM DRIVING MEANS IN A HIGH-SPEED CAMERA
Frederick P. Warrick, 8565 Thendara, Clarkston, Mich.
Filed May 18, 1959, Ser. No. 813,818
7 Claims. (Cl. 88—17)

1. In a high-speed camera wherein images are successively directed toward an aperture and moved in the direction of movement of the film across the aperture, the combination comprising means forming an aperture which defines an exposure area, sprocket means rotatably mounted at a point spaced from and in advance of the axis of said aperture, the plane containing the aperture being substantially tangent to the sprocket means, means for continuously rotating said sprocket means at a substantially uniform speed, said sprocket means having teeth on the periphery thereof adapted to engage perforations in the film, means adjacent one point of the periphery of said sprocket means for holding film in position to



be engaged by the teeth of said sprocket means, means adjacent another point on the periphery of said sprocket means for holding a portion of the film in position to be engaged by the teeth of said sprocket means, means for guiding said film from adjacent the periphery of said sprocket means and across said aperture, thereby permitting a loop of film in untensioned state to be provided between said first and second means, said aperture being positioned in such a manner that a portion of said untensioned loop is adjacent thereto so that when the sprocket means is continuously rotated, the film is moved continuously across said aperture in an untensioned state.

3,095,779
FILM MAGAZINE AND DRIVE MEANS THEREFOR
Edwin E. Foster, Austin, Tex.
Filed June 22, 1959, Ser. No. 821,981
7 Claims. (Cl. 88—17)



1. In a moving picture camera, a film magazine comprising a casing, a film supply spool and a film takeup spool in the casing, the film passing from the supply spool past an exposure point and onto the takeup spool, a sprocket engaging the runs of film between the respective spools and the exposure point to insure movement of the film from one of the spools and onto the other spool at the same rate, a spring motor including a storage spool for the spring, a power spool and a spring strip normally biased to coil onto the storage spool and connected to the power spool to be back wound thereon, means connecting the power spool drivably to the sprocket to drive it at a constant speed, and means forming a positive driving connection between the spring storage spool and the film takeup spool to drive the film take-

up spool at varying angular speeds as the effective diameters of the spring storage spool and the film takeup spool change thereby to wind the film onto the film takeup spool at a constant lineal rate.

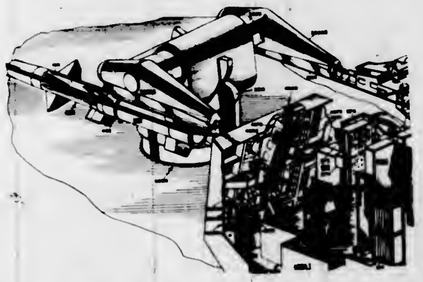
3,095,780

BLAST DOORS AND SPAN TRACK ARRANGEMENT FOR GUIDED MISSILE LAUNCHING SYSTEM

Myron J. Bauer, St. Paul, and Richard C. Wilson, Champlin, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Original application Oct. 22, 1959, Ser. No. 848,163. Divided and this application Mar. 18, 1960, Ser. No. 16,108

12 Claims. (Cl. 89—1.7)



1. In a missile weapon launching system, a launcher having at least one track member, a ballistically enclosed structure having an opening therein, a feeder system located in said ballistically enclosed structure and spaced from said launcher and having at least one track member, a bascule type door structure pivotally mounted in said opening in said ballistically enclosed structure, said door structure including an upper section and a lower section horizontally hinged to said ballistically enclosed structure, a third track member positioned between said first two mentioned track members, means floatably mounting said third track member on said upper section to allow said third track member to compensate for discrepancies in position of at least one of said track members of said launcher and feeder system, said pivotally mounted door structure being movable to shift said third track member into track engagement with said first two mentioned track members, whereby a missile weapon can be moved from said track member of said feeder system to said track member of said launcher for launching therefrom when said pivotally mounted door structure is open.

3,095,781

REPEATER-TYPE COCKING FIRING MECHANISM FOR GUNS

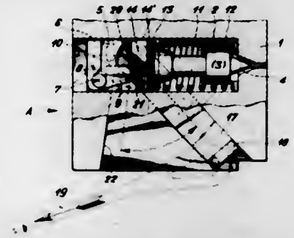
Erich Bartels, Ratingen, near Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany

Filed July 25, 1961, Ser. No. 127,454

Claims priority, application Germany July 29, 1960

1 Claim. (Cl. 89—27)

Repeater cocking mechanism for firearms, more particularly guns, comprising a breech having a bore therein, a sleeve secured in one end of the bore, a striker slidably mounted in the bore and in the sleeve and having a firing pin at one end thereof, a disc mounted on the striker and slidable with respect thereto, a single compression spring around the striker abutting against the sleeve at one end and the disc at the other end, a cocking piece secured on the other end of the striker to be slidably movable therewith, a member having a projecting part and a cocking part operative against the disc and the cocking piece, means to operate the member to compress the spring to a cocking position of the striker for the firing position and to force the striker back to its initial inoperative position, a cocking latch rotatably mounted in the cocking piece and having two projections,



and a pressure pin provided parallel and eccentric with respect to the longitudinal axis of the striker with one end contacting one of the projections of the cocking latch with the other projection of the cocking piece contacting the projecting part of the member in the cocking position.

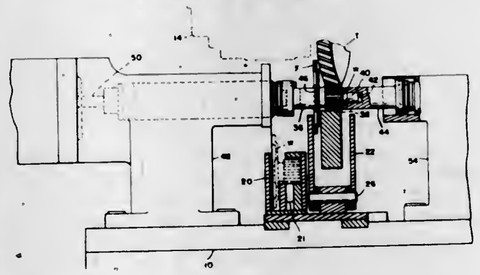
3,095,782

AUTOMATIC LOADING MECHANISM FOR GEAR FINISHING MACHINES

Lily G. Skalsey, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan

Filed Sept. 22, 1958, Ser. No. 762,560

10 Claims. (Cl. 90—1.6)



1. Means for supporting an apertured work piece for rotation and axial movement comprising a first rotary member mounted for axial movement, first fluid pressure operated means including first rigid means connected to said first rotary member, a first rigid abutment engageable by a portion of said rigid means to determine two limiting positions of said first rotary member, a second rotary member mounted for axial movement toward and away from said first rotary member, second fluid pressure operating means including second rigid means connected to said second rotary member, a second rigid abutment engageable by a portion of the rigid means connected to said second rotary member to determine two limiting positions thereof, said first fluid pressure operated means having sufficient power to overcome said second fluid pressure operated means, a first valve for admitting fluid under pressure to said fluid pressure operated means to move said first member through the aperture in a work piece and to engage said first rigid abutment by said first rigid means, a second valve operable to admit fluid to said second fluid pressure operated means to move said second rotary member into engagement with the work piece to clamp the work piece between said rotary members, said first valve being operable following a machining operation to exhaust fluid from said first fluid pressure operated means to cause said second fluid pressure operated means to overcome said first fluid pressure operated means and to shift said first rotary member and the work piece axially to a position determined by engagement between said second rigid abutment and said second rigid means, said second valve being then operable to reverse the application of fluid pressure to said first fluid pressure operated means to move said first rotary member away from said second rotary member to release the work piece from clamped condition therebetween.

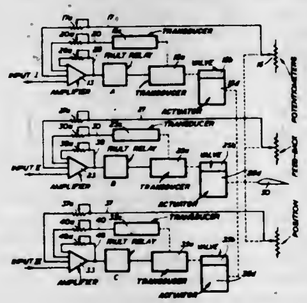
3,095,783

FAULT DETECTION MEANS

Charles B. Flindt, Sunbury-on-Thames, England, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company

Filed May 2, 1960, Ser. No. 25,954

12 Claims. (Cl. 91—1)



1. Apparatus for controlling the movement of an organ such as an aircraft control surface or the like in response to input control means, comprising at least three independent servo control systems, each having an independent servo mechanism with its output mechanically coupled to a common output member controlling movement of said organ and each having an independent electrical signal transmission channel adapted to be supplied with electrical input control signals representative of the movement of the said input control means, means for sampling the electrical control signal in each channel and for comparing each electrical signal sample with each of two other electrical signal samples, and warning means responsive to any disparity between the compared samples to indicate the identity of a defective channel.

3,095,784

ELECTRO-HYDRAULIC CONTROL SERVO-MECHANISMS

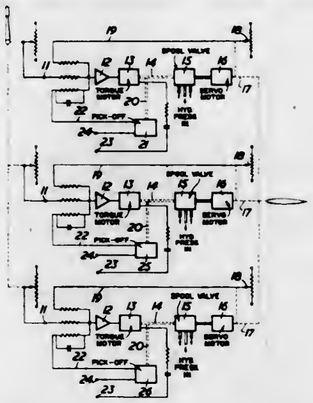
Robert Sydney Colhoun, Lisburn, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company

Filed July 14, 1960, Ser. No. 42,782

Claims priority, application Great Britain July 28, 1959

9 Claims. (Cl. 91—1)

1. An electro-hydraulic servo system comprising a common input control member, a common output member, at least three independent channels for the transmission of signals from the input control member to the output member, each channel comprising a first motor responsive to movement of the input control member, a hydraulic servo motor mechanically coupled to drive the common output member, means for supplying hydraulic fluid to the hydraulic servo motor, a hydraulic servo valve coupled to be operated by the said first motor, means for effectively comparing the position of the servo valve in each of the channels with the position of the servo valve in each of two other channels, and warning means responsive to a



disparity between the valve positions to indicate the identity of a defective channel.

3,095,785

POSITIONING DEVICE

Daniel T. Cahill, Glen Head, N.Y., assignor to Specialties, Incorporated, Syosset, Long Island, N.Y.

Filed Aug. 18, 1960, Ser. No. 50,364

8 Claims. (Cl. 91—42)



1. In a control device, a cylinder, piston means relatively movable therein, means including valve means for supplying fluid to said cylinder to cause movement of said piston means, first electromagnetic means for controlling said valve means, second electromagnetic means for controlling said first electromagnetic means, means inductively connected with said second electromagnetic means to cause variable adjustment thereof, said inductively connected means including means carried by said piston means, and means for fastening said piston means against movement.

3,095,786

HAMMER DEVICE

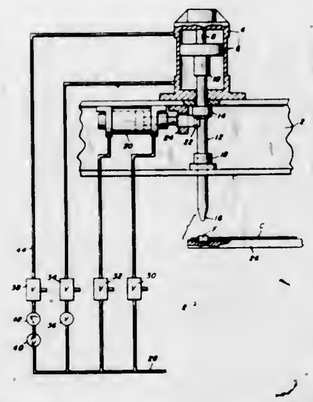
George Donald Fenton, Rocky River, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey

Original application June 6, 1959, Ser. No. 820,012. Divided and this application Oct. 18, 1960, Ser. No. 63,320

1 Claim. (Cl. 91—454)

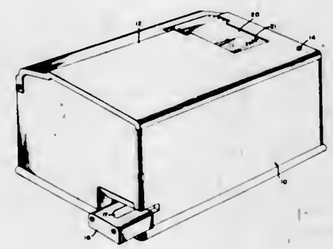
Apparatus providing a hammer blow comprising a cylinder, a piston in said cylinder, a piston rod attached to said piston and extending therefrom, a stop attached to said piston and extending therefrom in the direction opposite said piston rod, a collar on said piston rod outside said cylinder, a second cylinder arranged generally normal to said first cylinder and located adjacent said collar, a piston in said second cylinder, a piston rod attached to said second named piston and extending therefrom toward said collar, means on said last named piston rod for engaging said collar, means for delivering air under pressure to said first cylinder on the side of its piston having the stop thereon, means for delivering fluid under pressure

to said second cylinder on the side of said second named piston opposite its piston rod for holding its collar engaging means in engagement with said collar, and means for



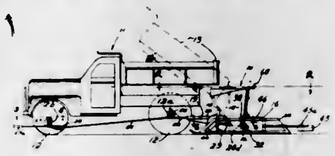
delivering fluid under pressure to said second cylinder on the piston rod side of said second named piston to retract said second named piston rod after the pressure in said first cylinder has built up to a predetermined amount.

3,095,787
LAUNDRY INVOICING MACHINE
Carlyle S. Cornwell, Shelby, N.C., and Theodore Bishoff, Washington, D.C.; said Bishoff assignor to said Cornwell
Filed June 30, 1959, Ser. No. 824,118
14 Claims. (Cl. 93—88)



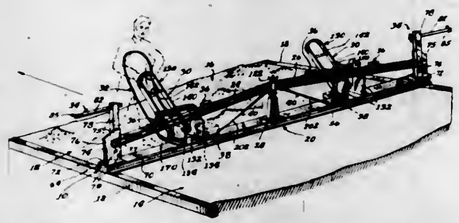
1. A machine for printing identifying tags with numbers corresponding to prenumbered invoice tickets and attaching the tags to garments, comprising, in combination, a register having a manual writing table for receipt of the invoice tickets, a printer including an advanceable numbering device for printing a number on tape corresponding to the preprinted number on a ticket on said writing table, means for feeding tape to the printer and to a stapling position, a stapler, a tag cutter, a garment support member movable from a garment receiving position to said stapling position and to a third position, means controlled by movement of the garment support member to said stapling position to operate said printer, tape feeding means, stapler and tag cutter in sequence, ticket moving means controlled by movement of said garment support member to said third position and operable to move a ticket from said writing table upon completion of the manual recording of a lot of garments, and means to advance the number on the numbering device when said ticket is moved from said writing table actuated by said ticket moving means.

3,095,788
SPREADER AND HITCH THEREFOR
Robert Odell, Parmelee Drive, Mentor, Ohio
Original application Sept. 8, 1953, Ser. No. 378,834, now Patent No. 2,914,995, dated Dec. 1, 1959. Divided and this application Nov. 23, 1959, Ser. No. 854,738
10 Claims. (Cl. 94—44)



1. In combination, a truck having a rear dump body and a spreader including a hopper positioned below the dump body discharge point for receiving material dumped thereby and for smoothly spreading this material over the ground behind said hopper, and a hitch means connecting said hopper and truck comprising a pull yoke secured to said hopper and having a forked abutment at its leading edge engaging a trailing surface of the rear truck axle, said hitch means comprising a resilient cable extending forwardly under the truck and below the rear axle and having a hook at its forward extremity detachablv engaged with the front axle of said truck so that the resiliency of said cable pulls said forked abutment against the rear truck axle by the stretch in said cable and urges said hopper down toward the ground by the tension in said cable exerting a pulling force below the rear axle and pivoting the forked abutment about the rear axle to urge the hopper downwardly so that said resiliency urges the hopper into ground contact but permits vertical relative movement between said hopper and truck to allow for variations in contour of said ground and urges said hopper down against the ground to help smooth the ground before the material is spread thereon.

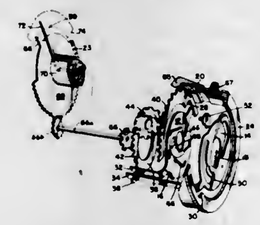
3,095,789
ADJUSTABLE PORTABLE STRIKE-OFF
Paul A. Melvin, Chicago, and Howard L. Wallin, Oak Park, Ill.; said Wallin assignor to Paul A. Melvin
Filed Apr. 28, 1959, Ser. No. 809,525
4 Claims. (Cl. 94—45)



1. A concrete finishing tool adapted for use in finishing a relatively large body of concrete poured between opposed spaced fixed forms and adapted to extend across the concrete and rest upon said forms, said tool comprising an elongate beam formed with a continuous planar bottom surface of uniform width throughout the length of the beam, the edges of said surface defining forward and rearward faces of said beam, a first elongate rigid truss member having one of its ends made fast to one end of said beam, a second elongate rigid truss member having one of its ends made fast to the other end of said beam, said members being substantially equal in length and having combined a length that is greater than the length of said beam, said members having their other ends joined together over the central portion of the beam to form

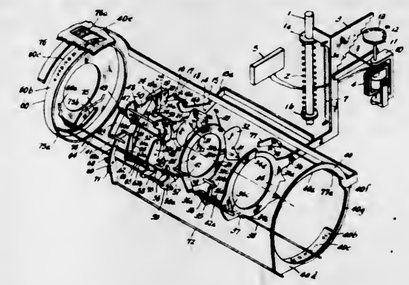
a truss structure, a rigid upright strut made fast between said joined together ends of said members and said beam and including jack means for adjusting the effective length of said strut whereby the contour of said beam may be adjusted, an elongate handle pivotally secured to said beam on each side of said strut and substantially midway between said strut and one of the ends of said beam, each of said handles projecting laterally from said beam and being mounted on the forward side of said beam for pivotal movement about a horizontal axis extending lengthwise of said beam, vibrator means mounted on said beam adjacent each of said handles for vibrating said bottom surface, a pair of tie rod means each connected at one of its ends to said beam adjacent said vibrator means and having its other end connected to said truss structure adjacent said joined together ends of said members, said tie rod means bracing said beam portions against uncontrolled vibration and thereby spreading out the vibration generated by said vibrator means substantially uniformly along the length of the beam, and means for releasably securing said handles against pivotal movement at selected forwardly directed positions of inclination with respect to said beam whereby a worker may adjust a handle to his particular height, said beam being formed with an upwardly facing planar sight guide surface means along said forward face thereof for acting as a guide for positioning and leveling concrete in advance of said beam during operation thereof, with said sight guide surface means being in parellel relation with and above said bottom surface of said beam, whereby each of two workers standing in the poured concrete and grasping a handle may adjust said handle to his particular height and, when drawing the beam along the opposed forms in a forward direction and over the concrete as said bottom surface is vibrated to finish the surface of thepoured concrete, avoid twisting of said sight guide surface means.

3,095,790
PHOTOGRAPHIC CAMERA
Kurt Gebele and Franz Singer, Munich, Germany, assignors to Compur-Werk Gesellschaft mit beschrankter Haftung & Co., Munich, Germany, a German firm
Filed June 9, 1960, Ser. No. 35,069
Claims priority, application Germany June 11, 1959
15 Claims. (Cl. 95—10)



10. Photographic exposure setting mechanism comprising a diaphragm aperture control ring and a shutter speed control ring both rotatable through respective ranges about a common axis of rotation, spring means tending to turn each of said rings toward one end of its respective range, a manually operable diaphragm aperture adjusting member having an abutment for engaging said aperture control ring to hold such control ring against the action of its spring means in a position determined by the position of said aperture adjusting member, a manually operable speed adjusting member having an abutment for engaging said speed control ring to hold such control ring against the action of its spring means in a position determined by the position of said speed adjusting member, and exposure value control means rotatable about said common axis and having abutment means for engaging both of said control rings to hold both of said control rings against the action of said spring means in related positions determined by the position of said exposure value control means independently of said abutments on said aperture adjusting member and said speed adjusting member.

3,095,791
PHOTOGRAPHIC CAMERA HAVING A BUILT-IN EXPOSURE METER
Carl Fritz Richter, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed July 25, 1962, Ser. No. 212,392
Claims priority, application Germany July 29, 1961
5 Claims. (Cl. 95—10)



1. A photographic camera comprising a built-in exposure meter; a shutter; first means to drive said shutter at variable speeds to achieve different exposure times; an adjustable diaphragm; second means to control the aperture of said diaphragm; a first setting member adjustable to an automatic position and to a range of manually controlled positions; a first linkage connecting said setting member to said second means only when said setting member is in its manual range to set said diaphragm manually; an automatic setting member linked to said exposure meter and to said second means to control said diaphragm automatically when said first setting member is set to its automatic position; a second setting member and a second linkage connecting said second setting member to said first means to control the exposure time of said shutter when said first setting member is in its range of manual positions; a third linkage connecting said automatic setting member to said first means to control the exposure time of said shutter when said first setting member is in its automatic position; and fourth means operatively connected with said first setting member to disengage said second linkage when said first setting member is in its automatic position.

3,095,792
CAMERA ACCESSORY SHOE ARRANGEMENT
Karl Heinz Lange, Bunde-Ennigloh, Westphalia, Germany, assignor to Balda-Kamerawerk Rudolf Gruter, Kommanditgesellschaft, Bunde, Westphalia, Germany, a German company
Filed Aug. 3, 1960, Ser. No. 47,228
Claims priority, application Germany Sept. 3, 1959
11 Claims. (Cl. 95—11)

1. In a camera case having a top, a rectangular opening in said top, a plate below said opening and a bent tongue on said top; a camera accessory shoe arrangement comprising a guideway for receiving a foot portion of said accessory, said guideway being formed between said top

and said plate, and said opening in said top having a raised border portion locating said foot portion laterally, said

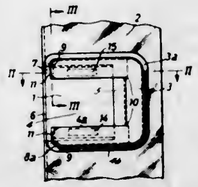
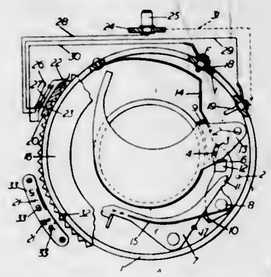


plate being inserted from the inside of said camera case and being secured to said top by said bent tongue thereof.

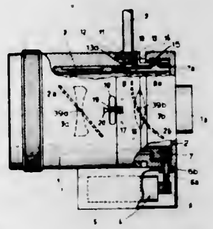
3,095,793
PHOTOGRAPHIC SHUTTER
Erhard Loose, Dresden, Karl Krömer, Radebeul, and Werner Hahn, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed July 29, 1960, Ser. No. 46,289
5 Claims. (Cl. 95—11.5)



1. In a photographic camera having a housing, a shutter device mounted in the housing and an exposure time setting member rotatably mounted in the housing, the provision of a plurality of flash-light contacts for lighting flash lamps having different delay characteristics, switch means mounted in the housing, a plurality of electrical circuits connected to said contacts respectively and to said switch means, said switch means being moved by the exposure time setting member to select one of said circuits in accordance with the position of the exposure time setting member corresponding to the preset exposure time, and means, driven by said shutter device, to engage said contacts in turn to complete said selected circuit on operation of the camera, the other circuit being ineffective.

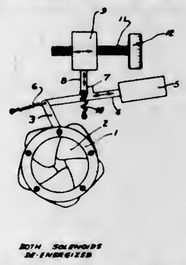
3,095,794
MECHANISM FOR AXIALLY DISPLACING AN OPTICAL CAMERA COMPONENT
Karlheinz Raab, Bad Kreuznach, Germany, assignor to Jos. Schneider & Co., Optische Werke, Bad Kreuznach, Germany, a company of Germany
Filed Dec. 11, 1961, Ser. No. 158,306
Claims priority, application Germany Dec. 15, 1960
17 Claims. (Cl. 95—45)

1. In a camera objective having a housing and at least one optical component axially displaceable in said housing, in combination, automatic drive means for said component, control means in engagement with said component, a manually movable member shiftable on said housing between a set of first positions and an alternate second position, said member engaging said control means in any of said first positions for displacing said component upon movement along a path defined by said first positions, and coupling means controlled by said member operatively connecting said drive means with said control means for automatic displacement of said component



upon a shifting of said member into said alternate position in which said member is disengaged from said control means.

3,095,795
CAMERA SHUTTER
Harold W. Yates, Stamford, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed June 8, 1960, Ser. No. 34,721
5 Claims. (Cl. 95—53)



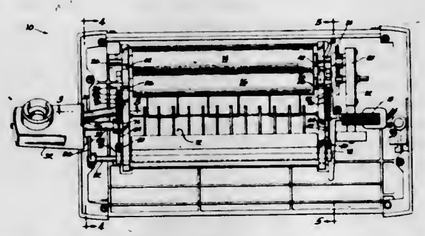
1. In a ballistic camera having a radiant energy responsive surface and wide angle imaging optics, the improvement which comprises

(*a*) an iris type shutter centered on the optic axis,
(*b*) electrically actuated means for periodically and substantially instantly opening the shutter to a wide open position against the resistance of rapid shutter closing means including a solenoid and a linkage from the solenoid to the shutter,
(*c*) a stop on said linkage, releasable latching means for said stop to hold the shutter partly open,
(*d*) a solenoid for releasing the latch, and
(*e*) means for adjusting the position of said releasable latching means to stop the closing of the shutter at a predetermined aperture.

3,095,796
PHOTOCOPY DEVELOPING MACHINE HAVING AUTOMATIC SQUEEZE ROLLER OPERATION
Edgar H. Du Bois and Anthony J. Mazzio, Chicago, and George P. Niesen, Niles, Ill., assignors to A. B. Dick Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 18, 1960, Ser. No. 22,913
9 Claims. (Cl. 95—89)

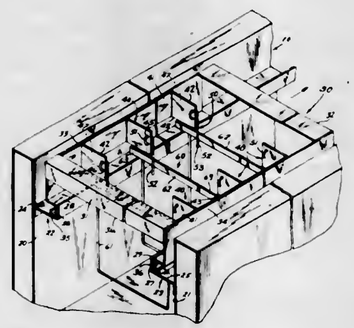
9. In a machine for applying a liquid to sheet material, the combination comprising a first receptacle for receiving the liquid, a closed receptacle for holding a supply of the liquid, conduit means connected between said first receptacle and said closed receptacle for carrying the liquid to and from said first receptacle, swingable means supporting said closed receptacle for movement between a raised inverted position in which the liquid flows into the first receptacle and a lowered upright position in which the liquid flows from the first receptacle into the closed

receptacle, first and second squeeze rollers disposed above the first receptacle for receiving sheet material therefrom to squeeze liquid from the sheet material, means mounted on said first and second rollers for relative movement against and away from each other, and means connected



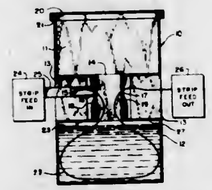
between said last-mentioned means and said swingable means for moving said rollers against each other when said closed receptacle is inverted, while moving said rollers away from each other when said closed receptacle is moved into said upright position.

3,095,797
TRANSFER DEVICE
Ray C. Lapof, Lake Success, N.Y., assignor to Bar-Ray Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed Mar. 9, 1962, Ser. No. 178,759
4 Claims. (Cl. 95—89)



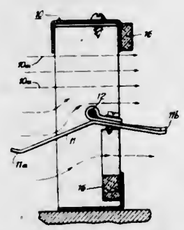
2. In a longitudinally extended film tank member having a pair of horizontally disposed parallel film hanger support tracks extending lengthwise along the opposite side edges of said tank and having a runway member disposed adjacent and outwardly of each said track at a level below the level of said tracks, a carrier for shifting and automatically releasing a plurality of film hanger members having spaced end portions supported on said tracks from a first position to a second position along said tracks comprising a frame having spaced parallel side wall portions, skid members on said frame slidably supported on said runway members to permit longitudinal sliding movement of said frame with respect to said tank, a plurality of vertically disposed sheet metal flanges fixed to said side walls and lying normal thereto including inner portions extending over said tank, the lowermost edge of each said flange being disposed above the level of said track, a pair of vertically spaced apart apertures formed in said inner portion of each said flange, a gravity pawl member vertically swingably supported from said inner portion of each said flange, each said pawl member including a generally circular upper portion loosely looped through both said apertures and a depending finger portion lying adjacent a side of said flange, the lowermost end of said finger portions being normally located beneath the level of said track portions.

3,095,798
PROCESSING TANK
Victor Q. Kelly, Atlantic Highlands, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 4, 1962, Ser. No. 200,002
5 Claims. (Cl. 95—94)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A liquid tight container, comprising a compartmented body consisting of upper and lower spaced main compartments of substantially equal cubic capacity one of which is used to contain a processing liquid, a plurality of elongated enclosed channels interconnecting the upper and lower sections at the plane of the side wall of the body, at least one additional channel adjacent the center of the body and interconnecting said top and bottom sections, entrance and exit slots located respectively in opposite walls of said center channel for permitting a film strip to enter and leave the container and resilient means in said slots to lightly and resiliently engage the film as it passes therebetween whereby when the tank is tipped into an inclined position approaching the horizontal the main body of the liquid will flow freely through the side wall channels to the upper compartment and be diverted from substantial flow through said center channel thus avoiding leakage through said slots.

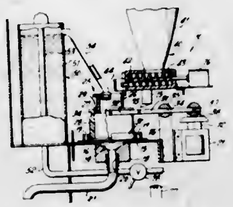
3,095,799
AIR CONDITIONING SYSTEM
John N. Pratt, Mount Holly, N.J., assignor to Iron Fireman-Webster, Inc., a corporation of Maryland
Filed Mar. 10, 1960, Ser. No. 14,044
2 Claims. (Cl. 98—37)



1. Apparatus for controlling the flow of air from a source to a room comprising a housing having an opening therein for the passage of air from said source therethrough, a plate-like damper blade which is thin relative to its length and width and which is bent along a portion thereof disposed centrally of the length dimension thereof forming a longitudinally central ridge extending in the direction of the width dimension of the blade, pivot means engaging said blade at said ridge and supported from said housing at said opening for pivoting said blade around a pivot axis extending along said ridge, said blade having first and second portions extending in opposite directions away from said axis and

said blade being rotatable about said axis from a first position in which the length and width thereof extend for substantially the full length and width of said opening and substantially closes said opening with one surface of said first portion facing away from said source to a second position in which the length of said blade extends generally in the direction of the air movement through said opening, said first portion is intermediate said source and said axis and said one surface of said first portion is intermediate said opening and an imaginary plane substantially perpendicular to a plane containing said opening and parallel to and intersecting said axis, the edge portion of said first portion of said blade most remote from said axis being bent oppositely to the direction of the bend forming said ridge, whereby in said second position said first portion of said blade has an effective cross-section transverse to said path corresponding to the cross-section of an airfoil, means connected to said blade for exerting thereon a variable mechanical moment urging said blade towards said second position, said moment increasing with the movement of said blade away from said second position and being substantially equal to the moment exerted on said blade by the impingement of air thereon in different positions of said blade, and stop means connected to said blade for preventing movement of said first portion of said blade beyond said second position thereof in a direction away from said first position.

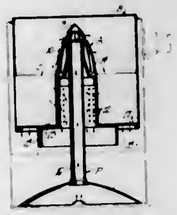
3,095,800
INFUSION APPARATUS
Jack J. Gilbert, Suffern, N.Y., assignor to Simon Adler, Brooklyn, N.Y.
Filed Apr. 26, 1961, Ser. No. 105,734
3 Claims. (Cl. 99—289)



1. A machine of the class described which includes means defining a flat supporting surface having an aperture therethrough, a receptacle having an open bottom positioned on said surface with said open bottom over said aperture, said receptacle thereby enclosing said aperture, means connected to said receptacle for moving said receptacle between said position and a position spaced away from said surface, means for drawing a tape across said surface over said aperture and under the open bottom of said receptacle, means communicating with the upper end of said receptacle for introducing liquid materials thereinto, and means communicating with the upper end of said receptacle for introducing solid materials thereinto.

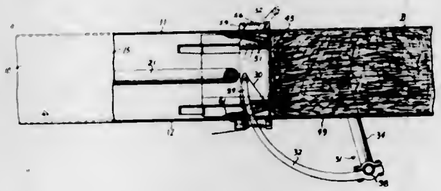
3,095,801
BEVERAGE PERCOLATING APPARATUS WITH UNIT DRY BEVERAGE CONTAINER
Charles R. Fogg, 130 Ivalee St., Playa Del Rey, Calif.
Filed Sept. 19, 1960, Ser. No. 57,017
3 Claims. (Cl. 99—312)

1. Beverage percolating apparatus comprising, in combination: a package including a container comprising top and side walls and a bottom wall having a preformed circular opening at its center and a body of dry beverage material in said container in a quantity suitable for a single brewing of beverage from the entire volume thereof, said container adapted to have adhered to the under surface of said bottom wall a removable seal for closing said opening prior to the use of said package; and a circulator head comprising a cylindrical tubular body extending upwardly through said opening and fitted snugly therein, extending upwardly through said body of dry beverage material and having an upper end disposed adjacent said top wall, and having at its lower end an annular enlargement defining an upwardly facing annular shoulder upon which said bottom wall is seated so as to support the container on the head with said upper end disposed above said body of beverage material; said upper end being provided with a circumferential array of discharge apertures for discharging outwardly near the upper level of



said body of beverage material, a plurality of jets of hot water to be pumped upwardly through said tubular body, for filtering downwardly through said dry beverage body, said tubular body having a plurality of inlets disposed in circumferential array near said annular shoulder, said inlets providing for flow of brewed beverage from the bottom area of said container into the lower portion of said tubular body, said tubular body having an open lower end for discharge of said brewed beverage downwardly into a receptacle; and means in said upper end of said tubular body providing a socket in spaced relation to said circumferential array of discharge apertures, said socket being of a shape and size to snugly receive the upper end of the tubular shaft of a percolator pump for pumping said hot water into said upper end as aforesaid.

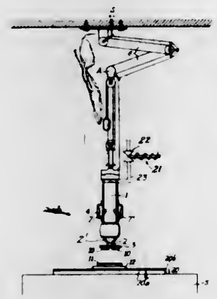
3,095,802
HAY BALER
Edwin B. Nolt, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,541
4 Claims. (Cl. 100—19)



1. A hay baler comprising a fore-and-aft extending bale case having a pair of side walls, a forward end and a rear end, each of said side walls having an opening therein, the opening in one wall being aligned with the opening in the other wall, said opening in said one side wall having a central portion and portions on opposite sides of the central portion, a plunger reciprocal in said bale case and having a hay engageable face operable to convey crop material deposited in the bale case from said forward end and toward said rear end, said plunger face having a slot

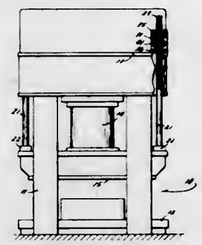
therein registering with said wall openings when said plunger is in its rearmost position, said plunger moving hay past said openings on each stroke thereof toward said rear end, needle means operable in timed relation with said plunger and projectable across said bale case through said plunger slot and through said openings, a hay dog having a normal position wherein it extends into said bale case and in the path of said plunger and having a width less than the width of said slot, means supporting said hay dog on said one side wall for pivotal movement about an axis transverse to the reciprocations of said plunger, spring means connected between said hay dog and the bale case and biasing the dog to said normal position while permitting it to yieldably pivot outwardly relative to the bale case responsive to engagement by hay moved toward said bale case rear end by said plunger, said hay dog having a pair of fore-and-aft extending laterally spaced hay engageable elements which form an acute angle with said one side wall when the hay dog is in normal position, said hay engageable elements being located in register with portions of said one side wall opening on the opposite sides of the central portion thereof and in register with the slot in the face of the plunger and having forward ends connected to said supporting means and free rearward ends, and said needle means passing between said pair of elements and through said central portions of said openings when projected across said bale case so that the free ends of the hay engageable elements move into the slot and against the end of the hay when the plunger is in its rearmost position whereby the hay dog opposes engagement of the hay with the needle upon forward movement of said plunger.

3,095,803
CUTTING PRESSES AND CUTTING SURFACES THEREFOR
Hans Linderoth, 16 Avenue Vlon Whitcomb, Paris, France
Filed Feb. 5, 1959, Ser. No. 791,369
Claims priority, application France Feb. 12, 1958
10 Claims. (Cl. 100—50)



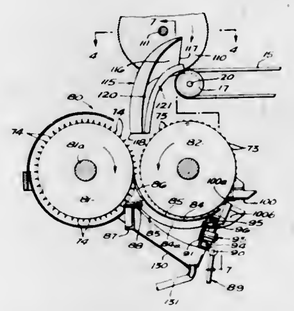
1. A press for operating on sheet material, the press comprising a tool for effecting an operation on the sheet material, a piston-and-cylinder assembly for applying pressure to the tool, means carrying said piston-and-cylinder assembly so that same is vertically movable, an electrical control system for initiating operation of the piston-and-cylinder assembly, a plate on the piston, electrical contacts mounted on said plate and forming part of the control system and adapted to be closed on contact with the tool to operate the control system and thereby actuate the piston-and-cylinder assembly and supporting means for supporting the sheet material.

3,095,804
SAFETY STOP FOR PRESSES
Philip J. Lindner, Mount Gilead, Ohio, assignor to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 14, 1960, Ser. No. 35,973
8 Claims. (Cl. 100—53)



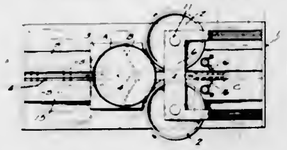
1. In a press having a frame member, a relatively movable platen member and hydraulic means for actuating said platen member, a safety stop device auxiliary to said actuating means comprising threaded nut means affixed to one of said members; threaded shaft means affixed to the other of said members and having threaded engagement with said nut, said nut and shaft being relatively rotatable when one is moved axially with respect to the other; one of said threaded means being non-rotatably affixed to its respective member; and brake means for selectively preventing relative rotation between said nut and shaft thereby preventing further movement of said platen member.

3,095,805
PINEAPPLE JUICE EXTRACTING MACHINE
Richard A. Andrews, Whittier, Calif., assignor to Citrus Equipment Corporation, Whittier, Calif., a corporation of California
Filed Oct. 20, 1958, Ser. No. 768,155
6 Claims. (Cl. 100—97)



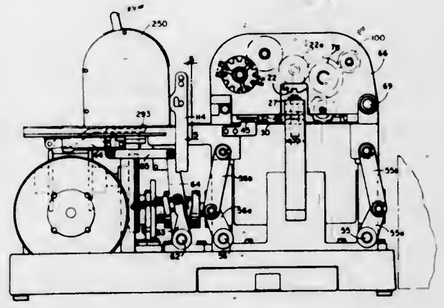
4. Apparatus for extracting pineapple juice comprising the combination of means for conveying whole pineapple fruit, means for aligning said fruit with the long axes thereof extending generally parallel to the direction of travel thereof, means for cutting said fruit while being so conveyed, and means for extracting the juice from the cut fruit, said extracting means including a rotating drum, and a grid having a curved surface conforming to the surface of said drum, said grid being convergently spaced from said drum to provide a convergent passage therebetween for movement of the fruit therethrough to flatten the same and express the juice therefrom and said grid being composed of a plurality of grid sections, each section being individually resiliently urged in the direction of the drum.

3,095,806
CAN DESTROYER
Zhivan James Mirkovich, 3101 W. Bottsford Ave., Milwaukee 21, Wis.
Filed May 25, 1961, Ser. No. 112,653
5 Claims. (Cl. 100—173)



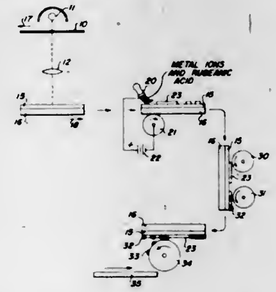
1. Apparatus for deforming hollow articles for disposal, comprising, a frame having a platform for receiving successive articles to be deformed, a pair of arcuate crushing members rotatably mounted on said frame in peripherally spaced relation and on parallel axes extending perpendicular to said article receiving platform, a rectilinearly movable force applying member supported on said frame and guided for movement from an initial position remote from said rotatable crushing members on one side thereof whereby the article to be crushed may be positioned on said platform between said force applying member and said rotatable crushing members to a position beyond the common plane containing the axes of said arcuate crushing members, and power means for moving said force applying member along said path to thereby collapse the article upon said force applying member as it passes between the peripheries of said arcuate crushing members.

3,095,807
INDICIA-APPLYING MACHINE
Arnold R. Bone, Needham, Mass., assignor to Dennison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts
Filed Apr. 14, 1960, Ser. No. 22,361
7 Claims. (Cl. 101—19)



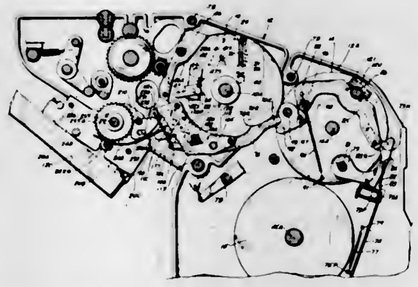
1. An indicia-applying machine for sectional ticket material, the machine including a plurality of indicia-applying devices at respective stations, means for feeding the ticket material step by step in successive cycles, timing means for causing the operation of one of said devices in the cycles of certain steps of feed and non-operation thereof in other cycles, the cycles of operation and non-operation forming a recurring sequence, and means for stopping the operations of feeding and indicia-applying in the event of out-of-phase relation between the ticket material and the recurring sequence of cycles of operation and non-operation, the machine including two controlling means for said stopping means, one of said controlling means including a detector for a cut-out occurring in a particular section of the material of a ticket and the other controlling means including switching means operating in timed relation to the recurring sequence of cycles of operation and non-operation, said detecting means and said switching means each having two respective conditions, the stopping means being under the joint control of the two controlling means, the two controlling means cooperating to cause said stopping when the switching means has a certain one of its two conditions and coincidentally the detector has a certain one of its two conditions.

3,095,808
PHOTOCONDUCTOLITHOGRAPHY EMPLOYING RUBEANATES
Donald R. Eastman, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 28, 1960, Ser. No. 45,958
3 Claims. (Cl. 101—149.2)



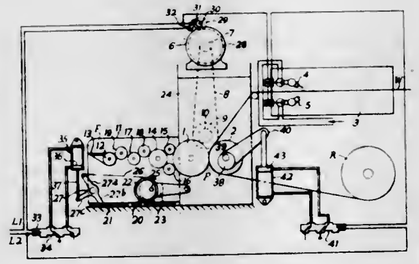
1. In a photoconductolithographic process, the steps of depositing on a hydrophobic photoconductive surface from an electrolyte containing rubeanic acid and metal ions selected from the group consisting of iron, copper, nickel and cobalt, an image of the compound of said metal and rubeanate which image is hydrophilic and litho printing from said surface and image.

3,095,809
MASTER STRIPPING MEANS FOR ROTARY PRINTING MACHINES
Harry F. Gammeter, Cleveland Heights, Francis R. Patalon, Willowick, and Rudolph J. Katterle, East Cleveland, Ohio, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,399
8 Claims. (Cl. 101—217)



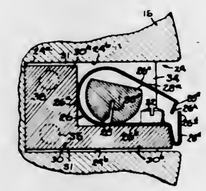
1. In an offset-set printing machine wherein a master is to be held on a rotatable master cylinder by a releasable clamp, oscillatable stripper means adjacent the master cylinder and normally disposed in a position free of the path of the master, means to release the clamp, a cam for controlling the releasing means and normally disposed in an ineffective position, means for shifting the cam to an effective position after a predetermined number of prints have been made, means under control of said cam in its effective position to permit shifting of the stripper means into the path of the unclamped master to strip the unclamped master from the master cylinder, and a cam rotatable with the master cylinder to control oscillation of the stripper means between the effective and ineffective position thereof.

3,095,810
ROTARY PRINTING MACHINES
John William Harris, Barton Seagrave, Kettering, England, assignor to Timsons Limited, Northamptonshire, England, a British company
Filed July 16, 1959, Ser. No. 827,613
Claims priority, application Great Britain Aug. 18, 1958
3 Claims. (Cl. 101—351)



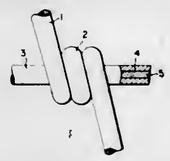
1. In combination with apparatus for moving a web through printing means and thereafter through a drying chamber and including a stationary frame supporting the printing means, means for moving the web at a predetermined speed, and a plurality of inking rollers for supplying ink to the printing means, the improvement comprising:
a movable carriage supporting the inking rollers;
driving means moving the carriage towards and away from the printing means to selectively supply ink to the printing means, the driving means including
a fluid pressure actuated piston and cylinder device,
a lever pivotally mounted on the carriage and pivoted in response to actuation of the piston and cylinder device,
a turnable eccentric mounted on the carriage and eccentrically rotatable relative to the carriage in response to pivoting of the lever,
and an arm joining the eccentric and the stationary frame and controlling the movement of the carriage;
and synchronous means responsive to the speed of the web moving means and operatively controlling the driving means for automatic shifting of said carriage away from the printing means when the web is advanced at a speed less than said predetermined speed and for automatic shifting of the carriage toward the printing means when the web is advanced at a speed at least equal to said predetermined speed, the said synchronous means including
a fluid valve communicating with the piston and cylinder device and operable to control transmission of fluid to the piston and cylinder device,
an actuable solenoid operatively controlling the fluid valve,
an electric switch controlling the actuation of the solenoid,
and cam means engaging the switch and responsive to changes in the speed of the web moving means.

3,095,811
TENSION LOCKUP FOR THIN PRINTING PLATES
Glenn R. Peabody, Bellwood, and Louis S. Tyma, Jr., Hinsdale, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,263
11 Claims. (Cl. 101—415.1)



1. In combination, a printing cylinder having a longitudinal slot in the surface thereof, a thin printing plate adapted to be conformed to and supported by the surface of said cylinder, said plate having channels formed along its opposite edges, an elongated spring of generally U-shaped cross section having a bight disposed in the lower portion of said slot defining arm portions and having nibs adjacent the surface of said cylinder, a plurality of fastening elements engaging one arm portion of said spring so as to anchor the spring in said slot with the nibs on said one arm portion being fixed and the nibs on the other arm portion being flexibly supported by the full extent of said bight, said nibs being formed to enter said channels on the opposed edges of said plate as such nibs are moved toward one another, said spring being formed such that said nibs are normally closely spaced from one another and when moved apart are biased toward one another, and a cam shaft embraced by said arm portions of said spring and rotatable to spread or relax said nibs.

3,095,812
EXPLOSIVE MEANS
David L. Coursen, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 27, 1960, Ser. No. 39,192
5 Claims. (Cl. 102—27)



1. An explosive device having directional selectivity comprising in combination a length of a sheathed detonating explosive core in helical configuration consisting of a plurality of turns and a second length of a sheathed detonating explosive core axially positioned within said helical configuration, the said helical configuration being such that the sheathing of each turn of said explosive core therein is in contact with the sheathing of its adjacent turn and with the sheathing of the said axial core, the ratio of the weight of sheathing to explosive in said explosive device being between 5 and 50 to 1.

3,095,813
PROPELLANT CONTAINER, PLASTIC IMPREGNATED GLASS

Henry S. Lipinski, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army

Filed July 5, 1961, Ser. No. 122,044
1 Claim. (Cl. 102—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)

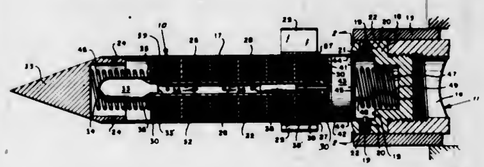


A recoilless weapon frangible reinforced plastic container for propellant comprising a cylindrical wall and at least one end wall and formed to be ruptured by breaking into many pieces when a propellant is fired, both the cylindrical wall and an end wall being provided with a patterned substantially entire surface forming repetitive diamond configuration having areas of dissimilar strengths with edge portions of the diamond shapes stronger than the rest of said configurations under pressure within the container to break up the container walls, at least one of said walls having configurations of a size to cause the broken pieces to be as small as of an order of about a third of an inch in one dimension.

3,095,814
DISPENSING APPARATUS

Tor W. Jansen, Southampton, and William B. Walker, Hatboro, Pa., assignors to the United States of America as represented by the Secretary of the Navy

Filed June 30, 1960, Ser. No. 40,114
9 Claims. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)

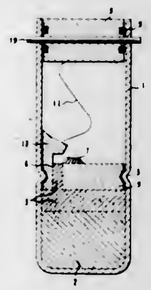


4. A device for dispensing an object in the flight path of a projectile which comprises: a shell, a propellent motor releasably coupled to the rear-end of said shell for propelling it and automatically uncoupling itself therefrom when the pushing power of said motor ceases, a timer releasably secured in said shell and means on said timer for activating said timer when said motor and shell are separated, said object confined in said shell by said timer and disposed and slidable endwise in said shell, force exerting means at the forward end of said shell and operable on said object and said timer to eject both said timer and said object from the shell; whereby when said projectile reaches a point in its flight where said motor ceases its propulsion and separates from said shell said timer will uncouple itself from the shell a selected time interval thereafter and release said object, and said force exerting means will eject said object from said shell into the ambient space.

3,095,815
FLUID PRESSURE RESPONSIVE FIRING DEVICE

William R. Brockway, Thorofare, Frank A. Loving, Wenonah, and George A. Noddin, Sewell, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 21, 1960, Ser. No. 64,087
3 Claims. (Cl. 102—70)

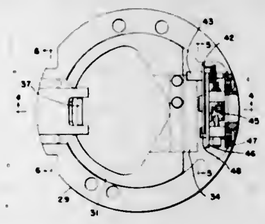


1. A pressure responsive initiator for detonation of explosive charges at a predetermined depth below the surface of a body of water which consists essentially of a tubular shell integrally closed at one extremity, a piston slidably mounted within and closing the other extremity of said shell, a base charge of detonating explosive and a priming charge of explosive sequentially positioned from said integrally closed extremity, an anvil positioned contiguous to said priming charge, said anvil comprising a diaphragm secured in peripheral engagement with the inner wall of said shell and a striker arm arrester extending from said diaphragm toward said piston, said diaphragm being provided with an aperture therethrough adjacent said striker arm arrester, an ignition charge filling said aperture, a percussion sensitive explosive cap secured on said diaphragm adjacent said aperture and in propagating relationship to said ignition charge, a striker arm secured to said piston and extending to engage said arrester, said arm being adapted to disengage said arrester and strike said percussion cap upon exertion of a predetermined pressure by said piston, and removable means for locking said piston in position.

3,095,816
SETBACK ACTUATED TIMING DEVICE

Benjamin D. Nabreski, Haddon Heights, N.J., and Albert L. Staudte, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed Sept. 14, 1960, Ser. No. 56,070
2 Claims. (Cl. 102—84)
(Granted under Title 35, U.S. Code (1952), sec. 266)



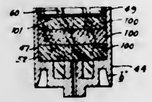
1. In a timing device, the combination of
a support,
a rotor journaled in said support and having fixed thereto a rotor pin and a roller which extend axially

therefrom and are angularly displaced from one another about the rotational axis of said rotor,
a delay gear train coupled to said rotor,
a lever having one end pivoted to said support and having the other end located between said rotor pin and said roller,
resilient means exerting a force whereby said other end of said lever is biased into engagement with said rotor pin,
a barrier guard fixed to said one end of said lever and having a groove curving outwardly from and alined with said lever,
a barrier pivoted to said support,
a barrier pin fixed to said barrier, said barrier pin being movable along the edge of said barrier guard past the end of said groove upon the movement of said lever against the force exerted by said resilient means and being movable along said edge and into said groove by said force, and
a firing arm biased into engagement with said barrier and releasable therefrom upon movement of said barrier pin into said groove.

3,095,817
WAD COLUMN

Homer E. Clark, Jr., Alton, Ill., assignor to Alcan Company, Incorporated, Alton, Ill., a corporation of Illinois

Filed July 25, 1960, Ser. No. 45,135
2 Claims. (Cl. 102—95)



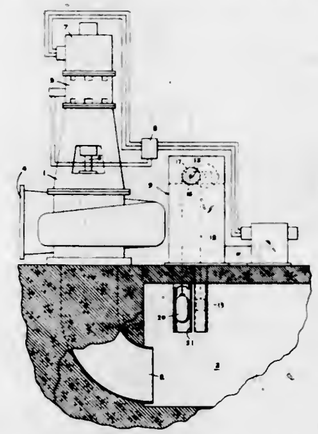
1. An over-powder, pre-assembled wad column for a shotgun cartridge comprising a substantially elongated tubular body being open at one end, said body having a transverse closure at the other end thereof, at least one filler wad disposed within said tubular body, said filler wad being permeated with a flowable lubricant, said tubular body having a plurality of relatively narrow, partispiral openings extending from the open end of said body to a point proximate the transverse closure.

3,095,818
FLOW CONTROL MEANS FOR A PUMPING STATION

Wilbur D. Nobles, Upper Montclair, and Peter E. Cardillo, Irvington, N.J., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Dec. 4, 1961, Ser. No. 156,838
14 Claims. (Cl. 103—11)

1. Variable flow control means for use with a pumping system having a suction reservoir, said pumping system including a pump, driving means for said pump, speed regulating means operatively interconnecting said pump to said driving means for varying the power flow of said driving means to said pump, said variable flow control means including indicator means for measuring the level in said suction reservoir, said indicator means including switch means connected to said driving means to start and stop said pump, a control connected to said indicator means, sensing means operated by the control means to sense a change in level in the suction reservoir, variable speed control means connected to the speed regulating means, a motor means connected to the variable speed control means, means interconnecting the motor means to the sensing means to start said motor means when said sensing means senses a change in level in the suction reservoir, and a variable control means interconnecting said means interconnecting the motor means to the sensing means with said sensing means to

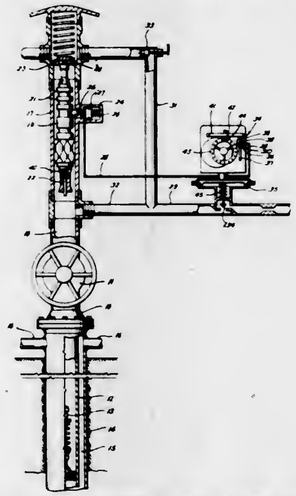


stop said motor means when a desired level is reached in said suction reservoir.

3,095,819
FREE PISTON PUMPING SYSTEM

Norman F. Brown and Clifford M. Peters, Longview, Tex., assignors to U.S. Industries, Inc., New York, N.Y.

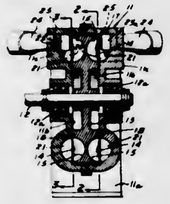
Filed Dec. 2, 1959, Ser. No. 856,818
12 Claims. (Cl. 103—52)



1. A free piston pumping system comprising in a combination a wellhead; a lubricator having a section made of non-magnetic material superimposed on the wellhead; a production line having a bore common to that of the lubricator extending down to a producing zone; a free piston containing magnetic material disposed to travel within the bore; a spring actuated catcher disposed to catch and retain the piston in the lubricator; pneumatic pressure responsive means for overcoming spring pressure on the catcher to move it to release the free piston; an outlet line leading from the bore; a pneumatic pressure responsive valve disposed to open and close the outlet line; a normally retracted movable magnet disposed at a side of the non-magnetic section of the lubricator

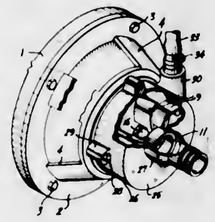
in position to be moved by attraction toward the free piston when the piston is in the lubricator; and means, comprising a valve actuated by movement of the magnet, for bleeding pneumatic pressure from the pneumatic pressure responsive means for releasing the catcher to move to free piston catching position and from the pneumatic pressure responsive valve.

3,095,820
REENTRY ROTARY FLUID PUMP
Daniel S. Sanborn, San Diego, and Joe L. Byrne, Gardena, Calif., assignors to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed Feb. 29, 1960, Ser. No. 11,514
9 Claims. (Cl. 103—96)



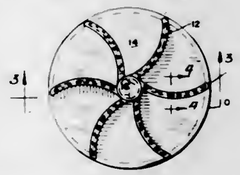
1. In a reentry rotary fluid pump: a casing; an impeller mounted for rotation in said casing; a plurality of spaced vanes disposed on said impeller at a common radius from the center of the rotational axis of said impeller, said vanes extending outwardly from said impeller; a flow passage in said casing laterally outwardly of said vanes and in communication therewith; an inlet into said casing and into said flow passage; a discharge passage from said flow passage outwardly through said casing; a sealing block in said casing outwardly of said vanes providing a seal between said inlet into said flow passage and said discharge from said flow passage; and a fluid bleed port adjacent the sealing block open through the casing to the vanes adjacent the outer portion of said flow passage for preventing recirculation of trapped fluid in the flow passage.

3,095,821
SANITARY CENTRIFUGAL PUMP
Herman Elenbaas, P.O. Box 273, Lynden, Wash.
Filed May 2, 1960, Ser. No. 26,038
1 Claim. (Cl. 103—103)



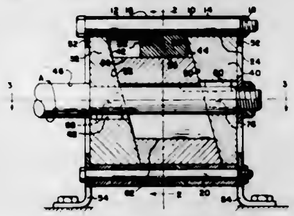
A sanitary pump comprising an impeller of molded plastic material including a circular plate, vanes projecting edgewise axially from said plate, having their radially inner ends spaced outward from the center of said plate to provide an unobstructed central cavity in the impeller and each having one edge integral with said plate, the edges of said vanes remote from said plate being free from their outer ends inward over most of their radial extent and a ring interconnecting the radially inner corners of said vanes remote from said plate, having a cylindrical outer surface and an unobstructed interior and projecting axially from the radially inner ends of said vanes away from said plate, and a casing of molded plastic material having a portion encircling said impeller, a portion having a cylindrical inner surface closely encircling and guiding the cylindrical outer surface of said ring for rotation thereof and an inlet tube communicating with the unobstructed interior of said ring and said impeller cavity.

3,095,822
PLASTIC WHEELS OR RUNNERS
Otto Kiefer, 89 Schottstrasse, Stuttgart, Germany
Filed Nov. 3, 1960, Ser. No. 67,108
Claims priority, application Germany Apr. 1, 1960
1 Claim. (Cl. 103—114)



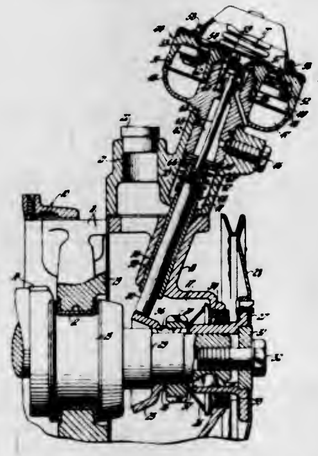
An impeller unitary in structure and composed wholly of thermoplastic material, including a base member having an integral centrally located portion forming a hub, and having integral wall members extending upwardly from said base member, said wall members converging at their tops to form a plurality of substantially V-shaped circumferentially spaced hollow vanes opening downwardly through said base member, said vanes extending from a point adjacent the periphery of said base member to said hub, and said hub extending upwardly from said base member to the vertical center of gravity of said impeller between the upper edge of said vanes and said base member.

3,095,823
POSITIVE DISPLACEMENT PUMP
Ronald S. Brand, Westford Road, Eastford, Conn.
Filed Aug. 14, 1961, Ser. No. 131,213
6 Claims. (Cl. 103—117)



1. A fluid pump comprising a housing having a cylindrical bore, a first cylindrical rotor of substantially the same diameter as said bore rotatively supported at a fixed axial position in said bore in coaxial relationship therewith and sealingly closing one end thereof, said rotor having a flat end face facing the other end of said bore and which end face is inclined relative to the common axis of said bore and said first rotor, wall means fixed relative to said housing and closing said other end of said bore, a second cylindrical rotor of smaller diameter than said bore loosely mounted in said wall means with its axis arranged eccentric to said common axis of said bore and said first rotor, said second rotor being both rotatable about and reciprocable along said eccentric axis relative to said housing and also extending beyond said wall means toward said first rotor and having an inclined flat end face which flatly engages said inclined end face of said first rotor, said inclined face of said first rotor, the surface of said housing bore, the surface of said wall means, and the outer cylindrical surface of said second rotor collectively defining an operating chamber, means for urging sad second rotor toward said first rotor so that said two inclined faces are maintained in flat engagement with each other and so that said second rotor is accordingly rotated and reciprocated relative to said housing into and out of said wall means as said first rotor is rotated, the reciprocation of said second rotor into and out of said wall means serving to cyclically vary the volume of said operating chamber, inlet means adapted for connection to a source of flud and operable to permit fluid to pass from said source to said operating chamber while the volume of the latter is increasing and to prevent fluid from passing in the reverse direction while said volume is decreasing, and outlet means adapted for connection to a receiver and operable to permit fluid to pass from said operating chamber to said receiver while said volume is decreasing and to prevent said fluid from passing in the reverse direction when said volume is increasing.

3,095,824
FUEL PUMP DRIVE
Donald B. Elfes, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 13, 1960, Ser. No. 35,678
3 Claims. (Cl. 103—152)



1. In a fuel pump drive for an internal combustion engine having an engine frame and a rotating shaft mounted in said frame and a fuel pump removably mounted on said frame, an axial passage in said frame extending from an exterior surface thereof to a position adjacent said rotating shaft, said fuel pump mounted at the exterior opening of said passage and having a reciprocating drive shaft aligned with and extending into said passage and being variably positionable by the fuel pump from a maximum stroke position to a minimum stroke position in accordance with fuel demand, the improvement comprising a cam adapted to be mounted on the engine rotating shaft, a push rod adapted to be reciprocably mounted within the lower portion of said passage and operatively engaging said cam and extending between said cam and the end of the fuel pump reciprocating drive shaft to variably reciprocate same in response to the operation of said cam according to the combined effect thereon of said fuel pump and cam, a spring supported by the walls of said passage and acting on said push rod to constantly urge same solidly against said cam, said push rod and reciprocating drive shaft being separably engageable to permit the operation of the fuel pump at a stroke less than the lift of said cam when the reciprocating drive shaft is positioned other than at maximum stroke position, a coupling secured on the end of said push rod opposite said cam and having an axially disposed cylinder therein, said cylinder being adapted to reciprocally receive the inner end of said reciprocating drive shaft for guiding same, and a non-metallic element disposed between the separably engageable ends of said push rod and reciprocating drive shaft whereby said fuel pump is provided with a fuel pump drive practically free from operational noises.

3,095,825
LOCKING MECHANISM FOR TELESCOPING MEMBERS
John W. Sandberg, 8723 Sepulveda Blvd., and Rudolf Balzer, 9131 Burnet Ave., both of Sepulveda, Calif.
Filed July 10, 1961, Ser. No. 122,995
5 Claims. (Cl. 103—153)

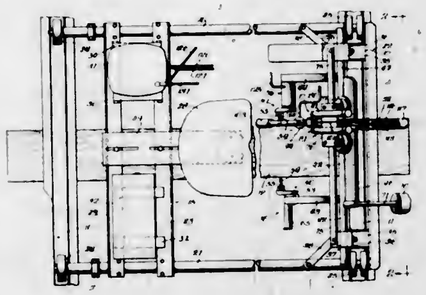


1. In a locking mechanism for a pump operative to move fluid into and out of an elongated cylinder, the combination of: a member adapted for axial and rotatable movement in the cylinder; a piston carried by and rotatable with said member, and including a plurality of radially outwardly directed cam lobes; and a resilient piston ring mounted to said piston for axial and slidable movement in the cylinder, and including a plurality of radially inwardly directed cam shoulders adjacent said cam lobes, whereby said piston ring is radially compressible for resilient slidable engagement with the walls of the cylinder, and said cam lobes are urgable radially outwardly into forcible engagement with said cam shoulders upon rotation of said member to radially expand said piston ring for locking frictional engagement with the cylinder to thereby lock said piston in any position of its stroke.

3,095,826
RAIL ANCHOR APPLICATOR
Edwin C. Swanson, Rockford, Ill., assignor, by mesne assignments, to Unit Rail Anchor Corporation, Pittsburgh, Pa., a corporation of New Jersey
Filed Nov. 15, 1957, Ser. No. 696,739
20 Claims. (Cl. 104—2)

1. An apparatus for applying a rail anchor to the base of a railroad track, comprising, a supporting framework, an anchor positioning mechanism on the framework in-

cluding means for engaging a rail anchor and urging the anchor toward a rail base thereby to hold the anchor in position against a rail base to be forced thereonto and means for moving the rail anchor longitudinally of the



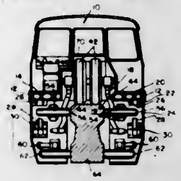
rail base against a tie, and an anchor applying mechanism on the framework including means for forcing the anchor onto the rail base while held by said positioning mechanism.

3,095,827
RAILWAY SWITCH
Lucien Chadenson, Paris, France, assignor to Safege-Transport, Société Anonyme, Paris, France
Filed June 29, 1962, Ser. No. 206,232
Claims priority, application France Mar. 1, 1962
4 Claims. (Cl. 104—130)



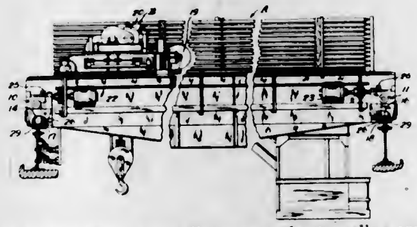
1. A switching device for railway systems in which the vehicles are equipped with carrier wheels mounted on pneumatic tires and with guide means such as wheels generally but not exclusively horizontal provided preferably with tires, mounted on the frame or on each bogie truck of the vehicle and engaging lateral guiding surfaces extending at right angles to the wheel-supporting surfaces and parallel to the longitudinal axis of the rolling surface, said device comprising a movable member adapted to pivot about a vertical axis situated at the point of crossing of the inner guiding tracks of the direct line and of the branch line, means for locking said movable member in two end positions, one end position corresponding to the passage to the direct line, the other to the branch line, said movable member consisting in turn of at least two elements in longitudinal relative alignment, the second element pivoting in relation to the first element about a vertical axis, each one of these elements being bound laterally by a plane vertical face on the side of the direct line and by a curved vertical face having a curvature corresponding to the curvature of the branch line, on the side of the branch line, and means for interconnecting these two elements whereby, in each one of the end positions in which they can be locked, which correspond to the direct line and to the branch line respectively, the outer vertical surface of the second element lies against the outer guiding track of the inoperative line, and the inner vertical surfaces of the two elements are in longitudinal alignment with each other and with the inner guiding track of the operative line.

3,095,828
MONORAIL VEHICLES
Konrad Deller, Cologne-Deutz, Germany, assignor to Alweg-Forschung G.m.b.H., Cologne, Germany, a corporation of Germany
Filed Mar. 15, 1961, Ser. No. 95,915
Claims priority, application Germany Mar. 16, 1960
3 Claims. (Cl. 105—144)



1. A monobeam vehicle assembly comprising a vehicle body, means including a downwardly facing U-shaped wheel box forming a recess in said body extending longitudinally thereof and opening at the front thereof, a U-shaped running gear frame, load carrying wheels spring-suspended on said frame, side wheels mounted on said frame, and means detachably and rigidly securing said frame to said vehicle body within said recess to dispose said frame transversely of said vehicle body and said running wheels within said wheel box whereby said frame and said wheels may be detached from said vehicle body and withdrawn as a unit through the open end of said recess.

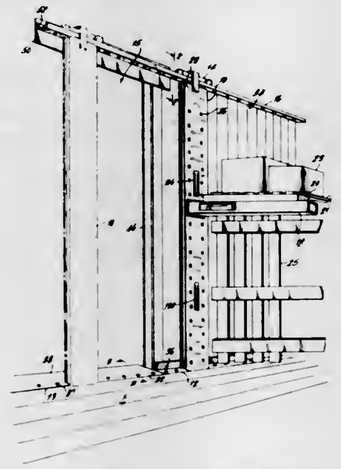
3,095,829
TRAVELING CRANE
Roy F. Dehn, Wickliffe, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Dec. 3, 1959, Ser. No. 857,067
6 Claims. (Cl. 105—163)



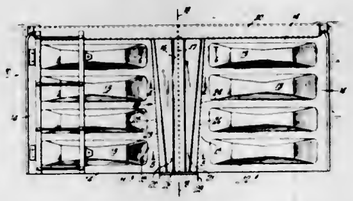
1. In an elongated generally rectangular traveling crane or the like having at each end a plurality of wheels arranged in spaced tandem relationship with respect to one another for movably supporting the crane on a runway formed by two widely spaced generally parallel rails, differentially connected power means for driving at least one of said wheels at each end of said crane for moving said crane by power along said runway, and discrete means adjacent to each of the leading corners of the crane for respectively engaging the vertical side of the rail adjacent thereto which side is farthest from the other rail when the corner of the crane adjacent to which said respective means is located leads all other corners to frictionally retard the movement of said leading corner and in turn the end of the crane of which it is a part.

3,095,830
LADING BRACING ARRANGEMENT
Gerd Runken, Cold Springs, N.Y., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed July 6, 1960, Ser. No. 41,157
4 Claims. (Cl. 105—369)

1. An apparatus for supporting lading in a railway car having side walls and an underframe, said apparatus including a track supported along the upper longitudinal edge of a side wall, a longitudinally extending support extending along the bottom of said side wall, a carriage, a pair of spaced rollers mounting said carriage on said track for longitudinal movement therealong, a load supporting post member positioned between said track and said longitudinal support, said post member including an upwardly projecting angle bracket having a portion extending above and overlying said carriage, resilient means mounted on said carriage and interposed between the overlying portion of said post angle bracket and the carriage for suspending the post out of engagement with the longitudinally extending support when the post is not under load but permitting the post to move downwardly into engagement with the longitudinal support when supporting a load, means securing said resilient means against lateral displacement, a retainer plate overlying said resilient means, means for detachably connecting the overlying portion of said post with said retainer plate, and manually actuated means mounted on said post for engaging the track and carriage to prevent relative movement of the parts.

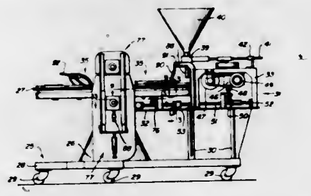


3,095,831
CAR END WALL
Norman E. Carlson, Ridgewood, N.J., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Nov. 18, 1957, Ser. No. 697,236
8 Claims. (Cl. 105—410)



1. A unitary freight car end wall structure fabricated from a plurality of smaller components and comprising, in combination, two substantially identical metal panels each having at least one uncorrugated margin, said panels abutting each other along a vertical line and each panel constituting substantially a half portion of said end wall, said end wall further comprising an approximately rectangular third metal panel overlying said vertical line and with its longitudinal axis coincident therewith, said last mentioned panel extending substantially the entire height of said other two panels and being formed with a web of substantially constant width in substantially coextensive contact with said uncorrugated margins and with a tapered vertically extending corrugation on each side of said web and overlying said margin of the respective underlying panel, a weld extending along said vertical line and integrally connecting together said two panels and said web of said rectangular third panel, and a weld extending along each longitudinal boundary of said third panel and integrally connecting the latter to the respective panel lying thereunder.

3,095,832
PIE FORMING APPARATUS
George W. Evans, 1220 S. 2nd W., Salt Lake City, Utah
Filed June 18, 1958, Ser. No. 742,858
21 Claims. (Cl. 107—1)

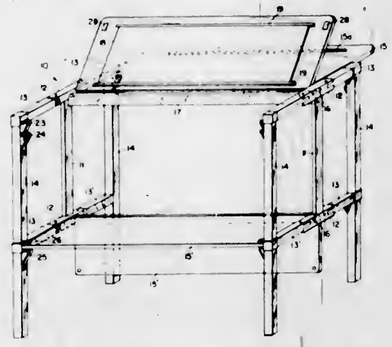


1. A machine for forming pies, comprising, in combination, frame means, hopper means for pie filling material mounted upon said frame means, measuring dispensing means mounted on said hopper means and having downwardly directed nozzle means for intermittently dispensing measured quantities of pie filling from said hopper means, an intermittently operable endless conveyor having regular alternating periods of dwell and movement, sequentially spaced mold means carried by said conveyor in a path below said nozzle means, said mold means stopping below said nozzle means during a period of dwell of said conveyor means, drive means for intermittently moving said conveyor with regular and alternating periods of dwell and movement, and brake means for accurately stopping successive mold means below said nozzle means during respective periods of dwell of said conveyor, and said drive further including means to actuate said dispensing means to periodically dispense measured quantities of pie filling into said mold means below said nozzle means.

3,095,833
CONVERTIBLE TABLES
Eugenie Peter, Spruceton, N.Y.
Filed Jan. 16, 1962, Ser. No. 168,573
1 Claim. (Cl. 108—3)

A convertible table comprising two center boards, brackets solidly secured to the ends of the latter, sections pivotally connected to said brackets, two table top leaves pivotally attached to the upper brackets, and two table leaves pivotally attached to the lower brackets, and pins for securing said connections, means for arranging said table leaves in different positions, all of said leaves having their inner edges downwardly slanting, two spacers secured to the center boards, one at the top and the other at the bottom of the latter, said spacers being tapered and adapted to cooperate with the downwardly slanting edges of the table leaves in making these form a snugly fitting surface, the upper one of said spacers has its tapered end extending upwardly, and the lower one of said spacers having its tapered end extending downwardly, a blackboard slantingly attached to a table top leaf; flat springs beneath the upper table top leaves, and flat springs be-

neath the lower table top leaves, and lists arranged near the outer edges of the table top leaves, whereby to pre-



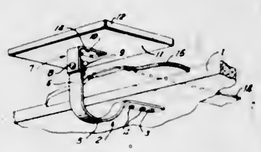
vent articles from sliding off said leaves, when the latter are adjusted into slanting positions.

3,095,834
CONVERTIBLE EASEL AND TABLE
Duncan C. Killen, 2521 Durant Ave., Berkeley, Calif.
Filed Jan. 3, 1962, Ser. No. 164,058
12 Claims. (Cl. 108—15)



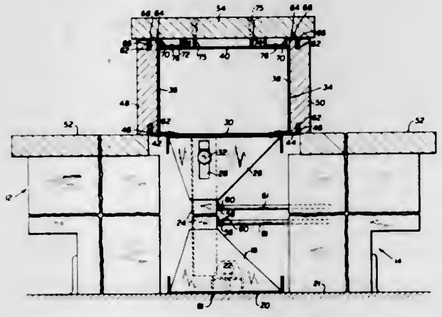
1. A convertible easel and table containing in combination (1) an easel for supporting the stretcher frame of an artist's canvas and the like, comprising a normally upright standard having a flat front face formed with an axially extending slot, a brace hingedly attached to the rear side of said standard, means for fastening said hingedly attached brace at a desired angle relative to said standard, and an elongated foot member mounted on and extending transversely across the lower end of said standard and brace; and (2) a leg assembly adapted to be secured to the normally upright standard of the easel in the slot thereof and adapted to support the normally upright standard in a substantially horizontal position, said leg assembly comprising a leg, a hinge on said leg adapted to pivotally secure the leg to the normally upright standard, locking means for holding the hinge in a fixed angular position, and a foot on said leg secured at the end opposite the hinge.

3,095,835
DRAFTING EQUIPMENT RECEPTACLE
Stacy M. Smith, 4801 Lemmon Ave., Dallas, Tex.
Filed June 20, 1961, Ser. No. 118,404
3 Claims. (Cl. 108—25)



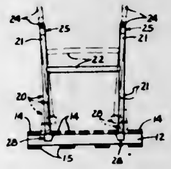
1. In a receptacle arranged for attachment to a drafting table top having a slanted surface; a bracket comprising a straight portion attachable to the underside of the table; a portion extending arcuately downwardly, outwardly and then upwardly to a point above the edge of the table top; an adjustable arm including angularly disposed legs, one said leg being vertically disposed and pivotally attached to the upwardly extending portion of the bracket, and the other said leg being substantially horizontally disposed; and a flat receptacle attached to the horizontal leg entirely at one side of the table, the major portion of said receptacle being spaced above and outwardly of the edge of the table, whereby the upper surface and edge of the table top are not obstructed by the receptacle, and the receptacle may be adjustable to horizontal position when the bracket is attached to the slanted surface.

3,095,836
CONSTRUCTIONS FOR TABLES AND LIKE STRUCTURES
John M. Liptay, Manhasset, N.Y., assignor to Laboratory Furniture Company, Inc., Mineola, N.Y., a corporation of New York
Filed Mar. 8, 1961, Ser. No. 94,367
9 Claims. (Cl. 108—48)



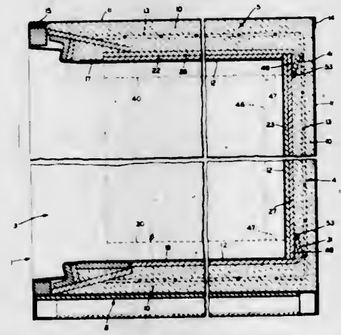
1. In a construction for table structures, a table including a top surface, a rear wall and a top ledge, said rear wall extending upwardly from the top surface and having an exposed surface, a bracket having a top and a side, said rear wall having engaging means along opposite edges thereof remote from its exposed surface, support means extending from and beyond the side of said bracket and engaging said engaging means along one of the edges of said rear wall to maintain the same against said bracket side, connecting means engaging said engaging means of said rear wall along the opposite edge thereof, and means securing said connecting means to said bracket top, said connecting means including means to support said top ledge above said bracket top.

3,095,837
PALLET TIERING FRAME
Leroy F. Skubic, Beverly Shores, Ind., assignor to The Paltier Corporation, Michigan City, Ind., a corporation of Illinois
Filed Apr. 4, 1961, Ser. No. 100,718
6 Claims. (Cl. 108—53)



1. A load carrying pallet frame for use on a supporting pallet for vertically carrying a plurality of similar pallets thereon, each pallet having longitudinal stringers and spaced deck boards secured transversely on said stringers, said frame comprising a pair of opposed frames mountable on the pallet each above a stringer thereof, said frames each including a pair of substantially vertical support posts and means permanently connecting said posts together with said posts pitched with respect to each other and stiffly resilient so that the lower ends thereof may be moved in opposition to said pitch, means on the lower end of each post for gripping a pallet stringer and for engaging a deck board including a pair of depending parallel spaced finger plates joined at their upper ends by a web, said web being of substantially the same width as the diameter of said posts and said finger plates being spaced apart a sufficient amount to snugly engage the pallet stringer, said fingers including a projection extending beneath a pallet deck board when the frame is mounted on the pallet and said fingers engage a stringer thereof.

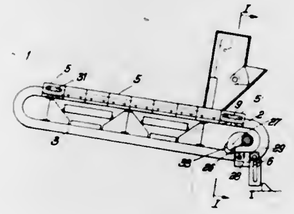
3,095,838
FORCED ENTRY RESISTANT SECURITY FILE CONSTRUCTION
Harry Paulos, Canton, and Roland G. Blauvelt, Hamilton, Ohio, assignors to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio
Filed Sept. 30, 1960, Ser. No. 59,566
9 Claims. (Cl. 109—80)



1. In an insulated security file of a type having a five-sided cabinet provided with side, rear, top and bottom insulated walls comprising inner and outer light gauge sheet metal shells and insulation material therebetween, and a plurality of drawers having insulated drawer heads removably mounted in said cabinet; the combination of a duplex-walled, forced-entry-resistant shell in the cabinet walls; the forced-entry-resistant shell including a bottom plate, inner and outer side plates forming two spaced side walls, inner and outer top plates and inner and outer back plates; the bottom plate and outer side, top and back plates being secured together as an integral structure; and the inner side, top and back plates being trapped between the integral structure and said inner shell and being unrestrained inwardly by said integral structure; whereby the duplex-walled shell resists penetration by a wedge attempted to be driven therethrough.

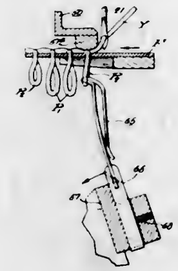
3,095,839
MOVING GRATE ASSEMBLY
Fromut Vollhardt, Gottingen, and Joachim Gevecke, Kreis Gottingen, Germany, assignors to Schmidt'sche Heissdampf-Gesellschaft, Kassel-Wilhelmshohe, Germany
Filed Oct. 4, 1961, Ser. No. 142,954
4 Claims. (Cl. 110—40)

1. In a moving grate assembly for a furnace having an endless trackway with an upper firebox reach and a lower return reach, a plurality of individual grate carriages mounted on said trackway, said carriages abutting each other in the upper firebox reach, a row of grate bars mounted in each carriage, respectively, and means for lifting a carriage from the lower return reach of the trackway into the inlet end position of the carriages on the upper firebox reach for pushing the carriages along the upper reach and thereby discharging a carriage from the exit end of the upper reach to ride inverted on said lower reach, the improvement comprising means forming an elongated slot extending parallel to said upper firebox reach in each grate bar, shaft means extending through



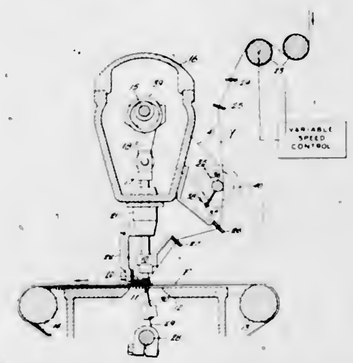
each slot in the row of grate bars for holding said grate bars in said carriage so that the grate bars slide the length of said slot on said shaft and hang vertically from said carriage when on said lower return reach, and said means for lifting a carriage into the inlet end position on the upper reach including a cam driven arm for pushing a carriage upwardly around the trackway portion at said inlet end to right said carriage on said inlet end portion, and simultaneously invert said grate bars in their position within said carriage so that the previous firebox passage upper grate bar surfaces now are the lower grate bar surfaces.

3,095,840
METHOD FOR TUFTING PILE FABRICS
Hyde W. Ballard, West Chester, Pa., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Sept. 5, 1957, Ser. No. 682,119
6 Claims. (Cl. 112—79)



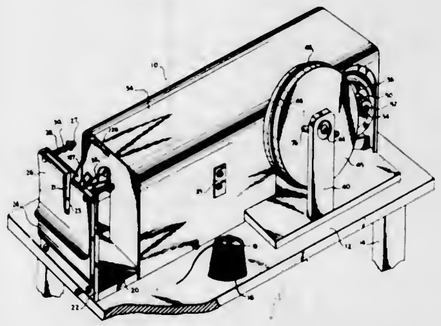
1. The method of producing a pattern tufted pile fabric which comprises the steps of inserting a transverse series of pile yarn projections through a backing fabric, varying the tension in the pile yarns forming said projections in accordance with a predetermined pattern, holding the projections on the opposite side of the backing fabric, and releasing certain of said held pile projections solely in accordance with said varying tension in the yarns without removing yarn from previously formed projections.

3,095,841
METHOD AND APPARATUS FOR PATTERN TUFTING PILE FABRICS WITHOUT LOOP ROBBING
Hyde W. Ballard, West Chester, and John E. Smith, Norristown, Pa., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Sept. 24, 1957, Ser. No. 685,968
2 Claims. (Cl. 112—79)



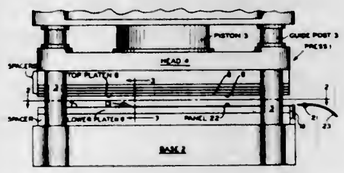
1. The method of tufting a pile fabric to provide various height pile projections in the same transverse and longitudinal rows which comprises supplying a series of yarn ends to the needles of a tufting machine under various degrees of tension, inserting all of said yarn ends to a maximum depth through a ground fabric, holding said yarn ends on the opposite side of said ground fabric, applying an additional tension increment to all of said yarn ends at approximately the point of maximum insertion, releasing selected pile projections due to said added increment of tension, and partially withdrawing said released projections through the ground fabric after maximum insertion and before maximum elevation of the needles.

3,095,842
APPARATUS AND CONTROL DEVICE FOR FORMING BELT LOOPS ON GARMENTS
Louis G. Metzger, New York, N.Y., assignor to Alfred S. Minchenberg, Winchendon, Mass.
Filed Apr. 25, 1961, Ser. No. 105,408
5 Claims. (Cl. 112—104)



1. In a machine for forming belt loops, a plunger carrying a needle axially thereon, a drive motor, a clutch cylinder secured axially on a shaft, a drive wheel freely rotatable on said shaft, said wheel having a hole, means of connection between said motor and wheel driving the wheel continuously on said shaft, an axially movable member in said cylinder engageable in the hole in said wheel rotating said cylinder, blade means disposed to retract said member from the hole in the wheel, a linkage connecting the plunger and cylinder advancing and retracting said needle while said member is engaged in said hole in the wheel, said blade means being a pair of blades operatively connected by linkage and pivotally mounted for pivoting under control of a pedal, stop members carried by said blades, and a radially projecting pin carried by said cylinder disposed to engage said stop members and hold the cylinder against rotation after said member is retracted from the hole in the wheel, with the plunger in either a forwardly extended position or in a retracted position.

3,095,843
PASSAGEWAY PANEL EXPANSION APPARATUS
Jesse B. Thomas, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Feb. 13, 1958, Ser. No. 715,108
3 Claims. (Cl. 113—44)



1. An apparatus for expanding passageway panels comprising:

A. a press having

(1) a pair of opposed platens mounted for relative movement between

(*a*) an open position, in which they are openly spaced to permit an unexpanded panel to be interposed between them and operatively located in a predetermined expansion position, and

(*b*) a closed position, in which they are closed upon said interposed and operatively located panel to clamp it in said predetermined expansion position, and

(2) a front end through which an unexpanded panel is inserted and moved longitudinally rearward between said open platens,

(3) one of said platens having

(*a*) a holding pressure cavity into which the adjacent side of said interposed and operatively located panel is to be expanded, and

(*b*) a continuous groove encircling said cavity;

B. panel positioning means located along one longitudinally extending side edge of said predetermined position and mounted on one platen for movement, when said platens are open, between

(1) a retracted position, along one platen-face side of said open space between open platens, and

(2) a projecting position, in which said positioning means projects into the said open space besaid open platens and is operative,

(*a*) when engaged by the rear edge of the panel during its longitudinally rearward insertion movement between open platens, to be retracted sufficiently to allow further rearward movement of said panel, and

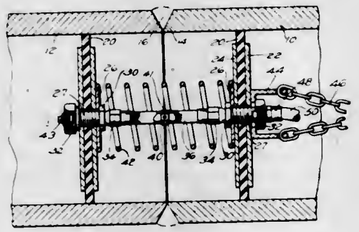
(*b*) when engaged by the side edge of the panel, to align it longitudinally with said predetermined expansion position; and

C. a resilient sealing strip extending lengthwise along said groove and widthwise across said groove,

(1) said strip being anchored in said groove to project heightwise in a direction proceeding outwardly away from said one platen and toward the other platen sufficiently to insure, upon the closure of said platens, compressive sealing contact between the outermost face of said strip and said interposed operatively located unexpanded panel,

(2) said strip having on its outermost face at least two laterally spaced saw tooth ribs extending longitudinally along the length of the strip.

3,095,844
INERT GAS SEALER
Helmut J. Thielsch, Cranston, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed July 24, 1958, Ser. No. 750,718
1 Claim. (Cl. 113—111)



An inert gas sealing device for enclosing and substantially sealing adjacent interior portions of two abutting pipe ends during a welding operation on said pipe ends, said device comprising:

A. two spaced, normally parallel and normally coaxial disc assemblies, each assembly comprising:

(1) two thin flat circular metal plates spaced from each other in parallel relationship,

(2) one thin flat circular elastomer disc of larger diameter than said metal plates sandwiched between said plates,

(3) a threaded ferrule element through the center of each of said assemblies securing each assembly together in firm relation,

(*a*) one ferrule being open therethrough, and the other ferrule having a plug therein,

B. a flexible, apertured, hollow metal mesh tube extending between the disc assemblies coincident with their axes and having each end fastened to one of said ferrules,

(1) one end of said tube communicating through the open ferrule with a gas inlet tube on the side of the disc assembly opposite to the side having the mesh tube,

(2) the other end of said mesh tube being fastened to the ferrule with the plug therein,

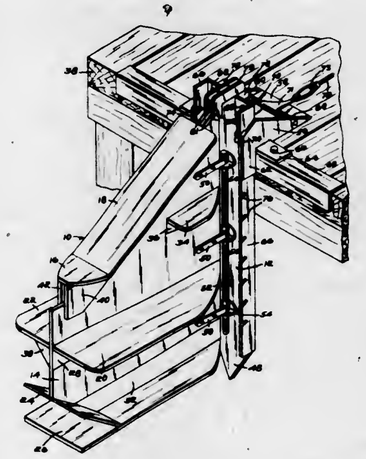
C. a helical coil spring located between said disc assemblies and coaxial therewith about said metal mesh tube,

(1) said spring having a free length greater than the distance between said disc assemblies, whereby said spring is always under compression and causes said assemblies to constantly seek a parallel relationship and to maintain a desired separation to the extent prescribed by the length of the metal mesh tube,

D. means for retaining said spring in said location, and

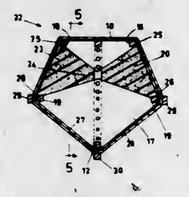
E. a plurality of chains each having one end joined to the outside of the disc assembly containing the open ferrule for pulling said device to and from its desired position.

3,095,845
LAUNCHING DEVICE FOR WATER SKIERS
William O. Dawson, 8 Wheelwright Ave., Exeter, N.H., and Roland K. Fraser, Christian Hill Road, Amherst, N.H.
Filed July 28, 1960, Ser. No. 45,899
12 Claims. (Cl. 114—43.5)



1. A launching device for water skiers which comprises a supporting post, a partly submerged body member, a seat and back rest on the upper portion of said body member adapted to be occupied by a skier prior to being launched, and means on the lower front portion of said body member for holding the rear ends of the water skis beneath the surface of the water with the forward ends extending upwardly in an inclined direction to a point above the said surface.

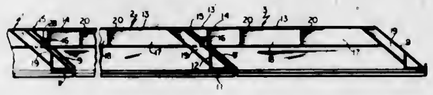
3,095,846
AIRCRAFT FLOAT
Thomas R. Beamish, Streetsville, Ontario, Canada (% Canadian Research and Development Foundation, 1434 Queen St. W., Toronto 3, Ontario, Canada)
Filed July 19, 1961, Ser. No. 125,137
3 Claims. (Cl. 114—66.5)



1. An aircraft float including a beam assembly having an upper longitudinal member and a keel strip in vertical, spaced apart alignment; a plurality of former assemblies attached to said beam assembly and extending outwardly therefrom substantially at right angles thereto; a plurality of shear strakes and inner chine strips attached to said former assemblies; a block of cellular foam material occupying the space defined by said upper member, said keel strip, said shear strakes and said chine strips; water tight covering means closely enveloping said block, said upper member, said keel strip, said shear strakes and said chine strips and adhesively attached thereto; each said former assembly including an upper cantilevered

plate and a lower cantilevered plate symmetrically disposed about said beam assembly; said upper cantilevered plate being substantially triangular and having two oppositely located corners cut away to accommodate said shear strakes; said lower cantilevered plate being substantially quadrilateral and having two diagonally opposite corners cut away to accommodate said inner chine strips.

3,095,847
COVERS FOR CLOSING OPEN SPACES SUCH AS SHIPHOLDS, RAILWAY CARS AND THE LIKE
Yuko Itoh, Tokyo, Japan, assignor to International Mac Gregor Organization (I.M.G.O.), Monte Carlo, Monaco
Filed June 5, 1961, Ser. No. 114,808
Claims priority, application France Sept. 30, 1960
5 Claims. (Cl. 114—202)



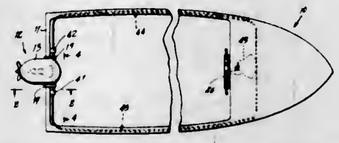
1. A cover device for closing apertures such as hatchways in ships' decks and like openings in rolling vehicles and buildings, comprising a plurality of separate rolling cover panel sections adapted to be horizontally aligned in a row in their aperture closing position and to be tilted and stowed vertically in an up-ended position in mutually nested relationship within a space adjacent said aperture when this latter is open, each panel section having a hollow box-like shape which is open at the bottom face and closed at the top and on at least three side faces thereof and comprising strong longitudinal beam means of sturdy structure constituting at least one lateral end wall of said panel section extending substantially the greatest dimension thereof and sloping downwards from said top face and outwards of said box-like shape to afford an interfitting engagement with adjacent panel sections in their stowed vertical position, one flat relatively light metal sheet formed by at least one plate constituting said top face and secured to said beam means, straight reinforcing elements secured to and beneath said plate and to said beam means to enable said top face to carry heavy loads in the closing position of said panel sections, said elements being substantially of less height than said beam means and said elements located transversely to said beam means being each one provided at their ends with a slant extension member connected and substantially conforming to the entire web height of said beam means to form part thereof and sealing bearing means provided on both lateral opposite end faces of said panel section adapted to cooperate in overlapping engagement with corresponding sealing bearing means secured to the adjacent ends of adjoining panel sections in their closing position to provide therebetween continuous fluid-tight joints, whereby the end part of one panel section is adapted to rest upon the adjacent end part of the adjoining panel section and said top plates are on a level with one another.

3,095,848
BOAT MOORING APPARATUS AND BOARDING RAMP THEREFOR
Adolph A. Dick, 1788 SW. 8th St., Miami, Fla.
Filed Dec. 27, 1961, Ser. No. 162,494
10 Claims. (Cl. 114—230)

1. A boat mooring apparatus and boarding ramp therefor comprising a main frame having opposite ends and upper and lower sides, mounting means adapted to be secured to a mooring structure and having one end of said main frame pivotally secured thereto for movement about a horizontally disposed transversely extending axis, mooring means carried by the other end of said frame adapted to be swivelly secured to a boat, said main frame being longitudinally extendible and including means resiliently urging said main frame to an intermediate position between extended and retracted positions, a boarding ramp, means securing said boarding ramp to the upper side of said main frame, a stair assembly, means securing one side of said stair assembly to the upper surface of said boarding ramp for swinging movement about an axis extending along one side of said boarding ramp.



3,095,849
STEERING APPARATUS FOR OUTBOARD MOTORS
Theodore R. Breunich, Stamford, Conn., assignor to Controlex Corporation of America, White Plains, N.Y., a corporation of New York
Filed July 27, 1961, Ser. No. 127,399
12 Claims. (Cl. 115—18)



1. Steering apparatus for remotely controlling the steering of an outboard motor comprising, in combination, a motor unit, means supporting said motor unit for rotational movement about a steering axis, said motor unit including a post whose longitudinal axis coincides with said steering axis, and said supporting means comprising a hanger bracket provided with a bearing for rotatably supporting said post for rotational movement about the longitudinal axis thereof, means hingedly connecting said supporting means to a boat to enable said supporting means and said motor unit to be moved about a tilting axis, a rigid steering lever in the form of a quadrant fixed to said post so as to be rotatable with said motor about said steering axis, said quadrant extending from said post to said tilting axis and having an outer arcuate end substantially tangential to said tilting axis and connected at the tilting axis for pivotal movement with said motor about said tilting axis, and movable means coacting with the arcuate end of said quadrant and operable to rotate said quadrant, said post and said motor about said steering axis regardless of the disposition of said quadrant relative to said tilting axis.

3,095,850
FOOT OPERATED BOAT PADDLE
Forrest L. Stolzer, 2900 W. 7th St., Little Rock, Ark.
Filed Apr. 27, 1961, Ser. No. 106,019
2 Claims. (Cl. 115—25)

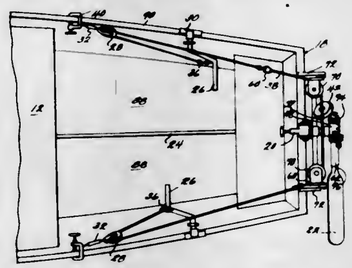
2. A paddle actuating assembly supported upon a boat comprising:

(A) a vertically inclinable bracket, including slip joint means, mounted upon an end of said boat;

(B) a paddle pivot attached to said bracket, said paddle pivot including a paddle shaft encompassing sleeve pivotable from side to side in said bracket;

(C) a paddle of the type having a lower blade and an upper shaft extending into and secured in said sleeve, said blade being parallel to the keel of said boat and being actuable with said sleeve from side to side perpendicularly of said keel;

(D) a cable bearing assembly supported upon the top

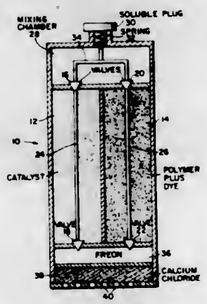


of said sleeve, including an annular bearing mounted upon a pivoted lever and a cable anchor pivoted on top of said sleeve;

(E) opposed cable means extending through said bearing assembly, and connected to said anchor, each of said cable means being reciprocable through bearing members mounted on said boat; and

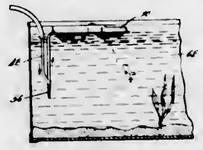
(F) a paddle longitudinal tensioning spring interconnecting said pivoted lever and said sleeve.

3,095,851
WATER MARKING DEVICE
Samuel E. Lager, P.O. Box 385, Somis, Calif.
Filed Nov. 27, 1961, Ser. No. 155,218
11 Claims. (Cl. 116—124)
(Granted under Title 35, U.S. Code (1952), sec. 266)



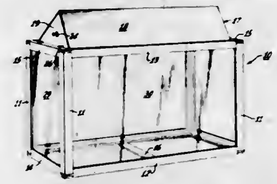
1. A device for marking the location of an object in a body of water, said device being adapted for entry into said body of water in the vicinity of the object the location of which is to be marked thereby, said device comprising an elongated container having a pair of laterally-adjacent compartments extending longitudinally of said container for less than the entire length thereof, one of said compartments being filled with an insoluble polymer to which has been added a coloring material, the other of said compartments being filled with a fluid catalyst, said device further comprising a mixing chamber located at one longitudinal extremity thereof so as to border upon both of said compartments, a soluble plug closing an exterior opening in said mixing chamber, means operating upon a dissolution of said plug following entry of said device into a body of water for opening said mixing chamber to the respective fluids contained in said two compartments, and means for propelling such respective fluids into said mixing chamber where they combine to form a marking substance, said propelling means further acting to force the marking substance so formed through the exterior opening in said mixing chamber formerly closed by said plug.

3,095,852
FISH FEEDER
Marvin Goldman, Brooklyn, N.Y., assignor to Gro-wel Fish-Ade Co., Inc., a corporation of New York
Filed Sept. 8, 1961, Ser. No. 136,756
5 Claims. (Cl. 119—3)



1. In a device for feeding fish in an aquarium, the combination comprising, a substantially dish form reservoir, a trough leading from the exterior of the device into said reservoir, a strainer portion including an opening at the bottom thereof communicating with the aquarium, a strainer supported in said opening, an intermediate wall separating said reservoir and strainer portion, passageway means communicating between said reservoir and strainer portion, and means on said device for supporting the same on the aquarium.

3,095,853
AQUARIUM STRUCTURAL UNIT
Frank M. Stout, 384 St. Francis Blvd., Daly City, Calif.
Filed July 21, 1961, Ser. No. 125,838
7 Claims. (Cl. 119—5)



1. In an aquarium:

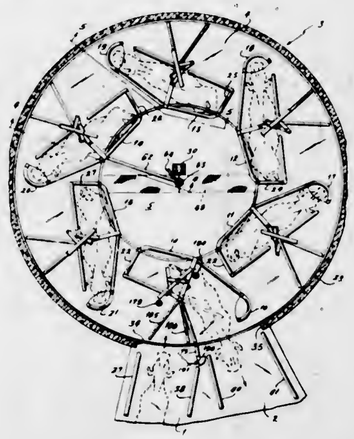
(*a*) a tank structure having generally upright sides and a bottom whereby to form an enclosure for holding water, said upright sides terminating in upper edges;

(*b*) a cover supported thereover in close proximity to said tank, said cover having edges substantially conforming to the figure defined by said upper edges of said sides, an edge of said cover being spaced inwardly from the corresponding tank side edge, the space so formed constituting a first ventilating air passageway, said cover further including a single second ventilating passageway therethrough spaced a substantial distance from the aforementioned first ventilating passageway.

3,095,854
MOVABLE ANIMAL RESTRAINING PLATFORM FOR MILKING STATION
Delmar H. Bott, Godfrey, and Marvin O. Bott, Brighton, Ill.
Filed Apr. 19, 1961, Ser. No. 104,158
8 Claims. (Cl. 119—14.04)

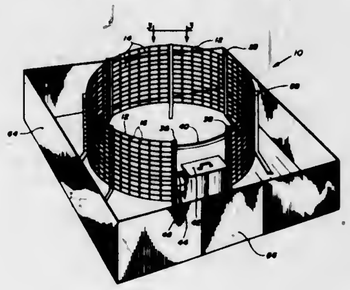
1. Milking apparatus for dairy cows and the like comprising an endless movable platform means, means as-

sociated with said platform means for moving the same in an orbital path, said platform having an inner and an outer periphery, a plurality of cow confining means arranged along said platform, each confining means having a front end and a rear end, said rear end of each con-



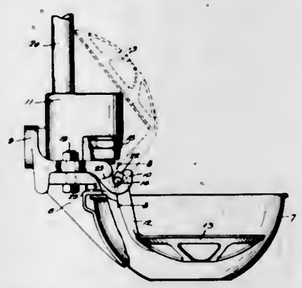
fining means being located adjacent the inner periphery of said platform, connections for milking equipment located adjacent the inner periphery of said platform, and adit and exit means located adjacent the outer periphery of said platform.

3,095,855
PREFABRICATED WIRE PANEL ENCLOSURE
Harold C. Mead, Charles City, Iowa, assignor to Walsh Manufacturing Company, Charles City, Iowa, a corporation of Iowa
Filed Jan. 5, 1961, Ser. No. 80,864
6 Claims. (Cl. 119—20)



1. A nursing pen, comprising a generally circular lateral enclosure, and a multiplicity of ground engaging members supporting said enclosure in spaced relation to the ground for a distance sufficient to provide access for young animals to and from the area encompassed by said enclosure while confining an adult animal within the interior of said enclosure, the circumference of the curve formed by the lower ends of said ground engaging members being sufficiently greater than the corresponding curve formed by the upper edge of said enclosure to provide a protected area at ground level sufficient to prevent the crushing of a young animal when the latter is caught between one of said ground engaging members and the reclining body of the adult animal.

3,095,856
ANIMAL WATERING FOUNTAIN
George D. Prentice, Milwaukee, Wis., assignor to A. F. Klinzing Co., Inc., a corporation of Wisconsin
Filed Sept. 18, 1961, Ser. No. 138,726
4 Claims. (Cl. 119—75)



1. In a self-serving animal drinking fountain, a stationary support having a pair of laterally spaced lugs projecting outwardly therefrom and terminating in upwardly open sockets, each of said lugs having a camming surface adjoining and spaced inwardly of its socket, a liquid confining bowl attached to said support below said lugs and the sockets thereof, a liquid supply valve carried by said support and having an actuating stem directed toward the interior of said bowl between said lugs, and a valve actuating lever having a nose contacting plate movable within said bowl and an end projection engageable with said valve stem and being provided with suspension pivots normally disposed within said sockets, said lever having a cam formed thereon adjacent to each of said pivots remote from said sockets and out of contact with said camming surfaces when said lever is in normal position with the nose contact plate thereof disposed within said bowl, said cams being movable into contact with said camming surfaces when said nose plate is swung out of said bowl to thereby prevent displacement of said lever and its pivots from said sockets except upon lateral tilting thereof.

3,095,857
LEASH
Stanton E. Fisher, 706 Lantern, St. Louis, 3, Mo.
Filed July 17, 1961, Ser. No. 124,707
1 Claim. (Cl. 119—109)

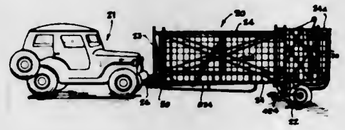


A flat ribbon-like leash of planar spiral configuration having one edge thereof of greater length than the length of the other edge, each of said edges being of a fixed length relative to each other, whereby said leash is converted to a three dimensional spiral configuration when the leash is extended.

3,095,858
VEHICLE MOUNTED ANIMAL CATCHING DEVICE
Oscar E. Bauer, Long Lake Rte., Alliance, Nebr.
Filed June 14, 1961, Ser. No. 117,056
3 Claims. (Cl. 119—151)

1. In an animal catching device, a pen adapted to surround and enclose range animals such as cattle, sheep and the like while the animal remains in standing or running position on the ground and said pen having

fence-like rear wall and side walls with the side walls pivoted on vertical axes at opposite ends of the rear wall for pivotal movement from open positions wherein the side walls diverge substantially with respect to each other to closed positions wherein the side and rear walls form



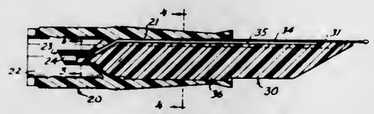
a fully enclosed area in which an animal may be confined, means on said rear wall for pivotally supporting the rear wall on and across the forward end of an automotive vehicle, and means mounted in part on said pen and operable by a driver in such a vehicle for shifting said side wall between open and closed positions.

3,095,859
WRITING INSTRUMENT
Morris Levy, Teaneck, N.J., assignor to David Kahn, Inc., Township of North Bergen, N.J., a corporation of New Jersey
Filed Aug. 15, 1958, Ser. No. 755,311
14 Claims. (Cl. 120—42.03)



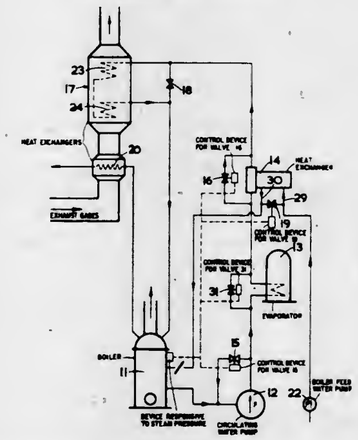
1. An ink cartridge comprising an elongated organic plastic tube having a ball point writing tip at one end thereof, said tube having an intermediate portion including a seat for a retract spring, said seat comprising at least one lateral projection of plastic material integral with said tube, said projection defining a plane substantially parallel to the axis of said tube, said projection comprising said material laterally displaced from the wall of the intermediate portion of said tube.

3,095,860
CARTRIDGE FOUNTAIN PEN
Frederick J. Ransom and Charles K. Lovejoy, Atlanta, Ga., assignors to Scripto, Inc., a corporation of Georgia
Filed May 1, 1962, Ser. No. 191,519
2 Claims. (Cl. 120—45.4)



1. In a cartridge fountain pen having a barrel, a feed section at the forward end of said barrel and in axial alignment therewith, piercing means having a bore therein carried by said feed section, said piercing means being so disposed to pierce an ink cartridge when carried within said barrel, a feed bar carried by said feed section, and a point mounted axially contiguous with said feed bar, the combination therewith of a first plurality of ink feed grooves formed on the upper surface of said feed bar extending rearwardly the full length of said feed bar and adapted to conduct ink by capillary action, an air channel overlying said feed grooves and adapted to allow air to enter the reservoir, a second plurality of ink feed grooves formed within the bore of said piercing means, said second plurality of ink feed grooves extending for a portion of their length in adjacent, parallel, overlapping relationship with a portion of the length of said first plurality of ink feed grooves, the arrangement being such that ink from said ink cartridge is conducted through one of said second plurality of ink feed grooves in said piercing means, and is transferred laterally to enter one of said first plurality of grooves for feeding to the point, the capillarity and ink storage capacity of said first plurality of ink feed grooves being greater than said second plurality of said ink feed grooves, and said bore of said piercing means having an area greater than said air channel of said feed bar to facilitate ingress of air within the closed system, the air-ink counter-flow metering action being controlled by the overlapping arrangement of said first and second plurality of ink feed grooves.

3,095,861
METHOD AND APPARATUS FOR EXTRACTING HEAT FROM THE HOT EXHAUST GASES OF INTERNAL COMBUSTION ENGINES
Alan Norris, Britannic House, Finsbury Circus, London E.C. 2, England
Filed Nov. 9, 1959, Ser. No. 851,607
Claims priority, application Great Britain Nov. 10, 1958
8 Claims. (Cl. 122—7)



1. Apparatus for extracting heat from the hot exhaust gases produced by an internal combustion engine comprising:

a boiler having means for removing steam at a high temperature therefrom;

cooling means having indirect heat exchange means for transferring useful heat from one fluid to another;

a heat exchanger including means for forwarding hot exhaust gases therethrough and means for forwarding water therethrough in indirect heat exchange relationship with said exhaust gases so that the heat content of said water is increased;

conduits connecting said boiler, said cooling means and said heat exchanger to provide a closed circuit for circulating water from said boiler through said circuit with said water passing through said cooling means before it passes through said heat exchanger so that heat is transferred from said water to another fluid in said cooling means;

means for continuously circulating water through said closed circuit;

a bypass circuit connected in parallel with said cooling means and valve means in said bypass circuit for controlling the amount of water circulating through said bypass circuit whereby the amount of cooling of the circulating water by said cooling means can be controlled.

3,095,862
SCALE REMOVAL
Roland A. Berner, Tinley Park, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 21, 1960, Ser. No. 16,143
4 Claims. (Cl. 122—379)

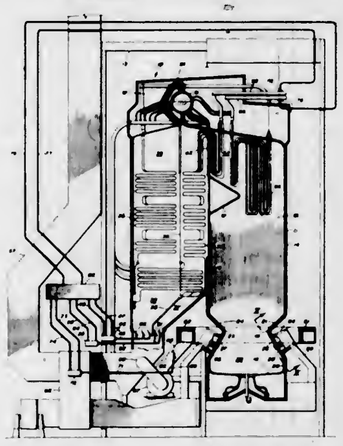
3. The method of removing carbonate scale from a boiler when said boiler is operating which consists essentially of the steps:

(*a*) Adding to water in a boiler from 0.05% to 2.0% by weight of a composition comprising an alkali metal salt of a hydroxy substituted carboxylic acid, selected from the group consisting of malic, malonic, tartaric, citric, gluconic, lactic, and salicylic, the calcium salt of said acid being soluble in water at 20° C. to the extent of at least 500 parts per million, and said acid having a dissociation constant of from 2×10^{-3}, to 1×10^{-5}, an organic sludge conditioning agent of large molecular dimensions and a polyoxyalkylene glycol having an average molecular weight of at least 1,000 with the weight ratio of the salt to the sludge conditioner being within the range of 2:1 to 1:2 and with the weight ratio of the sludge conditioner to said glycol compound being within the range of 300:1 to 2:1;

(*b*) Continuing normal operation of said boiler until the carbonate scale has been loosened and dispersed and;

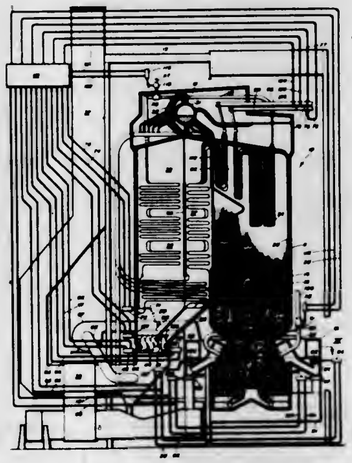
(*c*) Blowing down said boiler.

3,095,863
STEAM GENERATING UNIT
George Parmakian, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 14, 1961, Ser. No. 95,675
3 Claims. (Cl. 122—479)



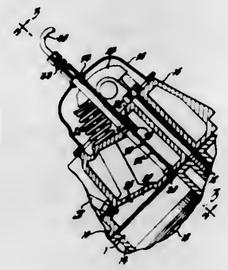
2. Apparatus for controlling superheat in a steam generating unit, comprising walls defining a vertically-elongated furnace, a back pass through which the products of combustion travel after they leave the furnace, abutments on opposed walls, each abutment having inclined upper and lower surfaces intersecting inwardly of the furnace walls to form a restriction in the furnace, the furnace being provided with a slagging bottom, directional flame burners having downwardly inclined vanes located on the said lower inclined surfaces of the abutments, a series of openings into the furnace located on the lower surfaces of the abutments between the burners, the openings having upwardly inclined vanes, a first conduit connected at one end to the openings, a fan whose outlet is connected to the other end of the conduit, a second conduit connecting the inlet of the fan to the said back pass, means for regulating gas flow to the openings, the gas flowing from the openings in a direction generally parallel to the said lower surfaces of the abutments to provide protective blankets over the surfaces of the abutments, a convection superheater located downstream of the said openings, an indicator associated with the superheater producing a signal representative of the degree of superheat, an actuator for determining the setting of the said means, and control means receiving the signals from the indicator and transmitting a signal to the actuator to maintain the degree of superheat at a selected predetermined value, means for regulating gas flow increasing and decreasing the flow of gas through the first conduit to the openings to increase and decrease, respectively, the heat transfer to the superheater to maintain the superheat at a predetermined value.

3,095,864
STEAM GENERATING UNIT
Earle C. Miller, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 16, 1961, Ser. No. 96,241
5 Claims. (Cl. 122—479)



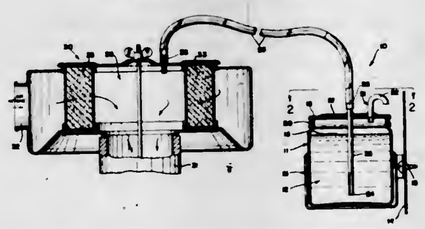
1. Apparatus for controlling superheat in a steam generating unit, comprising walls defining a furnace, a back pass through which the products of combustion travel after leaving the furnace, an abutment on one wall forming a restriction in the furnace, a cell containing burner openings located on the lower surface of the abutments, a first conduit connected at one end to certain of the burner openings, a fan whose outlet is connected to the other end of the conduit, a second conduit connecting the inlet of the fan to the said back pass, fuel and air mixture means connected to the burner openings, a valve located in the first conduit for regulating gas flow therethrough, a valve associated with the fuel and air mixture means for regulating the flow thereof through the burner openings, a convection superheater located downstream of the said openings, an indicator associated with the said convection superheater producing a signal proportional to the degree of superheat, actuators for determining the setting of the valves, control means receiving the signal from the indicator and transmitting a signal to the actuator to maintain the degree of superheat at a selected predetermined value, the valves opening and closing to permit flow of either gas alone or mixture alone through the certain of the burner openings to maintain the temperature of superheat at a predetermined value.

3,095,865
INTER-CYLINDER COMBUSTION CONTROL SYSTEM FOR AN INTERNAL COMBUSTION ENGINE
Craig Marks, Birmingham, and Floyd A. Wyczalek, Grosse Pointe Woods, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,894
15 Claims. (Cl. 123—55)



1. In an internal combustion engine having a plurality of expansible combustion chambers having sequentially phased compressive and expansive cycle portions and having means for sequentially charging, firing and exhausting said combustion chambers, passage means connecting each of said combustion chambers in series to a combustion chamber firing immediately therebefore and to a combustion chamber firing immediately thereafter, pressure operated injector valve means associated with the passage means leading to each of said combustion chambers and operable to inject a combustion gas pressure impulse into its respective combustion chamber from the combustion chamber firing immediately therebefore, said valve means including a valve member subjected to the differential pressures occurring within its associated combustion chamber and passage means and spring means normally biasing said valve member to a closed position, said valve member being pressure actuated to an opened gas impulse injecting position in opposition to said spring means whenever the differential pressures applied thereto exceeds the biasing action of said spring means, and each of said passage means being of an acoustical length and restriction to time the pressure impulse opening of its associated injector valve member during the compressive cycle portion of its associated combustion chamber and immediately prior to the firing of the combustible charge therein.

3,095,866
CARBURETOR AIR FILTER DETECTING DEVICE
Henry E. Dionne, 22 Hilton Road, Mount Holly, N.J.
Filed July 25, 1960, Ser. No. 45,212
5 Claims. (Cl. 123—196)



1. In combination with an engine having an air induction passage and a filter unit having a central cavity connected to said passage through which air flows to said engine, an air filter detection device comprising, a liquid lubricant containing reservoir, and conduit means communicating between said reservoir and said central cavity, said reservoir positioned below the communicative connection of said conduit to said central cavity in order that said conduit means will draw said lubricant from said reservoir into said passage in response to the partial vacuum within said central passage when there is a restriction of air flow through said filter unit.

3,095,867
MISSILE PROJECTOR
Paul C. Kiyuna, Honolulu, Hawaii, assignor to Paul's of Hawaii, Inc., Honolulu, Hawaii, a corporation of Hawaii
Filed July 5, 1960, Ser. No. 40,747
3 Claims. (Cl. 124—5)

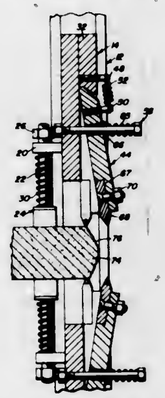


1. In combination: a missile projector comprising a whip-like member including a freely flexible lash, a whipstock on one end of the lash forming a continuation thereof and a cylindrical gripper on the other end; and a missile having a cylindrical projection, one of said cylindrical members being hollow and telescopically and frictionally engaging the other cylindrical member, said cylindrical members being the sole means holding said missile on said projector.

3,095,868
STONE FACING MACHINE CUTTER HEAD
Elmer F. Mangis, Gossett Road, Frankfort, Ind.
Filed May 24, 1961, Ser. No. 112,357
13 Claims. (Cl. 125—23)

13. A stone facing machine comprising a frame, a pair of cutter heads mounted on said frame for reciprocal movement toward and away from each other and adapted to receive a stone to be faced therebetween, at least one knife on each cutter head for cutting action movement therewith into engagement with opposite sides of said stone and cooperating as a pair of knives having opposing cutting edges, said heads also including opposing and yieldable holddown means spaced closer together than the

corresponding cutting edges whereby a stone disposed between said cutter heads will first be engaged by said hold-



down shoes and then by said blades as said cutter heads move toward each other.

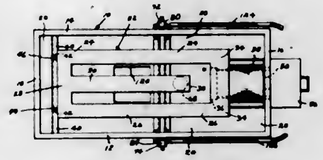
3,095,869
PICNIC GRIDDLE
Henry F. Swenson, 22 Holmhill Lane, Roseland, N.J.
Filed Apr. 3, 1961, Ser. No. 100,446
2 Claims. (Cl. 126—25)



1. A portable picnic griddle comprising; a supporting rod, a lower grill having the middle of its inner and outer edges attached to an opposed end portion of said rod, an upper grill having an inner and outer edge, a plurality of elongated horizontally spaced connecting links, said outer edges of said upper and lower grills pivotally connected respectively to opposite ends of said links, an extension on the inner end of said supporting rod, a spring clamping member wrapped about and frictionally slidable on said extension, the ends of said spring clamping member being adapted to extend outwardly from each side of the extension and having hook-shaped ends spaced to engage the opposite ends of the inner edge of said upper grill whereby the space between the grills may be altered, whereby the two grills may be clamped in parallel relation at different vertical distances apart, said clamping member being adapted to have sufficient force to hold the upper grill frame closed against the contents of the grill.

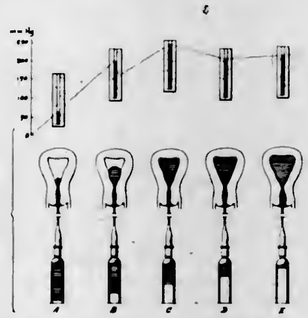
3,095,870
PORTABLE FURNACE FOR THAWING EARTH AND THE LIKE
Chester W. Sharkey, 2025 Anderson Road, Duluth, Minn.
Filed Sept. 14, 1961, Ser. No. 138,029
2 Claims. (Cl. 126—271.2)

1. In a portable furnace for heating earth and the like, a body member having a top, side walls, end walls and open at the bottom, a pair of spaced longitudinally extending outer heat conduits positioned within said body member, a rear transverse heat conduit connecting the rear ends of said outer longitudinal heat conduits, a front transverse heat conduit connecting the front ends of said outer longitudinal heat conduits, a central heat conduit connected to said rear conduit and extending between said pair of longitudinal conduits, a vent pipe extending from said central heat conduit, means for supplying heat to said front transverse heat conduit for travel throughout the remaining heat conduits and out said vent



pipe, wheel means connected to said body member, and means for raising and lowering said body member relative to said wheel means.

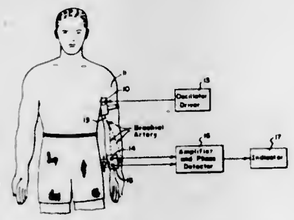
3,095,871
METHOD FOR DETERMINING THE CONDITION OF THE UTERINE ISTHMUS
Edward C. Mann, 445 E. 68th St., New York, N.Y., and William D. McLarn, The Glen, Locust Valley, N.Y.
Filed Jan. 26, 1960, Ser. No. 1,931
1 Claim. (Cl. 128—2)



A method for diagnosing the condition of the uterine isthmus which comprises, providing an expandable unit adapted for primary expansion to a critical pressure and secondary expansion beyond said critical pressure, inserting said expandable unit into the cervical canal, uterine isthmus and the cavity of the corpus of the uterus, introducing a radiopaque fluid into said expandable unit whereby it is subjected to a primary expansion and occupies the corpus of the uterus, continuing the introduction of said liquid beyond a critical pressure whereby a secondary expansion of said expandable unit is caused to take place and occupies and outlines the uterine isthmus and cervical canal, and taking an X-ray film of the uterus, uterine isthmus and cervical canal while said expandable unit is in position within said uterus, uterine isthmus and cervical canal and is under condition of primary and secondary expansion.

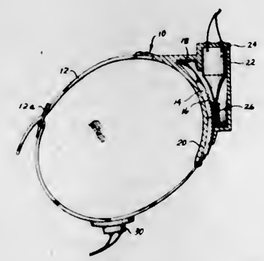
3,095,872
BLOOD PRESSURE MEASUREMENT
Walter E. Tolles, Oyster Bay, N.Y., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,699
9 Claims. (Cl. 128—2.05)

1. Apparatus for continuously measuring arterial blood pressure which comprises transmitting transducer means and driving source for externally impressing an alternating substantially symmetrical continuous-wave pressure variation on the arterial blood stream at a frequency substantially higher than the frequency of heart contraction and with an amplitude which is substantially smaller than the normal arterial blood pressures, whereby the impressed continuous-wave pressure variation is phase-modulated in accordance with the arterial blood pressure over the heart beat cycle as the continuous-wave pressure variation travels along the artery, receiver transducer means externally positioned over the arterial blood stream and



spaced from the transmitting transducer means and responsive to said phase-modulated continuous-wave pressure variation to yield an output corresponding thereto, and detecting means insensitive to amplitude variations for detecting the phase-modulation of the output of the receiver transducer means.

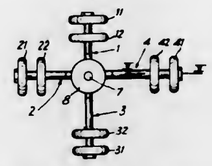
3,095,873
MECHANICALLY DRIVEN ELECTRICAL RECORDING SPHYGMOMANOMETER
Arthur B. Edmunds, Jr., Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Mar. 27, 1961, Ser. No. 98,567
7 Claims. (Cl. 128—2.05)



1. Sphygmomanometric apparatus comprising an occlusion cuff device adapted to extend around a body member and having opposite end portions, and means to slacken said cuff progressively through the relative systolic and diastolic points of the body member arteries, said slackening means comprising an electric motor and an associated drive connection movable by operation of said motor, said motor and drive connection being mounted on said cuff device and operatively interconnecting said end portions to move them progressively apart, and energizing circuit means connected to said motor, including switch means operable to control application of energizing voltage to the motor.

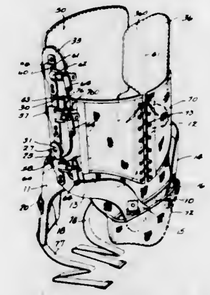
3,095,874
ROTARY MASSAGING APPARATUS
Israel Jean Frajdenrajch, 21 Rue St.-Rome, Toulouse, Haute-Garonne, France
Filed June 19, 1961, Ser. No. 117,884
Claims priority, application France June 25, 1960
6 Claims. (Cl. 128—57)

1. A massaging apparatus comprising a hub, a plurality of substantially radial arms rigid with said hub, means rotatably driving said hub, and a plurality of massage wheels carried by each of said arms at predetermined distances from the point of attachment of said arm on said hub, the distance between the wheel nearest the center of the hub on each arm and said center increasing uniformly



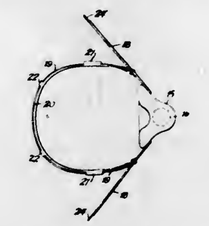
from one arm to the next in a predetermined direction around the hub.

3,095,875
SURGICAL BRACE
Ian Davidson, Toronto, Ontario, Canada, and Eugene L. Jewett, Maitland, Fla., assignors to Florida Brace Corporation, Winter Park, Fla., a corporation of Florida
Filed Aug. 28, 1961, Ser. No. 134,426
8 Claims. (Cl. 128—78)



3. A surgical brace comprising a pubic pad, buttocks pads, pelvis encircling means including frame elements for connecting the pubic and buttocks pads, a thoracic-lumbar pad, side pads, means including frame members for connecting respective side pads with the thoracic-lumbar pad and with the frame elements aforesaid, said connecting means including pintles pivotally connecting respective frame elements and respective frame members, and means for positively fixing the angular position of each frame member respecting the frame element with which it is in pivotal connection upon the respective pintle.

3,095,876
QUICK DONNING MASK
Eugene Neal Meister, Santa Ana, Calif., assignor to The Firewel Company, Inc., Buffalo, N.Y., a corporation of Ohio
Filed Mar. 22, 1961, Ser. No. 97,664
9 Claims. (Cl. 128—146)



1. A quick donning mask, comprising a mask member adapted to engage the face of the user, a head member adapted to engage the back of the user's head, spring means biasing said mask member toward said head mem-

ber to hold said mask member in pressure contact with the user's face, a laterally biased strut mounted on one of said members and positionable to project toward the other member, a withdrawable tongue and socket connection between the free end of said strut and said other member to hold said mask and head members in spaced inoperative relation to each other, said tongue projecting in the direction of movement of said members toward and from each other whereby upon pulling the mask member away from said head member said strut springs away from said other member to permit said mask member to spring into pressure contact with the face of the user.

3,095,877
SURGICAL PACKING
Robert L. Rowan, 141 E. 33rd St., New York 16, N.Y.
Filed May 1, 1961, Ser. No. 106,722
7 Claims. (Cl. 128—260)



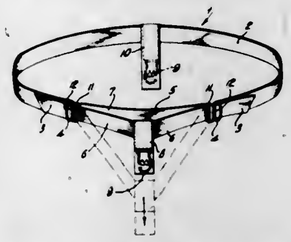
1. A surgical packing comprising a hollow nylon thread, a plurality of absorbent balls centrally secured to said thread in spaced relationship to each other.

3,095,878
SANITARY NAPKINS AND METHODS OF MAKING THE SAME
Alton H. Bassett, New Brunswick, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed June 23, 1960, Ser. No. 38,154
1 Claim. (Cl. 128—290)



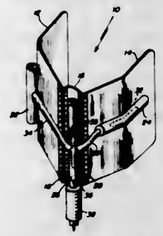
A sanitary napkin comprising in combination, a molded absorbent core having an arcuate shape with a plurality of crevices and wrinkles on its concave surface, and a conformable and drapeable cover wrapped about said core and in intimate contact therewith, said cover comprising a soft and highly permeable fibrous nonwoven fabric in which the fibers are oriented to define a multiplicity of substantially uniformly arranged holes and groups of fibers between said holes, and in which the fibers are bonded together at spaced areas by a resinous binding agent, said cover having about 100 holes per square inch and said cover being creped with the pleats of the crepe running transverse of the absorbent core, said fabric cover having incorporated therein a softening agent whereby said cover takes the arcuate shape of the core without entering and conforming to the crevices and wrinkles on the concave surface of said core.

3,095,879
BELT
Harold F. Burnham, Highland Park, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Jan. 23, 1957, Ser. No. 635,767
8 Claims. (Cl. 128—291)



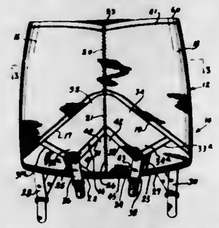
1. A sanitary napkin belt comprising a waist strap adapted to extend around the rear and sides of the waist of a wearer with the ends thereof spaced from each other on the front of the waist so that the strap does not encircle the waist, the spaced ends of said waist strap being attached to length-adjusting devices so that the size of the said strap may be adjusted on the waist of the wearer, a loop member of fixed length slideably connected to said devices and forming front and rear straps, one of said straps extending downwardly in a V-shaped configuration, and means on said downwardly extending strap and on the rear of said belt for attaching a napkin.

3,095,880
DIATHERMY APPLICATORS
Duane B. Haagensen, Lincoln, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 776,114
5 Claims. (Cl. 128—418)



1. Apparatus for heating a body to be treated comprising a source of microwave energy, a waveguide applicator having a pair of conductive plates adapted to be positioned about the part of the body to be treated, each conductive plate containing an energy radiating aperture resonant at the operating frequency, a hollow metallic cylinder having an energy radiating slot resonant at the operating frequency and supported in register with the corresponding energy radiating aperture in each conductive plate, said energy radiating slots positioned in a manner to direct energy toward said body in cross-polarized planes, a conducting rod passing through the inside of each cylinder parallel to the axis thereof and attached to one end of said cylinder, a feeder stub connected to the inner conducting rod of each cylinder and projecting radially outward therefrom to contact the wall of the corresponding radiating aperture in each plate, and a coaxial transmission line adapted to couple energy from said microwave source to each of said cylinders.

3,095,881
FREE MOTION GIRDLE
Nicholas Anthony Marino, 126 E. 36th St., New York, N.Y.
Filed Dec. 12, 1960, Ser. No. 75,295
1 Claim. (Cl. 128—552)



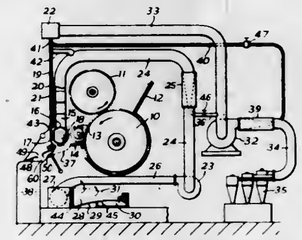
A girdle comprising an outer body-encircling member superposed upon an inner body-encircling member, said body-encircling members, along the vertical edges thereof, being joined to form a front seam, the upper edges of said inner and outer body-encircling members being secured to each other constituting the common upper edge of said garment, said outer member constituted by a pair of side panels and a pair of narrow rear panels stitched to each other, said inner member along the lower edge thereof extending downwardly to form downwardly extending portions at the front regions of the thighs of the wearer when the garment is worn, the lower edge of said outer member extending obliquely at the front of the garment and terminating at the front seam, said lower edge of the outer member extending generally horizontally across the rear of the garment, the lower edges of said inner and outer members being joined by stitching at the lower edges thereof at the rear of the garment, and hose supporting means secured to said downwardly extending portions of the lower edge of the inner member at the front of the garment and secured to the horizontally extending lower edge of the outer member at the rear of the garment.

3,095,882
TOBACCO FLAVORANTS
John D. Hind and Frank H. Crayton, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
No Drawing. Filed Aug. 4, 1961, Ser. No. 129,240
17 Claims. (Cl. 131—17)

1. A tobacco product containing a flavorant characterized in being volatile below the pyrolysis temperature of tobacco, said flavorant being the reaction product of an alcohol and a member of the group consisting of saccharides and organic acids native to tobacco.

3,095,883
CONTINUOUS ROD CIGARETTE-MAKING MACHINES
James Ernest Morris, Deptford, London, England, assignor to Molins Machine Company Limited, a British company
Filed Mar. 31, 1960, Ser. No. 18,926
Claims priority, application Great Britain Apr. 17, 1959
3 Claims. (Cl. 131—84)

1. In a continuous rod cigarette-making machine having a perforated conveyor, a suction chamber in communication with one face of the conveyor, a straight first duct having an inlet and an outlet, the inlet of the first duct being spaced from the conveyor and the outlet of the first duct being in communication with the other face of the conveyor, and tobacco feeding means to introduce cut tobacco into the inlet of the first duct along a path at substantially a right angle to the first duct, a pneumatic system comprising a first air pump having an inlet and an outlet, first air ducting having an inlet and an outlet, the inlet of the first air ducting being connected to the suction chamber, and the outlet of the first air ducting being connected to the inlet of the first air pump, whereby the first air pump draws air through the first duct, the conveyor and the suction chamber to impel the tobacco through the first duct to the conveyor to form a continuous tobacco filler on the conveyor and hold it thereto, a second duct having an inlet and an outlet, the inlet of the second duct being situated adjacent the inlet of the first duct and between the inlet of the first duct and the path of the tobacco, second air ducting having an inlet and an outlet, the outlet of the second duct being connected to the inlet of the second air ducting, a second air pump having an inlet and an outlet,

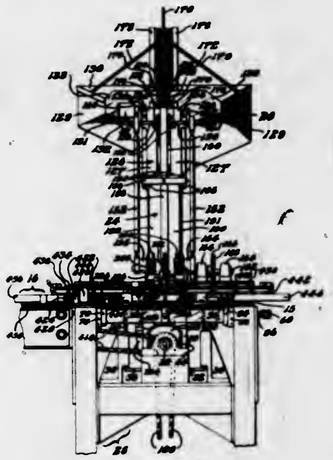


the outlet of the second air ducting being connected to the inlet of the second air pump, whereby the second air pump draws air across the path of the tobacco to assist in turning it into the first duct, a third duct having one end in communication with the inlet of the first duct and having its other end closed, the tobacco feeding means and air pumps being located on one side of the first and third ducts, third air ducting having an inlet and an outlet, the inlet of the third air ducting being connected to the outlet of the first air pump, and the outlet of the third air ducting being open to the atmosphere at a position remote from the inlet of the first duct, and fourth air ducting having an inlet and an outlet, the inlet of the fourth air ducting being connected to the outlet of the second air pump, and the outlet of the fourth air ducting being open to atmosphere adjacent the inlet of the first duct, whereby the air from the second air pump is drawn again into the first and second air ducts together with a first quantity of air from atmosphere, and means defining an aperture in a side of the third duct remote from the tobacco feeding means and air pumps to admit a second quantity of air from atmosphere into the third duct to be drawn into the first duct, which second quantity of air is cooler than the first quantity of air.

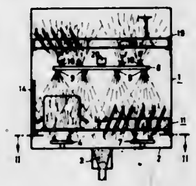
3,095,884
CIGAR TIPPING MACHINE
Dale R. Smith, Red Lion, Pa., assignor to York Production Engineering Co., Inc., Windsor, Pa., a corporation of Pennsylvania
Filed July 17, 1961, Ser. No. 124,698
5 Claims. (Cl. 131—88)

1. A machine for applying tips or the like to cigars comprising a stationary platform, cigar advancing means including a rack having a horizontally disposed main body and a plurality of fingers extending upwardly therefrom, each between an adjacent pair of cigars on said

platform, means mounting said rack for being extended horizontally in cigar advancing direction, lowered from its extended position for disengagement of said fingers from said cigars, retracted horizontally from its extended and lowered position, and raised from its retracted and lowered position to its initial position for re-engagement of said fingers with said cigars advanced as aforesaid, said rack having a fingerless terminal portion which is positioned, when said rack is in its retracted and lowered position, for receiving cigars successively fed thereto, means for actuating said rack in repeating cycles to advance each cigar successively from finger to finger to a cigar tipping station, while lifting cigars as they are successively fed to said rack to the elevation of said platform, means for successively sliding each cigar lifted in the manner aforesaid onto said platform when said rack is extended to advance said cigars, means for delivering a tip to a point aligned with a cigar on said platform at the tipping station, and means for axially shifting a cigar tip delivered to said point to effect its application to the opposed end of a cigar on said platform at the tipping station.

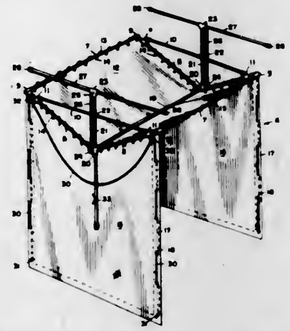


3,095,885
DISHWASHER
Wilhelm Hertel, Traunreut, Germany, assignor to Siemens-Electrogerate Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Filed Feb. 21, 1962, Ser. No. 174,781
Claims priority, application Germany, Feb. 22, 1961
8 Claims. (Cl. 134—58)



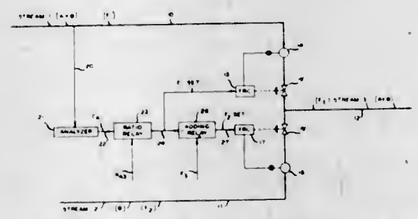
2. A dishwasher, comprising a housing forming a washing chamber, lattice-type shelf structures in said chamber for supporting dishes to be washed, one of said structures being adapted at a given location to accommodate a cooking vessel placed upside down; a jet nozzle arrangement in said chamber for squirting water against objects placed onto said structures and comprising upwardly directed nozzle means mounted below said location for directing jets of water into the hollow of a vessel, and nozzle means between said structures and directed to pass jets of water onto the outer surface of the vessel, pressure conduit means connected to all of said nozzle means for supplying water thereto, and pressure control means interposed in said conduit means ahead of those of said nozzle means that are mounted below said location for controlling said latter nozzle means when washing a vessel to operate at a higher pressure than said other nozzle means.

3,095,886
WEATHER SHIELD
Cyril P. Frommelt and Sylvan J. Frommelt, Dubuque, Iowa, assignors to Dubuque Awning & Tent Company, Dubuque, Iowa, a corporation of Iowa
Filed Aug. 23, 1960, Ser. No. 51,365
3 Claims. (Cl. 135—5)



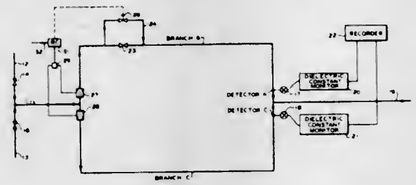
1. A weather shield adapted to be quickly attached and detached to adjacent roofed structures, each structure having a side wall with an opening therein, said shield comprising a frame having a covering element thereon, said frame adapted to have opposed ends projecting into said openings, a pair of T-bars, one at each side of said frame, each T-bar comprising a vertical bar rotatably and slidably mounted on said frame and a cross bar attached to said vertical bar, the ends of which cross bar are adapted to engage the roofs of the structures and coact with the ends of the frame projecting into the openings to clamp said ends of said frame into engagement against the upper portions of said openings, and spring means connecting said T-bars and frame to continually urge said T-bars toward said frame.

3,095,887
STREAM BLENDING METHOD AND APPARATUS
Dale E. Lupfer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 27, 1961, Ser. No. 98,544
5 Claims. (Cl. 137—3)



1. A method of continuously blending a first fluid stream consisting essentially of components A and B in variable ratio with a second fluid stream consisting essentially of component B to form a third stream containing components A and B in a substantially constant ratio and flow rate which comprises analyzing a sample of said first stream for component A, producing a first signal as a function of the fraction of said first stream that is component A, producing a second signal as a function of the ratio of said fraction to the desired flow rate of component A in said third stream, regulating the flow rate of said first stream in response to said second signal, producing a third signal as a function of the difference between the desired flow rate of said third stream and said flow rate of said first stream, and regulating the flow rate of said second stream in response to said third signal.

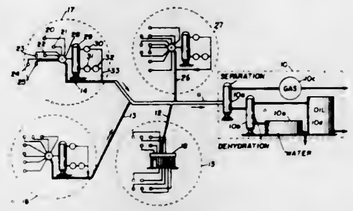
3,095,888
CONTROL OF RATES OF FLOW IN PIPELINE LOOP
Marvin E. Kline and Robert C. Reilly, both of Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed May 4, 1961, Ser. No. 107,723
5 Claims. (Cl. 137—10)



1. In a method of successively flowing different fluids through a pipeline having a loop at a given flow rate in the pipeline, wherein an interface is formed between such different fluids in each of the branches of said loop, the steps comprising introducing a first fluid into said pipeline at said given flow rate and passing the same through said loop, introducing a slug of a second fluid in said pipeline at said given flow rate and passing it through said loop, determining the arrival of segments of said slug in each of said branches at loci equidistant from the end of said loop, measuring the difference in said arrivals, changing the rate of flow through one of the branches of said loop to a second rate of flow in accordance with said difference in arrivals so as to approximate the simultaneous arrival of subsequent slug segments of said second fluid at the end of the loop, introducing a second slug of said second fluid into said pipeline at said given flow rate and passing slug segments thereof through said loop and through said one branch at said second rate of flow, determining the arrival of said subsequent slug segments in each of said branches at said loci, measuring the difference in said latter arrivals, changing said second rate of flow in accordance with said latter measured difference to a rate of flow so as to approximate closer the simultaneous arrival of said slug segments, and repeating said operation until a final rate of flow is determined whereby said slug segments substantially simultaneously arrive at the end of said loop, thereafter adjusting the rate of flow in said one branch to said final rate of flow whenever fluid is introduced into said pipeline at said given flow rate.

3,095,889
SATELLITE GATHERING SYSTEM
Alfred Edwin Barroll and Karl Herman Kretzschmar, Calgary, Alberta, Canada, assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Nov. 5, 1959, Ser. No. 851,062
18 Claims. (Cl. 137—14)

1. The method of operating oil and gas wells which comprises sequentially flowing fluids from each of a plurality of wells to a gas-liquid separating zone, during the period of flow from a given well through said zone commingling fluid from the remainder of said wells for group flow in a separate flow path by-passing said zone, at said zone separating the flow from said given well into gas and liquid, and measuring said gas and said liquid issuing from said zone while at least said liquid being measured is maintained at the pressure in said zone, commingling the liquid issuing from said zone with said fluids in said separate flow path, and maintaining the pressure in said zone at a predetermined relatively low differential above the pressure in said separate flow path.



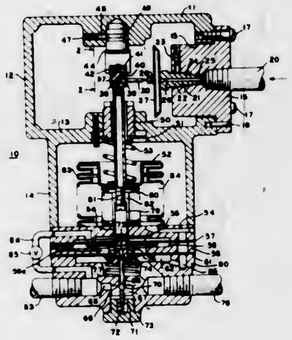
3,095,890
DEMAND REGULATOR FOR BREATHING APPARATUS
Jacques Y. Cousteau, Paris, France, and Emile Gagnan, Montreal, Canada, assignors to La Spirotechnique
Filed Dec. 2, 1960, Ser. No. 73,330
Claims priority, application France Dec. 21, 1959
4 Claims. (Cl. 137—63)

1. A demand regulator for a breathing apparatus, comprising a regulator chamber closed by a flexible diaphragm, a pressurized air inlet connected to a pressurized air source and adapted to discharge into said regulator chamber, an inhalation air nozzle mounted on said regulator chamber out of alignment with said pressurized air inlet and connected to an inhalation hose, valve means controlling the pressurized air stream and actuated by the movements of said flexible diaphragm, and a deflector strip mounted in said regulator chamber positioned between said pressurized air inlet and terminating close to said inhalation air nozzle, said deflector strip being formed to direct air from said inlet through said chamber, the terminal portion of said deflector strip being so formed as to direct air in a path into said inhalation air nozzle generally parallel with the central portion of said nozzle.

3,095,891
PNEUMATIC TRANSMITTERS
Thomas W. Clements, Huntington, N.Y., assignor to Moore Products Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1961, Ser. No. 138,654
15 Claims. (Cl. 137—85)

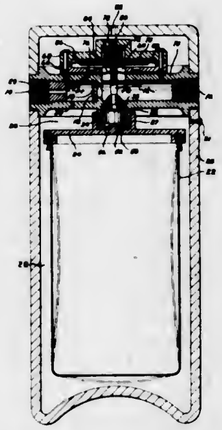
3. In combination, a housing, an input member carried by said housing and having a portion movable in a predetermined direction in response to a variable, a source of fluid under pressure, a nozzle tube connected to said source and having a discharge nozzle, said nozzle tube being movable in a different predetermined direction, members in said housing for positioning said nozzle tube including a first pressure responsive wall portion and a second pressure responsive wall portion, a fluid pressure transmitter controlled by the pressure in said

nozzle tube, fluid connections for applying the pressure in said nozzle tube on one of said wall portions, fluid connections for applying the transmitted pressure on the other of said wall portions in the same direction, and a



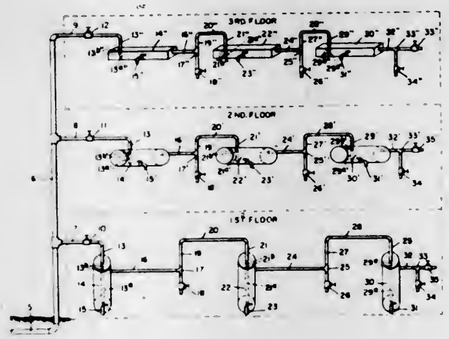
valve member having a part pivotally connected to said input member portion and another part controlling the discharge from said nozzle and thereby controlling the pressure upstream of said nozzle.

3,095,892
FLUID METERING DEVICE
David Harkness Laing, 1509 Pembroke Drive, Oakville, Ontario, Canada, and James Dennis Jones, 60 Glenridge Ave., Willowdale, Ontario, Canada
Filed Mar. 22, 1960, Ser. No. 16,880
Claims priority, application Great Britain Mar. 24, 1959
10 Claims. (Cl. 137—101.11)



1. Means for metering a first fluid into a second fluid, comprising: a conduit defining a fluid flow path; a predetermined fluid flow direction in said conduit; means for restricting flow of fluid along said conduit adapted to cause a pressure differential thereacross from a higher pressure on the upstream side of said flow restricting means to a lower pressure on the downstream side of said flow restricting means, said flow restricting means being designed to allow fluid flow therepast at a volume flow rate substantially linearly proportional to said pressure differential within a predetermined range of said pressure differential; a compressible container for said first fluid; means for applying said higher pressure to the outside of said compressible container; means defining a fluid passage connecting the inside of said compressible container to said main flow line in the region of said lower pressure; said fluid passage being designed to have laminar flow of said first fluid over said predetermined range of pressure differentials.

3,095,893
EMERGENCY WATER STORAGE TANK SYSTEM FOR USE IN BUILDINGS
Jules Martin, 525 Kunawai Lane, Honolulu, Hawaii
Filed June 8, 1959, Ser. No. 818,667
4 Claims. (Cl. 137—216)

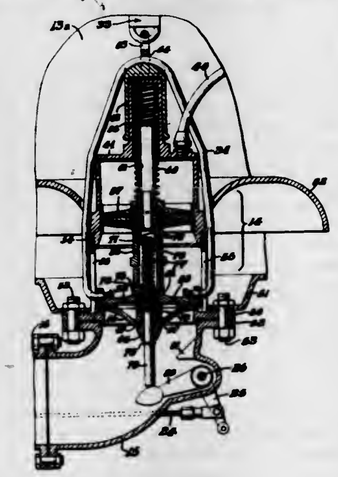


1. In a building equipped with plumbing facilities, an emergency distributing system including a water distribution pipe, a plurality of water storage tanks having inlet and outlet pipes connected in series, the inlet pipe of the first of said water storage tanks being connected to the water distribution pipe and the outlet pipes of said water storage tanks being connected to the plumbing facilities to permit passage of water from said water distribution pipe through the storage tanks before emptying into the plumbing facilities, each inlet pipe being connected to the top of each water storage tank and extending into the tank to a point proximate the lower limit of the tank, that portion of the pipe within the tank being provided with air holes to prevent the siphoning of water therefrom in the event that the water distribution pipe is broken, each outlet pipe being connected to a side wall of the tank near its upper extremity and being joined to a T-connection, one branch of said T-connection being in communiation with the inlet pipe of an adjacent tank, the other branch of said T-connection being in communication with one of the plumbing facilities, and a shut-off valve in the other branch of each T-connection, to isolate said water storage tanks from the plumbing facilities, means connected to the storage tanks adjacent their lower extremities for drawing off water therefrom, and shut off valves in the inlet pipe of said first tank and in the outlet pipe of the last tank to isolate the series of tanks.

3,095,894
TANK LOADING AND UNLOADING SYSTEM FOR TANK VEHICLES
James A. Jensen, Haverford, Pa., assignor to Philadelphia Valve Company, Philadelphia, Pa., a firm
Filed May 25, 1960, Ser. No. 31,740
4 Claims. (Cl. 137—267)

1. In apparatus for controlling the filling and draining of liquid in a tank through normally closed external supply and drain conduits, the combination comprising means having an inlet-outlet passage through which liquid is supplied to and drained from said tank, a hollow valve body overlying said passage, an assembly including a main

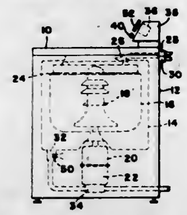
valve normally closing said inlet-outlet passage, and a piston in said body movable with said main valve and defining with said body a chamber over said piston, means biasing said main valve and yieldably holding the same in closed position, said main valve being movable for opening said inlet-outlet passage and said piston being movable in said body, against the influence of said bias, by supply liquid entering the tank through said inlet-outlet passage, means providing an inlet passage leading to said chamber from the inlet-outlet passage of said main valve, means providing an outlet passage leading from said chamber to the interior of the tank, a liquid controlled valve in said outlet passage open to permit maximum flow through said outlet passage, said liquid controlled valve being responsive to liquid level in the tank for closing, thereby to shut off flow through said outlet pas-



sage so that when said liquid controlled valve is open pressure is released in said chamber and said main valve is quickly opened by supply liquid pressure thereon and when said liquid controlled valve is closed pressure is increased in said chamber, whereupon said main valve closes under the influence of said bias, shutting off the flow of supply liquid to the tank, means providing an auxiliary outlet passage leading from said chamber to said inlet-outlet passage, a release valve normally closing said auxiliary passage, and means operable for actuating said release valve thereby to first release the pressure in said chamber, and thereafter to quickly open said main valve against the influence of said bias thereby to permit liquid to drain from said tank through said inlet-outlet passage.

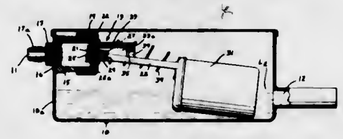
3,095,895
WASHING MACHINE LEVEL CONTROL
James W. Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 26, 1961, Ser. No. 161,796
5 Claims. (Cl. 137—387)

1. In combination, means forming a wash tub having an outflow port in an upper portion thereof, means including a solenoid actuated valve for supplying water to said wash tub, timer means for energizing said solenoid actuated valve for a predetermined time whereby said valve is conditioned to supply a predetermined quantity of water to said wash tub to a level even with said outflow port, and thermistor means in parallel with said timing means and ing heat exchange relationship with water flowing from said outflow port for continuing the energization of said solenoid actuated valve for an additional period neces-



sary to insure a fill of water to said predetermined quantity.

3,095,896
FLOAT VALVE
Anthony J. Ross, 116 Myrtle Ave., Elmhurst, Ill.
Filed July 13, 1959, Ser. No. 826,827
5 Claims. (Cl. 137—448)

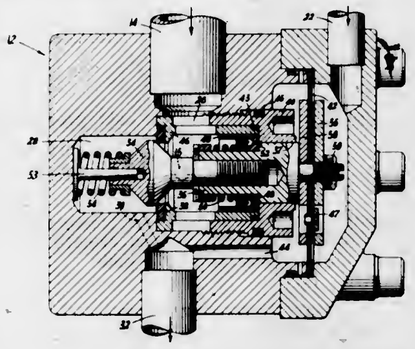


1. A liquid level control valve comprising a valve body defining a chamber having a liquid inlet passage and an outlet passage, said body having a substantially vertically disposed seat on the inner side of the body around said outlet passage, a valve member loosely positioned in said chamber adapted to overlie said outlet passage and having a face cooperable with said seat to block flow through said outlet passage in one position of the valve member and to open and permit flow when the valve member is tilted relative to said seat away from said one position, a stem rigidly attached to said valve member and extending generally horizontally outwardly of said chamber through said outlet passage, a float rigidly attached to the outer end of said stem to normally gravitationally urge the stem downwardly and tilt the valve member relative to its seat away from said one position, said float being adapted to be buoyed upwardly as the water level rises to move the stem upwardly until the valve member reaches said one position and stops the flow of liquid through said outlet passage, said body including a rigid guide member extending outwardly of the body alongside said stem, said guide member having a stop portion overlying said stem and engageable with the stem to prevent swinging of the stem above a position in which the valve member lies substantially flush with the valve seat, said guide member having vertically extending guide portions positioned along opposite sides of the path of travel of said stem and guidably engaging opposite sides of the stem to prevent horizontal swinging of the stem and float, and an elongated longitudinally resilient and laterally flexible spring disposed externally of said chamber and having one end engaging said body and the other end operatively connected to said outer end of said stem to urge the stem in a direction generally axially thereof and thereby yieldably urge the valve member toward its seat.

3,095,897
BALANCED VALVE AND SEAL CONSTRUCTION
Robert G. Pennstrom, Neptune, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Sept. 15, 1959, Ser. No. 840,140
4 Claims. (Cl. 137—454.2)

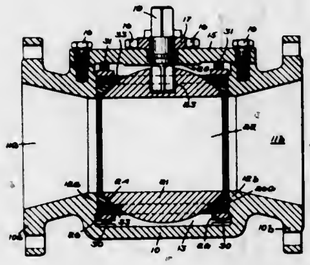
1. In a pressure regulator comprising a body having a cavity therein provided with an inlet for fluid under

pressure to be regulated, a socket formed in said cavity having an outlet for pressure-regulated fluid, a valve having a head in said socket and a stem in said cavity, a valve seat between said socket and said cavity the improvement which comprises an annular retainer for said valve seat, a cap screwed into said cavity having a larger bore surrounding said retainer and a smaller bore with



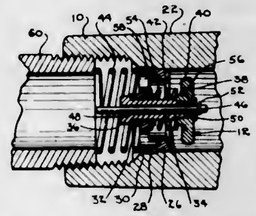
an internal annular shoulder therebetween engaging the top of said retainer, said valve stem having a bearing slideable in said smaller cap bore and a shoulder normally in register with said cap shoulder and forming with the top of said retainer an annular recess, and a ring of packing material in said annular recess sealing against leakage between said bearing and said retainer from said cavity.

3,095,898
REMOVABLE BALL AND SEAT VALVE UNIT
Howard G. Freeman and William W. Rawstron, Worcester, Mass., assignors to Jamesbury Corp., Worcester, Mass., a corporation of Massachusetts
Filed Dec. 2, 1960, Ser. No. 73,237
6 Claims. (Cl. 137—454.2)



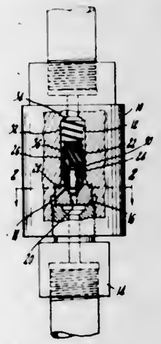
1. A ball valve comprising a hollow valve casing having a longitudinal direction and longitudinally spaced inner end walls defining a valve chamber and inlet and outlet passages through said end walls communicating with said chamber, a ball and seat assembly disposed between said end walls, said assembly including a yieldable sealing member engaging said ball, and adjustable means independent of said casing for constricting said assembly to a dimension less than the spacing of said end walls in the longitudinal direction of said casing, said casing having a side opening of a size to admit said assembly when restricted to said dimension communicating with said chamber, and a cover closing said opening and secured to said body.

3,095,899
LIQUID OUTAGE CONNECTION
Evans R. Billington, Chicago, Ill., assignor to The Bastian-Blessing Company, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 733,125, May 5, 1958. This application Mar. 2, 1960, Ser. No. 12,475
31 Claims. (Cl. 137—454.5)



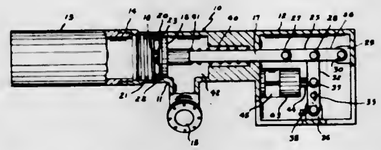
6. An excess flow check valve comprising a housing having a fluid flow passage therethrough open at one end, a valve seat element in said passage having a valve seat adjacent to the other end of said passage, guide means in said passage spaced from said other end, a reciprocable means in said passage accessible for adjustment through said open end extending through said guide means for relative free movements in a valve-closing direction and in a valve opening direction, a stop element on said reciprocable means, a valve member carried by said reciprocable means for movement into and out of engagement with said valve seat, means for moving said reciprocable means and valve member towards said one end to carry the valve member into a closed position, and resilient means released by said moving means for biasing said reciprocable means and said valve member away from said seat a distance limited by said stop element whereby said valve member and resilient means cooperate to perform an excess flow valving action when said valve member is disposed at said limited distance.

3,095,900
POPPET VALVE
Donald H. Newhall, Walpole, Mass., assignor to Harwood Engineering Company, Walpole, Mass., a corporation of Massachusetts
Filed Apr. 3, 1961, Ser. No. 100,099
3 Claims. (Cl. 137—516.25)



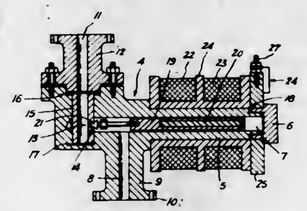
1. For use in a high pressure poppet-type valve, a valve structure which comprises a seating element of hard material having an aperture and a seating surface having a straight line outward projection surrounding said aperture, a composite movable valve member shiftable by opposed valve seating and valve opening fluid pressures between a seating and an open position comprising a metallic core member having a seat engaging portion for engagement with a portion of said seating surface adjacent said aperture, and a stem portion, and a valve closing component of said movable valve member overlying said metallic core member composed of a plastic material having suitable qualities of strength, ductility, and plastic flow, said valve closing plastic component having a seating surface engaging portion forming an outward extension of said core member seating surface engaging portion and substantially flush therewith for effecting a simultaneous engagement of said seating surface engaging portions with said seating element along said straight line projection of said seating surface, and said valve closing plastic component having a centrally disposed upwardly extending bore open at its lower end to receive said stem portion of said core member and of a diameter to provide a leak-tight fit with said stem and extending longitudinally in excess of the length of said stem to provide an unsupported area of said valve closing component equal to the cross-sectional area of said stem, whereby, the effective pressure exerted by the seating portion of said valve closing plastic component against said seating element seating surface is substantially intensified to produce a strong initial seal between said valve closing plastic component and said seating element seating surface, said valve structure further defining a means biasing said composite movable valve member in a direction to close said valve.

3,095,901
RAPID OPENING VALVE
Vincent H. Larson, Minneapolis, and Robert D. Holmberg, Mound, Minn., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 16, 1962, Ser. No. 180,368
2 Claims. (Cl. 137—522)



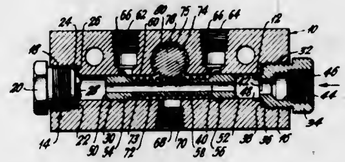
1. A rapid opening valve for releasing a fluent material under pressure within a container at a controllable time comprising: a valve housing having an inlet port and an outlet port; said inlet port being sealed to said container; a floating valve seat within said housing; a valve piston supported in sealing relation with said valve seat; a piston rod connected to said piston; a first pivot support within said valve housing; a first two-bar linkage connected between said piston rod and said first pivot support; a second pivot support within said valve housing; means, including a second two-bar linkage connected between said first two-bar linkage and said second pivot support, for holding said first two-bar linkage, said piston rod and said first pivot support in an in-line relation, to thereby lock said piston against said valve seat; means connected between said second two-bar linkage and said second pivot support for normally holding said second two-bar linkage, said second pivot support and the connecting point of said first and second two-bar linkages in in-line relation; a solenoid operated means for moving said second two-bar linkage out of its in-line relation to thereby move the first two-bar linkage out of its in-line relation to permit rapid opening of said valve in response to the pressure of the fluent material within said container; said second two-bar linkage being free to move independently of said solenoid operated means; means for decelerating and stopping said valve piston and means for reclosing the valve when the inlet and outlet pressures are equalized.

3,095,902
CORROSION RESISTANT VALVE
Walter Nathaniel Caton, 53 Pellisier Road, Putney, near Sydney, New South Wales, Australia
Filed Mar. 6, 1961, Ser. No. 93,753
2 Claims. (Cl. 137—554)



1. A corrosion resistant valve comprising a valve body of non-magnetic, corrosion resistant material, said body incorporating a chamber, an exhaust duct leading from said chamber, a female valve seat rimming an orifice at one end of said chamber and an inlet duct leading to said orifice externally of said chamber; a plunger of non-magnetic corrosion resistant material slidable axially within said chamber; a magnetic core within and totally enclosed by said plunger; a male valve seat secured to said plunger able to close the valve by seating in a liquid tight manner against said female seat and open the valve by departing from that seat in consequence of axial movement of said plunger; two solenoid coils with their adjacent ends in close proximity outside said body encircling said chamber and being adapted to act upon said core as an armature so as to close and open said valve depending on which coil is energized for the time being, and means to monitor the electrical continuity of the unenergized coil, said means being operated by the voltage induced in the unenergized coil by the leakage flux of the energized coil.

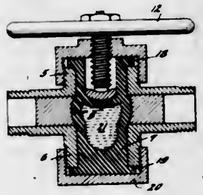
3,095,903
VALVE
William G. Jennings, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed May 5, 1960, Ser. No. 27,050
4 Claims. (Cl. 137—625.25)



1. A valve, comprising a valve body having an elongated bore, abutments at opposite ends of the bore, a piston matably disposed in the bore and having a through-bore terminating at opposed end surfaces of equal areas projected normal to the longitudinal axis of the bore, said piston being axially translatable within the bore between two extreme positions whereat a portion of the end surface of said piston is in contact with its adjacent abutment, each abutment and end surface constituted and arranged in said extreme positions to define with said bore an annular cavity, means for providing fluid communication between each defined annular cavity and the through-bore of the piston, said valve body having a fluid inlet communicating with the bore and the through-bore, said valve body also having a pair of axially spaced fluid outlets communicating with the bore between the abutments, each of said outlets being spaced from its adjacent

abutment and its remote abutment respectively, a distance less than and greater than the length of the piston, and means for translating the piston within the bore.

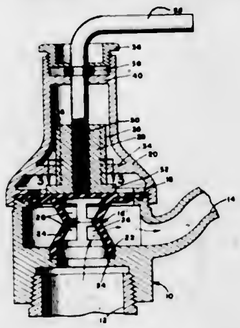
3,095,904
VALVES FOR THE CONTROL OF FLUID FLOW
Niels Otto Thaning, International House, 61 Loveday St., Johannesburg, Transvaal, Republic of South Africa
Filed Dec. 27, 1960, Ser. No. 78,516
11 Claims. (Cl. 137—625.28)



1. A valve for controlling the flow of fluid comprising a valve body, a resilient and deformable plug closure member in said body, said plug comprising an outer deformable sleeve, a rotatable spindle positioned across the passageway, a pair of stops around said spindle and a second resilient sleeve on said spindle and between said stops screw threads of opposite hands on each end of the spindle and the stops in the form of nuts one on each end of the spindle, a passageway through the body and around said plug in the unstressed condition, and a pair of guides one positioned on each side of said plug, said guides shaped to ensure maximum distortion of the plug at right angles to the direction of fluid flow through the valve when the latter is closed, and valve operating handwheel assemblies associated with each spindle end.

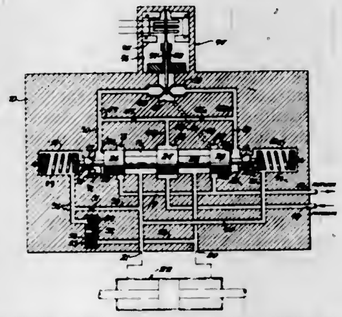
2. A valve for controlling the flow of fluid comprising a valve body, a resilient and deformable plug closure member in said body, at least one hollow pocket formed in said plug, a passageway through the body and around said plug in the unstressed condition, and a pair of guides one positioned on each side of said plug, said guides shaped to ensure maximum distortion of the plug at right angles to the direction of fluid flow through the valve when the latter is closed.

3,095,905
DIAPHRAGM VALVE
Myron J. Glauber, 6399 Wilshire Blvd., Los Angeles 48, Calif.
Filed May 12, 1960, Ser. No. 28,723
2 Claims. (Cl. 137—625.33)



1. A valve, comprising: a resilient valve element having a generally planar imperforate diaphragm portion; a generally tubular portion integral with and extending generally centrally and axially from one face of said diaphragm portion, said diaphragm portion extending radially outwardly beyond said tubular portion to provide a free-edged flange portion; a valve housing having a bonnet mounted thereon, said free-edged flange portion of said diaphragm being clamped between said housing and said bonnet; and openings in the side of said tubular portion between the ends thereof.

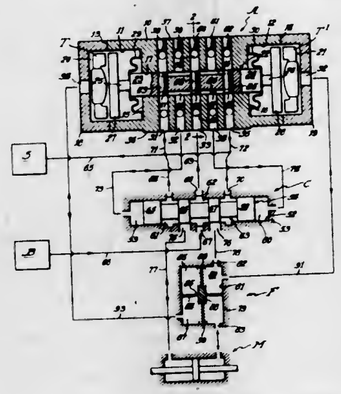
3,095,906
FLOW CONTROL SERVO VALVE WITH DYNAMIC LOAD PRESSURE FEEDBACK
Harvard B. Kolm, Jr., East Aurora, N.Y., assignor to Moog Servocontrols, Inc., a corporation of New York
Filed Mar. 5, 1959, Ser. No. 797,487
2 Claims. (Cl. 137—625.62)



2. In a servo valve having actuating ports adapted to be connected to a fluid-operated load, a first stage electrohydraulic amplifier and a second stage valve spool arranged to be fluidly driven by the output of said amplifier for controlling the flow of fluid through said ports, the combination therewith of load pressure feedback means associated with said ports and including resiliently restrained fluid volume transfer means and pressure drop producing means arranged to provide a frequency sensitive network for reducing the effective fluid drive on said spool in response to the dynamic pressure differential in said ports as a result of load reaction and operative to pass the load pressure variations more effectively above than below a predetermined frequency, said network being free of fluid flow during steady state conditions.

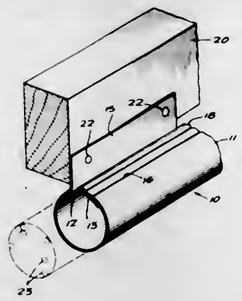
3,095,907
SERVO VALVE
Allen Latham, Jr., Jamaica Plain, Mass., assignor, by mesne assignments, to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 21, 1958, Ser. No. 729,990
12 Claims. (Cl. 137—625.67)

1. A fluid control valve device comprising: a housing having a bore therein; means defining a plurality of spaced passage means disposed in said housing interconnecting said bore with the exterior of said housing, said passage means including at least one passage means and a pair of passage means being so disposed whereby each passage means of said pair is disposed adjacent to said one passage means; movable piston means disposed in said bore, said piston means having medial recess means formed therein; biasing means carried by said housing tending to maintain said piston means in a predetermined position relative to said housing; pin means carried by said piston means dividing said recess means into sections, one of said pin means being adapted to prevent fluid communication between said one passage means and each passage means of said pair of passage means when said piston means is in said predetermined position; and means carried by said housing being adapted to cause selected axial movement of said piston means relative to said housing in opposition to said biasing



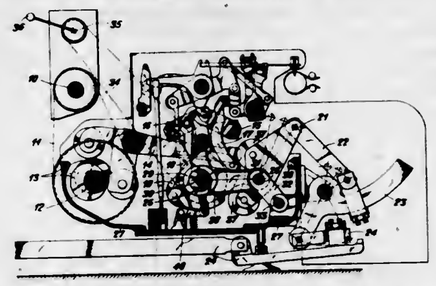
means whereby said pin means permits certain of said sections to fluidly interconnect said one passage means with one of the passage means of said pair of passage means.

3,095,908
COMBINED JACKET AND SUSPENSION MEANS FOR CONDUCTORS AND THE LIKE
Walter A. Plummer, North Hollywood, Calif. (3546 Crowsridge Drive, Sherman Oaks, Calif.)
Filed Mar. 23, 1959, Ser. No. 801,146
3 Claims. (Cl. 138—107)



1. An inexpensive, fluid-tight, lightweight, one-piece tubular jacket formed entirely of electrically nonconductive components having a readily opened and reclosed seam extending from end-to-end thereof and adapted to be suspended from temporary supports on construction projects to provide a weather-tight temporary housing for electrical conductors, said unitary tubular jacket comprising a thin-walled elongated main body strip with longitudinal edges of flexible impervious plastic material free of stiffening and reinforcing elements, a pair of seam forming members interlocking to provide a fluid-tight seam extending from end-to-end of said main body and formed of flexible electrically nonconductive plastic material, the first said seam forming member being secured in a fluid-tight manner along one longitudinal edge of said main body strip and the second said seam-forming member being secured inwardly of the other longitudinal edge of said main body strip sufficiently to provide an exterior guard flap wide enough to bridge said seam in the closed position of said seam, and a continuous jacket suspension strip of flexible plastic material projecting outwardly on the opposite side of said main body strip of said jacket from said second seam forming member, said suspension strip being so spaced from said guard flap that said seam is located along one lateral side of said jacket when the latter is supported by suspension from said suspension strip and whereby said guard flap overlies and conceals the closed seam and is effective eave-fashion to drain rain water and the like from the jacket without permitting the water to contact the mating portions of said seam forming means, said continuous seam being openable from the side of the suspended jacket and from end-to-end thereof to admit additional conductors and the withdrawal of conductors previously installed.

3,095,909
DOBBY
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Feb. 1, 1961, Ser. No. 86,490
Claims priority, application Switzerland Feb. 12, 1960
8 Claims. (Cl. 139—75)

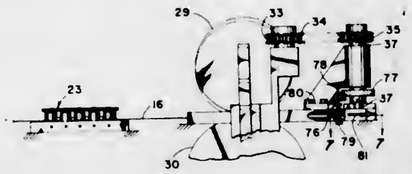


1. In a dobby for actuating the heddle frames of a weaving machine, lifter rails, actuating means connected to said lifter rails for actuating same, lifting blades selectively engageable with said lifter rails, a rocking cam for each heddle frame, a rotatable first shaft rockably supporting said cams, two of said lifting blades being swingably connected to each of said cams for rocking the latter upon engagement of one of the connected lifting blades with one of said lifter rails, a cam follower lever engageable with said rocking cam, a linkage for a heddle frame operatively connected to said cam follower lever, a second shaft rockably supporting said cam follower levers, guide means movably connected to said second shaft for guiding movement thereof normal to the longitudinal axis of the second shaft, at least one eccentric disc fast on one of said shafts, an eccentric rod having one end engaging said eccentric disc and having its second end swingably connected to the other of said shafts and forming a link between said shafts for accurately maintaining the relative position of said shafts, and means connected to the shaft on which an eccentric disc is fast for rotating said shaft to move said cam follower lever away from said rocking cam and into a position corresponding to the closed shed position of said heddle frames.

3,095,910
METHOD AND APPARATUS FOR WEFT PROJECTION
Emmett F. Deady, Arlington, Stanley F. Reed, McLean, and Daniel E. Houghton, Arlington, Va., assignors, by mesne assignments, to Cambridge Wire Cloth Company, Cambridge, Md.
Filed Nov. 8, 1960, Ser. No. 68,022
16 Claims. (Cl. 139—127)

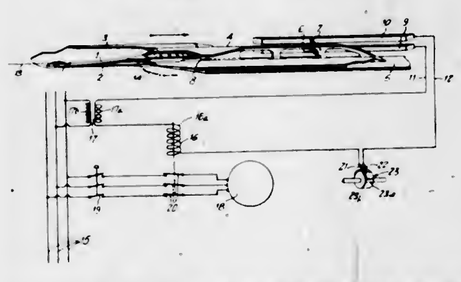
1. In a wire fabric loom comprising, in combination: a supporting framework; means for feeding a bank of

warp wires across said framework; heddle means for effecting a shed in said warp wires; a lay beam reciprocally supported on said framework, said lay beam operable between weft filling and weft weaving positions; a reed having a forward working face supported on said lay beam in fixed relation thereto; a substantially continuous weft wire supply source mounted on said framework; and a weft feeding means having a weft bore therein fixedly mounted on said framework with said bore



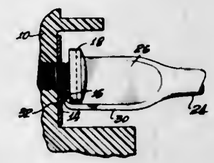
aligned with said working face of said reed when said lay beam is in said weft filling position; said feeding means adapted to project the free end of said weft wire into said shed, the improvement comprising; a weft shear and bend means aligned with said bore to first shear said projected weft wire from said supply and then bend a short length of the end of the remaining weft wire supply through a substantial angle prior to projection thereof into said shed.

3,095,911
WEFT DETECTING MEANS FOR SHUTTLELESS LOOMS
Raymond Dewas, 9 Blvd. de Saint Quentin, Amiens, Somme, France
Filed Sept. 8, 1960, Ser. No. 54,803
Claims priority, application France Sept. 11, 1959
8 Claims. (Cl. 139—370)



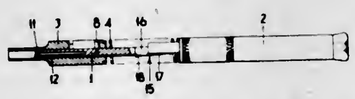
1. Stop motion means for shuttleless looms comprising in combination: a weft inserter; means for drawing the weft inserter through the shed of the loom; weft thread gripping means consisting of a rigid metal blade and an elastic metal blade mounted on the weft inserter said rigid and elastic metal blades being held out of contact with each other by the weft thread gripped therebetween; a first wiper mounted on the weft inserter and electrically connected to the rigid blade; a second wiper mounted on the weft inserter and electrically connected to the elastic blade; a first electrical conductor bar arranged in the path of the first wiper to make electrical contact therewith; a second electrical conductor bar arranged in the path of the second wiper to make electrical contact therewith; a motor driving the loom; an electrical interrupter; an electrical relay controlling the motor driving the loom; the electrical conductor bars, the interrupter and the winding of the relay being connected in electrical series circuit with a source of electrical current to stop the motor if the rigid blade contacts the elastic blade during the weft insertion phase.

3,095,912
SCREW DRIVER FOR BENDING WIRE
Melvin Sullivan, 523 Peach Tree Lane, Arcadia, Calif.
Filed Aug. 28, 1958, Ser. No. 757,805
2 Claims. (Cl. 140—124)



1. A tool for setting an electrical screw having a head and for looping an electrical wire around the shank of the screw and under said head thereof, said tool comprising a blade for engaging a screw head, and a tang projecting from an edge of said blade, said tank having an inwardly extending end portion to extend under the head of the screw when the screw is engaged by said blade with the tang engaging the periphery of the screw head, said tang end portion being of such conformation and extent as to engage an electrical wire which is directly under said screw head to force it substantially against the shank of the screw whereby the tool is operative to loop the wire around the shank of the screw in a position underneath the head of the screw while the screw is turned by the tool.

3,095,913
DEVICES FOR WRAPPING AND REMOVING WRAPPED CONNECTIONS
Sydney Anthony Shepherd, Coventry, and Bernard Norman Woods, Fillongley, England, assignors to The General Electric Company Limited, London, England
Filed May 24, 1960, Ser. No. 31,468
Claims priority, application Great Britain May 29, 1959
3 Claims. (Cl. 140—124)



1. A device for wrapping turns of wire as a connection on a terminal and for increasing the diameters of said turns when it is desired to remove the wire wrapping from the terminal, said device comprising a spindle which is rotatable about its longitudinal axis and which has an outer end surface, said spindle having a hole which extends longitudinally of the spindle from said outer end surface and which is adapted to receive the terminal, and said spindle also having a groove which extends longitudinally of the spindle from said outer end surface and which is adapted to receive a wire which is to be wrapped around said terminal, said groove being offset from said hole so that when said spindle is rotated in one direction relative to said terminal said wire is drawn from said groove and is wrapped around said terminal, a sleeve which encircles and is a longitudinally sliding fit on said spindle and which has an outer end, means to retain said sleeve in a first position in which the outer end of said sleeve projects outwards beyond the outer end surface of said spindle a sufficient distance to substantially completely encompass the wrapped connection, means to retain said sleeve in a second position in which the outer end of said sleeve lies in substantially the same plane as the outer end surface of said spindle, a projection formed on the outer end surface of said spindle, and a recess in the outer side surface of said spindle, said recess being positioned adjacent said projection and extending rearwardly from the outer end surface of said spindle and being shaped to receive the end of a wire that has been wrapped on said terminal when said spindle is rotated in the other direction relative to said terminal.

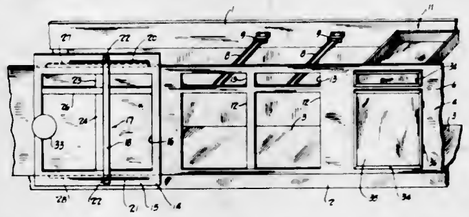
3,095,914
SUPPLY SYSTEM FOR VISCOUS FLUIDS
Josef Bachmann, Chalet Stegacker, Wollerau, Switzerland
Filed Nov. 10, 1959, Ser. No. 852,094
Claims priority, application Switzerland Sept. 11, 1959
3 Claims. (Cl. 141—27)



3. A supply system for a viscous fluid comprising a container for said fluid provided with an outlet bore and a fluid reservoir provided with a generally tubular receptacle removably positionable on said container, said reservoir having a discharge opening at one end thereof adapted to register with said outlet bore, a piston member slidably received in said receptacle and displaceable toward and away from said discharge opening, pressure means within said receptacle for urging said piston member toward said opening, said pressure means comprising a pressure member displaceable within said receptacle and spring means engaging said receptacle for urging said pressure member against said piston member, and stressing means operable externally of said receptacle for withdrawing said pressure member from engagement with said piston member while simultaneously loading said spring means, thereby relieving said piston member, said container being provided with a slidably displaceable piston-forming cover member formed with said inlet bore, said cover member being capable of being urged into said container for forcing fluid from said container through said outlet bore and said discharge opening in their registering position and in the relieved condition of said piston member, said stressing means comprising an elongated flexible member secured to said pressure member, said receptacle being provided with an opening at its other end adapted to pass said flexible member and retaining means at said other end adapted to releasably engage said flexible member in a selected one of a plurality of relative positions of said flexible member and said receptacle for temporarily holding said pressure member against the force of said spring means out of engagement with said piston member to enable filling of said receptacle with said fluid.

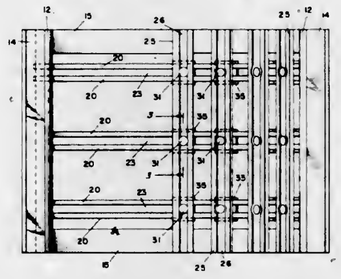
3,095,915
APPARATUS FOR CONSTRUCTING CABINETS AND THE LIKE
James P. Tesar, 870 Mulberry Road, and Stanley J. Kot, 12214 St. Clair Ave., both of Cleveland, Ohio
Filed May 5, 1960, Ser. No. 27,019
7 Claims. (Cl. 144—144.5)

1. In apparatus of the class described, in combination, a jig frame having an opening therethrough, an arm extending across one face of the frame and secured thereto for movement of said arm transversely of its length over said face to different fixed positions relative to the frame, and a gage member of approximately the same thickness



as said frame and secured to said arm for movement therewith and to lie within the plane of said frame.

3,095,916
GRID FOR DISINTEGRATING FIBROUS MATERIALS
Alexander Jacobsen, Appleton, Wis., assignor to Kools Brothers, Inc., Appleton, Wis., a corporation of Wisconsin
Filed Apr. 19, 1962, Ser. No. 188,792
7 Claims. (Cl. 146—117)

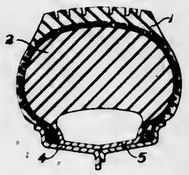


7. A grid for disintegrating fibrous materials comprising a frame member; said frame member being formed by a pair of spaced concavely-shaped side members and end cross-members connecting the ends of said side members; a plurality of pairs of spaced concavely-shaped supporting bars connected to said cross-members, the bars of each pair of said supporting bars being spaced apart to provide an elongated open space therebetween; a cutting bar removably retained on said supporting bars, said cutting bar being provided with openings for receiving fastening bolts therethrough, the free ends of said bolts extending through the said elongated open space between the bars of each pair of supporting bars, and retaining means carried by the free ends of the bolts for securely retaining the cutting bar at preselected positions on said supporting bars.

3,095,917
VEHICLE TIRE
Louis Adrien Arsandaux, Paris, France, assignor to Pneumatiques et Caoutchouc Manufacture Kleber-Colombes, Paris, France, a corporation of France
Filed Oct. 17, 1961, Ser. No. 145,667
Claims priority, application France Oct. 19, 1960
14 Claims. (Cl. 152—155)

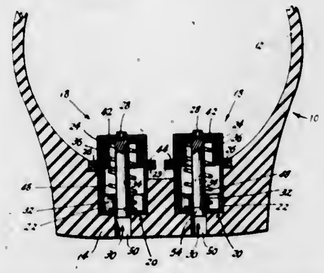
5. A vehicle tire of the inflatable type comprising a hollow carcass of cord-reinforced elastomer open at its radially inner portion with a running surface opposite said open portion and an annular member formed throughout of homogeneous incompressible elastomer in said carcass in contact with the interior surface of the latter, the said member occupying 40 to 80% of the volume of the interior of the carcass and having a free shape of greater

outer peripheral dimensions than the dimensions of the interior of the tire carcass so that when said member is inserted in the carcass it is deformed by said carcass in



a manner causing the member to exert tension stresses in the carcass similar to those created therein by inflation with fluid under pressure.

3,095,918
PNEUMATIC ANTI-SKID OR SNOW TIRE
John G. Mike, 71 Elmwood Ave., Bridgeport 5, Conn.
Filed Feb. 14, 1962, Ser. No. 173,248
8 Claims. (Cl. 152—208)



1. A pneumatic anti-skid vehicle tire comprising, in combination:

(*a*) a tire casing having a peripheral tread portion,

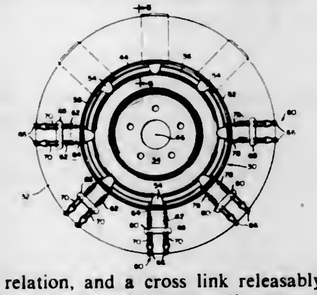
(*b*) a plurality of anti-skid plungers mounted in said tread portion for substantially radial movement between retracted, non-protruding positions and extended positions wherein they project from the tread portion to increase the traction of the tire,

(*c*) yieldable means biasing the said plungers to their retracted positions and normally retaining the plungers therein when air pressure in the casing is below a predetermined value; and

(*d*) means comprising an enclosure having a volume commensurate with that of the casing and including any air-tight, flexible member in the casing, operable by the pressurized air therein, for shifting the said plungers to their extended positions when the air pressure in the casing is raised appreciably above said predetermined value.

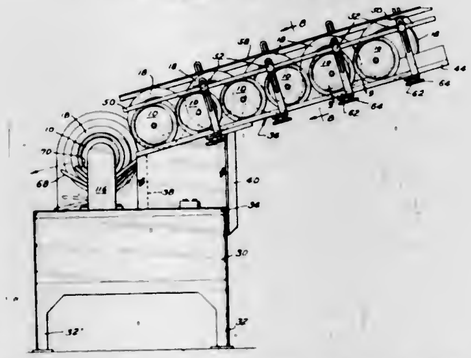
3,095,919
TRACTION DEVICE
Lester N. Yohe, 1601 Melrose Ave., Havertown, Pa.
Filed Feb. 20, 1961, Ser. No. 90,406
5 Claims. (Cl. 152—236)

5. Traction apparatus for motor vehicles comprising, a rim having spaced apart outwardly turned peripheral terminal flanges having slightly inturned peripheral edges thus to form radially inwardly facing shallow peripheral grooves on opposite sides of said rim, a tire mounted between said flanges, a pair of closed ring members, each having substantially the same outer diameter as the major inner diameter of said grooves whereby one ring member may releasibly be secured to each of said flanges by force fit being snapped into said grooves by forcing them over the slightly inturned peripheral edges, each ring member having attachment means secured thereto



in spaced relation, and a cross link releasably attached to said attachment means and extending around said tire from one side to the other.

3,095,920
AUTOMATIC TIRE MOUNTING MACHINE
Frank W. Cislak, 5768 W. 77th St., Chicago, Ill.
Filed Jan. 11, 1960, Ser. No. 1,671
9 Claims. (Cl. 157—1.1)

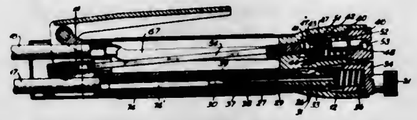


1. Apparatus for placing rubber tires on the rims of vehicle wheels, including a magazine having elongated compartments for a plurality of tires and a plurality of wheels, said magazine being an elongated rectangular frame for receiving both said wheels and tires in vertical planar side by side relation, means associated with the lower end of said magazine for releasing one tire and one wheel at a time; a cradle below the end of said magazine for receiving a wheel and a tire in vertically disposed side by side relation, a wheel guide for moving said wheel axially transversely to said carriage, a plurality of stretcher fingers adapted to enter the side of said tire and engage its inner surface to move the same outwardly radially to increase the diameter of said tire opening to a size larger than the diameter of said wheel rim, means for pushing said expanded tire off said fingers and on to the rim of said wheel, and means for collapsing a portion of said cradle to permit said completed wheel to drop from said machine.

3,095,921
BLOWPIPE
Clifford C. Anthes, Union, Byron H. Acomb, Watchung, and Matthew Heer, Jr., Basking Ridge, N.J., assignors to Union Carbide Corporation, a corporation of New York
Original application July 17, 1958, Ser. No. 749,292. Divided and this application Jan. 27, 1961, Ser. No. 85,273
5 Claims. (Cl. 158—27.4)

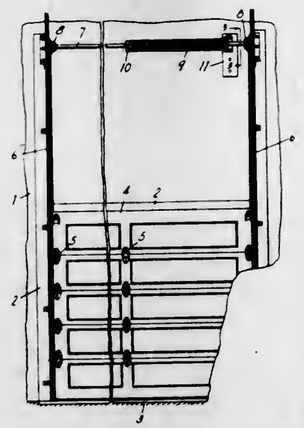
1. A blowpipe comprising in combination, a gas conduit, a tube positioned downstream of said conduit to

receive a flow of a combustible gas mixture, a high temperature resistant tubular throat disposed in said conduit, the forward end of said throat positioned at the downstream end of said conduit, a cylindrical gas mixer disposed upstream of said tubular throat in slideable relation to said conduit, said mixer including a gas mixing chamber having an inlet and an outlet, a passage means communicating said mixing chamber with a supply of fuel gas, and a second passage means communicating said chamber with a supply of combustion supporting gas, the



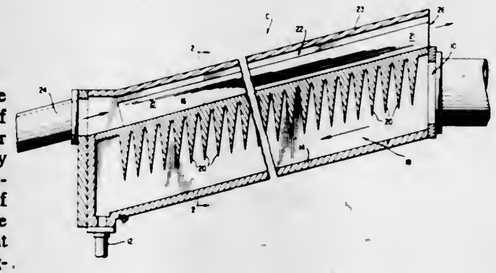
outlet of said mixing chamber positioned adjacent the upstream end of said tubular throat to provide a flow of a combustible gas mixture to said throat, and means for resiliently urging said throat and mixer longitudinally into said conduit providing a continuous gas passage therebetween, whereby thermal expansion and contraction of said throat due to flashback burning of the combustible mixture therein will result in free longitudinal movement of the throat and mixer along the conduit subject to urging of said resilient means.

3,095,922
COUNTERBALANCE AND STOP MEANS FOR UPWARDLY ACTING CLOSURES
Russel B. Frazier, Hartford City, Ind., assignor to Overhead Door Corporation, Hartford City, Ind.
Filed Apr. 4, 1958, Ser. No. 726,385
4 Claims. (Cl. 160—191)



4. An upwardly acting door assembly including a door and substantially vertical tracks with which the door is associated for vertical reciprocating opening and closing movement, a counterbalance means for the door comprising a rotatably mounted peripherally grooved cable drum, a door counterbalance spring drivingly connected to said drum, and a cable connected to said drum to wind thereon on the opening movement of the door and to be unwound therefrom on the closing movement of the door with the drum under continuous torsional stress of said spring, said drum including a brake member conformed on its inner edge to be supportedly engaged in the groove of the drum and having a peripheral cable groove which merges into the cable groove of the drum and is of increasing radius and is positioned on said drum to be engaged by the cable as the door approaches a predetermined open position.

3,095,923
CONDENSER
Clinton Root Foutz, 240 Brightwaters Blvd., St. Petersburg, Fla.
Filed Jan. 6, 1961, Ser. No. 81,135
2 Claims. (Cl. 165—164)

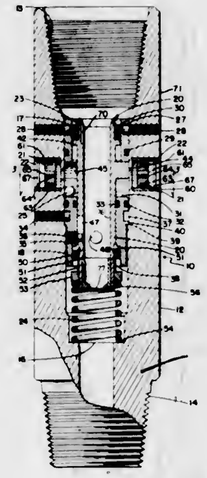


1. A condenser comprising an elongated hollow body formed by substantially parallel upper and lower walls and parallel end walls completely enclosing the space within the body, a heat conducting partition wall intermediate said upper and lower walls and substantially parallel thereto dividing the space within the body into an upper coolant chamber and a lower vapor chamber, said upper, lower and partition walls being inclined to the horizontal, a vapor inlet at the upper end of said vapor chamber and a condensate outlet at the lower end of the vapor chamber, a coolant inlet to said coolant chamber at the same end of the condenser as the condensate outlet and a coolant outlet to said coolant chamber at the other end of the condenser, the walls of said body being imperforate except for said inlets and outlets, the lower surface of said partition wall having a plurality of inverted cones integrally protruding downwardly therefrom, said cones having axes disposed substantially vertically and being adapted to quickly cool vapor and form spherical condensate droplets which will flow by gravity to and off the cone apices, and a plurality of longitudinally extending fins along the upper surface of said partition wall extending upwardly into said coolant chamber for substantially the full length thereof for conducting heat to a coolant fluid in said coolant chamber.

3,095,924
HYDRAULICALLY ACTUATED ORIENTING DEVICE
Thomas M. Frisby, Denver, Colo., assignor to Eastman Oil Well Survey Company, Denver, Colo., a corporation of Delaware
Filed Dec. 2, 1960, Ser. No. 73,348
3 Claims. (Cl. 166—4)

1. An orienting sub for insertion in a drill string for earth boring operations comprising: an outer tubular member having a bore therethrough; a tubular piston in said bore axially and radially movable therein and having at least one orifice in its wall near its lower end, an external annular shoulder having a downwardly facing notch therein, and a restricted opening at its lower end defining a first outlet passage constituting an outlet area for the passage of drilling fluid from said sub; the hollow of said

piston forming a passageway for drilling fluid through said sub; a tubular seal between said piston and said bore located below said external shoulder and having an internally recessed portion at its lower end to form an annular recess between its lower internal surface and said piston, the upper end of said seal and the lower surface of said external shoulder defining an annular race; means for indicating the orientation of said piston and said notch radially with respect to said outer tubular member; means for securing said piston in oriented position against radial movement; means for equalizing pressure between said race and the hydrostatic head of the well bore; a second outlet passage from said passageway defined by said orifices and said annular recess; sealing means carried by



said piston sealing said second outlet passage when the piston is in its upper position and opening said second outlet passage when the piston is moved to its lower position; spring biasing means between the bottom of said piston and said bore biasing said piston upwardly against the inlet pressure of drilling fluid in said passageway; and a ball in said race holding said piston in its upper position when the ball is not in said notch; whereby, when said ball is in said notch the piston will move to its lower position to open said second outlet passage to thereby increase said outlet area from said passageway resulting in a noticeable decrease in drilling fluid pressure in said passageway to indicate that the ball is in said notch.

3,095,925

CATALYTIC IN SITU COMBUSTION

John W. Marx, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 20, 1959, Ser. No. 828,029

6 Claims. (Cl. 166—11)

4. A process for depositing an iron-containing catalyst in a permeable carbonaceous stratum prior to producing same by in situ combustion, which comprises preparing an aqueous milky suspension of iron carbonate containing iron (calculated as Fe_2O_3) in the range of 0.1 to 5% by weight; introducing CO_2 into said suspension so as to form a clear yellow solution; maintaining said solution under CO_2 pressure so as to prevent precipitation of iron carbonate; injecting said clear yellow solution thru an injection well in said stratum under pressure into a substantial section of said stratum around said well; thereafter releasing pressure on said solution in said well so as to permit escape of CO_2 and precipitation of iron carbonate in said section; and thereafter driving remaining aqueous liquid from said section by displacing said liquid with drying gas injected thru a well in said stratum to dry and impregnate said section with iron carbonate.

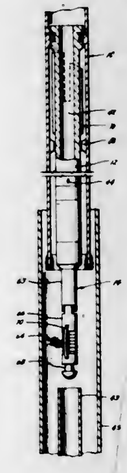
3,095,926

APPARATUS FOR RECOVERING OBJECTS IN A WELL

George E. Rush, Odessa, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware

Filed Sept. 3, 1958, Ser. No. 758,829

7 Claims. (Cl. 166—55)



1. In an apparatus for recovery of objects lodged in a well the improvement comprising, an elongated washover pipe adapted to be moved in a well, an elongated mandrel in said washover pipe, engaging means connected to the lower end of the mandrel adapted to engage the object in the well, said mandrel including an enlarged diameter portion, releasable connecting means releasably securing the mandrel in the washover pipe, a first J-slot in the enlarged diameter portion of the mandrel below its upper end, a lug on the inner wall of the washover pipe adapted to be slidably received in said first J-slot, a second J-slot in the mandrel below the enlarged diameter portion of said mandrel, and a lug connected to said engaging means and adapted to be slidably received in said second J-slot, and shearable means releasably securing the engaging means to the mandrel.

3. In an apparatus for recovery of objects in a well bore, said apparatus including a washover pipe, a mandrel movable in the washover pipe, and engaging means connected to the lower end of the mandrel adapted to engage the object in the well, the improvement comprising, an open ended cylinder at the upper end of the mandrel, a piston slidably mounted in the cylinder, a slip assembly slidably secured to the mandrel, said slip assembly including slips, said mandrel including a vertical slot adjacent the slip assembly, said mandrel being tapered adjacent its upper end to form a slip expander adapted to

expand the slips into engagement with the washover pipe upon relative movement of the slips towards the slip expander and to release the slips upon relative movement of the slips away from the slip expander, spring means urging the slip assembly toward the slip expander, a rigid connection secured between the piston and the slip assembly through the vertical slot whereby on application of fluid pressure on the piston the slip assembly is moved in one direction retracting the slips.

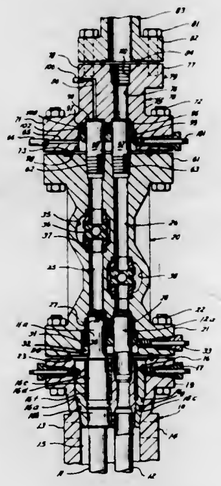
3,095,927

FLANGE-CONNECTED WELL HEAD APPARATUS

Allen F. Rhodes, Houston, Tex., assignor, by mesne assignments, to McEvoy Company, Houston, Tex., a corporation of Texas

Continuation of application Ser. No. 674,385, July 26, 1957. This application Nov. 25, 1960, Ser. No. 71,505

5 Claims. (Cl. 166—75)



3. Adapter device, comprising circular connection flange, a cylindrical body portion extending eccentrically above said connection flange and having a flow passage eccentrically therethrough, said flow passage also extending through said flange, an L-shaped passage through said flange and body portion having end openings at the lower face of said flange and at a side of said cylindrical body portion, a bolting flange formation forming the upper end of said cylindrical body portion and being circular and concentric with said flow passage and eccentric with said cylindrical body portion.

3,095,928

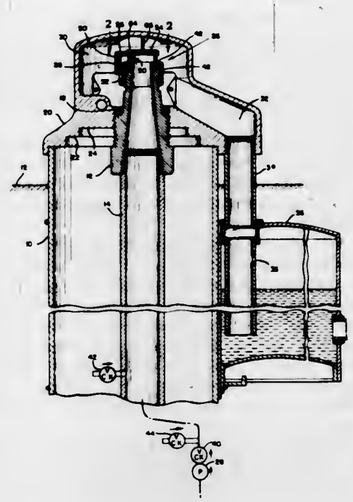
WELL SYSTEM

George F. Morrison, Fox Point, and Herman C. Frentzel, Milwaukee, Wis., assignors to The Morrison Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Dec. 8, 1960, Ser. No. 74,502

6 Claims. (Cl. 166—75)

1. The combination with a well system having a pump discharge pipe extending above grade and returning below grade, of a check valve located at the high point above grade, said check valve characterized by having a non-wettable valve seat of tetrafluoroethylene and a



valve member of silicon rubber, and means for draining the pipe on each side of the valve.

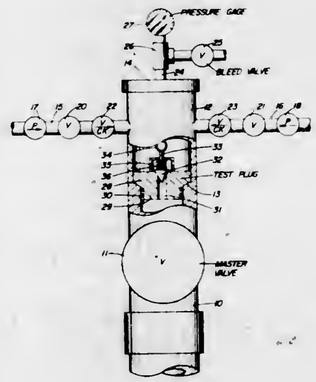
3,095,929

CASING HEADS FOR OIL WELLS

Jack C. McGuire and A. J. Speegle, Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware

Filed Jan. 14, 1960, Ser. No. 2,524

2 Claims. (Cl. 166—97)



1. A casing head and testing apparatus adapted for use in fracturing oil wells or the like comprising:

a body having an apertured portion;

independently removable closure means having coupling means for detachably and sealingly engaging said apertured portion of said body;

means for connecting a plurality of inlet conduits to said apertured body portion;

means for connecting said body to a well casing;
seat means within said apparatus disposed between said apertured body portion and an upper portion of said well casing;
test plug means engaging said seat means, said test plug means being freely and independently movable upwardly and away from said seat means;
packing means sealingly extending between the periphery of said test plug means and an inner peripheral portion of said body;
said test plug means further having fluid passage means extending therethrough to provide fluid communication between the interior of said well casing beneath said test plug means and said apertured portion of said body;
valve seat means in said passage means;
and check valve means between said valve seat means and said apertured body portion and movable toward said valve seat means in response to fluid pressure within said apertured body portion to prevent flow from said inlet conduits to the interior of said well casing beneath said test plug means and movable away from said valve seat means in response to fluid pressure in said well casing while said test plug means remains seated;
valved means for venting the interior of body prior to the removal of said closure means;
said valved means and said check valve means being cooperable to afford relief for fluid pressure in said well casing while said test plug remains seated;
grappling means on said check valve means extending toward said apertured body portion;
first abutment means carried by said check valve means;
second abutment means disposed outwardly with respect to said valve seat means from said first abutment means, spaced from and opposing said first abutment means, and carried by said test plug means, whereby, with said closure means removed from said apertured body portion, said grappling means may be engaged and moved away from said valve seat means to sequentially unseat said check valve means from said valve seat means and, through means of said first and second abutment means, move said test plug means from said seat means;
a plurality of inlet conduits connected to said apertured body portion;
a check valve in each inlet conduit biased to a closed position to prevent flow outward from said body through said conduits, and
pump means associated with each of said inlet conduits for supplying pressurized fluid to the interior of said body.

3,095,930
FLUID SAMPLERS
James W. Kisling III, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Apr. 27, 1959, Ser. No. 809,102
12 Claims. (Cl. 166—163)

1. A borehole apparatus for obtaining a representative fluid sample in a bore hole comprising: a housing adapted for passage through a borehole, said housing having a cylindrical bore; first and second pistons slidably and sealingly positioned in said bore and relatively movable between a collapsed position of adjacency and an extended, spaced-apart position to define therebetween a fluid sample-receiving chamber, said housing having a sample-admitting opening positioned to open between said pistons in their collapsed position to admit a fluid sample therebetween; means in said housing for controlling the rate of relative movement between said pistons upon admission of a fluid sample therebetween; and means for coupling said pistons to one another at said extended position of said pistons for joint movement relative to said sample-admitting opening to displace said pistons and



sample therebetween from access to said sample-admitting opening.

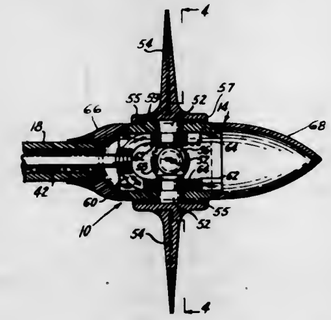
3,095,931
BLADE PITCH CONTROL MECHANISM FOR A HELICOPTER
Norman H. Peiffer, Scottsdale, Ariz., and Earle S. Proctor, Los Gatos, Calif., assignors to Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed May 10, 1961, Ser. No. 109,218
5 Claims. (Cl. 170—160.25)



1. For use in a helicopter provided with a lifting rotor having a generally vertical drive shaft and a plurality of generally radial blades connected with said drive shaft and movable about spanwise pitch changing axes, the combination comprising an azimuth assembly for controlling the pitches of said blades and including a nonrotatable azimuth ring and a swash plate rotatable about an axis fixed relative to the ring and normally coincident with the rotor axis, a first vertical link connected with the center of said swash plate for moving said azimuth assembly upwardly and downwardly along said rotor axis, a second vertical link connected to said nonrotatable ring and located in a transverse plane passing through said rotor axis for tilting said azimuth assembly about a longitudinal horizontal axis, a third vertical link connected to said nonrotatable ring and located in a longitudinal plane passing through said rotor axis for tilting said azimuth assembly

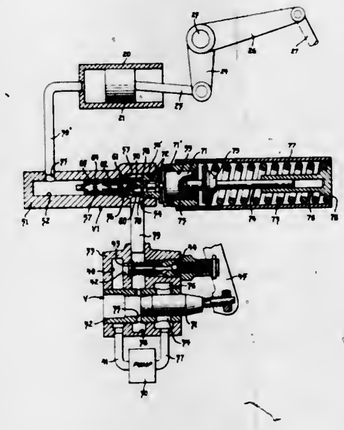
about a transverse horizontal axis, first and second and third bell cranks located below said azimuth mechanism and each of which bell cranks is supported for pivotal movement about a horizontal axis extending approximately 45° to said longitudinal plane, said bell cranks being associated respectively with said first and second and third vertical links and each of said bell cranks including a generally horizontal arm pivotally connected with the lower end of the associated vertical link and also including a generally vertical arm, and pilot operable means for moving said bell cranks about their horizontal pivot axes which means includes first and second and third generally horizontal links pivotally connected respectively to said vertical arms of said first and second and third bell cranks and which links extend generally perpendicular to said horizontal pivot axes of said bell cranks.

3,095,932
VARIABLE-PITCH BLADE PROPELLER
Christopher DeJ. Hercules, 4640 Q St. NW., Washington, D.C.
Filed Dec. 14, 1959, Ser. No. 859,535
2 Claims. (Cl. 170—160.43)



1. An adjustable pitch propeller having a hollow drive shaft and a hub casing mounted at the end of the drive shaft, said casing having a substantially square cross section,
a propeller blade extending radially from each side of said casing and having a flat circular base of maximum diameter rotatably mounted on the corresponding side of said casing,
a mounting shaft extending from each circular base through a bearing in said casing and having an arcuate rack or gear portion on one side at the inner end of said mounting shaft and an arcuate guide surface on the opposite side thereof,
an axially movable yoke member forming a yoke straddling each mounting shaft in said casing, each yoke comprising a pair of axially extending legs slidably mounted in angular recesses at the inside corners of said square casing and having opposing rack and flat guide surfaces coacting with the arcuate rack portion and arcuate guide surface respectively on the end of the corresponding mounting shaft for simultaneous adjustment of all the blades, each leg of each yoke serving also as the adjacent leg of the adjacent yoke to form a compact yoke member reenforced against distortion by the sides of said corner recesses,
substantially conically streamlined end portions fore and aft of said casing, the forward end portion being streamlined into the aft end of said hollow drive shaft,
a control rod extending freely through said hollow shaft in spaced relation thereto, and connected to said yoke member for controlling said adjustment of all the blades from the forward end of said hollow drive shaft, said rod having a substantially smaller diameter than the internal diameter of said hollow shaft, and
the base of each blade having an overhanging circumferential flange forming a substantially closed ball bearing outer race and the hub casing having a raised circular step to form a ball bearing inner race and ball bearings coacting with said races.

3,095,933
HYDRAULIC CONTROL SYSTEM
Ernest V. Bunting, Detroit, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Feb. 23, 1960, Ser. No. 10,126
13 Claims. (Cl. 172—491)

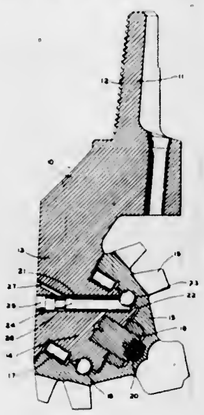


2. In an operating and control system for the vertically swingable implement hitch linkage of a tractor, in combination, a pressure fluid operated actuator mounted on the tractor and operatively connected to the linkage, main control valve means operable to direct fluid under pressure to said actuator to raise the linkage and implement attached thereto, said valve means including a flow restricting drop port and being further operative to vent said actuator to exhaust through said port to permit descent of the linkage and attached implement under the action of the load imposed on the linkage by the implement, and auxiliary valve means interposed between said actuator and said main valve means operative to restrict the exhaust of fluid from the ram to a rate such that the pressure of the fluid at the drop port is precluded from rising above a predetermined value whether the port is open or closed.

3,095,934
ROLLER BIT LUBRICATION
Richard E. Goetz, Long Beach, Calif., assignor to Smith Tool Co., Compton, Calif., a corporation of California
Filed Feb. 13, 1961, Ser. No. 88,843
2 Claims. (Cl. 175—227)

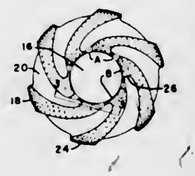
1. A well drilling bit comprising a body having a leg on which there is a journal, a roller cutter rotatable on the journal, opposed ball races on the exterior of the journal and on the interior of the cutter, balls between said races, there being a hole in the journal leading from the exterior of the leg to the ball race on the journal through which balls can be fed to between the races, a ball plug closing the outer entrance to the hole and extending inwardly to the race on the journal, there being a groove around the ball plug adjacent its outer end there being a clearance between the ball plug and the walls of

the hole, which clearance extends from the groove to the inner end of the ball plug, there being a single hole in the



leg leading from the outer side thereof to the groove on the ball plug.

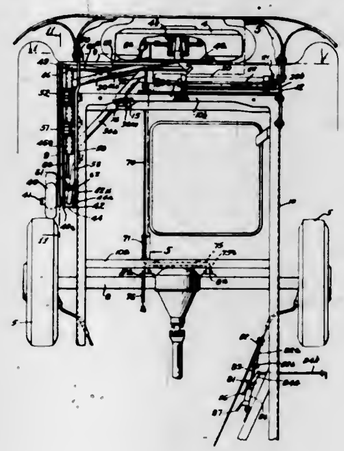
3,095,935
CORING BIT
Alexander B. Hildebrandt and Harold C. Bridwell, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware
Filed Sept. 25, 1958, Ser. No. 763,379
13 Claims. (Cl. 175—330)



6. In a rotary coring bit having a body which possesses a drilling face of a character to engage the bottom of a hole in which the bit is operating, a fluid conduit means therethrough and an axial core passage extending longitudinally therethrough, the improvement which comprises a fluid nozzle in fluid communication with the fluid conduit means and positioned in said drilling face closely adjacent said core passage with said nozzle being of a character to discharge fluid in a path substantially tangential to the periphery of said core passage.

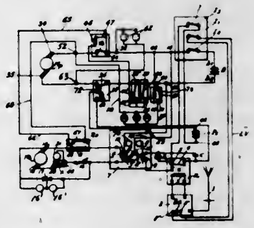
3,095,936
VEHICLE LIFTING AND TRAVERSING DEVICE
Brooks Walker, 1280 Columbus Ave., San Francisco 11, Calif.
Original application Feb. 17, 1959, Ser. No. 793,929. Divided and this application Oct. 6, 1960, Ser. No. 71,853
3 Claims. (Cl. 180—1)

1. An automotive vehicle comprising a frame supported on front and rear wheels; a lifting and traversing device on said frame incorporating a spare wheel adjacent to and rearward from said rear wheels; an engine-driven hydraulic pump supported by said frame; hydraulic means on said frame for lowering said spare wheel into contact with a roadway, for lifting the rear end of said vehicle on said lowered spare wheel so that the vehicle can be traversed thereon, for lowering said vehicle, and for raising said spare wheel out of contact with said roadway, separate hydraulic means on said frame and acting against one rear wheel for restraining said one rear wheel against movement, means communicating with said pump and in open communication with both said first mentioned



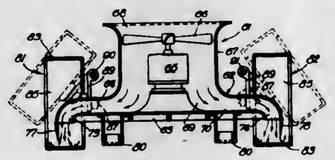
and said separate hydraulic means for the simultaneous actuation of both said hydraulic means and the holding of said one rear wheel against movement when said spare wheel is in firm contact with said roadway just before said vehicle is lifted.

3,095,937
TELECONTROL TOY VEHICLE
Jacques Vulliet-Durand, 91 Promenade des Anglais, Nice, Alpes-Maritimes, France
Filed Sept. 22, 1958, Ser. No. 762,606
Claims priority, application France Oct. 2, 1957
12 Claims. (Cl. 180—2)



1. A driving system for a toy vehicle including steerable wheels under the control of electromagnetic waves transmitted over a constant wave length comprising a wireless receiver for receiving the electromagnetic waves, a receiving relay controlled by said wireless receiver, a first circuit means including an electromagnetic coil controlled by said receiving relay, a second circuit including a reversing switch and steering motor for controlling the angular setting of said steerable wheels, means under control of said electromagnetic coil for moving said reversing switch from one position to another position to drive said steering motor in opposite directions, a third circuit including a switch and propelling motor for propelling the vehicle in forward and reverse directions, and means operatively connected to said receiving relay and controlled thereby to maintain said switch in said third circuit closed in the absence of transmitted electromagnetic waves.

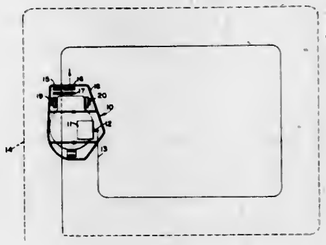
3,095,938
GROUND EFFECT MACHINE EQUIPPED WITH AUXILIARY SELECTIVELY ADJUSTABLE GROUND ENGAGING PROPELLING MECHANISMS
William R. Bertelsen, Neponset, Ill., assignor, by direct and mesne assignments, of twenty-five percent to William E. Martin, Kewanee, Ill., and twenty-five percent to Martin Engineering Company, Neponset, Ill., a corporation of Illinois
Filed Dec. 3, 1959, Ser. No. 857,212
11 Claims. (Cl. 180—7)



11. A mobile vehicle for travel over generally level and inclined ground surface areas comprising, in combination, selectively operable mobile apparatus to support and provide the means to propel the vehicle over the ground areas, one portion of said apparatus comprising an air pressure system with air discharge means to establish a supporting cushion of air beneath the vehicle to sustain said vehicle for motion in a given raised position above the ground, another portion of said apparatus comprising mechanical drive mechanisms for ground engagement mounted upon the vehicle and including actuation means to bodily displace such drive mechanisms between elevated inoperative locations situated above the lower structural limits of the vehicle and lowered ground contacting locations with the drive mechanisms occupying maximum effective positions spaced below the lower structure limits of the vehicle for the physical off the ground support of said vehicle structure, said one air pressure portion of said apparatus being used for normal travel over generally level ground areas and said other drive mechanism portions of said apparatus being employed for travel over inclined ground areas, said one air apparatus further providing an appropriate air cushion to maintain said vehicle at a given elevated position with respect to the lower structural limits thereof with the vehicle raised sufficiently to permit the actuating means for said drive mechanisms to freely and bodily swing such mechanisms between the aforesaid raised inoperative and lowered ground contacting positions that are below the level of the lower limits of the vehicle structure; such drive mechanisms, when lowered, providing a substitute mechanical maneuverable means for the air cushion maneuverable means of the vehicle at such times when the latter encounters inclined ground terrain of a nature presenting topography to impede the progress of the vehicle when airborne, said mechanical drive mechanisms each including power driven ground supported track assemblies each having air entrapping surface portions subjected to air pressure to enhance the effective operation of the tracks, said one air apparatus portion providing the operative means whereby to supply air under pressure to the air entrapping portions of the track assemblies.

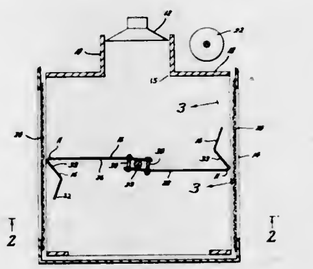
3,095,939
GUIDANCE APPARATUS
Edward K. Hine, North Caldwell, N.J. (Avery Road, Garrison, N.Y.)
Filed Apr. 13, 1960, Ser. No. 21,923
8 Claims. (Cl. 180—79.1)

1. Apparatus for automatically steering an automotive vehicle along a path defined by an electrically conductive fugitive ground trace, comprising a common ground contacting probe mounted on said vehicle and arranged to maintain continuous physical contact with the said ground trace, left and right trace sensing probes mounted symmetrically on said vehicle with respect to said common probe along an axis transverse the desired ground path for said vehicle, said trace sensing probes being mounted a predetermined distance apart and being arranged to maintain continuous contact with the respective left and



right ground surfaces adjacent said trace, means for electrically energizing said probes to produce separate current flow between the said common probe and said left and right probes respectively, circuit means for producing left and right steering control signals from the respective currents flowing to the said left and right sensing probes, and electrically operable steering means responsive to said left and right steering control signals for guiding said vehicle along a path defined by the said trace.

3,095,940
ACOUSTICAL VIBRATO APPARATUS
Harris Herman Santi, La Porte, Tex., assignor to Rototone, Inc., Houston, Tex., a corporation of Texas
Filed May 28, 1959, Ser. No. 816,610
4 Claims. (Cl. 181—27)

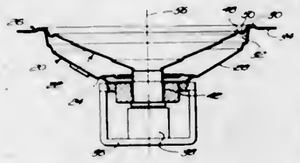


1. In a rotatable vibrato sound producing apparatus having a speaker in a housing, such speaker having an opening, a rectangular blade deflector having first and second ends, and having a width sufficient to extend across the speaker, said blade deflector being rotatable about an axis positioned in front of and parallel to the plane of the speaker opening, and means operatively associated with the blade deflector for rotating said blade deflector, the improvement comprising,

two flanges, one of which is connected to the first end and the second of which is connected to the second end of the blade deflector, the dimension of the flanges at the line of connection to the blade deflector being the same as the blade deflector,

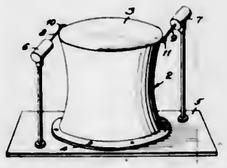
the entire body of said flanges extending rearwardly from the blade deflector relative to the direction of rotation, the distance of said rearward extent being no greater than the speaker opening, but being of a distance sufficient to increase the loading effect on the speaker.

3,095,941
LOUD SPEAKER CONSTRUCTION
Joseph A. Hassan, South Weymouth, Mass., assignor of one-half to Fauthal A. Hassan, South Weymouth, Mass.
Filed May 9, 1957, Ser. No. 658,095
2 Claims. (Cl. 181—32)



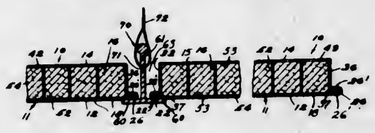
1. A loudspaker comprising a frame having a forward peripheral and a rearward medial portion, a conical diaphragm and a loudspeaker coil, the apex of said diaphragm being connected to said loudspeaker coil, said diaphragm including a piston portion and a convolution portion integral therewith, said convolution portion integrally including an outwardly convex ridge extending from said piston portion and an outwardly concave trough, the outer extremity of which is connected to said forward peripheral portion, the length from the extremity of said piston portion to the apex of said ridge being less than the length from the apex of said trough to said forward peripheral portion, an integral extension from said forward peripheral portion, the forward face of said extension lying substantially in a plane rearward of the plane in which lies the forward face of said peripheral portion.

3,095,942
SONIC VIBRATOR
Wilfred E. Thibodeau, Falls Church, Va.
(361 NE. Felton Ave., Port Charlotte, Fla.)
Filed Jan. 23, 1959, Ser. No. 788,563
19 Claims. (Cl. 181—32)



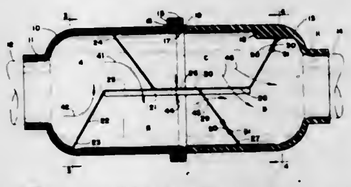
1. A sonic vibrator comprising a hollow structure of generally circular cross section, having substantially concave side walls of generally arcuate form in their normal, unstressed state, and means operatively associated with said structure, and arranged to subject said structure to torsion about its axis.

3,095,943
ACOUSTICAL STRUCTURE
William G. Kemp, Pontiac, Mich., assignor to The Soundlock Corporation, Hazlehurst, Ga., a corporation of Delaware
Filed May 29, 1961, Ser. No. 113,451
Claims priority, application Canada Sept. 19, 1960
6 Claims. (Cl. 181—33)



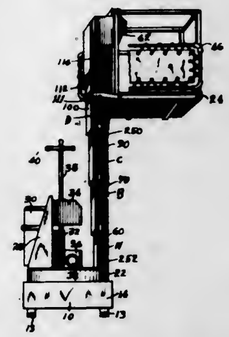
5. An acoustical panel comprising a casing and sound deadening means within said casing, said casing including first and second cover members, said first cover member comprising a substantially flat first sheet, said second cover member comprising a substantially flat second sheet in spaced parallel relation to and coextensive with the first sheet, said sound deadening means including a relatively rigid honeycomb core forming a layer between and substantially coextensive with said sheets, the opposite surfaces of said honeycomb core being adhered directly to the opposed surfaces of said sheets to prevent said sheets from sagging or separating from said honeycomb core, sound deadening material in the cells of said honeycomb core, said second cover member having extensions projecting laterally outwardly beyond opposite sides of said second sheet, said first cover member having extensions projecting laterally outwardly beyond opposite sides of said first sheet alongside the extensions of said second cover member, the extensions of said cover members being rigidly secured together to prevent separation of said members and to prevent delamination of said members and said core.

3,095,944
MUFFLER
Jarvis C. Buxton, Portland, Oreg., assignor to Griffith Rubber Mills, Portland, Oreg., a corporation of Oregon
Filed Oct. 27, 1960, Ser. No. 65,346
11 Claims. (Cl. 181—70)



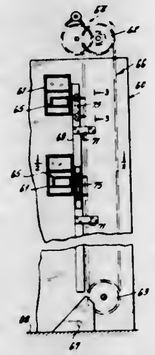
1. A muffler comprising a pair of resilient rubber shells connected together to form a casing having side and end walls, a baffle plate confined in said casing, outstanding deflectors on said plate braced against opposite side walls, and angular end portions on said baffle plate braced against opposite end walls to prevent transverse or endwise movements of said baffle plate in said casing.

3,095,945
OVERHEAD SERVICE UNIT
Maurice E. Mitchell, Muncie, Ind., assignor to Lift-A-Loft Corporation, a corporation of Indiana
Filed Dec. 22, 1959, Ser. No. 861,240
24 Claims. (Cl. 182—14)



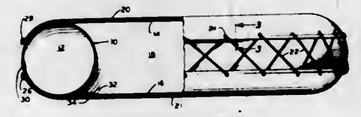
20. An overhead service vehicle, comprising a mobile base mounted on rear drive wheels and front steerable wheels and of compact configuration and low height less than of the order of 2 feet, a turntable rotatably mounted on the base between the wheels and having a portion extending below the tops thereof, said turntable being rotatable on the base through 360° of continuous movement in either direction about a central vertical axis, a mast fixed in upstanding position on the turntable and extending upward relative to and above the base, said mast having a predetermined clearance height for passage upright through doorways of predetermined height, a platform mounted on the upright mast for up and down movement thereon and extending outward from one side of the mast and radially of said central turntable axis and beyond the turntable, the platform having a length to extend a substantial distance beyond the sides of the base and to extend beyond at least one end of the base when swung with the turntable about said central axis, said platform having a lowered position closely above the low base to permit a workman to mount the platform from the floor and to work thereon at levels substantially contiguous with those which the workman can reach from the floor, and being positionable up and down along the mast between such lowered position and a top position substantially at the top of the mast, said platform being swingable with the turntable through 360° of continuous movement in either direction about the central turntable axis at all levels between its said lowered position and its said top position, whereby to give working access to a full circular area at all levels of the platform, drive motor means in the base drivingly connected to the drive wheels, swivel and lift motor means on the turntable operatively connected for rotating the turntable on the base and for raising the platform on the mast, self-contained electric supply means for energizing said motor means and mounted on the turntable for rotation therewith as counterbalance means for the platform, means to connect the turntable-mounted electric supply means to the base-mounted drive motors, control means on the platform for controlling said swivel and lift motor means, drive control means operable from the platform in a lowered position for energizing the drive motors from the electric supply means, and steering means operable from the platform in a lowered position for steering said front wheels, whereby a workman can mount the platform from the floor and while remaining thereon can drive the vehicle through door- and passage-ways to work locations and can lift the platform and rotate the turntable and platform to position himself for work at all levels of the platform over a full circular area at each such location.

3,095,946
FIRE ESCAPE
Herbert Fisher, 160 Beach 139th St., Belle Harbor, N.Y.
Filed June 25, 1962, Ser. No. 204,891
4 Claims. (Cl. 182—43)



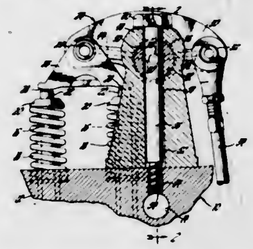
4. In a fire escape disposed adjacent to the wall of a building and having an endless chain engaged with upper and lower sprockets, and means for limiting the speed of rotation of said upper sprocket, the combination comprising: a platform disposable in the vicinity of a plurality of vertically aligned windows provided in said wall; said platform including a horizontal passenger-carrying plate provided with a supporting tongue depending from a vertical block; said platform being vertically displaceable by said chain; the plane of said chain being parallel to said wall; an upper and lower pair of rollers supported by said block and in contact with a vertical track during vertical displacement of said platform; said vertical track including a pair of U-shaped members housing said block and rollers; said vertical track being supported by said wall; a pair of parallel fingers depending from said block and removably engageable with the links of said chain; said fingers being successively ejectable from the links of said chain by the teeth of said lower sprocket; and an inclined chute disposed in the vicinity of said lower sprocket and adapted to receive said platform upon ejectment of said fingers by the teeth of said lower sprocket.

3,095,947
EXERCISE DEVICE
Gerald H. Beaulaurier, 42 22nd Ave., San Mateo, Calif.
Filed May 12, 1960, Ser. No. 28,774
1 Claim. (Cl. 182—139)



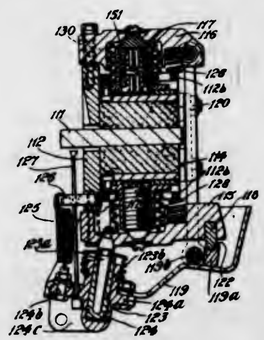
In a trampoline exercise device:
(*a*) an endless flexible tube of substantially uniform cross-section disposed in the shape of a ring to define an annular chamber within the tube;
(*b*) the tube being portable and adapted to be placed in a horizontal position relative to a floor or ground;
(*c*) a resilient top diaphragm in the form of a circular sheet sealed around its periphery to the top face of the tube to bridge across the tube;
(*d*) a resilient bottom diaphragm, also in the shape of a circular sheet, sealed around its periphery to the bottom face of the tube to bridge across the tube;
(*e*) the diaphragms being spaced apart and coacting with the tube to define a sealed central chamber;
(*f*) a filling valve for the annular chamber of the tube, and a separate filling valve for the central chamber, whereby these chambers may be inflated and the pressures within the chambers can be separately adjusted to give the trampoline exercise device the desired resiliency;
(*g*) the top diaphragm normally being substantially flat and disposed tangentially to the transverse curvature of the top face of the tube in all radial cross-sections of the latter, whereby a substantially flat resilient support is provided;
(*h*) a flexible bottom net secured over the underneath surface of the bottom diaphragm to protect the latter from being damaged by the floor or ground;
(*i*) a flexible top net secured over the exposed upper surface of the top diaphragm to protect the latter from being scuffed by the user; and
(*j*) the top net being entirely unobstructed from above, whereby the user may bounce thereon with freedom of movement to perform various acrobatic stunts.

3,095,948
MOUNTING AND LUBRICATION SUPPLY MEANS FOR ENGINE VALVE ACTUATING MECHANISM
Gilbert M. Lahr, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 9, 1961, Ser. No. 81,288
5 Claims. (Cl. 184—6)



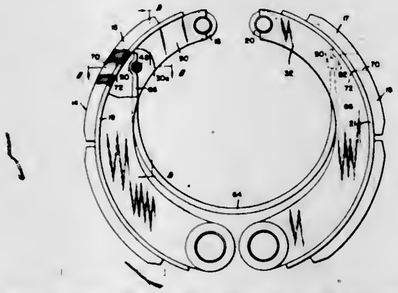
4. In an internal combustion engine having a lubricant supply gallery extending therethrough and a double pitch threaded hole intersecting said gallery, valve actuating mechanism including a rocker arm, means including a bracket member for pivotally journalling said rocker arm in spaced relation to said engine, said bracket member having a bolt hole and a bolt extending therethrough and defining a passage therebetween connected to supply lubricant to the means pivotally journalling said rocker arm, said bolt having a single pitch threaded end portion threaded in said gallery intersecting hole and securing said bracket member to the engine, said single and double pitch mating threads defining a helical fluid metering passage interconnecting the lubricant supply gallery with said bolt and bracket defined passage.

3,095,949
IMPROVEMENTS IN DISC BRAKES
Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, a British company
Filed Mar. 24, 1960, Ser. No. 17,377
Claims priority, application Great Britain Apr. 21, 1959
2 Claims. (Cl. 188—73)



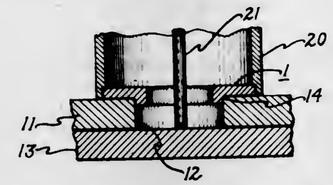
1. A disc brake comprising a rotatable disc, a non-rotatable structure comprising a pair of supporting elements one on each side of and spaced from a radial side of said disc and extending on a common chord of said disc to project beyond the periphery of said disc and united to each other beyond the said periphery to form a base plate, a pair of friction elements, one on each side of said disc, a guiding and stress supporting structure for said friction elements comprising a pair of guiding and stress supporting members rigidly fixed on both said supporting elements and extending from the side of said supporting elements remote from the axis of said disc to a distance beyond the periphery of said disc, the guiding and stress supporting members being spaced from each other to form a guide passage for each of said friction elements transverse to the plane of said disc and open to said disc in which said friction elements are retained and guided in movement to and from the braking surfaces of said disc and a pair of brake actuating means comprising a pressure plate pivoted to the base plate, an operating lever fulcrumed to one of the pressure plates, and a link situated beyond the periphery of the disc connecting the lever to the other pressure plate, angular movement of the operating lever being effective to move both pressure plates toward the disc and thereby force the friction elements into braking engagement with the disc, and a wear compensating device transmitting pressure from said pressure plate to said friction pad assembly to move said friction pad assembly against said disc and to withdraw said assembly upon movement in the reverse direction, said wear compensating device comprising a hollow, internally threaded, outer cylinder, an externally threaded inner cylinder threaded into said outer cylinder, one of said cylinders being rotatably connected to said pressure plate and the other cylinder being connected to the friction pad assembly, and a spring torsioned to rotate said inner cylinder outwardly of said outer cylinder when said pressure plate moves away from said friction pad assembly.

3,095,950
FLAT, TAPERED HORSESHOE TYPE RETURN SPRING AND BRAKE SHOE ASSEMBLY
Walther F. Scheel, Detroit, Mich., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Filed June 17, 1960, Ser. No. 36,927
1 Claim. (Cl. 188—78)



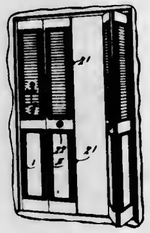
In a brake shoe and return spring assembly wherein two brake shoes are pivoted at adjacent ends and have their other ends adapted to be operably connected to an actuator with each brake shoe comprising an arcuate table, brake lining secured to said table on the convex side thereof and parallel spaced apart dual webs extending from the concave side of said table, anchor pins fixed between said webs near the actuator ends of said shoes, a substantially U-shaped brake shoe return spring having its free ends extending between the webs of the respective shoes and formed with inwardly opening sockets for hookingly engaging said anchor pins, said spring being suspended and supported entirely from said anchor pins so that it is intermediately free of restraint during flexure and stressed on the assembly to urge the actuator ends of said shoes toward each other, and cooperating transverse aligned apertures in said shoes and extending through said brake linings and tables substantially at the vicinity of said pins to enable the introduction of a tool for expanding said spring to permit said sockets to be hookingly engaged with said anchor pins in the assembly of said spring on said brake shoes.

3,095,951
ARTICLE AND METHOD FOR JOINING DISSIMILAR MATERIALS
Robert M. Rood, Pittsfield, Mass., and Philippe Villers, Bellows Falls, Vt., assignors to General Electric Company, a corporation of New York
Filed Jan. 11, 1960, Ser. No. 1,682
4 Claims. (Cl. 189—36)



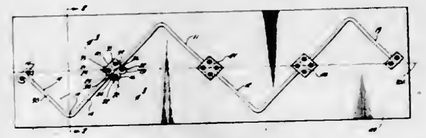
4. A joint between members composed of dissimilar materials comprising:
(*a*) a first joint member,
(*b*) a second joint member composed of easily weldable material,
(*c*) said first joint member being composed of material incompatible with said easily weldable material,
(*d*) an aperture through said first joint member defining a sharp corner,
(*e*) a washer composed of material compatible with said easily weldable material contacting said first joint member and surrounding said aperture, and
(*f*) a plug of fused material extending into said second joint member and filling said aperture,
(*f'*) said plug being fused to said second joint member and to said washer,
(*f''*) said plug comprising easily weldable material derived from a region of said second joint member adjacent said aperture and compatible material derived from a region of said washer in said aperture adjacent such sharp corner, and being substantially free of said incompatible material of said first joint member.

3,095,952
DOOR
Ralph E. Ford, Harper Woods, Mich., assignor to William A. Ternes
Filed Nov. 20, 1959, Ser. No. 854,338
10 Claims. (Cl. 189—46)



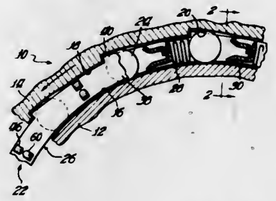
1. A decorative steel door construction comprising a front panel member, a louvered section formed in said panel member, a plurality of louvers integrally formed in said louvered section of said panel member, moulding strip means secured to said panel member around said louvered section, said moulding strip means comprising a pair of spaced wing portions, a central web portion connecting said wing portions, said wing portions defining longitudinally extending grooves on each side of said central web portion, said moulding strip means being connected to said panel member through said central web portion, the ends of said wing portions being reversely bent and extending outwardly beyond the plane of said central web portion opposite said grooves whereby when said central web portion is secured to said panel member said wing portions will be resiliently outwardly flexed to obtain a tight sound deadening engagement between said wing portions and said panel member, said central web portion being fastened to said panel member between said louvers along the side edges thereof, one of said wing portions being located to engage said louvers adjacent said panel member, and the other of said wing portions being located to engage said panel member adjacent said louvers.

3,095,953
GRILLE
Jan de Swart, 5833 Eucalyptus Lane, Los Angeles, Calif.
Filed Feb. 17, 1961, Ser. No. 90,028
8 Claims. (Cl. 189—82)



1. A grille comprising a plurality of geometrically congruent links, each link comprising an elongated web and a head on each end of the elongate extent of the web, said heads being symmetrical about the mid-point of the elongate extent of the web, each head defining at least one aperture extending through the head with their axes parallel and perpendicular to the elongate extent of the web, said links being disposed in end-to-end relation with their heads adjacent, connecting means disposed in the apertures in adjacent heads of adjacent links for connecting the links together, said connecting means including pins disposed in such apertures and having exterior surfaces in engagement with the surfaces defining the apertures in the heads, and means for effecting resilient displacement of the pins and the apertures relative to each other responsive to disposition of the pins in the apertures for biased frictional engagement between the surfaces of the pins and the surfaces of the apertures.

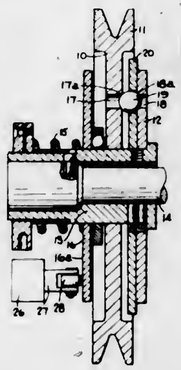
3,095,954
NON-PHASED ONE-WAY ROLLER CLUTCH
Ernest A. Ferris, Downers Grove, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 28, 1961, Ser. No. 106,320
6 Claims. (Cl. 192—45)



1. In a unitary preassembled clutch unit for a one-way engaging device having inner and outer races said clutch unit comprising: a cage member defined by a pair of axially spaced radially extending side rings, a plurality of crossbar means connecting said side rings, means formed

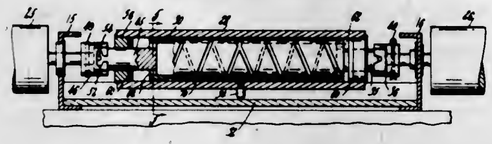
on one side of each of said crossbar means defining retaining means for retaining wedging elements, means on the other side of each of said crossbar means for attaching spring means thereto, said supporting means comprising means defining a slot on said crossbar means and adapted to receive one end of a spring means, a plurality of wedging elements disposed in said cage member and individual spring means attached in said slot means of said crossbar means and disposed respectively between a crossbar means and a wedging element yieldably urging said wedging element into engagement with said retaining means.

3,095,955
OVERLOAD CLUTCH OR TORQUE LIMITING DEVICE
Olaf J. B. Orwin, Quinton, Birmingham, England, assignor to Fisher & Ludlow Limited, Tipton, England, a British company
Filed Apr. 13, 1961, Ser. No. 102,885
Claims priority, application Great Britain Apr. 14, 1960
4 Claims. (Cl. 192—56)



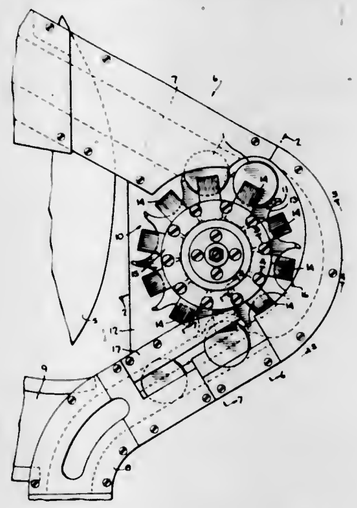
1. An overload clutch comprising
(*a*) a driving clutch member;
(*b*) a driven clutch member, said members being rotatable about a common axis and having
(*c*) opposed plane faces, said faces defining
(*d*) two like sets of ball receiving bores, all of said bores having the same radial distance from said axis and said sets of bores being in register with one another in one relative rotational position of the two clutch members;
(*e*) a plurality of torque transmitting balls each of a diameter greater than the diameter of said ball receiving bores at said faces;
(*f*) means yieldingly urging said opposed faces towards one another whereby said balls are in torque transmitting engagement with two registering ones of said bores when the two sets of bores are in said one relative rotational position;
(*g*) a ball retaining means rotatable with one of said clutch members and arranged between said opposed faces, said ball retaining means defining
(*h*) a plurality of ball retaining slots, said slots each having one part at the same radial distance from said axis as said bores and another part at a different radial distance from said axis whereby said other part of the slots is out of register with the bores at all relative rotational positions of the clutch members, and said balls being freely advanceable along said slots when the balls are out of torque transmitting engagement with said bores.

3,095,956
DECELERATOR
Thomas A. McGill, South Hamilton, Mass., assignor to J. W. Greer Company, Wilmington Mass., a corporation of Massachusetts
Filed Apr. 12, 1962, Ser. No. 187,005
3 Claims. (Cl. 193—35)



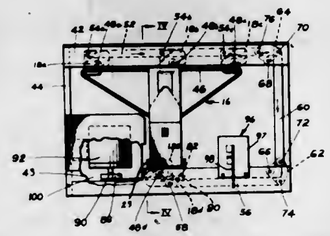
1. In a roller conveyor having a series of idler rollers disposed in sequential parallel relation for transferring a load over said rollers, the combination of a plurality of decelerator rollers spaced among said idler rollers, each said decelerator roller being constructed and arranged to have a non-slip load bearing surface, and a decelerator unit comprising a shaft, a rotor cylinder secured to said shaft, a stator cylinder disposed concentrically over said rotor cylinder and having fluid tight bearings at each end thereof on said shaft, said concentric stator and rotor cylinders having cooperating damping peripheral surfaces spaced from one another so that increasing relative velocity between said surfaces produces a damping effect therebetween, means on said conveyor for supporting said shaft on the same axis with a selected one of said decelerating rollers, means for connecting said shaft to said axially aligned decelerator roller, means securing said stator cylinder in fixed angular position on said conveyor, and a damping fluid disposed between the peripheral damping surfaces of said cylinders of a viscosity chosen to produce said damping effect.

3,095,957
CAP ALIGNING MECHANISM
Cecil P. Roberts and Frederick V. Hildebrandt, Lancaster, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,579
14 Claims. (Cl. 193—43)



1. In a mechanism for inverting caps which are improperly positioned, a rotating star wheel, a hopper synchronously rotated with said star wheel, means for delivering closures from said hopper to the pockets of said star wheel, means for permitting properly positioned closures to pass through the star wheel unaffected, magnetic means associated with said star wheel for raising improperly positioned closure caps toward a substantially vertical position, cam means along the path of said rotating star wheel to invert said vertically positioned caps, means for removing said caps from said star wheel, and means for returning excess caps to said hopper.

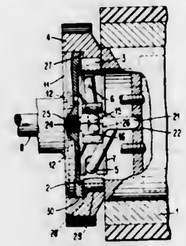
3,095,958
COAT HANGER DISPENSER
John H. Whitman, Grandville, Mich., assignor to Applied Arts Corporation, a corporation of Michigan
Filed Mar. 30, 1961, Ser. No. 99,389
10 Claims. (Cl. 194—10)



1. A hanger dispensing apparatus comprising the combination of a housing; a plurality of horizontally rotatable hanger package supports pivotally mounted on two sides of said housing; a stack of packaged hangers resting on said support; each package having at least one hanger therein and extending under the hook of said hanger, and around the central portion of the base of said hanger; at least two of said supports being on one side of said housing and under said hanger base and one of said supports centrally placed on the opposite side of said housing under the packaged hook portion; each of said supports having a first tang portion projecting toward the opposite side of said housing for normally supporting packaged clothes hangers; a second separating tang on each of said supports on an adjacent lateral side from said first tang so that when said support is rotated said second tang will project toward the opposite side of said housing while said first tangs recede therefrom; said second tangs being a distance above said first tang equal to the thickness of a hanger package; linkage means connecting said plurality of supports to a motor means; motor means operatively connected to said linkage means to cause said supports to rotate and thus cause said first tangs to recede toward the adjacent housing wall and thus create a central opening through which a hanger package may pass while simultaneously causing said second separator tangs to move toward the opposite side of said housing; switch means to actuate said motor means; and a guide means for packaged hangers above said supports; said guide means including a pair of vertical guide elements straddling said supports under said hanger base and holding the V-shaped ends of the packaged hangers aligned, and also including a U-shaped channel guide element positioned above said hook portion support and holding the packaged hooks aligned.

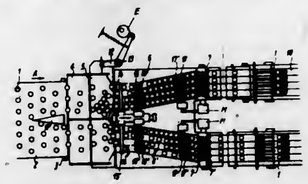
3,095,959
INDEXING CLUTCHES
Thurston H. Toeppen, Mahopac, N.Y. (R.D. 3, Lois Lane, Poughkeepsie, N.Y.)
Filed Feb. 19, 1962, Ser. No. 173,986
7 Claims. (Cl. 197—123)

1. An indexing clutch comprising a principal support member, an expandable clutch ring surrounding said support member, a mating external friction ring mounted for relative rotation with respect to said clutch ring, and engaging means for selectively interlocking said clutch ring, said external ring and said support member, said engaging means comprising a symmetrical pair of cam elements in rolling contact with each other and with flat cooperating surfaces of said clutch ring, means mounting



said cam elements loosely on said support member, a slidable operating member mounted within said support member for coaxial movement relative thereto, and means responsive to the axial movement of said operating member for simultaneously rolling said cam elements along said cooperating surfaces of said clutch ring to expand the clutch ring into frictional engagement with the external ring.

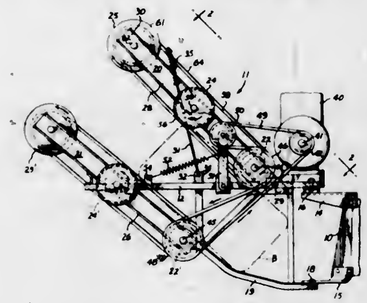
3,095,960
DEVICE FOR ARRANGING IRREGULARLY SUPPLIED FLAT ARTICLES
Pierre Luginbühl, Neuhausen am Rheinfall, Switzerland, assignor to Schweizerische Industrie-Gesellschaft, Neuhausen am Rheinfall, Switzerland
Filed Nov. 10, 1960, Ser. No. 68,393
Claims priority, application Switzerland Nov. 20, 1959
6 Claims. (Cl. 198—30)



6. In apparatus for aligning irregularly supplied flat objects, particularly biscuits, and advancing said objects in the aligned order, means defining a track inclined from a supply end to a delivery end thereof sufficiently to cause said objects to slide by gravity thereon from said supply end to said delivery end, means on said track defining a plurality of channels extending substantially from said supply end to said delivery end of the track, each of said channels having a width sufficient to accommodate one of said objects with a slight lateral clearance, rotary means extending across said plurality of channels adjacent to said delivery end of the track and having its axis of rotation substantially transverse to said channels, a plurality of substantially radial pins on said rotary means arranged in separate circumferential rows coinciding with said channels and having such a length and circumferential spacing as to successively extend into said channels into engagement with consecutive ones of said objects therein as said rotary means rotates, whereby upon cessation of the rotation of said rotary means advance of the objects in the channels past said engaging pins is prevented, drive means for said rotary means, first control means disposed in the lower range of said track and including means for sensing a gap in any one of said rows of aligned objects in said channels and for stopping said drive means in response to the sensing of

such a gap, and second control means adapted to restart said drive means following said stopping thereof, whereby delivery of said objects from said track is automatically interrupted when any of said channels is devoid of a row of interengaging objects, and automatically resumed when said void has been filled, said second control means being disposed in a higher range of said track than said first control means and includes sensing means for sensing the presence of one of said objects at rest in each of said channels and for starting said drive means in response to the sensing of such presence, and inclined slide means at the supply end of said track, means for oscillating said slide means transversely of said track, a plurality of laminations forming between them continuations of said channels over the supply end of said track, and means for oscillating said laminations longitudinally of said track.

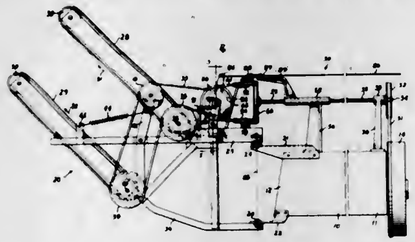
3,095,961
BALE THROWER
James H. Hollyday, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Sept. 30, 1960, Ser. No. 60,254
3 Claims. (Cl. 198—128)



1. A bale thrower mountable on the discharge end of a hay baler to receive discharged bales and traject them distantly from the baler, said thrower comprising an upper and a lower conveyor coextensive and engageable respectively with the top and bottom sides of each bale discharged from the baler, each conveyor having a plurality of high speed power driven rollers spaced relative to each other and successively engageable with each bale and including a first roller adjacent the baler and at least one other roller more remote therefrom, means rotating the first roller in each conveyor at a given speed and the other roller of each conveyor at a faster speed whereby to progressively increase the application of throwing force to each bale, the space between said first roller and said remote roller of each conveyor being such relative to the lengths of said discharged bales that when the bales engage the remote rollers portions of the bales are in engagement with the first rollers, the rollers in the upper conveyor being driven at substantially the same speed as the corresponding rollers in the lower conveyor and both conveyors cooperating in imparting a throwing force to each bale.

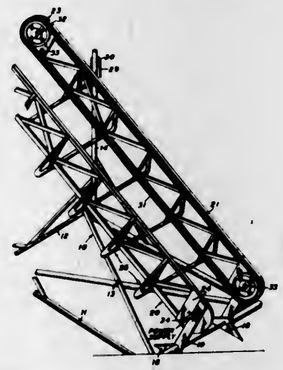
3,095,962
CONVEYING APPARATUS
James H. Hollyday, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Jan. 11, 1961, Ser. No. 82,015
10 Claims. (Cl. 198—128)

1. In combination, a baler having a bale case, a bale thrower at a rearward end of said bale case to receive bales therefrom and throw them away from the baler, means mounting said thrower on said bale case for lateral swinging movement about a vertical pivot axis and to each side of a neutral position whereby the direction of throw is variable, said pivot axis being located along a plane generally through the longitudinal center of said bale case, drive means on said baler, a drive sheave rotatably mounted on said bale case and connected to said drive means, a driven sheave rotatably mounted on said thrower, the location of said driven sheave relative to said drive sheave changing responsive to lateral swinging movement of said thrower, an endless belt connecting said drive and driven sheaves and having a pair of spaced



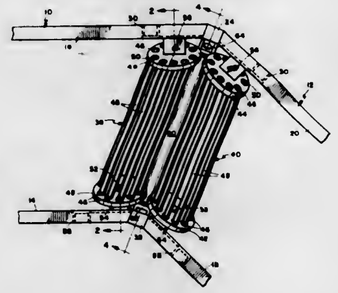
reaches, a pair of idlers on said thrower and rotatable about axes in said plane when the thrower is in said neutral position, said axes being spaced from said pivot axis, one reach of said endless belt extending around one of said idlers and the other reach around the other idler, each idler having a particular portion adjacent the periphery thereof around which said belt travels located generally in vertical register with said thrower pivot axis and the length of belt travel from said drive sheave to said driven sheave and around said idlers remaining substantially constant when the thrower swings laterally whereby the drive to the thrower is unimpaired by such swinging.

3,095,963
APPARATUS FOR MOVING FOWL
Leonard R. Johnson, 627 S. Capitol, Iowa City, Iowa
Filed Apr. 21, 1960, Ser. No. 23,847
5 Claims. (Cl. 198—148)



1. In an apparatus for moving fowl from one location to another location, frame means, guideways on the frame means extending longitudinally thereof to define upper and lower runs, endless transmission means adapted for movement in the guideways, longitudinally spaced open ended containers carried by the transmission means for free swinging movement transverse to the path of travel of the transmission means with each container being adapted to contain a fowl, means associated with the frame means and the containers for spacing the containers in the upper and lower runs apart during movement of the transmission means, and means for imparting movement to the transmission means.

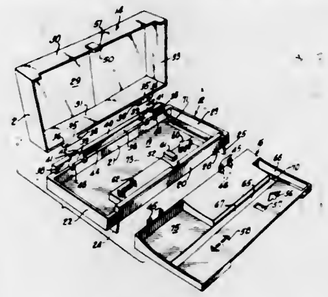
3,095,964
MEANS TO GUIDE A CONVEYOR BELT AROUND CORNERS
Herbert S. Shaw, La Mesa, Calif. (1526 Rideout Way, Whittier, Calif.), and Kenneth J. Bentley, 199 E. L St., Chula Vista, Calif.
Filed July 19, 1960, Ser. No. 43,788
7 Claims. (Cl. 198—184)



1. A belt assembly with means to guide a belt around a corner, comprising: a supporting frame defining a corner structure having an entry portion and an exit portion; a first compound roller rotatably mounted in said entry portion; a second compound roller rotatably mounted in said exit portion; an idler roller freely rotatably mounted in offset relation to and effectively between said compound rollers; a flexible belt supported on and passing between said compound rollers and around said idler roller; each of said compound rollers including a pair of end discs, each having its axis extending transversely of and dipped at an acute angle relative to the general plane of that portion of the belt in the adjacent one of said entry and exit portions, and a plurality of belt supporting rods parallel to said plane and staggered at an acute angle transversely of said portion of the belt; said belt supporting rods extending between said end discs and being universally pivotally attached at their ends to said end discs; any given point on one of said compound rollers in contact with said belt moving in an arcuate path in a plane inclined outwardly of the corner structure and parallel to said general plane, whereby axial slippage of said belt on the compound roller is prevented.

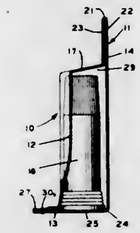
3,095,965
CASE FOR A RAZOR SET OR THE LIKE
Gerald Stahl, Rye, N.Y., and Charles A. Johnson, Jr., Cos Cob, Conn., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed May 12, 1961, Ser. No. 109,706
1 Claim. (Cl. 206—16)

A case for a razor set or the like comprising a base member having a rear portion, a cover member having a rear portion adapted to be supported by the rear portion of the base member, a platform member seated in said base member, rearwardly-extending arms on the rear portion of said cover member, pintles carried by said arms, means on the rear portion of the base member providing recesses into which said pintles may be moved in a rearward direction and providing shoulders opposing upward and rearward movement of said pintles, and arms extending rearwardly from said platform member at points disposed laterally of the aforesaid arms and carrying at their rear ends upward projections extending forwardly of said pintles to oppose forward movement of said pintles, the rear portion of said cover member being formed to oppose upward movement of said platform until the cover



has been moved to an open position, said cover member being swingable on said pintles into an open position in which said platform may be moved out of said base member.

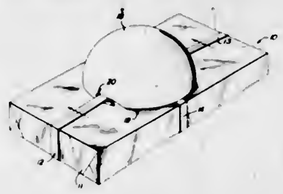
3,095,966
PACKAGE
Louis Henry Pfohl, Forest Hills, N.Y., assignor to Design Center, Inc., Long Island City, N.Y., a corporation of New York
Filed Dec. 16, 1960, Ser. No. 76,206
4 Claims. (Cl. 206—45.31)



3. A package, comprising a generally L-shaped stand formed from a single relatively stiff sheet folded along a first line to provide a bottom portion and a top portion, each of said portions being folded along an intermediate line to provide an upright back section and a horizontal base section, said sections of said top portion overlying directly the corresponding sections of said bottom portion, a plastic blister having a hollow body with an open base and an open back, said blister body having a first integral flange extending outwardly from the periphery of said open base along at least a major portion of the periphery thereof and being disposed in a horizontal plane, said blister body having a second integral flange extending outwardly from the periphery of said open back along at least a major portion of the periphery thereof and being disposed in a vertical plane, said flanges being integrally joined along the line of intersection of said planes, said upright back section of said top portion of said sheet having an aperture substantially conforming in size and shape to the periphery of said open back and said horizontal base section having an aperture substantially conforming in size and shape to the periphery of said open base, said apertures communicating with each other along said line of intersection of said planes, said body being inserted through said apertures so that said first flange lies between said base sections of said sheet and said second flange lies between said back sections of said sheet, and means to retain said portions in said overlying positions so that said sections of said por-

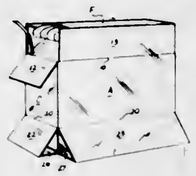
tions of said sheet contact said respective flanges and retain said body in said apertures.

3,095,967
PROTECTIVE DEVICE FOR A BOW ON GIFT-WRAPPED PACKAGES
Wallace A. Harvey, Jr., 1626 N. Fort Myer Drive, Arlington, Va.
Filed Mar. 30, 1960, Ser. No. 18,622
3 Claims. (Cl. 206—45.33)



1. In combination with a package having a flexible element tied therearound and a fragile ornament fixed with relation thereto, a unitary body having a substantially vertical bottom edge shaped to seat upon the package over said ornamental and said flexible element, said bottom edge having diametrically opposite slots provided with closed ends arranged above said bottom edge and entering ends extending from said closed ends downwardly through said bottom edge, the entering end of each slot having opposite edges, one of which is inclined at an angle to the vertical and intersects said bottom edge in a point, the points of the two slots extending circumferentially in the same direction whereby rotation of said body in said one direction with said bottom edge in engagement with the package will cause portions of said flexible element to slide upwardly over said inclined edges and move into the closed ends of said slots.

3,095,968
SHIPPER DISPENSER
Joseph Portola Hamilton, Oakland, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Nov. 3, 1960, Ser. No. 67,139
3 Claims. (Cl. 206—52)



3. A container readily convertible to a self-supporting stand, the container formed from foldable sheet material and comprising opposed parallel pairs of side and end walls, top and bottom closure means and an inner rigidifying liner, each of said side and end walls including a main body panel and two subjacent panels hingedly connected to the main body panels and to each other, the main body panels of the side and end walls only being connected together by fold lines to form a container, said subjacent panels of the side and end walls being free and unconnected at their side edges to said main body panels and to each other, top closure means secured to the main side and end wall panels, bottom closure means secured to the lowermost of said subjacent side and end wall panels, the liner disposed within said container and in contacting and parallel relation with the interior surfaces of said main and subjacent side and end wall panels, said liner being in sliding contact with the opposed pairs of side and end walls, said container with the top closure means unsealed convertible to a self-supporting stand by telescoping downwardly said main body panels about the rigidifying liner, the lowermost of said subjacent panels folding outwardly about their respective fold lines and said bottom closure means into truss-like relation with the outer face of said lowermost subjacent panels in substantial engagement with a supporting surface with the uppermost subjacent panels disposed angularly to the plane of the respective main side wall panels and forming a self-supporting stand.

3,095,969
CONTAINER AND REEL FOR TAPES
William A. Morrison, Ridgefield, Conn., assignor to Reeves Soundcraft Corp., Danbury, Conn.
Filed Aug. 1, 1961, Ser. No. 128,534
1 Claim. (Cl. 206—53)

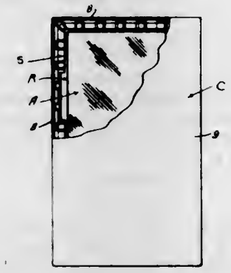


A dust-free storage container comprising a reel, said reel being formed from mating halves of a molded plastic material, said reel having a cylindrical, centrally located spool and radially extending solid flanges affixed to each end of the spool, and an annular cover for said reel, said annular cover and said solid flanges coacting to provide a dust-free storage container, said cover comprising a C-shaped molded plastic cover, the ends of which are self-biased into engagement to provide an annular cover for said reel, said cover comprising a first and second channel, a web between said first and second channel, each of said channels dimensioned to receive a respective flange of said reel in a dust-tight enclosure, said web dimensioned for insertion between the flanges of said reel to supportably engage said flanges, said cover being installed on said reel by deforming said C-shaped assembly to encircle said reel, and latch means extending between the ends of said cover to lock said cover in a dust-sealing relationship thereto, said first channel member being provided with upstanding annular shoulder inwardly of the channel and along the outer free edge of said first channel member, said said channel member terminating in a free edge concentric with said shoulder, whereby said shoulder is positioned to coact with the second channel member of an adjacent container in nesting relationship so that a plurality of reels may be nested for compact storage, and a flexible inwardly extending finger integrally molded to the web of said cover to engage magnetic tape secured on said reel.

3,095,970
PACKAGING STRIP HAVING OUTWARDLY PROJECTING CUSHIONING PEAKS
Arthur W. Gaulke, Milwaukee, Wis., assignor to Vanant Company, Inc., Milwaukee, Wis., a corporation
Filed Jan. 4, 1957, Ser. No. 632,562
1 Claim. (Cl. 206—62)

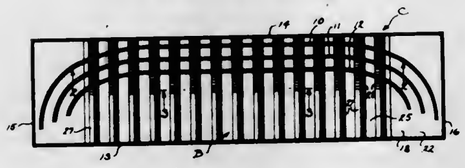
A shipping package for a sheet of glass or the like comprising a carton including end walls and facing side walls, a continuous cushion and suspension strip encompassing the periphery of the sheet of glass disposed in the carton including a longitudinally extending flat inner ply and a longitudinally extending outer ply secured at spaced points to the inner ply, and outwardly projecting cushioning members formed on the outer ply between the points of securement of the outer ply with the inner ply, said cushioning members being slit transversely with the slits

in longitudinal alignment and extending the length of the strip, said plies being folded longitudinally on said strip and said strip being of a U-shape in cross-section defining an outer wall of a width substantially equal to the width of the sheet of glass extending completely along the entire edge of the sheet of glass and spaced side walls engaging the opposite faces of the sheet of glass leaving



the major portion of the opposite sides of the sheet of glass clear and said cushioning members projecting outward from the outer wall of the strip in engagement with all of the carton end walls and laterally from the side walls of the strip into engagement with the facing carton side walls and spacing the sheet of glass from said end walls and side walls.

3,095,971
CARTON FOR SHIPPING DIFFERENT SIZES OF FRAGILE ARTICLES
Lloyd D. Van Antwerpen, 954 S. Water St., Milwaukee, Wis.
Filed Aug. 23, 1961, Ser. No. 133,497
5 Claims. (Cl. 206—62)



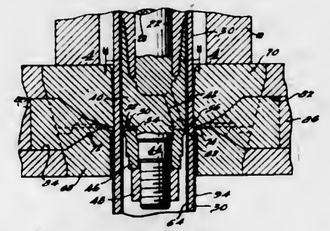
1. A shipping and storing package for a plurality of different sizes of fragile articles comprising a carton including top and bottom walls, side walls and end walls, a bottom cushioning and supporting member for the fragile articles disposed in said carton against the bottom wall thereof with its side edges engaging the inner faces of the opposite side walls, said member including a base ply and an outer ply having a plurality of transversely extending spaced peaks extending substantially the full width of the member, each of said peaks being provided with a plurality of spaced slits defining therebetween a plurality of bendable tongues, a plurality of fragile articles in said carton disposed with their lower edges against the said peaks in spaced parallel relation with the lower edges of the fragile articles breaking down adjacent tongues between the slits to form cushioning members and seats for the lower edges of the fragile articles, and independent cushioning strips for the upper edges of the articles including slotted peaks for receiving the upper edges of said articles with the strip for the article of greatest height engaging the inner surface of the top wall of the carton, said other cushioning strips for the other articles also including outer slotted cushioning peaks, and spacer strips of different heights seated in the slots of the peaks of the last named cushioning strips engaging the inner surface of the top wall of the carton.

3,095,972
SELF-SEALING STERILE PACKAGING AND METHOD
James L. Sorenson, 2341 Logan Circle, Salt Lake City, Utah
Filed Oct. 6, 1961, Ser. No. 143,479
11 Claims. (Cl. 206—63.2)



1. A sterile package construction comprising a flexible envelope sealed at each end thereof and a hub having a circumferential concavity therein, said envelope having opposed portions extending over said hub and converging snugly into said concavity in sealing relationship to the hub, said portions being individually selectively removable and each maintainable in sealing relation to the hub after removal of the other portion.

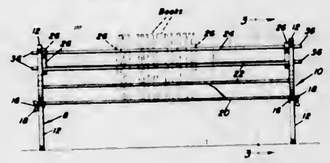
3,095,973
EXTRUSION CLADDING APPARATUS
Carl De Buigne, Grosse Pointe Shores, Mich., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 10, 1959, Ser. No. 798,420
10 Claims. (Cl. 207—4)



1. An extrusion cladding apparatus for bonding metal in the solid state to the inside surface of a preformed metal tube comprising a billet cylinder adapted to hold a billet of cladding metal in the solid state, guide means providing a linear path for axial movement of said preformed tube around said cylinder, an inside diameter die member fixedly secured against axial and lateral movement within the confines of such path at the discharge end of said billet cylinder which forms one side of an annular radial discharge orifice of fixed predetermined cross section for the billet metal from the cylinder within said tube as it moves through said path, the inside of said tube as it moves through said path cooperating with the outer periphery of said die member and being spaced therefrom to define an axial extrusion aperture of fixed predetermined cross section downstream relative to said orifice and in series flow relationship therewith, a power driven ram to apply extrusion pressure to the billet of metal in the solid state in said cylinder for extruding such metal in the solid state through said discharge orifice against the preformed tube and through said extrusion aperture, the sides of said orifice being axially spaced from each other whereby cladding metal in the solid state in response to the extrusion pressure applied by said ram is forced from the billet and radially discharged from said orifice toward and against the inside of said tube and into intimate contact therewith and metallurgically bonded thereto as the tube moves past said orifice, the axial spacing of the sides of said orifice being greater than the radial dimension of said extrusion aperture, said apparatus being characterized by

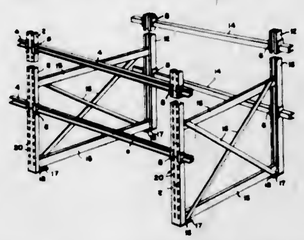
the fact that said preformed tube moves axially thereof relative to said orifice and die member during an extrusion cladding of said tube and forms a moving mandrel for extruding cladding metal of a predetermined thickness therewith.

3,095,974
COLLAPSIBLE BOOK RACK
Anthony R. Perini, 6 Wall St., New Bedford, Mass.
Filed Oct. 27, 1961, Ser. No. 159,473
4 Claims. (Cl. 211—42)



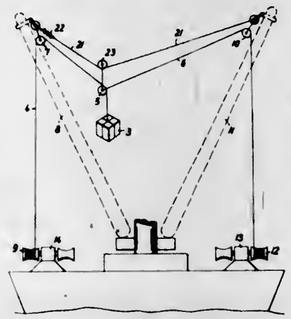
1. A portable book rack comprising a pair of vertical spaced parallel X-shaped leg frames, each leg frame comprising a pair of crossed interlocked separably fastened legs, a first pair of relatively low horizontal parallel contiguous rod members having their respective outer ends connected to the respective legs of the crossed portions of the respective leg frames, a second pair of upper horizontal rod members having their end portions connected to the upper ends of their respective legs of the respective leg frames and projecting outwardly beyond said legs, a plurality of intermediate rod members arranged in planes between the upper rod members and lower rod members and connected at their ends to their respective legs of the respective leg frames and providing a crib-like book rack, and a pair of bar members disposed at right angles to and having apertured end portions frictionally slidable along said upper rod members.

3,095,975
STORAGE RACK
Harrison H. Cassel, Skippack, and John O. Stoddart, Lafayette Hill, Pa., assignors to The Allen Iron & Steel Company, Norristown, Pa., a corporation of Pennsylvania
Filed May 15, 1961, Ser. No. 110,001
10 Claims. (Cl. 211—148)



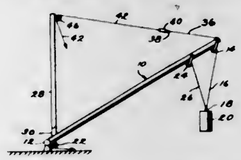
6. A storage rack comprising a pair of spaced upright front post members; a pair of upright rear post members spaced from each other and from said front post members; each of said post members having therein a series of vertically spaced apertures, the respective series of apertures in the posts being substantially identical individually and having the same center-to-center spacing, the apertures in said front post members being staggered vertically with respect to the apertures in said rear post members by an amount equal to approximately one-half said center-to-center spacing; a horizontal stringer spanning said front post members and connected thereto at its ends by connector elements, each of said connector elements having at least one projection engageable with an aperture in one of said post members; a second horizontal stringer spanning said rear post members and connected thereto by connector elements equivalent to the first-mentioned connector elements; the vertical relationship between the upper supporting surface of the first-mentioned stringer and the projections on its associated connector elements being different from that relationship of said second stringer to the projections on its associated connector elements by an amount approximately equal to one-half said center-to-center spacing of the apertures; whereby the first-mentioned and second stringers are interchangeable between said front and rear post members for height adjustments equal to one-half said center-to-center spacing or multiples thereof.

3,095,976
CARGO HANDLING APPARATUS
Rolf Langfeldt, Bremen, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed Mar. 17, 1960, Ser. No. 15,649
Claims priority, application Germany Mar. 18, 1959
5 Claims. (Cl. 212—3)



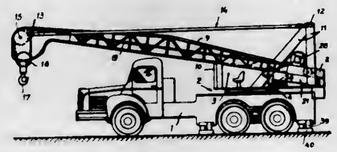
1. Apparatus for loading and unloading cargo on ships comprising first and second loading booms, first and second sheaves connected to said first and second loading booms respectively, a guide rope leading over the first sheave to a first loose block, a load rope leading over said second sheave and over said first loose block to a load hook for lifting and lowering cargo, an auxiliary cable connected between said first and second loading booms, means for resiliently connecting said auxiliary cable to at least one of said loading booms, a second loose block connected to said first loose block, and adapted to travel on said auxiliary cable wherein the altitude of said first and second loose blocks is limited by said resilient connection and said auxiliary cable.

3,095,977
ANTI-PENDULATION RIGGING FOR CRANES
Valdemar C. Farrell, Rte. 1, Box 172, Harwood, Md.
Filed June 22, 1961, Ser. No. 118,829
4 Claims. (Cl. 212—58)



1. In crane apparatus, a boom having a heel and a head, means for slewing said boom, means for topping said boom, means at a first point a given distance from the boom heel and a given distance to one side of the center line of the boom for guiding a first fall line thereover, and means at a second point closer to said boom heel than the first point and on the opposite side of the center line of the boom for guiding a second fall line thereover, a load hook means, the said first and second fall lines being fixed together at the load hook means as sole support therefor.

3,095,978
TRAVELLING CRANES AND THE LIKE
Léon Pierre Boyer, 12 Blvd. Marius Richard, Montolivet-Marseille, France
Filed Feb. 29, 1960, Ser. No. 11,705
Claims priority, application France Mar. 4, 1959
7 Claims. (Cl. 212—59)



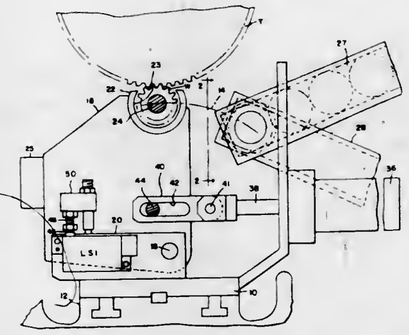
1. A travelling crane comprising a supporting chassis, a platform rotatably mounted on said chassis, vertically inclined guide means extending across said platform, a jib having a base mounted on said guide means and the jib extending in the same direction therewith, means connecting the base to the guide means for oscillating and sliding movement therealong, a short frame mounted on said platform adjacent to the lower end of the guide means, tie-rod means having one end pivotally connected to the head of said jib and the other to the upper end of said frame and means connected to the base of said jib to displace it in said guide means and constituting the sole means for raising and lowering said jib.

3,095,979
OVERLOAD DEVICE
Marvin E. Silberger, York, Pa. (% American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn.)
Filed Apr. 8, 1960, Ser. No. 20,975
3 Claims. (Cl. 212—134)



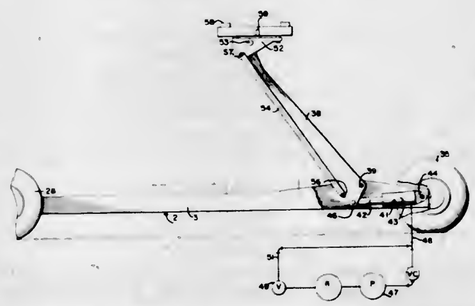
1. In a device for lifting indeterminate weights, means for causing operation of the device in a weight-lifting direction, an electrical circuit for controlling such operation, spring means operatively connected to said device and deflectable in response to the weight imposed on said device, switch means in said circuit operative in response to deflection of said spring means by a weight greater than a predetermined maximum to prevent operation of the lifting device in a weight-lifting direction, and means maintaining said switch in operation-preventing condition until reduction of the deflection of the spring means corresponding to reduction of the imposed weight to a predetermined value below the predetermined maximum.

3,095,980
AUTOMATIC LOADER
Kenneth J. Davis, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 9, 1959, Ser. No. 798,076
13 Claims. (Cl. 214—1)



1. An automatic loader for a gear finishing machine comprising a carrier having a gear support thereon arranged to support a work gear for rotation and movable between two positions along a path substantially tangential to the periphery of a work gear, one position providing a combined loading and unloading station and the other position providing a working station, non-positive means acting on said carrier in a direction to move said support from the combined loading and unloading station to the working station, and power means movable in opposite directions at controlled predetermined speeds and having a one-way connection to the carrier and operable upon movement of said power means in one direction to effect positive movement of the carrier in a direction to move the gear support from the working station to the combined loading and unloading station, movement of said power means in the opposite direction being operable to release said carrier at a controlled rate for movement by said non-positive means in the direction to move the gear support toward the said working station.

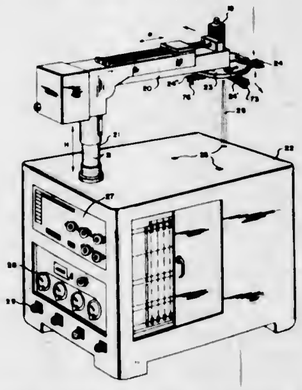
3,095,981
TRAILER
John R. Thorson, Takoma Park, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed June 22, 1959, Ser. No. 822,106
5 Claims. (Cl. 214—1)



1. In a trailer, a frame supported on wheel and axle assemblies, a cantilever elevator arm pivotally mounted on said frame, a base pivotally mounted on the free end of said cantilever arm, parallel linkage means to main-

tain said base parallel to said frame during pivotal movement of said cantilever arm, a missile rack mounted on said base for rotational movement about a vertical axis, said rack comprising a rack frame, front and rear walls on opposite ends of said rack frame, upper walls pivotally mounted on said front and rear walls, and arcuate pads on said walls to support missiles.

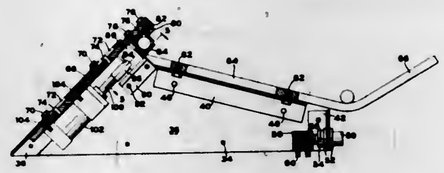
3,095,982
COMPLIANT SUPPORT FOR MATERIAL HANDLING APPARATUS
Sidney Weiser, Silver Spring, Md., assignor to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 30, 1959, Ser. No. 856,261
1 Claim. (Cl. 214—1)



Automatic electrical servo position controlled apparatus adapted to pick-up, transport and deliver articles between a supply station and a receiving station comprising a support, a mechanical arm adjustably mounted on said support for movement in linear translation, in height and in azimuth rotation with respect to said support, a turret rotatably mounted on said arm adjacent a free end thereof, said turret having at least one set of grasping jaws mounted thereon, the fingers of said jaws being adapted to be opened and closed to grasp and release articles in accordance with a predetermined program, separate null-seeking servo motor control systems for positioning said arm support and turret in linear translation and azimuth rotation with respect to said support, a null-seeking servo motor control system for positioning said arm support and turret vertically within a predetermined height location of limited position tolerance with respect to said work station, means for supporting said turret from said arm, said means including a compliant ring member arranged to yieldably couple said turret to said arm and provide a limited range of relative motion between said turret and said arm in the vertical direction of travel while providing a stiff arm coupling support for said turret in the horizontal direction of travel, and means mounted on said turret for adjusting the effective stiffness of said compliant ring member to turret motion in the vertical direction.

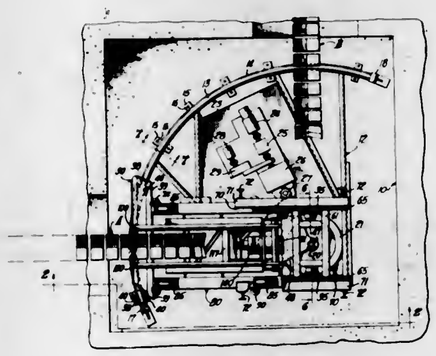
3,095,983
APPARATUS FOR HANDLING ELONGATED WORKPIECES
Edward C. Hanna, Waynesboro, Pa., assignor to Landis Machine Company, Waynesboro, Pa., a corporation of Pennsylvania
Filed Apr. 8, 1960, Ser. No. 20,954
5 Claims. (Cl. 214—1)

1. Apparatus for receiving elongated workpieces as they are delivered from a forming mechanism comprising a stand, means forming a channel, mounting means supporting said channel on said stand, said channel being adapted to closely surround and support said workpiece along its length, means for adjusting the position of said channel to dispose a workpiece in said channel in alignment with said forming mechanism, means mounting at



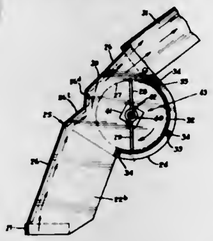
least one wall of said channel for movement with respect to the other walls to thereby vary the size of said channel, power means for periodically moving one of the walls of said channel to permit said workpiece to move laterally out of said channel, and means responsive to movement of said workpiece out of said forming mechanism to actuate said power means.

3,095,984
ARTICLE HANDLING EQUIPMENT
Gustav A. Lindkvist, Evanston, Ill., assignor to Link-Belt Company, a corporation of Illinois
Filed Jan. 23, 1961, Ser. No. 84,373
15 Claims. (Cl. 214—1)



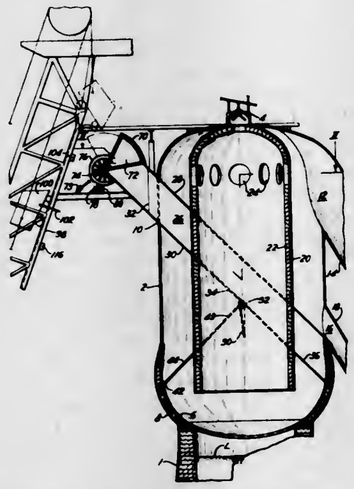
1. In combination with a pair of conveyors having the conveying paths thereof disposed at an angle to each other, apparatus for removing an article from the end of one of said conveyors and transferring it to the end of the other of said conveyors comprising a fixed base structure disposed intermediate the ends of said conveyors and providing a pivotal mounting means, a turntable mounted on said pivotal mounting means, means for effecting swinging of said turntable between a position aligned with said one conveyor and a position aligned with said other conveyor, a carriage mounted on said turntable to be movable inwardly and outwardly relative to the swing axis of said turntable, means for moving said carriage between extended and retracted positions on said turntable, lifting means carried by said carriage and mounted thereon to be elevatable to lift the article to be transferred, and means to effect raising of said lifting means to remove an article from the end of said one conveyor and to effect lowering of said lifting means to deposit the article on the end of said other conveyor.

3,095,985
SILO UNLOADER CONVEYOR STRUCTURE
Floyd E. Buschbom, Long Lake, Minn., assignor to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Filed June 19, 1961, Ser. No. 118,008
12 Claims. (Cl. 214—17)



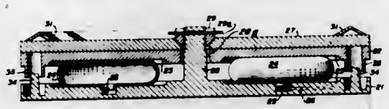
1. A housing for a booster impeller for a silo unloader or the like comprising, a pair of side panels having one end adapted to be secured to receive the discharge of a main impeller, an enlargement in each of said side panels and spaced from said end and adapted to provide suitable profiles to cover the sides of a booster impeller, each side panel having an edge portion extending in a direction the projection of which would be tangent to the circle described by the blade tips of a booster impeller in said housing, each side panel having an edge portion adjacent thereto diverging away from said circle before the tangentially oriented portion thereof reaches said circle, and a panel connecting said side panels and following the contour of said tangential and diverging oriented portions of said side panels.

3,095,986
BLAST FURNACE TOPS
Francis J. Sines, Youngstown, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Nov. 4, 1960, Ser. No. 67,386
9 Claims. (Cl. 214—35)



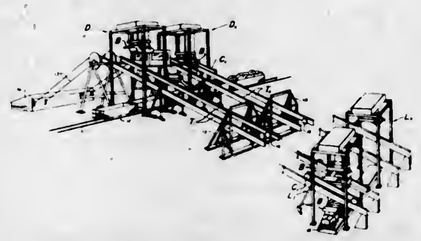
1. In a blast furnace an outer shell mounted on top of said furnace and extending upwardly therefrom, an inner shell arranged concentrically within said outer shell above the stock line of the furnace and arranged for conveying exhaust gases therethrough, a first chute slanting downwardly around said inner shell within said outer shell, said chute having a plurality of openings therein for discharging material therefrom, a second chute slanting downwardly from one of said openings around said inner shell, said second chute having at least one opening therein for discharging material therefrom, means to selectably close at least one of said openings, and means for conveying raw materials through the said outer shell to said first chute.

3,095,987
PIGGY-BACK TRANSPORTATION SYSTEM
Donald E. Sable, Kansas City, Mo.
(4413 Windsor Parkway, Dallas 5, Tex.)
Filed Nov. 19, 1959, Ser. No. 854,192
12 Claims. (Cl. 214—38)



1. A load handling and cushioning device, comprising a lower base plate; an upper plate disposed in a substantially horizontal plane thereabove; guide members carried by said plates and disposed to mutually interfere to limit the relative motion therebetween, the areas of the plates being large as compared with the maximum vertical separation between the plates permitted by the guide means; load receiving and engaging means carried on said upper plate; plural inflatable air tube means of flattened annular shape interposed between said plates and mutually spaced apart in two normal horizontal directions, the mutually adjacent faces of the plates having opposed bowl-shaped cavities receiving each air tube means, the cavities being deep enough that when the tube means is deflated the plates come together without pinching the periphery of the tube means therebetween, said lower plate having air ducts therethrough individually communicating with each one of the air tube means; and individual air supply line and valve means coupled to each duct for selectively inflating the air tube means to relative degrees required to float the upper plate substantially level on the lower plate despite unequal distribution of load weight on the air tube means.

3,095,988
UNIT HANDLING SINGLE LOAD HOISTING SYSTEM
John E. Ferguson, Beaverton, and Dwight Richards, Portland, Oreg., assignors to Guy F. Atkinson Company, South San Francisco, Calif., a corporation of Nevada
Filed Oct. 3, 1960, Ser. No. 60,009
8 Claims. (Cl. 214—38)



1. A load handling system comprising a loading station and a dumping station, a carriage arranged to travel between said stations, means for carrying a loaded truck body under said carriage, means for carrying an empty truck body on top of said carriage, means in said loading station for lifting an empty body off said carriage and

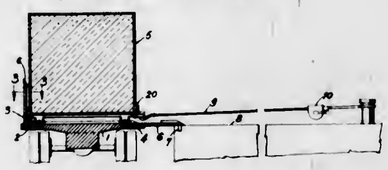
lowering said body onto a truck chassis, a dumping mechanism in said dumping station arranged to receive a loaded body from the under side of said carriage and dump the load, and means for lifting an empty body from said dumping mechanism and lowering said body onto the top of said carriage.

3,095,989

MEANS FOR MOVING SHIPPER CONTAINERS OFF OF AND ONTO A ROAD VEHICLE

Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York

Filed Jan. 30, 1961, Ser. No. 85,673
1 Claim. (Cl. 214—85)



In the combination of a transport vehicle and insulated shipping containers of substantial dimension and weight, means for removably mounting said shipping containers in a stabilized position of use on said transport vehicle, including means for the displacement of said containers into and out of said stabilized position onto and off of said transport vehicle, comprising longitudinally spaced apart tracks which extend laterally across a substantially flat horizontally disposed top surface of the transport vehicle, depressions in corresponding portions of said tracks spaced inwardly from the lateral edges thereof, portions spaced from the lateral edges of the containers extending downwardly from the bottom side of said containers for receipt in said depressions in said tracks when the containers are in position of use on said transport vehicle thereby releasably to hold the containers in position of use on the transport vehicle, bridge members laterally aligned with the tracks and pivotally mounted on each side thereof for rocking movement between a raised position extending vertically upwardly from the lateral edges of the tracks to a lowered position extending laterally horizontally as a continuation of said tracks with the upper surface of said lowered bridge member substantially flush with the surface of said tracks to form an extension thereof, and means for releasably latching said bridge member in raised position to block movement of the containers laterally relative to the supporting tracks comprising an elongate slot in the inner end portion of the bridge member, a pin fixed to the track and extending through the slot pivotally to support the track for rocking movement between raised and lowered positions, and another pin spaced below the first pin and longitudinally aligned with the slot when the bridge is in raised position, said other pin being mounted for shifting movement into and out of the slot whereby the pivot pin and the other pin retain the bridge in raised position when the latter as inserted in the slot and whereby the bridge is free for rocking movement about the pivot pin when the other pin is withdrawn from the slot, and means for releasably holding the other pin in retracted position.

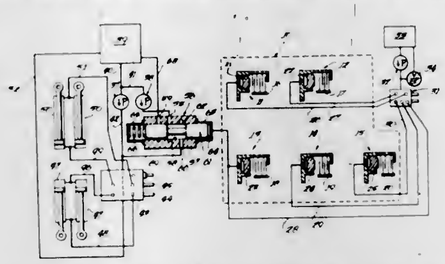
3,095,990

TRANSMISSION CONTROLLED LOADER HYDRAULIC CIRCUIT

Thorvald G. Granryd, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois

Filed Mar. 30, 1961, Ser. No. 99,453
8 Claims. (Cl. 214—140)

1. In a tractor loader having traction means and tool means operated by a single engine, means for distributing the available power from said engine to said traction means and said tool means in different proportions, comprising transmission means for selectively connecting power from said engine to said traction means at different speed ratios, means connected to said engine and to said tool means to deliver a certain amount of power to said tool means, second means connected between said engine



and said tool means for delivering an additional amount of power from said engine to said tool means, and means associated with said transmission means and operating responsive to the selective connection of power from said engine to said traction means at the lowest speed ratio for disconnecting said second means from said tool means.

3,095,991

COMBINATION BOTTLE CAP SEAL AND OPENER

Juan Garcia Paniagua, Tepeyac 121 Col. Leon Moderno, Leon, Guanajuato, Mexico

Filed Nov. 17, 1961, Ser. No. 153,028
3 Claims. (Cl. 215—40)



1. A bottle seal and opener comprising, in combination, a substantially annular sealing disc disposed between the top of a bottle and a cap therefor, said sealing disc having integral guide means dependingly positioned upon and extending from one side thereof and into a bottle for centering the sealing disc with respect thereto, integral deformable seal means positioned upon the one side of said sealing disc and substantially adjacent the periphery thereof, said deformable seal means being in engagement with the top of a bottle, and a series of frusto-conical projections integral with said sealing disc and extending from another side thereof oppositely disposed with respect to said one side, said projections being in engagement with a cap, said deformable seal means being deformed into engagement with the top of a bottle as the cap thereof is superimposed with respect to said sealing disc and the projections extending from the other side thereof, and an opener integral with said sealing disc, said opener being disposed in angular relationship with respect to said sealing disc and being of such configuration as to lie flush with respect to the exterior of a bottle and in conformance with the exterior configurations thereof.

3,095,992

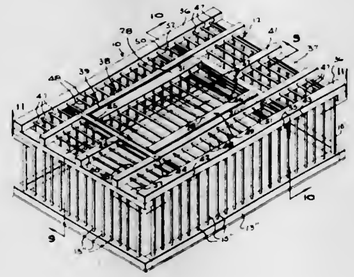
COOPS FOR CHICKENS

George W. Shreckhise, Weyers Cave, Va.

Filed Mar. 21, 1960, Ser. No. 16,343
4 Claims. (Cl. 217—36)

1. The combination of a chicken coop having a top wall comprising two pairs of longitudinally extending spaced apart rails, the innermost rail of each pair of rails

forming a door opening, a short rail member at respective ends of the coop and positioned in the longitudinal medial axis of the coop, spaced dowels secured between each pair of spaced rails and the short rails, the dowels adjacent the innermost rails forming the door-opening terminating therein; a door member complemental to the door-opening and comprising parallel side rails and being interconnected by spaced dowels, one of said dowels at one end of the side rails of the door being freely slidable therethrough, the innermost rails of said pair of rails having a longitudinally extending slot aligned with a respective recess formed in each of the outermost rails of said pair of rails, said freely slidable dowel being of a



length to extend through the slots to seat respective ends of the dowel in an aperture of the outermost rails to form a hinge connection between the door and the top wall, the short rail adjacent the hinge connection having an upwardly tapered end face, a reinforcing bar positioned beneath said pairs of rails and said short rail and secured thereto, a similar bar being positioned beneath said rails at the opposite end of the door-opening, the innermost rails and said short rail being recessed upon their upper faces, a latch bar secured in said recesses but spaced above and forwardly of said reinforcing bar to provide a space for passage of the side rails therebetween due to resilient tension provided between the slots and the dowel engaged therein.

3,095,993

FIBER GLASS TANK

George A. Balcom, Cleveland, and Ralph L. Archbold, Euclid, Ohio, assignors to White Sewing Machine Corporation, Lakewood, Ohio, a corporation of Delaware

Filed Nov. 5, 1958, Ser. No. 772,026
3 Claims. (Cl. 220—5)



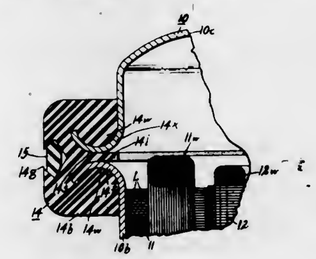
1. In combination, first and second cured resin-bonded fiber glass members respectively having outer and inner cylindrical portions which interfit in telescoping engagement with one another, the inner cylindrical portion having an interference fit with the outer cylindrical portion at a pair of locations spaced apart a substantial distance axially, said interfitting portions having an offset cylindrical portion defining between them a circumferentially and axially continuous annular space extending from one of said interference fit locations to the other, said members presenting at said annular space confronting cylindrical faces each having substantial surface depressions therein, and solidified bonding material filling said annular space and filling said surface depressions and bonded to both said members.

3,095,994

DYNAMOELECTRIC MACHINE CLOSURE MEANS

Russell J. Bush, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 23, 1960, Ser. No. 38,180
2 Claims. (Cl. 220—46)



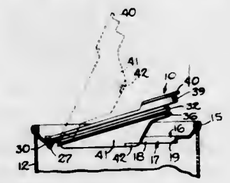
1. On a dynamoelectric machine having primary and secondary internal components contained within stationary housing parts each having outwardly projecting flanges which adjoin each other, the improvement therewith which comprises an external elongated completely non-metallic combination seal and closure means of elastomeric material having a body with an undercut recess on one side as well as laterally adjacent preformed slot means on an opposite side thereof to complement said flanges free of any bonding thereto as installed to fit snugly though removably therefrom, and a replaceable filler strip wedged longitudinally into said undercut recess of said body in a location spaced away from said flanges so as to maintain snug seal-like locking engagement of said elastomeric body externally around said flanges of said stationary housing parts inside of which said primary and secondary internal components are protected and free for movement relative to each other though such movement is independent of said elastomeric body.

3,095,995

CONTAINER WITH PLUG TYPE CLOSURE

John A. Foster, Rockford, Ill., assignor to J. L. Clark Manufacturing Co., Rockford, Ill., a corporation of Illinois

Filed Feb. 6, 1961, Ser. No. 87,356
8 Claims. (Cl. 220—60)



1. The combination with a container top having an opening defined by a narrow inturned flange of, a molded plug of resilient plastic material providing an airtight closure for said opening and comprising a top plate larger than said opening and sized to cover the opening when lying against said top, means hinging said plate on said top to swing about an axis paralleling said top and disposed adjacent but spaced outwardly from

one side of the opening, a peripheral wall depending from said plate and sized to telescope within said flange with a close press fit by lateral flexing of the skirt and compression of the plastic material thereof, said wall being deeper than said flange and having a peripheral outwardly extending shoulder adapted to expand beneath the lower edge of said flange when the plug is pressed into said opening whereby to hold the plug in said opening and said plate against said top, and an outwardly projecting bead narrower than said flange formed integral with and extending around the entire periphery of said wall intermediate the top and bottom thereof so as to be compressed into sealing engagement with a narrow band-like area of said flange when the plug is pressed into said opening.

3,095,996

FOLDED SHEET DISPENSER

Alexander Babin, Walnut Creek, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Filed Nov. 29, 1960, Ser. No. 72,364
7 Claims. (Cl. 221—52)



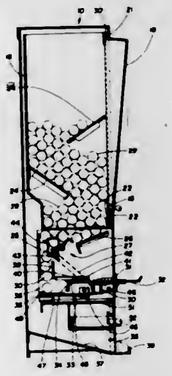
1. In combination, a dispenser and a stack of folded sheets positioned in said dispenser to be individually withdrawn therefrom; each of said sheets comprising a pair of rectangular panels hingedly connected with each other along a fold line, the panels of adjacent sheets in said stack being interfolded with each other whereby withdrawal of one sheet from said dispenser automatically withdraws at least partially a panel of another sheet which is interfolded therewith; said dispenser comprising a housing to be vertically mounted on a supporting surface, a sheet dispensing opening in an end of said housing through which individual sheets are withdrawable, a platform movably mounted in said housing on which said stack of sheets is supported, means normally urging said platfrom toward said housing end whereby the outermost sheet in said stack is engaged with said end; said dispensing opening being non-rectangular in configuration and having major and minor axes, the lengths of the major and minor axes of said dispensing opening being substantially equal to the respective major and minor dimensions of the folded sheets of said stack, said sheets being oriented in said housing with their fold lines and major dimension extending in the same direction as the major axis of said opening, whereby corner portions of the sheets of said stack are engaged with said housing end.

3,095,997

DEVICE FOR VENDING CYLINDRICAL OBJECTS

Alex James Garvin, Scarborough, Ontario, Canada, assignor, by mesne assignments, to Superpack Vending (Curacao), N.A., Willemstad, Curacao, N.A., a corporation of Curacao

Filed May 26, 1961, Ser. No. 112,896
8 Claims. (Cl. 221—180)



1. A device for vending cylindrical articles comprising: a hopper of substantially rectangular cross-section having sides spaced apart a distance substantially equal to the length of said articles and front and back wall portions spaced apart a distance greater than the diameter of said articles and defining the width of said hopper; at least one baffle in said hopper extending from one of said wall portions in a downwardly sloping manner substantially toward the middle of said hopper; a channel located subjacent to said hopper converging from a width substantially equal to said hopper to a width substantially equal to the diameter of said articles forming said articles therein into a stack; an agitator incorporated in said channel and pivotally mounted for see-saw movement relative thereto; an operable coin slide in communication with said agitator; linkage means pivotally connected to said coin slide and to said agitator and transmitting motion of said coin slide in one direction to said agitator to displace the same and transmitting motion of said coin slide in the reverse direction to said agitator to return the same, said movement of said agitator procuring simultaneous movement of said articles in said hopper; an article delivery member attached to said coin slide for movement together therewith and oriented in alignment with the lowermost article in said stack to move the same therefrom simultaneously with movement of said coin slide in said one direction; and a dispensing chute located subjacent to said channel.

3,095,998

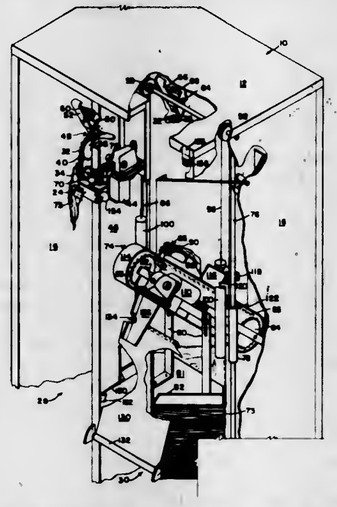
TOWEL DISPENSING MACHINE

Joseph E. Kienel, Marietta, Ga., assignor, by mesne assignments, to Callaway Mills Company, La Grange, Ga., a corporation of Georgia

Filed Apr. 14, 1960, Ser. No. 22,336
7 Claims. (Cl. 221—213)

1. Apparatus for dispensing cloth towels one at a time from an opening in the front of a cabinet containing a vertical stack of horizontally disposed towels, means forming a towel passageway in front of the stack of towels leading upwardly from said opening on the interior of the

cabinet, a carriage mounted for vertical movement in said cabinet and including contact means resting by gravity on top of said stack of towels, towel pickup means having teeth for catching the fabric of a towel, means mounting said pickup means on said carriage for movement of said teeth relative to said carriage around an endless path with said teeth extending outwardly from the central portion of the space enclosed by said endless path, said path including a towel discharge zone extending above said towel passageway and a towel entraining zone extending in proximity to the top towel of the stack at a point below and to the rear of said towel discharge zone and to the rear of said contact means on said carriage, and means for advancing said teeth completely around said path, said



teeth passing downwardly and rearwardly into said towel entraining zone to contact the top towel in the stack, said teeth passing rearwardly in said towel entraining zone to entrain the top towel, said teeth passing upwardly and forwardly carrying the entrained towel toward the front of the cabinet with a portion of the towel trailing loosely behind said teeth, said teeth passing downwardly into said towel discharge zone in a forwardly direction and passing out of said towel discharge zone in a rearwardly direction whereby the reversal in direction within said towel discharge zone causes the trailing portion of a towel entering said zone to flip over toward said toward passageway under the influence of gravity and exert a force for disengaging the towel from said teeth.

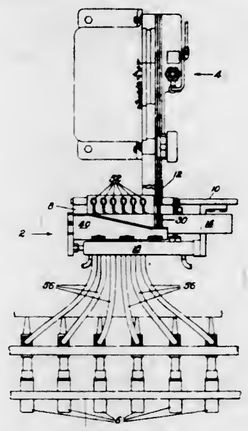
3,095,999

FASTENER SEPARATING AND DISTRIBUTING MECHANISMS

Kenneth L. Peterson, Bayport, Minn., assignor, by mesne assignments, to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed June 17, 1960, Ser. No. 36,947
12 Claims. (Cl. 221—233)

1. A machine for feeding fasteners to a plurality of inserting tools having, in combination, an inclined chute fastener supplying raceway, a plurality of conduits adjacent said raceway and each leading to an inserting tool, a transfer plate having a single fastener cavity for receiving fasteners from the raceway, said cavity being of sufficient length to accommodate at the same time at least as many fasteners as there are conduits, means for actuating said transfer plate to move from a position where said fasteners enter said cavity from said raceway to positions where said fasteners are deposited in said conduits and means operative in response to movement



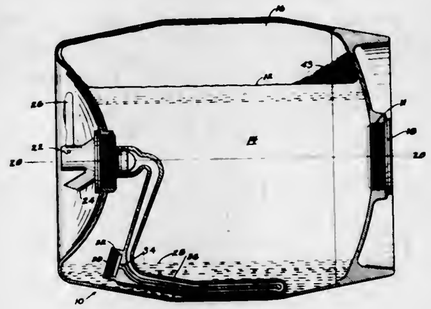
of the transfer plate for removing fasteners from the cavity one at a time and depositing them each in a separate conduit.

3,096,000

METHOD AND APPARATUS FOR DISCHARGING FLUID BY PRESSURE OF AN ISOLATED PROPELLANT IN CONTACT WITH AN ADSORBER OR ABSORBER THEREOF

John Staley, Chesterfield County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Nov. 4, 1959, Ser. No. 850,836
10 Claims. (Cl. 222—1)

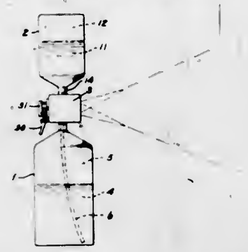


4. A method of discharging a fluid contained in a sealed container which comprises: discharging said fluid from said container under controlled conditions by pushing against said fluid in said container by means of an isolated propellant gas under internal pressure of said gas and modifying the normal internal effective pressure of said gas with a modifying agent which materially reduces the normal effective pressure of said propellant gas when said container is relatively full of said fluid and which negligibly reduces the normal effective pressure of said gas when said container is relatively empty of said fluid whereby said fluid is discharged from said container at a substantially constant pressure regardless of the amount of fluid in said container.

3,096,001
PRESSURE-PACKED POLYMERIZABLE MATERIALS

Carsten F. Boe, Malvern, Pa., and Lloyd I. Osipow, Monsey, N.Y.; said Osipow assignor to said Boe

Filed Mar. 9, 1959, Ser. No. 798,034
13 Claims. (Cl. 222—135)

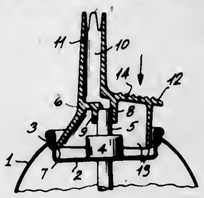


1. A package comprising a self-sufficient pressure-tight container having a closable outlet and containing a polymerizable material selected from the group consisting of reactive monomers and prepolymers containing a vinyl group; phenol, melamine and urea-aldehyde prepolymers; unsaturated polyesters derived from a polyhydric alcohol and maleic and fumaric acid and anhydride; epoxy resins, and polyurethane prepolymers, said polymerizable material being maintained in said container under such conditions that it is incapable of conversion to a higher molecular weight organic polymer while in said container, said polymerizable material of such nature that it will convert at a temperature below about 150° F. rapidly and completely to an organic polymer when released from said container, and a propellant that is a gas at room temperature and pressure, said propellant being present in a sufficient quantity and exerting sufficient pressure within the container to expel said polymerizable material without further replenishment of propellant from a source outside the container.

3,096,002
DISPENSING HEAD CONNECTABLE TO THE VALVE STEM OF AN AEROSOL DISPENSER

John Richard Focht, Yonkers, N.Y., assignor to Precision Valve Corporation, Yonkers, N.Y., a corporation of New York

Filed Sept. 30, 1960, Ser. No. 59,544
2 Claims. (Cl. 222—394)

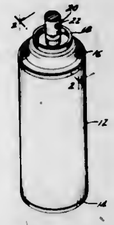


1. A dispenser head for controlling the dispensing of material from an aerosol container with a filling opening permanently closed by a mounting cap provided with an interior horizontally disposed recess and on which cup is supported an outlet valve having a tubular valve stem, comprising: a one-piece lever of plastic material provided intermediate its ends with an integral socket to embrace the tubular valve stem of the container to thereby serve as a support for the lever on the container, said lever also having at one of its ends an integral outwardly extending fulcrum toe adapted to engage in said recess of the mounting cup as the fulcrum of pivotal movement of the lever, and a liquid-discharge outlet also integral with said lever, said outlet communicating with the socket of the lever.

3,096,003
AEROSOL VALVE PERMITTING FAST INJECTION

William Z. Nesin, 2785 University Ave., New York, N.Y.

Filed May 29, 1961, Ser. No. 122,049
11 Claims. (Cl. 222—394)

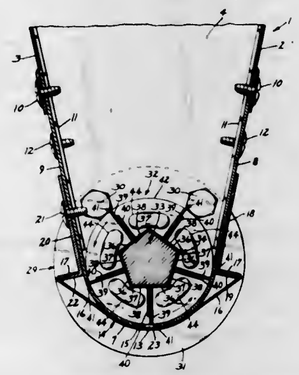


1. A fast injection aerosol valve assembly comprising a mounting cup, a valve gasket, a movable hollow valve stem passing through the gasket and having a flange beneath the gasket, a stationary spring cup around the lower end of the valve stem, a spring in said cup bearing against the flange of the valve stem to close the valve, the side of said valve stem having a small discharge orifice which is exposed to the container contents when the valve stem is moved, said valve stem having a closed lower end, a plurality of radial holes through the valve stem near its lower end, and a sleeve made of elastic material surrounding and movable with the lower end of the valve stem and acting with the holes to provide a check valve to afford fast injection when filling the aerosol container but thereafter preventing escape therethrough of contents from the container.

3,096,004
HOPPER AND FEEDING ROTOR STRUCTURE FOR DISPENSERS OF GRANULAR MATERIAL

Ebenhard S. Gandrud, % Gandy Co., 100 Gandrud Road, Owatonna, Minn.

Filed July 14, 1961, Ser. No. 125,042
4 Claims. (Cl. 222—410)

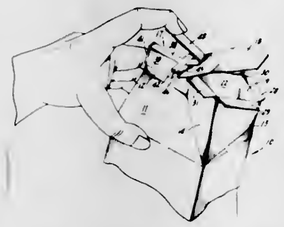


1. In a device of the kind described, a hopper having end walls and a pair of opposed side walls, and a cross sectionally arcuate bottom wall portion, a feeding rotor rotatably mounted in said end on the axis of said arcuate bottom wall, said side walls having downwardly converging portions both being tangent to said arcuate bottom wall portion, said bottom wall portion having a plurality of discharge openings arranged in a row in an axial direction, said rotor having at least five equally spaced radially extending vanes cooperating with said bottom wall portion to move material through said apertures, the angle of convergence of the side wall portions and the number of radial vanes being so related that at least two vanes cooperate with the arcuate portion at all times, with one on either side, circumferentially of said apertures to seal the hopper from the apertures.

3,096,005
REMOVABLE SPOUT FOR RECEPTACLE

Daniel L. Smith, Fort Myers, Fla., assignor to Home Products, Inc., Fort Myers, Fla., a corporation of Florida

Filed Dec. 6, 1961, Ser. No. 157,473
5 Claims. (Cl. 222—556)



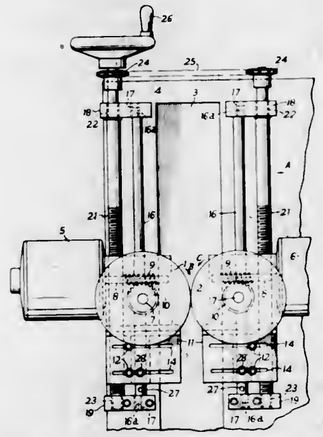
1. For use with a receptacle formed to provide an upstanding, upwardly-open pouring mouth of quadrilateral cross section and further formed to provide an upstanding, narrow rib disposed in a substantially vertical plane including a diagonal of the cross section of said mouth; the invention which comprises a self-sustaining, removable spout formed integrally of resilient, sheet material, said spout including two front walls integrally joined at their forward edges and diverging rearwardly, two rear walls integrally joined respectively to the rear edges of said front walls and converging rearwardly but spaced from each other at their rear edges, the lines of juncture between the respective front and rear walls diverging downwardly, and a substantially horizontal, outwardly-extending flange integrally projecting from the upper end of each wall, said spout being receivable in the pouring mouth of such a receptacle with the line of juncture between said front walls and a median line between the rear edges of said rear walls disposed in said vertical plane and with said flanges bearing against the lips of said mouth, a clip formed of resilient sheet material and proportioned and designed to be frictionally mounted in embracing relation on such a rib, hinge means supported at the forward end of said clip, and a cover hingedly mounted on said hinge means and proportioned and designed normally to rest upon said flanges in closing association with the upper end of said spout.

3,096,006
DEVICE FOR STRAIGHTENING THE WELTS OF SOCKS PREPARATORY TO A BOARDING OPERATION

John W. Glaze, Jr., Charlotte, N.C., assignor to Autoboard Corporation, Charlotte, N.C., a company of North Carolina

Filed Mar. 1, 1962, Ser. No. 176,666
Claims priority, application Great Britain Mar. 17, 1961
8 Claims. (Cl. 223—60)

1. In a boarding machine wherein vertically disposed boarding forms with their foot portions uppermost, and capable of individually supporting knitted socks having unelasticated welts, are caused to travel through a vertical entrance aperture into a boarding chamber in which said socks are subject to a fluid treatment phase, a welt-straightening device comprising, in combination, a pair of welt-straightening rollers covered with a relatively soft, yielding material, said rollers being arranged together side by side at a location intermediate the foot portions and the opposite ends of the travelling forms, immediately in advance of said vertical entrance aperture and with their axes in a common horizontal plane at opposite sides of and substantially parallel to the vertical plane in which the forms travel, and means rotating the rollers in opposite directions whereby adjacent portions of the rollers move downwards together, away from the foot portions of the forms, suchwise as to enable the rollers to engage and stroke each sock welt downwardly, thereby causing it to lie flat against and conform to the corresponding form as the latter passes edgewise between the rollers.



3,096,007
FORM FOR STOCKINGS AND THE LIKE

Curt Kronsbein, Hagen, Westphalia, Germany, assignor to Eugen Bellmann Erben o.H.G., Hagen-Haspe, Germany

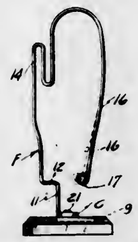
Filed July 6, 1961, Ser. No. 122,215
Claims priority, application Germany July 23, 1960
5 Claims. (Cl. 223—75)



1. A form for a stocking and the like, comprising, in combination, a flat substantially rigid member consisting essentially of a core portion and a layer of synthetic plastic material covering the same, said member having in its plane a configuration corresponding to the shape of said stocking and having a peripheral edge; and an elongated protecting strip of solid cross section firmly attached to said rigid member along at least part of said peripheral edge thereof and extending in said plane out-

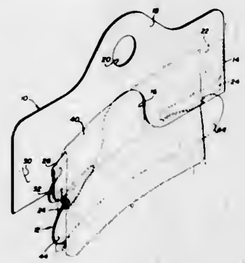
wardly of said edge so as to cover said edge terminating in a rounded outward edge portion, and to prevent, upon insertion of said form into a stocking or the like, direct contact between the latter and the edge covered by said protecting strip.

3,096,008
MITTEN HOLDING, STRETCHING AND SHAPING DEVICE
Fred J. Schumacher, 708 S. Wenona Ave., Bay City, Mich.
Filed Nov. 23, 1959, Ser. No. 854,898
1 Claim. (Cl. 223—78)



A wet mitten holding, stretching, drying and shaping device comprising a base; said base having an upper surface with a recessed area providing a gathering place for moisture dripping down; a row of vertically disposed wire mitten forms mounted on said base in spaced apart, side-by-side disposition; each mitten form comprising a resilient wire, with an intermediate generally U-shaped portion shaped to generally simulate a mitten in upright position, and terminal ends; one of said terminal ends of each form comprising a leg extending down to said base and having a lateral foot loop portion thereon and the other of said terminal ends terminating at a spaced distance above the base in a free loop portion in a vertical plane disposed inward of the wire portion above it; a hollow, cup-shaped member snugly embracing the foot loop of each form and having an opening in the wall thereof disposed at generally right angles to the plane of the row of forms and permitting said one wire leg to extend upwardly from the cup-shaped member covering its foot loop; and means for clamping each cup-shaped member to the base.

3,096,009
GARMENT HANGER
Monroe Jang, 1750 L St., Merced, Calif.
Filed May 9, 1960, Ser. No. 27,708
13 Claims. (Cl. 223—87)



1. A garment hanger comprising a pair of elongated panel members joined together about a transverse fold line, one of said panels being provided with upwardly extending recess means in a lower edge thereof and rod engaging support means, the other of said panels being foldable into a position of substantial alignment therewith and extending through said recess means, the upper edge of said other panel, when enfolded, being substantially in line with the upper edge of said recess means.

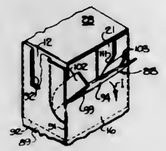
3,096,010
GAME CARRIER
Donald E. Rasmussen, Fargo, N. Dak., assignor to Lloyd C. Baldwin, Baudette, Minn., and Russ Crawford, Grand Forks, N. Dak., a partnership doing business as the Balford Mfg. Co., Baudette, Minn.
Filed Mar. 23, 1960, Ser. No. 17,070
2 Claims. (Cl. 224—7)



1. A game carrier comprising:
(*a*) a body unit for attachment at its upper end to a hunter's belt,
(*b*) said body unit including confronting front and rear panel portions;
(*c*) a reversely bent flexible cord having an intermediate portion thereof received between the lower marginal edges of said panel sections to provide two projecting end portions;
(*d*) stitching extending across the lower marginal portions of said panel sections and through said received intermediate portion of said cord, and
(*e*) a pair of plug members each having two parallel apertures extending therethrough,
(*f*) one aperture of each plug member having a projecting end of said cord anchored therein and the other aperture of each plug member slidably encircling a portion of said cord residing between the projecting end associated therewith and said marginal edges,
(*g*) whereby two cord loops are formed of independently adjustable size determined by where each plug member is individually positioned.

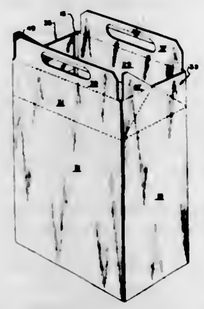
3,096,011
CONTAINER WITH POURING SPOUT
William R. Davis, Lawrenceville, Ga., assignor to Sonoco Products Company, Hartsville, S.C., a corporation of South Carolina
Filed Sept. 4, 1962, Ser. No. 221,253
8 Claims. (Cl. 229—17)

1. In a carton having a pouring spout formed from a one-piece body blank comprising, in combination, a wall on said carton including an outer ply, an intermediate ply and an inner ply secured together in overlapping relationship, said intermediate ply and said outer ply integrally connected together along a common upper edge defined by a fold line, a hinged tab cut in said outer ply defining a spout opening having side edges, a hinged central portion having elongated wings hingedly connected thereto along each side cut in intermediate ply, said tab and said central portion having an upper edge defined by said common edge, a hinged tongue cut in said inner ply defining an opening in said inner ply, means for securing said tongue, said central portion and said tab together in overlapping relationship to form with said wings a pouring spout movable between a closed position flush



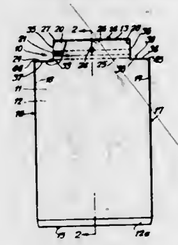
with said carton and an open position with said wings movable slidably over the side edges of said outer ply spout opening from a retracted position between said inner and outer plies in the closed position of said spout to an elevated position to form side walls for said spout in said spout open position, means cut in said inner ply for admitting the trailing portion of said wings during said sliding movement and for urging said wings against said spout opening side edges to thereby reduce the bending of said wings around said side edges and to prevent finely divided material packaged in said carton from sifting out around said pouring spout.

3,096,012
CARTON
Edward T. Bryant and John T. McNeally, Chesterfield County, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Mar. 29, 1961, Ser. No. 99,129
1 Claim. (Cl. 229—52)



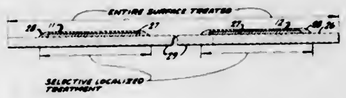
A thermal carton formed from a one-piece scored blank of a laminated board having an outer foil laminate surface and an inner pulp board surface, said carton comprising a front panel, a back panel and two side panels connected together along their edges to form a body of rectangular cross section, inner top flaps of equal size connected to the transverse top edges of said side panels, each inner top flap having 45 degree fold lines extending from its corners at its side panel, said lines extending toward each other and terminating at an apex at the opposite transverse edge to provide a bellows fold for each inner top flap, outer top flaps of equal size connected to the top edges of said front panel and back panel, said inner top flaps and said outer top flaps being connected along their adjacent longitudinal edges, a handle element connected to the other transverse edge of each of said outer top flaps, the handle elements being connected in face-to-face relation to provide a centrally disposed handle, a tie flap connected to said opposite transverse edge of each inner top flap at one side of said apex, each tie flap being sandwiched within the bellows fold formed by its inner top flap and adhered in face-to-face engagement to the portion of the bellows fold positioned thereover, said face-to-face engagement being made by the inner pulp board surface of the tie flaps and the outer foil laminate surfaces of their respective bellows folds, said tie flaps having a right triangular shape conforming substantially to the portion of the bellows fold to which it is adhered.

3,096,013
PLASTIC TUBULAR BAG
Emanuel Kugler, Valley Stream, N.Y.
Filed Aug. 21, 1961, Ser. No. 132,802
5 Claims. (Cl. 229—55)



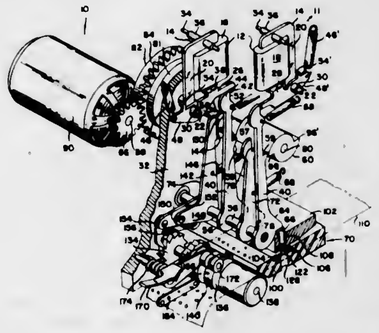
5. A tubular bag of flexible material having a top end, a bottom end and opposed side edges, and including oppositely disposed front and back face panels, a reinforcing member disposed between said front and back face panels at said top end of the bag and centrally of the width of the bag between said side edges, said reinforcing member having a lower edge and respective opposite ends each facing towards one of said opposed side edges of the bag, and further having length shorter than said width of the bag at its said top end whereby each of said opposite ends thereof is spaced a substantial distance inwardly in the direction of said bag width from its said associated side edge of the bag, said oppositely disposed front and back face panels being cut away within each region of the bag located outwardly of the respective opposite ends of the reinforcing member to said respective side edges of the bag and substantially in alignment with said lower edge of the reinforcing member to define notched top end shoulder regions of the bag thereat, means attaching said reinforcing member in said position with respect to said front and back face panels, means retaining each of said front and back face panels in adjacent, substantially contiguous relationship with respect to said lower edge of the reinforcing member, respective sealing means sealing together said front and back face panels at each of said opposed side edges of the bag, each said sealing means extending in a line from substantially said bottom end of the bag to said respective notched shoulder regions thereof, each said notched top end shoulder region extending outwardly from coincidence with each respective opposite end of the reinforcing member, and said front and back face panels at each of said notched shoulder portions being sealed together in respective lines of seal extending from each of said opposed side edges of the bag to respective locations substantially adjacent said respective opposite ends of the reinforcing member.

3,096,014
PRINTABLE SHEET AND METHOD
Charles M. Swan, San Lorenzo, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Nov. 7, 1960, Ser. No. 67,707
11 Claims. (Cl. 229—87)



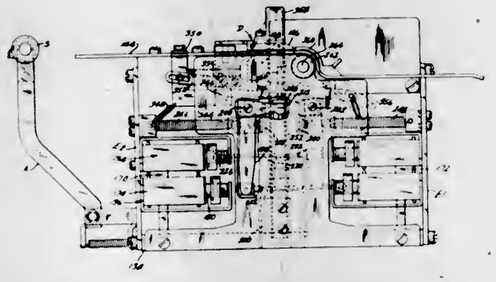
1. A heat sealed package comprising an article and a printed protective wrapper folded upon itself and surrounding said article and enclosing the same, said wrapper comprising a thermoplastic sheet having margins thereof overlapped and defining a seam extending along said article, one surface of said sheet being in contact with and heat sealed to the other surface of said sheet throughout substantially the full length of said seam, said sheet normally being generally non-receptive to printing inks and being treated across the full width of said one surface to make the same receptive to such inks, predetermined areas of said one ink receptive surface being coated with substantially solid pattern inked indicia, only said predetermined areas of said one surface being overcoated with a heat sealable material whereby said material contacts the other surface of said sheet in said seam, said other surface being selectively treated in said seam in alignment with said predetermined areas of said one surface to enhance the heat sealable characteristics thereof relative to said heat sealable material, whereby said sheet surfaces are heat sealable to each other for the length of said overlapped seam.

3,096,015
BALL PERFORATOR
Wilburn F. Bradbury, Northbrook, Ill., assignor to SCM Corporation, a corporation of New York
Filed Jan. 27, 1960, Ser. No. 4,916
20 Claims. (Cl. 234—107)



1. A multiple hole perforator machine comprising: a plurality of selectively operable ball type punch and die means; hammer means, at least equal in number to said punch means, individual to each punch means and adapted to impart momentary impact punching forces to associated punch means during a cycle of machine operation; power means for operating said hammer means; and a plurality of two position operable means adapted in one direction to engage and block the hammer operation of, and selectively operable to the second position to unblock and permit operation of, selected hammer means enabling such selected hammer means to impart said momentary impact punching forces to associated punch means.

3,096,016
DATA RECORDER
Werner Flieg, Brookline, Mass., assignor to Invac Corporation, Waltham, Mass.
Filed Apr. 12, 1961, Ser. No. 102,478
4 Claims. (Cl. 234—108)

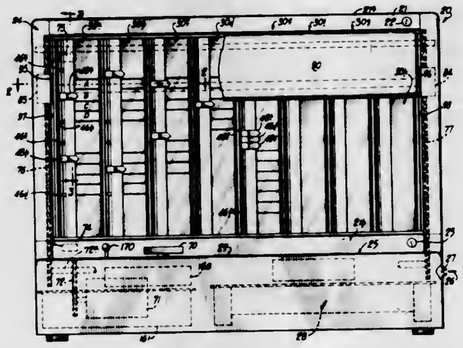


1. Tape punch apparatus comprising parallel pins displaceable to punch said tape and arranged in a rectilinear alignment of determinable breadth, a bank of solenoids on one side of the alignment of pins, said bank being parallel to and of substantially greater breadth than said alignment of pins, said solenoids including armatures displaceable transversely of said alignment of pins, said pins being provided with lateral openings, hammers coupling said armatures to said pins for actuating the latter, said hammers each including spaced perpendicularly disposed first and second arms and connecting members rigidly connecting the arms, means pivotally supporting said hammers with the first arms in parallel and with the second arms in parallel, and springs coupled to said hammers and urging the same towards respective rest conditions, said first arms being aligned with and coupled to said pins, said second arms being aligned with and coupled to said armatures, said connecting members being of different lengths to compensate for different distances of said armatures relative to the associated pins due to the different breadths of said bank and the alignment of pins.

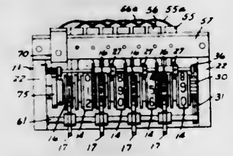
3,096,017
VOTING MACHINE
Stanley W. Wilcox, Tulsa, Okla., and Guilbert M. Hunt, Willowick, Ohio, and Arthur F. Fassnacht, deceased, late of Cleveland, Ohio, by Mary Ann Fassnacht, administratrix, Cleveland, Ohio, assignors to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,825
30 Claims. (Cl. 235—54)

1. In a voting machine, the combination of a voting panel made up of a number of different side by side columns, a plurality of stop means adjustably but fixedly mounted upon each column for dividing each column into different office groups, a plurality of selectors mounted for manual sliding movement along each column from a neutral position adjacent one of the stop means to any desired one of a plurality of selecting positions within each office group, there being at least one selector for each office group, scanning means movable along said columns in one direction to determine the selecting positions to which a selector has been moved, said scanning means being movable along said columns in a reverse direction and including means for returning each said selectors from its selecting position to its neutral position when said scanning means is moved in said reverse direction, the return movement of said selectors being limited by said stop means, and a movable cover for said panel

movable in synchronism with said scanning means for covering said panel as said scanning means is moved in said one direction so that the voter's choices cannot be detected by the next succeeding voter using the machine.



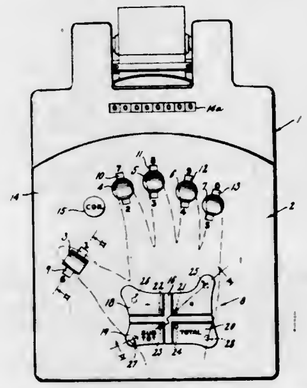
3,096,018
PREDETERMINING COUNTER MECHANISM
Harvey N. Bliss, Windsor, and George W. White, West Hartford, Conn., assignors to Veeder-Root, Incorporated, Hartford, Conn., a corporation of Connecticut
Filed June 24, 1959, Ser. No. 822,517
7 Claims. (Cl. 235—132)



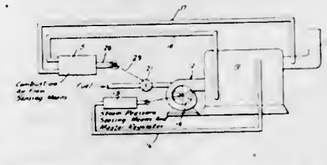
7. A predetermining counter comprising a totalizing counter having first and second rotatably mounted, indicia bearing counting wheels and transfer means operatively connecting said counting wheels, a first preset wheel adjacent the first number wheel, a second preset wheel adjacent the second number wheel, first and second coaxially mounted rotatable conductors driven by the adjacent counting wheels and preset wheels respectively, one of said conductors having a contact portion extending less than 360° about its axis of rotation, a contact on the other of said conductors engageable with said contact portion of said first conductor, and means for establishing external electrical connections to said first and second conductors.

3,096,019
CALCULATING MACHINE KEYBOARD
Marvin A. Frenkel, 26323 Hendrie Blvd., Huntington Woods, Mich.
Filed May 25, 1960, Ser. No. 31,696
12 Claims. (Cl. 235—145)

1. A ten digit keyboard for a calculating machine comprising function key means for effecting a desired operation on a number entered into said machine, and five value setting keys disposed in spaced relation from said function key means and constructed and arranged to be actuated by the fingers and thumb of an operator's hand while the heel of the operator's hand rests on said function key means, said value setting keys being movable in substantially a single plane from a neutral position to one or the other of first and second digit input positions, whereby the operator of said machine may rest the fingers and thumb of his hand firmly on said value setting keys and effect the operation of the machine without removal of his hand therefrom.



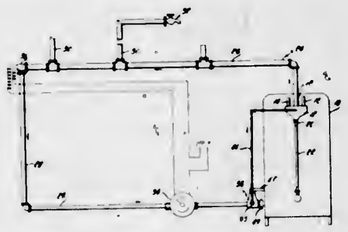
3,096,020
STEAM BOILER COMBUSTION CONTROL UNIT
Arthur A. Kraft, Parma, Ohio, assignor to Cleveland Controls, Inc.
Filed June 4, 1959, Ser. No. 818,064
6 Claims. (Cl. 236—14)



1. An apparatus for the control of the admission of a combustion component into a steam boiler combustion chamber wherein air and fuel combustion components are admitted through a burner and wherein the flow of one of said components is controlled by the steam pressure in the boiler, comprising a frame, a pressure sensitive member movable responsive to the flow of one of said components disposed below the frame, a switch operating plate hingedly supported at one end to said frame and means connecting said pressure sensitive member to the switch operating plate through the free end of the plate, a pair of arms hingedly supported at one end of the frame above the switch operating plate, said pressure sensitive member being connected to one of said arms for transmitting movement thereto and the point of connection including a leaf spring carried by one of the arms and clamp means slidable along the arm and spring and arranged to clamp the spring to the arm at different positions longitudinally of the arm and spring to vary the effective length of the spring, a support slidably disposed on the frame opposite one of said arms and a lever carried by the support and having ends extending in opposite directions from the support, said support comprising a fulcrum for the levers, means to move the support along the frame including a nut member on the support disposed below the frame and a screw supported below the frame and engaged in the nut member and means carried by the frame and connected to the screw for rotating the screw and moving said support, one of said arms having a roller carried thereby, said roller resting on said lever to one side of the fulcrum and means to adjust the position of the roller relative to the arm, and spring means

connected between said arm and the frame for moving the arm with the roller into engagement with the lever, means for controlling the flow of the other component including a reversible motor and a control arm connected thereto and movable longitudinally in response to energization of the motor by a motor circuit, a second lever connected to said control arm, a cam connected to and actuated by said second lever, a lever having a cam engaging portion in engagement with the cam and a first lever engaging portion for pressure engagement with the other end of the first lever, a motor circuit and switch means for controlling the motor circuit, means for adjustably supporting said switch means in operative connection with said switch operating plate.

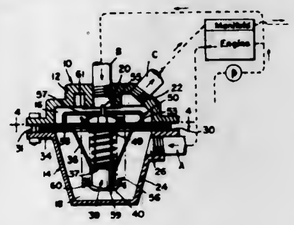
3,096,021
HOT WATER CIRCULATING SYSTEM
Halvard Lintvedt, Kalamazoo, Mich., assignor to Ruud Manufacturing Company, Kalamazoo, Mich., a corporation of Delaware
Filed Dec. 17, 1958, Ser. No. 780,971
4 Claims. (Cl. 236—20)



1. In a hot water system wherein hot water is withdrawn from a tank through a supply conduit connected to at least one service outlet and cool water is introduced into the tank to replenish hot water withdrawn from the system through said outlet, means for maintaining the temperature of the water in said supply conduit at a predetermined level comprising a return conduit from said supply conduit to the tank, a pump assembly in one of said conduits, means responsive to the temperature of water in said supply conduit for starting operation of said pump assembly when said temperature drops below said predetermined level, means for continuously mixing direct hot water from said tank with a proportioned amount of said cool water to provide a continuous source of tempered hot water and for conducting said tempered hot water into said supply conduit, and proportioning means connected to said return conduit for diverting part of the returned water into admixture with said tempered hot water adjacent said mixing means while discharging the remainder of said returned water into said tank.

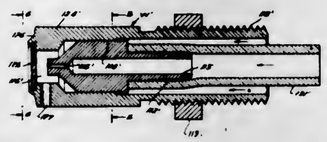
3,096,022
SAFETY THERMOSTATIC CONTROL FOR MARINE ENGINE COOLING SYSTEMS
Donald A. Holley, 700 E. Bremer Ave., Waverly, Iowa
Filed Dec. 2, 1959, Ser. No. 856,685
7 Claims. (Cl. 236—34.5)

1. A thermostatically actuated valve unit comprising a housing, a plate member therein and dividing the housing into a first chamber and a second chamber, said plate member having a central opening therethrough, a fluid inlet port and a fluid outlet port opening directly into the first chamber, a fluid inlet port opening into the second chamber, a spider structure supported by said plate member in said second chamber, a thermal element having a body and a piston carried by the body and movable relative to the body by thermal action, a resilient means connected with said body and supporting the thermal element on the spider, said piston being directed through said plate member opening, a valve poppet positioned within the first chamber over the plate member and supported by the piston and movable thereby between two extreme positions in one of which positions it engages the plate member over the opening therein, and in the other of which positions it closes the fluid inlet port communicating with the first chamber, said valve poppet



embodying an annular flange directed toward said plate member and wherein the plate member carries spaced means forming a part thereof with which said flange is adapted to engage, whereby a restricted water passage is provided between the two chambers, and spring means connected with and between the valve poppet and the body portion of the thermal element and normally urging movement of the valve poppet toward said plate member.

3,096,023
LUBRICATION
Thomas R. Thomas, New York, N.Y., assignor to Auto Research Corporation, Boonton, N.J., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,449
9 Claims. (Cl. 239—424)

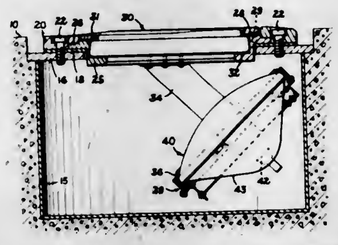


1. In a system for applying a controlled finely divided coolant to a place of machining by a machine tool of the type having a central air pressure and liquid coolant supply with parallel separate lines leading from said central supply to said place; the combination therewith of an outlet unit having concentric cylindrical inside and outside conduits with an outer annular air conduit and an inside central liquid coolant conduit, an inside nozzle unit having a central axial passageway with inlet and outlet nozzles, said inlet nozzle receiving said inside conduit and forming a fluid tight connection therewith, an outside tubular member having a central axial passageway receiving said nozzle unit and having inlet and outlet connections, said outlet connection having a central cylindrical chamber receiving the outlet nozzle of the nozzle unit and a closure closing off said central chamber and said outlet connection and said outside tubular member and closure having means to direct the flow of the finely divided coolant.

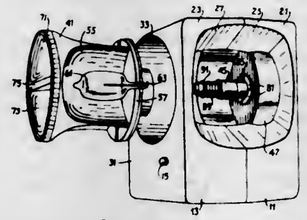
3,096,024
MARKER LIGHT
Clinton J. T. Young, Alexandria, Va., assignor to Outlook Engineering Corporation, Alexandria, Va., a corporation of Virginia
Filed Apr. 26, 1961, Ser. No. 105,687
6 Claims. (Cl. 240—1.2)

1. A flush mounted marker light capable of directing a light beam along runways and the like and adjacent to

the runway surface, comprising means providing a well member arranged for mounting in said runway surface, a mounting adapter fastened to said well member and extending about the upper end thereof approximately flush with the runway surface, a light source providing a concentrated beam of light from within said well member, a light transmitting lens member mounted in said adapter to close said well member and having an essentially flat upper surface extending across said well member approximately flush with the runway surface, said lens member being formed of material capable of withstanding thermal shock resulting from heat from such light source as accumulated within said well member due to enclosure of said light source therein and to the proximity of said light source of said lens member, and said lens member having an undersurface subdivided into a plurality of beam receiving surfaces extending essentially parallel to each other and angularly arranged with respect to said light source and said lens upper surface to direct a substantial portion of light rays from said source through said lens member to intersect said upper surface thereof at an angle slightly less than the critical angle of incidence of the lens member causing refraction of the beam of light and directing the refracted beam issuing from said lens member at an acute angle with respect to said upper surface.

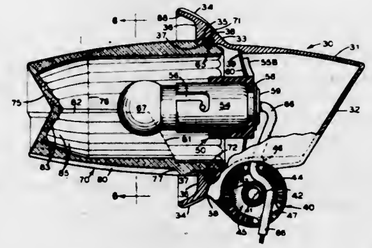


3,096,025
PHOTOGRAPHIC FLASH APPARATUS
Claus Prochnow, Braunschweig, Germany, assignor to Franke & Heidecke, Fabrik Photographischer Prazisions-Apparate, Braunschweig, Germany, a firm of Germany
Filed Dec. 14, 1960, Ser. No. 75,823
Claims priority, application Germany Dec. 23, 1959
4 Claims. (Cl. 240—1.3)



1. Flash lighting apparatus for use with a photographic camera and comprising a reflector unit and a magazine unit, said reflector unit including a housing having a portion of an inwardly dished reflecting surface, means defining a cylindrical bore extending laterally through said housing, a pivot pin mounted on said housing in said bore and disposed approximately at the apex of said reflecting surface and perpendicular to its optical axis, said magazine unit being in the form of a drum received rotatably and detachably on said pivot pin, a base and a plurality of angularly spaced recesses on said magazine unit, a flash lamp mounted on said base within each of said recesses with its longitudinal axis parallel to said pivot pin, rotation of said magazine unit moving each of said lamps successively into an operative position with its respective recess forming the apex of said reflecting surface, a power supply device contained within the housing of said reflector unit for supplying energy to said lamps, a guide flange on said pivot pin having an opening, and a projection on said drum adapted to pass through said opening to permit axial insertion and removal of said drum only in a fixed angular position, said drum when in other angular positions rotating on said pivot pin without substantial axial movement, to bring successive flash lamps into operative position.

3,096,026
CAB LAMP FOR AUTOMOTIVE VEHICLES
Donald S. Bruce, Holliston, Mass., and John B. Dickson, Kew Gardens, and Vilho Koljonen, Brooklyn, N.Y., assignors to Signal-Stat Corporation, Brooklyn, N.Y., a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,300
15 Claims. (Cl. 240—7.1)

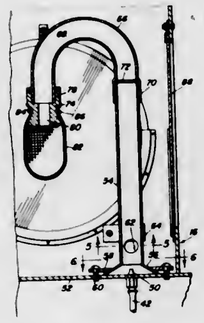


1. An automotive vehicle lamp comprising, in combination, a housing constructed and arranged for mounting upon a portion of a vehicle subjected to road shock; a lens operatively associated with said housing; a cup of relatively soft and flexible material having an apertured base; a lamp bulb socket having conforming seating engagement in and embraced by said cup; and a substantially flat annular metal member surrounding said cup intermediate its ends and having an outer peripheral portion seated in said housing; said cup being formed integral with a plurality of substantially uniformly peripherally spaced flexible and resilient fingers extending from the outer surface of its side wall intermediate the ends thereof, alternate fingers resiliently bearing on one surface of said member and intermediate fingers resiliently bearing on the opposite surface of said member; the side wall of said cup being imperforate in the area of said fingers and extending through the aperture in said annular member to completely isolate said socket from metal-to-metal contact with said member, whereby said lamp socket is isolated from shocks transmitted to said housing.

3,096,027
COMBUSTION CONTROLLED FLASHER LAMP
Lyle D. Atkins and Warren E. Holmgreen, Jr., San Antonio, Tex., assignors, by direct and mesne assignments, to Warning Lites Company, Inc., San Antonio, Tex., a corporation of Texas
Filed Dec. 1, 1960, Ser. No. 73,131
6 Claims. (Cl. 240—11)

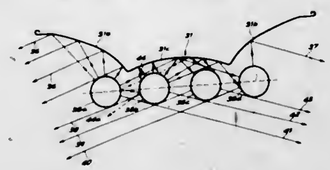
1. A combustion controlled flasher lamp comprising, a source of fluid fuel, pressure regulator means operatively connected to said source for supplying a metered flow of fuel, flow passage means operatively connected to said source for conducting said metered flow of fuel, fuel mixture control means operatively connected to said pas-

sage means for supplying an adjustable proportion of combustion supporting fluid to form a combustible mixture with said fuel in response to said metered flow thereof, discharge means operatively connected to said passage means, illumination emitting means operatively mounted by said discharge means for defining a volume within which combustion consumes said combustible mixture at a rate depleting the supply thereof, and means mounted



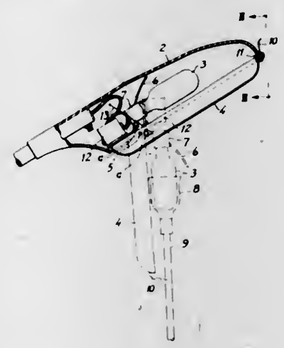
within said flow passage means intermediate said source and said discharge means for volumetrically limiting continued combustion within said passage means receding therewithin from the illumination emitting means in response to depletion of said combustible mixture, whereby illumination is intermittently produced within the illumination emitting means without interruption in combustion of said combustible mixture.

3,096,028
FLUORESCENT LUMINAIRE
Donald W. Harling, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Original application Sept. 23, 1957, Ser. No. 685,439. Divided and this application Dec. 29, 1958, Ser. No. 786,442
8 Claims. (Cl. 240—25)



7. In a luminaire, reflector means comprising at least two spaced parabolic reflecting surface means each operable to direct light from a light source disposed at its focal point in a preferred direction and connecting surface means interposed between and connecting said spaced parabolic reflecting surface means, and lamp means comprising a plurality of elongated light sources, at least one of said light sources positioned adjacent to and cooperating with each parabolic reflecting surface means and another of said light sources positioned adjacent to and cooperating with said connecting surface means, said connecting surface means being of a configuration and said light sources being positioned relative to each other and said connecting surface means that said connecting surface means intercepts a substantial portion of the light from said another light source and directs said light into each of said light sources to thereby convert said light into heat and reduce the concentration of light immediately below the luminaire.

3,096,029
LANTERNS
Birger Berge, Sodertalje, Sweden, assignor to El-Be Elektriska Aktiebolag, Sodertalje, Sweden, a joint stock company of Sweden
Filed Mar. 1, 1960, Ser. No. 12,018
Claims priority, application Sweden Mar. 5, 1959
3 Claims. (Cl. 240—25)



1. In a luminaire of the type intended to be mounted high above the ground and to have its lamp exchanged from the ground by means of a rod-mounted tool; the combination of:

A. An upper stationary housing in the form of an elongated inverted trough mounted with its longitudinal axis at a substantial angle from the vertical and having an opening at the bottom thereof;

B. a lamp holder assembly having a predetermned center of gravity and including

a. a lamp socket mounted in the assembly receiving the base of an electric lamp, and

b. a closure extending in opposite directions beyond said center of gravity and having a periphery with a configuration corresponding to that of said opening of the housing;

C. pivot means mounting said lamp holder assembly on said housing and defining a pivoting axis for the assembly, which pivoting axis extends transversely with respect to said longitudinal axis of the housing and is disposed intermediate the ends of both said housing and closure, said lamp holder assembly being swingable relative to said housing about said pivoting axis between

a. a swung-up operative position in which said socket and lamp are disposed in said housing and arranged substantially parallel to said longitudinal axis of the latter with said periphery of the closure engaging said housing around said opening at the bottom thereof, and in which said center of gravity of the lamp holder assembly is located above said pivoting axis and substantially close to a vertical plane passing through said pivoting axis, thereby to avoid abrupt unintentional downward swinging of said lamp holder assembly from said operative position, and

b. a swung-down, lamp exchange position in which said periphery of the closure lies substantially in a vertical plane and in which the lamp is suspended below the socket so as to be easily exchangeable from the ground by a rod-mounted tool, and said center of gravity of the lamp holder assembly is spaced radially to one side of said pivoting axis in order to stabilize the lamp holder assembly in said lamp exchange position; and

D. a tension spring connected, at its opposite ends, to points on said housing and lamp holder assembly, respectively,

a. the operative position of said lamp holder assembly having the line of force of said spring disposed to said one side of said pivot axis, the lamp exchange position having the line of force of said spring disposed to the opposite side of the pivot axis, and

b. the distance between said points of connection of the spring increasing to increase the tension of said spring during swinging movement of said lamp holder assembly from said operative position to said lamp exchange position, whereby said spring normally yieldably maintains the lamp holder assembly in said swung-up operative position and further stabilizes said assembly in said swung-down lamp exchange position when said assembly is positively displaced to the latter position.

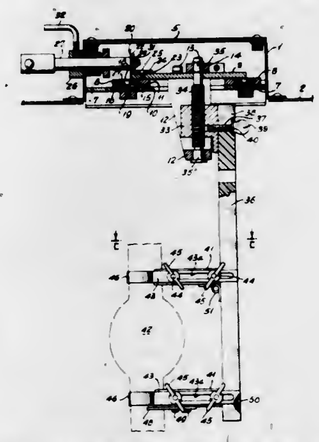
3,096,030
LUMINAIRE FOR DIRECTIONAL LIGHTING
Donald W. Harling, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Nov. 4, 1960, Ser. No. 67,392
3 Claims. (Cl. 240—25)



1. An elongated street lighting luminaire for use above a roadway having unidirectional travel thereon defining a forward and rearward direction, said luminaire having an elongated housing, a bracket arm engaging said housing and supporting said luminaire above the roadway with its longitudinal axis extending transversely of said roadway, an elongated light source supported by said housing and extending longitudinally thereof, means including a generally horizontally disposed reflecting surface positioned above said light source for reflecting light rays from said source downwardly in a substantially balanced pattern, with said rays extending vertically and also at an angle forwardly and rearwardly of said luminaire, and means including a secondary reflector having a forwardly directed reflecting surface positioned below said light source and spaced therefrom, the upper edge of said reflector terminating below said light source, said secondary reflector intercepting the greater portion but not all of said rearwardly directed rays and redirecting said greater portion forwardly of said luminaire in the direction of travel on the roadway, the space above said reflector permitting the smaller portion of said rays to be emitted in a rearward direction.

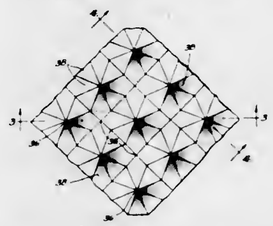
3,096,031
LAMP POSITIONING MECHANISM FOR SEARCHLIGHTS
Sidney Feldman, Riverdale, and Alfred J. Lawes, Flushing, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Filed June 26, 1959, Ser. No. 823,264
13 Claims. (Cl. 240—44.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A searchlight for signalling which comprises a housing having a window in one side and a reflector with its center at the other side thereof, a supporting element, means carried by said housing between said sides and adjacent one side wall thereof for mounting said element for sliding movements selectively in rectilinear crosswise directions relative to the top wall of the housing that lie in a common plane that is parallel to that axis of the housing which extends between the approximate centers of said reflector and said window, a lamp supporting member carried by said element and extending therefrom



in a direction approximtaely normal to said plane and radially toward said axis, and at its free end having means for detachably supporting a lamp approximately at said axis, said member being vertically movable in said direction normal to said plane for adjusting the position of a lamp carried thereby in a direction crosswise of said axis, and means accessible from the exterior of said housing and connected to said element for selectively adjusting said element and through it said lamp supporting member in directions toward and from said window.

3,096,032
LIGHTING DIFFUSER
Donald W. Davis, Detroit, Mich., assignor to Lighting Products, Inc., Highland Park, Ill., a corporation of Illinois
Filed Sept. 23, 1959, Ser. No. 841,776
2 Claims. (Cl. 240—106)



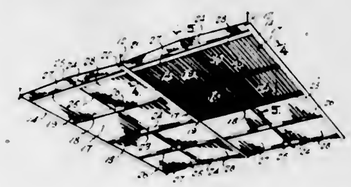
1. A solid imperforate light diffuser plate of plastic material smooth on one side and having octagonal pyramidal projections and square pyramidal inwardly extending recesses arranged closely together in the other side of the plate in a regular pattern with the octagonal apices outwardly, the alternate sides of each pyramid meeting the alternate bases of adjacent sides and bases of adjacent pyramids on all four sides, and the other four alternate sides of each pyramid extending inwardly in the planes of the sides of the recess, each to meet at the apex of the recess in the plate forming each of said pyramidal square inwardly extending recesses, the four

outward sides of the base of each recess defining a common plane for the bases of all of the outward pyramidal projections, the four common sides of each recess and of the corresponding octagonal pyramids being thus continuous and each pair of opposite sides being at an angle of approximately 122°.

3,096,033
CEILING PANEL

Kurt Franck and Vearl S. Wince, Newark, Ohio, assignors to Holophane Company, Inc., New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 645,315, Mar. 11, 1957. This application Jan. 22, 1960, Ser. No. 4,049
8 Claims. (Cl. 240—106)

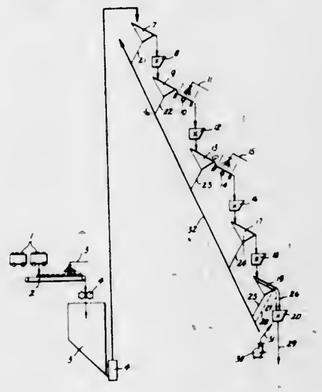


8. A rectangular light transmitter for use below fluorescent lamps and made of a single piece of plastic transparent material, the transmitter having a web panel, intersecting rib means extending downwardly from the light emergent surface of said web panel for strengthening said web panel and extending between the edges of said web panel, prism means substantially covering the light emergent surfaces of said panel between said intersecting rib means for altering the direction of transmitted light therethrough so as to obscure the fluorescent lamps and prevent glare, and further prism means on the bottom edges of said rib means for altering the direction of light transmitted therethrough so as to prevent glare.

3,096,034
METHOD AND APPARATUS FOR PURIFYING POTASSIUM SALT-CONTAINING MATERIALS

Kurt Schmidlapp, Neuhof, Kreis Fulda, Germany, assignor to Wintershall Aktiengesellschaft, Kassel, Germany

Filed Dec. 28, 1960, Ser. No. 79,073
16 Claims. (Cl. 241—14)

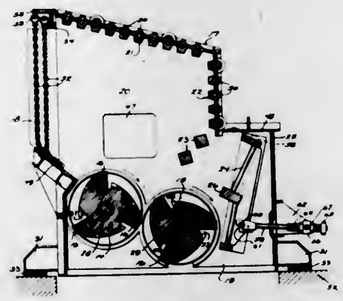


1. In a method of separating sludge-forming clay constituents from a particulate sludge-forming clay and potassium salt containing mined raw material, the steps of subjecting particulate sludge-forming clay and potassium salt-containing mined raw material including also particles within the size range of between 40 and 160 mm. without prior impact comminution to impact comminution at a first predetermined impact velocity so as to separate said raw material into clay enriched larger particles and potassium salt enriched smaller particles; recovering said potassium salt enriched particles from the thus formed particulate mixture; subjecting said clay enriched larger particles to impact comminution at a second velocity being greater than said first impact velocity so as to separate said clay enriched particles into further potassium salt enriched smaller particles and larger clay enriched particles; recovering said further potassium salt enriched particles; and subjecting the thus separated clay enriched particles to impact comminution at a third impact velocity being smaller than said second impact velocity so as to cause further separation into clay enriched larger particles and smaller potassium salt containing particles of greatly reduced clay content.

3,096,035
ROTARY IMPACT CRUSHER

Frank M. Allen and Fred Curtis Archer, Whitefish Bay, and William S. Shira, Brookfield, Wis., assignors to Barber-Greene Company, Aurora, Ill., a corporation of Illinois

Filed Aug. 4, 1960, Ser. No. 46,637
7 Claims. (Cl. 241—32)



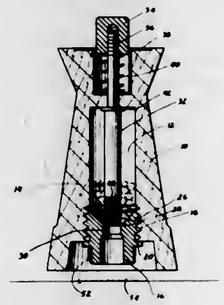
3. A rotary impact crusher comprising, cooperating upper and lower rotors having peripheral impact hammers revolvable in the same direction about parallel horizontal axes disposed at different elevations, a housing for said rotors forming an unobstructed impact zone above the hammer paths and being bounded above said zone by a rectilinear breaker plate disposed parallel to the common plane of the rotor axes and by another rectilinear breaker plate depending from the lower end of said inclined plate, several stationary breaker bars spanning said housing beneath and laterally of said zone and between the lower end of said depending plate and the path of the hammers of the lower rotor, and an approximately upright material discharge grid pivotally suspended from said housing laterally of said stationary bars and of said lower rotor and having thereon upper and lower grid sections separated by another breaker bar.

3,096,036
PEPPER MILLS

Edwin Cowles, New York, and Kenneth H. Bowen, Auburn, N.Y., assignors, by mesne assignments, to Bo-Mer Manufacturing Corporation, Auburn, N.Y., a corporation of New York

Filed Feb. 23, 1961, Ser. No. 91,077
5 Claims. (Cl. 241—169)

1. A condiment grinding mill comprising an elongated casing having a bore therein, a hollow annular end ferrule closing said bore, said end ferrule having an internal conical surface terminating in an edge defining an aperture through said ferrule, a spindle mounted within said bore and having a diameter less than said aperture, said cylindrical spindle being reciprocable in a stroke during which the spindle is driven from an end position into said aperture, said spindle being provided with a serrated surface

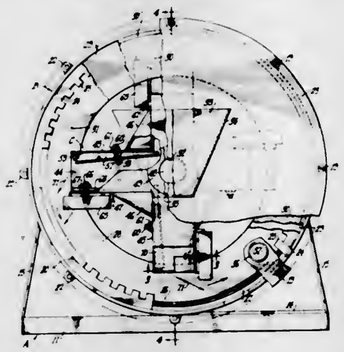


for grinding during said stroke, and means for varying the particle size of the ground condiment comprising means for moving said ferrule axially from a position at which the end of said spindle and the aperture defining edge are substantially coincident when the spindle is in said end position to provide a selectable gap between the end of said spindle and said aperture defining edge.

3,096,037
ORE PULVERIZER WITH CENTRIFUGAL IMPACT ACTION

Ervin J. Dear, 495 N. Bowling Green Ave., Los Angeles, Calif., and Robert W. Staples, 14826 Wyandotte St., Van Nuys, Calif.

Filed Mar. 5, 1962, Ser. No. 177,421
8 Claims. (Cl. 241—275)

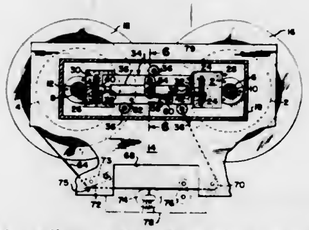


1. In an ore pulverizing mill, in combination: a housing comprising a rim, front and back walls secured to said rim in axially-spaced parallel relation, a target ring lining the inner wall of said rim, an inlet in one of said walls at the center thereof, and an outlet in one of said walls, adjacent said rim; and a rotor rotatable within said housing, having an inlet port communicating with said housing inlet and a plurality of peripheral discharge mouths for delivering ore chunks outwardly against said target ring; said target ring being of split ring form, with circumferentially-spaced ends defining a gap extending circumferentially to said outlet in the direction of rotation of said rotor, from a point spaced from said outlet.

3,096,038
TAPE STORAGE APPARATUS

John O. Fundingsland, Colorado Springs, Colo., assignor to Teleprompter Corporation, New York, N.Y., a corporation of New York

Filed Jan. 21, 1959, Ser. No. 788,187
2 Claims. (Cl. 242—55.14)

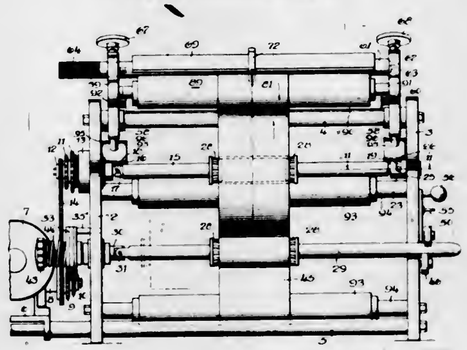


1. Record medium storage apparatus comprising two disks mounted for rotation about spaced parallel axes, each of said disks being adapted to drive a reel, and means coupling said disks for rotation together, said coupling means comprising a carriage mounted for reversible translation between said disks along a path substantially perpendicular to said axes and parallel to the plane defined by said axes, a shaft, two wheels affixed to said shaft at a separation different from the separation of said axes, means supporting said shaft from said carriage for rotation about its own axis and for separate rotation about a transverse axis parallel to said parallel axes, the support of said shaft from said carriage being such that when said shaft is parallel to the plane defined by said parallel axes, its said own axis lies in that plane, and resilient means engaged between said carriage and shaft support means tending to rotate said shaft about said transverse axis to positions in which the axes of said wheels are skew to the axes of said disks.

3,096,039
MACHINE FOR SLITTING SHEET MATERIAL

Eugene Doven, Appleton, Wis., assignor to The Appleton Machine Company, Appleton, Wis., a corporation of Wisconsin

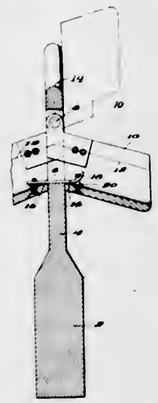
Filed July 8, 1958, Ser. No. 747,163
2 Claims. (Cl. 242—56.2)



1. In a machine for slitting sheet material including a frame, a supply shaft for holding a roll of sheet material to be slit, a rewind shaft upon which the slit material is wound and a slitting device to slit the material in its path from said supply shaft to said rewind shaft; means disposed substantially at the ends of said rewind shaft to removably connect said rewind shaft to said frame, wherein one end of said shaft has a pin and mating groove, first removable connection with said frame and the other end of said rewind shaft has a

second removable connection, said second removable connection comprising a bearing and a sleeve to rotatably enclose said other end of said rewind shaft enclosed in said bearing, said bearing and said sleeve having open groove portions which when aligned enable removal of said rewind shaft, means to selectively align and disalign said sleeve and bearing grooves, end thrust bearing means disposed within said bearing in engaging relationship with said rewind shaft other end, said sleeve having a front flange to abut the inner end of said bearing and a notch which is in registry to permit movement of the other end of said rewind shaft into and out of said bearing when said bearing and said sleeve grooves are also in registry.

3,096,040
HAND WINDER FOR FLEXIBLE MATERIAL
Walter P. Taylor, Jr., 42—44 12th St., Long Island City, N.Y.
Filed June 14, 1960, Ser. No. 36,063
7 Claims. (Cl. 242—85.1)



1. A hand winder for winding flexible material into a series of figure-8 coils, comprising a shank, at least two flexible-material-receiving members extending from said shank, means pivoting said members on said shank for movement about at least one axis transverse to the longitudinal axis of the shank between an operative position in which their longitudinal axes lie in planes forming an obtuse angle with each other and a released position in which the longitudinal axes lie closer to the longitudinal axis of the shank, and releasable means for holding the receiving members in operative position, the pivoting means pivoting the two receiving members being at a common point on the shank so as to extend in opposite directions therefrom and the shank having an extension beyond said common point having an end surface of saddle shape extending transversely to the common plane of the longitudinal axis of the receiving members.

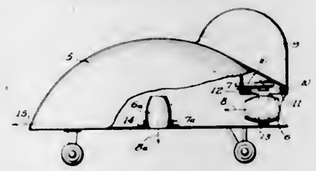
3,096,041
AIRCRAFT
Ian Clifford Cheeseman, Hawley, and Charles Ernest Moss, Farnborough, England, assignors to Power Jets (Research and Development) Limited, London, England, a British company
Filed Dec. 20, 1960, Ser. No. 77,091
Claims priority, application Great Britain Jan. 7, 1960
9 Claims. (Cl. 244—7)

1. An aircraft comprising a fuselage; a two-bladed helicopter rotor comprising a rotor head rotatably mounted on top of the fuselage, two opposite rotor blades of substantially circular cross-section, means locking the blades to the rotor head in an operative position at a pre-determined cone angle in which the rotor can rotate with the blades clear of the fuselage, each blade comprising an outer shell and an inner liner coaxial therewith, the liner defining a substantially circular section passage and the shell and liner defining between them an annular passage, both passages extending longitudinally of the blade, and the outer shell of each blade being formed with at least one long shallow aperture opening from the annular passage and extending along the blade; tip jet units mounted on the extremities of the blades and connected to be supplied from said circular section passage; means for moving the rotor blades be-



tween said operative position and a position in which they are at least partly retracted into the fuselage; at least one gas turbine jet propulsion engine comprising a compressor and having a jet nozzle arranged to discharge a jet stream rearwardly so as to produce forward thrust on the aircraft; duct means extending from said engine to said circular section passage of each blade; jet deflector means operable to divert the jet stream from said nozzle into said duct means; and duct means connecting said compressor to supply compressed air to said annular passage of each blade, each said aperture being arranged to discharge the air as a thin layer downwardly over the rearward part of the outer surface of the blade.

3,096,042
JET SUSTAINED AND PROPELLED AIRCRAFT
Fernando G. Prieto, Los Angeles, Calif. (3a. Calle Poniente 904, San Salvador, El Salvador)
Filed Oct. 1, 1954, Ser. No. 459,625
2 Claims. (Cl. 244—12)

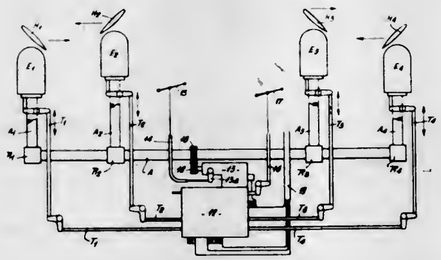


1. In a wingless gas jet discharge engine-propelled heavier than air flying vehicle which is devoid of connection to subjacent ground or water when in flight, so as to be adapted for high speed flying at from low to high altitudes said vehicle having walls providing a hollow fuselage which is substantially oval in top plan, said fuselage providing a substantially plane bottom wall and merging side and top walls which are convexly curved both transversely and longitudinally throughout their extent and the length of the fuselage, said fuselage having an interior and forwardly closed engine-receiving space at least in part provided by said top, bottom, and side fuselage walls; two first and one second gas discharge type reaction engines disposed entirely within said fuselage space, the two first engines in said space being located approximately midway the length of said fuselage and adjacent opposite sides of the latter; the bottom wall of said engine-receiving space constituting the bottom wall of said fuselage and provided with an opening

extending therethrough adjacent each side, mounting means for each of said first engines carried by said bottom wall and surrounding the respective openings therein as a bottom fuselage wall reinforcement at the site of said openings, said first engines being disposed in a downwardly discharging and substantially vertical position and directing their reacting forces downwardly through said bottom wall openings, whereby to vertically lift or controlledly lower the vehicle for a landing, the second single gas discharge type reaction engine having a rearwardly directed gas discharge end and constituting the steering and forward propulsion means for said vehicle, said single second engine located adjacent the rear end of both the vehicle fuselage and engine-receiving space, said rear fuselage end having an opening therein communicating directly with said engine-receiving space, at least the top and side walls of said engine-providing space being imperforate when the vehicle is in flight, said rear fuselage opening being of substantially greater widthwise area than the gas discharge end of said second engine, a circular tracking within said space and affixed to one of the top and bottom walls as a reinforcement for same, a member on which said second engine is affixed and which member is revolubly engaged with said tracking to turn in a horizontal plane around its axis through any desired angle, the discharge end of said second engine being disposed with relation to said rear fuselage opening to direct its reaction force therethrough during all positions of operative adjustment thereof relative to said fixed trackway, an upstanding stabilizing fin fixedly carried by the upper exterior portion of said fuselage extending longitudinally of the latter above said second engine to a point adjacent the plane of the first two engines and being of substantial height as compared to fuselage depth, whereby to cooperate with the latter as an aid in predeterminedly controlling turning of the vehicle in flight, and said first and second engines cooperating to propel said vehicle in flight with a minimum drag and a maximum efficiency.

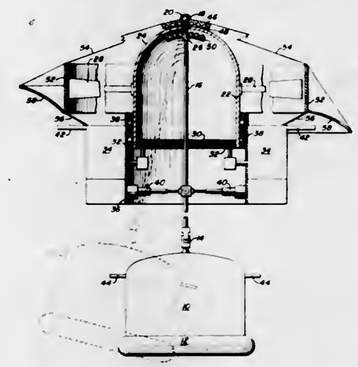
3,096,043
AERODYNES HAVING A SLIPSTREAM-ASSISTED WING SYSTEM
André J. Labussiere, Sceaux, France, assignor to Soclete Anonyme des Ateliers d'Aviation Louis Breguet, Paris, France, a company of France
Filed Apr. 24, 1961, Ser. No. 104,912
Claims priority, application France May 10, 1960
12 Claims. (Cl. 244—12)





1. An aerodyne comprising a fuselage,
a wing mounted on each side of the fuselage,
at least two variable pitch propellers mounted in front of each wing symmetrically disposed with respect to the longitudinal axis of the aerodyne,
engine means carried by said aerodyne,
driving means interconnecting all of said propellers together and to said engine means for equal speed operation,
means coupled to said propellers for simultaneously adjusting the pitch of all of the propellers in the same direction,
and means operatively associated with said last mentioned means for simultaneously and symmetrically changing the pitch of the outboard propellers relative to the inboard propellers whereby the pitch of the outboard propellers can be reduced independently of the inboard propellers to introduce drag during low speed operation.

3,096,044
HELICOPTER
Murray Whitfield Gould, Mink Hollow Road, Highland, Md.
Filed Feb. 8, 1962, Ser. No. 172,032
16 Claims. (Cl. 244—12)

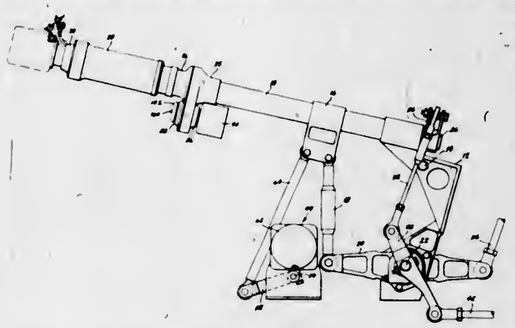


15. An aircraft of the helicopter type, comprising a motor, a hollow shaft connected to be rotated by the motor, said hollow shaft having a partially closed end, a propeller blade fixed to said shaft and rotatable therewith, a hollow cylinder partially housing said hollow shaft and supporting said motor, journalling means carried between said hollow cylinder and said hollow shaft, means journalled on the closed end of said hollow shaft to carry a load and means connected to said load carrying means and said hollow cylinder to change the relative position of said load carrying means and said hollow cylinder.

3,096,045
HELICOPTER CONTROL MECHANISM
Harold S. Hendrickson, Bloomfield, and Nelson R. Richmond, Thompsonville, Conn., assignors to Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed Oct. 9, 1961, Ser. No. 143,651
7 Claims. (Cl. 244—17.11)

1. A helicopter control mechanism including a pilot operable stick for collectively changing and controlling the pitches of the blades of the helicopter rotor, a friction brake operably connected with said stick, an electric circuit including an electromagnet which is connected to serve upon energization or de-energization to apply or release said brake so that it is effective or ineffective for resisting movement of the stick, and a pilot operable electric switch for connecting or disconnecting an automatic

pilot system to cause said system to be either operative or inoperative for actuating said helicopter control mechanism, said switch including contacts in said electromagnet circuit which serve to close said circuit so as to energize



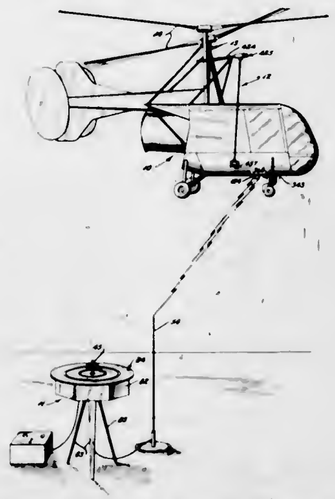
said electromagnet and apply said brake when said automatic pilot system is disconnected and inoperative and which serve to open said circuit so as to de-energize said electromagnet and release said brake when the automatic pilot system is connected and operative.

3,096,046

REMOTE CONTROL OF ROBOT AIRCRAFT

Delvin E. Kendall, Jr., West Hartford, Robert C. Mack, Warehouse Point, and Robert R. Wellock, Newington, Conn., assignors to Kaman Aircraft Corporation, a corporation of Connecticut

Filed Nov. 14, 1958, Ser. No. 773,964
49 Claims. (Cl. 244—17.13)



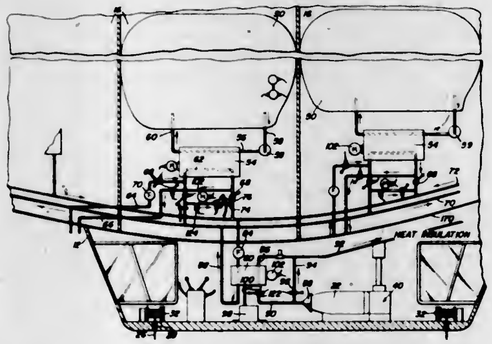
1. A control system for a robot aircraft comprising control means remote from said aircraft including means for producing electrical signals representing flight direction and air speed commands, and means electrically connected to said signal producing means to transmit said signals to said robot aircraft; and control means carried by said robot aircraft including means to receive said signals transmitted from said remote control means, means electrically connected to said receiving means for producing electrical signals representing flight commands commanding said aircraft to fly in a first direction, means electrically connected to said receiving means for simultaneously producing electrical signals representing flight commands commanding said aircraft to fly in a second direction at right angles to said first direction, means electrically connected to both of said aircraft carried signal producing means for producing a resultant signal representing the desired direction of flight of said aircraft, and means electrically connected to said resultant signal producing means for converting said resultant signal into forward and lateral mechanical flight control movements.

3,096,047

THERMALLY CONTROLLED BUOYANT VEHICLE

Edward D. Dunn, Jr., Columbus, Ga.
(Rte. 1, Greenfield Plantation, Morgan, Ga.)

Filed Jan. 5, 1962, Ser. No. 164,488
11 Claims. (Cl. 244—26)



1. An airship comprising a frame, expansible gas containers for buoyant gas secured in said frame for imparting buoyancy to the latter, means for controllably varying the volume of said containers and thereby their buoyant force upon said frame, said last mentioned means comprising means for circulating the buoyant gas into and out of said containers in a closed system while controllably varying the temperature of said buoyant gas during said circulation, propelling means for effecting circulation of said buoyant gas with a forced flow through said containers, a power plant carried by said frame, helicopter blades rotatably mounted upon said frame and drivingly connected to said power plant, said helicopter blades and said gas containers controllably varying between positive and negative limits the effective weight of said aircraft.

3,096,048

HEATED GAS GENERATOR FOR BALLOON

Paul E. Yost, 2105 W. 28th St., Sioux Falls, S. Dak.

Filed Sept. 5, 1961, Ser. No. 135,833
3 Claims. (Cl. 244—31)



1. A load carrying free floating balloon assembly comprising

a balloon for containing a lifting gas,

burner means supported on the balloon for supplying heated gas to the balloon,

a fuel supply conduit means leading to the burner means,

a first predetermined flow control valve connected to the conduit to supply a predetermined constant fuel flow to the burner means,

a second boost valve connected to said conduit means in parallel relation to said first valve to supply fuel to the burner means independent of the fuel flow passing through said first valve,

said second boost valve having a first closed position and a second open position and said open position passing a relatively large flow of fuel to said burner means, and

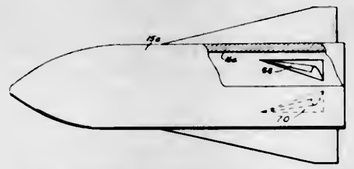
a rapid opening means connected to said second valve means to substantially instantaneously open and close said second boost valve means.

3,096,049

STEERING MEANS FOR SPACE VEHICLES MISSILES AND HIGH ALTITUDE FLYING CRAFT

Edward S. Karasinski, 2605 Ridgeway Ave., Chicago, Ill.

Filed Jan. 25, 1960, Ser. No. 4,535
5 Claims. (Cl. 244—52)



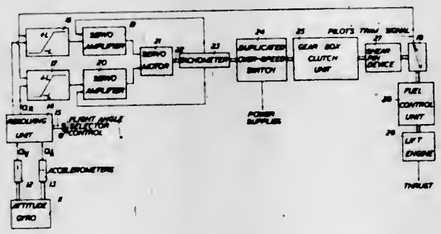
1. In a space vehicle powered by an engine having an exhaust stream, guidance means of the character described, including: an exhaust tube of annular cross section through which said exhaust stream is discharged, said tube having an inner wall; at least one generally triangular exhaust deflecting member hinged to said tube wall and having a first position flush with the inner surface of said tube wall, said deflecting member having generally the shape of a right triangle with one leg parallel with the axis of said tube and the other leg in a plane at right angles thereto, said deflecting member being hinged to the tube wall along the hypotenuse of the right triangle; and means for moving said deflecting member into the exhaust stream to control movement of the vehicle.

3,096,050

CONTROL APPARATUS FOR JET LIFT AIRCRAFT

Charles Snowdon, Belmont, Belfast, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company

Filed Aug. 29, 1960, Ser. No. 52,475
Claims priority, application Great Britain Sept. 7, 1959
13 Claims. (Cl. 244—77)



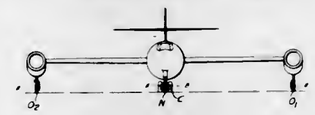
1. Automatic control apparatus for controlling the thrust generated by one or more vertical lift jet engines in an aircraft of the type specified, said apparatus comprising, in combination, accelerometers for generating component signals representative of the vertical and horizontal accelerations of the aircraft, resolving means for deriving from said component signals an output signal representative of the acceleration of the aircraft normal to any desired flight path angle, and a servo system responsive to said output signal to adjust the lift engine thrust to reduce such normal acceleration.

3,096,051

AIRCRAFT UNDERCARRIAGE

Jack Perdue, Warrington, and Christopher Bernard Vere-Neilson, Norton, near Runcorn, England, assignors to Electro-Hydraulics Limited, Warrington, England, a corporation of the United Kingdom

Filed Mar. 17, 1958, Ser. No. 721,848
1 Claim. (Cl. 244—100)



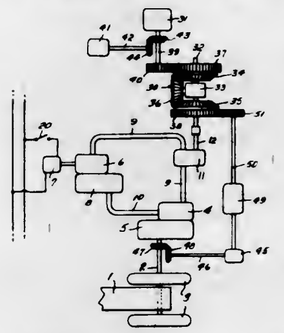
An aircraft including a fuselage and wing structure, a nose undercarriage, and a main group comprising three sets of main undercarriage equipment of which one is disposed beneath the fuselage and the other two are disposed one adjacent to each wing tip in transverse alignment with each other with respect to the longitudinal axis of the aircraft, each of said main undercarriage equipments having a brake, said three sets of main undercarriage equipment all being in the rear of the center of gravity of the aircraft and being so disposed relatively to said structure and to each other that, on land, said three sets of undercarriage equipment together carry substantially 90% of the static weight of the aircraft and each of said other two sets of undercarriage equipment carries between 10% and 25% of the static weight of the aircraft, a substantial proportion of the horizontal kinetic energy of the aircraft on landing being absorbed by the brakes of each of said three main undercarriage equipments.

3,096,052

PRE-SPINNING OF AIRCRAFT LANDING WHEELS

Robert Hardigan, Bronx, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware

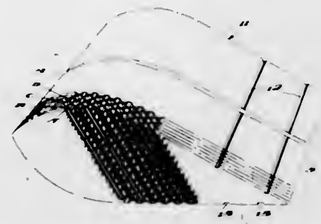
Filed Jan. 25, 1961, Ser. No. 84,800
9 Claims. (Cl. 244—103)



1. An aircraft landing gear mechanism of the character described comprising supporting means which is adapted to be secured to the underside of an aircraft, a pair of transversely spaced axially aligned landing wheels rotatably mounted on said supporting means, a gear box, power means by which said landing wheels are adapted to be rotated through said gear box at such r.p.m. that the linear peripheral speed thereof is equivalent to the ground speed of said aircraft, adjustable control means by which the speed of said power means is regulated, a mechanical differential, a ground speed computer, means by which the

computed ground speed value is adapted to be imparted to said differential, a servo mechanism by which the output of said gear box is fed back to said differential, and means by which the output of said differential is imparted to said adjustable control means.

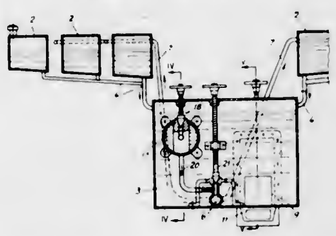
3,096,053
LOW DENSITY CONSTRUCTION MATERIAL
Theodore P. Pajak, Belair, Md., assignor to General Grid Corporation, Army Chemical Center, Md., a corporation of Maryland
Filed Nov. 17, 1960, Ser. No. 69,888
17 Claims. (Cl. 244—133)



1. A laminated, lightweight airfoil core having a leading edge and a trailing edge comprising, a plurality of linearly corrugated flat sheets of metal foil adhesively bonded together at all contacting surfaces in face-to-face relation, the corrugations of alternate sheets being angularly inclined and opposed to cross those of adjacent sheets, whereby said crossed corrugations form rigid truss-like structures, the longitudinal axes of all the linear corrugations of said plurality of flat sheets being disposed obliquely to said leading edge.

12. A method of constructing a lightweight core unit of the truss-grid type which comprises the steps of corrugating a strip of foil material so as to provide a ridge-like bonding area at the crest of the corrugation, coating the ridge-like bonding areas only of the corrugations with an adhesive, slitting the corrugated material at an angle of substantially 45° to the corrugations, leaving the crests on one side intact, folding the strip on the intact crests so that crests cross at substantially 90° and bonding the crossed crests.

3,096,054
FUEL FEED OR SUPPLY SYSTEM FROM SEPARATE TANKS WITH MEANS FOR ITS QUICK DISCHARGE IN CASE OF BREAKDOWN FOR AIRCRAFT INSTALLATIONS AND THE LIKE
Attilio Ciminaghi, Piazza Pietro Leopoldo 9, Florence, Italy
Filed Nov. 24, 1961, Ser. No. 154,759
Claims priority, application Italy Dec. 1, 1960
3 Claims. (Cl. 244—135)



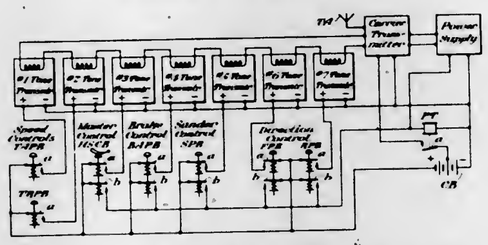
1. A fuel supply system of the class described comprising: a series of interconnected vented wing tanks; a closed intermediate tank positioned below said wing tanks; first conduit means interconnecting said wing tanks and said intermediate tank for gravity flow of liquid fuel from said wing tanks to said intermediate tank whereby said intermediate tank is normally completely filled with fuel excluding air therefrom; quick-acting dumping valve means positioned at the bottom portion of said intermediate tank; second conduit means communicating with said intermediate tank for supplying fuel to at least one aircraft engine; a closed individually vented auxiliary tank fixedly positioned within the interior of said intermediate tank; first manually operable valve means for causing said second conduit means to communicate with said auxiliary tank to the exclusion of said intermediate tank; and second manually operable valve means for causing said auxiliary tank to communicate with the interior of said filled intermediate tank to receive fuel therefrom by gravity flow.

3,096,055
AERIAL CARGO DELIVERY SYSTEM
Robert B. Cotton, Media, Pa., assignor to All American Engineering Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 17, 1961, Ser. No. 132,088
27 Claims. (Cl. 244—137)



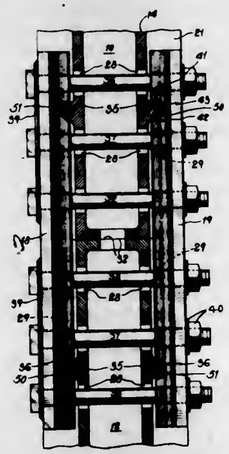
11. In an aerial cargo delivery system in an aircraft for delivering a cargo from a moving aircraft to a ground station, and including an aircraft and a cargo carried by said aircraft, means carried by said aircraft for accelerating said cargo in a direction opposite to the velocity of said moving aircraft for a time sufficient to decelerate said cargo from the velocity of the aircraft to a predetermined velocity with respect to said ground station while said cargo is under the control of said system and release means coordinated with said means for releasing said cargo from said system when the velocity of said cargo with respect to said ground station is substantially equal to said predetermined velocity.

3,096,056
LOCOMOTIVE REMOTE CONTROL SYSTEM
Leslie R. Allison, Forest Hills, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Jan. 25, 1961, Ser. No. 84,929
6 Claims. (Cl. 246—187)



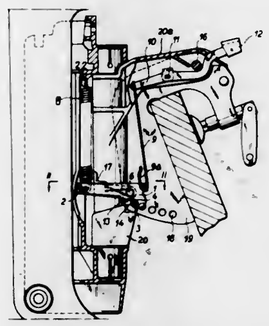
1. A remote speed control system for a locomotive, comprising, a communication means for transmitting different signals from a remote control station to a locomotive; a first, a second, and a third transmitter at said station, each capable of generating a distinctive tone signal when actuated and connected to said communication means for transmission of that signal; a first and a second control function selector for momentarily selectively actuating said first and second transmitters; a first, a second, and a third receiver at said locomotive having connections to said communication means for detecting the tone signals from the corresponding transmitters; speed control means controlled by said first and said second receivers for respectively increasing and decreasing the locomotive speed by increasing and decreasing the applied power between the zero and a maximum as first and second transmitter tone signals are received, control means having connections when operated for continuously actuating said third transmitter, and a control connection between said third receiver and said speed control means and responsive to said third receiver for overriding the control of said first and second receivers and immediately decreasing the locomotive speed to zero when absence of the third transmitter tone signal is detected.

3,096,057
ANTI-CREEP RAILROAD CROSSINGS
John L. Devaney, Jr., Downey, Calif., assignor to American Brake Shoe Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,867
5 Claims. (Cl. 246—465)



1. In a positive gauge railroad crossing, said crossing comprising castings laid out to form intersecting tracks, joints connecting adjacent arms of adjacent castings, each joint comprising a set of connected arms having adjacent ends, a set of splice bars and a set of connecting bolts; each arm having a treadway, flangeway and guard flange; each arm having upper and lower fishing surfaces on opposite sides thereof, said splice bars having upper and lower fishing surfaces engaging their respective arm fishing surfaces, each arm and adjacent ends of the splice bars having aligned bolt holes in which said bolts are loosely disposed, each arm having an abutment, at least one splice bar of each set constituting a tie bar having spaced abutments, said arm abutments having anti-creep dimension surfaces facing away from the arm ends, said spaced tie bar abutments having dimension surfaces engaging the arm dimension surfaces of a set of arms, said dimension surfaces being laid out in planes substantially perpendicular to the axes of said arms, the area of contact of said dimension surfaces being such as to permit movement of the bar dimension surfaces on said arm dimension surfaces with change in tightness of said bolts, without destroying the ability of said tie bars to maintain a substantially fixed distance between their respective arm dimension surfaces, whereby the joints of one track act as tying devices to maintain the gauge of the other track and thus prevent a set of car wheel flanges from simultaneously striking the guard flanges of said other track.

3,096,058
OUTBOARD MOTOR TILT RELEASE
Pier Luigi Torre, Milan, Italy, assignor, by direct and mesne assignments, to Bundy Marine S.p.A., Milan, Italy
Filed June 8, 1961, Ser. No. 115,760
Claims priority, application Italy Sept. 22, 1960
3 Claims. (Cl. 248—4)

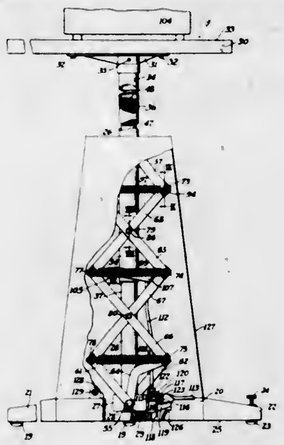


1. In an outboard motor support, a transom bracket, a swivel bearing having a bracket arm, a pivot tiltably connecting the bracket arm to the transom bracket, a latching pin carried by the transom bracket, a latch lever having a fulcrum pivot at one end and a hook at its opposite end normally engaging the pin thereby to prevent tilting of the motor, an auxiliary lever arm on the swivel bearing having a free end carrying the fulcrum pivot, the auxiliary lever arm extending transversely of the swivel bearing from a separate pivot, spring means effective between the latch lever and lever arm urging the former to its pin-engaging condition, hand-controlled release means associated with the hook-carrying end of the latch lever, further spring means effective between the swivel bearing and said fulcrum pivot in co-operation with the first named spring means to urge the latch lever to its pin-engaging condition, and abutment surfaces on the latch lever and the swivel bearing providing a temporary fulcrum for the latch lever under the action of an automatic release pull applied from the swivel bearing to the hook and pin whereby the latch lever is capable of swinging on the said temporary fulcrum against the action of the said further spring means in a direction disengaging the hook from the pin.

3,096,059
TELESCOPING MEANS HAVING INDEXING, BRAKING AND INTERLOCKING MEANS
Philip C. Johnson, Cincinnati, Ohio, assignor to F. and F. Koenigkramer Company, Cincinnati, Ohio, a corporation of Ohio
Continuation of application Ser. No. 718,720, Mar. 3, 1958, now Patent No. 2,977,168, dated Mar. 28, 1961.
This application Mar. 22, 1961, Ser. No. 97,607
10 Claims. (Cl. 248—162)

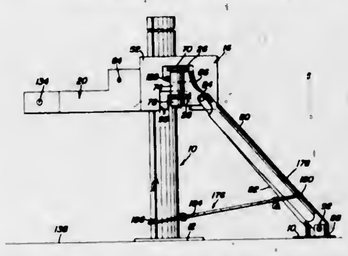
1. Locking means for a pair of telescoping members comprising in combination a first telescoping member, a second telescoping member having a longitudinal slot therein, a brake block guide in fixed radially extending relation to said first telescoping member and extending freely through said slot, a brake block slidable along said guide and engageable with said second telescoping mem-

ber, a brake frame pivotally secured to said brake block, a brake shoe pivotally secured to and carried by said brake frame and advanceable into cooperating straddling engagement with said second telescoping member, said brake frame being biased to pivot relative to said brake block to successively draw said brake block into indexing engagement with said second telescoping member and



then draw said brake shoe into engagement with said second telescoping member from a diametrically opposed direction, whereby slight movement in one direction of said second telescoping member while engaged by said brake shoe urges said brake frame to pivot to advance said shoe and block into locking relation to said second telescoping member releasable by slight movement of said telescoping member in the opposite direction.

3,096,060
BUMPER JACK SUPPORT WITH INTERCHANGEABLE BLOCKS
William E. Stevens, 2617 Taft St., Hollywood, Fla.
Filed Mar. 22, 1961, Ser. No. 97,639
11 Claims. (Cl. 248—170)



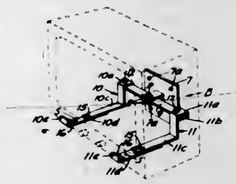
1. A support for a bumper jack standard comprising a housing adapted for sliding movement along a bumper jack standard, lock means adapted to lock said housing in selected positions, a pair of legs carried by said housing and diverging downwardly and outwardly from the latter adapted to form, with the lower end of said standard a triangular supporting base for the latter, said lock means including an actuating handle movably mounted on said housing, spaced first and second wedge means, means mounting said first and second wedge means in said housing for movement toward and away from each other and defining a passage therebetween through said housing adapted to receive said standard, means operatively connecting said first and second wedge means to said actuating handle for movement toward and away from each other in direct response to movement of said handle in opposite directions and adapted for wedging locking engagement with said standard when moved toward each other.

3,096,061
SUPPORT FOR MOUNTING A REAR VISION MIRROR ON A WINDSHIELD
Paul Bertell, Williamsville, N.Y., assignor to Standard Mirror Company, Inc., Buffalo, N.Y., a corporation of New York
Filed June 28, 1961, Ser. No. 120,288
4 Claims. (Cl. 248—288)



1. A support for supporting a rear vision mirror assembly from the glass windshield of a vehicle, said rear vision mirror assembly including an attaching ball and a neck connecting said attaching ball with the rear vision mirror, comprising a base having one broad face adapted to be secured directly to the inside face of said windshield and having a central concavity in its opposite face, a cap plate member having a laterally projecting marginal flange means along opposite sides of the periphery of said base and having a central through opening alongside an internal spherical concavity opposing said concavity of said base, said mounting ball being arranged in said concavities in contact with said spherical concavity of said cap plate member and with said stem projecting out through said central through opening, a sheet metal spring plate member interposed between said base and cap plate member and having a central portion offset into said concavity of said base and providing spherical concavity in contact with said mounting ball, and means securing said plate members to said base and providing pressure contact of said spring plate member against said ball.

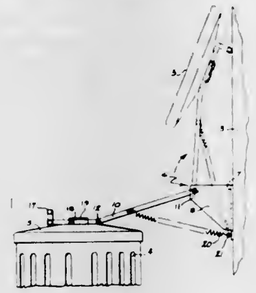
3,096,062
ADJUSTABLE MOUNTING SUPPORTS FOR TELEVISION SETS AND THE LIKE
Marvin L. V. Bosshart, Truman, Minn.
Filed Apr. 26, 1961, Ser. No. 105,779
6 Claims. (Cl. 248—289)



4. A swingably adjustable support mounting for television sets and the like having in combination, a bracket adapted to be secured in general vertical position to a wall or the like, said bracket having forwardly extending pivot-receiving means, a main, generally horizontal supporting member connected to said pivot-receiving means by a pivot member for swinging on a vertical axis disposed forwardly of the main portion of said bracket with its intermediate portion swingably connected by said pivot member, a pair of forwardly projecting supporting arms downwardly offset from said first mentioned supporting member near the end portions thereof and providing angular rear shoulders for cradling and

engaging the back of a television set or the like and means adjacent the forward extremities of said arms for also engaging the lower portion of the television set or the like to further secure the set for mounting and swingable adjustment.

3,096,063
GARBAGE CAN COVER HOLDER
Otto J. Nygren, 6036 13th Ave. S., Minneapolis, Minn.
Filed Aug. 30, 1961, Ser. No. 134,982
1 Claim. (Cl. 248—292)

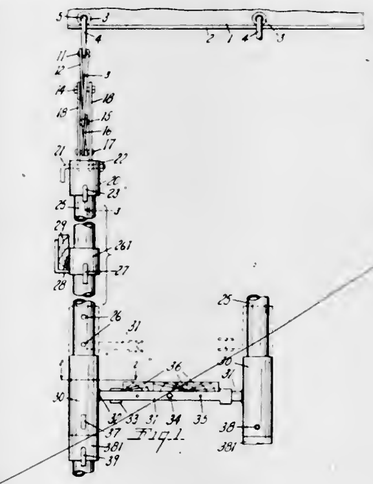


A holder for the cover member of a garbage receptacle comprising in combination, a mounting bracket rigidly secured to a fixed supporting member said bracket having a base plate and a pair of forwardly projecting, laterally spaced, integral side plates, a pair of outwardly projecting cover supporting arms pivotally mounted at their respective inner end portions to the said side plates of the mounting bracket said arms being rigidly connected in parallel arrangement, the one to the other by means of a plurality of spacer members, a finger piece associated with the outermost of said spacer members whereby said cover is manually raised or lowered relative to the receptacle, and cover handle engaging means associated with the rearwardmost spacer member whereby the said forwardly projecting arms are loosely connected to the said handle of the cover member to afford adjustment thereof relative to the said receptacle, a coiled spring extending between the said side plates of the bracket and the forwardly projecting arms rigidly secured at its inner end portion to the transverse center of the base plate of the mounting bracket adjacent the lower edge portion thereof, and at its outer end portion to the transverse center of the said rearwardmost spacer member substantially forwardly of the pivot point of the said arms and the side plates of the mounting bracket whereby said coiled spring will exert a downward pull on the assembled arms and cover member when said cover member is positioned on the said receptacle, and conversely a rearward pull on the said assembled arm and cover member when the same are moved into a raised position relative to the receptacle as the pivotally mounted arms move the mounting station of the inner end portion of the coiled spring past dead center of the pivot point of the said arms and the mounting bracket and thus hold the assembled arms and cover member in a raised position.

3,096,064
SUSPENSION STRUCTURE FOR DEMOUNTABLE SCAFFOLDS
Henderson G. Leonard, P.O. Box 124, Covert, Mich.
Filed Mar. 23, 1961, Ser. No. 97,825
2 Claims. (Cl. 248—323)

1. Suspended demountable scaffold structure comprising a pair of hangers each including

opposed rigid hook members having beam engaging rollers on their upper ends,
laterally inwardly extending tie bars connected to said hook members adjacent the lower ends thereof,
means securing said bars in overlapping slidable relation,
removable pin means selectively connecting said tie bars,
first suspension links pivoted on the lower ends of said hook members and pivotally connected to each other in crossing relation at their mid-sections,
second suspension links pivotally connected to the lower ends of said first links,
upright guide means comprising spaced bars having slots formed in their upper ends slidably receiving and guiding the pivot connection at the mid-section

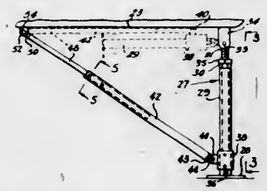


of said first links and pivotally connected at their lower ends to the lower ends of said second links,
a tubular connector of circular cross section pinned to the lower end of said guide means,
a suspension pipe telescopically received in said connector and removably pinned thereto, a sleeve rotatably and axially adjustable on said pipe and having a laterally projecting brace and support arm arranged in lapped engagement with the similar brace on the suspension pipe of the other hanger,
bolt means connecting said bases of said pair of hangers,
a supporting collar sleeved around each of said pipes and removably pinned thereto below said sleeves to support said sleeves.

3,096,065
TRAILER STABILIZER
Clede A. Horn, Rte. 1, Lake Antoine, Iron Mountain, Mich.
Filed Jan. 30, 1962, Ser. No. 169,793
5 Claims. (Cl. 248—354)

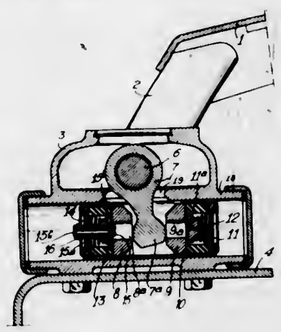
1. In a trailer stabilizer, the combination of a longitudinally adjustable tubular upright means having an upper end and a lower end, means for pivotally securing said upper end to the underside of a trailer, sleeve means slidingly and rotatably received over said tubular upright means, a first longitudinally adjustable tube and rod means having an upper end and a lower end, means pivotally securing said lower end of said first tube and rod means to said sleeve means, means pivotally securing said upper end of said first tube and rod means to the under-

side of said trailer remote from the point where said tubular upright means is secured thereto, a second longitudinally adjustable tube and rod means having an upper end and a lower end, means pivotally securing said lower end of said second tube and rod means to said sleeve means



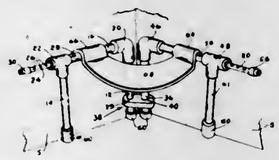
at right angles to said first tube and rod means, means pivotally securing said upper end of said second tube and rod means to the underside of said trailer remote from the point where said tubular upright means is secured thereto and remote from the point where said first tube and rod means is secured thereto.

3,096,066
VEHICLE-SEAT SUSPENSION
Charles Granet, 32 Blvd. de Lorraine, Courbevoie, France, and Robert Crauc, 2 Ave. Louis Dardenne, Vanves, France
Filed Jan. 6, 1961, Ser. No. 81,136
Claims priority, application France Nov. 30, 1960
6 Claims. (Cl. 248—399)



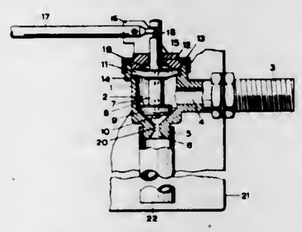
1. A seating assembly for a vehicle subject to jolting, comprising a base; a seat support mounted on said base for pivotal movement about a horizontal axis; resilient means anchored to said base and to said seat support for counteracting the weight of the latter; hydraulic damping means on said base, said damping means including a piston cylinder and piston means axially slidable in said cylinder; and transmission means positively connecting said seat support with said piston means; said piston means comprising a pair of axially spaced heads forming channels for the passage of a hydraulic fluid in generally axial direction within said cylinder, a first valve on one of said heads spring-urged into a normal position blocking the passage of said fluid in one axial direction while being yieldable to a predetermined fluid pressure in the opposite axial direction, said one of said heads being provided with an orifice of a width unaffected by the position of the said first valve and independent of the pressure differential across said orifice for enabling the passage of a restricted fluid flow therethrough, a second valve on the other of said heads spring-urged into a normal position blocking the passage of said fluid in said opposite axial direction while being yieldable to a predetermined fluid pressure in said one direction, and a third valve on said other of said heads spring-urged into a normal position blocking the passage of said fluid in said one direction while being yieldable to a predetermined fluid pressure in said opposite direction, said third valve being provided with a port obstructed in its normal position and exposed upon yielding for permitting only a restricted flow of said fluid through said other of said heads in said opposite direction.

3,096,067
SEAT DEVICE FOR A SHOWER-BATH STALL
Thomas F. O'Connell, Drake's Island Road, Wells, Maine
Filed Jan. 16, 1961, Ser. No. 82,782
3 Claims. (Cl. 248—436)



1. A seat device comprising two supporting members each embodying a rear leg, a front leg and a supporting arm between and connected to said legs, a connector connected to said rear legs and movably holding one of said rear legs whereby one said arm and one said front leg may be moved to position in angular relationship to said other arm and front leg, and a seat member supported by and extending between said supporting members in position of use, embodying means attaching one said arm to said seat member and means removably connecting said seat member to the other said arm, and two extension members one each of which extends into one of each said tubular arms whereby said extension members may extend beyond said front legs and arms.

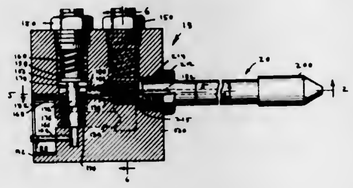
3,096,068
BALL-COCK
George H. Claridge, 105 Easther Crescent, and Clarence J. Maindonald, 97 Crawford St., both of Dunedin, Otago, New Zealand
Filed June 24, 1960, Ser. No. 38,653
Claims priority, application New Zealand June 26, 1959
1 Claim. (Cl. 251—118)



A ball-cock fluid valve device comprising: a circular valve body defining a valve chamber having an annular internal shoulder near its top opening, an integral pipe opening into one side defining a fluid inlet, a tapered bottom portion defining a valve seat, an outlet, and a throat of lesser diameter than said inlet connecting said outlet with said tapered bottom portion; a circular valve stem in said chamber having a circular flange on its lower end with a washer substantially covering its edge, said

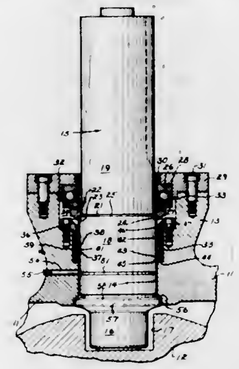
flange and washer being of a diameter substantially less than that of said chamber and constituting a valve member cooperating with said valve seat to form an outlet valve; a circular stem member extending out of said valve chamber having an elongated notch near its outer end; a circular diaphragm having a diameter greater than that of said chamber clamped at its central portion between the upper end of said valve stem and the lower end of said stem member; a circular cap provided with an external shoulder, a central bore for receiving said stem member and an internal recess in its bottom surface; said diaphragm being clamped by its peripheral edge between the lower edge of said cap and said internal shoulder and adapted to flex at its central portion with movement of said valve stem to vary the area of said chamber; said inlet being located between said valve member and said diaphragm when the valve is in the closed position; a circular retainer member seated on said external shoulder and securing said cap over the top of said chamber and clamping it on the periphery of said diaphragm; a pair of upstanding spaced-apart lugs on the top of said cap; a float arm adapted to carry a float at one end and pivotally mounted between said lugs at a point near its other end with said other end being of a reduced diameter which is less than the longitudinal dimension of said notch and fitting in said notch to effect movement of said stem member in response to movement of said float arm to effect opening and closing of said valve; said valve having a balanced condition at a certain position of said valve member, the combined effective area of said diaphragm and said valve member being such that the resultant force on them from internal fluid pressure will hold the valve member in the open position when it is open and in the closed position when it is closed.

3,096,069
FLUID FLOW CONTROL VALVE
Robert L. Rose, 915 Augusta Blvd., Oak Park, Ill.
Filed May 8, 1957, Ser. No. 657,946
5 Claims. (Cl. 251—205)



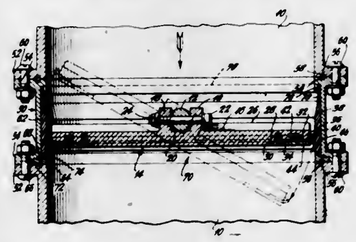
1. A fluid flow control valve for providing a continuous low volume flow of fluid at relatively low pressures comprising a fluid conduit forming a passage for the fluid, a resilient sleeve encompassing the passage within the conduit and having an elongated cylindrical bore, a longitudinally movable cylindrical stem having an elongated end portion received in said sleeve and resiliently engaged thereby, said sleeve and stem portions being complementally proportioned to seal off fluid flow through the passage solely by resilient gripping engagement of said stem portion by said sleeve bore throughout engaged cylindrical areas of substantial length, said sleeve and stem having portions of their engaged surfaces formed to define a longitudinally extending feed channel of limited length and longitudinally varying cross section, and means for moving the stem longitudinally of the sleeve to close the channel and thereby seal off fluid flow through said passage or to open a portion of the channel and thereby estabish communication between the upstream and downstream sides of said sleeve.

3,096,070
PLUG VALVE CONSTRUCTION
Adolph Wolfensperger, Pittsburgh, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 6, 1956, Ser. No. 608,246
1 Claim. (Cl. 251—214)



A plug valve assembly comprising a casing in which a valve plug is rotatably mounted, an outwardly open bore in said casing, a plug operating stem projecting slidably and rotatably through said bore, said stem being journalled in said bore on cooperating cylindrical surfaces, cooperating annular seats on the stem and said bore, a retainer surrounding said stem removably secured over the outer end of said bore to retain said stem against displacement outwardly of the bore and retain said seats in spaced relation during normal operation, a stem packing within said bore axially outwardly of said annular stem seat, means within the bore independent of said retainer for axially compressing said packing about the stem, an annular groove in one of said journal surfaces located between the packing and the annular seat on the stem, a passage in said casing in communication with said groove for bleeding off excess fluid pressure trapped in said groove when the stem packing has been removed, and control means in said passage.

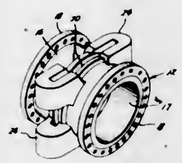
3,096,071
BUTTERFLY VALVE HAVING RESILIENT SEALING MEANS
John T. Fisher, Indianapolis, Ind., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed May 16, 1960, Ser. No. 29,537
2 Claims. (Cl. 251—306)



1. A butterfly-type valve, comprising a conduit defining a flow passage, a cylindrical valve seat disposed within the conduit and about a plane normal to the longitudinal axis of the flow passage, a butterfly disc member disposed within the flow passage alignable with

the valve seat and having an outer peripheral dimension smaller than the valve seat, mounting means spaced from said plane and diametrical of the valve seat adapted to rotate the disc member to a valve closed position aligned with the valve seat and to a valve opened position normal to said valve closed position, a flexible annulus of substantially uniform section secured to the disc member and having a generally cylindrical outer peripheral dimension larger than the valve seat and seatable therewith in the valve closed position to close the flow passage, and a rigid annulus secured to the disc member on the downstream side of the flexible annulus in the valve closed position, the outer peripheral dimension of the rigid annulus being smaller than the valve seat and diverging outwardly from the disc member in an upstream direction in the valve closed position against the flexible annulus to slope the overlapping flexible annulus with respect to the valve seat and to the disc member.

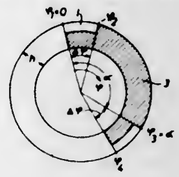
3,096,072
STRUCTURAL CENTER SECTION FOR FABRICATED GATE VALVE
Ronald A. Gulick, Houston, Tex., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Nov. 5, 1959, Ser. No. 851,074
2 Claims. (Cl. 251—329)



2. A fabricated through conduit gate valve body comprising: a structural center section formed of two axially aligned, spaced, cylindrical conduits, the opposed ends of the conduits formed into hubs, the opposed, spaced hubs of said conduits provided with opposed, annular seat pockets, four generally C-shaped clips joining the two conduits together dividing the opposed, spaced hubs of the conduits into four independently, approximately equal portions whereby the hubs become free rings supported at equally spaced points and the four portions may independently deflect thereby becoming self-cancelling; said center section being of sufficient strength to carry line and gate loads produced on the valve, a pressure containing shell capable of withstanding the internal pressure in the valve fabricated around the center section, the shell extending on two sides of the conduit.

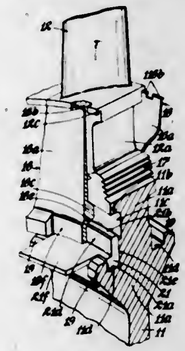
3,096,073
OSCILLATION SUPPRESSING ARRANGEMENT FOR TURBINES
Friedrich Homola and Arnold Witt, Oberursel, Taunus, Germany, assignors to Klockner-Humboldt-Deutz, Cologne, Germany
Filed Jan. 23, 1961, Ser. No. 84,345
18 Claims. (Cl. 253—39)

1. In a turbine, in combination, rotor vane means forming rotor passages and moving along a path; and guide passage means for guiding a fluid into said rotor passages and defining a fluid admission zone extending along said path so that said admission zone is passed by successive rotor passages during rotation of said rotor vane means, said guide passage means being constructed and arranged so that fluid flows into each rotor passage at least at one end of said admission zone through a smaller cross section than when the respective rotor passage is located in the adjacent part of said admission zone, said smaller cross section having such a ratio to the cross section at the center of said admission zone that a Fourier analysis of the oscillation excitation of said rotor vane means by the dynamic gas force based on the



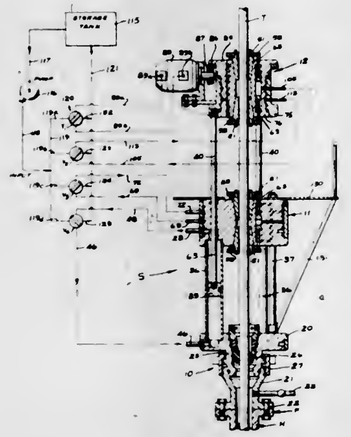
resonance oscillation frequency of said rotor vane means is at least partly free of at least one harmonic oscillation occurring when fluid is admitted through the entire cross section of a rotor passage whereby oscillations of said rotor vane means are at least partly suppressed.

3,096,074
BLADED ROTORS OF MACHINES SUCH AS GAS TURBINES
Leslie James Pratt, Allenton, and Ronald Brien, Allestree, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Nov. 27, 1961, Ser. No. 155,117
Claims priority, application Great Britain Dec. 6, 1960
6 Claims. (Cl. 253—77)



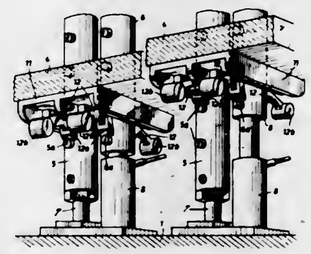
1. A bladed rotor comprising
(*a*) a rotor disc having a peripheral portion with axially-facing surfaces,
(*b*) a ring of blades carried by the peripheral portion of the disc, each blade having,
(*c*) a root interengaging with the peripheral portion of the disc to retain the blade radially in position, the root having axially facing surfaces corresponding to the axially-facing surfaces of the peripheral portion of the disc,
(*d*) a circumferential groove in one of said axially-facing surfaces of the peripheral portion, said groove affording by its sides a radially outwardly facing surface and a radially inwardly facing surface spaced outwards from the outwardly facing surface,
(*e*) a series of angularly-spaced first dogs on said peripheral portion, said first dogs projecting radially outwards from the outwardly facing surface of said groove in axially spaced relation to said peripheral portion,
(*f*) at least one key having a surface engaging said outwardly facing surface of said groove, said key further having circumferentially-spaced end portions each extending between one of an adjacent pair of said first dogs and the peripheral portion of the disc, said key further having a radially outwardly facing surface spaced inwardly from the radially inwardly facing surface of said groove,
(*g*) a tab on said key projecting axially between and abutting circumferentially against the said pair of first dogs, and
(*h*) an annular unsplit plate extending in contact with the axially-facing surface of said peripheral portion and said blade roots, said annular plate having a circumferential land projecting axially therefrom into said circumferential groove, said land having a radially outwardly facing surface in contact with the radially inwardly-facing surface of said groove and a radially inwardly-facing surface in contact with the radially outwardly-facing surface of said key, said annular plate further having circumferentially spaced second dogs engaging axially in the spaces between the said first dogs and the peripheral portion of the disc, and said annular plate further having a radial notch therein defining a pair of opposed circumferentially-facing shoulders, said tab having a portion engaging in said notch and abutting said opposed circumferentially-facing shoulders.

3,096,075
HYDRAULIC PIPE SNUBBER FOR OIL WELLS
Cicero C. Brown, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas
Filed Dec. 9, 1960, Ser. No. 74,977
8 Claims. (Cl. 254—29)



8. In a pipe snubber, a snubbing member comprising, a body having a through bore to receive a pipe, said bore comprising oppositely inwardly converging frusto-conical opposite end portions, separate sets of pipe-gripping wedges mounted in said end portions for reciprocative radial movement therein into and out of pipe-gripping positions, a pressure cylinder in the body, a pair of oppositely movable pistons slidable in said cylinder, means operably securing each piston to one of said sets of wedges to move said wedges in accordance with the respective piston movements, a first pressure fluid duct communicating with said cylinder at a point between the pistons, and a second pressure fluid duct communicating with both end portions of said cylinder outside said pistons.

3,096,076
APPARATUS FOR GRADUALLY LIFTING CONSTRUCTION PARTS MANUFACTURED ON A BUILDING YARD
Ernst Wälli, 3 Alpenstrasse, Arbon, Switzerland
Filed Nov. 16, 1959, Ser. No. 853,153
Claims priority, application Switzerland July 3, 1959
1 Claim. (Cl. 254—89)

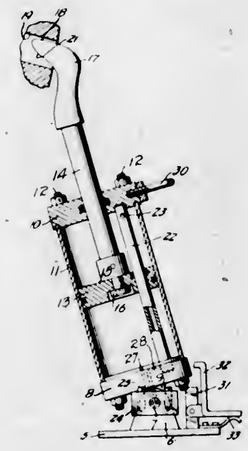


In a lifting system for lifting heavy parts of construction into flush engagement with a ceiling comprising for each lifting location, a lifting assembly therefor formed of a round stationary vertical supporting tube extending between a floor and the ceiling, said supporting tube being provided at at least one end with a tensioning head so as to secure the supporting tube between the floor and the ceiling, a round lifting tube extending parallel to said supporting tube and having limited vertical lifting strokes, a lifting device disposed beneath the lifting tube to lift same, said lifting tube being removably mounted upon said lifting device, said supporting and lifting tubes extending vetrically through the construction part, and each of said tubes having two diametrically-opposed rows of studs equally-spaced from one another in an axial direction, a work supporting plate adapted to engage the underside of the heavy construction part, said supporting plate having openings therein for the assembly of said round tubes therethrough, said supporting plate when so assembled upon said round tubes being slidable thereupon, weight loaded pawls pivotally connected to the underside of said supporting plate and respectively engageable with the respective rows of said supporting studs, said loaded pawls being so arranged that the pawls engaging the studs of the lifting tube when the lifting tube is elevated cause the work supporting plate to be lifted, and the loaded pawls that engage the studs of the supporting tube having slid upwardly over the studs of the supporting tube, and when lowering the lifting tube the pawls that engage the studs of the supporting tube automatically bear on the next lower studs thereof and the studs of the lifting tube pass under the pawls associated therewith, whereby the assembled parts of the lifting assembly can be readily taken down from the ceiling and the construction part that has been brought into flush engagement therewith.

3,096,077
BARRING JACK
James M. Forsyth, % Forsyth Engineering Co., P.O. Box 1623, 875 Lockwood Drive, Houston, Tex.
Filed Dec. 9, 1958, Ser. No. 779,106
5 Claims. (Cl. 254—93)

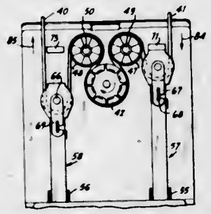
1. In a barring jack, a base, a cylinder, axle means carried by said base and supporting said cylinder for oscillation about the axis of said axle means, pressure fluid connection means to said axle means and from said axle means to the adjacent end of said cylinder, a hollow tube extending from said fluid pressure connection means within said cylinder to the opposite end of said cylinder, a piston in said cylinder and guided on said tube and prevented thereby from rotation in said cylinder, means to fixedly support said hollow tube at the opposite end from

said fluid pressure connection means whereby said hollow tube passes through said piston, and a piston rod on said piston and having a barring head at the end thereof for engagement in notches in the flywheel of an engine, said axle



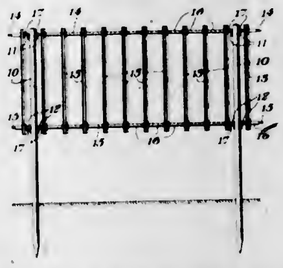
means allowing oscillation about the axis thereof from a non-operating position to an operating position, and means for restraining said cylinder in said non-operating position.

3,096,078
MOTORIZED TRAVERSE ROD OPERATOR
Hermann Steingass and Clare L. Milton, Jr., Baltimore, Md., assignors to Eastern Products Corporation, Baltimore, Md., a corporation of Maryland
Filed Apr. 10, 1961, Ser. No. 101,985
10 Claims. (Cl. 254—175.3)



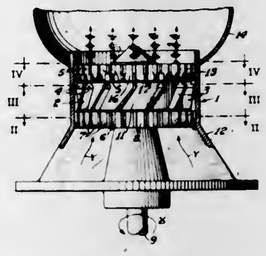
1. A powered operator for operating draperies and the like by imparting axial motion to an operating cord, comprising a reversible motor, a cord sheave, mechanical means intercoupling said motor and said sheave for rotating said sheave when said motor is powered, a pair of tensioning pulleys, mounting means for said tensioning pulleys arranged to permit translational motion of said tensioning pulleys, said sheave and said pulleys being arranged so that an operating cord may be threaded around one tensioning pulley, thence around said sheave and thence around the other tensioning pulley, whereby rotation of said sheave in one direction causes said cord to advance axially in one direction and rotation of said sheave in the other direction causes said cord to advance axially in the other direction, biasing means operatively coupled to said tensioning pulleys and constantly urging said tensioning pulleys to move in a direction to maintain said cord in tension, and a stop disposed in the path of motion of each of said tensioning pulleys and arranged to limit motion of said tensioning pulleys in a direction opposite to the direction of motion resulting from urging of said biasing means.

3,096,079
FENCE PANELS FOR ROADWAYS
Henry James Winn, 29 Between Sts., Cobham, England
Filed Jan. 13, 1961, Ser. No. 82,609
Claims priority, application Great Britain Jan. 14, 1960
5 Claims. (Cl. 256—24)



1. A barrier between separate tracks of a highway to eliminate dazzle of lights of oncoming traffic, said barrier comprising spaced uprights carrying horizontal pale supporting rails, a plurality of spaced apart pales mounted in vertical disposition on said rails, said pales comprising strips of thin sheet material having holes therethrough on the longitudinal centerline for the passage of the rails, said pales extending transversely of the rails and providing a series of side wings on both sides of the rails which wings are set at an angle to interrupt beams of light of oncoming traffic.

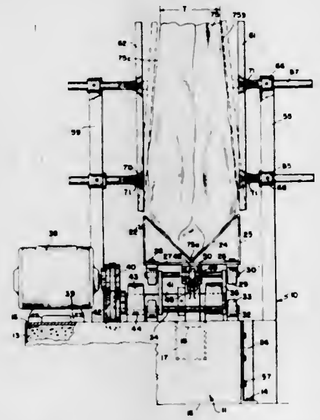
3,096,080
APPARATUS FOR GENERATING OSCILLATIONS IN FLUID
Peter Willems, 20–22 Steinhofhalde, Lucerne, Switzerland
Filed Oct. 26, 1960, Ser. No. 65,163
Claims priority, application Switzerland Oct. 30, 1959
13 Claims. (Cl. 259—1)



1. In a mechanical oscillator, in combination, a tubular housing having an axis; rotor means rotatable in said housing for actuating axial flow of a fluid through said housing; and a plurality of lip means mounted in said housing for oscillation transversely of the direction of fluid flow in contact with said flowing fluid, said lip means being angularly spaced about said axis and mounted for oscillation in respective paths tangential relative to a circle about said axis.

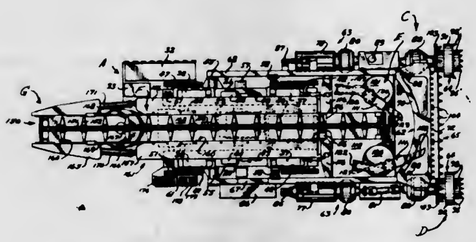
3,096,081
BAG FORMER AND SHAKER
Jack D. Helm and Frank L. Hopkins, Minneapolis, Minn., assignors to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Nov. 9, 1959, Ser. No. 851,582
8 Claims. (Cl. 259—72)

1. Apparatus for simultaneously conveying and shaping a bag comprising a frame, an elongated conveyor platform, means mounting said conveyor platform for vibratory movement to advance a bag along said platform, a pair of sideboards, and means for transversely mounting one sideboard on either side of the conveyor platform to extend to an elevation substantially above the conveyor platform to abut against the respective side of a bag as it is advanced, said side board mounting means including two mounted uprights, one upright mounted on either transverse side of the conveyor platform, three elongated transversely extending shafts secured to each upright to



extend horizontally inwardly toward the conveyor platform and in spaced relation to have the elongated axes of said shafts located at the apexes of a triangle, a resilient mount secured to the inner end of each shaft, means for securing each mount to a sideboard with each resilient mount between the shaft and sideboard to permit limited movement of the sideboard relative to the shaft, said shafts and resilient mounts holding the respective sideboard adjacent to the conveyor platform to strikingly engage an advancing bag.

3,096,082
BORING TYPE CONTINUOUS MINER
John B. Long, Oak Hill, W. Va., assignor to Marmon-Herrington Company, Inc., Indianapolis, Ind., a corporation of Indiana
Filed Jan. 5, 1961, Ser. No. 80,927
9 Claims. (Cl. 262—9)

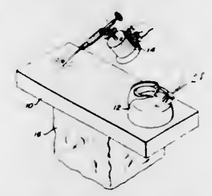


1. In a continuous miner, the combination of a main frame; cutting means mounted upon said main frame; said cutting means including material dislodging means for making a pair of spaced apart cuts in a working face, material dislodging means for making a pair of spaced apart cuts in the working face interconnecting with the cuts made by said first mentioned material dislodging means, said first and second mentioned material dislodging means being cooperatively positioned for cutting penetration of a working face leaving a projection of material extending intermediate the cuts made by said first and second mentioned material dislodging means, and a plurality of blades mounted in a spaced apart position for scoring the projection of material extending from said working face along its side edges left by the cuts of said second mentioned material dislodging means; gathering means mounted upon said main frame and disposed in juxtaposition with respect to said cutting means for cooperative abutment with the projection extending from the working face to dislodge such projection; and conveying means mounted upon said main frame in juxtaposition to receive the dislodged material.

3. Cutting means for a continuous miner including a first cutting drum and a second cutting drum, said first and second cutting drums being positioned in a spaced apart cutting relationship, a first sprocket fixedly secured to said first drum for cooperative rotation therewith, a second sprocket mounted upon said second cutting drum, said second sprocket being independently rotatable with respect to said second cutting drum, a cutting chain entrained about the said first and second sprockets and positioned in a cutting relationship with respect to said first and second cutting drums, first drive means for rotation of said first cutting drum and said cutting chain, and second drive means for rotation of said second cutting drum independently of the rotation of said first cutting drum and said cutting chain.

5. A method of continuous mining with a continuous miner having a pair of spaced apart cutting drums and a cutting chain entrained about the cutting drums with one of the cutting drums driving the cutting chain and the other cutting drum operative independent of the cutting chain which includes the steps of making a first cut in the working face with each of the cutting drums and the cutting chain engaging the working face in a cutting relationship, making a second cut in the working face laterally of the first cut with the cutting drum operative independently of the cutting chain and the cutting chain engaging the working face in a cutting relationship and the cutting drum driving the cutting chain extending into the opening made by the first cut and substantially out of contact with the working face, and making succeeding cuts in the same manner as the second cut for the entire width of the area then being mined.

3,096,083
ANISOTROPIC HEAT-CONTROLLING BODY AND METHOD FOR MANUFACTURE THEREOF
Edward F. Keon, Lowell, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Aug. 24, 1959, Ser. No. 835,618
5 Claims. (Cl. 263—2)



1. A system comprising a source of heat, an object to be heated, a body to be heat isolated, and a member of pyrolytic graphite characterized by respectively high and low degrees of heat conductivity in mutually orthogonal directions spaced in heat conducting relation to said object to be heated and said source of heat and oriented in the direction parallel to that of low heat conductivity to said body to be heat isolated.

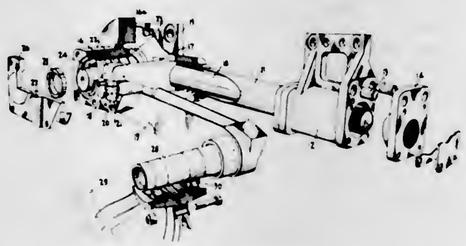
3,096,084
HELPER SPRING ASSEMBLY FOR SHOCK ABSORBERS
Harry Osterhoudt, Detroit, Mich., assignor to Perfection Automotive Products Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 10, 1962, Ser. No. 243,381
4 Claims. (Cl. 267—8)



1. In a helper spring assembly for a shock absorber including body with a reciprocal rod projecting axially therefrom; the improvement comprising an annular first spring stop loosely mounted around said body including an internal annular flange engaging the body, a flexible metallic split sleeve mounted around and upon said body within said first spring stop and bearing against its internal flange, a series of spaced fasteners threaded radially through said first stop operatively and frictioinally engaging said sleeve to adjustably anchor said first stop on said body, a coiled spring loosely mounted longitudinally over said body and rod and at one end extending around said sleeve and bearing against said first stop, an apertured axially split second spring stop comprising a pair of opposed symmetrical elements mounted over the end of said rod retainingly and compressively engaging the other end of said spring, spacer sleeve elements of reduced radius axially projecting from said symmetrical elements down into said other end of said spring, and an adjustable fastener threaded upon said rod operatively bearing against said second spring stop for regulating the compression of said spring and for centralizing and anchoring the same relative to said shock absorber body and rod.

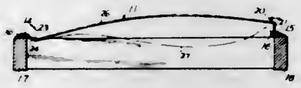
3,096,085
INDEPENDENT TORSION BAR SUSPENSION UNIT
Walter J. Owens, Ottawa, Ontario, Canada, assignor to Her Majesty the Queen in right of Canada as represented by the Minister of National Defence
Filed Jan. 23, 1961, Ser. No. 84,121
1 Claim. (Cl. 267—57)

An independent suspension unit for a vehicle wheel comprising a torsion bar enclosed throughout its length by a housing and fixed at one end to the vehicle through said housing, a torsion arm with one end thereof housed and fixed to the free end of the torsion bar, an elongated trailing arm supporting a wheel spindle at one end and pivotally connected at its other end to a shaft projecting from and fixed to said torsion arm housing, said trailing arm and said torsion bar being normally disposed in side-by-side relationship with their longitudinal axes substantially parallel, the plane of motion of the trailing arm being substantially parallel to the longitudinal axis of the torsion bar, and a ball and socket joint coupling the free end of the torsion arm to the trailing arm adjacent the connection of the trailing arm to the vehicle whereby reciprocating, pivotal motion of the trailing arm causes displacement of the coupling end of the torsion



arm occasioning twisting or torsion stress in the torsion bar; and whereby the spindle end of the trailing arm is adapted for comparatively greater displacement than the coupling end of the torsion arm.

3,096,086
SINUOUS WIRE SPRING
Edwin G. Krakauer, Roslyn Heights, N.Y., assignor to Kay Manufacturing Corp., Brooklyn, N.Y., a corporation of New York
Filed May 18, 1961, Ser. No. 117,255
4 Claims. (Cl. 267—103)

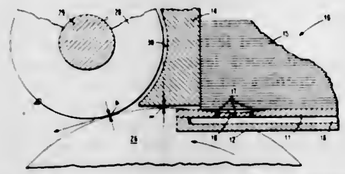


1. A spring structure comprising a frame having a pair of spaced apart rails, a pre-stressed sinuous wire spring having cross bars connected by loops and having a main portion initially set on an arc of relatively small uniform radius and extended into an arc of greater radius, said spring bridging the space between rails, profile-raising and spring-softening means adjacent the rear end of the spring to compel said end to swing readily inwardly when loaded and thereby to change the profile of said end from convex upwardly to concave upwardly when the spring is loaded, while maintaining substantially constant the angle between the leg and the adjacent part of the main portion, said means comprising a relatively short stiff leg at said end arranged at an interior angle of less than 180° to the adjacent part of the main portion, there being a common cross bar at one end of the leg and the main portion, and a second cross bar at the other end of the leg constituting a fulcrum about which the remainder of the leg and the adjacent part of the main portion are swingable as a unit, means pivotally securing the second cross bar of the leg to one rail, the spring having a relatively short stiffening bend adjacent the front end thereof, and means securing the front end of the spring to the other rail.

3,096,087
CARD FEED APPARATUS
Robert F. Markley, Nichols, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 29, 1961, Ser. No. 141,734
9 Claims. (Cl. 271—32)

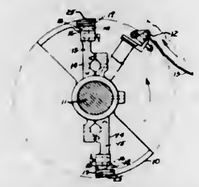
1. Sheet feeding apparatus comprising a hopper containing a stack of sheets, at least one stationary throat block forming part of the front wall of the hopper, and a resilient feed roll spaced slightly from each throat block and cooperating therewith to define an expandable throat

and sheet-receiving bite of minimum thickness at a point a very slight distance forward of the leading edge of the stack, means for driving said feed roll continuously, means for advancing the endmost sheets successively substan-



tially only as far as said bite such that advancement beyond said bite will be effected solely by said roll, and means asynchronously operable for effecting the advance and return of said advancing means.

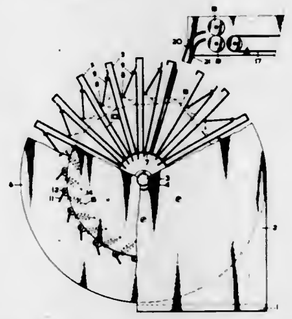
3,096,088
SHEET HOLDING AND TRANSFER MECHANISM FOR PRESSES
William G. Young, Pittsburgh, Pa., assignor to Miller Printing Machinery Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 20, 1961, Ser. No. 97,016
8 Claims. (Cl. 271—51)



1. In a sheet handling device, a sheet transfer cylinder having means fixed relatively to the cylinder receiving and gripping the leading edge of a sheet to be transferred and valved suction means extending to the periphery of the cylinder adjacent the trailing edge of the sheet to be transferred, an opening in the periphery of the cylinder at the suction means, a suction head in said opening for engaging the trailing edge of said sheet, said suction head being slidable generally on the circumference of said cylinder, resilient means normally urging said head toward the gripping means, connections in said suction head to the suction means acting through the suction head to engage the trailing edge of the sheet and thereupon draw the head against the resilient means whereby to draw the sheet taut over the periphery of the cylinder.

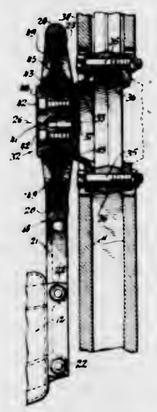
3,096,089
DEVICE FOR COLLECTING SHEETS OF LAMINAR MATERIAL
Martin Dominicus Pierre Swenker and Johannes Cornelis Augustinus Vercoulen, both of Venlo, Netherlands, assignors to Chemische Fabriek L. van der Grinten N.V., Venlo, Netherlands, a corporation
Filed Nov. 20, 1961, Ser. No. 153,536
Claims priority, application Netherlands Dec. 1, 1960
8 Claims. (Cl. 271—64)

1. An apparatus for the assorted collecting of sheets of laminar material, comprising movable support means, a multiplicity of walls spaced apart on said support means and carried thereby about a horizontal axis in substantially radial relation to said axis, each adjacent two of said walls continuously delimiting a wedge-shaped space widened at its radially outer end, a sheet-supporting member mounted swingably within each said space in spaced relation to one of said walls and forming with said one wall a sheet-collecting compartment, said member extending over a greater part of the radial extent of said one wall and having its inner end continuously spaced from said one wall by a distance corresponding to the desired sheet collecting depth of said compartment, and positioning means connected with each said supporting member and operative upon movement of said support means to move said member between (1) a normal posi-



tion in which said member and said one wall form a relatively closed sheet-retaining compartment and (2) an open position in which said member is swung away from said one wall with its outer end lying adjacent the other of said two walls whereby said compartment is opened to nearly the width of said widened end of said space to receive a sheet fed thereinto or for the removal of sheets collected therein.

3,096,090
PIT CUSHION
Alexander J. Albrecht, West Englewood, N.J., assignor, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 97,032
11 Claims. (Cl. 273—53)



3. In a bowling alley pit having kickbacks at opposite sides thereof, means for absorbing the force of a bowling ball comprising; an elongated backstop, a pair of spaced hanger arms, each of said arms having an annular portion and a depending portion secured to the backstop, said annular portion having an inner peripheral edge, a pair of resilient rings each having an inner hub portion, an intermediate web portion and an outer rim secured to the inner peripheral edge of one of said hanger arms, means fixedly securing each hub portion to one kickback to sup-

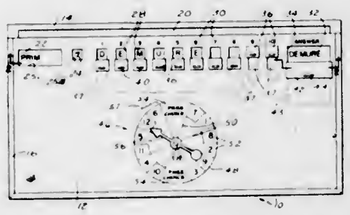
port the backstop so that movement of the hanger arms and co-incident angular rotation of said outer rim effect a distortion of the intermediate web portion of said rings.

3,096,091
WING SHOT ARROW
Jerome M. Dudley, 210 N. Pleasant Ave., Galesburg, Ill.
Filed Nov. 16, 1960, Ser. No. 69,758
1 Claim. (Cl. 273—106.5)



A wing shot arrow comprising, in combination, a hollow shaft having a longitudinal bore extending throughout the entire length thereof, said hollow shaft having a bow string receiving portion at one end and a multiple chamber projectile housing at the opposite end and motion responsive means carried by said shaft responsive to forward movement of said shaft to effect a braking action upon said shaft, said housing comprising a closure having a plurality of intersecting partition walls defining a plurality of identical chambers opening outwardly toward the front end of said housing for supporting a plurality of projectiles in spaced apart relationship, said motion responsive means comprising a longitudinal metal weight and a pair of circumferential friction pads secured at opposite ends of said weight slidably received within said longitudinal bore of said shaft, said shaft having means at each end for holding said weight captive therewithin.

3,096,092
WORD GAME
George J. Bredehorn, 713 Francis Drive, Wantagh, N.Y.
Filed Aug. 6, 1959, Ser. No. 831,973
4 Claims. (Cl. 273—135)

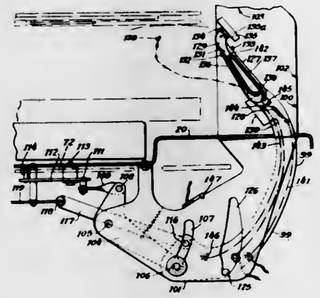


1. A word game comprising, in combination, a substantially rigid playing board, said playing board including a main panel having a plurality of window openings extending therethrough, a word game sheet having individual aligned columns of word letters and word definitions, said playing board slidably receiving said game sheet therebeneath with said columns of word letters and word definitions visible through said window openings of said main panel, individual closures for each of said word letter window openings, said closures being individually movable between an initial closed position masking the associated word letter and an adjusted open position revealing said word letter, means determining the sequence of opening all of said closures, and each one of said closures comprising a slide slidably supported upon said main panel for selective longitudinal sliding movement between said closed position and said adjusted open position and wherein said playing board further comprises a base panel, and a frame suporting said main and base panels in spaced apart parallel relationship slidably receiving said word game sheet therebetween for selective longitudinal movement to position a selected one of said word definitions and word letters within said window openings of said main panel, and wherein said means determining the sequence of opening of all of said closures comprises a spinner rotatably carried upon said main panel, and a plurality of circumferentially spaced apart numerals upon said main panel in the path of rotation of said spinner, each one of said numerals corresponding to one of said window openings in said main panel.

3,096,093
RECORD PLAYERS
Maurice E. Hardy, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Nov. 7, 1956, Ser. No. 620,925
8 Claims. (Cl. 274—10)

7. A record player comprising: a motor-driven turntable having a principal level area for supporting both large index-hole and small index-hole disc records, said turntable including an intermediate surface area depressed substantially below said principal level area whereby to provide thereat a reception space; an adaptor for supporting a quantity of large index-hole disc records; a mechanism for supporting said adaptor at an elevated level above said turntable and for allowing said adaptor to be manually submerged from its said elevated level position to one substantially completely encompassed by said receptive space; a record dispensing apparatus including peripheral support shoulders and associated separator plates carried by said adaptor and moved therewith between its elevated level position and its said receptive space position; and means including a spindle for indexing small index-hole record discs when said adaptor is manually submerged.

3,096,094
SOUND REPRODUCING MACHINES
John Adrian Churchill, Thorpe-le-Soken, and Garnet Montague Eveleigh Williams, Cranleigh, England, assignors to Foster-Mallard Limited, London, England
Filed June 14, 1960, Ser. No. 36,082
Claims priority, application Great Britain June 15, 1959
8 Claims. (Cl. 274—10)



1. A sound reproducing machine having a base plate, an upper and a lower turntable, a vertical spindle extending upwardly from said lower turntable through the center of said upper turntable, said spindle being adapted to receive records having various diameters, means permitting said records to drop one by one onto said lower turntable, a pick-up arm carrying a pick-up head for playing both sides of each one of said records, said pick-up arm swingingly arranged in a horizontal plane across said records, a mechanism positioning said pick-up arm at the correct radial distance from the center of one of said records preparatory to playing said record, said mechanism comprising a sizing arm pivotally located on said base plate, said sizing arm movable in a plane substantially radial to said upper and said lower turntable, a feeler carrier mounted on said sizing arm, spaced feeler members mounted in fixed relationship to one another on said feeler carrier, means moving said feeler carrier and said feeler members thereon together transversely over the surface of one of said records from the inner diameter of said record toward the outer diameter thereof, said feeler members movable, one relative to the other, in a direction transverse to said surface of said record, said feeler members positioned relatively to said feeler carrier in such manner that one feeler reaches said outer diameter of said record prior to the other feeler, means responsive to said relative movement of said feeler members when one of them passes over the outer diameter of one of said records, and a stop on said base plate, said stop limiting the inwardly swinging movement of said pick-up arm from a position outside said outer diameter of the largest size of said records, and said means responsive to said relative movement of said feeler members setting said stop according to the actual size of the one of said records to be played.

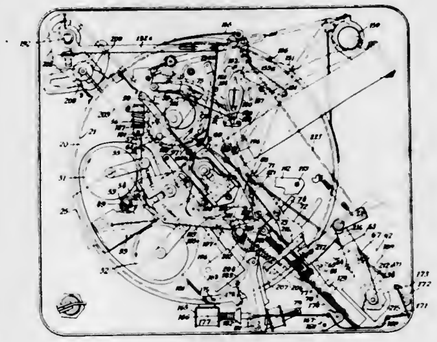
3,096,095
SOUND REPRODUCING MACHINES
John Adrian Churchill, Thorpe-le-Soken, England, assignor to Foster-Mallard Limited, London, England
Filed July 26, 1960, Ser. No. 45,385
5 Claims. (Cl. 274—10)

1. In a sound reproducing machine having a turntable adapted to support records, a pick-up arm, said pick-up arm being provided with at least one stylus thereon for playing said records, a hollow vertical spindle having said pick-up arm pivotally mounted thereon, said pick-up arm having an extreme outward and an extreme inward position, a plate attached to said vertical spindle, and said plate being arranged in a plane perpendicular to said spindle,

a rotary control unit,

a cam on said control unit,

a follower arm having a first follower thereon cooperating with said cam, said follower arm having an oscillating motion imposed upon it by said cam and being adapted to releasably engage said plate for transmitting said oscillating motion thereto, said follower arm further having a movement greater than it is required to move said pick-up arm from said extreme outward to said extreme inward position, and, when



said control unit is inoperative, occupying a position such as to enable said pick-up arm to swing inwardly to its full extent without engaging said arm with said plate, a second follower on said follower arm, a two-arm lever, said lever adapted to move said stylus on said pick-up arm in and out of engagement with said records,

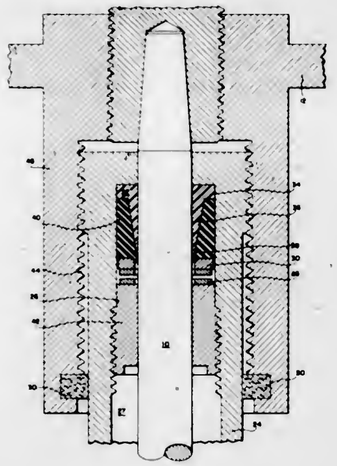
a ramp unit on one arm of said lever, said second follower arm cooperating with said ramp unit.

and a slidable stem in said hollow vertical spindle for lifting and lowering said pick-up arm, said slidable stem being operatively engaged by the other arm of said two-arm lever.

3,096,096
SEALING MEANS FOR SPINDLES OF FLUID VALVES
George W. Banks, 12424 14th Ave. S., Seattle 88, Wash.
Filed Feb. 13, 1959, Ser. No. 793,175
11 Claims. (Cl. 277—117)

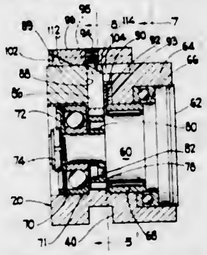
1. A sealing means for spindles of high pressure fluid valves, comprising: a valve spindle having a cylindrical sealing portion; a spindle barrel coaxially disposed around the sealing portion of said valve spindle and in which said spindle is guided and disposed for valve actuating movement; a coaxial recess in the outer end of said spindle barrel having a cylindrical portion and a threaded portion; a seal backing plug on said spindle barrel and threadedly engaging said threaded portion; a compression type compensating spring disposed around said valve spindle and seated on said plug; a plastic sealing member of conical frustum form, having an axial cylindrical bore, disposed in said recess and having a wall disposed around said valve spindle with its thinnest wall portion directed toward said spring; said sealing member made of a plastic material capable of limited cold flowing under pressure and having an annular flange at its thickest wall portion; a flowable medium having a cylindrical outer surface and a tapered axial bore adapted to fit the conical surface of said sealing member, disposed around the wall portion

of said sealing member and substantially filling the space between the wall of said recess and said wall portion; a pressure application washer operatively disposed between said medium and said spring and coacting to position said fluid medium in intimate contact with said sealing member including the free face of said annular flange



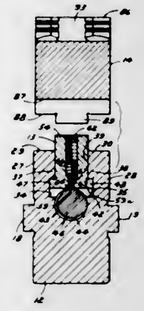
and said seal backing plug adapted to compress all the elements of the sealing means and position them in coacting relationship.

3,096,097
INDEXING CHUCK
John J. Roddy, Meriden, Conn., assignor to Skinner Precision Industries, Inc., New Britain, Conn., a corporation of Connecticut
Filed Apr. 26, 1961, Ser. No. 105,579
10 Claims. (Cl. 279—5)



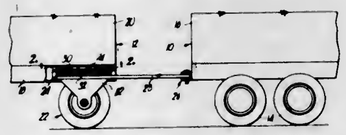
1. An indexing chuck, comprising: a chuck housing, a pair of opposed workpiece jaw supports mounted upon the housing for movement toward and away from each other, an indexing spindle adapted for indexing a chuck supported workpiece, means rotatably mounting the spindle in one of the opposed jaw supports, an indexing plate on the indexing spindle having a plurality of indexing notches thereon angularly spaced about the axis of rotation of the spindle, a locking pin mounted for movement within said one jaw support and having one end thereon adapted to selectively engage the angularly spaced notches for preventing rotation of the spindle, and a locking pin stop mounted upon said one jaw support adjacent the other end of the locking pin for movement between a first position and a second position, said stop having means overlying the other end of the locking pin to positively lock the pin in engagement with the indexing plate when the slide is in the first position.

3,096,098
CHUCK JAW CONSTRUCTION
Russell E. Buck, Scotts, Mich., assignor to Buck Tool Company, Kalamazoo, Mich., a corporation of Michigan
Filed Apr. 13, 1961, Ser. No. 102,847
7 Claims. (Cl. 279—123)



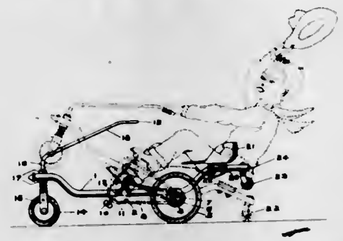
1. A jaw construction for a chuck, comprising:
a jaw base having an elongated slot opening through one external face thereof, said jaw base having an elongated threaded recess at the inner end of said slot;
a key member mounted on said jaw base and extending through said slot, said key member being movable longitudinally along said slot,
screw means threadedly engaging the threads of said recess and connected to said key member so that rotation of said screw means effects longitudinal movement of said key member along said slot;
a jaw mounted on said key member for movement therewith longitudinally of said slot;
cooperating clamping surfaces on said jaw base, said key member and said jaw; and
means extending between said jaw and said key member for moving the clamping surfaces of same into and out of engagement with the clamping surfaces on said jaw base whereby said jaw and said key member can be rigidly secured to said jaw base.

3,096,099
FIFTH WHEEL FOR TRUCK TRAILERS
Elton P. Bowles, 657 27th ½ Road, and Paul D. McNew, 147 Red Rock Road, both of Grand Junction, Colo.
Filed Jan. 22, 1962, Ser. No. 167,805
11 Claims. (Cl. 280—125)



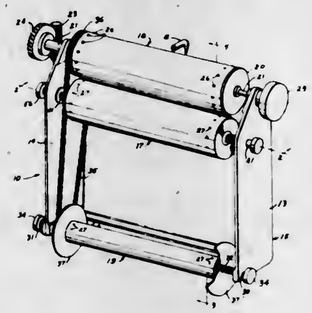
1. A fifth wheel unit for rotatably mounting a tow bar and wheel assembly on the frame of a trailer, said unit including:
(*a*) a first member adapted to be secured to said frame and having a downwardly facing, generally planar surface;
(*b*) a second member adapted to be coupled to the assembly and having an upwardly facing, generally planar surface;
(*c*) means rotatably interconnecting the members with said surfaces thereof in facing, substantially aligned relationship, said surfaces being provided with opposed, aligned, circular grooves therein in concentric relationship to the axis of rotation of the members and located in substantial spaced relationship to said axis; and
(*d*) a continuous, resilient, annular load bearing element of uniform cross-sectional configuration conforming to said grooves and interposed between said surfaces, positioned in said grooves, maintaining said surfaces of the members in spaced relationship and preventing lateral movement of one of the members relative to the other member.

3,096,100
RIDER PROPELLED VEHICLE
Robert E. Clarke, 450 Trappe Road, and John C. Clarke, 2903 Dunglow Road, both of Baltimore County, Md.
Filed Oct. 5, 1961, Ser. No. 143,128
4 Claims. (Cl. 280—261)



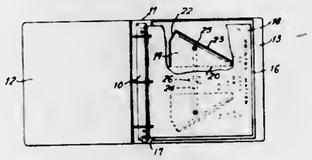
1. A tiltable rider propelled vehicle, a longitudinal frame, an axle thereon, transverse of and near the rear thereof, a main wheel on each end of the axle, a steerable wheel on the front of the frame, a seat on the frame rearwardly of the axle, a steering handle connected to the steerable wheel and extending rearwardly over the frame to adjacent the seat, means to drive one of said main wheels, while the other rotates freely, a caster wheel on the rear of the frame spaced upwardly from road contact relative to the other wheels, giving a third point support for the vehicle and a rider thereon when tilted back, to raise the steerable wheel from road contact for movement of the vehicle in a circle by the driving means.

3,096,101
CHART PAPER HOLDER
Melvin A. Raddeman, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Dec. 29, 1960, Ser. No. 79,261
3 Claims. (Cl. 281—8)



2. In a holder for an elongated sheet of chart paper rolled on a supply tube and having a series of longitudinally spaced perforations therein, the combination of, a support, a power-driven roll mounted on said support for rotation about a fixed axis, a shaft fixed at one end to said support and paralleling said roll axis, a radially expansible head on the free end portion of said shaft comprising a plurality of sections disposed around the shaft to form a substantially cylindrical outer surface telescoping into one end of the supply tube, a series of teeth angularly spaced around said roll to mesh with the perforations in the paper and draw the latter from the tube as the roll is rotated in one direction, and spring means disposed between said sections and urging the latter into light frictional contact with the tube to exert a frictional drag thereon while permitting axial shifting of the tube back and forth relative to said roll in response to stresses in the paper exerting axial forces on the tube greater than the light frictional force exerted by said spring means.

3,096,102
EASEL BINDER FOR PAGES READING ON LINES PARALLEL WITH THE BINDING
Clarence L. Wiands, Robert C. Cline, and Robert G. Rose, al of Saugerties, N.Y., assignors to F. L. Russell Corporation, Saugerties, N.Y., a corporation of New York
Filed Oct. 11, 1961, Ser. No. 144,384
1 Claim. (Cl. 281—33)



An easel binder which can be reversed to locate the binding in horizontal position at the top or at the bottom of the binder, to support bound leaves either hanging down from the binding or turned up away from the binding, said binder comprising
a back,
front and back covers hingedly connected with said back by reversible hinges enabling said covers to be hinged in reverse directions to positions in front of or behind said back,
a binding mounted on said back between the hinge lines of said covers,
an easel board in the form of a single flat layer of thin stiff sheet material of the approximate size and shape of said back cover, said easel board overlying said back cover,
said easel board being hinged to said back along its inner edge at the hinge connection of the back cover to thereby lie flat against the inside of the back cover when the binder is closed with the covers hinged to closed position overlying and in front of the binding, and free to be lifted to an upwardly inclined position over the back cover when the binder is opened in position with the back and the binding thereon at the bottom in horizontal relation, so that the bound pages in the binding may be raised from a horizontal position overlying the front cover to an upwardly inclined reading position on the upwardly inclined easel board,
props of thin flat stiff sheet material similar to said easel board and hingedly connected to said board on spaced parallel lines extending at right angles to said back and the binding thereon, whereby to hinge away from the back and the binding at right angles thereto into positions over and in engagement with the back

cover to support the board in upwardly inclined relation over the back cover,

a clip on the back cover between said props,

a tape slidingly engaged beneath said clip and connected at its ends with said props to automatically pull the props to a substantially equal extent into position extending from the board over the back cover when the easel board is raised, and

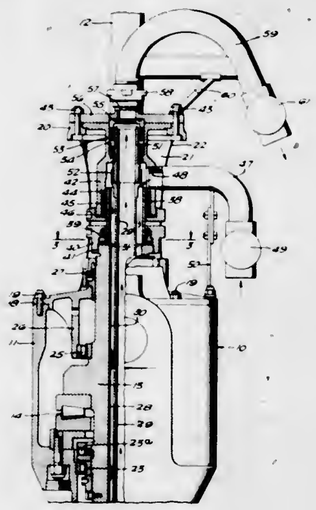
said props being held extended by said tape into position spacing the easel board from the back cover so that said board and back cover held in said spaced relation will support the back along one edge in raised position at the top of the binder, with the opposite edge supported by the front cover in reversed relation of the covers extending behind the back.

3,096,103

DUAL PASSAGE ROTARY SWIVEL

Demery A. Murphy, Torrance, Calif., assignor, by mesne assignments, to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Oct. 13, 1959, Ser. No. 846,173
1 Claim. (Cl. 285—134)



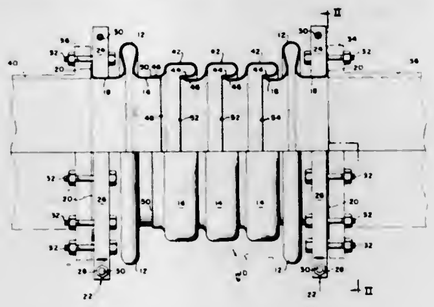
In a rotary swivel of the type used in the drilling of wells, the combination of: a housing, bearing means within the housing, a shank mounted on said bearing means and projecting through the lower end of the housing, the shank having a central opening extending therethrough, a tube extending centrally through the shank opening and defining a first passage in the annulus between the shank and the tube and a second passage within the tube, a sub threadedly secured to the lower end of said shank, means connecting the tube and the shank so that they rotate as a unit, said means including an element fixed to said tube and having a portion thereof clamped between the shank and said sub, a first washpipe detachably connected to the upper end of said shank and encircling a portion of said tube, a second washpipe detachably connected to the upper end of said tube, a sleeve detachably secured relative to said housing and having axially spaced sealing means engaging said washpipes, a flow conduit connected to said sleeve at a location between said sealing means and communicating with said first passage, and a second flow conduit fixed with respect to said housing and communicating with said second passage.

3,096,104

FLEXIBLE PIPE LINE FITTING

Harold Browning, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed May 15, 1959, Ser. No. 813,604
4 Claims. (Cl. 285—226)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A flexible coupling comprising, a plurality of corrugations connected together to form the longitudinal length of the flexible coupling, at least one of said corrugations being annular and having a cross-section that is symmetrical about an axis extending at right angles to the longitudinal axis of the coupling, and the remainder of said corrugations being substantially S-shaped with the major axis being disposed parallel to the longitudinal axis of the coupling, whereby the flexible coupling is adapted to connect together a pair of tubular members, and to yield to longitudinal, lateral and angular deflections of said tubular members; each of said corrugations having an opening therein exposed to the interior of the coupling, and each of the S-shaped corrugations having a portion there of comprising a substantially cylindrical outer surface, a first flange extending inwardly from said outer surface toward the interior of the coupling and in juxtaposed relation to the outer surface forming a U-shaped cavity whose width is approximately one-half its length, a second flange extending away from said first flange and forming an ogival curve, the inner leg of said ogival curve extending substantially parallel to the longitudinal axis of the coupling and toward an immediately adjacent S-shaped member, and wherein the second flange of one S-shaped corrugation has a free edge fixedly attached to the free edge on the inwardly directed flange on the next adjacent corrugation, whereby a plurality of nested S-shaped corrugations are formed which are free to flex on substantially all points from one fixedly attached point to the next.

3,096,105

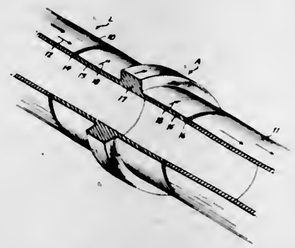
SPLIT ARRESTOR HAVING CIRCUMFERENTIALLY EXTENDING GRAIN STRUCTURE FOR WELDED PIPELINES HAVING LONGITUDINALLY EXTENDING GRAIN STRUCTURE

Roger E. Risley, Bradford, Pa., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Sept. 9, 1960, Ser. No. 54,943
3 Claims. (Cl. 285—286)

1. In combination, a pipeline comprising a plurality of rolled thin-walled steel pipe sections having a definite fibrous longitudinally extending grain structure, said sections being welded together, and a plurality of split arrestors incorporated into said pipeline at intervals with each arrestor having each end welded to the end of an adjacent pipe section, each of said arrestors comprising a

rolled tubular pipe section having a fibrous grain structure extending circumferentially thereof, whereby a split



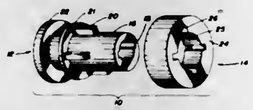
occurring in one of said sections is arrested when it reaches the next adjacent section of circumferential fibers.

3,096,106

TORQUE TRANSMITTING BEARING

Keith W. Wanner, Grand Rapids, Mich., assignor to Corduroy Rubber Company, Grand Rapids, Mich., a corporation of Delaware

Filed Sept. 15, 1960, Ser. No. 56,183
8 Claims. (Cl. 287—53)



1. A torque-limiting and vibration-absorbing bearing for mounting a propeller hub on a propeller shaft and for transmitting torque from said shaft to said hub, which comprises: a non-resilient bushing member mountable on said shaft and having an outside circumference less than the inside circumference of said hub; longitudinal and transverse flange means on said non-resilient bushing; a resilient bushing member slidably mounted on said non-resilient bushing member and having a substantially smooth, cylindrical outer surface of a diameter sufficient to provide slippage between said resilient bushing member and said hub when the torque to be transmitted therebetween exceeds a predetermined amount, said resilient bushing member having on the inside circumference thereof longitudinal and transverse flange receiving slot means and portions on both sides of said longitudinal and transverse slot means cooperating with and engaging said flange means to prevent all movement of said resilient bushing member with respect to said non-resilient bushing member after installation of said resilient bushing member on said non-resilient bushing member; and said cylindrical outer surface having a sufficient coefficient of friction relative to the surface of the inside circumference of said hub to prevent rotary motion of said hub with respect to said resilient bushing member during normal operation of said propeller.

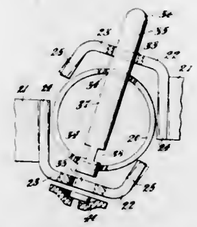
3,096,107

STRUCTURAL CONNECTION

Arthur C. Farley, Flourtown, Pa.
(The Kenilworth, Philadelphia 44, Pa.)

Filed June 29, 1960, Ser. No. 39,577
3 Claims. (Cl. 287—54)

1. In a structural connection, a first metallic member of generally round cross section, a second metallic member extending generally transversely to the first member, a metallic connector yoke having a generally flat base and arms of the yoke which diverge from the base, said second metallic member being secured in abutting relation to one of the arms of the yoke, the arms of the yoke being disposed on opposite sides of said first member and extending longitudinally of said first member and the arms coming into engagement with the curved surface of said first member at generally opposed positions on the first member spaced by a distance less than the diameter of the first member, the yoke in relaxed position when in contact with said first member having the arms of the yoke engaging the first member and the base of the yoke spaced from the first member, the arms of the yoke in assembled position being resiliently outwardly deflected and maintaining residual stress on the first member and



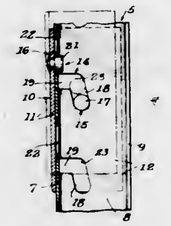
the base of the yoke in assembled position being relatively closer to the side of the first member than in the relaxed position of the yoke, and tension fastening means extending through the base of the yoke and through the first member at a plurality of points distributed longitudinally of the first member and pulling said yoke toward the first member and maintaining the arms of said yoke prestressed against the first member, the compression stress imposed on the first member by the tension of said fastening means being generally at right angles to the compression imposed on said first member by the arms of the yoke.

3,096,108

ADJUSTABLE RACK CONNECTION

Fred L. Baybarz, Lodi, Calif., assignor of one-half to Green-Penny Co., Los Angeles, Calif., a corporation of California

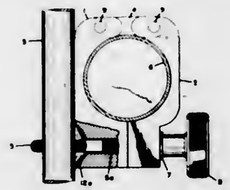
Filed Mar. 16, 1961, Ser. No. 96,261
6 Claims. (Cl. 287—54)



1. A rack connection comprising an upright having at least two vertical sides at right angles to each other, one of said sides having a downwardly extending bayonet slot formed therein and having a pin-passing opening that is open on the other of said sides, said other side having a generally longitudinal end-closed slot formed therein, an anchor member having two legs at right angles to each other and provided with a support extension affixed to one of said legs, a fixed pin extending from one leg of the anchor member to enter and pass through the pin-passing opening in the bayonet slot into engagement with said slot when the other leg of said anchor member is being moved in a direction toward and in flatwise engagement with the side of the upright that has the end-closed slot, and a fixed pin on said other leg and extending into said end-closed slot, the bayonet slot being disposed at an angle to draw the pin therein in a direction to move the

anchor leg that has the other pin toward and in flatwise engagement with the support.

3,096,109
CLAMPING DEVICE
James P. Callahan, % Personnel Quarters, Bldg. No. 2024, Veterans Administration Hospital, Downey, Ill.
Filed Jan. 29, 1962, Ser. No. 169,436
1 Claim. (Cl. 287—54)



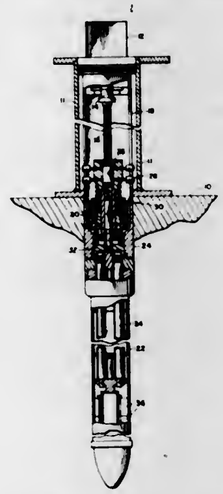
A clamping device for securing in a selected angular relation two elongated articles; said device being comprised of a block assembly having two sections, said sections being disposed in side by side relation and formed at one end with registering slots in aligned end faces of the sections, a hinge bar fitted into said slots, pins fitted into aligned holes in the hinge bar and in the sections for hingedly connecting said sections, a further slot adjacent the other end and formed in an outer side of one of said sections, an eyebolt having a shank extending through aligned openings in both sections and with its head received in said further slot, a further opening in said one of said sections transversed to said further slot, a first article to be clamped extending through said further opening and having one end received in the eye of said eyebolt, the inner facing walls of said sections having concave portions jointly defining a recess intermediate and transverse of the facing walls of said sections for receiving a second article in angular relation to said first article, a washer and a threaded knob screwed onto the free end of said eyebolt shank for drawing together the two block sections in embracing and clamping relation to the two said articles.

3,096,110
CLAMP
Theodore Cantor, Yonkers, N.Y., assignor to Manostat Corporation, New York, N.Y.
Filed Jan. 7, 1963, Ser. No. 249,891
9 Claims. (Cl. 287—54)



1. Apparatus comprising first and second elements adapted for being connected in mating engagement, each said element comprising a body having opposite ends and being provided with an axially extending elongated slot of determinable width opening at one of said ends and terminating in a semi-circular extremity remote from said one end, said body including branches on opposite sides of said slot, said branches being of said width and including free end portions at said one end, said free end portions having semi-circular profiles of the same diameter as the semi-circular extremity, said body including shoulders adjacent said branches, the branches of each body being accommodated in the slot of the other body with the shoulders of the respective bodies in abutting relation whereby the semi-circular profiles and extremities define circular passages spaced from one another.

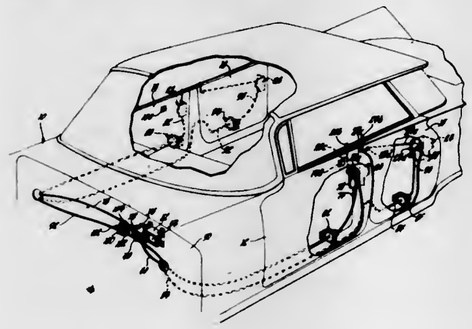
3,096,111
BALL LOCK COUPLING
Curth Myhre, Chatsworth, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 28, 1960, Ser. No. 58,959
8 Claims. (Cl. 287—58)



1. A coupling for disengageably connecting a member and a connector comprising in combination a plunger, a sleeve around said plunger having a first and second locking element therein, said locking elements being laterally movable, said plunger and said sleeve being relatively axially movable, said plunger having a pair of opposed cam surfaces thereon adapted to engage said first and second locking elements and limiting inward lateral movement of said elements, said plunger being connected to said member, said connector having a detent adapted to receive said first locking element, means for retaining said second locking element in said sleeve and adjacent said plunger, means for removing said retaining means including means for moving said plunger and sleeve relative to each other so that said second locking element is forced outwardly by one of said cam surfaces and said first locking element is movable inwardly out of engagement with said connector.

3,096,112
COINCIDENTAL DOOR LOCKING SYSTEM
Theodore H. Johnstone, Lincoln Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 14, 1961, Ser. No. 152,217
11 Claims. (Cl. 292—3)

1. In a vehicle having a plurality of doors, coincidental locking and unlocking apparatus of the character described, including: a latch for each door having locking means movable between locked and unlocked positions, including first latches with locking means movable between said positions by a force exerted in one direction and second latches with locking means movable between said positions by a force exerted in another direction; reversible fluid supply means having first and second outlets respectively producing positive and negative fluid



pressure alternately in accordance with the direction of operation of said fluid supply means; means connecting the locking means of said first latches to said first outlet; and means connecting the locking means of said second latches to said second outlet.

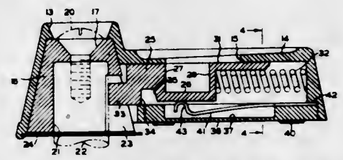
3,096,113
FLUSH-TYPE DOOR LOCK
Lester A. Polzin, New Berlin, Wis., assignor to Western Metal Specialty Division, Western Industries, Inc., a corporation of Wisconsin
Filed Oct. 2, 1961, Ser. No. 142,309
4 Claims. (Cl. 292—147)



1. A flush-type lock comprising, a sheet metal pocket having a flat bottom wall and a flange extending laterally from its front opening to form a recess of substantially uniform depth, said bottom wall having a guide slot formed therein, a manually operable handle mounted within said recess for sliding coaction with the bottom wall thereof, a flat guide plate reciprocal in said slot, a latch slidably engaged with the bottom wall exteriorly of said recess and on the side of the wall opposite from said handle, said handle, guide and latch all being rigidly secured together for sliding as a unit, and guide track means on said bottom wall exteriorly of said recess and adjacent said latch for guiding the latter in its reciprocatory movement.

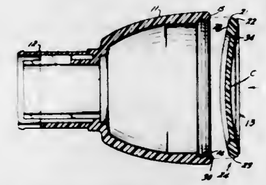
3,096,114
SAFETY DOOR LOCK
Earl M. Trammell, Jr., The Gatesworth Apts., 245 Union Blvd., St. Louis 8, Mo.
Filed Aug. 16, 1961, Ser. No. 131,795
8 Claims. (Cl. 292—336.3)

8. In a device for conditioning a latch mechanism, a hub operatively connected to the latch mechanism, a lock lever including a hub housing and a radially extending plunger housing, the hub being swivelly mounted in said hub housing, a plunger mounted in said plunger housing for movement between limits, means interconnecting said hub and plunger in one limit, the plunger housing being provided with an aperture for access to said plunger for plunger actuation, the aperture being of reduced size so as to preclude digital actuation of the plunger through the aperture, the plunger being operatively disengageable



from said hub in its other limit to enable unrestricted swivel movement of the lever relative to the hub.

3,096,115
KNOB CONSTRUCTION
George P. Patriquin, Gardner, and Norman R. Adler, Fitchburg, Mass., assignors to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Sept. 15, 1960, Ser. No. 56,234
2 Claims. (Cl. 292—347)



2. A door knob assembly including a shank portion and a gripping portion comprising a hollow shell of plastic material set to rigidity for loads encountered in door knob operation, having an open outer end, an annular groove formed in the inner circumference of said shell adjacent said open end, said groove including an annular sloped cam shoulder having radial and axial slope components and an inwardly extending retaining ledge in spaced relation to said shoulder, a concavo-convex end cap member of resilient plastic having a circular peripheral portion seated in said groove, the convex portion of said cap member being directed toward said shank portion, the diameter of said cap member in the unstressed condition thereof being greater than the diameter of said groove, whereby said cap member in the inserted position of the latter within said groove is maintained in stressed condition and assumes an increased concavo-convex posture with respect to the unstressed condition thereof, said periphery of said stressed cap being biased radially against said cam shoulder and coacting therewith to urge said cap member, axially against said ledge member in stressed contacting relationship.

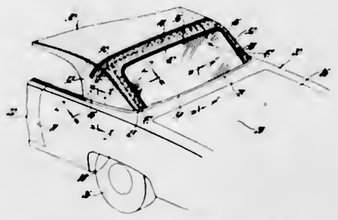
3,096,116
SHOCK ABSORBING FENDER
Nick Kost, 3011 G St., Apt. 6, Sacramento 16, Calif.
Filed May 12, 1961, Ser. No. 109,772
3 Claims. (Cl. 293—85)



1. A spring cushion shock absorber for a vehicle fender comprising a normally horizontal substantially hollow buffer member having a longitudinally-extending main body

bumper portion; said shock absorber including an elongated longitudinal face plate connected to said main body bumper portion, said face plate confronting said main body bumper portion and being laterally spaced therefrom, a substantially hollow elongated longitudinal housing connected to said face plate and having an elongated longitudinal end wall spaced in confronting relation relative to said face plate, an elongated longitudinal abutment plate mounted for reciprocation within said housing and being juxtaposed with respect to said end wall, a plurality of volute springs spaced longitudinally of said face plate and said abutment plate, said springs each having their respective bases engaging against said abutment plate and their respective apices engaging against said face plate, said springs constantly biasing said face plate for movement away from said end wall, and means extending through said end wall and connected to said abutment plate for connection with said vehicle.

3,096,117
VEHICLE BODY
Virgil R. Hallenbeck, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 94,204
3 Claims. (Cl. 296—107)



1. In a convertible vehicle body of the type including a foldable top frame mounted thereon for movement between raised and lowered positions and supporting a flexible top fabric having a rear window opening therein, a rear window construction comprising, in combination, a rear window of flexible material having an extent greater than the extent of said rear window opening, said window being disposed underneath said top fabric to locate the edge portions of said top fabric around said opening in overlying relationship to said window, means securing the lower edge portion of said window to the interior of said body below the belt line thereof and below said window opening, means securing the side edge portions of said window to the interior of said body below the belt line thereof and to each side of said rear window opening, means removably securing the upper edge portion of said window to said top frame above said window opening and below the edge portion of said top fabric overlying the upper edge portion of said window, each said securing means lacking any connection to said top fabric whereby the tension and stress in said top fabric cannot be transferred to said rear window and said rear window and top fabric can shift relative to each other when said top frame is raised and lowered.

3,096,118
RECLINING CHAIR MECHANISM WITH LEG PLATFORM EXTENSION
Emil Dubeck, Warren, Ohio, assignor to The Kenmar Manufacturing Company, East Palestine, Ohio, a corporation of Ohio
Filed Nov. 17, 1961, Ser. No. 153,091
2 Claims. (Cl. 297—75)

1. In a reclining chair mechanism for a reclining chair having stationary arms, a movable back and seat unit, a movable leg supporting platform and a movable extension thereof, a pair of support brackets secured to the inner sides of said stationary arms below said seat and back unit, a pair of elongated brackets secured to said seat and back unit above said support brackets, a pair of spaced supporting arms each of which has an upper portion pivotally connected to one of said support brackets and a lower portion pivotally connected to one of said elongated brackets and a leg platform normally positioned in vertical retracted position beneath the forward edge of said seat and back unit, slotted brackets on said leg platform and oppositely disposed pairs of actuating arms and levers pivotally supported on said elongated brackets and pivotally engaging said slotted brackets, one of each of said pairs of supporting arms having end portions depending below said support brackets and links pivoted to said

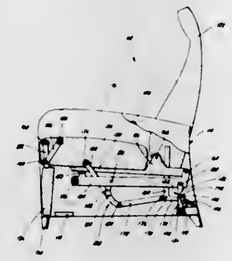


depending end portions and to said levers for imparting movement to said actuating arms and levers of said platform when said seat and back unit is moved relative to said arms and a leg platform extension normally positioned in vertically retracted position beneath said leg platform and oppositely disposed extension members secured thereto and slidably engaged and supported in said slotted brackets on said leg platform for longitudinal movement relative thereto and oppositely disposed pairs of secondary actuating arms and levers pivotally supported on said slotted brackets and on said actuating arms and levers for imparting movement to said extension members when said seat and back unit is moved relative to said arms and said leg platform moves relative to said seat and back unit, said movable extension of said leg platform secured to said extension members.

3,096,119
RECLINING CHAIR OF THE MULTIPLE POSITION LOUNGER TYPE
Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Continuation of application Ser. No. 601,885, Aug. 3, 1956. This application July 14, 1959, Ser. No. 827,065
20 Claims. (Cl. 297—85)

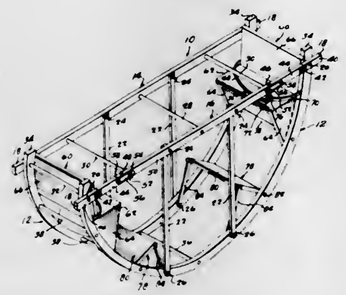
8. A reclining chair comprising a support, body-supporting means including a back-rest and seat adapted to be mounted on said support for reclining and inclining movement respectively, and means movably mounting said body-supporting means on said support for a first movement phase from a sitting position to an intermediate, tilted sitting position and for a second movement phase from said intermediate, tilted sitting position to a reclining position, the mounting means including a first constrained linkage for guiding said body-supporting means during movement between said sitting position and said intermediate, tilted sitting position and a second constrained linkage for guiding said body-supporting means during movement between said intermediate, tilted sitting

position and said reclining position, and rear guiding means as part of one of said constrained linkages and operative during one of said movement phases to cause



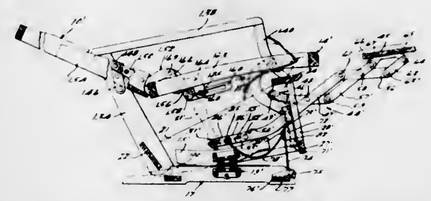
a rapid lowering of the rearward portion of said body-supporting means with a relatively small rearward displacement of said body-supporting means.

3,096,120
TWO-PASSENGER ROCKING TOY
William M. Campbell, 1621 Cruft, Indianapolis, Ind.
Filed Nov. 24, 1961, Ser. No. 154,627
2 Claims. (Cl. 297—247)



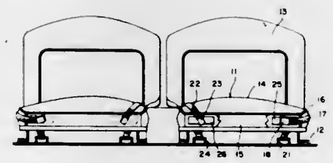
1. A two-passenger rocking toy comprising a pair of laterally spaced side members having arcuate rockers having upper ends and longitudinal side bars secured to the rockers at their upper ends, said side bars having end portions reaching longitudinally outwardly beyond the ends of the rockers and defining ground-engageable stop bars, means spacing and connecting the rockers, means spacing and connecting the side bars including transverse handle bars located near to and spaced inwardly from the ends of the rockers, inwardly facing seats extending between and secured to the rockers below the side bars and facing said handle bars, foot rests extending between and secured to the rockers at locations spaced below and spaced longitudinally inwardly from the seats, one of said side bars being discontinuous, and comprising a relatively long intermediate portion, a pair of vertical laterally spaced strut bars secured at their lower ends to the related rocker and at their upper ends to said intermediate portion, said one side bar further comprising end portions fixed to the related rocker, and spaced from the ends of the intermediate portion, and gate portions hinged to the longitudinally inward ends of the end portions to assume closed positions in the gaps between the end portions and the intermediate portion, and latch means for securing the gate portions in closed position.

3,096,121
RECLINING PLATFORM ROCKING CHAIR
Edward M. Knabusch and Edwin J. Shoemaker, Monroe, Mich., assignors to La-Z-Boy Chair Company, a corporation of Michigan
Filed July 21, 1961, Ser. No. 125,874
19 Claims. (Cl. 297—269)



5. In a platform rocking chair the combination of, a base, a seat and a back, means supporting said seat and said back on said base for both rocking movement and reclining movement and said supporting means being constructed and arranged so as to resist any substantial reclining movement during normal rocking movement and to permit rearward rocking of said seat and back on said base during reclining movement of said seat and said back.

3,096,122
SAFETY SEAT
John G. Connell, 232 Wyoming Ave., West Pittston, Pa.
Filed Mar. 16, 1962, Ser. No. 180,184
1 Claim. (Cl. 297—385)

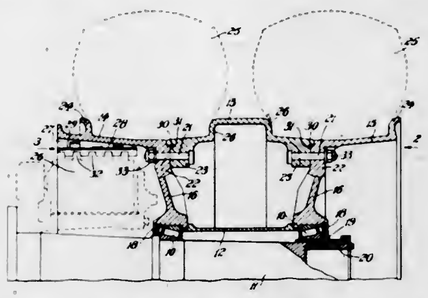


A safety seat for a vehicle comprising a seat having a bottom, a first belt strap having one end securely anchored, a metal buckle affixed to the other end of said first belt strap, a second belt strap having one end securely anchored, a metal tip affixed to the other end of said second belt strap and adapted to be inserted in the buckle, and two metal plates mounted on the seat bottom, the buckle and the tip being each adapted to contact and form a magnetic pair with the respective plates when the belt straps are not in use and one of the elements of each such pair having a magnetic attraction for the other sufficient to hold the corresponding belt strap in convenient, readily accessible position for use.

3,096,123
AIRCRAFT WHEELS
William Alfred Thompsett, Berkswell, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Nov. 30, 1960, Ser. No. 72,603
Claims priority, application Great Britain Dec. 15, 1959
5 Claims. (Cl. 301—36)

1. A twin wheel for an aircraft which comprises a tubular hub and an annular rim comprising a center part, two end parts detachably secured one to each end of said center part and a bearing for each end part, the center part having tire retaining flanges, one at each end, for the adjacent beads of twin tires and each end part having a retaining flange spaced from said center part for the

other bead of one of the tires and a web integral with said retaining flange of each end part and extending radially



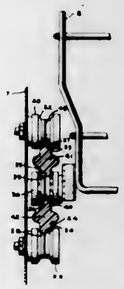
inwardly from said retaining flange, to, and supported on said hub and its respective bearing.

3,096,124
WHEEL COVER
Thomas B. Frame, Syracuse, and Arnold J. Maletzke, Fayetteville, N.N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 27, 1960, Ser. No. 45,743
2 Claims. (Cl. 301—37)



1. In combination with a wheel structure including generally axially extending flange structure provided with a plurality of generally radially extending spaced protuberances, a vehicle wheel cover comprising, a cover structure including a generally axially extending annular first wall portion telescoped within said flange structure, a generally axially facing and axially and radially outwardly extending annular second wall portion located angularly to said first wall portion, an annular retention bead structure interconnecting said first and second wall portions and engageable with said protuberances to place said bead structure under radial stress, said bead structure including an axially inner leg located generally coplanar with said second wall portion to distribute said radial stress over said second wall portion upon engagement of said retention bead structure with said protuberances, and axially extending flange structure located in generally radially inwardly spaced juxtaposed relationship to said first wall portion and connecting said second wall portion and a central generally dome-shaped portion of said cover across axially spaced sharply defined annular juncture ribs located generally oppositely and radially inwardly of said bead structure and within the confines of said axially extending wheel flange structure, at least one of said juncture ribs providing a bending axis for said first and second wall portions and said bead structure relative to said central portion of said cover to permit distortion of said bead structure upon assembly and removal of said wheel cover relative to said wheel structure.

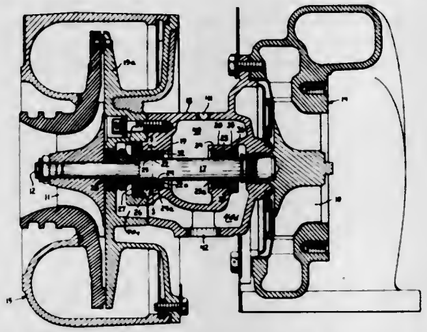
3,096,125
SLIDE OUT MECHANISM
Norman L. Kendt, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Oct. 19, 1961, Ser. No. 146,106
2 Claims. (Cl. 308—3.8)



1. A support system comprising:
(*a*) at least one roller rotatably secured to a stationary structure,
(*b*) a substantially V-shaped truncated annular recess in the periphery of said roller with the plane of truncation providing a contact surface,
(*c*) a track member asociated with said roller and having convergently sloping sides received within said recess,
(*d*) said convergently sloping sides terminating at a flat portion arranged to bear against the contact surface of said roller,
(*e*) said track member being formed of molded material made up of two sections which come together at the top and bottom and are subjected to irregular flashing along said flat portion at their junction line and in the line of movement of said track member as a result of the molding process, and
(*f*) a small peripheral groove in said contact surface of said roller adapted to receive the irregular flashing along said flat portion of said track member.

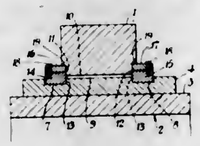
3,096,126
ANTI-WHIRL BEARING
William E. Woollenweber, Jr., Columbus, Ind., James A. Hardy, Playa Del Rey, Calif., and Gerhard Paul, Indianapolis, Ind., assignors to Schwitzer Corporation, Indianapolis, Ind., a corporation
Filed Sept. 26, 1960, Ser. No. 58,410
4 Claims. (Cl. 308—9)

1. A bearing structure for high speed machinery comprising a bearing housing formed to provide a chamber and spaced aligned journal boxes on opposite sides of said chamber, thrust washers mounted at the outer ends of said journal boxes, a shaft disposed within said journal boxes, a pair of bushing members mounted over said shaft within said journal boxes with their facing ends exposed to said chamber and their other ends adjacent said thrust washers, said bushing members having clearance with respect to said shaft and said journal boxes sufficient to permit excessive oil film whirl and shaft whip at certain speeds of rotation, and a source of lubricant coupled to said chamber for providing a film of lubricant within said clearance spaces, said bushings having sufficient thickness at the exposed ends thereof to provide exposed areas of



such magnitude that the pressure of the lubricant on said exposed ends forces said bushings against said thrust washers and inhibits rotation of said bushings with respect to said journal boxes to prevent said excessive oil film whirl and shaft whip.

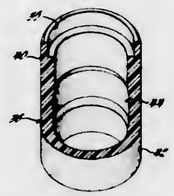
3,096,127
RIDING RING FOR ROTARY CYLINDERS
William Sym Parker, Barrow-in-Furness, England, assignor to Vickers-Armstrongs (Engineers) Limited, London, England, a British company
Filed Apr. 20, 1961, Ser. No. 104,384
Claims priority, application Great Britain May 31, 1960
7 Claims. (Cl. 308—36)



1. In a combination including a rotatable cylindrical member, and a loosely fitting riding ring encircling the cylindrical member, the improvement in which said rotatable cylindrical member has a pair of spaced circumferentially-extending grooves associated with its outer surface respectively located at the ends of the riding ring and in which said riding ring includes an annular recess at each extreme end of its bore, each recess presenting a radially-extending annular shoulder and a cylindrical surface extending from the shoulder to the adjacent end of the ring, and a retaining ring at each end of the riding ring located partly in the recess and partly in the groove at said end, each retaining ring consisting of two resilient half-ring segments sprung into position in the groove in which the retaining ring is located, the retaining rings at the respective ends of the riding ring respectively engaging the shoulders thereof to locate the riding ring axially of the cylindrical member.

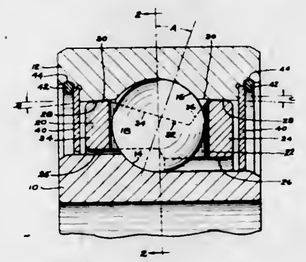
3,096,128
IDLER ARM SUPPORT BEARING
Robert D. Wight, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 31, 1960, Ser. No. 53,226
3 Claims. (Cl. 308—36.1)

1. A joint assembly permitting relative rotary movement between two parts one of which carries a generally cylindrical journal the other of which carries an eye having a generally cylindrical inner wall, said assembly being subject to forces tending to induce relative rocking movement of said parts about axes disposed angularly to the axis of the rotary movement and comprising a bushing sleeve formed of substantially non-resilient lubricous



plastic material press fitted in said eye and within which said journal has a press fit, said bushing sleeve having an internal diameter at the end portions thereof less than its internal diameter over the portion thereof mediate said end portions, the press fit of said journal in said bushing being due solely to said end portions.

3,096,129
ANTIFRICTION BEARING AND LUBRICATION THEREFOR
Charles N. Hay, Sandusky, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1961, Ser. No. 137,234
7 Claims. (Cl. 308—187)

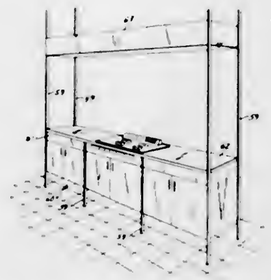


1. In a lubricated antifriction bearing having a series of rolling elements between a pair of relatively rotatable race rings, an annular rotatable separator between the race rings and journalled on one of said rings, said separator having spaced rolling element-receiving pockets, the separator being provided at its periphery with pocket edges which slope laterally and radially outwardly to divert lubricant from the outer pocket ends to a side of the bearing during separator rotation, and one side of the separator having a frusto-conical surface surface which receives the diverted lubricant and laterally feeds it back into the bearing between the rolling elements during bearing operation.

3,096,130
STORAGE ARRANGEMENTS
Paul W. McCobb, 139 E. 57th St., New York, N.Y.
Filed Dec. 4, 1959, Ser. No. 857,351
5 Claims. (Cl. 312—111)

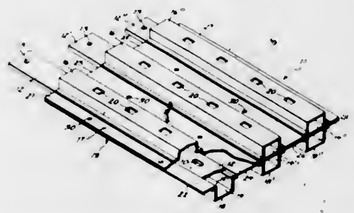
5. In a storage arrangement, in combination, a pair of cabinet units of substantially the same height located at substantially the same elevation with front faces of said units located in a common plane, each cabinet unit having a pair of front vertically extending corners each of which is formed along its entire length with a notch of polygonal cross section so that at the adjoining front corners of said pair of units there are a pair of notches

directed toward each other; and a divider element of polygonal cross section located in and filling said pair of notches and extending forwardly beyond said front faces of said units, said divider elements being fixed to said



units so that the latter are interconnected with each other by said divider element, and said divider element extending downwardly beyond said units to form a leg which supports said units.

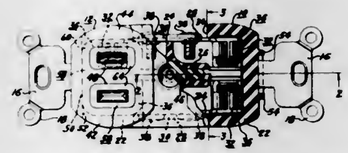
3,096,131
ELECTRICAL BUS CONDUCTOR
Albert H. Adams, Simsbury, Conn., assignor to General Electric Company, a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,112
8 Claims. (Cl. 339—22)



4. Electrical distribution apparatus comprising a pair of insulating sheets, a plurality of bus conductors aligned side by side, each having side edges adapted to be clamped between the pair of insulating sheets, the sheets being multiply channeled oppositely to one another and adapted to clamp a bus conductor between each opposing pair of channeled portions, the lateral portions of the respective sheets extending along the channeled portions thereof being essentially contiguous with one another, access to each bus conductor clamped between the sheets being provided by apertures in at least one of the overlying channeled sheet portions.

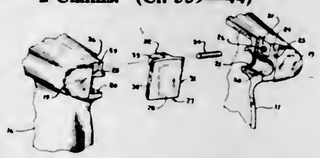
3,096,132
SEALED ELECTRICAL RECEPTACLES
Harvey Hubbell, Southport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed May 25, 1959, Ser. No. 815,577
2 Claims. (Cl. 339—36)

2. In combination, a sealing cover plate for an electrical outlet box; an electrical receptacle having a plurality of female contacts and rigidly secured to said sealing cover plate; opening means including a plurality of spaced openings formed in said sealing cover plate and communicating with the interior of said receptacle in alignment with said contacts; a resilient sealing insert supported by said sealing cover plate and normally completely filling, closing and sealing said opening means; said sealing insert comprising a main body portion having a plurality of spaced raised portions thereon, each of said raised portions having a slit therein that extends completely through the sealing insert, said slits corresponding in number to and being in alignment with said contacts, the raised portions of said insert having yieldable rim portions which surround said slits and are accessible from the exterior of the outlet box and adapted to be deformed when standard male electrical contact fingers of an electrical plug are inserted through said slits into engagement with said



female electrical contacts and thereby transform said slits into slot-like passageways, and said rim portions inherently acting to closely embrace the male electrical contact fingers, whereby said openings are completely sealed prior to and after an electrical plug is connected to said receptacle; a recess formed in said receptacle adjacent said insert; and a protective insert made of flame-resistant material disposed in said recess between said insert and said contacts, said protective insert having a plurality of slots that are in registry with said slits.

3,096,133
PROTECTIVE SNAP COVER FOR RECHARGER CORD RECEPTACLE OF CORDLESS ELECTRIC TOOL OR APPLIANCE
Allen C. Stanley, Baltimore, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Aug. 15, 1961, Ser. No. 131,622
2 Claims. (Cl. 339—44)



1. In a cordless electric device, the combination of a recharger cord receptacle and a protective snap cover for the receptacle, comprising:

(*a*) a housing having a first recess within which a pair of electrical contacts are mounted;

(*b*) said housing further having a second recess communicating with said first recess and through which said electrical contacts are externally accessible;

(*c*) a substantially-flat snap cover adapted to be received flush within said second recess and to have an interference fit with respect to said housing;

(*d*) said cover having a pair of parallel side edges, each of which is rounded off;

(*e*) said second recess having parallel side walls, each of which has a beveled undercut; with the lateral width of said cover, measured across said side edges thereof, being slightly greater than the minimum lateral width of said second recess measured between the respective tips of said beveled undercuts; and with the maximum lateral width of said second recess, measured across the respective troughs of said beveled undercuts, being slightly greater than the lateral width of said cover;

(*f*) said cover being formed of a flexible material, and said housing being formed of a more rigid material than said cover, whereby said cover will flex

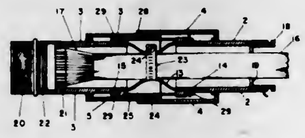
inwardly and outwardly as it is alternately moved in and out of said housing;

(*g*) said housing further having a third recess above said first recess and anteriorly in said housing with respect to said second recess and communicating with said second recess;

(*h*) said cover having an integral rearward boss portion received within said third recess; and

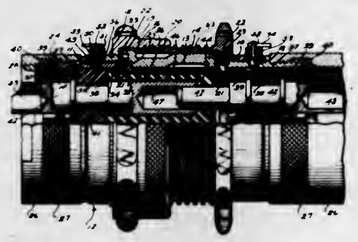
(*i*) a pin carried by said housing and passing through said boss to pivotally mount said cover to said housing.

3,096,134
WATERPROOF ELECTRICAL CONNECTOR ADAPTER
Jesse J. Kanarek, Sepulveda, Calif. (1102 Plum Ave., Sunnyvale, Calif.)
Filed Aug. 29, 1960, Ser. No. 52,554
2 Claims. (Cl. 339—150)



1. A waterproof electrical connector comprising a tubular casing incorporating two detachable halves held together by means of annular sleeves disposed thereupon and having screw engagements for fastening said halves one to the other; an electrical receptacle means having a plurality of solder wells therein secured to one end of said casing; and a cable provided with a plurality of insulated conductors therein passing through said casing, said conductors being attached to said solder wells to form an electrical outlet plug; and a tubular resilient member with its ends circumferentially stretched and sealed to said halves of said casing, forming a constricted portion at its midsection, said constricted portion of said tubular member hermetically gripping the cable passing therethrough to form a leakproof seal between said cable and said casing so as to permit said casing to be employed in a fluid atmosphere.

3,096,135
PREINDEXED CONNECTOR CONSTRUCTION
George H. Feustel, Chicago, and Alvin R. Burton, Northbrook, Ill., assignors to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 30, 1961, Ser. No. 85,739
8 Claims. (Cl. 339—186)



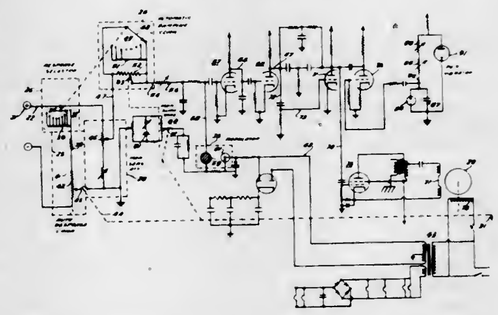
1. A connector part comprising an outer shell having a key means for indexed association with a mating connector part, a rotatable sleeve asociated with said shell having multiple circumferentially spaced holes, a spring-loaded dowel pin on said outer shell engaging said holes and an insulation and contact unit carried in said rotatable sleeve, whereby multiple pre-paired connectors may be provided for line connection with identically constructed parts.

3,096,136
WIRE-GRIPPING PART OF ELECTRIC TERMINAL MEMBER
Hugh W. Batcheller, Newton, Mass., assignor to Kent Mfg. Corp., Newton, Mass., a corporation of Massachusetts
Original application Oct. 31, 1957, Ser. No. 693,712. Divided and this application Dec. 31, 1958, Ser. No. 784,346
1 Claim. (Cl. 339—276)



An electric terminal member made of a single piece of sheet metal and comprising a terminal portion and a portion adapted to grip a wire, said wire-gripping portion comprising a longitudinal extension from the terminal portion and having an extremity, a part of said extension being bent up forming an angle in which a wire can be laid, said extension having a small locking lug struck up therefrom and adapted to be engaged by the end of said extension when it is crimped around a wire and to be bent to overlap the extremity of the cramped extension.

3,096,137
RECORDER FOR DENSITOMETER
Bela A. Silard, 300 Washington Ave., Pleasantville, N.Y.
Filed Apr. 3, 1957, Ser. No. 650,372
11 Claims. (Cl. 346—32)

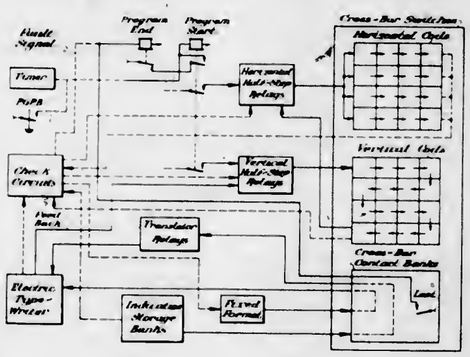


1. In an automatic recording apparatus for electrical signals, in combination, input means for supplying an electrical input signal to be recorded; recording means having a substantially linear potentiometer member and a movable recording member; circuit means interconnecting said input means with said recording means for recording variations in said input signal by said movable recording member; adjustable response-varying means having a substantially linear variable impedance member mechanically coupled for substantially proportionate movement with said potentiometer member and electrically so connected to said potentiometer member as to be adapted to vary the response of the recording means to said input signal in such a manner that the movements of said movable recording member depend on said input signal in accordance with a quasi-logarithmic function; and adjusting means electrically connected to said response-varying means for adjusting the same so that the movements of said recording member depend on said input signal in accordance with different quasi-logarithmic functions.

3,096,138
PROGRAMMING CONTROL CIRCUITS

Donald E. Stark, Eastwood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Dec. 12, 1958, Ser. No. 780,019
4 Claims. (Cl. 346—34)



1. Programming control circuits for data recording including in combination, a crossbar switch arrangement having a plurality of horizontal and vertical coils and a plurality of crosspoint contact sets, means connecting said horizontal and said vertical coils to operate in counting chain sequence to momentarily close in sequence said crosspoint contact sets; at least one set of indication storage contacts for storing by the closed combination thereof a data quantity, a recording device responsive to a data code input to produce a permanent record of that data and a stepping pulse output for each data quantity recorded, a stepping relay means operable in response to stepping pulses emitted from said recording device, a first energizing circuit for said horizontal and vertical coils including contacts controlled by the operation of said stepping relay means to advance the chain sequence one step for each stepping pulse, a translator relay bank with one relay for each contact of said storage contact set, at least one second energizing circuit for said translator relay bank comprising means for connecting said indication storage contacts when said secondset of crosspoints contacts to energize said translator relay bank in a combination corresponding to the closed combination of said storage contacts when said second set of crosspoint contacts is closed to momentarily register the stored data quantity, and an input circuit arrangement for said recording device including another contact of said selected set of crosspoint contacts connected to the contacts of said translator relays to translate the registered data quantity into a proper code input for said recording device to record that data quantity.

CHEMICAL

3,096,139
UNION DYEING ACRYLONITRILE COPOLYMER AND WOOL BLENDS

Walter H. Hindle, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Sept. 12, 1957, Ser. No. 683,455
11 Claims. (Cl. 8—21)

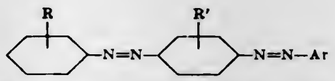
1. A method of union dyeing blends of acrylic fibers composed of blended polymers containing at least 80 percent by weight of acrylonitrile in polymeric form and from 2 to 10 percent by weight of a vinylpyridine in polymeric form with wool fibers which comprises subjecting the blend to the action of a dyebath containing a wool dye, from 0.5 percent to 6.0 percent of sulfuric acid, from 0.25 percent to 2.5 percent of a condensation product of ethylene oxide and a compound selected from the group consisting of higher fatty acids and higher fatty alcohols, and from 0.1 percent to 2.0 percent of the reaction product of ethylene chlorohydrin with the condensation product of equimolar quantities of hydroxyethyl ethylene diamine and stearic acid, based on the weight of the blended fibers.

3,096,140
PROCESS FOR DYEING POLYOLEFINS

Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini, ACNA S.p.A., Milan, Italy, a corporation of Italy

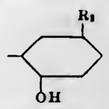
No Drawing. Filed Apr. 14, 1960, Ser. No. 22,128
Claims priority, application Italy Apr. 16, 1959
15 Claims. (Cl. 8—41)

1. A process for dyeing olefin polymers which comprises contacting said polymers in an aqueous dye bath which is maintained at its boiling temperature with a disazo dye having the formula:



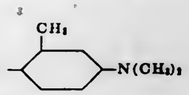
wherein R is a member selected from the group consisting of H, CH_3, CF_3 and Cl, R′ is a member selected from the group consisting of H, CH_3 and Cl, and Ar is a member selected from the group consisting of

(a)

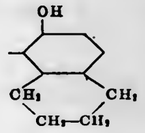


wherein R_2 is selected from the group consisting of CH_3, COOH and Cl

(b)

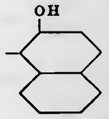


(c)



and

(d)

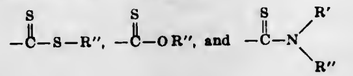


3,096,141
PRINTING PASTE CONTAINING AN ORGANIC SULPHUR COMPOUND AND A DYESTUFF CARRYING A 4:6-DIHALOGENO-1:3:5-TRIAZIN-2-YLAMINO GROUP, AND METHOD OF PRINTING

George Arthur Bennett, William Clarke, and John Stirling, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 29, 1960, Ser. No. 39,460
Claims priority, application Great Britain Aug. 27, 1959
7 Claims. (Cl. 8—63)

1. Process for printing textile materials which comprises applying to the textile materials a print paste containing as essential ingredients, firstly a sulphur compound of the formula: D—S—X, wherein D is selected from the group consisting of hydrogen and metal; X is an organic radical selected from the group consisting of alkyl; hydroxyalkyl; alkoxyalkyl; carboxyalkyl; cycloalkyl; aralkyl; aryl; and aryl carrying a substituent selected from the class consisting of chlorine, alkyl, alkoxy, sulphonic acid, nitro, and carboxylic acid groups; and a heterocyclic ring system of the class consisting of thiazolyl, benzthiazolyl, naphthathiazolyl, pyridyl, furyl, benzoxazolyl, benzselenazolyl, pyrrolidyl, quinolyl, 6-nitrobenzthiazolyl, and 5-chlorobenzthiazolyl radical; and a group having one of the formulae:



wherein

R′ is selected from hydrogen, hydrocarbon, and heterocyclic radicals;

R″ is selected from hydrocarbon and heterocyclic radicals; and wherein

R′ and R″ together with the nitrogen atom N form a heterocyclic ring having from 5 to 7 members;

and secondly a dyestuff compound having a chromophoric group selected from the class consisting of azo, anthraquinone, nitro, and phthalocyanine chromophoric groups, carrying a 4:6-dihalogeno-1:3:5-triazin-2-ylamino group.

3,096,142
PROCESS FOR DYE LEVELLING WITH LACTAMS

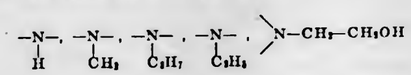
Bjarne Hartmark, Curt Schuster, and Karl Herrle, all of Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

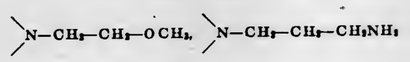
No Drawing. Filed July 9, 1958, Ser. No. 747,351
Claims priority, application Germany July 10, 1957
11 Claims. (Cl. 8—85)

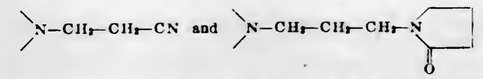
1. In the process of dyeing textile materials selected from the group consisting of cellulose and staple fiber yarn of regenerated cellulose with vat dyestuffs and sulfur dyestuffs the step which comprises levelling the dyeings in an alkaline bath with a compound of the following general formula

$$L_1—R_1—X—(R_2—X)_n—R_3—L_2$$

wherein L_1 and L_2 represent lactam groups with from 5 to 7 ring members, the said lactam groups being attached by their nitrogen atoms to R_1 and R_3; wherein R_1 and R_3 represent carbon chains with from 2 to 6 carbon atoms in each chain, R_2 represents a carbon chain with from 1 to 6 carbon atoms in the chain, X represents a member of the class consisting of oxygen, sulfur,







and n represents an integer of from 0 to 20.

3,096,143
TANNING WITH SILICATED SODIUM ZIRCONYL SULFATE

Robert V. Horrigan, Penn Yan, N.Y., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 21, 1961, Ser. No. 132,561
10 Claims. (Cl. 8—94.25)

1. A process for producing dry, non-gelatinous, silicated sodium zirconyl sulfate which consists essentially in mixing together sodium zirconium silicate and concentrated sulfuric acid in a molar ratio of acid to silicate of from about 1.5:1 to about 2.2:1 whereby a reaction occurs which results in the direct production of a dry, non-gelatinous, silicated sodium zirconyl sulfate substantially free of silica gel.

5. A tanning process which comprises treating pickled animal skins in an aqueous system with a silicated sodium zirconyl sulfate in an amount equivalent to from about 3.5 to 10.0 parts of soluble ZrO_2 per hundred parts of drained, pickled skins and from about 0.3 to 1.9 parts of soluble SiO_2 per hundred parts of drained, pickled skins, said silicated sodium zirconyl sulfate being characterized by the presence of water soluble zirconium products equivalent to from about 24% to about 30% ZrO_2 content and from about 1% to about 5% water soluble silica and being substantially free of silica gel.

3,096,144
METHOD OF MAKING INORGANIC FIBERS

Eugene Wainer, Cleveland, and Edward F. Mayer, Novelty, Ohio, assignors to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

Filed Aug. 12, 1960, Ser. No. 49,158
6 Claims. (Cl. 18—54)

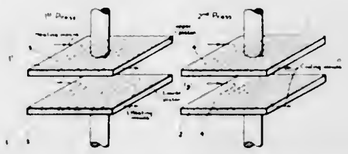
1. A method of forming filaments having a rectangular cross section and the following dimensions, length from 2.5 millimeters to 6 inches, width from 5 to 25 microns, thickness from 0.2 to 1.5 microns, ratio of length to width >100:1 and ratio of length of thickness >1000:1, said filaments being composed of inorganic oxide; which method comprises: forming a relatively stable highly concentrated sol, by bringing together in solution a metal salt of a strong acid and an alkali metal salt of a weak acid and thereafter adjusting the pH of the product resulting from the double decomposition reaction which occurs when the two said salts are brought together to produce a composition with a pH between 5 and 9; spreading the resulting filament forming composition as a thin layer on a chemically resistant solid surface; heating the thin layer to a temperature such that the sol of the layer is quickly transformed to a gel, simultaneously with the rapid evaporation of water; continuing the heating while filaments are formed as a result of the continued drying of the gel; completing the drying at about 150° C. until all free water has been removed; converting the dried fibrous material to metal oxide filaments by slowing raising the temperature of the dried material to between about 600° C. and 800° C. in an oxidizing atmosphere and maintaining the filaments within said temperature range for between 10 and 120 minutes; cooling the metal oxide filaments to room temperature; thereafter washing the filaments to remove all residual water soluble salts; drying the resulting porous inorganic oxide filaments; and then impregnating the porous product with a solution of an oxide forming metal salt.

3,096,145

PROCESS OF MAKING PLATES AND SHEETS OF POLYVINYL CHLORIDE FRAGMENTS BY A SIMULTANEOUS HEAT AND PRESSURE TREATMENT

Boris Carnaut, 53 Rue de Rennes, Paris, France

Filed May 6, 1958, Ser. No. 733,261
Claims priority, application France May 7, 1957
3 Claims. (Cl. 18—55)



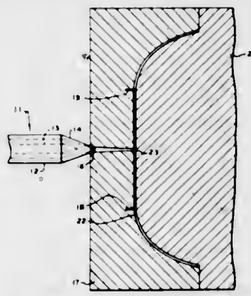
1. A process for making plates and sheets from fragments of polyvinyl chloride, by a simultaneous heat and pressure treatment, said process consisting of applying an even layer of polyvinyl chloride fragments on the lower platen of a first press, both platens being continuously heated at a fixed temperature comprised between 200° C. and 300° C., applying on said layer in said first press, a pressure from 2 to 5 kg./cm.^{2}, said pressure being no more than sufficient to obtain a thickness no greater than the diameter of the larger fragments; releasing this pressure only when the polyvinyl chloride fragments of the layer have just reached a temperature scarcely under their decomposition point, so as to be agglomerated with each other without being altered, the pressure being so applied on the layer of polyvinyl chloride fragments in said first press during a time which is predetermined between 10 minutes and 30 seconds, so as to be longer as said layer is thicker and as the temperature of the press platens is lower; transferring the layer of agglomerated polyvinyl chloride fragments just after the pressure release from the first press rapidly into a second press, the platens of which are continuously at a substantially lower temperature than the platens of said first press; applying finally to said layer of agglomerated polyvinyl chloride fragments a pressure near to the pressure applied thereupon in the first press; and releasing this finally applied pressure when said layer has returned to the ambient temperature.

3,096,146

DECORATIVELY COLORED THERMOPLASTIC ARTICLE AND PROCESS FOR MAKING THE SAME

Harold D. Coale, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 16, 1961, Ser. No. 89,742
9 Claims. (Cl. 18—61)



1. The process for molding a thermoplastic article having at least one decorated surface which comprises: forming at least one insert of a colored thermoplastic; securely positioning said insert within a mold cavity about the injection orifice thereof; filling said mold cavity through said injection orifice while in the closed position with a thermoplastic material from a hot plastic mass thereof, said injected thermoplastic material contacting and softening said insert; thereby drawing from one edge of said insert a minor part of said colored thermoplastic until said injected material fills said mold cavity and ceases to flow thereinto; whereby a decorated injection molded article is formed.

3,096,147

PROCESS FOR INHIBITING CORROSION IN ACID SOLUTIONS WITH GUANAMINE-PROPYLENE OXIDE CONDENSATION PRODUCT

Richard W. Fulmer, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Oct. 6, 1960, Ser. No. 60,808
4 Claims. (Cl. 21—2.7)

1. A process for corrosion inhibition of metallic substances intimately contacted by aqueous media which comprises adding to said aqueous media a corrosion inhibitor comprising a condensation product of an oxirane compound having 2 to 3 carbon atoms with a substituted guanamine having a monovalent aliphatic substituent having 1 to 20 carbon atoms.

3,096,148

ARTICLE STERILIZING, DEODORIZING AND ACCOUNTING PROCESS AND APPARATUS

Willis Walker, Jr., 990 Hardy St., Hattiesburg, Miss.

Filed Nov. 7, 1961, Ser. No. 150,761
6 Claims. (Cl. 21—58)



1. Apparatus for sanitizing and deodorizing articles comprising a heat sealable disposable container for receiving said articles and an independent gas generator within said container, said generator including wall structure defining a substantially flat paper envelope, at least one pellet disposed within said envelope, said pellet giving off sanitizing and deodorizing gases in the presence of water, said wall structure having at least one aperture for the inlet of water and the outlet of gases, the wall structure about said aperture being adapted to close to prevent leakage until opened by the expanding gases whereby water may be introduced into said envelope having a gas producing pellet and the envelope and article placed in the container and the container sealed by heat and thereafter said pellet will produce gases to sanitize and deodorize said article.

3,096,149

PROCESS FOR THE PRODUCTION OF METAL BORIDES

Bernard A. Gruber, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 16, 1959, Ser. No. 827,437
6 Claims. (Cl. 23—14)

1. Process for the production of a single crystal form of metal borides selected from the group consisting of the borides of titanium, zirconium, molybdenum, tungsten, chromium, silicon, columbium, vanadium and tantalum, which comprises melting together a preformed ferroalloy of the desired metal in a molten matrix with approximately stoichiometrical amounts of preformed ferroboron relative to the metal in said ferroalloy, cooling the said molten matrix at a rate of from 1° to 100° C./min. to crystallize the desired metal boride, and thereafter isolating the said metal boride having a crystal size ranging from at least 0.1 micron to more than ⅛ inch on at least one axis.

3,096,150

DEHYDRATION OF INORGANIC FLUORIDE HYDRATES WITH LIQUID HYDROGEN FLUORIDE

Donald R. Allen, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 5, 1958, Ser. No. 732,786
7 Claims. (Cl. 23—14.5)

1. A process for the dehydration of an inorganic fluoride salt hydrate, which comprises contacting at atmospheric pressure an inorganic fluoride hydrate salt selected from the group consisting of aluminum fluoride hydrate and uranium tetrafluoride hydrate with liquid hydrogen fluoride containing less than 5 weight percent water to dehydrate the salt, and separating the dehydrated salt from the resulting liquid hydrogen fluoride solution.

3,096,151

SEMI-CONDUCTOR Tl_2Te_3 AND ITS METHOD OF PREPARATION

Albrecht Karl Heinrich Theodor Rabenau, Aachen, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 10, 1959, Ser. No. 826,341
Claims priority, application Germany July 23, 1958
7 Claims. (Cl. 23—50)



1. A new semiconductor material comprising a single phase containing thallium and tellurium having a crystal structure isomorphous with that of Tl_2Te_3 and exhibiting a characteristic X-ray powder diffraction pattern containing substantially the line sequence indicated by the arrows in the graph of FIG. 1*b* of the accompanying drawing, wherein the abscissa is in degrees θ and the ordinate indicates relative line intensity, said single phase possessing a low thermal conductivity, a high thermoelectric power at room temperature of at least several hundred microvolts/° C., and an electrical conductivity in the semiconductor range.

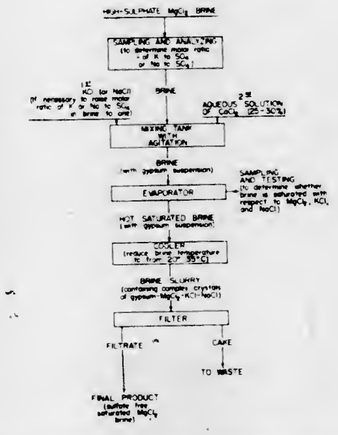
3,096,152

PROCESS FOR REMOVAL OF SULFATE FROM MAGNESIUM CHLORIDE BRINES

Pablo Hadzeriga, Salt Lake City, Utah, assignor, by mesne assignments, to Standard Magnesium Corporation, Inc., Tulsa, Okla., a corporation of New York

Filed Jan. 10, 1961, Ser. No. 81,903
10 Claims. (Cl. 23—91)

1. A process for removing sulfate ions from magnesium chloride brines containing a significant quantity of said ions as well as ions of at least one alkali metal selected from the group of alkali metals consisting of potassium and sodium, comprising first sampling and analyzing such a brine to determine the molar ratio of ions of said at least one alkali metal to sulfate ions, and, if said ratio is less than one, adding to said brine a material which will supply a sufficient quantity of ions of the one alkali metal concerned to raise said ratio to at least one; then, while agitating the brine, gradually adding at least the stoichiometric amount of an unsaturated, aqueous solution of calcium chloride to react with the sulfate present to produce crystals of gypsum; subjecting the resulting brine and gypsum crystal slurry, essentially without solids separations, to evaporation until saturated with respect to a chloride of said at least one alkali metal, and with respect to magnesium chloride, resulting in the precipitation of a multitude of crystals of gypsum, magnesium chloride, and a chloride of said at least one alkali metal; and separating said crystals from the brine component of said slurry to yield a magnesium chloride brine which is substantially free of sulfate ions, and of potassium ions and/or sodium ions, depending upon which ions are present.

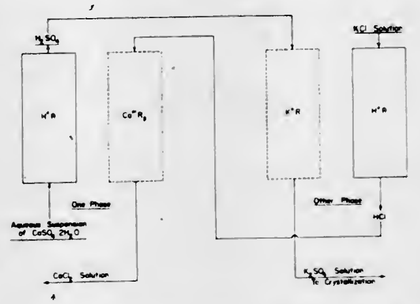


3,096,153

ION EXCHANGE PROCESS FOR PRODUCING POTASSIUM SULFATE AND SULFURIC ACID

Pablo Hadzeriga, Salt Lake City, Utah, assignor, by mesne assignments, to Standard Magnesium Corporation, Inc., Tulsa, Okla., a corporation of New York

Filed Oct. 17, 1960, Ser. No. 63,075
5 Claims. (Cl. 23—121)



1. An ion exchange process for producing potassium sulfate from calcium sulfate and potassium chloride as raw materials, comprising bringing an aqueous suspension of calcium sulfate and a cation exchange material in hydrogen form into intimate contact at a temperature of at least about 50° C. to effect ion exchange therebetween, yielding sulfuric acid; bringing a solution of potassium chloride and a cation exchange material in hydrogen form into intimate contact to effect ion exchange therebetween, yielding hydrochloric acid; and eluting the last-mentioned exchange material with the sulfuric acid to

regenerate said material and yield a solution of potassium sulfate.

3,096,154
METHOD FOR PREPARING BETA-ALUMINA TRIHYDRATE

Meredith M. Stewart, Penn Hills, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

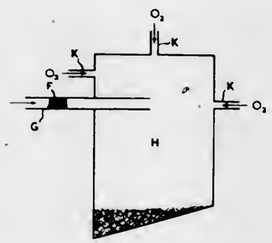
Filed Dec. 23, 1959, Ser. No. 861,525
7 Claims. (Cl. 23—143)

1. The method of preparing beta-alumina trihydrate without an aging step which comprises slowly adding in increments a dilute acidic aqueous solution of an aluminum salt selected from the group consisting of aluminum chloride and aluminum nitrate substantially free of metals other than aluminum with thorough mixing to a substantially sodium free 0.1 to 4 molar aqueous highly basic solution of an hydroxide compound having a non-metallic volatile cation, the slow rate of addition of increments of said acidic solution to said basic solution tending to only slowly decrease the pH of said basic solution from its highly basic value to a lower value, the lowest pH in the mixture of acidic solution and basic solution during the entire operation being no less than 9, maintaining the temperature of the mixed solution above freezing but below 120° F. during the entire operation, and recovering an immediate crystalline precipitate which comprises at least 95 percent bayerite.

3,096,155
PROCESS FOR THE CONTINUOUS PRODUCTION OF THIN, ELONGATED, SINGLE CRYSTALS OF ZINC OXIDE AND ANTIMONY TRI-OXIDE

James Edward Gordon, Christopher Charles Evans, and Noel James Parratt, all of Saffron Walden, England, assignors to T. I. (Group Services) Limited, Aston, England, a company of Great Britain

Filed Nov. 25, 1959, Ser. No. 855,431
Claims priority, application Great Britain Nov. 26, 1958
1 Claim. (Cl. 23—144)

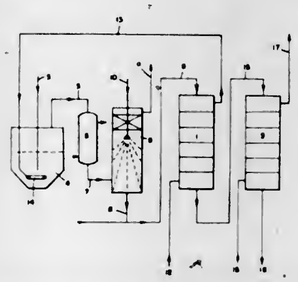


A process for the continuous production of thin elongated, single crystals of the class known as whiskers comprising the steps of subjecting a metallic compound selected from the group consisting of zinc oxide, and antimony tri-oxide to heat in a heating zone which is maintained at a temperature above the vaporizing temperature of said compound, continuously passing vaporized compound formed in said heating zone from said zone into a region of a condensing vessel, maintaining said region at a temperature below the vaporizing temperature of said compound, continuously passing an upward current of inert gas through said region, controlling the mean velocity of said upward current so that it initially maintains in suspension condensed crystals of said compound formed in said gas in said region as a result of the lowered temperature thereof until said crystals have grown to a size wherein they fall by gravity against said upward current of gas, and collecting from the bottom of the vessel the crystals of metallic compound that are formed and fall under gravity.

3,096,156
MULTI-STAGE PROCESS FOR THE SEPARATION AND RECOVERY OF HCN AND H_2S FROM WASTE PRODUCT GASES CONTAINING AMMONIA

Paul Kaunert and Hasso Doering, Marl, Germany, assignors to Gewerkschaft Auguste Victoria, Marl, Germany

Filed Apr. 6, 1960, Ser. No. 20,389
Claims priority, application Germany Apr. 13, 1959
8 Claims. (Cl. 23—151)



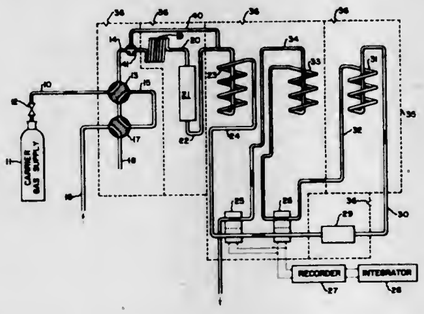
1. A multi-stage process for the separation and recovery of HCN and H_2S from a waste product gas which also contains ammonia, said process comprising: introducing said waste product gas into a saturator; contacting said waste product gas in said saturator with a dilute sulfuric acid bath at an elevated temperature for removal of said ammonia as ammonium sulfate; removing from said saturator a gas which is substantially free of ammonia but which still contains said HCN and H_2S; cooling said gas from said saturator; absorbing substantially all of the HCN and a portion of the H_2S contained in said gas from said saturator by contact with water in a washing zone recovering from said washing zone the washed product gas steam enriched in H_2S and substantially free of HCN; leading the wash water containing HCN and H_2S into a first stripping zone wherein substantially all of said H_2S and a minor proportion of said HCN is stripped from said wash water by contact with a stripping gas which is practically inert to HCN; recycling and introducing the effluent stripping gas from said first stripping zone into said saturator; leading the partially stripped water from said first stripping zone into a second stripping zone wherein substantially all of the remaining HCN is stripped from the wash water by contact with a second stripping gas which is practically inert to HCN; and separating HCN from the gas stream being removed from said second stripping zone.

3,096,157
METHOD AND APPARATUS FOR ANALYZING FUEL-AIR MIXTURES

Paul M. Brown, O'Hara Township, Allegheny County, and Donald R. O'Malley, Fox Chapel Borough, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Nov. 18, 1960, Ser. No. 70,228
13 Claims. (Cl. 23—232)

1. A method of analyzing gaseous mixtures of hydrocarbon fuels and air which comprises: extracting a sample of predetermined volume of the gaseous mixture to be analyzed, subjecting the said sample to oxidative combustion under conditions to effect substantially complete combustion of the combustible components of said sample, and then passing said oxidized gas sample through a series of chromatographic separation zones adapted selectively to separate the various components of said oxidized gas sample and detecting the separated compo-

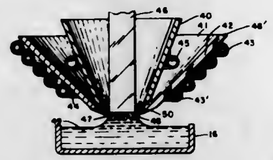


nents of the oxidized gas sample as they emerge from the separation zones selective therefor.

3,096,158
APPARATUS FOR PULLING SINGLE CRYSTALS IN THE FORM OF LONG FLAT STRIPS FROM A MELT

Gerhart K. Gaulé, Long Branch, Horst H. Kedesdy, Little Silver, and Leon J. D. Rouge, Fort Monmouth, N.J., assignors to the United States of America as represented by the Secretary of the Army

Filed Sept. 25, 1959, Ser. No. 842,536
2 Claims. (Cl. 23—273)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for growing a flat single crystal from a melt comprising: a crucible; means for drawing the growing crystal progressively upward from the melt; concentrator means supported at approximately the top of said crucible, said concentrator means comprising a conoidal shaped concentrator element of thin electrically conductive material supported with its major axis coaxial with that of said drawing means, said concentrator element having at its apex a narrow elongated opening, said apex projecting downwardly toward said crucible, said concentrator element having a slot that extends radially outward from its apex to its base such that said concentrator element forms a single turn slotted conductor; a multiple-turn coil surrounding and in physical contact with said concentrator element, said multiple-turn coil having one turn electrically connected to said concentrator element and the other turns electrically insulated therefrom in such a manner that said multiple-turn coil and said concentrator element form an autotransformer for increasing the electromagnetic current in said concentrator element over the current supplied to said coil; a conoidal shaped electromagnetic shield supported within said concentrator element, said shield having a narrow elongated aperture at its apex and terminating slightly above the apex of said concentrator element, said shield aperture being elongated in the same direction as the opening of said concentrator element so that it closely surrounds said grown crystal; and means supported by said shield for cooling said shield and said concentrator element.

3,096,159
METHOD OF MAKING A SINTERED CERAMIC ARTICLE

Harrison C. Van Cott, Horseheads, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

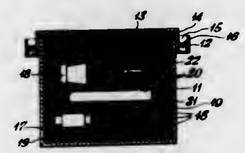
No Drawing. Filed Jan. 2, 1962, Ser. No. 163,898
5 Claims. (Cl. 25—157)

1. A method of making a sintered ceramic article comprising forming to the desired shape a finely divided ceramic batch composition consisting essentially, by weight, of 20 to 80 percent of beta spodumene and the remainder petalite, and sintering the resulting article at an elevated temperature but below the incipient melting point of said article.

3,096,160
VAPOR DIFFUSION COATING PROCESS

Robert B. Puyear, Kokomo, Ind., assignor to Union Carbide Corporation, a corporation of New York

Filed June 19, 1961, Ser. No. 117,974
16 Claims. (Cl. 29—197)

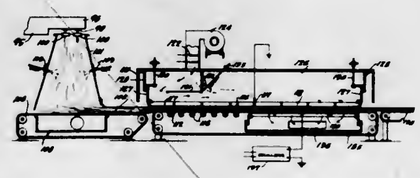


14. A metallic article having a protective coating of aluminum-containing, oxidation resistant materials formed by heating the article in a particulated, prealloyed charge material consisting essentially of from about 19 precent to about 35 percent by weight aluminum and the balance substantially all at least one metal selected from the group consisting of iron and cobalt and incidental impurities, said heating conducted in the presence of at least one carrier material selected from the group consisting of ammonium halides and aluminum halides at a temperature between about 1400° F. and 2000° F. with the exclusion of air for a time sufficient to form the coating.

3,096,161
HEAT SETTING OF BINDER OF FIBROUS MASSES

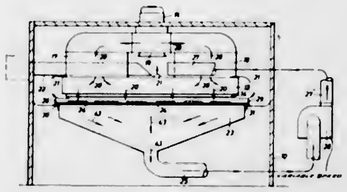
Albert R. Morrison and José A. Apellániz, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Sept. 16, 1957, Ser. No. 684,042
7 Claims. (Cl. 34—1)



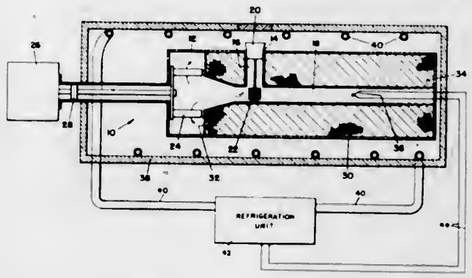
1. A method of heat curing the moisture laden binder of a porous, fibrous mass, in which the temperature required for heat curing the binder is substantially above the volatilizing temperature of the moisture, comprising first drying the binder by placing the mass in a dielectric heating field and simultaneously driving air at a temperature below the heat curing temperature of the binder through the mass, and then driving air at a binder heat curing temperature through the mass.

3,096,162
GASEOUS RESTRAINT OF CONVEYED ARTICLES
Michael Denis Jepson, Ilkley, England, assignor to The Spooner Dryer & Engineering Co. Limited, Ilkley, England
Filed Feb. 18, 1959, Ser. No. 794,005
Claims priority, application Great Britain Feb. 19, 1958
2 Claims. (Cl. 34—33)



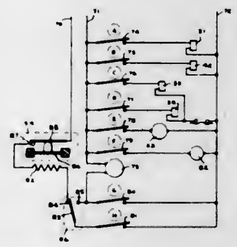
1. In a method of thermally treating light-weight moulded pulp articles; the steps of traversing the articles on a perforate conveyor, withdrawing gaseous medium from a suction zone at the side of said conveyor remote from said articles to establish a pressure drop across said conveyor, directing a plurality of streams of gaseous medium towards articles on the conveyor so as to impinge the articles at high velocity when opposite said suction zone, withdrawing at the article side of said conveyor gaseous medium so directed and circulating said withdrawn gaseous medium along an endless path of which a portion is occupied by said high velocity streams, imparting heat to said gaseous medium before directing it toward said articles, adding gaseous medium withdrawn from said suction zone to gaseous medium in said endless path, and adjusting the rate of withdrawal of said gaseous medium from said suction zone to be sufficient to restrain said articles from displacement on said conveyor by said high velocity streams.

3,096,163
APPARATUS FOR FREEZE-DRYING AT ATMOSPHERIC PRESSURE
Harold T. Meryman, Sandy Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 16, 1960, Ser. No. 49,894
2 Claims. (Cl. 34—43)



1. Apparatus for freeze-drying a water-containing material at atmospheric pressure comprising, an elongated container, which is closed at both ends, an elongated tubular member fixedly mounted within said container and spaced therefrom, said tubular member being shorter than said elongaed member and having its opposite ends spaced from the sides and closed ends of said elongated member, a quantity of desiccant between the outside of said tubular member and the inside of said elongated container, blower means within said elongated container constructed and arranged to circulate air through said tubular member and the desiccant, whereby the air is kept moving and dry, a perforate container within said tubular member constructed to hold a quantity of frozen material which is to be dehydrated, and means constructed to maintain the temperature of the circulating air within the elongated tubular member below freezing.

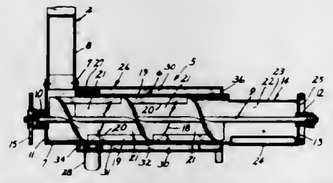
3,096,164
CONTROL SYSTEM FOR CLOTHES DRYERS
Aidan M. Stone, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 24, 1961, Ser. No. 105,162
3 Claims. (Cl. 34—45)



1. Clothes drying apparatus comprising: a clothes drying chamber substantially sealed from the atmosphere during operation of said apparatus; means for tumbling clothes in said chamber; clothes heating means positioned within said chamber for vaporizing moisture from clothes; condenser means within said chamber for removing moisture from the air therewithin after the moisture has entered the air from the clothes by evaporation; first thermostatic means having a low temperature normal position and a high temperature tripped position, said first thermostatic means being positioned both immediately next to said heating means and with a surface thereof projecting into said chamber to sense temperatures therewithin, said first thermostatic means being arranged to enable operation of said heating means in said normal position and to prevent operation of said heating means in response to movement to said tripped position, said first thermostatic means being calibrated to provide cycling on and off of said heating means during operation of said apparatus; second thermostatic means having a low temperature normal position and a high temperature tripped position, said second thermostatic means projecting into said chamber so as to contact the clothes therewithin and thereby sense rises in the temperature of the clothes, said second thermostatic means being calibrated to move from its normal position to its tripped position at a temperature indicating dryness of the clothes, said second thermostatic means being arranged to enable operation of said heating means in its normal position and to prevent operation of said heating means in response to movement to its tripped position; and means for terminating operation of said apparatus in response to movement of said second thermostatic means to its tripped positions.

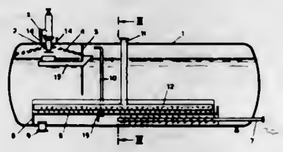
3,096,165
COMBINE MOUNTED GRAIN DRYER
Eugene W. Lane, Kensal, N. Dak.
(27350 Base Line, Highland, Calif.)
Filed Sept. 21, 1960, Ser. No. 57,560
1 Claim. (Cl. 34—183)

A grain dryer for use with an internal combustion engine-equipped combine, said dryer comprising a horizontally disposed cylindrical drying chamber adapted to be interposed in the grain discharge line of said combine, a screw conveyor extending axially through said drying chamber and journalled for rotation with respect thereto, a radially inwardly opening grain inlet adjacent one end of said drying chamber, a generally cylindrical jacket in outwardly spaced concentric relation to said drying chamber and defining therewith an axially elongated annular plenum, a gas inlet communicating with the lower end of said plenum in the end thereof adjacent the grain inlet, a diametrically opposed gas outlet leading from said plenum, axially extended circumferentially spaced baffle means within said plenum defining a serpentine path for



gasses passing from said gas inlet to said gas outlet, said drying chamber being axially extended at its discharge end beyond said screw conveyor and including an upwardly opening overflow-outlet defining side wall and a generally vertical end wall, said end wall defining an axially directed normal grain outlet above the axis of rotation of said screw conveyor, but below the lower limits of said overflow outlet, the lower portion of said side wall being formed to define a clean-out door.

3,096,166
APPARATUS FOR DEGASIFYING WATER, PARTICULARLY BOILER FEED WATER
Jacob J. Kolthof and Mattheus Besier, Hengelo, Netherlands, assignors to Koninklijke Machinefabriek Gebr. Stork & Co. N.V., Hengelo, Netherlands
Filed July 7, 1961, Ser. No. 122,560
Claims priority, application Netherlands Aug. 10, 1960
3 Claims. (Cl. 55—198)



1. An apparatus for degasifying water, comprising a horizontally disposed vessel adapted to contain water maintained to a normal level above its center, a spray device for discharging a water screen spray to be degasified arranged in said vessel near one end and in the upper part of the vessel above said normal water level, at least one outlet provided in said vessel above the screen of water emitted by said spray device, a conduit for introduction of heating steam located in the lower part of the vessel below said normal water level, an outlet for the degasified water at the bottom of the vessel, a casing provided in the bottom part of the vessel over said outlet, said casing having a top wall and being open at one end and closed at the other end beyond said outlet, a pipe for supplying hot condensate extending into said casing, and an upstanding tube connected to said top wall for venting gas from within the casing, said tube having its upper end opening in the upper part of the vessel above said normal water level.

3,096,167
HERBICIDAL METHOD
John M. Farmer, Sunnyside, Wash., assignor of one-half to Harvey Krueger, Richland, Wash.
No Drawing. Filed Feb. 15, 1960, Ser. No. 8,490
1 Claim. (Cl. 71—2.1)

The method of retarding the spread of plant growth outward from a plot of vegetation, comprising: incorporating a water-leachable soil sterilant deleteriously effective to growth of vegetation into an elongated non-rigid fibrous carrier element; disposing said carrier element in close proximity to the earth surface along the line at which it is desired to retard the spread of vegetation; and applying water to said carrier element to leach said soil sterilant from said carrier element into the earth along the line defined by said carrier element.

3,096,168
SUSPENSIONS OF UREAFORM IN LIQUID MIXED FERTILIZERS
Charles E. Waters, Petersburg, and Rodney L. Wells, Chesterfield County, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 20, 1960, Ser. No. 30,450
4 Claims. (Cl. 71—28)

1. The method of preparing a liquid fertilizer containing a suspension of ureaform therein comprising reacting urea with formaldehyde in the ratio of 1 to 2.5 mols urea per mol formaldehyde in an aqueous phosphoric acid medium, neutralizing the phosphoric acid with ammonia to a pH lying within the range of 6 to 7, controlling the relative amounts of water and water-soluble ingredients of the mixture to achieve a density of the liquid medium of at least 1.1 g./ml. at 60° F., and subjecting the slurry so obtained to violent agitation in a high-shear-type agitator to produce a stable suspension of ureaform in a liquid fertilizer.

3,096,169
AMMONIACAL AMMONIUM NITRATE SOLUTION OF REDUCED CORROSIVE TENDENCIES
Paul Shapiro, Chicago, Ill., David B. Sheldahl, Griffith, Ind., and Lawrence V. Collings, Park Forest, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 1, 1960, Ser. No. 5,637
16 Claims. (Cl. 71—59)

1. A composition consisting essentially of an aqueous ammoniacal ammonium nitrate solution, about 0.01 gram to less than about 0.5 g./100 ml. of said solution of a trivalent arsenic compound, soluble in said solution, about 0.01 to about 0.2 gram/100 ml. of said solution of a copper compound soluble in said solution, and about .005 to .1 gram/100 ml. of said solution of carbonate ions, the amounts of said compounds and ions being sufficient to substantially reduce the rate of corrosion by said solution to ferrous surfaces.

3,096,170
NOVEL SLURRY FERTILIZER
William S. Newsom, Jr., Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Oct. 2, 1958, Ser. No. 764,762
10 Claims. (Cl. 71—64)

1. A fertilizer in highly concentrated aqueous slurry form containing in excess of 30% by weight of a plant nutrient component selected from the group consisting of compounds of nitrogen, phosphate, potash and mixtures thereof, and a mixture, in an amount effective to inhibit the formation of large crystals and the settling of fine crystals in said slurry, of attapulgite and a swelling type bentonite in a weight ratio of between about

0.25 and about 4.0 parts of attapulgite per part of swelling type bentonite.

3,096,171
PROCESS FOR PREPARING SLOW RELEASE FERTILIZER COMPOSITION

Clarence J. Woerther, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

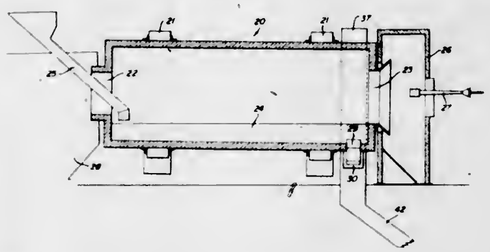
No Drawing. Filed Oct. 10, 1960, Ser. No. 61,341
1 Claim. (Cl. 71—64)

A process for preparing a fertilizer composition compatible with the constituents in soil and which when applied to soil releases the plant nutrient over an extended period of time, said fertilizer composition containing a water-soluble plant nutrient compound and a plant wax, said process comprising the steps of coating particles of a relatively water-soluble plant nutrient compound selected from the group consisting of urea, potassium nitrate, ammonium nitrate, ammonium sulfate, ammonium phosphate, dicalcium phosphate, potassium phosphate, superphosphate, triple superphosphate, potassium chloride, potassium carbonate, potassium sulfate, langbeinite and mixtures thereof, with from about 0.1% to about 25% by weight of said fertilizer composition of waxy cutin plant wax, and recovering said coated particles, whereby the water-soluble plant nutrient compound in said particle is rendered soluble in water at a relatively slower rate.

3,096,172
ROTARY FURNACE PRODUCTION OF SPONGE IRON

Stuart R. Zimmerley, Alexander E. Back, Russell R. Beck, and Hans H. Pick, all of Salt Lake City, Utah, assignors to Kennecott Copper Corporation, New York, N.Y., a corporation of New York

Filed May 5, 1960, Ser. No. 27,168
3 Claims. (Cl. 75—33)

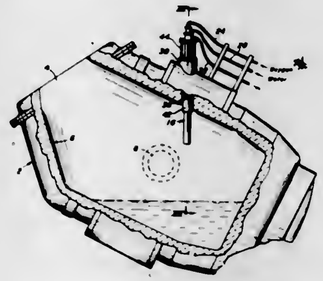


1. In a reduction process utilizing a rotary furnace having a cylindrical shell defining a processing chamber and having an end wall at the discharge end thereof, wherein the raw materials are charged into an end of the furnace opposite said discharge end and the reduced product is discharged at said discharge end from a reaction bed protectively blanketed by a burning gas produced by the reaction, the method of minimizing oxidation of said reduced product during its transfer from the furnace to a receiving vessel, comprising substantially instantaneously dropping, periodically, respective gas-generating batches of the reduced product in the form of respective, substantially compact masses of discrete solid particles from the lower part of said bed below the protective blanket and from within the zone comprehended by said cylindrical shell inwardly of said chamber from, but adjacent to, said end wall and into said receiving vessel as said furnace rotates.

3,096,173
METHOD FOR MAKING STEEL BY OXYGEN BLOWING

Truman H. Kennedy, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Feb. 29, 1960, Ser. No. 11,538
1 Claim. (Cl. 75—60)

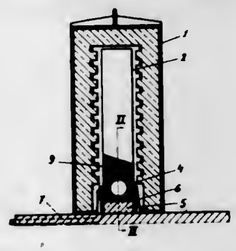


The method of making steel from a charge including molten iron in a vessel mounted for movement about a generally horizontal axis and having a charging opening at one end and an oxygen lance extending through the wall thereof, which method comprises charging the vessel through said opening, rotating said vessel about its axis to raise the level of molten metal, then delivering oxygen through said lance generally vertically downwardly on the surface of said bath, continuing flow of oxygen with the vessel remaining in its last mentioned position until the charge ignites, then rotating said vessel to increase the distance between said metal and lance, shutting off said oxygen flow, and then rotating said vessel to discharge molten steel therefrom.

3,096,174
METHODS OF REDUCING A METAL OXIDE BY A CARBONACEOUS MATERIAL AT SUB-ATMOSPHERIC PRESSURES

Elis Erik Vilhelm Helin, Gothenburg, Sweden, assignor, by mesne assignments, to Elektriska Svetsningsaktiebolaget, Gothenburg, Sweden, a corporation of Sweden

Filed Apr. 10, 1958, Ser. No. 727,660
Claims priority, application Sweden Apr. 18, 1957
5 Claims. (Cl. 75—226)

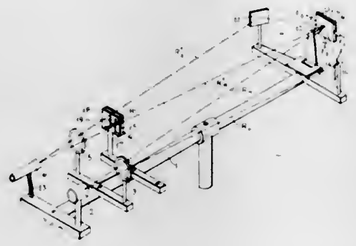


1. In the method of reducing a metal oxide by a carbonaceous material by the heating of a comminuted solid mixture of said materials at sub-atmospheric pressures, the steps of charging said unreacted mixture into a sheet metal container the wall thickness of which is insufficient to enable the container to retain its shape against external atmospheric pressure on exhaustion at elevated temperatures, and heating said charged container at atmospheric pressure while maintaining a sub-atmospheric pressure in the interior of said container.

3,096,175
PHOTOELASTIMETRIC APPARATUS FOR STRESS ANALYSIS

Felix Zandman, Paris, France, assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 18, 1960, Ser. No. 3,049
Claims priority, application France Mar. 21, 1959
1 Claim. (Cl. 88—14)



1. Photoelastimetric apparatus for the investigation of principal plane stresses acting laterally within a region of a sheet of transparent birefringent material contiguous with a reflecting surface, said apparatus comprising:

a mount relatively rotatable about an axis through said region and, supported on said mount, a unitary light source, a sheet material polarizer, a sheet material analyzer, an axially elongated pointer, and first and second plane mirrors;

said polarizer and said analyzer being coplanar and symmetrically displaced to opposite sides of said axis at one end thereof;

said pointer being located at the other end of said axis and oriented coaxially with respect thereto;

said first and second mirrors being located intermediate said ends of said axis, symmetrically displaced to opposite sides thereof, and equiangularly disposed with respect thereto;

said source being located behind said polarizer and illuminating said first mirror and said pointer;

and said source, polarizer, first and second mirrors, and analyzer being further relatively oriented with respect to said axis and to said pointer to simultaneously define first and second coplanar light paths through the region when said apparatus is in a position with said pointer contiguous with the region and said axis perpendicular to the plane of the principal stresses;

said first light path extending from said source, through said polarizer, through the region, to the reflecting surface, back through the region, and through said analyzer, when said apparatus is in said position;

said second light path extending from said source, through said polarizer, to said first mirror, through the region, to the reflecting surface, back through the region, to said second mirror, and through said analyzer, when said apparatus is in said position;

the portion of said first light path within the region being substantially normal to the plane of the principal stresses when said apparatus is in said position; and

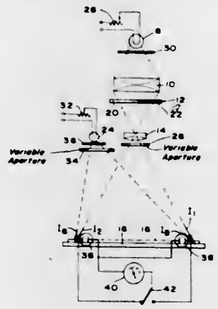
the portion of said second light path within the region being at a substantial oblique angle with the normal to the principal stresses acting within the region when said apparatus is in said position;

whereby upon relative rotation of said apparatus in said position about said axis, the plane of said coplanar light paths may be oriented parallel with one and the other of the principal stresses acting laterally of the region to yield photoelastic fringe information for the immediate resolutions of the individual magnitudes of the principal stresses.

3,096,176
PHOTOGRAPHIC PRINTING METHOD

Dwin R. Craig, Falls Church, Va., assignor to Logetronics, Inc., Alexandria, Va., a corporation of Delaware

Filed Mar. 13, 1957, Ser. No. 645,717
8 Claims. (Cl. 96—27)



1. A photographic printing method comprising directing light from a source to an object and projetcing an image of said object on a surface, positioning brightness indicating devices at points approximating respectively the minimum and the maximum brightness of said image at said surface, adjusting the overall brightness of said image until the maximum brightness indicating device indicates a first fixed predetermined value, superimposing light of uniform intensity over said surface, adjusting the brightness of said light of uniform intensity until the minimum brightness indicating device indicates a second fixed predetermined value, then exposing a film of photosensitive emulsion to the aggregate light at said surface and developing said film.

3,096,177
PROCESS FOR THE MANUFACTURE OF A SYNTHETIC YOGHURT FROM SOYBEAN

Hisashi Ariyama, 301 Nippon Jutakukodan, Apt.-House, 5th Bldg., No. 75–1, Biwakubi-cho, Sendai-shi, Japan

No Drawing. Filed Aug. 31, 1960, Ser. No. 53,044
Claims priority, application Japan Sept. 7, 1959
6 Claims. (Cl. 99—59)

1. A process for the manufacture of a synthetic yoghurt product, comprising steps of steaming washed soybeans for 25 to 30 minutes, soaking said soybeans in 0.1–0.2% caustic soda solution for one hour, skinning said soaked soybeans, soaking said skinned soybeans in 0.1–0.2% caustic soda solution for 4 to 5 hours, grinding said soaked soybeans with the same caustic soda solution, filtering said ground soybeans, adjusting pH of said filtrate to 7.0 by adding hydrochloric acid, adding about 75 grams of sugar per 500 ml. of said adjusted filtrate, boiling said filtrate for about 5 minutes with continuous agitation, cooling said boiled filtrate, inoculating said cooled filtrate with *Lactobacillus bulgaricus*, and incubating said inoculated filtrate at a temperature of 37° to 43° C. for four to six hours.

3,096,178
CHEMICALLY LEAVENED YEAST DOUGH

James W. Tucker, Park Forest, Ill., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 2, 1961, Ser. No. 107,052
2 Claims. (Cl. 99—94)

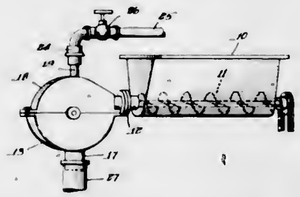
1. An improved yeast dough formulation consisting of a standard yeast dough formulation containing from 0.5 to 4.0 parts by weight bicarbonate of soda for each 100 parts by weight flour in said standard yeast dough formu-

lation, and from 100% to 250% of the theoretical amount of a sodium aluminum phosphate baking acid necessary to completely neutralize said bicarbonate of soda.

3,096,179
TWO-PACKAGE ANGEL FOOD CAKE MIX
Thomas P. Finucane, Hartsdale, N.Y., William A. Mitchell, Lincoln Park, N.J., and Leonard Z. Raymond, White Plains, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 17, 1962, Ser. No. 188,278
12 Claims. (Cl. 99—94)

1. A two-package angel food cake mix comprising egg white and sugar in one package and farinaceous ingredient in the other package, a fatty anti-foaming agent being present in the package containing the farinaceous ingredient at a level of 0.04–9.0% by weight of the egg white in the mix, wherein the aggregate level of a fatty anti-foaming agent present in the mix is present in an amount insufficient to cause collapse of the foam batter and prevent sufficient expansion of the cells of the egg white foam batter upon baking but sufficient to prevent excessive swelling of the foam batter on baking and subsequent collapse of the cake on cooling.

3,096,180
METHOD OF GRINDING SPICES
Felix E. Kasbaum, Chicago, Ill., assignor to H. J. Mayer & Sons Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 28, 1961, Ser. No. 141,368
10 Claims. (Cl. 99—140)



1. An improved method of grinding spices which comprises introducing the spices to be ground into a chamber, commingling with the spices in the chamber a non-oxidizing gas having good heat exchanging properties whereby to obtain a temperature within the chamber of from about −69° F. to about 30° F., and grinding the spices in the chamber while maintaining the temperature by controlling the rate of discharge of the ground spices from the chamber.

3,096,181
FOOD PROCESSING METHOD AND APPARATUS
Morris S. Dixon, Robert B. Marshall, and John Ross Crerar, all of Leamington, Ontario, Canada, assignors to H. J. Heinz Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 31, 1958, Ser. No. 784,173
1 Claim. (Cl. 99—150)

The method of storing an aseptically cooled and sterilized food product which is capable of being pumped from a source into a sterile tank having a sterile inlet and containing an inert gas, comprising the steps of:

closing the tank inlet,

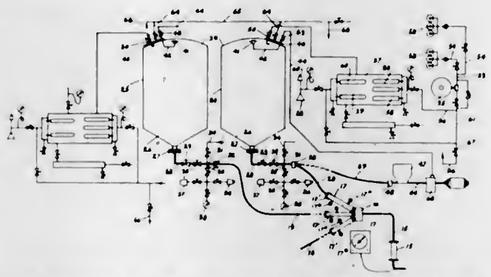
connecting the closed sterile tank inlet to the food product source with a sterile conduit,

introducing sterilizing steam under pressure into the conduit,

pumping the food product against the pressure of the sterilizing steam whereby the product advances toward the inlet and displaces the steam by the advancement to maintain a sterile atmosphere in the conduit immediately preceding the advancing front of the product,

simultaneously terminating the introduction of the steam into the conduit and opening the tank inlet to fill the tank with the sterile food product to a desired level and displacing an equal volume of the inert gas in the tank,

closing the tank inlet,



maintaining in the tank the inert gas a super-atmospheric pressure above the level of the food product in the tank whereby a sterile fluid seal is effected between the product and the atmosphere without the tank,

closing the conduit connection with the product source, and introducing a sterilizing medium into the conduit to effect a fluid seal between the tank inlet and the atmosphere without the conduit.

3,096,182
CHEMICAL PLATING SOLUTION AND PROCESS FOR PLATING THEREWITH
Talivaldis Berzins, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 765,017
9 Claims. (Cl. 106—1)

1. An aqueous alkaline chemical plating solution consisting essentially of about 0.02 to 0.2 gm.-mol per liter of a salt selected from the group consisting of nickel and cobalt salts, the anions of which are inert to said plating solution, a metal complexing agent capable of forming a stable water-soluble complex with nickel and cobalt, selected from the group consisting of ammonia and organic complex forming compounds having at least one functional group selected from the group consisting of amino, imino, carboxy and hydroxy radicals, in the molar ratio of about 1–10 mols per mol of said salt, about 0.005–0.05 gm.-mol per liter of an alkali metal borohydride, and an alkalinity such that the solution will have a hydroxyl ion concentration of 0.001 to 2.0 mols per liter.

3,096,183
BACTERIA-RESISTANT PLASTIC MATERIALS
Hermann Genth, Krefeld-Bockum, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Feb. 26, 1960, Ser. No. 11,124
Claims priority, application Germany Mar. 12, 1959
4 Claims. (Cl. 106—15)

1. A bacteria-resistant synthetic plastic material composed of a synthetic plastic substance of the group consisting of polyvinyl chloride, copolymers of vinylchloride and vinyl acetate copolymers of vinyl chloride and acrylonitrile, polyethylene, polypropylene, polystyrene, unsaturated polyesters and cellulose esters containing between about 1 and about 6% by weight of a mixture of approximately equal parts by weight of zinc pentachlorophenolate and salicyl anilide incorporated in the said plastic material.

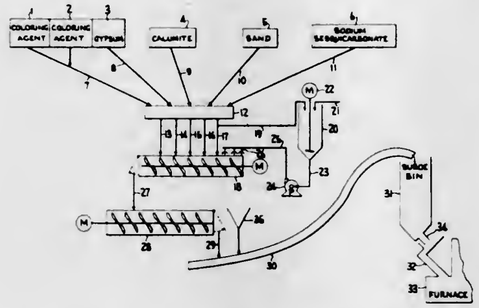
3,096,184
GLASS MARKING INK
John L. Gallup Bloomfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
No Drawing. Filed Sept. 20, 1961, Ser. No. 139,377
5 Claims. (Cl. 106—20)

1. A glass marking ink having solids, expressed as percent by weight oxides, Na_2O: 6 to 10, PbO: 15 to 25, CoO: 0.5 to 4, TiO: 10 to 20, WO_3: 20 to 30, B_2O_3: 1 to 5, and P_2O_5: 15 to 25.

3,096,185
HIGH DIELECTRIC MATERIAL
Daniel P. Lucero, 438 W. 94th St., Los Angeles 37, Calif.
No Drawing. Filed Feb. 3, 1960, Ser. No. 6,366
1 Claim. (Cl. 106—39)

A fired composition having a dielectric constant in the range of about 20,000 to 30,000, consisting of, by weight, about 41% ferric oxide, 30% barium titanate, 10% titanium dioxide, 9% ferrous oxide, 5% cobalt oxide and 5% nickel oxide.

3,096,186
METHOD OF PREPARING GLASS
Robert W. Hopkins, Hamilton, Ohio, assignor, by mesne assignments, to Pittsburgh Plate Glass Company
Filed May 11, 1959, Ser. No. 812,251
3 Claims. (Cl. 106—52)



1. A method of preparing glass by mixing and heating a mixture of glass making ingredients comprising sand and sodium sesquicarbonate, said sodium sesquicarbonate comprising at least 50 percent by weight of the total alkali of the glass making ingredients, which comprises forming an aqueous solution of between 5 and 40 percent by weight of the sodium sesquicarbonate content of the glass making ingredients, mixing said aqueous solution of sodium sesquicarbonate with said sand and the remainder of the sodium sesquicarbonate content of the batch, the amount of water present in the aqueous solution of sodium sesquicarbonate being not sufficient to produce a slurry but enough to produce a wet, free-flowing mixture, and feeding the wet, free-flowing mixture so formed into a glass forming furnace while wet and melting said wet, free-flowing mixture.

3,096,187
SILICON-BORON-OXYGEN REFRACTORY MATERIAL
Berthold C. Weber and Harry F. Rizzo, Dayton, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 5, 1959, Ser. No. 831,919
13 Claims. (Cl. 106—55)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A sintered refractory article formed from a raw mix consisting of by weight from 5% to 50% boron and from 50% to 95% silicon, said article consisting of a silicon-boron-oxygen refractory composed of three phases that consist of a boro-silicate matrix phase in which are dispersed an unreacted silicon phase and a silicon-boron reaction phase, which article has an oxygen gain by weight of between 19.6% and 43.8% and the material being characterized by chemical inertness in air to mixtures of boron and boron oxide at temperatures between the melting point of boron oxide and 2700° F.

3,096,188
STRUCTURAL COMPOSITION MATERIAL AND PROCESS FOR MAKING SAME
Paul Maydl, Landstrasse 113, Linz, Austria
No Drawing. Filed Dec. 8, 1960, Ser. No. 74,446
Claims priority, application Austria Mar. 18, 1957
6 Claims. (Cl. 106—97)

1. A process for making a structural composition material, comprising the steps of forming a granular-slag aggregate by quenching molten blast-furnace slag rich in silicic acid in an agitated fluid to produce an acidic coarse slag sand having a bulk weight between substantially 0.8 and 2.90 kg./l. at least a major fraction of said sand having a particle size between substantially 1 and 8 mm., and crushing said sand to a maximum particle size of approximately 5 mm. and until a proportion thereof ranging between substantially 10 and 50% by weight of said sand consists of particles having a grain size ranging up to 0.2 mm.; and admixing with said aggregate a hydraulic binder and water.

3,096,189
DUPLICATING SHEET AND COLORED COATING COMPOSITIONS THEREFOR
Frederick H. Kranz and Floyd L. Tewksbury, Jr., Buffalo, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 10, 1958, Ser. No. 779,276
14 Claims. (Cl. 106—236)

9. A coating composition for the production of a duplicating sheet consisting essentially of a dispersion of discrete colored droplets as discontinuous phase in a plastic normally solid hydrophobic material selected from the group consisting of waxes, resins and mixtures thereof as continuous phase, thereby characterized that said colored droplets consist essentially of a solution of a water-insoluble colorant which is at least one salt of an organic base with an organic dyestuff sulfonic acid in a hydrophilic oxygen-containing organic liquid solvent for said salt which is immiscible with said hydrophobic material.

3,096,190
BITUMINOUS COMPOSITIONS CONTAINING METHYLOL PHENOL DERIVATIVES
Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, a corporation of Delaware
No Drawing. Original application May 12, 1960, Ser. No. 28,514. Divided and this application Apr. 10, 1961, Ser. No. 101,629
16 Claims. (Cl. 106—273)

1. A strip-resistant bituminous composition containing an asphalt and a minor amount of a member selected from the group consisting of:

(1) acylated, (2) oxyalkylated, (3) acylated then oxyalkylated, (4) oxyalkylated then acylated, (5) acylated, then oxyalkylated and then acylated, monomeric polyaminomethyl phenols characterized by reacting a preformed methylol phenol having one to four methylol groups in the 2, 4, 6 position with a polyamine containing at least one secondary amine group in amounts of at least one mole of secondary polyamine per equivalent of methylol group on the phenol until

one mole of water per equivalent of methylol group is removed, in the absence of an extraneous catalyst; and then reacting the thus formed monomeric polyaminomethyl phenol with a member selected from the group consisting of (1) an acylation agent, (2) an oxyalkylation agent, (3) an acylation then an oxyalkylation agent, (4) an oxyalkylation then an acylation agent, and (5) an acylation then on oxyalkylation and then an acylation agent, the preformed methylol phenol having only functional groups selected from the class consisting of methylol groups and phenolic hydroxyl groups, the polyamine having only functional groups selected from the class consisting of primary amino groups, secondary amino groups and hydroxyl groups, the acylation agent having up to 40 carbon atoms and being selected from the class consisting of unsubstituted carboxylic acids, unsubstituted hydroxy carboxylic acids, unsubstituted acylated hydroxy carboxylic acids, lower alkanol esters of unsubstituted carboxylic acids, glycerides of unsubstituted carboxylic acids, unsubstituted carboxylic acid chlorides and unsubstituted carboxylic acid anhydrides, and the oxyalkylation agent being selected from the class consisting of alpha-beta alkylene oxides and styrene oxide.

3,096,191

ASPHALT AMINE SULFONATE ANTISTRIPPING AGENT FOR ASPHALT

Armin C. Pitchford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 31,219
4 Claims. (Cl. 106—275)

1. An anti-stripping composition consisting essentially of an asphaltic material selected from the group consisting of asphalt, road oil, still bottoms from an asphaltic crude oil and asphaltic cracking still bottoms; an aggregate; and an asphalt sulfonic acid neutralized with an amine having the general formula

$$R—CH_2—NH—CH_2—CH_2—CH_2—NH_2$$

in which R represents an alkyl group containing from 7 to 17 carbon atoms per alkyl group.

3,096,192

ASPHALT COMPOSITIONS HAVING REDUCED STRIPPING TENDENCIES

Armin C. Pitchford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 12, 1960, Ser. No. 49,130
7 Claims. (Cl. 106—281)

1. An asphalt composition having a low stripping tendency, comprising asphalt and an anti-stripping agent consisting essentially of a salt of asphaltene carboxylic acids and an amine selected from the group consisting of RNH_2, $(R)_2NH$, and $RNH(CH_2)_3NH_2$, where R is an aliphatic radical derived from a fatty acid having 8 to 22 carbon atoms per molecule, the amount of said agent in said composition being sufficient to maintain the low stripping tendency thereof.

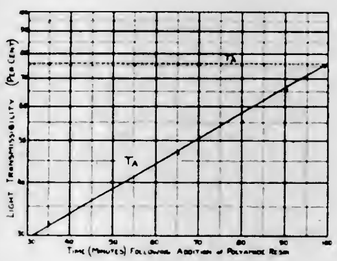
3,096,193

METHOD FOR END POINT DETERMINATION IN THE PRODUCTION OF THIXOTROPIC POLYAMIDE-MODIFIED VEHICLES

George H. Tinker, Skokie, and William B. Winkler, Arlington Heights, Ill., assignors to T. F. Washburn Company, Chicago, Ill.

Filed June 23, 1958, Ser. No. 743,698
17 Claims. (Cl. 106—287)

1. A process for the production of a vehicle base suitable for formulation with a predetermined vehicle solvent consisting essentially of a hydrocarbon having a boiling point falling in the range of 200°–600° F. for the production of thixotropic coating compositions which comprises reacting with heat a polyamide resin, comprising the reaction product of a polymerized fatty acid with an alkylene polyamine having from two to four amine substituents, with an ester base selected from the group consisting



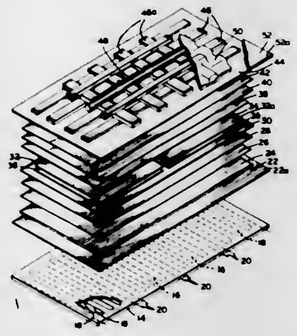
of glyceride oils, oil-modified alkyd resins and varnish ester bodies until a test solution of the reaction product in said vehicle solvent, wherein said test solution contains said reaction product in an amount at least 25% by weight, is clear at room temperature.

3,096,194

APPARATUS AND METHOD FOR CONSERVING AND RESTORING OIL PAINTINGS AND THE LIKE

Gustav D. Klimann, 15 Wellesley Road, Beverly, Mass.

Filed June 30, 1960, Ser. No. 40,092
10 Claims. (Cl. 117—2)



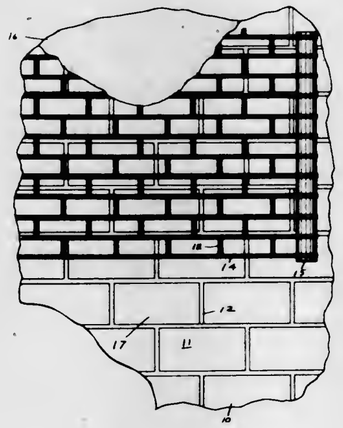
1. A method of conserving, restoring and facilitating the cleaning of oil paintings and the like comprising the steps of; placing a sheet of wet-strength paper over the painted surface; superimposing successively both above and below the painting, a sheet of wax impregnated paper, a sheet of insulation paper, a sheet of semi-absorbent paper and a substantially rigid panel; placing the materials thus sandwiched together within a substantially airtight, collapsible container; evacuating the air from within said container; raising the temperature within said container and subsequently permitting said container to cool; releasing the vacuum created in said container; opening said container and disassembling the said sandwiched materials and removing the painting and stripping the wet-strength paper therefrom.

3,096,195

PROCESS FOR PRODUCING AN ORNAMENTAL WALL FACING

David C. Seman, 261½ Scott St., Erie, Pa., and Colman J. Seman, R.D. 1, E. Main Road, and Fredrick P. Seman, R.D. 3, Station Road, both of North East, Pa.

Filed Apr. 11, 1960, Ser. No. 21,288
7 Claims. (Cl. 117—8.5)



1. A process of preparing an ornamental facing on the wall of a building, including mortar lines, consisting of applying a removable pattern of first strips of adhesive coated tape to said building, applying spaced second strips of pressure sensitive adhesive coated tape having a range of thickness of from .004 to .012 inch to said building perpendicular to said first strips, applying a coating of plaster material to a thickness of one-sixteenth inch to one-fourth inch over said tape and over said building surface whereby said plaster material adheres to said building surface exposed between said tape, and pulling said tape to remove said tape substantially immediately with said plaster material overlying said tape therewith.

3,096,196

FLAME-RETARDANT ASPHALTIC ROOFING MATERIALS

Phillip Stephen Bettoll, Belle Mead, and Joseph Jacob Klimas, North Plainfield, N.J., assignors to The Ruberoid Company, a corporation of New Jersey

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,109
10 Claims. (Cl. 117—32)

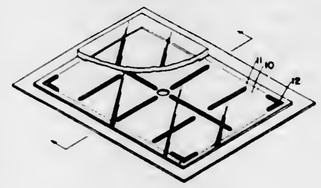
9. A mineral-surfaced fire-retardant roofing material comprising a saturated web base coated with a layer of a fire-retardant asphaltic coating composition and surfaced with mineral roofing granules embedded in the asphaltic coating, the fire-retardant asphaltic coating composition comprising from about 40 to about 60 percent by weight of a blown petroleum asphalt having a softening point, when measured by the ball and ring method, in the range between 180° F. and 250° F., from about 1 to about 25 percent by weight of a polyester resin of a polycarboxylic acid and a polyol, and from about 30 to about 60 percent by weight of a mineral stabilizer uniformly dispersed throughout the organic components of the coating composition, the percentage of the polyester resin being based on the weight of the blown petroleum asphalt contained in the asphaltic coating composition.

3,096,197

MARKING METHOD

Ralph W. Buetow and Robert P. Cox, Madison, Wis., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Jan. 21, 1960, Ser. No. 3,791
6 Claims. (Cl. 117—33.5)



1. A process for marking an article of graphic art comprising

(*a*) a preliminary treatment for applying a fluorescent marking visible only in ultraviolet light to an article of graphic art, said preliminary treatment including

(1) coating said article of graphic art with a reactive first composition,

(2) applying a stencil to said article of graphic art,

(3) reacting the areas exposed by said stencil with a vaporous second composition, the reaction product of said first and second compositions being visible only in ultraviolet light;

(*b*) a secondary treatment for applying a permanent marking to said article of graphic art marked with said preliminary fluorescent marking including

(1) coating said article of graphic art with a third reactive composition,

(2) aligning said stencil to said fluorescent marking, and

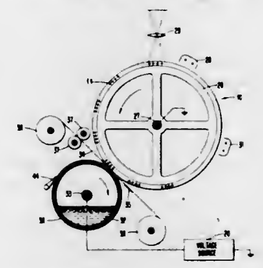
(3) applying a fourth reactive substance in the exposed areas of said stencil, the reaction product of said third reactive composition and said fourth reactive substance giving a permanent marking visible in actinic light.

3,096,198

METHOD FOR DEVELOPING LATENT FIELD IMAGES WITH LIQUID INKS

Roland M. Schaffert, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 22, 1958, Ser. No. 782,107
4 Claims. (Cl. 117—37)



1. A method of developing latent field images comprising

(*a*) contacting a liquid ink wettable development surface of a latent image-bearing record medium in the image and non-image areas alike with an impression member having a developing surface uniformly saturated with an image attractable development sur-

face wetting electrostatic field controllable liquid ink,

(*b*) and subjecting said liquid ink to an external electrostatic transfer control field while the developing surface is in contact with said record medium and said liquid ink is in contact coincidentally with the image and non-image areas alike of said record medium development surface by applying an external transfer control potential to said impression member and said record medium,

(*c*) said external electrostatic transfer control field having a polarity and magnitude opposing and counterbalancing the transfer of said pigmented liquid ink to the non-image areas while permitting transfer of said pigmented liquid ink from said impression member in response to field force of said field images in said image areas

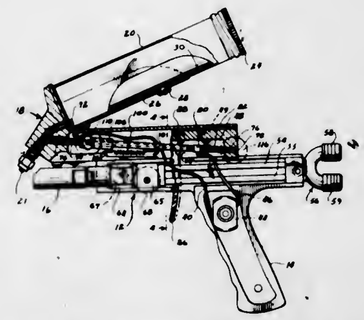
(*d*) whereby said pigmented liquid ink is deposited on said image areas and is prevented from depositing on the non-image areas of said development surface of said image bearing record medium on separation of said developing and development surfaces.

3,096,199

SURFACING TORCH WITH EXTERNAL POWDER FEED

Kenneth Lamb, Valencia, Pa., assignor to Coast Metals Inc., Little Ferry, N.J., a corporation of Delaware

Filed Dec. 2, 1959, Ser. No. 856,839
12 Claims. (Cl. 117—46)



1. In a torch for applying a coating to a work piece surface, and in which the torch has a tip face through which a combustible gas mixture is discharged in a high-velocity jet system and is burned in a flame system beyond the tip face but with eddy currents that flow outward from the jet system and turn back toward the tip face immediately adjacent to said tip face, and there is a powder holder for powdered coating material located at a higher level than the tip and with a discharge passage through which powder from the holder flows by gravity into the flame system, at a location outside of the torch and in front of the tip, and there are bracket means connecting the nozzle and powder holder to the torch, the improvement which comprises means for preventing powder from being carried by said eddy currents into contact with the tip face with resulting build-up of coating material on the tip face, said means including a discharge nozzle at the end of the passage and facing in a direction to discharge the powder from the passage into the burning flame system transversely of the direction of flow of the gas of the flame system from the tip, and supporting means holding the discharge nozzle above the flame system and out in front of the tip face at a distance to discharge the powder into the flame system ahead of the eddy currents.

3,096,200

METHOD OF PREPARING INORGANIC PRODUCTS

Robert G. Quinn, Bound Brook, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Nov. 22, 1960, Ser. No. 70,938
8 Claims. (Cl. 117—54)

1. The method of treating inorganic asbestos products consisting essentially of approximately 75 to 95% by weight of asbestos and approximately 25 to 5% by weight of bentonite which comprises removing about 15 to 25% by weight of the water of hydration of the asbestos constituent by heating the product to a temperature of at least about 1200° F. and, upon cooling, subjecting the thus dehydrated asbestos-bentonite product having about 15 to 25% by weight of its water of hydration thermally removed to silicon tetrafluoride gas until an over-all gain in weight of at least about 2% is effected.

3,096,201

INSOLUBILISATION OF FURTHER-POLYMERISABLE METHYLOL-PHOSPHORUS POLYMERIC MATERIALS

Harold Coates, Wombourn, and Brian Chalkley, Stourbridge, England, assignors to Albright & Wilson Limited, Warwickshire, England, a company of the United Kingdom

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,557
Claims priority, application Great Britain May 30, 1960
15 Claims. (Cl. 117—62.2)

4. A process for modifying the properties of a cellulosic material which comprises impregnating said cellulosic material with a solution of a further-polymerisable methylol-phosphorus polymeric material containing at least one free methylol group attached to a phosphorus atom, said solution containing a member selected from the group consisting of diammonium sulphite and mixtures of an ammonium salt of a weak acid together with a sulphite, drying the resulting impregnated cellulosic material and finally treating said material with an aqueous ammonia system.

3,096,202

POLYVINYL PYRROLIDONE PRESSURE SENSITIVE ADHESIVE AND TAPE CONTAINING SAME

Ellen deGroot von Arx, Shrewsbury, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Aug. 30, 1960, Ser. No. 52,815
7 Claims. (Cl. 117—68.5)



7. A splicing tape comprising a tissue paper impregnated and coated on both faces with a water-soluble, normally tacky and pressure-sensitive adhesive comprising: a polyvinyl pyrrolidone elastomer, a polyfunctional monomeric cross-linking agent having at least two functional groups selected from the group consisting of vinyl, allyl, acrylic and methacrylic groups, said cross-linking agent being in an amount from about 5 to 50 parts by weight per 100 parts by weight of polyvinyl pyrrolidone elastomer, a plasticizer compatible with the polyvinyl pyrrolidone elastomer selected from the group consisting of polyols and polyalkyl glycol ethers, said plasticizer being in an amount from about 15 to about 100 parts by weight per 100 parts of polyvinyl pyrrolidone elastomer, and an activator catalyst of the type capable of inducing vinyl-type polymerization in an amount from about 0.5 to about 5 parts by weight per 100 parts of polyvinyl pyrrolidone elastomer.

3,096,203

COATING SYSTEM

Morris Levine, Cleveland Heights, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 1, 1961, Ser. No. 114,243
8 Claims. (Cl. 117—75)



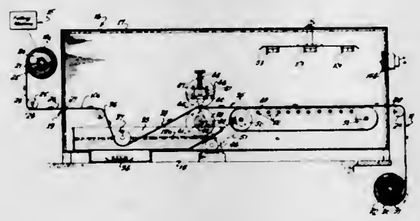
1. A metal article having a hard, adherent, crack-resistant, multiple layer coating comprising a layer of primer and a superimposed layer of a methyl methacrylate lacquer therewith, said primer consisting essentially of (1) from about 55 percent by weight to about 94 percent by weight of a hydroxyl-containing copolymer of a vinyl halide and a vinyl ester, (2) from about 6 percent by weight to about 25 percent by weight of a melamine-formaldehyde resin, and (3) up to about 20 percent by weight of a glycidyl ether of a polyhydroxyl substituted aryl compound.

3,096,204

METHOD OF MAKING A COATED FIBROUS FILTER ELEMENT

Earl Girrard Spangler, Newport Beach, and Clarence Schreur, Escondido, Calif.; said Schreur assignor to said Spangler

Filed Dec. 29, 1958, Ser. No. 773,610
10 Claims. (Cl. 117—98)



1. The method of making a filter element that comprises providing a porous sheet of material containing fibers arranged in closely spaced relation but with a large number of minute fluid passages formed between said fibers for passing a fluid from one side of the sheet to the other, applying to said sheet and into said passages a solution of a resinous plastic material dissolved in a solvent, said resinous plastic material being chosen from the group consisting of polyethylene, polypropylene, and the copolymers of polyethylene and polypropylene with each other, heating said sheet and said solution, after the solution has been filled into said passages, and thereby evaporating said solvent from the solution and from said passages, adding sufficient heat to the sheet and solution to maintain both the sheet and solution, during said evaporation of the solvent, at a temperature which is at least about as high as the fusion temperature of the resin, and thereby depositing the resin as a thin continuous coating on the surfaces of the individual fibers throughout the thickness of the sheet, said solvent being present in sufficient quantity in the initial solution to leave said passages open to fluid flow through the sheet after evaporation of the solvent.

3,096,205

DIFFUSION COATING OF METALS

Charles A. De Guisto, Elmsford, N.Y., assignor to Chromalloy Corporation, West Nyack, N.Y.

No Drawing. Filed May 16, 1960, Ser. No. 29,151
9 Claims. (Cl. 117—107.2)

1. In a pack impregnation diffusion coating of the character described for producing an outer layer of metallic constituents diffused into the surface of a metal article, the steps which comprise embedding said metal article in a diffusion coating pack including a source of chromium and aluminum as the metallic materials to be diffusion coated into the surface thereof and a source of vaporizable halogen for diffusion of said materials into said metal article, heating said pack with said materials and said article therein effecting vaporizing of said halogen and diffusion of said metallic materials into the surface of said article, also producing in said heating and diffusion coating step resultant components in said pack including chromium aluminide which are not diffusion coated into the surface of said article, removing said thus coated article from said pack, embedding a subsequent article to be coated in the same said pack for re-use thereof and a subsequent diffusion coating operation, including in said pack at least in said subsequent coating operation a fluoride as at least a part of said vaporizable halogen component, heating said article embedded in said pack in said subsequent coating operation for diffusion coating of said metallic materials into the surface thereof, and effecting by thermal reaction with said fluoride breakdown of said resultant chromium aluminide components formed in said preceding coating step for a diffusion coating thereof into said article in said subsequent coating step in said pack.

3,096,206

METHOD OF MAKING MAGNETIC FERRITE FILMS

William L. Wade, Jr., Neptune Township, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed June 6, 1961, Ser. No. 115,271
1 Claim. (Cl. 117—121)
(Granted under Title 35, U.S. Code (1952), sec. 266)



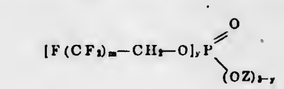
The method of making magnesium ferrite film including the steps of (1) mixing an iron alcoholate solution with a magnesium alcoholate solution in stoichiometric proportions of 2 moles of iron to 1 mole of magnesium, (2) immersing a substrate in the solution and preliminarily firing the coated substrate at 500° C., (3) repeating the latter steps until the requisite coating thickness has been attained, and (4) firing the coated substrate at 1000° C.

3,096,207
PROCESS OF IMPARTING OIL-REPELLENCY TO SOLID MATERIALS

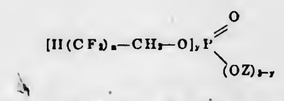
Werner Victor Cohen, Glen Farms, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 6, 1960, Ser. No. 53,885
8 Claims. (Cl. 117—138.8)

1. The process of rendering a water-insoluble solid material oil repellent which comprises treating said material with an aqueous bath containing a water-soluble polyfluoroalkyl phosphate of the group defined by the formulas



and



wherein m is an integer from 3 to 12, n is an integer from 6 to 12, y is a number of average value from 1.0 to 2.5, and Z is a member of the group consisting of hydrogen and water-solubilizing cationic ions, and drying the material whereby to form in intimate contact therewith an evenly distributed deposit of said polyfluoroalkyl phosphate.

8. A process as in claim 1, wherein the material being treated is a member of the group consisting of textile fibers and fabrics, leather, paper sheeting and synthetic plastic sheet material.

3,096,208
COATING MOLDED AMINOPLAST ARTICLES WITH POLYUREAS

Arthur S. Nyquist, Darien, and Arnold D. Myers, Wallingford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,731
20 Claims. (Cl. 117—138.8)

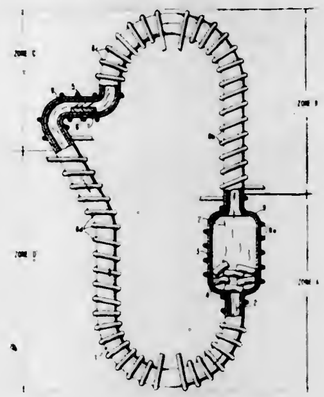
1. A heat- and pressure-consolidated article prepared from an aminoplast resinous composition selected from the group consisting of an aminotriazine-aldehyde resinous composition and a urea-aldehyde resinous composition and coated with a hard, stain-resistant, cured, adherent film comprising a resinous reaction product of (1) a toluene diisocyanate and (2) a water, the mol ratio of said (1) to said (2) being from about 2:1 to 6:1, respectively.

3,096,209
FORMATION OF SEMICONDUCTOR BODIES

Herbert S. Ingham, Jr., Hillside Lake, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 18, 1960, Ser. No. 29,836
1 Claim. (Cl. 117—201)

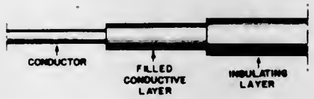
The method of forming semiconductor bodies comprising the steps of providing a continuous closed loop reaction container in a vertical orientation, positioning in a first zone on one side of said continuous closed-loop reaction container a source of semiconductor material, positioning in a second zone on another side of said container at least one substrate of semiconductor material, providing in said container a transport element cyclically reactive with said source said substrate to produce vapors, maintaining between said first and second zones a difference in temperature to effect the cyclical reaction, and establishing between said second zone and a third zone, adjacent said first zone, another difference in temperature, whereby rapid circulation of the vapors is obtained independently of the temperature difference between the source and the substrate.



3,096,210
INSULATED CONDUCTORS AND METHOD OF MAKING SAME

Bram B. S. T. Boonstra, Sharon, Mass., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware

Filed Apr. 17, 1959, Ser. No. 807,001
15 Claims. (Cl. 117—216)

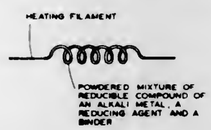


1. An insulated conductor for high voltage use which comprises a conductor, a cured conductive sheathing surrounding said conductor and an outer insulating sheathing, said conductive and insulating sheathings being chemically bonded to each other, said conductive sheathing comprising a crosslinked polymeric material chosen from the group consisting of the polymers and copolymers of the mono-olefinic hydrocarbons and mixtures thereof, and at least about 20 parts by weight of carbon black per 100 parts of the polymeric material, and said insulating sheathing comprising a polymeric material chosen from the group consisting of the polymers and copolymers of the mono-olefinic hydrocarbons and mixtures thereof.

3,096,211
ALKALI METAL GENERATORS

Gordon Peter Davis, Sunbury-on-Thames, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain

Filed Mar. 28, 1960, Ser. No. 18,145
Claims priority, application Great Britain Mar. 31, 1959
8 Claims. (Cl. 117—224)

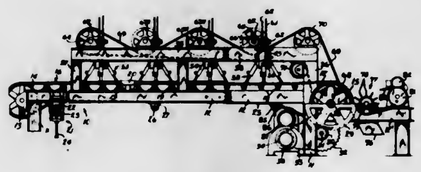


1. An alkali metal generator comprising an electrically conducting heating element of filamentary form, a coating thereon comprising a powdered mixture of a reducible compound of an alkali metal and a reducing agent for said compound and an alkali metal silicate.

3,096,212
BLENDER BELT

John R. Rosenleaf, Enterprise, Kans., assignor to The J. B. Ehrsam & Sons Manufacturing Company, Enterprise, Kans., a corporation of Kansas

Filed June 5, 1961, Ser. No. 115,003
6 Claims. (Cl. 118—111)

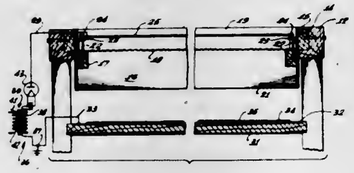


1. In a device of the class described, a travelling conveyor for discrete material, and a plurality of agitators spaced along the path of said conveyor in the direction of conveyor travel, each such agitator comprising a rotor suspended above said conveyor for turning movement about a vertical axis, a plurality of arms carried by each rotor, each arm being pivotally supported from its rotor for relative movement about a substantially horizontal axis and said arms for each rotor being peripherally spaced about said vertical axis, each of said arms depending from its pivotal support and having a length greater than the vertical distance from its pivotal support to said conveyor, a spray nozzle concentrically associated with at least one of said rotors and arranged to discharge toward said conveyor, and means for driving said rotors during transit of said conveyor.

3,096,213
FLOCK APPLYING DEVICE

Frank McCurtain, Los Angeles, Calif., assignor of one-half to Zack E. Gibbs, San Marino, Calif.

Filed Dec. 27, 1960, Ser. No. 78,509
8 Claims. (Cl. 118—638)

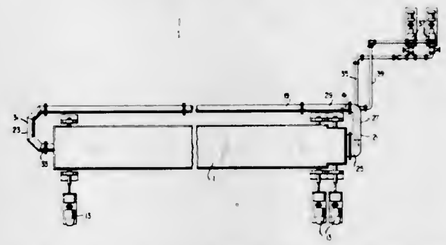


1. A flock applying device comprising: an elongated upper electrode having a small cross-sectional perimeter compared to its length and disposed in a substantially horizontal plane; an insulating screen disposed in a substantially horizontal plane spaced below said electrode plane and receiving loose flock thereon; a lower electrode disposed in a substantially horizontal plane spaced below the plane of said screen in a position to accommodate material to be flocked thereabove; and means for applying a fluctuating unidirectional potential across said electrodes to feed the flock through the screen to the surface of the material in pile producing relation.

3,096,214
CONTACTING ELONGATED FLEXIBLE MATERIAL WITH LIQUID

Arthur Forest Wells, Jr., and Carl Dolphin, Chesterton, and Robert R. Gobert, Long Beach, Michigan City, Ind., assignors to National Steel Corporation, a corporation of Delaware

Filed June 29, 1962, Ser. No. 206,482
7 Claims. (Cl. 134—15)

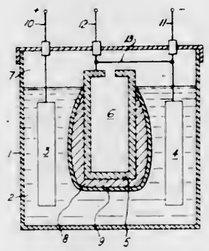


1. A method of contacting elongated flexible material with a liquid, comprising moving the material lengthwise through an elongated tank from a material entry end portion of the tank to a material exit end portion of the tank in contact with liquid in the tank, returning a first stream of liquid from the material exit end portion of the tank to the material entry end portion of the tank along a horizontal path, withdrawing from adjacent the material exit end portion of the tank a second stream of liquid, contacting the second stream with a solid impeller to move the second stream at a higher velocity than the first stream, and introducing the second stream into the first stream downstream of its point of withdrawal but substantially closer to the upstream than to the downstream end of the first stream and in a downstream direction.

3,096,215
SEALED STORAGE BATTERY

Ernst Voss and Klaus Dehmelt, Frankfurt am Main, Germany, assignors to Varta Aktiengesellschaft, Hagen, Westphalia, Germany

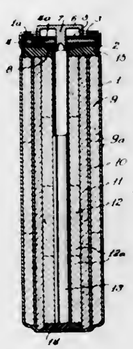
Filed Apr. 11, 1960, Ser. No. 21,229
Claims priority, application Germany Apr. 9, 1959
10 Claims. (Cl. 136—6)



1. In a storage battery, in combination, a casing; means for hermetically sealing said casing; a free flowing liquid electrolyte in said casing filling the same but partly so as to define a gas space within said casing; positive and negative electrodes in said casing substantially submerged in said free flowing liquid electrolyte; and an auxiliary gas-consuming electrode consisting essentially of an electrically conductive material which is inert with respect to said liquid electrolyte located in said casing spaced from said positive and negative electrodes and electrically connected to one of said electrodes, said auxiliary electrode having a major exterior surface portion in contact with said liquid electrolyte and being formed with a cavity opening into said gas space so that the interior surface

of said auxiliary electrode formed by said cavity communicates with said gas space and said cavity will be substantially free of liquid electrolyte.

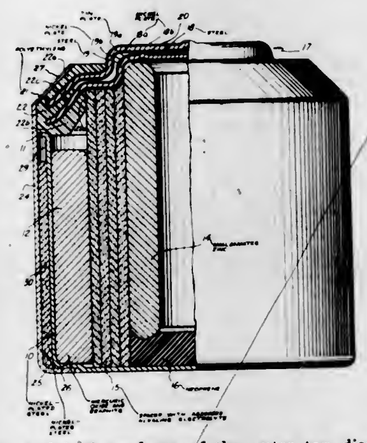
3,096,216
VALVE FOR VENTING FLUID
Robert A. Warren, Center Line, Mich., assignor to Servel, Inc., Evansville, Ind., a corporation of Delaware
Filed Jan. 2, 1962, Ser. No. 163,580
19 Claims. (Cl. 136—6)



1. A hermetically sealed fluid valve closure assembly for a container having an orifice, comprising a rigid centrally-apertured supporting member, means for sealing the edge of said supporting member to the wall of said container at its orifice, a centrally-apertured sealing disc composed of a resilient sealing material having one of its surfaces in sealing engagement with said supporting member, a valve member having a cup-form valve head the edge thereof engaging the other surface of said sealing disc throughout its periphery, and means providing axial clamping force of predetermined magnitude for clamping said sealing disc tightly between the edge of said valve head and said supporting member to form a seal between said valve head and said sealing disc, the surface of said supporting member engaging said sealing disc being provided with a gap of limited peripheral extent superimposed over a limited portion of the periphery of the edge of said valve head, sealing force against the edge of said valve head being applied at the area of said gap only by forces within said sealing disc resisting displacement of the portion thereof at the location of said gap, the arrangement being such that said container remains hermetically sealed under normal pressure conditions, and whereby increased pressure within said container of a predetermined magnitude causes the portion of said sealing disc over said gap to be sufficiently displaced as to break said seal temporarily and to permit fluid to escape from said container.

3,096,217
LEAK-PROOF ELECTROCHEMICAL CELL
Richard R. Clune, Ardsley, N.Y., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Filed Oct. 4, 1960, Ser. No. 60,344
7 Claims. (Cl. 136—107)

1. An electrical current producing cell comprising, in combination, a metal casing, a top closure member therefor comprising an inner and an outer metal top disc having interfitting center regions and their edges separated, an insulating sealing collar compressed between marginal portions of said casing and of said discs, a cathode in said casing and in electrical contact therewith, an anode spaced from said cathode and in electrical contact with the inner surface of the inner top disc, and an electrolyte interposed between said cathode and said anode, the inner surface of the inner top disc being formed of a first metal having low electrochemical potential with respect to the anode metal, and the outer surface of the inner

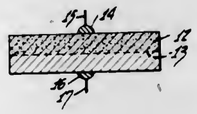


top disc and both surfaces of the outer top disc being formed of a second metal inert to the electrolyte whereby the outer surface of the inner top disc and the inner surface of the outer top disc are inert and equipotential with respect to the electrolyte.

3,096,218
SOLID-STATE BATTERY
Harry C. Lieb, Rockville Centre, and John A. De Rosa, Queens Village, N.Y., assignors to Leesona Corporation, a corporation of Massachusetts
No Drawing. Original application Apr. 22, 1958, Ser. No. 730,059, now Patent No. 2,930,830, dated Mar. 29, 1960. Divided and this application Oct. 30, 1959, Ser. No. 849,741
1 Claim. (Cl. 136—121)

A solid state battery comprising an electrode consisting essentially of cupric bromide and graphite having a particle size of up to one micron, said electrode having been deposited by evaporation of an aqueous solution of said cupric bromide and graphite.

3,096,219
SEMICONDUCTOR DEVICES
Herbert Nelson, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,176
12 Claims. (Cl. 148—1.5)

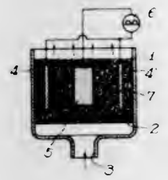


1. The method of forming a given conductivity type region in a compound semiconductive wafer, one of the elements of said compound being more volatile than another, comprising the steps of heating said wafer to a temperature at which said compound appreciably decomposes so as to volatilize said one element from the wafer surface and leave a layer of said another element on said surface, then reheating said wafer in an ambient consisting of the vapor of said one element and a substance which is capable of inducing said given conductivity type in said compound, the time and temperature of said reheating being sufficient to reconvert said surface layer of said another element to said compound, said reconverted layer containing a sufficient amount of said substance to be of given conductivity type.

3,096,220
CORROSION PROTECTION OF ALUMINUM
Robert S. Dalrymple, Chesterfield County, Va., and William B. Nelson, San Jose, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Oct. 31, 1960, Ser. No. 66,367
2 Claims. (Cl. 148—6.2)

1. A process of protecting an article having a surface of aluminum-base metal against corrosion, comprising immersing said article in an aqueous chromic acid solution of a concentration of between 0.5 and 3% by weight and a pH value of below 2, and heating said solution and said article in a hermetically sealed system at from 160 to 180° C. for from 20 to 50 hours whereby a corrosion-resistant, well-adhering film is formed on said surface.

3,096,221
METHOD OF QUICK NITRIFICATION IN WHICH FLUIDIZED PARTICLES ARE EMPLOYED
Yukio Tanaka, Tokyo, Japan, assignor to To-a Kako Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Filed Jan. 4, 1960, Ser. No. 317
Claims priority, application Japan Sept. 15, 1959
4 Claims. (Cl. 148—20.3)



1. A method for the quick nitrification of a steel piece which comprises establishing and maintaining a fluidized bed of finely divided particles of a solid nitrifying agent suspended in a gas selected from the group consisting of nitrogen and ammonia, immersing the steel piece in said fluidized bed between electrodes likewise immersed in said bed, and passing pulsating electric current through the particles from said electrodes to said steel piece under such conditions that the particles are at a positive potential and the steel piece is at a negative potential whereby spark discharges are generated on the surface of the steel piece, atomic nitrogen is produced by decomposing nitriding agent at the surface and is ionized, and the ionized atomic nitrogen penetrates the surface of the steel piece.

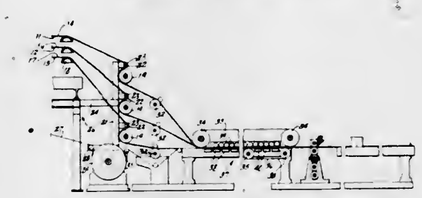
3,096,222
GRAIN ORIENTED SHEET METAL
Howard C. Fiedler, Niskayuna, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Original application Aug. 5, 1958, Ser. No. 753,181. Divided and this application Apr. 27, 1961, Ser. No. 105,900
3 Claims. (Cl. 148—31.55)

1. A polycrystalline sheet-like body having a majority of the constituent grains oriented in the (110) [001] direction consisting essentially of from 1.5 to 6.0 percent silicon, an effective amount up to about 0.050 percent carbon combined with from 0.50 to 2.0 percent vanadium in the form of a vanadium carbide second phase dispersion effectively promoting said (110) [001] grain orientation direction, and the balance substantially all iron.

3,096,223
SLURRY BLASTING EXPLOSIVES CONTAINING INORGANIC PERCHLORATE OR CHLORATE
Melvin A. Cook and Thomas K. Collins, Salt Lake City, Utah, assignors, by mesne assignments, to Intermountain Research and Engineering Co., Inc., Salt Lake City, Utah, a corporation of Utah
No Drawing. Filed July 11, 1960, Ser. No. 41,758
6 Claims. (Cl. 149—76)

1. An aqueous slurry blasting explosive consisting essentially of a slurry of solids in water, said solids comprising about 13 percent to 85 percent by weight of trinitrotoluene having a particle size in the range of 2 to 30 standard Tyler mesh, and 87 percent to 15 percent by weight of an inorganic salt selected from the group consisting of alkali metal and ammonium chlorates and perchlorates, the water content of the slurry being from 4 percent to 25 percent by weight of the total slurry.

3,096,224
CORRUGATED PAPER BOARD PRODUCT
Samuel Goldstein, deceased, late of New York, N.Y., by Manufacturers Hanover Trust Company, executor, New York, N.Y., and Immanuel Lichtenstein, Cambridge, Mass., assignors to Tri-Wall Containers, Inc., New York, N.Y., a corporation of New York
Continuation of application Ser. No. 604,429, Aug. 16, 1956, which is a division of application Ser. No. 383,756, Oct. 2, 1953, now Patent No. 2,759,523, dated Aug. 21, 1956. This application Nov. 3, 1961, Ser. No. 150,618
3 Claims. (Cl. 154—45.9)

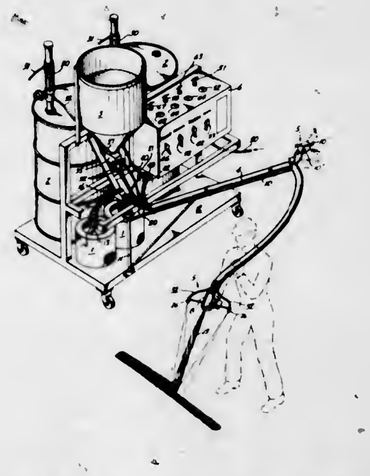


3. Triple wall corrugated paper board which is flat and adapted for scoring and bending to form a shipping container and consisting essentially of four paper liners, three corrugated paper mediums, the mediums being individually interposed between two liners in each instance, and adhesive applied to the ridges of the mediums' corrugations and the liners and intimately and rigidly bonding the mediums and liners together, the corrugations of the mediums being parallel to each other throughout said board and high enough so that the total thickness of said board is at least ½", and the total thickness of the liners and mediums being at least approximately .091", this total thickness being distributed between the liners and mediums so that said board is strong and rigid, said triple wall corrugated paper board having been made by a single pass of all of said sheets prior to setting of said adhesive simultaneously through a corrugated paper board machine having a heating and drying section operated at a temperature within the range of approximately 300° to approximately 350° F. and at a temperature-speed relationship which is varied with the humidity, the thickness, and porosity of said sheets to provide a residence time in said section sufficient to set said adhesive and make a rigid and strong triple wall corrugated paper board, the corrugations of at least one of the mediums being at least approximately .181" high, at least the liners on the outsides of said board being thicker than the thickest one of the mediums.

3,096,225
APPARATUS AND METHOD FOR DEPOSITING CONTINUOUS STRANDED MATERIAL

Marvin E. Carr, Rte. 1, Box 64, Burton, Wash., and Frank E. Ives, 15820 Benson Road, Renton, Wash.

Filed May 25, 1959, Ser. No. 815,716
14 Claims. (Cl. 156—38)



14. The method of making a mat of bonded continuous stranded material on a surface, which comprises projecting a roving of such continuous stranded material lengthwise and thereby depositing the strands of such roving as an unconfined mat on such surface, projecting onto such continuous stranded material, from opposite sides and in directions transversely of the roving's lengthwise movement, air jets which intersect a portion of such material moving through the air free from confinement within a tubular passage and thereby spreading apart the strands of such material into a fluffy cluster greatly expanded in cross-sectional area, for deposition on such surface, and spraying binder onto such strands after they have been spread into a fluffy cluster by such air jets and before they are deposited on such surface.

3,096,226
AQUEOUS COMPOSITION OF PHENOL-ALDEHYDE CONDENSATE AND METHOD OF BONDING MATERIALS WITH SAME

Clarence W. Spilker, Hopewell, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

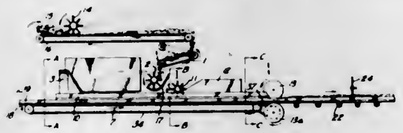
No Drawing. Filed Feb. 23, 1961, Ser. No. 90,908
2 Claims. (Cl. 156—335)

1. In the method of bonding comprising forming an assembly of the materials to be bonded in which at least one surface in contact with an adjacent surface of the materials in said assembly is coated with a bonding composition, and heating the assembly at elevated temperatures for sufficient time to convert the bonding composition to the infusible state, the step which comprises employing therein a bonding composition containing (A) 40 to 70 parts by weight of a phenol and formaldehyde condensation product having an average molecular weight within the range of about 124 to 316; (B) 15 to 45 parts by weight free formaldehyde; (C) 20 to 65 parts by weight free phenol; and 10 to 160 parts by weight water, the ratio of free formaldehyde to free phenol being within the range of about 1.8 mols to 2.5 mols of free formaldehyde to free phenol, (D) 0.02 to 0.2 mol per mol of total phenol of activating agent selected from the group of sodium carbonate, potassium carbonate, and ethylenediamine, said composition having a pH within the range of about pH 8 to pH 11.5.

3,096,227
APPARATUS FOR PRODUCING FIBROUS BUILDING BOARDS

Gerrit Jan van Elten, Haarkampstraat 10, Voorthuizen, Netherlands

Filed June 4, 1959, Ser. No. 818,171
Claims priority, application Netherlands June 4, 1958
4 Claims. (Cl. 156—372)

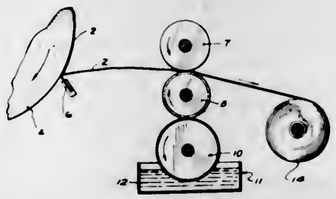


1. An apparatus for manufacturing light weight building boards from elongated wood wool fibers mixed with a binding agent, said apparatus comprising, in combination, a conveyer movable in a predetermined direction, forming plates carried by said conveyer and movable therewith, said forming plates having side rims, a distributor device located above said conveyer and rotatable in a direction opposite to the direction of movement of the conveyer to throw the material to be processed in said opposite direction upon the forming plates, a fixed guide shield located above said conveyer between the side rims of the forming plates and spaced from said distributor device in said opposite direction for receiving the material thrown by said distributor device, rolls connected with said guide shield for laterally compressing the material in the marginal spaces between said guide shield and said side rims, and a vertically adjustable picker roll located above said conveyer and spaced from said distributor device, said picker roll having a lower portion rotatable in the direction of movement of said conveyor and being adapted to engage the material carried by said forming plates.

3,096,228
MANUFACTURE OF CELLULOSIC PRODUCT

Winterton U. Day, Neenah, and Harold F. Donnelly, Appleton, Wis., and Henry L. Rohs, North Tonawanda, N.Y., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Jan. 9, 1961, Ser. No. 81,393
6 Claims. (Cl. 162—112)

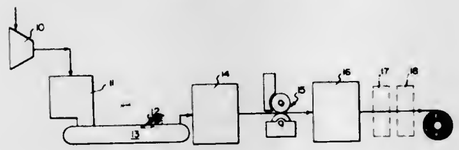


4. The process of producing an absorbent paper having temporary wet strength which comprises forming, drying, and creping a web of absorbent cellulose wadding at a moisture content of from 3 to 7%, applying to said web an aqueous solution of glyoxal in an amount to obtain a total moisture content in said web of more than 4% and not more than 20% by weight, and substantially maintaining said moisture content while aging the treated web at about room temperature to develop wet strength therein.

3,096,229
CARBON IMPREGNATED PAPER AND METHOD OF MAKING SAME

Robert M. Whitman, Holland Township, N.J., assignor to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 29, 1959, Ser. No. 849,562
1 Claim. (Cl. 162—135)



The method of making photographic papers and the like, which comprises the steps of

(*a*) forming a wet web of fibers which are inert to photosensitive materials,

(*b*) reducing substantially the moisture content of said web,

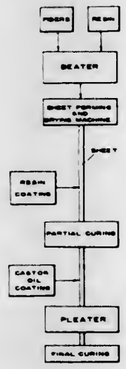
(*c*) impregnating said web with a colloidal suspension of carbon black and binder, whose dried residue forms an integral, opaque, pin-hole free impregnation which is inert to photosensitive materials, by subjecting said web to sufficient rolling pressure in the nip of a size press while said suspension is in contact with at least one surface of the web to bond mechanically the carbon to said web, and

(*d*) drying the thus impregnated film.

3,096,230
FILTER MEDIUM

Southwick W. Briggs, Howard County, Md. (6420 Western Ave., Chevy Chase, Md.)

Filed June 23, 1960, Ser. No. 38,278
12 Claims. (Cl. 162—137)



8. A method of making a filter medium comprising impregnating paper fibers with from 1½% to 2% of an oil-insoluble thermosetting resin, based upon the weight of said fibers, forming the impregnated fibers into a sheet, coating said sheet with a phenol formaldehyde resin and partially curing the same, thereafter coating said sheet with from 2% to 5% of cold pressed castor oil, based upon the combined weight of the other materials present, and finally curing said coating materials at an elevated temperature.

3,096,231
METHOD OF MANUFACTURING PAPER FROM PARTIALLY ESTERIFIED CELLULOSE FIBERS

William H. Griggs and Ralph D. Zaffrann, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Apr. 18, 1960, Ser. No. 22,711
9 Claims. (Cl. 162—157)

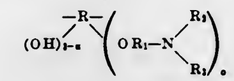
1. A method of preparing paper which comprises forming an aqueous suspension of cellulose fibers the cellulose of which contains 15–25% of lower fatty acid groups chemically combined therewith adding to this suspension in that order a water soluble salt of a higher fatty acid, a water soluble aluminum salt of a strong mineral acid and a water soluble cationic thermosetting resin formed by reacting epichlorohydrin with a polyamide of C_3 to C_{10}, saturated aliphatic dibasic carboxylic acid and from about 0.8 to about 1.4 moles per mole of dibasic acid of a polyalkylene polyamine at a temperature from about 45° C. to about 100° C., said polyamide containing secondary amine groups, the ratio of epichlorohydrin to secondary amine groups of said polyamide being from about 0.5–1 to about 1.8–1, adsorbing 0.1–5% approximately of said resin on said cellulose fibers, forming the cellulose fibers suspension into a sheet and heating the sheet to cure the resin to a water insoluble state.

3,096,232
AQUEOUS EMULSIONS OF WAXES AND RESINS

Charles H. Chapman, San Mateo, Calif., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 24, 1959, Ser. No. 861,747
7 Claims. (Cl. 162—172)

7. A process for the internal sizing of paper which comprises adding to an aqueous suspension of paper pulp at a point ahead of sheet formation an aqueous emulsion having as the continuous phase, an aqueous solution of from about 0.1% to about 6% by weight, based on the weight of the emulsion, of a cationic starch having the formula



where R is the starch molecule repeating unit, R_1 is selected from the group consisting of alkylene, hydroxyalkylene, phenyl alkylene and alkylalkylene groups, R_2 and R_3 are each selected from the group consisting of hydrogen, alkyl, aryl, aralkyl and cycloalkyl groups and n is from about 0.005 to about 3 and, as the dispersed phase, a paraffin wax, forming a sheet from the said pulp, and drying the sheet.

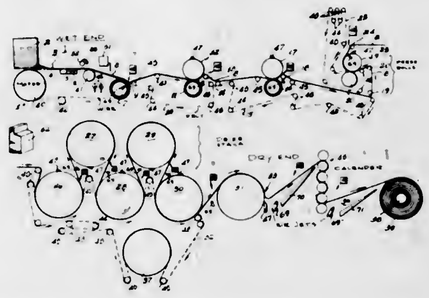
3,096,233
METHOD AND EQUIPMENT FOR RESTORING PAPER PASTE WEB IN PAPER MAKING MACHINERY AND SIMILAR FOILS IN OTHER MACHINES

Maximiliano Rappaport, Bernardo Rappaport, and Raul Szuehman, Buenos Aires, Argentina

Filed Mar. 26, 1957, Ser. No. 648,731
Claims priority, application Great Britain Aug. 28, 1956
16 Claims. (Cl. 162—193)

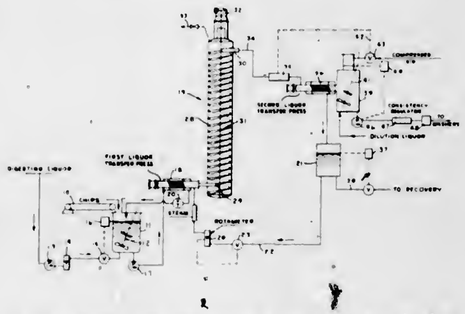
6. In the manufacture of a continuous paper web, the method of restoring the width of the web and maintaining its continuity upon initiation of a web break which comprises cutting a safety band parallel along the side of the web opposite the breaking side, continuing the cut from

said safety band diagonally across the web so as to sever and isolate the break section and forming an intentional



break at an intermediate part of said break section for dividing said break section into separate parts.

3,096,234
CONTINUOUS DIGESTING SYSTEM
Bruce Armstrong and William J. Nolan, Gainesville, Fla.; said Armstrong assignor to said Nolan
Filed Oct. 29, 1958, Ser. No. 770,424
6 Claims. (Cl. 162—237)



1. A system for continuously discharging pulp from a digester, including: a conduit connected to the discharge end of said digester; control means in said conduit responsive to the flow of pulp in said conduit for providing a signal proportional thereto; a liquor transfer press connected to said conduit for receiving pulp flowing therethrough, said press including means for expressing digestion liquor, at digester temperature, from the pulp as same passes therethrough so that the expressed liquor can be stored in a pressurized tank for reuse and the pulp exiting from said press is at a high consistency; a pressurized dilution tank connected for receiving pulp exiting from said press, said dilution tank being closed; means connected to said dilution tank for continuously supplying a non-condensible gas under pressure into said dilution tank to provide pressure on the pulp in said dilution tank and on the discharge end of said press, said last-named means being connected for responding to a signal from said control means so that the pressure within said tank will be proportional to the flow of pulp through said conduit; means for feeding a dilution liquid into said dilution tank and mixing same with the pulp therein; a liquid level controller connected to said dilution tank for maintaining a substantially constant liquid level therein; and pump means for withdrawing diluted pulp from said dilution tank in such a manner as to cause a smooth controllable flow of pulp and a release of the dilution tank pressure thereon.

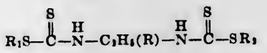
3,096,235
SUCTION BOX COVER FOR FOURDRINIER MACHINES
John S. Taylor, Wilmington, Del., assignor to The Budd Company, a corporation of Pennsylvania
Filed Mar. 21, 1961, Ser. No. 97,248
1 Claim. (Cl. 162—374)



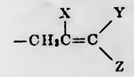
A suction box cover for use in contact with the moving screen wire of Fourdrinier machines, said cover comprising a screen contacting element and a base element, the screen contacting element consisting essentially of polypropylene, the base element being formed of a phenolic condensate impregnated fabric laminate, and a fabric layer bonded to said screen contacting element by fusion of the polypropylene material and thereafter bonded to the base element, whereby a low cost suction box cover is provided which increases the useful life of the moving screen and suction box cover system.

3,096,236
METHOD FOR CONTROL OF SOIL BORNE PATHOGENIC ORGANISMS
John J. D'Amico, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Original application Sept. 22, 1958, Ser. No. 762,207. Divided and this application Dec. 13, 1961, Ser. No. 168,860
5 Claims. (Cl. 167—22)

1. The method of treating soil which comprises applying to the soil in a quantity sufficient to destroy pathogenic organisms a compound of the structure



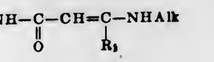
where $C_3H_5(R)$ represents an alkylene radical separating the nitrogen atoms by three carbon atoms, R being selected from the group consisting of hydrogen, lower alkoxy and lower alkyl, R_1 and R_2 are



X and Y being selected from a group consisting of hydrogen, halogen and acyclic hydrocarbon of 1–3 carbon atoms, at least one of X and Y being halogen, and Z is selected from a group consisting of hydrogen and halogen.

3,096,237
METHODS OF COMBATING MITES AND FUNGI
Engelbert Kühle and Ferdinand Grewe, Cologne-Stammheim, Günter Unterstenhofer, Opladen, Martin Boness, Bergisch-Neukirchen, and Richard Wegler, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed May 11, 1960, Ser. No. 28,215
Claims priority, application Germany May 13, 1959
8 Claims. (Cl. 167—30)

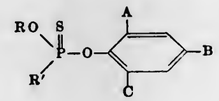
1. A method for combating fungus infestation of a plant which comprises treating the plant with an effective amount of a compound of the formula



wherein R_1 is a member selected from the group consisting of an anilino radical, a phenyl radical and a phenylsulfonyl radical; R_2 is a member selected from the group consisting of methyl and a phenyl radical; and Alk is an alkyl radical having 10 to 18 carbon atoms.

3,096,238
O-(HALOPHENYL) PHOSPHONOTHIOATES
Joseph W. Baker and John P. Chupp, Kirkwood, and Peter E. Newallis, Crestwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 20, 1960, Ser. No. 77,005
16 Claims. (Cl. 167—30)

1. A O-(halophenyl) phosphonothioate of the formula



wherein R and R′ are lower alkyl radicals and wherein A, B and C are halogens having an atomic number from 16 to 36.

3,096,239
METHOD FOR PEST CONTROL EMPLOYING POLYCHLOROPOLYHYDRIC ALCOHOLS
Paul E. Hoch, Youngstown, and Jack S. Newcomer, Wilson, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed July 23, 1962, Ser. No. 211,897
10 Claims. (Cl. 167—30)

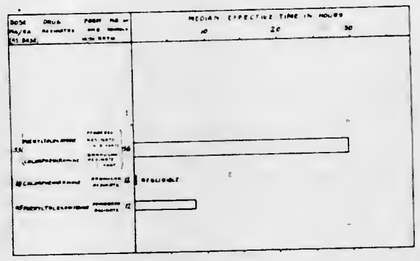
1. A method for controlling pests which comprises applying to the locus of said pests a toxic amount of a composition comprising a polyhydric alcohol hemi-ketal of decachlorooctahydro - 1,3,4 - metheno - 2H-cyclobuta-(cd)-pentalene-2-one wherein the alcohol is an aliphatic polyhydric alcohol containing at least three hydroxyl groups.

3,096,240
PROCESS FOR THE CONTROL OF BLOAT IN RUMINANTS WITH TRIS(HYDROXYMETHYL)AMINOMETHANE
Louis L. Rusoff, Baton Rouge, La., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Feb. 20, 1961, Ser. No. 90,213
6 Claims. (Cl. 167—53)

1. A process for the treatment of bloat in ruminant animals which comprises administering to the bloated animal bloat-reducing amounts of tris(hydroxymethyl) aminomethane.

3,096,241
SYNERGISTIC ANTIHISTAMINE MIXTURE
Edwin E. Hays and John G. Swift, Rochester, N.Y., assignors to Wallace & Tiernan Inc., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,825
4 Claims. (Cl. 167—65)

1. An antihistaminic composition comprising a mixture of a substance of the group consisting of phenyltoloxamine base, soluble salts of phenyltoloxamine, and cation exchange resinates of phenyltoloxamine, and a substance of the group consisting of chlorpheniramine base, soluble salts of chlorpheniramine, and cation exchange resinates of chlorpheniramine, the chlorpheniramine compound being present with the phenyltoloxamine compound in potentiating amount sufficient to give substantial increased duration of effectiveness to the composition.



3,096,242
VASODILATOR DRUG MIXTURES AND EXCIPIENT THEREFOR
Aubrey Allyn Young, Tamaqua, Pa., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 20, 1960, Ser. No. 30,444
16 Claims. (Cl. 167—65)

1. A drug mixture containing at least 20% by weight of PETN desensitized by an excipient in which the PETN is uniformly distributed, said excipient being selected from the group consisting of (1) lactose and a finely divided, highly porous material, (2) mannitol, and (3) mannitol and a finely divided, highly porous material, wherein the finely divided, highly porous material in (1) and (3) is selected from the group consisting of activated clay, diatomaceous earth, silica gel and activated carbon.

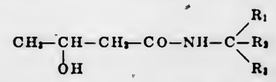
3,096,243
PERLIMYCIN
Felix Edward Pansy, Jamesburg, and James Dean Dutcher, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed Nov. 21, 1961, Ser. No. 153,946
3 Claims. (Cl. 167—65)

1. An antibiotic selected from the group consisting of perlimycin and salts thereof, said perlimycin being a colorless material having the following average elemental analysis: C=65.30; H=8.50; O=26.25; specific rotation $[\alpha]_D^{25}=0\pm2°$; having a molecular formula of $C_{40}H_{64}O_{12}$ and a molecular weight of about 736; M.P. 147–152°; very soluble in chloroform, benzene and pyridine; very slightly soluble in water; no specific absorption in the ultra violet above 210 mμ; and an infrared absorption spectrum in hydrocarbon oil as shown in the drawing.

3,096,244
SUBSTITUTED BUTYRIC ACID AMIDE AND ANALGESIA
Gustav Ehrhart, Bad Soden, Taunus, Ingeborg Hennig, Kelkheim, Taunus, Ernst Lindner, Frankfurt am Main, and Heinrich Ott, Eppstein, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Dec. 18, 1961, Ser. No. 160,258
Claims priority, application Germany Nov. 6, 1956
5 Claims. (Cl. 167—65)

2. A pharmaceutical composition in dosage unit form having analgesic activity containing from 200 to 500 milli-

grams of a substituted butyric acid amide of the general formula



wherein R_1 and R_2 each represent an alkyl radical containing at most 2 carbon atoms, and R_3 is selected from methyl, ethyl and phenyl, and a pharmaceutically acceptable carrier.

3,096,245

16α-METHYLYOHIMBONE, PROCESS THEREFOR AND THERAPEUTIC COMPOSITIONS THEREOF

John Shavel, Jr., Mendham, and Maximilian von Strandtmann, Morris Plains, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Oct. 29, 1959, Ser. No. 849,464
4 Claims. (Cl. 167—67)

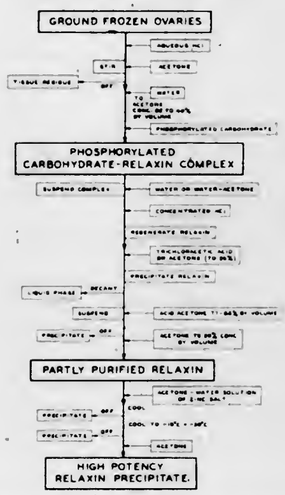
3. A therapeutic composition in dosage unit form which consists essentially of pharmaceutical carrier and 2 to 100 milligrams per unit of a member selected from the group consisting of 16α-methylyohimbone and its pharmaceutically acceptable non-toxic acid addition, alkyl halide and alkyl sulfate quaternary ammonium salts.

3,096,246

PROCESS FOR THE EXTRACTION AND PURIFICATION OF RELAXIN

John Doczi, Morristown, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

Filed May 24, 1960, Ser. No. 31,371
46 Claims. (Cl. 167—74)



5. A method of recovering relaxin from animal ovaries which comprises extracting the ovaries with a dilute aqueous mineral acid, adding sufficient acetone to provide an acetone concentration of between about 70 and about 85 percent by volume, separating the tissue residue from the mixture to yield an acid-acetone extract comprising relaxin dissolved therein, adding water to said extract in an amount sufficient to reduce the acetone concentration to about 30 to about 40 percent by volume, adding an excess of a phosphorylated carbohydrate to the diluted extract and separating therefrom the precipitate constituting a phosphorylated carbohydrate-relaxin complex.

3,096,247

INFECTIOUS RHINOTRACHEITIS VIRUS ATTENUATED IN LAMB CELL TISSUE CULTURES

Eben A. Slater, St. Joseph, Mo., assignor to Anchor Serum Company, Inc., St. Joseph, Mo., a corporation of Missouri

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,071
5 Claims. (Cl. 167—78)

1. A process of attenuating infectious bovine rhinotracheitis virus comprising passing the virus from about 5 to 125 times in lamb tissue cells.

3,096,248

METHOD OF MAKING AN ENCAPSULATED TABLET

Henryk S. Rudzki, West Los Angeles, Calif., assignor to Rexall Drug & Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,489
1 Claim. (Cl. 167—82)

A method of making an oral dosage tablet form which comprises: compressing a first finely-divided medicinal ingredient-containing portion to form a compressed tablet core having smaller dimensions than the desired finished tablet form; positioning the preformed compressed tablet core in contact with a coating material containing a second finely-divided medicinal ingredient portion; compressing said second portion, at a pressure between about 1000 and about 75,000 pounds per square inch, about said compressed tablet core until it fuses to form a continuous integral film coating which hermetically seals the core.

3,096,249

EMULSION COMPOSITION

Samuel J. Prigal, 55 Park Ave., New York 17, N.Y.

No Drawing. Filed May 10, 1960, Ser. No. 28,011
14 Claims. (Cl. 167—82)

1. An injectable, stable, homogeneous emulsion comprising an aqueous phase containing a material selected from the group consisting of a therapeutic agent and a prophylactic agent dispersed within a non-toxic oil phase, said dispersed phase comprised of particles having an average size of about 0.5 to 1.5 microns.

3,096,250

NOVEL PARTICULATE ANTIGENS AND PROCESS

Joseph S. Ingraham, Indianapolis, Ind., assignor to Indiana University Foundation, Bloomington, Ind.

No Drawing. Filed Nov. 30, 1959, Ser. No. 856,018
4 Claims. (Cl. 167—84.5)

1. A particulate antigen suspended in a buffered formaldehyde solution comprising a formalinized erythrocyte of the group consisting of avian and mammalian erythrocytes coupled to a soluble proteinaceous antigen by means of formaldehyde at a pH within 2 pH units of the isoelectric point of the proteinaceous antigen.

3,096,251

METHOD OF STABILIZING ACID PHOSPHATASE IN SERUM BY MEANS OF CITRATES AND GLUTAMATES

Arthur L. Babson, Morris Plains, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Mar. 10, 1961, Ser. No. 94,719
1 Claim. (Cl. 167—84.5)

A method of stabilizing acid phosphatase in blood serum which comprises the addition to said serum of a member selected from the group consisting of disodium citrate, mixtures of citric acid and trisodium citrate, and mixtures of L-glutamic acid and sodium glutamate in an amount of about 15 to about 35 milligrams of said member for each 2 milliliters of said serum.

3,096,252

PROCESS FOR PRODUCING L-GLUTAMIC ACID

Shinichi Motozaki, Tokyo, Toshinao Tsunoda and Shinji Okumura, Kanagawa-ken, Ryuichiro Tsugawa, Tokyo, Toshinori Matsui, Kumamoto-ken, and Atsuo Kitai and Noboru Miyachi, Tokyo, Japan, assignors to Ajinomoto Kabushiki Kaisha and Sanraku Shuzo Kabushiki Kaisha, both of Tokyo, Japan, and both corporations of Japan

No Drawing. Filed Apr. 19, 1961, Ser. No. 104,010
Claims priority, application Japan Apr. 23, 1960
13 Claims. (Cl. 195—47)

1. In a process for producing L-glutamic acid which comprises culturing L-glutamic acid producing bacteria belonging to the genus Brevibacterium under aerobic conditions in a culture medium containing carbohydrates, nitrogen sources, amino acids, and inorganic salts to produce and accumulate L-glutamic acid in said medium, the improvement comprising culturing the said bacteria under aerobic conditions in said medium in the presence of at least one member selected from the group consisting of desthiobiotin, biotin-d-sulfoxide and biocytin, and recovering L-glutamic acid thus formed.

3,096,253

ENZYME PRODUCTION

Won Young Koh, Bound Brook, and Ralph A. Messing, Somerville, N.J., assignors to Ethicon, Inc., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,880
12 Claims. (Cl. 195—62)

1. A method for producing keratinolytic enzymes which comprises aerobically cultivating a keratinase-producing strain of fungi selected from the group consisting of *Aspergillus flavus*, ATCC No. 13003, and *Aspergillus niger*, ATCC No. 13004, in a semi-synthetic aqueous nutrient medium containing a source of protein rich in sulfur-containing amino acids and disulfide bonds and inorganic salts.

3,096,254

GEOMICROBIOLOGICAL PROSPECTING

Donald O. Hitzman, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 4, 1960, Ser. No. 66,940
5 Claims. (Cl. 195—103.5)

5. The method of prospecting for subterranean petroleum hydrocarbon deposits which comprises collecting samples of soil from spaced points in the area under investigation, said samples containing both heat resistant and non-heat resistant forms of microorganisms; heating in the range from 40–75° C. said soil samples for a period of time which ranges between 2 and 60 minutes sufficient to kill off substantially all of the non-heat resistant forms of said microorganisms while leaving viable the more heat resistant forms thereof; and storing said heat-treated soil samples for an extended period of time until ready to carry out analysis of the same for evidence of hydrocarbon-indicating types of microorganism growth.

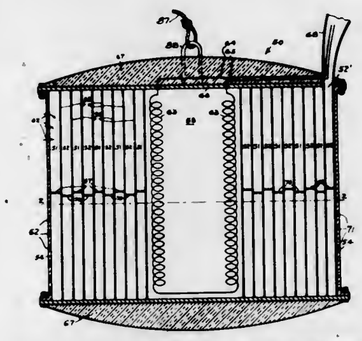
3,096,255

METHOD AND MECHANISM FOR SEPARATION OF SOLUTES FROM SOLVENTS

William A. Redenbaugh, Friday Harbor, Wash., assignor of one-half to G. Wright Arnold, Seattle, Wash.

Filed May 31, 1956, Ser. No. 588,546
17 Claims. (Cl. 202—51)

2. The method of separating sea water into its components salt and water of reduced salt content, comprising the steps of withdrawing a first stream of sea water from a body of sea water which body of water is at a pressure at least equal to its critical pressure; moving said stream through an elongated confined spiral path within said body of sea water to an inner zone, which zone and the path of said stream is heat insulated from said body of sea water; heating the stream as it moves inwardly by indirect heat exchange to a temperature approaching the critical temperature of the water of the body of water; further heating said stream within the inner zone to at least the critical temperature of said water; withdrawing



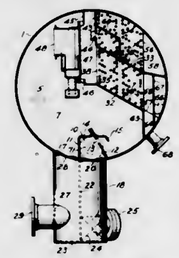
from said inner zone a stream of water of reduced salt content; withdrawing a second stream of water from said inner zone of increased salt content, moving each of said last mentioned two streams outwardly in separated confined elongated spiral paths; and cooling each of said last two mentioned streams as they move outwardly by indirect heat exchange contact of said streams with said first stream.

3,096,256

MULTISTAGE FLASH DISTILLING PLANT

Eugene Porter Worthen, Braintree, and Fenner Smith Barbour, Wollaston, Mass., assignors to Bethlehem Steel Company, a corporation of Pennsylvania

Filed Jan. 19, 1959, Ser. No. 787,628
17 Claims. (Cl. 202—173)



2. Evaporator apparatus comprising an elongated shell, a first stage and a second stage in said shell, each of said stages extending only a portion of the length of said shell, a first stage condenser and a second stage condenser within said shell and operatively associated with said first and second stages respectively, each of said condensers extending substantially the full length of said shell, first and second feed duct means in end-to-end relation in said first and second stages respectively, first and second excess feed channel means in said first and second stages respectively adjacent said first and second feed duct means respectively, feed inlet means communicating with the first feed duct means, and feed transfer means comprising a partitioned shell adjacent said first and second stages, a first chamber and a second chamber within said partitioned shell, said first chamber communicating between said first excess feed channel means and said second feed

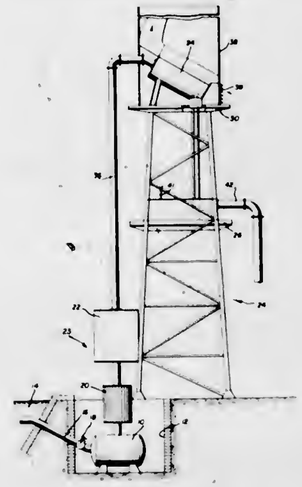
duct means, and said second chamber communicating between said second excess feed channel means and discharge, further including insulating means operatively interposed between said second stage condenser and said first stage.

3,096,257

SALT WATER CONVERTING APPARATUS

Clinton R. Foutz, St. Petersburg, Fla.; David F. Foutz administrator of said Clinton R. Foutz, deceased, assignor, by mesne assignments, of one-half to Elizabeth Foutz Lundstrom, Buckroe Beach, Va.

Filed Nov. 17, 1959, Ser. No. 853,546
5 Claims. (Cl. 202—205)



3. An apparatus for distilling liquid in a closed vacuum system sealed at one end by the liquid and at the other end by the condensate, comprising gravity operated means for leading the liquid from a source in the open to at least one evaporator also situated in the open and adapted to be heated by ambient thermal conditions, an ambient air cooled condenser disposed above the evaporator at a height exceeding the height of a barometric column of the liquid at atmospheric pressure, a vapor conducting duct connecting the evaporator to the condenser, a condensate receiving tank open to the atmosphere and positioned below the condenser a distance exceeding the height of a barometric column of the condensate, and a condensate discharge duct leading from the lowest part of said condenser to a point spaced above the bottom of the condensate receiving tank, said condensate discharge duct having venturi means in its inlet end including a duct extending into the condenser to a level above said lowest part for sucking air and vapor from the condenser above the level of the condensate therein by movement of the condensate through said means.

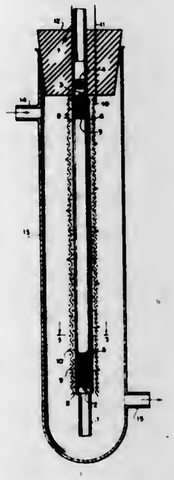
3,096,258

METHOD OF OPERATING AN ELECTROLYTIC ANALYSIS CELL

Nicholas A. Poulos, Niagara Falls, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Sept. 4, 1959, Ser. No. 838,355
1 Claim. (Cl. 204—1)

A method for reducing to zero potential a cell which has been used in detecting and measuring small concentrations of gaseous boranes in air which comprises passing into the cell a gas stream comprising chlorine in an amount and for a time sufficient to reduce the cell to zero potential, said cell comprising a silver wire electrode coated with a paste consisting essentially of a silver salt and an electrolyte solution, a non-conducting absorbent material wetted with the electrolyte solution surrounding the coated silver wire electrode, and a platinum wire electrode surrounding the wetted absorbent material, the electrolyte being a homogeneous solution wherein the solvent is a mixture of water, a polyol having 2 to 6 carbon atoms and 2 to 6 hydroxyls, and a glycol ether of the formula $RO—(CH_2CH_2O)_n—R'$, wherein n is an integer from 2 to 4, R is an alkyl hydrocarbon radical having 1 to 4 carbon atoms, and R′ is selected from the class consisting of hydrogen and an alkyl hydrocarbon radical having 1 to 4 carbon atoms, and wherein the solute is an alkali metal salt.



3,096,259

METHOD OF MANUFACTURING SEMICONDUCTIVE DEVICE

Richard A. Williams, Collingswood, N.J., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Continuation of abandoned application Ser. No. 669,852, July 3, 1957. This application Sept. 1, 1960, Ser. No. 56,619

3 Claims. (Cl. 204—15)

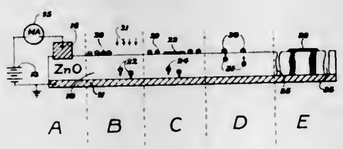
1. A method for producing reproducibly and in quantity high-frequency transistors each having emitter, collector and base elements, which method comprises: providing a plurality of bodies of substantially identical semiconductive material; subjecting said plurality of bodies to the same surface diffusion treatment to produce therein surface layers of substantially identical graded-resistivity characteristics, each of said surface layers having an exterior surface which is highly conductive and having a first region beneath said external surface the resistivity of which is substantially higher than that existing at said external surface and which is suitable for the base material adjacent said emitter element, each of said bodies also containing a second region on the opposite side of said first region from said exterior surface which is of higher resistivity than said first region and suitable for the base material adjacent said collector element; subjecting a typical body of said plurality of bodies to jet-electrolytic etching of a limited portion of said surface layer thereof to etch therein a depression extending into said layer toward said first region thereof; interrupting said etching to apply to said body a rectifying connection at the bottom of said depression and a reverse bias with respect to said rectifying connection, thereby to ascertain the resistivity of said layer at said bottom of said depression; alternating said etching and said application of said rectifying connection and said reverse bias until said etching has proceeded into said layer of said typical body to a depth at which said ascertained resistivity is substantially equal to said resistivity of said first region, the depth of said depression thereby being substantially equal to that required to expose said first region; jet-electrolytically etching a limited portion of said surface layer of each of the others of said plurality of bodies to produce in each of said other bodies a depression of substantially said depth; jet-electrolytically etching each of said other bodies at a surface on the opposite side of said second region from said depression therein to form another depression extending toward said second region therein, said last-named etching being terminated when it has proceeded to a depth substantially equal to that required to expose said second region therein; forming two rectifying barriers in each of said other bodies by a process including jet-electrolytically depositing a metal substance on the bottoms of the two opposed depressions formed in each of said bodies by said jet-electrolytic etching; and applying a substantially ohmic connection to each of said other bodies on a portion of said exterior surface of said surface layer thereof lying outside said etched depression therein.

3,096,260

TWO-STEP ELECTROPHOTOGRAPHY

Nelson R. Nail, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed June 2, 1959, Ser. No. 817,640
8 Claims. (Cl. 204—18)



1. The method of recording a radiation image by use of a photoconductive layer containing photoconductive zinc oxide in an insulating binder comprising

(*a*) establishing in said layer an imagewise distributed pattern of electrical conductivity,

(*b*) electroplating onto one surface of said layer in conformity with said pattern a material selected from the group consisting of electroplatable metals and iron dithioximide, by passing an electric current through the layer while the conductivity pattern is present and while said one surface is in contact with an electrolyte containing in solution a material selected from the group consisting of ions of said metals and ferrous chloride tetrahydrate with dithioximide,

(*c*) applying a negative electrostatic charge to said surface bearing the imagewise distributed electroplated material, such application being carried out with the surface substantially dry and in the absence of radiation to which the said layer is sensitive,

(*d*) imagewise toning said charged surface by applying xerographic toner thereto and

(*e*) fixing the toner to the surface.

3,096,261

SALT BATH FOR ELECTROLYTIC CLEANING OF METALS

Matthew Mekjean, Niagara Falls, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed May 25, 1959, Ser. No. 815,270
11 Claims. (Cl. 204—141)

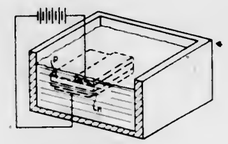
2. In a process for preparing a non-reducing molten alkali metal hydroxide-based salt bath for the electrolytic cleaning of metals, which bath consists essentially of at least 50 percent by weight of an alkali metal hydroxide, and a minor amount of a compound selected from the group of alkali metal and alkaline earth phosphates, chlorides, carbonates, fluorides, silicates, aluminates, stannates, borates, sulfates, sulfites, molybdates, fluosilicates, fluoborates, and mixtures thereof; the improvement for priming said salt bath which comprises adding thereto a priming amount of at least 0.05 percent of a material selected from the group consisting of elemental phosphorus, finely divided elemental iron, a phosphide, a phosphite, and mixtures thereof.

3,096,262

METHOD OF MAKING THIN SLICES OF SEMICONDUCTIVE MATERIAL

William Shockley, 23466 Corta Via, Los Altos, Calif.

Filed Oct. 23, 1958, Ser. No. 769,193
12 Claims. (Cl. 204—143)



1. The method of making a slice of semiconductive material of one conductivity type having a predetermined uniform thickness which comprises the steps of forming a block of semiconductor material having a first region of said one conductivity type and a second region of opposite conductivity type contiguous therewith to form a rectifying junction, said region of one conductivity type having the desired predetermined uniform thickness, and removing all the material of said opposite conductivity type, said step of removing material including preferentially dissolving material from a selected area of the face of said region of opposite conductivity type which lies opposite the junction until the material of opposite conductivity type beyond the junction in the selected area is entirely removed to leave an area of said material of said one conductivity type having said predetermined thickness.

3,096,263

NUCLEAR REACTOR FUEL ELEMENTS AND METHOD OF PREPARATION

Walter E. Kingston, Bayside, Bernard Kopelman, Flushing, and Henry H. Hausner, New York, N.Y., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Apr. 1, 1952, Ser. No. 279,910
23 Claims. (Cl. 204—154.2)

1. The method of incorporating uranium in discrete areas in a beryllium matrix which comprises the steps of mixing a compound in powder form selected from the group consisting of uranium nitride and uranium carbide, with beryllium powder, compacting the mixture and sintering the mixture.

14. A fuel element core for a nuclear reactor which comprises a solid coherent zirconium matrix containing in discrete areas, particles of a compound selected from the group consisting of uranium nitride and uranium carbide.

3,096,264
METHOD OF PRODUCING CANNED FUEL RODS FOR NUCLEAR REACTORS

Stefan George Bauer, Willowpit, Hilton, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain

Filed Dec. 7, 1959, Ser. No. 857,836
Claims priority, application Great Britain Dec. 10, 1958
4 Claims. (Cl. 204—154.2)



2. A method of producing canned fuel rods which comprises producing the fuel rod casing by the steps of bending a strip of metal into a tubular form with the longitudinal edges adjacent and outwardly flanged, twisting the tubular part about its longitudinal axis to give the flanged longitudinal edges a helical form, then welding the helical flanges together throughout their radial extent to form a tube having an external helical rib, then inserting fissile material in pellet form into the tube, and then subjecting the tube externally to fluid pressure to tighten the tube on the pellets.

3,096,265
PROCESS FOR THE PREPARATION OF KETONIC ORGANIC COMPOUNDS AND PRODUCTS RESULTING THEREFROM

Karl W. Hubel and Emile Henri Braye, Brussels, Belgium, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,889
Claims priority, application Great Britain Apr. 7, 1959
10 Claims. (Cl. 204—158)

1. A process for the preparation of ketonic organic compounds free of carbon to metal bonds, which comprises reacting an organometallic complex having the formula:

$$M_x(CO)_y(R'C_2R'')_z(B)_w$$

wherein M is a transition metal selected from the group consisting of sub-groups VIB, VIIB and VIII of the periodic table, CO represents a carbonyl group, R' and R'' represent a member selected from the group consisting of hydrogen, halogeno, carboalkoxy, alkyl, aryl, cycloaliphatic, alkoxy and silyl groups, C_2 represents carbon-to-carbon bonding, B represents a member selected from the group consisting of hydrogen, mercury, halogen, alkyl, aryl and acyl, x represents an integer of from 1 to 4, y represents an integer of from 1 to 10, z represents an integer of from 1 to 6, and w represents an integer of from 0 to 4, with at least a stoichiometric amount of an oxidation regent, whereby the carbon to metal bond in said complex is broken and oxygen is added to the C_2 group present in said complex to form the said ketonic organic compounds.

10. A process as claimed in claim 1, in which the reaction mixture is initially activated by ultraviolet radiation.

3,096,266
PROCESS FOR THE PREPARATION OF ACYL AND ALKYL SUBSTITUTED CYCLIC ORGANIC COMPOUNDS AND PRODUCTS RESULTING THEREFROM

Karl W. Hubel and Emile Henri Braye, Brussels, Belgium, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,890
Claims priority, application Great Britain Apr. 7, 1959
10 Claims. (Cl. 204—158)

1. A process for the preparation of acyl and alkyl-substituted cyclic organic compounds free of carbon to metal bonds, which comprises reacting an organo-metallic complex having the formula:

$$M_x(CO)_y(R'C_2R'')_z(B)_w$$

wherein M' is a transition metal selected from the group consisting of sub-groups VIB, VIIB and VIII of the periodic table, CO represents a carbonyl group, R' and R'' represent a member selected from the group consisting of hydrogen, halogeno, carboalkoxy, alkyl, aryl, cycloaliphatic alkoxy and silyl groups, C_2 represents carbon-to-carbon bonding, B represents a member selected from the group consisting of hydrogen, mercury, halogen, alkyl, aryl and acyl, x represents an integer of from 1 to 4, y represents an integer of from 1 to 10, z represents an integer of from 1 to 6, and w represents an integer of from 0 to 4, with at least a stoichiometric amount of a member selected from the group consisting of acylation and alkylation reagents, whereby the carbon to metal bond in said complex is broken and a member of the group consisting of alkyl and aryl is added to the C_2 group present in said complex to form the said cyclic organic compound.

10. A process as claimed in claim 1, in which the reaction mixture is initially activated by ultraviolet radiation.

3,096,267
RADIATION POLYMERIZATION OF VINYL ACETATE

Masakazu Matsumoto and Kiyokazu Imai, Kurashiki, Japan, assignors to Kurashiki Rayon Co., Ltd., Kurashika-shi, Japan, a corporation of Japan

No Drawing. Filed June 3, 1960, Ser. No. 33,619
Claims priority, application Japan June 4, 1959
7 Claims. (Cl. 204—158)

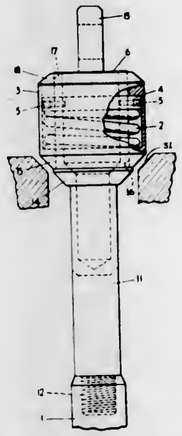
1. A method for the polymerization of vinyl acetate which comprises forming a solution consisting of vinyl acetate monomer, and 10 to 200 percent of a solvent based on the weight of vinyl acetate monomer, said solvent consisting of 10 to 90 percent of water by weight and 90 to 10 percent of a water-soluble solvent by weight, and subjecting said vinyl acetate solution to high energy, ionizing radiation, the dosage of said radiation being at least about 1×10^3 roentgens per hour.

3,096,268
ARRESTING DEVICES FOR FALLING BODIES

Graham Eades Lindsay, London, and Sidney John Joslin Waldron, Harwell, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed June 14, 1957, Ser. No. 665,812
Claims priority, application Great Britain June 14, 1956
3 Claims. (Cl. 204—193.2)

1. A body adapted to be suspended vertically and to extend through an aperture in a fixed structure having an upper complementary face and a lower impact stool, a support head fixed to the upper end of said body, an arrester cup having an inner vertical bore through which said support head extends, said arrester cup having a face on its outer surface adapted to engage with said complementary face for arresting the fall of said arrester cup, vertically resilient means fixed inside said arrester cup, yieldable linking means connecting said support head to said resilient means and adapted to yield and release said support head and body to fall free of the cup and resilient means when the force across said linking means increases to a predetermined magnitude, and energy absorbing

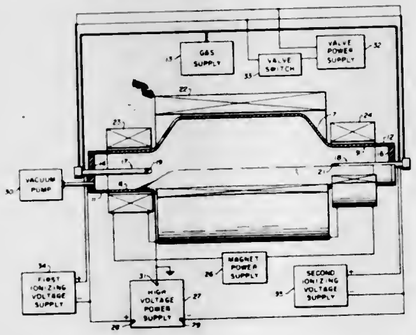


means at the lower end of said body adapted to engage with said lower impact stool to absorb the energy of the free fall of said support head and body.

3,096,269
COUNTERROTATING PLASMA DEVICE

Klaus Halbach, Berkeley, William R. Baker, Orinda, and Didier Veron, Berkeley, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed May 23, 1961, Ser. No. 112,132
11 Claims. (Cl. 204—193.2)

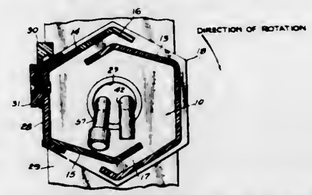


1. In a plasma generating and containment device, the combination comprising a pair of spaced apart electrodes each having a passage therein for emitting gas, a gas supply coupled to said passages of said electrodes, valve means operable on each of said passages of said electrode, an annular conductive means encircling each of said electrodes in spaced relationship therefrom, means for applying a potential difference between a first of said pair of electrodes and said conductive means and for applying an opposite potential, difference between the second of said pair of electrodes and said conductive means, and means providing a magnetic field having a flux component perpendicular to said electric fields, said magnetic field being of greater intensity in the vicinity of said electrodes than in the region therebetween.

3,096,270
ELECTROPLATING APPARATUS

Anton Lazaro, 2022 N. California Ave., Chicago, Ill.

Filed Jan. 25, 1961, Ser. No. 84,910
4 Claims. (Cl. 204—213)

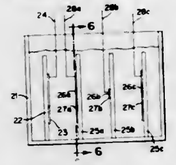


1. A self contained portable electroplating apparatus comprising: an electroplating barrel having solid non-perforated walls, a pair of end plates in opposing relation, each of said walls' sides being fixedly attached to a single one of said end plates, said walls being unconnected and overlapped at certain locations, said walls' unconnected ends forming slots therebetween to admit electroplating fluid when rotated in a certain direction without allowing parts to be electroplated to escape from said barrel, a motor associated with said electroplating barrel for rotatably driving it in one direction, and exhaust means associated with said barrel to enable spent fluid to be exhausted from said barrel without allowing said parts to be electroplated to escape.

3,096,271
DATA DISPLAY DEVICE

Wilbur G. Hespenheide, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Nov. 26, 1958, Ser. No. 776,481
13 Claims. (Cl. 204—267)



1. A symbol display device comprising a transparent walled vessel, a plurality of electrodes each fabricated from transparent material, at least one of said electrodes having a conducting surface formed as a symbol thereon, separate conducting means connected to each electrode, an immersing liquid within said transparent walled vessel surrounding said electrodes and being capable of depositing a visible solid upon the symbol carrying electrode arranged as a cathode, upon the application of a potential differential of proper polarity between one other of said electrodes serving as an anode and the symbol carrying electrode, said visible solid being removed upon the application of a potential differential of opposite polarity between the said symbol carrying electrode, now acting as an anode and any other of said plurality of electrodes serving as a cathode.

3,096,272
NOBLE METAL COATED TITANIUM ELECTRODE AND METHOD OF MAKING AND USING IT

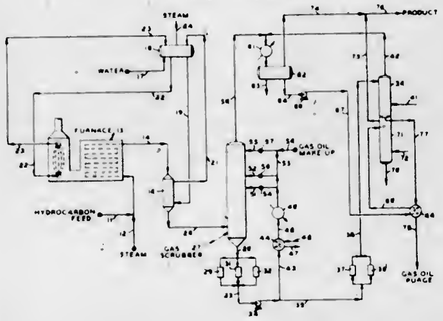
Henri Bernard Beer, The Hague, Netherlands, assignor, by mesne assignments, to Amalgamated Curacao Patents Company N.V., Willemstad, Curacao, Dutch Antilles, a limited-liability company

No Drawing. Filed Oct. 20, 1958, Ser. No. 768,046
Claims priority, application Netherlands Oct. 24, 1957
5 Claims. (Cl. 204—290)

5. An electrode consisting essentially of a core of titanium and a coating of a noble metal thereon and hav-

ing pores therein, each pore having therein a film of titanium oxide in rutile form produced by heating the noble metal coated electrode in an oxygen containing atmosphere at an elevated rutile oxide-forming temperature for a time sufficient to produce the rutile form of titanium oxide in the pores of the noble metal coating as a protective film which has high corrosion resistance.

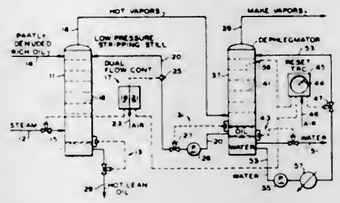
3,096,273
RECOVERY OF HYDROCARBONS
John Hanisian, Garden City, N.Y., and Edward H. Lightcap, Stratford, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Filed Aug. 5, 1960, Ser. No. 47,728
12 Claims. (Cl. 208—101)



1. A process for recovering C_{13} and lighter hydrocarbons from a vaporous mixture containing the same and tarry substances which comprises contacting said vaporous mixture in a scrubbing zone with a hydrocarbon scrubbing liquid predominantly comprising hydrocarbons heavier than C_{13}, separating a scrubbed-gas fraction containing a major portion of said C_{13} and lighter hydrocarbons and a minor portion of said C_{14} and heavier hydrocarbons and a liquid fraction containing a major portion of said C_{14} and heavier hydrocarbons, tarry substances and a minor portion of said C_{13} and lighter hydrocarbons, separating C_{13} and lighter hydrocarbons from at least a portion of said liquid fraction, cooling and partially condensing said scrubbed-gas fraction, separating hydrocarbon condensate containing said minor portion of C_{14} and heavier hydrocarbons present in said scrubbed-gas fraction and C_{13} and lighter hydrocarbons from said cooled and partially condensed scrubbed-gas fraction, separating C_{13} and lighter hydrocarbons from at least a portion of said hydrocarbon condensate, and recovering C_{13} and lighter hydrocarbons uncondensed from said cooling and partial condensing step and as separated from said liquid fraction and said hydrocarbon condensate.

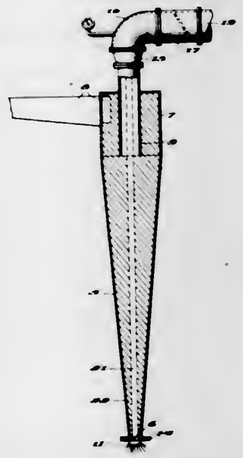
3,096,274
CONTROL OF STRIPPING STILL AND DEPHLEGMATOR OPERATION
Everett S. Palmer, Jr., Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 24,868
3 Claims. (Cl. 208—341)

3. A method for operating a rich absorption oil distillation and dephlegmator system, comprising, introducing an absorption oil rich in gasoline boiling range hydrocarbons into a distillation zone, introducing stripping steam into said zone and therein distilling absorbed hydrocarbons and low boiling ends of said absorption oil from the remainder of the absorption oil thereby producing overhead vapors from said distillation zone, introducing said overhead vapors into a dephlegmation zone, introducing cooling water into the upper portion of said dephlegmation zone and in said dephlegmation zone cooling said vapors by direct heat exchange with said cooling water whereby at least a portion of the high boiling ends of said vapors condense to produce a dephlegmator oil, withdrawing heat exchanged water from the bottom of said dephlegmation zone, cooling the withdrawn water to produce the first mentioned cooling water, withdrawing said



dephlegmator oil from said dephlegmation zone and introducing this withdrawn oil into the upper portion of said distillation zone, decreasing the rate of introduction of steam into said distillation zone in response to an increase in the rate of introduction of said dephlegmator oil into said distillation zone, and increasing the rate of introduction of steam into said distillation zone in response to a decrease in the rate of introduction of said dephlegmator oil into said distillation zone.

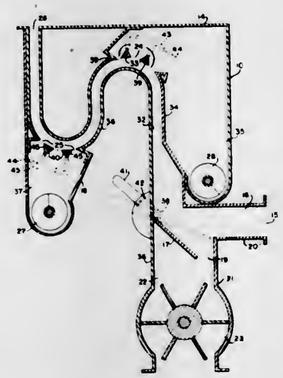
3,096,275
METHOD FOR SEPARATING DIRT FROM AQUEOUS SUSPENSIONS OF PULP FIBERS
George H. Tomlinson II, Long Sault, Ontario, Canada
Filed Sept. 26, 1961, Ser. No. 140,702
3 Claims. (Cl. 209—2)



1. The method of separating from an aqueous pulp suspension of cellulose fibers dirt particles of widely varying sizes characterized by the use of an apparatus comprising a separating chamber having at least a portion thereof of conical form, a tangential inlet at the larger end thereof, an axial accepted stock outlet at said larger end and an axial dirt discharge outlet at the apex of the chamber, the diameter at the larger end of said chamber being from 3 in. up to less than 36 in., the cone angle being between 5° and 18°, said inlet diameter being greater than 0.5 in., and said axial accepted stock outlet being not less than 1 in., the method comprising introducing an aqueous suspension of cellulose fibers into the

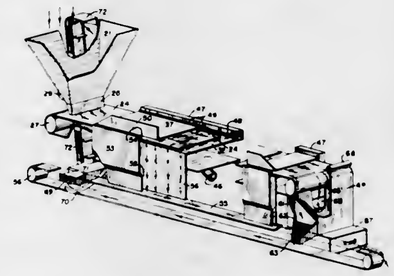
tangential inlet, the suspension containing dirt particles of widely varying sizes including shive, whirling the suspension in the separating chamber to produce a vortex of conical forms having a first zone of radially increasing angular velocities and a second zone wherein the angular velocity is substantially constant, the first and second zones meeting at a radial distance from the central axis at which the centrifugal force and angular velocity gradient are at a maximum, the ratio of centrifugal force to angular velocity gradient at said radial distance being at a value greater than 16×10^{-2} and an angular velocity gradient at said radial distance being less than 29,000 sec.$^{-1}$ ft.$^{-1}$ while operating at 40 p.s.i. feed pressure, and continuously withdrawing from the central portion of the vortex at the apex end said dirt and a minor proportion of the cellulose fibers and withdrawing at the end remote from the apex end a stream of suspension which contains a major proportion of the cellulose fibers.

3,096,276
APPARATUS AND METHOD OF CLEANING SEED COTTON
Gerald N. Franks, 1708 N. Robertshaw, Greenville, Miss., and Charles S. Shaw, 402 S. Deer Creek Drive W., Leland, Miss.
Filed Feb. 9, 1961, Ser. No. 88,235
3 Claims. (Cl. 209—20)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A seed cotton cleaner comprising:
(*a*) a relatively deep first rectangular duct for conveying a stream of air carrying seed cotton mixed with trash of varying weight at a velocity sufficient to float said seed cotton but insufficient to float said trash;
(*b*) a casing surrounding a forward portion of said first duct;
(*c*) an adjustable baffle within said first duct extending across the width thereof for deflecting the stream and removing from said stream a portion of the relatively heavier trash carried thereby;
(*d*) a relatively wide, shallow second duct in said casing connected to said first duct, said second duct being of smaller cross section than said first duct to effect an increase in air velocity, said second duct having two substantially reverse and opposed turns to form a generally S-shaped curve and being provided with a cut-away portion in the outer wall of each of said turns, said cut-away portions extending the entire width of the walls;
(*e*) a plurality of rotatable, adjustable triangular bars in each of said openings, for removing relatively lighter trash, extending the entire width of the second duct to provide a plurality of parallel passageways through the outer walls of the curved portions of said second duct, said triangular bars being so disposed that an apex portion of each bar extends into the second duct in a direction opposed to the direction of air flow in said second duct; and
(*f*) means connected to said first and second ducts for collecting trash removed by said baffle and triangular bars.

3,096,277
ELECTROSTATIC SEPARATOR
Thomas E. Maestas, Colorado Springs, Colo.
Filed Mar. 27, 1961, Ser. No. 98,576
7 Claims. (Cl. 209—20)

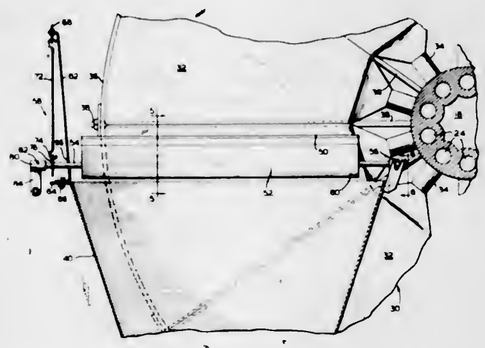


1. In apparatus for the electrostatic separation and classification of comminuted material of the type having an endless primary conveyor belt whose upper surface is adapted to move from a receiving terminal to a discharge terminal, means at the receiving terminal adapted to deposit material upon the upper surface of the belt, means at the discharge terminal adapted to receive material dropping from the belt, means in the belt reach between the terminals including electrode plates above and underneath the upper surface of the belt adapted to create an alternating electrostatic field on the belt surface with an intensity sufficient to agitate and lift electrostatically sensitive particles from the belt surface and means adapted to initiate a transverse movement of the lifted particles and shift them laterally across the belt and over the side thereof, and including in combination therewith, a series of generally longitudinally disposed riffles on the belt surface adapted to interrupt the lateral flow of particles to the side of the belt.

3,096,278
SCRAPER ASSEMBLY FOR FILTERS
Hudson F. Francom, Salt Lake City, Utah, assignor to The Eimco Corporation, Salt Lake City, Utah, a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,216
1 Claim. (Cl. 210—327)

In a rotary disc filter including a housing having a slurry tank associated therewith and a plurality of filter discs mounted for rotation through the tank, a scraper blade assembly comprising a scraper blade extending adjacent each of the filtering surfaces of said discs, means mounting one end of said scraper blades for pivotal movement adjacent the axis of rotation of the said discs, a support member spaced from the radially outer edge of each disc mounting in fixed spaced relationship the radially outer ends of the pair of scraper blades associated with each disc, and yieldable means supporting the said support member from a wall of the tank of the filter, said yieldable means including spaced swingable suspension means carried by the housing of said filter and having their lower ends attached to said support

member mounting the radially outer ends of each of the pairs of scraper blades thereby mounting the support



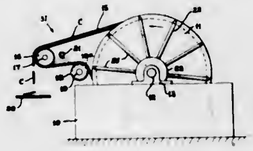
member for arcuate movement in a plane normal to the radial plane of the disc.

3,096,279

FLEXIBLE BELT FILTER UNIT

Thomas R. Komline, Gladstone, N.J., assignor to Komline-Sanderson Engineering Corporation, Peapack, N.J., a corporation of New Jersey

Filed Dec. 23, 1959, Ser. No. 861,534
5 Claims. (Cl. 210—391)



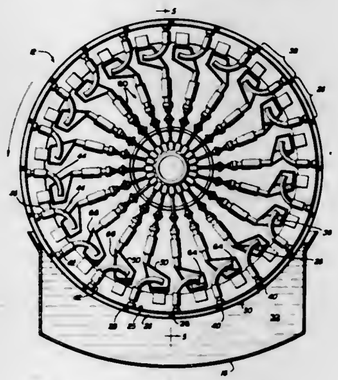
1. A vacuum filtering unit comprising a rotary filtering drum and means supporting same for rotation about a horizontal axis, said drum having a generally cylindrical surface formed with a plurality of axially parallel relatively uniformly spaced traction grooves of inwardly tapering cross-sectional configuration; a discharge roller rotatable about an axis parallel to the rotational axis of the drum and spaced from the drum; a flexible endless porous filter belt operatively disposed around said drum and said discharge roller for movement through an endless circuit incident to rotation of the drum, said belt having fixed on its inner surface a plurality of relatively parallel traction ribs of inwardly tapering cross-sectional configuration conforming generally to said traction grooves, said traction ribs extending transversely of the belt and positioned for reception in the respective traction grooves for imparting a positive drive to the belt and preventing wrinkling thereof; means supporting said belt around the drum with its inner surface spaced from the drum for reception of the effluent from the filtered material, certain of the said traction ribs being imperforate and extending continuously across the drum to function as sealing strips subdividing said space into relatively isolated sectors; suction means communicating with the respective sectors between adjoining sealing strips, said ribs in each sector between relatively adjoining sealing strips being formed to permit the passage of fluid to the respective suction passages, said belt being formed of elastic material and having a resiliently elongated portion both around said discharge roll and between the said roll and the drum, to facilitate the loosening and discharge of the filter cake from the belt and also to deform temporarily the pores of the belt whereby to facilitate the removal of solids therefrom; the meshing relation between said belt traction ribs and said drum traction grooves together with their tapering cross-sectional configuration functioning to contract said resiliently elongated portion of the belt incident to its return to the drum.

3,096,280

FILTER APPARATUS

Steven S. Davis, Bountiful, and Kent L. Davis, Salt Lake City, Utah, assignors to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware

Filed Apr. 8, 1959, Ser. No. 804,973
1 Claim. (Cl. 210—404)



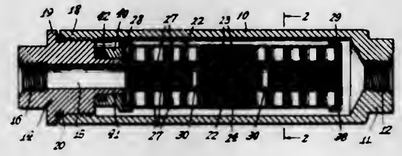
In a rotary drum filter having a deck including means for supporting a filter medium in spaced relationship therefrom, means dividing the space between the deck and the filter medium into a plurality of filter sectors, means for rotating the drum to successively pass the filter sectors through a slurry to be filtered, means connecting each of the filter sectors to a source of reduced pressure, said connecting means comprising a filtrate storage container, the volume of the storage container being substantially greater than the volume of its respective filter sector whereby the container will hold substantially all of the filtrate removed from a sector during a cycle of operation, said storage container being mounted adjacent each filter sector inwardly of the deck, said containers being positioned to receive and store filtrate out of contact with the filter medium during filter cake formation on the filter medium, conduit means having one end in communication with a filtrate outlet opening in the deck portion of each filter sector, each of the filtrate outlet openings being positioned adjacent only the trailing edge of the respective filter sectors with respect to the direction of rotation of the drum filter whereby as soon as the filter sectors begin to emerge from the slurry gravity assists in the flow of filtrate from the filtrate outlet openings, the other end of said conduit means having communication with the container mounted adjacent its filter sector and extending inwardly of the radially outermost wall thereof to position the outlet radially inwardly of the maximum liquid level of said container thereby to prevent return flow of filtrate to the respective filter sector, and further conduit means having one end connected at radially inner trailing edge portion of each container and the other end of said further conduit means connected to the source of reduced pressure.

3,096,281

FILTER CONSTRUCTION

Richard G. Smith, Lake Hiawatha, and James M. McMahon, Caldwell, N.J., assignors to Screen Products, Inc., Caldwell, N.J., a corporation of New Jersey

Filed Nov. 20, 1958, Ser. No. 775,272
3 Claims. (Cl. 210—487)



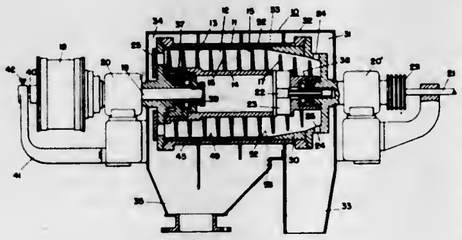
1. A filter comprising an imperforate cylindrical casing, closure means closing both ends of said casing and providing inlet and outlet ports thereto, at least one of said means being readily detachably connected to said casing to provide access to the interior thereof, and an elongated filter element carried within said casing between said closure means, said filter element being substantially star-shaped in cross section and comprising a single sheet of foraminous material formed into a series of ridges and valleys about a cylindrical axis, a support for said filter comprising a pair of longitudinally spaced star-shaped end members having radially extending fingers, one of said end members being formed with an axial opening therethrough, said fingers of one star-shaped member being aligned with the fingers of the other star-shaped member, said filter element having opposite ends fixed to said star-shaped members, a longitudinally extending strip fixed to and connecting each pair of aligned fingers inwardly of said filter element, there being a strip supporting each ridge of said filter element, said strips being corrugated with the folds thereof extending in radial directions, at least one annular member between said star-shaped members and in axial alignment therewith, and said strips being fixed to and supported on the periphery of said annular member.

3,096,282

IMPROVEMENT IN CENTRIFUGES

Herbert Trotter, Jr., Haverford, Pa., assignor to The Sharples Corporation, a corporation of Delaware

Filed Dec. 30, 1957, Ser. No. 706,061
2 Claims. (Cl. 233—7)



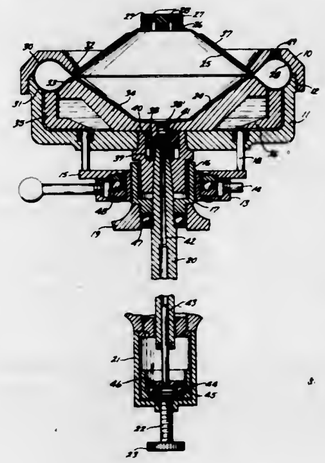
1. The combination with a centrifuge having a rotor for the separation of solids from liquid, said rotor having zones for the discharge of solids and liquid, means for impelling separated solids to the zone of discharge of solids, said last-mentioned means comprising an impeller for moving said solids relative to said rotor, and means for rotating said rotor and for actuating said impeller, of a flexible sleeve of thin, non-stretchable, wear-resistant material, the sleeve being received into said rotor in sliding fit and being circular in cross-section in contact with a corresponding area circular in cross-section on the inner periphery of said rotor, the inner surface of said sleeve being close to said impeller, said sleeve having a slit therein extending from one end thereof to the other so as to expand under centrifugal force upon rotation of said rotor to grip the inner periphery of said rotor, thereby preventing relative movement between said sleeve and said rotor upon relative movement of said impeller with respect to said sleeve in moving solids deposited by centrifugal force on the inner surface of said sleeve toward the zone of discharge of solids, and a plurality of circumferentially spaced ribs secured to the inner surface of said sleeve, one of said ribs being attached to one edge of said slit, said rib overlapping said slit in said sleeve.

3,096,283

CONTAINER FOR BLOOD AND MACHINE FOR SEPARATING PRECIPITATES FROM LIQUID BLOOD CONSTITUENTS

George N. Hein, San Carlos, Calif., assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey

Filed June 24, 1959, Ser. No. 822,561
5 Claims. (Cl. 233—20)



1. Apparatus for use in separating materials into components of relatively higher and relatively lower specific gravity which comprises: a drive shaft and a motor for causing the rotation thereof, a rotor head operatively connected to the drive shaft to be rotated thereby and formed with a circular recess concentric with the center of rotation, a separate removable liner in the recess in the rotor head in the form of a hollow circular body having upper and lower walls of sheet material spaced from each other to provide a central chamber and connected together around their peripheries to provide an annular chamber closed around the outer edge and communicating with the central chamber at its inner edge, said walls having annular confronting sealing zones between the two chambers, at least one of the walls being flexible so that sealing zones can be brought into sealing

engagement with each other, said rotor having clamping means spaced inwardly from the periphery of the recess in registry with the sealing zones of the liner to clamp said sealing zones into sealing engagement with each other, means for compressing the flexible wall of said liner around the annular chamber while the rotor head is rotating to express some of the materials from the annular chamber into the central chamber and means for thereafter operating said clamping means while said rotor head is rotating to cause said sealing zones to have sealing engagement and thereby seal off the materials of relatively higher specific gravity in the annular chamber from the materials of relatively lower specific gravity in the central chamber.

3,096,284

METHOD OF PREPARING GELLED AQUEOUS FLUID

Ralph L. Slate, Duncan, Okla., assignor to Halliburton Company, a corporation of Delaware

No Drawing. Filed July 5, 1960, Ser. No. 40,573
13 Claims. (Cl. 252—8.55)

1. A method of preparing a gelled aqueous fluid from a borate water, comprising the steps of:

(*a*) adding to said borate water a compound selected from the group consisting of polyhydroxy alcohols, monosaccharides, alkali metal fluorides, and ammonium fluorides, which forms a water soluble complex with the borate in said water in an amount which is at least equal on a chemical equivalent basis to the amount of the borate present in the borate water; and thereafter,

(*b*) adding to the resulting mixture a gum which tends to hydrate in the presence of water in an amount sufficient to form a gel characterized further in that the stability of the water soluble borate complex is sufficiently strong that the formation of a gum-borate complex is substantially prevented.

3,096,285

URETHANE CONTAINING LUBRICANT

Dietrich F. Huttenlocher, Philadelphia, Pa., and William M. Sweeney, Wappingers Falls, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 25, 1960, Ser. No. 51,762
12 Claims. (Cl. 252—47.5)

1. A lubricant composition comprising as the major component an ester formed from an acid selected from the group consisting of saturated aliphatic monocarboxylic acid and saturated aliphatic dicarboxylic acid of 6 to 12 carbon atoms and a saturated aliphatic alcohol of 6 to 18 carbon atoms containing 1 to 4 hydroxyl groups and as a minor component between 0.1 to 5.0 wt. percent of a urethane of the formula

$$R_y\left(O-\overset{X}{\overset{\|}{C}}-NH-R'\right)_y$$

wherein R_y is a saturated aliphatic hydrocarbon radical of from 3 to 20 carbon atoms, y is an integer from 1 to 8 and equals the valence of R_y, R′ is a monovalent hydrocarbon radical selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl of 1 to 40 carbon atoms and where X is selected from the group consisting of sulfur and oxygen.

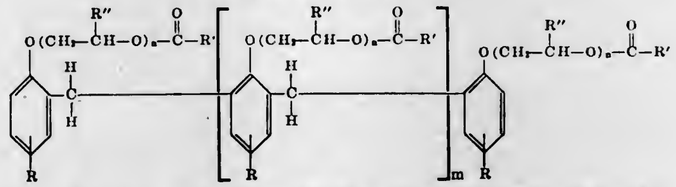
3,096,286

ESTERS OF AN OXYALKYLATED PHENOL-FORMALDEHYDE RESIN AS A LUBRICATING OIL DETERGENT

Joseph A. Verdol, Dolton, Ill., assignor, by mesne assignments, to Sinclair Research Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,425
3 Claims. (Cl. 252—57)

1. An oleaginous lubricant compo ition consisting essentially of a mineral oil of lubricating viscosity and about 0.1 to 10% of the oil to maintain in suspension sludge and varnish formed during use of said lubricant composition in an internal combustion engine of an oil-soluble polymer consisting essentially of an ester of an oxyalkylated phenol-formaldehyde resin wherein said oil-soluble polymer has the formula:



wherein: n=about 1 to 10; m=about 0 to 10; R=alkyl group, of about 4 to 15 carbon atoms; R′=alkyl group of about 11 to 19 carbon atoms, and R″ is selected from the group consisting of hydrogen and an alkyl radical of 1 to 2 carbon atoms.

3,096,287

METHOD OF MAKING Tl_2Te_3

Albrecht Karl Heinrich Theodor Rabenau, Aachen, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 6, 1960, Ser. No. 40,999
Claims priority, application Germany July 4, 1959
7 Claims. (Cl. 252—62.3)

1. In the method of making a semiconductor material comprising a single phase containing thallium and tellurium having a crystal structure isomorphous with that of Tl_2Te_3 and exhibiting a characteristic X-ray diffraction pattern containing substantially the line sequence indicated by the arrows in the graph of the accompanying drawing, wherein the abscissa is in degrees θ and the ordinate indicates relative line intensity, said single phase possessing semiconductive properties making it suitable for use in semiconductor devices, wherein the structure-forming materials containing thallium and tellurium are heated and reacted at a temperature below the decomposition temperature of the solid-state single phase for a period of time sufficient to form the said single phase, the improvement comprising, in order to reduce the heating time required to convert the structure-forming materials to the desired said single phase, carrying out the heating and reacting step in the presence of crystal nuclei containing thallium and tellurium and having a crystal structure isomorphous with that of said single phase.

3,096,288

FERRI-MAGNETIC SPINEL BODIES

Raymond V. Sarakauskas, North Olmsted, Mason C. Cox, Bay Village, and Norman R. Thielke, North Olmsted, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Dec. 23, 1957, Ser. No. 704,732
11 Claims. (Cl. 252—62.5)

1. A substituted ferrite material of spinel structure suitable for use as low loss cores in electric components, said material having the formula:

$$Li_2O \cdot bRO_2 \cdot cF_2O_3$$

wherein b ranges from 0 to 5 and c ranges from about 0.1 $(1+b+c)$ to 5; R stands for a cation selected from the group consisting of titanium and manganese, the sum of $(1+b+c)$ being from 3 to 7.

3,096,289

DIELECTRIC PLASTIC

Michael Joseph D'Errico and Mary Margaret Timney, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 11, 1961, Ser. No. 130,762
4 Claims. (Cl. 252—63.2)

1. A novel composition of matter consisting essentially of from about 5 to about 50 weight percent of the total composition of cyanoethylated hydroxyethyl cellulose and from about 50 to about 95 weight percent of cyanoethylated cellulose, each of said cyanoethylated materials having a degree of substitution of at least about 2.0, said composition being further characterized by a high dielectric constant and a low dissipation factor.

3,096,290

DEICER COMPOSITION

John J. Duane and Gene F. Tappan, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 31, 1960, Ser. No. 32,610
7 Claims. (Cl. 252—70)

1. A deicing composition consisting essentially of 25 to 95 weight percent normal propanol, 5 to 50 weight percent ethylene glycol, and the remainder water, the water content of said composition not exceeding 25 weight percent.

7. In a sealed container which is provided with a spray valve, a deicing composition which consists essentially of an active portion comprising 55 weight percent normal propanol, 30 weight percent ethylene glycol, and 15 weight percent water, an inhibitor portion of morpholine, and a propellant portion of carbon dioxide, said inhibitor portion being present in about 0.2 part by weight to every 100 parts by weight of said active portion and about 2.25 parts by weight of propellant to every 100 parts by weight of said active portion plus inhibitor portion.

3,096,291

PROCESS OF PREPARING DRY GRANULAR COMPOSITIONS

Paul J. Schauer and Riley N. Weston, St. Louis County, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 2, 1959, Ser. No. 784,471
6 Claims. (Cl. 252—99)

1. The process of preparing a dry, stable granular product comprising dichloroisocyanuric acid and sodium tripolyphosphate hexahydrate which comprises adding and mixing water droplets with an intimate mixture of powdery anhydrous dichloroisocyanuric acid and granular anhydrous sodium tripolyphosphate of a size such that 98% will pass through a 20 mesh screen and at least 98% will be retained on a 100 mesh screen and thereafter heating the granular product at a temperature in the range of 50° C. to 90° C., the amounts of said materials in parts by weight being as follows:

40 to 85 parts sodium tripolyphosphate
5 to 50 parts dichloroisocyanuric acid
10 to 17 parts water

wherein the parts are so selected as to total 100 parts.

3,096,292

CATIONIC BITUMINOUS EMULSIONS

Edward W. Mertens, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Aug. 21, 1959, Ser. No. 835,176
5 Claims. (Cl. 252—311.5)

1. A cationic oil-in-water type bituminous emulsion consisting essentially of from about 50 to about 75% by weight of asphalt, as the disperse bituminous phase; from about 50 to about 25% by weight of water, as the continuous aqueous phase; and, as the emulsifier for said asphalt in said water, from about 0.1 to about 2.0% by weight of a hydrohalide salt of an amino-amide of tetraethylene pentamine and tall oil acids, said salt being selected from the group consisting of hydrochloride and hydrobromide salts of mono-talloyl and ditalloyl amides of tetraethylene pentamine, said amides being characterized by the presence of from 3 to 4 basic nitrogen atoms reactive with halogen acids, and said emulsion being characterized by stability in storage at temperatures from about 120 to about 160° F. and by the absence of settlement of the asphalt, when so stored for at least two weeks.

3,096,293

METHOD OF INCREASING THE VISCOSITY OF AN AQUEOUS SOLUTION OF A DEACETYLATED POLYSACCHARIDE

Allene R. Jeanes, Peoria, and James H. Sloneker, Minier, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

Original application Dec. 30, 1959, Ser. No. 863,054, now Patent No. 3,000,790, dated Sept. 19, 1961. Divided and this application Oct. 31, 1960, Ser. No. 71,114
6 Claims. (Cl. 252—316)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of substantially increasing the viscosity of a 0.25 to 1.0 percent aqueous solution of the alkali-deacetylated derivative of the native polysaccharide B–1459 comprising adding about from 0.25 to 5.0 percent of a member selected from the group consisting of borax, calcium acetate, and potassium chloride thereto, said native polysaccharide B–1459 having been precipitated by the addition of methanol and potassium chloride to provide respective concentrations of 56 percent and 2 percent thereof in a centrifuged 72 to 96 hour aerobic whole culture fermentation of *Xanthomonas campestris* NRRL B–1459 and then isolated, the alkali-deacetylated derivative of said polysaccharide B–1459 having been obtained by dissolving, under nitrogen, 0.67 part of the isolated native polysaccharide B–1459 in 100 parts of air-free water containing 1.35 parts of potassium chloride, vigorously stirring in 34 parts of 0.20 N potassium hydroxide solution, maintaining the mixture at 25° C. for 2 hours under nitrogen, adjusting the pH to neutrality, precipitating the deacetylated polysaccharide by adding methanol to provide a concentration thereof of 44 percent by weight, and isolating the deacetylated polysaccharide.

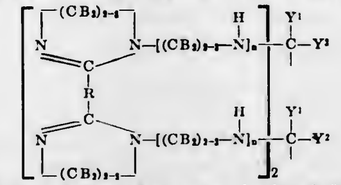
3,096,294

PROCESS OF INHIBITING CORROSION

William B. Hughes, Webster Groves, Mo., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application June 4, 1958, Ser. No. 739,660, now Patent No. 3,024,236, dated Mar. 6, 1962. Divided and this application Feb. 24, 1960, Ser. No. 10,544
4 Claims. (Cl. 252—390)

1. A method for inhibiting corrosion of ferrous metals contacting corrosive petroleum products comprising treating such metals with a compound of the formula



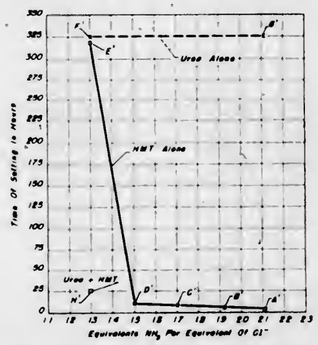
where R is a hydrocarbon group having 1–30 carbon atoms, B is a member selected from the group consisting

of hydrogen and lower alkyl, n is an integer, and Y^1 and Y^2 are selected from the group consisting of hydrogen and a hydrocarbon group.

3,096,295
MANUFACTURE OF SPHEROIDAL ALUMINA

Edward Michalko, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Nov. 24, 1959, Ser. No. 855,075
10 Claims. (Cl. 252—448)



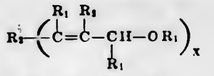
3. A method of manufacturing spheroidal alumina particles which comprises preparing an aluminum chloride hydrosol, separately preparing a mixture of urea and hexamethylenetetramine having a weight ratio of hexamethylenetetramine to urea of from about 0.3:1 to about 9:1 and an ammonia concentration within the range of about 0.75 to about 2.25 equivalents per equivalent of chloride ion contained in said hydrosol, commingling said mixture with said hydrosol, passing the resultant mixture in the form of droplets into an oil bath maintained at gelation conditions, retaining the droplets in said oil bath until they set to hydrogel spheroids, and thereafter subjecting said spheroids to drying and calcination at an elevated temperature sufficient to convert said hydrogel to alumina.

3,096,296
POLYETHERS FROM OXYGEN-CONTAINING ORGANIC COMPOUNDS

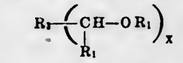
Gunther Nischk, Leverkusen, Hans Holtschmidt, Cologne-Stammheim, Wilhelm Bongard, Cologne-Nippes, and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,840
Claims priority, application Germany Apr. 5, 1957
7 Claims. (Cl. 260—2)

1. A method for preparing polyether compounds which comprises reacting a compound selected from the group consisting of compounds having the formula:



and compounds having the formula:



wherein R_1 represents a member of the group consisting of hydrogen, and alkyl radicals, R_2 represents a member of the group consisting of aliphatic, and aromatic radicals, R_3 represents an aromatic radical, and X is an integer of from 2 to 6, with an aliphatic polyhydric alcohol wherein the only OH groups present are the alcoholic hydroxyl groups in the presence of an acid catalyst.

3,096,297
ARTIFICIAL BOARD AND PROCESS FOR PREPARING SAME

Melvin E. Peterkin, Brookhaven, and Stewart S. Kurtz, Jr., Merion Station, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Mar. 15, 1961, Ser. No. 95,790
6 Claims. (Cl. 260—9)

1. An artificial board consisting essentially of a heated and compressed mixture of from 5.0 to 30.0 wt. percent of petroleum resin prepared by the condensation of an aldehyde and a hydrocarbon fraction containing aromatic hydrocarbons boiling in the range of from about 200° F. to about 650° F. in the presence of an acid catalyst, at condensation conditions suitable for the particular aldehyde, hydrocarbon fraction and catalyst employed, from 75.0 to 95.0 wt. percent of a cellulosic filler and from 0.1 to 6.0 wt. percent hexamethylenetetramine.

3,096,298
PREPARATION OF POLYVINYL ALCOHOL FROM POLYVINYL ACETATE AND AQUEOUS SOLUTION THEREOF

Kozo Fujii and Yasuji Oyanagi, Kurashiki City, Japan, assignors to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,006
4 Claims. (Cl. 260— 29.6)

1. A process for preparing polyvinyl alcohol which comprises homopolymerizing vinyl acetate in bulk in the presence of a polymerization initiator consisting essentially of a compound selected from the group consisting of the organic peroxides and azobis(isobutyronitrile) at a temperature of at least 135° C. and superatmospheric pressure to form homopolymeric polyvinyl acetate, and saponifying the polyvinyl acetate to form polyvinyl alcohol.

3,096,299
POLYVINYL FLOURIDE DISPERSED IN DIMETHYL SULFOXIDE

James Simpson Proctor, Amherst, Mass., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 17, 1961, Ser. No. 83,165
2 Claims. (Cl. 260—30.8)

1. A film-forming composition capable of being formed into a self-supporting film consisting essentially of particulate polyvinyl fluoride stably dispersed in dimethyl sulfoxide, said polyvinyl fluoride constituting from about 5% to about 85% of the total weight of the dispersion, the polyvinyl fluoride particles having a minimum average diameter of not less than about 0.005–0.010 micron.

3,096,300
POLYMERIC COMPOSITIONS OF MONOVINYL AROMATIC HYDROCARBONS AND SYNTHETIC RUBBER CONTAINING HIGH MOLECULAR WEIGHT POLYETHYLENE GLYCOLS OR MONOESTERS OF SUCH GLYCOLS

William E. Rittenhouse, Norwich, Conn., and Roger L. Briggs and Raymond M. Price, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 10, 1958, Ser. No. 747,603
7 Claims. (Cl. 260—31.4)

1. A polymeric composition of matter comprising from 85 to 97 percent by weight of a normally solid thermoplastic polymer consisting of at least one polymerized monovinyl aromatic hydrocarbon having a single benzene nucleus and a single vinyl radical directly attached to a carbon atom of the benzene nucleus and from 15 to 3 percent by weight of a rubbery copolymer containing in chemically combined form from 70 to 85 percent by weight of butadiene and from 30 to 15 percent of styrene, intimately incorporated with one another and with from 1 to 5 percent by weight, based on the total weight of the polymeric ingredients, of a polyoxyalkylene compound selected from the group consisting of polyethylene glycols having an average molecular weight between 4000 and 6000 and the monoesters of stearic acid and oleic acid which monoesters are the monostearates and monooleates of such polyethylene glycols.

3,096,301
HEAT TREATMENT OF BUTYL RUBBER WITH HALOGENATED BUTYL RUBBER AND A POLY (HALOMETHYL) PHENOL

Conrad J. Jankowski, Metuchen, James V. Fusco, Westfield, and Wilbur F. Fischer, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,054
14 Claims. (Cl. 260—43)

1. A method which comprises heat treating an admixture of a rubbery polymer of 70 to 99.5 parts by weight of a C_4–C_7 isoolefin and 30 to 0.5 parts by weight of a C_4–C_{10} conjugated diolefin, a halogenated rubbery polymer of the aforementioned type in which the halogen is selected from the group consisting of chlorine and bromine, and a poly (halomethyl) phenol at a temperature of between 250 and 350° F. for a period of time, in hours, equal to K divided by T minus 200, wherein T is the heating temperature in degrees Fahrenheit and K is between 50 and 600, cooling the heat treated admixture to a temperature below 250° F., followed by admixing curing agents with said admixture and curing the so treated admixture to produce a vulcanizate having a relative damping below 34.4%.

3,096,302
HEAT AND LIGHT STABLE POLYPROPYLENE COMPOSITIONS

Gordon C. Newland, Kingsport, Tenn., and Julian H. Chaudet, Fairfax, Va., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 13, 1961, Ser. No. 137,748
4 Claims. (Cl. 260—45.95)

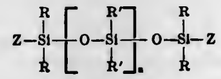
1. A heat and light stable polypropylene plastic composition comprising: a normally solid polypropylene polymer component and dispersed therein 4,4'-didodecycloxy-2-hydroxybenzophenone at a heat and light stabilizing concentration.

3,096,303
NOVEL ORGANOPOLYSILOXANE COMPOSITIONS

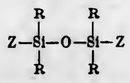
Joseph C. Caprino, Coboes, N.Y., and Robert J. Prochaska, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York

No Drawing. Filed May 25, 1954, Ser. No. 432,332
19 Claims. (Cl. 260—46.5)

1. Organopolysiloxanes having the general formula



where Z is a vinyl radical, R is a member selected from the class consisting of methyl, ethyl, phenyl and chlorinated phenyl radicals, R' is a monovalent hydrocarbon radical, and n represents a positive integer of from 50 to 10,000, the aforesaid organopolysiloxanes having been obtained by effecting interpolymerization between (1) a compound corresponding to the general formula



and (2) a compound corresponding to the general formula $[R'_2Sio]_m$, where Z, R and R' have the meanings given above, and m is an integer equal to from 3 to 10, inclusive.

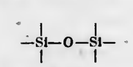
3,096,304
METHOD FOR THE PREPARATION OF ORGANOSTANNOSILOXANE

Toshizo Ishizuka, Tokyo, Mareyoshi Momoi, Hodogaya-ku, Yokohama, and Ryuichi Fujita, Tokyo, Japan, assignors to Shin-Etsu Chemical Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed Nov. 24, 1959, Ser. No. 855,025
Claims priority, application Japan Dec. 2, 1958
2 Claims. (Cl. 260—46.5)

1. Process for non-catalytic preparation of organostannosiloxane elastomer, vulcanizable at room-temperature, consisting essentially of

(1) reacting butyltin oxide with dimethylsilicon oil, said oil having



skeletons with the indicated unsatisfied valences of Si being bonded to methyl groups, said reaction effected above 80° C., and

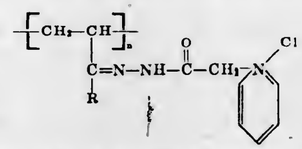
(2) adding ethyl silicate to the resultant product.

3,096,305
CONDENSATION PRODUCTS OF POLYVINYL-KETONES WITH HYDRAZIDES CONTAINING QUATERNARY NITROGEN GROUPS

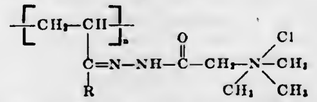
Thomas M. Laakso and Jack L. R. Williams, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Original application Sept. 3, 1957, Ser. No. 681,603, now Patent No. 2,972,537, dated Feb. 21, 1961. Divided and this application Dec. 23, 1960, Ser. No. 78,035
5 Claims. (Cl. 260—65)

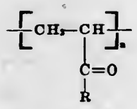
1. A quaternary salt of a resinous polymer consisting of from 70 to approximately 100% by weight in linear combination of a recurring structural unit selected from the group consisting of a recurring unit of the general structure:



and a recurring unit of the general structure:



the remainder of the polymer molecule being residual vinylketone units represented by a following general structure:



wherein n represents a positive whole number and R represents a member selected from the group consisting of

an alkyl group of 1 to 4 carbon atoms, a phenyl group and a tolyl group.

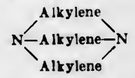
3,096,306

TRIALKYLENE DIAMINE INITIATORS FOR THE POLYMERIZATION OF FORMALDEHYDE

Henri Sidi, Paramus, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 13, 1961, Ser. No. 88,628
7 Claims. (Cl. 260—67)

1. A process for the production of high molecular weight polyoxymethylene which comprises contacting substantially anhydrous monomeric formaldehyde at a temperature in the range of approximately —100° C. to 80° C. with a polymerization initiator which is a trialkylene diamine having the formula



wherein the alkylene groups are saturated aliphatic hydrocarbon groups which contain from 2 to 4 carbon atoms, said polymerization initiator being present in the amount of approximately 0.00001 part to 0.05 part by weight per part by weight of said formaldehyde.

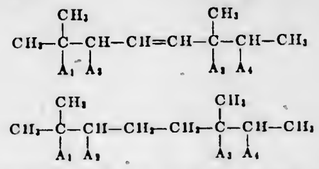
3,096,307

DIHYDROXY DIAMINE INITIATORS FOR THE POLYMERIZATION OF FORMALDEHYDE

Henri Sidi, Paramus, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 13, 1961, Ser. No. 88,656
12 Claims. (Cl. 260—67)

1. A process for the production of high molecular weight polyoxymethylene which comprises contacting substantially anhydrous monomeric formaldehyde at a temperature in the range of approximately —100° C. to 80° C. with a polymerization initiator selected from the group consisting of



and mixtures thereof where in each case two of the substituents A_1, A_2, A_3, and A_4 represent hydroxyl groups and the other two of said substituents represent nitrogen-containing groups selected from the group consisting of amino and alkylamino groups, said alkylamino group containing at least one alkyl group having from 1 to 4 carbon atoms, and where the combination of A_1 and A_2 and the combination of A_3 and A_4 each contain one hydroxyl group and one nitrogen-containing group, said polymerization initiator being present in the amount of about 0.00001 part to 0.05 part by weight per part by weight of said formaldehyde, and recovering a high molecular weight polyoxymethylene.

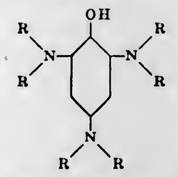
3,096,308

TRIAMINOPHENOL INITIATORS FOR THE POLYMERIZATION OF FORMALDEHYDE

Henri Sidi, Paramus, and Roy T. Gottesman, Glen Rock, N.J., assignors to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 16, 1961, Ser. No. 89,628
7 Claims. (Cl. 260—67)

1. A process for the production of high molecular weight polyoxymethylene which comprises contacting substantially anhydrous monomeric formaldehyde at a temperature in the range of approximately —100° C. to 80° C. with a polymerization initiator with a triaminophenol having the formula



wherein each R represents an alkyl group containing from 1 to 4 carbon atoms, said polymerization initiator being present in the amount of approximately 0.00001 part to 0.05 part by weight per part by weight of said formaldehyde.

3,096,309

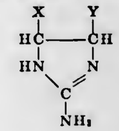
WATER SOLUBLE BASIC RESINS CONTAINING NITROGEN

Hans Schläpfer, Basel, and Jakob Bindler, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed May 16, 1958, Ser. No. 735,695
Claims priority, application Switzerland May 27, 1957
8 Claims. (Cl. 260—67.5)

1. A water-soluble nitrogen-containing basic resin obtained exclusively by heating to a temperature of about 120 to 280° C. a member selected from the group consisting of

(*a*) a 2-amino-imidazoline of the formula



(*b*) a salt of the said 2-amino-imidazoline with a weak volatile acid,

(*c*) a mixture of (*a*) and an inert high-boiling compound, and

(*d*) a mixture of (*b*) and an inert high-boiling compound,

wherein each of X and Y is a member selected from the group consisting of hydrogen and lower alkyl, and X and Y taken together represent $—CH_2—CH_2—CH_2—CH_2—$, until about 0.5 mole of ammonia per mole of imidazoline has been split off;

and separating, in the case of (*c*) and (*d*), the resulting resin from the solvent.

3,096,310

POLYMERIZATION PROCESS FOR POLYALLYLIC ESTERS

Charles A. Heiberger, Princeton, N.J., assignor to FMC Corporation, a corporation of Delaware

No Drawing. Filed May 22, 1959, Ser. No. 814,957
19 Claims. (Cl. 260—77.5)

1. The process of polymerizing to a fusible polymer capable of further polymerization a monomeric polyallylic ester selected from the group consisting of allyl and methallyl esters of a polybasic organic acid, comprising polymerizing said monomer in a homogeneous system with a catalytic amount of hydrogen peroxide, wherein the maximum amount of water present in the reaction system is that which is completely miscible with the reaction system throughout the polymerization reaction, said reaction system remaining homogeneous throughout the polymerization reaction, said maximum amount of water comprising about 1% of the reaction system.

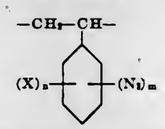
3,096,311

POLYMERIC AZIDES AND AZIDOPHTHALIC ANHYDRIDES

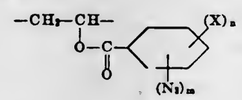
Stewart H. Merrill and Cornelius C. Unruh, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 29, 1955, Ser. No. 525,368
8 Claims. (Cl. 260—78.5)

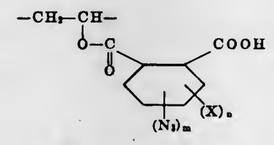
1. A film-forming organic polymer which becomes insoluble on exposure to light selected from the group consisting of (1) an azidostyrene polymer containing at least 5 mole percent of a recurring structural unit represented by the following general formula:



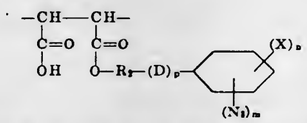
the remainder of the polymer molecule being a recurring structural unit represented by —R—, (2) a vinyl azidobenzoate polymer containing at least 5 mole percent of a recurring structural unit represented by the following general formula:



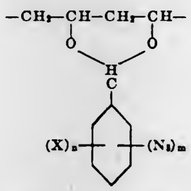
the remainder of the polymer molecule being a recurring structural unit represented by $—R_1—$, (3) a vinyl azidophthalate polymer containing at least 5 mole percent of a recurring structural unit represented by the following general formula:



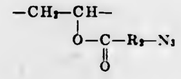
the remainder of the polymer molecule being a recurring structural unit represented by $—R_1—$, (4) a maleic acid azidoester copolymer containing at least 5 mole percent of a recurring structural unit represented by the following general formula:



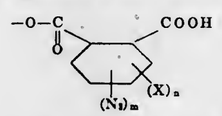
the remainder of the polymer molecule being a recurring structural unit represented by —R—, (5) a polyvinyl azidobenzalacetal containing at least 5 mole percent of a recurring structural unit represented by the following general formula:



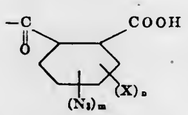
the remainder of the polymer molecule being a residual recurring structural unit selected from the group consisting of a vinyl alcohol unit, a vinyl ester unit, and a vinyl alcohol unit in combination with a vinyl ester unit, the said vinyl ester unit being a vinyl ester of a saturated fatty acid containing from 1 to 4 carbon atoms, (6) a polyvinyl azidocarboxylic acid ester containing at least 5 mole percent of a recurring structural unit represented by the following general formula:



the remainder of the polymer molecule being a residual recurring unit selected from the group consisting of a vinyl chloroacetate unit, a vinyl α-chloropropionate unit and a vinyl ω-chlorobutyrate unit, (7) a cellulose carboxylic acid ester wherein at least 5 mole percent of the cellulose units have attached thereto through carbon atoms of the cellulose unit an azidoacyloxy group represented by the following general formula:



the remainder of the cellulose molecule being residual cellulose acetate units, and (8) an amidated gelatin wherein at least 5 mole percent of the gelatin units have attached thereto through a nitrogen atom of the gelatin unit an azidoacyl group represented by the following general formula:



the remainder of the gelatin molecule being residual gelatin units, wherein in each occurrence *m* represents a digit of from 1 to 2, *n* represents a digit of from 0 to 2, X represents a member selected from the group consisting of a chlorine atom, an alkyl group containing from 1 to 4 carbon atoms, an alkoxy group containing from 1 to 4 carbon atoms and a nitro group, *p* represents a digit of from 0 to 1, R_2 represents an alkylene group containing from 1 to 4 carbon atoms, D represents a member selected from the group consisting of an oxygen atom, a sulfur atom, an imino group and an alkylimino group wherein the alkyl group contains from 1 to 4 carbon atoms, R represents a recurring structural unit selected from the group consisting of ethylene, isobutylene, butadiene-1,3, styrene, acrylic acid, methacrylic acid, maleic acid, citraconic acid, itaconic acid, maleic anhydride, acrylamide, methacrylamide, N-alkyl acrylamide, N,N-dialkyl acrylamide, N-alkyl methacrylamide, N,N-dialkyl methacrylamide, acrylonitrile, methacrylonitrile, an alkyl acrylate, an alkyl methacrylate, vinyl chloride, vinylidene chloride and a vinyl alkyl ketone, the said alkyl group in each instance containing from 1 to 4 carbon atoms, and R_1 represents a recurring structural unit selected from the group consisting of ethylene, isobutylene, butadiene-1,3, vinyl alcohol, a vinyl ester of a saturated fatty acid of 2 to 4 carbon atoms, a vinyl alcohol unit in combination with said vinyl ester unit, an isopropenyl ester of a saturated fatty acid of 2 to 4 carbon atoms, vinyl benzoate, vinyl carbamate, a vinyl N-alkyl carbamate, a vinyl alkyl ketone, a vinyl alkyl ether, vinyl acetaldehyde acetal, vinylpropionaldehyde acetal and vinyl butyraldehyde acetal, the said alkyl group in each instance containing from 1 to 4 carbon atoms.

3,096,312
POLYMERS AND COPOLYMERS OF 5-VINYLTETRAZOLE

Ronald A. Henry, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Aug. 26, 1960, Ser. No. 52,310
7 Claims. (Cl. 260—78.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The copolymer of 1,1-bis(5-tetrazolyl)ethylene and vinyl acetate having the empirical formula

$$-[-CH_2C(CHN_4)_2-CH-CH(OCOCH_3)-]_x.$$

3,096,313
COPOLYMER OF METHYL METHACRYLATE AND GLYCIDYL METHACRYLATE

Edwin Benjamins and Barnard Mitchel Marks, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 20, 1958, Ser. No. 736,444
1 Claim. (Cl. 260—86.1)

A thermoplastic composition having improved melt viscosity stability, melt strength, and injection moldability consisting essentially of a copolymer of methyl methacrylate and glycidyl methacrylate containing from 0.01% to 0.40% by weight of copolymerized glycidyl methacrylate units.

3,096,314
POLYMER CROSSLINKING TECHNIQUE AND COMPOSITIONS

David Alwyn Stivers and Don L. Peterson, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed June 17, 1960, Ser. No. 36,744
6 Claims. (Cl. 260—87.7)

1. A method for preventing scorch in the curing of highly fluorinated polymers which comprises admixing with 100 parts by weight of an elastomeric copolymer of vinylidene fluoride and a member of the group consisting of perfluoropropene and chlorotrifluoroethylene, between about 0.1 and about 10 parts of hydroquinone, and between about 0.1 and about 10 parts by weight of a non-aromatic polyfunctional amine salt of the formula

YHN—R—X

wherein R is selected from the group consisting of cyclic and acyclic alkylene radicals having from 2 to 15 carbon atoms, Y is selected from the group consisting of hydrogen, alkyl or aryl, and X is a carbamic radical wherein one of the oxygen atoms is bonded to a hydrogen atom.

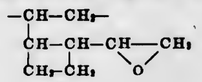
3,096,315
1-(1,2-EPOXYETHYL)-2-VINYLCYCLOBUTANE AND POLYMERS THEREOF

Samuel W. Tinsley and Donald L. MacPeek, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 27, 1961, Ser. No. 105,879
16 Claims. (Cl. 260—88.3)

1. 1-(1,2-epoxyethyl)-2-vinylcyclobutane.

2. A fusible polymer of 1-(1,2-epoxyethyl)-2-vinylcyclobutane which ranges from a viscous liquid to a solid and which contains the following recurring structural unit:



3,096,316
POLYMERIZATION OF PROPYLENE WITH A CATALYST PREPARED BY GRINDING Al AND $TiCl_3$ IN THE PRESENCE OF H_2

Donald F. Hoeg, Kensington, Md., assignor to W. R. Grace & Co., Clarksville, Md., a corporation of Connecticut

No Drawing. Filed July 7, 1959, Ser. No. 825,410
4 Claims. (Cl. 260—93.7)

1. The method of preparing a catalyst which comprises grinding a mixture of aluminum metal and titanium trichloride in an initial $Al:TiCl_3$ weight ratio of 0.5 to 100:1 in the presence of hydrogen until hydrogen is absorbed into the mixture to provide a hydrogen:aluminum ratio of substantially 1 atom of hydrogen per 2 atoms of aluminum.

3,096,317
METHOD FOR PURIFYING POLYOLEFINS BY FILTRATION UNDER A PARTIAL PRESSURE OF DISSOLVED GAS

David C. Hull, Hugh J. Hagemeyer, Jr., and John W. Wilder, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,414
8 Claims. (Cl. 260—93.7)

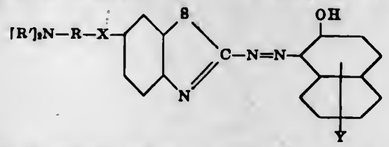
1. The method for removing solid impurities from a high molecular weight macromolecular substance which comprises filtering liquified macromolecular substance having a substantially high viscosity at which filtration is difficult, at a temperature at which said impurities are solid and under a sufficient partial pressure of a gas soluble in said liquified macromolecular substance to reduce substantially the viscosity of said liquified macromolecular substance.

3,096,318
BENZOTHIAZOLE AZO β-NAPHTHOL DYE COMPOUNDS

James M. Straley, John G. Fisher, and Raymond C. Harris, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

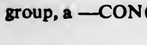
No Drawing. Filed Jan. 18, 1960, Ser. No. 2,827
10 Claims. (Cl. 260—146)

1. The azo compounds selected from the group consisting of the monoazo compounds having the formula:



wherein R represents an alkylene radical having 2 to 3 carbon atoms, R′ represents an alkyl radical having 1 to 4 carbon atoms, X represents a member selected from the group consisting of a thio radical and a sulfonyl radical, $N[R']_2$ collectively represents a member selected from the group consisting of the morpholinyl and piperidyl radicals and Y represents a member selected from the group consisting of a hydrogen atom, a bromine atom, the sulfamyl group, a

group, a $-SO_2N(alkyl)_2$ group, a



group, a $-CON(alkyl)_2$ group and a

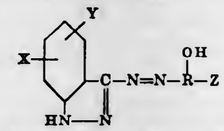
group, wherein R_1 represents a member selected from the group consisting of a phenyl group and a methoxyphenyl group and wherein alkyl as used herein represents an alkyl radical having 1 to 4 carbon atoms and their 1:2 metal complexes containing a metal selected from the group consisting of cobalt, nickel and chromium, said azo compounds being devoid of a water-solubilizing group.

3,096,319
COMPLEX METAL COMPOUNDS OF WATER-INSOLUBLE MONOAZO 3-INDAZOLE DYESTUFFS

Ulrich Dreyer and Werner Kirst, Offenbach (Main), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,951
Claims priority, application Germany Jan. 14, 1960
6 Claims. (Cl. 260—147)

1. A complex metal compound containing a metal selected from the group consisting of copper, cobalt and nickel, of an azo-dyestuff having the following formula



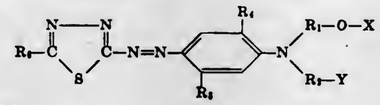
wherein X represents a member selected from the group consisting of a hydrogen atom, chlorine atom, a methyl, methoxy, ethoxy, trifluoromethyl, sulfonic acid diethylamide, carboxylic acid amide, methyl sulfone, phenyl sulfone, benzoylamino, acetyl and nitro group, Y stands for a member selected from the group consisting of a hydrogen atom and a methoxy group, R represents a member selected from the group consisting of benzene, naphthalene and carbazole, and Z stands for a member selected from the group consisting of a hydrogen atom, a hydroxy, methoxy, benzoyl, carboxylic acid methyl ester and sulfonic acid amide group, and wherein the group OH stands in a position adjacent to the azo group.

3,096,320
WATER-INSOLUBLE MONOAZO AND DISAZO 1,3,4-THIADIAZOLE DYESTUFFS

Guenter Lange, Ludwigshafen (Rhine), Gartenstadt, and Gerhard Luetzel, Hans Guenter Wippel, Hans Weidinger, and Joachim Kranz, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 28, 1960, Ser. No. 17,770
Claims priority, application Germany Mar. 28, 1959
6 Claims. (Cl. 260—158)

1. A water-insoluble azo dyestuff of the general formula



in which:

R_1 represents a radical selected from the class consisting of an alkylene group with 2 to 6 carbon atoms, a chloralkylene group with 3 to 4 carbon atoms and a cyanalkylene group with 4 carbon atoms;

X represents a substituent selected from the class consisting of a hydrogen atom, an alkyl group with 1 to 3 carbon atoms, a hydroxyalkyl group with 2 to 3 carbon atoms, a cyanalkyl group with 2 to 4 carbon atoms and the acyl radical of an aliphatic monocarboxylic acid with 1 to 4 carbon atoms;

R_2 represents a radical selected from the class consisting of an alkylene group with 2 to 6 carbon atoms, a cyanalkylene group with 3 to 4 carbon atoms and a chloralkylene group with 2 to 4 carbon atoms;

Y represents a substituent selected from the class consisting of hydrogen, hydroxy, alkoxy with 1 to 3 carbon atoms, hydroxyalkoxy with 2 to 3 carbon atoms, a cyanalkoxy group with 3 to 4 carbon atoms and an acyloxy radical of an aliphatic monocarboxylic acid with 1 to 4 carbon atoms;

R_2—Y together also representing a methyl group;

R_3 represents a substituent selected from the class consisting of hydrogen, methyl, ethyl, chlorine, trifluoromethyl and acetylamino;

R_4 represents a substituent selected from the class consisting of hydrogen, methoxy and ethoxy; and

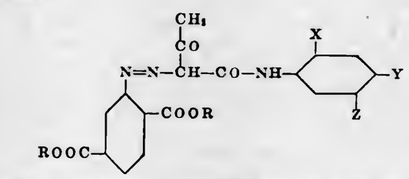
R_5 represents a substituent selected from the class consisting of methyl, ethyl, cyclohexyl, phenyl, tolyl, chlorophenyl and nitrophenyl.

3,096,321
WATER-INSOLUBLE MONOAZO-DYESTUFFS

Joachim Ribka, Offenbach (Main), Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 29, 1961, Ser. No. 120,512
Claims priority, application Germany July 2, 1960
3 Claims. (Cl. 260—193)

1. The water-insoluble monoazo-dyestuffs having the formula



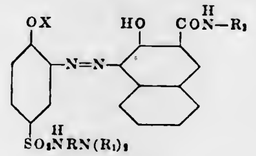
wherein X represents a member selected from the group consisting of a hydrogen atom, a lower alkyl group, a lower alkoxy group and an acetylamino group, Y represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a lower alkyl group, a lower alkoxy group, a benzoylamino group and an acetylamino group, Z represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a lower alkyl group, a lower alkoxy group and an acetylamino group, and R represents a lower alkyl group.

3,096,322
AMINOBENZENESULFONAMIDE AZO DYES FOR ACRYLIC FIBERS

James M. Straley and Raymond C. Harris, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,560
6 Claims. (Cl. 260—204)

1. The azo compounds having the formula:



wherein X represents a member selected from the group consisting of a methyl radical and an ethyl radical, R represents an alkylene radical having 2 to 3 carbon atoms, R_1 represents an alkyl radical having 1 to 4 carbon atoms, $N(R_1)_2$ collectively represents a member selected from the group consisting of the morpholinyl radical and the piperidyl radical and R_2 represents a monocyclic aryl nucleus of the benzene series devoid of a water-solubilizing group.

3,096,323

GLUCOSE ISOBUTYRAL

George P. Touey and John E. Kiefer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 4, 1959, Ser. No. 838,039
2 Claims. (Cl. 260—209)

1. Glucose isobutyral containing in its structure from 2.5 to 3.5 isobutyraldehyde molecules and less than 4% hydroxyl groups.

3,096,324

PROCESS FOR MANUFACTURING SUGAR ESTERS

Rex H. Goins and Herman E. Davis, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,519
8 Claims. (Cl. 260—234)

4. The method of preparing sugar esters which comprises reacting a sugar selected from the group consisting of the mono- and di-saccharides with a lower fatty acid anhydride, in excess of the amount required to esterify the sugar, to which has been added about 1% barium hydroxide, based on the weight of the sugar.

3,096,325

PREPARATION OF 3-CHLOROCAPROLACTAM

Roger J. Tull, Plainfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 29, 1962, Ser. No. 169,655
5 Claims. (Cl. 260—239.3)

1. A process for the preparation of 3-chlorocaprolactam which comprises reacting N-benzoyl-3-chlorocaprolactam with sulfuric acid.

3,096,326

PREPARATION OF α-NITRO ε-CAPROLACTAM

Johannes de Haan and Johan P. H. Von Den Hoff, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

Filed Feb. 19, 1962, Ser. No. 173,885
Claims priority, application Netherlands Feb. 22, 1961
6 Claims. (Cl. 260—239.3)

1. In a process for the preparation of α-nitro ε-caprolactam by nitration of 2-chloroazacyclo 2,3-heptene 1-carbochloride and hydrolysis of the nitration product in two steps wherein 3-nitroazacycloheptane-2-one 1-carbochloride is formed in the first step and said nitro compound is hydrolized further into α-nitro ε-caprolactam, the improvement which comprises carrying out said first step in a water-immiscible organic solvent for 3-nitroazacycloheptane-2-one 1-carbochloride, after which the resulting liquid is separated into an aqueous and an organic phase, and the latter phase is re-contacted with water in the second step.

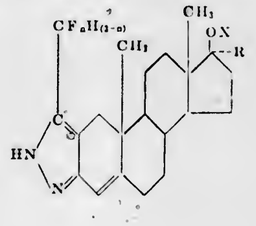
3,096,327

FLUORINATED PYRAZOLE STEROID COMPOUNDS

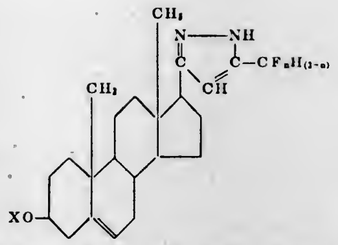
Marcel Harnik, Morristown, Tenn., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 26, 1961, Ser. No. 162,230
4 Claims. (Cl. 260—239.5)

1. A fluorinated steroid pyrazole compound selected from the group consisting of



and



wherein X is selected from the group consisting of hydrogen and lower alkanoyl radicals, R is selected from the group consisting of hydrogen and lower alkyl radicals and *n* is a positive integer from 1 to 3, inclusive.

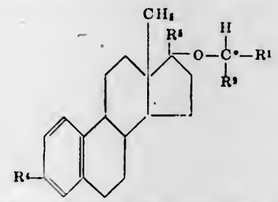
3,096,328

ESTRADIOL DERIVATIVES

Poul Borrevang, Copenhagen, Denmark, assignor to Lovens Kemiske Fabrik ved A. Kongsted, Ballerup, Denmark, a firm

No Drawing. Filed July 3, 1961, Ser. No. 121,380
Claims priority, application Great Britain July 13, 1960
18 Claims. (Cl. 260—239.55)

1. Novel estradiol derivatives having the general formula:



(I)

as the individual isomers and mixtures thereof, in which formula R^1 is a substituted alkyl group having from 1 to 4 carbon atoms in the carbon chain and being substituted with at least one chlorine atom, and R^2 and R^4 are selected from the class consisting of a hydroxy group, and its esters with an acid group selected from the group consisting of formyl, acetyl, propionyl, butyryl, isobutyryl, cyclopentylpropionyl, benzoyl, phenyl-propionyl, furoyl, enanthyl, glycyl, succinyl, and glutaryl groups, and where the isomery is due to the carbon atom of the hemiacetal group which is indicated by an asterisk.

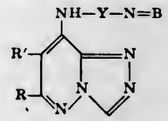
3,096,329

TRIAZOLO[b]PYRIDAZINES

Edgar Alfred Steck, Guilderland Township, Albany County, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 15, 1957, Ser. No. 690,195
12 Claims. (Cl. 260—250)

1. A compound having the formula



wherein R is a member of the group consisting of lower-alkyl and monocarbocyclic aryl, R′ is a member of the group consisting of hydrogen and lower-alkyl, Y is a member of the group consisting of lower-alkylene, hydroxy lower-alkylene and monocarbocyclic aryl lower-alkylene, in which the free valences are on different carbon atoms, and N=B is a member of the group consisting of di-lower-alkylamino, 1-pyrrolidyl, 1-piperidyl, and 4-morpholinyl; said monocarbocyclic aryl in each instance being a member of the group consisting of phenyl and phenyl substituted by from one to three groups selected from lower-alkyl, lower-alkoxy and halogen.

7. 6 - methyl - 8 - (3 - diethylaminopropylamino) - s-triazolo[b]pyridazine.

3,096,330

PRODUCTION OF PYRAZINOIC ACID

Harold Gainer, Southgate, and Moses Cenker, Trenton, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Feb. 3, 1960, Ser. No. 6,352
7 Claims. (Cl. 260—250)

3. A process for the production of pyrazinoic acid, which comprises, adding a permanganate selected from the group consisting of sodium, potassium, lithium and calcium permanganates to an aqueous solution of ethylpyrazine while continuously stirring the resulting reaction mixture, the permanganate being added portionwise at such a rate and the temperature of the reaction mixture being so controlled that the color of the permanganate is removed, separating and removing precipitated manganese dioxide from the reaction mixture and adding an acid to the reaction mixture which is stronger than pyrazinoic acid to precipitate pyrazinoic acid.

3,096,331

CHLORINATION OF ALKYLPYRAZINES

William K. Langdon, Grosse Ile, and Michael Kokorudz, Southgate, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Mar. 17, 1961, Ser. No. 96,362
10 Claims. (Cl. 260—250)

1. A liquid phase process of preparing mononuclear-chlorinated alkylpyrazines which comprises adding chlorine to a liquid solvent selected from the group consisting of carbon tetrachloride and chloroform and subsequently adding thereto an alkylpyrazine selected from the group consisting of methylpyrazine, ethylpyrazine, 2,5-dimethylpyrazine and 2,5-diethylpyrazine while maintaining the solvent at a temperature from about 25° C. to about the boiling point of the solvent; the process being further characterized by having a minimum initial chlorine:alkylpyrazine mol weight ratio of 2:1 and having a chlorine concentration with respect to the solvent of at least 1% by weight.

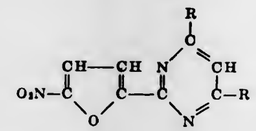
3,096,332

4,6 - BIS(TRIHALOMETHYL) OR 4,6 - DILOWERALKYL-2-(5-NITROFURYL)-PYRIMIDINES

Anne Mary Von Esch, North Chicago, Ill., and William Reese Sherman, University City, Mo., assignors to Abbott Laboratories, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 19, 1961, Ser. No. 146,364
5 Claims. (Cl. 260—251)

1. A compound of the formula



wherein each R is a member of the group consisting of loweralkyl and trihalomethyl.

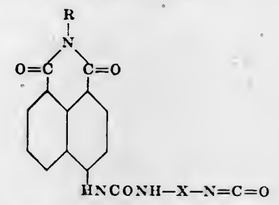
3,096,333

REACTION OF 4 - AMINO - 1,8 - NAPHTHALIMIDES AND AROMATIC DIISOCYANATES, AND RESULTING PRODUCTS

Robert C. Wilson, Cranford, N.J., and Harlan B. Freyermuth, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,418
14 Claims. (Cl. 260—281)

8. A dyestuff having the formula:



wherein R is a member of the group consisting of H, alkyl having from 1 to about 18 carbon atoms, lower hydroxyalkyl, lower carboxyalkyl, lower cycloalkyl, aralkyl wherein the alkyl is a lower alkyl and the aryl contains no more than 2 benzene nuclei, aryl containing no more than two benzene nuclei, and substituted derivatives of said aryl wherein the substituted substituent is selected from the group consisting of lower alkyl, lower alkoxy, and hydroxyl, and X is the aromatic moiety of a homocyclic aromatic diisocyanate containing no more than 2 benzene nuclei, nuclei of said moiety having substituents thereon selected from the group consisting of H, lower alkyl and lower alkoxy.

3,096,334

6-METHOXY-8-(5 - n - PROPYLAMINOPENTYLAMINO)QUINOLINE, ITS SALTS AND ITS PREPARATION

Edgar Alfred Steck, Metuchen, N.J., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 9, 1957, Ser. No. 633,199
4 Claims. (Cl. 260—286)

1. A compound selected from the group consisting of 6-methoxy-8-(5-n-propylaminopentylamino)quinoline and non-toxic acid addition salts thereof.

4. 6 - methoxy-8-(5-n-propylaminopentylamino)quinoline monophosphate.

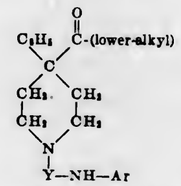
3,096,335

LOWER ALKYL 1-(PHENYLAMINOALKYL)-4-PHENYL-4-PIPERIDYL KETONES

Bill Elpern, Walnut Creek, Calif., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 12, 1958, Ser. No. 734,389
9 Claims. (Cl. 260—293.4)

1. A member of the group consisting of compounds of the formula



where C_6H_5 is phenyl, Y is alkylene having from two to six carbon atoms, lower-alkyl has from one to six carbon atoms, and Ar is selected from the group consisting of unsubstituted-phenyl and phenyl substituted by from one to three substituents selected from nitro, amino, (lower-alkyl)amino, (lower-alkanoyl)amino, lower-alkoxy, low-

er-alkylmercapto, lower-alkylsulfonyl, hydroxy and halo; and their acid-addition salts.

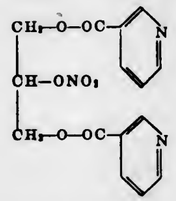
3,096,336

GLYCERYL MONONITRATE DINICOTINATE

Edgar A. Ferguson, Jr., Brooklyn, N.Y., assignor to Amfre-Grant, Inc., Brooklyn, N.Y.

No Drawing. Filed Jan. 22, 1962, Ser. No. 167,949
1 Claim. (Cl. 260—295.5)

Glyceryl mononitrate dinicotinate of the following formula:



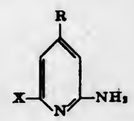
3,096,337

PROCESS FOR THE PREPARATION OF AMINO-HALOGENOPYRIDINES

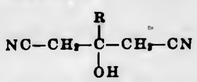
Francis Johnson, West Newton, Mass., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,661
6 Claims. (Cl. 260—296)

1. A process for the preparation of a compound of the formula



wherein R is a member selected from the group consisting of hydrogen, lower alkyl and phenyl and X is a halogen atom selected from the group consisting of bromine and iodine, which process comprises reacting in an inert organic solvent at room temperature a compound selected from the group consisting of



where R has the same meaning as above and the corresponding unsaturated compound formed upon splitting out of water with an anhydrous hydrogen halide of the formula HX where X has the same meaning as above and recovering said first-named compound.

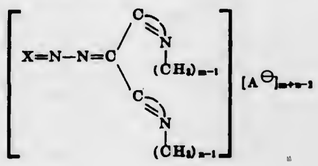
3,096,338

NEW DIAZAPOLYMETHINE DYES CONTAINING THREE HETEROCYCLIC RINGS

Johannes Dehnert, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Apr. 4, 1961, Ser. No. 100,510
Claims priority, application Germany Apr. 9, 1960
7 Claims. (Cl. 260—299)

1. A dye of the formula



in which:

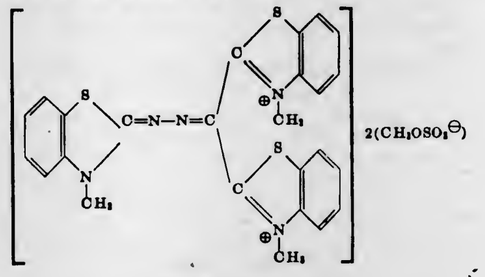
X represents a heterocyclic radical selected from the class consisting of 3-methyl-dihydrothiazolylidene-(2), 3-methyl-dihydrobenzothiazolylidene-(2), 3-methyl-6-methoxy - dihydrobenzothiazolylidene-(2), 2,4 - dimethyl-5-phenyl-dihydro-1,2,4-triazolylidene-(3), 3-methyl-5-phenyl - dihydro-1,3,4-thiodiazolylidene-(2), 2,4-dimethyl-dihydro-1,2,4-triazolylidene-(3), 1,2-dimethyl-5-chloro - dihydroindazolylidene-(3), 3-methyl-dihydro-1,3,4-oxadiazolylidene-(2), 1,2-dimethyl-dihydropyrazolylidene-(3), 1,4-dimethyl-dihydrotetrazolylidene-(5), 2 - methyl - dihydrocinnolinylidene-(3), 2-methyl-dihydropyridazinylidene-(3), 1,2 - dimethyl-dihydroindazolylidene - (3), 1-methyl-dihydroquinolinylidene-(2), the moiety

represents a heterocyclic radical selected from the class consisting of 1-methyl-benzimidazolyl-(2), benzothiazolyl-(2), 3-hydroxyquinoxalyl-(2), 1-phenyl-benzimidazolyl-(2), quinolyl-(2), pyridyl-(2), thiazolyl-(2), benzoxazolyl-(2), 1-methyl-5-chlorobenzimidazolyl-(2) and 1-methyl-perimidyl-(2);

$A^{\ominus}$ represents an anion selected from the class consisting of chloride, bromide, iodide, nitrate, perchlorate, sulfate, phosphate, tetrachlorozincate, tetrabromozincate, tetrafluoborate, toluenesulfonate, and methylsulfate; and

m and *n* each represent an integer of from 1 to 2.

4. A dye of the formula:



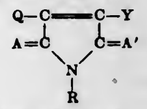
3,096,339

SELECTED NEGATIVELY SUBSTITUTED MALEIMIDE DYES

Elmore L. Martin, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

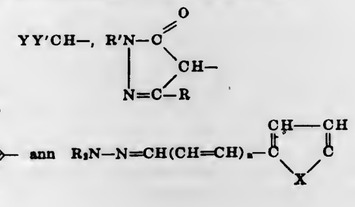
No Drawing. Filed Feb. 19, 1959, Ser. No. 794,239
8 Claims. (Cl. 260—310)

1. Compounds of the formula



wherein A and A' are chalcogens of atomic number less than 17, Q being a member of the group consisting of

R'_2NAr-, $RCONHNRAr-$, $(R'_2NAr)_2C{=}CH-$



---

wherein Ar represents arylene which is hydrocarbon of 6 to 20 carbon atoms; R' is from 1 to 20 carbon atoms and is a member of the class consisting of hydrocarbon radicals, β-alkoxyethyl, β-acyloxyethyl where the acyl group contains only carbon and hydrogen in addition to the oxygen of the carbonyl group, β-cyanoethyl and β-trialkylammoniumethyl halide; X is a member of the group consisting of O, S, and NR; Y and Y' are members of the group consisting of —CN, —COOR, —COR, —$CONR_2$, —$CSNR_2$, —SO_2R, —NO_2, —NR_2^+, and —SR_2^+; Z is a member of the group consisting of lower alkyl, halogen, —SO_2Na, and Y; Z' is a member of the group consisting of hydrogen and Z, and taken together with R'' and the carbons to which Z' and R'' are attached is the benzene ring; R and R'' are members of the class consisting of hydrogen and hydrocarbon radicals of 1 to 20 carbon atoms; and *n* represents a cardinal number selected from the group consisting of 0 and 1.

5. 3-cyano-2,5-dioxo-4(3-methyl-1-phenyl-5-pyrazolon-4-yl)-3-pyrroline.

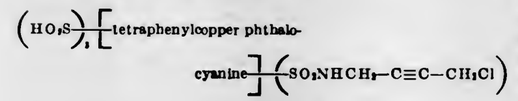
3,096,340

NEW PHTHALOCYANINE DYES

Arnold Tartter, Lambsheim, Pfalz, Werner Rohland, Ludwigshafen (Rhine), Dieter Ludsteck, Ludwigshafen (Rhine)-Gartenstadt, and Rudolf Schroedel, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,391
Claims priority, application Germany Oct. 15, 1959
4 Claims. (Cl. 260—314.5)

4. The dye of the formula:



3,096,341

9-CYANOETHYL DODECAHYDROCARBAZOLE

Chester S. Sheppard, Pittsburgh, and Myron H. Wilt, Monroeville, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,263
1 Claim. (Cl. 260—315)

The compound 9-(β-cyanoethyl-)dodecahydrocarbazole.

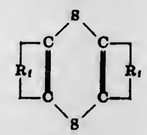
3,096,342

POLYFLUORINATED 1,4-DITHIIN COMPOUNDS AND THE PROCESS OF PREPARATION

Carl G. Krespan, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 19, 1960, Ser. No. 56,649
11 Claims. (Cl. 260—327)

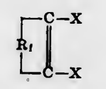
1. Compounds of the formula



where R_f is a saturated divalent radical in which the terminal members are —CF_2— selected from the group consisting of polyfluorohydrocarbon, oxygen-interrupted polyfluorohydrocarbon and sulfur-interrupted polyfluorohydrocarbon, said divalent radical having a continuous chain of 2–4 carbons and at most one intracatenic atom other than carbon.

2. Ocotafluoro - 2,7 - dithiatricyclo[6.2.0.0^{3,6}]deca-1(8),3(6)-diene.

5. The process which comprises reacting a metal sulfide with a polyfluorinated cyclic olefin of the formula



wherein X is halogen and R_f is a saturated divalent radical in which the terminal members are —CF_2— selected from the group consisting of polyfluorohydrocarbon, oxygen-interrupted polyfluorohydrocarbon and sulfur-interrupted polyfluorohydrocarbon, said divalent radical having a continuous chain of 2–4 carbons and at most one intracatenic atom other than carbon.

3,096,343

METHOD FOR ISOLATING AROMATIC CARBOXYLIC ACIDS

Ovell Francis Bennett, Woodbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 20, 1960, Ser. No. 44,017
13 Claims. (Cl. 260—328)

1. A method for the isolation of an aromatic carboxylic acid selected from the group consisting of pyromellitic acid, trimellitic acid, bis(4-carboxyphenyl)-sulfone, 2,6-anthraquinonedicarboxylic acid and 2,7-dicarboxythiaxanthone-5,5-dioxide which comprises dissolving a mixture containing the acid to be isolated in hot N,N-dimethylformamide, cooling the solution thus formed to precipitate an adduct of N,N-dimethylformamide and said acid, separating the adduct from the remaining solution, and heating the adduct to drive off the N,N-dimethylformamide.

6. A process according to claim 1, wherein the aromatic carboxylic acid is 2,7-dicarboxythiaxanthone-5,5-dioxide.

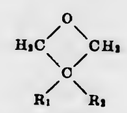
3,096,344

PERFLUOROALKYLOXETANES

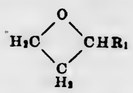
Leslie C. Case, Lafayette, Ind., assignor to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed May 9, 1961, Ser. No. 108,720
3 Claims. (Cl. 260—333)

1. An oxetane selected from the group consisting of oxetanes of the formula



wherein R_1 is a perfluoro lower alkyl group of 1 to 9 carbon atoms and R_2 is selected from the group consisting of perfluoro lower alkyl groups of 1 to 9 carbon atoms, lower alkyl of 1 to 2 carbon atoms and hydrogen, and oxetanes of the formula



wherein R_1 is a perfluoro lower alkyl group of 1 to 9 carbon atoms.

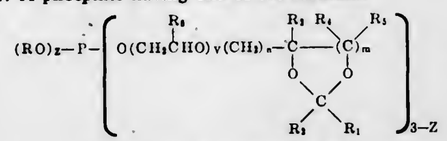
3,096,345
ACETAL AND KETAL PHOSPHITES

Ingenuin Hechenbleikner and Kenneth R. Molt, Cincinnati, Ohio, assignors to Carlisle Chemical Works Inc., Reading, Ohio, a corporation of Ohio

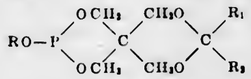
No Drawing. Filed Aug. 3, 1962, Ser. No. 214,508
32 Claims. (Cl. 260—340.7)

1. A phosphite having one of the formulae

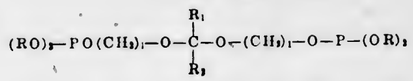
(a)



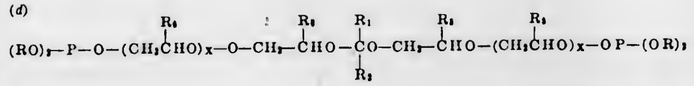
(b)



(c)

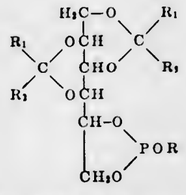


(d)



and

(e)



where R is selected from the group consisting of alkyl, alkenyl, phenyl, lower alkyl phenyl, naphthyl and halophenyl, R_1 and R_2 are selected from the group consisting of hydrogen, alkyl, phenyl, naphthyl, lower alkyl phenyl, halophenyl and nitrophenyl, individually and



together form a cycloalkyl ring of 5 to 6 carbon atoms, R_3 is selected from the group consisting of hydrogen, alkyl and phenyl, lower alkyl phenyl, R_4 and R_5 are selected from the group consisting of hydrogen and alkyl, R_6 is selected from the group consisting of hydrogen and 1–2 carbon atom alkyl, V is selected from the group consisting of zero and an integer, n is an integer between 1 and 10 inclusive, m is an integer between 1 and 2 inclusive, 1 is an integer of at least 4, Z is selected from the group consisting of zero, 1 and 2 and X is an integer of at least 1.

3,096,346
OXIDATION OF MANOYL OXIDE

Jesse A. Giles and Sam S. Mims, Winston-Salem, N.C., assignors to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey

No Drawing. Filed Sept. 11, 1961, Ser. No. 137,022
7 Claims. (Cl. 260—343.3)

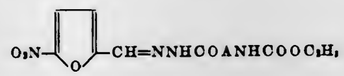
1. A process of preparing the compound decahydro-3a,6,6,9a-tetramethylnaphtho[2,1 - b]furan - 2(1H) - one which comprises contacting under oxidizing conditions in the presence of a non-oxidizing organic acid dispersing medium manoyl oxide and an oxidizing agent selected from the group consisting of the alkali metal and alkaline earth metal permanganates, said oxidizing agent being present in an amount whereby the desired oxidation is completed, and thereafter recovering the said compound.

3,096,347
N-CARBETHOXY AMINOACID 5-NITROFURFURYLIDENE HYDRAZIDES

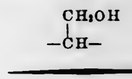
George C. Wright, Norwich, N.Y., assignor to The Norwich Pharmacal Company, a corporation of New York

No Drawing. Filed Dec. 6, 1961, Ser. No. 157,543
4 Claims. (Cl. 260—347.5)

1. A compound of the formula:



in which A represents a lower alkylene group selected from the group consisting of $—CH_2—$; $—CH_2CH_2—$;

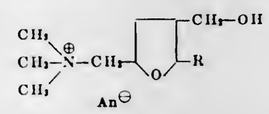


3,096,348
QUATERNARY AMMONIUM SALTS OF 5-DIMETHYL AMINO-3-FURANMETHANOLS

Rolf Denss and Hans Herbert Kühnis, Basel, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed May 18, 1961, Ser. No. 110,866
Claims priority, application Switzerland May 19, 1960
4 Claims. (Cl. 260—347.7)

1. A compound of the formula



wherein

R is a member selected from the group consisting of hydrogen and lower alkyl and

$An^{\ominus}$ is a pharmaceutically acceptable anion.

3,096,349
PRODUCTION OF DIGLYCIDYL ETHERS OF DIOLS

Ferdinand Meyer, Ziegelhausen, and Kurt Demmler, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Apr. 11, 1962, Ser. No. 186,624
Claims priority, application Germany May 14, 1955
5 Claims. (Cl. 260—348.6)

1. In a process for preparing diglycidyl ethers from an epihalogenhydrin selected from the group consisting of epichlorohydrin and epibromohydrin and a diol having two primary hydroxyl groups wherein said epihalogenhydrin and said diol are reacted in the presence of an acid catalyst to form a diol-dihalogenhydrin and wherein hydrogen halide is split off from said diol-dihalogenhydrin to form a diglycidyl ether, the improvement which comprises: reacting from 0.5 to 1.0 mol of said epihalogenhydrin with each mol of said diol having two primary hydroxyl groups in the presence of said acid catalyst to form a monohalogenhydrin ether; distilling off the unreacted diol; and thereafter reacting an additional 0.3 to 0.7 mol of epihalogenhydrin per mol of the original diol reactant with said monohalogenhydrin to form said dioldihalogenhydrin.

3,096,350
6,16α-DIMETHYL-$\Delta^{1,4,6}$-PREGNATRIENE-17α-OL-3,20-DIONE AND ESTERS THEREOF

Jose Iriarte, Carl Djerassi, and Howard J. Ringold, all of Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Jan. 19, 1960, Ser. No. 3,278
Claims priority, application Mexico Jan. 28, 1959
4 Claims. (Cl. 260—397.4)

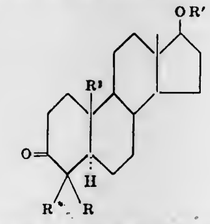
1. 6,16α-dimethyl-$\Delta^{1,4,6}$-pregnatriene-17α-ol-3,20-dione.

3,096,351
4,4-DIALKYL ANDROSTANES

Howard J. Ringold, Shrewsbury, Mass., and George Rosenkranz, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed May 31, 1961, Ser. No. 113,629
Claims priority, application Mexico, Feb. 21, 1956
14 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



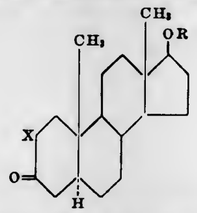
wherein R represents a lower alkyl group; R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms and R^2 is selected from the group consisting of hydrogen and methyl.

3,096,352
ANDROSTANE COMPOUNDS CONTAINING TRIFLUORO ALIPHATIC SUBSTITUENTS IN THE 2-POSITION

Marcel Harnik, Morristown, Tenn., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 13, 1961, Ser. No. 123,630
8 Claims. (Cl. 260—397.4)

1. An androstane compound of the formula



wherein R is a member of the group consisting of hydrogen and lower alkanoyl radicals and X is a member of the group consisting of trifluoroacetyl, 2,2,2-trifluoro-1-acetoxy-ethylidene, 2,2,2-trifluoro-1-hydroxyethyl, 2,2,2-trifluoro-1-acetoxyethyl, 2,2,2-trifluoroethylidene, and 2,2,2-trifluoroethyl radicals.

3,096,353
Δ^9-DEHYDRO-21-HALOETHISTERONES AND THE PROCESS FOR THE PRODUCTION THEREOF

John Fried, Plainfield, and Thomas S. Bry, Elizabeth, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 3, 1961, Ser. No. 128,977
9 Claims. (Cl. 260—397.4)

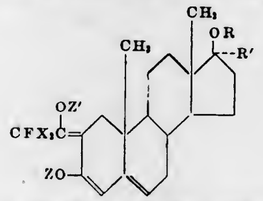
1. 17α - haloethynyl - 17β - hydroxy - 19-nor-4,9(10)-androstadiene-3-one.

3,096,354
2-FLUOROACETYL-5-ANDROSTENOLONE COMPOUNDS

Marcel Harnik, Morristown, Tenn., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 6, 1961, Ser. No. 122,093
8 Claims. (Cl. 260—397.5)

1. An androstene compound of the formula



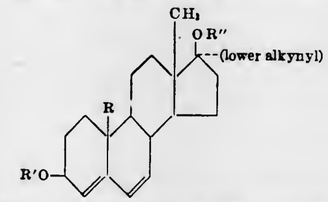
wherein X is a member of the group consisting of hydrogen and fluorine; R and Z are members of the group consisting of hydrogen and lower alkanoyl radicals; R′ is a member of the group consisting of hydrogen and lower alkyl radicals; and Z′ is a member of the group consisting of hydrogen, alkali metal and lower alkanoyl radicals.

3,096,355
17 - ALKYNYLANDROSTA-4,6-DIENE - 3,17 - DIOLS, ESTERS THEREOF AND 19-NOR COMPOUNDS CORRESPONDING

John S. Baran, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 31, 1961, Ser. No. 135,126
10 Claims. (Cl. 260—397.5)

1. A compound of the structural formula



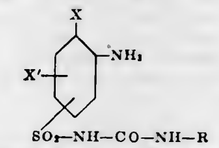
wherein R is selected from the group consisting of hydrogen and a methyl radical, and R′ and R″ are selected from the group consisting of hydrogen and lower alkanoyl radicals.

3,096,356
NEW AROMATIC AMINES AND PROCESSES FOR THEIR PREPARATION

Marcel Jirou, Sotteville-les-Rouen, and Jean-Marie Frey, Les Authieux sur le Port St.-Ouen, Oissel, France, assignors to Compagnie Française des Matieres Colorantes, Paris, France, a French company

No Drawing. Filed Dec. 13, 1957, Ser. No. 702,497
Claims priority, application France Dec. 14, 1956
4 Claims. (Cl. 260—397.7)

1. A compound of the formula



in which R represents a member selected from the group consisting of methyl, ethyl and phenyl, X represents a member selected from the group consisting of —OH and $—OCH_3$, X′ represents a member selected from the group consisting of hydrogen, chlorine, nitro, methyl and methoxy.

3. N-(3 - hydroxy-4-amino-6-methyl-phenylsulphonyl)-N′-ethylurea.

3,096,357
NOVEL REACTION PRODUCTS OF A SULFURIC ACID AND EPOXIDES

Jürgen Plapper, Dusseldorf, and Gerhard Dieckelmann, Dusseldorf-Holthausen, Germany, assignors to Böhme Fettchemie G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed Apr. 12, 1961, Ser. No. 102,387
Claims priority, application Germany May 4, 1960
13 Claims. (Cl. 260—400)

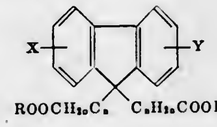
1. A process for the preparation of surface-active sulfuric acid reaction products which comprises reacting at temperatures between about 15° and 40° C. an epoxide of high molecular weight unsaturated polyesters having at least one unsaturated hydrocarbon radical with 8 to 20 carbon atoms and having an epoxide oxygen content of 0.5 to 1.5% and 8 to 20% by weight sulfuric acid and recovering the reaction product.

3,096,358
SULFONATED 9,9-DI(CARBOXYALKYL) FLUORENE AND ESTERS AND SALTS THEREOF

Christian F. Horn, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 20, 1961, Ser. No. 96,683
10 Claims. (Cl. 260—429.7)

1. A fluorene of the formula:



wherein X is a member selected from the group consisting of hydrogen, $—SO_3H$, $—SO_3M$, and $—SO_3M'Z$; Y is a member selected from the group consisting of $—SO_3H$, $—SO_3M$, and $—SO_3M'Z$; M is a member selected from the group consisting of lithium, sodium, potassium, rubidium, cesium, and $—NR'_4$; R′ is a member selected from the group consisting of hydrogen, alkyl of from 1 to 10 carbon atoms, phenyl, naphthyl, benzyl, phenethyl, tolyl, and xylyl; M′ is a member selected from the group consisting of beryllium, magnesium, calcium, zinc, strontium, barium, and tin; Z is acyloxy —OOCR″; R″ is a member selected from the group consisting of alkyl of from 1 to 10 carbon atoms, phenyl, naphthyl, benzyl, phenethyl, tolyl, and xylyl; R is a member selected from the group consisting of hydrogen and alkyl of from 1 to 10 carbon atoms; and *n* is an integer having a value of 1 to 10.

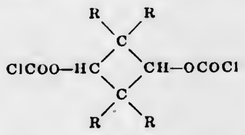
10. 2,7 - di - (acetoxytinsulfo) - 9,9 - di - (2′ - carbomethoxyethyl)fluorene.

3,096,359
BISCHLOROFORMATES OF 2,2,4,4-TETRAALKYL-1,3-CYCLOBUTANEDIOLS

John R. Caldwell and Winston J. Jackson, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,247
6 Claims. (Cl. 260—463)

1. The compounds represented by the following general structural formula:



wherein each R represents an alkyl group containing from 1–4 carbon atoms.

3,096,360
MANUFACTURE OF 1,2-DICYANOCYCLOBUTANE

Kurt Sennewald and Armin Götz, Knapsack, near Cologne, and Gottfried Kallrath, Kerpen, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany

No Drawing. Filed Jan. 19, 1960, Ser. No. 3,244
Claims priority, application Germany Feb. 6, 1959
3 Claims. (Cl. 260—464)

1. A process for the manufacture of 1,2-dicyanocyclobutane by dimerization of acrylonitrile which comprises heating acrylonitrile in a closed reaction vessel for a period of between about 1 hour and 6 hours to a temperature of between about 180° and 260° C. under a pressure of between about 10 and 100 atmospheres in the presence of an inert gas and of about 0.01% to 1.00% by weight, calculated on the acrylonitrile used, of a substance selected from the group consisting of nitrogen monoxide, carbon monoxide, sulfur dioxide, diphenylnitrosamine and nickel tetracarbonyl, wherein a reaction mixture is obtained consisting of the unreacted portion of acrylonitrile and 1,2-dicyanocyclobutane, separating the unreacted acrylonitrile from the reaction mixture by a first distillation, recycling the obtained acrylonitrile to again participate in the dimerization, and subjecting the residue of the first distillation to a second distillation to yield pure 1,2-dicyanocyclobutane.

3,096,361
PRODUCTION OF NITRILES FROM ALCOHOLS

Joachim Datow and Karl Wimmer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed June 14, 1960, Ser. No. 35,883
Claims priority, application Germany June 19, 1959
5 Claims. (Cl. 260—465)

1. A process for the production of nitriles of the formula R—CN which comprises reacting a primary alcohol of the formula RCH_2OH wherein R in the foregoing formulae is a member selected from the group consisting of phenyl, alkyl of 2–19 carbons and alkenyl of 2–19 carbons with ammonia at a temperature in the range of 300–500° C. in contact with a solid catalyst consisting essentially of the active ingredients chromium (III) oxide and a member selected from the group consisting of zinc oxide and cadmium oxide wherein the chromium content of said catalyst, calculated as chromium (III) oxide, constitutes 5–95% by weight of said active ingredients.

3,096,362
METHOD FOR THE MANUFACTURE OF N-METHYLENE GLYCINONITRILE

Arthur R. Sexton, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,438
3 Claims. (Cl. 260—465.5)

1. A method for the manufacture of N-methylene glycinonitrile which comprises reacting as the sole ingredients one proportion of glycinonitrile gradually portionwise with about one molecular proportion of formaldehyde in water as reaction medium with the water being employed in the proportion of at least 1.6 moles with each two moles of the sum of the employed amounts of glycinonitrile and formaldehyde, the reaction being effected by adding the glycinonitrile incrementally portionwise to the formaldehyde at such a rate that heat of reaction is evolved and the reaction temperature does not exceed 50° C.

3,096,363
FLUORINATED ESTERS OF POLYCARBOXYLIC ACIDS

Edward C. Ballard and Earl E. Sommers, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 8, 1960, Ser. No. 74,449
10 Claims. (Cl. 260—468)

1. A normally liquid ester of the formula

$$R[COO—CH_2CH_2—O—CH_2(CF_2CF_2)_nH]_m$$

wherein R represents a saturated hydrocarbon radical of 2 to 20 carbon atoms, in which ester only one

$$COO—CH_2CH_2—O—CH_2(CF_2CF_2)_nH$$

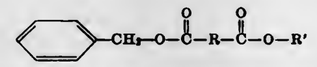
group is attached to any one carbon atom of R, *m* is an integer of 2 to 4 and *n* is an integer of 1 to 5.

3,096,364
PRODUCTION OF BENZYL ALKYL PHTHALATES BY ESTER INTERCHANGE

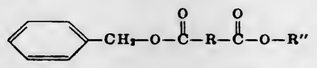
Harry R. Gamrath, St. Louis, and Louis O. Raether, Webster Groves, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 8, 1958, Ser. No. 778,628
7 Claims. (Cl. 260—475)

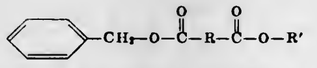
1. In a process for producing a benzyl phthalate of the formula



where R is o-phenylene and R′ is selected from the group consisting of alkyl, alkenyl and alkyl-substituted alicyclic of from about ten to about twenty carbon atoms, the steps comprising heating a mixture of an alcohol of the structure R′OH, said alcohol having a boiling point above the boiling point of benzyl alcohol, and a benzyl phthalate of the formula



where R is o-phenylene and R″ is selected from the group consisting of alkyl, alicyclic and alkenyl of up to about twenty carbon atoms, to form said phthalate of the formula



and an alcohol of the structure, R″OH, which boils below said alcohol, R′OH, and removing said alcohol, R″OH, from said mixture.

3,096,365
PREPARATION OF ESTERS FROM OLEFINS

Robert Y. Heisler, Fishkill, Howard V. Hess, Glenham, George W. Eckert, Wappingers Falls, and Morford C. Throckmorton, Beacon, N.Y., assignors to Texaco, Inc., a corporation of Delaware

No Drawing. Filed Mar. 24, 1959, Ser. No. 801,434
17 Claims. (Cl. 260—497)

1. In a process for the condensation of a tertiary olefin with a carboxylic acid to form the corresponding ester in a reaction zone, the improvement which comprises: contacting said reactants in the liquid phase at a temperature not above about 300° F. and in the presence of a Period 3 polyvalent metal silicate catalyst which is substantially free from fugitive acid and consists essentially of 5 to 50 weight percent Period 3 polyvalent metal oxide and 50 to 95 weight percent silica.

3,096,366
PREPARATION OF TEREPHTHALIC ACID BY CARBOXYLATION REACTIONS

Franklin D. Smith, Webster Groves, Mo., and Erhard J. Prill, James C. Wygant, and Milton Kosmin, Dayton, Ohio, assignors, by mesne assignments, to Henkel and Cie G.m.b.H., a corporation of Germany

No Drawing. Filed Oct. 7, 1957, Ser. No. 688,785
10 Claims. (Cl. 260—515)

1. The preparation of terephthalic acid by the thermal reaction of alkali metal benzoates with alkali metal salts of aliphatic hydrocarbon carboxylic acids containing at least 2 carbon atoms, by heating the said components in a closed chamber in the presence of inert gas at temperatures from 350° C. to 500° C. to convert the benzoates to terephthalates the said aliphatic acid salt being present in amount of about 0.5 to 5 moles for each mole of said benzoate salt, and acidifying the terephthalates to obtain terephthalic acid.

3,096,367
PREPARATION OF A MIXTURE OF 1 PART 2,3,6- AND 3 PARTS 2,3,5-TRICHLOROBENZOIC ACIDS

Jack S. Newcomer, Wilson, Jerome Linder, Niagara Falls, and Keith J. Smith, Lockport, N.Y., assignors to Hooker Chemical Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,852
2 Claims. (Cl. 260—515)

1. A process for the preparation of a synergistic herbicidal mixture containing 3 parts of 2,3,5-trichlorobenzoic acid per part of 2,3,6-trichlorobenzoic acid which comprises adding chlorine to benzoyl chloride in the presence of ferric chloride at a temperature of about one hundred and twenty to about one hundred and fifty degrees centigrade until the resultant chlorinated reaction mixture reaches a specific gravity of about 1.500 to 1.685 when measured at twenty-five degrees centigrade, separating the trichlorobenzoyl chloride fraction from the said chlorinated reaction mixture, and heating the fraction thus isolated with water.

3,096,368
PROCESS FOR PREPARING HYDROLYSIS PRODUCTS OF γ-DIMETHYL AMINO-β-HYDROXYBUTYRONITRILE CHLOROMETHYLATE

Fernand Aime Ghislain Binon, Brussels, Belgium, and Georges J. L. Dechamps, deceased, late of Brussels, Belgium, by Elsa Dechamps, representative, Brussels, Belgium, assignors, by mesne assignments, to Societe Belge de L'Azote et des Produits Chimiques du Marly, Liege, Belgium

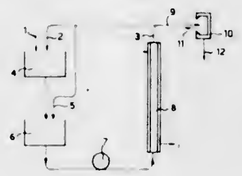
No Drawing. Filed July 30, 1958, Ser. No. 791,233
Claims priority, application Belgium May 8, 1953
(Filed under Rule 47(a) and 35 U.S.C. 116)
11 Claims. (Cl. 260—534)

1. The process for preparing carnitine which comprises reacting γ-dimethylamino-β-hydroxybutyronitrile chloromethylate, under autogenenous pressure, with one to two times its weight of concentrated aqueous hydrochloric acid containing between 30% and 38% hydrochloric acid by weight, at a temperature between about 50° and about 80° C., for 3 to 7 hours, filtering out the ammonium chloride and non-acid, non-inorganic impurities formed, evaporating the hydrochloric solution in vacuo at a temperature not exceeding 60° C., taking up the residue in isopropyl alcohol, filtering and taking up the resultant crystals in aqueous ethyl alcohol, filtering, washing the residue with acetone and drying.

3,096,369
THREE STEP CRYSTALLIZATION OF ADIPIC ACID

Johannes C. Soeterbroek, Geleen, and Renier J. L. Graff, Beek, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

Filed Dec. 2, 1958, Ser. No. 777,739
Claims priority, application Netherlands Dec. 9, 1957
1 Claim. (Cl. 260—537)



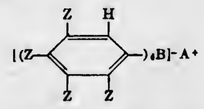
In a method for obtaining crystalline adipic acid from an adipic acid solution wherein said solution is cooled to give a suspension of adipic acid crystals in mother liquor and adipic acid crystals are recovered from said suspension, the improvement consisting of directly cooling said solution by mixing the same in a first crystallizing zone with a cooling agent selected from the group consisting of a suspension of adipic acid crystals in mother liquor and mother liquor obtained from such a suspension, to give a suspension of adipic acid crystals in mother liquor having a temperature between 35 and 70° C., passing a suspension of adipic acid crystals in mother liquor from said first crystallizing zone into a second crystallizing zone, directly cooling said suspension within said second crystallizing zone by mixing the same with a cooling agent consisting of a suspension of adipic acid crystals in mother liquor to give a cool suspension of adipic acid crystals in mother liquor having a temperature between 10 and 30° C., and thereafter further cooling said cool suspension indirectly to a temperature between about 5 and 25° C., and recovering adipic acid crystals from said cool suspension.

3,096,370
REACTIONS OF BORON HALIDES AND TETRA-SUBSTITUTED BORON COMPOUNDS

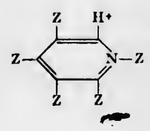
Murray Bloom and Robert M. Washburn, Whittier, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Filed Mar. 30, 1959, Ser. No. 802,602
12 Claims. (Cl. 260—543)

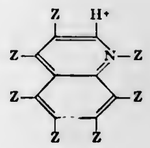
1. The process for the preparation of aryldihaloboranes, diarylhaloboranes and triarylboranes, comprising reacting a boron trihalide with a tetraarylborohydride of the general formula



where each Z is selected from the class consisting of H, halogen, lower alkyl, lower alkoxy, acetamido and dimethylamino and A is a cation selected from the class consisting of Mg-halogen, Na+, K+, Rb+, Cs+, Ag+, Ca++, Sr++, Ba++, Hg+, lower alkyl-substituted ammonium groups, substituted pyridinium groups of the general formula



where Z is as defined above and fused ring pyridinium groups of the general formula



where Z is as defined above.

3,096,371
PHOSPHORISOCYANATIDIC DIFLUORIDE

George Andrew Olah and Stephen Joseph Kuhn, Sarnia, Ontario, Canada, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 25, 1960, Ser. No. 17,450
Claims priority, application Canada Aug. 4, 1959
1 Claim. (Cl. 260—543)

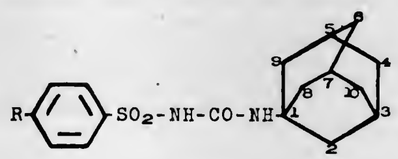
Phosphorisocyanatidic difluoride.

3,096,372
NOVEL N-(SUBSTITUTED)-PHENYLSULFONYL-N'-1-ADAMANTYLUREAS

Koert Gerzon, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Aug. 15, 1961, Ser. No. 131,466
6 Claims. (Cl. 260—553)

1. A member of the class consisting of a compound and its nontoxic cationic salts, said compound being represented by the formula:



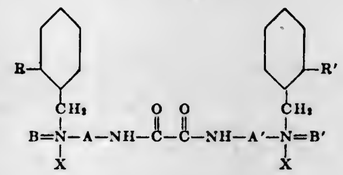
wherein R is a member of the group consisting of hydrogen, alkyl, alkyl-O—, alkyl-S—, and halo, wherein alkyl is a lower alkyl group.

3,096,373
N,N'-BIS(DI-LOWER-ALKYLAMINO-LOWER-ALKYL) DICARBOXYLIC ACID AMIDES

Frederick K. Kirchner, Delmar, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 30, 1956, Ser. No. 581,356
19 Claims. (Cl. 260—558)

3. A compound having the formula



wherein R and R' are halogen atoms, A and A' are lower-alkylene radicals, N=B and N=B' are di-lower-alkylamino radicals in which the alkyl groups each have at least two carbon atoms, X and X' are anions, and the tertiary-amine nitrogens and the amide nitrogens are attached to different carbon atoms of A and A'.

3,096,374
NEW CARBOXYLIC ACID AMIDES SUBSTITUTED AT THE NITROGEN ATOM AND β-CARBON ATOM AND PROCESS FOR THEIR MANUFACTURE

Gustav Ehrhart, Bad Soden, Taunus, Ingeborg Hennig, Kelkheim, Taunus, Ernst Lindner, Frankfurt am Main, and Heinrich Ott, Eppstein, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Oct. 29, 1957, Ser. No. 693,016
Claims priority, application Germany Nov. 6, 1956
1 Claim. (Cl. 260—562)

β-Hydroxy-butyric acid-[1-phenyl-1-ethylpropyl-(1)]-amide.

3,096,375
THIOETHERS

John Robert Campbell, St. Louis, Mo., and Ernest E. Campaigne, Bloomington, Ind., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 6, 1961, Ser. No. 150,178
18 Claims. (Cl. 260—609)

1. A process for preparing thioethers comprising reacting

(*a*) a hydrocarbon disulfide free from olefinic and acetylenic unsaturation,

(*b*) a halogen-substituted hydrocarbon represented by the structure, $R_1(X)_n$, where R_1 is a hydrocarbon radical free from olefinic and acetylenic unsaturation, X is selected from chlorine, bromine, and iodine, and *n* is selected from 1 and 2, and

(*c*) copper

in a solvent boiling above about 125° C. at atmospheric pressure and represented by the structure,

where A is selected from hydrogen, aliphatic hydrocarbon radicals, and aromatic hydrocarbon radicals, and B and C are selected from aliphatic hydrocarbon radicals and aromatic hydrocarbon radicals, provided, however, that B and C can, together with the nitrogen atom, form a carbon- and nitrogen-containing heterocyclic ring, and provided further that A and B can, together with the nitrogen atom and the carbonyl carbon adjacent thereto, form a heterocyclic carbon- and nitrogen-containing ring, said ring in each case containing five to six members.

3,096,376
PROCESS FOR MAKING CYCLOHEXENE HYDROPEROXIDES

Geneviève Clement, 108 Rue de Patay, Paris 13, France, and Jean-Claude Balaceanu, 115 Boulevard Bessieres, Paris 17, France

No Drawing. Filed Mar. 2, 1959, Ser. No. 796,240
Claims priority, application France Mar. 3, 1958
3 Claims. (Cl. 260—610)

1. A continuous process for converting olefins selected from the group consisting of cyclohexene and methylcyclohexene to the corresponding hydroperoxide, which process consists essentially of:

(1) passing an oxygen-containing gas through a reaction zone containing a mixture of:

(*a*) 80–98 parts by weight of said olefin,

(*b*) 2–20 parts by weight of the corresponding hydroperoxide, at a temperature between 50–90° C., thereby producing additional hydroperoxide; and

(2) withdrawing a portion of said mixture from said reaction zone and adding fresh olefin to said reaction zone at a rate of flow sufficient to maintain the hydroperoxide content of said mixture in said reaction zone at not higher than 20%.

3,096,377
PROCESS FOR THE RECOVERY OF PENTAERYTHRITE

André Roche, Paris, Pierre Grancher and Jean Gajac, Toulouse, and Robert Becanne, Pinsaguel, France, assignors to the French State represented by the Minister of Armies (Powder Department), Paris, France

Filed May 15, 1959, Ser. No. 813,489
1 Claim. (Cl. 260—637)

Process for the recovery of pentaerythrite in purified form from an aqueous liquid reaction mixture in which pentaerythrite has been formed by condensation of formaldehyde with an aliphatic aldehyde in the presence of an alkaline catalyst, which process consists of acidifying said reaction mixture with a mineral acid to a pH value ranging between 0.1 to 3 to release formic acid formed in said reaction mixture, adding to said acidified reaction mixture at a temperature ranging between 0 and 70° C. a substantially equal volume of an organic solvent selected from the group consisting of benzoic and toluidic aldehyde, furfuraldehyde, cyclohexanone, methyl and dimethyl cyclohexanone and acetophenone to extract the pentaerythrite from said acidified reaction mixture, separating the remaining acidified reaction mixture from said solvent containing the pentaerythrite, washing said solvent containing the pentaerythrite with a dilute alkaline solution, and subjecting said solvent containing the pentaerythrite to a stream of steam to thereby recover the pentaerythrite in purified form from said solvent.

3,096,378
CHLORINATION OF NITROETHANE

Dewey Robert Levering, Wilmington, Del., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Oct. 10, 1962, Ser. No. 229,768
3 Claims. (Cl. 260—644)

1. In a process for the production of 1-chloro-1-nitroethane which comprises bubbling chlorine through a solution of sodium nitroethane; incorporating sodium chloride therewith; maintaining the temperature in a range from −20° C. to +25° C.; immediately removing the 1-chloro-1-nitroethane as formed from the said solution with little or no agitation whereby production of dichloronitroethane is suppressed.

3,096,379
PREPARATION OF TETRAFLUOROETHYLENE

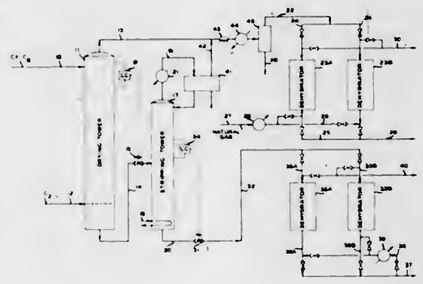
Edgar Allan Blair, Drexel Hill, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Nov. 30, 1960, Ser. No. 72,613
4 Claims. (Cl. 260—653.3)

1. Method of preparing tetrafluoroethylene which comprises: (1) contacting methane with a ferric halide selected from the group consisting of ferric chloride and ferric bromide at a temperature in the range of 220–375° C. and with a ferric halide: methane molar ratio of 0.3:1 to 2.5:1, whereby halogenation of the methane occurs and the ferric halide is reduced to ferrous halide; (2) separately recovering haloform and hydrogen halide from the reaction mixture; (3) reacting the haloform with hydrogen fluoride at a temperature in the range of 250–550° C. and with a hydrogen fluoride:methyl halide molar ratio of 1:1 to 4:1; (4) separately recovering monohalodifluoromethane and hydrogen halide from the reaction

mixture; (5) pyrolyzing said monohalodifluoromethane at a temperature in the range of 650–850° C.; (6) separately recovering tetrafluoroethylene and hydrogen halide from the pyrolysis products; (7) contacting the ferrous halide with oxygen and with the hydrogen halide recovered in steps (2), (4) and (6) to re-form ferric halide; and (8) recycling the ferric halide to step (1).

3,096,380
METHOD FOR THE DEHYDRATION OF LIQUIDS
Kenneth E. Bolen, Pasadena, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 28, 1959, Ser. No. 836,816
7 Claims. (Cl. 260—666)



7. A method for the stepwise dehydration of cyclohexane which comprises countercurrently contacting said cyclohexane in a dehydration zone with ethylene, as the dehydrating medium, at dehydration conditions of temperature and pressure to selectively absorb a substantial portion of the moisture contained in said cyclohexane, removing ethylene and absorbed moisture overhead from said dehydration zone, passing partially dehydrated cyclohexane from the base of said dehydration zone to a stripping zone and therein stripping retained ethylene and moisture therefrom, removing cyclohexane reduced in moisture and substantially free of ethylene from the base of said stripping zone and passing same through a solid adsorption zone to remove final traces of moisture from said cyclohexane, recovering said cyclohexane substantially free of moisture from said dehydration zone as product, and regenerating said dehydration zone with a portion of said liquid cyclohexane product.

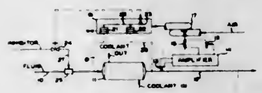
3,096,381
MANUFACTURE OF DIARYLETHANES
Erhard J. Prill, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 30, 1956, Ser. No. 606,966
11 Claims. (Cl. 260—668)

7. In the process of producing 1,1-diarylethane wherein acetylene is reacted with a compound selected from the group consisting of mono- and di-alkyl substituted benzene in the presence of a sulfuric acid-mercuric sulfate catalyst, the improvement which comprises reacting in a multi-stage continuous reaction from about 25% to about 50% of the stoichiometric amount of acetylene required to react with all of the compound selected from the group consisting of mono- and di-alkyl substituted benzene, the amount of acetylene introduced into each stage of the reaction being a fraction of the total amount reacted and wherein the number of added fractions is equal to the number of stages in the multi-stage continuous reaction.

3,096,382
REFINING BENZENE WITH A SODIUM AND POTASSIUM METAL ALLOY
Oscar L. Wright, McKees Rocks, John Wilson Mausteller, Evans City, and Frank J. Vancheri, Pittsburgh, Pa., assignors to MSA Research Corporation, Pittsburgh, Pa.
No Drawing. Filed Apr. 13, 1960, Ser. No. 21,866
6 Claims. (Cl. 260—674)

1. A method of purifying benzene that contains thiophene impurity which comprises contacting said benzene in the liquid phase with an alloy of sodium and potassium at a temperature about 50° C. and 80° C., using at least about 1.5 parts alloy for each part of thiophene to be removed, and recovering the purified benzene.

3,096,383
AUTOMATIC PROCESS FOR PREVENTION OF GAS HYDRATE FORMATION
Paul D. Hann, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,990
4 Claims. (Cl. 260—676)

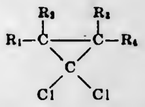


1. A method for inhibiting hydrate formation in a gaseous hydrocarbon stream containing 1 to 3500 pounds of water vapor per million standard cubic feet of gas which comprises continuously adding a predetermined minimum of hydrate inhibitor to said stream, continuously passing the stream through a flow restriction zone comprising an indirect heat exchange zone, continuously detecting the differential pressure across said flow restriction zone by measuring the pressure of the flowing stream immediately upstream of said zone and immediately downstream of said zone to obtain said differential pressure, and introducing hydrate inhibitor into said flowing stream upstream of said zone directly responsive to changes in said measured pressure differential due to hydrate formation at said restriction zone by increasing the addition of hydrate inhibitor added to said stream when said differential pressure increases and lowering the rate of hydrate inhibitor addition toward said minimum addition rate when said differential pressure falls, thus maintaining said differential pressure substantially constant at a predetermined value.

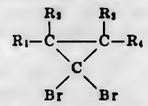
3,096,384
PROCESS FOR PREPARING 1,2-DIENES
Ted J. Logan, Colerain Township, Hamilton County, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Jan. 10, 1961, Ser. No. 81,692
21 Claims. (Cl. 260—680)

1. The process for the preparation of allene compound comprising reacting in an ether solvent

(1) a 1,1-dihalocyclopropane selected from the group consisting of 1,1-dichlorocyclopropane having the general formula:



wherein R_1, R_2, R_3, and R_4 are each radicals selected from the group consisting of hydrogen and an alkyl radical having from 1 to 18 carbon atoms such that the 1,1-dichlorocyclopropane compound has up to and including 21 carbon atoms per molecule; and, 1,1-dibromocyclopropane having the general formula:



wherein R_1, R_2, R_3 and R_4 are as above such that the the 1,1-dibromocyclopropane has from 10 carbon atoms per molecule up to and including 21 carbon atoms per molecule with

(2) magnesium and

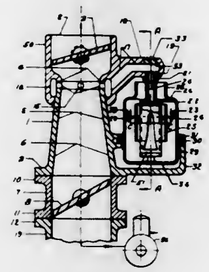
(3) a halide compound having the general formula R′X′ wherein R′ is a radical selected from the group consisting of alkyl and aryl radicals having from 1 to 10 carbon atoms and X′ is a halogen selected from the group consisting of bromine, chlorine, and iodine.

3,096,385
PROCESS FOR PREPARING α-MONOOLEFINIC HYDROCARBONS
Richard L. McConnell and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed June 30, 1960, Ser. No. 39,822
5 Claims. (Cl. 260—683.15)

1. The method which comprises forming monoolefinic hydrocarbons by contacting an α-monoolefinic hydrocarbon containing up to 10 carbon atoms with a catalyst consisting essentially of an alkyl aluminum sesquihalide wherein the alkyl radical contains from 1 to 12 carbon atoms and the halogen is selected from the group consisting of chlorine, bromine and iodine and a hexaalkyl phosphoric triamide.

3,096,386
CARBURETOR WITH ORIFICE PROGRAMMING
George E. Seldon, 534 N. Holmes Ave., Kirkwood, Mo.
Filed Feb. 21, 1958, Ser. No. 716,720
8 Claims. (Cl. 261—66)

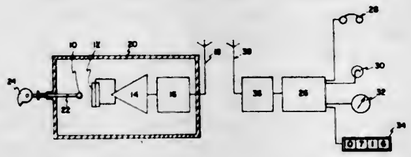
1. A carburetor including a main air induction tube to induce primary air, said tube having a venturi with a throat with main jets there-in; a self-contained fuel reservoir having trunnions mounting it upon the carburetor for swinging movements; means operated by such swinging movements of the reservoir for establishing and maintaining a definite quantity of liquid fuel there-in, establishing a specific fuel level in said reservoir, an auxiliary induction tube supported on the carburetor to remove a rich mixture of primary fuel and auxiliary air from said reservoir and deliver it to said throat, the outlet end of said auxiliary tube connected into the main jets in the throat of said venturi, the fuel inlet port being the open opposite end of said auxiliary tube and submerged deep in said definite quantity of liquid fuel, said tube piercing



the surface of said quantity of fuel held in said self-contained reservoir within the bounds there-of and near the center of said definite quantity of fuel in said reservoir; the axis of the trunnions being transverse to the axis of the tube and close thereto; a slot cut through the wall of said auxiliary tube and part of said slot above the surface level of said fuel and the remainder below, where-by said engine aspirates a mixture of air and primary fuel through said auxiliary induction tube, the air being admitted through that part of the slot above the fuel level and the primary fuel admitted through the lower part of the slot below the fuel level and the port at the bottom of said auxiliary induction tube.

ELECTRICAL

3,096,387
RADIOACTIVITY DETECTION TRAINING
Josef Braunbeck, Uberlingen (Bodensee), Germany, assignor to Bodenseewerk Perkin-Elmer & Company, Uberlingen (Bodensee), Germany
Filed Apr. 6, 1960, Ser. No. 20,449
1 Claim. (Cl. 35—10.4)

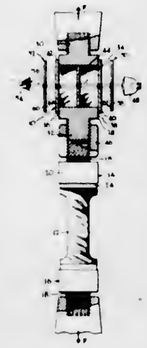


Apparatus for simulating measurement of relatively high-level radioactivity which comprises nuclear radiation counting tube means; relatively low-level radioactive source means in energizing relationship thereto and at a variable-distance therefrom; means for moving said source means with respect to said counting tube means to vary the energizing relationship therebetween; simulated radiation detector means including radio receiving antenna means; and signal transmitting means including radio transmitting antenna means responsive to the signals produced by said counting tube means and adapted to supply said signals to said receiving antenna means and said simulated detector means.

3,096,388
PHOTOELASTIC TRANSDUCERS
Thomas I. Davenport, Ambler, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 16, 1960, Ser. No. 69,581
11 Claims. (Cl. 88—14)

1. A photoelastic tranducer for use with polarized light for the resolution of bending components from axial components of a load applied to a workpiece, said transducer comprising two photoelastic strata, an optical rotator rotating planes of polarization of transmitted light through 90°, means attaching the strata to the workpiece imposing differing portions of the bending and equal portions of the axial load components upon said strata, and means direct-

ing said light normally of, and through, one said stratum, said rotator, and the other said stratum, in that order,



whereby a net birefringence is produced in said light proportional to the bending load components.

3,096,389

THREE-DIMENSIONAL SPATIAL IMAGE PRODUCING DISPLAY DEVICE

Leslie Peter Clarence Jack Dudley, 1 Beresford Court, Park Road, East Twickenham, England

Filed Nov. 19, 1958, Ser. No. 774,935

1 Claim. (Cl. 88—75)



A display apparatus for producing a three-dimensional spatial optical image comprising a substantially spherical concave mirror, a three-dimensional model of a three-dimensional object to be viewed positioned in front of said mirror so that various portions of the model are at different distances from the mirror, means in front of said mirror to support said model substantially at a position to one side of the optical axis of said mirror, a mask located adjacent said model on a side furthermost from said mirror so that said model is obscured from view, the dimensions of said model measured transversely to the mirror axis being proportionately progressively smaller than the dimensions of the corresponding object in a direction toward said mirror in proportion to the progressive magnification caused by said mirror, and the dimensions of the model measured parallel to the mirror axis being proportionately progressively shorter than the dimensions of the corresponding object in a direction toward the mirror in proportion to the progressive elongation caused by said mirror so that the spatial image reflected by said mirror will appear to a viewer as being a substantially undistorted reconstitution of the original object.

3,096,390

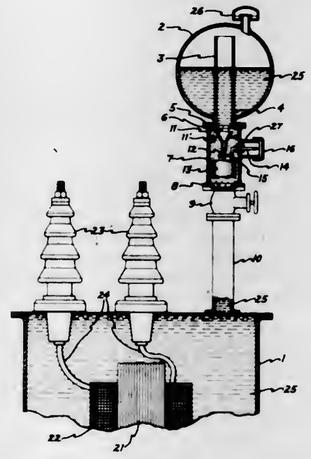
FLUID SYSTEM

André J. A. Deniau, Paris, France, assignor to Societe Generale de Constructions Electriques et Mecaniques, Paris, France

Filed Mar. 23, 1960, Ser. No. 17,103

Claims priority, application France Aug. 27, 1959

7 Claims. (Cl. 174—11)



7. In combination, a main tank, an auxiliary reservoir mounted above said main tank and being vented to the atmosphere, a conduit interconnecting said tank and reservoir, a liquid normally filling said tank and conduit and partially filling said reservoir, said conduit extending into said reservoir above the liquid level therein and having an open top end, a restricted orifice associated with said conduit in the vicinity of said auxiliary reservoir for limiting downward flow of liquid through said conduit from said auxiliary reservoir to said main tank, a valve in said conduit between said orifice and said main tank, and a float in said conduit between said valve and said main tank for normally maintaining said valve open, said float acting to close said valve in response to the partial emptying of said conduit by liquid flow therefrom into said main tank at a rate greater than said orifice will permit liquid to flow from said auxiliary reservoir into said conduit.

3,096,391

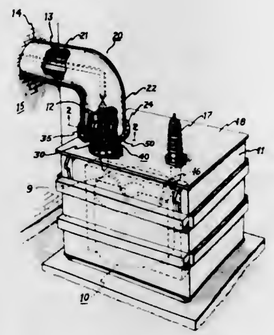
BUS DUCT CONNECTION

John W. Albright, Pittsfield, and Ernest E. Bianco, North Adams, Mass., assignors to General Electric Company, a corporation of New York

Filed Dec. 27, 1960, Ser. No. 78,349

3 Claims. (Cl. 174—18)

1. In an electrical power transmission system employing a power transformer having a low voltage bushing connected by a power carrying bus to other electrical apparatus, said bus extending substantially horizontally from said other electrical apparatus for at least a portion of its length, the height of said bus above the ground being substantially fixed, and said transformer being contained in an enclosure having a fixed height, the improvement in means for protecting said bus comprising duct means enclosing said bus and bushing, a housing surrounding a portion of said bushing at the end that passes through said enclosure, clamping means comprising a plurality of angle shaped elements adjustably connected to each other, a portion of said angle elements



clampingly encompassing said housing so as to be vertically adjustable therealong, and said clamping means having a flange connected to said duct means.

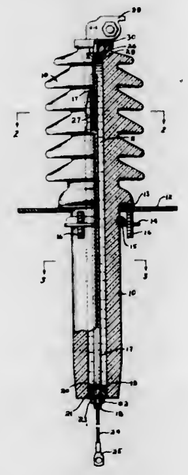
3,096,392

TRANSFORMER BUSHING CONSTRUCTION

Andrew J. Shaback, Philadelphia, Pa., assignor, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Filed Apr. 28, 1959, Ser. No. 809,494

12 Claims. (Cl. 174—31)



1. An insulator bushing comprising a body of insulator material having a longitudinally extending aperture therein, a metallic cable extending centrally through said aperture from one end to the other, a metallic tube surrounding said cable and extending centrally through said aperture from a point adjacent said one end to a point therewithin short of said other end, terminal means connected to said cable at said other end, means for securing said cable to said tube, and means for securing said tube centrally within said longitudinally extending aperture.

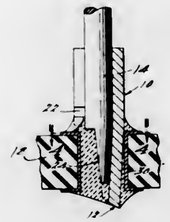
3,096,393

ELECTRICAL CONNECTION AND TERMINAL FOR MAKING THE SAME

Lloyd Mancini, Hershey, Pa., assignor to Berg Electronics, Inc., a corporation of Pennsylvania

Filed Oct. 14, 1959, Ser. No. 846,444

6 Claims. (Cl. 174—68.5)



1. An electrical connection comprising a wire and a metal terminal secured thereto, said terminal including a ferrule portion wrapped around and crimped on said wire so as to leave solder flow paths between the inner surface of said ferrule portion and the wire embraced therein, and an integral tapering channel shaped-portion open along one side projecting axially from said ferrule portion, the crimped ferrule portion being of substantially uniform cross section throughout its length, the end of said wire extending into said channel-shaped portion being flattened therein so that the end of the wire projecting beyond said ferrule portion is substantially disposed within said channel-shaped portion and with said channel-shaped portion forms a section substantially smaller than the crimped ferrule portion and which tapers toward a point remote from said ferrule portion, a circuit board having a hole therein, a metal sleeve in said hole forming a socket of smaller cross section than the crimped ferrule portion and of larger cross section than the point forming the end of the channel-shaped portion, said crimped ferrule portion of said terminal being disposed above said socket and said tapered channel-shaped portion being disposed in and projecting through said socket, solder in said paths uniting said wire with said ferrule and tapered channel-shaped portion, and solder uniting said wire and channel-shaped portion with said sleeve, said ferrule portion being notched adjacent the flattened end of said wire, said notched portion being disposed at the upper end of said socket.

3,096,394

FLYING SPOT SCANNER COLOR PRINTER WITH COLOR CORRECTION

Gordon Stanley James Allen, London, David Harry Mawby, Tackleway, Hastings, and Donald Charles Gresham, London, England, assignors to Crosfield Electronics Limited, a British company

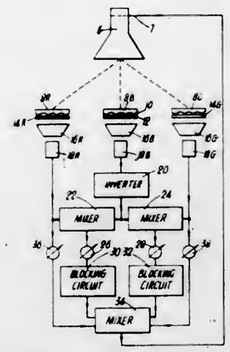
Filed Jan. 30, 1961, Ser. No. 85,855

Claims priority, application Great Britain Feb. 3, 1960

5 Claims. (Cl. 178—5.2)

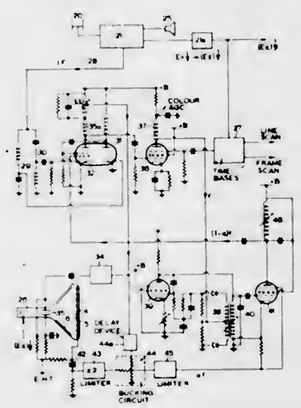
1. Apparatus for the reproduction of coloured originals comprising: electro-optical scanning means for deriving electric colour channel signals representing the colour components of a coloured original; subtraction means connected to said scanning means to receive a signal representing a given colour component to be corrected and a correcting colour channel signal for providing an output signal representing the difference between said two signals; a non-linear circuit connected to receive the output signal from said subtraction means said circuit having an input-output characteristic in which the gain is reduced as the input increases, whereby at least the difference signals of a polarity representing an excess of the signal to be corrected over the correcting colour are attenuated; a light source for exposing a light-sensi-

tive layer which is to provide the colour printer for the colour to be corrected; and exposure control means for



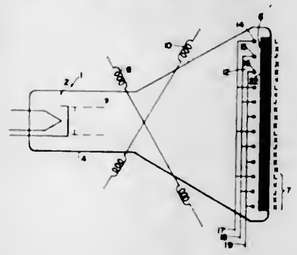
modulating the light source both with the output signal from said non-linear circuit and with said correcting signal from the same correcting colour channel.

3,096,395
VELOCITY-MODULATED COLOUR TELEVISION RECEIVERS
Eric John Gargini, Ylewsley, West Drayton, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed July 17, 1957, Ser. No. 672,458
Claims priority, application Great Britain July 19, 1956
11 Claims. (Cl. 178—5.4)



1. A colour television receiver having a cathode ray image reproducing tube the fluorescent screen of which comprises a cyclic array of parallel phosphor strips transverse to the line scanning direction and emitting different colours when excited by the cathode ray beam; means for producing from received television signals a first signal variable to represent the brightness of the picture to be reproduced and a second signal the phase of which is variable to represent the hue of the picture to be reproduced and the amplitude of which is variable to represent the saturation thereof; means for producing a line scanning waveform for the beam of said tube having a first substantially linear component periodic at the line scanning frequency, thereby to tend to cause the beam to cross the cycles of phosphor strips with a predetermined frequency, and a second component periodic at a centre frequency equal to said predetermined frequency and modulated in phase in response to the phase variations in said second signal, whereby said cathode ray beam is caused preferentially to excite a selected strip or selected strips in each cycle of said phosphor strips but to dwell on each cycle for a substantially constant time; saturation control means for varying the excitation of said selected strips relative to the excitation of the whole cycle of phosphor strips in response to amplitude in said second signal; and means modulating the intensity of the cathode ray beam in response to said first signal.

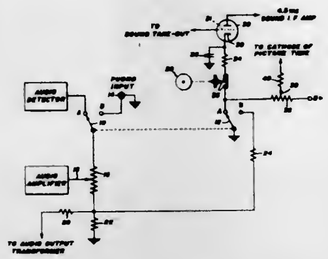
3,096,396
COLOR TELEVISION RECEPTION WITH POLY-PHASE GRID SWITCHING
Emil E. Sanford, Clifton, N.J., assignor to Paramount Pictures Corporation, New York, N.Y., a corporation of New York
Filed Sept. 22, 1961, Ser. No. 140,034
6 Claims. (Cl. 178—5.4)



1. In a color cathode-ray tube having an electron gun for generating a beam of electrons and a conductive coating disposed thereon across which said beam is adapted to be deflected, an electrode system comprising an apertured electrode structure of substantially equal area to said target area mounted within said tube adjacent to said target area and at a substantially uniform distance therefrom, said apertured electrode structure comprising a plurality of parallel interleaved grill-like grid elements, a target area having a conductive coating disposed thereon across which said beam is adapted to be deflected and comprising a plurality of parallel spaced colored phosphor strips generally parallel to the grid elements, each colored phosphor being disposed to appear behind each of the said grid elements and an inert material being relatively thicker and lying between the respective colored phosphor strips and grid elements, electrical potential means connected to the said electrode structure for producing a multiplicity of converging electron lenses between the said apertured electrode structure and target area for focusing the said beam upon the colored strips of the target area.

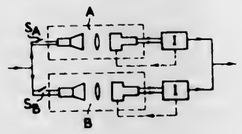
3,096,397
AUDIO MUTING CIRCUIT
Frank R. Stachowiak, Manlius, and Norman Szeremy, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed Feb. 3, 1961, Ser. No. 86,900
6 Claims. (Cl. 178—5.8)

5. An audio muting circuit for a television receiver having an audio detector, an audio amplifier, a volume control, a brightness control, and a sound intermediate frequency amplifier having a cathode circuit, a phonograph input terminal, first and second switch means being ganged and having first and second operative positions, means for connecting said volume control to said audio amplifier, means for connecting said brightness control to said cathode circuit, said first and second switch means when in said first position connecting said audio detector to said volume control and connecting said cathode circuit to a common source of reference potential whereby said receiver is functioning normally for the reception of television sound signals, said first and second



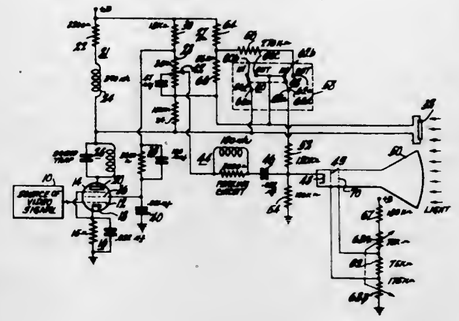
switches when operated to said second position connecting said phonograph input terminal to said volume control and opening said cathode circuit to mute said television receiver.

3,096,398
PICTURE COMMUNICATION SYSTEMS
Dennis Gabor, London, and Peter Charles John Hill, Reading, England, assignors to National Research Development Corporation, London, England, a corporation of Great Britain
Filed Jan. 6, 1961, Ser. No. 81,123
Claims priority, application Great Britain Jan. 6, 1960
8 Claims. (Cl. 178—6.8)



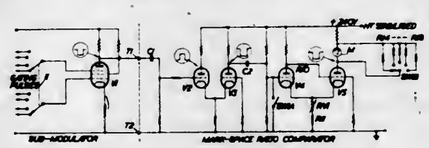
1. Picture transmission system comprising means for transmitting sequential signals representing the lines of a selected field of an interlaced two-field scan, means for receiving said signals, means for performing an interpolation between successive lines of said field to provide signals representing an approximation to the lines of the unselected field, said last-mentioned means comprising storage means for storing successively at least two lines of picture signal, means for scanning at a predetermined speed two of the stored lines simultaneously, means for detecting an abrupt change of signal level read out from either one of said lines, means responsive thereto for halting the scan of that line and accelerating the scan of the other line, means for detecting an abrupt change of signal level read out from said other line, means responsive thereto for halting the scan of said other line and resuming at accelerated rate the scan of the said one line up to the point where said scans coincide and thereupon restoring both scanning speeds to said predetermined speed, means for generating an interpolated signal related to a scanning speed intermediate the scanning speeds at which the said two lines are being read and at a signal level intermediate the signals read out from said two lines while both are scanning, said means being responsive to operation of said first named detecting means to equate the interpolated signal to that of the line still scanning whereby an abrupt change equivalent to that experienced in the two stored lines will be generated in the interpolated line signal at a point in its scan intermediate those experienced in the said stored lines, and means for assembling an interlaced version of the received signals and the interpolated signals to provide a picture presentation.

3,096,399
TELEVISION RECEIVER CIRCUITS
Lucius P. Thomas, Jr., Woodcrest, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,853
3 Claims. (Cl. 178—7.5)



1. In a television receiver having a video amplifier electron tube including an anode and further having a cathode ray tube including a cathode, a control grid and an image reproducing face, an automatic image contrast and brightness control circuit comprising in combination,
a source of operating potential;
a video load circuit connected between said source of operating potential and the anode of said video amplifier electron tube for developing alternating video signals thereacross;
D.C. coupling means connected in circuit between said video load circuit and the cathode of said cathode ray tube for establishing a direct bias voltage between the cathode and control grid of said cathode ray tube, said D.C. coupling means including a light responsive resistor having a resistance value that varies with the intensity of the light striking it;
A.C. coupling means connected in circuit between said D.C. coupling means and the cathode of said cathode ray tube for passing only said alternating video signals and applying same to said cathode;
and means for applying the light present near the image reproducing face of said cathode ray tube to said light responsive resistor to vary the amplitude of the video signals applied by said A.C. coupling means to said cathode and simultaneously to vary the direct bias voltage between the cathode and the control grid of said cathode ray tube.

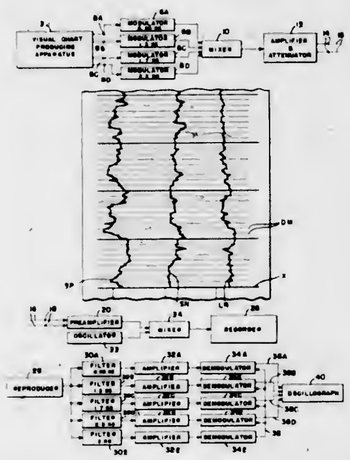
3,096,400
APPARATUS FOR MEASURING THE MARK-SPACE RATIO OF A TRAIN OF PULSES
Terence Hutchinson, Belfast, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company
Filed Apr. 4, 1961, Ser. No. 100,601
Claims priority, application Great Britain Apr. 11, 1960
8 Claims. (Cl. 178—69)



1. Apparatus for measuring the mark-space ratio of a train of pulses comprising a two condition switching circuit including a pair of electronic valves each having an anode circuit, a cathode and at least one control electrode,

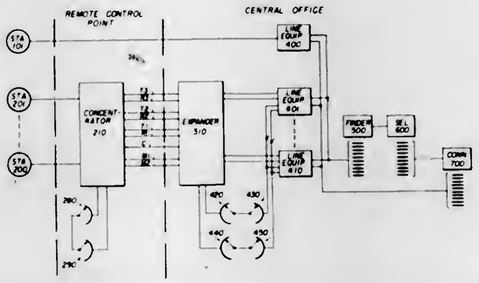
the cathodes of the valves being connected to a common cathode load with the valves being further connected together so that one of the valves is cut off in one of the two conditions of the switching circuit, means for applying said pulses to said switching circuit to cause said one of the valves to be switched, in the absence of a pulse, to a first condition in which the current flowing in the anode circuit of said one of the valves is of a first constant value, and in the presence of a pulse, to a second condition in which the current flowing in the anode circuit of the said one of the valves is of a different constant value, and a current measuring device connected in series in the said anode circuit of said one valve for measuring the average current flowing therein as an indication of the mark-space ratio of the applied pulses.

3,096,401
METHODS AND APPARATUS FOR TRANSMITTING RECORDS
Preston E. Chaney, Dallas, and Fred M. Mayes and Jack Weir Jones, Richardson, Tex., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed May 15, 1961, Ser. No. 110,166
2 Claims. (Cl. 179—15)



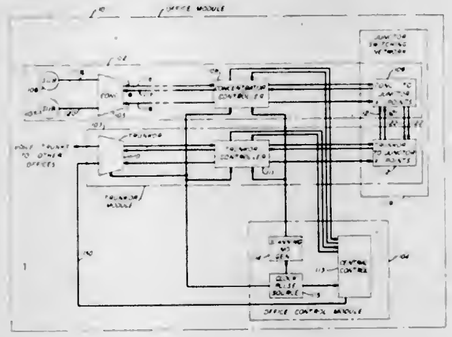
1. Apparatus for the simultaneous transmission of a plurality of functions of a common independent variable comprising transmitting means, means for supplying to said transmitting means a plurality of signals corresponding respectively to said functions, said transmitting means comprising means for producing in response to the first mentioned signals a plurality of frequency-modulated signals each of which corresponds to one of said first mentioned signals, and comprising means for mixing said frequency-modulated signals, means providing a transmission link receiving the mixed frequency-modulated signals and transmitting them to a point remote from said transmitting means, means at said point receiving the signals so transmitted, mixing the last mentioned signals with a fixed audio frequency signal, and recording the so mixed signals in a single record channel, means for reproducing the signals from said channel, means separating the individual signals thereof, means demodulating said frequency-modulated signals and also the signal provided at said fixed frequency to provide respective variable amplitude signals corresponding thereto, and means recording simultaneously a plurality of signals each of which corresponds respectively to the difference of amplitude of the amplitude signal derived from said signal provided at said fixed frequency and the amplitude of one of signals derived from the frequency-modulated signals.

3,096,402
TELEPHONE LINE CONCENTRATOR
Harold J. McCreary, Canoga Park, Calif., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Mar. 10, 1960, Ser. No. 14,061
11 Claims. (Cl. 179—18)



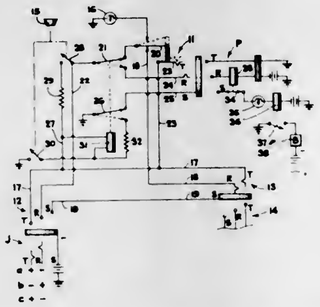
5. In a telephone system a plurality of lines each including at least one station, a central office including a plurality of line equipments each corresponding to a different one of said lines, and line concentration equipment for the establishment of circuit connections between a plurality of said lines and said corresponding line equipments comprising: a plurality of trunks less in quantity than said lines; line concentrating means located at a point remote to said central office, including line terminations, trunk terminations, and switching means including a plurality of bistable permanent magnets operated in response to one stable state to connect at least one of said trunk terminations to at least one of said line terminations; and line expanding means located at said central office.

3,096,403
SCANNING CONTROL CIRCUIT
Dennis B. James, Far Hills, William A. Malthaner, New Providence, and John P. Runyon, Mendham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 21, 1960, Ser. No. 44,431
18 Claims. (Cl. 179—18)



12. A time division telephone system comprising a plurality of subscriber lines, a concentrator connected to said subscriber lines, central office control means, transmission means interconnecting said concentrator and said central office control means, means in said central office control means defining a repetitive office cycle comprising a plurality of time slots, means for selectively establishing connections through said concentrator from particular ones of said lines to said central office control means in particular time slots of said cycle, means for detecting requests for service from said lines in any idle one of said time slots, means for assigning said idle one of said time slots to a service requesting line, and means for subsequently detecting supervisory and dial signals in said assigned time slot.

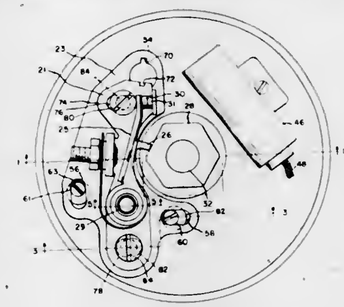
3,096,404
TELEPHONE SWITCHBOARD PATCHING UNIT
Lawrence J. Semon, 713 Wilshire Blvd., Santa Monica, Calif.
Filed Aug. 24, 1961, Ser. No. 133,643
7 Claims. (Cl. 179—42)



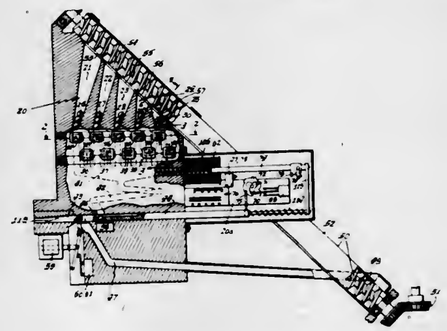
1. A switchboard patching unit for connecting and supervising a telephone call between an incoming call plug and an outgoing call jack on said switchboard comprising, in combination: a housing; circuit means in said housing for receiving and connecting said incoming call plug with said outgoing call jack; a signal means; control means in said circuit means connected to said signal means to energize said signal means in response to a change of voltage across the terminals of said outgoing call jack upon completion of said telephone call, said housing further including means for receiving a dialing out plug from said switchboard, said circuit means connecting said dialing out plug with said outgoing call jack prior to insertion of said incoming call plug in said housing and being responsive to said insertion of said incoming call plug in said housing to disconnect said dialing out plug.

3,096,405
IGNITION DEVICE
Eugene C. Bettoni, Birmingham, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed Mar. 6, 1961, Ser. No. 93,624
13 Claims. (Cl. 200—31)

1. A distributor mechanism comprising a drive shaft, a cam carried by said drive shaft for rotation therewith, a fixed breaker plate, an adjustable breaker plate on top of said fixed breaker plate, an ignition contact assembly mounted on said adjustable breaker plate and including a pivotally mounted breaker arm having a laterally extending rubbing block thereon opposite said cam, primary adjustment means for effecting an adjustment between said ignition contact assembly and said adjustable breaker plate to obtain an approximate setting between said rubbing block and said cam, a pair of independently operated secondary adjustment means between said adjustable and fixed breaker plates for obtaining the final setting between said rubbing block and said cam, and fastening means for holding said ignition contact assembly and said adjustable breaker plate in a fixed position after the aforesaid settings have been made, one of said secondary adjustment means being adapted to move said adjustable breaker plate in a first direction substantially perpendicular to the axis of said drive shaft, and the other of said secondary adjustment means being adapted to move said adjustable breaker plate in a second direction substantially perpendicular to said first direction.



3,096,406
SELECTION PLAYING DEVICE
George J. Brown, 22 Grandview Ave., Waterbury, Conn.
Filed June 13, 1960, Ser. No. 35,602
14 Claims. (Cl. 200—38)

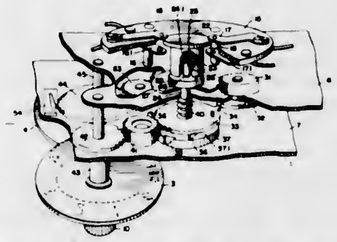


1. A manually operated program selecting means for enabling the performing of selections in the order chosen comprising means having a plurality of more than two distinct conditions, each for the performing of a selection; a plurality of more than two interposers, each having a different sensible characteristic; means for storing the interposers; means for manually releasing an interposer for each selection as each selection is made; means for collecting the released interposers; and means for individually accepting said interposers one at a time in the order released from the collecting means and adjusting the means having a plurality of conditions to the distinct condition determined by the characteristic thereof.

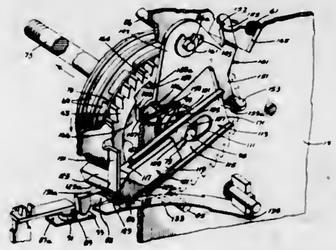
3,096,407
TIMED SWITCH ACTUATION MEANS
John L. McClure, Berwyn, Ill., assignor to General Electric Company, a corporation of New York
Filed Aug. 16, 1960, Ser. No. 49,890
8 Claims. (Cl. 200—38)

1. A switching device, comprising a plate; first and second switch elements of leaf spring quality insulatedly secured to opposite sides of said plate with free ends pro-

jecting beyond an edge of said plate in mutual vertical alignment, said switch elements being biased in opposing directions to assume a closed circuit condition; a shaft disposed normal to said plate; means for mounting said shaft for axial and rotational movement relative to said switch elements; a switch actuator; means for mounting said actuator on said shaft for rotation therewith and axial movement relative thereto, said actuator comprising a cylindrical body portion having a circular flange extending between said switch elements without interference with the closed circuit condition thereof; a keyway extending axially along said actuator body; a gear freely rotatable on said shaft and axially movable therewith, said gear having a key disposed beneath said body for seating within said keyway to establish said actuator flange at a level at which said switch elements are closed, manually operable means including a plate cam fixed relative to said shaft and a cam follower on said shaft for moving said shaft and actuator axially to a first position sufficient to disengage said key and keyway and for rotating said shaft and actuator body relative to said key, said actuator flange thereby engaging said first switch element in opposition to the bias thereof to disengage said switch elements; timed means for rotating said gear in an opposite direction to return the key to registry with said keyway whereby the bias of said switch element axially displaces said actuator to a second position to close said switch elements, said gear and said actuator being then in mechanically coupled relation for rotation of said shaft by said gear; means effective upon a predetermined extent of said rotation to position said cam follower relative to said cam to restore said shaft to its first position and move said actuator to a third position wherein said actuator flange separates said switch elements and said key disengages from said keyway; and spring means for effecting said movement.

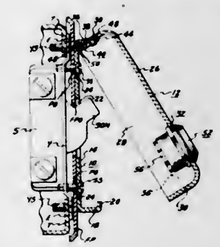


3,096,408
SEQUENCE CONTROLLER MECHANISM
George D. Brock, Sterling, and Ernest W. Topping, Lyndon, Ill., assignors to General Electric Company, a corporation of New York
Filed Sept. 26, 1961, Ser. No. 140,731
10 Claims. (Cl. 200—38)



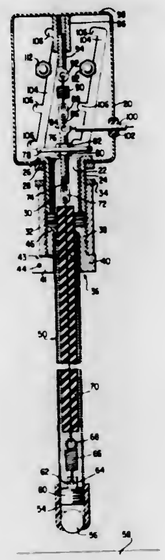
1. In a timing mechanism including a plurality of sequentially operable control devices, a rotatable operating unit for actuating said devices, a shaft coaxially arranged within said unit for setting said unit, said shaft being disposed for reciprocable movement relative to said unit, a camming surface on said shaft, an actuator having a follower surface thereon, a control element arranged for operation by said actuator, said camming surface on said shaft being disposed for coaction with said follower surface on said actuator to move said actuator transversely relative to the axis of said shaft in response to reciprocation of said shaft for operating said control element, and a positive stop means including said actuator arranged to coact with said rotatable unit for positioning said unit at a predetermined programming position.

3,096,409
SWITCH PLATE LOCKING COVER ATTACHMENT
Harvey Hubbell, Southport, and Joseph F. Healy, Westport, Conn., assignors to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed June 14, 1960, Ser. No. 35,979
5 Claims. (Cl. 200—44)



1. For use with an electrical wall-type switch having a standard face plate which is mounted by standard face plate securing screw means and through which a manually actuated switch operating member extends that is accessible for manual actuation, an attachment adapted to be mounted in operative association with the switch for selectively rendering the switch operating member inaccessible to prevent unauthorized manual actuation thereof comprising: a generally planar mounting member having an opening through which the switch operating member may extend and opening means formed therein and arranged to have the standard face plate securing screw means extend therethrough to rigidly mount said mounting member to the front of the standard face plate in contiguous parallel relationship therewith with the switch operating member extending through said opening and accessible for actuation; and a cover pivotally secured to said mounting member between an opened and a closed position by hinge means formed partially on and disposed at adjacent end portions of said mounting member and said cover, said cover configured such that when in opened position it does not prevent access to the switch operating member and when in closed position it overlies and surrounds the portion of the switch operating member that extends through the face plate and mounting member and renders it inaccessible for actuation; and selectively operated locking means for locking said cover in its closed position disposed at adjacent end portions of said mounting member and said cover that are opposite to the first mentioned adjacent end portions, said locking means comprising a locking lug formed out of said mounting member and extending inwardly of said cover when the latter is in closed position and a manually key-operated lock carried by said cover and having a latching detent that is arranged to selectively engage and disengage said locking lug to either lock or unlock said cover relative to said mounting member.

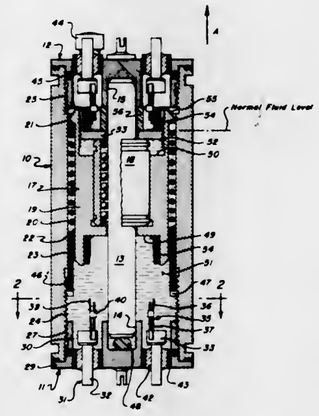
3,096,410
LOW TIRE INDICATING DEVICE
Mitchell Anderson, 2710 SE. Courtney Road, Portland 22, Oreg.
Filed Dec. 19, 1961, Ser. No. 160,465
16 Claims. (Cl. 200—61.24)



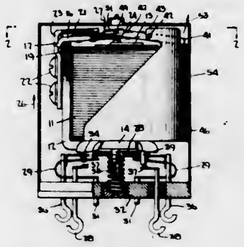
1. A low tire indicator or the like comprising: a first substantially rigid switch contact, a second substantially rigid switch contact, means biasing said first switch contact to a first position indicative of normal tire inflation, a switch control member coupled to said first switch contact, means responsive to a low tire condition for pulling said switch control member to bring said first switch contact to a second position in firm contact with said second switch contact, indicative of said low tire condition, and protective means for limiting the tension in said switch control member exerted by said means responsive to a low tire conditon after said first switch contact is brought to said second position, said protective means comprising a coil tension spring connected mechanically in series with said switch control member and said first switch contact, said coil tension spring being located on the same side of said first switch contact as said switch control member and said means responsive to a low tire condition.

3,096,411
ACCELERATION RESPONSIVE SWITCH
Alex F. Chabrek and Russell L. Maxwell, both of Albuquerque, N. Mex., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 24, 1961, Ser. No. 133,750
5 Claims. (Cl. 200—61.53)

1. A device of the character described comprising the combination of an elongate housing, end plates for closing opposite ends of said housing, electrical contact means mounted on each end plate within said housing, a guide shaft extending between and supported in the housing by said end plates; a ball bushing encircling said shaft and movable thereupon, an annular acceleration responsive mass having centrally disposed recesses in opposite ends thereof surrounding said shaft and affixed to said bushing, a shorting ring disposed in each of said recesses, means securing said rings to said mass and insulating them therefrom, a selectively settable adjusting ring carried by said housing, and helical compression spring means encircling said mass and disposed between one end of said settable adjusting ring and a portion of said mass for continuously forcing said mass toward one of said end plates, the compression force of said spring means against said mass opposing mass movement toward the other of said end plates being selectively determinable by moving the settable adjusting ring.

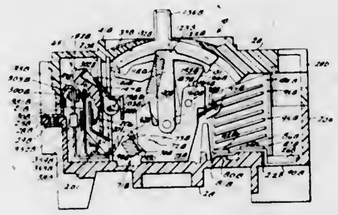


3,096,412
COUNTERBALANCED RELAY
Paul N. Martin, Frederick, Md., assignor to Consolidated Electronics Industries Corp., New York, N.Y., a corporation of Delaware
Filed Apr. 26, 1960, Ser. No. 24,730
11 Claims. (Cl. 200—87)



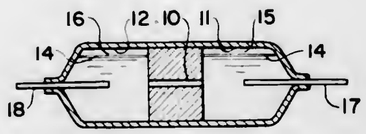
1. A relay comprising: a winding; a ferromagnetic core energized by said winding to produce a magnetic field; a clapper type armature pivotally mounted to move about an axis fixed with respect to said core whereby one end of said armature moves with respect to said core under the force of attraction of a magnetic field generated in said winding; a counterbalance weight engaging said armature to be moved thereby, said weight being located in the same region of said relay as said armature to be acted upon by substantially the same external forces that act upon said armature and having a pivot axis which lies between the first-named axis about which said armature pivots and the center of mass of said weight, the motion of said weight being about said pivot axis.

3,096,413
THERMAL MAGNETIC CURRENT BY-PASS
Carl E. Gryctko, Haddon Heights, N.J., and Kenneth Ball, Philadelphia, Pa., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1958, Ser. No. 775,862
2 Claims. (Cl. 200—88)



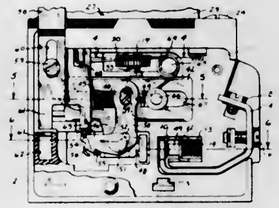
1. A circuit breaker including a pair of cooperating contacts and a bimetallic means connected in electrical series with one of said cooperating contacts; means operatively connected to one of said cooperating contacts and actuated by said bimetallic means upon deflection thereof to a first predetermined position to thereby separate said cooperating contacts; a normally open shunt circuit actuated by said bimetallic means upon a deflection thereof to a second predetermined position; said shunt circuit when actuated being operatively connected to said bimetallic means to prevent deflection thereof beyond said second predetermined position and to provide a conductive path shunting said bimetallic means to thereby prevent burn-out and distortion thereof; magnetic means associated with said bimetallic means and said shunt circuit; said magnetic means being operatively positioned and constructed to assist said bimetallic means in actuating said shunt circuit and thereafter maintain said shunt circuit actuated until such time as current flow through said circuit breaker is reduced to a value which will not cause injury to said bimetal; said magnetic means being adapted to enable said shunt circuit to be rapidly urged toward said bimetal; said shunt circuit comprising a conductive shunt member; said shunt member being highly flexible along its entire length to enable rapid movement of said shunt member towards said bimetallic element and to eliminate contact bounce between said bimetallic element and said shunt circuit.

3,096,414
ELECTRICAL CIRCUIT CONTROLLERS
Earl Clinton Newman, Allison Park, Pa.
(8280 Tanglewood Road, Pittsburgh 37, Pa.)
Filed Oct. 3, 1958, Ser. No. 765,140
5 Claims. (Cl. 200—113)



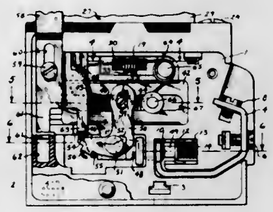
1. A circuit controller device comprising an elongated restricted bore, spaced reservoirs communicating with said bore, a contact member extending through the wall of each reservoir, a conductive fluid capable of volatilizing at elevated temperature filling said bore and substantially filling said reservoirs to a point where a small void remains in each reservoir, said void forming a minor portion of the volume of said reservoir, said reservoirs being evacuated of substantially all fluids other than the conductive fluid and being of such size that the end of the bore is closed by the conductive fluid in all positions of the bore.

3,096,415
RELAY
Robert E. Walters, Bayside, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 27, 1960, Ser. No. 32,250
15 Claims. (Cl. 200—124)



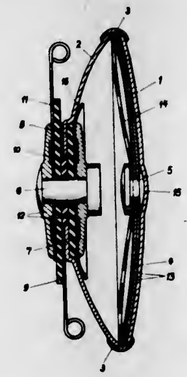
2. In a relay the combination comprising: a trip member movable between cocked and tripped positions and having a driving portion thereon; means to move said trip member toward tripped position; an actuator movable between a retracted position and an actuated position which is engageable by said driving portion of said trip member to be carried therewith upon said trip member being moved toward its tripped position, said actuator thereby being moved toward its actuated position; bias means urging said actuator toward said retracted position; cocking means have a working surface thereon which is carried by said actuating member and engageable with said trip member; and a reset lever substantially independent of said actuator and trip member and having an operating portion operatively engageable with said working surface only when said working surface has been carried by said actuator to a position corresponding to said actuated position of said actuator.

3,096,416
PROTECTIVE RELAY
Gerd C. Boysen, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 27, 1960, Ser. No. 32,372
9 Claims. (Cl. 200—124)



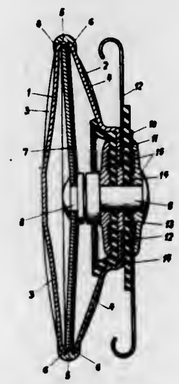
1. In a relay the combination comprising: a trip member movable between cocked and tripped positions; means to move said trip member toward tripped position; an actuator movable between a retracted position and an actuated position and engageable by said trip member to be moved to actuated position; bias means urging said actuator toward said retracted position; cocking means engageable with said trip member and having a working arm thereon; a movable reset lever having a projecting finger engageable with said working arm for causing the cocking means to return the trip member to its cocked position and a lost motion connection between said reset lever and said actuator whereby said actuator is free to move to said actuated position regardless of the position of said reset lever.

3,096,417
SMALL-TYPE THERMOSTAT FOR PREVENTING OVERHEATING, PROVIDED WITH A BIMETAL DISK AND A CONDUCTOR DISK IN A LENTICULAR CASING
Alfred Odenwald, Steinbergsgutstrasse 22, Pforzheim, Germany
Filed Apr. 7, 1959, Ser. No. 804,771
Claims priority, application Germany May 16, 1958
2 Claims. (Cl. 200—138)



1. A small type thermostat adapted to be inserted between windings of electrical machinery to prevent overheating of the same and comprising, in combination, a casing of lenticular shape formed by a pair of oppositely curved sheet metal members connected at annular rim portions thereof to each other; a flexible conductor disk made from current and heat well conductive material and formed with a spiral slot extending between an unslotted outer rim portion and a central portion of said conductor disk, said conductor disk being clamped at said outer unslotted rim portion thereof between said annular rim portions of said sheet metal members; a first contact fixed to a central portion of one of said sheet metal members insulated therefrom; a bimetal disk extending transversely through said casing and being located between said conductor disk and the other of said sheet metal members, said bimetal disk having an active position curved toward said first contact and being adapted to snap under the influence of heat to an inactive position curved away from said first contact; and a second contact fixed to said bimetal disk, extending through an opening in said central portion of said conductor disk and clamping said central portion of said conductor disk against said bimetal disk, said second contact engaging in said active position said first contact and said conductor disk being curved in such a manner as to be in contact substantially over the entire surface thereof with a corresponding face of said bimetal disk when the latter is in said active position so as to increase heat transfer from said casing through said conductor disk to said bimetal disk, whereby the time of response of said bimetal disk to heat imparted to the casing is greatly reduced.

3,096,418
SMALL-TYPE THERMOSTAT FOR PREVENTING OVERHEATING, PROVIDED WITH A BIMETAL DISK IN A LENTICULAR CASING AND WITH BEAM-LIKE PROFILED BRACING MEANS ON SAID CASING
Alfred Odenwald, Steinbergsgutstrasse, Pforzheim, Germany
Filed Apr. 7, 1959, Ser. No. 804,772
Claims priority, application Germany Apr. 18, 1958
4 Claims. (Cl. 200—138)

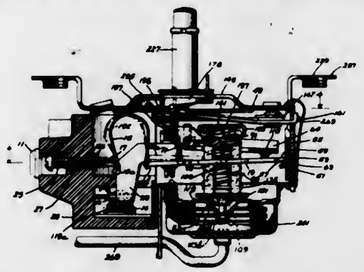


1. A small type thermostat adapted to be inserted between windings of electrical machinery to prevent overheatings thereof and comprising, in combination, a casing of lenticular shape including a pair of oppositely curved sheet metal members having each an annular edge face directed toward the annular edge face of the other of said members, and a metal ring of substantially T-shaped cross-section having a central portion and a pair of curved flange portions integral with and protruding respectively from opposite sides of said central portion, said central portion being located between and engaged on opposite sides thereof by said edge faces of said sheet metal members, respectively, and said pair of flange portions respectively engaging outer surface portions of said sheet metal members adjacent said edge faces thereof so as to press said edge faces tightly against said central portion of said ring so as to form together with said central portion of said ring an annular outwardly closed space; a bimetal disk extending transversely through said casing in the region of said central portion of said ring and having a rim portion projecting into and located in said annular space formed by said central portion of said ring and said pair of oppositely curved sheet metal members, so that said bimetal disk is thereby supported and properly centered within said casing; a first contact fixed to said disk substantially in the center thereof; a counter contact fixed to and insulated from one of said sheet metal members of said casing and aligned with said first contact; and a pair of conductor means respectively electrically and mechanically connected to said casing and said counter contact.

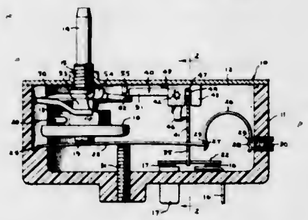
3,096,419
CONDITION RESPONSIVE ELECTRIC SWITCH MECHANISM
Louis J. Howell, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Sept. 6, 1960, Ser. No. 54,205
8 Claims. (Cl. 200—140)

1. A condition responsive switch comprising a pair of contacts, a contact operating member pivotally mounted to close and open said contacts when said member is moved about its pivot in opposite directions between

first and second positions, snap action spring means in continuous engagement with said member for producing snap action thereof between said positions, condition responsive means for effecting movement of said member between said positions in response to predetermined variations in external conditions, a pivotally movable spring having a free end engageable by said member when said member is in the first position to bias said member toward the second position, the free end of said spring and said contact operating member having a gap therebetween when said member is in the second position, and a rotatable cam operatively associated with said spring and arranged to pivot said spring thereby to adjust the size of said gap for varying the condition at which the member will move to the second position but having no substantial effect upon the condition at which said member will move to said first position.

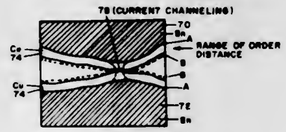


3,096,420
OVEN THERMOSTAT
Raymond L. Dills, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 27, 1960, Ser. No. 78,615
5 Claims. (Cl. 200—140)



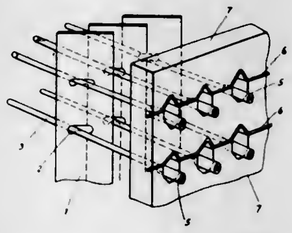
1. A temperature responsive control device comprising a housing, an expansible member adjustably mounted in one wall of the housing, said member expanding and contracting according to the direction and extent of temperature change of an external body, and manual control means combined with the expansible member for setting the desired temperature of the device, fixed switch contact means mounted within the housing, a snap-acting spring mechanism supporting movable switch contact means, said spring mechanism being motivated by the expansible member for making and breaking an electric circuit through the fixed contacts, and a lock-out mechanism for disabling the movable contact means in an open circuit position once the temperature reaches a predetermined maximum temperature, said lock-out mechanism including an insulating plate connecting the snap-acting spring mechanism with the movable contact means, a spring-biased pawl supported in the housing for movement toward and away from the said insulating plate, said plate including a keeper portion that is adapted to be engaged by the pawl in one position of the control device for locking the movable contact means in the open circuit position, and an adjustable camming means combined with the expansible member for cooperation with the pawl so that in one normal position the pawl is held away from the said plate, another position of the expansible member and hence the cam freeing the pawl therefrom whereby when the expansible member reaches its position of maximum temperature the insulating plate moves until the pawl is locked therewith to prevent subsequent closing of the contacts until the position of the expansible member and hence the camming means is changed.

3,096,421
SUPERCONDUCTING CONTACT DEVICES
Hans W. Meissner, Baltimore, Md., assignor of fifty percent to Walter G. Finch, Baltimore, Md.
Filed Apr. 16, 1958, Ser. No. 728,966
16 Claims. (Cl. 200—166)



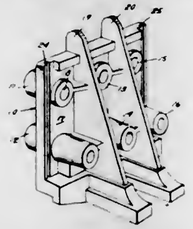
1. A superconducting contact device which, in a closed position, has zero resistance, comprising, at least two superconducting base members, a protective coating of normal conducting metal on said base members, said protective coatings of said normal conducting metals on said base members each having a thickness less than the range-of-order distance of superconducting electrons, said base members being arranged to contact each other through their respective coatings of normal conducting metal at at least one point of contact, and means for maintaining said superconducting base members at a temperature below their respective superconducting transition temperatures.

3,096,422
MULTI-CONTACT SWITCHING DEVICE
Harald Valdemar Alexandersson, Lidingo, and Arne Kurt Dietsch, Enskede, Sweden, assignors to Telefonaktiebolaget L. M. Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Jan. 29, 1960, Ser. No. 5,442
Claims priority, application Sweden Feb. 10, 1959
5 Claims. (Cl. 200—166)



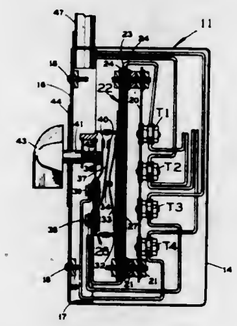
1. A multi-contact switching device comprising a plurality of substantially straight contact springs fixedly mounted at one end and grouped spaced apart in vertical and transverse rows, a plurality of stationary contacts each engageable with one of said contact springs at the free end thereof, and a lengthwise displaceable vertically disposed insulation lifting bar for each vertical row of contact springs, said bars being aligned in a row transverse of said contact springs, each of said bars contacting with all the contact springs in the respective vertical row to move said springs into and out of engagement with the respective stationary contacts by lengthwise displacement of the bars, said bars having a width greater than the transverse spacing between two adjacent vertical rows of springs and being positioned to define an angle of less than 90° with said contact springs whereby upon displacement of the bars into the contact-making position, a uniform contact pressure is exerted at all the stationary contacts in the respective vertical row.

3,096,423
UNITARY MULTI-PHASE TERMINAL SUPPORT
George A. Wilson, Media, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1960, Ser. No. 10,625
1 Claim. (Cl. 200—168)



A unitary rear panel and terminal support member for a three-phase draw-out switchgear unit; said unitary rear panel being comprised of a relatively flat plate portion adapted to span across the rear of said draw-out unit and being mountable to the rear of said draw-out unit; said flat plate portion having a plurality of tubular extensions extending from at least the rear surface thereof; said plurality of unitary tubular extensions having openings extending therethrough in a direction substantially perpendicular to said flat plate portion; said unitary tubular extensions having relative positions in accordance with predetermined disconnect contact positions of said three-phase draw-out unit; each of said tubular extensions being adapted to receive a respective disconnect contact structure for said draw-out unit; said opening in said tubular extensions being operable to pass conductive means connected to said disconnect contact structures to the front surface of said flat plate portion; said front surface of said flat plate portion having integral barriers extending perpendicularly therefrom and being adapted to electrically isolate conductive components of different phases of said multi-phase draw-out unit which are positioned adjacent to said front surface of said flat plate portion said plurality of unitary tubular extensions comprising first, second and third pairs of said extensions being adapted respectively to receive first, second and third pairs of stationary contacts of said three phase draw-out switchgear unit; the tubular extensions of each of said pairs being in vertical alignment; said pairs being arranged in a horizontal manner along said panel; said first barrier being vertically aligned between said first and second pairs of tubular extensions; said second barrier being vertically aligned between said second and third pairs of tubular extensions, said first and second barriers being adapted to provide suitable support for said panel thereby avoiding the necessity for additional vertical supporting barriers along said panel; first and second horizontally aligned supporting ribs for joining respectively the tubular extensions of said first pair of extensions to said first vertical barrier; third and fourth horizontally aligned supporting ribs for joining respectively the tubular extensions of said first pair of extensions to said second vertical barrier; fifth and sixth horizontally aligned supporting ribs for joining respectively the tubular extensions of said second pair of extensions respectively to both said first and second vertical barriers; all of said horizontally aligned supporting ribs being positioned along the front surface of said panel for providing a rigid unitary structure.

3,096,424
TEMPERATURE CONTROL MEANS
Angelo Cecchini, 310 E. 163rd St., New York, N.Y.
Filed Mar. 15, 1960, Ser. No. 15,210
2 Claims. (Cl. 219—20)

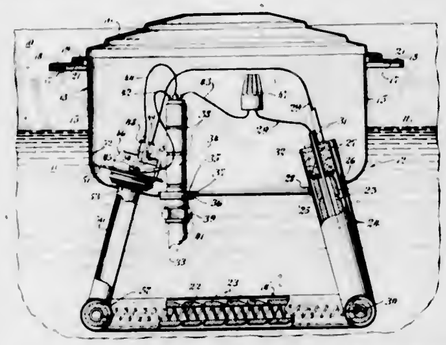


2. A heating apparatus comprising means defining a main heating zone, a main electric resistance heating element disposed in said main heating zone, a housing spaced and thermally isolated from said heating zone and substantially unaffected by the temperature therein, a second electrical resistance heating member disposed in said housing and spaced from the walls thereof and a thermostatic switch carried by and in heat conducting relationship with said second electrical resistance heating element and being heated substantially solely thereby, said main heating element and said second heating member being connected to a source of current through said thermostatic switch to be simultaneously energized and deenergized, said second heating member including an insulating core about which is helically wound an electrical resistance element and a pair of insulating sheets sandwiching said resistance element carrying core and a pair of parallel metal plates clamping said sandwich, said thermostatic switch being affixed to one of said metal plates.

3,096,425
FLOATING ELECTRIC HEATER FOR STOCK WATERING TANK
Maurice H. Keating and John J. Kubinski, Rockford, Ill., assignors to H. D. Hudson Manufacturing Company, Chicago, Ill., a corporation of Minnesota
Filed Jan. 12, 1961, Ser. No. 82,195
2 Claims. (Cl. 219—38)

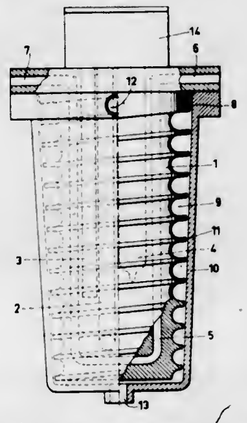
1. An immersion heater adapted for use in a watering tank for livestock, comprising a tubular heat exchange member in the form of a coil of generally oval shape having upwardly extending end portions, a hollow float disposed above the coil and rigidly connected to said upwardly extending end portions, said float being adapted to suspend said coil beneath the surface of the water to be heated, an electrical resistance element of relatively high resistance within the coil, a thermostatic switch within the float responsive to the ambient temperature in the float, an electrical conductor cord extending through the float and connected to the resistance element through said switch, and safety means communicating with said switch to prevent overheating of the resistance element in the event the coil is exposed to the atmosphere, said safety means including an embossed area on and within the

bottom of the float, a spring bracket mounting and urging said thermostatic switch against said embossed area and a hollow heat conducting tube secured to and extending



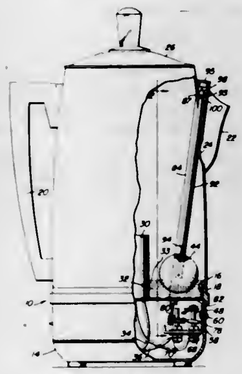
between said embossed area and the coil for conducting heat from said coil to said embossed area and to said switch to open the latter and prevent overheating of the coil.

3,096,426
ELECTRICAL PAINT HEATER
Eskil Anders August Axelson, 13 Kungsholmgatan, Stockholm, Sweden
Filed Apr. 3, 1961, Ser. No. 100,057
Claims priority, application Sweden Apr. 6, 1960
3 Claims. (Cl. 219—38)



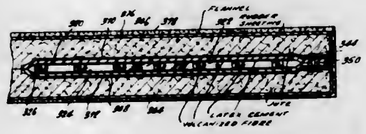
1. An electrical flow heater for paint and compressed air comprising: a one piece thermally conductive body, a heating element encased in said body, said body being of frusto-conical shape and being provided with a helical groove peripherally formed therein, said groove decreasing in depth in relation to the decreasing diameter of said body, a frusto-conical casing having a smooth inner surface surrounding said body and in substantially peripheral sealing contact with said body whereby said helical groove provides a closed helical channel, said casing being provided with openings in communication with said groove at opposite ends of the body to constitute an inlet and an outlet for said channel to enable the circulation of paint through said channel, said paint absorbing heat from the body which is heated by the heating element as the paint traverses said path, and a U-shaped tube having an inlet and an outlet for air encased within said body, said tube extending in a peripheral zone in said body between the heating element and the closed channel.

3,096,427
AUTOMATIC COFFEE MAKER
Leon H. Wildberger, Sr., P.O. Box 309, Robertsdale, Ala.
Filed Nov. 7, 1961, Ser. No. 150,733
2 Claims. (Cl. 219—44)



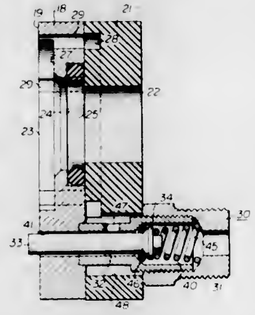
1. In combination with a beverage percolator utilizing an electric circuit for maintaining heat therein, a float-controlled switch in said circuit for interrupting said heat maintaining circuit when the beverage level in the percolator drops below a safe minimum, said float-controlled switch comprising a vertically movable contact, a float floatable in the beverage, a float rod connected to said float and to said vertically movable contact, a fixed contact mounted in the vertical path of and above said vertically movable contact whereby the circuit is maintained through said switch only when said float is supported by the beverage in contact lifting position, said fixed contact comprising a horizontally extending contact member, a vertically extending fixed contact rod, insulated support means for said fixed contact rod, a circuit line connected to said fixed contact rod, a contact guide rod for said movable contact mounted on said insulated support means parallel to and spaced from said fixed contact rod, a circuit line connected to said guide rod for said movable contact, said vertically movable contact comprising a conductor plate apertured to slide vertically on said contact guide rod, a contact member on said conductor plate, insulated guide means extending from said conductor plate about said fixed contact rod, said float rod being connected to said conductor plate of said movable contact.

3,096,428
THERAPEUTIC WARMING PAD FOR ANIMALS
Robert Dublirer, 10 Downing St., Sara M. Barbaresi, 308 E. 49th St., and Lawrence Katzman, 11 Riverside Drive, all of New York, N.Y.
Filed Apr. 3, 1961, Ser. No. 100,174
3 Claims. (Cl. 219—46)



1. A whelping pad for animals comprising a substantially rectangular shaped pillow, said pillow having opposed relatively thick layers of jute padding, a pair of vulcanized sheets between said layers of jute padding and extending along only one half of said layers of jute padding and being bonded to said layers of jute padding, a heating coil between said vulcanized sheets, means securing the peripheral edges of said vulcanized sheets together, a waterproof tape secured over said peripheral edges of said vulcanized sheets, a waterproof envelope embracing and completely enclosing said layers of jute padding, and a flannel slip-over cover removably covering said waterproof envelope.

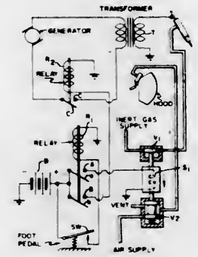
3,096,429
WELDING APPARATUS AND PROCESS
Lorenz J. Mowry, Elyria, and Henry H. Jenkins, Amherst, Ohio, assignors to Gregory Industries, Inc., a corporation of Michigan
Filed Mar. 30, 1961, Ser. No. 99,588
12 Claims. (Cl. 219—98)



1. Atmospheric control apparatus for drawn-arc welding, comprising, a hood body having a base surface, wall surfaces defining a chamber opening from said base surface into said hood body, said chamber being substantially closeable by abutment of said base surface against a workpiece to which a welding attachment is to be made, a passageway from the exterior of said hood body to said chamber defined by wall surfaces shaped to receive a weldable element, exhaust port means from said chamber to atmosphere, chamber gas inlet means through said wall surfaces of the chamber, valve means in said gas inlet means, valve actuation means, a gas supply source of predeterminable maximum pressure, a length of support conduit between said source and said valve, said conduit having internal volume to hold a quantity of compressed gas at said maximum pressure which will expand at atmospheric pressure to a volume greater than the combined volume of the said chamber and all gas conducting members to and from the chamber, including the said supply conduit, and an orifice throat in said valve of a size related to said length of hose to thereby reduce the flow from longer hoses acting as larger reservoirs, whereby shielding gas will flood the chamber and escape through said outlet port.

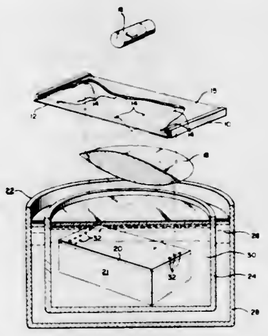
3,096,430
WELDING HOOD
Richard S. Farr, 4542 Don Felipe Drive, Los Angeles 8, Calif.
Filed Apr. 10, 1961, Ser. No. 101,990
15 Claims. (Cl. 219—147)

1. A welding hood for use with an electric arc-welding system comprising a helmet, a face plate hingedly carried on the helmet and adapted to be opened or closed. an air inlet port, means responsive to air pressure at said inlet port to close said face plate, valve means for supplying air pressure to said means, and means associated with the arc-welding system and said valve means for delaying the operation of the arc-welding



system for a predetermined period of time after the opening of said valve means.

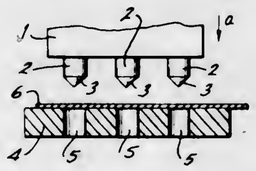
3,096,431
INFORMATION HANDLING ARRANGEMENT
Frederick W. Schmidlin, Redondo Beach, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Aug. 5, 1960, Ser. No. 47,740
12 Claims. (Cl. 235—61.11)



8. Apparatus for converting information stored in a data card containing punched holes to corresponding electrical information, said apparatus comprising: a storage panel including an array of superconductive storage units arranged in rows and columns, each of said storage units including a radiation responsive thin film superconductive switch element and a superconducting inductance portion connected in an electrical parallel circuit, said switch element being responsive to radiant energy impinging thereon to transform said switch element from a superconducting to a resistive state, said inductance portion being constructed to have a substantially higher inductance and a higher critical current level relative to said switch element; means connecting said storage units in series; a radiant energy source arranged to project on said storage panel a radiation pattern formed by projections of said radiant energy through the punched holes of said data card, with the rays of radiant energy passing through said holes impinging upon said switch elements; a source connected to apply a bias current through said storage units in series, said bias current being of a magnitude below the critical current level of said switch element, whereby in the absence of radiation on a switch element, said bias current flows unimpeded through said switch element, and upon irradiating said switch element, said bias current flows through said inductance portion, thereby to

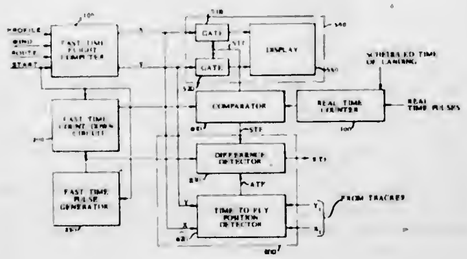
induce a persistent current in said irradiated storage unit when said radiation and said bias current are removed sequentially; and means for sending the presence of said persistent current in each of said storage units, said sensing means including an array of superconductive members arranged in rows and columns, with one member from each row and each column inductively coupled to each inductance portion of said storage units.

3,096,432
RECORD CARDS FOR BUSINESS MACHINES AND MEANS FOR EMBOSSING THE SAME
Gerhard Wunderlich, Nurnberg, and Hans Sippel, Furth, Bavaria, Germany, assignors to Max Grundig, Furth, Bavaria, Germany
Filed Dec. 4, 1959, Ser. No. 857,465
Claims priority, application Germany Dec. 6, 1958
8 Claims. (Cl. 235—61.12)



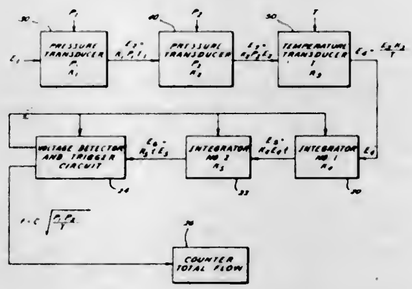
1. As a novel article of manufacture, a record card for business machines and the like having a major surface and at least one substantially funnel-shaped apertured protuberance projecting from said major surface for engagement with a sensing element when the card is advanced through the machine.

3,096,433
AIR TRAFFIC CONTROL SYSTEM
John I. Daspit and Donald C. Thomas, Los Angeles County, Calif., assignors to Tasker Instruments Corporation, Van Nuys, Calif., a corporation of California
Filed July 3, 1959, Ser. No. 824,843
9 Claims. (Cl. 235—151)



1. In a system for controlling an aircraft to adhere to a scheduled flight along a predetermined route, the aircraft having a predetermined profile specifying variations in air speed and altitude along the predetermined route, said system including means for generating a position signal continuously representing the position of the aircraft, the combination comprising: first means responsive to an applied start signal for producing a flight signal in simulated flight time representing the movement of the aircraft along its route according to its profile, with compensation being made to adjust for the effect of wind along the aircraft route, said first means including circuits for controlling the rate of change in amplitude of said flight signal in accordance with the air speed of the aircraft specified by its profile and in accordance with the influence of wind along the route of the aircraft; a second means, operable in synchronism with said first means, for producing a signal indicating the occurrence, after said start signal, of a simulated flight time corresponding to the scheduled time remaining for the aircraft to arrive at a predetermined point on its route; third means coupling said first and second means and responsive to the signals produced thereby for translating the signal of said first means into an output signal indicating the proper position for said aircraft according to its schedule; and fourth means coupled to said first and second means and responsive to the signals produced thereby and to said position signal for producing a timing signal indicating the approximate coincidence in position represented by said position signal with that represented by a said flight signal, the time between said timing signal and said start signal corresponding, in simulated time, to the actual time remaining to fly for said aircraft along its route; said fourth means further including means for producing an output signal representing the difference between the actual time remaining for flight and the scheduled time remaining for flight for said aircraft.

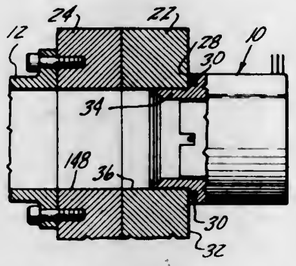
3,096,434
MULTIPLE INTEGRATION FLOW COMPUTER
James D. King, San Antonio, Tex., assignor, by mesne assignments, to Daniel Orifice Fitting Company, Houston, Tex., a corporation of Texas
Filed Nov. 28, 1961, Ser. No. 155,364
4 Claims. (Cl. 235—151)



1. A double integration flow meter for measuring the volume of a flowing fluid wherein the flow rate is proportional to the square root of the flow pressure of the fluid, the differential pressure drop across an orifice and inversely proportional to the square root of the temperature of the fluid comprising,

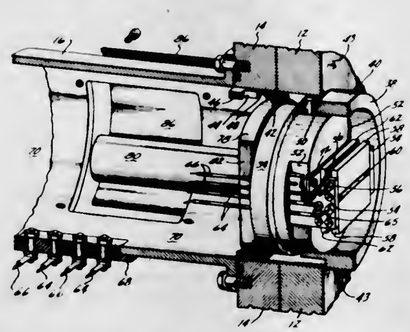
(*a*) a differential pressure transducer,
(*b*) a pressure drop transducer,
(*c*) a temperature transducer,
(*d*) a first integrator for receiving measurements from all of said transducers,
(*e*) a second integrator connected to the output of the first integrator and integrating said output,
(*f*) a signal level detector and trigger circuit connected to the output of the second integrator,
(*g*) a resetting circuit connected to said detector and trigger circuit and to said first and second integrators,
(*h*) said detector and trigger circuit being actuated on a predetermined output of the second integrator thereby actuating said resetting circuit and resetting the integrators, and
(*i*) a counter connected to the detector and trigger circuit and actuated by said circuit to measure total volume flow.

3,096,435
ION GENERATING AND FOCUSING MECHANISM
Charles E. Burdg, Suffield, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,826
6 Claims. (Cl. 250—41.9)



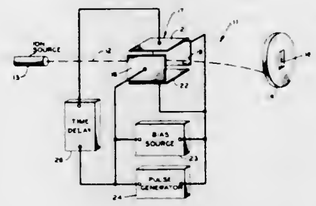
1. In a mass spectrometer adapted to be provided with a vacuum, a support subjected on one side to said vacuum, a housing supporting an ion beam source and focusing mechanism for said beam, said housing comprising a shouldered cylindrical member having a closed end supporting said source and focusing mechanism and having sealing means associated with said shoulder, a cylindrical receptacle in said support receiving, aligning and adjustably supporting said housing with the shoulder seating on said support and with the sealing means forming a seal between said housing and said support, said housing including said closed end being subjected to said vacuum on one side and atmospheric pressure on the other side to retain said housing in said support.

3,096,436
ION LENS SYSTEM
Charles E. Burdg, Suffield, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,853
6 Claims. (Cl. 250—41.9)



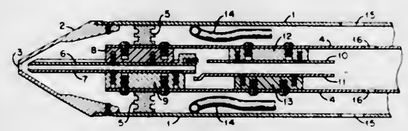
6. In a mass spectrometer, an ion stream source, a lens system including accelerating plates, receiving and directing said stream, socket means having walls telescopically receiving and positioning said lens and supporting said source, a tubular chamber extending downstream from said socket means; said source and said walls closing, and forming one end of, said chamber, an open ended tubular shield having imperforate walls surrounding said stream and extending downstream from said lens inside of, and spaced from the walls of, said chamber, conducting means for accelerating voltage for said plates located between said shield and said chamber walls downstream of said lens.

3,096,437
MEANS FOR PULSING AN ION BEAM
Julius J. Muray, Los Altos, Calif., assignor, by mesne assignments, to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts
Filed Mar. 27, 1961, Ser. No. 98,565
3 Claims. (Cl. 250—41.9)



1. A system for pulsing a beam of ionized particles, comprising a collector having a slit aperture therein disposed with its center in alignment with the axis of beam traverse of an ionized particle beam, bias field means generating a continuous bias field for deflecting said beam transversely off axis relative to said slit aperture, means periodically generating a pulsed sweep deflection field in opposition to said bias field with the strength of said deflection field with respect to time having a trapezoidal waveform including a substantially linear very fast rise time leading edge and exponential trailing edge of relatively long decay period interconnected by a constant flat crest portion, and means periodically generating a second pulsed sweep deflection field oriented 90° to said first deflection field and delayed relative thereto by a time at least as long as the rise time of a pulse of the first field and shorter than the time between initiation of the leading edge and trailing edge thereof, said second pulsed field having pulses of constant peak magnitude sufficient to deflect said beam parallel to said slit aperture beyond an end thereof and prevent said beam from crossing said slit aperture during decay periods of the pulses of said first deflection field.

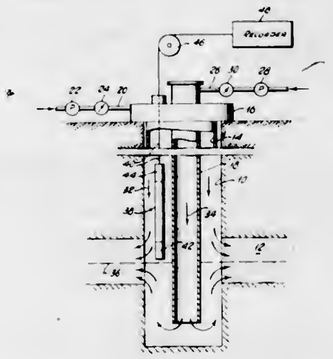
3,096,438
APPARATUS FOR THE MASS ANALYSIS OF PLASMAS ON A CONTINUOUS BASIS
Rodger V. Neidigh, Knoxville, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 24, 1961, Ser. No. 105,244
4 Claims. (Cl. 250—41.9)



1. A velocity selector mass analyzer for continuously analyzing the ionic composition of a plasma source, comprising a source of plasma to be analyzed, a small, cylindrical outer tube, a tapered nose cone mounted in one end of said tube, said cone being provided with a narrow, ion entrance slit in the apex thereof, said slit being closely spaced from said plasma source, closure means mounted in the other end of said tube, a first pair of closely spaced, parallel plate electrodes insulated from and mounted within said tube, said first pair of electrodes being axially aligned with the axis of said tube and with said entrance slit of said nose cone and being closely spaced from said

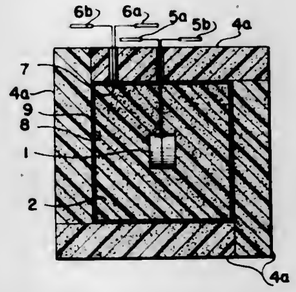
slit, a second pair of parallel plate electrodes insulated from and mounted within said tube and being parallel to and in alignment with said first pair of electrodes, a source of D.C. accelerating potential having a positive terminal and a negative terminal, means for connecting said positive terminal to ground and to said nose cone, means for connecting said negative terminal to one of said first pair of electrodes and to one of said second pair of electrodes, a source of A.C. potential, means for connecting said A.C. source across said first pair of electrodes, means for providing a magnetic field, said field having a direction parallel to said electrodes, the spacing between said first pair of electrodes serving as a velocity selecting region for ions drawn therebetween through said nose cone entrance slit by said accelerating potential from said source of plasma under analysis, said spacing between said first pair of electrodes being provided with an electrostatic field by the potentials applied thereacross, the force on an ion due to said electrostatic field being made equal and opposite to the force on the same ion due to said magnetic field to prevent the ions in said velocity selecting region from striking either of said first pair of electrodes as said ions pass through said region, the other electrode of said second pair of electrodes serving as a collector plate for the ionic species separated in said velocity selected region by variations in said A.C. potential across said first pair of electrodes, a duel beam oscilloscope, means for connecting said collector electrode and said D.C. negative terminal and one terminal of said A.C.

3,096,439
SUBSURFACE EXPLORATION
Alexander S. McKay, Houston, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 12, 1958, Ser. No. 780,060
4 Claims. (Cl. 250—43.5)



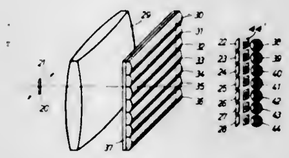
1. A method of locating an interface between two fluid streams flowing through the wall of a borehole traversing a subsurface formation which comprises disposing in one of said two streams a thermal neutron source and a non-radioactive substance containing nuclei capable of becoming unstable after capturing one or more of the thermal neutrons from said source to produce in said one of said two streams at a known point in the vicinity of said subsurface formation a radioactive tracer material, detecting the presence of said tracer material at a point spaced vertically about 10 feet from said known point to determine the direction of flow of said one stream, and repeating the above operations at different known depths until a change in the direction of flow of one stream containing said tracer material has been noted.

3,096,440
CALORIMETRIC RADIATION DOSIMETER
Roger Lawson Gamble, Atlanta, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 22, 1959, Ser. No. 788,379
5 Claims. (Cl. 250—83.3)



1. A dosimeter for measuring penetrating radiation comprising a radiation absorber having a resistance thermometer therein, insulation means of the same chemical and molecular structure as the radiation absorber while having a density less than the radiation absorber, said radiation absorber embedded in said insulation, and resistance type adiabatic foil around said insulation, said foil connected to an electrical energy source for resistance heating of said foil to maintain the temperature thereof substantially the same as the thermometer in the radiation absorber whereby the temperature rise of the radiation absorber is indicative of the absolute penetrating radiation dosage.

3,096,441
ELECTRO-OPTICAL AND ELECTROMAGNETIC DETERMINATION OF THE POSITION OF SCALE DIVISIONS
Horst Burkhardt, Stein an der Traun, Germany, assignor to Wenczler & Heidenhain, Traunreut, near Traunstein, Upper Bavaria, Germany
Filed Oct. 12, 1961, Ser. No. 144,778
Claims priority, application Germany Oct. 14, 1960
18 Claims. (Cl. 250—209)



1. A device for electrically determining the position of a structural element provided with a scale, comprising, in combination:

(*a*) a movable structural element provided with a scale composed of markings and which moves through a measuring range;

(*b*) means for indicating at a plurality of stations the presence of a marking of said scale within said measuring range; and

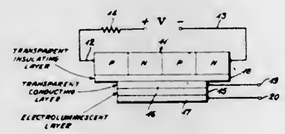
(*c*) electrical position determining means including

(1) at least three transducer heads at said stations sensitive to the indication of said marking for continuously scanning said scale, said heads being arranged to produce a maximum output when the marking is in a predetermined central position and also when it is displaced by a predetermined distance from said position or by an integer multiple of said predetermined distance, at least three of said transducer heads, at any marking displacement within the measuring range between the integer multiples of said distance, sensing the position of such marking and generating output signals of appreciable magnitude,

(2) stages of periodically interrogating and adding the output signals of said transducer heads for a definite and at least approximately constant time interval in the same order in each period for generating an alternating summation signal, and

(3) a comparative section receiving the summation signal which is dependent upon the head scanning and interrogation, and receiving a signal significant of the initiation of the interrogation period and, by comparative phase measurement, giving an indication of the position of said marking.

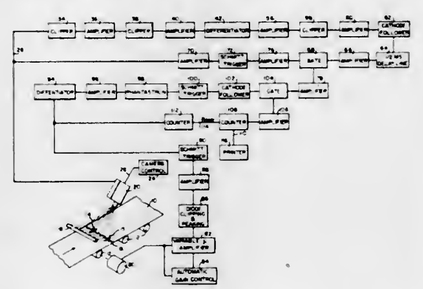
3,096,442
LIGHT SENSITIVE SOLID STATE RELAY DEVICE
Richard F. Stewart, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Jan. 2, 1959, Ser. No. 784,742
6 Claims. (Cl. 250—211)



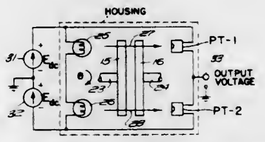
1. A solid state relay device comprising a PNPN transistor, a layer of electroluminescent material positioned to irradiate the junctions of said PNPN transistor with light emitted by said layer of electroluminescent material, a layer of electrically conducting and light transmitting material making contact with said layer of electroluminescent material and positioned between said layer of electroluminescent material and said PNPN transistor, a layer of insulating and light transmitting material sandwiched between said PNPN transistor and said layer of electrically conducting and light transmitting material, and a layer of electrically conducting material making contact with said layer of electroluminescent material on the opposite side from said layer of electrically conducting and light transmitting material.

3,096,443
ELECTRONIC SURFACE INSPECTION SYSTEM
John F. Laycak, Duquesne, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 20, 1960, Ser. No. 37,473
11 Claims. (Cl. 250—219)

1. In apparatus for detecting flaws on the surface of moving material in which the flaws have a different optical appearance than the remainder of the material, the combination of means including an electron-optics device for scanning an image of the surface of said material with an unmodulated electron beam along a line extending substantially perpendicular to the direction of movement of the material to produce a pulsed signal in which a pulse is produced each time the electron beam scans over the image of a defect, means responsive to the speed of said moving material for gating said pulsed signal to eliminate a portion of the pulses therein and produce a resultant signal, the portion of the pulses eliminated being a function of the speed of said material, and means for counting the pulses in said resultant signal.

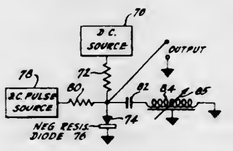


3,096,444
ELECTROMECHANICAL TRANSDUCING SYSTEM
Harold H. Seward, 16 Frost St., Arlington 74, Mass.
Filed Apr. 29, 1958, Ser. No. 731,844
14 Claims. (Cl. 250—220)



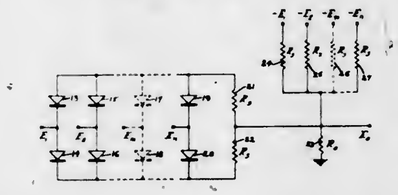
3. Apparatus for providing an electrical signal characteristic of an angular parameter of a rotatable shaft supporting a first circular disc axially symmetric about the axis of said shaft, a second circular disc axially symmetric about said shaft axis adjacent to said first disc, said first and second discs having a different number of equiangular sectors which are alternately opaque and translucent, a photoelectric transducer and a light source, said light source directing light through both said discs to said photoelectric transducer.

3,096,445
SQUARE WAVE GENERATOR COMPRISING NEGATIVE RESISTANCE DIODE AND MISMATCHED DELAY LINE PRODUCING STEEP EDGE PULSES
Gerald B. Herzog, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 13, 1959, Ser. No. 852,743
7 Claims. (Cl. 307—88.5)



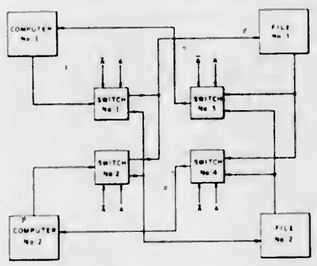
4. In combination, a negative resistance diode which is capable of assuming two stable voltage states; means coupled to the diode which switches the same from one of said voltage states to the other; and a delay line which is mismatched at its receiving end coupled at its sending end to the diode for receiving the change in voltage which occurs when the negative resistance diode switches to said other voltage state and for producing a reflected signal which switches the diode back to its original voltage state.

3,096,446
ELECTRICAL MAGNITUDE SELECTOR
Charles L. Cohen, Hyattsville, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 8, 1960, Ser. No. 34,854
1 Claim. (Cl. 307—88.5)



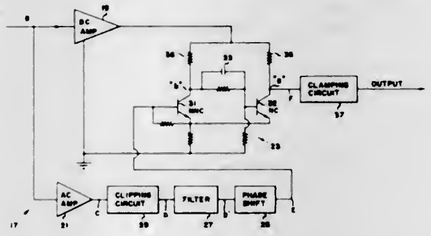
A magnitude selector for eliminating the largest of a number of electrical signals of all the same polarity or phase including a first multiplicity of diode means having all their plates coupled together and each cathode individually coupled to an input accepting one of the electrical signals so that the largest positive going signal blocks the passage of the other positive going signals, a second multiplicity of diode means having all their cathodes coupled together and each plate individually coupled to an input accepting one of the electrical signals so that the largest negative going signal blocks the passage of all other negative going signals, summing means coupling the coupled plates of the first multiplicity of diode means to the coupled cathodes of the second multiplicity of diode means, output means coupled to said summing means to provide an output proportional to the largest signal and means to subtract this largest signal from the sum of all the other signals.

3,096,447
TRANSISTOR GATE BIASED BY SIGNAL BEING GATED
James E. Hill, Sylmar, Donald B. Levinson, Beverly Hills, and Lane L. Wolman, North Hollywood, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Mar. 21, 1961, Ser. No. 97,285
5 Claims. (Cl. 307—88.5)



1. In a switching system which includes: a first component having an output circuit and at least one further component having an input circuit, said output circuit including an impedance element connected to a source of direct current exciting potential and across which output signals appear, said input circuit including an impedance element connected to a point of reference potential, a switching component for selectively introducing said output signals from said output circuit of said first component to said impedance element in said input circuit of said further component including in combination: an electronic discharge device having a first electrode, a second electrode and a third electrode; input terminal means for receiving said output signals from said first component; a direct current circuit connection from said input terminal means to said first electrode of said electronic discharge device to supply exciting power to said first electrode from said output signals; second circuit means including first and second series-connected resistance means connected to said input terminal means and to said second electrode of said electronic discharge device; output terminal means connected to said third electrode of said electronic discharge device for receiving said signals for application to said impedance element in said input circuit of said further component; and means for selectively establishing the common junction of said first and second resistance means at different potential levels to control the passage of said signals through said electronic discharge device.

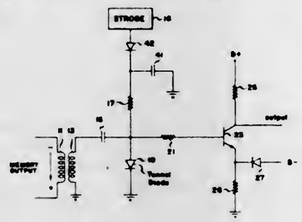
3,096,448
PULSE SAMPLING DEVICE EMPLOYING MODULATED MULTIVIBRATOR TO SLICE LEADING AND TRAILING EDGES OF INPUT
Peter G. Stratos, San Francisco, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 6, 1961, Ser. No. 115,219
3 Claims. (Cl. 307—88.5)



1. A pulse train sampling device for clipping the leading and trailing edges and transmitting the remaining portion of each pulse in a pulse train comprising a switching device, means applying said train of pulses to the input of said switching device, means for converting said train of pulses into a train of sinusoidal signals having a period and phase which approximately corresponds with the period and phase of said train of pulses, means for applying said train of sinusoidal signals to said switching device, said switching device beings actuated by said sinusoidal signals when the potential of each sinusoidal signal is above a predetermined magnitude thereby permitting transmission by said switching device of only said remaining portion and clipping said leading and trailing edges of each pulse of said pulse train.

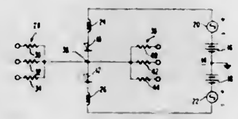
3,096,449
TUNNEL DIODE SWITCHED TO LOW-STATE BY DISCHARGING CAPACITOR, PULSE SENSING DEVICE CHARGED BY COINCIDENTLY APPLIED HIGH-STATE PRODUCING INPUTS
Frank F. Stucki, Palo Alto, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 23, 1961, Ser. No. 119,164
2 Claims. (Cl. 307—88.5)

1. A trigger circuit comprising means for sensing a current pulse, means for applying the sensed current pulse to the collector of a tunnel diode, means for applying a second current pulse simultaneously with said sensed current pulse to the collector of said tunnel diode, the sum of said sensed current pulse and said second current pulse being greater than the peak current of said tunnel diode and resulting in switching said tunnel diode from the low voltage state to the high voltage state, a capacitive storage means operatively connected to said means for applying said second current pulse and to the collector of said tunnel diode, whereby said tunnel diode remains in said high voltage state until the charge on said capacitive



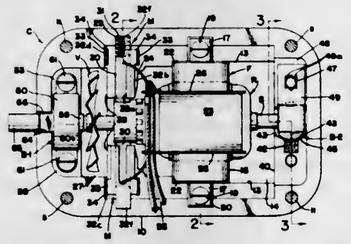
storage means created by said second current pulse exponentially decays to a predetermined value at which time said tunnel diode switches to the low voltage state.

3,096,450
MATCHED NEGATIVE RESISTANCE PAIR HAVING CRITICAL INDUCTANCE IN SERIES EFFECTING SLIGHT INSTABILITY
Martin S. Axelrod, North White Plains, and Donald E. Rosenheim, Yorktown Heights, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,672
7 Claims. (Cl. 307—88.5)



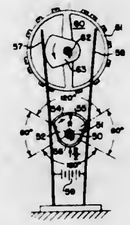
1. A logic circuit comprising:
(*a*) a pair of tunnel diodes,
(*b*) a source of electrical energy,
(*c*) a pair of inductors and
(*d*) means for interconnecting said diodes, said energy source and said inductors,
(*e*) said inductors having values such that the total series inductance of the circuit is greater than the total series resistance times the negative resistance of one of said pair of diodes times the capacitance of said one diode.

3,096,451
ELECTRIC MOTOR ASSEMBLY
Frank Z. Daugherty, Kent, and Albert L. Sebok, Akron, Ohio, assignors to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 11, 1960, Ser. No. 8,011
16 Claims. (Cl. 310—42)



1. A motor unit adapted to mounting in a housing having a space for receiving portions of the motor components and being bounded by a substantially continuous wall structure, said motor unit comprising: a mould-formed member providing a motor half-casing open on one side and recessed to accommodate a rotor and stator, a rotor on a shaft rotatably supported at opposite ends of the half-casing, a wound stator embracing the rotor having at least a portion thereof received in the recess of said half-casing, stator anchor means secured to the half-casing on opposite sides of said recess and engaged on respective shoulder formations of said stator to clamp the stator in the half-casing, said recess and said stator portion having mating complementary surface regions adapted to a wedging engagement under clamping pressures exerted by said anchor means, said half-casing including a peripheral portion around said recess adapted to be clamped in abutting relation to said wall structure of the housing.

3,096,452
MOTOR FOR ELECTRIC CLOCKS
Arthur W. Haydon, Milford, Conn., assignor to Consolidated Electronics Industries Corp., Waterbury, Conn., a corporation of Delaware
Filed Mar. 17, 1958, Ser. No. 721,795
19 Claims. (Cl. 310—46)

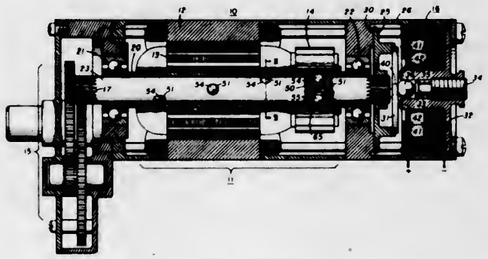


1. An electric motor combination, comprising a rotor having a coil energizable by a source of electrical power, a commutator connected to said coil and rotatable with said rotor about an axis, said commutator being of eccentric peripheral outline with respect to said axis, a plurality of brushes adapted to engage said commutator at spaced points, said brushes being adapted for connection to a source of electrical power and being connected in series during simultaneous contact with said commutator, means mounting said brushes for limited resilient oscillatory movement permitting said brushes to follow the surface of said commutator during rotations thereof, and means separate from said rotor and brushes coacting with at least one of said brushes and adapted to perform a function in cycles upon movement of said one brush caused by rotation of said commutator, said commutator constituting a cam effective to cause cyclic operation of said separate means.

3,096,453
ELECTRIC MOTOR DRIVE SYSTEM
Samuel M. Behar, Glendale, Calif., assignor to The Bendix Corporation, North Hollywood, Calif., a corporation of Delaware
Filed June 14, 1961, Ser. No. 117,062
5 Claims. (Cl. 310—77)

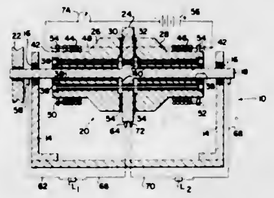
1. An electromechanical actuator comprising:
a motor including a stator and an armature having a shaft;
the shaft of said motor armature comprising an outer tubular member fixed to said armature and a load shaft positioned coaxially within said tubular member and extending out of at least one end of said tubular member;
means journaling said tubular member for rotation upon the energizing of the motor;
means for coupling the load to be driven by said motor to said load shaft; and

a plurality of spring-biased members positioned in transverse recesses in said shaft in frictional engagement



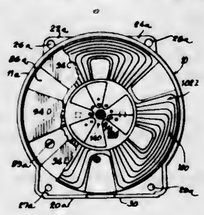
with the inner surface of said tubular member to transmit torque from said tubular member to said load shaft.

3,096,454
CENTRIFUGAL DIRECT CURRENT ELECTRIC GENERATOR
Anthony Sears, 1061 Saint Nicholas Ave., New York, N.Y.
Filed Apr. 12, 1960, Ser. No. 21,759
14 Claims. (Cl. 310—178)



1. In an electric current generator, a rotatable electrically conductive shaft, an electrically conductive member having a radially directed body rotatable with said shaft, means to rotate said shaft, pole pieces of opposite polarity on opposite sides of said member secured for rotation synchronously therewith and with said shaft, said pole pieces having pole faces adjacent their respective sides of said member, each of said pole pieces having a magnetic field and flux extending in one direction therebetween and through said member, and means electrically connecting said shaft and member to complete an electrical circuit therebetween.

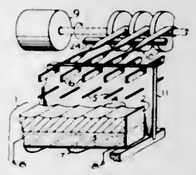
3,096,455
PRINTED DISC ELECTRICAL MACHINERY
James H. Hahn, Glenview, Ill., assignor to Basic Motor Developments, Inc., Tallahassee, Fla., a corporation of Florida
Filed Mar. 8, 1962, Ser. No. 179,515
19 Claims. (Cl. 310—268)



5. A conductive rotor assembly for an electromechanical energy converter comprising:

first insulating means having a circular cross-section and having a first conductive pattern located thereon,
said first pattern comprising an open-circuited conductive winding located on said first insulating means between the center and the circumference thereof to define an equal number of n pole centers, each pole center being of opposite polarity with respect to its next adjacent pole center neighbor and being symmetrically positioned therefrom at $(360/n)°$;
second insulating means concentrically associated with the said first insulating means and having a second conductive pattern located thereon,
said second pattern comprising $3n/2$ circular wedge segments, each adjacent segment being mutually insulated and the said segments being symmetrically positioned at $\frac{2}{3}(360/n)°$; and
means connecting said first insulating means and said second insulating means such that two pole centers located within $2(360/n)°$ of said first insulating means are aligned with three wedge segments located within $2(360/n)°$ of said second insulating means,
wherein the said conductive winding of the first pattern is open-circuited across respective ends of that winding positioned at $\frac{2}{3}(360/n)°$ from each other and the said connecting means electrically connect two mutually insulated adjacent segments of the second pattern respectively to the said ends.

3,096,456
ACCELERATING STRUCTURE FOR A CHARGED PARTICLE ACCELERATING SYSTEM
Haywood Shelton, Woodland Hills, and John M. Sellen, Jr., Encino, Calif., assignors to Thompson Ramo Wooldridge Inc., Canoga Park, Calif., a corporation of Ohio
Filed Oct. 12, 1960, Ser. No. 62,272
10 Claims. (Cl. 313—63)

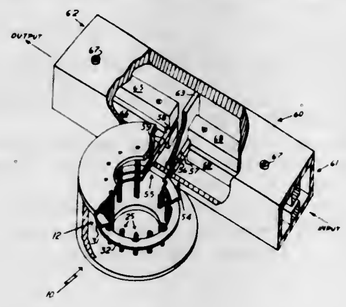


1. A charged particle accelerating structure comprising a source of ions, a plurality of beam forming electrodes, replaceable accelerating electrodes, means for automatically replacing the accelerating electrodes during the continuous operation of the structure as the accelerating electrodes becomes sputtered away by impact with the charged particles, and a voltage source for supplying operating potentials to the structure.

3,096,457
TRAVELING WAVE TUBE UTILIZING A SECONDARY EMISSIVE CATHODE
William A. Smith, Jr., Milton, and George H. MacMaster, Waltham, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Mar. 31, 1959, Ser. No. 803,326
7 Claims. (Cl. 313—103)

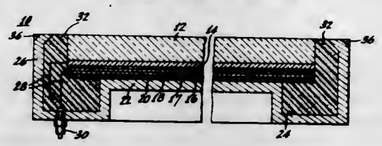
1. A traveling wave electron discharge device comprising a delay line for propagating a traveling wave, an input terminal coupled to one end of said delay line, a cold cathode, and means for supplying high frequency input energy to said input terminal for effecting initial

bombardment of said cold cathode by free electrons and by gas molecules, said cathode supplying electrons for



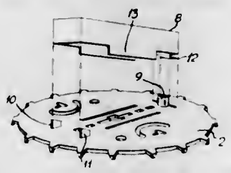
injection along paths adjacent said delay line in energy-exchanging relation with said traveling wave.

3,096,458
ELECTROLUMINESCENT DEVICE
Robert C. Demmy, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,930
7 Claims. (Cl. 313—108)



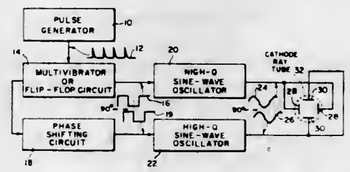
3. An electroluminescent lamp comprising an electroluminescent phosphor, a transparent conductor on one side of said phosphor, and a conductive layer on the other side of said phosphor, a housing for said lamp, said housing comprising a transparent face plate on said transparent conductor, an insulating coating on said conductive layer and a metallic back plate on said insulating coating, and said housing defining a space insulating the peripheral edges of said conductor and said transparent conductor.

3,096,459
THERMIONIC VALVES
Norman Edward Hugo Pearson, Enfield, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Mar. 11, 1960, Ser. No. 14,456
Claims priority, application Great Britain Mar. 13, 1959
2 Claims. (Cl. 313—241)



1. A thermionic valve comprising at least an anode and a grid electrode, upper and lower insulating cross plates apertured to support the ends of the electrodes, a surrounding envelope, a top anode connection mounted in the upper end of the envelope, a beam plate extending longitudinally of said envelope and having at its upper end spaced lugs projecting through and above apertures in said upper insulating plate, and a metallic shield mounted on the top face of the upper insulating plate and extending over the ends of the electrodes so as to screen the upper end of the valve envelope against electrons escaping through the apertures in the insulating plate, said metallic shield comprising an inverted box formed with top and side walls having edges abutting against the upper insulating plate said lugs engaging the side walls of said shield to hold said shield in place on said upper plate with said shield having at least one side projection extending down through an aperture in said upper insulating plate and into engagement with said beam plate below said upper insulating plate.

3,096,460
CIRCUIT FOR MAINTAINING A PREDETERMINED PHASE RELATIONSHIP BETWEEN TWO VOLTAGE WAVES
James D. Long, North Hollywood, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 13, 1960, Ser. No. 22,069
3 Claims. (Cl. 315—23)

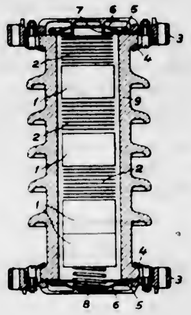


1. In a circuit for generating a pair of sine-wave voltages for respective application to the two sets of deflecting plates of a cathode-ray tube, the two said sine-wave voltages having a predetermined phase displacement therebetween, said circuit including a pulse generator for developing a series of pulses having a substantially constant repetition frequency, a flip-flop multivibrator designed to yield a periodically-varying wave output of essentially rectangular configuration, means for applying the pulses developed by said generator to trigger the said multivibrator and hence synchronize the output thereof at the said pulse repetition frequency, a phase-shifting circuit, a pair of high-Q sine-wave oscillators, means for applying the rectangular wave output of said multivibrator to one oscillator of said pair and also to the said phase-shifting circuit, means for applying the output of said phase-shifting circuit to the other oscillator of said pair, whereby both oscillators are synchronized in their operation due to the respective reception thereby of said rectangular waves, one of said rectangular waves being displaced in phase with respect to the other rectangular wave due to the action of said phase-shifting circuit, and means for applying the respective sine-wave outputs of said oscillators to the two sets of deflecting plates of said cathode-ray tube.

3,096,461
LIGHTNING ARRESTER WITH RESILIENT SEALING LID
Bengt Grundmark, Ludvika, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Oct. 30, 1961, Ser. No. 148,662
Claims priority, application Sweden Nov. 19, 1960
3 Claims. (Cl. 315—36)

1. A lightning arrester having a substantially cylindrical casing of insulating material, end armatures completely or partly made of metal, and having at least at one

end of the casing a spring pressure sealing lid, characterized in that the lid is formed as a resilient plate which, at its centre part, abuts against one of the said end armatures



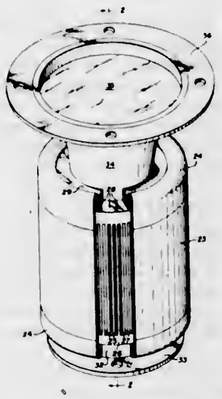
and is so arranged that when over-pressure occurs within the lightning arrester casing, the edge of the plate may rise and thus form an outflow channel for gas.

3,096,462

HIGH POWER ELECTRON DISCHARGE DEVICE

Joseph Feinstein, Livingston, N.J., assignor to S-F-D Laboratories, Inc., Union, N.J., a corporation of New Jersey

Filed Mar. 21, 1960, Ser. No. 16,313
32 Claims. (Cl. 315—39.53)



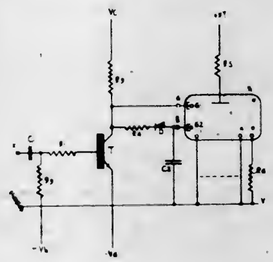
1. An electron discharge device using crossed electric and magnetic fields for the wave-electron stream interaction therein comprising, in combination, a hollow circular anode structure, the inner surface of which defines a circular electric mode waveguide; a hollow circular cathode surrounding and spaced from the outer surface of said anode structure to form the wave-electron interaction space therebetween, said cathode having an emission surface facing said anode structure; and means at opposing ends of said anode structure for propagating electromagnetic energy into and out of said waveguide defined by said anode structure, said anode structure having a plurality of radial resonator slots formed therein and providing communication between the circular electric mode waveguide and the interaction space between said cathode and anode and said resonator slots communicating with said circular electric mode waveguide over a length of said guide exceeding one wavelength of the dominant circular electric mode propagating in said guide.

3,096,463

COUNTING TUBE STEPPED ACCORDING TO POTENTIAL DIFFERENCES ON GUIDE ELECTRODES CONTROLLED BY CHARGING-DISCHARGING RC CIRCUIT

Lionel Clifford Burnett, Beeston, England, assignor to Ericsson Telephones Limited, London, England, a British company

Filed July 31, 1961, Ser. No. 128,212
Claims priority, application Great Britain Aug. 16, 1960
1 Claim. (Cl. 315—84.6)



In an electric control circuit for controlling the stepping of the discharge in a gas-filled discharge tube of the type having an anode electrode connected to a source of positive potential, a plurality of cathode electrodes connected to a source of negative potential, at least one of said cathode electrode connections including a resistor, and a first and a second guide electrode located between each pair of adjacent cathode electrodes, all of said first guide electrodes being connected together to a first terminal and all of said second guide electrodes being connected together to a second terminal, the combination of:

(1) an anode resistor connected in the discharge current path of said discharge tube;

(2) a transistor having collector, emitter and base electrodes so connected to suitable sources of potential that said transistor is capable of conducting a current between said collector and emitter electrodes;

(3) Means for applying a control pulse to the base electrode of said transistor, said means being so constructed and arranged that the potential of the collector electrode falls on the application of said control pulse to said base electrode and that said collector potential is restored on the termination of said control pulse;

(4) a direct connection between said collector electrode and said first terminal; and

(5) a delay device comprising a delay resistor and a diode connected in series between said collector electrode and said second terminal and a capacitor connected between said second terminal and said source of negative potential;

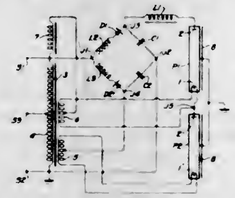
(6) said diode being so poled that the change in potential of said second terminal resulting from the application of a control pulse to the base electrode of said transistor is delayed by a time dependent upon the current flowing through said delay resistor, and that the change in potential of said second terminal resulting from the termination of said control pulse is delayed by a time dependent upon the current flowing to said second terminal through said anode resistor and the discharge path of said discharge tube.

3,096,464

STARTING AND OPERATING CIRCUIT FOR DISCHARGE LAMPS

Eugene Lemmers, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York

Filed Apr. 25, 1961, Ser. No. 105,502
9 Claims. (Cl. 315—105)



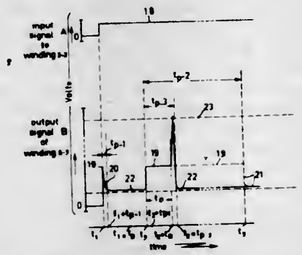
1. An operating and starting circuit for a pair of electric discharge devices comprising input terminals for alternating current energization, a rectifier-capacitor bridge having a pair of branches connected across said input terminals, each branch including a rectifier and a capacitor connected in series, the junction points of the rectifier and capacitor in each branch forming output junctions, a utilization circuit comprising a pair of electric discharge devices connected in series across said output junctions, and high impedance means supplying an alternating voltage to the common junction of the electrodes in said devices in order to ignite them.

3,096,465

CIRCUIT ARRANGEMENT FOR IGNITING GAS DISCHARGE DEVICES

Jozef Cornelis Moerkens, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 29, 1961, Ser. No. 99,154
Claims priority, application Netherlands Apr. 26, 1960
14 Claims. (Cl. 315—278)



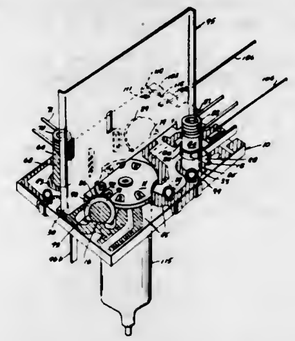
1. A circuit arrangement adapted to be disposed with a source of predetermined signal voltage and the input means of a gas discharge device for the ignition of said device, said device having an ignition response time period characteristic for a given signal applied thereto proportional to the temperature of said gas including at least a first time period of response for first predetermined temperatures of said gas and a second time period of response for second predetermined temperatures of said gas, said first time period being relatively smaller than said second time period, said circuit arrangement comprising transformer means having a primary winding coupled to said source and a secondary winding coupled to said input means to provide a first output signal sufficient to ignite said device in said first time period at said first predetermined temperatures of said gas, and switching means coupled to said transformer means operative to short circuit and open circuit sequentially a part of said transformer means to provide a second output signal sufficient to ignite said device at said second predetermined temperatures of said gas in a time period less than said second time period, said switching means having a response time greater than said first time period and becoming operative whenever said gas discharge device is extinguished for a time period greater than the response time of said switching means.

3,096,466

FIXED FREQUENCY AMPLIFIER

Thomas Fisher Gossard, North Hollywood, Calif., assignor to Standard Coil Products Co. Inc., Melrose Park, Ill., a corporation of Illinois

Original application Aug. 13, 1953, Ser. No. 374,039, now Patent No. 2,796,470. Divided and this application Apr. 26, 1957, Ser. No. 655,223
1 Claim. (Cl. 317—101)



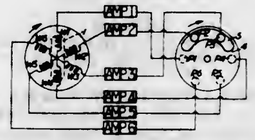
An electrical system containing a printed circuit board with a generally rectangular slot therethrough, two conductive layer sections on the board extending respectively to the opposite longer sides of the slot, a condenser composed of a flat dielectric body wtih a conductive electrode layer on its opposite sides, the thickness of said condenser being proportioned to be held wedged in said slot with its electrode layers in direct conductive contact respectively with the said layer sections and thereby constituting a perpendicular firmly self-mounted component in direct circuit connection in the board, said slot being formed into a slope in which the condenser is wedged to the board in the slot by the tapered configuration and provides a direct conductive connection to the printed circuit.

3,096,467

BRUSHLESS D.C. MOTOR WITH PERMANENT MAGNET ROTOR

Ernest Thomas Angus, Edinburgh, and Donald Ferguson Walker, Midlothian, Scotland, assignors to Ferranti, Limited, Lancashire, England, a company of the United Kingdom of Great Britain and Northern Ireland

Filed Oct. 7, 1960, Ser. No. 61,118
Claims priority, application Great Britain Oct. 9, 1959
4 Claims. (Cl. 318—138)



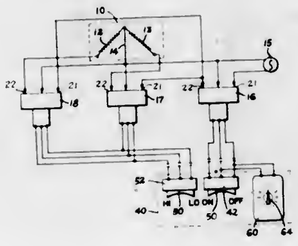
1. A direct current motor comprising a permanently magnetised rotor rigidly secured to an output shaft, a wound stator having a plurality of windings, each winding being associated with an individual energising circuit which is controlled by the output current from one or

other of two energy transducers, gating means for selecting one or other of said two transducers for controlling the energising circuit of each winding, and a disc rotated in synchronism with said rotor by said output shaft, said disc controlling a supply of energy to each of said energy transducers which are disposed in relation to said disc in such manner that for any position of said rotor at least one of said stator windings is energised to produce a field causing said rotor to rotate, and that said rotor is caused to rotate in a forward or a reverse direction according to which of said two energy transducers is selected by said gating means to control the energising circuit of each winding.

3,096,468
CONTROL SYSTEM FOR PLURAL SPEED FAN MOTORS

Donald D. Kinsworthy, Dayton, Ohio, assignor to The Lau Blower Company, Dayton, Ohio, a corporation of Ohio

Filed Jan. 18, 1960, Ser. No. 2,925
5 Claims. (Cl. 318—224)



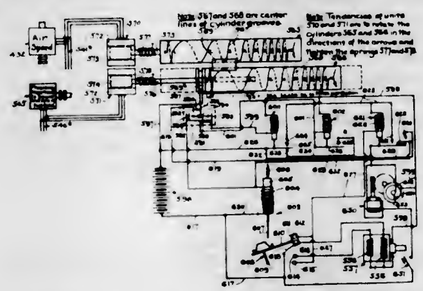
1. An integrated remote control and automatic shut-off system for an attic fan motor having high and low speed windings, comprising first thermal relay means having on and off low voltage control inputs and adapted for connection to a source of fan motor power, second thermal relay means connected to receive motor power from said source through said first thermal relay means and having selectable low voltage inputs adapted to apply said power selectively to said high and low speed windings upon the momentary energization thereof, an integrated remote low voltage control panel including a first single pole double throw normally open rocker switch connected to the inputs of said first relay means for applying and removing motor power from said source to said second relay means upon the momentary closing thereof, a second single pole double throw normally open rocker switch connected to the inputs of said second relay means for causing said power to be applied to said fan motor selectively through said high and low speed windings upon the momentary closing thereof, and a fan timer in said panel having a normally open contact arranged to close momentarily to energize said off input of said first relay means upon the conclusion of a preset period of time to remove said source from said fan motor.

3,096,469
INSTRUMENTS FOR CONTROLLING OPERATIONS TO ENSURE OPTIMUM OPERATING CONDITIONS

Thomas A. Banning, Jr., Chicago, Ill.

Application Sept. 26, 1951, Ser. No. 248,340, now Patent No. 2,794,507, dated June 4, 1957, which is a division of application Ser. No. 573,382, Jan. 18, 1945, now Patent No. 2,569,444, dated Oct. 2, 1951. Divided and this application May 29, 1957, Ser. No. 662,542
19 Claims. (Cl. 318—264)

1. An economy determining and operation controlling unit comprising in combination means to compare the rates of two variable rate quantities and determine the ratio of said rates, said unit including first and second rate input connections, a movable ratio indicating element, operative connections between the ratio determining means and the ratio indicating element including means effective to move the ratio indicating element harmoniously with the ratio determination of the ratio determining means in a first defined direction corresponding to increasing values of said ratio and to move said ratio indicating element in a second defined direction corresponding to decreasing values of said ratio, a reversible servo-motor unit, and servo-motor operative connections between the ratio indicating element and said servo-motor unit, said servo-motor operative connections including a follower element in connection with the ratio indicating element, there being a lost-motion in said connections permitting reversal of direction of movement of the ratio indicating element without reversal of movement of the servo-motor during movement of the ratio indicating element an amount corresponding to said lost motion,

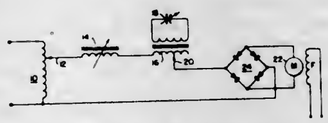


said servo motor operative connections being constituted to cause the servo-motor unit to function in one selected direction for movements of the ratio indicating element in said first defined direction and to cause discontinuance of said servo-motor functioning in said direction with commencement of movement of the ratio indicating means in said second defined direction, the operative connections between the ratio indicating element of the ratio determining means and said servo-motor unit also including means to cause the servo-motor unit to function when the ratio indicating element moves in said second defined direction an amount at least as great as said lost motion, and the operative connections between the ratio indicating element and said servo-motor unit also including servo-motor selected direction reversing means, and said connections also including servo-motor reverser actuating means and including means to cause said servo-motor reverser actuating means to function in manner to reverse the direction of the servo-motor when the ratio indicating element moves in said second defined direction at least as much as said lost motion.

3,096,470
SPEED AND LOAD CONTROL FOR ELECTRIC MOTORS

Aram Kalenian, %Vee-Arc Corp., Westboro, Mass.

Filed June 14, 1960, Ser. No. 36,037
2 Claims. (Cl. 318—332)

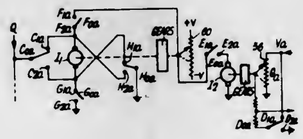


1. The combination with an electric motor, of a control circuit in series with the motor and having an inductor which is saturable within the normal operating range of the motor, a transformer having a primary in series with the inductor, the transformer having a secondary across which is connected a condenser, the transformer having a core which does not saturate within the normal range of current for operation of the motor but becomes saturated upon the passage through the transformer primary of a current in excess of normal operating current.

3,096,471
OPTIMIZING AUTOMATIC CONTROL SERVOSYSTEM

Wilfred Kenelm Taylor, Richmond, England, assignor, by mesne assignments, to International Business Machines Corporation, a corporation of New York

Filed Oct. 7, 1960, Ser. No. 61,285
Claims priority, application Great Britain Oct. 16, 1959
11 Claims. (Cl. 318—448)

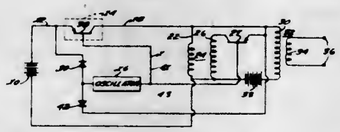


10. Position control system comprising a controlling member, a forward signal path including an amplifier, a motor, a controlled member driven by said motor in accordance with the output of said amplifier a tachometer generator driven by said motor and providing a feedback signal proportional for the velocity of said motor, means for providing a feedback signal related to the position of said controlled member and means for combining at the input to said amplifier a signal from said controlling member and said feedback signals to form an error signal, wherein said velocity feedback signal is fed through a feedback path including a resistance network in which are provided means for selecting a portion of said velocity feedback signal and switch means for periodically varying the level of the feedback signal fed back above and below the selected portion, there being provided also means for operating upon said error signal to derive therefrom a signal representing the sense and rate of change of said error signal and means for applying said last named signal to control the portion of said velocity feedback signal selected.

3,096,472
STATIC INVERTER CIRCUIT

Louis J. Elliott and Thomas C. Ward, Encinitas, Calif., assignors to Kinetics Corporation, Solana Beach, Calif., a corporation of California

Filed Sept. 2, 1958, Ser. No. 758,230
6 Claims. (Cl. 321—45)

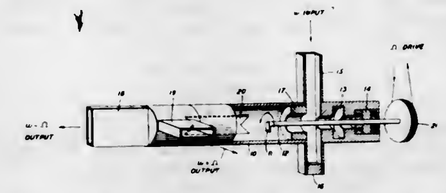


1. A static inverter comprising: a pair of direct-current voltage sources an impedance device and an inductance in circuit with one of said sources; means for automatically periodically changing the impedance of said impedance device to establish a varying D.-C. current that creates a fluctuating voltage across said inductance, said means including an oscillator; switch means operable by said oscillator to alternately connect the other source across said impedance device; and output circuit means coupled to said inductance.

3,096,473
MICROWAVE FREQUENCY CONVERTER

Georges R. P. Marié, Rumson, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 23, 1960, Ser. No. 78,078
3 Claims. (Cl. 321—69)

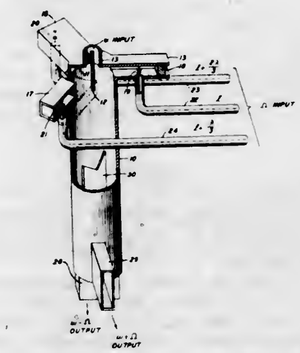


1. In combination, a source of electromagnetic wave energy of frequency ω, means for launching said energy in each of a multiplicity of polarizations consecutively at an angular rate of Ω, means for converting oppositely rotating circularly polarized wave components of said launched energy into linearly polarized waves of frequencies $\omega+\Omega$ and $\omega-\Omega$, respectively, and means for separating said linearly polarized waves.

3,096,474
MICROWAVE FREQUENCY CONVERTER

Georges R. P. Marié, Rumson, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 23, 1960, Ser. No. 78,079
3 Claims. (Cl. 321—69)



1. In combination, first and second sources of electromagnetic wave energy of first and second frequencies, principal supporting means for supporting said energy of said first frequency in a multiplicity of linearly polarized polarizations, a plurality of auxiliary supporting means positioned about and electromagnetically coupled to said principal supporting means each with an axis orthogonal to the axis of said principal supporting means for supporting said energy of said first frequency, radiating means axially positioned within said principal supporting means for directing linearly polarized energy of said first frequency orthogonally to the propagation axis of said principal supporting means from said first source toward said auxiliary supporting means, nonlinear conducting means located within said auxiliary supporting means and energized by said second source with phase differences directly related to the angular separation of said auxiliary

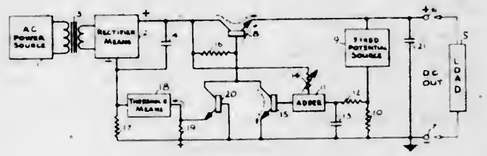
supporting means about said principal supporting means for reflecting energy of said first frequency of a polarization that rotates at said second frequency from said auxiliary supporting means into said principal supporting means, means within said principal supporting means for converting said reflected energy into two mutually orthogonal linearly polarized waves one of which has a frequency equal to the sum of said first and second frequencies and the other of which has a frequency equal to the difference of said first and second frequencies, and means within said principal supporting means on the opposite side of said converting means from said auxiliary supporting means for separating said linearly polarized waves.

3,096,475

ELECTRICAL APPARATUS

William O. Brooks, Los Angeles, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed May 16, 1958, Ser. No. 735,768
15 Claims. (Cl. 323—22)



1. A regulated power supply including the combination of: a source of unidirectional voltage; a pair of output terminals; at least one transistor connected serially between the source of unidirectional voltage and one of the output terminals; a control circuit coupled to the transistor for biasing the transistor to maintain a substantially constant unidirectional voltage across the output terminals; means for sensing the value of the current drawn from the output terminals; and a protective circuit connected to the sensing means and operative upon said control circuit to limit the maximum current flow through the transistor in response to current being drawn from the output terminals in excess of a predetermined value.

3,096,476

OVERHAUSER EFFECT WELL LOGGING

Edward H. Poindexter, Anaheim, Calif., and Henry C. Torrey, Highland Park, N.J., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Sept. 2, 1958, Ser. No. 758,383
9 Claims. (Cl. 324—.5)

1. The method of logging an earth formation penetrated by a well bore for the presence of hydrogen nuclei in the form of water and crude oil comprising the steps of

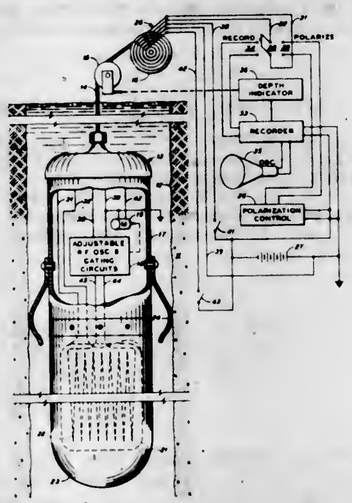
(*a*) performing a first nuclear magnetism well logging operation within said well bore to polarize hydrogen nuclei in the form of water and crude oil present in said formation,

(*b*) detecting nuclear magnetism precessional signals from precessing protons in said polarized nuclei as a result of said first logging operation,

(*c*) repeating said nuclear magnetism logging operation to again polarize said hydrogen nuclei and, during at least a portion of said repeated nuclear magnetism logging operation, irradiating said earth formation with an oscillating electromagnetic field, said electromagnetic field having a frequency and field strength capable of resonance with precessing unpaired electrons associated with crude oil hydrogen nuclei within said formation,

(*d*) detecting nuclear magnetism precessional signals from precessing protons in said polarized nuclei as a result of said repeated logging operation,

(*e*) comparing said first and second detected signals as an indication of the molecular environment within



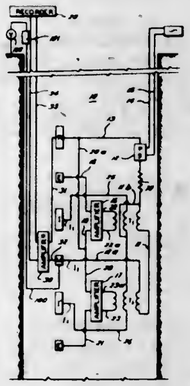
said well bore of the hydrogen nuclei contributing to said detected precessional signals, and distinguishing crude oil from water nuclei by the existence of a change in the second detected precessional signal attributed to said irradiation during said repeated nuclear magnestism logging operation.

3,096,477

ELECTRICAL WELL LOGGING APPARATUS AND METHOD IN WHICH THE MEASURING CURRENT DENSITY IS CONTROLLED A SUBSTANTIAL DISTANCE FROM THE BOREHOLE

Harold W. Smith, William C. Duesterhoeft, Jr., Francis X. Bostick, Jr., and William Garner, Jr., all of Austin, Tex., assignors to Dresser Industries, Inc.

Filed Dec. 29, 1958, Ser. No. 783,548
20 Claims. (Cl. 324—1)



1. In a method for investigating the electrical resistivities of earth formations traversed by a borehole, the steps comprising passing current between a first location

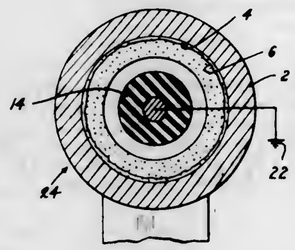
in the borehole and a point remote from said first location so as to establish an electrical field in the earth formation laterally of the first location, passing current between a second location in the borehole and a third location also in the borehole but intermediate said first and second locations and also simultaneously passing current between said second location and a point remote therefrom, controlling the amount of current flowing between said second and third locations so as to maintain said first and third locations at substantially equal potential as said locations are moved as a group past non-homogenous earthen formations, and obtaining an indication of variations in an electrical property existing between said first location and a point remote therefrom.

3,096,478

APPARATUS WITH CONDUCTIVE GAS ELECTRODES FOR DETECTING NON-UNIFORMITY IN ELECTRICALLY INSULATING AND ELECTRICALLY SEMI-CONDUCTING MATERIALS

George A. Brown, Clifton, N.J., assignor to The Okonite Company, Passaic, N.J., a corporation of Delaware

Filed Aug. 18, 1959, Ser. No. 834,526
8 Claims. (Cl. 324—54)



1. Apparatus for detecting dead leaks in the insulating and semi-conducting coverings of conductors, said apparatus comprising, in combination, an electrode of conducting gas; means for advancing a grounded, covered conductor through the gas of said electrode, progressively to effect contact of the conducting gas with the entire surface of that portion of the conductor covering which at any instant is within the electrode; a source of electrical energy electrically connected to said electrode for maintaining a constant potential difference between said electrode and grounded conductor; and means in the circuit thus provided for measuring the current flowing from said energy source through said electrode and said conductor.

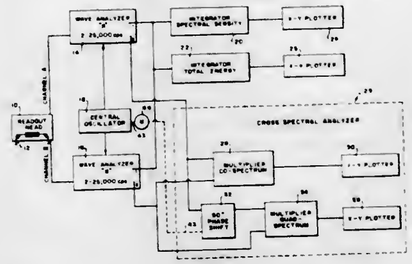
3,096,479

ENERGY SPECTRUM AND CROSS SPECTRUM ANALYSIS SYSTEM

Wilbur Marks, Fords, N.J., and Paul E. Stransser, Germantown, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Apr. 10, 1961, Ser. No. 102,074
19 Claims. (Cl. 324—77)
(Granted under Title 35, U.S. Code (1952), sec. 266)

11. A system for automatically analyzing a plurality of complex waves which is indicative of a series of physical events comprising, a source of energy representing said physical events containing a plurality of information channels, means for analyzing said information, said means being connected to the source of information, cross spectrum means for obtaining the cross spectrum of said energy of the complex waves, total energy means for obtaining the total energy content of said complex waves, spectral density means for obtaining the spectral density of the complex waves, said cross spectrum means, total energy means and said spectral density means being connected to the analyzing means whereby the energy content of the complex signal waves may be displayed for the purpose of relating a history of the physical events.

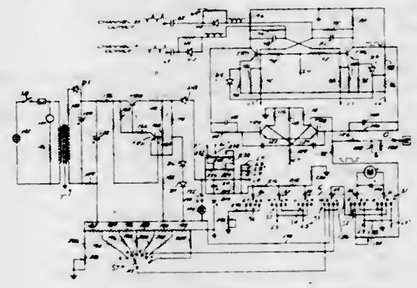


3,096,480

SELF-CALIBRATING VARIABLE RANGE PHASE METER

George E. Pihl, Abington, Mass., assignor to Acton Laboratories, Inc., Acton, Mass., a corporation of Massachusetts

Filed Jan. 2, 1959, Ser. No. 784,751
5 Claims. (Cl. 324—83)

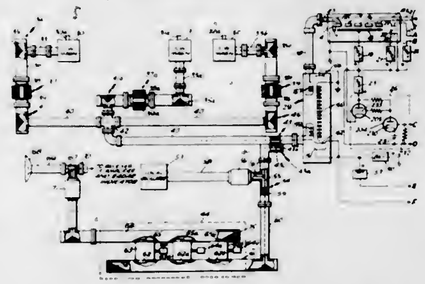


1. In a phase angle measuring system having a meter for providing a visual indication of phase angle, means for producing an analog signal voltage proportional to phase angle, and means for coupling said analog signal voltage to said meter whereby to cause upscale deflection of said meter, the improvement comprising an adjustable source of D.C. voltage, a voltage divider network connected across said voltage source, said network having a plurality of output taps providing a plurality of successively smaller output voltages which differ in magnitude by equal increments, means for selectively applying a voltage equal to the voltage between taps to said meter so as to cause upscale deflection of said meter, switch means for selectively connecting each tap to said meter whereby the output at each tap will cause downscale deflection of said meter, said voltage source adjustable to provide full scale deflection of said meter when simultaneously (1) said voltage equal to the voltage between taps is applied to said meter so as to produce upscale deflection of said meter and (2) said analog signal voltage is zero, and means for zeroing said meter when simultaneously (1) said analog signal voltage is at a maximum level and (2) the total voltage across said network is connected to said meter in opposition to said analog signal voltage.

3,096,481
TRAVELING WAVE TUBE SYSTEMS

Edward C. Dench, Needham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Feb. 26, 1958, Ser. No. 717,782
10 Claims. (Cl. 325—17)

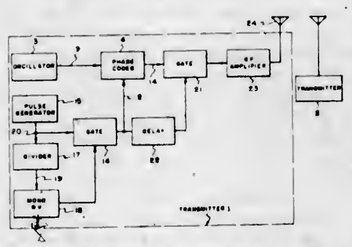


1. A radar system for alternately transmitting electromagnetic energy to a reflecting surface and receiving electromagnetic energy from said surface comprising a backward wave voltage tunable device having an oscillatory mode and an amplifying mode of operation and tunable through a predetermined frequency range, means for cyclically tuning said device through said frequency range, injection oscillator means for injecting a plurality of locking signals into said device within the frequency band through which said backward wave device is tunable, voltage generating means adapted to render said backward wave device oscillatory to produce an electromagnetic energy output signal at the frequency of each injected locking signal, means for shifting said backward wave device from said oscillatory mode to said amplifying mode, means for receiving transmitted output signals reflected from said surface including a mixer cooperating with said locking signals and an intermediate frequency amplifier, a circuit interconnecting said receiving means and said locking signal means including local oscillator means connected to beat with each of said locking signals from said injection oscillator means to provide sidebands above and below each injection frequency, filtering means for passing only the upper or lower portions of said sidebands, and means for applying the non-suppressed portion of said sidebands to said mixer input of said receiving means, whereby incoming reflected signals at each of said plurality of transmitted frequencies are progressively mixed with the corresponding sideband signal from said filter means.

3,096,482
PHASE CODED SIGNAL RECEIVER

Robert L. Frank, Great Neck, and Solomon Zadoff, Flushing, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware

Filed Apr. 11, 1957, Ser. No. 652,310
9 Claims. (Cl. 325—41)

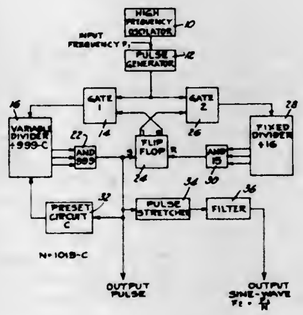


1. Apparatus adapted to receive a plurality of phase coded pulsed carrier signals and operative to selectively respond to a desired one of said carrier signals, said apparatus including means for receiving said carrier signals, means for generating a local phase coded signal having the same phase characteristics as said desired carrier signal, means connected to said means for receiving and to said means for generating for cross-correlating the received pulse signals with said local signal to produce a pulsed output signal proportional in amplitude to a function of the instantaneous phase angles between said received signals and said local signal, pulse gating means connected to receive said pulsed output signal and operative to pass said pulsed output signal in response to control pulses, said source for generating said local signal including a source of control pulses, means for connecting said control pulse source to said gating means, first and second signal integrating means, switching means coupled to said gating means and to both said signal integrating means for alternatively connecting said gating means to a different one of said signal integrating means according to whether or not said switching means is energized, said switching means being energized for a portion of the time that said gating means is rendered operative, means connected to both said signal integrating means for monitoring the amplitude and polarity of the signals stored in said signal integrating means, said monitoring means producing an output signal when both said signals stored in said signal integrating means are simultaneously of the same polarity, and indicating means connected to said monitoring means and adapted to receive said output signal.

3,096,483
FREQUENCY DIVIDER SYSTEM WITH PRESET MEANS TO SELECT COUNTDOWN CYCLE

James R. Ransom, Baltimore, Md., assignor to The Bendix Corporation, Towson, Md., a corporation of Delaware

Filed Apr. 6, 1961, Ser. No. 101,187
7 Claims. (Cl. 328—48)

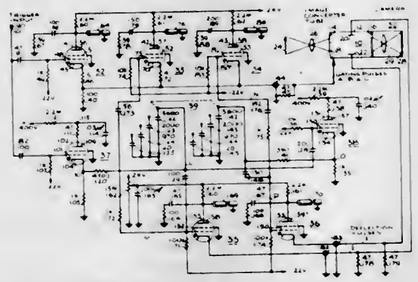


7. A system for providing an electrical signal having a frequency determined by the frequency of a reference source divided by a selected integer, comprising a first path for the signals from said reference source comprising a first resettable counter, an alternately effective second path for the signals from said reference source including a second resettable counter, means responsive to the initiation of the resetting function in each of said counters to render effective the signal path to the other of said counters, and preset means responsive to the initiation of the resetting function in said first counter for presetting said first counter to a selectable value such that the total number of counts in one cycle of said first counter plus one cycle of said second counter equals said selected integer, whereby the output frequency of said first counter equals the frequency of said reference source divided by said selected integer.

3,096,484
HIGH SPEED PULSE CONTROL CIRCUIT FOR IMAGE CONVERTER TUBES

George L. Clark, Hawthorne, Calif., assignor to Thompson Ramo Wooldridge Inc., Los Angeles, Calif., a corporation of Ohio

Filed Dec. 4, 1958, Ser. No. 778,246
2 Claims. (Cl. 328—63)

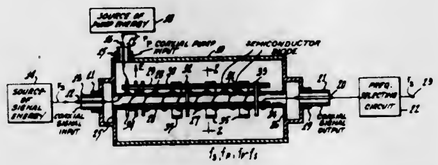


1. A control circuit operable in response to an input trigger pulse to produce at least two rectangular pulses in accurately timed succession, said circuit comprising: a first rectangular pulse producing circuit receptive of the input trigger pulse and operable in response thereto to produce a first rectangular pulse; a pulse generating circuit receptive of the input trigger pulse and operable in response thereto to produce a step voltage; integrating means coupled to said pulse generating circuit and operable in response to said step voltage to produce a ramp voltage whose amplitude rises in a predetermined manner toward the amplitude of said step voltage; pulse means coupled to said integrating means to receive said ramp voltage therefrom, said pulse means being operable at a predetermined amplitude level of said ramp voltage to produce a second trigger pulse; and a second rectangular pulse producing circuit coupled to said pulse means and operable in response to said second trigger pulse to produce a second rectangular pulse, said second rectangular pulse being delayed with respect to said first rectangular pulse by a predetermined interval of time.

3,096,485
DIODE TRAVELING WAVE PARAMETRIC AMPLIFIER

Kern K. N. Chang, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Jan. 4, 1960, Ser. No. 142
12 Claims. (Cl. 330—4.6)

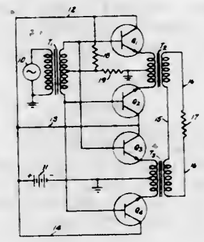


1. A parametric amplifier comprising, in combination, a continuously wound helical transmission line,
a single variable capacitance semiconductor junction diode coupled for radio frequency current conduction between a point on one turn of said line and a point on the next turn of said line in response to a radio frequency field of said line,
means connected to one end of said line for applying a first radio frequency signal of signal frequency to said one end of said line,
means including a helix in an inductive energy coupling relationship with said one end of said line for applying a second radio frequency signal of pump frequency higher than said signal frequency to said line,
said line being dimensioned to support electrical energy of said pump frequency, said signal frequency, and a frequency equal to the difference between said pump and signal frequencies,
and means to derive from the other end of said line an output signal having a frequency equal to one of said signal, pump and difference frequencies.

3,096,486
PUSH-PULL PARALLEL OPERATING CIRCUIT FOR POWER TRANSMISSION DEVICES

Robert R. Atherton, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy

Filed Sept. 13, 1960, Ser. No. 55,812
6 Claims. (Cl. 330—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Parallel operation of power electron emission means comprising:
at least two pairs of electron emission devices, each electron emission device having a pair of conduction electrodes and a control electrode for controlling current conduction in the conduction electrodes;
an alternating current input of two phases, one phase input being coupled to the control electrode of a first electron emission device of each pair and the other phase input being coupled to the control electrode of a second electron emission device of each pair; and
a pair of output transformers, one of said conduction electrodes of both of said electron emission devices in each pair of electron emission devices being coupled in series through one primary winding of each pair of output transformers, the other of said conduction electrodes of both of said electron emission device pairs being coupled to one terminal of a voltage supply, said primary windings each being center tapped and said center tap being coupled to the other terminal of said voltage supply providing parallel couplings for said two pairs of electron emission devices, and the secondary windings of said pair of output transformers being coupled in series to an output circuit whereby parallel operation of said electron emission devices accomplishes a minimum of power loss and equalization of currents in the electron emission devices.

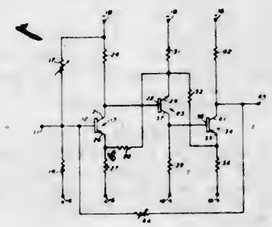
3,096,487
DIRECTLY COUPLED TRANSISTOR AMPLIFIER WITH POSITIVE AND NEGATIVE FEEDBACK

Willis L. Lee, 4118 Seri Road, San Diego, Calif.

Filed Apr. 3, 1961, Ser. No. 100,363
8 Claims. (Cl. 330—17)

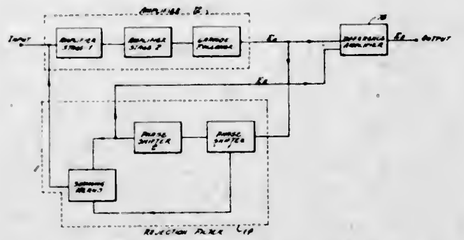
5. A transistor amplifier comprising an input and output transistor of one conductivity type, an odd number of

intermediate transistors connected in cascade between said input and output transistors, each of said transistors having base collector and emitter elements and being of opposite conductivity type to any adjacent transistor, the base of each transistor following said input transistor connected to the collector of the adjacent previous transistor,



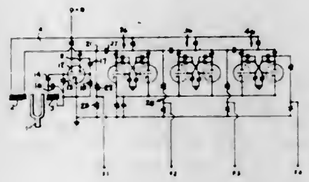
positive and negative supply voltages, each of said transistors connected to said supply voltages in a common emitter configuration, a series of signal feedback means connected between the emitters of all adjacent transistors, each of said signal feedback means operable to set the output transistor collector operating voltage substantially equal to the input transistor base operating voltage.

3,096,488
ELECTRONIC FILTER
Morton R. Lomask, New York, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 14, 1961, Ser. No. 138,206
4 Claims. (Cl. 330—69)



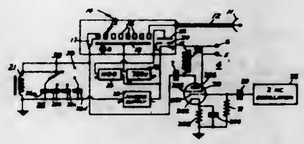
1. An electronic filtering device comprising, in combination: a first amplifier having connection means for application of an input signal and connection means for derivation of an output signal; a rejection filter comprising phase-shifting means and summing means, a portion of said amplifier output signal being applied to said phase-shifting means and to said summing means as an input and the phase-shifted output signal of said phase-shifting means also being applied to said summing means as an input, said summing means operating to add its phase-shifted and unphase-shifted input signals, the resultant signal being applied as a negative feedback input signal to said amplifier, said amplifier including means for preventing low-frequency oscillations and means for preventing high-frequency oscillations, said summing means further including signal attenuating means, the summed output signal being passed through said signal attenuating means before being fed back to said amplifier, said signal attenuating means acting as a selectivity control; and a differential amplifier for amplifying the difference between two input signals, the first input being the output signal of said first amplifier and the second input being a portion of said phase-shifted signal, the output of said differential amplifier being the output signal of said electronic filtering device.

3,096,489
TUNING FORK TONE GENERATOR
Frederico R. Santos, Rua Antonio de Godoi 35, Sao Paulo, Brazil
Filed Nov. 14, 1960, Ser. No. 68,939
Claims priority, application Brazil Nov. 14, 1959
4 Claims. (Cl. 331—51)



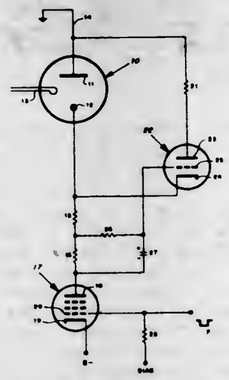
1. A tuning fork oscillator adapted to serve as a tone generator for an organ, comprising:
a tuning fork having a pair of prongs;
a driving coil adjacent one prong and a pick-up coil adjacent the other prong;
a source of D.C. potential;
a first electric valve and means connecting the anode of said first valve directly to one end of said driving coil;
means connecting the other end of said driving coil directly to the positive terminal of said source;
means connecting the cathode of said first valve to ground whereby energization of said driving coil is controlled directly by the conduction of said first valve;
a second electric valve having its anode coupled to the control electrode of said first valve and also connected to the positive terminal of said source, the cathode of said second valve being connected to ground;
means connecting said pick-up coil between said cathode and the control electrode of said second valve; and
means connected to said first valve for providing a frequency output corresponding to the frequency of said tuning fork.

3,096,490
TRAVELING WAVE DEVICE MODULATION SYSTEM
Robert A. Rapuano, Dedham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Feb. 28, 1957, Ser. No. 643,152
19 Claims. (Cl. 331—82)



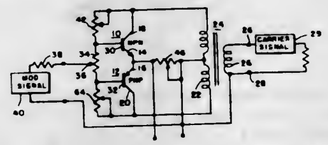
1. In combination, a traveling wave device voltage tunable through a predetermined frequency band and having a plurality of electrodes adapted to control the frequency band swept by said traveling wave device, means for applying a voltage to said frequency determining electrodes, a resonant energy storage device in circuit with one of said electrodes and said voltage means, said resonant frequency storage device tuned to a predetermined sweep frequency, and means for exciting said resonant storage device with a modulating voltage.

3,096,491
QUICK DISCHARGE CIRCUIT FOR A MAGNETRON
Joseph L. Ball, Teaneck, N.J., and Robert H. Edmonds, New York, and Gerald F. Ross, Plainview, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 19, 1961, Ser. No. 146,384
4 Claims. (Cl. 331—87)



1. A quick discharge circuit, comprising in combination: a magnetron oscillator, power supply means, switch means connecting said power supply means to said magnetron oscillator for energizing said magnetron oscillator, vacuum tube means connected across said magnetron oscillator, first means connected between said switch means and said vacuum tube means biasing said vacuum tube below cutoff when said magnetron oscillator is energized, second means connected to said switch means for disconnecting said power supply from said magnetron oscillator, third means connected between said switch means and said vacuum tube biasing said vacuum tube to conduction when said magnetron oscillator is disconnected from said power supply whereby said magnetron oscillator is quickly turned off when said power supply is disconnected.

3,096,492
CARRIER-SUPPRESSED MODULATOR
Gottfried F. Vogt, Lincroft, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Oct. 28, 1960, Ser. No. 65,870
12 Claims. (Cl. 332—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)



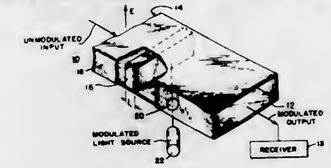
1. A modulator circuit comprising a pair of semiconductor devices of opposite conductivity type each having emitter, collector and base electrodes, said emitter electrodes being directly connected in common, a source of carrier voltage signal, a source of modulating voltage signal, means directly connected across said collectors for impressing said carrier voltage signal in phase opposition therebetween, means for applying said modulating voltage signal in phase to said base electrodes, and means for deriving an output signal from said common connected emitter electrodes.

3,096,493
FOUR-TERMINAL ELECTRIC NETWORKS
Maurice Gardiner, Coventry, England, assignor to The General Electric Company Limited, London, England
Filed July 19, 1960, Ser. No. 43,832
Claims priority, application Great Britain July 23, 1959
6 Claims. (Cl. 333—75)



1. A four terminal electric network that is electrically equivalent to a bridged-T network formed entirely of lumped impedance elements, comprising a pair of input terminals, a pair of output terminals, first and second lengths of two-conductor transmission line connected in parallel between the said input terminals and the said output terminals, a third length of two-conductor transmission line connected to the said second length of transmission line as a stub, a lumped impedance element connected between the conductors of the first line, at least one lumped impedance element connected between the conductors of the third line and at least one lumped impedance element connected between the conductors of each part of the second line on either side of the junction with the said third line.

3,096,494
MICROWAVE AMPLITUDE MODULATOR
Harold Jacobs, West Long Branch, and Frank A. Brand, Elberon, N.J., James D. Meindl, East Pittsburgh, Pa., and Michael A. Benanti, Mamaroneck, N.Y., assignors to the United States of America as represented by the Secretary of the Army
Filed Dec. 30, 1960, Ser. No. 79,936
1 Claim. (Cl. 333—81)
(Granted under Title 35, U.S. Code (1952), sec. 266)

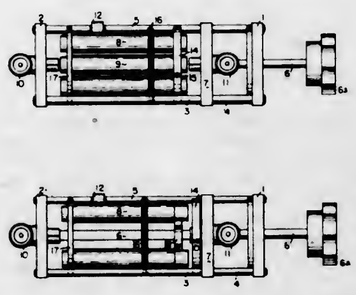


A microwave amplitude modulator having little or no phase shift of the reflected waves comprising a hollow-pipe waveguide of rectangular cross-section and operating in the $TE_{0,1}$ mode through which microwave energy can be propagated, a germanium body having a resistivity of at least 5 ohm-centimeters located within the waveguide in the path of said energy, the ratio of the dimension of said germanium body extending in the direction of said propagated energy to the wavelength of the propagated energy through said germanium body being a constant equal to .3, and said wavelength and said dimension being measured in the same dimensional units.

3,096,495
COAXIAL ELEMENT TURRET
Henry Leknovich, Alhambra, Calif., assignor to Stoddart Aircraft Radio Co. Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 7, 1960, Ser. No. 67,847
14 Claims. (Cl. 333—81A)

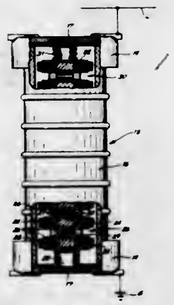
8. In an assembly having plural tubular elements, plural aligned connectors disposed at ends of said elements,

means to rotate said elements to selectively position one of said elements
in alignment with said connectors, and means to translate the said elements
in relation to said connectors to connect the selected said element
to at least one of said connectors;
means to selectively replace a said element comprising



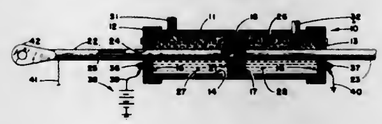
inner support means attached to said means-to-rotate at one end of the group of said elements,
one spring surrounding all said elements in relation to said inner
support means such as to retain said elements and upon deformation
of said spring to allow said elements to be selectively removed by radial displacement thereof.

3,096,496
OVERVOLTAGE PROTECTIVE DEVICE
Lawrence M. Burrage, South Milwaukee, and Darrel D. McStrack, New Berlin, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed May 11, 1961, Ser. No. 109,363
8 Claims. (Cl. 338—21)



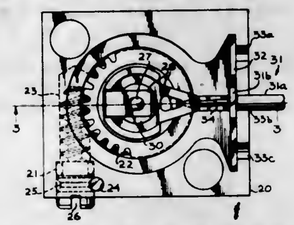
1. A valve element for a lightning arrester of the type having at least a pair of spaced apart electrodes which conjointly define a spark gap therebetween, said element being in series electrical relation with at least one of said pair of electrodes and comprising first and second discrete portions which are in parallel electrical relation with one another, said first portion composed in part of large grain non-linear resistance valve material, said second portion composed in part of relatively smaller grain non-linear resistance valve material, said valve element having a pair of opposed contact faces and each of said first and second portions extending across said element between said contact faces and defining a portion of each of said contact faces.

3,096,497
COMBINATION HYDRAULIC ACTUATOR AND POTENTIOMETER
Donald F. Sellers, Dallas, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Filed Mar. 6, 1961, Ser. No. 93,410
5 Claims. (Cl. 338—83)



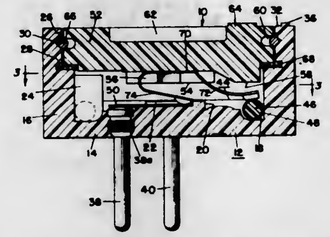
1. A potentiometer comprising: a vessel having an inner surface and including a cylinder and a pair of end caps closing off the ends of the cylinder; a portion of said inner surface in the region of one and a portion of said inner surface in the region of the other of the end caps, said portions being conductive and the balance of the inner surface being non-conductive and electrically isolating the conductive portions from each other; means for effecting electrical connection to each conductive portion; a piston slidably mounted in the cylinder and dividing the vessel into two chambers, the piston having conductive, electrically connected faces; a conductive liquid filling both chambers, the liquid in one chamber being electrically connected to the liquid in the other by the piston faces and the conductive faces being electrically connected through the liquid in the chambers and the piston faces; a conductor connected to the piston faces and electrically isolated from the liquid and the conductive surfaces, said conductor having an end extending outside the vessel; and material having a non-conductive inner surface defining a passage leading out of the cylinder in the region of one of the end caps and back into the cylinder in the region of the other of the end caps, the passage being filled with the conductive liquid.

3,096,498
POTENTIOMETER
Edward H. Tumbusch, Sepulveda, Calif., assignor to Techno-Components Corp., Northridge, Calif.
Filed May 23, 1961, Ser. No. 112,026
9 Claims. (Cl. 338—162)



1. A potentiometer, the internal structure of said potentiometer comprising: a circular resistance member non-rotatably fixed in position; a shaft-like pivot member immovably mounted along the axis of said resistance element; a wiper mechanism mounted on said pivot member and rotatable thereabout, said wiper mechanism being in direct electrical contact with said resistance and pivot members; input means for applying a potential difference between the ends of said resistance member; output means electrically connected to said pivot member for developing an output potential corresponding to the point of contact between said wiper mechanism and said resistance member; and means for rotating said wiper mechanism to selectively obtain different points of contact between said mechanism and said resistance element.

3,096,499
VARIABLE RESISTOR
Milton W. Hudson, St. Petersburg, and Fred J. Moore, Sr., Largo, Fla., assignors to International Resistance Company, Philadelphia, Pa.
Filed May 22, 1961, Ser. No. 111,659
5 Claims. (Cl. 338—163)



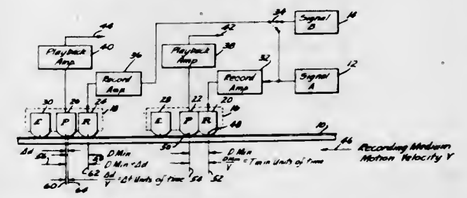
1. A variable resistor comprising a housing of an electrical insulating material having a base and a cylindrical wall extending from the edge of the base, an arcuate resistance element mounted on the inner surface of the base of the housing and extending along the inner surface of the cylindrical wall, said resistance element including a core and a resistance material on the surface of the core, a pair of terminal pins of an electrically conductive metal extending through and secured to the base of the housing, a contact plate of an electrically conductive metal mounted on the inner surface of the base of the housing, said contact plate extending from the center of the base of the housing to one of said terminal pins and contacting said one terminal pin, the other terminal pin being electrically connected to the resistance material of said resistance element, a circular cover fitting in and rotatably supported on the cylindrical wall of said housing and extending across the open end thereof, means securing said cover in said housing but permitting rotation of said cover with respect to said housing, and a contact of an electrically conductive metal carried on the inner surface of said cover, said contact having a pair of contact arms extending therefrom, one of said contact arms slidably engaging the resistance element and the other contact arm slidably engaging said contact plate.

3,096,500
VARIABLE RESISTOR
Arthur M. Daily, Edwardsburg, and William L. Kelver, Cassopolis, Mich., assignors to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed June 30, 1961, Ser. No. 121,173
5 Claims. (Cl. 338—183)



1. In a variable resistor of the type wherein contact means bridging parallel conductive and resistive paths are caused to traverse said paths by rotation of a leadscrew, improved contact means comprising: a contact of conductive material electrically connecting the conductive and resistive paths, a drive block of nonconductive material, the contact and the drive block having interengaging surfaces one of which is convex so that the drive block engages the contact along a line parallel to the conductive and resistive paths, a driver attached to the drive block which engages the leadscrew of the variable resistor so that it is moved longitudinally by the rotation of the leadscrew, said contact means being further characterized by the fact that the driver and the drive block may rotate slightly in the direction of rotation of the leadscrew while maintaining line engagement with the contact.

3,096,501
SIGNAL PROCESSING APPARATUS
Cecil E. Williams, Hawthorne, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 3, 1958, Ser. No. 707,033
20 Claims. (Cl. 340—15.5)

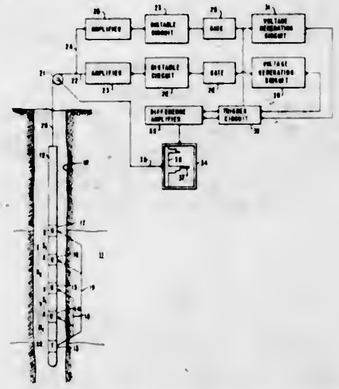


1. Apparatus useful in introducing a delay of Δt time units between a first and a second electrical signal conditionally having different frequency components without imposing substantial unlike nonlinear phase distortion upon the components of each signals, comprising in combination: first and second input terminal means adapted independently to accept said first and said second electrical signals respectively; means coupled to said first input terminal means for recording said first signal on a moving recording medium traveling in a given direction; means positioned in displaced relation to said first signal recording means in the direction of said travel for playing back said first signal at a time T_d time units subsequent to its recording, said recording and reproducing cycle introducing known nonlinear phase distortion upon the components of said first signal; means coupled to said second input terminal means for recording said second signal on a like-associated recording medium moving in a given direction; means positioned in displaced relation to said second recording means in the direction of travel of said associated recording medium for playing back said second signal at a time $T_d+\Delta t$ time units subsequent to its recording, said recording and reproducing means and recording medium handling said second signal being arranged to introduce substantially the same nonlinear phase distortion upon the components of said second signal, attributable to the recording and reproducing cycle thereof, as said known nonlinear phase distortion imposed on said first signal, whereby the played-back signals produced by said playing back means for said first and second signals respectively represent like versions of said two signals but delayed with respect to one another by a time interval of Δt time units; and signal acceptance means coupled to both of said playing back means for said first and second signals whereby said first and second signals may be compared.

3,096,502
DUAL RANGE ACOUSTICAL WELL LOGGING
Charles B. Vogel, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed June 16, 1961, Ser. No. 117,594
5 Claims. (Cl. 340—18)

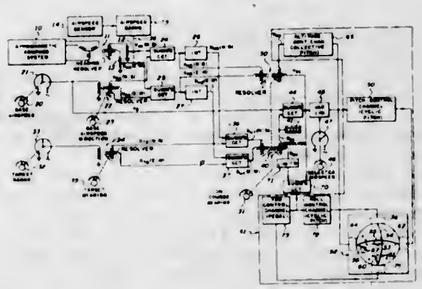
1. A method of acoustical well logging comprising: generating acoustical impulses at a point within a borehole; receiving said acoustical impulses over at least two separate equal length intervals, said equal length intervals being located at different ranges from said point and

registering on a scale related to the depth of said point in the borehole a quantity whose magnitude is related to the



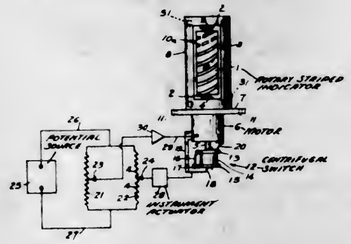
difference in travel time of the acoustical impulse over said two separate equal length intervals.

3,096,503
AIRCRAFT NAVIGATION SYSTEM
George E. Iddings, Wantagh, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,243
9 Claims. (Cl. 340—26)



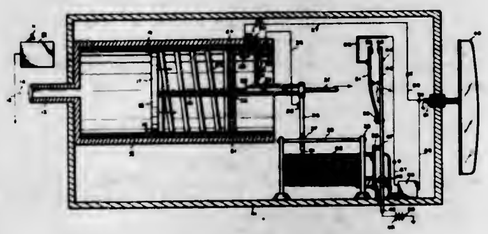
7. A navigation instrument for aircraft by means of which said aircraft may be controlled to maintain a first predetermined speed and altitude over an initial portion of a distance to be travelled to a destination and over the remaining portion of said distance the speed and altitude are gradually decreased comprising means for providing a signal representative of the distance from the craft to said destination, means including limiting means for limiting the amplitude of said distance-to-destination signal in excess of a predetermined amplitude as a function of a predetermined speed of said aircraft, first signal responsive means responsive to the output of said limiting means for providing a first output indicative of a required change in craft condition to cause said aircraft to approach and maintain said first predetermined speed over said initial portion of said distance and thereafter maintain a speed in accordance with said distance-to-destination signal, means for providing a signal representative of the speed of said aircraft, and second signal responsive means responsive to said speed signal for providing a second output indicative of the change required in craft altitude to cause said craft to approach and maintain a desired altitude whereby over said first portion of said distance the speed and altitude may be maintained substantially constant and maximum and thereafter they may be gradually decreased.

3,096,504
INSTRUMENT INDICATION SYSTEM
Ivan O. Fieldgate, Halesite, N.Y., and Edward S. Gwathmey, Earlysville, Va., assignors to Specialties Incorporated, Syosset, N.Y., a corporation of New York
Filed Mar. 14, 1961, Ser. No. 95,737
11 Claims. (Cl. 340—27)



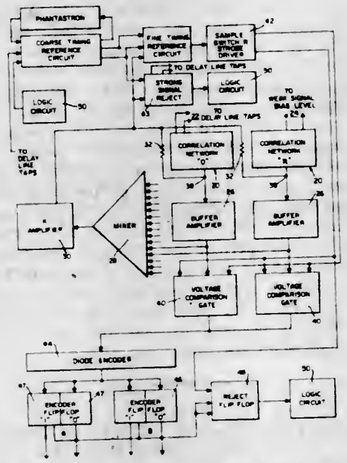
11. In an instrument system, a rotatable member having a generally helical stripe therearound, electrical means for rotating said member, electrical circuit means connected with said electrical means for controlling current supplied thereto, means for supplying current to said circuit means, and an instrument connected with a member of said circuit means for producing electrical unbalance therein in accordance with responses of said instrument.

3,096,505
BRAKELIGHT SYSTEM
David A. Richins, Echo, Utah
Filed May 25, 1962, Ser. No. 197,783
2 Claims. (Cl. 340—69)



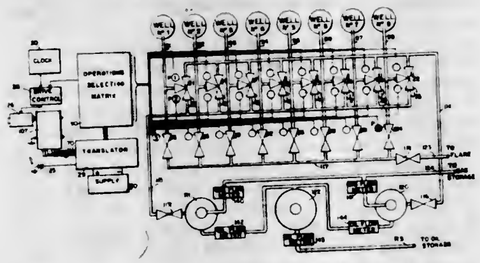
1. In a fluid braking system having an auxiliary fluid outlet providing variable fluid pressure in accordance with the braking actuation of said system, the combination of a pressure chamber coupled to said auxiliary fluid outlet, a spring loaded plunger operatively disposed within said pressure chamber, brakelight means, electrical circuit means coupled to said brakelight means for selectively supplying electrical current to said brakelight means, said electrical circuit means including actuatable means for selectively varying the electrical current supplied to said brakelight means in accordance with the actuation of said actuatable means, said plunger having means for engaging said actuatable means for varying the condition thereof in accordance with the movement of said plunger so as to effect such variation of electrical current to said brakelight means, and wherein said electrical circuit means is additionally provided with circuit means responsive to extremity movement of said plunger for automatically supplying intermittent electrical current surges to said brakelight means.

3,096,506
GRAPHIC CHARACTER RECOGNITION
Chao Kong Chow, Bryn Mawr, and Harvey Rosenberg, Drexel Hill, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 2, 1959, Ser. No. 850,443
16 Claims. (Cl. 340—146.3)



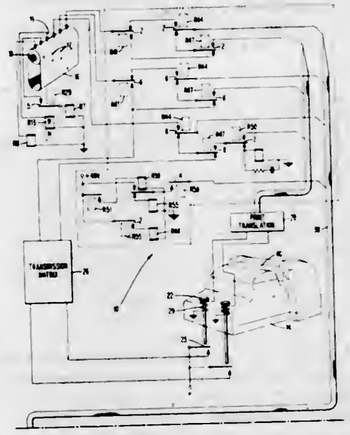
1. Magnetic character recognition circuitry for determining the optimum time t_0 at which comparison should be made between the readback voltage signal of a character to be identified and the correct one of a plurality of stored representations of all possible characters, comprising, means for developing a peaked waveform signal which is a function of the plurality of signals resulting from the application of said readback voltage signal to said stored representations, said peaked waveform signal having a maximum peak at t_0, coarse timing means adapted to sample said readback voltage signal and to generate a sample interval signal having a time width $(t_0-\Delta t_1)$ to $(t_0+\Delta t_2)$, and fine timing means enabled by said sample interval signal and adapted to receive said peaked waveform signal, for generating a fine timing signal at the occurrence of each ascending peak of said peaked waveform signal up to and including t_0, always ignoring peaks which are smaller than the largest previous peak.

3,096,507
SYSTEM AND APPARATUS FOR PROGRAMMED CONTROL OF OIL WELLS AND THE LIKE
Victor Harms, 4224 16th St. SW., and Jerry H. Schwartz, 3032 Hampton Crescent, both of Calgary, Alberta, Canada
Filed Feb. 20, 1959, Ser. No. 794,715
6 Claims. (Cl. 340—147)



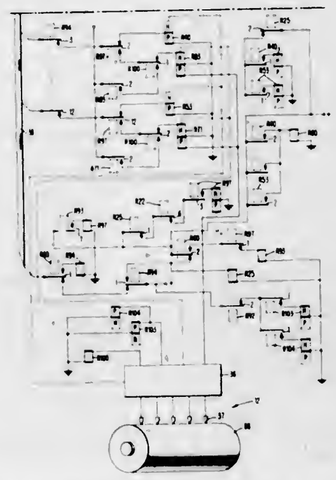
1. In apparatus for directing the flow of fluids in a distribution system by controlling periodically the opening and closing of valves in accordance with a recorded program, said apparatus comprising a record means, translating means for advancing and reading said record having a first and a second group of output leads and effective to selectably energize a single output lead in each group at different potentials in accordance with a reading, a matrix comprising an orthogonal bus grid having a first set of buses respectively connected with output leads of the first group and a second set of buses respectively connected with output leads of the second group, and a plurality of load devices connected at matrix junctions for energization from buses of said first and said second sets of buses for controlling valve states, the improvement which comprises means for advancing the record at predetermined times and for stopping the advance of said record throughout the remainder of an interval between said times upon reading of a stop code contained in said program, comprising a time-controlled source of short voltage pulses independent of said record recurring at the commencement of each interval, a record drive motor for advancing the record with respect to said translator means having a primary control operable in response to a pulse to start advance of said record, and an auxiliary control operable in response to energization of a predetermined load device in accordance with a reading of said stop code to stop said motor.

3,096,508
INPUT OUTPUT APPARATUS
Henry A. Reitfort, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1959, Ser. No. 863,335
2 Claims. (Cl. 340—172.5)



1. An inquiry station for a data processing machine wherein said inquiry station includes a record medium having a plurality of columns of format data, means for reading each column of said format data, means for advancing said record medium to read the next successive column of data wherein individual successive columns of data are presented to said reading means, a selectively operable keyboard character data transmitter means for transferring said format data and said character data to said processing machine, switching means in said inquiry station for alternately connecting said format and data transmitters to said transfer means in response to the transmission of a column of format data or character data, format storage means in said processing machine, format delay means in said processing machine responsive to the reception of said format data for operating said switching

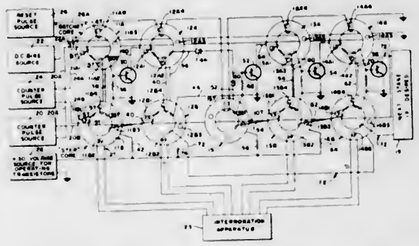
means in said inquiry station to connect said character data transmitter to said transfer means, and means responsive to the selection of character data in said inquiry station for interrupting said transfer means.



3,096,509
MAGNETIC-CORE COUNTER

Milton Rosenberg, Santa Monica, and William R. Johnston, Los Angeles, Calif., assignors, by mesne assignments, to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed May 16, 1960, Ser. No. 29,193
6 Claims. (Cl. 340—174)

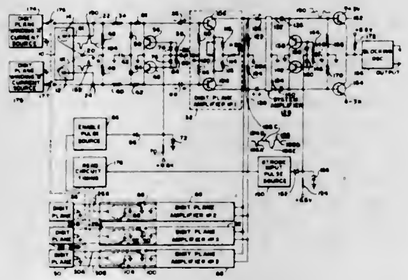


5. A counter circuit for counting pulses from a source comprising a plurality of magnetic cores each magnetic core having two stable states of magnetic remanence, respectively designated as the clear and set state, and being drivable from one to the other thereof, each magnetic core having a toroidal ring shape with a central main aperture and a plurality of small apertures in the ring of said toroid, means for applying count pulses to a first and second of said plurality of magnetic cores for driving them to their set states if not already in their set states including a first drive winding wound in one sense on the portions of said first magnetic core between one of its small apertures and its main aperture, between another of its small apertures and its main aperture, thereafter wound with said one sense on the portions of said second magnetic core between one of its small apertures and its main aperture and between another of its small apertures and its main aperture, an output winding coupled to said first and second cores with an opposite sense, a transistor having base, emitter, and collector electrodes, a resistor connected between the ends of said output winding, means connecting said transistor base to one end of said resistor and said transistor emitter to the other end of said resistor, the relative sense of the coupling of said output winding on said first and second cores being such that said transistor is rendered conductive only by the output induced in said output winding when said first core alone is driven from its clear to its set state, means for driving a third and fourth of said plurality of magnetic cores to their set states if not already set and said second magnetic core to its clear state from the output of said transistor including a second drive winding connected to said transistor collector, said second drive winding being wound in one sense on the portions of said third magnetic core between one of its small apertures and its main aperture, between another of its small apertures and its main aperture, thereafter being wound with said one sense on the portions of said fourth magnetic core between one of its small apertures and its main aperture, between another of its small apertures and its main aperture and thereafter being wound on said second magnetic core through its main aperture, and means for driving said first and third cores to their clear states after each count pulse from said source including a clear winding coupled to said first and third cores through their main apertures.

3,096,510
CIRCUIT FOR SENSING SIGNAL OUTPUT OF A MAGNETIC-CORE MEMORY

Don N. Lee, Torrance, Calif., assignor, by mesne assignments, to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Nov. 25, 1960, Ser. No. 71,783
3 Claims. (Cl. 340—174)

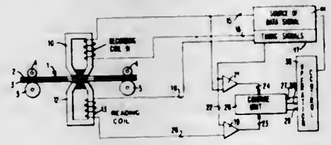


1. In a magnetic-core memory system of the type wherein a reading drive is applied to a magnetic core to transfer it from one to the other of its states of remanence if not already in said state at the termination of other drives applied to said core, and a sense winding having output terminals is inductively coupled to said core for having a digit voltage signal induced therein should said core be transferred, a circuit for eliminating the effects of said noise signals induced in said sense winding due to termination of said other drives comprising amplifier means having an input and output, means coupling said sense winding output terminals to said amplifier means input, means for bypassing said noise signals and allowing said digit voltage signal to be applied to said amplifier means including a diode, a bias source for said diode, means connecting said diode and bias source across said sense winding output terminals for bypassing noise signals of a given polarity exceeding the amplitude of said bias source, a first transistor having collector, emitter, and base electrodes, means connecting said first transistor emitter and collector to said amplifier means input for bypassing any signals applied thereto, means for applying a bias to said first transistor base to maintain said first transistor conductive, means for applying a signal to said first transistor base to render said first transistor nonconductive upon the commencement of said reading drive over the interval of said reading drive, and means including a differentiating circuit for deriving an output signal from said amplifier means output during the interval of said reading drive which does not have its direct-current level affected by any preceding signals.

3,096,511
APPARATUS FOR EFFECTING CONCURRENT RECORD, READ AND CHECKING OPERATIONS

Andrew Taras, Binghamton, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Feb. 25, 1959, Ser. No. 795,376
5 Claims. (Cl. 340—174.1)



1. In a data processing system for effecting concurrent recording and reading operations upon a thin magnetizable medium such as a tape, or the like, the combination comprising:

a fixed recording means adapted for cooperation with one surface of said medium for recording thereon serially magnetic patterns in response to received data pattern signals,

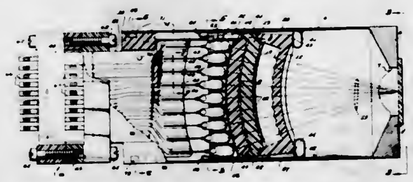
means for moving said medium during the recording of said patterns, and

a fixed reading means disposed to cooperate with an opposed surface of said medium and in conjoint magnetic relationship both with said reading means and said opposed surface whereby each of said patterns being recorded on and through said medium to said opposed surface is concurrently read from said last-named surface.

3,096,512
MULTIPLE SYMBOL VISUAL PRESENTATION

Garrison G. Hollowich, Los Angeles, and Stuart N. McCullough, Encino, Calif., assignors to Tasker Instruments Corporation, Van Nuys, Calif., a corporation of California

Filed Sept. 22, 1960, Ser. No. 57,735
9 Claims. (Cl. 340—378)

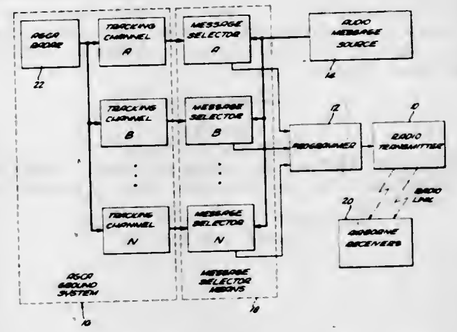


1. A visual indicator for selectively presenting a plurality of luminous symbols within a common area at mutually exclusive times comprising a casing, an observation medium at one end of said casing and to which images of said symbols are projected, an arcuate molded multiple projection lens element, an arcuate molded multiple field lens element, and an arcuate molded multiple condensing lens element, said lens elements being arranged in that order from said medium, a plurality of lamps positioned in arcuate alignment with the multiple lens of each of said lens elements, said lamps being positioned in parallel rows, a plurality of circuit boards having a plurality of conducting elements on each side thereof, each lamp being connected to a respective pair of conducting elements on oppoiste sides of a respective circuit board, and resiliently mounted terminals corresponding to the number of said conducting elements and attached to said circuit boards by friction.

3,096,513
SEMI-AUTOMATIC GROUND CONTROLLED APPROACH SYSTEM

Burton Cutler, Los Angeles, Calif., assignor to Gilfillan Bros., Inc., Los Angeles, Calif., a corporation of California

Filed Oct. 14, 1957, Ser. No. 689,999
13 Claims. (Cl. 343—7)

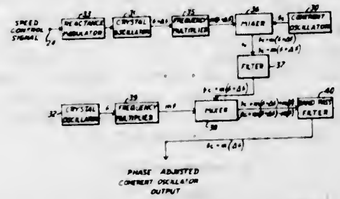


1. In a ground controlled approach system including a ground based radar system for producing output signals by which a piloted aircraft may be guided for landing, an arrangement for automatically transmitting audio messages to an aircraft to guide it, said arrangement comprising: record means containing recordings of a plurality of audio messages; means for reproducing said audio messages; a set of range audio gates for passing only range audio messages developed by said reproducing means; a set of heading audio gates for passing only heading audio messages developed by said reproducing means; a set of elevation audio gates for passing only elevation audio messages developed by said reproducing means; a set of course audio gates for passing only course audio messages developed by said reproducing means; range, heading, elevation, and course converters for producing switching signals corresponding to the actual range, ideal heading, elevation error, and course error of an aircraft to be guided; said set of range audio gates being responsive to range switching signals to pass only one range audio message; said set of heading audio gates being adapted to pass only one heading audio message; said set of elevation audio gates being adapted to pass only one elevation audio message; said set of course audio gates being adapted to pass only one course audio message; and means to gate out only one of said one range, said one heading, said one elevation, and said one course audio messages at a time.

3,096,514
MOVING TARGET INDICATOR SYSTEMS

John T. Zimmer, Holliston, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Dec. 26, 1958, Ser. No. 783,652
6 Claims. (Cl. 343—7.7)

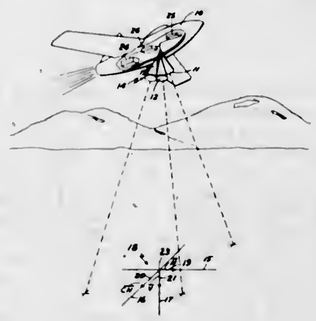


1. In a moving target indicating system having a coherent oscillator, the improvement comprising a first stable oscillator, means for frequency modulating said first oscillator, a first heterodyning device, the outputs of said first oscillator and said coherent oscillator being coupled to said first heterodyning device, a first filter connected to the output of said first device for passing the resultant sum frequency signals to a second heterodyning device, a second stable oscillator having its output coupled to said second device, and a second filter connected to the output of said second device for passing the resultant difference frequency signals.

3,096,515
ANTENNA SYSTEMS

Willard W. McLeod, Jr., Lexington, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Aug. 29, 1958, Ser. No. 758,051
7 Claims. (Cl. 343—9)

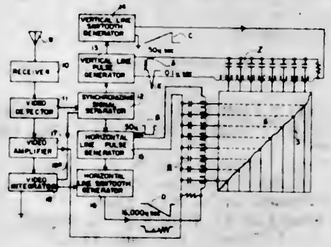


1. A navigation system comprising, in combination, a transmitter; an antenna system connected to said transmitter for radiating signals from said transmitter; means for receiving return echo signals from said antenna system, said antenna system including at least three antennas, each of said antennas subtending a first predetermined angle with respect to one of a plurality of reference coordinates, and each of said antennas subtending a second predetermined angle with respect to another of said reference coordinates, said first predetermined angles being substantially equal in magnitude and said second predetermined angles being substantially equal in magnitude; and means for combining said antenna signals.

3,096,516
TRANSPARENT ELECTRONIC DISPLAY SYSTEMS

David W. Pendleton, 116 Woodley Drive, Alexandria, Va., and Max Sussman, 4649 Brummel St., Skokie, Ill.

Filed Apr. 12, 1960, Ser. No. 21,823
18 Claims. (Cl. 343—11)

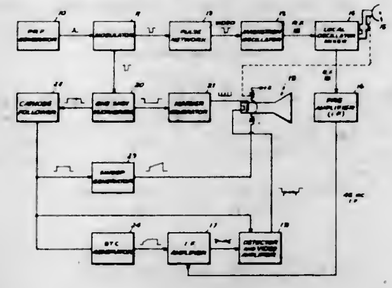


1. An electronic system for displaying a pattern of illuminated spots on a gas filled matrix having series of mutually crossed coordinate conductors in response to groups of input video signals separated by synchronizing pulses, the signals being connected to said crossed conductors, said system comprising separate commutating means each connected with one of said series of crossed conductors and sequentially applying to the conductors in each series bias voltages having amplitudes less than the threshold voltage necessary to ionize the gas between crossed conductors, at least one of said commutating means comprising a bias pulse generator synchronized to said synchronizing pulses, a bias-pulse delay line coupled with said pulse generator and having taps connected with the associated series of conductors and sequentially applying the bias pulse thereto; and compensating means generating a continuously increasing compensating voltage between synchronizing pulses and applying said compensating voltage between the conductors of the crossed series to compensate for pulse amplitude decreases as each pulse passed along the delay line.

3,096,517
PULSED ELECTRON DISCHARGE SYSTEMS

Harold N. Beveridge, Santa Barbara, Calif., and Howell L. Carter, Jr., Natick, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

Continuation of application Ser. No. 383,312, Sept. 30, 1953. This application Sept. 19, 1961, Ser. No. 143,269
8 Claims. (Cl. 343—17.1)



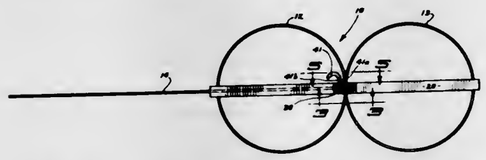
7. In an echo ranging system comprising means for radiating signals, means for cyclically pulse energizing said radiating means to radiate a signal of pulse wave energy, a wave energy receiving device comprising an intermediate frequency amplifier comprising a grid controlled normally amplifying electron discharge device, and at least one alternately amplifying and non-amplifying in time electron discharge device in that order of

signal amplification, which normally amplifying electron discharge device is also connected to and feeding a tuning indicator, which normally amplifying electron discharge device has a substantially lower Q than said alternately amplifying and non-amplifying electron discharge device, means for biasing the grid of said alternately amplifying electron discharge device according to a sensitivity-time control function, means for varying the leading edge of said function, a demodulator connected to and fed by the output of said intermediate frequency amplifier, a video amplifier connected to and fed by said demodulator, comprising at least one grid controlled electron discharge device, which electron discharge device has a screen grid, means for cyclically biasing the grid of said alternately amplifying intermediate frequency electron discharge devices, and said screen grid of said video amplifier electron discharge device, to amplify signals for a period of time substantially longer than the pulse duration of said radiated pulse wave energy and also substantially shorter than the interval between successive radiated signals.

3,096,518
LOOP ANTENNA WITH IMPEDANCE MATCHING

Olaf A. Tiikkainen, 815 14th St. N., Virginia, Minn.

Filed June 20, 1960, Ser. No. 37,170
12 Claims. (Cl. 343—742)

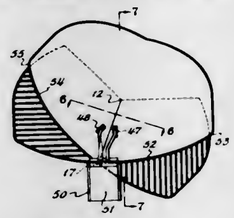


10. A substantially non-directional antenna system comprising a pair of substantially identical adjacent loop elements having a juncture point and each having a free end portion, said loop elements being substantially coplanar and horizontally disposed, an insulating member having said loop elements mounted thereon, a straight element extending across only one of said loop elements in a plane parallel to the plane of said one of said loop elements along the longitudinal axis of the figure defined by said loop elements and being insulated from said one of said loop elements by said insulating member and being integral with the free end of the other of said loop elements.

3,096,519
COMPOSITE REFLECTOR FOR TWO INDEPENDENT ORTHOGONALLY POLARIZED BEAMS

Robert W. Martin, Hicksville, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Apr. 14, 1958, Ser. No. 728,482
9 Claims. (Cl. 343—756)

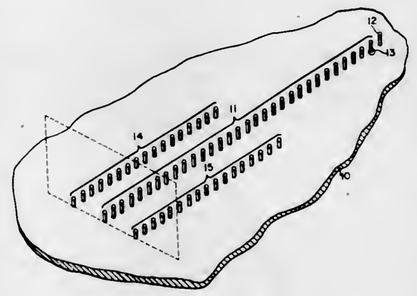


5. A superimposed polarization isolated shaped reflector for microwave energy for use in a V-beam radar system, comprising two component microwave energy reflectors, each containing a surface portion which is conformal to the same paraboloidal surface of revolution, one of said reflectors being rotated through an angle of substantially 45° relative to the other about the axis of revolution of said surface of revolution, said superimposed reflector containing a first surface portion which is conformal to said paraboloidal surface of revolution and common to both of said component reflectors and second surface portions uniquely associated with a respective one of said component reflectors, said common portion being adapted to reflect both of two orthogonally polarized incident beams of microwave energy and said uniquely associated portions being adapted to reflect a respective one of said two incident beams whereby mutually independent reflected beams of orthogonally polarized microwave energy are produced in space.

3,096,520
ENDFIRE ARRAY

Hermann W. Ehrenspeck, 94 Farnham St., Belmont 78, Mass.

Filed Mar. 6, 1958, Ser. No. 719,698
2 Claims. (Cl. 343—834)
(Granted under Title 35, U.S. Code (1952), sec. 266)

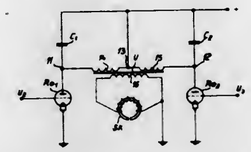


1. A method for controlling the side lobe and gain characteristics of an endfire antenna array by controlling the virtual aperture of the array comprising the steps of placing parasitic arrays about said endfire array adjusting the phase distribution in the virtual aperture by varying the height, spacing and diameter of the parasitic elements of said parasitic arrays, and adjusting the amplitude within said virtual aperture by varying parasitic array length.

3,096,521
MAGNETIC DATA RECORDING APPARATUS

Johannes Hugo Petermann and Nora Anne Petermann, Wilhelmshaven, Germany, assignors to Olympia Werke AG., Wilhelmshaven, Germany

Filed Mar. 6, 1959, Ser. No. 797,787
Claims priority, application Germany Mar. 13, 1958
8 Claims. (Cl. 346—74)



1. In an arrangement for applying input pulses to a magnetizable record carrier, the combination which comprises: a recording head having a winding past which recording head the record carrier is moved; a transformer having primary and secondary windings, said secondary

winding being connected across said winding of said recording head, said primary winding having a center tap and two end terminals thereby to form two primary halves, said center tap being connected to one terminal of the source of electrical energy; two amplifiers each having two output terminals and one control input terminal, one output terminal of each amplifier being connected to the other terminal of the source of electrical energy and the remaining output terminals of said two amplifiers being connected, respectively, to said two end terminals of said primary winding; two capacitors connected across said halves of said primary winding, respectively, for producing a current overshoot beyond the zero line in the particular half of said primary winding which is energized by the corresponding amplifier when there appears at the output terminal of the respective amplifier a substantially rectangular pulse that reaches to the zero line; and means connected to said control input terminals of said amplifiers for applying to said amplifiers the pulses to be applied to the record carrier.

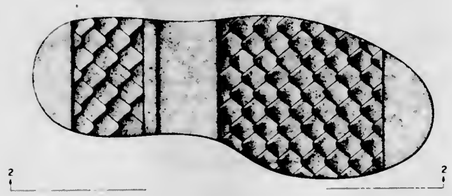
DESIGNS

JULY 2, 1963

195,541
LADY'S SLIP OR THE LIKE
Neva A. Cederholm, Chicago, Ill., assignor to Kellwood Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 24, 1962, Ser. No. 71,824
Term of patent 7 years
(Cl. D3—26)



195,542
SHOE SOLE
Peter W. Webster, 31 Orchard St., Springfield, Vt.
Filed Nov. 2, 1962, Ser. No. 72,364
Term of patent 14 years
(Cl. D7—5)



195,543
SLIPPER
Florence B. Zacks, Columbus, Ohio, assignor to R. G. Barry Corporation, Columbus, Ohio, a corporation of Ohio
Filed June 13, .962, Ser. No. 70,539
Term of patent 14 years
(Cl. D7—7)



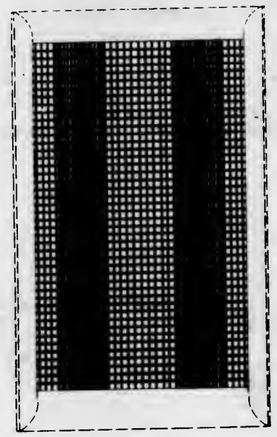
195,544
WASHING MITT
Robert Servin, Jenkintown, Pa., assignor to Robert Hosiery Mills, Inc., Trappe, Pa., a corporation of Pennsylvania
Filed Apr. 11, 1962, Ser. No. 69,672
Term of patent 14 years
(Cl. D9—2)



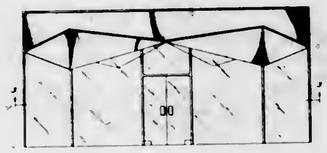
195,545
DIETARY SUPPLEMENT BLOCK FOR CATTLE
Charles F. Aniser, King City, Mo.
Filed May 19, 1961, Ser. No. 65,235
Term of patent 14 years
(Cl. D12—2)



195,546
LOADING RAMP FOR VEHICLES AND THE LIKE
Roy W. Bloch, Bay City, Mich., assignor to Magline, Inc., Pinconning, Mich., a corporation of Michigan
Filed Dec. 30, 1960, Ser. No. 63,406
Term of patent 14 years
(Cl. D13—1)



195,547
COMMERCIAL BUILDING
Joseph B. Schwartz, 278 W. 86th St., New York, N.Y.
Filed Mar. 30, 1962, Ser. No. 69,500
Term of patent 14 years
(Cl. D13—1)



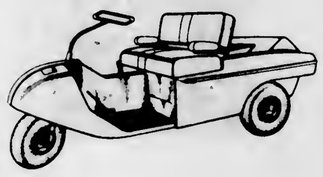
195,548
HOUSE
Donald J. Scholz, Toledo, Ohio, assignor to Scholz Homes, Inc., Toledo, Ohio, a corporation of Ohio
Filed June 22, 1962, Ser. No. 70,652
Term of patent 14 years
(Cl. D13—1)



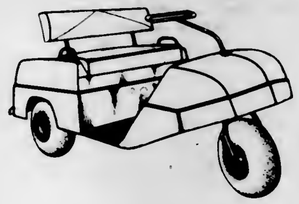
195,549
HOUSE
Donald J. Scholz, Toledo, Ohio, assignor to Scholz Homes, Inc., Toledo, Ohio, a corporation of Ohio
Filed June 22, 1962, Ser. No. 70,653
Term of patent 14 years
(Cl. D13—1)



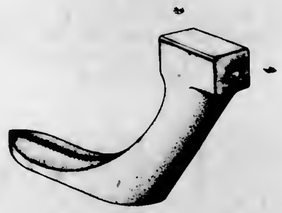
195,550
GOLF CAR
Duncan McRae, Whitehall, Mich., assignor, by mesne assignments, to Chamberlin Metal Products Co., Frankfort, Mich., a corporation of Illinois
Filed June 6, 1962, Ser. No. 70,431
Term of patent 14 years
(Cl. D14—3)



195,551
GOLF CAR
Duncan McRae, Whitehall, Mich., assignor, by mesne assignments, to Chamberlin Metal Products Co., a corporation of Illinois
Filed June 6, 1962, Ser. No. 70,439
Term of patent 14 years
(Cl. D14—3)



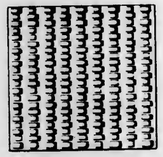
195,552
AUTOMOTIVE MIRROR BASE
Thurman F. Naylor, Wellesley, and Pierce Hollingsworth, Wayland, Mass., assignors to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Filed Dec. 19, 1962, Ser. No. 72,906
Term of patent 14 years
(Cl. D14—6)



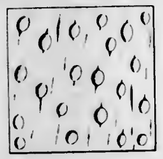
195,553
CHAIR
Richard A. Isola, Royal Oak, Mich., assignor, by mesne assignments, to Steelcase Inc., Grand Rapids, Mich.
Filed Aug. 3, 1962, Ser. No. 71,162
Term of patent 14 years
(Cl. D15—1)



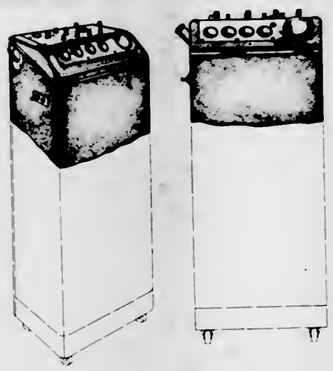
195,554
TILE
Donald R. Speaker, North Hollywood, Calif., assignor to Pomona Tile Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed July 12, 1962, Ser. No. 70,895
Term of patent 14 years
(Cl. D18—2)



195,555
TILE
Donald R. Speaker, North Hollywood, Calif., assignor to Pomona Tile Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed July 12, 1962, Ser. No. 70,899
Term of patent 14 years
(Cl. D18—2)



195,556
DENTAL INSTRUMENT SUPPORTING AND ACTUATING UNIT
Jack G. Ashton, Northridge, Calif., assignor of one-third to Jere C. Butterworth, Granada Hills, Calif., and one-third to William T. Deardorff, Van Nuys, Calif.
Filed Mar. 5, 1962, Ser. No. 69,070
Term of patent 14 years
(Cl. D24—1)



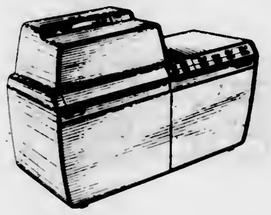
195,557
MICROWAVE ATTENUATOR
Eric Allen Inhelder, Mountain View, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Apr. 4, 1962, Ser. No. 69,575
Term of patent 14 years
(Cl. D26—1)



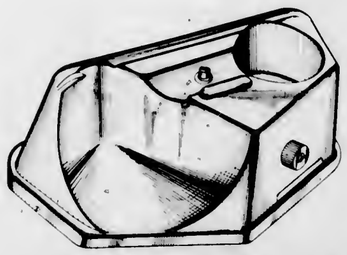
195,558
MULTIMETER
Ira W. Simons, Columbus, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed June 7, 1962, Ser. No. 70,465
Term of patent 14 years
(Cl. D26—1)



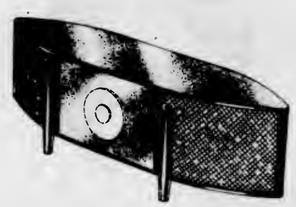
195,559
HIGH SPEED PRINTER CONSOLE
Donald Van Der Linden, Phoenix, Ariz., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1962, Ser. No. 72,326
Term of patent 7 years
(Cl. D26—5)



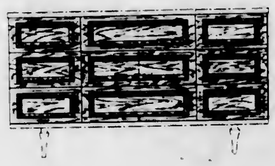
195,560
TELEPHONE AMPLIFIER
Claude F. Mendell, 1324 Chester St., South Bend, Ind.
Filed Oct. 20, 1960, Ser. No. 62,556
Term of patent 3½ years
(Cl. D26—14)



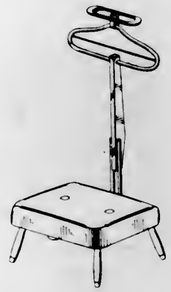
195,561
SPEAKER CABINET
Alfred J. Erickson, 928 S. Hampstead St., Anaheim, Calif.
Filed Oct. 25, 1962, Ser. No. 72,269
Term of patent 14 years
(Cl. D26—14)



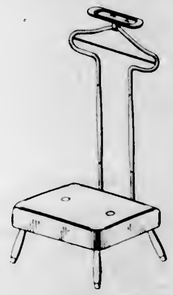
195,562
BUREAU
Edmond J. Spence, Boca Raton, Fla., assignor to Johnson-Carper Furniture Company, Inc., Roanoke, Va., a corporation of Virginia
Filed Mar. 15, 1962, Ser. No. 69,279
Term of patent 14 years
(Cl. D33—6)



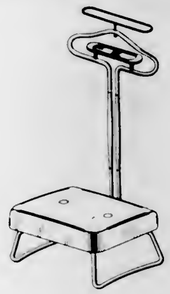
195,563
COMBINED VALET STAND AND SEAT
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., assignors to Gleitsman's Inc., Long Island City, N.Y., a corporation of New York
Filed July 13, 1962, Ser. No. 70,908
Term of patent 14 years
(Cl. D33—8)



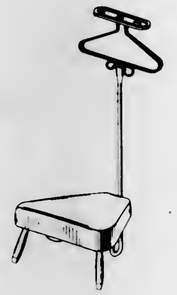
195,564
COMBINED VALET STAND AND SEAT
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., assignors to Gleitsman's Inc., Long Island City, N.Y., a corporation of New York
Filed July 13, 1962, Ser. No. 70,909
Term of patent 14 years
(Cl. D33—8)



195,565
COMBINED VALET STAND AND SEAT
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed July 13, 1962, Ser. No. 70,911
Term of patent 14 years
(Cl. D33—8)



195,566
COMBINED VALET STAND AND SEAT
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed July 13, 1962, Ser. No. 70,912
Term of patent 14 years
(Cl. D33—8)



195,567
VALET STAND
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Nov. 30, 1962, Ser. No. 72,662
Term of patent 14 years
(Cl. D33—8)



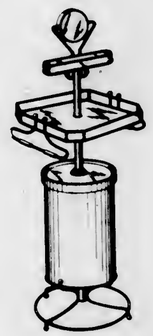
195,568
CLOTHES SUPPORT
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Nov. 30, 1962, Ser. No. 72,663
Term of patent 14 years
(Cl. D33—8)



195,569
VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,056
Term of patent 14 years
(Cl. D33—8)



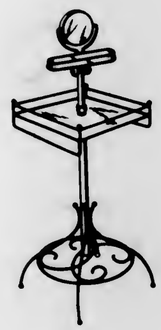
195,570
VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,057
Term of patent 14 years
(Cl. D33—8)



195,571
VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,059
Term of patent 14 years
(Cl. D33—8)



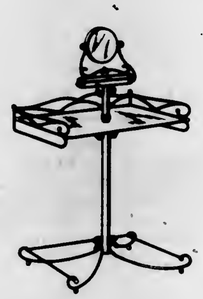
195,572
VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,060
Term of patent 14 years
(Cl. D33—8)



195,573
COMBINED TABLE AND VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,078
Term of patent 14 years
(Cl. D33—14)



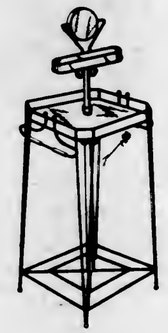
195,574
VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,079
Term of patent 14 years
(Cl. D33—14)



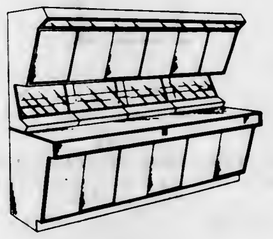
195,575
COMBINED TABLE AND VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,080
Term of patent 14 years
(Cl. D33—14)



195,576
COMBINED TABLE AND VALET STAND OR SIMILAR ARTICLE
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., and John H. Squadra, Westport, Conn., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,129
Term of patent 14 years
(Cl. D33—14)



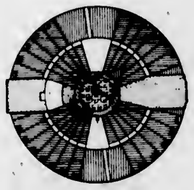
195,577
KITCHEN CABINET
Joseph B. Szewczyk, 1200 E. Carson St., Pittsburgh, Pa.
Filed Dec. 20, 1961, Ser. No. 67,998
Term of patent 14 years
(Cl. D33—19)



195,578
SET OF CHESS MEN
William Lee Epton, Box 131, Wewoka, Okla.
Filed July 17, 1962, Ser. No. 70,957
Term of patent 14 years
(Cl. D34—5)



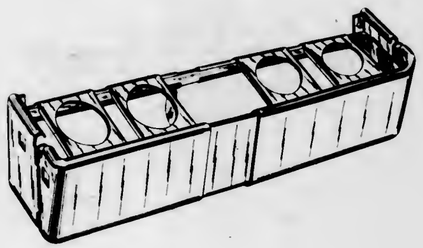
195,579
EDUCATIONAL SPINNING TOY
Max J. Ruderian, 545 Hanley Ave., Los Angeles, Calif.
Filed Jan. 31, 1963, Ser. No. 73,396
Term of patent 14 years
(Cl. D34—5)



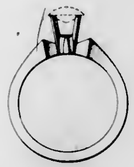
195,580
ANIMATED TOY FIGURE
Frank Stanton, 1 W. 72nd St., New York, N.Y.
Filed May 4, 1962, Ser. No. 69,983
Term of patent 14 years
(Cl. D34—15)



195,581
SUPPORT FOR POTTED PLANTS
William A. Hill, 3rd Ave., Charles River Grove, Bellingham, Mass.
Filed July 11, 1960, Ser. No. 61,294
Term of patent 14 years
(Cl. D35—3)



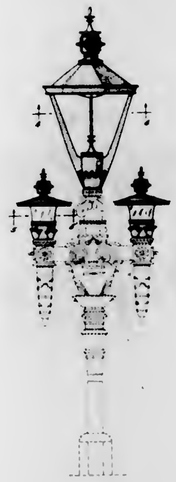
195,582
SEPARABLE FINGER RING
Frederick J. Kuczajda, Riverside, Ontario, Canada, and Willis E. Angell, Warren, Mich., assignors to Fayrick Mfg., Inc., Detroit, Mich., a corporation of Michigan
Filed Jan. 15, 1962, Ser. No. 68,308
Term of patent 14 years
(Cl. D45—10)



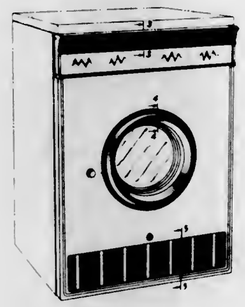
195,583
LIGHT FIXTURE
Sidney Phillips, Cincinnati, Ohio, assignor to Oscar Phillips Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 3, 1962, Ser. No. 72,692
Term of patent 7 years
(Cl. D48—23)



195,584
LIGHTING FIXTURE
Glacinto C. D'Ercoli, Chicago Heights, Ill., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed June 19, 1961, Ser. No. 65,638
Term of patent 14 years
(Cl. D48—31)

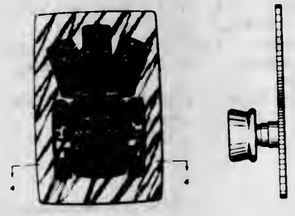


195,585
COMBINATION AUTOMATIC CLOTHES WASHER AND DRIER
John F. Horvath, Milwaukee, Wis., assignor to Vamco Corporation, Brooklyn, N.Y., a corporation of New York
Filed Aug. 1, 1962, Ser. No. 71,131
Term of patent 14 years
(Cl. D49—1)



195,586
COMBINED ESCUTCHEON PLATE AND DOORKNOB
Roy Stuart Denker, South Pasadena, Calif., assignor to Schlage Lock Company, a corporation
Filed Sept. 7, 1962, Ser. No. 71,599
Term of patent 14 years
(Cl. D50—3)

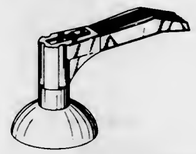
195,587
COMBINED ESCUTCHEON PLATE AND DOORKNOB
Roy Stuart Denker, South Pasadena, Calif., assignor to Schlage Lock Company, a corporation
Filed Sept. 7, 1962, Ser. No. 71,603
Term of patent 14 years
(Cl. D50—3)



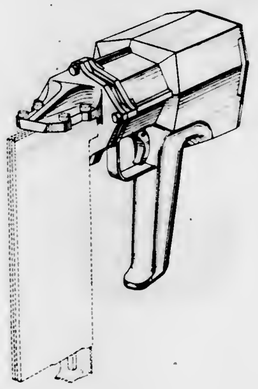
195,588
SPOON OR SIMILAR ARTICLE
Ellen B. Manderfield, Syracuse, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed July 7, 1961, Ser. No. 65,847
Term of patent 14 years
(Cl. D54—12)



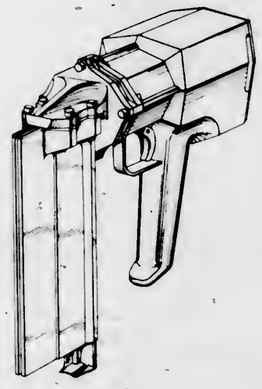
195,589
TOOL FOR HANDLING TILE OR THE LIKE
Joseph Charniga, Jr., R.D. Box 296, near Poland, Ohio
Filed Feb. 26, 1962, Ser. No. 68,970
Term of patent 14 years
(Cl. D54—13)



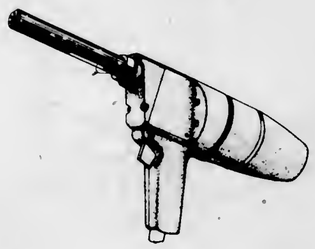
195,590
PNEUMATIC POWER TOOL FOR APPLYING FASTENERS
Clarence V. Le Sage, 1333 N. Baker St., Stockton, Calif., and Arthur Raisch, 261 Barden Road, Bloomfield Hills, Mich.
Filed Aug. 13, 1962, Ser. No. 71,270
Term of patent 14 years
(Cl. D54—14)



195,591
PNEUMATIC POWER TOOL FOR APPLYING FASTENERS
Clarence V. Le Sage, 1333 N. Baker St., Stockton, Calif., and Arthur Raisch, 261 Barden Road, Bloomfield Hills, Mich.
Filed Aug. 13, 1962, Ser. No. 71,271
Term of patent 14 years
(Cl. D54—14)



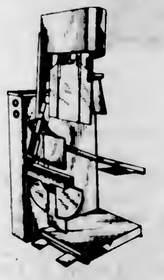
195,592
RIVET SETTING TOOL
Rudolph M. Babel, Pawtucket, R.I., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Sept. 19, 1962, Ser. No. 71,781
Term of patent 14 years
(Cl. D54—14)



195,593
ELECTROSTATIC SEPARATOR FOR PARTICULATE MATERIALS
James Hall Carpenter, Jacksonville, Fla., assignor to Carpco Research & Engineering, Inc., Jacksonville, Fla., a corporation of Florida
Filed June 23, 1961, Ser. No. 65,703
Term of patent 14 years
(Cl. D55—1)



195,594
AUTOMATIC MACHINE FOR FOLDING GARMENTS AND OTHER FLEXIBLE ARTICLES
David A. Freeman, 1550 N. Lake Shore Drive, Chicago, Ill.
Filed Nov. 24, 1961, Ser. No. 67,721
Term of patent 14 years
(Cl. D55—1)



195,595
FLEXIBLE DRIVE SHAFT FOR MANICURING TOOLS AND THE LIKE
James W. Bradbury, Middletown, Ohio, assignor to Forward Corporation, West Middletown, Ohio, a corporation of Ohio
Filed May 24, 1962, Ser. No. 70,264
Term of patent 14 years
(Cl. D55—1)



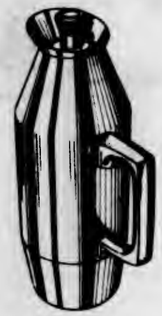
195,596
JUG
Joseph L. Greenwell, Miami, Fla., assignor to American Cellular Corporation, Miami, Fla., a corporation of Florida
Filed Nov. 21, 1961, Ser. No. 67,634
Term of patent 14 years
(Cl. D58—5)



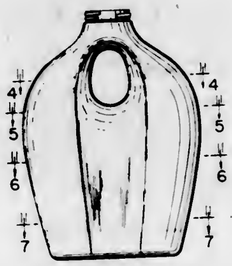
195,597
JUG
Thomas W. Monk, Alameda, and George W. Worthington, Castro Valley, Calif., assignors to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Jan. 3, 1962, Ser. No. 68,176
Term of patent 14 years
(Cl. D58—5)



195,598
VACUUM JUG OR SIMILAR ARTICLE
Sigvard Bernadotte, Styrmansgatan 57, Stockholm, Sweden, and Acton Bjørn, Toldbodgade 71, Copenhagen, Denmark
Filed Apr. 24, 1962, Ser. No. 69,827
Claims priority, application Sweden Oct. 25, 1961
Term of patent 14 years
(Cl. D58—5)



195,599
BOTTLE
Richard L. Platte, Ann Arbor, and Richard J. Lee, Midland, Mich., and Robert P. Joslin, Omaha, Nebr.; said Platte and said Lee assignors, by direct and mesne assignments, to The Dow Chemical Company, Midland, Mich., a corporation of Michigan, and said Joslin assignor to Fairmont Foods Company, Omaha, Nebr., a corporation of Delaware
Filed July 23, 1962, Ser. No. 71,006
Term of patent 14 years
(Cl. D58—6)



195,600
BOTTLE
Ray O. Neyman, Kansas City, Mo., assignor to Consolidated Thermoplastics Company, Stamford, Conn., a corporation of Delaware
Filed Nov. 2, 1962, Ser. No. 72,356
Term of patent 14 years
(Cl. D58—6)



195,601
PACKAGING CONTAINER
John Donald Bostrom, Niles, Ill., assignor to Poster Packaging, Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 64,184
Term of patent 14 years
(Cl. D58—11)



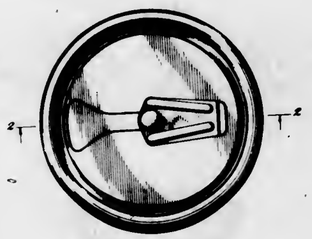
195,602
COMPARTMENTED DISPLAY PACKAGING CONTAINER
John Donald Bostrom, Niles, Ill., assignor to Poster Packaging, Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 16, 1961, Ser. No. 64,336
Term of patent 14 years
(Cl. D58—11)



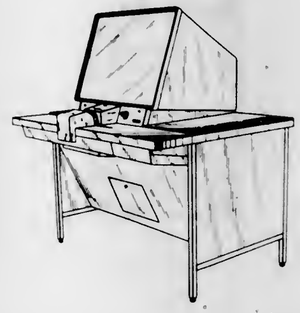
195,603
DISPENSING CLOSURE
Arthur Wesley Newby, 1265 Schaumburg Road, Elgin, Ill.
Filed May 8, 1961, Ser. No. 65,051
Term of patent 14 years
(Cl. D58—26)



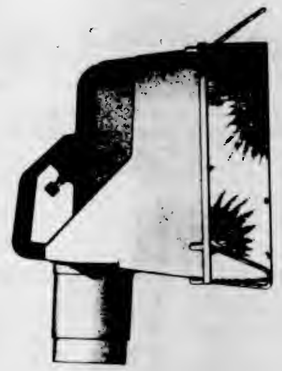
195,604
CLOSURE WITH A TEAR STRIP OPENER
Ermal C. Fraze, 355 W. Stroop Road, Dayton, Ohio
Filed Feb. 4, 1963, Ser. No. 73,435
Term of patent 14 years
(Cl. D58—26)



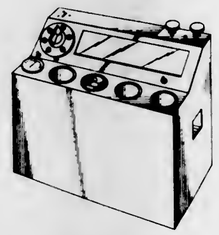
195,605
MICROFILM READER-PRINTER
Philip H. Stevens, Syracuse, David O. Chase, Camillus, and Roderick F. Bunyea, Skaneateles, N.Y., assignors to Photostat Corporation, Rochester, N.Y.
Filed Nov. 16, 1961, Ser. No. 67,556
Term of patent 14 years
(Cl. D61—1)



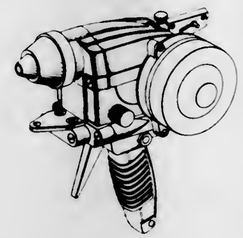
195,606
COMBINED TRANSPARENT AND OPAQUE PROJECTOR
James O. Kuhn, Cincinnati, Ohio, assignor to Kenner Products Company, Cincinnati, Ohio, a corporation of Delaware
Filed Oct. 12, 1962, Ser. No. 72,090
Term of patent 14 years
(Cl. D61—1)



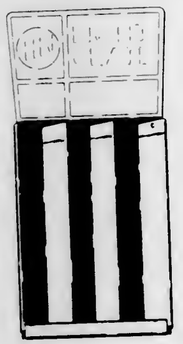
195,607
PHOTOGRAPHIC PLATE DEVELOPING AND PROCESSING UNIT
David Gordon Sharp, Chapel Hill, N.C., assignor to Ward Laboratories, Durham, N.C., a corporation of North Carolina
Filed Nov. 5, 1962, Ser. No. 72,378
Term of patent 14 years
(Cl. D61—1)



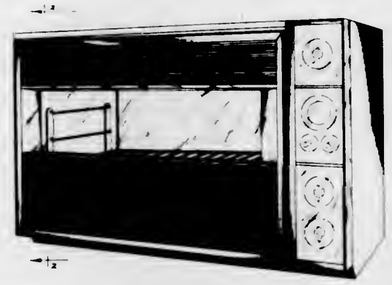
195,608
FLAME SPRAY GUN
Herbert Charlop, Brooklyn, N.Y., assignor to Metco Inc., Westbury, N.Y., a corporation of New Jersey
Filed Nov. 13, 1962, Ser. No. 72,466
Term of patent 14 years
(Cl. D62—2)



195,609
COMBINED DISPLAY AND MERCHANDISING RACK FOR TOILETRY PACKAGES OR THE LIKE
George E. Engdahl, Hingham, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed May 9, 1962, Ser. No. 70,062
Term of patent 14 years
(Cl. D80—9)



195,610
COOKING OVEN OR SIMILAR ARTICLE
Robert W. Blee and Renor S. Faidy, Jefferson County, Ky., assignors to General Electric Company, a corporation of New York
Filed Nov. 29, 1961, Ser. No. 67,746
Term of patent 14 years
(Cl. D81—4)



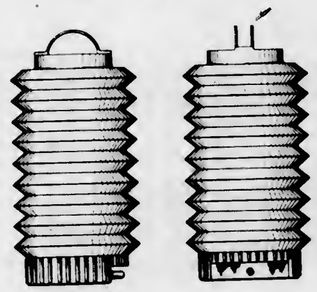
195,611
MEDICINE DROPPER
Joseph M. Mitchell, 72 High St., Clinton, Mass.
Filed Jan. 19, 1962, Ser. No. 68,378
Term of patent 14 years
(Ch D83—1)



195,612
FACE MASK FOR SURGEONS OR THE LIKE
Gerald J. Liloia, 369 Alden Way, North Brunswick, N.J., and William H. Bird, R.D. 1, Somerset, N.J.
Filed Mar. 21, 1962, Ser. No. 69,497
Term of patent 14 years
(Cl. D83—1)



195,613
DISPOSABLE IRRIGATION CONTAINER OR THE LIKE
Elias Picker, Kew Gardens, N.Y., assignor to Ipco Hospital Supply Corporation, New York, N.Y., a corporation of New York
Filed Oct. 31, 1962, Ser. No. 72,319
Term of patent 14 years
(Cl. D83—1)



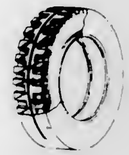
195,614
NAIL CLIPPER
John J. Sacko, Jr., 613 W. Main St., Greeneville, Tenn.
Filed Oct. 18, 1961, Ser. No. 67,141
Term of patent 14 years
(Cl. D86—10)



195,615
TIRE
Michael Tiborcz, 714 W. Market St., Akron, Ohio
Filed Mar. 14, 1961, Ser. No. 64,273
Term of patent 14 years
(Cl. D90—20)



195,616
TIRE
Michael Tiborcz, 714 W. Market St., Akron, Ohio
Filed Mar. 14, 1961, Ser. No. 64,274
Term of patent 14 years
(Cl. D90—20)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Benninger A.-G., Maschinenfabrik: *See*—
Coester, Robert. Re. 25,409.
Coester, Robert, to Maschinenfabrik Benninger A.-G. Turbo machine. Re. 25,409, 7–2–63, Cl. 230—125.
Limberger, Walter, to Lumoprint Zindler K.G. Continuous exposure apparatus for producing photocopies from flat patterns. Re. 25,408, 7–2–63, Cl. 88—24.
Lumoprint Zindler K.G.: *See*—
Limberger, Walter. Re. 25,408.
Trysaman Machine Co., Inc.: *See*—
Wayland, Hubert E. Re. 25,410.
Wayland, Hubert E., to Trysaman Machine Co., Inc. Grinding wheels. Re. 25,410, 7–2–63, Cl. 125—3.

LIST OF DESIGN PATENTEES

American Brake Shoe Co.: *See*—
Simons, Ira W. 195,558.
American Cellular Corp.: *See*—
Greenwell, Joseph L. 195,596.
Aniser, Charles F. Dietary supplement block for cattle. 195,545, 7–2–63, Cl. D12—2.
Ashton, Jack G., ⅓ to J. C. Butterworth and ⅓ to W. T. Deardorff. Dental instrument supporting and actuating unit. 195,556, 7–2–63, Cl. D24—1.
Babel, Rudolph M., to United Shoe Machinery Corp. Rivet setting tool. 195,592, 7–2–63, Cl. D54—14.
Barry, R. G., Corp.: *See*—
Zacks, Florence B. 195,543.
Bernadotte, Sigvard, and A. Bjorn. Vacuum jug or similar article. 195,598, 7–2–63, Cl. D58—5.
Blee, Robert W., and R. S. Faidy, to General Electric Co. Cooking oven or similar article. 195,610, 7–2–63, Cl. D81—4.
Bloch, Roy W., to Magline, Inc. Loading ramp for vehicles and the like. 195,546, 7–2–63, Cl. D13—1.
Boestrom, John D., to Poster Packaging, Inc. Packaging container. 195,601, 7–2–63, Cl. D58—11.
Boestrom, John D., to Poster Packaging, Inc. Compartmented display packaging container. 195,602, 7–2–63, Cl. D58—11.
Bradbury, James W., to Forward Corp. Flexible drive shaft for manicuring tools and the like. 195,595, 7–2–63, Cl. D55—1.
Butterworth, Jere C.: *See*—
Ashton, Jack G. 195,556.
Carpco Research & Engineering, Inc.: *See*—
Carpenter, James H. 195,593.
Carpenter, James H., to Carpco Research & Engineering, Inc. Electrostatic separator for particulate materials. 195,593, 7–2–63, Cl. D55—1.
Cederholm, Neva A., to Kellwood Co. Lady's slip or the like. 195,541, 7–2–63, Cl. D3—26.
Chamberlin Metal Products Co.: *See*—
McRae, Duncan. 195,550.
McRae, Duncan. 195,551.
Charlop, Herbert, to Metco Inc. Flame spray gun. 195,608, 7–2–63, Cl. D62—2.
Charniga, Joseph, Jr. Tool for handling tile or the like. 195,589, 7–2–63, Cl. D54—13.
Consolidated Thermoplastics Co.: *See*—
Neyman, Ray O. 195,600.
Deardoff, William T.: *See*—
Ashton, Jack G. 195,556.
Denker, Roy S., to Schlage Lock Co. Combined escutcheon plate and doorknob. 195,586, 7–2–63, Cl. D50—3.
Denker, Roy S., to Schlage Lock Co. Combined escutcheon plate and doorknob. 195,587, 7–2–63, Cl. D50—3.
D'Ercoli, Giacinto C., to McGraw-Edison Co. Lighting fixture. 195,584, 7–2–63, Cl. D48—31.
Dow Chemical Co.: *See*—
Platte, Richard L., Lee, and Joslin. 195,599.
Engdahl, George E., to The Gillette Co. Combined display and merchandising rack for toiletry packages or the like. 195,609, 7–2–63, Cl. D80—9.
Epton, William L. Set of chess men. 195,578, 7–2–63, Cl. D34—5.
Erickson, Alfred J. Speaker cabinet. 195,561, 7–2–63, Cl. D26—14.
Fairmont Foods Co.: *See*—
Platte, Richard L., Lee, and Joslin. 195,599.
Fayrick Mfg., Inc.: *See*—
Kuczajka, Frederick J., and Angell. 195,582.
Forward Corp.: *See*—
Bradbury, James W. 195,595.
Fraze, Ermal C. Closure with a tear strip opener. 195,604, 7–2–63, Cl. D58—26.
Freeman, David A. Automatic machine for folding garments and other flexible articles. 195,594, 7–2–63, Cl. D55—1.
General Electric Co.: *See*—
Blee, Robert W., and Faidy. 195,610.
Van Der Linden, Donald. 195,559.
Gillette Co., The: *See*—
Engdahl, George E. 195,609.
Gleitsman, Harold, and C. Fuerst, to Gleitsman's Inc. Combined valet stand and seat. 195,563, 7–2–63, Cl. D33—8.
Gleitsman, Harold, and C. Fuerst, to Gleitsman's Inc. Combined valet stand and seat. 195,564, 7–2–63, Cl. D33—8.
Gleitsman, Harold, and C. Fuerst, to Gleitsman's Inc. Combined valet stand and seat. 195,565, 7–2–63, Cl. D33—8.
Gleitsman, Harold, and C. Fuerst, to Gleitsman's Inc. Combined valet stand and seat. 195,566, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's Inc. Valet stand. 195,567, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's, Inc. Clothes support. 195,568, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's Inc. Valet stand or similar article. 195,569, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's Inc. Valet stand or similar article. 195,570, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's Inc. Valet stand or similar article. 195,571, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's, Inc. Valet stand or similar article. 195,572, 7–2–63, Cl. D33—8.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's, Inc. Combined table and valet stand or similar article. 195,573, 7–2–63, Cl. D33—14.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's, Inc. Valet stand or similar article. 195,574, 7–2–63, Cl. D33—14.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's Inc. Combined or table and valet stand or similar article. 195,575, 7–2–63, Cl. D33—14.
Gleitsman, Harold, C. Fuerst, and J. H. Squadra, to Gleitsman's, Inc. Combined table and valet stand or similar article. 195,576, 7–2–63, Cl. D33—14.
Gleitsman's Inc.: *See*—
Gleitsman, Harold, and Fuerst. 195,563–66.
Gleitsman, Harold, Fuerst, and Squadra. 195,567–76.
Greenwell, Joseph L., to American Cellular Corp. Jug. 195,596, 7–2–63, Cl. D58—5.
Hewlett-Packard Co.: *See*—
Inhelder, Eric A. 195,557.
Hill, William A. Support for potted plants. 195,581, 7–2–63, Cl. D35—3.
Horvath, John F., to Vamco Corp. Combination automatic clothes washer and drier. 195,585, 7–2–63, Cl. D49—1.
Inhelder, Eric A., to Hewlett-Packard Co. Microwave attenuator. 195,557, 7–2–63, Cl. D26—1.
Ipco Hopital Supply Corp.: *See*—
Picker, Elias. 195,613.
Isola, Richard A., to Steelcase Inc. Chair. 195,553, 7–2–63, Cl. D15—1.
Johnson-Carper Furniture Co., Inc.: *See*—
Spence, Edmond J. 195,562.
Kellwood Co.: *See*—
Cederholm, Neva A. 195,541.
Kenner Products Co.: *See*—
Kuhn, James O. 195,606.
Kuczajka, Frederick J., and W. E. Angell, to Fayrick Mfg., Inc. Separable finger ring. 195,582, 7–2–63, Cl. D45—10.
Kuhn, James O., to Kenner Products Co. Combined transparent and opaque projector. 195,606, 7–2–63, Cl. D61—1.
Le Sage, Clarence V., and A. Raisch. Pneumatic power tool for applying fasteners. 195,590, 7–2–63, Cl. D54—14.
Le Sage, Clarence V., and A. Raisch. Pneumatic power tool for applying fasteners. 195,591, 7–2–63, Cl. D54—14.
Lilois, Gerald J., and W. H. Bird. Face mask for surgeon or the like. 195,612, 7–2–63, Cl. D83—1.
Magline, Inc.: *See*—
Bloch, Roy W. 195,546.
Manderfield, Ellen B., to Oneida Ltd. Spoon or similar article. 195,588, 7–2–63, Cl. D54—12.
McGraw-Edison Co.: *See*—
D'Ercoli, Giacinto C. 195,584.
McRae, Duncan, to Chamberlin Metal Products Co. Golf car. 195,550, 7–2–63, Cl. D14—3.
McRae, Duncan, to Chamberlain Metal Products Co. Golf car. 195,551, 7–2–63, Cl. D14—3.

Mendell, Claude F. Telephone amplifier. 195,560, 7–2–63, Cl. D26—14.
Metco Inc.: *See*—
Charlop, Herbert. 195,608.
Mitchell, Joseph M. Medicine dropper. 195,611, 7–2–63, Cl. D83—1.
Monk, Thomas W., and G. W. Worthington, to Owens-Illinois Glass Co. Jug. 195,597, 7–2–63, Cl. D58—5.
Naylor, Thurman F., and P. Hollingsworth, to Standard Thomson Corp. Automotive mirror base. 195,552, 7–2–63, Cl. D14—6.
Newby, Arthur W. Dispensing closure. 195,603, 7–2–63, Cl. D58—26.
Neyman, Ray O., to Consolidated Thermoplastics Co. Bottle. 195,600, 7–2–63, Cl. D58—6.
Oneida Ltd.: *See*—
Manderfield, Ellen B. 195,588.
Owens-Illinois Glass Co.: *See*—
Monk, Thomas W., and Worthington. 195,597.
Phillips, Oscar, Co.: *See*—
Phillips, Sidney. 195,583.
Phillips, Sidney, to Oscar Phillips Co. Light fixture. 195,583, 7–2–63, Cl. D48—23.
Photostat Corp.: *See*—
Stevens, Philip H., Chase, and Bunyea. 195,605.
Picker, Elias, to Ipco Hospital Supply Corp. Disposable irrigation container or the like. 195,613, 7–2–63, Cl. D83—1.
Platte, Richard L., R. J. Lee, and R. P. Joslin; said Platte and said Lee, assor. Dow Chemical Co., and said Joslin, assor. Fairmont Food Co. Bottle. 195,599, 7–2–63, Cl. D58—6.
Pomona Tile Mfg. Co.: *See*—
Speaker, Donald R. 195,554.
Speaker, Donald R. 195,555.
Poster Packaging, Inc.: *See*—
Bostrom, John D. 195,601.
Bostrom, John D. 195,602.
Robert Hosiery Mills, Inc.: *See*—
Servis, Robert. 195,544.
Ruderian, Max J. Educational spinning toy. 195,579, 7–2–63, Cl. D34—5.
Sacko, John J., Jr. Nail clipper. 195,614, 7–2–63, Cl. D86—10.
Schlage Lock Co.: *See*—
Denker, Roy S. 195,586.
Denker, Roy S. 195,587.
Schols, Donald J., to Schols Homes, Inc. House. 195,548, 7–2–63, Cl. D13—1.
Schols, Donald J., to Schols Homes, Inc. House. 195,549, 7–2–63, Cl. D13—1.
Schols Homes, Inc.: *See*—
Schols, Donald J. 195,548.
Schols, Donald J. 195,549.
Schwartz, Joseph B. Commercial building. 195,547, 7–2–63, Cl. D13—1.
Servin, Robert, to Robert Hosiery Mills, Inc. Washing mitt. 195,544, 7–2–63, Cl. D9—2.
Sharp, David G., to Ward Laboratories. Photographic plate developing and processing unit. 195,607, 7–2–63, Cl. D61—1.
Simons, Ira W., to American Brake Shoe Co. Multimeter. 195,558, 7–2–63, Cl. D26—1.
Speaker, Donald R., to Pomona Tile Mfg. Co. Tile. 195,554, 7–2–63, Cl. D16—2.
Speaker, Donald R., to Pomona Tile Mfg Co. Tile. 195,555, 7–2–63, Cl. D16—2.
Spence, Edmond J., to Johnson-Carper Furniture Co., Inc. Bureau. 195,562, 7–2–63, Cl. D33—6.
Standard Thomson Corp.: *See*—
Naylor, Thurman F., and Hollingsworth. 195,552.
Stanton, Frank. Animated toy figure. 195,580, 7–2–63, Cl. D34—15.
Steelcase Inc.: *See*—
Isola, Richard A. 195,553.
Stevens, Philip H., D. O. Chase, and R. F. Bunyea, to Photostat Corp. Microfilm reader-printer. 195,605, 7–2–63, Cl. D61—1.
Szewczyk, Joseph B. Kitchen cabinet. 195,577, 7–2–63, Cl. D33—19.
Tiborcz, Michael. Tire. 195,615, 7–2–63, Cl. D90—20.
Tiborcz, Michael. Tire. 195,616, 7–2–63, Cl. D90—20.
United Shoe Machinery Corp.: *See*—
Babel, Rudolph M. 195,592.
Vamco Corp.: *See*—
Horvath, John F. 195,585.
Van Der Linden, Donald, to General Electric Co. High speed printer console. 195,559, 7–2–63, Cl. D26—5.
Ward Laboratories: *See*—
Sharp, David G. 195,607.
Webster, Peter W. Shoe sole. 195,542, 7–2–63, Cl. D7—5.
Zacks, Florence B., to R. G. Barry Corp. Slipper. 195,543, 7–2–63, Cl. D7—7.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Carlson, Norman E. 3,095,831.
Gulick, Ronald A. 3,096,072.
Runken, Gerd. 3,095,830.
Thorson, John R. 3,095,981.
Abbott Laboratories: *See*—
Von Esch, Anne M., and Sherman. 3,096,332.
Ace Engineering Co.: *See*—
Smith, Gus T. 3,095,718.
Ackaret, Robert L., to Phillips Petroleum Co. Hot runner for molding machine. 3,095,604, 7–2–63, Cl. 18—5.
Acme Steel Co.: *See*—
Cliff, George J., Parshall, and Braun. 3,095,678.
Acomb, Byron H.: *See*—
Anthes, Clifford C., Acomb, and Heer. 3,095,921.
Acton Laboratories, Inc.: *See*—
Pihl, George E. 3,096,480.
Adams, Albert H., to General Electric Co. Electrical bus conductor. 3,096,131, 7–2–63, Cl. 339—22.
Addressograph-Multigraph Corp.: *See*—
Gammeter, Harry F., Patalon, and Katterle. 3,095,809.
Adler, Simon: *See*—
Gilbert, Jack J. 3,095,800.
Adlert, Norman R.: *See*—
Patriquin, George P., and Adlert. 3,096,115.
Air Reduction Co., Inc.: *See*—
Wamser, Christian A. 3,095,893.
Ajinomoto Kabushiki Kaisha: *See*—
Motozaki, Shinichi, Tsunoda, Okumura, Tsugawa, Matsui, Kitai, and Miyachi. 3,096,252.
Albrecht, Alexander J., to Brunswick Corp. Pit cushion. 3,096,090, 7–2–63, Cl. 273—53.
Albright, John W., and E. E. Bianco, to General Electric Co. Bus duct connection. 3,096,391, 7–2–63, Cl. 174—18.
Albright & Wilson Ltd.: *See*—
Coates, Harold, and Chalkley. 3,096,201.
Alcan Co., Inc.: *See*—
Clark, Homer E., Jr. 3,095,817.
Alexandersson, Harald V., and A. K. Dietsch, to Ericcson, LM, Telefonaktiebolaget. Multi-contact switching device. 3,096,422, 7–2–63, Cl. 200—166.
All American Engineering Co.: *See*—
Cotton, Robert B. 3,096,055.
Allen-Bradley Co.: *See*—
Boysen, Gerd C. 3,096,416.
Walters, Robert E. 3,096,415.
Allen, Donald R., to The Dow Chemical Co. Dehydration of inorganic fluoride hydrates with liquid hydrogen fluoride. 3,096,150, 7–2–63, Cl. 23—14.5.
Allen, Frank M., F. C. Archer, and W. S. Shira, to Barber-Greene Co. Rotary impact crusher. 3,096,035, 7–2–63, Cl. 241—32.
Allen, Gordon S. J., D. H. Mawby, and D. C. Gresham, to Crosfield Electronics Ltd. Flying spot scanner color printer with color correction. 3,096,394, 7–2–63, Cl. 178—5.2.
Allen Iron & Steel Co., The: *See*—
Cassel, Harrison H., and Stoddart. 3,095,975.
Allied Chemical Corp.: *See*—
Krans, Frederick H., and Tewksbury. 3,096,189.
Spilker, Clarence W. 3,096,226.
Waters, Charles E., and Wells. 3,096,168.
Allison, Leslie R., to Westinghouse Air Brake Co. Locomotive remote control system. 3,096,056, 7–2–63, Cl. 246—187.
Allmanna Svenska Elektriska Aktiebolaget: *See*—
Grundmark, Bengt. 3,096,461.
Alweg-Forschung G.m.b.H.: *See*—
Deller, Konrad. 3,095,828.
Amalgamated Curacao Patents Co., N.V.: *See*—
Beer, Henri B. 3,096,272.
Amann, Charles A., J. S. Collman, R. W. Haushalter, J. M. Ricketts, W. A. Turunen, and P. T. Vickers, to General Motors Corp. Regenerative gas turbine. 3,095,700, 7–2–63, Cl. 60—39.2.
American Bosch Arma Corp.: *See*—
Waldron, Claude F. 3,095,597.
American Brake Shoe Co.: *See*—
Devaney, John L., Jr. 3,096,057.
American Cyanamid Co.: *See*—
D'Errico, Michael J., and Timney. 3,096,289.
Myquist, Arthur S., and Myers. 3,096,208.
Ponson, Lloyd J., and Becker. 3,095,615.
American Potash & Chemical Corp.: *See*—
Bloom, Murray, and Washburn. 3,096,370.
Stern, David R. 3,095,698.
Ametek Inc.: *See*—
Daugherty, Frank Z., and Sebok. 3,096,451.
Amfre-Grant, Inc.: *See*—
Ferguson, Edgar A., Jr. 3,096,336.
Ampex Corp.: *See*—
Lee, Don N. 3,096,510.
Rosenberg, Milton, and Johnston. 3,096,509.
Anchor Hocking Glass Corp.: *See*—
Roberts, Cecil P., and Hildebrandt. 3,095,957.
Anchor Serum Co., Inc.: *See*—
Slater, Eben A. 3,096,247.
Anderson, Mitchell. Low tire indicating device. 3,096,410, 7–2–63, Cl. 200—61.24.
Andrews, Richard A., to Citrus Equipment Corp. Pineapple juice extraction machine. 3,095,805, 7–2–63, Cl. 100—97.
Angus, Ernest T., and D. F. Walker, to Ferranti, Ltd. Brushless D.-C. motor with permanent magnet rotor. 3,096,467, 7–2–63, Cl. 318—138.
Anniss, Charles H., T. A. Kestell, and E. Tipper, to United Shoe Machinery Corp. Machines for applying pressure to shoe bottoms. 3,095,589, 7–2–63, Cl. 12—33.
Anstalt fur Technische Entwicklung und Verwertung: *See*—
Roussos, Georges. 3,095,618.
Anthes, Clifford C., B. H. Acomb, and M. Heer, Jr., to Union Carbide Corp. Blowpipe. 3,095,921, 7–2–63, Cl. 158—27.4.
Apellaniz, Jose A.: *See*—
Morrison, Albert R., and Apellaniz. 3,096,161.
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Applied Arts Corp.: *See*—
Whitman, John H. 3,095,958.
Applied Power Industries, Inc.: *See*—
Luedicke, Alexander H., Jr. 3,095,651.
Archbold, Ralph L.: *See*—
Balcom, George A., and Archbold. 3,095,993.
Archer, Fred C.: *See*—
Allen, Frank M., Archer, and Shira. 3,096,035.
Ariyama, Hisashi. Process for the manufacture of a synthetic yoghurt from soybean. 3,096,177, 7–2–63, Cl. 99—59.
Armco Steel Corp.: *See*—
Murphy, Demery A. 3,096,108.
Armstrong, Bruce, and W. J. Nolan; said Armstrong assor. to said Nolan. Continuous digesting system. 3,096,234, 7–2–63, Cl. 162—237.
Arnold, G. Wright: *See*—
Redenbaugh, William A. 3,096,255.
Arsandaux, Louis A., to Pneumatiques et Caoutchouc Manufacture Kleber-Colombes. 3,095,917, 7–2–63, Cl. 152—155.
Associated Electrical Industries Ltd.: *See*—
Pearson, Norman E. H. 3,096,459.
Tabberer, George, and Wallace. 3,095,705.
Ateliers d'Aviation Lou's Breguet, Societe Anonyme des: *See*—
Labussiere, Andre J. 3,096,048.
Atherton, Robert R., to United States of America, Navy. Push-pull parallel operating circuit for power transmission devices. 3,096,486, 7–2–63, Cl. 330—14.
Atkins, Lyle D., and W. E. Holmgreen, Jr., to Warning Lites Co., Inc. Combustion controlled flasher lamp. 3,096,027, 7–2–63, Cl. 240—11.
Atkinson, Guy F., Co.: *See*—
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Atlas Chemical Industries, Inc.: *See*—
Young, Aubrey A. 3,096,242.
Autoboard Corp.: *See*—
Glaze, John W., Jr. 3,096,006.
Automatic Electric Laboratories, Inc.: *See*—
McCreary, Harold J. 3,096,402.
Auto Research Corp.: *See*—
Thomas, Thomas R. 3,096,023.
Avery-Hardoll Ltd.: *See*—
Wilson, Frederick E. J. 3,095,741.
Axelrod, Martin S., and D. E. Rosenheim, to International Business Machines Corp. Matched negative resistance pair having critical inductance in series effecting slight instability. 3,096,450, 7–2–63, Cl. 307—88.5.
Axelson, Eskil A. A. Electrical paint heater. 3,096,426, 7–2–63, Cl. 219—38.
Aziende Colori Nazionali Affini Acna S.p.A.: *See*—
Gaetani, Ermanno. 3,096,140.
Babcock & Wilcox Co.: *See*—
Baver, Clyde B. 3,095,699.
Babin, Alexander, to Crown Zellerbach Corp. Folded sheet dispenser. 3,095,996, 7–2–63, Cl. 221—52.
Babson, Arthur L., to Warner-Lambert Pharmaceutical Co. Method of stabilizing acid phosphatase in serum by means of citrates and glutamates. 3,096,251, 7–2–63, Cl. 167—84.5.
Bachmann, Josef. Supply system for viscous fluids. 3,095,914, 7–2–63, Cl. 141—27.
Back, Alexander E.: *See*—
Zimmerley, Stuart R., Back, Beck, and Pick. 3,096,172.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Datow, Joachim, and Wimmer. 3,096,361.
Dehnert, Johannes. 3,096,338.
Hartmark, Bjarne, Schuster, and Herrle. 3,096,142.
Lange, Guenter, Luetzel, Wippel, Weidinger, and Krans. 3,096,320.
Meyer, Ferdinand, and Demmler. 3,096,349.
Tartter, Arnold, Rohland, Ludateck, and Schroedel. 3,096,340.

Baier, Ludwig S. Ring buoy life preserver. 3,095,586, 7–2–63, Cl. 9—340.

Baker, Joseph W., J. P. Chupp, and P. E. Newallis, to Monsanto Chemical Co. O-(halophenyl) phosphonothioates. 3,096,238, 7–2–63, Cl. 167—30.

Baker, Willard C., to Ford Motor Co. Rear axle construction. 3,095,762, 7–2–63, Cl. 74—720.5.

Baker, William R.: *See*—
Halbach, Klaus, Baker, and Veron. 3,096,269.

Balaceanu, Jean-Claude: *See*—
Clement, Genevieve, and Balaceanu. 3,096,376.

Balcom, George A., and R. L. Archbold, to White Sewing Machine Corp. Fiber glass tank. 3,095,993, 7–2–63, Cl. 220—5.

Balda-Kamerwerk Rudolf Gruter, Kommanditgesellschaft: *See*—
Lange, Karl H. 3,095,792.

Baldwin, Lloyd C.: *See*—
Rasmussen, Donald E. 3,096,010.

Balford Mfg. Co.: *See*—
Rasmussen, Donald E. 3,096,010.

Ball, Joseph L., R. H. Edmonds, and G. F. Ross, to United States of America, Navy. Quick discharge circuit for a magnetron. 3,096,491, 7–2–63, Cl. 331—87.

Ball, Kenneth: *See*—
Gryctko, Carl E., and Ball. 3,096,413.

Ballard, Edward C., and E. E. Sommers, to E. I. du Pont de Nemours and Co. Fluorinated esters of polycarboxylic acids. 3,096,363, 7–2–63, Cl. 260—468.

Ballard, Hyde W., to James Lees and Sons Co. Method for tufting pile fabrics. 3,095,840, 7–2–63, Cl. 112—79.

Ballard, Hyde W., and J. E. Smith, to James Lees and Sons Co. Method and apparatus for pattern tufting pile fabrics without loop robbing. 3,095,841, 7–2–63, Cl. 112—79.

Balzer, Rudolf: *See*—
Sandberg, John W., and Balzer. 3,095,825.

Banks, George W. Sealing means for spindles of fluid valves. 3,096,096, 7–2–63, Cl. 277—117.

Banning, Thomas A., Jr. Instruments for controlling operations to ensure optimum operating conditions. 3,096,469, 7–2–63, Cl. 318—264.

Baran, John S., to G. D. Searle & Co. 17-alkynylandrosta-4,6-diene-3,17-diols, esters thereof and 19-nor compounds corresponding. 3,096,355, 7–2–63, Cl. 260—397.5.

Barbaresi, Sara M.: *See*—
Dublirer, Robert, Barbaresi, and Katzman. 3,096,428.

Barber-Colman Co.: *See*—
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Barnes Engineering Co.: *See*—
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Bar-Ray Products, Inc.: *See*—
Lapof, Ray C. 3,095,797.

Barricks, Joseph B., 5% to M. Zerin, and 95% to R. L. Lowell. Sound emitting device. 3,095,669, 7–2–63, Cl. 46—179.

Barroll, Alfred E., and K. H. Kretzschmar, to Socony Mobil Oil Co., Inc. Satellite gathering system. 3,095,889, 7–2–63, Cl. 137—14.

Bartels, Erich, to Rheinmetall, G.m.b.H., Firma. Repeater-type cocking firing mechanism for guns. 3,095,781, 7–2–63, Cl. 89—27.

Basic Motor Developments, Inc.: *See*—
Hahn, James H. 3,096,455.

Bassett, Alton H., to Johnson & Johnson. Sanitary napkins and methods of making the same. 3,096,878, 7–2–63, Cl. 128—290.

Bastian-Blessing Co., The: *See*—
Billington, Evans R. 3,095,899.

Batcheller, Hugh W., to Kent Mfg. Corp. Wire-gripping part of electric terminal member. 3,096,186, 7–2–63, Cl. 339—276.

Bauer, Myron J., and R. C. Wilson, to United States of America, Navy. Blast doors and span track arrangement for guided missile launching system. 3,095,780, 7–2–63, Cl. 89—1.7.

Bauer, Oscar E. Vehicle mounted animal catching device. 3,095,858, 7–2–63, Cl. 119—151.

Bauer, Stefan G., to Rolls-Royce Ltd. Method of producing canned fuel rods for nuclear reactors. 3,096,264, 7–2–63, Cl. 204—154.2.

Baver, Clyde B., to Babcock & Wilcox Co. Combined gas-steam turbine power plant and method of operating the same. 3,095,699, 7–2–63, Cl. 60—39.02.

Baybarz, Fred L., ¼ to Green-Penny Co. Adjustable rack connection. 3,096,108, 7–2–63, Cl. 287—54.

Bayer, Otto: *See*—
Nischk, Gunther, Holtschmidt, Bongard, and Bayer. 3,096,296.

Beamish, Thomas R. Aircraft float. 3,095,846, 7–2–63, Cl. 114—66.5.

Bearing Inspection, Inc.: *See*—
Matheson, Stuart N. 3,095,730.

Beaulaurier, Gerald H. Exercise device. 3,095,947, 7–2–63, Cl. 182—189.

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Roche, Andre, Grancher, Gajac, and Becanne. 3,096,377.

Beck, Russell R.: *See*—
Zimmerley, Stuart R., Back, Beck, and Pick. 3,096,172.

Becker, Robert H.: *See*—
Ponson, Lloyd J., and Becker. 3,095,615.

Becton, Dickinson and Co.: *See*—
Hein, George N. 3,096,283.

Beer, Henri B., to Amalgamated Curacao Patents Co., N.V. Noble metal coated titanium electrode and method of making and using it. 3,096,272, 7–2–63, Cl. 204—1.

Beerli, Karl, to Scindel-, Motoren-und Maschinenfabrik A.G. Electromotor-driven textile mill spindles. 3,095,687, 7–2–63, Cl. 57—100.

Behar, Samuel M., to The Bendix Corp. Electric motor drive system. 3,096,453, 7–2–63, Cl. 310—77.

Bell Telephone Laboratories, Inc.: *See*—
James, Dennis B., Malthaner, and Runyon. 3,096,403.
Marie, Georges R. P. 3,096,473.
Marie, Georges R. P. 3,096,474.

Bemis Bro. Bag Co.: *See*—
Helm, Jack D., and Hopkins. 3,096,081.

Benanti, Michael A.: *See*—
Jacobs, Harold, Brand, Meindl, and Benanti. 3,096,494.

Bendix Corp., The: *See*—
Behar, Samuel M. 3,096,453.
Pendorf, Harold. 3,095,612.
Ransom, James R. 3,096,483.

Benjamins, Edwin, and B. M. Marks, to E. I. du Pont de Nemours and Co. Copolymer of methyl methacrylate and glycidyl methacrylate. 3,096,318, 7–2–63, Cl. 260—86.1.

Bennett, George A., W. Clarke, and J. Stirling, to Imperial Chemical Industries Ltd. Printing paste containing an organic sulphur compound and a dyestuff carrying a 4:6-dihalogeno-1:3:5-triazin-2-ylamino group, and method of printing. 3,096,141, 7–2–63, Cl. 8—68.

Bennett, Ovell F., to E. I. du Pont de Nemours and Co. Method for isolating aromatic carboxylic acids. 3,096,348, 7–2–63, Cl. 260—328.

Bentley Engineering Co. Ltd., The: *See*—
Manger, Charles F., and Smith. 3,095,719.

Bentley, Kenneth J.: *See*—
Shaw, Herbert S., and Bentley. 3,095,964.

Berg Electronics, Inc.: *See*—
Mancini, Lloyd. 3,096,393.

Berge, Birger, to El-Be Elektriska Aktiebolag. Lanterns. 3,096,029, 7–2–63, Cl. 240—25.

Berglund, David B., and J. H. Drew. Texas Electronics Products Corp. Random sampling demonstration device. 3,095,655, 7–2–63, Cl. 35—30.

Berner, Roland A., to Nalco Chemical Co. Scale removal. 3,095,862, 7–2–63 Cl. 122—379.

Bertell, Paul, to Standard Mirror Co., Inc. Support for mounting a rear vision mirror on a windshield. 3,096,061, 7–2–63, Cl. 248—288.

Bertelsen, William R., 25% to W. E. Martin, and 25% to Martin Engineering Co. Ground effect machine equipped with auxiliary selectively adjustable ground engaging propelling mechanisms. 3,095,938, 7–2–63, Cl. 180—7.

Berzins, Talivaldis, to E. I. du Pont de Nemours and Co. Chemical plating solution and process for plating therewith. 3,096,182, 7–2–63, Cl. 106—1.

Besler, Mattheus: *See*—
Kolthof, Jacob J., and Besler. 3,096,166.

Bethlehem Steel Co.: *See*—
Worthen, Eugene P., and Barbour. 3,096,256.

Bettoli, Phillip S., and J. J. Klimas, to The Ruberoid Co. Flame-retardant asphaltic roofing materials. 3,096,196, 7–2–63, Cl. 117—32.

Bettoni, Eugene C., to Holley Carburetor Co. Ignition device. 3,096,405, 7–2–63, Cl. 200—31.

Beveridge, Harold N., and H. L. Carter, Jr., to Raytheon Co. Pulsed electron discharge systems. 3,096,517, 7–2–63, Cl. 343—17.1.

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Albright, John W., and Bianco. 3,096,891.

Bigelow, Floyd E., Jr. Portable building and apparatus for the transportation and erection of the same. 3,095,616, 7–2–63, Cl. 20—2.

Billington, Evans R., to The Bastian-Blessing Co. Liquid outage connection. 3,095,899, 7–2–63, Cl. 137—454.5.

Billotti, Paul, and L. W. Weiss. Multi-beat instrument. 3,095,775, 7–2–63, Cl. 84—484.

Bindler, Jakob: *See*—
Schlapfer, Hans, and Bindler. 3,096,309.

Binns, Jack N. Contour roll-turning lathe. 3,095,770, 7–2–63, Cl. 82—2.

Binon, Fernand A. G., G. J. L. Dechamps, deceased; by E. Dechamps, representative, to Societe Belge de l'Azote et des Produits Chimiques du Marly. Process for preparing hydrolysis products of β-dimethyl amino-β-hydroxybutyronitrile chloromethylate. 3,096,368, 7–2–63, Cl. 260—534.

Bishoff, Theodore: *See*—
Cornwell, Carlyle S., and Bishoff. 3,095,787.

Bitzer, Martin: *See*—
Olshei, John R., and Bitzer. 3,095,596.

Bixby, Leo A., to Rockwell-Standard Corp. Power transmission. 3,095,758, 7–2–63, Cl. 74—701.

Black and Decker Mfg. Co., The: *See*—
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Blair, Edgar A., to Sun Oil Co. Preparation of tetrafluoroethylene. 3,096,379, 7–2–63, Cl. 260—653.3.

Blauvelt, Roland G.: *See*—
Paulos, Harry, and Blauvelt. 3,095,838.

Bliss, Harvey N., and G. W. White, to Veeder-Root, Inc. Predetermining counter mechanism. 3,096,018, 7–2–63, Cl. 235—132.

Bloom, Murray, and R. M. Washburn, to American Potash & Chemical Corp. Reactions of boron halides and tetra-substituted boron compounds. 3,096,370, 7–2–63, Cl. 260—543.

Bochan, John, to General Electric Co. Clothes washing machine. 3,095,721, 7–2–63, Cl. 68—133.

Bodenseewerk Perkin-Elmer & Co.: *See*—
Braunbeck, Josef. 3,096,387.

Boe, Carsten F., and L. I. Osipow; said Osipow, assor. to said Boe. Pressure-packed polymerizable materials. 3,096,001, 7–2–63, Cl. 222—135.

Boeing Airplane Co.: *See*—
Edmunds, Arthur B., Jr. 3,095,873.
Reinhart, William A. 3,095,697.

Böhme Fettchemie G.m.b.H.: *See*—
Plapper, Jürgen, and Dieckelmann. 3,096,857.

Bolen, Kenneth E., to Phillips Petroleum Co. Method for the dehydration of liquids. 3,096,380, 7–2–63, Cl. 260—666.

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Cowles, Edwin, and Bowen. 3,096,036.

Bone, Arnold R., to Dennison Mfg. Co. Indicia-applying machine. 3,095,807, 7–2–63, Cl. 101—19.

Boness, Martin: *See*—
Kuhle, Engelbert, Grewe, Unterstenhofer, Boness, and Wegler. 3,096,237.

Bongard, Wilhelm: *See*—
Nischk, Gunther, Holtschmidt, Bongard, and Bayer. 3,096,296.

Bono, Luigi, to Necchi Societa per Azioni. Change speed arrangement for sewing machines. 3,095,752, 7–2–63, Cl. 74—217.

Boonstra, Bram B. S. T., to Cabot Corp. Insulated conductors and method of making same. 3,096,210, 7–2–63, Cl. 117—216.

Booth, Arthur P. Foot flush assemblies for use with a water closet. 3,095,582, 7–2–63, Cl. 4—249.

Borah, John E. Mold. 3,095,611, 7–2–63, Cl. 18—36.

Borg-Warner Corp.: *See*—
Ferris, Ernest A. 3,095,954.
Latham, Allen, Jr. 3,095,907.
Smirl, Richard L. 3,095,716.
Stokely, Raymond E. 3,095,715.

Born, Lester R., Jr., and W. D. Weikart, to Rockwell Mfg. Co. Workpiece gauging stop for metal cut-off machine. 3,095,673, 7–2–63, Cl. 51—98.

Borrevang, Poul, to Lovens Kemiske Fabrik Ved A. Kongsted. Estradiol derivatives. 3,096,328, 7–2–63, Cl. 260—239.55.

Bosshart, Marvin L. V. Adjustable mounting supports for television sets and the like. 3,096,062, 7–2–63, Cl. 248—289.

Bostick, Francis X., Jr.: *See*—
Smith, Harold W., Duesterhoeft, Bostick, and Garner. 3,096,477.

Bott, Delmar H. and M. O. Movable animal restraining platform for milking station. 3,095,854, 7–2–63, Cl. 119—14.04.

Bott, Marvin O.: *See*—
Bott, Delmar H. and M. O. 3,095,854.

Bottcher, Herman F.: *See*—
Gerow, Clarence C., and Bottcher. 3,095,581.
Gerow, Clarence C., Bottcher, Molzen, and Landell. 3,095,579.

Bowen, Kenneth H.: *See*—
Cowles, Edwin, and Bowen. 3,096,036.

Bowles, Elton P., and P. D. McNew. Fifth wheel for truck trailers. 3,096,099, 7–2–63, Cl. 280—125.

Boyer, Léon P. Travelling cranes and the like. 3,095,978, 7–2–63, Cl. 212—59.

Boysen, Gerd C., to Allen-Bradley Co. Protective relay. 3,096,416, 7–2–63, Cl. 200—124.

Bradbury, Wilburn F., to SCM Corp. Ball perforator. 3,096,015, 7–2–63, Cl. 234—107.

Brand, Frank A.: *See*—
Jacobs, Harold, Brand, Meindl, and Benanti. 3,096,494.

Brand, Ronald S. Positive displacement pump. 3,095,823, 7–2–63, Cl. 103—117.

Braun, William H.: *See*—
Cliff, George J., Parshall, Braun, Feldkamp, and Hager. 3,095,678.

Braunbeck, Josef, to Bodenseewerk Perkin-Elmer & Co. Radioactivity detection training. 3,096,387, 7–2–63, Cl. 35—10.4.

Braye, Emile H.: *See*—
Hubel, Karl W., and Braye. 3,096,265.
Hubel, Karl W., and Braye. 3,096,266.

Bredehorn, George J. Word game. 3,096,092, 7–2–63, Cl. 273—135.

Bretzner, Hans S., to General Motors Corp. Door hinging arrangement for vehicle bodies. 3,095,600, 7–2–63, Cl. 16—163.

Brennich, Theodore R., to Controlex Corp. of America. Steering apparatus for outboard motors. 3,095,849, 7–2–63, Cl. 115—18.

Bridwell, Harold C.: *See*—
Hildebrandt, Alexander B., and Bridwell. 3,095,935.

Brien, Ronald: *See*—
Pratt, Leslie J., and Brien. 3,096,074.

Briggs, Roger L.: *See*—
Rittenhouse, William E., Briggs, and Price. 3,096,300.

Briggs, Southwick W. Filter medium. 3,096,230, 7–2–63, Cl. 162—138.

Brilmyer, Harold G., and G. E. Wehlann, to Huck Mfg. Co. Lock bolt with collar that is swaged by a rotatable driving tool. 3,095,776, 7–2–63, Cl. 85—7.

Brock, George D., and E. W. Topping, to General Electric Co. Sequence controller mechanism. 3,096,408, 7–2–63, Cl. 200—38.

Brockway, William B., F. A. Loving, and G. A. Noddin, to E. I. du Pont de Nemours and Co. Fluid pressure responsive firing device. 3,095,815, 7–2–63, Cl. 102—70.

Brooks, William O., to Thompson Ramo Wooldbridge Inc. Electrical apparatus. 3,096,475, 7–2–63, Cl. 323—22.

Brown, Arthur E., E. G. Gaeke, J. D. Hiller, and H. C. Zeisloft, to General Motors Corp. Afterburner fuel control. 3,095,702, 7–2–63, Cl. 60—39.28.

Brown, Cicero C., to Brown Oil Tools, Inc. Hydraulic pipe snubber for oil wells. 3,096,075, 7–2–63, Cl. 254—29.

Brown, George A., to The Okonite Co. Apparatus with conductive gas electrodes for detecting non-uniformity in electrically insulating and electrically semi-conducting materials. 3,096,478, 7–2–63, Cl. 324—54.

Brown, George J. Selection playing device. 3,096,406, 7–2–63, Cl. 200—38.

Brown, Norman F., and C. M. Peters, to U.S. Industries, Inc. Free piston pumping system. 3,095,819, 7–2–63, Cl. 103—52.

Brown Oil Tools, Inc.: *See*—
Brown, Cicero C. 3,096,075.

Brown, Paul M., and D. R. O'Malley, to Gulf Research & Development Co. Method and apparatus for analyzing fuel-air mixtures. 3,096,167, 7–2–63, Cl. 23—232.

Browning, Harold, to United States of America, Navy. Flexible pipe line fitting. 3,096,104, 7–2–63, Cl. 285—226.

Bruce, Donald S., J. B. Dickson, and V. Koljonen, to Signal-Stat Corp. Cab lamp for automotive vehicles. 3,096,026, 7–2–63, Cl. 240—7.1.

Bruno, John. Means to preclude wind flexing of a storm sash. 3,095,617, 7–2–63, Cl. 20—55.

Brunswick Corp.: *See*—
Albrecht, Alexander J. 3,096,090.

Bry, Thomas S.: *See*—
Fried, John, and Bry. 3,096,353.

Bryant, Edward T., and J. T. McNeally, to Reynolds Metals Co. Carton. 3,096,012 7–2–63, Cl. 229—52.

Buck, Russell E., to Buck Tool Co. Chuck jaw construction. 3,096,098, 7–2–63, Cl. 279—123.

Buck, Steward T. Traveling ramp for loading vehicles onto multiple deck transport. 3,095,591, 7–2–63, Cl. 14—72.

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Buckley, Edward D.: *See*—
Teasel, Richard C., and Buckley. 3,095,743.

Budd Co., The: *See*—
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Macgeorge, William D. 3,095,732.
Taylor, John S. 3,096,235.
Zandman, Felix. 3,096,175.

Buetow, Ralph W., and R. P. Cox, to United States of America, Army. Marking method. 3,096,197, 7–2–63, Cl. 117—33.5.

Bundy Marine S.p.A.: *See*—
Torre, Pier L. 3,096,058.

Bunting, Ernest V., to Massey-Ferguson Inc. Hydraulic control system. 3,095,933, 7–2–63, Cl. 172—491.

Burdg, Charles E., to Combustion Engineering, Inc. Ion generating and focusing mechanism. 3,096,435, 7–2–63, Cl. 250—41.9.

Burdg, Charles E., to Combustion Engineering, Inc. Ion lens system. 3,096,436, 7–2–63, Cl. 250—41.9.

Burkhardt, Horst, to Wenczler & Heidenhain. Electro-optical and electromagnetic determination of the position of scale divisions. 3,096,441, 7–2–63, Cl. 250—209.

Burnett, Lionel C., to Ericsson Telephones Ltd. Counting tube stepped according to potential differences on guide electrodes controlled by charging-discharging RC circuit. 3,096,463, 7–2–63, Cl. 315—84.6.

Burnham, Harold F., to Johnson & Johnson. Belt. 3,095,879, 7–2–63, Cl. 128—291.

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Hespenheide, Wilbur G. 3,096,271.
Mayon, Leon, and Schnoorr. 3,095,754.

Burton, Alvin R.: *See*—
Feustel, George H., and Burton. 3,096,135.

Buschbom, Floyd E., to Vandale Corp. Silo unloader conveyor structure. 3,095,985, 7–2–63, Cl. 214—17.

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Butler, Henry J., to Dunlop Rubber Co. Ltd. Improvements in disc brakes. 3,095,949, 7–2–63, Cl. 188—73.

Butterworth, Arnold W., and J. E. Roberts, to Ferranti, Ltd. Tools for unwrapping wrapped electrical connections. 3,095,640, 7–2–63, Cl. 29—203.

Buxton, Jarvis C., to Griffith Rubber Mills. Muffler. 3,095,944, 7–2–63, Cl. 181—70.

Byrne, Joe L.: *See*—
Sanborn, Daniel S., and Byrne. 3,095,820.

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Daily, Arthur M., and Kelver. 3,096,500.

Cabot Corp.: *See*—
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Munsell, David D. 3,095,608.

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Caldwell, John R., and W. J. Jackson, Jr., to Eastman Kodak Co. Bischloroformates of 2,2,4,4-tetraalkyl-1,3-cyclobutanediols. 3,096,359, 7–2–63, Cl. 260—463.

California Research Corp.: *See*—
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Poindexter, Edward H., and Torrey. 3,096,476.

Callahan, James P. Clamping device. 3,096,109, 7–2–63, Cl. 287—54.

Callaway Mills Co.: *See*—
Kienel, Joseph E. 3,095,998.

Cambridge Wire Cloth Co.: *See*—
Deady, Emmett F., Reed, and Houghton. 3,095,910.
Campaigne, Ernest E.: *See*—
Campbell, John R., and Campaigne. 3,096,375.
Campbell, John R., and E. E. Campaigne, to Monsanto Chemical Co. Thioethers. 3,096,375, 7–2–63, Cl. 260—609.
Campbell, William M. Two-passenger rocking toy. 3,096,120, 7–2–63, Cl. 297—247.
Canada, Her Majesty the Queen in right of, as represented by the Minister of National Defence: *See*—
Owens, Walter J. 3,096,085.
Cantor, Theodore, to Manostat Corp. Clamp. 3,096,110, 7–2–63, Cl. 287—54.
Caprino, Joseph C., and R. J. Prochaska, to General Electric Co. Novel organopolysiloxane compositions. 3,096,303, 7–2–63, Cl. 260—46.5.
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Nobles, Wilbur D., and Cardillo. 3,095,618.
Carlisle Chemical Works Inc.: *See*—
Hechenbleikner, Ingenuin, and Molt. 3,096,345.
Carlson, Norman E., to ACF Industries, Inc. Car end wall. 3,095,831, 7–2–63, Cl. 105—410.
Carnaut, Boris. Process of making plates and sheets of polyvinyl chloride fragments by a simultaneous heat and pressure treatment. 3,096,145, 7–2–63, Cl. 18—55.
Carr, Marvin E., and F. E. Ives. Apparatus and method for depositing continuous stranded material. 3,096,225, 7–2–63, Cl. 156—38.
Carrier Corp.: *See*—
Clark, William E. 3,095,710.
Carter, Howell L., Jr.: *See*—
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Cassel, Harrison H., and J. O. Stoddart, to The Allen Iron & Steel Co. Storage rack. 3,095,975, 7–2–63, Cl. 211—148.
Caton, Walter N. Corrosion resistant valve. 3,095,902, 7–2–63, Cl. 137—554.
Cecchini, Angelo. Temperature control means. 3,096,424, 7–2–63, Cl. 219—20.
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Gainer, Harold, and Cenker. 3,096,330.
Chabrek, Alex F., and R. L. Maxwell, to United States of America, Atomic Energy Commission. Acceleration responsive switch. 3,096,411, 7–2–63, Cl. 200—61.53.
Chadenson, Lucien, to Safege-Transport, Societe Anonyme. Railway switch. 3,095,827, 7–2–63, Cl. 104—130.
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Morris, John M. 3,095,747.
Chalkley, Brian: *See*—
Coates, Harold, and Chalkley. 3,096,201.
Champion Spark Plug Co.: *See*—
Teasel, Richard C., and Buckley. 3,095,743.
Chaney, Preston E., F. M. Mayes, and J. W. Jones, to Sun Oil Co. Methods and apparatus for transmitting records. 3,096,401, 7–2–63, Cl. 179—15.
Chang, Kern K. N., to Radio Corp. of America. Diode traveling wave parametric amplifier. 3,096,485, 7–2–63, Cl. 330—4.6.
Chapman, Charles H., to Hercules Powder Co. Aqueous emulsions of waxes and resins. 3,096,232, 7–2–63, Cl. 162—172.
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Newland, Gordon C., and Chaudet. 3,096,302.
Cheeseman, Ian C., and C. E. Moss, to Power Jets (Research Development) Ltd. Aircraft. 3,096,041, 7–2–63, Cl. 244—7.
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Harnik, Marcel. 3,096,352.
Chemische Fabriek L. von der Grinten N.V.: *See*—
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Chemetron Corp.: *See*—
Harnik, Marcel. 3,096,354.
Chicago Lock Co.: *See*—
Karr, William J. 3,095,727.
Chow, Chao K., and H. Rosenberg, to Burroughs Corp. Graphic character recognition. 3,096,506, 7–2–63, Cl. 340—146.3.
Christensen, Børge J. R., and I. Refsholm. Method and means for the production of hollow bent articles of plastic material. 3,095,613, 7–2–63, Cl. 18—42.
Christenson, Howard W., M. E. Fisher, and R. H. Schaefer, to General Motors Corp. Transmission. 3,095,760, 7–2–63, Cl. 74—710.5.
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De Guisto, Charles A. 3,096,205.
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Baker, Joseph W., Chupp, and Newallis. 3,096,238.
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Churchill, John A., to Foster-Mallard Ltd. Sound reproducing machines. 3,096,095, 7–2–63, Cl. 274—10.
Ciminaghi, Attilio. Fuel feed or supply system from separate tanks with means for its quick discharge in case of breakdown for aircraft installations and the like. 3,096,054, 7–2–63, Cl. 244—135.
Cislak, Frank W. Automatic tire mounting machine. 3,095,920, 7–2–63, Cl. 157—1.1.
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Andrews, Richard A. 3,095,805.
Claridge, George H., and C. J. Maindonald. Ball-cock. 3,096,068, 7–2–63, Cl. 251—118.
Clark, Charles J. Toilet tank flushing mechanism. 3,095,577, 7–2–63, Cl. 4—19.
Clark, George L., to Thompson Ramo Wooldridge Inc. High speed pulse control circuit for image converter tubes. 3,096,484, 7–2–63, Cl. 328—63.
Clark, Homer E., Jr., to Alcan Co., Inc. Wad column. 3,095,817, 7–2–63, Cl. 102—95.
Clark, J. L., Mfg. Co.: *See*—
Foster, John A. 3,095,995.
Clark, William E., to Carrier Corp. Anti-surge control for fluid compressor. 3,095,710, 7–2–63, Cl. 62—117.
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Clarke, Robert E. and J. C. 3,096,100.
Clarke, Robert E. and J. C. Rider propelled vehicle. 3,096,100, 7–2–63, Cl. 280—261.
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Clement, Genevieve, and J.-C. Balaceanu. Process for making cyclohexene hydroperoxides. 3,096,376, 7–2–63, Cl. 260—610.
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Cleveland Crane & Engineering Co., The: *See*—
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Clevite Corp.: *See*—
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Cliff, George J., B. B. Parshall, W. H. Braun, J. G. Feldkamp, and R. E. Hager; said Cliff, Parshall, and Braun, assors. to Link-Belt Co., and said Feldkamp and Hager, assors to Acme Steel Co. Article stacking and strapping machine. 3,095,678, 7–2–63, Cl. 53—124.
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Coast Metals Inc.: *See*—
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Coates, Harold, and B. Chalkley, to Albright & Wilson Ltd. Insolubilisation of further-polymerisable methylol-phosphorus polymeric materials. 3,096,201, 7–2–63, Cl. 117—62.2.
Cobb, James S., Jr., to E. I. du Pont de Nemours and Co. Spinneret assembly. 3,095,607, 7–2–63, Cl. 18—8.
Cohen, Charles L., to United States of America, Navy. Electrical magnitude selector. 3,096,446, 7–2–63, Cl. 307—88.5.
Cohen, Werner V., to E. I. du Pont de Nemours and Co. Process of imparting oil-repellency to solid materials. 3,096,207, 7–2–63, Cl. 117—138.8.
Colle, Benjamin F., to Textile Machine Works. Circular knitting machine. 3,095,717, 7–2–63, Cl. 66—8.
Cole-Hersee Co.: *See*—
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Colhoun, Robert S., to Short Bros. & Harland Ltd. Electrohydraulic control servo-mechanisms. 3,095,784, 7–2–63, Cl. 91—1.
Collings, Lawrence V.: *See*—
Sharpiro, Paul, Sheldahl, and Collings. 3,096,169.
Collins, Thomas K.: *See*—
Cook, Melvin A., and Collins. 3,096,223.
Collman, John S.: *See*—
Amann, Charles A., Collman, Haushalter, Ricketts, Turunen, and Vickers. 3,095,700.
Combustion Engineering, Inc.: *See*—
Burdg, Charles E. 3,096,435.
Burdg, Charles E. 3,096,436.
Commercial Solvents Corp.: *See*—
Rusoff, Louis L. 3,096,240.
Compagnie Francaise des Matieres Colorantes: *See*—
Jiron, Marcel, and Frey. 3,096,356.
Compur-Werk Gesellschaft mit beschrankter Haftung & Co.: *See*—
Gebele, Kurt, and Singer. 3,095,790.
Connell, John G. Safety seat. 3,096,122, 7–2–63, Cl. 297—385.
Consolidated Electronics Industries Corp.: *See*—
Haydon, Arthur W. 3,096,452.
Martin, Paul N. 3,096,412.
Consolidated Thermoplastics Co.: *See*—
Gonnella, Carmen J., and Marchant. 3,095,598.
Controlex Corp. of America: *See*—
Breunich, Theodore R. 3,095,849.
Cook Melvin A., and T. K. Collins, to Intermountain Research and Engineering Co., Inc. Slurry blasting explosives containing inorganic perchlorate or chlorate. 3,096,223, 7–2–63, Cl. 149—76.
Cooke, Edward I., and J. A. Donelan, to Submarine Cables Ltd., and Pirelli-General Cable Works Ltd. Method of manufacturing submarine cables. 3,095,643, 7–2–63, Cl. 29—460.
Coover, Harry W., Jr.: *See*—
McConnell, Richard L., and Coover. 3,096,385.
Corduroy Rubber Co.: *See*—
Wanner, Keith W. 3,096,106.
Corning Glass Works: *See*—
Van Cott, Harrison C. 3,096,159.
Cornwell, Carlyle S., and T. Bishoff, said Bishoff assor. to said Cornwell. Laundry invoicing machine. 3,095,787, 7–2–63, Cl. 93—66.
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Corrigan, Robert E., to Corrigan Communications, Inc. Method of testing the learning of persons. 3,095,653, 7–2–63, Cl. 35—9.
Cotton, Robert B., to All American Engineering Co. Aerial cargo delivery system. 3,096,055, 7–2–63, Cl. 244—137.
Coursen, David L., to E. I. du Pont de Nemours and Co Explosive means. 3,095,812, 7–2–63, Cl. 102—27.

Cousteau, Jacques Y., and E. Gagnan, to La Spirotechnique. Demand regulator for breathing apparatus. 3,095,890, 7–2–63, Cl. 137—63.
Cowles, Edwin, and K. H. Bowen, ½ to said Cowles and ½ to Bo-Mer Mfg. Corp. Pepper mills. 3,096,036, 7–2–63, Cl. 241—169.
Cox, Henry C. Fan reversing mechanism. 3,095,766, 7–2–63, Cl. 74—792.
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Sarakauskas, Raymond V., Cox, and Thielke. 3,096,288.
Cox, Robert P.: *See*—
Buetow, Ralph W., and Cox. 3,096,197.
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Crauc, Robert: *See*—
Granet, Charles, and Crauc. 3,096,066.
Crawford, Russ: *See*—
Rasmussen, Donald E. 3,096,010.
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Creo-Dipt Co., Inc.: *See*—
Fink, Carl J., and Heints. 3,095,671.
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Allen, Gordon S. J., Mawby, and Gresham. 3,096,394.
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Babin, Alexander. 3,095,996.
Hamilton, Joseph P. 3,095,968.
Swan, Charles M. 3,096,014.
Cummings, Thomas F., to International Business Machines Corp. Educational device. 3,095,654, 7–2–63, Cl. 35—9.
Curry, John L., to Rector Well Equipment Co., Inc. Method for attaching overlapped members. 3,095,644, 7–2–63, Cl. 29—527.
Cusden, Earl R. J. Honeycomb uncapping machine. 3,095,584, 7–2–63, Cl. 6—12.
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Daly, Arthur M., and W. L. Keiver, to CTS Corp. Variable resistor. 3,096,500, 7–2–63, Cl. 338—183.
Dalrymple, Robert S., and W. B. Nelson, to United States of America, Atomic Energy Commission. Corrosion protection of aluminum. 3,096,220, 7–2–63, Cl. 148—6.2.
D'Amico, John J., to Monsanto Chemical Co. Method for control of soil borne pathogenic organisms. 3,096,236, 7–2–63, Cl. 167—22.
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Daspit, John L., and D. C. Thomas, to Tasker Instruments Corp. Air traffic control system. 3,096,433, 7–2–63, Cl. 235—151.
Datow, Joachim, and K. Wimmer, to Badische Anilin- & Soda-Fabrik Atkiengesellschaft. Production of nitriles from alcohols. 3,096,361, 7–2–63, Cl. 260—465.
Daugherty, Frank Z., and A. L. Sebok, to Ametek Inc. Electric motor assembly. 3,096,451, 7–2–63, Cl. 310—42.
Davenport, Thomas I., to The Budd Co. Photoelastic transducers. 3,096,388, 7–2–63, Cl. 88—14.
Davidson, Ian, and E. L. Jewett, to Florida Brace Corp. Surgical brace. 3,095,875, 7–2–63, Cl. 128—78.
Davis, Donald W., to Lighting Products, Inc. Lighting diffuser. 3,096,032, 7–2–63, Cl. 240—106.
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Davis, Steven S. and K. L., to The Elmco Corp. Filter apparatus. 3,096,280, 7–2–63, Cl. 210—404.
Davis, William R., to Sonoco Products Co. Container with pouring spout. 3,096,011, 7–2–63, Cl. 229—17.
Dawson, William O., and R. K. Fraser. Launching device for water skiers. 3,095,845, 7–2–63, Cl. 114—43.5.
Day, Winterton U., H. F. Donnelly, and H. L. Rohs, to Kimberly-Clark Corp. Manufacture of cellulosic product. 3,096,228, 7–2–63, Cl. 162—112.
Deady, Emmett F., S. F. Reed, and D. E. Houghton, to Cambridge Wire Cloth Co. Method and apparatus for weft projection. 3,095,910, 7–2–63, Cl. 139—127.
Dear, Ervin J., and R. W. Staples. Ore pulverizer with centrifugal impact action. 3,096,037, 7–2–63, Cl. 241—275.
De Buigne, Carl, to United States of America, Atomic Energy Commission. Extrusion cladding apparatus. 3,095,973, 7–2–63, Cl. 207—4.
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Binon, Fernand A. G., and Dechamps. 3,096,368.
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Binon, Fernand A. G., and Dechamps. 3,096,368.
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Pittman, Edgar H. 3,095,630.
Tessmer, Raymond G. 3,095,683.
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De Guisto, Charles A., to Chromalloy Corp. Diffusion coating of metals. 3,096,205, 7–2–63, Cl. 117—107.2.
De Haan, Johannes, and J. P. H. von Den Hoff, to Stamicarbon N.V. Preparation of α-nitro ε-caprolactam. 3,096,326, 7–2–63, Cl. 260—239.3.
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Delman Co., The: *See*—
Lovell, Ernest E. 3,095,595.
Demand, Erhart E., to Philco Corp. Heat transfer apparatus. 3,095,709, 7–2–63, Cl. 62—3.
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Meyer, Ferdinand, and Demmler. 3,096,349.
Demmy, Robert C., to Radio Corp. of America. Electroluminescent device. 3,096,458, 7–2–63, Cl. 313—108.
Dench, Edward C., to Raytheon Co. Traveling wave tube systems. 3,096,481, 7–2–63, Cl. 325—17.
Deniau, Andre J. A., to Societe Generale de Constructions Electriques et Mecaniques. Fluid system. 3,096,390, 7–2–63, Cl. 174—11.
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Bone, Arnold R. 3,095,807.
Denss, Rolf, and H. H. Kuhnis, to Geigy Chemical Corp. Quaternary ammonium salts of 5-dimethyl amino-3-furanmethanols. 3,096,348, 7–2–63, Cl. 260—347.7.
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Lieb, Harry C., and De Rosa. 3,096,218.
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Design Center, Inc.: *See*—
Pfohl, Louis H. 3,095,966.
De Swart, Jan. Grille. 3,095,953, 7–2–63, Cl. 189—82.
Devaney, John L., Jr., to American Brake Shoe Co. Anticreep railroad crossings. 3,096,057, 7–2–63, Cl. 246—465.
Dewas, Raymond. Weft detecting means for shuttleless looms. 3,095,911, 7–2–63, Cl. 139—370.
Dick, A. B., Co.: *See*—
Du Bois, Edgar H., Mazzio, and Niesen. 3,095,796.
Dick, Adolph A. Boat mooring apparatus and boarding ramp therefor. 3,095,848, 7–2–63, Cl. 114—230.
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Diebold, Inc.: *See*—
Paulos, Hary, and Blauvelt. 3,095,838.
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Dills, Raymond L., to General Electric Co. Oven thermostat. 3,096,420, 7–2–63, Cl. 200—140.
Dionne, Henry E. Carburetor air filter detecting device. 3,095,866, 7–2–63, Cl. 123—196.
Di Tullio, Alfred, P., and E. S. Anchorage bolt and block for concrete structures. 3,095,672, 7–2–63, Cl. 50—477.
Di Tullio, Elio S.: *See*—
Di Tullio, Alfred, P., and E. S. 3,095,672.
Di Tullio, Patsy: *See*—
Di Tullio, Alfred, P., and E. S. 3,095,672.
Dixon, Morris S., R. B. Marshall, and J. R. Crerar, to H. J. Heinz Co. Food processing method and apparatus. 3,096,181, 7–2–63, Cl. 99—150.
Djerassi, Carl: *See*—
Iriarte, Jose, Djerassi, and Ringold. 3,096,350.
Doczi, John, to Warner-Lambert Pharmaceutical Co. Process for the extraction and purification of relaxin. 3,096,246, 7–2–63, Cl. 167—74.
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Kaunert, Paul, and Doering. 3,096,156.
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Cooke, Edward I., and Donelan. 3,095,643.
Donnelly, Harold F.: *See*—
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Dornbos, Peter B. Plasterer's finishing tool. 3,095,594, 7–2–63, Cl. 15—235.4.
Dorsett, Clarence T. Magnetic blocks. 3,095,668, 7–2–63, Cl. 46—25.
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Allen, Donald R. 3,096,150.
Ellis, Henry A. 3,095,661.
Johnson, Francis. 3,096,337.
Olah, George A., and Kuhn. 3,096,371.
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Sexton, Arthur R. 3,096,362.
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Risley, Roger E. 3,096,105.
Smith, Harold W., Duesterhoeft, Boatick, and Garner. 3,096,477.
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Berglund, David B., and Drew. 3,095,655.
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Dreyfus, Robert L., and W. C. Kirkpatrick, to W. R. Grace & Co. Method of packaging articles. 3,095,677, 7–2–63, Cl. 53—30.

Duane, John J., and G. F. Tappan, to Union Carbide Corp. Deicer composition. 3,096,290, 7–2–63, Cl. 252—70.

Dubeck, Emil, to The Kenmar Mfg. Co. Reclining chair mechanism with leg platform extension. 3,096,118, 7–2–63, Cl. 297—75.

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Dubuque Awning & Tent Co.: *See*—
Frommelt, Cyril P. and S. J. 3,095,886.

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Hurst, Norman A., and Edney. 3,095,773.
Thompsett, William A. 3,096,123.

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Du Pont de Nemours, E. I., and Co.: *See*—
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Benjamins, Edwin, and Marks. 3,096,313.
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Berzins, Talivaldis. 3,096,182.
Brockway, William R., Loving, and Noddin. 3,095,815.
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Nail, Nelson R. 3,096,260.
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Berge, Birger. 3,096,029.

Electric & Musical Industrie Ltd.: *See*—
David, Gordon P. 3,096,211.
Gargini, Eric J. 3,096,395.

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Elliott, Louis J., and T. C. Ward, to Kinetics Corp. Static inverter circuit. 3,096,472, 7–2–63, Cl. 321—45.

Ellis, Henry A., to The Dow Chemical Co. Structure for detachably mounting panels. 3,095,661, 7–2–63, Cl. 40—156.

Elpern, Bill, to Sterling Drug Inc. Lower alkyl 1-(phenylaminoalkyl)-4-phenyl-4-piperidyl ketones. 3,096,335, 7–2–63, Cl. 260—293.4.

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Farley, Arthur C. Structural connection. 3,096,107, 7–2–63, Cl. 287—54.

Farmer, John M., ½ to H. Krueger. Herbicidal method. 3,096,167, 7–2–63, Cl. 71—2.1.

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Ferris, Ernest A., to Borg-Warner Corp. Non-phased one-way roller clutch. 3,095,954, 7–2–63, Cl. 192—45.

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Finelt, Aron. Multi-rotational casting machine. 3,095,621, 7–2–63, Cl. 22—65.1.

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Christenson, Howard W., Fisher, and Schaefer. 3,095,760.

Fisher, Stanton E. Leash. 3,095,857, 7–2–63, Cl. 119—109.

Flanigan, Eugene E., and R. M. Zeek, to General Motors Corp. Gas turbine fuel nozzle cooling. 3,095,706, 7–2–63, Cl. 60—39.66.

Flanigan, Eugene E., and R. M. Zeek, to General Motors Corp. Gas turbine fuel nozzle air supply system. 3,095,707, 7–2–63, Cl. 60—39.74.

Fletcher, Peter S., to A. Lorenz. Reclining chair of the multiple position lounger type. 3,096,119, 7–2–63, Cl. 297—85.

Flieg, Werner, to Invac Corp. Data recorder. 3,096,016, 7–2–63, Cl. 234—108.

Flindt, Charles B., to Short Brothers & Harland Ltd. Fault detection means. 3,095,788, 7–2–63, Cl. 121—41.

Florida Brace Corp.: *See*—
Davidson, Ian, and Jewett. 3,095,875.

Focht, John R., to Precision Valve Corp. Dispensing head connectable to the valve stem of an aerosol dispenser. 3,096,002, 7–2–63, Cl. 222—394.

Fogg, Charles R. Beverage percolating apparatus with unit dry beverage container. 3,095,801, 7–2–63, Cl. 99—312.

Ford Motor Co.: *See*—
Baker, Willard C. 3,095,762.
Duffy, James J. 3,095,755.

Ford, Ralph E., to W. A. Ternes. Door. 3,095,952, 7–2–63, Cl. 189—46.

Forsyth James M. Barring jack. 3,096,077, 7–2–63, Cl. 254—93.

Fortuna-Werke Spezialmaschinenfabrik Aktiengesellschaft: *See*—
Voller, Rolf. 3,095,676.

Foster, Edwin E. Film magazine and drive means therefor. 3,095,779, 7–2–63, Cl. 88—17.

Foster, John A., to J. L. Clark Mfg. Co. Container with plug type closure. 3,095,995, 7–2–63, Cl. 220—60.

Foster-Mallard Ltd.: *See*—
Churchill, John A. 3,096,095.
Churchill, John A., and Williams. 3,096,094.

Fourroux, Melvin M.: *See*—
Kindred, Raymond L., and Fourroux. 3,095,728.

Foutz, Clinton R., deceased; D. F. Fouts, administrator, ½ to E. F. Lundstrom. Salt water converting apparatus. 3,096,257, 7–2–63, Cl. 202—205.

Foutz, Clinton R. Condenser. 3,095,923, 7–2–63, Cl. 257—28.

Foutz, David F.: *See*—
Foutz, Clinton R., and D. F. 3,096,257.

Fox, Donald L. Device for dispensing water or fabric conditioning substances in clothes washers. 3,095,722, 7–2–63, Cl. 68—207.

Fradette, Lawrence E. Traction footwear. 3,095,657, 7–2–63, Cl. 36—7.6.

Frajdenrajch, Israel J. Rotary massaging apparatus. 3,095,874, 7–2–63, Cl. 128—57.

Frame, Thomas B., and A. J. Maletzke, to General Motors Corp. Wheel cover. 3,096,124, 7–2–63, Cl. 301—37.

Franck, Kurt, and V. S. Wince, to Holophane Co., Inc. Ceiling panel. 3,096,033, 7–2–63, Cl. 240—106.

Francom, Hudson F., to The Elmco Corp. Scraper assembly for filters. 3,096,278, 7–2–63, Cl. 210—327.

Frank, Robert L., and S. Zadoff, to Sperry Rand Corp. Phase coded signal receiver. 3,096,482, 7–2–63, Cl. 325—41.

Franke & Heidecke, Fabrik Photographischer Prazisions-Apparate: *See*—
Prochnow, Claus. 3,096,025.

Franks, Gerald N., and C. S. Shaw. Apparatus and method of cleaning seed cotton. 3,096,276, 7–2–63, Cl. 209—20.

Fraser, Roland K.: *See*—
Dawson, William O., and Fraser. 3,095,845.

Frazier, Russel B., to Overhead Door Corp. Counterbalance and stop means for upwardly acting closures. 3,095,922, 7–2–63, Cl. 160—191.

Freeman, Howard G., and W. W. Rawstron, to Jamesbury Corp. Removable ball and seat valve unit. 3,095,898, 7–2–63, Cl. 137—454.2.

French State, Minister of Armies (Powder Department): *See*—
Roche, Andre, Grancher, Gajac, and Becanne. 3,096,377.

Frenkel, Marvin A. Calculating machine keyboard. 3,096,019, 7–2–63, Cl. 235—145.

Frentzel, Herman C.: *See*—
Morrison, George F., and Frentzel. 3,095,928.

Frey, Jean-Marie: *See*—
Jirou, Marcel, and Frey. 3,096,356.

Freyermuth, Harlan B.: *See*—
Wilson, Robert C., and Freyermuth. 3,096,333.

Fried, John, and T. S. Bry, to Merck & Co,. Inc. Δ⁹-dehydro-21-haloethisterones and the process for the production thereof. 3,096,353, 7–2–63, Cl. 260—397.4.

Frisby, Thomas M., to Eastman Oil Well Survey Co. Hydraulically actuated orienting device. 3,095,924, 7–2–63, Cl. 166—4.

Frommelt, Cyril P., and S. J., to Dubuque Awning & Tent Co. Weather shield. 3,095,886, 7–2–63, Cl. 135—5.

Frommelt, Sylvan J.: *See*—
Frommelt, Cyril P., and S. J. 3,095,886.

Frostad, Lars: *See*—
Stelljes, Charles R., Frostad, and Leach. 3,095,748.

Fujii, Kozo, and Y. Oyanagi, to Kurashiki Rayon Co., Ltd. Preparation of polyvinyl alcohol from polyvinyl acetate and aqueous solution thereof. 3,096,298, 7–2–63, Cl. 260—29.6.

Fujita, Ryuichi: *See*—
Ishizuka, Toshizo, Momoi, and Fujita. 3,096,804.

Fulmer, Richard W., to General Mills, Inc. Process for inhibiting corrosion in acid resolutions with guanamine-propylene oxide condensation product. 3,096,147, 7–2–63, Cl. 21—2.7.

Fundingsland, John O., to Teleprompter Corp. Tape storage apparatus. 3,096,038, 7–2–63, Cl. 242—55.14.

Fusco, James V.: *See*—
Jankowski, Conrad J., Fusco, and Fischer. 3,096,301.

GEA Luftkuhlergesellschaft Happel Gesellschaft m.b.H. & Co. K.G.: *See*—
Selen, Günter. 3,095,638.
Selen, Günter. 3,095,639.

Gabor, Dennis, and P. C. J. Hill, to National Research Development Corp. Picture communication systems. 3,096,398, 7–2–63, Cl. 178—6.8.

Gaeke, Edward G.: *See*—
Brown, Arthur E., Gaeke, Hiller, and Zeisloft. 3,095,702.

Gaetani, Ermanno, to Aziende Colori Nazionali Affini Aena S.p.A. Process for dyeing polyolefins. 3,096,140, 7–2–63, Cl. 8—41.

Gagnan, Emile: *See*—
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Gainer, Harold, and M. Cenker, to Wyandotte Chemicals Corp. Production of pyrazinoic acid. 3,096,330, 7–2–63, Cl. 260—250.

Gajac, Jean: *See*—
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Gallup, John L., to Radio Corp. of America. Glass marking ink. 3,096,184, 7–2–63, Cl. 106—20.

Gamble, Roger L., to Lockheed Aircraft Corp. Calorimetric radiation dosimeter. 3,096,440, 7–2–63, Cl. 250—83.3.

Gammeter, Harry F., F. R. Patalon, and R. J. Katterle, to Addressograph-Multigraph Corp. Master stripping means for rotary printing machines. 3,095,809, 7–2–63, Cl. 101—217.

Gamrath, Harry R., and L. O. Raether, to Monsanto Chemical Co. Production of benzyl alkyl phthalates by ester interchange. 3,096,364, 7–2–63, Cl. 260—475.

Gandrud, Ebenhard S. Hopper and feeding rotor structure for dispensers of granular material. 3,096,004, 7–2–63, Cl. 222—410.

Gardiner, Maurice, to The General Electric Co. Ltd. Four-terminal electric networks. 3,096,493, 7–2–63, Cl. 333—75.

Gargini, Eric J., to Electric & Musical Industries Ltd. Velocity-modulated colour television receivers. 3,096,395, 7–2–63, Cl. 178—5.4.

Garner, William, Jr.: *See*—
Smith, Harold W., Duesterhoeft, Bostick, and Garner. 3,096,477.

Garrett Corp., The: *See*—
Grosselfinger, Robert A., and Schoch. 3,095,701.

Garvin, Alex J., to Superpack Vending (Curacao) N.A. Device for vending cylindrical objects. 3,095,997, 7–2–63, Cl. 221—180.

Gaubatz, Arthur W., and J. W. Moore, to General Motors Corp. Convergent-divergent jet nozzle. 3,095,695, 7–2–63, Cl. 60—35.6.

Gaule, Gerhart K., H. H. Kedesdy, and L. J. D. Rouge, to United States of America, Army. Apparatus for pulling single crystals in the form of long flat strips from a melt. 3,096,158, 7–2–63, Cl. 23—273.

Gaulke, Arthur W., to Vanant Co., Inc. Packaging strip having outwardly protecting cushioning peaks. 3,095,970, 7–2–63, Cl. 206—62.

Gauthier, Alfred, G.m.b.H.: *See*—
Richter, Carl F. 3,095,791.

Gebele, Kurt, and F. Singer, to Compur-Werk Gesellschaft mit beschrankter Haftung & Co. Photographic camera. 3,095,790, 7–2–63, Cl. 95—10.

Gegauf, Fritz, to Fritz Gegauf Aktiengesellschaft Berninanahmaschinenfabrik. Abrasive belt grinding machine. 3,095,675, 7–2–63, Cl. 51—148.

Gegauf, Fritz, Aktiengesellschaft Berninananhmaschinenfabrik: *See*—
Gegauf, Fritz. 3,095,675.

Geigy Chemical Corp.: *See*—
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Geigy, J. R., A.-G.: *See*—
Schlapfer, Hans, and Bindler. 3,096,309.

General Aniline & Film Corp.: *See*—
Wilson, Robert C., and Freyermuth. 3,096,333.

General Electric Co.: *See*—
Adams, Albert H. 3,096,131.
Albright, John W., and Bianco. 3,096,891.
Bochan, John. 3,095,721.
Brock, George D., and Topping. 3,096,408.
Caprino, Joseph C., and Prochaska. 3,096,303.
Dills, Raymond L. 3,096,420.
Fiedler, Howard C. 3,096,222.
Hart, Benjamin F. 3,095,774.
Howell, Louis J. 3,096,419.
Kendt, Norman L. 3,096,125.
Lemmers, Eugene. 3,096,464.
McClure, John L. 3,096,407.
Rood, Robert M., and Villers. 3,095,951.
Stachowiak, Frank R., and Szeremy. 3,096,397.
Stone, Aidan M. 3,096,164.
Woodward, Stewart A. 3,095,756.

General Electric Co. Ltd., The: *See*—
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Shepherd, Sydney A., and Woods. 3,095,913.
General Foods Corp.: *See*—
Finucane, Thomas P., Mitchell, and Raymond. 3,096,179.
General Grid Corp.: *See*—
Pajac, Theodore P. 3,096,053.
General Mills, Inc.: *See*—
Fulmer, Richard W. 3,096,147.
General Motors Corp.: *See*—
Amann, Charles A., Collman Haushalter, Ricketts, Turunen, and Vickers. 3,095,700.
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Brown, Arthur E., Gaeke, Hiller, and Zeisloft. 3,095,702.
Bush, Russell J. 3,095,994.
Christenson, Howard W., Fisher, and Schaefer. 3,095,760.
Elfes, Donald B. 3,095,824.
Flanigan, Eugene E., and Zeek. 3,095,706.
Flanigan, Eugene E., and Zeek. 3,095,707.
Frame, Thomas B., and Maletzke. 3,096,124.
Gaubatz, Arthur W., and Moore. 3,095,695.
Hallenbeck, Virgil R. 3,096,117.
Hay, Charles N. 3,096,129.
Hollenbaugh, William J., and Winter. 3,095,737.
Jacobs, James W. 3,095,895.
Johnstone, Theodore H. 3,096,112.
Lahr, Gilbert M. 3,095,948.
Laviana, Donald W. 3,095,635.
Marks, Craig, and Wyczalek. 3,095,865.
Wight, Robert D. 3,096,128.
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Genth, Hermann, to Farbenfabriken Bayer Aktiengesellschaft. Bacterial-resistant plastic materials. 3,096,183, 7–2–63, Cl. 106—15.
Gerow, Clarence C., and H. F. Bottcher, to Speakman Co. Panel showers. 3,095,581, 7–2–63, Cl. 4—192.
Gerow, Clarence C., H. F. Bottcher, C. F. Molzen, and H. Landell. Column shower. 3,095,579, 7–2–63, Cl. 4—145.
Gerson, Koert, to Eli Lilly and Co. Novel N-(substituted)-phenylsulfonyl-N'-1-adamantylureas. 3,096,372, 7–2–63, Cl. 260—553.
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Kaunert, Paul, and Doering. 3,096,156.
Gibbs, Zack E.: *See*—
McCurtain, Frank. 3,096,213.
Gilbert, Jack J., to S. Adler. Infusion apparatus. 3,095,800, 7–2–63, Cl. 99—289.
Giles, Jesse A., and S. S. Mims, to R. T. Reynolds Tobacco Co. Oxidation of manoyl oxide. 3,096,346, 7–2–63, Cl. 260—343.3.
Gilfillan Bros., Inc.: *See*—
Cutler, Burton. 3,096,513.
Glauber, Myron J. Diaphragm valve. 3,095,905, 7–2–63, Cl. 137—625.33.
Glaze, John W., Jr., to Autoboard Corp. Device for straightening the welts of socks preparatory to a boarding operation. 3,096,006, 7–2–63, Cl. 223—60.
Gobert, Robert R.: *See*—
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Goetz, Richard E., to Smith Tool Co. Roller bit lubrication. 3,095,934, 7–2–63, Cl. 175—227.
Goins, Rex H., and H. E. Davis, to Eastman Kodak Co. Process for manufacturing sugar esters. 3,096,324, 7–2–63, Cl. 260—234.
Goldman, Marvin, to Gro-Wel Fish-Ade Co., Inc. Fish feeder. 3,095,852, 7–2–63, Cl. 119—3.
Goldstein, Samuel, deceased (by Manufacturers Hanover Trust Co., executor), and I. Lichtenstein, to Tri-Wall Containers, Inc. Corrugated paper board product. 3,096,224, 7–2–63, Cl. 154—45.9.
Golub, Leo, and M. Zaiger, to P. R. Engel. Play pen. 3,095,583, 7–2–63, Cl. 5—99.
Gonnella, Carmen J., and P. A. Marchant, to The Mennen Co. and Consolidated Thermoplastics Co. Dispensing container. 3,095,598, 7–2–63, Cl. 15—571.
Gordon, James E., C. C. Evans, and N. J. Parratt, to T.I. (Group Services) Ltd. Process for the continuous production of thin, elongated, single crystals of zinc oxide and antimony tri-oxide. 3,096,155, 7–2–63, Cl. 23—144.
Gossard, Thomas F., to Standard Coil Products Co. Inc. Fixed frequency amplifier. 3,096,466, 7–2–63, Cl. 317—101.
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Sidi, Henri, and Gotteeman. 3,096,308.
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Gould, Murray W. Helicopter. 3,096,044, 7–2–63, Cl. 244—12.
Grace, W. R., & Co.: *See*—
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Hoeg, Donald F. 3,096,316.
Graff, Renier J. L.: *See*—
Soeterbroek, Johannes C., and Graff. 3,096,369.
Grancher, Pierre: *See*—
Roche, Andre, Grancher, Gajac, and Becanne. 3,096,377.
Granet, Charles, and R. Craue. Vehicle-seat suspension. 3,096,066, 7–2–63, Cl. 248—399.
Granryd, Thorvald G., to The Frank G. Hough Co. Transmission controlled loader hydraulic circuit. 3,095,990, 7–2–63, Cl. 214—140.
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McGill, Thomas A. 3,095,956.
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Baybarz, Fred L. 3,096,108.
Gregory Industries, Inc.: *See*—
Mowry, Lorenz J., and Jenkins. 3,096,429.
Gresham, Donald C.: *See*—
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Buxton, Jarvis C. 3,095,944.
Griggs, William H., and R. D. Zaffrann, to Eastman Kodak Co. Method of manufacturing paper from partially esterified cellulose fibers. 3,096,231, 7–2–63, Cl. 162—157.
Grinnell Corp.: *See*—
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Gruber, Bernard A., to Monsanto Chemical Co. Process for the production of metal borides. 3,096,149, 7–2–63, Cl. 23—14.
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Grundmark, Bengt, to AllmÄnna Svenska Elektriska Aktiebolaget. Lightning arrester with resilient sealing lid. 3,096,461, 7–2–63, Cl. 315—36.
Gryctko, Carl E., and K. Ball, to I-T-E Circuit Breaker Co. Thermal magnetic current by-pass. 3,096,413, 7–2–63, Cl. 200—88.
Gubbels, Christoph. Hook fastener. 3,095,626, 7–2–63, Cl. 24—225.
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Gulick, Ronald A., to ACF Industries, Inc. Structural center section for fabricated gate valve. 3,096,072, 7–2–63, Cl. 251—329.
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Hadzeriga, Pablo, to Standard Magnesium Corp., Inc. Ion exchange process for producing potassium sulfate and sulfuric acid. 3,096,153, 7–2–63, Cl. 23—121.
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McGuire, Jack C., and Speegle. 3,095,929.
Slate, Ralph L. 3,096,284.
Hallock, Robert L. Driven fastener having penetrating point for attaching objects to metal. 3,095,777, 7–2–63, Cl. 85—31.
Hamilton, Joseph P., to Crown Zellerbach Corp. Shipper dispenser. 3,095,968, 7–2–63, Cl. 206—52.
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Hanisian, John, and E. H. Lightcap, to The M. W. Kellogg Co. Recovery of hydrocarbons. 3,096,273, 7–2–63, Cl. 208—101.
Hann, Paul D., to Phillips Petroleum Co. Automatic process for prevention of gas hydrate formation. 3,096,383, 7–2–63, Cl. 260—676.
Hanna, Edward C., to Landis Machine Co. Apparatus for handling elongated workpieces. 3,095,983, 7–2–63, Cl. 214—1.
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Hardy, Maurice E., to Zenith Radio Corp. Record players. 3,096,093, 7–2–63, Cl. 274—10.
Harling, Donald W., to McGraw-Edison Co. Fluorescent luminaire. 3,096,028, 7–2–63, Cl. 240—25.
Harling, Donald W., to McGraw-Edison Co. Luminaire for directional lighting. 3,096,030, 7–2–63, Cl. 240—25.
Harms, Victor, and J. H. Schwartz. System and apparatus for programmed control of oil wells and the like. 3,096,507, 7–2–63, Cl. 340—147.
Harnik, Marcel, to Chemetron Corp. Fluorinated pyrazole steroid compounds. 3,096,327, 7–2–63, Cl. 260—239.5.
Harnik, Marcel, to Chemetron Corp. Androstene compounds containing trifluoro aliphatic substituents in the 2-position. 3,096,352, 7–2–63, Cl. 260—397.4.
Harnik, Marcel, to Chemetron Corp. 2-fluoroacetyl-5-androstenolone compounds. 3,096,354, 7–2–63, Cl. 260—397.5.
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Harvey, Wallace A., Jr. Protective device for a bow on gift-wrapped packages. 3,095,967, 7–2–63, Cl. 206—45.33.
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Hassan, Joseph A., ½ to F. A. Hassan. Loud speaker construction. 3,095,941, 7–2–63, Cl. 181—32.
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Hays, Edwin E., and J. G. Swift, to Wallace & Tiernan Inc. Synergistic antihistamine mixture. 3,096,241, 7–2–63, Cl. 167—65.
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Helin, Elis E. V., to Elektriska Svetsningsaktiebolaget. Methods of reducing a metal oxide by a carbonaceous material at sub-atmospheric pressures. 3,096,174, 7–2–63, Cl. 75—226.
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Henkel and Cie G.m.b.H.: *See*—
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Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,096,244.
Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,096,374.
Henry, Ronald A., to United States of America, Navy. Polymers and copolymers of 5-vinyltetrasole. 3,096,312, 7–2–63, Cl. 260—78.5.
Hercules, Christopher D. Variable-pitch blade propeller. 3,095,932, 7–2–63, Cl. 170—160.43.
Hercules Powder Co.: *See*—
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Herrle, Karl: *See*—
Hartmark, Bjarne, Schuster, and Herrle. 3,096,142.
Herrod, J. T. Combination transmission and differential. 3,095,759, 7–2–63, Cl. 74—701.
Hertel, Wilhelm, to Siemens-Electrogerate Aktiengesellschaft. Dishwasher. 3,095,885, 7–2–63, Cl. 134—58.
Herzog, Gerald B., to Radio Corp. of America. Square wave generator comprising negative resistance diode and mismatched delay line producing steep edge pulses. 3,096,445, 7–2–63, Cl. 307—88.5.
Hespenheide, Wilbur G., to Burroughs Corp. Data display device. 3,096,271, 7–2–63, Cl. 204—267.
Hess, Howard V.: *See*—
Heisler, Robert Y., Hess, Eckert, and Throckmorton. 3,096,365.
Heyden Newport Chemical Corp.: *See*—
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Sidi, Henri, and Gotteeman. 3,096,308.
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Muray, Julius J. 3,096,437.
Hilado, Alfonso. Self locking differential mechanism. 3,095,761, 7–2–63, Cl. 74—715.
Hildebrandt, Alexander B., and H. C. Bridwell, to Jersey Production Research Co. Coring bit. 3,095,935, 7–2–63, Cl. 175—330.
Hildebrandt, Frederick V.: *See*—
Roberts, Cecil P., and Hildebrandt. 3,095,957.
Hill, James E., D. B. Levinson, and L. L. Wolman, to General Precision, Inc. Transistor gate biased by signal being gated. 3,096,447, 7–2–63, Cl. 307—88.5.
Hill, Peter C. J.: *See*—
Gabor, Dennis, and Hill. 3,096,398.
Hiller, John D.: *See*—
Brown, Arthur E., Gaeke, Hiller, and Zeisloft. 3,095,702.
Hind, John D., and F. H. Crayton, to Philip Morris, Inc. Tobacco flavorants. 3,095,882, 7–2–63, Cl. 131—17.
Hindle, Walter H., to Monsanto Chemical Co. Union dyeing acrylonitrile copolymer and wool blends. 3,096,139, 7–2–63, Cl. 8—21.
Hine, Edward K. Guidance apparatus. 3,095,939, 7–2–63, Cl. 180—79.1.
Hitzman, Donald O., to Phillips Petroleum Co. Geomicrobiological prospecting. 3,096,254, 7–2–63, Cl. 195—103.5.
Hoch, Paul E., and J. S. Newcomer, to Hooker Chemical Corp. Method for pest control employing polychloropolyhydric alcohols. 3,096,239, 7–2–63, Cl. 167—30.
Hoeg, Donald F., to W. R. Grace & Co. Polymerization of propylene with a catalyst prepared by grinding Al and TiCl₃ in the presence of H₂. 3,096,316, 7–2–63, Cl. 260—93.7.
Hollenbaugh, William J., and H. G. Winter, to General Motors Corp. Fabric tester. 3,095,737, 7–2–63, Cl. 73—159.
Holley Carburetor Co.: *See*—
Bettoni, Eugene C. 3,096,405.
Holley, Donald A. Safety thermostatic control for Marine engine cooling systems. 3,096,022, 7–2–63, Cl. 236—34.5.
Hollowich, Garrison G., and S. N. McCullough, to Tasker Instruments Corp. Multiple symbol visual presentation. 3,096,512, 7–2–63, Cl. 340—378.
Hollyday, James H., to Sperry Rand Corp. Bale thrower. 3,095,961, 7–2–63, Cl. 198—128.
Hollyday, James H., to Sperry Rand Corp. Conveying apparatus. 3,095,962, 7–2–63, Cl. 198—128.
Holmberg, Robert D.: *See*—
Larson, Vincent H., and Holmberg. 3,095,901.
Holmgreen, Warren E., Jr.: *See*—
Atkins, Lyle D., and Holmgreen. 3,096,027.
Holophane Co., Inc.: *See*—
Franck, Kurt, and Wince. 3,096,033.
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Home Products, Inc.: *See*—
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Homola, Friedrich, and A. Witt, to Klockner-Humboldt-Deutz. Oscillation suppressing arrangement for turbines. 3,096,073, 7–2–63, Cl. 253—39.
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Newcomer, Jack S., Linder, and Smith. 3,096,867.
Hopkins, Frank L.: *See*—
Helm, Jack D., and Hopkins. 3,096,081.
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Horizons Inc.: *See*—
Wainer, Eugene, and Mayer. 3,096,144.
Horn, Christian F., to Union Carbide Corp. Sulfonated 9,9-di(carboxyalkyl) fluorene and esters and salts thereof. 3,096,358, 7–2–63, Cl. 260—429.7.
Horne, Clede A. Trailer stabilizer. 3,096,065, 7–2–63, Cl 248—354.
Horrigan, Robert V., to National Lead Co. Tanning with silicated sodium zirconyl sulfate. 3,096,143, 7–2–63, Cl. 8—94.25.
Hough, Frank G., Co., The: *See*—
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Houghton, Daniel E.: *See*—
Deady, Emmett F., Reed, and Houghton. 3,095,910.
Houston Oil Field Material Co., Inc.: *See*—
Rogers, Austin S. 3,095,736.
Rush, George E. 3,095,926.
Howell, Louis J., to General Electric Co. Condition responsive electric switch mechanism. 3,096,419, 7–2–63, Cl. 200—140.
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Hubbell, Harvey, and J. F. Healy, to Harvey Hubbell Inc. Switch plate locking cover attachment. 3,096,409, 7–2–63, Cl. 200—44.
Hubbell, Harvey, Inc.: *See*—
Hubbell, Harvey. 3,096,132.
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Hubel, Karl W., and E. H. Braye, to Union Carbide Corp. Process for the preparation of ketonic organic compounds and products resulting therefrom. 3,096,265, 7–2–63, Cl. 204—158.
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Brilmyer, Harold G., and Wehlann. 3,095,776.
Hudson, H. D. Mfg. Co.: *See*—
Keating, Maurice H., and Kubinski. 3,096,425.
Hudson, Milton W., and F. J. Moore, Sr., to International Resistance Co. Variable resistor. 3,096,499, 7–2–63, Cl. 338—163.
Huff, Hazel S.: *See*—
Huff, Leslie R. 3,095,667.
Huff Leslie R., deceased: H. S. Huff, administratrix of the estate of L. R. Huff, Rotatable and translatable drawing board. 3,095,667, 7–2–63, Cl. 45—131.
Hughes, William B., to Petrolite Corp. Process of inhibiting corrosion. 3,096,294, 7–2–63, Cl. 252—390.
Hull, David C., H. J. Hagemeyer, Jr., and J. W. Wilder, to Eastman Kodak Co. Method for purifying polyolefins by filtration under a partial pressure dissolved gas. 3,096,317, 7–2–63, Cl. 260—93.7.
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Hunt, Robert G., to Marco Products Co. Pipe cleaning machine. 3,095,592, 7–2–63, Cl. 15—104.3.
Hunting Survey Corp. Ltd.: *See*—
Hutchins, Roger W., and D'Arcy. 3,095,744.

Hurst, Norman A., and W. J. Edney, to Dunlop Rubber Co. Ltd. Perforator for pneumatic tire sidewall. 3,095,773, 7–2–63, Cl. 83—2.

Hutchins, Roger W., and D. F. D'Arcy, to Hunting Survey Corp. Ltd. Gravity gradient measuring device. 3,095,744, 7–2–63, Cl. 73—382.

Hutchinson, Terence, to Short Bros. & Harland Ltd. Apparatus for measuring the mark-space ratio of a train of pulses. 3,096,400, 7–2–63, Cl. 178—69.

Huttenlocher, Dietrich F., and W. M. Sweeney, to Texaco Inc. Urethane containing lubricant. 3,096,285, 7–2–63, Cl. 252—47.5.

I-T-E Circuit Breaker Co.: *See*—
Grycrko, Carl E., and Ball. 3,096,413.
Wilson, George A. 3,096,423.

Iddings, George E., to Sperry Rand Corp. Aircraft navigation system. 3,096,503, 7–2–63, Cl. 340—26.

Imai, Kiyokasu: *See*—
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Imperial Chemical Industries Ltd.: *See*—
Bennett, George A., Clarke, and Stirling. 3,096,141.

Independent Lock Co.: *See*—
Patriquin, George P., and Adlert. 3,096,115.

Indiana University Foundation: *See*—
Ingraham, Joseph S. 3,096,250.

Ingham, Herbert S., Jr., to International Business Machines Corp. Formation of semiconductor bodies. 3,096,209, 7–2–63, Cl. 117—201.

Ingraham, Joseph S., to Indiana University Foundation. Novel particulate antigens and process. 3,096,250, 7–2–63, Cl. 167—84.5.

Ingwer, Carl H., C. E. Wright, and H. Weibel, to Ridge Tool Co. Power threading tool. 3,095,772, 7–2–63, Cl. 82—100.

Intermountain Research and Engineering Co., Inc.: *See*—
Cook, Melvin A., and Collins. 3,096,223.

International Business Machines Corp.: *See*—
Axelrod, Martin S., and Rosenheim. 3,096,450.
Cummings, Thomas F. 3,095,654.
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Ingham, Herbert S., Jr. 3,096,209.
Markley, Robert F. 3,096,087.
Reitfort, Henry A. 3,096,508.
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Taras, Andrew. 3,096,511.
Taylor, Wilfred K. 3,096,471.

International MacGregor Organization (I.M.G.O.): *See*—
Itoh, Yuko. 3,095,847.

International Minerals & Chemical Corp.: *See*—
Newsom, William S., Jr. 3,096,170.
Woerther, Clarence J. 3,096,171.

International Resistance Co.: *See*—
Hudson, Milton W., and Moore. 3,096,499.

Invac Corp.: *See*—
Flieg, Werner. 3,096,016.

Iriarte, Jose, C. Djerassi, and H. J. Ringold, to Syntex Corp. 6,16α-dimethyl-$\Delta^{1,4,6}$-pregnatriene-17α-ol-3,20-dione and esters thereof. 3,096,350, 7–2–63, Cl. 260—397.4.

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Ishisuka, Toshizo, M. Momoi, and R. Fujita, to Shin-Etsu Chemical Co., Ltd. Method for the preparation of organostannosiloxane. 3,096,304, 7–2–63, Cl. 260—46.5.

Itoh, Yuko, to International Mac Gregor Organisation (I.M.G.O.) Covers for closing open spaces such as shipholds, railway cars and the like. 3,095,847, 7–2–63, Cl. 114—202.

Ives, Frank E.: *See*—
Carr, Marvin E., and Ives. 3,096,225.

J. & L. Engineering Co., Inc.: *See*—
Pugh, Joseph M., and Edley. 3,095,679.

Jackson, Winston J., Jr.: *See*—
Caldwell, John R., and Jackson. 3,096,359.

Jacobs, Harold, F. A. Brand, J. D. Meindl, and M. A. Benanti, to United States of America, Army. Microwave amplitude modulator. 3,096,494, 7–2–63, Cl. 333—81.

Jacobs, James W., to General Motors Corp. Washing machine level control. 3,095,895, 7–2–63, Cl. 137—387.

Jacobsen, Alexander, to Kools Bros., Inc. Grid for disintegrating fibrous materials. 3,095,916, 7–2–63, Cl. 146—117.

Jakob, Hans, to F. Zoellig. Washing and dyeing machines. 3,095,720, 7–2–63, Cl. 68—43.

James, Dennis B., W. A. Malthaner, and J. P. Runyon, to Bell Telephone Laboratories, Inc. Scanning control circuit. 3,096,403, 7–2–63, Cl. 179—18.

Jamesbury Corp.: *See*—
Freeman, Howard G., and Rawstron. 3,095,898.

Jang, Monroe. Garment hanger. 3,096,009, 7–2–63, Cl. 223—87.

Jankowski, Conrad J., J. V. Fusco, and W. F. Fischer, to Esso Research and Engineering Co. Heat treatment of butyl rubber with halogenated butyl rubber and a polyhalomethyl). 3,096,301, 7–2–63, Cl. 260—43.

Jansen, Tor W., and W. B. Walker, to United States of America, Navy. Dispensing apparatus. 3,095,814, 7–2–63, Cl. 102—49.

Jeanes, Allene R., and J. H. Sloneker, to United States of America, Agriculture. Method of increasing the viscosity of an aqueous solution of a deacetylated polysaccharide. 3,096,293, 7–2–63, Cl. 252—316.

Jenkins, Henry H.: *See*—
Mowry, Lorenz J., and Jenkins. 3,096,429.

Jennings, William G., to Stewart-Warner Corp. Valve. 3,095,903, 7–2–63, Cl. 137—625.25.

Jensen, James A., to Philadelphia Valve Co. Tank loading and unloading system for tank vehicles. 3,095,894, 7–2–63, Cl. 137—267.

Jenter, Ellsworth W. Apron for use when treating small pigs. 3,095,576, 7–2–63, Cl. 2—51.

Jepson, Michael D., to The Spooner Dryer & Engineering Co. Ltd. Gaseous restraint of conveyed articles. 3,096,162, 7–2–63, Cl. 34—33.

Jersey Production Research Co.: *See*—
Hildebrandt, Alexander B., and Bridwell. 3,095,935.

Jesonis, Alexander. Apparatus and method for drilling holes. 3,095,767, 7–2–63, Cl. 77—62.

Jewett, Eugene L.: *See*—
Davidson, Ian, and Jewett. 3,095,875.

Jirou, Marcel, and J.-M. Frey, to Compagnie Francaise des Matieres Colorantes. New aromatic amines and processes for their preparation. 3,096,356, 7–2–63, Cl. 260—397.7.

Johns-Manville Corp.: *See*—
Quinn, Robert G. 3,096,200.

Johnson, Charles A., Jr.: *See*—
Stahl, Gerald, and Johnson. 3,095,965.

Johnson, Charles F., to McEvoy Co. Pipe anchor. 3,095,627, 7–2–63, Cl. 24—263.

Johnson, Francis, to The Dow Chemical Co. Process for the preparation of amino-halogenpyridine. 3,096,337, 7–2–63, Cl. 260—296.

Johnson & Johnson: *See*—
Bassett, Alton H. 3,095,878.
Burnham, Harold F. 3,095,879.
Von Arx, Ellen De Groot. 3,096,202.

Johnson, Leonard R. Apparatus for moving fowl. 3,095,963, 7–2–63, Cl. 198—148.

Johnson, Philip C., to F. and F. Koenigkramer Co. Telescoping means having indexing, braking and inter-locking means. 3,096,059, 7–2–63, Cl. 248—162.

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Johnstone, Theodore H., to General Motors Corp. Coincidental door locking system. 3,096,112, 7–2–63, Cl. 292—3.

Jones, Jack W.: *See*—
Chaney, Preston E., Mayes, and Jones. 3,096,401.

Jones, James D.: *See*—
Laing, David H., and Jones. 3,095,892.

Jones & Laughlin Steel Corp.: *See*—
Laycak, John F. 3,096,443.

Just, Matyas J. Sink mounting construction. 3,095,580, 7–2–63, Cl. 4—187.

Kahn, David, Inc.: *See*—
Levy, Morris. 3,095,859.

Kalenian, Aram. Speed and load control for electric motors. 3,096,470, 7–2–63, Cl. 318—332.

Kallrath, Gottfried: *See*—
Sennewald, Kurt, Gots, and Kallrath. 3,096,360.

Kaman Aircraft Corp.: *See*—
Hendrickson, Harold S., and Richmond. 3,096,045.
Kendall, Delvin E., Jr., Mack, and Wellock. 3,096,046.
Peiffer, Norman H., and Proctor. 3,095,931.

Kanarek, Jesse J. Waterproof electrical connector adapter. 3,096,134, 7–2–63, Cl. 339—150.

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Karasinski, Edward S. Steering means for space vehicles, missiles and high altitude flying craft. 3,096,049, 7–2–63. Cl. 244—52.

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Gammeter, Harry F., Patalon, and Katterle. 3,095,809.

Katsman, Lawrence: *See*—
Dubilrer, Robert, Barbaresi, and Katsman. 3,096,428.

Kaunert, Paul, and H. Doering, to Gewerkschaft Auguste Victoria. Multi-stage process for the separation and recovery of HCN and H_2S from waste product gases containing ammonia. 3,096,156, 7–2–63, Cl. 23—151.

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Keating, Maurice H., and J. J. Kubinski, to H. D. Hudson Mfg. Co. Floating electric heater for stock watering tank. 3,096,425, 7–2–63, Cl. 219—38.

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Vann, Henry E., and Keeling. 3,095,771.

Kellogg, M. W., Co., The: *See*—
Hanlsian, John, and Lightcap. 3,096,273.

Kelly, Victor Q., to United States of America, Navy. Processing tank. 3,095,798, 7–2–63, Cl. 95—94.

Kelver, William L.: *See*—
Daily, Arthur M., and Kelver. 3,096,500.

Kemp, William G., to The Soundlock Corp. Acoustical structure. 3,095,943, 7–2–63, Cl. 181—33.

Kendall, Delvin E., Jr., R. C. Mack, and R. B. Wellock, to Kaman Aircraft Corp. Remote control of robot aircraft. 3,096,046, 7–2–63, Cl. 244—17.13.

Kendt, Norman L., to General Electric Co. Slide out mechanism. 3,096,126, 7–2–63, Cl. 308—3.8.

Kenmar Mfg. Co., The: *See*—
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Anniss, Charles H., Kestell, and Tipper. 3,095,589.

Keyser, Johann J. Lubricating holder for spinning and twisting rings. 3,095,689, 7–2–63, Cl. 57—120.

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Touey, George P., and Kiefer. 3,096,323.

Kiefer, Otto. Plastic wheels or runners. 3,095,822, 7–2–63, Cl. 103—114.

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Kilcup, Dillon K. Intermittent motion mechanism. 3,095,749, 7–2–63, Cl. 74—84.

Killen, Duncan C. Folding easel. 3,095,665, 7–2–63, Cl. 45—129.

Killen, Duncan C. Wide frame folding easel. 3,095,666, 7–2–63, Cl. 45—129.

Killen, Duncan C. Convertible easel and table. 3,095,834, 7–2–63, Cl. 311—3.

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King, James D., to Daniel Orifice Fitting Co. Multiple integration flow computer. 3,096,434, 7–2–63, Cl. 235—151.

Kingston, Walter E., B. Kopelman, and H. H. Hausner, to United States of America, Atomic Energy Commission. Nuclear reactor fuel elements and method of preparation. 3,096,263. 7–2–63, Cl. 204—154.2.

Kinsworthy, Donald D., to The Lau Blower Co. Control system for plural speed fan motors. 3,096,468, 7–2–63, Cl. 318—224.

Kirchner, Frederick K., to Sterling Drug Inc. N,N'-bis(di-lower-alkylamino-lower-alkyl) dicarboxilic acid amides. 3,096,373, 7–2–63, Cl. 260—558.

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Dreyer, Ulrich, and Kirst. 3,096,319.

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Kiyuna, Paul C., to Paul's of Hawaii, Inc. Missile projector. 3,095,867, 7–2–63, Cl. 124—5.

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Sennewald, Kurt, Gotz, and Kallrath. 3,096,360.

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Langdon, William K., and Kokoruds. 3,096,331.

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Kolm, Harvard B., Jr., to Moog Servocontrols, Inc. Flow control servo valve with dynamic load pressure feedback. 3,095,906, 7–2–63, Cl. 137—625.62.

Kolthof, Jacob J., and M. Besier, to Koninklijke Machinenfabrik Gebr. Stork & Co. N.V. Apparatus for degasifying water, particularly boiler feed water. 3,096,166, 7–2–63, Cl. 55—196.

Komline-Sanderson Engineering Corp.: *See*—
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Komline, Thomas R., to Komline-Sanderson Engineering Corp. Flexible belt filter unit. 3,096,279, 7–2–63, Cl. 210—391.

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Kolthof, Jacob J., and Besier. 3,096,166.

Kools Brothers, Inc.: *See*—
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Kingston, Walter E., Kopelman, and Hausner. 3,096,263.

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Köttner, Antonin. Device for halving the bodies of slaughtered animals. 3,095,602, 7–2–63, Cl. 17—23.

Kraft, Arthur A., to Cleveland Controls, Inc. Steam boiler combustion control unit. 3,096,020, 7–2–63, Cl. 236—14.

Krakauer, Edwin G., to Kay Mfg. Corp. Sinuous wire spring. 3,096,086, 7–2–63, Cl. 267—103.

Krans, Frederick H., and F. L. Tewksbury, Jr., to Allied Chemical Corp. Duplicating sheet and colored coating compositions therefor. 3,096,189, 7–2–63, Cl. 106—236.

Kranz, Joachim: *See*—
Lange, Guenter, Luetzel, Wippel, Weidinger, and Kranz. 3,096,320.

Krasne, Henry. Feather duster. 3,095,593, 7–2–63, Cl. 15—234.

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Krespan, Carl G., to E. I. du Pont de Nemours and Co. Polyfluorinated 1,4-dithiin compounds and the process of preparation. 3,096,342, 7–2–63, Cl. 260—327.

Kretzschmar, Karl H.: *See*—
Barroll, Alfred E., and Kretzschmar. 3,095,889.

Krömer, Karl: *See*—
Loose, Erhard, Krömer, and Hahn. 3,095,793.

Kronogard, Sven-Olof. Control system for hydraulically operated variable speed transmissions for motor vehicles. 3,095,763, 7–2–63, Cl. 74—754.

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Kugler, Emanuel. Plastic tubular bag. 3,096,013, 7–2–63, Cl. 229—55.

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Kuhn, Stephen J.: *See*—
Olah, George A., and Kuhn. 3,096,371.

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Kurtz, Stewart S., Jr.: *See*—
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Laakso, Thomas M., and J. L. R. Williams, to Eastman Kodak Co. Condensation products of polyvinylketones with hydrazides containing quaternary nitrogen groups. 3,096,305, 7–2–63, Cl. 260—65.

Laboratory for Electronics, Inc.: *See*—
Peacock, Wendell C. 3,095,740.

Laboratory Furniture Co.: *See*—
Liptay, John M. 3,095,836.

Labusslere, Andre J., to Societe Anonyme des Ateliers d'Aviation Lou's Breguet. Aerodynes having a slipstream-assisted wing system. 3,096,043, 7–2–63, Cl. 244—12.

Lager, Samuel E. Water marking device. 3,095,851, 7–2–63, Cl. 116—124.

Lahr, Gilbert M., to General Motors Corp. Mounting and lubrication supply means for engine valve actuating mechanism. 3,095,848, 7–2–63, Cl. 184—6.

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Gerow, Clarence C., Bottcher, Molsen, and Landell. 3,095,579.

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Lane, Eugene W. Combine mounted grain dryer. 3,096,165, 7–2–63, Cl. 34—183.

Langdon, William K., and M. Kokoruds, to Wyandotte Chemicals Corp. Chlorination of alkylpyrazines. 3,096,331, 7–2–63, Cl. 260—250.

Lange, Guenter, G. Leutzel, H. G. Wippel, H. Weidinger, and J. Krans, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Water-insoluble monoazo and disazo 1,3,4-thiadiazole dyestuffs. 3,096,320, 7–2–63, Cl. 260—158.

Lange, Karl H., to Balda-Kamerwerk Rudolf Gruter, Kommanditgesellschaft. Camera accessory shoe arrangement. 3,095,792, 7–2–63, Cl. 95—11.

Langfeldt, Rolf, to Licentia Patent-Verwaltungs G.m.b.H. Cargo handling apparatus. 3,095,976, 7–2–63, Cl. 212—8.

Lapof, Ray C., to Bar-Kay Products, Inc. Transfer device. 3,095,797, 7–2–63, Cl. 95—89.

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Levering, Dewey R., to United States of America, Navy. Chlorination of nitroethane. 3,096,378, 7-2-63, Cl. 260—644.

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Lichtenstein, Immanuel: *See*—
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Newcomer, Jack S., Linder, and Smith. 3,096,367.

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Lindkvist, Gustav A., to Link-Belt Co. Article handling equipment. 3,095,984, 7-2-63, Cl. 214—1.

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Lindsay, Graham E., and S. J. J. Waldron, to United Kingdom Atomic Energy Authority. Arresting devices for falling bodies. 3,096,268, 7-2-63, Cl. 204—193.2.

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Lipare, Frank. Elastic cradle grip for footwear. 3,095,656, 7-2-63, Cl. 36—2.5.

Lipinski, Henry S., to United States of America, Army. Propellant container, plastic impregnated glass. 3,095,813, 7-2-63, Cl. 102—43.

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Stratos, Peter G. 3,096,448.
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Logetronics, Inc.: *See*—
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Lomask, Morton R., to United States of America, Navy. Electronic filter. 3,096,488, 7-2-63, Cl. 330—69.

Long, James D., to United States of America, Navy. Circuit for maintaining a predetermined phase relationship between two voltage waves. 3,096,460, 7-2-63, Cl. 315—28.

Long, John B., to Marmon-Herrington Co., Inc. Boring type continuous miner. 3,096,082. 7-2-63, Cl. 262—9.

Long, Leonard D. Apparatus for making pre-cast cored building blocks. 3,095,629, 7-2-63, Cl. 25—45.

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Loving, Frank A.: *See*—
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Luedicke, Alexander H., Jr., to Applied Power Industries, Inc. Tram gage. 3,095,651, 7-2-63, Cl. 33—158.

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MacMaster, George H.: *See*—
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Maestas, Thomas E. Electrostatic separator. 3,096,277, 7-2-63, Cl. 209—20.

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Claridge, George H., and Maindonald. 3,096,068.

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Mallory, P. R., & Co., Inc.: *See*—
Clune, Richard R. 3,096,217.

Malthaner, William A.: *See*—
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Mangis, Elmer F. Stone facing machine cutter head. 3,095,868, 7-2-63, Cl. 125—23.

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Marchant, Paul A.: *See*—
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Marie, Georges R. P., to Bell Telephone Laboratories, Inc. Microwave frequency converter. 3,096,474, 7-2-63, Cl. 321—69.

Marino, Nicholas A. Free motion girdle. 3,095,881, 7-2-63, Cl. 128—552.

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Martin, Jules. Emergency water storage tank system for use in buildings. 3,095,893, 7-2-63, Cl. 137—216.

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Martin, William E.: *See*—
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Massacrier, Jean-Marie F. Plugging gun of the repeating type. 3,095,572, 7-2-63, Cl. 1—44.8.

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Mawby, David H.: *See*—
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Maydl, Paul. Structural composition material and process for making same. 3,096,188, 7-2-63, Cl. 106—97.

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Mayer, H. J., & Sons Co., Inc.: *See*—
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Mayes, Fred M.: *See*—
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Mayon, Leon, and D. P. Schnoorr, to Burroughs Corp. Control apparatus. 3,095,754, 7-2-63, Cl. 74—471.

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McConnell, Richard L., and H. W. Coover, Jr., to Eastman Kodak Co. Process for preparing a-monoolefinic hydrocarbons. 3,096,385, 7-2-63, Cl. 260—683.15.

McConnell, William M., to Taylor-Wilson Mfg. Co. Pipe tester with automatic screw-off stations. 3,095,729, 7-2-63, Cl. 73—49.1.

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McCulloch Corp.: *See*—
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McEvoy Co.: *See*—
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Harling, Donald W. 3,096,080.

McGuire, Jack C., and A. J. Speegle, to Halliburton Co. Casing heads for oil wells. 3,095,929, 7-2-63, Cl. 166—97.

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McKnight, Harry F., and J. Noble. Lock and magnetic release device. 3,095,723, 7-2-63, Cl. 70—69.

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McNew, Paul D.: *See*—
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Midgley Shoe Systems, Inc.: *See*—
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Minnesota Mining and Mfg. Co.: *See*—
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Baker, Joseph W., Chupp, and Newallis. 3,096,238.
Campbell, John R., and Campaigne. 3,096,375.
D'Amico, John J. 3,096,236.
Gamrath, Harry R., and Raether. 3,096,364.
Gruber, Bernard A. 3,096,149.
Hindle, Walter H. 3,096,139.
Prill, Erhard J. 3,096,381.
Schauer, Paul J., and Weston. 3,096,291.

Moog Servocontrols, Inc.: *See*—
Kolm, Harvard B., Jr. 3,095,906.

Moore, David P. Fiber transfer devices. 3,095,614, 7-2-63, Cl. 19—99.

Moore, Fred J., Sr.: *See*—
Hudson, Milton W., and Moore. 3,096,499.

Moore, James W.: *See*—
Gaubatz, Arthur W., and Moore. 3,095,695.

Moore Products Co.: *See*—
Clements, Thomas W. 3,095,891.

Morris, James E., to Molins Machine Co. Ltd. Continuous rod cigarette-making machines. 3,095,883, 7-2-63, Cl 131—84.

Morris, John M., to Chain Belt Co. Amplitude control of resonant vibration exciter. 3,095,747, 7-2-63, Cl. 74—26.

Morris, Philip, Inc.: *See*—
Hind, John D., and Crayton. 3,095,882.
Stahl, Gerald. 3,095,645.
Stahl, Gerald, and Johnson. 3,095,965.

Morrison, Albert R., and J. A. Apellaniz, to Owens-Corning Fiberglass Corp. Heat setting of binder of fibrous masses. 3,096,161, 7-2-63, Cl. 34—1.

Morrison Co., The: *See*—
Morrison, George F., and Frentzel. 3,095,928.

Morrison, George F., and H. C. Frentzel, to The Morrison Co. Well system. 3,095,928, 7-2-63, Cl. 166—75.

Morrison, Willard L., to Liquefreeze Co., Inc. Means for moving shipper containers off of and onto a road vehicle. 3,095,989, 7-2-63, Cl. 214—85.

Morrison, Willard L., to Liquefreeze Co., Inc. Method of chilling, storing and shipping perishable materials. 3,096,626, 7-2-63, Cl. 62—60.

Morrison, William A., to Reeves Soundcraft Corp. Container and reel for tapes. 3,095,969, 7-2-63, Cl. 206—53.

Moss, Charles E.: *See*—
Cheeseman, Ian C., and Moss. 3,096,041.

Motozaki, Shinichi, T. Tsunoda, S. Okumura, R. Tsugawa, T. Matsui, A. Kitai, and N. Miyachi, to Ajinomoto Kabushiki Kaisha and Sanraku Shuzo Kabushiki Kaisha. Process for producing L-glutamic acid. 3,096,252, 7-2-63, Cl. 195—47.

Mowry, Lorenz J., and H. H. Jenkins, to Gregory Industries, Inc. Welding apparatus and process. 3,096,429, 7-2-63, Cl. 219—98.

Munsell, David D., to Cabot Corp. Process and apparatus for extruding and curing polymeric compositions. 3,095,608, 7-2-63, Cl. 18—14.

Muray, Julius J., to High Voltage Engineering Corp. Means for pulsing an ion beam. 3,096,437, 7-2-63, Cl. 250—41.9.

Murphy, Demery A., to Armco Steel Corp. Dual passage rotary swivel. 3,096,103, 7-2-63, Cl. 285—134.

Myers, Arnold D.: *See*—
Nyquist, Arthur S., and Myers. 3,096,208.

Myhre, Curth, to United States of America, Atomic Energy Commission. Ball lock coupling. 3,096,111, 7-2-63, Cl. 287—58.

Nabreski, Benjamin D., and A. L. Staudte, to United States of America, Army. Setback actuated timing device. 3,096,816, 7-2-63, Cl. 102—84.

Nail, Nelson R., to Eastman Kodak Co. Two-step electrophotography. 3,096,260, 7-2-63, Cl. 204—18.

Nalco Chemical Co.: *See*—
Berner, Roland A. 3,095,862.

National Broach & Machine Co.: *See*—
Davis, Kenneth J. 3,095,980.
Skalsey, Lily G. 3,095,782.

National Lead Co.: *See*—
Horrigan, Robert V. 3,096,143.

National Research Development Corp.: *See*—
Gabor, Dennis, and Hill. 3,096,398.

National Steel Corp.: *See*—
Wells, Arthur F., Jr., Dolphin, and Gobert. 3,096,214.

Necchi Societa per Azioni: *See*—
Bono, Luigi. 3,095,752.

Neckrich, Max. Shoe assembling and locating attachment. 3,095,590, 7-2-63, Cl. 12—141.

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Nelson, Herbert, to Radio Corp. of America. Semiconductor devices. 3,096,219, 7-2-63, Cl. 148—1.5.

Nelson, William B.: *See*—
Dalrymple, Robert S., and Nelson. 3,096,220.

Nesin, William Z. Aerosol valve permitting fast injection. 3,096,003, 7-2-63, Cl. 222—394.

Newallis, Peter E.: *See*—
Baker, Joseph W., Chupp, and Newallis. 3,096,238.

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Newcomer, Jack S., J. Linder, and K. J. Smith, to Hooker Chemical Corp. Preparation of a mixture of 1 part 2,3,6- and 3 parts 2,3,5-trichlorobenzoic acids. 3,096,967, 7-2-63, Cl. 260—515.

Newhall, Donald H., to Harwood Engineering Co. Poppet valve. 3,095,900, 7-2-63, Cl. 137—516.25.

Newland, Gordon C., and J. H. Chaudet, to Eastman Kodak Co. Heat and light stable polypropylene compositions. 3,096,302, 7-2-63, Cl. 260—45.95.

Newman, Earl C. Electrical circuit controllers. 3,096,414, 7-2-63, Cl. 200—113.

Newsom, William S., Jr., to International Minerals & Chemical Corp. Novel slurry fertiliser. 3,096,170, 7-2-63, Cl. 71—64.

Nichols, William O. Trolling spinner. 3,095,664, 7-2-63, Cl. 43—42.19.

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Nischk, Gunther, H. Holtschmidt, W. Bongard, and O. Bayer, ½ to Farbenfabriken Bayer Aktiengesellschaft and ½ to Mobay Chemical Co. 3,096,296, 7-2-63, Cl. 260—2.

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Nobles, Wilbur D., and P. E. Cardillo, to Worthington Corp. Flow control means for a pumping station. 3,095,618, 7-2-63, Cl. 103—11.

Noddin, George A.: *See*—
Brockway, William R., Loving and Noddin. 3,095,815.

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Nolt, Edwin B., to Sperry Rand Corp. Hay baler. 3,095,802, 7-2-63, Cl. 100—19.

Norris, Alan. Method and apparatus for extracting heat from the hot exhaust gases of internal combustion engines. 3,095,861, 7-2-63, Cl. 122—7.

Norsk Lettmetall A/S: *See*—
Eng, Knut. 3,095,660.

North American Philips Co., Inc.: *See*—
Moerkens, Josef C. 3,096,465.
Rabenau, Albrecht K. H. T. 3,096,151.
Rabenau, Albrecht K. H. T. 3,096,287.

Norton, Douglas N., and M. C. McKinley. Small interest to various assignees. Conduit forming machine. 3,095,628, 7-2-63, Cl. 25—36.

Norwich Pharmacal Co.: *See*—
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Nygren, Otto J. Garbage can cover holder. 3,096,063, 7-2-63, Cl. 248—292.

Nyquist, Arthur S., and A. D. Myers, to American Cyanamid Co. Coating molded aminoplast articles with polyureas. 3,096,208, 7-2-63, Cl. 117—138.8.

O'Connell, Thomas F. Seat device for a shower-bath stall. 3,096,087, 7-2-63, Cl. 248—436.

Odell, Robert. Spreader and hitch therefor. 3,095,788, 7-2-63, Cl. 94—44.

Odenwald, Alfred. Small-type thermostat for preventing overheating, provided with a bimetal disk and a conductor disk in a lenticular casing. 3,096,417, 7-2-63, Cl. 200—138.

Odenwald, Alfred. Small-type thermostat for preventing overheating provided with a bimetal disk in a lenticular casing and with beam-like profiled bracing means on said casing. 3,096,418, 7-2-63, Cl. 200—138.

Oishei, John R., and M. Bitzer, to Trico Products Corp. Windshield cleaning apparatus. 3,095,596, 7-2-63, Cl. 15—250.02.

Okumura, Shinji: *See*—
Motozaki, Shinichi, Tsunoda, Okumura, Tsugawa, Matsui, Kitai, and Miyachi. 3,096,252.

Olah, George A., and S. J. Kuhn, to The Dow Chemical Co. Phosphorisocyanatidic difluoride. 3,096,371, 7-2-63, Cl. 260—543.

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Pansy, Felix E., and Dutcher. 3,096,243.
Poulos, Nicholas A. 3,096,258.

Olympia Werke AG: *See*—
Petermann, Johannes H. and N. A. 3,096,521.

O'Malley, Donald R.: *See*—
Brown, Paul M., and O'Malley. 3,096,157.

Ono, George Y., to Thompson Ramo Wooldridge Inc. Drive coupling. 3,095,712, 7-2-63, Cl. 64—3.

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Orwin, Olaf J. B., to Fisher & Ludlow Ltd. Overload clutch or torque limiting device. 3,095,935, 7-2-63, Cl. 192—56.

Osipow, Lloyd I.: *See*—
Boe, Carsten F., and Osipow. 3,096,001.

Osterhoudt, Harry, to Perfection Automotive Products Corp. Helper spring assembly for shock absorbers. 3,096,084, 7-2-63, Cl. 267—8.

Ott, Heinrich: *See*—
Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,096,244.
Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,096,374.

Outlook Engineering Corp.: *See*—
Young, Clinton J. T. 3,096,024.

Overhead Door Corp.: *See*—
Frazier, Russel B. 3,095,922.

Owens-Corning Fiberglas Corp.: *See*—
Lockwood, Paul A. 3,095,642.
Morrison, Albert R., and Apellaniz. 3,096,161.

Owens, Walter J., to Her Majesty the Queen in right of Canada as represented by the Minister of National Defence. Independent torsion bar suspension unit. 3,096,085, 7-2-63, Cl. 267—57.

Oyanagi, Yasuji: *See*—
Fujii, Kozo, and Oyanagi. 3,096,298.

Pajac, Theodore P., to General Grid Corp. Low density construction material. 3,096,053, 7-2-63, Cl. 244—133.

Palmer, Everett S., Jr., to Phillips Petroleum Co. Control of stripping still and dephlegmator operation. 3,096,274, 7-2-63, Cl. 208—341.

Paltier Corp., The: *See*—
Skubic, Leroy F. 3,095,837.

Paniagua, Juan G. Combination bottle cap seal and opener. 3,095,991, 7-2-63, Cl. 215—40.

Pansy, Felix E., and J. D. Dutcher, to Olin Mathieson Chemical Corp. Perlimycin. 3,096,243, 7-2-63, Cl. 167—65.

Paramount Pictures Corp.: *See*—
Sanford, Emil E. 3,096,396.

Parker, William S., to Vickers-Armstrongs (Engineers) Ltd. Riding ring for rotary cylinders. 3,096,127, 7-2-63, Cl. 308—36.

Parmakian, George, to Riley Stoker Corp. Steam generating unit. 3,095,863, 7-2-63, Cl. 122—479.

Parratt, Noel J.: *See*—
Gorden, James, Evans, and Parratt. 3,096,155.

Parshall, Bert B.: *See*—
Cliff, George J., Parshall, Braun, Feldkamp, and Hager. 3,095,678.

Pasquine, Tony A. Combination rake and carrier. 3,095,682, 7-2-63, Cl. 56—400.12.

Patalon, Francis R.: *See*—
Gammeter, Harry F., Patalon, and Katterle. 3,095,809.

Patriquin, George P., and N. R. Adlert, to Independent Lock Co. Knob construction. 3,096,115, 7-2-63, Cl. 292—347.

Paul, Gerhard: *See*—
Woollenweber, William E., Hardy, and Paul. 3,096,126.

Paulos, Harry, and R. G. Blauvelt, to Diebold, Inc. Forced entry resistant security file construction. 3,095,838, 7-2-63, Cl. 109—80.

Paul's of Hawaii, Inc.: *See*—
Kiyuna, Paul C. 3,095,867.

Peabody, Glenn R., and L. S. Tyma, Jr., to Miehle-Goss-Dexter, Inc. Tension lockup for thin printing plates. 3,095,811, 7-2-63, Cl. 101—415.1.

Peacock, Wendell C., to Laboratory for Electronics, Inc. Mass flow measurement. 3,095,740, 7-2-63, Cl. 73—204.

Pearson, Norman E. H., to Associated Electrical Industries Ltd. Thermionic valves. 3,096,459, 7-2-63, Cl. 313—241.

Peiffer, Norman H., and E. S. Proctor, to Kaman Aircraft Corp. Blade pitch control mechanism for a helicopter. 3,095,931, 7-2-63, Cl. 170—160.25.

Pelishek, Roy A. Comfort index indicating means. 3,095,742, 7-2-63, Cl. 73—336.

Pendleton, David W., and M. Sussman. Transparent electronic display systems. 3,096,516, 7-2-63, Cl. 343—11.

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Pennstrom, Robert G., to Union Carbide Corp. Balanced valve and seal construction. 3,095,897, 7-2-63, Cl. 137—454.2.

Péras, Lucien, to Regie Nationale des Usines Renault. Foundry machines. 3,095,620, 7-2-63, Cl. 22—64.

Péras, Lucien, to Regie Nationale des Usines Renault. Change-speed gears for engine and transmission mechanism units. 3,095,764, 7-2-63, Cl. 74—763.

Perdue, Jack, and C. B. Vere-Neilson, to Electro-Hydraulics Ltd. Aircraft undercarriage. 3,096,051, 7-2-63, Cl. 244—100.

Perfection Automotive Products Corp.: *See*—
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Perini, Anthony R. Collapsible book rack. 3,095,974, 7-2-63, Cl. 211—43.

Perla, Martin R., to The Singer Mfg. Co. Two speed drive for sewing machines. 3,095,765, 7-2-63, Cl. 74—785.

Peter, Eugenie. Convertible tables. 3,095,833, 7-2-63, Cl. 108—3.

Peterkin, Melvin E., and S. S. Kurtz, Jr., to Sun Oil Co. Artificial board and process for preparing same. 3,096,297, 7-2-63, Cl. 260—9.

Petermann, Johannes H. and N. A., to Olympia Werke AG. Magnetic data recording apparatus. 3,096,521, 7-2-63, Cl. 346—74.

Petermann, Nora A.: *See*—
Petermann, Johannes H. and N. A. 3,096,521.

Peters, Clifford M.: *See*—
Brown, Norman F., and Peters. 3,095,819.

Peterson, Don L.: *See*—
Stivers, David A., and Peterson. 3,096,314.

Peterson, Edwin F. Method and means for sealing adjacent coacting closure surfaces of cavity contouring structures. 3,095,619, 7-2-63, Cl. 22—10.

Peterson, Kenneth L., to United Shoe Machinery Corp. Fastener separating and distributing mechanisms. 3,095,999, 7-2-63, Cl. 221—233.

Petrolite Corp.: *See*—
De Groote, Melvin, and K.T. Shen. 3,096,190.
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Pfohl, Louis H., to Design Center, Inc. Package. 3,095,966, 7-2-63, Cl. 206—45.31.

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Philco Corp.: *See*—
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Williams, Richard A. 3,096,259.

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Ackaret, Robert L. 3,095,604.
Bolen, Kenneth E. 3,096,360.
Coale, Harold D. 3,096,146.
Hann, Paul D. 3,096,363.
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Kindred, Raymond L., and Fourroux. 3,095,728.
Kline, Marvin E., and Reilly. 3,095,888.
Lupfer, Dale E. 3,095,887.
Marx, John W. 3,095,925.
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Pitchford, Armin C. 3,096,192.
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Scott, John N., Jr. 3,095,606.

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Pick, William J. Means for analyzing involute gear profiles. 3,095,652, 7-2-63, Cl. 33—179.5.

Pihl, George E., to Acton Laboratories, Inc. Self-calibrating variable range phase meter. 3,096,480, 7-2-63, Cl. 324—83.

Pitchford, Armin C., to Phillips Petroleum Co. Asphalt amine sulfonate antistripping agent for asphalt. 3,096,191, 7-2-63, Cl. 106—275.

Pitchford, Armin C., to Phillips Petroleum Co. Compositions having reduced stripping tendencies. 3,096,192, 7-2-63, Cl. 106—281.

Pittman, Edgar H., to Deering Milliken Research Corp. Methods and apparatus for producing intermittently elastisized yarns. 3,095,630, 7-2-63, Cl. 28—1.

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Plapper, Jürgen, and G. Dieckelmann, to Böhme Fettchemie G.m.b.H. Novel reaction products of sulfuric acid and epoxides. 3,096,357, 7-2-63, Cl. 260—400.

Plummer, Walter A. Combined jacket and suspension means for conductors and the like. 3,095,908, 7-2-63, Cl. 138—107.

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Arsandaux, Louis A. 3,095,917.

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Polsin, Lester A., to Western Metal Specialty Division, Western Industries Inc. Flush-type door lock. 3,096,113, 7-2-63, Cl. 292—147.

Ponson, Lloyd J., and R. H. Becker, to American Cyanamid Co. Plaiting apparatus. 3,095,615, 7-2-63, Cl. 19—163.

Porter-Cable Machine Co., The: *See*—
Steiljes, Charles R., Frostad, and Leach. 3,095,748.

Porter, H. K., Co., Inc.: *See*—
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Poulos, Nicholas A., to Olin Mathieson Chemical Corp. Method of operating an electrolytic analysis cell. 3,096,258, 7-2-63, Cl. 204—1.

Power Jets (Research Development) Ltd.: *See*—
Cheeseman, Ian C., and Moss. 3,096,041.

Pratt, John N., to Iron Fireman-Webster, Inc. Air conditioning system. 3,095,799, 7-2-63, Cl. 98—37.

Pratt, Leslie J., and R. Brien, to Rolls-Royce Ltd. Bladed rotors of machines such as gas turbines. 3,096,074, 7-2-63 Cl. 253—77.

Precision Valve Corp.: *See*—
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Prentice, George D., to A. F. Klinzing Co., Inc. Animal watering fountain. 3,095,856, 7-2-63, Cl. 119—75.

Preston, James N. Super-charged jet torque and propulsion reverse reaction engine. 3,095,703, 7-2-63, Cl. 60—39.35.

Price, Raymond M.: *See*—
Rittenhouse, William E., Briggs, and Price. 3,096,300.

Prieto, Fernando G. Jet sustained and propelled aircraft. 3,096,042, 7-2-63, Cl. 244—12.2.

Prigal, Samuel J. Emulsion composition. 3,096,249, 7-2-63, Cl. 167—82.

Prill, Erhard J., to Monsanto Chemical Co. Manufacture of diarylethanes. 3,096,381, 7-2-63, Cl. 260—668.

Prill, Erhard J.: *See*—
Smith, Franklin D., Prill, Wygant, and Kosmin. 3,096,366.

Prochaska, Robert J.: *See*—
Caprino, Joseph C., and Prochaska. 3,096,303.

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Propst, Robert L., to Herman Miller, Inc. Connector. 3,095,625, 7-2-63, Cl. 24—217.

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Raab, Alexander. Seed starter and plant propagator. 3,095,670, 7-2-63 Cl. 47—17.

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Demmy, Robert C. 3,096,458.
Gallup, John L. 3,096,184.
Herzog, Gerald B. 3,096,445.
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Thomas, Lucius P., Jr. 3,096,399.

Radov, Samuel J., to D. F. Krumme, Jr. Welder's hood. 3,095,575, 7-2-63, Cl. 2—8.

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Ramser, Walter O., to Clevite Corp. Apparatus for manufacture of alloyed semiconductor devices. 3,095,622, 7-2-63, Cl. 22—75.

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Ransom, James R., to The Bendix Corp. Frequency divider system with preset means to select countdown cycle. 3,096,483, 7-2-63, Cl. 328—48.

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Rappaport, Bernardo: *See*—
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Rappaport, Maximiliano and B., and R. Szuehman. Method and equipment for restoring paper paste web in paper making machinery and similar foils in other machines. 3,096,233, 7-2-63, Cl. 162—193.

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Freeman, Howard G., and Rawatron. 3,095,898.

Ray, Norman L. Press for amalgams and the like. 3,095,648, 7-2-63, Cl. 32—40.

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Haagensen, Duane B. 3,095,880.
Keon, Edward F. 3,096,083.
McLeod, Willard W., Jr. 3,096,515.
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Redenbaugh, William A., ½ to G. W. Arnold. Method and mechanism for separation of solutes from solvents. 3,096,-255, 7-2-63, Cl. 202—51.

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Deady, Emmett F., Reed, and Houghton. 3,095,910.

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Reilly, Robert C.: *See*—
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Reinecke, Marvin E., and D. V. Eckert, to Phillips Petroleum Co. Fluid-actuated valve. 3,095,746, 7-2-63, Cl. 73—422.

Reinhart, William A., to Boeing Airplane Co. Noise suppression nozzles with thrust reversal provision for jet engines. 3,095,697, 7-2-63, Cl. 60—35.54.

Reitfort, Henry A., to International Business Machines Corp. Input out apparatus. 3,096,508, 7-2-63, Cl. 340—172.5.

Renier, J. L.: *See*—
Soeterbroek, Johannes C., and Renier. 3,096,369.

Research Corp.: *See*—
Case, Leslie C. 3,096,344.

Reynolds Metals Co.: *See*—
Bryant, Edward T., and McNeally. 3,096,012.
Staley John. 3,096,000.
Thomas, Jesse B. 3,095,843.

Reynolds, R. T., Tobacco Co.: *See*—
Giles, Jesse A., and Mims. 3,096,346.

Rexall Drug & Chemical Co.: *See*—
Rudzki, Henryk S. 3,096,248.

Rheinmetall, G.m.b.H., Firma: *See*—
Bartels, Erich. 3,095,781.

Rhodes, Allen F., to McEvoy Co. Flange-connected well head apparatus. 3,095,927, 7-2-63, Cl. 166—75.

Ribka, Joachim, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius und Bruning. Water-insoluble monoazo-dye-stuffs. 3,096,321, 7-2-63, Cl. 260—193.

Richards, Dwight: *See*—
Ferguson, John E., and Richards. 3,095,988.

Richins, David A. Brakelight system. 3,096,505, 7-2-63, Cl. 340—69.

Richmond, Nelson R.: *See*—
Hendrickson, Harold S., and Richmond. 3,096,045.

Richter, Carl F., to Alfred Gauthier, G.m.b.H. Photographic camera having a built-in exposure meter. 3,095,791, 7-2-63, Cl. 95—10.

Ricketts, James M.: *See*—
Amann, Charles A., Collman, Haushalter, Ricketts, Turunen, and Vickers. 3,095,700.

Ridge Tool Co.: *See*—
Ingwer, Carl H., Wright, and Weibel. 3,095,772.

Riegel Paper Corp.: *See*—
Whitman, Robert M. 3,096,229.

Riley Stoker Corp.: *See*—
Miller, Earle C. 3,095,864.
Parmakian, George. 3,095,863.

Ringold, Howard J.: *See*—
Iriarte, Jose, Djerassi, and Ringold. 3,096,350.

Ringold, Howard J., and G. Rosenkranz, to Syntex Corp. 4,4-dialkyl androstanes. 3,096,351, 7-2-63, Cl. 260—397.4.

Risley, Roger E., to Dresser Industries, Inc. Split arrester having circumferentially extending grain structure for welded pipelines having longitudinally extending grain structure. 3,096,105, 7-2-63, Cl. 285—286.

Rittenhouse, William E., R. L. Briggs, and R. M. Price, to The Dow Chemical Co. Polymeric compositions of monovinyl aromatic hydrocarbons and synthetic rubber containing high molecular weight polyethylene glycols or such glycols. 3,096,300, 7-2-63, Cl. 260—31.4.

Rizzo, Harry F.: *See*—
Weber, Berthold C., and Rizzo. 3,096,187.

Robbins, Albert L. Handle lock for stapling devices. 3,095,-574, 7-2-63, Cl. 1—49.

Roberts, Cecil P., and F. V. Hildebrandt, to Anchor Hocking Glass Corp. Cap aligning mechanism. 3,095,957, 7-2-63, Cl. 193—43.

Roberts, James E.: *See*—
Butterworth, Arnold W., and Roberts. 3,095,640.

Roche, Andre, P. Grancher, J. Gajac, and R. Becanne, to French State, Minister of Armies (Powder Department). Process for the recovery of pentaerythrite. 3,096,377, 7-2-63, Cl. 260—637.

Rockwell Mfg. Co.: *See*—
Born, Lester R., Jr., and Weikart. 3,095,673.
Wolfensperger, Adolph. 3,096,070.

Rockwell-Standard Corp.: *See*—
Bixby, Leo A. 3,095,758.
Scheel, Walther F. 3,095,950.

Roddy, John J., to Skinner Precision Industries, Inc. Indexing chuck. 3,096,097, 7-2-63, Cl. 279—5.

Rogers, Austin S., to Houston Oil Field Material Co., Inc. Stuck pipe locator. 3,095,736, 7-2-63, Cl. 73—151.

Rogers, Bobo B. Ring rail latch for spinning frames and the like. 3,095,684, 7-2-63, Cl. 57—54.

Rogers, Bobo B. Traveler cleaner. 3,095,685, 7-2-63, Cl. 57—57.

Röhl, Georg. Stripping device for bobbins. 3,095,631, 7-2-63, Cl. 28—20.

Rohland, Werner: *See*—
Tartter, Arnold, Rohland, Ludsteck, and Schroedel. 3,096,340.

Rohs, Henry L.: *See*—
Day, Winterton U., Donnelly, and Rohs. 3,096,228.

Rolls-Royce Ltd.: *See*—
Bauer, Stefan G. 3,096,264.
Pratt, Leslie J., and Brien. 3,096,074.

Rood, Robert M., and P. Villers, to General Electric Co. Article and method for joining dissimilar materials. 3,095,-951, 7-2-63, Cl. 189—36.

Rose, Robert G.: *See*—
Wlands, Clarence L., Cline, and Rose. 3,096,102.

Rose, Robert L. Fluid flow control valve. 3,096,069, 7-2-63, Cl. 251—205.

Rosenberg, Harvey: *See*—
Chow, Chao K., and Rosenberg. 3,096,506.

Rosenberg, Milton, and W. R. Johnston, to Ampex Corp. Magnetic-core counter. 3,096,509, 7-2-63, Cl. 340—174.

Rosenheim, Donald E.: *See*—
Axelrod, Martin S., and Rosenheim. 3,096,450.

Rosenkrans, George: *See*—
Ringold, Howard J., and Rosenkranz. 3,096,351.

Rosenleaf, John R., to The J. B. Ehrsam & Sons Mfg. Co. Blender belt. 3,096,212, 7-2-63, Cl. 118—111.

Ross, Anthony J. Float valve. 3,095,896, 7-2-63, Cl. 137—448.

Ross, Gerald F.: *See*—
Ball, Joseph L., Edmonds, and Ross. 3,096,491.

Rossen, Hans A. Cheese mould and insert for such cheese mould. 3,095,647, 7-2-63, Cl. 31—45.

Rototone, Inc.: *See*—
Santi, Harris H. 3,095,940.

Rouge, Leon J. D.: *See*—
Gaule, Gerhart K., Kedesdy, and Rouge. 3,096,158.

Roussos, Georges, to Anstalt fur Technische Entwicklung und Verwertung. Casing for the production of a shrinkage funnel inhibitor coating in an ingot or like mold. 3,095,618, 7-2-63, Cl. 22—9.

Rowan, Robert L. Surgical packing. 3,095,877, 7-2-63, Cl. 128—260.

Ruberoid Co., The: *See*—
Bettoli, Phillip S., and Klimas. 3,096,196.

Ruckelshaus, John G. Mass production of resistors. 3,095,-636, 7-2-63, Cl. 29—155.62.

Rudzki, Henryk S., to Rexall Drug & Chemical Co. Method of making an encapsulated tablet. 3,096,248, 7-2-63, Cl. 167—82.

Rumble, Roy W. Combustion-engine exhaust systems. 3,095,-696, 7-2-63, Cl. 60—35.6.

Runken, Gerd, to ACF Industries, Inc. Lading bracing arrangement. 3,095,830, 7-2-63, Cl. 105—369.

Runyon, John P.: *See*—
James, Dennis B., Malthaner, and Runyon. 3,096,403.

Rush, George E., to Houston Oil Field Material Co., Inc. Apparatus for recovering objects in a well. 3,095,926, 7-2-63, Cl. 166—55.

Rusoff, Louis L., to Commercial Solvents Corp. Process for the control of bloat in ruminants with tris(hydroxy-methyl) aminomethane. 3,096,240, 7-2-63, Cl. 167—53.

Russell, F. L., Corp.: *See*—
Wlands, Clarence L., Cline, and Rose. 3,096,102.

Russell, James S., to Steel Heddle Mfg. Co. Balloon control ring. 3,095,688, 7-2-63, Cl. 57—106.

Ruud Mfg. Co.: *See*—
Lintvedt, Halvard. 3,096,021.

SCM Corp.: *See*—
Bradbury, Wilburn F. 3,096,015.

S-F-D Laboratories, Inc.: *See*—
Feinstein, Joseph. 3,096,462.

Sable, Donald E., Piggy-back transportation system. 3,095,-987, 7-2-63, Cl. 214—38.

Safege-Transport, Societe Anonyme: *See*—
Chadenson, Lucien. 3,095,827.

Sahlmann, Louis H., and J. J. Kane, to Zurn Industries, Inc. Seal and flexible gear type coupling. 3,095,713, 7-2-63, Cl. 64—9.

Salo, William G. Marine speedometers. 3,095,738, 7-2-63, Cl. 73—181.

Sanborn, Daniel S., and J. L. Byrne, to McCulloch Corp. Reentry rotary fluid pump. 3,095,820, 7-2-63, Cl. 103—96.

Sandberg, John W., and R. Balzer. Locking mechanism for telescoping members. 3,095,825, 7-2-63, Cl. 103—153.

Sanford, Emil E., to Paramount Pictures Corp. Color television reception with polyphase grid switching. 3,096,396, 7-2-63, Cl. 178—5.4.

Sanraku Shuzo Kabushiki Kaisha: *See*—
Motozaki, Shinichi, Tsunoda, and Okumura. 3,096,252.

Santi, Harris H., to Rototone, Inc. Acoustical vibrato apparatus. 3,095,940, 7-2-63, Cl. 181—27.

Santos, Frederico R. Tuning fork tone generator. 3,096,489, 7-2-63, Cl. 331—51.

Sarakauskas, Raymond V., M. C. Cox, and N. R. Thielke, to Union Carbide Corp. Ferri-magnetic spinel bodies. 3,096,288, 7-2-63, Cl. 252—62.5.

Sartorio, Aristide L. Hand-operated implement for picking on the plant olives and similar hanging down fruits. 3,095,681, 7-2-63, Cl. 56—339.

Sawyer, Lester T. Hair retaining comb and method of making the same. 3,095,610, 7-2-63, Cl. 18—34.

Scania-Vabis, Aktiebolaget: *See*—
Sjostrom, Sverker W. 3,095,733.

Schaefer, Robert H.: *See*—
Christenson, Howard W., Fisher, and Schaefer. 3,095,760.

Schaffert, Roland M., to International Business Machines Corp. Method for developing latent field images with liquid inks. 3,096,198, 7-2-63, Cl. 117—37.

Schauer, Paul J., and R. N. Weston, to Monsanto Chemical Co. Process of preparing dry granular compositions. 3,096,291, 7-2-63, Cl. 252—99.

Scheel, Walther F., to Rockwell-Standard Corp. Flat, tapered horseshoe type return spring and brake shoe assembly. 3,095,950, 7-2-63, Cl. 188—78.

Schillinger, Robert J. Tonometer. 3,095,731, 7-2-63, Cl. 73—80.

Schlage, Ernest L., to Schlage Lock Co. Pin tumbler cylinder key system. 3,095,726, 7-2-63, Cl. 70—383.

Schlage Lock Co.: *See*—
Lasier, David R. 3,095,599.
Schlage, Ernest L. 3,095,726.

Schlapfer, Hans, and J. Bindler, to J. R. Geigy, A.-G. Water soluble basic resins containing nitrogen. 3,096,309, 7-2-63, Cl. 260—67.5.

Schlotmann, Karl, to Maschinenfabrik Stromag G.m.b.H. Flexible couplings. 3,095,714, 7-2-63, Cl. 64—11.

Schlumberger Well Surveying Corp.: *See*—
Kisling, James W., III. 3,095,930.

Schmidlapp, Kurt, to Wintershall Aktiengesellschaft. Method and apparatus for purifying potassium salt-containing materials. 3,096,034, 7-2-63, Cl. 241—14.

Schmidlin, Frederick W., to Space Technology Laboratories, Inc. Information handling arrangement. 3,096,431, 7-2-63, Cl. 235—61.11.

Schmidt'sche Heissdampf-Gesellschaft: *See*—
Vollhardt, Fromut, and Gevecke. 3,095,839.

Schneider, Jos., & Co., Optische Werke: *See*—
Raab, Karlheins. 3,095,794.

Schnoorr, Donald P.: *See*—
Mayon, Leon, and Schnoorr. 3,095,754.

Schoch, Jacques J.: *See*—
Grosselinger, Robert A., and Schoch. 3,095,701.

Schreur, Clarence: *See*—
Spangler, Earl G., and Schreur. 3,096,204.

Schroedel, Rudolf: *See*—
Tartter, Arnold, Rohland, Ludsteck, and Schroedel. 3,096,340.

Schumacher, Fred J. Mitten holding, stretching and shaping device. 3,096,008, 7-2-63, Cl. 223—78.

Schuster, Curt: *See*—
Hartmark, Bjarne, Schuster, and Herrle. 3,096,142.

Schwartz, Jerry H.: *See*—
Harms, Victor, and Schwartz. 3,096,507.

Schweizerische Industrie-Gesellschaft: *See*—
Luginbuhl, Pierre. 3,095,960.

Schwitzer Corp.: *See*—
Woollenweber, William E., Jr., Hardy, and Paul. 3,096,126.

Scott, John N., Jr., to Phillips Petroleum Co. Method and apparatus for producing cold drawn monofilaments. 3,095,606, 7-2-63, Cl. 18—8.

Screen Products, Inc.: *See*—
Smith, Richard G., and McMahon. 3,096,281.

Scripto, Inc.: *See*—
Hanson, Frederick J., and Lovejoy. 3,095,860.

Searle, G. D., & Co.: *See*—
Baran, John S. 3,096,355.

Sears, Anthony. Centrifugal direct current electric generator. 3,096,454, 7-2-63, Cl. 310—178.

Sebok, Albert L.: *See*—
Daugherty, Frank Z., and Sebok. 3,096,451.

Selen, Günter, to GEA Luftkuhlergesellschaft Happel Gesellschaft m.b.H. & Co. K.G. Method and apparatus for the automatic production of tubes provided with transverse ribs especially for heat exchangers. 3,095,638, 7-2-63, Cl. 29—202.

Selen, Günter, to GEA Luftkuhlergesellschaft Happel Gesellschaft m.b.H. & Co. K.G. Apparatus for automatically threading transverse ribs on a tube, especially for heat exchangers. 3,095,639, 7-2-63, Cl. 29—202.

Selsmograph Service Corp.: *See*—
Wilcox, Stanley W., Hunt, and Fessnacht. 3,096,017.

Seldon, George E. Carburetor with orifice programming. 3,096,386, 7-2-63, Cl. 261—66.

Sellen, John M., Jr.: *See*—
Shelton, Haywood, and Sellen. 3,096,456.

Sellers, Donald F., to Ling-Temco-Vought, Inc. Combination hydraulic actuator and potentiometer. 3,096,497, 7-2-63, Cl. 338—83.

Seman, Colman J.: *See*—
Seman, David C., C. J. and F. P. 3,096,195.

Seman, David C., C. J. and F. P. Process for producing an ornamental wall facing. 3,096,195, 7-2-63, Cl. 117—8.5.

Seman, Frederick P.: *See*—
Seman, David C., C. J. and F. P. 3,096,195.

Semon, Lawrence J. Telephone switchboard patching unit. 3,096,404, 7-2-63, Cl. 179—42.

Sennewald, Kurt, A. Gotz, and G. Kallrath, to Knapsack-Griesheim Aktiengesellschaft. Manufacture of 1,2-dicyanocyclobutane. 3,096,360, 7-2-63, Cl. 260—464.

Servel, Inc.: *See*—
Warren, Robert A. 3,096,216.

Seward, Harold H. Electromechanical transducing system. 3,096,444, 7-2-63, Cl. 250—220.

Sexton, Arthur R., to The Dow Chemical Co. Method for the manufacture of N-methylene glycinonitrile. 3,096,362, 7-2-63, Cl. 260—465.5.

Shaback, Andrew J., to H. K. Porter Co., Inc. Transformer bushing construction. 3,096,392, 7-2-63, Cl. 174—31.

Shannon, John K. Method and apparatus for making storage battery plates. 3,095,633, 7-2-63, Cl. 29—2.

Shapiro, Paul, D. B. Sheldahl, and L. V. Collings, to Sinclair Research, Inc. Ammoniacal ammonium nitrate solution of reduced corrosive tendencies. 3,096,169, 7-2-63, Cl. 71—59.

Sharkey, Chester W. Portable furnace for thawing earth and the like. 3,095,870, 7-2-63, Cl. 126—271.2.

Sharples Corp., The: *See*—
Trotter, Herbert, Jr. 3,096,282.

Shavel, John, Jr., and M. von Strandtmann, to Warner-Lambert Pharmaceutical Co. 16α-methylyohimbone, process therefor and therapeutic compositions thereof. 3,096,245, 7-2-63, Cl. 167—67.

Shaw, Charles S.: *See*—
Franks, Gerald N., and Shaw. 3,096,276.

Shaw, Herbert S., and K. J. Bentley. Means to guide a conveyor belt around corners. 3,095,964, 7-2-63, Cl. 198—184.

Sheldahl, David B.: *See*—
Shapiro, Paul, Sheldahl, and Collings. 3,096,169.

Shell Oil Co.: *See*—
Vogel, Charles B. 3,096,502.

Shelton, Haywood, and J. M. Sellen, Jr., to Thompson Ramo Wooldridge Inc. Accelerating structure for a charged particle accelerating system. 3,096,456, 7-2-63, Cl. 313—63.

Shen, Kwan-Ting: *See*—
De Groote, Melvin, and Shen. 3,096,190.

Shepherd, Sydney A., and B. N. Woods, to The General Electric Co. Ltd. Devices for wrapping and removing wrapped connections. 3,095,913, 7-2-63, Cl. 140—124.

Sheppard, Chester S., and M. H. Wilt, to United States Steel Corp. 9-cyanoethyl dodecahydrocarbazole. 3,096,341, 7-2-63, Cl. 260—315.

Sherman, William R.: *See*—
De Groote, Melvin, and Sherman. 3,096,190.
Von Esch, Anne M., and Sherman. 3,096,882.

Shin-Etsu Chemical Co., Ltd.: *See*—
Ishizuka, Toshiso, Momoi, and Fujita. 3,096,304.

Shira, William S.: *See*—
Allen, Frank M., Archer, and Shira. 3,096,035.

Shockley, William. Method of making thin slices of semiconductive material. 3,096,262, 7-2-63, Cl. 204—143.

Shoemaker, Edwin J.: *See*—
Knabusch, Edward M., and Shoemaker. 3,096,121.

Short Brothers & Harland Ltd.: *See*—
Colhoun, Robert S. 3,095,784.
Flindt, Charles B. 3,095,783.
Hutchinson, Terence. 3,096,400.
Snowdon, Charles. 3,096,050.

Shreckhise, George W. Coops for chickens. 3,095,992, 7-2-63, Cl. 217—36.

Siddons, John R. Explosive-charge operated fastening tools. 3,095,573, 7-2-63, Cl. 1—44.5.

Sidi, Henri, to Heyden Newport Chemical Corp. Trialkylene diamine initiators for the polymerization of formaldehyde. 3,096,306, 7-2-63, Cl. 260—67.

Sidi, Henri, to Heyden Newport Chemical Corp. Dihydroxy diamine initiators for the polymerization of formaldehyde. 3,096,307, 7-2-63, Cl. 260—67.

Sidi, Henri, and R. T. Gottesman, to Heyden Newport Chemical Corp. Triaminophenol initiators for the polymerization of formaldehyde. 3,096,308, 7-2-63, Cl. 260—67.

Siegel, A., Handles, Inc.: *See*—
Siegel, Rubin. 3,095,641.

Siegel, Rubin, to A. Siegel Handles, Inc. Method for making a handle. 3,095,641, 7-2-63, Cl. 29—411.

Siemens-Electrogerate Aktiengesellschaft: *See*—
Hertel, Wilhelm. 3,095,885.

Signal-Stat Corp.: *See*—
Bruce, Donald 3., Dickson, and Koljonen. 3,096,026.

Silard, Bela A. Recorder for densitometer. 3,096,137, 7-2-63, Cl. 346—32.

Silberger, Marvin E. Overload device. 3,095,979, 7-2-63, Cl. 212—134.

Sinclair Research, Inc.: *See*—
Shapiro, Paul, Sheldahl, and Collings. 3,096,169.
Verdol, Joseph A. 3,096,286.

Sines, Francis J., to United States Steel Corp. Blast furnace tops. 3,095,986, 7-2-63, Cl. 214—35.

Singer, Franz: *See*—
Gebele, Kurt, and Singer. 3,095,790.

Singer Mfg. Co., The: *See*—
Perla, Martin R. 3,095,765.

Sippel, Hans: *See*—
Wunderlich, Gerhard, and Sippel. 3,096,432.

Sjostrom, Sverker W., to Aktiebolaget Scania-Vabis. Devices for automatic control of a machine in accordance with a predetermined program. 3,095,733, 7-2-63, Cl. 73—91.

Skalsey, Lily G., to National Broach & Machine Co. Automatic loading mechanism for gear finishing machines. 3,095,782, 7-2-63, Cl. 90—1.6.

Skinner Precision Industries, Inc.: *See*—
Roddy, John J. 3,096,097.

Skubic, Leroy F., to The Paltier Corp. Pallet tiering frame. 3,095,837, 7-2-63, Cl. 108—53.

Slate, Ralph L., to Halliburton Co. Method of preparing gelled aqueous fluid. 3,096,284, 7-2-63, Cl. 252—8.55.

Slater, Eben A., to Anchor Serum Co., Inc. Infectious rhinotracheitis virus attenuated in lamb cell tissue cultures. 3,096,247, 7-2-63, Cl. 167—78.

Sloneker, James H.: *See*—
Jeanes, Allene R., and Sloneker. 3,096,293.

Smirl, Richard L., to Borg-Warner Corp. Torsional vibrational dampener device. 3,095,716, 7-2-63, Cl. 64—27.

Smith-Corona Marchant Inc.: *See*—
Bradbury, Wilburn F. 3,096,015.

Smith, Dale R., to York Production Engineering Co., Inc. Cigar tipping machine. 3,095,884, 7-2-63, Cl. 131—88.

Smith, Daniel L., to Home Products, Inc. Removable spout for receptacle. 3,096,005, 7-2-63, Cl. 222—556.

Smith, Franklin D., E. J. Prill, J. C. Wygant, and M. Kosmin, to Henkel and Cie G.m.b.H. Preparation of terephthalic acid by carboxylation reactions. 3,096,366, 7-2-63, Cl. 260—515.

Smith, George A.: *See*—
Manger, Charles F., and Smith. 3,095,719.

Smith, Gus T., to Ace Engineering Co. Wear-resistant throat plate for knitting machine. 3,095,718, 7-2-63, Cl. 66—125.

Smith, Harold W., W. C. Duesterhoeft, Jr., F. X. Bostick, Jr., and W. Garner, Jr., to Dresser Industries, Inc. Electrical well logging apparatus and method in which the measuring current density is controlled a substantial distance from the borehole. 3,096,477, 7-2-63, Cl. 324—1.

Smith, John E.: *See*—
Ballard, Hyde W., and Smith. 3,095,841.

Smith, John W., to Eastman Kodak Co. Method for continuously opening crimped tow. 3,095,632, 7-2-63, Cl. 28—72.

Smith, Keith J.: *See*—
Newcomer, Jack S., Linder, and Smith. 3,096,367.

Smith, Richard G., and J. M. McMahon, to Screen Products, Inc. Filter construction. 3,096,281, 7-2-63, Cl. 210—487.

Smith, Stacy M. Drafting equipment receptacle. 3,095,835, 7-2-63, Cl. 108—25.

Smith Tool Co.: *See*—
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Smith, William A., Jr., and G. H. MacMaster, to Raytheon Co. Traveling wave tube utilizing a secondary emissive cathode. 3,096,457, 7-2-63, Cl. 313—103.

Smith, Willis D.: *See*—
Williams, Arthur T., and Smith. 3,095,634.

Snowdon, Charles, to Short Brothers & Harland Ltd. Control apparatus for jet lift aircraft. 3,096,050, 7-2-63, Cl. 244—77.

Societe Belge de l'Azote et des Produits Chimiques du Marly: *See*—
Binon, Fernand A. G., and Dechamps. 3,096,368.

Societe Generale de Constructions Electriques et Mecaniques: *See*—
Denlau, Andre J. A. 3,096,390.

Societe Rhodiaceta: *See*—
Lievre, Lucien. 3,095,609.

Socony Mobil Oil Co., Inc.: *See*—
Barrold, Alfred E., and Kretzschmar. 3,095,889.

Soeterbroek, Johannes C., and R. J. L. Graff, to Stamicarbon N.V. Three step crystallization of adipic acid. 3,096,369, 7-2-63, Cl. 260—537.

Sommers, Earl E.: *See*—
Ballard, Edward C., and Sommers. 3,096,363.

Sonoco Products Co.: *See*—
Davis, William R. 3,096,011.

Sorenson, James L. Self-sealing sterile packaging and method. 3,095,972, 7-2-63, Cl. 206—63.2.

Soundlock Corp., The: *See*—
Kemp, William G. 3,095,943.

Space Technology Laboratories, Inc.: *See*—
Schmidlin, Frederick W. 3,096,431.

Spalding, Dudley B. Pressure exchanger apparatus. 3,095,704, 7-2-63, Cl. 60—39.45.

Spangler, Earl G., and C. Schreur; said Schreur assor. to said Spangler. Method of making a coated fibrous filter element. 3,096,204, 7-2-63, Cl. 117—98.

Speakman Co.: *See*—
Gerow, Clarence C., and Bottcher. 3,095,581.

Specialties, Inc.: *See*—
Cahill, Daniel T. 3,095,785.
Fieldgate, Ivan O., and Gwathmey. 3,096,504.

Speegle, A. J.: *See*—
McGuire, Jack C., and Speegle. 3,095,929.

Sperry Rand Corp.: *See*—
Frank, Robert L., and Zadoff. 3,096,482.
Hollyday, James H. 3,095,961.
Hollyday, James H. 3,095,962.
Iddings, George E. 3,096,503.
Martin, Robert W. 3,096,519.
Nolt, Edwin B. 3,095,802.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Hardigan, Robert. 3,096,052.

Spilker, Clarence W., to Allied Chemical Corp. Aqueous composition of phenol-aldehyde condensate and method of bonding materials with same. 3,096,226, 7-2-63, Cl. 156—335.

Spindel-, Motoren- und Maschinenfabrik A.G.: *See*—
Beerli, Karl. 3,095,687.

Spirotechnique, La: *See*—
Cousteau, Jacques Y., and Gagnan. 3,095,890.

Spooner Dryer & Engineering Co. Ltd., The: *See*—
Jepson, Michael D. 3,096,162.

Stachowiak, Frank R., and N. Szeremy, to General Electric Co. Audio muting circuit. 3,096,397, 7-2-63, Cl. 178—5.8.

Stahl, Gerald, to Philip Morris, Inc. Adjustable injector razor and the like. 3,095,645, 7-2-63 Cl. 30—65.

Stahl, Gerald, and C. A. Johnson, Jr., to Philip Morris, Inc. Case for a razor set or the like. 3,095,965, 7-2-63, Cl. 206—16.

Staley, John, to Reynolds Metals Co. Method and apparatus for discharging fluid by pressure of an isolated propellant in contact with an adsorber or absorber thereof. 3,096,000, 7-2-63, Cl. 222—1.

Stamicarbon N.V.: *See*—
De Haan, Johannes, and Von Den Hoff. 3,096,326.
Soeterbroek, Johannes C., and Graff. 3,096,369.

Standard Coil Products Co. Inc.: *See*—
Goesard, Thomas F. 3,096,466.

Standard Magnesium Corp., Inc.: *See*—
Hadzeriga, Pablo. 3,096,152.
Hadzeriga, Pablo. 3,096,153.

Standard Mirror Co., Inc.: *See*—
Bertell, Paul. 3,096,061.

Stanford, George A. Disposable urinal bag. 3,095,578, 7-2-63, Cl. 4—110.

Stanley, Allen C., to The Black and Decker Mfg. Co. Protective snap cover for recharger cord receptacle of cordless electric tool or appliance. 3,096,133, 7-2-63, Cl. 339—44.

Staples, Robert W.: *See*—
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Stark, Donald E., to Westinghouse Air Brake Co. Programming control circuits. 3,096,138, 7-2-63, Cl. 346—34.

Staudte, Albert L.: *See*—
Nabreski, Benjamin D., and Staudte. 3,095,816.

Stauffer Chemical Co.: *See*—
Tucker, James W. 3,096,178.

Steck, Edgar A., to Sterling Drug Inc. Triazolo [b] pyridazines. 3,096,329, 7-2-63, Cl. 260—250.

Steck, Edgar A., to Sterling Drug Inc. 6-methoxy-8-(5-N-propylaminopentylamino) quinoline, its salts and its preparation. 3,096,334, 7-2-63, Cl. 260—286.

Steel Heddle Mfg. Co.: *See*—
Russell, James S. 3,095,688.

Steingass, Hermann, and C. L. Milton, Jr., to Eastern Products Corp. Motorized traverse rod operator. 3,096,078, 7-2-63, Cl. 254—175.3.

Steinlein, Max, to Kreidler's Metall- und Drahtwerke G.m.b.H. Speed-stranding machine. 3,095,686, 7-2-63, Cl. 57—58.3.

Stelljes, Charles R., L. Frostad, and H. K. Leach, to The Porter-Cable Machine Co. Orbital motion tool. 3,095,748, 7-2-63, Cl. 74—44.

Sterling Drug Inc.: *See*—
Elpern, Bill. 3,096,335.
Kirchner, Frederick K. 3,096,373.
Steck, Edgar A. 3,096,329.
Steck, Edgar A. 3,096,334.

Stern, David R., to American Potash & Chemical Corp. Heat transfer medium. 3,095,698, 7-2-63, Cl. 60—36.

Stevens, William E. Bumper jack support with interchangeable blocks. 3,096,060, 7-2-63, Cl. 248—170.

Stewart, Meredith M., to Gulf Research & Development Co. Method for preparing beta-alumina trihydrate. 3,096,154, 7-2-63, Cl. 23—143.

Stewart, Richard F., to Texas Instruments Inc. Light sensitive solid state relay device. 3,096,442, 7-2-63, Cl. 250—211.

Stewart-Warner Corp.: *See*—
Fisher, John T. 3,096,071.
Jennings, William G. 3,095,903.

Stiller, Bertram, and F. I. Louckes, Jr., to United States of America, Navy. Multifilar measuring device. 3,095,650, 7-2-63, Cl. 33—46.

Stirling, John: *See*—
Bennett, George A., Clarke, and Stirling. 3,096,141.

Stivers, David A., and D. L. Peterson, to Minnesota Mining and Mfg. Co. Polymer crosslinking technique and compositions. 3,096,314, 7-2-63, Cl. 260—87.7.

Stoddart Aircraft Radio Co., Inc.: *See*—
Leknovich, Henry. 3,096,495.

Stoddart, John O.: *See*—
Cassel, Harrison H., and Stoddart. 3,095,975.

Stokely, Raymond E., to Borg-Warner Corp. Universal joint. 3,095,715, 7-2-63, Cl. 64—321.

Stolzer, Forrest L. Foot operated boat paddle. 3,095,850, 7-2-63, Cl. 115—25.

Stone, Aidan M., to General Electric Co. Control system for clothes dryers. 3,096,164, 7-2-63, Cl. 34—45.

Stout, Frank M. Aquarium structural unit. 3,095,853, 7-2-63, Cl. 119—5.

Straley, James M., J. G. Fisher, and R. C. Harris, to Eastman Kodak Co. Benzothiazole azo β-naphthol dye compounds. 3,096,318, 7-2-63, Cl. 260—146.

Straley, James M., and R. C. Harris, to Eastman Kodak Co. Aminobenzenesulfonamide azo dyes for acrylic fibers prepared therefrom. 3,096,322, 7-2-63, Cl. 260—204.

Stratos, Peter G., to Lockheed Aircraft Corp. Pulse sampling device employing modulated multivibrator to slice leading and trailing edges of input. 3,096,448, 7-2-63, Cl. 307—88.5.

Strausser, Paul E.: *See*—
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Stromag G.m.b.H., Maschinenfabrik: *See*—
Schlotmann, Karl. 3,095,714.

Stucki, Frank F., to Lockheed Aircraft Corp. Tunnel diode switched to low-state by discharging capacitor, pulse sensing device charged by coincidently applied high-state producing inputs. 3,096,449, 7-2-63, Cl. 307—88.5.

Submarine Cables Ltd.: *See*—
Cooke, Edward I., and Donelan. 3,095,643.

Sullivan, Melvin. Screw driver for bending wire. 3,095,912, 7-2-63, Cl. 140—124.

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Wolf, Gottlieb. 3,095,692.

Sun Oil Co.: *See*—
Blair, Edgar A. 3,096,379.
Chaney, Preston E., Mayes, and Jones. 3,096,401.
Peterkin, Melvin E., and Kurts. 3,096,297.

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Garvin, Alex J. 3,095,997.

Sussman, Max: *See*—
Pendleton, David W., and Sussman. 3,096,516.

Swan, Charles M., to Crown Zellerback Corp. Printable sheet and method. 3,096,014, 7-2-63, Cl. 229—87.

Swanson, Edwin C., to Unit Rail Anchor Corp. Rail anchor applicator. 3,095,826, 7-2-63, Cl. 104—2.

Sweeney, William M.: *See*—
Huttenlocher, Dietrich F., and Sweeney. 3,096,285.

Swenker, Martin D. P., and J. C. A. Vercoulen, to Chemische Fabriek L. von der Grinten N.V. Device for collecting sheets of laminar material. 3,096,089, 7-2-63, Cl. 2[illegible]-64.

Swenson, Henry F. Picnic griddle. 3,095,869, 7-2-63, Cl. 126—25.

Swift, John G.: *See*—
Hays, Edwin E., and Swift. 3,096,241.

Syntex Corp.: *See*—
Iriarte, Jose, Djerassi, and Ringold. 3,096,350.
Ringold, Howard J., and Rosenkrans. 3,096,351.

Szekely, George. Slicing knife. 3,095,646, 7-2-63, Cl. 30—283.

Szeremy, Norman: *See*—
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Szuehman, Raul: *See*—
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T.I. (Group Services) Ltd.: *See*—
Gordon, James E., Evans, and Parratt. 3,096,155.

Tabberer, George, and D. H. Wallace, to Associated Electrical Industries Ltd. Monofuel reaction chamber apparatus. 3,095,705, 7-2-63, Cl. 60—39.46.

Tanaka, Yukio, to To-a Kako Kabushiki Kaisha. Method of quick nitrification in which fluidized particles are employed. 3,096,221. 7-2-63, Cl. 148—20.3.

Tappan, Gene F.: *See*—
Duane, John J., and Tappan. 3,096,290.

Taras, Andrew, to International Business Machines Corp. Apparatus for effecting concurrent record, read and checking operations. 3,096,511, 7-2-63, Cl. 340—174.1.

Tartter, Arnold, W. Rohland, D. Ludasteck, and R. Schroedel, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. New phthalocyanine dyes. 3,096,340, 7-2-63, Cl. 260—314.5.

Tasker Instruments Corp.: *See*—
Daspit, John I., and Thomas. 3,096,433.
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Taylor, John S., to The Budd Co. Suction box cover for Fourdrinier machines. 3,096,235, 7-2-63, Cl. 162—374.

Taylor, Walter P., Jr. Hand winder for flexible material. 3,096,040, 7-2-63, Cl. 242—85.1.

Taylor, Wilfred K., to International Business Machines Corp. Optimizing automatic control servosystem. 3,096,471, 7-2-63, Cl. 318—448.

Taylor-Wilson Mfg. Co.: *See*—
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Teasel, Richard C., and E. D. Buckley to Champion Spark Plug Co. Apparatus for measuring elevated temperatures. 3,095,743, 7-2-63, Cl. 73—339.

Techno-Components Corp.: *See*—
Tumbusch, Edward H. 3,096,498.

Teleprompter Corp.: *See*—
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Tesar, James P., and S. J. Kot. Apparatus for constructing cabinets and the like. 3,095,915, 7-2-63, Cl. 144—144.5.

Teasmer, Raymond G., to Deering Milliken Research Corp. Yarn handling apparatus. 3,095,683, 7-2-63, Cl. 57—34.

Tewksbury, Floyd L., Jr.: *See*—
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Texaco Inc.: *See*—
Heisler, Robert Y., Hess, Eckert, and Throckmorton. 3,096,365.
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Texas Instruments Inc.: *See*—
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Colle, Benjamin F. 3,095,717.

Thaning, Nells O. Valves for the control of fluid flow. 3,095,904, 7-2-63, Cl. 137—625.28.

Thibodeau, Wilfred E. Sonic vibrator. 3,095,942, 7-2-63, Cl. 181—32.

Thielke, Norman R.: *See*—
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Thoma, Hans J. Transmission with hydrostatic control. 3,095,757, 7-2-63, Cl. 74—687.

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Thomas, Jesse B., to Reynolds Metals Co. Passageway panel expansion apparatus. 3,095,843, 7-2-63, Cl. 113—44.

Thomas, John L. Trailer mechanism. 3,095,585, 7-2-63, Cl. 9—1.

Thomas, Lucius P., Jr., to Radio Corp. of America. Television receiver circuits. 3,096,399, 7-2-63, Cl. 178—7.5.

Thomas, Thomas R., to Auto Research Corp. Lubrication. 3,096,023, 7-2-63, Cl. 239—424.

Thompsett, William A., to Dunlop Rubber Co. Ltd. Aircraft wheels. 3,096,123, 7-2-63, Cl. 301—36.

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Clark, George L. 3,096,484.
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Shelton, Haywood, and Sellen. 3,096,456.
Williams, Cecil E. 3,096,501.

Thornton, Samuel A. Cane stalk gathering, topping, detrashing and severing means. 3,095,680, 7-2-63, Cl. 56—17.

Thorson, John R., to ACF Industries, Inc. Trailer. 3,095,981, 7-2-63, Cl. 214—1.

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Heisler, Robert Y., Hess, Eckert, and Throckmorton. 3,096,365.

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Harris, John W. 3,095,810.

Tinker, George H., and W. B. Winkler, to T. F. Washburn Co. Method for end point determination in the production of thixotropic polyamide-modified vehicles. 3,096,193, 7-2-63, Cl. 106—287.

Tinsley, Samuel W., and D. L. MacPeek, to Union Carbide Corp. 1-(1,2-epoxyethyl)-2-vinylcyclobutane and polymers thereof. 3,096,315, 7-2-63, Cl. 260—88.3.

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Anniss, Charles H., Kestell, and Tipper. 3,095,589.

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Toeppen, Thurston H. Indexing clutches. 3,095,959, 7-2-63, Cl. 197—123.

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Tomlinson, George H., II. Method for separating dirt from aqueous suspensions of pulp fibers. 3,096,275, 7-2-63, Cl. 209—2.

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Touey, George P., and J. E. Kiefer, to Eastman Kodak Co. Glucose isobutyral. 3,096,323, 7-2-63, Cl. 260—209.

Trammel, Earl M., Jr. Safety door lock. 3,096,114, 7-2-63, Cl. 292—336.3.

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Oishei, John R., and Bitzer. 3,095,596.

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Hubel, Karl W., and Braye. 3,096,266.
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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 2, 1963 Volume 792 Number 1

TRADEMARKS

NOTICES

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 501,128 (FINELINE), W. A. Sheaffer Pen Company, Mechanical pencils, parts thereof and leads therefor; **Reg. No. 572,050**, same, Erasers, fountain pens, dip pen reservoirs and sets comprising writing fluid reservoirs and/or pens used therewith; **Reg. No. 666,739** (FINELINE "500"), same, Fountain pens, mechanical pencils and ball point pens, filed Jan. 15, 1963, D.C., S.D.N.Y., Doc. 63/153, *W. A. Sheaffer Pen Company* v. *United States Pencil Co., Inc.* Stipulation and order of dismissal without prejudice Apr. 1, 1963.

Reg. No. 510,992 (HAPPY HOLIDAY), Attleboro Printing & Embossing Co., Inc., Greeting cards and printed seals; **Reg. No. 690,560**, same, Holiday decorations and plain seals, filed Dec. 5, 1962, D.C., S.D.N.Y., Doc. 62/3971, *Attleboro Printing & Embossing Co., Inc.* v. *Kurt S. Adler, Inc. et al.* Stipulation and order of discontinuance Jan. 29, 1963.

Reg. No. 529,080 (ORLON), E. I. du Pont de Nemours and Company, Synthetic fiber-forming polymers and copolymers of acrylic acid or its derivatives produced in the form of fibers for further use in the industrial arts; **Reg. No. 536,272**, same, Yarns of synthetic fibers, filed Mar. 29, 1963, D.C., S.D.N.Y., Doc. 63/893, *E. I. du Pont de Nemours & Co.* v. *Barclay Knitwear Co., Inc.* Same, filed Apr. 1, 1963, D.C., S.D.N.Y., Doc. 63/909, *E. I. du Pont de Nemours & Co.* v. *Pauker Boyswear Corporation.*

Reg. No. 536,272. (See Reg. No. 529,080.)

Reg. No. 539,068 (IPI), Interchemical Corporation, Intaglio ink, news ink, lithographic ink, printing ink, stamp pads and inking ribbons, filed Mar. 25, 1963, D.C., S.D.N.Y., Doc. 63/825, *Interchemical Corporation* v. *Allan R. Rood.*

Reg. No. 554,811 (DACRON), E. I. du Pont de Nemours and Company, Synthetic polyester fibers for generalized use in the industrial arts; **Reg. No. 555,065**, same, Yarns of synthetic fibers, filed Jan. 10, 1963, D.C., S.D.N.Y., Doc. 63/95, *E. I. du Pont de Nemours and Company* v. *Triton Fabrics, Inc. et al.* Consent judgment; defendants enjoined Mar. 30, 1963.

Reg. No. 555,065. (See Reg. No. 554,811.)

Reg. No. 557,750 (MAJESTIC ETC. AND DESIGN), Garod Radio Corporation, Radio receiving sets, television receiving sets, etc.; **Reg. No. 569,709**, same, filed Mar. 21, 1963, D.C.,

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] ---------- 16,358
Date of oldest new application ---------- Oct. 18, 1962
Date of oldest amended application ---------- Oct. 1, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 5, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-18-62	10-1-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 15, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-1-62	10-4-62
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Applications filed during the month of May 1963—2,342

Registrations Issued ---------- 411—No. 751,866 to No. 752,276
Renewals Issued ---------- 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C. to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

N.D. Ill. (Chicago), Doc. 63c472, *The Wilcox-Gay Corporation* v. *Majestic Electronics, Ltd.*

Reg. No. 569,769. (See Reg. No. 557,750.)

Reg. No. 572,650. (See Reg. No. 501,128.)

Reg. No. 601,713 (FLEXITIZED), Flexitized, Inc., Flexible collar lining, particularly suitable for use in shirts and the like, **filed** Oct. 23, 1959, D.C., S.D.N.Y., Doc. 152/93, *Flexitized, Inc. et al.* v. *National Flexitized Corporation et al.* Judgment for plaintiffs Mar. 26, 1963.

Reg. No. 606,739. (See Reg. No. 501,128.)

Reg. No. 611,919 (DANCING WATERS), Dancing Waters, Inc., Entertainment service in the nature of fountain displays, **filed** Mar. 22, 1963, D.C., S.D.N.Y., Doc. 63/811, *Dancing Waters, Inc.* v. *National Broadcasting Co., Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 134,561. Nurserymen's Exchange, Inc., San Francisco, Calif. Filed Dec. 22, 1961.

RED WING

For Nursery Plants.
First use in June 1951.

SN 135,978. Kimber Turkey Breeding Farms, Inc., Fremont, Calif. Filed Jan. 17, 1962.



Applicant disclaims the word "Turkeys" apart from the mark as shown, as well as the representation of the turkeys.
Owner of Reg. Nos. 616,704, 678,250, and 684,948.
For Live Turkeys.
First use Apr. 3, 1961; in the year 1930 as to "Kimber."

SN 142,180. Excel-Mineral Company, Inc., Los Angeles, Calif. Filed May 10, 1962.

CLEAN-DRI

For Granular, Fluid-Absorbent Material Used To Absorb Oil, Grease, Water and the Like From Floors and Similar Surfaces, as a Litter for Small Animals, and as a Plant Mulch.
First use May 28, 1954.

SN 142,738. Regal Pet Centers, Inc., Jacksonville, Fla. Filed Apr. 20, 1962.

PURR LITTER

For Ground Clay and/or Treated Cellulose Material Used for Litters for Cats.
First use Mar. 10, 1958.

SN 149,149. Western Peat Co. Ltd., Delta, British Columbia, Canada. Filed July 16, 1962.

CARIBOU

Priority claimed under Sec. 44(d) on Canadian application filed Jan. 20, 1962; Reg. No. 127,359, dated July 20, 1962.
For Sphagnum Peat.

SN 150,066. Raymond T. Johnson, d.b.a. Johnson's Flower Center, Washington, D.C. Filed July 30, 1962.

OUR BUSINESS IS BLOOMING

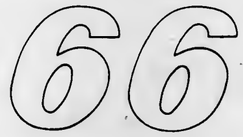
Owner of Reg. No. 722,700.
For Cut Flowers, Floral Pieces, Plants, Nursery Stock, Dried Foliage Decorating Materials, Top Soil, and Bulbs.
First use Apr. 30, 1957.

SN 150,299. York Feather & Down Corp., Brooklyn, N.Y. Filed Aug. 1, 1962.

YORK

For Feathers and Down.
First use on or about Aug. 19, 1926.

SN 150,609. Phillips Petroleum Company, Bartlesville, Okla. Filed Aug. 6, 1962.



Owner of Reg. No. 579,894.
For Carbon Compounding Material Used Principally as a Filler in Rubber or Synthetic Rubber.
First use on or about June 14, 1962.

SN 150,610. Phillips Petroleum Company, Bartlesville, Okla. Filed Aug. 6, 1962.



Owner of Reg. No. 579,894.
For Carbon Compounding Material Used Principally as a Filler in Rubber or Synthetic Rubber.
First use on or about June 14, 1962.

SN 153,791. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Sept. 24, 1962.

SCOTCHPLY

Owner of Reg. Nos. 605,301 and 730,984.
For Plastic Sheet Material for use in the Industrial Arts.
First use June 29, 1962.

SN 154,086. American Cyanamid Company, Wayne, N.J. Filed Sept. 28, 1962.

CYANASET

Owner of Reg. Nos. 587,090, 731,353, and others.
For Cross-Linking Shoe Stiffeners in Sheet Form.
First use June 1, 1962.

SN 155,399. Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. Filed Oct. 18, 1962.

TROFIL

Owner of German Reg. No. 719,292, dated Nov. 4, 1958.
For Filaments, Bristles, and Bands of Synthetic Materials, Such as High-Molecular Polyolefins.

SN 157,947. Sun Oil Company, Philadelphia, Pa. Filed Nov. 26, 1962.

SUN-LITE

For Charcoal Lighter Fluid.
First use July 10, 1962.

SN 158,167. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Nov. 29, 1962.

BURNIL

For Platelets of Synthetic Mica.
First use Nov. 7, 1962.

SN 158,671. York Feather & Down Corp., Brooklyn, N.Y. Filed Dec. 6, 1962.

SAN-O-TAN

For Feathers and Down.
First use on or about Nov. 28, 1962.

SN 158,990. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 12, 1962.

SPECKELON

For Fiber and Filaments.
First use Nov. 7, 1962.

Class 2 — Receptades

SN 139,721. D. J. Alexander Corporation, Philadelphia, Pa. Filed Mar. 13, 1962.

LITTER BUTT

Applicant hereby disclaims the exclusive right to the use of the word "Litter" apart from the mark as shown.
For Small Size Waste Cans.
First use Apr. 23, 1961.

SN 139,905. Van Brode Milling Co., Inc., Clinton, Mass. Filed Mar. 14, 1962.

BERMUDA BOATS

Applicant disclaims the exclusive right to the word "Boats" apart from the mark as shown. Owner of Reg. No. 705,756.
For Plastic Dishes.
First use Nov. 17, 1960.

SN 148,662. Shoe-Sheen Products Corporation, New York, N.Y. Filed July 9, 1962.

APPLITUBE

For Container Tubes With Applicators Sold Empty for Dispensing Shoe Polish.
First use Aug. 18, 1960.

SN 150,643. Sonoco Products Company, Hartsville, S.C. Filed Aug. 6, 1962.

REDI-SPOUT

For Folding Boxes and Cartons With Dispensing Spout.
First use June 11, 1962.

SN 151,828. Interstate Bag Company, Inc., Walden, N.Y. Filed Aug. 24, 1962.

GLOSSTONE

For Paper Bags.
First use Aug. 14, 1962.

SN 153,881. Haveg Industries, Inc., Wilmington, Del. Filed Sept. 25, 1962.

HAVEG

Owner of Reg. No. 374,009.
For Containers—Namely, Plastic Cups.
First use Oct. 19, 1960.

SN 156,304. Kennedy Car Liner and Bag Company Incorporated, Shelbyville, Ind. Filed Oct. 31, 1962.

MINI-GRIP

For Bags Formed of Synthetic Plastic.
First use on or about Sept. 18, 1962.

SN 162,051. Norba Aktiebolag, Blomstermala, Sweden. Filed Jan. 14, 1963.

NORBA

Owner of Swedish Reg. No. 103,452, dated July 27, 1962.
For Dustbins and Parts and Fittings Therefor.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 107,448. Hartmann Luggage Company, Racine, Wis. Filed Oct. 31, 1960.

INTER-CONTINENTAL

For Hand Luggage—Namely, Train Cases, Over-Night Cases, Utility Cases, Hat Boxes, Cosmetic Cases, and Wardrobe Cases.
First use Oct. 13, 1960.

Class 4 — Abrasives and Polishing Materials

SN 151,228. The Hubbard-Hall Chemical Company, Waterbury, Conn. Filed Aug. 15, 1962.

Buffit

For Impregnated Metal Cleaning and Polishing Buffs.
First use June 29, 1962.

Class 5 — Adhesives

SN 137,528. Johnson & Johnson, New Brunswick, N.J. Filed Feb. 8, 1962.

SIGMAFLEX

For Paper Adhesive Tapes.
First use Jan. 10, 1962.

SN 163,191. F. W. Woolworth Co., New York, N.Y. Filed Feb. 20, 1963.

HERALD SQUARE

Owner of Reg. Nos. 536,681, 651,192, and others.
For Rubber Cement.
First use Mar. 28, 1962.

Class 6 — Chemicals and Chemical Compositions

SN 125,711. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Aug. 10, 1961.

For Chemicals and Chemical Compositions.
First use July 5, 1961.

SN 132,936. Phoenix Gems, Inc., Phoenix, Ariz. Filed Nov. 28, 1961.

KLEEN-BIN

For Insecticidal Composition Comprising Powdered Diatomaceous Earth Which May on Occasion Include a Botanical Type Insect Toxicant of a Type not Normally Toxic to Warm-Blooded Life in the Concentrations Employed.
First use in January 1959.

SN 133,053. Chemical Products Corporation, East Providence, R.I. Filed Nov. 30, 1961.

CHEM-O-THANE

Owner of Reg. No. 591,835.
For Polyurethane Prepolymers and Polyglycols.
First use June 5, 1961.

SN 135,243. Wendt's Fil-Cyl, Inc., Niagara Falls, N.Y. Filed Jan. 4, 1962.

Wendt's FIL-CYL

For Propane Gas in Refillable Cylinders.
First use Jan. 1, 1961.

SN 135,999. Rokeby Chemical Company, Marietta, Ohio. Filed Jan. 17, 1962.

GUARD-ALL

The lining appearing on the drawing is for purposes of shading only and is not intended to depict any particular color.
For Turf Fungicide.
First use Nov. 14, 1961.

SN 138,156. Malcolm Bru, d.b.a. Aldermaston Sales, Glen Cove, N.Y. Filed Feb. 19, 1962.

Flower Keep

For Chemical Preparation for Drying and Preserving Fresh Cut Flowers.
First use Jan. 4, 1962.

SN 138,287. Chemical Testing Corporation, Long Island City, N.Y. Filed Feb. 20, 1962.

ZYME-CLEAN

For Bacterial Enzyme That Liquefies Organic Solids in Plumbing and Sewage Systems.
First use Jan. 22, 1962.

SN 139,724. Anodyne, Inc., d.b.a. North Shore Nameplate Inc., Bayside, N.Y. Filed Mar. 13, 1962.

THERMA SOL

For Solvent for Activating Adhesive Phenol Formaldehyde.
First use in or about February 1958.

SN 139,781. Purex Corporation, Ltd., Wilmington, Calif. Filed Mar. 13, 1962.

RADOX

For Compounds for the Prevention and Removal of Rust, Water-Scale and Corrosion From Automobile Radiators, Industrial Cooling Systems, Heat Exchange Apparatus, and Similar Equipment.
First use Mar. 13, 1986.

SN 140,306. Vicksburg Chemical Company, Newark, N.J. Filed Mar. 20, 1962.

SAPFLO

For Chemical Preparation for Inhibiting the Growth of Micro-Organisms in Tap Holes of Sugar Maple Trees.
First use on or about Mar. 6, 1962.

SN 142,798. Alan H. Coons, d.b.a. ZIT Laboratories, Los Angeles, Calif. Filed Apr. 23, 1962.

BUG-JUS

For Insect Attractant and Exterminator (Non-Poisonous).
First use Mar. 15, 1962.

SN 147,303. Pacific Vegetable Oil Corporation, San Francisco, Calif. Filed June 20, 1962.



The wording "Vegetable Oils From All Over the World" is disclaimed apart from the mark as shown. Also, the globe shown in the drawing is lined to indicate the color yellow but no claim is made as to the color so named.
For Safflower, Castor, Fish, Isano, Linseed and Tung Oils and Tallow, All of Which Goods Are for Industrial Use.
First use Apr. 2, 1960, on safflower oil.

SN 147,703. Chicago Mastic Company, Chicago, Ill. Filed June 26, 1962.

CERAMICRETE

For Liquid Additive for Admixture With Portland Cement To Make Tile Setting Mortars.
First use Apr. 3, 1962.

SN 148,623. Industrial Biochemicals, Inc., Edison, N.J. Filed July 9, 1962.



For Gluconic Acid, Sodium Gluconate and Gluconate Amines.
First use Jan. 12, 1962.

SN 149,405. The Protane Corporation, Cleveland, Ohio. Filed July 19, 1962.



The drawing is lined for the colors red and blue. Owner of Reg. Nos. 195,392 and 550,594.
For Liquified Petroleum Gas.
First use on or about June 20, 1961.

SN 150,367. W. A. Scholten's Chemise Fabrieken N.V., Foxhol, Groningen, Netherlands. Filed Aug. 2, 1962.

NYLGUM

Owner of Dutch Reg. No. 140,981, dated Feb. 23, 1961.
For Starch and Starch Products for Industrial Use.

SN 152,105. Valley Chemical Company, Greenville, Miss. Filed Aug. 28, 1962.

EN-A-ME

For Insecticide.
First use May 9, 1959.

SN 152,667. Arizona Agrochemical Corporation, Phoenix, Ariz. Filed Sept. 7, 1962.

FIRE-TROL

For Fire Retardant Chemicals.
First use June 29, 1962.

SN 152,676. Cabot Corporation, Boston, Mass. Filed Sept. 7, 1962.



Applicant disclaims the words "Cabot Corporation, Boston, Mass., U.S.A." Owner of Reg. No. 302,707 and 559,109.
For Carbon Black Used in the Plastic and Other Industries.
First use Sept. 30, 1960; July 27, 1931, in another display.

SN 153,481. Halby Products Company, Inc., Wilmington, Del. Filed Sept. 19, 1962.

CUPLEX

For Ethylene Diamine Tetrapropionic Acid and Its Salts.
First use June 20, 1961.

SN 154,131. Metal Hydrides Incorporated, Beverly, Mass. Filed Sept. 28, 1962.

HYDRIPULP

For Stabilized Aqueous Solution of Sodium Borohydride and Sodium Hydroxide, for Use in the Pulp and Paper Industry.
First use Mar. 20, 1962.

SN 154,495. Jet-Aer Corporation, Paterson, N.J. Filed Oct. 4, 1962.

G-66

For Gun Blue, Waterproofing Compositions for Fabric, Leather, Boots, Dry-Flies and Feathers; and Insect Repellent.
First use 1956.

SN 154,980. Luxmasse G.m.b.H., Ludwigshafen (Rhine), Germany. Filed Oct. 11, 1962.

FORMEX

Owner of German Reg. No. 719,106, dated Oct. 29, 1958.
For Insulating Material for Use in the Foundry Industry—Namely, a Material Having High Exothermic Properties for Insulating Risers Thereby To Retard Cooling and Hence Solidification Thereof.
First use Apr. 3, 1958; in commerce Oct. 27, 1961.

SN 155,155. R. M. Hollingshead Corporation, Camden, N.J. Filed Oct. 15, 1962.

HOLLICIDE

For Combination Germicide and Fungicide.
First use October 1960.

SN 155,247. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 16, 1962.

GUSITOX

Priority claimed under Sec. 44(d) on German application filed June 16, 1962; Reg. No. 764,056, dated Aug. 2, 1962. Owner of U.S. Reg. No. 633,420.
For Animal and Plant Destroying Agents—i.e., Weed Destroying Agents, Vermin Destroying Agents, Insecticides and Fungicides.

SN 155,524. S & B Distributing Co., Inc., Chicago, Ill. Filed Oct. 19, 1962.

KITCHENMAID

For Laundry Rinse, Bleach Disinfectant, Starch, Fabric Softener and Ammonia.
First use Oct. 5, 1962.

SN 158,502. American Cyanamid Company, Wayne, N.J. Filed Dec. 5, 1962.

MAGNIFLOC

For Flocculating Agent.
First use Sept. 21, 1962.

SN 159,050. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Dec. 13, 1962.

CRONALITH

Owner of Reg. Nos. 608,302, 691,666, and others.
For Photographic Chemicals.
First use Oct. 26, 1962.

SN 159,167. Martin-Marietta Corporation, Charlotte, N.C. Filed Dec. 14, 1962.

LAUNDERVAT

For Dyestuffs.
First use on or about Nov. 19, 1962.

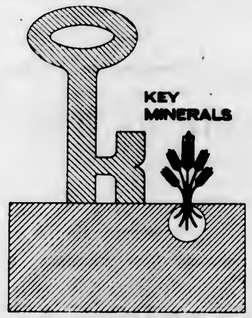
SN 159,307. The Upjohn Company, Kalamazoo, Mich. Filed Dec. 17, 1962.

ENIDE

For Pre-Emergence Herbicide To Control Noxious Weeds.
First use Sept. 21, 1962.

Class 10 — Fertilizers

SN 122,089. Jensen-Sandberg, Inc., Salt Lake City, Utah. Filed June 15, 1961.



The drawing is lined for the colors brown and green. No claim is made to the word "Minerals."
For Organic Fertilizer Supplements.
First use May 3, 1961.

SN 157,918. Martin-Marietta Corporation, Martinsburg, W. Va. Filed Nov. 26, 1962.

DOL-AG

For Limestone Prepared for Use as a Fertilizer.
First use on or about Sept. 28, 1962.

SN 157,948. Tennessee Corporation, New York, N.Y. Filed Nov. 26, 1962.

ZIRATE

For Agricultural Trace Mineral Fertilizer Supplement.
First use Sept. 7, 1962.

Class 11 — Inks and Inking Materials

SN 141,055. Bell Intercontinental Corporation, New York, N.Y. Filed Mar. 29, 1962.

CARBONICATIONS

For Carbon Copy Paper.
First use Feb. 23, 1962.

SN 150,801. Mason Marking Systems Corporation, Norfolk, Va. Filed Aug. 8, 1962.

COLORMARK

For Ink.
First use on or about June 15, 1962.

Class 12 — Construction Materials

SN 119,133. Italtubi S.p.A., Torre Annunziata, Italy. Filed May 2, 1961.

ROLLING

Priority claimed under Sec. 44(d) on Italian application filed Mar. 11, 1961; Reg. No. 161,021, dated Jan. 26, 1963.
For Asbestos Cement Pipe-Joints.

SN 139,876. Martin-Marietta Corporation, Baltimore, Md. Filed Mar. 14, 1962.

FURNASET

For Refractory Dolomite for Lining Furnaces.
First use on or about Feb. 23, 1962.

SN 141,546. Sanford Industries, Inc., Pompano Beach, Fla. Filed Apr. 4, 1962.

GRIP-MASTER

Owner of Reg. No. 614,710.
For Wood Joint Connector Plates.
First use Feb. 8, 1962.

SN 142,012. Armstrong Cork Company, Lancaster, Pa. Filed Apr. 11, 1962.

EXPANDOFOAM

For Component for Polyurethane Foam Insulating Material.
First use Aug. 3, 1960.

SN 143,655. Mystik Adhesive Products, Inc., Chicago, Ill. Filed May 2, 1962.

LUBRITITE

For Tape for Use on Pipe Threads.
First use Mar. 23, 1962.

SN 150,488. American Cement Corporation, Los Angeles, Calif. Filed Aug. 6, 1962.



Owner of Reg. No. 693,023.
For Liquid Latex Used as an Additive for Cement Mixes.
First use Jan. 22, 1962.

SN 150,755. Caloric Corporation, Topton, Pa. Filed Aug. 8, 1962.

CALORIC

Owner of Reg. No. 406,669.
For Plain, Enamelled or Porcelained, Insulated or Uninsulated, One Thickness or More Than One Thickness, Panels for Use as Curtain Walls, as Roofs, as Floors, or as Partitions in Buildings.
First use on or about Mar. 1, 1961.

SN 150,914. Ted O. Austin, North Bend, Wash. Filed Aug. 10, 1962.

FULL FLEX

For Diving Boards.
First use July 2, 1962.

SN 153,219. The Ruberoid Company Limited, London, England. Filed Sept. 14, 1962.

MUTOFLEX

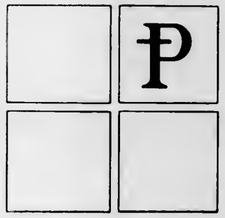
Priority claimed under Sec. 44(d) on British Reg. No. 836,986, dated July 17, 1962.
For Bituminised Felt Materials Used for Sound Deadening and Heat Insulating for Vehicles and Receptacles.

SN 153,474. Benjamin Foster Company, Philadelphia, Pa. Filed Sept. 19, 1962.

MAST-A-FAB

For Plain Open Weave Glass Cloth Used for Construction and Repair in the Building Industry as a Reinforcing Membrane With Surface Coatings, Such as Mastics and Adhesives To Provide Improved Film Strength and as a Bridge and Aid in Lagging Installation.
First use Aug. 10, 1962.

SN 154,510. Pomona Tile Manufacturing Company, Los Angeles, Calif. Filed Oct. 4, 1962.



Applicant hereby disclaims the representation of the goods apart from the mark as shown.
For Ceramic Tile.
First use Oct. 1, 1961.

SN 158,914. Johns-Manville Corporation, New York, N.Y. Filed Dec. 11, 1962.

FLOORINSUL

For Sheets Sold for Use as Sound Deadening Material in Connection With Floors—e.g., as Underlayment for Carpet.
First use at least 1961.

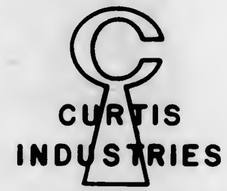
SN 159,365. Standard Industries, Inc., Tulsa, Okla. Filed Dec. 18, 1962.



For Hot Mix Cold Laid Asphalt, for Use in Surfacing Roads, Car Parking Lots, or the Like, and/or Patching Such Roads and Parking Lots.
First use on or about Nov. 5, 1962, in bulk form.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 139,277. Curtis Industries, Inc., Eastlake, Ohio. Filed Mar. 7, 1962.



Applicant disclaims the word "Industries" apart from the mark shown.
For Hardware—Namely, Bolts, Nuts, Wood and Metal Screws, Pins, Washers, Snap Rings, Shims, Clips, Cotter Pins, and Hollow Head Screws.
First use Nov. 8, 1961.

SN 139,279. Dixie Electrical Manufacturing Company, Birmingham, Ala. Filed Mar. 7, 1962.



For Pole Line Hardware—Namely, Bolts, Clevises, Cross Arms, Pole Top Pins, Secondary Racks, Transformer Cluster Mounts, and Cross Arm Braces.
First use Feb. 15, 1962.

SN 139,536. Screw and Bolt Corporation of America, Pittsburgh, Pa. Filed Mar. 9, 1962.

SURVIV-A-LINK

For Eye-Bolts Used as Anchors for Attaching the Ends of Safety Belts to the Floor or Frame of a Motor Vehicle.
First use Jan. 4, 1962.

SN 141,256. Continental Copper & Steel Industries, Inc., Hanover, Pa. Filed Apr. 2, 1962.

STARGLAS

Owner of Reg. Nos. 58,575, 736,250, and others.
For Insect Screening.
First use Dec. 15, 1961.

SN 141,407. Amerock Corporation, Rockford, Ill. Filed Apr. 3, 1962.

FLAIR

For Cabinet Hardware and Pulls for Cabinet Doors and Drawers.
First use Sept. 17, 1961.

SN 141,425. Flint & Walling Mfg. Co., Inc., Kendallville, Ind. Filed Apr. 3, 1962.

JET-KING

For Water Systems Including Home Water Pumping Systems.
First use Apr. 21, 1961.

SN 141,426. Flint & Walling Mfg. Co., Inc., Kendallville, Ind. Filed Apr. 3, 1962.

GOLDEN JET

For Water Systems Including Home Water Pumping Systems.
First use Nov. 3, 1961.

SN 141,427. Flint & Walling Mfg. Co., Inc., Kendallville, Ind. Filed Apr. 3, 1962.

MERCURY JET

For Water Systems Including Home Water Pumping Systems.
First use May 2, 1961.

SN 141,428. Flint & Walling Mfg. Co., Inc., Kendallville, Ind. Filed Apr. 3, 1962.

JET-QUEEN

For Water Systems Including Home Water Pumping Systems.
First use Nov. 3, 1961.

SN 148,402. MacMillin Hydraulic Engineering Corporation, Skokie, Ill. Filed July 5, 1962.



For Valve Assemblies, Valve Manifolds, Valve Blocks, and the Like.
First use Feb. 19, 1962.

SN 149,487. Piuma Enterprises, Inc., Los Angeles, Calif. Filed July 20, 1962.

RITE LUBE

For Oil Dripper Valves.
First use June 13, 1962.

SN 149,701. C. L. Blake, d.b.a. C. L. Blake and Associates, Fort Worth, Tex. Filed July 25, 1962.



For Laminated Plastic Articles Including Table Tops, and Table Tops Having Integral Sinks Therein.
First use June 22, 1962.

SN 149,908. Automated Building Components, Inc., Miami, Fla. Filed July 27, 1962.

ABC

For Construction Equipment and Supplies—Namely, Metal Connector Plate for Wooden Joints, Presses and Jigs for Fabricating Such Joints With Said Metal Connector Plates and Metal Web Members.
First use Oct. 1, 1961.

SN 150,756. Caloric Corporation, Topton, Pa. Filed Aug. 8, 1962.

CALORIC

Owner of Reg. No. 406,669.
For Kitchen Sinks.
First use on or about Dec. 15, 1959.

SN 152,460. Swimquip, Inc., El Monte, Calif. Filed Sept. 4, 1962.

GUARD-MASTER

For Valves, Fittings, and Appurtenances for a Water Level Control System for Swimming Pools.
First use Dec. 23, 1961.

SN 153,144. AB Silver & Stal, Vingaker, Sweden. Filed Sept. 14, 1962.



Applicant disclaims the words "Sweden" and "Stainless" apart from the mark as shown on the drawing.
For Stainless Steel Hollowware—Namely, Trays, Bowls, Plates, Serving Dishes, and Platters.
First use in or about 1948; in commerce 1952.

SN 153,279. Harford Pumps Limited, London, England. Filed Sept. 17, 1962.



Owner of British Reg. No. 816,917, dated Feb. 13, 1961.
For Valves.

SN 154,004. Woric Corp., Rochester, N.Y. Filed Sept. 26, 1962.

SOAK RITE

For Supports for Garden Hose.
First use July 21, 1962.

SN 154,012. Chudnow Manufacturing Company, Inc., Long Island City, N.Y. Filed Sept. 27, 1962.

VANE 100

For Carbonators.
First use Oct. 25, 1961.

SN 154,073. Voss International Corporation, Hollywood, Calif. Filed Sept. 27, 1962.



For Gate Valves.
First use Aug. 29, 1961.

Class 14 — Metals and Metal Castings and Forgings

SN 150,083. Magparts, Azusa, Calif. Filed July 30, 1962.



The mark is described as a circle enclosing and in contact with two capital letters M's at their two topmost points, said letters touching in an upside down position relative to each other, and with the bases of the M's so truncated that they form with the rest of the voids within the letters a uniform six-pointed star.
For Magnesium Sand Castings.
First use Mar. 19, 1962.

SN 152,160. Societe Lorraine de Laminage Continu "Sollac," Paris, France. Filed Aug. 29, 1962.

SOLLEGE

Priority claimed under Sec. 44(d) on French Reg. No. 503,892, dated Mar. 30, 1962 (Seine); Natl. Inst. No. 182,431.
For Tinned Metal Sheet.

SN 152,161. Societe Lorraine de Laminage Continu "Sollac," Paris, France. Filed Aug. 29, 1962.

SOLRADIA

Priority claimed under Sec. 44(d) on French Reg. No. 503,891, dated Mar. 30, 1962 (Seine); Natl. Inst. No. 182,430.
For Metal Sheet.

SN 153,339. Trinity Forge, Inc., Hurst, Tex. Filed Sept. 17, 1962.



For Die Forgings.
First use Jan. 15, 1958.

SN 157,340. Union Carbide Corporation, New York, N.Y. Filed Nov. 15, 1962.

MULTIMET

Owner of Reg. No. 423,980.
For Metal Castings and Wire.
First use on or about Oct. 23, 1962.

SN 157,452. The Brush Beryllium Company, Cleveland, Ohio. Filed Nov. 19, 1962.

BRUSH

For Beryllium and Metal Alloys—Namely, Beryllium and Beryllium-Copper Alloy Powders, Ingots, Billets, Castings, Forgings, and Molded, Cast, Forged, Pressed, Extruded, Rolled or Wrought Metal Articles and Shapes of Unitary or Composite Construction in the Unfinished and Semi-Finished Condition.
First use June 27, 1962.

SN 163,156. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Feb. 20, 1963.

MALLORY

Owner of Reg. No. 400,385.
For Metallurgical Products—Namely, Nonferrous Alloys, Copper and Its Alloys, Bronze, Precious Metals and Their Alloys, Refractory Metals and Their Alloys and Compositions, Specifically Tungsten and Molybdenum in Their Substantially Pure Form and Tungsten, Molybdenum, Rhenium, Tungsten Carbide, and Molybdenum Carbide in Alloys and Metal Compositions With Other Metals, Powder Metallurgical Products, Specifically Partly Finished Bodies of Pressed and Sintered Mixtures of Copper, Silver, Tungsten, Molybdenum, Nickel, Cobalt, Zinc, and Cadmium, in Various Proportions With or Without Small Percentages of Other Ingredients, Laminated Metals, Specifically Sheet Steel Clad With Copper or Silver and Their Alloys and Copper Clad With Silver and Silver Alloys, and Unfinished and Partly Finished Castings.
First use July 1936.

Class 15 — Oils and Greases

SN 141,990. Sprayon Products, Inc., Bedford Heights, Ohio. Filed Apr. 10, 1962.



For Open Gear and Wire Rope Lubricant, Light Oil Lubricant, Penetrating Oil, Graphite Lubricant, Mold Release Compounds, Silicone Lubricant and Anti-Rust Spray of the Petroleum Type.
First use Feb. 16, 1959, on silicone lubricant.

SN 148,219. Quaker State Oil Refining Corporation, Oil City, Pa. Filed July 2, 1962.



The rectangular design shown on the drawing is mere background rather than part of the mark sought to be registered. Owner of Reg. No. 293,980 and others.
For Motor Oil.
First use May 25, 1962.

SN 150,016. Carolina Company, Inc., d.b.a. The Carolina Soap & Candle Makers, Southern Pines, N.C. Filed July 30, 1962.



Carolina

For Candles.
First use on or about June 30, 1952.

SN 151,406. Halo Sales Corporation, San Francisco, Calif. Filed Aug. 17, 1962.

Halo

Owner of Reg. No. 639,553.
For Candles.
First use January 1957; Mar. 28, 1956, as to "Halo."

SN 152,054. Economics Laboratory, Inc., St. Paul, Minn. Filed Aug. 28, 1962.

EL CHAIN LUBE

Applicant disclaims the words "Chain Lube" apart from the mark as shown.
For Non-Toxic Lubricant for Use in Connection With Food-Processing Equipment.
First use June 13, 1962.

SN 152,300. Graphite Metallizing Corporation, Yonkers, N.Y. Filed Aug. 31, 1962.

GRAPHILM

Owner of Reg. Nos. 265,826 and 592,959.
For Low-Coefficient-of-Friction Liquid Lubricant, Chemically Inert to Most Solvents, for Spray-On, Dip, or Brush-On Coating; Applicable Wherever a Thin, Adherent Coating Is To Supply Low-Friction Characteristics to Moving Parts in Inaccessible Locations, or on High Temperature Equipment Such as Oven Conveyors, Chains, and Sprockets; Also Used to Advantage at Room Temperature on Conveyor Chains and on Overhead Trolley Wheels Because of Its Low-Friction Characteristic and Tenacity.
First use May 12, 1961.

SN 153,446. Banner Products Corporation, Camden, N.J. Filed Sept. 19, 1962.

HOTSHOT

Owner of Reg. No. 740,828.
For Starting Fluid for Gasoline and Diesel Engines.
First use September 1957.

SN 153,478. General Magnaplate Corporation, Belleville, N.J. Filed Sept. 19, 1962.

MAGNALUBE

For Liquid, Semi-Liquid and Grease Lubricants and Sealants.
First use in December 1961.

SN 156,110. Garland Chemical Products Co., Garland, Tex. Filed Oct. 29, 1962.

HIGH TORQUE

For Concentrated Fuel for Two-Cycle Engines.
First use Sept. 1, 1962.

SN 156,668. Shell Oil Company, New York, N.Y. Filed Nov. 5, 1962.

GOLDCHECK

Owner of Reg. No. 332,292.
For Motor Oil.
First use Sept. 28, 1962.

SN 156,834. The Standard Oil Company, Cleveland, Ohio. Filed Nov. 7, 1962.

INDUSTRON

For Industrial Lubricating Oil.
First use Oct. 29, 1962.

SN 157,164. The Standard Oil Company, Cleveland, Ohio. Filed Nov. 13, 1962.

SOHIO HEAT

The designation "Heat" is disclaimed apart from use in the entire mark. Owner of Reg. Nos. 235,809 and 562,291.
For Furnace Oil for Home Heating.
First use Oct. 1, 1946.

Class 16—Protective and Decorative Coatings

SN 147,586. Robert D. John, El Monte, Calif. Filed June 25, 1962.

CONTRA-MAT

For Chemical Coating Composition for Staining Metal.
First use May 29, 1957.

SN 150,489. American Cement Corporation, Los Angeles, Calif. Filed Aug. 6, 1962.



Owner of Reg. No. 693,023.
For Water Repellant Coating Composition for Masonry Surfaces.
First use Jan. 13, 1962.

SN 152,392. The Flood Company, Hudson, Ohio. Filed Sept. 4, 1962.

NF-23

For Clear Latex Exterior Wood Finish.
First use about January or February 1962.

SN 155,466. Gamble-Skogmo, Inc., d.b.a. Gambles, Minneapolis, Minn. Filed Oct. 18, 1962.

Tempo-Tone

For Household Paints.
First use Sept. 11, 1962.

SN 156,505. Masury-Young Company, Boston, Mass. Filed Nov. 2, 1962.

TRAZSEAL

Owner of Reg. No. 406,901.
For Liquid Floor Sealing Compound in the Nature of a Varnish.
First use Sept. 27, 1940.

SN 156,506. Masury-Young Company, Boston, Mass. Filed Nov. 2, 1962.

SEALATEX

Owner of Reg. No. 404,728.
For Liquid Floor Sealing Compound.
First use Sept. 27, 1940.

SN 157,844. Quaker State Oil Refining Corporation, Oil City, Pa. Filed Nov. 23, 1962.

QUAKER KOAT

For Undercoater and Sound Deadener.
First use Apr. 1, 1962.

SN 158,000. Interchemical Corporation, New York, N.Y. Filed Nov. 27, 1962.

VYSPERSE

For Vinyl Coatings Applied to Vinyl Film Sheeting and Coated Fabric as a Protective and Decorative Finish.
First use Aug. 28, 1962.

SN 158,984. Martin-Marietta Corporation, Chicago, Ill. Filed Dec. 12, 1962.



For Paints, Varnishes, Enamels, Lacquers, and Sealers.
First use on or about Nov. 16, 1962.

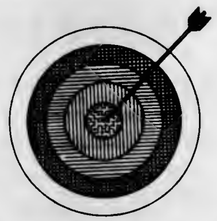
SN 159,900. New Period Lacquer Corporation, Brooklyn, N.Y. Filed Dec. 28, 1962.

NEW PERIOD

For Lacquers, Paints, Varnishes, Stains, Woodfillers, Removers.
First use Mar. 1, 1920.

Class 17—Tobacco Products

SN 149,707. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed July 25, 1962.



The drawing is lined for yellow, red, blue, and black.
Owner of Reg. Nos. 153,114, 306,574, and others.
For Smoking Tobacco.
First use Feb. 18, 1931.

SN 150,679. Cope & Lloyd (Overseas) Limited, London, England. Filed Aug. 7, 1962.

COPE'S NAVY DE LUXE "ESCUDO" BRAND

Applicant disclaims any exclusive right in the words "Deluxe" and "Brand" apart from the mark as shown in the drawing. Owner of British Reg. No. B611,408, dated Apr. 11, 1940.
For Cigarettes, Smoking Tobacco, Cigars, and Snuff.

SN 166,473. Liggett & Myers Tobacco Company, New York, N.Y. Filed Apr. 10, 1963.

MAYTIME

For Cigarettes.
First use Apr. 1, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 141,954. Imperial Chemical Industries Limited, London, England. Filed Apr. 10, 1962.

ACTOMOL

Owner of British Reg. No. 782,422, dated Oct. 3, 1958.
For Preparations for the Treatment of Depressive States and Psychiatric Disorders.

SN 143,367. General Nutrition Corporation, d.b.a. Natural Sales Company, Pittsburgh, Pa. Filed Apr. 30, 1962.

Preventron

For Dietary Food Supplement Containing Vitamins and Minerals From Natural Sources Plus Additional Natural Ingredients.
First use Sept. 26, 1957.

SN 147,945. Merck & Co., Inc., Rahway, N.J. Filed June 28, 1962.

MERPRESS

For Specially Processed Vitamins.
First use Apr. 19, 1962.

SN 149,511. Laboratorio Quimico Dominicano, C. por A., Santo Domingo, Dominican Republic. Filed July 17, 1962.

FORTIDOM

Owner of Dominican Republic Reg. No. 11,750, dated May 24, 1961.
For Pharmaceutical Preparation in the Nature of a Tonic and Fortifier.

SN 151,604. Medical Arts Supply Co., Inc., Huntington, W. Va. Filed Aug. 21, 1962.

REDI-SWABS

For Swabs Impregnated With Antiseptic Solution.
First use June 4, 1956.

SN 152,247. W. J. Rendell Limited, London, England. Filed Aug. 30, 1962.

W. J. Rendell

The mark shown in the drawing is a facsimile of the script signature, W. J. Rendell of Mr. Walter John Rendell, deceased, founder of applicant's predecessor in business. Owner of British Reg. No. 182,688, dated Oct. 5, 1894.
For Suppositories.

SN 152,722. Sankyo Co. Ltd., Chuo-ku, Tokyo, Japan. Filed Sept. 7, 1962.

SANBION

Owner of Japanese Reg. No. 523,185, dated July 7, 1958.
For Vitamin Preparations for Use in Medicine and Pharmacy.

SN 154,798. American Cyanamid Company, Wayne, N.J. Filed Oct. 9, 1962.

VETICILLIN

Owner of Reg. No. 416,900.
For Penicillin Preparation for Veterinary Use.
First use Mar. 27, 1945.

SN 155,328. Palmedico, Inc., Columbia, S.C. Filed Oct. 17, 1962.

SPASMASORB

For Antacid, Antispasmodic Sedative.
First use Jan. 28, 1960.

SN 155,332. Palmedico, Inc., Columbia, S.C. Filed Oct. 17, 1962.

MEDCOHIST

For Antihistaminic, Analgesic Vasoconstrictor.
First use Jan. 5, 1961.

SN 155,355. The Warren-Teed Products Company, Columbus, Ohio. Filed Oct. 17, 1962.

SYMBIO

For Drug Preparation in Capsule Form for Veterinary Use To Combat Infection.
First use Aug. 10, 1962.

SN 156,126. Kellogg Company, Battle Creek, Mich. Filed Oct. 29, 1962.

Kellogg's

Owner of Reg. No. 115,622.
For Antibiotic Feed Additive for Mink and Other Similar Fur Bearing Animals.
First use July 31, 1962.

SN 157,054. Hazel Bishop Inc., Union, N.J. Filed Nov. 13, 1962.

RYBUTOL V S

Owner of Reg. Nos. 693,062 and 694,841.
For Polyvitamin and Mineral Preparations.
First use Oct. 22, 1962.

SN 159,542. M. R. Thompson, Inc., New York, N.Y. Filed Dec. 20, 1962.

THOCTYL

For Medicinal Preparation for the Relief of Pain of Sore Throats and Coughs and Reduces Pain and Inflammation of Musculoskeletal Diseases.
First use Dec. 12, 1962.

SN 162,284. The W. T. Rawleigh Company, Freeport, Ill. Filed Feb. 7, 1963.

HISTAM

For Decongestant Tablets.
First use Feb. 1, 1962.

SN 162,806. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Feb. 14, 1963.

LUFTODIL

For Anti-Asthmatic.
First use Feb. 4, 1963.

SN 163,313. Boyle & Company, Bell Gardens, Calif. Filed Feb. 25, 1963.

FLAVOS

Owner of Reg. No. 651,121.
For Vitamin Preparation.
First use Nov. 13, 1962.

SN 163,384. Dermik Pharmacal Co., Inc., Syosset, N.Y. Filed Feb. 25, 1963.

NEO-HYTONE

Owner of Reg. Nos. 686,577 and 736,295.
For Medical Preparation for the Treatment of Pruritic, Allergic and Inflammatory Dermatoses Which Are Complicated by Presence of Secondary Bacterial Infection.
First use Nov. 1, 1962.

SN 163,525. Lloyd Brothers, Inc., Cincinnati, Ohio. Filed Feb. 27, 1963.

CARNIPEC

For Medicines and Pharmaceutical Preparations—Namely, an Appetite and Growth Stimulant.
First use on or about Feb. 13, 1963.

SN 164,036. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 6, 1963.

OMNILAX

For Laxative.
First use Mar. 1, 1963.

SN 164,297. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 11, 1963.

CONSANT

For Preparation for the Relief of Acid Indigestion, Heartburn, and Gastric Hyper-Acidity.
First use Feb. 26, 1963.

Class 19—Vehicles

SN 133,436. Acme Spring Products Company, d.b.a. Wayne Spring Company, Detroit, Mich. Filed Dec. 6, 1961.

HY-POWER

For Automotive Leaf-Springs for Use as Replacement Parts.
First use Dec. 1, 1959.

SN 138,498. General Motors Diesel Limited, London, Ontario, Canada. Filed Feb. 23, 1962.

PORTAGER

For Railroad Cars.
First use Sept. 28, 1960; in commerce Mar. 11, 1961.

SN 139,288. Fairchild Stratos Corporation, Hagerstown, Md. Filed Mar. 7, 1962.



For Aircraft and Parts Therefor.
First use Aug. 8, 1961.

SN 139,754. International Harvester Company, Chicago, Ill. Filed Mar. 13, 1962.



The lining shown on the drawing constitutes lining forming a part of the mark and does not represent color. Owner of Reg. Nos. 416,823, 705,836, and others.
For Seat Belts for Use in Vehicles.
First use Dec. 29, 1960.

SN 140,532. Caveman Camper, Inc., Grants Pass, Oreg. Filed Mar. 23, 1962.

CAVEMAN CAVETTE

For Transportable Trailer Having Complete Living Accommodations.
First use Jan. 31, 1962.

SN 162,050. Norba Aktiebolag, Blomstermala, Sweden. Filed Jan. 14, 1963.

NORBA

Owner of Swedish Reg. No. 103,452, dated July 27, 1962.
For Refuse Collecting Vehicles for Emptying and Transportation, and Parts and Fittings Therefor.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 133,360. British Industries Corporation, Port Washington, N.Y. Filed Dec. 5, 1961.



Owner of Reg. No. 666,545.
For Vacuum Tubes, Record Changers and Players, and Parts Therefor, Amplifiers, Pre-Amplifiers and Loudspeakers.
First use Mar. 28, 1960; 1952 in a different form.

SN 135,919. Sprague Electric Company, North Adams, Mass. Filed Jan. 16, 1962.

MAGMAX

For Soft Magnetic Alloys of High Permeability in Various Forms, Particularly Wires, Foils, and Tapes.
First use Jan. 2, 1962.

SN 137,593. Central Transformer Corporation, Pine Bluff, Ark. Filed Feb. 9, 1962.

DURA-PAK

For Core and Coil Assemblies for Distribution Transformers Having a Rating of Not Less Than One kva.
First use Sept. 18, 1961.

SN 138,097. Hild Floor Machine Co., Inc., Chicago, Ill. Filed Feb. 16, 1962.

HILD

For Vacuum Cleaners, Rug and Carpet Beaters, Scrubbers, and Polishers.
First use 1927.

SN 139,138. Protectall Industries, Inc., Batavia, Ill. Filed Mar. 5, 1962.

TRANSISTO FENCE

For Electric Fence Controllers.
First use Jan. 6, 1962.

SN 139,630. Sigmund F. Hiller, d.b.a. Richberger's, Memphis, Tenn. Filed Mar. 12, 1962.

RADOR

For Incandescent Electric Lamp Bulbs, Fluorescent Electric Lamp Bulbs, Fluorescent Lamp Starter Switches, Fixtures and Fuses for Incandescent and Fluorescent Lamp Bulbs and Starter Switches.
First use July 3, 1957.

SN 140,886. The Thomas & Betts Co., Elizabeth, N.J. Filed Mar. 27, 1962.

POS-E-FLEX

For Flat Conductor Cable Connectors, Adapted for Connecting and/or Splicing Flat Conductor Cable Sections and for Termination in Round Conductors.
First use July 14, 1960.

SN 140,889. The Thomas & Betts Co., Elizabeth, N. J. Filed Mar. 27, 1962.

POS-E-KON

For Flat Conductor Cable Connectors, Adapted for Connecting and/or Splicing Flat Conductor Cable Sections in End to End Relation, Connecting Flat Conductor Cable to Printed Circuit Boards, and Also for Such Connectors Which Are Further Adapted for Termination in Round Conductors.
First use Apr. 11, 1960.

SN 143,439. Scanner Corporation of America, Livonia, Mich. Filed Apr. 30, 1962.

SURF-HAILER

For Combined Horn, Megaphone, and Audio Receiver.
First use Apr. 6, 1961.

SN 147,812. The Electric Auto-Lite Company, Toledo, Ohio. Filed June 27, 1962.



For Generators, Alternators, Motors, Storage Batteries, Spark Plugs, Wire and Cable, Voltage Regulators, Electric Storaging, Generating, Engine Starting, Ignition, Indicating and Regulating Apparatus, Electric Wiring, Switching and Controlling Devices, Components and Accessories Therefor, Particularly Adapted for Automotive Engines; Vehicle Equipment—Namely, Actuating Apparatus, Electric Lighting Devices, Electrically Actuated Apparatus for Producing Visual-Audible Warning and Direction Signals and Parts Therefor, Particularly Adapted for Use With Self-Propelled Vehicles.
First use June 23, 1961, on generators, wire and cable and containers for the goods.

SN 149,137. Sony Corporation of America, New York, N.Y. Filed July 16, 1962.

MICRO

For Television Receiving Sets.
First use June 15, 1962.

SN 151,067. Lloyd Trade Company, Los Angeles, Calif. Filed Aug. 13, 1962.

LLOYD'S

For Radio Receiving Sets, Operating on Shortwave or Amplitude and Frequency Modulation; and Telephone Amplifiers.
First use Nov. 1, 1959.

SN 151,159. Opto-Electronic Devices, Inc., Mountain View, Calif. Filed Aug. 14, 1962.

opto-electronics

For Photoconductors—Namely, Photocells and Phototubes.
First use June 20, 1962.

SN 153,133. U.S. Terminals, Inc., Cincinnati, Ohio. Filed Sept. 13, 1962.

SLIP LOCK

For Electrical Terminals Used in Radios and Electronic Devices.
First use Aug. 2, 1962.

SN 156,549. Artclif Manufacturing Inc., Saginaw, Mich. Filed Nov. 5, 1962.

SERVISTART

For Vehicle Battery Boosting and Starting Apparatus Incorporating an Auxiliary Battery.
First use Oct. 22, 1962.

SN 157,106. Hull Protectors, Inc., San Diego, Calif. Filed Nov. 13, 1962.

ULTRAMATIC

For Cathodic Anodes and Control Instruments for the Protection of the Ship or Pipe Line Against Galvanic Metal Losses and for Automated Direct Current Power Supply Instruments.
First use Sept. 15, 1962.

SN 157,360. Electro Products Laboratories, Inc., Chicago, Ill. Filed Nov. 16, 1962.

PRES-CON

For Electronic Control Devices for Automatically Operated Machinery.
First use May 4, 1962.

SN 158,018. Opto-Electronic Devices, Inc., Mountain View, Calif.. Filed Nov. 27, 1962.

opto-electronic

For Light Actuated Devices—Namely, Relays.
First use Nov. 13, 1962.

SN 158,154. Harvey Aluminum (Incorporated), Torrance, Calif. Filed Nov. 29, 1962.

HARVEY Aluminum

Applicant disclaims the word "Aluminum" apart from the mark as shown.
For Electrical Conduit.
First use May 1, 1960.

SN 158,242. Electro-Matic Products Co., Chicago, Ill. Filed Nov. 30, 1962.

NEUTROL

Owner of Reg. Nos. 406,937 and 562,245.
For Demagnetizing Apparatus for Magnetic Chucks and Workpieces Thereon.
First use May 15, 1938.

SN 158,368. Penta Laboratories, Inc., Santa Barbara, Calif. Filed Dec. 3, 1962.

PL

Owner of Reg. No. 597,571.
For Electron Tubes, Electrical Switches, and Electronic Sub-Assemblies for Connecting External Apparatus to Tubes.
First use July 10, 1952.

SN 158,417. AMP Incorporated, Harrisburg, Pa. Filed Dec. 4, 1962.

AMPLIMICA

For Electrical Capacitors.
First use Nov. 21, 1962.

SN 158,732. Process Development Corporation, Wayne, N.J. Filed Dec. 7, 1962.

SPEED MASTER

For Electrical Control for the Starting, Stopping, and Speed Regulation of Electric Motors.
First use June 15, 1962.

SN 158,982. Lighting Products, Inc., Highland Park, Ill. Filed Dec. 12, 1962.

LPI

Owner of Reg. No. 725,284.
For Fluorescent Electric Lighting Fixtures.
First use on or about Mar. 9, 1959.

SN 159,857. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed Dec. 27, 1962.

DORYL

For Insulating Varnishes.
First use on or about Oct. 11, 1962.

SN 159,977. Electric Cleaner Co. Inc., Osseo, Wis. Filed Dec. 31, 1962.

DAIRY-VAC

Owner of Reg. No. 639,282.
For Portable Electrically Operated Vacuum Cleaners.
First use Nov. 29, 1947.

SN 161,181. Howe-Baker Engineers, Inc., Tyler, Tex. Filed Jan. 22, 1963.

NU-STATIC

For Electrodes for Use in Electrostatic Treatment of Liquids.
First use July 30, 1962.

SN 162,067. Basic Products Corporation, Milwaukee, Wis. Filed Feb. 5, 1963.

MERC-MITE

For Ballasts for Supplying Energy to Gaseous Discharge Lamps.
First use Sept. 17, 1962.

SN 162,158. General Floorcraft, Inc., Bronx, N.Y. Filed Feb. 6, 1963.

BUDDY VAC

For Portable Vacuum Cleaners.
First use on or about Dec. 15, 1961.

SN 162,246. Electrotone Laboratories, Inc., Chicago, Ill. Filed Feb. 7, 1963.

TRIGNITER

For Transistorized Ignition System Kit for Automobiles and Sold as Such.
First use on or about Dec. 17, 1962.

SN 162,820. Channel Master Corporation, Ellenville, N.Y. Filed Feb. 15, 1963.

GEMINI

For Television Antenna Signal-Amplifiers and Rotators.
First use Jan. 3, 1963.

SN 163,157. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Feb. 20, 1963.

P. R. MALLORY & CO MALLORY

Owner of Reg. No. 400,573.
For Electrical and Radio Products—Namely, Electric Condensers, Electric Vibrators and Vibrator-Operated Electric Power Supply Devices, Electric Power Controls, Electric Rectifiers, Battery Chargers, Electric Switches, Electric Contacts, Electric Resistances, Potentiometers, Rheostats, Volume Controls and Parts Thereof, Tuning Devices, Electric Filter Devices, Electric Plugs and Jacks, Potential Cells, Grid Bias Devices, Terminals, Terminal Strips, Electric Connectors, Radio Outlets, Dial and Pilot Lights and Acessories, Dial Plates, Electric Welding Equipment, Welding Electrodes of the Type Not Consumed in the Welding Operation, Welding Electrode Holders.
First use July 1936.

SN 163,501. Trak Incorporated, Columbus, Ohio. Filed Feb. 26, 1963.

TRAK

For Electrical Gourmet Range and Electrical Defrosters for Refrigerators and Freezers.
First use Feb. 12, 1963.

SN 164,030. Essex Wire Corporation, Detroit, Mich. Filed Mar. 6, 1963.

POLY THERMALEX

Owner of Reg. Nos. 672,137, 672,750, and 717,808.
For Electrical Wire.
First use July 1, 1960.

Class 22 — Games, Toys, and Sporting Goods

SN 139,095. The Eastridge Company, Inc., Lincoln, Nebr., assignee of Arthur M. Gunderson, Minneapolis, Minn. Filed Mar. 5, 1962.

DIVOT-OFF

For Multi-Purpose Golfer's Tool.
First use Aug. 15, 1960.

SN 146,183. Halsam Products Company, Chicago, Ill. Filed June 5, 1962.

HORSE WINKS

For Equipment Sold as a Unit for Playing a Board Game.
First use Mar. 2, 1962.

SN 150,140. Teresa & Tom Woodward, Los Angeles, Calif. Filed July 30, 1962.

ANIMAL KOOKIES

No claim of exclusive right is made to "Animal" for animal stuffed toys.
For Fanciful Three Dimensional Animal Characters in the Nature of Stuffed Toys.
First use July 17, 1962.

SN 150,598. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Aug. 6, 1962.

LEVELINE

For Fishing Reels.
First use 1955.

SN 151,316. John Eisenhut, Carrollton, Ohio. Filed Aug. 16, 1962.

IRRITATION

For Playing Equipment Comprising a Game Board for Playing a Marble Game.
First use Aug. 2, 1962.

SN 151,566. Brunswick Corporation, Chicago, Ill. Filed Aug. 21, 1962.

SPARE SETTER

No claim is made to the exclusive use of the word "Setter" alone.
For Mechanism for Controlling the Operation of an Automatic Pinsetter.
First use Aug. 6, 1962.

SN 151,677. The Hubley Manufacturing Company, Lancaster, Pa. Filed Aug. 22, 1962.

golferino

For Equipment Sold as a Unit for Playing a Toy Golf Game.
First use July 13, 1962.

SN 152,066. Ideal Toy Corporation, Hollis, N.Y. Filed Aug. 28, 1962.

KING ZOR

For Motorized Mechanical Toy Simulating a Dinosaur, a Toy Gun, and Suction Tipped Darts for Use Therewith.
First use May 17, 1962.

SN 152,068. Ideal Toy Corporation, Hollis, N.Y. Filed Aug. 28, 1962.

ODD OGG

For Battery Operated Toy Frog.
First use May 17, 1962.

SN 153,062. Milton Bradley Company, Springfield, Mass. Filed Sept. 13, 1962.

Flan-O-Graph

For Educational Devices Including a Display Surface and Display Objects in the Nature of Flash Cards, Cut-Outs or the Like Adapted To Be Releasably Held by Said Display Surface and Used by Teachers in Illustrating Numerals, Letters, Words, Problems and Objects for the Training of Young Children.
First use Sept. 4, 1962.

SN 155,286. Worthington Golf Inc., Elyria, Ohio. Filed Oct. 16, 1962.

Premier

For Golf Balls.
First use Sept. 20, 1962.

SN 155,848. St. Lawrence Sales Incorporated, Birmingham, Mich. Filed Oct. 17, 1962.

BLACK DEMON

For Snow Skis.
First use May 12, 1960.

SN 155,818. Louis Marx & Co. Inc., New York, N.Y. Filed Oct. 24, 1962.

FAIRYKINS

For Miniature Toy Figures.
First use Jan. 20, 1962.

SN 155,957. Admart, Inc., Chicago, Ill. Filed Oct. 26, 1962.

BOPPER

For Balloon Bouncer Toy.
First use Sept. 10, 1962.

SN 157,526. John Makar, d.b.a. Makar Products Co., Tulsa, Okla. Filed Nov. 19, 1962.

PAR-BUSTER

For Golf Equipment—Namely, Practice Nets, Turf and Tee Mats, Balls and Shag Bags.
First use Sept. 8, 1962.

SN 157,744. Wilson Sporting Goods Co., River Grove, Ill. Filed Nov. 21, 1962.

KRAMER CUP

For Tennis Rackets.
First use Feb. 11, 1962.

SN 157,746. Ypsilanti American Engineering and Development Corporation, Ypsilanti, Mich. Filed Nov. 21, 1962.

AMEDCO

For Toy of the Sled-Type.
First use Aug. 11, 1962.

SN 157,747. Ypsilanti American Engineering and Development Corporation, Ypsilanti, Mich. Filed Nov. 21, 1962.

Magic SNOW CARPET

For Toy of the Sled-Type.
First use Aug. 11, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 117,400. Screw Conveyor Corporation, Hammond, Ind. Filed Apr. 7, 1961.

SCREW-LIFT

Owner of Reg. No. 592,156.
For Elevating and Conveying Apparatus Comprising Helical and Screw Conveyors and Parts Thereof.
First use on or about Oct. 1, 1940.

SN 129,481. Gualtiero Giori, Lausanne, Switzerland. Filed Oct. 9, 1961.

GIORI SIMULTAN

Owner of Swiss Reg. No. 185,103, dated Feb. 28, 1961.
For Machines and Apparatus for Impression—Namely, Dry-Offset Printing Presses and Parts Thereof for Reproducing Engravings and Ornamental Parts.

SN 129,484. Gualtiero Giori, Lausanne, Switzerland. Filed Oct. 9, 1961.

GIORI PERFORA

Owner of Swiss Reg. No. 185,102, dated Feb. 28, 1961.
For Machines and Apparatus for Impression—Namely, Rotary Perforating Machines and Parts Thereof for Perforating Sheets of Gummed and Printed Securities.

SN 136,889. Daffin Corporation, Hopkins, Minn. Filed Jan. 30, 1962.

Daffin

Owner of Reg. No. 566,168.
For Machines for Grinding and Mixing Cattle Feed and Disc Harrows.
First use Feb. 24, 1949.

SN 137,027. Daffin Corporation, Hopkins, Minn. Filed Jan. 30, 1962.

MILL-U-NIT

Owner of Reg. No. 579,866.
For Machines for Grinding and/or Mixing Cattle Feed.
First use Nov. 10, 1949.

SN 138,022. Interstate Vending Company, Chicago, Ill. Filed Feb. 15, 1962.

PERK-O-CUP

Owner of Reg. No. 628,646.
For Beverage Dispensing Machine.
First use June 27, 1961.

SN 138,611. Alma A. Hutchins, d.b.a. Hutchins Mfg. Company, Pasadena, Calif. Filed Feb. 26, 1962.

SPEED FILE

For Sanding Tools—Namely, Holders to Which Sandpaper Is Detachably Secured for Sanding Automobile Bodies and Other Work Structures.
First use Mar. 28, 1958.

SN 139,617. Geode Industries Inc., New London, Iowa. Filed Mar. 12, 1962.

VIBRA-SONIC

For Lapidary Tumbling and Processing Equipment, Using Controlled Orbital Vibratory Action for Reducing and Finishing Rough Gem Materials to a Polished State.
First use Feb. 13, 1962.

SN 140,134. The Joyce-Cridland Company, Dayton, Ohio. Filed Mar. 19, 1962.



The drawing is lined for color red. Owner of Reg. No. 622,181.
For Vehicle Lifts.
First use on or about Jan. 5, 1962.

SN 142,782. Baker Perkins Inc., Saginaw, Mich. Filed Apr. 23, 1962.

KO-KNEADER

For Mixing, Masticating, and Blending Machines.
First use Oct. 1, 1954.

SN 147,416. David Vaughan Mitchell, d.b.a. Custom Muffler Manufacturing Co., Pasadena, Calif. Filed June 21, 1962.

BESTONE

For Automobile Mufflers and Exhaust Pipes.
First use May 12, 1960.

SN 149,470. Jacobsen Manufacturing Company, Racine, Wis. Filed July 20, 1962.

J

For Lawn Mowers, Power Mowers, Gang Mowers, Tractors, Grass Catchers, Lawn Edgers and Trimmers, Turf Aerators, Rotary Tillers, Snow Throwers, Leaf Mulchers, and Accessories and Parts for All of the Foregoing.
First use as early as September 1955.

SN 149,664. J. J. Newberry Co., New York, N.Y. Filed July 24, 1962.

TITAN

For Power Lawn Mowers.
First use Oct. 20, 1961.

SN 150,089. F. P. Maxson Saw & Mfg. Co., Skokie, Ill. Filed July 30, 1962.



Applicant disclaims the word "Saw" apart from the mark shown.
For Saw Blades.
First use May 8, 1962.

SN 150,166. Foo Equipment Corporation, Rockford, Ill. Filed July 31, 1962.

COULTER

For Spray-Type Milk Dryers.
First use June 1, 1955.

SN 150,978. Sundstrand Corporation, Rockford, Ill. Filed Aug. 10, 1962.

SUNDSTRAND JIGMATIC

Owner of Reg. No. 525,878.
For Machine Tools—Namely, Milling Machines and Drilling Machines and Parts Thereof.
First use Dec. 2, 1961.

SN 150,999. Brunswick Corporation, Chicago, Ill. Filed Aug. 13, 1962.

BRUNSWICK 90

Owner of Reg. No. 539,796.
For Lane Maintenance Machines.
First use Apr. 13, 1962.

SN 151,270. Sundstrand Corporation, Rockford, Ill. Filed Aug. 15, 1962.

OMNILATHE

Owner of Reg. No. 679,566.
For Machine Tools—Namely, Lathes and Parts Thereof.
First use May 18, 1962.

SN 152,156. Royal McBee Corporation, New York, N.Y. Filed Aug. 29, 1962.

CITADEL

For Typewriting Machines and Parts Thereof.
First use Aug. 21, 1962.

SN 152,157. Royal McBee Corporation, New York, N.Y. Filed Aug. 29, 1962.

CRUISER

For Typewriting Machines and Parts Thereof.
First use Aug. 21, 1962.

SN 152,158. Royal McBee Corporation, New York, N.Y. Filed Aug. 29, 1962.

TRAVELER

For Typewriting Machines and Parts Thereof.
First use Aug. 22, 1962.

SN 152,770. Dodge Manufacturing Corporation, Mishawaka, Ind. Filed Sept. 10, 1962.

AIR GRIP

Owner of Reg. No. 621,931.
For Pneumatically Operated Clutches.
First use on or about Apr. 29, 1954.

SN 154,135. Modernair Corporation, San Leandro, Calif. Filed Sept. 28, 1962.

CIRCUITAIR

For Fluid Operated Reciprocating Cylinder Units, and Valves and Accessories Therefor.
First use Sept. 6, 1962.

SN 154,136. Modernair Corporation, San Leandro, Calif. Filed Sept. 28, 1962.

CO-AXIAL

For Combination Air and Hydraulic Cylinder Units.
First use May 27, 1954.

SN 154,137. Modernair Corporation, San Leandro, Calif. Filed Sept. 28, 1962.

SYSTEMAIR

For Fluid Operated Reciprocating Cylinder Units, and Valves and Accessories Therefor.
First use Sept. 6, 1962.

SN 154,138. Modernair Corporation, San Leandro, Calif. Filed Sept. 28, 1962.

VERITROL

For Hydraulic Control Mechanism for Checking Strike Speed of Air Cylinder Units.
First use Nov. 11, 1957.

SN 154,159. The Sharples Corporation, Philadelphia, Pa. Filed Sept. 28, 1962.



Owner of Reg. No. 386,494.
For Centrifuges, Mixers, Pumps, Particle Classifiers, Counter-Current Extractors, Deaerators, Steam Condensers, Powder Collection Equipment, Proportioning Devices, Particle Size Analyzers, Level Controllers, Time Controls for Centrifuges, Spray Dryers, Vacuum Dryers, Vacuum Dehydrators, and Heater Assemblies.
First use June 26, 1962, on centrifuges.

SN 154,346. Frenchtown Porcelain Company, Frenchtown, N.J. Filed Oct. 2, 1962.

TUFBLAST

For Sand Blast Nozzles and Parts Thereof Formed Entirely or Throughout the Abrasive Contacting Portions Thereof, of Ceramic Material or Porcelain.
First use Apr. 6, 1939.

SN 154,970. William P. Glade, d.b.a. Asphalt Tools Mfg. Co., Fort Worth, Tex. Filed Oct. 11, 1962.

ASFO-SEALER

For Dispensing Apparatus for Asphalt in Repairing Pavements and the Like.
First use June 1, 1962.

SN 155,525. Salmanson & Co. Inc., New York, N.Y. Filed Oct. 19, 1962.



For Gas Engine Powered Snow Throwers.
First use June 20, 1962.

SN 162,052. Norba Aktiebolag, Blomstermala, Sweden. Filed Jan. 14, 1963.

NORBA

Owner of Swedish Reg. No. 103,452, dated July 27, 1962.
For Mechanical, Hydraulical and Pneumatical Devices for Lifting and Tipping for Use in Refuse Collecting and Compressing, and Parts and Fittings Therefor.

SN 163,353. Georgia Pacific Pump Company, Vienna, Ga. Filed Feb. 25, 1963.



Owner of Reg. No. 658,086.
For Water Pumps and Home Water Systems.
First use January 1960.

SN 163,360. Hastings Fiber Glass Products, Inc., Hastings, Mich. Filed Feb. 25, 1963.

TEL-O-POLE

For Linemen's Hot Sticks, Measuring Sticks and Pike Poles; Firemen's Pike Poles; and Surveyors' Range Poles; and Comprised of an Extensible Pole Having Markings or a Tool Mounted Thereon.
First use July 16, 1959.

SN 163,365. Illinois Tool Works Inc., Chicago, Ill. Filed Feb. 25, 1963.



Owner of Reg. Nos. 119,518, 644,438, and others.
For Metal Cutting Tools Used in Connection With Machine Tools—Namely, Counterbores, Pilots, Hollow Mills, Reamers, Taps, Spot Facers, Countersinks, Center Cutting Tools, Cutters, Form Cutters, End Mills, Drills, Boring Bars, Interchangeable Drives, Core Drills, Tool Holders, and Multi-Diameter Cutters.
First use as early as May 1931.

SN 163,395. The Oilgear Company, Milwaukee, Wis. Filed Feb. 25, 1963.

DIGITAC

For Hydraulic Drives and Hydraulic Transmissions, and Electrohydraulic Controls Therefor.
First use Dec. 18, 1962.

SN 163,403. Questron America, Inc., Ellenville, N.Y. Filed Feb. 25, 1963.

JYRAK

For Machines and Accessories for Making Plastic Containers.
First use Aug. 15, 1962.

SN 163,545. Hayes & Stols Industrial Manufacturing Co., Inc., Fort Worth, Tex. Filed Feb. 27, 1963.



For Machinery for Handling, Processing, Compounding and Storing Feeds, Grains, Fertilizers, Chemicals, Cement and Other Bulk Material, Including Distributors, Conveyors, Mixers, Agitators, Blenders, Pumps, Applicators, Valves, Gates, Elevators, Bins and Hoppers, Steamers, Loading Belts, Lifts, Cleaners, Feeders, and Heating and Storage Tanks.
First use Nov. 21, 1962.

SN 163,546. Hayes & Stols Industrial Manufacturing Co., Inc., Fort Worth, Tex. Filed Feb. 27, 1963.

H & S

For Machinery for Handling, Processing, Compounding and Storing Feeds, Grains, Fertilizers, Chemicals, Cement and Other Bulk Material, Including Distributors, Conveyors, Mixers, Agitators, Blenders, Pumps, Applicators, Valves, Gates, Elevators, Bins and Hoppers, Steamers, Loading Belts, Lifts, Cleaners, Feeders, and Heating and Storage Tanks
First use Jan. 15, 1957.

SN 163,632. Horvath Tool and Manufacturing Company, Detroit, Mich. Filed Feb. 28, 1963.

FF 300

For Masonry Bits.
First use Dec. 17, 1962.

SN 163,672. Towle Manufacturing Company, Newburyport, Mass. Filed Feb. 28, 1963.

INNOVATION

For Stainless Steel Flatware.
First use Feb. 15, 1963.

SN 163,675. Towle Manufacturing Company, Newburyport, Mass. Filed Feb. 28, 1963.

MERRIMACK

For Stainless Steel Flatware.
First use Feb. 15, 1963.

SN 163,697. Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Filed Mar. 1, 1963.

ARROWHEAD

For Cutting Edges for Earth Moving Equipment.
First use Feb. 12, 1963.

SN 163,735. Krauss-Maffei Aktiengesellschaft, Munich-Allach, Germany. Filed Mar. 1, 1963.



Owner of U.S. Reg. No. 635,902.
For Locomotives.
First use 1941; in commerce Oct. 30, 1961.

SN 163,809. The Cincinnati Tool Company, Cincinnati, Ohio. Filed Mar. 4, 1963.

CIN-CRAFT

For Carbide Tipped Masonry Drills.
First use February 1955.

SN 163,906. B. Verner & Company, Inc., New York, N.Y. Filed Mar. 4, 1963.

MULTIPRESS

For Printing Presses.
First use October 1935.

SN 164,034. Garlock Inc., Palmyra, N.Y. Filed Mar. 6, 1963.

MARBLOCK

For Machine Parts—Namely, Hydraulic Cylinder Components Primarily Intended for Use With Bucket, Boom and Steering Cylinders on Loaders, Bulldozers, and Other Equipment.
First use Feb. 6, 1961.

SN 164,139. Howard T. Johnston, d.b.a. California Seed & Fertilizer Company, Yuba City, Calif. Filed Mar. 7, 1963.

RANCHERO

For Fertilizer Spreaders.
First use Feb. 12, 1963.

SN 164,238. Gesco Cutlery Company, Inc., Orange Park, Fla. Filed Mar. 8, 1963.

GESCO

For Cutlery—Namely, Folding Knives, Multi-Purpose Knives, Pocket Knives, Jack Knives, Pruning Knives, and Hunting Knives.
First use June 22, 1960.

SN 164,418. Atlas Deco Corporation, New York, N.Y. Filed Mar. 12, 1963.

ATLAMATIC

For Lift Trucks and Transmissions for Lift Trucks.
First use on or about Feb. 5, 1962, on transmissions for lift trucks.

SN 164,446. Walter D. Landgraf, Oak Lawn, Ill. Filed Mar. 12, 1963.

REEL-MATE

For Typewriter Spools.
First use Feb. 1, 1963.

SN 164,513. Dura Corporation, Oak Park, Mich. Filed Mar. 13, 1963.

DURA-MATIC

For Transaxles Comprising a Power Transmission and Differential Mechanism Mounted as a Unit.
First use Nov. 29, 1962.

SN 164,731. H. E. Lauffer Co., Inc., New York, N.Y. Filed Mar. 15, 1963.

BEDFORD

For Stainless Steel Cutlery—Namely, Knives, Forks, Spoons, and Serving Spoons and Forks.
First use Jan. 21, 1963.

SN 164,918. Tensiometers, Inc., Barrington, R.I. Filed Mar. 18, 1963.

UNI-TENS

For Hydro-Mechanical Power Transmission Drive.
First use Oct. 16, 1962.

SN 164,998. Recon Corporation, Rochester, Mich. Filed Mar. 19, 1963.

MATCHMAKER T

For Gasoline Pumps.
First use Mar. 13, 1963.

SN 165,010. Winslow Product Engineering Corporation, Arcadia, Calif. Filed Mar. 19, 1963.

WINSLOMATIC

For Drill Point Grinders.
First use Oct. 16, 1959.

SN 165,331. Samuel Jackson Manufacturing Corporation, Lubbock, Tex. Filed Mar. 25, 1963.



For Cotton Ginning Equipment.
First use Apr. 11, 1960.

SN 166,252. Brother International Corporation of Pennsylvania, New York, N.Y. Filed Apr. 8, 1963.

WINDOW-MATIC

For Sewing Machines and Sewing Machine Heads.
First use Dec. 16, 1955.

Class 24—Laundry Appliances and Machines

SN 134,603. Borg-Warner Corporation, Chicago, Ill. Filed Dec. 26, 1961.

NORGE

Owner of Reg. Nos. 331,103, 514,790, 643,247, and others.
For Coin Operated and Commercial Laundry and Dry Cleaning Equipment Consisting of Washers and Dryers, Dry Cleaning Machines, Extractors, Filter Sludge Reclaimers (Muck Cookers), Solvent Reclaimers, Presses and Other Finishing Equipment, and Parts Thereof for Replacement and Repair.
First use on or prior to Jan. 1, 1956.

SN 134,605. Borg-Warner Corporation, Chicago, Ill. Filed Dec. 26, 1961.



Owner of Reg. Nos. 633,985, 635,603, 637,642, and 645,936.
For Coin Operated and Commercial Laundry and Dry Cleaning Equipment Consisting of Washers and Dryers, Dry Cleaning Machines, Extractors, Filter Sludge Reclaimers (Muck Cookers), Solvent Reclaimers, Presses and Other Finishing Equipment, and Parts Thereof for Replacement and Repair.
First use on or prior to Jan. 20, 1961.

Class 26—Measuring and Scientific Appliances

SN 96,552. Ace Electronics Associates, Inc., Somerville, Mass. Filed May 6, 1960.

ACE

Owner of Reg. Nos. 635,176, 690,196, and others.
For Variable Resistance Potentiometers for Use as Resistors, Rheostats, Voltage Dividers and the Like in Electronic Circuits.
First use Oct. 16, 1954.

SN 138,348. Alameda Gage Company, Oak Park, Mich. Filed Feb. 21, 1962.

ALA-HIDE

For Metal Having a Hard Surface Coating Made Into Plug and Ring Gages and Similar Products.
First use Apr. 15, 1961.

SN 154,295. E. H. Sargent & Co., Chicago, Ill. Filed Oct. 1, 1962.



Owner of Reg. Nos. 410,569 and 733,073.
For Laboratory Equipment and Supplies—Namely, Blood Gas Apparatus; Burette; Burner; Centrifuge; Combustion

Apparatus; Power Boring Machine (Cork Boring Machine); Oscillometer High Frequency, Dielectric Constant and Conductance Apparatus; Titrator; Polarized Electrode Graph, Recording Microammeter and Electropolarizer; Polarographic Oxygen Analyzer; Electrolytic Analyzer; Concentration Comparator; Power Supply; Furnace; Gas Analyzer; Heater; Hot Plate Magnetic Stirrer; Incubator; Mill Assembly; Molecular Models; Amino Nitrogen Apparatus; Kjedahl Digesting and Distilling Unit; Oven; Paint Pigment Volumeter; Viscosimeter Bath; Pump; Recorder; Thermometric Bridge; Thermoregulating Relay; Thermistor Thermometer; Thermo-Controller; and Water Bath.
First use prior to Aug. 1, 1959.

SN 154,324. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 2, 1962.

VERIMASK

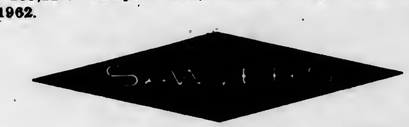
Priority claimed under Sec. 44(d) on German application filed Apr. 7, 1962; Reg. No. 762,847, dated June 29, 1962.
For Unexposed Photographic Films.

SN 159,042. Carter Products, Inc., New York, N.Y. Filed Dec. 13, 1962.



For Measuring Appliance—Namely, a Vacuum Tube Voltage Comparison Regulator.
First use Nov. 1, 1962.

SN 159,121. Sawyer's Inc., Portland, Oreg. Filed Dec. 13, 1962.



For Photographic Apparatus—Namely, Cameras, Camera Accessories, Projectors, Projector Accessories, Stereoscopes, Viewers, and Holders for Photographic Transparencies.
First use July 21, 1958.

SN 159,389. Da-Lite Screen Company, Inc., Warsaw, Ind. Filed Dec. 19, 1962.

DA-LITE

Owner of Reg. Nos. 201,592 and 401,282.
For Portable Picture Screens.
First use in 1914.

SN 159,568. Diginamics Corporation, Minneapolis, Minn. Filed Dec. 21, 1962.



For Data Processing Equipment Including Electro-Mechanical Transducers and Related Equipment—Namely, Pressure to Digital Transducers, Temperature to Digital Transducers, Shaft Position to Digital Transducers Parallel to Serial Converters or Serializers, Digital Multiplexers, Digital Controllers, Digital Synchro Repeaters, and Data Logging Systems.
First use Mar. 2, 1962.

Class 27 — Horological Instruments

SN 114,805. Sunbeam Corporation, Chicago, Ill. Filed Mar. 2, 1961.

SLIM WOOD

For Clocks.
First use Feb. 13, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 147,611. Willi Nonnenmann, Pforzheim, Germany. Filed June 25, 1962.



Owner of German Reg. No. 676,617, dated May 25, 1955.
For Pins, Pendants, Chains, Necklaces, Bracelets, Earrings, Finger Rings, and Jewelry Ornaments Made of Precious Metal.

SN 148,049. Levine-Simson Co. Inc., New York, N.Y. Filed June 29, 1962.

L-S

For Jewelry.
First use Dec. 31, 1947.

SN 148,626. Jo-Di Jewelry Manufacturing, Inc., New York, N.Y. Filed July 9, 1962.



For Charms, Bracelets, Pins, Cuff Links, Tie Bars, Religious Medals, Crosses and the Like To Be Worn on the Person.
First use June 1, 1962.

SN 149,663. Neptune Cultured Pearl Syndicate, Ltd., New York, N.Y. Filed July 24, 1962.

CULTURED TURQUOISE

Applicant disclaims rights in and to the term "Turquoise" when used apart from the subject trademark.
For Precious and Semi-Precious Stones and Beads and Jewelry Manufactured Therefrom.
First use June 13, 1962.

SN 150,739. Town & Country Distributors, Inc., Harrisburg, Pa., assignee of Jack Ginsburg, d.b.a. Gerbun Distributors, New York, N.Y. Filed Aug. 1, 1962.

Tourcrest

For Articles of Jewelry Including Rings, Bracelets, Earrings, Necklaces, and Pendants.
First use July 1, 1962.

SN 152,746. Charles Barnett Co. Inc., New York, N.Y. Filed Sept. 10, 1962.

CB

For Gold or Platinum Wedding Rings, Diamond Rings, Men's Rings, Mountings, Diamond Watch Bracelets, and Diamond Pendants.
First use July 1946.

SN 153,457. Paul Fourian, d.b.a. Boyajian's Sons Company, New York, N.Y. Filed Sept. 19, 1962.

P.F.

For Jewelry.
First use July 15, 1962.

SN 154,001. Victoria Floating Opals, Inc., New York, N.Y. Filed Sept. 26, 1962.



For 14 Kt. Gold Floating Opal and Other Precious and Semi-Precious Stone Pendants.
First use Dec. 2, 1961.

SN 154,125. George Lederman, Inc., New York, N.Y. Filed Sept. 28, 1962.



For Manufactured Jewelry for Personal Wear.
First use Aug. 28, 1962.

SN 156,067. J. Abraham & Son, New York, N.Y. Filed Oct. 29, 1962.



For Jewelry.
First use June 20, 1962.

SN 156,160. George Parness, d.b.a. Max Parness & Son, New York, N.Y. Filed Oct. 29, 1962.

MPS

For Gold Watch Attachments and Watch Bracelets.
First use June 15, 1962.

SN 156,192. Leon Turkus, New York, N.Y. Filed Oct. 29, 1962.

TU

For Precious Metal Jewelry—Namely, Rings and Pendants.
First use June 29, 1962.

SN 156,331. Mary G. Rezendes, d.b.a. Jo-Sand Jewelry Co., Providence, R.I. Filed Oct. 31, 1962.

SCARAB-MATE

For Jewelry for Personal Wear and Adornment.
First use Oct. 25, 1962.

SN 156,391. Harry Feffer, New York, N.Y. Filed Nov. 1, 1962.



For Jewelry.
First use Sept. 5, 1962.

SN 156,437. S & G Jewelry Co., Buffalo, N.Y. Filed Nov. 1, 1962.

S-G

For Rings and Jewelry.
First use Jan. 1, 1937.

SN 156,453. Max Jurow, Inc., New York, N.Y. Filed Nov. 1, 1962.



For Finger Rings, Earrings, Brooches, Bracelets, and Pendants.
First use on or about Oct. 19, 1962.

SN 157,216. Goldschild and Hershey, New York, N.Y. Filed Nov. 14, 1962.

GH.

For Jewelry.
First use July 1962.

Class 29 — Brooms, Brushes, and Dusters

SN 152,776. The Drackett Company of Canada, Ltd., Toronto, Ontario, Canada. Filed Sept. 10, 1962.

CHAN

Owner of Canadian Reg. No. 142/32207, dated Mar. 21, 1933.
For Mops and Sponge Mops.

SN 157,519. Landers, Frary & Clark, New Britain, Conn. Filed Nov. 19, 1962.

UNIVERSAL

Owner of Reg. Nos. 111,952 and 340,336.
For Cordless Electric Toothbrush.
First use July 31, 1962.

Class 30—Crockery, Earthenware, and Porcelain

SN 152,351. Terrace Ceramics, Inc., Zanesville, Ohio. Filed Aug. 31, 1962.

FERNWARE

For Horticultural Artware—Namely, Planters, Flower Bowls, Window Boxes, Jardinieres, All Featuring Satin-Matte Glazes on High-Fired Semi-Porcelain.
First use Aug. 15, 1962.

Class 31—Filters and Refrigerators

SN 131,042. P. M. Hayden Corporation, Riverside, Calif. Filed Oct. 31, 1961.

TRANS & COOLER

The term "Cooler" is disclaimed apart from the mark as shown.
For Cooling Units for Torque Converters and the Like.
First use Oct. 5, 1961.

SN 137,662. Royal Super Ice Company, Oakland, Calif. Filed Feb. 9, 1962.

ZERO-PAK

For Gel Product Packaged for Handling and for Repeated Freezing and Thawing for Use as a Refrigerant.
First use Apr. 19, 1937.

SN 151,202. Corning Glass Works, Corning, N.Y. Filed Aug. 15, 1962.

CERCOR

For Cellular Ceramic Elements for Use in Filtration in Sewage Disposal Systems.
First use on or about May 2, 1962.

SN 152,490. Cambridge Filter Manufacturing Corp., Syracuse, N.Y. Filed Sept. 5, 1962.

HI-CAP

For Air Filters.
First use on or before Aug. 29, 1962.

SN 152,491. Cambridge Filter Manufacturing Corp., Syracuse, N.Y. Filed Sept. 5, 1962.

HI-FLO

For Air Filters.
First use on or before Aug. 29, 1962.

Class 32—Furniture and Upholstery

SN 152,607. McDonald Products Corporation, Buffalo, N.Y. Filed Sept. 6, 1962.

DUK-IT

Owner of Reg. No. 562,203.
For Ash Receptacles of the Floor and Wall Type—Namely, Smokers' Stands, Urns and Trays, a Combination Arm Rest, Carryall Case and Seat for Small Children, and Book Ends, Letter Trays and Racks, and Utility Trays.
First use on or about June 26, 1934, on ash receptacles of the floor type.

SN 157,686. E.G. Enterprises, Inc., New York, N.Y. Filed Nov. 21, 1962.

FABRAK

For Display Rack for Sample Cards of Any and All Material Composition or Fabric.
First use Apr. 9, 1962.

SN 160,625. Federated Department Stores, Inc., Brooklyn, N.Y. Filed Jan. 14, 1963.

GAYLORD

For Venetian Blinds, Beds, Sofas, Loveseats, Cocktail Tables, Coffee Tables, and Pictures.
First use October 1940.

SN 160,630. Federated Department Stores, Inc., Brooklyn, N.Y. Filed Jan. 14, 1963.

OVERBROOK

For Upholstered Living Room Furniture—Namely, Sofas, Chairs, Loveseats, Sectionals and Sofa Beds.
First use July 1940.

SN 161,308. Breneman-Hartshorn Inc., Cincinnati, Ohio. Filed Jan. 24, 1963.

BALI BLIND

No claim is made to the exclusive right to the use of the word "Blind" separate and apart from the mark as shown.
For Form of Venetian Blind.
First use September 1962.

SN 161,405. Marymill Manufacturing Corporation, Phoenix, Ariz. Filed Jan. 25, 1963.

TRAZIDAZY

For Snack Trays.
First use Jan. 12, 1963.

SN 161,406. Marymill Manufacturing Corporation, Phoenix, Ariz. Filed Jan. 25, 1963.

LAZIDAZY

For Folding Cots.
First use Jan. 12, 1963.

SN 162,030. Sengbusch Self-Closing Inkstand Company, Milwaukee, Wis. Filed Feb. 4, 1963.

CATA-RACK

For Holder for Books, Directories, Catalogs, Desk Correspondence, and the Like.
First use January 1951.

SN 162,374. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

For Latex Foam Mattresses and Cushions.
First use Aug. 7, 1962.

Class 33—Glassware

SN 152,030. American Can Company, Jersey City, N.J., by merger from A-W Glass Corporation, East Brunswick, N.J. Filed Aug. 28, 1962.

MIRAGLASS

For Glass Bottles and Jars.
First use Aug. 14, 1962.

SN 157,157. Societe Anonyme des Miroiteries de Charleroi, Marchienne-au-Pont, Belgium. Filed Nov. 15, 1962.

MIROX

For Mirrored Plate Glass.
First use Dec. 10, 1937; in commerce Dec. 30, 1950.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 122,233. Williams Furnace Co., Buena Park, Calif. Filed June 16, 1961.

DEBONAIR

For Gas-Fired Household Heating Appliances.
First use on or about Mar. 15, 1960.

SN 140,712. Midland-Ross Corporation, Toledo, Ohio. Filed Mar. 26, 1962.

WEBSTER

Owner of Reg. Nos. 255,277, 621,312, and others.
For Oil-Fired Burners for Boilers.
First use Dec. 30, 1955.

SN 150,757. Caloric Corporation, Topton, Pa. Filed Aug. 8, 1962.

CALORIC

Owner of Reg. No. 406,669.
For Incinerators.
First use on or about Jan. 15, 1958.

SN 151,357. Premier Industrial Corporation, Cleveland, Ohio. Filed Aug. 16, 1962.

REFRIGERANT ACTION

For Welding Supplies—Namely, Welding Rods and Welding Electrodes.
First use July 1961.

SN 152,516. Henes Manufacturing Company, Phoenix, Ariz. Filed Sept. 5, 1962.

WATER WELDER

For Welding Equipment, Including Electrolytic Gas Generators and Boosters.
First use June 26, 1962.

SN 157,078. Crouse-Hinds Company, Syracuse, N.Y. Filed Nov. 13, 1962.

Hi-liter

For Flood Lights and Lighting Equipment.
First use May 15, 1962.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 162,873. Seiberling Rubber Company, Barberton, Ohio. Filed Feb. 15, 1963.

POLYTEX

For Pneumatic Rubber Tires.
First use Oct. 26, 1962.

Class 36—Musical Instruments and Supplies

SN 113,578. Grossman Music Corporation, Cleveland, Ohio. Filed Feb. 13, 1961.

DIXIE

For Fifes, Banjo-Ukuleles, Snare Drums, Parade Drums, Bass Drums, Tom-Toms, Congos and Bongos.
First use on or about May 3, 1948.

SN 135,603. The Nortronics Company, Inc., Minneapolis, Minn. Filed Jan. 11, 1962.

STEREO 4!

NORTRONICS RECORDINGS

Applicant hereby disclaims "Stereo" and "Recordings" apart from the mark as shown. Owner of Reg. No. 678,445.
For Magnetic Tapes and Magnetic Recording and Reproducing Devices.
First use June 16, 1961.
Subj. to Intf. with SN 125,517.

SN 138,992. Warren S. Swanson, d.b.a. W. S. Sumner Company, Minneapolis, Minn. Filed Mar. 2, 1962.

ACOUSTICUT

For Musical Wind Instruments.
First use June 1, 1951.

SN 140,385. Romper Room, Inc., Baltimore, Md. Filed Mar. 21, 1962.

ROMPER ROOM

Owner of Reg. No. 589,236.
For Phonograph Records.
First use Dec. 22, 1955.

SN 151,067. Lloyd Trade Company, Los Angeles, Calif. Filed Aug. 13, 1962.

LLOYD'S

For Tape Recorders.
First use Nov. 1, 1959.

SN 157,000. National Bag-O-Tunes, Island Park, N.Y. Filed Nov. 9, 1962.

STRING-O-TUNES

For Packaged Phonograph Records, Each Package Containing a Number of Different Records.
First use July 1, 1962.

SN 159,120. Sawyer's Inc., Portland, Oreg. Filed Dec. 13, 1962.



For Office Equipment—Namely, Office Recording and Transcribing Machines.
First use July 20, 1962.

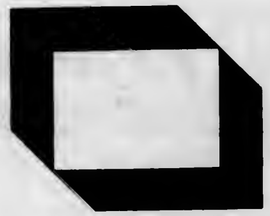
SN 159,248. Harry G. Lasky, Bronxville, N.N.Y. Filed Dec. 17, 1962.

SAVAREZ

For Nylon Guitar Strings.
First use Nov. 20, 1962.

Class 37 — Paper and Stationery

SN 106,062. Container Corporation of America, Chicago, Ill. Filed Oct. 10, 1960.



Owner of Reg. No. 733,030.
For Paperboard.
First use June 28, 1958.

SN 127,981. Park Tissue Mills Inc., New York, N.Y. Filed Sept. 15, 1961.

SOF-TONE

For Toilet Tissues.
First use May 1, 1960.

SN 151,302. Crown Zellerbach Corporation, San Francisco, Calif. Filed Aug. 16, 1962.

ZEE

Owner of Reg. Nos. 279,461, 550,784, and others.
For Polyethylene Food Wrap.
First use Aug. 15, 1961.

SN 151,828. Interstate Bag Company, Inc., Walden, N.Y. Filed Aug. 24, 1962.

GLOSSTONE

For Wrapping Paper.
First use Aug. 14, 1962.

SN 152,407. Imperial Wallpaper Mill, Inc., Cleveland, Ohio. Filed Sept. 4, 1962.

TOWNLEY

For Wallpapers.
First use on or about Aug. 1, 1962.

SN 152,608. McDonald Products Corporation, Buffalo, N.Y. Filed Sept. 6, 1962.

DUK-IT

Owner of Reg. No. 562,203.
For Desk Sets and Accessories—Namely, Desk Pads, Pen Holders, Paper Weights, Letter Openers, Letter Opener and Scissor Library Sets, Desk Calendars and Calendar Pads, Pencil Caddys, Memo Boxes, Telephone Indexes, and Name Plate and Sign Bases.
First use in or about February 1956.

SN 155,623. Mail-Well Envelope Company, Portland, Oreg. Filed Oct. 22, 1962.

CARRY-WELL

For Envelopes.
First use Oct. 10, 1962.

Class 38 — Prints and Publications

SN 130,663. The Traffic Service Corporation, Washington, D.C. Filed Oct. 25, 1961.

TRANSPORTATION & DISTRIBUTION MANAGEMENT

For Specialized Magazine Relating to the Distribution of Physical Goods and Issued Monthly.
First use Oct. 9, 1961.

SN 131,069. The Railway Equipment and Publication Company, New York, N.Y. Filed Oct. 31, 1961.

CONDENSED LIST OF CLOSED, OPEN AND STOCK CARS

For Periodical.
First use Jan. 10, 1943.

SN 131,070. The Railway Equipment and Publication Company, New York, N.Y. Filed Oct. 31, 1961.

RAILWAY LINE CLEARANCES

Owner of Reg. No. 233,997.
For Transportation Reference Periodical, Published Annually.
First use in May 1917.

SN 131,071. The Railway Equipment and Publication Company, New York, N.Y. Filed Oct. 31, 1961.

THE OFFICIAL REGISTER OF PASSENGER TRAIN EQUIPMENT

For Transportation Reference Periodical, Published Annually.
First use in March 1943.

SN 131,073. The Railway Equipment and Publication Company, New York, N.Y. Filed Oct. 31, 1961.

THE OFFICIAL RAILWAY EQUIPMENT REGISTER

Owner of Reg. No. 225,187.
For Transportation Reference Periodical, Published Quarterly.
First use in January 1897.

SN 139,748. International Grapho Analysis Society, Inc., Chicago, Ill. Filed Mar. 13, 1962.

THE GRAPHOANALYST

For Monthly Publication Containing News and Articles Relating to the Field of Handwriting Analysis.
First use prior to 1945.

SN 139,834. Dell Publishing Co., Inc., New York, N.Y. Filed Mar. 14, 1962.

BLUE PHANTOM

For Magazine of the Comic Book Type Pertaining to a Fictional Civil War Guerilla Character.
First use Feb. 17, 1962.

SN 144,279. Schlage Lock Company, San Francisco, Calif. Filed May 10, 1962.

LOCK AND KEY

For Periodically Issued House Organ for Employees and the Trade.
First use Sept. 15, 1944.

SN 144,369. Forbes & Waite Inc., Lexington, Mass. Filed May 11, 1962.

UNICARD

For Discrete Film Transparency Microphotographic Record Cards.
First use May 4, 1962.

SN 148,094. Sperry Rand Corporation, New York, N.Y. Filed June 29, 1962.

GRAPH-A-MATIC

For Printed Title Inserts and Signals for Use in Computing Charts.
First use Nov. 12, 1940.

SN 149,764. Outdoor American Corporation, Spokane, Wash. Filed July 25, 1962.

Eden

For Magazine.
First use Mar. 2, 1959.

SN 151,842. Capital Gains Research Bureau, Inc., Larchmont, N.Y., assignee of Portfolio Research Corporation, Larchmont, N.Y. Filed Aug. 24, 1962.

THE PORTFOLIO FACT FINDER

For Periodical Bulletins Concerning Investment Companies.
First use Aug. 15, 1962.

SN 152,034. Associated Telephone Answering Exchanges, Inc., Washington, D.C. Filed Aug. 28, 1962.

THE ANSWER

For Magazine Published Exclusively for the Telephone Answering Industry.
First use December 1958.

SN 153,360. Your Bearing Specialist, Los Angeles, Calif. Filed Sept. 17, 1962.

BEARING SPECIALIST

For Trade Magazine.
First use in September 1954.

SN 153,778. Liaison Newsletter, Inc., New York, N.Y. Filed Sept. 24, 1962.

LIAISON

For Periodical Newsletter Concerning Love.
First use Sept. 4, 1962.

SN 154,188. Church Extension Service, Inc., Golden, Colo. Filed Sept. 24, 1962.

The SERMON BUILDER

For Religious Magazine.
First use on or about June 3, 1955.

SN 154,773. Sales Promotion Products, Inc., Cleveland, Ohio. Filed Oct. 8, 1962.

TUFTEX

For Printed Advertising Banners of Plastic Sheet Material.
First use Mar. 14, 1962.

SN 159,122. Sawyer's Inc., Portland, Oreg. Filed Dec. 13, 1962.



For Photographic Transparencies and Trade Publications—Namely, Trade Magazines.
First use Apr. 19, 1962.

Class 39 — Clothing

SN 106,598. Beau-Bra Foundations, Inc., Jersey City, N.J. Filed Nov. 17, 1960.

PERMANET

For Brassieres.
First use Oct. 21, 1960.

SN 113,231. The Mayer Company, Inc., New York, N.Y. Filed Feb. 7, 1961.



Owner of Reg. No. 356,437.
For Women's Hosiery.
First use Jan. 6, 1936.

SN 127,252. Novelty Veiling Co. Inc., New York, N.Y. Filed Sept. 5, 1961.

SAYLON

For Acrylic Fiber Made Up Into Sweaters, Stoles, and Scarves.
First use September 1960.

SN 134,109. Exquisite Form Brassiere Inc., New York, N.Y. Filed Dec. 15, 1961.

GLAMOUR-GLO

For Brassieres and Girdles.
First use Oct. 19, 1961.

SN 137,497. R. G. Barry Corporation, Columbus, Ohio. Filed Feb. 8, 1962.

SOFT-TUFF

For Slippers and Soles for Slippers.
First use January 1962.

SN 138,970. J. E. Morgan Knitting Mills, Inc., Tamaqua, Pa. Filed Mar. 2, 1962.

BLUE STREAK

For T-Shirts and Boys' and Men's Underwear.
First use January 1962.

SN 139,797. Unishops, Inc., Jersey City, N.J. Filed Mar. 13, 1962.



For Raincoats in Both Men's and Boys' Wear and Also for Outer Type Jackets in All Categories.
First use Feb. 12, 1962.

SN 140,386. Romper Room, Inc., Baltimore, Md. Filed Mar. 21, 1962.

ROMPER ROOM

Owner of Reg. No. 587,236.
For Children's Hats, Shoes, and Slippers.
First use Jan. 15, 1954.

SN 147,081. Blue Bell, Inc., Greensboro, N.C. Filed June 18, 1962.

SEDGEFIELD

Owner of Reg. Nos. 658,085 and 677,019.
For Rainwear.
First use in September 1961.

SN 149,187. The Kohl Corporation, Milwaukee, Wis. Filed July 17, 1962.



For Men's and Boys' Sportcoats, Jackets, Overcoats, Sport Shirts, Pajamas, Sweaters, and Hosiery.
First use July 1, 1962.

SN 151,078. Puritan Fashions Corporation, New York, N.Y. Filed Aug. 13, 1962.

OGGI

"Oggi" is neither the name nor pseudonym of any living individual.
For Women's and Misses' Wearing Apparel—Namely, Dresses, Blouses, Shirts, Jackets, Coats, Slacks, Slack Suits, Shorts, Robes, Pajamas, and Bathing Suits.
First use July 16, 1962.

SN 151,308. Custom Craft Fashions, Inc., New York, N.Y. Filed Aug. 16, 1962.

barberini

The trademark is fanciful and is not the name or pseudo name of any designer or any other living individual.
For Women's Coats, Suits, and Dresses.
First use on or about July 2, 1962.

SN 151,315. Gosselin Cobblers, St. Paul, Minn. Filed Aug. 16, 1962.



For Baby Shoes, Slippers for Men and Women, Moccasins for Men and Women, Pacs for Men and Women, and Sweaters.
First use Nov. 1, 1961.

SN 151,512. O'Bryan Bros., Inc., Chicago, Ill. Filed Aug. 20, 1962.

COLLEEN

For Lingerie.
First use Aug. 1, 1962.

SN 152,040. Beatrice-Martin, Inc., New York, N.Y. Filed Aug. 28, 1962.

BEATRICE-MARTIN

"Beatrice-Martin" is a pseudonym of one Beatrice Woronoff, who is president of the applicant corporation.
For Ladies' Millinery.
First use Sept. 5, 1956.

SN 152,100. Superba Cravats, Inc., Rochester, N.Y. Filed Aug. 28, 1962.

XX-150

For Neckwear and More Particularly Neckties.
First use Aug. 20, 1962.

SN 152,789. The Globe Tailoring Company, Cincinnati, Ohio. Filed Sept. 10, 1962.

LADY BRUMMELL

The mark "Lady Brummell" is an arbitrary name and is not the name or pseudonym of a particular designer or other living individual. Owner of Reg. No. 111,143.
For Women's Suits, Skirts, Top Coats, and Slacks.
First use on or about June 1, 1962.

SN 153,874. Fuld, Inc., d.b.a. Daniels Bootery, Silver Spring, Md. Filed Sept. 25, 1962.



The word "Bootery" is disclaimed apart from the mark as shown.
For Misses' and Children's Shoes.
First use September 1953.

SN 156,600. Herbst Shoe Manufacturing Company, Milwaukee, Wis. Filed Nov. 5, 1962.

CARTWHEELS

For Children's Shoes.
First use Oct. 22, 1962.

SN 156,667. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 5, 1962.

MERRI-MOCS

For Women's Shoes.
First use on or about Oct. 10, 1962.

SN 156,845. Wonderknit Corporation, New York, N.Y. Filed Nov. 7, 1962.

FEATHA-BAC

For Knitted Shirts and Sweaters of Cotton, Wool, and Synthetic Fibers and Mixtures Thereof, for Men and Boys.
First use Sept. 28, 1962.

SN 157,179. Wings Shirt Co. Inc., Greenville, S.C. Filed Nov. 13, 1962.

GOLDEN VEE

For Men's and Boys' Shirts, Sports Shirts, Pajamas, Jackets, Coats, and Trousers.
First use Oct. 24, 1962.

SN 157,245. Rugby Knitting Mills, Inc., Buffalo, N.Y. Filed Nov. 14, 1962.



For Sport Shirts.
First use Aug. 20, 1962.

SN 157,643. The Puritan Sportswear Corp., Altoona, Pa. Filed Nov. 20, 1962.

COOLFRONT V

For Men's Outerwear Jackets.
First use Oct. 1, 1962.

SN 157,644. The Puritan Sportswear Corp., Altoona, Pa. Filed Nov. 20, 1962.

COLDFRONT V

For Men's Outerwear Jackets.
First use June 11, 1962.

SN 157,757. Anvil Brand, Incorporated, High Point, N.C. Filed Nov. 23, 1962.

JAVELIN

For Men's and Boys' Pants.
First use Sept. 27, 1962.

SN 157,823. Marx-Haas Clothing Co., St. Louis, Mo. Filed Nov. 23, 1962.

FOREST HILLS

For Men's and Boys' Slacks, Sport Coats, Top Coats, Suits, and All Weather Coats.
First use Nov. 14, 1962.

SN 157,841. Protective Equipment Supply Co., Inc., Buffalo, N.Y. Filed Nov. 23, 1962.

PESCO

For Industrial Protective Clothing—Namely, Helmets, Gloves, Mitts, Aprons, Leggings, Spats, Hoods, Sleeves, and Pants.
First use on or about Sept. 23, 1961.

SN 157,888. Dartmoor Fashions Ltd., New York, N.Y. Filed Nov. 26, 1962.

DARTMOOR FASHIONS

Reserving all common law rights, applicant hereby disclaims any exclusive right to the use of the word "Fashions" except as a part of its mark, as shown.
For Men's Sport Jackets.
First use Aug. 8, 1962.

SN 157,930. A. Sagner's Son, Frederick, Md. Filed Nov. 26, 1962.

WOOMO

For Men's and Boys' Suits, Jackets, Slacks, and Coats.
First use March 1962.

SN 158,006. Irving Marks Nite-Wear Corporation, New York, N.Y. Filed Nov. 27, 1962.

REST-MOR

For Men's, Boys', Women's, and Girls' Pajamas.
First use Jan. 2, 1953.

SN 158,223. Burberrys Limited, London, England. Filed Nov. 26, 1962.



Owner of U.S. Reg. Nos. 93,819, 658,567, and others.
For Coats, Topcoats, Jackets, Rainwear, Suits, Breeches, Trousers, Slacks, Shorts, Riding Habits, Waistcoats, Gaiters, Leggings, Overalls, Shirts, Fur Coats, Fur Jackets, Capes, Hats, Caps, Helmets, Bonnets, Hoods, Toques, Berets, Neckties, Stockings, Socks, Braces, Suspenders, Garters, Belts, Boots, Shoes, Slippers, Sandals, Underwear, Gloves, Shirts, Collars, Pajamas, Lingerie, Dressing Gowns, Cardigans, Sweaters, Pullovers, Scarfs, Corsetry, Foundation Garments, Brassieres, Blouses, Swimwear, Beach Robes, Dresses, Ski-Wear, Fishing Waders, and Handkerchiefs.
First use at least prior to June 1, 1957; in commerce at least prior to June 1, 1957.

SN 159,356. J. C. Penney Company, New York, N.Y. Filed Dec. 18, 1962.

Penmere

For Women's Sweaters.
First use Mar. 10, 1962.

SN 159,442. The Villager, Inc., Philadelphia, Pa. Filed Dec. 19, 1962.



Owner of Reg. No. 702,965.
For Women's Wear—Namely, Shirts, Blouses, Dresses, Jackets, and Sportswear.
First use June 1, 1956.

SN 159,589. Izod, Ltd., New York, N.Y. Filed Dec. 21, 1962.

IZOD

Owner of Reg. Nos. 655,860, 736,456, and others.
For Raincoats.
First use Dec. 4, 1962.

SN 159,799. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

baby BB

Owner of Reg. Nos. 676,379, 684,094, and 721,075.
For Infants' Wear—Namely, Gowns, Socks, Booties, Shoes, Panties, Shirts, Diapers, Underwear, Sleepers, Pajamas, Kimonos, Bibs, Sacques, Topper Sets, Dresses, Sweaters, Shawls, Car Coats, Creepers.
First use Mar. 17, 1958.

SN 159,807. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

busy B

Owner of Reg. Nos. 676,379, 684,094, and 721,075.
For Boys' and Girls' Clothing—Namely, Pajamas, Gowns, Sweaters, Dresses, Sport Shirts, Polo Shirts, Suspender Shorts, Suspender Slacks, Car Coats, Slips, Deck Pants.
First use June 1, 1959, on pajamas, gowns, and sweaters.

SN 159,828. Charles Komar & Sons, Inc., South Amboy, N.J. Filed Dec. 27, 1962.

LEANNE

For Ladies' and Misses' Lingerie.
First use Sept. 28, 1962.

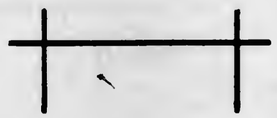
SN 162,378. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

Owner of Reg. Nos. 630,051 and 658,573.
For Overshoes, Raincoats, Golf Clothing for Men and Women, Bathing Caps, and Canvas and Rubber Shoes.
First use Aug. 9, 1962, on overshoes.

Class 40—Fancy Goods, Furnishings, and Notions

SN 147,112. Harkal Mfg. Co. Inc., Long Island City, N.Y. Filed June 18, 1962.



For Buckles and Clasps.
First use 1949.

SN 158,092. National Printing Company, Union, N.J. Filed Nov. 28, 1962.

RAP-A-NAP

For Napkin Ring.
First use Nov. 5, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 139,765. Mitsubishi Rayon Company Limited, Chuo-ku, Tokyo, Japan. Filed Mar. 13, 1962.

Hipolan

Priority claimed under Sec. 44(d) on Japanese application filed Sept. 21, 1961; Reg. No. 606,695, dated Mar. 8, 1963.
For Textile and Netted Fabrics Used in Making Dresses, Suits, Coats, Underwear, Gowns, Shawls, Mufflers, Curtains, Bed Sheets, Covers, and Scarves.

SN 139,962. Payne & Company, Inc., Dayton, Ohio. Filed Mar. 15, 1962.

THE GLOBE TROTTER COLLECTION

For Fabrics in the Piece as a Correlated Collection of Upholstery, Drapery, Slipcover, and Casement Weaves and Designs.
First use Jan. 22, 1962.

SN 151,361. Pyramid Knit Sales Corp., New York, N.Y. Filed Aug. 16, 1962.

"100X SUPER SUEDE"

No claim is made to the word "Suede" apart from the mark shown in the drawing.
For Fabrics in the Piece, Composed of Knitted or Woven Fabric in Cotton or Any Synthetic Material Laminated to Polyurethane Foam, Used in the Manufacture of Men's, Women's, and Children's Coats, Jackets, Headwear, Slippers and Shoes, Upholstery and Drapery, Elbow and Knee Patches, Trimmings, Such as Collars, Inserts and Pocket Welts and for Linings of Garments.
First use Mar. 28, 1962.

SN 152,503. Dux Incorporated, Burlingame, Calif. Filed Sept. 5, 1962.

DUX

For Upholstery, Casement, and Drapery Fabrics Made of Wool, Cotton, Linen, Synthetic Materials, and Combinations Thereof.
First use Jan. 15, 1954.

SN 152,504. Dux Incorporated, Burlingame, Calif. Filed Sept. 5, 1962.

DUX

For Upholstery, Casement, and Drapery Fabrics Made of Wool, Cotton, Linen, Synthetic Materials, and Combinations Thereof.
First use May 15, 1958.

SN 156,546. American Viscose Corporation, Philadelphia, Pa. Filed Nov. 5, 1962.

AVIFLAX

For Textile Fabrics in the Piece Composed of Synthetic Fibers.
First use Oct. 8, 1962.

SN 159,471. Crylor, Paris, France. Filed Dec. 20, 1962.

Crylor

Owner of French Reg. No. 493,283, dated Jan. 13, 1961 (Paris); Natl. Inst. No. 156,947; and U.S. Reg. Nos. 611,126, 736,865, and others.
For Bed and Table Linen and Specifically Rugs and Carpets Made of Natural and Synthetic Materials.

SN 159,810. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

State pride

Owner of Reg. Nos. 612,244 and 684,830.

For Dish Towels, Bath Mat Sets, Rugs, Bed Sheets, Pillow Cases, Mattress Covers, Pillow Covers, Mattress Pads, Bed Pillows, Curtains, Bedspreads, Ironing Board Covers, Blankets, Washcloths, Bath Sheets, Table Cloths, Napkins, Aprons, Toaster Covers, Mixer Covers, Valances, Drapes, Dressing Table Skirts, Canopies, Coverlets, Dust Ruffles, Shams, Slip Covers, Throw Covers, Ironing Board Pads, Shower Ensembles, Bath Towels, Guest Towels, Fingertip Towels.

First use Aug. 1, 1954, on bed sheets, pillow cases, and blankets.

Class 43 — Thread and Yarn

SN 139,766. Mitsubishi Rayon Company Limited, Chuo-ku, Tokyo, Japan. Filed Mar. 13, 1962.

Hipolan

Priority claimed under Sec. 44(d) on Japanese application filed Sept. 21, 1961; Reg. No. 606,694, dated Mar. 8, 1963.

For Yarns and Threads.

SN 158,990. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 12, 1962.

SPECKELON

For Thread and Yarn.
First use Nov. 7, 1962.

SN 159,523. Pharr Yarns, Inc., McAdenville, N.C. Filed Dec. 20, 1962.

PHARR-MIST

For Yarn Spun From Acrylic Fibers.
First use Aug. 19, 1962.

SN 162,376. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

Owner of Reg. No. 678,535.
For Yarns.
First use Aug. 8, 1962.

Class 44 — Dental, Medical, and Surgical Appliances

SN 123,139. William S. Schneider, d.b.a. The William Steven Company, Los Angeles, Calif. Filed June 29, 1961.

INSTA-PAK

For Containers Made of Flexible Sheet Material and Filled With a Substance That Is Endothermic When Dissolved, for Use as a Simulated Ice Pack or the Like.
First use on or about Apr. 3, 1961.

SN 135,476. Vector Manufacturing Company Incorporated, Southampton, Pa. Filed Jan. 9, 1962.

RAG 100

The drawing is lined for red but color is not claimed as a feature of the mark. Owner of Reg. No. 737,603.

For Medical Cardiograph Apparatus and Systems for Radio Broadcasting and Receiving Cardiovascular Data—Namely, Battery Powered Miniature Transmitters for Broadcasting the Data From the Patient, Radio Receivers for Remotely Receiving the Broadcasted Data, Connectors for the Medical Electrodes, Skin Resistance Measuring Devices, Battery Charging Mechanisms and Other Apparatus Associated With Such Systems.

First use July 17, 1961.

SN 140,210. The DEG Corporation, San Francisco, Calif. Filed Mar. 19, 1962.

EROS

For Prosthetic Genital Devices.
First use July 15, 1960.

SN 152,248. W. J. Rendell Limited, London, England. Filed Aug. 30, 1962.

W. J. Rendell

The mark shown in the drawing is a facsimile of the script signature, W. J. Rendell of Mr. John Rendell, deceased, founder of applicant's predecessor in business. Owner of British Reg. No. 182,688, dated Oct. 5, 1894.

For Pessaries.

SN 155,284. The S. S. White Dental Manufacturing Co., Philadelphia, Pa. Filed Oct. 16, 1962.

AIRTORQUE

For Dental Handpieces and Parts Thereof.
First use on or before Feb. 12, 1962.

SN 161,428. Unitek Corporation, Monrovia, Calif. Filed Jan. 25, 1963.

HI-T

For Orthodontic Wire.
First use Oct. 29, 1962.

SN 161,445. Merck & Co., Inc., Rahway, N.J. Filed Jan. 25, 1963.

EZEJECT

Owner of Reg. No. 648,651.
For Syringe for Medicinal Use.
First use Dec. 31, 1962.

SN 161,801. Meadox Medicals, Incorporated, Haledon, N.J. Filed Jan. 31, 1963.

MEDI-GRAFT

For Surgical Supplies, Particularly Vascular Prosthetic Devices and Materials.
First use on or about Jan. 9, 1963.

Class 46 — Foods and Ingredients of Foods

SN 110,968. Apopka Fruit Co., Orlando, Fla. Filed Dec. 29, 1960.

RICHFRUIT

For Fresh Citrus Fruits.
First use Dec. 28, 1948.

SN 129,432. Zanadu Gourmet Specialty Co., Fort Lauderdale, Fla. Filed Oct. 6, 1961.

ZANADU

For Marinade Sauce and Sauce Mongol.
First use Oct. 5, 1961.

SN 131,932. Fermin J. Barcala, d.b.a. F. J. Barcala, Buenos Aires, Argentina. Filed Nov. 14, 1961.

VITA NUTRAMINIC EST

The English translation of "Vita Nutraminic Est" is "nutrition is vital."

For Health Food—Namely, Packaged Noodles and Spaghetti.

First use February 1956; in commerce February 1956.

SN 132,254. Olavarria & Company, Inc., New York, N.Y. Filed Nov. 17, 1961.

OLA-SHUG

Owner of Reg. No. 720,432.
For Animal Feed Sugar.
First use May 2, 1961.

SN 140,887. Romper Room, Inc., Baltimore, Md. Filed Mar. 21, 1962.

ROMPER ROOM

Owner of Reg. No. 589,236.
For Cookies.
First use Mar. 12, 1959.

SN 144,167. Hygrade Bakery, Incorporated, Philadelphia, Pa. Filed May 9, 1962.



For Pretzels and Potato Chips.
First use Feb. 20, 1961.

SN 147,274. Foremost Dairies, Inc., d.b.a. Foremost International Dairies, Inc., San Francisco, Calif. Filed June 20, 1962.

LE PERROQUET

The words "Le Perroquet" are French and can be translated "the parrot."

For Sweetened Condensed Milk.
First use Dec. 17, 1957.

SN 147,448. Harold T. Griffin Limited, Toronto, Ontario, Canada. Filed June 22, 1962.

CLUB DES MILLIONNAIRES

For Canned Fish—Namely, Sardines, Anchovies, Spratts, and Mackerel.

First use 1908; in commerce 1937.

SN 147,886. Beatrice Foods Co., Chicago, Ill. Filed June 28, 1962.

MARIONETTE

For Olives.
First use May 1958.

SN 149,148. Weidner Canning Company, Inc., Plymouth, Ind. Filed July 16, 1962.

PILGRIM FARM

For Pickles and Pickle Products—Namely, Sweet Chips, Hamburger Chips, Sweet Pickles, Sweet Mix, Sweet Relish, Sweet Cucumber Slices, Sweet Peppers, Hot Peppers, Hot Mix, Dills, Kosher Dills, Baby Dills, Kosher Baby Dills, Kosher Hamburger Dills, and Sauerkraut.

First use May 25, 1962.

SN 151,541. Tulip Brand Factory, Vejle, Denmark. Filed Aug. 20, 1962.



The drawing is lined for the colors red, blue, and yellow. No claim is made to the word "Brand" apart from the mark as shown.

For Canned Cooked Hams, Canned Cooked Pork Shoulder Picnics, Canned Sliced Smoked Bacon, Canned Pork and Beef Luncheon Meat, Canned Pork Luncheon Meat, Canned Canadian Style Bacon (Pork Loins), Canned Sausages, Dry Salami Sausages, Canned Back Bacon, Canned Chopped Ham.

First use Aug. 1, 1954; in commerce Aug. 21, 1954.

SN 152,078. N.V. Verenigde Textiel- en Oliefabrieken, Krommenie, Netherlands. Filed Aug. 28, 1962.

POLY-SPRED

Owner of Dutch Reg. No. 148,263, dated Dec. 20, 1961.

For Edible Oils and Fats (With the Exception of Butter) of Animal and/or Vegetable Origin; Margarine; Emulsions of Oils and Fats Also of Animal and/or Vegetable Origin.

SN 152,798. Kahan & Lessin Co., d.b.a. Natural Brands Co., Los Angeles, Calif. Filed Sept. 10, 1962.



No claim is made to the word "Brand."
For Noodles; Roasted Cashew Butter; Honey; Macaroni; Spaghetti; Safflower Oil; and Sesame Oil.
First use Aug. 10, 1962.

SN 153,370. Blatchford Calf Meal Company, Waukegan, Ill. Filed Sept. 18, 1962.

SUREPORK SUPER

For Swine Feeds.
First use Aug. 10, 1962.

SN 153,371. Blatchford Calf Meal Company, Waukegan, Ill. Filed Sept. 18, 1962.

SURECATTLE

For Livestock Feeds.
First use Aug. 10, 1962.

SN 153,372. Blatchford Calf Meal Company, Waukegan, Ill. Filed Sept. 18, 1962.

SURELAY

For Poultry Feeds.
First use Aug. 10, 1962.

SN 153,373. Blatchford Calf Meal Company, Waukegan, Ill. Filed Sept. 18, 1962.

SUREMILK

For Livestock Feeds.
First use Aug. 10, 1962.

SN 153,375. Blatchford Calf Meal Company, Waukegan, Ill. Filed Sept. 18, 1962.

SURERAISE

For Livestock Feeds.
First use Aug. 10, 1962.

SN 156,207. Kellogg Company, Battle Creek, Mich. Filed Oct. 29, 1962.

Kellogg's

Owner of Reg. Nos. 105,218, 722,869, and others.
For Croutons.
First use Sept. 20, 1962.

SN 156,489. Hall Brothers (Whitefield) Limited, Whitefield, Manchester, England. Filed Nov. 2, 1962.

HALLS
MAJESTIC

For Candy.
First use 1957; in commerce 1957.

SN 156,967. Fritzsche Brothers, Inc., New York, N.Y. Filed Nov. 9, 1962.

OLEO-BUTTACUL

For Flavoring Agent for Food.
First use Aug. 22, 1958.

SN 157,115. V. & E. Kohnstamm, Inc., Brooklyn, N.Y. Filed Nov. 13, 1962.

BUTTA-SAVER

Owner of Reg. No. 720,440.
For Butter Flavor for Food Purposes.
First use Oct. 1, 1962.

SN 157,615. Gold Leaf Corporation, Bryan, Ohio. Filed Nov. 20, 1962.

DELICIOUSLY YOURS

For Candy.
First use on or about Apr. 1, 1962.

SN 157,769. Carver Foods Company, Houston, Tex. Filed Nov. 23, 1962.



For Fruitcake.
First use 1950.

SN 157,883. Chicago Ravioli Co., Inc., Chicago, Ill. Filed Nov. 26, 1962.

MAMA MADE

For Ravioli and Sauces for Ravioli, Spaghetti, Fish, Cutlets and the Like.
First use in 1942.

SN 158,156. Herold & Miller, Inc., Natchez, Miss. Filed Nov. 29, 1962.

DUTCH ANN

For Frozen Pie Shells.
First use in 1955.

SN 158,402. United Biscuit Company of America, Melrose Park, Ill. Filed Dec. 3, 1962.



Owner of Reg. Nos. 124,976 and 722,816.
For Crackers and Cookies.
First use Nov. 16, 1962.

SN 158,483. Standard Brands Incorporated, New York, N.Y. Filed Dec. 4, 1962.

GELAQUICK

Owner of Reg. Nos. 298,504, 357,922, and others.
For Pre-Seasoned Gelatin Base.
First use Aug. 10, 1962.

SN 158,598. Breddo-Food Products Corporation, Inc., Kansas City, Kans. Filed Dec. 6, 1962.

QUICK-TEX

For Icing Stabilizer for Baked Sweet Goods.
First use on or about Mar. 22, 1952.

SN 159,224. Mel Finerman Co., Inc., Oxnard, Calif. Filed Dec. 17, 1962.

WINDY CITY

For Fresh Vegetables.
First use Nov. 26, 1962.

SN 161,230. The Borden Company, New York, N.Y. Filed Jan. 23, 1963.



For Animal Milk Replacer.
First use Feb. 20, 1962.

Class 47 — Wines

SN 154,711. E. & J. Gallo Winery, Modesto, Calif. Filed Oct. 8, 1962.

AVANTI

The Italian word "Avanti" when translated means "forward" or "before."
For Wines.
First use Sept. 26, 1962.

SN 155,198. San Marino Wine Corporation, Brooklyn, N.Y. Filed Oct. 15, 1962.

MICHELLE D'ARCY

The name "Michelle D'Arcy" is fictitious.
For Champagne Wines.
First use 1943.

SN 156,701. Atlas Distributing Corp., d.b.a. Toll House Wine Co., Worcester, Mass. Filed Oct. 8, 1962.

TOLL HOUSE

For Wines.
First use Dec. 15, 1941.

Class 48 — Malt Beverages and Liquors

SN 84,463. Jacob Ruppert, New York, N.Y. Filed Nov. 2, 1959.

Jacob
Ruppert
Bavarian

Jacob Ruppert is the deceased founder of applicant corporation. Applicant disclaims the word "Bavarian" apart from the mark as shown. Owner of Reg. Nos. 374,619, 572,525, and others.
For Beer.
First use Oct. 7, 1959.

SN 142,524. Metropolis Brewery of N.J., Inc., Trenton, N.J. Filed Apr. 18, 1962.

PILSER'S ORIGINAL

Owner of Reg. No. 207,958.
For Beer.
First use Oct. 23, 1933.

Class 49 — Distilled Alcoholic Liquors

SN 150,235. J. A. Dougherty's Sons, Inc., Distillers, Philadelphia, Pa. Filed Aug. 1, 1962.

GOVERNOR'S CLUB

Owner of Reg. No. 622,482.
For Whiskey and Gin.
First use Feb. 24, 1955.

SN 152,547. "Rolimpex" Centrala Handlu Zagranicznego, Warsaw, Poland. Filed Sept. 5, 1962.

POLMOS

Owner of Polish Reg. No. 43,083, dated Feb. 10, 1962.
For Vodka.

SN 154,334. Davison Newman & Company, Limited, London, England. Filed Oct. 2, 1962.



Applicant disclaims any exclusive rights in the phrase "Established over three centuries." Owner of British Reg. No. 829,518, dated Jan. 12, 1962; and U.S. Reg. No. 341,621.
For Whisky.

SN 156,216. J. T. S. Brown's Son Company, d.b.a. Masterson's Station Distilling Company, Cincinnati, Ohio. Filed Oct. 30, 1962.

BRADFORD'S SECRET STILL

No claim is made to the word "Still" apart from the mark shown in the drawing.
For Whiskey.
First use Oct. 22, 1962.

SN 156,217. J. T. S. Brown's Son Company, d.b.a. Masterson's Station Distilling Company, Cincinnati, Ohio. Filed Oct. 30, 1962.

KENTUCKY GAZETTE

For Whiskey.
First use Oct. 22, 1962.

SN 156,458. Jas. Barclay & Co. Limited, Peoria, Ill. Filed Nov. 2, 1962.

COUNTY BANK

For Whiskey.
First use Oct. 23, 1962.

Class 50 — Merchandise Not Otherwise Classified

SN 148,133. Albert E. Benson, d.b.a. Benson Products, Ludington, Mich. Filed July 2, 1962.

EARTH-NAIL

For Lawn Stakes, Nursery and Garden Markers, Fencing Stakes, and Surveyors' Pins.
First use June 23, 1962.

SN 151,750. Germain's, Inc., Los Angeles, Calif. Filed Aug. 23, 1962.

GERMAIN'S

Owner of Reg. Nos. 508,904, 731,805, and others.
For Plant Protector Covers.
First use at least as early as 1958.

SN 151,931. Lee Rowan Company, St. Louis, Mo. Filed Aug. 27, 1962.

The Aristocrat

For Article Supporting Closet and Bathroom Accessories—Namely, Garment Drying Forms and Garment Hangers and Racks, at Least Some of Said Accessories Being Gold Plated.
First use Feb. 1, 1961.

SN 152,180. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 29, 1962.

SNIP

Owner of Reg. No. 719,844.
For Fly Bands.
First use June 19, 1962.

SN 155,197. Rohm & Haas Company, Philadelphia, Pa. Filed Oct. 15, 1962.

PLEXIGLAS

Owner of Reg. Nos. 284,355, 623,869, and others.
For Color Demonstrating Kit Having Sheets With Cut Out Portions of Colored or Uncolored Material and Inserts for the Cut Out Portions Thereof and a Screen Which May Be Lighted From Behind Against Which May Be Placed for Observation the Sheets and Cut Out Portions Aforesaid.
First use on or about Sept. 27, 1962.

SN 162,375. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

For Dunnage—Namely, Inflatable Bags.
First use Aug. 28, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 133,156. Jerant Company, Inc., Los Angeles, Calif. Filed Dec. 1, 1961.

Hold-it

For Hair Setting Preparation.
First use Oct. 17, 1961.

SN 140,650. Dauphine, Ltd., New York, N.Y. Filed Mar. 26, 1962.

BLANCHE BY DAUPHINE

The word "Blanche" appearing in the drawing is disclaimed apart from the mark as shown. The word "Blanche" signifies "bleach."
For Cosmetic Skin Bleaching Cream.
First use on or about Jan. 15, 1962.

SN 149,840. The Fuller Brush Company, East Hartford, Conn. Filed July 26, 1962.

THE FIRST ROSE

Owner of Reg. No. 724,597.
For Cosmetics and Toilet Preparations, Particularly Cologne, Hand Lotion, Bath Powder, Bubble Bath.
First use on or about June 25, 1960.

SN 153,294. Karlsruher Parfumerie- und Toilettenseifenfabrik F. Wolff & Sohn, Gesellschaft mit beschrankter Haftung, Karlsruhe, Baden, Germany. Filed Sept. 17, 1962.

EXCLUSIV

Owner of German Reg. No. 759,081, dated Mar. 7, 1962.
For Articles of Perfumery, Shave Lotion, Cosmetic Deodorants.

SN 153,681. Revlon, Inc., New York, N.Y. Filed Sept. 21, 1962.

TENDER MIST

The word "Mist" is disclaimed apart from the mark as shown.
For Hair Setting Lotion, Hair Conditioner, and Hair Conditioner Cream Rinse.
First use Sept. 15, 1962.

SN 153,716. Amway Sales Corporation, Ada, Mich. Filed Sept. 24, 1962.

WHISKER WHIZ

For Shaving Cream.
First use on or about Apr. 7, 1962.

Class 52 — Detergents and Soaps

SN 99,389. A. L. Wilson Chemical Company, Kearny, N.J. Filed June 20, 1960.



For Protein Digester for Albuminous Stains; Cleaning, Decolorizer, Stripping and Spotting Liquids; and Chemical Preparations for Removing Stains, Tar, Grease, Paint, Chewing Gum, and the Like.
First use June 1, 1945.

SN 139,725. Anodyne, Inc., d.b.a. North Shore Nameplate Inc., Bayside, N.Y. Filed Mar. 13, 1962.



For Surface Cleaner and Solvent for Activating Adhesive Phenol Formaldehyde.
First use in or about February 1959.

SN 148,975. The Keever Starch Company, d.b.a. Keever Company, Columbus, Ohio. Filed May 7, 1962.

ALKASOHP

For Soaps.
First use on or about Aug. 1, 1961.

SN 145,995. American Cyanamid Company, Wayne, N.J. Filed June 4, 1962.

RID

For Thermoplastic Composition in Granular Form for Use as a Purging Compound.
First use May 2, 1962.

SN 149,633. Barton Manufacturing Company, St. Louis, Mo. Filed July 24, 1962.

BARTON'S

Owner of Reg. No. 593,182.
For Cleaning Fluid, Specifically, a Spot Remover for Fabrics.
First use June 13, 1962; in the year 1917 as to "Barton's" on related goods.

SN 149,667. Northern Laboratories, Manitowoc, Wis. Filed July 24, 1962.

WASH-RITE

For Detergent for Hand Laundering.
First use May 3, 1962.

SN 149,840. The Fuller Brush Company, East Hartford, Conn. Filed July 26, 1962.

THE FIRST ROSE

Owner of Reg. No. 724,597.
For Shampoo.
First use on or about June 25, 1960.

SN 151,412. King Kullen Grocery Co., Inc., Westbury, N.Y. Filed Aug. 17, 1962.

Owner of Reg. No. 732,566.
For Household All-Purpose Cleaner.
First use February 1959.

SN 153,294. Karlsruher Parfumerie- und Toiletteseifenfabrik F. Wolff & Sohn, Gesellschaft mit beschrankter Haftung, Karlsruhe, Baden, Germany. Filed Sept. 17, 1962.

EXCLUSIV

Owner of German Reg. No. 759,031, dated Mar. 7, 1962.
For Shaving Soap in Cream Form and Toilet Soap.

SN 153,880. Harwin Industries, Inc., New York, N.Y. Filed Sept. 25, 1962.

NU-TAB

For Detergent Tablets for Use in Washing Machines.
First use Aug. 31, 1962.

SN 155,524. S & B Distributing Co., Inc., Chicago, Ill. Filed Oct. 19, 1962.

KITCHENMAID

For Dishwasher Detergent, All Purpose Cleaner.
First use Oct. 5, 1962.

SN 156,252. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Oct. 30, 1962.

BIG JOHN

For Household Cleaners.
First use on or about Sept. 18, 1962.

SN 156,652. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Del. Filed Nov. 5, 1962.

AIRMULSO

For Emulsion Cleaner for Industrial Use.
First use on or before Dec. 31, 1951.

SERVICE MARKS

Class 100 — Miscellaneous

SN 117,548. Strategic Materials Corporation, New York, N.Y. Filed Apr. 10, 1961.

For Chemical and Metallurgical Research and Development, Design and Custom Engineering, Process Trial and Development Work, Metallurgical and Chemical Analyses, and Providing Technical Information and Assistance To Patent Licensees.
First use at least as early as September 1959.

SN 128,708. Cardinal Engineering Corporation, Philadelphia, Pa. Filed Sept. 27, 1961.

CARDINAL

For Consultation Services Rendered to Architects and Design Engineers Concerning Masonry Construction; Designing, Manufacturing and Modifying Masonry Equipment To Meet the Special Needs of Others; Demonstrating the Use of Masonry-Cutting Equipment; Furnishing Technical Advice Regarding Masonry Problems to Members of the Building Trades.
First use at least as early as 1956.

SN 151,590. International Restaurants Corporation, Washington, D.C. Filed Aug. 21, 1962.

The applicant disclaims any exclusive right to the use of the term "Restaurant." The drawing is lined for the colors red and blue; however, no claim is made to color as a feature of the mark.
For Restaurant Services.
First use May 6, 1962.

SN 152,313. Ki-Wives Council of the Capitol District, Bethesda, Md. Filed Aug. 31, 1962.

KEYETTE

Owner of Reg. No. 710,367.
For Fostering and Aiding the Development of Characteristics of Initiative and Leadership Among High School Girls by Their Participation in Worthy Projects of the School and Community in Cooperation With School and Community Leaders.
First use in the fall of 1955.

SN 152,729. Tisch Hotels, Inc., Atlantic City, N.J. Filed Sept. 7, 1962.

AMERICANA

Owner of Reg. No. 737,656.
For Hotel, Restaurant, Banquet, and Catering Services.
First use Dec. 1, 1955.

Class 101 — Advertising and Business

SN 127,004. Nels Gordon, Inc., Akron, Ohio. Filed Aug. 31, 1961.

SCOPE INTERNATIONAL

For Providing Technical Advice in the Field of Management To Export-Import Firms.
First use about the middle of June 1961.

SN 135,346. Gift Stars, Inc., Minneapolis, Minn. Filed Jan. 8, 1962.

The drawing is lined for blue, but no claim is made as to color.
For Promoting the Sale of Manufacturer's Products Through the Use of Gift Certificates Redeemable in Various Selected Items of Merchandise.
First use Apr. 24, 1961.

SN 153,817. Riedl & Freede, Inc., Clifton, N.J. Filed Sept. 24, 1962.

The monogram is the letters "R" and "F."
For Advertising Agency Services.
First use July 2, 1962.

SN 155,492. CO/AD, San Jose, Calif. Filed Oct. 19, 1962.

CO/AD CLASSIFIED

The word "Classified" is disclaimed apart from the mark as shown.
For Advertising Services.
First use Sept. 12, 1962.

Class 102 — Insurance and Financial

SN 126,682. Retirement Investment Company, Cleveland, Ohio. Filed Aug. 25, 1961.

The words "Security Through Securities" are disclaimed apart from the mark as shown.
For Advisory Service Regarding Investments and Estate Planning for Retirees and Those Contemplating Retirement.
First use Aug. 9, 1961.

SN 158,124. Allstate Insurance Company, Skokie, Ill. Filed Nov. 29, 1962.

CRUSADER

For Insurance Underwriting.
First use on or about July 31, 1956.

Class 103 — Construction and Repair

SN 103,372. Teleprompter Corporation, New York, N.Y. Filed Aug. 24, 1960.



Applicant disclaims the letters "TV" apart from the mark as shown.

For Installation and Maintenance of Television Apparatus.

First use on or about June 20, 1960.

Class 105 — Transportation and Storage

SN 139,305. Kinney Service Corporation, New York, N.Y. Filed Mar. 7, 1962.

KINNEY

Owner of Reg. No. 710,068.

For Operation of Parking Lots and Parking Buildings, and the Renting of Automotive Vehicles.

First use January 1949 in connection with the operation of parking lots and parking buildings.

Class 106 — Material Treatment

SN 146,446. Allprints Photo, Inc., Mansfield, Ohio. Filed June 8, 1962.



For Processing of Film.

First use Mar. 15, 1959.

SN 146,579. Chandler Evans Corporation, West Hartford, Conn. Filed June 11, 1962.

CECOLITE

For Services Comprising Chrome Electroplating Applied to Parts of Aircraft Engines and Accessories of Others.

First use May 31, 1962.

SN 152,806. Lindberg Steel Treating Company, Melrose Park, Ill. Filed Sept. 10, 1962.



For Heat Treating of Metals of Others.

First use Oct. 28, 1961.

Class 107 — Education and Entertainment

SN 130,098. No. 1-A District Agricultural Association of the State of California, San Francisco, Calif. Filed Oct. 17, 1961.

COW PALACE

For Conducting Competitive Sporting Events, Animal Exhibits, and Performances and Other Events.

First use about Aug. 1, 1961; about November 1941 in a different form.

SN 155,785. Crosley Broadcasting Corporation, Cincinnati, Ohio. Filed Oct. 24, 1962.

PROBE

For Title of Television Programs Consisting of the Presentation, Analysis, Documentation and Discussion of Public Issues.

First use Nov. 26, 1960.

CERTIFICATION MARKS

Class A — Goods

SN 136,397. Rodale Press, Inc., Emmaus, Pa. Filed Jan. 28, 1962.



The mark certifies that the statements made by the manufacturers and distributors of the goods certified are true within the laws relating to product labeling and advertising. Owner of Reg. No. 694,267.

For Foods and Food Supplements.

First use Feb. 17, 1957.

SN 156,865. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Nov. 8, 1962.

501

The mark certifies that carpet with which the mark is associated complies with quality standards imposed by applicant as to construction and performance. Owner of Reg. Nos. 716,983 and 716,984.

For Carpet.

First use June 7, 1962.

Class B — Services

SN 152,437. Bradley Post, Meade, Kans. Filed Sept. 4, 1962.



The words "Recommended by" and "Nation Wide" are disclaimed separate from the mark as shown. The mark certifies that the bowling establishments and motels or lodging houses which display the mark have met standards of location, quality of accommodations or bowling equipment and courtesy which have met approval by the applicant.

For Bowling and Lodging Services.

First use July 12, 1962.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

751,866. POLYCIN. The Baker Castor Oil Company. SN 124,502. Pub. 4–16–63. Filed 7–24–61.

751,867. A ACCUREZ AND DESIGN. Pennsylvania Foundry Supply & Sand Co. SN 139,667. Pub. 4–16–63. Filed 3–12–62.

751,868. POLY-THANE. Pelron Corporation. SN 143,163. Pub. 12–18–62. Filed 4–26–62.

751,869. GENPLY. General Plastics Corporation. SN 146,372. Pub. 4–16–63. Filed 6–7–62.

751,870. KENRON. Sechrist Chemicals, Inc. SN 152,840. Pub. 4–16–63. Filed 9–10–62.

751,871. JAN DE GRAAFF AND DESIGN. Oregon Bulb Farms. SN 153,313. Pub. 4–16–63. Filed 9–17–62.

751,872. BROIL-ET. Crawford Associates, Inc. SN 154,097. Pub. 4–16–63. Filed 9–28–62.

Class 2—Receptacles

751,873. THERMO NURSER. Fashioncraft-Excello, assignee of Baby World Company, Inc. SN 91,739. Pub. 9–13–60. Filed 2–29–60.

751,874. NUCERITE. Pfaudler Permutit Inc. SN 137,864. Pub. 4–16–63. Filed 2–13–62.

751,875. MARK/57. Gilman Paper Company. SN 143,733. Pub. 11–27–62. Filed 5–3–62.

751,876. PEARLECRAFT. Pearlecraft. SN 143,997. Pub. 4–16–63. Filed 5–7–62.

751,877. STERITHENE. Protective Lining Corporation. SN 144,642. Pub. 4–16–63. Filed 5–15–62.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

751,878. REPRESENTATION OF TWO MEN AND DESIGN. Bri-Son Company, Inc. SN 136,340. Pub. 4–16–63. Filed 1–23–62.

Class 4—Abrasives and Polishing Materials

751,879. 3M. Minnesota Mining and Manufacturing Company. SN 146,301. Pub. 4–16–63. Filed 6–6–62.

Class 5—Adhesives

751,880. UNALLOY. Hysol Corporation. SN 148,385. Pub. 4–16–63. Filed 7–5–62.

Class 6—Chemicals and Chemical Compositions

751,881. SABCO THE QUALITY GOES IN BEFORE THE LABEL GOES ON AND DESIGN. Sabine Chemical Co., Inc. SN 118,495. Pub. 4–16–63. Filed 4–24–61.

751,882. LUPLASTOL. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 136,945. Pub. 12–18–62. Filed 1–31–62.

751,883. WEEDBEADS. The Dow Chemical Company. SN 137,214. Pub. 4–16–63. Filed 2–5–62.

751,884. PAX-CELL. Pax-Products. SN 138,527. Pub. 4–16–63. Filed 2–23–62.

751,885. INTHION. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. SN 141,512. Pub. 4–16–63. Filed 4–4–62.

751,886. AGRISOLV. The Pure Oil Company. SN 141,983. Pub. 4–16–63. Filed 4–10–62.

751,887. GOLF. Northrup, King & Co. SN 148,749. Pub. 3–5–63. Filed 7–10–62.

751,888. SIROC. Diamond Alkali Company. SN 153,260. Pub. 4–16–63. Filed 9–17–62.

751,889. LEA-RONAL. Lea-Ronal, Inc. SN 153,492. Pub. 4–16–63. Filed 9–19–62.

751,890. CHEMCRAFT. The Lionel Corporation. SN 153,494. Pub. 4–16–63. Filed 9–19–62.

751,891. SLIMEX. E. F. Houghton & Co. SN 153,764. Pub. 4–16–63. Filed 9–24–62.

751,892. ARO. J. M. Huber Corporation. SN 153,765. Pub. 4–16–63. Filed 9–24–62.

751,893. UNIGAS. Union Oil Company of California. SN 153,837. Pub. 4–16–63. Filed 9–24–62.

751,894. GOTAN. Siangelis Associates, Inc. SN 153,989. Pub. 4–16–63. Filed 9–26–62.

751,895. AEROSIZE. American Cyanamid Company. SN 154,065. Pub. 4–16–63. Filed 9–28–62.

751,896. HYDRIPILLS. Metal Hydrides Incorporated. SN 154,130. Pub. 4–16–63. Filed 9–28–62.

751,897. HYDRIQUAT. Metal Hydrides Incorporated. SN 154,132. Pub. 4–16–63. Filed 9–28–62.

Class 7—Cordage

751,898. TIDEELINE. Tufline Plastics, Inc. SN 153,182. Pub. 4–16–63. Filed 9–13–62.

751,899. REBEL. Dixie Fish Net and Twine Company. SN 153,164. Pub. 4–16–63. Filed 9–14–62.

Class 12—Construction Materials

751,900. PERMA BED. The Biddle Company. SN 103,009. Pub. 1–17–61. Filed 8–19–60.

751,901. TIMBERLODGE. J. F. Pritchard & Co. of California. SN 129,034. Pub. 4–16–63. Filed 10–2–61.

751,902. PREFABULOUS. J. F. Pritchard & Co. of California. SN 129,035. Pub. 4–16–63. Filed 10–2–61.

751,903. GRAPHMITE. Graphics, Inc. SN 131,672. Pub. 4–16–63. Filed 11–9–61.

751,904. "CABOTIZED." Samuel Cabot, Incorporated. SN 131,744. Pub. 4–16–63. Filed 11–10–61.

751,905. NOB-LOCK. Amercoat Corporation. SN 132,792. Pub. 4–16–63. Filed 11–27–61.

751,906. ROVIR. Rognoni S.n.C. SN 134,041. Pub. 4–16–63. Filed 12–14–61.

751,907. RIGIDRUG. Duracote Corporation. SN 137,122. Pub. 4–16–63. Filed 2–2–62.

751,908. "ROYAL CORE" AND DESIGN. International Sauna Corporation. SN 138,021. Pub. 4–16–63. Filed 2–15–62.

751,909. SEAL KING. Bird & Son, Inc. SN 139,269. Pub. 4–16–63. Filed 3–7–62.

751,910. PANELAIRE. Panelboard Manufacturing Company, Inc. SN 141,747. Pub. 4–16–63. Filed 4–6–62.

751,911. MIGHTY-PATCH. The Valspar Corporation, d.b.a. Mighty-Mix Company. SN 148,253. Pub. 4–16–63. Filed 7–2–62.

751,912. F. Filon Corporation. SN 148,885. Pub. 4–16–63. Filed 7–12–62.

751,913. JAHN AND DESIGN. Mas-Con Supply Co. SN 149,581. Pub. 4–16–63. Filed 7–23–62.

751,914. HI STYLE AND DESIGN. Hi Style Inc. SN 150,415. Pub. 4–16–63. Filed 8–3–62.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

751,915. SONIJET. General Precision, Inc. SN 130,448. Pub. 4–16–63. Filed 10–23–61.

751,916. GREENKEEPER. Double Rotary Sprinkler Company. SN 134,200. Pub. 4–16–63. Filed 12–18–61.

751,917. FLANGOLET. Bonney Forge & Tool Works. SN 135,329. Pub. 4–16–63. Filed 1–8–62.

751,918. HIFLEX. Crane Co. SN 135,570. Pub. 4–16–63. Filed 1–11–62.

751,919. N AND DESIGN. National Lock Co. SN 136,795. Pub. 4–16–63. Filed 1–29–62.

751,920. SANDERS. Sanders Associates, Incorporated. SN 136,825. Pub. 4–16–63. Filed 1–29–62.

751,921. T-SERT. Long-Lok Corporation. SN 137,251. Pub. 4–16–63. Filed 2–5–62.

751,922. MINNY-TWIST. Minerallac Electric Company. SN 138,038. Pub. 4–16–63. Filed 2–15–62.

751,923. DI-EX. Diamond Expansion Bolt Company, Inc. SN 138,172. Pub. 4–16–63. Filed 2–19–62.

751,924. POWER CAP. Harold S. Hilton, d.b.a. Hilton Products Company. SN 138,714. Pub. 4–16–63. Filed 2–27–62.

751,925. SEAT-TITE. The National Screw & Manufacturing Company. SN 147,217. Pub. 4–16–63. Filed 6–19–62.

Class 14—Metals and Metal Castings and Forgings

751,926. OERSTIT. Deutsche Edelstahlwerke Aktiengesellschaft. SN 136,745. Pub. 4–16–63. Filed 1–29–62.

751,927. DURABLE FLANGARD. Wasco Supply Company. SN 141,398. Pub. 4–16–63. Filed 4–2–62.

751,928. MARATHON REMANIT. Deutsche Edelstahlwerke Aktiengesellschaft. SN 142,286. Pub. 4–16–63. Filed 4–16–62.

751,929. KIPP. Madison-Kipp Corporation. SN 148,739. Pub. 4–16–63. Filed 7–10–62.

Class 15—Oils and Greases

751,930. LPS AND DESIGN. LPS Research Laboratories, Inc. SN 147,471. Pub. 4–16–63. Filed 6–22–62.

751,931. THE GIFTS OF THE THREE WISE MEN. Carolina Company, Inc., d.b.a. Carolina Soap & Candle Makers. SN 148,953. Pub. 4–16–63. Filed 7–13–62.

751,932. EL PASO PASOTORQUE AND DESIGN. El Paso Natural Gas Products Company. SN 150,404. Pub. 4–16–63. Filed 8–3–62.

751,933. CHATELAINE AND DESIGN. Victrylite Candle Co. SN 150,480. Pub. 4–16–63. Filed 8–3–62.

751,934. 12M. United Co-Operatives, Inc. SN 151,375. Pub. 4–16–63. Filed 8–16–62.

751,935. UNICO 12M AND DESIGN. United Co-Operatives, Inc. SN 151,376. Pub. 4–16–63. Filed 8–16–62.

Class 16—Protective and Decorative Coatings

751,936. POLYCIN. The Baker Castor Oil Company. SN 124,501. Pub. 4–16–63. Filed 7–24–61.

Class 17—Tobacco Products

751,937. PELHAM. Liggett & Myers Tobacco Company. SN 144,396. Pub. 4–16–63. Filed 5–11–62.

751,938. VASCO DA GAMA. Rembrandt Tobacco Corporation (Overseas) Limited. SN 147,225. Pub. 4–16–63. Filed 6–19–62.

Class 18—Medicines and Pharmaceutical Preparations

751,939. ZEASORB. Stiefel Laboratories, Inc. SN 100,070. Pub. 1–17–61. Filed 6–30–60.

751,940. DIVARG. McHale Pharmaceutical, Inc. SN 121,013. Pub. 9–19–61. Filed 5–29–61.

751,941. GESTANIN. Organon Inc. SN 133,402. Pub. 4–16–63. Filed 12–5–61.

751,942. HAEMAZOIDS. British Chemotheutic Products Limited. SN 140,230. Pub. 4–16–63. Filed 3–20–62.

751,943. SAVAC. American Cyanamid Company. SN 142,247. Pub. 2–12–63. Filed 4–16–62.

751,944. VERIDERM. The Upjohn Company. SN 142,667. Pub. 4–16–63. Filed 4–19–62.

751,945. ULCOFAC. Dartell Laboratories, Inc. SN 144,058. Pub. 8–28–62. Filed 5–8–62.

751,946. VITACARE. Packaged Products Corp. SN 147,017. Pub. 4–16–63. Filed 6–15–62.

751,947. ALTEST. Allied Stores Corporation. SN 148,457. Pub. 4–16–63. Filed 7–6–62.

751,948. BROMEZYME. Specific Serums Inc. SN 149,415. Pub. 3–5–63. Filed 7–19–62.

751,949. ETRAFON. Schering Corporation. SN 149,877. Pub. 4–16–63. Filed 7–26–62.

751,950. UTILITAB. Steven Laboratories, Inc. SN 150,463. Pub. 4–16–63. Filed 8–3–62.

751,951. UTILICAP. Steven Laboratories, Inc. SN 150,464. Pub. 4–16–63. Filed 8–3–62.

751,952. MANDETS. American Cyanamid Company. SN 150,491. Pub. 4–16–63. Filed 8–6–62.

751,953. FADE. Ajoye, Incorporated. SN 151,643. Pub. 4–16–63. Filed 8–22–62.

751,954. THERA 12–M. Dart Drug Corporation. SN 151,732. Pub. 4–16–63. Filed 8–23–62.

751,955. NUTRA-BLEND. Service and Research, Inc. SN 152,096. Pub. 4–16–63. Filed 8–28–62.

Class 19—Vehicles

751,956. RATSEY VENTURI SPINNAKER. Ratsey & Lapthorn, Inc. SN 129,538. Pub. 4–16–63. Filed 10–9–61.

751,957. MISCELLANEOUS DESIGN. Shinn Industries, Inc. SN 130,116. Pub. 4–16–63. Filed 10–17–61.

751,958. MATHER IN CAPITAL M. The Mather Spring Company. SN 141,736. Pub. 4–16–63. Filed 4–6–62.

751,959. VESPA JET. Piaggio & C. Societa per Azioni. SN 143,047. Pub. 4–16–63. Filed 4–25–62.

751,960. SCEPTRE. Humber Limited, assignee of Sunbeam-Talbot Limited. SN 146,121. Pub. 4–16–63. Filed 6–4–62.

751,961. FISHER. Andrew Fisher Cycle Co., Inc. SN 147,917. Pub. 4–16–63. Filed 6–28–62.

751,962. REMCO. Republic Engineering & Manufacturing Co. SN 150,103. Pub. 2–19–63. Filed 7–30–62.

751,963. THE VIRGINIAN. S.W. Virginia Tire Company, Inc., d.b.a. Richlands Metal Prods. SN 150,187. Pub. 4–16–63. Filed 7–31–62.

751,964. DC AND DESIGN. Dura Corporation. SN 150,682. Pub. 4–16–63. Filed 8–7–62.

751,965. ROSS. Ross Gear and Tool Company, Inc. SN 151,082. Pub. 4–16–63. Filed 8–13–62.

751,966. WAGONEER. Willys Motors, Inc. SN 151,109. Pub. 4–16–63. Filed 8–13–62.

751,967. GEOMETRIC DESIGN. The Ryan Aeronautical Co. SN 151,781. Pub. 4–16–63. Filed 8–23–62.

751,968. ATLAS LOAD BALANCER. Atlas Supply Company. SN 151,799. Pub. 4–16–63. Filed 8–24–62.

751,969. CONESTOGA. Concord Mobile Homes, Inc. SN 153,160. Pub. 4–16–63. Filed 9–14–62.

Class 20 — Linoleum and Oiled Cloth

751,970. ENCORE. Robbins Floor Products, Inc. SN 147,504. Pub. 4–16–63. Filed 6–22–62.

Class 21 — Electrical Apparatus, Machines, and Supplies

751,971. POWERTRIM. Invar Electronics Corp. SN 124,650. Pub. 3–13–62. Filed 7–25–61.

751,972. VIDEOMATIC. The Magnavox Company. SN 125,675. Pub. 3–20–62. Filed 8–9–61.

751,973. TORNADO. Perrine Battery Corporation, d.b.a. Boston Battery Company. SN 130,823. Pub. 4–16–63. Filed 10–27–61.

751,974. OAK. Oak Manufacturing Co. MULTIPLE CLASS (Classes 21 and 26). SN 131,059. Pub. 4–16–63. Filed 10–31–61.

751,975. GII AND DESIGN. Game Industries, Inc. SN 131,560. Pub. 4–16–63. Filed 11–8–61.

751,976. BECON. Brown Engineering Company, Inc. SN 132,024. Pub. 4–16–63. Filed 11–15–61.

751,977. DIAL-A-DOZEN. John W. Nelson, Inc. SN 134,555. Pub. 4–16–63. Filed 12–22–61.

751,978. ITEK AND DESIGN. Itek Corporation. SN 135,274. Pub. 4–16–63. Filed 1–5–62.

751,979. TYKON. United-Carr Fastener Corporation. SN 135,643. Pub. 4–16–63. Filed 1–11–62.

751,980. SWIRL-GLOW. Raylite Electric Corp. SN 136,396. Pub. 4–16–63. Filed 1–23–62.

751,981. TRUSONIC FREE-CONE SUSPENSION AND DESIGN. Stephens Trusonic, Inc. SN 136,693. Pub. 4–16–63. Filed 1–26–62.

751,982. OERSTIT. Deutsche Edelstahlwerke Aktiengesellschaft. SN 136,746. Pub. 4–16–63. Filed 1–29–62.

751,983. RAYTECH. Harry C. Wain, d.b.a. Raytech Equipment Co. SN 136,855. Pub. 10–30–62. Filed S.R. 1–29–62; Am. P.R. 9–17–62.

751,984. TRANSFIRE AND DESIGN. William F. Palmer. SN 137,365. Pub. 4–16–63. Filed 2–6–62.

751,985. TRANSPARK AND DESIGN. William F. Palmer. SN 137,366. Pub. 4–16–63. Filed 2–6–62.

751,986. KOOL-TAINER. The Birtcher Corporation. SN 138,077. Pub. 4–16–63. Filed 2–16–62.

751,987. TRANS-CLIP. The Birtcher Corporation. SN 138,078. Pub. 4–16–63. Filed 2–16–62.

751,988. TAYLOR-WINFIELD. The Taylor-Winfield Corporation. SN 138,245. Pub. 4–16–63. Filed 2–19–62.

751,989. KNIGHT. Allied Radio Corporation. MULTIPLE CLASS (Classes 21 and 36). SN 139,256. Pub. 4–16–63. Filed 3–7–62.

751,990. KNIGHT-KIT. Allied Radio Corporation. SN 139,809. Pub. 4–16–63. Filed 3–14–62.

751,991. LIFE LITE. Guiton Industries, Inc. SN 141,294. Pub. 4–16–63. Filed 4–2–62.

751,992. CERWISTOR. Aktiebolaget Installationsmateriel. SN 142,241. Pub. 4–16–63. Filed 4–16–62.

751,993. CSC. Consolidated Systems Corporation. SN 142,797. Pub. 4–16–63. Filed 4–23–62.

751,994. AUDITION. F. W. Woolworth Co. SN 142,889. Pub. 4–16–63. Filed 4–23–62.

751,995. M MOORESTYLE AND DESIGN. Moore's Super Stores, Inc. MULTIPLE CLASS (Classes 21, 31, and 34). SN 143,158. Pub. 4–16–63. Filed 4–26–62.

751,996. VARTALIT AND DESIGN. Varta Aktiengesellschaft, by change of name from Accumulatoren-Fabrik Aktiengesellschaft. MULTIPLE CLASS (Classes 21 and 26). SN 143,197. Pub. 4–16–63. Filed 4–27–62.

751,997. CUSTOM-KING. Thompson and Sons, Inc. SN 144,658. Pub. 4–16–63. Filed 5–15–62.

751,998. RHAPSODY. B & B Import-Export Company. SN 145,465. Pub. 4–16–63. Filed 5–25–62.

751,999. CHRISTOPHER YORK. Christopher York Lighting, Inc. SN 147,423. Pub. 4–16–63. Filed 6–21–62.

752,000. ECAG AND DESIGN. Electronics Corporation of America. SN 147,716. Pub. 4–16–63. Filed 6–26–62.

752,001. ACRA SPLIT. Entron, Inc. SN 149,379. Pub. 4–16–63. Filed 7–19–62.

752,002. Q BERG AND DESIGN. Berg Electronics, Inc. SN 149,700. Pub. 4–16–63. Filed 7–25–62.

752,003. RUSTIC. The Rustic Crafts Co. Inc. SN 150,722. Pub. 4–16–63. Filed 8–7–62.

752,004. RECTIFORMER. The I-T-E Circuit Breaker Company. SN 151,824. Pub. 4–16–63. Filed 8–24–62.

752,005. NITELIGHTER. Sigma Instruments, Inc. SN 152,843. Pub. 4–16–63. Filed 8–31–62.

Class 22 — Games, Toys, and Sporting Goods

752,006. MR. MIXIT AND DESIGN. Americanmade Plastics, Inc., assignee of Ideal Toy Corporation. SN 123,747. Pub. 3–5–63. Filed 7–11–61.

752,007. WIZ-WORD. Arthur M. Fay, d.b.a. Meritcraft Co. SN 134,535. Pub. 4–16–63. Filed 12–22–61.

752,008. ANDY PANDA. Walter Lantz Productions, Inc. SN 134,995. Pub. 4–16–63. Filed 1–2–62.

752,009. CHILLY WILLY. Walter Lantz Productions, Inc. SN 135,008. Pub. 4–16–63. Filed 1–2–62.

752,010. WOODY WOODPECKER. Walter Lantz Productions, Inc. SN 135,011. Pub. 4–16–63. Filed 1–2–62.

752,011. CAPTAIN ACE. American Enterprises, Inc. SN 148,287. Pub. 4–16–63. Filed 7–3–62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

752,012. AEL. Automation Engineering Laboratory, Incorporated. SN 131,260. Pub. 4–16–63. Filed 11–3–61.

752,013. TAPPING JACK. Ingersoll-Rand Company. SN 131,687. Pub. 4–16–63. Filed 11–9–61.

752,014. EEEE. Crucible Steel Company of America. SN 133,223. Pub. 4–16–63. Filed 12–4–61.

752,015. BALLAST. Fritz W. Glitsch & Sons, Inc. SN 133,259. Pub. 4–16–63. Filed 12–4–61.

752,016. LIBERTY. Western Sewing Machine Distributors, Inc. SN 134,297. Pub. 4–16–63. Filed 12–18–61.

752,017. EMBLEM DESIGN. Drives Incorporated. SN 134,620. Pub. 4–16–63. Filed 12–26–61.

752,018. MAGNASTATIC AND DESIGN. Magnastatic Corporation. SN 135,213. Pub. 4–16–63. Filed 1–4–62.

752,019. MAGICOL. Manufacture Belge d'Aiguilles. SN 135,282. Pub. 4–16–63. Filed 1–5–62.

752,020. WHISPER-CUT. Black, Sivalls & Bryson, Inc. SN 135,327. Pub. 4–16–63. Filed 1–8–62.

752,021. SEMCO. Systems Engineering and Manufacturing Co., Inc. SN 135,475. Pub. 10–9–62. Filed 1–9–62.

752,022. MOW-A-MAGIC. Black, Sivalls & Bryson, Inc. SN 136,190. Pub. 4–16–63. Filed 1–22–62.

752,023. P & S AND DESIGN. Pumps & Softeners, Limited. SN 137,792. Pub. 4–16–63. Filed 2–12–62.

752,024. DIALLOY AND DESIGN. Dia-Chrome Co. SN 138,171. Pub. 4–16–63. Filed 2–19–62.

752,025. HELMICK AND DESIGN. Helmick Foundry-Machine Company. SN 138,503. Pub. 4–16–63. Filed 2–23–62.

752,026. PUMPAK AND DESIGN. MP Pumps, Inc. SN 139,312. Pub. 4–16–63. Filed 3–7–62.

752,027. AUTOSPEC. Eagle Iron Works. SN 140,543. Pub. 4–16–63. Filed 3–23–62.

752,028. CLAM RAM. Theodore A. Riccio, d.b.a. Clam Ram. SN 141,112. Pub. 4–16–63. Filed 3–29–62.

752,029. MICRO-MIRROR. Steel-Tex Manufacturing Corporation. SN 141,125. Pub. 4–16–63. Filed 3–29–62.

752,030. TIGER TUF. S. A. Felton & Son Company, assignee of Dersal Corporation. SN 147,808. Pub. 4–16–63. Filed 6–27–62.

752,031. DURALUBE. Diamond Chain Company, Inc. SN 148,155. Pub. 4–16–63. Filed 7–2–62.

752,032. CONAFORM. Illinois Tool Works Inc. SN 148,389. Pub. 4–16–63. Filed 7–5–62.

752,033. PAWLOCK. Briles Manufacturing, assignee of Pawlock Tool Co. SN 148,997. Pub. 4–16–63. Filed 7–13–62.

752,034. CUTUPS AND DESIGN. Domus Products Inc. SN 149,271. Pub. 4–16–63. Filed 7–16–62.

752,035. DURACRIMP. The Lindsay Wire Weaving Company. SN 149,575. Pub. 4–16–63. Filed 7–23–62.

752,036. OMCO Overmyer Mould Company, Inc. SN 149,591. Pub. 4–16–63. Filed 7–23–62.

Class 26 — Measuring and Scientific Appliances

752,037. EDIVIEW. Elgeet Optical Company, Inc. SN 85,116. Pub. 3–1–60. Filed 11–12–59.

752,038. SPEEDAC. Howe Richardson Scale Company, by assignment and change of name from Richardson Scale Company. SN 128,102. Pub. 4–16–63. Filed 9–18–61.

752,039. PROFITAKER. Harold F. Byrd. SN 128,508. Pub. 4–16–63. Filed 9–25–61.

752,040. REALISTIC. Radio Shack Corporation. SN 131,616. Pub. 4–16–63. Filed 11–8–61.

752,041. AUDIT-IN-ROUTE. Johnson Fare Box Company. SN 135,362. Pub. 4–16–63. Filed 1–8–62.

752,042. SANDERS. Sanders Associates, Incorporated. SN 136,826. Pub. 4–16–63. Filed 1–29–62.

752,043. SATELLITE. Control Data Corporation. SN 137,719. Pub. 8–28–62. Filed 2–12–62.

752,044. MICROSTRIP. Eastman Kodak Company. SN 138,476. Pub. 4–16–63. Filed 2–23–62.

752,045. FLO-PROBE. Quality Precision Products, Inc. SN 147,033. Pub. 4–16–63. Filed 6–15–62.

752,046. MICROFLO. Quality Precision Products, Inc. SN 147,035. Pub. 4–16–63. Filed 6–15–62.

752,047. HYDROTHERM. Henry Fairfax Ayres, d.b.a. Fayrport Farm. SN 149,036. Pub. 4–16–63. Filed 7–16–62.

752,048. CHEMI-COTE. Da-Lite Screen Company, Inc. SN 151,729. Pub. 4–16–63. Filed 8–23–62.

752,049. SIC. Fred Ellis, Jr., d.b.a. Scientific Instruments Co. SN 152,781. Pub. 4–16–63. Filed 9–10–62.

752,050. ASTROMET. Precision Scientific Company. SN 152,825. Pub. 4–16–63. Filed 9–10–62.

752,051. META-TEST. Precision Scientific Company. SN 152,826. Pub. 4–16–63. Filed 9–10–62.

Class 27 — Horological Instruments

752,052. CARIBBEAN. Bulova Watch Company, Inc. SN 110,976. Pub. 6–27–61. Filed 12–29–60.

752,053. PRAISE. Magnolia Diamonds, Inc. SN 151,496. Pub. 4–16–63. Filed 8–20–62.

Class 28 — Jewelry and Precious-Metal Ware

752,054. ESPO-FLEX. Espo-Flex Mfg., Inc. SN 141,280. Pub. 4–16–63. Filed 4–2–62.

752,055. ESPO. Espo-Flex Mfg., Inc., assignee of Esposito Jewelry, Inc. SN 141,281. Pub. 4–16–63. Filed 4–2–62.

752,056. S & M. S & M Jewelry Co. SN 142,359. Pub. 4–16–63. Filed 4–16–62.

752,057. SYMBOLINE. Antaya Brothers, Inc. SN 143,783. Pub. 4–16–63. Filed 5–4–62.

752,058. LENOX. Lenox Jewelry Products Corp. SN 143,843. Pub. 4–16–63. Filed 5–4–62.

752,059. F. The Fratianne Mfg. Co. SN 144,830. Pub. 4–16–63. Filed 5–17–62.

752,060. JKC AND DESIGN. J. C. Keppie Co. SN 144,857. Pub. 4–16–63. Filed 5–17–62.

752,061. LR. Leon Rudberg, d.b.a. Leon Rudberg Jewelry Company. SN 144,982. Pub. 4–16–63. Filed 5–18–62.

752,062. LEVIN. Edward Levin, d.b.a. Ed Levin. SN 145,092. Pub. 4–16–63. Filed 5–21–62.

752,063. RK DESIGN. Federated Department Stores, Inc., d.b.a. The Rike-Kumler Company. SN 146,516. Pub. 4–16–63. Filed 6–8–62.

752,064. ITALIAN PROVINCIAL. Gorham Corporation. SN 147,197. Pub. 4–16–63. Filed 6–19–62.

752,065. FABU-LOOK. Famor Inc. SN 148,801. Pub. 4–16–63. Filed 7–11–62.

752,066. DFJ MONOGRAM. David Felberbaum, d.b.a. D.F. Jewelry. SN 148,802. Pub. 4–16–63. Filed 7–11–62.

752,067. LIT. Litwin & Sons. SN 149,098. Pub. 4–16–63. Filed 7–16–62.

752,068. LJ. Loewi's Jewelry. SN 149,659. Pub. 4–16–63. Filed 7–24–62.

752,069. DESIGN OF LETTERS "T" AND "U." Turin Jewelry Ltd. SN 149,895. Pub. 4–16–63. Filed 7–26–62.

752,070. MOLE AND DESIGN. Leon Friedman, d.b.a. Molé Jewelers. SN 151,220. Pub. 4–16–63. Filed 8–16–62.

752,071. CO AND DESIGN. Concord Jewelry Manufacturing Corporation. SN 151,299. Pub. 4–16–63. Filed 8–16–62.

752,072. ORG. Benjamin Orgel, d.b.a. B. Orgel Co. SN 151,355. Pub. 4–16–63. Filed 8–16–62.

752,073. PD WITHIN DIAMOND DESIGN. Harry Ganz, d.b.a. Penn Diamond Company. SN 151,483. Pub. 4–16–63. Filed 8–20–62.

752,074. PRAISE. Magnolia Diamonds, Inc. SN 151,497. Pub. 4–16–63. Filed 8–20–62.

752,075. SFI. Straus Findings, Inc. SN 152,727. Pub. 4–16–63. Filed 9–7–62.

752,076. BJC AND DESIGN. Beatrix Jewelry Co. SN 152,747. Pub. 4–16–63. Filed 9–10–62.

752,077. DANC. Daniels Jewelry Co. SN 152,766. Pub. 4–16–63. Filed 9–10–62.

752,078. HIND. Howard Russell Hind and Esther Egan Hind (joint owners). SN 152,792. Pub. 4–16–63. Filed 9–10–62.

752,079. MK AND DESIGN. Morris Kaplan & Sons. SN 152,897. Pub. 4–16–63. Filed 9–11–62.

752,080. STC. Stanley Needles, d.b.a. Stanley Creations. SN 152,907. Pub. 4–16–63. Filed 9–11–62.

752,081. GWD AND DESIGN. Gorham Corporation. SN 152,991. Pub. 4–16–63. Filed 9–12–62.

752,082. ROBERT BRUCE. Gorham Corporation. SN 152,992. Pub. 4–16–63. Filed 9–12–62.

Class 29 — Brooms, Brushes, and Dusters

752,083. PRODUCE MATCHED. Industrial Brush Company. SN 148,190. Pub. 4–16–63. Filed 7–2–62.

752,084. SANI-FLUSH. American Home Products Corporation. SN 148,567. Pub. 4–13–63. Filed 7–9–62.

752,085. RING-A-TING. Otis Company. SN 149,116. Pub. 4–16–63. Filed 7–16–62.

752,086. SMOOTHEE. T. K. Gray, Inc. SN 149,931. Pub. 4–16–63. Filed 7–27–62.

Class 31 — Filters and Refrigerators

752,087. MASPAC. The Dow Chemical Company. SN 134,203. Pub. 4–16–63. Filed 12–18–61.

752,088. TBT. T.B.T.—Societe d'Etude et de Construction d'Appareillages pour Tres Basses Temperatures. SN 135,063. Pub. 4–16–63. Filed 1–2–62.

752,089. VANGUARD. Frostmaster Company. SN 146,551. Pub. 4–16–63. Filed 6–8–62.

752,090. PRONTO. American Plant Equipment Company. SN 146,560. Pub. 4–16–63. Filed 6–11–62.

752,091. BIG 3. Hussmann Refrigerator Co. SN 147,116. Pub. 4–16–63. Filed 6–18–62.

752,092. ROTO-LEAF. The Duriron Company, Inc. SN 147,357. Pub. 4–16–63. Filed 6–21–62.

752,093. MERCURY II. Bruner Corporation. SN 147,793. Pub. 4–16–63. Filed 6–27–62.

752,094. SCOTTY. Bruner Corporation. SN 147,795. Pub. 4–16–63. Filed 6–27–62.

752,095. COM-PAC. Century Softener Corporation. SN 147,800. Pub. 4–16–63. Filed 6–27–62.

752,096. GOLD CROWN. Bruner Corporation. SN 147,998. Pub. 4–16–63. Filed 6–29–62.

Class 32 — Furniture and Upholstery

752,097. APPCO. American Plastic Products Co. SN 140,616. Pub. 4–16–63. Filed 3–26–62.

752,098. FF FIDELITY FILE AND DESIGN. Fidelity File Box, Inc. SN 144,611. Pub. 4–16–63. Filed 5–15–62.

752,099. BODI-REST AND DESIGN. American Seating Company. SN 149,907. Pub. 4–16–63. Filed 7–27–62.

752,100. KID-NIK SET. William M. McIntosh, d.b.a. Kid-Nik Mfg. Co. SN 151,502. Pub. 4–16–63. Filed 8–20–62.

752,101. LAWSON SILVER CAMEO AND DESIGN. The F. H. Lawson Company. SN 151,930. Pub. 4–16–63. Filed 8–27–62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

752,102. PRESTORAY. The Electric Auto-Lite Company. SN 134,104. Pub. 4–16–63. Filed 12–15–61.

752,103. SKY-KOOL. Sky-Kool, Inc. SN 135,078. Pub. 4–16–63. Filed 1–2–62.

752,104. TI AND DESIGN. Thomas Industries Inc. SN 137,472. Pub. 4–16–63. Filed 2–7–62.

752,105. NUCERITE. Pfaudler Permutit Inc. SN 137,940. Pub. 4–16–63. Filed 2–14–62.

752,106. BLACKSTONE. Blackstone Corporation. SN 141,571. Pub. 4–16–63. Filed 4–5–62.

752,107. SPEED-ALLOY. The McKay Company. SN 142,046. Pub. 4–16–63. Filed 4–11–62.

752,108. SILFLO. All-State Welding Alloys Co., Inc. SN 142,587. Pub. 4–16–63. Filed 4–19–62.

752,109. KWIK-KLAMP. Lear Siegler, Inc., by merger and change of name from The Siegler Corporation. SN 146,112. Pub. 4–16–63. Filed 6–4–62.

752,110. PERIMA-VENT. Lear Siegler, Inc., by merger and change of name from The Siegler Corporation. SN 146,113. Pub. 4–16–63. Filed 6–4–62.

752,111. KWIK-VENT. Lear Siegler, Inc., by merger and change of name from The Siegler Corporation. SN 146,114. Pub. 4–16–63. Filed 6–4–62.

752,112. PROTANE. The Protane Corporation. SN 147,398. Pub. 4–16–63. Filed 6–21–62.

752,113. GEOMETRICAL DESIGN. Anemostat Corporation of America. SN 147,670. Pub. 4–16–63. Filed 6–26–62.

752,114. ILC. Inductotherm Linemelt Corporation. SN 147,928. Pub. 4–16–63. Filed 6–28–62.

752,115. LINEMELT. Inductotherm Linemelt Corporation. SN 147,929. Pub. 4–16–63. Filed 6–28–62.

752,116. LINEMELT 60. Inductotherm Linemelt Corporation. SN 147,930. Pub. 4–16–63. Filed 6–28–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

752,117. KEX JIFFY-GUN. Kex Products, Incorporated. SN 128,359. Pub. 4–16–63. Filed 9–21–61.

752,118. STOMIL. Korlis (N.J.) Limited. SN 142,322. Pub. 4–16–63. Filed 4–16–62.

752,119. TRAC-SEAL. Sure-Seal Equipment Co. SN 147,157. Pub. 4–16–63. Filed 6–18–62.

Class 36 — Musical Instruments and Supplies

752,120. CANDIX. Candix Enterprises, Inc. SN 129,914. Pub. 4–16–63. Filed 10–16–61.

752,121. SCRAMBLED SING ALONG. Mars Broadcasting, Inc. SN 130,475. Pub. 4–16–63. Filed 10–23–61.

752,122. SHOWCASE. Pickwick International Inc. SN 132,484. Pub. 9–4–62. Filed 11–21–61.

752,123. KORDEX. Lafayette Radio Electronics Corporation. SN 132,559. Pub. 4–16–63. Filed 11–22–61.

752,124. ORTOFON. Ortofon A/S. SN 137,651. Pub. 4–16–63. Filed 2–9–62.

752,125. BRIAR. Todd Recording Corporation. SN 139,697. Pub. 4–16–63. Filed 3–12–62.

752,126. PROCESS 70. Time Records, Inc. SN 145,978. Pub. 4–16–63. Filed 6–1–62.

Class 37 — Paper and Stationery

752,127. GIBSON. C. R. Gibson & Company. SN 131,125. Pub. 4–16–63. Filed 11–1–61.

752,128. YOUR GUARANTEE IN WRITING. Arthur Abbey, d.b.a. Abbey Pen Company. SN 132,888. Pub. 4–16–63. Filed 11–28–61.

752,129. MAMARCO. Mason Marking Systems Corporation. SN 151,150. Pub. 4–16–63. Filed 8–14–62.

752,130. WIREMASTER. American Pad & Paper Company. SN 151,188. Pub. 4–16–63. Filed 8–15–62.

Class 38 — Prints and Publications

752,131. APPALACHIAN HARDWOODS AMERICA'S FINEST ETC. AND DESIGN. Appalachian Hardwood Manufacturers, Inc. SN 105,592. Pub. 4–16–63. Filed 10–3–60.

752,132. GIBSON. C. R. Gibson & Company. SN 119,511. Pub. 4–16–63. Filed 5–8–61.

752,133. GIBSON MEMORY BOOKS . . . DON'T FORGET. C. R. Gibson & Company. SN 119,512. Pub. 4–16–63. Filed 5–8–61.

752,134. TRANSISTOR TIPS AND DESIGN. Minneapolis-Honeywell Regulator Company. SN 119,537. Pub. 4–16–63. Filed 5–8–61.

752,135. COLORTECK. Colorteck, Inc. SN 125,007. Pub. 4–16–63. Filed 7–31–61.

752,136. TALES OF THE OIL COUNTRY. James A. Clark. SN 129,120. Pub. 4–16–63. Filed 10–3–61.

752,137. AD-KAP. Ad-Kap. SN 130,158. Pub. 4–16–63. Filed 10–18–61.

752,138. ANDY PANDA. Walter Lantz Productions, Inc. SN 134,996. Pub. 4–16–63. Filed 1–2–62.

752,139. FANCIFUL REPRESENTATION OF A PENGUIN. Walter Lantz Productions, Inc. SN 134,999. Pub. 4–16–63. Filed 1–2–62.

752,140. CHILLY WILLY. Walter Lantz Productions, Inc. SN 135,009. Pub. 4–16–63. Filed 1–2–62.

752,141. WOODY WOODPECKER. Walter Lantz Productions, Inc. SN 135,012. Pub. 4–16–63. Filed 1–2–62.

752,142. WOODY WOODPECKER. Walter Lantz Productions, Inc. SN 135,014. Pub. 4–16–63. Filed 1–2–62.

752,143. PP AND DESIGN. Pageant Press, Inc. SN 136,274. Pub. 4–16–63. Filed 1–22–62.

752,144. TECHNICAL MANAGEMENT. Industrial Research, Incorporated. SN 136,464. Pub. 4–16–63. Filed 1–24–62.

752,145. CHEMICAL HORIZONS AND DESIGN. Shirley Bridges. SN 137,499. Pub. 4–16–63. Filed 2–8–62.

752,146. GRID LEAKS. Ace Radio Control, Inc., d.b.a. Grid Leaks. SN 137,878. Pub. 4–16–63. Filed 2–14–62.

752,147. NATIONAL CLEANER. The Reuben H. Donnelley Corporation. SN 144,698. Pub. 4–16–63. Filed 5–16–62.

752,148. MONOGRAM AND HEART DESIGN. Jeanne O. Hart. SN 147,113. Pub. 4–16–63. Filed 6–18–62.

752,149. ARIEL. Farrar, Straus and Company, Inc., by change of name from Farrar, Straus & Cudahy, Inc. SN 147,813. Pub. 4–16–63. Filed 6–27–62.

752,150. WHAT'S NEW IN HOME ECONOMICS. The Reuben H. Donnelley Corporation. SN 148,960. Pub. 4–16–63. Filed 7–13–62.

752,151. MONUMENTAL NEWS-REVIEW. Monumental News-Review, Inc. SN 149,313. Pub. 4–16–63. Filed 7–18–62.

752,152. NCR AND DESIGN. The National Cash Register Company. SN 150,094. Pub. 4–16–63. Filed 7–30–62.

752,153. LIVING WORD AND DESIGN. Gospel Light Publications, d.b.a. The Sunday School House. SN 150,334. Pub. 4–16–63. Filed 8–2–62.

752,154. BIRD AND FLOWER DESIGN. American Greetings Corporation. SN 150,384. Pub. 4–16–63. Filed 8–3–62.

752,155. METALSCOPE. Brooks & Perkins, Incorporated. SN 150,515. Pub. 4–16–63. Filed 8–6–62.

752,156. SCHOOL AND DESIGN. Hollywood School Photo Association. SN 150,561. Pub. 4–16–63. Filed 8–6–62.

752,157. E.E.N.T. DIGEST. E.E.N.T. Digest, Inc. SN 151,028. Pub. 4–16–63. Filed 8–13–62.

752,158. PHARMOUR. Armour Pharmaceutical Company. SN 151,389. Pub. 4–16–63. Filed 8–17–62.

Class 39 — Clothing

752,159. CENTURY. Century Sportswear Co., Inc. SN 48,399. Pub. 12–6–60. Filed 3–25–58.

752,160. WHITE ROCK. White Rock Uniform Co., Inc. SN 129,068. Pub. 4–16–63. Filed 10–2–61.

752,161. MR. PIMA. Silver Knit Hosiery Mills, Inc. SN 129,887. Pub. 4–16–63. Filed 10–13–61.

752,162. SLIM-SUIT BY SLACK-EES. Slack-Ees Corporation. SN 132,755. Pub. 2–5–63. Filed 11–24–61.

752,163. CEST MAGNIFIQUE. S.M.W. Buying Syndicate, Inc. SN 134,042. Pub. 4–16–63. Filed 12–14–61.

752,164. ADJUST-A-LENGTH. Stone Manufacturing Company. SN 135,841. Pub. 4–16–63. Filed 1–15–62.

752,165. CLICK TAB. Bud Berman Sportswear Inc. SN 136,531. Pub. 4–16–63. Filed 1–25–62.

752,166. TOM COLLINS. Modern Shoe Company. SN 136,673. Pub. 4–16–63. Filed 1–26–62.

752,167. CARINA. Caressa, Inc. SN 136,881. Pub. 4–16–63. Filed 1–30–62.

752,168. NINA NORTH. The Eastern Isles, Inc., assignee of Nina North, Inc. SN 138,637. Pub. 4–16–63. Filed 2–26–62.

752,169. CHALKIES. Fairfield Knitwear, Inc. SN 139,477. Pub. 4–16–63. Filed 3–9–62.

752,170. COUNSEL HALL. Merit Clothing Company. SN 139,653. Pub. 4–16–63. Filed 3–12–62.

752,171. POWER-KNIT. Cooper's, Incorporated. SN 140,003. Pub. 4–16–63. Filed 3–16–62.

752,172. FLEECE-LON. A. H. Schreiber Co. Incorporated. SN 140,046. Pub. 2–5–63. Filed 3–16–62.

752,173. NINA DOLL AND DESIGN. Nina Footwear Co., Inc. SN 140,169. Pub. 4–16–63. Filed 3–19–62.

752,174. EMISSARY. P. H. Hanes Knitting Company. SN 140,683. Pub. 4–16–63. Filed 3–26–62.

752,175. STATESMAN. P. H. Hanes Knitting Company. SN 140,684. Pub. 4–16–63. Filed 3–26–62.

752,176. BONANZA. The B.V.D. Company, Inc. SN 140,904. Pub. 2–26–63. Filed 3–28–62.

752,177. PLAY ONE AND DESIGN. The Puritan Sportswear Corp. SN 143,049. Pub. 4–16–63. Filed 4–25–62.

752,178. FAULTLESS TOPPER. The Enro Shirt Co., Inc. SN 144,478. Pub. 4–16–63. Filed 5–14–62.

752,179. FAULTLESS COMFO-KNIT. The Enro Shirt Co., Inc. SN 144,479. Pub. 4–16–63. Filed 5–14–62.

752,180. HATTIE LEEDS. Gladstone-Arcuni, Inc. SN 146,617. Pub. 4–16–63. Filed 6–11–62.

752,181. OUNCES. S. Augstein & Co., Inc. SN 147,063. Pub. 4–16–63. Filed 6–11–62.

752,182. AQUASPECTRUM. Aquascutum, Limited. SN 148,125. Pub. 4–16–63. Filed 7–2–62.

752,183. U.S. ROYAL AND DESIGN. United States Rubber Company. SN 148,865. Pub. 4–16–63. Filed 7–11–62.

752,184. U.S. QUEEN ROYAL AND DESIGN. United States Rubber Company. SN 148,866. Pub. 4–16–63. Filed 7–11–62.

752,185. "TAKE THE GUESSING OUT OF DRESSING." Wembley, Inc. SN 149,620. Pub. 4–16–63. Filed 7–23–62.

752,186. "TAKES THE GUESSING OUT OF DRESSING." Wembley, Inc. SN 149,621. Pub. 4–16–63. Filed 7–23–62.

752,187. GOLDCREST AND DESIGN. Imperial Shirt Corp. SN 150,831. Pub. 4–16–63. Filed 7–5–62.

752,188. WAKEFIELD AND DESIGN. Imperial Shirt Corp. SN 150,833. Pub. 4–16–63. Filed 7–5–62.

752,189. CRESTFIELD AND DESIGN. Imperial Shirt Corp. SN 150,835. Pub. 4–16–63. Filed 7–5–62.

752,190. SHOGS. BGS Shoe Corporation. SN 150,916. Pub. 4–16–63. Filed 8–10–62.

752,191. PENSIVE. Burlington Industries, Inc. SN 151,000. Pub. 4–16–63. Filed 8–13–62.

752,192. PECOS PETE. Elk Brand Manufacturing Company. SN 151,030. Pub. 4–16–63. Filed 8–13–62.

752,193. HAVEN HALL. Wells & Coverly, Incorporated. SN 151,183. Pub. 4–16–63. Filed 8–14–62.

752,194. SUZY SQUIRE. Little Squire, Inc. SN 151,241. Pub. 4–16–63. Filed 8–15–62.

752,195. WORLD MASTER. Ideal Shoe Company. SN 151,328. Pub. 4–16–63. Filed 8–16–62.

752,196. WEATHER ROUNDER. Wales Manufacturing Company. SN 151,379. Pub. 4-16-63. Filed 8-16-62.

752,197. DISP-HOSE. Locust Hosiery Mills, Inc. SN 151,600. Pub. 4-16-63. Filed 8-21-62.

752,198. TELSTAR. Byer-Rolnick Hat Corporation. SN 151,659. Pub. 4-16-63. Filed 8-22-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

752,199. KIDDYLAND. Beacon Manufacturing Company. SN 79,833. Pub. 3-6-62. Filed 8-19-59.

752,200. PRESTOLENE. J. P. Frank Chemical & Plastic Corp. SN 139,842. Pub. 4-16-63. Filed 3-14-62.

752,201. DUVO-CLE. Edmos Products Corporation. SN 142,695. Pub. 4-16-63. Filed 4-20-62.

752,202. VINELLE. The General Tire & Rubber Company. SN 143,369. Pub. 4-16-63. Filed 4-30-62.

752,203. REPRESENTATION OF A CUP-LIKE FIGURE. Cannon Mills Company. SN 144,934. Pub. 4-16-63. Filed 5-18-62.

752,204. REPRESENTATION OF CUP-LIKE FIGURE AND CROWN. Cannon Mills Company. SN 144,935. Pub. 4-16-63. Filed 5-18-62.

752,205. BABYTEX. Singing Needles, Inc. SN 147,505. Pub. 4-16-63. Filed 6-22-62.

752,206. PITLOCHRY HIGHLAND HOMESPUN AND DESIGN. A. & J. Macnaughton Limited. SN 148,051. Pub. 4-16-63. Filed 6-29-62.

752,207. PITLOCHRY HOMESPUN. A. & J. Macnaughton Limited. SN 148,052. Pub. 4-16-63. Filed 6-29-62.

752,208. VIGORETS. Mosse, Incorporated. SN 148,992. Pub. 4-16-63. Filed 7-13-62.

752,209. BEAUTYSCREEN. J. P. Stevens & Co., Inc. SN 152,017. Pub. 4-16-63. Filed 8-27-62.

752,210. ELY-NAN. W. F. Breuss, Inc. SN 152,042. Pub. 4-16-63. Filed 8-28-62.

752,211. RAJAH PLUS. Evan-Picone, Inc. SN 152,129. Pub. 4-16-63. Filed 8-29-62.

752,212. DEL-GAB. J. P. Stevens & Co., Inc. SN 152,455. Pub. 4-16-63. Filed 9-4-62.

752,213. LION AND GLOBE DESIGN. Dux Incorporated. SN 152,505. Pub. 4-16-63. Filed 9-5-62.

752,214. LOUTREL. O'Callaghan. SN 152,620. Pub. 4-16-63. Filed 9-6-62.

752,215. CELLUFAB. Denison Cotton Mill Company. SN 152,768. Pub. 4-16-63. Filed 9-10-62.

Class 43 — Thread and Yarn

752,216. BLENDALL. Lawrence Reisman, d.b.a. Blendall Synthetic Thread Co. SN 152,439. Pub. 4-16-63. Filed 9-4-62.

Class 44 — Dental, Medical, and Surgical Appliances

752,217. REGENT. Johnson & Johnson. SN 149,936. Pub. 4-16-63. Filed 7-27-62.

Class 45 — Soft Drinks and Carbonated Waters

752,218. SUR-VI-VO. The Nashoba Products Co., Inc. SN 130,718. Pub. 4-16-63. Filed 10-26-61.

752,219. GOLD-N-MELLO. Gold'n Mello Company. SN 100,595. Pub. 11-29-60. Filed 7-11-60.

Class 46 — Foods and Ingredients of Foods

752,220. CHEE.TOS. The Frito Company. SN 107,432. Pub. 6-20-61. Filed 10-31-60.

752,221. DIAMOND AND PENNANT DESIGN. Booth Fisheries Corporation, d.b.a. Booth Fisheries Canadian Co., Ltd. SN 114,674. Pub. 4-16-63. Filed 3-1-61.

752,222. BONNIE BAKER. Piggly Wiggly Operators' Warehouse Inc. SN 132,939. Pub. 4-16-63. Filed 11-28-61.

752,223. WOODY'S. Walter Lantz Productions, Inc. SN 135,006. Pub. 4-16-63. Filed 1-2-62.

752,224. WOODY WOODPECKER'S. Walter Lantz Productions, Inc. SN 135,007. Pub. 4-16-63. Filed 1-2-62.

752,225. PR BRAND AND DESIGN. Peter Reeves Markets, Inc. SN 135,910. Pub. 4-16-63. Filed 1-16-62.

752,226. PUP-VITA. National Vitamin Products Company. SN 140,165. Pub. 4-16-63. Filed 3-19-62.

752,227. DIAMOND GM. Raymond Myruski. SN 142,649. Pub. 4-16-63. Filed 4-19-62.

752,228. FRISCO. Merrill Farms. SN 147,384. Pub. 3-5-63. Filed 6-21-62.

752,229. KIRKPATRICK'S. Allen Kirkpatrick & Co., Inc. SN 152,139. Pub. 4-16-63. Filed 8-29-62.

752,230. LOR-CAL. Chocolate Products Company. SN 152,375. Pub. 4-16-63. Filed 9-4-62.

752,231. 600. Universal Foods Corporation. SN 152,848. Pub. 4-16-63. Filed 9-10-62.

752,232. VANASYN. F. Ritter & Co. SN 153,217. Pub. 4-16-63. Filed 9-14-62.

752,233. STARBURST. The Robb-Ross Company. SN 153,218. Pub. 4-16-63. Filed 9-14-62.

752,234. DYNAMITE. Jaw Teasers Inc. SN 153,486. Pub. 4-16-63. Filed 9-19-62.

752,235. TOTEM. Kakawatees, Ltd. SN 153,487. Pub. 4-16-63. Filed 9-19-62.

Class 49 — Distilled Alcoholic Liquors

752,236. KAHLUA. Jules Berman & Associates, Inc. SN 135,749. Pub. 4-16-63. Filed 1-15-62.

752,237. KAHLUA. Jules Berman & Associates, Inc. SN 135,750. Pub. 4-16-63. Filed 1-15-62.

752,238. AZTEC. Jules Berman & Associates, Inc. SN 138,935. Pub. 4-16-63. Filed 3-2-62.

752,239. BLACK LADY. Hanns Georg Seinemeier, d.b.a. H. G. Seinemeier & Co. SN 146,669. Pub. 4-16-63. Filed 6-11-62.

752,240. DOUGHERTY'S. J. A. Dougherty's Sons, Inc., Distillers. SN 150,234. Pub. 4-16-63. Filed 8-1-62.

752,241. PRINCE IVAN. Esbeco Distilling Corporation. SN 152,779. Pub. 4-16-63. Filed 9-10-62.

752,242. CONQUISTADOR. Schenley Import Corporation, d.b.a. Compania Ron Carioca. SN 153,022. Pub. 4-16-63. Filed 9-12-62.

Class 50 — Merchandise Not Otherwise Classified

752,243. LITHOKOTE. Polychrome Corporation. SN 131,152. Pub. 4-16-63. Filed 11-1-61.

752,244. PARSFERN. Parafern, Inc. SN 136,806. Pub. 4-16-63. Filed 1-29-62.

752,245. PETOS-KIT. Arlie S. Kline, d.b.a. The Village Craft Shop. SN 144,505. Pub. 4-16-63. Filed 5-14-62.

752,246. 3M. Minnesota Mining and Manufacturing Company. SN 146,918. Pub. 4-16-63. Filed 6-14-62.

Class 51 — Cosmetics and Toilet Preparations

752,247. LONG-GLO. Valmor Products Company. SN 82,741. Pub. 1-10-61. Filed 10-5-59.

752,248. LUCKY LADY. Lucky Tiger Manufacturing Company. SN 126,362. Pub. 4-16-63. Filed 8-21-61.

752,249. DR. SCHUPP AND DESIGN. Dr. Schupp K.G. SN 143,515. Pub. 4-16-63. Filed 5-1-62.

752,250. NORIDENT. Norex Laboratories, Inc. SN 144,522. Pub. 4-16-63. Filed 5-14-62.

752,251. NOR-I-DENT. Norex Laboratories, Inc. SN 144,523. Pub. 4-16-63. Filed 5-14-62.

752,252. FREEFORM. Turner Hall Corporation. SN 145,980. Pub. 4-16-63. Filed 6-1-62.

752,253. SUN 'N FUN. Lanvin-Parfums, Inc. SN 146,731. Pub. 4-16-63. Filed 6-12-62.

752,254. DENTILLIUM. Xttrium Laboratories, Inc., d.b.a. Blue Ridge Vitamin Co. SN 147,983. Pub. 2-26-63. Filed 6-28-62.

752,255. CYMO. Harry Benet, d.b.a. Dara Products. SN 149,038. Pub. 4-16-63. Filed 7-16-62.

752,256. FINALE. North American Philips Company, Inc. SN 151,428. Pub. 4-16-63. Filed 8-17-62.

Class 52 — Detergents and Soaps

752,257. TRIDANE. Witco Chemical Company, Inc. SN 131,443. Pub. 3-5-63. Filed 11-6-61.

752,258. NU-LUSTRE AUTOMAGIC SHAMPOO AND DESIGN. Samuel L. Eplett, d.b.a. Mid-West Chemical Company. SN 139,058. Pub. 10-16-62. Filed 3-5-62.

752,259. MAC D. Serval Products Co., Inc. SN 148,756. Pub. 4-16-63. Filed 7-10-62.

752,260. POWER-GENT AND DESIGN. Kenney-Cripps, Incorporated, assignee of Kenney-Cripps. SN 152,705. Pub. 4-16-63. Filed 9-7-62.

752,261. AVIVA. Gabe B. Weil. SN 153,353. Pub. 4-16-63. Filed 9-17-62.

752,262. VIVID. Gabe B. Weil. SN 153,354. Pub. 4-16-63. Filed 9-17-62.

752,263. NCR AND DESIGN. The National Cash Register Company. SN 153,587. Pub. 4-16-63. Filed 9-20-62.

Class 101 — Advertising and Business

752,265. SPEC-DATA. The Producers' Council, Inc. SN 33,837. Pub. 4-16-63. Filed 7-16-57.

752,266. SALES-QUERIES. Stanley Publishing Company. SN 100,650. Pub. 4-16-63. Filed 7-11-60.

752,267. MACDONALD PLAID. E. F. MacDonald Stamp Company. SN 137,539. Pub. 4-16-63. Filed 2-8-62.

Class 102 — Insurance and Financial

752,268. SPEEDY CASH AND DESIGN. Gulfco Investment Group, Incorporated. SN 143,373. Pub. 4-16-63. Filed 4-30-62.

Class 103 — Construction and Repair

752,269. WE STOP LEAKS NO STOP NO PAY. James E. Anderson, d.b.a. Southern Roofing Co. SN 141,240. Pub. 4-16-63. Filed 4-2-62.

Class 105 — Transportation and Storage

752,270. ECONOMOVER. Neptune World-Wide Moving, Inc. SN 128,198. Pub. 4-16-63. Filed 9-19-61.

Class 107 — Education and Entertainment

752,271. AUTO-TRAP-SHOOT. Auto-Trap-Shoot, Inc. SN 127,178. Pub. 4-16-63. Filed 9-5-61.

Service Marks

Class 100 — Miscellaneous

752,264. PRESCRIPTION-MIX. Farmers Union Central Exchange, Incorporated. SN 112,348. Pub. 4-16-63. Filed 11-17-60.

Collective Membership Mark

Class 200

752,272. M.A.I. American Institute of Real Estate Appraisers of the National Association of Real Estate Boards. SN 56,439. Pub. 4-16-63. Filed 8-1-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 12 — Construction Materials

752,273. Narad, Inc., Plymouth, Mich. SN 141,742. Filed P.R. 4–6–62; Am. S.R. 5–2–63.

DOR-KOR

For Cardboard Assemblies Expandable To Form Cellular Cores for Panels.
First use Sept. 21, 1961.

Class 17 — Tobacco Products

752,274. F. J. Burrus & Cie, Boncourt (near Berne), Switzerland. SN 150,157. Filed P.R. 7–31–62; Am. S.R. 3–29–63.



Owner of Swiss Reg. No. 184,670, dated Feb. 17, 1961.
For Tobacco Products, Cigars, and Cigarettes.

Class 19 — Vehicles

752,275. Robert J. Thomas, Dearborn, Mich. SN 129,060. Filed P.R. 10–2–61; Am. S.R. 5–1–63.

KAR-TRA

For Collapsible and Disposable Shelves for Holding Food and Drink Containers on the Interior of an Automobile.
First use July 1, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

752,276. Cris Lab, Inc., Pratt, Kans. SN 126,745. Filed P.R. 8–28–61; Am. S.R. 4–29–63.

IN-LINE

For Electrical Induction Heaters for Installation in a Fluid Flow Line.
First use Apr. 26, 1961.

TRADEMARK REGISTRATIONS RENEWED

160,225. KOPPERS COKE. Cl. 1. 10–17–22.
164,079. TOWN & COUNTRY. Cl. 39. 2–13–23.
164,247. KUNNIN KID. Cl. 39. 2–13–23.
164,464. CAMIA. Cl. 51. 2–20–23.
164,827. COTTONTOTS. Cl. 39. 2–27–23.
164,828. JACK IN THE BOX. Cl. 39. 2–27–23.
165,697. SMOKADOR. Cl. 8. 3–20–23.
165,819. "THE TASTE TELLS." Cl. 46. 3–20–23.
166,013. SOCONY. Cl. 16. 3–27–23.
166,248. SEA-BIRD. Cl. 46. 3–27–23.
166,810. CRAFTSMAN. Cl. 23. 4–17–23.
167,397. CROWN DESIGN. Cl. 46. 5–1–23.
167,485. WILGLEN. Cl. 42. 5–1–23.
167,733. CHAMPION. Cl. 12. 5–8–23.
167,840. PAL-WELD. Cl. 34. 5–8–23.
168,246. BOSSOCKS. Cl. 39. 5–15–23.
168,403. WOOL "O" AND DESIGN. Cl. 42. 5–22–23.
168,689. GOLDEN GLOW AND DESIGN. Cl. 1. 5–29–23.
168,882. WEMCO. Cl. 15. 5–29–23.
169,799. PROTECTOL. Cl. 6. 7–3–23.
169,838. RUBINOLE. Cl. 6. 7–3–23.
170,027. BLUEBIRD PEARLS FOR HAPPINESS AND DESIGN. Cl. 28. 7–10–23.
171,202. ROGER WILLIAMS. Cl. 39. 7–31–23.
172,756. PEP. Cl. 46. 9–11–23.
174,227. MOVAR. Cl. 16. 10–9–23.
174,501. OCB. Cl. 8. 10–16–23.
174,944. ANDREWS LIVER SALT. Cl. 18. 10–30–23.
175,089. CELORON. Cl. 1. 10–30–23.
396,151. JAUNTY-SPUN. Cl. 42. 6–30–42.
400,094. VERSE REFERENCE JEWEL. Cl. 38. 2–16–43.
400,396. DRYBAK. Cl. 39. 3–9–43.
400,868. ZERO. Cl. 52. 4–6–43.
400,932. COL-PLY. Cl. 12. 4–13–43.
401,242. BELL'S AND DESIGN. Cl. 49. 5–4–43.
401,267. BUMBLEBEE AND DESIGN. Cl. 21. 5–4–43.
401,446. SCINTILLA. Cl. 28. 5–18–43.
401,510. LINGUETS. Cl. 18. 5–25–43.
401,530. CURTIS ENVELABEL. Cl. 37. 5–25–43.
401,534. BALCORD. Cl. 29. 5–25–43.
401,535. BALTWINE. Cl. 29. 5–25–43.
401,536. MILROVE. Cl. 29. 5–25–43.
401,543. SIL-X. Cl. 1. 5–25–43.
401,601. TIMEFAX. Cl. 21. 5–26–43.
401,606. BAKING MAGIC. Cl. 46. 5–25–43.
401,617. DIRILYTE. Cl. 23. 5–25–43.
401,682. NATIONAL EN-AR-CO C1 AND DESIGN. Cl. 15. 6–1–43.
401,687. PONTIAC. Cl. 16. 6–1–43.
401,752. CHANGE-A-DAY. Cl. 46. 6–8–43.
401,794. AIRCO. Cl. 34. 6–8–43.
401,922. THIMBLETE. Cl. 13. 6–15–43.
402,120. THE V. D. ANDERSON CO. Cl. 13. 6–29–43.
402,264. DRI-TRI. Cl. 6. 7–13–43.
402,321. BLIZZARD SIDES. Cl. 1. 7–13–43.
402,591. DIRILYTE. Cl. 13. 8–3–43.
402,826. BARRETT. Cl. 6. 8–17–43.
403,022. ENERGETIC. Cl. 46. 8–31–43.
403,262. POLECTRON. Cl. 1. 9–14–43.
403,284. "B-B BATS." Cl. 46. 9–14–43.
403,285. SULPHON. Cl. 6. 9–14–43.
403,450. ALCUT. Cl. 15. 9–28–43.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

280,445. MARTEXIN. Cl. 42. 2–17–31.
587,247. PENTAX. Cl. 26. 3–23–54.
633,606. PERRIN CONTUR AND DESIGN. Cl. 26. 8–28–56.
686,088. CAMELIA AND DESIGN. Cl. 44. 9–29–59.
687,804. VALIANT. Cl. 17. 11–10–59.
715,156. CAMELIA. Cl. 44. 5–9–61.
722,678. MONSIEUR X. Cl. 51. 10–10–61.
730,615. FALCON. Cl. 2. 5–1–62.
738,655. SUBURBAN VENTURA. Cl. 34. 10–2–62.

Section 8

88,622. "POCAHONTAS" AND DESIGN. Cl. 47. 10–8–12.
343,254. GOLD SEAL AND DESIGN. Cl. 25. 2–16–37.
343,614. SPORT CHAMP. Cl. 22. 2–23–37.
344,062. GOLD SEAL AND DESIGN. Cl. 23. 3–9–37.
344,427. HOCOLOID. Cl. 52. 3–23–37.
385,748. PERI AND DESIGN. Cl. 16. 3–18–41.

The following registrations issued May 14, 1957

645,261. MEDALIST. Cl. 1.
645,268. STAK-SURE. Cl. 2.
645,270. GEOVISION. Cl. 2.
645,276. ATTIRE. Cl. 4.
645,282. POLYSOL. Cl. 6.
645,284. RODEO. Cl. 6.
645,285. KYLO. Cl. 6.
645,290. CARAC. Cl. 6.
645,291. LM 1849 AND DESIGN. Cl. 6.
645,296. WEEDONE BRUSH KILLER L–329. Cl. 6.
645,297. VAYPITE. Cl. 6.
645,306. AUTO SMOKE FUN AND DESIGN. Cl. 9.
645,308. VINYLCRETE. Cl. 12.
645,311. LEVERLITE. Cl. 12.
645,313. DESIGN OF GROTESQUE KING. Cl. 12.
645,314. H. Cl. 12.
645,316. TRIPLE PLUS. Cl. 12.
645,318. TRI-LOK AND DESIGN. Cl. 12.
645,320. SOLREX. Cl. 15.
645,322. GOLD SEAL. Cl. 15.
645,324. PEBLUM. Cl. 15.
645,330. EVT–50. Cl. 16.
645,335. GILCO. Cl. 16.
645,337. HIGH TONE. Cl. 17.
645,343. WOUNDEX. Cl. 18.
645,349. DECOWALL. Cl. 19.
645,350. L CART AND DESIGN. Cl. 19.
645,351. FRIGIFRATER. Cl. 19.
645,352. SKIPPER AND DESIGN. Cl. 19.
645,355. ESTATE. Cl. 20.
645,356. MISCELLANEOUS DESIGN. Cl. 21.
645,358. FLEXI-GRIP. Cl. 22.
645,360. SPORTEX TURBO AND DESIGN. Cl. 22.
645,362. Z-MAN. Cl. 22.
645,364. INTERNATIONAL. Cl. 23.
645,365. FLINTWOOD. Cl. 23.
645,370. RODENSTOCK. Cl. 26.
645,372. PENDRAGON. Cl. 26.
645,373. HAGEMAN SPEED-A-LINER AND DESIGN. Cl. 26.
645,374. CALCULINE. Cl. 26.
645,376. HOLIDAY. Cl. 27.
645,377. STARLIGHT. Cl. 27.
645,380. MUSTARD SEED. Cl. 28.
645,381. ROCK-N-ROLL. Cl. 28.
645,383. CARMEN. Cl. 28.
645,385. FASTRAP. Cl. 28.
645,388. FIDELIS. Cl. 28.
645,390. EDWARD VII. Cl. 28.
645,403. GRAND MANNER. Cl. 28.
645,413. NATURALIZER. Cl. 32.
645,414. POSTURFLEX. Cl. 32.
645,422. THORO-FLEX. Cl. 35.
645,423. KUBANEY AND DESIGN. Cl. 36.
645,424. DULCY HARP. Cl. 36.
645,425. GENNETT. Cl. 36.
645,431. WEATHER-TEX. Cl. 38.
645,434. DREAM BY PALMYRA. Cl. 39.
645,438. MILLER AND DESIGN. Cl. 39.
645,445. STOR MITT AND DESIGN. Cl. 39.
645,446. KNITWEAR AND DESIGN. Cl. 39.
645,447. DEB-U-KNIT. Cl. 39.
645,451. CHILD-FLEX. Cl. 39.
645,452. ELASTI-FLEX. Cl. 39.
645,454. DESIGN OF NAIL IN SWATCH OF CLOTH. Cl. 39.
645,459. CAVALIER. Cl. 39.
645,462. GLEN-JOAN. Cl. 39.
645,469. MOHAWK MAIDEN LANE. Cl. 42.
645,475. SILK CLOUD. Cl. 42.
645,478. DVOLOPE. Cl. 44.
645,479. IDEAL. Cl. 44.
645,481. BUO HY PERSONIC AND DESIGN. Cl. 44.
645,486. OLD MACDONALD MAC AND DESIGN. Cl. 46.
645,488. RAY EWING ANTIOX. Cl. 46.
645,490. VOTKA. Cl. 46.
645,491. FRANKLIN FF. Cl. 46.
645,494. WOODARD'S CRESTLINE. Cl. 46.
645,496. NIKE. Cl. 46.
645,497. GUIDED MISSILES. Cl. 46.
645,505. AKWA-PLAK. Cl. 50.
645,506. REPLICAP. Cl. 50.
645,509. PUDDY. Cl. 50.
645,514. NETRONE. Cl. 51.
645,530. CFS AND DESIGN. Cl. 52.
645,544. CRAIG-CRAFT. Cl. 19.
645,548. VISUAL-PAK. Cl. 38.
645,552. GUASTI. Cl. 46.
645,553. GORKI. Cl. 49.
645,559. KLEEN-ETCH. Cl. 52.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

168,137. SEALOL. Cl. 6. 5–15–23. Standard Oil Company. Humble Oil & Refining Company, Houston, Tex. Amended to appear:

SEALOL

216,574. REPRESENTATION OF A GIRL. Cl. 46. 8–17–26. The Creamette Company, Minneapolis, Minn. Amended to appear:



301,888. ZERO-LITE. Cl. 12. 3–21–33. Johns-Manville Corporation, New York, N.Y. Amended to appear:

ZERO-LITE

645,870. 5 DAY AND DESIGN. Cl. 51. 5–21–57. Associated Products, Inc., New York, N.Y. Amended to appear:



655,053. LILLIAN RUSSELL. Cl. 39. 11–26–57. Lillian Russell Originals, Inc. Lillian Russell, Inc., Mobile, Ala. Amended: In the statement, column 2, lines 5 and 6 are deleted, and the drawing is amended to appear:

Lillian Russell

740,709. FREOMIST. Cl. 45. 11–13–62. National Dairy Products Corporation, New York, N.Y. Amended: In the statement, column 2, lines 4 and 5 are deleted, and the drawing is amended to appear:

FREOMIST

747,494. PHARMATINIC. Cl. 18. 4–2–63. Pharmachem Specialties, Inc., Bethlehem, Pa. Corrected: In the statement, column 2, line 2, after "injectable" *iron* should be inserted.

747,758. MOISTURE WAVE. Cl. 51. 4–2–63. Sales Affiliates, Inc., New York, N.Y. Corrected: In the heading, "1962" should be deleted and *1961* should be inserted.

748,314. MYERS AND DESIGN. Cl. 13. 4–23–63. The F. E. Myers & Bro. Co., Ashland, Ohio. Corrected: In the statement, column 2, line 10, "164,244" should be deleted and *164,224* should be inserted.

749,016. CAR GO CARTS AND DESIGN. Cl. 19. 5–7–63. Nutting Truck and Caster Company, Faribault, Minn. Corrected: In the statement, column 2, line 2, "used" should be deleted and *use* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(e), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

102,202. SAXON AND DESIGN. Cl. 18. The Strong & Cobb Company. 1–26–15. New Cert. Sec. 7(c) to Pennex Products Company, Verona, Pa.

510,266. SAXON. Cl. 6. Royal Pharmacal Corporation, d.b.a. Royal Mfg. Co. of Duquesne. 5–31–49. New Cert. Sec. 7(c) to Pennex Products Company, Verona, Pa.

682,793. AKRINOL. Cl. 18. Schering Corporation. 8–4–59. New Cert. Sec. 7(c) to Schering Corporation, Bloomfield, N.J.

686,529. GIBB. Cl. 10. United-Heckathorn. 10–13–59. New Cert. Sec. 7(c) to Abbott Laboratories, North Chicago, Ill.

730,149. BEAUTEX. Cl. 39. Jack N. Price, assignee of Jane Hart, d.b.a. Perry Distributing Company. 4–17–62. New Cert. Sec. 7(c) to The Beautex Corporation, Saginaw, Mich.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 2—Receptacles

166,186. Mar. 27, 1923. Myers Manufacturing Company, Camden, N.J. Pub. by Ellisco Incorporated, Philadelphia, Pa.

LABELSTIK

For Tin Boxes and Containers.

400,615. Mar. 23, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Vegetable Bins.

400,908. Apr. 6, 1943. Edwin F. Nickol, Inc., Versailles, Ohio. Pub. by registrant.



For Burial Casket Containers.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

400,230. Feb. 23, 1943. Globe Novelty House, New York, N.Y. Pub. by Globe Novelty House, Inc., New York, N.Y.

London

For Wallets and Billfolds of Leather, Key Cases of Leather, and Men's Travel Kits of Leather.

Class 4—Abrasives and Polishing Materials

266,622. Jan. 28, 1930. The American Products Company, Cincinnati, Ohio. Pub. by B. T. Babbitt, Inc., New York, N.Y.

BLITZ

For Cleanser in Powder Form for General Household Purposes.

Class 6—Chemicals and Chemical Compositions

164,685. Feb. 27, 1923. The Creolin Co., Rahway, N.J. Pub. by Plough, Inc., Memphis, Tenn.

V-C-P

For Disinfectant for Veterinary Uses.

442,544. Apr. 26, 1949. Raynard J. Marx, d.b.a. Marx Chemical Supply Company, Chicago, Ill. Pub. by registrant.

CENLAB

For Embalming Preparations—Namely, Arterial Cleaning Fluid, Deodorant Spray, Arterial Fluid, Modifier Fluid, Cavity Fluid, and Disinfecting Powder.

Class 7—Cordage

401,118. Apr. 27, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Metal Drive Cord—Namely, a Metal Multi-Strand Flexible Driving Element; Dial Drive Cord—Namely, a Waxed, or Otherwise Treated, Cord for Effecting a High Friction Drive With a Pulley or Drum Affixed to an Instrument Dial; and Control Drive Cable—Namely, a Flexible Motion Transmitting Means Used for Control Purposes.

Class 16—Protective and Decorative Coatings

401,033. Apr. 20, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Lacquers, Stains, Paint Thinners, Fillers Used for Preparing Surfaces To Be Painted, Ready-Mixed Paints, Prepared Shellacs, Varnishes, Cabinet Polish, Burn-in-Wax and Refrigerator Polish.

Class 17—Tobacco Products

238,627. Feb. 14, 1928. Sanchez & Haya Company, Tampa, Fla. Pub. by Gradias, Annis & Co., Inc., Tampa, Fla.

GOLD LABEL

For Cigars.

Class 18—Medicines and Pharmaceutical Preparations

279,072. Jan. 6, 1931. Ernst Silten, Berlin, Germany. Pub. by Silten Limited, Hatfield, England.

SILBE

For Medicinal Preparations for Asthma, Hay Fever, Bronchitis, Tuberculosis, and Other Diseases of the Respiratory Organs.

280,242. Feb. 10, 1931. Ernst Silten, Berlin, Germany. Pub. by Silten Limited, Hatfield, England.

GLYCIRENAN

For Liquid for Asthma, Bronchitis, Laryngitis, and Diseases of Respiratory Organs.

299,616. Dec. 13, 1932. Dr. Ernst Silten, Berlin, Germany. Pub. by Silten Limited, Hatfield, England.

JODIRENAN

For Inhalant for Asthma and Bronchial Catarrh.

Class 19—Vehicles

169,254. June 12, 1923. Westfield Manufacturing Company, Westfield, Mass. Pub. by The Columbia Manufacturing Co., Inc., Westfield, Mass.

Rambler

For Bicycles.

Class 21—Electrical Apparatus, Machines, and Supplies

400,943. Apr. 13, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Battery Parts and Supplies—Namely, Straps, Connectors, Terminals, Vent Caps, Jars, Covers, Wood Cases, and Sealing Compounds; Radio Receiving Sets; Radio-Phonograph Combinations; Radio Speakers; Radio Parts and Supplies—Namely, Radio Power Supply Devices, Vacuum Tubes, Power Transformers, Fixed Condensers, Fixed Resistors, Variable Resistors, Radio Frequency Coils, Switches, Push-Pull Tranaformers, Speaker Field Coils, Filter Condensers, Variable Condenser Parts, Loud Speaker Cones, Fixed Radio Frequency Transformers, Radio Frequency Chokes, Pilot Lamps, Oscillators, Knobs, Tube Shields, Variable Condensers, Tuning Scales, Control Grid Clips, Rubber Mounting Washers, Tube Sockets, Neutralizing Condensers, Shielding Lids, Speaker Sockets, Binding Posts and Panels, Speaker Cables, Radio Chassis, Audio Frequency Amplifiers, Radio Frequency Amplifiers, Interference Filters, Aerial Kits, Extension Speakers, Electrolytic Condensers, Terminal Strips, Volume Controls, Hum Controls, Tone Controls, Headphones, Fuses, Electrical Connector Plugs, Wave Traps, Lighting Bulbs, Wire Shielding, Band Switches, Remote Control Devices, Dry Batteries, Signal Generators, Automobile Radios, Household Power Line Cord, Tuning Control and Cable, Automobile Dynamotors, Automobile Radio Controls, Headphone Kits, High Fidelity Demonstrators, Microphones, Aerial Masts, Amplifier and Microphone Kits, Aerial Window Lead-In Straps, Under Car Aerials, Wired Interphone Systems, Automobile Suppressor Chokes, Automatic Tuning Devices, Grid Bias Cells, Automobile Aerial Adaptors, Wireless Record Players, Automobile Extension Speakers, Radio Tube Removers, Ceramic Electric Insulators, and Ceramic Electric Wall Outlets.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

150,700. Jan. 10, 1922. Acme Fishing Tool Company, Parkersburg, W. Va. Pub. by registrant.

"ACME" FISHING TOOL CO. PARKERSBURG W.VA.

For Oil Well Drilling and Fishing Tools.

Class 26—Measuring and Scientific Appliances

401,240. May 4, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Voltmeters, Pocket Voltage Testers, Condenser Testers, Speaker Testers, Tube Testers, Magnifying Mirrors, Oscilloscopes, Thermometers, Thermostatic Controls for Mechanical Refrigeration Apparatus, Battery Testers, Needle Pressure Pocket Testers, and Wattmeters.

443,176. Aug. 2, 1949. Universal Drafting Machine Company, assignor, by mesne assignments, to Universal Drafting Machines Corporation, Cleveland, Ohio. Pub. by Universal Drafting Machine Corporation, Bedford Heights, Ohio.

BOARDMASTER

For Drafting Machines of the Parallel Motion Arm Type.

Class 27—Horological Instruments

400,738. Mar. 30, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Clocks, Radio Station Selecting Clocks and Automatic Starting Timers.

401,424. May 18, 1943. Waltham Watch Company, Waltham, Mass. Pub. by Waltham Watch Company, Chicago, Ill.

WALTHAM PREMIER

For Watches, Clocks, Chronometers, Watch Cases, Clock Cases, and Parts of Each of the Foregoing.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

402,412. July 20, 1943. United States Rubber Company, New York, N.Y. Pub. by registrant.

MULTI-FLEX

For Duct Hose Comprising a Fabric Base Treated With a Sealing Material Used by Aircraft Engineers as Boots To Protect Reciprocating Rods From Dirt and Grit, and Seals for Control Rods as Chutes for Ejected Machine Gun Shells, Etc.

Class 36—Musical Instruments and Supplies

400,517. Mar. 16, 1943. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Phonographs, Phonograph Turntables, Phonograph Motor Board Assemblies, Phonograph Tone Arms, Phonograph Needles, Phonograph Recording Blanks, and Phonograph Recording Apparatus.

Class 37—Paper and Stationery

52,417. May 8, 1906. Eberhard Faber, New York, N.Y. Pub. by Eberhard Faber Inc., Wilkes-Barre, Pa.



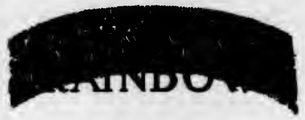
For Rubber Erasers.

168,855. May 29, 1923. Eberhard Faber Pencil Company, Brooklyn, N.Y. Pub. by Eberhard Faber Inc., Wilkes-Barre, Pa.



For Pencils.

202,106. Aug. 18, 1925. Eberhard Faber Pencil Company, Brooklyn, N.Y. Pub. by Eberhard Faber Inc., Wilkes-Barre, Pa.



For Colored Pencils.

234,037. Oct. 18, 1927. Eberhard Faber Pencil Company, Brooklyn, N.Y. Pub. by Eberhard Faber Inc., Wilkes-Barre, Pa.

STAR ★

For Lead Pencils.

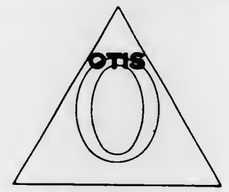
434,169. Nov. 11, 1947. Eberhard Faber Pencil Company, Brooklyn, N.Y. Pub. by Eberhard Faber Inc., Wilkes-Barre, Pa.

E. FABER

For Lead Pencils, Colored Pencils, and Copying Pencils, Penholders, Rubber Bands, Rubber Erasers, Mechanical Pencils and Parts Thereof, Leads, Pencil Point Protectors, Combined Pencil and Compass, and Fountain Pens and Parts Thereof.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

394,737. Apr. 28, 1942. The Falls Company, Norwich, Conn. Pub. by Glen Raven Cotton Mills, Inc., Glen Raven, N.C.



For Cotton Awning Fabrics.

400,728. Mar. 30, 1943. I. B. Kleinert Rubber Company, New York, N.Y. Pub. by registrant.

AIRLITE

For Very Thin Treated Fabric Sheeting in the Piece To Render It Waterproof for Use in the Manufacture of Articles Such as Dress Shields, Crib Sheets, Baby Pants, Bibs, Protective Panels for Sanitary Garments, and Lining for Tourist Bags.

Class 45—Soft Drinks and Carbonated Waters

407,493. June 6, 1944. The Whipple Company, Natick, Mass. Pub. by registrant.

Grandmother's

For Sirups for Making Soft Drinks.

Class 46—Foods and Ingredients of Foods

184,655. May 27, 1924. Harry E. Mosher, d.b.a. Memphis Potato Chip Company, Memphis, Tenn. Pub. by Golden Flake, Inc., Birmingham, Ala.



For Potato Chips.

413,240. Apr. 17, 1945. The Whipple Company, Natick, Mass. Pub. by registrant.

Grandmother's

For Preserved Fruits, Marshmallow Topping, Nuts in Sirup, Fudge Sauce and Butterscotch Sauce for Soda Fountain Use; Marmalade; Jellies; Pie Fillings (Other Than Mincemeat); Mincemeat; Corn Starch; Milk Powder; Nuts; Cocoa; Cleaned Currants; Relish or Piccalilli, Watermelon Pickle; and Food Flavoring Extracts.

413,325. Apr. 17, 1945. The Whipple Company, Natick, Mass. Pub. by registrant.

Grandmother's

For Fruit Preserves—Namely, Jams.

Class 51—Cosmetics and Toilet Preparations

170,450. July 17, 1923. Polak's Frutal Works, Amersfoort, Netherlands. Pub. by Polak's Frutal Works, Inc., Middletown, N.Y.

"FRUTAL"

For Natural and Synthetic Essential Oils and Materials Suitable for the Production of Perfumes.

401,327. May 11, 1943. Prince Matchabelli Inc., New York, N.Y. Pub. by registrant.

SPARKLING BURGUNDY

For Bubble Bath Preparation.

INDEX OF REGISTRANTS

JULY 2, 1963

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Abbey, Arthur, d.b.a. Abbey Pen Co., Chicago, Ill. 752,128, pub. 4–16–63. Cl. 37.
Abbott Laboratories: *See*—
United-Heckathorn.
Accumulatoren-Fabrik Aktiengesellschaft: *See*—
Varta Aktiengesellschaft.
Ace Radio Control, Inc., d.b.a. Grid Leaks, Higginsville, Mo. 752,146, pub. 4–16–63. Cl. 38.
Acme Fishing Tool Co., by Acme Fishing Tool Co., Parkersburg, W. Va. 150,700, 12(c) pub. 7–2–63. Cl. 23.
Acorn Photo Service: *See*—
Mail Photo Service, Inc.
Actien-Gesellschaft fur Anilin-Fabrikation, Berlin, Germany, to General Aniline & Film Corp., New York, N.Y. 169,799, ren. 7–2–63. Cl. 6.
Ad-Kap, Downers Grove, Ill. 752,137, pub. 4–16–63. Cl. 38.
Air Reduction Co., Inc.: *See*—
Air Reduction Sales Co.
Wilson Welder and Metals Co., Inc.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 401,794, ren. 7–2–63. Cl. 34.
Ajoye, Inc., Orlando, Fla. 751,953, pub. 4–16–63. Cl. 18.
Aktiebolaget Installationsmateriel, Vimmerby, Sweden. 751,992, pub. 4–16–63. Cl. 21.
Allied Chemical Corp.: *See*—
Allied Chemical & Dye Corp.
Allied Chemical & Dye Corp., to Allied Chemical Corp., New York, N.Y. 402,826, ren. 7–2–63. Cl. 6.
Allied Radio Corp., Chicago, Ill. 751,989–90, pub. 4–16–63. Classes 21 and 36.
Allied Stores Corp., New York, N.Y. 751,947, pub. 4–16–63. Cl. 18.
Al's Goldfish Lure Co.: *See*—
Stuart, Herbert A.
All-State Welding Alloys Co., Inc., White Plains, N.Y. 752,108, pub. 4–16–63. Cl. 34.
Amercoat Corp., South Gate, Calif. 751,905, pub. 4–16–63. Cl. 12.
American Art Alloys, Inc., to Dirilyte Co. of America, Inc., Kokomo, Ind. 401,617, ren. 7–2–63. Cl. 23.
American Art Alloys, Inc., to Dirilyte Co. of America, Inc., Kokomo, Ind. 402,591, ren. 7–2–63. Cl. 13.
American Chemical Paint Co., Ambler, Pa. 645,296, canc. Cl. 6.
American Cyanamid Co.: *See*—
Davis & Geck, Inc.
American Cyanamid Co., Wayne, N.J. 751,895, pub. 4–16–63. Cl. 6.
American Cyanamid Co., Wayne, N.J. 751,943, pub. 2–12–63. Cl. 18.
American Cyanamid Co., Wayne, N.J. 751,952, pub. 4–16–63. Cl. 18.
American Enterprises, Inc., San Mateo, Calif. 752,011, pub. 4–16–63. Cl. 22.
American Greetings Corp., Cleveland, Ohio. 752,154, pub. 4–16–63. Cl. 38.
American Home Products Corp., New York, N.Y. 752,084, pub. 4–16–63. Cl. 29.
American Institute of Real Estate Appraisers of the National Association of Real Estate Boards, Chicago, Ill. 752,272, pub. 4–16–63. Cl. 200.
American Mercantile Co.: *See*—
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American Pad & Paper Co., Holyoke, Mass. 752,130, pub. 4–16–63. Cl. 37.
American Plant Equipment Co., Elizabeth, N.J. 752,090, pub. 4–16–63. Cl. 31.
American Plastic Products Co., Detroit, Mich. 752,097, pub. 4–16–63. Cl. 32.
American Products Co., The, Cincinnati, Ohio, by B. T. Babbitt, Inc., New York, N.Y. 266,622, 12(c) pub. 7–2–63. Cl. 4.
American Seating Co., Grand Rapids, Mich. 752,099, pub. 4–16–63. Cl. 32.
Americanmade Plastics, Inc., Ringtown, Pa., from Ideal Toy Corp., Hollis, N.Y. 752,006, pub. 3–5–63. Cl. 22.
Anderson, James E., d.b.a. Southern Roofing Co., Nashville, Tenn. 752,269, pub. 4–16–63. Cl. 103.
Anderson, V. D., Co., The, to International Basic Economy Corp., Cleveland, Ohio. 402,120, ren. 7–2–63. Cl. 13.
Andrew Fisher Cycle Co., Inc., New York, N.Y. 751,961, pub. 4–16–63. Cl. 19.
Anemostat Corp. of America, Scranton, Pa. 752,113, pub. 4–16–63. Cl. 34.
Antaya Brothers, Inc., Attleboro, Mass. 752,057, pub. 4–16–63. Cl. 28.
Appalachian Hardwood Manufacturers, Inc., Cincinnati, Ohio. 752,131, pub. 4–16–63. Cl. 38.
Aquascutum, Ltd., London, England. 752,182, pub. 4–16–63. Cl. 39.
Armour Pharmaceutical Co., Chicago, Ill. 752,158, pub. 4–16–63. Cl. 38.
Armstrong Cork Co., Lancaster, Pa. 645,355, canc. Cl. 20.
Ashland Oil & Refining Co.: *See*—
National Refining Co., The.
Associated Products, Inc., New York, N.Y. 645,870. Am. 7(d). Cl. 51.
Atlas Supply Co., Newark, N.J. 751,968, pub. 4–16–63. Cl. 19.
Augstein, S., & Co., Inc., College Point, N.Y. 752,181, pub. 4–16–63. Cl. 39.
Automation Engineering Laboratory, Stamford, Conn. 752,012, pub. 4–16–63. Cl. 23.
Auto-Trap-Shoot, Inc., Champaign, Ill. 752,271, pub. 4–16–63. Cl. 107.
Avco Mfg. Corp., Connersville, Ind. 645,356, canc. Cl. 21.
Ayres, Henry F., d.b.a. Fayrport Farm, Shaftsbury, Vt. 752,047, pub. 4–16–63. Cl. 26.
B & B Import-Export Co., Detroit, Mich. 751,998, pub. 4–16–63. Cl. 21.
BGS Shoe Corp., Manchester, N.H. 752,190, pub. 4–16–63. Cl. 39.
B.V.D. Co., Inc., The, Cincinnati, Ohio. 752,176, pub. 2–26–63. Cl. 39.
Babbitt, B. T., Inc.: *See*—
American Products Co., The.
Baby World Co., Inc.: *See*—
Fashioncraft-Excello.
Bacon, Louis E., Alliance, Ohio. 645,509, canc. Cl. 50.
Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. 751,882, pub. 12–18–62. Cl. 6.
Baker Castor Oil Co., The, Bayonne, N.J. 751,866, pub. 4–16–63. Cl. 1.
Baker Castor Oil Co., The, Bayonne, N.J. 751,936, pub. 4–16–63. Cl. 16.
Ballinger, W. A., & Co., to Otis Co., San Francisco, Calif. 401,534–36, ren. 7–2–63. Cl. 29.
Barbizon Corp., The, to The Jaunty Fabric Corp., New York, N.Y. 396,151, ren. 7–2–63. Cl. 42.
Baumert, F. X., & Co. Inc., to The Borden Co., New York, N.Y. 167,397, ren. 7–2–63. Cl. 46.
Beacon Chemical Corp., Philadelphia, Pa., to Texize Chemicals, Inc., Greenville, S.C. 400,868, ren. 7–2–63. Cl. 52.
Beacon Mfg. Co., Swannanoa, N.C. 752,199, pub. 3–6–62. Cl. 42.
Beatrix Jewelry Co., Providence, R.I. 752,076, pub. 4–16–63. Cl. 28.
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Heublein, G. F., & Bro.
Bellamy, D. L.: *See*—
Bellamy, Donald L.
Bellamy, Donald L., d.b.a. D. L. Bellamy, Miami, Fla. 645,490, canc. Cl. 46.
Benet, Harry, d.b.a. Dara Products, Norwood, Ohio. 752,255, pub. 4–16–63. Cl. 51.
Berg Electronics, Inc., New Cumberland, Pa. 752,002, pub. 4–16–63. Cl. 21.
Berman, Bud, Sportswear Inc., New York, N.Y. 752,165, pub. 4–16–63. Cl. 39.
Berman, Jules, & Associates, Inc., Beverly Hills, Calif. 752,236–38, pub. 4–16–63. Cl. 49.
Biddle Co., The, St. Louis, Mo. 751,900, pub. 1–17–61. Cl. 12.
Bird & Son, Inc., East Walpole, Mass. 751,909, pub. 4–16–63. Cl. 12.
Birtcher Corp., The, Los Angeles, Calif. 751,986–87, pub. 4–16–63. Cl. 21.
Black, Sivalls & Bryson, Inc., Kansas City, Mo. 752,020, pub. 4–16–63. Cl. 23.
Black, Sivalls & Bryson, Inc., Kansas City, Mo. 752,022, pub. 4–16–63. Cl. 23.
Blackstone Corp., Jamestown, N.Y. 752,106, pub. 4–16–63. Cl. 34.
Blendall Synthetic Thread Co.: *See*—
Reisman, Lawrence.
Blow-Knox Co.: *See*—
Tri-Lok Co., The.
Blue Ridge Vitamin Co.: *See*—
Xttrium Laboratories, Inc.
Bonney Forge & Tool Works, Allentown, Pa. 751,917, pub. 4–16–63. Cl. 13.
Booth Fisheries Canadian Co., Ltd.: *See*—
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Booth Fisheries Corp., d.b.a. Booth Fisheries Canadian Co., Ltd., Chicago, Ill. 752,221, pub. 4–16–63. Cl. 46.
Borden Co., The: *See*—
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Bossong Hosiery Mills, Inc.: *See*—
Bossong, Joseph C.
Bossong, J. C., & Co.: *See*—
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Bossong, Joseph C., d.b.a. J. C. Bossong & Co., New York, N.Y., to Bossong Hosiery Mills, Inc., Asheboro, N.C. 164,827–28, ren. 7–2–63. Cl. 63.

Bossong, Joseph C., d.b.a. J. C. Bossong & Co., New York, N.Y., to Bossong Hosiery Mills, Inc., Asheboro, N.C. 168,246, ren. 7–2–63. Cl. 39.
Boston Battery Co.: *See*—
Perrine Battery Corp.
Bradley, L. R., d.b.a. The Periseal Co., New York, N.Y. 385,748, canc. Cl. 16.
Breuss, W. F., Inc., West New York, N.Y. 752,210, pub. 4–16–63. Cl. 42.
Bridges, Shirley, New York, N.Y. 752,145, pub. 4–16–63. Cl. 38.
Briggs, Bates & Bacon Co., Attleboro, Mass. 645,383, canc. Cl. 28.
Brilles Mfg., El Segundo, Calif., from Pawlock Tool Co., Coronado, Calif. 752,033, pub. 4–16–63. Cl. 28.
Bri-Son Co., Inc., Los Angeles, Calif. 751,878, pub. 4–16–63. Cl. 3.
British Chemotheutic Products Ltd., Bradford, England. 751,942, pub. 4–16–63. Cl. 18.
Brooks & Perkins, Inc., Detroit, Mich. 752,155, pub. 4–16–63. Cl. 38.
Brown Engineering Co., Inc., Huntsville, Ala. 751,976, pub. 4–16–63. Cl. 21.
Brown & Williamson Tobacco Corp., Louisville, Ky. 687,804, canc. Cl. 17.
Bruner Corp., Milwaukee, Wis. 752,093–4, pub. 4–16–63. Cl. 31.
Bruner Corp., Milwaukee, Wis. 752,096, pub. 4–16–63. Cl. 31.
Brunswick Corp.: *See*—
Drybak Corp., The.
Budd Co., The: *See*—
Diamond State Fibre Co.
Buffalo Marine and Sports Mart, Inc., Buffalo, N.Y. 645,544, canc. Cl. 19.
Bulova Watch Co., Inc., Flushing, N.Y. 752,052, pub. 6–27–61. Cl. 27.
Burlington Industries, Inc., New York, N.Y. 752,191, pub. 4–16–63. Cl. 39.
Burrus, F. J., & Cie, Boncourt (near Berne), Switzerland. 752,274. Cl. 17.
Byer-Rolnick Hat Corp., Garland, Tex. 752,198, pub. 4–16–63. Cl. 39.
Byrd, Harold F., San Ysidro, Calif. 752,039, pub. 4–16–63. Cl. 26.
C & F Co.: *See*—
Filpi, Sebastiano, Co.
Cabot, Samuel, Inc., Boston, Mass. 751,904, pub. 4–16–63. Cl. 12.
Candix Enterprises, Inc., Hollywood, Calif. 752,120, pub. 4–16–63. Cl. 36.
Cannon Mills Co., Kannapolis, N.C. 752,203–04, pub. 4–16–63. Cl. 42.
Carac Corp., The, Freeport, N.Y. 645,290, canc. Cl. 6.
Caressa, Inc., Miami, Fla. 752,167, pub. 4–16–63. Cl. 39.
Cargill, Inc., Minneapolis, Minn. 645,330, canc. Cl. 16.
Carolina Co., Inc., d.b.a. Carolina Soap & Candle Makers, Southern Pines, N.C. 751,931, pub. 4–16–63. Cl. 15.
Carolina Soap & Candle Makers: *See*—
Carolina Co., Inc.
Cennett, Harry, Jr., Richmond, Ind. 645,425, canc. Cl. 36.
Century Softener Corp., Milwaukee, Wis. 752,095, pub. 4–16–63. Cl. 31.
Century Sportswear Co., Inc., Boston, Mass. 752,159, pub. 12–6–60. Cl. 39.
Chamberlin Metal Products: *See*—
Chamberlin, Joseph E.
Chance, A. B., Co., Centralia, Mo. 401,922, ren. 7–2–63. Cl. 13.
Chandler & Price Co., The, Cleveland, Ohio. 166,810, ren. 7–2–63. Cl. 28.
Chocolate Products Co., Chicago, Ill. 752,230, pub. 4–16–63. Cl. 46.
Chromium Mining & Smelting Corp. Ltd., Sault Ste. Marie, Ontario, Canada. 401,543, ren. 7–2–63. Cl. 1.
Ciba Corp.: *See*—
Society of Chemical Industry in Basel.
Clam Ram: *See*—
Riccio, Theodore A.
Clark, James A., Houston, Tex. 752,136, pub. 4–16–63. Cl. 38.
Clerfast Corp., Providence, R.I. 645,530, canc. Cl. 52.
Cohn & Rosenberger, Inc., to Coro, Inc., New York, N.Y. 401,446, ren. 7–2–63. Cl. 28.
Colorteck, Inc., New York, N.Y. 752,135, pub. 4–16–63. Cl. 38.
Columbia Electric Mfg. Co.: *See*—
McManamee, Louis J.
Columbia Mfg. Co. Inc., The: *See*—
Westfield Mfg. Co.
Columbian Carbon Co., New York, N.Y. 645,291, canc. Cl. 6.
Compania Ron Carioca: *See*—
Schenley Import Corp.
Concord Jewelry Mfg. Corp., New York, N.Y. 752,071, pub. 4–16–63. Cl. 28.
Concord Mobile Homes, Inc., Elkhart, Ind. 751,969, pub. 4–16–63. Cl. 19.
Consolidated Systems Corp., Monrovia, Calif. 751,993, pub. 4–16–63. Cl. 21.
Control Data Corp., Minneapolis, Minn. 752,043, pub. 8–28–62. Cl. 26.
Cooper's, Inc., Kenosha, Wis. 752,171, pub. 4–16–63. Cl. 39.
Copco Steel & Engineering Co., Detroit, Mich. 645,311, canc. Cl. 12.
Coro, Inc.: *See*—
Cohn & Rosenberger, Inc.
Cosman, Charles F., d.b.a. Surgical Balm Co., Seattle, Wash. 645,343, canc. Cl. 18.
Crane Co., Chicago, Ill. 751,918, pub. 4–16–63. Cl. 13.
Crawford Associates, Inc., Palo Alto, Calif. 751,872, pub. 4–16–63. Cl. 1.
Creamette Co., The, Minneapolis, Minn. 216,574. Am. 7(d). Cl. 46.
Creolin Co., The, Rahway, N.J., by Plough, Inc., Memphis, Tenn. 164,685, 12(c) pub. 7–2–63. Cl. 6.
Cris Lab, Inc., Pratt, Kans. 752,276. Cl. 34.
Crown Mfg. Co.: *See*—
Supplee-Biddle Hardware Co.
Crucible Steel Co. of America, Pittsburgh, Pa. 752,014, pub. 4–16–63. Cl. 23.
Cudahy Packing Co., The, Omaha, Nebr. 165,819, ren. 7–2–63. Cl. 46.
Curtis 1000 Inc., St. Paul, Minn. 401,530, ren. 7–2–63. Cl. 37.
D.F. Jewelry: *See*—
Felberbaum, David.
Da-Lite Screen Co., Inc., Warsaw, Ind. 752,048, pub. 4–16–63. Cl. 26.
Daniels Jewelry Co., Lansing, Mich. 752,077, pub. 4–16–63. Cl. 28.
Dara Products: *See*—
Benet, Harry.
Dart Drug Corp., Washington, D.C. 751,954, pub. 4–16–63. Cl. 18.
Dartell Laboratories, Inc., Los Angeles, Calif. 751,945, pub. 8–28–62. Cl. 18.
Davis & Geck, Inc., Danbury, Conn., to American Cyanamid Co., New York, N.Y. 645,478, canc. Cl. 44.
Dayton Rubber Co., The, Dayton, Ohio. 645,422, canc. Cl. 35.
Denison Cotton Mill Co., Denison, Tex. 752,215, pub. 4–16–63. Cl. 42.
Dent, C. S., & Co.: *See*—
Grandpa Brands Co.
Dersal Corp.: *See*—
Felton, S. A., & Son Co.
Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. 751,926, pub. 4–16–63. Cl. 14.
Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. 751,928, pub. 4–16–63. Cl. 14.
Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. 751,982, pub. 4–16–63. Cl. 21.
Dia-Chrome Co., Glendale, Calif. 752,024, pub. 4–16–63. Cl. 23.
Diamond Alkali Co., Cleveland, Ohio. 751,888, pub. 4–16–63. Cl. 6.
Diamond Chain Co., Inc., Indianapolis, Ind. 752,031, pub. 4–16–63. Cl. 23.
Diamond Expansion Bolt Co., Inc., Garwood, N.J. 751,923, pub. 4–16–63. Cl. 13.
Diamond State Fibre Co., Bridgeport, Pa., to The Budd Co., Philadelphia, Pa. 175,089, ren. 7–2–63. Cl. 1.
Dior, Christian, Perfumes Corp., New York, N.Y. 722,678, canc. Cl. 51.
Dirilyte Co. of America, Inc.: *See*—
American Art Alloys, Inc.
Dixie Fish Net and Twine Co., Shelby, Tenn. 751,899, pub. 4–16–63. Cl. 7.
Dr. Schupp K.G., Freudenstadt, Black Forest, Germany. 752,249, pub. 4–16–63. Cl. 51.
Domus Products Inc., New York, N.Y. 752,034, pub. 4–16–63. Cl. 23.
Donnelley, Reuben H., Corp., The, Chicago, Ill. 752,147, pub. 4–16–63. Cl. 38.
Donnelley, Reuben H., Corp., The, Chicago, Ill. 752,150, pub. 4–16–63. Cl. 38.
Double Rotary Sprinkler Co., Kansas City, Mo. 751,916, pub. 4–16–63. Cl. 13.
Dougherty's, J. A., Sons, Inc., Distillers, Philadelphia, Pa. 752,240, pub. 4–16–63. Cl. 49.
Dow Chemical Co., The, Midland, Mich. 751,883, pub. 4–16–63. Cl. 6.
Dow Chemical Co., The, Midland, Mich. 752,087, pub. 4–16–63. Cl. 31.
Drives Inc., Fulton, Ill. 752,017, pub. 4–16–63. Cl. 23.
Drybak Corp., The, Binghamton, N.Y., to Brunswick Corp., Chicago, Ill. 400,396, ren. 7–2–63. Cl. 39.
Dura Corp., Oak Park, Mich. 751,964, pub. 4–16–63. Cl. 19.
Duracote Corp., Ravenna, Ohio. 751,907, pub. 4–16–63. Cl. 12.
Duriron Co., Inc., The, Dayton, Ohio. 752,092, pub. 4–16–63. Cl. 31.
Dux Inc., Burlingame, Calif. 752,213, pub. 4–16–63. Cl. 42.
E.E.N.T. Digest, Inc., Northfield, Ill. 752,157, pub. 4–16–63. Cl. 38.
Eagle Iron Works, Des Moines, Iowa. 752,027, pub. 4–16–63. Cl. 23.
Eastern Isles, Inc., from Nina North, Inc., New York, N.Y. 752,166, pub. 4–16–63. Cl. 39.
Eastman Kodak Co., Rochester, N.Y. 752,044, pub. 4–16–63. Cl. 26.
Edmos Products Corp., Plainview, N.Y. 752,201, pub. 4–16–63. Cl. 42.
Ekco Products Co., Chicago, Ill. 645,365, canc. Cl. 23.
Elan-Schaltelemente Kurt Maecker OHG: *See*—
Maecker, Kurt.
Electric Auto-Lite Co., The, Toledo, Ohio. 752,102, pub. 4–16–63. Cl. 34.
Electronics Corp. of America, Cambridge, Mass. 752,000, pub. 4–16–63. Cl. 21.
Elgeet Optical Co., Inc., Rochester, N.Y. 752,087, pub. 8–1–60. Cl. 26.
Elk Brand Mfg. Co., Hopkinsville, Ky. 752,192, pub. 4–16–63. Cl. 39.
Ellis, Fred, Jr., d.b.a. Scientific Instruments Co., Berkeley, Calif. 752,049, pub. 4–16–63. Cl. 26.
Ellisco Inc.: *See*—
Myers Mfg. Co.
El Paso Natural Gas Products Co., El Paso, Tex. 751,932, pub. 4–16–63. Cl. 15.

Engelke, William J. H., d.b.a. Pan American Fireworks Co., Fort Worth, Tex., to Irvin Parker, Oklahoma City, Okla. 645,806, canc. Cl. 9.
Enro Shirt Co., Inc., The, Louisville, Ky. 752,178–79, pub. 4–16–63. Cl. 39.
Entron, Inc., Bladensburg, Md. 752,001, pub. 4–16–63. Cl. 21.
Eplett, Samuel L., d.b.a. Mid-West Chemical Co., Houston, Tex. 752,258, pub. 10–16–62. Cl. 52.
Ercona Camera Corp., New York, N.Y. 587,247, canc. Cl. 26.
Esbeco Distilling Corp., Stamford, Conn. 752,241, pub. 4–16–63. Cl. 49.
Espo-Flex Mfg., Inc., from Esposito Jewelry, Inc., Providence, R.I. 752,055, pub. 4–16–63. Cl. 28.
Espo-Flex Mfg., Inc., Providence, R.I. 752,054, pub. 4–16–63. Cl. 28.
Esposito Jewelry, Inc.: *See*—
Espo-Flex Mfg., Inc
Evan-Picone, Inc., New York, N.Y. 752,211, pub. 4–16–63. Cl. 42.
Ewing, Ray, Co., The, Pasadena, Calif. 645,488, canc. Cl. 46.
Faber, Eberhard, Inc.: *See*—
Faber, Eberhard.
Faber, Eberhard, New York, N.Y., by Eberhard Faber Inc., Wilkes-Barre, Pa. 52,417, 12(c) pub. 7–2–63. Cl. 37.
Faber, Eberhard, Pencil Co., Brooklyn, N.Y., by Eberhard Faber Inc., Wilkes-Barre, Pa. 168,855, 12(c) pub. 7–2–63. Cl. 37.
Faber, Eberhard, Pencil Co., Brooklyn, N.Y., by Eberhard Faber Inc., Wilkes-Barre, Pa. 202,106, 12(c) pub. 7–2–63. Cl. 37.
Faber, Eberhard, Pencil Co., Brooklyn, N.Y., by Eberhard Faber Inc., Wilkes-Barre, Pa. 234,037, 12(c) pub. 7–2–63. Cl. 37.
Faber, Eberhard, Pencil Co., Brooklyn, N.Y., by Eberhard Faber Inc., Wilkes-Barre, Pa. 434,169, 12(c) pub. 7–2–63. Cl. 37.
Fair, The, Chicago, Ill. 171.202, ren. 7–2–63. Cl. 39.
Fair Play Caramels, Inc., Johnson City, N.Y. 403,284, ren. 7–2–63. Cl. 46.
Fairfield Knitwear, Inc., New York, N.Y. 752,169, pub. 4–16–63. Cl. 39.
Falls Co., The, by Glen Raven Cotton Mills, Inc., Glen Raven, N.C. 394,737, 12(c) pub. 7–2–63. Cl. 42.
Famor Inc., New York, N.Y. 752,065, pub. 4–16–63. Cl. 28.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. 751,885, pub. 4–16–63. Cl. 6.
Farmers Union Central Exchange, Inc., South St. Paul, Minn. 752,264, pub. 4–16–63. Cl. 100.
Farrar, Straus and Co., Inc., from Farrar, Straus & Cudahy, Inc., New York, N.Y. 752,149, pub. 4–16–63. Cl. 38.
Farrar, Straus & Cudahy, Inc.: *See*—
Farrar, Straus and Co., Inc.
Fashioncraft-Excello, Brooklyn, N.Y., from Baby World Co., Inc., Queens, N.Y. 751,878, pub. 9–13–60. Cl. 2.
Fawick Flexi-Grip, Akron, Ohio. 645,358, canc. Cl. 22.
Fay, Arthur M., d.b.a. Meritcraft Co., Chicago, Ill. 752,007, pub. 4–16–63. Cl. 22.
Federated Department Stores, Inc., d.b.a. The Rike-Kumler Co., Dayton, Ohio. 752,063, pub. 4–16–63. Cl. 28.
Felberbaum, David d.b.a. D. F. Jewelry, Spring Valley, N.Y. 752,066, pub. 4–16–63. Cl. 28.
Felton, S. A., & Son Co., Manchester, N.H., from Dersal Corp., Worcester, Mass. 752,030, pub. 4–16–63. Cl. 23.
Fidelity File Box, Inc., Minneapolis, Minn. 752,098, pub. 4–16–63. Cl. 32.
Filon Corp., Hawthorne, Calif. 751,912, pub. 4–16–63. Cl. 12.
Filpi, Sebastiano, Co., d.b.a. C & F Co., Cucamonga, Calif. 645,552, canc. Cl. 46.
Flint Co., d.b.a. The Flints, Kansas City, Mo. 645,380, canc. Cl. 28.
Flintkote Co., The, New York, N.Y. 400,932, ren. 7–2–63. Cl. 12.
Flints, The: *See*—
Flint Co.
Forry, David, Tobacco Co., York, Pa. 645,337, canc. Cl. 17.
Fox Specialty Co., Inc., Lowell, Mass. 730,615, canc. Cl. 2.
Frank, J. P., Chemical & Plastic Corp., New York, N.Y. 752,200, pub. 4–16–63. Cl. 42.
Franklin Foods, Inc., Ann Arbor, Mich. 645,491, canc. Cl. 46.
Fratianne Mfg. Co., The, Cleveland, Ohio. 752,059, pub. 4–16–63. Cl. 28.
Frederick Post Co., The, Chicago, Ill. 645,374, canc. Cl. 26.
Friedman, Leon, d.b.a. Mole Jewelers, New York, N.Y. 752,070, pub. 4–16–63. Cl. 28.
Frito Co., The, Dallas, Tex. 752,220, pub. 6–20–61. Cl. 46.
Frone, Janet, d.b.a. Netrone Products Co., Chicago, Ill. 645,514, canc. Cl. 51.
Frostmaster Co., Tyler, Tex. 752,089, pub. 4–16–63. Cl. 31.
Game Industries, Inc., Brooklyn, N.Y. 751,975, pub. 4–16–63. Cl. 21.
Ganz, Harry, d.b.a. Penn Diamond Co., Scranton, Pa. 752,073, pub. 4–16–63. Cl. 28.
Garland Co., The, Cleveland, Ohio. 645,559, canc. Cl. 52.
Garrett & Co., Norfolk, Va. 88,622, canc. Cl. 47.
General Aniline & Film Corp.: *See*—
Actien-Gesellschaft fur Anilin-Fabrikation.
General Dyestuff Corp.
Grasselli Chemical Co., The.
General Aniline & Film Corp., New York, N.Y. 403,282, ren. 7–2–63. Cl. 1.
General Dyestuff Corp., to General Aniline & Film Corp., New York, N.Y. 403,285, ren. 7–2–63. Cl. 6.
General Foods Corp.: *See*—
Jersey Cereal Co.
General Motors Corp., Detroit, Mich. 645,351, canc. Cl. 19.
General Plastics Corp., Bloomfield, N.J. 751,869, pub. 4–16–63. Cl. 1.
General Precision, Inc., Little Falls, N.J. 751,915, pub. 4–16–63. Cl. 13.
General Tire & Rubber Co., The, Akron, Ohio. 752,202, pub. 4–16–63. Cl. 42.
Gibson, C. R., & Co., Norwalk, Conn. 752,127, pub. 4–16–63. Cl. 37.
Gibson, C. R., & Co., Norwalk, Conn. 752,132–3, pub. 4–16–63. Cl. 38.
Gilbert Spruance Co., The, Philadelphia, Pa. 645,335, canc. Cl. 16.
Gilman Paper Co., New York, N.Y. 751,875, pub. 11–27–62. Cl. 2.
Gladstone-Arcuni, Inc., New York, N.Y. 752,180, pub. 4–16–63. Cl. 39.
Glen-Joan Fashions, Inc., New York, N.Y. 645,462, canc. Cl. 39.
Glitsch, Fritz W., & Sons, Inc., Dallas, Tex. 752,015, pub. 4–16–63. Cl. 23.
Globe Novelty House, by Globe Novelty House, Inc., New York, N.Y. 400,230, 12(c) pub. 7–2–63. Cl. 3.
Globe Novelty House, Inc.: *See*—
Globe Novelty House.
Gold Seal Petr-O-Leum Corp., New York, N.Y. 645,322, canc. Cl. 15.
Golden Flake, Inc.: *See*—
Mosher, Harry E.
Gold'n Mello Co., Chicago, Ill. 752,219, pub. 11–29–60. Cl. 46.
Gorham Corp., Providence, R.I. 752,064, pub. 4–16–63. Cl. 28.
Gorham Corp., Providence, R.I. 752,081–2, pub. 4–16–63. Cl. 28.
Gospel Light Publications, d.b.a. The Sunday School House, Glendale, Calif. 752,153, pub. 4–16–63. Cl. 38.
Gourielli: *See*—
H.R. Laboratories, Inc.
Gourielli, Div. of H.R. Laboratories, Inc.: *See*—
H.R. Laboratories, Inc.
Gradiaz, Annis & Co., Inc.: *See*—
Sanchez & Haya Co.
Grant Co., The: *See*—
Ratner, Walter.
Graphics, Inc., Kearny, N.J. 751,903, pub. 4–16–63. Cl. 12.
Grasselli Chemical Co., The, Cleveland, Ohio, to General Aniline & Film Corp., New York, N.Y. 169,838, ren. 7–2–63. Cl. 6.
Gray, T. K., Inc., Minneapolis, Minn. 752,086, pub. 4–16–63. Cl. 29.
Grid Leaks: *See*—
Ace Radio Control, Inc.
Gulf Salt Co., Fort Bend, to United Salt Corp., Houston, Tex. 645,284, canc. Cl. 6.
Gulfo Investment Group, Inc., Marksville, La. 752,268, pub. 4–16–63. Cl. 102.
Gulton Industries, Inc., Metuchen, N.J. 751,991, pub. 4–16–63. Cl. 21.
Gussow, Herbert, New York, N.Y. 645,446, canc. Cl. 39.
Hageman and Son, Inc., Dumont, N.J. 645,373, canc. Cl. 26.
Hagerstown Shoe Co., The, Hagerstown, Md. 645,451, canc. Cl. 39.
Hall, Haas & Vessey, Ltd., d.b.a. MacDonald Farms, Los Angeles, Calif. 645,486, canc. Cl. 46.
Hall, Turner, Corp., New York, N.Y. 752,252, pub. 4–16–63. Cl. 51.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 752,174–75, pub. 4–16–63. Cl. 39.
Harbor Plywood Corp., Aberdeen, Wash. 645,313–14, canc. Cl. 12.
Harco Distributors: *See*—
Oppenheim, Charles J., Jr.
Hart, Jane: *See*—
Price, Jack N.
Hart, Jeanne O., New Gardens, N.Y. 752,148, pub. 4–16–63. Cl. 38.
Hecker-Jones- Jewell Milling Co., New York, N.Y., to Standard Milling Co., Kansas City, Mo. 172,756, ren. 7–2–63. Cl. 46.
Helmick Foundry-Machine Co., Fairmont, W. Va. 752,025, pub. 4–16–63. Cl. 23.
Henshel Co. Inc., The, New York, N.Y., to Stein & Ellbogen Co., Chicago, Ill. 170,027, ren. 7–2–63. Cl. 28.
Heublein, G. F., & Bro., Hartford, Conn., to Arthur Bell & Sons Ltd., Perth, Scotland. 401,242, ren. 7–2–63. Cl. 49.
Hi Style Inc., Miami, Fla. 751,914, pub. 4–16–63. Cl. 12.
Hilton, Harold S., d.b.a. Hilton Products Co., Seattle, Wash. 751,924, pub. 4–16–63. Cl. 13.
Hilton Products Co.: *See*—
Hilton, Harold S.
Hind, Howard Russell & Esther Egan Hind, Laguna Beach, Calif. 752,078, pub. 4–16–63. Cl. 28.
Holly Pharmacal Co.: *See*—
Hollingsworth, Merrill W., M.D.
Hollywood School Photo Association, Los Angeles, Calif. 752,156, pub. 4–16–63. Cl. 38.
Holman, A. J., Co., Philadelphia, Pa. 400,094, ren. 7–2–63. Cl. 38.
Houghton, E. F., & Co., Philadelphia, Pa. 344,427, canc. Cl. 52.
Houghton, E. F., & Co., Philadelphia, Pa. 751,891, pub. 4–16–63. Cl. 6.
Huber, J. M., Corp., Borger, Tex. 751,892, pub. 4–16–63. Cl. 6.
Humber Ltd., London, England, from Sunbeam-Talbot Ltd., Conventry, England. 751,960, pub. 4–16–63. Cl. 19.
Humble Oil & Refining Co.: *See*—
Standard Oil Co.

Hussmann Refrigerator Co., St. Louis, Mo. 752,091, pub. 4–16–63. Cl. 31.
Hysol Corp., Olean, N.Y. 751,880, pub. 4–16–63. Cl. 5.
I-T-E Circuit Breaker Co., The, Philadelphia, Pa. 752,004, pub. 4–16–63. Cl. 21.
Ideal Shoe Co., Philadelphia, Pa. 752,195, pub. 4–16–63. Cl. 39.
Ideal Toy Corp.: *See*—
Americanmade Plastics, Inc.
Illinois Tool Works Inc., Chicago, Ill. 752,032, pub. 4–16–63. Cl. 23.
Imperial Shirt Corp., New York, N.Y. 752,187–89, pub. 4–16–63. Cl. 39.
Inductotherm Linemelt Corp., Rancocas, N.J. 752,114–16, pub. 4–16–63. Cl. 34.
Industrial Brush Co., Arcadia, Calif. 752,083, pub. 4–16–63. Cl. 29.
Industrial Research, Inc., Beverly Shores, Ind. 752,144, pub. 4–16–63. Cl. 38.
Ingersoll-Rand Co., New York, N.Y. 752,013, pub. 4–16–63. Cl. 23.
International Basic Economy Corp.: *See*—
Anderson, V. D., Co., The.
International Sanna Corp., New York, N.Y. 751,908, pub. 4–16–63. Cl. 12.
International Stitch-O-Matic Corp.: *See*—
Rodney Distributors, Inc.
Invar Electronics Corp., Santa Monica, Calif. 751,971, pub. 3–13–62. Cl. 21.
Itek Corp., Cambridge, Mass. 751,978, pub. 4–16–63. Cl. 21.
Jaunty Fabric Corp., The: *See*—
Barbizon Corp., The.
Jaw Teasers Inc., East Boston, Mass. 752,234, pub. 4–16–63. Cl. 46.
Jersey Cereal Co., Chicago, Ill., to General Foods Corp., White Plains, N.Y. 401,752, ren. 7–2–63. Cl. 46.
Johns-Manville, Corp., New York, N.Y. 301,888. Am. 7(d). Cl. 12.
Johnson Fare Box Co., Chicago, Ill. 752,041, pub. 4–16–63. Cl. 26.
Johnson & Johnson, New Brunswick, N.J. 752,217, pub. 4–16–63. Cl. 44.
Justrite Mfg. Co., Chicago, Ill. 645,372, canc. Cl. 26.
Kaiser Aluminum & Chemical Corp.: *See*—
United States Rubber Co.
Kakawatees, Ltd., Findlay, Ohio. 752,235, pub. 4–16–63. Cl. 46.
Kaplan, Morris, & Sons, New York, N.Y. 752,079, pub. 4–16–63. Cl. 28.
Kenney-Cripps, Inc., from Kenney-Cripps, Wallingford, Conn. 752,260, pub. 4–16–63. Cl. 52.
Keppie, J. C. Co., Pittsburgh, Pa. 752,060, pub. 4–16–63. Cl. 28.
Kex Products, Inc., St. Louis, Mo. 752,117, pub. 4–16–63. Cl. 35.
Kid-Nik Mfg. Co.: *See*—
McIntosh, William M.
King, James M., d.b.a. Redi-Products, Los Angeles, Calif. 645,505, canc. Cl. 50.
Kirkpatrick, Allen & Co., Inc., Rehoboth Beach, Del. 752,229, pub. 4–16–63. Cl. 46.
Kleinert, I. B., Rubber Co., New York, N.Y. 400,728, 12(c) pub. 7–2–63. Cl. 42.
Kline, Arlie S., d b.a. The Village Craft Shop, Onekama, Mich. 752,245, pub. 4–16–63. Cl. 50.
Knitown Togs Corp., New York, N.Y. 645,447, canc. Cl. 39.
Koppers Co., The, Pittsburgh, Pa., to Koppers Co., Inc., Pittsburgh, Pa. 160,225, ren. 7–2–63. Cl. 1.
Koppers Co., Inc.: *See*—
Koppers Co., The.
Korlis (N.J.) Ltd., Englewood, N.J. 752,118, pub. 4–16–63. Cl. 35.
Kress, S. H., and Co., New York, N.Y. 645,459, canc. Cl. 39.
LPS Research Laboratories, Inc., Beverly Hills, Calif. 751,930, pub. 4–16–63. Cl. 15.
Lafayette Radio Electronics Corp., Jamaica, N.Y. 752,123, pub. 4–16–63. Cl. 36.
Lantz, Walter, Productions, Inc., Hollywood, Calif. 752,008–10, pub. 4–16–63. Cl. 22.
Lantz, Walter, Productions, Inc., Hollywood, Calif. 752,138–42, pub. 4–16–63. Cl. 36.
Lantz, Walter, Productions, Inc., Hollywood, Calif. 752,223–4, pub. 4–16–63. Cl. 46.
Lavin-Parfums, Inc., New York, N.Y. 752,253, pub. 4–16–63. Cl. 51.
Lawson, F. H., Co., The, Cincinnati, Ohio. 752,101, pub. 4–16–63. Cl. 32.
L-Cart, Inc., Elkhart, Ind. 645,350, canc. Cl. 19.
Lea-Ronal, Inc., Jamaica, N.Y. 751,889, pub. 4–16–63. Cl. 6.
Lear Siegler, Inc., from The Siegler Corp., Olean, N.Y. 752,109–11, pub. 4–16–63. Cl. 34.
Lenox Jewelry Products Corp., New York, N.Y. 752,058, pub. 4–16–63. Cl. 28.
Levin, Ed: *See*—
Levin, Edward.
Levin, Edward, d.b.a. Ed Levin, North Bennington, Vt. 752,062, pub. 4–16–63. Cl. 28.
Liggett & Myers Tobacco Co., New York, N.Y. 751,937, pub. 4–16–63. Cl. 17.
Lindsay Wire Weaving Co., The, Cleveland, Ohio. 752,085, pub. 4–16–63. Cl. 23.
Lionel Corp., The, Hillside, N.J. 751,890, pub. 4–16–63. Cl. 6.
Little Squire, Inc., Kansas City, Mo. 752,194, pub. 4–16–63. Cl. 39.
Litton Systems, Inc.: *See*—
Times-Telephoto Equipment Inc.
Litwin & Sons, Cincinnati, Ohio. 752,067, pub. 4–16–63. Cl. 28.
Lockrey Co., The: *See*—
Lockrey, Andrew J.
Locust Hosiery Mills, Inc., Mt. Pleasant, N.C. 752,197, pub. 4–16–63. Cl. 39.
Loewi's Jewelry, New York, N.Y. 752,068, pub. 4–16–63. Cl. 28.
Long-Lok Corp., Los Angeles, Calif. 751,921, pub. 4–16–63. Cl. 13.
Love Foundation, The: *See*—
Love, Mahdah.
Love, Mahdah, d.b.a. The Love Foundation, St. Petersburg, Fla. 645,481, canc. Cl. 44.
Lovsted, C. M., Inc.: *See*—
Pallady Welding & Mfg. Co.
Lucky Tiger Mfg. Co., Kansas City, Mo. 752,248, pub. 4–16–63. Cl. 51.
MP Pumps, Inc., Detroit, Mich. 752,026, pub. 4–16–63. Cl. 23.
Maas, A. R., Chemical Co., South Gate, Calif., to Stauffer Chemical Co., New York, N.Y. 402,264, ren. 7–2–63. Cl. 6.
MacDonald, E. F., Stamp Co., Dayton, Ohio. 752,267, pub. 4–16–63. Cl. 101.
MacDonald Farms: *See*—
Hall, Haas & Vessey, Ltd.
MacNaughton, A. & J., Ltd., Pitlochry, Scotland. 752,206–7, pub. 4–16–63. Cl. 42.
Madison-Kipp Corp., Madison, Wis. 751,929, pub. 4–16–63. Cl. 14.
Magnastatic Corp., Dover, N.J. 752,018, pub. 4–16–63. Cl. 23.
Magnavox Co., The, Fort Wayne, Ind. 751,972, pub. 3–20–62. Cl. 21.
Magnolia Diamonds, Inc., Birmingham, Ala. 752,053, pub. 4–16–63. Cl. 27.
Magnolia Diamonds, Inc., Birmingham, Ala. 752,074, pub. 4–16–63. Cl. 28.
Mail Photo Service, Inc., d.b.a. Acorn Photo Service, Louisville, Ky. 645,548, canc. Cl. 38.
Manufacture Belge d'Aiguilles, Eupen, Belgium. 752,019, pub. 4–16–63. Cl. 23.
Mark Chemical Supply Co.: *See*—
Marx, Raynard J.
Mars Broadcasting, Inc., Stamford, Conn. 752,121, pub. 4–16–63. Cl. 36.
Martin Dyeing and Finishing Co., Bridgeton, N.J. 280,445, canc. Cl. 42.
Marx, Raynard J., d.b.a. Mark Chemical Supply Co., Chicago, Ill. 442,544, 12(c) pub. 7–2–63. Cl. 6.
Mas-con Supply Co., Denver, Colo. 751,913, pub. 4–16–63. Cl. 12.
Mason Marking Systems Corp., Norfolk, Va. 752,129, pub. 4–16–63. Cl. 37.
Mastercrafters Clock and Radio Co., Chicago, Ill. 645,377, canc. Cl. 27.
Mateos Record Corp., New York, N.Y. 645,423, canc. Cl. 36.
Mather Spring Co., The, Toledo, Ohio. 751,958, pub. 4–16–63. Cl. 19.
Mayer, Max, & Co., Inc., New York, N.Y. 645,445, canc. Cl. 39.
McCormick & Co., Inc., Baltimore, Md. 401,606, ren. 7–2–63. Cl. 46.
McHale Pharmaceutical, Inc., Wilmington, Del. 751,940, pub. 9–19–61. Cl. 18.
McIntosh, William M., d.b.a. Kid-Nik Mfg. Co., Anaheim, Calif. 752,100, pub. 4–16–63. Cl. 32.
McKay Co., The, Pittsburgh, Pa. 752,107, pub. 4–16–63. Cl. 34.
Memphis Potato Chip Co.: *See*—
Mosher, Harry E.
Merit Clothing Co., Mayfield, Ky. 752,170, pub. 4–16–63. Cl. 39.
Meritcraft Co.: *See*—
Fay, Arthur M.
Merrill Farms, Salinas, Calif. 752,228, pub. 3–5–63. Cl. 46.
Metal Hydrides Inc., Beverly, Mass. 751,896–7, pub. 4–16–63. Cl. 6.
Michaels, Stern & Co., Inc., Rochester, N.Y. 645,454, canc. Cl. 39.
Mid-West Chemical Co.: *See*—
Eplett, Samuel L.
Mighty-Mix Co.: *See*—
Valspar Corp., The.
Miller and Co., Denver, Colo. 645,438, canc. Cl. 39.
Minerallac Electric Co., Chicago, Ill. 751,922, pub. 4–16–63. Cl. 13.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 752,134, pub. 4–16–63. Cl. 38.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 645,285, canc. Cl. 6.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 751,879, pub. 4–16–63. Cl. 4.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,246, pub. 4–16–63. Cl. 50.
Modern Shoe Co., St. Louis, Mo. 752,166, pub. 4–16–63. Cl. 39.
Mohasco Industries, Inc.: *See*—
Mohawk Carpet Mills, Inc.
Mohawk Carpet Mills, Inc., to Mohasco Industries, Inc., Amsterdam, N.Y. 645,469, canc. Cl. 42.
Mole Jewelers: *See*—
Friedman, Leon.
Monumental News-Review, Inc., Buffalo, N.Y. 752,151, pub. 4–16–63. Cl. 38.
Moore, Benjamin, & Co., New York, N.Y. 174,227, ren. 7–2–63. Cl. 16.
Moore's Super Stores, Inc., Roanoke, Va. 751,995, pub. 4–16–63. Classes 21 and 31.

Mosher, Harry E., d.b.a. Memphis Potato Chip Co., Memphis, Tenn., by Golden Flake, Inc., Birmingham, Ala. 184,655, 12(c) pub. 7–2–63. Cl. 46.
Moose, Inc., New York, N.Y. 752,206, pub. 4–16–63. Cl. 42.
Myers, F. E., & Bro. Co., The, Ashland, Ohio. 748,314, cor. Cl. 13.
Myers Mfg. Co., Camden, N.J., by Ellisco Inc., Philadelphia, Pa. 166,186, 12(c) pub. 7–2–63. Cl. 2.
Myruski, Raymond, Goshen, N.Y. 752,227, pub. 4–16–63. Cl. 46.
Nashoba Products Co., Inc., The, West Acton, Mass. 752,218, pub. 4–16–63. Cl. 45.
National Cash Register Co., The, Dayton, Ohio. 752,152, pub. 4–16–63. Cl. 35.
National Cash Register Co., The, Dayton, Ohio. 752,263, pub. 4–16–63. Cl. 52.
National Dairy Products Corp., New York, N.Y. 740,709. Am. 7(d). Cl. 45.
National Lock Co., Rockford, Ill. 751,919, pub. 4–16–63. Cl. 13.
National Refining Co., The, Cleveland, Ohio, to Ashland Oil & Refining Co., Ashland, Ky. 401,682, ren. 7–2–63. Cl. 15.
National Screw & Mfg. Co., The, Cleveland, Ohio. 751,925, pub. 4–16–63. Cl. 13.
National Vitamin Products Co., Minneapolis, Minn. 752,226, pub. 4–16–63. Cl. 46.
Narad, Inc., Plymouth, Mich. 752,273. Cl. 12.
Needles, Stanley, d.b.a. Stanley Creations, Philadelphia, Pa. 752,080, pub. 4–16–63. Cl. 28.
Nelson, John W., Inc., Bryn Mawr, Pa. 751,977, pub. 4–16–63. Cl. 21.
Neptune World-Wide Moving, Inc., New Rochelle, N.Y. 752,270, pub. 4–16–63. Cl. 105.
Netrone Products Co.: *See*—
Frone, Janet.
Nickol, Edwin F., Inc., Versailles, Ohio. 400,908, 12(c) pub. 7–2–63. Cl. 2.
Nina Footwear Co., Inc., New York, N.Y. 752,173, pub. 4–16–63. Cl. 39.
Norex Laboratories, Inc., New York, N.Y. 752,250–51, pub. 4–16–63. Cl. 51.
North American Philips Co., Inc., New York, N.Y. 752,256, pub. 4–16–63. Cl. 51.
North, Nina, Inc.: *See*—
Eastern Isles, Inc.
Northrup, King & Co., Minneapolis, Minn. 645,261, canc. Cl. 1.
Northrup, King & Co., Minneapolis, Minn. 751,887, pub. 3–5–63. Cl. 6.
Nutting Truck and Caster Co., Faribault, Minn. 749,016, cor. Cl. 19.
Oak Mfg. Co., Crystal Lake, Ill. 751,974, pub. 4–16–63. Classes 21 and 26.
O'Callaghan, New York, N.Y. 752,214, pub. 4–16–63. Cl. 42.
Oceanus Laboratories of The Pacific: *See*—
Clarke, Robert E.
Oh-Boy Broiler Co.: *See*—
Franzheim, George W.
Oregon Bulb Farms, Gresham, Oreg. 751,871, pub. 4–16–63. Cl. 1.
Organon Inc., West Orange, N.J. 751,941, pub. 4–16–63. Cl. 18.
Orgel, Benjamin, d.b.a. B. Orgel Co., New York, N.Y. 752,072, pub. 4–16–63. Cl. 28.
Orgel Co.: *See*—
Orgel, Benjamin.
Ortofon A/S, Copenhagen, Denmark. 752,124, pub. 4–16–63. Cl. 36.
Oster, John, Mfg., Co.: *See*—
Cummins-Chicago Corp.
Otis Co.: *See*—
Ballinger, W. A.
Ballinger, W. A., & Co.
Otis Co., San Francisco, Calif. 752,085, pub. 4–16–63. Cl. 29.
Overmyer Mould Co., Inc., Winchester, Ind. 752,036, pub. 4–16–63. Cl. 23.
Packaged Products Corp., Brooklyn, N.Y. 751,946, pub. 4–16–63. Cl. 18.
Packard Food Products Co.: *See*—
Polin, Jack.
Pageant Press, Inc., New York, N.Y. 752,143, pub. 4–16–63. Cl. 38.
Pallady Welding & Mfg. Co., to C. M. Lovsted, Inc., Seattle, Wash. 167,840, ren. 7–2–63. Cl. 34.
Palmer, William F., Carlisle, Mass. 751,984–85, pub. 4–16–63. Cl. 21.
Palmyra Hosiery Mills, Inc., Albany, Ga. 645,434, canc. Cl. 39.
Pan American Fireworks Co.: *See*—
Engelke, William J. H.
Panelboard Mfg. Co. Inc., Newark, N.J. 751,910, pub. 4–16–63. Cl. 12.
Parsfern, Inc., Beverly Hills, Calif. 752,244, pub. 4–16–63. Cl. 50.
Parker, Alton N., Jacksonville, Fla. 645,352, canc. Cl. 19.
Parker, Irvin: *See*—
Engelke, William J. H.
Pawlock Tool Co.: *See*—
Briles Mfg.
Pax-Products, Des Moines, Iowa. 751,884, pub. 4–16–63. Cl. 6.
Pearlecraft, Birmingham, Ala. 751,876, pub. 4–16–63. Cl. 2.
Pelron Corp., Lyons, Ill. 751,868, pub. 12–18–62. Cl. 1.
Penn Diamond Co.: *See*—
Gans, Harry.
Pennex Products Co.: *See*—
Royal Pharmacal Corp.
Strong & Cobb Co., The.
Pennsylvania Foundry Supply & Sand Co., Philadelphia, Pa. 751,867, pub. 4–16–63. Cl. 1.
Periseal Co., The: *See*—
Bradley, L. R.
Perkins-Harlan Coal Co. Inc.: *See*—
Southern Coal & Coke Co., The.
Perkins, Ronald R., Dallas, Tex. 645,270, canc. Cl. 2.
Perrin, J. B., & Co., Inc., Culver City, Calif. 633,606, canc. Cl. 26.
Perrine Battery Corp., d.b.a. Boston Battery Co., Waltham, Mass. 751,973, pub. 4–16–63. Cl. 21.
Perry Distributing Co.: *See*—
Price, Jack N.
Pharmachem Specialties, Inc., Bethlehem, Pa. 747,494, cor. Cl. 18.
Philadelphia Chewing Gum Corp., Havertown, Pa. 645,496–7, canc. Cl. 46.
Philadelphia Rug Mills, Inc., to The Wool "O" Co., Philadelphia, Pa. 168,403, ren. 7–2–63. Cl. 42.
Philco Corp., by Philco Corp., Philadelphia, Pa. 401,240, 12(c) pub. 7–2–63. Cl. 26.
Philco Corp., by Philco Corp., Philadelphia, Pa. 400,517, 12(c) pub. 7–2–63. Cl. 36.
Philco Corp., by Philco Corp., Philadelphia, Pa. 400,738, 12(c) pub. 7–2–63. Cl. 27.
Philco Corp., by Philco Corp., Philadelphia, Pa. 400,943, 12(c) pub. 7–2–63. Cl. 21.
Philco Corp., by Philco Corp., Philadelphia, Pa. 401,033, 12(c) pub. 7–2–63. Cl. 16.
Philco Corp., by Philco Corp., Philadelphia, Pa. 401,118, 12(c) pub. 7–2–63. Cl. 7.
Philco Corp., by Philco Corp., Philadelphia, Pa. 400,615, 12(c) pub. 7–2–63. Cl. 2.
Philipp Sales, Inc., Port Washington, Wis. 645,431, canc. Cl. 36.
Pickwick International Inc., Long Island City, N.Y. 752,122, pub. 9–4–62. Cl. 36.
Piaggio & C. Societa per Azioni, Genoa, Italy. 751,959, pub. 4–16–63. Cl. 19.
Piggly Wiggly Operators' Warehouse Inc., Shreveport, La. 752,222, pub. 4–16–63. Cl. 46.
Pfaudler Permutit Inc., Rochester, N.Y. 751,874, pub. 4–16–63. Cl. 2.
Pfaudler Permutit Inc., Rochester, N.Y. 752,105, pub. 4–16–63. Cl. 34.
Plough, Inc.: *See*—
Creolin Co., The.
Point Adams Packing Co., Hammond, Oreg. 166,248, ren. 7–2–63. Cl. 46.
Polak's Frutal Works, Amersfoort, Netherlands, by Polak's Frutal Works, Inc., Middletown, N.Y. 170,450, 12(c) pub. 7–2–63. Cl. 51.
Polak's Frutal Works, Inc.: *See*—
Polak's Frutal Works.
Polin, Jack, d.b.a. Packard Food Products Co., Brooklyn, N.Y. 403,022, ren. 7–2–63. Cl. 46.
Polychrome Corp., Yonkers, N.Y. 752,243, pub. 4–16–63. Cl. 50.
Pontiac Varnish Co., Pontiac, Mich. 401,687, ren. 7–2–63. Cl. 16.
Posturflex, Inc., Brooklyn, N.Y. 645,413–14, canc. Cl. 32.
Precision Scientific Co., Chicago, Ill. 752,050–1, pub. 4–16–63. Cl. 26.
Price, Jack N., assignee of J. Hart, d.b.a. Perry Distributing Co., to The Beautex Corp., Saginaw, Mich. 730,149, new cert. Cl. 39.
Price's Golden Guernsey Dairy: *See*—
Price, Kenneth C.
Prima Theatrical Footwear, Inc., Columbus, Ohio. 645,452, canc. Cl. 39.
Prince Matchabelli Inc., New York, N.Y. 401,827, 12(c) pub. 7–2–63. Cl. 51.
Pritchard, J. F., & Co. of California, Kansas City, Mo. 751,901–2, pub. 4–16–63. Cl. 12.
Producers' Council, Inc., The, Washington, D.C. 752,265, pub. 4–16–63. Cl. 101.
Protane Corp., The, Cleveland, Ohio. 752,112, pub. 4–16–63. Cl. 34.
Protective Lining Corp., Brooklyn, N.Y. 751,877, pub. 4–16–63. Cl. 2.
Pumps & Softeners, Ltd., London, Ontario, Canada. 752,028, pub. 4–16–63. Cl. 23.
Pure Oil Co., The, Palatine, Ill. 751,886, pub. 4–16–63. Cl. 6.
Puritan Sportswear Corp., The, Altoona, Pa. 752,177, pub. 4–16–63. Cl. 39.
Pyramid Rubber Co., The, Ravenna, Ohio. 645,479, canc. Cl. 44.
Quality Precision Products, Inc., Los Angeles, Calif. 752,045–6, pub. 4–16–63. Cl. 26.
Radio Shack Corp., Boston, Mass. 752,040, pub. 4–16–63. Cl. 26.
Ratner, Walter, d.b.a. The Grant Co., Chicago, Ill. 645,297, canc. Cl. 6.
Ratsey & Lapthorn, Inc., New York, N.Y. 751,956, pub. 4–16–63. Cl. 19.
Raylite Electric Corp., New York, N.Y. 751,980, pub. 4–16–63. Cl. 21.
Raytech Equipment Co.: *See*—
Wain, Harry C.
Redi-Products: *See*—
King, James M.
Reed, Wesley B., North Woodstock, Conn. 645,424, canc. Cl. 36.
Reeves, Peter, Markets, Inc., New York, N.Y. 752,225, pub. 4–16–63. Cl. 46.
Reisman, Lawrence, d.b.a. Blendall Synthetic Thread Co., New York, N.Y. 752,216, pub. 4–16–63. Cl. 48.
Rembrandt Tobacco Corp. (Overseas) Ltd., Stellenbosch, Cape, Republic of South Africa. 751,938, pub. 4–16–63. Cl. 17.

Replicap Corp., Dayton, Ohio. 645,506, canc. Cl. 50.
Republic Engineering & Mfg. Co., St. Louis, Mo. 751,962, pub. 2–19–63. Cl. 19.
Revere, Inc., Los Angeles, Calif. 645,276, canc. Cl. 4.
Reynolds Metals Co., Richmond, Va. 645,316, canc. Cl. 12.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 174,501, ren. 7–2–63. Cl. 8.
Riamera, N.V.: *See*—
Rigaud, Henri.
Riccio, Theodore A., d.b.a. Clam Ram, Newington, Conn. 752,028, pub. 4–16–63. Cl. 23.
Richard Scale Co.: *See*—
Richardson, Howe, Scale Co.
Richards, Raymond, Co., Chicago, Ill. 645,376, canc. Cl. 27.
Richardson, Howe, Scale Co., Rutland, Vt., from Richardson Scale Co., Clifton, N.J. 752,038, pub. 4–16–63. Cl. 26.
Richlands Metal Prods.: *See*—
S. W. Virginia Tire Co., Inc.
Rigaud: *See*—
Rigaud, Henri.
Rigaud, Henri, d.b.a. Rigaud, Paris, France, and New York, N.Y., to Riamera, N.V., Curacao, Netherlands West Indies. 164,464, ren. 7–2–63. Cl. 51.
Rike-Kumler Co., The: *See*—
Federated Department Stores, Inc.
Ritter, F., & Co., Los Angeles, Calif. 752,232, pub. 4–16–63. Cl. 46.
Robbins Floor Products, Inc., Tuscumbia, Ala. 645,349, canc. Cl. 19.
Robbins Floor Products, Inc., Tuscumbia, Ala. 751,970, pub. 4–16–63. Cl. 20.
Robb-Ross Co., The, Sioux City, Iowa. 752,233, pub. 4–16–63. Cl. 46.
Rodenstock, Rudolf, Munich, Germany. 645,370, canc. Cl. 26.
Rodney Distributors, Inc., to Rodney Inc., to International Stitch-O-Matic Corp., Chicago, Ill. 645,364, canc. Cl. 23.
Rodney Inc.: *See*—
Rodney Distributors, Inc.
Rognoni S.N.C., Milan, Italy. 751,906, pub. 4–16–63. Cl. 12.
Ross Gear and Tool Co., Inc., Lafayette, Ind. 751,965, pub. 4–16–63. Cl. 19.
Roter: *See*—
Van den Baumen, Frederik W. R.
Royal Mfg. Co. of Duquesne: *See*—
Royal Pharmacal Corp.
Royal Pharmacal Corp., d.b.a. Royal Mfg. Co. of Duquesne, to Pennex Products Co., Verona, Pa. 510,266, new cert. Cl. 6.
Rubbercrete Ltd., Toronto, Ontario, Canada. 645,308, canc. Cl. 12.
Rudberg, Leon, d.b.a. Leon Rudberg Jewelry Co., Dallas, Tex. 752,061, pub. 4–16–63. Cl. 28.
Rudberg, Leon, Jewelry Co.: *See*—
Rudberg, Leon.
Russell, Lillian, Inc.: *See*—
Russell, Lillian, Originals, Inc.
Russell, Lillian, Originals, Inc. Lillian Russell, Inc., Mobile, Ala. 655 053. Am. 7(d). Cl. 39.
Rustic Crafts Co. Inc., The, Englewood, N.J. 752,003, pub. 4–16–63. Cl. 21.
Ryan Aeronautical Co., The, San Diego, Calif. 751,967, pub. 4–16–63. Cl. 19.
S & M Jewelry Co., New York, N.Y. 752,056, pub. 4–16–63. Cl. 28.
S.M.W. Buying Syndicate, Inc., Inc., New York, N.Y. 752,163, pub. 4–16–63. Cl 39.
S. W. Virginia Tire Co., Inc., d.b.a. Richlands Metal Prods., Richlands, Va. 751,963, pub. 4–16–63. Cl. 19.
Sabine Chemical Co., Inc., Port Arthur, Tex. 751,881, pub. 4–16–63. Cl. 6.
Sales Affiliates, Inc., New York, N.Y. 747,758, cor. Cl. 51.
Samuel Stamping & Enameling Co., Chattanooga, Tenn. 738,655, canc. Cl. 34.
Sanchez & Haya Co., by Gradiaz, Annis & Co., Inc., Tampa, Fla. 238,627, 12(c) pub. 7–2–63. Cl. 17.
Sanders Associates, Inc., Nashua, N.H. 751,920, pub. 4–16–63. Cl. 13.
Sanders Associates, Inc., Nashua, N.H. 752,042, pub. 4–16–63. Cl. 26.
Schenley Import Corp., d.b.a. Compania Ron Carioca, New York, N.Y. 752,242, pub. 4–16–63. Cl. 49.
Schering Corp., to Schering Corp., Bloomfield, N.J. 682,793, new cert. Cl. 18
Schering Corp., Bloomfield, N.J. 751,949, pub. 4–16–63. Cl. 18.
Schreiber, A. H., Co. Inc., New York, N.Y. 752,172, pub. 2–5–63. Cl. 39.
Scientific Instruments Co.: *See*—
Ellis, Fred, Jr.
Scott and Turner, Ltd., Newcastle-On-Tyne, England, to Sterling Products International, Inc., New York, N.Y. 174,944, ren. 7–2–63. Cl. 18.
Seinemeier, Hanns G., d.b.a. H. G. Seinemeier & Co., Munich, Germany. 752,239, pub. 4–16–63. Cl. 49.
Sechrist Chemicals, Inc., Bayonne, N.J. 751,870, pub. 4–16–63. Cl. 1.
Seinemeier, H. G., & Co.: *See*—
Seinemeier, Hanns G.
Several Products Co., Inc., College Point, N.Y. 752,259, pub. 4–16–63. Cl. 52.
Service and Research, Inc., Springdale, Ark. 751,955, pub. 4–16–63. Cl. 18.
Shell Oil Co., New York, N.Y. 645,324, canc. Cl. 15.
Shinn Industries, Inc., Santa Ana, Calif. 751,957, pub. 4–16–63. Cl. 19.
Siangelis Associates, Inc., New York, N.Y. 751,894, pub. 4–16–63. Cl. 6.
Siegler Corp., The: *See*—
Lear Siegler, Inc.
Sigma Instruments, Inc., South Braintree, Mass. 752,005, pub. 4–16–63. Cl. 212.
Silten, Ernst, Berlin, Germany, by Silten Ltd., Hatfield, England. 279,072, 12(c) pub. 7–2–63. Cl. 18.
Silten, Ernst, Berlin, Germany, by Silten Ltd., Hatfield, England. 280,242, 12(c) pub. 7–2–63. Cl. 18.
Silten, Dr. Ernst, Berlin, Germany, by Silten Ltd., Hatfield, England. 299,616, 12(c) pub. 7–2–63. Cl. 18.
Silten Ltd.: *See*—
Silten, Ernst.
Silver Knit Hosiery Mills, Inc., High Point, N.C. 752,161, pub. 4–16–63. Cl. 39.
Singing Needles, Inc., Leola, Pa. 752,205, pub. 4–16–63. Cl. 42.
Sky-Kool, Inc., New Orleans, La. 752,103, pub. 4–16–63. Cl. 34.
Slack-ees Corp., New York, N.Y. 752,162, pub. 2–5–63. Cl. 39.
Slevin, Julian B., Co., Fast Lansdowne, Pa. 645,268, canc. Cl. 2.
Smith, Frank, Silver Co., Gardner, Mass. 645,390, canc. Cl. 28.
Smokador Mfg. Co. Inc.: *See*—
Smokadore Co., The.
Smokadore Co., The, San Francisco, Calif., to Smokador Mfg. Co., Inc., Bloomfield, N.J. 165,697, ren. 7–2–63. Cl. 8.
Society of Chemical Industry in Basel, Basel, Switzerland, to Ciba Corp., New York, N.Y. 401,510, ren. 7–2–63. Cl. 18.
Socony Mobil Oil Co., Inc., New York, N.Y. 645,320, canc. Cl. 15.
Socony Paint Products Co.: *See*—
Standard Oil Co. of New York.
Southern Coal & Coke Co., The, Cincinnati, Ohio, to Perkins-Harlan Coal Co., Inc., Liggett, Ky. 168,689, ren. 7–2–63. Cl. 1.
Southern Roofing Co.: *See*—
Anderson, James E.
Specific Serums Inc., Hoboken, N.J. 751,948, pub. 3–5–63. Cl. 18.
Sportex G.m.b.H., Ulm/Donau, Germany. 645,360, canc. Cl. 22.
Strong & Cobb Co., The, to Pennex Products Co., Verona, Pa. 102,202, new cert. Cl. 18.
Standard Distillers Products, Inc., Baltimore, Md. 645,553, canc. Cl. 49.
Standard Milling Co.: *See*—
Hecker-Jones-Jewell Milling Co.
Standard Oil Co. of New Yerk, New York, N.Y., to Socony Paint Products Co., Metuchen, N.J. 166,013, ren. 7–2–63. Cl. 16.
Standard Oil Co. Humble Oil & Refining Co., Houston, Tex. 168,137. Am. 7(d). Cl. 6.
Stanley Creations: *See*—
Needles, Stanley.
Stanley Publishing Co., Chicago, Ill. 752,266, pub. 4–16–63. Cl. 101.
State Produce Brokers: *See*—
Gioia, Carl.
Stauffer Chemical Co.: *See*—
Maas, A. R., Chemical Co.
Steel-Tex Mfg. Corp., Farmington, Mich. 752,029, pub. 4–16–63. Cl 23.
Stein & Ellbogen Co.: *See*—
Henshel Co. Inc., The.
Stephens Trusonic, Inc., Culver City, Calif. 751,981, pub. 4–16–63. Cl. 21.
Sterling Products International, Inc.: *See*—
Scott and Turner, Ltd.
Stevens, J. P., & Co., Inc., New York, N.Y. 752,209, pub. 4–16–63. Cl. 42.
Stevens, J. P., & Co., Inc., New York, N.Y. 752,212, pub. 4–16–63. Cl. 42.
Steven Laboratories, Inc., Clayton, Mo. 751,950–1, pub. 4–16–63. Cl. 18.
Stiefel Laboratories, Inc., Oak Hill, N.Y. 751,939, pub. 1–17–61. Cl. 18.
Stone Mfg. Co., Greenville, S.C. 752,164, pub. 4–16–63. Cl. 39.
Straus Findings, Inc., New York, N.Y. 752,075, pub. 4–16–63. Cl. 28.
Sulfio, Inc., Elizabeth, N.J. 403,450, ren. 7–2–63. Cl. 15.
Sunbeam-Talbot Ltd.: *See*—
Humber Ltd.
Sunday School House, The: *See*—
Gospel Light Publications.
Supplee-Biddle Hardware Co., Philadelphia, Pa. 343,254, canc. Cl. 25.
Supplee-Biddle Hardware Co., d.b.a. Crown Mfg. Co., Philadelphia, Pa. 343,614, canc. Cl. 22.
Supplee-Biddle Hardware Co., Philadelphia, Pa. 344,062, canc. Cl. 23.
Sure-Seal Equipment Co., Portland, Oreg. 752,119, pub. 4–16–63. Cl. 35.
Surgical Balm Co.: *See*—
Cosman, Charles F.
Systems Engineering and Mfg. Co., Inc., Houston, Tex. 752,021, pub. 10–9–62. Cl. 23.
Szegvari, Andrew, d.b.a. Union Process Co., Akron, Ohio. 645,282, canc. Cl. 6.
T.B.T.-Societe d'Etude et de Construction d'Appareillages pour Tres Basses Temperatures, Grenoble, Isere, France. 752,088, pub. 4–16–63. Cl. 31.
Taylor-Winfield Corp., The, Warren, Ohio. 751,988, pub. 4–16–63. Cl. 21.
Texize Chemicals, Inc.: *See*—
Beacon Chemical Corp.
Thomas Industries Inc., Louisville, Ky. 752,104, pub. 4–16–63. Cl. 34.

Thomas, Robert J., Dearborn, Mich. 752,275. Cl. 19.
Thompson and Sons, Inc., Lyons, Ill. 751,997, pub. 4–16–63. Cl. 21.
Tiktin, Abraham, Mexico City, Mexico. 645,385, canc. Cl. 28.
Time Records, Inc., New York, N.Y. 752,126, pub. 4–16–63. Cl. 36.
Times Telephoto Equipment Inc., New York, N.Y., to Litton Systems, Inc., Beverly Hills, Calif. 401,601, ren. 7–2–63. Cl. 21.
Todd Recording Corp., Nashville, Tenn. 752,125, pub. 4–16–63. Cl. 36.
Tri-Lok Co., The, to Blaw-Knox Co., Pittsburgh, Pa. 645,318, canc. Cl. 12.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 402,321, ren. 7–2–63. Cl. 1.
Tufline Plastics, Inc., Menomonee Falls, Wis. 751,898, pub. 4–16–63. Cl. 7.
Turin Jewelry Ltd., New York, N.Y. 752,069, pub. 4–16–63. Cl. 28.
Union Process Co.: *See*—
Szegvari, Andrew.
Union Oil Co. of California, Los Angeles, Calif. 751,893, pub. 4–16–63. Cl. 6.
United-Carr Fastener Corp., Boston, Mass. 751,979, pub. 4–16–63. Cl. 21.
United Co-Operatives, Inc., Alliance, Ohio. 751,934–5, pub. 4–16–63. Cl. 15.
United-Heckathorn, to Abbott Laboratories, North Chicago, Ill. 686,529, new cert. Cl. 10.
United Salt Corp.: *See*—
Gulf Salt Co.
United States Gypsum Co., Chicago, Ill. 167,733, ren. 7–2–63. Cl. 12.
United States Rubber Co., New York, N.Y. 402,412, 12(c) pub. 7–2–63. Cl. 35.
United States Rubber Co., New York, N.Y. 752,183–4, pub. 4–16–63. Cl. 39.
Universal Drafting Machine Co., to Universal Drafting Machines Corp, Cleveland, by Universal Drafting Machine Corp., Medford Heights, Ohio. 443,176, 12(c) pub. 7–2–63. Cl. 26.
Universal Drafting Machine Corp.: *See*—
Universal Drafting Machine Co.
Universal Foods Corp., Milwaukee, Wis. 752,231, pub. 4–16–63. Cl. 46.
Upjohn Co., The, Kalamazoo, Mich. 751,944, pub. 4–16–63. Cl. 18
Valmor Products Co., Chicago, Ill. 752,247, pub. 1–10–61. Cl. 51.
Valspar Corp., The, d.b.a. Mighty-Mix Co., Rockford, Ill. 751,911, pub. 4–16–63. Cl. 12.
Varta Aktiengesellschaft, from Accumulatoren-Fabrik Aktiengesellschaft, Frankfurt am Main, Germany. 751,996, pub. 4–16–63. Classes 21 and 26.
Vereinigte Panierwerke Schickedanz & Co., Nurnberg, Germany. 686,088. canc. Cl. 44.
Vereinigte Panierwerke Schickedanz & Co., Nurnberg, Germany. 715,156. canc. Cl 44.
Victrylite Candle Co., Oshkosh, Wis. 751,933, pub. 4–16–63. Cl. 15.
Village Craft Shop, The: *See*—
Kline, Arlie S.
Wain, Harry C., d.b.a. Raytech Equipment Co., Somers, Conn. 751,983, pub. 10–30–62. Cl. 21.
Wales Mfg. Co., Boston, Mass. 752,196, pub. 4–16–63. Cl. 39.
Wallace Silversmiths, Inc., Wallingford, Conn. 645,403, canc. Cl 28.
Waltham Watch Co., Waltham, Mass., by Waltham Watch Co., Chicago, Ill. 401,424, 12(c) pub. 7–2–63. Cl. 27.
Wasco Supply Co., Kansas City, Kans. 751,927, pub. 4–16–63. Cl. 14.
Water Queen Corp.: *See*—
Bexell Associates, Inc.
Wechsler, Daniel A., d.b.a. Wechsler Fabrics Co., New York, N.Y. 645,475, canc. Cl. 42.
Wechsler Fabrics Co.: *See*—
Wechsler, Daniel A.
Weil, Gabe B., Dallas, Tex. 752,261–62, pub. 4–16–63. Cl. 52.
Wells & Coverly, Inc., Troy, N.Y. 752,198, pub. 4–16–63. Cl. 39.
Wembley, Inc., New Orleans, La. 752,185–86, pub. 4–16–63. Cl. 39.
West, I. B., & Co., New York, N.Y. 645,381, canc. Cl. 28.
Western Sewing Machine Distributors, Inc., St. Louis, Mo. 752,016, pub. 4–16–63. Cl. 23.
Westfield Mfg Co., by The Columbia Mfg. Co. Inc., Westfield, Mass. 169,254, 12(c) pub. 7–2–63. Cl. 19.
Westinghouse Electric Corp.: *See*—
Westinghouse Electric & Mfg. Co.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., to Westinghouse Electric Corp., Pittsburgh, Pa. 168,882, ren. 7–2–63. Cl. 15.
Whipple Co., The, Natick, Mass. 413,240, 12(c) pub. 7–2–63. Cl. 46.
Whipple Co., The Natick, Mass. 413,325, 12(c) pub. 7–2–63. Cl. 46.
Whipple Co., The, Natick, Mass. 407,493, 12(c) pub. 7–2–63. Cl. 45.
Whitaker, F., Co., Providence, R.I. 645,388, canc. Cl. 28.
White Rock Uniform Co., Inc., New York, N.Y. 752,160, pub. 4–16–63. Cl. 39.
Willys Motors, Inc., Toledo, Ohio. 751,966, pub. 4–16–63. Cl. 19.
Wilson & Glenny Ltd., Hawick, Scotland. 167,485, ren. 7–2–63. Cl 42.
Wilson Welder and Metals Co. Inc., to Air Reduction Co., Inc., New York, N.Y. 401,267, ren. 7–2–63. Cl. 21.
Witco Chemical Co., Inc., New York, N.Y. 752,257, pub. 3–5–63. Cl. 52.
Woodard Foods, Inc., St. Louis Park, Minn. 645,494, canc. Cl. 46.
Wool "O" Co., The: *See*—
Philadelphia Rug Mills, Inc.
Woolworth, F. W., Co., New York, N.Y. 751,994, pub. 4–16–63. Cl. 21.
Xtrium Laboratories, Inc., d.b.a. Blue Ridge Vitamin Co., Chicago, Ill. 752,254, pub. 2–26–63. Cl. 51.
York, Christopher, Lighting, Inc., Chicago, Ill. 751,999, pub. 4–16–63. Cl. 21.
Zimmerman, Jay V., Co., St. Louis, Mo. 645,362, canc. Cl. 22.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

DIRECTORY FOR REORGANIZED PATENT EXAMINING OPERATIONS

	Room	Phone
CHEMICAL EXAMINING OPERATION—P. E. Mangan, Director	4701	5161
General Chemistry, Group **110**—R. L. Campbell	4083	2856
General Organic Chemistry, Group **120**—I. Marcus	4733	2806
Petroleum Chemistry, Group **130**—J. S. Bailey	4618	2831
High Polymer Chemistry, Group **140**—M. Sterman	4706	2850
Compositions and Molding, Group **150**—L. H. Gaston	4091	2864
Coating and Laminating, Group **160**—J. Rebold, Acting	4629	2825
Specialized Chemical Arts and Industries, Group **170**—W. B. Knight	4063	2863
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Information Transmission, Group **230**—S. W. Capelli	6516	2841
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Radiation and Instruments, Group **260**—F. M. Strader	6086	2854
Elements, Group **270**—E. J. Sax	6625	2837
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. Wahl, Director	7701	5175
Material or Article Handling and Dispensing, Group **310**—A. Berlin	7064	2835
Metal and Plastics Working, Group **320**—N. Berger	7620	2815
Manufacturing and Assembling Miscellaneous Articles, Group **330**—A. Horton	2088	2514
Machine Tools, Mechanisms, and Elements, Group **340**—F. Bronaugh	4057	2858
Hardware Tools and Joints, Group **350**—T. Hickey	7868A	2857
Fluid Handling, Group **360**—E. Paul	7838	2839
Power Plants, Motor and Pumps, Group **370**—C. Gareau	7842	2818
Heating, Cooling and Ventilating, Group **380**—P. Patrick	7087B	2819
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—		
J. A. Manian, Director	5701	3711
Agriculture, Group **410**—A. Ruegg	5891	2501
Civil Engineering, Group **420**—B. Bendett	3885	2549
Physics, Group **430**—R. L. Evans	5898C	2523
Textiles and Apparel, Group **440**—R. C. Mader	7898C	2521
Transportation, Group **450**—P. Arnold	5600	2547
Furniture and Receptacles, Group **460**—W. S. Cole	5609	2552
Printing, Stationery and Material Treatment, Group **470**—L. W. Varner	3510	2517
Personal Treatment, Adornment and Amusement, Group **480**—L. R. Prince	2320	2562
Designs—J. A. Manian	614DNB	2423

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 9, 1963 Volume 792 Number 2

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of May 1963

Examiner affirmed	351
Examiner affirmed in part	52
Examiner reversed	103
Total	506

Order No. 5315

Jerome W. Paxton of Washington, D.C. whose registration number is 15,517, is hereby excluded, beginning on January 25, 1963, from practice as a patent agent in any application before the United States Patent Office, without prejudice to his re-registration, upon a sufficient showing, after a period of not less than one year.

This action is taken under the provisions of Section 32 of Title 35 of the United States Code and Rule 348 of the Rules of Practice of the United States Patent Office in Patent Cases.

EDWIN L. REYNOLDS,
Jan. 25, 1963. *First Assistant Commissioner of Patents.*

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

United States District Court for the District of Columbia

Pre-Trial Briefs—Patent Cases

So long as I am assigned to hearing patent cases in the District Court, all pre-trial briefs in such cases shall be filed with the Assignment Commissioner 48 hours prior to the trial date, *and shall not be accepted for filing by the Clerk's Office.*

May 21, 1963. JOSEPH R. JACKSON,
Judge.

Transcripts—Patent Cases

Stipulations reflecting modifications in transcripts of patent cases shall be in all cases approved by the Court prior to their being filed with the Clerk of the District Court.

June 3, 1963. JOSEPH R. JACKSON,
Judge.

Directory for Reorganized Patent Examining Operations

The movement of all Examining Groups, incident to the reorganization of the Patent Examining Corps is now complete.

For your convenience, a yellow tear sheet, which provides a complete listing of room and telephone numbers of each Director and Supervisory Examiner as of May 15, 1963, is included as the last page of this issue of the OFFICIAL GAZETTE.

Patents Available for Licensing or Sale

3,027,663. Garment Press Attachment. Earl R. Frahm, 3669 Belle St., San Bernardino, Calif.

3,045,363. Device for Teaching, Particularly for the Teaching of Drawing. Charles Emile Kaestle, Meurthe-et-Moselle, France. Correspondence to: Woodhams, Blanchard and Flynn, 203 State Theatre Building, Kalamazoo, Mich.

3,083,324. Phase Modulated Positioning Servo-System. Dietrich Wolff, Zurich, Switzerland. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,091,414. Pool Cover Dolly. Henry A. Patnaude, 831 Los Molinos Way, Sacramento 25, Calif.

3,086,240. Device for Eliminating Flying Fibre From Textile Machines, Particularly Spinning and Doubling Frames. Helmut Berberich, et al. Correspondence to: Woodhams, Blanchard and Flynn, 203 State Theatre Building, Kalamazoo, Mich.

3,092,327. New Orchard Spray Mechanism. R. H. Fish, P.O. Box 337, Morgan Hill, Calif.

General Electric Company is prepared to grant non-exclusive licenses under the following 3 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1285 Boston Ave., Bridgeport 2, Conn.

3,039,989. Curable Polyethylene Containing Basic Lead Carbonate and a Peroxide Curing Agent.

3,061,594. Vulcanization Treatments.

Applications for license under the following patent may be addressed to: Patent Attorney, Specialty Control Department, General Electric Company, Waynesboro, Va.

3,064,174. Motor Speed Control Circuits.

Patent Withdrawn From Register

General Electric Company hereby withdraws from the Register of Patents Available for Licensing or Sale the following patent. The patent was listed in the OFFICIAL GAZETTE as indicated below:

2,846,560. Heater Wire. May 19, 1959.

New Applications Received During May 1963

Patents	7,692
Designs	475
Plant Patents	7
Reissues	23
Total	8,197

Issue

Patents	838—No.	3,096,522	to No.	3,097,359, incl.
Designs	46—No.	195,617	to No.	195,662, incl.
Reissues	4—No.	25,411	to No.	25,414, incl.
Total	888			

GUIDELINES OF PATENTABILITY

On June 17, 1963, the memorandum reproduced below was distributed to the Examiners in the Patent Office. It is presented here for the information of all applicants and their representatives.

Memorandum #1 (GP1)

The following principles have been formulated after careful consideration of the applicable court decisions and after consultation with the Board of Appeals of the Patent Office, and will be supplemented or revised from time to time as circumstances may require. The principles stated here and in future "Guidelines of Patentability" memoranda should be uniformly followed until further notice.

GP1(*a*) : *Uniform Application of the Statutory Requirements for Patentability*

The standards of patentability applied in the examination of claims must be the same throughout the Office. In every art, whether it be considered "complex," "newly developed," "crowded," or "competitive," all of the requirements for patentability (e.g., novelty, usefulness and unobviousness, as provided in 35 U.S.C. 101, 102 and 103) must be met before a claim is allowed. Hence, the mere fact that a claim recites in detail all of the features of applicant's alleged invention (i.e., a "redbutton" or "picture" claim) is never, in itself, justification for the allowance of such a claim.

GP1(*b*) : *Multiple Rejections*

As a general rule, an Examiner should reject each claim of an application on all distinct, valid grounds that are available to him. Stated in another manner, each claim should be rejected on any ground available which, if not applied, could subsequently be utilized by a court to hold the same claim in a patent invalid.

Thus rejections on such grounds as insufficient disclosure, indefiniteness, and res judicata should be applied where appropriate even though there may be a seemingly sufficient rejection on the basis of prior art. However, prior art rejections should not be needlessly multiplied but should ordinarily be confined to the best available art. Rejections which are merely cumulative or which would clearly fall if the primary rejection is not sustained should be avoided. Exceptions may properly be made where the most pertinent reference seems likely to be antedated or where a claim is met only in terms by a reference which does not disclose the inventive concept involved. Such rejections should be backed up by the best other art available.

A number of situations have been found to exist where examination of an application is best accomplished by limiting action on the claims thereof to the particular issue involved. These situations are as follows:

(1) Where an application is too informal for a complete action on the merits—see section 702.01, M.P.E.P.;
(2) Where there is an undue multiplicity of claims—see section 706.03(1), M.P.E.P.;
(3) Where there is a misjoinder of invention—see section 806.02, M.P.E.P.;
(4) Where the disclosure is directed to perpetual motion—note *Ex parte Payne*, 1904 C.D. 42, 108 O.G. 1049.

However, in such cases, the best prior art readily available should be cited without specifically applying it to the claims.

On the other hand, a rejection on the grounds of inoperativeness (not involving perpetual motion), *res judicata*, no *prima facie* showing for reissue, or new matter should be accompanied by all other available grounds of rejection.

GP1(*c*) : *Old Combination*

A rejection on the ground of old combination should be made whenever proper.

Whether subcombination claims have been presented or allowed in the same application, or whether other grounds for rejection of the combination claims exist, are not determinative of the propriety of this rejection.

The rejection is proper when a single reference discloses broadly a combination of elements functionally cooperating in substantially the same manner to produce substantially the same results as that of the claimed combination under consideration. *Ex parte Silverstein*, 125 U.S.P.Q. 238.

The fact that an applicant has improved one element of a combination which may be per se patentable does not entitle him to a claim to the improved element in combination with old elements where the elements perform no new function in the claimed combination. *In re Hall*, 41 CCPA 759. The test to be applied to claims of this character is whether or not the action of any of the elements embraced by the claim is modified in any material manner by the fact that another element has the specific structure recited. *In re Allatt*, 28 CCPA 1367.

Accordingly, the rejection should make it clear exactly what the combination is and why it is thought that any improved element does not modify the action of the combination.

A suggested form for use in making an old combination rejection is as follows:

> Claim 1 is rejected as being drawn to the old combination of a bell, a battery and a switch connected in series by wire conductors. This combination is shown to be old by the patent to Jones which discloses broadly the same elements functionally interrelated in the same manner to produce substantially the same results. The combination of claim 1 differs from that shown in Jones in setting forth a specific construction of the battery itself. Since the latter does not modify the action of the other elements recited in the claim in any material manner, no new combination is seen to exist. *In re Hall*, 41 CCPA 759.

GP1(*d*) : *Inherent Function of the Apparatus*

Process or method claims which merely define the function of applicant's machine or apparatus are not allowable.

A rejection on this ground is proper where the disclosed machine will inherently carry out the steps set forth in the process claims regardless of whether an apparatus claim is allowed, unless it appears that the process claimed can be carried out either by some machine which is not the functional equivalent, i.e., having materially different functional characteristics from the disclosed machine, or by hand. *In re Gartner et al.*, 42 CCPA 1022. The performance of a process by hand is not necessarily limited to the use of hands alone, but includes the use of prior art apparatus actuated by hand. *In re Winder*, 44 CCPA 795.

GP1(*e*) : *Obvious Method*

It is well settled that a process which amounts to nothing more than an obvious manner of producing an article or product is not patentable.

While a rejection on this ground does not require the citation of art or the allowance of any claim, it must be apparent to a person ordinarily skilled in the art, without reference to any method disclosure contained in the application, how the article was made. In other words, the rejection is proper if such a person would be able, upon the basis of his own knowledge, to produce the article merely by having it shown to him or by being told what ingredients it contained. Note *In re Larsen*, 49 CCPA 711.

June 17, 1963.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	10-6-61	9-14-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	2-2-62	2-9-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	12-7-61	11-17-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6-27-61	7-20-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-1-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	12-4-61
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	11-24-61	10-11-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-11-62	1-25-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-28-61	10-16-61
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	12-1-61	1-3-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-6-61	10-9-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	11-16-61	11-7-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	11-1-61	11-3-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	11-9-61	11-3-61

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1963

Total number of pending applications (excluding Designs)	200, 178
Total number of Design applications pending	6, 195
Total number of applications awaiting action (excluding Designs)	115, 956
Total number of Design applications awaiting action	2. 329
Date of oldest new application awaiting action	June 27, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,402,939 to 2,405,106, inclusive

Plant Patents ..... Numbers 702 to 706 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-5-62	2-26-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	12-13-61	12-21-61
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	1-31-62	12-4-61
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	1-16-62	1-15-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	1-12-62	9-20-61
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner..... Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	2-28-62	3-12-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner..... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-5-62	3-5-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner..... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	1-17-62	1-8-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner..... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	5-25-62	7-2-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner..... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-19-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-6-62	2-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner..... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-2-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner..... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	2-12-62	2-5-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner..... Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	4-16-62	5-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner..... Printing; Typewriters; Stationery; Material Treatment.	1-15-62	12-12-61
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner..... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	3-9-62	3-5-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner..... Industrial Arts; Household, Personal and Fine Arts.	12-26-62	12-18-62
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....		
93. PURDY, W. F. (acting), Wire Working.....	6-8-62	6-1-62
94. BERLOWITZ, W.....	8-6-62	10-15-62
95. ANGEL, C. D., (REZNEK, J., acting).....		

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Commissioner's Decision

JOHN PRESPER ECKERT, JR. *v.* PAUL A. REILING

Interference No. 91,280. Decided January 8, 1962

1. INTERFERENCE—DISSOLUTION—RULES 225 AND 237.

"The petitioner contends that 'the prohibition of Rule 225 restricting a junior party under an order to show cause to matters ancillary to priority in motions to dissolve also runs to the Primary Examiner proceeding under Rule 237.' Therefore, he urges that the Primary Examiner cannot dissolve an interference on his own motion on a ground not ancillary to priority where a junior party is under an order to show cause. No authority, directly in point, has been cited by petitioner to support this position and none has been found. Rule 237 of the Rules of Practice contains no express statement restricting the Primary Examiner in the manner alleged by petitioner."

2. SAME—PETITION—MANIFEST ERROR.

"* * * the holding by the Primary Examiner on the question of double patenting is one which may be reviewed ex parte upon appeal. Under such circumstances, the ruling of the Primary Examiner cannot properly be disturbed on petition in the absence of a showing of manifest error amounting virtually to an abuse of discretion."

Charles C. English for John Presper Eckert, Jr.

R. J. Guenther for Paul A. Reiling.

ON PETITION.

DENIED.

REYNOLDS, *First Assistant Commissioner.*

The party Reiling has filed a petition to the Commissioner requesting that he exercise his supervisory authority to vacate that portion of the Primary Examiner's decision dissolving the above identified interference, and to direct the entry of an award of priority to the petitioner.

The record in this case reveals that while the junior party Eckert, was under an order to show cause, he filed a motion to dissolve the interference on the grounds that (1) the single count was not readable on the Reiling disclosure and (2) the single count was not patentable to the party Reiling on the basis of double patenting. No opposition to the setting of this motion for hearing was made by the party Reiling. After a hearing on the motion by Eckert, the Primary Examiner rendered a decision in which he held (1) that the disclosure of the party Reiling did support the count and (2) granted the party Eckert's motion to dissolve, on the ground of double patenting.

On reconsideration, the Primary Examiner amended his original decision to the extent that he vacated the granting of Eckert's motion to dissolve and substituted a decision dissolving the interference on his own motion under Rule 237 on exactly the same grounds.

[1] The petitioner contends that "the prohibition of Rule 225 restricting a junior party under an order to show cause to matters ancillary to priority in motions to dissolve also runs to the Primary Examiner proceeding under Rule 237." Therefore, he urges that the Primary Examiner cannot dissolve an interference on his own motion on a ground not ancillary to priority where a junior party is under an order to show cause. No authority, directly in point, has been cited by petitioner to support this position and none has been found. Rule

237 of the Rules of Practice contains no express statement restricting the Primary Examiner in the manner alleged by petitioner.

[2] While the setting of the motion for hearing does not appear to have been in accordance with the rules, the holding by the Primary Examiner on the question of double patenting is one which may be reviewed ex parte upon appeal. Under such circumstances, the ruling of the Primary Examiner cannot properly be disturbed on petition in the absence of a showing of manifest error amounting virtually to an abuse of discretion. The Primary Examiner's decision has been carefully viewed in the light of the present petition, but no such error has been found therein.

Petitioner's attention is directed to Rule 257 of the Rules of Practice under the provisions of which the presumption that Reiling is the senior party will not be disturbed by dissolution. Therefore, it does not appear that he is materially damaged by the fact that the interference is terminated by dissolution rather than by an award of priority.

The petition is accordingly denied.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,308,361, R. E. Fearon, Well logging method and device; **2,554,844**, L. M. Swift, Casing collar locator; **2,711,084**, R. A. Bergan, Refrigeration system for well logging instruments; **2,810,076**, E. S. Mardock, Process for making a well log with radioactive tracers; **2,933,609**, R. G. Norelvis, Radioactivity well surveying; **2,942,112**, D. P. Hearn, Multiple well logging system; **2,945,129**, Swift and Barkalow, Calibrator for radioactivity well logging instruments; **2,967,994**, G. Peterson, Casing joint locator; **2,985,822**, H. W. Georgi, Modulation system for casing collar locators; **3,007,109**, G. Swift, Apparatus for detecting casing joints, **filed** Jan. 4, 1963, D.C. Kans. (Wichita), Doc. W–2767, *Well Surveys, Inc.* v. *Great Guns, Inc.* Consent judgment: complaint dismissed as to Patents 2,308,361, 2,711,084, 2,810,076, 2,933,609, 2,945,129, 2,985,822 and 3,007,109. Other patents infringed; defendant enjoined (notice Apr. 2, 1963).

2,445,322, M. C. Fridolph, Body garment; **2,707,280**, E. G. Mayer, Girdles, **filed** Dec. 19, 1962, D.C., S.D.N.Y., Doc. 62/4116, *Sarong, Inc.* v. *Foremost Foundations, Inc. et al.* Consent judgment; patents held valid and infringed; defendants enjoined Mar. 28, 1963.

2,481,979, R. H. Colley, Filtering device for a clothes-washing machine; **2,883,843**, J. Bochan, Clothes washer with liquid recirculation system, **filed** Nov. 15, 1962, D.C., W.D.N.Y. (Buffalo), Doc. 10/002, *Blackstone Corporation* v. *General Electric Company.*

2,491,646, H. M. Coleman et al., Process for treating animal materials, **filed** June 24, 1960, D.C., N.D. Ohio (Toledo), Doc. 8449, *B. Heller & Company* v. *Basic Food Materials, Inc.* Decree holding patents valid and each of the claims thereof infringed; injunction granted (notice Mar. 25, 1963).

2,510,438, K. M. Tuohy, Contact lens, **filed** Mar. 30, 1961, D.C., E.D. Tex. (Beaumont), Doc. 4426, *Solex Laboratories et al.* v. *Rogers Brothers Wholesalers.* Texas State Optical Company dismissed and Rogers Brothers Wholesalers made defendants and Plastic Contact Lens Company added as a plaintiff Mar. 26, 1963. Order of dismissal with prejudice Mar. 26, 1963.

2,523,182, R. Battaglia, Steelflex tire, **filed** Mar. 28, 1963, D.C., W.D. La. (Shreveport), Doc. 9409, *Robert Battaglia* v. *United States Rubber Company.*

2,554,844. (See 2,308,361.)

2,569,079, M. E. Special, Shoe sanitizers, **filed** Apr. 3, 1963, D.C., S.D.N.Y., Doc. 63/948, *Atlantic Ultraviolet Co., Inc.* v. *American Machine & Foundry Co. et al.*

2,621,757, E. Anderson, Extendable and collapsible filter bag; **2,737,263**, same, Vacuum cleaner filter bag, **filed** June 24, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–608, *Electrolux Corporation* v. *Dust Pack, Ltd. et al.* Judgment dismissing action on the merits Mar. 25, 1963.

2,691,958, A. P. Lage, Wind oriented livestock dispenser, **filed** June 23, 1961, D.C. Nebr. (Omaha), Doc. 440–L, *Arthur P. Lage* v. *Caldwell Mfg. Company.* Order holding patent invalid; cause dismissed Apr. 3, 1963.

2,707,280. (See 2,445,322.)

2,711,084. (See 2,308,361.)

2,713,683, L. L. Krieger, Brassieres, **filed** June 12, 1961, D.C.N.J. (Newark), Doc. 464/61, *International Latex Corporation* v. *Regent Corset Company.* Consent judgment; injunction granted Apr. 2, 1963.

2,736,898, Lax and Hine, Brassiere, **3,024,789**, P. Amyot, same, **filed** Dec. 26, 1962, D.C., S.D.N.Y., Doc. 62/4174, *Sarong, Inc.* v. *Splendor Form Brassiere Co., Inc.* Consent judgment; patents held valid and infringed; defendant enjoined Mar. 28, 1963.

2,737,263. (See 2,621,757.)

2,775,383, Kollman and Beck, Food packaging assembly; **2,960,255**, J. B. Beane, Polygonal foil container, **filed** Apr. 3, 1963, D.C.N.J. (Camden), Doc. 279/63, *Ekco Containers, Inc.* v. *Penny Plate, Inc.*

2,807,080, G. R. Mathews, Sr., Bearing puller, **filed** Apr. 5, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–240, *Thomas J. Mathews et al.* v. *Neumeyer Motor Parts, Inc.*

2,810,076. (See 2,308,361.)

2,828,194, Hopkins and Easley, Etching, **filed** Apr. 4, 1963, D.C., W.D.S.C. (Greenville), Doc. 4313, *The Dow Chemical Company* v. *Frederick John Locke et al.*

2,883,843. (See 2,481,979.)

2,933,609. (See 2,308,361.)

2,942,112. (See 2,308,361.)

2,945,129. (See 2,308,361.)

2,960,255. (See 2,775,383.)

2,967,994. (See 2,308,361.)

2,985,882. (See 2,308,361.)

3,007,109. (See 2,308,361.)

3,024,789. (See 2,308,361.)

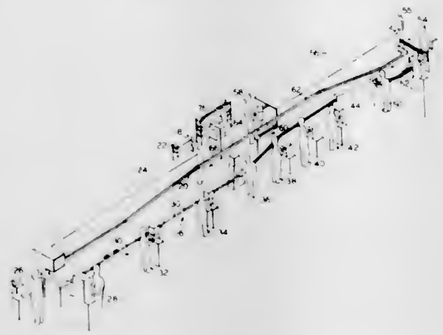
Re. 24,954, H. Church, Apparatus for filtering solids from gas-solids suspensions, **filed** Jan. 18, 1963, D.C., M.D. Pa. (Scranton), Doc. 7980, *The Slick Corporation* v. *Young Machinery Co., Inc.*

REISSUES

JULY 9, 1963

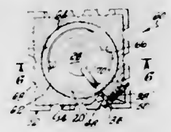
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,411
METHOD OF MANUFACTURING SHOES
Morton S. Bromfield, 76 Rolling Lane, Weston, Mass.
Original No. 2,973,530, dated Mar. 7, 1961, Ser. No. 810,807, May 4, 1959. Application for reissue Feb. 28, 1963, Ser. No. 262,303
5 Claims. (Cl. 12—142)



5. The method of shoemaking including the steps of mulling and lasting a leather upper, the mulling being controlled to add to the surface zone of the leather upper only sufficient moisture to increase the flexibility of said surface zone, and subjecting the lasted upper to heat treatment to withdraw the mulling moisture before it pervades the center zone of said upper.

25,412
ELECTRICAL RESISTOR
Marlan E. Bourns, 2530 Piedmont Drive, Riverside, Calif.
Original No. 2,989,718, dated June 20, 1961, Ser. No. 839,767, Sept. 14, 1959, which is a division of Ser. No. 519,847, July 5, 1955. Application for reissue May 3, 1962, Ser. No. 193,650
12 Claims. (Cl. 338—150)



1. A new and improved variable resistor which includes: a housing including means defining a cavity within said housing; an electrical resistance member disposed within said cavity, and an electrical return means for said resistance member disposed within said cavity; a movable ring seated within said cavity; a screw carried by said housing adapted to move said ring, said screw projecting to the exterior of said housing and being located at one side of said cavity; means, supported by said ring, for electrically connecting said electrical resistance member and electrical return means; and means for connecting said electrical resistance member and electrical return means into an electrical circuit.

25,413
QUARTZ PIEZOELECTRIC ELEMENT
Leland T. Sogn, Montgomery County, Ohio (3791 Kingswood Drive, Dayton 29, Ohio)
Original No. 3,072,806, dated Jan. 8, 1963, Ser. No. 122,042, July 5, 1961. Application for reissue Feb. 8, 1963, Ser. No. 257,353
10 Claims. (Cl. 310—9.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A quartz piezoelectric element designed to vibrate at the fundamental of the face-shear mode coupled to the [fundamental] *second overtone* of the length-width flexure mode, said element being a rectangular plate rotated about its length dimension from an initial position in which its thickness dimension is parallel to the Y axis of the mother crystal and its length dimension is parallel to the X axis of the mother crystal through an angle falling within the range −51° to −53°, said plate having a width/length ratio falling within the range .35 to .45.

25,414
TABLE OR THE LIKE
Richard G. Reineman, Balboa, Calif., and George E. Schaefer, Muskegon Heights, Mich., assignors to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Original No. 188,669, dated Aug. 23, 1960, Ser. No. 60,121, Apr. 11, 1960, for 14 years. Application for reissue Aug. 23, 1962, Ser. No. 71,523. Term of patent 14 years
(Cl. D34—5)



The ornamental design for a [score] table or the like, as shown and described.

PATENTS

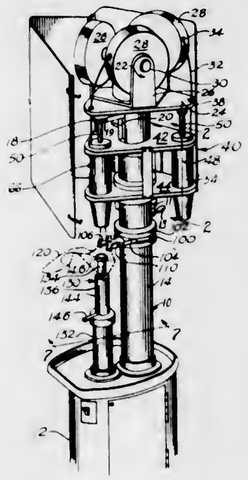
GRANTED JULY 9, 1963

GENERAL AND MECHANICAL

3,096,522
AUTOMATIC NAILING MACHINES

Davis J. Ajouelo, Atlanta, Ga., assignor of fifty percent to Petty Bregman and twenty-five percent to Jack Hazan, both of Atlanta, Ga.

Filed June 27, 1961, Ser. No. 119,880
8 Claims. (Cl. 1—29)



1. In an automatic nailing machine wherein selectively continuous lengths of different size wire are cut into individual nails which are driven in position in shoes or the like,

(*a*) a machine base having power means thereon,

(*b*) more than one means on said machine for receiving, transferring and cutting continuous lengths of wire into individual nails, and including means for driving said nails in place on a shoe or the like positioned on said machine,

(*c*) and wire supporting means on said machine selectively operable to support and selectively to provide more than one selected gauge of wire, whereby an operator of said machine may select the gauge of wire used.

3,096,523
FOOTBALL GLOVE

George R. Bruchas, Munhall, Pa., assignor to George R. Bruchas, Munhall, and Edward R. Bruchas, Pittsburgh, Pa.

Filed Nov. 8, 1961, Ser. No. 151,056
3 Claims. (Cl. 2—159)

1. A football glove comprising a wriststrap, a palm portion, individual finger and thumb stalls, the backs of said finger stalls extending from the tips thereof to a zone between the first and second joints of the wearer's fingers and each having an elastic portion in said zone adapted to grip and retain said fingers in said stalls, the remaining part of the back of the glove being open, said glove having patches of tactile gripping material secured at the balls of the thumb and finger stalls, said glove



otherwise being of a less tactile gripping material than said patches.

3,096,524
PROCESS FOR IMPROVING CREASE-RETENTION PROPERTIES OF COTTON GARMENTS

Louis R. Mizell, Springfield, Md., assignor to Williamson-Dickie Manufacturing Company, Fort Worth, Tex., a corporation of Texas

No Drawing. Filed Apr. 11, 1961, Ser. No. 102,126
12 Claims. (Cl. 2—243)

1. A proces for forming, on a cotton garment, a pressed crease which is resistant to a plurality of subsequent washings and which is still retained by the garment after said washings, comprising, impregnating said garment with an aqueous emulsion of a mixture of one part cyclic ethylene urea-formaldehyde resin and from 1 to 2 parts by weight, based upon said resin, of a butadiene-acrylonitrile copolymer having a monomer ratio of 55 parts butadiene to 45 parts of acrylonitrile, extracting excess emulsion from said garment, forming a fold in said garment and heat-pressing said garment along the line of fold to form a crease therein, and subjecting said garment to a temperature sufficient to effect curing of the mixture thereon, said treated garment having about 5% by weight of cyclic ethylene urea-formaldehyde and from about 5 to 10% by weight of butadiene-acrylonitrile copolymer thereon, based upon the dry weight of the garment.

3,096,525
GARMENT FASTENER

Charna Gould, 280 Badger Ave., Millburn, N.J.

Filed Mar. 11, 1960, Ser. No. 14,292
2 Claims. (Cl. 2—335)

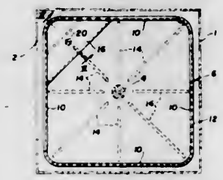


1. A one-piece garment fastener comprising a flexible strip formed of plastic material having elastic memory and including an intermediate portion and upper and lower end portions integral with said intermediate portion, said upper end portion being relatively thick transversely across the strip to the side edges thereof, and said intermediate portion being relatively thin transversely across the strip to the side edges thereof, with a straight line shoulder extending transversely across the strip to the side edges thereof and constituting the demarcation line between said upper end portion and said intermediate portion, said upper end portion being relatively less flexible than said intermediate portion and having slot means for receiving the loop of a supporting tape, and connection means at said lower end portion for connection to a garment to be supported by said fastener comprising a substantially U-shaped slot defining a downwardly directed tab and an inverted substantially U-shaped slot upwardly opposed to said first slot and defining an upwardly directed tab.

3,096,526
SHOWER STALL, BATH TUB ACCESSORY

Ethel A. Vecenie, Pittsburgh, Pa., assignor of one-half to William J. Ruano, Pittsburgh, Pa.

Filed Dec. 11, 1961, Ser. No. 158,405
2 Claims. (Cl. 4—148)

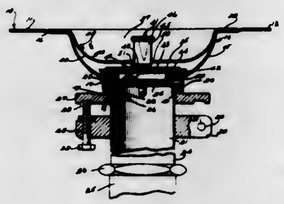


1. In a shower stall having four sidewalls defining a substantially rectangular outline with a door opening in one sidewall and having a substantially central drain, a substantially rectangular shaped tub of rigid plastic material with sidewalls slightly spaced from the sidewalls of the shower stall, the top portion of said tub sidewalls being rigid and outwardly rolled to provide a rim for grasping and support of the bather, the width of said tub being greater than the width of said door opening and the height being smaller than the width of said door opening to allow removal through said opening after turning the tub 90°, a drain hole in the floor of said tub, a plug for closing said drain hole to enable filling of the tub with water, supporting ribs on the underside of the floor portion of said tub for providing a space between said tub floor portion and the shower stall floor, and an integrally molded plastic seat formed inside of at least one of said sidewalls.

3,096,527
DRAIN CONNECTOR

Harry John Eynon, Bloomfield Hills, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed Nov. 24, 1961, Ser. No. 154,682
12 Claims. (Cl. 4—287)

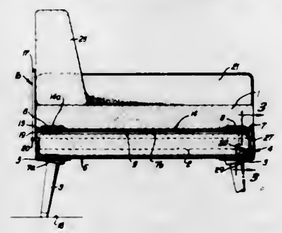


1. In a waste outlet fitting adapted to be secured within a drain aperture of a sink and comprising a tubular cup-shaped drain housing having a reduced lower end including an annular radially inwardly extending flange defining a seat, a gasket on said seat, a tubular tail piece comprised of thin metal of substantially uniform cross-section and having an upper end including an annular radially outwardly extending tail piece flange mounted on said gasket, a C-shaped tail piece clamp having means securing its opposite ends for rigidly attaching the clamp to the exterior of said tail piece below the seat, and a series of screws threadably secured to said clamp and having upper ends for engagement with an area at an underside of a sink to draw said tail piece flange downwardly and snugly against said gasket and said seat to secure the tail piece in watertight assembly with said tubular cup-shaped drain housing.

3,096,528
COUCH CONVERTIBLE INTO BEDS

Joseph F. Inco, La Canada, Calif. (% The Inco Co., 3221 San Fernando Road, Los Angeles 65, Calif.)

Filed Sept. 1, 1961, Ser. No. 135,615
2 Claims. (Cl. 5—28)

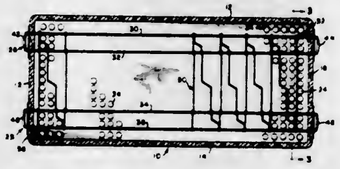


1. In a convertible couch structure: a pair of hingedly connected rectangular frames, whereby one may be moved from a side-by-side position to a juxtaposed position and from a juxtaposed position to a side-by-side position; said frames each carrying a wire-spring network; means for supporting one of the frames above the floor; a back structure attached to the other frame and serving to form at least a part of the couch back, said back structure having an upper surface cooperating with the floor to support the said other frame adjacent said one of the frames; a pair of cushions respectively extending along the frames and in superposed position over said wire-spring network when the structure is used as a couch; and a fabric cover having one end so attached to said other frame that it lies between its spring-wire network and the upper cushion when the structure is used as a couch, said fabric then extending downwardly in front of the lower cushion and in front of and under said one frame where it is attached to a permanently stationary under-portion thereof.

3,096,529
COMBINATION MATTRESS

Orville Thompson, 3012 Ridenbuagh St., Boise, Idaho

Filed June 20, 1961, Ser. No. 118,369
4 Claims. (Cl. 5—345)



1. In combination with a mattress having four sides, a top and a bottom and resilient means filling said mattress, a pair of flexible elements lying substantially in a horizontal plane parallel to and intermediate the top and bottom of said mattress, said elements being respectively

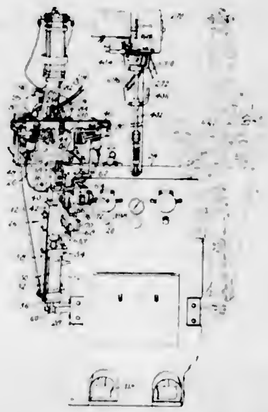
substantially adjacent and extending parallel to opposed sides of said mattress, each of said elements having two closely adjacent parallel parts whose opposite ends extend outwardly through and beyond the sides of said mattress transverse to the first mentioned opposed sides, a handle part connecting the extending ends of the closely adjacent parts of each of said elements, and flexible cross members interconnecting all of said parts so as to form with said elements a flexible web-like structure within said mattress.

3,096,530
WATER SKIS
Louis E. Almgren, 1928 Rutherford Ave., Chicago 35, Ill.
Filed Oct. 12, 1960, Ser. No. 62,248
10 Claims. (Cl. 9—310)



3. A water ski having an elongated body and an upwardly turned front end, the said ski having its bottom substantially plane and having its upper side provided with a flotation member only at its front end and having foot engaging means on its upper side between the ends of the ski in the proper location to support a skier, said ski assuming a position diagonal to the water surface with its front end projecting upward out of the water when supported on the foot of the skier, due to the downward pressure on the ski by the foot of the skier at the foot engaging means behind the flotation member, which flotation member holds the front end of the ski uppermost at this time with the front end of the ski out of the water in such position that the skier may start from a still position slowly and gradually increasing speed until he is skiing on top of the water.

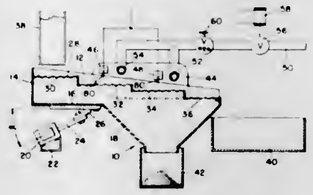
3,096,531
HEEL END ASSEMBLING AND BACKPART MOLDING MACHINE
Adelbert W. Rockwell, Jr., Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Oct. 12, 1961, Ser. No. 144,635
19 Claims. (Cl. 12—10.2)



2. In a shoe machine, the combination with means for supporting at last and a shoe upper thereon of a heel band for shaping the heel end portion of the upper upon the last, a carriage for mounting the heel band, a pair of arms mounted on the carriage and connected to the heel band at its opposite ends, means for advancing the carriage thereby to flex the heel band about the heel end portion of a last supported in the machine, grippers constructed and arranged to engage the upper at opposite sides thereof, and means rendered operative by the advancement of the carriage for causing the grippers to tension opposite side portions of the upper from the heel end toewardly.

4. In a shoe machine, the combination with means for supporting a last and a shoe upper thereon of a heel band for shaping the heel end portion of the upper upon the last, a carriage for the heel band, a carrier mounted in the carriage for movement relatively to the carriage lengthwise of the last toward and from its heel end, lasting wipers mounted in the carrier for overwiping movement, tack drivers mounted in the carrier, means mounted in the carrier for conducting tacks to the drivers, and driver operating means mounted in the carrier.

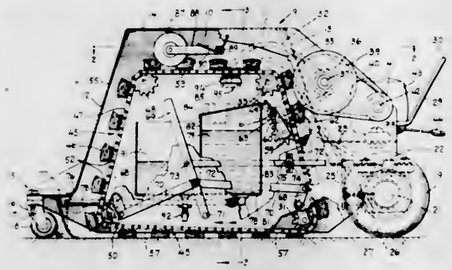
3,096,532
TABLET DUSTER
Raymond G. Frank, Ambler, Pa., assignor to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 5, 1960, Ser. No. 27,040
11 Claims. (Cl. 15—1.5)



1. A tablet dusting machine comprising a tray, a screen on said tray, said screen having first and second steps lying in substantially parallel planes with the plane of said first step being above the plane of said second step, means including the distance between said planes for enabling a tablet on said first step to fall onto said second step in a manner so that the uppermost side of a tablet while on said first step is the lowermost side of said tablet while it is on said second step, a dust collecting portion on said tray beneath said screen, a first means above said first step on said screen for dissipating an electrostatic charge on one side of a tablet and for subjecting said one side to a jet of air, a second means above said second step on said screen for dissipating an electrostatic charge on another side of said tablet and for subjecting said other side to a jet of air, and a vibrator operatively engaged with said tray so that vibration of said tray causes tablets on said screen first step to hop along said screen first step and flip over onto said screen second step.

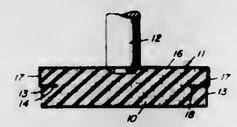
3,096,533
FLOOR WASHING MACHINES
Ira Shank, 340 Main St., Markham, Ontario, Canada
Filed Aug. 27, 1962, Ser. No. 219,802
6 Claims. (Cl. 15—99)

1. In a floor washing machine, a vehicular body normally maintained in a substantially parallel position with respect to a surface being traversed during a washing operation, an endless wiper conveyor mounted on said body and including a plurality of spaced, outwardly extending wiper devices disposed in outwardly extending relation transversely of the direction of movement of said wiper conveyor, power means operatively connected to said conveyor for moving it relative to said body, said wiper conveyor having an upper and lower stretch, said lower stretch being spaced above the surface over which said vehicular body will traverse, means on said body and operatively connected to said wiper conveyor for elevating said lower stretch of the wiper conveyor, said wiper devices being of a yieldable character, said lower



stretch of said wiper conveyor extending angularly from front to rear of said body and said wiper devices being progressively collapsible during operation of said endless wiper conveyor, the wiper devices during said relative movement being brought into forcible wiping contact initially with the surface being cleaned and subsequently expanding to pick up residual liquid at the rear of said endless conveyor stretch.

3,096,534
APPLICATOR FOR LIQUID WEED-KILLER
Clifford E. Jones, 362 W. Main St., Peru, Ind.
Filed Oct. 11, 1961, Ser. No. 144,476
1 Claim. (Cl. 15—244)



A tool for the spot application of a liquid weed killer to individual plants such as dandelions and plantains, having a handle member, an absorbent sponge member and a backing member connecting the sponge member to the handle member,

(A) said sponge member being a rectangular slab of spongy absorbent material having flat and parallel top and bottom faces, flat and parallel side faces and flat and parallel end faces,

(B) the bottom face of said slab being of a size to cover not more than the foliage of a large weed plant,

(C) laterally opposed, straight walled grooves in said side faces of the slab extending continuously from one end face to the other of said slab,

(D) said backing member being formed from a one-piece, flat and generally rectangular sheet of metal and comprising

(*a*) a body portion covering and in contact with the entire top face of said slab,

(*b*) a pair of flat, straight and parallel side walls bent downwardly at right angles from the side edges of said body portion and engaged with said side faces of the slab, said side walls being coextensive in length with said slab,

(*c*) a pair of flat, straight flanges coextensive in length with said side walls and bent inwardly at right angles from the lower edges of said side walls, said flanges being disposed in opposed relation and in contact with said slab,

(*d*) a flat straight stop flange bent downwardly at right angles from one of the ends of said body portion and engaged with one end face of said slab, and

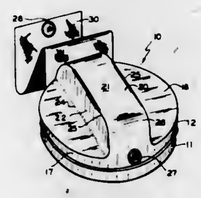
(*e*) said body portion having a hole disposed at its center,

(E) said handle member being a straight wood rod having a flat lower end disposed in a plane at right angles to its axis and in contact with the top of said body portion of said backing member over said hole,

(F) a wood screw in said hole and threaded into said end of the handle rod to fasten the latter in a position perpendicular to the body portion of said backing member,

(G) the grooves in said slab being of a size to snugly receive said flanges, whereby, when said slab is slid into said backing member until it engages said stop flange, the slab will be frictionally held against displacement.

3,096,535
SHOE POLISH KIT-CAN
William D. Martin, 139 Hobart St., Utica, N.Y.
Filed Nov. 24, 1961, Ser. No. 154,574
7 Claims. (Cl. 15—258)



1. A cover for a polish container comprising a top and a depending sidewall, said top having an upstanding rib extending diametrically thereacross, said rib being adapted to be covered with a soft material and to be used as a polisher.

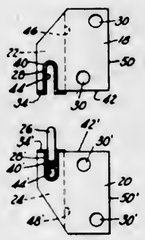
3,096,536
RETRACTABLE BALL CASTER
Nicholas Arthur Rabelos, Atlanta, Ga., assignor to Roll-Lok Corporation, Atlanta, Ga.
Filed Mar. 31, 1961, Ser. No. 99,843
1 Claim. (Cl. 16—26)



In a caster device for articles of furniture and the like, a sleeve adapted to be frictionally engaged within an opening of the leg of an article of furniture, said sleeve having a plurality of circumferentially spaced longitudinally extending ribs for engaging the wall of the article of furniture, the lower end of said sleeve having an annular flange of a diameter slightly greater than the

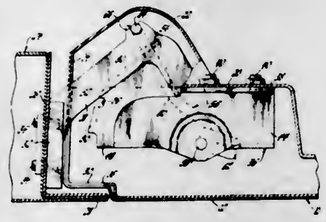
opening of said leg for contacting engagement therewith, the lower end of said sleeve having an arcuate seat, a ball retainer housing mounted in said sleeve, said retainer housing comprising an encircling band in said seat for embracing a roller member, said encircling band at the lower end thereof being of a diameter slightly less than the upper end thereof for retaining the roller member therewithin, the lower end of said band being arranged below the lower end of said sleeve, said retainer housing having a plurality of integral fingers of such curvature as to freely overlie the roller member within the retainer housing, all of said fingers being of the same size and shape, and said fingers extending inwardly from the upper end of said band and said fingers having their upper ends terminating in pointed end portions which are spaced slightly from each other, the upper pointed end portions of the fingers being closer to each other than are the lower end portions of the fingers which are integrally joined to the band, the inner end of said sleeve having an inwardly turned flange, said last named flange having a circular formation, a closure member of yieldable material within the sleeve and said closure member comprising a disk of resilient construction enabling it to be presented into the sleeve and snapped beneath the last named flange for retaining the parts in assembled position, a helical spring interposed between said closure member and said retainer housing, said fingers in addition to retaining the ball member in operative position also form a seat for said helical spring, the upper ends of said fingers being positioned at a slightly higher elevation than the lower end portion of the helical spring, said roller member normally projecting beyond the annular flange on the lower end of said sleeve and said roller member being movable to a position inwardly of said last named flange upon a downward pressure on the caster device against the resilient resistance of said spring.

3,096,537
DOOR HINGE
Leonard E. Johnson, Jr., P.O. Box 114, Elkhart, Ind.
Filed Nov. 13, 1961, Ser. No. 151,650
3 Claims. (Cl. 16—128)



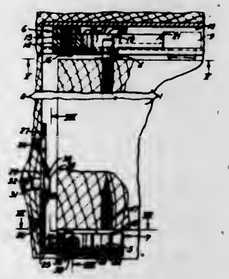
2. A door hinge comprising a pair of longitudinally spaced plates formed with diametrically opposed longitudinal slots, a plastic bearing member mounted on each of said plates with an end portion of one member in bearing engagement with an end portion of the other member, said bearing members having parallel face portions joined by a recessed central web extending longitudinally inwardly from said end portion, said webs being disposed in said slots and said face portions extending on opposite sides of said plates in resilient gripping engagement therewith, said webs being longer than the length of said slots whereby said end portions are disposed a predetermined distance from the edges of said plates, a longitudinal bore formed in each of said webs, and a pivot pin mounted in one of said bores and projecting into the other of said bores.

3,096,538
CLOSURE HINGE
Delbert D. De Rees, Lake Orion, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 21, 1960, Ser. No. 77,439
4 Claims. (Cl. 16—142)



1. A hinge and hold-open comprising, in combination, a hinge box including at least one wall, a hinge arm located to one side of said wall and adapted to be pivotally connected to said box for swinging movement relative to said wall between open and closed positions, a resilient member including a first portion providing the hinge pivot for said arm and a second portion located to the other side of said wall generally parallel thereto, means connecting said second portion to said hinge arm for movement therewith relative to said wall, and at least one detent projection on said wall located in the path of movement of said resilient member and being releasably engageable therewith upon movement of said hinge arm relative to said wall to provide a hold-open.

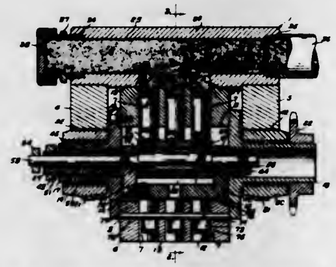
3,096,539
FOLDING DOOR HINGE ASSEMBLY
Lloyd R. Dickinson and William V. Vessalo, Pittsburgh, Pa., assignors to McKinney Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 11, 1962, Ser. No. 186,693
9 Claims. (Cl. 16—176)



1. A folding door hinge assembly adapted to be mounted in a doorway, comprising a vertical pivot pin adapted to project from a door near one edge adjacent one side of the doorway, a bearing member provided with a horizontal spring fork straddling said pin in engagement therewith, means for rigidly mounting the bearing member in the doorway with its outer end located at said side of the doorway, said fork extending toward the inner end of the bearing member and having sides diverging toward said inner end, the fork sides having interior opposed shoulders facing the narrow end of the fork and defining with adjoining interior surfaces of the fork a bearing opening rotatably receiving the pivot pin in a location spaced from said narrow end, and said diverging fork sides being movable away from each other by said pin when it is forced laterally from said opening toward said narrow end, whereby upon release of said lateral force

from the pin the tendency of the expanded fork to contract will force the pin back into said bearing opening.

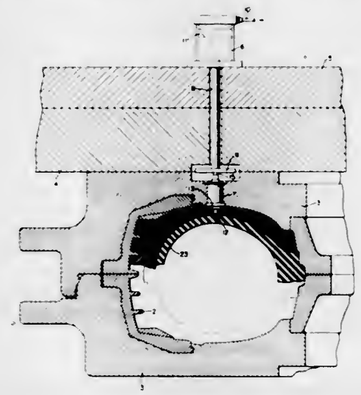
3,096,540
CONTROL APPARATUS FOR FORMING MECHANISM
Jack M. Miller, Shawnee Mission, and Marshall Long, Overland Park, Kans., and Charles F. Rapp, Kansas City, Mo., assignors to Marlen Equipment Company, Overland Park, Kans., a corporation of Missouri
Filed July 10, 1961, Ser. No. 123,019
5 Claims. (Cl. 17—32)



1. In a machine for forming a material into cohesive masses of like shape and size, a rotor having a radial bore conforming in cross section to the masses to be formed and having an axial bore intersecting the radial bore, a manifold in contact with the periphery of the rotor and having an outlet to discharge the material under pressure, means for turning the rotor to bring the radial bore into and out of connection with the outlet of the manifold during each revolution of the rotor, and a piston slidable inwardly within the radial bore under pressure of the material within said manifold as the radial bore moves across the manifold, the improvement comprising a roller in said axial bore in radial alignment with the manifold for limiting inward movement of the piston and for providing a rolling support for the piston during the time that the piston is subjected to the charging pressure, and means within said axial bore for contact with the inner end of the piston as the piston is carried off the roller and away from said manifold to move the piston outwardly in said bore for ejecting the charge of material.

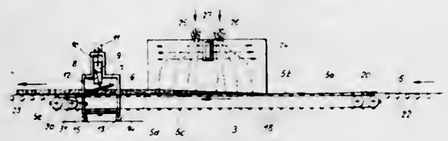
3,096,541
APPARATUS FOR MOLDING A VALVE RECEIVING APERTURE IN A TIRE
Lawrence R. Sindelar, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 11, 1958, Ser. No. 760,346
6 Claims. (Cl. 18—2)

6. Apparatus for molding a valve receiving aperture in the sidewall of a tire while said tire is in a vulcanizing press comprising, in combination, an elongated pin having a cross-sectional shape to form the resired valve receiving aperture in said tire sidewall, said pin being located in the mold portion of said press adjacent the mold cavity and movable along its longitudinal axis in a line substantially perpendicular to said tire sidewall for a distance sufficient to completely pierce said sidewall, actuating means to insert said pin into said sidewall, said actuating means being located substantially removed from the mold portion of said press, means coupling said actuating means and said pin to effect movement of said pin upon operation of said actuating means, said coupling means being provided with enlarged presser means adjacent the inward end thereof to contact said pin when it is in any one of a variety of locations whereby tires of various sizes may be accommodated by said apparatus, and means responsive to the control mechanism of said press to energize said actuating means to insert said pin through said



sidewall at a predetermined time during the vulcanization of said tire and after full pressurization thereof to form an aperture therein.

3,096,542
METHOD AND APPARATUS FOR PRODUCTION OF PARTICLE BOARD
Kurt Fischer, Bad Munder, and Heinrich Mund, Springe, Deister, Germany, assignors to Bahre Metallwerk K.G., Springe, Hannover, Germany
Filed Nov. 7, 1960, Ser. No. 67,561
Claims priority, application Germany Nov. 11, 1959
9 Claims. (Cl. 18—4)

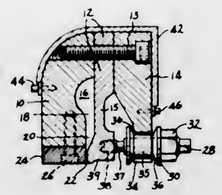


3. In apparatus for the production of particle board, a conveyor, a plurality of cauls in end overlapping relationship on said conveyor, means for forming a mat of wood particles on said cauls, and a vertically movable band saw having blade runs extending transversely of the direction of travel of said conveyor, said blade runs lying in a plane inclined to said direction of travel whereby one of said blade runs can be positioned to cut the mat above the overlapping ends of said cauls upon lowering said band saw.

3,096,543
FILM EXTRUSION APPARATUS HAVING IMPROVED FILM THICKNESS CONTROL MEANS
Henry A. Konopacke, North Haven, and John C. Cunningham, New Haven, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia
Filed Mar. 8, 1962, Ser. No. 178,334
5 Claims. (Cl. 18—12)

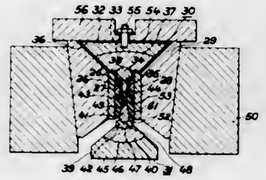
4. In film extrusion apparatus having a rigid wall member and adjacent thereto a flexible wall member, with the said members defining a die cavity terminated by a pair of opposed lips, the combination of a rigid support member adjacent to the said flexible wall member and secured thereto at one end, internally threaded spools rotatably mounted in slots spaced along the free end of the said support member, each of said spools having a pair of opposed curved flange surfaces bearing on the said support

member, and a screw member threaded within each said spool and threadedly attached to the free end of the said flexible wall member, whereby the relative rotation of a



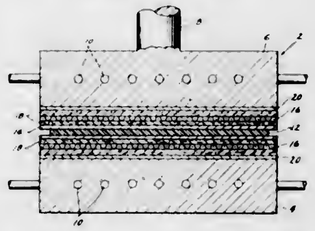
spool and its screw member effects the movement of one lip with respect to the other to accomplish the desired spacing thereof.

3,096,544
HIGH PRESSURE VESSEL WITH PUNCH
Erik Lundblad, Stockholm, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed June 5, 1961, Ser. No. 114,901
5 Claims. (Cl. 18—16.5)



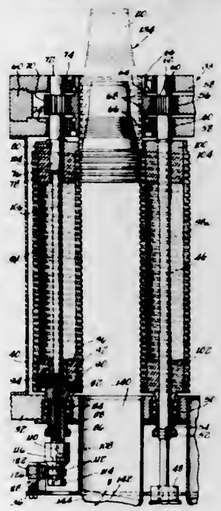
1. High pressure vessel comprising means forming a pressure space and at least one punch directed towards the pressure space, said punch being symmetrical about an axis running through the pressure space and comprising at least two parts engaging along a contact surface, said contact surface being a doubly curved surface the centre of curvature of which substantially coincides with the axis of symmetry of the punch and is situated on the side of the contact surface turned towards the pressure space.

3,096,545
RESILIENT SPACER FOR PRESS-FINISHING OF PLASTIC SHEET
William P. Rowland, Southington, Conn., assignor to Rowland Products, Inc., Kensington, Conn., a corporation of Connecticut
Filed July 20, 1960, Ser. No. 44,155
3 Claims. (Cl. 18—17)



3. An assembly for press finishing plastic sheet in a heated platen press comprising a pair of finishing plates for receiving plastic sheet therebetween, and resilient pads of closely woven steel mesh on the outer sides of said finishing plates, said pads having high tensile strength and a deflection on the order of 0.015 to 0.045 inch during operation of the press, said mesh having spaced parallel reinforcing rods and helical coils of wire woven about said rods, the loops of said coils having a generally oval configuration with the longer dimension disposed laterally of the pad and encircling a plurality of rods, said mesh being dimensioned to provide close support between said rods and coils for a close weave and to permit limited deflection, said reinforcing rods being spaced apart to provide clearance between the outside of the loops and the next adjacent rod for limited elongation of the oval loops of the coils during compression in operation of the press, the narrow dimension of the loops providing clearance between the encircled reinforcing rods and the inside of the loop to permit limited deflection.

3,096,546
MACHINE AND METHOD FOR CURLING LIPS OF CONTAINER ARTICLES
Bryant Edwards, Chicago, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed Aug. 19, 1958, Ser. No. 755,908
7 Claims. (Cl. 18—19)

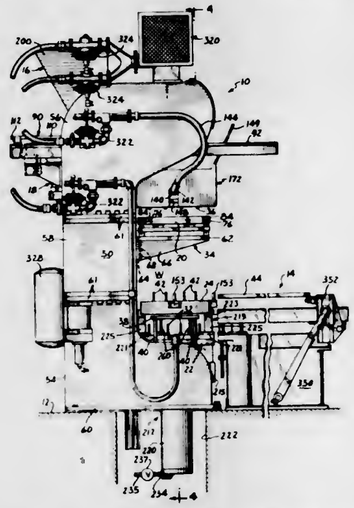


4. Apparatus for forming a rolled-under lip on a plastic cup or the like of the type having a sidewall terminating in an outwardly and downwardly projecting circumferential rim, said apparatus comprising: camming means for engaging said rim at a plurality of equally arcuately spaced positions, said means including a plurality of rollers, each of said rollers carrying a spiral groove which receives said rim, said grooves having a gradually diminishing and subsequently gradually increasing depth and height; and drive means operating said camming means, whereby said rim is progressively deflected toward said sidewall.

3,096,547
AUTOMATIC CORE-MAKING MACHINE
William A. Hunter, Morton Grove, and Robert Lund, Melrose Park, Ill., assignors to Pettibone Mulliken Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 14, 1961, Ser. No. 138,195
14 Claims. (Cl. 22—10)

1. In a core-making machine of the character described, in combination, a machine framework establishing a working area, a lift table, a separable core box in the form of a lower drag section and an upper cope section, a sand magazine and a blow valve disposed in said

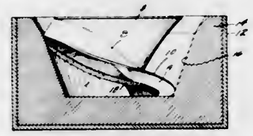
working area in superposed relationship in the order named, said framework including a cope-arresting support, said upper cope section being movable vertically between a lowered position wherein it rests by gravity upon said cope-arresting support, and a raised position wherein it is in operative engagement with said sand magazine, said lower drag section being supported upon said table and movable bodily therewith, said table being movable vertically from a lowered position wherein the lower drag section thereon is disposed below the level of said cope-arresting support, through an intermediate position wherein said lower drag section sealingly engages the upper cope section and raises the same from said cope-arresting support, to an elevated position wherein it forces the lower drag section against the upper cope section to force, in turn, the upper cope section against the magazine and thus force the magazine against the blow valve, thereby clamping the two core box sections, magazine and blow



valve together in their operative relationship, and vice versa, said core box sections being so formed that when they are thus clamped, they define therebetween a core-forming cavity in communication with the sand magazine, said lower drag section having formed in its bottom portion a plurality of holes in vertical communication with said core-forming cavity when the two core box sections are clamped together, a drag stripper plate movably carried by said drag section, a plurality of upstanding drag stripper pins mounted on said plate, projecting into said holes and slidable vertically in the latter, the upper ends of said pins normally lying below the confines of the core-forming cavity, and a fixed abutment on the machine framework and engageable with said plate during descent of said table and as the same approaches the limit of its lowered position for arresting said plate to control said drag stripper pins so that they have relative vertical motion with respect to the lower drag section for core-stripping purposes.

3,096,548
SPECIAL TECHNIQUE FOR CASTING IMPELLER BLADE PASSAGES
James V. Altieri, Jr., Hamden, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 8, 1960, Ser. No. 74,562
5 Claims. (Cl. 22—193)

3. The method of making a multiblade cast impeller which consists in generating a master hub having the desired axial curvature and forming one master blade thereon, taking an impression of one side of the master blade, indexing the impression about the axis of the hub to the next corresponding blade position on the other side of the blade from which the impression was taken, filling the



space between the impression and said other side of said blade to form a core of the space between two adjacent blades, repeating the steps of making an interblade core until a core has been provided for each interblade space of the impeller, and using said cores in a female mold cavity to cast the impeller.

3,096,549
MARKING OF INGOTS
Jurrianus Schuttevaêr, Heemstede, Netherlands, assignor to Koninklijke Nederlandsche Hoogovens En Staalfabrieken N.V., Ijmuiden, Netherlands, a corporation of the Netherlands
Filed Jan. 25, 1960, Ser. No. 4,489
10 Claims. (Cl. 22—200)

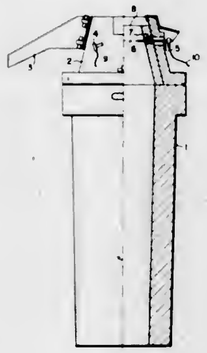


1. A method of mass producing ingots with identifying configurations comprising the steps of: casting ingots in identical open molds designed to produce an ingot of a predetermined configuration when the molds are retained in a normal position; cooling each of the ingots in the molds in substantially the same manner; during cooling, inclining the molds with respect to their normal position into one of a number of positions each corresponding to different ingot characteristics to produce ingots of different configurations; and, after cooling, segregating the ingots according to their different characteristics in dependence upon the configurations thereof.

3,096,550
PROCESS FOR CASTING INGOTS IN A MOLD CONTAINING SLAG
André Greffe, Annecy, Maurice Asselin, Moutiers, and François Grandjacques, Brides-les-Bains, France, assignors to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France
Filed Oct. 28, 1958, Ser. No. 770,115
Claims priority, application France July 23, 1955
34 Claims. (Cl. 22—209)

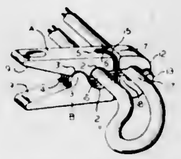
4. A method of casting metal into a mold containing a liquid slag to produce an ingot of a given weight which comprises pouring metal into the slag in the mold, said slag in the mold being in an amount such that some of said slag overflows from said mold during pouring said metal thereinto to produce said ingot of a given weight, during pouring of the metal into the slag in the mold, sensing at a predetermined height in the mold a value of a character of a material in the mold at said predetermined height, at said predetermined height said material being at different times during metal pouring slag, metal-slag emulsion and metal, said sensing detecting at said

predetermined height presence of slag, of metal and of metal-slag emulsion, said predetermined height defining that height in the mold to which metal is poured to produce said ingot of a given weight, being below the top of the mold and being above the upper surface of metal during metal pouring and substantially at the upper surface of metal upon completion of metal pouring, said character having a different value for each of slag, of



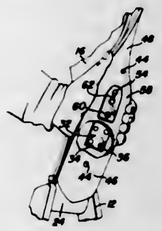
metal, and of metal-slag emulsion, decreasing the rate of metal pouring when sensing said character of the material at the predetermined height indicates a change from that value corresponding to presence of slag and stopping the metal pouring when sensing said character of the material at the predetermined height indicates a value corresponding to presence of metal.

3,096,551
CLIP
Raymond W. Shoberg, 1221 N. 30th St., Milwaukee, Wis.
Filed Jan. 12, 1961, Ser. No. 82,276
3 Claims. (Cl. 24—132)



2. In a clip, two substantially identical clip members, each comprising an elongated member having a pair of relatively spaced arcuate bearing elements intermediate its ends, a pair of relatively spaced arcuate cord receiving depressions disposed between said bearing elements and one of said ends and extending transversely across said member, a pair of relatively spaced upstanding lugs between said arcuate depressions, and a pair of relatively spaced projections at the other of said ends, said bearing elements, lugs and projections being arranged so that one of each is disposed adjacent one side of said member and so that the other of each of said elements, lugs and projections is disposed on the side of a plane extending lengthwise of and intermediate the sides of said elongated member opposite that of the first mentioned element, lug and projection, each said members having an arcuate bearing surface between said pair of elements and an arcuate bearing surface on the side of one of said elements opposite that of the other and adjacent the other side of said member in combination with resilient means biasing said members into operative relationship.

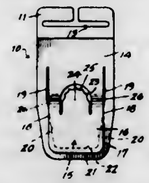
3,096,552
STIRRUP AND ADJUSTABLE SUSPENSION MEANS THEREFOR
John Kreger, Jr., 1040 Lewis, Sheridan, Wyo.
Filed Mar. 3, 1961, Ser. No. 93,052
4 Claims. (Cl. 24—166)



1. A stirrup leather comprising, in combination, a first strap having a free terminal end portion, a cleat having one end portion thereof superimposed upon and fixed to an outwardly facing surface of said first strap, the other end portion of said cleat projecting beyond said terminal end portion and being provided with a pair of laterally outwardly projecting studs, each stud having an outer end circumferentially grooved and providing a head, said studs being longitudinally spaced apart a predetermined distance, a second strap complemental to and alignable with said first strap and having a central row of longitudinally spaced holes for selective connection with and retention by said studs, said second strap having an end portion thereof superimposed upon said cleat, said one end portion of said cleat being interposed between opposed cooperating surfaces of said straps, said studs passing removably through and outwardly beyond a selected pair of the holes in said second strap, and a rigid clip complemental to said cleat and studs and constituting a keeper, said clip being superimposed lengthwise upon an outwardly disposed surface of said second strap and being provided with a keyhole slot adjacent one end embodying a straight narrow portion and an enlarged end portion, the width of said straight portion being less than that of said heads, the width of said enlarged end portion being substantially the same as that of said heads, one end of said slot slidingly and rotatably mounting the grooved headed end of one of said studs, said clip being also provided with a generally circular hole aligned with and having releasable snap-on engagement with the grooved headed end of the other one of said studs, said circular hole being spaced from said keyhole slot a distance such as to locate said one stud along a portion of said slot remote from said enlarged end portion when said other stud is in said hole, whereby said clip is maintained in position solely by said studs, said second strap being of a width appreciably greater than the width of said cleat and also said clip and having its lengthwise marginal edges projecting beyond the lengthwise edges of the cleat and functioning, when said edges are grasped and squeezed with one hand to forcibly bend said edges toward each other to convexly bulge the median lengthwise portion of said strap against a surface of said clip, to exert clip-freeing pressure against said clip whereby to release said hole-equipped end of said clip from engagement with the hole-engaging stud.

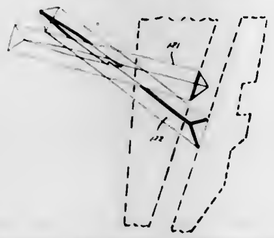
3,096,553
GARMENT FASTENER
Charna Gould, 280 Badger Ave., Millburn, N.J.
Filed Aug. 10, 1961, Ser. No. 130,558
4 Claims. (Cl. 24—246)

1. A one-piece garment fastener formed of flexible plastic material comprising an upper end part for securing to a supporting garment, a body part integral with and depending from said upper end part having a cutout surrounded by side and bottom margin edge portions, a downwardly directed tongue integral with and flexibly connected to said body part at the upper end of said cutout having side and bottom marginal edge portions overlapping said side and marginal edge portions of said body part, whereby a supported garment is adapted to have a



top marginal edge portion thereof pressed forward through said cutout to overlie the forward side of said tongue with portions of the garment interposed between the overlapped surfaces of said tongue and body parts, and said tongue having an inverted U-shaped slit defining an upwardly extending tab for hooking engagement of the upper edge portion of said garment overlying said tongue.

3,096,554
PIPE ANCHOR
Charles F. Johnson, P.O. Box 3127, Houston, Tex.
Filed Mar. 11, 1960, Ser. No. 14,477
16 Claims. (Cl. 24—263)

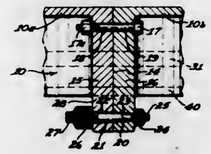


15. Annular segmented pipe anchoring means having an axial pipe receiving passage therethrough, said anchoring means comprising means including a plurality of sharp annular teeth disposed in said passage presenting a generally cylindrical pipe-gripping surface, means including a plurality of annular sharp teeth on the exterior of said anchoring means presenting a generally conical wedging surface, each of the flanks of said exterior teeth making an exterior angle of at least ninety degrees with a line through the roots of the teeth parallel to the elements of said generally conical wedging surface, the number of said wedging surface teeth being no more than of the same order of magnitude as the number of said pipe gripping surface teeth to cause ready yielding of the cooperating surface to be engaged by said wedging surface when said anchoring means is in use whereby said wedging surface can move relative to said cooperating surface and cause said pipe gripping surface to engage and hold a pipe, the size of said wedging surface teeth being of the same order of magnitude as said pipe-gripping surface teeth so that the correlative portions of said cooperating surface formed after yielding thereof can support the pipe load.

3,096,555
CLAMP FOR RADIALLY SPLIT RING PALLET
Harrel Gannaway, 3440 N. 27th Ave., Phoenix, Ariz.
Filed Oct. 19, 1961, Ser. No. 146,113
1 Claim. (Cl. 25—1)

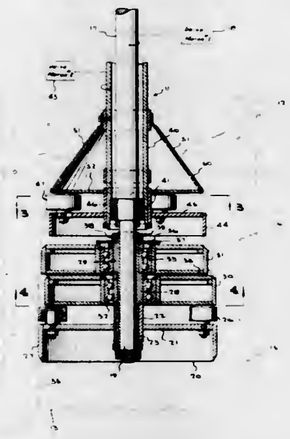
A clamp for a radially split ring pallet comprising in combination:

(*a*) radially extending lug portions formed integral with the ring pallet adjacent the parting line of said ring pallet,
(*b*) a straight clamp bolt extending through aligned clearance holes in said lug portions at right angles to the plane of split of said ring pallet,
(*c*) a nut on said bolt adapted to be tightened to clamp the segments of the ring pallet in abutting contact at split,
(*d*) an alignment clamp bolt,
(*e*) an intermediate tapered portion on said alignment clamp bolt adapted to fit in mating aligned tapered bores formed in said lugs at right angles to the plane of split of said ring pallet,



(*f*) a smaller threaded end adjacent the smaller tapered intermediate portion of said alignment clamp bolt,
(*g*) a larger threaded end adjacent the larger tapered intermediate portion of said alignment clamp bolt,
(*h*) a nut on said smaller threaded end engaging a lug when tightened to draw said alignment bolt into said tapered bores to align and lock said lugs in abutting contact at said split,
(*i*) and a further nut on said larger threaded end engaging an opposite lug when tightened to withdraw said alignment clamp bolt from said tapered bore so as to release said lugs from clamped abutting engagement at said split.

3,096,556
CONCRETE PIPE FORMING APPARATUS
Randell C. Woods, 8250 Riverdale, Dearborn, Mich.
Filed June 23, 1961, Ser. No. 119,067
7 Claims. (Cl. 25—36)



1. A concrete pipe forming apparatus comprising a generally cylindrical stationary outer form, a rotary shaft mounted axially in said outer form, a first forming drum secured on the lower end portion of said shaft, a sleeve member coaxially journaled on said shaft above said first forming drum, a second forming drum mounted on said sleeve member and being smaller in diameter than said first-forming drum, means drivingly connected to and ro-

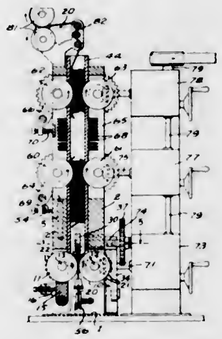
tating said rotary shaft in one direction, means drivingly connected to and rotating said sleeve member simultaneously in the opposite direction, and an additional forming drum journaled eccentrically on said shaft between said first forming drum and said second forming drum.

3,096,557
PROCESS FOR HOT-WET CALENDERING FABRICS
Lester Hubert Messinger, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 3, 1961, Ser. No. 80,052
12 Claims. (Cl. 26—1)



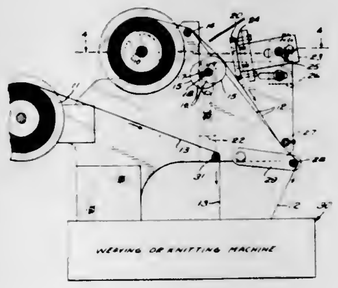
1. A continuous process for improving the aesthetics of a fabric containing a preponderance of filaments composed of a synthetic, fiber-forming polymer having a melting point above about 250° F. which comprises passing the fabric, which is wet with water, at a speed of at least about 15 yards per minute, through two confining structures, heating the fabric and water to a temperature of from 200 to 10° F. below the softening point of the said synthetic polymer while maintaining sufficient pressure between the confining structures to maintain the fabric in the wet condition as it passes through said structures and thereafter immediately releasing the pressure from the fabric to vaporize at least part of the water which leaves the fabric in all directions to form a multiplicity of extended protrusions on the surface of individual filaments in said fabric thereby improving the cover and reducing the slickness of the fabric.

3,096,558
CRIMPING APPARATUS
Leo W. Rainard, Edgewood Hills, Wilmington, and Ewart H. Shattuck, Lynnfield, Wilmington, Del., assignors to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Filed Sept. 23, 1959, Ser. No. 841,880
3 Claims. (Cl. 28—1)



1. A stuffer crimper comprising an elongated chamber, feed rolls disposed to feed fibers into one end of said chamber to be folded over and crimped due to the pressure of the mass of previously crimped fibers in said chamber, said feed rolls being adapted to exert pressure for advancing the mass of crimped fibers along said chamber to a discharge point, and a plurality of driven control wheels projecting peripherally into said chamber and disposed at spaced points along said chamber, said control wheels being connected for independent adjustment as to relative rates of drive.

3,096,559
METHOD AND APPARATUS FOR MAKING TEXTURED FABRICS
Robert J. McNamara, Folsom, Pa., assignor to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Filed Nov. 22, 1961, Ser. No. 154,186
5 Claims. (Cl. 28—1)



1. The method of making a textured fabric which comprises feeding a sheet of crimped yarn to a fabricating station under a tension to substantially remove the crimp, applying heat to selected parts of said yarn sheet in a predetermined pattern to produce a permanent straight set in the heated portions of the yarns, fabricating said yarn sheet into a fabric and heat-treating said fabric to relax the yarns and to restore the crimp to said yarns except in the areas of said straight set yarns whereby a patterned textured effect is obtained.

3. Apparatus for making a textured fabric comprising a warp beam carrying a set of crimped yarns, means feeding a sheet of said yarns from said beam to a fabricating machine, a heating shoe positioned along and normally out of contact with said yarn sheet, a pattern member adapted to raise selected yarns of said sheet into contact with said shoe for heating the yarns to permanently set the yarn in straight form in the heated areas.

3,096,560
PROCESS FOR SYNTHETIC VASCULAR IMPLANTS
William J. Liebig, Martha Road, Harrington Park, N.J.
Filed Nov. 21, 1958, Ser. No. 775,522
3 Claims. (Cl. 28—72)

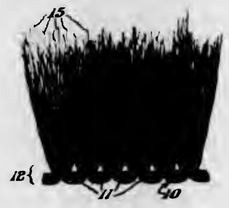
1. The process for making prosthetic vascular implants which comprises weaving a tubular blank of multifilament syntheic warp and filling yarns, moistening and passing the woven blank onto a cylindrical heat-expansible mandrel of full filling diametral size, progressively axially compressing the blank thereon and simultaneously creating a longitudinal array of circumferential pleat-forming crimps of maximum external projective extent less than a radius of the tube and compacting contiguous crimps into general touching relation of the radial walls thereof for forming the blank into an externally micro-crimped implant tube of approximately one-fourth the initial blank

length, heating the assembly of mandrel-carried micro-crimped implant in the presence of moisture, cooling said



assembly and removing the mandrel, and drying the resultant tubular implant.

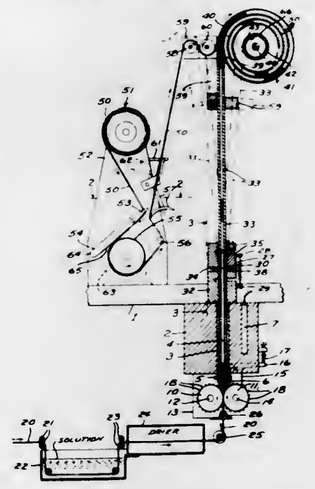
3,096,561
TUFTED PILE FABRIC AND METHOD
Arthur F. McNally, Larchmont, N.Y., and William L. White, Wynnewood, Pa., assignors to Collins & Aikman Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,486
6 Claims. (Cl. 28—72)



1. The method of making a high fluffy tufted pile fabric comprising tufting a loop pile yarn in a backing material, separating the fibers of the loops of the pile yarns above the surface of the backing material with minimal breaking and cutting of said fibers by first subjecting said yarns to the kneeing action of a tigering roll and then drawing the separated fibers lengthwise of and partially out of said pile yarns to form a high fluffy pile surface by subjecting said yarns to the tigering action of a tigering roll, intermeshing the separated fibers of the loops of the pile yarns extending above the backing material thereby locking the pile yarns in the base fabric and then subjecting the pile surface to the action of a hot grooved roller and shearing it to form a finished pile surface.

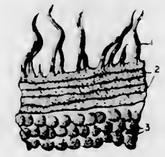
3,096,562
METHOD OF TREATING FIBERS
Carl J. Russo, Brookside Park, Newark, and Alexander L. Trifunovic, Wilmington, Del., and Henry A. Sinski, Alden, Clifton Heights, Pa., assignors to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Original application Dec. 21, 1959, Ser. No. 861,001, now Patent No. 2,997,747, dated Aug. 29, 1961. Divided and this application Jan. 18, 1961, Ser. No. 83,508
2 Claims. (Cl. 28—75)

1. The method of treating cellulosic fibers which comprises impregnating said fibers with a thermosetting resin, partially drying said resin, crimping said fibers to form a continuous core of crimped fibers, winding said core together with a pervious tape in successive convolutions on a pervious support to form a core package, subjecting said core package to a temperature to cure said resin, progressively removing the tape from said package to



expose the core and extracting the treated yarn from said core as it becomes exposed.

3,096,563
NOVEL FABRIC OF IMPROVED COVER AND REDUCED SLICKNESS
Lester Hubert Messinger, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 18, 1959, Ser. No. 821,127
11 Claims. (Cl. 28—78)

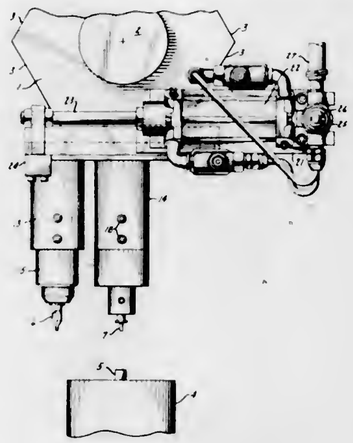


1. A fabric containing at least 50% by weight of filaments composed of a man-made non-cellulosic fiber-forming polymer having a melting point above about 250° F. at least some of said filaments are located at the fabric surface and bear a multiplicity of extended protrusions which project outwardly from the fabric surface, most of the said extended protrusions of each individual filament extending outwardly from the side of the filament for a distance greater than the width of the filament and said protrusions being smaller in cross section than the filament at the mid-point of the length of the protrusion.

3,096,564
TURRET LATHE TOOLING
William A. Smith, Peru, Ind., assignor to Logansport Machine Co., Inc., Logansport, Ind., a corporation of Indiana
Filed Aug. 22, 1960, Ser. No. 50,956
8 Claims. (Cl. 29—57)

4. A tool holding unit for use on a rotatable lathe turret including a guide member adapted to be mounted on one face of said turret, a tool slide slidably mounted on said guide member, a pair of cutting tools, means for mounting

said cutting tools in spaced relation on said slide, and power means for moving said slide back and forth so that



either one or the other of said tools is positioned at a work station.

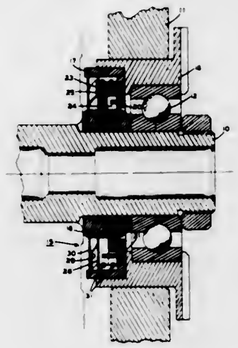
3,096,565

METHOD OF USING A SLIDING SURFACE MATERIAL FOR SEALS OR BEARINGS

Joseph F. Cerness, East Cleveland, and Douglas H. Strong, Willoughby, Ohio, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Continuation of abandoned application Ser. No. 629,936, Dec. 21, 1956. This application Apr. 10, 1959, Ser. No. 805,480

3 Claims. (Cl. 29—149.5)



1. The process of making a sliding surface seal or bearing which comprises the step of forming a body of an alloy consisting essentially of:

	Percent
Carbon	.87
Silicon	.25
Manganese	.25
Chromium	4.00
Vanadium	1.90
Molybdenum	8.00
Iron	Balance

and forming on said body a surface for rubbing engagement with another body.

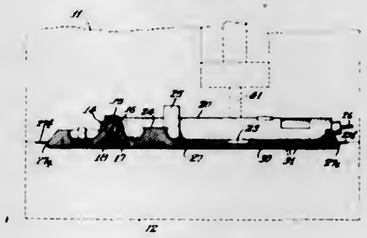
3,096,566

LIGHTWEIGHT COMPOSITE SOLE PLATE AND METHOD OF MAKING THE SAME

Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Original application Feb. 2, 1953, Ser. No. 334,573, now Patent No. 2,807,700, dated Sept. 24, 1957. Divided and this application Feb. 19, 1957, Ser. No. 641,169

1 Claim. (Cl. 29—155.5)



The method of bonding to a mass of lightweight metal, a thin sheet of hard, scratchproof metal, which comprises placing a first thin sheet of said hard metal within a mold and directly against the bottom of said mold so as to cover the entire bottom of said mold, said sheet being provided with a peripheral portion extending beyond the limits of the mold cavity thereby to prevent molten material from entering the mold cavity beneath said thin sheet, said first sheet having bonded thereto on the side thereof opposite the side in engagement with the bottom of said mold a second sheet of a different material including interlocking members, filling the remainder of said mold cavity with molten lightweight metal to provide a body having an upper exposed portion of said lightweight metal and a lower exposed portion of said hard metal, removing the contents of said mold cavity and cutting away said peripheral portion flush with said lightweight metal to define a smooth surface at the junction between said two exposed metals.

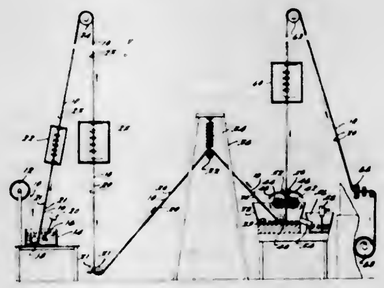
3,096,567

PROCESS AND COMPOSITION FOR METALLIZING ALUMINUM WITH ANOTHER METAL

Stuart T. Ross, Costa Mesa, Calif., and Henry M. Luehmann, Mount Clemens, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed Nov. 20, 1959, Ser. No. 854,394

23 Claims. (Cl. 29—155.5)



18. A method of making aluminum foil strip for alternator coils and the like comprising coating said strip on at least one face with a continuous electrical insulating film of a synthetic resin in a solvent and drying said film, applying to said dried film in predetermined spaced apart areas a second coating of a metallic salt selected from the group consisting of cuprous chloride and silver chloride and mixtures thereof suspended in a resinous vehicle consisting essentially of a synthetic resin in a solvent, said vehicle having the property of softening and commingling with the resin of said insulating film so as to carry a layer of metallic salt to the surface of said strip, drying said metallic salt layer to a substantially non-smudging condition at a temperature sufficiently low and below the boiling point of the solvent whereby to inhibit breaking of the suspension and bubbling of the vehicle, and heating the strip with its applied material to a temperature below the melting point of the foil but sufficiently high to volatilize the resin of said salt layer and effect melting of the salt and a replacement reaction between the salt and aluminum metal of the foil to produce a layer of the metal of the salt over the aluminum metal metallurgically bonded thereto, soldering electrical terminal wires to said metallized areas, recoating said metallized and soldered areas with a layer of said insulating resin and severing the strip into lengths each having a terminal wire at each end.

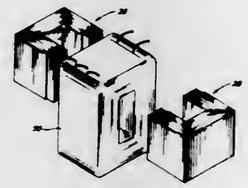
3,096,568

MANUFACTURE OF LAMINATED CORE INDUCTORS

Orrick H. Biggs, Beverly, Theodore Wroblewski, Danvers, and David R. Dayton, Beverly, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Original application Oct. 1, 1958, Ser. No. 764,588. Divided and this application Nov. 2, 1959, Ser. No. 858,008

7 Claims. (Cl. 29—155.61)



1. For fabricating a laminated core for an electromagnetic inductor, a method of manufacturing a [-shaped laminated member for a core assembly comprising the steps of: preparing a first three sided, [-shaped, laminate member by feeding a continuous strip of core material in a first series of first, second and third measured distances, bending said material in a substantially 90° angle in a given direction at the end of said first measured distance, bending said material in a substantially 90° angle in the same given direction at the end of said second measured distance to produce said [-shape, severing said twice bent member from said strip at the end of said third measured distance; preparing a second, similar, laminate member by feeding said material in a second series of first, second and third measured distances each altered from the corresponding measurement in said first series by an amount substantially equal to twice the thickness of said material for said second measured distance and equal to at least once the thickness of said material for said first and said third measured distances, similarly bending said material at the end of the first and second of said measured distances and severing it at the end of the third in said second series so that said second laminate will fit to said first laminate in a stacked array; preparing additional laminate members by similar feeding, measuring with progressive alteration in the same direction, bending and severing operations; and, stacking said laminations so prepared, one within the confines of another.

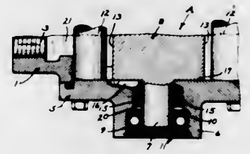
3,096,569

METHOD OF MAKING FLUID PUMP STRUCTURES

Ernest E. Cook and Harry J. Sadler, both % Hypro Engineering Co., 700 39th Ave. NE., Minneapolis, Minn.

Filed June 8, 1959, Ser. No. 818,890

1 Claim. (Cl. 29—156.4)



In the production of a self-exhausting leak-proof rotary shaft seal and bearing bore in a rotary pump casing end wall member; the method comprising member said casing wi.h a suction area and an exhaust area and an end wall closure extending therebetween having a planar annular inner face surrounding a rotary shaft bore therein; forming during casting a laterally open passageway in said planar face with the inner end thereof in radially spaced relation to said rotary shaft bore and its radially outer end in communication with said suction area; and thereafter counterboring said rotary shaft bore inwardly from the outer end thereof for an axial distance short of the planar inner face of said wall and for a radial extent to provide within said wall a sealing chamber around the rotary shaft and to intersect the inner end of said passageway; whereby to provide a through exhaust passageway between said counterbored portion of said shaft aperture and the suction area in said end wall member and thereby maintain an exhaust action on said sealing chamber.

3,096,570

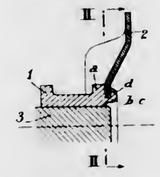
ASSEMBLING A FLANGE ON A HUB, PARTICULARLY IN THE MANUFACTURE OF PUMP TURBINES

Maxime Amirault, 32 Avenue Le Notre, Sceaux, France, and Paul Destoumieux, 16 Avenue Sainte Foy, Neuilly, Seine, France

Filed May 24, 1960, Ser. No. 31,313

Claims priority, application France June 19, 1959

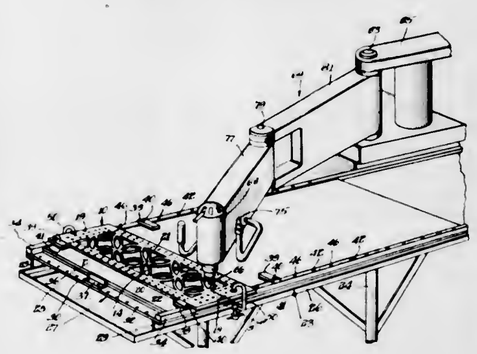
2 Claims. (Cl. 29—156.8)



1. The method of making a pump turbine, including the steps of forming, from an annular blank, by stamping and punching, a flange shaped with blading thereon and having a central bore with internal saw-tooth serrations; forming a hub including a shoulder and a tubular extension projecting beyond said shoulder and having an extremity of cylindrical outer contour the radius of which is only slightly less thar the flange bore radius, as measured between the centre of the bore and the tips of said saw-tooth serrations, and a base, against said shoulder, reinforced by projecting serrations of identical profile to those of the central flange bore, engaging the flange by its central bore onto said tubular hub extension until the serrations of the bore engage with those on the base of the tubular extension and the flange is home

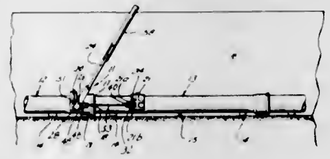
against the hub shoulder, and crimping the circular edge of the tubular hub extension against the flange.

3,096,571
METHOD AND APPARATUS FOR MAKING A SCREEN OR GRILLE
David Koch, Highland Park, Ill., assignor to Morris Kurtzon, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1958, Ser. No. 783,578
4 Claims. (Cl. 29—160)



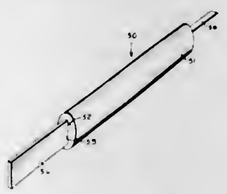
4. A method of making a color anodized architectural grille of uniform color comprising: securing a design-forming templet in a first one of a plurality of successive overlying positions with respect to an anchored thick metal plate work piece, said templet having a series of spaced but contiguous perforations occupying a major share of the area encompassing the design-forming portion of the templet to provide narrow ribs of metal between said perforations, said perforations forming a repetitive design pattern to be transferred to said metal plate work piece, the ribs along one side edge of the design pattern on the templet in each position of the latter being continuous with respective ribs along the opposite side edge of the design pattern in the next successive position of the templet so that the design patterns in successive positions of the templet are complementary and so that the juxtaposition of two such design patterns forms one overall homogeneous design pattern, passing a milling tool rotating about an axis at right angles to the plane of the work piece through each of the design-forming perforations of the templet and moving the milling tool along the entire extent of the defining walls thereof and passing the tool through the work piece to cut and remove individual pieces of metal corresponding to said perforations leaving narrow ribs of metal with perforations therebetween to define a first grille design area, then changing the relative position between the anchored work piece and the templet and securing the latter in a second of said successive overlying positions with respect to the work piece to bring the design-forming portion of the templet in continuous adjacent juxtaposed relation to the design area just cut in said workpiece, then repeating said cutting operation by passing the milling tool again through the templet perforations and the work piece, moving the tool along the entire extent of the defining walls of the templet perforations, to form a second grille design area having ribs along one edge continuous with the respective ribs along the corresponding adjacent edge of said first grille design area and thereby to form an overall homogeneous design pattern, and then color anodizing the completed work piece to form a grille with a metallic appearance and with the same intensity of color throughout.

3,096,572
PIPE JOINT FABRICATING TOOL
Wayne A. Simmons, Lindale, Tex., assignor to Tyler Pipe and Foundry Company, Tyler, Tex., a corporation of Texas
Filed July 24, 1961, Ser. No. 126,178
3 Claims. (Cl. 29—237)



1. A device for assembling pipes having bell and spigot type joints comprising, first and second spaced apart yokes disposed in approximate parallelism to and in axial alignment with each other and having slot-ways therein respectively opening in the same lateral direction, the slot-way of the first yoke being of a size to receive a pipe and abut against the bell end thereon, the slot-way of the second yoke being of a size to receive a pipe adjacent its spigot end, an operating lever having a bifurcated end providing parallel arms which are disposed over the first yoke with the opening between said arms facing in the same lateral direction as the opening of said yokes, said arms being pivoted to the extremities of said first yoke respectively on a single pivotal axis transverse to the axis of a pipe received in the slot-ways, pipe gripping members each having a pipe gripping end and an end remote therefrom and being pivotally mounted intermediate their ends on the second yoke on each side of its slot-way with their pivotal axes approximately parallel to one another and transverse to the axis of said second yoke for rotation into and out of pipe engaging positions of said gripping ends with respect to a pipe positioned in the slot-way of said second yoke, and linkage means disposed on opposite sides of said slot-ways and pivoted respectively to each arm of the lever on a single axis parallel to the pivotal axis of the connection of said lever to said first yoke and spaced therefrom, said linkage means being also connected with the ends of the pipe gripping members remote from their pipe engaging ends whereby displacement of the operating lever in one direction initially pivots the pipe gripping members into pipe engaging positions and then pulls the second yoke toward the first yoke while displacement of the lever in an opposite direction initially pivots the pipe gripping members out of pipe engaging positions and releases the second yoke to permit it to be moved away from the first yoke.

3,096,573
APPARATUS FOR REPAIRING A SEAL
Thomas W. Connors, Sr., Sturgis, and Howard J. Blonde, White Pigeon Township, St. Joseph County, Mich.; said Connors assignor to said Blonde
Filed Dec. 9, 1960, Ser. No. 74,986
5 Claims. (Cl. 29—238)



1. An apparatus for decreasing the tolerance between an elongated, relatively compressible sealing means and

an adjacent surface, said sealing means being disposed within, and having one side projecting substantially throughout its length from, a channel-shaped groove, the combination comprising:

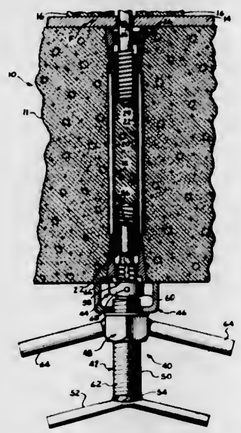
an elongated, thin and relatively incompressible and nonextensible element of substantially uniform thickness throughout its length, said element being of no greater width and length than the width and length of the sealing means;

an elongated guide member having a first lengthwise opening therethrough, said first opening being of cross-sectional size and shape similar to and no greater than the cross-sectional size and shape of said elongated element, said guide member being adapted for slidably and snugly receiving into the said first opening, said elongated, thin and relatively incompressible element, and said first opening being adapted to guide movement of said element;

a second lengthwise opening through said elongated guide member, said second opening communicating with the first opening throughout the length thereof; and

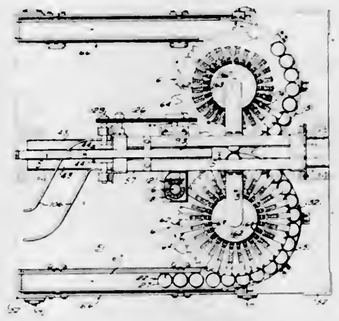
a substantially rigid, elongated driving member snugly and slidably receivable into said second opening, part of said driving member extending into a portion of said first opening for engagement with one end of said element for urging said element through said first opening and endwise into the groove between the bottom thereof and the adjacent side of said sealing means, whereby said sealing means is urged sidewardly out of said groove and toward said surface.

3,096,574
COIL TIE SPACER CONE AND PULLING DEVICE FOR THE REMOVAL THEREOF FROM CONCRETE INSTALLATIONS
Bror Hillberg, Franklin Park, Ill., assignor, by mesne assignments, to Superior Concrete Accessories, Inc., a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,359
7 Claims. (Cl. 29—263)



1. The combination with a frusto-conical spacer member having a central bore extending axially therethrough, the end of the bore adjacent the small base of the cone frustum being provided with a first series of internal right hand threads, another portion of the bore adjacent the large base of the cone frustum being formed with a series of left hand threads, of a cone puller device for extracting said spacer member from a position of embedment in a mass of hardened concrete wherein said series of right hand threads are threadedly received on the free closely wound convolutions of a hollow coil tie embedded in said mass, said cone puller device comprising an elongated pull rod having a torque applying handle at one end thereof, the other end of said pull rod being formed with a series of threads for mating engagement with said series of left hand threads, and means on said pull rod providing a shoulder to limit the extent of threaded reception of the pull rod by said series of left hand threads, whereby upon continued turning movement of the pull rod after complete mating engagement with said series of left hand threads, the spacer member will be turned bodily with the pull rod to initially loosen the same from the surrounding concrete and to thereafter cause the same to become unthreaded from said coil tie.

3,096,575
METHOD FOR ORIENTING CYLINDRICAL OBJECTS AND SECURING THE SAME TOGETHER
Thomas L. Cook, San Francisco, Calif., assignor of one-third each to Kenneth H. Norberg, Tiburon, Calif., Warren V. Glass, Sausalito, Calif., and Leo Tellefsen, El Cerrito, Calif.
Filed May 25, 1959, Ser. No. 815,570
8 Claims. (Cl. 29—407)

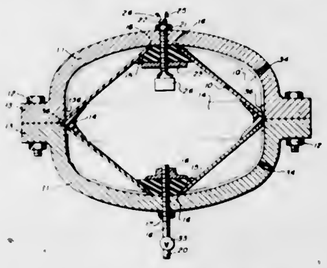


1. A method of orienting and securing cylindrical metal containers having a generally non-conductive covering over a major extent of its periphery with bare metal at another portion of its periphery, which consists of moving said containers along a defined path and discharging the same in end up relation at the end of said path, effecting a rotation of said containers about their axis during said movement, applying a sensing element to the periphery of each container during rotation thereof to sense the appearance of said bare metal, and utilizing the sensing of said bare metal to halt further container rotation whereby all containers will be discharged with the bare metal portion in the same relative position, and then substantially simultaneously securing upper and lower end portions of at least two adjacent containers together.

3,096,576
FABRICATION OF BODIES HAVING COMPOUND CURVATURE
Arthur R. Parilla, 34 Crestview Road, Mountain Lakes, N.J.
Filed Sept. 24, 1958, Ser. No. 763,114
17 Claims. (Cl. 29—421)

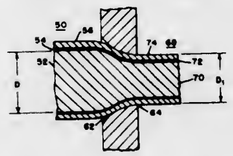
1. The method for forming a desired thin-walled body of compound curvature from a flat body of hard-to-work thin sheet metal, which method comprises: deforming said flat sheet metal body into a curved preform body approximately the shape of the desired body of compound curvature and having a curvature in only one of

at least two sets of transverse parallel planes; inserting said preform body into a die having a shaped curved surface corresponding to the shape of the desired body of compound curvature; sealing the joint between said preform body and said die; and then deforming said curved



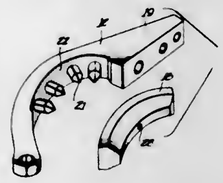
preform body into the desired thin-walled body of compound curvature, by expanding by fluid pressure said curved preform body in the set of planes of its original curvature only, to impart curvature in said curved preform body in the other of said sets, until said body conforms to said shaped curved surface.

3,096,577
METHOD OF MAKING ALUMINUM CLAD COPPER WIRE
Charles L. Carlson, Irwin, and Stanley A. Rosecrans, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original application Jan. 12, 1956, Ser. No. 558,699, now Patent No. 2,947,069, dated Aug. 2, 1960. Divided and this application June 9, 1960, Ser. No. 35,031
5 Claims. (Cl. 29—473.3)



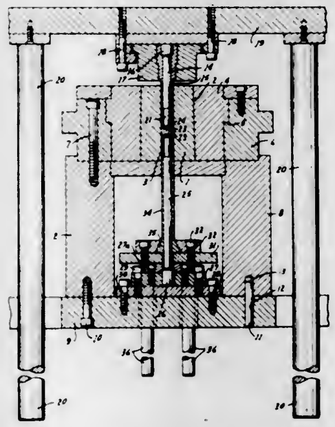
1. In the process of producing a ductile and flexible composite elongated member, comprising a copper core and an aluminum sheath bonded to the exterior surface of the copper core, the steps comprising applying a thin imperforate layer of silver of a thickness of at least 0.005 inch to the exterior surface of a copper body, the thickness of the silver layer being from 1% to 12% of the diameter of the copper body, applying an aluminum sleeve about the copper body, the cross-section of the aluminum sleeve being at least 5% of the cross-section of the copper body, the copper body having a larger cross-sectional area than the sleeve, initially working the assembly of the aluminum sleeve and copper body to reduce the cross section of the aluminum-sleeved assembly to a value less than the cross-sectional area of the copper body alone whereby the aluminum sleeve is drawn into close and intimate contact with the silver layer, thereafter cold drawing the initially worked assembly through at least one die such that the drawn cross section of the aluminum clad assembly is substantially less than the cross section of the copper core portion alone before passage through the die, the drawing producing a metallurgically bonded aluminum sheathed elongated copper core member with an imperforate interposed layer of silver.

3,096,578
METHOD OF CASTING BRAKE SHOE TO LINING
Basil S. Sample, Danville, Ill., assignor to Duff-Norton Company, Pittsburgh, Pa.
Filed Feb. 16, 1959, Ser. No. 793,468
3 Claims. (Cl. 29—527)



1. The method of casting a brake shoe to, and radially to one side of, a semi-circular lining, comprising the steps of forming radially spaced and oriented pockets extending from one side partially through the lining, spraying die release in a pressure casting die adapted to receive the lining and form the brake shoe contiguous to the lining, placing the lining in the pressure casting die, preheating the die to a temperature within the range of 600° F. to 700° F., forcing molten metal into the brake shoe forming portion of the die contiguous to said one side of the lining at a pressure approximating 1000 p.s.i., maintaining the pressure from 10 to 15 seconds, opening the die after pressure is released and the molten metal flow cut off and removing the cast shoe and integral lining therefrom.

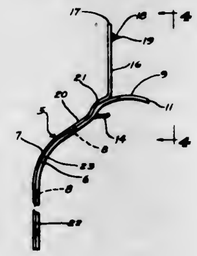
3,096,579
PROCESS OF PRODUCING EXTRUDED ARTICLES
Gustav M. Waller, Geneva, Ill., assignor to Burgess-Norton Mfg. Co., a corporation of Illinois
Original application Apr. 15, 1959, Ser. No. 806,534. Divided and this application Sept. 11, 1959, Ser. No. 843,610
2 Claims. (Cl. 29—534)



1. A method of cold extruding metal blanks including the steps of confining the outer surface of the blank, applying axial pressure to one end of the confined blank with a punch smaller in cross section than the blank end while supporting the opposite end of the blank with a similar stationary punch whereby the blank extrudes axially along the first punch, limiting the extent of said extrusion, applying axial pressure externally concentric to and in the same direction as said first punch, whereby the opposite end of said blank extrudes axially along the stationary punch, limiting the extrusion in the second

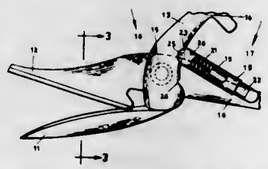
direction, and then ejecting the extruded blank from the zone of confinement while delaying the start of the next cycle a period of time consistent with the length of the finished slug in order to complete its ejection.

3,096,580
CAN OPENER
Ivan E. Cox, 4740 Broadway, Kansas City, Mo.
Filed Aug. 3, 1959, Ser. No. 831,303
1 Claim. (Cl. 30—6.1)



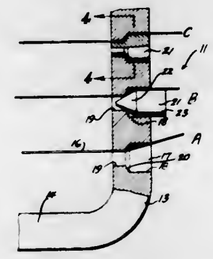
A can opener comprising a pair of rigid metal members, one of said metal members having straight parallel end portions and an intermediate shank portion, a punching prong mounted adjacent the extremity of one of said end portions, said shank portion being of greater length than the end portion having said prong mounted thereon and extending at an oblique angle to said parallel end portions, and the other of said metal members having a straight end portion secured in face to face engagement to the other straight end portion to provide a handle for said opener, an intermediate shank portion conforming to said shank portion of said first mentioned metal member and secured thereto in face to face relation, and an arcuate end portion terminating in a sharp point to provide a punch extending from the end of said straight end portion having said punching prong thereon that is adjacent said shank portion of said first mentioned metal member in divergent relation to said last mentioned straight end portion, said arcuate portion being shorter than said straight end portion diverging therefrom, said other metal member having a bead engaging finger thereon at the junction of said arcuate end portion and said shank portion.

3,096,581
METAL SHEARS
Antti Aapro, Downsview, Ontario, Canada (% Canadian Research & Development Foundation, 1434 Queen St. W., Toronto 3, Ontario, Canada)
Filed Mar. 9, 1961, Ser. No. 94,553
2 Claims. (Cl. 30—261)



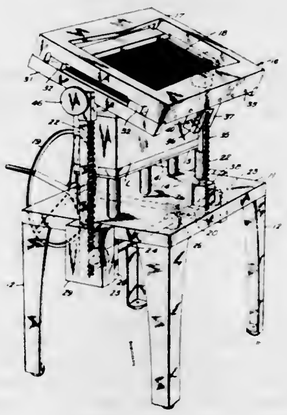
1. A metal shearing tool comprising in combination an upper blade and a lower blade, said upper blade having a cutting edge disposed in the vertical plane, the remaining portion of said upper blade being disposed upwardly and outwardly of said cutting edge, said lower blade having a cutting edge disposed in the horizontal plane, the remaining portion of said lower blade being disposed outwardly from said cutting edge, said upper blade and said lower blade being pivotally secured together, said pivot being positioned substantially above the cutting line formed by said upper blade and said lower blade, said cutting edge of said upper blade being formed rearwardly and terminating substantially below said pivot point, an upper handle member secured to said lower blade, a lower handle member secured to said upper blade, said upper handle member and said lower handle member lying substantially above said cutting line and dual-position spring loaded ram means selectively adjustable to effect either opening or closing of said blades.

3,096,582
CHEESE CUTTER
William F. Mueller, 5405 Aura Ave., Tarzana, Calif.
Filed Aug. 10, 1961, Ser. No. 130,628
3 Claims. (Cl. 31—23)



2. A frame member, said member having an opening formed therein extending through the thickness thereof, a cutting wire extending through said opening, and a retainer plug force-fitted in said opening, said plug being formed of material softer than the material of said member and being compressed sufficiently to cause said plug to flow around said member and completely fill said opening, said plug being flush with the side surfaces of said member.

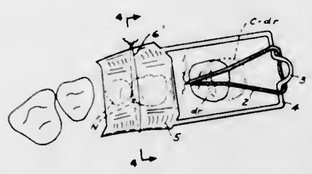
3,096,583
FOOD PRODUCT SLICING MACHINE
Robert L. Nevin, New York, N.Y., assignor to Helm Machine Products, Inc., New York, N.Y., a corporation of New York
Filed Oct. 25, 1962, Ser. No. 233,045
6 Claims. (Cl. 31—25)



1. In a device of the character described, a base, a table, means securing said table on said base, a cutter

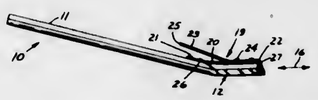
head consisting of a frame having a multiplicity of wires arranged in a common plane and extending in one direction across said frame, means for moving said head for engagement of said wires through a loaf of food product supported on said table, said means including a rack pivotally connected with said head and carried by said base for guided reciprocatory movement, rotatable drive means operatively connected with said rack for moving said head downwardly with the turning of the drive means in one direction, and means carried by said head and base disposing said head and wires in angular relation with reference to the food product and effecting swinging of the head in continuously changing angular relation of the wires through the food product supported on said table with the downward movement of the head.

3,096,584
UNILATERAL ORTHODONTIC DEVICE FOR REPOSITIONING A MOLAR TOOTH
Harry Aaron Traiger, 3206 Fairfield Ave., New York 63, N.Y.
Filed Mar. 31, 1959, Ser. No. 803,137
7 Claims. (Cl. 32—14)



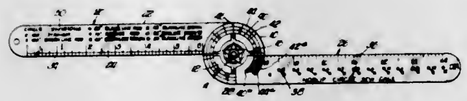
1. An intra oral total traction orthodontic device for correcting malpositioned teeth, said device comprising an elongated substantially rigid channeled retention body fittable with its base upon the top surfaces of a grouping of natural anchor teeth lengthwise thereof, a substantially rigid mounting member extending from one end of said retention body substantially in alignment therewith, said mounting member having two brackets extending from the side walls of said retention body to straddle the flanks of at least one malpositioned tooth without contact therewith, attachment means on said mounting member, and an elastic ligature releasably attachable to said attachment means, said ligature being placeable upon the malpositioned tooth to exert traction upon the same towards the point of attachment of the ligature on the mounting member.

3,096,585
TOOL FOR INSERTING DENTAL WEDGES
Charles R. Dockum, 424 Alta Pine Drive, Altadena, Calif.
Filed June 5, 1961, Ser. No. 114,880
1 Claim. (Cl. 32—40)



A tool for inserting the point of a triangular pyramidal wedge between teeth comprising: a base having a longitudinal axis; a longitudinally extending ridge rising from the base at a central portion thereof; a longitudinally extending backing wall on each side of the ridge, a clamping arm mounted to the base comprising a flat spring blade attached to the base with a free end biased toward the base; lever means for moving the said end away from the base comprising an elongated member attached to a medial portion of the clamping arm and extending longitudinally beyond the point where the clamping arm is attached to the base; a pair of forks, one on each side of the ridge, each fork including a pair of tines, the tines being formed by turned-down ends of the clamping arm and lever means, said forks being mounted on said arm at a distance from the point at which the arm is mounted to the base, said forks being adapted to be moved toward and away from said base, and overhanging the base, whereby the larger end of the wedge can be placed against the backing wall with one side resting on the base on one side of said ridge and a dihedral edge facing one of the forks, and the said fork can be moved toward the dihedral edge so that its tines embrace the sides of the dihedral angle forming the edge, thereby holding the wedge in the tool, with the point of the wedge projecting from the tool away from the respective backing wall.

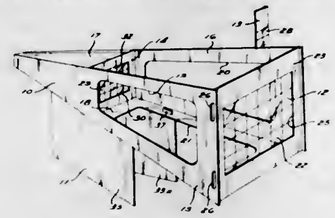
3,096,586
LAYOUT GAUGE
William R. Albright and Henry F. Szczepanski, both of 332 Main St., Lander, Wyo.
Filed Mar. 25, 1955, Ser. No. 496,781
3 Claims. (Cl. 33—26)



1. A layout gauge for textiles comprising first and second members, said first member including a disc-like portion and an elongated arm integrally secured thereto, said arm extending out beyond the periphery of the disc-like portion and including a first straight edge parallel to and offset from a diameter on said disc-like portion by the thickness of a scribing tool, said second member including at least an arm, said arm of said second member pivotally connected to the center of said disc-like portion and including a second straight edge on the opposite side of said diameter when opened parallel to and offset from said diameter by the thickness of a scribing tool, said second member having a plurality of scribing point openings extending along its length so that the gauge can function as a compass in drawing circular arcs of varying radii, indicia on one surface of said first and second members whereby said gauge can be used interchangeably as a ruler, a compass, or a divider, frictional means on at least the greater part of the opposite surface of said one member for establishing a gripping relationship with the textile material, and frictional means on the lesser part of the opposite surface of the second member whereby said second member can be pivoted over the surface of said textile material without snagging while said first member is in gripping engagement therewith, or in cooperation with said first member functioning as a straight edge when a small amount of pressure is exerted on said second member to force its frictional means into engagement with said textile material.

3,096,587
SKETCHING DEVICE
Emil J. Kenney, Middleburg Heights, Ohio, assignor to The Craftint Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 3, 1960, Ser. No. 47,264
6 Claims. (Cl. 33—64)

1. A sketching device comprising a rectangular truncated pyramidal viewing frame, a transparent rectangular base grid therefor, a transparent finder grid slideably mounted on said base grid, a transparent rectangular aligning grid interposed in said viewing frame between said base grid and the vertex of said truncated pyramidal viewing frame, and a positioning support for said viewing frame.



3,096,588
MASONRY GUIDE APPARATUS
Paul R. Cook, 1705 Belmont Ave., Apt. 601, Seattle, Wash.
Filed June 22, 1959, Ser. No. 822,063
1 Claim. (Cl. 33—85)



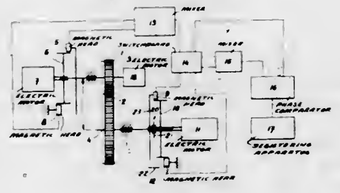
In guide apparatus for use in laying brick walls, a standard having telescopically associated outer and inner members adapted to be located in upright position adjacent a wall to be laid, guide line holding means sleeved on said outer member, and a movable collar mounted on said inner member, said collar corresponding in cross-section to said outer telescoping member and having an axial length no greater than that of said line holding means, a set screw, said collar and line holding means having radial holes therethrough arranged to register and receive said set screw when said guide line holding means is sleeved on said collar, whereby said guide line holding means can be selectively locked by said set screw anywhere along the length of said standard in concentric relationship thereto.

3,096,589
GAGE HANDLE
Sydney H. Chaffee, Greenfield, Mass., assignor to United-Greenfield Corporation, Chicago, Ill., a corporation of Delaware
Filed July 10, 1961, Ser. No. 122,806
2 Claims. (Cl. 33—178)

1. Handle for receiving reversible plug type gages comprising a disk having generally planar, parallel upper and lower surfaces, said disk having a height not less than the maximum diameter of the gages to be carried thereby, said disk being provided with a segmental slot forming spaced opposed walls, bores extending radially through said disk at an acute angle with each other and providing in said opposed walls spaced opposed channels configured to receive said gages, said disk being formed of a resiliently flexible material, and clamping means for releasably clamping said channels on said gages.



3,096,590
METHOD OF MEASURING THE UNIFORMITY OF GEARINGS
Karel Stěpánek, Prague, Czechoslovakia, assignor, by mesne assignments, to W. E. Sykes Limited, Manor Works, Staines, Great Britain
Filed Oct. 13, 1959, Ser. No. 846,114
2 Claims. (Cl. 33—179.5)



1. In an arrangement for measuring the precision of a gear train, in combination, a gear train having an input shaft and an output shaft; means for rotating one of said shafts; a first magnetic record of a periodic signal; means for moving said record; a stationary first magnetic head arranged for reading said record when said record is moved; a second magnetic head connected to one of said shafts for reading movement therewith relative to said record; mixer means connected to said magnetic heads for producing a first output signal responsive to the frequency difference of the readings of said heads; a magnetic record carrier; means for releasably connecting said carrier to the other one of said shafts for joint movement therewith; means for producing a second magnetic record on said carrier responsive to said output signal; releasable motor means for moving said carrier when released from said other shaft; a stationary third magnetic head arranged for reading said second magnetic record when the same is moved by said releasable motor means; a fourth magnetic head; means for connecting said fourth head to said other shaft for reading movement therewith relative to said second record; mixer means connected to said third and fourth magnetic heads for producing a second output signal responsive to the frequency difference of the readings of said third and fourth heads; and means for comparing said output signals.

3,096,591
RADIO FREQUENCY LEVELING DEVICE
Edward F. Higgins, Jr., and Daniel H. Larson, Parsippany-Troy Hills Township, Morris County, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed June 29, 1960, Ser. No. 39,750
2 Claims. (Cl. 33—206)

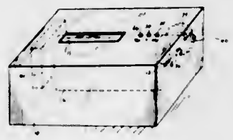
1. A leveling system comprising: a spirit level having a gaseous bubble floating in a dielectric liquid; a

first common electrode attached to one side of said level; a second electrode and a third electrode attached to the opposite side of said level, said common electrode and said second electrode forming a first capacitor, said common electrode and said third electrode forming a second capacitor, the electrodes of said capacitors being differentially dielectrically coupled by the bubble of said spirit level wherein a movement of said bubble in a first direction produces an increase in the capacitance of said first capacitor and a decrease in the capacitance of said second capacitor and a movement of said bubble in the opposite direction produces a decrease in the capacitance of said first capacitor and an increase in the capacitance of said second capacitor; detection means coupled to said



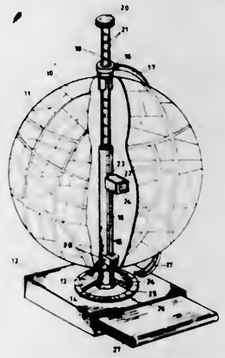
capacitor to detect the difference in capacitance of said capacitors, said detection means having a radio frequency signal source, first and second inductors each having a reactance of a magnitude approximately equal to that of one of said capacitors at the source frequency, means for connecting said first inductor and said first capacitor in series with said radio frequency signal source, means for connecting said second inductor and said second capacitor in series with said radio frequency signal source and in parallel with said first inductor and said first capacitor, a measuring circuit, having one end connected to said first capacitor and said first inductor, and the other end to said second capacitor and said second inductor.

3,096,592
EDUCATIONAL TESTING DEVICE
Donald H. Schuster, 548 Forest Drive SE., Cedar Rapids, Iowa
Filed Feb. 27, 1961, Ser. No. 91,833
7 Claims. (Cl. 35—9)



1. In a mechanical question and score answering machine, a housing having an opening, an electro-conductive drum operatively rotatably mounted in said housing and adjacent its opening, a non-electro-conductive covering over at least the upper periphery of said drum, questions on said covering progressively observable through the opening in said housing when said drum is rotated, a contact point passageway through said covering adjacent some of said questions, a yieldable member operatively depressible by the person taking the test, an electrical circuit including means for rotating said drum, and a switch having two poles, one of said poles carried by said yieldable member, said switch adapted to be closed when said yieldable member is depressed whereby said drum is rotated, and a second electrical circuit including a second yieldable member, an electrically actuated indicating means and said drum, said second yieldable member adapted to make electrical point contact with said drum through a passageway in said covering, said first yieldable member when depressed adapted to depress said second yieldable member into electrical contact with said drum closing said second circuit and causing said indicating means to be operated.

3,096,593
CITY GLOBE
Andrew J. Visser, 3440 Sherbrooke E., Apt. 2, Montreal, Quebec, Canada
Filed Nov. 16, 1960, Ser. No. 69,583
2 Claims. (Cl. 35—46)

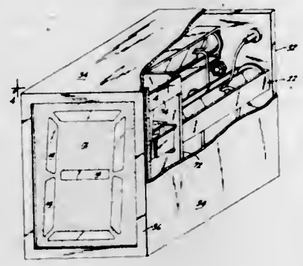


1. A city globe comprising a hollow translucent globe with a city map imprinted thereon; a pedestal for the said globe rigidly attached between the lower portion of the globe and a disc; said disc having imprinted numbered radial lines thereon; a base with one datum mark imprinted thereon; a centre spindle having a longitudinal slot running its entire length and protruding from said base to the top of the globe; said globe, pedestal and disc rotatable about the centre spindle; a centre shaft in close sliding fit within the spindle shaft with a plurality of alphabetical graduation marks inscribed around the circumference of said centre shaft; said centre shaft adapted to extend vertically upwards or downwards by means of a manually controlled knurled knob; said centre shaft having attached thereto a narrow squared grid high intensity light beam device fitted through the said slot in the centre spindle; said light to move up or down in conjunction with said centre shaft when turned by means of the knurled knob; a rigid semi-circular reinforcing strap having substantially larger curvature than the globe attached to the top of the said centre spindle and to the said base.

3,096,594
VARIABLE EXHIBITOR
Alfred Skrobisch, Huntington Station, N.Y., assignor to Allard Instrument Corp., Mineola, N.Y., a corporation of New York
Filed June 17, 1960, Ser. No. 36,984
7 Claims. (Cl. 40—28)

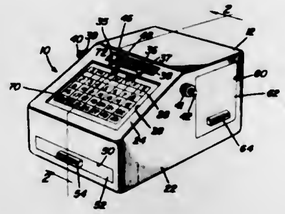
1. An electrically operated variable exhibitor unit for the display of any desired one of a series of printed characters, said unit comprising a front window with an array of narrow elongated openings corresponding to line-like segments needed to make up any one of a number of desired characters, narrow elongated white flags movable laterally relative to the openings to either exposed covering or concealed non-covering position, independently energizable means for each flag to move the flag to either position, each of said energizable means comprising a

small-diameter permanent magnet rotor, means mounting the same immediately behind its respective opening for rotation about an axis parallel to said opening, a stationary elongated electromagnet disposed in fore-and-aft direction behind the rotor and having a core of material which may be temporarily but not permanently magnetized, said core when magnetized having two spaced poles of like polarity and a single pole of opposite polarity, said like poles being



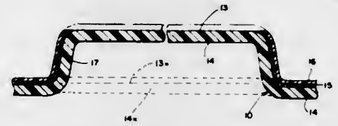
disposed approximately diametrically of the axis of rotation and said opposite pole being disposed at one end of a diameter transverse to the diameter of the like poles, the poles of the rotor and the electromagnet being so related that when the electromagnet is energized the rotor rotates no more than 90 degrees, said flag being mounted on the rotor and extending in the direction of the rotor axis for lateral arcuate movement with the rotor.

3,096,595
PERPETUAL CALENDAR ASSEMBLY
Sam F. Elwood, P.O. Box 2612, Sacramento, Calif.
Filed Aug. 30, 1960, Ser. No. 52,860
2 Claims. (Cl. 40—107)



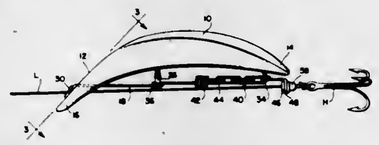
2. In a calendar assembly, a plurality of calendar cards, each of said calendar cards having identifying indicia thereon, a tabulator having indicia thereon for selectively indicating the calendar card to be employed depending upon the date to be observed, said tabulator including a plurality of superimposed rotatable disks, each of said disks having a handle thereon, a bottom plate, means rotatably retaining the disks in assembled relation, and a cover plate overlying all of the disks, said cover plate having peripheral notches therein receiving the handles and limiting the movement of the disks, said disks being four in number with one of the disks being a month disk, one being a year disk, one being a decade disk, one being a century disk for indicating a month and year date, said cover plate having a slot-like opening for revealing the dialed month and year date, said disks also having indicia thereon corresponding to the identifying indicia on the cards for registry with each other when dialing the month and year date for indicating the calendar card to be employed for that particular month and year, said cover plate also having a slot-like opening revealing the indicia designating the calendar card to be employed for that month and year.

3,096,596
MULTIPLE-LEVEL LIGHT-REFLECTIVE SIGN
Elton E. Magnuson, Ann Arbor, and Fred N. Blackmore, Orchard Lake, Mich., assignors to Plastiform Company, Ypsilanti, Mich., a corporation of Michigan
Filed Jan. 20, 1958, Ser. No. 709,883
3 Claims. (Cl. 40—135)



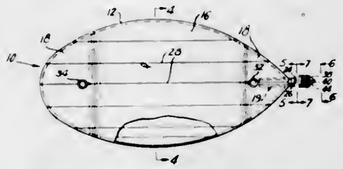
1. A sign member having a front and back and comprising a substantially rigid layer of opaque material, a layer of light reflective material laminated to the front of said rigid layer, a light transmitting protective material laminated to the front of said light reflective material, said member having areas offset with the front surface of said opaque material disposed in front of the front surface of said protective material and exposed to view above said light reflective and protective materials over predetermined coplanar surface areas which provide configurations defining intelligible indicia to a viewer thereof, said opaque material being concealed from view by said light reflective material over its remaining planar area around said offset areas with opaque layer portions interconnecting said exposed and concealed areas being covered by said layer of light reflective material in turn covered by said protective material with said reflective material exposed edgewise at its edges between said exposed opaque material and the protective material bordering same.

3,096,597
FISHING LURE HAVING DETACHABLE HOOK SUPPORTING MEANS
John T. Dickinson, 104 Wall St., Seattle, Wash.
Filed Apr. 17, 1961, Ser. No. 103,645
2 Claims. (Cl. 43—42.05)



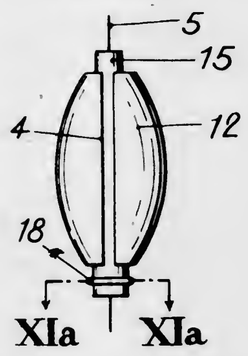
1. A fishing lure comprising a floatable body having an arcuate longitudinal form and a frontal water impingement surface at its forward end, said forward end of said floatable body defining a longitudinally extending slot which is open at said forward end for the passage of a fishing line through said slot, a metal rod secured to said line, said rod terminating in an open loop adjacent said water impingement surface, the closed portion of said loop crossing said slot to obstruct the same, said rod having a horizontal loop intermediate its rear end and a screw passing through said loop and secured to the under side of said lure, a rearward extension of said rod terminating in an upturned hook, an adjustable guide means having a tight coil at its front end and encircling said rearward extension of said rod and having a plurality of horizontal loop openings individually adapted to engage said upturned hook, said guide means terminating in a line guide and hook abutment.

3,096,598
BUBBLE-FORMING FISHING LURE
Joseph H. Smolen, 41450 Fret Road, Belleville, Mich.
Filed May 2, 1960, Ser. No. 26,270
1 Claim. (Cl. 43—42.06)



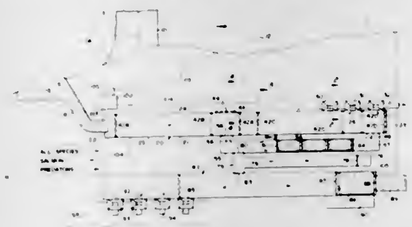
A readily repressurable bubble forming fishing lure for slowly emitting gas to form fish luring bubbles comprising a hollow rigid body having fishing line and fish hook connecting means secured thereon and having an opening at one portion of its peripheral extent, a charging and discharging valve assembly within said body at said opening, said valve assembly comprising a valve chamber, a valve seat, and a valve within said chamber, said valve being axially movable toward and away from a closed position on said valve seat, said valve having an end portion extending through the opening in said body, a collar on the exterior surface of said valve chamber and extending through the opening in said body, said end portion of said valve extending through said collar, said valve being yieldably biased into its closed position and being movable into open position by axial pressure on its end portion, and a cap rotatably cammed on said collar, said cap having an aperture therein and having an internal spider, said spider being arranged to apply pressure to said valve end portion when said cap is rotated on said collar, said collar being externally threaded while said cap is internally threaded to mate with the threads on said collar, said cap being constructed to vary its pressure on the valve end portion in accordance with the threadedly adjustable position of said cap on said collar, said cap being temporarily removable to permit access of a charging conduit to the valve.

3,096,599
REMOVABLE FISHING SINKER
Charles Baron, 34 Rue Trevet, Aubervilliers, France
Filed July 3, 1958, Ser. No. 746,552
Claims priority, application France July 6, 1957
1 Claim. (Cl. 43—44.9)



A fishing line sinker for easy connection on and removal from a fishing line, said sinker comprising a heavy body member having a central bore of substantially conical configuration provided throughout the length thereof and a lateral slot extending along the entire length thereof, said lateral slot opening into said central bore to allow said body member to be placed over as well as removed from said fishing line laterally thereof, and a light sleeve member having a substantially conical configuration complementary to that of the conical configuration of said central bore so that said sleeve member makes a friction fit along the entire length of said central bore when disposed therewithin, said sleeve member having a central longitudinal opening therethrough and a longitudinal slot extending the full length thereof, said longitudinal slot communicating with said longitudinal opening and both having a diameter greater than said fishing line so that said sleeve member can be placed over as well as removed from said fishing line laterally thereof, said sleeve member including a longitudinal rib disposed along the entire length of the outer surface of said sleeve member and being angularly displaced in relation to said longitudinal slot of said sleeve member, said longitudinal rib having the same diameter throughout its disposition along said sleeve member, said longitudinal rib entering said lateral slot of said body member when said sleeve member is placed in said central bore to prevent any angular displacement of said sleeve member therein as well as to provide substantially uniform engagement therealong, said sleeve member including a base portion, said body member and sleeve member being mounted on said fishing line so that said base portion of said sleeve member is directed towards the end of the fishing line to which a fishing hook is connected.

3,096,600
FISH SORTING METHOD
Val M. Gwyther, 4686 W. 5th Ave., Vancouver 8, British Columbia, Canada
Filed Oct. 13, 1960, Ser. No. 62,420
6 Claims. (Cl. 43—100)



1. The method of removing all fish except a desired species from a river during migration upstream past an obstruction which method comprises: guiding the fish from the downstream side of the obstruction into a water-filled structure, moving a first screen along the structure towards a second screen to reduce the volume of water containing the fish, to separate some of the fish below a predetermined size from the remainder of the fish and to collect the remainder of the fish above a lifting tray, raising the lifting tray until the fish therein are accessible from the exterior of the structure, hand selecting the desired species from the fish in the lifting tray for transfer to another part of the structure and transporting the desired species in the other part of the structure back to the river on the upstream side of the obstruction.

3,096,601
MOUNTING PROCESS FOR A LINING PANEL, IN PARTICULAR FOR VEHICLES
Edmond Henry-Biabaud, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France
Filed Sept. 8, 1961, Ser. No. 136,857
1 Claim. (Cl. 45—138)

A device cooperative with the inner wall of a vehicle for securing an upholstery panel against said inner wall

of the vehicle, said inner wall having struck-out fixation lugs, said lugs being bent inwardly, said device consisting of a section of flexible resilient material of channel cross-

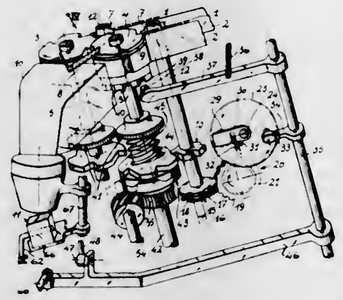


section adapted to fit resiliently over the panel edge and formed with an extension fitting between said wall and said lugs formed in said wall.

3,096,602
PACKAGING METHOD
Frederick C. Newmaker, Jr., Cleveland, Ohio, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Jan. 5, 1962, Ser. No. 164,590
4 Claims. (Cl. 53—22)

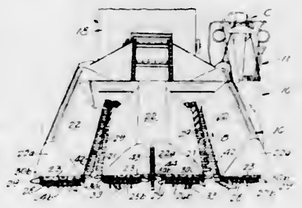
1. In the method for packaging articles comprising positioning an article to be packaged upon an air permeable paperboard base, bringing into contact with said article and said base a heated film of a non-aromatic olefin polymer, drawing said film into skin-like relationship with said article by applying a suction to the side of said base opposite that on which said article is positioned, and subsequently cooling the package so-formed, the improvement comprising, prior to bringing into contact said article and said base with said heated film, providing said film with an at least partially oxidized surface, and applying over said oxidized surface between about 5 and about 100 grams per thousand square feed of film surface of a polyalkyleneimine comprised of alkylene units containing from 2 to about 4 carbon atoms, said oxidized surface having applied thereover the polyalkyleneimine being the surface that is brought into contact with said article and said base.

3,096,603
AUTOMATIC COUNTING MACHINE FOR SCREWS, NAILS AND SIMILAR ARTICLES
Paolo Chiaia, % Ing. A. Giambrocono, Via Durini 4, Milan, Italy
Filed Apr. 25, 1960, Ser. No. 24,569
9 Claims. (Cl. 53—78)



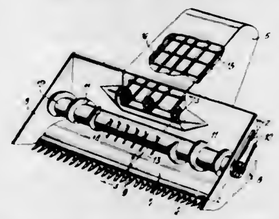
1. An automatic machine for counting screws and similar articles comprising a rotatable drum with a series of peripherally spaced indents, each receiving only one article, a drive for rotating said drum, stationary discharge means for removing each article from the respective indent after said drum has rotated through an angle and for discharging the removed article towards an outlet, coupling means interposed in the arcuate path of the article transported by said rotatable drum so that a temporary driving connection between said drum and said coupling means is established, a counting device to count the articles transported by said drum, and means connecting said counting device with said coupling means so that said counting device is temporarily coupled with said drive through said coupling means as the article impinges said coupling means in such a manner that said counting device is actuated whenever a transported article engages one of said coupling means.

3,096,604
ROW CROP HARVESTING APPARATUS
Slade Hale Baker and Rollo John Baker, Jr., Akron, Iowa, and Thomas Robert Burnight, 2221 Essex Road, Minneapolis, Minn.
Filed May 31, 1960, Ser. No. 32,876
15 Claims. (Cl. 56—18)



1. A harvester for use with row crops of the type having the fruit supported at an elevated position on the stalk, comprising a mobile supporting structure to move along the ground, a harvesting unit on the structure and including crop and stalk supporting and guiding means above the ground surface and defining a fore-and-aft stalkway with an open stalk-receiving forward end, means spaced rearwardly from said forward end for engaging the stalks in the stalkway and harvesting the fruit, said unit including a pair of elongate and continuous conveyors respectively disposed on opposite sides of the stalkway, each of said conveyors having a gathering leg extending and traveling transversely of and inwardly to the stalkway in closely spaced relation with the ground surface, each of said gathering legs being disposed forwardly of the foremost portion of said supporting and guiding means, supporting means on the harvesting unit and spaced rearwardly of the gathering legs of said conveyors thereby leaving the front of the harvesting unit free of structure forwardly of the gathering legs and thereby causing the gathering legs of the conveyors to first engage the crops as the harvester moves along the crop row, and means for driving said conveyors.

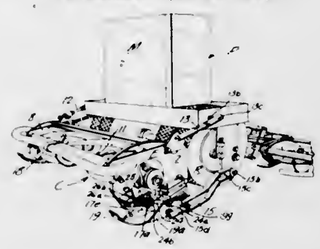
3,096,605
COMBINE HARVESTER
Reinhold Claas, 64 August-Claas-Strasse, Harsewinkel, Westphalia, Germany
Filed Oct. 25, 1960, Ser. No. 64,949
Claims priority, application Germany Oct. 27, 1959
3 Claims. (Cl. 56—23)



1. In a combine harvester, in combination, a cutter platform adapted to receive the material which is worked on by the harvester and having a bottom wall and a pair of side walls; a rotary auger located over and adja-

cent said bottom wall and being mounted in said side walls turnable about a fixed axis substantially parallel to the bottom wall for feeding material received by said cutter platform; and yieldable means between said auger and said bottom wall and including deformable wall means movably attached along one edge thereof to said bottom wall and slidably abutting along an opposite edge thereof against said bottom wall while being spaced between said edges from said bottom wall and forming with portions of the latter outside said edges a continuous surface over which the material may be fed by said auger, said yieldable means including further spring means engaging said deformable wall means for yieldably maintaining the latter in a predetermined position with respect to said auger.

3,096,606
GROUND ENGAGING SUPPORT FOR GROUND TRAVERSING MACHINES
Hugh R. Weir, Minneapolis, Minn., assignor to Toro Manufacturing Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed May 12, 1961, Ser. No. 112,159
9 Claims. (Cl. 56—26)



1. A ground engaging support for ground traversing machines comprising,

a frame adapted to be connected to such a machine in supporting relation,

a pair of laterally spaced apart elongate shoes mounted at opposite sides of the frame to engage the ground and at least partially support said frame thereabove,

means pivotally connecting the intermediate portions of each shoe to its associated side of the frame for permitting pivotal movement of the shoes about an axis extending transversely of the machine and orienting said shoes to extend longitudinally in the direction of movement of the machine,

a ground engaging roller extending between said shoes,

means interconnecting opposite ends of the roller with the rear end portions of said shoes to permit revolving movement of the roller about its longitudinal axis,

said last-mentioned interconnecting means also defining a pivotal connection between each shoe and one end of said roller to permit relative pivotal movement of the roller with respect to each shoe about a horizontal axis extending substantially parallel to the longitudinal axis of the shoe,

and resilient means interconnecting said frame and said roller and urging said roller downwardly to thereby cause the major portion of the weight of said frame and machine to be borne by the roller.

3,096,607
COTTON PICKING SPINDLE
Albert J. Scholtes, 714 Ohio Ave., Corpus Christi, Tex.
Filed Nov. 3, 1961, Ser. No. 149,987
4 Claims. (Cl. 56—50)

1. A spindle for cotton pickers comprising

(*a*) a substantially solid body having

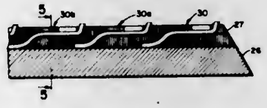
(*b*) a longitudinal slot open through the outer surface,

(*c*) stop members at least partially crosswise of the slots at spaced longitudinal intervals,

(*d*) closely spaced barb units in the slot comprising

(*e*) anchor portions affixed to the spindle at inner portions of the slot,

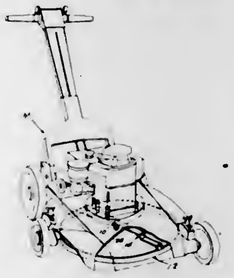
(*f*) spring portions having forward sections abutted beneath the stops and



(*g*) rearward spring sections extending downwardly and rearwardly from the rear ends of the forward spring sections to the forward ends of the anchor portions, said anchor portions and at least parts of said rearward spring sections underlapping forward spring sections of next rearward barb units, and

(*h*) barbs outstanding from the front ends of the forward spring sections forwardly of the stop members.

3,096,608
SAFETY BLADE ASSEMBLY FOR ROTARY MOWERS
Tom R. Williamson, 813 W. Bolt St., Fort Worth, Tex.
Filed June 15, 1962, Ser. No. 202,875
2 Claims. (Cl. 56—295)

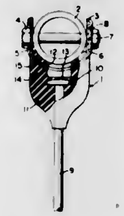


1. A safety blade assembly for rotary mowers, comprising a diametrical cutter blade, and a circular guard ring surrounding the blade and fixed to the ends of the blade, said blade having a central portion spaced above the guard ring and having centered means for fixing the blade to the motor shaft of a rotary mower, outer end portions spaced below and parallel with the central portion and above the guard ring, the leading edges of said outer end portions being formed with cutting edges, said central portion and said outer end portions being flat and disposed in horizontal planes, and outwardly declining portions on the outward ends of the central portion extending downwardly to and fixed to the inward ends of the outer end portions, said outer end portions terminating at their outward ends in downwardly and outwardly declining terminals fixed at their lower ends to the guard ring.

3,096,609
HAY RAKE TOOTH
John E. Garrett and Kenneth W. Howick, St. Marys, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Dec. 14, 1961, Ser. No. 159,263
4 Claims. (Cl. 56—400)

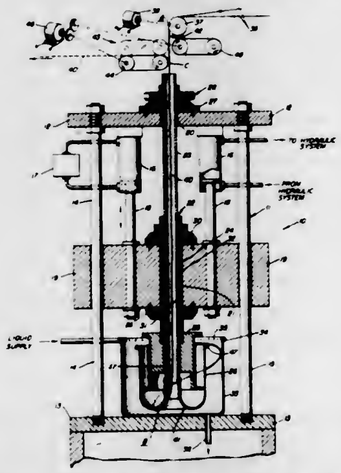
1. A hay rake tooth for mounting on a rake bar comprising a clip element for attaching said tooth to said rake bar, a block of elastomeric material having one end

firmly attached to and depending from said clip element, a rake tooth extending from the end of said block away from said rake bar in a direction substantially normal to said rake bar, a portion of said tooth being firmly embedded in and adhered to elastomeric material of said



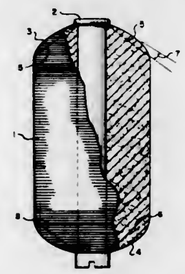
block, a recess in said block of elastomeric material on the end adjacent said clip and extending toward the opposite end stopping short of the end of the embedded portion of said rake tooth, and an aperture in said clip coextensive with said recess.

3,096,610
METHODS OF AND APPARATUS FOR MULTI-CYCLE TWISTING A WIRE-LIKE MEMBER
Tillman T. Bunch, Princeton, N.J., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Sept. 18, 1961, Ser. No. 138,854
14 Claims. (Cl. 57—34)



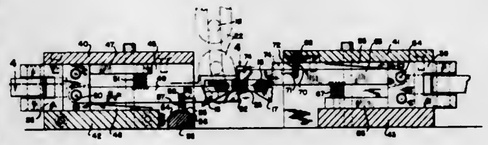
1. A multicycle apparatus for twisting a wire-like member, which comprises hollow guide means, said guide means including a structure having a hollow cylindrical portion and a hollow bell-shaped portion, said cylindrical portion having a diameter larger than that of a reel so as to permit the reel to be moved axially into and out of the guide means, a rotatable reel receiver having a winding surface positioned concentrically with respect to said guide means, means operable to control the movement of the wire-like member in a longitudinal direction while restraining axial rotation of the engaged portions relative thereto, means for operating said control means to limit the rate of advance of the wire-like member during a first cycle of operation in the direction of its length through the hollow guide means to the winding surface of the receiver, and drive means for rotating the receiver about a common axis of the guide means and the receiver during the first cycle and a second cycle of operation at a rotational speed such that an inertial force is imparted to a portion of the wire-like member extending from the guide means to the winding surface, such inertial force tending to advance the wire-like member through the guide means to the winding surface, said extending portion of the wire-like member rotating during said first cycle about the common axis at a speed less than the rotational speed of the receiver and causing a twisting of the member between the control means and the guide means, said means for operating said control means causing the latter to move the twisted wire-like member in the reverse longitudinal direction during the second cycle of operation while the receiver continues to rotate in the same direction, such reversal of longitudinal direction of the wire-like member causing that portion of the wire-like member extending from the guide means to the winding surface to rotate in its original direction about the common axis at a speed greater than that of the receiver, thus causing it to be unwound from the winding surface and further twisted as it moves between the control means and the guide means.

3,096,611
METHOD FOR WINDING PACKAGES OF ROVING AND THE LIKE
Ornulf E. Heiberg, Charlotte, N.C.
(% Institute of Textile Technology, Charlottesville, Va.)
Filed Oct. 23, 1959, Ser. No. 917
5 Claims. (Cl. 57—156)



1. In the method of forming packages of roving in which the roving is wound on a bobbin in successive cylindrical layers, each layer consisting of closely spaced turns of roving, the improvement which comprises winding on the bobbin a first layer of predetermined length and winding successive cylindrical layers of lengths shorter than the next preceding layer by an amount which progressively increases from layer to layer.

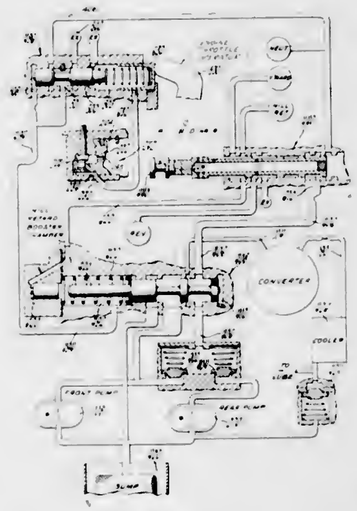
3,096,612
CHAIN MAKING MACHINE WITH MEANS FOR TRIMMING WELDING BURR
Ralph J. Coffey, York, Pa., assignor to American Chain & Cable Company, Inc., a corporation of New York
Filed May 16, 1961, Ser. No. 110,449
11 Claims. (Cl. 59—22)



1. Apparatus for trimming excess material from opposite sides of a workpiece comprising a frame, means for holding said workpiece on said frame, sliding means mounted on said frame for reciprocation toward and away

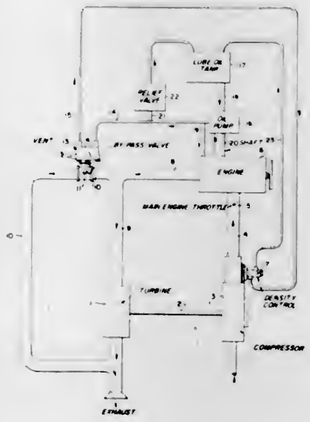
from said workpiece, a pair of tool supports mounted on said sliding means and reciprocable thereby alongside the opposite sides of said workpiece, means for permitting lateral displacement of said tool supports relative to the path of reciprocation of said sliding means, a pair of cutting tools on the respective tool supports, and cam means on said frame in the path of reciprocation of said tool supports for periodically effecting said lateral displacement of said supports to move said tools into trimming contact with the opposite sides of said workpiece.

3,096,613
TRANSMISSION
Frank J. Winchell and Oliver K. Kelley, Bloomfield Hills, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application July 25, 1956, Ser. No. 600,022. Divided and this application Mar. 1, 1961, Ser. No. 92,599
2 Claims. (Cl. 60—12)



1. A power transmission comprising in combination a hydrodynamic device for transmitting torque to turbine means from an impeller for being driven by an engine having a movable torque demand indicating device, a movable adjusting element for influencing the torque between the impeller and turbine means, means for urging the adjusting element toward a first position providing a high torque transmitting range between the impeller and turbine means, a fluid pressure chamber for overcoming the urging means and holding the adjusting element in a second position providing a low torque transmitting range, means normally supplying fluid under pressure to said fluid pressure chamber to hold the adjusting element in the second position, a source of fluid under pressure for operating means auxiliary to the turbine means, a regulator valve for increasing the pressure of the source as torque demand on the engine increases, the regulator valve including a spring for increasing the pressure of the source when the spring is stressed, a spring abutment movable in response to movement of the torque demand indicating device for stressing the spring, a vent port opened by the abutment in its movement and a connection from said fluid pressure chamber to the vent port for venting the pressure chamber to move the adjusting element to the first position after predetermined movement of the torque demand indicating device.

3,096,614
TURBO-CHARGER BOOST DENSITY CONTROL
Alexander Silver, East Woodland Hills, and Robert L. Cholvin, El Segundo, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 29, 1961, Ser. No. 99,099
10 Claims. (Cl. 60—13)



1. A turbocharger boost density control for an internal combustion engine wherein said engine is supplied with air from a compressor operated by a fluid turbine driven by gases exhausted from said internal combustion engine, said control comprising: means responsive to variations from a predetermined pressure-temperature relationship in air supplied to an internal combustion engine; means actuated by said responsive means for producing an impulse signal in accordance with the response produced in said responsive means; a valve providing a vent to atmosphere for gases exhausted from said internal combustion engine; means operated by said signal producing means for actuating said valve so as to vent gases exhausted from said internal combustion engine to the atmosphere thus controlling the operational speeds of said turbine and compressor whereby a predetermined pressure-temperature relationship is maintained in air supplied to said internal combustion engine.

3,096,615
TURBOCHARGER SYSTEM FOR INTERNAL COMBUSTION ENGINES
Arthur A. Zuhn, East Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Sept. 21, 1961, Ser. No. 139,707
4 Claims. (Cl. 60—13)

1. In a turbocharger system for an internal combustion engine having an exhaust manifold and an intake manifold wherein the manifolds are immediately adjacent to the engine the combination comprising:

a turbine communicating with the exhaust manifold and driven by gases therefrom;

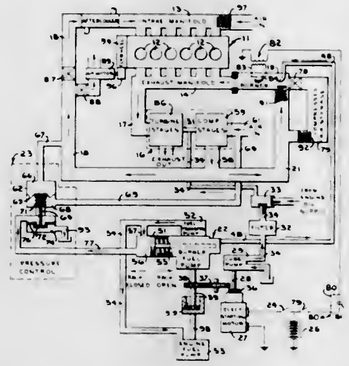
a compressor driven by said turbine and having an output which communicates with said intake manifold;

a fuel burner chamber having an input for receiving compressed air and an output through which expanded gases pass;

means communicating the output of said compressor to the input of said fuel burner chamber;

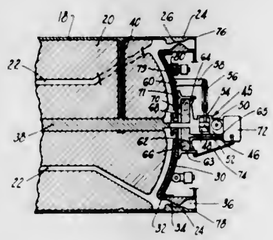
means communicating the output of said fuel burner chamber into and through the exhaust manifold;

means for supplying a variable quantity of fuel to said burner chamber; and



means responsive to intake manifold pressure to vary the quantity of fuel delivered to said burner.

3,096,616
JET PROPELLED VEHICLE
James L. Edman, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed June 11, 1959, Ser. No. 819,712
11 Claims. (Cl. 60—35.6)



10. In a rocket engine having a longitudinal axis and an outlet with an annular restriction therein, a disc-shaped gate proportioned to fit within said outlet and having an outer periphery of greater diameter than the diameter of the opening provided by said annular restriction and which defines in cooperation with said restriction an annular thrust nozzle, a first means responsive to the pressure within the engine for locating said gate toward and away from said restriction to define the effective cross sectional area of said nozzle controlling the magnitude of thrust on said rocket, and a second means for locating said gate radially to define the configuration of said nozzle unaffecting its area and thrust magnitude but locating the centroid of said nozzle relatively to the longitudinal axis of said rocket.

3,096,617
COMBINED NOISE SUPPRESSOR, THRUST REVERSER AND VARIABLE AREA NOZZLE FOR EXHAUST EXIT SYSTEM FOR JET ENGINES
Paul M. Bryant, Sherman Oaks, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Nov. 8, 1960, Ser. No. 67,951
7 Claims. (Cl. 60—35.54)

1. In a jet engine, a nozzle located at the aft end of said engine, a stationary cowling for the engine, a plurality of radially outwardly extending pockets formed in the aft portion of said nozzle and separated by surface portions of the nozzle extending from and continuous with the forward portion of the nozzle, a noise suppression element located in each of said pockets in sealing relationship thereto to prevent passage of exhaust gas through said pockets during cruise operation, means for supporting said elements for movement into and out of said pockets, actuator means for moving said elements inwardly into the exhaust jet in order to break up the exhaust stream into a plurality of small separate jets and thereby obtain noise suppression, a movable shroud located at the aft end of said cowling during cruise operation, and actuator means for moving said shroud rear-





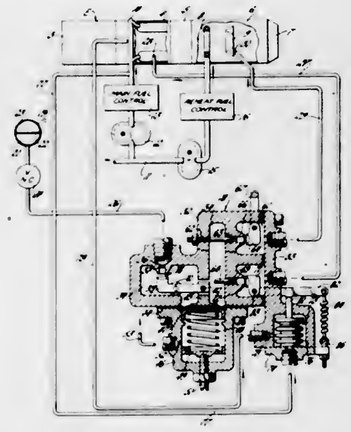
wardly upon movement of said elements inwardly into said exhaust jet to provide an opening between the end of said cowling and said shroud through which ambient air can be drawn and passed through the space between said pockets by the ejector action of the exhaust jet.

3. In a jet engine as defined in claim 1 having a plurality of movable blockage segements pivotally mounted on said shroud, means for connecting said segments to said nozzle to permit said segments to extend longitudinally of the engine until the shroud is moved to the aft end of the nozzle, and linkage means causing inward movement of said segments as said shroud moves beyond the end of said nozzle in order to reverse the flow of exhaust gas leaving the nozzle and discharge same through the opening between the cowling and the shroud.

3,096,618
PYROPHORIC IGNITER
Howard B. Kast, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 22, 1960, Ser. No. 51,030
7 Claims. (Cl. 60—39.82)

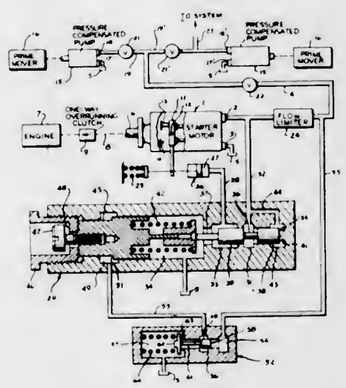
1. An igniter system for a turbojet engine having a main combustion chamber and an afterburner comprising, in combination, a source of pyrophoric fuel under pressure, a pressure regulating valve, means including fuel shutoff means and a first flow-limiting restriction connecting the source to the said valve, means including a second flow-limiting restriction and a flow-controlling valve connecting the outlet of the regulating valve to the main combustion apparatus of the engine for supplying pyrophoric fuel thereto to effect ignition therein, means responsive to main combustion chamber ignition effective to close the flow-controlling valve, means including a third flow-limiting restriction and a stop valve connecting the outlet of the regulating valve to the afterburner of the engine for supplying pyrophoric fuel thereto to effect ignition therein, and manually controllable operating means for the stop valve, the first flow-limiting restriction being of such proportions as to limit the pressure at the

outlet of the regulating valve to not more than approximately twice the regulating valve setting when the regu-



lating valve is ineffective because of a casualty thereto and either the flow-controlling valve or the stop valve is open.

3,096,619
HYDRAULIC SYSTEM
Lyston C. Jennings and Howard C. Spooner, Watertown, N.N.Y., assignors to The New York Air Brake Company, a corporation of New Jersey
Filed Sept. 10, 1962, Ser. No. 222,392
4 Claims. (Cl. 60—53)



1. In combination, an engine and a hydraulic starting system for accelerating the engine to starter cut-out speed, the system comprising

(*a*) a variable displacement hydraulic motor connected with the engine for driving same and having a displacement control element movable between minimum and maximum displacement positions;

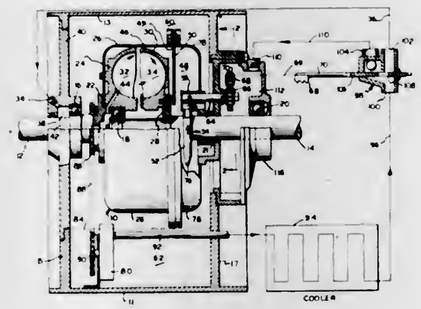
(*b*) a source of hydraulic fluid capable of delivering fluid at a selected one of two substantially constant supply pressures and at a rate that varies between a minimum value and a maximum value equal to the demand of the motor when the displacement control element is in maximum displacement position and the motor is operating at a speed less than starter cut-out speed;

(*c*) conduit means connected with the motor and the source for leading fluid from the source to and through the motor;

(*d*) motor control means connected with the displacement control element and responsive to the operating pressure of the motor for positioning said element in the maximum displacement position when operating pressure is above a predetermined pressure and for moving said element toward the minimum displacement position as operating pressure tends to decrease below said predetermined pressure, whereby the change in displacement of the motor maintains motor demand constant at said maximum delivery rate; and

(*e*) regulating means connected with the motor control means and responsive to the supply pressure for establishing a high value for said predetermined pressure when the source is delivering fluid at the higher of said two substantially constant supply pressures and for establishing a lower value for said predetermined pressure when the source is delivering fluid at the lower of said two substantially constant supply pressures.

3,096,620
FLUID DRIVE IMPROVEMENT
Richard M. Nelden, Birmingham, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,712
6 Claims. (Cl. 60—54)



5. In a fluid coupling

a toroidal work chamber defined by opposing impeller and runner shells,

supply means including a conduit connected to supply cooled liquid to said work chamber,

a control chamber in axial alignment and free liquid communication with said work chamber to control level of liquid in said work chamber,

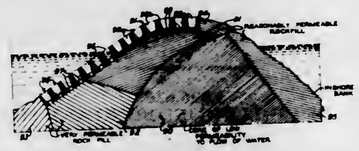
adjustable means to regulate the quantity of liquid in said work chamber,

means to regulate the quantity of liquid in said control chamber and thus in said work chamber,

a proportioning valve in said supply conduit adjustable to by-pass variable amounts of cooled liquid back to the supply means and deliver the remainder to the work chamber in accordance with liquid level in the work chamber,

and a common operator for said regulating means and said proportioning valve to increase flow of cooled liquid to the work chamber as the amount of liquid in the work chamber is reduced and the slip and need for cooling increase.

3,096,621
ARTIFICIAL BLOCKS FOR THE PROTECTION OF HYDRAULIC STRUCTURES
Pierre Francois Danel, La Tronche, France, assignor to Societe Grenobloise d'Etudes et d'Applications Hydrauliques, Grenoble, France, a corporation of France
Filed Jan. 18, 1960, Ser. No. 3,196
Claims priority, application France Jan. 20, 1959
10 Claims. (Cl. 61—4)



5. A hydraulic structure for protection against the action of moving water and composed of a rubble mound in the form of a sloping embankment and a protecting facing provided on said sloping embankment, the rubble in said embankment being of such sizes and configurations as to provide the embankment with such permeability that water absorbed thereby from a wave thereof is enabled to flow down therethrough while such wave is receding and to be substantially drained therefrom before a successive wave breaks on said structure, said facing comprising a plurality of container shaped blocks laid as a layer on the lower portion of the embankment and disposed generally in side-by-side relation with the side walls thereof in supporting engagement and the top faces thereof exposed to the movements of the water, each of said blocks being relatively massive and of substantial weight and having a large cavity opening in its top face and at least one orifice in its bottom face bringing such large cavity into communication with the portion of the embankment on which it rests, the cavity and orifice constituting from 20% to 60% of the total block volume and occupying such a large portion of the volume of the block that the block is relatively light in weight for its size and unable by its own weight to withstand substantial hydrodynamic underpressures exerted against its bottom face by water flowing through said embankment, the cavity in each block occupying the major part of the area of the upper portion of the block, whereby said layer of such blocks presents to an incoming wave of water a cellular construction which is capable of destroying the formation thereof and of absorbing and storing such a substantial portion of the water of such wave that formation of a major reflection of such wave would be prevented, and the orifices in said blocks being of such size as to enable water flowing down from the upper portion of the embankment to drain out through such orifices and cavities at such rate as to prevent the build up of hydrodynamic underpressures to a magnitude sufficient to displace such blocks on the embankment, and said facing comprising a plurality of said container shaped blocks laid generally as a layer on a higher portion of the embankment against which waves may break, the cavities and orifices in said blocks on said higher portion also constituting from 20% to 60% of the total block volumes, and the cavities occupying the major part of the area of the upper portions of the blocks so that such layer thereof presents a cellular construction capable of destroying the formation of an advancing wave and of absorbing and storing such a substantial portion of the water thereof, that a major part of the water of the advancing wave is engulfed within such cavities and rendered unable to form a major reflection of such wave, and the orifices in said blocks being of such size as to enable the engulfed water to pass through such blocks at a rate such that the engulfed water can flow into and down through said embankment so as to be substantially drained from the latter before a successive wave breaks on said structure, the total cross-sectional orifice area of each block on said lower portion of the embankment being greater than the total cross-sectional orifice area of each block on said higher portion of the embankment.

3,096,622
SOIL SETTLING METHOD
Richard E. Landau, 61—59 Dry Harbor Road, Middle Village, Long Island, N.Y.
No Drawing. Filed July 2, 1958, Ser. No. 746,099
4 Claims. (Cl. 61—10)

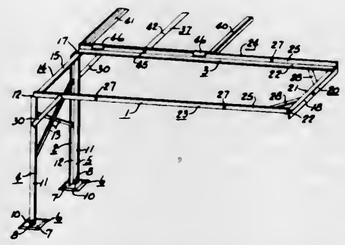
1. In settling of liquid-containing, compressible, earth formation utilizing a plurality of sand-drains, the improvement in the method of constructing the sand-drains comprising:

(1) penetrating into the formation to the desired depth by helically cutting with a substantially continuous flight auger into the earth formation to thereby form a core of earth

(2) removing the core from the earth formation by withdrawing the auger to thereby create a cavity and

(3) simultaneously as the cavity is formed, filling same with a porous material.

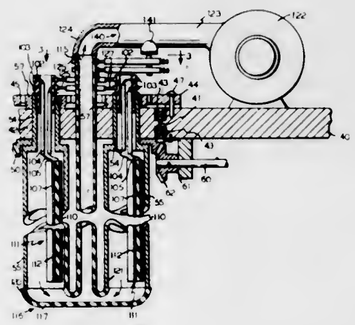
3,096,623
SMALL BOAT DOCK
Ray H. Laird, Rapid City, Mich.
Filed Nov. 9, 1960, Ser. No. 68,253
6 Claims. (Cl. 61—48)



1. A dock structure made up of a series of sections each section consisting of a rectangular deck frame having a matched pair of horizontally disposed parallel angle rails with their coplanar horizontal flanges inturned toward each other and their vertical parallel flanges coextensive and turned upwardly, a matched pair of horizontally disposed parallel angle sills transversely of said rails and having their vertical parallel flanges coextensive and turned downwardly and their horizontal coplanar flanges inturned toward each other, the ends of the top horizontal coplanar flange surfaces of said sills secured to the ends of the bottom horizontal coplanar flange surfaces of said rails and completing said rectangular deck frame, a matched pair of vertically disposed parallel angle legs having their coplanar flanges inturned toward each other and their parallel flanges coextensive, the top edges of said parallel leg flanges secured to both end edges of the inner surfaces of both flanges of one of said sills and providing support for the frame, the inner surface of the coplanar leg flanges being spaced from the extreme portions of the outer vertical sill flange surface and defining therewith a pair of pockets, said other sill being the free end sill of the dock section, and said pockets having a width and breadth receiving the end and inner and outer depending vertical flange surfaces of said free end sill on the next consecutive dock section and retaining the outer vertical flange surfaces of adjacent sills

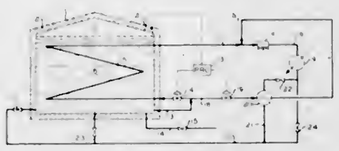
in continuous transverse contact to maintain alignment of adjacent dock sections, the free end sill of said consecutive dock section supported directly on the top edge of said coplanar leg flanges, and the inner flange surfaces of said coplanar and parallel rail flanges of adjacent dock sections disposed to form a continuous upwardly open cradle to receive a deck.

3,096,624
THERMOELECTRIC COOLER ARRANGEMENT FOR ROLLER MIXER FREEZERS
Peter Charos, Maylen Drive, Hampton Bays, N.Y.
Filed Nov. 22, 1961, Ser. No. 154,293
6 Claims. (Cl. 62—3)



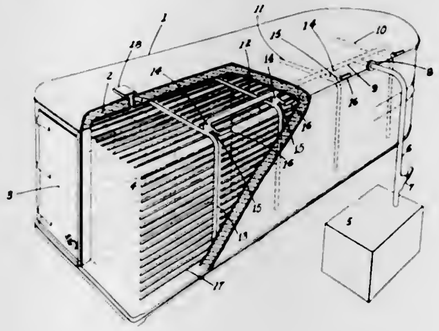
1. In a roller mixer freezer having a plurality of rotatable rollers mounted in a rotatable vessel, a thermoelectric cooler extended through each roller, a passage for a cooling medium adjacent said cooler being extended through each roller, frictional contact means mounted on each roller being conductively connected to each roller, resilient stationary contacts in frictional engagement with said contact means connecting the same to a source of electrical current, stationary passages connected to the cooling medium passages in said rollers, and means for forcing a cooling medium through each roller and from the same through stationary passages.

3,096,625
REFRIGERATION OF LIQUEFIED GASES
Harold R. Legatski, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 4, 1961, Ser. No. 129,424
5 Claims. (Cl. 62—54)



2. A process for the refrigeration of a liquid comprising a liquefied first normally gaseous material containing a second normally gaseous material having a normal boiling point below the normal boiling point of the first material comprising withdrawing a stream of said liquid from a zone containing said liquid, reducing the pressure of the withdrawn liquid whereby at least a portion of the reduced pressure liquid vaporizes, passing the so produced vapor and any unvaporized liquid into indirect heat exchange with liquid remaining in said zone wherein said unvaporized liquid vaporizes, withdrawing vapors from the heat exchange step, compressing the withdrawn vapors, condensing the compressed vapors thereby producing condensate, withdrawing further liquid from said zone, reducing pressure on this further withdrawn liquid and passing same in indirect heat exchange with said condensate whereby said condensate is chilled and the pressure reduced further withdrawn liquid is vaporized, introducing these latter formed vapors into said compressing step and introducing the chilled condensate into said zone.

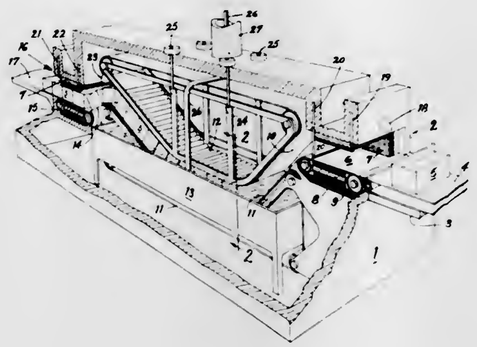
3,096,626
METHOD OF CHILLING, STORING AND SHIPPING PERISHABLE MATERIALS
Willard L. Morrison, Lake Forest, Ill., assignor, by mesne assignments, to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 27, 1956, Ser. No. 567,850
1 Claim. (Cl. 62—60)



The method of preparing for delivery and delivering successive batches of perishable food which consists in packing all the batches at substantially uniform temperature in an insulated shipper container in the inverse order of their expected time of delivery, then closing the container and while it is closed and before shipment, selectively cooling the successive batches of food to temperatures in consonance with their time of expected delivery, the temperatures progressively decreasing in the order of their time of expected delivery, then without further cooling, conveying the container to the first point of delivery, opening it and removing the first batch of food, then closing the container and conveying it to the next point of delivery, opening it and removing the next batch of goods and continuing such step by step conveying, opening, delivery and closing until all the batches have been delivered.

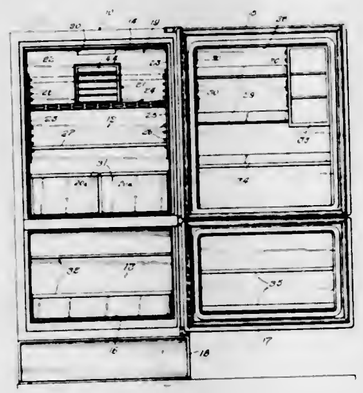
3,096,627
APPARATUS FOR QUICK FREEZING OF BAKERY GOODS
Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Filed July 14, 1960, Ser. No. 42,937
5 Claims. (Cl. 62—178)

1. In combination, an insulating housing, a bath of liquid nitrogen therein, a pair of opposed conveyors contained entirely within the housing, generally parallel to one another, means for guiding them along spaced inclined paths downwardly below the level of the bath at one end, horizontally through the bath and upwardly above the level of the bath at the other end, means for positively adjusting the distance between the horizontal conveyor paths and means responsive thereto for maintaining the distance



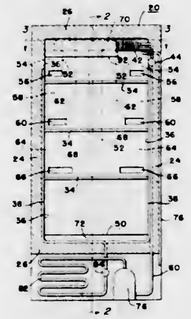
between the downward and upward paths the same as the distance between the horizontal paths.

3,096,628
HOME APPLIANCE
Leo G. Beckett, Henderson, Ky., and Robert E. Lindenschmidt, Evansville, Ind., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Oct. 20, 1961, Ser. No. 146,552
7 Claims. (Cl. 62—265)



1. Refrigeration apparatus comprising: a wall; means within said wall defining a first flow passage for refrigerated air; a hollow shelf defining a second flow passage, said shelf having a portion defining an inlet to said second flow passage and a portion defining an outlet from said second flow passage, said shelf inlet portion being provided with a deflector for directing refrigerated air from said first flow passage into said second flow passage; means associated with said first flow passage means defining a plurality of openings for selectively receiving said shelf inlet portion for delivery of refrigerated air from said first flow passage through said second flow passage; and closure means adjacent each of said openings for selective sealing thereof, said closure means being movable to an open position by engagement thereof with said shelf deflector.

3,096,629
FROSTLESS FREEZER
Charles E. Rembold, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 5, 1961, Ser. No. 100,844
3 Claims. (Cl. 62—283)



1. A freezer including insulating walls and a front door completely enclosing a compartment generally in the shape of a rectangular parallelopiped to be kept below water freezing temperatures and containing a plurality of pervious shelves located at different heights, a false top wall located in the upper portion of said compartment providing an upper chamber, said insulating walls including an upright wall provided substantially from one edge of the compartment to the other with a plurality of independent duct means extending upwardly from locations a short distance above each shelf to and connecting with said upper chamber and each adjacent its bottom having a separate opening below said false top wall for communication with said compartment, a refrigerating system including first evaporating means in heat transfer relation with said compartment below said false top wall and second evaporating means located above said false top wall in heat transfer relation with said upper chamber, said false top wall being arranged to provide independent gravity air circulation between said upper chamber and each of said duct means and said compartment adjacent each shelf beneath said top wall, said refrigerating system including means normally maintaining both said evaporating means at below freezing temperatures and means normally maintaining said second evaporating means at temperatures substantially below the first evaporating means for collecting substantially all the frost thereon so as to prevent the deposit of frost in said compartment beneath said top wall.

3,096,630
REFRIGERATION MACHINE INCLUDING COMPRESSOR, CONDENSER AND EVAPORATOR
Peter Anthony Weller, Farmington, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,607
6 Claims. (Cl. 62—506)

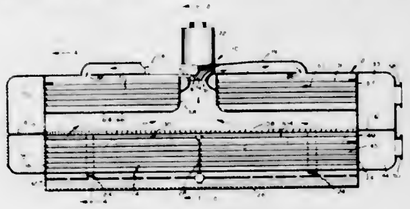
6. In a self-contained, recirculating refrigeration machine,

a horizontally disposed and elongated hollow shell divided by an axially extending interior wall into an axially extending evaporator compartment and an axially extending condenser compartment with a vapor space above the evaporator compartment,

said shell having at its ends heat-exchange passages joined by axially extending heat-exchange tubes,

a horizontally disposed and elongated fluid baffle extending the length of said shell in said vapor space,

a compressor mounted on top of said shell and fluid connected to said evaporator compartment by a passage extending through said shell,
conduit means connecting said compressor in fluid flow



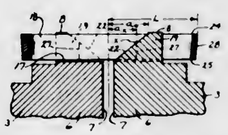
relation to said condenser compartment,
and conduit means to conduit liquid refrigerant from said condenser compartment into said evaporator compartment.

3,096,631
COUPLING
Ali Seireg, Whitefish Bay, and Edward J. Wellauer, Wauwatosa, Wis., assignors to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed July 24, 1961, Ser. No. 126,209
7 Claims. (Cl. 64—15)



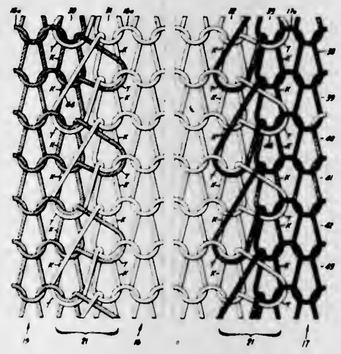
1. A coupling for connecting driving and driven shafts comprising a pair of hub members connectable to said shafts for rotation therewith and having interior surfaces in facing relationship, each of said hub members including a plurality of axially extending and peripherally spaced teeth which define slots therebetween, said teeth having side walls which are curved with the axes of revolution thereof tending to converge toward a plane which includes said interior surface of the respective hub member; and a grid member received within said slots to form a resilient torque transmitting element between said hubs.

3,096,632
COUPLING
Edward J. Wellauer, Wauwatosa, and Alfred G. Bade, Brookfield, Wis., assignors to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed July 24, 1961, Ser. No. 126,274
6 Claims. (Cl. 64—15)



1. A coupling for connecting driving and driven shafts comprising a pair of hubs connectable to said driving and driven shafts for rotation therewith and having interior surfaces in facing relationship, each of said hubs being provided with a plurality of axially extending teeth having their adjacent side faces defining slots therebetween, said teeth having a varying effective radial height along the hub axis with the minimum height adjacent the interior surface of the hub; and a grid member received in the slots in said hubs to form a resilient torque transmitting element between said hubs, the variation of the effective radial height extending over a substantial portion of the radial width of said grid member.

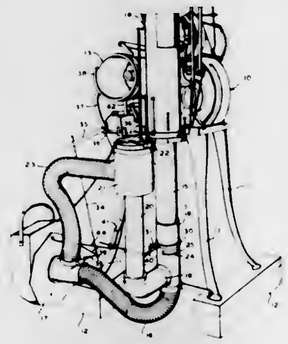
3,096,633
METHOD OF KNITTING SUTURE
Nathan Levin, Trenton, N.J., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed May 13, 1957, Ser. No. 658,642
4 Claims. (Cl. 66—43)



1. The method of forming a suture structure between a pair of suture-joined pattern sections of fabric on a circular knitting machine having a circle of needles and adapted to reciprocate to knit fabric on selected needles comprising the step of selecting a first and a second group of needles for the formation of said pair of pattern sections, said groups of needles having a pair of needles in common, the step of reciprocatorily knitting a pair of courses of a first yarn upon said first needle group during a first pair of knitting strokes, and the step of reciprocatorily knitting a pair of courses of a second yarn upon said second needle group during a second pair of knitting strokes, one of said pair of needles being the leading needle of said first needle group during one of said first pair of knitting strokes and the other of said pair of needles being the tail needle of said first needle group during the other of said first pair of knitting strokes, and the said other of said pair of needles being the leading needle of said second needle group during one of said second pair of knitting strokes and said one of said pair of needles being the tail needle of said second needle group during the other of said second pair of knitting strokes.

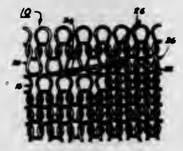
3,096,634
TAKE-UP DEVICE FOR CIRCULAR KNITTING MACHINE
Tasker L. Capes and George G. Norman, Moreland, Ga., assignors to Hemphill Company, Hopedale, Mass., a corporation of Massachusetts
Filed Sept. 13, 1955, Ser. No. 533,956
5 Claims. (Cl. 66—150)

3. In a circular knitting machine having a circle of needles and a take-up mechanism for the fabric formed thereon, said take-up mechanism comprising a tubular chamber projecting below said circle of needles, said chamber having air-flow means permitting the passage of air but preventing the passage of a knit article therethrough, a vacuum source, means attaching the vacuum source to said chamber for drawing air through said air-flow means, said chamber having a fabric discharge opening, valve means for alternately opening and closing said discharge opening, means connecting said vacuum source to said discharge opening, said valve means in one position permitting said vacuum to draw air through said air-flow means and in another position permitting said vacuum



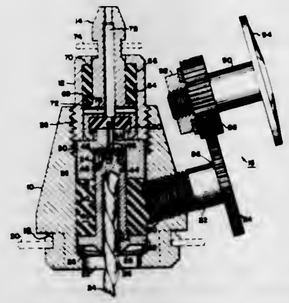
to draw air through said discharge opening, said valve means being connected to said machine, said machine automatically controlling the position of said valve means.

3,096,635
PRESSURE GARMENT
John V. Somyk, 705 High St., Central Falls, R.I.
Filed May 25, 1959, Ser. No. 815,394
10 Claims. (Cl. 66—175)



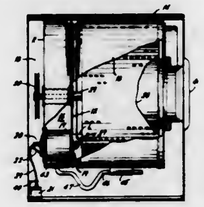
1. A pressurized garment comprising: a plurality of tubular members each including a tubular bladder; and, a seamless looped fabric encasing said bladder, the loops of said fabric being arranged in wales having a longitudinal direction circumferential of said bladder.

3,096,636
GAS VALVE AND BURNER
Stanley H. Newman, New York, N.Y.
(% Schwartz & Frohlich, 19 E. 70th St., New York, N.Y.)
Filed Apr. 11, 1960, Ser. No. 21,220
Claims priority, application Netherlands Dec. 8, 1959
5 Claims. (Cl. 67—7.1)



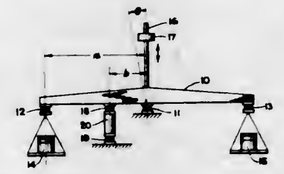
1. In a cigarette lighter of the type using a hydrocarbon gas as a combustion fuel, an improved burner and valve construction comprising a casing, a jet burner tube extending from said casing and having an opening therethrough, said opening being exposed to atmospheric pressure, a gas valve structure positioned in said casing beneath the opening in said tube, a wick holder having a wick mounted therein, a resilient support mounted in the casing and beneath the wick holder, said holder being spaced from said burner and seated on the resilient support, a fuel dispensing pad communicating with said wick and said wick communicating with a supply of liquefied fuel maintained under a pressure greater than normal atmospheric pressure, said pad positioned beneath said valve structure and in communication therewith, said pad being above said wick holder whereby said pad is adapted to be compressed between said holder and said valve structure, a deformable compression member located within said casing and about said wick holder and contacting the valve structure and the wick holder, means for deforming said member whereby a force is exerted on the wick holder and the valve structure causing the wick holder to move relative to the valve structure to vary the compression of the pad between the wick holder and the valve structure and thereby control the flow of fuel in gaseous form from said pad and through said valve structure.

3,096,637
LINT SCREEN
Michael P. Gosnell, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 26, 1961, Ser. No. 113,025
4 Claims. (Cl. 68—20)



1. In apparatus for washing fabrics in a tub and for drying the washed fabrics in said tub, said tub being arranged for removably maintaining a body of washing liquid therein for said washing:
means for circulating air into and from said tub to provide an air current for said drying;
a screen constructed and arranged during said drying to intercept and screen said air current, as the air current passes from said tub; and
means for moving said screen, during at least a portion of the time for said washing, in and through said liquid in order to clean the screen.

3,096,638
BEAM CALIBRATOR
Alfred N. Ormond, 9107 5th Ave., Inglewood, Calif.
Filed Dec. 23, 1959, Ser. No. 861,524
4 Claims. (Cl. 73—1)



1. A beam balance calibrator for load cells comprising: a beam; a flexure fulcrum secured to a station-

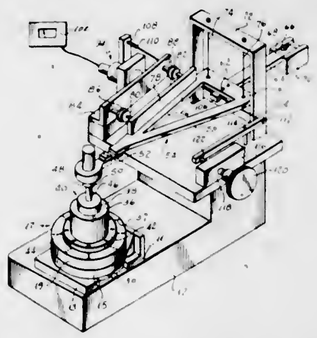
ary structure for said beam; an inverted pendulum secured to said beam in vertical alignment with said flexure fulcrum when said beam is horizontal to act as a counterpoise and cancel the stiffness factor of said flexure; means at each end of said beam for receiving dead weights; flexure means secured to said beam at a point between one end of said beam and said fulcrum, said point being closer to said fulcrum than to said one end to provide a mechanical weight amplification at said point when said one end of said beam is weighted; a platen secured to said flexure means for connection to a load cell; and laterally extending guide flexures connected from said stationary structure to said platen for constraining movement thereof to a vertical direction whereby torque and shear forces are excluded from affecting loading of said load cell during calibration thereof by adding weights to one end of said beam.

3,096,639

METHOD AND APPARATUS FOR COMPENSATING FOR ECCENTRICITY

Werner K. Theilheimer, Bayside, N.Y., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 24, 1960, Ser. No. 10,791
9 Claims. (Cl. 73—1)



1. Apparatus for measuring eccentricity between the rotor and stator of an electrical device, said rotor having an axis of relative rotation with respect to the stator including in combination a support, means mounting one of said rotor and stator for rotary movement on said support, means for moving said mounting means through a precisely known angular displacement with respect to said support and means responsive to displacement of said axis of relative rotation upon movement of said mounting means for sensing the difference between the relative angular displacement of the rotor in respect to the stator and the angular displacement of said mounting means on said support as a measure of said eccentricity.

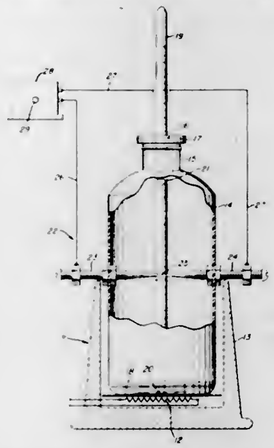
3,096,640

SIMPLE APPARATUS FOR THE DETECTION OF LOW BOILING HYDROCARBONS BY SPARK-GAP METHOD

Charles M. Hewett, Ellicott City, and Gordon B. Hamill, Catonsville, Md., assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 31, 1959, Ser. No. 863,259
6 Claims. (Cl. 73—36)

1. A portable apparatus for detecting the presence of low boiling hydrocarbons in a higher boiling liquid hydrocarbon which apparatus comprises: means for electrical heating; a bottle to be heated by said heating means, said bottle being formed of resilient, light-transmitting plastic; light weight cover means for resting on and for covering the mouth of said bottle, said means being capable of movement in response to the exit of gases formed by electrical spark ignition of hydrocarbon vapor in said



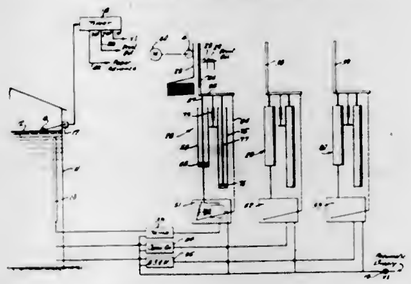
bottle; means for measuring temperature at the inside bottom of said bottle, means for providing an electrical discharge gap within said bottle at a substantial distance above the bottom of said bottle and means for controllably supplying a suitable electrical current to said spark-gap means.

3,096,641

AUTOMATIC SYSTEM FOR MEASURING AND RECORDING PROPERTIES OF A QUANTITY OF FLUID

Laurence M. Hubby, Bellaire, Tex., assignor to Texaco Inc., a corporation of Delaware

Filed Jan. 15, 1959, Ser. No. 787,035
6 Claims. (Cl. 73—53)



1. An automatic run-ticket printer for recording measured properties of a quantity of fluid in conjunction with delivery thereof to a pipeline or the like comprising, a ticket, means for measuring at least one of said properties, means for supplying pneumatic fluid pressure including a valve controlled by timing means, said timing means being actuated by means responsive to the level of said quantity of said fluid, transducer means for providing a pneumatic signal proportional to said measured property, means located adjacent to said ticket for indicating the full range of said measured property, pneumatic servo means controlled by said signal for positioning said indicating means, and means for printing from said indicating means onto said ticket at a predetermined time, said timing means providing a sufficient delay after

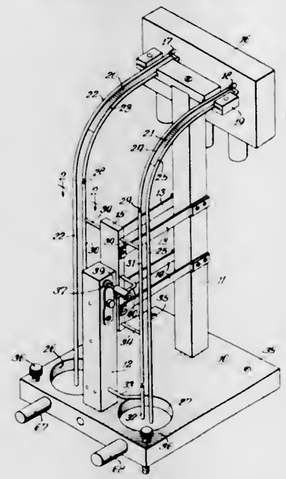
actuation of said valve to permit energization and response of said pneumatic servo means.

3,096,642

SURFACE TENSION MEASURING DEVICE

Edward C. Peterson, Benton Harbor, Mich., assignor to Whirlpool Corporation, a corporation of Delaware

Filed Apr. 15, 1960, Ser. No. 22,627
12 Claims. (Cl. 73—53)



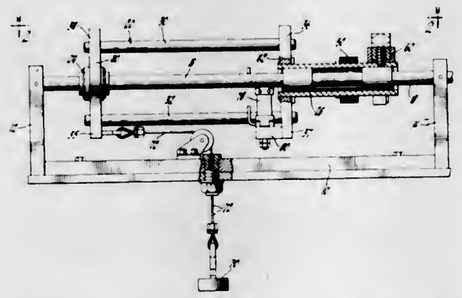
1. A device for continuously indicating changes in the dynamic surface tension of a liquid, comprising: a pair of spaced apart members capable of supporting a liquid film; means for continuously flowing liquid between said members to form said liquid film therebetween: and means for continuously indicating the changing forces exerted on said members due to the surface tension of said liquid film.

3,096,643

THREAD TORQUE TENSION INDICATOR

Ernest R. Essenmacher, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 25, 1960, Ser. No. 4,488
9 Claims. (Cl. 73—133)



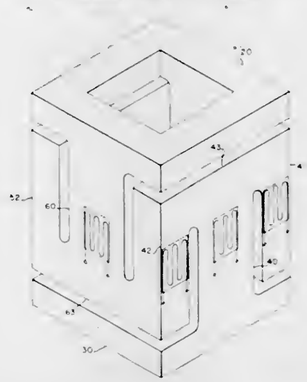
1. A thread testing machine comprising a frame member, integral torque and tension responsive means supported by said member, means to rigidly support a thread receiving member in torque and tension transferring relation with said torque and tension responsive means, torque and tension recording means associated with said torque and tension responsive means, means for rotatably supporting a threaded test member in a fixed position adjacent said thread receiving member, and power means associated with said test member to drivingly engage said thread receiving member and said threaded test member.

3,096,644

LOAD CELLS

Aniese E. Seed, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio

Filed July 28, 1959, Ser. No. 829,996
9 Claims. (Cl. 73—141)



1. Force measuring apparatus comprising a unitary device which may be conveniently formed from a single piece of stock and which has an equal number of oppositely stressed mounting surfaces for strain gage devices and which includes upper and base end elements adapted to receive forces to be measured, an opposed pair of primary intermediate column elements projecting upward from said base element, each of said primary intermediate column elements being split at its upper extremity and turned back on itself to form a pair of downwardly projecting corner column elements, each downwardly projecting corner column element merging at its lowermost extremity with a corresponding corner column element from the opposite primary intermediate column element to form a secondary intermediate column element which extends upwardly to said upper end element, said intermediate column elements being stressed in tension or compression when said corner column elements are stressed respectively in compression or tension in response to an applied load force.

3,096,645

COMPENSATED INTEGRATOR

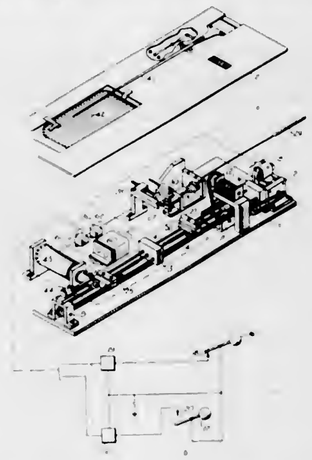
Robert Arthur Hodgson, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada

Filed May 1, 1958, Ser. No. 732,233
10 Claims. (Cl. 73—223)

1. A compensated integrator including,
a contactor body,
motive means arranged to reciprocate the contactor body in a fixed path,
a power supply for the motive means,
a control circuit between the power supply and the motive means,
a first set of two switches included in the control circuit which are actuated alternately at two predetermined volumes of fluid in the container as the container fills and empties to establish the two volumes, whereby the contactor body is reciprocated in the path,
a second set of switches in the control circuit which is

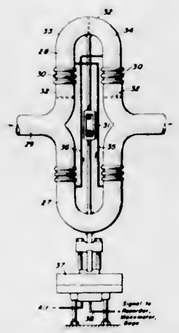
actuated by the contactor body to dynamically brake the motive means at two points along the fixed path, and

means for positioning at least one of the second set of switches along the path in accordance with a variable



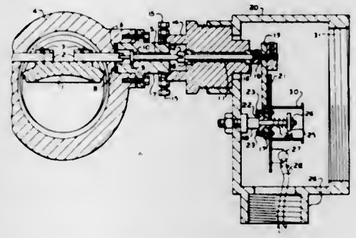
factor of the volume, whereby the length of path between the two switches of the second set is proportional to the volume emptied from the container as though the volume were at a predetermined value of the variable.

3,096,646
FLOW METER
Earl H. Peirce, Provo, Utah, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 15, 1959, Ser. No. 846,744
1 Claim. (Cl. 73—228)



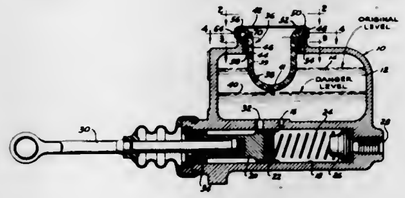
A system for measuring the flow rate of fluid through a pipe comprising a pair of substantially identical U-tubes connected in branching and returning relation to said pipe and extending in opposite directions therefrom, each leg of both tubes including a bellows whereby the tubes are floatingly supported from said pipe, means rigidly connecting the U-tubes together, partitions dividing one U-tube symmetrically into two static-pressure chambers one on each side of the point of connection of said means, pipes cross connecting said chambers, respectively, with the entrance and exit ends of the other tube, pneumatic force-balance means connected to the bend of said other tube, and indicating means responsive to the output of said force-balance means.

3,096,647
FLOW MEASURING SYSTEM
Clyde M. Cox, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 15, 1960, Ser. No. 49,471
1 Claim. (Cl. 73—228)



A flow control system comprising, in combination: a valve having a disc and a first shaft means attached to said disc for pivoting said disc member within said valve, said disc member adapted to rotate about the axis of said first shaft means in response to the flow of fluid through said valve, said first shaft means extending without said valve; a second shaft means within a first housing means and operably attached at one end to said first shaft means by means of a screw driver joint; a third shaft means within a second housing means and operably attached at one end to said second shaft means by means of a screw driver joint, said first, second and third shaft means attached end to end so as to continue in the same alignment the rotating motion of said disc member attached to said first shaft means; a first gear member mounted on the extended portion of said third shaft means; a second gear member actuated by said first gear member, said second gear member being secured to a fourth shaft means, the axis of said fourth shaft means being parallel to the axis of said third shaft means; a rate of flow calibrated circular plate secured to said fourth shaft means so as to be rotated about said fourth shaft means in fixed relationship to said second gear member; and an adjustable tilting flow switch operably attached to said circular plate.

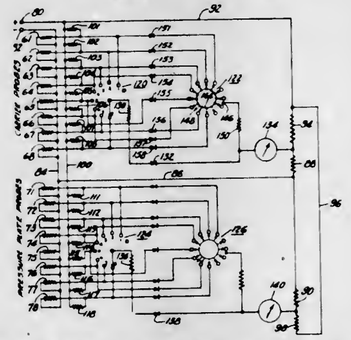
3,096,648
QUICK CHECK MASTER CYLINDER FILLER CAP
Edward K. Dombeck and Donald D. Johannesen, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed May 18, 1960, Ser. No. 29,945
1 Claim. (Cl. 73—334)



A cap comprising two members: one of said members being closed at the lower end thereof and open at the upper end thereof, said one member having an annular wall with a dome portion closing the lower end thereof

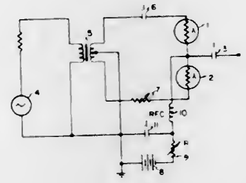
and with an outwardly extending annular flange at the upper end thereof, at least one indentation in the bottom face of said flange and extending from the outer surface of said annular wall to the outer periphery of said flange, said one member being transparent, the other of said members comprising an annular wall at the bottom end and an annular inwardly facing recessed portion at the upper end thereof for receiving said flange, the outer surface of said last mentioned annular wall having threads thereon, the portion of said second member forming said annular recess having at least one breather port therein; said two members being so assembled that the outer periphery of said flange fits within said annular recess and the upper and lower face of said flange is clamped by the portion of said second member forming said annular recess and the outer surface of the annular wall of said first member is spaced from the inner surface of said annular wall of said second member whereby the last named space is communicated with said breather port via said indentation.

3,096,649
BRAKE OVERTEMPERATURE DETECTOR AND INDICATOR
Donald W. Howard, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,527
5 Claims. (Cl. 73—342)



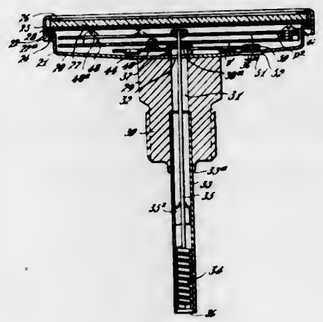
1. In a brake overtemperature detector for aircraft landing gear including a plurality of wheels and associated brake assemblies said assemblies including carriers and pressure plates, the combination comprising a source of direct current voltage, an electrical bridge circuit connected to said source including a first resistive branch and a second resistive branch connected in series across said source, a third resistive branch and a fourth branch connected in series across said source in parallel with said first and second branches, said fourth branch including a temperature sensing resistive element located in one of said carriers, and a resistor, a diode and a meter movement connected across said bridge such that said meter movement will indicate overtemperature conditions sensed by said temperature sensing element, a plurality of temperature sensitive resistors in the remainder of said carriers, a dropping resistor connected to each of said temperature sensitive resistors, first switching means operative to connect any one of said dropping resistors and its corresponding temperature sensing resistor into said third and fourth branches respectively, a diode connected in series with each of said temperature sensitive resistors, a second switching means operable to connect all of said temperature sensing resistors through said diodes to said meter movement such that said meter movement reflects the highest temperature sensed by any of said temperature sensing resistors, and means connecting said first and second switching means together for simultaneous operation.

3,096,650
A.C. BIASED THERMISTOR BOLOMETERS
Mark G. Lowenstein, Norwalk, and Robert W. Astheimer, Westport, Conn., assignors to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Aug. 29, 1961, Ser. No. 134,718
3 Claims. (Cl. 73—355)



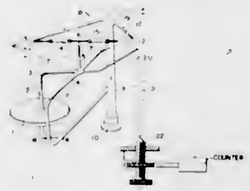
1. A thermistor bolometer comprising in combination at least two flakes connected in series at least one flake being an active flake and the second a reference flake, a source of A.C. bias for the flakes, a differential output between the flakes and means for applying a D.C. heating voltage to one flake only.

3,096,651
DIAL INSTRUMENT WITH EXTERNAL CALIBRATION
Joseph E. Gorgens, Easton, and Edward J. Plavcan, Stratford, Conn., assignors to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Mar. 20, 1961, Ser. No. 96,870
11 Claims. (Cl. 73—363.9)



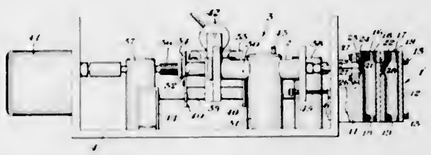
1. In a dial instrument of the kind wherein a case houses a normally stationary, graduated dial and wherein a pointer is mounted upon a staff extending perpendicular and coaxial with the dial; a rotary dial carrier independent of the dial and arranged within the case, means removably securing the dial to the carrier, means operative to turn the carrier thereby to adjust its graduations relative to the pointer, said carrier being a disc of stiffly resilient material, and means normally operative to hold the carrier in adjusted position while permitting the carrier to be turned in response to the application of sufficient force including a plurality of integral tongues struck down from the plane of the disc with the free ends of said tongues contacting an interior surface of the case, and means whereby said tongues are held under bending stress so that they exert frictional force against said surface.

3,096,652
STRAIN GAUGE
Boyd Cornelison, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 69,208
10 Claims. (Cl. 73—398)



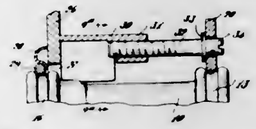
1. A force measuring device comprising a support member having a pair of spaced projecting arms and formed of fused quartz, at least one elongated sensor element having an electrical resistance variable in response to variation in its tension in the direction of its length and connected at its ends between said spaced arms, means engageable with one end of the sensor element and responsive to an applied force for subjecting said element to a change in tension in the direction of its length from an initial value, said last-named means comprising a bar of fused quartz, torsion hinges of fused quartz connecting the ends of the bar to the support for rotation of the bar about its longitudinal axis, means extending between the bar and one end of the sensor element for converting a rotational force on said bar to a linear force on the sensor element in the direction of its length, pressure sensitive means for applying a rotational force to the bar, and electrical means coupled to the ends of at least one sensor element for detecting variations in its resistance in accordance with changes in the magnitude of the force.

3,096,653
SAMPLING DEVICE
Irvin J. Martin, Robert A. Stowe, and Leslie G. Meverden, all of Ludington, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Sept. 30, 1960, Ser. No. 59,747
4 Claims. (Cl. 73—422)



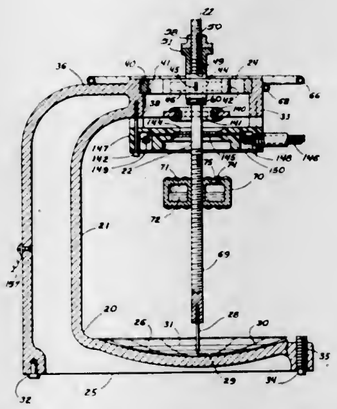
1. A sampling device comprising a sampling block having two passageways extending through said block with an aperture in the outer wall communicating with one passageway and a second aperture through the inner wall dividing the passageways, said apertures being in axial alignment and being closed with an elastomeric material, a syringe having a needle at one end and a plunger at the other, means for supporting the syringe adjacent to the sampling block with the point of the needle of the syringe positioned in axial alignment with said apertures, means of moving the syringe forward and backward to thereby insert and withdraw the point of the needle through the elastomeric material in said apertures, and means to operate the plunger of the said syringe.

3,096,654
INSTRUMENT CASE FOR UNIVERSAL MOUNTING
Robert C. Du Bois, Fairfield, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Sept. 19, 1960, Ser. No. 57,869
16 Claims. (Cl. 73—431)



1. In a dial instrument, a case capable of being mounted upon a wall or panel, said case comprising a substantially tubular casing having two axially spaced peripheral mounting grooves in the external surface thereof, said grooves being located near the front and rear ends respectively of said casing, and a one piece deformable mounting flange having means for mounting the same on a panel and the like, said flange being initially engageable with either of said mounting grooves, said flange including a continuous clamping portion extending substantially in excess of 180 degrees about said casing and engaged in one of said grooves, said flange extending radially of said casing and being deformed so that said portion firmly embraces the casing with a force supplied solely by the deformed flange due to the deformation thereof, and means for mounting said flange on a panel and the like.

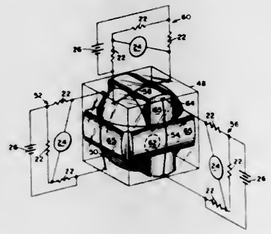
3,096,655
BALANCING MACHINE
Henry Ferdinand Peterson, 2240 Parmele St., Rockford, Ill.
Filed Feb. 24, 1959, Ser. No. 795,230
4 Claims. (Cl. 73—483)



3. Balancing apparatus having, in combination, a base, a work supporting member, and a universal pivotal mounting supporting said member on said base for swinging in all directions about a point on a vertical axis and comprising, an intermediate ring element, two inner elongated torsion spring elements disposed on opposite sides of said axis and in a first common vertical plane and each secured at opposite ends to and stretched horizontally between said intermediate ring and said member, and two outer elongated torsion spring elements disposed on opposite sides of said axis and in a common vertical plane normal to said first plane and secured at opposite ends to and

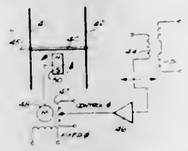
stretched horizontally between said intermediate ring and said base.

3,096,656
TRANSDUCER
Philip Jackson, Ann Arbor, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 23, 1959, Ser. No. 808,508
11 Claims. (Cl. 73—517)



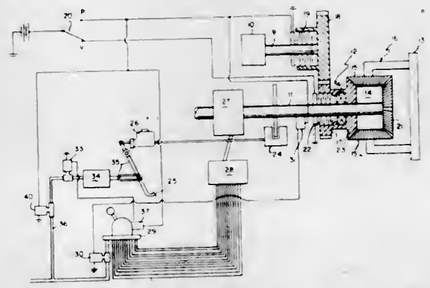
1. A transducer accelerometer comprising a plurality of resistive members of a solid material secured in a common housing, circuit means for applying an electrical signal through each of said resistive members, a conductive member of a solid material having an electrical resistance less than the resistance of each of said resistive members, said conductive member simultaneously engageable with each of said resistive members, said conductive member being successively and elastically engageable with each of said resistive means to form electrical contact lengths corresponding to the direction and magnitude of relative movement between said conductive member and said housing, said resistive members having a surface contact with said conductive member which is increased due to relative movement toward one another and decreased upon relative movement away from one another said variable contact lengths between the conductive member and the resistive members forming a variable shunt to the resistive members to accordingly change the electrical signal in the respective circuits, each of said resistive members comprising a longitudinal member secured at each end to the housing and said conductive member being simultaneously engaged along a plurality of sides with said resistive members in a plurality of non-parallel planes.

3,096,657
SINGLE AXIS INTEGRATING ACCELEROMETER
Robert J. Cohen, Wyckoff, N.J., assignor to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed Dec. 6, 1960, Ser. No. 75,057
10 Claims. (Cl. 73—517)



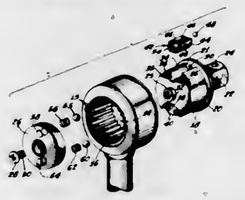
1. An integrating accelerometer comprising a relatively flat mass having a length and width considerably greater than its thickness, said mass having low electrical resistivity, spring means for suspending the mass for deflection along one sensitive axis only and preventing deflection along other axes, said spring means normally supporting the mass in a given neutral position, circumferentially polarized substantially cylindrical magnetic means for producing a concentrated magnetic flux through said mass at the neutral position and energizable to vary the rate of change of magnetic flux at said position, position transducer means responsive to the displacement of said mass from said neutral position, for determining deflection of said mass from said position along said sensitive axis, and actuating means energized by said transducer means for actuating said magnetic means to vary the rate of change of flux at said neutral position responsively to deflection of said mass from said neutral position, said actuating means being adapted to rotate the magnetic means at a speed proportional to the displacement of the mass, whereby said mass is restored to said neutral position by a magnetically generated force equal to and opposite the acceleration force acting upon said mass.

3,096,658
POWER DIVIDER FOR PUMP CONTROL SYSTEM
Russell A. Rill and Kenneth A. McLyman, Clintonville, Wis., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 3, 1961, Ser. No. 150,106
4 Claims. (Cl. 74—15.84)



1. A power dividing system for a pump operating vehicle comprising: a vehicle drive shaft, a flywheel, a differential having two pinions and a first and a second side gear, means for connecting said pinions to said flywheel, said vehicle drive shaft being connected to said first side gear, a pump drive shaft, a pump drive gear, means attached to said second side gear for driving said pump drive gear, a first magnetic clutch connected between said last named means and said vehicle drive shaft, a second magnetic clutch connected between said pump drive gear and said pump drive shaft, means for selectively energizing said first or said second magnetic clutches, a braking means coupled to said vehicle drive shaft and means for selectively operating said braking means.

3,096,659
REVERSIBLE RATCHET MECHANISM
George A. Jenkins, Glendora, Calif., assignor to George C. Jenkins, San Gabriel, Calif.
Filed Jan. 30, 1961, Ser. No. 85,862
5 Claims. (Cl. 74—157)



1. A reversible ratchet mechanism comprising:
an inner member of generally circular cross section;

an outer annular member surrounding and journalling said inner member, said outer member having an inner circumferential series of teeth, one of said members being a drive member, the other of the two members being a driven member,

said inner member being formed with a cylindrically curved recess on its outer circumference with the axis of cylindrical curvature parallel with the axis of rotation of the inner member,

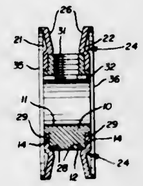
a pawl in the form of a body of the same cylindrical curvature as said recess peripherally cut away to form a longitudinal side, said pawl having two opposite engagement portions on opposite sides of said longitudinal side for alternate engagement with said teeth,

said pawl being journalled by said recess and backed against said inner member with said longitudinal side facing outwardly from the axis of the inner member to oscillate between one operating position at which one of said two engagement portions cooperates with said teeth to prevent relative rotation in one direction between the inner and outer members, and an alternate operating position at which the other of said two engagement portions cooperates with said teeth to prevent relative rotation in the opposite direction between the inner and outer members,

and reversing means to place and yieldingly maintain said pawl at said two operating positions selectively,

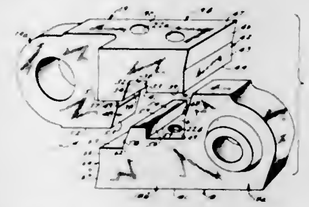
said reversing means including a cam surface on one end of the pawl and a spring-pressed follower exerting pressure on said cam surface in a direction parallel to the axis of rotation of the pawl.

3,096,660
SYMMETRICAL HUBBED SHEET METAL PULLEY
Stanley F. Spirakus, Cleveland, Ohio, assignor to Zatko Metal Products Co., Euclid, Ohio, a corporation of Ohio
Filed May 19, 1961, Ser. No. 111,274
4 Claims. (Cl. 74—230.3)



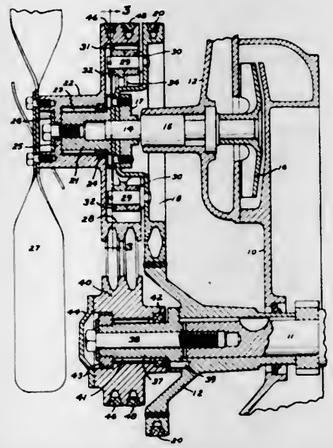
1. A pulley comprising a centrally bored hub having a great outside diameter, a reduced outside diameter at each end, and a shoulder at each end defined between said great diameter and the associated one of said reduced diameters, a pair of sheet metal walls which, commencing at a radially intermediate zone of relative proximity located slightly radially outwardly of said great diameter and at which zone said walls are spaced from each other, spread axially away from each other both in the radially outward and radially inward directions, said radially outward axial spreading being relatively gentle to form the flanges of the pulley sheave, said radially inward axial spreading being relatively acute to form sockets for receiving said hub shoulders including the radially outermost portions of said shoulders, with portions of said walls which are located radially inwardly of said relatively acute spreading having substantially no spread and abutting against said shoulder, a tapped set-screw hole extending radially inwardly from the great outside diameter to the central bore of said hub, said set-screw hole being located axially intermediate said sheet metal walls.

3,096,661
TWO-PIECE MASTER TRACK LINK
Harold L. Reinsma, Pekin, and Floyd S. Dadds, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Nov. 6, 1961, Ser. No. 150,385
4 Claims. (Cl. 74—258)



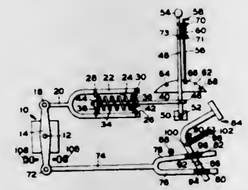
1. In a master link for an endless articulate track the combination comprising a first half-link having a bearing area integrally connected to a connection area, said first connection area of full link width and approximately one-half link depth, said first connection area having a notch along its width extending less than half its depth, said notch having a pair of side walls and a top surface wherein one of said side walls slants away from and is longer than the other, a second half-link having a bearing area integrally connected to a connection area, said second connection area of full link width and approximately one-half link depth, said second connection area having a key formed along its width, said key having a pair of side walls and a top surface wherein one of said key walls slants away from and is longer than the other, said key mating with said notch when said half-links are contacted such that said half-links form an essentially solid link.

3,096,662
ENGINE ACCESSORY DRIVE
Edwin C. McRae, 3348 NE. 29th Ave., Pompano Beach, Fla.
Filed Dec. 6, 1961, Ser. No. 157,886
14 Claims. (Cl. 74—336)



1. In a device of the character described, a motor vehicle engine having a crankshaft, a water pump shaft associated with said engine in position radially spaced from said crankshaft, a crankshaft pulley fixed to said crankshaft, a water pump pulley fixed to said water pump shaft, a high speed belt extending around said water pump pulley and said crankshaft pulley so as to drive said water pump from said crankshaft at a fixed speed ratio, a fan pulley rotatably mounted in axial alignment with said water pump shaft, a centrifugally actuated clutch arranged to couple said fan pulley to said water pump pulley at all engine speeds below a pre-determined speed and to release said fan pulley from said water pump pulley at all engine speeds above a pre-determined engine speed, a low speed pulley rotatably mounted in axial alignment with said crankshaft, an overrunning clutch disposed between said crankshaft and said low speed pulley, said overrunning clutch preventing said low speed pulley from rotating slower than said crakshaft and permitting said low speed pulley to rotate faster than said crankshaft, and a low speed belt extending around said low speed pulley and said fan pulley, said low speed belt driving said fan pulley at a reduced speed ratio when said centrifugally operated clutch is disenaged from said water pump pulley.

3,096,663
CLUTCH CONTROL LINKAGE
William H. Sink, Toledo, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed June 24, 1960, Ser. No. 38,548
17 Claims. (Cl. 74—481)



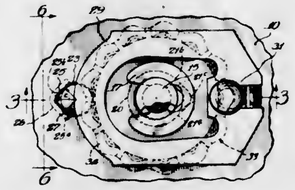
1. A control device comprising an element having a first position and alternate positions and being adapted to be operated, a linkage operably connected to said element and operable to move the same to its alternate positions, first means movable to a plurality of positions for actuating said linkage, second means operably connected to said element and adapted to operate the same, said second means including a lost motion device so that said second means becomes operative to move said element only after said linkage has moved said element to an alternate position, and resilient means serially incorporated in said linkage so that said second means can override said first means.

3,096,664
REMOTELY CONTROLLED REAR VIEW MIRROR
Phillip D. Walsh, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 19, 1960, Ser. No. 50,783
1 Claim. (Cl. 74—501)



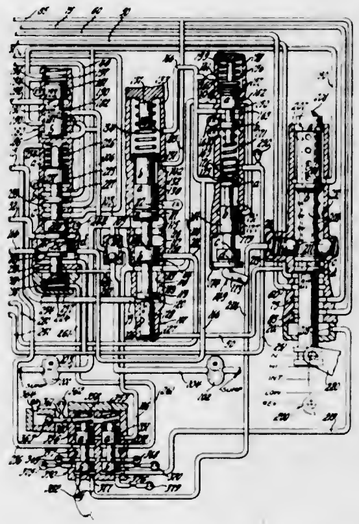
A remote control mechanism comprising a fixed support, a device to be controlled, a pivot connection between said support and said device including a ball member seated within an open socket; an actuator assembly located remotely from said support and comprising a fixed housing having an open end and a base opposite thereto, an axial slot in the side wall of said housing, a bushing adjustably threadably engaged in said base and having a bore therein substantially axially and centrally aligned with the open end of said housing, a support pin reciprocably disposed in said opening and having a spherical bearing surface at one end thereof within said housing, a manually operable actuator freely mounted for axial movement within said housing and including an open socket receiving said bearing surface, an operating handle connected to said actuator and extending through the open end of said housing, spring means acting between said bushing and support pin to urge said bearing surface into engagement with said socket on said actuator and to urge the latter axially away from said housing base, a lug on said actuator extending radially into said slot to limit axial and rotary movement of said actuator relative to said housing; and a plurality of operating cables having the opposite ends thereof respectively directly connected to said device and actuator at points spaced respectively from said pivot connection and said bearing surface whereby said spring means in response to adjustable movement of said bushing urges said actuator axially away from said housing base to tension said cables substantially equally thereby maintaining said ball member within said socket on said device and said bearing surface within said socket on said actuator.

3,096,665
INDEX MECHANISM
Norman D. Cappelle, Park Ridge, John J. Kornacker, Niles, and John Y. Ma, Maywood, Ill., assignors to Oak Manufacturing Co., Crystal Lake, Ill., a corporation of Delaware
Filed Mar. 14, 1961, Ser. No. 95,731
12 Claims. (Cl. 74—527)



1. An index means for a shaft, comprising at least one support plate, a shaft having a round portion for support in a journal, said plate having a journal portion through which said round shaft portion passes, said journal portion having a generally notched portion so dimensioned and shaped that said shaft portion has some lateral play and when moved toward said notched portion said shaft is supported thereby, an index plate movable with said shaft adjacent said support plate, said index plate having a wavy index portion inclined out of a plane normal to the shaft, said support plate having an aperture generally registering with said wavy index portion, said aperture having a notched portion generally similar to the journal notched portion, each notched portion being generally symmetrical about a straight line between the centers of said journal region and aperture region, spring means including a ball shaped portion for cooperating with said wavy index portion, said ball shaped portion operating in said plate aperture, said spring means providing a force urging said ball shaped portion through the aperture and toward said wavy index portion, said two notched portions being so directed and the inclination of said index portion being such that the force of said spring bias on said ball shaped portion creates force components tending to urge said ball shaped portion and journaled shaft portion into their respective notched portions.

3,096,666
TRANSMISSION
Howard W. Christenson, Indianapolis, Mark E. Fisher, Carmel, and Edward T. Mabley, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 22, 1955, Ser. No. 554,720
42 Claims. (Cl. 74—645)



1. In a transmission, an input and an output member, transmission gearing connecting said input and output members having a first unit and a second unit each having a plurality of ratios, servo means to engage each of said ratios of said first and second transmission units, a source of fluid under pressure, a first control means movable from one to another position to actuate said servo means to engage one or another of said ratios of said second transmission unit, a second control means movable to one or another position to actuate said servo means to engage one or another ratio of said first transmission unit, upshift control means operable in one position to hold said second control means in said another position and inoperable in another position, downshift control means operable in one position to hold said second control means in said one position and inoperative in another position, said first control means on an upshift from one to another ratio of said second unit being operable during release of said one ratio servo to move said upshift control means to said operable position, and said first control means on a downshift from another to one ratio of said second unit being operable during release of said another ratio servo to move said downshift control means to said operable position.

3,096,667
TRANSMISSION SYSTEM AND HYDRAULIC CONTROLS THEREFOR
Leonard F. Dickeson, Wichita, Kans., and Vergil P. Hendrickson, Decatur, Gordon W. Johnson, Peoria, Le Roy Lichtenstein, Morton, Shairyl I. Pearce, Marquette Heights, and Gerald D. Rohweder, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Aug. 15, 1960, Ser. No. 49,587
20 Claims. (Cl. 74—731)

1. A drive train comprising:
a variable speed transmission, and
a hydraulic control system for said transmission said variable speed transmission including driving and driven shafts,
a hydraulic torque converter operatively interposed between said shafts,
hydraulic clutch means adapted to connect said shafts mechanically for direct drive therebetween, and
hydraulic brake means adapted to induce a mechanical operable connection between said shafts for increased speed ratio drive,
said hydraulic control system including:
a source of pressure fluid,
first and second shift valve means for bringing said



source into communication with said clutch means and said brake means respectively,
said valve means being movable in one direction from a torque converter range position wherein both of said valve means are closed successively to a direct drive position wherein said first valve means is opened while said second valve means remains closed and an overdrive position wherein said first valve means is closed and said second valve means is opened, and
speed governor means on one of said shafts adapted to move said valve means in said one direction in response to speed increase.

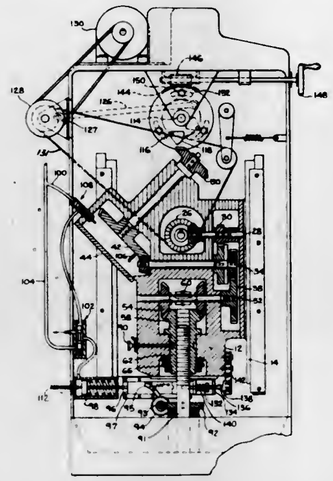
3,096,668
MIST COOLED CUTTING TOOL
Harlan J. Maynard, 341 E. 33rd St., New York, N.Y.
Filed Apr. 25, 1962, Ser. No. 190,019
10 Claims. (Cl. 77—68)



1. A cutting tool for use with a mist cooling system, comprising a drill body of hardened metal, said drill body being fromed with at least one cutting edge, said body being formed with a plurality of internal passages, said passages terminating at one end in discharge ports located in proximity to said cutting edge and at another end in inlet ports located at a distance from said discharge ports, the total cross-sectional area of said inlet ports being greater than the total cross-sectional area of said discharge ports, said passages being adapted to deliver a flow of cooled mist to said cutting edge.

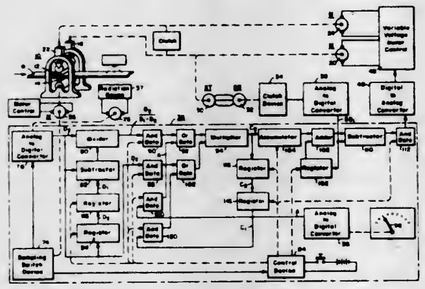
3,096,669
METAL FORMING MACHINE AND METHOD
Albert F. Tremblay, Toledo, Ohio, assignor to Kent-Owens Machine Company, Toledo, Ohio, a corporation of Ohio
Filed Sept. 15, 1958, Ser. No. 761,148
9 Claims. (Cl. 80—16)

1. A method of forming a gear from a gear blank by rolling, which comprises supporting the gear blank, applying a plurality of successive forces to a surface of the gear blank in a direction toward the axis thereof and substantially at right angles to the root of a tooth to be formed therein, the forces being sufficient to substantially uniformly depress the metal of the blank over all portions of the blank to which the forces are applied, and the forces being applied along a line laterally to the width of the blank, subsequently moving the blank toward



the direction from which the forces are applied, reapplying forces in the above described manner, and subsequently moving the blank a lesser amount toward the direction from which the forces are applied.

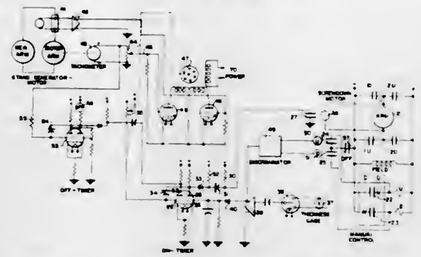
3,096,670
APPARATUS AND METHOD FOR WORKPIECE THICKNESS CONTROL
Loren F. Stringer, Amherst, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 16, 1957, Ser. No. 672,319
9 Claims. (Cl. 80—56)



1. The method of controlling the thickness of a moving strip of material by changing the spacing between a pair of roller members operative with said strip, including the steps of measuring a first deviation D_1 in the thickness of said strip relative to a predetermined reference thickness, making a first correction C_1 in the spacing between said roller members proportional to said first deviation, measuring a second deviation D_2 in the thickness of said strip relative to a predetermined reference thickness, and making a second correction C_2 in said spacing in accordance with a predetermined relationship

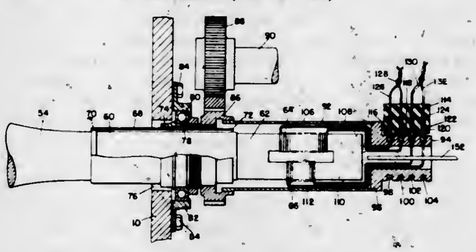
$$C_2=\left(\frac{D_2}{D_1-D_2}\right)C_1$$

3,096,671
THICKNESS CONTROL SYSTEMS FOR ROLLING MILLS
Carl A. Vossberg, Umatilla, Fla.
Filed Dec. 5, 1960, Ser. No. 73,753
9 Claims. (Cl. 80—56)



1. A system for automatically controlling the thickness of a strip being processed by a roll stand of the type driven by a prime mover, comprising: sensing means positioned on the finished side of the stand for sensing the stock thickness; pressure regulation means for changing the pressure between rolls in the roll stand; means for activating said pressure regulating means in response to signals from said sensing means; and timing means responsive to at least the load on the prime mover for the stand for controlling the periods of activation of said pressure regulating means.

3,096,672
VIBRATING ROLL AND METHOD
James Byron Jones, West Chester, Pa., assignor to Aeroprojects Incorporated, West Chester, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 45,926, July 28, 1960. This application Jan. 9, 1962, Ser. No. 169,700
17 Claims. (Cl. 80—60)



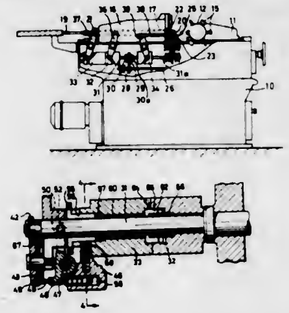
9. A method of rolling a metal comprising passing a metal member between a pair of rotating rolls, reducing the thickness of the metal member by applying sufficient force through said rolls while said rolls are engaged with said metal member, and simultaneously vibrating at least one of said rolls in a direction parallel to the surface of the metal member being contacted as the thickness of said metal member is being reduced by being passed between said rolls.

3,096,673
AUTOMATIC WORKING TURNING MEANS FOR SCREW MACHINES
Karl Spohn, Damaschkestrasse 15, Oberesslingen, Germany, and Hermann Walker, Kuhsteige 28, Esslingen-Waldenbronn, Germany
Filed June 8, 1959, Ser. No. 818,712
Claims priority, application Germany June 6, 1958
7 Claims. (Cl. 82—2.5)

1. In a screw machine, in combination, first rotary cam means rotating at a given speed and adapted to actuate a work-gripping means; second rotary cam means adapted

to actuate a work feeding means; clutch means transmitting a drive from said first cam means to said second cam means when said clutth means is engaged; third rotary cam means cooperating with said cltuch means for controlling the engagement and disengagement thereof; and transmission means driving said third rotary cam means from said first rotary cam means at a speed which is half the speed of ro.ation of said first rotary cam means, so that during the time that said clutch is disengaged a workpiece may be reversed end for end to enable a tool to operate on both ends of a workpiece before the work is fed.

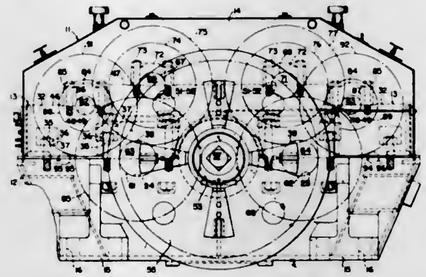
5. In a screw machine, in combination, first rotary cam means adapted to actuate a work-gripping means; second rotary cam means adapted to actuate a work-feeding means which feeds an elongated workpiece to said work-gripping means to be gripped thereby; clutch means having an engaged position transmitting a drive from said first cam means to said second cam means and a disengaged position where said first cam means rotates while said second cam means remains stationary; third rotary cam means cooperating with said clutch means for con-



trolling the engagement and disengagement thereof; transmission means driving said third rotary cam means from said first rotary cam means at a speed which is half of the speed of rotation of said first rotary cam means so that said second rotary cam means actuates the work-feeding means to feed a workpiece to said work-gripping means only at every other actuation of the work-gripping means by said first rotary cam means; and means for turning end for end in timed relation with said clutch means, during the time that said clutch means is in said disengaged position thereof, a workpiece which has previously been gripped once by said work-gripping means after being fed thereto by said work-feeding means, and for placing, while said clutch means remains in said disengaged position thereof, the workpiece which has been turned end for end again in a position to be gripped by said work-gripping means at the next actuation thereof by said first cam means, so that the work is not fed while a workpiece is turned end for end, whereby each workpiece can have work performed on both of its ends while held by the same work-gripping means before additional work is fed to the work-gripping means by the work-feeding means.

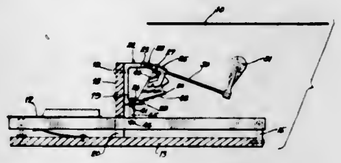
3,096,674
HEADSTOCK FOR LATHE
Maurice Paul Sieger, Upper St. Clair Township, Allegheny County, Pa., assignor to United Engineering and Foundry Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 29, 1960, Ser. No. 46,139
1 Claim. (Cl. 82—28)

A heavy duty head stock assembly composing a rigid base, said base made up of a lower member and an upper member and having formed therein pairs of cooperative journal recesses and a plurality of other journal recesses, said upper member carried by said lower member, a horizontally arranged non-rotating shaft received in one pair of the cooperative recesses of said members overhanging one side thereof, a workpiece engaging element secured in the end of the overhanging portion of said shaft, a face plate rotatably mounted on and carried by the overhanging portion of said shaft, said face plate having an annular recess on its inboard side, an internal gear formed on said face plate at the outer periphery of said recess, a pair of pinions rotatably received into others of said pairs of cooperative recesses of said members,



said pinions being arranged at diametrically opposite points on the outer periphery of said face plate and in meshing relation with said internal gear, two symmetrical trains of gears carried on shafts received in the other journal recesses of said members for driving said pinions in the same rotational direction, the gears of said trains being compactly situated in and arranged relatively close to the bottom of said base, separate motors connected to said trains, a cover adapted to fit over and be secured to said base, said base and cover being so constructed whereby on removal of said cover the trains of gears are exposed.

3,096,675
PIANO ACTION
Howard K. Graves, 9241 Mango, Morton Grove, Ill.
Filed Aug. 11, 1960, Ser. No. 49,042
5 Claims. (Cl. 84—237)



1. A piano action comprising a base, a key pivotally mounted on said base, a hammer having an arm, said arm being pivotally connected to said base, a cam member pivotally mounted on said base and having an eccentric cam surface in engagement with said arm, and an actuating means interconnecting said key and said cam member, whereby movement of said key imparts movement to said cam member which, in turn, causes movement of said hammer by coaction of said cam surface with said arm.

3,096,676
TAILPIECE FOR STRINGED INSTRUMENTS
Mosa Havivi and Max Frirsz, New York, N.Y.
Filed Feb. 1, 1961, Ser. No. 86,407
10 Claims. (Cl. 84—302)

1. A tailpiece for string instruments comprising an elongated body having means at the rear thereof for attach-

ment to said instrument, means at the front of said body for anchoring of at least one front string, and means at an intermediate area for anchoring of at least one intermediate string, the front anchoring means being for high



notes and the intermediate anchoring means for low notes, a flat lower surface on said body, a convex bulge rising from said flat surface at said intermediate area and extending towards the front of said body.

3,096,677
NON SLIP DRUM HOLDER
Charles C. Ryan, 535 Addison Road, Glastonbury, Conn.
Filed Oct. 27, 1961, Ser. No. 148,141
1 Claim. (Cl. 84—421)



A drum holder of the character described, comprising four flat pads of non slip material, each of said pads being adjacent to two others and each of two said pads being hinged to two of said pads by a plurality of piano hinges so as to permit their being folded together in a package the size of one of the four said flat pads, one of the flat pads having an L-shaped support along the peripheral edge thereof, a second L-shaped support on the surface of the same said flat pad, a pad adjacent the said one pad having an L-shaped opening therein adapted to receive the second mentioned L-shaped support on said one flat pad when the said holder is completely folded together, the said adjacent flat pad also having an L-shaped cut out along that edge thereof in alignment with the first mentioned L-shaped support for receiving same when the said holder is folded in a closed position, each of the others of said four flat pads having an edge mounted holder thereon and each having a cut-out providing means to receive the said edge mounted holder of the other pad when the said holder is completely folded into a package the size of one of the said flat pads, and each one of the said flat pads having an elongated opening therein for one's hand when the said holder is being moved, the said holder providing an non slip drum on its stand and cymbals on a Hi-Hat sock pedal stand all resting on the said four flat pads which prevent the drums and accessories from slipping about while being played.

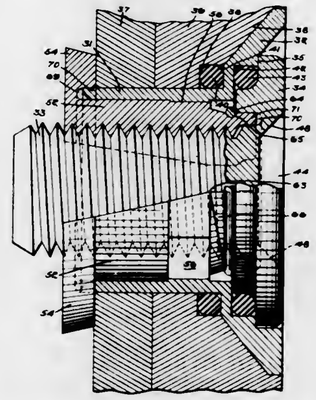
3,096,678
BOLT WITH SELF-CONTAINED MULTI-PART NUT AND CENTERING SLEEVE
James Henry Devine and Evelyn Y. Devine, Brookline, Mass.; said James Henry Devine assignor to D-Y Trust, Boston, Mass., a trust of Massachusetts
Filed Aug. 24, 1959, Ser. No. 835,580
9 Claims. (Cl. 85—2.4)

1. A blind bolt for clamping together two or more structural panels having concentric openings therethrough, irrespective of the accessibility of the opening in the innermost panel, the bolt being insertable in said openings and removable therefrom, and comprising:

a rigid centering sleeve extending through said openings and having a flanged head portion engageable with a surface of the outermost panel, and a continuous, cylindrical interior wall portion providing a bearing surface;

an expandable nut component assembly comprising at least three separate and separable complemental segments rockable angularly with respect to each other in planes radial to the axis of said sleeve, from mutually contracted, unlocking position to mutually expanded, locking position; and resilient means encircling said segments, intermediate the ends thereof, for holding the segments in cooperative, mutually abutting relation and for yieldingly restraining rocking movement thereof;

each nut segment having a rigid shank portion of substantially arcuate cross-section provided with a curved, screw-threaded inner surface, and an outwardly projecting clamping head portion engageable flatwise with a surface of the innermost panel when



the nut component assembly is expanded to locking position;

the nut component assembly being movable lonigtudinally of said sleeve, and the expanded segments having sliding engagement with said interior bearing surface of the sleeve;

a solid, cylindrical, screw-threaded center component threading into the nut segments to expand the nut segments and to draw the nut component assembly into the sleeve to move the head portions of the segments to locking position against the innermost panel; the center component providing a solid core for the bolt and having a head portion engageable with the head portion of the sleeve during torquing rotation of the center component; and

means for restraining relative rotation between the nut component and the sleeve while the bolt is being tightened to locking position.

3,096,679
SHEET CLAMP HAVING A ONE EARED SPREADER BAR
Sterling B. Jones, West Covina, Calif., assignor to Monogram Precision Industries, Inc., Culver City, Calif., a corporation of California
Filed Mar. 14, 1960, Ser. No. 14,740
2 Claims. (Cl. 85—6)

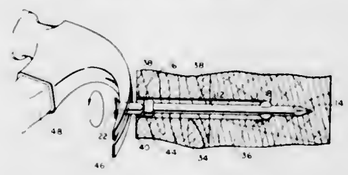
1. A sheet clamp comprising: a hollow body having restricted openings at its ends, thereby providing transverse surfaces; a washer in said body having flat, substantially parallel surfaces engaging the transverse surface at one end; a rod extending into the opposite end of said body and having a flange engaging the transverse surface at said opposite end; a compressed coil spring extending between said flange and said washer, a substantial por-

tion of the end coil abutting the washer; a pair of needles fixed at one end to said flange, said needles extending through said spring and said washer to the exterior of said body, the exterior ends of said needles having enlarged heads with surface portions to engage the outermost surface of said washer; a spreader bar having a portion within said spring and extending through said



washer and between said heads, said spreader bar having parallel edges; and an ear extending substantially at right angles from one edge only of said spreader bar intermediate the ends of said bar, said ear being located between said washer and the adjacent end turn of said spring, said ear being disposed adjacent the end of said end turn, said portion of the bar within the spring having a width substantially equal to the inner diameter of the spring.

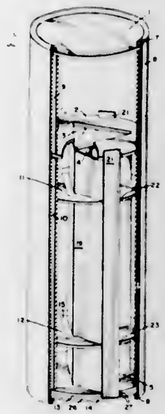
3,096,680
NAIL WITH HEAD REMOVABLE BY TWISTING
John E. Dudgeon, 3920 Dodge St., Omaha, Nebr.
Filed June 3, 1960, Ser. No. 33,697
1 Claim. (Cl. 85—28)



In a finishing nail, the combination which comprises an elongated cylindrical body, said body having a point on one end, wings extended from the intermediate portion, each wing having an inclined leading edge and flat sides and each wing extending radially beyond said body, and an enlarged laterally extending inner head on the end opposite to the end on which the point is positioned, a web having opposite sides flat and parallel to each other, a portion of reduced cross sectional area therein that is joined to and is extended from the inner head, said area being less than the smallest cross sectional area of said body, and an outer head carried by said web, said web flat sides extending substantially from said outer head to said reduced area.

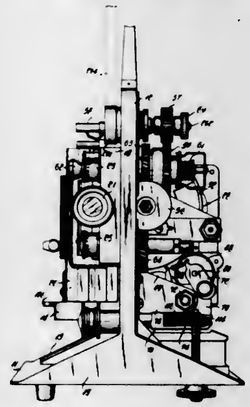
3,096,681
KALEIDOSCOPIC VIEWER
John Lyon Burnside III, Woodside, Calif.
(2220 Astral Drive, Los Angeles 46, Calif.)
Filed Sept. 7, 1960, Ser. No. 54,548
4 Claims. (Cl. 88—15)

1. In a kaleidoscope comprising an elongated sighting tube having an objective end with an objective lens contained therein and an ocular end with an ocular opening contained therein and containing a pair of elongated mirrors with reflecting inner surfaces in trough-shape configuration, a partition comprising a diaphragm dividing the said sighting tube perpendicularly at the principal focal plane of the said objective lens, with a hol-



low tube extending inside the said sighting tube from the said partition to the said objective lens, with the said mirrors extending from the said partition to the said ocular end, and with the said partition having an optical aperture of substantially triangular shape.

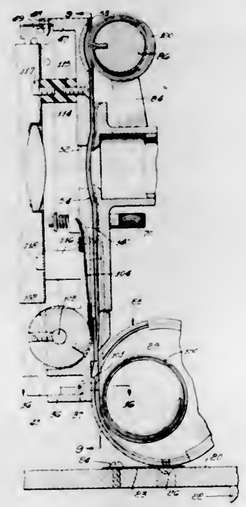
3,096,682
REVERSIBLE SHUTTER DRIVE AND ACCESSIBLY MOUNTED MECHANISMS IN A MOTION PICTURE PROJECTOR
Roy E. Moore, Ann Arbor, Mich., assignor, by mesne assignments, to Argus Incorporated, a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,453
4 Claims. (Cl. 88—17)



2. In a motion picture projector, a rigid support comprising a base and a centrally disposed upstanding film handling and drive mechanism support plate integral with said base, said plate having a ventilation grating, an integrally formed lamp house projecting from one side of said plate and a through opening in said plate communicating with the interior of said lamp house; an electric motor mounted on the other side of said plate and having a shaft substantially parallel to the vertical plane of said plate;

a first fan mounted on said shaft near said grating for drawing air from the one side of said plate; a second fan mounted on said shaft, and a shroud surrounding said second fan with its outlet connected to said opening for delivering cooling air therethrough directly into said lamp house.

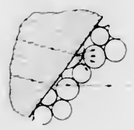
3,096,683
FILM PROJECTOR
Carroll H. Dunning, 4337 Clybourn Ave., North Hollywood, Calif.
Filed Aug. 28, 1959, Ser. No. 836,702
1 Claim. (Cl. 88—28)



A projector comprising: a plate having an opening therein through which a picture may be projected; a projection lens assembly fixed on said plate; indentations on said plate and complementing bulges on the inner portion of said lens assembly forming a fixed undulating path for the passage of film past said opening; a pair of slots in said plate; a leaf spring in said housing adjacent said path and below said opening; a pair of pawls carried by said leaf spring and projecting through said slots; cam faces on said pawls and cooperating curved surfaces on said plate adapted to be engaged by said cam faces whereby said pawls are adapted to engage in sprocket holes in said film on downward movement of said leaf spring to advance said film and to disengage from said sprocket holes upon upward movement of said leaf spring; a roller rotatably mounted in said housing, the lower end of said leaf spring being attached to said roller, the free end of said leaf spring extending upwardly and normally bearing against said plate and means for rotating said roller to raise or lower said free end of said spring; and said housing including a perforated shell including a top, two sides and a rear end, a plurality of box-like, nested shells within said perforated shell and a lamp within the innermost shell.

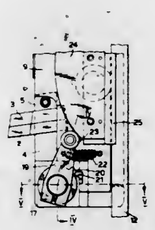
3,096,684
FENESTRATION STRUCTURE FOR CONTROL OF DAYLIGHTING
Robert R. Kegg, Toledo, Raymond E. La Brecque, Zanesville, and Richard C. Warnke, Toledo, Ohio, assignors, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Nov. 12, 1958, Ser. No. 773,342
6 Claims. (Cl. 88—60)

1. In a fenestration structure for utilizing daylight to light an interior, the combination comprising a sheet of light transmitting material intended to be interposed in a vertical position, one surface of said sheet having a series of symmetrical parallel ribs formed thereon extending longitudinally thereof, said ribs extending vertically when the sheet is positioned in vertical position, the configuration of said ribs being such that sunlight from wide azimuth angles striking the ribs are redirected toward the other surface of said sheet in a direction generally perpendicular thereto, said other surface of said sheet comprising a series of prisms, said prisms extending horizontally when the sheet is positioned in vertical position, each



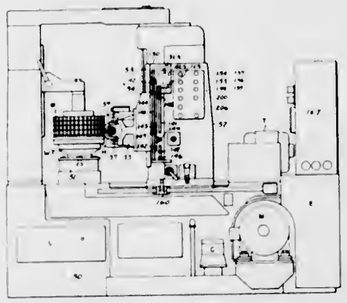
said prism having a configuration such that light rays striking said prism are directed in substantially horizontal directions, a thin substantially continuous translucent coating bonded to the surfaces of said prisms and comprising a cellular agglomeration of sodium silicate having sand dispersed therein, said coating having areas in optical contact with the surfaces of said prisms interspersed with areas out of optical contact with the surfaces of said prisms throughout the extent thereof thereby diffusing the light transmitted to said prisms in the areas of optical contact and transmitting the light directly and without substantial diffusion in the remaining areas.

3,096,685
DEVICE FOR MACHINING THE FLANKS OF SPUR AND HELICAL GEARS
Walter Demuth, Wallisellen, Switzerland, assignor to Maag Gear Wheel & Machine Company Limited, Zurich, Switzerland
Filed July 7, 1959, Ser. No. 825,479
Claims priority, application Switzerland July 21, 1958
7 Claims. (Cl. 90—1.6)



1. A machine tool for the machining of tooth flanks on spur and helical gears and producing deviations from the theoretical tooth shape along the width of the teeth, comprising in combination: a machine frame for supporting the gear to be maintained, a template fixedly attached to said frame, a ram reciprocatingly mounted on said frame, a tool carrier on said ram, a hinged tool holder pivotally mounted on said tool carrier for holding a tool to engage the gear to be machined in one direction of movement of said ram and a follower mechanism comprising a pair of cooperating wedges mounted in said hinged tool holder controlled by said template to vary the distance of said tool from the axis of the gear to be machined in the course of the movement of said ram in dependence upon the shape of said template.

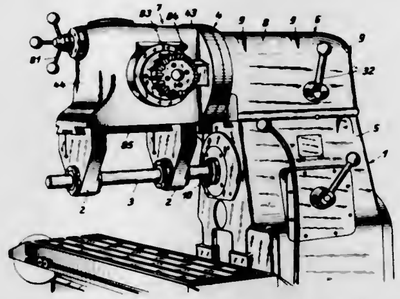
3,096,686
AUTOMATIC HOB SHIFTER
Granger Davenport, Montclair, and Joseph E. Van Acker, New Vernon, N.J., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Continuation of application Ser. No. 670,200, July 5, 1957. This application Apr. 12, 1962, Ser. No. 189,660
13 Claims. (Cl. 90—4)



1. The combination of a translatable slide member, a hob spindle, means mounting said hob spindle for rotary and axial movement relative to the slide member, power-operated clamping means for said spindle-mounting means normally operative to retain the spindle-mounting means in a preselected axially adjusted position, first power means for actuating said clamping means, second power means adapted when actuated to effect axial movement of said mounting means a preselected unit distance, selectively adjustable means to vary the preselected unit distance, independently operable control means for each of said first and second power means, and a coordinating system of controls responsive to translation of said slide member and operative normally to effect operation of said control means through one cycle including unclamping of said spindle-mounting means, then axial movement thereof, and then a reclamping of the spindle-mounting means to the slide member, and additional selectively operable means associated with said system of controls for causing said system of controls to repeat the axial movement portion of the cycle two or more times to thereby obtain two or more preselected unit distances of movement of the mounting means before reclamping of the spindle-mounting means.

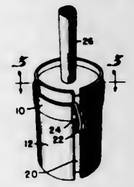
3,096,687
MILLING MACHINE
Friedrich Klopp, Friedrich Klopp, Jr., and Friedhelm Lessenich, all of Solingen-Wald, Germany, assignors to Klopp-Werke G.m.b.H., Solingen-Wald, Germany
Filed May 8, 1961, Ser. No. 108,611
Claims priority, application Germany May 10, 1960
9 Claims. (Cl. 90—17)

1. A milling machine having in combination a horizontal shaft, a milling head swivelly mounted thereon, said milling head comprising a horizontal cutter arbor and a milling spindle, said cutter arbor extending parallel to said shaft, the axis of said milling spindle and the axis of said shaft lying in a first plane, the axis of said cutter arbor and the axis of said shaft lying in a second plane extending normal to said first plane, means for selectively securing the milling head in its swivel position, transmission means for transmission of a driving force including a transmission spindle extending parallel to said arbor, first and second gearing, said cutter arbor being movable, by swivelling said milling head, into alignment with said transmission spindle and connectable thereto for driving purposes, and selective means for driv-



ably connecting said first and second gearing, said second gearing being drivably connected to said milling spindle.

3,096,688
TRACER FINGER FOR AUTOMATIC TRACER AND METHOD AND MEANS OF COORDINATING SAME WITH A CUTTER
Jack N. Binns, 4886 Oaklawn Drive, Cincinnati, Ohio
Filed June 19, 1957, Ser. No. 666,544
6 Claims. (Cl. 90—62)

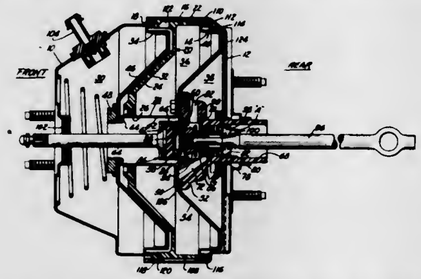


5. In combination, a tracer finger having a substantially cylindrical outer surface, a shim having a substantially constant thickness and defining a split tubular member, said shim substantially surrounding said tracer finger and having an inner surface thereof in contacting relationship with a major circumferentially extending portion of the cylindrical outer surface of said tracer finger, and clamping means encircling and engaging the outer surface of said shim, said clamping means urging said shim into tight engagement with the outer surface of said tracer finger.

3,096,689
SIMPLIFIED TANDEM DIAPHRAGM FLUID PRESSURE MOTOR
Oswald O. Kytta, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 30, 1961, Ser. No. 85,521
4 Claims. (Cl. 91—376)

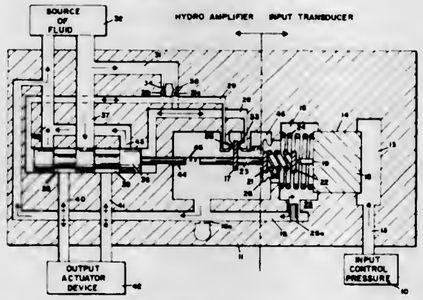
1. In a fluid pressure motor: a first generally cup-shaped housing section having a first internal shoulder facing an open end with sidewalls between said shoulder and said open end forming an opening of generally uniform cross section, a second generally cup-shaped housing section received in the open end of said first cup-shaped housing section to form a second shoulder facing said first shoulder, a partition member positioned between said shoulders, said partition member having a radially inner flange portion with a centrally located opening therethrough, a hub member whose center portion extends through said opening to effect a seal with said flange of said partition member, a first diaphragm having a peripheral portion sealingly wedged between the sidewalls of said first housing section and said second shoulder by

said partition member, said first diaphragm having its radially inner portion sealed to said hub to form a first motor chamber on its side away from said partition member and a second motor chamber between said diaphragm and said partition member, a second diaphragm having an outer periphery sealingly clamped to said partition member, said second diaphragm having a radially inner portion sealed to said hub member to form a third motor



chamber between said second diaphragm and said partition member and a fourth motor chamber on the opposite side of said second diaphragm member, said hub member having a flow communicating passage between said first and third motor chambers, and said partition member having a passage communicating said second motor chamber to said fourth motor chamber internally of said housing.

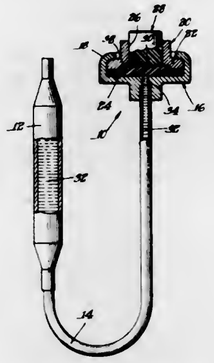
3,096,690
HYDRAULIC TRANSDUCER
Paul F. Hayner, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,241
6 Claims. (Cl. 91—461)



4. A hydraulic transducer according to claim 3 having a control valve comprising in part a slidable control piston; a second fluid source coupled to said control valve by input and exhaust lines; an output actuator coupled to said control valve; at least one control passageway coupling the second source, the control member, and the control valve; means for varying the pressure in the control passageway in response to the position of the control member; whereby the varying pressure in the control passageway is communicated to the control valve in order to control fluid pressure from the second source to the output actuator.

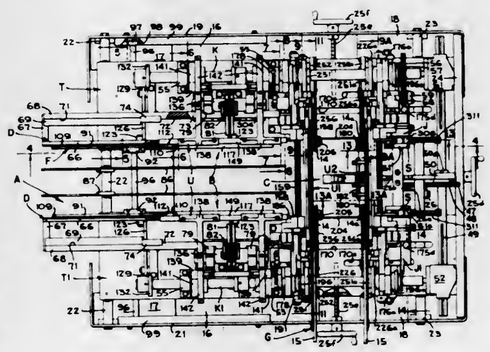
3,096,691
TRANSDUCER
Clarence P. Salmon, Elgin, Ill., assignor to Flexonics Corporation, Maywood, Ill., a corporation of Illinois
Filed June 27, 1960, Ser. No. 38,924
6 Claims. (Cl. 92—101)

1. A transducer adapted to convert fluid expansion to linear mechanical movement, said transducer comprising: cup-shaped housing means having deformable lips at the open end thereof; fitting means confined in said housing means by deforming said lips thereover; an elastomeric disc situated in said housing means beneath said fitting means; a sleeve bearing defined in one of said first and



second mentioned means and disposed perpendicularly to said disc; piston means slidably received in said sleeve bearing and displaying an anti-friction surface to one side of said disc; and means in the other of said first and second mentioned means communicating an expansible fluid to the opposite side of said disc.

3,096,692
BOX MAKING MACHINE
Charles F. H. Crathern III, Hopkinton, John B. Bradicich, Warner, and Joel S. Reen, Contoocook, N.H., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Continuation of application Ser. No. 97,374, Mar. 21, 1961. This application Mar. 16, 1962, Ser. No. 182,156
35 Claims. (Cl. 93—49)



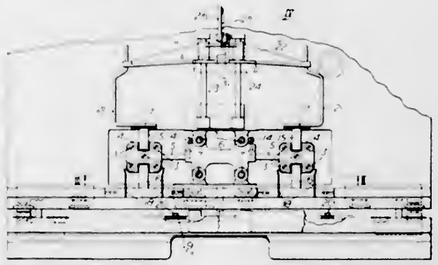
1. Apparatus for forming container parts from corner notched and tabbed blanks comprising a frame, a pair of laterally spaced tables extending longitudinally of said frame, a blank registration station at the forward end of the apparatus including means for guiding the longitudinally extending edges of the blanks, a first folding station comprising laterally spaced longitudinally extending lower dies supported on said tables for receiving blanks from said registration station, a second folding station comprising longitudinal spaced laterally extending lower dies for receiving blanks from said first folding station, longitudinally extending camshafts mounted on said tables, means for driving said camshafts, longitudinally and laterally ex-

tending upper dies mounted on said tables at said first and second folding stations for motion toward and away from the corresponding lower dies, drive means between said camshafts and both sets of upper dies for lowering and raising the upper dies, and blank feed means for progressively and simultaneously advancing blanks from station to station.

3,096,693
CARTON TRANSFERRING APPARATUS

Alfred Mouncy Simpson, Swindon, England, assignor to The Metal Box Company Limited, London, England, a British company

Filed Aug. 17, 1961, Ser. No. 132,161
Claims priority, application Great Britain Sept. 8, 1960
4 Claims. (Cl. 93—51)

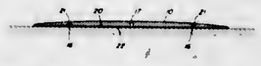


1. Apparatus for receiving cartons removed from a setting-up die, comprising a support aligned with and spaced from the exit end of a setting-up die by a distance which permits a set-up carton extracted from the die to rest on the support, an extractor device movable between a first position thereof at which it is operable to extract a carton from the die and a second position thereof at which it deposits the extracted carton on the support, a conveyor to receive cartons from the support, a pusher movable over the extractor device in the second position thereof to move a carton from the support and to deliver it to the conveyor, a reciprocable operating member to effect said movement of the pusher, and a connecting element connecting the pusher with the operating member, said connecting element spacing the pusher from the operating member and extending between said member and pusher at a position displaced laterally from the path of the extractor device whereby while the pusher is located in the position thereof at which it delivers a carton to the conveyor the extractor device is permitted to return to the forward position thereof through the space between the pusher and the operating member.

3,096,694
GUIDE MARKING FOR JET RUNWAYS

Bernard Stanley Lynn, 19451 Black Road, Los Gatos, Calif.

Filed Nov. 16, 1961, Ser. No. 152,731
5 Claims. (Cl. 94—1.5)

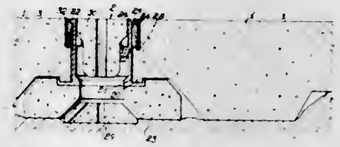


1. The method of forming a guide line on a pavement comprising forming fluorocarbon resin tiles of a thickness between .06" and 0.2", said fluorocarbon resin being selected from the group consisting of tetrafluoroethylene resin and trifluorochloroethylene resin, pitting the lower surface of the tiles, and securing the tiles to the pavement by means of an epoxy base resin adhesive.

3,096,695
FOUNDATION FOR BUILDINGS, ROADS OR THE LIKE

John Reinhardt, Brighton, South Australia, Australia (61 Holder Parade, Kingston Park, South Australia, Australia)

Filed Oct. 31, 1958, Ser. No. 771,143
Claims priority, application Australia Nov. 7, 1957
3 Claims. (Cl. 94—11)

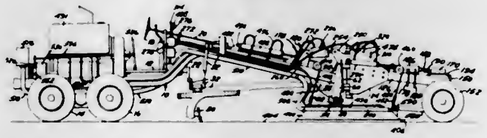


1. A road structure comprising a plurality of triangular road sections disposed in a common plane and arranged to form a continuous mosaic road surface, each triangular road section having a corner thereof meeting with the corners of two other road sections to form a junction therewith, separate joining members at the junctions formed by the triangular sections for joining corresponding sections together comprising a base and an upstanding metal sleeve extending therefrom, a sand fill hole being provided in each said base member extending centrally therethrough, said upstanding metal sleeve forming an opening in correspondence with said sand fill hole, lugs on the metal sleeve extending inwardly into said opening, a recess in each said base member being provided around the metal sleeve, and downwardly projecting key sections on the corners of said road sections engaged in said recesses for preventing lateral displacement of said road sections and thereby connecting said road sections together.

3,096,696
MOTOR GRADER FRAME EXTENSION

Vernon H. Reisser, Omaha, Nebr.

Filed Mar. 5, 1957, Ser. No. 644,038
8 Claims. (Cl. 94—39)



1. In a grader, the combination which comprises an elongated frame including a plurality of pivotally connected leading and trailing frame sections, wheels upon which the leading end of the leading section of the frame is mounted, a first implement carried by a pair of said pivotally connected adjacent sections of the frame, a second implement carried by a trailing section of the frame, means pivotally connecting the section at the leading end of the frame to the leading end of the trailing section of the frame for pivoting of these sections about both a vertical and a horizontal axis, and controllable means for swinging the said leading section about said vertical and horizontal axes.

3,096,697
AUTOMATIC SHUTTER FOR CAMERA

Takayoshi Sato and Atsutada Nakatani, both of Tokyo, Japan, assignors to Kabushiki Kaisha Koparu, Tokyo-to, Japan, a joint-stock company of Japan

Filed July 18, 1961, Ser. No. 124,979
3 Claims. (Cl. 95—10)

1. In a photographic lens shutter including a shutter release, shutter cocking means, and an automatic exposure

control mechanism in which a shutter speed control means including a shutter, a shutter governor and a diaphragm aperture control means are actuated in sequence by a differential mechanism including two elements for controlling a respective exposure element, and a stop means connected with said differential mechanism adapted to be stopped in correspondence with the light condition measured by a photoelectric exposure meter built in the camera; the combination in said automatic exposure control mechanism comprising a diaphragm operating lever operated upon operation of the shutter release, a diaphragm aperture control cam means provided with a first nose portion and a first cam step portion adapted to be positioned to determine the diaphragm aperture, said diaphragm control cam means being connected with one element of said differential mechanism, a first latch lever for engaging said first nose portion to prevent movement of said one element of said differential mechanism in the shutter cocked position, a shutter speed control cam means provided with a second nose portion and a second cam step portion for adjusting the shutter governor, said shutter speed control cam means being connected with the



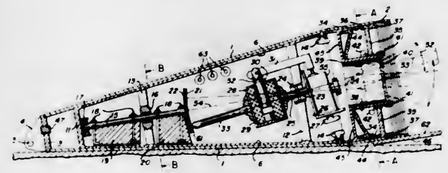
second element of said differential mechanism, an operating lever means connecting said shutter speed control cam means to said governor, a second latch lever capable of being engaged with said second nose portion to prevent movement of said differential mechanism in the shutter cocked position, a first pivoted lever associated with said shutter speed control cam means and provided with a first pin, a spur gear provided with an arresting pin adapted to arrest said first pin for stopping the rotation of said shutter speed control cam means, a shutter speed preset means capable of displacing the arresting pin on said spur gear to a position corresponding to a desired shutter speed, a disengaging disc provided with a third nose portion and a cam surface for disengaging said first pin from said arresting pin upon release of the shutter, a third latch lever capable of being engaged with said third nose portion against a spring of said disc, a first unlatch lever provided with first and second arms, and a second unlatch lever provided with a third arm, said two unlatch levers actuating to unlatch one by one said three latch levers from the respective nose portions for controlling the shutter speed and the diaphragm aperture control devices.

3,096,698
APPARATUS FOR PHOTOGRAPHING THE INTERIOR OF PIPES

Garnet H. Stoutenburg, 215 3rd Ave. SE., Calgary, Alberta, Canada

Filed Sept. 26, 1960, Ser. No. 58,462
10 Claims. (Cl. 95—11)

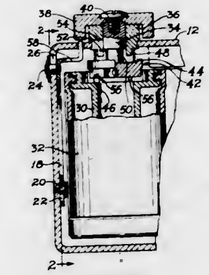
1. Apparatus for the photographing of pipes, comprising a closed substantially liquid-tight shell having a longitudinal axis of symmetry, a pendulum weight pivotally mounted inside the shell and freely rotatable about a pivotal axis which is substantially coincident with the said axis of symmetry of the shell, an arc member fixed to said pendulum weight and having a longitudinal slot therein, a shaft gimbally mounted inside the shell about a pivotal point substantially on the said axis of symmetry of the shell, said shaft having a projecting member engaging the slot and adjustably fixed in one of a plurality of positions in said longitudinal slot in said arc member, a camera support fixed to said shaft and to which a camera whose lens faces one end of the shell may be removably attached, electrically actuated trigger means for triggering the shutter of said camera and responsive to an external signal, a transparent window in said end of said shell and intersected by the axis of the lens of said camera when the camera is fixed in operating position and a flashbulb for casting light into that part of the pipe facing the camera lens and responsive to said external signal.



3,096,699
CAMERA LOCKING DEVICE

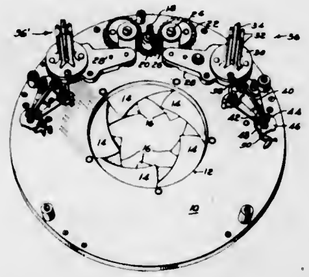
Douglass C. Harvey and Hubert Nerwin, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 22, 1962, Ser. No. 167,791
7 Claims. (Cl. 95—31)



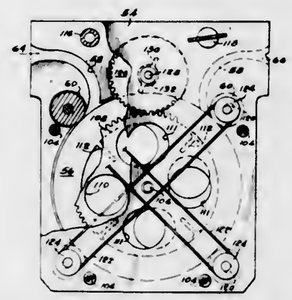
1. In a camera adapted to accommodate a rotatable film winding member, and having:
(*a*) a housing,
(*b*) a cover movable into and out of closed position closing said housing,
(*c*) locking means movable between
(1) a first position locking said cover in said closed position, and
(2) a second position releasing said cover for movement out of said closed position, and
(*d*) release means for moving said locking means from said first position to said second position,
the improvement comprising:
(*e*) winding mechanism remote from said release means, and including a driving member movable into and out of driving engagement with said winding member when said winding member is accommodated in the camera, and
(*f*) means for moving said driving member out of driving engagement with said winding member in response to movement of said locking means to said second position.

3,096,700
DOUBLE TORSION SPRING ENERGY-STORAGE PHOTOGRAPHIC SHUTTER
Frederick P. Willcox, Old Westbury, N.Y., and Ludolph F. Welanetz, Bethesda, Md., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Jan. 30, 1959, Ser. No. 790,083
10 Claims. (Cl. 95—63)



1. In a photographic shutter having two blade devices operating in an alternating sequence to complete an exposure for each pair of such operations, a symmetrical spring drive connected to of said blade devices, individual means for latching said spring drives in respective tensioned states to hold their blade devices respectively closed and open, means for sequentially releasing the individual latching means to initiate oscillations of said respective spring drives from their initial tensioned states through their unstressed neutral condition and transiently into partially tensioned states opposite to those last occupied, to complete respective shutter opening and shutter closing phases of one exposure, means for latching each of said spring drives in its newly acquired state of partial opposite tension, and means for further and fully tensioning each spring drive in its said newly acquired state, in preparation for a following exposure in which the opening and closing functions of said blade devices will be interchanged.

3,096,701
SELF-THREADING AUTOMATIC FILM PROCESSING APPARATUS
Charles N. Edwards, Huntington, N.Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,662
3 Claims. (Cl. 95—94)



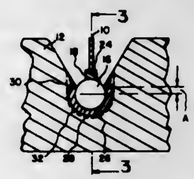
1. A device for feeding photographic film or the like through a liquid treatment bath, comprising a pair of spaced-apart parallel plates, a drive wheel mounted between said plates for rotation about an axis perpendicular to said plates, said drive wheel having a width substantially equal to the distance between said plates and a radius less than the distance from said axis to the nearest point on the perimeter of either of said plates, a film-guiding groove in each of the facing surfaces of said plates and extending between points of film entry and film exit on the perimeters of said plates, said grooves being in registry with each other and with a major portion of the periphery of said drive wheel, a plurality of spaced-apart idler wheels mounted between said plates for rotation about axes parallel to said first axis, said idler wheels being mounted adjacent the periphery of said drive wheel for limited motion in directions radial of said drive wheel, means for rotating said drive wheel, and means for resiliently urging said idler wheels toward said drive wheel.

3,096,702
BODY SUPPORTED AIR CIRCULATOR
Joe W. Malone, Sr., 1905 Douglas St., and Joe D. Lamb, 1001 E. Arkansas St., both of Sweetwater, Tex.
Filed Feb. 23, 1961, Ser. No. 91,144
5 Claims. (Cl. 98—1)



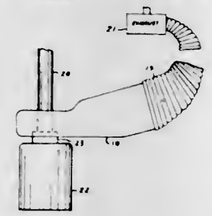
1. A body supported air circulator comprising a shield having inwardly turned back side edges forming side walls and rear flanges, said rear flanges being adapted to engage against the chest and defining an open rear side of the shield between said flanges, said shield defining an air cavity, a conduit member supported by said shield having an inner discharge end opening into the cavity and an exposed open outer inlet end, an electric fan for propelling air through said conduit into said cavity, means supporting said fan within the conduit, a self-contained current source electrically connected to the fan, means detachably mounting said current source on the shield, and a neck encircling supporting strap attached to and supporting said shield against the chest of the wearer.

3,096,703
LOUVER STRUCTURE
Adam D. Goettl, Phoenix, Ariz., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Dec. 12, 1960, Ser. No. 75,214
6 Claims. (Cl. 98—110)



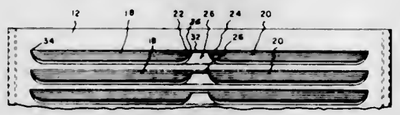
1. In a louver structure the combination of: a first slat; a second slat angularly intersecting said first slat; each of said slats provided with a notch located at the area of intersection with the other slat; a universal bearing assembly interconnecting said slats and comprising a spherical bearing member; first and second inserts secured in said notches of said first and second slats and pivotally connected to said spherical bearing member, said first inserts being substantially U-shaped and engageable with said spherical bearing member over substantially more than 180 degrees of its periphery; opposed portions of said U-shaped insert deflectable apart to receive said spherical bearing member, said notches being of a dimension to hold said opposed portions together around said periphery for substantially more than 180 degrees for retaining said bearing member in said U-shaped insert.

3,096,704
FUME ELIMINATOR
Linus E. Russell, Springfield, Ohio, assignor to Peters & Russell, Inc., Springfield, Ohio, a corporation of Ohio
Filed Aug. 23, 1961, Ser. No. 133,403
4 Claims. (Cl. 98—115)



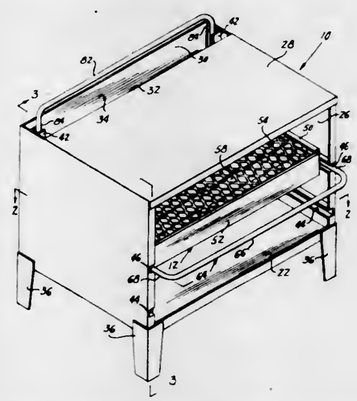
1. An accessory for the elimination of fumes in the filling of fuel tanks and the like, the inlet to which is defined by a projected fitting, consisting of a one piece hollow resilient body structure a portion of which provides a base having an aperture opening to its interior, said base being elongated and formed to extend laterally of said aperture and provide a cushioned support for said body structure as said aperture accommodates a fitting on a fuel tank to project therethrough to the interior of said body structure, means defining a second aperture in said body structure over and generally aligned with said first mentioned aperture, said second aperture being formed to receive the nozzle of a fuel delivery spout therethrough with clearance therebetween, whereby the nozzle may be freely introduced to the fitting interiorly of said body structure, and means defining a passage for application of suction to the interior of said body structure to draw air through at least said second mentioned aperture to entrain the fumes in and about said body structure and disperse them through said passage.

3,096,705
LOUVER STRUCTURE
Adam D. Goettl, Phoenix, Ariz., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Apr. 9, 1959, Ser. No. 805,203
10 Claims. (Cl. 98—121)



2. In a louver structure; a plate; first and second louver slat elements each integral with said plate and extending laterally of said plate at an angle thereto; said first and second louver slat elements disposed in longitudinal alignment with each other and being spaced apart at their adjacent ends; a strip of said plate disposed between said adjacent ends of said first and second louver slat elements and a first portion of said strip extending transversely to said louver slat elements; a second portion of said strip extending laterally to one side of said plate at an angle equal to that of said louver slat elements, said second portion being in alignment with and integral with both of said first and second louver slat elements; said second portion forming a stiffener structure which interconnects said louver slat elements, one of said louver slat elements having an end opposite to its said adjacent end; said opposite end being cut away from said plate at a location coinciding with one side of said plate, said adjacent ends of said louver slat elements being cut away from said plate at a location spaced laterally of said one side of said plate.

3,096,706
PORTABLE SMOKELESS BROILER AND OVEN ASSEMBLY
Robert G. Cardwell, 54 Extension St., Hazlehurst, Miss.
Filed Apr. 26, 1961, Ser. No. 105,740
5 Claims. (Cl. 99—340)

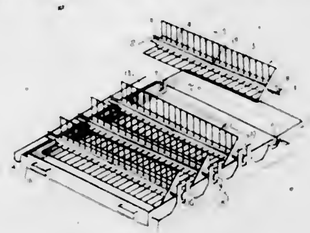


5. A portable broiler and oven assembly comprising an oven, a heating unit, a drip pan, and a food basket, said oven comprising a rectangular horizontal bottom panel, a vertical side panel secured to each of two opposite ends of said bottom panel, an oven top panel supported on said vertical panels, and a back panel secured to the back edges of said side panels, the bottom edge of said back panel being spaced above said bottom panel providing a drip pan entry slot therebetween, the back edge of said top panel being spaced forwardly of said back panel providing a food basket entry slot, the front of said oven being open, a pair of opposed vertical U-shaped rails secured to the inner surfaces of said opposite vertical side panels and extending downwardly from said oven top panel back slot, and opposed horizontal rail means secured to said inner surfaces of said opposite vertical side panels and extending rearwardly from the open front of said oven, rail means cooperating means pivoted centrally to opposite edges of said heating unit, and rail means cooperating means secured to two opposed edges of said food basket, said opposed horizontal rail means comprising vertically spaced apart pairs of opposed rails, said food basket being supported in the upper pair of horizontal rails, said heating unit being supported in a horizontal position by the lower pair of horizontal rails, and said drip pan being in said entry slot.

3,096,707
FOOD HOLDING AND TURNING APPARATUS
Archie W. Mills, 345 E. 89th Place, Chicago, Ill.
Filed July 10, 1961, Ser. No. 122,679
5 Claims. (Cl. 99—423)

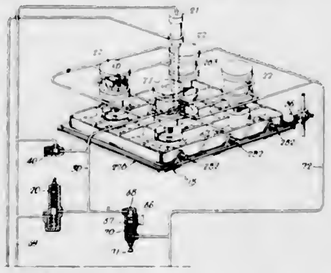
4. Cooking apparatus comprising a generally V-shaped rack having a pair of opposed support surfaces configured to retain food to be cooked, means mounting the rack for

pivotal movement about an axis adjacent the apex thereof, means for selectively pivoting the rack sufficient to deposit food successively on the opposed support surfaces so that the food can be cooked on both surfaces,



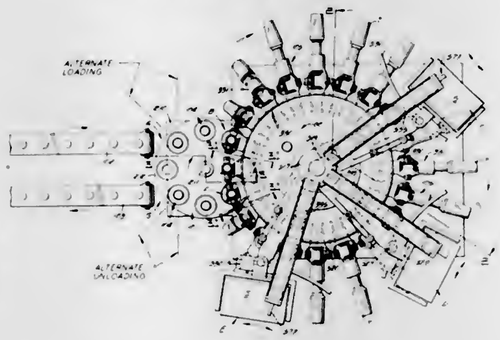
and a trough formed at the apex of the V-shaped rack between said support surfaces and sloping in one direction along the longitudinal axis thereof to carry off drippings from food being cooked and supported on the support surfaces.

3,096,708
MACHINES FOR PERFORMING OPERATIONS ON SHEET MATERIALS
Henry W. Moser, Haddonfield, N.J., assignor to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey
Original application Mar. 8, 1955, Ser. No. 492,897, now Patent No. 3,004,456, dated Oct. 17, 1961. Divided and this application Jan. 11, 1961, Ser. No. 82,042
3 Claims. (Cl. 100—50)



1. In a machine for performing work on sheets of work material, a platen press comprising two platens, at least one of which is movable toward the other, said movable platen having sheet-working elements, means for registering work sheets in the press with the said elements, and means for actuating said movable platen at a high cyclical speed to effect pressure engagement between the working elements and sheets so registered, said actuating means comprising a central hydraulic cylinder and piston unit for advancing said movable platen into a pressure-applying position with respect to the other of said platens, and a plurality of additional cylinder and piston units attached to and symmetrically disposed with respect to said movable platen for effecting the work stroke of the platen, a hydraulic system including a pump and containing said cylinder and piston units, a sequence valve in said system adapted to exclude hydraulic pressure from said additional units until a predetermined pressure has been developed in said central unit, means responsive to an additional predetermined pressure in said system for interrupting the advance movement of said movable platen, and means for adjusting the connection between each of the said additional cylinder and piston units and said movable platen to vary the angular position of the same with respect to said units for selectively adjusting areas of pressure on said sheets.

3,096,709
DECORATING MACHINE
John W. Eldred and James B. Legg, Columbus, Ohio, assignors to The Eldred Company, Columbus, Ohio, a corporation of Ohio
Filed Aug. 4, 1961, Ser. No. 129,455
42 Claims. (Cl. 101—115)



1. A decorating machine comprising a rotatable turret, spindles mounted on said turret at angularly spaced intervals and carrying article-supporting chucks, a decorating station disposed in cooperation with the turret, means for rotating the turret to bring articles carried by said spindles successively to the decorating station, said spindles including sections which are pivoted for vertical swinging movement and which carry said chucks so that articles carried thereby can be moved between a vertical position and a horizontal position, and a continuous cam track extending around said turret and relative to which the turret rotates and cooperating with said spindle sections to move them between a vertical position and a horizontal position with the section in horizontal position at said decorating station.

3,096,710
DAMPENING DEVICE FOR LITHOGRAPHIC PRINTING PRESS
Walter J. Wojciechowski, Cleveland, and Gotlieb Herman Brandt, Cleveland Heights, Ohio, assignors to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,835
2 Claims. (Cl. 101—148)

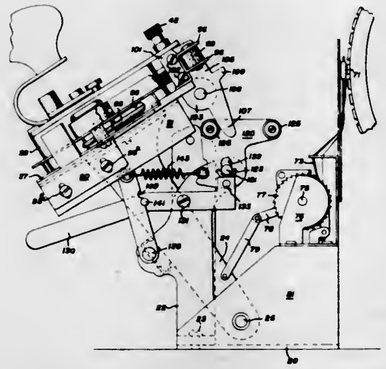


1. A device for dampening a lithographic printing plate on a rotating cylinder with ink repellent water solution, comprising water-carrying roller means having at least a portion thereof adapted to run in surface contact with the plate, said roller means having a substantially non-absorptive surface at least a portion of which is ink-rejecting, relatively non-absorptive means for supplying ink repellent water from a water supply to the ink-rejecting portion of the roller means at a point remote from the plate, the primary path of water from the supply to the plate around said roller means defining a train of water, and an absorptive accumulator roller running in surface contact with the ink-rejecting portion of the roller means over the train of water and between the supplying means and the plate.

3,096,711
METHOD OF PRODUCING COPY
Wilhelm Ritzerfeld, Franzensbader Str. 21, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Schorlemer Allee 14, Berlin-Grunewald, Germany
No Drawing. Filed Apr. 14, 1959, Ser. No. 806,382
Claims priority, application Germany Apr. 19, 1958
10 Claims. (Cl. 101—149.4)

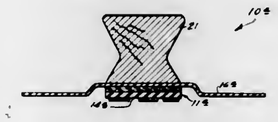
5. A method of producing copy, comprising, in the indicated sequence, the steps of forming on a transfer sheet an image consisting essentially of the leuco compound of a dye; oxidizing substantially all of said leuco compound; reacting said oxidized leuco compound on said transfer sheet with an acidic solution so as to substantially completely transform said oxidized leuco compound into a dye soluble in water and alcoholic solvents, said solution containing a substituted phenol which renders said dye insoluble in water without impairing the solubility of said dye in alcoholic solvents; and transferring the image formed by said dye in the presence of an alcoholic solvent therefor from said transfer sheet onto a copy sheet.

3,096,712
TAG PRINTING MACHINE
John F. Filsinger, Syracuse, N.Y., assignor to Tag-O-Matic Machine Co., Inc., Syracuse, N.Y., a corporation of New York
Filed Oct. 11, 1961, Ser. No. 144,344
4 Claims. (Cl. 101—288)



1. A machine for printing tags individually, or in strip form, comprising a frame, a tag print means, a carrier, a platen mounted on said carrier, a tape supply carried by said carrier, a tape feed roll mounted at one end of said platen drive means for intermittently rotating said tape feed roll, said carrier being pivotally mounted in said frame and being movable forwardly to move the tape overlying the platen into printing engagement with said print means to print a tag portion on said tape, said carrier being movable rearwardly from said print means, said tape feed roll drive means being operable upon initial movement of said carrier to rotate said roll to feed a predetermined tag length of said tape across said platen, a knife pivotally mounted on said carrier at the opposite end of said platen, a knife actuator mounted on a fixed support and positioned for engagement by said knife during the latter portion of the movement of said carrier and being operable upon such engagement to move said knife about its pivotal mounting into cutting engagement with the tape to sever a printed tag therefrom, said knife actuator being mounted for limited movement and being shiftable out of the path of movement of said knife, a tape re-wind roll mounted on said carrier, motion transmitting means operable upon actuation of said tape feed drive means to effect rotation of said re-wind roll to wind the printed tape, and releasable means for holding said actuator in shifted position.

3,096,713
RUBBER STAMP
Donal McLaughlin, Jr., 10706 Weymouth St., Garrett Park, Md.
Filed Dec. 28, 1961, Ser. No. 162,736
1 Claim. (Cl. 101—379)



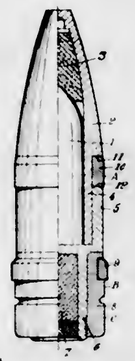
A manually operable stamp comprising a transparent, plastic plate having its central portion offset upwardly relative to the plane of the peripheral portions of said plate, and a resiliently flexible body secured to the underside of said central portion of the plate and having a bottom marking surface projecting below said peripheral portions of the plate and adapted to apply an inked impression to a sheet by being pressed against the latter, said peripheral portions of the plate having right-angularly related guide lines thereon for visually locating the inked impression relative to the sheet.

3,096,714
ELECTRIC DETONATORS
Alexander McLellan Yuill, West Kilbride, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Oct. 3, 1960, Ser. No. 59,782
Claims priority, application Great Britain Oct. 2, 1959
17 Claims. (Cl. 102—28)



1. An electric detonator comprising: a detonator casing having a mouth end; a rigid metal walled tube within said casing; an electric fusehead having a gas-producing matchhead composition pellet located within the end of said tube which is nearer said mouth end of said casing; sealing means within said mouth end of said casing; means for preventing flame gases produced by said pellet from bearing on said sealing means; a column of a uniformly highly compressed composition consisting essentially of pentaerythritol tetranitrate compressed against said pellet at a loading pressure of at least 1500 kilograms per sq. cm., said column occupying a portion of the bore of said tube; a base charge of a compressed secondary initiating explosive compressed into said casing at a pressure up to about 350 kilograms per sq. cm., said base charge occupying a position in said casing such that a space remains between the end of said highly compressed column in said tube and the more lightly compressed base charge.

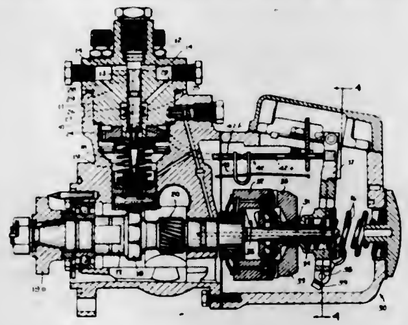
3,096,715
ARMOR-PIERCING PROJECTILES
Georges Dufour, Geneva, Switzerland, assignor to Brevets Aero-Mecaniques S.A., Geneva, Switzerland, a society of Switzerland
Filed Dec. 28, 1959, Ser. No. 862,401
Claims priority, application Luxembourg Jan. 19, 1959
3 Claims. (Cl. 102—52)



1. A projectile which comprises, in combination, an armor piercing core, an ogive mounted on said core to surround it, said ogive being made of a material of a density much lower than that of said core, said ogive having a cylindrical rear portion of a cross section smaller than the maximum cross section of its front portion, the outer wall of said ogive forming, between said front portion and said rear portion thereof, a rearwardly facing annular shoulder, a cylindrical base fitting tightly around said ogive rear portion, said base being made of a material of at least approximately the same density as said ogive, the front edge of said base being at a distance from said shoulder and facing it, a solid front guiding ring of a material harder than that of said ogive fitted on the side wall of said rear portion of the ogive, extending from said shoulder to said base front edge and having an outer diameter slightly greater than that of said base and that of the outer edge of said shoulder, a rear cylindrical extension of said base integral therewith, said extension having an outer diameter smaller than that of said base, a rigid rear cylindrical guiding ring fitting tightly around said rear extension, said rear ring being made of a material different from that of said rear extension and of substantially the same hardness as that of said front ring, said rear ring further having an outer diameter substantially equal to that of said base and to that of the outer edge of said shoulder, and a driving band of a metal softer than that of said guiding rings fixed around said rear ring for giving the projectile its spin, said driving band having an outer diameter greater than that of said guiding rings and further having an axial length substantially less than the axial length of said rear guiding ring.

3,096,716
CONTROL ROD FOR FUEL INJECTION PUMP
Theodore S. Chmura, Chicopee, Mass., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Mar. 11, 1960, Ser. No. 14,252
3 Claims. (Cl. 103—37)

1. In a device of the character described, a pumping member, means for controlling the fuel quantity delivered from said pumping member, said means including a rod and thermally actuated means for varying the effective length of said rod, said means comprising a pair of separate rod portions and a thermally actuated member connecting said rod portions with the adjacent ends of said



rod portions being in abutting relation at a temperature in the range of from about 70° F. to 80° F.

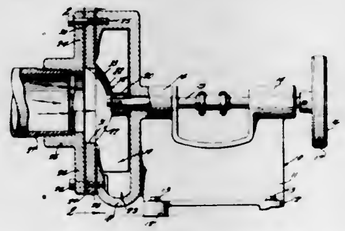
3,096,717
WELL PUMPS
George K. Roeder, Odessa, Tex., assignor to Roeder Hydraulics, Inc., Odessa, Tex., a corporation of Texas
Filed May 21, 1962, Ser. No. 196,091
16 Claims. (Cl. 103—46)



1. A well pump including,
a pump barrel,
a motor barrel,
first means for anchoring the pump barrel and the motor barrel in a well bore and sealing externally of the pump between the lower end of the pump barrel and the upper end of the motor barrel,
means for exposing the lower end of the pump barrel to the well bore below the first sealing means,
means for exposing the upper end of the motor barrel to the well bore above the first sealing means,
a pump piston in the pump barrel,
a motor piston in the motor barrel,
an element connecting the pump piston and the motor piston and having a flow passage between the underside of the pump piston and the upperside of the motor piston,
means in the flow passage for preventing fluid flow downwardly from the passage to the underside of the pump piston,

means communicating the flow passage above the latter means with the interior of the pump barrel,
second sealing means slidably engaging the element connecting the pump piston and the motor piston for sealing off between the pump barrel and the motor barrel,
a power barrel surrounding the motor barrel,
third sealing means carried by the power barrel and slidably engaging around the motor barrel,
means communicating the interior of the motor barrel above the third sealing means with the interior of the power barrel,
a power piston slidably engaging the power barrel and sealing between the power barrel and the motor barrel above the point of exposure of the interior of the motor barrel to the interior of the power barrel,
the power piston having a working area greater than that of the motor piston,
and means for preventing fluid flow downwardly from the interior of the motor barrel into the flow passage.

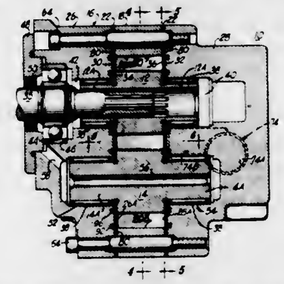
3,096,718
TRASH CUTTER FOR A PUMP
Roy N. Anderson, Clovis, N. Mex., assignor to Conard Kenner and Walter C. Ewers
Filed Dec. 12, 1961, Ser. No. 158,801
1 Claim. (Cl. 103—111)



In a pump including a hollow housing having an open end, a shaft rotatable in said housing, an impeller on said shaft, and said impeller having a plurality of radially arranged blades each provided with a concavely curved edge portion adjacent said shaft, said blade edge portions facing the open end of said housing, an end member positioned adjacent to and spaced from the open end of said housing and being provided with an opening in registry with said blade edge portions, an annular plate disposed in the space between said member and said housing, and a cutting blade projecting radially inwardly from the inner periphery of said plate on the side of the latter facing said housing and being disposed contiguous to and in coacting relation with the edge portions of each of said blades in turn upon rotation of said shaft, said blade being conformably shaped to said blade edge portions.

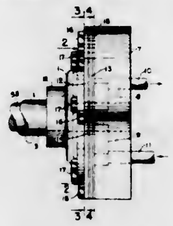
3,096,719
ROTARY PUMP OR MOTOR
John C. McAlvay, Racine, Wis., assignor to Webster Electric Company, Racine, Wis., a corporation of Delaware
Filed Apr. 29, 1960, Ser. No. 25,571
18 Claims. (Cl. 103—126)

1. In a rotary machine of the class described, impeller means comprising a pair of intermeshing gears, a housing for said impeller means comprising a gear plate with an opening configured closely to receive said gears and of a thickness corresponding to that of said gears, spacer plates at each side of the gear plate and each having an opening somewhat larger than that in said gear plate, and opposed end plates abutted against said spacer plates, said housing having inlet and discharge passages leading to gears at inlet and discharge areas, said gears having oppositely extending shafts and the end plates having openings for receiving the ends of the shafts, relatively thin wear plates disposed at opposite sides of and abutting against the side faces of the gears, said wear plates having shapes generally corresponding to the openings in said gear and spacer plates and having openings for said shafts and openings of the same size as and aligned with said inlet and discharge passages, and being of a size so that their peripheral side portions abut against the sides of the gear plates and their peripheral edges are spaced from the opening defining edges of the spacer plates to define a seal receiving space, the wear plate thicknesses being substantially less than the thicknesses of said spacer plates whereby the wear plates have freedom for movement toward the end plates and there are provided pressure chambers at the sides of the wear plates adjacent the end plates, resilient sealing gaskets surrounding the peripheral edges of each of said wear plates and having short



axially disposed flanges interposed between the peripheral side portions of the wear plates and adjacent portions of said end plates, said end plates having resilient sealing means located therein abutted against the end plates and wear plates around the openings in the latter aligned with the discharge passage, thereby to seal off discharge pressures from the said pressure chambers, and said end plates having resilient sealing means located therein and abutting against the end plates and wear plates and defining pressure areas surrounding the said first mentioned resilient means and extending toward the inlet passageways somewhat beyond a plane normal to a line passing through the inlet and outlet passageways and also passing through the axes of rotation of the gears, and a pair of small openings in each of said wear plates leading to said pressure areas, said openings being similarly located relative to the gears and leading to areas of pressure disposed between the inlet and discharge pressures and isolated at all times from the discharge area by at least one gear tooth.

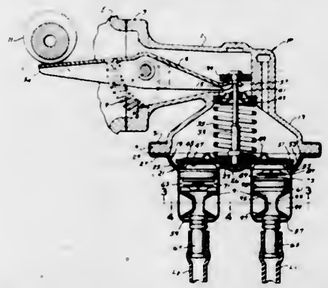
3,096,720
ROTARY GEAR PUMPS
Gil W. Younger, % Mercury Tool Engineering Co., 11126 E. Rush St. S., El Monte, Calif.
Filed Jan. 2, 1962, Ser. No. 163,548
6 Claims. (Cl. 103—126)



1. A rotary pump comprising a housing having a recess opening at a machined end surface, a pair of inter-

nally meshing gears mounted in said recess and forming therewith and with each other intake and delivery pumping compartments, the end faces of said gears lying flush with said machined end surface, means for driving one of said gears, a casting having inlet and outlet ducts and also having a machined surface through which said ducts open, and a compound plate structure interposed between said machined surfaces completing said pumping compartments and having inlet and outlet ports registering with said ducts and communicating with said inlet and delivery pumping compartments, respectively, said compound plate structure being made up of a pair of similarly shaped relatively thin sheet members having a gasket between them extending over their entire area, the face of one of said sheet members bearing against said machined end surface and the end faces of said gears, and the face of the other sheet member bearing against the machined surface of said casting, and means for clamping said housing, plate structure and casting together, whereby a plate structure of adequate thickness and rigidity may be produced by a die punching operation.

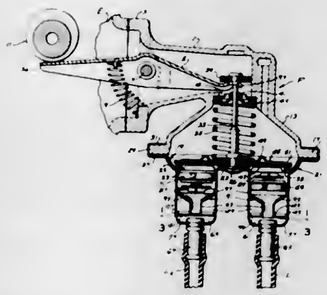
3,096,721
FUEL PUMP
Jack M. White, Florissant, and Eldon A. Johnson, Sunset Hills, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Aug. 14, 1961, Ser. No. 131,174
13 Claims. (Cl. 103—150)



1. A diaphragm pump comprising a cup-shaped sheet metal body having an end and a peripheral wall defining a pumping chamber and having a pair of cup-shaped projections extending from its end wall defining an intake cavity and a discharge cavity respectively opening into said pumping chamber, a diaphragm closing the pumping chamber, the intake cavity having an intake check valve therein and being adapted for connection of a supply line thereto upstream from the intake check valve, the discharge cavity having a discharge check valve fitted therein and being adapted for connection of a discharge line thereto downstream from the discharge check valve, and means comprising a tubular stem and a head on the stem arranged axially in the discharge cavity downstream from the discharge check valve providing an annular surge chamber around the tubular stem in the discharge cavity.

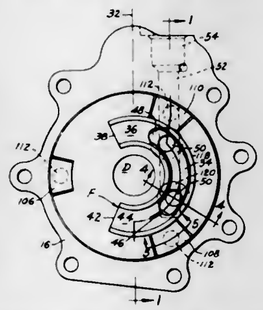
3,096,722
FUEL PUMP
John B. Fitzgerald, St. Louis, Mo., and Donald R. Compton, Belleville, Ill., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Aug. 17, 1961, Ser. No. 132,134
14 Claims. (Cl. 103—150)

1. A diaphragm pump comprising a body formed to provide a pumping chamber, an intake cavity and a discharge cavity each in communication at one end with the pumping chamber, a diaphragm closing the pumping chamber, the intake cavity having an intake check valve therein and being adapted for connection of a supply line thereto upstream from the intake check valve, the discharge cavity having a discharge check valve therein and being adapted for connection of a discharge line



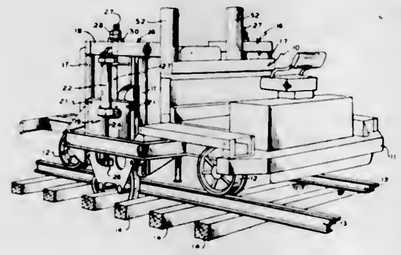
thereto downstream from the discharge check valve, means in the discharge cavity forming a fuel outlet conduit and a surge chamber around said conduit and forming a fuel passage between said surge chamber and said discharge cavity, and a screen in said discharge cavity across said fuel passage to trap gas in said surge chamber.

3,096,723
FLOATING PORT PLATE CONSTRUCTION
David B. Puryear, St. Joseph, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,341
6 Claims. (Cl. 103—162)



1. In a positive displacement fluid handling device: a housing member having an internal chamber with opposite end walls providing an axis of rotation extending through said chamber, a rotor member in said chamber, means carried by said housing and drivably connected with the rotor member for rotating it about said axis, said rotor having end surfaces facing said end walls of said internal chamber and at least one fluid displacement chamber therein with a port which opens into one end surface of said rotor, means mounted within said fluid displacement chamber and slidable therein for displacing fluid out of said fluid displacement chamber through said port during a first predetermined angle of rotor rotation and for causing fluid to flow into said fluid displacement chamber through said port during a second predetermined angle of rotor rotation, at least two slipper segments slidingly abutting said one end surface of said rotor during its rotation to provide reaction surfaces against which said rotor is thrust, swivel means supporting said slipper segments from one end wall of said housing, a port plate separate from said slipper segments in sliding engagement with said one end surface of said rotor, said port plate having a generally crescent shaped opening which communicates with said port of said rotor during one of said predetermined angles, said port plate having a portion surrounding said crescent shaped opening which slidingly sealingly engages said rotor member, said housing having at least one flow port generally opposite to said crescent shaped opening of said port plate, sealing means for effecting a sealing relationship between said crescent shaped opening of said port plate and said at least one housing flow port, said sealing means being so constructed so as to maintain said sealing relationship when said port plate moves toward and away from its respective end wall of said housing, means for biasing said port plate into engagement with said rotor end surface with slightly greater force than produced by fluid pressure tending to separate said port plate and said rotor member to effect a proper seal therebetween.

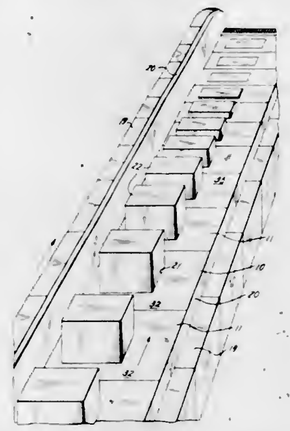
3,096,724
APPARATUS FOR TAMPING BALLAST ON A RAILROAD TRACK
Royce G. Kershaw, % Kershaw Manufacturing Co. Inc., P.O. Drawer 1711, Montgomery, Ala.
Filed Nov. 20, 1958, Ser. No. 775,254
12 Claims. (Cl. 104—12)



1. In apparatus for tamping ballast on both sides of a crosstie of a railroad track, a vehicle having wheels for riding along the rails, a tool supporting frame mounted on said vehicle and being movable in a generally vertical direction, said supporting frame having a lower head portion extending across substantially the entire width of the crosstie over which the apparatus is positioned, a pair of ballast engaging tools pivotally mounted on the head portion for pivoting in a vertical plane substantially parallel to the rails and engaging ballast on opposite sides of the crosstie, each of the ballast tools being pivotally mounted to the head portion adjacent the side of the crosstie opposite the side thereof on which the tool engages ballast in working position whereby the tools cross each other over the crosstie and travel through an arc having a relatively long radius, and means connected to the ballast tools to pivot said ballast tools about said pivotal connections on the supporting frame thereby tamping ballast on both sides of the crosstie.

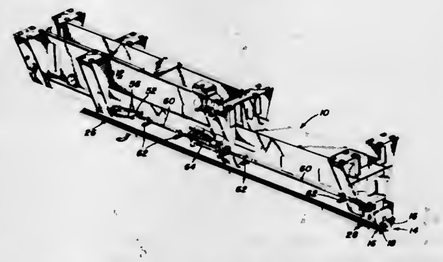
3,096,725
PASSENGER CONVEYORS
Alfred Widmer, Bodenhofterrasse 11, Lucerne, Switzerland
Filed July 12, 1961, Ser. No. 123,584
Claims priority, application Switzerland July 19, 1960
16 Claims. (Cl. 104—25)

1. A passenger conveyor comprising, in combination; an endless band including a plurality of adjacent plates at least some of which are formed with opening means, said band having an elongated upper run having a first end and a second end and said plates forming a continuous passenger-supporting apron extending between said ends; means for moving said band in the longitudinal direction of said upper run from said first end toward said second end; a plurality of seats, one for each of said openings; means for moving said seats at the speed of said band; and means for reciprocating said seats in



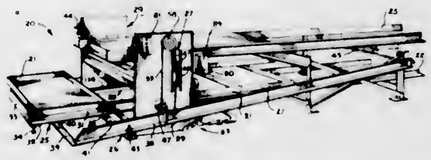
directions substantially perpendicular to the planes of said plates so that the seats project upwardly and beyond the respective plates along said upper run, and that the seats are retracted at said first and second ends of the band.

3,096,726
RETRACTABLE RAILS
Carl T. Johnson and Palmer G. Wermager, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 8, 1961, Ser. No. 130,194
9 Claims. (Cl. 104—107)



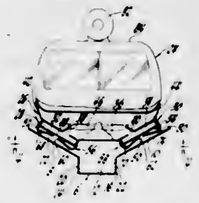
1. A conveyor rail for conveying articles having support lugs thereon comprising a rail having fixed and movable sections and grooves extending substantially the length of said rail sections, said grooves having a configuration suitable for physical engagement by the lugs, the movable sections of said rail being movable transversely relative to said fixed sections between a first position wherein the grooves in said movable sections are in alignment with the grooves in said fixed sections and a second position wherein the grooves in said movable sections are out of alignment with the grooves in said fixed sections thus removing the support for the lugs, and movable means mounted on said rail for moving said movable sections between said first and said second positions whereby the article is released when said movable sections are moved to said second position.

3,096,727
LIFT FOR FOUNDRY CARS
Millard J. Bell, Grand Rapids, and Clifford K. Hindes, Sherman Township, Newaygo County, Mich., assignors to Newaygo Engineering Company, Newaygo, Mich., a corporation of Michigan
Filed Feb. 23, 1960, Ser. No. 10,388
4 Claims. (Cl. 104—131)



1. A foundry car lift comprising an upper and a lower track, platform means having track means thereon and movable between a position where said track means form a continuation of said lower track and a position where they form a continuation of said upper track while remaining generally horizontal, pivoted supporting means for supporting and moving said platform means, drive means located entirely between the levels of said tracks for moving said supporting means, and flexible means for transmitting motion from said drive means to said supporting means.

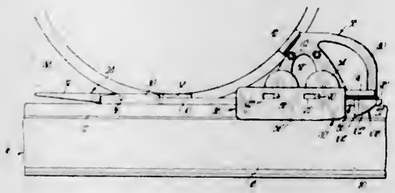
3,096,728
HIGH SPEED LAND TRANSPORTATION SYSTEM AND VEHICLE THEREFOR
Charles A. Amann, Birmingham, and Jerold W. Scheel, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 1, 1961, Ser. No. 106,561
14 Claims. (Cl. 104—134)



1. A rail transportation system comprising, a horizontally extending track of generally V-shaped cross section, a vehicle movable along said track, said vehicle including laterally spaced longitudinally extending runners arranged in inclined relation generally parallel with the V-shaped cross section of said track, fluid bearing means interposed between said track and each of said runners, means providing a continuous flow of fluid to said fluid bearings, and means providing a continuous flow of fluid for propelling the vehicle along said track.

3,096,729
RAILROAD SKATE HAVING LOCKABLE RETAINERS
Samuel J. Beck, Kansas City, Mo., assignor to The Safety Skate Company, Inc., Kansas City, Mo., a corporation of Kansas
Filed Apr. 5, 1962, Ser. No. 185,407
9 Claims. (Cl. 104—260)

1. A railroad skate comprising:
an elongated skid bar adapted to rest upon a rail and serve as a brake under a railroad car wheel;
an upstanding abutment on the bar against which the wheel rolls when it moves upon the bar;
a pair of retainers disposed to overlap the sides of the rail to hold the bar in place thereon;
means mounting the retainers on the bar for upward movement when the same strike a railroad frog within the path thereof as the bar skids along the rail with the wheel supported thereby; and
a shiftable latch for each retainer respectively normal-



ly holding the same locked to the bar and against upward movement, each latch being disposed to strike the frog, when the latter is within its path of travel, ahead of its retainer for movement to an unlocked position prior to striking of the frog by such retainer.

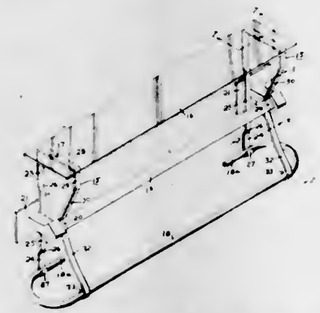
3,096,730
CENTER LOAD CONTAINER CAR
Jack E. Gutridge, Dyer, Ind., assignor to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,532
6 Claims. (Cl. 105—368)



1. Apparatus for transporting freight comprising a railroad flat car having a flat bed and a shed structure at its longitudinal center portion in combination with a pair of highway truck container bodies each mounted on an end portion of the bed, said shed structure comprising four posts joined together at their upper ends by a roof structure and defining doorways at the sides of the shed structure and access openings at the ends of the shed structure each having a width substantially equal to the width of one of said container bodies, each of said bodies having its rear end juxtaposed in sealed relation to the access opening in the adjacent end of the shed structure and each of said body ends having a pair of doors hinged to the sides of the body and swingable through the adjacent access opening in the shed structure from a retracted coplanar closing position through approximately 180 degrees to a projected position uncovering the full width of the body and extending substantially right angularly from the flat car through the adjacent doorway in the side of the shed structure, and a rolling overhead door mounted on the shed structure above each of said doorways for closing the same when the adjacent body door is in retracted position.

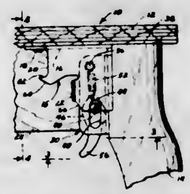
3,096,731
AUXILIARY TOWEL ROD ASSEMBLY
Louis H. Lehman, 5515 Wissahickon Ave., Philadelphia, Pa.
Filed Feb. 3, 1961, Ser. No. 86,984
8 Claims. (Cl. 108—29)

1. In an auxiliary rack apparatus adapted for securement to a well-mounted towel bar, the combination comprising, a pair of spaced-apart brackets each including one portion adapted to be disposed flatwise against the wall behind the wall-mounted towel bar and another portion connected thereto and positioned forward thereof adapted for latching engagement with the wall-facing region of the wall-mounted towel bar, and means for firmly biasing the said one portion of each bracket against the wall while simultaneously firmly biasing the said another portion of each bracket against the wall-mounted towel bar to thereby latch the brackets in position between



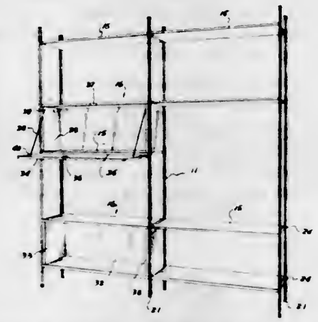
the wall and wall-mounted towel bar, said biasing means comprises a generally C-shaped tubular bar the arms of which are pivotally securable within loops formed at the lower extremities of the said one portions of the said brackets, and the main stroke of the C-shaped bar being pivotable downward for disposition within slots formed at the lower extremities of the said another portions of the said brackets, the distance between the arms and the main stroke of the C-shaped bar being such that the said loops and slots formed at the lower extremities of the brackets are shifted relatively away from one another.

3,096,732
CONSTRUCTION FOR FOLDING TABLE LEG
Michael A. Wilkinson, Owego, N.Y., assignor to Stakmore Co., Inc., Owego, N.Y., a corporation of New York
Filed Aug. 22, 1961, Ser. No. 133,174
13 Claims. (Cl. 108—127)



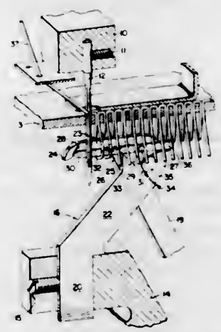
1. A folding table including a table top structure having a rigid portion with a substantially horizontal bottom face, a plurality of legs, a separate connection by which each leg is attached to the table top structure for movement between a set-up position and a folded position, the leg having a surface that abuts against said bottom face when the leg is in set up position, each connection including a fixed bracket secured to the table top structure, a movable bracket secured to a leg of the table and pivotally connected to the fixed bracket, locking means for holding the movable bracket against pivotal movement with respect to the fixed bracket including a pin extending through a slot in the movable bracket and movable transversely into a second slot that opens through a bottom edge of the fixed bracket, the slots in the different brackets having edges at opposite sides thereof that converge as the slots extend upwardly and that wedge the locking pin when the leg is in set-up position and abutting said bottom face of the table top structure.

3,096,733
MODULAR SHELVING ASSEMBLY
Sydney W. Jentzen, Bloomfield Hills, Mich., assignor to Jentzen-Miller Company, Troy, Mich., a corporation of Michigan
Filed May 16, 1961, Ser. No. 110,582
4 Claims. (Cl. 108—158)



1. A shelving assembly comprising transversely spaced pairs of spaced upright studs mountable upon a support surface, each stud having formed in its front and rear face throughout its length, an elongated undercut slot, a horizontally disposed shelving panel interposed between and spacing apart said pairs of studs, mounting keys, each including an elongated shank projected longitudinally into and frictionally nested within corresponding bores in the ends of said panel adjacent its front and rear, said keys including flattened heads extending longitudinally of the ends of said panel and bearing against the respective faces of said studs overlying said slots, T-shaped nuts nested in said slots and longitudinally adjustable therein, and a fastener extending through each head threaded into a nut for frictionally securing the same within its slot.

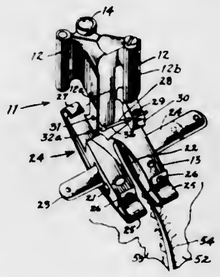
3,096,734
CUT PILE TUFTING MACHINE
Roy T. Card, Chattanooga, Tenn., assignor to Singer-Cobble, Inc., Chattanooga, Tenn., a corporation of Delaware
Filed May 31, 1961, Ser. No. 113,713
8 Claims. (Cl. 112—79)



1. In a tufting machine, means for supporting a backing fabric, a yarn carrying needle disposed on one side of said backing fabric and adapted to penetrate and to carry a loop of yarn through said backing fabric, a hook disposed on the opposite side of said backing fabric from

said needle and including a loop penetrating blade adapted to enter loops of yarn presented by said needle, said blade having a cutting edge, a knife having a cutting edge cooperating with said cutting edge of said blade to sever loops of yarn on said blade to form cut pile, yarn loop engaging means carried by said hook and movable between a position juxtaposed with relation to said cutting edge of said blade wherein said cutting edge substantially defines the path of a loop of yarn about said blade and a position in spaced relation to said cutting edge of said hook in the direction away from said backing fabric to lengthen the path of a loop of yarn about said blade, and means for moving said yarn loop engaging means between said positions upon successive loop forming cycles.

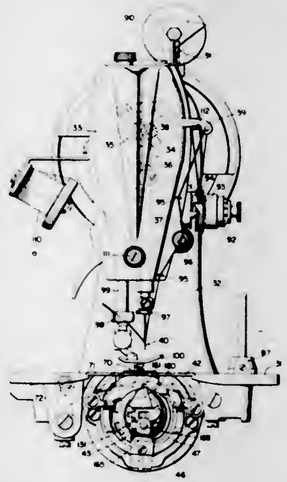
3,096,735
FABRIC STRIP SUPPORT DISPOSED ACROSS THE STEM PORTION OF A PRESSER FOOT
Daniel Wise, 1940 Lorraine Road, Reading, Pa.
Filed Aug. 10, 1960, Ser. No. 48,725
3 Claims. (Cl. 112—151)



1. In a presser foot for a sewing machine having a stem portion formed with opposite spaced sides thereof and a base portion, the base portion having a bifurcated toe portion formed with a springy lower face and also provided with a first opening adapted to accommodate a needle of a sewing machine and a second opening adapted to accommodate a fabric strip, the improvement which comprises a projection carried by one side of the stem portion of said presser foot and a hole provided upon the opposite side thereof, a fabric strip support member having an offset portion and a terminal prong disposed across said stem portion, said prong normally disposed within said hole, and means for removably securing the opposite terminal portion of said fabric strip support member to said projection.

3,096,736
LOCK STITCH SEWING MACHINE WITH BOBBIN REPLENISHING MEANS
Ralph E. Johnson, Boonton, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Mar. 17, 1961, Ser. No. 96,579
12 Claims. (Cl. 112—181)

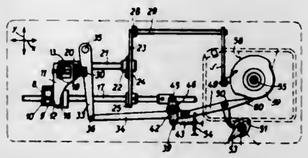
1. In a lock stitch sewing machine, a work penetrating thread carrying needle, a loop taker cooperating with said needle, a loop seizing beak of said loop taker, means for driving said needle and loop taker in timed relation as is required for the formation of lock stitches, thread loop manipulating means including a body portion on said loop taker formed to expand and control loops of thread seized by said loop seizing beak, a thread accommodating bobbin, means for journaling said bobbin in said loop taker with capacity for relative axial movement of said bobbin and said loop taker body portion, bobbin constraining means for positioning said bobbin relatively to said loop taker body portion in a lock stitch forming position relatively to said thread manipulating means locating said bobbin completely within the path of said loops being expanded and controlled by said thread manipulation means, means for positioning said bobbin axially relatively to said loop taker body portion in a



bobbin winding position locating said bobbin spanning the path of said loops being expanded and controlled by said thread manipulating means, means for maintaining said last mentioned means effective for deposit of needle thread on said bobbin during motion of said needle and loop taker in timed relation as is required for the formation of lock stitches

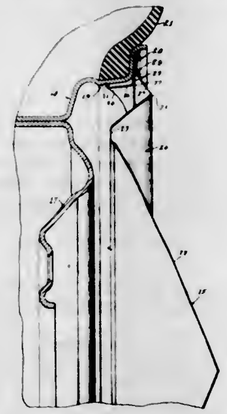
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3,096,737
FABRIC FEEDER MECHANISM FOR SEWING MACHINE
Luigi Bono, Pavia, Italy, assignor to Necchi Societa per Azioni, Pavia, Italy
Filed Jan. 19, 1961, Ser. No. 83,832
Claims priority, application Italy May 14, 1960
5 Claims. (Cl. 112—204)



1. In a sewing machine of the type including a frame supporting driving means and a bed plate carrying a slotted needle plate, a reciprocating needle driven by said means, a fabric feeder having teeth rows movable in the slotted needle plate, and two operating mechanisms connecting said fabric feeder to the driving means of the machine, a first of said operating mechanisms being of a construction to displace the feeder along a longitudinal trajectory which is substantially rectangular and consisting of a raising phase above the needle plate, of a displacement active phase in one direction, of a sinking phase beneath the needle plate and of a passive displacement phase in opposite sense to the previous one, a second of said operating mechanisms being of a construction to effectuate a lateral displacement of the feeder in one direction at the same time as said active displacement and another and opposite lateral displacement in the opposite direction during the passive displacement, so that the feeder returns to its starting position to repeat the same trajectories, the combination of said operating mechanisms providing for the feeding of fabric in any pre-fixed direction along the bed plate as a consequence of the simultaneous lateral and longitudinal movements, independent control means connected to said operating mechanisms in order to vary the amplitude from zero to a maximum as well as the direction of each one of the lateral and longitudinal displacements of the feeder from a center position.

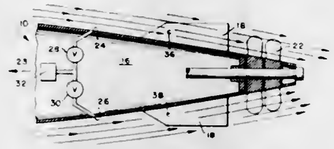
3,096,738
METHOD OF SHAPING SHEET METAL WHEEL COVERS
Michael J. Celovsky, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Original application Sept. 23, 1957, Ser. No. 685,493, now Patent No. 3,016,853, dated Jan. 16, 1962. Divided and this application Nov. 25, 1960, Ser. No. 71,670
3 Claims. (Cl. 113—116)



1. In a method of making a sheet metal wheel cover, drawing a sheet metal blank to provide a circular cover body and an annular outer marginal narrow rib projecting in one axial direction with a radially inner wall joining said body and a radially outer wall extending in the opposite axial direction and having cover retaining means on the free portion thereof, bending said rib and thus said walls generally radially outwardly into concealing relation to said cover retaining means and thereby turning said inner wall to face generally in said one axial direction and said outer wall to face in said opposite axial direction, then bending said turned inner wall to provide a marginal portion which slopes angularly in generally said opposite axial direction and radially outwardly from an annular reinforcing ridge juncture with the cover body, and at the same time moving said turned outer wall and said retaining means in said opposite axial direction and into substantially spaced relation to said turned and bent inner wall marginal portion and said reinforcing rib juncture and relative to said cover body.

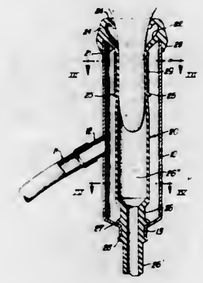
3,096,739
METHOD AND APPARATUS FOR STEERING UNDERWATER BODIES
Kenneth E. Smith, 521 Danimere Ave., Arcadia, Calif.
Filed June 20, 1960, Ser. No. 37,534
7 Claims. (Cl. 114—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)

3. In combination, a torpedo having a pair of diametrically opposed surfaces of revolution symmetrically disposed with respect to its longitudinal axis about which water is adapted to flow rearwardly to produce opposed balanced hydrodynamic lift forces, and means for steering said torpedo in the plane of said surfaces comprising a pair of ports associated therewith for selectively discharg-



ing gas into water in a quantity insufficient to produce a jet reaction steering force but in a quantity sufficient for rearward flow adjacent either of said surfaces to produce opposed unbalanced hydrodynamic lift forces, whereby a steering force is applied to said torpedo in said plane.

3,096,740
TEAT CUP LINER CONSTRUCTION
Daniel Olie Noorlander, Chino, Calif.
(5501 Maywood Road, Madison 14, Wis.)
Filed Aug. 25, 1961, Ser. No. 134,019
7 Claims. (Cl. 119—14.52)

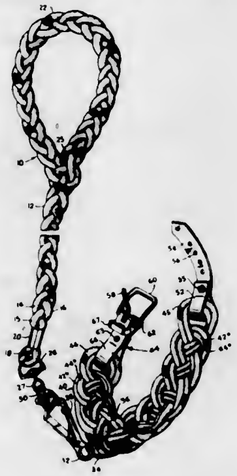


1. An improved, long-wearing, controllable-tension, controllable-perimeter teat cup inflation comprising: an upper section adapted to receive at least a substantial portion of the teat of a milk-producing animal, said teat-receiving section consisting of flexible material; separate elastic means surrounding at least a portion of said teat-receiving section, said elastic means having, when unstressed, an inner perimeter no greater than the outer perimeter of said teat-receiving section; and support means for maintaining said elastic means in position.

3,096,741
DOG COLLAR AND LEASH
Lea J. Ollstein, 630 W. 246th St., New York, N.Y.
Filed Oct. 12, 1961, Ser. No. 144,704
2 Claims. (Cl. 119—106)

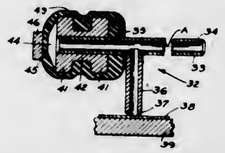
1. A collar and leash construction, comprising an elongated flexible flat body formed of triple braided cord terminating in a small loop at one end and a large handle loop at the other end, a shorter flexible flat body formed of quadruple braided cord terminating in loops at opposite ends, quick detachable clamping means connecting said small loop and a portion of the shorter body located between the ends thereof, a first leather strap having a loop engaged with one of the end loops of the shorter body, a second leather strap having a loop engaged with the other end loop of the shorter body, and a buckle on the second strap engageable with the first strap, the cord

of the braids being formed with an outer woven fabric tube and a twisted inner fibrous core, said shorter body



being wider than the elongated body, said shorter body being elastic longitudinally and laterally.

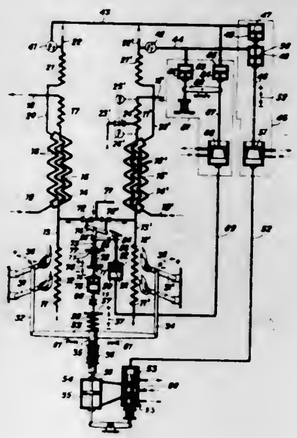
3,096,742
RECORDING DEVICE
Robert F. Gill, Jr., La Grange, and Peter G. S. Mero, Winnetka, Ill., assignors, by direct and mesne assignments, to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 28, 1959, Ser. No. 842,693
8 Claims. (Cl. 120—42.06)



1. A pen for use in a graphic communication system recorder or similar recording apparatus in which the pen may be moved substantially omnidirectionally, under substantial and varying acceleration, said pen comprising: an ink feeder tube; a nib member, connected to said ink feeder tube adjacent one end thereof, for transferring ink, fed through said tube toward said nib end, from said tube to a record medium; and reservoir means, comprising an open-ended extension of said nib end of said ink feeder tube disposed substantially coaxially therewith, for supplying ink to said nib member, in a direction substantially opposite the normal direction of flow of ink through said tube, when said pen is accelerated in said normal direction of ink flow.

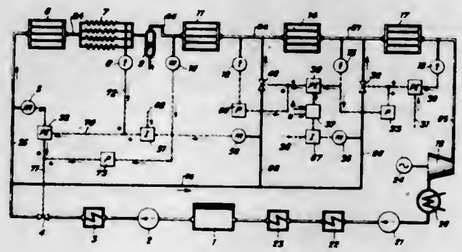
3,096,743
STEAM GENERATOR
Paul Profos, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland, a Swiss company
Filed June 9, 1959, Ser. No. 819,102
Claims priority, application Switzerland June 13, 1958
9 Claims. (Cl. 122—479)

1. A steam generator comprising firing means, at least two parallel-connected tube systems each including a reheater, said generator further comprising first and second means for varying in the same sense the amount of heat transferred to partially expanded steam in each of said reheaters, means responsive to the temperature of the steam reheated in at least one of said reheaters for operating said first and second means to increase said amounts



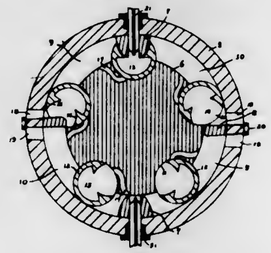
upon decline of said temperature and vice versa, and supplementary means responsive to the temperature of the steam reheated in one of said reheaters for additionally varying the amount of heat transferred to partially expanded steam passing through said one reheater.

3,096,744
METHOD OF AND APPARATUS FOR REGULATING THE STEAM TEMPERATURE IN A STEAM GENERATOR
Paul Profos, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland
Filed Dec. 10, 1959, Ser. No. 858,657
Claims priority, application Switzerland Dec. 23, 1958
7 Claims. (Cl. 122—479)



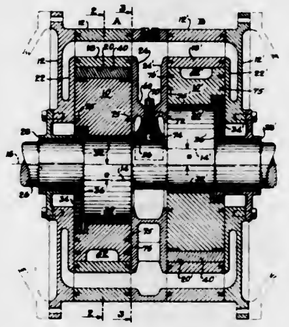
1. A steam generator comprising series-connected upstream and downstream heat exchange surfaces over which a working substance flows successively, a temperature control circuit for each of said surfaces, each said control circuit comprising means to develop a signal representative of the output steam temperature of its heat exchange surface, means to develop a signal representative of a reference temperature, means to compare said first-named signal with said signal representative of a reference temperature, and means to adjust the steam temperature at the output of its heat exchange surface in accordance with the result of said comparison, said adjusting means in the control circuit of said downstream surface comprising water injection means upstream of said downstream surface and means to vary the quantity of water injected through said injection means directly with the steam temperature at the outlet of said downstream surface, said generator further comprising means to measure the rate of water injection upstream of said downstream surface, and means to adjust the reference temperature in the control circuit of said upstream surface as an inverse function of said water injection rate.

3,096,745
ROTARY ENGINE
Standish F. Thompson, Dekalb County, Ga. (2631 Hogan Road, East Point, Ga.)
Filed July 9, 1956, Ser. No. 596,706
5 Claims. (Cl. 123—8)



1. A rotary internal combustion engine comprising a generally cylindrical first member and a concentrically arranged second member, each member having a surface which faces a surface of the other member but is separated therefrom thereby defining therebetween an annular space, an even number of abutments affixed to said first member and protruding across said space to slidingly contact said surface of said second member, channels in said second member opening toward said surface of said first member, pistons carried by said second member, said pistons being of hollow cylindrical shape and housed in said channels and mounted for rotation relative to said second member, said pistons extending across said space and the outer cylindrical surface of said pistons substantially rollingly contacting said surface of said first member, an opening in the cylindrical walls of said pistons, said first and second members being arranged for relative rotation, said relative rotation of said first and second members and the rotation of said pistons being arranged such that each abutment will engage said opening in the cylindrical walls of said pistons so that said pistons and abutments may pass each other, said openings further communicating with said annular space between said members at some position of piston rotation to permit flow into or out of said hollow interior of said piston, alternate ones of said abutments comprising a first set each having a passage at one side thereof to admit a combustible mixture to said annular space and a passage at the other side thereof to permit the exhaust of an expanded mixture; the others of said abutments comprising a second set having ignition means therein, said relative rotation of said members causing, (1) said pistons receding from said first set of abutments to draw a combustible mixture into said annular space through said inlets, (2) said pistons approaching said second set of abutments to compress said mixture in said annular space to flow into said hollow cylindrical pistons, (3) said pistons which are aligned with said second set of abutments to have the compressed mixture in the hollow piston ignited, (4) said pistons receding from said second set of abutments being forced to move under the influence of the expansion of said ignited mixture flowing from said hollow piston into said annular space and (5) said pistons approaching said first set of abutments expelling said expanded mixture from said annular space.

3,096,746
INTERMEDIATE HALF BEARING FOR ROTARY MECHANISMS
Ferdinand P. Sollinger, Wayne, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,369
10 Claims. (Cl. 123—8)

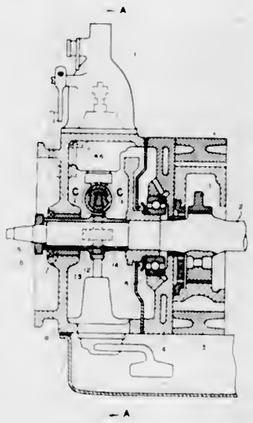


1. A rotary combustion engine comprising a multi-part housing having first and second axially-spaced end walls, an intermediate wall having a one-piece construction, a first peripheral wall secured to and disposed between the outer portions of said first and said intermediate wall to form a first cavity between and a second peripheral wall secured to and disposed between the outer portions of said second and said intermediate wall to form a second cavity; a one-piece shaft co-axial with said cavities and having a pair of eccentric portions, one for each of said cavities; first and second rotor members extending within said first and second cavities respectively with each rotor member being journaled on the associated shaft eccentric, each rotor member having a plurality of circumferentially-spaced apex portions for engagement with the inner surface of its associated peripheral wall to divide the portions of its associated cavity between said rotor member and inner surface into a plurality of working chambers which vary in volume upon rotation of the rotor member relative to the housing, said housing having intake and exhaust ports communicating with the working chambers of said first cavity and having intake and exhaust ports communicating with the working chambers of the second cavity with corresponding ports of said first and second cavities being disposed substantially one behind the other when viewed in a direction parallel to said axis; and a semi-cylindrical half bearing carried by said intermediate wall for bearing engagement with the portion of the shaft between said shaft eccentrics and on the side of said shaft for supporting said shaft portion against deflection by the forces transmitted against the shaft by the rotor resulting from the high gas pressures within each working chamber following combustion therein.

3,096,747
FUEL INJECTION SYSTEM FOR ROTARY ENGINES
Hiroshi Tado, Suita-shi, Osaka, Japan, assignor to Yanmar Diesel Engine Co., Ltd., Osaka, Japan, a corporation of Japan
Filed May 28, 1962, Ser. No. 198,267
Claims priority, application Japan June 23, 1961
1 Claim. (Cl. 123—8)

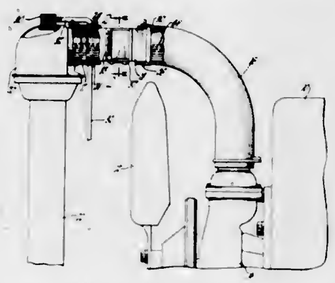
A fuel injection system for a rotary engine comprising a rotor or rotors, a rotor shaft, a rotor housing, a side cover for the housing and an auxiliary unit casing provided adjacent to the side cover, characterized by the fact that the system comprises a centrifugal governor

mounted on the top wall of the auxiliary unit casing so as to be driven by a vertical shaft therein, which vertical shaft is gear-driven by that portion of said rotor shaft extending into said auxiliary unit casing, a fuel injection pump including a fuel pump casing proper formed integrally with said auxiliary unit casing and a horizontal



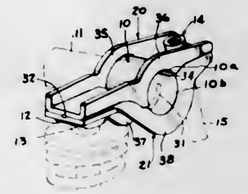
cam shaft extending at right angles to said rotor shaft, a fuel supply pump adapted to be driven by an eccentric cam mounted on the outer end of said cam shaft, and a fuel injection pump drive means with a fuel injection timing control provided on the inner end of said cam shaft and drivingly interconnecting said rotor shaft and said cam shaft in variable phase relationship.

3,096,748
LEVEL INDICATOR AND FILLING DEVICE IN AN ENGINE COOLING SYSTEM
Gordon W. Harry, Flushing, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 9, 1961, Ser. No. 151,324
3 Claims. (Cl. 123—41.15)



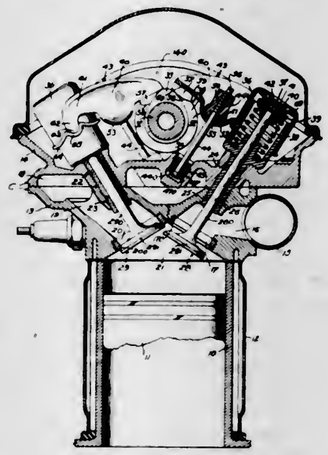
1. A liquid level indicating device comprising an element with a chamber therein, said element having open and opposite ends, at least a portion of said element being light permeable for viewing the contents of said chamber, a side inlet leading from the exterior of said element to said chamber, a one-way valve in said inlet and operable by pressure from the outside to open and from the inside to close, a yieldable twin flap sealing device located in said inlet outside of but in series with said one-way valve and adapted to receive a filling nozzle when the latter is inserted, and said opposite ends being adapted for connection to hose.

3,096,749
ROCKER ARM AND METHOD OF MAKING THE SAME
Howard M. Davidson, Detroit, Mich., assignor to Paramount Fabricating Co., Detroit, Mich., a corporation of Michigan
Filed Nov. 25, 1960, Ser. No. 71,511
5 Claims. (Cl. 123—90)



1. A rocker arm for an internal combustion engine having a rocker arm shaft, said rocker arm comprising an elongated body, a bearing provided in the middle of the body, a rolling cam provided on one end of said body with the axis of curvature of the cam being in the plane parallel to the axis of the bearing, and an internally threaded cylinder on its other end with the axis of the cylinder being perpendicular to but not intersecting a plane passing through the axis of the bearing; said body, bearing, and the rolling cam being formed of a plurality of laminations of sheet metal, with the inner surfaces of the laminations being in direct contact with the rocker arm shaft surfaces, said laminations having channel cross sections and extending in planes parallel to the axis of the bearing, and with said internally threaded cylinder extending perpendicular to said laminations and being integral therewith.

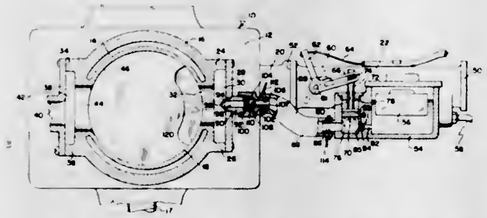
3,096,750
OVERHEAD CAMSHAFT ENGINE VALVE MECHANISM
Christiaan H. Bouvy, Bloomfield Township, Oakland County, and John Dolza, Fenton, Mich.; said Bouvy assignor to said Dolza
Filed July 14, 1961, Ser. No. 124,118
4 Claims. (Cl. 123—90)



1. In an internal combustion engine having a cylinder head, intake and exhaust valves arranged in said head, said valves including valve stems, a valve stem guide for each said valve stem including an integral thrust cap guide cup forming an extension of said valve stem guide, a thrust cup for contact engagement with the outer end of said valve stem reciprocatingly mounted on said thrust

cap cup, a compression spring disposed in said thrust cap guide cup and in compressive engagement with the upper portion of said valve stem normally urging said valve to close, a camshaft disposed between said valve stem guides, a rocker arm having contact engagement with said camshaft and said thrust cap, and a link anchoring said rocker arm to said cylinder head including means connecting said link to said cylinder head permitting limited universal movement of said link with respect to said cylinder head and means connecting said rocker arm to said link permitting a rocking movement of said rocker arm with respect to said link.

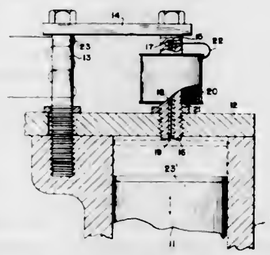
3,096,751
SUPPLEMENTAL FUEL FEED SYSTEM FOR INTERNAL COMBUSTION ENGINES
Gordon H. Millar, Mound, Minn., assignor to McCulloch Corporation, Scott Division, Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 4, 1961, Ser. No. 100,657
2 Claims. (Cl. 123—119)



1. In a two cycle internal combustion engine having a fuel supply, a cylinder, a piston slidably mounted therein and a crankcase the combination comprising a fuel feed system including a carburetor, a throttle valve in said carburetor, an inlet pipe leading from said carburetor to said crankcase, a bypass duct leading from said crankcase to said cylinder, said cylinder having an inlet port in the side wall thereof communicating with said bypass duct, a fuel pump chamber communicating with said fuel supply, a fuel duct communicating with said chamber, a plunger communicating with said chamber, said plunger being operatively connected to throttle valve to expel fuel from said chamber through said duct when said throttle is opened, a check valve between said fuel supply and said chamber, a supplemental fuel nozzle rigidly mounted in the wall of said bypass duct on an axis extending through said inlet port, said nozzle being positioned to direct a stream of fuel into said bypass duct and through said inlet port, said stream thereby passing directly into said cylinder when said piston moves out of sealing engagement with said inlet port, said nozzle communicating with said fuel duct, a pressure responsive valve means between the nozzle and the chamber to permit the flow of fuel from said chamber through said pressure responsive valve only when the pressure within said chamber has exceeded a predetermined value, said fuel being thereby fed continuously from said carburetor through said inlet duct into said crankcase and bypass duct and directed in a stream from said nozzle into said cylinder only when the throttle valve is opened.

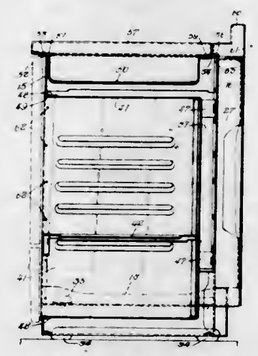
3,096,752
IGNITION SYSTEMS FOR INTERNAL COMBUSTION ENGINES
John Mathias Pelikan, 2 Yennicock Drive, Port Washington, N.Y.
Filed July 21, 1961, Ser. No. 125,689
5 Claims. (Cl. 123—149)

1. An ignition system; for an internal combustion engine of the kind having a piston and a cylinder whose side wall structure is of magnetic material while its head is of non-magnetic material; means extending through said head to a position closely adjacent the top portion of said piston in said cylinder and connected to said structure to establish a low reluctance flux path, an induction coil encircling said path, means including the first mentioned means and an insulated conductor leading into the combustion space of said cylinder for establishing a high tension circuit terminating at a spark gap within said space,



said circuit being connected to the output of said coil, means establishing a magnetomotive force, and means operative upon said piston reaching its top position to substantially close said path and to apply said force to said path whereby the rapid build-up of flux in the path within said coil will generate a high-voltage surge in said circuit to energize the spark gap as the piston approaches the top of its stroke.

3,096,753
FRAMELESS RANGE
Dean H. Freund and James E. Davis, Hamilton, Ohio, assignors to Whirlpool Corporation, a corporation of Delaware
Filed May 8, 1961, Ser. No. 108,669
4 Claims. (Cl. 126—39)



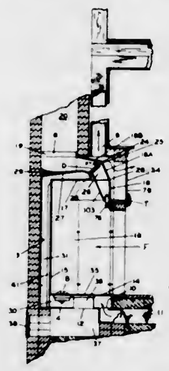
1. A frameless range cabinet, comprising: a pair of elongated, laterally spaced top rails each having an outwardly extending flange adapted for selective attachment of a panel thereto; a pair of elongated, laterally spaced bottom rails, each of said top and bottom rails having front and rear ends and cooperatively defining four substantially parallel edge portions of a hexahedron structure; a front panel having an opening therethrough and a forwardly extending flange at its top; means securing the front panel to the front end of each of said top and bottom rails to define a front face of the hexahedron structure; a rear panel having a forwardly extending flange at its top and rearwardly extending flanges at its sides; means securing the rearwardly extending flanges of the rear panel to the rear end of each of said top and bottom rails to define a rear face of the hexahedron structure, said rails, front panel and rear panel defining a hexahedral

space; means defining an oven compartment having a front opening; means securing the oven compartment to said rear panel and said front panel to extend through said space with the front opening of said oven compartment being substantially coincident with the front panel openings to add rigidity and strength to said hexahedron structure; a burner box having a peripheral outwardly extending flange overlying said forwardly extending flange of said front panel and said forwardly extending flange of said rear panel; means securing said outwardly extending flange of said burner box to said forwardly extending flanges of said front panel and said rear panel to add further rigidity and strength to said hexahedron structure; means defining a cook top overlying said burner box; means for removably securing said cook top to said forwardly extending flanges of said front and rear panels; console means; and means for securing said console means to said forwardly extending flange and said rearwardly extending flanges of said rear panel to add rigidity and strength to said rear panel and provide an independent mounting of said console means for removal of either said console means or said cook top means to provide increased serviceability and interchangeability.

3,096,754
FURNACE FIREPLACE

Harold C. Howrey, Estacada, Oreg.; Mildred L. Solomon, administratrix of said Harold C. Howrey, deceased, assignor to Marie E. Obrist and William H. Solomon

Filed Feb. 24, 1960, Ser. No. 10,805
5 Claims. (Cl. 126—120)



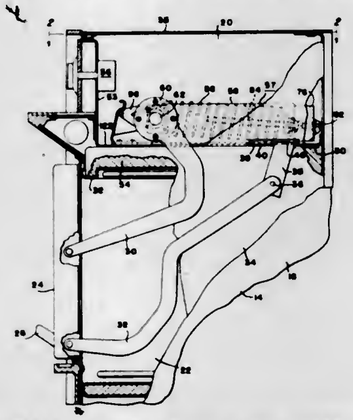
3. A fireplace comprising means for burning fuel in fluid form, means for burning fuel in solid form, damper means in said fireplace, a dual control thermostat unit having a pair of thermostatic elements, means for setting both of said thermostatic elements for operation together to preset said damper for movement which will achieve a desired temperature range when liquid fuel is burned, said pair of thermostatic elements when set as a unit providing a greater sensitivity in operation than when set singly, and means for disengaging one of said thermostatic elements for operation singly of the other of said thermostatic elements to preset said damper for movement which will achieve a desired temperature range when solid fuel is burned.

3,096,755
COUNTERBALANCED DOOR FOR AN OVEN DOOR

Frank L. Milburn, Bellbrook, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 30, 1961, Ser. No. 134,929
9 Claims. (Cl. 126—191)

5. A counterbalance arrangement for a door moving vertically relative to a compartment and comprising, control arm means for supporting said door and having a pawl portion, means adapted to be positioned in said compartment for pivotally mounting said control arm and said pawl portion, detent means adapted to be fixed relative to said compartment and in coplanar relationship to said pawl portion, said detent means having a first stop engageable with said pawl portion for positioning said

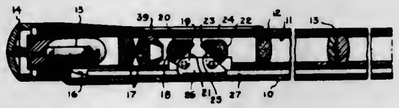


door in a first position and a second stop engageable with said pawl portion for positioning said door in a second position, and a spring means adapted to have one end fixed relative to said compartment and another end fastened to said pawl portion to withdraw said pawl portion away from said detent means for retaining said door in a third position.

3,096,756
OPTICAL BRONCHOSCOPE

Eltasar Borisovich Rosenfeld, Krova ulitsa 14/2, Apt. 3; Tamara Nikolaevna Miagkich, Tverskoi Blvd. 6, Apt. 10; Maria Nikolaevna Viliam-Vilmont, Vs. Vishnevsky ulitsa 10, Apt. 45; Eugene Michaelivich Osse, Novo-Basmannaja ulitsa 33, Apt. 3; and Alexander Vasilievich Plotnikov, Krasnoarmejskaja ulitsa 82, Apt. 39, all of Moscow, U.S.S.R.

Filed July 22, 1959, Ser. No. 846,766
3 Claims. (Cl. 128—6)



1. An optical bronchoscope, comprising a hollow elongated housing, illuminating means at one end of said housing, a pair of optical elements mounted for pivotal movement in fixed relationship relative to the housing along a generally lengthwise path with respect thereto, each of said optical elements including reflective means, one of said optical elements projecting light waves emitted from said illuminating means outwardly, the other of said optical elements receiving the image illuminated by said illuminating means, and reflecting the image toward the other end of said housing, and linkage means for moving said optical elements simultaneously to different pivotal positions.

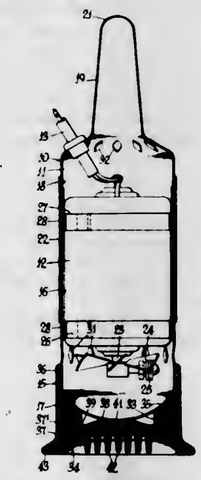
3,096,757
KINESITHERAPY DEVICE

Thomas C. Berard, 44 Buffalo St., Silver Creek, N.Y.

Filed Dec. 18, 1961, Ser. No. 159,890
10 Claims. (Cl. 128—36)

7. A kinesitherapy device comprising, in combination: a cylindrical housing to be held in the hand, power

driven means enclosed within the housing and connected to it to effect its gyratory vibration in a small closed loop path, an annular body fitted upon one end of the housing and having a central opening, a circular plug fashioned to engage parts of the human body for mas-

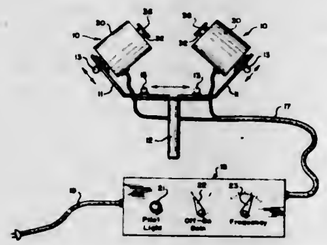


saging purposes and fitted coaxially in the central opening, the fitting of the plug being such that it participates in the vibratory motion of the annular body and also during such participation has rotatable movement relatively to the annular body and about its axial center.

3,096,758
VIBRATOR

Frederick T. Savage, 704 Victoria Ave., Venice, Calif.

Filed June 28, 1962, Ser. No. 205,938
2 Claims. (Cl. 128—41)



1. Apparatus for reducing fatty tissue which comprises at least two moving coil vibrators, each vibrator having magnetic means for establishing a stationary magnetic field and a moving coil drive element mounted for to-and-fro movement in and at right angles to said magnet field, a support structure for said moving coil vibrators, said moving coil vibrators being adjustably mounted on the support structure with the longitudinal axes of the moving coil drive elements disposed at an angle to each other, the adjacent outer ends of the drive elements being provided with drive heads adapted to transmit vibrations to fatty tissue contacted thereby, power means adapted to generate an oscillating electric current electrically connected to the moving coil drive element of each moving coil vibrator, means for varying the frequency of the oscillating current, and means for controlling the amplitude of the oscillating current energizing the moving coil elements of the vibrators.

3,096,759
EMERGENCY SURVIVAL PACK

Richard W. Coolbaugh, 116 Glen Ridge Road, East Aurora, N.Y.

Filed June 18, 1962, Ser. No. 203,248
6 Claims. (Cl. 128—94)

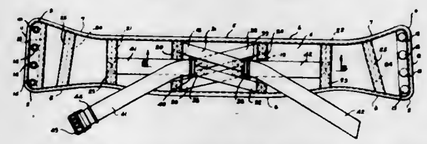


3. A wrapper for emergency survival of accident victims, comprising a wrapper of thin sheet waterproof fire resistant high strength material having a knee length body portion and a hood portion, said body portion having front panels, and a back panel approximately twice the width of each front panel, said front panels and back panels having, along their adjacent upper edges, curved shoulder portions forming a partial closure for the upper end, and a neck band portion, said hood portion being secured to the neck band portion, head, shoulder and body cushion pads of light weight relatively thin resilient foam polyurethane of low thermal conductivity, said head cushion being disposed centrally on the inside of said hood portion adjacent said neck band, said shoulder cushion being disposed on the inside of said back panel and extending transversely thereof shortly below said neck band to a width greater than half the width of said back panel and to a length approximately a quarter of the length of the back panels, and said body cushion extending over a central area of said back panel extending from said shoulder pad, and of a width less than a half of the width of said back panel, said cushions being heat sealed to the respective areas of said hood and back panel, and an arm sling having its central portion banded to the neck band portion of said back panel between said head and shoulder pads.

3,096,760
SACROILIAC SUPPORT

Henry G. Nelkin, Kansas City, Mo., assignor to H.G. Enterprises, a co-partnership

Filed Oct. 31, 1960, Ser. No. 66,038
3 Claims. (Cl. 128—95)



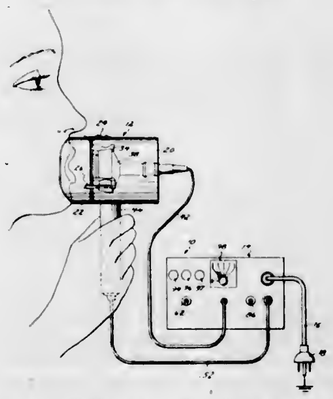
2. A sacroiliac support having a one-piece body portion of strong flexible fabric, means for detachably securing the opposite ends of said body portion together in fixed overlapping relation to encircle the body of the wearer, said body portion having a transverse fold on each side of the middle thereof, a stay mounted on said body portion at each of said folds each in fixed position relative to one of said folds, a transverse stay on each side of said body portion in spaced relation to said transverse fold and an end of said body portion and means for simultaneously pulling the transverse fold on each side of the body portion toward the transverse stay that is spaced from the fold on the other side of the body portion.

3,096,761
MOUTH PROTECTOR
Fred P. Moffett, 60 Quail Ave., Berkeley, Calif.
Filed Sept. 18, 1961, Ser. No. 138,918
3 Claims. (Cl. 128—136)



1. A mouth protector comprising a generally U-shaped trough formed of resilient material and adapted to fit over a person's teeth, said trough including a floor, an inner wall along the inner edge of said floor, and an outer wall along the outer edge of said floor, said outer wall including a frontal portion being about 3/32 inch thick adjacent said floor and tapering upwardly to a thickness of about 2/32 inch in the upper frontal portion, said outer wall further including a rear portion extending from said frontal portion and being about 4/32 inch thick adjacent said floor, said rear outer wall portion tapering upwardly to a thickness of about 3/32 inch in its upper portion, said inner wall including a frontal portion being about 3/32 inch thick adjacent said floor and tapering upwardly to a thickness of about 2/32 inch in its upper portion, said inner wall further including a rear portion extending from said frontal portion and being about 4/32 inch thick adjacent said floor, said rear inner wall portion tapering upwardly to a thickness of about 3/32 in its upper portion, said inner walls being spaced apart about 8/32 inch adjacent said floor in their confronting rear portions, said upper rear outer wall portion being inclined towards said inner wall to the extent that said inner and outer walls are spaced apart about 4/32 inch as measured between the confronting upper rear wall portions, said floor gradually narrowing in width from its rear portion towards its frontal portion with said inner and outer walls being spaced apart about 2/32 inch adjacent said floor in their confronting extreme frontal portions, and said inner and outer walls being spaced apart about 8/32 inch as measured between their confronting upper frontal portions.

3,096,762
ORAL BREATHING DEVICE
Alfred M. Winchell, Wolcott, Conn., assignor to Waterbury Pressed Metal Company, Waterbury, Conn., a corporation of Connecticut
Filed Feb. 12, 1962, Ser. No. 172,633
3 Claims. (Cl. 128—190)



1. An oral breathing mask comprising a hollow housing having one end in communication with atmosphere, a short hollow piece connected to said housing for communicating ionized air to a user, an ion generator, means supporting said ion generator in said housing in a manner so that air may be inhaled through said housing and hollow piece, said generator being adapted to be connected to a source of high voltage, a handle connected to said housing, said handle being made from a good electrical conductor so that a user will be grounded, said housing and hollow piece being made from a material having poor electrical conductivity, said hollow piece being a face piece connected to said housing adjacent one end of said ion generator, said face piece terminating in a contoured edge adapted to cooperate with a face of a user below the user's nose.

3,096,763
HYPODERMIC SYRINGES AND NEEDLE HUBS THEREFOR
Robert K. McConnaughey, 5220 Parkway Drive, Chevy Chase 15, Md., and Milton J. Cohen, 7325 16th St. NW., Washington 12, D.C.
Filed July 15, 1959, Ser. No. 827,347
20 Claims. (Cl. 128—221)

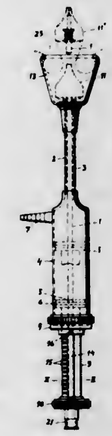


1. A hub having a hypodermic needle permanently affixed thereto and means adapted to provide for attachment of said hub to one end of a generally cylindrical container and for sealing the junction of said hub and said container, said hub consisting of a generally cylindrical shell having a central longitudinal passage, a cylindrical plug of elastic material extending into the rearward end of said passage and snugly surrounding a segment of said needle, said hypodermic needle being axially disposed within said passage, the forward end of said needle projecting beyond the forward end of said passage and the rear end of said needle extending axially through the center of said elastic plug and being so positioned that the channel of said needle is in communication with an opening at the rear end of said hub, there being hardened adhesive material within said passage forward of said plug, surrounding said needle and binding said shell and said needle together in the positions indicated, said elastic plug being adapted to prevent contact between said adhesive material and any material rearward of said hub.

3,096,764
INSTRUMENTS FOR FLUID INJECTIONS INTO THE UTERUS AND FALLOPIAN TUBES
Göran Uddenberg, Rangeltorpsgatan 49, Goteborg, Sweden
Filed Feb. 9, 1961, Ser. No. 88,048
Claims priority, application Sweden Dec. 27, 1960
2 Claims. (Cl. 128—241)

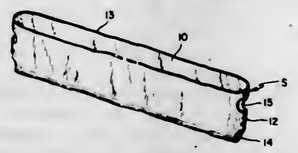
1. An instrument for injecting fluids into the human uterus and Fallopian tubes, including an outer tube having opposite ends, a suction cup operably connected to

one end of the outer tube with the suction cup being adapted to envelope and retain the cervix, a cannula tube of lesser diameter than the outer tube co-axially located within the outer tube and having opposite end portions with one of said end portions being located within the suction cup, a head on said one end portion of the cannula tube adapted to open the cervix, said head being provided with an axial bore for permitting the injection of fluid into the uterus, means providing a passageway between the suction cup and the outer tube to allow air to be exhausted from the interior of the suction cup into the space between the outer tube and the cannula tube for sealing the entry of air through the cup against the cervix, a cylinder having forward and rearward ends and also defining a handle means, means for connecting



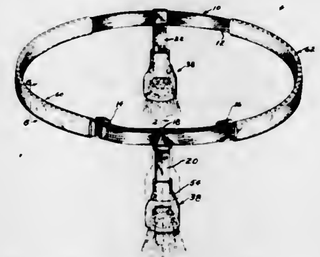
the forward end of the cylinder to the other end of said outer tube, said cannula tube being of a length to extend substantially the entire length of the cylinder, a piston secured to the cannula tube within the cylinder, a piston rod attached to the other end portion of the cannula tube and slidable axially within said cylinder and projecting beyond the rearward end of the cylinder for moving said cannula tube and head to different injecting positions, said piston rod having an axial bore in communication with the cannula tube for connection to a source of injecting fluid, means communicating with the cylinder between the piston and the forward end for exhausting the air from the cylinder and the space between the outer tube and the cannula tube, and coacting means on the cylinder and piston rod for locking the piston rod, cannula tube and head in the desired injecting position.

3,096,765
SHIELD FOR SANITARY NAPKINS
Robert L. Cornwell, 409 W. Bancroft St., Toledo 2, Ohio
Filed July 5, 1960, Ser. No. 40,799
2 Claims. (Cl. 128—287)



1. A shield for sanitary napkins or the like comprising a unitary structure of relatively thin, flexible moisture-proof material having a pair of oppositely disposed flat side panels, the top and bottom edges of said side panels being substantially straight, parallel end walls joining the opposite ends of said side panels, said end walls being perpendicular to at least one of said top and bottom edges, there being an open top bounded by the top edges of the side panels and the end walls, there being a pair of apertures in each end wall, one being adjacent the lower or bottom end of each end wall and the other being spaced from the upper or free edge of each end wall, thereby providing constricting bands between the upper aperture and the free upper edge of the structure, whereby the straps of a sanitary napkin are threaded outwardly through the lower apertures, then inwardly through the upper apertures and then extended outwardly so that outward tension on the constricting bands imparts a pouch-like enveloping movement to the free edge portions of the side panels relative to the napkin.

3,096,766
SANITARY BELT
George E. Patton, 12 Liddell St., Buffalo, N.Y.
Filed June 1, 1962, Ser. No. 199,296
2 Claims. (Cl. 128—289)

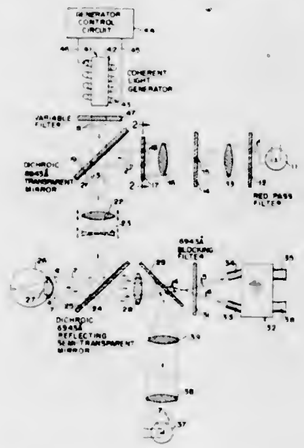


1. A belt assembly comprising a body encircling belt having front, rear, and side portions, a pair of depending attachment tabs secured to said front and rear portions, fastener means on a free end of each tab adapted to secure an end of a catamenial pad to each tab, a sheath slidably mounted on each tab, each sheath composed of a soft, pliable and impervious plastic material, each sheath including a narrow upper portion snugly but slidably received on an associated tab and a relatively enlarged bottom portion adapted to enclose an associated fastener means and the end of the catamenial pad secured thereto, said upper portion of each sheath having a length substanially less than the length of its respective tab whereby the sheath may be moved up and down to selectively cover and uncover a fastening means, each of said sheaths having a smooth outer surface so as not to irritate the wearer of said belt assembly and a roughened inner surface for frictionally gripping one of the ends of said catamenial pad, said rear and side portions of said body encircling belt including a wide and relatively thin strap of substantially rectangular cross sectional shape, sleeve means slidably enclosing each of said side portions, said sleeve means composed of a material having substantially the same characteristics as the material comprising the sheath and being of a flattened oval cross sectional shape.

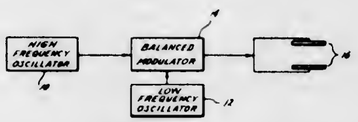
3,096,767
PHOTO-CAUTERIZER WITH COHERENT LIGHT SOURCE
Herbert D. Gresser, Plainview, Gerard M. Grosof, New York, Leonard R. Solon, Yonkers, and Theodore S. Shultz, New York, N.Y., assignors to TRG, Incorporated, Syosset, N.Y., a corporation of New York
Filed May 11, 1961, Ser. No. 109,325
7 Claims. (Cl. 128—395)

1. Photo-cauterizing apparatus comprising a coherent light generator for producing a beam of light with rays

having a high degree of parallelism, a variable focal length optical system for controlling the position of the focal point of said beam and the angle of convergence of said beam to cauterize a small area of matter, a focusing light source, means for directing a beam from said focusing light source along a path substantially coincident with the beam of light from said generator passing through said optical system, with the rays of said focusing light beam respectively parallel with the rays of said coherent light generator beam, the last said means including a reflector element for at least partially reflecting one of said two beams and for at least partially transmitting the other of said two beams along said coincident path whereby a spot to be cauterized may accurately be determined by observation of the beam from said focusing light source and thereafter cauterized by energy from said generator, the coincidence of the focal spot of said coherent light generator beam with the focal spot of said focusing light beam being assured by the parallelism of the respective rays of said beams.

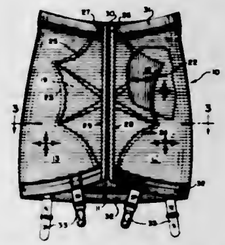


3,096,768
ELECTROTHERAPY SYSTEM
Benjamin Whitfield Griffith, Jr., Dallas, Tex., assignor, by mesne assignments, to Firmatron, Inc.
Filed May 27, 1960, Ser. No. 32,279
2 Claims. (Cl. 128—422)



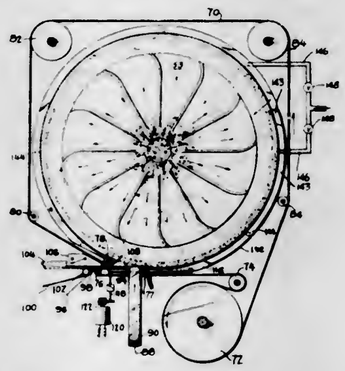
1. An electrotherapy system comprising a high frequency source, a low frequency source, a phase splitting network coupled to each of said sources adapted to split the current from each source into two currents phased 90° apart, a balanced modulator adapted to receive one of the high frequency currents as a carrier and one of the low frequency currents as a signal, a second balanced modulator adapted similarly to receive the remaining two currents, means for combining the outputs of the two modulators, a pair of insulated electrodes adapted to receive the combined outputs of the two modulators, and a second pair of insulated electrodes adapted to receive current directly from the high frequency source.

3,096,769
GIRDLE
Joseph R. Martin, Union, N.J., assignor to Flexnit Company, Inc., Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 20, 1961, Ser. No. 104,413
1 Claim. (Cl. 128—548)



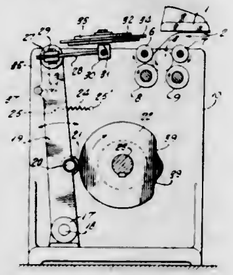
A girdle adapted to encircle the body of a wearer comprising a rear panel having a vertical stretch characteristic; a pair of side panels having front and rear vertical edges and having a two-way stretch characteristic extending around the sides of the wearer to the center front of said garment; said side panels being joined along the rear vertical edges thereof to said rear panel; said side panels, along the front vertical edges thereof being concavely contoured; a pair of underlying panels having front vertical edges and having a horizontal stretch characteristic underlying said side panels at the center front area of said garment; said underlying panels along the front vertical edges thereof, being concavely contoured and congruent to the front vertical edges of said side panels; a flexible non-stretch tape binding the vertical front edges of each one of said side panels and the vertical edges of one of said underlying panels; said non-stretch tapes being joined at the center front of said girdle.

3,096,770
CIGARETTE MAKING MACHINE AND METHOD
George Dearsley, Raleigh, N.C., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Apr. 21, 1959, Ser. No. 807,830
30 Claims. (Cl. 131—21)



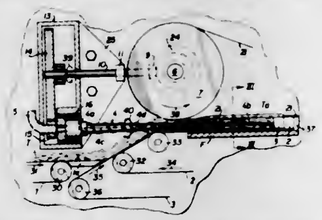
29. A method of forming a rod of tobacco of a desired density comprising the steps of forming an annulus of tobacco by centrifugally compacting air-borne tobacco particles in an annular porous main matrix, by the force resulting from the change in momentum of the air-borne particles of tobacco as they impinge on the surface of the porous matrix or on an underlying tobacco layer previously so deposited, while air escapes through the porous matrix and forming a continuous tobacco rod from the annulus of tobacco.

3,096,771
DEVICE FOR APPLYING WRAPPERS TO CIGAR FILLERS
Günther Sevcik, Dresden, Germany, assignor to VEB Tabak- und Industriemaschinen Dresden, Dresden, Germany
Filed June 14, 1962, Ser. No. 202,427
8 Claims. (Cl. 131—36)



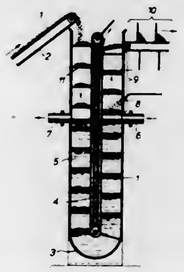
1. A device for applying wrappers to cigar fillers in cigar wrapping machines having a wrapper carrier, a plurality of wrapping rollers for manipulating the cigar filler, and a wrapping needle for applying the starting end of a wrapper to one end of the filler, comprising, in combination, a rotatable, pivotally mounted disc of elastic material adapted to contact said wrapper end in tangential relationship between the latter and a peripheral planar portion of said elastic disc, two rotatable discs mounted in vertically spaced-apart relation, concentrically with and flanking said elastic disc, and control means for bringing said elastic disc into engagement with said wrapper end for smoothing the folds of said wrapper on said cigar filler at said end thereof where said wrapper starting end has been applied.

3,096,772
DEVICE FOR PROVIDING CIGARETTES WITH AN AXIAL AIR DUCT
Kurt Körber, am Pfingstberg 10, Hamburg-Bergedorf, Germany
Filed Aug. 23, 1960, Ser. No. 51,434
Claims priority, application Germany Aug. 31, 1959
2 Claims. (Cl. 131—66)



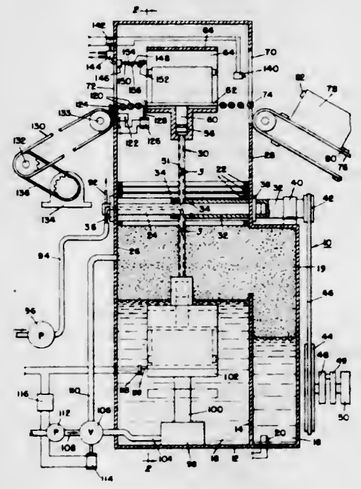
2. In a device for producing an air duct in cigarettes, means for forming a tobacco stream and conveying it into a cigarette rod forming mechanism, including a mandrel-like member extending axially into said tobacco stream, means for wrapping said tobacco stream around said mandrel-like member, means for supplying a cigarette paper for wrapping around said tobacco stream, said mandrel-like member being provided with a lengthwise extending bore, means at the outer end of said bore for supplying a bonding material to the bore to be discharged from the other end thereof within said tobacco stream to be applied to the wall of the air duct formed in the tobacco rod, means for rotating said mandrel-like member, and a helically arranged rib on the outer surface of said mandrel-like member.

3,096,773
PROCESS FOR TREATING TOBACCO AND TOBACCO OBTAINED BY SAID PROCESS
Serge Neukomm, Prilly, and Jacques Bonnet, Lausanne, Switzerland, assignors to Sasmoco S.A., Lenzerheide, Graubunden, Switzerland, a Swiss company
Filed Apr. 11, 1958, Ser. No. 727,879
Claims priority, application Switzerland Apr. 12, 1957
3 Claims. (Cl. 131—143)



2. A process for modifying the structure of tobacco so that smoke produced by the combustion of the resulting modified tobacco contains at least 30% less tars, at least 40% less anthracene and at least 55% less 3,4-benzopyrene than smoke produced by the combustion of the tobacco before modification, said process comprising the single step of continuously partially extracting cut tobacco with carbon tetrachloride by contacting cut tobacco having a moisture content of from 10 to 15 percent with carbon tetrachloride for a period of at most one hour at about room temperature and atmospheric pressure, the proportion of carbon tetrachloride to cut tobacco being from about 1 to 2 liters per kilogram.

3,096,774
AUTOMATIC ULTRASONIC CLEANING DEVICE
Burton Rand, Bala-Cynwyd, Pa., assignor to The Dow Chemical Company, a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,183
20 Claims. (Cl. 134—79)



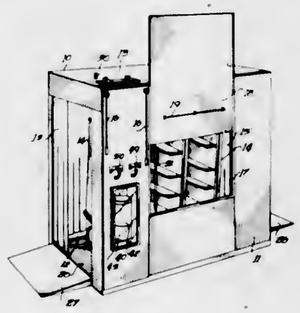
1. In a cleaning apparatus for degreasing machined parts comprising a housing having an immersion cham-

ber adapted to contain a degreasing solvent, a wheel within said housing having spokes extending from a hub, said hub being rotatably mounted on a shaft within said housing, a cylinder at the end of each spoke, a reciprocally mounted piston within each cylinder, each spoke being hollow, means including the hollow spokes for selectively reciprocating said pistons in a direction radially outwardly from said hub, each cylinder having a container retention means thereon, each piston being adapted to secure a container against a portion of said container retention means, an ultrasonic transducer disposed within the solvent adjacent the periphery of said wheel, and means for intermittently rotating said wheel so that each of said container retention means is disposed within the solvent adjacent said transducer for a predetermined period of time.

3,096,775
CART WASHING APPARATUS

Houghton W. Clarke, Wonder Lake, and Floyd A. Blashfield, Evanston, Ill., assignors, by direct and mesne assignments, of ninety-nine percent to Mealpack Corporation, Evanston, Ill., a corporation of Illinois, and one percent to Houghton W. Clarke

Filed Sept. 30, 1959, Ser. No. 843,531
1 Claim. (Cl. 134—123)



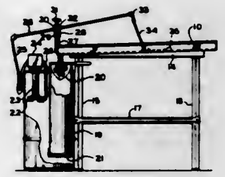
A cart washing, rinsing and draining apparatus comprising a cabinet having at least one open end and having top and side walls, said cabinet also having a floor extending horizontally immediately adjacent said open end and being inclined gradually downwardly away from said opening and one of said side walls for supporting a cart in tipped condition therein, a plurality of perimetrically spaced and inwardly directed spray nozzles within said cabinet, said nozzles being spaced along substantially the entire length of at least one of said side walls adjacent the top and bottom thereof, fluid passage means communicating with said nozzles to distribute hot liquid and a sanitizing agent under pressure to said nozzles for washing, rinsing and sanitizing said cart, whereby said cart is supported in tipped condition to facilitate the removal of dislodged and dissolved foreign material from the surfaces thereof.

3,096,776
CLEANING STAND

Raymond H. De Witt, Plymouth, Ohio, assignor to The Fate-Root-Heath Company, Plymouth, Ohio, a corporation of Delaware

Filed June 14, 1960, Ser. No. 36,066
3 Claims. (Cl. 134—174)

1. A cleaning stand comprising a sink-top having a drain outlet and an upstanding peripheral wall, a folding shield assembly removably resting on said top in opened condition and forming a partial enclosure extending appreciably above the wall thereof, said shield assembly folding to substantially flat condition and including hanger means for suspending the same from the edge of the sink-top when not in use, and means for discharging cleaning solution under pressure against a body supported on the sink-top for cleaning of the same.



3,096,777
INHIBITION OF DEPOSITION OF HYDROCARBONACEOUS SOLIDS FROM OIL

Christ F. Parks and Jacob E. Strassner, Tulsa, Okla., and Fred W. Burtch, Monroeville, Pa., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,212
4 Claims. (Cl. 137—15)

1. The method of inhibiting the adhesion of solid hydrocarbonaceous material deposited from oil containing such substances in solution and suspension on a deposition-susceptible surface of equipment with which such oil comes in contact which comprises subjecting the surface thus contacted to the action of an aqueous dispersion containing at least about 0.0025 percent of a water-dispersible hydrophilic colloid-producing polymeric substance selected from the class consisting of animal glue, gum arabic, amylose, gelatin, egg albumin, blood albumin, alkali metal salts of lignosulfonic acid, glycol-treated algin, saponin, Irish moss, and casein.

3,096,778
VALVE ARRANGEMENT FOR BREATHING DEVICES

Måns Månsson Arborellius and Claes Erik Gunnar Lundgren, both of Stora Tvargatan 36, Lund, Sweden

Filed Jan. 3, 1958, Ser. No. 706,993
Claims priority, application Sweden Jan. 5, 1957
2 Claims. (Cl. 137—63)

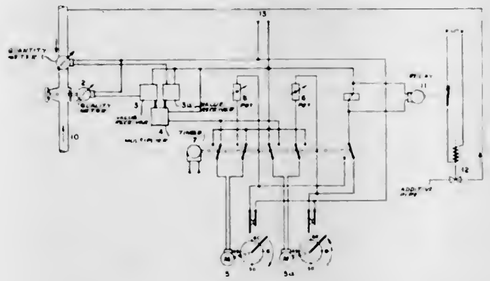


1. A breathable gas regulating device comprising a housing having a valve chamber therein, an extensible diaphragm forming one wall of said chamber, an outlet valve mounted on said diaphragm, an inlet valve located in a wall of said housing opposite said extensible diaphragm, actuating means operatively connecting said diaphragm and said inlet valve, a source of breathable gas connected to said inlet valve, a single aperture in said wall of said housing opposite said diaphragm for directly conducting said gas to and from a point of use, a conducting tube extending through said chamber, one end of said tube being connected to said diaphragm and disposed around said outlet valve and the other end of said tube extending through said aperture at all times and said tube having a smaller diameter than said aperture to allow free flow of gas between said chamber, said tube and said outlet.

3,096,779
DUAL CHARACTERISTIC ADDITIVE FEEDING SYSTEM

Alfred Kraft, Schonberger Feld 3, Kronberg, Taunus, Germany, and Erhard Kämpf, Klingsorstrasse 109a, Finkenweg 2, Malmsheim, near Stuttgart Wurttemberg-Baden, Germany

Filed Nov. 24, 1959, Ser. No. 855,041
4 Claims. (Cl. 137—101.19)

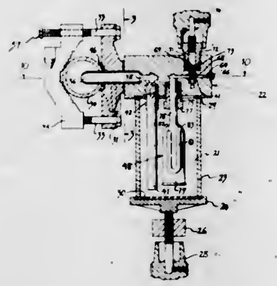


1. A system for controlling the quantity of a treating material to be fed to a fluid which varies in two characteristics to maintain a predetermined treating effect, comprising first and second means for measuring each of said characteristics, first and second reversible impulse counters, means including multiplying means connected to said measuring means and to said impulse counter to transmit during the first part of one cycle of operation measurements from said measuring means to the first impulse counter to advance the same, a reverse impulse transmitter connected to the second impulse counter during such part of the cycle to return the same to zero position, means to transmit during another part of the cycle measurements from said measuring means to the second impulse counter, said reverse impulse transmitter being connected to said first impulse counter during such other part of the cycle to return the same to zero position, feeding means, and means connected to the second impulse counter during such first part of the cycle and to the first impulse counter during such other part of the cycle to control said feeding means in dependence on the time required for such impulse counter to return to zero.

3,096,780
MEANS FOR INTRODUCING CHLORINE INTO WATER

Robert J. Kane, 2908 E. Pinchot, Phoenix, Ariz.

Filed June 2, 1960, Ser. No. 33,596
7 Claims. (Cl. 137—209)

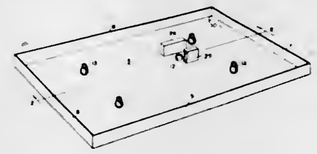


1. A unit chlorinator adapted for attachment at a water circulation line comprising a mixing chamber, means for circulating water from said line through said mixing chamber and back to said line, a mixing tube in the said chamber having a stem, a measuring chamber open at its bottom depending from the stem, a U-shaped aspirating tube within the measuring tube having one open end extending upwardly toward the stem and one open end leading through said measuring chamber and communicating with the mixing chamber, and means for delivering gas under controlled pressure to said stem, whereby to cause chlorine gas to displace a measured volume of water within the measuring chamber and to pulse out into the mixing chamber through the aspirating tube.

3,096,781
DRIP PAN FOR AUTOMATIC DISHWASHING MACHINES AND SIMILAR APPLIANCES

Joseph L. Roidt, 2126 SE. Umatilla, Portland, Oreg.

Filed Oct. 10, 1960, Ser. No. 61,754
1 Claim. (Cl. 137—314)

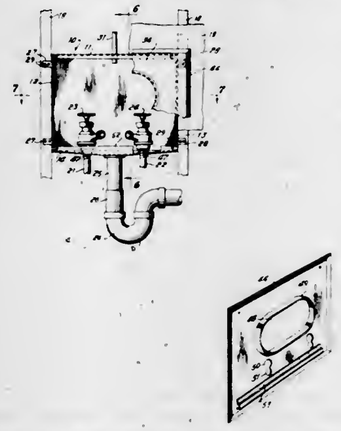


For use with an automatic dishwashing machine and similar appliances supported upon four corner leg members; a drip pan supported upon a foot at each corner and comprising a flat flexible bottom wall, and vertical front, rear and side walls consisting of an integral sheet of metal, said bottom wall having openings therethrough in open communication with collars secured to the bottom wall and extending upwardly therefrom, fastening elements extending through said collars and openings and adapted to anchor said machine to a floor beneath the drip pan with the machine supported upon said bottom wall by its four corner leg members, said bottom wall having a drainage opening therethrough, means supported upon said bottom wall adjacent said drainage opening and adapted to partake of the weight of said machine to thereby deflect said bottom wall into a sump area leading to the drainage opening.

3,096,782
WATER TAP RECEPTACLE AND DRAIN

John Wesley Williams, Dallas, Tex., assignor of fifty percent to Juanita W. Caruth, Dallas, Tex.

Filed Oct. 27, 1960, Ser. No. 65,483
2 Claims. (Cl. 137—360)



1. In a water tap and drain receptacle for installation in a wall structure, the combination which comprises:

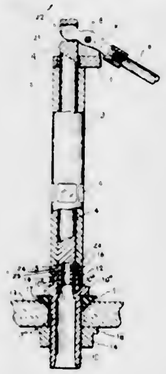
(*a*) a rectangular box having a top, side walls, and a bottom and a depth dimension adapting the same to be recessed in wall structure, the said bottom being recessed downwardly from each wall of said box and having a drain outlet centrally thereof, said box having ports on each side of said drain outlet each capable of receiving a water pipe therethrough having a tap thereon,

(*b*) an upturned flange formed along the front edge of said bottom,

(*c*) means formed with each side wall of said box for securing the same to a wall structure, and

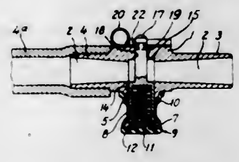
(*d*) a front frame for said box having means therein adapted to receive and retain lengths of hoses connected to said water taps and a baffle element thereon overreaching said upturned flange and depending downward into said box for directing inside of said upturned flange any leakage caught by said frame from hoses leading from said taps.

3,096,783
TOILET BOWL BALL COCK ASSEMBLY
James E. Dale, 4074 Estrella Ave., San Diego 5, Calif.
Filed Apr. 17, 1962, Ser. No. 188,199
2 Claims. (Cl. 137—434)



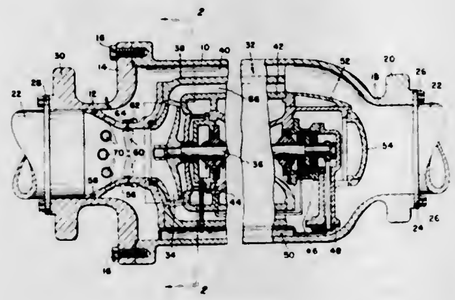
1. In a toilet flush tank device of the class described comprising a vertically extending thick walled water inlet pipe attached to a base plate at the inside of a toilet water tank and having water supply under normal pressure attached thereto, said inlet pipe having a longitudinal bore throughout its length and internal threads at the lower extremity thereof, one or more holes horizontally disposed through the wall of said inlet pipe adjacent to the aforesaid internal threads, a valve casing adapted for attachment to said base plate of toilet water tank and to water supply, said valve casing having a nipple provided with an internally threaded portion at the upper extremity thereof for attachment to the lower extremity of the aforesaid water inlet pipe, a recess in said nipple, a bushing of plastic material inserted in said recess of said nipple in said valve casing and lying flush at the rim of the upper extremity thereof, the internal diameter of said bushing being smaller than that of the internal diameter of the aforesaid water inlet pipe, said bushing presenting an upward face and an internal angular ledge secured by said bushing rim and when water inlet pipe is attached to said valve casing, a longitudinal bore of greater diameter at the lower extremity in said valve casing and terminating slightly below said recess, said valve casing having a collar adjacent to said nipple at the upper threaded portion thereof and having external threads extending from the lower extremity thereof to the underside of the aforesaid collar, a lock nut having internal threads for attachment onto said lower end extension member of the aforesaid valve casing, a downwardly inverted beveled washer of resilient material fitted into and disposed over said lower end extension member at the threaded portion of said valve casing and below the aforesaid collar to effect a seal when said lock nut is in position, a longitudinal rod of plastic material having a diameter to fit smoothly within said longitudinal bore of the aforesaid inlet pipe, a rod shank end at a portion of the lower extremity of said longitudinal rod having a reduced diameter to fit closely within said internal diameter of the aforesaid plastic bushing and when said rod is placed in said longitudinal bore of the aforesaid water inlet pipe, a slot passing through said rod, said slot being disposed at the opposite extremity of the aforesaid extremity having said reduced diameter, an operable means at the upper extremity of said water inlet pipe whereby said longitudinal rod may be raised or lowered within said longitudinal bore of the aforesaid water inlet pipe, said means comprising a pivoting member having a ball float at one extremity and a lifting lever at the opposite extremity thereof and having a flat shaped end arranged to fit within the aforesaid slot in the upper end of the aforesaid rod, a pivot in said operable means attached to said upper extremity of the aforesaid inlet water pipe for holding said pivoting member in position, one or more transversely disposed holes at the lower extremity wall of said water inlet pipe, said holes being superadjacent to the aforesaid internal threads and above said nipple of said valve casing, a longitudinal passage at the lower extremity of said rod extending concentrically for the length of said shank and for securing a thin wall therein, a horizontally disposed hole in said thin wall, said hole being adjacent to said downwardly disposed annular ledge of said shoulder and also being disposed in line and approximately of the same diameter as the aforementioned hole in said water inlet pipe, for securing water flow when said float is in its downwardly floating position and said rod member is held in its uppermost place.

3,096,784
AUTOMATIC SHUT-OFF DEVICE
Stig Åke Gösta Svensson, Sodertalje, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed May 16, 1962, Ser. No. 195,258
Claims priority, application Sweden May 26, 1961
13 Claims. (Cl. 137—463)



1. An automatically operable cut-off device comprising a casing having a suction duct extending therethrough, the casing also having a channel crossing the suction duct, a piston slidable in the channel between two end positions in one of which the piston closes the suction duct and in the other of which the piston opens said duct, a biasing element urging the piston to its duct-closing position, said channel communicating with the suction duct and having a lateral opening, and a flexible membrane covering said opening and subjected on its outer surface to atmospheric pressure and on its inner surface to a pressure corresponding to that in the suction duct, the membrane being operable through said opening to engage and lock the piston in its duct-opening position against the action of said biasing element when the duct pressure is below a predetermined value, the membrane being operable to release the piston when the duct pressure rises above said predetermined value.

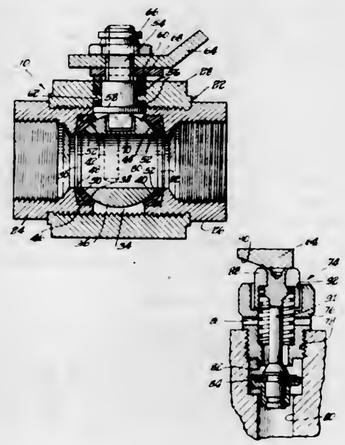
3,096,785
PIPE LINE PUMP
Hanns Hornschuch, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed June 27, 1960, Ser. No. 38,836
4 Claims. (Cl. 137—569)



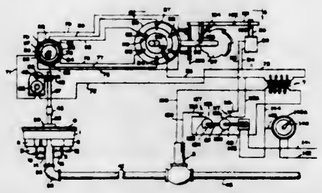
1. A pipeline blower comprising a casing having an inlet to receive a flow of pressure fluid and a discharge for such flow, a flow path for the flow in the casing connecting the inlet to the discharge, pump means in the flow path to provide driving force to the flow therethrough, normally open valve means in the flow path being adjustable between fully opened and fully closed positions to control flow to the pump means and to substantially shut the inlet in the fully closed position to block the flow from the pump means when such pump means is inoperative, a by-pass path for the flow in the casing connecting the inlet to the discharge, and normally closed valve means in the by-pass path that opens to pass the flow of pressure fluid therethrough from the inlet to the discharge when the normally open valve means in the flow path closes to block the flow from the pump means.

3,096,786
SAFETY CUTOFF VALVE
Thomas E. Rost, Crystal Lake, Ill., assignor to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Filed July 31, 1961, Ser. No. 127,950
2 Claims. (Cl. 137—596.2)

1. For use in valving compressed gases, a safety cutoff valve comprising, in combination, a valve body defining a valve chamber and defining inlet and outlet passages opening into said chamber, a valve ball disposed rotatably within said chamber, means defining two annular recesses encircling the inner ends of said respective passages, an annular valve seat supported in each of said recesses, each valve seat being formed of a flexible material and cantilevering radially inward into engagement with said ball, a valve stem drivingly connected with said ball for rotating the latter between a valve open position which connects said passages and a valve closed position in which the valve seat encircling the inlet passage coacts with the ball to close said inlet passage, a handle mounted on said stem for rotating the latter, the valve seat encircling said outlet passage being shaped to provide communication between said valve chamber and said outlet passage when said valve ball is in the closed valve position thereof, a normally closed bleed valve mounted in said valve body in communication with said valve chamber and having an outlet side open to exhaust, and cam means rotatable with said handle and coacting with said bleed valve to open the latter automatically as an incident to movement of the handle to turn said valve ball to the closed valve position thereof.



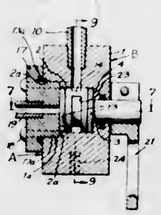
3,096,787
INDEXING VALVES ADAPTABLE FOR USE IN LAWN SPRINKLING SYSTEMS AND OTHER LIQUID DISTRIBUTION SYSTEMS
Lloyd M. Kayler, 3127 NE. Skidmore St., Portland, Oreg.
Filed July 10, 1961, Ser. No. 122,673
3 Claims. (Cl. 137—624.13)



1. An indexing valve and fluid distribution system, said valve comprising a hollow circular valve housing having a top wall and a bottom wall, said bottom wall having a plurality of radially disposed outlets therein, fluid distribution pipes radiating from said housing and in open communication with said outlets, a valve disk rotatably mounted within said housing having a single outlet port therein and a vertical stem rotatably extending through said top wall, a fluid pressure supply line in open communication through said bottom wall and the center of said valve disk with the interior of the valve housing, selector switch means and distributor switch means, motor means operatively connected to said valve stem for intermittently rotating said disk and said selector switch means and in circuit through said selector switch means and through said distributor switch means with a source of electrical current, a timer motor in circuit through an electrical timer with said current source, a first cam-actuated switch and a second cam-actuated switch both operable by said timer motor, a solenoid valve within said pressure supply line for supplying fluid pressure to the interior of said valve housing at timed intervals, said solenoid valve in circuit with said source through one of said cam-actuated switches, a solenoid for imparting progressive intermittent operation to said distributor switch means and in circuit through the other said second cam-actuated switch with said source, both of said cam switches

operable in unison by said timer motor and so related that when the first cam switch is closed by its respective cam to cause rotation of said distributor switch, the cam of the second cam switch will open the same to close said solenoid valve for a period of time approximately equal to the time required for said valve disk to be rotated by said motor means from one position to the next whereby operation of said motor means will actuate said selector switch and rotate said valve disk to advance said single outlet port therein from registry with one of said radially disposed outlets into registry with another and whereby closure of said solenoid valve by the opening of said second cam-actuated switch to relieve fluid pressure within the valve housing to permit of said valve disk rotation while closure of said first cam switch will actuate said distributor switch and said selector switch and said motor means.

3,096,788
ROTARY VALVE
William Y. Talbot, Box 13225, Phoenix, Ariz., and Jessie Chess, 412 Constitution Ave. SE., Washington, D.C.
Filed Aug. 21, 1961, Ser. No. 132,821
1 Claim. (Cl. 137—625.11)



A fluid-tight hydraulic valve adapted for pressures in the neighborhood of 10,000 lbs., comprising,

a housing having a cavity including first, second, and third bores of reduced diameter progressively from the rear face toward the front face respectively to provide a sealing plug chamber, a valve head chamber, and a valve stem chamber,

said housing having first, second, and third fluid passages disposed radially at 90° to each other and communicating with said valve head chamber,

shoulders respectively formed at the junctions between the first bore and the second bore and also between the latter and the third bore,

a valve assembly including:

an annular valve head and a control stem disposed respectively in the valve head chamber and the valve stem chamber,

said valve head having an axial cavity and a radial bore for selectively establishing communication between said fluid passages, said valve head also having a face which is a chord of the related arcuate portion of said head, said radial bore intersecting said face,

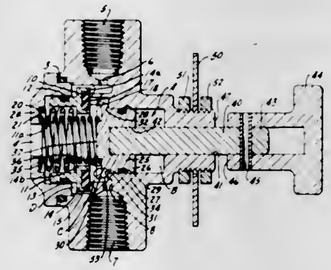
spaced annular walls extending continuously around the side edges of said head to sealingly engage the inner side of the valve head chamber,

transverse walls disposed between said annular walls at the opposite ends of said face,

seals at the outer sides of the annular walls,

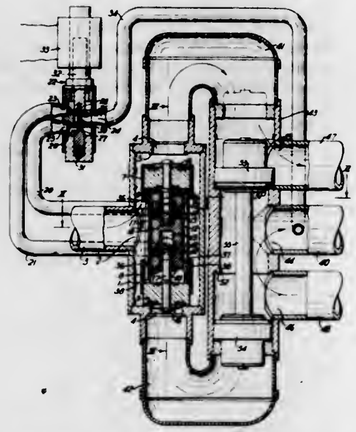
a combined sealing and thrust plate including an attaching flange and a plug in said sealing plug chamber, one of said seals nested in the included angle between the outer sides of said walls and the plug, said flange also having a seal on its inner face, all of said seals being compressed when said flange is secured to the rear face of the housing by force applied in the direction of the axis of the plug.

3,096,789
DASH CONTROL PARKING BRAKE VALVE
Charles Horowitz, Chicago, and Harold L. Dobrikin, Highland Park, Ill., assignors to Berg Airlectro Products Co., Chicago, Ill., a corporation of Illinois
Filed Jan. 23, 1961, Ser. No. 84,085
1 Claim. (Cl. 137—627.5)



A valve assembly including a housing, a main chamber in said housing, a hollow cylindrical valve piston slidably mounted in one end of said main chamber, a fixed valve seat at the opposite end of said chamber, an annular chamber surrounding said main chamber and communicating therewith through an annular space between said fixed valve seat and said one end of said main chamber, an annular valve face carried by said hollow piston and having an annular portion extending through said annular space and into said annular chamber, said annular chamber having areas on opposite sides of said annular valve face portion therewithin whereby said annular valve face portion opposite sides are both subjected to pressures within said annular chamber when said valve face is on said fixed seat, a fluid pressure inlet communicating with said annular chamber, a first coil spring within said piston and having its opposite ends in contact with said housing and said piston to urge said piston toward said fixed seat and to urge said valve face against said fixed seat, a movable seat member slidable in said housing and having a seat portion positioned for contact with a portion of said annular valve face within said fixed seat to move said valve face off said fixed seat, said movable seat member having a rod portion extending outwardly of said housing for manual operation of said movable seat member, a second coil spring positioned within and axially aligned with said first coil spring, said second coil spring extending through said first coil spring at all positions of said piston and movable seat, said second coil spring having its opposite ends in contact with said housing and said movable seat member and being operable through said annular valve face to urge said movable seat member away from said valve face, a fluid pressure outlet communicating with said main chamber beyond said fixed seat from said valve face, an exhaust outlet in said housing, said exhaust outlet communicating with the area of said main chamber within said hollow piston, said pressure outlet communicating with said exhaust outlet through said valve face and piston when said valve face is on said fixed seat and said movable seat portion is out of contact with said valve face, said movable seat portion sealing said exhaust outlet against communication with said pressure inlet and outlet when said movable seat portion is in contact with said valve face, a seal between said movable seat member and said housing whereby pressure entering said inlet when said valve face is off said fixed seat and said movable seat portion is in contact with said valve face is effective in one direction only against said housing and in the other direction against said movable seat member to urge said movable seat member against said valve face.

3,096,790
FLUID PRESSURE OPERATED VALVES
George N. Chatham and O O Shurtleff, Austin, Tex., assignors to Chatleff Controls, Inc., Austin, Tex., a corporation of Texas
Filed July 6, 1961, Ser. No. 122,264
3 Claims. (Cl. 137—628)



1. A three-way valve for a fluid pressure line containing compressible fluid, comprising a housing provided with two aligned end outlet ports and with an inlet port between them, valve seats in the housing around the outlet ports, a pair of cylinders rigidly mounted in the housing between said outlet ports in axial alignment therewith, the outer ends of the cylinders being open and spaced from the adjacent outlet ports, each cylinder also having in its inner end a central outlet opening encircled inside the cylinder by a valve seat, a piston valve member slidably mounted in each cylinder and having outer and inner ends for closing the adjacent outlet port and outlet opening alternately, the outer end of each valve member projecting laterally beyond the valve seat around the outlet port closed by that member, a pair of conduits sealed in the wall of the housing and each having an inner end communicating with the outlet opening of one of said cylinders, the inner ends of the cylinders being provided with aligned passages therethrough beside said outlet openings, and parallel push rods disposed between the piston valve members with their ends in said passages for movement lengthwise therein, the rods being only long enough to push a piston valve member outward from its cylinder seat to a point near the adjacent outlet port when the other piston valve member moves inward from the other outlet port seat to the adjacent cylinder seat, a rod end portion at each cylinder being reduced in diameter for a distance sufficient to expose the surrounding passage to the fluid pressure in the housing only while the piston valve member in that cylinder is near the valve seat therein, and the outer ends of said conduits being adapted to be connected alternately with a region of lower fluid pressure than the pressure in said housing to cause said piston valve members alternately to move inwardly into engagement with said cylinder seats.

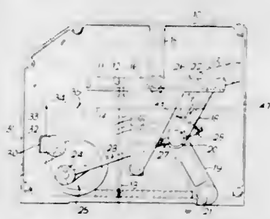
3,096,791
LEG STRUCTURE FOR METAL TABLES AND THE LIKE
James E. Barrow, 70 Emerald Drive, Jonesboro, Ga.
Filed May 3, 1961, Ser. No. 107,583
4 Claims. (Cl. 138—151)

1. A metal furniture leg comprising a single sheet metal strip bent into a closed hollow cross-section including two substantially plane edge portions forming a substantial angle with each other and meeting at a corner, the tip parts of said edge portions being bent inwardly into the interior of the hollow cross-section and diverging at said corner from each other and from the respective plane edge portions, and a securing member comprising an elongated securing strip bent into substantially triangular cross-section and having a base and converging legs extending



therefrom, said legs engaging over said tip parts, the angle between the legs being less than the normal angle between the tip parts whereby the tip parts are displaced towards each other to maintain substantial pressure between them and the legs, said legs and tip parts being in contact over substantially the whole of their facing surfaces.

3,096,792
JACQUARD MACHINES
Lothar Strach, Kohlhofweg 13, Wilhelmsfeld, Heidelberg, Germany
Filed June 22, 1960, Ser. No. 37,898
9 Claims. (Cl. 139—59)

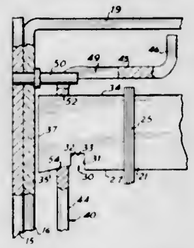


1. Jacquard mechanism for a textile weaving loom comprising a griffe, means mounting said griffe for limited rising and falling movement; a first toggle link connected between a stationary pivot and a pivotal connection with a second toggle link, said second toggle link being connected between said pivotal connection and a moving pivot forming part of a mechanism for raising and lowering said griffe, rotating drive means; a crank pin carried by said drive means, and rotatable with said drive means about a crank axis, and a connecting rod connected between said crank pin and said pivotal connection for transmitting drive from said crank pin to said toggle links; said drive means, connecting rod and toggle links being so relatively disposed that said crank pin passes through the position where said crank axis, said crank pin and said pivotal connection are in a straight line at approximately the position of maximum lift of said griffe.

3,096,793
LOOM HARNESS
Robert N. Suhr and Robert M. Goodman, Jr., Marietta, Ga., assignors to Pioneer Heddle and Reed Company, Inc., Atlanta, Ga., a corporation of Georgia
Filed Aug. 20, 1962, Ser. No. 218,030
14 Claims. (Cl. 139—92)

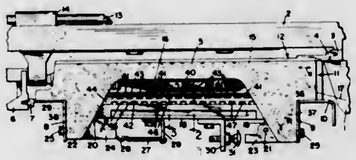
1. In a loom harness of the type having a heddle frame provided with an end brace and a rail connected to said end brace, and a heddle rod adjacent said rail, the combination therewith of a spring member secured

to said end brace and provided with a receiving recess for receiving the end portion of said heddle rod, said end portion of said heddle rod having a pair of outwardly diverging surfaces extending from a narrowed portion of said heddle rod, said receiving recess being defined by a pair of opposed walls having a pair of outwardly diverging surfaces for cooperating with said diverging surfaces



of said heddle rod, said spring member being yieldably biased outwardly for urging said opposed walls against said diverging surfaces of said heddle rod when said end portion is received therebetween for clamping said end portion of said heddle rod in said receiving recess, said spring member being movable inwardly for aligning said receiving recess with said narrowed portion of said heddle rod.

3,096,794
SHUTTLE CHECKING MEANS FOR LOOM
Clarence R. Kronoff, Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 20, 1961, Ser. No. 153,288
7 Claims. (Cl. 139—185)



1. In a shuttle checking means for a loom operating with at least one shuttle box at each end thereof to receive and check shuttles at the end of their flight across the loom, each box being provided with a rear longitudinal shuttle engaging rigid wall and a forward box front formed with a flexible wall substantially parallel to and forwardly of the rear wall and spaced substantially parallel to and rearwardly of the box front to form a longitudinal space between the latter and the flexible wall, the ends of the flexible wall being curved forwardly and fastened to the ends of the box front,

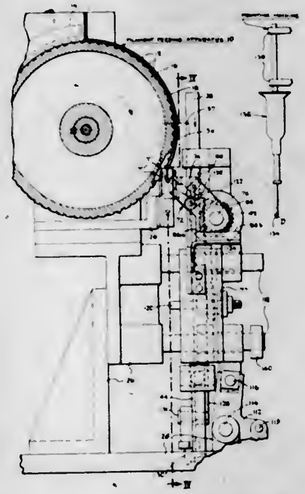
(*a*) a central longitudinal uninterrupted resilient web forming part of the box front and spaced from said flexible wall and said box front to extend centrally of said longitudinal space and with its ends fastened to the ends of said flexible wall,

(*b*) a first set of ribs extending transversely and rearwardly from one side of said web to define rearwardly opening grooves therebetween, the ribs being attached to said flexible wall, and

(*c*) a second set of ribs extending transversely and forwardly from the opposite side of said one side of said web to define forwardly opening grooves therebetween, the second set of ribs being attached to the shuttle box front,

(*d*) said ribs being compressed serially when the shuttle enters the box to subject said web progressively therealong to shear stresses acting transversely of the direction of travel of the shuttle into the box to progressively resist entrance of the shuttle therein to effect stopping of the shuttle in its proper position in the box.

3,096,795
ARTICLE-TRANSFER DEVICE
Carl Lenz, deceased, late of Wayne, N.J., by Earl J. Aberle, executor, Wayne, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 13, 1960, Ser. No. 2,191
1 Claim. (Cl. 140—71.6)



Apparatus for securing a coiled elongated article retained at an article pick-up station and transferring such article to an article discharge station, in addition to stretching such article during transfer to a predetermined length, said apparatus comprising:

(*a*) measuring means adjacent to said pick-up station for measuring the longitudinal dimension of said article at said pick-up station;

(*b*) article transfer means carrying two pairs of gripping jaws normally spaced a predetermined distance from one another, and one pair of said gripping jaws movable with respect to the other pair of said gripping jaws;

(*c*) jaw-positioning means responsive to said measuring means to move said movable pair of gripping jaws toward said other pair of gripping jaws through an amount corresponding to the longitudinal dimension of said article as measured by said measuring means, said jaw-positioning means comprising a rotatable bearing race and a stationary bearing race having bearings therebetween, said bearing races provided with bearing-containing grooves which vary in width so that rotation of said rotatable bearing race causes lateral movement between said rotatable bearing race and said stationary bearing race, and said measuring means operating to control the amount of rotation of said rotatable bearing race;

(*d*) jaw-closing means operable to cause said pairs of gripping jaws to grip said measured article as retained at said pick-up station;

(*e*) pivotal and lateral movement means operable to pivot and laterally move said jaws comprising said transfer means and said article gripped thereby from a position adjacent to said pick-up station to a position adjacent to said discharge station, said jaw-positioning means during pivotal and lateral movement of said gripped article causing said movable pair of gripping jaws to move away from said other pair of gripping jaws and to stretch said gripped article through a distance corresponding to the distance through which said movable pair of gripping jaws were previously moved toward said other pair of gripping jaws by said jaw-positioning means;

(*f*) jaw-opening means operable to open said pairs of gripping jaws at said discharge station to release said article after said article has been secured in its stretched condition; and

(*g*) operating means for actuating said measuring means, said article transfer means and said gripping jaws, said jaw-positioning means, said jaw-closing means, said pivotal and lateral movement means, and said jaw-opening means in the foregoing work sequence.

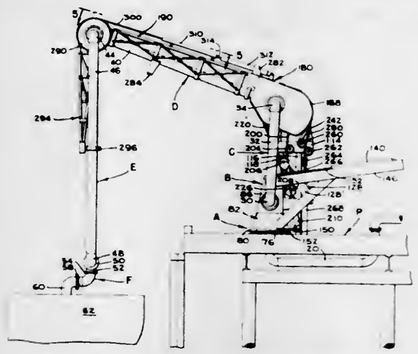
3,096,796
LEAD SPIRALING TOOL
Henry N. Dittrich, 1101 N. East St., Edna, Tex.
Filed June 20, 1960, Ser. No. 37,176
8 Claims. (Cl. 140—124)



1. A tool for spiraling flexible leads comprising a handle having a central longitudinal axis, a flat head secured to one end of said handle and having opposite side edges converging together in a direction away from said handle towards said axis, said converging edges terminating at a point substantially on said axis, a winding shaft, separate from and more rigid than the leads to be spiraled, connected to the handle and extending through a passage formed in said head, said passage terminating at said point and being substantially concentric with said axis, said head being provided with a notch which extends generally parallel to said passage but spaced therefrom, said notch having an exposed open end whereby one end of the lead may be inserted therein and the remainder of the lead wrapped about said shaft to form a spiral coil.

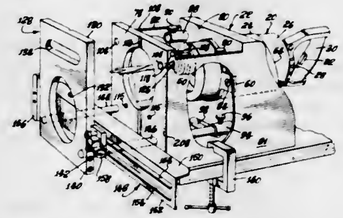
3,096,797
FLUID CONVEYING APPARATUS
Peter J. Bily, Brea, Calif., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,918
17 Claims. (Cl. 141—387)

1. Apparatus for establishing fluid-conveying interconnection between two fluid handling means, comprising a fluid tight conduit including at least three rigid sections and swivel pipe joints pivotally interconnecting adjacent sections, tower means mounted for pivotal movement about a horizontal axis adjacent its base, means connecting one of said conduit sections to said tower, means swivelly connecting said one conduit section to one of said fluid handling means, a boom mounted adjacent the upper end of said tower for pivotal movement about a horizontal axis from a retracted position to a projected position, means connecting a second conduit



section to the boom for movement therewith, and an arm pivotally connected to the outer end of the boom and rigidly connected to a third conduit section and operable to maneuver the outer end of said third conduit section to a position adjacent the other of said fluid handling means.

3,096,798
ELECTRICAL MULTIPURPOSE SHOP TOOL
Lawrence E. Pugsley, Box 656, R.R. 1, Escondido, Calif.
Filed June 6, 1960, Ser. No. 34,163
25 Claims. (Cl. 144—1)

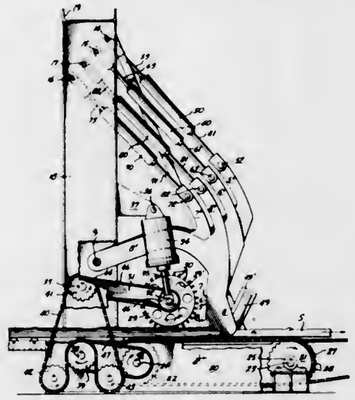


2. A multipurpose power tool comprising: front plate and rear frame members positioned in fixed, spaced-apart relationship providing at least three points in a common plane for supporting the tool on a flat surface in operative position; an electrically operated power unit containing a shaft with rotatable work-tool supporting means supported on the rear frame member for axial movement toward and away from the front plate member, the axis of said shaft being substantially parallel with the aforementioned common plane whereby the same is substantially parallel with the flat surface on which the tool may be positioned; a work-tool passageway in the front plate member in alignment with the work-tool supporting means; and workpiece-engaging means removably and adjustably mounted on said front plate member for supporting a workpiece in operative relationship with the work-tool supporting means.

3,096,799
SLAB BARKING MACHINE
Thomas W. Nicholson, 2525 A St. SE., Auburn, Wash.
Filed Mar. 28, 1960, Ser. No. 18,088
7 Claims. (Cl. 144—208)

1. A slab barking machine comprising a frame, generally horizontal slab-supporting means carried by said

frame, a segmented barking plow of generally chevron-shaped horizontal cross section and engageable with a slab on said slab-supporting means, and having its central portion leading and flaring therefrom toward its side portions, said plow including a cluster of hoe plates having downwardly projecting hoes disposed with their principal surfaces in adjacent parallel face-to-face relationship, successive hoes being stepped edgewise to form such chevron-

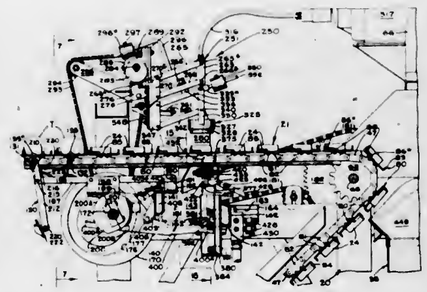


shaped plow, pivot means supporting said hoe plates from said frame for upward and downward movement of each hoe individually relative to the other hoes, and means effecting relative movement of said barking plow and said slab-supporting means lengthwise of a slab on said slab-supporting means and substantially parallel to the principal faces of said hoes for effecting barking of such slab by said hoes.

3,096,800
FRUIT ORIENTATOR, CORER AND TRIMMER

Sherman H. Creed and James L. Reimers, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware

Continuation of application Ser. No. 695,078, Nov. 7, 1957. This application Sept. 14, 1960, Ser. No. 56,059
8 Claims. (Cl. 146—52)

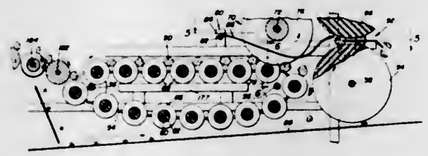


7. In a fruit processing machine, a conveyor having a processing run, a carrier plate on said conveyor arranged to support a fruit, means defining an aperture in said plate, a substantially vertically moving centering pin beneath said processing run, means to raise said pin through said plate aperture and into lifting engagement with the indent of a fruit disposed on said plate, means to vertically vibrate said pin while the fruit indent is disposed on the pin, a coring cutter disposed below said conveyor processing run and down stream of said centering pin, means for raising said coring cutter vertically through said plate aperture and into coring engagement with a fruit previously positioned on said plate by said centering pin, a fruit holding and centering cup disposed above said conveyor run and in vertical alignment with said coring cutter, means to lower said cup on a fruit previously positioned on said plate by said centering pin, means to drive said conveyor, means for retracting said cutter, and means for synchronizing vertical movements of said centering pin and cutter with said conveyor drive means.

3,096,801
SEED POTATO CUTTER

Merthen L. Miles, Rte. 1, Box 60, Scott W. Brown, Rte. 2, Box 107, and Owen K. Ward, Rte. 2, Box 309, all of Pocatello, Idaho

Filed July 11, 1961, Ser. No. 123,301
2 Claims. (Cl. 146—78)



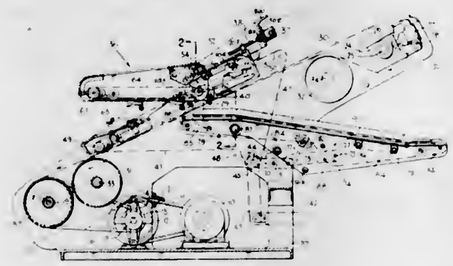
1. A conveyor for conveying and cutting seed potatoes, said conveyor comprising support means and an endless conveyor guided for movement through a closed path by said support means and including an upper reach having an inlet end and an outlet end, said endless conveyor including a plurality of sets of transversely aligned and spaced discs, spaced longitudinally of said closed path and adapted to support and cradle potatoes between adjacent sets of discs, knife means comprising disc knives rotatably mounted on said support means above the discharge end portion of said upper reach and spaced longitudinally along the axis of rotation of said knives which extends transversely of the path of movement of said upper reach, the lower extremities of said disc knives projecting downwardly and received between adjacent cradling discs of the sets of discs of said conveyor whereby potatoes carried by said conveyor will be cut and have the larger cut portions thereof wedged between adjacent ones of said disc knives, motor means drivingly connected to said disc knives for effecting rotation of said disc knives in a direction with their lower marginal portions moving in the direction of movement of said upper reach, extracting means carried by said support means comprising a plurality of elongated cam straps each secured at one end to said support means with the free end portion thereof extending generally along chords of and between adjacent disc knives above and below said upper reach and said axis respectively and generally in the direction of movement of said upper reach completely across said adjacent disc knives, whereby as said disc knives rotate with said cut portions of potatoes wedged therebetween, said cut portions will engage said cam straps to be cammed generally radially outwardly from between adjaecnt ones of said disc knives along paths defining a generally horizontally disposed plane of discharge of said cut portions, a pair of opposing soft and resilient and driven rollers spaced slightly apart and supported from said support means for rotation about horizontally disposed axes extending transversely of the direction of movement of said upper reach and positioned with respect to each other and the support means in order to generally horizontally align the space defined between said rollers with the plane of discharge of said cut portions from between said disc knives **9**, an elongated knife blade mounted on said support means adjacent said rollers and including a cutting edge disposed in said space and extending longitudinally of said rollers for again cutting the cut portions

of the potatoes after they are discharged from between said disc knives.

3,096,802
BREAD SLICING MACHINE

Benedict R. Benith, Westbury, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed June 7, 1960, Ser. No. 34,561
9 Claims. (Cl. 146—88)

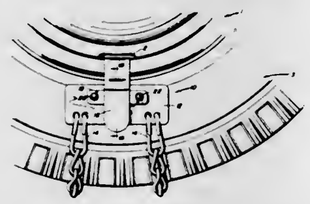


1. In a bread slicing machine having an infeed table and an infeed head positioned over said infeed table to be adjustably positioned at an angle to said infeed table; chain supported flights on said infeed head to individually urge loaves of bread along said infeed table into the bread slicing machine, a drive chain one run of which extends parallel to the angle of adjustment of said infeed head, transmission means engaging said drive chain and driving said chain supported flights on said infeed head, and drive means for said drive chain, and means whereby said chain supported flights are moved by said transmission means at a velocity relative to said drive chain substantially equal to the cosine of the angle of adjustment of said infeed head.

3,096,803
TIRE CHAIN

Gilbert J. Labbe and Roy J. Labbe, both of 548 Wyanoke Ave., Baltimore 18, Md.

Filed May 17, 1961, Ser. No. 110,727
6 Claims. (Cl. 152—237)

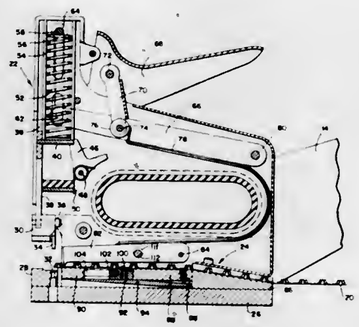


1. A tire chain device, comprising, a pair of substantially parallel and laterally spaced base members, a pair of removably mounted cross chains connecting said base members together at the one edge thereof, a flat elongated flexible metal strap member positioned intermediate said chains and having one end removably secured to the other edge of one of said base members, and adjustable latching means secured to the other base member of said spaced base members, said adjustable latching means including a plate swingable in a plane substantially parallel to the plane of said other base member for receiving and latching the other end of said flat elongated flexible metal strap member in doubled-up relationship to said other base member, with said flexible metal strap member being self conforming to a wheel felloe.

3,096,804
APPARATUS FOR MAKING ELECTRICAL CONNECTIONS

William J. Fuerth, Warwick, R.I., assignor to Patton-MacGuyer Co., Providence, R.I., a corporation of Rhode Island

Filed Dec. 19, 1960, Ser. No. 76,853
4 Claims. (Cl. 153—1)



2. Apparatus for uniformly making a crimped connection between an electrical connector having a U-shaped ferrule consisting of a body portion and opposing ears formed integrally therewith and an electrical conductor having a resilient insulating covering thereon, comprising, a crimping die, having a fixed anvil and a movable section, feeding means for placing and holding the rounded portion of the body portion of said electrical connector in said fixed anvil to receive an end of said electrical conductor, means springily operated to move said movable section into contact with the sides of said body portion and said opposing ears, whereby said body portion is crimped to said insulating covering and said ears are recurved therethrough into contact with the surface of said electrical conductor, a portion of said resilient insulating covering being compressed between one surface of each one of said ears and a surface of said body portion of said ferrule whereby an intimate contact is maintained between said electrical conductor and each one of said ears; said electrical connector being the last one of a strip of similar connectors and said feeding means includes a spring-loaded rocker arm having one surface thereof initially parallel to said strip, a pin slidably mounted on said one surface and initially engaging said strip, a pressure pad springily urging said strip toward said rocker arm and means for moving said pin along said one surface to move said strip whereby said electrical connector to be crimped is placed in said fixed anvil and said rocker arm is caused to rotate to disengage said pin from said strip.

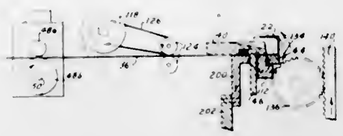
3,096,805
METHOD AND MECHANISM FOR THE MANUFACTURE OF LAMINATED CORE INDUCTORS

Orrick H. Biggs, Beverly, Theodore Wroblewski, Danvers, and David R. Dayton, Beverly, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Oct. 1, 1958, Ser. No. 764,588
15 Claims. (Cl. 153—2)

1. For the fabrication from strip stock of a series of multi-sided members adapted to be stacked one within the confines of the other, mechanism which comprises: a work station; means for feeding strip metal stock material through said station in measured lengths; means at said station for bending said strip stock to define said sides; means at said station for cutting said strip stock to sever therefrom a completed member; and, programmed

control means for varying said measured lengths of feeding in increments corresponding to the thickness of said



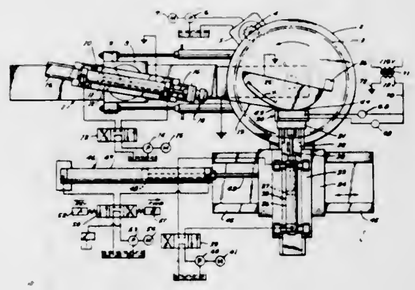
stock material for the production of successive members in said series.

3,096,806

COMBINED STRETCH AND WIPE FORMING MACHINE WITH AUTOMATIC TRAVERSE CONTROL OF THE WIPE SHOE

Clinton H. Root, Maple Heights, Ohio, assignor to The Cyril Bath Company, Solon, Ohio, a corporation of Ohio

Filed Aug. 17, 1960, Ser. No. 50,280
9 Claims. (Cl. 153—40)



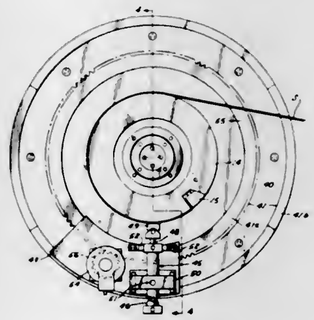
7. In a stretch forming machine, a power driven rotatable table, a side face die thereon and having a curvilinear side face, means for connecting one end of an elongated stock for rotation with the die, power driven stretch forming means adapted for connection to the other end of the stock for applying yieldable tension thereto endwise thereof as the stock is wrapped on the die by rotation of the table for stretch wrapping the stock onto the die face, a traversing wipe shoe, power driven wipe forming means for yieldably urging the shoe against the stock on said side face, traversing power means operable for traversing the shoe in opposite directions, selectively, endwise of said side face independently of rotation of the table, said shoe having a normal contact portion to be pressed against the stock and thereby press the stock against the side face normally at that instantaneous line of tangency of the stock and side face of the die resulting from the stretch wrapping during rotation of the table, sensing means for sensing deviation of said portions of the shoe from said instantaneous line of tangency and including sensing devices spaced apart from each other endwise of the wiping path at opposite ends of said normal contact portion, said devices being operatively connected to portions of the stock at opposite sides of said instantaneous line of tangency respectively, and each device being rendered operative in response to positions of its associated stock portion in the direction of thrust of the wipe shoe for producing control signals, and operating means responsive to the control signals to cause the traversing power means to traverse the shoe in the direction for positioning said normal contact portion at the instantaneous point of tangency.

3,096,807

METAL FORMING MACHINE AND AUXILIARY FIXTURE AND COMBINATION THEREOF

Robert F. De Marco, Mentor, Ohio, assignor to The Cyril Bath Company, Solon, Ohio, a corporation of Ohio

Filed Sept. 20, 1960, Ser. No. 57,302
7 Claims. (Cl. 153—40)



1. A metal forming machine comprising a frame, a horizontal table, a curvilinear side face die mounted on the top of the table, clamp means for connecting one end of a length of stock in fixed position relative to the side face, a curvilinear track detachably mounted in fixed position on the top of the table with its axis upright, a carriage mounted on the track for movement therealong about the track axis, a work-forming tool, means on the carriage supporting the tool for said movement relative thereto toward and away from the die for moving the stock transversely of the die so as to lay the stock onto the side face progressively from one location on the stock to another upon movement of the carriage along said track, tool operating means to cause said movement during travel of the carriage along said track, a power transmission drivingly interconnecting the table and carriage for driving the carriage along said track, said transmission including a stationary element in fixed position relative to the table and having a driving portion coaxial with the track, and a drivable element mounted on the carriage for rotation, about an axis parallel to the axis of the stationary element, relative to the carriage, for movement with the carriage along the track, and drivingly connected to said portion for planetary movement relative thereto for driving the carriage along the track when the drivable element is rotated, motor means on said carriage and drivingly connected to said drivable element, and means to supply power to the motor means in all positions of the carriage along the track, means supporting the table for rotation about an upright axis, and power means operable independently of the motor means

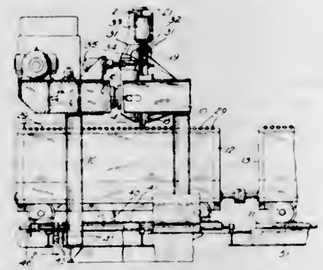
to rotate the table independently of the travel of the carriage along said track, a stretch forming assemblage mounted on the frame, a stock gripping head carried by the assemblage for movement toward and away from the side face of the die and adapted for connection to the other end of the stock for stretch forming the stock upon rotation of the table, concurrently with the application of the stock onto the die face by the tool.

3,096,808

SLAB STRAIGHTENING

Henry W. Holsteyn, 10 End St., Johannesburg, Transvaal, Republic of South Africa

Filed Jan. 16, 1961, Ser. No. 82,919
Claims priority, application Republic of South Africa Jan. 15, 1960
15 Claims. (Cl. 153—48)



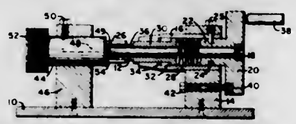
1. Apparatus for straightening a slab such as an anode of cast copper comprising a press with its platten and bed horizontally opposed and mounted for a truck to move underneath it; an elevator adapted to grasp a slab in a truck, lift the slab, position and hold it between the platten and bed, lower the slab and release it in lowered position; and means to cause the platten to operate when the slab is positioned and to withdraw the platten prior to lowering of the slab.

3,096,809

COIL WINDING DEVICE

Robert H. Petty, Las Vegas, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Filed June 20, 1960, Ser. No. 37,413
5 Claims. (Cl. 153—67)



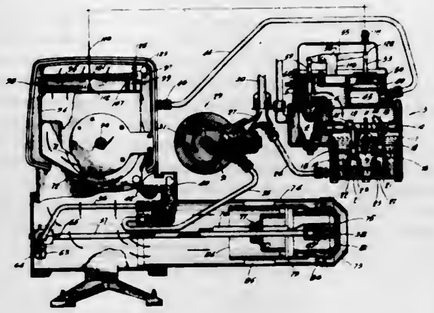
1. Apparatus for winding a coil of wire comprising; a base, a mandrel rotatably mounted on said base and having a slot in one end thereof adapted to receive the end of a length of wire to be wound, means for rotating said mandrel, a follower slidably mounted on said mandrel and biased by spring means toward the said one end of said mandrel, a shaft slidably and rotatably mounted on said base and having an end face adapted to be locked against the said one end of said mandrel thereby to close the open side of the slot in the end thereof, wire guide means mounted on said base spaced apart from said mandrel, and coil cover guide means fixedly attached to the end of said shaft and projecting therefrom over the side, remote from said wire guide means, of a portion of the said one end of said mandrel when said shaft end face is locked against the said one end of said mandrel.

3,096,810

LOW PRESSURE OIL BURNER

Roger G. Martz, Lebanon, Ind., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Feb. 24, 1960, Ser. No. 10,751
2 Claims. (Cl. 158—28)



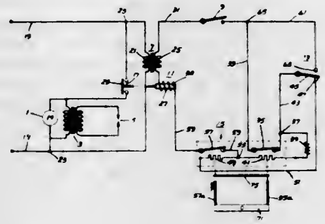
1. In a low pressure oil burner, the combination comprising a tube, a nozzle extending within the tube, pressure producing means operable intermittently for the supply of oil and air mixture to the nozzle for intermittent flow therethrough, means for supplying secondary air to the tube including inlet means, normally closed closure means for substantially preventing admission of the secondary air through the inlet means, fluid pressure operated means operatively connected to the closure means effective for opening actuation thereof for admitting secondary air through the inlet means, and means forming a single continuous communicating path between the exhaust side of the pressure producing means and the pressure operated means operable to pressurize the latter upon operation of the former to open said closure means, and to vent the latter upon termination of the former to permit closing of the closure means, said communicating path means having a flow resistance substantially greater than the flow resistance of the nozzle and sufficiently high to delay in the order of a few seconds equalization of pressures in the exhaust side of the pressure producing means and the pressure operated means for delaying correspondingly the opening or closing of the closure means relative to the operation of the pressure producing means.

3,096,811

SAFETY CONTROL SYSTEM FOR FLUID FUEL BURNERS

Ralph W. Gustafson, Morrison, Ill., assignor to General Electric Company, a corporation of New York

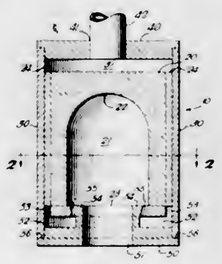
Filed July 20, 1961, Ser. No. 125,495
4 Claims. (Cl. 158—28)



1. A control system for a fluid fuel burner comprising a relay having contacts for controlling said burner and a

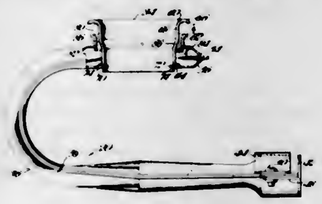
control coil for actuating said contacts; means for energizing said control coil comprising a thermostat, a flame detector having hot side contacts and cold side contacts, thermal timer means including a normally closed lockout switch controlled by a lockout heater and a normally closed recycling switch controlled by an associated heater, and a limiting resistor; a starting circuit for energizing said relay coil through said lockout switch, said thermostat and said recycling switch, said starting circuit including said lockout heater and said cold side contacts connected in parallel circuit relation with the recycling switch heater and said limiting resistor; and an operating circuit for energizing said control coil through said lockout switch and said thermostat, said hot side contacts, said recycling switch heater and said limiting resistor; the resistances of said lockout and recycling heaters being proportioned so that only the lockout switch can be opened when said starting circuit is closed, and said recycling switch is opened when said operating circuit is closed, whereby said lockout heater is energized if ignition failure occurs upon completion of the starting circuit to time open said lockout switch and deenergize said relay for shutting down said burner, and said recycling switch heater is energized if ignition occurs upon completion of the starting circuit to time open said recycling switch and break open a portion of said starting circuit in preparation for rapid shutdown if flame failure occurs.

3,096,812
COMBUSTION BURNER
Willis D. Kervin, Johnson City, Tenn., assignor to Carbonic Development Corporation, Johnson City, Tenn., a corporation of Delaware
Filed Sept. 21, 1961, Ser. No. 139,629
2 Claims. (Cl. 158—108)



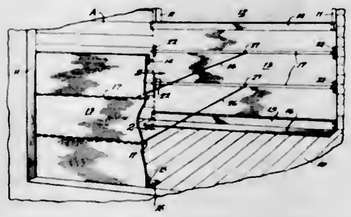
1. A combustion burner having a longitudinal axis and comprising a burner block of refractory material defining a combustion chamber having side walls generally parallel to said axis, a curved dome at one end of said chamber and an opening at the opposite end of said chamber, a burner body including side walls means surrounding said burner block, a first wall at one end of said body defining a mouth in registry with said opening and a second wall at the other end of said body having an inlet to admit burner fuel, passage means communicating with said inlet and extending in said burner block longitudinally of said axis along and outside of said chamber to provide direct heat exchange between the refractory material of said burner block and the fuel in said passage means, said first wall providing a plurality of ports communicating with said passage means and spaced around the periphery of said opening, said ports being oriented to direct fuel against opposing walls of said chamber and toward said dome so that when said burner is operating the fuel is ignited as it enters said chamber and the resulting flame sweeps said opposing walls and is deflected at the apex of said dome through said mouth.

3,096,813
GAS BURNER ASSEMBLIES
Victor Weber, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 798,899
1 Claim. (Cl. 158—116)



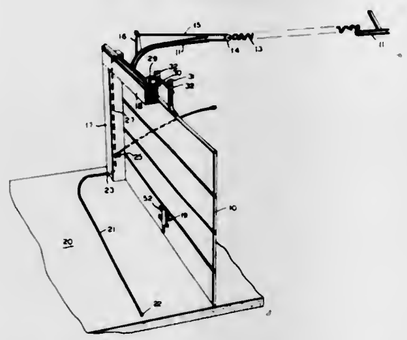
In a burner assembly provided with a burner head support base having upper and lower surfaces, a burner head comprising: a first tubular member connected at one end to the upper surface of said support base and being formed at the other end with a first outwardly extending flange, a second tubular member connected at one end to the lower surface of said support base and being formed at the other end with a second outwardly extending flange, said tubular members having vertically extending body portions arranged concentric to one another to form an annular flow passage between said body portions and a peripheral port between said flanges, and a necked-down portion on one of said tubular members reducing in diameter said flow passage to increase the velocity of fluid flowing through said flow passage to said burner port without turbulence thereof, said necked-down portion progressively and smoothly reducing the cross sectional area of said flow passage toward said burner port throughout a major portion of said flow passage, the width of said reduced cross sectional area of said annular flow passage being between one-third to one-eighth of the distance between the flanges of said tubular members.

3,096,814
TEMPORARY DOOR
Michael J. Ford, Hartsdale, N.Y., and Barton H. Ford, Omaha, Nebr., assignors, by mesne assignments, of one-half to International Paper Company, New York, N.Y., a corporation of New York, and one-half to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Jan. 9, 1959, Ser. No. 785,858
2 Claims. (Cl. 160—113)



1. In combination, a grain-carrying freight car equipped with oppositely-disposed doorways defined by vertically-extending framing posts, a temporary door extending across each doorway and overlapping the interior of said framing posts, means securing each door to its associated framing posts, each door comprising a generally planar, rectangular paperboard panel folded along a plurality of spaced-apart, parallel fold lines to provide a rib adapted to extend laterally perpendicularly from the plane of said panel, said rib, in the cross section thereof extending perpendicular to said fold lines, having a dimension perpendicular to said plane greater than the rib dimension parallel to said plane, means for reinforcing said rib, said ribs being disposed to face the interior of said car and extending generally horizontally, and a tie wire extending between and connected to the ribs of said door panels free of any connection to said panels outside the outermost of said fold lines.

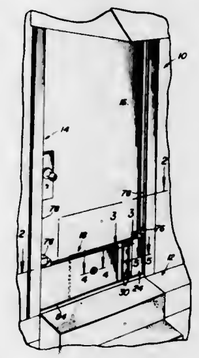
3,096,815
DOOR OPERATING APPARATUS
Donald F. May, 120 Terrace Ave., North Babylon, N.Y.
Filed Apr. 15, 1960, Ser. No. 22,428
2 Claims. (Cl. 160—188)



1. An automatic door opening apparatus for a garage formed with an access opening having a header at its upper dimension, said apparatus comprising a door having front and back walls defining top, side and bottom door edges between them, said door being movable between a closed position in which it is substantially vertical and blocks access through said opening and an open position in which said access is unblocked, means continuously urging said door for movement at least initially in the substantial direction of its vertical axis past said header toward said open position, means for retaining said door in said closed position, said retaining means including a pair of spaced brackets fixed to said door at said top edge and extending upwardly from said top edge, said brackets being formed with aligned apertures, a roller journaled in said apertures for rotation above said door between the planes of said front and back walls, and a tongue fixed to a solenoid mounted on said header, said tongue abutting said roller when said door is in said closed position to block movement of said door from said closed position, an elastic fluid reservoir disposed near said door in position to enable a vehicle approaching said door to contact and compress a portion of said reservoir, and a switch for converting a change in fluid pressure in said reservoir into a change in quantity of electrical energy, said change in electrical energy causing said solenoid to withdraw said tongue from a position abutting said roller to permit said door to move toward said open position.

3,096,816
DOOR AND WINDOW WATER SHIELD
Carl W. Peters, 8613 W. Park, Fort Myers, Fla.
Filed Nov. 9, 1961, Ser. No. 151,372
4 Claims. (Cl. 160—215)

1. In combination with a wall having an opening formed therein including opposite upstanding end edges and a lower edge interconnecting said end edges, a wall opening water shield for preventing the entrance of water through said opening in the event the water level of water on one side of said wall rises above the level of said lower edge, said water shield comprising an upstanding water impervious panel assembly for tight frictional engagement with said lower and end edges, said panel assembly being substantially straight and planar and including lower and opposite end edges, means removably securing said panel assembly in the lower portion of said opening with the lower and opposite end edges of said panel assembly disposed in fluid tight sealing engagement with the lower and opposite end edges of said opening, said panel assembly comprising a pair of panel sections disposed in end-to-end relation and pivotally secured together at adjacent end edges by means of a hinge including a pair of leaves secured to and extending along the marginal portions of corresponding side surfaces of said sections and pivotally secured together by means of a pivot extending along said adjacent end edges of said panel sections for movement between a limit position with said panel sections substantially coplanar and a position with said panel sections

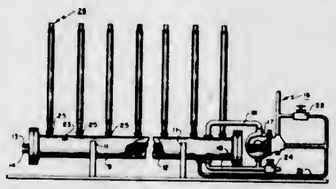


angularly disposed relative to each other, a pair of flexible sealing strips substantially L-shaped in cross section each including one portion secured between the corresponding hinge leaf and the associated panel section and a second portion overlying the corresponding one of said adjacent end edges of said panel sections and disposed between said adjacent ends with said second portions sealing said panel sections in fluid tight sealing engagement with each other, seal means disposed about the lower and opposite end edges of said panel sections sealing said panel sections in fluid tight sealing engagement with each other and the remote end edges and the lower edges of said panel sections in fluid tight sealing engagement with said end and lower edges of said opening, abutment means carried by the portions of said wall defining the sides of said opening above said water shield, and wedge means operatively engaged with said abutment means and upper portions of said shield forcing said shield tightly down upon said lower edge of said opening.

3,096,817
APPARATUS FOR HUMIDIFYING AN AIR STREAM
Frederic W. McKenna, Webster Groves, Mo., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Apr. 13, 1960, Ser. No. 21,953
1 Claim. (Cl. 165—60)

In an air conditioning system including a housing having an air stream to be treated passing therethrough, a unit humidifier assembly for distributing uncontaminated water vapor continuously and uniformly into such air stream comprising an enclosed, narrow, elongated water chamber positioned within said housing and removed from such air stream, a heating means extending within

said chamber to heat and convert water within said chamber indirectly to uncontaminated self-rising vapor, means to feed water into said chamber, water feed control means positioned outside said chamber to maintain a proper amount of water in said chamber during humidifying operations, and a plurality of vertically extending elongated spaced vapor distribution conduits communicating with said chamber immediately thereabove and extending in spaced columns across the entire air stream path substan-



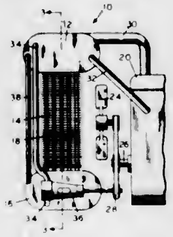
tially within a common plane transverse the direction of flow of the air stream to be treated, said vapor distribution conduits including a plurality of orifices spaced therealong and having a vapor permeable sheet of material surrounding such orifices to provide an extended vapor laden intersitial surface to insure uniform distribution of the uncontaminated vapor which rises in said conduits in substantially sheet-like form across the overall path of the air stream to be treated so that such air stream must pass through said sheet-like vapor.

3,096,818

INTEGRAL EBULLIENT COOLER

Harry W. Evans, 4409 S. Lewis, and Loyd W. Disler, 6703 E. 27th, both of Tulsa, Okla.

Original application July 13, 1959, Ser. No. 826,553, now Patent No. 3,030,077, dated Apr. 17, 1962. Divided and this application Aug. 15, 1960, Ser. No. 49,733
5 Claims. (Cl. 165—111)



1. In combination with an internal combustion engine having a cooling system wherein a coolant enters said engine substantially as a liquid and leaves said engine substantially as a vapor, an integral ebullient cooler, said cooler having,

an enclosed upper liquid separator, said liquid separator having a condensate storage area in the lower portion thereof and a vapor storage area in the upper portion thereof;

a conduit means communicating said engine with said upper vapor area of said liquid separator for conducting vapors from said engine to said separator;

a lower condensate storage tank;

a vapor condenser communicating at the upper end with said vapor area of said liquid separator and at the lower end with said condensate storage tank;

a condensate recirculation pipe communicating at the lower end with the lower portion of said condensate storage tank and at the upper end with the said vapor storage area of said liquid separator;

a pump means in said condensate recirculation pipe for conveying liquid from said condensate storage tank to said liquid separator; and,

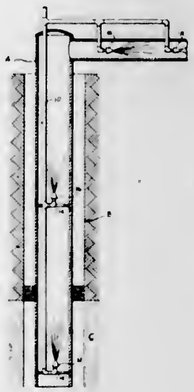
a conduit means communicating at one end with said liquid storage area of said liquid separator and at the other end with said engine whereby liquid is conducted to said engine.

3,096,819

METHOD AND COMPOSITION FOR PREVENTING CORROSION

William S. White, Jr., Midland, and Jackson L. Babb and John H. McGuire, Odessa, Tex., assignors to Champion Chemicals, Inc., Odessa, Tex., a corporation of Texas

Filed May 22, 1959, Ser. No. 815,195
3 Claims. (Cl. 166—1)



1. The method of applying protective coatings to inside walls of gas carrying conduits comprising introducing a mixture of a polar filming amine corrosion inhibitor, water, and a foaming agent into the flowing gas stream as the conduit is in normal use and entraining a multitude of minute bubbles within the mixture thereby causing the introduced material to foam to the end that the inhibitor is carried by a foamy vehicle along the conduit.

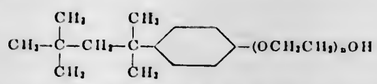
3,096,820

SUPERIOR WATER-FLOODING PROCESS

George G. Bernard, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,962
11 Claims. (Cl. 166—9)

1. In the recovery of petroleum oil from the subterranean formation by the injection of floodwater through an input well and into said formation and the production of oil from said formation through an output well, the improvement comprising incorporating in at least a portion of said floodwater condensation products of fatty acids and diethanolamine, wherein the fatty acids contain 8 to 18 carbon atoms, and incorporating in at least a portion of said floodwater an alkaryl polyether alcohol of the formula



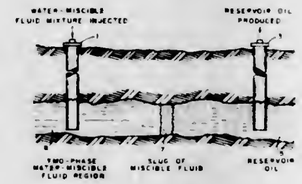
wherein n is an integer in the range of 7 to 13, the concentration of the compounds in said floodwater being about 0.001 to 0.100% by weight.

3,096,821

METHOD FOR INCREASING RECOVERY OF OIL

Alvin B. Dyes, Dallas, Tex., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed May 31, 1960, Ser. No. 33,060
20 Claims. (Cl. 166—9)



1. The method of increasing the recovery of oil from a subterranean reservoir having in communication therewith at least one injection well and at least one production well comprising injecting into said reservoir through said injection well and contacting said oil with a mixture of water and a fluid which is miscible with said oil and is liquid at the hereinafter specified operating pressure; the volumetric ratio of water to fluid in said water-fluid mixture being that value at which

$$W/F=\frac{S_w-S_{wr}}{S_f}$$

wherein S_{wr} is the residual water saturation established during the conduct of the process, S_w and S_f are the water saturation and fluid saturation, respectively, established in the two-phase, water-fluid region of said reservoir and W/F is the ratio of water to fluid in said water-fluid mixture; thereafter injecting into said reservoir and contacting said water-fluid mixture with a mixture of water and free gas at a pressure at which said gas is miscible with said fluid and said gas will remain in a gaseous state; the volumetric ratio of water to gas in said water-gas mixture being that value at which

$$W/G=\frac{S_w-S_{wr}}{S_g}$$

wherein S_{wr} is the residual water saturation established during the conduct of the process, S_w and S_g are the water saturation and gas saturation, respectively, established in the two-phase, water-gas region of said reservoir and W/G is the ratio of water to gas in said water-gas mixture; whereby said fluid miscibly displaces said oil and said gas miscibly displaces said fluid, said water and said fluid flow through said two-phase, water-fluid region at equal velocities and said water and said gas flow through said two-phase, water-gas region at equal velocities; and withdrawing oil from said reservoir through said producing well.

3,096,822

HYDRAULIC METHOD AND APPARATUS FOR FLEXING STUCK PIPE IN WELL BORES

Elmer D. Hall, 401 Norton St., Weatherford, Tex.

Original application Dec. 12, 1956, Ser. No. 627,935, now Patent No. 2,939,531, dated June 7, 1960. Divided and this application Oct. 19, 1959, Ser. No. 847,148
9 Claims. (Cl. 166—35)

2. A method of flexing pipe stuck in a well bore employing a flexible material body insertable within the pipe to be flexed and movable therethrough, comprising the steps of running said body to a level above the stuck area of the pipe to be flexed, flexing said body and the pipe therewith, moving said body, while still in the flexed position downwardly through the stuck portion of the pipe, deforming the pipe as it is moved downwardly therethrough and permitting the body and pipe to straighten after the body has been moved into at least a portion of the stuck portion of the pipe to be flexed.

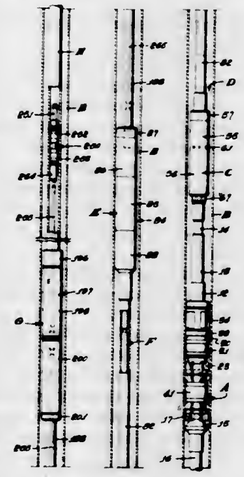


3,096,823

WELL BORE TESTING AND PRESSURING APPARATUS

Talmadge L. Crowe, Houston, Tex., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

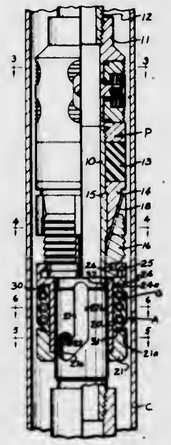
Filed Apr. 28, 1959, Ser. No. 809,383
41 Claims. (Cl. 166—150)



1. In apparatus for testing a well bore and adapted to be secured to a tubular string extending to the top of the well bore: a well packer adapted to be anchored in the well bore against upward and downward movement therewithin and having a fluid passage; a tester valve above and connected to said packer and communicable with said packer passage, said tester valve being shiftable between opened and closed conditions to selectively permit fluid to flow from said packer passage through said valve or prevent such flow; and said tester valve including a portion detachably secured in said tester valve and removable therefrom through the tubular string to provide a substantially unobstructed passage through said tester valve; an unloader valve above and connected to

said tester valve and adapted to be attached to the tubular string, said unloader valve being shiftable between opened and closed conditions to selectively permit fluid to flow between the interior of said unloader valve and the annulus surrounding the tubular string or to prevent such flow, said unloader valve having a passage through which said tester valve portion can move.

3,096,824
GRIPPING DEVICES
Cicero C. Brown, 8490 Katy Road, Houston, Tex.
Filed Oct. 23, 1958, Ser. No. 769,189
17 Claims. (Cl. 166—210)



14. A gripping device for anchoring a member within a well bore including,

a mandrel connected with the member,

a gripping element mounted upon the mandrel for movement outwardly into contact with the wall of the well and also mounted upon the mandrel for rotational movement relative thereto,

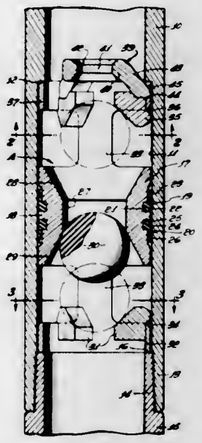
said element having a non-gripping surface and a gripping surface spaced circumferentially and radially inward therefrom for non-engagement with said wall when said non-gripping surface is in engagement with said wall,

means normally urging said gripping element radially outward so that said non-gripping surface is in slidable contact with said wall,

and coacting means on said mandrel and said gripping element engageable with each other when the mandrel is rotated with respect to the element for urging the gripping surface of said element into tight frictional engagement with the wall of the bore to thereby anchor said mandrel and member therein.

3,096,825
CONTROL VALVE APPARATUS FOR DRILL PIPES
Earnest H. Clark, Jr., Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Continuation of abandoned application Ser. No. 728,148, Apr. 14, 1958. This application Sept. 19, 1960, Ser. No. 56,931
8 Claims. (Cl. 166—224)

1. In apparatus of the character described: a tubular drilling string lowered through fluid in a well bore and extending to the top of the well bore; a body member in a lower portion of said drilling string while said drilling string is lowered in the well bore and having a passage therethrough; a valve member greater in cross-section than said passage and disposed initially below said passage and movable upwardly into engagement with said body member to prevent upward flow of well bore fluid through said passage during initial lowering of said drilling string through the well bore fluid; one of said members being of pliant, elastic material to permit said valve member to be



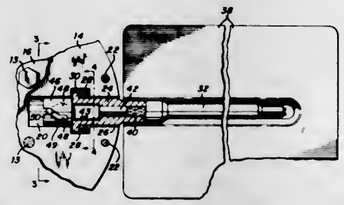
forced by fluid pressure through said passage, upon further lowering of said drilling string, from a position below said passage to a position above said passage and from a position above said passage to a position below said passage upon being subjected to fluid pressure in said drilling string above said valve member.

3,096,826
ROTOR BLADE FOR ROTARY-WINGED AIRCRAFT
Kenneth B. Amer and Stephen J. Chris, Los Angeles, and Clay C. Boswell, Jr., Rolling Hills Estates, Calif., assignors to Hughes Tool Company, Aircraft Division, Houston, Tex., a corporation of Delaware
Filed Aug. 7, 1961, Ser. No. 129,720
10 Claims. (Cl. 170—135.4)



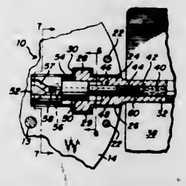
4. A rotor blade for a jet-propelled aircraft-sustaining-rotor, having a spanwise-extending gas-conducting passageway terminating in a gas-expelling thrust-producing outlet at the distal end of the blade, said blade comprising: a plurality of airfoil-shaped segments disposed in series along the spanwise axis of the blade, said segments including leading edge sections, trailing edge sections and intermediate box-like sections interconnecting the leading and trailing edge sections chordwise of the blade, said intermediate sections including upper and lower skin-portions, and gas-conducting ducts arranged spanwise of the blade in gas-conducting relationship so as to constitute said passageway; and articulating members interconnecting said segments such as to provide said blade with torsional rigidity for resisting forces acting to twist the blade about its spanwise axis and with spanwise flexibility of a character such that flapwise bending of the blade can occur without bending said segments said articulating members comprising bellows-like elements having circumfenential flanges rigidly attached to the upper and lower skin-portions of the intermediate sections.

3,096,827
FLUID CONTROL APPARATUS
John E. Woods, Cohasset, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Filed Oct. 2, 1961, Ser. No. 142,290
5 Claims. (Cl. 170—160.13)



1. Apparatus of the type described comprising rotary support structure, a plurality of blade assemblies rotatively carried by the support structure, a plurality of thermally responsive actuator assemblies, there being one thermally responsive actuator assembly for each of the blade assemblies, each actuator assembly including axially extending and axially movable key means engageable with its respective blade assembly for rotation of the blade assembly with rotation of the key means, cam means joining each of the thermally responsive actuator assemblies to the support structure so that the actuator assembly is rotated with actuation thereof.

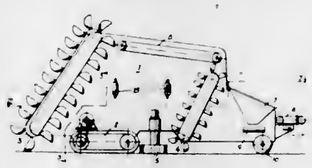
3,096,828
FLUID CONTROL APPARATUS
Pierce Hollingsworth, Wayland, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Filed Dec. 4, 1961, Ser. No. 156,776
10 Claims. (Cl. 170—160.14)



1. Fluid control apparatus comprising rotary support structure, a plurality of blade structures pivotally carried by the support structure, cam means joining the support structure to each of the blade structures, thermally responsive force transmission means carried by each of the blade structures and operably connected to the cam means so that there is pivotal movement of the blade structures with operation of the thermally responsive force transmission means, the cam means including resilient means permitting adjustment of the pivotal position of the blade structure with respect to the support structure in response to changes in centrifugal forces acting upon the cam means.

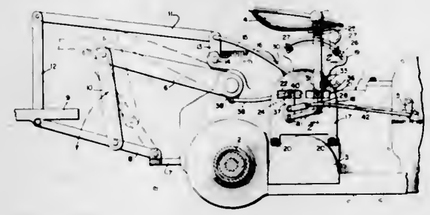
3,096,829
MACHINE FOR TREATING BALLAST IN A RAILROAD BED
Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna, Austria
Filed Apr. 25, 1960, Ser. No. 24,556
Claims priority, application Austria Apr. 29, 1959
7 Claims. (Cl. 171—16)

1. A machine for treating ballast supporting a railroad track including two elongated rails and tie means transversely connecting said rails, comprising a vehicle equipped with wheel means for travel laterally adjacent the track, a ballast treating implement supported on the vehicle and extending substantially horizontally therefrom for positioning in the ballast under the track, a guide



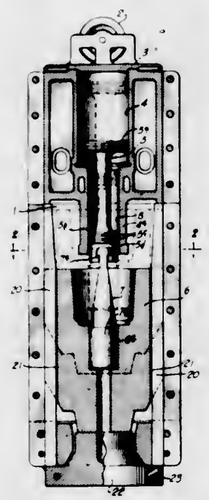
means mounted on the vehicle for engagement with at least one rail of the track whereby the vehicle is guided along the track as it travels adjacent thereto on said wheel means thereof, and means for temporarily moving the guide means out of the space defined by the track.

3,096,830
DRAFT CONTROL MECHANISM
Billie K. Criswell, Rte. 2, Altoona, Ala., and Hugh W. Jones, Brooksville, Ala.
Filed Nov. 2, 1960, Ser. No. 66,868
7 Claims. (Cl. 172—9)



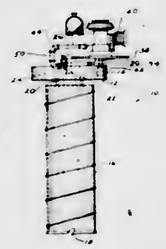
7. Draft control mechanism for tractors having implement connecting means which includes upper and lower tension links for connection to the implement with the top tension link being connected to a spring-loaded lever, and lift arms for raising and lowering the implement operated by means including a control valve lever, the draft control comprising, a lever arm, means pivotally connected at one end of the lever arm and to the spring-loaded lever to rock the lever arm upon movement of the spring-loaded lever, means pivotally connected to the opposite end of the lever arm and to the lift arms to rock the lever arm about the first-mentioned pivotal connection when the lift arms are moved, and means connected to the lever arm at an intermediate point and to the control valve lever, whereby the lever arm may rock about the pivotal connections at its ends as fulcrums to move the control valve lever upon movement of the spring-loaded lever and upon movement of the lift arms, the means interconnecting the said one end of the lever arm and the spring-loaded lever including, a shaft, means mounting the shaft for bodily sliding movement transversely of the shaft axis and in the direction of rocking movement of the spring-loaded lever, the shaft carrying an arm fixed thereto and projecting radially therefrom, a link connected to the end of the projecting arm and said one end of the lever arm, and a rod interconnecting the shaft and the spring-loaded lever to move the shaft transversely of its axis upon movement of the spring-loaded lever, the shaft having an operating lever fixed thereto, the shaft being rotatably connected to the rod, and means to releasably hold the shaft against rotation relative to the rod.

3,096,831
POWER HAMMER
Campbell V. Adams, Chicago, Ill., assignor to Vulcan Iron Works Inc., Chattanooga, Tenn., a corporation of Illinois
Filed Dec. 27, 1960, Ser. No. 78,366
8 Claims. (Cl. 173—127)



1. A power hammer comprising a cylinder member, a piston member operating in said cylinder member and having a slot in one end thereof, means for supplying motive fluid to said cylinder to operate said piston, a ram, and a connecting rod member having a complementary tongue at one end loosely positioned in said slot providing clearance between the sides of said tongue and said slot to allow for slight misalignment between the piston member and the connecting rod member and having its other end secured to said ram.

3,096,832
ICE HOLE CUTTER
Clarence Westre, 5253 Queen N., Minneapolis, Minn.
Filed Mar. 27, 1959, Ser. No. 802,511
9 Claims. (Cl. 175—18)



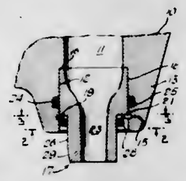
1. A device for cutting holes in ice comprising a cutter head provided with a flange mounted for rotation about a substantially vertical axis, a cutter element rigidly secured to and depending from the cutter head, a hub member interconnected between the cutter head and the cutter element, a hollow shaft rotatably mounted in the hub and connected to the inside of the cutter element, a support bar rigidly secured to the shaft and extending laterally therefrom, a carriage member pivotally mounted on the bar, a gasoline motor having a shaft provided with friction means thereon mounted on the carriage, the friction means being mounted in the same horizontal plane as the cutter head flange, a handle bar rigidly mounted on the bar, a handle rigidly secured to and extending from the carriage member, a biased spring means connected between the handle bar and the carriage handle for normally holding the carriage in a position whereby the friction means of the motor shaft is disengaged from the flange of the cutter head and conduit means connecting the exhaust of the gasoline motor with the hollow shaft for feeding, hot exhaust gases into the cutter element.

3,096,833
SONIC EARTH BORING DRILL WITH JACKET
Albert G. Bodine, Sherman Oaks, Calif.
(3300 Cahuenga Blvd., Los Angeles 28, Calif.)
Filed Feb. 1, 1960, Ser. No. 5,792
3 Claims. (Cl. 175—56)



1. In a high energy sonic well drill adapted for attachment to a drill string and having an elastically compliant vertical column of heavy cross section, a periodic force generating oscillator coupled to said column for exerting a vertically directed alternating force thereon at a longitudinal resonant frequency of the column to generate a longitudinal standing wave in the column, with a velocity antinode at each end of the column and a stress antinode at an intermediate region thereof, and a bit connected to the lower end of the column, the combination therewith of improvements for drilling without substantial vibration of the drill string and for suppression of parasitic lateral vibration of said column derived from said longitudinal standing wave therein comprising an elongated jacket structure attached at its upper end to the drill string and concentrically surrounding and extending downwardly along an upper section of said column at a predetermined and fixed slight clearance therefrom which is less than the half-amplitude of parasitic lateral vibration tending to be set up in said column, whereby to effect lateral collision between the laterally vibrating column and the jacket structure, and means connecting said jacket structure to said column at a distance downwardly from the velocity antinode at the upper end of the column equal to at least an eighth wave length distance along the column for the longitudinal standing wave therein, said bit being of larger diameter than said jacket structure so as to provide for accommodation of the jacket structure in the well bore.

3,096,834
JETTING DEVICE FOR ROCK BIT
James B. Steen, Fort Worth, Tex., assignor to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 26, 1960, Ser. No. 52,121
9 Claims. (Cl. 175—340)



9. In a rock drill bit having a downwardly extending passage for discharging flushing fluid from the bottom of the bit, a nozzle disposed in the passage for effecting discharge of the fluid from the bit at high velocity, the nozzle being slidably removable through the discharge end of the passage, an internal abutment in the passage abutting the upper end of the nozzle and thereby determining the upward position of the nozzle in the passage, a reduced extension of the nozzle depending from the underside of the nozzle in the passage and projecting through the discharge end of the passage, the reduced extension having a transverse annular shoulder at its upper end, an annular groove in the passage intermediately of the ends of the latter, a contractible split snap ring having an outer part seated in the groove and an inner part abutting the underside of the shoulder whereby the nozzle is blocked from dropping out of the discharge end of the passage, the snap ring having an internal diameter greater than the outer diameter of the extension and being contractible out of the groove to the diameter of the passage upon drawing the free ends of the snap ring toward each other, the snap ring having a pair of radially inturned ears at its free ends, and upon being so contracted the snap ring being movable downward over the extension and through the discharge end of the passage enabling thereby removal of the nozzle from the passage, and the extension projecting out of the passage beyond the bottom end of the bit whereby the distance between the snap ring and the discharge end of the nozzle is extended according to the extent of projection of the nozzle beyond the bottom end of the bit.

3,096,835
BEARING SEAL FOR ROTARY ROCK BITS
William J. Neilson, Whittier, Calif., assignor to Smith Industries International, Inc., Compton, Calif., a corporation of California
Filed Jan. 2, 1962, Ser. No. 163,793
1 Claim. (Cl. 175—371)

A well drilling bit having a body, a journal on the body, a cutter rotatable on the journal, a bearing between the cutter and the journal, means for introducing a lubricant into the bearing, there being opposed substantially parallel frusto-conical races on the body and on the cutter about the journal, said frusto-conical faces sloping angularly with respect to the longitudinal axis of the body, cutter and journal, and a frusto-conical seal disposed between the faces bearing near its outer edge on the face on the cutter and bearing near its inner edge against the face on the body whereby the available annular space defined between the bottom inner edge of the frusto-conical seal abutting the face of the body and the end of the bearing is effectively increased so that the length of the bearing may be increased and ingress of extraneous material from the well bore is effectively prevented.



3,096,836
DRILL BITS AND CUTTING INSERTS THEREFOR
Curt Vilhelm Dahlin, Sandviken, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Filed Apr. 24, 1959, Ser. No. 808,617
1 Claim. (Cl. 175—410)

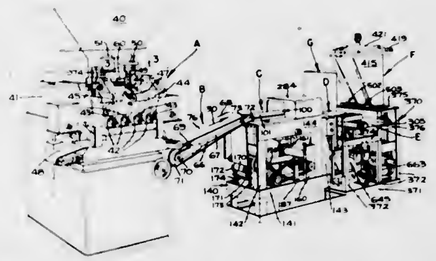


A cutting insert for a drill bit consisting of a body portion and a cutting edge portion, said body portion having a substantially plane bottom surface, substantially plane parallel side surfaces which are substantially perpendicular to said bottom surface, a top surface and end surfaces connecting said bottom, top and side surfaces, said cutting edge portion being in the form of a relatively narrow ridge which extends upwardly from said top surface of said body portion away from said bottom surface, said ridge extending along said top surface of said body portion, the thickness of said body portion between said side surfaces being at least twice the thickness of said ridge in the direction perpendicular to said side surfaces, the thickness of said ridge being within the range from 2 to 5 mm. and being such that a good cutting edge is maintained until said ridge is completely worn down, said ridge having a cutting edge surface opposite to said bottom surface and side surfaces which are substantially perpendicular to said bottom surface and merge through curved surfaces into the top surface of said body portion, the end portions of said ridge being thicker in the direction perpendicular to said side surfaces than the intermediate portion thereof, said end portions being situated between the planes of said side surfaces.

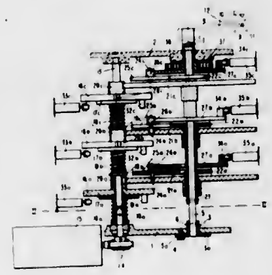
3,096,837
WEIGHT CHECKING AND CORRECTING APPARATUS
John A. Abbott, Menlo Park, Philip R. Bunnelle, San Jose, Thomas E. Roberts, Jr., Saratoga, Herbert B. Brooks, Menlo Park, and William J. Fowler, San Jose, Calif., assignors to FMC Corporation, a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 789,124
8 Claims. (Cl. 177—62)

1. Weight checking and correcting apparatus adapted for use with a dough divider comprising means for con-

tinuously advancing pieces of dough along a path in spaced relation, a weighing device disposed adjacent said path for weighing the pieces of dough in succession, means responsive to said weighing device for producing successive signals, each signal being representative of the weight of one of the successively advancing pieces of dough, a dough discharging mechanism disposed adjacent said path, said mechanism including projecting means selectively operable to cast one or more of a plurality of different relatively small quantities of dough into adhering relation with the pieces of dough, and means responsive to said signals for operating said dough discharging mechanism to add quantities of dough onto pieces of dough weighing less than a prescribed weight, said added quantities of dough being commensurate with the amount individual dough pieces weigh less than the prescribed weight.

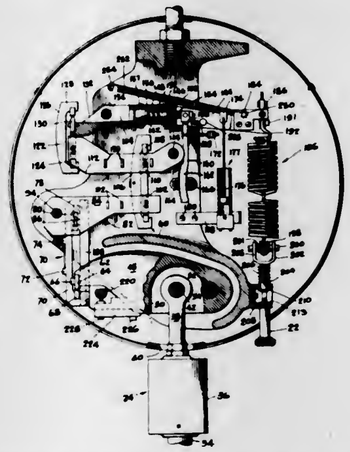


3,096,838
DEVICES FOR PRE-SETTING OF REQUIRED WEIGHTS IN DIALLED WEIGHING MACHINES
Otto Treier, Schwanden, Glarus, Switzerland, assignor to Verwaltungsgesellschaft der Werkzeugmaschinenfabrik, Oerlikon (A.G.), Zurich-Oerlikon, Switzerland
Filed June 27, 1960, Ser. No. 38,897
Claims priority, application Switzerland, June 27, 1959
7 Claims. (Cl. 177—80)



1. In a device for the pre-setting of the required weights in dial weighing machines, having a pointer, an adjusting shaft, and a signalling device comprising an electric light source and a photoelectric cell, the combination of an adjusting arm being secured to said adjusting shaft, said adjusting arm carrying said signalling device, and said signalling device cooperating with said pointer, cooperating coaxial planetary gears being connected in series and driving said adjustment shaft, the number of planetary gears provided corresponding to the number of decimals in the graduation scales of the dial, and said planetary gears being driven by a reversibly driven driving shaft, on which control disks for the respective planetary gears are rotatable, the control disks being connected by a friction clutch to the driving shaft and being respectively provided with pinions which respectively drive the drive gear of the corresponding planetary gears, and the control disks being respectively provided with locking means, which locking means are controlled by an electric control device in such manner that the control disks of the planetary gears are respectively released for carrying out a number of revolutions which corresponds to the adjustment of the required corresponding decimal.

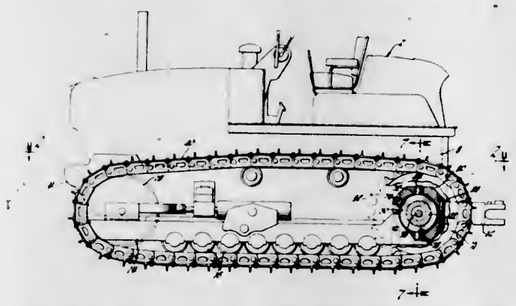
3,096,839
WEIGHING SCALE
Max van Mastrigt, Van Nuys, Calif., assignor to W. C. Dillon & Company, Inc., a corporation of California
Filed Aug. 5, 1959, Ser. No. 831,739
6 Claims. (Cl. 177—156)



2. A weighing scale comprising: a frame; suspension means coupled to said frame; indicating means journaled in said frame; a plurality of levers inter-coupled in series to each other and in coupled pivotable relationship, respectively, to said frame; load carrying means suspended from the first in series of said levers; spring means coupled between said frame and the last in series of said levers, said spring means biasing said last in series of said levers against movement responsive to said load; and, locking means movably coupled to said frame, said locking means including a first portion designed to actuate said first in series of said levers in a load responsive direction, and said locking means including another portion designed for coupling to said last in series of said levers to limit movement of said last in series of said levers in a load responsive direction, whereby said first in series of said levers and said last in series of said levers, as well as the levers inter-coupled therebetween, may be placed in tension.

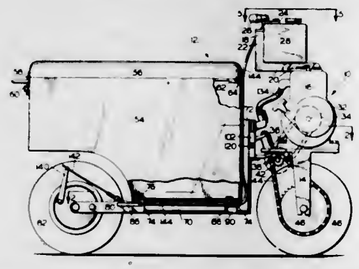
3,096,840
TRACTOR SUSPENSION PERMITTING PIVOTAL MOVEMENT OF TRACK FRAMES
Janis Mazzarins, Northfield, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 25, 1960, Ser. No. 31,775
4 Claims. (Cl. 180—9.5)

1. A suspension for a crawler tractor comprising a main frame, a drive sprocket assembly at each side of said main frame at the rear thereof, each sprocket assembly comprising a housing operatively rigidly secured to one side of said main frame and projecting laterally outwardly therefrom, a sprocket wheel mounted on the outer end of said housing and spaced from said main frame, means for rotatably driving said sprocket wheel, an adapter surrounding and substantially rigidly secured to each of said housings between said main frame and said sprocket wheel, each of said adapters comprising an annular external bearing surface substantially coaxial with the axis of rotation of said sprocket wheel and a pair of oppositely projecting substantially vertically aligned axles, a track roller frame at each side of said main frame, each of said roller frames comprising a yoke including an annular internal bearing surface at the rear end thereof surrounding



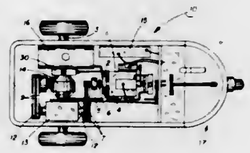
said adapter bearing surface, a pair of oppositely disposed elongate slots in each of said yokes receiving and laterally confining said axles, said slots permitting oscillation of said track roller frames about the axis of rotation of said sprocket wheels and toe-in of said track roller frames about the axis of said axles while preventing lateral shifting movement of said track roller frames on said adapters, and an equalizer bar mechanism pivotally connecting a forward portion of said main frame to a forward portion of each of said track roller frames to maintain the latter in a predetermined spaced relationship.

3,096,841
MOTOR SCOOTER HAVING DETACHABLE POWER TRAILING SECTIONS
Jim May, 12110 SE. Pine, Portland, Oreg.
Filed Mar. 12, 1962, Ser. No. 179,169
4 Claims. (Cl. 180—13)



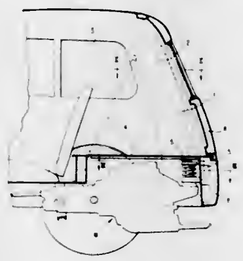
1. A motor scooter comprising a motor section, wheel means on said motor section, spindle means on said motor section, at least one rearwardly extending arm on said spindle means, a channel member carried by said arm, exhaust pipe means on said motor section, a trailing section, wheel means on said trailing section, exhaust pipe means on said trailing section comprising a hollow frame support member for the latter extending longitudinally thereunder and upwardly along the forward end, a plate member on the upwardly extending portion of said hollow frame member adapted for detachable connection in said channel member, and means detachably connecting the exhaust pipe means on said motor section and said trailing section.

3,096,842
DRIVING AND WEIGHT DISTRIBUTION ARRANGEMENT FOR SELF-PROPELLED GOLF CARTS
John C. Westmont, Madison, Wis., assignor to George A. Westmont, Madison, Wis.
Filed Sept. 2, 1959, Ser. No. 837,609
1 Claim. (Cl. 180—54)



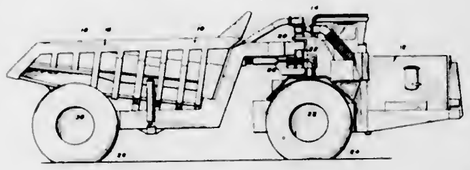
A driving arrangement for a motor vehicle comprising a motor at the measured center line of the vehicle, power transfer means comprising a transmission laterally disposed from the center line of said vehicle and over the driving axle of the vehicle, a fuel tank and a battery, at least one of said fuel tank and said battery disposed laterally opposite said center line from said power transfer means, said transmission counterbalancing at least one of said other laterally disposed members of said vehicle, a differential in said axle, said power flow being characterized by a circuit originating outward laterally, thence rearwardly, thence inward laterally.

3,096,843
REAR-ENGINED MOTOR VEHICLES HAVING AIR-COOLED ENGINES
Dante Giacosa, Turin, Italy, assignor to Fiat Societa per Azioni, Turin, Italy
Filed Jan. 13, 1961, Ser. No. 82,598
Claims priority, application Italy Jan. 13, 1960
2 Claims. (Cl. 180—54)



1. In a rear engine vehicle having a body comprising spaced side walls and a rear loading platform between said walls, a box-section load supporting cross-beam having an opening situated intermediately its ends, said cross-beam extending between the bottom rear portion of said side walls and beneath said loading platform and thereby forming a rear wall of said body, an engine provided with an air suction fan arranged beneath said loading platform and having its rear part supported by said cross-beam, an air duct beneath said platform connecting the opening in the cross-beam with the air suction fan, two lateral tubular pillars extending to the top rear portion of respective side walls and having their lower ends rigidly connected to either end of said cross-beam and having their interiors communicating with the interior of said cross-beam, and an air intake in the upper portion of each lateral pillar.

3,096,844
STEERING AND FOLLOW-UP LINKAGE ASSEMBLY
Richard L. Sittel and Jerry A. Shelton, Tulsa, Okla., assignors to Unit Rig & Equipment Company, Tulsa, Okla., a corporation of Delaware
Filed Apr. 20, 1961, Ser. No. 104,434
11 Claims. (Cl. 180—79.2)



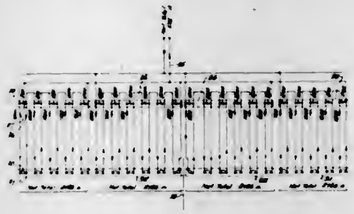
1. In a vehicle comprising a tractor and a trailer, a steering assembly comprising steering means carried by the tractor, a follow-up linkage assembly interposed between the trailer and the steering means, said follow-up linkage assembly comprising a pair of linkage assemblies responsive to turning of the tractor with respect to the trailer by the steering means for restoring normal driving conditions to the vehicle, said follow-up linkage assembly provided with means interposed between the linkage assemblies and disposed on the axis of oscillation of the trailer to isolate any self-steering action due to the oscillation of the tractor.

3,096,845
VEHICLE DOOR LOCKING SYSTEM
John R. Oishei, Buffalo, and Raymond A. Deibel, Cheektowaga, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Apr. 22, 1960, Ser. No. 24,165
10 Claims. (Cl. 180—82)



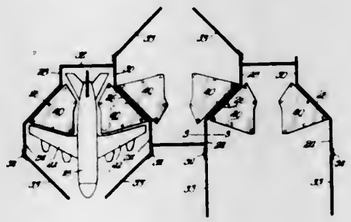
1. A door lock actuating system for an automotive vehicle comprising a plurality of doors in said vehicle, latch locks in each of said doors, motor means coupled to each of said latch locks, a source of fluid pressure in said vehicle, conduit means coupling said motor means to said fluid pressure source, manually actuatable valve means in said conduit means for causing said motor means to communicate with said fluid pressure source to cause said motor means to exert a continuous locking force on said latch locks after said manually actuatable valve means have once been actuated to a locking position and released or for causing said motor means to communicate with said fluid pressure source to cause said motor means to exert a continuous unlocking force on said latch locks after said manually actuatable valve means have once been actuated to an unlocking position and released, and means for maintaining said latch locks in the condition in which they were last placed after said motor means are no longer exerting a force on said latch locks.

3,096,846
METHOD AND APPARATUS FOR SEISMOGRAPHIC EXPLORATION
Carl H. Savit, Van Nuys, and John T. Brustad, Downey, Calif., and Joseph Sider, Poughkeepsie, N.Y., assignors to Western Geophysical Company of America, Los Angeles, Calif., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,170
10 Claims. (Cl. 181—.5)



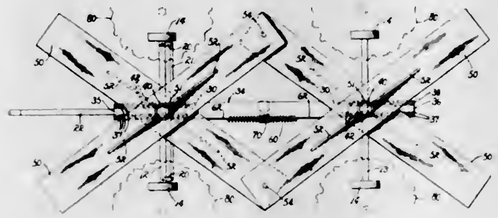
1. In seismology wherein seismic waves are detected at spaced points, said waves having moveouts and resulting from a seismic wave producing disturbance, and in which said detection is carried out to produce outputs, the steps that include establishing for a particular locality a preferred range of moveouts that includes the bulk of said wave moveouts, said establishing step including measuring seismic wave moveouts characteristic of said locality, combining said outputs to produce an output response, and adjusting said outputs to values substantially determined by the mathematical condition that the output response is a least squares best fit to unit response over a first range of reciprocal wave lengths corresponding to said preferred range of moveouts and to zero response over a second range of reciprocal wave lengths corresponding to moveouts outside of said preferred range, thereby to accomplish filtering of the detected seismic waves to accept seismic waves having moveouts within said preferred range and to suppress seismic waves having moveouts outside said preferred range.

3,096,847
ACOUSTICAL BARRIER FENCE
Howard C. Hardy, Northlake, Ill., assignor to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 7, 1960, Ser. No. 74,402
4 Claims. (Cl. 181—33)



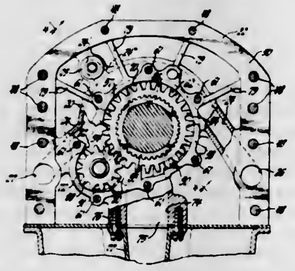
1. A sound barrier and blast deflector fence for suppressing sound energy from an airplane engine and deflecting the blast therefrom upwardly and over said barrier fence, said fence comprising inclined upright walls having impervious surfaces arranged in hexagonal shape so as to closely follow the outline of an airplane to diffract the sound and deflect the blast from said airplane upwardly, the inclination of the fence and arrangement of same in close proximity to the airplane causing the surface of the airplane to conjointly act with the fence in attenuating the sound.

3,096,848
MOBILE EXTENSIBLE SCAFFOLD
Kazuo Hiyama and Howard K. Hiyama, both of 8184 E. Adams, Fowler, Calif.
Filed Sept. 8, 1961, Ser. No. 136,785
12 Claims. (Cl. 182—131)



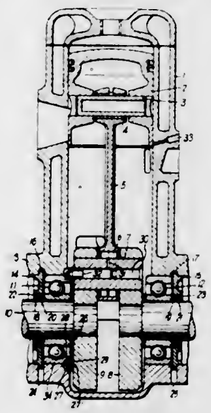
5. A scaffold comprising a mobile, longitudinally extending base; a pair of longitudinally spaced piston-cylinder assemblies mounted on the base and adapted for extension and retraction in a vertical plane; power means for effecting such extension and retraction; an auxiliary frame carried on said assemblies, said frame having longitudinally spaced end portions provided with stabilizing means; a pair of longitudinally spaced king bolts; means slidably connecting said king bolts to said stabilizing means; a pair of longitudinally spaced horizontally disposed laterally folding platforms mounted on said frame, each pair comprising two separate elongated sections of predetermined lengths defined by end portions, said sections being pivotally interconnected at a point intermediate their respective end portions for movement between a laterally retracted position wherein one of said sections of each pair substantially overlies the other section and an extended position wherein the end portions of the respective sections of each pair are spaced in a substantially common horizontal plane; pivot pins connecting the adjacent end portions of said spaced pairs of platforms; and means to move said king bolts toward and away from each other to effect retraction and extension of said platforms.

3,096,849
GEAR PUMP FOR INTERNAL COMBUSTION ENGINE AND THE LIKE
Albin Chaplin, Detroit, and Virgin C. Reddy, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 24, 1960, Ser. No. 17,402
12 Claims. (Cl. 184—6)



12. In an internal combustion engine having a crankcase member rotatably supporting a crankshaft and defining an opening at one end of said engine and having an oil distribution passage extending transversely between alternate inlet ports opening on opposite sides of said one end: a gear pump comprising a housing secured to and closing the open end of said crankcase member and defining an ovate pumping chamber disposed obliquely to said crankcase opening, said pumping chamber having two spaced and opposed cylindrical surfaces of substantially different radial dimension, the larger of said cylindrical surfaces being concentric with said crankshaft and said housing having aligned bores therethrough embracing the adjacent end of said crankshaft, a first impeller gear drivingly secured to said crankshaft within said pumping chamber, a second impeller gear journaled within the pumping chamber in spaced parallel relation to the crankshaft rotative axis, said impeller gears having fluid pumping gear tooth engagement and rotative sealing clearances with the pump chamber defining surfaces and cooperating with the pump chamber to define inlet and discharge chambers on opposite sides of said gear engagement, said inlet chamber being connected to the oil sump of the engine, and passage means extending transversely of said housing between said discharge chamber and alternate pressure inlet ports of said crankcase member and defining an arch partially embracing and reinforcing the pressure discharge side of the pumping chamber.

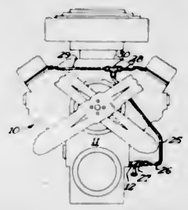
3,096,850
DEVICE FOR LUBRICATING CRANKSHAFT AND CONNECTING ROD BEARINGS BY MEANS OF A FORCED-FEED LUBRICATOR
Nils Kaj Gunnar Rosenqvist, Trollhattan, Sweden, assignor to Svenska Aeroplan Aktiebolaget, Trollhattan, Sweden, a corporation of Sweden
Filed Feb. 15, 1961, Ser. No. 89,470
Claims priority, application Sweden Feb. 15, 1960
2 Claims. (Cl. 184—6)



1. In a lubricating system for reciprocating machines, the combination comprising a frame having a piston cylinder, a pair of bearing seats formed in the frame, a crankshaft having a hollow crankpin and two main bearing seats, a pair of main antifriction crankshaft bearings having outer races located in said frame bearing seats and inner races mounted on said crankshafts seats, ducts in said frame communicating with said bearing seats to supply lubricant to said crankshaft bearings, an antifriction bearing mounted on the crankpin, a piston located in the cylinder, a connecting rod having a portion surrounding the crankpin bearing, sealing means on the sides of said crankshaft bearings remote from the crank of said crankshaft, a lubricant collecting ring on one side of said crank having a perpheral edge directed radially inwards toward the axis of said crankshaft and a spout opening into said hollow crankpin whereby lubricant from the corresponding crankshaft bearing is transmitted to said crankpin antifriction bearing, a peripheral groove in the outer race of the crankshaft bearing near said collecting ring, an outwardly radially expanding sealing ring dis-

posed in said groove, said sealing ring bearing on said inwardly directed peripheral edge of said lubricant collecting ring.

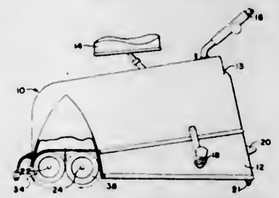
3,096,851
ENGINE ATTACHMENT FOR VALVE GEAR LUBRICATION
Donald W. Johnson, Minneapolis, Minn., assignor to Thexton Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed June 20, 1961, Ser. No. 118,449
2 Claims. (Cl. 184—6)



1. In combination with an automotive V-8 engine having an engine block with a pair of transversely inclined cylinder heads thereon, each of the heads including a flat sloping upper surface having a lower transverse portion with an oil return port therein, and also having an upper transverse portion, a stationary hollow rocker arm mounting shaft affixed to the flat sloping surface of each head, a plurality of rocker arms on the shaft, the shaft having means for applying oil from the interior thereof to the exterior thereof for lubricating said rocker arms, said shaft also having an oil overflow discharge means connected thereto so as to spill oil from the interior of the shaft onto the sloping surface from which the oil flows into said return port, and a cover secured to each head so as to enclose the sloping surface thereof, the rocker arms and mounting shaft, a gasket between each of said covers and its respective flat sloping surface, said block also having an oil supply port therein for supplying oil under pressure, an attachment connected to said engine comprising an elongated tube means disposed at the exterior of said block and head and having a supply end, said tube means being branched to provide a pair of discharge ends, means connecting said supply end of said tube means with said oil supply port in the engine block, a pair of fluid connectors each applied onto the end of the hollow interior of a respective shaft, and in tight fitting frictional relation with said shaft, each of said connectors having an oil passage therein, each passage having an inner end communicating with the hollow interior of the shaft and also having an outer end, each of the discharge ends of the tube means being affixed in the outer end of the passage in a respective connector, each of said discharge ends of each tube means passing over the upper transverse portion of one of the respective flat sloping surfaces of one of said cylinder heads and extending under said gasket and an edge portion of said cover whereby to supply oil to the interior of said shaft for lubricating the rocker arms, each of said discharge ends being flattened whereby it extends under said cover so as not to separate the edge of said cover from said flat sloping surface more than the thickness of said gasket.

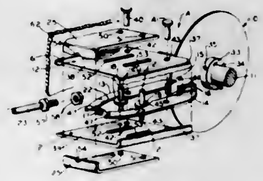
3,096,852
WHEEL MOUNTING MEANS
Richard J. Harwood, 1 Hawthorne, Wichita, Kans.
Filed Sept. 26, 1960, Ser. No. 58,414
7 Claims. (Cl. 188—1)

1. A wheel mounted portable riding article comprising, in combination, an integrally formed elongated base of plastic material, superstructure mounted thereon for supporting a human being, hand hold means for lifting the front end portion of said base, a pair of spaced rubber feet fixedly mounted on said front end portion of said base, two stationary axles disposed in parallel spaced relation, two spaced reinforcing and spacing members extending between and rigidly secured to end portions of said axles, said reinforcing and spacing members being secured to the lower surface of said base at the rear thereof, four wheels of like size, each end portion of each of said axles receiving one of said wheels for rotation thereon, said wheels at like end portions of said axles being in tangential



frictional engagement at all times with each of said wheels being engageable with a common supporting surface when said article is at rest, said article being constructed and adapted so that when said wheels are resting on a common surface forward or rearward movement of said wheels and said article will be prevented due to the frictional engagement between said wheels, and said article can be moved by lifting said base by said hand hold means and said wheels on one of said axles from the surface so that only said wheels on the other of said axles will be in engagement with the surface.

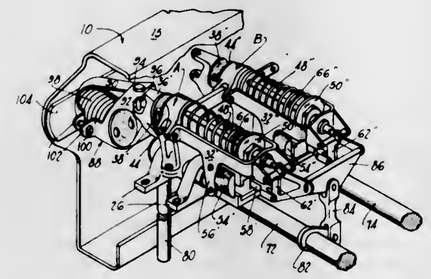
3,096,853
SIMPLIFIED DISC BRAKE AND AUTOMOTIVE VEHICLE
Orrin E. Farrand, San Jose, Calif., assignor to Michael O. Farrand, San Jose, Calif.
Filed June 1, 1961, Ser. No. 114,049
3 Claims. (Cl. 188—18)



1. A disc brake mechanism for a small automotive vehicle of the "kart" type having a frame, an axle journaled on the frame and secured co-axially to a support wheel mounted thereon; said brake mechanism comprising a strong, metal braking disc secured co-axially to the axle and spaced axially thereof from the frame, a U-shaped brake housing of metal plate material welded along its ends to the frame and with an open side thereof radially adjacent an edge of the disc, a pair of brake lever arms mounted interiorly of the housing and pivotally connected thereto, an end portion of each brake arm extending beyond the housing and over a marginal portion of the disc, a brake block secured to the extending end portion of each brake arm and facing an opposite side of the disc from the other, said brake arms being pivotally movable to swing the brake blocks into and out of engagement with opposite sides of the disc, spring means pivotally urging the brake arms in directions to separate the brake blocks from the disc, a cam face on each brake arm, a pair of cam follower rollers mounted in the housing and in rolling engagement with the cam faces on the brake

arms, a co-axial shaft portion on each cam follower roller riding in guided relation in a longitudinally slotted opening provided therefor in the housing, and means operatively engaging said shaft portions for moving the cam follower rollers in rolling engagement along the cam faces of the brake arms to thereby pivotally urge the brake arms in directions to move the brake blocks thereon into braking engagement with opposite sides of the disc.

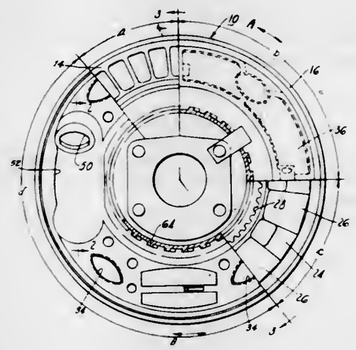
3,096,854
BRAKE SYSTEM FOR RAIL VEHICLES
Robert A. Price and Lyle E. Massing, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Sept. 25, 1961, Ser. No. 140,404
8 Claims. (Cl. 188—42)



1. The combination of a brake system and rail suspended vehicle comprising: a vehicle frame, a vehicle supporting rail having a brake engaging web, a rod-like support member secured to said vehicle frame and having a longitudinally extending axis arranged substantially normal to said brake engaging web, a brake carrier member slidably mounted on said rod-like support member and including first and second portions extending adjacent opposed sides of said web, a first friction surface secured to said first portion of said brake carrier proximate one side of said web and movable into and out of frictional engagement therewith with movement of said brake carrier, a movable brake actuating member slidably mounted in said second portion, said brake actuating member including a second friction surface secured thereto arranged proximate the other side of said web in opposed relation to said first friction surface, a spring member confined between said movable brake actuating member on one end and said carrier member on another end to urge said members in opposed directions to normally engage said first and second friction surface with said web, and solenoid means mounted on said carrier operative to compress said spring member and release said friction surfaces from engagement with said web when an actuating electrical signal is applied.

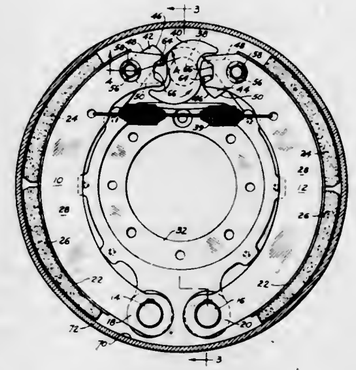
3,096,855
DISK BRAKE
Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Original application Jan. 13, 1954, Ser. No. 403,672, now Patent No. 2,955,681, dated Oct. 11, 1960. Divided and this application Aug. 8, 1960, Ser. No. 48,160
2 Claims. (Cl. 188—72)

1. A disk brake comprising an axially movable U-shaped cross section member having splined connection with a nonrotatable member resisting in one direction relative circumferential movement therebetween, a pressure plate having splined connection with a nonrotatable member resisting in opposite direction relative circumferential movement therebetween, and a splined driven rotor received between the spaced sides of said member



and engageable with said pressure plate, the torque reaction thereof being transmitted through the splined connection of said U-shaped cross section member, or said pressure plate depending upon the direction of movement of said rotor.

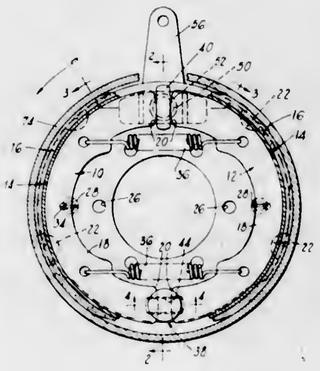
3,096,856
"S" CAM BRAKE WITH SEGMENTED CAM FOLLOWER
Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 19, 1959, Ser. No. 854,145
5 Claims. (Cl. 188—78)



1. A brake comprising a rotatable drum, two arcuate brake shoes each having a friction material lined rim and a transverse strengthening web, a return spring stretched between adjacent actuatable ends of said shoes to effect retraction thereof, an S cam disposed between the adjacent actuatable ends of said shoes for spreading the two shoes apart and applying the shoes frictionally against said drum, a cam follower between each of said shoes and said S cam and having an arcuate outer face in rolling engagement with said S cam and movable outwardly thereby, means forming a V-shaped recess in each of said cam

followers and providing at the innermost end thereof an arcuate bearing surface of substantially less radius than that of said arcuate outer face, force transmitting means connected with each of said shoes and of complementary curvature in relation to said bearing surface of said followers engaging with a respective arcuate bearing surface of one of said cam followers to transmit spreading force to the brake shoes, and abutment means forming a part of each of said cam followers and disposed within a notch in a respective one of said shoes to limit pivotal movement of said cam followers.

3,096,857
BRAKE
Edward K. Dombeck, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Apr. 27, 1961, Ser. No. 106,112
1 Claim. (Cl. 188—78)



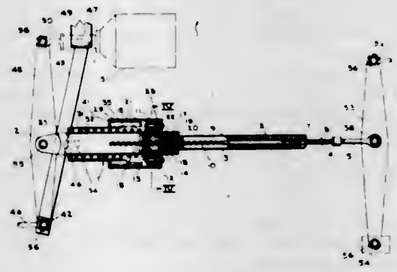
A brake comprising a pair of arcuate T-section brake shoes having a lined rim and a transverse strengthening web, each of said shoe webs having convexly shaped ends, a support plate for guiding shoe movement and providing spaced ledges which slidingly engage the edges of the rims of said shoes to support said shoes in their radial movement, two diametrically disposed hold-down springs each having a small diametered portion extending through an opening in the backing plate and stretched to extend into hooking relation with a respective one of said shoes and thereby bias said shoes laterally against said support plate, each of said springs having a plurality of coils which bear against said support plate and are proportioned to surround their backing plate opening without being pulled through said backing plate opening, actuating means for spreading said shoes and comprising a cam disposed between and acting against adjacent ends of said webs to effect their application, a camshaft having an enlarged diameter boss formed integrally therewith and limiting lateral movement of said camshaft in one direction through an opening in said backing plate, bearing means axially spaced from and rigidly connected to said support plate, said camshaft being so disposed to bear on said bearing means and the edges of its respective support plate opening during actuation of said shaft, lever means attached to said shaft for actuating the same, an anchor disposed between the other adjacent ends of said shoes and comprising a cylindrical member having a rectangular boss received through a companion opening of said support and rigidly connected to said support with the major dimension of said boss disposed collinearly with the direction of anchoring force acting against said anchor, and means forming two recesses of said anchor at opposite sides thereof and receiving the other rounded or convex ends of the webs of two of said shoes which thereby both anchor and slide within said recesses.

3,096,858
SHAFT LOCK
David Hoppenstand, Miami Beach, Fla., assignor to Transport Industries, Inc., Albion, Pa., a corporation of Pennsylvania
Filed Oct. 25, 1960, Ser. No. 64,967
7 Claims. (Cl. 188—82.7)



1. Shaft locking apparatus comprising a threaded shaft, a shell surrounding the shaft and providing clearance therefor, a plurality of pawls pivotally mounted on the shell and distributed about the shaft, each pawl having a dimension axially of the shaft not greater than the corresponding distance between adjacent threads, means rotatably movable about the shaft with respect to the shell, and separate spring means connected between each pawl and the movable means whereby rotation of the movable means pulls anyone of said pawls yieldingly into a space between adjacent threads when said pawl overlies said space.

3,096,859
DOUBLE ACTING SLACK ADJUSTER
Lewis M. Showers, Jr., 104 E. Essex Ave., Lansdowne, Pa., and Charles T. Biscardi, E. Mill Road, Maple Shade, N.J.
Filed Aug. 13, 1962, Ser. No. 216,557
3 Claims. (Cl. 188—196)



1. A double acting slack adjuster for a brake linkage to resist tension loads, in combination, a brake adjusting rod having a removable jaw on one end and a multiple thread on the other end, a take-up spring and washer surrounding said rod, a longitudinal keyway at said jaw end of said rod, a ratchet spin-nut threaded on said rod, antifriction bearings supporting said ratchet spin-nut, a ratchet spin-nut housing having a jaw at one end, a take-up spring housing removably attached to the other end of said spin-nut housing, a key in said take-up spring housing slidably matching said keyway in said brake adjusting rod, a dished

washer between said antifriction bearing and the other end of said take-up spring housing, a plurality of ratchet dogs pivotally mounted on the ratchet spin-nut housing and alternately engageable with said ratchet spin-nut, a command finger return spring housing slidably mounted on said ratchet spin-nut housing, a plurality of oppositely acting ratchet dog command fingers secured to said command finger return spring housing for alternately engaging and disengaging said ratchet dogs, a ratchet cover for said ratchet dogs having springs biasing the ratchet dogs into engagement with the ratchet spin-nut, a command trigger secured to said cam finger return spring housing, a command lever adapted to be secured to the brake linkage and engageable with the command trigger for actuation of the command finger return spring housing during normal and overtravel brake applications.

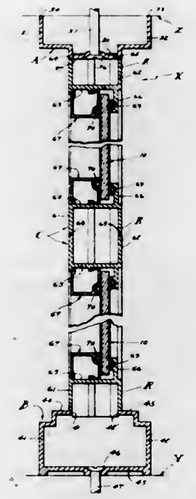
3,096,860
CRIB STRUCTURE
Leo Sokol, Columbus, Nebr.
Filed Dec. 9, 1960, Ser. No. 74,882
2 Claims. (Cl. 189—3)



1. In a crib, a generally cylindrical wall portion embodying a plurality of similar interlocking interfitted panels, each of said panels comprising a plurality of horizontally disposed spaced parallel cross members, each of said cross members including a main body portion of arcuate formation, each cross member further including transverse end portions which are arranged angularly with respect to said main body portion, the transverse end portions of each cross member extending in opposite directions with respect to each other, the junction between the transverse end portions and the main body portions defining shoulders, the shoulders of each panel being arranged in alignment with respect to each other, and wherein when the panels are interfitted together, the shoulders on one panel will be in opposed relation with respect to the shoulders of an adjacent interfitting panel, vertically disposed rods extending through the spaces defined between opposed shoulders; first and second vertically disposed strands arranged on opposite sides of the shoulders and said strands being secured to said transverse end portions and to said main body portions, and a plurality of vertically disposed elements secured to said main body portions, one set of vertically disposed shoulder strands being on the outside of a panel and the other on its inner side, and wherein when the panels are interfitted, the first and second strands of one panel will abut the second and first strands respectively of an adjacent panel.

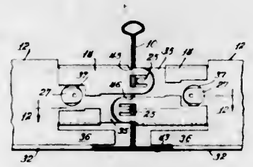
3,096,861
PREFABRICATED PARTITION WITH INTERLOCKED RAILS AND STUDS
Chester A. Frick, Burbank, and Robert M. Langmack, Redondo Beach, Calif., assignors to Harvey Aluminum (Incorporated), Torrance, Calif., a corporation of California
Filed Aug. 28, 1959, Ser. No. 836,718
8 Claims. (Cl. 189—34)

1. A partition frame of the character described and adapted to receive a panel and including, fixedly spaced and parallel upper and lower rails and each with spaced side walls having coplanar edges and forming a channel therebetween, and spaced and parallel studs for erection between the rails with flat opposite ends engaged with the coplanar edges of the rails, said studs having tenons



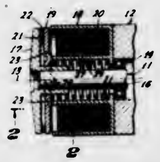
projecting from the ends thereof and with flat faces slidably engaged between the walls of the rails.

3,096,862
CEILING SUSPENSION SYSTEM WITH DOUBLE LOCKING CLIP
Burl O. Purdy, Bensenville, Ill., assignor to W. J. Haertel & Co., Melrose Park, Ill., a corporation of Illinois
Filed Sept. 7, 1960, Ser. No. 54,506
21 Claims. (Cl. 189—36)



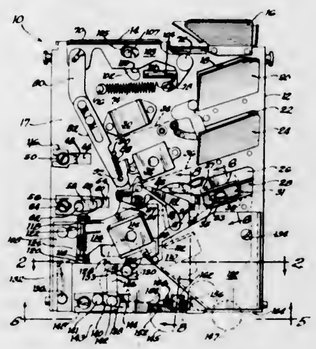
5. A ceiling suspension structure comprising: a longitudinal support member having a web and a pair of flanges normal thereto, said web having vertically aligned slots therein; a pair of transverse support members each having a web and a pair of flanges normal thereto, each of said webs having a first extended portion extending beyond the flanges to be supported by said longitudinal support member, and a second extended portion extending beyond the flanges; and a detachable double locking clip on each of said second extended portions of said transverse support members, said clips being insertable in the vertically aligned slots in the web of said longitudinal support member, to align the webs of the transverse support members on opposite sides of the web of the longitudinal support member, said clips locking each transverse support member to the longitudinal support member and interlocking each transverse support member to each other transverse support member aligned on the opposite side of the web of the longitudinal support member.

3,096,863
CLUTCH OR BRAKE EMPLOYING CAM ACTION
Robert A. Shefke, Los Angeles, Calif., assignor to American Electronics, Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 28, 1959, Ser. No. 849,231
2 Claims. (Cl. 192—90)



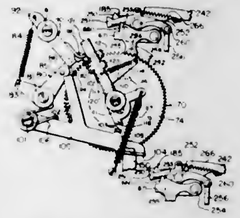
1. Means for clutching together two members and comprising: a pair of members mounted for rotation relative to each other, one of said members comprising a shaft disposed on the axis of relative rotation, the other member comprising an annular member coaxially circumjacent said shaft, disc means secured to said shaft, a first cam member fixedly mounted with respect to said annular member, said disc means and first cam member being fixed against relative axial movement, a second cam member in the form of a clutching plate disposed between said disc means and said first cam member and mounted for limited rotative and axial movement with respect to said first cam member, one of said cam members having a plurality of sloped protuberances, and the other of said cam members having a corresponding plurality of sloped recesses receiving said protuberances, said protuberances and recess being substantially equi-angularly spaced around said axis, and means for selectively moving said clutching plate toward and away from said disc means into selective clutching engagement and disengagement with respect thereto.

3,096,864
COIN SELECTOR DEVICE
William A. Patzer, Chicago, Ill., assignor, by mesne assignments, to Reed Electromech Corporation, Rockford, Ill., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 695,090
4 Claims. (Cl. 194—102)



1. A coin testing and separating device comprising in combination a housing, said housing having coin inlet and outlet openings and runways to permit the passage of coins therethrough, a first runway in said housing carrying both pennies and dimes, means for separating genuine dimes from spurious dimes and pennies on their composition independently of their paramagnetic properties, said means retarding the speed of the coins on said one runway to an extent dependent on their composition, means in spaced relation to the exit of said first runway and positioned to permit genuine dimes moving at predetermined speeds to follow one path while defective and spurious dimes and pennies moving at different speeds are caused to follow a different path, a second runway positioned so it is part of the path followed by the defective and spurious dimes and pennies, said second runway downwardly and oppositely inclined with respect to said first runway with the exit of said first runway in vertically spaced relation to the entrance of said second runway, and means on said second runway for separating the spurious and defective dimes from pennies on the basis of their size.

3,096,865
TYPEWRITER ESCAPEMENT MECHANISM
James F. Smathers, P.O. Box 1016, Poughkeepsie, N.Y.
Filed Nov. 28, 1961, Ser. No. 155,382
9 Claims. (Cl. 197—84)



1. A device for varying the movement of a typewriter carriage in accordance with the character key which is actuated, comprising drive means operatively connected to said carriage for moving said carriage in a letter-feed direction, a driven member operatively connected to said carriage, a stop pawl pivotally mounted adjacent said driven member and normally engaging said driven member for arresting movement of said carriage, a latch member pivotally mounted in spaced relation to said stop pawl for engaging and holding said stop pawl when it is moved into a position disengaged from said driven member to release said carriage, a plurality of stops arranged adjacent said driven member in spaced relation to said stop pawl and selectively actuated in accordance with the character key which is actuated for establishing the movement of said carriage in said letter-feed direction, a control pawl having a radial slot for mounting said control pawl with respect to the axis of rotation of said driven member for radial and oscillatory movement, said control pawl normally engaging said driven member and adapted to be disengaged from said driven member for movement in a direction opposite to said letter-feed direction independently of said driven member to engage said driven member in a predetermined relation to the disengaged point for movement with said driven member in said letter-fed direction, a control member pivotally mounted with respect to the axis of said driven member and operatively coupled to said control pawl, said control member holding said control pawl disengaged from said driven member and being moved in the direction opposite to said letter-feed direction with said control pawl for engaging the selected stop and releasing said control pawl to engage said driven member and being movable in said letter-feed direction with said control pawl for engaging said latch member to release said stop pawl, resilient means operatively connected to said control pawl for moving said control pawl and said control member as a unit in the direction opposite to said letter-feed direction, when said control pawl is released from said driven member, so said control member engages the selected stop and said control pawl engages said driven member before said carriage movement is commenced, and means responsive to the character key which is actuated for releasing said stop pawl from said driven member and said control pawl from said driven member to initiate a predetermined carriage movement in said letter-feed direction.

3,096,866
COLLAPSIBLE FURNITURE
Henry P. Glass, 245 Dickens, Northfield, Ill.
Filed Feb. 3, 1961, Ser. No. 86,926
16 Claims. (Cl. 297—159)



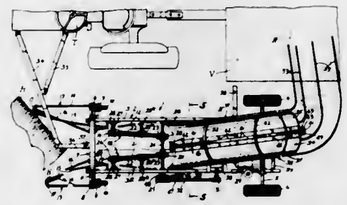
1. A collapsible table and bench assembly comprising a one-piece table top, a plurality of supporting legs, rigid brace means pivotally connected to each of said legs remote from said table top and interconnecting said legs, a plurality of over-center connecting links having one end pivotally connected to said table top and the other end pivotally connected to one end of a respective one of said legs and movable between a first position against the bottom of said table top with said one end of said legs being positioned against the bottom of said table top and a second position against the bottom of said table top with said one end of said legs being positioned outwardly of said first position against the bottom of said table top, said legs being swingable between a first position corresponding to the first-mentioned first position and longitudinally against the bottom of said table top to a second position corresponding to the first-mentioned second position and supporting said table, and one-piece seat means telescopically positionable relative to said table top outwardly thereof when said legs are in their said first position and operatively associated with said legs intermediate the length of said legs to move downwardly relative to said table top when said legs are in their said second position.

3,096,867
CORRECTION OF TYPED ERRORS ON CARBON COPIES
Irene Dorsey Kuhlman, 121 S. Osage, Sedalia, Mo.
Filed June 25, 1962, Ser. No. 204,713
3 Claims. (Cl. 197—181)



1. In combination, a sheet of carbon paper having a marking surface and a rear surface, and a blockout correction tape having tabs at the longitudinal ends and a masking ink formulation on one surface thereof, said tape being attached to the rear surface of said carbon paper adjacent to and in parallel relationship with one edge of said carbon paper, said one surface facing in a direction opposite from said marking surface.

3,096,868
HAY BALE PICK-UP AND CONVEYOR IMPLEMENT
Edward D. Hendrikson, St. Paul, and Joseph P. Logas, Buffalo, Minn.; said Hendrikson assignor of two-sixths to Maxine Wilson Lopp, Grand Rapids, Minn.
Filed Sept. 13, 1961, Ser. No. 137,827
5 Claims. (Cl. 198—9)

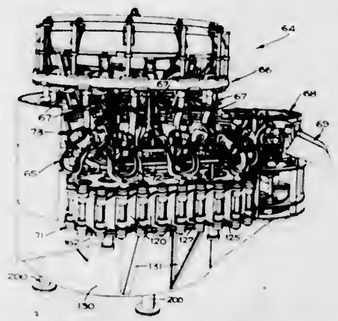


1. A hay bale pick-up and conveyor implement for use in connection with and to be propelled by a powered vehicle such as a tractor, said implement comprising a rigid frame, suitable carriage means secured to said frame so as to adapt said implement for movement generally in the direction of the longitudinal axis thereof, laterally outwardly and forwardly diverging members secured generally at the front of said implement frame and arranged so as to form a collecting and funneling mouth for engaging hay bales randomly scattered on the ground in the path of travel of said implement and for arranging said collected hay bales with their longitudinal axes generally parallel to the longitudinal axis of said implement and orientating the same toward the rear of said funneling mouth, endless and adjustable generally longitudinally extending V-belt means carried by said implement frame adjacent to but rearwardly of said funneling mouth, the forward portion of said V-belt means being disposed adjacent the ground and adapted to engage said relatively rearwardly moving hay bales, means mounting and guiding said V-belt means for circulatory movement thereof so as to lift the hay bales engaged by said forward portion of said V-belt means from their ground-supported position and move said bales in a generally rearward direction to another position wherein said lifted hay bales are supported by said V-belt means in spaced relationship to the ground, and power means for imparting said circulatory movement to said V-belt means.

3,096,869
FRUIT FEEDING MECHANISM
Sherman H. Creed and Sandor Csimma, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Original application Nov. 30, 1956, Ser. No. 625,368, now Patent No. 2,979,093, dated Apr. 11, 1961. Divided and this application Feb. 20, 1961, Ser. No. 90,250
15 Claims. (Cl. 198—33)

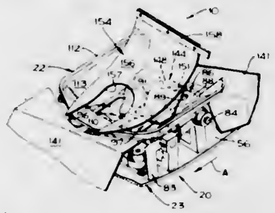
1. In a fruit preparation machine, a support member; cam means mounted on said support member; and a plurality of fruit feed cups mounted on said support member for movement along a predetermined path, each feed cup comprising a rigid body portion mounted on said support member, a pair of jaws pivotally mounted on said body portion, means interconnecting said jaws for simultaneous pivoting movement, a cam follower operatively connected to one of said jaws and disposed in engagement with said cam means for pivoting said jaws at predetermined points along the path of movement of said cups, a latch detent

on one of said jaws, a latching arm pivotally mounted on said cup body portion, means defining a latching recess on said arm, and spring means connected between said



arm and said body portion to urge said arm in a direction to move said recess into engagement with said latch detent as said jaws are pivoted to an open position.

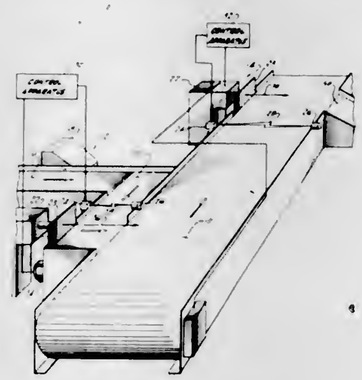
3,096,870
FRUIT PREPARATION MACHINE
Andrew H. Miller, Los Gatos, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Feb. 15, 1962, Ser. No. 173,489
6 Claims. (Cl. 198—33)



1. In a pear orienting and feeding apparatus, an orienting mechanism, a plurality of pear engaging means in said orienting mechanism adapted to support a pear, means connected to said pear engaging means for driving said means in directions which will cause the pear to become oriented with its stem blossom axis disposed in a predetermined position, one of said pear engaging means being driven in a direction which tends to move the pear out of said orienting mechanism along a predetermined path, and an arresting unit disposed in said predetermined path and having an abutment section for contacting and camming upwardly any pear which tends to be driven out of said orienting mechanism by said one pear engaging means whereby the frictional engagement between the pear and said one pear engaging means is reduced and the movement of said pear outwardly of said orienting mechanism is terminated.

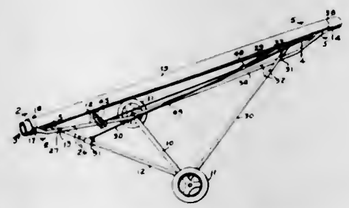
3,096,871
CENTERING CONTROL
Gilbert G. Anderson, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Dec. 16, 1960, Ser. No. 76,376
3 Claims. (Cl. 198—34)

1. A device for centering an object with respect to a reference line comprising means for moving said object at a predetermined velocity in a direction towards and transverse to said reference line, a photocell and light beam defining a second reference line parallel to and upstream from said first reference line, resistance capacitance means chargeable towards a predetermined value when the leading edge of said object crosses said second reference line, said resistance capacitance means chargeable at a predetermined rate until said object passes said second reference line and chargeable at double said predetermined rate after said object has passed said



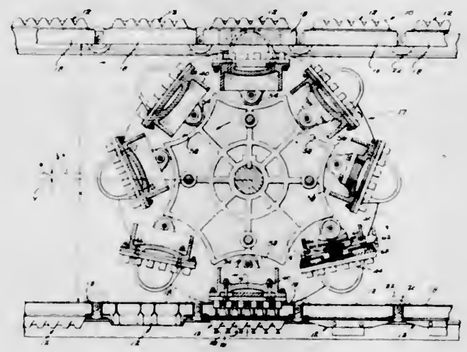
second reference line, means for indicating the alignment of the center of said object with said first reference line operable responsive to the charging of said resistance capacitance means to said predetermined value, said predetermined rate being determined by the distance between said reference lines and the velocity of said moving means.

3,096,872
CARRIAGE FOR ELEVATORS
Martin Mayrath, 10707 Lennox Lane, Dallas, Tex.
Filed June 21, 1961, Ser. No. 118,646
9 Claims. (Cl. 198—120.5)



1. A carriage for conveyors and like mechanisms comprising a wheeled axle assembly, a pair of radius rods connected at one end to said axle assembly, a pair of supporting arms connected at one end to said axle assembly and projecting therefrom at the side opposite said radius rods, said radius rods converging from said axle assembly and crossing at a point spaced from the other ends thereof, said supporting arms converging from said axle assembly and crossing at a point spaced from their other ends, said radius rods and said supporting arms having openings punched therethrough in corresponding pairs adapted to be brought into registration selectively to predetermine the distance between said other ends of said radius rods and said supporting arms, and single fastening elements passing through alined openings in said radius rods and said supporting arms, said other ends of said radius rods and said supporting arms having means for supporting with respect thereto a selected mechanism.

3,096,873
CONTINUOUSLY-OPERATING MOLDED ARTICLE-REMOVING MEANS FOR DRYING FORMS
Roland A. Tousignant, Wilbraham, and Harold S. Crane, Palmer, Mass., assignors to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 26, 1962, Ser. No. 190,298
7 Claims. (Cl. 198—185)



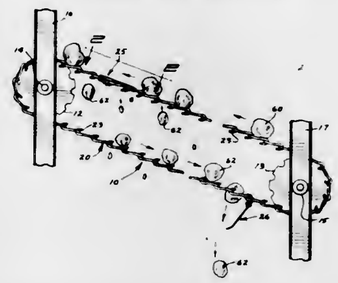
1. Apparatus for continuously removing molded pulp articles from drying forms comprising in combination endless conveyor means including opposed conveyor runs, a plurality of spaced drying forms for molded pulp articles spaced longitudinally along said conveyor means, said drying forms including normally retracted, extendable portions for removing a molded pulp article therefrom, and means for engaging said normally retracted, extendable portions to extend the same for removing a molded article disposed on said drying forms, said last mentioned means comprising a member mounted on an axis of rotation disposed between said opposed conveyor runs substantially closer to one of said runs than the other run, the one conveyor run and said support member being continuously movable in a common direction with the drying forms said member including abutment portions having substantially the same linear speed as said one conveyor run for operating said normally retracted, extendable portions.

3,096,874
BELT SUPPORTING ROLLERS FOR ENDLESS BELT CONVEYORS
Lawson Clarence Wooldridge, Stourbridge, England, assignor to Brockway Engineering Co. Limited, Stourbridge, England, a company of the United Kingdom of Great Britain and Northern Ireland
Filed Feb. 8, 1961, Ser. No. 87,900
Claims priority, application Great Britain Jan. 6, 1961
6 Claims. (Cl. 198—192)



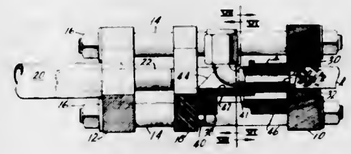
6. A roller set for a trough conveyor belt, comprising an intermediate roller and wing rollers, a stationary spindle for the intermediate roller supported at both ends in horizontal position and cut out at both ends to present vertical flat side faces and adjacent shoulders, and a wing spindle reduced at one end to present a vertical flat side face and an overhanging shoulder inclined with respect to the axis of the spindle, the said spindles being pivotally connected with their flat faces in face-to-face contact, and the inclined shoulder of the wing spindle engaged with the shoulder of the intermediate roller spindle.

3,096,875
TRAP STRUCTURE FOR LINK BELT
Rudolph Olson, Franklin, Minn., assignor to Dahlman Manufacturing & Sales, Inc., Braham, Minn., a corporation of Minnesota
Filed July 6, 1960, Ser. No. 41,171
1 Claim. (Cl. 198—195)



An endless link belt of uniformly spaced parallel cross bars containing a self releasing trap structure having in combination, adjacent cross bars of a certain pair of links of said belt being respectively offset oppositely of one another in the plane of the top run of said belt forming a wider spacing therebetween than is present between the adjacent cross bars of the remainder of links of said belt, a plate member having a length substantially the width of said link belt and a width substantially that of said wider spacing, a lengthwise edge portion of said plate member being reversely bent to form an open-sided channel receiving therein one of said offset cross bars, a pair of spaced brackets removably secured to said plate member and having upstanding portions overlying portions of said open side of said channel removably securing said cross bar therein, the opposite edge portion of said plate member being bent slightly out of the plane of said plate member to overlie the other of said offset cross bars having said inclined edge portion disposed below the plane of the top run of said belt.

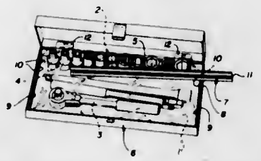
3,096,876
PORTABLE SWAGING DEVICE
William Arthur Scudieri, Hazardville, Conn., assignor, by mesne assignments, to Atlas Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 78,071
7 Claims. (Cl. 205—4)



1. A swaging device comprising a base plate, a frame plate, a plurality of posts mounting said plates in parallel, spaced relation, a pressure plate slidably mounted on said posts between said frame and base plates, die means mounted in said base plate with the entrance thereto facing said pressure plate, means including a pressure member on said pressure plate for aligning a fitting with said die means, said frame plate and said pressure plate having aligned slots opening on one side

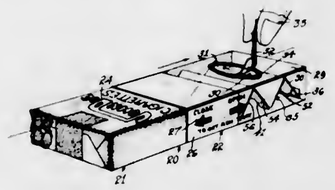
of said plates and extending beyond the axis of said die means to provide clearance for certain fittings, and means for forcing said pressure plate towards said base plate.

3,096,877
PACKAGES AND METHODS OF PACKAGING
Norman E. Skarsten, Oakland, Calif., assignor to Thorsen Manufacturing Company, a corporation of California
Filed Oct. 2, 1961, Ser. No. 142,174
3 Claims. (Cl. 206—16)



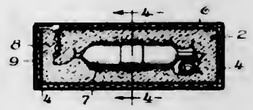
1. A tool box adapted for display purposes comprising a rigid container of generally rectangular configuration and having vertical walls, tools positioned on a backing strip, said tools and said backing strip being completely enclosed in a transparent film to form a complete assembly, said assembly being inserted in said container, vertical slots positioned on the inside of said vertical walls, corrugated dividing strips adapted for tight insertion in said slots and against said assembly thereby defining compartments in said container and whereby said assembly is firmly retained in said container.

3,096,878
TOBACCO PACKAGE WITH BUILT IN ASHTRAY
James M. Whitley and William N. Whitley, both of 3875 E. 154th St., Cleveland 28, Ohio
Filed June 21, 1961, Ser. No. 118,716
1 Claim. (Cl. 206—41)



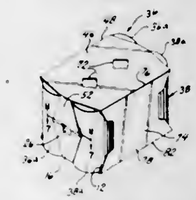
The combination with a cigarette package including a bottom, and a wrapper having spaced side walls, a front wall, a back wall, and an end wall connecting the adjacent ends of said front, back, and side walls together, said wrapper normally enclosing said package and upon being opened at the end remote from said end wall being slidable on said package from the normal position to an extended position in which said end wall is spaced from said bottom, of a tray for cigarette ashes, said tray comprising a flat sheet folded along a plurality of parallel fold lines to form a flap, first, second, third, and fourth panels, and a lip, said flap being on one end of said sheet and being secured to said wrapper end wall, said lip being on the other end of said sheet and being secured to said package, said first, second, third, and fourth panels being disposed in face to face abutting relation between said flap and said lip when said wrapper is in the normal position, said sheet unfolding upon execution of movement of said wrapper from the normal position to the extending position so that said second and third panels form a V-shaped trough with said first and fourth panels sloping upwardly on each side of said trough, said wrapper front wall being provided with an access opening in registry with said trough when said wrapper is in the extended position, and an abutment in said trough spaced from said trough opening for positioning the lit end of a cigarette when said cigarette projects through said access opening.

3,096,879
PACKAGING MATERIAL AND PACKAGE
Stanley P. Schumacher, 1243 W. Lincoln Blvd., Freeport, Ill.
Filed Dec. 12, 1957, Ser. No. 702,383
10 Claims. (Cl. 206—46)



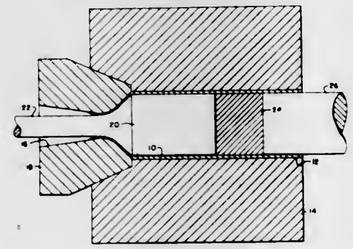
3. A package comprising a sheet of corrugated paperboard having a layer of uncompressed, curled, resilient fibers bonded thereto, an article positioned between two oppositely disposed portions of said fibrous layer and embedded in a pocket formed jointly by said portions of the fibrous layer and conforming intimately to its shape throughout its surface area, and a container enclosing said corrugated paperboard and said article.

3,096,880
CAN CARRIER
Melville T. Farquhar, Bon Air, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,427
13 Claims. (Cl. 206—65)



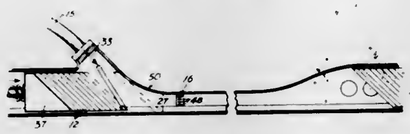
1. In combination, a plurality of rows of cylindrical cans, and a carton made from a single homogeneous blank and surrounding said cans, said carton comprising: a can end covering first wall having an integral, short, gluing tab on one side and integral, opposed, relatively narrow, fractional length, first and second end tabs with mechanical first and second fastening means formed respectively near their ends, said end tabs being bent at their bases at angles greater than right angles to said first wall at a distance from each other which is shorter than the combined diameter lengths of two adjacent parallel rows of said cylindrical cans with the can ends covered by said first wall to cause the end cans of said rows to straddle said bases of said tabs, said first and second end tabs being narrower at their bases than at their ends; an integral, can side covering, second wall bent at right angles to the other side of said first wall, said second wall being mainly of less length than said first wall; an integral, can end covering, third wall bent at right angles to said second wall and being substantially of the same length as said first wall and having integral, opposed, relatively narrow, fractional length, third and fourth end tabs with mechanical third and fourth fastening means formed respectively near their ends, said third and fourth tabs being bent at their bases at angles greater than right angles to said third wall substantially the same distance apart as said first and second end tabs, said third and fourth end tabs being narrower at their bases than at their ends; an integral, can side covering, fourth wall bent at right angles to said third wall, said fourth wall being mainly of less length than said third wall, a portion near the edge of said fourth wall being glued to said gluing tab, said first and second fastening means being fastened respectively to said third and fourth fastening means to cause said end tabs to engage said cans to hold said cans in said carton.

3,096,881
LUBRICATING COMPOSITION AND METHOD FOR THE HOT EXTRUSION OF METALS
Roy W. Tombaugh, Bethel Borough, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 20, 1956, Ser. No. 629,635
3 Claims. (Cl. 207—10)



1. In the method of extruding a metal billet from an extrusion container having a bore therethrough to accommodate the metal billet and a die at one end of the bore, the die having an opening through which the billet is extruded, the steps comprising applying a layer of a lubricating composition consisting essentially of, by volume, 1 part of finely divided molybdenum disulfied and from 2 parts to 6 parts of finely divided lead to the surface of the bore and to the surfaces of the die with which the billet makes contact during extrusion, heating the billet to a temperature of from 1500° F. to 2400° F. and introducing it into the bore of the extrusion container and extruding the billet under pressure.

3,096,882
DATA PROCESSING
Arthur W. Tyler, Weston, Mass., assignor to Itek Corporation, Waltham, Mass., a corporation of Delaware
Filed July 26, 1960, Ser. No. 45,438
20 Claims. (Cl. 209—111.5)



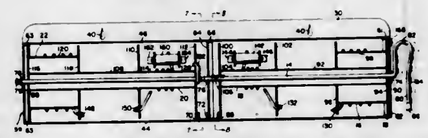
16. Apparatus for processing a plurality of physically similar, data-bearing sheets, each of said sheets being substantially rectangular and having a uniquely-coded stripe of magnetic material along at least one long edge thereof, a guide rail for said sheets, means on each of said sheets for being mounted on said rail and slidably displaced thereon, a source of air pressure for displacing said sheets, a substantially enclosed duct with narrow and broad walls having an interior cross section comparable to the dimensions of said sheets, the narrow wall of said duct being slightly larger than the short edge of said sheets, the broad wall being substantially smaller than the long edges of said sheets, said rail being mounted longitudinally of said duct along the interior of said narrow wall whereby said sheet is angularly disposed within said duct to form a piston-like element when acted upon by said air pressure, and magnetic transducer means for sensing the code on said stripes.

3,096,883
PAPER ROLL DISPENSER
Sam R. Llewellyn, P.O. Box 776, La Feria, Tex.
Filed Aug. 29, 1961, Ser. No. 134,753
2 Claims. (Cl. 211—88)



2. A holding rack for roll dispensing packages comprising an elongated, open-work cage of assembled, rod-like elements, comprising a plurality of spaced, parallel U-form rib sections, with outer and inner legs, a first rod attached to said outer legs near the top thereof, a second rod secured to the under sides of said sections near the inner legs thereof, a third rod secured to the under sides of said sections, medially of the width thereof and extending longitudinally of the cage, beyond the ends thereof, with a transversely-disposed end portion extending in the direction of the tops of said legs, and having a looped end, a fourth rod having a looped end engaging the first-mentioned looped end, said fourth rod being of a length to extend beyond said cage, lengthwise thereof, and having a transversely-disposed end portion, with a hooked end, adapted to engage the extending portion of said third rod, a fifth and a sixth rod secured, respectively, to the inner legs of the end rib sections in parallel and tangential relation thereto, said latter rods extending above and below the cage, and having looped ends, and a seventh rod secured to said latter rods.

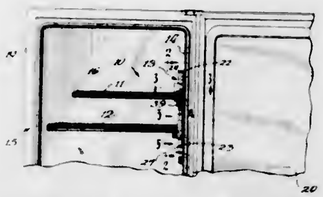
3,096,884
REEL-TYPE CLOTHES DRIER
Ervin Leshner, Philadelphia, Pa., assignor to Falco Products Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1960, Ser. No. 63,879
6 Claims. (Cl. 211—119.15)



1. A reel-type clothes drier comprising in combination a first pair of rope storage drums secured to a first tubular shaft and a second pair of rope storage drums secured to a second tubular shaft, said tubular shafts being axially aligned, said first and second drum pairs each comprising a drum of a relatively large diameter and a drum of a relatively small diameter, a central shaft rotatably and slidably mounted in the drier, and telescoped within said tubular shafts and being keyed to said first tubular shaft, and means for releasably connecting said

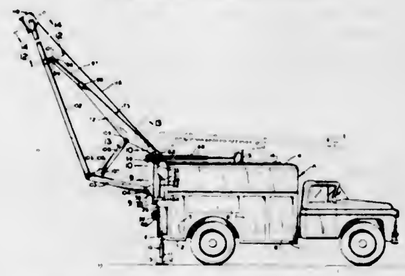
central shaft to said second tubular shaft whereby said drum pairs may be simultaneously rotated and whereby said second tubular shaft may be disconnected from said central shaft so that said drum pairs may be independently rotated.

3,096,885
HOME APPLIANCE
Harold P. Peters, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Jan. 31, 1961, Ser. No. 86,127
12 Claims. (Cl. 248—240)



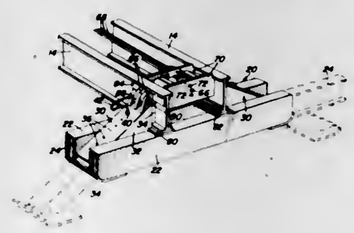
5. A shelf support comprising: a post; means for fixing said post in a vertical position; a pivot member axially immovable on said post and pivotally movable thereon about the axis thereof; a connecting member releasably carried by the pivot member for movement therewith about said axis; co-operating catch means on said pivot member and connecting member releasably retaining the connecting member on the pivot member selectively in any one of a plurality of vertically related positions; and a support secured to the connecting member for movement therewith and including means for carrying a shelf.

3,096,886
SINGLE-BOOM DERRICKS
Thomas R. Hall, Portland, Oreg., assignor to McCabe-Powers Body Company, Berkeley, Calif., a corporation of California
Filed Apr. 7, 1960, Ser. No. 20,769
9 Claims. (Cl. 212—35)



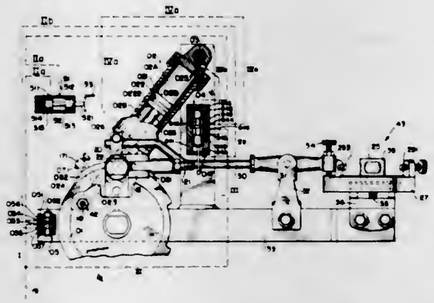
1. A laterally and vertically swingable derrick comprising a base, a vertical post rotatably mounted on said base and adapted to rotate thereon about a substantially vertical axis, a laterally projecting substantially horizontal arm rigidly attached to the post, first hydraulic ram means pivotally mounted at one end on the base having rocking movement in a substantially horizontal direction and being operatively connected at its other end to the laterally projecting arm for rotating said post about said vertical axis, a derrick leg pivotally mounted on the top of said post for swinging movement up and down about a substantially horizontal axis located about the upper end of the post and in an arc across the top of the post from an inoperative position to an operative position, a boom, a second hydraulic ram means securely mounted in said derrick leg and having an extensible element adapted to extend outwardly from the swinging end of the derrick leg upon application of fluid pressure to the second hydraulic ram means, said extensible element being pivotally connected at its outer end to said boom for swinging movement about a substantially horizontal axis, first link means pivotally connected at its outer end to said boom and being connected at its inner end to said post in downwardly spaced vertical relation with respect to said derrick leg, second link means pivotally connected to the first link means and the derrick leg so that, as said extensible element is extended, said derrick leg will simultaneously swing up and down together with respect to said post.

3,096,887
REMOVABLE POWER AND MANUALLY OPERATED OUTRIGGERS FOR CARRIER FRAMES
James G. Thomas, 157 Forrest Ave. N., Camden, Tenn.
Filed Nov. 9, 1960, Ser. No. 68,248
18 Claims. (Cl. 212—145)



1. An outrigger construction for vehicles of the type having a mobile chassis provided with longitudinally extending spaced side frame members, said construction comprising a pair of vertically inclined longitudinally extensible jacks secured to and carried by opposite sides of said chassis, said jacks having their central axes lying in a common vertical plane transverse said chassis, said jacks being downwardly divergent at their lower ends, each jack comprising a telescoping upper outer member and a lower inner member slidable therein and therethrough, fastening means securing each upper member to the exterior side surface of a side frame member.

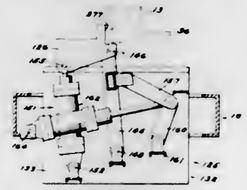
3,096,888
DISTRIBUTOR DEVICE
Ernest Sosolic, Ornans, France, assignor to Societe Ornanaise de Constructions Mecaniques (S.O.C.), Ornans, France
Filed Nov. 24, 1958, Ser. No. 776,017
Claims priority, application France Nov. 30, 1957
4 Claims. (Cl. 214—1)



1. A distributor device having a framework and adapted to be mounted by said framework on a utilizing

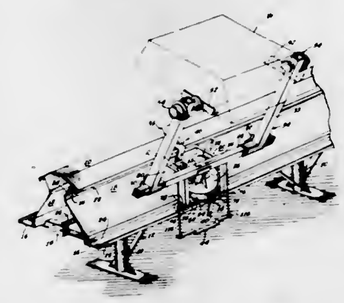
machine for feeding individual workpieces thereto, comprising, in combination, a pivotable arm attached to said framework, gripping means carried by said arm for conveying said workpieces from a storage point to said machine, means for setting said machine into action when said gripping means are in a predetermined position, a disc rotatably mounted about a fulcrum solid with said framework, a pinion integral with said disc, a control jack having a piston provided with a rod solid with a rack meshing with said pinion, for imparting to said disc an oscillatory movement about said fulcrum, a telescopic connecting rod including resilient return means and crank-pins on both ends thereof, said crank-pins co-operating with said disc to oscillate said arm in a substantially horizontal plane, a pair of adjustable stops defining the extreme positions of said arm in said horizontal plane, cam means provided at the periphery of said disc, a lever acted upon by said cam means at one of its ends to bear by an adjustable screw provided at its other end on a mobile part carrying said arm to control the vertical displacements of said mobile part effected around a spindle carried by a basic part integral with said framework, a spring placed between said mobile part and said basic part for opposing the displacement of one toward the other and repelling said mobile part when the action of said screw ceases, fluid pressure means for operating said jack by means of a fluid, said jack being flanked on its longitudinal axis by two cylindrical parts co-operating with bores made in the respective heads of said jack for limiting the exhaust section offered to said fluid and consequently braking said piston at the end of its stroke, cam means on said arm, a fluid actuator forming part of said means for setting the machine into action and adapted to control the clutching and declutching of the machine and a slide-valve actuated by said cam means and controlling the operation of said fluid actuator.

3,096,889
BILLET GRINDING APPARATUS
Charles W. Vekovius, Corunna, and William M. Woodward, Birmingham, Mich., assignors to Mid-West Abrasive Company, Owosso, Mich., a corporation of Delaware
Filed June 5, 1959, Ser. No. 818,328
20 Claims. (Cl. 214—1)



1. Mechanism for rotating a work piece positioned on a support comprising a frame structure supported for up and down movement away from and toward an initial lower position, a turn-over member mounted on said frame structure for rotation and for forward and rearward movement relative thereto and having a work piece supporting surface beneath a work piece on said support in said initial lower position of said frame structure, a first power device for raising and lowering said frame structure, a second power device for rotating said member in opposite directions, a third power device for moving said member forwardly and rearwardly relative to said frame structure, means for actuating said first power device to elevate said frame structure to thereby bodily raise said member to lift the work piece from the support and support the same on said supporting surface of said member, means for actuating said third power device in the raised position of said frame structure to move said member forwardly, and means for thereafter actuating said second and first power devices in sequence to rotate said member in one direction and lower said frame structure to thereby rotate and deposit the work piece on the support and return said frame structure to its initial position.

3,096,890
MOBILE WORK HOLDER
James H. Paige, Rolling Hills, and John L. Wells, La Canada, Calif., assignors to Fabrodynamics, Inc., Gardena, Calif., a corporation of California
Filed Apr. 5, 1960, Ser. No. 20,138
6 Claims. (Cl. 214—1)

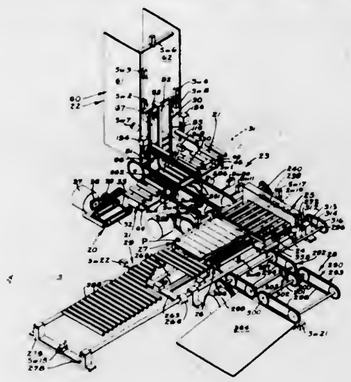


1. A mobile work holder to adjustably hold a workpiece for movement from station to station along an assembly line, comprising: a track extending along the assembly line; means extending upward from said carriage to support a workpiece, said upwardly extending means being movable about a pivot axis relative to the carriage through a range of angles outward to one side of the carriage; a pair of arcuate racks concentric to said pivot axis, said racks facing each other in spaced relation to form an arcuate space between the racks, said racks respectively presenting sets of teeth on the opposite sides respectively of said arcuate space with the teeth of the two sets staggered; pawl means in said arcuate space movable along the arcuate space to engage said sets of teeth alternately to releasably hold said upwardly extending means at selected angles in said range; and a foot pedal to operate said pawl means for step-by-step adjustment of said upwardly extending means through said range.

3,096,891
APPARATUS FOR HANDLING CASES
Ernest A. Verrinder, Riverside, and Earle J. McGrath, Chula Vista, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Original application July 11, 1955, Ser. No. 521,011, now Patent No. 2,993,315, dated July 25, 1961. Divided and this application Dec. 9, 1960, Ser. No. 74,896
4 Claims. (Cl. 214—6)

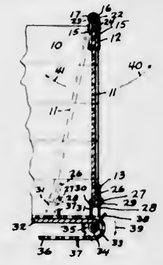
2. Apparatus for handling cases or the like comprising a support structure, elevating means mounted for vertical reciprocation in said support structure and arranged to lift a case upwardly in said structure during a stack forming operation, a pair of spaced support blades mounted on said structure and disposed on opposite sides of the path of upward movement of a case being raised by said elevating means, means mounting said blades for movement from a position in the path of a case being raised or lowered by said elevating means to a position removed from said path, and power means for urging said blades into said path obstructing position including a lever system connected to each blade, a solenoid secured to said support structure and operatively connected to said system and

arranged when energized to pivot said lever system and urge the associated blade into said path obstructing posi-



tion, and a spring connected between said solenoid and said lever system for transmitting the force of said solenoid to said lever system.

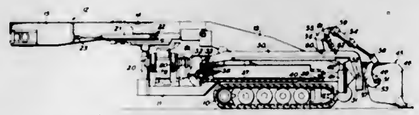
3,096,892
AUTOMATIC TAIL GATE RELEASE
George E. Smith, Jr., Moville, Iowa
Filed Aug. 15, 1960, Ser. No. 49,778
1 Claim. (Cl. 214—83.18)



A swinging tail gate construction comprising a tail gate, means for pivoting the upper edge of said tail gate to a wagon, a pair of extending members attached at the lower end of said tail gate, an endless conveyor positioned at the bottom of said wagon, said conveyor including transverse conveying slats, said extending members including straps having lower hinged portions, said lower hinged portions adapted to engage any one of said slats to prevent said tail gate from opening outwardly when said conveyor is stationary, spring urged means attached to said tail gate for positioning said hinged portions behind one of said slats when said slat is spaced inwardly from the rear of said wagon, the lower edge of said tail gate being adapted to clear said slats, a resilient flap attached adjacently to said lower edge and adapted to engage the floor of said wagon.

3,096,893
LOADING MACHINE
Anthony R. Bledess, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 24, 1960, Ser. No. 10,715
7 Claims. (Cl. 214—90)

3. In a loading machine, a mobile frame, a conveyor extending along said frame and having a forward receiving end at a fixed elevation with respect to the ground, a boom transversely pivoted to said frame rearwardly of the forward end thereof and extending in advance of said frame, a digger bucket transversely pivoted to the forward end of said boom and depending from said boom into engagement with the ground, means for holding said boom in position and vertically adjustably moving said boom with respect to the ground, a bellcrank transversely pivoted to one side of said digger bucket for movement about an axis spaced beneath and forwardly of the axis of pivotal connection of said digger bucket to said boom when said digger bucket is in engagement with the ground, a stop projecting laterally of said digger bucket, said bellcrank having a lever arm depending from its axis of connection to said digger bucket and extending underneath said stop when said digger bucket is in engagement with the ground and having a second upright lever arm extending upwardly of the axis of connection of said bellcrank to said digger bucket, an actuating lever transversely pivoted to said frame and extending upwardly of its axis of pivotal connection to said frame, an extensible and retractible operating member transversely pivoted to said boom and pivotally connected with said actuating



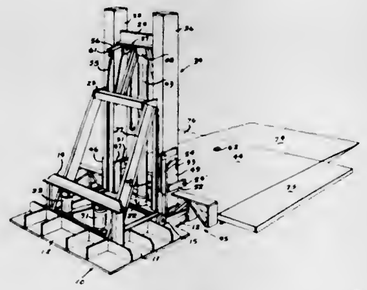
lever intermediate the ends of said actuating lever, a rigid link, a transverse pivot pin connecting one end of said link to the free end of said actuating lever, a second transverse pivot pin connecting the opposite end of said link with the upright arm of said bellcrank, the relationship between the axis of connection of said bucket to said boom, said bellcrank to said bucket and the axes of said pivot pins being such that when said bucket is in depending relation with respect to said boom, the weight of said bucket and the rock loaded thereon will engage said stop with said depending arm of said bellcrank and effect initial upward movement of said bucket about a lever arm equal to the distance between the axis of connection of said bucket to said boom and the axis of said pivot pin connecting said link to the upright arm of said bellcrank, and as said bucket moves toward a discharge position, said link and the upright arm of said bellcrank will move into aligned relation with each other and pivot said bucket to a discharge position about a shorter moment arm equal to the distance between the axis of connection of said bucket to said boom and said bellcrank to said bucket and move said stop away from said depending lever arm of said bucket.

3,096,894
DUMP TRUCK
Sam Proler and Donald B. Bolding, Houston, Tex., assignors to Proleride Transport Systems, Inc., Houston, Tex., a corporation of Texas
Filed June 27, 1961, Ser. No. 119,886
8 Claims. (Cl. 214—515)



1. Apparatus comprising in combination, a truck bed, a dump body removably mounted on said truck bed, a plurality of retractable, ground-engaging supports on said dump body, cooperating means on said truck bed and said dump body adapted to raise and lower said dump body with respect to said truck bed, a fluid cylinder pivotally mounted on said truck bed, a piston rod extensible rearwardly and upwardly therefrom, a conical end on said piston rod, a female cone pivotally attached to said dump body and having its open face normally directed toward the end of the piston rod, a slot in the apex of the female cone, a hook extending axially from said piston rod, and a bar positioned above said female cone extending laterally from said dump body in a position to be engaged by said hook upon dumping movement of said dump body and consequent pivoting of said fluid cylinder and said female cone.

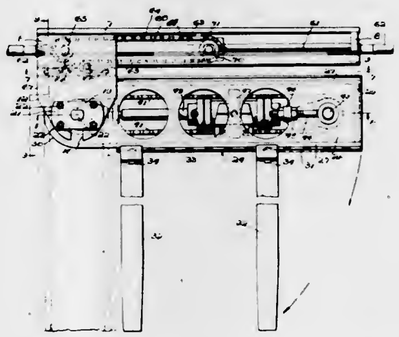
3,096,895
LIFTING UNIT
John W. Kappen, 243 Kenwood Ave., Dayton, Ohio
Filed Feb. 13, 1957, Ser. No. 640,019
4 Claims. (Cl. 214—674)



1. A lifting unit, including a base, rocking means supported by said base for relative rocking movement, a lift assembly supported by said rocking means for unison rocking and relative elevating and lowering motions, the weight of said lift assembly being disposed to rock said rocking means in one direction, a hydraulic piston and cylinder connection between said base and said rocking means, another hydraulic piston and cylinder connection between said rocking means and said lift assembly, means for supplying hydraulic fluid under pressure simultaneously to the first said connection in a manner to rock said rocking means in the opposite direction and to the said other connection in a manner to elevate said lift assembly, said connections presenting a differential piston area to the hydraulic fluid to effect said rocking and elevating motions in a predetermined sequence.

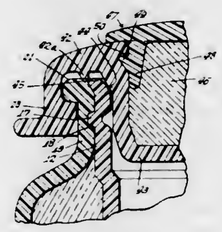
3,096,896
ATTACHMENT FOR FORKLIFT TRUCKS
Desmond H. Norton and Jeff D. Castleberry, Ogden, Utah, assignors to the United States of America as represented by the Secretary of the Army
Filed May 4, 1961, Ser. No. 107,868
10 Claims. (Cl. 214—730)
(Granted under Title 35, U.S. Code (1952), sec. 266)

10. An attachment for forklift trucks, comprising a frame adapted to be mounted upon the carriage of a forklift truck, a bearing assembly mounted on said frame, a shaft fixedly mounted in said bearing assembly, a fork-hanger boom pivotally mounted on said fixed shaft, a sprocket fixed upon said fixed shaft in coaxial relation thereto, a second shaft fixedly mounted in said boom remote from said fixed shaft and having its axis parallel to the axis thereof, a sprocket freely rotatable upon said remote shaft, a sprocket chain meshed with said two sprockets, a piston rod supported at opposite ends thereof from said two shafts, respectively, a piston fixed on said piston rod, a double acting cylinder mounted in operative relationship with said piston and piston rod, the opposite ends of said chain being fixed to said cylinder so that pull may be applied thereby to said sprocket chain



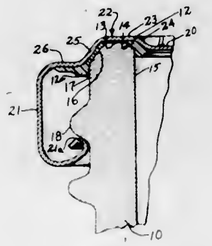
selectively in opposite directions, means for adjusting said remote shaft toward and from said fixed shaft and means to accommodate the length of said piston rod to variations in the spacings between said fixed and remote shafts.

3,096,897
INSULATED CONTAINER AND CLOSURE THEREFOR
Erik H. Hansen, Fairfield, Conn., assignor to Plastica Inc., Milford, Conn., a corporation of Connecticut
Filed Mar. 14, 1960, Ser. No. 14,800
2 Claims. (Cl. 215—13)



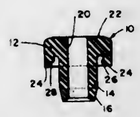
1. An insulated container of resilient thermoplastic material comprising an inner container and a surrounding outer shell having an insulating space therebetween, a neck portion connected to said container and casing and forming a mouth for the insulated container and having an outer rim, and a closure for said mouth including a hollow stopper portion having an opening at its outer end leading to the interior thereof adapted to be inserted into the neck portion, an annular portion extending outwardly from the stopper, a depending wall at the edge of the annular portion having means interlocking with said rim to hold the closure thereto, the annular portion having a sealing rib portion pressed against the end of said neck portion to seal the mouth, and a cap for closing the opening at the outer end of the stopper, said cap having a portion engaging the outer face of the annular portion and a flange inserted into the opening, said flange having a rib of right triangular cross-section extending into a correspondingly shaped cooperating groove formed in said annular portion above the stopper portion with the base of the triangle facing the outer end of the stopper and the hypotenuse of the triangle facing the sealing portion of the stopper.

3,096,898
CONTAINER AND CLOSURE CAP THEREFOR
John Hohl and Jack M. Wheaton, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Oct. 17, 1960, Ser. No. 62,950
4 Claims. (Cl. 215—40)



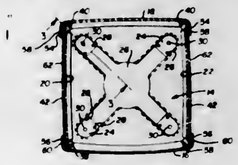
1. The combination comprising an open-mouth container and a sheet metal closure cap for sealing said container, said container having a vertically disposed neck portion terminating at its upper end and a sealing surface comprising a substantially flat top sealing surface, a vertically disposed side-sealing surface of minor axial extent and upwardly sloping annular sealing surface between said top and said side-sealing surface, and closure retaining means below said side sealing surface, said closure cap comprising a circular panel portion, a depending attaching skirt at the periphery of said panel portion, the panel portion being deformed in an area adjacent its point of juncture with said skirt to provide an annular upstanding hollow rib, said rib having radially spaced inner and outer side walls forming a sealing gasket accommodating channel internally of the panel portion, said outer wall being disposed at approximately the angle of said upwardly sloping annular sealing surface, an annular ledge between said skirt and rib lying in a plane below but parallel with said panel portion, an annular sealing gasket of elastomeric material disposed in said channel, the outer periphery of said gasket being secured to the inner peripheral portion of the underside of said ledge, said gasket being held under compression between said sealing surfaces and said cap whereby said gasket forms around said sealing surface, and means on the lower portion of said skirt cooperating with said closure retaining means.

3,096,899
NON-DRIP POURING INSERT
Paul M. Woodburn, 301 Melville St., Sandusky, Ohio
Filed Sept. 22, 1961, Ser. No. 139,997
1 Claim. (Cl. 215—47)



A non-drip pouring insert for a bottle neck comprising a tubular member having a beveled outside edge at one end thereof, an enlarged head portion at the other end thereof, said head portion being cut at its outer extremity at a sharp right angle to the axis of said tubular member, the periphery of said head portion being folded over upon the outer edge of said bottle neck and having a plurality of inwardly extending lugs irregularly spaced apart bearing against the outer surface of said neck.

3,096,900
CONTAINER ASSEMBLY
Joseph C. Breneman, Wooster, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio
Filed Dec. 11, 1961, Ser. No. 158,449
6 Claims. (Cl. 220—4)



1. A container assembly comprising top and bottom end shells, and pairs of opposing panels for supporting and spacing apart said end shells, each of said panels having an inwardly projecting lip along the top edge for fitting within said top end shell and an offset leg portion along the bottom edge for fitting within said bottom end shell, one of said pairs of opposing panels having inset surfaces, the other of said pairs of opposing panels having integral side edges wrapping around edge portions of said one pair of opposing panels and cooperating with said inset surfaces to form channels adapted to slidingly receive the side edges of advertising cards to retain the latter in overlying relation with said inset surfaces.

3,096,901
SQUAROID TYPE LIQUID STORAGE TANK
Christian Arne, Chicago, Ill., assignor to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois
Filed May 12, 1960, Ser. No. 28,719
9 Claims. (Cl. 220—18)



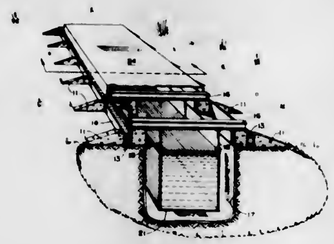
1. In a squaroid type storage tank having curved sidewalls with the curvature of the sidewalls increasing from top to bottom, the radius of curvature R_2 at vertically spaced points along said sidewall being equal to

$$R_2=\frac{T}{jw(h-kH)}$$

where R_2=the radius of curvature; T=the tension in the vertical direction in a 1" wide strip of the side plate, in pounds per inch; w=the actual weight of the liquid stored, pounds per cubic inch; j=a selective variable based upon the weight of the stored liquid; H=the full height of the vessel measured from the bottom of the squaroid to the top capacity line; h=the distance from the top capacity to any point P on the curved side plate; and k=a selective variable based upon the height of stored liquid.

3,096,902
STORAGE INSTALLATION
Carl E. Schroeder, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 96,813
12 Claims. (Cl. 220—18)

1. A reservoir comprising a depression in the ground, support means secured on at least two sides of said depression and extending thereacross, a plurality of cables connected to said support means and a container secured



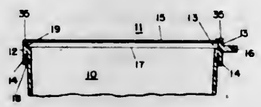
to said cables and suspended thereby within said depression above the bottom thereof.

3,096,903
CONTAINERS AND CLOSURES THEREFOR
John Barrett Grant, Greenwich, Conn., assignor to Richardson-Merrell Inc., a corporation of Delaware
Filed May 11, 1962, Ser. No. 193,922
5 Claims. (Cl. 220—42)



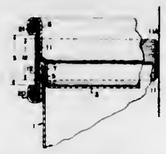
1. A thin-walled open-top plastic container of polygonal horizontal cross-sectional configuration and a plastic cap of the same horizontal configuration as the said horizontal configuration of said container, said cap including a depending peripheral flange closely engaging over said open end of the container for a substantial distance to form a closure, said closure having internally thereof adjacent each of at least two angles of its peripheral flange a substantially rectanguar flat plate-like projection depending from the lower face of the cap top and diagonally spanning said angle, said projection having its vertical free edges spaced from the inner faces of the walls of said angle a distance to grip the end of the container wall securely between the said projection and the said inner faces of said angle of the cap over a substantial depth.

3,096,904
SEALED PLASTIC CONTAINERS
Herman R. Hutchinson, Wyncote, Pa., assignor to Plastomatic Corporation, Malvern, Pa., a corporation of Pennsylvania
Filed Dec. 15, 1959, Ser. No. 859,685
10 Claims. (Cl. 220—47)



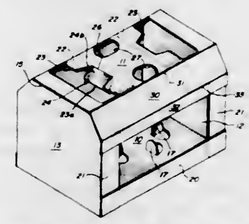
1. A sealed container comprising a plastic body having at its open end an integral tear-off rim defined by opposed grooves, and a plastic film member peripherally sealed to said body rim outwardly of said grooves to provide a sealed closure for the container during shipment and display, said plastic body being characterized by the provision of a tab extending outwardly from said rim and which when bent toward or away from said body member ruptures a fractional bit of the rim portion between said opposed grooves whereby the tab may then be lifted with progressive severance of the remaining portion of the rim between said opposed grooves to remove the sealed closure from the container.

3,096,905
CAN AND RECLOSURE LID AND TAPE SEAL THEREFOR
Philip J. Kenney, 12405 SE. Schiller St., Portland 66, Oreg.
Filed Sept. 28, 1961, Ser. No. 141,370
2 Claims. (Cl. 220—53)



1. A cylindrical sheet metal container having a top end,
a permanently closed bottom end and a closure lid,
said lid frictionally seated within the top end of the can to provide an air-tight seal,
said can having a downwardly extending annular flange at the top thereof rolled upwardly and inwardly,
said lid having an upwardly extending annular flange rolled downwardly and inwardly,
an inner reinforcing strip of non-frangible material of a width substantially equal to the vertical spacing between the rolled edges of said can and lid flanges,
an outer seal of frangible material of greater width than said reinforcing strip and secured along its top and bottom marginal edges respectively within the rolled edges of said lid and can,
said reinforcing strip terminating in an exposed pull-tab whereby manually pulling said reinforcing strip outwardly by means of the pull tab will sever said outer seal along lines above and below the top edge of the can whereby the initial step in opening the can may be effected without disturbing said air-tight seal between the lid and the can and whereby said remaining edges of said outer seal being closely adjacent said rolled edges of said can and lid flanges will not interfere with replacement of the lid on the can.

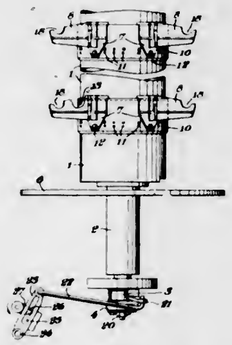
3,096,906
BOTTLE CARTON WITH REINFORCED FINGER OPENINGS
Francis A. Chidsey, Jr., Wayne, and Richard E. De Paul, Norristown, Pa., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Feb. 2, 1961, Ser. No. 86,763
2 Claims. (Cl. 220—113)



1. A paperboard bottle carrier including a rectangular top wall panel formed with bottle neck receiving openings

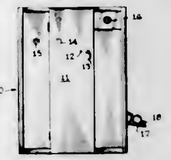
adjacent two opposite edges, at least one of the openings being narrow and elongated with its long dimension parallel to the adjacent edge of the top panel, a narrow, elongated, reinforcing panel hinged along the side of the opening remote from such edge of the top panel, the reinforcing panel being folded toward the central part of the top panel into contact with the under side of the top panel, a double-thickness tab formed in the folded edge portion of the reinforcing panel and top panel provided by spaced, centrally located slits extending from such folded edge, such tab, when folded downward below the top panel, providing a finger-receiving notch centrally of the bottle neck receiving opening.

3,096,907
AUTOMATIC VENDING MACHINE
Cyril Eugene Bouracier, 340 Bensham Lane, Thornton Heath, Surrey, England
Filed Mar. 6, 1961, Ser. No. 93,619
Claims priority, application Great Britain May 9, 1960
1 Claim. (Cl. 221—113)



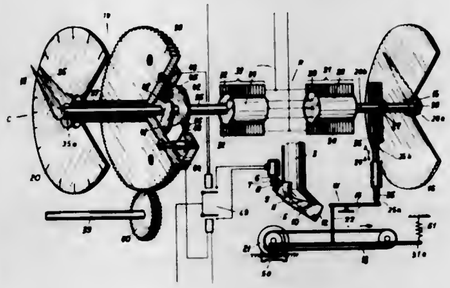
A vending machine comprising a vertically mounted rotatable drum, a pluraltiy of removable vertical magazine boxes all of like size disposed in equally spaced array around said drum to hold stacks of articles for vending, a horizontal flat plate beneath said magazine boxes whereon the lowermost articles in said stacks slide as said drum is rotated, a delivery opening in said plate directly below the path of said magazine boxes to receive articles from said magazine boxes, and intermittent drive means to rotate said drum at each actuation through a fraction of a complete revolution equal to the reciprocal of the number of magazine boxes on said drum, one of said magazine boxes passing over said delivery opening at each actuation of said drive means to allow the lowermost article of the stack contained in that box to fall into said delivery opening, there being a plurality of compartment defining members removably mounted around said drum, and mounting means for said members whereby they may be mounted in equally spaced array around said drum, said magazine boxes being supported on said members, pairs of said compartment defining members being formed integrally in a unit, in which the members are constituted by arms which diverge from said unit at an angle to suit the size of compartment to be defined thereby, there being a number of units equal to the number of compartments to be defined in combination with support rings at the top and bottom of said drum which are formed with annular locating means, said units being formed to engage said locating means whereby each unit may be located by a ring and fixed in position by a single fixing means.

3,096,908
CAN DISPENSING APPARATUS
Roy A. Parker and James D. Thompson, Fayetteville, N.C.; said Thompson assignor to Highland Dairies, Inc., Fayetteville, N.C., a corporation of North Carolina
Filed Aug. 9, 1961, Ser. No. 130,350
13 Claims. (Cl. 221—176)



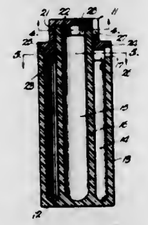
1. Can dispensing apparatus comprising frame open on at least one side and end, a series of communicating ramps mounted on said frame in vertical zig-zag descending relation and rollingly guiding therealong a series of contiguous cans, each of said ramps comprising spaced tracks each rail of which has along its outer edge an upstanding guide wall for restraining the cans against unwarranted axial movement, the juncture of the lowermost end of each ramp terminating short of the uppermost end of the underlying ramp to permit cans to fall from one ramp to the next below, a plurality of oppositely reciprocating dual gate units for controlling descent of said series of cans on said ramps, each unit adapted upon being actuated to pass a single can for descent and admit said series to move one can increment, said units being disposed at said junctures along the path of descent of said cans, to prevent jamming of contiguous cans moving down said ramps and excessive thrust on the lowermost can, and means for simultaneously operating all of said gate units.

3,096,909
DEVICE FOR WEIGHING AND DISPENSING MATERIALS FOR MIXING THEREOF
Walter Hächler, Alte Otelfingestrasse 42, Wettingen, Switzerland
Filed Oct. 7, 1960, Ser. No. 61,152
15 Claims. (Cl. 222—25)



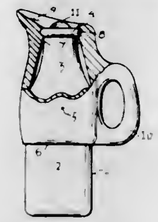
1. A device for the automatic weighing of individual constituents; comprising supply means for dispensing a quantity of a material to be weighed, weighing means associated with said supply means for receiving and weighing material dispensed from said supply means, said weighing means including conveyor means mounted for pivotal movement, means for driving said conveyor means at a constant speed, regulating means cooperable with said supply means for controlling the quantity of material dispensed therefrom, control means remotely positioned from said supply means for setting of the desired quantity of said material to be dispensed and operatively connected with said regulating means for actuating the latter to control the dispensing of material from said supply means, and repeater means communicating with said control means and said weighing means in order to transmit a reading of the quantity of material received by said weighing means to said remotely positioned control means.

3,096,910
COMBINED SALT AND PEPPER DISPENSER
Harold T. Pehr, 637 E. 72nd Terrace, Kansas City, Mo.
Filed Oct. 20, 1960, Ser. No. 63,830
4 Claims. (Cl. 222—142.5)



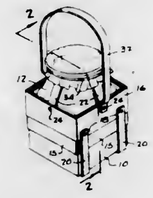
1. A combined salt and pepper shaker comprising a vertical cylindrical container open at its top and a removable cap engaging and closing said container; said container being divided into an inner compartment and an outer compartment by means of a vertical cylindrical partition concentric with the outer wall of said container, said partition extending higher than said container outer wall; both said partition and said outer wall being provided with dispensing apertures adjacent the upper edges thereof and said cap being provided with vertical flanges engaging said partition and said outer wall; each of said flanges being provided with openings so positioned as to be alignable with the respective apertures in the partition or outer wall; and means whereby said cap may be rotated so as to selectively bring certain of such openings into alignment with certain of said apertures.

3,096,911
POURING SPOUT FOR MILK BOTTLES AND THE LIKE
Stanley R. Finch, Edmonton, Alberta, and Vearl Kelly, Calgary, Alberta, Canada
Filed Sept. 26, 1960, Ser. No. 58,328
2 Claims. (Cl. 222—183)



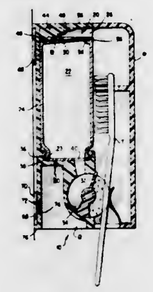
1. A pouring device for milk bottles of the class having a body with a reduced neck and a lip at the top of the neck comprising, a jacket having an enlarged lower end to pass over the neck of the bottle and fit closely on the body, a reduced upper portion on the jacket to fit against the neck of the bottle, an annular internal groove in the reduced upper portion to engage over the lip of the bottle to hold the jacket on the bottle, a pouring spout extending from the jacket on one side thereof, a gripping handle integral with the jacket and extending on the opposite side of the jacket, opposed sections of the reduced upper neck portion distended laterally away from the neck and adapted to co-act with the remainder of the reduced upper portion to disengage the annular internal groove from the lip when the opposed sections are squeezed towards the neck and thereby release engagement of the reduced upper portion with the lip of the bottle.

3,096,912
CERAMIC MUD DISPENSER
Ervin J. Rivette, 2405 Stanton St., Lake Charles, La.
Filed Jan. 16, 1962, Ser. No. 166,606
3 Claims. (Cl. 222—183)



3. A pour-controlling device for a container having a bottom, sides, and a mouth, the pour-controlling device comprising:
(*a*) a band of an outline form to encircle the container;
(*b*) means pivotally connected to the band to support the container at its bottom and sides;
(*c*) a series of spider elements secured medially to the sides of the band;
(*d*) each of the spider elements having an intermediate section extending upwardly and inwardly from the band;
(*e*) a ring secured to the spider elements having retaining means at its upper edge;
(*f*) the mouth of the container being reverted over the ring; and
(*g*) elastic means about the mouth and ring to retain the location of the mouth with respect to the ring.

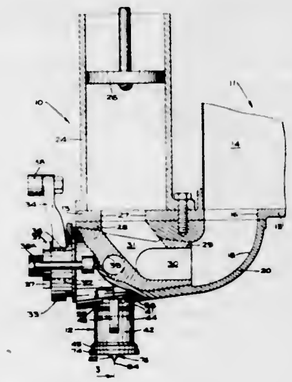
3,096,913
DISPENSING CONTAINER AND APPARATUS
Clifton Corley, 232 Brazilian Ave., Palm Beach, Fla.
Filed Mar. 2, 1962, Ser. No. 177,090
7 Claims. (Cl. 222—183)



1. An apparatus for dispensing a material having fluid characteristics such as toothpaste, comprising a casing having top, bottom, side and rear walls defining a supply chamber open at the front, the bottom wall having a recess and a dispensing opening through the bottom of the recess, a substantially rigid supply container having an open ended neck and removably mounted in inverted position in said chamber with said neck removably inserted within

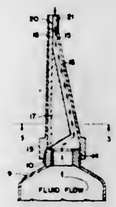
said recess, and means rigidly locating said container in said chamber and forcing said container neck in sealing engagement with said recess about said dispensing opening, said means including a rigid web projecting downwardly from said top and having a cam surface terminating in a substantially horizontal portion toward said rear wall, and a web receiving slot transverse the bottom of said container opening through the rear of said container to receive the cam surface of said web as said container is inserted at an incline into said chamber from the open front thereof, said cam surface entering said opening at the rear of said slot to cam said container as the container is inserted into said chamber to force said neck down into said recess and the substantially horizontal portion of said web holding said neck in sealing engagement with said recess.

3,096,914
FILLING MECHANISM
Charles E. Kerr, St. Petersburg, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed July 10, 1959, Ser. No. 826,329
7 Claims. (Cl. 222—333)



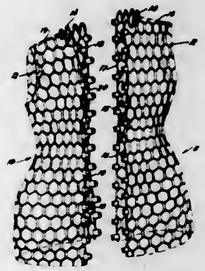
1. A liquid dispenser comprising a hollow generally cylindrical body having a lower edge circumscribing an outlet, a core having a cylindrical flange, means upwardly spaced from said lower edge and being connected to said core for supporting said flange in said outlet with said lower edge circumferentially spaced from said flange, said flange and edge defining an uninterrupted and continuous outlet opening extending entirely around said flange, an annular, resiliently flexible diaphragm having a circumferential outer edge secured to said lower edge of said body in fluid-tight relation therewith and an inner annular edge in resilient underlying fluid-tight engagement with said flange, a dispensing cylinder located above, and communicating with, said body, and means for filling the body above said diaphragm with liquid and for reducing the pressure above said diaphragm below the pressure under said diaphragm by sucking liquid into said dispensing cylinder whereby the diaphragm is held in fluid-tight engagement with said flange by imbalance of pressures above and below said diaphragm, said means being operative to force liquid in the body downwardly through the outlet opening between said diaphragm and said core, said liquid emerging through said opening in a compact annular stream which is continuous about said flange and substantially free of air, and said diaphragm resiliently returning to fluid-tight core engagement, incident to said imbalance of pressures, substantially simulaneously with interruption of downward movement of liquid in said body.

3,096,915
DISPENSING CLOSURE
Olin C. Taylor, Cleveland, Miss., assignor to Baxter Laboratories, Inc.
Filed Feb. 17, 1961, Ser. No. 90,124
3 Claims. (Cl. 222—495)



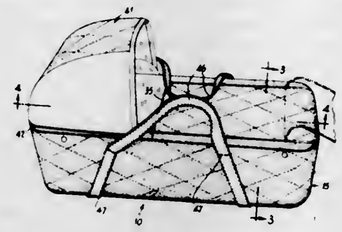
1. In combination a collapsible container having a screw-threaded end having a central aperture, and a dispensing nozzle for attachment to said screw-threaded end, said dispensing nozzle having a screw-threaded hub at one end thereof and a central passage therethrough, a movable wedge-shaped valve in said passage, said valve being provided with an acutely inclined surface at the end adjacent the screw-threaded hub and an elongated tongue at the other end, and means for restricting the movement of said valve to a single plane, said means comprising a laterally extending flange on said valve and flange-receiving groove in said passage, said flange and groove when engaged cooperating to limit the movement of said valve member to a single plane.

3,096,916
ADJUSTABLE DRESS FORM
Eva Elizabeth Ronell, New York, N.Y., assignor, by mesne assignments, to My Double Company, Inc., Stamford, Conn.
Filed Mar. 20, 1958, Ser. No. 722,770
4 Claims. (Cl. 223—68)



1. An adjustable dress form including portions for a part of the body of a wearer adjacent the neck of said wearer comprising, in combination, a pair of complementary dress form sections each composed of a chicken-wire mesh made up of substantially non-resilient flexible wires twisted together at their points of intersection and capable of holding the shape of a dress form to which they are bent by the user and formed with undulations in the region of the neck; a continuous uninterrupted plastic coating covering the wire mesh and the twisted intersecting portions of each of said sections; and releasable fastening means carried by said sections for releasably fastening the same together.

3,096,917
BABY LIFT
Ingvard Gudiksen, Glostrup, Copenhagen, Denmark, assignor to Thomas J. Mulroy, Bellerose, N.Y.
Filed Apr. 21, 1961, Ser. No. 104,597
1 Claim. (Cl. 224—6)



A portable collapsible baby bed comprising an elongate generally horizontal open frame having spaced side pieces and end pieces extending between said side pieces, a skirt of flexible sheet material extending peripherally about and depending from said frame, a generally horizontal bottom board extending across the lower region of said skirt, the lower edge region of said skirt extending horizontally beneath and being secured fast to a margin of said board, a pair of generally U-shaped braces adjacent to opposite ends of said frame each having its ends pivoted to opposite frame side pieces and depending therefrom with its bight region engaging said bottom board to space the latter from said frame, said braces being swingable upward and inward toward each other to substantial coplanarity with said frame for collapse of said frame toward said bottom board, and a pad on said board and the bight regions of said braces to maintain said braces from swinging movement out of their depending position, a pair of flexible carrier straps each operatively connected to the bottom of said board at a location adjacent to and longitudinally inward of a respective brace and extending upward from opposite sides of said frame over and across said frame, each of said straps extending completely across the underside of said board to establish operative connection therewith, a cover extending laterally across said frame from one end piece thereof toward and terminating short of the other frame end piece, and separable fastener means in said cover extending longitudinally along each side piece of said frame substantially coextensive with said cover, for separating said cover from said frame side pieces and permitting swinging movement of said cover over said one frame end pieces, and stop means fixed to said frame for engagement with said braces to limit downward movement of the latter to a generally vertical depending position.

3,096,918
DISPENSING CARTON WITH CONCEALED CUTTING BLADE
Bruce E. Van Dyke, Chagrin Falls, Gerald V. Richards, Brecksville, and Richard G. Kadleck, Berea, Ohio, assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Sept. 1, 1961, Ser. No. 135,635
1 Claim. (Cl. 225—48)

A package for retaining a roll of sheet material and for severing and dispensing lengths of sheet material from said roll, comprising;

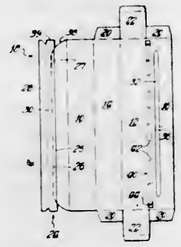
(*a*) a carton formed from a unitary blank of foldable paperboard cut and scored to provide a plurality of panels serially joined to form a tubular structure;

(*b*) said structure including front and rear walls spaced from each other to provide therebetween an opening at the top of the carton;

(*c*) a cutting blade fixedly attached to the outer surface of the carton front wall and having its cutting edge projecting a slight distance below the lower edge of said front wall; and

(*d*) a carton cover including a top wall panel hinged at its rear edge to the upper edge of the carton rear wall and a closure panel having its upper edge hinged to the forward edge of the cover top wall panel;

(*e*) said closure panel depending from said top wall panel forward edge and being disposed to cover the entire front wall of the carton and said cutting blade



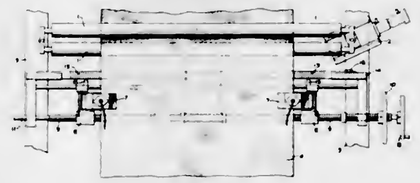
before the package is initially opened by the consumer of the packaged material;

(*f*) said closure panel having a pair of readily separable upper and lower portions;

(*g*) said upper portion constituting a tuck flap insertable into the carton behind said front wall upon reclosure of the cover;

(*h*) said lower portion serving to cover said cutting blade prior to the initial opening of the package, and being removable upon separation from the closure panel upper portion upon initial opening of the package.

3,096,919
WEB GUIDE
Robert F. Snyder, Lakemore, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 14, 1961, Ser. No. 131,345
7 Claims. (Cl. 226—3)

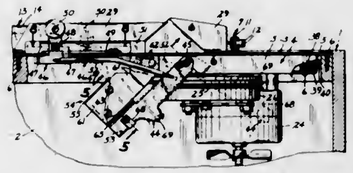


1. A photo-responsive web edge sensing device comprising a light source, a collimating lens mounted remotely therefrom and forming an optical transmitting unit therewith, said lens having a substantially elongated transverse cross-section so that light passing therethrough is formed into a narrow, transversely elongated beam, a photo-responsive element, a concentrating lens mounted remotely therefrom and forming an optical receiving unit therewith, said lens having a substantially elongated transverse cross-section, said optical units adapted to be positioned adjacent the web edge to be sensed and on opposite sides thereof with the respective lenses being positioned adjacent to and facing each other with the elongated cross-section substantially transverse of the web.

5. A method of determining the centerline position of

a substantially light-impervious web comprising projecting a transversely elongated light beam transversely of the web and perpendicular to the plane thereof and intersecting each edge thereof, detecting the transmitted portion of said elongated light beam at each edge of the web, and comparing said detected transmitted portions to determine the relative edge position and hence the centerline of said web.

3,096,920
TAPE DRIVING MECHANISM
Wayne E. Schober, Minneapolis, Minn., assignor to Viking of Minneapolis, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 7, 1961, Ser. No. 93,907
18 Claims. (Cl. 226—181)



9. In a tape driving mechanism for use with a magnetic tape machine, a supporting structure, a power driven capstan journalled on said supporting structure and having a surface for frictional driving engagement with one side of the tape to be driven thereby, an idle pressure roller adapted to engage the side of the tape opposite that engaged by the capstan so as to maintain the tape in frictional driving engagement with the capstan, means mounting said pressure roller on said supporting structure for arcuate swinging movements toward and away from said capstan between an inoperative position relatively widely spaced therefrom and an operative tape driving position wherein said pressure roller presses said tape into driving engagement with said capstan and wherein the axis of said pressure roller is generally parallel with the axis of said capstan, means for actuating said swinging movements of said pressure roller, and adjustment means for slightly varying the operative position of said pressure roller whereby to adjust said machine for parallelism between the respective axes of the pressure roller and the capstan.

3,096,921
DISPENSING CONTAINER WITH RECLOSABLE COVER FOR DISPENSING CONTAINERS
Paul J. Graybill, Sunset Hill Drive, Pine Orchard, Conn.
Filed Oct. 24, 1960, Ser. No. 64,423
4 Claims. (Cl. 229—17)



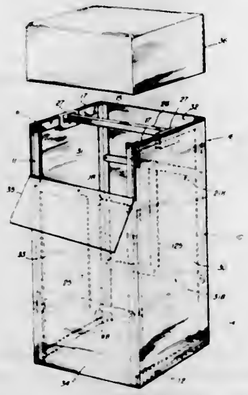
1. A container formed of foldable stock, having opening and reclosing means inherent in a multiple wall thereof, said multiple wall consisting of the adhered outer, intermediary and inner glue-flaps of said container end, said opening means consisting of an essentially rectangular multiple paneled cover, hingedly articulated to said multiple wall on its innermost edge and cut releasably free from said container wall on its lateral edges, said innermost panel also being cut releasably free on its front edge, said cut being positioned somewhat inwardly from the edge of said container forming a shoulder adjacent to said container edge, each panel of said cover being smaller than the one immediately outwardly, thus forming staggered edges about said cover, said cover in one position to be an essential part of said container end, each panel thereof lying in the same plane as the corresponding panel of said container end, effecting a complete closure, said cover in another position being torn free on three edges thereof and rotated about on its hinged connection forming an aperture in said container end, said cover having articulated to its two outer panels by hinged connection, a tuck-tab formed by a transverse crease thereacross essentially parallel to said hinged connection, said tuck-tab in one position being adhered to said shoulder and being in the same plane as the releasably joined panels, and in another position being torn free therefrom and positioned into said aperture at essentially 90° to said container end when said cover is in a reclosed position, said cover having articulated to at least one of its panels a pull-tab being formed by a crescent cut arching outwardly from said hinged connection, said pull-tab being positioned on said shoulder, being useful in reopening said cover, said shoulder having articulated to its inner edge a lock-tab protruding ostensibly into said aperture, and being so positioned and dimensioned as to occupy the crescent aperture in said tuck-tab, said crescent aperture having been formed by said crescent cut which also formed said pull-tab, said lock-tab and said crescent aperture forming a locking means holding said cover in a secured closed position.

3,096,922
DISPENSING CONTAINERS
Paul J. Graybill, Sunset Hill Drive, Pine Orchard, Conn.
Filed Dec. 6, 1960, Ser. No. 74,041
8 Claims. (Cl. 229—17)



1. A dispensing container formed of foldable stock having opening, reclosing and securing means inherent in a multiple wall thereof, said multiple wall being formed by the adhered container end glue-flaps thereof, said means consisting of a dispensing aperture, a hingedly joined multiple layered and staggered edged cover, a tuck-tab hingedly joined to the free end of said cover and a tuck-slot situated externally to the container wall, adjacent to said aperture into which said tuck-slot said tuck-tab can be inserted and there held when said dispensing aperture is reclosed by said hinged cover, said container having a Van Buren Ear articulated to each of the two end glue-flaps of said container, said ears being adhered on their lateral vertical edges in superimposed position to one another and to the end sidewall of said container adjacent to said dispensing aperture, said outer Van Buren Ear being modified by two vertical and releasable cuts which cuts form said tuck-tab, said inner Van Buren Ear having the vertical lateral edges adhered to said container sidewall, thus having a generally central glue free area which area constitutes said tuck-slot into which said tuck-tab is inserted when said aperture is reclosed.

3,096,923
MOVING AND STORAGE CONTAINER AND STRENGTHENING FRAME THEREFOR
Lawrence Piller, 1416 Brooklyn Ave., Brooklyn 3, N.Y.
Filed Nov. 23, 1960, Ser. No. 71,210
2 Claims. (Cl. 229—49)



2. A moving and storage container comprising, in combination, a generally rectangular carton formed of interconnected side walls of relatively stiff material, a foldable self-supporting frame of unitary assembly adapted for internally strengthening said carton, said frame comprising a pair of rigid and rectangular side panels lying juxtaposed to each other disposed inwardly of and adjacent to the edges of the side walls of the carton and with each of said side panels having front and back side edges, two sets of foldable toggle braces, each toggle brace comprising a pair of arms, means pivotally mounting one end of each arm to one of said side panels with each set comprising a plurality of said toggle braces longitudinally spaced apart, said pivotally mounting means being located inwardly from the ends of said side panels a distance at least the length of the longest toggle arm to prevent projection therebeyond on folding, one of said sets pivotally connecting the front edges of said side panels together and the other set pivotally connecting the back edges of said side panels together, said toggle brace arms pivotally connected together intermediate said side panels for folding swing in one direction and means tying together said toggle braces in each set with all of said toggle braces on the front being swingable simultaneously in the same direction and all of those on the back being similarly swingable simultaneously in the same direction.

3,096,924
HANDLE-EQUIPPED CONTAINER
James R. Young, 913 Forsythe Ave., Toledo 5, Ohio
Filed Oct. 11, 1960, Ser. No. 61,987
1 Claim. (Cl. 229—52)

A handle-equipped closed container, comprising an elongated vertically-disposed closed receptacle having a bottom wall, side walls and a top wall,

said top wall including an upper top wall portion and a lower top wall portion disposed below said upper top wall portion and defining a recess beneath said upper top wall portion;

and an elongated vertically-disposed foldable handle structure having at its lower end a lower attachment portion secured to said bottom wall,

said handle structure having an intermediate portion hingedly connected at its lower end to said lower attachment portion,

said handle structure also having an upper attachment portion secured to said lower top wall portion within said recess,

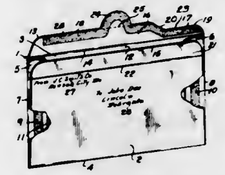
said handle structure also having a foldable connecting portion bent reversely to said intermediate portion and hingedly connected at its upper end to the upper end of said intermediate portion and hingedly connected at its lower end to said upper attachment portion,

said connecting portion in the folded position of said handle structure lying beneath said upper top wall



portion within said recess and swingable out of said recess into an extended position approximately aligned with said upper attachment portion, whereby in the folded position of said handle structure said upper attachment portion and connecting portion lie within said recess within the confines of said side walls, said lower attachment portion lies beneath said bottom wall, and only said intermediate portion lies outside the confines of said side walls of said receptacle, namely in a position disposed flat against one of said side walls.

3,096,925
ENVELOPE FOR TWO-WAY USE
Walter Lee Hiersteiner, Mission, Kans., assignor to Tension Envelope Corporation of Kansas City, Kansas City, Mo., a corporation of Delaware
Filed May 19, 1961, Ser. No. 111,338
4 Claims. (Cl. 229—73)



1. An envelope for two-way use, including

substantially rectangular front and back panels interconnected along three edges thereof to provide a pocket having an insert opening between the remaining edges of said panels,

a closure flap having connection with said remaining edge of the back panel,

a first fold extending along said connection and on which the closure flap is folded over the front panel to close the insert opening for a first use of the envelope,

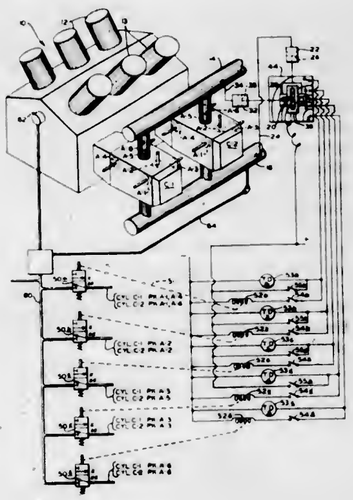
a first sealing means on the closure flap for sealing contact with the front panel to retain the closure flap closed during the first use,

a second line of fold extending across both panels in substantial registry with the free edge of the closure flap,

a return address area on the front panel immediately below the second line of fold and having a return address located thereon during said first use of the envelope,

said envelope being opened after the first use by loosening the closure flap from the first sealing means, and gum on the closure flap providing a second sealing means for the closure flap when the envelope is folded on the second line of fold to bring the portions of the panels that lie between said lines of fold into covering relation with the return address and the first sealing means when the closure flap gum is sealed to the front panel for the second use of the envelope.

3,096,926
COMPRESSOR CONTROL
Donald T. Koch, Birmingham, Mich., and William R. Bohannan, Caracas, Venezuela, assignors to The Cooper-Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio
Filed Mar. 19, 1962, Ser. No. 180,767
4 Claims. (Cl. 230—4)



1. In a control system for a compressor having means to change the compression ratio of the compressor while running, the combination of

(1) a single movable control element,

(*a*) moved in one direction by a change in compressor discharge pressure and

(*b*) moved in a direction at right angles to said first movement by a change in compressor suction pressure,

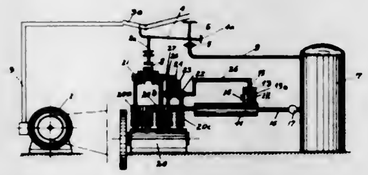
(2) a stationary control element operatively associated with said movable control element,

(*a*) having its surface segmented into areas representing a summation of suction and discharge pressures at which the compressor operates at substantially constant horsepower,

(3) means to sense the presence of said movable control element over any of the segments of said stationary control element, and

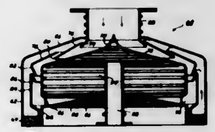
(4) means responsive to said sensing means to change the compression ratio of the compressor to maintain the power input to the compressor substantially constant.

3,096,927
RELIEVING DEVICE FOR MULTIPLE STAGE COMPRESSORS
Hermann Wahl, 8 Im Ulenberg, Stuttgart-Bad Cannstadt, Germany
Filed Oct. 13, 1959, Ser. No. 846,182
9 Claims. (Cl. 230—26)



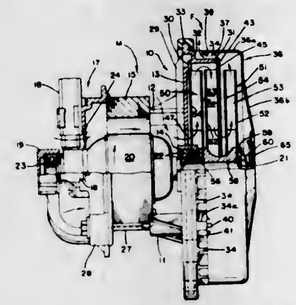
1. A pressure relieving device for multiple stage compressors of the type including at least first and second cylinders arranged in series, a first cooler connected in series between said cylinders and receiving a product of the first cylinder and cooling the same prior to the delivery thereof to the second cylinder, a final cooler connected to the second cylinder for receiving the product from the second cylinder and cooling the same, a container connected to said final cooler for receiving the cooled product therefrom, a check valve disposed intermediate said final cooler and said container, a relief valve on said final cooler of the pressure maintained type, a conduit from said first cooler to said relief valve with the pressure in said first cooler reacting on said relief valve to normally maintain said relief valve in a closed position, and a relief valve on said first cooler for relieving the pressure therein, the relief of pressure within said first cooler operating to open said final cooler relief valve to relieve said final cooler, and means connected to said first cooler relief valve for opening the same upon the stopping of the compressor.

3,096,928
VACUUM PUMP
Stephen Bukata, 7813 Ardleigh St., Philadelphia 18, Pa.
Filed Dec. 22, 1960, Ser. No. 77,584
3 Claims. (Cl. 230—101)



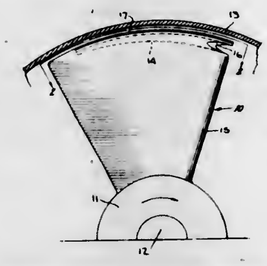
1. A vapor pump comprising a housing having an oil sump, a layer of oil in said sump, means for heating said oil, a gas inlet conduit in communication with the interior of said housing, a gas outlet conduit in communication with the interior of said housing at a point spaced from said inlet conduit, cooling means, an interior wall axially in line with said inlet and outlet conduits and spaced inwardly from the inside wall of said housing, said cooling means being juxtaposed to said interior wall, means defining at least two annular vapor jet stages in series between said inlet and outlet conduits, said stages being arranged to direct oil vapor against said interior wall so that said oil vapors condense on said interior wall, the jet stage closest to said layer of oil being spaced closer to said interior wall than the other stages, a vapor condensate drain below the lowermost stage, said drain being in communication with said sump, said jet stages surrounding said interior wall.

3,096,929
VACUUM CLEANER MOTOR FAN UNIT
Albert L. Sebok, Tallmadge, and Frank Z. Daugherty, Kent, Ohio, assignors to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 1, 1962, Ser. No. 170,447
6 Claims. (Cl. 230—117)



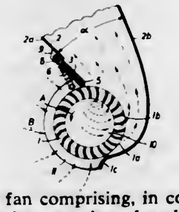
1. A motor-fan unit of reversed air-flow type comprising: a motor stator; a motor rotor including a shaft; first and second motor end brackets on respective opposite ends of the stator, and having central socket formations supporting bearings for said shaft; the said first bracket having apertures therethrough surrounding the socket therein providing air inlet means; said second bracket being an integral structure including a generally disk-like portion having as for air inlets arcuate apertures around the corresponding bearing socket formation thereof, a rim portion including a cylindrical flange concentric with the socket of the said second member extending endwise outwardly from the motor portion of the unit, and circumferentially spaced diffuser vanes on the cylindrical exterior of said flange; fan impeller means disposed endwise outwardly beyond said flange on an end of said shaft projecting through the said second bracket; and generally cup-shaped fan shell means including an end wall and a cylindrical portion, said cylindrical portion being fitted over a part of the length of said vanes to provide a circumferential series of longitudinally directed air outlet passages from said impeller, said passages opening radially outward of said flange.

3,096,930
PROPELLER DESIGN
Leonard Meyerhoff, Brooklyn, N.Y., assignor to Leonard Meyerhoff and Stanley A. Meyerhoff, doing business as Eastern Research Group, a partnership
Filed June 26, 1961, Ser. No. 119,443
6 Claims. (Cl. 230—120)



1. An enclosed propeller blade assembly comprising a blade mounted to rotate about an axis, a housing for said blade, said housing being circular in shape and concentric with the cylindrical surface described by the periphery of said blade leaving a determinate clearance between its inner surface and said cylindrical surface, the said blade having a peripheral portion and a leading edge and being provided with a conduit configured substantially similar to and located adjacent said peripheral portion, said conduit intersecting the leading edge of said blade and having an opening formed at such intersection, an elongated slot located in the peripheral portion of said blade and being longitudinally coterminous with said conduit, said slot longitudinally intersecting both the conduit and the periphery of said blade, whereby rotation of said propeller blade causes fluid to enter said opening, the fluid so entering then flowing through said conduit and escaping from said conduit through said slot thereby forming a curtain of fluid between the periphery of said blade and said housing.

3,096,931
CROSS FLOW FAN ARRANGEMENT
Bruno Eck, Geisbergstrasse 24, Cologne-Klettenberg, Germany
Filed May 25, 1961, Ser. No. 112,587
Claims priority, application Germany May 28, 1960
17 Claims. (Cl. 230—125)

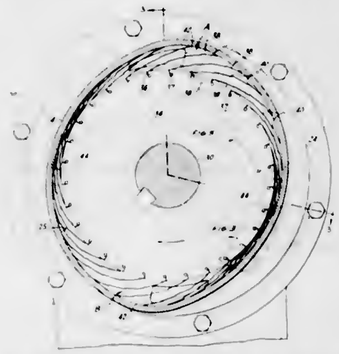


1. A cross flow fan comprising, in combination, rotary impeller means having an axis and a plurality of impeller blades defining a cylindrical outer surface on said impeller means and an inner cylindrical space within said impeller means; and a stator supporting said impeller means for rotation about said axis in one direction of rotation and including two parts located adjacent said cylindrical outer surface spaced circumferentially about the same and defining between each other a passage through said impeller means and through said inner space, said passage having an inlet for a fluid on one side of said two parts and an outlet for the fluid on the other side of said two parts so that during rotation of said impeller means in said one direction a fluid is drawn through said inlet, flows through said passage and is discharged through said outlet, one of said parts being a grid including a plurality of deflecting vanes defining deflecting guide passages connecting said outlet with said inlet, said vanes and guide passages being shaped to guide a portion of said fluid from said outlet back into said inlet and in a stream along said one part to form a whirling body of fluid in said inner space for guiding the main flow of the fluid through said passage.

3,096,932
AIR PUMP
Samuel W. Traylor, Jr., Hotel Traylor, Allentown, Pa.
Filed Nov. 22, 1960, Ser. No. 71,093
6 Claims. (Cl. 230—154)

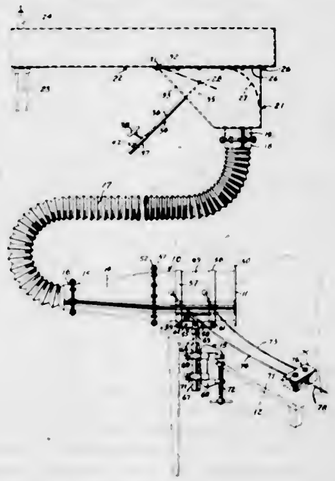
1. In a rotary fluid pump, an irregularly shaped closed casing, said casing having a smoothly-finished continuously curved interior surface, a rotor mounted in said casing, a plurality of vanes mounted on said rotor for rotation therewith with the free ends thereof in continuing sealing contact with the interior surface of said casing on rotation of said rotor, the outer periphery of said rotor and the interior surface of said casing defining therebetween a plurality of chambers, said vanes being elastically deform-

able vanes of a length exceeding the maximum radial width of said chamber, said vanes being elastically deformed by said casing into continuing biasing contact with said casing interior surface, each of said vanes being in overlapping relation with at least one preceding vane, and each of said vanes having at least one outwardly-directed axially-extending step thereon to provide clearance for a preceding overlapped vane when said vanes pass through the region of minimum casing diameter, fluid inlet and outlet means entering said casing and opening into said



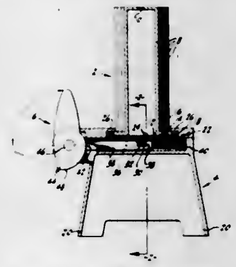
chambers, said vanes adapted to sweep fluid through said chambers and increasingly compress the fluid from entry in to exit from said chambers, said closed casing being of a modified elliptical shape wherein the maximum and minimum diameters of the casing form an acute angle defining the inlet region of each chamber, and a complementary obtuse angle setting forth the compression region such that the compression stroke of said vanes through said chambers is of greater angular duration than the intake stroke, thereby decreasing the pressure differential on each vane and reducing the shock occurring in the compression region.

3,096,933
PORTABLE FUME EXHAUST FAN APPARATUS
Ion Bora, 917 Eagle Ave., Bronx 56, N.Y.
Filed Mar. 29, 1961, Ser. No. 99,313
6 Claims. (Cl. 230—235)



1. A portable fume exhaust fan apparatus comprising, in combination, an exhaust conduit adapted to be supported on a window sill beneath a window section, damper means in said conduit, a flexible conduit connected at one end in air tight relation to said first mentioned conduit, a flanged coupling on the other end of said flexible conduit, a fan head including a cylindrical portion having a flange at one end and a tapered outlet portion having a flange at each end, the flange at the smaller end being bolted to the flanged coupling of said flexible conduit and the flange at the other end being bolted to the flange of said cylindrical portion, the other end of said cylindrical portion being formed with an open fume intake, transverse shelves extending across said cylindrical portion, a pair of bladed exhaust fans mounted on said shelves, a pair of electric motors individually connected to said exhaust fans, an individual wire connected to each electric motor, a control block having an individual switch for each wire, a common wire extending to said control block from a source of electric power, a clamp ring assembly for said cylindrical portion, said clamp ring assembly comprising a pair of laterally-spaced split clamp rings having clamping ears and bolts, a balance piece extending between said bolts, said balance piece having a series of adjusting holes therein, a pivot bolt selectively engageable in one of said adjusting holes for supporting said fan head, and vertically adjustable means supporting said pivot bolt selectively to vary the height of said fan head.

3,096,934
COIN BANK WITH COMBINATION LOCK
Philip Nemsky, 1507 26th Ave., San Francisco, Calif.
Filed Nov. 27, 1961, Ser. No. 154,997
8 Claims. (Cl. 232—4)



1. A depository device comprising
a receptacle having an opening for removal of contents,
a flange slide member including opposite edges extending laterally from said receptacle,
a complementary slideway having a planar slide surface and means receiving a pair of opposite edges of said slide member for sliding movement therebetween, said slideway being open at one end for insertion and removal of said slide member,
a series of spaced lugs depending from the bottom of said slide member and aligned in a row parallel to said opposite edges,
a slot in said slideway opening at said one end to receive said aligned lugs, and
a plurality of blocking members mounted below said slideway for reciprocal movement transversely across said slot,
means for moving each of said blocking members in one direction to a first position and in the other direction to a second position,
said blocking members being disposed to move freely between said spaced lugs when said slide member is fully engaged in said slideway,
certain of said blocking members having portions thereon obstructing passage of said lugs in said slot when said blocking members are in said first position and other of said blocking members having portions thereon obstructing passage of said lugs in said slot when said blocking members are in said second position.

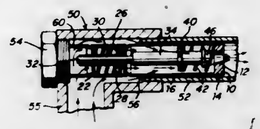
3,096,935
SPACE TEMPERATURE CONTROL
William D. Gibson, Portland, Oreg., assignor, by mesne assignments, to White-Rodgers Company, a corporation of Missouri
Continuation of application Ser. No. 11,647, Feb. 29, 1960. This application May 2, 1961, Ser. No. 107,209
6 Claims. (Cl. 236—1)



1. A space temperature controller for use in optionally controlling electrically operated space heating means and electrically operated space cooling means, said controller including: a thermostat comprising a first single pole, single throw switch, a base for said switch and a switch operating means on said base responsive to the temperature of the conditioned space to cause said first switch to open upon a rise and to close upon a drop above and below a predetermined space temperature, a sub-base detachably connected to said base, said sub-base including mounted thereon a second single pole, single throw switch, a third single throw, double pole switch, and a fourth temperature responsive, normally closed, single pole, single throw switch; said fourth switch being required to be heated to a temperature considerably above the controlled space temperature to effect its opening, an electrical resistance heater mounted on said sub-base operative when energized to heat said fourth switch and effect its opening, a single selector handle for operating both said second and third switches having a neutral position in which both said switches are open, a first throw position in which only said second single pole switch is closed and a second throw position in which only both poles of said third switch are closed; and said sub-base further including thereon a first circuit means operative when said selector handle is in said first throw position and when said first switch is closed to complete an energizing circuit for electrically operated space heating means, and a second circuit means operative when said selector handle is in its second throw position and when said fourth switch is closed to complete an energizing circuit for electrically operated space cooling means and to complete an energizing circuit for said electrical resistance heater through said first switch when it is closed, thereby to effect the opening of said fourth switch and thereby to break the energizing circuit for the space cooling means.

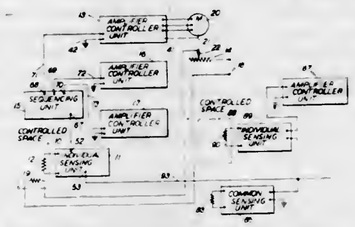
3,096,936
FLUID CONTROL APPARATUS
John E. Woods, Cohasset, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Filed Mar. 2, 1961, Ser. No. 92,801
2 Claims. (Cl. 236—56)

2. Fluid control apparatus comprising a conduit having an end portion, a housing encompassing said end portion of the conduit and attached thereto, valve apparatus within the housing and within the conduit, the valve apparatus including support structure, a portion of the support structure being in abutting relation with the end of the conduit and thus positioning the valve apparatus with respect to the conduit and with respect to the housing, a stationary closure member attached to the support structure, the stationary closure member being within the conduit and in sealing engagement therewith, the sta-



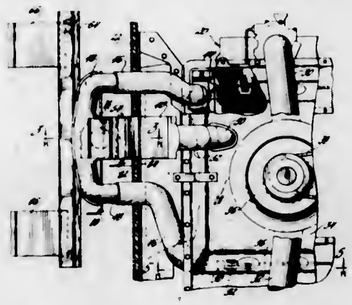
tionary closure member having a passage therethrough, a movable closure member carried by the support structure and engageable with the stationary closure member to close the passage therethrough, the movable closure member having a portion provided with a cavity therein, thermal responsive material within the cavity, abutment means engageable by the thermal responsive material to cause relative movement between the movable closure member and the stationary closure member upon expansion of the thermal responsive material.

3,096,937
PROPORTIONING CONDITION CONTROL SYSTEM
John E. Steiner, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Dec. 10, 1958, Ser. No. 779,414
7 Claims. (Cl. 236—78)



5. In a system for controlling a variable condition, the combination of, a sensing unit providing a signal variable with changes of said condition, a plurality of controller units each having an amplifying device providing an output signal variable with changes in a signal applied to an input circuit extending between first and second electrodes of the device, a sequencing unit having an input terminal connected through said sensing unit to the first electrode of each of said amplifying devices and a plurality of output terminals each connected individually to a different one of said second electrodes, said sequencing and sensing units applying to said input circuits through said different output terminals different signals variable with said sensing unit signal, and at least one feedback means each connected to and cooperating with a different one of said controller units, each of said feedback means providing a feedback signal proportional to the output signal of the associated controller unit and including an element connected to the portion of said input circuit of the unit extending between said second electrode of the unit and the associated output terminal of said sequencing unit and between said sensing unit and said first electrode of the controller unit whereby the feedback signal is applied to the circuit in opposition to the signal from the sequencing and sensing units without varying the adjustment of the sequencing unit.

3,096,938
HEATING AND VENTILATING SYSTEM FOR AIR COOLED ENGINE CARS
Edward N. Cole, Bloomfield Hills, Mich., and Rodney M. Johnston, Lockport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 2, 1960, Ser. No. 53,797
3 Claims. (Cl. 237—12.3)



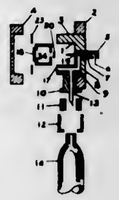
2. A heating and ventilating system in an automobile having a passenger compartment and an air-cooled engine with a bank of finned cylinders in an engine compartment, a main blower located in said engine compartment, said main blower having its discharge directed at said bank for cooling the latter with air, first duct work arranged to guide said cooling air around and in contact with said bank and then to said passenger compartment, automatic means for controlling the temperature of said engine during changes in engine load and speed, a second blower in said duct work, further duct work connecting said main blower to said first duct work and bypassing said bank, damper means controlling the flow of air through said first and further duct work, and the arrangement being such that said blowers are adapted to act in series for ventilating said compartment with air bypassing said bank and also in series for heating of said compartment with air flowing from said bank.

3,096,939
REVERSIBLE TRACTION DEVICE
Zoltan Kalfen, 2835 W. Jarlath, Chicago, Ill.
Filed Dec. 29, 1959, Ser. No. 862,625
2 Claims. (Cl. 238—14)



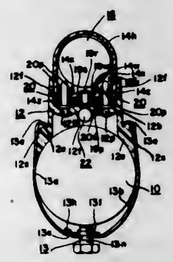
1. A reversible traction device for motor vehicles and the like, comprising, a pair of elongated sheets, each of said sheets being formed with a plurality of elongate openings and elongate projections integral with the sheet and upstanding therefrom along the long dimensions of said openings, said projections being bladelike, parallel to each other, perpendicular to the surface of the sheet, and normal to the long dimension of the sheet; said sheets being superimposed upon each other and permanently secured together with the projections facing outwardly and with the respective openings in each sheet out of register with each other to form a single imperforate plate having projections on each side thereof.

3,096,940
AUTOMATIC IDENTIFICATION MARKER FOR RESTRICTED EQUIPMENT
Elmer G. Burleigh, 5475 Encina Drive, San Diego, Calif.
Filed Dec. 19, 1961, Ser. No. 160,520
3 Claims. (Cl. 239—272)



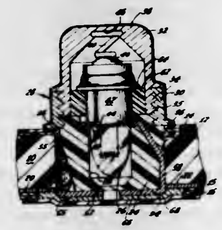
1. Apparatus for assisting in detecting unauthorized tampering with a signal device, such as a fire alarm box, comprising in combination:
(A) an arm for initiating a signal;
(B) means for moving said arm;
(C) a releasable retainer for said means;
(D) a cartridge containing an expansible fluid and adapted to be moved by said arm when said arm is moved by said means,
(1) said cartridge having a fracturable wall;
(E) a hollow needle lying in the path of movement of said cartridge and adapted to pierce said cartridge to release the fluid in said cartridge,
(2) said needle having a fluid outlet;
(F) means forming a cylinder and a fluid passage leading from said outlet to the cylinder, and forming a passage leading from said outlet to atmosphere;
(G) a capsule type piston in said cylinder movable under pressure from the first mentioned passage,
(3) said piston being adapted to contain a detecting fluid,
(4) said piston a fracturable wall;
(H) a hollow needle lying in the path of movement of the piston when said piston is moved by the fluid in the first mentioned passage,
(5) said second mentioned needle having an outlet disposed in the second mentioned passage;
(I) and means for releasing said retainer.

3,096,941
RECHARGEABLE FLASHLIGHT ASSEMBLY
Charles William Miller, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 20, 1960, Ser. No. 3,603
1 Claim. (Cl. 240—6.4)



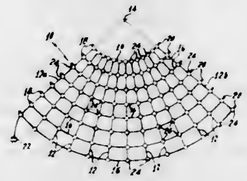
In a portable rechargeable flashlight assembly specifically for use in combination with a mobile vehicle and including a unitary housing portion of insulating material having a pair of female terminal connectors of conducting material mounted therein to be accessible during vehicle mounting thereof and possible power supply thereto, the improvement which comprises a vehicle-mounted socket-forming receptacle portion of insulating material having a pair of male terminal means also of conducting material projecting therefrom and carrying an impedance mounted within the protective covering of said receptacle portion of insulating material and joined directly electrically in series with the power supply to one of said male terminal means, and an integral laterally projecting wall having a pair of opposite substantially parallel walls between which said male terminal means are located, said parallel walls engaging and mounting said flashlight assembly and said male terminal means engaging said female terminal connectors, said parallel walls having a length greater than that of said male terminal means and shielding said terminals against bending and deformation and short-circuiting when said terminals are engaged.

3,096,942
LAMP SOCKET
Leslie E. Madansky, Burbank, Calif., assignor to California Plasteck, Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 17, 1961, Ser. No. 132,080
4 Claims. (Cl. 240—8.16)



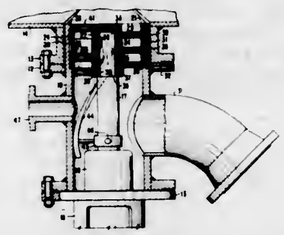
1. A lamp assembly for mounting endwise in a circular aperture of an edge-lighted panel for illumination thereof, wherein the panel has two circuit conductors bonded thereto adjacent one face thereof, said assembly comprising:
a block of non-conducting light-transmitting material of circular cross section of a diameter to fit snugly in said aperture, said black being hollow with a relatively thick cylindrical wall and being open at at least one end to provide a cavity therein;
a lamp bulb extending into said cavity at said one end of the block, said lamp bulb having an end contact and a ferrule contact, said ferrule contact forming a circumferential shoulder;
a first conductive means at least partially embedded in said block;
a ring-shaped first portion of said conductive means being exposed at the inner circumference of said block at said one end thereof and seating said circumferential shoulder of the ferrule contact, a second portion of said conductive means being exposed on the other end of said block for connection to one of said two circuit conductors, a third portion of said conductive means extending through the material of the block and interconnecting the first and second portions;
a cylindrical member of conducting material bonded to said block and extending from said one end thereof;
a threaded cap of conducting material in screw-threaded engagement with said cylindrical member for enclosing the lamp bulb and in electrical communication with said end contact of the lamp bulb; and
a second conductive means at least partially embedded in said block, a first portion of said conductive means extending from said cylindrical member to said other end of the block, a second portion of said second conductive means being exposed at said other end of the block for connection to the other of the two circuit conductors.

3,096,943
A TREE LIGHTING FIXTURE
Edward E. Forrer, 16 Maple Drive, New Hyde Park, N.Y.
Filed Oct. 24, 1961, Ser. No. 147,228
2 Claims. (Cl. 240—10)



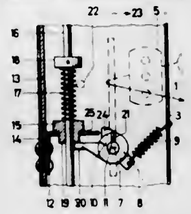
1. In a Christmas tree lighting fixture, a plurality of relatively spaced radially directed risers, a plurality of relatively spaced arcuately directed connectors, said risers and connectors crossing each other to form a single unitarily formed substantially quadrant shaped net, said risers and connectors being of a pliable material, a plurality of electrical conductors included in said net at said crossing risers and connectors, said quadrant shaped net being formable into a substantially frusto-conical shape, releasable engaging means on said net to releasably retain the same in said frusto-conical shape, means to connect said electrical conductors to a source of electricity, and illuminating means electrically connected with said electrical conductors, said net being adapted to be positioned about and supported on the branches of said tree.

3,096,944
DISINTEGRATING FRESHLY POLYMERIZED OLEFINS WITH POLYMERIZATION INHIBITOR
Richard V. Schafer, Walnut Creek, and Earl S. Hill, Orinda, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed June 7, 1961, Ser. No. 115,433
6 Claims. (Cl. 241—15)



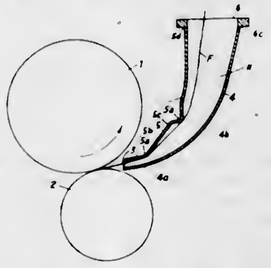
1. Method of disintegrating solid materials entrained in a liquid stream, said stream containing freshly polymerized olefins subject to depositions on surfaces, which comprises the steps of flowing said stream through a disintegrator having a plurality of relatively moving parts which includes cutter blades, and injecting directly into the zone adjoining juxtaposed, relatively moving parts a fluid polymerization inhibitor for substantially preventing the formation of deposits on said parts.

3,096,945
KNOCK-OFF MOTION FOR THREAD PROCESSING MACHINES
Edwin Wildi, Uzwil, Sankt Gallen, Switzerland, assignor to Maschinenfabrik Benninger A.-G., Uzwil, Sankt Gallen, Switzerland
Filed Oct. 19, 1961, Ser. No. 146,284
Claims priority, application Switzerland Oct. 22, 1960
2 Claims. (Cl. 242—19)



1. In a tension actuated device for responding to tension in the thread being unwound from a bobbin, said device having a feeler pin around which thread is adapted to be passed, a rotatable shaft on which said feeler pin is mounted, a cutting means cooperating with said feeler pin against which the thread is drawn and cut when the tension gets too great, and a contact adapted to be contacted to close a circuit when the tension in said thread is released suddenly, that improvement comprising an abutment pin on said shaft, a sleeve rotatably mounted around said shaft and having a sector-shaped opening therein in which said abutment pin is free to move, a switch member projecting from said sleeve and adapted to contact the contact when said sleeve is rotated, and spring means connected to said sleeve urging said sleeve to rotate said switch member against the contact in the opposite direction from that in which said shaft will be rotated by increasing thread tension acting on the feeler pin, whereby when the tensioned thread is cut, said spring means will rotate said sleeve and the edge of the sector-shaped opening will engage said abutment pin and carry said shaft and feeler pin along in the rotation of said sleeve until said switch member abuts the contact, after which said feeler pin is free to continue its rotational movement as said abutment pin rotates in the sector-shaped opening of said sleeve.

3,096,946
METHOD AND APPARATUS FOR HANDLING THREAD IN AN AUTOMATIC THREAD WINDING MACHINE
Walter Schweiter, Horgen, Switzerland, assignor to Maschinenfabrik Schweiter AG., Horgen, Switzerland, a company of Switzerland
Filed May 11, 1960, Ser. No. 28,453
Claims priority, application Switzerland May 15, 1959
8 Claims. (Cl. 242—35.6)



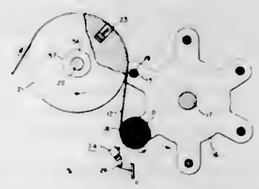
1. A method of engaging a thread that is broken as it is wound on a winding bobbin during the operation of an automatic thread winding machine which comprises: initially creating an air flow within a nozzle thereby drawing a thread thereinto in close proximity to one surface thereof, and thereafter deflecting at least a portion of the thread away from close proximity to said one surface.

3,096,947
WEB SEVERING AND ROLL INITIATING MECHANISM
Robert J. Jacobs and Charles J. Waechter, Plainfield, N.J., assignors to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 14, 1961, Ser. No. 95,563
13 Claims. (Cl. 242—56)



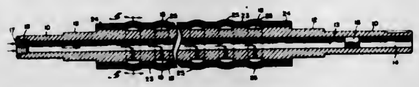
3. In a web-severing mechanism for a center shaft winding machine including a roll, means for driving the roll independently of the web at a peripheral speed substantially equal to the linear speed of the web and about which the web passes between an initial line of contact and a final line of separation, means operable to affix one end of a wire to one end of the roll at a point substantially in said initial line of contact and at one side edge of the web, and means operable simultaneously with said first means to pay out the wire under tension from a point transversely across the web at the other side edge of the web, the construction and arrangement being such that the wire is wound in a helical path about the roll to grip the web thereto and to sever the same along said path as successive points thereof pass said line of separation.

3,096,948
WINDING APPARATUS
Frank G. Conrad, Jr., Glenolden, Pa., assignor to Scott Paper Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 12, 1961, Ser. No. 137,701
6 Claims. (Cl. 242—67.1)



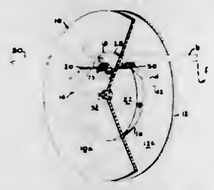
1. In web winding apparatus, the combination with a mandrel on which a web is wound, and a glue dispenser positioned to deposit glue on the web wound on said mandrel, of means for controlling operation of said glue dispenser, said controlling means comprising a hydraulic actuating system connected to said glue dispenser and including a pump, a rotatable cam adapted to actuate said pump, means rotating said cam at a velocity directly proportioned to the velocity of the web being wound, said pump including a cam follower movable from an inactive position out of the path of movement of said cam to an active position within the path of movement of said cam, and means responsive to the feeding of substantially the total desired length of web to said mandrel for moving said cam follower to its active position.

3,096,949
AIR EXPANDABLE CORE SHAFT
Harold W. Huffman, Hamilton, Ohio, assignor to The Hamilton Tool Company, Hamilton, Ohio, a corporation of Ohio
Filed Jan. 15, 1958, Ser. No. 709,065
5 Claims. (Cl. 242—72)



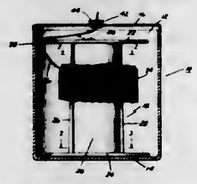
1. In a device of the class described, the combination of a longitudinally bored one-piece shaft having opposite ends and an intermediate portion, said intermediate portion being provided with a series of shallow annular grooves alternated with annular ridge areas along the length of the intermediate portion of the shaft, and each shallow groove having therein a transverse opening placing each groove in fluid communication with the longitudinal bore of the shaft, and a resilient air-impermeable tube covering substantially the full length of the intermediate portion of the shaft and all the shallow grooves therein formed, said tube being vulcanized to the shaft at all areas between and adjacent to each groove.

3,096,950
REEL IMPROVEMENT
Robert P. Gutterman, Bethesda, Md., assignor to General Kinetics Incorporated, Arlington, Va., a corporation of Virginia
Filed Oct. 24, 1960, Ser. No. 64,456
14 Claims. (Cl. 242—74)



1. A cylindrical hub for use in a reel having a flange with an inner surface for winding and storage of flexible strip material, said hub comprising at least two chordal segments, the width of one of said segments being less than the width of the other of said segments, each of said segments having a chordal edge, said segments being adapted for planar mounting with said chordal edges adjacent each other, and forming therebetween a chordal slot arranged for direct communication with said inner surface of the flange.

3,096,951
WIRE PACKAGE AND REEL THEREFOR
Ernest L. Jenson, Fort Wayne, Ind., assignor to New Haven Wire & Cable, Inc., New Haven, Ind., a corporation of Indiana
Filed Jan. 2, 1962, Ser. No. 163,599
15 Claims. (Cl. 242—137.1)



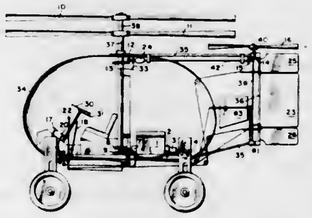
10. A wire reel comprising: a cylindrical barrel portion with radially extending flanges at the opposite ends thereof, and at least one wedge member extending axially between said flanges and secured to the outer surface of said barrel portion, said wedge member being radially thicker at its end adjacent one flange than at its end adjacent the other flange and having its outer surface tapering uniformly therebetween.

3,096,952
VERTICAL TAKE OFF AIRCRAFT
Clarence L. Roppel, Fairdale, N. Dak.
Filed Apr. 19, 1961, Ser. No. 104,040
6 Claims. (Cl. 244—12)



1. An aircraft comprising a fuselage, wing semispans projecting outwardly from each side of the fuselage, propulsion means pivotally connected to each semispan by universal joint means, power means connected to the propulsion means for tilting the propulsion means in any direction about said universal joint means with respect to said semispans for controlling the aircraft, said propulsion means comprising jet engines pivotally connected to the tips of said semispans, said jet engines each having its intake provided with a pair of power operated clamshells where the intake may be selectively closed and streamlined by said clamshells.

3,096,953
AUTOHELICOPTER
Vladimir I. Koump, 4705 92nd St., Elmhurst 73, N.Y.
Filed Sept. 4, 1959, Ser. No. 838,246
4 Claims. (Cl. 244—17.19)



1. An autohelicopter, comprising in combination with a cabin having a body portion and a tail portion, two main driving rotors, each of said main driving rotors having a constant pitch, vertical axles carried by said body portion and supporting said main driving rotors one above the other in horizontal planes located above said body portion, a motor carried by said body portion, and means operatively connecting said motor with said axles for rotating said driving rotors in opposite directions in said horizontal planes; a control device having a small horizontal tail rotor having a constant pitch, a vertical axle carrying said tail rotor, means connected with said tail portion and supporting the last-mentioned vertical axle adjacent to and outside of said tail portion, three vertical control vanes mounted adjacent said vertical axle and located one above the other, means connecting one of said vertical axles with the last-mentioned vertical axle for driving said tail rotor, means carried by

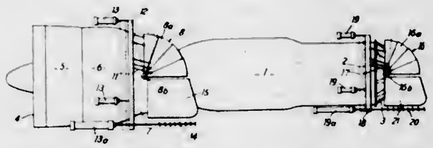
said body portion and connected with said control vanes for turning said vanes to a limited angle to control the autohelicopter about its principal roll and yaw axes, a horizontal axle carried by said tail portion and located outside of and adjacent to said tail portion below said main driving rotors and parallel to said principal roll axis, a further vertical control vane carried by said horizontal axle and located in the path of the downwash of the main driving rotors, and means carried by said body portion and connected with the said control vane for turning it to a limited angle to control the autohelicopter about its principal yaw axis at hovering and vertical ascent and descent of the autohelicopter.

3,096,954

IMPROVEMENTS TO JET-PROPELLED AIRCRAFT WITH DIRECTIONAL DISCHARGE-NOZZLES FOR VERTICAL TAKE-OFF

Louis Jules Bauger, Vanves, René Constant, La Rochette, and Louis François Jumelle, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France

Filed Nov. 6, 1961, Ser. No. 150,500
Claims priority, application France Nov. 10, 1960
6 Claims. (Cl. 244—23)



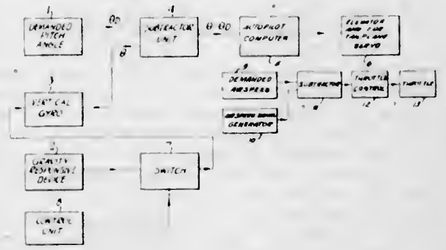
1. In an aircraft which takes off vertically without changing trim, the jet deflecting combination of at least one turbojet engine having a double flow and a front fan, comprising a rear discharge nozzle for the hot flow and at least one nozzle discharging the flow compressed by said fan, immediately downstream of said fan, with jet deflecting devices associated with each discharge nozzle and comprising, arranged immediately downstream of said nozzle, at least one upper deflecting segment pivoted about an axis substantially horizontal, substantially vertical lateral partitions, substantially horizontal lower grids provided with transverse blades and a common actuating mechanism for urging in the same time said segment, partitions and grids from a retracted to an extended position and vice versa.

3,096,955

AUTOMATIC LANDING SYSTEM FOR AIRCRAFT

Eric Priestley, St. Albans, England, assignor to Elliott Brothers (London) Limited, London, England, a company of Great Britain

Filed Nov. 30, 1961, Ser. No. 155,974
Claims priority, application Great Britain Nov. 30, 1960
4 Claims. (Cl. 244—77)



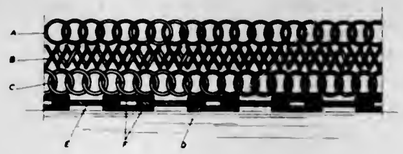
3. In an automatic landing system for aircraft embodying a vertical gyro and a gravity responsive device which modifies the output of the vertical gyro to provide a signal representing the pitch angle of the aircraft, the system being arranged to cause the aircraft to land in three phases during the first of which the aircraft is controlled by an instrument landing system to follow a glide path approaching the airfield, during the second or transition phase of which the aircraft is controlled by means comprising an automatic throttle control tending to maintain the airspeed constant and pitch angle means responsive to the difference between the measured pitch angle of the aircraft and a predetermined pitch angle to tend to maintain the aircraft at a substantially constant pitch angle whereby the aircraft is caused to fly during the transition phase on a path which is an extension of the glide path of the first phase and during the third or landing phase of which the aircraft is caused to fly on a landing path; the improvement comprising means operable in response to a signal representing the commencement of the transition phase to render the gravity responsive device inoperative to modify the output of the vertical gyro.

3,096,956

AIRSTRIP FOR VERTICAL TAKE-OFF AIRCRAFT

Hermann Oestrich, Paris, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France

Filed July 14, 1961, Ser. No. 124,186
Claims priority, application France July 29, 1960
3 Claims. (Cl. 244—114)



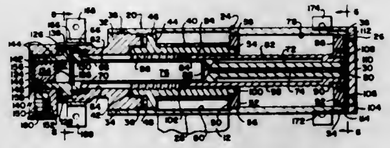
1. A transportable airstrip suitable for V.T.O.L. jet aircraft and of the wire-mesh mat type, comprising a plurality of generally horizontal strata of generally helical coils of refractory wire, the turns of each coil in a stratum being imbricate with the turns of the adjacent coils of the same stratum, said strata being superposed one above the other.

3,096,957

BALLISTIC ROTARY ACTUATOR

Leslie D. Peterson and Gerald E. Hirt, % Talley Industries, 4551 E. McKellips St., Mesa, Ariz.

Filed Nov. 3, 1960, Ser. No. 89,591
8 Claims. (Cl. 244—122)



7. In a pilot ejection system including a seat for accommodating a pilot, strap means fixed at one end to the forward lower portion of said seat and extending rearwardly and then upwardly in an inflight position to engage between the seat and a pilot sitting therein, and a rotary actuator fixed to the rearward upper portion of said seat and having the opposite end of said strap means operatively connected therewith for effecting separation of the pilot and seat during ejection by rapidly reeling in said strap means into a substantially taut condition between the one end thereof fixed to the forward lower portion of the seat and the other end thereof operatively connected

to said actuator, the improvement comprising said actuator including an elongated annular housing member, a head member sealingly engaged to one end of said housing member, a reel rotatably mounted within said housing member at a position adjacent said head member receiving one end of said strap means so that the latter can be wound on said reel in response to rotation of said reel in one direction, said housing member having an opening therein in axial alignment with said reel for receiving the strap means extending from said reel therethrough, said head member and said reel having coaxial openings extending therethrough, an elongated rigid structure fixedly secured to said head member and extending axially therefrom within said housing member through the coaxial openings of said head member and said reel, said elongated rigid structure including a cylindrical portion adjacent said head member defining a chamber for receiving a ballistic charge capable of creating gases under pressure upon ignition and a portion of non-circular exterior cross-section extending therefrom toward the opposite end of said housing member, end closure means sealingly closing the opposite end of said housing member, said housing member having means defining an interior cylindrical surface extending from said end closure means toward said reel, a piston mounted within said housing member with its periphery in sealing relation to the interior surface thereof for axial movement from a position adjacent said end closure means away from the latter toward said reel, said piston and said end closure means defining with the portion of the interior cylindrical surface of said housing member extending therebetween an expansible pressure chamber, said piston having a central opening therein receiving the non-circular portion of said elongated rigid structure, a hollow piston rod disposed within said housing member in surrounding relation to said elongated structure having one end sealingly secured to said piston rod for axial movement therewith, said piston rod extending from said piston within the axial opening in said reel and having an interior cylindrical surface slidably engaged on the cylindrical portion of said elongated rigid structure in sealing relation therewith, said piston and piston rod including a sliding connection with the non-circular portion of said elongated rigid structure preventing free relative rotational movement between said elongated rigid structure and said piston rod during the axial movement of the latter with said piston, said elongated rigid structure including a passage extending from said charge-receiving chamber through the non-circular portion thereof in communicating with said expansible pressure chamber for communicating the gases under pressure created in said charge-receiving chamber with said expansible pressure chamber to effect axial movement of said piston and piston rod in a direction away from said end closure means, and means acting between the exterior surface of said piston rod and the surface defining the axial opening in said reel for effecting a rotary movement of said reel in a direction to wind said strap means thereon in response to the axial movement of said piston rod away from said end closure means.

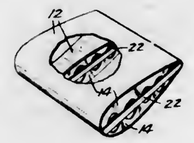
3,096,958

RIBBED SHEET STRUCTURE

Robert D. Koontz, Manhattan Beach, Calif., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Jan. 22, 1959, Ser. No. 788,296
4 Claims. (Cl. 244—123)

2. A reinforced plastic wing section comprising top and bottom reinforced plastic skins joined to one another by at least one wing-rib, each self-sustaining skin comprising at least one layer of resinous sheet material reinforced with continuous, non-woven, lineally aligned filaments, and having at least one rib integrally formed therewith and forming a portion of the wing-rib, said rib being composed of a molded discontinuous fiber reinforced resin strongly adherently bonded to said skin and having reinforcing fibers therein intimately intermingled with the resin of said skin, said rib resin and said skin resin being of compatible resin systems, means joining said wing-rib portions to one another to form said wing section.

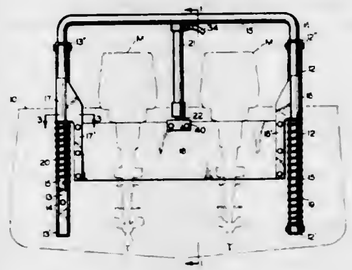


3,096,959

OPERABLE MOUNTING MEANS FOR OUTBOARD MARINE MOTOR

Gustave H. Wagner, 8027 NE. Killingsworth St., Portland, Oreg.

Filed May 7, 1962, Ser. No. 192,640
4 Claims. (Cl. 248—4)



1. An outboard marine motor adjustable mounting assembly including a frame having a pair of side portions extending in substantially parallel vertical planes, bracket means securing said frame on the outside of the rear wall of a boat with said side portions of said frame spaced from said rear wall, a pair of sleeves slidable on said side portions of said frame respectively, a motor-supporting member secured to said sleeves, said sleeves enabling said member to move up and down to a limited extent with respect to said rear wall of the boat, spring means on said side portions of said frame beneath said sleeves exerting an upward thrust on said sleeves and therewith on said member and adapted to hold said sleeves and said member normally in raised position, hydraulic mean operable from within the boat for thrusting said member and sleeves downwardly into lowered position against the force of said spring means, and releasing means connected with said hydraulic means enabling said member and sleeves to return quickly to raised position under the force of said spring means.

3,096,960

IMPLEMENT HOLDER

Thurlow R. Kinney, 105 Fillmore Ave., Endicott, N.Y.

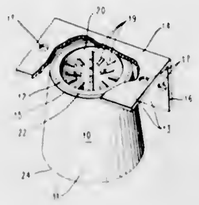
Filed July 3, 1961, Ser. No. 121,764
2 Claims. (Cl. 248—113)

1. An implement holder for engaging the free end of a rod-type implement and thus securing the implement for storage, comprising:

(*a*) a hollow frusto-conical member having an inside

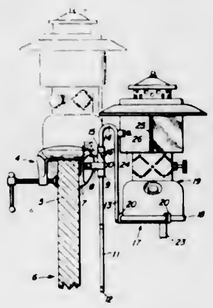
surface dimensioned to allow passage of the implement handle through a significant portion of the length of said frusto-conical member along an axial path; and

(*b*) a multiplicity of flexible elongated rodlike projections extending inwardly from a major portion of the inside surface of said frusto-conical member, said projections pointing slightly upward toward the apex end of said frusto-conical member, said projections being adapted for easy deformation from their normal attitudes toward the apex end of said frusto-conical member as an implement handle is



inserted but resisting direct removal of the implement handle due to compression and friction as they are returned toward their normal attitudes, and said projections resisting removal of the implement handle by only a downward pull of it but allowing removal of the implement handle by a downward pull accompanied by a radial twisting motion which allows deformation of said projections away from the apex end of said frusto-conical member without passing through their normal attitudes.

3,096,961
LANTERN MOUNTING BRACKET FOR BOATS
Milton W. Powell, Lexington, Ky., assignor of forty percent to Lattimer J. McConnell and twenty percent to Paul H. Mansfield, both of Lexington, Ky.
Filed June 16, 1961, Ser. No. 117,543
8 Claims. (Cl. 248—229)

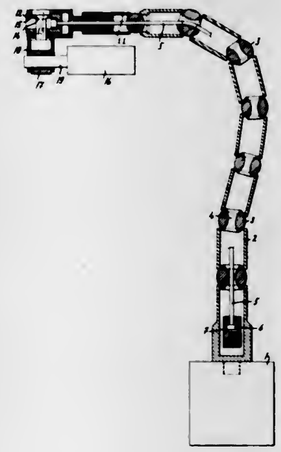


1. A lantern holder comprising a clamp for mounting on a boat gunwale, a vertical sleeve on the clamp, a vertical rod rotatably and slidably mounted in said sleeve and comprising a reversely bent upper end portion, a horizontal bracket on said reversed end portion of said rod for supporting a lantern in one position outwardly of the gunwale and adapted to rest on the guanwale for supporting the lantern in at least one other position thereon, means for releasably retaining the bracket in said one position, and means for releasably securing the bracket in said other position.

ERRATUM

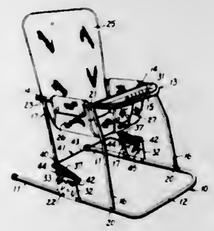
For Class 248—240 see:
Patent No. 3,096,885

3,096,962
LOCKING DEVICE FOR A MEASURING APPARATUS OR THE LIKE
Pieter Johannes Meijs, Hillevliet 43c, Rotterdam, Netherlands
Filed Jan. 25, 1961, Ser. No. 84,852
Claims priority, application Netherlands Feb. 4, 1960
4 Claims. (Cl. 248—276)



1. A locking device for a measuring apparatus or the like comprising a socket having means for fixing to a support, a measuring apparatus having a shaft, a holder associated with said socket receiving said shaft, said holder comprising a plurality of loose parts having bores which are hingeable with respect to one another, a dragband extending through said bores of said parts and means for tightening and releasing said dragband to lock and unlock said measuring apparatus from said holder.

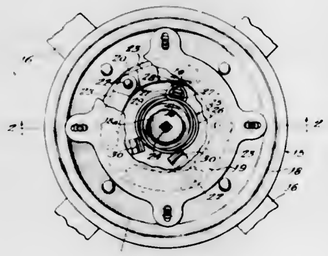
3,096,963
BABY JUMPER
Matilda D. Welsh, Ladue, Mo.
(% Welsh Co., 1535 S. 8th St., St. Louis 4, Mo.)
Filed Feb. 15, 1961, Ser. No. 89,471
13 Claims. (Cl. 248—401)



1. In a collapsible baby jumper, a frame comprising a generally horizontal base frame, a seat support above the base frame, and a pair of braces pivoted to the base frame and to the seat support to complete a quadrangle, a plate

attached to said base frame, the plate being provided with a guide means and a stop shoulder, a rod slidably received in said guide means, spring means connecting said rod to one of said braces, said rod being movable against said stop shoulder for retention when said spring means is stressed to maintain said jumper in an erect position, and means engaging said rod to provide a fulcrum about which the rod can be selectively moved to detach the rod from said stop shoulder.

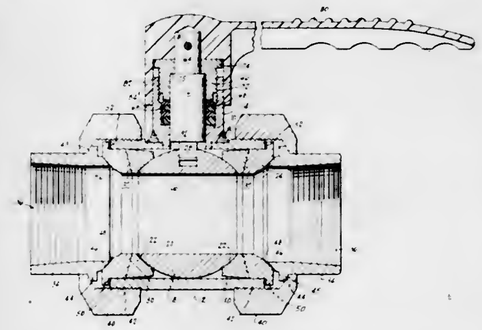
3,096,964
SELF-ORIENTING REVOLVING FIXTURE
Martin Fox, Chicago, Ill., assignor to The Seng Company, a corporation of Illinois
Filed Oct. 19, 1960, Ser. No. 63,530
4 Claims. (Cl. 248—425)



1. A chair iron, comprising: upper and lower opposed, substantially flat, parallel plates; means between said plates, spacing said plates apart, and mounting said plates for rotation with respect to each other in either direction from a predetermined oriented position; resilient means between said plates normally retaining said plates in said oriented position and urging said plates toward said oriented position upon relative rotation of said plates in either direction from said oriented position, said resilient means comprising a spring having opposite ends, and a lug on each of said plates, each lug engaging an opposite one of the opposite spring ends upon relative rotation of said plates from said oriented position to stress said spring; and circumferentially spaced stop means on said plates for limiting relative rotation of said plates from said oriented position.

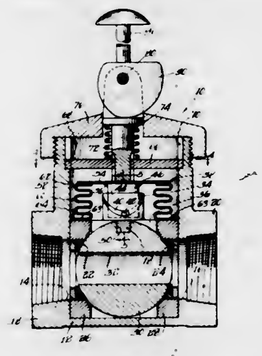
3,096,965
BALL VALVE WITH ADJUSTABLE SEAT SEALS
Edward A. Margus, Morris Plains, and Gerald Lewis, South Orange, N.J., assignors, by mesne assignments, to Manning, Maxwell & Moore, Incorporated, a corporation of New Jersey
Filed May 13, 1960, Ser. No. 29,088
4 Claims. (Cl. 251—170)

4. In a ball valve, a generally cylindrical valve body, a spherical valve member disposed within the body, a pair of annular seals concentrically disposed within opposite ends of the valve body and forming opposed seats for the valve member, means for retaining said valve member and seals in assembly within the body comprising a pair of aligned generally cylindrical inserts telescopically and slidably received within opposite ends of the valve body in alignment with said seals, each of said inserts having a convex surface facing generally outwardly of the valve body, a nose piece generally aligned with each insert and having a convex end surface in engagement with the convex end surface of the insert, each insert further having a generally annular external surface facing outwardly of the valve body and inclined outwardly of the nose piece and toward said insert, and a retaining collar respectively associated with each nose piece, each collar being threadably mounted on the valve body for movement generally longitudinally of the nose piece and having an inclined



surface in engagement with the inclined surface on the nose piece, whereby the nose piece is retained in assembly with the insert and the insert is retained with the valve body with at least some axial misalignment being permitted between the nose piece and insert.

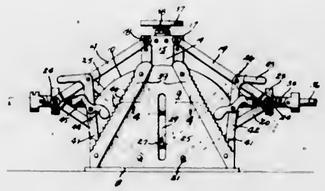
3,096,966
SEALED BALL VALVE
Rolland McFarland, Jr., Crystal Lake, Ill., assignor to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Filed July 23, 1959, Ser. No. 829,127
10 Claims. (Cl. 251—214)



1. A spherical ball valve comprising, in combination, a valve housing, a spherical valve ball in said housing, a pair of valve seats in said housing engaging said ball, said housing defining two separate passages communicating with the respective valve seats, a reciprocable valve actuating plunger mounted in said housing for rectilinear movement toward and away from said ball, anchoring means coacting with said plunger to hold the latter against rotation, coacting cam and follower elements reciprocable relative to each other, said cam element being shaped to force rotation of said cam and follower elements relative to each other as an incident to reciprocation of said elements relative to each other, means connecting one of said elements to said ball to rotate the latter, means connecting the other of said elements nonrotatably to said plunger for reciprocation by the latter relative to said one

element, valve operating means coacting with said plunger to move the latter longitudinally in opposite directions to rotate said ball between open and closed positions thereof, a bellows encircling said plunger between said anchoring means and said seats and enclosing the element connected to the ball for rotating the same, means forming an impervious circumferential joint between one end of said bellows and said housing, and means forming an impervious circumferential joint between the other end of said bellows and said plunger whereby the bellows partakes of the rectilinear movement of said plunger.

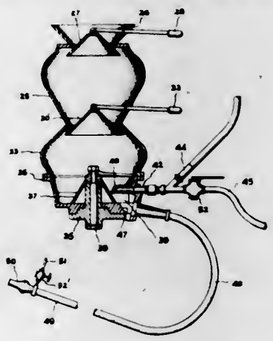
3,096,967
MECHANICAL JACK
Jacob A. Duke, 1338 Foxwood, Houston 8, Tex.
Filed June 4, 1962, Ser. No. 199,743
1 Claim. (Cl. 254—126)



A mechanical jack with safety locks, comprising, a base, side plates upstanding along opposite sides of the base, a pedestal mounted centrally of the base and including four guides projecting upwardly therefrom, a thrust block including downwardly extending plates for slideably engaging in said guides, two upper pairs of pivotally jointed arms mounted on opposite sides of the thrust block, two lower pairs of arms pivotally mounted at their lower ends to said side plates, horizontally spaced trunnioned spacer blocks pivotally connecting said upper and lower pairs of arms together, a shaft threaded in opposite hands at each end threadably engaging through the spacer blocks to cause the said blocks to converge and diverge with respect to each other in response to rotation of the shaft, stabilizing bars pivotally connected to the upper pairs of arms intermediate the length of the said arms, a stabilizing shaft extending through said plates, said plates having vertical slots formed therein to receive the stabilizing shaft and restrict the same to movement in a vertical plane, said stabilizing bars converging downwardly and terminating with pivotal mounting on the stabilizing shaft, and a locking mechanism comprising upwardly converging notched bars secured to the outer side of the side plates, locking levers pivotally extending from said upper pairs of jointed arms for selective engagement with the notched bars, and catches on said locking levers for selectively maintaining said levers out of engagement with said bars.

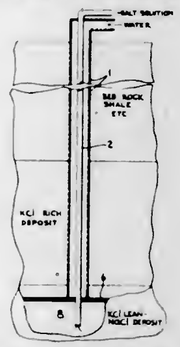
3,096,968
PROCESS FOR MAKING CONCRETE FOR APPLICATION BY SPRAY GUN
James Lewis Kempthorne, Springfield, N.J.
(7 Ramsay Road, Montclair, N.J.)
Filed Sept. 14, 1960, Ser. No. 55,911
1 Claim. (Cl. 259—147)

The method of making concrete, comprising mixing cement with the usual aggregate of sand and graded sizes of stone, blowing the mixing through a tube by means of compressed air, blowing dry steam into the stream of the



compressed air and mentioned mixture, and injecting water into said stream adjacent the delivery end of said tube.

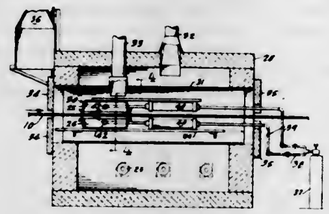
3,096,969
RECOVERY OF POTASSIUM CHLORIDE
Byron P. Edmonds, Alice, and James B. Dahms and Edward Phelps Helvenston, Corpus Christi, Tex., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 26, 1961, Ser. No. 123,916
7 Claims. (Cl. 262—3)



1. A method of recovering potassium chloride from a deposit having a potassium chloride-rich stratum and containing sodium chloride disposed above a sodium chloride deposit in which the potassium chloride content is relatively lower than in the potassium chloride-rich deposit which comprises drilling a well into the sodium chloride-rich deposit, extracting sodium chloride with water from the sodium chloride-rich deposit until a cavity of substantial size has been produced and then continuing such extraction and raising the roof of the cavity until the roof reaches the potassium chloride-rich deposit and thereafter extracting potassium chloride with water from the potassium chloride-rich strata.

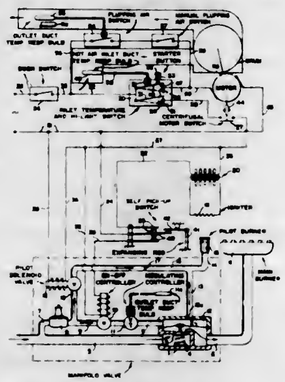
3,096,970
APPARATUS FOR TREATING FIBROUS GLASS
Remus F. Caroselli, Cumberland, R.I., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Original application May 8, 1957, Ser. No. 657,923, now Patent No. 3,008,846, dated Nov. 14, 1961. Divided and this application Nov. 3, 1960, Ser. No. 67,099
3 Claims. (Cl. 263—3)

1. Apparatus for heat cleaning glass cloth comprising a furnace having an inner muffle, and an outer muffle which surrounds said inner muffle, a heat source on the outside of the outer muffle for raising the temperature within said furnace, said furnace including a housing surrounding said outer muffle, said housing and inner and outer muffles each having entrance and exit ports



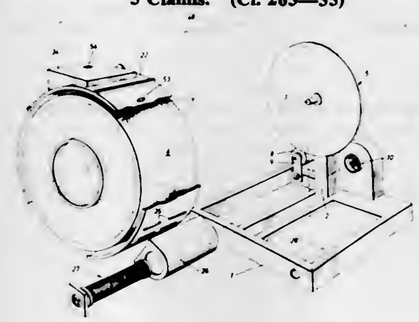
for the passage of fabric therethrough, said inner and outer muffle being interconnected at both the entrance and exit ends of said inner muffle to allow free flow of fluid from one muffle to the other, and means within said inner muffle for introducing a fluid therein which will not support combustion.

3,096,971
DRYER APPARATUS
Nicholas J. Sidaris, Long Beach, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 1, 1959, Ser. No. 817,169
7 Claims. (Cl. 263—33)



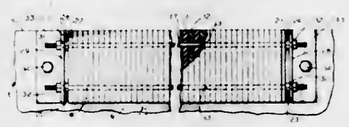
1. A dryer comprising a drum, a motor for driving said drum, control means for controlling a heat supply to said drum, first means responsive to a condition indicative of drying in said drum for operating said control means to variably supply heat to said drum to maintain a uniform drying condition therein, and second means responsive to the heat supplied to the dryer also adapted to control said control means for starting and stopping the supply of heat to said drum and for controlling the operation of said motor, said second means having a manual operator for initially actuating said second means to start the supplying of heat to said drum and to start said motor, said second means being operable to keep said motor operating so long as the heat supplied to the drum does not cause the temperature within the drum to exceed a preselected amount or the temperature of the heat supplied to said drum does not drop below a preselected lower amount and to stop the supply of heat and said motor when the temperature of the heat supplied to the drum has dropped to a preselected level.

3,096,972
GAS DRIERS
Leonard G. H. Mitchell, Toronto, Ontario, Canada, assignor to General Steel Wares Limited, Toronto, Ontario, Canada
Filed Dec. 5, 1960, Ser. No. 73,619
5 Claims. (Cl. 263—33)



1. In a gas drier of the type comprising a perforated drum rotatably mounted in a housing having an inlet for heated drying air, and an outlet for moisture laden air and positive air circulating means for causing air to enter said drum through said housing inlet and exhaust from said drum through said housing outlet, means defining a folded air path leading into said housing inlet, gas burner means for producing an open flame in said folded air path and separated from said housing inlet by a reverse fold in said path requiring air passing through said flame to reverse flow direction through substantially 180° in said flow path to reach said housing inlet, means dividing air flow into said housing inlet into directly heated drying air passing through said flame and indirectly heated drying air heated by but bypassing said flame, means to divide said indirectly heated drying air between a first minor air flow stream separated from the open burner flame by a thin heat transfer wall and a second major air flow stream isolated from the burner flame by said minor secondary air flow stream, and a flame pattern detector located downstream of said gas burner in said folded air path and disposed and arranged to cut off gas flow upon appreciable flame pattern change, said flame pattern detector comprising a thermal responsive device disposed substantially in contact with said heat transfer wall and exposed to said minor air flow stream of indirectly heated air.

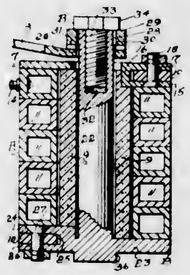
3,096,973
DOCK BUMPER
Walter F. Bergen, Alamo, Calif., assignor to Pacific & Atlantic Shippers, Inc., doing business as Tyrcs Industries, a corporation of Illinois
Filed Jan. 27, 1961, Ser. No. 85,380
3 Claims. (Cl. 267—1)



2. A dock bumper for installation on a support having a vertical face comprising a bundle of laminations of rubberized fabric having apertures therein, end plates at the opposite ends of said bundle and having similar openings therein, rods passing through said apertures and said openings, enlargement on said rods engaging said end plates, at least some of said enlargements being nuts engaging

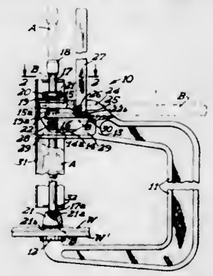
threaded end portions on said rods and effective when tight to compress said end plates and said laminations together and to leave said threaded end portions projecting, an angle iron adapted to abut said vertical face and having holes therein fitting over said projecting rod ends, fasteners engaging said ends of said rods and urging said angle iron toward said nut, and mounting means in addition to said angle iron for supporting said rods from said vertical face.

3,096,974
VEHICLE RESILIENT SUSPENSION MEANS
Adolphe C. Peterson, 4623 Bruce Ave. S., Minneapolis, Minn.
Filed Apr. 19, 1960, Ser. No. 23,338
13 Claims. (Cl. 267—65)



8. In a vehicle suspension means: a first support bracket fixed on a vehicle frame; a second support bracket fixed on a road wheel bearing element; a core means extended vertically from one of said support brackets and having an annular shelf perpendicular to the core means and at the core means end; a gas container constructed of a flexible material, having an elongated form adequate to encircle said core means at least once, having at each end of the elongated form and extended therefrom a securing part formed in the extended container end, having intermediately of the pair of securing parts a wall enclosing and surrounding a gas space internally of the wall; a pair of securing means associated one with one of said support brackets and one with said annular shelf to attach said gas container by said securing parts between the one support bracket and the annular shelf so that the gas container is extended therebetween and retained in position thereby encircling said core means at least once to form yieldable means for compression.

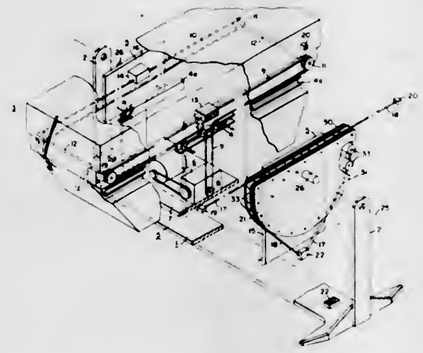
3,096,975
FAST ACTING CLAMP
Milton Irwin, 4609 Nicollet Ave., Minneapolis, Minn.
Filed June 23, 1960, Ser. No. 38,337
2 Claims. (Cl. 269—169)



1. A clamping device comprising a rigid C-shaped body having forwardly projecting upper and lower portions in confronting relation with each other, said lower body portion having an upwardly facing stationary jaw thereon, the upper portion of said body being bifurcated and defining a pair of forwardly extending and spaced upper and lower legs having vertically aligned openings therein and having front ends, said legs defining an unobstructed space therebetween, a longitudinally movable shaft extending toward said stationary jaw to clamp a workpiece thereon, said lower leg receiving and guiding said shaft through the opening therein, an externally threaded sleeve receiving and guiding the shaft therein and being threaded into the opening in said upper leg, said sleeve projecting downwardly from said upper leg, an elongate plate-like armature in said space between said legs and having a forward end with an aperture extending transversely therethrough and slidably receiving said shaft in close-fitting relation to lock against the shaft when the armature is tilted, said armature having a rear end to be tilted and moved downwardly toward the stationary jaw to lock the armature to the shaft and move the shaft toward the jaw, said upper leg having a slot aperture therethrough and extending in a fore-and-aft direction, said slot aperture having an inner end confronting the rear end of the armature to provide access thereto, a spring between said lower leg and the forward end of the armature and urging the armature away from the stationary jaw, an upright elongate handle having an inner camming end portion projecting through said slot aperture and engaging the rear end of the armature, pivot means mounting said handle in the slot aperture for swinging rearwardly and downwardly to a substantially horizontal position, said slot aperture having handle-engaging end surfaces respectively engaging the handle when the handle is swung to upright and horizontal positions, the inner camming end portion of the handle being asymmetrically shaped about said pivot means and co-operating with the spring to produce tilting and downward and upward movement of the rear end of the armature when the handle is successively swung in opposite directions, and a substantially U-shaped cover having rearwardly extending side panel portions lying along said upper and lower legs and enclosing said space therebetween and said cover also having an intermediate portion interconnecting said side panel portions and being wrapped around the front ends of said legs.

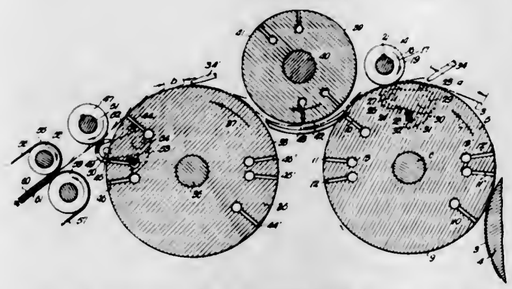
3,096,976
X-RAY APPARATUS
Harry E. Koerner, Catonsville, and Eugene P. Thomas, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 3, 1961, Ser. No. 150,063
5 Claims. (Cl. 269—323)

1. An X-ray tilt table comprising a fixed floor-mounted base having spaced-apart vertical standards; a cradle means disposed between said standards for rotary movement about a horizontal axis, said cradle means having spaced-apart vertical-plane cradle members journaled at their one end to the uppermost ends of said standards, respectively, and a connecting cradle member extending horizontally between and rigidly secured to opposite ends of said vertical-plane cradle members, one of said vertical plane cradle members being a T-shaped cradle member having cradle arms extending perpendicularly of said horizontal axis at opposite sides, respectively, and the other of said vertical-plane cradle members being a segmental cradle member having a frustrated straight-edge cradle portion parallel to and aligned with the arms of said T-shaped cradle member and a circular-edge cradle portion extending therefrom in the direction of the aforesaid connecting cradle member; rotary bearing means at opposite ends of said cradle arms and of said straight-edge cradle portion; an X-ray table body disposed between said vertical-plane cradle members in longitudinally-rollable longitudinally-spaced-apart support along its front and back by said rotary bearing means; motorized chain driving means mounted on said connecting cradle member; a pair of translation sprocket wheels at each end of said table body secured to opposite ends of a respective shaft passing transversely through said table body adjacent to its top surface; a first translation chain at the rear of said table body anchored to said segmental cradle member to form opposite loops extending longitudinally along said table body around respective ones of said translation



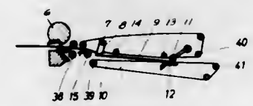
sprocket wheels and joined at a common driven connection with said motorized chain driving means; a second translation chain at the front of said table body anchored to said T-shaped cradle member to form opposite loops extending longitudinally along said table body around respective ones of said translation sprocket wheels; and a pair of tilt chains anchored to opposite ends of said table body, respectively, and extending in opposite directions over the upper straight-edge portion of said segmental cradle member and around opposite sides of its circular-edge portion to an anchor on said fixed floor-mounted base.

3,096,977
APPARATUS FOR SQUAMIFORM LAPPING OF BLANKS
Richard Winkler, Rengsdorf, near Neuwied, Rhineland, and Kurt Dünnebier, Wollendorf, near Neuwied, Rhineland, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 10, 1960, Ser. No. 68,385
Claims priority, application Germany Dec. 5, 1959
11 Claims. (Cl. 271—2)



4. An apparatus for squamiformly lapping by stages envelope blanks having transverse front and rear flap portions and laterally extending side flap portions, including means for conveying the blanks at high speed one after another with the front transverse flap portions leading the lateral flap portions, a staggering wheel at said first stage and having a peripheral means for gripping a forward portion of the leading transverse flap portion of a leading blank on the conveying means to carry said blank from the conveying means onto the periphery of the staggering wheel and subsequently to release said blank, braking rollers at opposite sides of the staggering wheel and located substantially tangent to a plane which is also tangent to the staggering wheel for engaging the side flap portions, means for rotating the braking rollers at a slower peripheral speed than the speed of the conveying means, pressure rollers to urge a preceding blank into driven contact with the periphery of the braking rollers for reducing speed of said preceding blank, means for rotating the staggering wheel at a peripheral speed corresponding to the speed of the conveying means to run said gripped portion of the blank carried thereon under said preceding blank to pull the side flap portions of said gripped blank into contact with the braking rollers at the time the gripped blank is released by said gripping means to effect advance of said blank at said reduced speed, a second staggering wheel similar to the first, means for actuating said second staggering wheel at the peripheral speed of the first braking rollers, a second pair of braking and pressure rollers, means for actuating the second braking rollers at a reduced peripheral speed relatively to the speed of the second staggering wheel to effect further lapping of the blanks, and means for continuing advance of the lapped blanks at a speed correspondingly with the speed of the braking rollers.

3,096,978
DEVICE FOR OVERLAPPING SHEETS OF PAPER, PRESS BOARD AND OTHER MATERIAL
Paul Jendrusch, Hamburg-Wandsbek, Germany, assignor to E. C. H. Will, Hamburg, Germany
Filed Aug. 15, 1960, Ser. No. 49,535
Claims priority, application Germany Aug. 20, 1959
3 Claims. (Cl. 271—46)



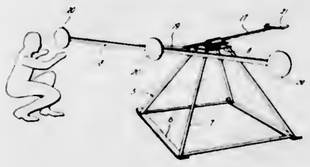
1. A device for overlapping sheets of paper, pressboard or similar material, comprising in combination, first conveying means consisting of a plurality of endless conveyor belts spaced in parallel relation and having taut portions, end rollers guiding said belts, means driving said rollers to move said belts at a speed corresponding to the speed of the sheets advanced toward said conveying means, the taut portions of said first conveyor belts being disposed above said sheets and forming a first guide surface for said sheets, second conveying means disposed below said first conveying means and consisting of a plurality of endless conveyor belts spaced in parallel relation to each other in a position between adjacent conveyor belts of said first conveying means and having second taut portions, second end rollers guiding said second belts, means driving said second rollers and said second belts at a lesser speed than said first conveyor belts, the taut portions of said second conveyor belts forming a second guide surface for said sheets, a first shaft extending normally to said first conveyor belts and rotatably supported above the taut portions of said first conveyor belts, means rotating said shaft with a speed proportional to that of said first conveyor belts, fingers mounted on said first shaft dimensioned and arranged to extend through the spaces between said first conveyor belts and engage each sheet moved past therebelow at the rear top

end so as to positively urge said rear edge to a lower plane, a second shaft spaced from said first shaft extending normally to said conveyor belts and freely rotatable above the taut portions of said first conveyor belts, rollers mounted on said second shaft extending through the spaces between said first conveyor belts and engaging the leading edges of said sheets urging said sheets against said conveyor means moving at a slower speed than said first conveyor means so as to overlap successively fed sheets, a plurality of idling rollers extending normally to said conveyor belts disposed in spaced parallel relation between said first and said second shafts and engaging the top side of said first conveyor belts portions forming said first guide surface, a driven gear wheel journaled on a pin drivably connected with said first shaft, and means for adjusting said pin eccentrically to said first shaft whereby the circumferential speed of said fingers may be adjusted to the rate of travel of said sheets while the trailing edge of a sheet is positively urged downwardly by said fingers.

3,096,979
AGILITY DEVELOPING DEVICE

Walter J. Lacy, San Antonio, Tex. (Pasadena Royal Apts., I–71, 2120 Strawberry Road, Pasadena, Tex.)

Filed May 15, 1962, Ser. No. 194,787
3 Claims. (Cl. 272—57)

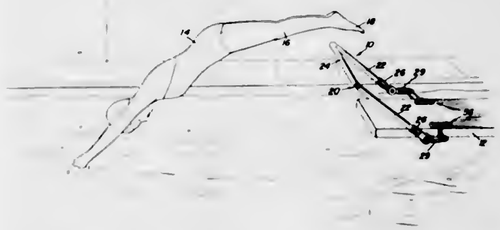


2. A device for training athletes comprising in combination a support; a target carrying member including a lightweight beam; a member mounted for arcuate movement on the support receiving the beam for reciprocating movement therethrough; at least one target carried by the target carrying member adjacent an end thereof; and manually operable means for moving the beam in rapid and irregular reciprocating and arcuate motion including a handle at an end of the target carrying member opposite said target.

3,096,980
DIVING BARRIER

Walter W. Gauer, Kenilworth, N.J., assignor to Wroble & Gauer Co., Inc., Kenilworth, N.J., a corporation of New Jersey

Filed Oct. 19, 1960, Ser. No. 63,527
5 Claims. (Cl. 272—66)

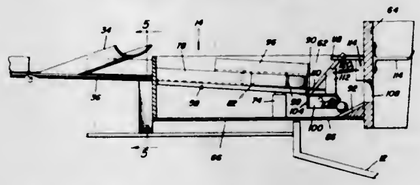


5. In combination with the free end of a spring board, a diving barrier including upstanding barrier defining means, clamp means removably securing said barrier defining means to said spring board with said barrier defining means extending transversely across and above said board, said clamp means including a pair of clamps pivotally secured to the lower end of said barrier means and at opposite sides of said board for rotation about axes extending transversely of said board and including jaw means releasably and clampingly engaged with the opposite side marginal edge portions of said board.

3,096,981
BALL SEPARATOR AND RETURN MECHANISM

Ewald L. Fischer, % Fischer Mfg. Co., Inc., Tipton, Mo.

Filed July 13, 1961, Ser. No. 123,749
6 Claims. (Cl. 273—11)

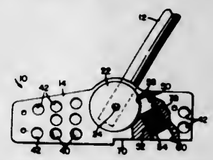


4. A ball separator and return mechanism for pool game tables or the like comprising, an elongated ball receiving channel sloping longitudinally downward toward a delivery shelf located at one end of the table, said elongated ball receiving channel receiving return balls from different angles and directing said balls single file toward the delivery shelf, an inclined ball return passage secured to the lower end of the ball receiving channel, divider means spanning the ball return passage at a height so as to allow the free passage therethrough of balls of a predetermined size, balls of a larger size being deflected toward one side of the return passage, said one side having an opening therein in alignment with a return opening communicating with the delivery shelf, a control gate means mounted above the delivery shelf and extending transversely of the table with one end in communication with the lower end of the return passage for receiving said balls of a predetermined size, said control gate means comprising pivotally mounted stop means confining said balls, spring means biasing said stop means to a confining position, coin-operated actuator means releasably engageable with the stop means for movement thereof to release the balls into the delivery shelf, and a rearwardly and downwardly inclined surface forward of said stop means and slightly transversely inclined from the return passage, said stop means in its confining position, being of generally inverted channel shape and including a forward wall rearwardly inclined and spaced from the inclined surface a distance so as to confine said predetermined size balls therebetween, and a rear wall of a size so as to confine said balls substantially between said walls upon upward and rearward pivotal movement of said forward wall, said balls being released upon subsequent forward pivotal movement of said forward wall.

3,096,982
ADJUSTABLE GOLF CLUB

Charles S. Bassin, 62 Randolph St., Springfield, Mass.

Filed Nov. 24, 1961, Ser. No. 154,462
9 Claims. (Cl. 273—80.1)

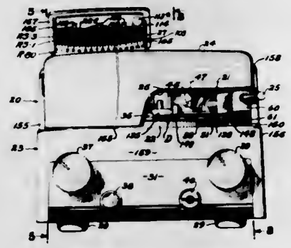


6. An adjustable golf club comprising in combination, a head, a shaft, a transversely extending opening in said head having an annular drum journalled therein, adjustable tensioning means disposed in an angularly upwardly-extending threaded opening in said head communicating with said transversely-extending opening, said tensioning means including a tension plug having a forward face concaved to the outer periphery of said drum, and locking means disposed in said angularly upwardly-extending opening adapted to bear against said tension plug, said shaft extending through a longitudinal groove in said head and being fixed to said drum, said drum being rotatable relative to said head whereby said shaft may be angularized, said tension plug being movable by rotation of said locking means to tightly embrace the outer periphery of said drum whereby rotation of said drum and angularization of said shaft are precluded.

3,096,983
INDICATING AND PLACE-FINDING APPARATUS FOR PHONOGRAPHIC MACHINES

Anthony C. de Napoli, Jr., Windsor, and Donald F. Balmer, Madison, Conn., assignors to The Soundscriber Corporation, New Haven, Conn., a corporation of Connecticut

Filed Apr. 26, 1950, Ser. No. 158,104
14 Claims. (Cl. 274—9)



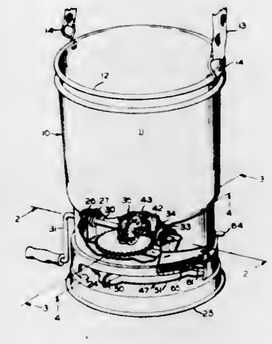
1. In a phonographic transcribing machine having a cabinet, a support for rotatably holding a record member, an inclined mirror mounted above said support for reflecting an image of said record rearwardly and upwardly, an adjustable mirror in said cabinet reflecting said image forwardly out of said cabinet into a position to be visible to the transcribing typist, said adjustable mirror being retractable downwardly into inoperative position within said cabinet.

3,096,984
SPREADER

Marvin L. Garrison, Seymour, Ind., assignor to Seymour Manufacturing Co., Seymour, Ind., a corporation of Delaware

Filed Sept. 29, 1960, Ser. No. 59,400
1 Claim. (Cl. 275—12)

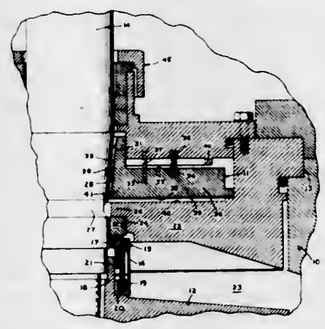
In a spreader, an elongate tubular housing open at the top, a first wall across the housing below the top to provide a hopper adapted to receive the material to be spread, said first wall having a downwardly convergent portion providing a funnel with a discharge port, a second imperforate wall completely across the housing adjacent the said discharge port to provide a lateral compartment between the housing and first wall and above said second wall, an impeller rotatively mounted on said second wall and disposed in said housing below said second wall, said impeller having a rotative vertical axis offset laterally from the discharge end of said funnel, drive means located in said compartment laterally adjacent said funnel above said second wall and connected to said impeller, said drive means being completely enclosed by said housing, first and second walls, and a third wall across said housing below said impeller, the said second wall, third wall and peripheral housing providing a shield and chamber for said impeller, the housing being provided with a lateral slot communicating with said chamber through which the impeller throws said material incident to spreading.



3,096,985
EMERGENCY SHAFT SEALING DEVICE

Hans Joseph Biheller, Lodi, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Dec. 14, 1961, Ser. No. 159,367
4 Claims. (Cl. 277—27)

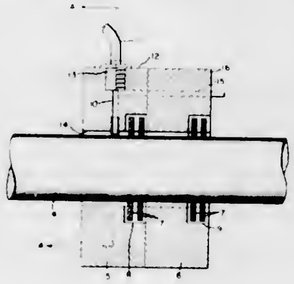


1. An emergency shaft sealing device for a turbomachine comprising:

(*a*) a casing having an inlet and an outlet therein,
(*b*) a shaft rotatably disposed in said casing and connected to a source of power,
(*c*) an impeller mounted on said shaft and adapted to energize fluid in said turbomachine,
(*d*) a first flange formed on the inner periphery of said casing inboard of said impeller and extending radially inwardly therefrom,
(*e*) a mechanical seal connected to said first flange and engaging said shaft in sealed relationship therewith,
(*f*) a sleeve member slidably disposed in said casing inwardly of said first flange and normally out of engagement with said shaft,
(*g*) a second flange formed on the end of said sleeve member adjacent said first flange and extending radially upward to slidably engage said casing,
(*h*) said shaft having a tapered section in juxtaposition with said sleeve member,
(*i*) said sleeve member having a tapered inner periphery corresponding to said tapered section of said shaft,
(*j*) spring means urging said sleeve member normally out of engagement with said shaft,

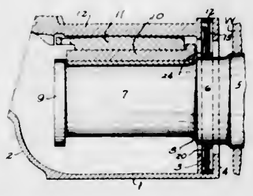
(*k*) the side of said second flange adjacent said first flange normally subjected to atmospheric pressure and on failure of said mechanical seal the fluid in said turbomachine leaking therethrough to subject the side of said second flange to a pressure greater than that of the force of said spring means to force said sleeve member to engage said shaft and form a sealed relationship therewith.

3,096,986
LUBRICATING DEVICE
Lawrence James David, Brevard, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,575
5 Claims. (Cl. 277—32)



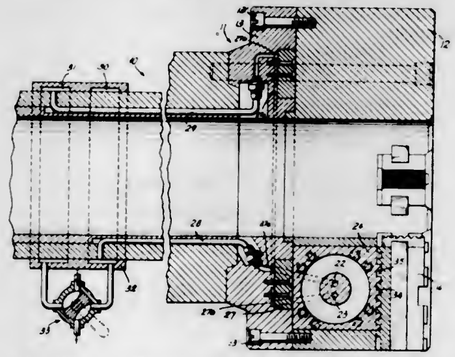
3. A combination oiler ring and packing retainer device for supplying a lubricating fluid to a horizontally positioned, reciprocating shaft and providing a housing for suitable packing, having an inside surface adjacent to and surrounding said shaft, a passageway connecting at least one point on said inside surface to a source of a lubricating fluid, a tube composed of a material softer than the material forming said shaft imbedded in said device at at least one point of communication of said passageway with said inside surface and projecting from said inside surface towards said shaft, and a circular recessed portion of substantially the same cross-sectional configuration across the said inside surface disposed along the axial center line of said ring away from the point of connection of said passageway with said inside surface for the retention of said packing.

3,096,987
RAILWAY AXLE BOX OIL AND DUST SEAL
James J. Hennessy, Jr., Chambersburg, Pa., assignor to Hennessy Lubricator Co., Inc., Chambersburg, Pa., a corporation of Delaware
Filed Mar. 19, 1962, Ser. No. 182,157
17 Claims. (Cl. 277—175)



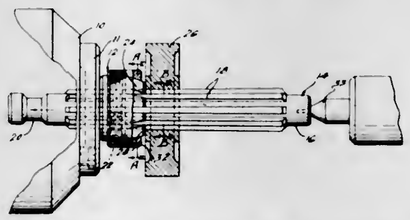
1. A railway journal box dust and oil guard comprising a body plate having a flat forward face and having an outer periphery corresponding generally to the contour of a journal box pocket into which it is to be inserted, but of less width, and having a central opening of substantially greater diameter than the dry seat of the axle to which it is to be applied, an annulus having a flat face opposing said plate forward face and having an opening smaller than said plate opening and corresponding to the diameter of a dry seat to which it is to be applied, and a spring means including a part having a fixed anchor to said body plate and a part spaced from the fixed anchor and bearing against said annulus and thereby thrusting said annulus against said body plate but accommodating relative sliding movement of said annulus and body plate over each other and accommodating limited movement of said annulus away from said body plate.

3,096,988
COMPENSATING POWER CHUCK
Walter F. Skillin, New Britain, Conn., assignor, by mesne assignments, to The Cushman Chuck Company, Hartford, Conn., a corporation of Connecticut
Filed Sept. 30, 1960, Ser. No. 59,573
4 Claims. (Cl. 279—4)



1. A chuck, comprising a chuck body, a plurality of chuck jaws, said body having openings to receive each of said jaws, a pair of guide ribs acting between said chuck body and each of said jaws for guiding each of said jaws for radial reciprocation in said body, separate fluid-pressure operated actuating means for radially reciprocating each of said jaws independently, means to connect a source of fluid pressure in common to said actuating means, said body having a pair of oppositely facing radial slots including axially top and bottom abutment surfaces for said ribs to hold them against axial movement but to permit radial movement, and means for removably holding said guide ribs in place in a radial direction.

3,096,989
ARBOR SECURING DEVICE
Albin F. Fallon, Grosse Pointe Shores, Mich. (Apt. No. 1502, Horizon House, Clearwater, Fla.)
Filed June 4, 1962, Ser. No. 199,881
6 Claims. (Cl. 279—48)



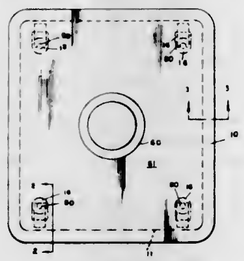
3. A device for securing an internally splined workpiece to a rotatable drive member comprising an arbor having a plurality of spline projections uniformly tapered toward a pilot end thereof and engageable with the internally splined workpiece, a collet fixed to said rotatable drive member, said collet having an axial bore containing said arbor and a plurality of deflectable teeth extending toward said arbor intermediate its said spline projections, each of said deflectable teeth having an abutment portion engageable with the workpiece at its side proximate the pilot end of said arbor, and means operatively connected to said collet and operable to compress its teeth into engagement with the root diameter portions of said arbor intermediate its spline projections.

3,096,990
STRIDING TOY HORSE
Robert Edward Thoren, Box 743, Moses Lake, Wash.
Filed Oct. 24, 1958, Ser. No. 769,468
2 Claims. (Cl. 280—1.182)



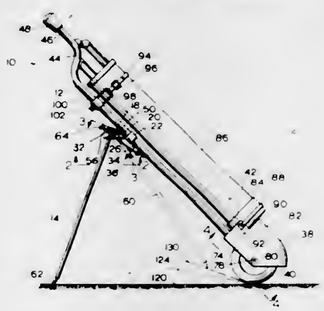
1. A striding toy horse comprising a body frame member, a fitting mounted on said body frame member and having a skirt projecting downwardly therefrom, front and rear leg struts depending from said body frame member, one of said struts having its upper end extending upwardly within the skirt of said fitting, a pivot extending through said fitting skirt and the end of said leg strut received therein for mounting said leg strut, spring means connected to said pivotally mounted leg strut and urging it to swing in one direction, and said fitting including stop members below said pivot engageable by said pivotally mounted leg strut and limiting swinging movement of said leg strut in opposite directions effected by said spring means.

3,096,991
SUPPORT FOR HOSPITAL TABLES
John H. Crankshaw, Erie, Pa., assignor to American Sterilizer Company, Erie, Pa., a corporation of Pennsylvania
Filed Nov. 30, 1961, Ser. No. 156,051
6 Claims. (Cl. 280—43.24)



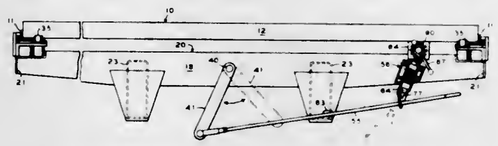
1. In a table, a generally horizontally disposed base, a downwardly disposed channel in said base extending continuously around said base adjacent the edge thereof, a resilient inflatable member in said channel, wheel means on said base for supporting said base above a support surface, and means on said inflatable member to engage said support surface to lift said wheel means out of engagement with said support surface when said inflatable member is inflated.

3,096,992
GOLF CART
Wallace J. Fritsch, 1609 S. 33rd St., Omaha, Nebr.
Filed Dec. 19, 1960, Ser. No. 76,676
1 Claim. (Cl. 280—47.31)



In a golf bag cart, the combination which comprises a frame having an offset upper end providing a handle, a guide including diverging arms with slots therein extended from a hub mounted on the frame, a U-shaped bracket pivotally mounted by a bearing on the frame and positioned above the guide, legs extended through the slots in the arms of the guide and pivotally mounted on arms of the bracket, a yoke extended from ends of the arms of the bracket, a hook positioned on the shaft and located below the guide, an elastic member attached to the hook and yoke for actuating the legs to retracted positions, an anchoring prong extended from the lower end of one of the legs, a base mounted on the lower end of the frame, a wheel rotatably mounted in said base, a band on the base for retaining the lower end of a golf bag on the base, and a strap having a buckle therein adjustably mounted on the frame for retaining the upper end of a golf bag in position on the frame.

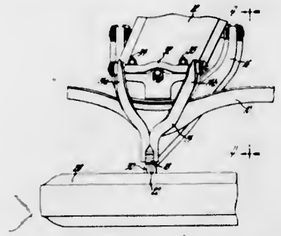
3,096,993
TRUCK TRAILER WITH SHIFTABLE RUNNING GEAR FOR LOAD EQUALIZING
Harry M. McKay, Warrenton, Mo., assignor to The Binkley Company, Warrenton, Mo., a corporation of Missouri
Filed Oct. 6, 1961, Ser. No. 143,463
10 Claims. (Cl. 280—81)



1. In a trailer of the character described, a body frame provided with locking pin sockets spaced therealong, a wheel truck movable along said frame, a locking pin on said truck, resilient means urging said pin toward locking engagement with one of said sockets, manipulating means operable to retract said pin from such engagement, a shaft rotatively mounted on and disposed lengthwise of said body frame, said shaft being provided with a plurality of recesses spaced longitudinally along and about said shaft, a latch for said manipulating means including a reciprocatively mounted plunger, a follower carried by said plunger, said follower engaging and riding along said

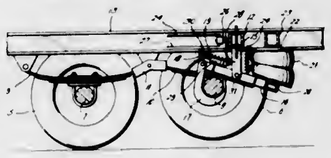
shaft upon relative movement of the truck and frame to interfit one of said recesses so as to release said manipulating means, and means connected to said shaft for turning the shaft to place a preselected recess in the path of travel of said follower.

3,096,994
CASTER AND CAMBER ADJUSTMENT MEANS
George H. Primeau, Grosse Pointe Farms, and William S. Wolfram, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 24, 1959, Ser. No. 835,513
5 Claims. (Cl. 280—96.1)



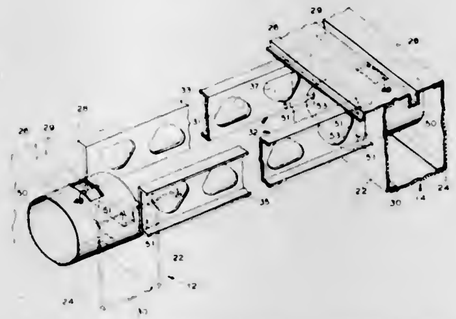
1. In the assembly of an independent front suspension of the type comprising a frame member, a shaft member fixedly connected to said frame member and a control arm pivoted on said shaft member, the improvement which resides in making the fixed connection by a process which involves: bringing said members into juxtaposition, interposing a volute spring therebetween, effecting a light connection between said members by means including a bolt the shank of which is passed axially through said volute spring and is formed to provide a fluid passage opening to the chamber delineated by the spring, filling said chamber through said passage with a curable plastic material, tightening the said light connection to an extent providing a predetermined space between said members, said space being gauged in relation to the caster and camber characteristics desired in the suspension assembly, and subjecting the plastic material to conditions causing it to set.

3,096,995
AXLE LIFT
Erick G. Richnow, Jr., Houston, Tex., assignor to Truck Accessories, Inc., Houston, Tex., a corporation
Filed July 16, 1962, Ser. No. 209,926
4 Claims. (Cl. 280—104.5)



1. In an axle lift, a pivotal bar suspended from a vehicle frame, a pivotal hook mounted on one end of said bar and movable into engaged relation with one axle of the vehicle, bellows on the other end of said bar, means connected to said hook and said frame for constantly urging said hook into a position disengaged from said axle when said bellows is in a collapsed position, fluid pressure means for pivoting said hook into engagement with said axle, and means connected to said vehicle frame for selectively applying fluid pressure to said fluid pressure means for pivoting said hook into engaged relation with said axle for thereafter inflating said bellows to raise said hook and the axle engaged thereby.

3,096,996
VEHICLE FRAME STRUCTURE
Nelson E. Cole, Reading, Pa., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed June 3, 1960, Ser. No. 33,857
3 Claims. (Cl. 280—106)



1. In a vehicle the combination comprising a longitudinal member having a box section including an upper plate member, means for reinforcing said longitudinal member, a transverse member connected to said longitudinal member and said reinforcing means externally of said longitudinal member for transmitting torsional loads to said reinforcing means, and means carried by said upper plate member for reinforcing the same and being connected to said reinforcing means whereby said reinforcing means receives loads from said upper plate member.

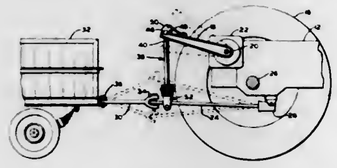
3,096,997
SPRING FRAME FOR SCOOTER-TYPE TRAIL VEHICLE
Clayton B. Merry, Leavenworth, Wash., assignor, by mesne assignments, to William E. Wilson, Sr., Kent, Wash.
Filed Mar. 3, 1961, Ser. No. 93,219
4 Claims. (Cl. 280—275)



1. A trail vehicle comprising a forward frame section having a steering post attached thereto for swivel motion about a generally vertical axis at the forward part of said frame section, a front ground wheel carried between fork arms at the lower end of said steering post, the upper end of said post having a steering handle for controlling turning movements of said steering post, a rider's seat mounted on the forward frame section below and behind said steering handle so that a rider seated thereon may conveniently grasp said steering handle, a rear frame section secured to said front frame section for relative swing motion about the center of a horizontal transverse pivot pin located intermediate the front wheel and a rear ground wheel carried by said rear frame section for rotation in substantially the same longitudinal vertical plane as said front wheel, a spring so connected to each of said frame sections as to prescribe a relative angular position of the sections when the spring is unflexed, said spring yieldingly resisting relative swinging of the frames so that, as said vehicle rides over rough terrain, resulting shocks to said wheels will be passed into the spring, said front and rear

frame sections having complementing stop members lying in the same longitudinal vertical plane, said stop members being so disposed that as a relatively strong upward force is applied to either wheel to responsively swing the related frame section, the stop members of each section will be brought to bear against one another to a limit of swing, the steering post comprising two pieces separated by a shock-dampening pad the lower portion of said steering post being pivotally mounted on an axis rigid with respect to said frame section so that shocks transmitted to said frame section through said front wheel are dampened with respect to the upper steering post part by means of said pad, said spring being a longitudinal leaf spring positioned adjacent said pin and capable of being inverted so that the angle defined between two planes one of which contains the pivot axis and an axle for the rear wheel and the other of which contains said pivot axis and an axle for the front wheel may be increased or decreased at will.

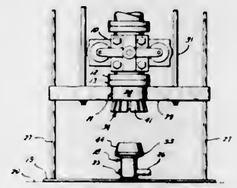
3,096,998
TRACTION ATTACHMENT FOR TRACTORS
Floyd W. Stadelman, 4387 S. Custer, Monroe, Mich.
Filed Feb. 27, 1961, Ser. No. 91,911
3 Claims. (Cl. 280—405)



3. For a tractor having a body, rear wheels, front wheels, a draw bar extending rearwardly from said body, means pivotally connecting said draw bar to said body, a pair of lift arms extending rearwardly of and pivotally connected to said tractor body, and means connected to said arms for moving them in an arcuate path, the improvement comprising a rigid, generally U-shaped member comprising a pair of upright legs and a straight, horizontal cross member attached to the lower ends thereof, means at upper ends of said legs to provide a pivotal attachment of said legs to said lift arms whereby said arms remain in generally upright positions for any position of said lift arms, a yoke comprising a pair of depending arms extending downwardly on each side of said draw bar, a pair of upwardly extending arms on each side of said cross member, means held by said depending arms for movably supporting said draw bar whereby said yoke can move in a direction having a component directed longitudinally of said draw bar, a roller rotatably held by said upwardly extending arms above said cross member for contacting said cross member and movably supporting said yoke and said draw bar whereby said yoke can move in a lineal path parallel to said cross member and said draw bar can move in an arcuate path, the center of which constitutes the point of the pivotal connection of said draw bar to said body.

3,096,999
PIPE JOINT HAVING REMOTE CONTROL COUPLING MEANS
Arthur G. Ahlstone and Marvin R. Jones, Houston, Tex., assignors to Cameron Iron Works, Inc., Houston, Tex.
Filed July 7, 1958, Ser. No. 746,997
3 Claims. (Cl. 285—24)

1. A coupling, comprising a first conduit supported in a substantially upright position, a second conduit having a surface at one end for mating engagement with the end surface of the first conduit and having another surface facing downwardly and disposed radially outwardly of said end surface of the second conduit, a vertically reciprocable supporting member engageable in its uppermost position beneath the downwardly facing surface of the second conduit to support said second conduit with its end surface disposed for lowering guidably into mating engagement with the end surface of said first conduit, a downwardly facing shoulder on the first conduit, an upwardly facing shoulder on the second conduit, and dogs having vertically spaced-apart lands on the inner surfaces thereof with the upper lands supported on the shoulder of the second conduit for swinging between positions in which the lower lands are engaged beneath the shoulder on the first conduit to lock the second conduit to the first conduit, when the end surfaces thereof are in mating engagement with one another, and in which the lower lands are retracted from beneath the shoulder on the first conduit to release the second conduit from the first con-

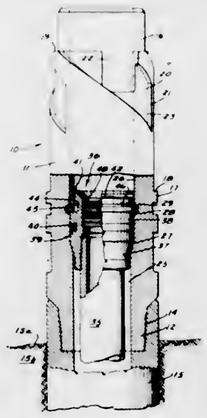


duit, said supporting member being disposed about the dogs and having an inner camming surface slidable over the outer surfaces on the dogs to swing the dogs into locking position, during downward movement of the supporting member from its uppermost position, and movable out of camming engagement with said surfaces to permit the dogs to swing into releasing position, during upward movement of the supporting member from dog locking position, and said dogs having outwardly projecting parts on the upper ends of their outer surfaces which are engaged by the supporting member during its upward movement so that the supporting member holds the dogs in releasing position, as the second conduit is lowered into the first conduit, and swings the dogs from locking to releasing position as supporting member approaches engagement with the downwardly facing surface on the second conduit in order to lift the second conduit from above the first conduit upon continued upward movement.

3,097,000
PIPE HANGER DETACHABLE BY AN AXIAL FORCE
Ross A. McClintock, Orange, Calif. (1462 Foothill Blvd., Santa Ana, Calif.); Raymond E. Thompson, Placentia, Calif. (3620 Rose Drive, Yorba Linda, Calif.); and Kenneth E. Waggener, 921 E. Elm, Brea, Calif.
Filed Oct. 28, 1957, Ser. No. 692,941
7 Claims. (Cl. 285—142)

1. Well completion equipment, comprising: a safety release joint having a mandrel including a part with a plurality of annularly spaced helical recesses open at the upper end and a key groove for each recess, said key grooves extending longitudinally with respect to the mandrel and opening at the open ends of said recesses; an annular external shoulder on said mandrel forming a stop; means for securing the lower end of said mandrel to a tubular pipe, said mandrel having a bore therethrough including an enlarged bore portion extending

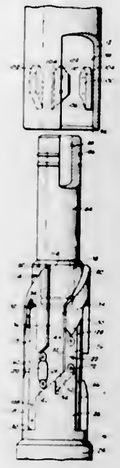
from the top and a smaller diameter portion therebelow, there being a landing surface flaring from the smaller diameter bore portion to the larger diameter bore, there also being an annular internal groove in the large diameter bore portion, spaced upwardly from the landing surface and having the upper wall inclined upwardly and inwardly; a tubing hanger releasably positioned in said mandrel and having a frusto-conical seating surface seating on said landing surface and having an external annular groove spaced upwardly of said seating surface, said hanger being adapted to have a pipe string secured thereto; a split ring disposed in said groove in the hanger and received in the internal annular groove of the mandrel, said ring having an upper outer wall portion conforming to the inclination of the upper wall portion of the internal mandrel groove and cooperating therewith



to releasably secure the hanger in said mandrel; and a barrel unit including a tubular barrel receivable on said mandrel and having an internal diameter so as to be respectively engageable with said stop; a top sub to which said barrel is secured, said top sub having an internally threaded socket from which there extends a depending internally threaded bore; means, including a key sleeve, for releasably securing the barrel unit to the mandrel; and a tubing hanger having an externally threaded portion receivable in the depending bore portion of said top sub and adapted to have a pipe string secured thereto which is receivable in the first mentioned pipe string.

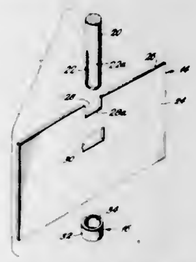
3,097,001
UNLATCHING JOINT APPARATUS
Franklin L. LeBus, Sr., Longview, Tex., assignor to LeBus Royalty Company, Longview, Tex., a partnership
Filed June 8, 1959, Ser. No. 818,687
10 Claims. (Cl. 285—361)

1. A safety joint comprising an inner sleeve, an outer sleeve telescopically arranged with the inner sleeve, spline means on and cooperating between the inner and outer sleeves and responsive to a simultaneous downward and right hand rotation of the outer sleeve to latch the outer sleeve to the inner sleeve, said spline means responsive to an upward movement of the outer sleeve followed by a subsequent downward and right hand rotation of the outer sleeve for unlatching the outer sleeve from the inner sleeve, and yielding means on one of said sleeves having first surface means adapted for cooperation with the spline means to preclude a left hand rotation of the outer sleeve with respect to the inner sleeve and having second surface means cooperating with the spline means for depressing



the yielding means upon right hand rotation of the outer sleeve.

3,097,002
MIXING PADDLE
Edwin D. Phillips, P.O. Box 188, Middlesex, N.J.
Filed Sept. 9, 1960, Ser. No. 54,875
9 Claims. (Cl. 287—20)

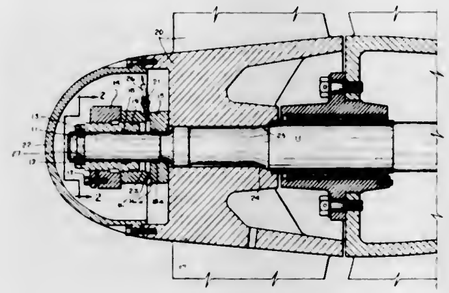


1. A mixing paddle comprising a blade body having a top edge, a notch formed in said top edge, the body having an opening therethrough spaced from but aligned with the notch transversely of the blade, a shaft having a bifurcated end adapted to receive the notched edge of the blade and to position in the notch at the inner ends of the furcations, said furcations being of a length to extend across the opening of the blade when said notched edge is so engaged between the furcations, a locking band supported within the opening of the blade and having said furcations extended thereinto, and means for effecting a locking engagement of the band with the furcations.

3,097,003
HYDRAULIC TIGHTENING DEVICE
Vagn Devé, Chomedey, Quebec, and Leonid Miloradovitch, Montreal, Quebec, Canada, assignors to Dominion Engineering Works Limited
Filed Apr. 16, 1962, Ser. No. 187,858
2 Claims. (Cl. 287—53)

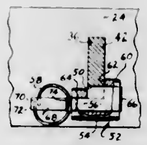
1. In a device of the character described, a shaft, a member having a bore with said shaft extending through said bore, said shaft and member having opposed congruent surfaces, said first means for urging said surfaces into abutting engagement, said first means comprising a

hollow cylinder slidable on said shaft, a piston mounted on said shaft and slidable in said cylinder and second means for transmitting axial thrust from said piston to said shaft in one direction, said second means comprising a circumferential groove in said shaft, a face on said piston and key means in said groove, and means whereby



fluid may be supplied under pressure to said cylinder and said piston to effect urging of said member into axially loaded relation with said shaft and thereby urge said surfaces into abutting engagement, and means for maintaining said member and said shaft in said axially loaded relation after removal of pressure from said fluid, and a vent plug to facilitate expulsion of air from said cylinder.

3,097,004
EARTH WORKING DEVICE
Philip D. Wenzel, Stockton, Calif., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed June 2, 1961, Ser. No. 114,465
4 Claims. (Cl. 287—56)



1. In a mechanism for locking a scarifier tooth to a supporting bar having shank receiving slots spaced from each other in an up-and-down direction, the scarifier tooth having a shank portion disposed in said slots, the combination of a

guiding member fixed to said supporting bar and overlying one of said slots, a

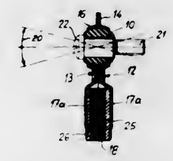
latch member slidable in said guiding member in a direction transverse to said shank, said guiding member defining a first notch aligned with the slots in said supporting bar so as to admit a shank disposed in said slots, an

enlarged portion on said latch member positioned to obstruct said notch when said latch member is shifted in one direction and to contact said guiding member and positively limit sliding movement in said direction, a scarifier tooth

shank in said slots and said notch, said shank defining a second notch positioned to register, in one position of said shank, with the path of sliding movement of said enlarged portion of said latch when shifted in said one direction, said latch having another position wherein said enlarged portion is clear of said first notch for shifting of said shank in said slots, and a

grip member pivoted to said latch member at a point spaced from said enlarged portion and biased to swing to a position yieldingly pressing against said latch member outside of said guiding member in position to engage said guiding member in the event of movement of said latch member in a direction opposite to said one direction, whereby said latch member is locked in position against displacement in either direction, and said grip member being swingable away from said latch member into another position wherein it is yieldingly held in a position projecting from said latch member and said supporting bar to be readily grasped for sliding said latch member in said guiding member.

3,097,005
JOINT HEAD FOR MOVABLY CONNECTING TWO MACHINE ELEMENTS
Hans Fickler, Seuzach, Switzerland, assignor to Industriewerk Schaeffler, Herzogenaurach, Germany
Filed Feb. 10, 1960, Ser. No. 8,478
Claims priority, application Switzerland Mar. 6, 1959
3 Claims. (Cl. 287—90)

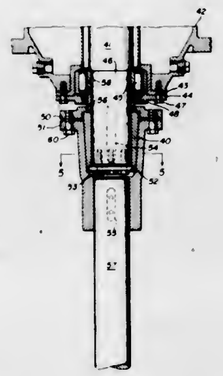


1. Joint head for movably connecting two machine elements, particularly levers and linkages, comprising an outside spherical body, and a supporting cage of two parts and having interengaging flanges connected firmly and undetachably to each other and having outwardly pressed hollow spherical portions, said spherical body being frictionally held in the hollow spherical portions and being composed of an elastically compressible synthetic material and in direct contact with the hollow spherical portions of the cage in a slight compressed condition, said spherical body being provided with a diametrical boring in which a bolt is rotatably journaled, said cage having at least one opening for the passage of said bolt, the two parts of the cage being provided with semi-cylindrical outwardly pressed portions having an internally threaded sleeve arranged therebetween, said sleeve projecting with one end over the respective edges of the parts of the cage and having at least one recess on the outside engaged by a portion of the adjacent part of the cage.

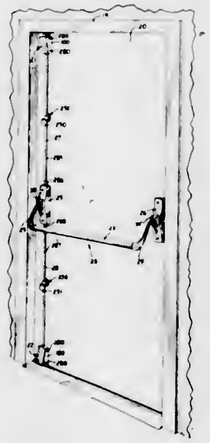
3,097,006
COUPLINGS FOR ROTARY SHAFTS
Leland H. Logue, Denver, Colo., assignor to Denver Equipment Company, Denver, Colo., a corporation of Colorado
Filed Dec. 2, 1959, Ser. No. 856,860
18 Claims. (Cl. 287—129)

1. A coupling for rotary shafts comprising a housing having upper and lower sections, means on said lower section for fixedly holding a suspended shaft section, a sleeve fixedly mounted on the drive section of the shaft tapered throughout at least its lower portion and capable of compression by externally applied force for elimination of clearance between the sleeve and said drive section, at least one movable housing section arranged to move along the tapered surface of the sleeve for aligning the shaft sections at the completion of said movement,

and joining means for said housing sections adapted to draw said sections together and thereby direct said aligning movement to the housing section movable along said tapered surface.



3,097,007
PANIC EXIT DEVICE
Homer A. Eichacker and John R. Foster, Indianapolis, Ind., assignors to Vonnegut Hardware Company, Indianapolis, Ind., a corporation of Indiana
Filed Sept. 10, 1959, Ser. No. 839,105
4 Claims. (Cl. 292—92)



1. A safety panic exit device for a door comprising an upper latch mechanism adapted to be mounted on a door near the top thereof and including an upper latch bolt, a lower latch mechanism adapted to be mounted on a door near the bottom thereof and including a lower latch bolt, a case adapted to be mounted on the door intermediate of said latch mechanisms, a panic bar, a panic bar lever pivotally mounting said panic bar on said case, an upper rod operatively connected to project said upper latch bolt upon upward movement of said upper rod and retract said upper latch bolt upon downward movement of said upper rod, a lower rod operatively connected to project said lower latch bolt upon downward movement of said lower rod and retract said lower latch bolt upon upward movement of said lower rod, an upper rod actuator fixed to said upper rod and received for vertical reciprocation within said case, a lower rod actuator fixed to said lower rod and received for vertical reciprocation within said case, a compression spring received between mutually facing abutment surfaces on said upper and lower rod actuators so as to urge said upper rod actuator upwardly and said lower rod actuator downwardly, said panic bar lever extending into said case to a position engaging said lower rod actuator whereby, when said panic bar is actuated, said lower rod actuator is moved upwardly against the urging of said compression spring, each of said rod actuators being formed with a cavity, said cavities being laterally offset with respect to each other and opening toward one another, and an actuator lever including two oppositely projecting, generally horizontal arms, each of said arms having a portion which is received within one of said cavities, said actuator lever being mounted to oscillate with relation to said case about an axis midway between the distal ends of said arms, the cavity-received portion of one of said projecting arms being substantially smaller than the cavity within which it is received whereby said lower latch bolt, rod, and rod actuator may be held upwardly without causing said upper latch bolt, rod, or rod actuator to be held downwardly.

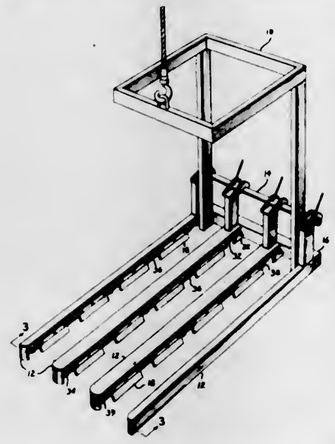
3,097,008
LATCH GUARD
Arthur J. Gravelle, % Canadian Research and Development Foundation, 1434 Queen St. W., Toronto 3, Ontario, Canada
Filed Aug. 14, 1961, Ser. No. 131,208
3 Claims. (Cl. 292—346)



3. A latch guard including a body member of substantially rectangular configuration having a plain longitudinal edge and a serrated longitudinal edge; said plain edge being bent inwardly to form a channel; a strip retainable in said channel, extending outwardly thereof at each end to form wing portions; said wing portions being bent substantially at right angles to said body portion; slits at the bends thereof; each of said wing portions being of elongated rectangular configuration having a free longitudinal edge and a fixed longitudinal edge; said free edges being flared outwardly and both said free edges and said fixed edges notched at intervals to facilitate the clipping thereof to a selected length.

3,097,009
LIFTING AND LOADING MEANS
John C. Martin, Toronto, Ontario, Canada, assignor to Diesel Equipment Limited, Toronto, Ontario, Canada
Filed Oct. 19, 1960, Ser. No. 63,567
Claims priority, application Great Britain Oct. 20, 1959
11 Claims. (Cl. 294—63)

1. A lifting device comprising a lifting frame, a series of elongated carrying members mountable in said frame to support a load with their longitudinal axes in parallel spaced apart relation, cooperating means on said frame, and said carrying members designed and constructed to mount said carrying members on said frame while allowing limited pivoting movement of said carrying members in relation to said frame about an axis perpendicular to but spaced from the longitudinal axes of said carrying members in response to the imposition of load, said carrying members each having grippers, gripper operating means carried by each carrying member, responsive to pivoting movement of its respective carrying member about said axis under load for moving the grippers on each carrying member towards the grippers on an adjacent carrying member to co-operate therewith and grip materials between adjacent carrying members.



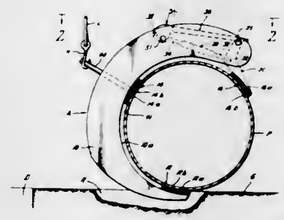
3,097,010
TOP GRIP CARRIER FOR BOTTLES OR THE LIKE
Stan M. Silver, 25 Central Park W., New York, N.Y.
Filed Dec. 12, 1960, Ser. No. 75,389
30 Claims. (Cl. 294—87.2)



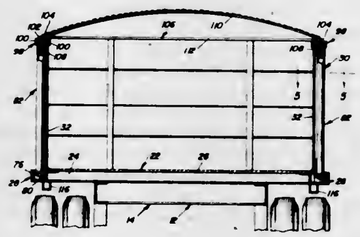
1. A carrier for a bottle or the like with an upper neck section having relatively thicker and thinner portions comprising, a pair of flat walled tubes each including parallel inner and outer side wall sections and a wall section connecting one of the edges of each of each of said side wall sections to the corresponding edge of the other; means connecting said tubes in parallel, each by the other edges of its side walls, for pivotal movement of said tubes towards and away from one another; each of said inner side wall sections having a cut-out opening formed therein and extending inwardly thereinto from the one edge thereof in register with a corresponding opening in the other of said inner side wall sections, said opening adapted to accommodate said upper bottle-neck portion and having wider portions adapted to receive the wider portions of said neck section and narrower portions adapted to engage against the underside of said wider neck portions; said connecting wall sections each having an opening formed therein continuous with said opening in its connected inner wall section and adapted to receive a portion of the thickness of said bottle-neck section, when said inner side wall opening is fitted over said bottle-neck.

3,097,011
PIPE TONGS
Robert Don Foster, 3115 Buffalo Drive, Houston, Tex.
Filed May 31, 1960, Ser. No. 32,680
3 Claims. (Cl. 294—104)

1. Pipe tongs comprising, an arcuate body having a pair of pipe engaging shoes mounted thereon for engaging a pipe at circumferentially spaced points on one side of the longitudinal central axis of the pipe, said body also having another pipe engaging shoe thereon at an intermediate point between said pair of pipe engaging shoes for engaging the pipe at a point on the other side of the longitudinal central axis of the pipe said pipe engaging means acting to rotate the engaged pipe about its longitudinal central axis as it is lifted, pivot means mounting one of said pair of pipe engaging shoes for pivotal movement with respect to said body for movement into and out of gripping engagement with the pipe, a lock member pivotally mounted on said body, a connecting element connecting said lock member to said pivot means, and means for pivoting said lock member for effecting a pivoting of said one of said pair of pipe engaging shoes into gripping engagement with the pipe and for locking same in such gripping engagement with said connecting element under tension by moving the end of said connecting element which is connected to said lock member from a position on one side of the pivot point for said lock member to a point on the other side thereof.



3,097,012
COLLAPSIBLE VEHICLE LOAD BED SIDES
Norman D. Bain, Zephyr, Tex.
(P.O. Box 942, Lubbock, Tex.)
Filed Jan. 9, 1962, Ser. No. 165,105
16 Claims. (Cl. 296—10)



1. In combination with a vehicle load bed of the type including a flooring having opposite side and end edges, a load bed side assembly comprising a pair of elongated longitudinally extending opposite sides, hinge means pivotally securing corresponding side edge portions of said sides to the opposite side edge portions of said flooring for movement between lowered positions overlying the corresponding side portions of said flooring and raised positions with the free edge portions of said sides elevated above said flooring, a plurality of side posts for each of said sides, means pivotally securing corresponding ends of said side posts to said flooring at points spaced along corresponding side edges of said flooring for movement about axes extending transversely of the axis of rotation of the corresponding sides and between lowered positions disposed along the corresponding side of said flooring and raised positions with their free ends elevated above said flooring.

3,097,013
COLLAPSIBLE PORTABLE CABIN STRUCTURE FOR AUTOMOTIVE VEHICLES

Walter J. Mussler, Rte. 2, Box 459, Imperial, Mo.

Filed Aug. 8, 1960, Ser. No. 48,003
8 Claims. (Cl. 296—23)



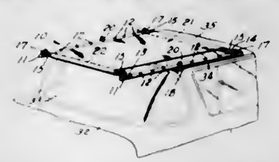
1. In combination with an automobile having a passenger compartment and a trunk to the rear of the passenger compartment with a rear window on the back of the passenger compartment above the trunk, a collapsible portable cabin structure for attachment over the upper side of the automobile trunk, the structure comprising a plurality of panels foldable upon one another to form a flat package of substantially less height than that of the automobile rear window, the panels including a generally horizontal first floor panel overlying the automobile trunk and having a forward edge adjacent the automobile rear window, a rear edge positioned slightly rearward of the back of the automobile, and side edges generally aligned with the sides of the automobile, a front end panel hinged to the forward edge of the first floor panel and pivotal to a substantially vertical position adjacent the automobile rear window, the front panel having side edges and a top edge, a pair of first side panels hinged to the side edges of the first floor panel, the first side panels being pivotal to substantially vertical positions into contact with the side edges of the front end panel, a depending panel hinged to the rear edge of the first floor panel and pivotal to a substantially vertical position depending downwardly from the first floor panel opposite the rear end of the automobile, the depending panel having side edges, second side panels hinged to the side edges of the depending panel and extending rearwardly thereof, second floor panels hinged to the lower edges of the second side panels, the second floor panels being pivotal into substantially horizontal positions in contact with the bottom edge of the depending panel, a rear end panel hinged to the second side panels and having a lower edge in contact with the second floor panels, the rear end panel having a top edge, a forward roof panel assembly comprising first roof panels fastened to the upper edges of the first side panels and having forward edges in contact with the top edge of the front end panel, a rearward roof panel assembly comprising second roof panels hinged to the rear edges of the first roof panels and having rearward edges in contact with the top edge of the rear end panel, the second roof panels including panel means extending to the upper edges of the second side panels.

3,097,014
ADJUSTABLE WINDSHIELD AWNING AND SUPPORTING MEANS THEREFOR

John P. Francis, 20 Boston St., Haverhill, Mass.

Filed July 3, 1961, Ser. No. 123,606
2 Claims. (Cl. 296—95)

1. An adjustable taut supported rain awning structure adjustably supported over the roof top and windshield area of an automobile comprising, a longitudinally adjustable rectangular shaped frame structure, said frame structure having longitudinally extending laterally spaced apart tubular frame members each provided with longitudinally spaced apart vertical apertures, forward and rear laterally directed and longitudinally spaced movable tubular frame members, means detachably connecting said laterally directed members to said longitudinally extending members comprising longitudinally spaced apart threaded bolt members, said bolt members extending upwardly through the vertical apertures in said frame members, removable threaded frame clamping members on said bolt members, both of said movable laterally directed frame members adapted to be removably attached onto the upper side of the outer periphery of the said side longitudinally extending frame members upon engagement of the said bolt members, laterally spaced apart frame support means, said support means comprising roof engaging means, a vertically disposed threaded stud member attached to each of said roof engaging means, vertically adjustable threaded frame engaging means on said stud members, said stud members adapted to freely engage the vertical apertures of the said longitudinally extending frame members of said frame structure to provide for longitudinal positioning of the said frame structure, the said frame engaging

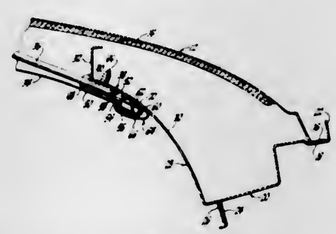


means on said stud members adapted to freely engage the underside of the said frame structure and to adjustably support said frame structure in vertically spaced apart relationship relative to the roof top, and a flexible taut supported rain awning panel adjustably coiled around said laterally directed frame members, said awning being movably supported in longitudinally and in vertically spaced apart relationship relative to the said side longitudinally extending frame members of said frame structure, said taut supported awning adapted to be retracted and extended in the said taut supported form upon the removal of one of the said laterally directed frame members and the manual coiling thereof, the said laterally directed frame members thereby defining the longitudinal length and also determining the longitudinal position of the said taut supported rain awning panel relative to the said side longitudinally extending frame members.

3,097,015
VEHICLE BODY

Arthur N. Nagel, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 5, 1960, Ser. No. 60,662
4 Claims. (Cl. 296—137)



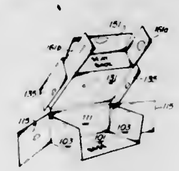
1. Means for mounting trim fabric on a vehicle body, comprising, in combination, means securing a portion of said fabric on said body, and means anchoring an edge portion of said fabric on said body and tensioning said fabric against said securing means, said anchoring means comprising, a support member mounted on said body, a retainer member mounted on said support member and including a pair of offset wall portions, one of said wall portions being located in spaced relationship

to said support member and terminating in an arcuate edge portion, a plurality of teeth extending from said one of said wall portions to adjacent said support member, said edge portion of said fabric being wrapped around said one wall portion and arcuate edge portion and being impaled on said teeth to anchor said edge portion of said fabric on said body and tension said fabric against said securing means, and a molding member having a pair of spaced legs, one of said legs overlying said one wall portion and engaging said fabric opposite said other wall portion to crease said fabric toward said other wall portion and further tension said fabric against said securing means, the other of said legs being wedged between the distal portions of said teeth and said support member to mount said molding member on said retainer member and retain said fabric on said teeth.

3,097,016
COLLAPSIBLE OR FOLDABLE SEAT FOR CHILD

James C. Bigler, Jr., 5555 SW. Scholls Ferry Road, Portland 1, Oreg.

Filed Apr. 14, 1961, Ser. No. 102,985
4 Claims. (Cl. 297—457)



1. A collapsible seat comprising a blank having
a front panel disposed between and hinged to a seat panel and a base panel to assume an upright position relative to both,
support panels hingedly connected to said base panel for positioning in upright fashion to support the seat panel,
said base panel being of lesser width at least at certain portions thereof so that said support panels are disposed beneath said seat panel,
other support panels hinged to said front panel for positioning next to the first mentioned support panels to also lend support to said seat panel,
a back panel hinged to said seat panel for assuming an upright position with respect thereto,
arm panels hinged to said seat panel for assuming an upright position with respect thereto and having hinged portions to extend downwardly to lie next to said support panels,
means for securing said portions to at least certain of said support panels,
and means for retaining said arm panels and said back panel in upright position.

3,097,017
EXTRACTION METHOD AND APPARATUS

Roscoe E. Turner, 1330 E. Belleview Ave., Englewood, Colo., and Harold J. Ludwig, 3364 W. Chenango, Littleton, Colo.

Filed Oct. 2, 1959, Ser. No. 844,141
5 Claims. (Cl. 302—58)

1. Apparatus for removing ballast from an inner tube of a casing mounted on a wheel, comprising: a tool for insertion through an opening in said casing and an opening in said inner tube having two separate concentric channels for simultaneous application of pressure through one channel and reduced pressure through the other channel to the interior of said inner tube; a source of pressure connected to one of said channels; a source of reduced pressure connected to the other of said channels; a hollow connector into which said tool is fitted and adapted to connect said tool with the interior of the inner tube of said casing, comprising a hollow stem member for insertion through the opening in said casing having a base member at one end for attachment to the exterior surface

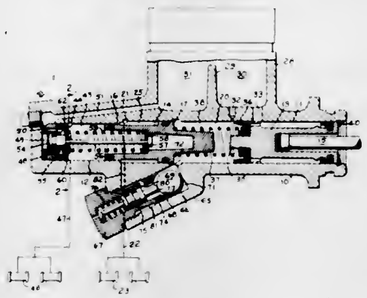


of said inner tube over the opening therein; a coupling having one of its ends connected to the other end of said stem member; a fitting; a sleeve connecting said fitting and said coupling; and sealing means supported by said fitting for preventing leakage between said connector and said tool.

3,097,018
MOTOR VEHICLE HYDRAULIC BRAKE SYSTEM

William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed June 12, 1961, Ser. No. 116,394
15 Claims. (Cl. 303—6)



1. A hydraulic braking system for a motor vehicle having front and rear wheel cylinders, comprising a master cylinder having fluid displacing means operative for displacing fluid separately to the front and rear wheel cylinders, including pressure control means, and a single device connected to the master cylinder and responsive to the rate of vehicle deceleration for so controlling the development of pressure in said master cylinder as to increase the rate of increase of pressure to the front wheel cylinders and to decrease the rate of pressure increase to the rear wheel cylinders.

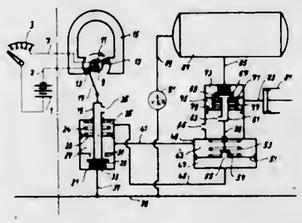
3,097,019
ELECTROPNEUMATICALLY OPERATING BRAKE SYSTEM

Engelbert Riedl, Munich, Germany, assignor to Knorr-Bremse Gesellschaft mit beschrankter Haftung, Munich, Germany

Filed Dec. 17, 1959, Ser. No. 860,268
4 Claims. (Cl. 303—20)

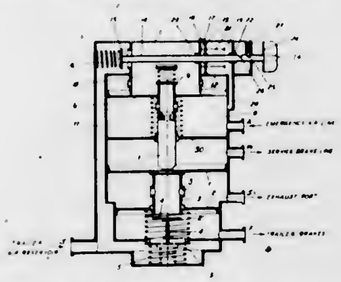
1. A control system for an air brake comprising: an adjustable electric current source; a permanent magnet producing a constant magnetic field; an electrical conductor electrically connected to said current source and moving in said magnetic field; a tubular element having inlet and outlet; linking means for connecting said conductor to said tubular element for displacement thereof; a pres-

sure vessel housing that portion of said tubular element having said inlet; a spring loaded piston on said tubular element defining a first and a second chamber in said vessel; a stationary duct with valve seat in said vessel defining a third chamber therein communicating with said second chamber, said tubular element with inlet protruding through said duct; a spring loaded valve plate in said vessel for engaging said valve seat and closing said inlet; first, second and third conduit means; a cylinder; a piston



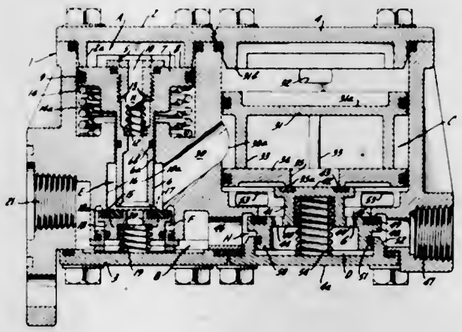
displaceably disposed in said cylinder and defining two chambers therein; said first conduit means interconnecting one of said chambers of said cylinder and said first chamber of said vessel, said second conduit means interconnecting the other chamber of said cylinder and said second chamber of said vessel; a pressure line, said third conduit means interconnecting said third chamber of said vessel and said pressure line; and an air brake control valve controllable by said piston in said cylinder.

3,097,020
PNEUMATIC DEVICE TO BRAKE OR UNBRAKE A TRAILER
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed May 18, 1960, Ser. No. 29,875
Claims priority, application Italy June 12, 1959
3 Claims. (Cl. 303—29)



1. Apparatus of the character described for pneumatically applying and releasing the brakes of a trailer comprising an automatic relay valve, said automatic relay valve including a housing, service piston means slidably mounted within the housing, a service brake line connected to the housing for supplying compressed air thereto for actuating the service piston means, a first port formed in the housing placing the automatic relay valve in communication with the atmosphere, a second port formed in the housing connecting the trailer braking sections to the automatic relay valve, a third port formed in the housing connecting the compressed air reservoir to the automatic relay valve, double-acting valve means including an inlet and an exhaust valve positioned within the housing adapted to be actuated by the service piston means whereby, when the inlet valve is in open position, compressed air is fed to the trailer braking sections from the trailer compressed air reservoir and when the exhaust valve is in open position, compressed air is exhausted from the braking sections to the atmosphere, an emergency relay piston slidably mounted within the housing and having one face forming an operating chamber with one end of the housing and an opposite face defining an air pressure chamber, an emergency air line connected to the pressure chamber for supplying fluid pressure to the opposite face of the emergency relay piston, a conduit connected between the trailer air reservoir port and the operating chamber for supplying fluid pressure to the one face of the piston, rod means carried by the emergency relay piston for actuating the service piston means, whereby the emergency relay piston is reciprocable within the housing to thereby actuate the inlet and exhaust valve means for placing the compressed air reservoir port in communication with the port connected to the braking sections of the trailer and for placing the port connected to the trailer braking sections in communication with the port connected to the atmosphere, in combination with a trailer manual brake release device and braking device including an auxiliary cylinder positioned within the operating chamber of the automatic relay valve and communicating with said emergency air line, an auxiliary piston reciprocable in said cylinder, a rod fixed to said auxiliary piston and having one portion extending in said operating chamber and an opposite portion protruding exteriorly of said housing to define an external control extremity, an auxiliary valve in said operating chamber opening and closing communication between said operating chamber and said trailer air reservoir port, resilient means urging said auxiliary valve toward its closed position, said auxiliary valve being positioned against said resilient means to its opened position by end pressure of the one portion of said rod, means establishing communication between said auxiliary cylinder and said pressure chamber to automatically actuate said auxiliary piston in response to a predetermined pressure in said pressure chamber whereby said rod is moved with said auxiliary piston to position said auxiliary valve in its opened position in response to compressed air flowing into said pressure chamber, and detent means for retaining said rod in a plurality of positions corresponding to the opened and closed positions of said auxiliary valve.

3,097,021
RELAY EMERGENCY VALVE
Harold L. Dobrikin, Highland Park, Ill., assignor to Berg Airlectro Products Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 23, 1961, Ser. No. 84,239
12 Claims. (Cl. 303—29)



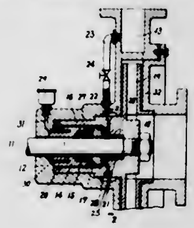
8. In an emergency relay valve, a housing, an emergency fluid pressure inlet in said housing, a reservoir pressure outlet in said housing, an application outlet in said housing, a first passage means interconnecting the emergency fluid pressure inlet and the application outlet, a second passage means in communication with the first passage means and connected to the reservoir pressure outlet to deliver fluid pressure thereto, a valve means, a transfer passage between said inlet and said application outlet, said valve means being disposed in the first passage means between the inlet and the application outlet and being responsive to a predetermined fluid pressure in said emergency inlet to connect said transfer passage to said application outlet for the exhaust of pressure therethrough and responsive to a pressure below said predetermined pressure to supply pressure to said application outlet through said first passage means.

3,097,022
ELASTICALLY MOUNTED ANTIFRICTION BEARING STRUCTURES
Heinz Sernetz, Alte Poststrasse 98, Graz-Eggenberg, Austria
Filed Jan. 12, 1961, Ser. No. 82,200
Claims priority, application Austria Jan. 14, 1960
2 Claims. (Cl. 308—20)



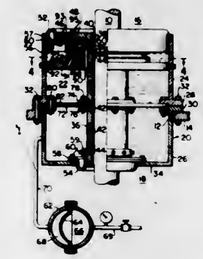
1. An elastically mounted bearing structure for a tubular roller comprising, in combination with said roller, an antifriction bearing having an outer race housed within said roller, an elastic collar between said outer race and the inner wall of said roller, a pair of segmental compression washers located, respectively, on opposite sides of the collars, and a series of axial tie rods adapted to draw related pairs of washer segments toward each other to deform said collar so that it expands radially and presses against the outer bearing race and said roller wall.

3,097,023
FLUIDTIGHT DEVICE FOR A BEARING
Gensuke Nojima, 1108 Kashima-cho, Higashiyodogawa-ku, Osaka City, Japan
Filed Nov. 6, 1961, Ser. No. 150,555
4 Claims. (Cl. 308—36.2)



1. A shaft seal construction comprising a bearing box having a bore therethrough adapted to receive a shaft, said bore having an enlarged portion with a concave end wall, a bearing member having a bore therethrough adapted to fit around the shaft in sliding relationship therewith, said bearing member having one end convex and mating with the concave end wall of the bearing box, said bearing member having a recess in the other end thereof, a spring in said recess, a ring having a bore therethrough adapted to fit around the shaft in sliding relationship therewith, said spring bearing against said ring, a rotor member adapted to be secured to said shaft and rotatable within the enlarged portion of the bearing box bore, said rotor member having a recess therein into which said bearing member and said ring fit, said ring abutting against the end of said recess, sealing rings between said rotor member and the peripheral surfaces of said bearing member and said ring, means securing said ring and said bearing member to said rotor and allowing relative sliding of said bearing member, ring and rotor, and means for supplying fluid under pressure through said rotor and against the face of said ring on the opposite end of the ring from the end against which said spring bears, whereby the spring pressure and the fluid pressure combine to force said bearing member against the end wall of said bearing box.

3,097,024
FLUID-SEALING SELF-ALIGNING SHAFT BEARING
William A. Jones, Boston, R. Langdon Wales, Lincoln, John F. Leonard, Lynnfield, and Philip W. Dalrymple, Wellesley, Mass., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Feb. 13, 1962, Ser. No. 173,003
7 Claims. (Cl. 308—36.3)

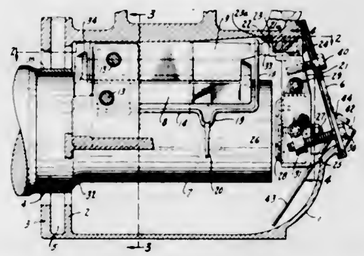


7. A self-aligning bearing for rotatably supporting a shaft extending through an opening in a wall, and for sealing the opening against leakage therethrough of fluids ambient to opposite sides of the wall and subject to a difference in pressures, said bearing comprising, in combination: a sleeve having a cylindrical bearing surface for slidably receiving a shaft rotatably therethrough, said sleeve having a first flange extending circumferentially thereabout to form opposed hydraulic fluid pressure surfaces extending transversely to the major axis of said cylindrical bearing surface; an annular housing circumferentially spaced about said sleeve and attachable in fluid-tight relation in an opening in a wall, said housing being formed with a further flange extending internally thereof circumferentially about said sleeve; a first flexible annular sealing member secured about inner and outer peripheries thereof to said first flange and said housing, respectively; a further flexible annular sealing member secured about inner and outer peripheries thereof to said sleeve and said second flange, respectively; said sealing members defining a chamber between said sleeve and said housing; a quantity of hydraulic fluid being enclosed in said chamber to act upon one of said pressure surfaces exposed to said chamber in opposition to ambient fluid pressure exerted upon the other of said pressure surfaces to support said sleeve in axially-spaced relation to said housing for freedom of self-alignment with a shaft received in said bearing surface.

3,097,025
RAILROAD CAR AXLE JOURNAL BOXES
Karl A. Klingler, 111 S. Wright St., Naperville, Ill.
Filed July 12, 1961, Ser. No. 123,984
13 Claims. (Cl. 308—41)

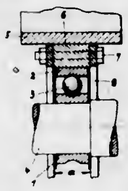
1. In combination, a ported railroad car axle journal box, a door therefor, a flange extending downwardly from the top of the box inside the port, an end stop frame

in contact with the flange at its upper end and means for holding them together, an abutment at the lower end of



the frame adapted to engage the wall of the box below the port and means for holding the frame in position with the abutment tight against the inner wall of the box.

3,097,026
RESILIENT MOUNT FOR LOAD-CARRYING ANTI-FRICTION BEARINGS
Heinz Sernetz, Alte Poststrasse 98, Graz-Eggenberg, Austria
Filed July 28, 1961, Ser. No. 127,670
Claims priority, application Austria Aug. 12, 1960
9 Claims. (Cl. 308—184)



1. A resiliently mounted load carrying anti-friction bearing structure having an outer bearing race and a supporting sleeve, and including

a resilient intermediate member disposed between said bearing race and said sleeve and adapted to exert pressure thereon in inward and outward radial directions;

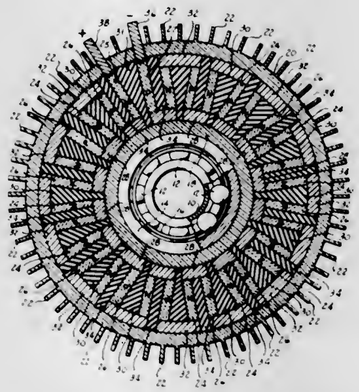
a pair of thrust rings located at opposite sides of said intermediate member; and

tie bolts extending through said thrust rings and adapted to draw said thrust rings toward each other;

characterized in that the intermediate member is deformed by being subjected to pressure in the axial direction by said thrust rings to grip the outer bearing race directly, and when axially compressed exerts a pressure on said outer bearing race which when considered in an axial sectional view over the outer boundary of the outer race exhibits such a non-linear variation that pressure maxima occur close to the ends of the outer bearing race and a pressure minimum occurs in the intermediate portion of said race.

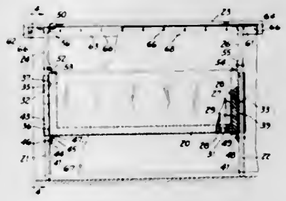
3,097,027
THERMOELECTRIC COOLING ASSEMBLY
Bruce L. Mims, Danbury, and John E. Fitzgerald, Ridgefield, Conn., assignors to The Barden Corporation, Danbury, Conn., a corporation of Connecticut
Filed Mar. 21, 1961, Ser. No. 97,281
6 Claims. (Cl. 308—189)

1. A thermoelectrically cooled ball bearing assembly including in combination an inner race, an outer race, rolling elements positioned between the races, a plurality of semiconductor thermocouples electrically connected in series and having first junctions positioned in heat exchange relationship with one of said races, means for impressing a direct-current potential across the terminal semiconductors of the series connected thermocouples of such polarity that said first junctions are the cold junc-



tions of the thermocouples, said thermocouples having hot junctions and heat exchange means positioned in heat exchange relationship with said hot junctions.

3,097,028
COMBINED BAR AND COOLER
Walter L. Pieschel, Ludlow, Ky., assignor to The Coca-Cola Bottling Works Company, Cincinnati, Ohio, a corporation of Ohio
Original application May 9, 1958, Ser. No. 734,297, now Patent No. 3,013,850, dated Dec. 19, 1961. Divided and this application July 10, 1961, Ser. No. 123,013
2 Claims. (Cl. 312—277)

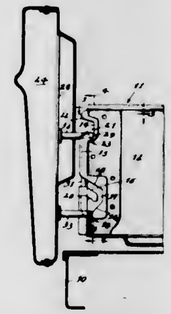


1. In combination with an open-topped receptacle having a bottom and spaced end wall members, an upright open-ended sleeve mounted on each of the end walls, a pair of lower leg members, each of said lower leg members comprising a base, an upper arm releasably received in one of said sleeves, and means for engaging the bottom of the receptacle to support the receptacle, a pair of upper leg members, each of said upper leg members having a lower leg releasably received in one of the sleeves, and table means supported by said upper leg members.

3,097,029
BROILER DRAWER DOOR
Larry C. Lotz and Eugene Stoligrosz, Hamilton, Ohio, assignors to Whirlpool Corporation, a corporation of Delaware
Filed July 7, 1961, Ser. No. 122,576
5 Claims. (Cl. 312—303)

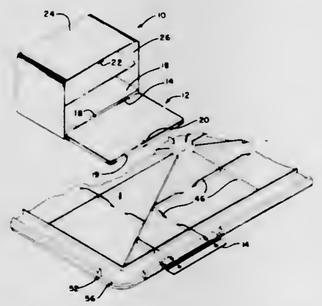
1. In a structure including means defining a compartment having a forwardly extending access opening and a movable door for said opening, a latch comprising: means associated with said compartment means defining

top and bottom catch receiving passages each having a catch retaining bottom and an open catch removing and inserting top; and top and bottom catch means on said door each retained on said catch retaining bottoms when the door is in closed position, said top passage being shal-



lower than said bottom passage in order that said top catch means may be removed from said top passage without removal of the bottom catch means from the bottom passage in moving the door to open position about said bottom catch means as a hinge.

3,097,030
CLOSURE DOOR FOR A RECEPTACLE
Robert L. Hartley, Indianapolis, Ind., assignor to Harper J. Ransburg Co., Inc., Indianapolis, Ind., a corporation of Indiana
Filed Aug. 15, 1960, Ser. No. 49,605
5 Claims. (Cl. 312—315)



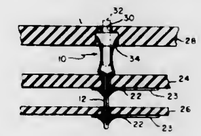
1. A bread box door comprising a metal section having a central dished portion and a peripheral flange terminating in a curl at its free edge and having a shoulder adjacent its attached edge, said metal flange having sufficient resiliency whereby upon being moved outwardly it will have a tendency to return to its normal position; a liner of plastic material having a central portion and a peripheral flange; a seat on the outer face of said liner flange adjacent its free edge; a recess on the outer face of said liner flange adjacent its attached edge; a plurality of ribs extending from said liner central section in the same direction as said liner flange, said ribs being adapted to engage said metal central portion; said metal section and said liner being so dimensioned that upon said liner being snapped inside said metal flange, said metal flange shoulder rests on said liner flange seat, said curl lockingly engages said liner flange recess to hold such liner locked within said metal section, and said ribs engage the inner surface of said metal central portion.

3,097,031
ELECTRICAL CONNECTOR
John A. Cooley, 3724 Manor Road, Chevy Chase, Md.
Filed Jan. 5, 1961, Ser. No. 80,960
2 Claims. (Cl. 339—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



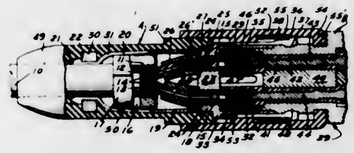
1. An electrical connector comprising a hollow sphere, said sphere being made of a non-conductive material and having at least a first and second opening therein, said first opening being closed by a rotatable, non-conductive solid sphere having an electrical conductor embedded therein, one end of said electrical conductor disposed in a flush relationship with the outside surface of said solid sphere and the other end of said electrical conductor extending through said solid sphere and externally of said hollow sphere, a second electrical conductor disposed in and closing said second opening and extending externally of said hollow sphere, a liquid metal enclosed by said hollow sphere and in contact with said solid sphere and each of said electrical conductors so as to provide a continuous path for current flow, one portion of said solid sphere disposed outside the hollow sphere and another portion of said solid sphere disposed inside the hollow sphere.

3,097,032
PIN SOCKET FOR MINIATURE ELECTRICAL COMPONENTS
Jerome S. Hochheiser, Northridge, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 28, 1961, Ser. No. 155,515
1 Claim. (Cl. 339—17)



A pin socket having one end soldered to the circuits on a plurality of circuit boards, with the opposite end in lateral supporting engagement with an outer panel of electrical apparatus in superimposed spaced relationship to the adjacent circuit board and adapted for receiving and releasably retaining a pin joined to an electrical component detachably pinned to the electrical apparatus and comprising: a metallic strip having symmetrically opposing ends with a narrow midportion and folded on itself at the midsection to form a tail at one end and an open end fork at the other end laterally symmetrical with the tail, the tail being formed of the narrow midportion and the open end fork being formed of the symmetrically opposite ends; the open end fork comprising a pair of inwardly curving arcuate tines each terminating at the base end in a heel at right angle to the arcuate surface and transforming the fork to the narrow tail and being spaced to provide a lateral gap at the nearest point between opposing tines which is less than the diameter of the pin to be received and retained, the tail of the socket passing through clearance holes in the superimposed circuit boards and passing through and being soldered to ring ends of the circuit elements on the circuit boards with the heels of the tines resting against the surface of the adjacent circuit board.

3,097,033
UNIVERSAL ELECTRIC CONNECTOR
Gordon P. Felts, Palm Springs, Calif., assignor to Microdot Inc., South Pasadena, Calif., a corporation of California
Filed Feb. 9, 1959, Ser. No. 791,891
13 Claims. (Cl. 339—75)



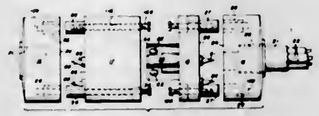
1. In an electric connector for a coaxial cable having an inner conductor and an outer conducting sheath, a clamp ring engaging said outer sheath, said ring having a greater outer diameter than the outer diameter of said cable, a conducting tubular ferrule having axially extending circumferentially spaced arms at one end surrounding said ring at their inner ends, and having their outer end margins deflected inwardly over said clamping ring to the outer surface of said cable, a C-ring clamped around and restraining said deflected ends, and a contact member insulatingly supported within the other end of said ferrule, said contact member having electrical connection with said inner conductor.

3,097,034
EXTENSION CORD LOCK AND KEEPER
Bernard V. Jamrosy, Newburg, Wis.
Filed Oct. 20, 1961, Ser. No. 146,595
2 Claims. (Cl. 339—75)



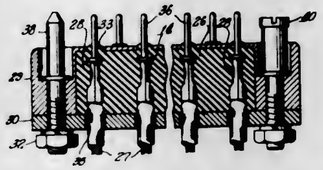
1. In combination, a pair of mating electric plugs having respective line cords connected axially thereto, and cooperating retention members on the line cords, each retention member comprising a helically wound spring surrounding the associated line cord and having an inner end adapted to bear on its associated plug, a plurality of retention arms secured to spaced portions of the outer end of the spring and extending substantially parallel to the spring in the direction of the opposing mating plug, and respective hook-shaped loops on the ends of the retention arms opening toward said outer end, the hook-shaped loops of the retention arms of the retention member associated with one of the line cords being transversely receivable in the hook-shaped loops of the retention arms of the retention member associated with the other line cord, the combined axial lengths of the retention arms being less than the combined normal lengths of the springs and mating plugs, whereby the springs are placed under tension when the hook-shaped loops of the opposing retention arms are linked together.

3,097,035
ELECTRIC CABLE CONNECTING MEANS
Victor R. Despard, Syracuse, N.Y., assignor to Pass & Seymour, Inc., Syracuse, N.Y., a corporation of New York
Filed June 16, 1960, Ser. No. 36,679
1 Claim. (Cl. 339—99)



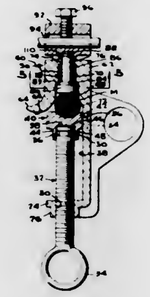
In an electric wiring device of the character described, a two-piece body consisting of front and rear one-piece discs of insulating material having flat confronting faces; the rear disc having a central axial opening therethrough for the passage of an electric cable of at least three insulated, stranded conductors; straight grooves extending divergently at irregular angular intervals from said opening through said confronting face and each terminating in a blind hole parallel to said opening and near the disc edge and each groove and hole sized to closely receive a fully insulated, stranded conductor from said cable of the largest required electrical capacity for the particular wiring device, each groove having flat, parallel side walls and a semi-cylindrical bottom, means in each groove integral with the disc and extending from the side walls only to center a conductor of less than groove width therein; the front disc only mounting conducting parts including for each of the above grooves a forwardly extending connector contact and a conical piercing point contact, the latter projecting from the confronting face at the same irregular angular intervals as said grooves to enter therein to at least the depth of said grooves, each point contact projecting from a shoulder which extends rearwardly beyond its disc face and sized to enter its cooperating groove and compress and pack the stranded wires about the conical point for good contact therewith; at least two pairs of interengaging surfaces integral with said discs and one of each pair extending outwardly from one of said faces a greater distance than said points and the other of each pair extending inwardly from the other face and said pairs being non-symmetrically positioned on the discs to interengage in only one position to thereby accurately register each point with the center of a corresponding one of said grooves for centrally piercing of the conductor therein; and separate means to secure the discs together and force the points into the conductors.

3,097,036
FLEXIBLE MULTIPLE CONNECTOR
Edward S. Cornell, Jr., Westport, Conn., assignor to Burndy Corporation, a corporation of New York
Original application Jan. 8, 1957, Ser. No. 633,137. Divided and this application Oct. 28, 1960, Ser. No. 65,636
2 Claims. (Cl. 339—176)



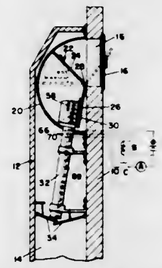
1. A multiple contact electrical connector comprising a plurality of compressible bodies; each said body including a pair of insulating strips; a plurality of electrically isolated contact members positioned between said pairs of strips in side-by-side relationship; each said body having a sinuous surface having a convex configuration about each of the positioned contacts and having a concave configuration at points where said strips are joined together between said contacts; and a frame for securing said bodies in tiers with the abutting faces of said bodies having their concave and convex portions interfitted.

3,097,037
ROTATABLE HOT LINE CLAMPS
Guy R. Gainer, 3700 W. 16th St., and George A. McLain, 1214 Calhoun Ave., both of Panama City, Fla.
Filed May 6, 1960, Ser. No. 27,391
4 Claims. (Cl. 339—245)



4. A hot line clamp comprising a shank having first and second ends, a lateral fixed jaw on the shank at said first end and at one side of the shank, said fixed jaw having a socket opening to the end thereof adjacent to the second end of the shank, said socket having an end wall provided with an opening, a stud having an enlarged head positioned in the socket and a stem extending slidably through said opening, stop means in said socket limiting travel of the stud toward the first end of the shank, spring means compressed between the fixed jaw and the stud, a transverse secondary conductor clamp fixed on the stem, the secondary conductor clamp and the stud being rotatable relative to the fixed jaw, said fixed jaw having an end facing the second end of the shank and formed with a flared transverse opening extending to opposite sides of the fixed jaw, the adjacent end of the socket opening to the flared opening, said head being exposed within the flared opening, a movable jaw supportably engaged with the shank between the fixed jaw and the second end of the shank, and a clamping screw mounted on the shank and connected to the movable jaw.

3,097,038
VERIFIED DEPOSITORY FOR ARTICLES
Jefts G. Beede, Wellesley Hills, and Peter Albiani, Weston, Mass.; said Albiani assignor to said Beede
Filed Jan. 26, 1960, Ser. No. 4,681
12 Claims. (Cl. 346—22)

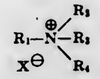


1. A depository comprising a chute, a movable receiver, said receiver having a passage, a container for valuables, an element on said container, mating means on the element and on the receiver in the passage whereby the container is keyed with respect to said receiver, a device on said receiver adapted to stamp a receipt, means on said receiver to actuate said stamping means, said actuating means being operated by said keyed means on the container in a certain predetermined position only thereof, means preventing withdrawal of the container once said keyed means has been entered into said receiver.

CHEMICAL

3,097,039
PROCESS FOR DYEING NITROGENOUS FIBERS
Arthur Buehler, Rheinfelden, and Richard Casty, Kaiseraugst, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Mar. 28, 1960, Ser. No. 17,795
Claims priority, application Switzerland Apr. 10, 1959
5 Claims. (Cl. 8—43)

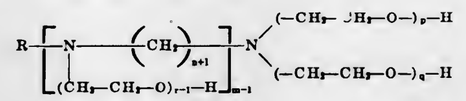
1. A process for dyeing wool, which comprises dyeing the wool in an aqueous bath in the presence of a cation active quaternary ammonium compound of the formula



in which R_1 represents an aliphatic hydrocarbon radical containing 12 to 20 carbon atoms, R_2, R_3 and R_4 each represent a lower alkyl radical and X represents an anion, and in the presence of a polyglycol ether of a higher aliphatic alcohol with a dyestuff consisting essentially of a 1:2-metal complex compound which compound is selected from the group consisting of chromium and cobalt compounds and contains in the molecule of the metal complex at least two sulfonic acid groups.

3,097,040
PROCESS FOR DYEING NITROGENOUS FIBERS
Richard Casty, Kaiseraugst, Switzerland, assignor to Ciba Company, Inc., Fair Lawn, N.J.
No Drawing. Filed Feb. 1, 1960, Ser. No. 5,634
Claims priority, application Switzerland Feb. 19, 1959
16 Claims. (Cl. 8—54)

1. A process which comprises dyeing wool with dyestuffs containing at least 2 HO_3S-groups in the presence of a compound of the formula



in which R represents an aliphatic hydrocarbon radical containing at least 12 and at most 22 carbon atoms, m and n each represent a whole number of at the most 2, and p, q and r represent whole numbers, the sum $p+q+(m-1)(r-1)$ being at least 3, at least one of the symbols p, q and $(r-1)$ being greater than 1, and in the presence of an anion-active substance that has no dyestuff character but possesses affinity for the wool.

3,097,041
PROCESS FOR DYEING WITH REACTIVE DYES IN WATER-SOLUBLE THIOL COMPOUND

Gordon Hobson Lister, 152 Canal Road, Bradford 2, England, and Hermann Egli, 47 Aralienstrasse, Basel, Switzerland

No Drawing. Filed June 27, 1960, Ser. No. 38,761
Claims priority, application Switzerland June 26, 1959
7 Claims. (Cl. 8—54)

1. A process for dyeing keratin-containing fibers with reactive dyestuffs, which consists in

(1) treating the fibers in aqueous acid medium at a temperature of maximally 100° C. with a reducing compound of the formula

HS—R—COOH

wherein R is divalent hydrocarbon radical of 1 to 6 carbons, whereby the cystine bridge of keratin is split into —SH groups, and

(2) concurrently treating the fibers with a reactive dye selected from the group consisting of azo, anthraquinone and phthalocyanine dyes bearing one to two halogen atoms of an atomic weight between 35 and 81.

3,097,042
TEXTILE COLOURATION PROCESS

Alan Metcalf Wooler, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed July 28, 1960, Ser. No. 45,816
Claims priority, application Great Britain Aug. 4, 1959
7 Claims. (Cl. 8—54.2)

1. Process for improving the stability, during storage, of fastness to washing of cellulose textile materials which have been coloured by reaction with a water-soluble dyestuff containing at least one dihalogeno-1:3:5-triazin-2-ylamino group, which consists essentially in treating the so-coloured textile material with an aqueous solution of an amine of the formula:

$H_2N—R—X$

wherein R is a radical selected from the class consisting of mono- and di-cyclic aromatic rings and the grouping $(CH_2)_m$, in which m represents one of the integers from 2 to 6; and X is a member selected from the class consisting of $—NH_2$ and

$—[—NH(CH_2)_p]_nNH(CH_2)_pY$

in which Y stands for a group selected from the class consisting of amino and hydroxy groups, p represents an integer from 2 to 6, and n represents one of the numbers 0, 1, and 2.

3,097,043
NEW DYEING PROCESS

Walter Percival Mills, Manchester, England, assignor to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Filed Nov. 4, 1959, Ser. No. 850,785
Claims priority, application Great Britain Nov. 7, 1958
6 Claims. (Cl. 8—55)

1. Process for dyeing nitrogen-containing synthetic polymeric textile materials selected from the class consisting of synthetic linear polyamides and modified polyacrylonitrile textile materials, which process comprises dyeing said synthetic polymeric textile material with an aqueous dispersion of a disperse reactive dyestuff and a member selected from the group consisting of an acid and acid salt, and having a pH in the range of between about 3 and 5, and subsequently, during the dyeing process, adding to said dispersion a member selected from the group consisting of an alkali and alkaline salt, to raise the pH thereof to within the range of between about 9 and 12.

3,097,044
PROCESS FOR COLORING POLYPROPYLENE

Thomas Skeuse, Purdys, N.Y., assignor to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,471
9 Claims. (Cl. 8—55)

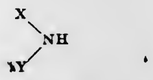
1. The method of dyeing polypropylene fiber by the simultaneous interaction of dye, water soluble chromium salt, acid and fiber in aqueous dye bath, which comprises contacting said fiber in said bath with a mordant dye in presence of said water-soluble chromium salt for a period of from about 15 minutes to about 90 minutes at a temperature of from about 212° to about 250° F., the ratio of said dye to said chromium salt ranging from about 1:1 to about 1:2 by weight, based on the dry weight of the fiber.

3,097,045
PROCESS FOR PRODUCING WHITE OR COLOR RESISTS ON DYEINGS WITH VAT DYESTUFFS ON NATIVE OR REGENERATED CELLULOSE

Hugo Bartl and Erich Fees, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,665
Claims priority, application Germany Feb. 5, 1959
6 Claims. (Cl. 8—65)

1. A process for producing white resists on pads that have been made on cellulose fabrics with leucosulfuric acid esters of vat dyestuffs selected from the group consisting of anthraquinoid and indigoid vat dyestuffs, with the addition of salts of nitrous acid, which comprises overprinting the dried pads with a printing paste essentially consisting of a fixing agent and 1–20% by weight of a substance that destroys nitrous acid and has the general formula



wherein X represents a member selected from the group consisting of the phenyl radical and the hydrogen atom, and Y represents a member selected from the group consisting of the $—NH_2$ radical, a sulfonic acid group, a sulfonic acid amide group, a sulfonic acid thioamide group, a sulfonic acid radical esterified by a lower alcohol, an OH radical, a phenyl radical, a substituted phenyl radical, a carbonamide group, a thiocarbonamide group, an N-anilino radical, an N-anilino radical substituted by a sulfonic acid group, an N-anilino radical substituted by a sulfonic acid group esterified by a lower alcohol, an N-anilino radical substituted by a carboxylic acid group, an N-anilino radical substituted by a carboxylic acid group esterified by a lower alcohol, at least one of X and Y represents an aromatic radical, the benzoyl radical, the thiobenzoyl radical and salts of the said compounds, steaming and treating the pads with dilute sulfuric acid at a temperature of 30–90° C., soaping, rinsing and drying the fabric so treated.

3,097,046
METHOD AND COMPOSITION FOR DYE-LEVELING

Wilhelm E. Walles and William F. Tousignant, Midland, Mich., and Lamar C. Cloninger, Williamsburg, Va., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,521
13 Claims. (Cl. 8—88)

1. In the method of dyeing a textile article, the improvement of effecting a more level dyeing which consists essentially of dissolving in the dyebath with the dyestuff poly-N-vinyl-5-methyl-2-oxazolidinone and dyeing said textile article with said dyestuff in the presence of said poly-N-vinyl-5-methyl-2-oxazolidinone.

3,097,047
DYEING SYNTHETIC FIBERS WITH ALKYL NAPHTHALENE COMPOSITION

Sidney M. Weinstein and Peter J. Scott, West Orange, N.J., assignors to The Tanatex Chemical Corporation, Kearny, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 27, 1961, Ser. No. 105,906
12 Claims. (Cl. 8—94)

1. A composition comprising about 70 to 98% of a carrier consisting essentially of methylnaphthalenes having less than 7 methyl groups on the naphthalene nucleus and about 2 to 30% of an emulsifier selected from the group consisting of anionic, nonionic and cationic emulsifiers based on the weight of the carrier employed.

6. The process of dyeing synthetic fibers which comprises adding a carrier composition comprising about 2 to 30% of an emulsifying agent based on the weight of the carrier to be used and about 70 to 98% of a carrier consisting essentially of methylnaphthalenes having less than 7 methyl groups on the naphthalene nucleus to a dyebath and forming a mixture of said carrier composition, dyebath, dyestuffs and goods to be dyed, maintaining the goods to be dyed in contact with said carrier composition and dyestuff at a temperature and for a period of time sufficient to insure dyeing of said goods and removing the dyed goods from the dyebath.

3,097,048
METHOD AND COMPOSITION FOR DYE-STRIPPING

Wilhelm E. Walles, William F. Tousignant, and Robert J. Axelson, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,487
7 Claims. (Cl. 8—102)

1. A dye-stripping composition for stripping vat, sulfur, and direct dyestuffs from a cellulosic substrate which composition comprises poly-N-vinyl-5-methyl-2-oxazolidinone dissolved in an aqueous solvent vehicle, said solvent vehicle consisting essentially of water and a minor proportion of an agent characterized by being capable of solubilizing said dyestuffs.

3,097,049
PROCESS FOR BLEACHING AND SHRINK-PROOFING WOOL

Jean Meybeck, 9A Rue du Bramont, Mulhouse, France, and Charles Schirle, deceased, late of 15 Rue Pasteur, Colmar, France, by Agnes Jeanne Antoinette Cazal Schirle, administratrix, Fraize, Vosges, France

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,001
19 Claims. (Cl. 8—108)

1. A process for bleaching and shrinkproofing wool with minimum alteration of the wool, which comprises introducing the wool in water, introducing progressively a dilute solution of an acid with continuous agitation until a pH of 2–4.5 is reached, continuing agitation, introducing slowly an aqueous chlorite solution of pH 8–9 at a temperature below about 50° C., until the wool turns pink, whereby the pH of the chlorite solution is lowered without evolution of ClO_2 and the bath remains substantially colorless throughout the treatment, and treating the pink wool with a reducing solution, said introduction of the wool in water, said progressive introduction of dilute acid, said continued agitation, said slow introduction of aqueous chlorite solution of pH 8–9, and said treatment with a reducing solution being carried out seriatim.

3,097,050
PROCESS OF CREASEPROOFING CELLULOSE FABRICS WITH 2,6-DIOXASPIRO(3,3)HEPTANE AND FORMALDEHYDE AND FABRICS PRODUCED THEREBY

Melvin D. Hurwitz, Southampton, and Stella Y. Wang, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,041
12 Claims. (Cl. 8—116.4)

1. The process consisting of impregnating a cellulose fabric with an aqueous solution of 3 to 7% by weight of 2,6-dioxaspiro(3,3)heptane, 2 to 4% by weight of formaldehyde, and 0.2 to 2% by weight of a catalyst selected from the group consisting of metal salts of an acid of the formula $H_a(XY_b)$ where H is hydrogen, a is an integer having a value of 1 to 3, X is a member selected from the group consisting of boron, silicon, sulfur, and chlorine, Y is a member selected from the group consisting of fluorine and oxygen, and b is an integer selected from 4 and 6, said metal being selected from the group consisting of those in groups Ib, II, IIIb, IV, and VIII of the periodic table, the cellulose-reactive substances in the solution consisting essentially entirely of the aforesaid heptane and formaldehyde, drying and heating the impregnated fabric at a temperature of about 250° to 400° F., until the crease resistance of the fabric is increased.

3,097,051
CELLULOSE ESTER ANHYDRIDES IN FIBER FORM

Ricardo H. Wade, Metairie, La., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,783
14 Claims. (Cl. 8—120)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for producing an ester anhydride of native fiber cellulose comprising subjecting a mixture containing (1) native fiber cellulose having three reactive hydroxyl groups per anhydroglucose unit, (2) a tricarboxylic acid mono-anhydride having one free carboxyl group capable of reacting with the hydroxyl groups of the cellulose to form a cellulose ester linkage and having, in addition, two carboxyl groups linked together in a cyclic anhydride structure, said tricarboxylic acid mono-anhydride being present in the proportion of one mole per mole of said anhydroglucose unit of said native fiber cellulose, and (3) at least one mole of trifluoroacetic anhydride per mole of the tricarboxylic acid mono-anhydride, in an inert non-aqueous solvent in which said tricarboxylic acid mono-anhydride and said trifluoroacetic anhydride are appreciably soluble, to a temperature ranging from about 20° C. up to at least about the reflux temperature of the mixture, to produce an ester anhydride of the cellulose in which the cellulose hydroxyl groups have been esterified by the free carboxyl group of the tricarboxylic acid mono-anhydride, in which the cyclic anhydride structure of the tricarboxylic acid mono-anhydride remains intact and unreacted, which contains about from 0.1 to 0.3 of the tricarboxylic acid mono-anhydride groups per anhydroglucose unit, which possesses latent cation exchange properties, and which retains the native fiber form of the cellulose.

3,097,052
TREATMENT OF WOOL WITH ACID ANHYDRIDES IN THE PRESENCE OF ACETIC ACID

Nathan H. Koenig, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Aug. 25, 1961, Ser. No. 134,056
12 Claims. (Cl. 8—128)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for chemically modifying wool which comprises reacting wool under essentially anhydrous condi-

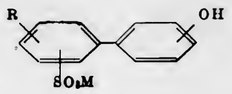
tions, in the presence of acetic acid, with an acid anhydride containing more than eight carbon atoms of the class consisting of aliphatic, aromatic, and aromatic-aliphatic acid anhydrides, in a reaction system consisting solely of said wool, acetic acid, and acid anhydride.

3,097,053
METHOD FOR MANUFACTURING SYNTHETIC ACRYLONITRILE FIBERS
Shohei Kurioka, Takasi Yamamoto, and Fukusaburo Matsushita, all of Kitajima-machi, Itano-gun, Tokushima Prefecture, Japan, assignors to Toho Rayon Kabushiki Kaisha, a corporation of Japan
No Drawing. Filed May 26, 1961, Ser. No. 112,787
Claims priority, application Japan June 8, 1960
3 Claims. (Cl. 18—48)

3. A method for preparing spun gel-tow fibers by a wet spinning process from a spinning solution containing acrylic co-polymers including at least 85% acrylonitrile employing aqueous saline solvents containing a mixture of water soluble metallic chlorides including zinc chloride, the improvement which comprises washing the spun gel-tows in an acidwater bath of a pH of not greater than 3 while controlling and maintaining the temperature below 70° C. thereby facilitating removal of zinc chloride from the spun gel-tows.

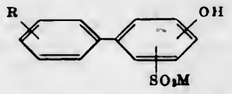
3,097,054
METHOD OF MAKING HIGH-SHRINK TEXTILE FIBERS
Willis G. Routson, Concord, Calif., and Thomas C. Spence, Yorktown, Va., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,019
8 Claims. (Cl. 18—54)

1. Method of preparing a highly shrinkable synthetic acrylonitrile polymer textile fiber which method comprises salt spinning a fiber-forming acrylonitrile polymer that is adapted to provide fibers which do not shrink more than 15 percent after exposure to water at about 100° C., which polymer contains in the polymer molecule at least about 80 percent of acrylonitrile, any balance being another monoethylenically unsaturated monomeric material that is copolymerizable with acrylonitrile, into an aquagel filamentary structure that contains between about 1 and 5 parts by weight of water to each part by weight of dry polymer therein, said aquagel having incorporated therein between about 2 and 15 weight percent, based on the dry weight of the combined polymer composition, of a polymer of a monomer selected from the group consisting of a N-vinyl lactam, a N-vinyl-3-morpholinone, a N-vinyl-2-oxazolidinone, and a N-vinyl-methylalkyl-sulfonamide; washing said aquagel substantially free from residual salt and physically elongating said fiber by stretching it to an at least partially oriented condition; subjecting said aquagel fiber to intimate contact with an aqueous solution of a monosulfonate of an alkyl phenyl phenol of the structures:



(I)

and

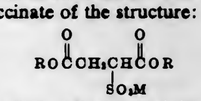


(II)

wherein R is an alkyl radical containing from about 1 to 8 carbon atoms, and M is an alkali metal consisting of sodium, potassium and lithium; irreversibly drying said aquagel fiber to a synthetic characteristically hydrophobic fiber structure; and subsequently stretching said fiber structure about 15 to 35 percent while heating said structure between about 90 and 150° C.

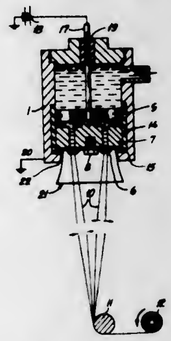
3,097,055
METHOD OF MAKING HIGH-SHRINK TEXTILE FIBERS
Willis G. Routson, Concord, Calif., and Thomas C. Spence, Yorktown, Va., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,020
9 Claims. (Cl. 18—54)

1. Method of preparing a highly shrinkable synthetic acrylonitrile polymer textile fiber which method comprises salt spinning a fiber-forming acrylonitrile polymer that is adapted to provide fibers which do not shrink more than 15 percent after exposure to water at about 100° C., which polymer contains in the polymer molecule at least about 80 percent of acrylonitrile, any balance being another monoethylenically unsaturated monomeric material that is copolymerizable with acrylonitrile, into an aquagel filamentary structure that contains between about 1 and 5 parts by weight of water to each part by weight of dry polymer therein, said aquagel having incorporated therein between about 2 and 15 weight percent, based on the dry weight of the combined polymer composition, of a polymer of a monomer selected from the group consisting of a N-vinyl lactam, a N-vinyl-3-morpholinone, a N-vinyl-2-oxazolidinone, and a N-vinyl-methylalkyl-sulfonamide; washing said aquagel substantially free from residual salt and physically elongating said fiber by stretching it to an at least partially oriented condition; subjecting said aquagel fiber to intimate contact with an aqueous solution of a sulfosuccinate of the structure:



wherein R is an alkyl radical containing from about 4 to 14 carbon atoms, and M is an alkali metal consisting of sodium, potassium and lithium; irreversibly drying said aquagel fiber to a synthetic characteristically hydrophobic fiber structure; and subsequently stretching said fiber structure about 15 to 35 percent while heating said structure between about 90 and 150° C.

3,097,056
MELT-SPINNING OF POLYMERS
Hugh Charles Rowlinson, St. Hilaire Station, Quebec, Canada, assignor to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Feb. 5, 1962, Ser. No. 171,191
Claims priority, application Canada Nov. 23, 1961
3 Claims. (Cl. 18—54)



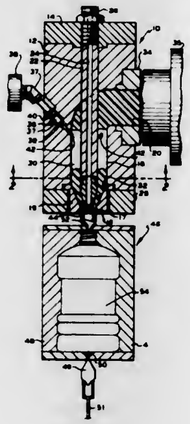
1. In a process for the continuous multifilament melt-spinning of a fibre-forming polymer wherein said polymer is melted by heating and forced under pressure through a plurality of fine holes in a spinneret plate, the improvement which comprises insulating said spinneret plate from ground and applying to said plate a substantial electrical potential.

3,097,057
PROCESS AND APPARATUS FOR MANUFACTURING FLOATING SOAP
Shoichi Takeuchi, 907–2 Furue, Kamisakabe, Amagasaki City, Japan
Filed July 28, 1959, Ser. No. 830,092
Claims priority, application Japan Aug. 1, 1958
4 Claims. (Cl. 18—55)



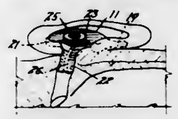
1. A method of making floating soap which comprises continuously forming an elongated hollow soap base, inserting a portion of said hollow elongated soap base between a die base and a die lid, engaging the die base and die lid to cut off the soap base exterior of the die base and die lid and to press the open ends of the soap base to a closed position that compresses the air within the hollow portion, and releasing the compressed air within the hollow portion.

3,097,058
EXTRUSION OF THERMOPLASTIC RESINS
Tony E. Branscum and John E. Havely, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,402
13 Claims. (Cl. 18—55)



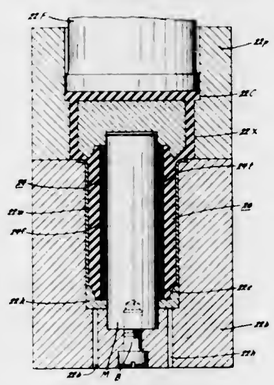
1. A process for extruding and blow molding a generally cylindrical container of translucent to opaque thermoplastic material having a transparent stripe extending longitudinally thereof which comprises extruding an initial tube of solely said material from a hot plastic mass thereof; simultaneously extruding a hot plastic strip of transparent thermoplastic material into the wall of the already formed tube to displace a comparable portion of the translucent to opaque material to form a striped tube adapted for blow molding; and blow molding said striped tube into a container having a transparent stripe lengthwise thereof.

3,097,059
METHOD FOR FORMING EAR PLUGS FOR SUPPORTING HEARING AID RECEIVERS
Carl G. Hoffman, 631 15th St., Denver, Colo.
Filed June 23, 1960, Ser. No. 38,267
1 Claim. (Cl. 18—55.05)



A method for forming a near plug for supporting a hearing aid receiver in the ear of a patient comprising: packing the tympani extremity of the auditory canal of the ear of said patient with cotton; pressing a mass of self-hardening moldable material into said canal and into the concha of the external ear with the thumb and fingers; leveling off the external surface of the mass to produce a flat external surface; pressing a receiver supporting member into said flat external surface; allowing said mass to harden in the ear to form a solid plug conforming to the internal contours of said ear with the receiver supporting member permanently inbedded therein; removing said plug from the ear; and thence drilling a sound passage in said plug extending from the extremity of the canal portion of said plug to the receiver supporting member thereon, so that sound waves from a receiver supported by said receiver supporting member will be conducted to the membrana tympani of the ear.

3,097,060
BEARING STRUCTURE AND METHOD OF MANUFACTURE THEREFOR
Leo S. Sullivan, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 10, 1959, Ser. No. 858,656
2 Claims. (Cl. 18—59)

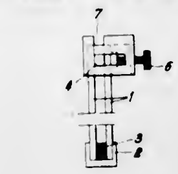


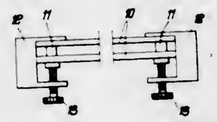
1. A bearing assembly for noise isolation and wear resistance in a pivotal joint, consisting of only, an initially loose and pliable preform that is basically a non-metallic organic fibrous material such as cotton having a curable phenolic impregnation therewith as well as a fluorine containing synthetic fiber woven as a durable low-friction bearing surface along one side of said non-metallic fibrous material of said preform, and a backing portion of pliable material such as elastomer polycarbonate as well as acetal resin means also curable per se, said backing portion being curable identically and specifically simultaneously with said phenolic impregnation into a unitary bonded and inseparable compacted relationship with each other.

3,097,061
PROCESS FOR THE PREPARATION OF MULTI-PANE INSULATING GLASS

Hubert Woelk, Porz-Zundorf, Germany, assignor to Spiegelglaswerke Germania Aktiengesellschaft Zweigniederlassung der Glaceries de Saint Roch Societe Anonyme, Porz-Urbach, Germany

Filed July 5, 1960, Ser. No. 40,781
Claims priority, application Germany July 3, 1959
7 Claims. (Cl. 18—59)





1. The method of forming a multiple-pane insulating glass panel which comprises standing two panes of glass vertically with their edges parallel and at a selected distance apart, interposing a boundary strip treated with a separating agent temporarily between the panes within the said edges, closing the space between the edges of the panes beyond the boundary strip, flowing sealing compound in the trough thus formed setting the compound and removing the boundary strip.

3,097,062
PROCESS FOR THE PREPARATION OF GRANULAR URANIFEROUS MATERIAL OF UNIFORM PARTICLE SIZE

Marie E. A. Hermans and Theo van der Plas, Arnhem, Netherlands, assignors to Stichting Reactor Centrum Nederland

No Drawing. Filed May 14, 1959, Ser. No. 813,053
Claims priority, application Netherlands May 14, 1958
3 Claims. (Cl. 23—14.5)

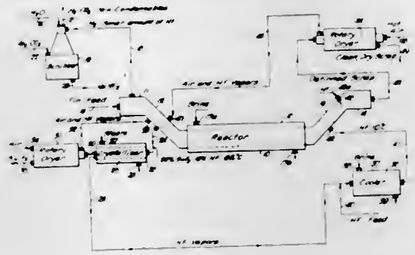
1. A process of preparing a uranium containing material of uniform particle size comprising adding 110 to 200 grams per liter of urea to a hot aqueous solution containing 0.2 to 0.6 gram ions of uranyl ions per liter, and an initial nitrate ion concentration less than 1.8 gram ions per liter, homogeneously stirring said mixture and rapidly separating, after termination of the homogeneous precipitation thus brought about, the solid precipitate from the liquid and maintaining the temperature of the solution during the homogeneous precipitation between 90 and 98° C.

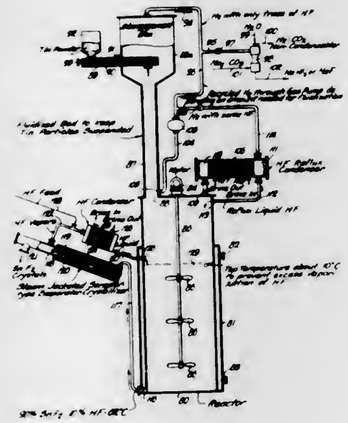
3,097,063
HYDROGEN FLUORIDE DETINNING PROCESS AND PRODUCTION OF STANNOUS FLUORIDE

Joe E. Gilliland, Raymond Ray, and Wayne E. White, Tulsa, Okla., assignors to Ozark-Mahoning Company, Tulsa, Okla., a corporation of Delaware

Filed Feb. 8, 1960, Ser. No. 7,388
7 Claims. (Cl. 23—88)

1. A method of producing stannous fluoride by reacting hydrogen fluoride and tin in a reaction step comprising the steps of first cooling a quantity of liquid hydrofluoric acid of greater than 70 percent concentration to a temperature substantially below the boiling point of the hydrofluoric acid at the pressures of the reaction step, said liquid HF cooled to a temperature sufficiently below the boiling point of liquid HF at the pressures of the reaction step to prevent any reaction with tin upon contact therewith, then rapidly adding together the HF and a quantity of relatively finely divided tin in a reaction step in such manner as to quickly submerge and immerse said quantity of tin to be reacted with the HF whereby to avoid an initial swift generation of heat, then permitting the temperature of the reaction mixture to rise to the temperature of the boiling point of the solution at the pressures existent in the reaction step whereby to permit the reaction of the tin and the acid; maintaining the reaction





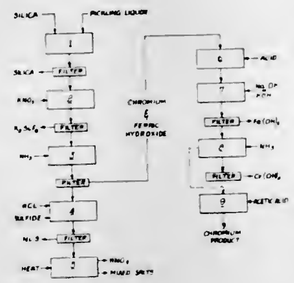
step at least substantially in its entirety at a substantially uniform temperature not greater than the boiling point of the liquid present in the reaction step, by maintaining a sufficient excess of liquid hydrofluoric acid continuously present in the reaction step and in contact with at least substantially all of the tin reacting in the reaction step, whereby to at least substantially prevent any agglomeration of the tin into unreactive metallic bodies in said reaction step due to fusion thereof in the presence of excess heat, and recovering stannous fluoride from the resultant solution.

3,097,064
RECOVERY OF VALUES FROM PICKLING LIQUOR

Paul Caldwell, Evergreen Park, Ill., assignor of one-half to Donald W. Lloyd, Chicago, Ill.

Filed Mar. 13, 1961, Ser. No. 95,411
18 Claims. (Cl. 23—88)

1. The method of treating acidic aqueous pickling liquor containing fluorine, chromium, iron, nickel and nitrate values therein; said method comprising reacting said liquor with a soluble nitrate salt capable of forming an insoluble fluorine compound; removing said fluorine compound; ammoniating the remaining liquor to form a chromium and iron hydroxide precipitate; removing said precipitate; reacting the remaining liquor with a soluble agent capable of forming an insoluble nickel compound; removing the



insoluble nickel compound; and drying the remaining liquor to recover a nitrate salt therefrom.

3,097,065
PROCESS FOR RECOVERY OF AMMONIA FROM COKE OVEN GAS AS AMMONIUM CHLORIDE AND AMMONIUM SULFATE

Herbert A. Gollmar, Bethel Park, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed May 17, 1957, Ser. No. 659,761
3 Claims. (Cl. 23—100)

3. A process for the recovery of ammonia from coke oven gas as ammonium chloride which comprises contacting said gas with a solution saturated as to its content of ammonium chloride, containing 10–15 percent of ammonium phosphate, and maintained at a pH value slightly lower than 7.5.

3,097,066
PROCESS FOR THE PRODUCTION OF BORON AND ALUMINIUM COMPOUNDS CONTAINING HYDROCARBON RADICALS AND/OR HYDROGEN

Roland Köster, Günter Bruno, and Hans-Herbert Lehmkuhl, Mulheim (Ruhr), Germany, assignors to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany

No Drawing. Filed Feb. 20, 1957, Ser. No. 641,246
Claims priority, application Germany Feb. 25, 1956
16 Claims. (Cl. 23—204)

5. Process for the production of hydrides which comprises reacting a compound selected from the group consisting of boron compounds of the general formula R_3B and aluminum compounds of the general formula R_3Al in which R is a member selected from the group consisting of alkyl, lower cycloalkyl and phenyl radicals with hydrogen at a temperature between about 120 and 200 degrees C. and under a pressure in excess of atmospheric and recovering the hydride compound formed.

3,097,067
PREPARATION OF IODINE PENTAFLUORIDE

Frank S. Fawcett and Alan L. McClelland, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

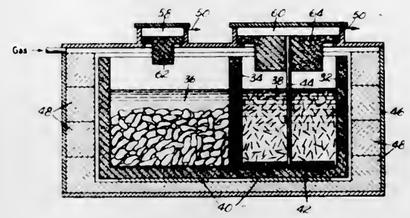
No Drawing. Filed July 27, 1960, Ser. No. 45,533
1 Claim. (Cl. 23—205)

A process of preparing iodine pentafluoride which comprises reacting carbonyl fluoride with iodine pentoxide at a temperature of 100–300° C., the molar ratio of carbonyl fluoride to iodine pentoxide being 2.5:1 to 10:1.

3,097,068
CRYSTALLIZATION OF PURE SILICON PLATELETS

Lawrence M. Litz, Lakewood, Robert A. Mercuri, Westlake, and Stanley A. Ring, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed May 29, 1959, Ser. No. 816,760
5 Claims. (Cl. 23—223.5)

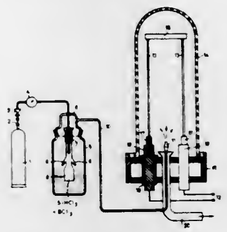


1. A continuous process for preparing at least 99.9 percent pure silicon which comprises dissolving at elevated temperature crude silicon in molten aluminum to form a liquid mixture of silicon and aluminum having a solidification temperature not below 577° C. and containing at least 11 atomic percent silicon; lowering the temperature of the liquid mixture to a value not below the solidification temperature of the liquid mixture but sufficient to crystallize out platelets of relatively pure silicon; recovering said platelets from said liquid mixture; removing a solidified silicon-aluminum coating from said platelets, retained thereon upon removal of said platelets from said solution and upon subsequent cooling; and washing the relatively pure silicon platelets.

3,097,069
PYROLYTIC PRODUCTION OF HYPERPURE SILICON

Konrad Reuschel, Pretzfeld, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Filed June 9, 1961, Ser. No. 115,990
Claims priority, application Germany June 10, 1960
7 Claims. (Cl. 23—223.5)



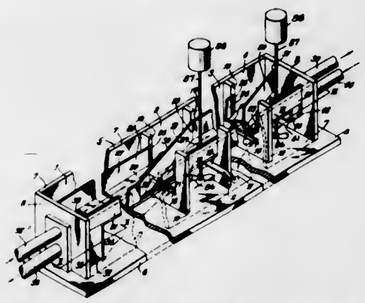
1. The method of producing hyperpure silicon by pyrolytic precipitation from a gaseous silicon-halogen compound onto a solid, carrier body of silicon heated to incandescent temperature, which comprises employing a liquid silicon-halogen compound containing a trace of a phosphorus compound as an impurity and adding thereto to least one boron compound selected from the group consisting of boron chloride, boron bromide and boron iodide to form an admixture, evaporating the silicon compound virtually free from phosphorus off the admixture, and pyrolytically precipitating silicon from the evaporated silicon compound onto the heated silicon body.

3,097,070
PLASTIC WARE FOR SCIENTIFIC USE
Adelbert Aldrich, La Crescenta, Robert Schwarz, Jr., Beverly Hills, and William H. Gottschalk, Encino, Calif., assignors to Falcon Plastic Products, Culver City, Calif., a copartnership
Filed Nov. 6, 1958, Ser. No. 772,224
4 Claims. (Cl. 23—253)



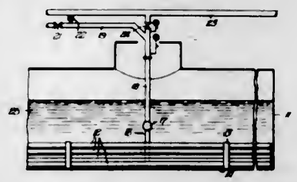
1. Disposable laboratory ware for use in holding materials for chemical, biological and physical manipulation comprising an article made from plastic material selected from the group consisting of polystyrene, polyethylene and methacrylate and having a container portion in the form of a cavity for holding the materials to be manipulated with the entire inner surface of the container portion including the portions which contact said materials having a continuous, unbroken, adherent coating of between approximately 0.1 and 1.5 microns in thickness of material selected from the group consisting of silicon oxide, tantalum, aluminum, magnesium fluoride and aluminum oxide whereby said surface is water wettable, compatible with living cells and tissue and adequately resistant to abrasion and chemical attack by the said materials.

3,097,071
LIQUID-LIQUID CONTACTING APPARATUS
Leonard Lowes, Seascale, and Maurice Charles Tanner, Mirehouse, Whitehaven, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Jan. 9, 1958, Ser. No. 707,995
Claims priority, application Great Britain Jan. 10, 1957
2 Claims. (Cl. 23—270.5)



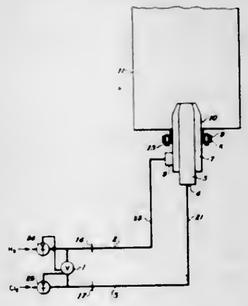
1. In mixer-settler apparatus for contacting two substantially immiscible fluid phases of differing densities, an elongated trough divided into an even number of compartments arranged in tandem, the even numbered compartments from one end of the trough being mixer compartments and the odd numbered compartments from said end being settler compartments, inlet duct means communicating at an upper level with the first of said mixer compartments for introducing a light phase fluid therein, inlet duct means communicating at a lower level with the last of said mixer compartments for introducing a heavy phase fluid therein, outlet duct means communicating at an upper level with the last of said settler compartments for removing light phase fluid therefrom, outlet duct means communicating at a lower level with the first of said settler compartments for removing heavy phase fluid therefrom, each but the first said settler compartment communicatnig at a lower level with the mixer compartment immediately preceding for heavy phase fluid flow thereto, each settler compartment communicating at an upper level with the second succeeding mixer compartment for light phase fluid flow thereto, each mixer compartment communicating at an intermediate level with the settler compartment immediately preceding for mixed phase fluid flow thereto, and liquid mixing means in the mixer compartments.

3,097,072
APPARATUS FOR DISSOLVING SOLUBLE MATERIALS
Alfred Lippman, Jr., Reserve, and Leon Godchaux II, New Orleans, La., assignors, by mesne assignments, to The National Sugar Refining Company, New York, N.Y., a corporation of New Jersey
Original application June 17, 1954, Ser. No. 437,516, now Patent No. 2,929,747, dated Mar. 22, 1960. Divided and this application July 6, 1959, Ser. No. 831,452
1 Claim. (Cl. 23—271)



In apparatus for dissolving particulate solid material, including a container for said solid material, and a plurality of substantially horizontal conduits disposed adjacent one another and adjacent the bottom of said container, said conduits being provided with downwardly directed apertures distributed over substantially their entire lengths, whereby a fluid flowing under pressure through said conduits is discharged substantially uniformly over the bottom of said container, the improvement which comprises arranging at least some of said apertures angularly in said wall so that fluid flowing through said angular apertures has a component of motion parallel to the longitudinal axis of said conduit, said conduits as a group being selectively valvedly connected to one of two separate fluid supply sources furnishing respectively water and steam.

3,097,073
HYDROGEN CHLORIDE PRODUCTION SYSTEM
Joseph M. Hildyard and Haldred C. Breckon, Youngstown, N.Y., assignors to The Hooker Electrochemical Company, Niagara Falls, N.Y., a corporation of New York
Filed Nov. 29, 1957, Ser. No. 699,761
1 Claim. (Cl. 23—277)



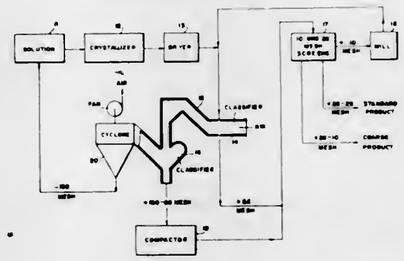
In the continuous combustion of gaseous hydrogen and gaseous chlorine to produce anhydrous hydrogen chloride, an improved apparatus means comprising a burner chamber, a burner nozzle secured to said chamber, separate gas supply means in communication with said nozzle for supplying gaseous hydrogen and gaseous chlorine to separate zones in said nozzle, and automatic ratio controlling means and, in communication therewith controlled valve means in each of said separate gas supply means, said ratio controlling means and said valve means being adapted to regulate the flow of each of said gases in substantially a one to one molar ratio to said nozzle under varying-demand rates by automatically measuring and controlling gas flow in each of said gas supply means, said nozzle comprising two cylindrical conduits, one inside the other in annularly spaced relationship with the inner conduit being made of nickel and forming a separate central zone, the gas-receiving end of the inner conduit being in separate communication with the chlorine gas supply means and the same end of the outer conduit being connected to the said inner conduit in a gas tight manner, thereby forming a separate annular zone and being in separate communication with the hydrogen gas supply means, and the gas-ejecting ends of each of said conduits tapering inwardly, terminating on substantially the same plane, in open communication with the burner chamber, and having the terminal area of the inner conduit approximately equal to the terminal annular area of the outer conduit whereby said nozzle is adapted to eject both of the said gases into the said burner chamber at substantially equal velocities without premixing and with substantially complete mixing after the gases leave the nozzle.

3,097,074
CATALYTIC CONVERTER
Ralph S. Johnson, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,569
1 Claim. (Cl. 23—288)



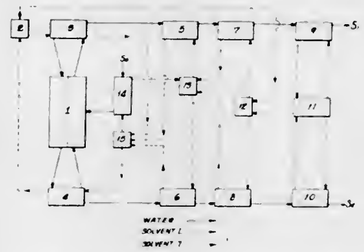
A catalytic converter apparatus comprising a casing having first and second inlet openings in one end thereof and an outlet opening formed in the opposite end thereof, a catalyst bed disposed within said casing and dividing the latter into vertically-spaced first and second gas flow chambers above and below the bed, the first inlet opening communicating with said first chamber for directing gas flow in series through the second chamber and the catalyst bed to the outlet opening, the second inlet opening disposed adjacent the second chamber for directing gas through the second chamber to the outlet opening without passing through the first chamber and the catalyst bed, an inlet casing member secured to the casing means and enclosing said first and second inlet openings, first and second valve seats formed in the inlet casing and respectively disposed in series with the first and second inlet openings, a valve pivotally supported by the inlet casing member at a point between said valve seats and adapted to coact with the latter to block flow therethrough, said valve including a self-centering valve member for cooperation with the second valve seat so as to assure positive closing thereof, a pressure source, fluid operated means operatively associated with said valve for moving the latter for engagement with the first and second valve seats, first means controlling communication of the pressure source with said fluid operated means, temperature-responsive means located in the catalyst bed for sensing the temperature thereof, and second means connecting said temperature responsive means to the first means for causing activation of the latter so as to connect the pressure source with the fluid operated means whereby the latter moves said valve to engage the first valve seat whenever the temperature of the catalyst bed reaches a predetermined destructive temperature.

3,097,075
METHOD FOR PRODUCING A GRADED PULVERULENT MATERIAL
Jean-Paul Vandenhoeck, New York, N.Y., assignor to Buell Engineering Company, Inc., New York, N.Y., a corporation of New York
Filed July 19, 1961, Ser. No. 125,109
6 Claims. (Cl. 23—302)



1. In a method of producing a graded pulverulent material from solution, the steps comprising crystallizing the material from solution, drying the crystallized material to produce dry particles of material, classifying the particles to segregate those particles that are smaller than a first reference particles, gas classifying the segregated particles into primary and secondary groups of particles larger than and smaller than respectively a second reference particle, compacting the particles in the primary group to form particles substantially at least as large as the first reference particle, and returning the particles in the secondary group into solution.

3,097,076
PROCESS OF CONCENTRATION OF SOLUTES
Allen F. Reid, 5323 Harry Hines Blvd., Dallas, Tex.
Filed Mar. 7, 1958, Ser. No. 719,905
4 Claims. (Cl. 23—306)



1. A process for increasing the concentration of a solute content in one portion of a solution while decreasing the concentration in another portion of the solution comprising the steps of adding to a first portion of the solution in predetermined condition another solute which changes the solubility in the solvent of the solute to be varied and introducing said treated portion into one compartment of a concentration cell having two compartments separated by a membrane permeable to the solute to be varied and impermeable or only slowly permeable to the added solute, introducing an untreated portion of the solution to the other compartment for the transference of the

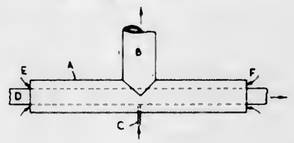
first solute through said membrane from the treated portion to the untreated portion, carrying said transference to a predetermined range of concentration of said treated portion permitting reduction of said added solute by solvent extraction, separately removing said treated and untreated portions of the solution from the cell and removing said added solute from said treated portion to reestablish the condition of said treated portion prior to said adding of another solute except for the concentration of the solute to be varied.

3,097,077
FRUIT DRYING TRAY
Vaughn W. Mellkian, 5138 N. Van Ness, Fresno, Calif.
Filed Jan. 11, 1960, Ser. No. 1,514
4 Claims. (Cl. 34—93)



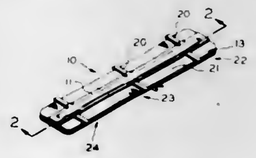
4. A fruit drying tray comprising a bottom panel of flexible, moisture resistant sheet material adapted for horizontal positioning on the ground in a flattened condition to receive fruit disposed thereon for drying purposes; a top panel of transparent sheet material adapted to be moved to a fruit drying position overlying the fruit and the bottom panel in substantially congruent relation with the bottom panel having the fruit thereon, and being adapted to transmit radiant heat therethrough and being of a sufficient flexibility at least partially to conform to the fruit by reason of gravitational force, the bottom panel being of a flexibility less than said top panel and sufficiently rigid to support the fruit resting thereon; said panels having respective joining segments and respective edges in circumferentially spaced relation to the joining segments; means interconnecting the joining segments of the edges of the panels for movement of the top panel between a fruit drying position and a fruit exposing position retracted from the drying position; and means releasably interconnecting the bottom and cover panels at a position along their respective edges in circumferentially spaced relation to the joining segments, the panels providing openings between said interconnecting means and the joining segments for allowing passage of ventilating air currents between the panels for ventilating fruit being dried in the tray.

3,097,078
APPARATUS FOR DRYING METAL STRIPS
Norman Turner, Runcorn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Sept. 11, 1959, Ser. No. 839,360
Claims priority, application Great Britain Sept. 12, 1958
3 Claims. (Cl. 34—155)



1. Apparatus for drying strip material comprising: means defining an open-ended tunnel through which the strip material may be passed; a single gas outlet pipe positioned perpendicular to the axis of said tunnel intermediate the ends thereof and in the plane of the path to be taken by the strip material; said outlet pipe having a transverse cross section about equal in area to that of said tunnel; and a group of at least two gas inlet jets substantially opposite to said gas outlet pipe and arranged symmetrically in an arc around the edge of the path taken by the strip remote from the outlet pipe; the discharge area of said jets being smaller than said transverse cross-section whereby gas admitted through said jets during operation of the apparatus passes transversely across both faces of the strip material, creates an inflow of air at the ends of the tunnel and leaves the tunnel through said outlet pipe.

3,097,079
MOUNTING DEVICE FOR FLORAL ARRANGEMENTS
Doris E. Todd, 4251 Sepulveda Blvd., Los Angeles, Calif., and Allen A. Willard, Sr., 82—191 Tahquitz St., Indio, Calif.
Filed July 13, 1960, Ser. No. 42,560
2 Claims. (Cl. 41—13)



1. A device for mounting an ornamental article, and the like, having stems, comprising:

a first, relatively-wide layer of relatively-pliable material having substantially rectilinear configuration and a length substantially longer than its width;

a second, rectilinear layer of relatively-pliable material having its length substantially equal to the length of said first layer, adhesively secured to said first layer so as to overlie said first layer; and

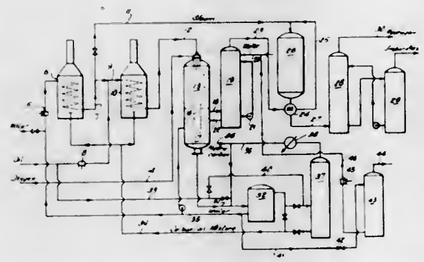
an elongated strip of bendable, form-retaining material substantially narrower than said first layer adhesively secured along its entire length between said first and second layers and having a plurality of arms extending transversely from opposite longitudinal side edges of said strip so as to extend exteriorly of said second layer, said second layer, where the arms extended from the strip, being of a width substantially equal to the width of the elongated strip, said arms being bendable back on said strip and along said opposed longitudinal edges thereof so as to be wrappable around stems of an ornamental article for retaining the ornamental article on said device, said arms being initially in relatively flat, coplanar relationship to said strip prior to being bent back.

3,097,080
ARTIFICIAL STONE FACING PLAQUE
Arthur R. Weir, 2915 Wexbridge Road, Shaker Heights 20, Ohio
Filed June 29, 1959, Ser. No. 823,626
1 Claim. (Cl. 41—35)



The method of making artificial stone facing plaques comprising providing a relatively thin self-supporting stratum of unset polyester resin material and pieces of coarse aggregate embedded partway therein and protruding from one face thereof with spaces between the protruding portions, setting the material, applying a mixture of fine aggregate and inorganic cementitious material in said spaces in contact with said portions and said face, setting the inorganic cementitious material, and then polish grinding the coarse and fine aggregate to a depth to present a continuous polished surface at said face.

3,097,081
PRODUCTION OF SYNTHESIS GAS
Du Bois Eastman and Frank E. Guptill, Whittier, Calif., assignors to Texaco Inc., a corporation of Delaware
Filed Sept. 23, 1958, Ser. No. 762,777
1 Claim. (Cl. 48—215)



A process for the production of carbon monoxide and hydrogen substantially free from contamination with normally liquid hydrocarbons which comprises subjecting a liquid hydrocarbon to partial oxidation under elevated pressure in the range of 8–40 atmospheres and an autogenous temperature within the range of 1100° C. to 1900° C. with oxygen and steam to produce a hot gaseous product comprising carbon monoxide and hydrogen and containing uncombined carbon corresponding to at least 0.5 and not more than about 4 percent of the carbon in the liquid hydrocarbon, bringing said products into direct contact with water under said elevated pressure effecting cooling of said hot gas stream and removal of said carbon from the cooled gaseous reaction products thereby forming a dispersion of carbon in hot water at a temperature within the range of 250 to 400° F., contacting said carbon-water dispersion under said elevated pressure and temperature with light hydrocarbon distillate effecting transfer of said carbon to said hydrocarbon distillate and forming a slurry of carbon in hydrocarbon distillate, separating at said elevated pressure said slurry of carbon in hydrocarbon distillate from resulting clarified water substantially free from carbon and containing a small residual amount of said hydrocarbon, passing said clarified water at said elevated tempearture to a separator maintained at a pressure lower than said elevated pressure effecting flash vaporization of a portion of said water to steam and simultaneously vaporizing said residual hydrocarbon, separately withdrawing resulting vapors and resulting hydrocarbon-free water from said separator, repressuring said water free of said residual hydrocarbon distillate and passing said repressured water substantially free from hydrocarbons into contact with hot gaseous products of said partial oxidation reaction as cooling and scrubbing medium.

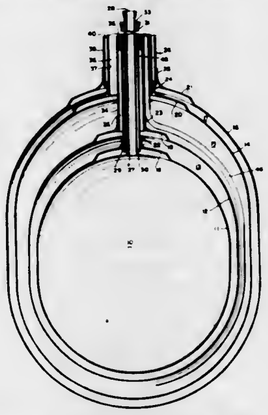
3,097,082
GASIFICATION OF HYDROCARBON FUEL OILS
Frank E. Guptill, Jr., Whittier, Calif., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 23, 1960, Ser. No. 10,110
2 Claims. (Cl. 48—215)

1. In a process for the generation of gaseous mixtures of carbon monoxide and hydrogen wherein a liquid hydrocarbon is subjected to partial oxidation by reaction with oxygen and steam in a gas generation zone at an autogenous temperature within the range of about 1800 to 3500° F. producing a hot product gas stream comprising carbon monoxide, hydrogen and unconverted free carbon from said liquid hydrocarbon and wherein said product gas is contacted with water in a contacting zone effecting removal of said carbon from the gas stream and forming a slurry consisting essentially of carbon in water, the improvement which comprises withdrawing from said contacting zone a pumpable slurry of said carbon in water containing from 0.5 to 3 percent carbon by weight; passing said carbon-water slurry in turbulent flow into an elongated tubular heating zone wherein said water is vaporized thereby forming a stream of steam containing said carbon dispersed and entrained therein and having a velocity in excess of 20 feet per second; injecting heavy liquid hydrocarbon into said stream of steam containing said dispersed carbon thereby forming a stream of steam containing suspended carbon and entrained liquid hydrocarbon; passing the mixed stream at a velocity in excess of 20 feet per second through a second elongated tubular heating zone providing a flow path having a length at least 100 times its diameter whereby said hydrocarbon oil is uniformly dispersed and suspended in fine droplet form in said stream of steam and suspended carbon is simultaneously transferred to said oil droplets; and passing the resulting dispersion of carbon-containing oil droplets suspended in steam into said reaction zone in admixture with said oxygen-containing gas.

3,097,083
POLISHING COMPOSITION AND PROCESS OF FORMING SAME
Walter L. Silvernail, West Chicago, Ill., assignor to American Potash & Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 2, 1959, Ser. No. 824,479
14 Claims. (Cl. 51—307)

1. A polishing composition, consisting of at least one polishing material selected from the group consisting of red rouge, zirconium oxide, cerium oxide and rare earth oxide combined with a gelatinous ceric hydroxide.

3,097,084
LIQUEFIED GAS CONTAINER
Laurel E. Putman, Livingston, N.J., assignor to Superior Air Products Co., Newark, N.J., a corporation of Delaware
Filed Oct. 9, 1961, Ser. No. 143,722
6 Claims. (Cl. 62—45)



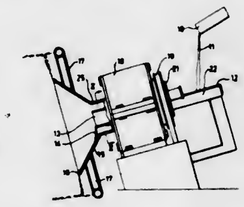
1. In a vacuum jacketed container for the storage of a liquefied gas at a low temperature substantially below

ambient temperature, the combination comprising a storage chamber for said liquefied gas, a jacket surrounding said chamber and containing a liquefied gas at a temperature substantially below ambient temperature and serving as a barrier to the flow of ambient heat to said chamber, a first hollow elongated tube communicating at one end thereof with said chamber for the introduction and removal of liquefied gas to and from said chamber, a second hollow elongated tube concentric with and surrounding said first tube through a major portion of the length of said first tube, said first and second tubes defining an elongated annular space communicating with said chamber at one end thereof, a pressure relief valve communicating with said annular space adjacent the other end thereof and arranged to open said space to the atmosphere when the pressure of gas in said space exceeds a predetermined value, said space being closed except for said one end thereof and said pressure relief valve, and heat conductive means arranged in thermal contact with said liquefied gas in said jacket and with said tubes thereby to conduct ambient heat traveling through said tubes to the liquefied gas in said jacket.

3,097,085
METHOD AND MEANS FOR THE MANUFACTURE OF FIBRES OF THERMOPLASTIC MATERIAL

Hans Wallsten, Billingsfors, Sweden

Filed July 2, 1959, Ser. No. 824,528
11 Claims. (Cl. 65—8)



1. A method of producing fibres of thermoplastic material comprising the steps of continuously supplying molten thermoplastic material in the form of a fluid stream against the smaller end of an internally facing frusto-conical surface in the form of a funnel, rotating said surface about a substantially horizontal axis and causing said fluid material to flatten out against said surface, forcing said material outwardly along said surface and forming the same into a homogeneous layer to be discharged from said outer edge, effecting said rotation at a speed to discharge said material from said outer edge and to transform said discharged material into fibres during the progress of free radial flight from said edge, cooling the external surface of said funnel by means of a cooling fluid and causing a controlled annular gas flow concentric with said axis but spaced from said discharging edge a sufficient distance to allow said fibres to form to carry away the finished completely solidified fibres while turning the same into a path extending in a direction approximately parallel to the axis of rotation of said funnel.

9. An apparatus for producing fibres of thermoplastic material from molten thermoplastic material, comprising in combination, a funnel in the form of a frustum of a cone, bearing means carrying said funnel at its narrow end so as to be rotatable about an approximately horizontal axis, means for imparting to said funnel a rotary movement at a velocity corresponding to a peripheral speed at the edge of the wide end of said funnel of at least about 60 meters per second, means for supplying molten thermoplastic material to the interior surface of said funnel adjacent the narrow end of said funnel, said edge of said wide end serving for discharging the thermoplastic molten material from said funnel to transform said molten thermoplastic material into fibres during the progress of free radial flight, means arranged around and in substantially spaced relation with respect to said discharging edge for generating an annular gas flow for carrying away fibres ejected from said discharging edge, and means in the form of a gravity gutter cooperating with the molten thermoplastic material supply means in such a manner as to receive the fluid stream and deliver such to the internal face of the funnel opening into the narrow end of said funnel and having an inclination approximately equal to the inclination of the rotational axis of said funnel, and means for displacing said gravity gutter for adjusting the point of the funnel where the molten material is supplied.

3,097,086
PROPIOLATES

John E. Katon and Lee A. Miller, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,504
10 Claims. (Cl. 71—2.3)

1. A compound of the formula

$$(hal)_n\text{-}R\text{—}O\text{-}alk\text{-}O\text{—}\overset{\overset{O}{\|}}{C}\text{—}C{\equiv}CH$$

in which hal is selected from the class consisting of chlorine and bromine and is attached to aromatic nuclear carbon, *n* is an integer of from 1 to 5, R is an aromatic hydrocarbon radical of from 6 to 12 carbon atoms and is selected from the class consisting of the phenyl and naphthyl radicals and such radicals carrying alkyl-substitution, and alk is an alkylene radical of from 2 to 4 carbon atoms.

3,097,087
HERBICIDAL MIXTURE COMPRISING A CRABGRASS KILLER AND A HETEROCYCLIC POLYMER

Jesse Werner, Hollis wood, N.Y., and Frederick A. Hessel, Upper Montclair, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 13, 1961, Ser. No. 82,394
5 Claims. (Cl. 71—2.4)

1. A herbicidal composition for the control of crabgrass comprising at least one herbicidal material selected from the group consisting of potassium cyanate, phenyl mercuric acetate, and phenyl mercuric ethanol ammonium lactate, and from 2 to 25% based upon the weight of said herbicidal material of an N-vinyl heterocyclic polymer selected from the group consisting of homopolymers and copolymers of vinyl pyrrolidone, vinyl morpholinone, vinyl oxazolidone, and vinyl imidazole and mixtures thereof, the said 2 to 25% being calculated on the basis of the N-vinyl heterocyclic component, the said homopolymers and copolymers having a K value of from about 10 to about 100.

3,097,088
OIL-SOLUBLE PLANT GROWTH REGULATION AGENTS

Richard A. Reck, Hinsdale, Walter W. Abramitis, Downers Grove, and Charles S. Wilhelmy, Chicago, Ill.; said Reck assignor, by mesne assignments, to Armour and Company, a corporation of Delaware

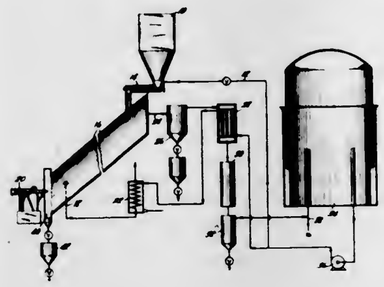
No Drawing. Filed June 15, 1959, Ser. No. 820,081
9 Claims. (Cl. 71—2.5)

1. Plant growth regulatory compositions comprising solutions having an effective concentration of primary amine salts of 3,6-endoxohexahydrophthalic acid in oil, said primary amine salts having the primary amine radical attached to a carbon atom selected from the group consisting of secondary and tertiary carbon atoms and wherein at least one of the organic radicals attached to the amine substituted carbon atom contains from about 8 to about 18 carbon atoms.

3,097,089
METHOD FOR DECOMPOSING SOLID MATERIALS BY EXPLOSIVE IMPACTS

Fredrik W. de Jahn, 41 Anderson Ave., Scarsdale, N.Y.

Filed Nov. 22, 1960, Ser. No. 71,096
3 Claims. (Cl. 75—6)



1. The method of decomposing metal sulfides which comprises the steps of flowing a thin layer of the metal sulfide in finely divided form through an enclosed area, the direction of flow being downwardly along a plane inclined at an angle less than 90° to the vertical, supplying sufficient heat to the metal sulfide within the enclosed area to at least equal the heat of formation of the metal sulfide and to raise the temperature thereof above the vaporization temperature of free sulfur, establishing a non-oxidizing atmosphere in the enclosed area, detonating pentaerythritol tetranitrate to generate in rapid succession a series of explosive shocks, and subjecting the thin layer of metal sulfide to the impact of the explosive shocks within the enclosed area, thereby liberating free metal and free sulfur with the latter being substantially completely vaporized and expelled from the enclosed area.

3,097,090
METALLURGICAL PROCESS

Olav C. Aamot, Lewiston, N.Y., assignor, by mesne assignments, to Independence Foundation, Philadelphia, Pa., a corporation of Delaware, and Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed June 23, 1960, Ser. No. 38,120
4 Claims. (Cl. 75—33)

3. A process for partial pre-reduction of iron oxide-containing materials in a rotary kiln that comprises introducing into said kiln said oxide material substantially within the size range of minus 3 to plus 28 mesh in admixture with a finely-divided carbonaceous reductant, and substantially larger pieces of additional carbonaceous reductant of at least approximately 1½ inch size, said finely-divided reductant being present in an amount sufficient to reduce said metallic oxides at least in part to the metallic state and said larger pieces of reductant being present in an amount sufficient to form an effective cover over said kiln charge, establishing a moving bed of said charge and carbonaceous cover within said kiln at an elevated temperature to effect at least partial reduction of said oxides, and discharging said charge and carbonaceous cover from said kiln.

3,097,091
TOOL STEEL FOR WORKING HOT METAL

Tonny Hong, North Sewickley Township, Beaver County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

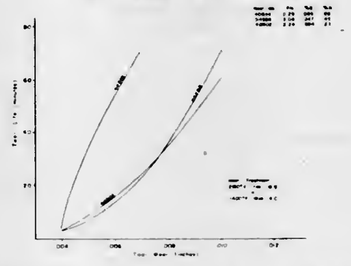
No Drawing. Filed June 9, 1961, Ser. No. 115,918
3 Claims. (Cl. 75—126)

1. An austenitic precipitation-hardenable steel consisting of from 0.2 to 0.75% carbon, from 12 to 18% manganese, about 18% chromium, from 0.5 to 2.5% cobalt, from 0.25 to 1% aluminum, from 0.1 to 0.5% nitrogen and the balance iron plus the usual impurities including no more than 2% silicon and no more than 1% nickel, said steel hardening from about 215 BHN as cast to from 325 to 350 BHN on being heated from 1450° to 1550° F. for several hours.

3,097,092
AUSTENITIC ALLOY

Wasil W. Dyrkacz, Niskayuna, and Clifford R. Hastings, Troy, N.Y., and Richard K. Pitler, Gibsonia, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

Filed July 5, 1961, Ser. No. 121,886
13 Claims. (Cl. 75—128)



1. An austenitic alloy suitable for use at elevated temperatures in atmospheres containing combustion products of leaded fuels and having a composition within the limits 0.65% and 0.75% carbon, 5.50% and 6.90% manganese, 0.45% and 0.85% silicon, 20.50% and 22.0% chromium, 1.40% and 1.90% nickel, 0.18% and 0.28% nitrogen, 0.025% and 0.055% sulfur and the balance essentially iron with incidental impurities and which is characterized by possessing excellent machinability and hot workability.

3,097,093
COPPER BASE ALLOYS

Donald K. Fox, Pittsburgh, and William J. Reichenecker, Churchill Borough, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed May 31, 1961, Ser. No. 113,636
10 Claims. (Cl. 75—156.5)

1. A high strength yellow brass having good ductility consisting essentially of, by weight, from 52% to 68% copper, from 2.5% to 5% manganese, from 2.75% to 7.5% aluminum, from 1% to 4% iron, up to .01% tin, up to .01% lead, from 0 to 0.5% boron, from 0 to 2% chromium, and the balance zinc except for incidental impurities, the boron and chromium, when present, imparting corrosion resistance to the alloy.

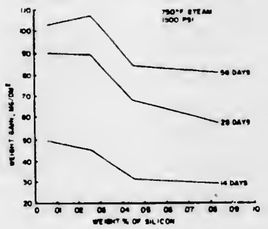
3,097,094
ZIRCONIUM ALLOYS

Lester S. Rubenstein, Pittsburgh, and Francis L. Shubert, Bethel Park, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 6, 1960, Ser. No. 54,092
9 Claims. (Cl. 75—177)

1. An alloy consisting essentially of from 0.1% to 2.5% by weight of tin, from .015% to .30% silicon, and a total

of at least .10% but not exceeding approximately 2% by weight of at least one metal from period 4 of the periodic table selected from the group consisting of iron, nickel,



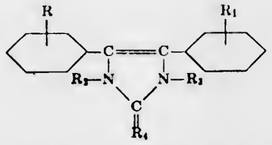
and chromium, carbon not exceeding .05%, the balance being zirconium and less than .5% by weight of incidental impurities.

3,097,095
MATERIAL FOR ELECTROPHOTOGRAPHIC REPRODUCTION

Kurt-Walter Klüpfel, Hans-Rainer Stumpf, Hans Behmenburg, Wilhelm Neugebauer, Oskar Süs, and Martha Tomanek, all of Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Nov. 20, 1957, Ser. No. 697,533
Claims priority, application Germany Nov. 21, 1956
38 Claims. (Cl. 96—1)

1. An electrophotographic reproduction material comprising a conductive support layer and a photoconductive insulating layer, the latter comprising a compound having the formula



in which R and R_1 are selected from the group consisting of hydrogen, halogen, alkoxy, alkyl, and amino radicals, and an organic linkage forming a fused heterocyclic ring, R_2 and R_3 are selected from the group consisting of hydrogen alkyl, and phenyl groups containing no strongly negative substituents, and R_4 is selected from the group consisting of oxygen and sulfur.

3,097,096
PHOTOPOLYMERIZATION WITH THE FORMATION OF RELIEF IMAGES

Gerald Oster, 134 W. 11th St., New York 11, N.Y.

No Drawing. Original application Jan. 19, 1955, Ser. No. 482,868, now Patent No. 2,875,047, dated Feb. 24, 1959. Divided and this application Jan. 7, 1959, Ser. No. 785,316
19 Claims. (Cl. 96—30)

13. Process for color printing which comprises irradiating at least 3 separate plates each coated with a layer of a solution containing at least 20% by weight of a vinyl monomer polymerizable to a solid polymer, an organic photo-reducible dye, and a reducing agent having a reduction potential incapable of reducing said dye in the absence of light but of sufficient strength to reduce the photo-excited dye, said dye and reducing agent forming a stable system in the absence of light, which undergoes reduction of the dye upon exposure to visible light, said solution comprising a solvent for a soluble vinyl polymer corresponding to a polymer of said vinyl monomer, said dye and reducing agent being present in sufficient amount to produce free radicals for the polymerization of said polymerizable vinyl monomer when irradiated with visible light, with an identical photonegative color image, the solution coating each plate having a photo reducible dye with an absorption maximum for a different primary color, thereafter washing the unpolymerized portion from said plates, drying the plates, and inking each plate with an ink having a color complementary to the absorption maximum of its dye, and thereafter printing superimposed images with said plates.

3,097,097
PHOTO DEGRADING OF GEL SYSTEMS AND PHOTOGRAPHIC PRODUCTION OF RELIEFS THEREWITH

Gisela K. Oster and Gerald Oster, both of 36 Grove St., New York, N.Y.

No Drawing. Filed Feb. 12, 1959, Ser. No. 792,699
29 Claims. (Cl. 96—35)

12. A photo reproduction process which comprises irradiating with a visible light image a water-soluble polymer in aqueous media, said polymer being cross-linked into the form of a gel by metallic ions selected from the group consisting of ferric, mercuric, silver, cupric, titanic, stannate, and molybdate ions, said metallic ions being reducible to a lower valent state with destruction of the cross-linking bonds, said gel containing a dissolved photo-reducible dye and a reducing agent incapable of reducing said metallic ions and incapable of reducing said dye in the absence of light but of sufficient strength to reduce the photo-excited dye, said dye and reducing agent forming a stable system in the absence of light, said dye and reducing agent being present in sufficient amount so that when irradiated with visible light, the dye will be reduced and the reduced dye, in turn, will reduce at least a portion of said metallic ions, said visible light image being of sufficient intensity and said irradiation being of sufficient duration to photo-excite at least a portion of said dye to thereby cause degradation of the light struck areas of said gel, and thereafter removing the degraded portions of the gel.

3,097,098
SHORTENING AND AGENT THEREFOR

Robert R. Allen, Richard J. Bell, and Ray B. Donohue, Jr., Sherman, Tex., assignors to Anderson, Clayton & Co., Houston, Tex., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,804
9 Claims. (Cl. 99—123)

1. An edible shortening agent when combined with an edible shortening base forming a shortening, said shortening agent comprising a reaction product resulting from an ester interchange reaction of glycerides of an edible fat, propylene glycol and glycerine.

3,097,099
METHOD FOR CONSERVING FISH

Hans Beckmann, Rutschbahn 7, Hamburg, Germany

Filed Jan. 28, 1959, Ser. No. 789,472
9 Claims. (Cl. 99—195)



1. In a method for the conservation of fresh fish, the steps of storing said fish in a sealable container, subjecting said container to a vacuum in order to degasify and deaerate said fish and to cool said fisn to a degree such

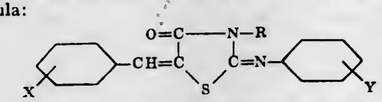
that the body cell contents and the intercellular liquid are cooled to approximately their freezing temperature, but do not freeze, subjecting said container to a pressure higher than said vacuum by means of a fluid chemically neutral with respect to said fish, and maintaining said pressure as long as conservation is desired.

3,097,100
THIAZOLIDONES AS LIGHT STABILIZERS FOR PLASTIC COMPOSITIONS

Gerald R. Lappin and John W. Tamblyn, Kingsport, Tenn., and James A. Van Allan, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,174
6 Claims. (Cl. 106—176)

1. A molded article essentially consisting of cellulose acetate butyrate and 1–5%, based on the weight of the cellulose acetate butyrate, of a thiazolidone having the formula:



where X and Y are each selected from the group consisting of alkyl radicals containing one to twelve carbon atoms, alkoxy radicals containing one to twelve carbon atoms, halogen and nitro and R is selected from the group consisting of alkyl radicals containing two to twelve carbon atoms and aryl radicals substituted with substituents selected from the same group as X and Y.

3,097,101
CERAMIC PRODUCT AND METHOD OF MAKING THE SAME

Ronald H. Lester, Baltimore, Md., assignor to General Electric Company, a corporation of New York

Filed Apr. 22, 1960, Ser. No. 24,066
14 Claims. (Cl. 106—46)

1. A ceramic body comprising the vitrified porcelain product of a mixture of clay, flux material, and flint, the flint being in particles all of which have a size between 1 and 45 microns.

3,097,102
COLD WATER DISPERSIBLE STARCH AND METHOD OF PREPARATION

Geert Moes, Hoogezand, Netherlands, assignor to W. A. Scholten's Chemische Fabrieken N.V., Groningen, Netherlands, a corporation of the Netherlands

Filed July 18, 1960, Ser. No. 43,605
Claims priority, application Netherlands July 24, 1959
10 Claims. (Cl. 106—210)

8. A cold water dispersible starch comprising a powder consisting of pregelatinized starch having incorporated therein borax in a quantity of from 2 to 6% based on the weight of the starch and an anhydrous sulphate selected from the group consisting of sodium sulphate, potassium sulphate and magnesium sulphate in a proportion of from 5 to 15%, based on the weight of the starch, said powder having such a particle size that at least 50 percent is finer than 100 mesh.

3,097,103
METHOD OF COATING A FLUORESCENT LAMP TUBE

Horace H. Homer, Arlington, and Fred R. Taubner, Danvers, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

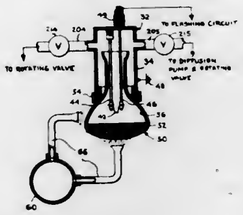
No Drawing. Continuation of application Ser. No. 366,858, July 8, 1953. This application Aug. 12, 1959, Ser. No. 833,136
2 Claims. (Cl. 117—33.5)

1. A method of coating a flourescent lamp tube, said method comprising coating the tube with a suspension containing between about 0.05% and about 2.0% of superfine high-purity powdered silica by weight of phosphor, said silica and phosphor being composed of separate particles, said silica having a particle size of about 0.02 microns and being of the type composed of discrete amorphous particles which go into suspension in water, as distinguished from the type which goes into a hydrated form in water, and baking the coated tube.

3,097,104
APPARATUS FOR AND METHOD FOR APPLYING REFLECTIVE COATINGS ON UNMASKED PORTION OF LAMP ENVELOPE

James L. Free, Little Rock, Ark., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 10, 1960, Ser. No. 48,690
8 Claims. (Cl. 117—38)

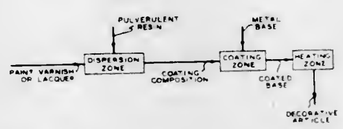


1. The method of applying a uniform reflective coating on an unmasked portion of a lamp envelope containing a predetermined quantity of granular material as a masking medium and between which an undesired electrostatic charge accumulates, said method comprising the steps of exhausting said lamp envelope, coating said unmasked portion of the evacuated lamp envelope with said reflective coating, simultaneously cooling said coated lamp envelope to increase the relative humidity of the atmosphere within said lamp envelope and provide an improved leakage path for said electrostatic charge, and thereafter introducing a gas saturated with water vapor into said coated lamp envelope to destroy the vacuum within said coated lamp envelope and provide a leakage path for any minute residual electrostatic charge between said coated lamp envelope and said glass beads.

3,097,105
DECORATIVE THERMOPLASTIC RESIN COATINGS

Lee O. Edmonds, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 2, 1959, Ser. No. 796,239
9 Claims. (Cl. 117—41)



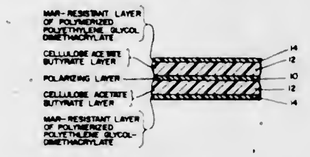
1. A method for producing a decorative coating on a surface, said coating being interspersed with wrinkled and smooth area, said method comprising dispersing from 1 to 15 weight percent of a pulverulent thermoplastic resin in a vehicle selected from the group consisting of oil base paints, varnishes and lacquers, said vehicle being a non-solvent for said resin and being stable at the melting temperature of said resin, applying a layer of the prepared composition to the surface to be coated, heating the layer so applied to a temperature of at least the melting point of said thermoplastic resin and below the decomposition

temperature of said vehicle until said layer is hardened and said resin particles are agglomerated in isolated areas.

3,097,106
METHOD OF APPLYING A MAR-RESISTANT SURFACE COATING TO THERMOPLASTIC SHEETS

Elkan R. Blout, Belmont, Harold O. Buzzell, Wollaston, and Leonard C. Farney, Melrose, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Dec. 26, 1962, Ser. No. 247,092
11 Claims. (Cl. 117—64)

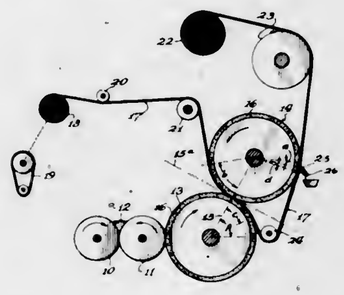


1. A continuous process for applying a mar-resistant cross-linked, thermoset plastic coating to a sheet of plastic material without causing crazing and cracking of said thermoset coating, said process comprising applying a coating solution comprising a polymerizable monomer of a diethylenic derivative of a polyalkyleneglycol comprising 3 to 5 alkylene groups, said alkylene groups comprising 2 to 3 carbon atoms, and a polymerization catalyst to the surface of said plastic material, holding the film of said coating solution, while said sheet of plastic material is advancing, in contact with the peripheral, optically smooth surface of a rotating, heated, cylindrical element until said coating is polymerized to a cross-linked thermoset polymer and then removing and straightening the resulting coated sheet.

3,097,107
PAPERMAKING MACHINE

Richard W. Martinek, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Oct. 12, 1960, Ser. No. 62,258
8 Claims. (Cl. 117—102)



3. The method of coating a web of paper which comprises the steps of driving in rotation a coating applicator roll and a backing roll which form a first pressure nip therebetween, passing the web through the said first pressure nip while applying an excess of an aqueous mineral coating composition to the web at the nip, subsequently blading off excess of the mineral coating composition at a second pressure nip formed by said backing roll and a doctor blade, and passing the said web from said first pressure nip to said second pressure nip in a winding path outwardly of the periphery of the backing roll between the said pressure nips while supporting the web to minimize contact of the web with the backing roll between the said nips.

3,097,108
PREPARATION OF AN ALKYL LITHIUM-CATALYZED LIQUID POLYMER HAVING PREDOMINATELY TRANS - 1,4 - UNSATURATION AND CONTAINING 1,3-BUTADIENE, AND COATING METALS WITH SUCH POLYMERS

George Bosmajian, Severna Park, Md., assignor, by mesne assignments, to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 29, 1959, Ser. No. 823,305
8 Claims. (Cl. 117—132)

2. A process of preparing a metal article having a protective coating thereupon comprising the steps of coating a surface of said metal article with a liquid polymer composition comprising an alkyl lithium-catalyzed polymer of 1,3-butadiene, and curing the coating to a hard, resinous adherent film, said catalyst being selected from the group consisting of (1) a composition containing a predominate proportion of an alkyl lithium and (2) consisting essentially of an alkyl lithium and a lithium halide admixture.

5. A method for preparing an unsaturated predominately trans-1,4-polybutadiene in the form of a liquid polymer, comprising polymerizing a polymerizable monomeric unsaturated material containing at least 90% 1,3-butadiene at a temperature between about 20° C. and 80° C., in the presence of a catalyst selected from the group consisting of (1) a composition consisting essentially of an alkyl lithium and (2) consisting essentially of an alkyl lithium and a lithium halide in admixture, in the presence of a non-polar hydrocarbon solvent, and recovering the liquid, unsaturated, predominately trans-1,4-polybutadiene.

3,097,109
ADHERING TEXTILE MATERIALS TO RUBBER

Arthur C. Danielson, Royal Oak, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 15, 1962, Ser. No. 166,377
20 Claims. (Cl. 117—162)

4. A method of adhering textile material to rubber which comprises applying a solid dry vulcanizable rubber composition comprising rubber selected from the group consisting of natural Hevea rubber and conjugated diolefine polymer synthetic rubbers which are polymers of material selected from the group consisting of butadiene-1,3, isoprene, 2,3-dimethyl butadiene-1,3, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 50% of the mixtures of compounds which contain a $CH_2{=}C<$ group and which are copolymerizable with butadienes-1,3, said rubber composition containing resorcinol and a compound selected from the group consisting of N-methylolamides of aliphatic monocarboxylic acids having 2 to 9 carbon atoms and N-methylolcyclicimides of dicarboxylic acids, to a textile material selected from the group consisting of cotton, rayon and nylon to coat the same, and heating the assembly to vulcanize the rubber and to firmly adhere to textile material to the vulcanized rubber composition.

3,097,110
ADHERING TEXTILE MATERIALS TO RUBBER

Arthur C. Danielson, Royal Oak, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 15, 1962, Ser. No. 166,378
15 Claims. (Cl. 117—162)

3. A method of adhering textile material to rubber which comprises applying to a textile material a solid dry vulcanizable rubber composition comprising rubber selected from the group consisting of natural Hevea rubber and conjugated diolefine polymer synthetic rubbers which are polymers of material selected from the group consisting of butadiene-1,3, isoprene, 2,3-dimethylbutadiene-1,3, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 50% of the mixtures of compounds which contain a $CH_2{=}C<$ group and which are copolymerizable with butadienes-1,3, said rubber composition containing resorcinol and a compound selected from the group consisting of N,N',N''-trisubstituted cyclotrimethylene-triamines, N-disubstituted - N' - disubstituted diaminomethanes, N,N'-disubstituted imidazolidines, and N,N'-disubstituted hexahydropyrimidines, and heating the assembly to vulcanize the rubber and to firmly adheer the textile material to the vulcanized rubber composition.

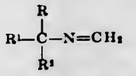
where R, R^1 and R^2 are selected from the group consisting of alkyl radicals having 1 to 8 carbon atoms, phenyl, benzyl and 2-phenylethyl, and heating the assembly to vulcanize the rubber and to firmly adhere the textile material to the vulcanized rubber composition.

3,097,111
ADHERING TEXTILE MATERIALS TO RUBBER

Arthur C. Danielson, Royal Oak, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 15, 1962, Ser. No. 166,380
22 Claims. (Cl. 117—162)

3. A method of adhering textile material to rubber which comprises applying to a textile material a solid dry vulcanizable rubber composition comprising rubber selected from the group consisting of natural Hevea rubber and conjugated diolefine polymer synthetic rubbers which are polymers of material selected from the group consisting of butadiene-1,3, isoprene, 2,3-dimethylbutadiene-1,3, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 50% of the mixtures of compounds which contain a $CH_2{=}C<$ group and which are copolymerizable with butadienes-1,3, said rubber composition containing resorcinol and a compound selected from the group consisting of butadienes-1,3, isoprene, 2,3-dimethylbutadiene-1,3, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 50% of the mixtures of compounds which contain a $CH_2{=}C<$ group and which are copolymerizable with butadienes-1,3, said rubber composition containing resorcinol and a compound selected from the group consisting of 1,8-di(methylene-amino)-p-menthane and azomethines having the general formula



3,097,112
METHOD AND APPARATUS FOR MAKING CATHODES

Hans-Jürgen Schütze and Helga Kallweit, Ulm (Danube), Germany, assignors to General Electric Company, a corporation of New York

Filed Jan. 12, 1960, Ser. No. 1,948
6 Claims. (Cl. 117—201)

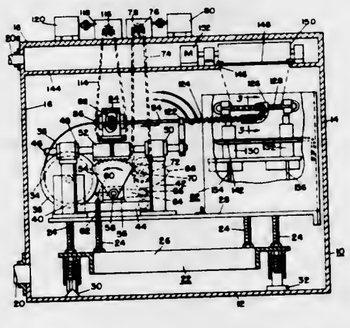


1. The method of coating the cathode support of a flat cathode with emission material characterized by mounting the cathode support into a centrifuge in such a way that the surface to be coated is at all times substantially perpendicular to a radius pointing at the axis of rotation and in such a way that the surface to be coated is spaced from said axis a distance substantially greater than the dimensions of said surface, and directing a spray of emission material at the cathode support while the centrifuge is revolving, allowing the sprayed emission material to substantially completely dry in place on said support while the centrifuge continues to revolve.

3,097,113
VACUUM COATING APPARATUS

Archibald S. Welsh, Croydon, Pa., assignor to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Nov. 9, 1959, Ser. No. 851,874
10 Claims. (Cl. 118—49)



1. Vacuum coating apparatus for coating a metal onto an article including a vacuum chamber containing an open heated boat for vaporizing the coating metal, and feeding means for feeding coating metal to said open boat, said feeding means including a feed duct through which a wire of the coating metal is fed to the boat, the discharge end portion of said feed duct being substantially parallel to the longitudinal axis of said boat, with the discharge end portion of said duct being laterally spaced from the longitudinal axis of said boat and below the upper edge of said boat so as to be out of the direct path of the vaporized metal emitted from said boat, the discharge end of said feed duct being curved, with said feed duct including means for urging the wire of metal against the inner surface of the mouth of the discharge end as the wire is discharged from said feed duct so that a curved wire of coating metal may be delivered from the discharge end of the feed duct into the boat.

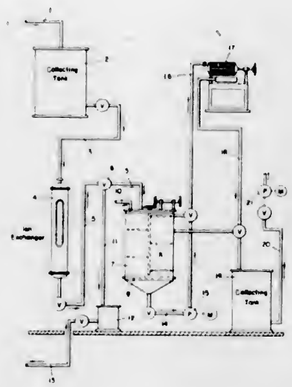
3,097,114
PROCESS FOR PURIFYING SUGAR

Giuseppe Assalini, Genoa, Italy, assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

Filed Aug. 9, 1960, Ser. No. 48,548
7 Claims. (Cl. 127—46)

1. Process for the purification of sugar juices by means of synthetic ion exchange resins without first cooling them after extracting the raw juices from their natural sources, comprising, treating the undefecated sugar juices with a cation-exchange resin which has on its exchange sites group II metallic cations which will react with soluble alkali metal and ammonia hydroxides, phosphates and carbonates to form a flocculent precipitate, heating the thus treated juices to a temperature even higher than what they had before being contacted with the ion-exchange resin, then reacting the heated juices with a compound from the class consisting of soluble hydroxides, phos-

phates, carbonates and bicarbonates of ammonia and the alkali metals, whereby a flocculent precipitate of



organic complexes and mineral salts forms, and finally removing the precipitate from the thus purified sugar juices.

3,097,115

CATALYSTS AND ELECTRODES FOR FUEL CELLS

Anthony M. Moos, Ossining, N.Y., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts

No Drawing. Filed Aug. 1, 1960, Ser. No. 46,380
9 Claims. (Cl. 136—120)

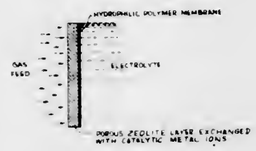
1. An electrode for a fuel cell having a metal catalyst bonded therein, comprising a catalytic metal containing, heat stabilized ion-exchanged zeolite, said heat stabilizing occurring at a temperature of from about 600–1600° C.

3,097,116

FUEL CELL ELECTRODES

Anthony M. Moos, Ossining, N.Y., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts

Filed Dec. 15, 1960, Ser. No. 75,921
8 Claims. (Cl. 136—120)



1. An electrode for a fuel cell having a metal catalyst bonded therein, comprising a catalytic metal containing, heat stabilized, ion-exchanged zeolite bonded to a gas diffusion membrane, said heat stabilizing occurring at a temperature of from about 600–1600° C.

3,097,117

METHOD OF AND COMPOSITION FOR PRODUCING ELECTROLESS BLACK NICKEL COATINGS

John J. Grunwald, New Haven, Conn., assignor to MacDermid, Incorporated, Waterbury, Conn., a corporation of Connecticut

No Drawing. Filed June 14, 1961, Ser. No. 116,958
8 Claims. (Cl. 148—6.14)

1. An aqueous solution for producing an adherent, black coating on nickel by reaction therewith, consisting essentially, in addition to water, of from 0.05 to 1.0 mole per liter of a water soluble compound selected from the group consisting of the sulfo, amino, hydroxy and carboxy substituted nitrobenzenes and nitronaphthalenes, from 0.01 to 0.5 mole per liter of a member selected from the group consisting of the ammonium and alkali metal salts of thiocyanic acid, together with a sufficient amount of a member selected from the group consisting of the mineral acids and the acid salts thereof to produce a hydrogen ion concentration in the solution of from 0.01 to 1.0 equivalent per liter.

3,097,118

PROCESS AND PRODUCT FOR REMOVING RUST AND COATING MATERIALS

Clarence E. Leonard, 20405 Martin Road, St. Clair Shores, Mich.

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,542
3 Claims. (Cl. 148—6.15)

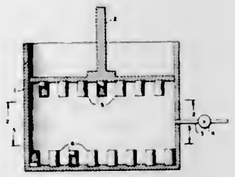
1. A composition of matter for coating and protecting metals from rust and for removing rust therefrom consisting essentially of phosphoric acid 1,650 parts by weight, iron phosphate 18 parts by weight, zinc chromate 52 parts by weight, manganese sulfate 46 parts by weight and water 2,763 parts by weight, mixed with polyacrylic acid ester water emulsion, 50% total solids.

3,097,119

EXPLOSIVE AND METHOD OF USE

George N. Tyson, Jr., Claremont, Calif., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Apr. 14, 1959, Ser. No. 806,399
19 Claims. (Cl. 149—22)



1. A method for providing an explosion which comprises rapidly mixing a relatively large mass of a nitrogen hydride and a mass of a boron hydride in proportions approximately stoichiometric for the reaction of all of the boron in the boron hydride with all of the nitrogen in the nitrogen hydride to form boron nitride, BN, such that a mixture consisting essentially of the nitrogen hydride and the boron hydride is formed and reacts at a very high rate of reaction with the production of a shock wave.

3,097,120

GELLED AMMONIUM NITRATE EXPLOSIVE CONTAINING POLYACRYLAMIDE AND AN INORGANIC CROSS-LINKING AGENT

Joseph A. Hoffman, Bound Brook, N.J., and Herbert L. Bowkley, New Castle, Pa., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

10 Claims. (Cl. 149—49)

1. A stable, soft, non-separating, explosive gel composition containing as its essential ingredients (*a*) from about 25 to about 60 weight percent of ammonium nitrate; (*b*) from about 5 to about 25 weight percent of an alkali-metal nitrate; (*c*) from about 15 to about 50 weight percent of a nitrated explosive sensitizer; from about 5 to about 25 weight percent of water; from about 0.1 to about 5 weight percent of a polyacrylamide, said polyacrylamide having an apparent molecular weight of from about one to about 25 million and a hydrolyzed free acid content of from about 0.1 to about 8%; and from about 0.01 to about 0.5 weight percent of an inorganic, polyvalent metal salt cross-linking agent for said polyacrylamide.

3,097,121

POWDERED AMMONIUM NITRATE EXPLOSIVE CONTAINING POLYACRYLAMIDE AND AN INORGANIC CROSS-LINKING AGENT

Herbert L. Bowkley and John P. Merryweather, New Castle, Pa., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 11, 1961, Ser. No. 130,773
8 Claims. (Cl. 149—60)

1. A stable, dry, pourable powder composition adapted to form on contact with water a soft, non-separating, highly-viscous, cohesive explosive gel, said powder composition containing as its essential ingredients (*a*) from about 25 to about 50 weight percent of ammonium nitrate; (*b*) from about 5 to about 25 weight percent of an alkali-metal nitrate; (*c*) from about 20 to about 40 weight percent of a nitrated explosive sensitizer; (*d*) from about 0.5 to about 5 weight percent of a polyacrylamide having an apparent molecular weight of at least 100,000; (*e*) from about 0.05 to about 0.5 weight percent of a polyvalent metal inorganic salt cross-linking agent for said polyacrylamide; and (*f*) from about 0.6 to about 2.5 weight percent of an inert liquid.

8. A method of preparing a stable, dry, pourable powder composition adapted to form on contact with water a soft, non-separating, highly-viscous, cohesive explosive gel which comprises combining amounts expressed in weight percent of the dry powder composition according to the steps which comprise: adding to an operating mixer from about 0.05 to about 0.5% of an inorganic, water-soluble salt of a polyvalent metal, about 0.6 to about 2.5% of an inert liquid; adding thereto from about 20 to about 40% of a nitrated explosive sensitizer and from about 5 to about 25% of an alkali-metal nitrate; stopping the mixing as soon as a uniform blending is obtained; forming a dry-blended mixture of from about 25 to about 50% of ammonium nitrate and from about 0.5 to about 5% of a polyacrylamide, said polyacrylamide containing at least 2000 acrylamide units and an apparent molecular weight of at least 100,000; adding said dry-blended mixture to said mixer; starting said mixer and continuing resultant blending until a uniform admixture is obtained and stopping said mixing before resegregation of the ingredients is initiated.

3,097,122

EXPLOSIVE COMPOSITION STABILIZED BY NITRO- OR NITROSO-TRIPHENYL AMINE

Wilbur C. Cox, Alexandria, Va., and Sydney Meyers, Brookline, and Edward F. Keon, Lowell, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

No Drawing. Filed Dec. 1, 1961, Ser. No. 157,050
2 Claims. (Cl. 149—92)

1. An explosive composition comprising a trace up to 5% by weight of a stabilizer from the group consisting of nitro-substituted triphenylamine and nitroso-substituted triphenylamine and the balance organic nitro explosives selected from the group consisting of nitrocellulose, nitrocellulose-nitroglycerin, nitrocellulose-nitroglycerin-nitroguanidine, nitroglycol, nitroglycerin, nitroguanidine, hexahydro - 1,3,5-trinitroso-S-triazine, cyclotrimethylenetrinitrosamine, and pentaerythritol tetranitrate.

3,097,123

COOL, NITROCELLULOSE BASE, NON-CARBON FORMING PROPELLANT

Beverley W. Lewis, Hampton, Va., and Carl Boyars, Silver Spring, Md., assignors to the United States of America, as represented by the Secretary of the Navy

No Drawing. Filed Apr. 5, 1961, Ser. No. 101,020
4 Claims. (Cl. 149—100)
(Granted under Title 35, U.S. Code (1952), sec. 266)

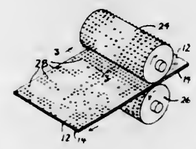
1. A cool gun propellant formulation comprising by weight: about 85–87% nitrocellulose having about 12.6% nitrogen, about 6–9% butyl stearate, about 1% stabilizer, about 2% potassium sulfate, the remainder essentially volatiles.

3,097,124

INSULATING WALL BOARD AND METHOD OF FORMING SAME

Maurice Denenberg, 2028 Washington Ave., P.O. Box 7362, Wynnewood 46, Pa.

Filed Aug. 30, 1957, Ser. No. 681,399
2 Claims. (Cl. 154—44)



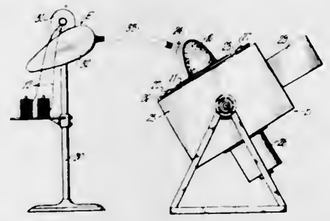
1. A heat-insulating laminated wall board comprising a central imperforate sheet of wet strength fiberboard, a pair of outer sheets of wet strength fiberboard bonded to opposite sides of the central sheet, a thin external facing sheet of heat-reflecting metal foil bonded to the outer side of each of said outer fiberboard sheets, each metal foil facing sheet and its underlying fiberboard sheet having a large number of small holes extending therethrough and terminating at the central imperforate fiberboard sheet, said holes having a diameter of .01 to .001 inch so that water must be in the form of a vapor to pass therethrough, whereby the sheets form a structure which is an efficient heat insulator capable of breathing.

3,097,125

METHOD OF FABRICATING A GLASS FIBER REINFORCED PLASTIC LUMINAIRE GLOBE

Lawrence B. Green, Glendale, Calif., assignor to Plastic Age Sales Inc., Saugus, Calif., a corporation of California

Filed Feb. 2, 1960, Ser. No. 6,233
3 Claims. (Cl. 156—38)



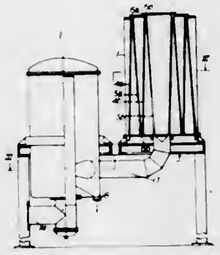
1. A method of fabricating a luminaire globe, comprising the following steps; intermittently blowing, in a manually-directed spray, onto the external surface of an exposed, rotating, air porous, hat-shaped form, succeeding layers of glass fibers while drawing air inwardly through the air porous wall of said form to hold the fibers in a mat adhering to the form; binding said fibers to one an-

other by manually-directed spraying onto the succeeding layers, during intervals between successive blowing steps, a thin solution of a binder resin, and air-drying the same to convert it into a thin film of strong, tough resin coating said glass fibers and providing integral bridging bonds binding the fibers to one another at points of crossing but leaving interstices between the fibers, whereby to provide a form-retaining highly porous matrix having the general form of the finished globe; preheating the matrix and pressing it, in the preheated condition, onto the male die of a mold comprising male and female dies arranged for closing movement on a vertical axis, with the open end of the female die at the top thereof and the male die disposed above the same; injecting a pool of liquid resin into the female die cavity; closing the mold with a relatively rapid movement so as to cause the matrix to be inserted into the female die and into said resin pool and to displace the resin upwardly between the walls of the molds; continuing the closing with a relatively slow closing movement causing the liquid resin to be extruded upwardly between the mold walls and into the interstices of the matrix so as to fill the same; and, in the last stages of closing movement, forcing the resin to flow substantially entirely within the porous wall structure of the matrix, parallel to the mold walls, in a manner to scavenge before it, air entrained within the matrix to eliminate air bubbles, applying compression to the matrix as thus impregnated with resin, compacting the matrix to a wall thickness substantially less than its thickness before insertion into the mold, and maintaining such compressing while subjecting the impregnated matrix to heat until the resin is cured, whereby to produce a globe of compacted wall structure of extremely high impact strength and with smooth wall surfaces of high light-transmitting character and with the glass fibers substantially invisible within the resin body of the globe; and then removing such globe from the mold.

3,097,126
VACUUM EVAPORATOR WITH A CLIMBING AND FALLING FILM

Maximilian Koffler, 17 Maharal St., Tel-Aviv, Israel

Filed Mar. 1, 1961, Ser. No. 92,523
Claims priority, application Israel Dec. 30, 1960
6 Claims. (Cl. 159—15)

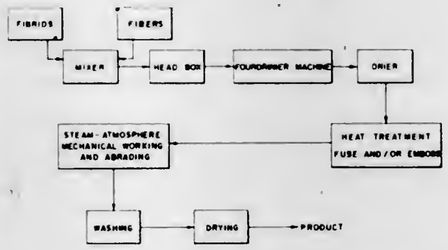


1. A vacuum evaporator comprising, in combination, a calandria including a conduit system for the liquid to be concentrated by evaporation; a separator having an inlet connected to the outlet of said calandria by a discharge conduit; the conduit system being constituted by a series-connected sequence of alternating rising and descending coaxial annular channels formed between heat exchange walls, the outermost one of said channels being connected to a feed conduit and the innermost one of said channels being connected to said discharge conduit; and means connecting a source of sub-atmospheric pressure to said separator to provide a sub-atmospheric pressure within said separator, discharge conduit and conduit system, whereby the flow of liquid through said vacuum evaporator is effected substantially entirely by the sub-atmospheric pressure.

3,097,127
PROCESS FOR MECHANICAL WORKING OF NON-WOVEN WEB

Bernard G. Ostmann, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 1, 1960, Ser. No. 72,970
7 Claims. (Cl. 162—146)



1. In a process for producing a synthetic non-woven interlinear fabric comprising the formation of a fiber/fibrid waterleaf having a fibrid composition of at least about 10% by weight, drying said waterleaf and thereafter, subjecting said waterleaf to a temperature of at least about 200° C. to provide a fusion-bonded fabric, the improvement comprising subjecting the bonded fabric to mechanical working and abrading in an atmosphere of steam, said mechanical working and abrading comprising the folding of the said bonded fabric back on itself transversely at least about 15 times per inch while simultaneously subjecting the said bonded fabric to mild tangential abrasion, subsequently washing the said bonded fabric and thereafter drying the said bonded fabric.

3,097,128
PHENOL STABILIZED ORGANO-PHOSPHOROUS INSECTICIDES

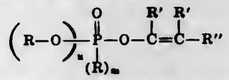
Charles R. Sprinkle, Bound Brook, Leo F. Sekula, Paterson, Milton R. Johnson, Springfield, and Bertram I. Sparr, Summit, N.J., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 6, 1961, Ser. No. 80,996
7 Claims. (Cl. 167—22)

1. A stable solid insecticidal composition comprising in combination:

(*a*) a substantially toxicologically inert solid carrier material,

(*b*) an insecticide of the formula:



wherein R is a member of the group consisting of low molecular weight hydrocarbon radicals and low molecular weight substituted hydrocarbon radicals, R′ is a member of the group consisting of hydrogen, chlorine, bromine, and radicals represented by R, R″ represents a member of the group consisting of chlorine and bromine, radicals represented by R and functional organic radicals, *n* is an integer from zero to two, with the proviso that $m+n=2$.

(*c*) a phenol,

the amount of said phenol being sufficient to stabilize said insecticide against decomposition.

3,097,129
VOLATILE SOLID INSECTICIDAL AND BACTERICIDAL COMPOSITION

Louis A. Laffetay, Paris, and Auguste M. Boutin, Issy-les-Moulineaux, France, assignors to Progil, S.A., Rhone, France, a corporation of France

No Drawing. Filed Apr. 19, 1961, Ser. No. 104,005
Claims priority, application France Apr. 22, 1960
8 Claims. (Cl. 167—30)

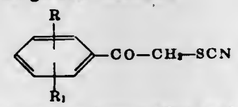
1. A volatile solid composition releasing vapors having balanced insecticidal and bactericidal properties, comprising paradichlorobenzene, a bactericide having a volatility differing substantially from that of paradichlorobenzene and a substance imparting to said bactericide a volatility substantially the same as that of paradichlorobenzene selected from the group consisting of a substituted cyclohexanol, a substituted cyclobexanone and mixtures thereof.

3,097,130
COMBATING PLANT DISEASES CAUSED BY FUNGI

Erik Regel, Kansas City, Mo., and Richard Wegler, Leverkusen, Ferdinand Grewe, Cologne-Stammheim, and Helmut Kaspers, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 19, 1960, Ser. No. 131,448
Claims priority, application Germany Dec. 23, 1959
6 Claims. (Cl. 167—30)

1. A method of combating fungi which comprises treating a member selected from the group consisting of plants to be protected and the locus of infestation with a compound of the general formula:



in which R stands for lower alkyl and R_1 stands for chlorine.

3,097,131
EUTECTIC LIQUID PRESERVATIVES

Ryuzo Ueno, Nishinomiya City, Yoshihiko Saito, Osaka City, and Toshio Matsuda, Sakai City, Japan; said Saito and Matsuda assignors to Ueno

No Drawing. Filed Apr. 1, 1960, Ser. No. 19,185
Claims priority, application Japan Apr. 9, 1959
1 Claim. (Cl. 167—31)

A liquid preservative composition comprising at least two p-hydroxybenzoic acid esters selected from the group consisting of p-hydroxybenzoic acid benzyl ester and p-hydroxybenzoic acid alkyl esters, the alkyl groups of which contain 1–5 carbón atoms, in such proportions that their mixture has a freezing point below room temperature.

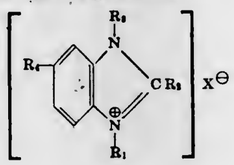
3,097,132
FUNGICIDAL PLANT PROTECTION

Christian Wiegand, Wuppertal-Elberfeld, and Ferdinand Grewe, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 4, 1960, Ser. No. 60,289
Claims priority, application Germany Oct. 10, 1959
6 Claims. (Cl. 167—33)

6. A fungicidal composition comprising

(*a*) A salt of a 1-lower alkyl-3-higher alkyl-benzimidazole of the following formula:



in which R_1 stands for lower alkyl radicals having up to 4 carbon atoms; R_2 stands for a member selected from the group consisting of hydrogen and lower alkyl radicals having up to 4 carbon atoms; R_3 stands for a higher alkyl radical having from 8 to 20 carbon atoms; R_4 stands for a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, chlorine, and nitro; and X is a salt-forming ion selected from the group consisting of chloride, bromide, sulfate, nitrate, hexacyanoferrate, reineckate, naphthalene-1,5-disulfonate, nitrophenyl-sulfonate, di-nitrophenyl-sulfonate pentachlorophenate, 2-mercapto-benzimidazolate, 2-mercapto-benzothiazolate,

(*b*) a non-ionic emulsifier,

(*c*) water, and

(*d*) an auxiliary solvent selected from the group consisting of dimethyl formamide, chlorobenzene and acetone.

3,097,133
ANAESTHETIC 1:1:1:3:3:3-HEXAFLUORO-2-HALOPROPANE

Charles Walter Suckling, Widnes, and James Raventos, Macclesfield, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 2, 1960, Ser. No. 73,228
Claims priority, application Great Britain Dec. 21, 1959
7 Claims. (Cl. 167—52)

1. Inhalant anaesthetic compositions comprising a 1:1:1:3:3:3-hexafluoro-2-halopropane of the formula CF_3CHXCF_3, wherein X stands for a member of the group consisting of chlorine and bromine atoms, in admixture with oxygen in suitable proportions for the production of anaesthesia.

3,097,134
PROCESS FOR TREATING CANINE DISTEMPER

Bertil Karl Fredrik Sjögren and Sven Lindvall, Sodertalje, Heinz Werner Heiwinkel, Ostertalje, and Karl Gustav Högberg, Sodertalje, Sweden, assignors to Aktiebolaget Astra Apotekarnes Kemiska Fabriker, a company of Sweden

No Drawing. Filed May 31, 1961, Ser. No. 113,645
15 Claims. (Cl. 167—53)

1. A process for treating canine distemper which comprises parenterally injecting an animal having canine distemper with a colloidal solution of an amorphous iron (III)-hydroxide-citrate complex compound with dextrin as stabilizer in a dosage containing from about 0.005 milligram to about 0.2 milligram of iron per kilogram of the animal's body weight at effective intervals until at least from about two to about six injections have been given, said iron compound having a median sedimentation constant of 30 to 60 Svedberg units and a maximum sedimentation constant of 100 Svedberg units.

3,097,135
ERYTHROMYCIN SUSPENSIONS AND METHOD OF STABILIZING THE SAME

Matthew J. Lynch, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,594
16 Claims. (Cl. 167—65)

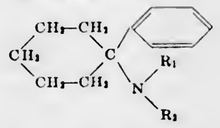
1. A method for the stabilization of liquid compositions containing erythromycin which comprises suspending a member of the group consisting of the salts and esters of erythromycin A and erythromycin B in an anhydrous vegetable oil-glycerine emulsion at a pH of 7–10 to render said compositions suitable for oral use.

3,097,136
PROCESS FOR PRODUCING A DEPRESSANT-LIKE EFFECT ON THE CENTRAL NERVOUS SYSTEM

Erik F. Godefroi, Detroit, V Harold Maddox, Huntington Woods, and Robert F. Parcell, Ann Arbor, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,474
5 Claims. (Cl. 167—65)

1. Process for producing a depressant-like effect upon the central nervous system of a mammal which comprises introducing into a mammal a member of the class consisting of a 1-phenylcyclohexylamine compound and nontoxic acid addition salts thereof; said 1-phenylcyclohexylamine compound having the formula,



where R_1 and R_2 are members of the class consisting of hydrogen and lower alkyl radicals, the sum of carbon atoms in said R_1 and R_2 being less than 5, and further members wherein R_1 and R_2 are combined and together represent a polymethylene radical containing more than 3 and fewer than 7 carbon atoms.

3,097,137
VINCALEUKOBLASTINE

Charles T. Beer, Vancouver, British Columbia, James H. Cutts, London, Ontario, and Robert L. Noble, Delaware, Ontario, Canada, assignors to Canadian Patents and Development, Ltd., Ottawa, Ontario, Canada, a company

Filed May 19, 1960, Ser. No. 30,315
6 Claims. (Cl. 167—65)

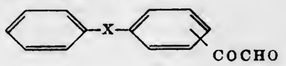
1. A member of the group consisting of vincaleukoblastine and its nontoxic acid addition salts, said vincalukoblastine being in pure state a white, microcrystalline compound which melts at about 201–211° C., showing upon analysis the presence of 68.15 percent carbon, 7.44 percent hydrogen, 6.65 percent nitrogen, and 18.05 percent oxygen, the analytical data establishing the molecular formula $C_{46}H_{58}O_9N_4$, an ultraviolet absorption spectrum in ethanol showing maxima at 214 mμ and 259 mμ with shoulders at 288, 296 and 310 mμ, a specific rotation in methanol of $[\alpha]_D^{23°} = -32°$ (c.=0.88), two titratable groups of pK' a 5.0 and 7.0 in dimethylformamide-water solution (2:1 v./v.) and exhibiting in chloroform solution in the infrared region over the range of about 2–16 microns characteristic peaks at the following wavelengths expressed in microns: 2.82, 2.91, 3.41, 3.51, 5.75, 6.19, 6.27, 6.66, 6.86, 6.98, 7.30, 7.52, 7.75, 8.15, 8.57, 8.75, 8.87, 9.04, 9.17, 9.28, 9.42, 9.63, 9.92, 10.22, 10.45, 10.58, 10.85, 11.15, 11.32, 11.50, 11.72, 12.00, 12.20.

3,097,138
ANTIVIRAL BIPHENYLYL GLYOXAL PROCESS AND DOSAGE FORMULATIONS

Guido Cavallini and Elena Massaranl, Milan, Italy, assignors to Francesco Vismara S.p.A., Casatenovo Brianza, Como, Italy, a firm

No Drawing. Filed July 26, 1960, Ser. No. 45,281
Claims priority, application Italy Mar. 15, 1960
6 Claims. (Cl. 167—65)

1. An antiviral composition in dosage unit form comprising a pharmaceutical carrier and from about 50 mg. to about 600 mg. of a chemical compound selected from the group consisting of: (1)



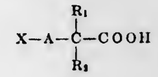
in which X is a moiety selected from the group consisting of oxygen, sulfur, sulfonyl, sulfinyl, methylene, vinylene, ethylene and a single valence bond; (2) its hydrate; (3) its alkali metal bisulfite; and (4) its alcoholate molecular addition compounds.

3,097,139
HYPOCHOLESTEROLAEMIA COMPOSITIONS

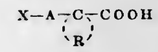
Jeffrey Meyrick Thorp, Macclesfield, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Mar. 2, 1961, Ser. No. 92,768
Claims priority, application Great Britain Mar. 10, 1960
14 Claims. (Cl. 167—65)

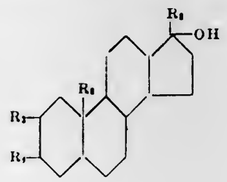
1. A pharmaceutical composition comprising a pharmaceutically effective amount of a mixture of at least one compound selected from the group consisting of carboxylic acid derivatives of the formulae:

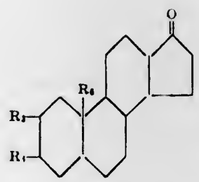


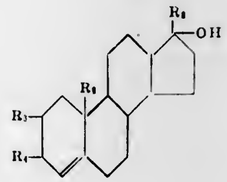
and



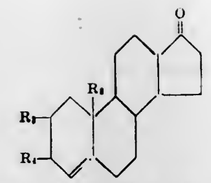
wherein A is selected from the group consisting of oxygen and imino; R_1 is selected from the group consisting of hydrogen and alkyl; R_2 represents alkyl; R represents the radical necessary to form, together with the adjacent carbon atom, cycloalkyl; and X is selected from the group consisting of phenyl, halogenophenyl, alkylphenyl, alkenylphenyl, alkoxyphenyl, diphenylyl, benzylphenyl, benzyloxyphenyl, anilinophenyl, α-naphthyl, halogeno-α-naphthyl, alkyl-α-naphthyl, alkenyl-α-naphthyl, alkoxy-α-naphthyl, phenyl-α-naphthyl, benzyl-α-naphthyl, benzyloxy-α-naphthyl and anilino-α-naphthyl, and the esters and salts thereof, together with at least one compound selected from the group consisting of androstane derivatives of the formulae:







and



wherein R_3 is selected from the group consisting of hydrogen and hydroxymethylene; R_4 is selected from the group consisting of hydroxy and a doubly bound oxygen atom; and R_5 and R_6 are selected from the group consisting of hydrogen and methyl, and the lower fatty acid esters thereof.

3,097,140
PREPARING A MIXED POLIO, PERTUSSIS, TETANUS, AND DIPHTHERIA VACCINE WITH BENZETHONIUM CHLORIDE

Lee F. Schuchardt, North Wales, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 31, 1958, Ser. No. 770,905
7 Claims. (Cl. 167—78)

1. In a method of preparing a combined poliomyelitis-diphtheria-tetanus-pertussis antigen, the steps which comprise mixing killed but antigenic poliomyelitis virus vaccine, diphtheria toxoid and tetanus toxoid with potassium alum, incorporating benzethonium chloride therein, adding alkali metal hydroxide thereby precipitating aluminum hydroxide and absorbing the poliomyelitis antigen, diphtheria antigen and tetanus antigen thereon, separately detoxifying pertussis organisms with heat, and incorporating the heat-detoxified pertussis organisms into the mixture containing said poliomyelitis, diphtheria and tetanus antigens.

3,097,141
IMMUNOLOGICAL METHOD

Elizabeth N. Wilcox Kidwell, 16 E. 9th St., New York, N.Y.

No Drawing. Filed Feb. 26, 1959, Ser. No. 795,601
16 Claims. (Cl. 167—78)

1. A method of reducing the toxicity of an antigen while retaining its antigenicity, which comprises treating the antigen by adding thereto a proteolytic enzyme, adding to the treated antigen an oxidizing agent, heating said oxidized and treated antigen for about 15–28 hours at a temperature in the range of about 50°–100° C., and contacting the heated resultant with an ion exchange resin.

3,097,142
BENZYL ALCOHOL STABILIZED POLIO VACCINES AND PRODUCTION THEREOF

Lee F. Schuchardt, North Wales, and Samuel Morton Zulick, Narberth, Pa., assignors to Merck & Co. Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,500
10 Claims. (Cl. 167—78)

1. A poliomyelitis vaccine product comprising an aqueous solution containing at least one type of killed but antigenic poliomyelitis virus and benzyl alcohol in a concentration in the range from 0.5% to 0.9% by volume.

3,097,143
MYRISTYL-GAMMA-PICOLINIUM CHLORIDE PRESERVED POLIO VACCINE AND ITS PRODUCTION

Lee F. Schuchardt, North Wales, and Samuel Morton Zulick, Narberth, Pa., assignors to Merck & Co. Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,521
11 Claims. (Cl. 167—78)

1. A poliomyelitis vaccine product comprising an aqueous solution containing at least one type of killed but antigenic poliomyelitis virus and myristyl-gamma-picolinium chloride in a concentration in the range from 1:5,000 and 1:80,000.

3,097,144
HEAT-CURED, POLYMERIC, MEDICINAL DOSAGE FILM COATINGS CONTAINING A POLYVINYLPYRROLIDONE COPOLYMER, POLYETHENOID ACID, AND POLYETHYLENE GLYCOL

Gilbert S. Banker, West Lafayette, Ind., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,543
4 Claims. (Cl. 167—82)

3. A process for producing a solid medicinal dosage form protected by a coating which includes the steps of (1) forming a coating on the said dosage form with a solution of a volatile solvent and (*a*) a polyethylene glycol having an average molecular weight of up to 20,000, (*b*) a polyethenoid acid, and (*c*) a copolymer represented by the following formula:

$$\{R—Y\}$$

wherein R represents the comonomer N-vinyl-2-pyrrolidone, and Y represents a comonomer selected from the group consisting of N-vinyl-2-pyrrolidone, vinyl acetate, vinyl chloride, styrene, acrylic acid, and methyl acrylate, and the ratio by weight of R to Y is between 30:70 and 70:30, and (2) curing the coating by heating at 105° F. for at least 3 hours.

3,097,145
ACID PROTEASE AND THE PRODUCTION THEREOF

Hirao Shimazono, Suita, and Katsumi Tomoda, Toyonaka, Japan, assignors to Takeda Chemical Industries, Ltd., Osaka, Japan

Filed Mar. 30, 1962, Ser. No. 183,919
5 Claims. (Cl. 195—62)

1. A method for producing acid protease, which comprises incubating a member selected from the group consisting of *Trametes sanguinea* (L. ex Fr.) Lloyd, *Trametes cinnabarina* (Jacq.) Fr. and *Poria vaporaria* (Fr. non Pers.) Cooke in an aqueous medium containing assimilable carbon sources, digestible nitrogen sources and other nutrients necessary for the growth of the microorganism at a temperature of from 20 to 35° C. under aerobic conditions until the acid protease is substantially accumulated in the culture broth, and recovering the accumulated acid protease from the liquid part of the culture broth.

3,097,146
PROCESS FOR LYCOPENE PRODUCTION

Earl J. Swarthout, Edwardsburg, Mich., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed June 30, 1961, Ser. No. 120,973
23 Claims. (Cl. 195—78)

1. A process for the production of lycopene which comprises growing a strain of *Blakeslea trispora* in a fermentation medium consisting of a proteinaceous nutrient material and an energy furnishing nutrient material selected from the group consisting of fats, fat derivatives and carbohydrates at a pH of about from pH 6.6 to pH 9.5 and recovering the lycopene produced during the fermentation.

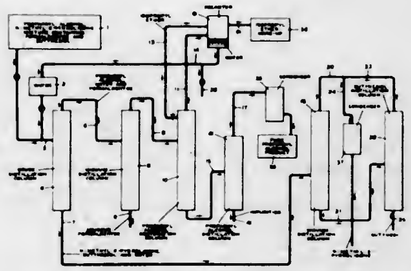
3,097,147
RECOVERY OF PROPARGYL ALCOHOL

Rob R. MacGregor, Hopewell, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 16, 1961, Ser. No. 96,179
7 Claims. (Cl. 202—42)

1. A process for recovering propargyl alcohol from a mixture containing it together with an N-alkyl pyrrolidone

having 1 to 8 N-alkyl carbon atoms, which comprises sub-



jecting said mixture to distillation in the form of an aqueous mixture containing at least 25% by weight of water.

3,097,148
ELECTROPLATING

Joseph L. Greene, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Dec. 7, 1960, Ser. No. 74,237
8 Claims. (Cl. 204—43)

1. An alkaline aqueous bath solution for the electrodeposition of a cadmium-tungsten coating, said bath solution containing about 0.06 mole per liter to 0.2 mole per liter of cadmium ion, about 3.5 moles to 5.0 moles of cyanide ion per mole of cadmium ion, about 0.15 mole per liter to 0.3 mole per liter of tungstate ion and about 0.3 mole to 0.7 of citrate ion per mole of tungstate ion.

3,097,149
METHODS OF MANUFACTURING MICROPOROUS METALLIC MEMBRANES

Roger Lacroix, Suresnes, France, assignor to Commissariat a l'Energie Atomique, Paris (Seine), France, an organization of France

Filed Aug. 18, 1959, Ser. No. 834,620
Claims priority, application France Aug. 30, 1958
5 Claims. (Cl. 204—146)

3. A process for the production of microporous metallic membranes by selective attack of the constituents of an alloy, for the purpose of obtaining membranes having very fine pores of less than about 0.12μ, comprising: forming a bimetallic rollable alloy with a first and a second metal, said second metal being distinctly less noble than the first metal and at least 40% of the atoms of said alloy being of the second metal; forming a thin membrane of such alloy; and subjecting said membrane to an electrochemical treatment which selectively causes the substantially complete dissolution of the second metal by subjecting the atoms of said second metal to an extraction potential permitting its removal from the alloy; said extraction potential being obtained electrolytically by bringing the membrane, whilst in an electrolytic solution, to an anode potential about the same as the dissolution potential of the first metal in said electrolytic solution.

3,097,150
IRRADIATED, CROSS-LINKED POLYETHYLENE COPOLYMER

William C. Rainer, Edward M. Redding, and Joseph J. Hitov, Baltimore, Md., and Arthur W. Sloan and William D. Stewart, Alexandria, Va., assignors, by mesne assignments, to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed June 24, 1955, Ser. No. 517,943
5 Claims. (Cl. 204—154)

1. A process comprising irradiating normally solid polyethylene at a dosage of at least about 2×10^6 REP admixed with polyisobutylene to form a cross-linked copolymer.

3,097,151
FUELS FOR NUCLEAR REACTORS

Samuel W. Martin, Oak Park, Ill., assignor to Great Lakes Carbon Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,875
4 Claims. (Cl. 204—154.2)

1. A process for producing a graphite body in which a fissionable material is uniformly dispersed in the graphite which comprises colloidally dispersing a fissionable compound in a purified coking stock, coking said stock, calcining the resulting coke composition, mixing the resulting calcined coke composition with a binder, and mix-mulling the resulting mixture, and molding, baking, and graphitizing the resultant product.

3,097,152
NUCLEAR REACTOR FUEL ELEMENT AND METHOD FOR PRODUCING SUCH FUEL ELEMENT

Chapman J. Walker, Saddle River, N.J., assignor to General Electric Company, a corporation of New York

Filed Dec. 1, 1958, Ser. No. 777,488
6 Claims. (Cl. 204—154.2)



1. A method for producing a nuclear reactor fuel plate having prestressed clad layers to resist internal pressure effects which comprises positioning an inner perforated layer, containing nuclear fuel in the perforation thereof, between a pair of external clad layers each having a different radius of curvature than that of said perforated layer, and then pressing and bonding at least the edges of said layers together whereby at least said external layers are deformed within the elastic limit thereof into a different curvature and into registry across their entire adjacent surfaces with said perforated layer so that each external layer applies a force inwardly against the surfaces of said perforated plate.

4. A nuclear reactor fuel element having three layers joined together in a sandwich including two outer imperforate layers of cladding and an inner layer having a plurality of nuclear fuel-filled cells, said cells having a minimum width less than 0.25 inch and small relative to the length of said cell measured perpendicular to the surface of said fuel element, said fuel element thus being adapted to transfer a substantial portion of heat generated in each fuel-filled cell laterally therefrom into the inner layer and then in a direction generally perpendicular to said surface through said imperforate layers, and adapted to reduce substantially the internal temperatures in said cell at a given power generation rate, said outer layers of cladding being stressed within the elastic limit during manufacture of said nuclear reactor fuel element to apply pressure inwardly against said inner layer to resist gas pressure generated within said fuel filled cells.

3,097,153
PROCESS FOR THE PREPARATION OF HYDROGENATED ORGANIC COMPOUNDS AND PRODUCTS RESULTING THEREFROM

Karl W. Hubel and Emile Henri Braye, Brussels, Belgium, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,840
Claims priority, application Great Britain Apr. 7, 1959
10 Claims. (Cl. 204—158)

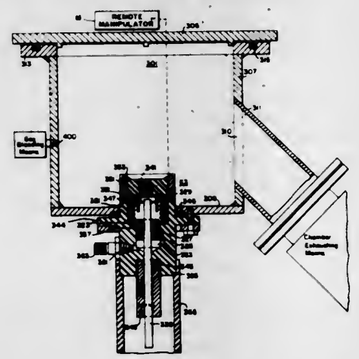
1. A process for the preparation of hydrogenated linear and cyclic organic compounds free of carbon to metal bonds, which comprises reacting an organo-metallic complex having the formula: $M_x(CO)_y(R'C_2R'')_z(B)_w$ wherein M is a transition metal selected from the group

consisting of sub-groups VI B, VII B and VIII of the periodic table, CO represents a carbonyl group, R′ and R″ represent a member selected from the group consisting of hydrogen, halogen, carboalkoxy, alkyl, aryl, cycloaliphatic, alkoxy and silyl groups, C_2 represents a carbon-to-carbon bonding, B represents a member selected from the group consisting of hydrogen, mercury, halogen, alkyl, aryl and acyl, x represents an integer of from 1 to 4, y represents an integer of from 1 to 10, z represents an integer of from 1 to 6, and w represents an integer of from 0 to 4, with at least a stoichiometric amount of a hydrogenation reagent, whereby the carbon to metal bond in said organo-metallic complex is broken and hydrogen is added to the C_2 group present in said complex to form said organic compounds.

3,097,154
APPARATUS AND METHOD FOR ETCHING OBJECTS

John E. Eck and Francis M. Cain, Jr., Apollo, Pa., assignors to Nuclear Materials and Equipment Corporation, Apollo, Pa., a corporation of Pennsylvania

Filed Jan. 13, 1959, Ser. No. 786,516
12 Claims. (Cl. 204—192)



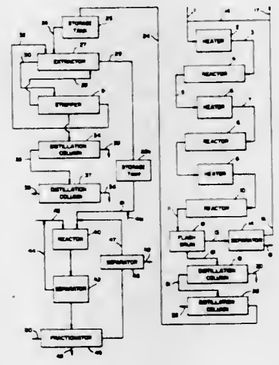
1. In cathodic vacuum etching of a radioactive body, the method of establishing electrical and thermal contact between said radioactive body and a cooled electrical and thermal conductor having a cooling surface of substantial area and having an electric potential impressed thereon, the said method comprising mounting said conductor so that said surface is at the pressure within said enclosure and another surface of said conductor is at atmospheric pressure, said conductor being mounted movable under any difference in pressure between said enclosure and the atmosphere, mechanically clamping said body adjacent said surface of said conductor by action of a remotely actuable manipulator, exhausting said chamber to establish said difference of pressure, under the action of said pressure difference causing said conductor to move to engage said body and to apply said pressure difference thereto to provide electrical and thermal contact between said conductor and said body.

3,097,155
PROCESS FOR THE CONVERSION OF PARAFFIN HYDROCARBONS WITH ISOBUTANE UTILIZING HYDROGEN FLUORIDE AS A CATALYST

Bernard S. Friedman, Chicago, and Robert P. Zmitrovis, Park Forest, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 3, 1959, Ser. No. 803,873
8 Claims. (Cl. 208—66)

6. In a method of converting a straight run hydrocarbon petroleum fraction boiling in the motor fuel range, the steps which comprise contacting said hydrocarbon fraction with a platinum metal-alumina catalyst in the presence of free hydrogen at a temperature of about 750 to 1000° F. and a pressure of about 50 to 1000 p.s.i.g. to provide a product boiling in the motor fuel range with increased octane value, separating from this product paraffinic hydrocarbon boiling in the C_7+ motor fuel range,

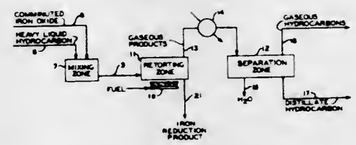


contacting in the liquid phase isobutane and the paraffinic hydrocarbon with a catalyst consisting of hydrogen fluoride at a temperature of about 100 to 400° F. and under a pressure sufficient to maintain the liquid phase in an essentially olefin-free reaction zone, said contacted isobutane being at least about 50 weight percent of said paraffinic hydrocarbon and separating the hydrocarbon boiling in the motor fuel range.

3,097,156
PROCESS FOR CONCURRENT UPGRADING OF IRON ORE AND HEAVY CRUDE OILS

Marvin M. Johnson and Armin C. Pitchford, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

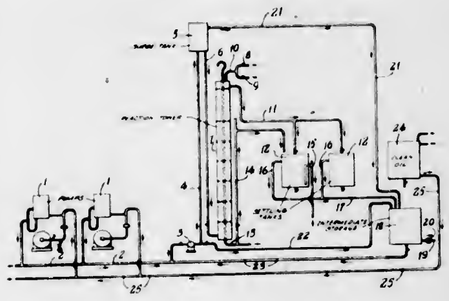
Filed June 30, 1960, Ser. No. 39,905
3 Claims. (Cl. 208—124)



1. The process of partially reducing an iron oxide and concurrently converting a heavy liquid hydrocarbon to a distillate hydrocarbon, said heavy hydrocarbon comprising less than ten percent boiling below 400° F., a gravity not higher than 20 API, and yielding by vacuum distillation at least 30 percent of 100 penetration asphalt, which comprises: intimately mixing said iron oxide in finely comminuted form with said heavy liquid hydrocarbon in a weight ratio from 1:5 to 1:0.2; charging the resulting mixture into a retorting zone; heating the said retorting zone to a temperature ranging between 750 and 2800° F. sufficient to cause chemical interaction between the components of said mixture; maintaining said temperature range for a period ranging between 0.02 and 10 hours by the end of which period said mixture substantially ceases

giving off vaporous products; conducting the vaporous products to a collection zone; withdrawing the residual solid from said retorting zone as an iron reduction product comprising a major part of iron oxides of lower oxidation state than said comminuted iron oxide and a minor part of finely divided amorphous carbon; and cooling said vaporous products and condensing a liquefied distillate hydrocarbon comprising hydrocarbons of greater than 4 carbon atoms having a distillation ranging between 170 and 800° F.

3,097,157
OIL PURIFICATION PROCESS
Oliver E. Accountius, Sierra Madre, Calif., assignor, by mesne assignments, to Chilean Nitrate Sales Corporation, New York, N.Y., a corporation of New York
Filed June 10, 1960, Ser. No. 35,161
2 Claims. (Cl. 208—182)



1. The method of decontaminating spent lubricating oils contaminated with iodine and hydriodic acid that comprises maintaining a contaminated oil stream within a reaction zone and in direct contact with steel wool in the presence of water for a period of time sufficient to convert substantially all of the iodine and hydriodic acid to ferrous iodide and to extract from the oil by means of said water substantially all of said ferrous iodide, and separating a decontaminated oil from the aqueous solution containing said ferrous iodide.

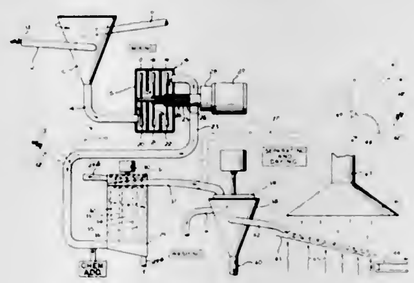
3,097,158
TREATING HYDROCARBON DISTILLATES
William K. T. Gleim, Island Lake, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Sept. 12, 1962, Ser. No. 223,260
6 Claims. (Cl. 208—204)

1. A combination process for treating a sour hydrocarbon fraction to produce a product of reduced mercaptan content and of acceptable color, which comprises oxidizing mercaptans contained in said fraction to disulfides and thereafter treating said fraction with a hydrocarbon soluble acyl hydrazide.

2. A combination process for treating sour hydrocarbon distillate to produce a distillate of reduced mercaptan content and of acceptable color, which comprises oxidizing mercaptans contained in said distillate to disulfides and thereafter treating the distillate with a hydrocarbon soluble aromatic sulfonyl hydrazide.

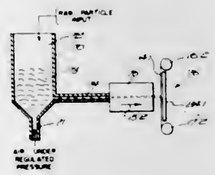
3. A combination process for treating sour hydrocarbon distillate to produce a distillate of reduced mercaptan content and of acceptable color, which comprises oxidizing mercaptans contained in said distillate to disulfides and thereafter treating the distillate with a hydrocarbon soluble aliphatic sulfonyl hydrazide.

3,097,159
PROCESS FOR CLEANING GRANULAR MATERIALS
Frank R. Ofner, Portland, Oreg., assignor to Industrial Powertronix, Inc., Portland, Oreg., a corporation of Oregon
Filed May 26, 1958, Ser. No. 737,866
3 Claims. (Cl. 209—2)



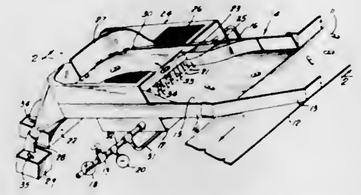
1. In a process for cleaning wheat and the like, the steps of mixing the wheat with water, agitating the resultant mixture in a washer to flush foreign materials from the wheat, isolating the wheat by flotation and stratification from both lighter weight and heavier weight solids in the mixture in accordance with the relative weights thereof, and withdrawing the wheat thus isolated from the washer.

3,097,160
METHOD OF SEPARATING DIFFERENTIALLY HEATED PARTICLES
Stanley R. Rich, West Hartford, Conn., assignor of twenty percent to Alfred H. Rosen, Newton, Mass., ten percent to William W. Sellew, Port Chester, N.Y., and ten percent to Robert E. Cohn, Bloomfield, Conn.
Filed Nov. 30, 1959, Ser. No. 856,232
6 Claims. (Cl. 209—4)



1. Method of treating a mixture of particles of at least two different materials to separate particles of a first of said materials from said mixture, comprising the steps of propelling a gas through said mixture and thereby fluidizing said mixture in a gaseous medium, propelling the fluidized mixture past a source of energy for applying to the fluidized mixture energy which selectively heats particles of said first material to a higher temperature than particles of the remainder of said mixture, thereafter propelling said fluidized mixture with said selectively heated particles toward a temperature sensitive body and selectively capturing heated particles of said first material with said temperature-sensitive body in contact therewith, the same gas being employed under pressure for fluidizing said mixture and for propelling the same successively past said source and toward said body.

3,097,161
CAPSULE INSPECTION AND SEPARATION
Michael Dudyak, Spring Valley, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed June 23, 1961, Ser. No. 119,104
3 Claims. (Cl. 209—12)



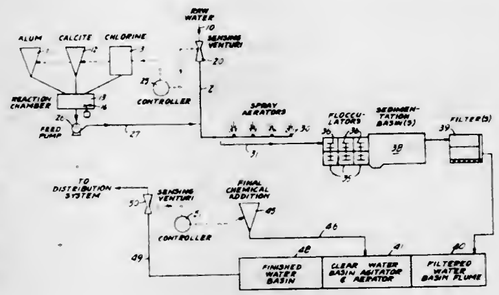
1. An apparatus for inspecting capsules and separating out of slack-filled capsules which comprises: an endless inspection belt, means for continuously moving said belt on which is a single layer of capsules, an inclined capsule chute having at least one directional air jet in the capsule traversing floor thereof, a deflector adjacent to said belt to deflect said single layer of capsules from said belt to and down said chute, an air pressure box under said chute, means for supplying air under controlled pressure to said air pressure box, and by way of said box to said air jet in the floor of the capsule chute, an inspected capsule receiver below said chute to receive inspected capsules from said chute, a divider above said capsule chute spaced with just sufficient clearance from the floor of the chute for a single layer of the largest capsules to be inspected to pass under said divider, and adjacent to the air blast from the air jet in the floor of said capsule chute, and spaced so closely to the air blast that a slack-filled capsule cannot pass between the air blast and the divider, said divider forming with the sides of the chute a slack-filled capsule trap, to receive slack-filled capsules blown upwardly by said blast, a screen over the said divider, to prevent slack-filled capsules from being blown out into the apparatus, a slack-filled capsule basket, and an air conveyor to transfer slack-filled capsules from said slack-filled capsule trap to said slack-filled capsule basket.

3,097,162
METHOD FOR CONCENTRATING ALUMINUM SILICATES AND ZIRCON FROM BEACH SAND
Robert E. Baarson, La Grange, and Charles W. Jonaitis, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 2, 1960, Ser. No. 73,231
2 Claims. (Cl. 209—166)

1. In a process for the concentration of quartz, aluminum silicate and zircon from a non-conductive, non-magnetic fraction of beach sand concentrate, comprising the steps of floating a zircon and quartz fraction from the aluminum silicates in the sand in an aqueous solution containing an amine collector and a depressant selected from the group consisting of dextrins, gums and starches, said aqueous solution being at a pH of from about 7.5 to about 12, and then floating the zircon from the quartz of said zircon-quartz fraction in the presence of a fluorine-containing acid and at a pH from about 6.0 to about 2.0.

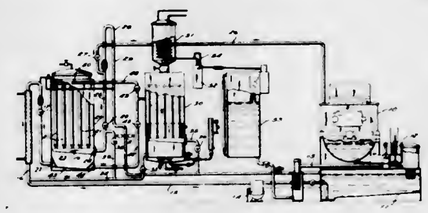
3,097,163
TREATMENT OF WATER IN MUNICIPAL AND INDUSTRIAL WATER SYSTEMS
Thomas Moore Riddick, 369 E. 149th St., New York 55, N.Y.
Filed Aug. 25, 1958, Ser. No. 757,073
8 Claims. (Cl. 210—53)

6. In a water purification process of the character described for removal of impurities from water by precipitation in a coagulated flocculant, the steps which comprise admixing for reaction a flocculating agent and finely divided calcite, said flocculating agent being selected from the group consisting of alum and ferric chloride flocculants and mixtures thereof, maintaining said admixed materials in intimate contact with mechanical agitation for a predetermined time for chemical reaction therebetween, adding the reaction product of said admixed flocculating agent and calcite to said water to be purified, the amount



of said calcite being in excess of that which completely reacts with said flocculating agent effecting direct addition to said water to be purified of finely divided calcite for providing flocculation and agglomeration nuclei for coagulation of a flocculant precipitate formed in said water by said added reaction product, intimately admixing said reaction product and said excess calcite with said water to be purified, and thereafter retaining said thus treated water in a substantially still pool for agglomeration and settling and precipitation of said coagulated flocculant precipitate.

3,097,164
DRY CLEANING PROCESS
Sebough S. Shields, Cleveland Heights, Ohio, assignor to Noubar S. Abdalian and Robert V. Abdalian, Cleveland Heights, Ohio
Filed Jan. 29, 1960, Ser. No. 5,426
2 Claims. (Cl. 210—73)



1. In a cleaning system for dry cleaning in which cleaning operations are normally affected by circulating cleaning fluid from a sump to a filter tank and thence to a cleaning chamber and return, the process of reconditioning contaminated fluid comprising:

(*a*) periodically stopping the normal circulation of fluid for cleaning operations and allowing the system to stand idle for a period of time thereby collecting lighter contaminants in the fluid near the top of the tank and heavier contaminants in the fluid near the bottom of the tank;

(*b*) periodically establishing a flow pattern from the top of the tank to a solvent reconditioning structure to draw off fluid contaminated with the collected light

contaminants while the normal circulation was stopped;

(*c*) periodically establishing a flow pattern from the bottom of the tank to the reconditioning structure to draw off fluid contaminated with the collected heavier contaminants while the normal circulation was stopped;

(*d*) thereafter treating the contaminated fluid in the reconditioning structure to separate the cleaning fluid from contaminants and thereby recondition the fluid; and,

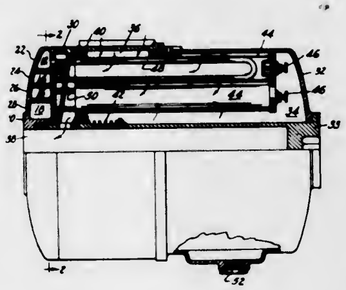
(*e*) thereafter delivering the reconditioned fluid to the sump.

3,097,165

FUEL FILTERING AND HEATER COMBINATION

Walter Kasten, Madison Heights, Mich., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware

Filed Oct. 26, 1959, Ser. No. 848,659
8 Claims. (Cl. 210—133)



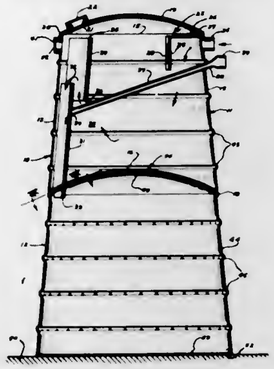
6. A fluid filtering and heater device comprising a housing having a first chamber formed therein communicating with a first inlet port for permitting ingress of a first fluid, a second chamber formed therein communicating with a first outlet port for permitting egress of said first fluid, a third chamber formed therein for communicating with a second inlet port and a second outlet port for permitting ingress and egress of a second fluid, partition means for separating said chambers from each other, means located in said third chamber and interposed between said second inlet and outlet ports for filtering the fluid flowing therebetween, said last named means including a pair of retainer plates and a plurality of porous filter tubes of good conductivity and of the outside-in type having the opposite ends thereof opening through said retainer plates, a plurality of hollow non-porous externally fluted members operatively connected to said housing, one of which is located within and in contact with a substantial portion of the length of each of said filter tubes for transferring heat thereto and to the second fluid flowing along said fluted members on the inside of said filter tubes to thereby prevent the formation of ice on the filter tubes and in the second fluid flowing through said filter tubes, said fluted members each having an open end and a closed end, means operatively connected to said housing and located within the hollow portion of each of said fluted members for forming two separated openings and a flow path therebetween, one of said openings communicating with said first chamber and the other of said openings communicating with said second chamber, and by-pass valve means interposed between the second inlet port and the downstream side of said filter tubes for permitting continued flow of said second fluid along the external surface of said fluted members under clogged filtering conditions.

3,097,166

SEWAGE DISPOSAL STRUCTURE

Arnold A. Monson, New Brighton, Minn. (4538 NE. 7th St., Minneapolis, Minn.)

Filed Feb. 1, 1960, Ser. No. 5,970
5 Claims. (Cl. 210—170)



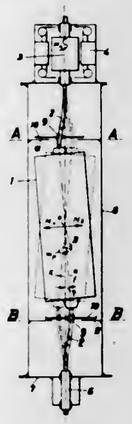
1. In a sewage disposal structure, a septic unit having an enclosing side wall, a bottom wall and top closure defining a sewage chamber, a raw sewage inlet communicating with said chamber adjacent the top of said side wall, an effluent passageway having its upper end within the chamber and adjacent the top thereof and extending downwardly to terminate exteriorly of the chamber adjacent the bottom thereof, and a waste water by-pass pipe extending exteriorly of said sewage chamber and passing therethrough for communicating with said effluent passageway intermediate its upper end and downward terminus, whereby waste water of low solid content may be by-passed directly to the effluent passageway without diluting the contents of the sewage chamber while bacterial action in the septic unit progresses.

3,097,167

DAMPING BEARING FOR THE SHAFTS OF A GAS CENTRIFUGE

Konrad Beyerle, 10 Bonsenstrasse, Gottingen, Germany

Filed Feb. 20, 1958, Ser. No. 716,332
Claims priority, application Germany Feb. 20, 1957
10 Claims. (Cl. 233—23)



1. In a gas centrifuge, a rotor, means for damping said rotor against precession movements superimposed by relatively faster vibrations of said rotor, a frame supporting said rotor, a hollow shaft disposed at and connected to each end face of said rotor, said means for damping including a bearing for each of said shafts, a closed housing filled with liquid for each of said bearings, a plurality of substantially radially disposed deformable members in said housing, the outer ends of said members being disposed in said housing and the inner ends of said members carrying said bearing substantially at the center of said housing, said deformable members permitting movement of said bearing in a plane disposed perpendicularly to the longitudinal axis of said shaft, said substantially radially disposed members defining with the inner face of said housing a plurality of liquid containing chambers, and conduits communicating between each pair of adjacent chambers for a flow of said liquid between said chambers during said precession movements of said rotor and damping said movements of the latter, throttled liquid feeding means connected to said chambers for feeding liquid to said chambers to replace liquid removed from said chambers by vibrations originating from the eccentricity of said rotor, said throttled feeding means feeding said liquid at such a slow rate that hollow spaces are created and extinguished, respectively, in said chambers according to the rhythm of said vibrations.

3,097,168

GELLING HYDROCARBON LIQUIDS

Daniel L. Gibson, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 8, 1960, Ser. No. 41,479
4 Claims. (Cl. 252—8.55)

1. The method of gelling a hydrocarbon liquid confined in a passageway, to render the hydrocarbon nonflowable and to impart to it the capacity of blocking and plugging the flow of liquid through the passageway, consisting essentially of intermixing with the hydrocarbon in the passageway abietyl amine and carbon disulfide in an amount of each sufficient to provide at least 1 part by volume of abietyl amine and at least 0.75 part by volume of carbon disulfide at a temperature between about 0° F. and 115° F.

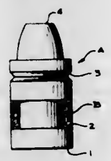
2. The method of effecting gelation in an oil-base well-treating fluid to control the fluid loss therefrom into a porous formation during treatment consisting essentially of injecting into said well-treating liquid at least about 1 part by volume of abietyl amine and at least about 0.75 part by volume of carbon disulfide to effect gelation of at least a portion of said well-treating fluid in the formation and thereby inhibiting loss of the well-treating fluid into the porous formation.

3,097,169

SOLID BULLET LUBRICANT

Leslie B. Hall, 817 Grand Ave., Long Beach 4, Calif.

Filed May 27, 1960, Ser. No. 32,483
1 Claim. (Cl. 252—23)



A lubricant for use in cleansing a small arms barrel when a bullet missile is fired therethrough and also imparts a mirror-like gloss to the interior surface of said barrel, said lubricant being capable of filling a circumferentially extending groove in said bullet missle, which lubricant is of sufficiently heavy consistency to permit a major portion of said lubricant to remain in said groove after said missile is fired through said small arms barrel, said lubricant comprising the following ingredients in parts by weight:

	Parts
Calcium base soap grease	2
Beeswax	3
Paraffin	4
Finely powdered mica	3
Colloidal graphite	¼
Common hoist oil	2

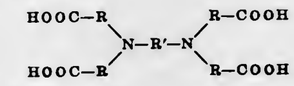
3,097,170

PHOSPHOSULFURIZED MATERIAL AND EXTREME PRESSURE LUBRICANT CONTAINING THE SAME

Howard J. Matson, Harvey, Ill., assignor to Sinclair Research, Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 5, 1962, Ser. No. 207,807
3 Claims. (Cl. 252—46.7)

1. A lubricating oil composition consisting essentially of a mineral lubricating base oil and a minor amount effective to improve the load carrying properties of the oil of an oil-soluble phosphosulfurized tetraester of an unsaturated aliphatic alcohol of from 4 to 22 carbon atoms and carboxylic acid said acid having a molecular structure of the formula:



wherein R is a divalent hydrocarbon radical of 1 to 5 carbon atoms and R' is a divalent hydrocarbon radical of 2 to 6 carbon atoms, said phosphosulfurized tetraester being the reaction product of said tetraester and about 1 to 10% by weight of a phosphosulfurizing phosphorus-sulfur compound.

3,097,171

MONO AMYL AND MONO BUTYL DI-HYDROGEN PHOSPHATE ADDITIVES FOR SYNTHETIC ESTER LUBRICANTS

George W. Eckert, Wappingers Falls, Howard V. Hess, Glenham, and Charles C. Towne, Fishkill, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 22, 1960, Ser. No. 37,862
3 Claims. (Cl. 252—49.8)

1. A synthetic aliphatic dicarboxylic acid aliphatic diester base lubricant containing from 0.1 to 5.0 volume percent of an alkyl acid phosphate selected from the group consisting of mono-amyl di-hydrogen phosphate, monobutyl di-hydrogen phosphate and mixtures thereof.

3,097,172

RADIATION SENSITIVE GLASS

Robert Joseph Ginther, 5507 Myrtle Ave., Temple Hills, Md.

No Drawing. Filed Jan. 31, 1961, Ser. No. 86,255
3 Claims. (Cl. 252—301.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A colorless and transparent glass containing trivalent cerium and scintillating in response to gamma rays and neutrons, said glass consisting essentially of from about 11.5 to 30.5 mole percent lithium oxide, from about 2 to 15 mole percent alumina, from about 0.3 to 2 mole percent cerous oxide and from about 62 to 80 mole percent silica.

3,097,173

PROCESS OF PREPARING EMULSIONS USING POLYETHERTHIOETHER EMULSIFIERS

Hanswilli v. Brachel and Heinz Esser, Cologne-Sulz, Hans Holtschmidt, Cologne-Stammheim, and Gustav Sinn, Bergisch-Neukirchen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 26, 1958, Ser. No. 757,213
Claims priority, application Germany Aug. 30, 1957
5 Claims. (Cl. 252—311.5)

1. In a process for the preparation of an aqueous emulsion, the improvement which consists of employing as an emulsifying agent a polyether-polythioether obtained by heating a dihydroxyalkyl thioether and a member of the group consisting of polyethylene glycols, oxyethylated monohydric alcohols and oxethylated polyhydric alcohols in the presence of dehydrating catalysts, said polyether-polythioether containing more than two thioether groups and being employed in an amount of 0.5–10% by weight based on the weight of the emulsion.

3,097,174

STORAGE-STABLE CATIONIC BITUMINOUS EMULSIONS

Edward W. Mertens, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Aug. 21, 1959, Ser. No. 835,191
5 Claims. (Cl. 252—311.5)

1. A cationic oil-in-water type bituminous emulsion, consisting essentially of from about 50 to about 75% by weight of asphalt, as the disperse bituminous phase; from about 50 to about 25% by weight of water, as the continuous aqueous phase; and, as the emulsifier for said asphalt in said water, from about 0.1 to about 2.0% by weight of a salt of a low molecular weight C_1–C_7 monocarboxylic acid and a tetraethylene pentamine amide of tall oil acids from the group consisting of monotalloyl and ditalloyl amides of tetraethylene pentamine, said amides being characterized by the presence of from 3 to 4 basic nitrogen atoms reactive with carboxylic acids and said emulsion being characterized by stability in storage at temperatures from about 120 to about 160° F. and by the absence of settlement of the asphalt, when so stored for at least two weeks.

3,097,175

STABLE SILICA-CLAD THORIA SOLS AND THEIR PREPARATION

Wayne T. Barrett, Arnold, Moisés G. Sañchez, Glen Burnie, and Milton C. Vanik, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 31, 1957, Ser. No. 693,511
14 Claims. (Cl. 252—313)

1. A hydrothermally stable silica-clad thoria sol consisting essentially of an alkaline aqueous dispersion of 10% to 60% thoria particles having a surface layer of silica in sufficient amount to impart to said particles a negative charge as measured by the electrophoretic method and containing a sufficient quantity of alkali metal hydroxide to give a solution pH of 7.0–10.0.

8. The method of preparing a thermally stable silica-clad thoria sol comprising the steps of rapidly mixing an aqueous thoria sol at a concentration below about 10% with an active aqueous silica sol in sufficient quantity to change the electrical charge on the thoria particles as measured by the electrophoretic method from positive to negative, adding sufficient soluble alkali metal hydroxide to give a solution pH of 7.0–11.0, and thereafter concentrating said sol.

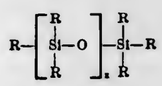
3,097,176

PREPARATION OF ELASTOMERIC CELLULAR POLYURETHANE

Newell R. Bender, Cuyahoga Falls, and Theodore R. Ten Broeck, Hudson, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 22, 1957, Ser. No. 635,093
4 Claims. (Cl. 260—2.5)

1. A method for preparing flexible elastomeric cellular materials which comprises heating a polypropylene ether glycol having an average molecular weight of from 1500 to 3200 with from 3.0 to 6.0 mols of an organic polyisocyanate per mol of said glycol to produce a prepolymer having a viscosity at room temperature of from 2,000 to 50,000 centipoises, adding to and mixing with 100 parts by weight of said prepolymer (A) from 0.7 to 6.5 parts by weight of water (B) from 0.1 to 3.0 parts by weight of a tertiary amine and (C) from 0.25 to 1.5 parts by weight of silicone oil and permitting the complete reaction mixture to expand and cure, said silicone oil being defined by the formula



in which R is selected from the group consisting of methyl and ethyl and x is an integer representing the number of units in the molecular chain, said silicone oil having a viscosity of from 10 to 1,000 centistokes as measured at 25° C.

3,097,177

LIGNOCELLULOSE MOLDING COMPOSITIONS

Ralph Waldo Emerson, Jackson, Miss., assignor to Emerite Corporation, Jackson, Miss., a corporation of Delaware

No Drawing. Filed Mar. 10, 1958, Ser. No. 720,016
4 Claims. (Cl. 260—17.3)

1. A composition of matter capable of being molded into objects comprising a mixture of a major part of a lignocellulose material, together with about 0.4–11% by weight of urea, about 0.4–16% by weight of furfural, about 0.5–10% by weight of lignin, under acidic conditions, said proportions being based on the weight of the dry lignocellulosic material in which a tempering composition comprising a petroleum residue resin, a drying oil, and an oxidizing catalyst is also incorporated into the mixture.

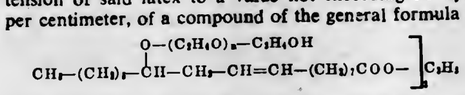
3,097,178

VINYLIDENE CHLORIDE COPOLYMER LATEX CONTAINING OXYETHYLATED CASTOR OIL

Harold J. Townsend, Saginaw, and Dallas G. Grenley, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,777
13 Claims. (Cl. 260—23)

1. A method for the preparation of a synthetic resinous copolymer latex having low foaming characteristics and adapted to the deposition of a continuous film therefrom comprising copolymerizing in a redox catalyzed emulsion polymerization system of low emulsifier content a polymerizable mixture of from about 60 to about 94 weight percent of vinylidene chloride and from about 40 to about 6 weight percent of at least one other ethylenically unsaturated material that is copolymerizable therewith to form a latex having a surface tension not substantially lower than about 68 dynes per centimeter, and adding to the resulting latex from about 0.2 to about 5.0 parts by weight, on the basis of 100 parts by weight of the copolymer contained in the latex, to reduce the surface tension of said latex to a value not exceeding 50 dynes per centimeter, of a compound of the general formula



wherein n has a numerical value of from 16 to 62.

3,097,179

ASPHALT-AMINE STABILIZED RUBBER FOR THE PAVING OF GROUNDS AND ITS METHOD OF MANUFACTURE

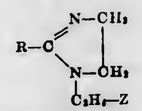
Marcel Ceintrey, Paris, France, assignor to Societe Chimique et Routiere de la Gironde, Paris, France, a corporation of France

No Drawing. Filed Oct. 15, 1958, Ser. No. 767,268
Claims priority, application France Oct. 24, 1957
8 Claims. (Cl. 260—28.5)

1. Binder for paving grounds, comprising an aqueous emulsion having a pH of about 1.5 to about 5 and containing a stabilized hydrocarbon rubber latex and a hydrocarbon binder selected from the group consisting of asphalts, tar and asphalt mixtures and cut-back asphalts, said latex and said hydrocarbon binder being dispersed in said emulsion by means of a cationic emulsifying agent consisting of at least one amine containing a hydrocarbon radical with at least 12 carbon atoms substantially neutralized by an acid, said rubber latex being stabilized by a member selected from the group consisting of (A) the amines satisfying the following formulae:



and



wherein R is a hydrocarbon radical having 12 to 18 carbon atoms and Z is a member selected from the group consisting of $—NH_2$, —OH and $—NH—CH_2OH$; (B) the non-ionic emulsifying agents selected from the group consisting of the polyoxyethylene derivatives of alcohols, acids, ethers, phenols, amides and amines, and (C) the amino-acids derived from the hydrolysis of proteins.

3,097,180

HEAT TREATMENT OF A BLEND OF BUTADIENE-ACRYLONITRILE COPOLYMER AND VINYL CHLORIDE POLYMER LATICES AND RESULTING COALESCED LATEX PRODUCT

Harry W. Tausch, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed May 3, 1960, Ser. No. 26,415
5 Claims. (Cl. 260—29.7)

1. A latex composition comprising particles of a conjugated diene-acrylonitrile rubbery copolymer intimately coalesced with particles of vinyl chloride resin as a result of heating the composition in latex form at about 250° F. to about 350° F.

3,097,181

COMPOSITION COMPRISING POLYPYRROLIDONE AND ANOTHER POLYAMIDE

Samuel A. Glickman, Easton, Edgar S. Miller, Bethlehem, and Max E. Chiddix, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 24, 1959, Ser. No. 855,030
5 Claims. (Cl. 260—42)

1. A composition of matter comprising polypyrrolidone and a polyamide selected from the group consisting of polyhexamethylene adipamide and polyepsilon-caprolactam, the said polypyrrolidone and polyamide being present in the weight ratio of 1:20 to 100:1.

3,097,182

COMPOSITION COMPRISING HALOGENATED BUTYL RUBBER AND A THIOALDEHYDE TRIMER

Delmer L. Cottle, Highland Park, and Leon S. Minckler, Jr., Metuchen, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,180
8 Claims. (Cl. 260—43)

1. A composition comprising a halogenated rubbery copolymer of about 85 to 99.5 wt. percent of a C_4 to C_8 isoolefin and about 15 to 0.5 wt. percent of a C_4 to C_{14} multiolefin, and 0.1 to 20 wt. percent, based on copolymer, of a thioaldehyde trimer.

5. The composition of claim 1 which additionally contains a minor proportion of nonylphenol and paraformaldehyde.

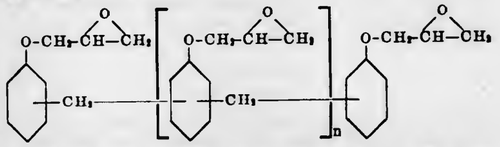
3,097,183

COATING COMPOSITIONS OF EPOXY NOVOLAC RESINS, AMINO RESINS AND ACID ESTERS OF DIETHYLENE GLYCOL AND DIBASIC CARBOXYLIC ACIDS

Richard B. Drubel and Francis J. Buege, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,306
9 Claims. (Cl. 260—44)

1. A coating composition comprising a liquid solution of essential ingredients consisting of (A) from 28 to 51 percent by weight of an epoxy novolac resin having the general formula:



wherein n in an average number from 1 to 1.5, (B) from 22 to 53 percent by weight of an acid ester resulting from the reaction of one gram molecular proportion of diethylene glycol with two gram molecular proportions of an anhydride of a dicarboxylic acid selected from the group consisting of maleic anhydride and mixtures of at least 20 mole percent of maleic anhydride and not more than 80 percent of phthalic anhydride, and (C) from 15 to 44 percent by weight of an amino resin selected from the group consisting of ureaformaldehyde resins, melamine formaldehyde resins and alkylated urea-formaldehyde and melamine-formaldehyde resins, wherein the alkyl radical contains from 1 to 8 carbon atoms, said ingredients (A), (B) and (C) being dissolved in an organic solvent to form a solution containing from 50 to 80 percent by weight of the ingredients.

3,097,184

MODIFIED, PHOSPHORUS-CONTAINING POLYESTER RESINS AND PROCESS FOR PREPARING SAME

Claus Heuck, Hofheim, Taunus, Fritz Rochlitz and Heinz Schmidt, Frankfurt am Main, and Herbert Vilcsek and Jakob Winter, Hofheim, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed May 26, 1959, Ser. No. 815,823
Claims priority, application Germany May 31, 1958
12 Claims. (Cl. 260—45.4)

1. A method of making self-extinguishing phosphorus-containing artificial resins which comprises copolymeriz-

ing, in the presence of a catalyst promoting polymerization, (A) at least one low molecular weight compound containing activated double bonds in an unsaturated group selected from the group consisting of vinyl, allyl, and methallyl groups, and (B) at least one unsaturated polyester containing phosphorus incorporated into the molecule by ester linkages, said polyester being obtained by reacting (i) at least one member selected from the group consisting of dihalides of phosphoric acid monoesters and dihalides of phosphorous acid monoesters with (ii) a carboxylic acid component consisting of up to 20 mol percent of monocarboxylic acids, the balance being polycarboxylic acids, and (iii) an alcohol component consisting of up to 30 mol percent of monohydric alcohols, the balance being polyhydric alcohols, whereby a polyester containing phosphorus incorporated into the molecule by ester linkages is formed, said carboxylic acid component and alcohol component being such that the resulting polyester contains at least 5 mol percent of a member selected from the group consisting of α,β-unsaturated carboxylic acids and alcohols having an allylic unsaturation condensed thereinto.

3,097,185

GRAFT COPOLYMERS COMPRISED OF CERTAIN ACRYLAMIDE AND METHACRYLAMIDE MONOMERS ON POLYVINYLLACTAMS AND IMPROVED ACRYLONITRILE POLYMER COMPOSITIONS OBTAINABLE THEREWITH

Ardy Armen, Denbigh, Va., and Forrest A. Ehlers, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed July 29, 1958, Ser. No. 751,733
17 Claims. (Cl. 260—45.5)

1. Graft copolymer consisting of between about 2 and 50 weight percent of (*a*) an acrylamide monomer of the general formula:

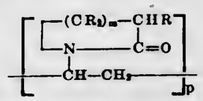
$$CH_2{=}CZCONQ_2 \qquad (I)$$

wherein Z is selected from the group consisting of hydrogen and methyl and Q is selected from the group consisting of hydrogen, methyl and ethyl; and (*b*) from about 98 to 50 weight percent of a N-vinyl lactam polymer.

8. Composition comprising a major proportion of at least about 80 percent by weight, based on the weight of the composition, of (A) a polymerized ethylenically unsaturated monomeric material containing at least about 80 percent by weight of polymerized acrylonitrile and (B) a minor proportion of up to about 20 percent by weight, based on the weight of the composition, of a graft copolymer consisting of (*a*) a monomer of the formula:

$$CH_2{=}CZCONQ_2 \qquad (I)$$

wherein Z is selected from the group consisting of hydrogen and methyl and Q is selected from the group consisting of hydrogen, methyl and ethyl; and (*b*) a N-vinyl lactam polymer of the formula:



(II)

in which each R is independently selected from the group consisting of hydrogen, methyl and ethyl, *m* is an integer from 2 to 4 and *p* has a numerical value from about 300 to about 3200; said graft copolymer containing in its molecular structure between about 2 and 50 percent by weight of said monomer upon from about 98 to 50 percent by weight of said N-vinyl lactam polymer.

3,097,186

GRAFT COPOLYMER OF A MONOVINYL AROMATIC HYDROCARBON AND A COPOLYMER OF BUTADIENE AND ISOPROPENYLBIPHENYL OR VINYLBIPHENYL

Ray W. Kent, Jr., and Frank H. Bolton, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,428
4 Claims. (Cl. 260—45.5)

1. A composition of matter consisting essentially of an interpolymer of (1) from 92 to 98.5 percent by weight of a monovinyl aromatic hydrocarbon of the benzene series having the vinyl radical directly attached to a carbon atom of the benzene nucleus and containing from 8 to 10 carbon atoms in the molecule, and (2) from 8 to 1.5 percent by weight of a rubbery copolymer of from 50 to 80 percent by weight of butadiene and from 50 to 20 percent by weight of a monomer selected from the group consisting of isopropenylbiphenyl and vinylbiphenyl.

3,097,187

CHLORINATED PYROLYSIS OIL

John M. Merserean, Cheshire, and Paul J. Mester, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 8, 1961, Ser. No. 150,891
7 Claims. (Cl. 260—45.7)

1. A composition of matter comprising the product of chlorination of pyrolysis oil, said oil being obtained by the destructive distillation of vulcanized rubber, said rubber consisting of from about 40 to about 60 percent by weight of natural rubber and, correspondingly, from about 60 to about 40 percent by welght of butadiene-styrene copolymer rubber, and said product having a chlorine content of from about 30% to about 65% by weight, based on the weight of said product.

3. A butyl rubber vulcanizate comprising (1) the rubbery copolymer obtained from the copolymerization of from about 90 to 99.5 parts of an isoolefin having from 4 to 7 carbon atoms with, correspondingly, from about 10 to 0.5 parts of a conjugated diolefin having from 4 to 8 carbon atoms, and (2) from about 0.5 to about 4 parts of the composition of claim 1 per 100 parts of said copolymer.

3,097,188

HEAT STABLE POLYMERS

Alvin R. Ingram, Murrysville, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Sept. 12, 1961, Ser. No. 137,530
4 Claims. (Cl. 260—45.95)

1. A heat stable flame retardant polystyrene composition comprising polystyrene which has been brominated in an amount sufficient to render it flame retardant, said polystyrene having admixed therewith at least 0.25% by weight of said composition of an alkynol selected from the group consisting of 3-phenyl-1-butynol-3; 3,6-dimethyl--4-octyn-3,6-diol; 4,7-dimethyl-5-decyn - 4,7 - diol; and 5,8-dimethyl-6-dodecyn-5,8-diol.

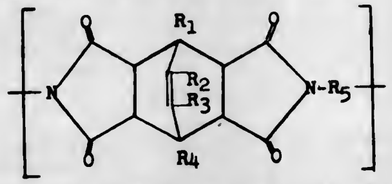
3,097,189

DIELS-ALDER POLYMERS CURED WITH ORGANIC PEROXIDES

Bernard O. Baum, Plainfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,605
10 Claims. (Cl. 260—65)

1. Method for preparing thermoset Diels-Alder polymers having improved stress-cracking resistance which comprises intimately blending together a thermoplastic Diels-Alder polymer having the repeating unit



wherein R_1, R_2, R_3 and R_4 are each selected from the group consisting of hydrogen, halogen and hydrocarbons and R_5 is a divalent hydrocarbon, and from 0.25% to 25% by weight based on the polymer of an organic peroxide and curing the mixture.

3,097,190

N,N,N',N' - TETRAALKYL ALKYLENE DIAMINE INITIATORS FOR THE POLYMERIZATION OF FORMALDEHYDE

Henri Sidi, Paramus, and Roy T. Gottesman, Glen Rock, N.J., assignors to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 9, 1961, Ser. No. 88,008
9 Claims. (Cl. 260—67)

1. A process for the production of high molecular weight polyoxymethylene which comprises contacting substantially anhydrous monomeric formaldehyde at a temperature in the range of approximately −100° C. to 80° C. with a polymerization initiator which is an N,N,N',N'-tetraalkyl alkylene diamine, said polymerization initiator being present in the amount of 0.00001 part to 0.05 part by weight per part by weight of said formaldehyde.

3,097,191

POLYISOCYANATE COMPOSITIONS

Harold France and Arnold Lister, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Mar. 27, 1958, Ser. No. 724,237
Claims priority, application Great Britain Mar. 29, 1957
4 Claims. (Cl. 260—77.5)

1. A liquid polyisocyanate composition obtained by phosgenating a polyamine composition, said polyamine composition being the product obtained by condensing formaldehyde with at least two moles of mixed aromatic amines selected from the group of aromatic amine mixtures consisting of (*a*) aniline and o-toluidine, (*b*) aniline and o-chloroaniline and (*c*) aniline, o-toluidine and m-tolylenediamine, the proportions of the amines in said mixtures being such that of the total amines converted into polyisocyanates, not more than 80% by molecular proportions consists of any single amine, the boiling point at low pressure of said polyamine composition being in the range of about 166° C. at 0.1 mm. to 230° C. at 0.2 mm.

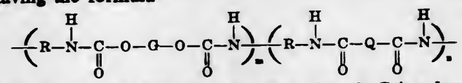
3,097,192

ELASTIC FILAMENTS FROM POLYESTER-URETHANE-UREA POLYMERS

Roberta J. Schillt, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 9, 1958, Ser. No. 707,861
12 Claims. (Cl. 260—75)

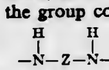
1. An elastic fiber having a tensile recovery of at least 90%, a stress decay below about 20%, and an essentially linear polymeric structure being provided by a linear segmented polyester-urethane-urea polymer having a polymer melt temperature above about 150° C. and substantially complete solubility at a concentration of 0.5% in m-cresol at 20° C., said segmented polymer consisting essentially of a plurality of intralinear structural units having the formula



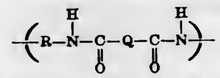
wherein *m* and *n* are integers greater than 0, G is a long-chain linear polymeric radical free from substituents reactive with an isocyanate and having recurring ester linkages of the formula



in the polymer chain, said radical G having a structure such that a hydroxyl-terminated polyester of the formula HO—G—OH has a melting point below about 60° C. and a molecular weight above about 600, R is a symmetrical aromatic radical selected from the group consisting of para-positioned phenylene, biphenylene, and alkylene diphenyl radicals, and Q is a bivalent organic radical selected from the group consisting of the formula



and a piperazino radical wherein Z is a radical selected from the group consisting of alkylene, cyclohexylene, aralkylene, alkarylene and arylene radicals, said arylene radicals being free from fused rings and each of said radicals Z being free from substituents reactive with an isocyanate, the radicals R and Q being so selected that the structure



represents a repeating unit of a linear urea polymer having a melting point above 200° C. in the molecular weight range above about 10,000, from about 60% to about 90% by weight of said segmented polymer being provided by said radical G.

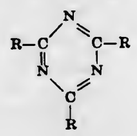
3,097,193

METHOD OF CURING POLYMERIC MATERIALS AND PRODUCT THEREOF

Jerry T. Gruver, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

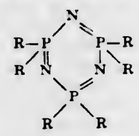
No Drawing. Filed Sept. 8, 1960, Ser. No. 54,583
23 Claims. (Cl. 260—85.1)

1. A process which comprises reacting a polymeric material selected from the group consisting of natural rubber, synthetic polymers of monomers containing a vinylidene group and synthetic polymers having the formula AY_n wherein A comprises a polymer of monomers containing a vinylidene group, Y is a terminally reactive group and *n* is an integer of at least 2, with an organic peroxide and a reactant material selected from the group consisting of compounds having the formula



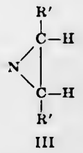
I

and compounds having the formula



II

wherein R is a radical selected from the group consisting of a 1-aziridinyl radical which can be represented by the formula



III

hydrogen, an alkyl, cycloalkyl, aryl, aralkyl, and alkaryl radical, each hydrocarbon radical containing from 1 to 12 carbon atoms, and the R′ radicals are selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, aralkyl and alkaryl radicals, the R's in each aziridinyl radical containing up to and including a total of 20 carbon atoms, at least three of the R groups of Formulas I and II being 1-aziridinyl radicals, said reactant material and said organic peroxide being present in amounts sufficient to effect a substantial curing of said polymeric material.

3,097,194

PROCESS FOR PREPARING PHOSPHORYLATED ELASTOMERIC COPOLYMERS OF ETHYLENE AND PROPYLENE

Edward C. Leonard, Jr., Plainfield, and William L. Wheelwright, North Plainfield, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,737
7 Claims. (Cl. 260—88.2)

1. A process for preparing elastomeric phosphorylated ethylene-propylene copolymers containing between about 35 percent to 80 percent propylene polymerized therein and being substantially free of low molecular weight polymeric oils, whrich includes the steps of copolymerizing ethylene and propylene monomers in a molar ratio of from about 0.5 mole to about 5.0 moles of propylene per mole of ethylene by contacting said monomers with a catalyst system consisting essentially of a trialkyl aluminum compound and a transition metal trihalide selected from the group of vanadium trichloride and purple crystalline titanium trichloride in which the said trialkyl aluminum compound is present in amounts from about 1 to 10 moles per mole of said transition metal trihalide, in an inert non-polar solvent for a time sufficient to form an ethylene-propylene copolymer, thereafter adding to the resulting mixture, oxygen and water in amounts sufficient to convert the aluminum and transition metal to the corresponding metal oxide, said water being employed in at least a stoichiometric amount and no greater than about 5 times the stoichiometric amount calculated to convert all hydrolyzable components of said catalyst system to the metal oxide, and thereafter phosphorylating the mixture by adding phosphorus trichloride to the mixture and contacting oxygen with the thus formed mixture until the copolymer contains more than about 0.5 percent phosphorus as phosphonyl dichloride groups.

3,097,195

POLYMERIZATION OF ACETYLENE COMPOUNDS

George W. Kennerly, Darien, David S. Hoffenberg, Stamford, and George C. Gleckler, Springdale, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 16, 1960, Ser. No. 76,128
13 Claims. (Cl. 260—94.1)

1. The method of polymerizing a polymerizable material selected from the group consisting of (1) acetylene and (2) mixtures of (*a*) acetylene and (*b*) at least one other unsaturated organic material which is copolymerizable with acetylene and contains at least one double bond, said polymerization being carried out at a temperature of at least about 40° C. in an inert organic liquid medium with the aid of a polymerization catalyst system consisting solely of both (*a*) at least one salt of the group consisting of nickel salts and cobalt salts, and (*b*) at least one substance of the group consisting of the alkali metals and the alkali-metal acetylides.

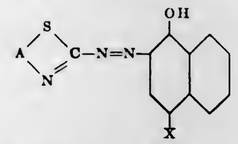
3,097,196

Ni COMPLEXES OF MONOAZO COMPOUNDS PREPARED FROM A BENZOTHIAZOLE COMPOUND AND AN α-NAPHTHOL COMPOUND

James M. Straley and John G. Fisher, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,226
6 Claims. (Cl. 260—146)

1. The nickel complex of the monoazo compounds having the formula:



wherein Ar represents an ortho-arylene radical of the benzene series devoid of a water-solubilizing group, and X stands for a member selected from the group consisting of a methyl radical and a lower alkoxy radical.

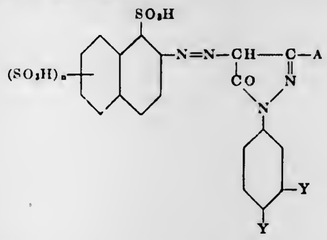
3,097,197

1-(DIHALOGEN-TRIAZINYLAMINOPHENYL)-4-(β-NAPHTHYLAZO)PYRAZOLONE DYESTUFFS

Colin George Tilley and Frederick Andrew Waite, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Nov. 6, 1959, Ser. No. 851,223
Claims priority, application Great Britain Nov. 14, 1958
1 Claim. (Cl. 260—153)

Azo dyestuffs which, in the form of the free acids, are represented by the formula:

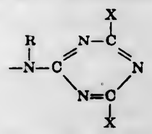


wherein:

n represents one of the numbers 0, 1, and 2;

A represents a member selected from the group consisting of lower alkyl, carboxyl, carbo lower alkoxy, carbamyl, lower alkyl carbamyl;

one Y represents a member selected from the group consisting of hydrogen and —SO_3H, and the other Y represents a group of the formula:



wherein:

R represents a member selected from the group consisting of hydrogen and lower alkyl;

X represents a halogen atom selected from the group consisting of chlorine and bromine.

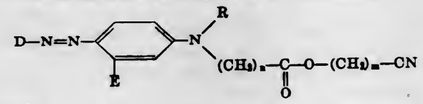
3,097,198

AZO DYESTUFFS

Brian Ribbons Fishwick and James Wardleworth, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Jan. 29, 1960, Ser. No. 5,378
Claims priority, application Great Britain Feb. 10, 1959
4 Claims. (Cl. 260—207.1)

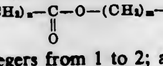
1. Water-insoluble azo dyestuffs of the formula:



wherein

D is a member selected from the class consisting of benzene, thiazole, and benzthiazole radicals carrying at least one of the substituents selected from the class consisting of nitro, cyano, thiocyano, methylsulfonyl, trifluoromethyl, and chlorine;

R stands for a member selected from the class consisting of lower alkyl, and cyano-, acetoxy-, methoxy-, and carbo(lower alkoxy)- lower alkyl, and benzyl, and the grouping



m and *n* are integers from 1 to 2; and E is a member selected from the class consisting of hydrogen, lower alkyl, and chlorine.

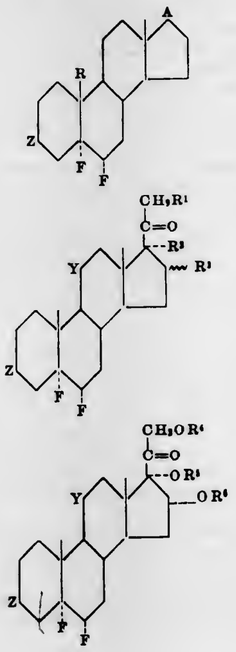
3,097,199

PROCESS FOR THE PREPARATION OF 5α,6α-DIFLUORO STEROIDS

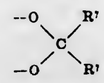
Albert Bowers, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Jan. 19, 1961, Ser. No. 83,630
Claims priority, application Mexico Jan. 19, 1960
26 Claims. (Cl. 260—235.55)

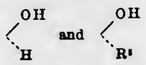
1. A process for the preparation of 5α,6α-difluoro steroids selected from the group consisting of the following formulas:



wherein R and R^3 are selected from the group consisting of hydrogen and methyl, R^1 and R^2 are selected from the group consisting of hydrogen, hydroxyl and a hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms, R^4, R^5 and R^6 are selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms, R^5 and R^6 together with the oxygen function represent the grouping

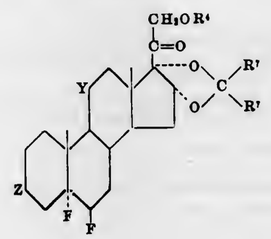


wherein R^7 is selected from the group consisting of hydrogen and an aliphatic hydrocarbon radical of less than 8 carbon atoms, Y is selected from the group consisting of hydrogen, keto and β-hydroxyl; Z is selected from the group consisting of keto and β-hydroxy, and A is selected from the group consisting of keto



wherein R^8 represents an aliphatic hydrocarbon radical containing up to 8 carbon atoms, comprising reacting the corresponding Δ^5-3β-hydroxy compound with anhydrous hydrogen fluoride and a metallic reagent selected from the group consisting of lead tetraacetate, lead dioxide, osmium tetroxide and cobaltic oxide.

23. A compound of the following formula:



wherein R^4 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl radical of less than 12 carbon atoms; R^7 is selected from the group consisting of hydrogen and an aliphatic hydrocarbon of less than eight carbon atoms; Y is selected from the group consisting of hydrogen, keto and hydroxy and Z is selected from the group consisting of keto and β-hydroxy.

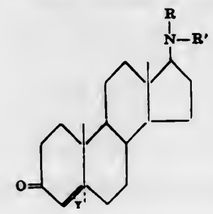
3,097,200

17-AMINOANDROSTANES

Fred A. Kincl, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Jan. 3, 1962, Ser. No. 164,184
14 Claims. (Cl. 260—239.5)

1. A compound of the following formula:



wherein Y is selected from the group consisting of a double bond and a saturated linkage between C–4 and C–5; R is a member of the group consisting of hydrogen and lower alkyl; R^1 is selected from the group consisting of an aryl group and an aralkyl group, each containing up to 10 carbon atoms and R and R^1 together with the nitrogen atom form a heterocyclic radical selected from the group consisting of pyrrolidino, piperidino, morpholino and piperazino.

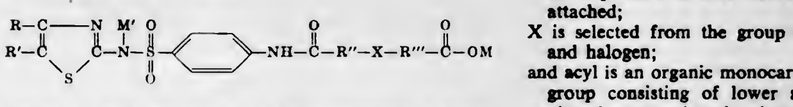
3,097,201

SUBSTITUTED SULFATHIAZOLES

Ferdinand B. Zienty, Warson Woods, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delawure

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,964
7 Claims. (Cl. 260—239.95)

1. Compounds of the structure:



wherein X is selected from the group consisting of sulfur and oxygen; wherein R and R′ are each selected from the group of hydrogen and alkyl radicals having up to four (4) carbon atoms, wherein R″ and R‴ are alkylene radicals having up to four (4) carbon atoms, wherein M and M′ are selected from the group consisting of hydrogen, alkali metal atoms, the ammonium radical and half of an alkaline earth metal atom.

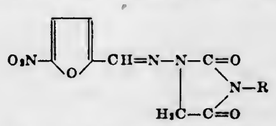
3,097,202

3-[ACETONYL; HYDROXYETHYL; AND 2-(4-PYRIDYL) - ETHYL] - 1 - (5 - NITROFURFURYLIDENEAMINO) HYDANTOIN

Julian Getz Michels, Norwich, N.Y., assignor to The Norwich Pharmacal Company, a corporation of New York

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,315
4 Claims. (Cl. 260—240)

1. A compound having chemotherapeutic activity upon oral administration and represented by the formula:



in which R represents a member of the group consisting of acetonyl, hydroxyethyl and 2-(4-pyridyl)ethyl.

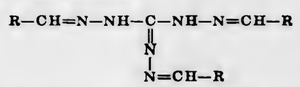
3,097,203

TRIS-PYRIDYL HYDRAZONE DERIVATIVES OF TRIAMINO-GUANIDINE

Siegfried Petersen, Leverkusen, Konrad Swinckicki, Cologne-Stammheim, and Wolfgang Wirth, Wuppertal-Elberfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 22, 1961, Ser. No. 97,432
Claims priority, application Germany Mar. 25, 1960
4 Claims. (Cl. 260—240)

1. A member selected from the group consisting of a compound of the formula:



wherein R is pyridyl, and non-toxic acid-addition salts thereof.

3,097,204

DERIVATIVES OF BENZOTHIADIAZINE-1,1-DIOXIDE COMPOUNDS

Frederick C. Novello, Berwyn, and James M. Sprague, Gwynedd Valley, Pa., assignors to Merck & Co. Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,654
10 Claims. (Cl. 260—243)

1. A compound selected from the group consisting of 3 - R^3 - 5 - X - 6 - R^1 - 7 - (acylsulfamyl) - 1,2,4 - benzothiadiazine-1,1-dioxide and 3-R^3-5-X-6-R^1-7-(acylsulfamyl) - 3,4 - dihydro - 1,2,4 - benzothiadiazine - 1,1 - dioxide, wherein in each of the foregoing compounds

R^1 is selected from the group consisting of halogen, lower-alkyl, lower alkoxy and nitro;

R^3 is selected from the group consisting of hydrogen, lower-alkyl, halo lower-alkyl, phenyl, benzyl, and pentamethylene which forms a cyclohexyl ring with the 3-position nuclear carbon atom to which it is attached;

X is selected from the group consisting of hydrogen and halogen;

and acyl is an organic monocarbonyl selected from the group consisting of lower aliphatic-monocarbonyl, phenyl-monocarbonyl, phenyl - lower - alkyl - monocarbonyl, thiophene-monocarbonyl, and pyridine-monocarbonyl.

3,097,205

2-(ALKOXY OR ARYLOXY)-4-ARYLAMINO-6-(H—)-1,3,5-TRIAZINES

Royal A. Cutler, Sand Lake, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application Mar. 14, 1960, Ser. No. 14,550. Divided and this application Oct. 18, 1960, Ser. No. 69,787
3 Claims. (Cl. 260—249.5)

1. 2-(lower alkoxy)-4-(lower alklymercaptophenylamino)-6-(H—)1,3,5-triazine.

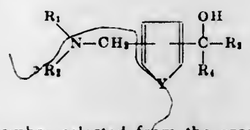
3,097,206

AMINOMETHYLTHIENYL AND FURYL ALCOHOL DERIVATIVES

Charles L. Zirkle, Berwyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 19, 1962, Ser. No. 180,857
13 Claims. (Cl. 260—268)

1. A compound selected from the group consisting of a free base, its nontoxic, pharmaceutically acceptable acid addition salts and its nontoxic, pharmaceutically acceptable quaternary ammonium salts, said free base having the formula:



in which:

Y is a member selected from the group consisting of S and O;

R_1 and R_2 are members selected from the group consisting of lower alkyl, hydrogen, cycloalkyl and, when taken together with the nitrogen atom to which they are attached, piperidinyl, pyrrolidinyl, morpholinyl, thiomorpholinyl and N-lower alkyl-piperazinyl, said lower alkyl and cycloalkyl groups having from 1–6 carbon atoms;

R_3 is a member selected from the group consisting of phenyl, α-furyl, α-thienyl and alkyl and cycloalkyl having from 1–8 carbon atoms and;

R_4 is a member selected from the group consisting of phenyl and, when identical with R_3, α-furyl and α-thienyl.

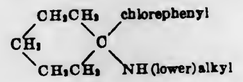
3,097,207

1-HALOPHENYL AND 1-ALKOXYPHENYL CYCLOHEXYLAMINES

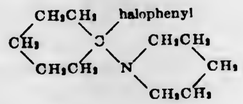
V. Harold Maddox, Huntington Woods, and Erik F. Godefrol, Harper Woods, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Mar. 6, 1958, Ser. No. 719,500
10 Claims. (Cl. 260—293)

1. A compound of the formula



5. A compound of the formula



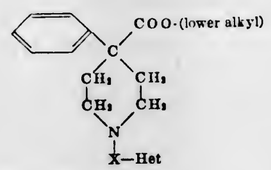
3,097,208

LOWER ALKYL 4-PHENYL-1-[(AROMATIC N-HETERYL)-ALIPHATIC]PIPERIDINE - 4 - CARBOXYLATES AND THEIR SYNTHESIS

Bill Elpern, Walnut Creek, Calif., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

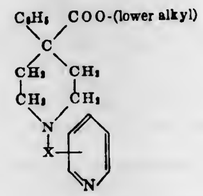
No Drawing. Filed Sept. 12, 1955, Ser. No. 533,891
9 Claims. (Cl. 260—294.3)

1. A composition of matter selected from the group consisting of a compound having the formula



where X is a lower divalent aliphatic hydrocarbon radical and Het is a monocyclic aromatic nitrogen-containing heteryl radical having five to six ring atoms selected from the group containing of pyridyl, pyrimidyl, thiazolyl, oxazolyl and pyridazyl radicals which are attached to the aliphatic hydrocarbon radical X through one of their ring-carbon atoms; and its acid addition salts.

2. A lower alkyl 4-phenyl-1-(pyridyl-aliphatic)piperidine-4-carboxylate having the formula



where X is a lower divalent aliphatic hydrocarbon radical.

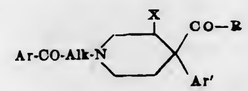
3,097,209

1-AROYALKYL-4-ARYLPIPERIDINE-CARBOXAMIDES

Paul A. J. Janssen, Vosselaar, near Turnhout, Belgium, assignor to Research Laboratorium Dr. C. Janssen, N.V., Beerse, Belgium, a company of Belgium

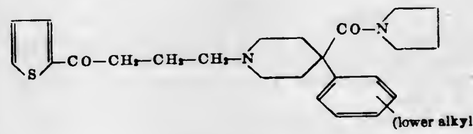
No Drawing. Filed Mar. 14, 1960, Ser. No. 14,570
16 Claims. (Cl. 260—293.4)

1. A compound of the formula



wherein Alk is a lower alkylene radical of at least 3 carbon atoms; Ar is a member of the class consisting of phenyl, lower alkylphenyl, xylyl, halophenyl, methoxyphenyl, and thienyl; Ar′ is a member of the class consisting of phenyl, lower alkylphenyl, xylyl, halophenyl, methoxyphenyl, and trifluoromethylphenyl; R is a member of the class consisting of NH_2, NH-(lower alkyl), N(lower alkyl)$_2$, anilino, N(CH_3)-phenyl, benzylamino, pyrrolidino, piperidino, morpholino, methylmorpholino, dimethylmorpholino, piperazino, and phenylpiperazino; and X is a member of the class consisting of hydrogen and methyl radicals.

13. A compound of the formula



3,097,210

SUBSTITUTED PYRAZOLE SULFONAMIDES

John B. Bicking, Lansdale, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Apr. 6, 1959, Ser. No. 804,136. Divided and this application Jan. 10, 1962, Ser. No. 165,325
2 Claims. (Cl. 260—294.8)

1. 1-(2-pyridyl)-3,5-dimethylpyrazole-4-sulfonamide.

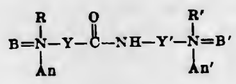
3,097,211

QUATERNARY AMMONIUM SALTS OF N-TERTIARYAMINO-ALKYL-TERTIARY-AMINO - LOWER-ALKANAMIDES

Alexander R. Surrey, Albany, and Arthur J. Olivet, Colonie, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,171
5 Claims. (Cl. 260—326.3)

1. A compound having the formula



where N=B and N=B′ are each selected from the group consisting of di-(lower-alkyl)amino, 1-piperidyl, (lower-alkylated)-1-piperidyl, 1-pyrrolidyl, (lower-alkylated)-1-pyrrolidyl and 4-morpholinyl, R and R′ are members selected from the group consisting of lower-alkyl, lower-alkenyl and lower-aralkyl, An and An′ are pharmacodynamically acceptable anions, and Y and Y′ are each straight-chained alkylene having from two or four carbon atoms.

3. A compound having the formula of claim 1 where

N=B is 1-pyrrolidyl, N=B′ is di-(lower-alkyl)amino, and R and R′ are each lower-alkyl.

3,097,212
N-METHYL-2-[2′-(ALPHA-METHYL-PARA-HALO-BENZHYDRYLOXY)-ETHYL]PYRROLIDINE
Ernst Jucker, Binningen, Basel-Land, and Anton Ebnöther, Basel, Switzerland, assignors to Sandoz A.G., Basel, Switzerland, a Swiss firm
No Drawing. Filed Jan. 9, 1961, Ser. No. 81,241
Claims priority, application Switzerland Jan. 19, 1960
2 Claims. (Cl. 260—326.5)

1. N - methyl - 2-[2′-(α-methyl-p-chloro-benzhydryl-oxy)-ethyl]-pyrrolidine.

3,097,213
WARFARIN INTERMEDIATES
Charles Wiener, Linden, N.J., and Collin H. Schroeder and Karl Paul Link, Madison, Wis., assignors to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin
No Drawing. Filed May 2, 1962, Ser. No. 191,732
2 Claims. (Cl. 260—343.2)

1. 2-amino-3-cyano-4-phenyl-5-oxo-γ-pyrano[3,2-c](1) benzopyran.

2. 3-(α-chloroformylmethylbenzyl)-4 - methoxycoumarin.

3,097,214
5-NITRO-2-FURYLAMIDOXIME
Anne Mary Von Esch, North Chicago, Ill., and William Reese Sherman, University City, Mo., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed Oct. 19, 1961, Ser. No. 146,366
1 Claim. (Cl. 260—347.7)

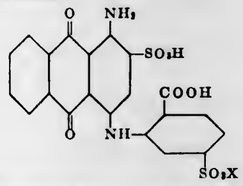
5-nitro-2-furylamidoxime.

3,097,215
RECOVERY OF HYDROCARBON OXIDATION PRODUCTS
Martin L. Courter, Walnut Creek, Calif., and David S. Thayer, Cheshire, Conn., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 8, 1960, Ser. No. 21,003
5 Claims. (Cl. 260—348)

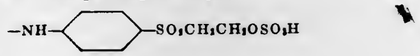
1. In a process for separating a water-soluble, highly reactive hydrocarbon oxidation product selected from the group consisting of acrolein and methacrolein from a reaction mixture obtained by the catalytic oxidation with molecular oxygen of the olefinic hydrocarbon corresponding to said hydrocarbon oxidation product, said reaction mixture comprising said hydrocarbon oxidation product in admixture with normally gaseous hydrocarbons and inert gas, in which process said hydrocarbon oxidation product is separated from said reaction mixture by selective absorption in a liquid aqueous solvent in an absorption zone, and said hydrocarbon oxidation product is distilled from the resulting rich aqueous absorbate formed in said absorption zone, the steps which comprise cooling said reaction mixture in the presence of water, thereby forming a liquid condensate phase comprising a part of said hydrocarbon oxidation product and water and a vapor phase comprising the rest of said hydrocarbon oxidation product in admixture with said normally gaseous hydrocarbons and said inert gas, compressing said vapor phase to a higher pressure than that maintained during said cooling, introducing said vapor phase after said compression into said absorption zone, maintaining a higher pressure in said absorption zone than in said cooling zone, and separately introducing at least a part of said condensate phase as absorption liquid into said absorption zone.

3,097,216
BLUE ACID ANTHRAQUINONE-DYESTUFFS
Johannes Heyna and Erich Schinzel, Frankfurt am Main, and Walter Noll, Bad Soden, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Aug. 1, 1960, Ser. No. 46,369
Claims priority, application Germany Aug. 8, 1959
4 Claims. (Cl. 260—372)

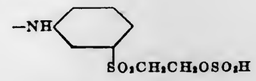
1. Blue acid anthraquinone-dyestuffs which correspond to the general formula



in which X represents a member selected from the group consisting of $-CH_2-CH_2-OSO_3H$,

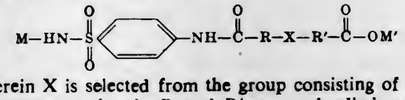


and



3,097,217
SUBSTITUTED SULFANILAMIDE
Ferdinand B. Zienty, Warson Woods, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Oct. 21, 1960, Ser. No. 63,963
7 Claims. (Cl. 260—397.7)

1. A compound of the structure

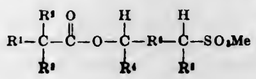


wherein X is selected from the group consisting of sulfur and oxygen; wherein R and R′ are each alkylene radicals having up to four (4) carbon atoms; and wherein M and M′ are selected from the group consisting of hydrogen, alkali metals, alkaline earth metals and the ammonium radical.

3,097,218
SULFONATES OF HYDROXYALKYL ESTERS OF TERTIARY ALKANOIC ACIDS
Pieter L. Kooljman and Hendrik Buesink, Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 14, 1961, Ser. No. 159,443
Claims priority, application Netherlands Dec. 30, 1960
17 Claims. (Cl. 260—400)

1. The process for the production of surface active compounds which comprises reacting a member of the group consisting of the alkali metal and alkaline earth metal salts of a tertiary alkanoic acid having from 5 to about 21 carbon atoms to the molecule with a sulfonate selected from the group consisting of the alkali metal and alkaline earth metal halogen-substituted hydroxy-alkane sulfonates having from 3 to about 22 carbon atoms to the molecule, at a temperature of from about 50 to about 250° C.

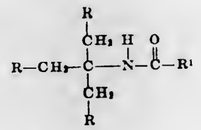
9. The surface active compounds having the general formula:



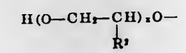
wherein:
R^1, R^2, R^3 are each an alkyl group;
the total number of carbon atoms in $R^1+R^2+R^3$ has a value of from 3 to about 21;
R^6 represents a member of the group consisting of alkylene and hydroxy-alkylene radicals having from 1 to 8 carbons;
R^4 and R^5 are each a member of the group consisting of alkyl, hydroxyalkyl, and hydrogen;
the total number of carbon atoms in $R^4+R^5+R^6$ has a value of from 1 to about 20, and only one of the R^4, R^5 and R^6 groups has a hydroxy substituent; and
Me is a member of the group consisting of the alkali metals, alkaline earth metals, hydrogen and NH^4.

3,097,219
OXYALKYLATED CARBOXYLIC ACID AMIDES AND PRODUCTION THEREOF
George N. Butter and John A. Frump, both of Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Aug. 7, 1961, Ser. No. 129,518
9 Claims. (Cl. 260—404)

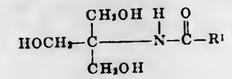
7. A process for the production of a compound having the following general formula:



wherein R is the radical:



wherein R^1 is a member selected from the group consisting of alkyl and alkenyl, wherein R^2 is a member selected from the group consisting of hydrogen and lower alkyl, and wherein x is an integer ranging from 1 to 20 which comprises reacting an amide having the following general formula:



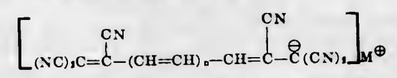
wherein R^1 is a member selected from the group consisting of alkyl and alkenyl, with a monoepoxyalkylene oxide in the presence of an alkaline catalyst at temperatures ranging from about 0 to about 75° C.

3,097,220
METHOD OF PRODUCING HIGHER FATTY ACID POLYMERS
Fred O. Barrett and Charles G. Goebel, Cincinnati, Ohio, assignors to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed May 22, 1962, Ser. No. 196,584
4 Claims. (Cl. 260—407)

1. In a process wherein unsaturated, higher fatty acids are heated in the presence of a Friedel-Crafts catalyst to form a reaction product containing fatty acid polymer, the improvement which consists in increasing the acid number of said polymer by heating said reaction product in the continuing presence of water and a crystalline clay mineral at temperatures of from about 180 to 260° C. for at least ½ hour.

3,097,221
POLYCYANOPOLYENES AND PROCESSES FOR PREPARING THEM
Douglas W. Wiley, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 28, 1960, Ser. No. 25,197
11 Claims. (Cl. 260—430)

1. Compounds having the formula



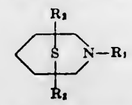
wherein n is a cardinal number of from zero to one and M is one equivalent of a cation selected from the class consisting of hydrogen, ammonium, diethylammonium, tetramethylammonium, phenylammonium, trimethylsulfonium, and metallic cations.

3,097,222
STABLE LEAD ALKYL COMPOSITIONS AND A METHOD FOR PREPARING THE SAME
James D. Johnston, Hymin Shapiro, and Albert P. Giraitis, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation
No Drawing. Filed June 8, 1962, Ser. No. 200,941
6 Claims. (Cl. 260—437)

1. A method of inhibiting the decomposition of an alkyllead compound at temperatures of from about 100° C. to about 195° C. which comprises incorporating with said compound from about 0.05 to about 0.5 mole of ethylene dibromide per mole of said compound, and from about 0.1 to about 30 percent of diacetone alcohol based on the weight of said compound.

3,097,223
STABLE LEAD ALKYL COMPOSITIONS AND A METHOD FOR PREPARING THE SAME
Wilford H. Thomas and Shirl E. Cook, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation
No Drawing. Filed June 8, 1962, Ser. No. 200,968
9 Claims. (Cl. 260—437)

1. A method of inhibiting the decomposition of an alkyllead compound at temperatures of from about 100° C. to about 195° C., which comprises incorporating with said compound from about 0.05 to about 0.50 mole of ethylene dibromide per mole of said compound, and from about 0.1 to about 30 percent of a piperidine compound based on the weight of said alkyllead compound, said piperidine compound having from 5 to about 18 carbon atoms in the molecule and having the formula



wherein R_1, R_2 and R_3 are selected from the group consisting of hydrogen, alkyl and alkenyl groups.

3,097,224
ACETYLENE NICKEL COMPOUNDS
Michael Dubeck, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Nov. 12, 1959, Ser. No. 852,216
16 Claims. (Cl. 260—439)

1. Organometallic compounds represented by the formula:

$$QC{\equiv}CQ'\cdot CyNiNiCy'$$

in which Q and Q′ are selected from the group consisting of hydrogen and univalent hydrocarbon radicals contain-

ing from one to about 10 carbon atoms, Cy and Cy′ are cyclomatic hydrocarbon groups having 5 to about 13 carbon atoms each of which donates five electrons to the nickel atom for bonding, and each of the two nickel atoms in the molecule achieves the electron configuration of krypton.

3,097,225

ACETYLENIC NICKEL COMPOUNDS

Michael Dubeck, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,179
24 Claims. (Cl. 260—439)

1. Organometallic compounds having the formula

$$QC{\equiv}CQ'\cdot CyNiCy'$$

wherein Cy and Cy′ are cyclomatic hydrocarbon groups which have 5 to about 13 carbon atoms and which are selected from the class consisting of the cyclopentadienyl radical, the indenyl radical, and hydrocarbon substituted cyclopentadienyl and indenyl radicals wherein the hydrocarbon substituents are univalent radicals selected from the class consisting of alkyl, aryl and aralkyl radicals and Q and Q′ are selected from the group consisting of electron withdrawing groups, hydrogen and univalent hydrocarbon groups containing up to about 13 carbon atoms and selected from the class consisting of alkyl, aryl, aralkyl, alkaryl, alkenyl, cycloalkyl and cycloalkenyl groups, at least one of Q and Q′ being an electron withdrawing group.

3,097,226

TWO STEP PREPARATION OF ALUMINUM ALKOXIDES

Donald R. Napier, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed July 25, 1961, Ser. No. 126,498
6 Claims. (Cl. 260—448)

1. A process which comprises (1) first reacting aluminum alkyl growth product with an elemental oxygen containing gas at a temperature above normal room temperature not exceeding about 70° C. to effect a substantial conversion to the alkoxide but not more than about 70 percent and (2) thereafter reducing the temperature to below the reaction temperature of the first step, reacting the unreacted trialkyl growth product with elemental oxygen containing gas at said temperature below normal room temperature not below about —10° C. to effect significantly more conversion to aluminum alkoxide than would result from continuing the reaction at the temperature of the first step for the same length of time.

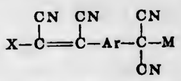
3,097,227

4-(1,2-DICYANOVINYL) DIARYLDICYANO METHANES, AND PREPARATION THEREOF

John K. Williams, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,185
7 Claims. (Cl. 260—465)

1. 4-(1,2-dicyanovinyl)aryldicyanomethanes having the formula

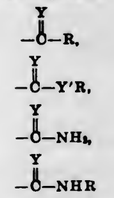


wherein Ar is selected from the group consisting of

1,4-phenylene,
1,4-naphthylene,
1,4-anthrylene, and
9,10-anthrylene;

X is a monovalent radical selected from the group consisting of

—CN,
p-NO_2-phenyl,
p-RSO_2-phenyl,
p-CN-phenyl,



wherein Y and Y′ are chalcogens of atomic number of up to 17, and R is hydrocarbyl of from 1 to 20 carbon atoms free of aliphatic carbon-to-carbon unsaturation; and M is selected from the group consisting of hydrogen, ammonium, sulfonium and metallic cations.

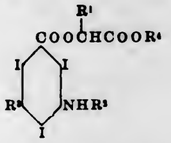
3,097,228

DERIVATIVES OF 2,4,6-TRIIODOBENZOYLOXYALKANOIC ACIDS AND PREPARATION THEREOF

Aubrey A. Larsen, Schodack, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

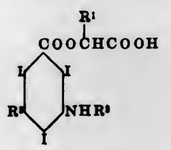
No Drawing. Filed June 3, 1958, Ser. No. 739,466
22 Claims. (Cl. 260—471)

1. A compound having the formula



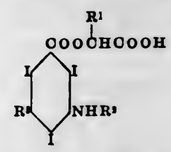
wherein R^1 represents a member of the group consisting of hydrogen and lower-alkyl, R^4 represents lower-alkyl, R^2 represents a member of the group consisting of hydrogen and lower-alkanoyl, and R^3 represents a member of the group consisting of hydrogen and lower-alkanoylamino.

2. A member of the group consisting of (A) compounds having the formula



wherein R^1 represents a member of the group consisting of hydrogen and lower-alkyl, R^2 represents a member of the group consisting of hydrogen and lower-alkanoyl, and R^3 represents a member of the group consisting of hydrogen and lower-alkanoylamino; and (B) salts thereof.

21. The process for preparing a compound having the formula



wherein R^1 represents a member of the group consisting of hydrogen and lower-alkyl, R^2 represents a member of

the group consisting of hydrogen and lower-alkanoyl, and R^3 represents a member of the group consisting of hydrogen and lower-alkanoylamino, which comprises heating a lower-alkyl ester of said compound with approximately one molar equivalent of an alkali metal hydroxide in aqueous-lower-alkanol solution.

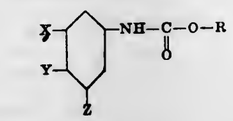
3,097,229

CYCLOALIPHATIC CHLOROCARBANILATES

David J. Beaver, Richmond Heights, and Paul J. Stoffel, St. Louis, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 4, 1960, Ser. No. 12,676
7 Claims. (Cl. 260—471)

1. A compound of the formula



where R is selected from the group consisting of cycloalkyl and cycloalkenyl of from 5 to 9 carbon atoms and alkylated cycloalkyl and cycloalkenyl of from 5 to 9 carbon atoms in the alicyclic ring and having a single alkyl substituent of from 1 to 4 carbon atoms, and X, Y and Z are each selected from the group consisting of chlorine, bromine and hydrogen, at least two of X, Y and Z being other than hydrogen.

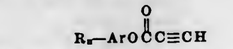
3,097,230

ARYL PROPIOLATES

Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 3, 1960, Ser. No. 59,823
13 Claims. (Cl. 260—473)

1. An ester of the formula



where Ar is aromatic hydrocarbon of from 6 to 12 carbon atoms, R is selected from the class consisting of halogen, nitro-, alkyl, alkyl-O-, $(alkyl)_2N$— and alkyl-O(O)C— wherein each alkyl has from 1 to 5 carbon atoms, and n is a number of 0 to 5.

3,097,231

MANUFACTURE OF DIBASIC ACIDS AND ESTERS THEREOF FROM PETROLEUM FRACTIONS

Ivor W. Mills, Glenolden, and John J. Melchiore, Ridley Park, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed June 10, 1959, Ser. No. 819,216
8 Claims. (Cl. 260—475)

6. As a new composition of matter, esters of an alcohol having 1 to 8 carbon atoms with a mixture of acids prepared by hydrotreating in the presence of a hydrotreating catalyst a petroleum fraction boiling mainly within the range of 400° F. to 550° F. and selected from the group consisting of cracked gas-oil and mixed aromatic hydrocarbons separated from cracked gas-oil under conditions including a temperature between 800° F. and 1050° F., a pressure between 350 p.s.i.g. and 2000 p.s.i.g., a molar ratio of hydrogen to oil between 5:1 and 20:1, and a liquid space velocity of between 0.5 and 10.0; contacting the hydrotreated fraction with an alkali metal in an ether solution, followed by carbonation of the reaction mixture with carbon dioxide and acidification with a mineral acid.

3,097,232

PRODUCTION OF STYRENES AND STILBENES

Harold H. Zeiss, Werner Metlesics, and Minoru Tsutsui, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 8, 1959, Ser. No. 825,636
11 Claims. (Cl. 260—475)

1. The process of preparing aryl ethenes which comprises mixing aryl chromium compounds selected from the group consisting of daryl chromium and triaryl chromium with di-substituted acetylenes selected from the group consisting of diphenyl acetylene, non-alpha alkynes of 4 to 10 carbon atoms and alkyl and aryl diesters of acetylene-dicarboxylic acid, the alkyl and aryl groups containing up to 10 carbon atoms, and isolating aryl ethenes from the resulting reaction mixture, the term aryl in every occurrence meaning a monovalent aromatic hydrocarbon radical in which the valence bond is located on an aromatic carbon atom.

3,097,233

UNSATURATED ESTER PURIFICATION

Edward P. Maglaughlin and Robert E. Trampe, Pampa, Tex., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 8, 1959, Ser. No. 845,092
17 Claims. (Cl. 260—486)

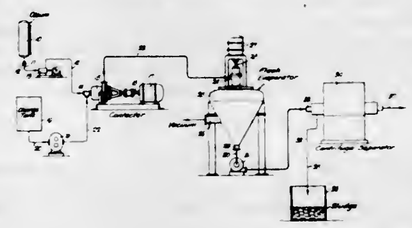
1. The process of removing ketone impurities from a crude mixture containing an unsaturated monomeric acrylic ester and ketone impurities, said process comprising treating the mixture with a member of the group consisting of ammonia and ammonium compounds capable of forming a carbonyl complex having a substantially higher boiling point than that of the unsaturated ester to form said complex, and separating from the resulting mixture a purified unsaturated ester monomer.

3,097,234

SULFUR DIOXIDE AND SLUDGE REMOVAL PROCESS

Ward A. Graham, Kansas City, Mo., and Herbert W. Stratford, Kansas City, Kans., assignors to Stratford Engineering Corporation, Kansas City, Mo., a corporation of Delaware

Filed Apr. 8, 1959, Ser. No. 805,024
8 Claims. (Cl. 260—504)



1. A method of treating hydrocarbons with one of the group consisting of sulfur trioxide, oleum and sulfuric acid (hereinafter called "acid") comprising the steps of first contacting the hydrocarbon and the acid in a reaction step, withdrawing a mixture of reaction product and sludge and any entrained gases from said reaction step, removing said gases from said withdrawn mixture under vacuum, and then extracting sludge from said mixture in a phase separating step.

3,097,235

PROCESS FOR THE MANUFACTURE OF 1,3-BENZENE-DISULFONIC ACID

Gerhard Otten, Otto Scherer, and Heinz Schild, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Filed Sept. 6, 1961, Ser. No. 136,321
Claims priority, application Germany June 13, 1957
5 Claims. (Cl. 260—505)

1. The process for preparing 1,3-benzene-disulfonic acid which comprises dissolving sulfur trioxide in a liquid sulfonated reaction mixture consisting essentially of 1,3-benzene-disulfonic acid at a temperature in the range from about 100° C. to about 160° C., and in such an amount that one part by volume of sulfur trioxide, calculated as liquid sulfur trioxide, is used for about 40 to 100 parts by volume of said sulfonated reaction mixture, and then reacting the resulting mixture at a temperature in the same range with benzene in such amount that about 2 to 2.5 moles of sulfur trioxide are used for each mole of benzene.

3,097,236

PREPARATION OF FLUOROSULFUR COMPOUNDS

David M. Marquis, Salt Lake City, Utah, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,605
5 Claims. (Cl. 260—543)

1. The process which comprises reacting, in the vapor phase and at a temperature between 475° C. and the decomposition temperature of the reactants, the reactant system consisting essentially of sulfur and a compound of the formula $F_2C{=}C(X)R_x$, where R_x is a member of the group consisting of chlorine, fluorine and perfluoroloweralkyl and X is a member of the group consisting of chlorine and fluorine.

3,097,237

PROCESS FOR PREPARING CARBOXYLIC ACID HALIDES

John Carl Sauer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,103
7 Claims. (Cl. 260—544)

1. A method of preparing acrylyl halides, β-halopropionyl halides, and succinoyl halides which comprises reacting acetylene, carbon monoxide, and a hydrogen halide in which the halogen is of atomic number 9–35 at a temperature of 50° to 250° C. and a pressure between 50 and 3000 atmospheres in the presence of a catalytic amount of a compound of the group consisting of rhodium and ruthenium carbonyls, chelates of acetylacetone, and halides in which the halogens are of atomic number 17–53.

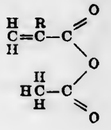
3,097,238

STABILIZED UNSYMMETRICAL ANHYDRIDES

Paul E. Blatz, Dallas, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,401
3 Claims. (Cl. 260—546)

1. A stabilized composition of matter comprising an unsymmetrical anhydride having the formula



wherein R is selected from the group consisting of chlorine, methyl, ethyl, benzyl and hydrogen and a nitrobenzene containing up to 2 nitro groups in an amount from 0.25 to 3 percent by weight of the unsymmetrical anhydride.

3,097,239

CONDENSATION PRODUCTS OF TRINITROMETHANE AND DIMETHYLOLUREA

Pliny O. Tawney, Passaic, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 24, 1948, Ser. No. 61,922
5 Claims. (Cl. 260—553)

1. A compound selected from the group consisting of

$(NO_2)_3C{-}CH_2{-}NH{-}CO{-}NH{-}CH_2OH$

and

$(NO_2)_3C{-}CH_2{-}NH{-}CO{-}NH{-}CH_2{-}C(NO_2)_3$

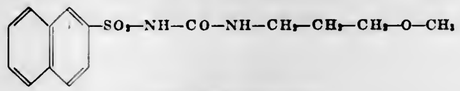
3,097,240

NOVEL SULFONYL-UREAS

Walter Aumuller and Gerhard Korger, Frankfurt am Main, Heinrich Ruschig, Bad Soden, Taunus, and Hans Wagner, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a company of Germany

No Drawing. Filed May 7, 1957, Ser. No. 657,477
Claims priority, application Germany May 23, 1956
2 Claims. (Cl. 260—553)

1. The compound of the formula



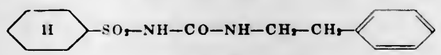
3,097,241

N-CYCLOHEXANE-SULPHONYL-N'-(β-PHENYLETHYL)-UREA

Gerhard Korger, Hans Wagner, and Walter Aumuller, Frankfurt am Main, and Heinrich Ruschig, Bad Soden, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Aug. 6, 1957, Ser. No. 676,500
Claims priority, application Germany Aug. 10, 1956
1 Claim. (Cl. 260—553)

The compound of the formula



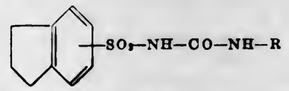
3,097,242

HYDRINDENE SULFONYLUREAS

Hans Hoehn and Hermann Breuer, Regensburg, Germany, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 21, 1961, Ser. No. 127,778
Claims priority, application Germany June 29, 1960
6 Claims. (Cl. 260—553)

1. A compound selected from the group consisting of sulfonylureas of the formula



wherein R is a member of the group consisting of lower alkyl, lower alkenyl, cycloalkyl of 4 to 6 carbon atoms, phenyl, substituted phenyl, phenyl-lower alkyl and substituted phenyl-lower alkyl wherein the phenyl

substituent in each instance is a member of the group consisting of halo, lower alkoxy and lower alkyl, and alkali metal and alkaline earth metal salts thereof.

3,097,243

(TERTIARY AMINO-LOWER ALKOXY)INDANE COMPOUNDS

Royal A. Cutler, Sand Lake, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 16, 1959, Ser. No. 827,439
2 Claims. (Cl. 260—570.9)

1. 5,7-Bis(dimethylaminomethyl)-4-indanol.
2. 4,6-Bis(dimethylaminomethyl)-5-indanol.

3,097,244

PRODUCTION OF VITAMIN A ALDEHYDE

Howard C. Klein, Brooklyn, N.Y., and Davide R. Grassetti, Richmond, Calif., assignors to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 4, 1957, Ser. No. 681,898
9 Claims. (Cl. 260—598)

1. A process for producing a vitamin A intermediate which comprises heating with iodine in the presence of an inert solvent a quaternary salt of an amine compound which amine compound has (1) vitamin A activity, (2) an absorption maximum in the ultra-violet region of the spectrum at 3250 A. and an extinction coefficient thereat of about 1000, (3) an infra-red pattern having the characteristic amine band, (4) when treated with hydrobromic acid, gives a product having an absorption maximum in the ultra-violet region of the spectrum at 3300 A., (5) when treated with phosphoric acid gives a product having an absorption maximum in the ultra-violet at 3280–3300 A., (6) contains the vitamin A chromophoric system, (7) contains a hexamethylene tetramine fragment, (8) has a Kjeldahl nitrogen content of about 9.6%, (9) when treated with acetic anhydride gives a product which shows an amide band when subject to infra-red analysis, (10) when treated with iodine is converted to vitamin A aldehyde and (11) when treated with aluminum isopropoxide is converted to vitamin A amine.

3,097,245

PROCESS FOR THE PREPARATION OF TRIMETHYLOLALKANE

Edward J. Russell and Robert J. Ruhf, Allentown, Pa., assignors to Trojan Powder Company, a corporation of New York

No Drawing. Filed Jan. 13, 1959, Ser. No. 786,454
7 Claims. (Cl. 260—635)

1. A process for the preparation of trimethylolalkanes having a color on the APHA color scale of between about 50 and about 200 when in the form of a molten mixture with an equal part of phthalic anhydride after seven minutes at 200 degrees C. which comprises mixing in aqueous medium a straight-chain alkanal having from three to five carbon atoms and formaldehyde in the presence of an alkaline catalyst selected from the group consisting of alkali metal hydroxides and alkaline earth metal hydroxides at a temperature below 40 degrees C. at which reaction proceeds for a time not exceeding seven hours until substantially three mols of formaldehyde are consumed per mol of said alkanal employed, said reactants being in a concentration of from 5 to 20%, by weight, of the reaction mixture; reducing the pH to below about 7; concentrating the reaction mixture to a water content within the range from about 8 to about 15%; separating formate salt which precipitates from the concentrate; contacting the remaining solution with cation exchange resin and strongly basic quaternary ammonium anion exchange resin to remove formate ion and inorganic ions derived from the alkaline catalyst; and recovering an effluent comprising trimethylolalkane substantially free from such ions.

3,097,246

NOVEL TELOMERIZATION REACTION

Dimitrios V. Favis, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Nov. 16, 1960, Ser. No. 69,548
8 Claims. (Cl. 260—671)

1. The process of preparing a polyalkylated aromatic hydrocarbon comprising the steps of reacting an aromatic hydrocarbon with ethylene in the presence of a minor amount of a 3-component catalyst comprising (1) an alkyl compound of a metal of groups I–III of the periodic table, (2) a halide of a metal of groups IV–B, V–B, VI–B and VIII of the periodic table, and (3) an alkyl halocyclopentane wherein the alkyl group contains from 1–10 carbon atoms, in an inert hydrocarbon diluent in the range of 0 to 130° F.; the quantity of alkyl halocyclopentane being less than one mole per mole of alkyl radical of catalyst component (1).

3,097,247

ALKALI METAL DISPERSIONS, THEIR PREPARATION AND USE AS CATALYSTS IN THE LIQUID PHASE POLYMERIZATION OF BUTADIENE

Robert A. Puckett, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 5, 1955, Ser. No. 520,101
16 Claims. (Cl. 260—680)

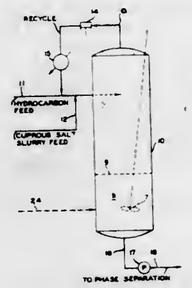
1. The process which comprises preparing a catalytic dispersion of an alkali metal by intimately mixing 15 to about 25 weight percent of a finely divided alkali metal in a liquid consisting essentially of from 15 to 90 weight percent of liquid polybutadiene and from 85 to 10 weight percent of a liquid hydrocarbon selected from the group consisting of aromatic, alicyclic, and aliphatic hydrocarbons boiling in the range about 170 to 400° F. and using the resulting dispersion as the catalyst in the liquid phase polymerization of butadiene to produce polybutadiene.

3,097,248

PROCESS AND APPARATUS FOR AUTO-REFRIGERATION IN CUPROUS SALT SLURRY EXTRACTION PROCESS

Glenn H. Dale, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 13, 1959, Ser. No. 793,002
3 Claims. (Cl. 260—681.5)



1. A method for extracting diolefins from a mixture of hydrocarbons containing the same, together with olefins, which comprises admixing the said hydrocarbons with an aqueous cuprous chloride slurry, introducing a mixture thus obtained into a flashing contacting zone as a film above a liquid level of hydrocarbons and salt slurry being agitated therein, causing flashing of some of the

hydrocarbons and producing in situ refrigeration, recovering, compressing and recycling hydrocarbons thus flashed as at least a portion of the hydrocarbons being introduced into said contacting zone, and removing diolefin-enriched slurry, emulsified with other non-dissolved hydrocarbons, from said zone for further treatment to recover a phase containing aqueous cuprous salt slurry and diolefins.

3,097,249

PROCESS FOR SEPARATING HYDROCARBON MIXTURES

Alan Marchant and Michael David Wynne, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 12, 1961, Ser. No. 116,275
Claims priority, application Great Britain June 13, 1960
11 Claims. (Cl. 260—681.5)

1. A process for the separation of cyclic and acyclic conjugated diene components of a mixture which comprises treating the mixture with sulphur dioxide under conditions in which the cyclic and acyclic components are respectively dimerised and converted to sulphone, decomposing the sulphone thus formed and distilling from the dimer a volatile fraction containing the acyclic component thus liberated.

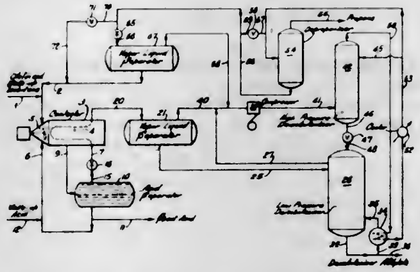
3,097,250

HYDROCARBON CONVERSION PROCESS

James A. Davies, Scarsdale, N.Y., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed June 28, 1960, Ser. No. 39,370
7 Claims. (Cl. 260—683.62)

1. In a catalytic alkylation process wherein isobutane and an alkylatable material are reacted in the liquid phase in the presence of an alkylation catalyst under alkylating conditions in an alkylation zone and lower boiling components of the reaction mixture including isobutane are evaporated under conditions effective for refrigerating said alkylation zone thereby producing an isobutane-rich vapor fraction and a remaining liquid fraction comprising butanes and alkylate, the improvement which comprises compressing said vapor fraction to a pressure within the range of 50 to 150 pounds per square inch gage, passing said compressed vapor to the bottom of a first fractional distillation zone maintained at a pressure within the range of about 50 to 150 pounds per square inch gage, passing said remaining liquid fraction to a second fractional distillation zone maintained at a pressure within the range of about 0 to 50 pounds per square inch gage, compressing overhead vapor from said second fractional distillation zone to a pressure within the range of 50 to 150 pounds per square inch gage and passing thus compressed overhead vapor to said first fractionation zone, passing overhead vapor from said first fractional distillation zone in indirect heat exchange with distilland in said second fractional distillation zone thereby supplying reboiler heat to said second fractional distillation zone and condensing at least a part of said overhead vapor from said first fractional distillation zone forming isobutane-rich condensate, passing at least a part of said isobutane-rich condensate to said alkylation zone, passing bottoms liquid from said first fractional distillation zone to the top of said second fractional distillation zone, and withdrawing deisobutanized liquid from the bottom of said second fractional distillation zone.



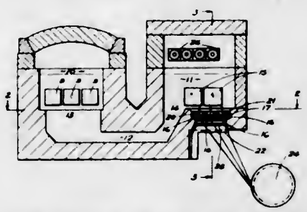
ELECTRICAL

3,097,251

MEANS FOR MAKING FIBRES OF VITREOUS MATERIAL

Philip A. M. Gell, Kinver, near Stourbridge, England, assignor to Elemelt Limited, Bilston, England, a British company

Filed Oct. 11, 1960, Ser. No. 61,953
7 Claims. (Cl. 13—6)



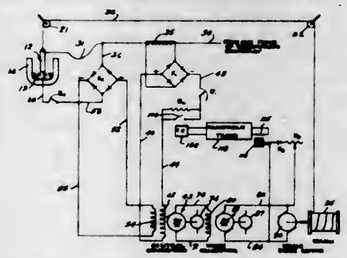
1. In a glass melting furnace, the combination of a chamber for containing a body of molten glass, said chamber having an outlet opening, electrode means in said chamber at opposite boundaries of said outlet opening for passing electric current through said glass along a flow path adjacent to said outlet opening and between opposite boundaries thereof, a metallic die disposed in said outlet opening and having die holes for passage therethrough of glass-fibre-forming streams, and electrically insulating barrier means also disposed in said outlet opening and in an electric current diversion path extending from one of said electrode means through said die to the other of said electrode means.

3,097,252

ELECTRIC ARC CONTROL

Charles G. Robinson, Sterling, Ill., assignor to Northwestern Steel and Wire Company, Sterling, Ill., a corporation of Illinois

Filed Dec. 11, 1959, Ser. No. 859,010
5 Claims. (Cl. 13—13)



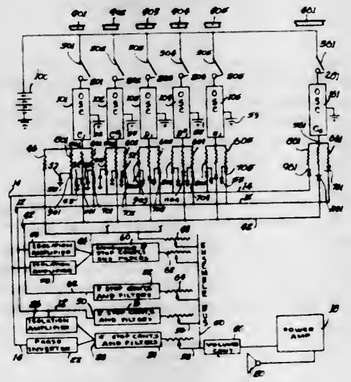
1. An electric arc furnace control system for controlling the position of an electrode in the furnace comprising control means normally operative to maintain a predetermined current-voltage relation at the electrode corresponding to a first arc length, and surge responsive means responsive to a current surge above a predetermined value to alter said control means whereby the control means tends to maintain a different current-voltage relation at said electrode corresponding to a second arc length substantially greater than said first arc length, said surge responsive means including timing means for controlling the length of time which said responsive means is operative to alter said control means in the absence of further current surges.

3,097,253

ELECTRONIC MUSICAL INSTRUMENT

Richard H. Peterson, 10108 Harnew Road E., Oaklawn, Ill.

Filed Mar. 10, 1959, Ser. No. 798,475
14 Claims. (Cl. 84—1.22)



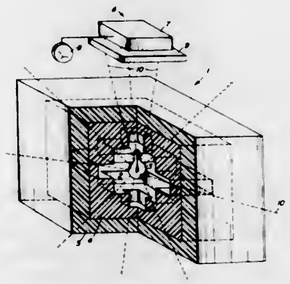
12. In an electronic musical instrument of the type comprising: a multiplicity of electrical oscillators adapted to generate electrical currents of frequencies corresponding to the pitches of the notes of the musical scale, but normally not in oscillation; a keying terminal operatively associated with each oscillator; a source of activating potential; a key and a key-operated switch operatively associated with each of said keying terminals, and with said potential source, for delivering activating potential to initiate and maintain oscillation of each oscillator as long as the key switch for said oscillator remains closed; an output terminal associated with each oscillator for delivering signal whenever said oscillator is activated; and transducer means for translating a received signal into sound; the improved circuitry between said oscillator output terminal and said transducer, comprising: first and second tone-collecting bus bars; each oscillator having a plurality of distorting circuits; one of said distorting circuits having a rectifier in it and connecting the output terminal of said oscillator to said first bus bar; a second one of said distorting circuits having a rectifier in it and connecting said output terminal to said second bus bar; said first and second distorting circuits having their rectifiers connected to rectify the signal in opposite senses; a phase inverter connected to receive signal from said first bus bar; means for combining the output signal from said phase inverter with the signal from said second bus bar; and operative connections from said combining means for delivering the signals emanating from said combining means to said transducer means.

3,097,254

DETERMINATION OF SHIELDING FACTORS OF COMPLEX STRUCTURES FOR THE ENERGY RANGE OF 0.1 TO 4.0 MEV.

Claude R. Schwob, 1156 Kearny St., San Francisco, Calif.

Filed July 19, 1961, Ser. No. 127,087
2 Claims. (Cl. 88—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An apparatus for determining the shielding responses of complex structures to high-energy-level electromagnetic radiation falling within the range of from about 0.1 mev. to about 4 mev. which comprises:

(*a*) a translucent model of the complex structure under investigation, said translucent model having light attenuation, scattering, degradation and reflection characteristics which correspond respectively to the attenuation, scattering, degradation and reflection characteristics of the complex structure in response to high-energy-level electromagnetic radiation in the range of from about 0.1 mev. to about 4 mev.;

(*b*) said translucent model being selectively tinted with grey color for attainment of a preselected light attenuation characteristic, having a selectively roughened surface for attainment of a preselected light scattering characteristic, being selectively colored in the range of yellow to red for attainment of a preselected light degradation characteristic and having a selectively polished surface for attainment of a preselected light reflection characteristic;

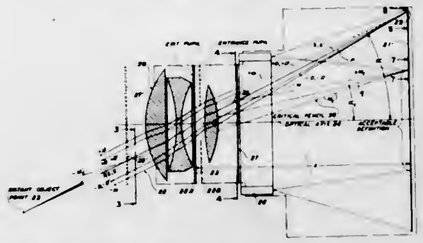
(*c*) a light source fixedly positioned with respect to said model and located on that side of said model corresponding to the side of the complex structure which would be exposed to the 0.1 to 4 mev. electromagnetic radiation, the source geometry of said light source being a facsimile of the source geometry of the high-energy-level electromagnetic radiation against which the complex structure is to serve as a shield and said light source upper spectral level occupying the same relative position in the light spectrum as is held by the highest radiation to be encountered within the 0.1 to 4 mev. range; and

(*d*) a light-sensitive detector which measures for a given area the total of light rays escaping through said translucent model and which is responsive to a preselected light spectrum range which is comparative to the energy level range of the high-energy-level 0.1 to 4 mev. electromagnetic radiation against which the complex structure is to serve as a shield, the response of said detector serving to indicate the measure of effectiveness of the shielding effect provided by the complex structure, said light-sensitive detector being selectively positionable at any area-to-be-tested on the light-shielded side of said model.

3,097,255
CORRECTOR FOR IMAGE-FORMING OPTICAL ASSEMBLIES

John P. Farquhar, Los Angeles, Calif. (11570 San Pablo Ave., El Cerrito, Calif.), and Frank F. Crandell, 3221 Milton St., Pasadena 10, Calif.

Filed July 16, 1954, Ser. No. 443,892
13 Claims. (Cl. 88—57)



1. In combination with an image-forming optical assembly having an optical axis, an aperture stop and discernible extra-axial aberration, an optical mask having a central opening positioned behind the aperture stop at a distance not greater than a limiting distance d_1 from the exit pupil of said assembly where

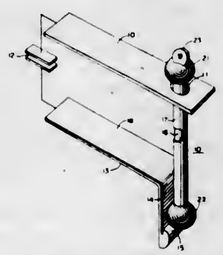
$$d_1 = \frac{\rho}{\tan \alpha - \tan \alpha_c + \frac{\rho}{s}}$$

and where ρ equals the radius of said exit pupil, α_c equals the angle between the optical axis of the assembly and the principal ray of those light rays from the object producing a circle of confusion of maximum acceptable diameter, α equals the maximum angle formed between an operative principal ray from the object and the optical axis, and s equals the distance from the exit pupil of the assembly to the image plane, the optical mask extending away from the optical axis of the assembly to intercept at least some of the image-forming light rays which would otherwise strike the peripheral zone of image area.

3,097,256
CAPACITOR DISCHARGING DEVICE

Leonard J. Melhart, 6511 Abbington Drive, Oxon Hill, Md.

Filed Dec. 28, 1962, Ser. No. 248,162
3 Claims. (Cl. 174—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A capacitor discharging device adapted to be connected electrically with the terminals of a capacitor which comprises:

an upper electrically conductive plate,

an aperture in said plate near one end thereof,

an electrically conductive shorting bar,

said shorting bar comprising an insulated rod with ball-shaped electrically conductive end terminals,

a lower electrically conductive plate spaced from said upper plate and extending in the same direction,

said rod secured for a loose fit through said aperture in said upper plate,

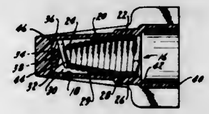
said ball-shaped end terminals adapted to make an electrical contact with said upper plate along the circumference of said aperture therein and to contact said bottom plate,

said shorting bar rendering said capacitor in a discharged safe condition.

3,097,257
ELECTRICAL CONNECTOR

North Cheney, Petersburg, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware

Filed Nov. 2, 1961, Ser. No. 149,635
3 Claims. (Cl. 174—87)

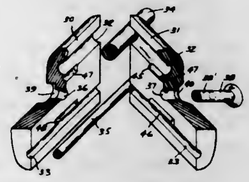


1. In an article of manufacture, a connector for joining the stripped ends of two or more electric wires and the like, including a cap of a stiffly flexible insulating material otherwise capable of being penetrated by the wire ends with a generally central bore open at one end and closed by an end wall at the other end, a generally cylindrical wire coil in the bore, means for holding the coil in the bore, and a deflector in the bore at the end wall for preventing the wire ends from penetrating the end wall in the form of a symmetrical projection integrally formed on the inner surface of the end wall as an integral part thereof and projecting into the bore of the cap.

3,097,258
ELECTRIC WIRING TERMINAL

Henry J. Modrey, Eagle Drive, Stamford, Conn.

Original application May 3, 1954, Ser. No. 427,256. Divided and this application July 26, 1962, Ser. No. 240,467
6 Claims. (Cl. 174—94)

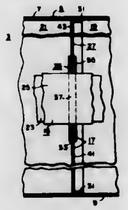


1. An electric wiring terminal of the service tap kind for connecting two wires, comprising two coacting members for fitting therebetween the wires to be connected, first explosive holding means attached to said members for loosely joining the same in wire retaining relationship, the said holding means when detonated experiencing a deformation such as to fix said holding means to said members, and second explosive holding means deformable by a detonation thereof, the said second holding means being positioned between said members in predetermined positions in which the deformation thereof presses wires inserted between the members tightly against the material of said members.

3,097,259
BUS BAR APPARATUS AND SUPPORTING MEANS

James W. McMillen, Jr., and Glenn E. Rhodes, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 27, 1961, Ser. No. 119,962
2 Claims. (Cl. 174—153)

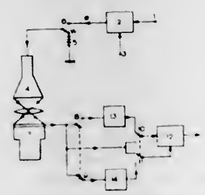


1. Bus bar apparatus comprising, in combination, a flat rigid plate comprising four rigid plate portions disposed in the same general plane and having an opening therebetween, said plate portions comprising an upper and a lower and two side plate portions, said plate portions encompassing said opening, an insulating bus bar support member having an upper and a lower side and a notch in each of said sides, the notch in said upper side being deeper than the notch in said lower side, said bus bar support member being supported on said plate with the notch in said lower side receiving said lower plate portion and the notch in said upper side receiving said upper plate portion, said bus bar support member having a set of at least three openings therein each of which receives a different bus bar of a set of multi-phase bus bars to support said bus bars, each of said bus bars substantially closing the opening through which it passes, and said bus bar support member having recesses therein receiving said side plate portions whereby when said support member and said bus bars are in position the opening in said plate is substantially closed.

3,097,260
CORRECTION OF TRANSMISSION VARIATIONS IN TELEVISION STANDARDS CONVERTING SYSTEM

Ivanhoe John Penfound James, South Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain

Filed Nov. 8, 1956, Ser. No. 621,103
Claims priority, application Great Britain Nov. 12, 1955
4 Claims. (Cl. 178—5.4)

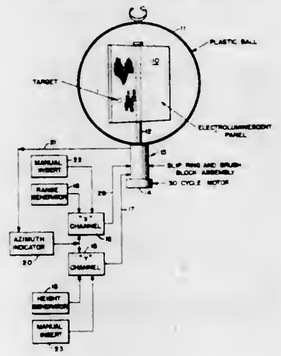


1. A television signal transmission system comprising converting means for converting applied television signals having one scanning standard into television signals having another scanning standard, means for applying television signals to said converting means during spaced intervals to derive corresponding converted signals, means for applying a reference signal to said converting means during intervening intervals to derive a corresponding signal constituting a correcting signal, storage means for said correcting signal, and means responsive to a correcting signal derived from said storage means during said first mentioned intervals to reduce the effect of transmission variations of said converting means on television signals derived therefrom.

3,097,261
THREE-DIMENSIONAL DISPLAY

Robert J. Schipper, South Fort Mitchell, Ky., and John L. Coddington, Cincinnati, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed May 1, 1961, Ser. No. 106,742
11 Claims. (Cl. 178—6.5)

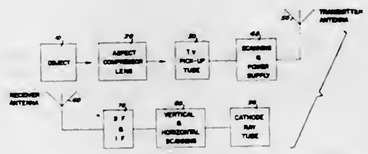


1. A three-dimensional electrical indicator device comprising, in combination: an x—y matrix-type luminescent panel having a plurality of x inputs and a plurality of y inputs, means for rotating the panel, means for supplying electrical signals representative of two positional attributes of an object in space, and means for repetitively gating said signals to selected x and y inputs only when the angular position of said panel is representative of a third positional attribute of said object in space, whereby a spot on the panel becomes luminescent to indicate said three positional attributes.

3,097,262
ANAMORPHOTIC TELEVISION SYSTEM

Franz F. Ehrenhaft, Forest Hills, N.Y., assignor to Uniscan Electronics Corporation, a corporation of New York

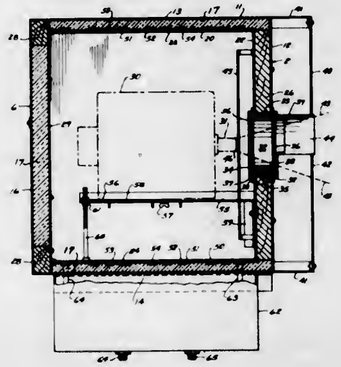
Filed Mar. 6, 1956, Ser. No. 569,708
9 Claims. (Cl. 178—6.8)



6. In a television system for producing a television image from a field of view having a selected aspect ratio, in combination, means for light-optically and electron-optically forming of said field of view an image having an intermediate aspect ratio and being evenly compressed in one direction and for transmitting electrical impulses corresponding to said image having said intermediate aspect ratio; means for electrically transforming said electrical impulses corresponding to said image having said intermediate aspect ratio into a visible image having a final aspect ratio different from said intermediate aspect ratio, and including a cathode ray tube producing an electron beam; deflecting means for deflecting said beam at a uniform speed along straight lines extending in said one

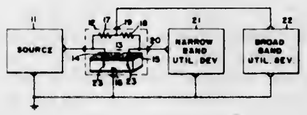
direction with respect to said image having said intermediate aspect ratio; and control means controlling said deflecting means for evenly expanding said visible image in said one direction for producing a visible image having substantially the aspect ratio of said field of view.

3,097,263
REFRIGERATED PROTECTIVE ENCLOSURE FOR TELEVISION CAMERAS
James W. Lintern, Madison, Ohio, assignor to The Lintern Corporation, Painesville, Ohio, a corporation of Ohio
Filed Mar. 30, 1961, Ser. No. 99,614
3 Claims. (Cl. 178—7.1)



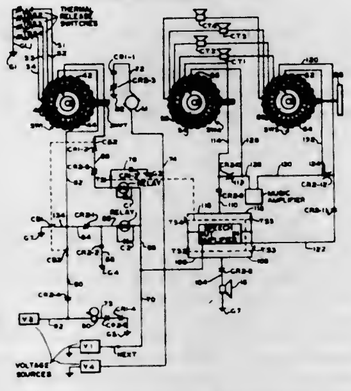
1. A protective enclosure for a television camera and comprising a box having heat insulated walls and providing an enclosure adapted to accommodate a television camera, one of said insulated walls being a front wall and having a peephole therein for the lens of a camera, transparent window pane means closing the peephole, refrigerating evaporator coil means within the enclosure and having connections adapted for connection to an external refrigeration circuit for supplying refrigerant to the coil means, a heat conducting metal shield, means supporting the shield in forwardly spaced face to face relation to the front wall to provide a convection air passage therebetween, said passage being open at the top and bottom to permit convection air currents to flow upwardly as a result of heating the shield, and said shield having an opening aligned with the peephole.

3,097,264
BRANCHING FILTER
Stephen W. Tehon, Clay, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 21, 1957, Ser. No. 660,551
6 Claims. (Cl. 179—1)



1. The combination comprising a selective transformer element tuned to a given frequency having an input terminal and an output terminal exhibiting a phase inversion as to said input terminal, a tapped impedance element coupled between said named terminals, said impedance element having an admittance which is low relative to the transfer admittance of said selective transformer at its tuned frequency for preserving a selective characteristic in said transformer at its output terminal and said tap being so placed that the admittance from said input terminal measured along said element directly to said tap is equal to the negative of the admittance from said input terminal measured directly through said transformer to said tap near said tuned frequency, means for applying signals to said transformer input terminal, a load coupled to said transformer output terminal deriving a selected narrow band signal, and means coupled to said tap for deriving a broad band signal less a portion near said tuned frequency.

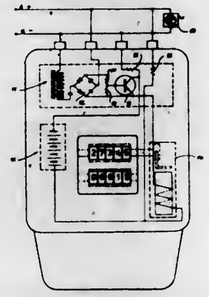
3,097,265
SIMPLIFIED COMMUNICATION SYSTEM
Charles A. Moore, Elmhurst, Ill., assignor to Eprad, Inc., Toledo, Ohio, a corporation of Ohio
Filed Apr. 22, 1960, Ser. No. 24,010
7 Claims. (Cl. 179—1)



3. A communication system for establishing communication between one of a plurality of remote transducers and a central transducer, said system comprising a plurality of remote transducers, a central transducer, a plurality of remote switches, each of which is associated with a remote transducer, a first power path, a second power path, a motor, a source of power for said motor, conductor means connecting said power source and said motor, first connecting means rotated by said motor and having means for connecting all of said switches except one to said first power path and means for connecting the remaining switch to said second power path, the remaining switch being changed as said connecting means is rotated, a first relay in said first power path actuated when any switch except said remaining switch is closed to complete a circuit through said first power path, said first relay having normally open contacts in said conductor means, said contacts being closed when said relay is actuated to start said motor and to rotate said connecting means to change the switch which constitutes the remaining swich, a second relay in said second power path actuated when the remaining switch is closed to complete a circuit through said second power path and operate said second relay, said second relay having normally closed contacts in said conductor means opened when said second relay is actuated to stop said motor, a speech amplifier having an input and an output, second connecting means connecting the remote transducer associated with the closed switch to said speech amplifier, means for connecting said central transducer to said amplifier, a manually-operated talk switch having a plurality of contacts operated thereby for connecting said central transducer to the input and said remote transducer to the output of said speech amplifier when said talk switch is depressed, said talk switch contacts operating to connect said central transducer to the output and

said remote transducer to the input of said speech amplifier when said talk switch is released.

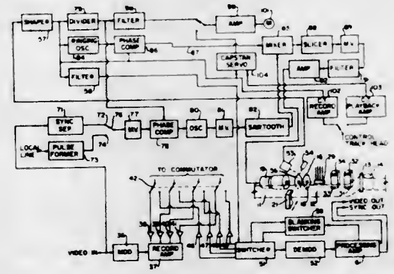
3,097,266
TELEPHONE FEE COUNTER
Paul Lüscher, Geneva, Switzerland, assignor to Sodeco, Societe des Compteurs de Geneve, Geneva, Switzerland, a firm of Switzerland
Filed May 20, 1959, Ser. No. 814,441
Claims priority, application Switzerland May 23, 1958
4 Claims. (Cl. 179—7)



1. In a telephone fee counter system for a subscriber's station comprising a subscriber's telephone set, two electric telephone wires connected at one end with a telephone exchange and at the other end to said set and feeding the latter, a fee counter with fee pulses generated from the exchange over said wires, in combination with said set and said wires and with the fee counter, a winding controlling the fee counter, a battery, an ungrounded auxiliary circuit including two terminal sections connected respectively with the corresponding telephone wire and two main sections interconnecting in parallel the terminal sections and passing respectively through the winding and through the battery, equal resistances inserted in each terminal section of the auxiliary circuit, a transistor having a time-base circuit and having its emitter and collector inserted in the main section of the auxiliary circuit passing through the winding and normally preventing the passage of current into the latter, a shunt circuit inserted across the telephone wires, a rectifying bridge inserted in said shunt circuit, filtering means inserted in the shunt circuit to limit the quantity of current passing through said shunt circuit to the fee pulses, said fee pulses being transmitted over said wires into said shunt circuit, and means feeding the fee pulses from the shunt circuit to the time-base circuit of said transistor to release the transistor and to ensure thus a discharge of the battery through the auxiliary circuit into the counter-controlling winding, said fee counter system, including said fee counter, said battery, said transistor, said bridge, said filtering means, said resistances and the connections between said wires and said set being all located at the subscriber's station.

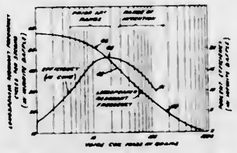
3,097,267
TAPE RECORDING AND/OR REPRODUCING SYSTEM AND METHOD
Harold V. Clark, Menlo Park, Joseph Roizen, Palo Alto, and John F. Varnell, Jr., Menlo Park, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Aug. 8, 1958, Ser. No. 754,098
11 Claims. (Cl. 179—100.2)

1. In a system of the character described in which a magnetic tape is driven lengthwise in cooperative relationship with a rotary magnetic head assembly to form successive record tracks extending crosswise of the tape; means for deriving a first signal having a frequency which is dependent upon the speed of rotation of the magnetic head assembly, a source of reference signal of reference frequency, means adapted to receive said signals and form an intermediate output signal having its phase controlled by the phase differences between said



signals, means forming an error signal which is dependent upon instantaneous changes in the frequency of the first signal, means serving to receive said error signal and said intermediate output signal and forming an output signal having an instantaneous phase which is controlled by the error signal, said output signal being applied to said rotary head assembly for driving the same.

3,097,268
LOW FREQUENCY LOUDSPEAKER
Siegfried J. Zuerker, Utica, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 28, 1959, Ser. No. 830,031
2 Claims. (Cl. 179—115.5)

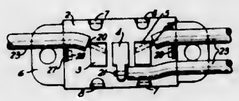


1. A loudspeaker comprising a cone of generally conical shape, a voice coil of generally cylindrical shape attached to said cone at the apex thereof, said voice coil comprising a winding arranged coaxially with the axis of said cone, and means for supplying a magnetic field radially through said winding, said loudspeaker comprising means for producing a characteristic curve of efficiency versus voice coil mass having a peak value for a given mass of said voice coil and a characteristic curve of resonant frequency versus voice coil mass having relatively little change in frequency at voice coil masses less than the mass that produces the peak efficiency and thereafter descending to lower resonant frequencies as the mass of the voice coil is increased and further having a knee at a value of voice coil mass greater than that required for peak efficiency, said voice coil comprising sufficient material so as to have a mass lying between that at which said peak efficiency occurs and that which corresponds to said knee of the loudspeaker resonant frequency curve.

3,097,269
ELECTRIC SLIDE SWITCH
Dudley H. Campbell, St. Marys, Pa., assignor to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania
Filed Feb. 3, 1961, Ser. No. 86,894
1 Claim. (Cl. 200—16)

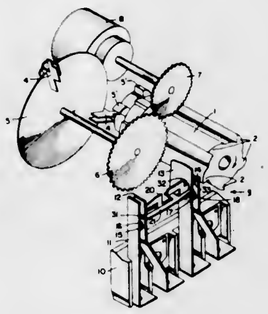
An electric slide switch comprising an insulating base plate, a row of three fixed contacts mounted on one side of

the plate and having terminals extending through the plate and projecting from its opposite side, the terminals extending laterally part way across the plate, a wire lead secured to the end of the center terminal and extending longitudinally away from one end of the base plate, wire leads secured to the ends of the two end terminals and extending longitudinally away from the opposite ends of said plate, a movable contact slidable along said row of fixed contacts, a metal housing covering said contacts



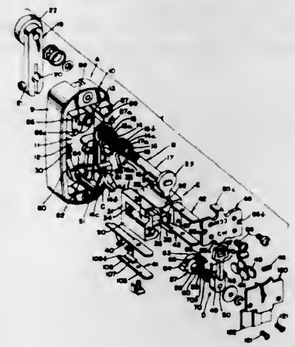
and secured to said plate, and an insulating shield at said opposite side of the base plate provided in the side adjoining the plate with a row of compartments each containing one of said terminals, the shield having integral means hooked onto said plate to hold the shield against it, and the ends of the shield being provided with notches connected with said compartments and receiving said leads, the notch that contains the center lead opening into one end of an end compartment, and the adjacent notch opening into the other end of said end compartment.

3,097,270
ELECTRICAL SWITCH BLADE ASSEMBLY
Ralph M. Manning, Winchester, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,374
6 Claims. (Cl. 200—38)



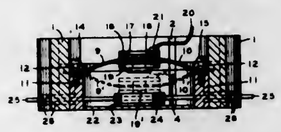
1. A switch assembly comprising a first and a second pair of resilient spaced apart blade members, said blade members being secured at corresponding ends and carrying contacts at the other ends positioned such as to contact each other when the blades of each pair are moved toward each other, a cam operator mounted adjacent said first pair of blade members, and a pair of movably interlocked, mutually supporting blade links interconnected such that actuation of one of the blades of said first pair of blades by said cam operator will produce actuation of one of the blades of said second pair of blades through one of said blade links therebetween, actuation of the other blade of said second pair by said cam operator being accomplished through contact between the other blade link of said pair and said cam operator, and actuation of the other blade of said first pair being accomplished through contact with said cam operator, said cam being shaped such that said pairs of blade members are actuated simultaneously to one switch position and sequentially to another switch position.

3,097,271
ELECTRIC LIMIT SWITCH
Robert B. Denison, Cleveland, Ohio, assignor to R. B. Denison Manufacturing Company, Bedford, Ohio, a corporation of Ohio
Filed Apr. 25, 1960, Ser. No. 27,238
8 Claims. (Cl. 200—47)



1. In an electrical switch, the improvement which comprises a contact block of insulation material having a chamber therein, said contact block having side walls at opposite sides of said chamber and having an opening between said side walls which leads into said chamber, one of said side walls of the block having a single recess therein which communicates with said chamber, said chamber and said recess being open at one end of the contact block, and a stationary contact having a first portion snugly received in said recess and shaped and dimensioned to be slidably inserted into and removed from said recess, said stationary contact having a second portion disposed in said chamber and extending substantially parallel to said one side wall, said second portion spaced from said block, and said stationary contact having a leg which extends transversely from said second portion into snug engagement with said one side wall in spaced relationship to said recess, and an electrical contact surface on said second portion of the stationary contact and facing away from said one side wall of the contact block, said surface located between said recess and said leg.

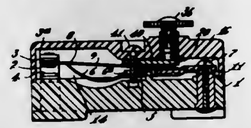
3,097,272
INERTIA SWITCH
Rudolph F. Hautly, 630 Kirkshire, Kirkwood, Mo.
Filed May 8, 1962, Ser. No. 193,139
1 Claim. (Cl. 200—61.49)



An inertia switch comprising a cylindrical housing, having side walls and a bottom wall, a flat cylindrical magnet adjacent said bottom wall, and insulated therefrom by a nylon insert, a contact rod passing through and projecting through said side walls and insulated therefrom by insulating jackets, said contact rod passing through and electrically connected to said cylindrical magnet, a spider spring attached to the side walls with a retainer ring and bolts, said spring provided with a permanent set, a suspended mass mounted upon the center of said spider spring and maintained by said set of the spring above the ends of the spring, said suspended

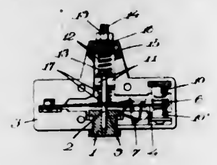
mass consisting of a contact stud and a ring magnet, said contact stud mounted on one side of said spring and said ring magnet mounted on the other side of said spring, both said contact stud and said ring magnet being insulated from said spring by insulating washers and said contact stud and said ring magnet being in electrical contact, said ring magnet being on the side of the spring adjacent said cylindrical magnet, and so magnetized that the lower surface of the ring magnet is of opposite polarity from the upper surface of the cylindrical magnet, a longitudinal slot in the side wall of the housing, a threaded bore perpendicular to said slot and located in said side wall, and an adjusting bolt in said threaded bore for adjusting the spring forces in said spider spring and the position of said suspended mass relative to the cylindrical magnet.

3,097,273
ADJUSTABLE SNAP ACTION ELECTRICAL SWITCH
John A. Denner, Roslindale, Mass., assignor to United Electric Controls Company, Watertown, Mass., a corporation of Massachusetts
Filed June 6, 1961, Ser. No. 115,250
8 Claims. (Cl. 200—67)



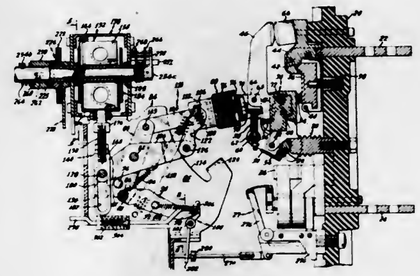
1. A snap-action switch of the kind which has a case comprising a cover, the case housing a switch spring and a spring-stressing element, the cover having a hole therein, characterized in having a non-rotatable, internally screw-threaded, elongate sleeve slidable in said hole, a force-receiving element having an externally screw-threaded shank having threaded engagement with the internal threads of the sleeve, said shank having an actuating head at its upper end whereby it may be rotated thereby to move the head toward or from the cover of the case, and means operative to transmit downward motion of said head, relatively to the cover, to the spring-stressing element.

3,097,274
MINIATURE ELECTRIC SWITCH
Shigeo Mamiya and Takeshi Odashima, Tokyo, Japan, assignors to Saginomiya Seisakusho Co., Ltd., Tokyo, Japan
Filed Dec. 14, 1961, Ser. No. 159,260
5 Claims. (Cl. 200—67)



1. A miniature electric switch comprising a pair of fixed contact points that face each other, a contact switching plate having a movable contactor and a central operating plate for making and breaking contact with said fixed contact points, an operating rod having a helical spring around it, said rod being fastened to the central operating plate of said contact switching plate, and an auxiliary helical spring which comes into contact with the tip of the operating rod when pressure is exerted on the operating rod and is separated from the tip when the pressure is released.

3,097,275
CIRCUIT INTERRUPTERS
Dominik Wiktor, Irvington, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed Feb. 17, 1961, Ser. No. 101,314
27 Claims. (Cl. 200—78)

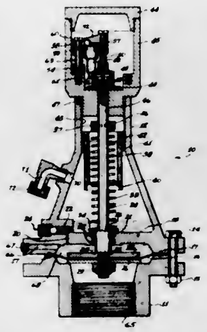


1. A circuit breaker having a pivoted contact arm, a companion contact engageable by said pivoted contact arm in the closed condition of the circuit breaker, a driving link having one end pivoted to said contact arm and having a cam follower at the opposite end thereof, a trip-free actuating and over-load release linkage connected to said driving link, a fixed cam engaged by said cam follower, said linkage when in various open-contact configurations causing said cam follower to move along said cam and said cam acting to establish the extent of opening of said pivoted contact arm, said trip-free actuating and over-load release linkage including a pair of crossed levers one of which is an operating lever and the other of which is a latch lever, a pair of connecting links pivoted to each other and to said driving link, said links also being pivoted to said crossed levers, respectively, a stored-energy drive mechanism coupled to said operating lever, a latch mechanism for normally arresting said latch lever, and means biasing said cam follower along said cam toward a position wherein said operating lever is at the starting end of said power stroke and said latch lever is in its restored position for coaction with said latching mechanism.

3,097,276
PRESSURE RESPONSIVE DEVICE
James R. Ellett, Edmonton, Alberta, Canada, assignor to Barber Machinery Limited, South Edmonton, Alberta, Canada
Filed Apr. 24, 1961, Ser. No. 104,863
3 Claims. (Cl. 200—83)

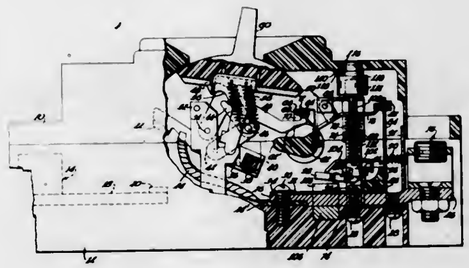
1. A pressure responsive device comprising a casing, a wall dividing said casing into first and second compartments, said wall being provided with a passageway and an opening connecting said first and second compartments, a valve for varying the effective size of said passageway, a diaphragm extending across said first compartment spaced from said wall and dividing said first compartment into first and second chambers, said first chamber lying between said wall and said diaphragm, damping liquid filling said first chamber and said passageway, said second chamber being provided with an opening communicating with said second chamber to admit to said second chamber a pressure applying fluid to cause flexing of said diaphragm, a spindle mounted in said casing and extending slidably through said opening in said wall, said spindle being fastened to said diaphragm and longitudinally movable by flexing of said diaphragm, first and second collars fixed to said spindle in said second compartment and

spaced one from the other, a member in said second compartment having an adjustable mounting to said casing positioning said member adjacent said spindle between said collars, a first and a second spring in said second compartment positioned with one end of each said spring bearing on said member, said springs extending in opposite directions from said member with the other ends of said first and second springs bearing on said first and second collars respectively to exert opposing forces on said spin-



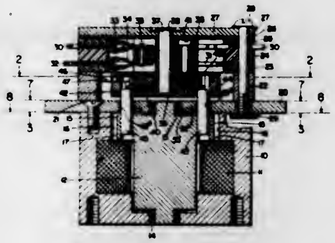
dle from said member, said adjustable mounting of said member providing longitudinal movement thereof to vary the forces exerted by both said first and second springs on said spindle and thereby vary the range of pressures on said diaphragm causing movement of said spindle between predetermined limits of movement, an electric switch adjustably mounted on said casing and operable by longitudinal movement of said spindle past a predetermined point, and means to vary the position of said switch to alter said predetermined point.

3,097,277
LATCH-TRIP CIRCUIT BREAKERS
Henry S. Wingard, Cranford, and Alfred E. Maier, Colonia, N.J., assignors to Federal Pacific Electric Company, a corporation of Delaware
Filed Nov. 10, 1959, Ser. No. 852,013
17 Claims. (Cl. 200—88)



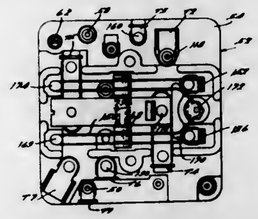
1. A circuit breaker including a molded case having cooperable contacts, mechanism for operating one of said contacts to open and close the circuit breaker, first and second externally accessible terminals, and thermal overcurrent release means automatically controlling said mechanism for opening the contacts, said circuit breaker when closed having conductive portions forming a current path extending from said first terminal along a substantially straight line to said second terminal and said current path including an elongated conductor in the form of a fixed metal bar, and said over-current release means including an elongated current responsive bimetal extending along and close to said bar and having one end thereof fixed in intimate heat transfer relation with the bar so as to be mechanically responsive to the thermal changes in said metal bar, said bar being substantially straight in the region of said current responsive bimetal, said overcurrent release means being disposed laterally of said current responsive bimetal and being operable thereby to effect opening of the contacts.

3,097,278
ROTARY SOLENOID ACTUATED SWITCHES
Robert E. Alderman, Solana Beach, Calif., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 13, 1960, Ser. No. 21,929
5 Claims. (Cl. 200—105)



1. In a stepping switch, a rotary solenoid, a balanced armature for said solenoid oscillatable between rotary positions of maximum and minimum gap reluctance, spring means for biasing said armature in its position of maximum gap reluctance, a balanced yoke member driven by said armature, pawl elements carried by said yoke member, a ratchet wheel having ratchet teeth and driven by engagement of said pawl elements with said teeth, means cooperating with said ratchet wheel to prevent retrograde rotation thereof, and abutment means cooperating with said pawl elements to provide a stable jammed condition in the biased position of said armature whereby the pawl elements are securely held in wedged position between said abutment means and said ratchet teeth to prevent accidental rotation of the ratchet wheel induced by adverse environmental accelerations.

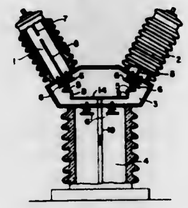
3,097,279
THERMAL RELAY
George B. Whinery, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., a corporation of Michigan
Filed Jan. 9, 1959, Ser. No. 785,967
10 Claims. (Cl. 200—113)



1. An ambient temperature compensated hot wire relay mechanism responsive to current flow in an input electrical circuit for controlling the current in an output electrical circuit comprising a base, first and second mateable electrical contacts connectable in the output circuit, means supporting said second electrical contact upon said base, resilient means supporting said first electrical contact and

tending to force said first electrical contact into a preselected relationship with said second electrical contact, a pair of support elements supported in spaced relation upon said base for supporting a metal wire, said wire connected to and supported by and tensioned between said support elements and connected in the input circuit and adapted to elongate to a substantial degree in response to heating thereof resulting from current therethrough, and means including said wire engaging said resilient means for exerting a force upon and controlling said resilient means, one of said support elements having a bimetallic leg portion deflectable in response to changes in temperature to tend to vary the tension in said wire.

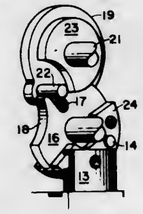
3,097,280
PARTITIONED GAS-FILLED ELECTRICAL APPARATUS
Walter Schimming, Berlin-Lichtenrade, and Werner Kohler, Berlin-Charlottenburg, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed Dec. 10, 1959, Ser. No. 858,689
Claims priority, application Germany Dec. 23, 1958
2 Claims. (Cl. 200—148)



1. A gas-filled power circuit interrupter of substantially Y-shaped configuration comprising, in combination, a substantially enclosed hollow actuating chamber, an upstanding hollow supporting insulator for supporting said hollow actuating chamber up in the air an adequate distance above ground potential, a pair of divergently extending enclosed gas-filled serially-related interrupting chambers each of which has a pair of separable contact means disposed therein, each of the two interrupting chambers being unvented, operating means disposed within said hollow actuating chamber for simultaneously effecting opening and closing movements of the two serially-related separable contact means, operating rod means extending upwardly through said supporting insulator to actuate said operating means, communicating passage means including an apertured partition plate between the hollow actuating chamber and each of the gas-filled interrupting chambers, and differential pressure-acting valve means including a valve having a raised portion adapted to surround the aperture in the partition plate upon valve closure whereby the valve seating pressure will be increased, the arrangement functioning to control the flow of gas through each communicating passage means, whereby loss of gas pressure through leakage in one interrupting chamber will effect closure of the respective valve means and so permit the remaining interrupting chamber to be effective in circuit interruption.

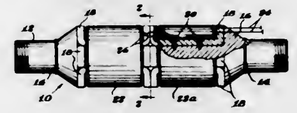
3,097,281
ELECTRIC BARRIER DEVICE
Maurice Henry Brown, Riverside, and Louis R. Giattino, Upland, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Jan. 19, 1961, Ser. No. 83,852
1 Claim. (Cl. 200—153)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An improved switch mechanism having actuated and unactuated positions for use in ordnance devices which provides protection against accidental shorting of the switch contacts from foreign matter comprising: a first electric terminal and a second electric terminal defining the switch contacts, a Geneva gear wheel interposed between said first and said second electric terminals, insulating barrier members attached to opposite planar faces of said Geneva gear wheel, an electric conducting member attached to said Geneva gear wheel, said insulating barrier members being concentric with the peripheral edge of said Geneva wheel so as to be interposed between said first and said second electric terminals whenever the switch mechanism is in its unactuated position, said electric conducting member being so dis-



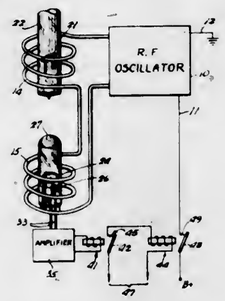
posed on said Geneva wheel with respect to said insulating barrier members so that said electric conducting member conductively engages said first and second electric terminals in the actuated position of said switch mechanism, and a driving Geneva wheel means engaging said Geneva gear wheel so that rotatory movement of said driving Geneva wheel means causes rotary motion of said Geneva gear wheel, said Geneva wheel means and Geneva gear wheel being so operatively coupled as to lock said switch mechanism when in its actuated and unactuated positions whereby, upon movement of the driving Geneva wheel means, the Geneva gear wheel is rotatable to actuated and unactuated positions.

3,097,282
CASING HEATER
Luther C. Cronberger, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Sept. 13, 1960, Ser. No. 55,802
7 Claims. (Cl. 219—10.49)



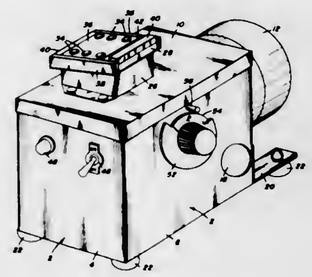
1. A casing heater adapted to be lowered on a tubing string into a string of well casing comprising an elongated body section made of non-magnetic metal material, said body section having means at each end for rigidly coupling said heater to said tubing string in end to end relationship therewith, at least one array of generally C-shaped magnetic return elements each having a pair of open end ends, said magnetic return elements being symmetrically disposed around said tubular section with their open ends facing outwardly and with their sides being disposed contiguous to said core section, and an electrical primary coil winding being disposed around said core and said magnetic return elements between their ends, said array being disposed between axially aligned non-magnetic metal supporting structures at each end, said supporting structure being frusto-conical in configuration and axially aligned with respect to the heater, the diameter of the supporting structure which is closest to said array being at least as great as the maximum diameter of said array.

3,097,283
REGULATION OF HIGH FREQUENCY INDUCTION HEATING APPARATUS
Anacleto D. Giacchetti, Chicago, Ill., assignor to National Video Corporation, Chicago, Ill.
Filed May 5, 1960, Ser. No. 27,174
10 Claims. (Cl. 219—10.77)



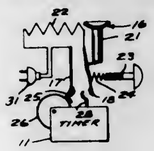
1. In induction heating apparatus of the type wherein high frequency alternating current through a heating coil fed by the output end of an oscillator is utilized to establish a magnetic field to which a work piece is subjected for raising the same to a selected temperature and a circuit is provided for supplying operating voltage to the oscillator, the improvement which comprises: an auxiliary heating coil connected to the oscillator output adapted to provide a second magnetic field, a reference standard of metallic material permanently positioned in the second magnetic field to be heated concurrently with the work piece, said reference standard being thermally distinct from said work piece; means to sense the temperature of the reference standard, and means under the control of said sensing means connected in the oscillator supply circuit to vary the supply voltage in response to varying temperature of said reference standard.

3,097,284
LABEL HEATING DEVICE
Harold A. Treadwell, 156 Glenhill Drive, Rochester 18, N.Y.
Filed Aug. 8, 1962, Ser. No. 215,671
2 Claims. (Cl. 219—19)



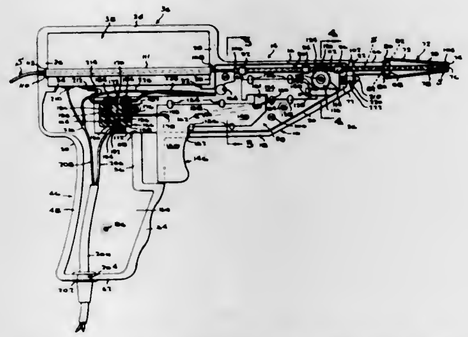
2. A heating device for thermo-activated adhesive coated labels, comprising a casing having one wall formed with an aperture, a heating plate mounted on said casing and closing said aperture at the outer side of said casing formed with air inlet apertures communicating with the interior of said casing through said aperture, said heating plate having the outer surface forming a label support and having a recessed marginal portion, low heat conducting means mounted in said recessed marginal portion and cooperating with said heating plate to provide an intermediate high heat zone and a marginal low heat zone on said plate, label positioning means on said heating plate for locating a label of a size substantially equal to the size of said label supporting outer surface with the central portion over said high heat zone and marginal portions over said low heat zone, electric heating means mounted on the inner face of said heating plate over said intermediate heat zone portion thereof, and means for controlling the temperature of said heating means to maintain said heating plate at a substantially uniform temperature of a predetermined degree.

3,097,285
THERMOSTAT-TIMER DEVICE
Irving Page, Brooklyn, N.Y.; Esther Page, administratrix of Irving Page, deceased, assignor of one-fourth to Warren Page, one-fourth to Esther Page, and one-fourth to Roberta Page, all of New York County, N.Y., and one-fourth to Rhoda Page, Queens County, N.Y.
Filed Sept. 30, 1960, Ser. No. 59,621
5 Claims. (Cl. 219—20)



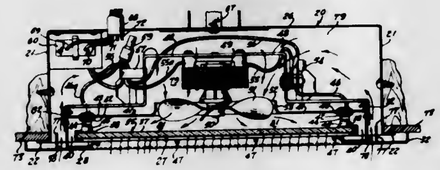
1. A thermostat timer device comprising, a heating coil, a source of electric current connected across said heating coil, a heat sensing element, a pair of movable breaker points interposed between said current source and said heating coil, one of said breaker points being controlled by said heat sensing element, a timing means which is started by the other of said breaker points and a means for separating said breaker points upon the completion of the timing cycle.

3,097,286
SOLDER FEEDING SOLDERING GUN
Vernon F. Luke, 1352 E. 5935 South, Salt Lake City, Utah
Filed Aug. 22, 1961, Ser. No. 133,080
6 Claims. (Cl. 219—27)



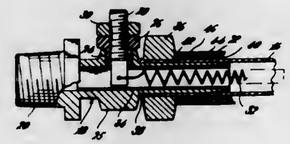
1. A solder feeding soldering gun comprising a support having forward and rear ends, a soldering tip on and extending forwardly from said forward end, wire solder feeding mechanism comprising a wire solder feeding tube having a forward end adjacent to said soldering tip and an open rear end, a ratchet wheel journalled on said support and having teeth to engage wire solder within the feeding tube, a ratchet bar having teeth engaged with the teeth of the ratchet wheel, and means for actuating the ratchet bar for feeding wire solder forwardly in the feeding tube to the soldering tip, said feeding tube having opening means through which the ratchet wheel engages the solder, an electrical switch assembly mounted on said support and electrically connected to the soldering tip, said actuating means comprising a trigger member mounted for endwise movements on the support, and lost motion means connecting the trigger member to the ratchet bar, and spring means yieldably urging said trigger member toward its starting position and toward said ratchet bar for moving the ratchet bar to a starting position from an operated position.

3,097,287
PANEL TYPE HEATING APPARATUS AND AIR CIRCULATING MEANS THEREFOR
David Knoll, Bayside, and Albert Greenhaus, Brooklyn, N.Y., assignors to Berko Electric Manufacturing Corporation, Queens Village, N.Y., a corporation of New York
Filed Feb. 9, 1959, Ser. No. 792,021
10 Claims. (Cl. 219—39)



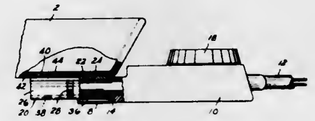
1. In a space heating device, in combination, a casing, an outer facially exposed air-impervious radiant heating panel mounted in said casing, electrical means heating said panel to radiate heat into the space being heated, means forming air inlets to said casing adjacent two opposite edges of said panel, means forming air outlets from said casing adjacent the other two opposite edges of said panel, and fan means in said casing to establish a positive current of air in through said inlets, against and along the inner face of said panel in said casing, and discharging it through said outlets, and into the space being heated.

3,097,288
FLEXIBLE CONDUCTOR CABLE
Robert B. Dunlap, Medway, Mass., assignor to Jacob S. Kamborian, West Newton, Mass.
Filed Jan. 27, 1960, Ser. No. 5,043
11 Claims. (Cl. 219—39)



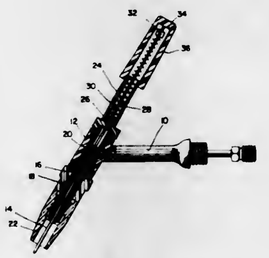
1. A flexible conductor for transmitting fluid from a container to a nozzle, comprising a Teflon tube, a pair of metal ferrules having threaded portions for screw-threaded engagement with a container and a nozzle respectively, and slender tips for interengagement with the ends of the Teflon tube, a conductor element extending through a wall of each ferrule into the interior of the tip, means insulating the conductor elements from the ferrules, a conductor wire stretched axially within the tube with its ends anchored to the inner ends of the conductor elements, and means surrounding the tube between the conductors for resisting heat loss and damage, including metal collars securing the ends of the tube to the tips of the ferrules, a flexible armor sleeve surrounding the Teflon tube, means securing the ends of the tube to the tips of the ferrules, means securing the ends of the armor sleeve to the collars, insulation surrounding the armor sleeve and a braided cover encasing the insulator sleeve.

3,097,289
PROBE SOCKET ASSEMBLY
Jesse K. Clark, Newington, Conn., assignor, by mesne assignments, to National Distillers and Chemical Corporation, Bridgeport, Conn., a corporation of Virginia
Filed Oct. 30, 1959, Ser. No. 849,907
6 Claims. (Cl. 219—44)



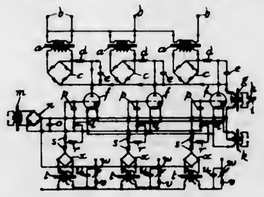
1. A container for use in an electrical appliance of the type having a detachable thermostat with heat-sensing probe, said container having a core of highly heat-conductive metal and an outer laminate with an opening therein, a probe key seated in said opening and intimately secured to the heat-conductive metallic core, said probe key having longitudinal flanges along its sides adjacent said core, lips formed on said outer laminate adjacent the opening and bent over into interlocking engagement with said flanges, said probe key having a groove in the outer surface thereof for receiving the probe of the thermostat, a cap engaged on said key enclosing the probe-receiving groove portion thereof to provide an insulating air layer about the groove, and means on said cap for urging the probe of the thermostat into contact with the groove of the probe socket.

3,097,290
ELECTRIC WELDING TORCH
Frank C. Guida, 144 Harryel St., Pittsfield, Mass.
Filed Jan. 2, 1962, Ser. No. 163,540
3 Claims. (Cl. 219—75)



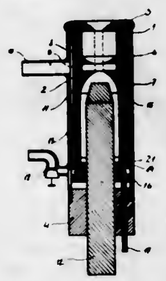
1. An electric welding torch comprising a barrel having an externally screw-threaded upper portion, an elongated internally threaded cap in threaded engagement with said upper portion of the barrel, a non-consumable electrode within said barrel extending from the upper end of said cap through the lower end of said barrel, and spring means within said barrel yieldingly pressing the upper end of said electrode against the end of said cap.

3,097,291
MEANS FOR DEPOSITING HARD METAL ON ANOTHER METAL BODY BY ELECTRIC SPARKS
John Lewis Adcock, Kenilworth, England, assignor to Wickman Limited, Coventry, England
Filed July 24, 1959, Ser. No. 829,276
3 Claims. (Cl. 219—76)



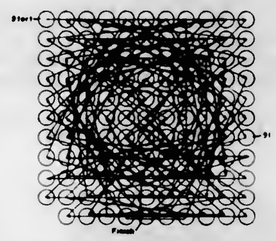
1. Apparatus for depositing sintered hard metal from a tool formed in part of said hard metal onto a workpiece, comprising in combination a first transformer having a primary winding and a secondary winding, the tool and workpiece being connected to opposite ends of the secondary winding respectively, a plurality of series circuits connected in parallel between opposite ends of said primary winding, each of said series circuits including a capacitor and an electronic switching device, a biasing circuit normally holding said electronic switching devices non-conductive, an A.C. source having a plurality of phases, a plurality of transformers and associated full wave rectifiers connecting the phases of the A.C. source to the plurality of capacitors respectively to charge the capacitors in turn in cyclic order, a switch-operating circuit operable by said A.C. source to render the electronic switching devices conductive in turn in cyclic order when the associated capacitors are charged to a predetermined level, each switching device serving when conductive to permit discharge of its associated capacitor through the primary winding of the first transformer, and said switch operating circuit ensuring that each capacitor discharges the same amount of energy through the primary winding of the first transformer irrespective of the positions of the tool and workpiece.

3,097,292
METHOD AND APPARATUS FOR THE MAINTENANCE OF THE ARC COLUMN IN THE CORE OF A LIQUID VORTEX
Tibor Kugler and Konstantin Miklóssy, Prague, Czechoslovakia, assignors to Kralovopolska Strojirna, zavody Chemickych zarizeni, narodni podnik, Brno, Czechoslovakia
Filed Nov. 7, 1960, Ser. No. 67,558
Claims priority, application Czechoslovakia Nov. 14, 1959
20 Claims. (Cl. 219—121)



1. In a process wherein an arc is maintained within an axially relatively elongated liquid vortex, the method of preventing radial deformation of the vortex core, due to the axial pressure gradient of the arc plasma, comprising the steps of sub-dividing the liquid vortex into axially adjacent vortex sections each having an axial length such that the axial pressure gradient therealong does not attain a magnitude sufficient to effect appreciable radial deformation of the vortex section core; and separately supplying liquid to each vortex section.

3,097,293
METHOD OF METALS JOINING
William L. Frankhouser, Irwin, and John H. Eyler, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1958, Ser. No. 780,047
18 Claims. (Cl. 219—137)



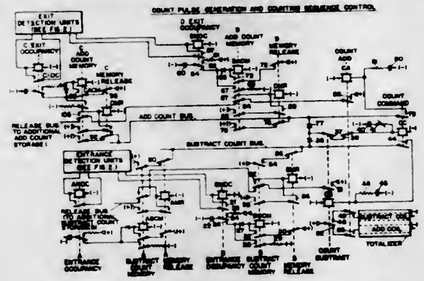
1. The method of precision welding a rod end-plate assembly comprising a plurality of rods engaging end plates at their ends into a stack comprising a plurality of rods sealed to end plates with the spacing between each rod and its adjacent rods being maintained along the whole lengths of said rods within narrow limits so that said stack maintains substantially its as-machined form, the said method comprising sealing said rods in a predetermined succession in which rods on the periphery of said stack and rods on the inside of said stack are sealed alternately to one of said end plates, by fusion-welding around the periphery of the end, in said one end plate, of each of said rods in its turn in said succession, and then sealing said rods in a succession homologous to said predetermined succession to said other end plate by fusion-welding around the periphery of the end, in said other end plate, of each of said rods in its turn in said homologous succession, said succession being such that said stack is formed with a minimum distortion.

3,097,294
ELECTRIC ARC WELDING AND WIRE THEREFOR
Robert A. Kubli, Scotch Plains, and William B. Sharav, Short Hills, N.J., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 3, 1961, Ser. No. 93,039
3 Claims. (Cl. 219—145)

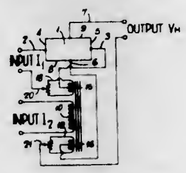
1. A consumable ferritic welding wire for electric arc welding consisting of 1.00 to about 2.00 manganese, 1.50 to about 3.00 percent nickel, 0.30 to about 0.60 percent molybdenum, .05–0.18 percent carbon, a trace up to about 0.05 percent vanadium, up to 0.035 percent phosphorus, up to 0.035 percent sulphur, up to about 0.25 percent silicon, 0.20–0.50 percent chromium, up to about 0.05 percent aluminum, and up to about 0.50 percent copper, balance iron.

3,097,295
TRAFFIC COUNTING SYSTEM
Roger E. Williams, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed June 8, 1961, Ser. No. 115,788
1 Claim. (Cl. 235—92)

In a system for registering the number of vehicles entering into and exiting from a parking area having at least one entrance passageway and at least one exit passageway, the combination comprising, vehicle detection means for each passageway producing an output signal upon the passage of a vehicle through the respective passageway, first and second storage means each registering the number of output signals produced by the plurality of vehicle detector means associated respectively with the entrance and exit passageways, an add-subtract counter having two input terminals and operating a single step in one counting direction upon the application of a control manifestation to one of its input terminals and operating a single step in the opposite counting direction upon the application of a control manifestation to the other of its input terminals, means responsive to the registration by said first storage means of one of said output signals for applying a control manifestation to said one terminal of said counting means and being responsive to the registration by said second storage means of one of said output signals for applying a control manifestation to said other of said terminals, means operable upon the operation of said counter by a single step to remove a single count from whichever of said storage means provided the last operation of said counter, said responsive means being also responsive to the concurrent registration by both said storage means of at least one count for removing from both said storage means a single count registered thereon without operating said counter, said responsive means completing an energization circuit to said one terminal of said counter when a count is registered by said first storage means but concurrently opening any energization circuit to said other said terminal, and said responsive means also completing an energization circuit to said other terminal of said counter when a count is registered by said second storage means but concurrently opening any energization circuit to said one terminal of said counter.

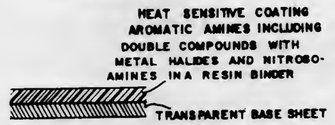


3,097,296
DEVICE FOR MULTIPLYING ELECTRICAL QUANTITIES
Reginald Philip Chasmar, Timperley, and Emanuel Cohen, Prestwich, Manchester, England, assignors to Associated Electrical Industries (Manchester) Limited, a British company
Filed June 4, 1959, Ser. No. 818,225
Claims priority, application Great Britain June 6, 1958
5 Claims. (Cl. 235—194)

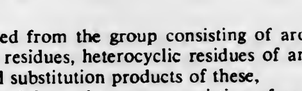


1. A device for multiplying electrical quantities comprising a ferrite member having faces defining a gap therebetween, a coil positioned in juxtaposition to the ferrite member so that current in the coil produces a corresponding magnetic flux in said member, a semi-conductor plate having opposite faces and positioned in the gap between said faces of said member so that said opposite faces of said plate contact said faces of said member and said magnetic flux passes across said plate, a pair of input current connections and a pair of output connections to said plate, the arrangement being such that the voltage between said output connections is proportional to the product of the current in said coil and current flowing between said input connections, and a compensating coil positioned in juxtaposition to said ferrite member and connected in series with said input current connections to said plate so as to compensate for voltages induced in said input current connections by said magnetic flux.

3,097,297
HEAT SENSITIVE REPRODUCTION MATERIAL
Wilhelm Sahler, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Kalle Aktiengesellschaft, Wiesbaden-Biebrich, Germany, a corporation of Germany
Filed July 8, 1959, Ser. No. 825,647
Claims priority, application Germany July 15, 1958
11 Claims. (Cl. 250—65)



1. A heat sensitive material for the reproduction of images comprising a base material in sheet form coated with a heat sensitive layer including a binder and a heat sensitive substance selected from the group consisting of aromatic amines, their salts and double compounds with inorganic metal halides, in combination with a nitrosamine corresponding to the general formulas



wherein

R is selected from the group consisting of aromatic carbocyclic residues, heterocyclic residues of aromatic nature, and substitution products of these,
R′ is selected from the group consisting of aromatic carbocyclic residues, aliphatic residues, araliphatic residues, and substitution products of these,
R″ is selected from the group consisting of aromatic carbocyclic residues and araliphatic residues, and
X is a carbocyclic aromatic residue,

and wherein R and R′ may join to form a ring.

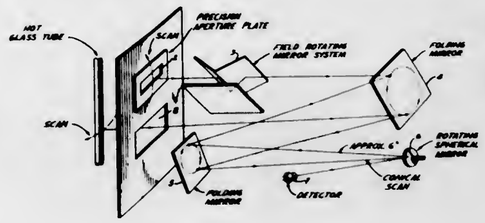
3,097,298
INFRARED COMPARISON MICROMETER
Robert W. Astheimer, Westport, and Monty M. Merlen, Stamford, Conn., assignors to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed May 25, 1960, Ser. No. 31,583
6 Claims. (Cl. 250—83.3)

1. A device for continuously measuring the width of an infrared emitting, moving, elongated material which comprises in combination an infrared detector,

(*a*) means for producing a continuous conical scan of the detector, one portion of the scan being at right angles to the moving material,
(*b*) means for rotating the direction of scan of an opposite side of the cone through approximately 90°, a precision aperture plate with a precision slot

scanned transversely by the rotated scan field said slot being oriented to receive infrared radiation from the moving hot material along the scan,

(*c*) means for imaging both the slot and the moving material transversely scanned onto the detector



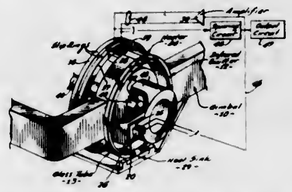
whereby the detector produces an output signal alternately of the transversely scanned hot material and of the scanned precision slot, and

(*d*) means for producing an output signal from the signals from the detector which is a function of the width of the moving material.

3,097,299
INFRARED PICKOFF DEVICE

Richard O. Rasmussen, Van Nuys, Calif., assignor to Telecomputing Corporation, Van Nuys, Calif., a corporation of California

Filed July 18, 1960, Ser. No. 43,518
12 Claims. (Cl. 250—83.3)

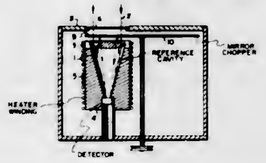


1. An infrared pickoff for measuring the angular position of a rotatable member, including, a circular wire for emitting infrared radiation mounted on said rotatable member, a heater on said rotatable member and thermally coupled to said wire at one position of the wire, a heat sink thermally coupled to the wire at another position of the wire, and a stationary infrared detector positioned opposite the wire for viewing a small portion of the wire in accordance with the angular position of the rotatable member.

3,097,300
THERMAL DETECTOR AND REFERENCE SOURCE

Eric M. Wormser, Stamford, Russell D. De Waard, Old Greenwich, and Andrew C. Rudomanski, Stamford, Conn., assignors to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed Oct. 6, 1960, Ser. No. 60,878
4 Claims. (Cl. 250—83.3)

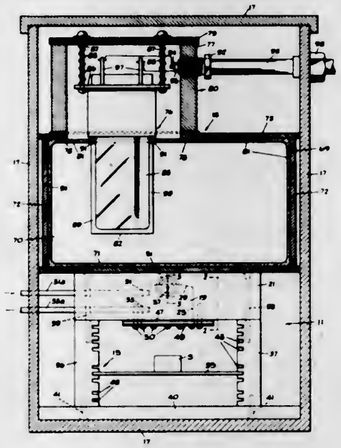


1. A radiation detecting device comprising in combination and in optical alignment a black body reference cavity, a chopper and a detector, the chopper comprising alternating transmitting and opaque sectors, the opaque sectors forming one wall of the cavity.

3,097,301
RADIATION DETECTING APPARATUS OF THE IONIZATION CHAMBER AND SCINTILLATION TYPE

Rodman A. Sharp, La Jolla, and Myron S. Elchen, Solana Beach, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 12, 1960, Ser. No. 55,584
7 Claims. (Cl. 250—83.6)

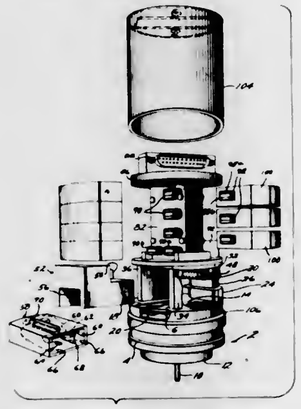


1. In apparatus for detecting beta radiation emanating from a source thereof in the presence of background radiation including cosmic radiation, a counter unit, means for supporting said counter unit adjacent the source of beta radiation, said counter unit including a gas filled ionization chamber having an electrically conductive coating on the inner surface thereof which provides the cathode of said chamber and a loop anode positioned in said chamber, means for establishing an ionizing potential between said loop anode and said conductive coating so that beta and back-ground radiation penetrating said chamber effect ionization of the gas therein and the generation of signals proportional thereto, said last mentioned means including a coaxial cable extending into said chamber, said cable having first and second conductive elements and insulation surrounding said elements, said first conductive element of said cable being electrically connected to said conductive coating, said anode including a portion mounted within said cable insulation in electrical contact with said second conductive element, a scintillation detecting unit mounted on said counter unit, said detecting unit including both a radiation responsive medium wherein light-energy pulses are produced by penetrating background radiation and means responsive to said light-energy pulses for generating an electrical signal proportional thereto, and means responsive to signals generated by said scintillation detecting unit and said gas filled ionization chamber for generating an output signal proportional to the beta radiation emanating from said source and for eliminating signals resulting from background radiation.

3,097,302
PHOTOSENSITIVE MODULAR SHAFT POSITION ENCODER

George H. Wayne and Donald E. Whitney, Newton, Mass., assignors to Wayne-George Corporation, Boston, Mass., a corporation of Massachusetts

Filed Mar. 3, 1961, Ser. No. 93,198
17 Claims. (Cl. 250—208)



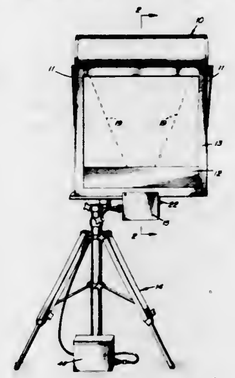
1. A precision shaft position encoder assembly comprising a code wheel module having a rotatable shaft for connection to a drive unit, said code wheel module including an optical code wheel with at least one concentric code track and a photosensitive detector for each code track disposed to detect the presence or absence of illumination at a predetermined location with respect to said each code track, a series of first electrical connectors affixed to said code wheel module in association with the photosensitive detectors, a light module assembly for providing a narrow light beam, said light module assembly having a series of second electrical connectors affixed thereto, said first series of electrical connectors of said code wheel module and said second series of electrical connectors of said light module being detachably mateable, under which condition said light beam is directed at said predetermined location, and an amplifier module assembly comprising an amplifier module for each detector, said amplifier module assembly having a series of third electrical connectors, said light module having a series of fourth electrical connectors, said third electrical connectors and said fourth electrical connectors being detachably mateable.

3,097,303
PHOTOSENSITIVE OPTICAL TRIGGERING SCREEN

Reinhard R. Ulrich, Bethesda, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Nov. 16, 1960, Ser. No. 69,780
4 Claims. (Cl. 250—222)
(Granted under Title 35, U.S. Code (1952), sec. 266)

4. A system for providing an accurate indication of the precise instant a projectile passes a predetermined point in space, comprising: a cylindrical cavity whose interior is blackened having a narrow axial slit therein, a photomultiplier tube positioned so that its photocathode faces said slit, and means positioned between said cavity and said photocathode for confining the detection region of said photomultiplier to a fan-shaped volume of uniform thickness terminating within said cavity, and further including means disposed in said cavity for preventing ambient light entering said slit from emerging therefrom, wherein said means disposed in said cavity comprises a perforated strip of dull black optical tape having a surface

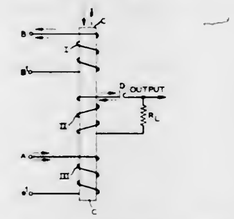


disposed at an angle of 45 degrees to a line between said photocathode and said axial slit.

3,097,304
SIGNAL TRANSLATING DEVICE

John Presper Eckert, Jr., Gladwyne, and Theodore H. Bonn, Merion Station, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Original application Sept. 24, 1953, Ser. No. 382,180. Divided and this application Jan. 6, 1959, Ser. No. 785,263
6 Claims. (Cl. 307—88)



2. A magnetic device comprising a magnetic core, a biasing coil coupled to said core, an input coil coupled to said core, means for applying direct current to said biasing coil to produce magnetic flux in one direction, means for applying a pulse waveform to said input coil to produce magnetic flux in an opposing direction, an output coil coupled to said core, and an integrating circuit coupled to said output coil, said integrating circuit having a discharge time longer than the duration of the pulses in said waveform.

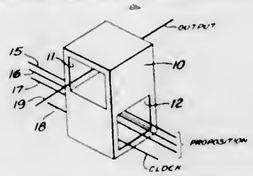
3,097,305
GATING CIRCUIT

Cravens L. Wanlass, Woodland Hills, Calif., assignor, by mesne assignments, to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Jan. 12, 1959, Ser. No. 786,429
3 Claims. (Cl. 307—88)

1. In a gating circuit, the combination of: a unitary block of homogeneous magnetic material having a first and second state of the magnetic flux and high flux retentivity, the block having a proposition current opening and an output current opening therethrough substantially perpendicular to each other and spaced by a quantity of the magnetic material to provide a flux zone therebetween, and including a first flux path in the magnetic material about the proposition opening and a second flux path in

the magnetic material about the output opening intersecting and perpendicular to the first flux path in said flux zone; a plurality of proposition conductors positioned in and extending through said proposition opening; means for coupling current pulses to said proposition conductors for changing the saturation state in the first flux path from the second to the first state; a clock conductor positioned in and extending through said proposition opening; means for coupling current pulses to said clock conductor for

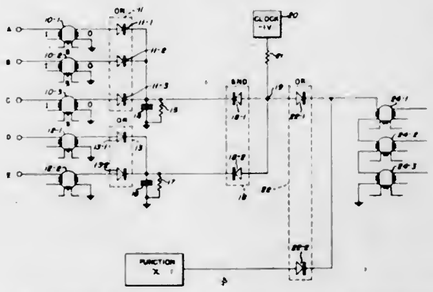


changing the saturation state in the first flux path to said second state; and an output conductor positioned in and extending through said output opening for detecting any chages in the magnetic flux in the second flux path about the output opening due to the clock conductor current pulses and producing unipolar output pulses of a polarity which is a function of the saturation state in said second flux path and independent of the polarity of the current pulses on said proposition and clock conductors.

3,097,306
MAGNETIC CORE DIGITAL STORAGE AND TRANSFER CIRCUITS

Lester Mintzer, Newton Center, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed May 3, 1960, Ser. No. 26,598
12 Claims. (Cl. 307—88)



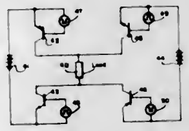
1. A coupling circuit for a digital transfer circuit comprising a pair of bistable magnetic core devices each of which has an input winding, an output winding and a shift winding, a condenser connected in series with the output winding of one of said bistable magnetic core devices, a pair of diodes having two like electrodes connected together and their other like electrodes connected one each to said condenser and to the input winding of the other of said core devices, and a clock pulse source connected to said pair of diodes where the like electrodes are connected together.

3,097,307
OPPOSITE CONDUCTING TYPE TRANSISTOR CONTROL CIRCUITS

Theodore H. Bonn, Philadelphia, Pa., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed July 6, 1955, Ser. No. 520,266
14 Claims. (Cl. 307—88.5)

1. A switching circuit comprising a load, a first transistor of a certain type having its collector coupled to one terminal of said load, a second transistor of a complementary type having its collector coupled to another terminal of said load, first control means coupled between the base and emitter of said first transistor for selectively applying signals thereto to control the conductivity of said first transistor, and second control means coupled between the base and emitter of said second transistor for selectively applying signals thereto to control the conductivity of said second transistor, means for applying energizing signals to one of said base and emitter electrodes of each of said transistors to pass current in a series circuit via said one electrodes and said collectors through said load in accordance with said control means

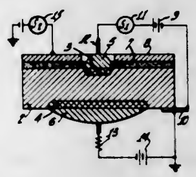


signals, a third transistor of said complementary type having its collector coupled to said one load terminal, a fourth transistor of said certain type having its collector coupled to said another load terminal, means for applying control signals between the base and emitter of said third transistor and the base and emitter of said fourth transistor to control the conductivity thereof, and means for applying energizing signals to one of said base and emitter electrodes of each of said third and fourth transistors to pass current in a series circuit via said one electrodes and said collectors of said third and fourth transistors through said load in accordance with the associated control signals and in a direction opposite to that passed by said first and second transistors.

3,097,308
SEMICONDUCTOR DEVICE WITH SURFACE ELECTRODE PRODUCING ELECTROSTATIC FIELD AND CIRCUITS THEREFOR

John T. Wallmark, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Continuation of applications Ser. Nos. 643,008 and 643,016, Feb. 28, 1957. This application Mar. 9, 1959, Ser. No. 798,129
23 Claims. (Cl. 307—88.5)

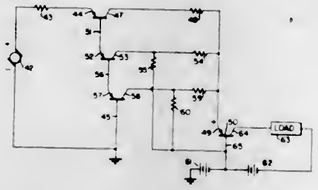


1. A semiconductor device comprising a semiconductor body having emitter and collector regions in contact therewith for injecting into and collecting minority carriers from said body, a base electrode contacting said body, said emitter region contacting a surface of said body, said emitter and collector regions defining the ends of a current path through said body substantially normal to said surface, a genetic insulating layer derived from said body covering at least a portion of said surface of said semiconductor body adjacent said emitter region, a control electrode adjacent said genetic layer for establishing an electric field therein for controlling the velocity of electron-hole recombination at said surface of said body, and means for independently biasing said control electrode.

3,097,309
JUNCTION TRANSISTORS USED TO APPROXIMATE NON-LINEAR FUNCTIONS

Alan R. Pearlman, Watertown, Mass., assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed June 2, 1959, Ser. No. 817,512
4 Claims. (Cl. 307—88.5)

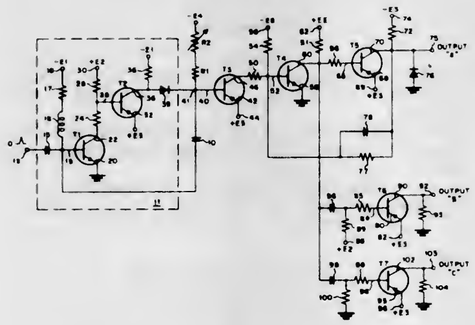


4. A circuit for approximating non-linear functions comprising a plurality of junction transistors each having an emitter, a base and a collector, said transistors being connected in cascade so that the entire base current of each transistor but the last is directed to the emitter of the succeeding transistor, means for applying a linearly variable input signal between the emitter of the first and base of the last transistor of the cascade, impedance means of decreasing magnitude in the collector circuit of each of said plurality of transistors, a load and a source of bias voltage in the collector circuit of said transistors whereby transfers of current in said plurality of said transistors due to linear increase in magnitude of said input signal cause a current through said load approximating a non-linear function.

3,097,310
RESETTABLE DELAY FLOP UTILIZING CAPACITOR IN FEEDBACK CIRCUIT

Ernesto Guidote Sevilla, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 14, 1959, Ser. No. 839,941
6 Claims. (Cl. 307—88.5)

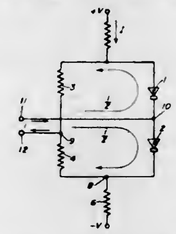


1. A delay flop comprising a source of trigger pulses, an input circuit, a capacitor connected in positive feedback relationship to said input circuit for charging therefrom, means coupling said source to said input circuit, said input circuit including means responsive to the current charging said capacitor to continue charging current flow from said input circuit to said capacitor after termination of said trigger pulse and for terminating said charging when said capacitor has attained a certain charge, a circuit for discharging said capacitor after it has become charged, and output circuit means responsive to the charge on said capacitor for producing an output signal therefrom upon discharge of said capacitor for a predetermined time.

3,097,311
TUNNEL DIODE MAJORITY LOGICAL ELEMENT

Jerome J. Tiemann, Burnt Hills, N.Y., assignor to General Electric Company, a corporation of New York

Filed June 1, 1960, Ser. No. 33,317
10 Claims. (Cl. 307—88.5)

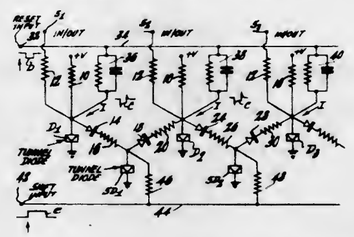


1. A logical element for performing majority logic comprising: a pair of series connected tunnel diode devices each having a low and a high voltage operating condition; a resistance; means connecting said resistance and said series connected tunnel diode devices in parallel circuit relationship; means for connecting said parallel circuit to a source of voltage adapted to cause operation for one of said diodes in its low voltage condition and the other diode in its high voltage condition; a pair of terminals including a first connection to the junction between said tunnel diode devices and a second connection to a point on said resistance, said point being selected with respect to the characteristics of said tunnel diode devices to provide that the polarity of the output voltage between said pair of terminals is determined by which of said tunnel diode devices is in the high voltage condition; and means for applying an odd number of input signals to said pair of terminals, the polarity of the majority of said input signals determining the polarity of the output of said logical element at said same pair of terminals.

3,097,312
SHIFT REGISTER INCLUDING TWO TUNNEL DIODES PER STAGE

James C. Miller, Hamilton Square, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Sept. 30, 1960, Ser. No. 59,692
7 Claims. (Cl. 307—88.5)



1. A shift register comprising a chain of bistable storage circuits which are stable in either an initial "0" state or a switched "1" state, a coupling from each storage circuit to the following storage circuit including unidirectional coupling means and a shift element having "0" and "1" states, means to apply a shift signal to bias all of said shift elements for a given interval at a level causing each shift element to assume the state of the preceding storage circuit, and means operative during said given interval to

apply a reset signal to said storage circuits to cause them to return to the initial "0" state, and thereafter assume the state of the preceding shift element.

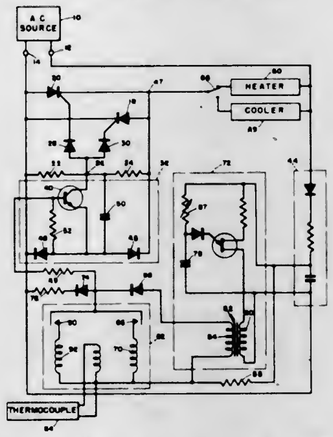
3,097,313
RC-COUPLED MONOSTABLE TRANSISTOR CIRCUIT WITH DIODE SHUNT TO PROVIDE FAST RECOVERY TIME
John Rywak, Ottawa, Ontario, Canada, assignor to Northern Electric Company Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Nov. 9, 1960, Ser. No. 68,182
3 Claims. (Cl. 307—88.5)



1. A monostable transistor circuit comprising in combination:
(*a*) a first and second semiconductor device each having a base, emitter and collector electrode,
(*b*) a capacitor and a first unidirectional means connected in series between the collector electrode of the first semiconductor device and the base electrode of the second semiconductor device, so that the cathode and anode of the unidirectional means are connected to the base electrode of the second semiconductor device and the capacitor respectively,
(*c*) a first resistor connected between the collector electrode of the second semiconductor device and the base electrode of the first semiconductor device,
(*d*) a source of potential,
(*e*) a second resistor connected to a first terminal of the source, poled to apply a predetermined potential thereto, and to the base electrode of the first semiconductor device,
(*f*) a third resistor connected to the first terminal of the source and to the anode of the unidirectional means,
(*g*) a fourth and fifth resistor individually connected to the other terminal of the source and to the collector electrodes of the first and second semiconductor devices respectively,
(*h*) a sixth resistor connected to the other terminal of the source and to the base electrode of the second semiconductor device,
(*i*) means for grounding the emitter electrodes of the transistors.

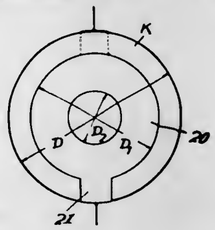
3,097,314
ALTERNATING CURRENT SILICON CONTROLLED RECTIFIER SWITCH
Raymond E. Harriman, San Diego, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Filed July 24, 1961, Ser. No. 126,004
11 Claims. (Cl. 307—88.5)

8. A circuit for controlling whether current flows between an A.C. source and a temperature changing device, comprising:
a pair of oppositely-poled silicon controlled rectifiers connected in parallel between said source and said device, each of said silicon controlled rectifiers having an anode, a cathode, and a control electrode;
a voltage divider connected between said anodes, said voltage divider having a midpoint;
means, comprising a pair of similarly poled diodes for applying the potential at said midpoint to said control electrodes of said silicon controlled rectifiers;
a connection comprising a pair of oppositely-poled front-to-front diodes connected in series between said anodes, said connection having a midpoint;
a transistor having its collector-emitter circuit between said midpoint of said voltage divider and said midpoint of said connection;
disabling means, for applying a D.C. potential to the base electrode of said transistor, said means comprising;
a meter wherein the pointer closes a contact and completes a circuit through a holding coil;



means whereby said contact is closed under given conditions of temperature;
means for causing said D.C. potential to cause a holding current to flow in a given direction through said coil, to provide a holding action;
an oscillator;
a transformer having a primary and a secondary;
means for causing said oscillator to periodically send a surge of current through said primary; and
means for causing the resultant surge of current in said secondary to flow through said coil in the opposite direction to break said holding action.

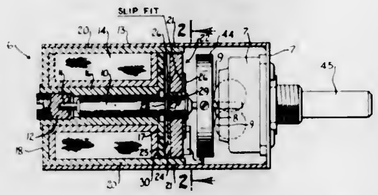
3,097,315
CRYSTAL VIBRATOR OF CONVEX LENS CONFIGURATION HAVING OPPOSED CONVEX SURFACES
Toshio Shinada, 1399 Iruma-cho, Chofu-shi, and Akira Ohnuki, Chikaneso, 433 Taishido-machi, Setagaya-ku, both of Tokyo, Japan
Filed Apr. 5, 1960, Ser. No. 20,071
Claims priority, application Japan Apr. 9, 1959
4 Claims. (Cl. 310—9.7)



1. A high Q crystal vibrator of convex lens configuration, said vibrator having opposed surfaces of similar convex curvature to each other characterized in that substantially equal annular electrodes are coaxially and tightly attached onto said opposed surfaces of the vibrator

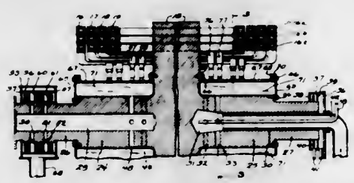
in such manner that the electrical signals across said electrodes may be predominantly correlated with the second order contoured thickness shear vibration of said vibrator.

3,097,316
IMPULSE MOTOR
Wayne A. Barden and Stanley O. Bender, Elkhart, Ind., assignors, by mesne assignments, to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Dec. 31, 1959, Ser. No. 863,160
16 Claims. (Cl. 310—49)



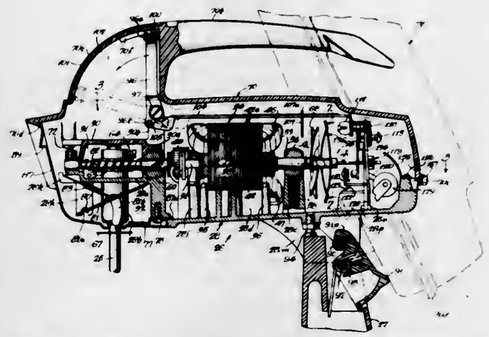
1. An impulse motor comprising: a shaft; means mounting the shaft for free rotation; an electromagnet having a core coaxial with the shaft and salient stator poles arranged concentrically about the shaft; an armature having salient poles; means mounting the armature for rotation about the shaft axis with its salient poles in position to be magnetically attracted toward radial alignment with the stator poles and for limited axial motion toward and from the core; means yieldingly holding the armature in a position of rest at which its poles are out of alignment with the stator poles, so that upon energization of the electromagnet the armature is rotated through an angle and in a direction depending upon the location of said position of rest with respect to the stator poles and attracted axially towards the core; and friction clutch means on the armature and the shaft to couple the same together for transmission of torque from the armature to the shaft, said clutch means comprising a driven element fixed to the shaft between the armature and the core, and a driving element on the armature facing the driven element and adapted to drivingly engage the same upon attraction of the armature axially toward the core in response to energization of the electromagnet.

3,097,317
LIQUID-COOLED ELECTRIC GENERATOR
Carl J. Fechheimer, 1930 N. Prospect Ave., Milwaukee, Wis.
Filed May 5, 1960, Ser. No. 27,222
16 Claims. (Cl. 310—54)



1. In an electric generator rotor comprising a body with shafts extending therefrom, the shafts having axial bores and radial bores from the axial bores for conveying a liquid coolant, electrical windings mounted in the body and each including a number of turns of electric conductor each conductor having ducts lengthwise thereof and ports radially of the body and into the ducts from the bottom of the windings, and tubular connectors severally joining the radial shaft bores with the ports in the windings for delivery thereto and discharge therefrom of liquid coolant.

3,097,318
ELECTRIC POWER UNIT FOR HAND HELD FOOD MIXER
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed May 13, 1959, Ser. No. 812,928
8 Claims. (Cl. 310—68)

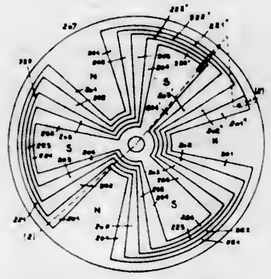


1. An appliance comprising a platformlike support, a motor having a shaft extending along the length of said support and generally parallel therewith, a gear casing at one end of said support, one end of said shaft extending into said gear casing, bearing means for said shaft mounted on said support, a centrifugally responsive member secured to the other end of said shaft, a cover for said support including a handle portion, said cover defining with said support a housing for said motor and gear casing, means defining a recess in said handle portion, an arcuate slot in said handle portion leading to said recess, a bell crank pivotally supported within said housing, one arm of said bell crank including manually actuatable means extending outside said housing through said arcuate slot, switch means mounted at the end of said support remote from said gear casing and connected in the energization circuit of said motor, means actuated by said centrifugally responsive member for operating said switch means in dependence upon the speed of rotation of said motor shaft, positioning means for selectively adjusting said switch means to different speed settings, and a longitudinally movable link having one end connected to said bell crank and the other end connected to said positioning means.

3,097,319
PRINTED CIRCUIT STATOR FOR ELECTRICAL ROTATING MACHINES
Jacques Henry-Baudot, Antony, France, assignor to Printed Motors Inc., New York, N.Y.
Filed Dec. 8, 1959, Ser. No. 858,240
Claims priority, application France Dec. 13, 1958
5 Claims. (Cl. 310—179)

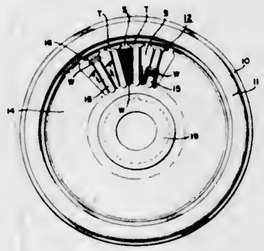
1. For an axial air-gap electrical rotating machine, a stator winding member comprising a carrier ring of magnetic material and having a radial face formed as a single-plane surface, a multi-turn spiral winding carried on said single-plane face, each turn of said winding comprising a plurality of sectorial conductor loops serially interconnected and made of a thin and flat conductor coating on the carrier face to which it strongly adheres, said coating comprising groups of radial conductor portions of sector shape arranged in contiguous relation to each other in each group and separated only by narrow insulating gaps, polar areas being preserved between such

groups of closely arranged radial conductor portions, and arcuate conductor portions alternately connecting the



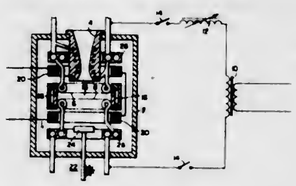
radial conductor portions of said groups at their inner and outer ends respectively.

3,097,320
PROTECTIVE MEANS FOR INSULATION
Paul F. Koehly and Earl C. Walters, Jr., Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 84,189
5 Claims. (Cl. 310—217)



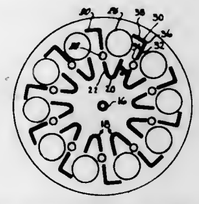
1. A toothed lamination assembly for use on an inside-out dynamoelectric machine, comprising, a plurality of slotted laminations having teeth to define radial slots into which conductive wiring is fitted, a cast metal hub portion including radially outwardly extending and laterally located projections cast in alignment with each of the teeth for rounding thereof, and an insulation covering over said rounding projections for protection of said covering against breakdown in locations engaged by the wiring.

3,097,321
HIGH ENERGY ARC ELECTRODES
Charles E. Le Row, Jr., Trafford, and Jack McDonald, Penn Hills Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1960, Ser. No. 73,831
8 Claims. (Cl. 313—32)



1. An electrode comprising, in combination; a substantially ring shaped member having an electrical arc terminating area; a plurality of tubular coils each helically wound on an annular axis disposed between the inner and outer circumference of said ring shaped member; said tubular coils adapted to allow fluid flow therethrough in a direction perpendicular to the arc column of said electric arc.

3,097,322
MAGNETRON BEAM SWITCHING TUBE
Roger W. Wolfe, South Plainfield, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 21, 1960, Ser. No. 37,607
13 Claims. (Cl. 313—156)



1. A magnetron beam switching tube of the type utilizing crossed electric and magnetic fields to control the flow of an electron beam and operating to switch an electron beam in a direction determined by the orientation of said fields and known as the leading direction,

said tube having an electrode assembly including a cathode for providing a stream of electrons and a plurality of groups of electrodes surrounding the cathode,

each group of electrodes defining an electron beam receiving region and including a target electrode for receiving an electron beam and providing an output signal therefrom,

a spade electrode lying between said cathode and the target electrode for forming and holding an electron beam thereon, said spade and target lying generally at one side of said electron beam receiving region,

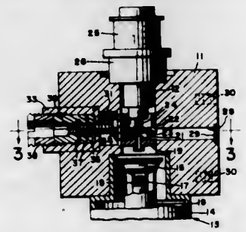
a switching electrode spaced from said target and spade electrodes and lying generally at the other side, the leading side, of said beam receiving region,

and an auxiliary electrode lying outside of the current flow path from cathode to target and substantially completely enclosing the space between said target electrode on one side and both said switching electrode on the other side and the target electrode of the next leading group,

the auxiliary electrode thus being positioned to collect leakage current from an electron beam flowing to a target and to provide a favorable electric field configuration to render a target able to receive an electron beam over a wide range of target potentials.

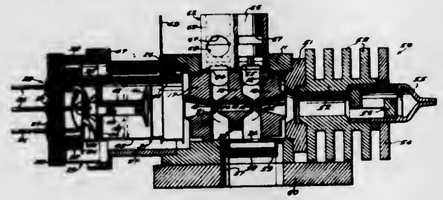
3,097,323
TUNING DEVICE FOR FLEXIBLE WALL KLYSTRON
Frederick L. Salisbury, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Dec. 6, 1960, Ser. No. 74,043
14 Claims. (Cl. 315—5.23)

1. A klystron tube comprising a main body portion of solid metallic material having a bore therein, a cathode for supplying an electron beam in said tube axially through said bore, a pair of wall members positioned in said bore each having a centrally positioned electron beam permeable passage therein aligned with said cathode, the wall members being spaced apart and serving to form a cavity resonator in said bore and providing a resonator gap therebetween at said beam openings, said main body having an opening extending into one side thereof and terminating short of said bore so as to form a relatively thin wall section in the body at said bore adjacent one of said wall members, and tuning



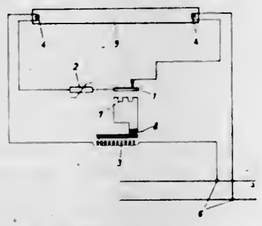
means positioned in said last opening and extending into contact with said thin wall section for permitting a force to be exerted on said thin wall section to thereby cause said one wall member to bend and change the resonator gap spacing between the two wall members.

3,097,324
CAVITY RESONATOR STRUCTURE FOR KLYSTRONS
Frederick L. Salisbury, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed May 2, 1960, Ser. No. 26,249
8 Claims. (Cl. 315—5.39)



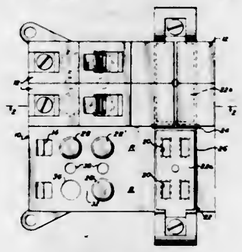
1. In an electron discharge device a central body portion including a longitudinal bore therethrough with knurls provided on the surface of the longitudinal bore at which cavity resonator partitions are to be located, and cavity resonator partitions positioned on the knurls within the longitudinal bore and fixedly secured to the central body portion.

3,097,325
FLUORESCENT DISCHARGE LAMP STARTING AND OPERATING CIRCUIT
Bernard Cosnuau, St.-Mande, Seine, France, assignor to Fluotechnic, Montreuil-sous-Bois, Seine, France
Filed Apr. 4, 1960, Ser. No. 19,807
4 Claims. (Cl. 315—100)



1. In combination, a fluorescent discharge lamp having two spaced heater electrodes, a pair of alternating current supply conductors, and a series circuit connecting said supply conductors and electrodes and including a voltage-responsive non-linear resistor, said resistor having a current voltage characteristic given by $I=CU^k$, where I is the current therethrough, C is a constant of its material, U is the voltage thereacross, and k is a constant value at least of the order of 5, a temperature-responsive switch, and a ballast reactor, said reactor being connected between a terminal of one of said electrodes and one supply conductor, a terminal of the other electrode being connected to the other supply conductor, and the non-linear resistor and the temperature-responsive switch being connected between the remaining terminals of the electrodes, said switch having a heating winding, and means energizing said heating winding in accordance with the current flowing in the series circuit, the voltage across the resistor being initially high and its resistance low, whereby initially a large current flows in the series circuit, thereby energizing said heating winding, causing the switch to open and discharge to start in the lamp, after which the voltage across the resistor is relatively low and its resistance high, reducing the current in the series circuit sufficiently to allow the switch to close while the lamp discharge continues, whereby the lamp can be immediately restarted following an interruption in its operation.

3,097,326
CIRCUIT BREAKER PANELBOARDS
Thomas M. Cole, Harrison, and Frank H. Roby and Alexander R. Norden, New York, N.Y., assignors to Federal Pacific Electric Company, a corporation of New York
Filed Nov. 12, 1958, Ser. No. 773,476
15 Claims. (Cl. 317—119)

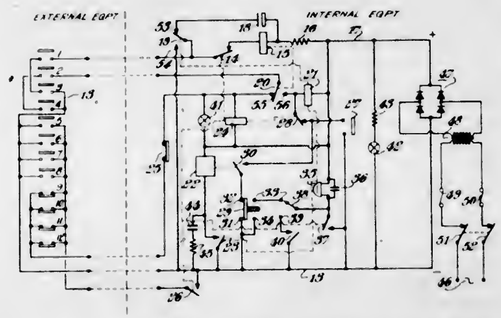


1. A circuit breaker panelboard having means for securing a circuit breaker thereon in a circuit breaker mounting region, said panelboard including a sheet metal component having a plurality of distinctively positioned and mutually separated knock-outs in each said region said knockouts in each region being disposed closely adjacent to a circuit breaker that may be mounted in such region and each of said knockouts being received in an opening in said sheet metal component and fully closing off said opening and being formed so as to be easily displaceable only by access to the concealed or back face of said component, said knock-outs being selectively displaceable to classify said region according to the rating classification of a mating circuit breaker and said panelboard being arranged to inhibit access to the rear of said component.

3,097,327
ACTUATOR FOR ELECTRICALLY OPERABLE DEVICE
James Herbert Bloor and Frederick George Chandler, Basingstoke, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Feb. 2, 1959, Ser. No. 790,620
Claims priority, application Great Britain Feb. 8, 1958
5 Claims. (Cl. 317—134)

1. An electric combination actuator for a mechanical member comprising at least one switch connected in series

with a relay, a capacitor connected across said relay, an automatic switch operable by said relay, a contact arm in said automatic switch movable from a first contact to a second contact, at least one switch connected in series with said contact arm, a magnetic coil means connected to be energized when current passes through said second contact, a self-holding circuit for said magnetic coil means, a self-holding circuit for said relay adapted to be energized when

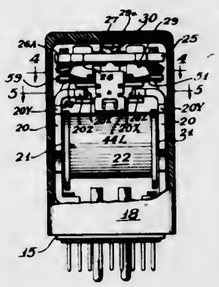


current passes through said second contact, a mechanical member movable from a first position to a second position by said magnetic coil means, a blocker relay connected to said first contact for preventing energization of the magnetic coil means, an additional self-holding circuit for said blocker relay, and a plurality of switches connected in parallel with each other and connected to said blocker relay.

3,097,328
ELECTROMAGNETIC RELAY

Hans Sauer, Chicago, Ill., assignor, by mesne assignments, to Comar Electric Company, Chicago, Ill., a corporation of Illinois

Original application July 18, 1955, Ser. No. 522,538, now Patent No. 2,825,783, dated Mar. 4, 1958. Divided and this application Feb. 12, 1957, Ser. No. 640,061
6 Claims. (Cl. 317—199)

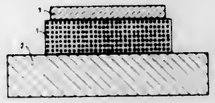


2. In a magnetic device, in combination, a movable member including a magnetically-attractable element; means including a magnetic device for attracting said element across an air gap diminished progressively by displacement of said member from a desired normal position, said magnetic device having a predetermined magnetic-force-displacement curve which is a function of the displacement of said movable member under the urgence of the magnetic force exerted across said gap by said magnetic device; and spring means having a dynamic characteristic approximating said predetermined curve and normally biasing said movable member to said desired normal position relative to the magnetic device, said spring means comprising a leaf spring of elongated character fixed at one end and having its opposite end projecting into space and laterally widened predetermined amounts relative to said one fixed end for the purpose aforesaid; together with adjustable means providing a fulcrum point engaged by said opposite projecting end of the spring and causing the latter to change its characteristic progressively in accordance with said curve responsive to flexure thereof with movement of said movable members by said magnetic device as said air gap is diminished.

3,097,329
SINTERED PLATE WITH GRADED CONCENTRATION OF METAL TO ACCOMMODATE ADJACENT METALS HAVING UNEQUAL EXPANSION COEFFICIENTS

Alfred Siemens, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin - Siemensstadt, Germany, a corporation of Germany

Filed June 16, 1961, Ser. No. 117,617
Claims priority, application Germany June 21, 1960
4 Claims. (Cl. 317—234)

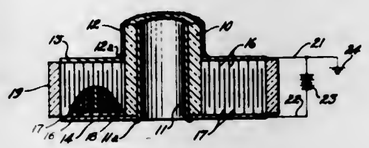


1. An electronic semiconductor device subject to thermal alternating stresses when in use, comprising a crystalline semiconductor body, a carrier structure of good conducting metal, and an intermediate plate having respective surfaces bonded to said semiconductor body and to said carrier structure respectively in face-to-face area contact with both, said intermediate plate consisting at its semiconductor side of a contact metal having a higher melting point than said carrier metal, and said plate consisting at its carrier side of another metal having the same thermal coefficient of expansion as said carrier metal, the intermediate region of said plate having a proportion of said contact metal increasing from said carrier side towards said semiconductor side.

3,097,330
COAXIAL CAPACITANCE TERMINATION

Heinz Fischer, 32 Scott Road, Belmont, Mass.

Filed Mar. 28, 1958, Ser. No. 724,775
2 Claims. (Cl. 317—242)
(Granted under Title 35, U.S. Code (1952), sec. 266)

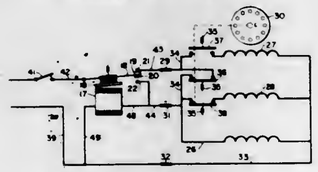


1. In an electrical capacitor apparatus, the combination of a pair of concentric tubular conductors having parallel conducting flanges extending radially outward therefrom and a capacitor assembly surrounding the inner one of said conductors, an insulating material disposed about said inner conductor, said assembly including a sheet of dielectric material enclosed between two sheets of conductive material and spirally wound therewith about said insulating material on said inner tubular conductor, one of said conductive sheets having an edge secured to one of said flanges and the other of said conductive sheets having an edge secured to the other of said flanges to complete an electric circuit therethrough.

3,097,331
TWO SPEED MOTOR

J. Vance Miller, 2226 E. Amelia, Phoenix, Ariz.

Filed Sept. 19, 1960, Ser. No. 57,014
7 Claims. (Cl. 318—221)



7. A system for operating a single phase, two speed motor with a starting winding, high speed and low speed windings, by means of a single pole line switch including, in addition to said motor,

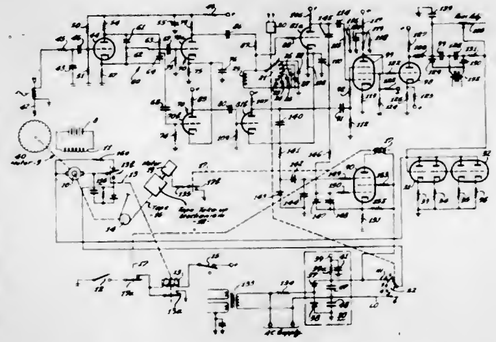
(*a*) a relay system including,
  (1) a relay coil,
  (2) an armature having a contact for engaging a first contact when said coil is de-energized and for engaging a second contact when said coil is energized,
(*b*) a first circuit including the following series-connected elements,
  (1) a first side of a power line,
  (2) said armature contact,
  (3) said first contact,
  (4) a first speed-responsive motor switch closed when said motor is rotating below a predetermined speed,
  (5) said high speed winding,
  (6) a second side of the power line,
(*c*) a second circuit including the following series-connected elements,
  (1) said first side of a power line,
  (2) said single pole line switch,
  (3) said armature contact,
  (4) said first contact,
  (5) said first speed-responsive motor switch,
  (6) a second speed-responsive motor switch closed when said motor is rotating below a predetermined speed,
  (7) said single pole line switch,
  (8) said starting winding,
  (9) said second side of the power line,
(*d*) a third circuit including the following elements connected in series,
  (1) said first side of a power line,
  (2) said armature contact,
  (3) said first contact,
  (4) a third speed-responsive motor switch open when said motor is rotating below said predetermined speed,
  (5) said low speed winding,
  (6) said second side of a power line,
(*e*) means connecting one side of said relay coil to said second side of a power line,
(*f*) means connecting the other side of said relay coil to the junction of said first and second speed-responsive motor switches, and
(*g*) means connecting said other side of said relay coil to said second contact.

3,097,332
SPEED CONTROL AND REGULATING CIRCUITS

John T. Mullin, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Jan. 8, 1959, Ser. No. 785,624
17 Claims. (Cl. 318—314)

1. In combination for regulating the speed of a motor in driving a medium capable of recording and reproducing information, means coupled to the motor for generating two signals having frequencies related to the speed of the motor, a tuned circuit arrangement coupled to said generating means for phase modulating one of said signals in accordance with the frequency deviation of said one signal from the resonant frequency of said tuned circuit arrangement, and electrical circuitry responsive jointly

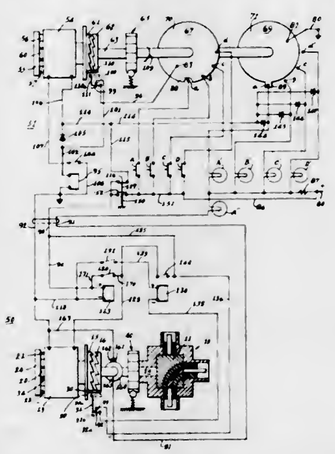


to the other signal from said generating means and to the phase modulated signal from said tuned circuit arrangement for generating a signal having a rectangular wave and having a duty cycle depending upon the phase displacement between said other signal and said modulated signal for introduction to the motor to regulate the speed of the motor.

3,097,333
FAILURE INDICATING CIRCUIT FOR SLAVE DRIVEN UNIT

Ralph J. Kragle, Newbury, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed June 29, 1960, Ser. No. 39,700
10 Claims. (Cl. 318—467)



1. A remotely controlled actuating system comprising a slave driven unit having an actuating electromagnetic device for energization to cause the slave unit to execute successive incremental movements, electrically energized failure signalling means operatively associated with said slave driven unit and controlling actuation of said failure indicating means at said remote control station, and means responsive to a failure of said slave driven unit for

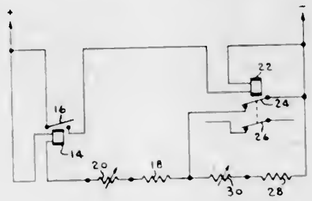
coupling said electrically energized failure signalling means to said actuating electromotive device for energization by the induced electromotive force generated by said actuating electromotive device upon deenergization thereof by said remote control station to actuate said failure indicating means at said remote control station.

3,097,334

AUTOMATIC CONTROL FOR BATTERY CHARGER

Robert Schimek, Milwaukee, Wis., assignor to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware

Filed Dec. 7, 1959, Ser. No. 857,589
3 Claims. (Cl. 320—40)



1. An automatic control for a battery charger comprising, a voltage sensitive relay winding adapted for connection across the terminals of a battery, said voltage sensitive relay winding having a pair of normally open voltage sensitive switch contacts operated by said voltage sensitive relay winding, a time delay relay winding adapted for connection across the terminals of a battery and parallel with said voltage sensitive relay winding, said time delay relay winding having first and second pairs of normally closed time delay switch contacts operated directly by said time delay relay winding, said voltage sensitive switch contacts connected in series with said time delay relay winding and operable in response to the energization of said voltage sensitive relay winding to energize said time delay relay winding when said voltage sensitive relay winding is energized, said first pair of time delay switch contacts operable in response to the energization of said time delay relay winding and adapted when so actuated to shut off the battery charger, a first variable resistance means connected in series with said voltage sensitive relay winding and adapted to adjust the maximum control voltage at which the voltage sensitive relay winding will be energized, a second variable resistance means connected in series with said voltage sensitive relay winding and adapted for adjustment of the minimum control voltage at which said voltage sensitive relay winding will drop out after once being energized, and a shunt circuit means for shunting said second variable resistance means, said shunt means including said second pair of time delay switch contacts, said second switch contacts adapted when actuated to open said shunt circuit and thereby introduce the resistance of said second variable resistance means into the voltage sensitive relay winding circuit.

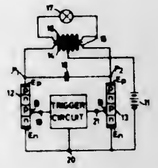
3,097,335

ELECTRIC CURRENT INVERTER

Arnold Schmidt, Vienna-Essling, Austria, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a German corporation

Filed Nov. 18, 1960, Ser. No. 70,258
Claims priority, application Germany Nov. 20, 1959
13 Claims. (Cl. 321—45)

1. An electric current inverter comprising two direct-current supply leads, a transformer having a secondary winding for providing alternating output voltage and two primary winding portions connected in series so as to have a midpoint and two ends respectively, two four-region three p-n junction semiconductor devices each having two terminal electrodes on respective p-type and n-type terminal regions and a gate electrode on one of the two intermediate regions, said two devices having one of of said terminal electrodes of a given-type region connected with said respective ends and having the other terminal electrode connected with one of said supply leads, said other supply lead being connected with said midpoint, a driver network comprising alternating-pulse



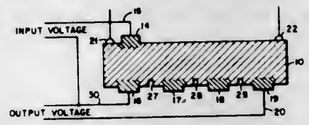
generating means and having a reference terminal connected to said one supply lead and two pulse terminals of different instantaneous pulse polarities respectively, said pulse terminals being connected to said two respective gate electrodes to drive a cut-off current in inverse direction through the p-n junction between the gate electrode and the adjacent terminal region of one of said semiconductor devices and simultaneously a firing current in forward direction through the corresponding p-n junction of the other device.

3,097,336

SEMICONDUCTOR VOLTAGE DIVIDER DEVICES

George C. Sziklai, Rosslyn Farms, Pa., and Gene Strull, Pikesville, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 2, 1960, Ser. No. 25,982
12 Claims. (Cl. 323—94)



1. A semiconductor device comprising a body of semiconductive material having a base, an emitter and a collector portion, said collector portion comprising a plurality of collector regions defining a plurality of current carrier paths between said emitter and each of said plurality of collector regions, means to establish an electric field transverse to said plurality of current paths to deflect current carriers in accordance with the magnitude and direction of said electric field, circuit means electrically coupled to at least one and less than all of said plurality of collector regions to derive an electrical output signal the magnitude of which is determined by the resistive path taken by current carriers between the collector region to which said current carriers are deflected by said electric field and the collector region having said circuit means electrically coupled thereto.

3,097,337

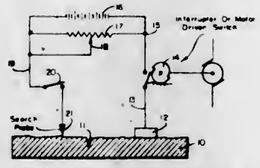
APPARATUS AND METHOD FOR ELECTROLUMINESCENT NON-DESTRUCTIVE FLAW DETECTION

Herbert S. Polin, Veyrier (Geneva), Switzerland
(2 East End Ave., New York 21, N.Y.)

Filed May 17, 1960, Ser. No. 29,695
10 Claims. (Cl. 324—32)

1. In a device for the non-destructive testing for flaws in material to which an electro-luminescent phosphor has

been applied in finely divided form capable of penetrating hair line cracks and other flaws in the surface of the material, a fixed electrode constructed to be applied to a piece of material under test at selected points, a movable probe, circuit means connecting said electrode and said



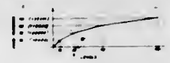
movable probe to supply a pulsating voltage thereto to create an electric field between said electrode and said probe and in and around said material, said field being of sufficient value to activate phosphor particles within said field and to cause them to luminesce and reveal a flaw in material under test.

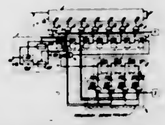
3,097,338

PULSE-CODE MODULATION TRANSMISSION SYSTEMS

André Eugène Pinet, 22 Rue E. Le Gac, Perros-Guirec, Cotes du Nord, Saint-Maur, France, and Gérard Battail, 30 Boulevard du Temple, Paris 11, France

Filed Sept. 26, 1961, Ser. No. 140,895
Claims priority, application France Nov. 30, 1960
7 Claims. (Cl. 325—38)





1. A coded pulse modulation transmission system comprising: means for producing sample pulses time-modulated by a modulation signal; a recurrent counting pulse generator; means for varying in multiples of two the frequency of such generator; means for transmitting over a transmission channel binary-code pulses translating the number of times that the period of the counting pulses is contained in the duration of a sample pulse; a recurrent backward counting pulse generator; means for varying in multiples of two the frequency of the last-mentioned generator; and means for producing restored sample pulses, the duration of which is a number of periods of the backward counting pulses equal to the number represented by the binary-code pulses, the frequency of the counting pulses and the frequency of the backward counting pulses varying by a multiple of two when the generators have produced predetermined numbers of counting and backward counting pulses.

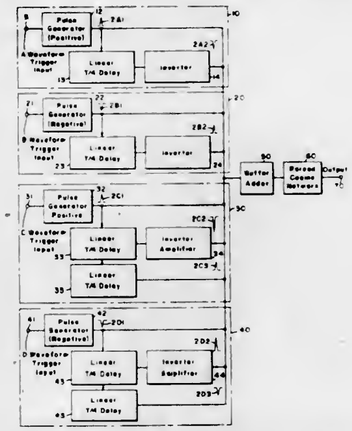
3,097,339

INDIVIDUALLY TRIGGERED PULSE GENERATORS FEEDING A BUFFER ADDER TO PRODUCE PARTICULAR OUTPUT WAVEFORMS

Gerard K. McAuliffe, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 19, 1959, Ser. No. 834,896
8 Claims. (Cl. 328—61)

1. A waveform generator comprising a matched filter for producing a waveform of a predetermined shape and time length T in response to a pulse being applied thereto, means operatively connected to the input of said filter for



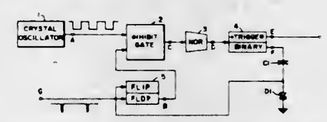
producing two pulses spaced a time distance less than T in response to a pulse being applied thereto.

3,097,340

GENERATING SYSTEM PRODUCING CONSTANT WIDTH PULSES FROM INPUT PULSES OF INDETERMINATE HEIGHT AND DURATION

James Dobbie, Williamsville, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 31, 1961, Ser. No. 113,897
7 Claims. (Cl. 328—63)



1. In controlled pulse signal providing apparatus operative with input pulse signals, the combination of a source of reference frequency signals, signal gating means operative when open with said signal source to provide a pair of control signals having a predetermined relationship to said reference signals, first control means operative to open said signal gating means in response to each of said input pulse signals, and second control means for providing a controlled pulse output signal in response to said control signals, with said first control means being responsive to said one control signal.

3,097,341

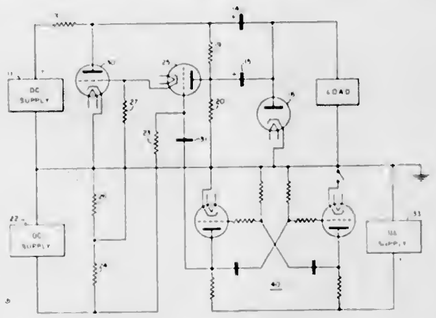
CIRCUIT FOR PRODUCING SQUARE WAVE PULSES BY PARALLEL CAPACITORS DISCHARGING THROUGH LOAD AT DIFFERENT RATES

Willard H. Bennett, 5032 Kaplan Drive, Raleigh, N.C.

Original application Oct. 30, 1961, Ser. No. 148,776. Divided and this application Apr. 26, 1962, Ser. No. 190,513
6 Claims. (Cl. 328—67)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Circuit means for pulsing a flow of current at high voltage at a selected repetition rate and pulse duration comprising a high-voltage D.-C. supply, a voltage divider having a plurality of taps connected in parallel with said supply, a capacitor and a diode in series with one of said taps and ground, a second capacitor in series with another tap and the junction of said diode and capacitor,

current control means connected across said supply between a tap and ground, said control means responsive to an input voltage to provide a variable impedance across said supply, switching means connected between said control means and a tap to control the input voltage



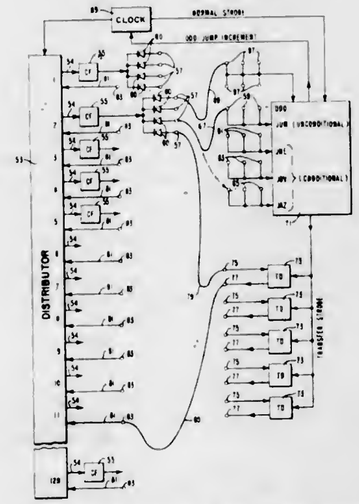
to said control means, and a load connected in parallel with said diode whereby said control means is made conducting reciprocally in response to the discharge of said capacitors thereby producing a pulse of substantially constant magnitude to said load.

3,097,342

JUMP DRIVE FOR COMPUTER DISTRIBUTOR COMPRISING MAGNETRON BEAM SWITCHING TUBES

Thomas L. Francis, Richardson, and Charles L. Kettler and George P. Sarrafian, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed July 14, 1960, Ser. No. 42,830
8 Claims. (Cl. 328—103)



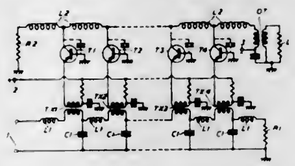
1. In a computer having a distributor comprising a plurality of magnetron beam switching tubes, each of said magnetron beam switching tubes comprising an electronic switch having a plurality of positions, each of said positions comprising a target, a spade, and a grid, each of said magnetron beam switching tubes further comprising a cathode, each of said magnetron beam switching tubes being capable of forming an electron beam flowing from its cathode and holding said electron beam on one of said targets, said distributor further comprising circuit means (1) to switch said electron beam from target to target in said magnetron beam switching tubes and (2) in response to said electron beam being switched to a predetermined target in each of said beam switching tubes, to form the electron beam in the next magnetron beam switching tube of said distributor and clear the magnetron beam switching tube in which the beam was formed to thereby advance said distributor so that output pulses are produced sequentially from said targets; the improvement comprising means to generate a transfer strobe pulse in response to receiving a distributor output pulse, means to selectively connect any of a plurality of said targets to said transfer strobe generating means, a plurality of transfer drivers connected to receive said transfer strobe pulse, each of said transfer drivers comprising a driver circuit means operative in response to receiving a coincidence of said transfer strobe pulse and a distributor output pulse to generate an output pulse which when applied to one of said spades will cause the formation of an electron beam at the position of such spade, means to selectively connect any of said plurality of targets to any of said transfer drivers, and means to selectively connect the outputs of any of said transfer drivers to any of said spades.

3,097,343

TRANSISTOR DISTRIBUTED AMPLIFIER

Boleslaw Marian Sosin, Great Baddow, and Roger Edwin John Gerard, Chiswick, London, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Filed Nov. 28, 1960, Ser. No. 72,202
Claims priority, application Great Britain Feb. 9, 1960
6 Claims. (Cl. 330—30)



1. A transistor distributed amplifier comprising an input filter line, a plurality of transformers providing current transformation between their primary and secondary windings and having their primary windings connected in series with said input filter line at different points therein, an output filter line having shunt arms thereof constituted at least in part by transistor electrode capacities, a plurality of transistors having their input electrodes connected to receive signals from the secondary windings of different ones of said transformers and their output electrodes connected to different points along the output filter line, said last mentioned points being so chosen that the delays along the output filter line between said output electrodes are substantially equal to the delays along the input filter line between corresponding input electrodes, means for applying signals to said input filter line and means for taking output from said output filter line.

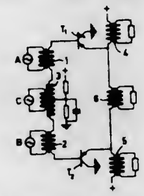
3,097,344

AMPLIFYING ARRANGEMENT FOR A PLURALITY OF INPUT SIGNALS

Hendrik Volkers, Emil van der Linden, Franciscus Gijsbertus, and Jaap Starreveld, all of Hilversum, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 18, 1961, Ser. No. 159,902
Claims priority, application Netherlands Jan. 16, 1961
3 Claims. (Cl. 330—30)

1. An amplifying arrangement for the amplified and combined reproduction of three input signals, characterized in that the first input signal is applied only to the base of a first transistor operating in common collector arrangement, that the second input signal is applied only to the base of a second transistor operating in common collector arrangement, and that the third signal is applied both to the base of the first transistor and to that of the



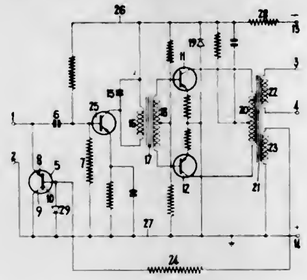
second transistor, and the combination of the first and third signals is taken from the emitter of the first transistor, the combination of the second and third signals is taken from the emitter of the second transistor, and the combination of at least the first and the second signals is taken from the potential difference between the two emitters of the transistors.

3,097,345

OSCILLATOR HAVING AMPLITUDE PROPORTIONAL TO INPUT SIGNAL

Derek George Woodward Ingram, Harrow, England, assignor to The General Electric Company Limited, London, England

Filed Aug. 13, 1959, Ser. No. 833,638
Claims priority, application Great Britain Aug. 15, 1958
6 Claims. (Cl. 331—109)



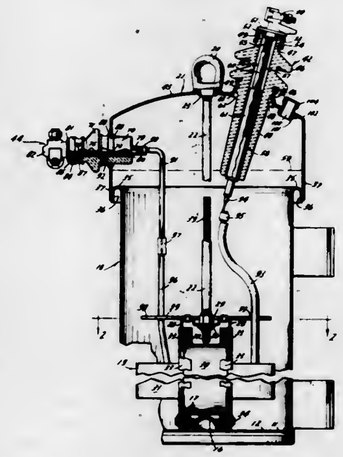
1. An electric oscillator for supplying an electric oscillation having an amplitude dependent upon the value of a variable input signal, said oscillator comprising input terminals to which said input signal is supplied during operation of the oscillator, an amplifier having an input circuit and an output circuit, circuit means connected between said input terminals and the input circuit of the amplifier, a variable impedance device which is included in said circuit means and which has an "on" condition wherein it presents an impedance to said input signal such that substantially all of that signal is applied to the amplifier and an "off" condition wherein it presents an impedance to said input signal such that substantially none of that signal is applied to the amplifier, control means of said variable impedance device by which that device is switched "off" and "on" respectively when a signal is and is not applied to that control means, an alternating current feedback path which is connected between the output circuit of the amplifier and said control means and over which part of the amplified input signal that is supplied by the amplifier only when said device is "on" is applied to said control means to switch said device "off" so that the arrangement oscillates, and resonance means included in said amplifier to determine the frequency at which the arrangement oscillates.

3,097,346

DISTRIBUTION TRANSFORMER

Arnold L. Horelick, Bridgeville, Herbert W. Dornbush, Canonsburg, and John J. Zimsky, Bridgeville, Pa., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Mar. 22, 1961, Ser. No. 97,573
8 Claims. (Cl. 336—68)



1. An electrical distribution transformer comprising, in combination, a hollow cylindrical metallic casing open at the upper end, a cup-shaped metallic cover having a depending circumferential flange in telescoped relation with the open end of said casing and being integrally secured thereto with a metal-to-metal seal between said flange and said casing, an insulating and cooling dielectric fluid within said casing, a core and coil assembly including a magnetic core linked by an electrical coil immersed in said fluid within said casing, a lifting eye integral with said cover, a lifting member integrally secured at its upper end to said eye and to said cover and at its lower end to said core and coil assembly for integrally suspending said core and coil assembly from said cover, said eye permitting lifting of said transformer and also permitting untanking of said core and coil assembly from said casing prior to integrally securing said cover to said casing, primary insulating bushings each having an electrical conductor extending therethrough protruding in spaced apart relation through the upper wall of said cover and being integrally secured in fluid-tight relation to said cover, secondary insulating bushings each having an electrical conductor extending therethrough protruding in spaced apart relation through said circumferential cover flange and being integrally secured in fluid-tight relation thereto, and electrical leads from said coil each of which is integrally affixed to said electrical conductor of one of said bushings, whereby it is unnecessary to break the seal of said transformer in use and the danger of the transformer breathing is minimized.

3,097,347

SUBSCRIBER CONTROLLED APPARATUS

Luther G. Simjian, Greenwich, Conn., assignor to Universal Match Corporation, St. Louis, Mo., a corporation of Delaware

Filed Sept. 9, 1959, Ser. No. 838,881
11 Claims. (Cl. 340—147)

5. In an apparatus of the type described, the combination of:

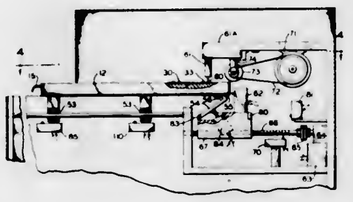
subscriber identification means having thereon a pre-

arranged pattern of a plurality of groups of embossings, each of said groups of embossings having an independent code significance;

indexing means to select one of said groups for read out;

signal discriminating and utilization means;

embossing sensing means coupled to said signal discriminating and utilization means for reading out



said selected group of embossings and providing code signals representative of said embossings to said signal discriminating and utilization means; and

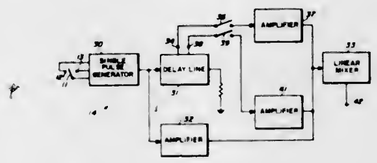
mutilating means mutilating said selected group of embossings subsequent to said reading out, thereby precluding subsequent additional reading out of said selected group of embossings and provision of signals representative of said embossings to said signal discriminating and utilization means.

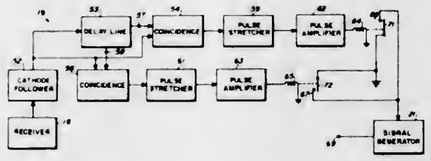
3,097,348

SECURE COMMUNICATION SYSTEM

Paul E. Fiske, 1059 Devonshire, San Diego, Calif.

Filed Aug. 20, 1959, Ser. No. 835,147
6 Claims. (Cl. 340—164)
(Granted under Title 35, U.S. Code (1952), sec. 266)





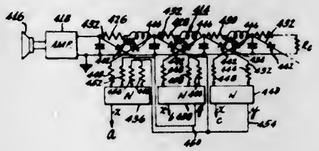
1. A secure communication system comprising pulse generating means for generating at least two sets of a plurality of pairs of pulses, the pairs of pulses of each of said sets having a different predetermined timed relationship with respect to each other, each of said plurality of pairs of pulses adapted to modulate a transmitter carrier signal, a decoder comprising a plurality of selecting circuits, each of said selecting circuits responsive to a different one of said sets of pulses when detected by suitable receiving means, pulse shaping means connected to the outputs of said selecting circuits, and indicating means connected to the output of said pulse shaping means.

3,097,349

INFORMATION PROCESSING APPARATUS

Franz L. Putzrath, Oaklyn, and Thomas B. Martin, Collingswood, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Aug. 28, 1961, Ser. No. 134,368
9 Claims. (Cl. 340—172.5)



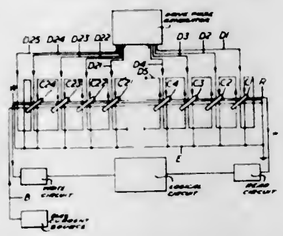
1. Electrical apparatus which simulates the cochlea, said apparatus comprising a plurality of electrical circuit neurons, means for separately exciting said neurons to respond to different frequency components of an acoustic electrical signal including a transmission line having successive sections which pass successively lower frequencies of said signal, and means for exciting and inhibiting different ones of said neurons with the signal passed, respectively, with a first and a second of different pairs of adjacent sections of said line.

3,097,350

MAGNETIC CORE REGISTERS

Harold Noel Coates, East Grinstead, England, assignor to International Computers and Tabulators Limited, London, England, a company of Great Britain

Filed May 24, 1961, Ser. No. 112,433
Claims priority, application Great Britain June 23, 1960
4 Claims. (Cl. 340—174)



1. A magnetic core register comprising a plurality of magnetic storage cores each for storing a binary digit and arranged in a series, a plurality of drive windings, one for each core, each drive winding being threaded twice in the same sense through its core to produce a field in one direction and except for the drive winding of the lowest core of the series, being threaded in the opposite sense through the next lower core to produce a field in the opposite direction, an additional drive winding threaded through the highest core to produce a field in said opposite direction, a bias winding threading all the cores, a source of bias current connected to said bias winding and operable to produce therein a field in said one direction in each core, a write winding threading all the cores, write circuits connected to said write winding and operable to produce therein a field in said opposite direction in each core, a read-out winding threading all the cores, and a drive pulse generator connected to the drive windings and operable to energise them in sequence whereby on energisation of a drive winding, other than the lowest and the highest, the change of field is greater in the higher one of the pair of cores threaded by that drive winding so that a switching field is built up in said higher core in said one direction to read a digit from that core and, if the write

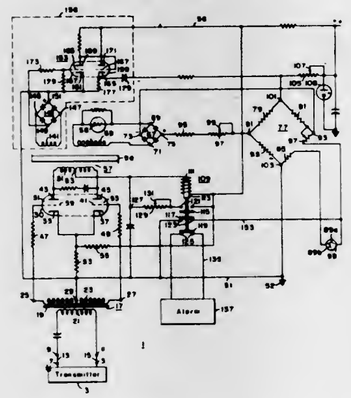
winding is energised, a switching field is built up in the lower core of the pair in said opposite direction to write a digit into the lower core.

3,097,351

REMOTE METERING APPARATUS

Theodore Barabutes, Morris Township, Morris County, and Andrew Kulick, Jr., Passaic, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 28, 1959, Ser. No. 789,698
6 Claims. (Cl. 340—207)



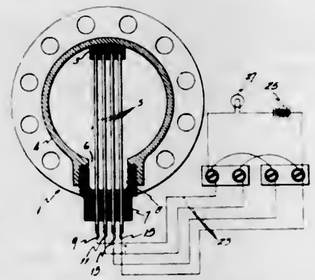
1. In an electrical system, a source of alternating voltage having a frequency variable in accordance with the magnitude of a measured quantity, converter means connected for energization from said source to produce a direct voltage having a magnitude dependent upon said frequency, a measuring instrument connected for energization in accordance with said direct voltage magnitude to provide an indication of said frequency, said instrument being actuated substantially independently of the magnitude of said source voltage above a predetermined voltage magnitude and actuated dependently of the magnitude of said source voltage below said predetermined voltage magnitude, and control means operable in response to a preselected change in the magnitude of said source voltage below said predetermined voltage magnitude to effect a zero indication of said instrument.

3,097,352

APPARATUS FOR DETECTING ENGINE FAILURE

William Krasnahira, 5217A Spruce St., Philadelphia 29, Pa.

Filed Apr. 28, 1961, Ser. No. 115,279
1 Claim. (Cl. 340—236)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A system for detecting the presence of minute electrically conductive impurities contained in a fluid which is flowing through a pipeline without interfering with the rate of fluid flow through the pipeline comprising in combination:

(*a*) an insulating body;

(*b*) a threaded insulating plug, said plug being spaced from said body;

(*c*) a plurality of wires embedded in said body and plug and extending through said plug to form terminals, said wires being parallel in a plane to form a grid;

(*d*) a pipe, having a threaded opening, said threaded opening mating said threaded plug for positioning said grid within said pipe and closing said pipe;

(*e*) circuit means connected to said terminals;

(*f*) a power source;

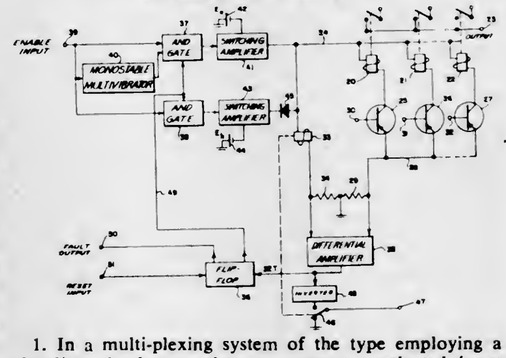
(*g*) a lamp connected in series with said power source and said grid by said circuit means whereby any minute electrical conductive impurities present in the fluid will strike the grid thereby closing the circuit and indicating their presence.

3,097,353

RELAY CONTROL CIRCUIT

Howard J. Carter, Newport Beach, Calif., assignor to Epsco Incorporated, Cambridge, Mass., a corporation of Massachusetts

Filed Apr. 17, 1961, Ser. No. 103,276
4 Claims. (Cl. 340—253)



1. In a multi-plexing system of the type employing a plurality of selector relays to connect a selected input channel to the system's output, fault detecting apparatus comprising a comparison relay, a differential amplifier for comparing the current flowing through the winding of the comparison relay and the current flowing through the windings of the selector relays, the differential amplifier determining when an unbalance exists, means providing an input enabling signal to the system, a flip-flop having one input coupled to the output of the differential amplifier, switching means responsive to the enabling signal for connecting a source of current to all the relay windings, means for gating the enabling signal to the switching means, and the flip-flop being connected to inhibit the gating means in response to an output from the differential amplifier caused by an unbalance.

3,097,354

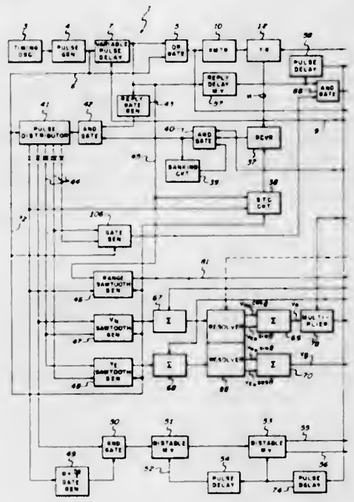
COOPERATIVE COLLISION AVOIDANCE SYSTEM

David P. Blowney, Huntington Station, Richard S. Brannin, East Williston, John J. Morrone, Elmhurst, James C. Wilcox, Bellerose, and Joseph E. Zupanick, Westbury, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

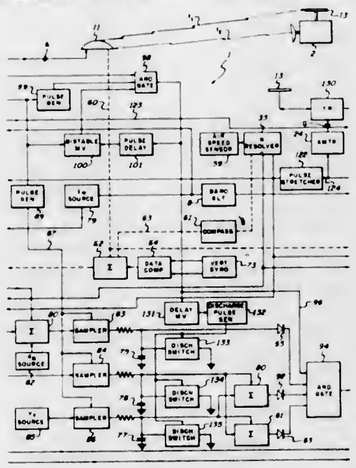
Filed May 31, 1960, Ser. No. 32,779
11 Claims. (Cl. 343—6.5)

5. Apparatus for commanding the maneuver to be undertaken by a first aircraft to avoid collision with each of

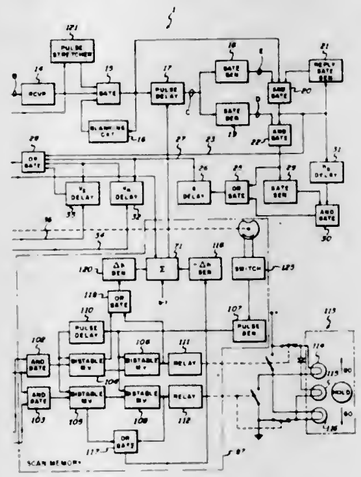
other aircraft, said apparatus comprising means carried by said first aircraft for transmitting to other aircraft electromagnetic energy having a predetermined characteristic representing the altitude of said first aircraft, means carried by each said second aircraft for receiving said energy and for developing in response thereto a first signal representing the altitude information conveyed by said energy, means for generating a second signal repre-



senting the altitude of said second aircraft, signal comparator means, means for applying said first and second signals to said comparator means, said comparator means producing an output signal when said first and second signals differ from each other by less than a predetermined amount, said output signal having a characteristic representing the sense of the altitude difference between said first and second aircraft, means for transmitting said out-

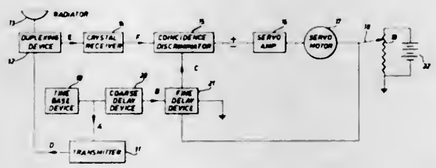


put signal back to said first aircraft, means carried by said first aircraft for detecting said transmitted output signal to extract the altitude information conveyed thereby, said last-named means producing a first control signal when the altitude of said second aircraft is higher than that of said first aircraft and producing a second control signal when the altitude of said second aircraft is lower than that of said first aircraft, first means coupled to said means for detecting for storing said first control signal, second means coupled to said means for detecting for storing said second control signal, first, second and third signal utilization means, and means connected to both said control signal storing means and to each said



utilization means for selectively applying said first control signal to said first utilization means, said second control signal to said third utilization means, and both said first and second control signals to said second utilization means.

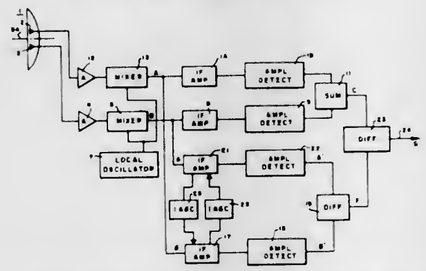
3,097,355
APPARATUS FOR AERIAL SURVEY RADAR DISTANCE MEASUREMENT
Gilbert Louis Hobrough, Oshawa, Ontario, and Fred Manley Hanna, Toronto, Ontario, Canada, assignors, by mesne assignments, to Hunting Survey Corporation Limited, Toronto, Ontario, Canada
Filed Mar. 6, 1957, Ser. No. 644,366
3 Claims. (Cl. 343—7.3)



1. In a pulse radar range measuring apparatus adapted for survey aircraft use to indicate the clearance height of the aircraft above a terrain surface: a dual channel amplifier adapted to amplify a radar echo pulse signal in each channel thereof; a range indicating device; means providing a control signal proportional to the range indicated by said device; means providing a timing reference signal; means providing at predetermined spacings in time a controlled reference sweep signal responsive to said reference signal and said control signal; means responsive to said controlled reference sweep signal for increasing the amplification of one channel of said amplifier while proportionally decreasing the amplification of the other channel thereof; means normally biasing said channels for equal amplification thereby at a predetermined timing

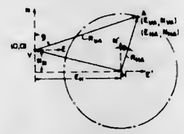
in each controlled reference sweep signal; means providing an error signal responsive to the relative amplification of said echo pulse signal by said amplifier channels and hence responsive to a lack of coincidence of said controlled reference sweep signal and the centre of said echo signal; and means driving said range indicating device responsive to said error signal to change said control signal effecting coincidence of said sweep signal and said echo signal thereby reducing said error signal to zero.

3,097,356
RADAR RECEIVER SYSTEM
Laurence J. Ruisinger, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Nov. 18, 1958, Ser. No. 774,698
10 Claims. (Cl. 343—100)



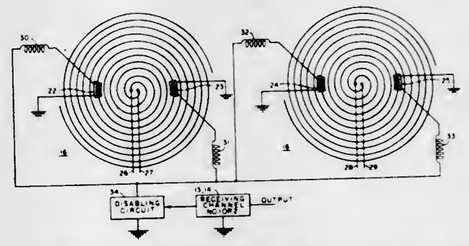
1. In combination with a multi-horn antenna, an antenna beam sharpening system comprising a first circuit for developing a first input signal proportional to the energy received by one horn of the multi-horn antenna, a second circuit for developing a second input signal proportional to the energy received by another horn of the multi-horn antenna, a first channel having summing means responsive to said input signals for producing a sum signal proportional to the sum of said input signals, a second channel also responsive to said input signals and having an amplifying means for producing an amplified output signal for each of said input signals, means for applying each of said input signals to a different one of said amplifying means, means for increasing and decreasing the gain of each said amplifying means as the input signals applied to the other of said amplifying means decrease and increase respectively, subtracting means for generating a difference signal proportional to the difference between the output signals from said amplifying means, and means for generating a signal proportional to the difference between said sum and difference signals.

3,097,357
AIRCRAFT POSITION DETERMINING APPARATUS
Robert G. Durnal, Catonsville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 11, 1961, Ser. No. 82,021
2 Claims. (Cl. 343—112)



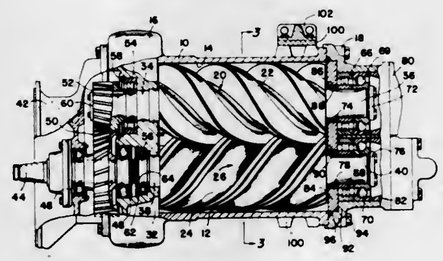
1. A method of providing information from a source of signals having range and bearing information from one selected point usable in directing aircraft in a closed path around a second selected point comprising the steps of, transmitting from said one selected point range and bearing information, receiving said information and deriving electrical signals representing a vector indicating the position of said aircraft relative to said first point, deriving electrical signals representing a vector indicating the position of said second point relative to said first point, vectorially adding said vectors to provide a course vector indicating instantaneous position of said aircraft with respect to said second point and utilizing said course vector signals for directing said craft in a closed path around said second point.

3,097,358
FUSE BEARING ANTENNA
Arthur S. Zamanakos, 2809 S. 8th St., Arlington, Va.
Filed Oct. 28, 1960, Ser. No. 65,867
5 Claims. (Cl. 343—119)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. In apparatus for homing on a source of electromagnetic wave energy, a plurality of spiral antennas having a discontinuity in at least one conductor of each, means for amplifying signals picked up by the antennas, means for comparing amplified signals from two of the antennas to derive guidance control signals for the homing apparatus, a plurality of current responsive disconnect means for bridging the spiral antenna discontinuities whereby the connections across the discontinuities are broken upon the occurrence of preselected current flow therethrough, and means for applying a destruct signal to said disconnect means to cause the connections through all of said disconnect means to be broken simultaneously.

3,097,359
AXIAL COMPRESSOR
Ellsworth C. Cowles, Corning, and Ralph F. Voggenthaler, Painted Post, N.Y., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 19, 1960, Ser. No. 76,546
13 Claims. (Cl. 230—143)



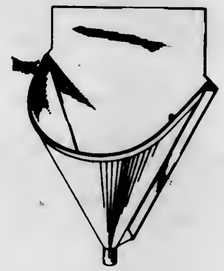
1. An elastic fluid compressor of the screw rotor type, comprising a casing having parallel intersecting bores with

inlet and discharge passages at opposite ends thereof, interengaging male and female rotors in said bores and providing a direct drive therebetween, a drive shaft rotatably mounted at the inlet end of the casing, a helical drive gear fixed to said drive shaft and rotated thereby, each of said rotors having a shaft extending axially at each rotor end, a helical driven gear on the male rotor shaft at the inlet end of the casing and in mesh with said drive gear wherein the helix angle of the gear teeth acts to produce axial thrust toward the discharge end, straight radial load bearings on said shaft at both the inlet and discharge ends of the casing, and an additional bearing on a shaft of each rotor to counteract thrust in the direction of the casing inlet end.

DESIGNS

JULY 9, 1963

195,617
WALL MOUNTED URINAL
Leroy O. Eger, 2225 Jernigan Road, Jacksonville 7, Fla.
Filed July 6, 1961, Ser. No. 65,822
Term of patent 14 years
(Cl. D4—5)



195,618
WOMAN'S OVERSHOE
Duncan E. Slade, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 22, 1961, Ser. No. 66,805
Term of patent 14 years
(Cl. D7—4)



195,619
PULL
John R. Morgan, Chicago, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Nov. 2, 1961, Ser. No. 67,364
Term of patent 14 years
(Cl. D10—8)



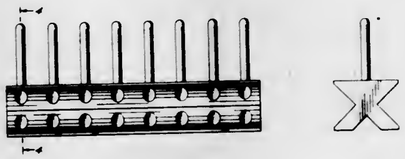
195,620
CHAIR OR THE LIKE
Dave Chapman, Chicago, and Kim Yamasaki, Lombard, Ill., assignors to The Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 28, 1961, Ser. No. 67,735
Term of patent 14 years
(Cl. D15—1)



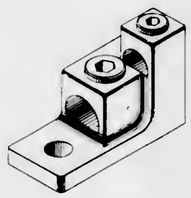
195,621
ADJUSTABLE OTTOMAN
Murray Langbaum, East Hills, N.Y., assignor to Nova Products Corp., Brooklyn, N.Y., a corporation of New York
Filed July 27, 1961, Ser. No. 66,099
Term of patent 14 years
(Cl. D15—8)



195,622
TEST TUBE RACK
John V. Wing, 1610 Longfellow St., Detroit, Mich.
Filed Dec. 10, 1962, Ser. No. 72,790
Term of patent 14 years
(Cl. D16—1)



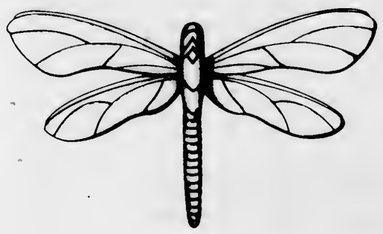
195,623
DUAL TERMINAL CONNECTOR LUG
Ignazio Leonardo, Mountainside, N.J., assignor to The Thomas & Betts Co., Incorporated, Elizabeth, N.J., a corporation of New Jersey
Filed Dec. 19, 1962, Ser. No. 72,902
Term of patent 14 years
(Cl. D26—1)



195,624
PRINTING MACHINE
Walter Behr and Helmut Keitel, Wilhelmshaven, Germany, assignors to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Oct. 19, 1960, Ser. No. 62,541
Term of patent 14 years
(Cl. D26—5)



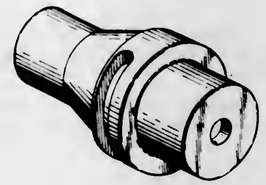
195,625
PLAQUE
Sylvia H. Hood, 527 S. Fairoaks, Pasadena, Calif.
Filed Oct. 21, 1957, Ser. No. 48,195
Term of patent 14 years
(Cl. D29—23)



195,626
PLAQUE
Sylvia H. Hood, 527 S. Fairoaks, Pasadena, Calif.
Filed Oct. 21, 1957, Ser. No. 48,199
Term of patent 14 years
(Cl. D29—23)



195,627
MUZZLE BRAKE
Clifford L. Ashbrook, 5027 Cheena St., and Wilson G. Wing, 33 E. Rivercrest, both of Houston, Tex.
Filed Dec. 4, 1962, Ser. No. 72,718
Term of patent 14 years
(Cl. D30—1)



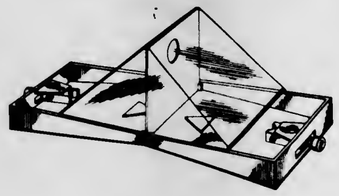
195,628
BIRD FEEDER
Frederic Andreae, Winslow, Wash. (10787 64th Ave. N., Largo, Fla.)
Filed Apr. 14, 1961, Ser. No. 64,746
Term of patent 14 years
(Cl. D31—2)



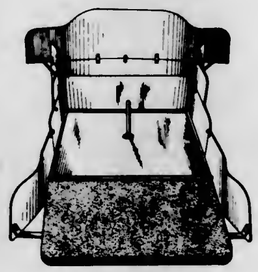
195,629
DEVICE FOR LIFTING GOLF BALLS
John E. Borah, 815 Mishawaka Ave., Mishawaka, Ind.
Filed Oct. 9, 1961, Ser. No. 67,012
Term of patent 14 years
(Cl. D34—5)



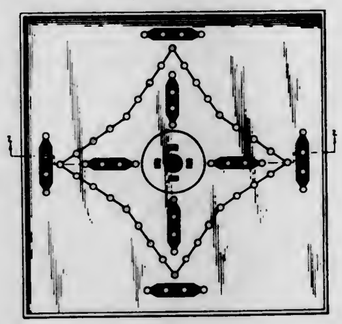
195,630
BALL GAME APPARATUS
Kelley M. Holland, 4649 Biona Drive, San Diego, Calif.
Filed Oct. 30, 1962, Ser. No. 72,309
Term of patent 14 years
(Cl. D34—5)



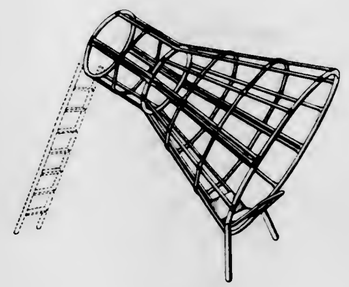
195,631
INDOOR HORSESHOE GAME TARGET
Harold Warren Klingaman, 780 17th St., Primghar, Iowa
Filed Nov. 20, 1962, Ser. No. 72,551
Term of patent 3½ years
(Cl. D34—5)



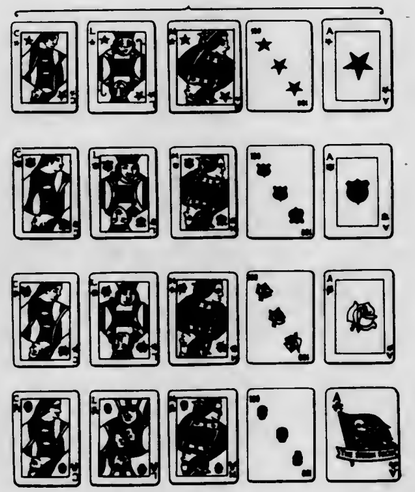
195,632
GAME BOARD
John C. Clark, 3470 NW. 3rd St., Fort Lauderdale, Fla.
Filed Feb. 12, 1963, Ser. No. 73,561
Term of patent 14 years
(Cl. D34—5)



195,633
PLAYGROUND CLIMBER
Wayne Haubert, Mifflintown, Pa., assignor to The Mexico Forge, Inc., Mexico, Pa., a corporation of Pennsylvania
Filed Mar. 19, 1963, Ser. No. 74,049
Term of patent 14 years
(Cl. D34—5)



195,634
SET OF PLAYING CARDS
Cornell Saxon, 5 Halcyon Place, Yonkers, N.Y.
Filed Oct. 16, 1962, Ser. No. 72,123
Term of patent 14 years
(Cl. D34—13)



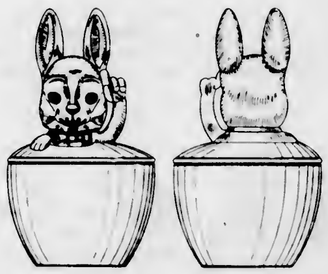
195,635
SALAD TONGS
John W. Moyer, 687 Chenery, San Francisco, Calif.
Filed Apr. 25, 1962, Ser. No. 69,841
Term of patent 14 years
(Cl. D44—4)



195,636
CASSEROLE
Jens H. Quistgaard, Meggen, Lucerne, Switzerland, assignor to Dansk Ovenware, Inc., Great Neck, N.Y., a corporation of New York
Filed Dec. 7, 1962, Ser. No. 72,765
Term of patent 14 years
(Cl. D44—15)



195,637
ICE BUCKET OR THE LIKE
Marten Gottsegen, Chicago, Ill., assignor to Gotham Industries, Inc., Chicago, Ill., a corporation of New York
Filed Feb. 11, 1963, Ser. No. 73,512
Term of patent 14 years
(Cl. D44—15)



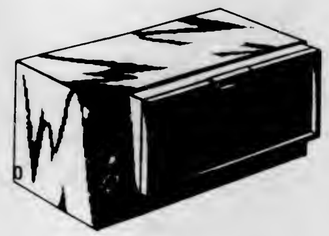
195,638
COMBINED TABLE CRUMBER AND BOTTLE OPENER
Fred M. Miller and Peter M. Cameron, Baltimore, Md.; Alice Miller, executrix of the estate of the said Fred M. Miller, deceased
Filed Oct. 25, 1960, Ser. No. 62,614
Term of patent 14 years
(Cl. D44—24)



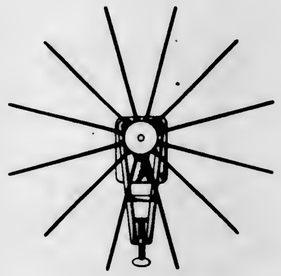
195,639
BASKET FOR WASHING MACHINE PARTS
John Andrew Ware, Grain Valley, Mo.
Filed May 9, 1961, Ser. No. 65,082
Term of patent 14 years
(Cl. D49—1)



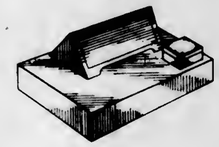
195,640
DISHWASHER
Duane A. James, Richardson, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Filed Dec. 4, 1961, Ser. No. 67,794
Term of patent 14 years
(Cl. D49—1)



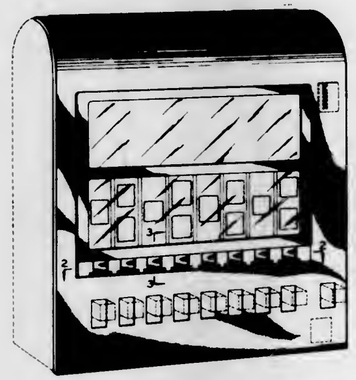
195,641
PORTABLE DRYING REEL FOR FISHING LINE
Lee O. Pyle, 6507 Mossrose, Houston, Tex.
Filed July 16, 1962, Ser. No. 70,928
Term of patent 14 years
(Cl. D49—1)



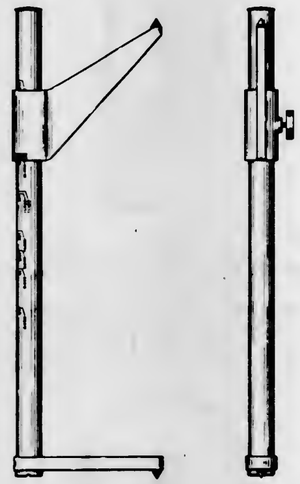
195,642
COMBINED FINGERPRINTING AND FRAUD DETECTOR FOR CHECK IDENTIFICATION
Edward A. Essad, 1516 N. Hobart, Hollywood, Calif.
Filed Mar. 27, 1962, Ser. No. 69,456
Term of patent 14 years
(Cl. D52—1)



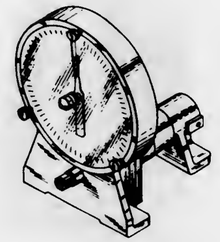
195,643
STAMP VENDING MACHINE
Lloyd J. Andres, Miami, Fla., assignor to American Sumatra Tobacco Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 9, 1962, Ser. No. 69,165
Term of patent 14 years
(Cl. D52—3)



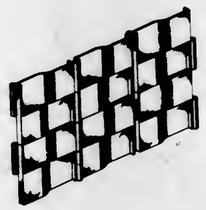
195,644
BRAKE DRUM WEAR LIMIT GAGE
George L. Marshall, Warwick, and Irving M. Leven, Providence, R.I., assignors to The Central Tool Company, Cranston, R.I., a corporation of Rhode Island
Filed Jan. 2, 1962, Ser. No. 68,165
Term of patent 3½ years
(Cl. D52—6)



195,645
TORQUE TESTER
Edward T. Able, Denver, Colo., assignor to B. K. Sweeney Mfg. Co., Denver, Colo., a corporation of Colorado
Filed Aug. 20, 1962, Ser. No. 71,419
Term of patent 14 years
(Cl. D52—6)



195,646
FOLDABLE TRAVERSING SCREEN
James Hirashiki, Los Angeles, Calif., assignor to Universe Products Company, Los Angeles, Calif., a limited partnership
Filed Feb. 9, 1962, Ser. No. 68,750
Term of patent 14 years
(Cl. D54—2)



195,647
ANCHOR HOLDER
Wilfred A. Hanggi, 728 Van Buren, St. Paul, Minn.
Filed Dec. 6, 1962, Ser. No. 72,753
Term of patent 14 years
(Cl. D54—11)



195,648
COMBINED TELEVISION RECEIVER AND SCREEN COVER THEREFOR
Robert E. Doyle, Willow Grove, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed June 25, 1962, Ser. No. 70,659
Term of patent 7 years
(Cl. D56—4)



195,649
BOTTLE
Gilbert W. Lindemann, 1032 Iowa Ave. W., St. Paul, Minn.
Filed Mar. 1, 1962, Ser. No. 69,043
Term of patent 14 years
(Cl. D58—6)



195,650
BOTTLE OR SIMILAR ARTICLE
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Sept. 4, 1962, Ser. No. 71,561
Term of patent 14 years
(Cl. D58—6)



195,651
BOTTLE OR SIMILAR ARTICLE
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Sept. 21, 1962, Ser. No. 71,807
Term of patent 14 years
(Cl. D58—6)



195,652
BOTTLE OR SIMILAR ARTICLE
Alfred D. Sterges, Los Angeles, Calif., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Aug. 13, 1962, Ser. No. 71,258
Term of patent 14 years
(Cl. D58—8)



195,653
WASTE BASKET COVER
Theodore J. Tomaluolo, 51-B Governor St., East Hartford, Conn.
Filed Jan. 8, 1963, Ser. No. 73,092
Term of patent 14 years
(Cl. D58—26)



195,654
COMBINED EXHAUST FAN AND HOUSING
John Maynard Morrison, Carss Park, near Sydney, New South Wales, Australia, assignor to Centriflo Pty. Limited, Brighton-le-Sands, near Sydney, New South Wales, Australia, a company of Australia
Filed May 29, 1962, Ser. No. 70,342
Term of patent 14 years
(Cl. D62—4)



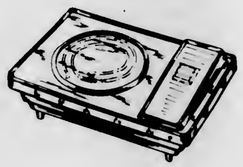
195,655
MORSE CODE SIGNALLING LIGHT
Charles L. Cleek, Pacific Palisades, Calif. (1540 Sagebrush Road, Palm Springs, Calif.)
Filed Apr. 4, 1962, Ser. No. 69,581
Term of patent 14 years
(Cl. D72—1)



195,656
MORSE CODE SIGNALLING LIGHT
Charles L. Cleek, Pacific Palisades, Calif. (1540 Sagebrush Road, Palm Springs, Calif.)
Filed Oct. 8, 1962, Ser. No. 72,018
Term of patent 14 years
(Cl. D72—1)



195,657
ELECTRIC BUFFET RANGE
James H. Sullivan, Lake Forest, Ill., assignor to Dominion Electric Corporation, a corporation of Ohio
Filed Nov. 5, 1962, Ser. No. 72,388
Term of patent 14 years
(Cl. D81—10)



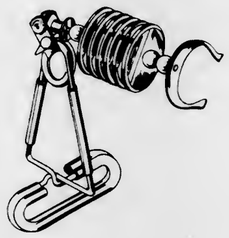
195,658
FROZEN CONFECTION
James S. Merritt, Kansas City, Mo., assignor to The James S. Merritt Company, Kansas City, Mo., a corporation of Missouri
Filed Feb. 27, 1962, Ser. No. 68,999
Term of patent 14 years
(Cl. D82—2)



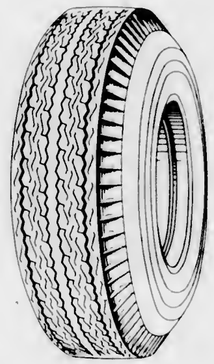
195,659
SUPPOSITORY
Charles L. Weckesser, 20 Hayes St., Norwich, N.Y.
Filed Nov. 24, 1961, Ser. No. 67,700
Term of patent 14 years
(Cl. D83—1)



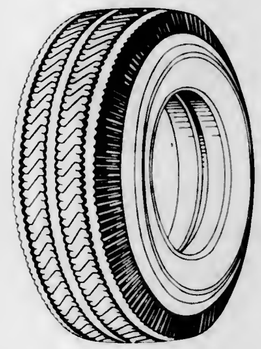
195,660
INFANT BOTTLE HOLDER
Howard L. Martin, 1716 Driscoll, Houston, Tex.
Filed Jan. 15, 1962, Ser. No. 68,301
Term of patent 14 years
(Cl. D83—8)



195,661
VEHICLE TIRE
Charles G. Wyman, Devon, and Orris H. Johnson, Wayne, Pa., assignors to Lee Rubber & Tire Corporation, Conshohocken, Pa., a corporation of New York
Filed Feb. 25, 1963, Ser. No. 73,709
Term of patent 14 years
(Cl. D90—20)



195,662
VEHICLE TIRE
Charles G. Wyman, Devon, and Orris H. Johnson, Wayne, Pa., assignors to Lee Rubber & Tire Corporation, Conshohocken, Pa., a corporation of New York
Filed Feb. 25, 1963, Ser. No. 73,710
Term of patent 14 years
(Cl. D90—20)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bourns, Marlan E. Electrical resistor. Re. 25,412, 7-9-63, Cl. 338—150.

Bromfield, Morton S. Method of manufacturing shoes. Re. 25,411, 7-9-63, Cl. 12—142.

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Reineman, Richard G., and G. E. Schaefer, to Brunswick Corp. Table or the like. Re. 25,414, 7-9-63, Cl. D34—5.

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Sogn, Leland T. Quartz piezoelectric element. Re. 25,413, 7-9-63, Cl. 310—9.5.

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Amerock Corp.: *See*—
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Andreae, Frederic. Bird feeder. 195,628, 7-9-63, Cl. D31—2.

Andres, Lloyd J., to American Sumatra Tobacco Corp. Stamp vending machine. 195,643, 7-9-63, Cl. D52—3.

Ashbrook, Clifford L., and W. G. Wing. Muzzle brake. 195,627, 7-9-63, Cl. D30—1.

Behr, Walter, and H. Keitel, to Olympia Werke A.G. Printing machine. 195,624, 7-9-63, Cl. D26—5.

Borah, John E. Device for lifting golf balls. 195,629, 7-9-63, Cl. D34—5.

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Chapman, Dave, and Yamasaki. 195,620.

Cameron, Peter M.: *See*—
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Clark, John C. Game board. 195,632, 7-9-63, Cl. D34—5.

Cleek, Charles L. Morse code signalling light. 195,655, 7-9-63, Cl. D72—1.

Cleek, Charles L. Morse code signalling light. 195,656, 7-9-63, Cl. D72—1.

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Koenigsberg, Victor. 195,651.

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Eger, Leroy O. Wall mounted urinal. 195,617, 7-9-63, Cl. D4—5.

Essad, Edward A. Combined fingerprinting and fraud detector for check identification. 195,642, 7-9-63, Cl. D52—1.

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Gottsegen, Marten, to Gotham Industries, Inc. Ice bucket or the like. 195,637, 7-9-63, Cl. D44—15.

Hanggi, Wilfred A. Anchor holder. 195,647, 7-9-63, Cl. D54—11.

Haubert, Wayne, to The Mexico Forge, Inc. Playground climber. 195,633, 7-9-63, Cl. D34—5.

Hirashiki, James, to Universe Products Co. Foldable traversing screen. 195,646, 7-9-63, Cl. D54—2.

Holland, Kelley M. Ball game apparatus. 195,630, 7-9-63, Cl. D34—5.

Hood, Sylvia H. Plaque. 195,625, 7-9-63, Cl. D29—23.

Hood, Sylvia H. Plaque. 195,626, 7-9-63, Cl. D29—23.

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Koenigsberg, Victor, to Colgate-Palmolive Co. Bottle or similar article. 195,651, 7-9-63, Cl. D58—6.

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Merritt, James S., to The James S. Merritt Co. Frozen confection. 195,658, 7-9-63, Cl. D82—2.

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Miller, Fred M., deceased (A. Miller, executrix), and P. M. Cameron. Combined table crumber and bottle opener. 195,638, 7-9-63, Cl. D44—24.

Morgan, John R., to Amerock Corp. Pull. 195,619, 7-9-63, Cl. D10—8.

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Moyer, John W. Salad tongs. 195,635, 7-9-63, Cl. D44—4.

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Saxon, Cornell. Set of playing cards. 195,634, 7-9-63, Cl. D34—13.

Slade, Duncan E., to United States Rubber Co. Woman's overshoe. 195,618, 7-9-63, Cl. D7—4.

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Universe Products Co.: *See*—
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Wing, John V. Test tube rack. 195,622, 7-9-63, Cl. D16—1.

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Wyman, Charles G., and O. H. Johnson, to Lee Rubber & Tire Corp. Vehicle tire. 195,662, 7-9-63, Cl. D90—20.

Yamasaki, Kim: *See*—
Chapman, Dave, and Yamasaki. 195,620.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Aapro, Antti. Metal shears. 3,096,581, 7–9–63, Cl. 30—261.

Abbott, John A., P. R. Bunnelle, T. E. Roberts, Jr., H. B. Brooks, and W. J. Fowler, to FMC Corp. Weight checking and correcting apparatus. 3,096,837, 7–9–63, Cl. 177—62.

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Von Esch, Anne M., and Sherman. 3,097,214.

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Abdallan, Robert V.: *See*—
Shields, Sebough S. 3,097,164.

Aberle, Earl J.: *See*—
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Reck, Richard A., Abramitis, and Wilhemy. 3,097,088.

Accountius, Oliver E., to Chilean Nitrate Sales Corp. Oil purification process. 3,097,157, 7–9–63, Cl. 208—182.

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Ahlstone, Arthur G., and M. R. Jones, to Cameron Iron Works, Inc. Pipe joint having remote control coupling means. 3,096,999, 7–9–63, Cl. 285—24.

Ajouelo, Davis J., 50% to P. Bregman, and 25% to J. Hazan. Automatic nailing machines. 3,096,522, 7–9–63, Cl. 1—29.

Albiani, Peter: *See*—
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Albright, William R., and H. F. Szczepanski. Layout gauge. 3,096,586, 7–9–63, Cl. 33—26.

Alderman, Robert E., to The Singer Mfg. Co. Rotary solenoid actuated switches. 3,097,278, 7–9–63, Cl. 200—105.

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Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Pneumatic device to brake or unbrake a trailer. 3,097,020, 7–9–63, Cl. 303—29.

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Almgren, Louis E. Water skis. 3,096,530, 7–9–63, Cl. 9—310.

Altieri, James V., Jr., to United Aircraft Corp. Special technique for casting impeller blade passages. 3,096,548, 7–9–63, Cl. 22—193.

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Amer, Kenneth B., S. B. Chris, and C. C. Boswell, Jr., to Hughes Tool Co., Aircraft Division. Rotor blade for rotary-winged aircraft. 3,096,826, 7–9–63, Cl. 170—135.4.

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American Bosch Arma Corp.: *See*—
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Benith, Benedict R., to American Machine & Foundry Co. Bread slicing machine. 3,096,802, 7–9–63, Cl. 146—88.

Bennett, Willard H. Circuit for producing square wave pulses by parallel capacitors discharging through load at different rates. 3,097,341, 7–9–63, Cl. 328—67.

Benninger A.-G., Maschinenfabrik: *See*—
Wildi, Edwin. 3,096,945.

Berard, Thomas C. Kinesitherapy device. 3,096,757, 7–9–63, Cl. 128—36.

Berg Airlectro Products Co.: *See*—
Dobrikin, Harold L. 3,097,021.
Horowitz, Charles, and Dobrikin. 3,096,789.

Bergen, Walter F., to Pacific & Atlantic Shippers, Inc., d.b.a. Tyres Industries. Dock bumper. 3,096,973, 7–9–63, Cl. 267—1.

Berkley Machine Co.: *See*—
Winkler, Richard, and Dunnebier. 3,096,977.

Berko Electric Mfg. Corp.: *See*—
Knoll, David, and Greenhaus. 3,097,287.

Bernard, George G., to The Pure Oil Co. Superior waterflooding process. 3,096,820, 7–9–63, Cl. 166—9.

Beyerle, Konrad. Damping bearing for the shafts of a gas centrifuge. 3,097,167, 7–9–63, Cl. 233—23.

Bicking, John B., to Merck & Co., Inc. Substituted pyrazole sulfonamides. 3,097,210, 7–9–63, Cl. 260—294.8.

Biedess, Anthony R., to Goodman Mfg. Co. Loading machine. 3,096,893, 7–9–63, Cl. 214—90.

Biggs, Orrick H., T. Wroblewski, and D. R. Dayton, to Sylvania Electric Products Inc. Manufacture of laminated core inductors. 3,096,568, 7–9–63, Cl. 29—155.61.

Biggs, Orrick H., T. Wroblewski, and D. R. Dayton, to Sylvania Electric Products Inc. Method and mechanism for the manufacture of laminated core inductors. 3,096,805, 7–9–63, Cl. 153—2.

Bigler, James C., Jr. Collapsible or foldable seat for child. 3,097,016, 7–9–63, Cl. 297—457.

Biheller, Hans J., to Worthington Corp. Emergency shaft sealing device. 3,096,985, 7–9–63, Cl. 277—27.

Bily, Peter J., to FMC Corp. Fluid conveying apparatus. 3,096,797, 7–9–63, Cl. 141—387.

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Binns, Jack N. Tracer finger for automatic tracer and method and means of coordinating same with a cutter. 3,096,688, 7–9–63, Cl. 90—62.

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Showers, Lewis M., Jr., and Biscardi. 3,096,859.

Blackmore, Fred N.: *See*—
Magnuson, Elton E., and Blackmore. 3,096,596.

Blashfield, Floyd A.: *See*—
Clarke, Houghton W., and Blashfield. 3,096,775.

Blatz, Paul E., to The Dow Chemical Co. Stabilized unsymmetrical anhydrides. 3,097,238, 7–9–63, Cl. 260—546.

Blonde, Howard J.: *See*—
Connors, Thomas W., Sr., and Blonde. 3,096,573.

Bloor, James H., and F. G. Chandler, to United Kingdom Atomic Energy Authority. Actuator for electrically operable device. 3,097,327, 7–9–63, Cl. 317—134.

Blout, Elkan R., H. O. Buzzell, and L. C. Farney, to Polaroid Corp. Method of applying a mar-resistant surface coating to thermoplastic sheets. 3,097,106, 7–9–63, Cl. 117—64.

Blowney, David P., R. S. Brannin, J. J. Morrone, J. C. Wilcox, and J. E. Zupanick, to Sperry Rand Corp. Cooperative collision avoidance system. 3,097,354, 7–9–63, Cl. 343—6.5.

Bodine, Albert G. Sonic earth boring drill with jacket. 3,096,833, 7–9–63, Cl. 175—56.

Bohannan, William R.: *See*—
Koch, Donald T., and Bohannan. 3,096,926.

Bolding, Donald B.: *See*—
Proler, Sam, and Bolding. 3,096,894.

Bolton, Frank H.: *See*—
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Bonn, Theodore H.: *See*—
Eckert, John P., Jr., and Bonn. 3,097,304.

Bonn, Theodore H., to Sperry Rand Corp. Opposite conducting type transistor control circuits. 3,097,307, 7–9–63, Cl. 307—88.5.

Bonnet, Jacques: *See*—
Neukomm, Serge, and Bonnet. 3,096,773.

Bono, Luigi, to Necchi Societa per Azioni. Fabric feeder mechanism for sewing machine. 3,096,737, 7–9–63, Cl. 112—204.

Bora, Ion. Portable fume exhaust fan apparatus. 3,096,933, 7–9–63, Cl. 230—235.

Bosmajian, George, to Cities Service Research and Development Co. Preparation of an alkyl lithium-catalyzed liquid polymer having predominately trans-1,4-unsaturation and containing 1,3-butadiene, and coating metals with such polymers. 3,097,108, 7–9–63, Cl. 117—132.

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Bowkley, Herbert L., and J. P. Merryweather, to American Cyanamid Co. Powdered ammonium nitrate explosive containing polyacrylamide and an inorganic cross-linking agent. 3,097,121, 7–9–63, Cl. 149—60.

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Wojciechowski, Walter J., and Brandt. 3,096,710.

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Hubel, Karl W., and Braye. 3,097,153.

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Hildyard, Joseph M., and Breckon. 3,097,073.

Bregman, Petty: *See*—
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Brockway Engineering Co. Ltd.: *See*—
Wooldridge, Lawson C. 3,096,874.

Brooks, Herbert B.: *See*—
Abbott, John A., Bunnelle, Roberts, Brooks, and Fowler. 3,096,837.
Brown, Cicero. Gripping devices. 3,096,824, 7-9-63, Cl. 166—210.
Brown, Maurice H., and L. R. Glattino, to United States of America, Navy. Electric barrier device. 3,097,281, 7-9-63, Cl. 200—153.
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Bruchas, George R., to G. R. and E. R. Bruchas. Football glove. 3,096,523, 7-9-63, Cl. 2—159.
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Koster, Roland, Bruno, and Lehmkuhl. 3,097,066.
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Bryant, Paul M., to The Marquardt Corp. Combined noise suppressor, thrust reverser and variable area nozzle for exhaust exit system for jet engines. 3,096,617, 7-9-63, Cl. 60—35.54.
Buege, Francis J.: *See*—
Drubel, Richard B., and Buege. 3,097,183.
Buehler, Arthur, and R. Casty, to Ciba Ltd. Process for dyeing nitrogenous fibers. 3,097,039, 7-9-63, Cl. 8—43.
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Buesink, Hendrik: *See*—
Kooijman, Pieter L., and Buesink. 3,097,218.
Bukata, Stephen. Vacuum pump. 3,096,928, 7-9-63, Cl. 230—101.
Bunch, Tillman T., to Western Electric Co., Inc. Methods of and apparatus for multicycle twisting a wire-like member. 3 096,610, 7-9-63, Cl. 57—34.
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Abbott, John A., Bunnelle, Roberts, Brooks, and Fowler. 3,096,837.
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Burndy Corp.: *See*—
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Burroughs Corp.: *See*—
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Burtch, Fred W.: *See*—
Parks, Christ F., Strassner, and Burtch. 3,096,777.
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Madansky, Leslie E. 3,096,942.
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Mertens, Edward W. 3,097,174.
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Capes, Tasker L., and G. G. Norman, to Hemphill Co. Take-up device for circular knitting machine. 3,096,634, 7-9-63, Cl. 66—150.
Cappelle, Norman D., J. J. Kornacker, and J. Y. Ma, to Oak Mfg. Co. Index mechanism. 3,096,665, 7-9-63, Cl. 74—527.
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Card, Roy T., to Singer-Cobble, Inc. Cut pile tufting machine. 3,096,734, 7-9-63, Cl. 112—79.
Cardwell, Robert G. Portable smokeless broiler and oven assembly. 3,096,706, 7-9-63, Cl. 99—340.
Carlson, Charles L., and S. A. Rosecrans, to Westinghouse Electric Corp. Method of making aluminum clad copper wire. 3,096,577, 7-9-63, Cl. 29—473.3.
Caroselli, Remus F., to Owens-Corning Fiberglas Corp. Apparatus for treating fibrous glass. 3,096,970, 7-9-63, Cl. 263—3.
Carter, Howard J., to Epsco, Inc. Relay control circuit. 3,097,353, 7-9-63, Cl. 340—253.
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Williams, John W. 3,096,782.
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Castleberry, Jeff D.: *See*—
Norton, Desmond H., and Castleberry. 3,096,896.
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Dickerson, Leonard F., Hendrickson, Johnson, Lichtenstein, Pearce, and Rohweder. 3,096,667.
Reinsma, Harold L., and Dadds. 3,096,661.
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Cavallini, Guido, and E. Massarani, to Francesco Vismara S.p.A. Antiviral biphenylyl glyoxal process and dosage formulations. 3,097,138, 7-9-63, Cl. 167—65.
Ceintrey, Marcel, to Societe Chimique et Routiere de la Gironde. Asphalt-amine stabilized rubber for the paving of grounds and its method of manufacture. 3,097,179, 7-9-63, Cl. 260—28.5.
Celanese Corp. of America: *See*—
Maglaughlin, Edward P., and Trampe. 3,097,233.
Celovsky, Michael J., to Lyon Inc. Method of shaping sheet metal wheel covers. 3,096,738, 7-9-63, Cl. 113—116.
Cerness, Joseph F., and D. H. Strong, to Clevite Corp. Method of using a sliding surface material for seals or bearings. 3,096,565, 7-9-63, Cl. 29—149.5.
Chase, Sidney H., to United-Greenfield Corp. Gage handle. 3,096,589, 7-9-63, Cl. 33—178.
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White, William S., Jr., Babb, and McGuire. 3,096,819.
Chandler, Frederick G.: *See*—
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Chaplin, Albin, and V. C. Reddy, to General Motors Corp. Gear pump for internal combustion engine and the like. 3,096,849, 7-9-63, Cl. 184—6.
Charos, Peter. Thermoelectric cooler arrangement for roller mixer freezers. 3,096,624, 7-9-63, Cl. 62—3.
Chasmar, Reginald P., and E. Cohen, to Associated Electrical Industries (Manchester) Ltd. Device for multiplying electrical quantities. 3,097,296, 7-9-63, Cl. 235—194.
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Chatham, George N., and O O Shurtleff, to Chatleff Controls, Inc. Fluid pressure operated valves. 3,096,790, 7-9-63, Cl. 137—628.
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Arne, Christian. 3,096,901.
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Steen, James B. 3,096,834.
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Glickman, Samuel A., Miller, and Chiddix. 3,097,181.
Childsey, Francis A., Jr., and R. E. De Paul, to Container Corp. of America. Bottle carton with reinforced finger openings. 3,096,906, 7-9-63, Cl. 220—113.
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Accountius, Oliver E. 3,097,157.
Chmura, Theodore S., to American Bosch Arma Corp. Control rod for fuel injection pump. 3,096,716, 7-9-63, Cl. 103—37.
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Chris, Stephen B.: *See*—
Amer, Kenneth B., Chris, and Boswell. 3,096,826.
Christenson, Howard W., M. E. Fisher, and E. T. Mabley, to General Motors Corp. Transmission. 3,096,666, 7-9-63, Cl. 74—645.
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Ciba Co., Inc.: *See*—
Casty, Richard. 3,097,040.
Ciba Ltd.: *See*—
Buehler, Arthur, and Casty. 3,097,039.
Cities Service Research and Development Co.: *See*—
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Citroen, Andre, Societe Anonyme: *See*—
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Claas, Reinhold. Combine harvester. 3,096,605, 7-9-63, Cl. 56—23.
Clark, Earnest H., Jr., to Baker Oil Tools, Inc. Control valve apparatus for drill pipes. 3,096,825, 7-9-63, Cl. 166—224.
Clark, Harold V., J. Roizen, and J. F. Varnell, Jr., to Ampex Corp. Tape recording and/or reproducing system and method. 3,097,267, 7-9-63, Cl. 179—100.2.
Clark, Jesse K., to National Distillers and Chemical Corp. Probe socket assembly. 3,097,289, 7-9-63, Cl. 219—44.
Clarke, Houghton W., and F. A. Blashfield, 99% to Mealpack Corp. and 1% to H. W. Clarke. Cart washing apparatus. 3,096,775, 7-9-63, Cl. 134—123.
Clevite Corp.: *See*—
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Cloninger, Lamar C.: *See*—
Walles, Wilhelm E., Tousignant, and Cloninger. 3,097,046.
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Cohn, Robert E.: *See*—
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Cohen, Robert J., to General Precision, Inc. Single axis integrating accelerometer. 3,096,657, 7-9-63, Cl. 73—517.
Cole, Edward N., and R. M. Johnston, to General Motors Corp. Heating and ventilating system for air cooled engine cars. 3,096,938, 7-9-63, Cl. 237—12.3.
Cole, Nelson E., to Dana Corp. Vehicle frame structure. 3,096,996, 7-9-63, Cl. 280—106.
Cole, Thomas M., F. H. Roby, and A. R. Norden, to Federal Pacific Electric Co. Circuit breaker panelboards. 3,097,326, 7-9-63, Cl. 317—119.
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Bauger, Louis J., Constant, and Jumelle. 3,096,954.
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Van Dyke, Bruce E., Richards, and Kadleck. 3,096,918.
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Schroeder, Carl E. 3,096,902.
Cook, Ernest E., and H. J. Sadler. Method of making fluid pump structures. 3,096,569, 7-9-63, Cl. 29—156.4.
Cook, Paul R. Masonry guide apparatus. 3,096,588, 7-9-63, Cl. 33—85.
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Thomas, Wilford H., and Cook. 3,097,223.
Cook, Thomas L., ⅓ each to K. H. Norberg, W. V. Glass, and L. Tellefsen. Method for orienting cylindrical objects and securing the same together. 3,096,575, 7-9-63, Cl. 29—407.
Coolbaugh, Richard W. Emergency survival pack. 3,096,759, 7-9-63, Cl. 128—94.
Cooley, John A. Electrical connector. 3,097,031, 7-9-63, Cl. 339—5.
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Cornell, Edward S., Jr., to Burndy Corp. Flexible multiple connector. 3,097,036, 7-9-63, Cl. 339—176.
Cornwell, Robert L. Shield for sanitary napkins. 3,096,765, 7-9-63, Cl. 128—287.
Cosnuau, Bernard, to Fluotechnic. Fluorescent discharge lamp starting and operating circuit. 3,097,325, 7-9-63, Cl. 315—100.
Cottle, Delmer L., and L. S. Minckler, Jr., to Esso Research and Engineering Co. Composition comprising halogenated butyl rubber and a thioaldehyde trimer. 3,097,182, 7-9-63, Cl. 260—43.
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Cox, Clyde M., to Phillips Petroleum Co. Flow measuring system. 3,096,647, 7-9-63, Cl. 73—228.
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Farquhar, John P., and Crandell. 3,097,255.
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Crathern, Charles F. H., III, J. B. Bradicich, and J. S. Reen, to FMC Corp. Box making machine. 3,096,692, 7-9-63, Cl. 93—49.
Creed, Sherman H., and S. Csimma, to FMC Corp. Fruit feeding mechanism. 3,096,869, 7-9-63, Cl. 198—33.
Creed, Sherman H., and J. L. Reimers, to FMC Corp. Fruit orientator, cover and trimmer. 3,096,800, 7-9-63, Cl. 146—52.
Criswell, Billie K., and H. W. Jones. Draft control mechanism. 3,096,830, 7-9-63, Cl. 172—9.
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Kronoff, Clarence R. 3,096,794.
Cronberger, Luther C., to The Dow Chemical Co. Casing heater. 3,097,282, 7-9-63, Cl. 219—10.49.
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Creed, Sherman H., and Csimma. 3,096,869.
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Cutler, Royal A., to Sterling Drug Inc. 2-(alkoxy or aryloxy)-4-arylamino-6-(H-)-1,3,5-triazines. 3,097,205, 7-9-63, Cl. 260—249.5.
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Dadds, Floyd S.: *See*—
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Olson, Rudolph. 3,096,875.
Dahms, James B.: *See*—
Edmonds, Byron P., Dahms, and Helvenston. 3,096,969.
Dale, Glenn H., to Phillips Petroleum Co. Process and apparatus for auto-refrigeration in cuprous salt slurry extraction process. 3,097,248, 7-9-63, Cl. 260—681.5.
Dale, James E. Toilet bowl ball cock assembly. 3,096,783, 7-9-63, Cl. 137—434.
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Danielson, Arthur C., to United States Rubber Co. Adhering textile materials to rubber. 3,097,110, 7-9-63, Cl. 117—162.
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Biggs, Orrick H., Wroblewski, and Dayton. 3,096,805.
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Rand, Burton. 3,096,774.
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Routson, Willis G., and Spence. 3,097,055.
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Walsh, Phillip D. 3,096,664.
Winchell, Frank J., and Kelley. 3,096,613.
General Precision, Inc.: *See*—
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General Railway Signal Co.: *See*—
Williams, Roger E. 3,097,295.
General Steel Wares Ltd.: *See*—
Mitchell, Leonard G. H. 3,096,972.
Gerard, Roger E. J.: *See*—
Sosin, Boleslaw M., and Gerard. 3,097,343.
Giacchetti, Anacleto D., to National Video Corp. Regulation of high frequency induction heating apparatus. 3,097,283, 7–9–63, Cl. 219—10.77.

Giacosa, Dante, to Fiat Societa per Azioni. Rear-engined motor vehicles having air-cooled engines. 3,096,843, 7-9-63, Cl. 180—54.

Giattino, Louis R.: *See*—
Brown, Maurice H., and Giattino. 3,097,281.

Gibson, Daniel L., to The Dow Chemical Co. Gelling hydrocarbon liquids. 3,097,169, 7-9-63, Cl. 252—8.55.

Gibson, William D., to White-Rodgers Co. Space temperature control. 3,096,935, 7-9-63, Cl. 236—1.

Gill, Robert F., Jr., and P. G. S. Mero, to Victor Comptometer Corp. Recording device. 3,096,742, 7-9-63, Cl. 120—42.06.

Gilliland, Joe E., R. Ray, and W. E. White, to Ozark-Mahoning Co. Hydrogen fluoride detinning process and production of stannous fluoride. 3,097,063, 7-9-63, Cl. 23—88.

Ginther, Robert J. Radiation sensitive glass. 3,097,172, 7-9-63, Cl. 252—301.4.

Giraitis, Albert P.: *See*—
Johnston, James D., Shapiro, and Giraitis. 3,097,222.

Glass, Henry P. Collapsible furniture. 3,096,866, 7-9-63, Cl. 297—159.

Glass, Warren V.: *See*—
Cook, Thomas L. 3,096,575.

Gleckler George C.: *See*—
Kennerly, George W., Hoffenberg, and Gleckler. 3,097,195.

Gleim, William K. T., to Universal Oil Products Co. Treating hydrocarbon distillates. 3,097,158, 7-9-63, Cl. 208—204.

Glickman, Samuel A., E. S. Miller, and M. E. Chiddix, to General Aniline & Film Corp. Composition comprising polypyrrolidone and another polyamide. 3,097,181, 7-9-63, Cl. 260—42.

Globe-Union Inc.: *See*—
Schimek, Robert. 3,097,334.

Godchaux, Leon, II: *See*—
Lippman, Alfred, Jr., and Godchaux. 3,097,072.

Godefrol, Erik F.: *See*—
Maddox, V. Harold, and Godefrol. 3,097,207.

Godefrol, Erik F., V. H. Maddox, and R. F. Parcell, to Parke, Davis & Co. Process for producing a depressant-like effect on the central nervous system. 3,097,136, 7-9-63, Cl. 167—65.

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Barrett, Fred O., and Goebel. 3,097,220.

Goettl, Adam D., to McGraw-Edison Co. Louver structure. 3,096,703, 7-9-63, Cl. 98—110.

Goettl, Adam D., to McGraw-Edison Co. Louver structure. 3,096,705, 7-9-63, Cl. 98—121.

Gollmar, Herbert A., to Koppers Co., Inc. Process for recovery of ammonia from coke oven gas as ammonium chloride and ammonium sulfate. 3,097,065, 7-9-63, Cl. 23—100.

Goodman Mfg. Co.: *See*—
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Suhr, Robert N., and Goodman. 3,096,793.

Goodyear Tire & Rubber Co., The: *See*—
Bender, Newell R., and Ten Broeck. 3,097,176.
Garrett, John E., and Howick. 3,096,609.
Sindelar, Lawrence R. 3,096,541.
Snyder, Robert F. 3,096,919.
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Gorgens, Joseph E., and E. J. Plavcan, to Manning, Maxwell & Moore, Inc. Dial instrument with external calibration. 3,096,651, 7-9-63, Cl. 73—363.9.

Gosnell, Michael P., to Philco Corp. Lint screen. 3,096,637, 7-9-63, Cl. 68—20.

Gottesman, Roy T.: *See*—
Sidl, Henri, and Gottesman. 3,097,190.

Gottschalk, William H.: *See*—
Aldrich, Adelbert, Schwarz, and Gottschalk. 3,097,070.

Gould, Charna. Garment fastener. 3,096,525, 7-9-63, Cl. 2—335.

Gould, Charna. Garment fastener. 3,096,553, 7-9-63, Cl. 24—246.

Grace, W. R., & Co.: *See*—
Barrett, Wayne T., Sanchez, and Vanik. 3,097,175.
Rainer, William C., Redding, Hitov, Sloan, and Stewart. 3,097,150.

Graham, Ward A., and H. W. Stratford, to Stratford Engineering Corp. Sulfur dioxide and sludge removal process. 3,097,234, 7-9-63, Cl. 260—504.

Grandjacques, Francois: *See*—
Greffe, Andre, Asselin, and Grandjacques. 3,096,550.

Grant, John B., to Richardson-Merrell Inc. Containers and closures therefor. 3,096,903, 7-9-63, Cl. 220—42.

Grassetti, Davide R.: *See*—
Klein, Howard C., and Grassetti. 3,097,244.

Gravelle, Arthur J. Latch guard. 3,097,008, 7-9-63, Cl. 292—346.

Graves, Howard K. Piano action. 3,096,675, 7-9-63, Cl. 84—237.

Graybill, Paul J. Dispensing container with reclosable cover for dispensing containers. 3,096,921, 7-9-63, Cl. 229—17.

Graybill, Paul J. Dispensing containers. 3,096,922, 7-9-63, Cl. 229—17.

Great Lakes Carbon Corp.: *See*—
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Green, Lawrence B., to Plastic Age Sales Inc. Method of fabricating a glass fiber reinforced plastic luminaire globe. 3,097,125, 7-9-63, Cl. 156—38.

Greene, Joseph L., to General Motors Corp. Electroplating. 3,097,148, 7-9-63, Cl. 204—43.

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Knoll, David, and Greenhaus. 3,097,287.

Greffe, André, M. Asselin, and F. Grandjacques, to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine. Process for casting ingots in a mold containing slag. 3,096,550, 7-9-63, Cl. 22—209.

Grenley, Dallas G.: *See*—
Townsend, Harold J., and Grenley. 3,097,178.

Gresser, Herbert D., G. M. Grosof, L. R. Solon, and T. S. Shultz, to TRG, Inc. Photo-cauterizer with coherent light source. 3,096,767, 7-9-63, Cl. 128—395.

Grewe, Ferdinand: *See*—
Regel, Erik, Wegler, Grewe, and Kaspers. 3,097,130.
Grewe, Ferdinand: *See*—
Wiegand, Christian, and Grewe. 3,097,132.

Griffith, Benjamin W., Jr., to Firmatron, Inc. Electrotherapy system. 3,096,768, 7-9-63, Cl. 128—422.

Grosof, Gerard M.: *See*—
Gresser, Herbert D., Grosof, Solon, and Shultz. 3,096,767.

Grunwald, John J., to MacDermid, Inc. Method of and composition for producing electroless black nickel coatings. 3,097,117, 7-9-63, Cl. 148—6.14.

Gruver, Jerry T., to Phillips Petroleum Co. Method of curing polymeric materials and product thereof. 3,097,193, 7-9-63, Cl. 260—85.1.

Gudiksen, Ingvard, to T. J. Mulroy. Baby lift. 3,096,917, 7-9-63, Cl. 224—6.

Gulda, Frank C. Electric welding torch. 3,097,290, 7-9-63, Cl. 219—75.

Guptill, Frank E.: *See*—
Eastman, Du Bois, and Guptill. 3,097,081.

Guptill, Frank E., Jr., to Texaco Inc. Gasification of hydrocarbon fuel oils. 3,097,082, 7-9-63, Cl. 48—215.

Gustafson, Ralph W., to General Electric Co. Safety control system for fluid fuel burners. 3,096,811, 7-9-63, Cl. 158—28.

Gutridge, Jack E., to Pullman-Standard Car Mfg. Co. Center load container car. 3,096,730, 7-9-63, Cl. 105—368.

Gutterman, Robert P., to General Kinetics Inc. Reel improvement. 3,096,950, 7-9-63, Cl. 242—74.

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H.G. Enterprises: *See*—
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Hachler, Walter. Device for weighing and dispensing materials for mixing thereof. 3,096,909, 7-9-63, Cl. 222—25.

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Hall, Elmer D. Hydraulic method and apparatus for flexing stuck pipe in well bores. 3,096,822, 7-9-63, Cl. 166—35.

Hall, Leslie B. Solid bullet lubricant. 3,097,169, 7-9-63, Cl. 252—23

Hall, Thomas R., to McCabe-Powers Body Co. Single-boom derricks. 3,096,886, 7-9-63, Cl. 212—35.

Hamill, Gordon B.: *See*—
Hewett, Charles M., and Hamill. 3,096,640.

Hamilton Tool Co., The: *See*—
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Hobrough, Gilbert L., and Hanna. 3,097,355.

Hansen, Erik H., to Plastica Inc. Insulated container and closure therefor. 3,096,897, 7-9-63, Cl. 215—13.

Hardy, Howard C., to Stanray Corp. Acoustical barrier fence. 3,096,847, 7-9-63, Cl. 181—33.

Harriman, Raymond E., to Ryan Aeronautical Co. Alternating current silicon controlled rectifier switch. 3,097,314, 7-9-63, Cl. 307—88.5.

Harris-Intertype Corp.: *See*—
Wojciechowski, Walter J., and Brandt. 3,096,710.

Harry, Gordon W., to General Motors Corp. Level indicator and filling device in an engine cooling system. 3,096,748, 7-9-63, Cl. 123—41.15.

Hartley, Robert L., to Harper J. Ransburg Co., Inc. Closure door for a receptacle. 3,097,030, 7-9-63, Cl. 312—315.

Harvey Aluminum (Inc.): *See*—
Frick, Chester A., and Langmack. 3,096,861.

Harvey, Douglass C., and H. Nerwin, to Eastman Kodak Co. Camera locking device. 3,096,699, 7-9-63, Cl. 95—31.

Harwood, Richard J. Wheel mounting means. 3,096,852, 7-9-63, Cl. 188—1.

Hastings, Clifford R.: *See*—
Dyrkacz, Wasil W., Hastings, and Pitler. 3,097,092.

Hautly, Rudolph F. Inertia switch. 3,097,272, 7-9-63, Cl. 200—61.49.

Havely, John E.: *See*—
Branscum, Tony E., and Havely. 3,097,058.

Havivi, Mosa, and M. Frirsz. Tailpiece for stringed instruments. 3,096,676, 7-9-63, Cl. 84—302.

Hayner, Paul F., to Sanders Associates, Inc. Hydraulic transducer. 3,096,690, 7-9-63, Cl. 91—461.

Hazan, Jack: *See*—
Ajouelo, Davis J. 3,096,522.

Helberg, Ornulf E. Method for winding packages of roving and the like. 3,096,011, 7-9-63, Cl. 57—156.

Helwinkel, Heinz W.: *See*—
Sjogren, Bertil K. F., Lindvall, Helwinkel, and Hogberg. 3,097,134.

Helm Machine Products, Inc.: *See*—
Nevin, Robert L. 3,096,583.

Helvenston, Edward P.: *See*—
Edmonds, Byron P., Dahms, and Helvenston. 3,096,969.

Hemphill Co.: *See*—
Capes, Tasker L., and Norman. 3,096,634.

Hendrikson, Edward D., and J. P. Logas; said Hendrikson, assor of ¼ to M. W. Lopp. Hay bale pick-up and conveyor implement. 3,096,868, 7-9-63, Cl. 198—9.

Hendrickson, Vergil P.: *See*—
Dickeson, Leonard F., Hendrickson, Johnson, Lichtenstein, Pearce, and Rohweder. 3,096,667.

Hennessy, James J., Jr., to Hennessy Lubricator Co., Inc. Railway axle box oil and dust seal. 3,096,987, 7-9-63, Cl. 277—175.

Hennessy Lubricator Co., Inc.: *See*—
Hennessy, James J., Jr. 3,096,987.

Henry-Baudot, Jacques, to Printed Motors Inc. Printed circuit stator for electrical rotating machines. 3,097,319, 7-9-63, Cl. 310—179.

Henry-Biabaud, Edmond, to Andre Citroen, Societe Anonyme. Mounting process for a lining panel, in particular for vehicles. 3,096,601, 7-9-63, Cl. 45—138.

Hermans, Marie E. A., and T. van der Plas, to Stichting Reactor Centrum Nederland. Process for the preparation of granular uraniferous material of uniform particle size. 3,097,062, 7-9-63, Cl. 23—14.5.

Hess, Howard V.: *See*—
Eckert, George W., Hess, and Towne. 3,097,171.

Hessel, Frederick A.: *See*—
Werner, Jesse, and Hessel. 3,097,087.

Heuck, Claus, F. Rochlitz, H. Schmidt, H. Vilcsek, and J. Winter, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Modified, phosphorus-containing polyester resins and process for preparing same. 3,097,184, 7-9-63, Cl. 260—45.1.

Hewett, Charles M., and G. B. Hamill, to Standard Oil Co. Simple apparatus for the detection of low boiling hydrocarbons by spark-gap method. 3,096,640, 7-9-63, Cl. 73—36.

Helwinkel, Heinz W.: *See*—
Sjogren, Bertil K. F., Lindvall, Helwinkel, and Hogberg. 3,097,134.

Heyden Newport Chemical Corp.: *See*—
Sidl, Henri, and R. T. Gottesman. 3,097,190.

Heyna, Johannes, E. Schinzel, and W. Noll, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Blue acid anthraquinone-dyestuffs. 3,097,216, 7-9-63, Cl. 260—372.

Hiersteiner, Walter L., to Tension Envelope Corp. of Kansas City. Envelope for two-way use. 3,096,925, 7-9-63, Cl. 229—73.

Higgins, Edward F., Jr., and D. H. Larson, to United States of America, Army. Radio frequency leveling device. 3,096,591, 7-9-63, Cl. 33—206.

Highland Dairies, Inc.: *See*—
Parker, Roy A., and Thompson. 3,096,908.

Hildyard, Joseph M., and H. C. Breckon, to The Hooker Electrochemical Co. Hydrogen chloride production system. 3,097,073, 7-9-63, Cl. 23—277.

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Hillberg, Bror, to Superior Concrete Accessories, Inc. Coil tie spacer cone and pulling device for the removal thereof from concrete installations. 3,096,574, 7-9-63, Cl. 29—263.

Hills-McCanna Co.: *See*—
McFarland, Rolland, Jr. 3,096,966.
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Hindes, Clifford K.: *See*—
Bell, Millard J., and Hindes. 3,096,727.

Hirt, Gerald E.: *See*—
Peterson, Leslie D. and Hirt. 3,096,957.

Hitov, Joseph J.: *See*—
Rainer, William C., Redding, Hitov, Sloan, and Stewart. 3,097,150.

Hiyama, Howard K.: *See*—
Hiyama, Kazuo and H. K. 3,096,848.

Hiyama, Kazuo and H. K. Mobile extensible scaffold. 3,096,848, 7-9-63, Cl. 182—131.

Hobrough, Gilbert L., and F. M. Hanna, to Hunting Survey Corp. Ltd. Apparatus for aerial survey radar distance measurement. 3,097,355, 7-9-63, Cl. 343—7.3.

Hochheiser, Jerome S., to United States of America, Air Force. Pin socket for miniature electrical components. 3,097,032, 7-9-63, Cl. 339—17.

Hodgson, Robert A., to National Tank Co. Compensated integrator. 3,096,645, 7-9-63, Cl. 73—223.

Hoehn, Hans, and H. Breuer, to Olin Mathieson Chemical Corp. Hydrindene sulfonylureas. 3,097,242, 7-9-63, Cl. 260—553.

Hoffenberg, David S.: *See*—
Kennerly, George W., Hoffenberg, and Gleckler. 3,097,195.

Hoffman, Carl G. Method for forming ear plugs for supporting hearing aid receivers. 3,097,059, 7-9-63, Cl. 18—55.05.

Hoffman, Joseph A., and H. L. Bowkley, to American Cyanamid Co. Gelled ammonium nitrate explosive containing polyacrylamide and an inorganic cross-linking agent. 3,097,120, 7-9-63, Cl. 149—60.

Hogberg, Karl G.: *See*—
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Hohl, John, and J. M. Wheaton, to Owens-Illinois Glass Co. Container and closure cap therefor. 3,096,898, 7-9-63, Cl. 215—40.

Hollingsworth, Pierce, to Standard-Thomson Corp. Fluid control apparatus. 3,096,828, 7-9-63, Cl. 170—160.14.

Holsteyn, Henry W. Slab straightening. 3,096,808, 7-9-63, Cl. 153—48.

Holtschmidt, Hans: *See*—
V. Brachel, Hanswilli, Esser, Holtschmidt, and Sinn. 3,097,173.

Homer, Horace H., and F. R. Taubner, to Sylvania Electric Products Inc. Method of coating a fluorescent lamp tube. 3,097,103, 7-9-63, Cl. 117—33.5.

Hong, Tonny, to United States Steel Corp. Tool steel for working hot metal. 3,097,091, 7-9-63, Cl. 75—126.

Hooker Electrochemical Co., The: *See*—
Hildyard, Joseph M., and Breckon. 3,097,073.

Hoppenstand, David, to Transport Industries, Inc. Shaft lock. 3,096,858, 7-9-63, Cl. 188—82.7.

Horelick, Arnold L., H. W. Dornbush, and J. J. Zimsky, to McGraw-Edison Co. Distribution transformer. 3,097,346, 7-9-63, Cl. 336—68.

Hornschuch, Hanns, to Ingersoll-Rand Co. Pipe line pump. 3,096,785, 7-9-63, Cl. 137—569.

Horowitz, Charles, and H. L. Dobrikin, to Berg Airlectro Products Co. Dash control parking brake valve. 3,096,789, 7-9-63, Cl. 137—627.5.

Howard, Donald W., to The Bendix Corp. Brake overtemperature detector and indicator. 3,096,649, 7-9-63, Cl. 73—342.

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Garrett, John E., and Howick. 3,096,609.

Howrey, Harold C., deceased; M. L. Solomon, administratrix, to M. E. Obrist and W. H. Solomon. Furnace fireplace. 3,096,754, 7-9-63, Cl. 126—120.

Hubby, Laurence M., to Texaco Inc. Automatic system for measuring and recording properties of a quantity of fluid. 3,096,641, 7-9-63, Cl. 73—53.

Hubel, Karl W., and E. H. Braye, to Union Carbide Corp. Process for the preparation of hydrogenated organic compounds and products resulting therefrom. 3,097,153, 7-9-63, Cl. 204—158.

Huffman, Harold W., to The Hamilton Tool Co. Air expandable core shaft. 3,096,949, 7-9-63, Cl. 242—72.

Hughes Tool Co., Aircraft Division: *See*—
Amer, Kenneth B., Chris, and Boswell. 3,096,826.

Hunter, William A., and R. Lund, to Pettibone Mulliken Corp. Automatic core-making machine. 3,096,547, 7-9-63, Cl. 22—10.

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Hobrough, Gilbert L., and Hanna. 3,097,355.

Hurwitz, Melvin D., and S. Y. Wang, to Rohm & Haas Co. Process of creaseproofing cellulose fabrics with 2,6-dioxaspiro (3,3) heptane and formaldehyde and fabrics produced thereby. 3,097,050, 7-9-63, Cl. 8—116.4.

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Imperial Chemical Industries Ltd.: *See*—
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France, Harold, and Lister. 3,097,191.
Marchant, Alan, and Wynne. 3,097,249.
Mills, Walter P. 3,097,043.
Suckling, Charles W., and Raventos. 3,097,133.
Thorp, Jeffrey M. 3,097,139.
Tilley, Colin G., and Waite. 3,097,197.
Turner, Norman. 3,097,078.
Wooler, Alan M. 3,097,042.
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Inco, Joseph F. Couch convertible into beds. 3,096,528, 7-9-63, Cl. 5—28.

Independence Foundation and Koppers Co., Inc.: *See*—
Aamot, Olav C. 3,097,090.

Industrial Powertronix Inc.: *See*—
Ofner, Frank R. 3,097,159.

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Ingersoll-Rand Co.: *See*—
Cowles, Ellsworth C., and Voggenthaler. 3,097,359.
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Ingram, Alvin R., to Koppers Co., Inc. Heat stable polymers. 3,097,188, 7-9-63, Cl. 260—45.95.

Ingram, Derek G. W., to The General Electric Co. Ltd. Oscillator having amplitude proportional to input signal. 3,097,345, 7-9-63, Cl. 331—109.

International Computers and Tabulators Ltd.: *See*—
Coates, Harold N. 3,097,350.

International Paper Co.: *See*—
Ford, Michael J. and B. H. 3,096,814.

Irwin, Milton. Fast acting clamp. 3,096,975, 7-9-63, Cl. 269—169.

Itek Corp.: *See*—
Tyler, Arthur W. 3,096,882.

Jackson, Philip, to The Bendix Corp. Transducer. 3,096,656, 7-9-63, Cl. 73—517.

Jacobs, Robert J., and C. J. Waechter, to Midland-Ross Corp. Web severing and roll initiating mechanism. 3,096,947, 7-9-63, Cl. 242—56.

James, Ivanhoe J. P., to Electric & Musical Industries Ltd. Correction of transmission variations in television standards converting system. 3,097,260, 7-9-63, Cl. 178—5.4.

Jamrosy, Bernard V. Extension cord lock and keeper. 3,097,034, 7-9-63, Cl. 339—75.

Janssen, Paul A. J., to Research Laboratorium Dr. C. Janssen, N.V. 1-aroyalkyl-4-arylpiperidinecarboxamides. 3,097,209, 7-9-63, Cl. 260—293.4

Jendrusch, Paul, to E. C. H. Will. Device for overlapping sheets of paper, press board and other material. 3,096,978, 7-9-63, Cl. 271—46.

Jenkins, George A., to G. C. Jenkins. Reversible ratchet mechanism. 3,096,659, 7-9-63, Cl. 74—157.

Jenkins, George C.: *See*—
Jenkins, George A. 3,096,659.

Jennings, Lyston C., and H. C. Spooner, to The New York Air Brake Co. Hydraulic system. 3,096,619, 7-9-63, Cl. 60—53.

Jenson, Ernest L., to New Haven Wire & Cable, Inc. Wire package and reel therefor. 3,096,951, 7-9-63, Cl. 242—137.1.

Jentzen-Miller Co.: *See*—
Jentzen, Sydney W. 3,096,733.

Jentzen, Sydney W., to Jentzen-Miller Co. Modular shelving assembly. 3,096,733, 7-9-63, Cl. 108—158.

Jepson, Ivar, to Sunbeam Corp. Lightweight composite sole plate and method of making the same. 3,096,566, 7-9-63, Cl. 29—155.5.

Jepson, Ivar, to Sunbeam Corp. Electric power unit for hand held food mixer. 3,097,318, 7-9-63, Cl. 310—68.

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Dombeck, Edward K., and Johannesen. 3,096,648.

Johnson, Carl T., and P. G. Wermager, to United States of America, Navy. Retractable rails. 3,096,726, 7–9–63, Cl. 104—107.

Johnson, Charles F. Pipe anchor. 3,096,554, 7–9–63, Cl. 24—263.

Johnson, Donald W., to Thexton Mfg. Co. Engine attachment for valve gear lubrication. 3,096,851, 7–9–63, Cl. 184—6.

Johnson, Eldon A.: *See*—
White, Jack M., and Johnson. 3,096,721.

Johnson, Gordon W.: *See*—
Dickeson, Leonard F., Hendrickson, Johnson, Lichtenstein, Pearce, and Rohweder. 3,096,667.

Johnson, Leonard E., Jr. Door hinge. 3,096,537, 7–9–63, Cl. 16—128.

Johnson, Marvin M., and A. C. Pitchford, to Phillips Petroleum Co. Process for concurrent upgrading of iron ore and heavy crude oils. 3,097,156, 7–9–63, Cl. 208—124.

Johnson, Milton R.: *See*—
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Johnson, Ralph E., to The Singer Mfg. Co. Lock stitch sewing machine with bobbin replenishing means. 3,096,736, 7–9–63, Cl. 112—181.

Johnson, Ralph S., to General Motors Corp. Catalytic converter. 3,097,074, 7–9–63, Cl. 23—288.

Johnston, James D., H. Shapiro, and A. P. Giraitis, to Ethyl Corp. Stable lead alkyl compositions and a method for preparing the same. 3,097,222, 7–9–63, Cl. 260—437.

Johnston, Rodney M.: *See*—
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Jonaitis, Charles W.: *See*—
Baarson, Robert E., and Jonaitis. 3,097,162.

Jones, Clifford E. Applicator for liquid weed-killer. 3,096,534, 7–9–63, Cl. 15—244.

Jones, Hugh W.: *See*—
Criswell, Billie K., and Jones. 3,096,830.

Jones, James B., to Aeroprojects Inc. Vibrating roll and method. 3,096,672, 7–9–63, Cl. 80—60.

Jones, Marvin R.: *See*—
Ahlstone, Arthur G., and Jones. 3,096,999.

Jones, Sterling B., to Monogram Precision Industries, Inc. Sheet clamp having a one eared spreader bar. 3,096,879, 7–9–63, Cl. 85—6.

Jones, William A., R. L. Wales, J. F. Leonard, and P. W. Dalrymple, to Northrop Corp. Fluid-sealing self-aligning shaft bearing. 3,097,024, 7–9–63, Cl. 308—36.3.

Josse, Eugene M.: *See*—
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Jucker, Ernst, and A. Ebnöther, to Sandoz A.G. N-methyl-2-[2'-(alpha-methyl-para-halo-benzhydryloxy)-ethyl]pyrrolidine. 3,097,212, 7–9–63, Cl. 260—326.5.

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Kadleck, Richard G.: *See*—
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Kalfen, Zoltan. Reversible traction device. 3,096,939, 7–9–63, Cl. 238—14.

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Sahler, Wilhelm. 3,097,297.

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Duniap, Robert B. 3,097,288.

Kämpf, Erhard: *See*—
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Kane, Robert J. Means for introducing chlorine into water. 3,096,780, 7–9–63, Cl. 137—209.

Kappen, John W. Lifting unit. 3,096,895, 7–9–63, Cl. 214—674.

Kasper, Helmut: *See*—
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Kasten, Walter, to The Bendix Corp. Fuel filtering and heater combination. 3,097,165, 7–9–63, Cl. 210—133.

Katon, John E., and L. A. Miller, to Monsanto Chemical Co. Tripolinates. 3,097,080, 7–9–63, Cl. 71—2.3.

Kayler, Lloyd M. Indexing valves adaptable for use in lawn sprinkling systems and other liquid distribution systems. 3,096,787, 7–9–63, Cl. 137—624.13.

Kegg, Robert R., R. E. La Brecque, and R. C. Warnke, to Owens-Illinois Glass Co. Fenestration structure for control of daylighting. 3,096,684, 7–9–63, Cl. 88—60.

Kelley, Oliver K.: *See*—
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Kennerly, George W., D. S. Hoffenberg, and G. C. Gleckler, to American Cyanamid Co. Polymerization of acetylene compounds. 3,097,195 7–9–63, Cl. 260—94.1.

Kenney, Emil J., to The Craftint Mfg. Co. Sketching device. 3,096,587, 7–9–63, Cl. 33—64.

Kenney, Philip J. Can and reclosure lid and tape seal therefor. 3,096,005, 7–9–63, Cl. 220—53.

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Kinney, Thurlow R. Implement holder. 3,096,960, 7–9–63, Cl. 248—113.

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Klingler, Karl A. Railroad car axle journal boxes. 3,097,025, 7–9–63, Cl. 308—41.

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Klopp, Friedrich, Jr.: *See*—
Klopp, Friedrich, F. Klopp, Jr., and Lessenich. 3,096,687.

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Klüpfel, Kurt-Walter, H.-R. Stumpf, H. Behmenburg, S. Wilhelm, and M. Tomanek, to Azoplate Corp. Material for electrophotographic reproduction. 3,097,095, 7–9–63, Cl. 96—1.

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Koch, Donald T., and W. R. Bohannan, to The Cooper-Bessemer Corp. Compressor control. 3,096,926, 7–9–63, Cl. 230—4.

Koehly, Paul F., and E. C. Walters, Jr., to General Motors Corp. Protective means for insulation. 3,097,320, 7–9–63, Cl. 310—217.

Koenig, Nathan H., to United States of America, Agriculture. Treatment of wool with acid anhydrides in the presence of acetic acid. 3,097,052, 7–9–63, Cl. 8—128.

Koerner, Harry E., and E. P. Thomas, to Westinghouse Electric Corp. X-ray apparatus. 3,096,976, 7–9–63, Cl. 269—323.

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Koontz, Robert D., to Minnesota Mining and Mfg. Co. Ribbed sheet structure. 3,096,958, 7–9–63, Cl. 244—123.

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Korger, Gerhard, H. Wagner, W. Aumuller, and H. Ruschig, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. N-cyclohexane-sulphonyl-N'-(B-phenylethyl)-urea. 3,097,241, 7–9–63, Cl. 260—553.

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Kraft, Alfred, and E. Kämpf. Dual characteristic additive feeding system. 3,096,779, 7–9–63, Cl. 137—101.19.

Kragle, Ralph J., to Thompson Ramo Wooldridge Inc. Failure indicating circuit for slave driven unit. 3,097,333, 7–9–63, Cl. 318—467.

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Morrison, Willard L. 3,096,627.

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Luke, Vernon F. Solder feeding soldering gun. 3,097,286, 7–9–63, Cl. 219—27.

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Martin, Joseph R., to Flexnit Co., Inc. Girdle. 3,096,769, 7-9-63, Cl. 128—548.

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May, Donald F. Door operating apparatus. 3,096,815, 7-9-63, Cl. 160—188.

May, Jim. Motor scooter having detachable power trailing sections. 3,096,841, 7-9-63, Cl. 180—13.

Maynard, Harlan J. Mist cooled cutting tool. 3,096,668, 7-9-63, Cl. 77—68.

Mayrath, Martin. Carriage for elevators. 3,096,872, 7-9-63. Cl. 198—120.5.

Mazzarins, Janis, to General Motors Corp. Tractor suspension permitting pivotal movement of track frames. 3,096,-840, 7-9-63, Cl. 180—9.5.

McAlvay, John C., to Webster Electric Co. Rotary pump or motor. 3,096,719, 7-9-63, Cl. 103—126.

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McClintock, Ross A., R. E. Thompson, and K. E. Waggener. Pipe hanger detachable by an axial force. 3,097,000, 7-9-63, Cl. 285—142.

McConnaughey, Robert K., and M. J. Cohen. Hypodermic syringes and needle hubs therefor. 3,096,763, 7-9-63, Cl. 128—221.

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McKay, Harry M., to The Binkley Co. Truck trailer with shiftable running gear for load equalizing. 3,096,993, 7-9-63, Cl. 280—81.

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Dickinson, Lloyd R., and Vessalo. 3,096,539.

McLain, George A.: *See*—
Gainer, Guy R., and McLain. 3,097,037.

McLaughlin, Donal, Jr. Rubber stamp. 3,096,713, 7-9-63, Cl. 101—379.

McLyman, Kenneth A.: *See*—
Rill, Russell A., and McLyman. 3,096,658.

McMillen, Jack W., Jr., and G. E. Rhodes, to Westinghouse Electric Corp. Bus bar apparatus and supporting means. 3,097,259, 7-9-63, Cl. 174—153.

McNally, Arthur F., and W. L. White, to Collins & Aikman Corp. Tufted pile fabric and method. 3,096,561, 7-9-63, Cl. 28—72.

McNamara, Robert J., to Joseph Bancroft & Sons Co. Method and apparatus for making textured fabrics. 3,096,559, 7-9-63, Cl. 28—1.

McRae, Edwin C. Engine accessory drive. 3,096,662, 7-9-63, Cl. 74—336.

Mealpack Corp.: *See*—
Clarke, Houghton W., and Blashfield. 3,096,775.

Meijs, Pieter J. Locking device for a measuring apparatus or the like. 3,096,962, 7-9-63, Cl. 248—276.

Melchiore, John J.: *See*—
Mills, Ivor W., and Melchiore. 3,097,231.

Melhart, Leonard J. Capacitor discharging device. 3,097,256, 7-9-63, Cl. 174—5.

Melliklan, Vaughn W. Fruit drying tray. 3,097,077, 7-9-63, Cl. 34—93.

Merck & Co., Inc.: *See*—
Bicking, John B. 3,097,210.
Novello, Frederick C., and Sprague. 3,097,204.
Schuchardt, Lee F. 3,097,140.
Schuchardt, Lee F., and Zulick. 3,097,142.
Schuchardt, Lee F., and Zulick. 3,097,143.

Mercuri, Robert A.: *See*—
Litz, Lawrence M., Mercuri, and Ring. 3,097,068.

Merlen, Monty M.: *See*—
Astheimer, Robert W., and Merlen. 3,097,298.

Mero, Peter G. S.: *See*—
Gill, Robert F., Jr., and Mero. 3,096,742.

Merry, Clayton B., to W. E. Wilson, Sr. Spring frame for scooter-type trail vehicle. 3,096,997, 7-9-63, Cl. 280—275.

Merryweather, John P.: *See*—
Bowkley, Herbert L., and Merryweather. 3,097,121.

Mersereau, John M., and P. J. Mester, to United States Rubber Co. Chlorinated pyrolysis oil. 3,097,187, 7-9-63, Cl. 260—45.7.

Mertens, Edward W., to California Research Corp. Storage-stable cationic bituminous emulsions. 3,097,174, 7-9-63, Cl. 252—311.5.

Messinger, Lester H., to E. I. du Pont de Nemours and Co. Process for hot-wet calendering fabrics. 3,096,557, 7-9-63, Cl. 26—1.

Messinger, Lester H., to E. I. du Pont de Nemours and Co. Novel fabric of improved cover and reduced slickness. 3,096,563, 7-9-63, Cl. 28—78.

Mester, Paul J.: *See*—
Mersereau, John M., and Mester. 3,097,187.

Metal Box Co. Ltd., The: *See*—
Simpson, Alfred M. 3,096,693.

Metlesics, Werner: *See*—
Zeiss, Harold H., Metlesics, and Tsutsui. 3,097,232.

Meverden, Leslie G.: *See*—
Martin, Irvin J., Stowe, and Meverden. 3,096,653.

Meybeck, Jean, and C. Shirle, deceased (A. J. A. C. Shirle, administratrix). Process for bleaching and shrinkproofing wool. 3,097,049, 7-9-63, Cl. 8—108.

Meyerhoff, Leonard, to L. and S. A. Meyerhoff, d.b.a. Eastern Research Group. Propeller design. 3,096,930, 7-9-63, Cl. 230—120.

Meyerhoff, Stanley A.: *See*—
Meyerhoff, Leonard. 3,096,930.

Meyers, Sydney: *See*—
Cox, Wilbur C., Meyers, and Keon. 3,097,122.

Miagkich, Tamara N.: *See*—
Rosenfeld, Eliasar B., Miagkich, Villam-Vilmont, Josse, and Piotnikov. 3,096,756.

Michels, Julian G., to The Norwich Pharmacal Co. 3-[acetonyl; hydroxyethyl; and 2-(4-pyridyl)-ethyl]-1-(5-nitrofurfurylideneamino) hydantoin. 3,097,202, 7-9-63, Cl. 260—240.

Microdot Inc.: *See*—
Felts, Gordon P. 3,097,033.

Midland-Ross Corp.: *See*—
Jacobs, Robert J., and Waechter. 3,096,947.

Mid-West Abrasive Co.: *See*—
Vekovius, Charles W., and Woodward. 3,096,889.

Miklossy, Konstantin: *See*—
Kugler, Tibor, and Miklossy. 3,097,292.

Milburn, Frank L., to General Motors Corp. Counterbalanced door for an oven door. 3,096,755, 7-9-63, Cl. 126—191.

Miles Laboratories, Inc.: *See*—
Swarthout Earl J. 3,097,146.

Miles, Merthen L., S. W. Brown, and O. K. Ward. Seed potato cutter. 3,096,801, 7-9-63, Cl. 146—78.

Millar, Gordon H., to McCulloch Corp., Scott Division. Supplemental fuel feed system for internal combustion engines. 3,096,751, 7-9-63, Cl. 123—119.

Miller, Andrew H., to FMC Corp. Fruit preparation machine. 3,096,870, 7-9-63, Cl. 198—33.

Miller, Charles W., to General Motors Corp. Rechargeable flashlight assembly. 3,096,941, 7-9-63, Cl. 240—6.4.

Miller, Edgar S.: *See*—
Glickman, Samuel A., Miller, and Chiddix. 3,097,181.

Miller, Jack M., M. Long, and C. F. Rapp, to Marlen Equipment Co. Control apparatus for forming mechanism. 3,096,540, 7-9-63, Cl. 17—32.

Miller, James C., to Radio Corp. of America. Shift register including two tunnel diodes per stage. 3,097,312, 7-9-63, Cl. 307—88.5.

Miller, J. Vance. Two speed motor. 3,097,331, 7-9-63, Cl. 318—221.

Miller, Lee A.: *See*—
Katon, John E., and Miller. 3,097,086.

Miller, Lee A., to Monsanto Chemical Co. Aryl propiolates. 3,097,230, 7-9-63, Cl. 260—473.

Mills, Archie W. Food holding and turning apparatus. 3,096,707, 7-9-63, Cl. 99—423.

Mills, Ivor W., and J. J. Melchiore, to Sun Oil Co. Manufacture of dibasic acids and esters thereof from petroleum fractions. 3,097,231, 7-9-63, Cl. 260—475.

Mills, Walter P., to Imperial Chemical Industries Ltd. New dyeing process. 3,097,043, 7-9-63, Cl. 8—55.

Miloradovitch, Leonid: *See*—
Devé, Vago, and Miloradovitch. 3,097,003.

Mims, Bruce L., and J. E. Fitzgerald, to The Barden Corp. Thermoelectric cooling assembly. 3,097,027, 7-9-63, Cl. 308—189.

Minckler, Leon S., Jr.: *See*—
Cottle, Delmer L., and Minckler. 3,097,182.

Minneapolis-Honeywell Regulator Co.: *See*—
Mintzer, Lester. 3,097,306.
Sidaris, Nicholas J. 3,096,958.

Minnesota Mining and Mfg. Co.: *See*—
Koontz, Robert D. 3,096,956.
Mullin, John T. 3,097,332.

Mintzer, Lester, to Minneapolis-Honeywell Regulator Co. Magnetic core digital storage and transfer circuits. 3,097,-306, 7-9-63, Cl. 307—88.

Mitchell, Leonard G. H., to General Steel Wares Ltd. Gas driers. 3,096,972 7-9-63, Cl. 263—33.

Mizell, Louis E., to Williamson-Dickie Mfg. Co. Process for improving crease-retention properties of cotton garments. 3,096,524, 7-9-63, Cl. 2—243.

Modrey, Henry J. Electric wiring terminal. 3,097,258, 7-9-63, Cl. 174—94.

Moes, Geert, to W. A. Scholten's Chemische Fabrieken N.V. Cold water disperaible starch and method of preparation. 3,097,102, 7-9-63, Cl. 106—210.

Moffett, Fred P. Mouth protector. 3,096,761, 7-9-63, Cl. 128—136.

Monogram Precision Industries, Inc.: *See*—
Jones, Sterling B. 3,096,679.

Monsanto Chemical Co.: *See*—
Beaver, David J., and Stoffel. 3,097,229.
Katon, John E., and Miller. 3,097,086.
Miller, Lee A. 3,097,230.
Zeiss, Harold H., Metlesics, and Tsutsui. 3,097,232.
Zienty, Ferdinand B. 3,097,201.
Zienty, Ferdinand B. 3,097,217.

Monson, Arnold A. Sewage disposal structure. 3,097,166, 7-9-63, Cl. 210—170.

Moore, Charles A., to Eprad, Inc. Simplified communication system. 3,097,265, 7-9-63, Cl. 179—1.

Moore, Roy E., to Mansfield Industries, Inc. Reversible shutter drive and accessibly mounted mechanisms in a motion picture projector. 3,096,682, 7-9-63, Cl. 88—17.

Moos, Anthony M., to Leesona Corp. Catalysts and electrodes for fuel cells. 3,097,115, 7-9-63, Cl. 136—120.

Moos, Anthony M., to Leesona Corp. Fuel cell electrodes. 3,097,116, 7-9-63, Cl. 136—120.

Morrison, Willard L., to Liquefreeze Co., Inc. Method of chilling storing and shipping perishable materials. 3,096,-626, 7-9-63, Cl. 62—60.

Morrison, Willard L., to Liquefreeze Co., Inc. Apparatus for quick freezing of bakery goods. 3,096,627, 7-9-63, Cl. 62—178.

Morrone, John J.: *See*—
Blowney, David P., Brannin, Morrone, Wilcox, and Zupanick. 3,097,351.

Moser, Henry W., to Samuel M. Langston Co. Machines for performing operations on sheet materials. 3,096,708, 7-9-63, Cl. 100—50.

Mueller, William F. Cheese cutter. 3,096,582, 7-9-63, Cl. 31—23.

Mullin, John T., to Minnesota Mining and Mfg. Co. Speed control and regulating circuits. 3,097,332, 7-9-63, Cl. 318—314.

Mulroy, Thomas J.: *See*—
Gudiksen, Ingvard. 3,096,917.

Mund, Heinrich: *See*—
Fischer, Kurt, and Mund. 3,096,542.

Mussler, Walter J. Collapsible portable cabin structure for automotive vehicles. 3,097,013, 7-9-63, Cl. 296—23.

My Double Co., Inc.: *See*—
Ronnell, Eva E. 3,096,916.

Nagel, Arthur N., to General Motors Corp. Vehicle body. 3,097,015, 7-9-63, Cl. 296—137.

Nakatani, Atsutada: *See*—
Sato, Takayoshi, and Nakatani. 3,096,697.

Napier, Donald R., to Continental Oil Co. Two step preparation of aluminum alkoxides. 3,097,226, 7-9-63, Cl. 260—448.

National Distillers and Chemical Corp.: *See*—
Clark, Jesse K. 3,097,289.

National Sugar Refining Co., The: *See*—
Lipoman, Alfred, Jr., and Godchaux. 3,097,072.

National Tank Co.: *See*—
Hodgson, Robert A. 3,096,645.

National Video Corp.: *See*—
Giacchetti, Anacleto D. 3,097,283.

Necchi Societa per Azioni: *See*—
Bono, Luigi. 3,096,737.

Neilson, William J., to Smith Industries International, Inc. Bearing seal for rotary rock bits. 3,096,835, 7-9-63, Cl. 175—371.

Nelden, Richard M., to American Radiator & Standard Sanitary Corp. Fluid drive improvement. 3,096,620, 7-9-63, Cl. 60—54.

Nelkin, Henry G., to H. G. Enterprises. Sacroiliac support. 3,096,760, 7-9-63, Cl. 128—95.

Nemsky, Philip. Coin bank with combination lock. 3,096,-934, 7-9-63, Cl. 232—1004.

Nerwin, Hubert: *See*—
Harvey, Douglass C., and Nerwin. 3,096,699.

Neukomm, Serge, and J. Bonnet, to Saamoco S.A. Process for treating tobacco and tobacco obtained by said process. 3,096,773, 7-9-63, Cl. 131—143.

Nevin, Robert L., to Helm Machine Products, Inc. Food product slicing machine. 3,096,583, 7-9-63, Cl. 31—25.

Newaygo Engineering Co.: *See*—
Bell, Millard J., and Hindes. 3,096,727.

New Haven Wire & Cable, Inc.: *See*—
Jenson, Ernest L. 3,096,951.

Newmaker, Frederick C., Jr., to The Dow Chemical Co. Packaging method. 3,096,602, 7-9-63, Cl. 53—22.

Newman, Stanley H. Gas valve and burner. 3,096,636, 7-9-63, Cl. 67—7.1.

New York Air Brake Co., The: *See*—
Jennings, Lyston C., and Spooner. 3,096,619.

Nicholson, Thomas W. Slab barking machine. 3,096,799, 7-9-63, Cl. 144—206.

Noble, Robert L.: *See*—
Beer, Charles T., Cutts, and Noble. 3,097,137.

Nojima, Gensuke. Fluidtight device for a bearing. 3,097,023, 7-9-63, Cl. 308—36.2.

Noorlander, Daniel O. Teat cup liner construction. 3,096,-740, 7-9-63, Cl. 119—14.52.

Nopco Chemical Co.: *See*—
Klein, Howard C., and Grassetti. 3,097,244.

Norberg, Kenneth H.: *See*—
Cook, Thomas L. 3,096,575.

Norden, Alexander R.: *See*—
Cole, Thomas M., Roby, and Norden. 3,097,326.

Norman, George G.: *See*—
Capes, Tasker L., and Norman. 3,096,634.

North American Philips Co., Inc.: *See*—
Volkers, Hendrik, van der Linden, and Starreveld. 3,097,344.

Northern Electric Co. Ltd.: *See*—
Rywak, John. 3,097,313.

Northrop Corp.: *See*—
Jones, William A., Wales, Leonard, and Dalrymple. 3,097,024.

Northwestern Steel and Wire Co.: *See*—
Robinson, Charles G. 3,097,252.

Norton Co.: *See*—
Davenport, Granger, and Van Acker. 3,096,686.

Norton, Desmond H., and J. D. Castleberry, to United States of America, Army. Attachment for forklift trucks. 3,096,-896, 7-9-63, Cl. 214—730.

Norwich Pharmacal Co., The: *See*—
Michels, Julian G. 3,097,202.

Novello, Frederick C., and J. M. Sprague, to Merck & Co. Inc. Derivatives of benzothiadiazine-1,1-dioxide compounds. 3,097,204, 7-9-63, Cl. 260—243.

Nuclear Materials and Equipment Corp.: *See*—
Eck, John E., and Cain. 3,097,154.

Oak Mfg. Co.: *See*—
Cappelle, Norman D., Kornacker, and Ma. 3,096,665.

Ohrist, Marie E.: *See*—
Howrey, Harold C. 3,096,734.

Odashima, Takeshi: *See*—
Mamiya, Shigeo, and Odashima. 3,097,274.

Oestrich, Hermann, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Airstrip for vertical takeoff aircraft. 3,096,956, 7-9-63, Cl. 244—114.

Ofner, Frank R., to Industrial Powertronix, Inc. Process for cleaning granular materials. 3,097,159, 7-9-63, Cl. 209—2.

Ohnuki, Akira: *See*—
Shinada, Toshio, and Ohnuki. 3,097,315.

Olsbel, John R., and R. A. Deibel, to Trico Products Corp. Vehicle door locking system. 3,096,845, 7-9-63, Cl. 180—82.

Olin Mathieson Chemical Corp.: *See*—
Hoelin, Hans, and Breuer. 3,097,242.
Konopacke, Henry A., and Cunningham. 3,096,543.
Tyson, George N., Jr. 3,097,119.

Olivet, Arthur J.: *See*—
Surrey, Alexander R., and Olivet. 3,097,211.

Ollstein, Lea J. Dog collar and leash. 3,096,741, 7-9-63, Cl. 119—106.

Olson, Rudolph, to Dahlman Mfg. & Sales, Inc. Trap structure for link belt. 3,096,875, 7-9-63, Cl. 198—195.

Ormond, Alfred N. Beam calibrator. 3,096,638, 7-9-63, Cl. 73—1.

Oster, Gerald: *See*—
Oster, Gisela K. and G. 3,097,097.

Oster, Gerald. Photopolymerization with the formatoin of relief images. 3,097,096, 7-9-63, Cl. 96—30.

Oster, Gisela K. and G. Photo degrading of gel systems and photographic production of reliefs therewith. 3,097,097, 7-9-63, Cl. 96—35.

Ostmann, Bernard G., Jr., to E. I. du Pont de Nemours and Co. Process for mechanical working of non-woven web. 3,097,127, 7-9-63, Cl. 162—146.

Otten, Gerhard, O. Scherer, and H. Schild, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the manufacture of 1-3-benzenedisulfonic acid. 3,097,235, 7-9-63, Cl. 260—505.

Owens-Corning Fiberglas Corp.: *See*—
Caroselli, Remus F. 3,096,970.

Owens-Illinois Glass Co.: *See*—
Hohl, John, and Wheaton. 3,096,898.
Kegg, Robert R., La Brecque, and Warnke. 3,096,684.

Ozark-Mahoning Co.: *See*—
Gilliland, Joe E., Ray, and White. 3,097,063.

Pacific & Atlantic Shippers, Inc.: *See*—
Bergen, Walter F. 3,096,973.

Page, Esther: *See*—
Page, Irving. 3,097,285.

Page, Irving, deceased: E. Page, administratrix, ¼ to W., ¼ to E., ¼ to Roberta, and ¼ to Rhoda Page. Thermostattimer device. 3,097,285, 7-9-63, Cl. 219—20.

Page, Rhoda: *See*—
Page, Irving. 3,097,285.

Page, Roberta: *See*—
Page, Irving. 3,097,285.

Page, Warren: *See*—
Page, Irving. 3,097,285.

Paige, James H., and J. L. Wells, to Fabrodynamics, Inc. Mobile work holder. 3,096,890, 7-9-63, Cl. 214—1.

Paramount Fabricating Co.: *See*—
Davidson, Howard M. 3,096,749.

Parcell, Robert F.: *See*—
Godefroi, Erik F., Maddox, and Parcell. 3,097,136.

Parilla, Arthur R. Fabrication of bodies having compound curvature. 3,096,576, 7-9-63, Cl. 29—421.

Parke, Davis & Co.: *See*—
Godefrot, Erik F., Maddox, and Parcell. 3,097,136.
Maddox, V. Harold, and Godefrol. 3,097,207.

Parker, Roy A., and J. D. Thompson; said Thompson assor. to Highland Dairies, Inc. Can dispensing apparatus. 3,096,908, 7-9-63, Cl. 221—176.

Parks, Christ F., J. E. Strassner, and F. W. Burtch, to The Dow Chemical Co. Inhibition of deposition of hydrocarbonaceous solids from oil. 3,096,777, 7-9-63, Cl. 137—15.

Pass & Seymour, Inc.: *See*—
Despard, Victor R. 3,097,035.

Patton, George E. Sanitary belt. 3,096,766, 7-9-63, Cl. 128—289.

Patton-MacGuyer Co.: *See*—
Fuerth, William J. 3,096,804.

Patzer, William A., to Reed Electromech Corp. Coin selector device. 3,096,864, 7-9-63, Cl. 194—102.

Pearce, Shairyl I.: *See*—
Dickeson, Leonard F., Hendrickson, Johnson, Lichtenstein, Pearce, and Rohweder. 3,096,667.

Pearlman, Alan R., to Clevite Corp. Junction transistors used to approximate non-linear functions. 3,097,309, 7-9-63, Cl. 307—88.5.

Pehr, Harold T. Combined salt and pepper dispenser. 3,096,910, 7-9-63, Cl. 222—142.5.

Peirce, Earl H., to United States Steel Corp. Flow meter. 3,096,646, 7-9-63, Cl. 73—228.

Pelikan, John M. Ignition systems for internal combustion engines. 3,096,752, 7-9-63, Cl. 123—149.

Peters, Carl W. Door and window water shield. 3,096,816, 7-9-63, Cl. 160—215.

Peters, Harold P., to Whirlpool Corp. Home appliance. 3,096,885, 7-9-63, Cl. 248—240.

Peters & Russell, Inc.: *See*—
Russell, Linus E. 3,096,704.

Petersen, Siegfried, K. Swinelcki, and W. Wirth, to Farbenfabriken Bayer Aktiengesellschaft. Tris-pyridyl hydrazone derivatives of triaminoguanidine. 3,097,203, 7-9-63, Cl. 260—240.

Peterson, Adolphe C. Vehicle resilient suspension means. 3,096,974, 7-9-63, Cl. 267—65.

Pettibone Mulliken Corp.: *See*—
Hunter, William A., and Lund. 3,096,547.

Peterson, Edward C., to Whirlpool Corp. Surface tension measuring device. 3,096,642, 7-9-63, Cl. 73—53.

Peterson, Henry F. Balancing machine. 3,096,655, 7-9-63, Cl. 73—483.

Peterson, Leslie D., and G. E. Hirt. Ballistic rotary actuator. 3,096,957, 7-9-63, Cl. 244—122.

Peterson, Richard H. Electronic musical instrument. 3,097,253, 7-9-63, Cl. 84—1.22.

Petty, Robert H., to Titanium Metals Corp. of America. Coil winding device. 3,096,809, 7-9-63, Cl. 153—67.

Phlco Corp.: *See*—
Gosnell, Michael P. 3,096,637.

Phillips, Edwin D. Mixing paddle. 3,097,002, 7-9-63, Cl. 287—20.

Phillips Petroleum Co.: *See*—
Branscum, Tony E., and Havely. 3,097,058.
Cox, Clyde M. 3,096,647.
Dale, Glenn H. 3,097,248.
Edmonds, Lee O. 3,097,105.
Gruver, Jerry T. 3,097,193.
Johnson, Marvin M., and Pitchford. 3,097,156.
Legatski, Harold R. 3,096,625.
Puckett, Robert A. 3,097,247.

Pieschel, Walter L., to The Coca-Cola Bottling Works. Combined bar and cooler. 3,097,028, 7-9-63, Cl. 312—277.

Piller, Lawrence. Moving and storage container and strengthening frame therefor. 3,096,923, 7-9-63, Cl. 229—49.

Pinet, André E., and G. Battail. Pulse-code modulation transmission systems. 3,097,338, 7-9-63, Cl. 325—38.

Pioneer Heddle and Reed Co., Inc.: *See*—
Suhr, Robert N., and Goodman. 3,096,793.

Pitchford, Armin C.: *See*—
Johnson, Marvin M., and Pitchford. 3,097,156.

Pitler, Richard K.: *See*—
Dyrkacz, Wasil W., Hastings, and Pitler. 3,097,092.

Pittsburgh Plate Glass Co.: *See*—
Edmonds, Byron P., Dahms, and Helvenston. 3,096,969.

Plasser, Franz, and J. Theurer. Machine for treating ballast in a railroad bed. 3,096,829, 7-9-63, Cl. 171—16.

Plastic Age Sales Inc.: *See*—
Green, Lawrence B. 3,097,125.

Plastica Inc.: *See*—
Hansen, Erik H. 3,096,897.

Plastiform Co.: *See*—
Magnuson, Elton E., and Blackmore. 3,096,596.

Plastomatic Corp.: *See*—
Hutchinson, Herman R. 3,096,904.

Playcan, Edward J.: *See*—
Gorgens, Joseph E., and Playcan. 3,096,651.

Plotnikov, Alexander V.: *See*—
Rosenfeld, Elisar B., Miagkich, Villam-Vilmont, Josse, and Plotnikov. 3,096,756.

Polaroid Corp.: *See*—
Blout, Elkan R., Buzzell, and Farney. 3,097,106.

Polin, Herbert S. Apparatus and method for electroluminescent non-destructive flaw detection. 3,097,337, 7-9-63, Cl. 324—32.

Powell, Milton W., 40% to L. J. McConnell, and 20% to P. H. Mansfield. Lantern mounting bracket for boats. 3,096,961, 7-9-63, Cl. 248—229.

Price, Robert A., and L. E. Massing, to The Bendix Corp. Brake system for rail vehicles. 3,096,854, 7-9-63, Cl. 188—42.

Priestley, Eric, to Elliott Brothers (London) Ltd. Automatic landing system for aircraft. 3,096,955, 7-9-63, Cl. 244—77.

Prineau, George H., and W. S. Wolfram, to General Motors Corp. Caster and camber adjustment means. 3,096,994, 7-9-63, Cl. 280—96.1.

Printed Motors Inc.: *See*—
Henry-Baudot, Jacques. 3,097,319.

Profos, Paul, to Sulzer Freres, Societe Anonyme. Steam generator. 3,096,743, 7-9-63, Cl. 122—479.

Profos, Paul, to Sulzer Freres, Societe Anonyme. Method of and apparatus for regulating the steam temperature in a steam generator. 3,096,744, 7-9-63, Cl. 122—479.

Progil, S.A.: *See*—
Laffetay, Louis A., and Boutin. 3,097,129.

Proler, Sam, and D. B. Bolding, to Proleride Transport Systems, Inc. Dump truck. 3,096,894, 7-9-63, Cl. 214—515.

Proleride Transport Systems, Inc.: *See*—
Proler, Sam, and Bolding. 3,096,894.

Puckett, Robert A., to Phillips Petroleum Co. Alkali metal dispersions, their preparation and use as catalysts in the liquid phase polymerization of butadiene. 3,097,247, 7-9-63, Cl. 260—680.

Pugsley, Lawrence E. Electrical multipurpose shop tool. 3,096,798, 7-9-63, Cl. 144—1.

Pullman-Standard Car Mfg. Co.: *See*—
Gutridge, Jack E. 3,096,730.

Purdy, Burl O., to W. J. Haertel & Co. Ceiling suspension system with double locking clip. 3,096,862, 7-9-63, Cl. 189—36.

Pure Oil Co., The: *See*—
Bernard, George G. 3,096,820.

Puryear, David B., to The Bendix Corp. Floating port plate construction. 3,096,723, 7-9-63, Cl. 103—162.

Putnam, Laurel E., to Superior Air Products Co. Liquefied gas container. 3,097,084, 7-9-63, Cl. 62—45.

Putzrath, Franz L., and T. B. Martin, to Radio Corp. of America. Information processing apparatus. 3,097,349, 7-9-63, Cl. 340—172.5.

Rabelos, Nicholas A., to Roll-Lok Corp. Retractable ball caster. 3,096,536, 7-9-63, Cl. 16—26.

Radio Corp. of America: *See*—
Miller, James C. 3,097,312.
Putzrath, Franz L., and Martin. 3,097,349.
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Rainard, Leo W., and E. H. Shattuck, to Joseph Bancroft & Sons Co. Crimping apparatus. 3,096,558, 7-9-63, Cl. 28—1.

Rainer, William C., E. M. Redding, J. J. Hitov, A. W. Sloan, and W. D. Stewart, to W. R. Grace & Co. Irradiated cross-linked polyethylene copolymer. 3,097,150, 7-9-63, Cl. 204—154.

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Reen, Joel S.: *See*—
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Regel, Erik, R. Wegler, F. Grewe, and H. Kaspers, to Farbenfabriken Bayer Aktiengesellschaft. Combatting plant diseases caused by fungi. 3,097,130, 7-9-63, Cl. 167—30.

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Rhodes, Glenn E.: *See*—
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Riedl, Engelbert, to Knorr-Bremse Gesellschaft mit Beschrankter Haftung. Electropneumatically operating brake system. 3,097,019, 7-9-63, Cl. 303—20.

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Ritzerfeld, W. and G. Method of producing copy. 3,096,711, 7-9-63, Cl. 101—149.4.

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Rosenfeld, Elisar B., T. N. Miagkich, M. N. Villam-Vilmont, E. M. Josse, and A. V. Plotnikov. Optical bronchoscope. 3,096,756, 7-9-63, Cl. 128—6.

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Routson, Willis G., and T. C. Spence, to The Dow Chemical Co. Method of making high-shrink textile fibers. 3,097,056, 7-9-63, Cl. 18—54.

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Solon, Leonard R.: *See*—
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Somyk, John V. Pressure garment. 3,096,635, 7-9-63, Cl. 66—175.

Sosin, Boleslaw M., and R. E. J. Gerard, to Marconi's Wireless Telegraph Co. Ltd. Transistor distributed amplifier. 3,097,343, 7-9-63, Cl. 330—30.

Sosolic, Ernest, to Societe Ornanaise de Constructions Mecaniques (S.O.C.) Distributor device. 3,096,888, 7-9-63, Cl. 214—1.

Soundscriber Corp., The: *See*—
De Napoli, Anthony C., Jr., and Balmer. 3,096,983.

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Routson, Willis G., and Spence. 3,097,055.

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Bonn, Theodore H. 3,097,307.
Eckert, John P., Jr., and Bonn. 3,097,304.
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Woelk, Hubert. 3,097,061.

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Spohn, Karl, and H. Walker. Automatic working turning means for screw machines. 3,096,673, 7-9-63, Cl. 82—2.5.

Spooner, Howard C.: *See*—
Jennings, Lyston C., and Spooner. 3,096,619.

Sprague, James M.: *See*—
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Sprinkle, Charles R., L. F. Sekula, M. R. Johnson, and B. Sparr, to Shell Oil Co. Phenol stabilized organo-phosphorous insecticides. 3,097,128, 7-9-63, Cl. 167—22.

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Stadelman, Floyd W. Traction attachment for tractors. 3,096,998, 7-9-63, Cl. 280—405.

Stakmore Co., Inc.: *See*—
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Woods, John E. 3,096,827.
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Stanley Works, The: *See*—
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Stanray Corp.: *See*—
Hardy, Howard C. 3,096,847.

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Starreveld, Jaap: *See*—
Volkers, Hendrik, van der Linden, and Starreveld. 3,097,-344.

Steen, James B., to Chicago Pneumatic Tool Co. Jetting device for rock bit. 3,096,834, 7-9-63, Cl. 175—340.

Steiner, John E., to Barber-Colman Co. Proportioning condition control system. 3,096,937, 7-9-63, Cl. 236—78.

Stelser, William, to Kelsey-Hayes Co. Motor vehicle hydraulic brake system. 3,097,018, 7-9-63, Cl. 303—6.

Štěpánek, Karel, to W. E. Sykes Ltd. Method of measuring the uniformity of gearings. 3,096,590, 7-9-63, Cl. 33—179.5.

Sterling Drug Inc.: *See*—
Cutler, Royal A. 3,097,205.
Cutler, Royal A. 3,097,248.
Elpern, Bill. 3,097,208.
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Surrey, Alexander R., and Olivet. 3,097,211.

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Stewart, William D.: *See*—
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Stumpf, Hans-Rainer: *See*—
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Suhr, Robert N., and R. M. Goodman, Jr., to Pioneer Heddle and Reed Co., Inc. Loom harness. 3,096,793, 7-9-63, Cl. 139—92.

Sullivan, Leo S., Jr., to General Motors Corp. Bearing structure and method of manufacture therefor. 3,097,060, 7-9-63, Cl. 18—59.

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Sun Oil Co.: *See*—
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Sunbeam Corp.: *See*—
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Jepson, Ivar. 3,097,318.

Superior Air Products Co.: *See*—
Putnam, Laurel E. 3,097,084.

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Biggs, Orrick H., Wroblewski, and Dayton. 3,096,805.
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Szczepanski, Henry F.: *See*—
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Talbot, William Y., and J. Chess. Rotary valve. 3,096,788, 7-9-63, Cl. 137—625.11.

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Tausch, Harry W., to The Goodyear Tire & Rubber Co. Heat treatment of a blend of butadiene-acrylonitrile copolymer and vinyl chloride polymer latices and resulting coalesced latex product. 3,097,180, 7-9-63, Cl. 260—29.7.

Tawney, Pliny O., to United States Rubber Co. Condensation products of trinitromethane and dimethylolurea. 3,097,-239, 7-9-63, Cl. 260—553.

Taylor, Olin C., to Barter Laboratories, Inc. Dispensing closure. 3,096,915, 7-9-63, Cl. 222—495.

Tebon, Stephen W., to General Electric Co. Branching filter. 3,097,264, 7-9-63, Cl. 179—1.

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Texaco Inc.: *See*—
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Eastman, Du Bois, and Guptill. 3,097,081.
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Texas Instruments Inc.: *See*—
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Francis, Thomas L., Kettler, and Sarrafian. 3,097,342.
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Thomas, Eugene P.: *See*—
Koerner, Harry E., and Thomas. 3,096,976.

Thomas, James G. Removable power and manually operated outriggers for carrier frames. 3,096,887, 7-9-63, Cl. 212—146.

Thomas, Wilford H., and S. E. Cook, to Ethyl Corp. Stable lead alkyl compositions and a method for preparing the same. 3,097,223, 7–9–63, Cl. 260—437.

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Thompson, Orville. Combination mattress. 3,096,529, 7–9–63, Cl. 5—345.

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Thompson, Standish F. Rotary engine. 3,096,745, 7–9–63, Cl. 123—8.

Thoren, Robert E. Striding toy horse. 3,096,990, 7–9–63, Cl. 280—1.182.

Thorp, Jeffrey M., to Imperial Chemical Industries Ltd. Hypocholesterolaemia compositions. 3,097,139, 7–9–63, Cl. 167—65.

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CLASSIFICATION OF DESIGNS

D 4—	5:	195,617	D29—	23:	195,625	D34—	5:	195,632	D49—	1:	195,640
D 7—	4:	195,618			195,626			195,633			195,641
D10—	8:	195,619	D30—	1:	195,627		13:	195,634	D52—	1:	195,642
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D62—	4:	195,654			195,662
D72—	1:	195,655			

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 9, 1963 Volume 792 Number 2

TRADEMARKS

NOTICES

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

Order No. 5315

Jerome W. Paxton of Washington, D.C. whose registration number is 15,517, is hereby excluded, beginning on January 25, 1963, from practice as a patent agent in any application before the United States Patent Office, without prejudice to his re-registration, upon a sufficient showing, after a period of not less than one year.

This action is taken under the provisions of Section 32 of Title 35 of the United States Code and Rule 348 of the Rules of Practice of the United States Patent Office in Patent Cases.

EDWIN L. REYNOLDS,
Jan. 25, 1963. *First Assistant Commissioner of Patents.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 641,841 (BC), D. E. Winebrenner Company, Inc., Canned blend of fruit juices, **filed** Mar. 27, 1961, D.C., S.D.N.Y., Doc. 61/1127, *D. E. Winebrenner Company, Inc.* v. *Dole Corporation.* Stipulation and order of discontinuance without prejudice Mar. 20, 1963.

Reg. No. 643,467 (PAC), Pacific Import Co., Inc., Pocket cigarette lighters, **filed** Jan. 11, 1962, D.C., S.D.N.Y., Doc. 62/192, *Pacific Import Co., Inc.* v. *North American Foreign Trading Corporation et al.* Stipulation and order of discontinuance with prejudice Mar. 18, 1963.

Reg. No. 644,202 (GRUEN THE NEWEST LOOK IN TIME), The Gruen Watch Company, Watches, watch cases and watch movements, **filed** Mar. 26, 1963, D.C., W.D.N.Y. (Buffalo), Doc. 10203, *Roman Products Corporation* v. *Di Crasto Dairy & Food Products, Inc. et al.*

Reg. No. 678,885 (VOLARE), J. Reindl, Living room, dining room and bedroom furniture, **filed** Mar. 26, 1963, D.C., S.D.N.Y., Doc. 63/835, *John Reindl* v. *Friendly Frost, Inc.*

Reg. No. 680,841 (PANTINO), Pantino, Inc., Women's and misses' slacks, shorts, skirts and blouses, commonly sold as coordinates; **Reg. No. 743,820** (DESIGN OF FEMALE), same, **filed** Mar. 22, 1963, D.C. Mass. (Boston), Doc. 63/237-J, *Pantino, Inc.* v. *Vanguard Slacks, Inc. et al.*

Reg. No. 686,892 (GUARDIAN), Guardian Products Company, Inc., Crutches, tips, cushions, backrests, bed tables, invalid bed receptors, surgical tubing, etc., **filed** Dec. 1, 1959,

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,358
Date of oldest new application	Oct. 18, 1962
Date of oldest amended application	Oct. 1, 1962

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-18-62	10-1-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-1-62	10-4-62
Renewals (All Classes)	5-9-63	5-25-63
Sec. 12 (c) Publications (All Classes)	5-6-63	5-29-63

Applications filed during the month of May 1963—2,342

Registrations Issued	428—No. 752,277 to No. 752,704
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

D.C. Mass. (Boston), Doc. 59/900–J, *Guardian Products Company, Inc.* v. *Guardian Corporation et al.* Consent decree; trademark held valid; defendants enjoined Mar. 15, 1963.

Reg. No. 690,560. (See Reg. No. 510,903.)

Reg. No. 742,646 (BAR-MASTER), Bar-Master, Inc., Electrically-operated non-alcoholic beverage dispensers for commercial bars, filed Mar. 27, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/352–WB, *Bar-Master, Inc.* v. *Bar Mistress.*

Reg. No. 743,820. (See Reg. No. 680,841.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 138,662. Select Nurseries, Inc., Brea, Calif. Filed Feb. 26, 1962.

LAVENDER ICE

For Plants Such as Ice Plants.
First use Jan. 17, 1961.

SN 138,663. Select Nurseries, Inc., Brea, Calif. Filed Feb. 26, 1962.

ORCHID SNOW

For Plants Such as Ice Plants.
First use Jan. 17, 1961.

SN 140,333. Canale Chemical Corporation, Glen Cove, N.Y. Filed Mar. 21, 1962.

CAN-A-LITE

For Plastics Such as Sheets or Film, Flat or Molded, Photosensitized, Plain or Treated.
First use Dec. 31, 1958.

SN 142,179. Excel-Mineral Company, Inc., Los Angeles, Calif. Filed May 10, 1962.

QUICK-SORB

For Granular, Fluid-Absorbent Material Used To Absorb Oil, Grease, Water and the Like From Floors and Similar Surfaces, as a Litter for Small Animals, and as a Plant Mulch.
First use Nov. 1, 1949.

SN 149,386. Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio. Filed July 19, 1962.

AMERIPOL MICRO-BLACK

Owner of Reg. Nos. 382,669, 740,772, and 740,774.
For Synthetic Elastomers and Compositions Containing Synthetic Elastomers, Particularly Butadiene-Styrene Copolymer Compositions Containing Carbon Black.
First use on or about Jan. 13, 1961.

SN 152,665. Amos-Thompson Corporation, Edinburg, Ind. Filed Sept. 7, 1962.

AM-O-LITE

For Thermoplastic Material Used in the Molding of Plastic Golf Club Heads.
First use Aug. 1, 1962.

SN 154,018. Dor Plastics Corp., Brooklyn, N.Y. Filed Sept. 27, 1962.

PROTECTOLITE

For Plastic Sheeting Which Simulates Leather.
First use June 1, 1962.

SN 156,545. American Viscose Corporation, Philadelphia, Pa. Filed Nov. 5, 1962.

AVIFLAX

For Synthetic Fibers.
First use Oct. 26, 1962.

SN 156,932. Apex Coated Fabrics Co. Inc., New York, N.Y. Filed Nov. 9, 1962.

BLISTAPEX

Owner of Reg. Nos. 219,882, 547,111, and 695,415.
For Plastic Material in Sheet Form for Use as Containers and Coverings for Merchandise and for Packaging Purposes.
First use Oct. 16, 1961.

SN 158,188. Suddeth-Baker Co., Long Beach, Calif. Filed Nov. 29, 1962.

WONDER-FUEL

For Solid Fuel, Useful as a Fire Starter as Well as a Fuel.
First use Mar. 19, 1962.

SN 158,723. The Ohio Leather Company, Girard, Ohio. Filed Dec. 7, 1962.

BOMBE

For Leather.
First use Jan. 12, 1962.

SN 158,784. Brownfield Seed & Delinting Company, Inc., Brownfield, Tex. Filed Dec. 10, 1962.

Plantmaster Seeds

Applicant hereby disclaims the word "Seeds."
For Cotton Seed and Field Grains.
First use Sept. 21, 1958.

SN 162,384. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

Owner of Reg. Nos. 539,903, 687,423, and others.
For Rubber; Synthetic Plastic Resins; Latex; Cellular Plastic Material in Sheet Form Resembling Sponge Rubber; and Thermoplastic Sheet Material for Forming, Fabricating, or Molding, Coated Fabrics of the So-Called Artificial Leather Type.
First use Aug. 17, 1962, on thermoplastic sheet material.

Class 2 — Receptacles

SN 105,995. The Metal Box Company Limited, London, England. Filed Oct. 7, 1960.

DIOTITE

Owner of British Reg. Nos. 754,022, dated May 28, 1956, and 764,568, dated Apr. 12, 1957.
For Cartons and Bags, Including Cartons and Bags Lined With Polythene Plastics and Waxed Lined Cartons.

SN 134,315. Global Plastics Inc., Beverly Hills, Calif. Filed Dec. 19, 1961.



For Molded Plastic Articles Such as Eating and Drinking Utensils, Protective Containers for Medicines, and Storage Devices for Vanity Items and Coins.
First use on or about Nov. 15, 1961.

SN 138,178. The Dow Chemical Company, Midland, Mich. Filed Feb. 19, 1962.

ZIP-HANDLE

For Containers—Namely, Bags.
First use Nov. 15, 1961.

SN 143,458. Stone Container Corporation, Chicago, Ill. Filed Apr. 30, 1962.

CANTEENER

For Corrugated Containers With Plastic Bag Inserts for Bulk Shipment and Storage of Fluids.
First use on or about Oct. 15, 1961.

SN 145,599. Pre-O-Form Corporation, Warsaw, Ind. Filed May 28, 1962.

SAN-O-PAK

For Containers—Namely, Coated Paperboard Milk Cartons.
First use May 15, 1962.

SN 147,310. Pre-O-Form Corporation, Warsaw, Ind. Filed June 20, 1962.

SAN-O-FORM

For Containers—Namely, Coated Paperboard Milk Cartons.
First use June 11, 1962.

SN 149,870. Pikes Peak Plastics, Inc., Colorado Springs, Colo. Filed July 26, 1962.

EGONITE

For Plastic Food Service Utensils—Namely, Banquet Covers, Platter Covers, Muffin Covers, Cake Covers, Cup Covers, Nappy Covers, Juice Glass Covers, and Sugar Trays.
First use on or about May 15, 1946.

SN 149,872. Pikes Peak Plastics, Inc., Colorado Springs, Colo. Filed July 26, 1962.



For Plastic Food Service Utensils—Namely, Banquet Covers, Platter Covers, Muffin Covers, Cake Covers, Cup Covers, Nappy Covers, Juice Glass Covers, and Sugar Trays.
First use on or about May 15, 1946.

SN 150,249. Hinchcliff Hardwood Lumber Company, Strongsville, Ohio. Filed Aug. 1, 1962.

CONTAIN-A-PALLET

For Collapsible Containers for Use With Pallets or Skids.
First use June 7, 1962.

SN 152,924. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Sept. 11, 1962.



The drawing is lined for gold. Owner of Reg. Nos. 672,855 and 688,509.
For Coasters, Holder for Jewelry Rings, Toothpick or Hors d'Ouevres Container, Lipstick Containers, Salt and Pepper Shakers, Chewing Gum Case and Match Case.
First use Nov. 10, 1959, on coasters.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 126,719. American Kleer-Vu Plastics, Inc., New York, N.Y. Filed Aug. 28, 1961.

KLEER-VU

Owner of Reg. No. 687,752.
For Plastic Transparent Enclosures Which May Be Inserted in Wallets and for Other Purposes.
First use in 1958.

SN 135,743. A. S. Beck Shoe Corporation, New York, N.Y. Filed Jan. 15, 1962.



The drawing is lined for brown and yellow but no claim is made to color.
For Handbags for Women and Young Women.
First use Dec. 15, 1961.

SN 145,865. Sportsman's Market, Cincinnati, Ohio. Filed May 31, 1962.



For Pilot's Chart Cases.
First use Jan. 1, 1962.

SN 158,337. Aristocrat Leather Products, Inc., New York, N.Y. assignee of Gold Seal Importers, Inc., New York, N.Y. Filed Dec. 3, 1962.



For Ladies' Handbags.
First use Dec. 31, 1939.

SN 158,338. Aristocrat Leather Products, Inc., New York, N.Y., assignee of Gold Seal Importers, Inc., New York, N.Y. Filed Dec. 3, 1962.

JOSEF

For Ladies' Handbags.
First use Dec. 31, 1939.

SN 158,388. Skyway Luggage Company, Seattle, Wash. Filed Dec. 3, 1962.

GOLDEN DOT

For Luggage.
First use Dec. 15, 1961.

SN 158,967. Friedman Bros., Westbury, N.Y. Filed Dec. 12, 1962.

ARTISAN

For Pocket Wallets, Billfolds, and Pass Cases.
First use Sept. 10, 1962.

SN 160,014. Seward Luggage Manufacturing Company, Incorporated, Petersburg, Va. Filed Dec. 31, 1962.

LEISURE LINE

For Luggage.
First use Nov. 21, 1962.

Class 4 — Abrasives and Polishing Materials

SN 143,400. S. C. Johnson & Son, Inc., Racine, Wis. Filed Apr. 30, 1962.

RAID

Owner of Reg. No. 628,506.
For Insecticidal Ingredient Incorporated in Floor Wax.
First use on or about Mar. 16, 1961.

SN 153,083. Gorham Corporation, Providence, R.I. Filed Sept. 13, 1962.

TRIPLE-L

For Combination Silver Cleaner and Polish.
First use Aug. 8, 1962.

SN 161,652. S. C. Johnson & Son, Inc., Racine, Wis. Filed Jan. 24, 1963.

KLEAR

For Floor Wax.
First use in or about January 1957.

Class 5 — Adhesives

SN 150,079. Latex Process, Inc., Melrose, Mass. Filed July 30, 1962.

LATITE

For Epoxy Adhesives for Use in Building and Repairing Boats and for General Household Repairs.
First use May 10, 1960.

SN 160,480. The Flintkote Company, New York, N.Y. Filed Jan. 10, 1963.

FLINTCRETE

For Polysulfide and Epoxy Materials for Intermixture To Provide a Binder for Aggregate or Grout (Adhesive Bonding Agent).
First use May 1958.

SN 161,470. Harry T. Campbell Sons' Corp., Towson, Md. Filed Jan. 28, 1963.

CAMEL-BOND

For Epoxy Adhesives.
First use in December 1961.

Class 6 — Chemicals and Chemical Compositions

SN 99,823. Charles C. Whitmer, d.b.a. The Interpool Products Company, Cleveland, Ohio. Filed June 27, 1960.

CHEMSOLVE

For Water Softener and Purifier for Use in Swimming Pools.
First use Feb. 15, 1959.

SN 99,824. Charles C. Whitmer, d.b.a. The Interpool Products Company, Cleveland. Ohio. Filed June 27, 1960.

CHEMTROL

For Preparation To Control Alkalinity in Swimming Pools.
First use Feb. 15, 1959.

SN 104,000. Charles C. Whitmer, d.b.a. The Interpool Products Company, Cleveland, Ohio. Filed Sept. 6, 1960.

CHEM-GONE

For Swimming Pool Water Preparation for Algae Control.
First use Feb. 15, 1959.

SN 104,001. Charles C. Whitmer, d.b.a. The Interpool Products Company, Cleveland, Ohio. Filed Sept. 6, 1960.

CHEM-RID

For Swimming Pool Water Preparation for Algae Control.
First use Feb. 15, 1959.

SN 129,512. Ethel M. McMaster, d.b.a. J. McMaster Laboratories, Seattle, Wash. Filed Oct. 9, 1961.

MCMASTER'S

For Chemical Eradicator for Removing Images Produced by Photoactivation of Photosensitive Surfaces.
First use on July 25, 1945.

SN 134,641. Heatbath Corporation, Indian Orchard, Mass. Filed Dec. 26, 1961.

ALCHROME

For Chemicals To Impart a Chromate Conversion Coating to Aluminum and Aluminum Alloys.
First use in October 1960.

SN 138,470. Consolidated Vacuum Corporation, Rochester, N.Y. Filed Feb. 23, 1962.

CONVALEX

For High Boiling Oil With an Ether Base for Use in Diffusion Vacuum Pumps.
First use Nov. 20, 1961.

SN 145,203. Minnesota Laboratories, Virginia, Minn. Filed May 22, 1962.



For Chemical Preparation To Eliminate Starch Sticking From the Sole Plate of an Iron.
First use Apr. 3, 1962.

SN 147,375. Koppers Company, Inc., Pittsburgh, Pa. Filed June 21, 1962.

REZAD

For Nitrosoresorcinol and Formulations Containing a Nitrosoresorcinol as the Active Ingredient.
First use Apr. 24, 1961.

SN 148,142. The Cincinnati Milling Machine Co., Cincinnati, Ohio. Filed July 2, 1962.

CIMGUARD

Owner of Reg. Nos. 415,093 and 699,276.
For Rust Preventives.
First use Apr. 2, 1962.

SN 148,597. Carlisle Chemical Works, Inc., Reading, Ohio. Filed July 9, 1962.

DILLYDAP

For Chemical Additive To Retard Oxidation in Plastics, Fats, and Oils.
First use June 19, 1962.

SN 148,624. Industrial Biochemicals, Inc., Edison, N.J. Filed July 9, 1962.

GLEEN

For Salts of Gluconic Acid and Amines—Namely, Gluconate Amines.
First use Jan. 12, 1962.

SN 150,060. Humble Oil & Refining Company, Houston, Tex. Filed July 30, 1962.

IMOL

Owner of Reg. No. 386,749, and others.
For Chemical Composition Suitable for Use as an Energy Transfer and Shock Absorbing Medium in Industrial or Mechanical Devices.
First use Mar. 27, 1962.

SN 152,733. Alco Chemical Corporation, Philadelphia, Pa. Filed Sept. 10, 1962.

VAPOR GARD

For Elastomeric Polymer Dispersion Sold in Concentrated Liquid Form as an Anti-Transpirant for Application as a Spray or Dip to Live Flower and Bush Transplants, Shrubs, Trees, etc. and Serving to Reduce Transplanting Shock, Wilt and/or Winter Injury Due to Transpiration of Moisture Through the Leaves Thereof.
First use June 20, 1962.

SN 153,149. Bernz O Matic Corporation, Rochester, N.Y., by change of name from Otto Bernz Company, Inc., Rochester, N.Y. Filed Sept. 14, 1962.



Owner of Reg. Nos. 587,281 and 593,884.
For Cylinder Containing Liquid Petroleum Gas.
First use in June 1962; Nov. 7, 1951, in a different form.

SN 154,155. Retiree Research & Development Institute, Inc., Toledo, Ohio. Filed Sept. 28, 1962.

RETECHOL

For Liquid Fuels for Stoves; Alcohol Fuels.
First use Mar. 21, 1962.

SN 154,277. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed Oct. 1, 1962.

H P 65

For Blood Diagnostics for Laboratory Use.
First use Sept. 17, 1962.

SN 155,929. Maschinenfabrik Uerkheim AG, Uerkheim, Switzerland. Filed Oct. 25, 1962.

Contelyt

For Electrolytic Fluids.
First use 1961; in commerce May 1962.

SN 156,116. Ilford, Limited, Ilford, Essex, England. Filed Oct. 29, 1962.

ILFOCHROME

Owner of British Reg. No. 823,242, dated July 20, 1961; and U.S. Reg. Nos. 116,139 and 745,799.
For Photographic Chemicals.

SN 156,119. Ilford, Limited, Ilford, Essex, England. Filed Oct. 29, 1962.

ILFOCOPY

Owner of British Reg. No. 823,243, dated July 20, 1961; and U.S. Reg. Nos. 116,139 and 745,799.
For Chemical Products for Use in Photography.

SN 156,596. Halliburton Company, Duncan, Okla. Filed Nov. 5, 1962.

MUD-KIL

For Cement Additive or Composition Which When Added to a Cement Composition or Slurry Reduces the Effects of Contamination of Such Cement Composition or Slurry by the Organic Chemicals Commonly Found in Drilling Muds.
First use on or about Nov. 26, 1956.

SN 156,836. Stepan Chemical Company, Maywood, N.J. Filed Nov. 7, 1962.

GRANLOX

For Crystals Used for Removing Carbon Dioxide in Confined Areas, Such as in Fallout Shelters.
First use August 1961.

SN 157,451. The Brush Beryllium Company, Cleveland, Ohio. Filed Nov. 19, 1962.

BRUSH

For Beryllium Oxide and Compositions Comprising Predominantly Beryllium Oxide—Namely, Powder, Porous, Compacted, Sintered, Compressed, Extruded, Cast and Molded Shapes and Articles.
First use Aug. 15, 1962.

SN 157,611. Ferro Corporation, Cleveland, Ohio. Filed Nov. 20, 1962.

HI-Q

For Organic and Inorganic Colorants and Pigments for Use in Ceramics, Plastics, Organic Paints and Finishes, Vitreous Enamels, Inks, Glazes and Building Materials, Screening Oils, Pastes, Wetting Compounds, and Color Concentrates Suspended in Plastic Resin Vehicles.
First use Nov. 2, 1962.

SN 157,731. Shell Oil Company, New York, N.Y. Filed Nov. 21, 1962.

SUPONA

For Insecticide.
First use Oct. 29, 1962.

SN 159,394. Dumas Milner Corporation, Jackson, Miss. Filed Dec. 19, 1962.

OCEANAIRE

For Room Deodorant.
First use July 1, 1958.

SN 159,436. Stauffer Chemical Company, New York, N.Y. Filed Dec. 19, 1962.

GARRATHION

For Livestock Spray and Dip.
First use July 27, 1962.

SN 159,530. Sandoz, Inc., New York, N.Y. Filed Dec. 20, 1962.

XYLENE

For Dyestuffs.
First use Jan. 10, 1925.

SN 159,531. Sandoz, Inc., New York, N.Y. Filed Dec. 20, 1962.

PYRAZOL

For Dyestuffs.
First use Jan. 10, 1925.

SN 159,564. Chemionics Inc., Roselle, N.J. Filed Dec. 21, 1962.

CHUM

For Water Repellent Formulations.
First use Feb. 23, 1962.

SN 159,969. The Diversey Corporation, Chicago, Ill. Filed Dec. 31, 1962.

DIBAC

For Bactericide for Dairy Farm Equipment Sanitizing.
First use Dec. 7, 1962.

Class 7—Cordage

SN 158,689. Davee Company, New York, N.Y. Filed Dec. 7, 1962.

BEND-A-BOW

For Ribbons for Windings and Wrappings and Decorative Strip Materials.
First use Nov. 1, 1961.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 141,585. Douwe Egberts Koninklijke Tabaksfabriek-Koffiebranderi Jen-Theehandel N.V., Joure, Netherlands. Filed Apr. 5, 1962.

AMPHORA

Priority claimed under Sec. 44(d) on Dutch Reg. No. 142,951, dated Jan. 10, 1962. Owner of U.S. Reg. Nos. 663,363 and 695,938.
For Tobacco-Pipes.
First use Jan. 11, 1962, on tobacco-pipes; in commerce July 31, 1962.

SN 142,447. Frederic Marland, d.b.a. F.M. Products, Norwalk, Conn. Filed Apr. 17, 1962.

Steamex

For Smoking Pipe Cleansing Glass Globe Attachment for Hot Water.
First use Apr. 11, 1962.

SN 152,606. McDonald Products Corporation, Buffalo, N.Y. Filed Sept. 6, 1962.

DUK-IT

Owner of Reg. No. 562,203.
For Ash Trays and Receptacles, Cigarette, Cigar and Tobacco Humidors, and Boxes, Pipe Rests and Racks, and Lighters and Ash Tray and Lighter Combinations.
First use June 26, 1934.

SN 155,953. Zegel Products Co., Detroit, Mich. Filed Oct. 25, 1962.

Adjusta-Snap

For Holsters for Supporting Smoking Pipes From Belts.
First use July 30, 1962.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 152,205. Colt's Patent Fire Arms Manufacturing Company, Inc., Hartford, Conn. Filed Aug. 30, 1962.



THE PEACEMAKER

Owner of Reg. Nos. 52,903, 436,574, and others.
For Revolvers.
First use Aug. 1, 1962; as early as the 1870's as to "Peacemaker."

SN 152,743. Amex, Inc., Coeur d'Alene, Idaho. Filed Sept. 10, 1962.

AMEX

For Blasting Agent Consisting of Ammonium Nitrate, Fuel Oil and Sea Coal, Known as Nitro Carbo Nitrate.
First use Apr. 20, 1962.

SN 160,154. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Jan. 4, 1963.

PRESTEX

For Explosives.
First use Nov. 28, 1962.

Class 12 — Construction Materials

SN 141,771. The Weather-Proof Company, Litchfield, Ill. Filed Apr. 6, 1962.

DUO-DOR

For Aluminum Combination Storm-Screen Doors.
First use August 1953.

SN 141,851. Lake Chemical Co., Chicago, Ill. Filed Apr. 9, 1962.

PIPETITE-STIK

Owner of Reg. No. 422,039.
For Caulking and Pipe Joint Compound for Sealing Cracks and Pipe Threads, for Preventing Leakage and Rusting.
First use on or about Oct. 1, 1944.

SN 144,555. W. R. Grace & Co., New York, N.Y. assignee of Sun Chemical Corporation, New York, N.Y. Filed May 14, 1962.

HORNSEAL

Owner of Reg. Nos. 337,916, 743,671, and others.
For Rubber-Based Compounds for Sealing Joints and the Like.
First use Apr. 18, 1962.

SN 145,932. Erico Products, Inc., Cleveland, Ohio. Filed June 1, 1962.

CADDY

Owner of Reg. No. 550,853.
For Fasteners for Industrial Purposes, Particularly for Use in the Construction Industry—Namely, Channel Brackets, Bridle Rings, Conduit Clips, Hanger Clips, and Low Voltage Clips.
First use May 3, 1962.

SN 148,784. Arketex Ceramic Corporation, Brazil, Ind. Filed July 11, 1962.

ARKETOTE

Owner of Reg. No. 283,094.
For Structural Ceramic Tile.
First use June 6, 1962.

SN 149,452. John A. Denie's Sons Co., Inc., Memphis, Tenn. Filed July 20, 1962.

DENILITE

For Expanded Clay Light-Weight Aggregate.
First use Mar. 15, 1954.

SN 151,675. The E. F. Hauserman Company, Cleveland, Ohio. Filed Aug. 22, 1962.

CRITERION

For Acoustical Ceiling Tiles and Panels.
First use July 27, 1962.

SN 152,651. The Visador Company, Jasper, Tex. Filed Sept. 6, 1962.

Beauti Mould

The word "Mould" is disclaimed apart from the mark as shown.
For Decorative Wood Mouldings for Cabinets and Doors.
First use on or about Feb. 2, 1960.

SN 153,679. Pittsburgh Corning Corporation, Pittsburgh, Pa. Filed Sept. 21, 1962.

UNIBESTOS

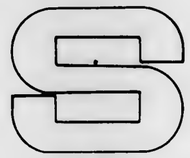
For Insulation.
First use July 16, 1962; Oct. 14, 1936, in another style.

SN 154,509. Pomona Tile Manufacturing Company, Los Angeles, Calif. Filed Oct. 4, 1962.

SIGNATURE TILE

Applicant disclaims the word "Tile" apart from the mark as shown.
For Ceramic Tile.
First use May 31, 1962.

SN 154,638. Sandell Manufacturing Company, Inc., Cambridge, Mass. Filed Oct. 5, 1962.



For Coated Metal and Coated Fabric Flashing.
First use about 1933.

SN 154,853. Patrick J. Ryan, Los Angeles, Calif. Filed Oct. 9, 1962.

MICHELANGELO

"Michelangelo" is the Christian name of the Italian artist, deceased 1564.
For Finished and Unfinished Stone Slabs, Including Marble and Granite.
First use May 21, 1962.

SN 155,277. Roseburg Lumber Co., Roseburg, Oreg. Filed Oct. 16, 1962.



Applicant disclaims the representation of the goods on the mark apart from the trademark as shown.
For Plywood.
First use July 15, 1962.

SN 155,526. Schacht Associates, Inc., New York, N.Y. Filed Oct. 19, 1962.

COMPAK

For Doors and Door Frames.
First use Mar. 26, 1962.

SN 158,158. Holland Plastics Co., Gilman, Iowa. Filed Nov. 29, 1962.

Thermco

The drawing is lined for shading purposes only.
For Rubber Foam Material of Sheet or Block Form for Thermal Insulation.
First use Oct. 2, 1961.

SN 159,019. Unistrut Corporation, Wayne, Mich. Filed Dec. 12, 1962.

TELESPAR

For Metallic Construction Members, Telescoping and Perforated Tubing, and Fittings and Connections Therefor. Adapted To Serve as Framing and Supporting Means for Temporary and Permanent Construction of Buildings and Other Structures—Namely, Ceiling, Wall and Roofing Panels, Racks, Scaffolding, Ladders, Rails, Shelving, Benches, Signs and Billboards, Awnings, Fences and the Like.
First use Sept. 20, 1962.

SN 159,747. Macmillan Ring-Free Oil Co., Inc., New York, N.Y. Filed Dec. 26, 1962.

TRI-CLAD

For Coating Material for Use in Sealing, Protecting and Beautifying Asphalt Black Top and Concrete Surfaces, Including Driveways, Parking Areas, and the Like.
First use Nov. 9, 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 121,377. Franklin Coffee Urn Corp., Buffalo, N.Y., assignee of Franklin Coffee Urn Co., Buffalo, N.Y. Filed June 5, 1961.



Owner of Reg. No. 734,037.
For Coffee Urns.
First use May 3, 1961.

SN 140,000. Conso Products, Inc., New York, N.Y., by change of name from Consolidated Trimming Corporation, New York, N.Y. Filed Mar. 16, 1962.

TIME SAVER

Owner of Reg. No. 661,418.
For Zippers and Drapery Weights.
First use November 1954.

SN 143,269. Research Engineering & Manufacturing, Inc., New Bedford, Mass. Filed Apr. 27, 1962.



For Screws, Particularly of the Self-Tapping Type.
First use Aug. 17, 1961.

SN 143,491. August Winkhaus, Telgte, Westphalia, Germany. Filed Apr. 30, 1962.

WINKHAUS-SWING-O-TILT

Priority claimed under Sec. 44(d) on German application filed Nov. 24, 1961; Reg. No. 758,238, dated Feb. 13, 1962.
For Building Hardware.

SN 144,029. Varian Associates, Palo Alto, Calif. Filed May 7, 1962.

CONFLAT

For Metallic Vacuum Sealing Flanges.
First use Apr. 26, 1962.

SN 144,464. Crane Co., Chicago, Ill. Filed May 14, 1962.

MONARCH

For Butterfly Valves.
First use Apr. 12, 1962.

SN 145,226. T. D. Williamson, Inc., Tulsa, Okla. Filed May 22, 1962.

SHORTCUTT

For Low Pressure Valves.
First use at least as early as Apr. 19, 1962.

SN 148,976. Jaybee Manufacturing Corporation, Los Angeles, Calif. Filed July 13, 1962.

JAYBEE

For Builders' Finish Hardware—Namely, Catches, Hinges, Pulls, Knobs, Back Plates, Push Plates, Towel Bars, Towel Rings, Door Stops, Latch Sets, Door Knobs, Rosettes, Sash Locks, Sash Lifts, Strikes, Screen Hangers, Coat and Hat Hooks, Brackets for Shelves and Rails, House Numbers, Door Grills and Knockers, Chain Latches, Thresholds, Pole Sockets, Hooks.
First use July 1, 1947.

SN 149,293. Jaybee Manufacturing Corporation, Los Angeles, Calif. Filed July 18, 1962.

JB

For Builders' Finish Hardware—Namely, Catches, Hinges, Pulls, Knobs, Back Plates, Push Plates, Towel Bars, Towel Rings, Door Stops, Latch Sets, Door Knobs, Rosettes, Sash Locks, Sash Lifts, Strikes, Screen Hangers, Coat and Hat Hooks, Brackets for Shelves and Rails, House Numbers, Door Grills and Knockers, Chain Latches, Thresholds, Pole Sockets, Hooks.
First use July 1, 1947.

SN 149,761. The New York Air Brake Company, New York, N.Y. Filed July 25, 1962.

THINSERT

For Butterfly Valves.
First use May 21, 1962.

SN 152,925. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Sept. 11, 1962.



The drawing is lined for gold. Owner of Reg. No. 688,995.
For Keyring With Attached Pieces and Silent Butlers (Table and Purse).
First use Sept. 30, 1959, on keyring with attached pieces.

SN 153,053. American Drill Bushing Co., Los Angeles, Calif. Filed Sept. 13, 1962.

AMER A CLAMP

For Tooling Components—Namely, Toggle Clamps.
First use Mar. 1, 1962.

SN 153,153. Campbell Foundry Company, Harrison, N.J. Filed Sept. 14, 1962.

CAMPBELL

Owner of Reg. Nos. 571,590 and 705,815.
For Culverts, Drains and Traps, Posts, Grills, Pipes, Fittings Made of Ferrous Metals and Castings.
First use Mar. 1, 1921.

SN 154,102. Fairfield Engineering and Manufacturing Company, Fairfield, Iowa. Filed Sept. 28, 1962.

PLA-GARD

For Livestock Waterer for Connection to a Water Supply.
First use Sept. 4, 1962.

SN 154,427. Neely Manufacturing Co., Inc., Corydon, Iowa. Filed Oct. 3, 1962.



For Screen Patches.
First use June 3, 1940.

SN 154,450. Suntemp Industries, Inc., Blenheim, N.J. Filed Oct. 3, 1962.

SUNFLEX

For Flexible Metal Lined Connectors for Use in Home and Industrial Heating Systems.
First use Sept. 1, 1962.

SN 154,476. Continental Coffee Company, Chicago, Ill. Filed Oct. 4, 1962.

URN-O-MATIC

For Coffeemaking Apparatus.
First use in or about April 1945.

SN 154,522. Societe Anonyme Acieries Reunies de Burbach-Eich-Dudelange Arbed Division: Clouterie & Trefilerie des Flandres, Gentbrugge-Ghent, Belgium. Filed Oct. 4, 1962.

LASSO

Owner of Belgian Reg. No. 4,872, dated Jan. 17, 1962.
For Barbed Wire and Artificial Bramble of Metallic or Non-Metallic Wire, Sheathed or Non-Sheathed.

SN 154,795. Lamar Manufacturing Corp., New York, N.Y. Filed Sept. 25, 1962.



For Zippers and Other Fasteners.
First use February 1939.

SN 154,939. Stephen A. Young Corporation, Flora, Ind. Filed Oct. 10, 1962.

TELE-STYLE

For Plumbing Fixtures—Namely, Tub Fillers Including Valve Body Units, Diverter Bath and Shower Valves, Shower Valves, Plain Shower Valves; and Parts Therefor—Namely, Handles, Flanges, Stems, Bonnets, Renewable Seats, Nipples, Slip Nuts, Escutcheons.
First use in or about March 1956.

SN 155,164. Manhattan Marine & Electric Co. Inc., New York, N.Y. Filed Oct. 15, 1962.



For Marine Hardware Such as Fog Bells, Door Hinges, Folding Steps, Cleats, and Fishing Rod Gimbals.
First use Jan. 3, 1961, on fog bells.

SN 155,353. Speakman Company, Wilmington, Del. Filed Oct. 17, 1962.

AUTOFLO

Owner of Reg. No. 631,364.
For Sink and Lavatory Fittings and Individual Flow Control Units.
First use Apr. 15, 1959.

SN 155,359. Acme Appliance Manufacturing Co., Monrovia, Calif. Filed Oct. 18, 1962.

ACME

Owner of Reg. Nos. 590,728 and 675,422.
For Knockdown Sliding Door Assemblies Consisting of Sliding Door Hardware and Either Panel Frames for Sliding Doors or Pocket Door Frames.
First use February 1959.

SN 155,812. Larsen Products, Inc., Benton Harbor, Mich. Filed Oct. 24, 1962.



For Hose Couplings.
First use July 16, 1962.

SN 156,105. The Flexible Tubing Corporation, Guilford, Conn. Filed Oct. 29, 1962.

VISUFLEX

Owner of Reg. No. 617,076.
For Flexible Tubing.
First use Aug. 20, 1962.

Class 14 — Metals and Metal Castings and Forgings

SN 148,636. Mastro Jewelry Corp., New York, N.Y. Filed July 9, 1962.

m 14K

Applicant disclaims the term "14K," apart from the mark as shown.
For Precious Metals Such as Gold, Silver and Platinum and Other Metals and Metal Castings and Forgings.
First use June 29, 1962.

SN 156,480. Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. Filed Nov. 2, 1962.

RESICAL

Owner of German Reg. No. 759,382, dated Mar. 15, 1962.
For Metals and Metal Alloys in the Form of Blocks, Ingots, Bars, Rods, Sheets, and Wire.

SN 156,481. Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. Filed Nov. 2, 1962.

DILAVAR

Owner of German Reg. No. 758,546, dated Feb. 20, 1962.
For Metals and Metal Alloys in the Form of Blocks, Ingots, Bars, Rods, Sheets, and Wire.

SN 156,691. Universal-Cyclops Steel Corporation, Bridgeville, Pa. Filed Nov. 5, 1962.

HEDRITE

For Wire Provided With a Protective and Lubricating Coating.
First use Oct. 9, 1962.

SN 157,009. Reynolds Metals Company, Richmond, Va. Filed Nov. 9, 1962.

COM-PAK

For Aluminum Foil.
First use on or about Oct. 16, 1962.

SN 157,516. H. W. Knight & Son, Inc., Seneca Falls, N.Y. Filed Nov. 19, 1962.



For Metal Type.
First use on or about Oct. 16, 1962.

Class 15 — Oils and Greases

SN 144,015. Sun Oil Company, Philadelphia, Pa. Filed May 7, 1962.

H FUEL

Applicant disclaims the word "Fuel" apart from the mark as shown.
For Petroleum Oil for Cracking To Make Heating Gas.
First use Feb. 3, 1958.

SN 150,146. The American Oil Company, Chicago, Ill. Filed July 31, 1962.

L D O

For Lubricating Oils.
First use Nov. 30, 1954.

SN 157,210. Foundry Specialties Corp., Chicago, Ill. Filed Nov. 14, 1962.

SIL-JET

For Silicone Mold and Pattern Release Agents.
First use Apr. 16, 1962.

Class 17 — Tobacco Products

SN 147,233. Petri Cigar Company, Clarksville, Tenn., assignee, by mesne assignments, of Angelo Squillo, New Haven, Conn. Filed June 19, 1962.

S SQUILLO

For Cigars, Cigarettes and Pipe Tobacco.
First use January 1927 on cigars.

SN 154,100. Alfred Dunhill of London, Inc., New York, N.Y. Filed Sept. 28, 1962.

Flor de Felipe

For Cigars.
First use Sept. 13, 1962.

SN 154,802. Carreras Limited, Basildon, Essex, England. Filed Oct. 9, 1962.

CARRERAS

Owner of British Reg. No. 506,199, dated Sept. 18, 1929.
For Cigarettes.

SN 156,718. Edwin W. A. Cheng, d.b.a. Philippine Cigar Company, San Francisco, Calif. Filed Nov. 6, 1962.

Bela King

Applicant disclaims the word "King" apart from the mark shown without waiver of its common law rights thereto and for the purpose of this registration.
For Tobacco Products (Cigars).
First use Nov. 3, 1962.

Class 18 — Medicines and Pharmaceutical Preparations

SN 131,033. The Fielding Pharmaceutical Corporation, Webster Groves, Mo., assignee of George P. Georges, d.b.a. The Fielding Company, Webster Groves, Mo. Filed Oct. 31, 1961.

NESTREX

For Preparation for Treatment of Nausea and Vomiting in Pregnancy.
First use Sept. 26, 1961.

SN 134,518. Bristol-Myers Company, New York, N.Y. Filed Dec. 22, 1961.

PRE-SCRIPT

For Medicinal and Pharmaceutical Preparations, Which are Distributed to Physicians.
First use in or about July 1959.

SN 152,804. Lafayette Pharmacal, Inc., Lafayette, Ind. Filed Sept. 10, 1962.

INTROPAQUE

For Medicinal Preparation for Internal Administration for Use in X-Ray Diagnosis.
First use Oct. 7, 1957.

SN 154,832. Mitchell-Liptak Laboratories, Inc., Minneapolis, Minn. Filed Oct. 9, 1962.

BENTONAC

For Medicated Skin Lotion.
First use Aug. 27, 1962.

SN 154,887. Ciba Corporation, New York, N.Y. Filed Oct. 10, 1962.

DIANARIT-B

Owner of Reg. No. 687,473.
For Stimulant and Tonic for Improving Physical and Mental Well-Being.
First use Oct. 1, 1962.

SN 155,333. Palmedico, Inc., Columbia, S.C. Filed Oct. 17, 1962.

PALBAR

For Sedative.
First use Oct. 2, 1959.

SN 155,334. Palmedico, Inc., Columbia, S.C. Filed Oct. 17, 1962.

PALMIRON

For Iron Salt Preparation for the Treatment of Iron Deficiency Anemia.
First use Aug. 17, 1959.

SN 157,241. Parke, Davis & Company, Detroit, Mich. Filed Nov. 14, 1962.

SYBRON

For Hematinic Preparation.
First use on or before Oct. 10, 1962.

SN 157,290. Diamond Laboratories, Inc., Des Moines, Iowa. Filed Nov. 15, 1962.

CERTIGEN

For Modified Live Virus Hog Cholera Vaccine.
First use Sept. 18, 1961.

SN 157,292. Diamond Laboratories, Inc., Des Moines, Iowa. Filed Nov. 15, 1962.

RHINO-LEP

For Bivalent Preparation for the Treatment of Bovine Rhinotracheitis.
First use Jan. 8, 1960.

SN 158,097. The Purdue Frederick Company, New York, N.Y. Filed Nov. 28, 1962.

GERISEP

Owner of Reg. No. 645,045.
For Nutritive Supplement Containing Vitamins and Minerals.
First use Nov. 2, 1962.

SN 159,316. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Dec. 17, 1962.

ANADUR

Owner of Reg. No. 691,174.
For Sinus Headache Tablets.
First use Dec. 5, 1962.

SN 159,504. Eli Lilly & Company, Indianapolis, Ind.. Filed Dec. 20, 1962.

ANHYDRON K

No property right is claimed in the letter "K" apart from the mark as shown.
For Diuretic Agent.
First use Nov. 12, 1962.

SN 160,224. G. D. Searle & Co., Skokie, Ill. Filed Jan. 4, 1963.

OVULEN

For Pharmaceutical Preparations Containing Steroid Hormones.
First use Dec. 12, 1962.

SN 162,625. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Feb. 13, 1963.

ASCODEEN-30

For Analgesic Drug.
First use Jan. 22, 1963.

SN 162,626. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Feb. 13, 1963.

ASCODEEN-15

For Analgesic Drug.
First use Jan. 22, 1963.

SN 163,200. Holland-Rantos Company, Inc., New York, N.Y. Filed Feb. 20, 1963.

HR

Owner of Reg. Nos. 290,475, 618,114, and others.
For Medicinal and Pharmaceutical Preparations—Namely, Vaginal Jelly, Vaginal Cream, Vaginal Douche Preparations and Skin Ointment.
First use on or about July 17, 1959.

SN 164,454. McNeil Laboratories, Incorporated, Fort Washington Pa. Filed Mar. 12, 1963.

SUBLIMAZE

For Analgesic Preparations.
First use Jan. 18, 1963.

Class 19—Vehides

SN 157,314. Melody Home Manufacturing Company, Fort Worth, Tex. Filed Nov. 15, 1962.

Melody Home

The word "Home" is disclaimed apart from the mark as shown. The drawing is lined for red, blue and green.
For House Trailers and Camper Bodies for Mounting on Motorized Vehicles.
First use April 1954.

SN 162,796. Tech Weld Corporation, Burlington, Mass. Filed Feb. 14, 1963.

BIKINI

For Truck Tank Bodies.
First use during May 1961.

Class 20—Linoleum and Oiled Cloth

SN 143,976. Kentile, Inc., Brooklyn, N.Y. Filed May 7, 1962.

AGATE CHIP

For Vinyl Asbestos Floor and Wall Tile.
First use Apr. 10, 1962.

SN 158,138. Bird & Son, Inc., East Walpole, Mass. Filed Nov. 29, 1962.

PERMABEST

For Flexible Composition Materials—Namely, Floor, Wall, Counter Coverings, etc. in Sheet Form.
First use Sept. 27, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 129,735. Cadre Industries Corp., Endicott, N.Y. Filed Oct. 12, 1961.

CADRE

For Cable and Wiring Harness, Computer Panels, Cable Strippers and Radio Transmitters and Receivers, Including the Following Accessories: Rechargeable Batteries, Wave Trap, High Pass Filter, Crystals, Power Cords, Selective Call Encoders, Selective Call Decoders, Microphones, Antenna and R.F. Meters.
First use Sept. 7, 1950.

SN 135,142. Iwasaki Denki Kabushiki Kaisha, Chuo-ku, Tokyo, Japan. Filed Jan. 3, 1962.

EYE

EYE REST GREEN LAMP

Applicant disclaims the words "Green" and "Lamp" separately and apart from the mark as shown. Owner of Japanese Reg. No. 558,698, dated Oct. 22, 1960.
For Electric Bulbs.

SN 139,056. Electronic Specialties Company, Inc., Batavia, Ill. Filed Mar. 5, 1962.

TRANSISTO-POWER

For Electric Fence Controllers.
First use Jan. 6, 1962.

SN 143,230. Hardware Distributors, Inc., New York, N.Y. Filed Apr. 27, 1962.

STALWART

For Electric Drills, Jig Saws, Power Saws, Sanders, Buffers, Drill Kits, Spotlight Brackets, Sockets, Electric Wall Receptacles, Ceiling Lamp Holders, Electric Switches, Extension Cord Sets, Trouble Lights, Auto Spotlights, Fuses, Flashlights, Electric Bells, Transformers, Cable Boxes, Flashlight Batteries, Lamp Bulbs, Post Lanterns, and Magnets.
First use Apr. 7, 1962.

SN 146,211. Plastic Mold & Engineering Co., East Providence, R.I. Filed June 5, 1962.

DYMATIC

For Microphones and Ear Phones.
First use Apr. 1, 1962.

SN 146,282. F & M Scientific Corporation, Near Avondale, Pa. Filed June 6, 1962.

F & M

For Electronic Microsignal Amplifiers, Electrical Power Controllers, Electrical Signal Attenuators, D.C. Power Supplies, and Parts thereof.
First use Jan. 1, 1960, on electrical power controllers.

SN 146,332. United Co-Operatives, Inc., Alliance, Ohio. Filed June 6, 1962.

COMET

For Electric Fence Controllers.
First use on or about Dec. 29, 1961.

SN 149,973. Therm-O-Lab Corp., North Hollywood, Calif. Filed July 27, 1962.

SOHOT

For Electrical Heating Elements—Namely, an Element Which Creates Heat Through Conversion of Electrical Energy to Thermal Energy by an Electrical Current in an Electrical Resistance.
First use July 17, 1962.

SN 150,745. Audio Program Corporation, Trenton, N.J. Filed Aug. 8, 1962.

Uniceiver

For Miniature Radios Which Can Be Supported From a Wearer's Ear or Supported on a Stand.
First use July 2, 1962.

SN 151,383. A & W Root Beer Co., Santa Monica, Calif. Filed Aug. 17, 1962.

ROTO MOUNT

For Mechanical Signs—Namely, Large Advertising Sign Boards Vertically Mounted Upon a Rotating Support and Powered by an Electric Motor.
First use Oct. 22, 1958.

SN 154,558. CHD Pool Equipment, Inc., South El Monte, Calif. Filed Oct. 5, 1962.

CHD

For Swimming Pool Lighting Apparatus.
First use June 6, 1959.

SN 155,053. F & M Scientific Corporation, Near Avondale, Pa. Filed Oct. 12, 1962.

F & M

For Electronic Microsignal Amplifiers, Electrical Power Controlelrs, Electrical Signal Attenuators, D.C. Power Supplies and Parts Thereof.
First use Jan. 1, 1960, on electrical power controllers.

SN 155,163. Manhattan Marine & Electric Co., Inc., New York, N.Y. Filed Oct. 15, 1962.

SEATEST

For Marine Electrical Equipment—Namely, Switches, Dome Lights, Cabin Fixtures, Navigation Lights, and Windshield Wipers.
First use Jan. 16, 1962, on marine electrical switches.

SN 156,405. Graphite Metallizing Corporation, Yonkers, N.Y. Filed Nov. 1, 1962.

GRAPHMETEX

Owner of Reg. Nos. 265,826 and 592,959.
For Series of Electrical Insulators (Such as Are Used in Brushholders and Slip-Ring Assemblies) With Excellent Chemical Resistance and Dimensional Stability Over a Wide Range of Temperature.
First use Jan. 22, 1954.

SN 156,456. Applied Polytechnic Research Corporation Inc., Annapolis, Md. Filed Nov. 2, 1962.

APPLIED POLYTECHNIC RESEARCH CORPORATION

For Burglar Alarms and Video Amplifiers.
First use Mar. 1, 1962.

SN 157,296. Gem Electronic Distributors, Inc., Farmingdale, N.Y. Filed Nov. 15, 1962.

SHERBROOKE

For Radios.
First use at least as early as Sept. 1, 1962.

SN 160,289. Vitramon, Incorporated, Monroe, Conn. Filed Jan. 4, 1963.

Vitramon

Owner of Reg. No. 565,945.
For Electrical Switches, and Switching Devices Embodying Said Switches.
First use Dec. 5, 1962.

SN 160,731. Vitramon, Incorporated, Monroe, Conn. Filed Jan. 15, 1963.



For Capacitors.
First use Jan. 4, 1963.

SN 160,732. Vitramon, Incorporated, Monroe, Conn. Filed Jan. 15, 1963.



For Capacitors.
First use Jan. 4, 1963.

SN 160,733. Vitramon, Incorporated, Monroe, Conn. Filed Jan. 15, 1963.



For Capacitors.
First use Jan. 4, 1963.

SN 165,504. ETC Incorporated, Cleveland, Ohio. Filed Mar. 27, 1963.

ETC

For Electrical Wiring Devices and Components—Namely, Terminals, Connectors, Splicers, Wiring Harness Components, and Wiring Harness Assemblies.
First use about January 1956.
Subj. to Intf. with SN 136,354.

Class 22—Games, Toys, and Sporting Goods

SN 131,854. Mattel, Inc., Hawthorne, Calif. Filed Nov. 13, 1961.



The word "Jumping" is disclaimed apart from the mark as a whole.
For Apparatus Sold as a Unit for Playing a Type of Card Game.
First use Sept. 27, 1961.

SN 152,064. Ideal Toy Corporation, Hollis, N.Y. Filed Aug. 28, 1962.

GAYLORD

For Battery Operated Toy Dog.
First use May 17, 1962.

SN 155,141. Max Ernst, d.b.a. K. Arnold & Co., Nurnberg, Germany. Filed Oct. 15, 1962.



Priority claimed under Sec. 44(d) on German application filed Apr. 16, 1962; Reg. No. 763,258, dated July 11, 1962.
For Electric Toy Railroads and Accessories Therefor.

SN 156,097. Donald F. Duncan, Incorporated, Evanston, Ill. Filed Oct. 29, 1962.



For Spinning Tops.
First use Oct. 8, 1962.

SN 156,482. Dyer Products Company, Canton, Ohio. Filed Nov. 2, 1962.

pow-r wrister

For Wrist Supports for Bowlers.
First use Aug. 13, 1957.

SN 156,799. Collins & Aikman Corporation, New York, N.Y. Filed Nov. 7, 1962.

CALITE

For Swimming Pool Covers and Sea Nets.
First use Oct. 3, 1962.

SN 156,942. Colt Manufacturing Co., d.b.a. Flex-Rite Rod Co., Mendota, Calif. Filed Nov. 9, 1962.

MAGNO-LITE

For Fishing Rods.
First use Apr. 17, 1962.

SN 157,334. Ski-Pony Corporation, Malone, N.Y. Filed Nov. 15, 1962.

SKI-PONY

For Power-Driven Skis.
First use Sept. 1, 1961.

SN 157,346. World Toy House, Inc., St. Paul, Minn. Filed Nov. 15, 1962.

NURSERY LAND

For Toys for Infants.
First use Oct. 24, 1962.

SN 157,374. Ideal Toy Corporation, Hollis, N.Y. Filed Nov. 16, 1962.

TAMMY

For Accessories for a Toy Mannequin Doll, Including Clothing, Handbags, Jewelry, Shoes, Television Sets, Radios, and Sporting Equipment.
First use July 19, 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 135,385. Pratt & Whitney Company, Incorporated, West Hartford, Conn. Filed Jan. 8, 1962.

TAPE-O-MATIC

For Machine Tools, Such as Drilling Machines, Tape Controlled Drilling Machines and the Like.
First use Nov. 15, 1961.

SN 136,354. Electric Terminal Corporation, Providence, R.I. Filed Jan. 23, 1962.

ETCO

For Machines for Applying Electric Terminals to Wire.
First use February 1960.
Subj. to intf. with SN 165,503 and SN 165,504.

SN 140,942. Goldblatt Tool Company, Kansas City, Mo. Filed Mar. 28, 1962.

GOLDBLATT TROWEL TRADES TOOLS

For Trowels; Floats; Darbies; Screeds; Concrete Brooms; Edgers; Groovers; Tampers; Aggregate Brooms; Rollers; Corner Tools; Curb and Step and Gutter Tools; Rub Bricks; Concrete Chisels; Knee Pads; Paver's Straight Edges; Brushes; Bricklayer's Brushes; Raker-Jointers; Joint Rakers; Caulking Trowels; Sled Runners and Rods; Ceremonial Trowels; Lines; Bricklayer's Hammers; Hammer Handles; Line Stretchers; Corner Blocks; Line Blocks; Line Pins; Brick Mason's Rules and Tapes; Story Poles; Coursing Calculators; Brick, Stone and Tile Cutters; Hydraulic Splitters; Saw Blades; Rotary Saw Blades; Power Saws; Masonry Saws; Pointing, Margin and Gauging Trowels; Stone Molds; Wheelbarrows; Tuck-Pointer's Hawks; Stone Mason's Tools, Including Chisels; Points; Tooth Chisels; Pitching Tools; Mason's Hammers; Wedges; Brick Handlers or Tongs and Blocklifters; Plasterer's Angle Planes; Featheredges; Shingles; Slipsticks; Plasterer's Brushes, Plasterer's Paddles; Angle Plows; Corner Trowels; Angle Trowels; Nail Holders; Glitter; Drywall Mud Tools and Knives; Taping Tools; Mud Holders; Tape Creasers; Wallboard Footlifts; Wallboard Roll Lifters; Wallboard Carrier Lifters; Tool Pouches; Tool Bags; Nail Bags; Drywall Hammers; T-Squares; Drywall Banjos; Sanders; Corner Sanders; Hand Sanders; Sand Paper; Tool Handles.
First use Apr. 15, 1961, on trowels.

SN 142,780. Baker Perkins, Inc., Saginaw, Mich. Filed Apr. 23, 1962.



The mark consists of the letters "bp" in the form shown in the drawing, and design. Owner of Reg. No. 404,206.
For Pneumatic Conveying Systems and Parts Thereof—Namely, Bins, Blenders, Bulk Rail Car Unloaders, Rotary Feeders, Scale Hoppers, Sifters, and Universal Diversion Rotary Valves; Dough Handling Machines and Parts Thereof—Namely, Dividers, Mixers, Moulders, Panners, Proofers, Reservoirs, Roll Machinery, Rounders, Sheeters, Trough Hoists, Twisters, and Developers; Bread Handling Machinery and Parts Thereof—Namely, Coolers, and Depanners; Biscuit Machinery and Parts Thereof—Namely, Cake Depositors, Coolers, Cutting Machines, Depositors, Formers, Fruit Cleaners, Sheeters, and Wafer Machines; and Chemical Processing Machinery and Parts Thereof—Namely, Blenders, Centrifugal Machines, Chicle Washers, Dispersion Machines, Extruders, Foundry Machinery, Jelutong Washers, Kneaders, Masticators, Mixers, Pelletizers, Precipitators, Rubber Washers, and Shredders.
First use Apr. 19, 1961.

SN 143,008. Carson-Newton Corporation, Belleville, N.J. Filed Apr. 25, 1962.



For Files, Rasps, Reamers, Rifflers, Hole Saws, Hack Saws and Blades, Band Saw Blades and Butcher Steels.
First use Jan. 1, 1926.

SN 143,301. W. J. Volt Rubber Corp., Los Angeles, Calif. Filed Apr. 27, 1962.



For Machine for Winding an Elastomeric Tread on Pneumatic Tire Casings.
First use March 1961.

SN 144,526. Oliver Corporation, Chicago, Ill. Filed May 14, 1962.



The mark is lined for the color orange. Owner of Reg. Nos. 290,083, 570,199 and others.
For Plows of Various Types, Harrows, Discers, Pulverizers, Stalk Cutters, Hoes, Weeders, Listers and Middlebusters, Cultivators of Various Types, Side Delivery Rakes, Vine Tuners, Potato Diggers, Planters of Various Types, Rotary Hoe Attachments for Tractor-Mounted Cultivators, Planting Attachments for Tractor-Mounted Cultivators, Weeder Attachments for Tractor-Mounted Cultivators, Fertilizer and Side Dressing Attachments for Tractor-Mounted Cultivators, Wheel Track Eradicators, Drills of Various Types, Seeder Attachments, Manure Spreaders, Lime and Fertilizer Sowers and Spreaders, Beet Lifters, Cotton Harvesters, Forage Harvesters, Forage Choppers and Blowers, Industrial and Agricultural Crawler Tractors, Motor Grader Transmissions, General Purpose Wheel-Type Tractors, Agricultural-Type Wheel Tractors, Orchard-Type Wheel Tractors, Industrial-Type Wheel Tractors, Fork Lift Tractors, Pull-Type and Self-Propelled Combine Harvesters, Row Crop and Corn Combine Headers, Pull-Type and Tractor-Mounted Corn Picker Huskers, Pull-Type Corn Picker Snappers, Pull-Type and Self-Propelled Windrowers and Swathers, Pull-Type and

Tractor-Mounted Corn Picker-Shellers, Balers and Bale Throwers, Pull-Type and Mounted Mowers, Hay and Crop Loaders, Bulldozers, Angle Dozers, Hydraulic Lifts for Tractor-Drawn and Tractor-Mounted Implements, Gasoline and Diesel Engine Power Units and Parts Thereof, Farm and Industrial Tractor Loaders, Hay Conditioners, Crop Driers, Soil Testers, Farm Wagons and Boxes, Forage Boxes, Tool Bars and Carriers, and Utility Carriers.
First use June 18, 1960, on tractors.

SN 145,226. T. D. Williamson, Inc., Tulsa, Okla. Filed May 22, 1962.

SHORTCUTT

For Drilling Machines Having a Fluid-Tight Housing Around the Cutting Mechanism to Especially Adapt Them to Cut Into Conduits, Such as Pipelines, Under Pressure.
First use as least as early as Apr. 19, 1962.

SN 146,383. Hughes Tool Company, Houston, Tex. Filed June 7, 1962.

HUGHES

Owner of Reg. Nos. 599,602, 698,951, and 730,378.
For Earth Penetrating Tools Including Drill Bits, Core Bits, Reamers, Shaft Cutters and Tunnel Cutters; Drill String Members Including Tool Joints and Parts and Accessories Therefor.
First use Feb. 3, 1915.

SN 149,146. Waukee Engineering Company, Inc., Milwaukee, Wis. Filed July 16, 1962.

A PACKAGE OF PRECISION FROM Waukee

For Gas Compressor.
First use May 25, 1962.

SN 149,468. Jacobsen Manufacturing Company, Racine, Wis. Filed July 20, 1962.

JACOBSEN

Owner of Reg. No. 550,855.
For Lawn Mowers, Power Mowers, Gang Mowers, Tractors, Grass Catchers, Gasoline Engines, Lawn Edgers and Trimmers, Turf Aerators, Rotary Tillers, Sulkies Including Riding Mowers and Riding Trailers Therefor, Snow Throwers, Leaf Mulchers, and Accessories and Parts for All of the Foregoing.
First use at least as early as January 1929.

SN 149,904. S. L. Allen & Co., Inc., Philadelphia, Pa. Filed July 27, 1962.

BIG 20

The numeral "20" is disclaimed apart from the mark as shown.
For Fertilizer Spreaders.
First use Mar. 28, 1962.

SN 149,938. Ledeen Inc., El Monte, Calif. Filed July 27, 1962.

DYNAPROP

For Hydropneumatic Roof Supports for Use in Mines.
First use Feb. 26, 1962.

SN 150,047. General Plastics, Inc., Auburn, Maine. Filed July 30, 1962.

MOT'R-SAV'R

For Reservoir for Feed Oil.
First use Feb. 6, 1962.

SN 150,844. Big Three Welding Equipment Co., Scotch Plains, N.J. Filed Aug. 9, 1962.

Ransome

For Welding Machinery Such as Machines for Holding Work During Welding and Welding Head Manipulators.
First use February 1937.

SN 151,055. Hummel Technical Products, Inc., New York, N.Y. Filed Aug. 13, 1962.



For Pumps, Hydraulic Motors, Valves, and Pipe and Tube Fittings Therefor.
First use June 1953.

SN 152,981. Constantflo Machinery Company, Tooele, Utah. Filed Sept. 12, 1962.

CONSTANTFLO

For Machine for Manufacturing Extruded Blocks.
First use Sept. 1, 1961.

SN 154,405. Diehl Machines, Inc., Wabash, Ind. Filed Oct. 3, 1962.

D

For Woodworking Machinery Including Straightline Ripsaws, Tapless Veneer Splicers, Veneer Jointers, Automatic Turning Lathes, Gang Ripsaws and Moulders.
First use Aug. 27, 1962.

SN 154,419. E. D. Jones Corporation, Pittsfield, Mass. Filed Oct. 3, 1962.

RTB

For Refiner Bars for Use in Pulp Machinery.
First use Mar. 23, 1962.

SN 154,451. William L. Tenney, d.b.a. London Fog Company, Crystal Bay, Minn. Filed Oct. 3, 1962.

PORTA FOG

For Insecticide Fogging Apparatus.
First use Sept. 10, 1962.

SN 154,500. Millars' Machinery Company Limited, Bishop's Stortford, and London, England. Filed Oct. 4, 1962.

MILLARVAC

Owner of British Reg. No. B827,444, dated Nov. 14, 1961.
For Presses and Machinery, All Being Vacuum Operated and All for Use in Making Slabs of Concrete and of Other Materials; and Parts and Fittings for These Goods.

SN 154,596. Edward F. Frume, d.b.a. E.F.F. Engineering Company, Western Springs, Ill. Filed Oct. 5, 1962.

PRES-TUCK

For Tuckpointing Apparatus and Its Parts or Components.
First use Aug. 5, 1960.

SN 154,663. Victory Vending Corporation, Chicago, Ill. Filed Sept. 18, 1962.

GUMTY-DUMPTY

For Merchandise Vending Machines.
First use Sept. 5, 1962.

SN 154,681. Baker Perkins Inc., Saginaw, Mich. Filed Oct. 8, 1962.

DEPAN-O-VAC

For Farinaceous Product Handling Machinery—Namely, Depanners.
First use Sept. 22, 1961.

SN 154,747. The Nash Engineering Company, South Norwalk, Conn. Filed Oct. 8, 1962.

CENTRIVAC

For Pumps for Supplying Fuel to Internal Combustion Systems.
First use June 4, 1948.

SN 154,886. Coppus Engineering Corporation, Worcester, Mass. Filed Oct. 10, 1962.

JECTAIR

For Portable Units Providing Jets of Compressed Air or Steam for the Entrainment and Movement of Air and Other Gases.
First use on or about Apr. 5, 1962.

SN 154,891. The Egan Machine Corp., Terryville, Conn. Filed Oct. 10, 1962.

EGAN MACHINE E CORP.

For Threaders, Grinders, Lathes, Millers, Drill Presses and Deburring Machinery.
First use Feb. 14, 1961.

SN 154,919. Onsrud Machine Works, Inc., Niles, Ill. Filed Oct. 10, 1962.

METRO GNOME

For Routing and Shaping Machine Tools.
First use Sept. 12, 1962.

SN 154,954. Clinton Engines Corporation, Maquoketa, Iowa. Filed Oct. 11, 1962.

CLINTON

Owner of Reg. Nos. 641,701 and 642,567.
For Internal Combustion Engines, Outboard Motors, Chain Saws, and Parts Thereof.
First use at least as early as 1946.

SN 154,962. Dowty Corporation, Arlington, Va. Filed Oct. 11, 1962.

DOWTY

For Hydraulic Pumps.
First use June 1, 1956.

SN 155,029. The Union Fork and Hoe Company, Columbus, Ohio. Filed Oct. 11, 1962.

ASTRO-LITE

For Hand-Operated Lawn and Garden Tools—Namely, Shovels, Rakes, Forks, Hoes, Grass Hooks and Cultivators.
First use Sept. 27, 1962.

SN 155,415. Hospital Specialty Company, Cleveland, Ohio. Filed Oct. 18, 1962.

GARDS

Owner of Reg. No. 406,395.
For Vending Machines.
First use January 1944.

SN 155,559. Black, Sivalls & Bryson, Inc., Kansas City, Mo. Filed Oct. 22, 1962.

BS&B

For Lawn Mowers.
First use Sept. 20, 1962.

SN 155,560. Black, Sivalls & Bryson, Inc., Kansas City, Mo. Filed Oct. 22, 1962.

LAWN-PRO

For Lawn Mowers.
First use Sept. 20, 1962.

SN 155,561. Black, Sivalls & Bryson, Inc., Kansas City, Mo. Filed Oct. 22, 1962.

MOW-N-KLEEN

For Lawn Mowers.
First use Sept. 21, 1962.

SN 155,588. Eugene G. Danner Manufacturing, Inc., Brooklyn, N.Y. Filed Oct. 22, 1962.

AIRMASTER

For Air Pumps for Aquariums.
First use during 1953.

SN 156,193. The Union Fork and Hoe Company, Columbus, Ohio. Filed Oct. 29, 1962.

UNION

Owner of Reg. No. 341,556.
For Hand-Operated Lawn and Garden Tools—Namely, Cultivators, Vegetation Cutters, Tool Handles, Lawn and Turf Edgers, Forks, Hoes, Rakes, Lawn Brooms, Pokers, Shovels, Spades, Scoops, Scrapers, Sod Lifters, Trowels, Weeders, Grass Whips and Hooks.
First use Oct. 12, 1962.

SN 156,329. R.P.B. Corporation, Los Angeles, Calif. Filed Oct. 31, 1962.



For Pavement Breaking Machinery.
First use May 1961.

SN 157,455. Caloric Corporation, Topton, Pa. Filed Nov. 19, 1962.

CALORIC

Owner of Reg. No. 406,669.
For Sheet Material Dispenser.
First use on or about Nov. 13, 1962.

SN 163,766. Rich-Con Incorporated, El Segundo, Calif. Filed Mar. 1, 1963.

KONNIE

For Saws, Saw Blades, and Protective Sheaths for Said Blades.
First use Feb. 25, 1963.

SN 165,503. ETC Incorporated, Cleveland, Ohio. Filed Mar. 27, 1963.

ETC

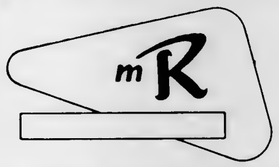
For Tools for Attaching Electrical Terminals, Connectors, and Splicers to Electrical Conductors, and Dies and Other Parts for Such Tools.
First use about February 1961.
Subj. to Intf. with SN 136,354.

SN 165,644. Utica Cutlery Company, Utica, N.Y. Filed Mar. 28, 1963.

CAMEO STAR

For Stainless Steel Tableware.
First use Mar. 20, 1963.

SN 166,317. Milton Roy Company, Philadelphia, Pa. Filed Apr. 8, 1963.



For Controlled Volume Pumps, Combination Pressure and Vacuum Pumps, Back Pressure Valves and Pressure Relief Valves.
First use Oct. 1, 1962.

Class 26—Measuring and Scientific Appliances

SN 125,982. Associated Products & Service Co., Inc., Long Branch, N.J. Filed Aug. 11, 1961.

Labpower

For Science Teaching Equipment—Namely, Variable Voltage Systems, Test Panels, Rectifiers, Load Banks, Electronic Supply and Distribution Centers, Experimental Rotating Machines, Cross-Bar-Grids, Transformer Demonstration Groups, and Cable Pressure Alarms.
First use March 1955.

SN 133,910. Tech Serv, Inc., College Park, Md. Filed Dec. 12, 1961.

BRS electronics

The word "Electronics" is disclaimed apart from the mark as shown.
For Human Behavior Research and Test Equipment.
First use Sept. 29, 1961.

SN 135,080. Adox Fotowerke Dr. C. Schleussner G.m.b.H., Frankfurt Am Main, Germany. Filed Jan. 3, 1962.

POLO

Owner of German Reg. No. 739,375, dated Aug. 18, 1960.
For Cameras and Parts Thereof.

SN 139,048. Dorsett Electronics, Inc., Norman, Okla. Filed Mar. 5, 1962.



For Electrically Operated Teaching Aids, Telemetry Equipment, Computers, and Distance Measuring Equipment.
First use Mar. 1, 1960.

SN 150,342. Lee Hunter, d.b.a. Hunter Engineering Company, St. Louis, Mo. Filed Aug. 2, 1962.



For Vehicle Wheel Alignment Indicator Apparatus.
First use Mar. 26, 1962.

SN 150,947. Hy-Cal Engineering, Santa Fe Springs, Calif. Filed Aug. 10, 1962.

HY-CAL

For Electrical Instruments, Systems, and Components—Namely, Thermal Transducers, Calorimeters, Radiometers, Resistance Temperature Sensors, Temperature Controllers, Thermal Instrumentation Systems, and Test Structures Connected Therewith.
First use on or about Jan. 2, 1957.

SN 152,698. Hy-Cal Engineering, Santa Fe Springs, Calif. Filed Sept. 7, 1962.

ASYMPTOTIC

For Electrical Instruments, Systems, and Components—Namely, Thermal Transducers, Calorimeters, Radiometers, Resistance Temperature Sensors, Temperature Controllers, Thermal Instrumentation Systems, and Test Structures Connected Therewith.
First use on or about May 6, 1961.

SN 152,809. MPO Videotronics, Inc., New York, N.Y. Filed Sept. 10, 1962.

VIDEOTRONIC 8

The numeral "8" is disclaimed apart from the mark as shown.
For Motion Picture Projectors and Film Magazines Therefor.
First use Dec. 26, 1961.

SN 153,039. William R. Weaver, d.b.a. W. R. Weaver, Co., El Paso, Tex. Filed Sept. 12, 1962.

WEAVER

For Firearm Telescope Sight Mounts.
First use Nov. 15, 1933.

SN 153,915. Sprague Electric Company, North Adams, Mass., assignee of Vectrol Engineering, Inc., Stamford, Conn. Filed Sept. 25, 1962.

PHASETROL

For Electrical Equipment for Controlling the Flow or Phase Relationship of Electric Power.
First use Aug. 9, 1962.

SN 155,054. F & M Scientific Corporation, Near Avondale, Pa. Filed Oct. 12, 1962.

F & M

For Analytical Instruments and Accessories—Namely, Gas Chromatographs, Sampling Devices for Gas Chromatographs, Gas Chromatograph Columns, Septums and Detectors for Gas Chromatographs, Equipment for Analytical Combustion, Temperature Controllers, and Parts Thereof.
First use May 1959, on gas chromatographs.

SN 155,278. Sawyer's Inc., Portland, Oreg. Filed Oct. 16, 1962.

MIRASCREEN

For Photographic Projection Apparatus—Namely, Projector Screens and Projectors.
First use July 26, 1962.

SN 155,581. Collins Radio Company, Cedar Rapids, Iowa. Filed Oct. 22, 1962.

COLLINS

Owner of Reg. Nos. 356,544, 738,181, and others.
For Navigation Equipment—Namely, Radio Transmitters and Receivers, Distance Measuring Systems, Terminal Visual Omni-Range Systems, Visual Omni-Range Systems, Radio Approach Systems, and Card Reader Navigational Computers; Flight Control Systems—Namely, Autopilots, Approach Horizon Instruments, Course Indicator Instruments, Altitude Controls, Throttle Controls and Pitch Controls.
First use July 10, 1961; Mar. 15, 1932, as to "Collins."

SN 155,784. H. D. and E. H. Croft Co., Minneapolis, Minn. Filed Oct. 24, 1962.

CLEAR CORDER

For Manually Adjusted Device Serving as a Pilot Reminder of Pertinent Flight Information During a Flight.
First use Sept. 14, 1962.

SN 155,926. Kontes Glass Company, Vineland, N.J. Filed Oct. 25, 1962.

KEM-KIT

For Laboratory Glassware, Equipment and Accessories.
First use Sept. 20, 1962.

SN 155,975. Douglas Aircraft Company, Inc., Santa Monica, Calif. Filed Oct. 26, 1962.

AUDIO-PAC

For Electronic Voice Amplification Unit for Protective Breathing Equipment.
First use Sept. 11, 1962.

SN 156,117. Ilford, Limited, Ilford, Essex, England. Filed Oct. 29, 1962.

ILFOCHROME

Owner of British Reg. No. 823,232, dated July 20, 1961; and U.S. Reg. Nos. 116,139 and 745,799.
For Photographic Dry Plates, Photographic Films, and Photographic Paper, All Being Sensitized.

SN 156,164. The Frederick Post Co., Chicago, Ill. Filed Oct. 29, 1962.

VERSATRIG

Owner of Reg. No. 573,704.
For Slide Rules.
First use Oct. 5, 1962.

SN 156,188. Textron Inc., Rochester, N.Y. Filed Oct. 29, 1962.

GREENTEX

For Tinted Lenses for Spectacles.
First use March 1952.

SN 156,189. Textron Inc., Rochester, N.Y. Filed Oct. 29, 1962.

NEUTREX

For Tinted Lenses for Spectacles.
First use January 1959.

SN 156,229. Intercontinental Instruments, Incorporated, Farmingdale, N.Y. Filed Oct. 30, 1962.



For Pulse Generators, Spectrum Analyzers, Wave Generators, and Pulsers.
First use Aug. 21, 1962.

SN 156,256. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 31, 1962.

ISOLAR

Owner of German Reg. No. 359,148, dated Nov. 9, 1926; and U.S. Reg. No. 655,791.
For Photographic Cameras, Instruments and Apparatus.

SN 156,456. Applied Polytechnic Research Corporation Inc., Annapolis, Md. Filed Nov. 2, 1962.

APPLIED POLYTECHNIC RESEARCH CORPORATION



For Radiation Detectors, Square Wave Converter Attachments for Oscilloscopes, Depth Indicators, Auto-Navigators, Sailing Course Computers, and Sonar Devices.
First use Mar. 1, 1962.

SN 156,961. Eastman Kodak Company, Rochester, N.Y. Filed Nov. 9, 1962.

TRANSMISSION

For Sensitized Photographic Film.
First use in June 1936.

SN 157,275. Airmatic Valve, Inc., Cleveland, Ohio. Filed Nov. 15, 1962.

AIRMATIC MEASURE-MATIC

Owner of Reg. No. 562,954.
For Pumps—Namely, Positive Displacement Pumps for Metering, Injecting, Sampling, Feeding, Mixing, and Lubricating Applications.
First use in September 1961.

SN 160,499. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Jan. 10, 1963.

STYLE HOUSE

Owner of Reg. No. 443,332.
For Bathroom Scales.
First use Jan. 15, 1962.

Class 27 — Horological Instruments

SN 147,361. Federated Department Stores, Inc., Brooklyn, N.Y. Filed June 21, 1962.

A&S

For Watches.
First use May 1, 1962, on watches.

SN 155,604. General Time Corporation, New York, N.Y. Filed Oct. 22, 1962.

NITE-VUE

For Clocks.
First use Oct. 5, 1962.

Class 28 — Jewelry and Precious-Metal Ware

SN 144,133. Block Ring Corporation, Buffalo, N.Y. Filed May 9, 1962.

TEN

The mark is a stylized form of the letters "TEN."
For Finger Rings and Other Jewelry for Personal Wear.
First use Jan. 2, 1910.

SN 144,212. Wilbar Ring Manufacturing Co. Inc., Buffalo, N.Y. Filed May 9, 1962.



The mark is a stylized form of the letter "W" with a horizontal line drawn through it.
For Finger Rings and Other Jewelry for Personal Wear.
First use Jan. 2, 1962.

SN 146,991. Louis Ferlon, Inc., New York, N.Y. Filed June 15, 1962.



For Jewelry for Personal Wear; Hollowware; Church Vessels and Ornaments, and Decorative Holders and Boxes, All Made of Precious Metal or Plated With Same.
First use June 1, 1962.

SN 147,361. Federated Department Stores, Inc., Brooklyn, N.Y. Filed June 21, 1962.

A&S

For Bracelets, Flatware and Tableware of Precious Metal.
First use May 1, 1962, on watches.

SN 147,863. Tarlton Silver Corporation, New York, N.Y. Filed June 27, 1962.

STC

For Ashtrays, Coasters and Trivets Made of Gold or Silver or Their Alloys.
First use May 25, 1962.

SN 148,029. Alfred H. Glasser Corp., New York, N.Y. Filed June 29, 1962.



The representation of the jewel by itself is disclaimed.
For Bracelets, Rings, Pins, Charms, Watches, and Tie Tacks, Made Wholly or in Part of Precious Metals.
First use in or before Summer of 1953.

SN 149,393. Jewelers Design, Inc., New York, N.Y. Filed July 19, 1962.



Applicant disclaims the terms "Jewelers" and "Design" as components of the mark.
For Jewelry Items, Consisting of Rings, Necklaces, Pins, Charms, Tie Pins, Cuff Links.
First use Aug. 15, 1961, for rings.

SN 152,221. Anni & Bent Knudsen, Kolding, Denmark. Filed Aug. 30, 1962.

BENT K

For Jewelry and Hollowware in Sterling Silver and Gold.
First use June 1, 1956; in commerce June 1, 1956.

SN 153,304. George Weston Mitchell Jr., d.b.a. Weston of Williamsburg, Williamsburg, Va. Filed Sept. 17, 1962.

VIRGINIA PINK DOGWOOD

For Items of Jewelry (Necklaces, Bracelet Earrings, Charms, Key Chains, Pins, Brooches, Tie-Tacks, Tie-Bars), Set With the Stone Unakite.
First use Jan. 27, 1960.

SN 156,522. Rogers, Lunt & Bowlen Company, d.b.a. Lunt Sterling, Greenfield, Mass. Filed Nov. 2, 1962.

RONDELAY

For Sterling Silver Flatware.
First use Sept. 28, 1962.

SN 157,094. Isi Fischzang, New York, N.Y. Filed Nov. 13, 1962.



For Jewelry, For Personal Wear, Including Rings, Charms, Bracelets and Earrings.
First use Nov. 5, 1962.

Class 29 — Brooms, Brushes, and Dusters

SN 156,664. Rubon, Incorporated, Independence, Mo. Filed Nov. 5, 1962.

KLASSIC

For Mops.
First use Aug. 24, 1962.

SN 157,038. All American Brush Mfg. Corp., New York, N.Y. Filed Nov. 13, 1962.

French-tease

For Hair Brushes.
First use July 20, 1962.

SN 157,483. Euco Corporation, Chicago, Ill. Filed Nov. 19, 1962.

U-ROL

For Paint Rollers and Paint Roller Covers.
First use Oct. 23, 1962.

SN 157,840. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed Nov. 23, 1962.

TIP TUFT

For Toothbrush.
First use Nov. 12, 1962.

Class 30 — Crockery, Earthenware, and Porcelain

SN 148,673. Terrace Ceramics, Inc., Zanesville, Ohio. Filed July 9, 1962.

SATIN-WARE

For Horticultural Artware—Namely, Window Box, African Violet Planter, Jardiniere, Urn Planter, Square Planter, Round Planter, Scroll Flower Bowl, Modern Flower Bowl, Leaf Flower Bowl, Rose Vase, Bouquet Vase, and Bud Vase, All of Said Articles Being in Satin-Matte High-Fired Semi-Porcelain Material.
First use June 1, 1962.

Class 31 — Filters and Refrigerators

SN 137,661. Royal Super Ice Company, Oakland, Calif. Filed Feb. 9, 1962.

ZERO-THERMOPAK

For Gel Product Packaged for Handling and for Repeated Freezing and Thawing for Use as a Refrigerant; and for Repeated Heating and Cooling for Use as a Warming Agent.
First use Nov. 2, 1961.

SN 140,794. Whirlpool Corporation, Benton Harbor, Mich. Filed Mar. 26, 1962.

CAROUSEL

For Refrigerators, Freezers and Parts Thereof.
First use Jan. 25, 1962.
Subj. to intf. with SN 141,632.

SN 141,362. Progressive Metal Equipment, Inc., Philadelphia, Pa. Filed Apr. 2, 1962.

CAROUSEL

For Water Coolers.
First use on or about Oct. 5, 1961.
Subj. to intf. with SN 140,794.

SN 145,409. Robbins & Myers, Inc., Springfield, Ohio. Filed May 24, 1962.

MISTROL

For Air Cleaning Units.
First use May 4, 1962.

SN 145,847. Peterson Filters & Engineering Company, Salt Lake City, Utah. Filed May 31, 1962.



For Filters.
First use on or about Feb. 12, 1960.

SN 150,611. Portable Appliances Incorporated, New York, N.Y. Filed Aug. 6, 1962.

GALLEY FRIDGE

For Refrigerators.
First use Jan. 1, 1962.

SN 153,816. Revco, Inc., Deerfield, Mich. Filed Sept. 24, 1962.

CHIL-PAK

For Detachable Refrigeration Unit.
First use July 31, 1962.

SN 154,029. Hydro Manufacturing Co., Inc., Reading, Pa. Filed Sept. 27, 1962.



For Water Filtering and Water Softening Equipment.
First use June 11, 1962.

SN 154,698. De Laval Turbine Pacific Company, Millbrae, Calif. Filed Oct. 8, 1962.

DIAUTOMATIC

For Filters.
First use Sept. 13, 1962.

SN 154,786. Walker Manufacturing Company, Racine, Wis. Filed Oct. 8, 1962.

WALKER

For Oil, Air and Fuel Filters and Parts Thereof Such as Cartridges, Installation Kits, Flexible Conduits, Gaskets and Insulating Looms for Filters.
First use in August 1948.

SN 155,073. Helsingborgs Fryshus Aktiebolag, Johanneshov, Sweden. Filed Oct. 12, 1962.

FLO-FREEZE

Owner of Swedish Reg. No. 103,451, dated July 27, 1962.
For Refrigerating and Freezing Apparatuses.

SN 155,437. Rockwell-Standard Corporation, Coraopolis, Pa. Filed Oct. 18, 1962.

AUTOMAZE

Owner of Reg. Nos. 255,632 and 523,092.
For Automatically Cleaned Filters for Gaseous Streams, Comprising an Endless Filter Curtain Moving in an Orbit Which Includes Passage Through a Cleaning Bath.
First use on or about Dec. 30, 1953.

SN 155,439. Carl Schleicher & Schuell Company, Inc., Keene, N.H. Filed Oct. 18, 1962.

BAC-T-KOTE

For Filter Paper.
First use in April 1962.

SN 155,565. E. F. Brewer Company, Butler, Wis. Filed Oct. 22, 1962.

CUBEMASTER

For Ice Making Machines.
First use on or about June 15, 1962.

Class 32 — Furniture and Upholstery

SN 116,143. Melrose Wire Products, Inc., Passaic, N.J. Filed Mar. 21, 1961.

MELROSE DISPLAYS

Applicant hereby disclaims the word "Displays" on the ground that such word may be descriptive.
For Display and Storage Units, Including Shelves, Racks and Stands for Displaying Merchandise.
First use Oct. 28, 1960.

SN 145,685. Fla. B & B Distributing Company, Hialeah, Fla. Filed May 29, 1962.

duCor

For Lounge Chairs.
First use Jan. 5, 1962.

SN 145,832. Kincaid Furniture Company, Inc., Hudson, N.C. Filed May 31, 1962.

HUDSON HOUSE

For Bedroom and Dining Room Furniture Sets.
First use June 30, 1958.

SN 147,369. Henredon Furniture Industries, Incorporated, Morganton, N.C. Filed June 21, 1962.

TOWN & COUNTRY

For Living Room, Dining Room, Bedroom, and Upholstered Furniture.
First use October 1961.

SN 153,222. Slick Industrial Company, Washington, D.C., assignee of The Slick Corporation, d.b.a. Illinois Shade Division of the Slick Corporation, Chicago Heights, Ill. Filed Sept. 14, 1962.

MIX OR MATCH

For Window Shades.
First use May 22, 1962.

SN 157,125. Roland D. McIntosh, Bath, Maine. Filed Nov. 13, 1962.

DISPATCHIT

For Carrier for Customer Cards, Operable To Indicate When Oil Deliveries Are Needed.
First use Sept. 6, 1962.

SN 157,349. The Balyeat Company, Mansfield, Ohio. Filed Nov. 16, 1962.

SYKO

For Mattresses.
First use Feb. 26, 1953.

SN 157,350. The Balyeat Company, Mansfield, Ohio. Filed Nov. 16, 1962.

SYKOETTE

For Mattresses.
First use May 1, 1955.

SN 157,460. Chairs & Tables, Inc., Bellwood, Ill. Filed Nov. 19, 1962.

Dura-Steel

For Furniture—Namely, Chairs and Tables.
First use Oct. 15, 1962.

SN 162,566. Manhasset Specialty Co., Inc., Yakima, Wash. Filed Feb. 12, 1963.

HUSKIES

For Multi-Purpose Steel Legs Used To Make Game Tables, Display or Banquet Tables, Saw Horses and Other Tables and Table-Like Support Structures.
First use Nov. 2, 1962.

SN 162,857. Oliver-Olsen Corporation, Van Nuys, Calif. Filed Feb. 15, 1963.

BEVERAGE CENTER

For Beverage Dispenser Cabinets.
First use Jan. 11, 1963.

SN 162,858. Oliver-Olsen Corporation, Van Nuys, Calif. Filed Feb. 15, 1963.

For Beverage Dispenser Cabinets.
First use Jan. 11, 1963.

SN 162,947. H.P.C. Inc., Chicago, Ill. Filed Feb. 18, 1963.

KEKAB

For Cabinets for Filing Keys.
First use in 1955.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 139,295. Hexacon Electric Company, Roselle Park, N.J. Filed Mar. 7, 1962.

HORNET

For Soldering Iron Sold Exclusively for Use in Connection With the Manufacture of Small Electronic Devices.
First use Jan. 31, 1962.

SN 142,781. Baker Perkins, Inc., Saginaw, Mich. Filed Apr. 23, 1962.

The mark consists of the letters "bp" in the form shown in the drawing and design. Owner of Reg. No. 405,272.
For Bake Ovens.
First use Apr. 19, 1961.

SN 147,576. Hazen Engineering Co., Pittsburgh, Pa. Filed June 25, 1962.

HAZEN Metallic RECUPERATORS

The wording "Metallic Recuperators" shown in the drawing is disclaimed. The drawing is lined for red.
For Metallic Recuperators.
First use May 17, 1962.

SN 148,119. Airline Welding and Manufacturing, Inc., Gardena, Calif. Filed July 2, 1962.

Airline

Applicant disclaims the words "Welding and Engineering."
For Welding Equipment Consisting of Welding Machines.
First use Feb. 15, 1952.

SN 149,935. Jackes-Evans Manufacturing Company, St. Louis, Mo. Filed July 27, 1962.

RIB-INFORCED CONSTRUCTION

The word "Construction" and the representation of the goods are disclaimed apart from the mark as shown. Owner of Reg. No. 737,900.
For Stove Pipe, Including Elbows, T-Joints, Reducers and Flue Thimbles; Space Heaters—Namely, Wood, Gas, and Coal Burning Types.
First use Feb. 23, 1962.

SN 150,758. Caloric Corporation, Topton, Pa. Filed Aug. 8, 1962.

CALORIC

Owner of Reg. No. 406,669.
For Kitchen Range Hoods.
First use on or about May 15, 1959.

SN 152,929. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Sept. 11, 1962.

GOLD TONE

The drawing is lined for gold.
For Candlesticks.
First use June 5, 1961.

SN 154,694. Loren Cook Company, Berea, Ohio. Filed Oct. 8, 1962.

CENTRI-Cook VANE

For Ventilators.
First use on or about Aug. 25, 1962.

SN 154,695. Loren Cook Company, Berea, Ohio. Filed Oct. 8, 1962.

SPUN-TIER

For Ventilators.
First use on or about Aug. 25, 1962.

SN 154,778. State Steel Industries, Inc., City of Industry, Calif. Filed Oct. 8, 1962.

FUN FOOD

For Barbecue Devices for Preparation of Food.
First use June 7, 1962.

SN 155,566. William S. Brigham, d.b.a. Brigham Gelatine Co., Randolph, Vt. Filed Oct. 22, 1962.

BRIGHAM GELATINE CO.

No claim is made to the word "Gelatine" apart from the mark shown.
For Gelatine Sheets Used for Theatrical Lighting.
First use in 1877.

SN 155,589. Eugene G. Danner Manufacturing, Inc., Brooklyn, N.Y. Filed Oct. 22, 1962.

HEETMASTER

For Heaters for Aquariums.
First use during 1956.

SN 155,609. The Henry Furnace Company, Medina, Ohio. Filed Oct. 22, 1962.

LANCER

For Forced Air Gas Fired Furnaces.
First use on or about May 16, 1962.

SN 155,633. The C. A. Olsen Manufacturing Company, Elyria, Ohio. Filed Oct. 22, 1962.

CARDINAL

For Forced Air Gas Fired Furnaces.
First use on or about Apr. 13, 1962.

SN 155,684. The Philip Carey Manufacturing Company, Cincinnati, Ohio. Filed Oct. 23, 1962.

COVERANGE

Owner of Reg. No. 707,922.
For Range Hoods.
First use Oct. 2, 1957.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 138,266. United States Rubber Company, New York, N.Y. Filed Feb. 19, 1962.

U. S. ROYALON

Owner of Reg. Nos. 45,674, 693,859, and others.
For Hose.
First use Jan. 16, 1962.

SN 140,209. Dayco Corporation, Dayton, Ohio. Filed Mar. 19, 1962.

SANI-DRAIN

For Fluid Conveying Hose.
First use Jan. 16, 1962.

SN 141,266. Dayco Corporation, Dayton, Ohio. Filed Apr. 2, 1962.

SANI-VENT

For Fluid Conveying Hose.
First use Mar. 19, 1962.

SN 142,285. Dayco Corporation, Dayton, Ohio. Filed Apr. 16, 1962.

SANI-FLEX

For Fluid Conveying Hose.
First use Mar. 19, 1962.

SN 147,161. United States Rubber Company, New York, N.Y. Filed June 18, 1962.

U. S. ROYALITE

Owner of Reg. No. 546,993.
For Fiber-Reinforced Elastomeric-Lined Hose.
First use June 26, 1961.

SN 155,440. Seiberling Rubber Company, Summit, Ohio. Filed Oct. 18, 1962.

CARBOBOND

Owner of Reg. Nos. 685,949 and 704,316.
For Treading Stock.
First use July 26, 1962.

SN 163,088. United States Pipe and Foundry Company, Birmingham, Ala. Filed Feb. 19, 1963.

USIFLEX

Owner of Reg. Nos. 290,920 and 696,636.
For Gaskets for Use in Pipe Joints.
First use on or about July 8, 1959.

Class 36 — Musical Instruments and Supplies

SN 144,042. Bell Records, Inc., New York, N.Y. Filed May 8, 1962.

HI-LIFE

For Phonograph Records.
First use Mar. 15, 1962.

SN 144,725. M. Hohner Inc., Hicksville, N.Y. Filed May 16, 1962.

HOHNER PIANET

Owner of Reg. Nos. 57,457, 686,297, and others.
For Musical Instrument Having a Keyboard and Electro-Mechanical Means for Producing Musical Tones in Response to Manipulation of the Respective Keys.
First use Apr. 6, 1962.

SN 155,279. Sawyer's Inc., Portland, Oreg. Filed Oct. 16, 1962.

ROLS

For Office Machines—Namely, Office Dictation Machines and Transcribing Machines.
First use July 20, 1962.

SN 157,296. Gem Electronic Distributors, Inc., Farmingdale, N.Y. Filed Nov. 15, 1962.

SHERBROOKE

For Phonographs, Tape Recorders, Public Address Sound Systems, and Parts and Accessories Therefor.
First use at least as early as Sept. 1, 1962.

SN 160,280. Carl Fischer Musical Instrument Co., Inc., New York, N.Y. Filed Jan. 7, 1963.



The drawing is lined for the color brown. Owner of Reg. Nos. 660,352 and 660,353.
For Reed and Brass Musical Instruments.
First use Sept. 21, 1962; about the year 1931 in a different display.

SN 160,594. Argo Record Company Limited, London, England. Filed Jan. 14, 1963.

ARGO

For Phonograph Records.
First use in or about 1951; in commerce on or about Aug. 11, 1953.

Class 37 — Paper and Stationery

SN 139,985. Armor Paper Products, Inc., Linden, N.J. Filed Mar. 16, 1962.

ARMOR

For Envelopes, Notepaper, Tablets, Pads, Typewriter Paper, Carbon Paper, Looseleaf Filler, Index Cards, Graph Paper, Tracing Paper and Drawing Paper.
First use Mar. 25, 1957.

SN 144,671. Richard Best Pencil Company, Inc., Springfield, N.J. Filed May 16, 1962.



For Wood Encased Lead Pencils.
First use 1951.

SN 144,833. Goldsmith Bros., New York, N.Y. Filed May 17, 1962.

KEEPEZEE

For Payroll Book and Payroll Sheets.
First use Nov. 1, 1940.

SN 144,998. Stanbrook Stationery Company, Inc., West Springfield, Mass. Filed May 18, 1962.

BROOKMONT

For Bond Paper for Writing and Typewriter Work and Mailing Envelopes.
First use Jan. 18, 1911.

SN 151,068. Joe C. Melton, d.b.a. Melton Publishing Company, Dallas, Tex. Filed Aug. 13, 1962.



The words "Classified Income Tax Record & Travel Expense Book" are disclaimed apart from the mark as shown.
For Travel Expense Record Book.
First use Mar. 28, 1959; May 15, 1950, as to "Melton's and design."

SN 151,099. Traffic Builders Inc., Great Neck, N.Y. Filed Aug. 13, 1962.

INSTANT BUCKS

For Printed Contest Cards for Promotional Use by Others To Encourage, Facilitate and Stimulate the Sale of Their Goods.
First use Aug. 4, 1962.

SN 157,192. The Bates Manufacturing Company, Orange, N.J. Filed Nov. 14, 1962.

PHONE-PAL

For Telephone Indexes Comprising Casings Having Index Cards Hingedly Mounted Therein.
First use Oct. 17, 1962.

Class 38 — Prints and Publications

SN 114,308. Midnight Publishers Corporation Limited, Montreal, Quebec, Canada, assignee, by mesne assignments, from Joseph Azaria, d.b.a. Glendale Publishing Company, Montreal, Quebec, Canada. Filed Feb. 24, 1961.

MIDNIGHT

For Newspaper Publication.
First use Nov. 12, 1954; in commerce Nov. 12, 1954.

SN 122,731. Edmond A. Steffey, d.b.a. Easco Products, Chicago, Ill. Filed June 23, 1961.

EASAMATIC

For Appliques—Namely, Flexible, Metallic Nameplates Which Are Adhesively Affixed to a Product.
First use Nov. 1, 1959.

SN 138,833. The American Businessman Inc., Washington, D.C. Filed Mar. 1, 1962.

THE AMERICAN BUSINESSMAN

For Periodical Newsletter.
First use Jan. 22, 1962.

SN 144,750. Meehanite Metal Corporation, New Rochelle, N.Y. Filed May 16, 1962.

QUALITY TALKS

For Pamphlet Published From Time to Time.
First use on or about Nov. 22, 1960.

SN 155,364. Berkley Publishing Corporation, New York, N.Y. Filed Oct. 18, 1962.



For Books.
First use Aug. 20, 1959.

SN 155,365. Berkley Publishing Corporation, New York, N.Y. Filed Oct. 18, 1962.



For Books.
First use Aug. 27, 1959.

SN 156,118. Ilford, Limited, Ilford, Essex, England. Filed Oct. 29, 1962.

ILFOCHROME

Owner of U.S. Reg. Nos. 116,139 and 745,799.
For Photographic Prints.
First use May 1, 1962; in commerce Aug. 1, 1962.

SN 157,596. Berkley Publishing Corporation, New York, N.Y. Filed Nov. 20, 1962.



The use of the words "Library Selection" as part of the subject mark is hereby disclaimed.
For Books.
First use Nov. 4, 1962.

SN 158,354. Lukens, Savage & Washburn, Philadelphia, Pa. Filed Dec. 3, 1962.



For Insurance Newsletter.
First use Nov. 20, 1962.

Class 39—Clothing

SN 124,337. The Brittany Hat Co., Inc., New York, N.Y. Filed July 20, 1961.

Crosby

For Men's, Boys' and Women's Hats and Caps.
First use Nov. 16, 1926.

SN 125,174. Uniflair, Inc., Baltimore, Md. Filed Aug. 1, 1961.

UNIFLAIR

For Ladies' Uniforms.
First use June 14, 1961.

SN 126,373. Mlle. Liberté Inc., New York, N.Y. Filed Aug. 21, 1961.

Midnight Lace

For Ladies' Briefs.
First use May 25, 1961.

SN 132,442. Blue Bell, Inc., Greensboro, N.C. Filed Nov. 21, 1961.

JEANIE WEATHER LARK

Owner of Reg. Nos. 544,681 and 721,639.
For Misses' Raincoats.
First use Oct. 31, 1961.

SN 136,087. John Wanamaker Philadelphia, Philadelphia, Pa. Filed Jan. 18, 1962.

carte blanche

For Women's Leather Shoes.
First use Jan. 5, 1962.

SN 142,390. H. Wenzel Tent & Duck Co., St. Louis, Mo. Filed Apr. 16, 1962.

FIBER FOAM

For Articles of Apparel Insulated With Insulation Foam Material—Namely, Insulated Sport Jackets and Vests.
First use Mar. 21, 1962.

SN 143,854. Mutual Buying Syndicate Incorporated, New York, N.Y. Filed May 4, 1962.

PATTY ALLEN

Owner of Reg. No. 425,920.
For Apparel for Girls—Namely, Dresses, Coats, Suits, Faille Dusters, Slack Sets, Shorts, Pedal Pushers, Blouses, Shirts, Panties, Slips, Pajamas and Sleepers, Duster Robes, Skirts and Slacks.
First use Feb. 1, 1962.

SN 143,978. Krasnow Belt Co., Inc., Long Island City, N.Y. Filed May 7, 1962.

mr. belt

For Garment Belts.
First use on or about Mar. 8, 1962.

SN 147,062. Windsmoor (London) Limited, London, England. Filed June 15, 1962.

WINDSMOOR

For Women's and Misses' Coats, Suits, Skirts, and Slacks.
First use Apr. 9, 1934; in commerce June 30, 1943.

SN 147,787. Avalon Classics, Inc., New York, N.Y. Filed June 27, 1962.

LISA ROBIN

"Lisa Robin" is the name of a fictitious person.
For Dresses and Blouses.
First use June 13, 1962.

SN 147,820. Philip Howard Ford, d.b.a. Ann Howard, Hawick, Scotland. Filed June 27, 1962.

SILAND

Owner of British Reg. No. 778,260, dated June 3, 1958.
For Ladies' Knitted Garments Including Pullovers, Cardigans and Twin Sweater Sets.

SN 149,064. Edison Brothers Stores, Inc., St. Louis, Mo. Filed July 16, 1962.

MAGNETICS

For Women's Shoes.
First use July 1, 1962.

SN 149,284. Hanes-Millis Sales Corporation, High Point, N.C. Filed July 18, 1962.

the Mark VI

For Hosiery for Men.
First use June 11, 1962.

SN 150,455. Rand Rubber Company, Inc., Brooklyn, N.Y. Filed Aug. 3, 1962.

KUMFIT

Owner of Reg. No. 647,876.
For Aprons and Baby Pants.
First use Feb. 1, 1920, on aprons.

SN 153,027. Societe Rhodiaceta, Paris, France. Filed Sept. 12, 1962.

TERCRYL

Priority claimed under Sec. 44(d) on French Reg. No. 504,039, dated Apr. 5, 1962 (Paris); Natl. Inst. No. 182,787.
For Clothing for Men, Women, and Children—Namely, Robes, Two-Piece Suits, Coats, Underwear, Cardigans, Vests and Waist Coats, Boots, Shoes, and Slippers.

SN 153,235. Wembley, Inc., New Orleans, La. Filed Sept. 14, 1962.

RESILIO

Owner of Reg. No. 163,575.
For Men's and Boys' Wearing Apparel—Namely, Neckties, Hosiery, Dress Shirts, Sport Shirts, Suits, Coats, Trousers, Underwear, Neckties and Scarfs, Handkerchiefs, Mufflers, Pajamas, Hats and Caps, Cummerbunds, Cummervests, Tie and Sox Sets, Tie and Handkerchief Sets, Cummerbund and Tie Sets, Cummerbund, Tie and Handkerchief Sets, Ascots, Belts, Shoes and Robes.
First use Apr. 20, 1922.

SN 153,582. Melville Shoe Corporation, New York, N.Y. Filed Sept. 20, 1962.

POSSUMS

For Men's, Women's, and Children's Shoes.
First use at least prior to Aug. 15, 1962.

SN 153,714. The Alligator Company, St. Louis, Mo. Filed Sept. 24, 1962.

SILVER LABEL

Owner of Reg. No. 384,991.
For Fabrics Suitable for Topcoats, Treated for Water-Repellency Sold Only in Wearing Apparel—Namely, Coats for Men and Women.
First use February 1950.

SN 153,984. Puccini Boys' Wear, Inc., New York, N.Y. Filed Sept. 26, 1962.

PUCCINI STYLED BY KOGAN

Applicant disclaims the words "Styled by" apart from the mark as shown.
For Sport Pants, Sport Jackets, and Sport Shirts for Children.
First use Nov. 15, 1955.

SN 154,230. The Fibre-Metal Products Company, Chester, Pa. Filed Oct. 1, 1962.

SCALPGARD

For Protective Hats and Caps.
First use Sept. 17, 1962.

SN 154,388. Willis Hosiery Mills, Inc., Concord, N.C. Filed Oct. 2, 1962.

SILVER SEAL

For Women's, Children's, and Men's Hosiery.
First use March 1940.

SN 154,389. Jack Winter Manufacturing Corporation, Mirianna, Ark. Filed Oct. 2, 1962.

Tee-Bird

For Men's Slacks and Walking Shorts.
First use Sept. 6, 1962.

SN 154,852. Robart International, Inc., New York, N.Y. Filed Oct. 9, 1962.

ROBART

For Men's Robes.
First use Sept. 6, 1962.

SN 155,243. J. Edwards & Co., Inc., Philadelphia, Pa. Filed Oct. 16, 1962.

SURE FOOT

Owner of Reg. No. 146,730.
For Children's Shoes.
First use Aug. 21, 1962.

SN 155,244. J. Edwards & Co., Inc., Philadelphia, Pa. Filed Oct. 16, 1962.

VALGA-PEDIC Edwards V P

Owner of Reg. Nos. 651,788 and 703,590.
For Children's Shoes.
First use Aug. 2, 1962.

SN 155,270. Melville Shoe Corporation, New York, N.Y. Filed Oct. 16, 1962.

BOSSA NOVA

The meaning of "Bossa Nova" in Portugese is "new beat."
For Men's and Women's Shoes.
First use Oct. 11, 1962.

SN 157,180. Wings Shirt Co., Inc., Greenville, S.C. Filed Nov. 13, 1962.

BENTLEY, LIMITED

For Men's and Boys' Shirts, Sports Shirts, Pajamas, Jackets, Coats and Trousers.
First use Oct. 24, 1962.

SN 158,196. Vanity Fair Mills, Inc., Reading, Pa. Filed Nov. 29, 1962.

LISSOMES

For Women's Lingerie—Namely, Girdles, Pantie Girdles, and Brassieres.
First use Nov. 6, 1962.

SN 158,197. Vanity Fair Mills, Inc., Reading, Pa. Filed Nov. 29, 1962.

HIGH FAVOR

For Women's Lingerie—Namely, Girdles, Pantie Girdles, and Brassieres.
First use Nov. 7, 1962.

SN 158,198. Vanity Fair Mills, Inc., Reading, Pa. Filed Nov. 29, 1962.

VANITY PLUS

Owner of Reg. Nos. 116,092, 659,094, and others.
For Women's Lingerie—Namely, Girdles, Pantie Girdles, and Brassieres.
First use Nov. 12, 1962.

SN 159,357. J. C. Penny Company, New York, N.Y. Filed Dec. 18, 1962.

Pentred

For Shoe Soles.
First use Oct. 13, 1960.

SN 159,449. Young Viewpoint Sales, Inc., New York, N.Y. Filed Dec. 19, 1962.

Linnel

For Ladies' Dresses.
First use July 15, 1962.

SN 159,450. Youthcraft Creations, Inc., New York, N.Y. Filed Dec. 19, 1962.

RISE "N" STRIDE

For Girdles and Panty Girdles.
First use Nov. 28, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

SN 140,846. Dan Kasoff Inc., New York, N.Y. Filed Mar. 27, 1962.

Florenza

Owner of Reg. No. 635,564.
For Pin Cushions and Sewing Kits.
First use Feb. 20, 1956.

SN 152,276. The Boye Needle Company, Chicago, Ill. Filed Aug. 31, 1962.

Boye

The drawing is lined for red and blue but color is not claimed as an essential feature of the mark. Owner of Reg. Nos. 72,417, 518,095, and others.
For Art Needlework Implements and Accessories—Namely, Crochet Hooks, Knitting Needles, Bead Stringing and Weaving Outfits, Tatting Shuttles, Pin-Type Weaving Frames, Embroidery Hoops, Knitting Stitch Counters and Markers, Stitch Holders, Embroidery and Punch Work Needles, Knitting Pin Point Protectors, Stilettos, Bodkins, Interchangeable Crochet Hooks, Crochet and Knitting Gauge Cards, Yarn Winders and Knitting Yarn Holders, and Crochet Forks, Hairpins, Bob Hairpins, Safetypins, Dress Fasteners, Needles for Hand Sewing, Hooks and Eyes, Common Pins, Thimbles, Needle Threaders, Stocking Darners, Veil Pins, and Hat Pins.
First use Aug. 1, 1962.

SN 152,931. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Sept. 11, 1962.

GOLD TONE

The drawing is lined for gold.
For Set Consisting of a Mirror, Comb and Brush, Pin Cushions and Sewing Kits and Napkin Holders.
First use June 1, 1959, on set consisting of a mirror, comb and brush.

SN 153,236. George Wollner, New York, N.Y. Filed Sept. 14, 1962.

WALL STREET

Owner of Reg. Nos. 299,714, 300,255 and 661,699.
For Clothing Accessories—Namely, Braids, Tapes, Shields, Buttons, Fasteners, Seam Bindings, Elastic Webbing, Zippers, Buckles, Used in the Making of Clothing.
First use Aug. 15, 1931.

SN 153,584. Miracle Ribbon Products Corporation, Nashville, Tenn. Filed Sept. 20, 1962.

Miracle

For Ribbons, Bow Pins and Bow Makers.
First use Mar. 5, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 141,760. Spunlo-Elderlon, Inc., New York, N.Y. Filed Apr. 6, 1962.

PIMELLA

For Ladies' Knitted Underwear Fabrics.
First use Jan. 15, 1962.

SN 144,491. Max Halpern & Sons, Inc., New Orleans, La. Filed May 14, 1962.

HALPERN'S FABRICS

No claim is made to the word "Fabrics."
For Fabrics and Piece Goods for Making Dresses, Coats, Blouses and Other Wearing Apparel, and for Making Draperies, Slip Covers and the Like.
First use on or about Apr. 1, 1954.

SN 149,684. Vitafoam Limited, Manchester, England. Filed July 24, 1962.

VITAWEB

For Webbing and Supporting Members for Cushions, Mattresses, Upholstery and the Like, and Luggage and Like Load-Carrying Devices, Made of Flexible and Elastic Materials.
First use May 15, 1962; in commerce May 15, 1962.

SN 153,028. Societe Rhodiaceta, Paris, France. Filed Sept. 12, 1962.

TERCRYL

Priority claimed under Sec. 44(d) on French Reg. No. 504,039, dated Apr. 5, 1962 (Paris); Natl. Inst. No. 182,787.
For Textile Fabrics Used for Making Dresses, Suits, Coats, Underwear, and Bed and Table Covers.

SN 153,120. Santens Gebroeders, Oudenaarde, Belgium. Filed Sept. 13, 1962.

Terry-Tex

Applicant disclaims the word "Terry" except as shown.
Owner of Belgian Reg. No. 638, dated Feb. 19, 1958.
For Toweling, Towels, Bath Towels, Beach Towels, Kitchen Towels, Beach Togas, Wash Cloths, Dish Rags, and Terry Cloth in the Piece.

SN 154,719. Glen Raven Mills, Inc., New York, N.Y., assignee of Greenlaw, Inc., New York, N.Y. Filed Oct. 8, 1962.

CLAN CREST

For Fabrics of Rayon and Synthetic Fibers.
First use Feb. 6, 1962.

SN 154,720. Glen Raven Mills, Inc., New York, N.Y., assignee of Greenlaw, Inc., New York, N.Y. Filed Oct. 8, 1962.

PBF

For Fabrics of Rayon and Synthetic Fibers.
First use Feb. 6, 1962.

SN 154,909. Mission Valley Mills, Inc., New Braunfels, Tex. Filed Oct. 10, 1962.

CONNIE COTTONS

The word "Cottons" is disclaimed apart from the mark as shown.
For Cotton Piece Goods.
First use July 12, 1960.

SN 155,288. Ack-Ti-Lining, Inc., New York, N.Y. Filed Oct. 17, 1962.

ACK-TI-VATED

For Interlining Material for Men's Clothing.
First use May 28, 1962.

SN 155,772. Bates Manufacturing Company, Lewiston, Maine. Filed Oct. 24, 1962.

Bates

Owner of Reg. Nos. 86,025, 682,960, and others.
For Toilet and Bath Mat Sets, Rugs, Mats, and Dust Ruffles for Beds.
First use at least as early as July 17, 1962.

SN 156,616. Jute Industries Limited, Dundee, England. Filed Nov. 5, 1962.

JIL

For Carpets, Mats and Matting Made Wholly or Partly of Jute.
First use before the year 1925; in commerce before the year 1935.

SN 159,868. John Boyle and Company, Incorporated, New York, N.Y. Filed Dec. 28, 1962.

JAYBEECOTE

Owner of Reg. Nos. 114,220, 161,078, and 192,022.
For Coated Fabrics Utilized for Industrial, Outdoor, and Marine Purposes.
First use Nov. 28, 1962.

SN 159,892. Hodgman Rubber Company, Framingham, Mass. Filed Dec. 28, 1962.

HORCOTARD

Owner of Reg. Nos. 328,199, 604,332, and others.
For Flame-Resistant and Flame-Retardant Coated Fabrics.
First use Nov. 6, 1962.

SN 159,902. Oxford Mills, Inc., Ware, Mass. Filed Dec. 28, 1962.

COUNTY FAIR

For Carpeting.
First use Nov. 2, 1961.

SN 162,377. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

Owner of Reg. Nos. 593,968 and 712,196.
For Woven Industrial and Asbestos Fabrics, Rug Underpadding.
First use Aug. 9, 1962, on asbestos fabrics.

Class 43 — Thread and Yarn

SN 147,095. The Firestone Tire & Rubber Company, Akron, Ohio. Filed June 18, 1962.

PROLOFT

For Synthetic Yarns.
First use Mar. 26, 1962.

SN 153,029. Societe Rhodiaceta, Paris, Franc. Filed Sept. 12, 1962.

TERCRYL

Priority claimed under Sec. 44(d) on French Reg. No. 504,039, dated Apr. 5, 1962 (Paris); Natl. Inst. No. 182,787.
For Threads and Yarns of Synthetic Fibers.

Class 44 — Dental, Medical, and Surgical Appliances

SN 146,489. International Orthodontics Inc., Oakland, Calif. Filed June 8, 1962.



For Orthodontic Appliances.
First use Apr. 12, 1962.

SN 147,485. Master Touch Dental Service Corp., New York, N.Y. Filed June 22, 1962.

RETENTO-GRIP

For Synthetic Plastic Dental Prosthetic Appliances.
First use Nov. 2, 1958.

SN 147,905. The Dynair Company, Inc., Bedford, Ohio. Filed June 28, 1962.

DYNAIR

For Hair Dryers.
First use Feb. 1, 1962.

SN 149,204. Progressive Products, Inc., La Mesa, Calif. Filed July 17, 1962.

KOOL DUCK

The word "Duck" is disclaimed apart from the mark as shown.
For Teething Device in the Form of a Liquid Filled Container Formed of a Pliable Material.
First use on or about May 22, 1962.

SN 155,143. Robert F. Fitch, d.b.a. Fitch Products Company, Glendale, Calif. Filed Oct. 15, 1962.

Thumsies

For Thumbsucking Deterrent Devices Comprising Finger Gloves and Securing Means Therefor.
First use March 1948.

SN 162,031. Serend, Inc., Dixon, Ill. Filed Feb. 4, 1963.

SLEEPY WIND CLOWN

For Appliance Used During the Induction of Anesthesia in Children.
First use Aug. 6, 1962.

SN 162,045. L. S. Watlington Mfg. Co., Bloomington, Ill. Filed Feb. 4, 1963.



For Hair Dryers.
First use Jan. 23, 1963.

SN 162,850. Med-Ram, Inc., Osakis, Minn. Filed Feb. 15, 1963.

THERMO-CADDY

For Container for Sterilizing and Dispensing Clinical Thermometers.
First use Sept. 17, 1962.

SN 162,911. Michael Davis, New York, N.Y. Filed Feb. 18, 1963.

MICROVOX

For Hearing Aid.
First use Jan. 22, 1963.

SN 163,201. Holland-Rantos Company, Inc., New York, N.Y. Filed Feb. 20, 1963.



Owner of Reg. Nos. 290,475, 618,114, and others.
For Medical and Surgical Appliances—Namely, Vaginal Diaphragms, Vaginal Diaphragm Introducers, Vaginal Fitting Rings, and Surgical Face Masks.
First use on or about Oct. 20, 1960.

SN 163,300. Aeroplast Corporation, Dayton, Ohio. Filed Feb. 25, 1963.

VI-DRAPE

Owner of Reg. No. 666,946.
For Sterile Adhesive for Removably Adhering a Sterilizable Plastic Sheeting for Isolating and Protecting Areas of the Human Skin During Surgery and Other Treatment.
First use Jan. 29, 1963.

SN 163,537. Eli Lilly and Company, Indianapolis, Ind. Filed Feb. 27, 1963.

HYPORET

For Disposable Syringe.
First use Jan. 10, 1963.

SN 163,600. Beltone Electronics Corporation, Chicago, Ill. Filed Feb. 28, 1963.

FUTURA

For Hearing Aids and Accessories.
First use Jan. 22, 1963.

Class 45 — Soft Drinks and Carbonated Waters

SN 151,384. A & W Root Beer Co., Santa Monica, Calif. Filed Aug. 17, 1962.



The drawing has been lined for the color orange. Owner of Reg. Nos. 266,929 and 689,586.
For Soft Drinks and Syrups, Bases, and Concentrates for Making the Same.
First use on or about June 1, 1961.

SN 152,732. Aktieselskabet de Forenede Bryggerier, Copenhagen, Denmark. Filed Sept. 10, 1962.



Owner of Danish Reg. No. 2018–1960, dated Aug. 20, 1960; and U.S. Reg. No. 740,134.
For Mineral and Carbonated Waters.

Class 46 — Foods and Ingredients of Foods

SN 116,573. Rogers Walla Walla Canning Co., Milton-Freewater, Oreg., by merger and change of name from Rogers Canning Company, Milton-Freewater, Oreg. Filed Mar. 27, 1961.

DOUCEUR

For Canned Combination of Peas and Onions.
First use July 8, 1960.

SN 116,832. Nutrafoods Corporation, d.b.a. Nutrafoods Corp. and Nutra-Foods Corp., Long Island, N.Y. Filed Mar. 30, 1961.

SUNNY-CHOCKS

For Sunflower Seeds Coated With a Dietetic Confection.
First use Mar. 10, 1961.

SN 121,998. Happy House Inc., d.b.a. Happy House Shops, Hopkins, Minn. Filed June 14, 1961.

HAPPY HOUSE

Owner of Reg. No. 693,621.
For Candy.
First use Apr. 5, 1960.

SN 131,745. Chemtest Products, Inc., Kansas City, Mo., by change of name from Chemtest Laboratories, Incorporated, Kansas City, Mo. Filed Nov. 10, 1961.



No claim is made to the wording "A Product" and "900 Diet Plan" apart from the mark as shown. The figure of the man in the drawing does not represent any particular individual living or dead. Owner of Reg. No. 410,079.
For Dietary Food Concentrate Used for Weight Control.
First use Oct. 8, 1961.

SN 133,926. M. R. Blackman & Co., Inc., Philadelphia, Pa. Filed Dec. 13, 1961.

Blackman's

Owner of Reg. No. 328,278.
For Flavoring Syrups for Food Purposes, Crushed Fruits, Crushed Nuts, Marshmallow, Fruit Acid for Flavoring Foods, Natural Fruit Juices for Flavoring Foods and Flavored Syrups, Marshmallow, Fruit and Nut Toppings.
First use 1908.

SN 133,927. M. R. Blackman & Co., Inc., Philadelphia, Pa. Filed Dec. 13, 1961.

Blackman's SINCE 1909

Owner of Reg. No. 328,278.
For Flavoring Syrups for Food Purposes, Crushed Fruits, Crushed Nuts, Marshmallow, Fruit Acid for Flavoring Foods, Natural Fruit Juices for Flavoring Foods and Flavored Syrups, Marshmallow, Fruit and Nut Toppings.
First use 1908.

SN 136,385. Muir-Roberts Co. Inc., Salt Lake City, Utah. Filed Jan. 23, 1962.



The word "Brand" is disclaimed apart from the mark as shown.
For Fresh Cherries, Peaches and Apricots, Fresh Vegetables, and Frozen Apricots.
First use Feb. 26, 1936.

SN 138,587. Corn Cabin Company, Elgin, Ill. Filed Feb. 26, 1962.



The words "Corn" and "Delicious Popcorn Products" are disclaimed. Also, no claim of exclusive right is made to the representation of the corn, separate and apart from the mark as shown. Owner of Reg. Nos. 721,097 and 721,098.
For Popped Popcorn, Salted, Unsalted, Candied, and in Different Flavors, Colors, and Shapes.
First use Dec. 8, 1961.

SN 139,836. The Dietene Company, Minneapolis, Minn. Filed Mar. 14, 1962.

DIETENE

Owner of Reg. No. 329,995.
For Specially Formulated Powder Containing Vitamins, Minerals, Sucrose, Malt, and Desiccated Milk Solids Used in Lieu of Food in Dieting Problems.
First use Jan. 1, 1934.

SN 141,325. Manna Vita Food Products Corp., Sherman Oaks, Calif. Filed Apr. 2, 1962.

PROTIES

For Concentrated Protein Products for Use as a Dietary Food Supplement and Consisting of Soya Proteins, Milk Proteins, Casein, Lactalbumin, Soya Lecithin, Defatted Wheat Germ, Vanilla and Vanillin Flavoring and Calcium Cyclamate as a Sweetener.
First use Jan. 27, 1962.

SN 141,636. John Morrell & Co., Chicago, Ill. Filed Apr. 5, 1962.

Twin Hearts BY RED HEART

Owner of Reg. Nos. 33,599, 75,085, 636,541, and others.
For Dog Food.
First use Feb. 26, 1962.

SN 142,759. John W. Wilson, d.b.a. J and E Food Products Supply Co., Portland, Oreg. Filed Apr. 20, 1962.

DIPSY DOODLE CRUNCH PUP

For Batter Mix for the Preparation of Weiners on a Skewer Encased in a Batter and Cooked in Deep Fat.
First use Mar. 6, 1962.

SN 143,001. The Broken Drum—You Can't Beat It, d.b.a. The Broken Drum, Santa Monica, Calif. Filed Apr. 25, 1962.

THE BROKEN DRUM

For Salad Dressing.
First use on or before Jan. 1, 1949.

SN 143,513. County Line Cheese Co., Inc., Auburn, Ind. Filed May 1, 1962.

COUNTRY-CURED

For Cheese.
First use Dec. 15, 1961.

SN 145,402. Potato Service, Inc., Presque Isle, Maine. Filed May 24, 1962.

Glori★taters

For Frozen Peeled Potatoes.
First use on or about Dec. 1, 1961.

SN 147,202. Hedlin's Cocowhip, Inc., Chicago, Ill. Filed June 19, 1962.

SWISS-KISS

For Orange Juice Food Drink.
First use Apr. 13, 1962.

SN 148,951. Calico Kate's, Inc., Glen Haven, Colo. Filed July 13, 1962.

CALICO KATE'S



The drawing is lined for the colors red and green.
For Jams, Jellies, Preserves, and Pickles.
First use on or about Mar. 27, 1959.

SN 149,563. Gold Medal Candy Corporation, Brooklyn, N.Y. Filed July 23, 1962.

TURKISH TAFFY

The word "Taffy" is disclaimed. Owner of Reg. Nos. 419,561 and 680,074.
For Candies and Confectionery Products.
First use at least as early as 1912.

SN 149,971. Star-Kist Foods, Inc., Terminal Island, Calif. Filed July 27, 1962.



For Canned Fish.
First use Sept. 22, 1961.

SN 150,271. Naamloze Vennootschap Cacaofabriek "De Zaan," Zaandijk, Koog, aan de Zaan, Netherlands. Filed Aug. 1, 1962.



Applicant disclaims any exclusive right in the word "Cacao" apart from the mark as shown. Owner of Dutch Reg. No. 90,921, dated Jan. 6, 1948; and U.S. Reg. No. 712,941.
For Cocoa.

SN 155,013. G. B. Raffetto, Inc., New York, N.Y. Filed Oct. 11, 1962.

CONDIMATO

For Chutney-Chili Sauce.
First use June 18, 1962.

SN 155,258. Jaindl's, Inc., Allentown, Pa. Filed Oct. 16, 1962.

Jaindl's GRAND CHAMPION

For Turkeys Fresh, Dressed, and Frozen.
First use September 1947.

SN 155,615. The Jersee-Security Food Company, Minneapolis, Minn. Filed Oct. 22, 1962.

VELV-KOTE

For Livestock Food.
First use Feb. 14, 1951.

SN 158,159. H. P. Hood & Sons, Inc., d.b.a. Buxton Preserving Company, Boston, Mass. Filed Nov. 29, 1962.

BUXTON FARMS

For Condiments—Namely, Piccalilli, Watermelon Rind, Onion Relish, Pepper Relish, and Mustard Pickle.
First use Sept. 11, 1962; 1900 as to "Buxton."

SN 158,282. S. Stamoules, Inc., d.b.a. Stamoules & Co., Mendota, Calif. Filed Nov. 30, 1962.

S§S

For Fresh Melons.
First use July 26, 1927.

SN 159,204. Carson Pirie Scott & Co., Chicago, Ill. Filed Dec. 17, 1962.

carson house candies

The word "Candies" is hereby disclaimed apart from the mark shown in the drawing.
For Candies.
First use Oct. 18, 1962.

SN 159,346. G. D. Ireland, d.b.a. Ireland's Chili Company, Wichita Falls, Tex. Filed Dec. 18, 1962.

IRON KETTLE

For Canned Chili.
First use Nov. 15, 1962.

SN 159,788. Triple T Company, Inc., Stone Mountain, Ga. Filed Dec. 26, 1962.

DIXIE

For Bubble Gum.
First use Dec. 10, 1962.

SN 159,918. Scatena-Gaili Fruit Co., South San Francisco, Calif. Filed Dec. 28, 1962.

SCAT

For Fresh Fruits.
First use about January 1957.

SN 160,030. Martha White Mills, Inc., Nashville, Tenn. Filed Jan. 2, 1963.

BIXMIX

For Biscuit Mix.
First use Nov. 7, 1962.

SN 160,093. Chicago Refining Corporation, Chicago, Ill. Filed Jan. 3, 1963.

PROEX

For Edible Dehydrated Product Comprising a Protein Residue From the Refining of Fats.
First use Nov. 12, 1962.

SN 160,356. Basic Food Materials, Inc., Vermilion, Ohio. Filed Jan. 8, 1963.

PEPPEROME

For Soluble Black Pepper.
First use Apr. 7, 1953.

Class 49 — Distilled Alcoholic Liquors

SN 152,723. Schenley Distillers, Inc., New York, N.Y. Filed Sept. 7, 1962.

HAPPY AGE

Owner of Reg. No. 307,181.
For Whiskey.
First use Aug. 20, 1962.

SN 157,251. Joseph E. Seagram & Sons, Inc., New York, N.Y. Filed Nov. 14, 1962.

CAVIAR

For Vodka.
First use Oct. 24, 1962.

Class 50 — Merchandise Not Otherwise Classified

SN 135,169. D. Arnold Associates, Inc., Brooklyn, N.Y. Filed Jan. 4, 1962.

PRESTIGE FLORAL

The word "Floral" is disclaimed apart from the mark as shown.
For Artificial Flowers and Foliage.
First use Jan. 25, 1956.

SN 139,548. The Supersign Company Limited, d.b.a. Aluminum & Plastic Sign Manufacturing Co., Toronto, Ontario, Canada. Filed Mar. 9, 1962.

AJDUSTA

Priority claimed under Sec. 44(d) on Canadian application filed Sept. 19, 1961; Reg. No. 125,319, dated Feb. 2, 1962.
For Plastic and Aluminum Signs Employing Changeable Letters, and Name Plates.
First use October 1961; in commerce Feb. 15, 1962.

SN 143,579. Stagecraft Industries, Inc., Portland, Oreg. Filed May 1, 1962.

STAGE SCOPE

The word "Stage" is disclaimed apart from the mark as shown.
For Foldable Stage Assembly, Including a Stage, Curtains and Stage Lighting Equipment Designed for Use in Schools and Other Places in Place of a Permanent Stage.
First use about Jan. 15, 1962.

SN 149,678. Paul E. Sernau Inc., New York, N.Y. Filed July 24, 1962.

DECOR-AIDS

For Honeycomb Tissue Decorations Used for Table Centerpieces and for Decorative Uses.
First use Oct. 19, 1960.

SN 151,759. Jomac, Inc., Philadelphia, Pa. Filed Aug. 23, 1962.

"D" - TEX

For Fabric Covers for Lithographic Rollers.
First use Aug. 15, 1962.

SN 152,424. Morgan Adhesives Company, Stow, Ohio. Filed Sept. 4, 1962.

DUMAR

Owner of Reg. Nos. 710,354, 710,694, and 710,695.
For Metallized Plastic Material Coated With Adhesive and Having a Paper Backing, for Use as a Protective and Decorative Covering.
First use June 1, 1962.

SN 155,564. Bradford Novelty Co. Inc., Boston, Mass. Filed Oct. 22, 1962.

"TELSTAR"

For Christmas Tree Decorations.
First use on or about Oct. 9, 1962.

SN 155,569. Bernard Cater, d.b.a. Magna-Mat, Whittier, Calif. Filed Oct. 22, 1962.

MAGNA-MAT

For Safety Shield, Asbestos or Fireproof, Attachable by Magnets to a Hot Exhaust Pipe or Otherwise for Safety Purposes.
First use Jan. 1, 1962.

SN 155,696. George Cohen Sons and Company Limited, London, England. Filed Oct. 23, 1962.

600

Owner of British Reg. No. 742,718, dated May 26, 1955; and U.S. Reg. Nos. 744,282 and 744,283.
For Scaffolding of Metal and Parts Thereof.

SN 156,334. Robbins Incubator Company, Denver, Colo. Filed Oct. 31, 1962.

ROBBINS

Owner of Reg. No. 562,440.
For Incubators Including Accessories Therefor and Parts Thereof Such as Temperature Controls, Timing Controls, Control Valves, Special Incubating and Hatching Trays, Egg Turning Mechanism and Humidity Controls.
First use in or about 1928.

Class 51 — Cosmetics and Toilet Preparations

SN 69,089. Les Parfums Jean Desses, Paris, France, assignee of Societe Civile d'Etude et de Recherche de Produits de Marque, Paris, France. Filed Mar. 6, 1959.

JEAN DESSES

Priority claimed under Sec. 44(d) on French Reg. No. 478,698, dated Mar. 2, 1959 (Seine); Natl. Inst. No. 121,925.
The name "Jean Desses" is that of a living individual, whose consent is of record.
For Perfumes.

SN 93,692. Les Parfums Jean Desses, Paris, France. Filed Mar. 25, 1960.

L'AUTRE DE JEAN DESSES

The English translation of "L'Autre de Jean Desses" is "the other Jean Desses." The name "Jean Desses" is that of a living individual, whose consent is of record. Owner of French Reg. No. 482,546, dated Sept. 1, 1959 (Seine); Natl. Inst. No. 131,192.
For Perfumes and Toilet Water.

SN 142,969. Revlon, Inc., New York, N.Y. Filed Apr. 19, 1962.

AVANT GARDE

The English meaning of the French term "Avant Garde" is "vanguard."
For Lipstick and Nail Enamel.
First use Apr. 6, 1962.

SN 144,675. Bristol-Myers Company, New York, N.Y. Filed May 16, 1962.

SCORE

For Hair Dressing Preparation.
First use Mar. 26, 1962.

SN 146,702. Avon Products, Inc., New York, N.Y. Filed June 12, 1962.

PRETTY CHOICE

For Cosmetic Set—Namely, Cologne and Bubble Bath.
First use May 25, 1962.

SN 150,223. Beauty by Spector, Inc., McKeesport, Pa. Filed Aug. 1, 1962.

ROYAL GOLD

For Cosmetics—Namely, Related Hair Preparations, Hair Fixatives, Hair Lubricants and Conditioners, Hair Colorings and Bleaches, Hair Shampoos, Hair Curling Preparations.
First use June 30, 1959.

SN 153,287. Huntley, Ltd., St. Thomas, Virgin Islands. Filed Sept. 17, 1962.

RAFFIA

For Colognes, After-Shave Lotions, and Bay Rum.
First use Sept. 12, 1962.

SN 153,383. Clairol Incorporated, New York, N.Y. Filed Sept. 18, 1962.

INSTIN

Owner of Reg. Nos. 620,097, 729,289, and 733,195.
For Color Developer in Tablet Form.
First use May 17, 1962.

SN 153,445. Aloe Creme Laboratories, Inc., Fort Lauderdale, Fla. Filed Sept. 19, 1962.

BEAUTY MATTE

Applicant disclaims the word "Matte" separate and apart from the mark as shown.
For Combined Foundation and Powder Make-Up.
First use Sept. 13, 1962.

SN 156,305. Lehn & Fink Products Corporation, d.b.a. Tussy Cosmetics, Bloomfield, N.J. Filed Oct. 31, 1962.

MEDI-CLEAR

Owner of Reg. No. 665,929.
For Skin Lotion.
First use June 18, 1962.

SN 158,232. Helene Curtis Industries, Inc., Chicago, Ill. Filed Nov. 30, 1962.

CONDITIONOL

Owner of Reg. No. 663,281.
For Cold Permanent Hair Waving Lotion and Neutralizer Therefor.
First use in or about April 1952.

Class 52 — Detergents and Soaps

SN 147,484. Mar-Shel Agencies, Inc., Spokane, Wash. Filed June 22, 1962.

KLEENWAY

For Industrial and Home Cleaning Compounds, Emulsions, and Detergents in Both Liquid and Powder Form.
First use January 1961.

SN 148,795. Colgate-Palmolive Company, New York, N.Y. Filed July 11, 1962.

GOLIATH

For Cleaner, Cleanser, and Detergent.
First use June 4, 1962.

SN 150,170. Benjamin Harrison, Chicago, Ill. Filed July 31, 1962.

HARRISON'S "BENZA-LAC"

For General Purpose Liquid Cleaner.
First use Nov. 1, 1961.

SN 153,206. Olympic Manufacturing Company, Atlanta, Ga. Filed Sept. 14, 1962.

ALUMINEX

For Metal Cleaning Compositions.
First use on or about June 13, 1960.

SN 156,654. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Nov. 5, 1962.

TURCO-SOLV

Owner of Reg. Nos. 270,966, 657,594, and others.
For Safety Solvent and Cleaner for General Industrial Use.
First use on or before Dec. 31, 1952.

SN 157,599. Bristol-Myers Company, New York, N.Y. Filed Nov. 20, 1962.

BREAKTHRU

For Hair Shampoo.
First use Sept. 19, 1962.

SN 158,346. Ken-Gard Corporation, Andover, Mass. Filed Dec. 3, 1962.

KEN-KEN

For Cleaning Compound in Liquid Form for All Cleaning Purposes.
First use Sept. 13, 1962.

SN 159,252. Macmillan Ring-Free Oil Co., Inc., New York, N.Y. Filed Dec. 17, 1962.

Ring Free
WEATHERGARD

Owner of Reg. Nos. 302,949, 731,744, and others.
For All Purpose Cleaner; Chemical Cleaner Designed for Heavy Duty Cleaning Such as Removing Oils and Grease From Driveways, Floors, Parking Areas, and Equipment.
First use June 28, 1962.

SN 159,472. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories, Stamford, Conn. Filed Dec. 20, 1962.

ALVININE

Owner of Reg. No. 22,370.
For Medicated Hair Shampoo.
First use Mar. 8, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 120,966. Consolidated Natural Gas Company, New York, N.Y. Filed May 29, 1961.

CONSOLIDATED NATURAL GAS SYSTEM

The drawing is lined for blue but applicant claims exclusive rights in the mark as shown irrespective of color.
For Utility Services—Namely, Supplying Natural Gas to Residential, Commercial, and Industrial Users for Heat, Light and Power Purposes; and Service and Maintenance of Household, Commercial, and Industrial Appliances and Equipment.
First use on or about Apr. 15, 1959.

SN 131,566. The Gold Buffet Franchise, Inc., Parkville, Mo. Filed Nov. 8, 1961.

GOLD BUFFET

The word "Buffet" is disclaimed except as used in the mark.
For Restaurant Services.
First use Jan. 1, 1960.

SN 138,636. National Personnel Research, Inc., Evansville, Ind. Filed Feb. 26, 1962.

SELECTRONIC

For Employment Services—Namely, Advice and Consultation in Selecting Employees for Others.
First use during January 1962.

SN 146,407. Nedick's Stores, Inc., New York, N.Y. Filed June 7, 1962.



Owner of Reg. Nos. 415,760, 629,705, and others.
For Serving and Dispensing Foods and Beverages in Restaurants.
First use in or about 1949.

SN 151,319. Hilton Hotels Corporation, Chicago, Ill. Filed Aug. 16, 1962.

Hilton Hotels

Owner of Reg. Nos. 728,659 and 732,263.
For Hotel and Restaurant Services.
First use prior to July 31, 1953.

SN 157,713. The Maintenance Company, Inc., Long Island City, N.Y. Filed Nov. 21, 1962.

MAINCO

For Engineering Consultation and Design Services.
First use in or about October 1925.

SN 158,288. Townsman Motel, Inc., Blackwell, Okla. Filed Nov. 30, 1962.

TOWNSMAN

For Motel Services.
First use 1955.

SN 158,726. The People to People Health Foundation, Inc., Washington, D.C. Filed Dec. 7, 1962.

PROJECT HOPE

For Health and Medical Services Provided Without Charge to People of Other Countries on and From a Floating Hospital and Clinic and Medical Teaching Center.
First use November 1958.

SN 158,727. The People to People Health Foundation, Inc., Washington, D.C. Filed Dec. 7, 1962.

HOPE

For Health and Medical Services Provided Without Charge to People of Other Countries on and From a Floating Hospital and Clinic and Medical Teaching Center.
First use November 1958.

SN 158,728. The People to People Health Foundation, Inc., Washington, D.C. Filed Dec. 7, 1962.

PROJECT HOPE
HOPE I

The drawing is lined to indicate the colors red and blue, but color is not an essential feature of the mark.
For Health and Medical Services Provided Without Charge to People of Other Countries on and From a Floating Hospital and Clinic and Medical Teaching Center.
First use November 1958.

Class 101 — Advertising and Business

SN 137,535. E. F. MacDonald Stamp Company, Dayton, Ohio. Filed Feb. 8, 1962.



Bonnie,
The Plaid Lassie

For Promoting the Sale of Goods of Others Through the Use of Trading Stamps Which Are Redeemed for Merchandise or Money.
First use Nov. 6, 1961.
Subj. to Intf. with SN 145,808.

SN 146,084. Manpower, Inc., Milwaukee, Wis. Filed June 4, 1962.

WOMANPOWER

For Business Service—Namely, Furnishing of Its Employees on a Contract Basis to Persons or Places of Business Requiring Part-Time or Temporary Help, Including Stenographers, Typists, File Clerks, Accounting Machine Operators, Bookkeepers, General Office Workers.
First use May 18, 1962.

SN 146,210. Peter Pan's Pantry, Inc., Memphis, Tenn. Filed June 5, 1962.



For Retail Drive-In Grocery Store Services.
First use Dec. 1, 1960.

SN 146,497. Clifford J. Locke, d.b.a. Locke Detective Agency and Check-Stop, El Cerrito, Calif. Filed June 8, 1962.

CHECK-STOP

For Agency Services—Namely, Detection of Forged or Stolen Negotiable Papers, Credit Cards, and Like Properties.
First use Feb. 9, 1962.

SN 158,212. Amerad Corporation, Charlottesville, Va. Filed Nov. 30, 1962.

Amerad

For Computer Programming and Computer-Oriented Research Services.
First use Mar. 24, 1962; at least as early as Feb. 3, 1961, as to the word "Amerad."

Class 102 — Insurance and Financial

SN 145,968. The Robert C. Rothert Agency, Toledo, Ohio. Filed June 1, 1962.



For Writing of Marine, Fire, Casualty, and Surety Insurance.
First use Aug. 6, 1957.

SN 156,145. National Old Line Insurance Company, Little Rock, Ark. Filed Oct. 29, 1962.



The monogram forming a part of the mark comprises the letters "NOLICO."
For Underwriting Life Insurance.
First use 1930.

SN 156,227. General Fire and Casualty Company, New York, N.Y. Filed Oct. 30, 1962.

PEOPLE IN GENERAL DO BETTER WITH PEOPLE IN GENERAL!

For Underwriting Insurance.
First use Sept. 23, 1961.

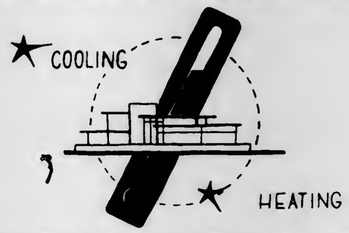
SN 159,455. American Motorists Insurance Company, Chicago, Ill. Filed Dec. 20, 1962.

AMERICAN MOTORISTS INSURANCE COMPANY

For Underwriting of Insurance and Fidelity and Surety Bonds.
First use Jan. 29, 1926.

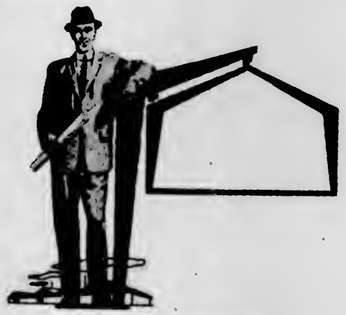
Class 103 — Construction and Repair

SN 126,297. James D. Benjamin, d.b.a. Benjamin's Plumbing Service, Greenwood, S.C. Filed Aug. 21, 1961.



Applicant disclaims the words "Cooling" and "Heating" apart from the mark.
For Plumbing, Heating, and Air Conditioning Services.
First use in 1958.

SN 149,044. Butler Manufacturing Company, Kansas City, Mo. Filed July 16, 1962.



For Constructing and Erecting Buildings.
First use July 1957.

SN 157,713. The Maintenance Company, Inc., Long Island City, N.Y. Filed Nov. 21, 1962.

MAINCO

For Construction and Repair Service for Elevators, Electric Motors, Generators, Controllers and Wiring, Air Conditioning Systems, and Refrigeration Systems.
First use in or about October 1925.

Class 105 — Transportation and Storage

SN 126,783. Lyon Van & Storage Co., Inc., Los Angeles, Calif. Filed Aug. 28, 1961.

LYON
ELECTRO/PALLET

Applicant disclaims the word "Pallet" apart from the mark as shown. Owner of Reg. No. 576,554.
For Service of Truck Transportation and Storage and Arrangement for Sea, Air and Rail Transportation of Fragile Equipment.
First use Jan. 2, 1959; 1913 as to "Lyon."

SN 142,906. Belmont Aviation Corporation, Long Beach, Calif. Filed Mar. 9, 1962.



For Renting Used Aircraft to Others; Chartering Aircraft to Others; and Providing Air Taxi Service.
First use May 12, 1960.

Class 106 — Material Treatment

SN 153,744. Dikeman Laminating Corporation, Clifton, N.J. Filed Sept. 24, 1962.



For Plastic Film Lamination of Paper Products to Order or Specifications of Others.
First use May 1954.

Class 107 — Education and Entertainment

SN 131,923. Ski-Dek Corporation, Caldwell, N.J. Filed Nov. 13, 1961.



For Indoor Skiing and Entertainment Services.
First use Apr. 22, 1961.

SN 133,845. Water Show Spectaculars, Inc., North Miami, Fla. Filed Dec. 11, 1961.

AQUA SPECTACULAR

For Entertainment Services—Namely, Water Variety Shows and Fountain Displays.
First use Oct. 15, 1961.

SN 152,704. Robert Keeshan Associates, Inc., New York, N.Y. Filed Sept. 7, 1962.

TREASURE HOUSE

Owner of Reg. Nos. 643,729, 643,730, and 643,731.
For Entertainment Service for Children Rendered Through the Medium of Television Broadcast Programs.
First use June 1, 1955.

SN 154,206. Career Academy, Inc., Milwaukee, Wis. Filed Oct. 1, 1962.



The separate use of the simulation of the caduceus apart from the mark as shown is disclosed.
For Educational Services Designed To Educate and Train Medical Assistants and Dental Assistants.
First use Jan. 2, 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

752,277. WAVERLY. John Plain & Company. SN 117,223. Pub. 4–23–63. Filed 4–5–61.

752,278. FUSECOLORS. Rarolite Chemical Co. Inc. SN 127,040. Pub. 4–23–63. Filed 8–31–61.

752,279. 3 LITTLE INDIANS. Anderson, Clayton & Co. SN 140,417. Pub. 4–23–63. Filed 3–22–62.

752,280. REVELATION. Western Auto Supply Company. SN 141,776. Pub. 4–23–63. Filed 4–6–62.

752,281. WESKID. Joanna Western Mills Company. SN 148,393. Pub. 4–23–63. Filed 7–5–62.

752,282. IRVETHENE. Great American Plastics Company. SN 148,501. Pub. 4–23–63. Filed 7–6–62.

752,283. PHEASANTS HYBRIDS ETC. AND DESIGN. Vennootschap Onder de Firma A. Overdevest Gzn & Zonen. SN 150,826. Pub. 4–23–63. Filed 8–8–62.

752,284. WESTURF. Western Turfgrass, Inc. SN 151,107. Pub. 4–23–63. Filed 8–13–62.

752,285. CELANAR. Celanese Corporation of America. SN 151,293. Pub. 4–23–63. Filed 8–16–62.

752,286. CELANEX. Celanese Corporation of America. SN 151,294. Pub. 4–23–63. Filed 8–16–62.

752,287. CELGAR. Celanese Corporation of America. SN 151,295. Pub. 4–23–63. Filed 8–16–62.

752,288. CELAR. Celanese Corporation of America. SN 151,296. Pub. 4–23–63. Filed 8–16–62.

752,289. TETRAN. Pennsalt Chemicals Corporation. SN 154,150. Pub. 4–23–63. Filed 9–28–62.

752,290. CASUALTAN. Albert Trostel & Sons Company. SN 154,180. Pub. 4–23–63. Filed 9–28–62.

752,291. CONTOURLITE. Contours Unlimited, Inc. SN 154,210. Pub. 4–23–63. Filed 10–1–62.

752,292. HANDY DAN'S. Council Manufacturing Corporation. SN 154,212. Pub. 4–23–63. Filed 10–1–62.

752,293. ELECTROPLY. Electrofilm, Inc. SN 154,220. Pub. 4–23–63. Filed 10–1–62.

752,294. IMCO-FIL. International Minerals & Chemical Corporation. SN 154,355. Pub. 4–23–63. Filed 10–2–62.

Class 2 — Receptacles

752,295. MEMORY PAK. William S. Schneider, d.b.a. The William Steven Company. SN 123,140. Pub. 4–23–63. Filed 6–29–61.

752,296. THE WILLIAMSBURG. Boyertown Burial Casket Company. SN 136,951. Pub. 4–23–63. Filed 1–31–62.

752,297. POST-GARD. West Virginia Pulp and Paper Company. SN 137,581. Pub. 4–23–63. Filed 2–8–62.

752,298. FD-PAK. Ivers-Lee Company. SN 144,853. Pub. 4–23–63. Filed 5–17–62.

752,299. TAPPER. Reynolds Metals Company. SN 144,889. Pub. 4–23–63. Filed 5–17–62.

752,300. FPC AND DESIGN. Flexible Plastics Corporation. SN 145,068. Pub. 4–23–63. Filed 5–21–62.

752,301. CARTIER. Cartier, Inc. SN 146,359. Pub. 4–23–63. Filed 6–7–62.

752,302. SUNFROST. Nibot Corporation, by change of name from Fedco Corporation. SN 146,806. Pub. 4–23–63. Filed 6–13–62.

752,303. FROSTIE AND DESIGN. The Frostie Company. SN 147,277. Pub. 4–23–63. Filed 6–20–62.

752,304. BATTERY. International Paper Company. SN 147,286. Pub. 4–23–63. Filed 6–20–62.

752,305. KELLER ETC. AND DESIGN. The Keller Pottery Company. SN 147,590. Pub. 4–23–63. Filed 6–25–62.

752,306. WRAPAK. Container Corporation of America. SN 147,803. Pub. 4–23–63. Filed 6–27–62.

752,307. PERTAINER. Charles B. Whitman, d.b.a. Pelmo Park Perennial Gardens. SN 148,549. Pub. 4–23–63. Filed 7–6–62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

752,308. BOBBI SOX (FANCIFUL). Aristocrat Leather Products, Inc. SN 114,909. Pub. 4–23–63. Filed 3–6–61.

752,309. BERK-LOOM. Berkeley Bags, Inc. SN 147,259. Pub. 4–23–63. Filed 6–20–62.

Class 4 — Abrasives and Polishing Materials

752,310. E111. Norton Company. SN 120,118. Pub. 4–23–63. Filed 5–16–61.

752,311. E266. Norton Company. SN 120,119. Pub. 4–23–63. Filed 5–16–61.

752,312. E67. Norton Company. SN 120,120. Pub. 4–23–63. Filed 5–16–61.

752,313. STAT-SKAT. Fostoria Corporation. SN 139,616. Pub. 4–23–63. Filed 3–12–62.

752,314. RAM'S HEAD DESIGN. The Osborn Manufacturing Company. SN 144,757. Pub. 4–23–63. Filed 5–16–62.

752,315. TYKOR AND DESIGN. The Borden Company. SN 145,514. Pub. 4–23–63. Filed 5–28–62.

752,316. EKAMANT. Fabriksaktiebolaget Eka. SN 147,360. Pub. 4–23–63. Filed 6–21–62.

Class 5 — Adhesives

752,317. CLING-FIRM. Arthur S. Hoyt Company, Inc. SN 129,212. Pub. 4–23–63. Filed 10–4–61.

752,318. EXTRA SPARE. Fram Refiner Sales, Inc. SN 142,028. Pub. 4–23–63. Filed 4–11–62.

752,319. EVANS'. The Commercial Paste Company. SN 145,047. Pub. 4–23–63. Filed 5–21–62.

752,320. EVANS' WELSH. The Commercial Paste Company. SN 145,048. Pub. 4–23–63. Filed 5–21–62.

Class 6 — Chemicals and Chemical Compositions

752,321. POLYCHROME. Polychrome Corporation. SN 116,068. Pub. 4–23–63. Filed 3–20–61.

752,322. KALZATE. Guth Chemical Company. SN 116,305. Pub. 4–23–63. Filed 3–23–61.

752,323. FLY CHECKER. Ralston Purina Company. SN 119,794. Pub. 4–23–63. Filed 5–11–61.

752,324. HEXAVER. Hach Chemical Company. SN 129,595. Pub. 4–23–63. Filed 10–10–61.

752,325. NITRAVER. Hach Chemical Company. SN 129,596. Pub. 4–23–63. Filed 10–10–61.

752,326. TEVER. Hach Chemical Company. SN 129,601. Pub. 4–23–63. Filed 10–10–61.

752,327. NEMAFOS. American Cyanamid Company. SN 131,329. Pub. 4–23–63. Filed 11–6–61.

152,328. ROGUE. Monsanto Chemical Company. SN 131,387. Pub. 4–23–63. Filed 11–6–61.

752,329. ORLENE. Hagan Chemicals & Controls, Inc. SN 137,911. Pub. 4–23–63. Filed 2–14–62.

752,330. TUMBL-TROLL. Geode Industries Inc. SN 138,197. Pub. 4–23–63. Filed 2–19–62.

752,331. SULFOLE. Phillips Petroleum Company. SN 138,228. Pub. 4–23–63. Filed 2–19–62.

752,332. DIE HARD. Charles S. Leventhal, d.b.a. Lev-Co Developing Company. SN 138,792. Pub. 4–23–63. Filed 2–28–62.

752,333. NOR DEL AND DESIGN. The Paul D. Foster Company. SN 140,830. Pub. 4–23–63. Filed 3–27–62.

752,334. NACCOPERM. Allied Chemical Corporation. SN 141,483. Pub. 4–23–63. Filed 4–4–62.

752,335. 3M. Minnesota Mining and Manufacturing Company. SN 147,488. Pub. 4–23–63. Filed 6–22–62.

752,336. G–7 SUPER-WEIGHT. Magnet Cove Barium Corporation. SN 148,822. Pub. 4–23–63. Filed 7–11–62.

752,337. GERMAIN'S. Germain's Inc. SN 150,552. Pub. 4–23–63. Filed 8–6–62.

752,338. 12. Germain's Inc. SN 150,553. Pub. 4–23–63. Filed 8–6–62.

752,339. MATACIL. Farbenfabriken Bayer Aktiengesellschaft. SN 150,687. Pub. 4–23–63. Filed 8–7–62.

752,340. OVEN-GARD. Afta Solvents Corp. SN 150,744. Pub. 4–23–63. Filed 8–8–62.

752,341. ASCO. Acetylene Service Company. SN 154,189. Pub. 4–23–63. Filed 10–1–62.

752,342. CWC, ETC. AND SHIELD DESIGN. United States Borax & Chemical Corporation, assignee of Columbia Wax Company. SN 154,209. Pub. 4–23–63. Filed 10–1–62.

752,343. STANDAPOL. Standard Chemical Products, Inc. SN 154,302. Pub. 4–23–63. Filed 10–1–62.

752,344. SPARKLEEN AND DESIGN. Valley Chlorine Solutions Company, d.b.a. Valley Chlorine Solutions. SN 154,312. Pub. 4–23–63. Filed 10–1–62.

752,345. LUCITE. E. I. du Pont de Nemours and Company. SN 154,339. Pub. 4–23–63. Filed 10–2–62.

752,346. WISE AND DESIGN. S & F Manufacturing and Leasing Corporation. SN 154,517. Pub. 4–23–63. Filed 10–4–62.

752,347. PURZAUST. Universal Oil Products Company. SN 154,650. Pub. 4–23–63. Filed 10–5–62.

Class 7 — Cordage

752,348. 3M. Minnesota Mining and Manufacturing Company. SN 147,492. Pub. 4–23–63. Filed 6–22–62.

Class 8 — Smokers' Articles, Not Including Tobacco Products

752,349. LLOYDS. Mastercraft Pipes, Inc. SN 108,798. Pub. 4–23–63. Filed 11–21–60.

752,350. SMOKE-RINGS. Clifford W. Nitchie. SN 154,428. Pub. 4–23–63. Filed 10–3–62.

Class 10 — Fertilizers

752,351. CYCOCEL. American Cyanamid Company. SN 147,067. Pub. 4–23–63. Filed 6–18–62.

Class 12 — Construction Materials

752,352. THIOLASTIC. Curtis Products Inc., by change of name and assignment from Plastic Products Company. SN 123,229. Pub. 4–23–63. Filed 6–30–61.

752,353. RYOLEX. Silbrico Corporation. SN 124,767. Pub. 4–23–63. Filed 7–26–61.

752,354. DEBONDENE. L & M Construction Chemicals, Inc. SN 137,243. Pub. 4–23–63. Filed 2–5–62.

752,355. LUMOFLEX. Swimquip, Inc. SN 148,432. Pub. 4–23–63. Filed 7–5–62.

752,356. TEXACOUSTICA. Mario Catani Co. SN 153,252. Pub. 4–23–63. Filed 9–17–62.

752,357. ALUMAROCK. Shully's Industries Limited. SN 153,426. Pub. 4–23–63. Filed 9–18–62.

752,358. ARCH-COR. Granite City Steel Company, d.b.a. Granco Steel Products Company. SN 153,758. Pub. 4–23–63. Filed 9–24–62.

752,359. SAMAZO. Samson Block & Supply Co., Inc. SN 155,018. Pub. 4–23–63. Filed 10–11–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

752,360. DIAL-A-DOOR. Avia-Marine Company. SN 139,016. Pub. 4–23–63. Filed 3–5–62.

752,361. DANBOLT. Daniel Bolt Company. SN 141,579. Pub. 4–23–63. Filed 4–5–62.

752,362. DANBOLT AND DESIGN. Daniel Bolt Company. SN 141,580. Pub. 4–23–63. Filed 4–5–62.

752,363. CENTRI-FUSE. Lithcote Corporation. SN 141,854. Pub. 4–23–63. Filed 4–9–62.

Class 14 — Metals and Metal Castings and Forgings

752,364. SOFT-FORM. Granite City Steel Company. SN 142,706. Pub. 4–23–63. Filed 4–20–62.

752,365. DURANEL. Aluminum Company of America. SN 148,701. Pub. 4–16–63. Filed 7–10–62.

Class 15 — Oils and Greases

752,366. ALL THAT THE NAME IMPLIES ETC. AND DESIGN. Royal Petroleum Corporation. SN 73,268. Pub. 4–23–63. Filed 5–8–59.

752,367. POWEROYAL. Royal Oil Company. SN 82,445. Pub. 4–23–63. Filed 9–30–59.

752,368. ROYAL BLUE. Arkansas Louisiana Gas Company, assignee of Arkansas Louisiana Chemical Corporation. SN 92,427. Pub. 4–23–63. Filed 3–9–60.

752,369. CML-260. Kendall Refining Company. SN 136,987. Pub. 4–23–63. Filed 1–31–62.

Class 16 — Protective and Decorative Coatings

752,370. PLAM. Great Lakes Paint and Varnish Company. SN 113,210. Pub. 4–23–63. Filed 2–7–61.

752,371. GUARD-SEAL AND DESIGN. Al-Chroma Paint Company, Inc. SN 128,326. Pub. 4–23–63. Filed 9–21–61.

752,372. SNORKEL. Rust-Oleum Corporation. SN 129,402. Pub. 4–23–63. Filed S.R. 10–6–61; Am. P.R. 9–10–62.

752,373. STERICIDE. Pioneer Paint and Varnish Company. SN 136,077. Pub. 4–23–63. Filed 1–18–62.

752,374. FILMFLEX. Macmillan Ring-Free Oil Co., Inc. SN 141,961. Pub. 4–23–63. Filed 4–10–62.

752,375. LIN-OXYN. Gulf States Paint Company. SN 142,187. Pub. 4-23-63. Filed 4-13-62.

752,376. ORGANITEX. Devoe & Raynolds Company, Inc. SN 146,795. Pub. 4-23-63. Filed 6-13-62.

752,377. 3M. Minnesota Mining and Manufacturing Company. SN 147,489. Pub. 4-23-63. Filed 6-22-62.

752,378. REDWOOD BEAUTY. Devoe & Raynolds Company, Inc. SN 151,305. Pub. 4-23-63. Filed 8-16-62.

Class 17—Tobacco Products

752,379. ALUMIDOR. Brown & Williamson Tobacco Corporation. SN 151,802. Pub. 4-23-63. Filed 8-24-62.

Class 18—Medicines and Pharmaceutical Preparations

752,380. "CLIMACTERON." Charles E. Frosst & Co. SN 121,282. Pub. 4-23-63. Filed 6-2-61.

752,381. SOLVOLIPID. A. Nattermann & Cie. SN 129,221. Pub. 4-23-63. Filed 10-4-61.

752,382. PROTENSIN. Bristol-Myers Company. SN 129,574. Pub. 4-23-63. Filed 10-10-61.

752,383. ORAL-EASE. Mizzy, Inc. SN 130,224. Pub. 4-23-63. Filed 10-18-61.

752,384. PIAPARENE. Sterling Drug Inc. SN 135,640. Pub. 4-23-63. Filed 1-11-62.

752,385. LANTISTAPH. Best & Gee Proprietary Limited, d.b.a. Edinburgh Laboratories (Aust.) Pty. Ltd. SN 136,103. Pub. 4-23-63. Filed 1-19-62.

752,386. VIGOTRIL. Lever Brothers Company. SN 138,032. Pub. 4-23-63. Filed 2-15-62.

752,387. LAN-A-MINK. Charles A. Champion, d.b.a. Champion Products Company. SN 140,092. Pub. 4-23-63. Filed 3-19-62.

752,388. CALF PAL. Peter Hand Brewery Company. SN 140,742. Pub. 4-23-63. Filed 3-26-62.

752,389. ADINEX. M-A Pharmaceutical Corporation. SN 140,960. Pub. 4-23-63. Filed 3-28-62.

752,390. DESITIN AND DESIGN. Desitin Chemical Co., Inc. SN 141,270. Pub. 4-23-63. Filed 4-2-62.

752,391. CENTEREX. Warner-Lambert Pharmaceutical Company. SN 142,001. Pub. 4-23-63. Filed 4-10-62.

752,392. EQUIBOLE. Syracuse Pharmacal Co., Inc. SN 142,467. Pub. 4-23-63. Filed 4-17-62.

752,393. DYNAMIC. Dynamic Nutritional Products, d.b.a Dynamic Products. SN 143,355. Pub. 4-23-63. Filed 4-30-62.

752,394. HEALTH MATES. Drug Development Corporation. SN 143,813. Pub. 4-23-63. Filed 5-4-62.

752,395. CITROGEN. Mar-Tay, Inc., d.b.a. Mar-Tay Sales, Inc. SN 145,197. Pub. 4-23-63. Filed 5-22-62.

752,396. CAPTAGON. Chemiewerk Homburg. SN 145,444. Pub. 4-23-63. Filed 5-25-62.

752,397. INTERSEPT. Johnson & Johnson. SN 146,824. Pub. 4-23-63. Filed 6-13-62.

752,398. ADRINASOL. C. H. Boehringer Sohn. SN 147,691. Pub. 4-23-63. Filed 6-26-62.

752,399. NOPGROSOL. Nopco Chemical Company. SN 148,065. Pub. 4-23-63. Filed 6-29-62.

752,400. VAC-PAK. Dr. Salsbury's Laboratories. SN 150,931. Pub. 4-23-63. Filed 8-10-62.

752,401. CEO-TWO. Beutlich, Inc. SN 151,121. Pub. 4-23-63. Filed 8-14-62.

752,402. RADIOPLEX. SPA Societa Prodotti Antibiotici S.p.A. SN 154,061. Pub. 4-23-63. Filed 9-27-62.

752,403. HEXTRIL. Warner-Lambert Pharmaceutical Company. SN 154,074. Pub. 4-23-63. Filed 9-27-62.

752,404. MYAVAN. Warner-Lambert Pharmaceutical Company. SN 154,075. Pub. 4-23-63. Filed 9-27-62.

752,405. ONCOVIN. Eli Lilly and Company. SN 154,127. Pub. 4-23-63. Filed 9-28-62.

Class 19—Vehicles

752,406. AMI 6. Societe Anonyme Andre Citroen. SN 123,503. Pub. 4-23-63. Filed 7-6-61.

752,407. ROADRUNNER. Midwest Model Supply Company, d.b.a. K. & S. Engineering Company. SN 132,177. Pub. 4-23-63. Filed 11-16-61.

752,408. AVANTI. Studebaker Corporation. SN 155,206. Pub. 4-23-63. Filed 10-15-62.

752,409. GEOGRAPHIC. Harry and David. SN 155,312. Pub. 4-23-63. Filed 10-17-62.

752,410. IRVIN AND PARACHUTE DESIGN IN CIRCLE. Irving Air Chute Company, Inc. SN 155,315. Pub. 4-23-63. Filed 10-17-62.

752,411. FLEXMASTER. Custom Bilt Body, Inc. SN 155,380. Pub. 4-23-63. Filed 10-18-62.

752,412. POLYSTEEL. Sanford-Day Corporation. SN 155,746. Pub. 4-23-63. Filed 10-23-62.

752,413. BRUNSWICK. Brunswick Corporation. SN 156,461. Pub. 4-23-63. Filed 11-2-62.

Class 21—Electrical Apparatus, Machines, and Supplies

752,414. DELTA T AND DESIGN. Wakefield Engineering, Inc. SN 121,523. Pub. 4-23-63. Filed 6-6-61.

752,415. ANATROL. The De Havilland Aircraft Company Limited. SN 127,325. Pub. 4-23-63. Filed 9-6-61.

752,416. CONVERTRON. Electronic Energy Conversion Corp. SN 128,891. Pub. 9-25-62. Filed 9-29-61.

752,417. 3M. Minnesota Mining and Manufacturing Company. SN 147,490. Pub. 4-23-63. Filed 6-22-62.

752,418. UV DESIGN. Ultra-Violet Products, Inc. SN 153,341. Pub. 4-23-63. Filed 9-17-62.

752,419. BAYLOR. Zale Jewelry Company, Inc. SN 153,361. Pub. 4-23-63. Filed 9-17-62.

752,420. STOCKMASTER. Ultronic Systems Corp. SN 153,607. Pub. 4-23-63. Filed 9-20-62.

752,421. SMITHFIELD. Fieldcrest Mills, Inc. SN 155,792. Pub. 4-23-63. Filed 10-24-62.

752,422. WHISPER LIGHT. Fieldcrest Mills, Inc. SN 155,794. Pub. 4-23-63. Filed 10-24-62.

752,423. CORSAIR. Fieldcrest Mills, Inc. SN 155,796. Pub. 4-23-63. Filed 10-24-62.

752,424. TANTACON. Erie Resistor Corporation. SN 156,483. Pub. 4-23-63. Filed 11-2-62.

752,425. REPRESENTATION OF A MALE FIGURE IN CIRCLE DESIGN. The Crescent Company, Inc. SN 157,075. Pub. 4-23-63. Filed 11-13-62.

752,426. DUO-VOLT. Sigma Instruments, Inc. SN 157,413. Pub. 4-23-63. Filed 11-16-62.

752,427. PIC-N-PAC. The Lockwood Manufacturing Company. SN 157,630. Pub. 4-23-63. Filed 11-20-62.

752,428. POWERGLOW. General Electric Company. SN 157,691. Pub. 4-23-63. Filed 11-21-62.

752,429. COROTRON. The Victoreen Instrument Company. SN 157,743. Pub. 4-23-63. Filed 11-21-62.

752,430. BUBBLTROL. Automatic Control Company. SN 157,759. Pub. 4-23-63. Filed 11-23-62.

752,431. TANKTROL. Automatic Control Company. SN 157,760. Pub. 4-23-63. Filed 11-23-62.

752,432. TELETROL. Automatic Control Company. SN 157,763. Pub. 4-23-63. Filed 11-23-62.

752,433. TURBO-ACTION. Champion Spark Plug Company. SN 157,974. Pub. 4-23-63. Filed 11-27-62.

752,434. PEK LABS AND DESIGN. Pek Labs, Inc. SN 159,273. Pub. 4-23-63. Filed 12-17-62.

Class 22—Games, Toys, and Sporting Goods

752,435. LITTLE BIG BROTHER KIT. Irwin Berger and Roberta M. Berger. SN 95,046. Pub. 4-23-63. Filed 4-14-60.

752,436. LITTLE BIG SISTER KIT. Irwin Berger and Roberta M. Berger. SN 95,047. Pub. 4-23-63. Filed 4-14-60.

752,437. TALKING MOVIE-WHEELS AND DESIGN. Movie-Wheels, Inc. SN 110,875. Pub. 4-23-63. Filed 12-27-60.

752,438. PARABACK. Parallel Products Company. SN 131,985. Pub. 4-23-63. Filed 11-14-61.

752,439. MASCHUCA. Hughes-Blattner Game Co., Inc. SN 135,507. Pub. 4-23-63. Filed 1-10-62.

752,440. BITE-O-LITE. Bite-O-Lite. SN 137,318. Pub. 4-23-63. Filed 2-6-62.

752,441. PITTIE PAT. American Doll & Toy Corporation. SN 140,899. Pub. 4-23-63. Filed 3-28-62.

752,442. BABIE BABBLES. American Doll & Toy Corporation. SN 140,900. Pub. 4-23-63. Filed 3-28-62.

752,443. TAMMY. Ideal Toy Corporation, assignee of The Royal Doll Mfg. Co. Inc. SN 143,273. Pub. 4-23-63. Filed 4-27-62.

752,444. BATTENKILL. Chas. F. Orvis Company, Inc. SN 143,563. Pub. 4-23-63. Filed 5-1-62.

752,445. SHIFTY GEAR. Schaper Manufacturing Company, Inc. SN 144,278. Pub. 4-23-63. Filed 5-10-62.

752,446. LITTLE MISS ECHO. American Doll & Toy Corporation. SN 145,504. Pub. 4-23-63. Filed 5-28-62.

752,447. CHA CHA CHECKERS. Hessenfeld Bros., Inc. SN 145,547. Pub. 4-23-63. Filed 5-28-62.

752,448. CENTRE COURT. The General Tire & Rubber Company. SN 145,936. Pub. 4-23-63. Filed 6-1-62.

752,449. JET-AIR. The General Tire & Rubber Company. SN 145,937. Pub. 4-23-63. Filed 6-1-62.

752,450. FUN-ALYSIS. Alabe Crafts, Inc. SN 145,993. Pub. 4-23-63. Filed 6-4-62.

752,451. STRUCT-A-FOAM. Nesbit Industries, Incorporated. SN 146,091. Pub. 4-23-63. Filed 6-4-62.

752,452. UNI-BOND. Wilson Sporting Goods Co. SN 146,240. Pub. 4-23-63. Filed 6-5-62.

752,453. CO-ORDINATION. Brumberger Co., Inc. SN 146,785. Pub. 4-23-63. Filed 6-13-62.

752,454. DESIGN OF A LADY BOWLER. Brunswick Corporation. SN 146,877. Pub. 4-23-63. Filed 6-14-62.

752,455. ROUTE 66. Peter S. Pagratis. SN 147,018. Pub. 4-23-63. Filed 6-15-62.

752,456. SPIN-TRIGGER. Gudebrod Bros. Silk Co., Inc. SN 147,109. Pub. 4-23-63. Filed 6-18-62.

752,457. HIT THE SPOT. American Toy & Furniture Co. Inc. SN 147,176. Pub. 4-23-63. Filed 6-19-62.

752,458. HOBBYLAND U.S.A. American Toy & Furniture Co., Inc. SN 147,179. Pub. 4-23-63. Filed 6-19-62.

752,459. RACE-TIME. Louis Marx & Co. Inc. SN 147,295. Pub. 4-23-63. Filed 6-20-62.

752,460. WATERLOO. The Avalon Hill Company. SN 147,537. Pub. 4-23-63. Filed 6-25-62.

752,461. CLEATREAD. John T. Riddell, Inc. SN 148,424. Pub. 4-23-63. Filed 7-5-62.

752,462. POWERHOUSE. Louis Marx & Co. Inc. SN 148,635. Pub. 4-23-63. Filed 7-9-62.

752,463. PERMA-VUE. Perma-Seal Plastic Corporation. SN 148,751. Pub. 4-23-63. Filed 7-10-62.

752,464. DOLL-EZE. Doll-Eze Products Co., Inc. SN 148,879. Pub. 4-23-63. Filed 7-12-62.

752,465. SILLY STICKERS. Topps Chewing Gum, Incorporated. SN 148,925. Pub. 4-23-63. Filed 7-12-62.

752,466. PLASTI/CARVE. Original Bradford Soap Works, Inc. SN 154,051. Pub. 4-23-63. Filed 9-27-62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

752,467. FULL VISION AND DESIGN. Full Vision, Inc. SN 110,836. Pub. 4-23-63. Filed 12-27-60.

752,468. WATERBURY. Textron Inc. SN 123,148. Pub. 4-23-63. Filed 6-29-61.

752,469. TORWEGGE. Franz Torwegge. SN 126,623. Pub. 4-23-63. Filed 8-24-61.

752,470. ROLL-RAMP. Philadelphia Gear Corporation. SN 134,838. Pub. 4-23-63. Filed 12-28-61.

752,471. FILOMATIC. Automatic Packaging Equipment Inc. SN 135,252. Pub. 4-23-63. Filed 1-5-62.

752,472. LOW BOY. Dacor Corporation. SN 136,206. Pub. 4-23-63. Filed 1-22-62.

752,473. SUPERMET. Buehler Ltd. SN 138,767. Pub. 4-23-63. Filed 2-28-62.

752,474. AQUA JET AND DESIGN. Farrow Manufacturing, Incorporated. SN 139,060. Pub. 4-23-63. Filed 3-5-62.

752,475. GROTESQUE REPRESENTATION OF A BOY. Goiny & Co., Inc., d.b.a. Chore-Boy Manufacturing Company. SN 140,808. Pub. 4-23-63. Filed 3-26-62.

752,476. REGENCY. Allied Sewing Machine Distributors, Inc. SN 142,671. Pub. 4-23-63. Filed 4-20-62.

752,477. CHASSIS TRAK INC. AND DESIGN. Chassis Trak Corporation. SN 142,925. Pub. 4-23-63. Filed 4-24-62.

752,478. VIM. J. Wiss & Sons Co. SN 142,984. Pub. 4-23-63. Filed 4-24-62.

752,479. DIA-SAW. Hamco Machine & Electronics Corp. SN 143,528. Pub. 4-23-63. Filed 5-1-62.

752,480. MAXIFORCE. International Equipment Co. SN 145,367. Pub. 4-23-63. Filed 5-24-62.

752,481. HELIXTRACTOR. International Equipment Co. SN 145,368. Pub. 4-23-63. Filed 5-24-62.

752,482. MIRACLE. Fischbach Trucking Co., d.b.a. Circle F. Sales. SN 145,933. Pub. 4-23-63. Filed 6-1-62.

752,483. BOYE AND DESIGN. The Boye Needle Company. SN 154,801. Pub. 4-23-63. Filed 10-9-62.

752,484. 333. Swingline Inc. SN 154,866. Pub. 4-23-63. Filed 10-9-62.

752,485. VIBRA-COOL. Link-Belt Company. SN 154,979. Pub. 4-23-63. Filed 10-11-62.

752,486. MISTER TWISTER AND DESIGN. Melard Manufacturing Corporation. SN 155,169. Pub. 4-23-63. Filed 10-15-62.

752,487. KWIK-GRIP. Crestline Products, Inc. SN 155,586. Pub. 4-23-63. Filed 10-22-62.

752,488. BUTTON ROBOT. A. J. Mitchell Co. SN 155,822. Pub. 4-23-63. Filed 10-24-62.

Class 26—Measuring and Scientific Appliances

752,489. LAB-TEK. Lab-Tek Plastics Co. SN 84,435. Pub. 5-16-61. Filed 11-2-59.

752,490. SOM BERTHIOT. Societe d'Optique et de Mecanique de Haute Precision. SN 93,371. Pub. 1-10-61. Filed 3-21-60.

752,491. SONILINE. Computer Control Company, Inc. SN 123,728. Pub. 1-16-62. Filed 7-11-61.

752,492. OMNISCOPE. Birns & Sawyer Cine Equipment Co. SN 124,506. Pub. 4-23-63. Filed 7-24-61.

752,493. GLOBE DESIGN AND ORBITS. Aero Geo Astro Corporation, by change of name from A.G.A. Corporation, d.b.a. Aero Geo Astro Corporation. SN 125,704. Pub. 4-23-63. Filed 8-10-61.

752,494. PRO-LITE. Aimes Engineering Co., Inc., assignee of American Gage & Machine Company. SN 134,078. Pub. 1-15-63. Filed 12-15-61.

752,495. NU RAD. International Telephone and Telegraph Corporation. SN 139,101. Pub. 4-23-63. Filed 3-5-62.

752,496. NUALARM. International Telephone and Telegraph Corporation. SN 139,102. Pub. 4-23-63. Filed 3-5-62.

752,497. GISCO. A. A. Danish, d.b.a. Geophysical Instrument & Supply Co. SN 143,012. Pub. 4-23-63. Filed 4-25-62.

752,498. UNISPEC. Glendale Optical Co., Inc. SN 147,466. Pub. 4-23-63. Filed 6-22-62.

752,499. SUPER-LAB. Houston-Fearless Corporation. SN 152,996. Pub. 4-23-63. Filed 9-12-62.

752,500. ECON-O-GRAPH. Charles Beseler Company. SN 153,060. Pub. 4-23-63. Filed 9-13-62.

752,501. LITE-A-LINE. Lee Hunter, d.b.a. Hunter Engineering Company. SN 153,086. Pub. 4-23-63. Filed 9-13-62.

752,502. PARATIC. Agfa Aktiengesellschaft. SN 153,443. Pub. 4-23-63. Filed 9-19-62.

752,503. EUROPTIMA. Agfa Aktiengesellschaft. SN 153,444. Pub. 4-23-63. Filed 9-19-62.

752,504. RAIR. Eastman Kodak Company. SN 153,558. Pub. 4-23-63. Filed 9-20-62.

752,505. AHU. Eastman Kodak Company. SN 153,559. Pub. 4-23-63. Filed 9-20-62.

752,506. CAMFLASH. Sears, Roebuck and Co. SN 153,687. Pub. 4-23-63. Filed 9-21-62.

752,507. A BLOCK ARRANGEMENT OF CONTIGUOUS DARK AND LIGHT AREAS. FMA, Inc. SN 154,224. Pub. 4-23-63. Filed 10-1-62.

752,508. MULTI-SITE. Irving P. Filderman. SN 154,231. Pub. 4-23-63. Filed 10-1-62.

Class 27 — Horological Instruments

752,509. LE DUC GENEVE AND DESIGN. Jean Föllmi. SN 127,333. Pub. 4-23-63. Filed 4-27-62.

752,510. ISLE. Torque Controls, Inc. SN 145,223. Pub. 4-23-63. Filed 5-22-62.

752,511. INVICTA. Invicta Ltd. SN 153,001. Pub. 4-23-63. Filed 9-12-62.

Class 28 — Jewelry and Precious-Metal Ware

752,512. M. ZAID AND DESIGN. Morris Zaidband. SN 150,738. Pub. 4-23-63. Filed 8-7-62.

752,513. M OVER J. Michele Jewelry Co. SN 153,010. Pub. 4-23-63. Filed 9-12-62.

752,514. PHOTOGEM. Photogem Co. SN 153,019. Pub. 4-23-63. Filed 9-12-62.

752,515. IR AND DESIGN. American Trading Co., Inc. SN 153,056. Pub. 4-23-63. Filed 9-13-62.

752,516. ACCO DESIGN. Automatic Chain Co. SN 153,148. Pub. 4-23-63. Filed 9-14-62.

752,517. NOTO. Joseph C. Notō, d.b.a. Noto Jewelry Company. SN 153,201. Pub. 4-23-63. Filed 9-14-62.

752,518. KL AND DESIGN. Classic Jewelry Mfgrs. SN 153,623. Pub. 4-23-63. Filed 9-21-62.

752,519. P/S. Penedo & Swiber. SN 153,677. Pub. 4-23-63. Filed 9-21-62.

Class 29 — Brooms, Brushes, and Dusters

752,520. FI-BRO. Lyla H. Snella, d.b.a. Jal Chemicals and Fi-Bro Sponge Co. SN 154,065. Pub. 4-23-63. Filed 9-27-62.

Class 30 — Crockery, Earthenware, and Porcelain

752,521. SOCIETY. Co-Operative Wholesale Society, Limited. SN 153,866. Pub. 4-23-63. Filed 9-25-62.

752,522. BLOCK AND DESIGN. Block China Company. SN 161,467. Pub. 4-23-63. Filed 1-28-63.

Class 32 — Furniture and Upholstery

752,523. CHIPFORM. Gisholt Machine Company. SN 124,357. Pub. 4-23-63. Filed 7-20-61.

752,524. LES CARE KITCHENS. Louis Lestorti, d.b.a. Lewis Millwork. SN 127,123. Pub. 4-23-63. Filed 9-1-61.

752,525. DUNBAR COMPATIBLES. Dunbar Furniture Corporation of Indiana. SN 150,538. Pub. 4-23-63. Filed 8-6-62.

752,526. STUDY STAND. Protecto Manufacturing Co. SN 151,076. Pub. 4-23-63. Filed 8-13-62.

752,527. PERMAFOLD. Charles R. Lark, Jr., d.b.a. Lark Industries. SN 153,004. Pub. 4-23-63. Filed 9-12-62.

Class 33 — Glassware

752,528. BLOCK AND DESIGN. Block China Company. SN 161,468. Pub. 4-23-63. Filed 1-28-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

752,529. QUARTZ-KING. Colortran Industries. SN 154,562. Pub. 4-23-63. Filed 10-5-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

752,530. FLUORO SPAR. United States Ceramic Tile Company. SN 126,702. Pub. 4-23-63. Filed 8-25-61.

752,531. ADMIRAL*PREMIUM-RIDE. Market Tire Company of Maryland, Inc. SN 149,155. Pub. 9-25-62. Filed 7-17-62.

752,532. MILE-TRAC. Atlas Supply Company. SN 155,041. Pub. 4-23-63. Filed 10-12-62.

752,533. SURE-TRAC. Atlas Supply Company. SN 155,042. Pub. 4-23-63. Filed 10-12-62.

752,534. ACME. The General Tire & Rubber Company. SN 155,066. Pub. 4-23-63. Filed 10-12-62.

752,535. EVERFLEX. The B. F. Goodrich Company. SN 155,310. Pub. 4-23-63. Filed 10-17-62.

Class 37 — Paper and Stationery

752,536. SECURA. Paul Koch G.m.b.H. Papierverarbeitungswerk und Verlag. SN 112,051. Pub. 4-23-63. Filed 1-18-61.

752,537. BOBBI SOX (FANCIFUL). Aristocrat Leather Products, Inc. SN 114,910. Pub. 4-23-63. Filed 3-6-61.

752,538. QUIK-KARD AND DESIGN. Norman L. Cotton, d.b.a. Addressing Machine Co. of California. SN 131,812. Pub. 4-23-63. Filed 11-13-61.

752,539. COSIL AND DESIGN. A.B. Bonnierföretagen. SN 146,571. Pub. 4-23-63. Filed 6-11-62.

752,540. ARC ETC. AND DESIGN. Geraldine Tuscany (Mrs.), d.b.a. School Form & Supply Company. SN 148,108. Pub. 4-23-63. Filed 6-29-62.

752,541. KLEENEX. Kimberly-Clark Corporation. SN 151,337. Pub. 4-23-63. Filed 8-16-62.

Class 38 — Prints and Publications

752,542. PULSE BEAT. The Pulse, Inc. SN 70,165. Pub. 4-23-63. Filed 3-24-59.

752,543. PIT AND QUARRY HANDBOOK AND PURCHASING GUIDE AND DESIGN. Pit and Quarry Publications, Inc. SN 105,373. Pub. 4-23-63. Filed 9-28-60.

752,544. IMC AND DESIGN. International Minerals & Chemical Corporation. SN 106,599. Pub. 4-23-63. Filed 10-18-60.

752,545. MW WITHIN AN OVAL. Hayden Publishing Company, Inc. SN 117,495. Pub. 4-23-63. Filed 4-10-61.

752,546. COLOR KEYIFIC AND DESIGN. Robert Carey Dorr. SN 119,491. Pub. 4-23-63. Filed 5-8-61.

752,547. COLORITE. Williams & Meyer Co. SN 129,440. Pub. 4-23-63. Filed 10-6-61.

752,548. READING HORIZONS. Western Michigan University. SN 133,350. Pub. 4-23-63. Filed 11-24-61.

752,549. AUTOMATION AND DESIGN. The Penton Publishing Company. SN 135,529. Pub. 4-23-63. Filed 1-10-62.

752,550. WORD WESTERN OFFICE REPRODUCTION DIGEST. Russell F. Brown. SN 136,730. Pub. 4-23-63. Filed 1-29-62.

752,551. SPACE TECHNOLOGY INTERNATIONAL. McGraw-Hill Publishing Company, Inc. SN 138,409. Pub. 4-23-63. Filed 2-21-62.

752,552. FRAME-A-CARD. American Greetings Corporation. SN 145,650. Pub. 4-23-63. Filed 5-29-62.

752,553. "THE BUC BOOK" AND DESIGN. Boats Unlimited Corp. SN 148,293. Pub. 4-23-63. Filed 7-3-62.

752,554. PARCELMAN. United Parcel Service of America, Inc. SN 148,340. Pub. 4-23-63. Filed 7-3-62.

752,555. ELECTRONIC SYMBOL DESIGN. Chilton Company. SN 148,478. Pub. 4-23-63. Filed 7-6-62.

752,556. SAM'S STRIP. The Hearst Corporation. SN 148,731. Pub. 4-23-63. Filed 7-10-62.

752,557. MODERN MATERIALS HANDLING. Cahners Publishing Company, Inc. SN 148,950. Pub. 4-23-63. Filed 7-13-62.

752,558. PROFIT MEMO. Food Enterprises, Inc. SN 150,937. Pub. 4-23-63. Filed 8-10-62.

Class 39 — Clothing

752,559. CONTINENTAL CASUALS. The Belgrade Shoe Company. SN 55,445. Pub. 4-23-63. Filed 7-17-58.

752,560. 80 SPUN. JMS Corp., by assignment and change of name from House of Worsted-Tex, Inc. SN 102,768. Pub. 4-23-63. Filed 8-16-60.

752,561. FASHION MATES. Sears, Roebuck and Co. SN 120,257. Pub. 4-23-63. Filed 5-17-61.

752,562. THE STAGLINE YOUNG CAVALIER FORMAL FASHION BY AFTER SIX. S. Rudofker's Sons, Inc. SN 121,944. Pub. 4-23-63. Filed 6-13-61.

752,563. YOUNG CAVALIER FORMAL FASHION. S. Rudofker's Sons, Inc. SN 121,945. Pub. 4-23-63. Filed 6-13-61.

752,564. YOUNG CAVALIER FORMAL FASHION BY AFTER SIX. S. Rudofker's Sons, Inc. SN 122,566. Pub. 4-23-63. Filed 6-21-61.

752,565. KENNINGTON LTD AND DESIGN. Kennington, Ltd., Inc., assignee of Kennington, Ltd. SN 131,690. Pub. 8-14-62. Filed 11-9-61.

752,566. JANE BUTLER. Bel-Aire Knitters Inc. SN 145,915. Pub. 4-23-63. Filed 6-1-62.

752,567. SUSAN KEITH. Imperial Shirt Corp. SN 150,064. Pub. 4-23-63. Filed 7-30-62.

Class 40 — Fancy Goods, Furnishings, and Notions

752,568. LOVELAND MAGICA. Lander Co. Inc., d.b.a. Loveland. SN 148,816. Pub. 4-23-63. Filed 7-11-62.

752,569. AMERICANA. David and David, Inc. SN 150,927. Pub. 4-23-63. Filed 8-10-62.

752,570. ENCHANT-TRESS. David and David, Inc. SN 150,928. Pub. 4-23-63. Filed 8-10-62.

752,571. PRINCESS. David and David, Inc. SN 150,929. Pub. 4-23-63. Filed 8-10-62.

752,572. TEMPT-TRESS. David and David, Inc. SN 150,930. Pub. 4-23-63. Filed 8-10-62.

Class 43 — Thread and Yarn

752,573. VERVE. Massachusetts Mohair Plush Company, Inc. SN 117,642. Pub. 4-23-63. Filed 4-11-61.

752,574. CROATAN ETC. AND DESIGN. Henderson Cotton Mills, d.b.a. Croatan Spinning Mills. SN 146,900. Pub. 4-23-63. Filed 6-14-62.

752,575. CALGLO. Standard-Coosa-Thatcher Company. SN 152,842. Pub. 4-23-63. Filed 9-10-62.

Class 44 — Dental, Medical, and Surgical Appliances

752,576. SURGI-GATOR. Andermac, Inc. SN 153,719. Pub. 4-23-63. Filed 9-24-62.

Class 45 — Soft Drinks and Carbonated Waters

752,577. CANTRELL & COCHRANE. Cantrell & Cochrane Ltd., Inc. SN 148,472. Pub. 4-23-63. Filed 7-6-62.

Class 46 — Foods and Ingredients of Foods

752,578. SIFTO. Sifto Salt (1960) Limited. SN 103,207. Pub. 4-23-63. Filed 8-22-60.

752,579. REINA. J. Marlo Tamayo and Brothers, d.b.a. Tamayo Hnos. SN 114,553. Pub. 4-23-63. Filed 2-27-61.

752,580. BETINA'S BEST. Straser Candy Company, Inc., assignee of H. Alex Rosenfelder, d.b.a. Betina Confectionery Company. SN 117,538. Pub. 4-23-63. Filed 4-10-61.

752,581. REPRESENTATION OF A MICROSCOPE ABOVE A COLORED RECTANGLE. Chippers, Inc. SN 117,846. Pub. 4-23-63. Filed 4-14-61.

752,582. LAKE ENTIAT AND DESIGN. Harris Orchard Company, Inc., assignee of Lake Entiat Growers. SN 117,973. Pub. 4-23-63. Filed 4-17-61.

752,583. AGED-CREAM. Loomis, Ltd. SN 118,456. Pub. 4-23-63. Filed 4-24-61.

752,584. PATRICIA MURPHY'S. Patricia Murphy Candlelight Gift Shop, Inc. SN 119,709. Pub. 4-23-63. Filed 5-10-61.

752,585. LA TIARA AND DESIGN. Variety Food Products Company, d.b.a. Variety Food Products. SN 123,382. Pub. 4-23-63. Filed 7-3-61.

752,586. DESIGN OF A CROWNED CAT ON A PILLOW. Kitty Queen Pet Foods, Inc. SN 129,620. Pub. 4-23-63. Filed 10-10-61.

752,587. MA PERKINS. The Procter & Gamble Company. SN 133,315. Pub. 4-23-63. Filed 12-4-61.

752,588. SHIELD DESIGN. Willow Brook Company. SN 137,588. Pub. 4-23-63. Filed 2-8-62.

752,589. JUAN VALDEZ ETC. AND DESIGN. National Federation of Coffee Growers of Colombia. SN 138,219. Pub. 4-23-63. Filed 2-19-62.

752,590. FLAVOR BUDS. General Foods Corporation. SN 138,298. Pub. 4-23-63. Filed 2-20-62.

752,591. PAN-TEX AND DESIGN. Howard Gault, d.b.a. Howard Gault Company. SN 139,075. Pub. 4-23-63. Filed 3-5-62.

752,592. H/G ETC. AND DESIGN. Howard Gault, d.b.a. Howard Gault Company. SN 139,077. Pub. 4-23-63. Filed 3-5-62.

752,593. ASCOT ETC. AND DESIGN. Howard Gault, d.b.a. Howard Gault Company. SN 139,078. Pub. 4-23-63. Filed 3-5-62.

752,594. DESIGN OF BUILDING AND MALE FIGURE MOUNTED ON TOP. Milton J. Willner, d.b.a. Mister Taco. SN 140,800. Pub. 4-23-63. Filed 3-26-62.

752,595. LUFREMA. Lou Freeman Co. SN 141,605. Pub. 4-23-63. Filed 4-5-62.

752,596. ESTRELLA. L.D.G. Corporation of Miami, d.b.a. L.D.G. SN 143,744. Pub. 4-23-63. Filed 5-3-62.

752,597. SHOW. Purity Stores, Inc. SN 144,096. Pub. 4-23-63. Filed 5-8-62.

752,598. PERSIAN SHERBET. White House Creamery Company. SN 144,790. Pub. 4-23-63. Filed 5-16-62.

752,599. CRACKER CHATTER. National Biscuit Company. SN 144,972. Pub. 4-23-63. Filed 5-18-62.

752,600. EL CORDERITO AND DESIGN. Rice Growers Association of California. SN 146,216. Pub. 4-23-63. Filed 6-5-62.

752,601. JACK LA LANNE'S. La Lanne Incorporated. SN 146,393. Pub. 4-23-63. Filed 6-7-62.

752,602. SI'A. National Dairy Products Corporation. SN 146,507. Pub. 4-23-63. Filed 6-8-62.

752,603. AZTEC. National Dairy Products Corporation. SN 146,508. Pub. 4-23-63. Filed 6-8-62.

752,604. VITAL. National Dairy Products Corporation. SN 146,509. Pub. 4-23-63. Filed 6-8-62.

752,605. YOURS BY REQUEST. Yours . . . By Request, Inc. SN 146,856. Pub. 4-23-63. Filed 6-13-62.

752,606. PAY DAY. Pay Way Feed Mills, Inc. SN 147,619. Pub. 4-23-63. Filed 6-25-62.

752,607. AKTIV AND DESIGN. Crowley's Milk Company, Inc. SN 148,298. Pub. 4-23-63. Filed 7-3-62.

752,608. MORGANS' DOGWOOD BRAND AND DESIGN. Morgan & Sons Poultry Company, Incorporated. SN 148,643. Pub. 4-23-63. Filed 7-9-62.

752,609. SOU'WESTER. Mondial Company, Inc. SN 150,435. Pub. 4-23-63. Filed 8-3-62.

752,610. TRANSATLANTIC. Mondial Company, Inc. SN 150,437. Pub. 4-23-63. Filed 8-3-62.

752,611. GOLDEN THISTLE. Anderson, Clayton & Co. SN 154,458. Pub. 4-23-63. Filed 10-4-62.

752,612. DUTCH COUNTRY. Eastern Food Distributors, Inc. SN 154,809. Pub. 4-23-63. Filed 10-9-62.

Class 49 — Distilled Alcoholic Liquors

752,613. TORADA. Sazerac Company, Inc. SN 96,744. Pub. 4-23-63. Filed 5-9-60.

752,614. LONDON'S CATALINA. London & Company, Inc. SN 125,830. Pub. 4-23-63. Filed 8-11-61.

752,615. HI-BALL AND DESIGN. The American Distilling Company, d.b.a. The American Distilling Co. (Inc.). SN 129,565. Pub. 4-23-63. Filed 10-10-61.

752,616. OLD WAGON WHEEL. Jas. Barclay & Co. Limited. SN 151,466. Pub. 4-23-63. Filed 8-20-62.

Class 50 — Merchandise Not Otherwise Classified

752,617. NORCAP. F.G.M. & Co. SN 151,130. Pub. 4-23-63. Filed 8-14-62.

752,618. EXTRUDKOTE. Polychrome Corporation. SN 131,154. Pub. 4-23-63. Filed 11-1-61.

752,619. WARMOLD. Warren Molded Plastics, Inc. SN 132,002. Pub. 4-23-63. Filed 11-14-61.

752,620. MAGIC SPARKLES GLITTER. Magic Sparkles, Inc. SN 136,382. Pub. 4-23-63. Filed 1-23-62.

752,621. 3M. Minnesota Mining and Manufacturing Company. SN 147,493. Pub. 4-23-63. Filed 6-22-62.

752,622. PITCH-BOARD. Close and Patenaude. SN 148,364. Pub. 4-23-63. Filed 7-5-62.

Class 51 — Cosmetics and Toilet Preparations

752,623. COSMO-FRUIT. Robert Alan Franklyn. SN 126,422. Pub. 4-23-63. Filed 8-21-61.

752,624. ATOYA. Alden M. Green, d.b.a. Mt. Hebron Sky Ranch Laboratories. SN 142,337. Pub. 4-23-63. Filed 4-16-62.

752,625. LITTLE GAD-ABOUT AND DESIGN. Jay Johns. SN 147,373. Pub. 4-23-63. Filed 6-21-62.

752,626. NAKID. Kenneth Burgher. SN 148,275. Pub. 4-23-63. Filed 6-13-62.

752,627. VOTRE AMI. Lillian Goldberg, assignee of Votre Ami Cosmetic Co. SN 148,445. Pub. 4-23-63. Filed 7-5-62.

752,628. STERISOL. Warner-Lambert Pharmaceutical Company. SN 148,930. Pub. 4-23-63. Filed 7-12-62.

Class 52 — Detergents and Soaps

752,629. NAME BRAND. Malco Products, Inc. SN 106,210. Pub. 4-23-63. Filed 10-11-60.

752,630. X SPOT. Redlum Research Corporation, d.b.a. Redlum Research Corp. SN 116,073. Pub. 4-23-63. Filed 3-20-61.

752,631. MIRACLE OIL-GO AND DESIGN. Tri State Industries, Inc., d.b.a. Tri State Supply Co. SN 124,015. Pub. 4-23-63. Filed 7-14-61.

752,632. SUD'N KLEEN. Lincoln Industrial Chemical Company, Inc. SN 128,449. Pub. 4-23-63. Filed 9-22-61.

752,633. QUIX-IT. Household Research Corporation. SN 129,618. Pub. 4-23-63. Filed 10-10-61.

752,634. SHAM PREEM. Stur-Dee Health Products, Inc. SN 133,838. Pub. 4-23-63. Filed 12-11-61.

752,635. WEE GEE. Macmillan Ring-Free Oil Co. Inc. SN 136,785. Pub. 4-23-63. Filed 1-29-62.

752,636. LCE AND DESIGN. Nelson Haney, d.b.a. Nic-A-Lene Company. SN 141,068. Pub. 4-23-63. Filed 3-29-62.

752,637. MASTER TOUCH AND DESIGN. Yankee Chemical Inc. SN 145,643. Pub. 4-23-63. Filed 5-28-62.

752,638. LOVELAND. Lauder Co. Inc., d.b.a. Loveland. SN 148,815. Pub. 4-23-63. Filed 7-11-62.

752,639. EXPLORER. Texize Chemicals, Inc. SN 154,385. Pub. 4-23-63. Filed 10-2-62.

Service Marks

Class 100 — Miscellaneous

752,640. ISS. International Shoppers Service, S.A.R.L. SN 112,384. Pub. 4-23-63. Filed 1-24-61.

752,641. CIRCLE AND POINT DESIGN. Arthur Joseph Kalo, d.b.a. A. J. Kalo Co. SN 120,420. Pub. 4-23-63. Filed 5-19-61.

752,642. WHERE RESEARCH IS PLANNED WITH PROGRESS IN MIND. Universal Oil Products Company. SN 132,402. Pub. 4-23-63. Filed 11-20-61.

752,643. WE LIVE TO KILL—BUGS! AND REPRESENTATION OF MAN WITH MOUSE. Western Exterminator Company. SN 139,712. Pub. 4-23-63. Filed 3-12-62.

752,644. '400' AND DESIGN. Imperial 400 National, Inc., assignee of Imperial 400 Motels, Inc. SN 145,187. Pub. 4-23-63. Filed 5-22-62.

752,645. TEENAGERS MARCH AGAINST LEUKEMIA. American Lebanese Syrian Associated Charities, d.b.a. Alsac. SN 147,780. Pub. 4-23-63. Filed 6-27-62.

Class 101 — Advertising and Business

752,646. REVOLV-A-COUNT. John Breuner Company. SN 64,607. Pub. 4-23-63. Filed 12-19-58.

752,647. IBA AND DESIGN. The International Boating Association, Inc. SN 107,197. Pub. 4-23-63. Filed 10-26-60.

752,648. TW. Thomas & White, Inc. SN 128,618. Pub. 4-23-63. Filed 9-25-61.

752,649. RHYTHM-CHECK. Monroe Calculating Machine Company, Inc. SN 133,393. Pub. 4-23-63. Filed 12-5-61.

752,650. REPRESENTATION OF ANIMATED HEAD OR FACE. Reddy Kilowatt, Inc. SN 135,390. Pub. 4-2-63. Filed 1-8-62.

752,651. 3 STAR. The Three Star Stamp Company. SN 145,004. Pub. 4-23-63. Filed 5-18-62.

752,652. LITTLE MISS UNIVERSE. Miss Universe, Inc. SN 147,215. Pub. 4-23-63. Filed 6-19-62.

Class 102 — Insurance and Financial

752,653. CITIZENS U.S.A. UNITED SECURITY ACCOUNT AND DESIGN. Citizens Bank & Trust Company. SN 121,704. Pub. 4-23-63. Filed 6-9-61.

752,654. COSMO AND DESIGN. Cosmopolitan Insurance Company. SN 130,431. Pub. 4-23-63. Filed 10-23-61.

752,655. AMERICAN FINANCE SYSTEM. State Loan and Finance Management Corporation. SN 133,903. Pub. 4-23-63. Filed 12-12-61.

752,656. UNITED FINANCE SYSTEM. State Loan and Finance Management Corporation. SN 133,904. Pub. 4-23-63. Filed 12-12-61.

752,657. AMERICAN CAPITAL LIFE INSURANCE COMPANY. American Capital Life Insurance Company. SN 134,076. Pub. 4-23-63. Filed 12-15-61.

752,658. A.R.D AND DESIGN. American Research and Development Corporation. SN 137,034. Pub. 4-23-63. Filed 2-1-62.

752,659. EMBLEM AUTO POLICY ETC. AND DESIGN. The Beacon Mutual Indemnity Company. SN 139,268. Pub. 4-23-63. Filed 3-7-62.

752,660. PLUS AND DESIGN. Philadelphia Life Insurance Company. SN 142,964. Pub. 4-23-63. Filed 4-24-62.

Class 103 — Construction and Repair

752,661. FIGURE DESIGN. National Lubricating Grease Institute, Inc. SN 111,907. COLLECTIVE MARK. Pub. 4-23-63. Filed 1-16-61.

752,662. GROTESQUE HUMAN HOLDING A MAGNIFYING GLASS. Getz Exterminators, Inc. SN 135,499. Pub. 4-23-63. Filed 1-10-62.

752,663. GB AND DESIGN. Giurdanella Bros., Inc. SN 138,859. Pub. 4-23-63. Filed 3-1-62.

Class 105 — Transportation and Storage

752,664. SABRE LINE. Sabre Shipping Corporation, d.b.a. Sabre Line. SN 146,545. Pub. 4-23-63. Filed 5-22-62.

Class 106 — Material Treatment

752,665. PATHE AND DESIGN. Pathe News, Inc. SN 134,150. Pub. 4-23-63. Filed 12-15-61.

752,666. MAILMASTER. Mastercolor of New England, Inc., d.b.a. Mailmaster Photolabs. SN 138,517. Pub. 4-23-63. Filed 2-23-62.

Class 107 — Education and Entertainment

752,667. NATIONAL BABY CARE COUNCIL. National Baby Care Council. SN 123,757. Pub. 4-23-63. Filed 7-11-61.

Collective Membership Mark

Class 200

752,668. APA ETC. AND DESIGN. The Appliance Profession Association of California, Inc. SN 132,889. Pub. 4-23-63. Filed 11-28-61.

Certification Marks

Class A — Goods

752,669. DANISH FURNITUREMAKERS' CONTROL AND DESIGN. Danske Møbelproducenters Forening til Kvalitetsmaerkning af Danske Eksportmøbler. SN 145,446. Pub. 4-23-63. Filed 5-25-62.

Class B — Services

752,670. IDL AND DESIGN. McKesson & Robbins, Incorporated. SN 142,117. Pub. 4-23-63. Filed 4-12-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

752,671. Kellogg Company, Battle Creek, Mich. SN 131,846. Filed P.R. 11-13-61; Am. S.R. 4-11-63.

SPACE SAVER

For Disposable Packages, Cartons, Containers, and Wrappers for Cereal Foods and Other Goods, Sold in Filled Condition.

First use Nov. 9, 1961.

Class 11 — Inks and Inking Materials

752,672. Sperry Rand Corporation, New York, N.Y. SN 152,453. Filed P.R. 9-4-62; Am. S.R. 5-15-63.

REMINGTON

For Inked Ribbons.

First use Nov. 28, 1961.

Class 16—Protective and Decorative Coatings

752,673. The Sherwin-Williams Company, Cleveland, Ohio. SN 144,548. Filed P.R. 5-14-62; Am. S.R. 5-6-63.

GLITTER-KOTE

For Varnish.
First use May 4, 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

752,674. Smith Tool Company, Compton, Calif. SN 142,866. Filed P.R. 4-23-62; Am. S.R. 4-24-63.

the Quality bit

For Well Drilling Bits.
First use Mar. 7, 1962.

752,675. The Lockwood Manufacturing Company, Cincinnati, Ohio. SN 146,396. Filed P.R. 6-7-62; Am. S.R. 2-12-63.

DEPAN-N-PAK

For Electrically Operated Machines for Removing Rolls, Buns and the Like From Baking Pans and Packing Them in Containers for Sale and for the Replacement Parts and Component Elements in This Operation.
First use Jan. 5, 1962.

Class 27—Horological Instruments

752,676. Jean Föllmi, Geneva, Switzerland. SN 127,332. Filed P.R. 9-6-61; Am. S.R. 5-9-63.

Dubois Frères 1888

Owner of Swiss Reg. No. 185,326, dated Dec. 22, 1960.
For Watches.
First use 1888; in commerce May 3, 1961.

Class 37—Paper and Stationery

752,677. Sanford Ink Company, Bellwood, Ill. SN 125,623. Filed P.R. 8-8-61; Am. S.R. 4-29-63.

ALL-PEN

For Fountain Pen Ink Cartridges.
First use July 5, 1961.

Class 38—Prints and Publications

752,678. Society of the Divine Word, Techny, Ill. SN 111,360. Filed P.R. 1-5-61; Am. S.R. 5-8-63.



For Cartoon Panels of a Religious Character.
First use Nov. 15, 1960; Sept. 15, 1955, as to "Angelo."

752,679. Fairchild Publications, Inc., New York, N.Y. SN 128,668. Filed P.R. 9-26-61; Am. S.R. 4-19-63.



For Section of a Magazine.
First use July 14, 1961.

752,680. Wisconsin Farmer Company, Inc., Racine, Wis. SN 130,600. Filed P.R. 10-24-61; Am. S.R. 4-26-63.

THE WISCONSIN FARMER

For Department or Section of a Periodical.
First use in or about June 1929; in or about 1849 on a periodical.

752,681. Outdoor Vacations, Inc., d.b.a. Outdoors, Inc., Columbia, Mo. SN 130,988. Filed P.R. 10-30-61; Am. S.R. 4-29-63.

RESORT BLUE BOOK

For Publication Issued Periodically in the Nature of a Guide Outlining Vacation and Travel Information and Listing Resorts and Their Accommodations, Rates and Other Information.
First use in July 1960.

752,682. Outdoor Vacations, Inc., d.b.a. Outdoors, Inc., Columbia, Mo. SN 130,989. Filed P.R. 10-30-61; Am. S.R. 4-29-63.

THE CAMPING BLUE BOOK

For Publication Issued Periodically in the Nature of a Directory of Camping Facilities, Both Public and Private, in the United States and Canada, and the Participation Sports Available at These Sites.
First use December 1960.

752,683. Bulletin Company, Philadelphia, Pa. SN 137,111. Filed P.R. 2-2-62; Am. S.R. 4-30-63.

Pepper Potpourri

For Special Section of a Sunday Newspaper Magazine.
First use Sept. 17, 1961.

752,684. M. E. Arden Company, Detroit, Mich. SN 150,216. Filed P.R. 8-1-62; Am. S.R. 5-3-63.

Business Indicator

For Newsletter.
First use Dec. 1, 1961.

752,685. National Market Reports, Inc., Chicago, Ill. SN 156,430. Filed P.R. 11-1-62; Am. S.R. 4-29-63.

TRUCK BLUE BOOK OFFICIAL USED TRUCK VALUATIONS

For Periodical Booklets Issued Approximately Twice Yearly.
First use January 1959.

Class 39—Clothing

752,686. Alexander Lipton, Inc., Los Angeles, Calif. SN 113,931. Filed P.R. 2-17-61; Am. S.R. 2-26-63.



Alexander Lipton is the original creator and designer of the Alexander Lipton line of casual clothing and his consent to use and register his name is of record.
For Casual Dresses for Women and Children.
First use Nov. 1, 1954.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

752,687. Heal Fabrics Limited, London, England. SN 153,954. Filed P.R. 9-26-62; Am. S.R. 4-30-63.

HEAL'S

For Fabrics for Making Slipcovers, Draperies, Upholstered Furniture and the Like.
First use April 1951; in commerce June 1951.

Class 43—Thread and Yarn

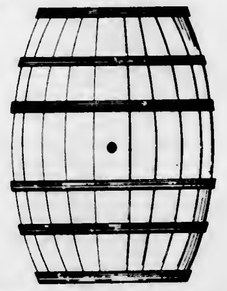
752,688. Emile Bernat & Sons Company, Jamaica Plain, Mass. SN 119,468. Filed P.R. 5-8-61; Am. S.R. 4-29-63.

THE EASY RAGLAN

For Packages of Yarn and Accessories With Directions for Making Sweaters.
First use June 24, 1959.

Class 46—Foods and Ingredients of Foods

752,689. James Candy Company, Atlantic City, N.J. SN 101,628. Filed P.R. 7-28-60; Am. S.R. 5-1-63.



The mark consists of the configuration of the package used as a container for the goods. The drawing is lined for blue, but no claim to color is made.
For Candy.
First use in June 1940.

752,690. Foremost Dairies, Inc., San Francisco, Calif. SN 109,862. Filed P.R. 12-8-60; Am. S.R. 10-1-62.



For Ice Cream.
First use Nov. 1, 1960.

752,691. National Starch and Chemical Corporation, New York, N.Y. SN 117,037. Filed P.R. 4-3-61; Am. S.R. 5-17-63.

BATTER BIND

For Dry Starch for Use in Forming an Aqueous Slurry for Coating Food Products Prior to Their Being Breaded and Fried.
First use Jan. 15, 1961.

752,692. Max H. Ries, Chicago, Ill. SN 122,564. Filed P.R. 6-21-61; Am. S.R. 2-7-63.

PLUMLET

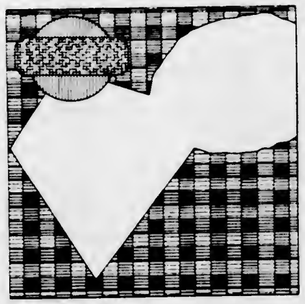
For Canned Plums.
First use on or about Aug. 3, 1960.

752,693. Hanover Canning Company, Hanover, Pa. SN 136,552. Filed 5-3-63.



For Canned Beans With Pork.
First use Nov. 7, 1961.

752,694. Robert S. Wolf, d.b.a. Holiday Frosted Food Company, Philadelphia, Pa. SN 151,858. Filed 8-24-62.



The drawing consists of a gingham design of blue and white checks. The drawing is lined for red, yellow, and blue.

For Frozen Meats—Namely, Beef Steaks, Ground Beef, Beef Liver, Pork Chops, Veal Cutlets.
First use November 1946.

Class 47 — Wines

752,695. Gold Seal Vineyards, Inc., Hammondsport, N.Y. SN 137,337. Filed P.R. 2-6-62; Am. S.R. 5-22-63.

LAKE KEUKA

For Wines.
First use in 1910.

Class 49 — Distilled Alcoholic Liquors

752,696. Mr. Boston Distiller Inc., d.b.a. Essex Importers and Distillers, Ltd., Boston, Mass. SN 145,107. Filed P.R. 5-21-62; Am. S.R. 5-10-63.

HANCOCK

For Vodka.
First use May 4, 1962.

Class 51 — Cosmetics and Toilet Preparations

752,697. Elizabeth Arden Sales Corporation, New York, N.Y. SN 120,367. Filed P.R. 5-19-61; Am. S.R. 5-10-63.

MEXICAN FIRE

For Nail Polishes, Lipsticks, and Rouges.
First use Apr. 3, 1961.

752,698. Yardley of London, Inc., Paterson, N.J. SN 135,547. Filed P.R. 1-10-62; Am. S.R. 4-22-63.

FULL FINISH

For Foundation Make-Up.
First use Nov. 29, 1961.

752,699. Merle Norman Cosmetics, Inc., Los Angeles, Calif. SN 142,546. Filed P.R. 4-18-62; Am. S.R. 5-7-63.

SHEER DAWN

For Powder Base.
First use Mar. 23, 1962.

Class 52 — Detergents and Soaps

752,700. Sanitary Soap Company, Inc., Paterson, N.J. SN 129,238. Filed P.R. 10-4-61; Am. S.R. 5-15-63.

LOTION-KLEEN

For Liquid Hand Soap (or Detergent).
First use June 1961.

752,701. Janitorial Supplies Corporation, Albany, N.Y. SN 134,325. Filed P.R. 12-19-61; Am. S.R. 5-3-63.

NOWYP

For Cleaning Preparation for Windows; Car Wash; and Liquid Dishwashing Compound.
First use Aug. 29, 1961.

752,702. The Bendix Corporation, Detroit, Mich. SN 141,570. Filed P.R. 4-5-62; Am. S.R. 4-30-63.

GREASE *clene*

For Metal Cleaners and Degreasers.
First use Feb. 15, 1962.

752,703. Wilbert Products Co., Inc., New York, N.Y. SN 155,118. Filed P.R. 10-8-62; Am. S.R. 5-2-63.

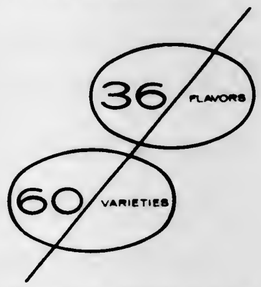
FRESH MiNT

For Cleanser, Disinfectant and Deodorant Preparation for Household Use.
First use Oct. 4, 1961.

Service Mark

Class 100 — Miscellaneous

752,704. Thomas Carvel, Yonkers, N.Y. SN 98,267. Filed P.R. 6-2-60; Am. S.R. 3-5-62.



For Serving Foods and Beverages at Road Stands.
First use May 22, 1960.

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162,324. MUSICAL COURIER. Cl. 38. 12-12-22.
165,193. MONO-LINE. Cl. 12. 3-6-23.
166,086. NOVADELOX. Cl. 6. 3-27-23.
167,201. OSIRIS AND DESIGN. Cl. 46. 4-24-23.
167,202. MONA LISA AND DESIGN. Cl. 46. 4-24-23.
168,228. JAQUES. Cl. 44. 5-15-23.
168,244. L. HYMAN & SONS AND DESIGN. Cl. 37 5-15-23.
168,812. QUALITY INN AND DESIGN. Cl. 46. 5-29-23
169,763. COPLEY. Cl. 39. 7-3-23.
170,395. PYREX. Cl. 33. 7-17-23.
170,510. REGATTA. Cl. 16. 7-17-23.
170,627. SUNNYBROOK. Cl. 1. 7-17-23.
170,642. CON-O-LITE AND DESIGN. Cl. 2. 7-17-23.
170,785. FLORADALE. Cl. 1. 7-24-23.
170,786. FORDHOOK. Cl. 1. 7-24-23.
171,200. ANITA. Cl. 46. 7-31-23.
171,395. YARMOR. Cl. 16. 8-7-23.
171,396. RISOR. Cl. 16. 8-7-23.
171,398. HERCO. Cl. 16. 8-7-23.
172,014. SERVANT TO THE HOME. Cl. 21. 8-21-23.
172,286. FRALINGER'S. Cl. 46. 8-28-23.
173,326. EMBASSY. Cl. 39. 9-25-23.
173,773. TUADS AND DESIGN. Cl. 6. 10-2-23.
174,403. MUR-COP. Cl. 16. 10-16-23.
175,029. F AND DESIGN. Cl. 14. 10-30-23.
399,431. NURSEPTIC. Cl. 6. 1-5-43.
400,088. DURODI. Cl. 23. 2-16-43.
401,133. DESIGN PORTRAIT OF A MAN. Cl. 42. 4-27-43.
401,275. DESIGN OF A SHIELD. Cl. 38. 5-4-43.
401,348. MARCO AND DESIGN. Cl. 44. 5-11-43.
401,412. FIBREX. Cl. 12. 5-18-43.
401,420. CHEVRON. Cl. 12. 5-18-43.
401,580. ELKONIUM. Cl. 21. 5-25-43.
401,694. DURODI. Cl. 14. 6-1-43.
401,734. PHILLIPS UNIQUE AND DESIGN. Cl. 21. 6-8-43.
401,769. "MINUTE-MAN". Cl. 26. 6-8-43.
402,161. LEWISOL. Cl. 1. 7-6-43.
402,345. GLASSBESTOS. Cl. 35. 7-13-43.
402,589. RIGORTEX. Cl. 16. 8-3-43.
402,627. E-JECT-O. Cl. 52. 8-3-43.
402,715. GLAMORTEX. Cl. 16. 8-10-43.
402,774. HAND WARDEN AND DESIGN. Cl. 6. 8-10-43.
403,054. CERFEX. Cl. 12. 8-31-43.
403,227. LASTIDECK. Cl. 12. 9-14-43.
403,228. NUDECK. Cl. 12. 9-14-43.
403,229. U-G-L. Cl. 12. 9-14-43.
403,230. UGL AND DESIGN. Cl. 12. 9-14-43.
403,248. MX. Cl. 4. 9-14-43.
403,473. LORD JEFF AND DESIGN. Cl. 39. 9-28-43.
403,474. WOOLHARA. Cl. 39. 9-28-43.
403,601. COL. COTTON BLOSSOM. Cl. 24. 10-5-43.
403,633. C & K AND DESIGN. Cl. 39. 10-5-43.
403,682. COL. COTTON BLOSSOM. Cl. 42. 10-12-43.
403,698. EVERGREEN AND DESIGN. Cl. 46. 10-12-43.
403,790. MO-LYB-DIE. Cl. 23. 10-19-43.
403,791. F AND DESIGN. Cl. 23. 10-19-43.
403,845. MORTITE. Cl. 12. 10-19-43.
403,876. MELH. Cl. 1. 10-19-43.
403,966. VALERIE JEAN AND DESIGN. Cl. 46. 10-26-43.
404,054. POLAROID. Cl. 26. 11-2-43.

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415,832. INDOOR CLIMATE MERCHANDISING. Cl. 36. 8-14-45.
515,866. GOLDEN GUERNSEY. Cl. 46. 10-4-49.
515,867. GOLDEN GUERNSEY AND DESIGN. Cl. 46. 10-4-49.
686,763. CLEAR-AWAY. Cl. 18. 10-13-59.
702,315. CHRISTIAN DIOR ETC. AND DESIGN. Cl. 39. 8-2-60.
745,472. NO-SKIVE. Cl. 35. 2-19-63.

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115,788. TRIPLE DIAMOND. Cl. 35. 3-6-17.
115,789. DESIGN OF DIAMONDS. Cl. 35. 3-6-17.
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348,007. ECON-O-CASE AND DESIGN. Cl. 31. 7-13-37.
444,446. DERBY DAY. Cl. 39. 3-20-51.
624,539. M & R ORIGINAL. Cl. 39. 4-3-56.
625,312. NRD. Cl. 26. 4-17-56.
625,383. AIRFLOW AND DESIGN. Cl. 32. 4-17-56.
626,748. FERTILRITE AND DESIGN. Cl. 10. 5-15-56.
629,879. ELECTROCRAFT. Cl. 21. 7-3-56.
630,428. CULTURE CRAFT AND DESIGN. Cl. 28. 7-10-56.
630,903. CAMEO. Cl. 32. 7-17-56.
631,107. LUSTREFORM. Cl. 4. 7-24-56.

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645,560. TC AND DESIGN. Cl. 1.
645,561. CIRCULAR DESIGN. Cl. 1.
645,571. VULCOT PRINCESS. Cl. 2.
645,574. DIAL-A-HOOK AND DESIGN. Cl. 2.
645,579. PHALTLESS. Cl. 6.
645,590. ECONOCRETE. Cl. 6.
645,592. CHARG-A-CAR. Cl. 6.
645,598. MALLARDS. Cl. 6.
645,601. INSTA-GREEN. Cl. 6.
645,605. TUF-PLATE. Cl. 6.
645,611. SILVER STREAK AND DESIGN. Cl. 9.
645,612. OR-FER-GRO. Cl. 10.
645,613. P.I.P. AND DESIGN. Cl. 11.
645,616. CORAL STONE. Cl. 12.
645,617. VENETIAN STONE. Cl. 12.
645,620. KEY-LOK. Cl. 13.
645,634. BEEKAR. Cl. 15.
645,636. BRAYKIN. Cl. 15.
645,639. CREST ETC. AND DESIGN. Cl. 16.
645,643. NU-VITA-F. Cl. 18.
645,644. HOMEOLYTE. Cl. 18.
645,647. "SANDY." Cl. 18.
645,650. BUMPER'S RELIEF AND DESIGN. Cl. 18.
645,651. PREPEP. Cl. 18.
645,654. HEMOSTASE. Cl. 18.
645,657. NEWBYCO VITALIZER. Cl. 18.
645,659. BOGADIN. Cl. 18.
645,670. SEA-VIGOR. Cl. 18.
645,673. DO-IT. Cl. 21.
645,676. ELECTRO-SENTRY. Cl. 21.
645,678. DESIGN OF BATHING BEAUTY ON WHEELS HOLDING LIGHTNING BOLTS. Cl. 21.
645,681. SENTRY AND DESIGN. Cl. 21.
645,682. AIRFIL. Cl. 21.
645,684. KADDIE-O-MATIC. Cl. 22.
645,686. BOWLITE. Cl. 22.
645,689. KLOBBER WOBBLER. Cl. 22.
645,692. KNOT-MASTER. Cl. 22.
645,693. TCA. Cl. 22.
645,694. SAFE AT FIRST. Cl. 22.
645,699. ATOMIX. Cl. 23.
645,700. STRIPO. Cl. 23.
645,710. MYCO. Cl. 23.
645,719. ACADEMY. Cl. 23.
645,730. AERO-MOLD. Cl. 34.
645,734. DEKABRIDGE. Cl. 26.
645,741. WATER QUEEN. Cl. 31.
645,748. OH-BOY. Cl. 34.
645,749. HOME COMFORT. Cl. 34.

645,753. SOMETIMES AND DESIGN. Cl. 36.
645,755. FREE-UR-TONE. Cl. 36.
645,756. P AND N. Cl. 37.
645,758. DOCEY-DOE. Cl. 37.
645,759. PALS AND GALS. Cl. 37.
645,765. CERAMICOL. Cl. 37.
645,777. MIAMI BEACH SUN. Cl. 38.
645,779. PLAY-KNIT. Cl. 39.
645,780. DARLIN'S. Cl. 39.
645,787. ZIP-EASE. Cl. 39.
645,788. GEORGE CRAFT AND DESIGN. Cl. 39.
645,789. RIB'N-AIRE. Cl. 39.
645,796. CEE-N-EM. Cl. 39.
645,799. CASHMA-NYLE. Cl. 39.
645,800. PLATTER PATCHES. Cl. 40.
645,804. NYLONACE. Cl. 42.
645,805. PEPPERELL COUNTRY COTTONS. Cl. 42.
645,806. RENDALE. Cl. 42.
645,808. AURA. Cl. 42.
645,814. FOREMOST THE GREAT NAME IN DAIRY PRODUCTS. Cl. 46.
645,815. JA BO'S. Cl. 46.
645,817. BOOTH ETC. AND DESIGN. Cl. 46.
645,822. GRAND SLAM. Cl. 46.
645,823. CAR-MO-LAS. Cl. 46.
645,825. KEY KLUB. Cl. 46.
645,836. SUPERTATE. Cl. 46.
645,840. QWIK-TIME AND DESIGN. Cl. 46.
645,842. "HARMONICA" AND DESIGN. Cl. 46.
645,849. ROSE GLOW. Cl. 46.
645,850. KILLER. Cl. 46.
645,854. NO-MAD. Cl. 50.
645,855. HOLLIDAY. Cl. 50.
645,859. HOUSE OF WINSTON LTD. AND DESIGN. Cl. 51.
645,860. OCEANUS. Cl. 51.
645,863. LIQUID UMPRELLA. Cl. 51.
645,864. ROTERSEPT. Cl. 51.
645,865. PARLEZ-VOUS. Cl. 51.
645,866. "FOUR LOVES HAVE I." Cl. 51.
645,868. LADY BOYER AND DESIGN. Cl. 51.
645,872. FINAL FINISH. Cl. 51.
645,877. JAMELLE FOLSOM AND DESIGN. Cl. 51.
645,880. DESIGN OF TEN POINT STAR. Cl. 52.
645,881. HAMILTON. Cl. 52.
645,883. COLGA-MATIC. Cl. 52.
645,889. KNOW AS YOU GO ETC. AND DESIGN. Cl. 101.
645,894. KAYMAR. Cl. 106.
645,895. CAULAY. Cl. 106.
645,903. PROMAT MEANS PROTECTIVE MATERIALS. Cl. 6.
645,904. CEDAR WICK AND DESIGN. Cl. 6.
645,910. TINYLITES. Cl. 21.
645,912. MAECKER. Cl. 21.
645,913. MAID FOR YOU. Cl. 21.
645,915. PRICE'S GUERNSEY MAID. Cl. 46.
645,920. EYE-TREAT. Cl. 51.
645,924. LITHOCOLOR. Cl. 101.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

142,117. ROYAL. Cl. 23. 5–8–21. Royal Typewriter Company, Inc. Royal McBee Corporation, Port Chester, N.Y. Amended to appear:

ROYAL

670,105. LOGOTYPE DESIGN. Cl. 13. 11–25–58. Fluidmaster, Inc., Anaheim, Calif. Amended: In the statement, column 1, line 2 is deleted and *1800 Via Burton* is inserted, and the drawing is amended to appear:



679,641. GOURMET GUIDE. Cl. 38. 6–2–59. The Junior Chamber of Commerce of Washington, D.C., Washington, D.C. Corrected: In the statement, column 2, line 2 "association" should be deleted and *corporation* should be inserted.

679,641. GOURMET GUIDE. Cl. 38. 6–2–59. The Junior Chamber of Commerce of Washington, D.C. Downtown Chapter of the District of Columbia Junior Chamber of Commerce, Washington, D.C. Amended: In the statement, column 1, after line 1, , *now by change of name to Downtow Chapter of the District of Columbia Junior Chamber of Commerce* is inserted.

703,354. WESTERN STATES ANGUS BONANZA. Cl. 101. 8–23–60. Pacific Coast Aberdeen- Angus Association, Sacramento, Calif. Corrected: In the statement, column 1, line 1, after "Coast" *Aberdeen-* should be inserted.

723,596. VETTA. Cl. 26. 11–7–61. M.A.R.S. Manifattura Articoli Resine Sintetiche S.r.l., Milan, Italy. Corrected: In the statement, column 1, line 1, "Mars, S.R.L." should be deleted and *M.A.R.S. Manifattura Articoli Resine Sintetiche S.r.l.* should be inserted.

741,556. STALTO. Cl. 22. 12–4–62. Allgemeiner Zentralverein zur Forderung Schopferischen Schaffens, Salzburg, Austria. Corrected: In the heading, "Trademark" should be deleted and *Collective Mark (Goods)* should be inserted.

749,602. SORBOLITE 325-X. Cl. 1. 5–21–63. Gus Dettelbach, Inc., Atlanta, Ga. Corrected: In the statement, column 1, line 2, after "1506" *Atlanta* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

190,231. ELK MASTER TIP AND DESIGN. Cl. 22. Oscar H. Tweeten, d.b.a. Tweeten Fibre Co., Not Inc. 10–7–24. New Cert. Sec. 7(c) to Tweeten Fibre Company, Inc., Chicago, Ill.

438,938. MAGI CALL AND DESIGN. Cl. 21. E. W. McGrade Manufacturing Co., Inc. 5–18–48. New Cert. Sec. 7(c) to Perini Electronic Corporation, San Mateo, Calif.

523,774. INGERSOLL'S. Cl. 46. Ingersoll Products Corporation. 4–11–50. New Cert. Sec. 7(c) to William Underwood Company, Watertown, Mass.

535,169. ARRO AND DESIGN. Cl. 13. Arro Expansion Bolt Company. 12–26–50. New Cert. Sec. 7(c) to The Arro Expansion Bolt Company, Marion, Ohio.

730,798. PACE. Cl. 34. Pace Co. 5–1–62. New Cert. Sec. 7(c) to Brod & McClung-Pace Co., Portland, Oreg.

733,323. ANUGESIC. Cl. 18. Philco Pharmaceutical Company. 6–26–62. New Cert. Sec. 7(c) to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J.

INDEX OF REGISTRANTS

JULY 9, 1963

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A.G.A. Corp.: *See*—
Aero Geo Astro Corp.
Acetylene Service Co., Denver, Colo. 752,341, pub. 4–23–63. Cl. 6.
Ada Milling Co., to Evergreen Mills, Inc., Ada, Okla. 403,698, ren. 7–9–63. Cl. 46.
Adams, Ruth, Lemmon, S. Dak. 645,872, canc. Cl. 51.
Addressing Machine Co. of California: *See*—
Cotton, Norman L.
Aero Geo Astro Corp., from A.G.A. Corp., d.b.a. Aero Geo Astro Corp., Alexandria, Va. 752,493, pub. 4–23–63. Cl. 26.
Afta Solvents Corp., Glen Cove, N.Y. 752,340, pub. 4–23–63. Cl. 6.
Agfa Aktiengesellschaft Leverkusen-Bayerwerk, Germany. 752,502, pub. 4–23–63. Cl. 26.
Agfa Aktiengesellschaft Leverkusen-Bayerwerk, Germany. 752,503, pub. 4–23–63. Cl. 26.
Aimes Engineering Co., Inc., from American Gage & Machine Co., Chicago, Ill. 752,494, pub. 1–15–63. Cl. 26.
Alabe Crafts, Inc., Cincinnati, Ohio. 752,450, pub. 4–23–63. Cl. 22.
Al-Chroma Paint Co., Inc., Stevens Point, Wis. 752,371, pub. 4–23–63. Cl. 16.
Allgemeiner Zentralverein zur Forderung Schopferischen Schaffens, Salzburg, Austria. 741,556, cor. Cl. 22.
Allied Chemical Corp., New York, N.Y. 752,334, pub. 4–23–63. Cl. 6.
Allied Sewing Machine Distributors, Inc., Detroit, Mich. 752,476, pub. 4–23–63. Cl. 23.
Alsac: *See*—
American Lebanese Syrian Associated Charities.
Aluminum Co. of America, Pittsburgh, Pa. 752,365, pub. 4–16–63. Cl. 14.
American Capital Life Insurance Co., Washington, D.C. 752,657, pub. 4–23–63. Cl. 102.
American Chicle Co., Long Island City, N.Y. 289,788, canc. Cl. 46.
American Cyanamid Co., New York, N.Y. 752,327, pub. 4–23–63. Cl. 6.
American Cyanamid Co., Wayne, N.J. 752,351, pub. 4–23–63. Cl. 10.
American Distilling Co., The, d.b.a. The American Distilling Co. (Inc.), New York, N.Y. 752,615, pub. 4–23–63. Cl. 49.
American Distilling Co., Inc., The: *See*—
American Distilling Co., The.
American Doll & Toy Corp., Brooklyn, N.Y. 752,441–2, pub. 4–23–63. Cl. 22.
American Doll & Toy Corp., Brooklyn, N.Y. 752,446, pub. 4–23–63. Cl. 22.
American Gage & Machine Co.: *See*—
Aimes Engineering Co., Inc.
American Greetings Corp., Cleveland, Ohio. 752,552, pub. 4–23–63. Cl. 38.
American Lebanese Syrian Associated Charities, d.b.a. Alsac, Indianapolis, Ind. 752,645, pub. 4–23–63. Cl. 100.
American Potash & Chemical Corp., Los Angeles, Calif. 645,592, canc. Cl. 6.
American Toy & Furniture Co., Inc., Chicago, Ill. 752,457–8, pub. 4–23–63. Cl. 22.
American Research and Development Corp., Boston, Mass. 752,658, pub. 4–23–63. Cl. 102.
American Trading Co., Inc., Providence, R.I. 752,515, pub. 4–23–63. Cl. 28.
Andermac, Inc., Yoba City, Calif. 752,576, pub. 4–23–63. Cl. 44.
Anderson, Clayton & Co., Houston, Tex. 752,279, pub. 4–23–63. Cl. 1.
Anderson, Clayton & Co., Dallas, Tex. 752,611, pub. 4–23–63. Cl. 46.
Appliance Profession Association of California, Inc., The, Los Angeles, Calif. 752,668, pub. 4–23–63. Cl. 200.
Arden, Elizabeth, Sales Corp., New York, N.Y. 752,697. Cl. 51.
Arden, M. E., Co., Detroit, Mich. 752,684. Cl. 38.
Aristocrat Leather Products, Inc., New York, N.Y. 752,308, pub. 4–23–63. Cl. 3.
Aristocrat Leather Products, Inc., New York, N.Y. 752,537, pub. 4–23–63. Cl. 37.
Arkansas Louisiana Chemical Corp.: *See*—
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Arkansas Louisiana Gas Co., Shreveport, La., from Arkansas Louisiana Chemical Corp., Dover, Del. 752,368, pub. 4–23–63. Cl. 15.
Arro Expansion Bolt Co., to The Arro Expansion Bolt Co., Marion, Ohio. 535,169, new cert. Cl. 13.
Arro Expansion Bolt Co., The: *See*—
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Atlas Supply Co., Newark, N.J. 752,532–3, pub. 4–23–63. Cl. 35.
Automatic Chain Co., Providence, R.I. 752,516, pub. 4–23–63. Cl. 28.
Automatic Control Co., St. Paul, Minn. 752,430–2, pub. 4–23–63. Cl. 21.
Automatic Packaging Equipment, Inc., Skokie, Ill. 752,471, pub. 4–23–63. Cl. 23.
Avalon Hill Co., The, Baltimore, Md. 752,460, pub. 4–23–63. Cl. 22.
Avia-Marine Co., Boeing Field, Seattle, Wash. 752,360, pub. 4–23–63. Cl. 13.
BTF, Inc., Seymour, Tex. 645,650, canc. Cl. 18.
Barbour Co., The, St. Louis, Mo. 645,579, canc. Cl. 6.
Barclay, Jas., & Co. Ltd., Peoria, Ill. 752,616, pub. 4–23–63. Cl. 49.
Beacon Mutual Indemnity Co., The, Columbus, Ohio. 752,659, pub. 4–23–63. Cl. 102.
Beekar Co., Azusa, Calif. 645,634, canc. Cl. 15.
Bel-Aire Knitters Inc., Butler, N.J. 752,566, pub. 4–23–63. Cl. 39.
Belgrade Shoe Co., The, Auburn, Maine. 752,559, pub. 4–23–63. Cl. 39.
Bendix Corp., The, Detroit, Mich. 752,702. Cl. 52.
Berger, Irwin, and Roberta M. Berger, New York, N.Y. 752,435–6, pub. 4–23–63. Cl. 22.
Berger, Roberta M.: *See*—
Berger, Irwin, and Roberta M. Berger.
Berkeley Bags, Inc., Jim Thorpe, Pa. 752,309, pub. 4–23–63. Cl. 3.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 752,688. Cl. 43.
Beseler, Charles, Co., East Orange, N.J. 752,500, pub. 4–23–63. Cl. 26.
Best & Geo Proprietary Ltd., d.b.a. Edinburgh Laboratories (Aust.) Pty. Ltd., Sydney, Australia. 752,385, pub. 4–23–63. Cl. 18.
Betina Confectionery Co.: *See*—
Straser Candy Co., Inc.
Beutlich, Inc., Chicago, Ill. 752,401, pub. 4–23–63. Cl. 18.
Bexell Associates, Inc., Evanston, Ill., to Water Queen Corp., Chicago, Ill. 645,741, canc. Cl. 31.
Biflex Foundations, Inc., New York, N.Y. 645,789, canc. Cl. 39.
Birns & Sawyer Cine Equipment Co., Hollywood, Calif. 752,492, pub. 4–23–63. Cl. 26.
Bite-O-Lite, Chicago, Ill. 752,440, pub. 4–23–63. Cl. 22.
Block China Co., New York, N.Y. 752,522, pub. 4–23–63. Cl. 30.
Block China Co., New York, N.Y. 752,528, pub. 4–23–63. Cl. 33.
Boats Unlimited Corp., Larchmont, N.Y. 752,553, pub. 4–23–63. Cl. 38.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 752,398, pub. 4–23–63. Cl. 18.
Bolt, Daniel, Co., Houston, Tex. 752,361–2, pub. 4–23–63. Cl. 13.
Bonnierforetagen, A. B., Stockholm, Sweden. 752,539, pub. 4–23–63. Cl. 37.
Booth Fisheries Corp., Chicago, Ill. 645,817, canc. Cl. 46.
Borden Co., The, New York, N.Y. 752,315, pub. 4–23–63. Cl. 4.
Boye Needle Co., The, Chicago, Ill. 752,483, pub. 4–23–63. Cl. 23.
Boyer International Laboratories, Inc., Chicago, Ill. 645,868, canc. Cl. 51.
Boyertown Burial Casket Co., Boyertown, Pa. 752,296, pub. 4–23–63. Cl. 2.
Bray Oil Co., Los Angeles, Calif. 645,636, canc. Cl. 15.
Breuner, John, Co., Oakland, Calif. 752,646, pub. 4–23–63. Cl. 101.
Brink's Finer Foods: *See*—
Brink, Laurence H.
Brink, Laurence H., d.b.a. Brink's Finer Foods, Chicago, Ill. 645,825, canc. Cl. 46.
Bristol-Myers Co., New York, N.Y. 752,382, pub. 4–23–63. Cl. 18.
Brittains Ltd., Near Leek, Staffordshire, England. 645,765, canc. Cl. 37.
Brod & McClung-Pace Co.: *See*—
Pace Co.
Brook, Willow, Co., Catasauqua, Pa. 752,588, pub. 4–23–63. Cl. 46.
Brown, Russell F., Los Angeles, Calif. 752,550, pub. 4–23–63. Cl. 38.
Brown & Williamson Tobacco Corp., Louisville, Ky. 752,379, pub. 4–23–63. Cl. 17.
Brumberger Co., Inc., Brooklyn, N.Y. 752,453, pub. 4–23–63. Cl. 22.
Brunswick Corp., Chicago, Ill. 752,413, pub. 4–23–63. Cl. 19.
Brunswick Corp., Chicago, Ill. 752,454, pub. 4–23–63. Cl. 22.
Buehler Ltd., Evanston, Ill. 752,473, pub. 4–23–63. Cl. 23.
Bulletin Co., Philadelphia, Pa. 752,683. Cl. 38.
Burchard, A. S., Mfg. Co., Inc., Oxford, N.Y. 645,694, canc. Cl. 22.
Burgher, Kenneth, New York, N.Y. 752,626, pub. 4–23–63. Cl. 51.
Burpee, W. Atlee, Co., Philadelphia, Pa. 170,627, ren. 7–9–63. Cl. 1.
Burpee, W. Atlee, Co., Philadelphia, Pa. 170,785, ren. 7–9–63. Cl. 1.
Burpee, W. Atlee, Co., Philadelphia, Pa. 170,786, ren. 7–9–63. Cl. 1.

Cahners Publishing Co., Inc., Boston, Mass. 752,557, pub. 4–23–63. Cl. 38.
Cantrell & Cochrane Ltd., Inc., New York, N.Y. 752,577, pub. 4–23–63. Cl. 45.
Carborundum Co., The, Niagara Falls, N.Y. 403,248, ren. 7–9–63. Cl. 4.
Cargo Carriers, Inc., Minneapolis, Minn. 645,823, canc. Cl. 46.
Carl-Morris Mfg. Inc., Boston, Mass. 645,796, canc. Cl. 39.
Cartier, Inc., New York, N.Y. 752,301, pub. 4–23–63. Cl. 2.
Carvel, Thomas, Yonkers, N.Y. 752,704. Cl. 100.
Catani, Mario, Co., North Bergen, N.J. 752,356, pub. 4–23–63. Cl. 12.
Celanese Corp. of America, New York, N.Y. 752,285–8, pub. 4–23–63. Cl. 1.
Chamberlin, Joseph E., d.b.a. Chamberlin Metal Products, Chicago, Ill. 645,684, canc. Cl. 22.
Champion, Charles A., d.b.a. Champion Products Co., Memphis, Tenn. 752,387, pub. 4–23–63. Cl. 18.
Champion Products Co.: *See*—
Champion, Charles A.
Champion Spark Plug Co., Toledo, Ohio. 752,433, pub. 4–23–63. Cl. 21.
Chassis Trak Corp., Indianapolis, Ind. 752,477, pub. 4–23–63. Cl. 23.
Chemiewerk Homburg, Frankfurt am Main, Germany. 752,396, pub. 4–23–63. Cl. 18.
Cherokee Laboratories, Inc., The, Tulsa, Okla. 645,605, canc. Cl. 6.
Chilton Co., Philadelphia, Pa. 752,555, pub. 4–23–63. Cl. 38.
Chippers, Inc., Chicago, Ill. 752,581, pub. 4–23–63. Cl. 46.
Chore-Boy Mfg. Co.: *See*—
Golay & Co., Inc.
Ciba Ltd., Basel, Switzerland. 645,659, canc. Cl. 18.
Citizens Bank & Trust Co., Park Ridge, Ill. 752,653, pub. 4–23–63. Cl. 102.
Clarke, Robert E., d.b.a. Oceanus Laboratories of The Pacific, San Carlos, Calif. 645,860, canc. Cl. 51.
Classic Jewelry Mfgrs., New York, N.Y. 752,518, pub. 4–23–63. Cl. 28.
Clements Mfg. Co., Chicago, Ill. 645,913, canc. Cl. 21.
Close and Patennude, Philadelphia, Pa. 752,622, pub. 4–23–63. Cl. 50.
Cluett, Peabody & Co., Inc., Troy, N.Y. 645,787, canc. Cl. 39.
Cohen, George, Clothing Co., Inc., New York, N.Y. 645,788, canc. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 645,883, canc. Cl. 52.
Colortran Industries, Burbank, Calif. 752,529, pub. 4–23–63. Cl. 34.
Columbia Wax Co.: *See*—
United States Borax & Chemical Corp.
Commercial Paste Co., The, Columbus, Ohio. 752,319–20, pub. 4–23–63. Cl. 5.
Computer Control Co., Inc., Framingham, Mass. 752,491, pub. 1–16–62. Cl. 26.
Con-O-Lite Corp., Cortland, N.Y. 170,642, ren. 7–9–63. Cl. 2.
Container Corp. of America, Chicago, Ill. 752,306, pub. 4–23–63. Cl. 2.
Contours Unlimited, Inc., Franklin, Mass. 752,291, pub. 4–23–63. Cl. 1.
Co-Operative Wholesale Society, Ltd., Manchester, England. 752,521, pub. 4–23–63. Cl. 30.
Coral Stone, Inc., Rock Island, Ill. 645,616–17, canc. Cl. 12.
Corning Glass Works, Corning, N.Y. 170,395, ren. 7–9–63. Cl. 33.
Cosmopolitan Insurance Co., Chicago, Ill. 752,654, pub. 4–23–63. Cl. 102.
Cotton, Norman L., d.b.a. Addressing Machine Co. of California, San Francisco, Calif. 752,538, pub. 4–23–63. Cl. 37.
Council Mfg. Corp., Fort Smith, Ark. 752,292, pub. 4–23–63. Cl. 1.
Crescent Co., Inc., The, Pawtucket, R.I. 752,425, pub. 4–23–63. Cl. 21.
Crest Coats, Inc., d.b.a. Crest Coatings, Milwaukee, Wis. 645,639, canc. Cl. 16.
Crest Coatings: *See*—
Crest Coats, Inc.
Crestline Products, Inc., Minneapolis, Minn. 752,487, pub. 4–23–63. Cl. 23.
Croatan Spinning Mills: *See*—
Henderson Cotton Mills.
Crowley's Milk Co., Inc., Binghamton, N.Y. 752,607, pub. 4–23–63. Cl. 46.
Cummins-Chicago Corp., Chicago, Ill., to John Oster Mfg. Co., Racine, Wis. 645,673, canc. Cl. 21.
Curtis Products, Inc., Chicago, Ill., from Plastic Products Co., Detroit, Mich. 752,352, pub. 4–23–63. Cl. 12.
Custom Bilt Body, Inc., Hamburg, N.Y. 752,411, pub. 4–23–63. Cl. 19.
Dacor Corp., Evanston, Ill. 752,472, pub. 4–23–63. Cl. 23.
Danish, A. A., d.b.a. Geophysical Instrument & Supply Co., Denver, Colo. 752,497, pub. 4–23–63. Cl. 26.
Danske Mobelproducenters Forening Til Kvalitetsmaerkning af Danske Eksportmobler, Copenhagen, Denmark. 752,669, pub. 4–23–63. Cl. A.
David and David, Inc., Long Island City, N.Y. 752,569–72, pub. 4–23–63. Cl. 40.
De Havilland Aircraft Co. Ltd., The, Hatfield, England. 752,415, pub. 4–23–63. Cl. 21.
Delta Sigma Phi Fraternity, Denver, Colo. 401,275, ren. 7–9–63. Cl. 38.
Desco Shoe Corp.: *See*—
Rex Shoe Co., Inc.
Desitin Chemical Co., Inc., Providence, R.I. 752,390, pub. 4–23–63. Cl. 18.
Dettelbach, Gus, Inc., Atlanta, Ga. 749,602, cor. Cl. 1.
Devoe & Raynolds Co., Inc., Louisville, Ky. 752,376, pub. 4–23–63. Cl. 16.
Devoe & Raynolds Co., Inc., Louisville, Ky. 752,378, pub. 4–23–63. Cl. 16.
Dr. Salsbury's Laboratories, Charles City, Iowa. 752,400, pub. 4–23–63. Cl. 18.
Doll-Eze Products Co., Inc., Newark, N.J. 752,464, pub. 4–23–63. Cl. 22.
Dorr, Robert C., Beverly Hills, Calif. 752,546, pub. 4–23–63. Cl. 38.
Douglas Furniture Corp., Chicago, Ill. 630,903, canc. Cl. 32.
Drug Development Corp., Brooklyn, N.Y. 752,394, pub. 4–23–63. Cl. 18.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 752,345, pub. 4–23–63. Cl. 6.
Dunbar Furniture Corp. of Indiana, New York, N.Y. 752,525, pub. 4–23–63. Cl. 32.
Dynamic Nutritional Products, d.b.a. Dynamic Products, North Hollywood, Calif. 752,393, pub. 4–23–63. Cl. 18.
Dynamic Products: *See*—
Dynamic Nutritional Products.
Eastern Food Distributors, Inc., Pomeroy, Pa. 752,612, pub. 4–23–63. Cl. 46.
Eastern National Foods, Inc., Riverhead, N.Y. 645,840, canc. Cl. 46.
Eastman Kodak Co., Rochester, N.Y. 752,504–5, pub. 4–23–63. Cl. 26.
Econocrete Corp., New York, N.Y. 645,590, canc. Cl. 6.
Edinburgh Laboratories (Aust.) Pty. Ltd.: *See*—
Best & Gee Proprietary Ltd.
Electric Storage Battery Co., The, Philadelphia, Pa. 401,769, ren. 7–9–63. Cl. 26.
Electrofilm, Inc., North Hollywood, Calif. 752,293, pub. 4–23–63. Cl. 1.
Electro-Measurements, Inc., Portland, Oreg. 645,734, canc. Cl. 26.
Electronic Energy Conversion Corp., New York, N.Y. 752,416, pub. 9–25–62. Cl. 21.
Embassy Men's Apparel, Inc.: *See*—
Excelsior Underwear Co. Inc.
Engelke, William J. H., d.b.a. Pan American Fireworks Co., Fort Worth, Tex., to I. Parker, Oklahoma City, Okla. 645,611, canc. Cl. 9.
Erie Resistor Corp., Erie, Pa. 752,424, pub. 4–23–63. Cl. 21.
Essex Importers and Distillers, Ltd.: *See*—
Mr. Boston Distiller Inc.
Evergreen Mills, Inc.: *See*—
Ada Milling Co.
Excelsior Underwear Co. Inc., to Embassy Men's Apparel, Inc., New York, N.Y. 173,326, ren. 7–9–63. Cl. 39.
F.G.M. & Co., Copenhagen, Denmark. 752,617, pub. 4–23–63. Cl. 50.
Fabriksaktiebolaget Eka, Markaryd, Sweden. 752,316, pub. 4–23–63. Cl. 4.
Fairchild Publications, Inc., New York, N.Y. 752,679. Cl. 38.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 752,339, pub. 4–23–63. Cl. 6.
Farm and Ranch Accounting Service Firm, Hay Springs, Nebr. 645,889, canc. Cl. 101.
Farrow Mfg., Inc., Elmore, Minn. 752,474, pub. 4–23–63. Cl. 23.
Fedco Corp.: *See*—
Nibot Corp.
Fieldcrest Mills, Inc., Spray, N.C. 752,421–23, pub. 4–23–63. Cl. 21.
Fliderman, Irving P., Memphis, Tenn. 752,508, pub. 4–23–63. Cl. 26.
Finki, A., & Sons Co., Chicago, Ill. 175,029, ren. 7–9–63. Cl. 14.
Finki, A., & Sons Co., Chicago, Ill. 400,088, ren. 7–9–63. Cl. 23.
Finki, A., & Sons Co., Chicago, Ill. 401,694, ren. 7–9–63. Cl. 14.
Finki, A., & Sons Co., Chicago, Ill. 403,790, ren. 7–9–63. Cl. 23.
Finki, A., & Sons Co., Chicago, Ill. 403,791, ren. 7–9–63. Cl. 23.
Fischbach Trucking Co., d.b.a. Circle F. Sales, Akron, Ohio. 752,482, pub. 4–23–63. Cl. 23.
Fisher, Marjory M., San Francisco, Calif. 645,755, canc. Cl. 36.
Flexible Plastics Corp., South San Francisco, Calif. 752,300, pub. 4–23–63. Cl. 2.
Flintkote Co., The, New York, N.Y. 401,412, ren. 7–9–63. Cl. 12.
Fluidmaster, Inc., Anaheim, Calif. 670,105. Am. 7(d). Cl. 13.
FMA, Inc., El Segundo, Calif. 752,507, pub. 4–23–63. Cl. 26.
Follmi, Jean, Geneva, Switzerland. 752,509, pub. 4–23–63. Cl. 27.
Follmi, Jean, Geneva, Switzerland. 752,676. Cl. 27.
Folsom, Jamelle, Inc., Montgomery, Ala. 645,877, canc. Cl. 51.
Food Enterprises, Inc., Rye, N.Y. 752,558, pub. 4–23–63. Cl. 38.
Foremost Dairies, Inc., San Francisco, Calif. 752,690. Cl. 46.
Foremost Dairies, Inc., Jacksonville, Fla. 645,814, canc. Cl. 46.
Foster, Paul D., Co., The, Blytheville, Ark. 752,333, pub. 4–23–63. Cl. 6.
Fostoria Corp., Huntingdon Valley, Pa. 752,313, pub. 4–23–63. Cl. 4.
Fralinger's: *See*—
Lapres, Theo. J., Inc.
Frami Refiner Sales, Inc., Pittsburgh, Pa. 752,318, pub. 4–23–63. Cl. 5.
Frame, Charles W., Salt Lake City, Utah. 626,748, canc. Cl. 10.
Franklyn, Robert A., Los Angeles, Calif. 752,623, pub. 4–23–63. Cl. 51.

Franzheim, George W., d.b.a. Oh-Boy Broiler Co., Dunkirk, N.Y. 645,748, canc. Cl. 34.
Freeman, Lou, Co., Chicago, Ill. 752,595, pub. 4–23–63. Cl. 46.
Frost, Charles E., & Co., Westmount, Quebec, Canada. 752,380, pub. 4–23–63. Cl. 18.
Frostie Co., The, Camden, N.J. 752,303, pub. 4–23–63. Cl. 2.
Fruit Products Corp., New York, N.Y. 645,849, canc. Cl. 46.
Full Vision, Inc., Newton, Kans. 752,467, pub. 4–23–63. Cl. 23.
Fuller, D. B., & Co., Inc., New York, N.Y. 645,808, canc. Cl. 42.
Gault, Howard, d.b.a. Howard Gault Co., Hereford, Tex. 752,591–93, pub. 4–23–63. Cl. 46.
Gault, Howard, Co.: *See*—
Gault, Howard.
General Electric Co., Schnectady, N.Y. 752,428, pub. 4–23–63. Cl. 21.
General Foods Corp., White Plains, N.Y. 752,590, pub. 4–23–63. Cl. 46.
General Tire & Rubber Co., The, Akron, Ohio. 752,448–9, pub. 4–23–63. Cl. 22.
General Tire & Rubber Co., The, Akron, Ohio. 752,534, pub. 4–23–63. Cl. 35.
Geode Industries Inc., New London, Iowa. 752,330, pub. 4–23–63. Cl. 6.
Geophysical Instrument & Supply Co.: *See*—
Danish, A. A.
Germain's Inc., Los Angeles, Calif. 752,337–8, pub. 4–23–63. Cl. 6.
Getz Exterminators, Inc., St. Louis, Mo. 752,662, pub. 4–23–63. Cl. 103.
Gioia, Carl, d.b.a. State Produce Brokers, Los Angeles, Calif. 645,850, canc. Cl. 46.
Gisholt Machine Co., Madison, Wis. 752,523, pub. 4–23–63. Cl. 32.
Giurdanella Bros., Inc., New York, N.Y. 752,663, pub. 4–23–63. Cl. 103.
Glendale Optical Co., Inc., Valley Stream, N.Y. 752,498, pub. 4–23–63. Cl. 26.
Golay & Co., Inc., d.b.a. Chore-Boy Mfg. Co., Cambridge City, Ind. 752,475, pub. 4–23–63. Cl. 23.
Goldberg, Lillian, from Votre Ami Cosmetic Co., Brooklyn, N.Y. 752,627, pub. 4–23–63. Cl. 51.
Golden Guernsey, Inc., Peterborough, N.H. 515,866, canc. Cl. 46.
Golden Guernsey, Inc., Peterborough, N.H. 515,867, canc. Cl. 46.
Gold Seal Vineyards, Inc., Hammonsport, N.Y. 752,695. Cl. 47.
Goodrich, B. F., Co., The, Akron, Ohio. 752,535, pub. 4–23–63. Cl. 35.
Gottfried, Shalom, Haifa, Israel. 645,700, canc. Cl. 23.
Gowrie Distributors, Inc., Gowrie, Iowa. 645,815, canc. Cl. 46.
Granco Steel Products Co.: *See*—
Granite City Steel Co.
Grandpa Brands Co., d.b.a. C. S. Dent & Co., Cincinnati, Ohio. 645,920, canc. Cl. 51.
Granite City Steel Co., d.b.a. Granco Steel Products Co., Granite City, Ill. 752,358, pub. 4–23–63. Cl. 12.
Granite City Steel Co., Granite City, Ill. 752,364, pub. 4–23–63. Cl. 14.
Grasak, John, McKeesport, Pa. 645,598, canc. Cl. 6.
Great American Plastics Co., Nashua, N.H. 752,282, pub. 4–23–63. Cl. 1.
Great Lakes Paint and Varnish Co., Chicago, Ill. 752,370, pub. 4–23–63. Cl. 16.
Green, Alden M., d.b.a. Mt. Hebron Sky Ranch Laboratories, Hendersonville, N.C. 752,624, pub. 4–23–63. Cl. 51.
Gudebrod Bros. Silk Co., Inc., Philadelphia, Pa. 752,456, pub. 4–23–63. Cl. 22.
Gulf States Paint Co., Eastwood Station, Houston, Tex. 752,375, pub. 4–23–63. Cl. 16.
Gulton Mfg. Corp., Metuchen, N.J. 645,676, canc. Cl. 21.
Guth Chemical Co., Chicago, Ill. 752,322, pub. 4–23–63. Cl. 6.
H.R. Laboratories, Inc., d.b.a. Gourielli and as Gourielli, Div. of H.R. Laboratories, Inc., New York, N.Y. 645,866, canc. Cl. 51.
Hach Chemical Co., Ames, Iowa. 752,324–6, pub. 4–23–63. Cl. 6.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 752,329, pub. 4–23–63. Cl. 6.
Hallmark Shirt Co., Inc., The, New York, N.Y. 444,446, canc. Cl. 39.
Hamco Machine & Electronics Corp., Rochester, N.Y. 752,479, pub. 4–23–63. Cl. 23.
Hamilton Watch Co., Lancaster, Pa. 645,881, canc. Cl. 52.
Hamilton-Pax, Inc., Chicago, Ill. 629,879, canc. Cl. 21.
Hand, Peter, Brewery Co., Chicago, Ill. 752,388, pub. 4–23–63. Cl. 18.
Haney, Nelson, d.b.a. Nic-A-Sene Co., Shreveport, La. 752,636, pub. 4–23–63. Cl. 52.
Hanover Canning Co., Hanover, Pa. 752,693. Cl. 46.
Harris, Arthur A., Oak Ridge, Tenn. 645,686, canc. Cl. 22.
Harris Orchard Co., Inc., from Lake Entiat Growers, Entiat, Wash. 752,582, pub. 4–23–63. Cl. 46.
Harry and David, Medford, Oreg. 752,409, pub. 4–23–63. Cl. 19.
Hat Corp. of America, Norwalk, Conn. 403,633, ren. 7–9–63. Cl. 39.
Hatfield, Lillian W., Helena, Ark. 645,904, canc. Cl. 6.
Hayden Publishing Co. Inc., New York, N.Y. 752,545, pub. 4–23–63. Cl. 38.
Heal Fabrics Ltd., London, England. 752,687. Cl. 42.
Hearst Corp., The, New York, N.Y. 752,556, pub. 4–23–63. Cl. 38.
Henderson Cotton Mills, d.b.a. Croatan Spinning Mills, Henderson, N.C. 752,574, pub. 4–23–63. Cl. 43.
Hettrick Mfg. Co., The, Toledo, Ohio. 645,854, canc. Cl. 50.
Hettrick Mfg. Co., The, Toledo, Ohio. 645,855, canc. Cl. 50.
Hercules Powder Co., Wilmington, Del. 171,395, ren. 7–9–63. Cl. 16.
Hercules Powder Co., Wilmington, Del. 171,396, ren. 7–9–63. Cl. 16.
Hercules Powder Co., Wilmington, Del. 171,398, ren. 7–9–63. Cl. 16.
Hercules Powder Co., Wilmington, Del. 402,161, ren. 7–9–63. Cl. 1.
Hercules Powder Co., Wilmington, Del. 403,876, ren. 7–9–63. Cl. 1.
Hessenfeld Bros., Inc., Central Falls, R.I. 752,447, pub. 4–23–63. Cl. 22.
Holiday Frosted Food Co.: *See*—
Wolf, Robert S.
Hollingsworth, Merrill W., M.D., d.b.a. Holly Pharmacal Co., Orange, Calif. 645,670, canc. Cl. 18.
Hoover Co., The, North Canton, Ohio. 172,014, ren. 7–9–63. Cl. 21.
House of Worsted-Tex, Inc.: *See*—
JMS Corp.
Household Products, Inc., Stamford, Conn. 645,863, canc. Cl. 51.
Household Research Corp., Auburndale, Mass. 752,633, pub. 4–23–63. Cl. 52.
Houston-Fearless Corp., Los Angeles, Calif. 752,499, pub. 4–23–63. Cl. 26.
Hoyt, Arthur S., Co., Inc., Hicksville, N.Y. 752,317, pub. 4–23–63. Cl. 5.
Hughes-Blattner Game Co., Inc., Baltimore, Md. 752,439, pub. 4–23–63. Cl. 22.
Hunter Engineering Co.: *See*—
Hunter, Lee.
Hunter, Lee, d.b.a. Hunter Engineering Co., St. Louis, Mo. 752,501, pub. 4–23–63. Cl. 26.
Hyman, L., Sons, to L. Hyman & Sons Corp., New York, N.Y. 168,244, ren. 7–9–63. Cl. 37.
Hyman, L., & Sons Corp.: *See*—
Hyman, L., Sons.
Ideal Toy Corp., Hollis, N.Y., from Royal Doll Mfg. Co., The, New York, N.Y. 752,443, pub. 4–23–63. Cl. 22.
Imperial 400 Motels, Inc.: *See*—
Imperial 400 National, Inc.
Imperial 400 National, Inc., Englewood Cliffs, N.J., from Imperial 400 Motels, Inc., Los Angeles, Calif. 752,644, pub. 4–23–63. Cl. 100.
Imperial Shirt Corp., New York, N.Y. 752,567, pub. 4–23–63. Cl. 39.
Inertol Co., Inc., Newark, N.J. 402,589, ren. 7–9–63. Cl. 16.
Inertol Co., Inc., Newark, N.J. 402,715, ren. 7–9–63. Cl. 16.
Ingersoll Products Corp., to William Underwood Co., Watertown, Mass. 523,774, new cert. Cl. 46.
Intercontinental Mfg. Co., Inc., Garland, Tex. 645,730, canc. Cl. 34.
International Boating Association, Inc., The, Fort Lauderdale, Fla. 752,647, pub. 4–23–63. Cl. 101.
International Equipment Co., Boston, Mass. 752,480–81, pub. 4–23–63. Cl. 23.
International Milling Co.: *See*—
Midland Flour Milling Co., The.
International Minerals & Chemical Corp., Skokie, Ill. 752,294, pub. 4–23–63. Cl. 1.
International Minerals & Chemical Corp., Skokie, Ill. 752,544, pub. 4–23–63. Cl. 38.
International Paper Co., New York, N.Y. 752,304, pub. 4–23–63. Cl. 2.
International Shoppers Service, S.A.R.L., Paris, France. 752,640, pub. 4–23–63. Cl. 100.
International Telephone and Telegraph Corp., New York, N.Y. 752,495–6, pub. 4–23–63. Cl. 26.
Invicta Ltd., Lachaux-defonds, Switzerland. 752,511, pub. 4–23–63. Cl. 27.
Ipekdjian Inc., New York, N.Y. 630,428, canc. Cl. 28.
Irving Air Chute Co., Inc., Lexington, Ky. 752,410, pub. 4–23–63. Cl. 19.
Ivers-Lee Co., Newark, N.J. 752,298, pub. 4–23–63. Cl. 2.
J-L Plastic Enterprises: *See*—
Liska, Andrew J
JMS Corp., from House of Worsted-Tex., Inc., Philadelphia, Pa. 752,560, pub. 4–23–63. Cl. 39.
Jal Chemicals and Fi-Bro Sponge Co.: *See*—
Snella, Lyla H.
James Candy Co., Atlantic City, N.J. 752,689. Cl. 46.
Janitorial Supplies Corp., Albany, N.Y. 752,701. Cl. 52.
Joanna Western Mills Co., Chicago, Ill. 752,281, pub. 4–23–63. Cl. 1.
Johns, Jay, Palm Beach, Fla. 752,625, pub. 4–23–63. Cl. 51.
Johnson & Johnson, New Brunswick, N.J. 752,397, pub. 4–23–63. Cl. 18.
Junior Chamber of Commerce of Washington, D.C., The, Washington, D.C. 679,641, cor. Cl. 38.
Junior Chamber of Commerce of Washington, D.C., The, Downtown Chapter of the District of Columbia Junior Chamber of Commerce, Washington, D.C. 679,641. Am. 7(d). Cl. 38.
K.L.R. Laboratories, Inc., Seattle, Wash. 645,651, canc. Cl. 18.
Kalo, A. J., Co.: *See*—
Kalo, Arthur J.
Kalo, Arthur J., d.b.a. A. J. Kalo Co., Racine, Wis. 752,641, pub. 4–23–63. Cl. 100.
Keller Pottery Co., The, North Wales, Pa. 752,305, pub. 4–23–63. Cl. 2.
Kellogg Co., Battle Creek, Mich. 752,671. Cl. 2.
Kendall Refining Co., Bradford, Pa. 752,369, pub. 4–23–63. Cl. 15.

Kennington, Ltd. : *See*—
Kennington, Ltd., Inc.
Kennington, Ltd., Inc., from Kennington, Ltd., Los Angeles, Calif. 752,565, pub. 8–14–62. Cl. 39.
Kimberly-Clark Corp., Neenah, Wis. 752,541, pub. 4–23–63. Cl. 37.
Kitty Queen Pet Foods, Inc., Los Angeles, Calif. 752,586, pub. 4–23–63. Cl. 46.
Klein, William, d.b.a. American Mercantile Co., San Francisco, Calif. 645,710, canc. Cl. 23.
Koch Butchers' Supply Co., The, North Kansas City, Mo. 348,007, canc. Cl. 31.
Koch, Paul, G.m.b.H. Papierverarbeitungswerk und Verlag, Geesthacht, Germany. 752,536, pub. 4–23–63. Cl. 37.
Kress, S. H., and Co., New York, N.Y. 645,719, canc. Cl. 23.
Kurland Motors, Denver, Colo. 645,678, canc. Cl. 21.
L.D.G. : *See*—
L.D.G. Corp. of Miami.
L.D.G. Corp. of Miami, d.b.a. L.D.G., Miami, Fla. 752,596, pub. 4–23–63. Cl. 46.
L & M Construction Chemicals, Inc., Omaha, Nebr. 752,354, pub. 4–23–63. Cl. 12.
La Lanne Inc., Hollywood, Calif. 752,601, pub. 4–23–63. Cl. 46.
Lab-Tek Plastics Co., Westmont, Ill. 752,489, pub. 5–16–61. Cl. 26.
Lake Entlat Growers : *See*—
Harris Orchard Co., Inc.
Lander Co. Inc., d.b.a. Loveland, New York, N.Y. 752,568, pub. 4–23–63. Cl. 40.
Lander Co. Inc., d.b.a. Loveland, New York, N.Y. 752,638, pub. 4–23–63. Cl. 52.
Lapres, Theo. J., Inc., d.b.a. Fralinger's Atlantic City, N.J. 172,286, ren 7–9–63. Cl. 46.
Lark, Charles R., Jr., Alden, Mich. 752,527, pub. 4–23–63. Cl. 32.
Leatherfoam, Inc., South Bend, Ind. 631,107, canc. Cl. 4.
Lestorti, Louis, d.b.a. Lewis Millwork, Waterbury, Conn. 752,524, pub. 4–23–63. Cl. 32.
Lev-co Developing Co. : *See*—
Leventhal, Charles S.
Leventhal, Charles S., d.b.a. Lev-co Developing Co., Pottstown, Pa. 752,332 pub. 4–23–63. Cl. 6.
Lever Brothers Co., New York, N.Y. 752,386, pub. 4–23–63. Cl. 18.
Lewis Millwork : *See*—
Lestorti, Louis.
Lilly, Eli, and Co., Indianapolis, Ind. 752,405, pub. 4–23–63. Cl. 18.
Lincoln Industrial Chemical Co., Inc., Reading, Pa. 752,632, pub. 4–23–63. Cl. 52.
Link-Belt Co., Chicago, Ill. 752,485, pub. 4–23–63. Cl. 23.
Lipton, Alexander, Inc., Los Angeles, Calif. 752,686. Cl. 39.
Liska, Andrew J., d.b.a. J-L Plastic Enterprises, Flint, Mich. 645,574, canc. Cl. 2.
Lithcote Corp., Melrose Park, Ill. 752,363, pub. 4–23–63. Cl. 13.
Lockrey, Andrew J., d.b.a. The Lockrey Co., Southampton, N.Y. 645,601, canc. Cl. 6.
Lockwood Mfg. Co., The, Cincinnati, Ohio. 752,427, pub. 4–23–63. Cl. 21.
Lockwood Mfg. Co., The, Cincinnati, Ohio. 752,675. Cl. 23.
Loesser, Frank, d.b.a. Union Record Co., to Union Record Co., Inc., New York, N.Y. 645,753, canc. Cl. 36.
London & Co., Inc., Elizabeth, N.J. 752,614, pub. 4–23–63. Cl. 49.
Loomis, Ltd., Oakland, Md. 752,583, pub. 4–23–63. Cl. 46.
Lord Jeff Knitting Co., Inc., Maspeth, N.Y. 403,473, ren. 7–9–63. Cl. 39.
Lord Jeff Knitting Co., Inc., Maspeth, N.Y. 403,474, ren. 7–9–63. Cl. 39.
Loveland : *See*—
Lander Co. Inc.
M-A Pharmaceutical Corp., Mount Vernon, N.Y. 752,389, pub. 4–23–63. Cl. 18.
M.A.R.S. Manifattura Articili Resine Sintetiche S.r.l., Milan, Italy. 723,596, cor. Cl. 26.
MacMillan Ring-Free Oil Co., Inc., Los Angeles, Calif. 752,374, pub. 4–23–63. Cl. 16.
MacMillan Ring-Free Oil Co., Inc., Los Angeles, Calif. 752,635, pub. 4–23–63. Cl. 52.
Maecker, Kurt, d.b.a. Elan-Schaltelemente Kurt Maecker OHG, Dusseldorf, Germany. 645,912, canc. Cl. 21.
Magic Sparkles, Inc., Newark, N.J. 752,620, pub. 4–23–63. Cl. 50.
Magnet Cove Barium Corp., Houston, Tex. 752,336, pub. 4–23–63. Cl. 6.
Malco Products, Inc., Akron, Ohio. 752,629, pub. 4–23–63. Cl. 52.
Mallory, P. R., & Co., Inc., Indianapolis, Ind. 401,580, ren. 7–9–63. Cl. 21.
Market Tire Co. of Maryland, Inc., Rockville, Md. 752,531, pub. 9–25–62. Cl. 35.
Marsales Co. Inc., New York, N.Y. 401,348, ren. 7–9–63. Cl. 44.
Marsh, Jordan, Co., Boston, Mass. 169,763, ren. 7–9–63. Cl. 39.
Mar-Tay, Inc., d.b.a. Mar-Tay Sales, Inc., Orlando, Fla. 752,395, pub. 4–23–63. Cl. 18.
Mar-Tay Sales, Inc. : *See*—
Mar-Tay, Inc.
Marx, Louis, & Co. Inc., New York, N.Y. 752,459, pub. 4–23–63. Cl. 22.
Marx, Louis, & Co. Inc., New York, N.Y. 752,462, pub. 4–23–63. Cl. 22.
Massachusetts Mohair Plush Co., Inc., Kings Mountain, N.C. 752,573, pub. 4–23–63. Cl. 43.
Master Products Co., Bridgeport, Conn. 645,692, canc. Cl. 22.
Mastercolor of New England, Inc., d.b.a. Mailmaster Photolabs, Boston, Mass. 752,666, pub. 4–23–63. Cl. 106.
Mastercraft Pipes, Inc., New York, N.Y. 752,349, pub. 4–23–63. Cl. 8.
Matchless Electric Co., Chicago, Ill. 645,910, canc. Cl. 21.
McGrade, E. W., Mfg. Co., Inc., to Perini Electronic Corp., San Mateo, Calif. 438,938, new cert. Cl. 21.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 415,832, canc. Cl. 36.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 752,551, pub. 4–23–63. Cl. 38.
McKesson & Robbins, Inc., New York, N.Y. 752,670, pub. 4–23–63. Cl. B.
McManamee, Louis J., d.b.a. Columbia Electric Mfg. Co., East St. Louis, Ill. 645,681, canc. Cl. 21.
Mead Johnson & Co., Evansville, Ind. 645,644, canc. Cl. 18.
Mehard Mfg. Corp., New York, N.Y. 752,486, pub. 4–23–63. Cl. 23.
Merck & Co., Inc., Rahway, N.J. 645,836, canc. Cl. 46.
Miami Beach Sun Publishing Co., Miami Beach, Fla. 645,777, canc. Cl. 38.
Michele Jewelry Co., Boston, Mass. 752,513, pub. 4–23–63. Cl. 28.
Midland Flour Milling Co., The, Kansas City, Mo., to International Milling Co., Minneapolis, Minn. 167,201, ren. 7–9–63. Cl. 46.
Midland Flour Milling Co., The, Kansas City, Mo., to International Milling Co., Minneapolis, Minn. 167,202, ren. 7–9–63. Cl. 46.
Midwest Model Supply Co., Chicago, Ill. 752,407, pub. 4–23–63. Cl. 19.
Milk Maid Ice Cream Co., Inc., White Plains, N.Y. 645,842, canc. Cl. 46.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,335, pub. 4–23–63. Cl. 6.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,348, pub. 4–23–63. Cl. 7.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,377, pub. 4–23–63. Cl. 16.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,417, pub. 4–23–63. Cl. 21.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,621, pub. 4–23–63. Cl. 50.
Miss Universe, Inc., New York, N.Y. 752,652, pub. 4–23–63. Cl. 101.
Mr. Boston Distiller Inc., d.b.a. Essex Importers and Distillers, Ltd., Boston, Mass. 752,696. Cl. 49.
Mister Taco : *See*—
Willner, Milton J.
Mitchell, A. J., Co., Fall River, Mass. 752,488, pub. 4–23–63. Cl. 23.
Mizzy, Inc., Clifton Forge, Va. 752,383, pub. 4–23–63. Cl. 18.
Mohasco Industries, Inc., Amsterdam, N.Y. 645,806, canc. Cl. 42.
Mondial Co., Inc., New York, N.Y. 752,609–10, pub. 4–23–63. Cl. 46.
Monroe Calculating Machine Co., Inc., Orange, N.J. 752,649, pub. 4–23–63. Cl. 101.
Monsanto Chemical Co., St. Louis, Mo. 752,328, pub. 4–23–63. Cl. 6.
Morgan & Sons Poultry Co., Inc., Guilford College, N.C. 752,608, pub. 4–23–63. Cl. 46.
Mortell, J. W., Co., Kankakee, Ill. 403,845, ren. 7–9–63. Cl. 12.
Mt. Hebron Sky Ranch Laboratories : *See*—
Green, Aldeu M.
Movie-Wheels, Inc., New York, N.Y. 752,437, pub. 4–23–63. Cl. 22.
Muralo Co., Inc., The, Staten Island, N.Y. 645,880, canc. Cl. 52.
Murphy, Patricia, Candlelight Gift Shop, Inc., Yonkers, N.Y. 752,584, pub. 4–23–63. Cl. 46.
Musical Courier Co., Inc., New York, N.Y., to Summy Birchard Co., Evanston, Ill. 162,324, ren. 7–9–63. Cl. 38.
NRD Instrument Co. : *See*—
Nuclear Consultants, Inc.
Naamlooze Vennootschap Industrieele Maatschappij v.h. Noury & Van der Lande, Deventer, Netherlands, to Wallace & Tiernan Inc., Belleville, N.J. 166,086, ren. 7–9–63. Cl. 6.
National Baby Care Council, Wilmington, Del. 752,667, pub. 4–23–63. Cl. 107.
National Biscuit Co., New York, N.Y. 752,599, pub. 4–23–63. Cl. 46.
National Dairy Products Corp., New York, N.Y. 752,602–4, pub. 4–23–63. Cl. 46.
National Federation of Coffee Growers of Colombia, New York, N.Y. 752,589, pub. 4–23–63. Cl. 46.
National Industrial Supplies Co., Dayton, Ohio. 645,620, canc. Cl. 13.
National Lubricating Grease Institute, Inc., Kansas City, Mo. 752,661, pub. 4–23–63. Cl. 103.
National Market Reports, Inc., Chicago, Ill. 752,685. Cl. 38.
National Starch and Chemical Corp., New York, N.Y. 752,691. Cl. 46.
National Vulcanized Fibre Co., Wilmington, Del. 645,571, canc. Cl. 2.
Nattermann, A., & Cie, Cologne-Braunsfeld, Germany. 752,381, pub. 4–23–63. Cl. 18.
Nesbit Industries, Inc., Chicago, Ill. 752,451, pub. 4–23–63. Cl. 22.
New England By-Products Corp., Boston, Mass. 645,657, canc. Cl. 18.
New York Belting and Packing Co., New York, N.Y. 115,788, canc. Cl. 35.
New York Belting and Packing Co., New York, N.Y. 115,789, canc. Cl. 35.

Nibot Corp., Chicago, Ill., from Fedco Corp., Chicago, Ill. 752,302, pub 4–23–63. Cl. 2.
Nic-A-Sene Co : *See*—
Haney, Nelson.
Nicoll, R. C., d.b.a. Valerie Jean Date Shop, Thermal, Calif. 403,966, ren. 7–9–63. Cl. 46.
Nitchie, Clifford W., Bloomfield, Conn. 752,350, pub. 4–23–63. Cl. 8.
Nopco Chemical Co., Newark, N.J. 752,399, pub. 4–23–63. Cl. 18.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 752,699. Cl. 51.
Noto Jewelry Co. : *See*—
Noto, Joseph C.
Noto, Joseph C., d.b.a. Noto Jewelry Co., New York, N.Y. 752,517, pub 4–23–63. Cl. 28.
Norton Co., Worcester, Mass. 752,310–12, pub. 4–23–63. Cl. 4.
Nuclear Consultants, Inc., d.b.a. NRD Instrument Co., St. Louis, Mo. 625,312, canc. Cl. 26.
Nutrient F., Inc., Lynbrook, N.Y. 645,643, canc. Cl. 18.
Oppenheim, Charles J., Jr., d.b.a. Harco Distributors, New York, N.Y. 645,865, canc. Cl. 51.
Original Bradford Soap Works, Inc., West Warwick, R.I. 752,466, pub. 4–23–63. Cl. 22.
Orvis, Chas. F., Co., Inc., Manchester, Vt. 752,444, pub. 4–23–63. Cl. 22.
Osborn Mfg. Co., The, Cleveland, Ohio. 752,314, pub. 4–23–63. Cl. 4.
Outdoor Vacations, Inc., d.b.a. Outdoors, Inc., Columbia, Mo. 752,681–2. Cl. 38.
Outdoors, Inc. : *See*—
Outdoor Vacations, Inc.
P.I.P. Printing Ink Products Corp., Long Island City, N.Y. 645,613, canc. Cl. 11.
Pace Co., to Brod & McClung-Pace Co., Portland, Oreg. 730,798, new cert. Cl. 34.
Pacific Coast Aberdeen-Angus Association, Sacramento, Calif. 703,354, cor. Cl. 101.
Pagratis, Peter S., Chicago, Ill. 752,455, pub. 4–23–63. Cl. 22.
Parallel Products Co., Columbia, S.C. 752,438, pub. 4–23–63. Cl. 22.
Parker-Hannifin Corp., Cleveland, Ohio. 745,472, canc. Cl. 35.
Parkway Printing Co., Inc., New York, N.Y. 645,924, canc. Cl. 101.
Pathe News, Inc., New York, N.Y. 752,665, pub. 4–23–63. Cl. 106.
Pay Way Feed Mills, Inc., Kansas City, Mo. 752,606, pub. 4–23–63. Cl. 46.
Pek Labs, Inc., Palo Alto, Calif. 752,434, pub. 4–23–63. Cl. 21.
Pelmo Park Perennial Gardens : *See*—
Whitman, Charles B.
Penedo & Swiber, New Orleans, La. 752,519, pub. 4–23–63. Cl. 28.
Pennsalt Chemicals Corp., Philadelphia, Pa. 752,289, pub. 4–23–63. Cl. 1.
Pennsylvania Salt Mfg. Co., The, Philadelphia, Pa. 645,612, canc. Cl. 1C.
Penton Publishing Co., The, Cleveland, Ohio. 752,549, pub. 4–23–63. Cl. 38.
Pepperell Mfg Co., Boston, Mass. 645,805, canc. Cl. 42.
Perini Electronic Corp. : *See*—
McGrade, E. W., Mfg. Co., Inc.
Perma-Seal Plastic Corp., New York, N.Y. 752,463, pub. 4–23–63. Cl. 22.
Philadelphia Gear Corp., King of Prussia, Pa. 752,470, pub. 4–23–63. Cl. 23.
Philadelphia Life Insurance Co., Philadelphia, Pa. 752,660, pub. 4–23–63. Cl 102.
Philco Pharmaceutical Co., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 733,323, new cert. Cl. 18.
Phillips Petroleum Co., Bartlesville, Okla. 401,734, ren. 7–9–63. Cl. 21.
Phillips Petroleum Co., Bartlesville, Okla. 752,331, pub. 4–23–63. Cl. 6.
Photogem Co., New York, N.Y. 752,514, pub. 4–23–63. Cl. 28.
Pioneer Paint and Varnish Co., Tucson, Ariz. 752,373, pub. 4–23–63. Cl. 16.
Pit and Quarry Publications, Inc., Chicago, Ill. 752,543, pub. 4–23–63. Cl. 38.
Plain, John, & Co., Chicago, Ill. 752,277, pub. 4–23–63. Cl. 1.
Plastic Products Co. : *See*—
Curtis Products, Inc.
Play-Knit Mills, West New York, N.J. 645,779, canc. Cl. 39.
Polaroid Corp., Cambridge, Mass. 404,054, ren. 7–9–63. Cl. 26.
Polychrome Corp., Yonkers, N.Y. 752,321, pub. 4–23–63. Cl. 6.
Polychrome Corp., Yonkers, N.Y. 752,618, pub. 4–23–63. Cl. 50.
Pool & Co., Chicago, Ill. 645 903, canc. Cl. 6.
Price, Kenneth C., d.b.a. Price's Golden Guernsey Dairy, Port Orchard, Wash. 645,915, canc. Cl. 46.
Prince Tomato Repacking Co., Inc., Boston, Mass. 645,822, canc. Cl. 46.
Procter & Gamble Co., The, Cincinnati, Ohio. 752,587, pub. 4–23–63. Cl. 46.
Protecto Mfg. Co., Owatonna, Minn. 752,526, pub. 4–23–63. Cl. 32.
Pulse, Inc., The, New York, N.Y. 752,542, pub. 4–23–63. Cl. 38.
Purity Stores, Inc., Burlingame, Calif. 752,597, pub. 4–23–63. Cl. 46.
Quigley Co., Inc. : *See*—
Quigley Furnace Specialties Co., Inc.
Quigley Furnace Specialties Co., Inc., to Quigley Co., Inc., New York, N.Y. 165,193, ren. 7–9–63. Cl. 12.
Ralston Purina Co., St. Louis, Mo. 752,323, pub. 4–23–63. Cl. 6.
Rarolite Chemical Co., Inc., Middlesex, N.J. 752,278, pub. 4–23–63. Cl. 1.
Raven Mills Corp., New York, N.Y. 645,804, canc. Cl. 42.
Raybestos-Manhattan, Inc., Passaic, N.J. 402,345, ren. 7–9–63. Cl. 35.
Reddy Kilowatt, Inc., New York, N.Y. 752,650, pub. 4–2–63. Cl. 101.
Redlum Research Corp., d.b.a. Redlum Research Corp., Redlands, Calif. 752,630, pub. 4–23–63. Cl. 52.
Reeder, Oliver, & Son, Inc., Baltimore, Md. 170,510, ren. 7–9–63. Cl. 16.
Reich Dress Co., Chicago, Ill. 624,539, canc. Cl. 39.
Renaissance Publishers, Inc., Brooklyn, N.Y. 645,756, canc. Cl. 37.
Revlon, Inc., New York, N.Y. 686,763, canc. Cl. 18.
Rex Shoe Co., Inc., to Desco Shoe Corp., Long Island City, N.Y. 645,780, canc. Cl. 39.
Reynolds Metals Co., Richmond, Va. 752,299, pub. 4–23–63. Cl. 2.
Rice Growers Association of California, Sacramento, Calif. 752,600, pub. 4–23–63. Cl. 46.
Richardson-Merrell Inc. : *See*—
Vick Chemical Co.
Richmond-Chase Co., San Jose, Calif. 168,812, ren. 7–9–63. Cl. 46.
Riddell, John T., Inc., Chicago, Ill. 752,461, pub. 4–23–63. Cl. 22.
Ries, Max H., Chicago, Ill. 752,692. Cl. 46.
Rosenfelder, H. Alex : *See*—
Straser Candy Co., Inc.
Royal Doll Mfg. Co., The : *See*—
Ideal Toy Corp.
Royal McBee Corp. : *See*—
Royal Typewriter Co., Inc.
Royal Oil Co., Fort Worth, Tex. 752,367, pub. 4–23–63. Cl. 15.
Royal Petroleum Corp., New York N.Y. 752,366, pub. 4–23–63. Cl. 15.
Royal Typewriter Co., Inc. Royal McBee Corp., Port Chester, N.Y. 142,117. Am. 7(d). Cl. 23.
Rudofker's, S., Son, Inc., Philadelphia, Pa. 752,562–4, pub. 4–23–63. Cl. 39.
Rust-Oleum Corp., Evanston, Ill. 752,372, pub. 4–23–63. Cl. 16.
S & F Mfg. and Leasing Corp., Dallas, Tex. 752,346, pub. 4–23–63. Cl. 6.
SPA Societa Prodotti Antibiotici S.p.A., Milan, Italy. 752,402, pub. 4–23–63. Cl. 18.
Sabre Line : *See*—
Sabre Shipping Corp.
Sabre Shipping Corp., d.b.a. Sabre Line, New York, N.Y. 752,664, pub. 4–23–63. Cl. 105.
Sales, Circle F. : *See*—
Fischbach Trucking Co.
Samson Block & Supply Co., Inc., Media, Pa. 752,359, pub. 4–23–63. Cl. 12.
Sandoval, T. P., Laboratory : *See*—
Sandoval, Thomas P.
Sandoval, Thomas P., d.b.a. T. P. Sandoval Laboratory, Santa Rita, N. Mex. 645,647, canc. Cl. 18.
Sanford-Day Corp., Knoxville, Tenn. 752,412, pub. 4–23–63. Cl. 19.
Sanford Ink Co., Bellwood, Ill. 752,677. Cl. 37.
Sanitary Soap Co., Inc., Paterson, N.J. 752,700. Cl. 52.
Sazerac Co. Inc., New Orleans, La. 752,613, pub. 4–23–63. Cl. 49.
Schaper Mfg. Co., Inc., Minneapolis, Minn. 752,445, pub. 4–23–63. Cl. 22.
Schenley Laboratories, Inc., New York, N.Y. 645,654, canc. Cl. 18.
Schneider, William S., d.b.a. The William Steven Co., Los Angeles, Calif. 752,295, pub. 4–23–63. Cl. 2.
School Form & Supply Co. : *See*—
Tuscany, (Mrs.) Geraldine.
Schully's Industries Ltd., Toronto, Ontario, Canada. 752,357, pub. 4–23–63. Cl. 12.
Schwartz, Joseph, d.b.a. Schwartz Mattress Co., Brooklyn, N.Y. 625,383, canc. Cl. 32.
Schwartz Mattress Co. : *See*—
Schwartz, Joseph.
Sears, Roebuck and Co., Chicago, Ill. 752,506, pub. 4–23–63. Cl. 26.
Sears, Roebuck and Co., Chicago, Ill. 752,561, pub. 4–23–63. Cl. 39.
Sherwin-Williams Co., The, Cleveland, Ohio. 752,673. Cl. 16.
Sifto Salt (1960) Ltd., Montreal, Quebec, Canada. 752,578, pub. 4–23–63. Cl. 46.
Sigma Instruments, Inc., South Braintree, Mass. 752,426, pub. 4–23–63. Cl. 21.
Silbrico Corp., Chicago, Ill. 752,353, pub. 4–23–63. Cl. 12.
Smith, S. K., Co., The, Chicago, Ill. 645,758, canc. Cl. 37.
Smith, S. K., Co., The, Chicago, Ill. 645,759, canc. Cl. 37.
Smith Tool Co., Compton, Calif. 752,674. Cl. 23.
Snella, Lyla H., d.b.a. Jal Chemicals and El-Bro Sponge Co., Burbank, Calif. 752,520, pub. 4–23–63. Cl. 29.
Societe Anonyme Andre Citroen, Paris, France. 752,406, pub. 4–23–63. Cl. 19.
Societe d'Optique et de Mecanique de Haute Precision, Paris, France. 752,490, pub. 1–10–61. Cl. 26.
Societe a Responsabilite Limitee Dite, Paris, France. 702,315, canc. Cl. 39.
Society of the Divine Word, Techny, Ill. 752,678. Cl. 38.

Southern Mills, Inc., Atlanta, Ga. 401,133, ren. 7–9–63. Cl. 42.
Southern Mills, Inc., Atlanta, Ga. 403,601, ren. 7–9–63. Cl. 24.
Southern Mills, Inc., Atlanta, Ga. 403,682, ren. 7–9–63. Cl. 42.
Sperry Rand Corp., New York, N.Y. 752,672. Cl. 11.
Standard Chemical Products, Inc., Hoboken, N.J. 752,343, pub. 4–23–63. Cl. 6.
Standard Oil Co. of California, San Francisco, Calif. 401,420, ren. 7–9–63. Cl. 12.
Standard-Coosa-Thatcher Co., Chattanooga, Tenn. 752,575, pub. 4–23–63. Cl. 43.
State Loan and Finance Management Corp., Washington, D.C. 752,655–6, pub. 4–23–63. Cl. 102.
Sterling Drug Inc., New York, N.Y. 752,384, pub. 4–23–63. Cl. 18.
Steven, William, Co., The: *See*—
Schneider, William S.
Strasser Candy Co., Inc., from H. Alex Rosenfelder, d.b.a. Betina Confectionery Co., Denver, Colo. 752,580, pub. 4–23–63. Cl. 46.
Strohmeyer & Arpe Co., New York, N.Y. 171,200, ren. 7–9–63. Cl. 46.
Stuart, Herbert A., d.b.a. Al's Goldfish Lure Co., Indian Orchard, Mass. 645,689, canc. Cl. 22.
Studebaker Corp., South Bend, Ind. 752,408, pub. 4–23–63. Cl. 19.
Stur-Dee Health Products, Inc., Brooklyn, N.Y. 752,634, pub. 4–23–63. Cl. 52.
Summy-Birchard Co.: *See*—
Musical Courier Co., Inc.
Swimquip, Inc., El Monte, Calif. 752,355, pub. 4–23–63. Cl. 12.
Swingline Inc., Long Island City, N.Y. 752,484, pub. 4–23–63. Cl. 23.
Syracuse Pharmacal Co., Inc., Syracuse, N.Y. 752,392, pub. 4–23–63. Cl. 18.
Tamayo Hnos: *See*—
Tamayo, J. Mario, and Brothers.
Tamayo, J. Mario, and Brothers, d.b.a. Tamayo Hnos, Culiacan, Sinaloa, Mexico. 752,579, pub. 4–23–63. Cl. 46.
Termokimik Corp., Milan, Italy. 645,699, canc. Cl. 28.
Texize Chemicals, Inc., Greenville, S.C. 752,639, pub. 4–23–63. Cl. 52.
Textron Inc., Waterbury, Conn. 752,468, pub. 4–23–63. Cl. 23.
Thomas & White, Inc., West Orange, N.J. 752,648, pub. 4–23–63. Cl. 101.
Thorer & Co.: *See*—
Thorer & Hollender.
Thorer & Hollender, to Thorer & Co., Frankfurt am Main, Germany. 645,560, canc. Cl. 1.
Thorer & Hollender, to Thorer & Co., Frankfurt am Main, Germany. 645,561, canc. Cl. 1.
Three Star Stamp Co., The, Hopkins, Minn. 752,651, pub. 4–23–63. Cl. 101.
Topps Chewing Gum, Inc., Brooklyn, N.Y. 752,465, pub. 4–23–63. Cl. 22.
Torque Controls, Inc., Union City, N.J. 752,510, pub. 4–23–63. Cl. 27.
Torwegge, Franz, Bad Oeynhausen, Germany. 752,469, pub. 4–23–63. Cl. 23.
Toy Center of America, Boston, Mass. 645,693, canc. Cl. 22.
Tri State Industries, Inc., d.b.a. Tri State Supply Co., Dubuque, Iowa. 752,631, pub. 4–23–63. Cl. 52.
Tri State Supply Co.: *See*—
Tri State Industries, Inc.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 752,290, pub. 4–23–63. Cl. 1.
Tuscany, Geraldine, (Mrs.), d.b.a. School Form & Supply Co., Arcadia, Wis. 752,540, pub. 4–23–63. Cl. 37.
Tweeten Fibre Co., Inc.: *See*—
Tweeten, Oscar H.
Tweeten Fibre Co., Not Inc.: *See*—
Tweeten, Oscar H.
Tweeten, Oscar H., d.b.a. Tweeten Fibre Co., Not Inc., to Tweeten Fibre Co., Inc., Chicago, Ill. 190,231, new cert. Cl. 22.
Ultra-Violet Products, Inc., San Gabriel, Calif. 752,418, pub. 4–23–63. Cl. 21.
Ultronic Systems Corp., Pennsauken, N.J. 752,420, pub. 4–23–63. Cl. 21
Union Record Co., Inc.: *See*—
Loesser, Frank.
United Gilsonite Laboratories, Scranton, Pa. 402,627, ren. 7–9–63. Cl. 52
United Gilsonite Laboratories, Scranton, Pa. 403,054, ren. 7–9–63. Cl. 12.
United Gilsonite Laboratories, Scranton, Pa. 403,227, ren. 7–9–63. Cl. 12.
United Gilsonite Laboratories, Scranton, Pa. 403,228, ren. 7–9–63. Cl. 12.
United Gilsonite Laboratories, Scranton, Pa. 403,229, ren. 7–9–63. Cl. 12.
United Gilsonite Laboratories, Scranton, Pa. 403,230, ren. 7–9–63. Cl. 12.
United Parcel Service of America, Inc., New York, N.Y. 752,554, pub. 4–23–63. Cl. 38.
United States Borax & Chemical Corp., Los Angeles, to Columbia Wax Co., Glendale, Calif. 752,342, pub. 4–23–63. Cl. 6.
United States Ceramic Tile Co., Canton, Ohio. 752,530, pub. 4–23–63. Cl. 35.
United States Rubber Co., New York, N.Y., to Kaiser Aluminum & Chemical Corp., Oakland, Calif. 645,682, canc. Cl. 21.
Universal Oil Products Co., Des Plaines, Ill. 752,347, pub. 4–23–63. Cl. 6.
Universal Oil Products Co., Des Plaines, Ill. 752,642, pub. 4–23–63. Cl. 100.
Valerie Jean Date Shop: *See*—
Nicoll, R. C.
Valley Chlorine Solutions: *See*—
Valley Chlorine Solutions Co.
Valley Chlorine Solutions Co., d.b.a. Valley Chlorine Solutions, Los Angeles, Calif. 752,344, pub. 4–23–63. Cl. 6.
Velveray Corp., New York, N.Y. 645,894, canc. Cl. 106.
Velveray Corp., New York, N.Y. 645,895, canc. Cl. 106.
Van den Baumen, Frederik W. R., d.b.a. Roter, Hilversum, Netherlands. 645,864, canc. Cl. 51.
Vanderbilt, R. T., Co., Inc., New York, N.Y. 173,773, ren. 7–9–63. Cl. 6.
Variety Food Products Co., Gladstone, Mo. 752,585, pub. 4–23–63. Cl. 46.
Vennootschap Onder de Firma A. Overdevest Gzn & Zonen, Wassenaar, Netherlands. 752,283, pub. 4–23–63. Cl. 1.
Vick Chemical Co., Wilmington, Del., to Richardson-Merrell Inc., New York, N.Y. 399,431, ren. 7–9–63. Cl. 6.
Victoreen Instrument Co., The, Cleveland, Ohio. 752,429, pub. 4–23–63. Cl. 21.
Votre Ami Cosmetic Co.: *See*—
Goldberg, Lillian.
Wakefield Engineering, Inc., Wakefield, Mass. 752,414, pub. 4–23–63. Cl. 21.
Wallace & Tiernan Inc.: *See*—
Naamlooze Vennootschap Industrieele Maatschappij v.h. Noury & Van der Lande.
Warne, William, & Co. Ltd., Barking, England. 168,228, ren. 7–9–63. Cl. 44.
Warner, Jane, Inc., New York, N.Y. 645,799, canc. Cl. 39.
Warner-Lambert Pharmaceutical Co.: *See*—
Philco Pharmaceutical Co.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 752,891, pub. 4–23–63. Cl. 18.
Warner-Lambert Pharmaceutical Co., Corp., Morris Plains, N.J. 752,403–4, pub. 4–23–63. Cl. 18.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 752,628, pub. 4–23–63. Cl. 51.
Warren Molded Plastics, Inc., Cortland, Ohio. 752,619, pub. 4–23–63. Cl. 50.
West Virginia Pulp and Paper Co., New York, N.Y. 752,297, pub. 4–23–63. Cl. 2.
Westcott, Slade and Balcom Co., Providence, R.I. 174,403, ren. 7–9–63. Cl. 16.
Western Auto Supply Co., Kansas City, Mo. 752,280, pub. 4–23–63. Cl. 1.
Western Exterminator Co., Los Angeles, Calif. 752,643, pub. 4–23–63. Cl. 100.
Western Michigan University, Kalamazoo, Mich. 752,548, pub. 4–23–63. Cl. 38.
Western Turfgrass, Inc., San Gabriel, Calif. 752,284, pub. 4–23–63. Cl. 1.
White Co., New York, N.Y. 645,800, canc. Cl. 40.
White House Creamery Co., Burlington, Iowa. 752,598, pub. 4–23–63. Cl. 46.
Whitman, Charles B., d.b.a. Pelmo Park Perennial Gardens, Weston, Ontario, Canada. 752,307, pub. 4–23–63. Cl. 2.
Wilbert Products Co., Inc., New York, N.Y. 752,703. Cl. 52.
Williams & Meyer Co., Chicago, Ill. 752,547, pub. 4–23–63. Cl. 38.
William Underwood Co.: *See*—
Ingersoll Products Corp.
Willner, Milton J., d.b.a. Mister Taco, Aurora, Colo. 752,594, pub. 4–23–63. Cl. 46.
Wilson Sporting Goods Co., River Grove, Ill. 752,452, pub. 4–23–63. Cl. 22.
Windsor-Lloyd Products, Inc., Philadelphia, Pa. 402,774, ren. 7–9–63. Cl. 6.
Winston, Ltd., Oklahoma City, Okla. 645,859, canc. Cl. 51.
Wisconsin Farmer Co., Inc., Racine, Wis. 752,680. Cl. 38.
Wiss, J., & Sons Co., Newark, N.J. 752,478, pub. 4–23–63. Cl. 23.
Wolf, Robert S., d.b.a. Holiday Frosted Food Co., Philadelphia, Pa. 752,694. Cl. 46.
Wrought Iron Range Co., St. Louis, Mo. 645,749, canc. Cl. 34.
Yankee Chemical Inc., Santa Ana, Calif. 752,637, pub. 4–23–63. Cl. 52.
Yardley of London, Inc., Paterson, N.J. 752,698. Cl. 51.
Yours . . . By Request, Inc., Waverly, Fla. 752,605, pub. 4–23–63. Cl. 46.
Zaidband, Morris, New York, N.Y. 752,512, pub. 4–23–63. Cl. 28.
Zale Jewelry Co., Inc., Dallas, Tex. 752,419, pub. 4–23–63. Cl. 21.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

DIRECTORY FOR REORGANIZED PATENT EXAMINING OPERATIONS

	Room	Phone
CHEMICAL EXAMINING OPERATION—P. E. Mangan, Director	4701	5161
General Chemistry, Group **110**—R. L. Campbell	4083	2856
General Organic Chemistry, Group **120**—I. Marcus	4733	2806
Petroleum Chemistry, Group **130**—J. S. Bailey	4618	2831
High Polymer Chemistry, Group **140**—M. Sterman	4706	2850
Compositions and Molding, Group **150**—L. H. Gaston	4091	2864
Coating and Laminating, Group **160**—J. Rebold, Acting	4629	2825
Specialized Chemical Arts and Industries, Group **170**—W. B. Knight	4063	2863
Chemical Engineering, Group **180**—G. D. Mitchell	4876	2832
ELECTRICAL EXAMINING OPERATION—N. H. Evans, Director	6098	3748
Power, Group **210**—M. L. Levy	6897	2848
Security, Group **220**—S. Boyd	3618	2810
Information Transmission, Group **230**—S. W. Capelli	6516	2841
Information Storage and Retrieval, Group **240**—W. W. Burns, Jr.	6511	2868
Electronic Component Systems and Devices, Group **250**—B. G. Miller	6616	2865
Radiation and Instruments, Group **260**—F. M. Strader	6086	2854
Elements, Group **270**—E. J. Sax	6625	2837
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. Wahl, Director	7701	5175
Material or Article Handling and Dispensing, Group **310**—A. Berlin	7064	2835
Metal and Plastics Working, Group **320**—N. Berger	7620	2815
Manufacturing and Assembling Miscellaneous Articles, Group **330**—A. Horton	2088	2514
Machine Tools, Mechanisms, and Elements, Group **340**—F. Bronaugh	4057	2858
Hardware Tools and Joints, Group **350**—T. Hickey	7868A	2857
Fluid Handling, Group **360**—E. Paul	7838	2839
Power Plants, Motor and Pumps, Group **370**—C. Gareau	7842	2818
Heating, Cooling and Ventilating, Group **380**—P. Patrick	7087B	2819
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—		
J. A. Manian, Director	5701	3711
Agriculture, Group **410**—A. Ruegg	5891	2501
Civil Engineering, Group **420**—B. Bendett	3885	2549
Physics, Group **430**—R. L. Evans	5898C	2523
Textiles and Apparel, Group **440**—R. C. Mader	7898C	2521
Transportation, Group **450**—P. Arnold	5600	2547
Furniture and Receptacles, Group **460**—W. S. Cole	5609	2552
Printing, Stationery and Material Treatment, Group **470**—L. W. Varner	3510	2517
Personal Treatment, Adornment and Amusement, Group **480**—L. R. Prince	2320	2562
Designs—J. A. Manian	614DNB	2423

GUIDELINES OF PATENTABILITY

On June 17, 1963, the memorandum reproduced below was distributed to the Examiners in the Patent Office. It is presented here for the information of all applicants and their representatives.

Memorandum #1 (GP1)

The following principles have been formulated after careful consideration of the applicable court decisions and after consultation with the Board of Appeals of the Patent Office, and will be supplemented or revised from time to time as circumstances may require. The principles stated here and in future "Guidelines of Patentability" memoranda should be uniformly followed until further notice.

GP1(*a*) : *Uniform Application of the Statutory Requirements for Patentability*

The standards of patentability applied in the examination of claims must be the same throughout the Office. In every art, whether it be considered "complex," "newly developed," "crowded," or "competitive," all of the requirements for patentability (e.g., novelty, usefulness and unobviousness, as provided in 35 U.S.C. 101, 102 and 103) must be met before a claim is allowed. Hence, the mere fact that a claim recites in detail all of the features of applicant's alleged invention (i.e., a "redbutton" or "picture" claim) is never, in itself, justification for the allowance of such a claim.

GP1(*b*) : *Multiple Rejections*

As a general rule, an Examiner should reject each claim of an application on all distinct, valid grounds that are available to him. Stated in another manner, each claim should be rejected on any ground available which, if not applied, could subsequently be utilized by a court to hold the same claim in a patent invalid.

Thus rejections on such grounds as insufficient disclosure, indefiniteness, and res judicata should be applied where appropriate even though there may be a seemingly sufficient rejection on the basis of prior art. However, prior art rejections should not be needlessly multiplied but should ordinarily be confined to the best available art. Rejections which are merely cumulative or which would clearly fall if the primary rejection is not sustained should be avoided. Exceptions may properly be made where the most pertinent reference seems likely to be antedated or where a claim is met only in terms by a reference which does not disclose the inventive concept involved. Such rejections should be backed up by the best other art available.

A number of situations have been found to exist where examination of an application is best accomplished by limiting action on the claims thereof to the particular issue involved. These situations are as follows:

(1) Where an application is too informal for a complete action on the merits—see section 702.01, M.P.E.P.;
(2) Where there is an undue multiplicity of claims—see section 706.03(1), M.P.E.P.;
(3) Where there is a misjoinder of invention—see section 806.02, M.P.E.P.;
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A rejection on the ground of old combination should be made whenever proper.

Whether subcombination claims have been presented or allowed in the same application, or whether other grounds for rejection of the combination claims exist, are not determinative of the propriety of this rejection.

The rejection is proper when a single reference discloses broadly a combination of elements functionally cooperating in substantially the same manner to produce substantially the same results as that of the claimed combination under consideration. *Ex parte Silverstein*, 125 U.S.P.Q. 238.

The fact that an applicant has improved one element of a combination which may be per se patentable does not entitle him to a claim to the improved element in combination with old elements where the elements perform no new function in the claimed combination. *In re Hall*, 41 CCPA 759. The test to be applied to claims of this character is whether or not the action of any of the elements embraced by the claim is modified in any material manner by the fact that another element has the specific structure recited. *In re Allatt*, 28 CCPA 1367.

Accordingly, the rejection should make it clear exactly what the combination is and why it is thought that any improved element does not modify the action of the combination.

A suggested form for use in making an old combination rejection is as follows:

> Claim 1 is rejected as being drawn to the old combination of a bell, a battery and a switch connected in series by wire conductors. This combination is shown to be old by the patent to Jones which discloses broadly the same elements functionally interrelated in the same manner to produce substantially the same results. The combination of claim 1 differs from that shown in Jones in setting forth a specific construction of the battery itself. Since the latter does not modify the action of the other elements recited in the claim in any material manner, no new combination is seen to exist. *In re Hall*, 41 CCPA 759.

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Process or method claims which merely define the function of applicant's machine or apparatus are not allowable.

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GP1(*e*) : *Obvious Method*

It is well settled that a process which amounts to nothing more than an obvious manner of producing an article or product is not patentable.

While a rejection on this ground does not require the citation of art or the allowance of any claim, it must be apparent to a person ordinarily skilled in the art, without reference to any method disclosure contained in the application, how the article was made. In other words, the rejection is proper if such a person would be able, upon the basis of his own knowledge, to produce the article merely by having it shown to him or by being told what ingredients it contained. Note *In re Larsen*, 49 CCPA 711.

June 17, 1963.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 16, 1963 Volume 792 Number 3

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of May 1963

Examiner affirmed	351
Examiner affirmed in part	52
Examiner reversed	103
Total	506

Order No. 5315

Jerome W. Paxton of Washington, D.C. whose registration number is 15,517, is hereby excluded, beginning on January 25, 1963, from practice as a patent agent in any application before the United States Patent Office, without prejudice to his re-registration, upon a sufficient showing, after a period of not less than one year.

This action is taken under the provisions of Section 32 of Title 35 of the United States Code and Rule 348 of the Rules of Practice of the United States Patent Office in Patent Cases.

EDWIN L. REYNOLDS,
Jan. 25, 1963. *First Assistant Commissioner of Patents.*

Directory for Reorganized Patent Examining Operations

The movement of all Examining Groups incident to the reorganization of the Patent Examining Corps is now complete.

For your convenience, a yellow tear sheet, which provides a complete listing of room and telephone numbers of each Director and Supervisory Examiner as of May 15, 1963, is included as the last page of this issue of the OFFICIAL GAZETTE.

International Convention for the Protection of Industrial Property

Ratification of the Lisbon 1958 Revision by the Federation of Rhodesia and Nyasaland

The Secretary of State has been notified by the Embassy of Switzerland of the ratification, effective June 16, 1963, by the Federation of Rhodesia and Nyasaland of the International Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Tanganyika to the Lisbon 1958 Revision

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New Applications Received During May 1963

Patents	7,692
Designs	475
Plant Patents	7
Reissues	23
Total	8,197

Issue

Patents	872	No. 3,097,360	to No.	3,098,231, incl.
Designs	50	No. 195,663	to No.	195,712, incl.
Plant Patents	1	No. 2,269		
Reissues	4	No. 25,415	to No.	25,418, incl.
Total	927			

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June 17, 1963.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	10-6-61	9-14-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	2-2-62	2-9-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	12-7-61	11-17-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6-27-61	7-20-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-1-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	12-4-61
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	11-24-61	10-11-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-11-62	1-25-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-28-61	10-16-61
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	12-1-61	1-3-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-6-61	10-9-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	11-16-61	11-7-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	11-1-61	11-3-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	11-9-61	11-3-61

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1963

Total number of pending applications (excluding Designs)	200,178
Total number of Design applications pending	6,195
Total number of applications awaiting action (excluding Designs)	115,956
Total number of Design applications awaiting action	2,329
Date of oldest new application awaiting action	June 27, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,402,939 to 2,405,106, inclusive

Plant Patents ..... Numbers 702 to 708 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-5-62	2-26-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	12-13-61	12-21-61
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	1-31-62	12-4-61
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner.. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	1-16-62	1-15-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	1-12-62	9-20-61
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DECISIONS IN PATENT AND TRADEMARK CASES

Supreme Court of the United States

ALEXANDER T. SPERRY *v.* STATE OF FLORIDA EX REL. THE FLORIDA BAR

No. 322. Decided May 27, 1963

[— U.S. —; 137 USPQ 578]

1. PRACTITIONERS—REGISTRATION FOR PRACTICE BEFORE PATENT OFFICE—STATE MAY NOT DENY RIGHT TO PRACTICE TO THOSE AUTHORIZED BY COMMISSIONER.

"The statute [35 U.S.C. 31] * * * expressly permits the Commissioner to authorize practice before the Patent Office by nonlawyers, and the Commissioner has explicitly granted such authority. If the authorization is unqualified, then, by virtue of the Supremacy Clause, Florida may not deny to those failing to meet its own qualifications the right to perform the functions within the scope of the federal authority. A State may not enforce licensing requirements which, though valid in the absence of federal regulation, give 'the State's licensing board a virtual power of review over the federal determination' that a person or agency is qualified and entitled to perform certain functions, or which impose upon the performance of activity sanctioned by federal license additional conditions not contemplated by Congress."

2. SAME—SAME—NO CONDITION THAT PRACTICE NOT BE INCONSISTENT WITH STATE LAW.

Held that there was not to be read into the authorization conferred by the federal statute, 35 U.S.C. 31, and Patent Office regulations, 37 CFR 1.341, the condition that practice before the Patent Office in patent cases not be inconsistent with State law.

3. SAME—DESIGN OF 35 U.S.C. 31 AND PREDECESSOR PROVISIONS—LEGISLATIVE HISTORY.

"* * * respondent directs us to the legislative history of the statute to confirm its understanding that § 31 and its predecessor provisions were not designed to authorize practice not condoned by the State. Insofar as this history provides any insight into the intent of Congress, however, we are convinced that the interpretation which respondent asks us to give the statute is inconsistent with the assumptions upon which Congress has acted for over a century."

4. SAME—SAME—SAME.

"Examination of the development of practice before the Patent Office and its governmental regulation reveals that: (1) nonlawyers have practiced before the Office from its inception, with the express approval of the Patent Office and to the knowledge of Congress; (2) during prolonged congressional study of unethical practices before the Patent Office, the right of nonlawyer agents to practice before the Office went unquestioned, and there was no suggestion that abuses might be curbed by State regulation; (3) despite protests of the bar, Congress in enacting the Administrative Procedure Act refused to limit the right to practice before the administrative agencies to lawyers; and (4) the Patent Office has defended the value of nonlawyer practitioners while taking steps to protect the interests which a State has in prohibiting unauthorized practice of law. We find implicit in this history congressional (and administrative) recognition that registration in the Patent Office confers a right to practice before the Office without regard to whether the State within which the practice is conducted would otherwise prohibit such conduct."

5. SAME—ORDER OF STATE COURT ENJOINING REGISTERED PRACTITIONER.

Held that the order of the Supreme Court of Florida enjoining petitioner, a nonlawyer registered to practice before the Patent Office, "must be vacated since it prohibits him from performing tasks which are incident to the preparation and prosecution of patent applications before the Patent Office."

ON WRIT of certiorari to Supreme Court of Florida.

JUDGMENT VACATED.

Oscar A. Mellin, *LeRoy Hanscom*, and *Jack E. Hursh* (*Carlisle M. Moore* and *Ernest M. Anderson* of counsel) all of San Francisco, Calif., for petitioner.

Sherwood Spencer, Hollywood, Fla., *J. Lewis Hall*, Tallahassee, Fla., *Donald J. Bradshaw*, Inverness, Fla., *J. Nixon Daniel, Jr.*, Pensacola, Fla., and *John Houston Gunn*, Miami, Fla. (*F. Trowbridge vom Baur*, Washington, D.C., of counsel) for respondent.

Archibald Cox, *Joseph D. Guilfoyle*, *Louis F. Claiborne*, *Morton Hollander*, and *David J. McCarthy, Jr.*, for United States, amicus curiae.

William H. Webb (*Morton Burden, Jr.*, and *John M. Webb* of counsel) all of Pittsburgh, Pa., for American Patent Law Association, amicus curiae.

F. Trowbridge vom Baur, Washington, D.C., *H. H. Perry, Jr.*, Albany, Ga., *Wayland B. Cedarquist*, Chicago, Ill., *Jonathan F. Ellis*, Winsted, Conn., *Raymond Reisler*, Brooklyn, N.Y., *Warren H. Resh*, Madison, Wis., *R. Carleton Sharretts, Jr.*, Baltimore, Md., *George H. Turner*, Lincoln, Neb., and *Melvin F. Adler*, Fort Worth, Tex., for American Bar Association, amicus curiae.

Roger Robb, Washington, D.C., for American Association of Registered Patent Attorneys and Agents, amicus curiae.

John R. Turney and *D. W. Markham*, both of Washington, D.C. (*Nuel D. Belnap*, Chicago, Ill., of counsel) for Association of Interstate Commerce Commission Practitioners, amicus curiae.

M. A. Baskin, Miami, Fla., for The Florida Patent Law Association, amicus curiae.

Lyman Brownsfield and *Phillip K. Folk*, both of Columbus, Ohio, for State Bar Associations, amici curiae.

Arthur B. Hanson (*Emmett E. Tucker, Jr.*, and *R. K. Kennon Jones* of counsel) all of Washington, D.C., for American Chemical Society, amicus curiae.

MR. CHIEF JUSTICE WARREN delivered the opinion of the Court.

Petitioner is a practitioner registered to practice before the United States Patent Office. He has not been admitted to practice law before the Florida or any other bar. Alleging, among other things, that petitioner "is engaged in the unauthorized practice of law, in that although he is not a member of The Florida Bar, he nevertheless maintains an office . . . in Tampa, Florida, . . . holds himself out to the public as a Patent Attorney . . . represents Florida clients before the United States Patent Office, . . . has rendered opinions as to patentability, and . . . has prepared various legal instruments, including . . . applications and amendments to applications for letters patent, and filed same in the United States Patent Office in Washington, D.C.," the Florida Bar instituted these proceedings in the Supreme Court of Florida to enjoin the performance of these and other specified acts within the State. Petitioner filed an answer in which he admitted the above allegations but pleaded as a defense "that the work performed by him for Florida citizens is solely that work which is presented to the United States Patent Office and that he charges fees solely for his work of preparing and prosecuting patent applications and patent assignments and determinations incident to preparing and prosecuting patent applications and assignments." Thereupon, the court granted the Bar's motion for a summary decree and permanently enjoined the petitioner from pursuing the following activities in Florida until and unless he became a member of the State Bar:

"1. using the term 'patent attorney' or holding himself out to be an attorney at law in this state in any field or phase of the law (we recognize that the respondent according to the record before us has already voluntarily ceased the use of the word 'attorney');

"2. rendering legal opinions, including opinions as to patentability or infringement on patent rights;

"3. preparing, drafting and construing legal documents;

"4. holding himself out, in this state, as qualified to prepare and prosecute applications for letters patent, and amendments thereto;

"5. preparation and prosecution of applications for letters patent, and amendments thereto, in this state; and

"6. otherwise engaging in the practice of law."

The Supreme Court of Florida concluded that petitioner's conduct constituted the unauthorized practice of law which the State, acting under its police power, could properly prohibit, and that neither federal statute nor the Constitution of the United States empowered any federal body to authorize such conduct in Florida. 140 So. 2d 587.

In his petition for certiorari, petitioner attacked the injunction "only insofar as it prohibits him from engaging in the specific activities . . . [referred to above], covered by his federal license to practice before the Patent Office. He does not claim that he has any right otherwise to engage in activities that would be regarded as the practice of law."[1] We granted certiorari, 371 U.S. 875, to consider the significant, but narrow, questions thus presented.

We do not question the determination that under Florida law the preparation and prosecution of patent applications for others constitutes the practice of law. *Greenough* v. *Tax Assessors*, 331 U.S. 486; *Murdock* v. *Memphis*, 20 Wall. 590. Such conduct inevitably requires the practitioner to consider and advise his clients as to the patentability of their inventions under the statutory criteria, 35 U.S.C. §§ 101–103, 161, 171, as well as to consider the advisability of relying upon alternative forms of protection which may be available under state law. It also involves his participation in the drafting of the specification and claims of the patent application, 35 U.S.C. § 112, which this Court long ago noted "constitute[s] one of the most difficult legal instruments to draw with accuracy," *Topliff* v. *Topliff*, 145 U.S. 156, 171. And upon rejection of the application, the practitioner may also assist in the preparation of amendments, 37 CFR §§ 1.117–1.126, which frequently requires written argument to establish the patentability of the claimed invention under the applicable rules of law and in light of the prior art. 37 CFR § 1.119. Nor do we doubt that Florida has a substantial interest in regulating the practice of law within its State and that, in the absence of federal legislation, it could validly prohibit nonlawyers from engaging in this circumscribed form of patent practice.[2]

But "the law of the State, though enacted in the exercise of powers not contravened, must yield" when incompatible with federal legislation. *Gibbons* v. *Ogden*, 9 Wheat. 1, 211. Congress has provided that the Commissioner of Patents "may prescribe regulations governing the *recognition* and conduct of *agents*, attorneys, *or other persons* representing applicants or other parties before the Patent Office," 35 U.S.C. § 31,[3] and the Commissioner, pursuant to § 31, has provided

[1] Petitioner's right to refer to himself as a "Patent Attorney" has been mooted by his voluntary discontinuance of the use of the term "attorney."

[2] See *Konigsberg* v. *State Bar of California*, 366 U.S. 36, 40–41; *Schware* v. *Board of Bar Examiners of New Mexico*, 353 U.S. 232, 239; *West Virginia State Bar* v. *Earley*, 144 W. Va. 504, 109 S.E. 2d 420; *Gardner* v. *Conway*, 234 Minn. 468, 48 N.W. 2d 788.

[3] Act of July 19, 1952, c. 950, § 1, 66 Stat. 795, 35 U.S.C. § 31:

"The Commissioner, subject to the approval of the Secretary of Commerce, may prescribe regulations governing the recognition and conduct of agents, attorneys, or other persons representing applicants or other parties before the Patent Office, and may require them, before being recognized as representatives of applicants or other persons, to show that they are of good moral character and reputation and are possessed of the necessary qualifications to render to applicants or other persons valuable service, advice, and assistance in the presentation or prosecution of their applications or other business before the Office."

by regulation that "[a]n applicant for patent . . . *may be represented by an* attorney or *agent* authorized to practice before the Patent Office in patent cases." 37 CFR § 1.31. [Emphasis added.] The current regulations establish two separate registers "on which are entered the names of all persons recognized as *entitled to represent applicants* before the Patent Office in the preparation and prosecution of applications for patent." 37 CFR § 1.341. [Emphasis added.] One register is for attorneys at law, 37 CFR § 1.341(a), and the other is for nonlawyer "agents." 37 CFR § 1.341(b). A person may be admitted under either category only by establishing "that he is of good moral character and of good repute and possessed of the legal and scientific and technical qualifications necessary to enable him to render applicants for patents valuable service, and is otherwise competent to advise and assist them in the preparation and prosecution of their applications before the Patent Office." 37 CFR § 1.341(c).

[1] The statute thus expressly permits the Commissioner to authorize practice before the Patent Office by nonlawyers, and the Commissioner has explicitly granted such authority. If the authorization is unqualified, then, by virtue of the Supremacy Clause, Florida may not deny to those failing to meet its own qualifications the right to perform the functions within the scope of the federal authority. A State may not enforce licensing requirements which, though valid in the absence of federal regulation, give "the State's licensing board a virtual power of review over the federal determination" that a person or agency is qualified and entitled to perform certain functions,[4] or which impose upon the performance of activity sanctioned by federal license additional conditions not contemplated by Congress.[5] "No State law can hinder or obstruct the free use of a license granted under an act of Congress." *Pennsylvania* v. *Wheeling & B. Bridge Co.*, 13 How. 518, 566.

[2] Respondent argues, however, that we must read into the authorization conferred by the federal statute and regulations the condition that such practice not be inconsistent with state law, thus leaving registered practitioners with the unqualified right to practice only in the physical presence of the Patent Office and in the District of Columbia, where the Office is now located.

The only language in either the statute or regulations which affords any plausible support for this view is the provision in the regulations that "[r]egistration in the Patent Office . . . shall only entitle the persons registered to practice before the Patent Office." 37 CFR § 1.341. Respondent suggests that the meaning of this limitation is clarified by reference to the predecessor provision, which provided that registration "shall not be construed as authorizing persons not members of the bar to practice law." 3 Fed. Reg. 2429. Yet the progression to the more circumscribed language without more tends to indicate that the provision was intended only to emphasize that registration in the Patent Office does not authorize the general practice of patent law, but sanctions only the performance of those services which are reasonably necessary and incident to the preparation and prosecution of patent applications. That no more was intended is further shown by the contrast with the regulations governing practice before the Patent Office in trademark cases, also issued by the Commissioner of Patents. These regulations now provide that "[r]ecognition of any person under this section is not to be construed as sanctioning or authorizing the performance of any acts regarded in the jurisdiction where performed as the unauthorized practice of law." 37 CFR § 2.12(d). The comparison is perhaps sufficiently telling. But any possible uncertainty as to the intended meaning of the Commissioner must be dispelled by the fact that when the present regulations were amended in 1948,[6] it was first proposed to add a provision similar to that appearing in the trademark regulations.[7] After objection had been leveled against the revision on the ground that it "indicated that the office thinks that the states have the power to circumscribe and limit the rights of patent attorneys who are not lawyers," [8] the more sweeping language was deleted and the wording modified to its present form.

[3] Bereft of support in the regulations, respondent directs us to the legislative history of the statute to confirm its understanding that § 31 and its predecessor provisions were not designed to authorize practice not condoned by the State. Insofar as this history provides any insight into the intent of Congress, however, we are convinced that the interpretation which respondent asks us to give the statute is inconsistent with the assumptions upon which Congress has acted for over a century.

[4] Examination of the development of practice before the Patent Office and its governmental regulation reveals that: (1) nonlawyers have practiced before the Office from its inception, with the express approval of the Patent Office and to the knowledge of Congress; (2) during prolonged congresisonal study of unethical practices before the Patent Office, the right of nonlawyer agents to practice before the Office went unquestioned, and there was no suggestion that abuses might be curbed by state regulation; (3) despite protests of the bar, Congress in enacting the Administrative Procedure Act refused to limit the right to practice before the administrative agencies to lawyers; and (4) the Patent Office has defended the value of nonlawyer practitioners while taking steps to protect the interests which a State has in prohibiting unauthorized practice of law. We find implicit in this history congresisonal (and administrative) recognition that registration in the Patent Office confers a right to practice before the Office without regard to whether the State within which the practice is conducted would otherwise prohibit such conduct.

The power of the Commissioner of Patents to regulate practice before the Patent Office dates back to 1861, when Congress first pro-

[4] *Miller, Inc.*, v. *Arkansas*, 352 U.S. 187, 190; *First Iowa Hydro-Electric Coop.* v. *Federal Power Comm'n*, 328 U.S. 152; cf. *Castle* v. *Hayes Freight Lines, Inc.*, 348 U.S. 61; *Cloverleaf Butter Co.* v. *Patterson*, 315 U.S. 148.

[5] *Rice* v. *Santa Fe Elevator Corp.*, 331 U.S. 218, 235–236; *Moran* v. *New Orleans*, 112 U.S. 69; *Sinnot* v. *Davenport*, 22 How. 227; *Gibbons* v. *Ogden*, 9 Wheat. 1; *Huron Portland Cement Co.* v. *Detroit*, 362 U.S. 440, 449 (dissenting opinion); cf. *Hill* v. *Florida*, 325 U.S. 538.

[6] 13 Fed. Reg. 9596.

[7] Proposed Revision of Patent Rules § 5.1, 611 O.G. Pat. Off., June 29, 1948, Supp. 8: "*Registration of attorneys and agents.* . . . Registration in the Patent Office under the provisions of these rules shall not be construed as authorizing persons not members of the bar to practice law or to perform any acts regarded as practicing law in the jurisdiction where performed."

[8] "I think I know what you mean to say, but you have not said what you mean to say. If you stopped at the end of the first clause there and said that it does not authorize the persons not members of the bar to practice law, you might be closer to being right; but, as you have written it here, you have said that patent attorneys may not do in the states things which it may be necessary for them to do in order to prosecute their claims before the Patent Office.

"In other words, you are giving it to the states to say what a patent attorney may do rather than leaving it up to the Congress and to the laws of the United States.

"I may suggest that what patent attorneys do before the Patent Office might be construed as practicing law, were it not for the fact that their particular conduct is permitted by the acts of Congress and under the rules of the Patent Office.

"The states cannot pass laws derogating from the rights of the patent attorneys as created by Congress and existing under the rules of the Patent Office. I think that the rule, as proposed, makes it possible for the states, or indicated that the Office thinks that the states have the power to circumscribe and limit the rights of patent attorneys who are not lawyers, which rights are created under the laws of Congress, and subject to the rules of the Patent Office rather than to regulation by the individual states.

"I think you would have no power to pass this particular part of your proposed rule."

Remarks of A. P. Kane, Attorney, Hearing on Proposed Revision of Rules of Practice in Patent Cases, 281–282 (Sept. 30, 1948). See also *id.*, at pp. 319–330.

vided that "for gross misconduct he may refuse to recognize any person as a patent agent, either generally or in any particular case . . . ." [9] The "Rules and Directions" issued by the Commissioner in 1869 provided that "[a]ny person of intelligence and good moral character may appear as the attorney in fact or agent of an applicant upon filing proper power of attorney." [10] From the outset, a substantial number of those appearing in this capacity were engineers or chemists familiar with the technical subjects to which the patent application related. "Many of them were not members of the bar. It probably never occurred to anybody that they should be." [11] Moreover, although a concentration of patent practitioners developed in Washington, D.C., the regulations have provided since the reorganization of the Patent Office in 1836 that personal attendance in Washington is unnecessary and that business with the Office should be transacted in writing.[12] The bulk of practitioners are now scattered throughout the country, and have been so distributed for many years.[13]

As a practical matter, if practitioners were not so located, and thus could not easily consult with the inventors with whom they deal, their effectiveness would often be considerably impaired.[14] Respondent's suggestion that practice by nonlawyers was intended to be confined to the District of Columbia thus assumes either congressional ignorance or disregard of long-established practice.

Despite the early recognition of nonlawyers by the Patent Office, these agents, not subject to the professional restraints of their lawyer brethren, were particularly responsible for the deceptive advertising and victimization of inventors which long plagued the Patent Office.[15] To remedy these abuses, the Commissioner of Patents in 1899 first required registration of persons practicing before the Patent Office [16] and, in 1918, required practitioners to obtain his prior approval of all advertising material which they distributed.[17] It was to reach these same evils that § 31 was given much its present form when, in 1922, the statute was amended to expressly authorize the Commissioner to prescribe regulations for the recognition of agents and attorneys.[18]

This modification of the statute, first proposed in 1912, was designed to provide for the "creation of a patent bar" and "to require a higher

[9] Act of March 2, 1861, c. 88, § 8, 12 Stat. 247; see also Act of July 8, 1870, c. 230, § 19, 16 Stat. 200, as amended, 66 Stat. 793, 35 U.S.C. § 6.

[10] Rules and Directions for Proceedings in the Patent Office, § 127 (Aug. 1, 1869).

[11] Letter from Edward S. Rogers, Hearings before House Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 84 (1928); cf. *Hoosier Drill Co.* v. *Ingels*, 15 O.G. Pat. Off. 1013; 2 Robinson, Patents, § 431.

[12] Personal attendance of the applicant at the Patent Office, to obtain a patent, is unnecessary. The business can be done by correspondence (free of postage), or by power of attorney." Information to Persons Having Business to Transact at the Patent Office, 8 (July 1836). In 1854, it was first provided that "[a]ll business with the office should be transacted in writing. . . ." Rules and Directions for Proceedings in the Patent Office, § 122 (Feb. 20, 1854). Compare 37 CFR § 1.2.

[13] Roster of Attorneys and Agents Registered to Practice Before the U.S. Patent Office (1958); Names and Addresses of Attorneys Practicing Before the U.S. Patent Office (1883); Testimony of T. E. Robertson, Commissioner of Patents, Hearings before House Committee on Patents on H.R. 699, 71st Cong., 2d Sess. 12. Commencing in 1848, the Commissioner for many years informed inventors that "[I]f the services of Patent Agents are desired, able and competent persons engaged in that business can be found at their offices *in this city, and in other cities*." Information to Persons Having Business to Transact at the Patent Office, Patent Agents or Attorneys (1848). [Emphasis deleted and added.]

[14] See Berle, Inventions and Their Management, 189–190; Hoar, Patent Tactics and Law (3d ed.), 256–257; Woodling, Inventions and Their Protection (2d ed.), 289–290, 333; Revise, Preparation and Prosecution of Patent Applications, § 42.

[15] See Hearings before House Committee on Patents on H. R. 5527, 70th Cong., 1st Sess. 16–18; 69 Cong. Rec. 6580; Spencer, The United States Patent Law System, 94–96. Berle, 184–186. Compare H.R. Rep. No. 1622, 68th Cong., 2d Sess. 2–3; H.R. Rep. No. 364, 64th Cong., 1st Sess. 2; Information to Persons Having Business to Transact at the Patent Office, Patent Agents or Attorneys (1848).

[16] Rules of Practice in the United States Patent Office, § 17 (July 18, 1899). Compare § 17 in the edition of June 18, 1897.

[17] 252 O.G. Pat. Off. 967. Compare 37 CFR § 1.345.

[18] Act of February 18, 1922, c. 58, § 3, 42 Stat. 390. Compare Act of July 8, 1870, c. 230, § 19, 16 Stat. 200, as amended, 35 U.S.C. § 6, and Act of July 4, 1884, c. 181, § 5, 23 Stat. 101, 5 U.S.C. § 493.

standard of qualifications for registry." [19] Although it was brought to the attention of the House Committee on Patents that practitioners included lawyers and nonlawyers alike,[20] it was never suggested that agents would be subject to exclusion. In fact, although the Commissioner of Patents had at one time expressed the view that Patent Office abuses could be eliminated only by restricting practice to lawyers,[21] his successor concluded that such a limitation would be unwise and during the pendency of this legislation recommended to Congress against such a limitation:

"It has been suggested many times that the privilege of practicing before the Office should be granted only after examination similar to examinations held for admission to the bar. It is believed that this requirement would be too severe, as many persons not specially trained in the law and without any particular educational advantages may by careful study of the practice and of the useful arts learn adequately to prosecute applications. Fundamentally knowledge of the invention is more important than knowledge of the rules and is often possessed by men of a type of mind which does not acquire legal knowledge readily." [22]

Moreover, during the consideration in 1916 of another bill enacted to curb abusive advertising by patent practitioners, by prohibiting persons practicing before government agencies from using the names of government officials in their advertising literature,[23] the same point was made on the floor of the House:

"Mr. OGLESBY. I will say to the gentleman that a good many men appear before the Patent Office who are not admitted attorneys. The commissioner stated at the hearing that he had considered the question as to whether or not anyone except a regularly admitted attorney at law should be excluded from practicing before the Patent Office, but for certain reasons thought, perhaps, he ought not to establish such a rule." [24]

Disclosure that persons were falsely holding themselves out to be registered patent practitioners led in 1938 to the enactment of legislation making such misrepresentation a criminal offense.[25] This corrective legislation was under consideration for over a decade and originally contained several other provisions, including one which would have prohibited any person "duly registered to practice in the Patent Office . . . [from holding] himself out as a patent attorney, patent lawyer, patent solicitor, or patent counselor unless he is legally admitted to practice law in the State . . . or in the District of Columbia." [26] During the extended consideration given the matter in both Houses of Congress, the distinction between patent lawyers, who had been admitted to the bar, and nonlawyer agents, was repeatedly

[19] Letter from E. B. Moore, Commissioner of Patents, Hearings before House Committee on Patents on H.R. 23417, No. 1, 62d Cong., 2d Sess. 6–7. See also Hearings before House Committee on Patents on H.R. 210, 67th Cong., 1st Sess. 16; Commissioner of Patents, Annual Report, xii (1908).

[20] The following colloquy regarding an identical bill introduced the session before passage occurred between Congressman Himes and the Commissioner of Patents:

"Mr. HIMES. It seems to me that we should know just who the man practicing before the Patent Office happens to be. Must he be a member of the bar or are the requirements the same for the patent attorney who simply goes and gets a patent for his clients as the man that goes and practices before the Patent Office, before the Commissioner of Patents?

"Mr. ROBERTSON. The Patent Office can register anyone who shows a degree of proficiency necessary to write specifications, whether or not he is a member of the bar.

"Mr. HIMES. He must not be a member of the bar?

"Mr. ROBERTSON. He need not be a member of the bar. That is not as bad as it sounds. Some of our best practitioners are not members of the bar. They are the older line of attorneys. There are some very fine ones who have been practicing before the Patent Office 30 or 40 years who are not members of the bar, but they are honest men, and there are some of the practitioners who are members of the bar who are not honest men. So it is a very difficult thing to reach." Hearings before House Committee on Patents on H.R. 210, 67th Cong., 1st Sess. 15–16.

See also Hearings before House Committee on Patents on H.R. 5011, 5012, 7010, 66th Cong., 1st Sess. 281.

[21] Commissioner of Patents, Annual Report, vi (1893).

[22] Commissioner of Patents, Annual Report, xiv (1915).

[23] Act of April 27, 1916, c. 89, 39 Stat. 54.

[24] 53 Cong. Rec. 6313.

[25] Act of May 9, 1938, 52 Stat. 342; now 66 Stat. 796, 35 U.S.C. § 33.

[26] This was the so-called "Cramton bill," H.R. 699, 71st Cong., 2d Sess.; H.R. 5527, 70th Cong., 1st Sess.; H.R. 5811, 69th Cong., 1st Sess.; H.R. 10735, 69th Cong., 1st Sess.; H.R. 5790, 68th Cong., 1st Sess.

brought out;[27] time and again it was made clear that the above provision was not intended to restrict practice by agents, but was designed only to prevent them from labeling themselves "patent attorneys,"[28] as the Patent Office had theretofore permitted.[29] The proposed bills would not have affected "any engineers or draftsmen from doing those things which they have always been doing before the Patent Office";[30] the bills sought "to bring about no change in the status of the many men now registered and *entitled to practice before the Patent Office*, regardless of whether they are members of the bar or not . . . ."[31] [Emphasis added.] "[T]here are quite a number of solicitors of patents who are highly qualified and who are not members of the bar, who never graduated at law and were never admitted to the bar. But this bill doesn't disqualify those men. *They can continue to qualify as patent agents.*"[32] [Emphasis added.] When asked "[w]hat is going to be the difference in the legal prerogatives of the agents and the others that come in," the Commissioner of Patents responded that "[*t*]*heir rights in the Patent Office will be exactly the same.* Their rights in the courts will be different."[33] [Emphasis added.] The House debates on the bill before Congress in 1930 reveal the same understanding:

"Mr. STAFFORD. . . . I was under the impression that hereafter a person in order to practice before the Patent Office must be admitted to practice before some bar of a State.

"Mr. LAGUARDIA. That is my understanding.

"Mr. PERKINS. I will correct myself. He may be admitted to act as a patent agent but after the passage of this act no one who is not admitted to the bar generally can hold himself out to be a patent attorney, patent lawyer, patent solicitor, or patent counselor.

"Mr. STAFFORD. A person without being a member of the bar may be registered as a patent agent to practice before the Commissioner of Patents?

"Mr. PERKINS. He may."[34]

Hence, during the period the 1922 statute was being considered, and prior to its readoption in 1952,[35] we find strong and unchallenged implications that registered agents have a right to practice before the Patent Office. The repeated efforts to assure Congress that no attempt was being made to limit this right are not without significance. Nor is it insignificant that we find no suggestion that the abuses being perpetrated by patent agents could or should be corrected by the States. To the contrary, reform was effected by the Patent Office, which now requires all practitioners to pass a rigorous examination,

[27] *E.g.*, 69 Cong. Rec. 6580; Hearings before Senate Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 4–7, 51; Hearings before House Committee on Patents on H.R. 699, 71st Cong., 2d Sess. 34, 49.

[28] *E.g.*, 69 Cong. Rec. 6580; S. Rep. 628, No. 71st Cong., 1st Sess. 4; Hearings before Senate Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 7, 59; Hearings before House Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 14–25, 28–33, 56–76, 85–100; Hearings before Senate Committee on Patents on H.R. 699, 71st Cong., 2d Sess. 3, 5, 10; Hearings before House Committee on Patents on H.R. 699, 71st Cong., 2d Sess. 2–5, 41.

[29] Prior to 1938, the Patent Office listed both lawyers and nonlawyers on a single register and referred to both as Patent Attorneys. The legislation which was proposed would not have prohibited nonlawyers previously registered from continuing to use this appellation. *E.g.*, H.R. Rep. No. 947, 70th Cong., 1st Sess. 4. Although the several bills containing this provision failed to gain approval (though passing the House repeatedly), in 1938, the Commissioner, following suggestions made to him during the course of the Committee hearings, Hearings before House Committee on Patents on H.R. 5811, 69th Cong., 1st Sess. 16; Hearings before House Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 20, 26–27, established separate registers for lawyers and for nonlawyer agents, 495 O.G. Pat. Off. 715, and has since prohibited agents so registered from representing themselves to be attorneys, solicitors or lawyers. See 37 CFR §§ 1.341, 1.345. The registration of those agents previously enrolled on the single register, of whom petitioner is one, was not changed.

[30] S. Rep. No. 1209, 70th Cong., 1st Sess. 1.

[31] H.R. Rep. No. 947, 70th Cong., 1st Sess. 4; S. Rep. No. 626, 71st Cong., 2d Sess. 4; H.R. Rep. No. 728, 71st Cong., 2d Sess. 3.

[32] Statement of E. W. Bradford, Chairman of the Committee on Ethics of the American Patent Law Association, Hearings before House Committee on Patents on H.R. 699, 71st Cong., 2d Sess. 61.

[33] Hearings before House Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 15.

[34] 72 Cong. Rec. 5467.

[35] No changes of substance were intended by the 1952 revision. S. Rep. No. 1979, 82d Cong., 2d Sess. 4; H.R. Rep. No. 1923, 82d Cong., 2d Sess. 6.

37 CFR § 1.341(c), strictly regulates their advertising, 37 CFR § 1.345, and demands that "[a]ttorneys and agents appearing before the Patent Office . . . conform to the standards of ethical and professional conduct generally applicable to attorneys before the courts of the United States." 37 CFR § 1.344.

Moreover, the extent to which specialized lay practitioners should be allowed to practice before some 40-odd federal administrative agencies, including the Patent Office, received continuing attention both in and out of Congress during the period prior to 1952.[36] The Attorney General's Committee on Administrative Procedure which, in 1941, studied the need for procedural reform in the administrative agencies, reported that "[e]specially among lawyers' organizations there has been manifest a sentiment in recent years that only members of the bar should be admitted to practice before administrative agencies. The Committee doubts that a sweeping interdiction of nonlawyer practitioners would be wise . . . ."[37] Ultimately it was provided in § 6(a) of the Administrative Procedure Act that "[e]very party shall be accorded the right to appear in person or by or with counsel or other duly qualified representative in any agency proceeding . . . . Nothing herein shall be construed either to grant or to deny to any person who is not a lawyer the right to appear for or represent others before any agency or in any agency proceeding." 60 Stat. 240, 5 U.S.C. § 1005(a). Although the act thus disavows any intention to change the existing practice before any of the agencies, so that the right of nonlawyers to practice before each agency must be determined by reference to the statute and regulations applicable to the particular agency, the history of § 6(a) contains further recognition of the power of agencies to admit nonlawyers, and again we see no suggestion that this power is in any way conditioned on the approval of the State. The Chairman of the American Bar Association's committee on administrative law testified before the House Judiciary Committee:

"A great deal of complaint has been received from two sources. Number one is the lay practitioners before the various agencies, chiefly the Interstate Commerce Commission, who are afraid something might be said that would oust them from practice. On the other hand, there is a great deal of protest from the committees on unauthorized practice of the law in various State, local and municipal bar associations who are just as vehement in saying that these measures fail to recognize that legal procedure must be confined to lawyers. But these bills do not eliminate the lay practitioner, if the administrative agency feels they have a function to perform and desires to admit him to practice."[38]

Despite the concern of the bar associations, the Senate Judiciary Committee reported that "nonlawyers, if permitted by the agency to practice before it, are not excluded from representing interested parties in administrative matters."[39] And in the House debates on this provision we find the following instructive passage:

"Mr. AUSTIN. Mr. President, before the Senator leaves that thought, I wish to ask a question. I notice . . . in the section to which the Senator is referring, this language:

[36] See Committee on Administrative Practice of the Bar Association of the District of Columbia, Report on Admission to and Control Over Practice Before Federal Administrative Agencies (1938); Survey of the Legal Profession, Standards of Admission for Practice Before Federal Administrative Agencies (1953); House Committee on Government Operations, Survey and Study of Administrative Organization, Procedure, and Practice in the Federal Agencies, 85th Cong., 1st Sess. (Comm. Print); Note, Proposed Restriction of Lay Practice Before Federal Administrative Agencies, 48 Col. L. Rev. 120.

[37] Attorney General's Committee on Administrative Procedure, Final Report, 124 (1941). Compare Commission on Organization of the Executive Branch of the Government, Report to the Congress on Legal Services and Procedure, 32–35, 40–44 (1955).

[38] Hearings before House Committee on the Judiciary on Federal Administrative Procedure, 79th Cong., 1st Sess. (Serial No. 19) 33–34, Legislative History of the Administrative Procedure Act, S. Doc. No. 248, 79th Cong., 2d Sess. 79–80 (hereinafter referred to as "Legislative History").

[39] S. Comm. Print on S. 7, 79th Cong., 1st Sess. 10 (June 1945), Legislative History 26.

"'Nothing herein shall be construed either to grant or to deny to any person who is not a lawyer the right to appear for or represent others before any agency or in any agency proceeding.'

"Is it not a fact that somewhere in the bill the distinguished Senator has reserved the right to a nonprofessional—that is, a man who is not a lawyer—to appear, if the agency having jurisdiction permits it? That is, there is a discretion permitted, is there not? For example, take a case where a scientific expert would better represent before the Commission the interests involved than would a lawyer. The right to obtain that privilege is granted in the bill somewhere, is it not?

"Mr. McCARRAN. The Senator is correct; and in connection with that I wish to read from the Attorney General's comment, as follows:

"'This subsection does not deal with, or in any way qualify, the present power of an agency to regulate practice at its bar. It expressly provides, moreover, that nothing in the act shall be construed either to grant or to deny the right of nonlawyers to appear before agencies in a representative capacity. *Control over this matter remains in the respective agencies.*'

"That is the Attorney General's observation." [40] [Emphasis added.]

It is also instructive to note that shortly after the adoption of the Administrative Procedure Act, the American Bar Association proposed the adoption of an "Administrative Practitioners' Act." [41] Though limiting the powers of nonattorneys in respects not here relevant, the bill did provide that "authorized participation in agency proceedings" was permissible, without regard to whether the conduct constituted the practice of law in the State where performed.[42]

Indicative of this same general understanding, we note that every state court considering the problem prior to 1952 agreed that the authority to participate in administrative proceedings conferred by the Patent Office and by other federal agencies was either consistent with or premptive of state law.[43]

[40] 92 Cong. Rec. 2156, Legislative History 316–317.

[41] H.R. 2657, 80th Cong., 1st Sess. See Curry, Bills in Congress Sponsored by American Bar Association Seek To Prevent Nonlawyers From Practicing Before the Interstate Commerce Commission, 14 I.C.C. Pract. J. 491.

[42] "Credentials for Agents

"SEC. 6. If any agency shall find it necessary in the public interest and in the interest of parties to agency proceedings before it to authorize practice by individuals not subject to section 5 and provides by generally applicable rule therefor in any case in which the governing statute does not provide only for appearances in person or by attorney or counsel, any such individual may be admitted hereunder to practice as an agent before such agency except in proceedings pursuant to section 7 or 8 of the Administrative Procedure Act or in connection with any form of compulsory process. . . . On application, individuals subject to this section who have been individually authorized to practice before any agency, have maintained such standing, are actively engaged in practice so permitted, and are so certified by the agency with a specification of the extent to which they have been so qualified to practice and have practiced shall be given credentials enabling them to continue such practice. No agency, and nothing in this Act, shall be deemed to permit any person to practice law in any place or render service save the authorized participation in agency proceedings by holders of credentials; and no person shall hold himself out, impliedly or expressly, as otherwise authorized hereunder."

[43] *Chicago Bar Assn.* v. *Kellogg*, 338 Ill. App. 618, 88 N.E. 2d 519 (1949) (Patent Office); *Sharp* v. *Hida's Research Bureau*, 45 N.Y.S. 2d 690 (1943), aff'd, 48 N.Y.S. 2d 799 (1944) (Patent Office); *Schroeder* v. *Wheeler*, 126 Cal. App. 367, 14 P. 2d 903 (1932) Patent Office; *People ex rel. Colorado Bar Assn.* v. *Erbaugh*, 42 Colo. 480, 94 P. 349 (1908) (Patent Office) (by implication); *In the Matter of New York County Lawyers Assn. (In re Bercu)*, 273 App. Div. 524, 534–535, 78 N.Y.S. 2d 209, 218 (1948), aff'd. 299 N.Y. 728, 87 N.E. 2d 451 (1949) (Treasury and Tax Court) (by implication); *Auerbacher* v. *Wood*, 139 N.J. Eq. 599, 604, 53 A. 2d 800, 803 (1947), aff'd. 142 N.J. Eq. 484, 59 A. 2d 863 (1948) (N.L.R.B.); *De Pass* v. *B. Harris Wool Co.*, 346 Mo. 1038, 144 S.W. 2d 146 (1940) (I.C.C.); *Blair* v. *Motor Carriers Service Bureau, Inc.*, 40 Pa. D & C 413, 426 (1939) (I.C.C.); *Bennett* v. *Goldsmith*, 280 N.Y. 529, 19 N.E. 2d 927 (1939) (Immigration Department); *Public Service Traffic Bureau, Inc.*, v. *Haworth Marble Co.*, 40 Ohio App. 255, 178 N.E. 703 (1931) (I.C.C.) (dictum); *In the Matter of Gibbs*, 35 Ariz. 348, 355, 278 P. 371, 374 (1929) (Land Office) (dictum); *Mulligan* v. *Smith*, 32 Colo. 404, 76 P. 1063 (1904) (Land Office); see also *In the Matter of Lyon*, 301 Mass. 30, 16 N.E. 2d 74 (1938) (bankruptcy); *Brooks* v. *Mandel-White Co.*, 54 F. 2d 992 (C.A. 2d Cir.), cert. denied, 286 U.S. 559 (1932) (Customs Court). Compare *Lowell Bar Assn.* v. *Loeb*, 315 Mass. 176, 184–185, 52 N.E. 2d 27, 33–34 (1943) (Treasury and Tax Court).

Normally, the state courts have deemed the authority granted by the federal agency to be closely circumscribed. *E.g., Chicago Bar Assn.* v. *Kellogg, supra; In the Matter of Lyon, supra; Public Service Traffic Bureau, Inc.*, v. *Haworth Marble Co., supra.*

In recent years divergence in opinion has developed. Compare *Batelle Memorial Inst.* v. *Green*, 133 U.S.P.Q. 49 (Ohio Ct. App. 1962) (Patent Office), and *Noble* v. *Hunt*, 95 Ga. App. 804, 99 S.E. 2d 345 (1957) (Treasury and Tax Court), with *Agran* v. *Shapiro*, 127 Cal. App. 2d Supp. 807, 273 P. 2d 619 (App. Dept. Super. Ct., 1954) (Treasury); *Wisconsin* v. *Keller*, 16 Wis. 2d 377, 114 N.W. 2d 796, now pending on certiorari as No. 429, 1962 Term (I.C.C.); *Petition of Kerney*, 63 So. 2d 630 (Fla. 1953) (Treasury and Tax Court); cf. *Marshall* v. *New Inventor's Club, Inc.* 69 O.L.A. 578, 117 N.E. 2d 737 (C.P. 1953) (Patent Office).

State courts have frequently held practice before state administrative agencies by nonlaywers to constitute the unauthorized practice of law. *E.g., People ex rel. Chicago Bar Assn.* v. *Goodman*, 366 Ill. 346, 8 N.E. 2d 941, 111 A.L.R. 1, cert. denied, 302 U.S. 728; *Clark* v. *Austin*, 340 Mo. 467, 101 S.W. 2d 977. But compare *State ex rel. Reynolds* v. *Dinger*, 14 Wis. 2d 193, 109 N.W. 2d 685; *Realty Appraisals Co.* v. *Astor-Broadway Holding Corp.*, 5 App. Div. 2d 36, 169 N.Y.S. 2d 121.

Finally, regard to the underlying considerations renders it difficult to conclude that Congress would have permitted a State to prohibit patent agents from operating within its boundaries had it expressly directed its attention to the problem. The rights conferred by the issuance of letters patent are federal rights. It is upon Congress that the Constitution has bestowed the power "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries," Art. I, § 8, cl. 8, and to take all steps necessary and proper to accomplish that end, Art. I, § 8, cl. 18, pursuant to which the Patent Office and its specialized bar have been established. The Government, appearing as *amicus curiae*, informs the Court that of the 7,544 persons registered to practice before the Patent Office in November 1962, 1,801 were not lawyers and 1,687 others were not lawyers admitted to the bar of the State in which they were practicing.[44] Hence, under the respondent's view, one-quarter of the present practitioners would be subject to disqualification or to relocation in the District of Columbia and another one-fourth, unless reciprocity provisions for admission to the bar of the State in which they are practicing are available to them, might be forced to relocate, apply for admission to the State's bar, or discontinue practice. The disruptive effect which this could have upon Patent Office proceedings cannot be ignored. On the other hand, the State is primarily concerned with protecting its citizens from unskilled and unethical practitioners,[45] interests which, as we have seen, the Patent Office now safeguards by testing applicants for registration, and by insisting on the maintenance of high standards of integrity. Failure to comply with these standards may result in suspension or disbarment. 35 U.S.C. § 32; 37 CFR § 1.348. So successful have the efforts of the Patent Office been that the Office was able to inform the Hoover Commission that "there is no significant difference between lawyers and nonlawyers either with respect to their ability to handle the work or with respect to their ethical conduct." [46]

Moreover, since patent practitioners are authorized to practice only before the Patent Office, the State maintains control over the practice of law within its borders except to the limited extent necessary for the accomplishment of the federal objectives.[47]

We have not overlooked respondent's constitutional arguments, but find them singularly without merit. We have already noted the source of Congress' power to grant patent rights. It has never been doubted that the establishment of the Patent Office to process patent applications is appropriate and plainly adopted to the end of securing to inventors the exclusive right to their discoveries, nor can it plausibly be suggested that by taking steps to authorize competent persons to assist in the preparation of patent applications Congress has exceeded the bounds of what is necessery and proper to the accomplishment

[44] Of the 73 patent practitioners in Florida, 62 are not members of the Florida Bar.

[45] *Hexter Title & Abstract Co.* v. *Grievance Committee*, 142 Tex. 506, 509, 179 S.W. 2d 946, 948; *Lowell Bar Assn.* v. *Loeb*, 315 Mass. 176, 180, 52 N.E. 2d 27, 31. Commission on Organization of the Executive Branch of the Government, Report of the Task Force on Legal Services and Procedure, Part VI, Appendices and Charts, 169 (1955).

[46] *Id.*, 158. The Patent Office noted the qualification that nonlawyers are able to advertise. Compare Hearings before House Committee on Patents on H.R. 5527, 70th Cong., 1st Sess. 16–19, 71–72, 89, 90.

[47] Because of the breadth of the injunction issued in this case, we are not called upon to determine what functions are reasonably within the scope of the practice authorized by the Patent Office. The Commissioner has issued no regulations touching upon this point. We note, however, that a practitioner authorized to prepare patent applications must of course render opinions as to the patentability of the inventions brought to him, and that it is entirely reasonable for a practitioner to hold himself out as qualified to perform his specialized work, so long as he does not misrepresent the scope of his license.

of this same end. Cf. *Goldsmith* v. *United States Board of Tax Appeals*, 270 U.S. 117; *United States* v. *Duell*, 172 U.S. 576. Congress having acted within the scope of the powers "delegated to the United States by the Constitution," it has not exceeded the limits of the Tenth Amendment despite the concurrent effects of its legislation upon a matter otherwise within the control of the State. "Interference with the power of the States was no constitutional criterion of the power of Congress. If the power was not given, Congress could not exercise it; if given, they might exercise it, although it should interfere with the laws, or even the Constitution of the States." II Annals of Congress 1897 (remarks of Madison). The Tenth Amendment "states but a truism that all is retained which has not been surrendered." *United States* v. *Darby*, 312 U.S. 100, 124; *Case* v. *Bowles*, 327 U.S. 92, 102. Compare *Miller, Inc.*, v. *Arkansas*, 352 U.S. 187. The authority of Congress is no less when the state power which it displaces would otherwise have been exercised by the state judiciary rather than by the state legislature. Cf. *Pennsylvania R. Co.* v. *Public Service Comm'n*, 250 U.S. 566. Finally, § 31 contains sufficient standards to guide the Patent Office in its admissions policy to avoid the criticism that Congress has improperly delegated its powers to the administrative agency. *Fahey* v. *Mallonee*, 332 U.S. 245; *Currin* v. *Wallace*, 306 U.S. 1, 16–18.

[5] It follows that the order enjoining petitioner must be vacated since it prohibits him from performing tasks which are incident to the preparation and prosecution of patent applications before the Patent Office. The judgment below is vacated and the case is remanded for further proceedings not inconsistent with this opinion.

It is so ordered.

U.S. Court of Customs and Patent Appeals

UNIVERSAL OVERALL COMPANY *v.* STONECUTTER MILLS CORPORATION

No. 6847. Decided December 12, 1962

[50 CCPA —; 310 F.2d 952; 135 USPQ 437]

1. TRADEMARK—OPPOSITION—RES JUDICATA

On review of the action of the Trademark Trial and Appeal Board in granting applicant's motion for summary judgment on the ground that the issues raised in the opposition were *res judicata* because of a previous cancellation proceeding, *Held* that all the questions of fact and law involved in the opposition were not determined in the previous proceeding, and that "the holding of *res judicata* was not proper."

APPEAL from the Patent Office. Opposition No. 40,626.

REVERSED AND REMANDED.

Norman Lettvin (*D. D. Allegretti, Bair, Freeman & Molinare* of counsel) for appellant.

Edward L. Merrigan for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

WORLEY, *Chief Judge*, delivered the opinion of the court.

Stonecutter Mills Corporation seeks registration of the mark "STONECUTTER" for certain fabrics for use in specified garments and home furnishing items.[1] Universal Overall Company, hereinafter referred to as Universal, opposed that application. The Trademark Trial and Appeal Board granted a motion for summary judgment by Stonecutter Mills and dismissed the opposition. Universal appeals from that action.

[1] The application, Serial No. 79,125, as originally filed on August 6, 1959, designated the goods as "men's, women's, and children's clothing, including shirts, slacks, dresses, skirts, blouses, sportswear and other similar articles of clothing." Subsequently, the application was amended to specify "textile fabrics of cotton, silk, rayon and/or other manufactured fibers and combinations thereof for use in garments for men, women and children, including blouses, dresses, shirts [sic], jackets, jeans, lingerie, shirts, ties, slacks, shorts and sportswear, and for use in home furnishing items such as draperies, curtains, bedspreads and upholstery fabrics."

The Board granted the motion for summary judgment on the ground that the issues raised in the opposition are *res judicata* because of a prior proceeding, viz., Cancellation No. 6,771, in which Universal unsuccessfully sought cancellation of Stonecutter Mills' Registration No. 422,633 [2] of "STONECUTTER" on the Principal Register for piece goods of rayon, wool and/or cotton.

The final decision in the prior proceedings, *Universal Overall Company* v. *Stonecutter Mills Corporation*, 121 USPQ 605, reconsideration denied, 122 USPQ 324, is that of the Assistant Commissioner. In the original decision it is stated:

> The record shows that since 1926, petitioner has used the term "STONE CUTTER" as a trademark for men's work clothing. * * *
>
> Respondent was organized in 1920 under the name of Stonecutter Mills Corporation, and it has continuously operated under that name since that time. The sales value of respondent's piece goods had increased from $37,000 in 1921 to more than $17,000,000 in 1957. The chairman of respondent's board testified that "STONECUTTER" has always appeared in one way or another on all shipments of its piece goods, and since the beginning of its operations, respondent's products have been known in the trade as "STONECUTTER" goods.
>
> The question to be determined here is whether or not petitioner's right to use "STONECUTTER" (either as one word or two words) is superior to respondent's right with the result that the registration is inconsistent with petitioner's rights.
>
> The record is inconclusive with regard to respondent's earliest use of "STONECUTTER" in a technical trademark sense,[3] but it conclusively appears that "Stonecutter Mills Corporation" has been continuously used since 1921 in connection with the extensive sales of respondent's piece goods. Such use of "STONECUTTER" by respondent is sufficient to establish rights in the term, and since it has been so used since 1921, petitioner has failed to show that it has superior rights in the term. Therefore, damage to petitioner from the registration cannot be inferred.
>
> The record indicates, however, that there has been long concurrent use by the parties on specifically different goods without any evidence of confusion, and it may be that petitioner would, in a proper case, be entitled to concurrent registration, but that question is not here to be decided.
>
> * * * * * * *

On reconsideration, the Assistant Commissioner, in responding to an argument by Universal that it should prevail because it was first to use the mark in a trademark sense, commented as follows:

> Section 2 of the statute sets forth the grounds for ex parte refusal of registration by the Commissioner. These grounds may be invoked by an opposer who can show that he will be damaged by registration of a mark sought to be registered. These grounds may also, in a proper case, be invoked in a cancellation proceeding, but only as general grounds to show damage from a registration already issued. The provisions of section 2 are prospective, and the statutory language of section 2(d) is not applicable to a cancellation proceeding.

In the same opinion, the Assistant Commissioner further stated:

> In the present case it was established that the rights of respondent in "STONECUTTER" were at least equal to petitioner's rights in the word and that damage from the registration therefore could not be inferred.

In support of the allegation in its notice of opposition that it will be damaged by the registration sought, Universal asserts that it has

[2] Issued on an application filed January 18, 1945, asserting use since September 4, 1944.

[3] In its registration, respondent asserted use as a trademark since Sept. 4, 1944.

used the trademark "STONE CUTTER" on its clothing products since 1926 and that, in Cancellation No. 6,771, the Commissioner was unable to find that Stonecutter Mills had used "STONECUTTER" *as a trademark* prior to 1944. As another ground of opposition, Universal asserts that the registration should be refused because the allegation, in the application as originally filed, that Stonecutter Mills has used the mark since 1921 on goods defined as clothing or garments produced by it, was false.

In holding *res judicata* applicable, the Board stated:

> The records reveal that the several questions raised by opposer in its present pleading pertaining to applicant's use and display of its mark were duly considered and rejected by the Examiner of Interferences in the aforesaid Cancellation No. 6,771, it being determined therein that, as between the parties, the respondent (applicant herein) had superior rights in the term "STONECUTTER" and that petitioner (opposer herein) could not be injured by respondent's registration thereof. On appeal, the Assistant Commissioner affirmed the Examiner's holding on the question of superior rights and did not disturb his rulings on the other questions involved.
>
> Since the present opposition and the aforesaid cancellation proceedings manifestly involve the identical question of damage to Universal Overall Company arising out of registration of the term "STONECUTTER" to Stonecutter Mills Corporation, the final adjudication in the prior proceeding is considered to be res judicata and binding on opposer herein. See: *Commissioner of Internal Revenue* v. *Sunnen* [333 U.S. 591], 77 USPQ 29 * * *; *American Fruit Growers, Inc.* v. *John Braadland, Ltd.*, 7 USPQ 261 (CCPA, 1930); *Westgate-Sun Harbor Company* v. *Watson, Comr. Pats.*, 97 USPQ 523 (CADC, 1953); *Fourco Glass Company* v. *Libbey-Owens-Ford Glass Company*, 115 USPQ 191 (Comr., 1957); and *The Arnold Milling Company* v. *Thorobred Company, Inc.*, 82 USPQ 436 (Comr., 1949).

Universal urges that the Board erred in finding the doctrine of *res judicata* applicable because the present opposition raises issues of fact and law which are different from those determined in the cancellation proceedings. The differences in fact it advances are, in substance, as follows:

> 1. The issue of the alleged falsity of the assertion in the present application, as originally filed, with respect to the use of the mark since 1921 on clothing or garments is new since the application was not filed until after the Assistant Commissioner's original decision in Cancellation No. 6,771.
>
> 2. The date of 1921, alleged for first use in the application is not the same as the date found in the cancellation for Stonecutter Mills' first use of "STONECUTTER" in a trademark sense, the latter date being asserted by Universal to be 1944, and.
>
> 3. The designation of the goods in Registration No. 422,633, involved in the cancellation is different from that in the application.

Universal further urges that the statutory provisions which govern cancellation proceedings are different from those governing opposition proceedings. In support of that contention, it refers to the statements of the Assistant Commissioner on reconsideration regarding the significance of section 2(d) to opposition and cancellation proceedings, quoted above.

Stonecutter Mills refers to the cancellation proceedings as "involving the very same two trademarks and merchandise here involved" and asserts that the decision therein including rulings as follows:

> (1) that Stonecutter Mills Corporation [applicant] has superior rights in "Stonecutter," dating back to 1921, and
>
> (2) that Universal Overall Company [opposer], therefore, cannot be damaged by registration of "Stonecutter" in favor of Stonecutter Mills Corporation.

It is obvious that the designation of goods and date of first use set out in the present application differ from the registration of Stonecutter Mills involved in the cancellation proceedings as pointed out by Universal. It is also evident that the contention that the application included false assertions as filed was not at issue in the cancellation proceedings.

The Board did not discuss those obvious differences between the cancellation proceedings and the present opposition in its original opinion, nor did it discuss them in its decision on reconsideration, even though they were specifically pointed out by Universal. While the Board's conclusion that *res judicata* is applicable indicates that that body did not consider the differences to be significant, we have not been given the benefit of the reasons it took that view.

On the basis of the record and the arguments before us we think the Board erred. [1] Applying the principles set out in *Commissioner of Internal Revenue* v. *Sunnen*, 333 U.S. 591, 77 USPQ 29, cited by the Board and parties here, it is apparent that all the questions of fact and law involved here were not determined in the previous proceedings. Determining whether Registration No. 422,633 should be cancelled did not settle the question involved in the present matter, viz., whether applicants are entitled to registration of their new application with its different designation of goods and its assertion of a different date for first use.

The decision in the cancellation proceeding did not include a finding that the date of first use asserted in the application, 1921, is correct or that Stonecutter Mills used the mark as a trademark prior to opposer so using it. On the contrary, that decision ruled that the record "is inconclusive with regard to respondent's [Stonecutter Mills'] earliest use of 'STONECUTTER' in a technical trademark sense." The discussion in the opinion on cancellation of the possibility that a case for concurrent use might exist, with the express statement that the question was not "here to be decided" indicates the Assistant Commissioner did not regard that decision as settling any rights of the parties beyond those necessary to determine the cancellation question.

Universal's charge that the allegation of use of the mark on clothing, made in the application as originally filed, is false, was obviously not settled by the cancellation proceedings. Thus, the holding of *res judicata* was not proper.

It appears that at this time no useful purpose would be served by discussing the applicability of section 2(d) to cancellation and opposition proceedings, raised by Universal. Hence we express no opinion on that matter.

The decision is reversed and the case remanded to the Trademark Trial and Appeal Board.

REVERSED AND REMANDED.

In the United States Patent Office
Commissioner's Decision

IN RE APPLICATION PAPERS FILED MAR. 27, 1963

Decided April 22, 1963

1. APPLICATION—INCOMPLETE—PHOTOCOPIES—RULES 52 AND 183.

With respect to a cited decision of the First Assistant Commissioner authorizing the Application Branch to accept applications in which the specification is a photocopy for filing, but requiring the applicant to file promptly a duplicate typewritten copy and to pay the cost of comparison of the substitute

with the original, *Held* that "The practice * * * has been found to impose a substantial and unnecessary burden on the Patent Office and to result in an objectionable duplication of records"; that "Accordingly, it should not be followed except upon a showing which would satisfy the requirement of Rule 183 for a waiver of the requirement of Rule 52 that the application papers be 'legibly written or printed in permanent ink'"; and that "To the extent that the cited decision holds that such papers should be accepted in other cases, it is overruled."

2. SAME—SAME—RULES 52 AND 183—EXTRAORDINARY SITUATION—BENEFIT OF FOREIGN FILING DATE.

"In the present case it is shown that the requested filing date is necessary in order that the applicants may obtain the benefit of a foreign filing date. This, in itself, is not such an extraordinary situation as would justify a waiver [under Rule 183] of the requirement of Rule 52 * * *."

ON PETITION.

GRANTED TO EXTENT INDICATED.

REYNOLDS, *First Assistant Commissioner.*

This is a renewed petition requesting that the above-entitled papers be accorded a filing date of March 27, 1963, which date was refused for the reason that the application papers then presented were photocopies. The petitioners call attention to the decision of the First Assistant Commissioner in *In re Application filed January 5, 1956*, 109 USPQ 148, which holds that

"* * * the Application Branch is authorized hereafter to accept applications in which the specification is a photocopy for filing, and to forward them to the Examiner who will enter a letter in the case immediately notifying the applicant that the application has been accepted for filing only, and that, to entitle applicant to have the case placed upon the files for examination, it will be necessary to file promptly a duplicate typewritten copy in permanent ink and to pay the cost of comparison of the substitute with the original."

[1] The practice outlined in the statement just quoted has been found to impose a substantial and unnecessary burden on the Patent Office and to result in an objectionable duplication of records. Accordingly, it should not be followed except upon a showing which would satisfy the requirement of Rule 183 for a waiver of the requirement of Rule 52 that the application papers be "legibly written or printed in permanent ink." To the extent that the cited decision holds that such papers should be accepted in other cases, it is overruled.

[2] In the present case it is shown that the requested filing date is necessary in order that the applicants may obtain the benefit of a foreign filing date. This, in itself, is not such an extraordinary situation as would justify a waiver of the requirement of Rule 52, but there are other extraordinary circumstances shown in the present petition which do justify such a waiver. The petition is granted to the extent that the requested filing date will be accorded if the applicants, within thirty days of the date of this decision, file a duplicate specification and claims with an order to pay for the cost of comparing such papers with the originals.

REISSUES

JULY 16, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

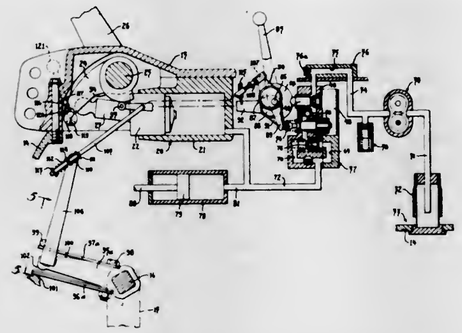
25,415
HYDRAULIC POWER UNIT AND CONTROL SYSTEM FOR TRACTORS

Henry E. Merritt, Claverdon, Warwick, England, and Pierre Francois Tiberghien, Sevran, Seine-et-Oise, and Alain Henri Eugene Gougelot, Fiers-lez-Lille, Nord, France, assignors to Massey-Ferguson (United Kingdom) Limited, a British company

Original No. 3,003,568, dated Oct. 10, 1961, Ser. No. 757,768, Aug. 28, 1958. Application for reissue Mar. 16, 1962, Ser. No. 180,950

Claims priority, application Great Britain Sept. 3, 1957

13 Claims. (Cl. 172—9)



13. The combination in a tractor having an implement hitch linkage trailingly pivoted thereon and a hydraulically operated power unit for raising and lowering the hitch linkage, valve means carried by the tractor for controlling the operation of the unit, a hand lever pivoted on the tractor to swing in opposite directions from a neutral position, alternatively available draft load and position responsive controls for said valve means, said draft load responsive control having a member shifted by said hand lever when swung in one direction into a position to actuate said valve means to maintain a uniform draft load on the linkage at a value determined by the extent of displacement of the hand lever from its neutral position, and said position responsive control having a member shiftable by the hand lever when swung in the other direction into a position to actuate said valve means for raising or lowering the linkage in positional agreement with the setting of said hand lever.

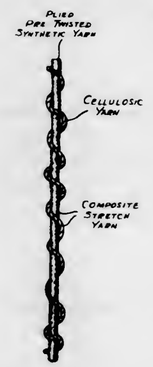
25,416
STRETCH YARN AND FABRIC AND METHOD OF MAKING SAME

Marvin H. Comer, Burlington, N.C., assignor, by mesne assignments, to Alamance Industries, Inc., Burlington, N.C., a corporation of North Carolina

Original No. 2,777,310, dated Jan. 15, 1957, Ser. No. 544,049, Oct. 31, 1955. Application for reissue Aug. 29, 1957, Serial No. 687,845

34 Claims. (Cl. 66—180)

47. That method of making a composite stretch yarn which includes plying at least one end of cotton yarn twisted in one direction with at least one end of stretch thermoplastic yarn under tension and having a torque in the opposite direction from the twist in the cotton yarn while imparting a lesser number of turns per inch to the composite yarn than was originally imparted to the cotton yarn.

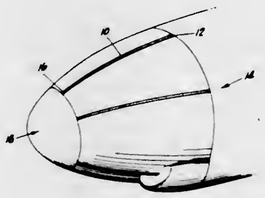


25,417
LIGHTNING ARRESTOR FOR RADOMES

Myron P. Amason, Reseda, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.

Original No. 2,982,494, dated May 2, 1961, Ser. No. 819,764, June 11, 1959. Application for reissue May 22, 1962, Ser. No. 197,200

6 Claims. (Cl. 244—1)



1. In combination with a plastic [aircraft] section *of an aircraft fuselage*, a lightning arrestor, comprising: at least one conductor path of lightning ionizable material adhesively fastened to the plastic aircraft section exterior providing maximum lightning protection for the minimum electrical interference; each path being adapted to have a portion thereof completely transmuted by a lightning strike thereto into an ion trail outwardly disposed from said plastic section to conduct away from said section the energy of said lightning strike; at least one grounding means adapted to ground said conductor paths individually to the aircraft fuselage.

25,418
AIRPLANE WITH STABILIZING FINS
Charles H. Grant, Box 247, Cottage St., Manchester Center, Vt.
Original No. 2,649,265, dated Aug. 18, 1953, Ser. No. 41,602, July 30, 1948. Application for reissue Dec. 13, 1962, Ser. No. 246,293
7 Claims. (Cl. 244—91)



3. In aircraft which has wings comprising cambered lifting surfaces with swept-back leading edges and a chord that decreases from the roots to the tips of the wings, each wing having horizontal control surfaces forming at least a part of the trailing edge of the wing, and a fuselage between the wings and located partly above and partly below the wings, the improvement which comprises a keel attached to and extending downwardly from the portion of said fuselage between the wing roots, and extending forward beyond the forward limits of the wings, at least a part of the keel that is below said portion of the fuselage having a downward extent below the wings for a substantial distance and equal to the maximum downward extent of any other part of the keel to blanket one wing and to reduce its lift while increasing the lift of the other wing when the aircraft moves with a sideways component as when skidding or slipping, and other vertically extending elements connected with the aircraft and adding to the total lateral area, at least a major portion of the total lateral area of said elements being rearward of the center of gravity of the aircraft, whereby the center of area of the lateral area of the aircraft is rearward of the center of gravity of said aircraft, said keel having a lateral area substantially greater than that of any other structure projecting below either wing at regions spaced spanwise from the fuselage.

PLANT PATENTS

GRANTED JULY 16, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,269
ROSE PLANT
Robert V. Lindquist, Hemet, Calif., assignor to Hemet Wholesale, Hemet, Calif., a partnership
Filed July 12, 1962, Ser. No. 209,481
1 Claim. (Plants—27)

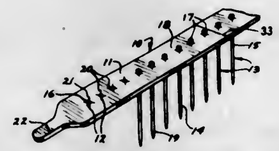
A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by its general similarity to its parent variety "Eutin" (unpatented), but being essentially distinguished therefrom by the Fuchsine Pink general color tonality of its flowers.

PATENTS

GRANTED JULY 16, 1963

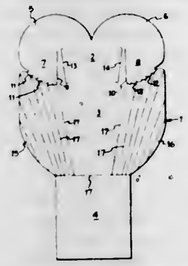
GENERAL AND MECHANICAL

3,097,360
FASTENER ASSEMBLAGE
Carl J. Carlson, Jr., Omaha, Nebr. (15682 S. Woodgate Road, Hopkins, Minn.), and Donald W. Carlson, 516 Meadow Road, Omaha, Nebr.
Filed June 26, 1961, Ser. No. 119,478
4 Claims. (Cl. 1—56)



1. A fastener strip comprising, a strip of flexible and resilient material having a relatively greater width than depth, a plurality of apertures formed in longitudinally spaced relation intermediate the side edges of said strip and through the depth thereof, each of said apertures defining discontinuous side walls comprising inwardly extending radial abutment members each separated from the other by a cut extending outwardly from the aperture, said apertures being adapted to receive a plurality of fasteners, one each in said apertures, said fasteners each being provided with a head and a depending shank adapted to lie in frictional engagement with the aperture side walls, said strip retaining said fastener substantially normal to said strip but permitting a driving instrumentality to engage said head and to project together therewith through said aperture, said discontinuous side walls frictionally yielding to permit the projection of the driving instrumentality through the strip.

3,097,361
PAPERBOARD BODY FORM
George Bourgraf, Cincinnati, Ohio, assignor to George J. Bourgraf, Cincinnati, Ohio
Filed June 8, 1961, Ser. No. 115,798
8 Claims. (Cl. 2—64)



1. In a body form for use in the restoration of a human torso, a paperboard blank cut and scored to define an upper bust forming portion and an underlying abdominal forming portion, said bust forming portion comprising a pair of laterally spaced generally circular segments each terminating in a tongue one side edge of which is defined by a line of cut extending outwardly from the center of the circular segment to the periphery thereof, a slot in each of said circular segments adjacent and in general alignment with the said lines of cut, whereby upon the insertion of said tongues into said slots and their retention therein, said generally circular segments will be formed into generally conical bust defining parts, said underlying abdominal forming portion having foldable side portions adapted to be folded about the opposite sides of the human torso.

3,097,362
SIMULATED FOUR-IN-HAND TIE CONSTRUCTION
Leo J. Dinn, 508 Ontario St., Toronto 5, Ontario, Canada
Filed July 20, 1961, Ser. No. 133,282
1 Claim. (Cl. 2—153)

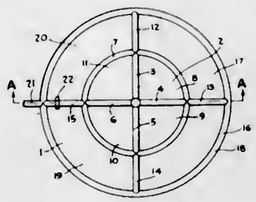


A simulated one-piece four-in-hand tie comprising an elongated body and an upper knot portion, said knot portion including diverging, upper orienting wing portions for receipt beneath the wings of a shirt collar, a Y-shaped stiffener element including diverging wings integrated in said knot orienting wing portions and a depending leg integrated in said elongated body portion, said depending leg including a bendable plastic material, a deformable metal strip integral with said plastic material, said metal strip being of a less width and length than said depending leg and wholly embedded in said plastic material and extending lengthwise of said depending leg, elastic strap means anchored at one end beneath said knot portion and within said elongated body, snap-fastener means on the other end of said elastic strap means for securement on a co-operating snap fastener on a button for securing the neckband of a shirt, and said other end of said elastic strap means terminating intermediately of said knot portion whereby said strap means when secured to said button is under tension for drawing the knot portion beneath the wings of a shirt collar.

3,097,363
PLASTIC COLLAPSIBLE SUN HAT
Allan J. Le Blanc, 53 Laurier Ave. E., Ottawa 2, Ontario, Canada
Filed Mar. 29, 1961, Ser. No. 99,141
2 Claims. (Cl. 2—177)

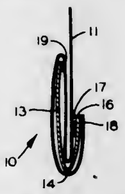
1. A collapsible hat comprising a brim formed of inner and outer annular flexible tubes connected together by a series of radial flexible tubes in combination therewith and webs of plastic material between the annular and radial tubes and a crown formed of flexible tubes extending transversely of the inner annular tube of said brim connected together at their point of intersection

and webs of plastic material between the transverse tubes and inner annular tube, said transverse tubes being of greater length than the diameter of the annulus formed



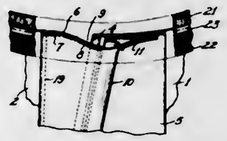
by the inner annular tube and in communication with said tube whereby the transverse tubes upon inflation assume an arched position and means for introducing air into the tubes for inflating the same.

3,097,364
DEVICE FOR FORMING CUFFS ON TROUSERS
Earl B. Hess, San Francisco, Calif.
Filed May 15, 1961, Ser. No. 109,944
8 Claims. (Cl. 2—232)



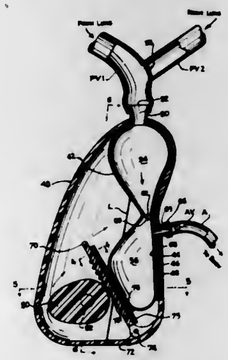
5. A cuff comprising a leg having the lower end thereof formed with a first fold extending upward and outside the lower end of said leg a second fold along the upper edge of said first fold extending downward to the elevation of the lower edge of said leg and outside said first fold and a third fold along the lower edge of said first fold extending upward and inside the lower end of said leg, a tape of a length substantially equal to the circumference of said cuff and a width equal to the combined widths of said second and third folds interposed under said third fold and between said second and first folds, a first strip of adhesive on said tape along the upper edge of one surface of said tape and adhering said tape to said third fold, and a second strip of adhesive along the upper edge of said tape on the surface opposite said first surface and adhering said tape to said lower end of said leg.

3,097,365
GARMENTS HAVING AN ELASTIC WAISTBAND WITH AUTOMATICALLY ADJUSTABLE WAIST MEASUREMENTS
Berl Leib Zins, 13bis Ave. Foch, Marcq-en-Baroeul, France
Filed May 18, 1960, Ser. No. 29,884
Claims priority, application France May 20, 1959
4 Claims. (Cl. 2—237)



1. In a garment having an elastic waistband with automatically adjustable fit of the waist and of the type in which each side pocket pouch is formed between its inner gore and the pocket hole with an amplitude plait having a portion, furthest from the garment, which is joined to the inner surface of said garment by an internal extensible means, and in which the top of said pocket hole and that of the rear lateral edge of said inner gore are united to the elastic waistband and to the garment while the upper edge of said amplitude plait and that of said inner gore till its rear lateral edge are disunited from the elastic waistband, the improvement comprising an elastic waistband including an upper elastic band offering substantial resistance to tension projecting over the top edge of the garment, a lower elastic band connected to the upper band and offering resistance to tension which is less than that of said upper band and a thin inelastic extensible band freely suspending the lower elastic band in the garment, said extensible band having an outer face which is connected to the top edge of the garment, the inner gores and pocket pouches being disunited from the waistband over the length of said inelastic extensible band.

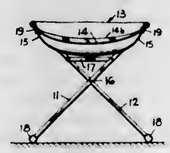
3,097,366
ARTIFICIAL HEART
Paul Winchell, Whitestone, N.Y., assignor to Chelwin Productions, Inc., New York, N.Y., a corporation of New York
Filed Feb. 6, 1961, Ser. No. 87,233
5 Claims. (Cl. 3—1)



1. A mechanical heart substitute for a natural heart, comprising a first impermeable casing of material compatible with the tissue of the body of a living being, and of a size to fit within the chest cavity of a living being after removal of the natural heart, said casing having spaced openings, a squeezing mechanism in the casing to circulate blood through the body and lungs of said living being, nipples extending through the openings in the casing for connection at one end to natural blood vessels, motor drive means arranged to be worn externally of said living being, another casing adapted to be supported externally on the chest of a living being, said other casing enclosing said motor drive means, drive shaft means connecting the motor drive means and said mechanism, said first casing having a tubular extension arranged to extend through one of said openings and to exit from the body of said living being and detachably connected to said other casing, said drive shaft being axially disposed in said tubular extension, at least one flexible, sealed, plastic bag disposed in said first casing, said bag having upper and lower chambers, said bag having openings therein, valve means between the chambers adapted to close when pressure is exerted upon the lower chamber and to open upon release of said pressure,

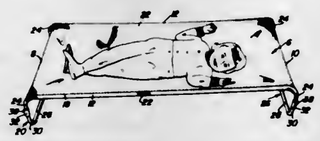
the other end of the nipples being connected to the openings in the bag in hermetic seals therewith, said nipples communicating with the bag on each side of the valve means, said mechanism comprising a pivotally mounted spring-biased plate disposed alternately to compress and release said lower chamber, a roller abutting said plate to control reciprocal movement of the plate, said drive shaft being operatively connected to the roller for rotation thereof, two sets of batteries disposed in said other casing, first electric circuit means normally connecting one set of batteries to the motor to energize the same, and automatic switch means for deactivating one set of batteries and connecting the other set of batteries to the motor when one set of batteries falls in voltage below a predetermined magnitude.

3,097,367
BABY BATH
Dora J. Selvert, 1712 Edgewater Blvd., Minneapolis, Minn.
Filed Nov. 23, 1960, Ser. No. 71,336
2 Claims. (Cl. 4—177)



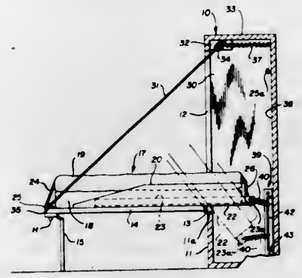
1. A baby bath comprising, a pair of inverted U-frames each having downwardly extending leg members pivotally secured together in crossed relation, said U-frames having respective spaced parallel and horizontal portions intermediate said downwardly extending leg members, a folding brace pivotally secured to opposing U-frame leg members adjacent their pivotal securement, a flexible sheet having a medial cavity suspended at the sides thereof between said parallel and horizontal portions of said U-frames, and an elongated flexible strap secured endwise to the sides near said horizontal portions of said U-frames and adjacent one end of said flexible sheet, said flexible strap lying in spaced relation above the medial cavity of said flexible sheet.

3,097,368
PORTABLE KNOCKDOWN COT
Welby H. Collins, 530 Park St., Imperial, Nebr.
Filed Apr. 21, 1961, Ser. No. 104,623
3 Claims. (Cl. 5—114)



1. A portable knockdown cot comprising a four-part knockdown frame structure embodying a pair of longitudinally spaced parallel duplicate vertically positionable leg frames, said leg frames being interchangeable and U-shaped in end elevation and each including a horizontal bight portion adapted to rest on a stationary support surface and relatively short upstanding limb portions at the ends of the bight portion constituting leg portions, a pair of rails extending longitudinally and in parallel relation and coplanar with each other and having lateral downbent end portions, said end portions being joined to said leg portions by separable but securely connectible slip joints, and an inelastic cover spanning the space between the rails and having longitudinal edge portions provided with open-ended hems connected to said rails, said rails passing through and beyond the hems with the downbent end portions beyond the respective open ends of the hems, said cover being of a width slightly less than the normal distance between the respective rails so that when the cot is occupied the flexibility of the rails and the slight surplus in material allows the cover to become slack and assume a hammock-like shape between the side rails with the latter.

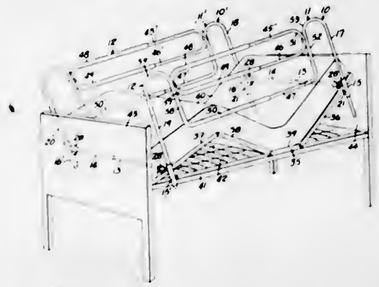
3,097,369
FOLD-AWAY DEVICE FOR BED UNIT
Paul J. Emch, 201 W. Sunset Drive, P.O. Box 44, Rittman, Ohio
Filed June 8, 1960, Ser. No. 34,664
3 Claims. (Cl. 5—136)



1. A fold-away device for a bed unit, comprising: a hollow frame having a front opening therein; a vertical closure panel pivoted at the lower end thereof to said frame to be swingable about a pivotal axis from a vertical retracted position of the panel closing said opening to a horizontally extended position of the panel; stop means on said panel and frame interengageable in the retracted position of the panel; said panel having means on the inner side thereof for retaining the bed unit thereon to be inwardly of a plane of the closed panel; a first counterbalancing means including a first tension spring of substantial strength sufficient to urge said panel with the bed unit thereon toward the retracted position of the same with progressively diminishing power approaching zero; the weight of said bed unit disposed inwardly of said vertical plane of the retracted panel tending to retain the same retracted; said closure panel having a rigid portion thereon adapted to swing therewith in an arc of predetermined stroke generally vertically about said pivotal axis; and a second counterbalancing means including a relatively fixed, vertically extending guide part within said frame inwardly of the arcuate path of said rigid portion, and a second tension spring directly connected between said rigid portion and said guide part; the inner end of said second spring having vertically shiftable anchoring connection to said guide part, to be shiftable thereon between vertically spaced upper and lower anchoring positions of said inner end of the second spring to be horizontally opposed with respect to the upper and lower limits of said arcuate stroke of said rigid portion in which the second spring is in untensioned and tensioned conditions for the extended and retracted positions, respectively, of said panel, whereby the second spring is substantially ineffective to retard operation of said first tension spring until near the end of the panel closing movement at which the second tension spring is tensioned by movement of said rigid portion away from said guide part and thereby to minimize the impact of closing interengagement of said stop means

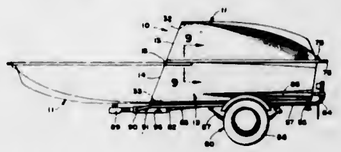
emphasized by said inwardly disposed weight of the bed unit.

3,097,370
FOUR-WAY ADJUSTABLE BED RAIL UNIT
Charles E. Murcott, Valley Drive, Bay Crest, Huntington, N.Y.
Filed Apr. 20, 1962, Ser. No. 189,173
10 Claims. (Cl. 5—331)



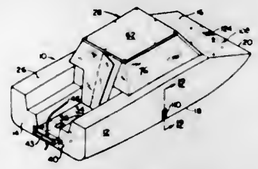
1. A multiple adjustment bed rail unit comprising a pair of side rails, each rail having telescoping small and large diameter ends, each rail having elongated depending posts at ends thereof including longitudinally spaced apertures, telescoping substantially T-shaped members including means adjustably coupling said members, means providing rotatable movement of said members one with respect to the other, said members having tubular crossheads, in which said posts are adjustably mounted, means in said crossheads operatively engaging the apertures of said posts in retaining the posts in different positions in said crossheads, and means on said members adjacent the crossheads for detachably and adjustably securing the rail ends in connection with a mattress supporting frame of a bed.

3,097,371
FOLDING BOAT
Charles L. Rough, 3511 Burritt Way, La Crescenta, Calif.
Filed Oct. 4, 1960, Ser. No. 60,499
14 Claims. (Cl. 9—1)



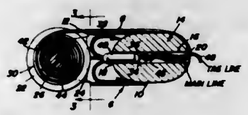
1. In a folding boat formed in two halves hingedly connected together transversely of the mid-portion of the boat; that improvement which comprises a pair of transverse partition means each integral with an associated half of said boat and each similarly inclined acutely to a vertical plane and in a direction toward the aft end of the boat whereby the upper portion of the partition means for the bow half of the boat provides a comfortable inclined back rest for a seat, and whereby said pair of partition means cooperate in the folded position of the boat to provide a closed cargo compartment the forward end of which presents a neat-appearing upwardly and rearwardly inclined flat wall, the bow half of said boat being substantially as wide as the rear end of the stern half and being inclined upwardly and forwardly into merger with a generally wide long straight horizontal lip extending across the forward end of said bow half, said bow half having a downwardly projecting keel-like rib extending lengthwise centrally of said half, the stern half of said boat having a bottom including shallow V-shaped panels and a planar transom extending crosswise of said boat and merging along its lower edge with said shallow V-shaped panels forming the bottom of said stern half.

3,097,372
AMPHIBIOUS VEHICLE
Robert B. Barrie, Neds Point Road, Mattapoisett, Mass.
Filed Apr. 17, 1961, Ser. No. 103,302
4 Claims. (Cl. 9—1)



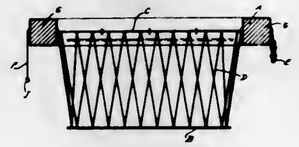
1. A combination boat and automobile trailer, comprising a rigid keelless hull of molded fiberglass said hull being formed with substantially flat vertical sides arranged parallel to one another, a generally flat rectangular foredeck extending between the upper forward edges of said sides and being inclined downwardly, said hull also including a generally rectangular longitudinally stepped bottom having an upwardly curved forward portion and a straight leading edge joining with the leading edge of said foredeck to form the bow of said hull, internal ribs extending transversely of said bottom, each side of said hull being formed with an external channel of V-cross section located generally along the longitudinal balance position of said hull and extending vertically upwards from the lower edge of each of said sides, elongated struts of V-cross section adapted to be mounted snugly within said channels, said struts selectively being supports for wheels when said hull is used as a trailer and being supports for leeboards when said hull is used as a boat.

3,097,373
LIFE LINE GRAPPLING HOOK AND MARKER
Charles E. Wistl, 2492 Broadway, North Bend, Oreg.
Filed Mar. 20, 1962, Ser. No. 181,107
7 Claims. (Cl. 9—9)



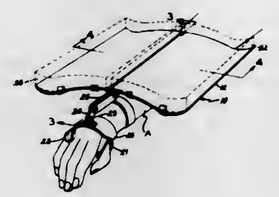
4. A multipurpose device comprising, in combination, a float having an open-ended line passage therethrough, a line passing freely through said passage, grappling means carried by a free outer end of said line, and a holder for said float having a freely rotatable spool on which the inner end of said line is wound and from which the line may be unwound and payed out for use, said holder embodying handle means, said handle means embodying a sleeve open at an outer end and defining a pocket-like receiver and retainer for said float and permitting a substantial portion of the float to be fitted telescopically and retentively stored therein when said float is not being used, said grappling means embodying a plurality of retrieving hooks mounted on a shank, said shank having a line-attaching eye and being provided between the hooks and eye with a weight.

3,097,374
ALUMINUM LIFE FLOAT WITH PLYWOOD PLATFORM
John E. Browning, Spring Lake, N.J., assignor to Continental Copper & Steel Industries, Inc., Welin Davit & Boat Division, New York, N.Y., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,320
1 Claim. (Cl. 9—11)



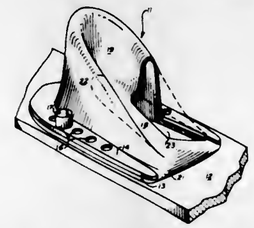
An aluminum life float with a plywood platform comprising a horizontal rectangular floating structure, a plywood platform suspended therefrom, said structure including a rectangular tubular metal member formed of thin sheet aluminum of rectangular cross section, a plurality of rectangular expanded polystyrene blocks placed in end to end contact and extending as continuous columns in and through the sides of the structure, said blocks being of smaller dimensions than the rectangular cross section so as to leave a spacing between the outer faces of the blocks and inside faces of the thin sheet aluminum and thin flexible foil covering on said polystyrene blocks along the outside faces and adjacent top and bottom faces thereof, said thin sheet aluminum being readily dented and said polystyrene being protected against damage and rupture upon denting of the aluminum by said spacing and said foil covering, said suspension of the plywood platform consisting of a plurality of rope members attached midway of the height to the inside vertical faces of the rectangular structure, said platform being of smaller length and width than the interior opening of the structure and said ropes extending obliquely inwardly from the structure to the platform.

3,097,375
SWIMMING AID
John D. Griffith, 625 N. Kalsman, Compton, Calif.
Filed July 31, 1961, Ser. No. 128,154
2 Claims. (Cl. 9—307)



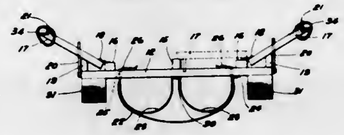
1. In a swimmer's aid of the class described, a forward harness member and a rearward harness member each adapted for attachment to the forearm of a swimmer; a pair of hinge posts extending perpendicularly outwardly from respective ones of said harness members; a pair of relatively stiff wings hingedly connected to the outer ends of said hinge posts and extending on opposite sides of the swimmer's forearm; and an elongated imperforate partition extending between said hinge posts in the plane thereof; whereby during the forward stroke of the swimmer's forearm the inner edges of said wings abut together to restrict the flow of water therebetweeen while said partition inhibits the sideways flow of water behind the swimmer's forearm beneath said wings, but during the rearward stroke of the swimmer's forearm said wing inner edges are separated from each other and from said partition to permit the flow of water therebetween.

3,097,376
WATER SKI BINDING
Arnold H. Forsman, 347 Ilo Ave., Danville, Calif.
Filed July 5, 1961, Ser. No. 121,871
3 Claims. (Cl. 9—310)



1. A semi-flexible slalom water ski heel binding comprising a U-shaped rearwardly and upwardly inclined heel ramp, a resilient U-shaped heel gripping rim integral with and forming the periphery of the raised portion of said ramp, the upper portions of said rim being free to move radially inward when pressure is exerted downward upon said ramp, side wall support means secured to said ramp and rim, and clamping means attached to said binding to secure the binding to a water ski.

3,097,377
AQUATIC SPORTING DEVICE
Charles D. Collins, 114 Morningside Drive, New York, N.Y.
Filed Jan. 29, 1962, Ser. No. 169,568
4 Claims. (Cl. 9—313)

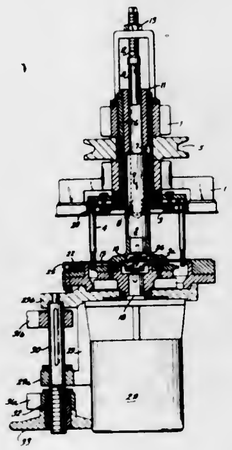


1. A harness-like aquatic sporting device adapted to be attached to a person to permit self-propulsion on or through the water by means of oars, paddles and the like, comprising a supporting member having a width substantially less than the length of the person and a length approximately the same as the width of the person, means on said member for attaching the member to the person with the length thereof extending crosswise to the person, pivot means on both ends of said supporting member, two outriggers each having one end secured to said pivot means, and means at the free ends of said outriggers for supporting oars or paddles.

3,097,378
CONTINUOUSLY OPERABLE APPARATUS FOR CHAMFERING THE ENDS OF ELONGATED WORKPIECES
Fritz Meyercordt and Hans Hommens, Dusseldorf, Germany, assignors to Maimedie Maschinenfabrik G.m.b.H., Dusseldorf, Germany
Filed Mar. 28, 1960, Ser. No. 17,963
Claims priority, application Germany, Mar. 26, 1959
5 Claims. (Cl. 10—21)

1. In a continuously operable apparatus for chamfering the ends of elongated workpieces, in combination, con-

tinuously operable rotary transporting means rotatable about a vertical axis for successively transporting elongated vertical workpieces from one location to another location with one end of each workpiece moving along a first arcuate path during turning of the workpieces with said transporting means; continuously operable chamfering means for chamfering said one ends of the workpieces, said chamfering means having rotary cutting portions which move along a second arcuate path intersecting said first path at an intermediate portion thereof so that said one end of each workpiece gradually approaches the cutting portions to be cut thereby during transportation of the workpieces by said transporting means; means cooperating with said transporting means for rotating each workpiece around its own axis while each workpiece is transported by said transporting means so that the cutting portions will chamfer the rotating ends of the workpieces, said chamfering means being located beneath and directly adjacent to a part of said transporting means; spring means urging said part of said transporting means downwardly toward said chamfering means; support means cooperating with said chamfering means for supporting the same for movement downwardly from and upwardly toward said transporting means and said support means also supporting said chamfering means for turning movement away from said transporting means after said chamfering means has been lowered away from said transporting means; and stop means cooperating with said transporting means for limiting the downward movement of said part thereof, so that said part of said transporting means will not follow the downward movement of said chamfering means when the latter is moved downwardly away from said transporting means.



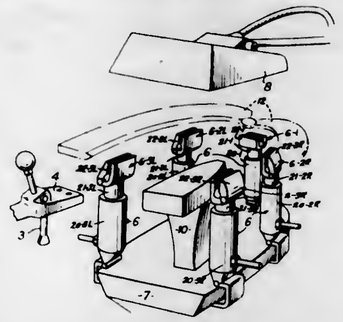
3,097,379

APPARATUS FOR CONFORMING SHOE UPPERS

Wallace Gerald Hawkins, Ashcott, near Bridgewater, Somerset, England, assignor to C.I.C. Engineering Limited, Somerset, England, a British company

Filed Oct. 25, 1960, Ser. No. 64,846
7 Claims. (Cl. 12—10.1)

1. Apparatus for conforming a pliable blank to a former, comprising power-operated means for stretching the blank over the former, sensing devices operating to detect movements of portions of the blank as it is thus stretched over the former and means responsive to said sensing devices to control automatically continued operation or arrest of the blank stretching means.

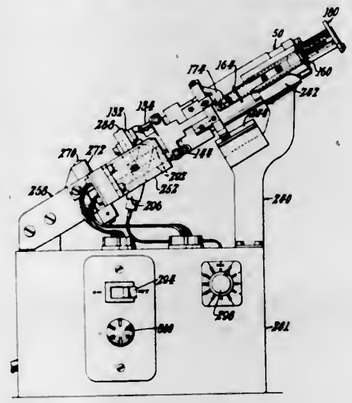


3,097,380

LASTING APPARATUS

Edward Quinn, Peabody, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed May 23, 1962, Ser. No. 196,993
18 Claims. (Cl. 12—107)



1. A tool for use in lasting shoes comprising a body portion adapted to be grasped by one hand of an operator, a nozzle portion carried by the body portion, a feed member mounted on the body portion for movement by the operator to extrude adhesive through said nozzle portion onto the shoe being lasted, and a retarder member mounted on said body portion for movement by the operator to and from an operative position adjacent to the nozzle portion and an inoperative position away from said nozzle portion.

3,097,381

METHOD FOR MAGNETICALLY RETAINING AN INSOLE AND LAST IN ASSEMBLED ALIGNMENT

Richard G. Kline, Springfield, Md., and John B. Reid, Brighton, and Robert A. Spence, South Lincoln, Mass., assignors to Bain Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed May 23, 1962, Ser. No. 197,131
4 Claims. (Cl. 12—142)

1. In the manufacture of footwear, a method for retaining an insole and last in assembled alignment comprising the steps of (1) aligning said insole and last in superposed relation, (2) placing a holddown member on said insole which is magnetically attracted toward said last and



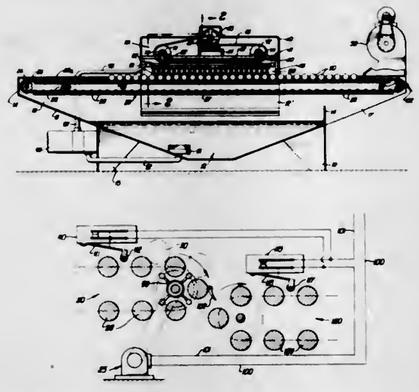
(3) forcing said insole into contacting engagement with said last by the magnetic interaction between said holddown member and said last.

3,097,382

EGG WASHER

Robert L. Angle, 6741 Miller St., Placentia, Calif.

Filed Sept. 6, 1960, Ser. No. 54,032
4 Claims. (Cl. 15—3.13)



3. In a machine for subjecting large numbers of eggs to a washing and scrubbing operation, the provision of: a wash tank having sides and a sloping bottom, the upper portion of said sides extending longitudinally to form overhanging extensions, said tank and extensions being provided with supports to form a base; inwardly extending trackways carried by the upper portion of the sides of said base to rollably support upper and lower lays of a continuous roller conveyor above said tank; a continuous roller conveyor having its ends mounted on said overhanging extensions, said conveyor having a plurality of spaced, transversely extending rollers adapted to roll on said trackways, each roller being provided with alternately larger and smaller diameter sections, the rollers having a yielding but substantially water-impervious surface; driving means carried beneath one of said overhangs and operably connected to the conveyor for driving the same; a brush housing removably positioned on said base above said tank and conveyor; a brush assembly mounted in said housing and comprising a rigid frame having longitudinal side members and a brush means attached to said frame, said brush means comprising a plurality of brush elements carrying downwardly extending flexible fibers, the ends of the fibers lying in a virtual plane parallel to the top of the roller conveyor but spaced therefrom; means for supplying aqueous fluid from the wash tank to between side members and above the brush means of said brush assembly; pump means for supplying fluid from said tank to above the brush means of the brush assembly; means carried by the housing for imparting to said brush assembly a circular motion in a vertical plane parallel to the direction of travel of said conveyor, said means including a pair of spaced, parallel yoke straps rigidly connected to each longitudinal side member of the frame of said brush assembly, eccentric means carried by the housing and operably connected to said yoke straps; motor and drive means on said housing for driving said eccentrics in phase in the same direction and speed and means for adjusting the effective length of the yoke strap connections to said brush assembly; a blower carried above the conveyor on the overhang at the discharge end of said conveyor for subjecting eggs on said conveyor to a current of air counter to the direction of movement of the conveyor; a thermostatically controlled means for heating aqueous fluid in the wash tank; and means for de-energizing the pump means when the roller conveyor drive means is stopped.

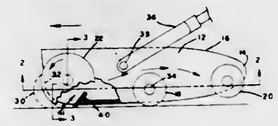
4. An egg washing machine comprising: a continuous, rotating, roll-type egg washing conveyor for advancing and rotating eggs in spaced relation, said egg washing conveyor having a plurality of spaced transversely extending rollers; brush means mounted above said egg washing conveyor, said brush means presenting a multitude of downwardly directed fibers whose lower ends terminate in a virtually common, horizontal plane; means for imparting a continuous circular motion to said brush means and fiber ends in a vertical plane parallel to the direction of advance of said conveyor, the circular motion of said brush means being in the same direction as the direction of rotation of the eggs on the conveyor but at a materially greater angular velocity; means for continuously driving the egg washing conveyor; an intermittently driven egg grader conveyor adapted to receive eggs from the egg washing conveyor; and means including a circuit interconnecting said driving means for said egg washing conveyor and said egg grader conveyor, said circuit including stationary switches operated by rollers of each of said conveyors for stopping said egg washing conveyor when said egg grading conveyor is not in position to safely receive eggs from said egg washer conveyor without interrupting the intermittent movement of the egg grading conveyor.

3,097,383

SWEEPER

Charles H. Taylor, Box 5, Chicopee, Mass.

Filed Jan. 31, 1962, Ser. No. 170,220
5 Claims. (Cl. 15—41)



1. A sweeper including:

a casing having an opening at its front end and having its rear end closed,

a brush rotatable in said opening,

front wheels supporting said front end,

rear wheels supporting said rear end,

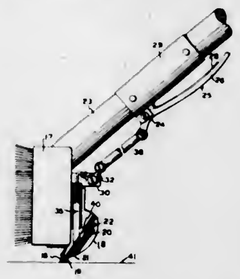
intermediate wheels which are in constant engagement with surface to be cleaned and on which said casing is tiltable forwardly, to rest on said front wheels, or rearwardly, to rest on said rear wheels,

a handle pivoted to said casing, forwardly of the axis of said intermediate wheels, whereby a forward push on said handle depresses said front wheels into engagement with the surface to be cleaned and raises the rear wheels out of engagement with said surface, and whereby a rearward pull on said handle raises said front wheels out of engagement with said surface and depresses said rear wheels into engagement

with said surface to permit continued rotation of said brush by momentum, and

actuating means operatively connecting said brush with said front wheels to rotate the brush in a direction opposite to the direction of the forward movement of said sweeper.

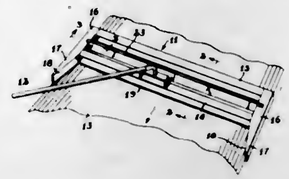
3,097,384
AUTOMATICALLY SHIELDED SCRAPING DEVICES
John V. Clark, Brooklyn, N.Y., assignor to Byron M. Bailey, Brooklyn, N.Y.
Filed June 13, 1960, Ser. No. 35,508
10 Claims. (Cl. 15—111)



1. A scraping device of the character described including an elongated horizontal member carrying a scraping blade therealong and extending laterally therefrom, said blade having a scraping edge along and spaced from said member; a shielding plate movably mounted on said member; said shielding plate, in normal rest position, being in close proximity to said blade, opposite it and extending beyond the scraping edge of said blade where said shielding plate terminates in an edge adapted to contact a floor upon positioning said horizontal member in a predetermined relation with respect to the floor whereby the scraping edge of said blade is off the floor; means positioned on said device for moving with the shielding member every time said shielding member is moved on said horizontal member; spring means on said device acting on said means which moves with the shielding plate to bias said shielding plate to a normal rest position; a handle extending from the center region of said horizontal member, whereupon when the device is set so that said edge of the shielding plate contacts the floor and said handle is pushed to move said member downwardly, the scraping edge of said blade will contact the floor and the spring means will be stressed, and when the handle is released by the operator of the device said spring will cause said shielding plate to return to its normal position; a latch-engageable means on said scraping device moving with the shielding plate; a releasable spring-biased latch normally engaging said latch-engageable means to make the latter immobile, thereby locking the shielding plate against movement from its normal rest position and manually-operated latch-releasing means accessibly located on the handle for manipulation at all positions of said handle.

3,097,385
DRESSING APPLICATOR FOR FLOOR SURFACE
Victor Unterbrink, Ottawa, Ohio, assignor to Pines Engineering Co., Inc., Aurora, Ill., a corporation of Illinois
Filed July 2, 1962, Ser. No. 206,697
4 Claims. (Cl. 15—118)

1. An applicator for applying dressing on a surface comprising, in combination, a handle, a substantially rectangular head on said handle, said head comprising spaced apart parallel front and back rails and connecting end rails, a covering of absorbent material covering the bot-



tom face of said front, back and end rails, and a scraper bar located between the front and back rails and bridging the end rails, said bar having its bottom face resting on the surface.

3,097,386
NAIL PAINT APPLICATOR
Rose Marie Quirine Marani, 25 Grande Ave., Carrieres-sous-Poissy, France
Filed Aug. 9, 1960, Ser. No. 48,388
Claims priority, application France July 9, 1960
4 Claims. (Cl. 15—167)



1. A nail paint applicator comprising a holder made of a strip of a resilient material having an arc shaped cross-section whereby the forward end of said holder is adapted to fit the periphery and the transverse curvature of a nail when a slight pressure is exerted upon the lateral edges of said strip and a sheet of bristles fastened at one end to said holder and arranged parallel to the longitudinal axis thereof to define a concave surface forming an extension of the lower face of said holder, whereas the other end of said sheet of bristles has an edge shaped to fit the limit of the area to be painted.

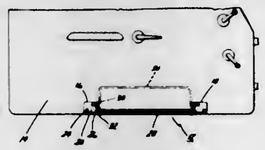
3,097,387
SCOURING PAD
Mark J. Perkovich, Chicago, Ill., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Filed May 18, 1960, Ser. No. 29,986
1 Claim. (Cl. 15—209)



A scouring pad, comprising a body of matted interwoven elongated metal wool filaments having a substantially planar surface portion formed from said filaments, a backing including a continuous sheet of relatively thin flexible material adjoining central portions of which are folded into face-to-face relationship to form a handle, flat end portions of said sheet extending on either side

of said handle and overlying said surface portion of said body, and a flexible film of high tensile strength and dimensional stability at temperatures below 140° F. precoated on one side of said sheet and activatable at increased temperatures, said film having been activated and thereby holding together said adjoining central portions of said handle, said film having a thickness greater than the diameter of said filaments at said surface portion and by said activation being fused to said end portions of said sheet and surrounding and being fused to a plurality of said filaments at said surface portion of said body to interlock said body and said backing.

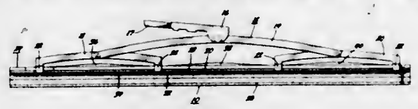
3,097,388
SHOE SCRAPING DEVICE
Stephen J. Gresko, Fort Wayne, Ind., assignor of one-half to Doyle C. Shady, Fort Wayne, Ind.
Filed July 31, 1962, Ser. No. 213,769
2 Claims. (Cl. 15—237)



1. A shoe scraping device for vehicles comprising: a pair of spaced angle brackets each having a first flange adapted to be mounted on the inner surface of a door of said vehicle and a second flange extending outwardly therefrom; and a generally U-shaped scraping member extending between said brackets and having its legs respectively pivotally connected to said second flanges whereby said member is pivotally movable between a first storage position in a first plane generally parallel with said first flanges and a second operative position in a second plane generally at right angles to said first flanges and extending outwardly therefrom, each of said pivotal connections of said scraping member legs to said second flanges comprises a pivot pin secured to the respective second flange and an elongated slot formed in the respective leg parallel therewith and receiving said pin, said slots and pin respectively cooperating to permit movement of said scraping member in said first plane when in said first position thereof between lower latching and upper unlatched positions, said second flanges respectively having grooves formed therein and said scraping member legs respectively having projections thereon, said projections being respectively received in said grooves when said scraping member is in its first and latching position thereby latching said scraping member in its first position, said projections being respectively free of said grooves when said scraping member is in its first and unlatched position whereby said scraping member may be pivoted to its second position.

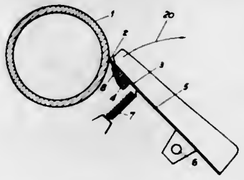
3,097,389
SQUEEGEE AND WIPER BLADE ASSEMBLY EMBODYING SAME
Peter R. Contant, Vaughn H. Hardy, and Elmer E. Reese, all of Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1961, Ser. No. 129,576
13 Claims. (Cl. 15—250.42)

1. A squeegee comprising an elongate, freely flexible body of elastomeric material having a wiping lip along one edge, and a stiff, resilient plastic retention portion coextensively bonded to the opposite edge of said elastomeric body, said retention portion having a plurality of aligned sections of nonuniform flexibility in a plane normal to the surface to be wiped, each section having



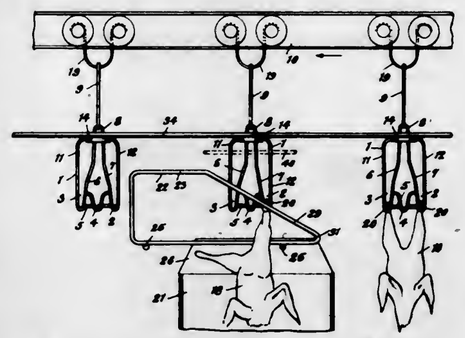
maximum flexibility at its ends and minimum flexibility midway between its ends.

3,097,390
HOLDING DEVICE FOR SCRAPER BLADES OF ROLLER MILLS
Anton Thaler, Unterdorf, Waldkirch, and Alfred Siebert, Niederuzwil, Switzerland, assignors to Gebrueder Buehler, Uzwil, Switzerland, a firm of Switzerland
Filed Sept. 25, 1961, Ser. No. 141,266
Claims priority, application Switzerland Sept. 27, 1960
13 Claims. (Cl. 15—256.51)



1. A holding device, for scraper blades used in rolling mills, comprising, in combination, a support structure, including magnetizable material, and formed with cooperating surface portions arranged to supportingly engage a surface and a rear edge of a scraper blade to position the latter with its front edge beyond said structure for engagement with a roller; permanent magnet means mounted on said support structure to provide a magnetic field including said magnetizable material, and operative to retain a scraper blade in engagement with said cooperating surface portions; and means movably mounting said support structure for displacement relative to a roller.

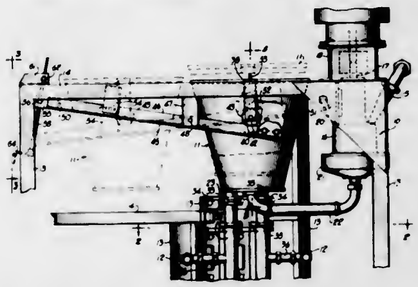
3,097,391
UNLOADING DEVICES FOR CHICKEN SHACKLES
Edward T. Wayne, Port Crane, N.Y., assignor to E. H. Titchener & Co., Binghamton, N.Y., a corporation of New York
Filed Oct. 28, 1960, Ser. No. 65,794
8 Claims. (Cl. 17—11)



1. An unloading device for chicken shackles comprising, a conveyor for a chicken-bearing shackle, the shackle

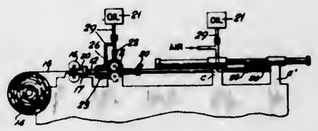
having notches through which parts of the chicken extend, a pair of spaced rods between which a shackle is moved by the conveyor, said rods having inclined portions which contact with the parts of the chicken that extend through the notches in the shackle and raise such parts in a manner to disengage the same from the notches and thereby free the chicken from the shackle.

3,097,392
STUFFING HOPPER UNIT
Daniel L. Orloff and Raymond J. Keating, Madison, Wis., assignors to Oscar Mayer & Company, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 29, 1960, Ser. No. 52,429
8 Claims. (Cl. 17—35)



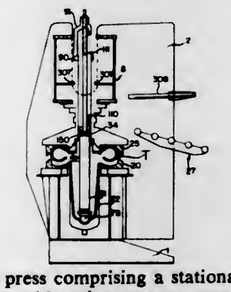
1. A hopper unit for material accumulation and delivery, said unit comprising a frame mounting a hopper therein, said hopper being truncated and open at the top thereof while being provided with a closure plate at the bottom thereof, a material delivery opening in said closure plate, standpipe means in communication with said delivery opening in the interior of said hopper to deliver material up into said hopper from the bottom thereof, said delivery opening being adapted to receive a material delivery pipe therein, at least one material discharge opening in said closure plate offset from said delivery opening for the discharge of material from said hopper below the inner end of said standpipe means, said discharge opening being adapted to receive a material discharge pipe therein, and hopper lifting means forming a part of said frame and connected to said hopper to lift the same for disconnection from said pipes during cleaning thereof.

3,097,393
METHOD OF SHIRRING CASINGS
Edward A. Matecki, Evergreen Park, Ill., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 17, 1958, Ser. No. 774,444
1 Claim. (Cl. 17—45)



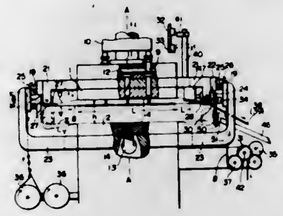
Method of shirring cellulosic tubing which comprises inflating the tubing at a moisture content of 12% to 20% with a gaseous medium, applying lubricant to the tubing surface, longitudinally collapsing the inflated, lubricated tubing by pleating in continuous manipulation of a plurality of laterally coextensive successive mechanical pressure surfaces diverging from the tubing at an included angle in the order of 15°, alternately coacting along opposing and adjacent sides of the gaseous inflated tubing and guided during such manipulation onto and by a tubular mandrel having a portion with a low coefficient of friction which terminates in an advanced portion and is of a diameter of the order of 75% of the casing diameter, applying lubricant to said moving surfaces of the order of .0002 to .0013 gram per six inch frankfurter length, which moving surfaces alternately and successively indent the inflated casing from true axial alignment with said mandrel to form protuberances and indentations, collapsing the protuberance opposite the indentation immediately preceding, folding the collapsed portions of the casing into a loosely interfolded, pattern configuration of pleats; and compressing such interfolded pleats into a straight, firm, and durable unit item.

3,097,394
TIRE CURING PRESS
Edwin E. Mallory and Armindo Cantarutti, Cuyahoga Falls, Ohio, assignors to National Rubber Machinery Company, Akron, Ohio, a corporation
Filed Oct. 10, 1960, Ser. No. 61,664
20 Claims. (Cl. 18—17)



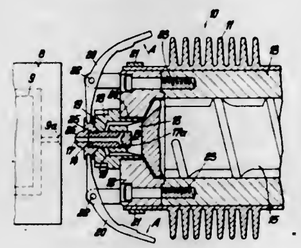
1. In a tire press comprising a stationary mold section and a movable mold section, means operative to move said movable mold section away from and then laterally with respect to said stationary mold section to open said press, a toe ring for said movable mold section, means vertically to move said toe ring, and chucking means mounted on said movable mold section adapted peripherally to underlie said toe ring to hold a tire cured in said press axially centered with respect to said movable mold section as said press is thus opened to remove said tire from said press laterally of said stationary mold section.

3,097,395
APPARATUS FOR PRODUCING SLIDE FASTENERS HAVING INTERLOCKING ELEMENTS OF SYNTHETIC RESIN
Tadao Yoshida, Ichikawa-shi, Japan, assignor to Yoshida Kogyo K.K., Tokyo, Japan
Filed July 12, 1961, Ser. No. 123,520
Claims priority, application Japan Jan. 31, 1961
1 Claim. (Cl. 18—30)



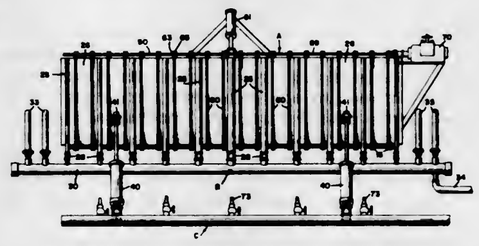
An apparatus for producing slide fasteners each including fastener tapes, core cords secured to said respective fastener tapes and rows of interlocking elements of synthetic resin secured thereto in engagement with said respective core cords, said apparatus comprising a molten resin injecting device, a stationary mold section communicating with said injecting device, said stationary mold section including a mold surface, a movable mold section disposed above and opposite to said stationary mold section and adapted to effect intermittent vertical reciprocatory movement relative to said stationary mold section, said movable mold section including a mold surface, said mold surfaces opposing each other, said mold sections each including a pair of spaced longitudinally extending grooves formed in the respective opposing mold surfaces, means for periodically moving said movable mold section in contact with said stationary mold section to clamp said fastener tapes and to define a mold cavity to receive injected molten synthetic resin to form rows of interlocking elements on the fastened tapes in engagement with the core cords, brackets extending generally longitudinally from each of said mold sections at opposite ends thereof, a pair of cooperating racks secured to said respective brackets at either end of said mold sections, a differential pinion embraced by said pair of racks in intermeshing relation therewith, a guide wheel for guiding the fastener tapes loosely mounted on the shaft of said differential pinion, a guide roller and a friction roller mounted on said respective brackets extending from said movable mold section and cooperating with each other to hold the fastener tapes in tension between said mold sections, said friction roller including an annular groove formed therein, a wedge-shaped scraper disposed closely adjacent to said friction roller to fit in said annular groove formed therein for removing runners and gates formed during the molding process integrally with the interlocking elements therefrom as the fastener tapes are moved past said wedge-shaped scraper, and a take-up roller assembly mounted on said stationary mold section and including a drive roller operable in timed relation with said movable mold section to wind the fastener tapes in two steps, during the first step blank portions of the fastener tapes are moved forward nearly into position between said mold sections and during the second step the blank portions are further moved forward just sufficient to ensure that the core cords on the blank portions are fitted completely in said longitudinal extending grooves in said mold sections.

3,097,396
INJECTION MOLDING MACHINE FOR PLASTICS
Herbert Ludwig, Desmastrasse 112, Uesen, near Bremen, Germany
Filed Oct. 20, 1961, Ser. No. 146,564
Claims priority, application Germany Oct. 29, 1960
4 Claims. (Cl. 18—30)



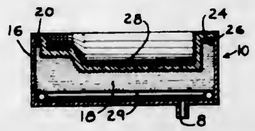
1. An injection molding machine comprising, in combination, a mold formed with a sprue opening at one side thereof;
a cylinder closed at one end facing said side of said mold and being formed in said closed end with a bore therethrough, said mold and said cylinder being stationarily arranged spaced from each other;
a nozzle having a closed rear end facing the interior of said cylinder and being slidably arranged in said bore movable between a rear inactive position and a forward injection position;
first passage means formed in said nozzle and having a front portion aligned with said sprue opening and a rear portion ending forwardly of said closed rear end of said nozzle at the annular surface defining said bore;
second passage means formed in said closed end of said cylinder and having a rear portion communicating with the interior of said cylinder and a front portion ending at said surface, said front portion of said second passage means being out of alignment with said rear portion of said first passage means when said nozzle is in said rear inactive position and said front portion of said second passage means being aligned and in communication with said rear portion of said first passage means when said nozzle is in said forward injection position;
and means in the interior of said cylinder for pressing plastic material against said closed end of said cylinder and said closed rear end of said nozzle for moving the latter from said inactive to said forward injection position, whereby said first and second passage means are brought in communication with each other so that plastic material will flow from the interior of said cylinder through said second and first passage means into said sprue opening of said mold.

3,097,397
PLASTIC MOLD
Irby H. Leach and Frank H. Bickford, both of 603 Brown St., Napa, Calif.
Filed Nov. 22, 1960, Ser. No. 70,996
5 Claims. (Cl. 18—38)



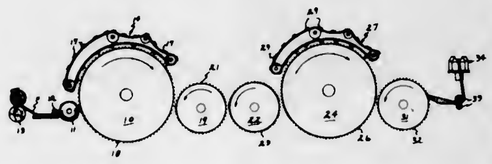
1. A mold for forming articles from expandable plastic particles comprising: a chest formed of walls of sheet material, the inner wall surface being in direct contact with the expandable plastic particles, said chest being imperforate except for spaced apertures formed within the wall thereof, a plurality of spaced pipes positioned adjacent the outer surface of said apertured wall allowing a maximum outer wall surface area to be exposed directly to the atmosphere, aligned, openings formed in each of said pipes, means for providing fluid communication between the said openings formed by side pipes and the apertures formed by said wall, means for injecting steam under pressure into said pipes for even distribution to said chest, and means for cooling said exposed outer wall surfaces whereby said chest is subjected to even heat distribution as a result of equalized steam flow through said spaced pipes and to instantaneous cooling by said cooling means contacting the relatively large exposed outer wall surfaces between said spaced pipes.

3,097,398
APPARATUS FOR MAKING PLASTIC BOTTLES
John H. Inglesby, Bloomingdale Township, Dupage County, Ill. (P.O. Box 273, Medinah, Ill.)
Filed Apr. 10, 1961, Ser. No. 101,693
8 Claims. (Cl. 18—42)



1. Equipment for producing plastic bottles, or the like, comprising a twin water bath, each half having one open side adapted to receive a half mold; and cooling means for removing heat from said bath; the mold having a heat capacity not exceeding about 10 percent of the heat capacity of the entire assembly; and means for adjusting the rate of heat removal from the water bath to permit the mold to experience a predetemined temperature cycle repeatedly, with the temperature history of each cycle approximately identical with that of a previous cycle.

3,097,399
PROCESS AND APPARATUS FOR CARDING COTTON FIBERS
Otis B. Alston, Columbus, Ga., assignor to Swift Spinning Mills, Inc., a corporation of Georgia
Filed Jan. 2, 1962, Ser. No. 165,713
12 Claims. (Cl. 19—98)



1. An improved process of carding cotton fibers to increase the rate of carding obtainable over a like single cylinder cotton card and to improve the quality of the carded product which comprises continuously carrying out the following steps in the sequence named:

(*a*) feeding the fibers to be carded at more than twice the rate of feed of said like single cylinder cotton card to a first revolving card cylinder having substantially straight tooth clothing thereon,

(*b*) imparting carding action to the fibers on said first card cylinder by carding flats,

(*c*) removing the thus carded fibers in a uniform, loose web from said first card cylinder by gentle action of a first transfer cylinder having substantially straight tooth clothing thereon,

(*d*) rotating said first transfer cylinder in a direction opposite the direction of rotation of said first card cylinder and at a surface speed less than the surface speed of said first card cylinder,

(*e*) transferring said fibers in a uniform, loose web from said first transfer cylinder to a second card cylinder having substantially straight tooth clothing thereon by gentle action of a second transfer cylinder having substantially straight tooth clothing thereon,

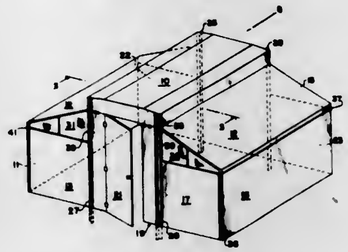
(*f*) rotating said second transfer cylinder in the same direction as said first transfer cylinder,

(*g*) rotating said second card cylinder in a direction opposite the direction of rotation of said second transfer cylinder and at a surface speed greater than the surface speed of said second transfer cylinder,

(*h*) imparting carding action to said fibers on said second card cylinder by carding flats, and

(*i*) doffing said fibers from said second card cylinder.

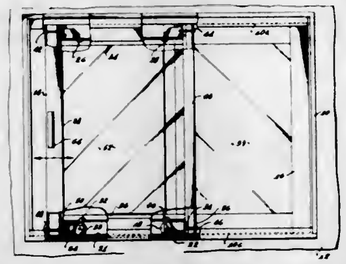
3,097,400
FOLDING SHELTER
Linly H. Davis, 1519 W. Greenfield, and John E. Ellsworth, 1520 W. Greenfield, both of Wichita, Kans.
Filed Oct. 14, 1960, Ser. No. 62,604
7 Claims. (Cl. 20—2)



1. A foldable shelter comprising: A central box section having a top, side and end walls, and an open bottom; two central end panels each having an end hingedly secured to the inside surface of a respective end wall of said box section and movable between stowed positions within said box and vertical parallel positions normal to the top of said box; two side assemblies, each including a roof panel, a sidewall panel, and front and rear panels, each roof panel being hingedly connected along one side edge to the inside surface of a respective side wall of said box, each side wall panel being hingedly connected along one side edge to the opposite side edge of its respective associated roof panel, and each front and rear panel being hingedly connected along one edge to the respective opposite ends of their respective associated side wall panels, releasable means for securing those edges of the front and rear panels which are opposite their hinged edges to the respective adjacent edges of the two central end panels when the front and rear panels and central end panels are in their respective erected and unfolded positions, the front and rear panels being movable from positions normal to their respective associated side wall panels in planes common to the respective central end panels to positions flat against the inside surface of their respective side wall panels, each side wall panel with its two associated front and rear panels folded flat against the inside surface thereof being movable to a position substantially parallel to the inner surface of its respective associated roof panel, and each side assembly including the roof panel, the side wall panel and the front and rear panels being movable to a stowed position within said box section, all panels when stowed lying within the box section above the open bottom thereof and being disposed in superposed substantially parallel positions therein.

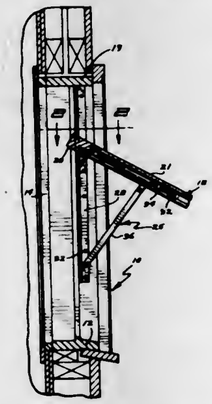
3,097,401
REVERSIBLE SLIDING DOOR AND WINDOW CONSTRUCTION
Harry M. Riegelman, Rolling Hills, Calif., assignor to Security Aluminum Corporation, Compton, Calif., a corporation of California
Filed May 26, 1961, Ser. No. 113,011
11 Claims. (Cl. 20—19)

5. In a reversible sliding door construction, a corner bracket assembly for strengthening a corner of a pair of channel members and adjustably mounting a wheel housing, comprising: a wheel housing; a bracket including two side walls and an end wall joining said two side walls together, said end wall having integral pivot tab means pivotally connected to said wheel housing removably mounting said wheel housing thereon; means engaging said corner bracket for tying said channel members together



and bracing said corner; and an adjustable stop member mounted on said bracket engaging said wheel housing and limiting pivotal movement thereof.

3,097,402
SHOE FOR WINDOW HINGE
Thomas R. Ewing, % Treco Products Inc., Bayport, Minn.
Filed Aug. 8, 1962, Ser. No. 215,700
4 Claims. (Cl. 20—42)



1. A hinge structure in connection with a window frame having an awning type window sash comprising

an elongated plate member attached to a side portion of said window frame,

a shoe slidably connected to said plate member,

said sash at its upper rail portion being pivoted to said shoe,

an arm linking said sash and said side of said window frame below the point of travel of said shoe,

said elongated plate member comprising a side portion angled upwardly and reversely curved inwardly to form a channel and a depending flange spaced at its free end from the base of said plate member and forming a track,

said shoe comprising a body portion formed as a plate member having a downwardly angled outwardly reversely curved side portion forming a channel,

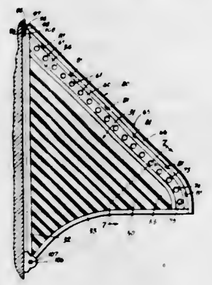
said curved side portion of said shoe having transverse slots therein forming spaced ears of said curved side portion,

said ears being disposed in said channel of said first mentioned plate member and said track being disposed in said channel of said shoe,

a plate member underlying said body portion having arm portions extending through said slots between said ears of said body portion and underlying said track, and

means connecting said body portion and the underlying plate member thereof moving said arms toward and away from engagement with said track.

3,097,403
AWNING
Donald Macy, Richmond Heights, and Harry Nelson, St. Louis, Mo., assignors to Artcraft Venetian Blind Manufacturing Company of St. Louis, St. Louis, Mo., a corporation of Missouri
Filed Apr. 27, 1959, Ser. No. 809,241
4 Claims. (Cl. 20—57.5)

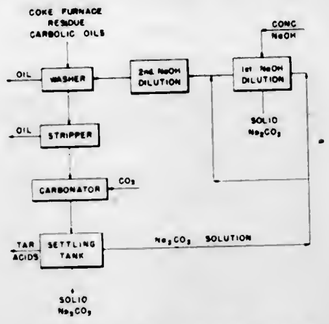


3. An awning structure having a roof and sides, each side having an edge adjacent an edge of the roof and means for joining the top to the sides comprising an elongated member for each side, each elongated member having a channel for receiving the adjacent edge of a side and another channel for receiving an edge of the roof, the open sides of the channels being at substantially right angles to one another, the channels of each member being spaced from one another by a plate that has portions cut away to permit ventilation beneath the roof and to enhance the esthetic design of the structure, each member being formed of two pieces, and means for releasably locking the pieces to one another so that the roof can be snapped onto the sides after all channels are in place, the locking means comprising an elongated hook on the plate of one piece and an elongated recess on the plate of the other piece, the elongated recess having means for resiliently engaging the hook for locking the two pieces together.

3,097,404
PROCESS FOR TREATING CARBOLIC OILS
William E. Downey, Jr., North Madison, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,593
10 Claims. (Cl. 23—63)

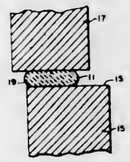
1. In the process for the treatment of a carbolic oil-containing material wherein a dilute alkali metal hydroxide solution is added to said material to solubilize the tar acids contained therein by forming the alkali salts thereof, the insoluble oils are separated from the tar acid salts and the solution of tar acid salts is acidified with a carbon dioxide-containing gas to convert the tar acid salts to the insoluble tar acids which are then separated from the alkali metal carbonate solution formed by the carbonation of the tar acid salts, the improvement which comprises precipitating solid alkali metal carbonate from the thus-separated alkali metal carbonate solution by adding thereto a concentrated alkali metal hydroxide of the same alkali metal, thus effecting a dilution of said alkali metal hydroxide solution, separating the thus-precipitated alkali metal carbonate and adding the thus-diluted alkali metal hydroxide solution to the carbolic oil-containing material

to solubilize the tar acids contained therein, said alkali metal hydroxide being diluted, initially, to a point at least sufficient that there is no further precipitation of said



alkali metal carbonate in the process, prior to the carbonation of tar acid salt solution, but said alkali metal hydroxide not being diluted, initially, to substantially below 20% by weight.

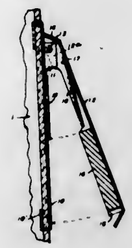
3,097,405
EXTRUDED RIBBON OF FIRE CLAY
William B. Yerrick, Oakmont, Pa., assignor to Kittanning Brick Company, Reesdale, Pa., a corporation of Pennsylvania
Filed Nov. 22, 1960, Ser. No. 70,959
8 Claims. (Cl. 22—147)



1. In the method of teeming ingots wherein a hot-top mold is set on top of an ingot mold and molten metal is cast into the casting cavities of said molds until the molten metal rises into the hot-top mold, the improvement comprising, seating an extruded elongated rope of of undried and unfired fire clay continuously about the top surface of said ingot mold so as to completely circumvent said casting cavity, seating said hot-top mold on top of said ingot mold and fire clay rope so as to flow said extruded fire clay between said molds to form a uniform seal therebetween, drying said fire clay and teeming.

3,097,406
ARTICLE HOLDER
Le Roy W. Yarborough, Mechanicsville, Bucks County, Pa.
Filed Aug. 24, 1960, Ser. No. 51,563
4 Claims. (Cl. 24—3)

1. In combination a glasses case and a clasp for use in retaining said glasses case in a pocket of a garment by gripping the edge of the pocket, said clasp comprising an elongated armature adapted to be secured to said glasses case in a position to extend from a position normally outside of the pocket in a direction generally normal to the edge of the pocket when the article is in the pocket, a hinge means mounted on the end of said armature normally lying outside of said pocket, an elongated clamping plate hinged thereon to overlie said armature and to be swingable toward and away from said armature and from the fabric of a pocket inserted between said armature and said clamping plate, stop means to limit the swing of said clamping plate away from said armature, magnet means adapted to normally pull said clamping plate toward said armature, said magnet means being mounted on said clamping plate at its end remote from said hinge means, and a resilient gripping element of plate material secured



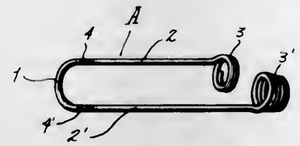
to said clamping plate adjacent said hinge and bendable so as to provide for adjustment of the position of the face of said gripping element with respect to said clamping plate and presenting a gripping surface toward said armature between said magnet means and said hinge means.

3,097,407
CONFORMING NON-VISIBLE GARTERS FOR HOSIERY
Paul Winchell, 9—05 166th St., Whitestone, N.Y.
Filed Dec. 7, 1961, Ser. No. 158,158
1 Claim. (Cl. 24—248)



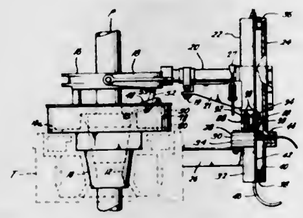
A clamp structure for a form fitting garter, comprising a pair of elongated arms, each of said arms having an opening defining an upper elongated frame portion, the frame portion of one arm fitting within the frame portion of the other arm, one of the arms having an intermediate offset portion, the offset portion of the one arm extending through the frame portion of the other arm and pivotally secured thereat, each of the arms having a lower jaw portion formed with an elongated serrated side, the serrated sides of the jaw portions facing each other to grip a stocking therebetween when the arms are closed and the frame portions are engaged one within the other, the upper end of said other arm being formed with a loop to engage the top of a garter, said other arm having a transverse bridge between said opening and loop, and a catch member carried by said bridge for engaging the upper end of said one arm when the arms are closed, said catch member including a threaded pin having a head disposed in the loop and a conical tip disposed in the opening of said other arm, said upper end of the one arm having a recess for receiving said conical tip, said pin being turnably threaded in a bore in said bridge.

3,097,408
SPRING CLAMP
Oliver W. Hildebrand, 6338 Lena, Jennings 20, Mo.
Filed June 8, 1961, Ser. No. 115,769
1 Claim. (Cl. 24—255)



A clamp adapted for detachable engagement upon an elongated support member comprising a generally U-shaped body formed from a single length of spring metal stock having an arcuate bend portion and a pair of legs of different length progressing in like direction from said arcuate bend portion, a coil being fomed at the end of each leg remote from said arcuate bend, the longitudinal axes of said coils being normally inclined with respect to the longitudinal axis of the related leg, said legs through normal bias of the U-shaped body being normally spaced-apart in axially parallel relationship and with the related coils being thereby normally urged away from each other, said coils being spaced from each other longitudinally of said body by virtue of the length of the respective legs, the longitudinal axes of said coils being parallel when said clamp is in normal detached condition, each coil having an inside cross-section for snug reception of said support member, and said legs being bent at points adjacent to the arcuate bend portion whereby when said clamp is engaged upon an elongated support member said legs will be forced toward each other with the related coils being brought into coaxial relationship to thereby cause the development of opposing lateral forces for maintaining the device against accidental longitudinal displacement of the support member and to cause the development of a downward force by the arcuate bend portion of the body upon said support member.

3,097,409
OPERATING MECHANISM FOR ROTARY SLIPS
Benjamin F. Kelley, % Ben F. Kelley Co., Inc., 18 S. Madison, Tulsa, Okla.
Filed Nov. 14, 1961, Ser. No. 152,299
6 Claims. (Cl. 24—263)



3. In rotary slip mechanism, the combination with a slip bowl through which a pipe may be extended centrally and slips movably disposed in the bowl for movement to positions for coaction with the bowl and pipe to grippingly engage the pipe and to releasing positions out of such engagement, of means for moving the slips from one to the other of said positions, said means including an annular lifting ring vertically spaced from the top of the slip bowl and reciprocable relative thereto and linkage mechanism operatively connecting the lifting ring to each of said slips, said linkage mechanism comprising a bell crank lever having one end pivotally connected to one of said slips, a hinge link pivotally connecting the opposite end of said lever to the slip bowl, and a connecting link pivotally connecting an intermediate portion of the bell-crank lever to said lifting ring, said bell-crank lever having spaced apart web portions disposed in parallel planes rigidly connected together intermediate their ends and each formed with longitudinally spaced, laterally thickened hub portions each having a bore therethrough, the bores of the hub portions on one web being aligned axially with the bores of the corresponding ones of the hubs on the other web, pins extending between the webs and into the aligned bores, said pins providing said pivoted connections between said lever and the other elements of said linkage mechanism, and means connecting the pins to the hub portions to hold the pins against rotational and axial movement in the bores.

3,097,410
DUST COLLECTOR
Roland L. Lincoln, Macungie, Pa., assignor to Fuller Company, a corporation of Delaware
Filed Feb. 9, 1961, Ser. No. 88,201
2 Claims. (Cl. 24—270)

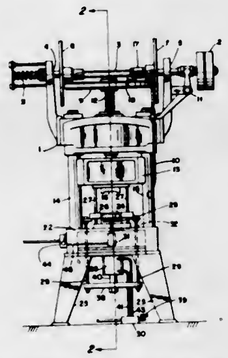


1. A tensioning clamp comprising a clamping band adapted to encircle an article to be clamped, a lever mounted on said band adjacent one end thereof for swinging about an axis, a loop having a generally U-shaped portion, hook means on said band adjacent to the other end thereof adapted to be engaged by the base of said U-shaped portion and means for anchoring the distal ends of the respective legs to said loop, each of the legs of said U-shaped portion including spring portions which are extensible in a direction longitudinally of said legs.

3,097,411
APPARATUS FOR SHAPING PRESSURE-SHAPABLE MATERIALS
Charles W. Gerster, East Liverpool, Ohio, and Howard Pearch, Paramount, Calif., assignors to Ferro Corporation, Cleveland, Ohio
Filed Feb. 13, 1961, Ser. No. 93,284
5 Claims. (Cl. 25—45)

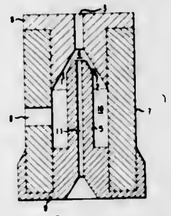
1. In an apparatus for pressure forming a shaped article from pressure shapable material, said apparatus having a fixed bed upon which are supported connecting side walls extending generally in the same direction, said side walls surrounding a cavity die member conforming to the shape of the area circumscribed by aforementioned connecting side walls, to form a cavity, said cavity adapted to receive a charge of pressure shapable material, a plunger die member movable into said cavity in substantially a single continuous compacting stroke in a direction generally parallel to the planes of aforementioned side walls, and opposed to said cavity die member, said plunger die member having an outline, taken in a plane generally normal to the common direction of said side walls, coincident with the outline of the area circum-

scribed by aforementioned connecting side walls, reciprocating means for moving said plunger die member in its compacting stroke into said cavity to shape said pressure shapable material introduced therein to an outline conforming to the outline of said cavity, and out of said cavity following said compacting stroke, the improvement, in combination therewith, of a segmented cavity die member, said segments constituting the shaping surface of said cavity die member, at least one of said segments immovable, operationally, with respect to a fixed point, at least one of said segments movable with respect to said fixed segment in a direction generally parallel to the common direction of aforementioned connecting side walls, said movable segment having an upper and lower limit of movement within said cavity, a first means for



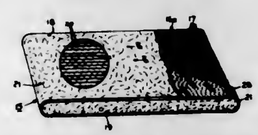
maintaining said movable segment at its upper limit during the filling operation of said cavity, a second means for moving said movable segment sequentially to its lower limit following completion of the cavity filling operation but prior to completion of the compacting stroke of said plunger die member, said first means coacting sequentially with said movable segment to return same back to its upper limit following completion of said compacting stroke, which return of said segment back to its upper limit pushes said shaped article, while in supported contact with said movable segment, free of said other immovable segment of said die cavity member, to produce a shaped article of homogeneous density which is readily removable from contact with said cavity die member segments.

3,097,412
YARN TREATING APPARATUS
Robert Paul Becher, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 8, 1961, Ser. No. 130,110
4 Claims. (Cl. 28—1)



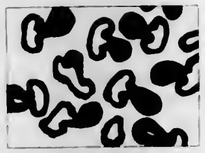
1. Yarn treating apparatus comprising a hollow cylindrical body, an orifice block closeing one end of the body including a conical orifice throat and a cylindrical exit conduit with the axes along the cylindrical axis of the body, a yarn needle positioned in and concentric with the body having a longitudinal yarn passageway of smaller diameter than the exit conduit aligned with the axis of the exit conduit, the needle having a cap portion closing the end of the body opposite the orifice block to form a chamber surrounding the needle, the needle having a tip in the form of an conical section the apex angle of which is from 45° to 135°, said conical orifice throat having a precisely matching angle and a length from 2 to 6 times the length of the corresponding conical section of the needle, the conical needle tip being completely spaced from the orifice throat to provide a yarn treating zone between the tip of the needle and the exit conduit and to provide an annular passageway around the needle tip from the chamber to the treating zone, and an inlet conduit for introducing air into said chamber from outside the body.

3,097,413
UNWOVEN PAPERMAKER'S FELT
John H. Draper, Jr., Canton, Mass., assignor to Draper Brothers Company, Canton, Mass., a corporation of Massachusetts
Filed May 26, 1960, Ser. No. 31,847
2 Claims. (Cl. 28—79)



1. A new article of manufacture comprising a papermaker's felt of endless belt-like formation for use in papermaking machinery for supporting, transporting, and draining wet papermaking fibre material comprising a foundation layer having a non-woven fibrous porous structure consisting of a thread sheet assembly made up of a multiplicity of helically-arranged continuous thread lengths, the convolutions of which are disposed widthwise of the felt and the linear runs of which extend longitudinally thereof in a general predetermined spaced parallel relationship to one another so as to form definite liquid drainage passages between them for rapid draining of liquid through the felt from the outer side to the inner side thereof, said helically disposed thread lengths each being of a composite yarn structure and consisting of a central core strand made up of a plurality of fine synthetic textile filament yarns around the exterior of which longitudinally extends a single helically-wrapped staple fiber yarn length of any of the usual textile fabric yarn materials, an intermediate layer in the form of a thin flat temporary binder sheet and composed of a water-soluble vinyl plastic film material superposed upon and enveloping said foundation thread sheet, said binder sheet being adherently secured to the threads of said foundation layer by a coating of a suitable water-soluble adhesive material and said vinyl plastic binder sheet and its water-soluble coating material further being capable of subsequent removal easily from the final manufactured felt product when the latter is readied for use with wet papermaking material, and an outer covering body of unwoven fibrous material superposed upon and co-extensive with said binder sheet layer, said fibrous covering body being integrally united with the threads of said foundation layer by having considerable fibers needled in a depthwise direction through both said binder sheet and said thread sheet layers and interlocked with the threads of the latter and also with the respective helical yarns carried by such threads, the outer face of said fibrous body serving as the active supporting surface of said felt for draining and transporting wet papermaking fibre material in a papermaking machine.

3,097,414
CRIMPABLE FIBERS OF REGENERATED CELLULOSE
Rudolph Woodell, Kinston, N.C., assignor, by mesne assignments, to Beaunit Corporation, a corporation of New York
Filed Oct. 30, 1958, Ser. No. 770,656
2 Claims. (Cl. 28—82)

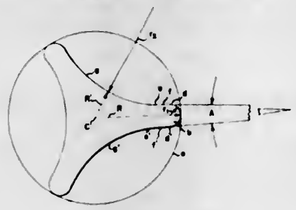


1. A regenerated cellulose fiber consisting essentially of a pair of substantially oval cross section components fused together along their entire lengths so that the long axes of said oval cross sections form a T when extended to the point of interception, each of said components having a smooth substantially uncrenulated contour, and comprising a core completely surrounded by a thick skin, one of said components having at least 20% more skin by cross sectional area than the other.

3,097,415
ACRYLONITRILE FIBER AND PROCESS FOR PREPARING SAME
Merton L. Davis, Camden, S.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 20, 1959, Ser. No. 794,511
2 Claims. (Cl. 28—82)

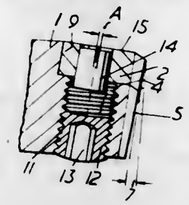
1. An improved textile fiber having a high resistance to penetration by liquid processing agents and a shrinkability in boiling water of at least 35%, said fiber formed of a solid organic synthetic polymeric composition comprising at least 75% polyacrylonitrile and up to 25% of ethylenically unsaturated monomers copolymerizable therewith, said solid composition having a void-free, highly consolidated, high density internal structure with a density of greater than 1.170 grams per cubic centimeter, a molecular orientation in the longitudinal direction corresponding to a drawn condition of from about 1.5 to about 2.5 times its original length, said composition exhibiting a detectable degree of negative birefringence, said fiber containing less than about 1.4% solvent.

3,097,416
TEXTILE FILAMENTS
Alfred H. McKinney, Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,342
10 Claims. (Cl. 28—82)



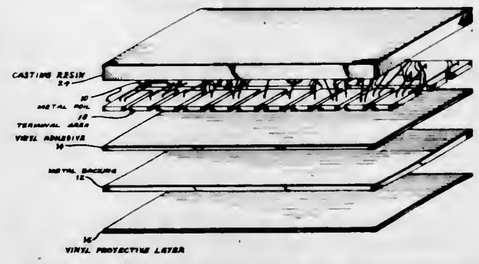
1. A textile filament of a synthetic polymer having an essentially uniform cross section along its length, said cross section consisting of three integrally joined, substantially symmetrical lobes, said cross section having a tip radius ratio and an arm angle within the range represented by the area LNVX on FIGURE 2 of the drawing, a straight side ratio within the range represented by the area SUZC on FIGURE 3 of the drawing, and a modification ratio within the range from about 1.9 to about 4.0.

3,097,417
TOOL HOLDER WITH REPLACEABLE TIP
Edward Hill, Sheffield, England, assignor to General Electric Company, a corporation of New York
Filed Oct. 15, 1958, Ser. No. 767,384
Claims priority, application Great Britain Oct. 25, 1957
3 Claims. (Cl. 29—96)



1. In a tool holder, an invertible and indexible flat carbide tip having parallel faces and a peripheral surface normal to said faces to provide cutting edges around said faces and a central hole normal to said faces, a shank having an open recess at one end to receive the tip, said open recess defined by a base and a rear surface normal to the base, the tip resting in the open recess of said shank with its parallel faces parallel to the base of the recess and its peripheral surface abutting the rear surface of the recess, a round hole through the shank normal to the base of the recess, a pin rotatably fitting the hole and provided with an eccentric cylindrical extension protruding into the recess to fit the hole in the tip, and means whereby the pin may be rotated to hold the tip in the recess solely by the frictional grip exerted between the eccentric extension of the pin and the central hole in the tip and between the peripheral surface of the tip and the abutting rear surface of the recess.

3,097,418
ELECTRICALLY CODED TERRAIN MODEL MAP
Edward G. Valliere, Elkins Park, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 20, 1958, Ser. No. 775,331
3 Claims. (Cl. 29—155.5)

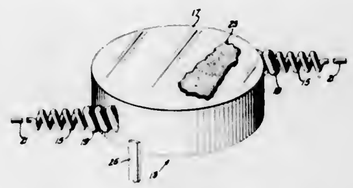


1. The method of fabricating an electrically coded contour map comprising the steps of bonding by means of vinyl adhesive a photo-sensitive metal foil to a thin backing, photo-etching a contour map into said metal foil, said contour map having elevation contour areas electrically connecting same elevation contour areas together, casting said electrical connections in a casting resin, and peeling said backing and said vinyl adhesive away from the contour map.

3,097,419
HEATER-CATHODE ASSEMBLIES

Herbert F. Dickson, Jr., Seneca Falls, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Mar. 11, 1960, Ser. No. 14,472
2 Claims. (Cl. 29—155.62)

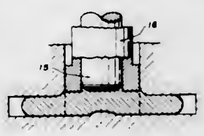


1. In a process of fabricating a heater-cathode pellet assembly of given diameter and thickness adapted for use in an electron discharge device, the steps comprising filling substantially equal volume reservoirs with a charge of cathode metal powder capable of retaining residual magnetism, magnetically transferring a charge of powder from a reservoir into a cylindrical ferromagnetic metal chamber provided in each half of a segmented pelletizing die, each chamber being closed at one end by a sliding ram to provide substantially equal volume chambers, positioning the heater across the open end of one of said chambers, mating the die halves with the parting line of the die halves in a vertical plane and with the heater held therebetween and with said chambers in alignment, the residual magnetism of said powder maintaining the powder form within the chambers applying substantially equal and opposite pressure at an equal rate to the sliding rams to compact the metal powder uniformly about the heater and into a form having substantially said given pellet thickness and diameter, parting at least slightly the die halves in opposite directions while said rams are maintained under pressure, releasing the pressure on said rams and ejecting said pellet assembly, and heating the pellet assembly to cause sintering of the compacted metal powder.

3,097,420
FORGING OF METAL ARTICLES

Alexander B. Graham, Glasgow, Scotland, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 1, 1958, Ser. No. 745,864
Claims priority, application Great Britain July 25, 1957
2 Claims. (Cl. 29—156.8)

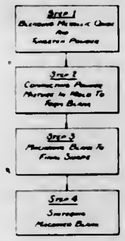


1. A process for the production of an improved disc-like blank which comprises subjecting the central portion of a metal billet to longitudinal deformation to form a central cavity therein and to induce radial flow of metal adjacent one end of the billet while longitudinally confining said billet and while externally, laterally confining the major portion of said billet adjacent the deforming tool and thereafter subjecting the longitudinal end portion of said billet to deformation to continue the radial flow of said metal adjacent the same end of the billet and provide a disc having substantially the same volume as said metal billet and a greater diameter than said metal billet while maintaining the original lateral external confinement of said billet and while internally confining said billet laterally by supporting the walls of said central cavity.

3,097,421
HIGH-FREQUENCY ENERGY ABSORBING MATERIAL

Leo J. Cronin, Watsonville, Calif., assignor to Semicon of California, Inc., Watsonville, Calif., a corporation of Kentucky

Filed Feb. 20, 1959, Ser. No. 794,759
3 Claims. (Cl. 29—182.5)

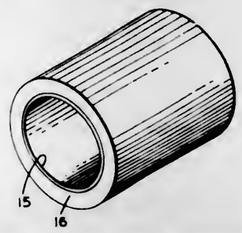


1. A lossy device for absorbing electromagnetic wave energy in the high frequency region consisting essentially of a 50–50 mixture by weight of tungsten powder and aluminum oxide powder, the mixture being compacted, shaped and sintered to form a solid body of high thermal conductivity.

3,097,422
SILVER LEAD ALLOY FOR CAVITATION EROSION RESISTANCE

Joseph F. Cerness, East Cleveland, and Betty M. Luce, Willowick, Ohio, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 25, 1960, Ser. No. 11,102
8 Claims. (Cl. 29—183.5)



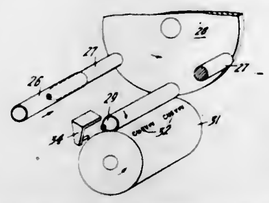
1. A bearing comprising a backing member of strong, heat conductive metal and superimposed thereon a relatively thin bearing layer of an alloy comprised of lead in an amount greater than about .15% and less than about .75% and the balance substantially all silver.

3,097,423
METHOD OF PRODUCING STRESSED JOINT PLASTIC CONTAINERS

Alexander George Makowski, Fayville, Mass., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 11, 1960, Ser. No. 61,954
8 Claims. (Cl. 29—407)

1. A method of producing containers comprising the steps of providing tubular container bodies of resilient plastic material open at both of the opposite ends thereof, prior to closing either of said ends of said bodies decorating the exterior surfaces of said bodies by applying a coating thereto, heat treating said open-ended decorated container bodies to dry said coating, and thereafter closing

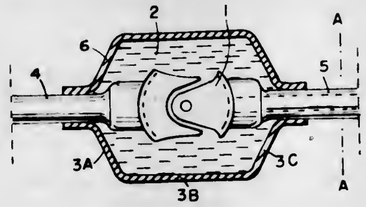


both of said opposite ends of said body by attaching stress-applying closure elements thereto.

3,097,424
PROCESS FOR PROTECTING AND LUBRICATING MECHANICAL ASSEMBLIES

Jean R. V. Martiny, 10 Rue Pavee, Rouen, Seine-Maritime, France

Filed Oct. 6, 1958, Ser. No. 765,630
Claims priority, application France Oct. 5, 1957
12 Claims. (Cl. 29—460)



1. A process for protecting and lubricating a joint of relatively movable parts which comprises the steps of wrapping said joint in a grease lubricant upon which ordinary coatings applied by ordinary procedures would not stick, and depositing on said grease lubricant wrapping and on the free ends of said joint, a synthetic rubber in the form of an aqueous dispersion containing curing agents and thickeners, at ambient temperature, in order to make an elastic sheath hermetically enclosing said joint.

3,097,425
METHOD OF SOLDERING COPPER CONNECTION STRIPS TO COOLING THERMOPILE ELECTRODES

Evgeny Andreevich Kolenko, ul. Academica Pavlova, 14, Apt. 26; Andrey Georgievich Tauber, ul. Mahovaja 26, Apt. 25; and Anatoly Grigorievich Czerbina, Saplorny per. 16, Apt. 53; all of Leningrad, U.S.S.R.

No Drawing. Filed Apr. 15, 1960, Ser. No. 23,879
1 Claim. (Cl. 29—492)

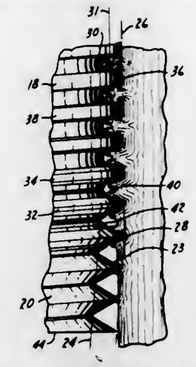
A method of soldering copper conductor strips to cooling thermopile electrodes comprising applying 0.2 to 0.3 mm. thick coating of an alloy of 99% bismuth and 1% tin to a thermopile electrode, then soldering a copper conductor onto the coating employing an alloy having a melting point which does not exceed 140° C.

3,097,426
TOOL FOR REDUCING THE DIAMETER OF A HOLE

Keith A. Hill, Rockton, Ill., assignor to Besly-Welles Corporation, South Beloit, Ill., a corporation of Illinois

Filed July 17, 1959, Ser. No. 827,942
13 Claims. (Cl. 29—567)

1. A tool for changing the size of a cylindrical surface on a metal workpiece including a threaded body section having a constant thread depth and predetermined root, pitch and crest diameters, and a threaded metal working tapered section adjacent and leading to the body section having predetermined gradually varying root, pitch and crest diameters, the threads on the body section being a uniform continuation of the threads on the tapered section, the cross sectional area, taken in an axial plane, of the root space between the pitch and root

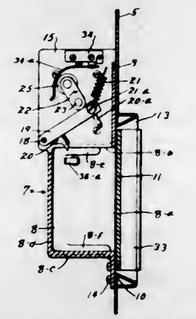


diameters and between adjacent threads of the body section being greater than the corresponding cross sectional area on the tapered section.

3,097,427
AUTOMATIC ELECTRIC CAN OPENER

Thomas H. Croteau, Hartford, and Walter A. Grouten, Avon, Conn., assignors, by mesne assignments, to The Seeburg Corporation, Chicago, Ill., a corporation of Delaware

Filed Jan. 22, 1962, Ser. No. 167,698
7 Claims. (Cl. 30—4)



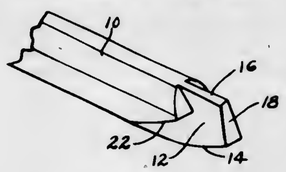
1. A can opening device including a base having a plate portion at the front thereof for mounting said device upon a supporting panel and an enclosure portion extending rearwardly from said plate portion, said enclosure portion forming a can receiving chamber with an entrance in said plate portion and having an opening in the top thereof communicating with said chamber, a mounting wall extending upwardly above the top of said enclosure portion adjacent said opening, can opening mechanism mounted on said wall including a detachable pivot pin, a carrier arm pivotally mounted on said pin on the side of said wall adjacent said opening, a can opening element on said carrier arm movable through said opening into said chamber for opening a can therein, an electric motor mounted on the opposite side of said wall from said carrier arm, means driven by said motor for moving said carrier arm to can opening position, and a spring anchored on said base and detachably connected to said carrier arm for biasing said arm out of can opening position.

3,097,428
PIPE CUTTER
Simon Lutsker, 3120 Belvoir Blvd., Shaker Heights, Ohio
Filed Sept. 7, 1961, Ser. No. 136,541
1 Claim. (Cl. 30—102)



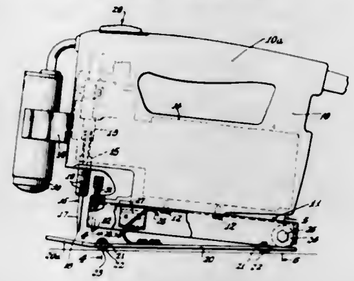
In a pipe cutter, a generally C-shaped frame having a roller carrying terminal end and an opposite end provided with a threaded bore having its axis disposed normally to the roller carrying terminal end, a screw threaded element mounted in threaded engagement with said bore and movable toward and away from said roller carrying end, a hub formed on said frame generally medially of the terminal ends, a pin extending through said hub, a pivoted arm having a bifurcated end mounted on said pin and straddling said hub, said arm extending into the opening between the terminal ends of the frame, said threaded element bearing against said arm for moving said arm toward and away from said roller, cutter means rotatably journalled on said arm at the free end thereof and movable therewith toward and away from said roller carrying end, a coiled torsion spring surrounding said hub, a recess in the frame adjacent said hub and receiving one end of said spring, a recess in said arm receiving the opposite end of said spring, said spring acting between said hub and said arm to bias said arm continuously into yielding contact with said threaded element whereby movement of said threaded element defines the spacing between said cutter and the roller carrying terminal end of the frame.

3,097,429
CHISEL WITH GUIDE MEANS
Ellsworth W. Frye, 112 Summer St., Abington, Mass., and Lloyd D. Tibbetts, Sr., 217 Plymouth St., Holbrook, Mass.
Filed Oct. 23, 1961, Ser. No. 146,985
2 Claims. (Cl. 30—168)



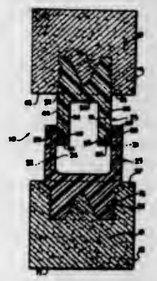
2. A chisel comprising a main body, a cutter extending from said body forwardly and having a cutting edge at its foremost part, and two bearing guides at opposite sides of said cutter member extending from said body forwardly and upwardly and terminating at a point intermediate the top and bottom of said cutter member and spaced rearwardly from said cutting edge, said cutting edge converging in width from the bottom thereof upwardly and extending from the bottom edge diagonally rearwardly and upwardly.

3,097,430
CUTTER
Julius Lewinski, New York, and Abraham Rashbaum, Whitestone, N.Y., assignors to Willcox & Gibbs Sewing Machine Company, New York, N.Y., a corporation of New York
Filed July 3, 1961, Ser. No. 121,700
5 Claims. (Cl. 30—273)



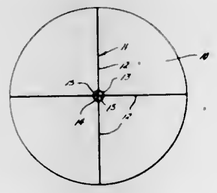
1. A power operated cutting device comprising a housing; a base secured to the housing; a reciprocating shaft and a cutter carried thereby mounted on the housing adjacent the forward end thereof for reciprocation in the direction of the base to a cutting position below said base; a contact plate adapted to be supported on the surface of a material to be cut and pivotally mounted on the base adjacent the rear end thereof; means normally urging the base away from the contact plate and to a raised position; means reciprocating said shaft when the base is moved toward said plate a predetermined distance and said cutter engages the material to cut the same; and means limiting the movement of the base toward said plate whereby the penetration of the cutter into the material is controlled.

3,097,431
DENTAL ARTICULATOR FOR BRIDGEWORK AND CROWNS
Jesse Harris, 94—05 Linden Blvd., Ozone Park, N.Y.
Filed June 11, 1962, Ser. No. 201,395
8 Claims. (Cl. 32—32)



1. A dental articulator, comprising mandibular and maxillary stones each composed of rigid, set material, at least one of said stones having a tapered passage extending therethrough from one side to the other thereof for removably receiving a model of an artificial tooth, a first articulator joint member secured in one end of one of the stones, a second articulator joint member secured in one end of the other of said stones, the first joint member having a pair of straight parallel arms extending upwardly from the one stone with spherically curved knobs extending toward each other in axial alignment on opposing inner sides of the arms respectively, the second joint member having another of straight parallel arms extending downwardly from the other stone, said other arms having first recesses on outer sides thereof rotatably receiving the respective knobs, said other arms having other recesses concentric with the first recesses and shallower than the first recesses to engage the knobs when the stones are turned and twisted with respect to each other to simulate anatomical bite movements.

3,097,432
RETICLE FOR VARIABLE POWER TELESCOPE SIGHTS
George R. Shaw, El Paso, Tex., assignor to William R. Weaver, El Paso, Tex.
Filed Oct. 24, 1960, Ser. No. 64,364
2 Claims. (Cl. 33—50)



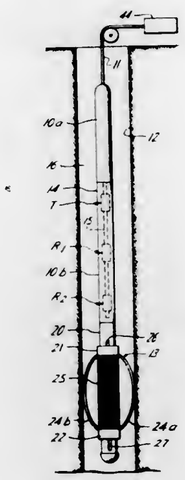
1. A reticle for variable power telescope sights, comprising, a transparent disk having a circular area defining substantially the full field of view of said sight, indicia carried on one surface of the disk, said indicia comprising a pair of main cross lines disposed to intersect at the center of said area and extending to the periphery of said area, the point of intersection of said main cross lines being enclosed by a line defining a circle having an area which is relatively minute with respect to the area of said disk, said circle having an inside diameter to subtend an angle of from about 8 to about 20 minutes, the portions of said cross lines lying within said circle having a natural line thickness of from about 25% to about 50% of that of the lines outside said circle.

3,097,433
BOREHOLE APPARATUS
Walter E. Cubberly, Jr., Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Sept. 30, 1960, Ser. No. 59,758
10 Claims. (Cl. 33—178)

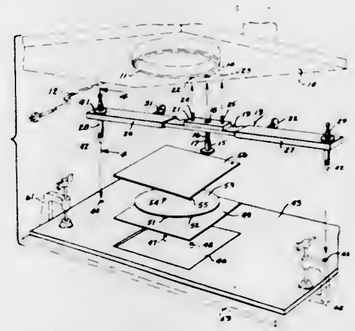
1. A well tool for use in a well bore including a housing, a pair of tubular collars on said housing wherein at least one of said collars is slidable on said housing permitting relative movement between said collars, bow springs pivotally connected to said collars, respectively, having a preformed curvature so that the central portions of said springs normally extend outwardly of said housing intermediate of a fully collapsed and a fully extended position for said central portions of said springs, said preformed curvature being symmetrical about a midpoint of each spring, the shape of one-half of each spring having a curvature defined by the formula

$$Y=\frac{Y_0}{2}\left[\left(\frac{X}{l}\right)^3-\frac{3X}{l}-2\right]$$

when considered from an origin at the midpoint of a spring wherein Y_0 equals the maximum deflection of the spring due to a given applied force, Y equals the deflection of a point on the spring due to the given applied force, X equals the distance from the origin along the spring to the aforesaid point at a deflection Y, and l equals one-half the overall length of the spring, and a coiled spring coupled in tension between said collars for extending said bow springs to a fully extended position when unconstrained by a bore wall.

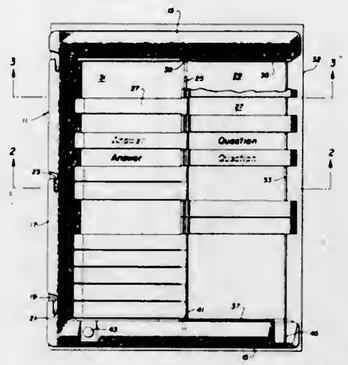


3,097,434
SETTING TOOL FOR HEAT SEALING DIE MACHINES
Harry L. Diamond, Hotel Newburgh, Newburgh, N.Y.
Filed Nov. 7, 1961, Ser. No. 150,794
4 Claims. (Cl. 33—181)



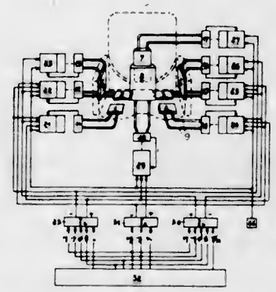
1. A die setting tool adapted to be connected to a die supporting plate of a die press comprising an elongated flat horizontal main member and other members mounted upon and adjustably positionable along the main member, a centering device extending vertically through each adjustable member and a striking point secured to the bottom end of each centering device and adapted to effect a marking upon a work tray when said centering device is struck on the upper end thereof, and means on the main member for detachably fixing and centering the setting tool upon the die supporting plate.

3,097,435
SELF TESTING DEVICE
Hans Goldschmidt, 1 Flood Circle, Atherton, Calif.
Filed Oct. 10, 1961, Ser. No. 144,225
12 Claims. (Cl. 35—8)



1. A self testing device for use with an underlay of question and answer paper, comprising a generally U-shaped frame having an upper and a lower arm joined together by a third arm fixed to one end of each of the upper and lower arms, a pivot rod connected between said upper and lower arms and extending substantially parallel to but spaced from the third arm whereby a series of questions on the underlay may be disposed on one side of the pivot rod and the associated answers on the other, and a plurality of flippers pivotally engaged on the rod whereby preselected ones or all of said answers may be hidden from view or disclosed at will.

3,097,436
METHOD AND MEANS FOR THE SIMULATION OF THE ACTION OF MECHANICAL PARAMETERS ON A BODY
Louis Gaucher, 326 Rue Lecourbe, Paris 15, France
Filed Jan. 18, 1961, Ser. No. 83,417
Claims priority, application France Jan. 22, 1960
3 Claims. (Cl. 35—12)



1. In a flight training stimulator equipment, a device for simulating the effect of acceleration on the body of a person comprising the combination of a plurality of inflatable pouches arranged on parts of the seat, sides, and back of the pilot's seat and on the safety belt of said pilot, said pouches being filled with a fluid under pressure, an analog computer deriving analog voltages representing the components of acceleration according to directions of attitude of the simulated craft, and a corresponding plurality of servo-mechanisms controlled from combinations of analog voltages issuing from said analog computer and controlling the respective fluid pressures within said pouches.

3,097,437
GOLF TEACHING DEVICE
William H. Harrison, 6363 Santa Monica Blvd., Los Angeles 38, Calif.
Filed Nov. 16, 1961, Ser. No. 152,756
8 Claims. (Cl. 35—29)



8. A device of the type used by a person in the self-teaching of manual skills involving coordinated body movements, comprising: a lower, image mirror having forward and rearward ends and positioned adjacent and generally parallel to the ground so that it is within the field of vision of a person located forwardly thereof who is performing the movements; an intermediate, first reflecting mirror positioned rearwardly of said image mirror and inclined upwardly and rearwardly relative thereto and with its reflecting surface facing the person; and an upper, second reflecting mirror positioned forwardly of the upper end of said first reflecting mirror and arranged with its reflecting surface facing the reflecting surfaces of both said first reflecting and image mirrors, its image of the person being successively reflected by said first reflecting, second reflecting and image mirrors, so that it may be seen by him in said mirror while performing the movement.

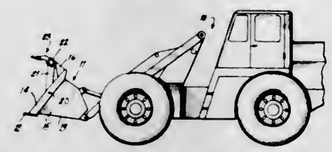
3,097,438
ACCESSORY FOR A SHOE
Anthony J. Evans, Box 14, Wendell Depot, Mass.
Filed Apr. 9, 1962, Ser. No. 186,033
7 Claims. (Cl. 36—1)



1. An attachment for a shoe, said attachment comprising a flat gauging part, said gauging part having a portion thereof conforming to the shape of the sole of the shoe including the heel and the shank, said gauging part being adapted to be cemented in position with respect to the shoe, and a movable, flexible accessory secured to said gauging part adjacent the shank area only thereof, said accessory extending to the rear and being otherwise free of the gauge part, the accessory normally extending above the shoe counter and upon which the foot is adapted to be set in entering the shoe, the foot causing said accessory to slide down and conform to the shape of the counter, assisting the foot in entering the shoe, said gauging part including an arcuate rear edge that conforms to and fits the corresponding portion of the heel of the shoe to correctly locate the accessory with respect to the counter portion of the shoe.

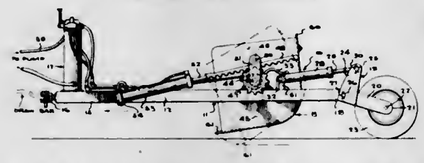
3,097,439
SCARIFIER ATTACHMENT
Fenton Calkin, 62 W. Cedar Place, Ramsey, N.J.
Filed Jan. 12, 1962, Ser. No. 165,783
4 Claims. (Cl. 37—117.5)

1. In an earth working machine, in combination, a front end loader bucket provided at its bottom end with a scraper blade projecting forwardly and outwardly therefrom, and provided at its upper end with a rigid transverse member arranged in substantial parallelism with said scraper blade and projecting forwardly and outwardly from said bucket, and said bucket having rigid side members between the ends of said blade and transverse member, a pair of arms pivotally connected to said side members for pivotal movement about a transverse axis located approximately midway between said blade and transverse member and disposed in substantial parallelism with the latter, a rigid transverse beam mounted on the outer ends of said arms and having oppositely



directed surface portions disposed in opposed relation to the outer edges of said blade and transverse member, said surface portions and said outer edges being substantially located in a curved plane whose radii center at said transverse axis so that said surface portions are alternately engageable with said outer edges at the ends of the range of movement of said rigid beam and said pivoted arms, means for removably securing said rigid beam to said blade and to said transverse member, and a plurality of scarifier teeth secured to said transverse beam.

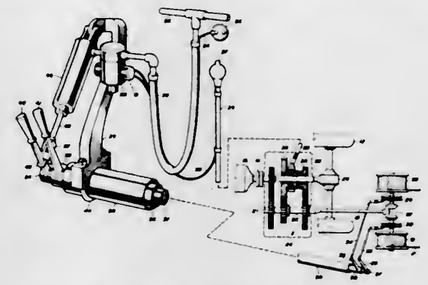
3,097,440
HYDRAULICALLY OPERATED LAND CONTOURING MACHINE
Oltmann George Schmidt, P.O. Box 576, Moorhead, Minn.
Filed June 9, 1960, Ser. No. 34,938
2 Claims. (Cl. 37—129)



1. In a land contouring machine, the combination of a frame having a swivel connector means at one end thereof and positioned in the longitudinal medial axis of the frame to establish a draft engagement with a tractor or the like and permitting horizontal pivotal movement of said frame, a hingedly connected ground engaging wheel mounted at respective sides of said frame at the end opposite said swivel connector means providing pivotal movement of said frame, said means including cylinders for stabilizing the hingedly connected ground engaging wheels, opposed aligned bearing means mounted on said frame, a scraper bucket positioned within said frame and having an axle member journalled in each bearing member, a gear fixed to each axle, a rack bar in meshed engagement with each gear, a hydraulic unit operatively connected to each rack bar and a control means connected to said hydraulic units for actuating said rack bars.

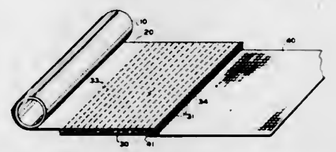
3,097,441
EARTH MOVER LOAD APPLIED TO FACILITATE GEAR SHIFTING
Frederick G. J. Grisé, New Braintree, Mass., assignor, by direct and mesne assignments, of fifty percent to Lionel Grise, Jr., trustee, West Brookfield, Mass., and fifty percent to Norman S. Blodgett, Westboro, Mass.
Filed Dec. 27, 1960, Ser. No. 78,537
4 Claims. (Cl. 37—129)

4. Control apparatus for an earth moving machine having an engine adapted to be connected through a clutch and a transmission, having a gear shift lever and including a lower gear and a higher gear, to propelling wheels and to an earth-handling mechanism, the machine having a second clutch for selectively connecting or disconnecting the mechanism to the engine side of the transmission, comprising an actuator adapted to be connected to the said second clutch for rendering it selectively operative or inoperative to connect the mechanism to



the engine side of the transmission, a source of pressure fluid connected to the actuator for the actuation thereof, a solenoid valve interposed between the source and the actuator, and a switch mountable on the gear shift lever controllable by the operator to control the flow of the said pressure fluid from the source to the actuator during shifting of the transmission into neutral from the lower gear before shifting to the higher gear.

3,097,442
PAD ASSEMBLY
John D. Willingham, Jr., 220 W. Paces Ferry Road NW., Atlanta, Ga.
7 Claims. (Cl. 38—66)

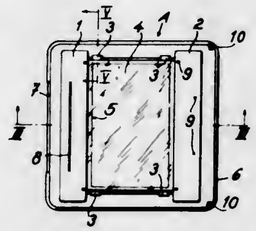


1. In a flatwork ironer of the class wherein a roll is mounted in spaced relationship to a steam chest and a securing plate is mounted axially on the periphery of said roll, said plate being provided with securing means engaging a pad assembly covering the periphery of said roll, and a rod passes through said securing means, the combination with said pad assembly of a lead cloth formed of open mesh locked weave fabric, the securing means of said securing plate projecting between adjacent yarns of said fabric, the end portion of said lead cloth being looped around said rod.

3,097,443
CHANGEABLE FRAMES FOR DIAPOSITIVES
Oskar Maria Kellner, Neussesser Strasse 25, Augsburg, Germany
Filed Feb. 25, 1960, Ser. No. 11,070
3 Claims. (Cl. 40—152)

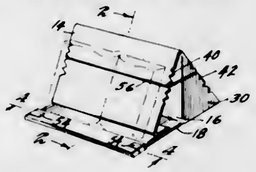
1. A slide frame comprising a pair of coextensive and hingedly interconnected frame members with aligned openings and with mating edge portions defining a peripherally closed casing in an engaged position of said members; a pair of substantially coextensive transparent plates within said casing respectively spanning said openings; a first set of retaining elements on one of said members overlying opposite marginal zones of one of said plates

for holding it in place and so disposed as to come to rest against the other of said plates in the engaged position of said members; and a second set of retaining elements offset from said first retaining elements on the other of said members overlying opposite marginal zones of said



other of said plates for holding it in place and so disposed as to come to rest against said one of said plates in said engaged position whereby said plates are held spaced apart with an intervening clearance accommodating a transparency between said plates.

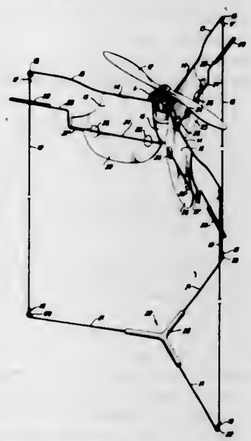
3,097,444
BOOK HOLDER
Charles Steiner, Long Island City, N.Y.
(25 Sutton Place S., New York 22, N.Y.)
Filed Jan. 19, 1962, Ser. No. 167,321
2 Claims. (Cl. 45—57)



1. A foldable book holder comprising a rectangular sheet provided with first, second, third, fourth, and fifth joined rectangular sections which are foldable along first, second, third and fourth separate parallel lines of fold which define said five joined sections, said lines being parallel to two parallel edges of said sheet and perpendicular to the other two parallel edges of said sheet, the two edges of said second section which are perpendicular to said lines being serrated, first and second rectangular sheet members, each member being secured to a corresponding one of the two edges of said fourth section which are perpendicular to said lines, first and second right triangle sheet elements, one of said elements having one leg secured to one side of said first member and the other leg secured to one edge of said third section which is perpendicular to said lines in such manner that the hypotenuse of said one element extends between said one side of said first member and said second line, the other of said elements having one leg secured to one side of said second member and the other leg secured to the other edge of said third section which is perpendicular to said lines in such manner that the hypotenuse of said other element extends between said one side of said second member and said second line.

3,097,445
THRUST-SUPPORTED AND THRUST-CONTROLLED DEVICE
Charles A. Lindley, Los Angeles, Calif.
(4741 Natoma Ave., Woodland Hills, Calif.)
Filed Dec. 7, 1959, Ser. No. 857,633
14 Claims. (Cl. 46—77)

14. A thrust-supported and thrust-controlled device comprising: a thrust-supportable object provided with thrust-producing engine means for solely supporting the object; airfoil means projecting outwardly with respect to an axis of and from the object; a handle spaced from the object; and a plurality of flexible means connected be-



tween the handle and the airfoil means in a direction substantially parallel to said axis to apply position-correcting tension and torque to the object corresponding to and in response to relative movement of the handle with respect to the object.

3,097,446
TOY FIGURE
Marvin Packer, 416 Village Lane, Broomall, Pa.
Original application Jan. 28, 1959, Ser. No. 789,666, now Patent No. 3,061,572, dated Oct. 30, 1962. Divided and this application Feb. 9, 1960, Ser. No. 7,560
1 Claim. (Cl. 46—123)

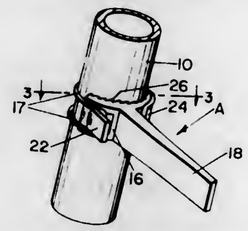


A toy figure having the property of animated motion, and composed of a homogeneous mixture of polyvinyl acetate resin having a softening point between 89.6 and 187° F., a compatible plasticizer and an incompatible plasticizer, the proportions of plasticizer being from 15 to 40 parts of compatible plasticizer per hundred parts by weight of total resin and from 7 to 25 parts of incompatible plasticizer per 100 parts by weight of total resin, the figure after deformation snapping back to a different shape than before deformation and visibly moving parts of its body in so doing, a compatible plasticizer being one which does not produce bloom and an incompatible plasticizer being one which does produce bloom.

3,097,447
BICYCLE NOISE MAKER
Engelbert J. Peham and John A. Peham, St. Paul, Minn.
Filed Dec. 14, 1959, Ser. No. 859,500
2 Claims. (Cl. 46—175)

1. A noisemaker for vehicles having a frame and spoked wheels comprising a generally T shaped resilient member having a base and an integral finger projecting substantially perpendicularly from one surface of said

base at a locus intermediate the ends thereof and a serrated surface on the opposite surface of said base, attaching means on said one surface of said base on opposite sides of said finger, a connecting element en-



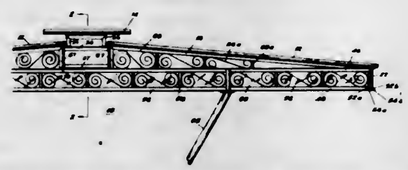
gageable with said attaching means designed to encircle portions of the frame adjacent the spoked wheel and to anchor said T shaped member to the frame with said finger extending into the pathway of the spokes of one of the wheels.

3,097,448
MAGNETIC TOY
Franklin C. Prunkard, 5707 Chain Bridge Road, McLean, Va.
Filed May 26, 1961, Ser. No. 113,014
2 Claims. (Cl. 46—241)



1. A magnetic toy comprising a ferrous bar having a round peripheral surface, a relatively thin magnetic disc of reduced diameter with its peripheral edge surface adapted to be placed at the upper end of the bar so that the resultant of the magnetic and gravity forces will cause said disc to travel around the axis of said bar in a spiral pathway, said disc being provided with a central opening, a toy object, and a spindle received in the opening of said disc connecting said toy object with said disc.

3,097,449
VENTILATED, ORNAMENTAL SHELTER
William B. Kellett, 3715 E. 4th St., Tucson, Ariz.
Filed Dec. 1, 1959, Ser. No. 856,530
1 Claim. (Cl. 50—115)



In a ventilated structure having first and second primary corrugated roof sections and a secondary corrugated roof section superjacent said primary roof sections, an improved frame for supporting said roof sections in such a manner that air currents will be induced to flow from the interior of said structure to the exterior thereof comprising:

a pair of substantially open end gables;

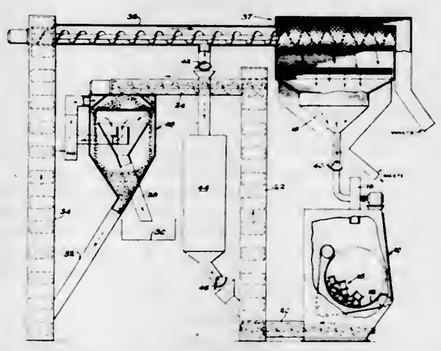
an open-ended ridge girder having an end connected to each gable, said girder including first and second upper rails and first and second lower rails, a first set of horizontal members connecting said upper rails together in spaced relation, a second set of horizontal members connecting said lower rails together in spaced relation, a first set of vertical members connecting said first upper and lower rails together in spaced relation and a second set of vertical members connecting said second upper and lower rails together in spaced relation;

first and second pluralities of V-shaped rafters having one end connected to said first and second upper rails, respectively, said rafters being spaced along said upper rails between said gables for supporting said first and second primary roof sections, respectively, in such a manner that air currents are free to flow from the interior of said structure to the exterior thereof through said girder;

means supporting the other ends of said V-shaped rafters; and

framing means attached to the upper side of said girder for supporting said secondary roof section in spaced relation above said primary roof sections.

3,097,450
ROUGH CLEANING AND FINISH CLEANING MACHINE AND METHOD
Ardee H. Freeman, Granger, and Frederick J. Pichard, South Bend, Ind., assignors to Bell Intercontinental Corporation, South Bend, Ind.
Filed May 11, 1962, Ser. No. 193,924
6 Claims. (Cl. 51—13)



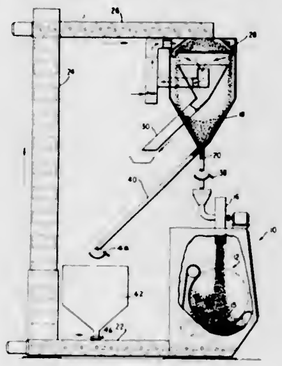
2. A machine for sequentially rough cleaning and knocking out hard-to-dislodge debris from workpieces and then finish-cleaning the same, said machine comprising, a workpiece receiving device adapted to turn the workpiece, a blast device arranged to throw blast media at the workpiece as it is turned, a feed device for delivering blast media to said blast device, a first separator receiving debris and spent media falling away from said workpiece, said separator having a debris discharge and a preferred material discharge separate therefrom, said preferred material discharge normally delivering to a second separator, a bypass conveying overload material from said second separator intake to a temporary storage bin, a first valve controlling passage through said bypass, a second valve controlling discharge from said storage bin to said first separator, whereby said machine is sequentially controllable so as to initially block passage of material from said storage into said separator system while cir-

culating material falling away from said workpiece through said separators and subsequently recycling the stored material and the reusable blast media through said separators and said blast device against said workpiece.

3,097,451
BLAST MACHINE SYSTEM AND METHOD

Ardee H. Freeman, Granger, and Frederick J. Pichard, South Bend, Ind., assignors to Bell Intercontinental Corporation, South Bend, Ind.

Filed May 11, 1962, Ser. No. 194,019
6 Claims. (Cl. 51—13)



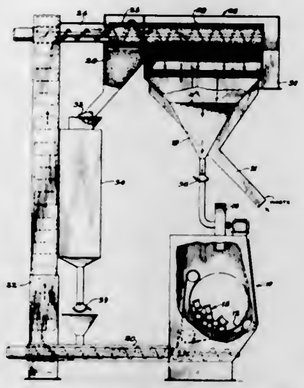
1. A unit machine system for blast-cleaning workpieces, said machine system including a workpiece receiving device adapted to turn the workpiece, a blast machine arranged to bombard the workpiece as it is turned, a feed hopper delivering blast media to said blast machine, a separator receiving contaminated blast media residual to the blasting operation, said separator having a debris discharge and a reusable blast media discharge separate therefrom, said reusable blast media discharge delivering to said feed hopper, a by-pass conveyor returning from said feed hopper to an intermediate storage hopper arranged to discharge to said separator intake, a first valve controlling passage through said by-pass conveyor, a second valve controlling passage from said storage hopper to said separator, a third valve controlling passage to said blast machine, said valves being selectively actuatable so as to either block passage of blast media through said blast machine while causing circulation of all material in the system through said separator, or to cause recycling of the reusable blast media through said feeder hopper and said blast machine against said workpieces.

3,097,452
CASTING CORE KNOCK-OUT AND CLEANING MACHINE AND METHOD

Ardee H. Freeman, Granger, and Frederick J. Pichard, South Bend, Ind., assignors to Bell Intercontinental Corporation, South Bend, Ind.

Filed May 11, 1962, Ser. No. 194,116
5 Claims. (Cl. 51—13)

2. A machine system for sequentially knocking out cores and heavy surface debris from castings and then finish-cleaning the same, said machine comprising a casting receiving device adapted to turn the casting, a centrifugal blast machine arranged to bombard the casting as it is turned, a feed device delivering blast media to said blast machine, a separator receiving debris and spent blast media falling away from said casting, said separator having a debris discharge and a reusable blast media discharge separate therefrom, said reusable blast media discharge delivering to said feed device, a by-pass conduit conveying overload material from said separator to a temporary storage bin, a first valve controlling passage through said by-pass conduit, a second valve controlling discharge from said bin for recycling to said separator, said valves being operable so as to initially divert passage of overload debris from said separator to said bin while

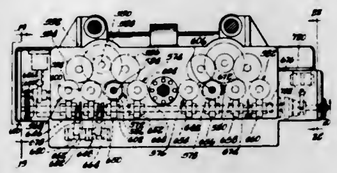


permitting circulation of material falling away from said casting through said separator, and for subsequently recycling the overload debris and reusable blast media from said bin through said separator and said blast device against said casting.

3,097,453
HONING APPARATUS

Floyd A. Swanson, Rockford, Ill., assignor, by mesne assignments, to National Automatic Tool Company, Inc., Richmond, Ind., a corporation of Indiana

Original application June 6, 1958, Ser. No. 740,445, now Patent No. 3,025,642, dated Mar. 20, 1962. Divided and this application Mar. 16, 1962, Ser. No. 185,183
3 Claims. (Cl. 51—34)

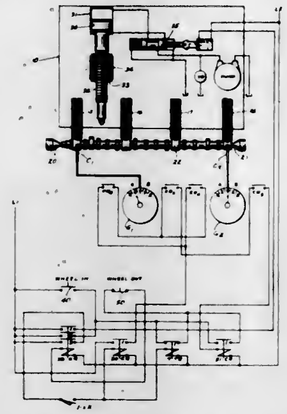


1. In an apparatus for machining a workpiece with a plurality of tool means adapted to be fed into engagement with and retracted from the workpiece, the combination comprising a plurality of bodily shiftable motor means respectively for shifting a plurality of the tool means from retracted positions to initial advance positions, a plurality of gear means respectively drivingly associated with said plurality of motor means for bodily shifting the motor means for feeding the tool means from said advanced positions, shaft means extending adjacent all of said gear means, a plurality of members freely disposed on said shaft means and respectively meshing with said plurality of gear means, a plurality of clutch means respectively associated with said members for selectively providing a driving connection between said shaft means and said members, and means for driving said shaft means for rotating any of said members thereon and drivingly connected thereto by their associated clutch means for bodily shifting the motor means associated with such driven members for feeding the tool means.

3,097,454
SIZE CONTROL FOR MULTIPLE WHEEL GRINDING MACHINES

Leslie V. Phell, Wallisellen, Zurich, Switzerland, assignor to Landis Tool Company, Waynesboro, Pa.

Filed Dec. 16, 1960, Ser. No. 76,391
5 Claims. (Cl. 51—165)

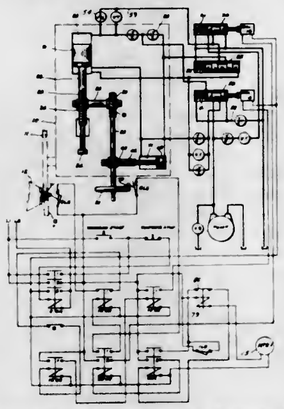


1. In a multiple wheel grinding machine for grinding axially spaced portions of a workpiece, a work support for supporting said workpiece, a grinding wheel support, two or more grinding wheels rotatably mounted on said grinding wheel support, feeding means for effecting a relative transverse feeding movement between said supports to perform a grinding operation, control means for said feeding means, means for maintaining size between the high and low limits of tolerance on two axially spaced portions of said workpiece comprising a sizing device for each of said two axially spaced portions, each sizing device having a high limit contact and a low limit contact, means operable by said sizing devices to reverse said feeding means when both of said two axially spaced portions have been ground to diameters between said high and said low limits.

3,097,455
WHEEL APPROACH CONTROL WITH FEED SAFETY DEVICE

William P. Flohr, Jr., Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.

Filed Dec. 27, 1960, Ser. No. 78,598
8 Claims. (Cl. 51—165)

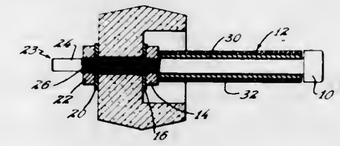


1. In a grinding machine, a work support and a wheel support, means for rotatably supporting a grinding wheel on said wheel support, means for rotatably supporting a workpiece on said work support, feeding means for feeding said grinding wheel toward and from said work support, feed rate reducing means operable when said grinding wheel engages a workpiece, means co-acting with said feed rate reducing means and actuated by said feeding means for reversing said feeding means and retracting said grinding wheel if there is no workpiece in position to be engaged by said grinding wheel.

3,097,456
PORTABLE SICKLE AND TOOL GRINDING DEVICES

Raymond G. Retterath, Stanton, N. Dak.

Filed Apr. 24, 1961, Ser. No. 105,149
1 Claim. (Cl. 51—173)

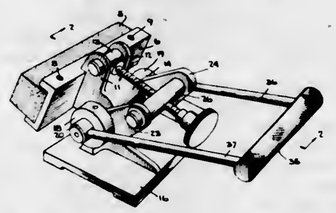


A portable sickle and tool grinding and sharpening apparatus having a one piece spindle having a portion of reduced diameter at one end adapted to be connected to a turning means, said spindle including a threaded section adjoining said reduced diameter portion, a grinding wheel encircling said threaded section, threaded securing means on opposite sides of said grinding wheel on said threaded section of said spindle, washers having portions in face contact with said grinding wheel interposed between said grinding wheel and said threaded securing means, said spindle including a cylindrical bearing section adjoining said threaded section, an enlarged head at the other end of said spindle and at the end of said cylindrical bearing section, a hollow cylindrical bearing sleeve handle means encircling said cylindrical bearing section between said enlarged head and one of said threaded securing means, and a substantially cylindrical sleeve of insulating material encircling said handle means between said enlarged head and said one threaded securing means and secured to said handle means for rotation therewith, said threaded securing means being of greater periphery than said cylindrical sleeve and said enlarged head, said enlarged head being beyond the end of said handle means whereby said enlarged head may be grasped to hold the spindle from rotation.

3,097,457
SHARPENER

Jay William Seligman, Brooklyn, N.Y., assignor to Lillian Freyer, Great Neck, N.Y.

Filed Nov. 17, 1961, Ser. No. 152,994
1 Claim. (Cl. 51—246)



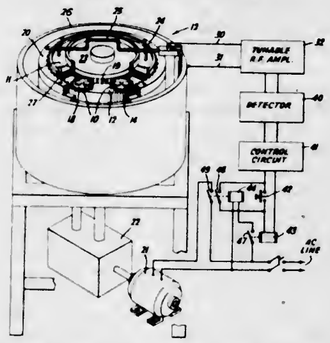
A honer for honing an edge on a blade, said honer comprising: a base; support means on said base; a non-rotating shaft supported by said support means; an adjust-

ment pin rotatably supported by said support means and having an axis substantially parallel to the axis of said shaft and having in addition a threaded hole extending through said pin perpendicular to the axis thereof; a bearing rotatably mounted on said shaft; clamping means attached to said bearing; an abrasive stone held in said clamping means and extending parallel to said axis of said shaft; a handle; means for connecting said handle to said shaft whereby said shaft is between said abrasive stone and said handle; an anchor pin rotatably attached to said bearing; a threaded shaft threaded to said threaded hole in said adjustment pin; means on said threaded shaft engaging said anchor pin to cause said anchor pin to move with said threaded shaft; and a knob fixedly attached to said threaded shaft and located between said adjustment pin and said handle whereby rotation of said knob moves said threaded shaft along its own axis and rotates said bearing together with said abrasive stone about said first-mentioned shaft.

3,097,458
METHOD OF ACCURATELY MACHINING SEMICONDUCTOR BODIES

Wallace E. Richmond, Hillsboro, N.H., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed May 13, 1960, Ser. No. 28,924
5 Claims. (Cl. 51—281)



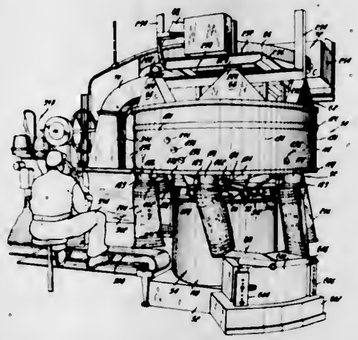
1. The method of determining the magnitude of a dimension of a body of semiconductor material undergoing a machining operation which comprises the steps of subjecting a body of semiconductor material and a body of piezoelectric material having a correspondingly oriented dimension the magnitude of which determines its resonant frequency to a machining operation simultaneously reducing the corresponding dimension of each of said bodies at the same rate, and measuring during the machining operation the frequency of the piezoelectric currents produced in said body of piezoelectric material by the stresses caused by the machining operation.

3,097,459
BAG FILLING MACHINE

Clarence W. Rausch, Marysville, Ohio, assignor to The O. M. Scott & Sons Company, Marysville, Ohio, a corporation of Ohio

Filed Feb. 1, 1960, Ser. No. 5,918
28 Claims. (Cl. 53—59)

1. An automatic bag filling machine comprising: a rotatable device arranged with its axis of rotation vertical; a support structure disposed adjacent said rotatable device; means connected to said rotatable device for rotatably driving said rotatable device; means rotatably supporting said rotatable device on said support structure; said rotatable device comprising a drum structure having an annular group of vertical hopper devices coaxially arranged around its vertical axis, each hopper device having an upper material receiving opening and a bottom discharge nozzle, and means on each of said discharge nozzles enabling holding of the open end of a bag to be filled over the end of said associated discharge nozzle and providing a continuous peripherally sealed passage connection between the upper end of a retained bag and the associated said discharge nozzle; an air-tight hood device nonrotatably secured to said support structure above and providing a commutated sealed cooperation with the material receiving openings of said hopper devices to prevent escape of dust and to enable particles of material being placed in the bags to settle back in the bag; a material dispensing

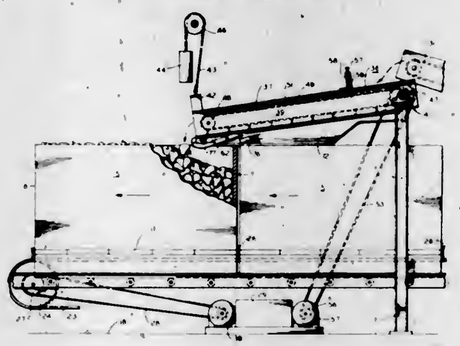


device secured above the path of rotation of said hopper devices and above said hood device for measuring and dumping a desired quantity of material through said hood device and into and through a hopper of said rotatable device and thence into a conditioned bag on the associated said hopper; operating means in operative connection with said dispensing device; control means responsive to a predetermined rotational position of said rotatable device for actuating said operating means at a specific rotational position of said rotatable device whereby a hopper and bag held thereon will be in a position to receive the dispensed quantity of material; and means, having an operative control connection with said means for holding the bags, for automatically releasing a filled bag from said rotatable device.

3,097,460
BULK BIN FILLER

Michael O'Brien, Davis, Calif., assignor to The Regents of the University of California, Berkeley, Calif.

Filed Feb. 6, 1961, Ser. No. 87,463
12 Claims. (Cl. 53—64)

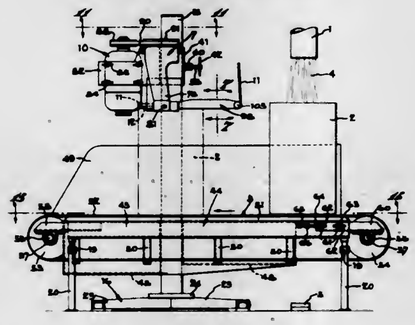


1. A bulk bin filler comprising a frame, a bin support on said frame, means for advancing a bin on said support, a fruit conveyor, means for mounting said fruit conveyor on said frame to swing into and out of said bin, means actuated by fruit in said bin for operating said bin advancing means, and means operated by advancement of said bin on said support for swinging said fruit conveyor out of said bin.

3,097,461
BAG CLOSING MACHINE

Arthur C. Avril, Wyoming, Ohio, assignor to A & T Development Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed Aug. 21, 1961, Ser. No. 132,879
5 Claims. (Cl. 53—137)



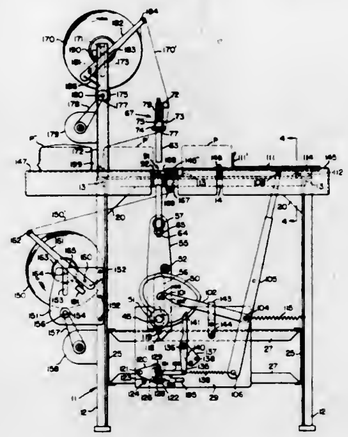
1. A bag closing machine comprising, a base, a vertical column rising from said base, a vertical rack mounted on said column, a conveyor structure slidably connected to said column, self-locking conveyor adjustment means on said conveyor structure including a pinion meshing with said rack, a chute mounted above said conveyor and adapted to discharge material into the open end of a bag resting upon the conveyor, a bag stitching head mounted upon said column above the conveyor, said stitching head adapted to fold a strip of tape over the open upper portion of the filled bag and to apply a line of stitching through said tape and through the upper portion of the filled bag advancing on the conveyor, said conveyor adjustment means adapted to raise or lower the conveyor relative to said discharge chute, thereby to compensate for the size of a bag resting on the conveyor, said stitching head including trimming means for severing the strip of tape from the trailing edge of the bag in response to the advancement thereof relative to the stitching head and after application of said line of stitching.

3,097,462
PACKAGING MACHINE

Samuel W. Langdon, Rochester, N.Y., assignor to Reginald R. Kiefer, Fairport, N.Y.

Filed Feb. 6, 1961, Ser. No. 87,284
19 Claims. (Cl. 53—180)

2. A machine for wrapping packages having a surface over which a package is moved in a predetermined path for a predetermined distance, a support for a supply of wrapping material, means for positioning wrapping material from said support in a plane transverse to and intermediate the ends of said path, means for moving a package along said path to a position of rest at one end of said path, whereby a portion of the wrapping material is engaged by the front end of the moving package, guide means operative during the movement of said package to guide further portions of said material about, respectively, the upper and lower faces of said package, means operative when said package is in said rest position to tilt said package relative to the plane of said path so that the material beneath said package is guided upwardly behind the rear end of said package, means movable subsequent to the movement of said package to said rest position to operate the last-named means and to seal

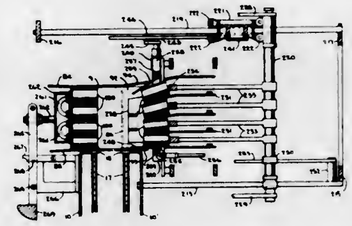


together the wrapping material over the rear face of said package, and control means operative during the sealing of said wrapping material to interrupt the operation of said package moving means.

3,097,463
PACKAGING MACHINE

James L. Neal and Morris P. Neal, Clearwater, and Sylvan V. Dice, Tarpon Springs, Fla., assignors to A-B-C Packaging Machine Corporation, Clearwater, Fla., a corporation of Florida

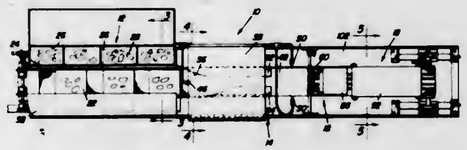
Original application Oct. 9, 1959, Ser. No. 845,442. Divided and this application Aug. 29, 1960, Ser. No. 52,509
24 Claims. (Cl. 53—186)



1. In a machine of the type described for removing flat, collapsed cartons from a pile, setting them up and filling them with containers at a loading station, the combination of means for providing flat, collapsed cartons in a pile so that the weight of the pile is on the lowermost carton, a first member engageable with the lowermost carton, means to move said first member substantially parallel to the flat surfaces of said carton to slidably remove said carton from under said pile and means to at the same time restrain the pile from like movement, roller means to cause the underside of said lowermost carton to undergo rolling friction rather than sliding friction while removing said lowermost carton from under said pile, at least one additional and separate member engageable with said lowermost carton at nearly the same time it is engaged by said first member, to move said carton for a short dis-

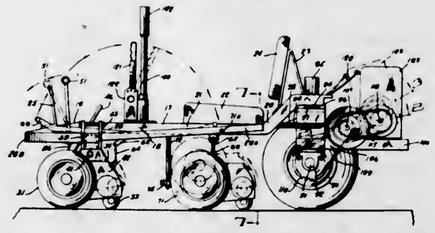
tance in a direction at least nearly parallel to the direction of travel of said carton to aid in separating said carton from said pile and a plurality of lifting members to engage the side of said pile to at least partially lift a portion of the weight of said pile from said lowermost carton while said lowermost carton is slidably removed from under said pile.

3,097,464
GIBLET WRAPPING MACHINE
Willard D. Reeves, Center, Tex., assignor of one-half to St. Elmo Cross and one-half to S. C. Cross, both of Center, Tex.
Filed Feb. 7, 1961, Ser. No. 87,603
7 Claims. (Cl. 53—209)



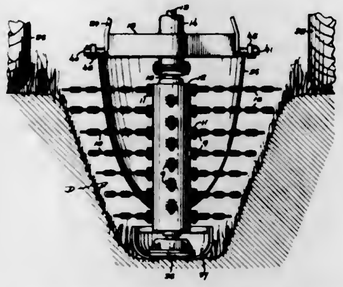
5. A wrapping machine comprising a conveyor belt for carrying a plurality of spaced sheets of wrapping material, means adjacent the conveyor belt for folding the edges of the sheets inwardly into overlying relation, and means overlying the conveyor belt for engaging the end of the folded sheets and causing the end to move in a spiral manner for spirally rolling the folded sheet, said end spiralling means including a plurality of curved fingers, said fingers having a concave edge surface facing the folded sheet, said conveyor belt having recesses in the upper surface thereof receiving the fingers whereby the folded sheet may ride up onto the concave surface for starting a spiral, means oscillating the fingers in synchronization with the spacing of the sheets on the conveyor belt thereby elevating the fingers to an inoperative position after the spiralling of the folded sheet has begun, a flexible plate attached to the fingers, a roughened undersurface on said plate, said flexible plate engaging the partially rolled sheet and tending to hold the top portion of the partially rolled sheet while the conveyor belt moves the lower portion thereby completing the spiralling of the sheet.

3,097,465
RIDING LAWN MOWER
Chester Williams, 5651 Carpenter Road, Ypsilanti, Mich.
Filed Feb. 16, 1961, Ser. No. 89,847
5 Claims. (Cl. 56—7)



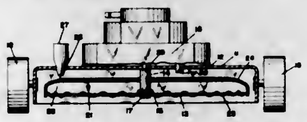
1. In a device of the character described, including a longitudinal frame member, a cross member secured to said first named member, and a power driven wheel for driving and steering said device, the combination of a pair of conventional wheel driven, reel type mowers positioned under and supporting opposite ends of said cross member said mowers being secured to said cross member by pivotable means for rocking each of said mowers about its longitudinal axis and its transverse axis.

3,097,466
APPARATUS AND METHOD OF CLEARING DITCHES
Jack E. King, 312 W. 1st Ave., Toppenish, Wash.
Filed July 20, 1959, Ser. No. 828,245
12 Claims. (Cl. 56—25.4)



1. In combination with a conventional 4-wheeled tractor adapted to be driven along the banks of a ditch in spanning relation thereto, a ditch-clearing machine detachably associated with the tractor and supported thereby so as to occupy a position within the ditch in trailing relation to the tractor and presenting a rotor journal-mounted from the machine for rotation about an upright axis and having about its periphery lengths of flailing chains spaced apart both at intervals of the circumference and of the height of the rotor and acting by rotation of the rotor to clear vegetation from the walls of the ditch, and a detachable drive connection to said rotor from the engine of the tractor for driving the rotor.

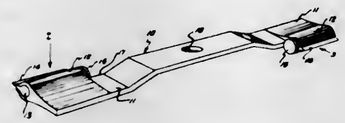
3,097,467
POWER MOWER WITH ROTARY AND VIBRATORY CLEANING DISC
Alexander Konrad, Parma, Ohio, assignor of twenty percent each to Lucille L. Hahn, Parma Heights, Ohio, Margaret J. Konrad, Parma, Ohio, Marsha B. Felder, Parma, Ohio, and Warren A. Konrad, Parma, Ohio
Filed Aug. 15, 1962, Ser. No. 217,106
6 Claims. (Cl. 56—25.4)



1. In a rotary power mower including a casing having an internal chamber, wheels mounting said casing, a motor having an exhaust and being mounted on said casing, a drive shaft extending vertically from said motor through said casing, and a rotary cutter blade on said drive shaft, the improvement which comprises a rotatable disc loosely mounted on said drive shaft above said blade for independent rotation thereof and for vibration with respect thereto.

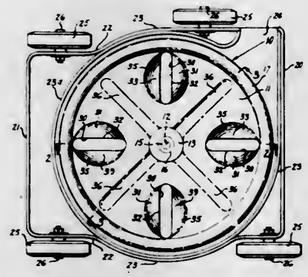
3,097,468
GRASS CUTTER BAR
Clarence E. Johnson, Rte. 4, Box 100A, Arkadelphia, Ark.
Filed Jan. 16, 1962, Ser. No. 166,519
1 Claim. (Cl. 56—295)

A grass cutter bar of the character described, the said bar being rectangular as viewed from the top and having depressed ends that are parallel to the center section and a raised portion on each end thereof, the said raised portion also being rectangular as viewed from the top, and each said raised portion being integral with the rest of the said bar, and the each said raised portion of the said cutter bar having a longitudinally disposed opening therein, the opening having an end view configuration that is basically that of a letter U, and a cutter having the end viewed configuration of a letter U terminating in an equilateral triangle that is rectangular when viewed from the top, the said cutter having one end of its raised portion



terminating in a head having the configuration of a disk, and each said cutter having its raised portion slidably secured within the U-shaped opening of the said raised portion of the said cutter bar, the said cutter bar having a centrally located opening thereby providing means for mounting the said cutter bar on the power providing shaft of a lawn mower.

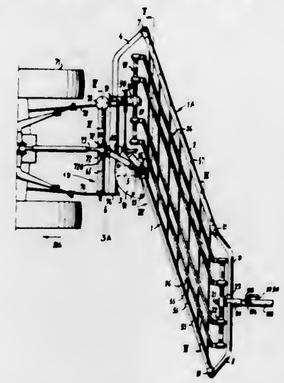
3,097,469
ROTARY LAWN MOWER BLADE
Samuel Belfiore, 602 East Ave., Elyria, Ohio
Filed June 19, 1962, Ser. No. 203,595
1 Claim. (Cl. 56—295)



A rotary lawn mower blade comprising a disc having a central opening for the rotating shaft of a lawn mower; reinforcing washers on each side of said disc surrounding said opening, radical reinforcing ribs stamped in said disc and extending from said washers to points adjacent to the periphery of said disc, said disc having a plurality of radial slots therein, a pair of concaved cutting cups formed one on either side of each slot with the cups of each pair being oppositely concaved, the edges of each cup being arcuate axially of the disc and straight radially of the disc to define cutting edges adjacent each slot on each side of said disc, said concaved cups tapering rearwardly into fluid relation with the surface of the disc to provide a suction effect, and a relatively large annular bead about the periphery of said disc.

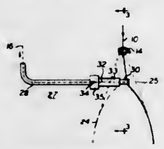
3,097,470
IMPLEMENTS FOR WORKING MATERIAL LYING ON THE GROUND
Cornelis van der Lely, Zug, Switzerland, assignor to Patent Concern N.V., Willemstad, Curacao, Netherlands Antilles, a limited-liability company
Filed Aug. 5, 1960, Ser. No. 47,796
Claims priority, application Netherlands Aug. 25, 1959
18 Claims. (Cl. 56—366)

1. An implement for working material lying on the ground which comprises a first frame part of a substantially horizontally disposed parallelogram structure, vertical pivots pivotally connecting the corners of said parallelogram structure, rotatable support means mounted in said first frame part, tine carrying bars pivotally mounted between said rotatable support means, a second frame



part, draft means included in said second frame part, said first frame part connected to said second frame part at selective angles in a substantially horizontal plane whereby said implement is adjustable to operate in a plurality of working positions.

3,097,471
METHOD AND APPAPATUS FOR COVERING THREAD
Boutwell Hyde Foster, 3 Sunset Terrace, Maplewood, N.J.
Filed June 30, 1961, Ser. No. 121,225
12 Claims. (Cl. 57—12)

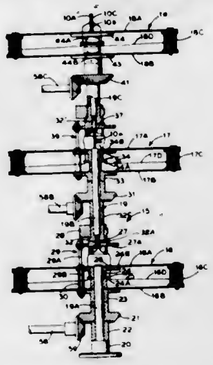


3. A method for covering a core thread with a cover yarn in apparatus having means for guiding the core thread from a core thread supply to means for disposing covered thread on a rotatable spool adapted to impart twist to core thread and cover yarn, this method comprising passing core thread from said supply means to said disposing means, delivering cover yarn to said core thread in a delivery zone between said core thread guiding means and said means for disposing covered thread on said spool, limiting the movement at said delivery zone of said cover yarn and said core thread in a direction perpendicular to the longitudinal axis of said core thread to maintain said cover yarn in close proximity with said core thread at said delivery zone and to permit said core thread to generate a balloon between said guide means and said delivery zone and said covered thread to generate a balloon between said delivery zone and said means for disposing covered thread on said spool.

3,097,472
APPARATUS FOR MAKING ROPE STRAND
James Stirling, 109—26 209th St., Queens Village, N.Y.
Filed July 16, 1959, Ser. No. 827,515
3 Claims. (Cl. 57—15)

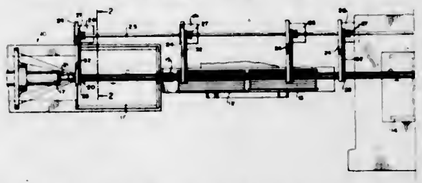
1. A machine for making rope strand from a plurality of either natural and/or synthetic fibres, comprising a

plurality of tables, hollow shafting means connecting said tables in co-axially spaced relationship, each of said tables being rotatably journaled with said shafting means, a plurality of bobbins having fibre windings thereon mounted on each of said tables, the bobbins mounted on each of said tables being radially spaced about said hollow shafting means, means for drawing the fibres from the respective bobbins of each table through the hollow shafting means, means for rotating each of said tables to impart a twist to the fibres being drawn from their respective bobbins whereby the fibres drawn from one of said tables are twisted to form the core of said strand, and the fibres drawn from said other tables are twisted



in successive concentric layers upon said core, and means for individually controlling the relative revolutions of the respective tables with respect to one another for controlling the pitch at which the fibres drawn from the bobbins of the respective tables are twisted per unit length of the rope strand formed thereby so that the twist of the respective concentrically disposed fibre layers from the core to the outermost layer of said strand is progressively decreased so that in the finished strand the respective fibres of the core and the succeeding concentrically disposed layers are substantially equal in length for insuring that each of the strand fibres are uniformly stressed under given load conditions.

3,097,473
WIRE GUIDING MEANS FOR CABLING MACHINES
Joseph V. O'Grady, Locust, and Howard Lawrence Ungerer, Little Silver, N.J., assignors to Syncro Machine Company, Perth Amboy, N.J., a corporation of New Jersey
Filed June 26, 1962, Ser. No. 205,456
10 Claims. (Cl. 57—15)



1. Means for guiding strands from a preceding cabling machine to an axially aligned succeeding cabling machine separated from the preceding machine by a die stand, drawing capstans and takeup reel, while maintaining said strands in a predetermined pattern, comprising, in combination, a plurality of pivotally mounted arms spaced apart between the cabling machines, a corresponding plurality of strand guiding plates, means rotatably mounting each plate on a corresponding arm, the centers of rotation of said plates being on the common axis of said machines when said arms are in one extreme of pivotal movement, means coupling one of said plates to the preceding cabling machine for drive by a rotary element thereof, and means for driving the remaining plates synchronously from said one plate.

3,097,474
APPARATUS FOR INSTRUCTION IN ROPE SPLICING
John Henry Rohdenburg, 62 Montauk Ave., Brooklyn 8, N.Y.
Filed June 4, 1962, Ser. No. 199,852
1 Claim. (Cl. 57—23)

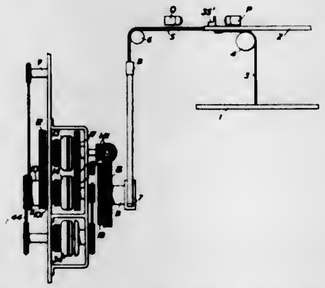


An apparatus for the purpose of instruction in rope splicing consisting of a length of rope formed of strands of synthetic plastic material, the rope having the strands at one end thereof unravelled, each of the strands at said end of the rope having a rigid shell surrounding the same and provided with detents penetrating the strand to secure the shell permanently to the strand thereby providing an armor thereon, a hollow cylindrical guide for each of said strands having an axial opening thereinto at one end thereof, each of the armored ends of the strands registering in the axial opening of one of said guides, the other ends of the guides having a taper, each of the strands and the guides secured thereto having a distinctive color, means for removably locking the guides on the armored ends of the strands, said means comprising a diametrical hole extending through the armored end of each of the strands, the guides each having diametrically aligned holes therethrough giving access to the axial opening therein, the guides being positioned on the strands with the holes of the guide aligned with the hole in the armored end of the strand to provide a through passage, and screw bolt means extending through said through passage comprising a hollow internally threaded bolt extending into said passage from one end thereof and a threaded screw threaded into said hollow bolt and extending thereinto from the opposite end of said passage, the opposite ends of the aligned holes in the guides having countersinks, the heads of the bolt and the screw registering in the countersinks below the cylindrical surface of each of the guides.

3,097,475
TRAVERSE MECHANISM FOR SPINNING MACHINES
Norbert Hooper, Castleton, Rochdale, and Fred Ratcliffe, Rochdale, England, assignors to Tweedales & Smalley Limited, Rochdale, England, a British company
Filed Mar. 29, 1961, Ser. No. 99,082
12 Claims. (Cl. 57—99)

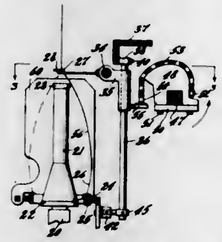
1. Apparatus for lifting and lowering a traverse rail in a textile ring spinning or like machine comprising an

input drive shaft, an oscillatory output drive shaft coupled to the traverse rail to impart a lifting and lowering motion to the rail, and two drive paths connected in parallel between the input drive shaft and the oscillatory output drive shaft, one of which is such as to impart motion to the oscillatory output shaft in one sense in response to motion of the input drive shaft in a predeter-



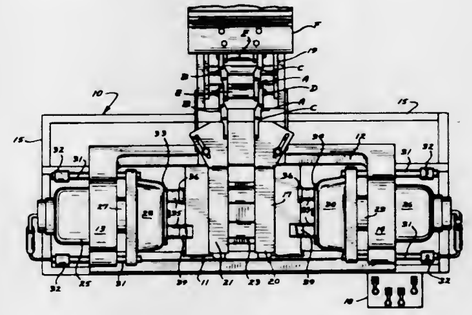
mined sense, and the other of which is such as to impart a motion to the output shaft in the opposite sense in response to motion of the input drive shaft in said predetermined sense, and each of which includes clutch means, said clutch means being responsive to the traverse rail reaching the required extent of its travel to change drive to the output shaft from one path to the other so as to reverse the direction of travel of the traverse rail.

3,097,476
MECHANISM FOR SPINNING
Roy A. Fetterman, Jr., Lafayette Hills, Pa., assignor to Vara-Trol Inc., Ambler, Pa., a corporation of Pennsylvania
Filed June 14, 1962, Ser. No. 202,415
3 Claims. (Cl. 57—110)



1. In a mechanism for spinning on the woolen system, a rotatable bobbin which is vertically movable, a vertically stationary ring around the bobbin, a traveller on the ring adapted to guide roving to the bobbin, means for moving the bobbin vertically with respect to the vertically stationary ring from a vertical position at the beginning of the doff in which the bobbin is fully raised within the ring, to a vertical position at the end of the doff in which the bobbin is substantially withdrawn downwardly from the ring, and a thread guide above the bobbin for guiding the roving to the traveller, the roving passing from the thread guide to the traveller free from contact with the mechanism, in combination with means for relatively moving the thread guide vertically starting at the beginning of the doff at a position in which the thread guide is relatively close to the bobbin and relatively remote from the ring, moving the thread guide first downwardly substantially with the motion of the bobbin, and toward the end of the doff moving the thread guide downwardly more slowly than the bobbin to a position at which the thread guide is not more than 5 inches above the ring.

3,097,477
TRACK PRESS AND TRACK ASSEMBLY TOOL THEREFOR
James S. Rodgers, Adams Run, S.C., assignor to Rodgers Hydraulic Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 30, 1961, Ser. No. 99,582
6 Claims. (Cl. 59—7)

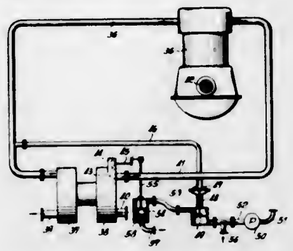


1. A track press for repairing track sections having a plurality of links connected together by bushings and pins comprising in combination a frame, a pressure means affixed to said frame, said pressure means including a ram head movable inwardly and outwardly along an axis toward and away from one of said track sections, support means for said track, a track assembly tool connected to said ram head for movement therewith, said tool comprising a link engaging member, said link engaging member having a portion adapted to abut against the side of one of said links, a bushing engaging member, said bushing engaging member having a portion adapted to abut against the end of one of said bushings, abutment means at one side of said support means opposite said assembly tool adapted to abut the other end of said bushing, said link engaging member being movably connected to said bushing engaging member and adjustment means for selectively moving said link engaging member with respect to said bushing engaging member on a path parallel to said axis whereby the axial distance between the portion of said link engaging member adapted to contact said link and the portion of said bushing engaging member adapted to abut against said bushing can be varied as desired, said adjustment means including interengaging cam surfaces on the link engaging member and the bushing engaging member for adjusting the outward movement of said link engaging member relative to said bushing engaging member.

3,097,478
EXHAUST GAS DRIVEN COMPRESSOR
Friedrich W. Lück, Berlin-Tegel, Germany, assignor to Borsig Aktiengesellschaft, Berlin-Tegel, and Wankel G.m.b.H., Lindau, Bodensee, Germany
Filed Sept. 28, 1960, Ser. No. 58,946
Claims priority, application Germany Oct. 1, 1959
6 Claims. (Cl. 60—13)

1. In combination with an internal combustion engine: an exhaust gas driven motor in the form of a first rotary piston unit connected to receive exhaust gas from said combustion engine, a compressor in the form of a second rotary piston unit drivingly connected to said first rotary piston unit, each of said rotary piston units comprising two rotary pistons one arranged within the other, one piston only of each of said rotary piston units being a working piston while the other rotary piston in each of said rotary piston units is arranged so as to be idly moved by the respective adjacent working piston, said second rotary piston unit including control means adjustable for

controlling the delivery of said compressor, and means operatively connecting said engine with said control means for causing the latter to reduce the delivery of said com-



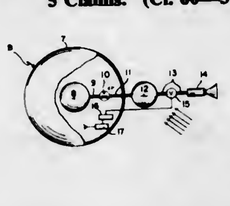
pressor in response to the pressure of said exhaust gas furnished by said engine dropping below a certain magnitude, whereby an undue drop in the speed of said compressor is avoided.

3,097,479
ROCKET FUEL
Walter Reipold, Geneva, Switzerland, assignor to Ets. Valerca and Kontinitro, Vaduz, Liechtenstein, a corporation
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,067
5 Claims. (Cl. 60—35.4)

1. A method of producing thrust which comprises ejecting from a reaction chamber the gaseous products produced by the combustion of a fuel comprising a mixture of concentrated nitric acid and a halomononitrobenzene.

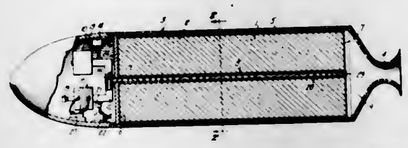
5. A rocket fuel comprising a mixture containing from about 60 to 80 parts by weight of concentrated nitric acid and correspondingly from about 20 to 40 parts by weight of halomononitrobenzene, and containing from 1 to 40 parts by weight of a material selected from the group consisting of almuminum, boron, lithium, and their hydrides.

3,097,480
SOLAR PREHEATER FOR GAS JET ATTITUDE CONTROL SYSTEM
Robert L. Sohn, Santa Monica, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 29, 1962, Ser. No. 183,314
5 Claims. (Cl. 60—35.5)



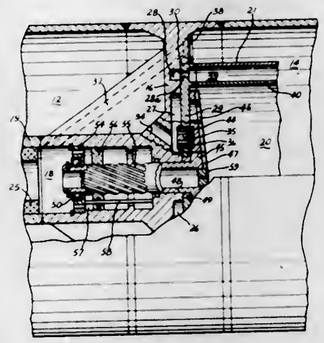
5. A method of improving the performance of a jet operated attitude control means for outer space vehicles which comprises the steps of: storing a gaseous pressure fluid within a space vehicle at a high pressure, at a relatively low temperature; discharging the gaseous pressure fluid from the aforesaid space and collecting the discharged pressure fluid at a materially lower pressure than the aforesaid high pressure; heating the last mentioned collected pressure fluid by solar radiation to heat and expand the same to increase the pressure thereof and controllably discharging the heated and expanded pressure fluid from the outer space vehicle through a jet in a predetermined direction outwardly away from the vehicle to obtain reactionary thrust in the opposite direction on the vehicle to change the attitude in space of the vehicle.

3,097,481
PROPELLENT GRAINS
Bernard Silver, Alexandria, Va., assignor to Atlantic Research Corporation, Fairfax County, Va., a corporation of Virginia
Filed Nov. 24, 1959, Ser. No. 855,240
9 Claims. (Cl. 60—35.6)



1. A propellent grain, said grain being designed to burn continuously from one end which is an initial ignition surface and comprising a self-oxidant propellent matrix, the combustion of which generates propellent gases, said matrix containing embedded therein an elongated metal heat conductor tube positioned substantially normal to the plane of said initial ignition surface of said grain and extending continuously in the direction of flame propagation for the entire length of said grain, the entire exterior surface of said metal tube lying within the body of the propellent grain being in intimate, gas-sealing contact with the propellent matrix, the maximum wall thickness of the said metal tube being about 0.05 inch and the maximum internal diameter of the tube being about 0.6 inch, said metal heat conductor tube being adapted to serve as a channel for controllable passage therethrough in contact with the interior wall surface of said metal tube, during the burning cycle of the grain, of fluid, which vents out of the burning end of said grain, said fluid being at a temperature different from and, thereby, changing that of said tube.

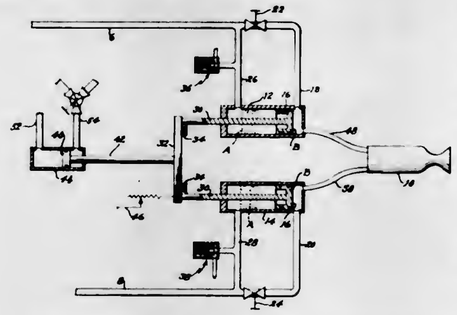
3,097,482
ROTARY INJECTOR FOR ROCKET POWERPLANT
Joseph J. Lovingham, Madison, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Dec. 22, 1960, Ser. No. 77,760
11 Claims. (Cl. 60—35.6)



6. A propellant injector for liquid propellant rocket powerplants including a propellant tank and a combustion chamber communicating therewith comprising a propellant injector plate including an injection nozzle for permitting flow of propellant to the combustion chamber, a shear cup projecting from the plate and sealing off flow

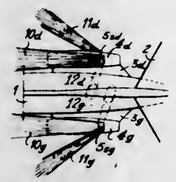
through the nozzle, and rotatable means mounted adjacent the injector plate and operative upon rotation to shear off the cup and admit propellant to the combustion chamber.

3,097,483
INSTANTANEOUS AND SIMULTANEOUS PROPELLANT SHUTOFF FOR A BIPROPELLANT FLOW SYSTEM
Louis L. Bixson, Sepulveda, and Herbert H. Debol, Canoga Park, Calif., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 27, 1962, Ser. No. 190,842
4 Claims. (Cl. 60—35.6)



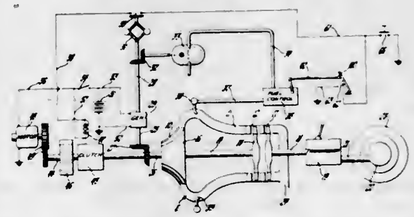
1. A valve system for providing instantaneous and simultaneous propellant shutoff in a bipropellant flow system comprising a pair of cylinders, a piston arranged for reciprocating movement in each of said cylinders, a piston rod connected with each of said pistons and extending through its cylinder, means connected with said piston rods for yoking said pistons for simultaneous movement a separate source of fluid for each of said cylinders, each source having a conduit connected with one end of a cylinder, bypass lines connected between each of said source conduits and the other end of its cylinder, valve means within each of said source conduits downstream from the connection with said bypass lines for controlling fluid flow, pneumatic means connected with said means for yoking to control movement of said pistons in one direction, and conduit means connecting said one end of said cylinders with a combustion chamber.

3,097,484
THRUST REVERSERS FOR JET ENGINES
Joseph Gustave Etienne André and Jean Maurice Denis Rech, Toulouse, Haute-Garonne, France, assignors to Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France
Filed Dec. 29, 1960, Ser. No. 79,298
Claims priority, application France June 13, 1960
11 Claims. (Cl. 60—35.54)



1. A thrust reverser for a jet engine adapted for use on an aircraft, the reverser comprising three ejection means for deflecting combustion gases from the engine asymmetrically with respect to said engine, each of the ejection means respectively comprising means defining an outlet for the combustion gases and a plurality of gas deflecting vanes for directing said gases obliquely with respect to said engine through the outlet, said engine developing a resultant thrust which is directed forwardly along a longitudinal axis through said engine, with said gases flowing through said outlets, and means for selectively directing said gases to said outlets, one of said ejection means being an upper ejection means and located at a level higher than that of the jet engine axis for directing said gases forwardly of said engine, both of the other ejection means being disposed at levels lower than that of said axis and having different outflows of gases, the lower means which has the greater outflow of gases constituting a main lower ejection means and directing said gases forwardly and laterally, while the other of said lower ejection means constitutes a lower compensating ejection means for directing said gases laterally to equilibrate the lateral thrust generated by the asymmetry of the main lower and upper ejection means whereby the resultant thrust of said three ejection means does not have a component lying in a plane inclined with respect to the engine axis so that balance of the jet engine around the axis thereof is obtained.

3,097,485
GAS TURBINE ACCELERATOR
Joseph B. Bidwell, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 2, 1959, Ser. No. 824,523
10 Claims. (Cl. 60—39.14)

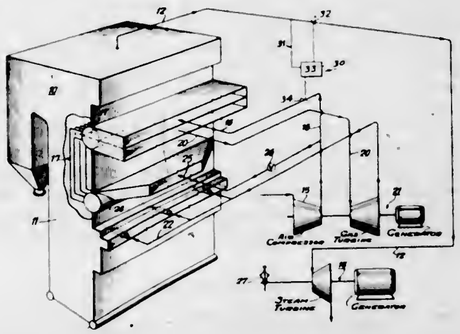


1. A power plant comprising, in combination, a gas turbine engine including a rotor, and means for rapidly accelerating the said rotor from idling speed to a substantially higher normal operating speed comprising a flywheel having a kinetic energy storage capacity of the same order of magnitude as that of the said rotor, power supply means coupled to the flywheel adapted to accelerate the flywheel to an effective speed higher than the normal operating speed of the said rotor and maintain it at such speed, power transmission means between the flywheel and the said rotor including a normally disengaged clutch, manually operable means controlling the power level of the engine operable to vary power over a range from idling to full power, and means operated by the manually operable controlling means for engaging the clutch temporarily when the manually operable controlling means is moved to a position calling for acceleration of the said rotor.

3,097,486
COMBINED GAS AND STEAM POWER CYCLE
Ralph C. Roe, Tenafly, N.J., assignor to Burns and Roe, Inc., New York, N.Y., a corporation of New Jersey
Filed Feb. 9, 1961, Ser. No. 88,037
2 Claims. (Cl. 60—39.18)

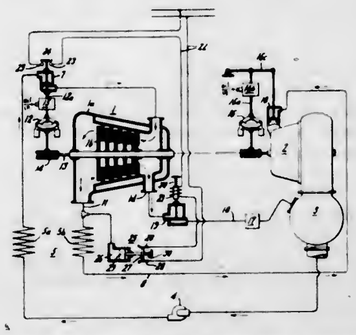
2. In a power plant of the class described, a combination gas and steam cycle comprising, a steam generator including a single furnace, a steam operated turbine connected to receive steam from said generator, an air heater

disposed in the radiant zone of said furnace, means supplying air under pressure to said radiant heater, gas operated turbine means connected to receive heated compressed air from said heater, means delivering the entire exhaust from said gas turbine to said furnace to support combustion of fuel therein, said gas turbine exhaust constituting the sole supply of combustion air in said furnace, a bypass for conducting a portion of the air under pressure to said heater at a point intermediate its inlet and



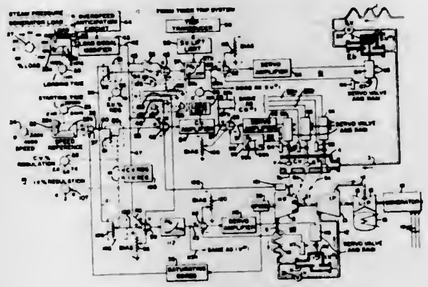
outlet sides, a damper in said bypass controlling the flow of compressed air therethrough, and control means sensing variations in the demand on said power plant and regulating the flow of air under pressure to said heater and thus also to said furnace to vary the thermal output of said heater and steam generator in direct relation to variations in power requirements, the air flow through said heater thus being at all times automatically proportional to the heat generated to maintain the integrity of said heater.

3,097,487
SYSTEM FOR PREVENTING OVERHEATING OF A STEAM TURBINE
Gordon W. Clark, Burnt Hills, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,272
7 Claims. (Cl. 60—73)



2. In a reheat turbine powerplant having conduits connecting in series steam generating means, a high pressure turbine, a reheater, a lower pressure turbine, and condenser, first valve means controlling the flow of motive fluid to the high pressure turbine, second valve means controlling the flow of motive fluid from the reheater to the lower pressure turbine, and governing means controlling the operation of the first and second valve means and adapted to close them upon occurrence of a predetermined operating condition, the combination of bypass conduit means with bypass valve means communicating between the high pressure turbine and condenser, means controlled by said governing means for opening the bypass valve when the first and second valves are closed, and check valve means in the conduit between the high pressure turbine and reheater, whereby the fluid trapped between the first valve means and the check valve means is vented to the condenser to prevent overheating of the turbine components by friction heating of the trapped fluid.

3,097,488
TURBINE CONTROL SYSTEM
Markus A. Eggenberger, Paul H. Troutman, and Patrick C. Callan, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 3, 1961, Ser. No. 149,910
15 Claims. (Cl. 60—73)

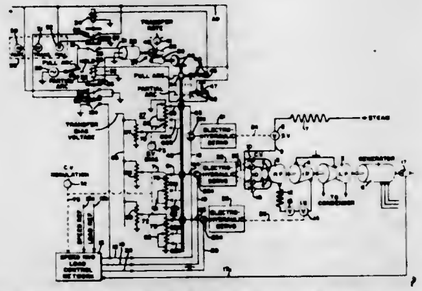


1. In a control system for a prime mover supplying power to a load also supplied with power by other prime movers, the combination of:
valve means for controlling the flow of motive fluid to the prime mover,
means supplying a first reference electric signal representing a desired normal operating speed,
speed responsive means supplying a second electric signal representing actual prime mover speed,
means comparing said first and second signals to supply a third electric signal representing a speed error signal,
adjustable multiplier means modifying the speed error signal to give a desired speed regulation,
electro-hydraulic servo means positioning said valve means in response to said modified speed error signal, and
means supplying a fourth reference electric signal representing a desired load on the prime mover, said load signal being superimposed on the speed error signal after it has been modified by said multiplier means, whereby the load applied for a given magnitude of load reference signal is substantially the same regardless of the setting of said multiplier means.

3,097,489
FULL ARC-PARTIAL ARC TRANSFER MECHANISM FOR AN ELECTRO-HYDRAULIC TURBINE CONTROL SYSTEM
Markus A. Eggenberger and Paul H. Troutman, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 3, 1961, Ser. No. 149,911
6 Claims. (Cl. 60—73)

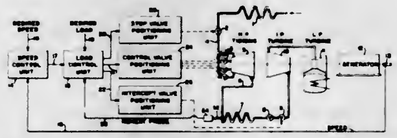
1. In an electro-hydraulic turbine control system of the type having a plurality of steam valves controlling the flow of steam to a turbine and positioned in accordance with electrical signals representative of the error between

desired turbine speed and actual turbine speed at a given load, the combination of:
stop valve means positioned by a first electrical signal derived from a speed error indication,
a plurality of control valve means supplied with steam through said stop valve means, and sequentially positioned by a second electrical signal derived from the same speed error indication,



and means superimposing selected first and second transfer biasing electrical signals on either the first signal or the second signal respectively in a sense to increase the speed at which said first and second signals take effect, whereby only one of said valve means controls the flow of steam at a given turbine speed while the other of said valve means remains open.

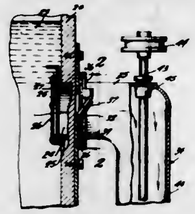
3,097,490
ELECTRO-HYDRAULIC CONTROL SYSTEM FOR TURBINE WITH PRESSURE FEEDBACK
Patrick C. Callan, Markus A. Eggenberger, Paul E. Malone, and Paul H. Troutman, all of Schnectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Apr. 23, 1962, Ser. No. 189,442
9 Claims. (Cl. 60—73)



1. In a steam turbine powerplant having valve means, high pressure turbine, reheater, and lower pressure turbine connected in series flow relationship, the combination of:
electro-hydraulic control means positioning said valve means in response to a first electrical signal representing a desired steam flow through said valve means,
first means furnishing an electrical feedback signal to said control means for modifying the effect of said first signal on the valve means, said feedback signal being responsive to steam pressure in the reheater and having a lagging characteristic,
and second means including a first adjustable network for independently adjusting the transient response of said valve means to changes in said first signal while also compensating for the lag in the reheat pressure feedback signal.

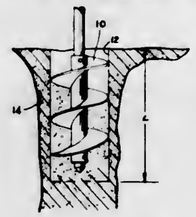
3,097,491
TURBINE MOUNTING MEANS
William J. Pugh, 19 Lovett Place, Lynn, Mass.
Filed Nov. 21, 1961, Ser. No. 153,794
2 Claims. (Cl. 61—19)

1. In a device of the character described, a vertically disposed dam adapted to have water backed up contiguous thereto, said dam including inner and outer surfaces and said dam having an opening therein, an annular sleeve mounted in said opening, a screen arranged contiguous to the inner surface of said dam adjacent said sleeve, an adjustable gate contiguous to said screen, a vertically disposed support member arranged adjacent the outer surface of the dam, said support member having an opening therein which registers with the opening in the dam, securing elements extending through said support member and into engagement with said dam, portions of said support member on opposite sides of the opening in the support member being struck-out to provide a pair of spaced apart pockets, a struck-out section on the lower portion of the support member providing a retaining lip; a turbine casing including a horizontally disposed cylindrical portion having an annular flange thereon, inclined lugs affixed to said flange for engaging said pockets, a sealing element interposed between said flange and support member, said casing further including a vertically disposed portion having an enlargement on the lower end



thereof, a rotary turbine arranged in said enlargement, a vertically disposed shaft extending through the vertically disposed portion of said casing and said shaft having its lower end connected to said turbine, a tapered fluid discharge nozzle mounted below said casing, an annular shoulder on the upper end of said nozzle, a collar including a horizontally disposed annular wall section arranged contiguous to the lower surface of said shoulder, said collar further including an annular wall portion having a plurality of spaced apart apertures therein, screw members extending through said last named apertures and engaging the lower portion of the casing; an inclined lug on said collar engaging the retaining lip on the support member; a ring member including a circular portion interposed between the lower end of said casing and the upper end of said nozzle, and said ring member including a central hub having an opening therein for receiving a bearing on the lower end of the shaft, and a plurality of radially disposed arms extending between said hub and the circular portion of the ring member.

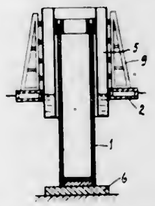
3,097,492
METHOD OF FORMING CONCRETE PILES IN SITU
Hugh C. Salassi, 5733 College Drive, Baton Rouge, La.
Filed Mar. 20, 1961, Ser. No. 96,856
4 Claims. (Cl. 61—36)



1. Method of forming concrete piles in situ comprising the steps of: drilling a hole in sandy soil to a predetermined fraction of the ultimate pile depth and removing

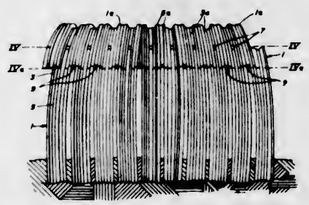
the soil therefrom, this hole constituting a mixing area; adding hydraulically settable cementitious material to the hole to form a fluid concrete mix with the underlying soil; drilling to a slightly lower depth into the underlying soil by means of a rotating auger and raising the newly drilled soil upwardly and mixing the newly drilled soil with the cementitious material thereabove by raising the rotating auger into the mixing area; repeating said drilling, raising and mixing steps in a progressive operation until the predetermined depth of the pile is reached, whereby the newly drilled soil and the cementitious material are uniformly mixed throughout the entire depth by the rotating auger, and then removing the auger from the formed concrete pile.

3,097,493
METHOD OF CONSTRUCTING MOVABLE BUILDING SECTIONS AND APPARATUS APPLYING THIS METHOD
Dirk Blankevoort, Vijverweg 41, Bloemendaal, Netherlands
Filed Apr. 10, 1959, Ser. No. 805,424
4 Claims. (Cl. 61—43)



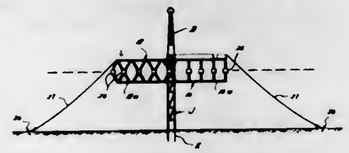
3. That method of constructing tubular concrete sections below and above water, comprising, flooding the interwall space of a vertical, tubular, double-walled float until one end rests on a submerged bottom plate, lowering a double-walled mould within the inner wall of said float, to rest on the plate, filling with concrete the interspace between said mould walls, moving said mould upwardly relatively to the float while pouring concrete into the upper interwall portion of the mould thus evacuated, expelling water from the interwall space of said float to gradually raise said float relatively to said mould, continuing the upward movement of said mould in and relatively to said float while pouring concrete as aforesaid until the section is completed, tilting the float and completed tubular section as a unit into horizontal floating position, and axially translating said section out of said float.

3,097,494
SUPPORTING FRAMEWORK FOR A MINE GALLERY OR SHAFT
Georges Chapron, 22 Bernonville, Auberchicourt, Nord, France
Filed July 21, 1959, Ser. No. 828,587
Claims priority, application France July 29, 1958
5 Claims. (Cl. 61—45)



1. Means for supporting or lining the roof and walls of mine galleries, or the walls of pits, mine shafts or like excavations, comprising a plurality of elongated elements which are arched lengthwise and overlap partially one another laterally along the length of the excavation, the elements being of two kinds of which a first kind alternates with a second kind along the length of the excavation, each of said elements extending over only a part of the cross-section of the excavation, the first kind of element presenting a substantially flat omega channel section as viewed from the interior of the excavation and the second kind of element presenting a substantially flat U channel section from the same point of view, the two kinds of channel section each having outwardly inclined side walls, a base along the middle of which is formed a flat shallow inwardly extending salient bounded by two flat bottomed grooves, and a flange wing formed along the free edge of each side wall in a plane substantially parallel to the planes of the flat inward salient and of the flat bottom of the grooves, the two kinds of elements overlapping each other at adjacent side walls but only along one end portion of each element, and connecting stirrups comprising at least a clamping piece, a T-headed bolt and a tightening nut, one such stirrup being positioned at the free end of an element and engaged both with said free end and with the lateral wings of two adjacent elements, and the stem of the bolt being positioned against the free edges of the salient at the end of an element.

3,097,495
PLATFORM FOR AFLOAT-CONDITION DRILLING
Alden J. Laborde and Tom S. Graham, both % Ocean Drilling and Exploration Co., Caribe Bldg., 2475 Canal St., New Orleans, La.
Filed May 27, 1959, Ser. No. 816,155
3 Claims. (Cl. 61—46.5)



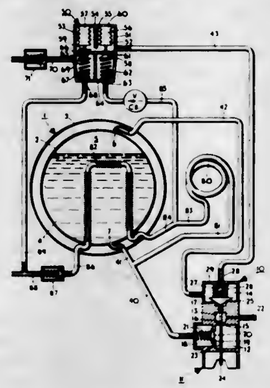
1. A buoyant drilling rig base for afloat condition drilling, comprising, a hull member comprising a wave transparent structural frame defined by vertically spaced upper and lower stringer elements interconnected by hollow tubular bracing elements defining buoyancy elements and disposed in partly submerged floating position in a water body, the lower stringer elements and said bracing elements defining flotation chambers having displacement sufficient to support said base in said partially submerged floating position without rigid connection to the underlying land, a drill support mounted on said hull member, a plurality of auxiliary buoyancy chambers rigidly secured to said bracing elements at a uniform level intermediate the upper and lower stringer elements and partly submerged in the water body, said auxiliary buoyancy chambers being of substantially lesser length than the vertical distance between said upper and lower stringer elements, each of said auxiliary bouyancy chambers having greater water plane area than the portions of said bracing elements extending above and below said auxiliary buoyancy chambers, the combined water plane area of said auxiliary chambers exceeding the water plane area of the base at any other horizontal plane between the upper and lower stringer elements, said auxiliary buoyancy chambers having a total buoyancy to provide tons-per-inch immersion sufficient to prevent substantial vertical movement of said hull member under varying live loads, and means for ballasting and de-ballasting the several flotation chambers whereby to regulate the extent of submergence of said base in said water body.

3,097,496
METHOD OF MAINTAINING LEVEL OF CRYOGENIC LIQUIDS
Ronald G. Petts and William T. Colville, Williamsport, and George W. Parsons, Hughesville, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 29, 1961, Ser. No. 120,685
2 Claims. (Cl. 62—49)



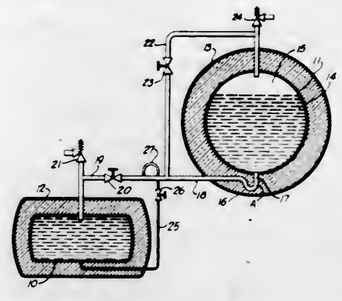
1. The method of maintaining the level af a cryogenic liquid in a reservoir at a substantially constant elevation, said method comprising: disposing a semiconductor diode in said liquid at the top surface thereof; connecting said diode in an electrical circuit including control means for regulating the flow of additional cryogenic liquid into said reservoir, said control means being responsive to resistance changes in said diode whereby additional cryogenic liquid is admitted to said reservoir when the level of the cryogenic liquid therein drops to an elevation where the said diode is no longer disposed therein and additional cryogenic liquid is prevented from entering said reservoir when said diode is disposed in said liquid in said reservoir; and electrically connecting a time delay relay and a warning signal to said control means, the time delay of said relay being set to actuate said warning signal when the supply of cryogenic liquid to said reservoir has been depleted.

3,097,497
OXYGEN SUPPLY SYSTEMS
Peter W. Fitt, Yeovil, England, assignor to Normalair Limited, Yeovil, England
Filed Aug. 10, 1960, Ser. No. 48,778
Claims priority, application Great Britain Aug. 14, 1959
5 Claims. (Cl. 62—52)



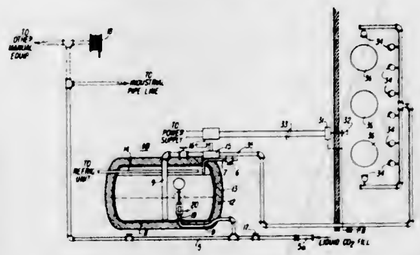
1. An operationally inclinable and invertible liquid oxygen converter having automatic pressure controlling means whereby when the pressure is below normal working pressure oxygen passes successively through a low pressure outlet means from said converter, through heat exchanging conduit means external of said converter, through heat exchanging conduit means inside said converter and thence to a delivery conduit, said heat exchanging conduit means inside said converter being suitably shaped and positioned in such a manner that a portion thereof is substantially always in contact with the liquid phase of said converter whatever the attitude of said converter, when the pressure in said converter attains a chosen normal working pressure oxygen flows through a high pressure outlet means of said converter to said delivery conduit.

3,097,498
APPARATUS FOR HANDLING LIQUEFIED GASES
David A. Williams, Wheaton, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,664
6 Claims. (Cl. 62—55)



1. Apparatus for handling liquefied gas having a boiling temperature below 233° K., comprising a supply tank within an insulation jacket adapted to be at least partially filled with fluid in the liquid state, a fluid trap below the liquid level of said tank having inlet means in communication with said tank below the liquid level thereof and having discharge means, a receiving vessel remote from and independent of said tank adapted to be supplied with said fluid, the fluid of said receiving vessel being below the discharge means of said fluid trap, first conduit means directly connecting said discharge means to said receiving vessel, and second conduit means connected to said first conduit means at the high point thereof and external of said jacket and connected to said tank above the liquid level thereof venting said first conduit means.

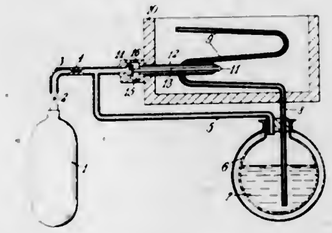
3,097,499
METHOD AND APPARATUS FOR PRESERVING AN ADEQUATE SUPPLY OF CO_2 FOR FIRE PROTECTION
Felix C. Rodgers, Evanston, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 1, 1960, Ser. No. 72,937
8 Claims. (Cl. 62—55)



1. A method of reserving a minimum supply of liquid gas material in a storage unit for an emergency purpose, comprising the steps of connecting a first outlet to said unit for withdrawal of said liquid gas therefrom, limiting the withdrawal of the liquid gas material from the

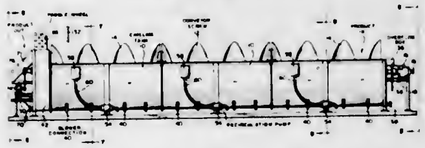
first outlet for any purpose by closing the outlet when the gas material reaches a predetermined level, connecting a second outlet to emergency use equipment and to said unit, maintaining said outlet in continuous open communication with said storage unit and said emergency equipment at all times, and reserving all liquid gas material below said predetermined level for withdrawal through said second outlet.

3,097,500
TEMPERATURE CONTROL SYSTEM
Arthur Rowlatt More, Croydon, England, assignor of one-half to H. W. Wallace & Co. Limited, Croydon, England
Filed Aug. 21, 1961, Ser. No. 132,909
Claims priority, application Great Britain Sept. 7, 1960
5 Claims. (Cl. 62—55)



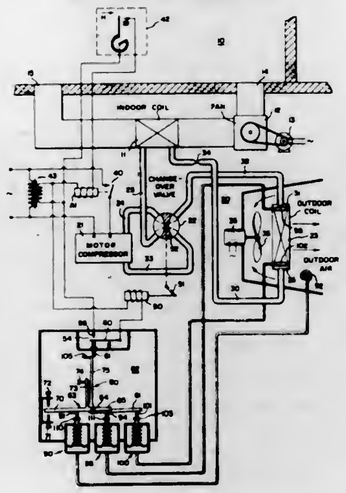
1. A chamber temperature control system comprising an enclosed reservoir of liquified gas, a first pipe leading from below the surface of the liquid in the reservoir to said chamber the temperature of which is to be controlled, a source of gas under constant pressure, housing means providing a valve chamber having an inlet port and a vent to the atmosphere of restricted cross-sectional area, means connecting the inlet port of the housing means to the source of gas under pressure, a thermostatically operated valve in said inlet port for controlling the area of the port in accordance with changes in the temperature of the temperature-controlled chamber, and a second pipe in communication with the housing means at one side of the inlet port and ending above the liquified gas in the reservoir.

3,097,501
FOOD CHILLING
Peter H. Pappas, Houston, Tex., assignor to Pappas Refrigeration Company, Houston, Tex., a corporation of Texas
Filed Feb. 14, 1961, Ser. No. 89,293
4 Claims. (Cl. 62—63)



2. A method of cooling animal carcasses comprising the steps of: initially flowing stored water from a water storage tank to a receptacle into which the carcasses are placed; then continuously moving carcasses through the water in the receptacle to an unloading means while continuously supplying make-up water to the receptacle from a water cooler; then when it is desired to stop the cooling of carcasses for an extended period of time, discontinuing the supplying of make-up water, draining all the water from the receptacle and leaving said receptacle drained until it is desired to again cool animal carcasses; and simultaneously with and during all of the foregoing steps, continuously recirculating cool water from the water cooler through the water storage tank and back to the water cooler.

3,097,502
DEFROST CONTROL APPARATUS
Loren L. Krueger, Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,051
10 Claims. (Cl. 62—156)



3. In a defrost control system for a refrigeration system having a compressor, an indoor heat exchanger normally furnishing heat to a space and an outdoor air heat exchanger connected in a refrigerant filled series system with defrosting apparatus for heating the outdoor heat exchanger when frost forms thereon, first responsive means having an output indicative of the temperature of the normally coldest portion of said outdoor coil, second responsive means having an output indicative of the temperature of the normally warmest portion of the outdoor coil, third responsive means having an output indicative of the temperature of the air entering the outdoor heat exchanger, means responsive to a predetermined difference in the output of said second responsive means and said third responsive means for starting the operation of the defrosting apparatus by reversing refrigerant flow to said coils to remove frost from the outdoor heat exchanger, and means responsive to the output of said first responsive means for terminating the operation of the defrosting apparatus.

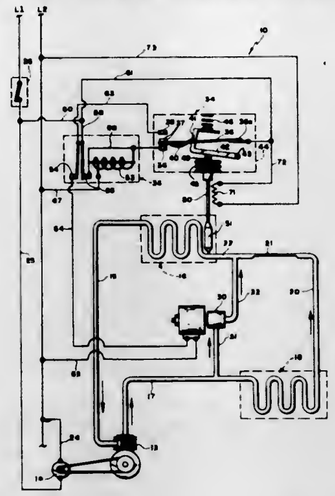
3,097,503
AUTOMATIC DEFROST CONTROL FOR REFRIGERATION SYSTEMS
John Liebermann, Columbus, Ohio, assignor to Ranco Incorporated, Columbus, Ohio, a corporation of Ohio
Filed Dec. 13, 1961, Ser. No. 159,126
5 Claims. (Cl. 62—156)

2. Control means in a refrigeration system of the type including a compressor, a prime mover for said compressor, a condenser and an evaporator connected to said compressor to form a closed path for refrigerant, and an electrically operated valve for directing hot gas from said compressor to said evaporator to effect defrosting thereof; said control means comprising:

(*a*) a first thermally responsive switch means for starting and stopping operation of said compressor by said prime mover,

(*b*) a second thermally responsive switch means connected in series with said first switch means and with said electrically operated valve so that said valve is opened when both switches are closed,

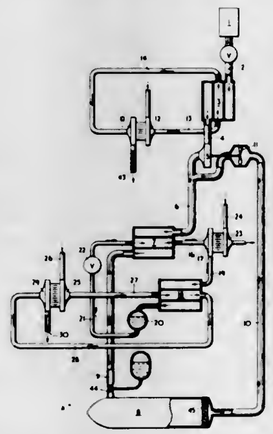
(*c*) said second switch being adapted to open in response to a temperature rise in said evaporator to a predetermined defrosting temperature whereby said



valve is closed and cooling of said evaporator started, and

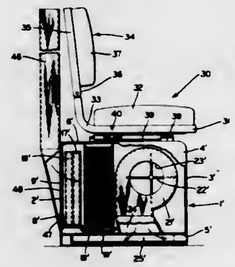
(*d*) electrically actuated means for preventing said second switch from effecting reopening of said valve upon a decrease in temperature of said evaporator until the next opening and closing of said first switch means.

3,097,504
COOLING SYSTEMS FOR AIRCRAFT
Desmond F. J. Quick, Yeovil, Somerset, and Donald J. Leech, Dorchester, Dorset, England, assignors to Normalair Limited, Yeovil, England
Filed Oct. 24, 1960, Ser. No. 64,448
Claims priority, application Great Britain Oct. 30, 1959
4 Claims. (Cl. 62—241)



1. In an aircraft of the high altitude supersonic type having an engine compressor, a system for cooling air in an enclosure thereof comprising, in combination, a supply conduit, said supply conduit connectible with an intermediate stage of the engine compressor supplying bleed air, a heat exchanger, the supply conduit connected to the heat exchanger whereby air is cooled by said heat exchanger, a conduit connecting the output of the heat exchanger with the enclosure, a closed refrigerant vapor cycle coolant circuit including an exaporator, compressor, condenser and expansion, valve, said heat exchanger comprising the evaporator and a reversed bootstrap means including a turbine compressor unit driven by ram air for cooling the refrigerant passing through the condenser.

3,097,505
AIR CONDITIONER FOR INDUSTRIAL CONTROL QUARTERS
John H. Smith, Willoughby, Ohio, assignor to Correct-Air Corporation, Willoughby, Ohio, a corporation of Ohio
Filed Feb. 10, 1961, Ser. No. 88,476
6 Claims. (Cl. 62—261)

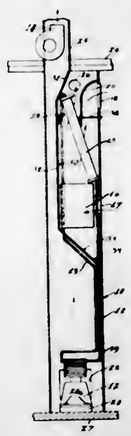


3. In a normally crowded industrial control quarters such as a crane cab, control pulpit and the like, having front, back and side walls and a floor and ceiling, an air conditioner unit comprising air filter means, an evaporator coil, and blower means enclosed in a housing located entirely within said control quarters upon the floor thereof adjacent the back wall thereof, means for discharging conditioned air from the lower portion of said housing into the control quarters, and an operator's seat detachably mounted upon the top of the air conditioner housing, said housing forming the sole support for said operator's seat.

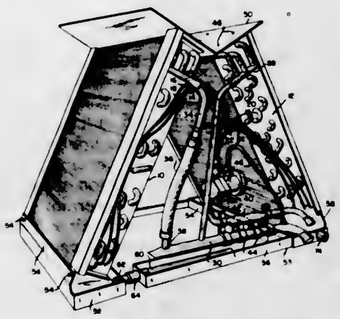
3,097,506
AIR CONDITIONER APPARATUS
George R. Blakesley, Sr., 211 W. Craig Place, San Antonio 12, Tex.
Filed Aug. 14, 1961, Ser. No. 131,311
4 Claims. (Cl. 62—263)

1. In association with a wall structure and floor structure, the improvement of an air conditioner unit including a casing mounted substantially in the wall structure and extending vertically therealong, and having a bottom end supported on said floor structure, a compressor means mounted on said floor structure, a condenser coil, an evaporator coil, conduit means circulating fluid through said condenser coil, said evaporator coil and said compressor means, and said compressor means, said condenser coil and evaporator coil being disposed in superposed relationship in said casing, said floor structure being open within the bottom portion of the casing, a frame supporting said compressor means within the open portion of said floor structure, an upper outlet in said casing, blower means for moving air from said inlet to said upper outlet past said condenser means, an inlet in said casing adjacent said evaporator coil, an outlet in said casing adjacent said evaporator coil, a

blower for moving air from said inlet adjacent said evaporator coil and past said evaporator coil through said outlet adjacent said evaporator coil, and baffle means separating said evaporator coil from said condenser coil.



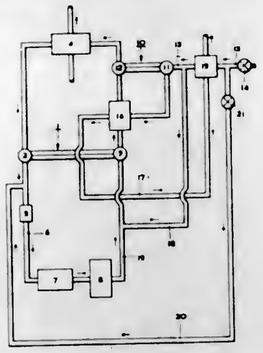
3,097,507
ADJUSTABLE EVAPORATOR ASSEMBLIES FOR AIR CONDITIONERS
Paul H. Makuh, Westlake, Ohio, assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed May 26, 1961, Ser. No. 113,006
7 Claims. (Cl. 62—285)



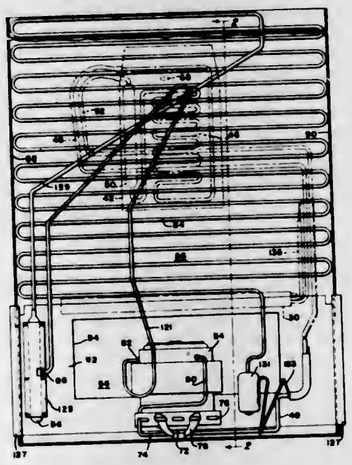
1. A heat exchanger comprising a pair of coils arranged in A form with the upper ends of said coils closer together than their lower ends, mounting means connecting the upper ends of said coils, said mounting means being adapted to support said coils in a plurality of different selected spaced apart positions, a pair of drip pans carried by the lower ends of said coils, a pair of extensible brace means connecting said drip pans, one of said brace means including a fluid conduit connecting the interior of one drip pan to the interior of the other drip pan.

3,097,508
AIR CONDITIONING
Donald J. Leech, Melbury Osmond, Dorchester, and Brian H. Rogers, Yeovil, England, assignors to Normalair Limited, Yeovil, England
Filed Dec. 22, 1960, Ser. No. 77,599
Claims priority, application Great Britain Jan. 7, 1960
10 Claims. (Cl. 62—402)

1. In an aircraft, an air conditioning apparatus for an enclosure thereof, comprising the combination of a substantially closed circuit air cooling system, for the passage of air to and from said enclosure, an auxiliary air circulating system adapted to cool the air in said air cooling system, air augmenting means adapted to supply replenishment air, means for controlling the temperature therein and means for removing excess water, said air cooling system being characterised by a "bootstrap" unit, in conduit communication with said enclosure, operated in combination with a compressor, said compressor being driven by a turbine of said auxiliary air circulating system, said turbine being mechanically coupled to said compressor, and said compressor being in conduit communication with the compressor stage of said "bootstrap" unit by way of intercooler means in which the air of said auxiliary air circulating system is passed into heat exchange relationship with the air of the substantially closed circuit air cooling system.

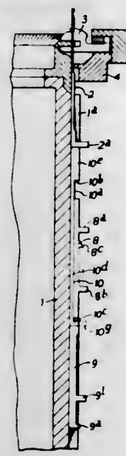


3,097,509
REFRIGERATING APPARATUS
Leonard J. Mann, Victor A. Williamitis, and Edward C. Simmons, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 24, 1960, Ser. No. 64,620
2 Claims. (Cl. 62—469)



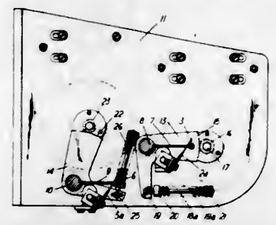
2. Refrigerating apparatus including an insulated cabinet provided with an outer metal shell and two insulated chambers within the shell, a refrigerating system containing a refrigerant and a lubricant including evaporating means having two sections connected in series, one of said sections being associated in heat transfer relation with each of said chambers, a compressor means having a suction inlet connected to said evaporating means and having an outlet, means associated with said outlet for removing lubricant from the compressed refrigerant and returning the removed lubricant to the compressor means, a condenser, a capillary tube restrictor means connecting said condenser and evaporating means, a liquid refrigerant trap in heat transfer relation with said outer metal shell for trapping increasing amounts of liquid refrigerant as the environment temperature of the compressor means falls comprising a container elongated in the ascending direction having its upper portion connected to said condenser, and heat dissipating conduit means of substantial length connecting the outlet of said compressor means with a portion of the interior of said container substantially midway between the top and bottom thereof.

3,097,510
NEEDLE SELECTING MECHANISMS IN KNITTING MACHINES
Albert M. Brown, Leicester, England, assignor to G. Stibbe & Co. Limited, Leicester, England, a British company
Filed Dec. 8, 1960, Ser. No. 74,538
Claims priority, application Great Britain Dec. 14, 1959
12 Claims. (Cl. 66—50)



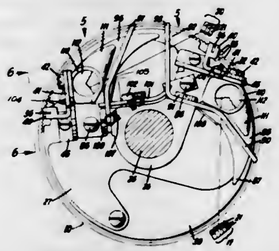
1. A knitting machine comprising, in combination, a needle bed having needle grooves formed therein, a set of independent knitting needles arranged to work in said grooves, two separate independently operable needle selection mechanisms which are disposed at different heights, said two needle selecting mechanisms being adapted to effect selections of needles for respectively different purposes, two separate and independent needle-actuating jacks to each needle requiring to be influenced by the said needle selecting mechanisms, said two jacks being both arranged in the same needle groove as, and thus in alignment with, the said needle and, interposed between said two jacks, a spacer element which is also accommodated in the same groove as the needle but is so formed as to enable it to be acted upon and moved longitudinally, to transmit a corresponding movement to the needle, by either of the two independent selectively actuated jacks without disturbing the other.

3,097,511
WARP KNITTING MACHINES
Allan William Henry Porter, Burton-on-Trent, England, assignor to Hobourn-F.N.F. Limited
Filed Mar. 11, 1957, Ser. No. 645,093
Claims priority, application Great Britain Mar. 16, 1956
17 Claims. (Cl. 66—86)



1. A high speed flat warp knitting machine having a mechanism for controlling the tension in the warp threads by adjusting the speed of rotation of a continuously driven warp beam, the mechanism comprising a tension bar over which the threads are led and which is connected through a resilient connection to a speed-control member, movement of which actuates a mechanism for adjusting the speed of rotation of the warp beam, the speed-control member being connected through a weaker resilient connection to a fixed support and also being connected to a device which acts to damp out oscillations in the member at frequencies of the order of that at which the machine operates.

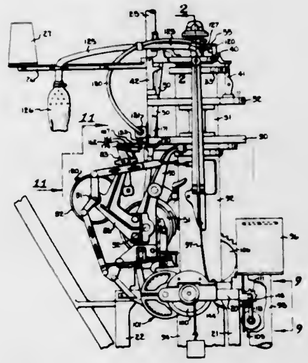
3,097,512
YARN CLAMPING AND SEVERING MECHANISM FOR KNITTING MACHINES
James D. Moyer, Wyomissing, Pa., assignor, by mesne assignments, to The Gordon Company, Winston-Salem, N.C., a partnership
Filed Nov. 2, 1959, Ser. No. 850,487
8 Claims. (Cl. 66—140)



1. In a circular knitting machine having a rotating cylinder with a circular series of needles, a plurality of feed stations mounted in fixed angularly spaced positions around said cylinder, each of said stations including retractable yarn guide fingers for feeding yarns to said needles, a stationary disk positioned within the circle of needles adjacent to the top of said cylinder, and separate means mounted in fixed position on said disk for clamping the yarns at each of said feed stations, said separate means comprising a first and a second clamp member, means for raising said first clamp member at one of said feed stations to receive and clamp the yarns of the guide fingers when retracted thereat, and means for raising said second clamp member at another of said feed stations to receive and clamp the yarns of the guide fingers when retracted thereat, said last named means comprising a pivotally mounted member having oppositely extending ends operatively connecting said first and said second

clamp members, said pivotally mounted member being operated by the movement of said first clamp member to raised position to raise said second clamp member.

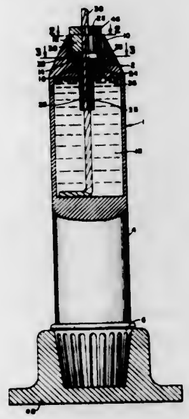
3,097,513
YARN CUTTING AND CLAMPING MEANS FOR KNITTING MACHINES
Jesse A. Pike, Liberty, and Eargle L. Eulliss, Pittsboro, N.C., assignors to Alamance Industries, Inc., Burlington, N.C., a corporation of North Carolina
Filed Sept. 5, 1957, Ser. No. 682,240
1 Claim. (Cl. 66—145)



In a circular knitting machine having circularly arranged cylinder needles and a plurality of yarn feeding fingers movable into and out of yarn feeding position relative to said needles, a pattern chain, a main pattern drum and an auxiliary pattern drum; the combination therewith of a single yarn cutting device disposed closely adjacent the path of said cylinder needles, said cutting device comprising a fixed cutting blade and a movable cutting blade, pattern controlled means for moving said movable cutting blade in timed relation to movement of said yarn feeding fingers, an open ended nozzle adjacent said cutting device, means for creating suction currents adjacent said open ended nozzle to attract the ends of all yarns severed by said cutting device into said nozzle, and control means for selectively activating said suction creating means from said pattern chain, said main pattern drum or said auxiliary pattern drum.

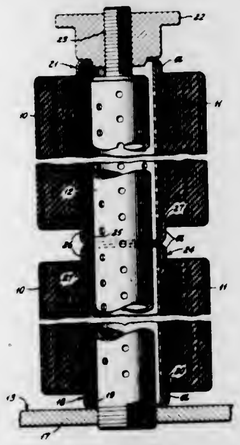
3,097,514
ARTIFICIAL CANDLE
Arthur H. Stone, 212 Broadway, Massapequa Park, N.Y.
Filed Nov. 2, 1961, Ser. No. 149,649
4 Claims. (Cl. 67—55)

1. An artificial candle comprised of a casing having head, body and base portions, a bore within said head portion, a wick holder, a fuel chamber within said body portion, and a wick extending through said wick holder into said fuel chamber, said wick holder including a vertically fluted top piece having upper and lower ends, a vertically fluted tubular sleeve depending integrally and centrally of said lower end, said tubular sleeve being smaller of diameter than said top piece so as to form an annular collar at the junction of said lower end and said tubular sleeve, an O-ring frictionally secured annularly of said tubular sleeve and contiguously with said annular collar, said bore having an upper passage and a substantially smaller lower passage, a shoulder disposed annularly at the juncture of said passages, said passages being disposed in vertical coaxial relation and in communication with said fuel chamber, said tubular sleeve being slidably received within said lower passage, said O-ring being slidably and sealingly secured within said



upper passage and adapted for seating engagement with said shoulder.

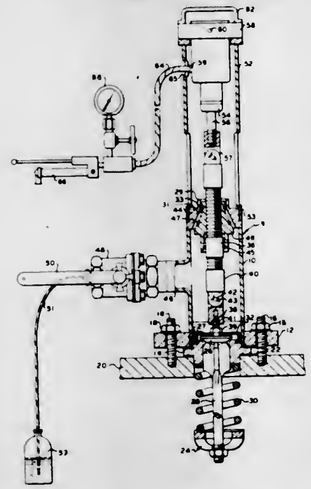
3,097,515
SEAL FOR YARN PACKAGE TREATING APPARATUS
Jefferson Lyle Claiborne, Chattanooga, Tenn., assignor to Dixie Mercerizing Company, Chattanooga, Tenn., a corporation of Tennessee
Filed Jan. 18, 1962, Ser. No. 167,126
1 Claim. (Cl. 68—198)



In apparatus for the liquid treatment of packages of yarn including a plurality of yarn packages, a perforated bobbin extending axially through each package and means to axially compress a group of said packages in a stack with the ends of their respective bobbins in registry, the improvement that comprises a seal for sealing the ends of said packages having a substantially cup-shaped body associated with each end of each yarn package, the bottom wall of said body defining an opening of a diameter less than that of said bobbin, said bottom wall forming a bearing surface for receiving the end of one of said bobbins, the side wall of said body having an annular edge at its periphery of a diameter slightly greater than that of said bobbin to dig into and form a seal against the

respective yarn package under the bias of said compression means.

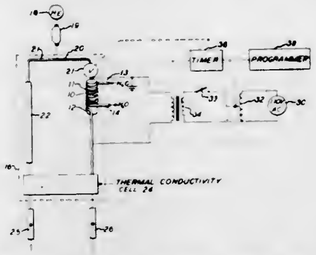
3,097,516
SAFETY DEVICE FOR USE IN TESTING RELIEF VALVES ON PRESSURIZED FLUID CONTAINERS
Edwin E. Reed, John W. Hale, and Frank S. Hamlin, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,507
15 Claims. (Cl. 73—4)



1. In a safety device for testing a relief valve on a fluid-containing vessel comprising a housing adapted to form a sealed attachment around a relief valve; a coupling rod extending thru said housing from the attaching end thereof having means adjacent said end for attaching to the head of said relief valve; means in the end of said housing opposite the attaching end for sealing said housing with said coupling rod comprising an inwardly facing valve seat in the opposite end of said housing surrounding said rod and a valve head on said rod inside said housing adapted to seat in said valve seat on axial movement of said rod away from said relief valve; and a valve in the side of said housing for controlling fluid flow therefrom, the improvement comprising a first annular section on the valve head on said rod extending away from said relief valve; a second annular section on said valve seat concentrically surrounding said first annular section; and slidable sealing means between said first and second annular sections adapted to maintain a fluid tight seal upon limited longitudinal movement of said coupling rod.

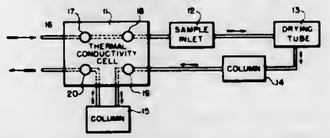
3,097,517
CHROMATOGRAPHY
Stuart W. Bowen and Monte L. Marks, Pasadena, Calif., assignors, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed May 23, 1957, Ser. No. 661,081
6 Claims. (Cl. 73—23)

1. In an improved chromatographic analysis system the combination of a chromatographic column constructed of electroconductive material so as to be of low thermal inertia, a source of electric current, current flow control means operable at a selected point during the chromatographic analysis to initiate the flow of electric current from said source at a controlled rate through the column, whereby the temperature of the column rises from an initial analysis temperature in response to said current flow so as to increase the accuracy of the analysis, said current flow control means being operable upon the completion of the analysis to terminate said current flow



through the column, and column cooling means for initiating the forced cooling of the chromatographic column upon the completion of the analysis, whereby the temperature of the column is rapidly returned to the initial analysis temperature.

3,097,518
APPARATUS FOR GAS ANALYSIS
Billy W. Taylor and Albert Anthony Poll, Jr., Pittsburgh, Pa., assignors to Fisher Scientific Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 22, 1958, Ser. No. 762,472
9 Claims. (Cl. 73—23)

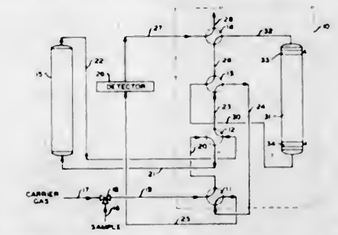


1. Gas chromatographic apparatus comprising, a source of carrier gas, means forming a flow path for flowing the carrier gas over first and second detectors in series, a sample inlet connected to the exit end of said means beyond the second of said two detectors, a first chromatographic column connected to said sample inlet, a third detector positioned in said flow path at the exit end of said first column, a second chromatographic column connected to the exit end of the first column beyond said third detector, a fourth detector positioned in said flow path at the exit end of the second column, a measuring bridge circuit in which said first and second detectors form geometrically opposing arms and in which said third and fourth detectors form geometrically opposing arms, said first and second detectors initiating electrical signals in the output of said measuring bridge circuit when carrier gas alone flows past them, and said third and fourth detectors initiating electrical signals in the output of said measuring bridge circuit when carrier gas alone flows past them and when components of the sample flow past them in the carrier gas, the packing and capacity of the columns being such that signals initiated by the detectors when components of the sample in the carrier gas flow by the third and fourth detectors are spaced from each other in point of time.

3,097,519
CHROMATOGRAPHIC ANALYZER
John A. Favre, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,705
2 Claims. (Cl. 73—23)

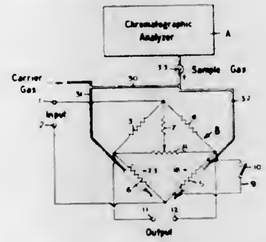
1. Apparatus comprising, in combination, first and second columns each of which contain a material that selec-

tively retards the passage therethrough of the constituents of a fluid mixture to be analyzed; first, second, third and fourth four-way selector valves; first conduit means communicating with the sample inlet of said first selector valve for the introduction of a carrier gas; second conduit means communicating with said sample inlet of said first selector valve for the introduction of the fluid mixture to be analyzed; third conduit means communicating between said first selector valve and said second selector valve; fourth conduit means communicating between said first selector valve and a means of measuring a property of a fluid mixture which is representative of the composition thereof; fifth conduit means communicating between said first selector valve and said third selector valve, said first selector valve effecting communication between said sample inlet and said third conduit means and between said fourth and fifth conduit means in a first position, and between said sample inlet and said fifth conduit means and between said third and fourth conduit means in a second position; sixth conduit means communicating between said second selector valve and said third selector valve; seventh conduit means communicating between said second selector valve and the outlet of said first column; eighth conduit means communicating between said second selector valve and the inlet of said first column, said second selector valve effecting communication between said third and eighth conduit means and between said sixth and seventh conduit means in a first position, and between said third and sixth conduit means and between said seventh and eighth conduit means in a second position; ninth conduit means communicating between said third selector valve and the inlet of said second column; tenth conduit means communicating between said third selector valve and said fourth selector valve, said third selector valve effecting communication between said sixth and fifth conduit means and between said ninth and tenth conduit means in a first position, and between said sixth and ninth conduit means and between said fifth and tenth conduit means in a second position; eleventh conduit means communicating between said fourth selector valve and a means of measuring a property of the fluid mixture which is representative of the composition thereof; twelfth conduit means communicating with said fourth selector valve; thirteenth conduit means communicating between said fourth selector valve and the outlet of said second column, said fourth selector valve effecting communication between said eleventh and twelfth conduit means and between said tenth and thirteenth conduit means in a first position, and between said tenth and eleventh conduit means and between said twelfth and thirteenth conduit means in a second position.

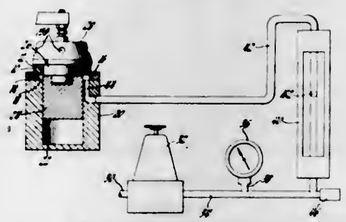


3,097,520
REDUCING THERMAL UPSETS IN FLUID MEASURING CELLS
Wilmer R. Thompson, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Mar. 10, 1960, Ser. No. 14,138
7 Claims. (Cl. 73—27)

1. In the method of measuring the concentration of the low concentration components of a fluid mixture by separating said fluid mixture into substantially all its components by means of a chromatographic analyzer and successively passing all of said separated components through a measuring device, said measuring device comprising a measuring cell adapted to receive said separated components and an electrically energized, current carrying temperature sensitive transducer within said measuring cell, said transducer coupled to an electrical detecting means, said measuring device operable at a reference temperature and within a limited variation of said reference temperature and capable satisfactorily measuring the concentration of separated components which produce temperatures in said measuring cell within said limited variation, a separated component of a concentration sufficient to produce a temperature outside of said limited variation having the effect of thermally upsetting the equilibrium of said measuring device, the improvement which comprises reducing the current passing through said transducer prior to the entry of said thermally upsetting component into said measuring cell to a value such that the temperature within said measuring cell is maintained within approximately 1.5° C. of said reference temperature, and maintaining the current passing through said transducer at said reduced value until said thermally upsetting component passes out of said measuring cell.



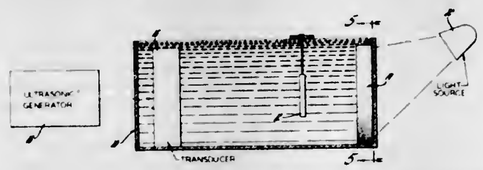
3,097,521
GAUGING APPARATUS AND METHOD FOR MEASURING SEAL QUALITY
Robert L. Dega, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,858
21 Claims. (Cl. 73—40)



1. An apparatus for checking the quality of flexible shaft seals comprising a table, a block secured to said table and having a seal receiving recess formed therein, a stub shaft secured to said table and concentrically disposed within said recess such that an annular flexible seal received in said recess will surround said shaft in close fitting engagement therewith, a clamp mounted on said table to secure a flexible seal received in said recess, means for supplying air to said recess such that air will flow between said seal and said shaft, and means to indicate the amount of air flowing between said seal and said shaft as a determination of the qualtiy of said seal.

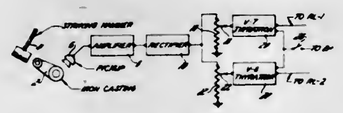
18. A method of testing sealing quality of a production flexible shaft seal subsequent to manufacture and prior to installation, and comprising the steps of, placing said seal in sealing relationship with a test member having predetermined dimensional characteristics, supplying fluid under pressure to a fluid cavity defined by said seal and said test member, circumflexing the seal at the area of sealing contact with the surface of the test member solely by action of the fluid under pressure in the fluid cavity thereby disengaging the seal from sealing relationship with the test member, confining fluid flow from said cavity to a flow path between said seal and said test member, and measuring fluid flow rate past said seal as an indication of sealing quality of said flexible seal.

3,097,522
IMAGE CONVERTER
Edward F. Weller, Jr., Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 13, 1961, Ser. No. 116,767
8 Claims. (Cl. 73—67.6)



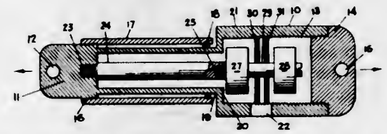
6. Apparatus for the ultrasonic inspection of objects including a source of ultrasonic energy, transducing means for generating ultrasonic vibrational waves from the energy received from the source, means responsive to ultrasonic wave energy comprising support means one of whose surfaces defines a viewing screen, said means having a plurality of compartments therein, each compartment being filled with a substantially transparent liquid of low viscosity and having an opaque flake suspended in the liquid, the largest dimension of the flake being smaller than the wave length of the ultrasonic energy in the liquid, the compartments being large enough to permit rotational freedom of the flake, the support means being positioned such that the ultrasonic energy from the transducing means is transmitted first through an object and then through the support means such that the flakes tend to align in a manner which is indicative of irregularities in the object.

3,097,523
SONIC TESTING DECAY DETECTOR
Milton J. Diamond, Saginaw, Robert F. Spain, Troy, and Robert H. Latch, Birch Run, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 26, 1960, Ser. No. 45,476
5 Claims. (Cl. 73—69)



1. In testing means for checking the soundness of parts having a natural resonant frequency of vibration, means to strike a part to be tested to set it into resonant vibration, transducer means mounted adjacent said part when in its vibratory state to pick up the mechanical vibrations of the same and convert them into electrical oscillations, amplifying means connected to the transducer means to amplify the electrical oscillations produced by the transducer means, rectifier means connected to the amplifying means to provide a direct current voltage from the signal output of the amplifying means, a plurality of parallel circuits connected to the output of the rectifier means each including adjustable impedance means across which the direct current voltage is developed, a source of electrical power, electronic means having a control electrode connected to each adjustable impedance means and set to conduct at different values, a first switching means connected between the source of electrical power and the electronic means to control the initial energization thereof, relay switching means connected to each electronic means and actuated by conduction through the same and timing means connected to the source of electrical power and the relay switching means and turned on and off thereby to indicate the duration of the time of decay of the amplitude of the signal from one value to another as indication of the soundness of the part.

3,097,524
LOAD MEASURING DEVICE
Irvin L. Gleruni, Canoga Park, Calif., assignor to W. C. Dillon & Company, Inc., a corporation of California
Filed Feb. 8, 1960, Ser. No. 7,311
4 Claims. (Cl. 73—141)

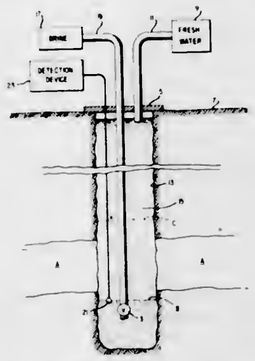


1. A load measuring device comprising: an elongated casing, said casing having an integral major diameter portion and a minor diameter portion and an integral radially extending annular shoulder interconnecting said major and minor diameter portions; coupling means connected, respectively, to said major diameter portion and said minor diameter portion, said coupling means being designed for connection to force exerting members, said minor diameter portion and said shoulder being responsive and designed, respectively, to change in length and bend according to said force, and said major diameter portion being substantially unresponsive to said force; transducer means having at least two elements, one of said elements being coupled to said minor diameter portion, and the other of said elements being coupled to said major diameter portion, whereby the relative positions of said elements is changed in response to said force.

3,097,525
PROFILING METHOD USING A NON-IONIZING ORGANIC ADDITIVE
Don R. Holbert, Tulsa, Okla., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 5, 1959, Ser. No. 797,454
5 Claims. (Cl. 73—152)

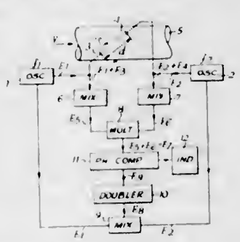
2. In a method for determining the fluid permeability of a subterranean formation traversed by a well bore "under vacuum" containing a tubing extending downwardly below the formation and forming an annulus between the tubing and the face of the formation, introducing brine into the tubing in an amount sufficient to form in the tubing annulus a column uncommunicative with the formation, introducing into the annulus fresh water in an amount sufficient to cover the formation, said brine and fresh water forming two liquid columns meeting in the annulus at an interface located below the formation, introducing additional amounts of brine into the tubing at known rate to cause the interface to ascend in the an-

nulus with the upper levels of the columns being maintained below the surface of the earth, determining the rate of ascent of the interface in the well bore, its rate of ascent changing on traversing a permeable portion of the well, and ascertaining the elevation of the interface as its rate of ascent changes, the change in rate of ascent



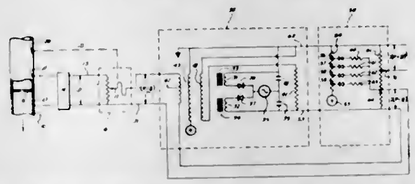
being a measure of permeability of the formation at the elevation at which the rate of ascent changes; the step comprising incorporating into the fresh water a non-ionizing organic additive in an amount sufficient to impart a viscosity to the water essentially the same as the viscosity of the brine.

3,097,526
FLOWMETERS
Ronald Ernest Fischbacher, Orpington, Kent, England, assignor to National Research Development Corporation, London, England
Filed July 27, 1959, Ser. No. 829,916
Claims priority, application Great Britain Oct. 14, 1958
3 Claims. (Cl. 73—194)



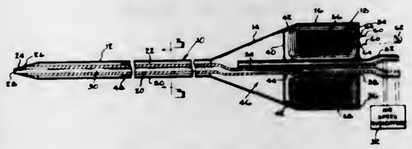
1. An ultrasonic flowmeter for measuring the rate of fluid flow relatively to first and second transducers spaced apart up-stream and down-stream of said fluid flow and defining a transmission path for ultrasonic waves therebetween through said fluid, comprising a first oscillator connected to energize said first transducer as a transmitter, a second oscillator connected to energize said second transducer as a transmitter, a first mixer supplied with signals both from said first oscillator and from said first transducer operating as a receiver and supplying a signal to a first frequency multiplier, a second mixer supplied with signals both from said second oscillator and from said second transducer operating as a receiver and supplying a signal to said first frequency multiplier, a third mixer supplied with signals both from said first and said second oscillators and supplying a signal to a second frequency multiplier, a phase comparator connected to compare the output signals from said first and second frequency multipliers and indicating means responsive to the phase difference between the two said output signals.

3,097,527
FLOW METER
Billy E. Davis and Leslie E. Gormley, Houston, Tex., assignors to Computers, Incorporated, a corporation of Texas
Filed Feb. 2, 1959, Ser. No. 790,681
5 Claims. (Cl. 73—205)



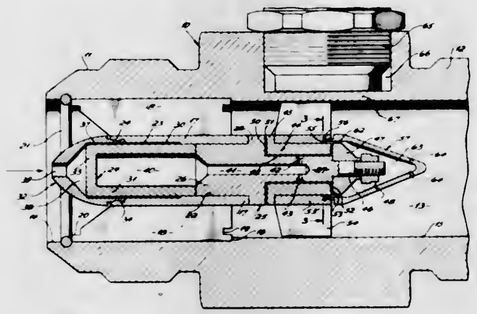
1. A flow meter comprising a length of pipe having an orifice therein, an electro-mechanical transducer having a mechanical input and electrical output, means connecting the mechanical input of the transducer to the pipe to respond to the pressure drop across the orifice, a potentiometer including first and second ends and a center tap, electric conductor means connecting the ends of the potentiometer to the electric output of the transducer, means responsive to the static pressure in the pipe on one side of the orifice to vary the distance of the center tap of the potentiometer from one end thereto in proportion to the variations in said static pressure, a magnetic amplifier of the saturable reactor type including a control winding, a bias winding, and a feedback winding, means connecting said bias winding to a source of direct current potential, means including a first resistor in series with the feedback winding connecting said feedback winding and first resistor across the output of the magnetic amplifier, said feedback winding being wound for positive feedback, a square root network including second and third resistors connected in series across the output of the amplifier and a fourth resistor series connected to the amplifier output terminal to which said second resistor is conected and a source of direct current, said square root network further including a plurality of rectifiers each connected in series with a portion of said fourth resistor and the juncture of said second and third resistors, and electric conductor means connecting in series said third resistor, said control winding and the portion of said potentiometer between said one end and said center tap.

3,097,528
HEATED PITOT TUBE
Donald H. Mohring, Oakland Park, Fla., assignor to U.S. Industries, Inc., a corporation of Delaware
Filed Apr. 8, 1958, Ser. No. 727,201
11 Claims. (Cl. 73—212)



1. A deicing Pitot tube comprising a total pressure tube, a static pressure tube surrounding and spaced from said total pressure tube to form an annular chamber between said tubes, means joining the forward and rearward ends of said tubes to form a complete electrical circuit, means forming a transformer with said tubes, said transformer having a primary winding and said tubes forming a one-turn secondary winding, and said means joining the rearward ends of said tube being flexible for accommodating relative shifting of said tubes with respect to each other under thermal expansion and contraction.

3,097,529
FLOWMETER
Kenneth R. Jackson, Los Angeles, and William Selden, Encino, Calif., assignors, by mesne assignments, to The Foxboro Company, a corporation of Massachusetts
Filed Feb. 24, 1960, Ser. No. 10,626
10 Claims. (Cl. 73—231)



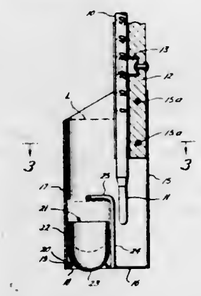
1. A fluid flowmeter comprising a casing containing a flow passage for the measured fluid, a turbine shaft supported within said casing, a bearing sleeve surrounding said shaft, a turbine rotor supported on said bearing sleeve and having blades located in said flow passage, means located at opposite ends of said sleeve for confining said sleeve on said shaft, said sleeve being dimensioned to provide clearance spaces separating said sleeve from said shaft and from said confining means, fluid supply means in communication with the surface of said shaft for introducing fluid to said spaces and producing a bearing surface between said shaft and said sleeve and an end thrust bearing surface at each end of said sleeve, and a tail cone extending downstream of said rotor to a nose portion and having its base secured to said rotor, the static pressure developed on said tail cone producing a resultant upstream thrust on said rotor against the upstream thrust bearing at flow velocities above a predetermined value.

3,097,530
COMBINATION THERMOMETER
Harry Weksler, Massapequa Park, N.Y., assignor to Weksler Instruments Corporation, Freeport, Long Island, N.Y., a corporation of New York
Filed Oct. 7, 1959, Ser. No. 844,943
2 Claims. (Cl. 73—340)



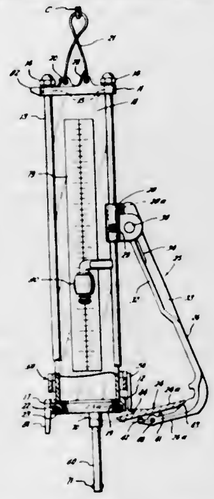
1. A combination oven and roast thermometer comprising probe means constructed for insertion in a roast, and carrying at its upper end first means for indicating the temperature within a roast and second means mounted on the upper end of said probe means for indicating the temperature of the oven area immediately surrounding a roast, said probe means including a hollow tube and an elongated glass stem thermometer received within the tube, said first means including a portion of said glass thermometer exposed at the upper end of the tube, an indicating shield mounted at the upper end of the tube in cooperative association with said glass thermometer, said second means including a second thermometer mounted on said shield and exposed to the area surrounding said shield, said shield having an upper portion which extends above the upper end of the tube and first thermometer, the second thermometer being mounted on the upper portion of the shield and comprising a bi-metal element anchored at the back of the upper portion of the shield and having an indicating portion projecting through a slot in the shield visible from the front side thereof.

3,097,531
TANK THERMOMETER AND VALVE THEREFOR
Robinson W. Brown and Willis L. Mynatt, San Antonio, Tex., assignors to W. H. Curtin and Company, Houston, Tex., a corporation of Texas
Filed Dec. 9, 1960, Ser. No. 74,979
1 Claim. (Cl. 73—354)



A tank thermometer, comprising, an elongate thermometer, a rigid backing member adapted to support the thermometer in vertical position, a generally tubular cage member carried by the backing member to surround only the lower end portion of the thermometer, said cage member being open at its upper end and having a bottom wall, a port in said bottom wall, an upwardly projecting annular flange surrounding said port and defining a valve seat, and a downwardly closing check valve inside said cage member cooperating with said seat, said check valve comprising a thin-walled thimble-shaped body open at its upper end and having a convexly rounded bottom adapted to engage said seat, said body being constructed of a flexible, resilient, non-metallic material and having a weight such that the valve member is movable to port-opening position under a differential fluid pressure across said port in the range of about 0.015 to about 0.020 pound per square inch, and guide means for said valve constraining substantially vertical movement of said valve relative to the seat, and a stop member in the cage member for limiting the extent of upward movement of the valve relative to said seat, said guide means and said stop member comprising an integrally formed structure of inverted generally U-shaped configuration defined by a pair of spaced-apart leg members vertically disposed in guiding relation to one side of said valve member, said leg members having their upper end portions joined and turned to extend over the upper end of said valve member in vertically spaced relation thereto.

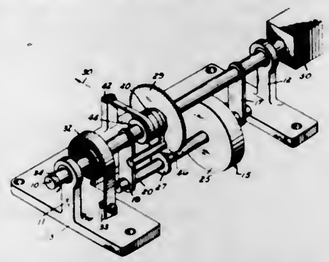
3,097,532
LIQUID SAMPLING DEVICE
Robinson W. Brown and William E. Oakey, San Antonio, Tex., assignors to W. H. Curtin and Company, Houston, Tex., a corporation of Texas
Filed Apr. 29, 1960, Ser. No. 25,635
5 Claims. (Cl. 73—425.4)



1. A liquid sampling device, comprising, a tubular barrel, an enclosure for the barrel including head and base members secured respectively against the upper and lower ends of the barrel, said base member having a port therein coaxial with the barrel, means carried by the lower end face of the base member defining an annular valve seat about said port, said last-mentioned means comprising an annular retaining groove in said lower end face, a resilient seal ring seated in said groove, said sealing ring comprising an annular body of a resilient material and a supporting ring of relatively rigid material bonded to said resilient material, means for controlling said port, comprising, a valve having a generally disk shape, an actuating lever for said valve, said lever being generally L-shaped and comprising a single vertical arm and a single horizontal arm, said valve being rockably supported in horizontal position on top of the horizontal arm, means on the horizontal arm defining longitudinally spaced abutments limiting the extent of rocking movement of said valve, said vertical arm being pivotally connected to a side of said enclosure at a point intermediate the head and base members to swing in a vertical plane toward and away from said barrel whereby to swing said valve toward and away from port-closing position on said seat, resilient means biasing the actuating lever toward the port-closing position of the valve, releasable latch means arranged between the enclosure and the valve for holding the valve in the port-opening position, and trip means movably mounted on the enclosure operable in response to longitudinal movement relative to the enclosure to release the latch means.

3,097,533
FORCE BALANCE ACCELEROMETER
John D. Heinzmann, Middletown, Conn., assignor to Raymond Engineering Laboratory, Inc., Middletown, Conn., a corporation of Connecticut
Filed Sept. 11, 1959, Ser. No. 839,484
18 Claims. (Cl. 73—490)

7. A force balance accelerometer comprising a first rotatable shaft, a motor operative to rotate said first shaft, a second shaft, means supporting said second shaft for pivotal movement about said first shaft, said last-named means supporting said second shaft for rotation relative thereto, an integrating element mounted on said second shaft, drive means operative between said first shaft and said second shaft to effect rotation of said integrating means with said first shaft, a brake on said first shaft



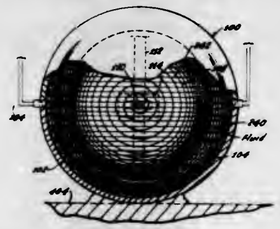
preventing rotation thereof, means interconnecting said brake and said second shaft whereby pivotal movement of said second shaft in response to acceleration of said first shaft causes release of said brake to permit rotation of said first shaft and said second shaft, the reaction force to rotation of said second shaft and said integrating means causing restoration of said second shaft to the zero acceleration position thereby to close said brake.

3,097,534
ACCELERATION INDICATOR
John F. Pasieka, South Acton, Mass., assignor of one-half to Raymond L. Renner, Cochituate, Mass.
Filed Nov. 28, 1960, Ser. No. 71,929
2 Claims. (Cl. 73—492)



1. Acceleration-responsive apparatus comprising a tubular casing including transparent material and having a substantially cylindrical opening therethrough, an elongated mass member of generally cylindrical outline disposed within said opening with radial clearance for movement along the longitudinal axis of said opening responsive to acceleration having at least a component along said axis, end caps closing said opening, a spring within said opening resiliently biasing said mass member in one direction along said axis, said mass member having at least one caging section of reduced diameter and of truncated substantially conical form with the conical taper thereof in said one direction along said axis, a plurality of caging balls disposed about said conical caging section and confined axially and radially in relation to said mass member between outer surfaces of said reduced-diameter conical caging section and inner surfaces of said casing about said opening, said balls being of diameter greater than the least lateral spacing between said inner and outer surfaces and of diameter less than the greatest lateral spacing between said inner and outer surfaces, the diameter of said balls also being slightly in excess of the radial spacing between the outer periphery of said mass member and the points along said outer surfaces at which the balls contact said outer surfaces when they are in their innermost positions nearest the smaller base of said truncated conical section, whereby said balls tend to wedge between said inner and outer surfaces only when axially nearest the larger base of said truncated conical section, and whereby said balls tend to roll with low friction upon said inner surface of said tube when said balls are nearest said smaller base of said truncated conical section, an index on said mass member visible through the transparent material of said casing, and acceleration indicia distributed along said tubular casing, whereby registrations of said index with said indicia characterize maximum accelerations producing movements of said mass member relative to said casing in the direction opposite to said one direction along said axis.

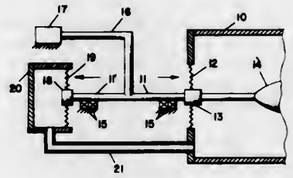
3,097,535
TRANSDUCING AND CONTROL SYSTEMS
Naum S. Bers, Los Angeles, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,554
35 Claims. (Cl. 74—5.7)



1. In combination: a first winding having a spherical configuration and provided with a plurality of turns disposed along a first particular axis, means coupled to the first winding for energizing the winding to produce a magnetic field having a trigonometric pattern of intensity at progressive positions external to the winding and along a meridian of the spherical configuration, means coupled to the first winding for producing a rotation of the winding on a second particular axis transverse to the first particular axis, gyro means disposed within the first winding for rotation on a third particular axis having a vectorial component corresponding to the first particular axis, means coupled to the gyro means for producing a rotation of the gyro means on the third particular axis, and a second winding having a spherical configuration and provided with a plurality of turns disposed along a fourth particular axis having a vectorial component corresponding to the second particular axis, the second winding being disposed within the magnetic field provided by the first winding to produce signals in accordance with the precession of the first winding on a fifth particular axis transverse to the first and second particular axes.

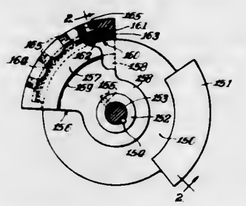
3,097,536
PRESSURE COMPENSATING APPARATUS
Shirrel R. Young, Pico Rivera, Calif., assignor to Aeroscience, Inc., a corporation of California
Filed Aug. 8, 1960, Ser. No. 48,142
1 Claim. (Cl. 74—18.2)

In a force measuring system, the combination comprising: a chamber having a diaphragm sealed thereto and a connecting member passing from the interior to the exterior of said chamber through said diaphragm, said member being sealed to said diaphragm to transmit forces from an object in said chamber to measuring apparatus exterior of said chamber; and means for preventing the introduction of an additional force on said member by said diaphragm as a consequence of changes in the pressure in said chamber relative to the ambient pressure, said means including an auxiliary chamber exterior to said first mentioned chamber having an auxiliary diaphragm in opposing relationship to said first mentioned diaphragm and sealed to said auxiliary chamber, said auxiliary diaphragm being of substantially identical dimensions to said first mentioned diaphragm; means connecting an exterior portion of said member to said auxiliary diaphragm; and a conduit connecting said auxiliary chamber to said first mentioned chamber to place said chambers in communication with each other so that the chambers have identical pressures therein at all times



whereby introduction of additional forces into said member as a consequence of changes in pressure within said first chamber relative to ambient pressure is prevented by identical forces transmitted to said member by said auxiliary diaphragm whereby said connecting member is only subject to forces from said object within said first mentioned chamber.

3,097,537
VIBRATION-INDUCING APPARATUS
Edwin F. Peterson, P.O. Box 191, Neponset, Ill.
Filed Nov. 6, 1959, Ser. No. 851,455
3 Claims. (Cl. 74—61)

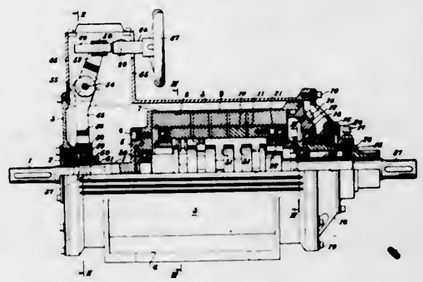


1. Vibration-inducing means comprising an operationally rotatable shaft, first and second radially extending members mounted on said shaft each having an enlarged peripheral portion locating the center of mass thereof eccentrically of said shaft, said first member being of plate-like form and said second member being of channel form receiving the first member therein and of appreciably less peripheral extent than the first member, one of said members being fixed for rotation with the shaft and the other being rotatable relative thereto, and means affording frictional engagement between said members and resiliently exerting pressure thereon sufficient to prevent relative rotation thereof upon operational rotation of the shaft but insufficient to prevent manual rotation thereof relative to each other for adjustment of said centers of mass.

3,097,538
MECHANICALLY OPERATING CONTINUOUS SPEED VARIATOR
Lino Gubbiotti, Perugia, Italy, assignor to Societá Variatori Gubbiotti S.r.L., Perugia, Italy, a company of Italy
Filed Dec. 2, 1960, Ser. No. 73,250
Claims priority, application Italy Jan. 11, 1960
4 Claims. (Cl. 74—112)

1. In a mechanically operating continuous speed variator with an input shaft adapted to be connected to a

prime mover and having a first cylindrical drum fixed to said shaft and having an internal circular eccentric bore and two opposed longitudinal recesses at the front end thereof, a second drum positioned in said bore and also having a circular eccentric bore with an eccentricity equal to that of said first drum and having helical guide means on its outer surface, a unit comprising in combination an annular sleeve mounted in the bore of said second drum, a collar fixed on said sleeve, an output shaft aligned with said sleeve, a tooth on said output shaft, a hollow hub carrying said output shaft, a double slider coupling connecting said sleeve to said hollow hub and allowing translational movements of said sleeve, hindering rotational movement thereof about its axis, said output shaft having recessed transverse seats therein, a thrust element mounted in each of said transverse seats for transmitting the movement of said annular sleeve to said output shaft, said thrust elements each having a longitudinal groove and two end projections, rollers mounted in said longitudinal grooves, a sliding block slidably supported by said rollers between said end projections and having a notch therein, said seats having peripheral grooves in said output shaft on the sides of the recesses for said seats, helical springs mounted in said grooves, said springs bearing at one end on said output shaft and at other end on said thrust elements, a casing in which the entire unit is mounted, and a lock screw carried by said casing and engageable with said hollow hub for blocking said hollow hub.

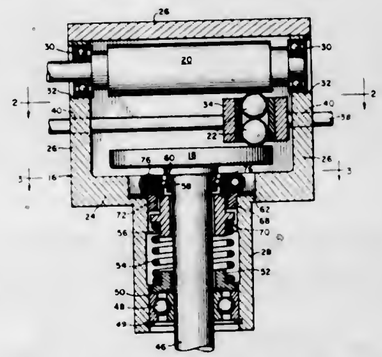


3,097,539

INTEGRATOR DISK BEARING IMPROVEMENT

Willard J. Opocensky, Glendale, Calif., assignor to General Precision, Inc., a corporation of Delaware

Filed Jan. 13, 1961, Ser. No. 82,465
6 Claims. (Cl. 74—198)



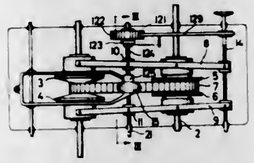
1. An integrator having a rotatable disc, a cylinder rotatable on an axis normal to the axis of rotation of said disc, motion transmission means comprising a movable carriage confining a pair of balls in driving engagement with said cylinder, said disc and each other, a shaft affixed to said disc rotatably supported by a bearing, a plurality of radially disposed bearings circumferentially disposed about said first mentioned bearing and confining said first bearing to a precise axis and adjustment means associated with at least one of said radially disposed bearings for accurately positioning said radially disposed bearings against said first bearing whereby axial movement of said shaft is freely permitted.

3,097,540

AUTOMATIC CHAIN TIGHTENING MECHANISM FOR INFINITELY VARIABLE CONE PULLEY GEARS

Heinrich Berens, Bad Homburg vor der Hohe, Germany, assignor to Reimers Getriebe K.G., Ascona, Switzerland, a firm of Switzerland

Filed July 9, 1962, Ser. No. 208,438
Claims priority, application Germany Mar. 17, 1962
4 Claims. (Cl. 74—230.17)



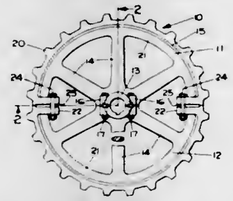
1. In an infinitely variable transmission having a housing, a pair of transmission shafts rotatably mounted in said housing, two pairs of conical pulley disks within said housing and each pair mounted on one of said shafts, flexible endless power transmitting means connecting said two pairs of disks and adapted to travel between them under a certain tension, adjusting means comprising a tightening spindle rotatably mounted in said housing centrally between and parallel to said shafts and a setting spindle rotatably mounted in said housing near one end thereof, both of said spindles having oppositely directed threads at opposite sides of the central plane of said transmission, a pair of threaded members on each of said spindles and engaging with said threads thereof and being movable in opposite directions along each spindle when the same is turned, a pair of levers pivotably mounted on said threaded members on said setting spindle so that, when said setting spindle is turned, said levers are equally pivoted in opposite directions to each other about their pivot points on said tightening spindle to vary the transmission ratio of said transmission, a ratchet device comprising a ratchet wheel secured to said tightening spindle and a shift rod eccentrically mounted at one end on said setting spindle so as to be reciprocated thereby when said setting spindle is turned and its other end adapted to engage with the teeth of said ratchet wheel end thereby to turn said wheel and thus also said tightening spindle in one direction to tighten said transmitting means, and means for gauging the tension of said transmitting means and for controlling the operation of said ratchet device comprising tension shoes, spring means for applying said tension shoes upon and in sliding engagement with one side of the two runs of said transmitting means, a rocker pivotally mounted on said tightening spindle and in its normal position when said transmitting means has an adequate tension being adapted to engage with said shift rod to hold the same in its inactive position in which it is disengaged from said ratchet wheel so that said tightening spindle then remains stationary, and at least one cam member on and movable with at least one of said tension shoes when the tension of said transmitting means decreases whereby the position of said tension shoe is changed accordingly, said cam member then being adapted to engage with and to pivot said rocker about said tightening spindle and thereby to disengage said rocker from said shift rod to permit the latter to move to its active position, so that when said setting spindle is turned, said shift rod can then engage with and turn said ratchet wheel and thus also said tightening spindle and thereby tighten said transmitting means.

3,097,541

SEGMENTED WHEEL STRUCTURE

Arnie J. Kindig, Columbus, Ohio, assignor, by mesne assignments, to Jeffrey Galion Manufacturing Company, a corporation of Ohio

Filed Aug. 31, 1961, Ser. No. 135,327
1 Claim. (Cl. 74—243)



A cast wheel structure comprising at least two cast wheel segments joined together in assembly, each wheel segment having a rim portion to form the peripheral rim of the wheel when the segments are joined together, each wheel segment including a rib portion integrally cast with the rim portion to form a reinforcing rib of the wheel when the segments are joined, said rib extending radially inwardly of the rim and being smaller in an axial direction than the rim, a pair of integral cast lugs on each wheel segment disposed radially inwardly from the rim, said lugs being disposed on opposite sides of said rib and closely adjacent to said rib and said rim, said lugs being of substantial thickness in both axial and circumferential directions, the lugs on the respective wheel segments being adjacent each other and in alignment when the wheel segments are joined, a cast notch in each lug, said notches being disposed substantially in alignment wtih said rib in an axial direction, the notches in said lugs which are disposed on opposite sides of said rib as aforesaid being open in opposite axial directions, the notches in adjacent lugs of joined wheel segments being disposed in alignment with each other along chordal lines closely adjacent to the peripheral rim and within the peripheral rim, and fastening means disposed along said chordal lines and received in the notches of adjacent lugs for securing the wheel segments together in joined relationship, the force of said fastening means acting along said chordal lines and close to the peripheral rim of the wheel to firmly secure the wheel segments together.

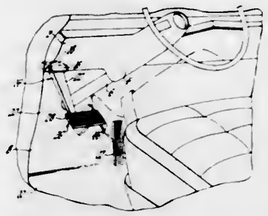
3,097,542

BRAKE PEDAL ASSEMBLY

Charles A. Chayne, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 10, 1961, Ser. No. 101,818
1 Claim. (Cl. 74—560)

In a motor vehicle having a manually operated accelerator pedal, a manually operated brake pedal assembly disposed in laterally adjacent relation to said accelerator pedal, said brake pedal assembly including a lever arm and a transversely extending pedal member which is hinged to said lever arm in a manner permitting the portion of said pedal member adjacent said accelerator pedal to swing laterally away from said accelerator pedal only



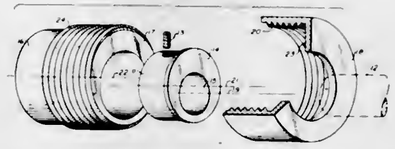
when said portion of said pedal member is engaged manually in a direction opposite to that required to actuate said lever arm for brake operation.

3,097,543

VARIABLE-THROW CAM

Edward C. Godsil and Ernest Y. Robinson, Livermore, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed July 5, 1962, Ser. No. 207,826
2 Claims. (Cl. 74—568)



1. A variable-throw cam comprising,
(*a*) a first cylindrical sleeve having a hole bored therein on an axis parallel to and displaced from the cylinder axis, said sleeve having a radially-extending shoulder formed on one end thereof,
(*b*) means for fixing said first sleeve to a driving shaft fitted into said hole,
(*c*) a second cylindrical sleeve eccentrically disposed around said first cylindrical sleeve and being selectively rotatable relative to said first sleeve, said second sleeve having external threads formed adjacent one end thereof which end lies adjacent the shoulder of said first sleeve,
(*d*) and an annular internally-threaded locking collar fitting over said first sleeve and engaging the threads on said second sleeve, said collar having means coacting with said shoulder and a portion of said second sleeve for maintaining said first and second sleeves in a fixed angular spaced relation.

3,097,544

TRANSMISSION

Harold Ivan F. Evernden, Wistaston, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

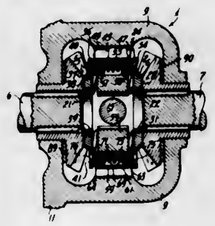
Filed Sept. 15, 1961, Ser. No. 138,461
Claims priority, application Great Britain Oct. 21, 1960
9 Claims. (Cl. 74—688)



1. In a power transmission, the combination of a power source, a load, a plurality of gear units transferring drive

from the power source to the load in a series of drive ratios, the plurality of gear units including a drive dividing gear unit drive connected to the power source, a drive combining gear unit drive connected to the load, and an overdrive gear unit having a predetermined overdrive ratio, plural power paths between the drive dividing and drive combining gear units, and a hydrodynamic torque transmitting device arranged in one of the paths, the overdrive gear unit being arranged in another of the power paths so as to cause the load to be overdriven in a ratio different from the predetermined ratio provided by the overdrive gear unit alone.

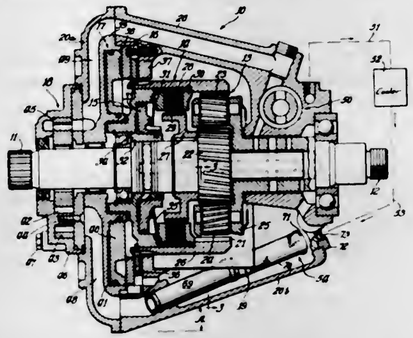
3,097,545
SLIP-RESISTANT DIFFERENTIAL
Alton E. Immel, 215 E. 14th St., Auburn, Ind.
Filed Nov. 26, 1962, Ser. No. 239,974
8 Claims. (Cl. 74—711)



1. A slip-resistant differential unit, comprising: a pair of opposed power output shafts; axially aligned differential side gears fixed in opposed relation on the inner ends of said shafts; a differential casing rotatably mounted at either side thereof with respect to the respective shafts and surrounding said side gears; ring gear means for applying power to said casing; a pinion shaft mounted transversely in said casing and extending between said side gears; a pair of pinion gears rotatably mounted on said shaft and each meshing at either side thereof with said side gears, said pinion gears being provided on their inner ends with inwardly directed friction faces; a pair of friction plates mounted between said side gears and having outwardly disposed friction faces directly aligned with corresponding faces provided on the inner ends of said side gears; means for biasing said friction plates outwardly into tight frictional engagement with said side gears; and a pair of mounting blocks connected between said friction plates and on opposite sides of said pinion shafts, said mounting blocks each being provided with friction surfaces at either end thereof for cooperation with the friction faces on the inner ends of said pinion gears, whereby relative rotation of said side gears will move said mounting blocks into engagement with the respective pinion gears to prevent rotation thereof.

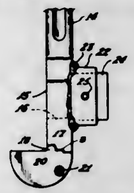
3,097,546
TRANSMISSION MECHANISM
Donald W. Kelbel and Kenneth M. Armantrout, Muncie, Ind., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 29, 1960, Ser. No. 52,453
2 Claims. (Cl. 74—788)

1. In a marine transmission including a housing with a sump formed therein, the combination of a drive shaft, a driven shaft, a planetary gear set interconnecting said drive and driven shafts, clutch and brake means including servomotors for engaging said clutch and brake to establish forward and reverse drives through said gear set, a fluid supply means in communication with said sump including a fluid pump for actuating the servomotors, a fluid cooler connected to the fluid supply means and including a fluid return conduit, a fluid ejector connected to said fluid return conduit and directly to a fluid intake port on the pump to provide a direct supply of fluid to the pump from the cooler, said fluid ejector including a tubu-



lar screen portion in communication with said sump, and said tubular screen portion serving as an inlet for fluid to enter said fluid ejector from the sump and as a fluid conduit for fluid flow between the cooler and the pump.

3,097,547
MEANS FOR THE REMOVAL AND INSTALLATION OF CUTTER BITS IN MINING MACHINERY
Claude B. Krekeler, Cincinnati, Ohio, assignor to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio
Filed May 5, 1959, Ser. No. 811,167
6 Claims. (Cl. 76—80)

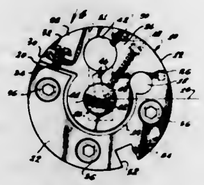


1. A tool for removing cutter bits comprising a handle, substantially parallel spaced bifurcations at one end of the handle adapted to lie on either side of a cutter bit, portions of said bifurcations extending in the direction of the axis of said handle, and other portions of said bifurcations extending at an angle to said axis, camming surfaces on the last mentioned portions of said bifurcations, and a pin extending across between said bifurcations and located substantially in line with the said handle axis so that when said camming surfaces are brought against the surface of another element such as the top of a socket member, the said pin will lie closest to said last mentioned surface when said tool handle is tilted with respect thereto, and so that said pin may be brought beneath an abutment means on said bit for removing it by a prying action, the said camming surfaces on said bifurcations acting, when said tool is swung upwardly to a higher angularity with respect to the surface of said socket member to cause said pin to exert a powerful lifting force on said abutment.

3,097,548
ADJUSTABLE BORING HEAD
Phillip L. Johnson, 9710 Oceangate Ave., Inglewood, Calif.
Filed July 1, 1960, Ser. No. 40,212
2 Claims. (Cl. 77—58)

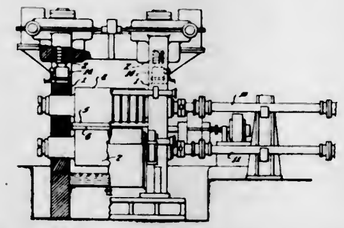
1. A boring head comprising a rotary tool holder having a given axis of rotation and including a cylindrical

metal block which has a generally semicircular slit parallel to and centered on said axis and an approximately radial slit parallel to said axis extending from one end of said semicircular slit through the outer surface of the block to form a first, relatively fixed holder portion and a second, flexible, relatively radially adjustable holder portion on said axis, means on said first portion to attach the



latter to a rotary tool spindle for rotation of the holder on said axis, said second portion having a bore which is parallel to said axis and coaxial with the axis in one position of adjustment of the second portion, said bore being adapted to receive a boring bar, means for releasably securing a boring bar in said bore, and means for radially adjusting said second portion to radially adjust said bore with respect to said axis.

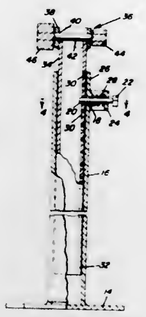
3,097,549
COLD MILL PRESSURE CONTROL
Edwin B. Hudson, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Apr. 28, 1958, Ser. No. 731,319
4 Claims. (Cl. 80—60)



1. A method of producing strip having a uniform gage across its width, which comprises providing a mill having crowned work rolls, back rolls, and screw means for applying pressure to said back rolls, pre-setting said screw pressure means to deflect said back rolls by an amount equal to the crown of said work rolls, whereby for each pass of the strip therebetween the work rolls will make substantially straight line contact with the strip, rolling the strip between said work rolls and maintaining the same pre-set screw pressure for as many passes as required to bring the strip to substantially final gage, and when said strip is substantially to final gage, making a last pass through said mill which is a percentage reduction to final gage.

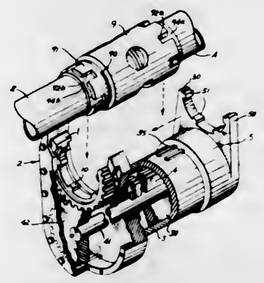
3,097,550
LUG WRENCH SUPPORT
Harlow H. Johnston, 366 N. 10th St., Sunnyside, Wash.
Filed Nov. 20, 1959, Ser. No. 854,446
6 Claims. (Cl. 81—53)

1. A lug wrench support comprising an enlarged base, a standard attached to and rising vertically from the base, an adapter comprising a collar operatively mounted on the upper end of the standard, said collar having bearings, a shaft mounted for free rotation in said bearings, said shank being provided on its opposite ends with fixedly mounted



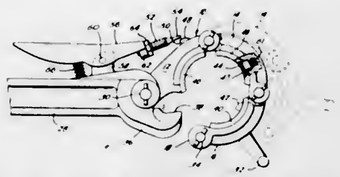
selectively usable keying and wrench-turning heads, said heads being adapted to fit telescopically into socket members at the ends of the shank portion of a wrench and said heads varying in cross-sectional shape and size.

3,097,551
PORTABLE HYDRAULIC TORQUE WRENCH
Hubert A. Schmitt, Box 1423, Rte. 3, Auburn, Wash.
Filed Apr. 21, 1961, Ser. No. 104,637
5 Claims. (Cl. 81—56)



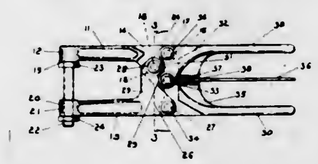
1. A torque wrench for use with a source of pressure fluid at a predetermined pressure, to apply a predetermined torque to two complemental and screw-threadedly connected elements of a fitting or the like, which wrench comprises an interrupted ring gear formed as a first jaw member of a size to straddle one of the two threadedly connected elements of the fitting, and including means to engage the same against relative rotational movement during rotation of one jaw relative to a second jaw, a cooperating second jaw member of a size capable of straddling the other of the two threadedly connected elements of the fitting, and incfuding means to engage the same against relative rotational movement during rotation of one jaw member relative to the other, a fluid pressure rotary motor including a fixed and a movable member, and means interconnecting the two such members to the respective jaws, the connection between one jaw and the corresponding motor member including a torque arm of given length, through which relative rotation of the jaws may be effected, and means for connecting said motor to the pressure source of predetermined value, whereby to apply torque between the two jaws of a value which is the product of the pressure at the source times the length of the torque arm.

3,097,552
PIPE TONGS
Benjamin F. Kelley, 18 S. Madison, Tulsa, Okla.
Filed Sept. 28, 1961, Ser. No. 141,521
4 Claims. (Cl. 81—66)



1. In a pipe tong the combination with an articulated body formed of a plurality of hingedly connected segments adapted to be positioned in encircling relation to a pipe, arcuate gripping dies lining the inner faces of the segments in position for gripping engagement with the pipe, a lever member pivotally connected to one end of the body and means on the member and the other end of the body positioned for coaction when the segments are in pipe encircling position to move the dies into gripping contact with the pipe upon rotating movement of the member about its pivot, of means for securing the dies to the segments comprising registering, radially extending openings in the dies and segments, a radially inwardly facing shoulder in each die and each segment opening, a bushing disposed in and extending partially through both registering openings in each die and segment and formed with radially outwardly facing shoulders in engagement with said radially inwardly facing shoulders in the openings, and threadable means on the bushings and segments positioned for coaction to hold the bushings in the openings.

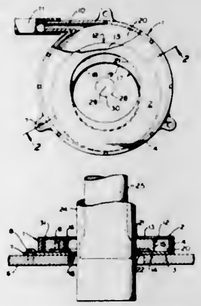
3,097,553
FAST ACTION TOGGLE HAND CLAMP
George N. Baustert, Dearborn, Mich., assignor to The Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 9, 1961, Ser. No. 130,384
1 Claim. (Cl. 81—351)



In a hand toggle clamp comprising a pair of substantially identical, generally L-shaped handles, a swinging clamp arm and a relatively non-swinging anvil arm, the clamp having a center axis, a forward clamping end and a rear, handle end; the two handles being arranged on opposite sides of said center axis with their short legs extending transversely to and overlapping and being pivotally interconnected at said center axis and their long legs normally extending rearwardly, alongside the center axis; with the two arms each being arranged on opposite sides of said axis and each having a base portion extending transversely relative to the center axis towards the other base portion; each base portion having an outer end an inner end, with the outer end of each base portion being pivotally connected to its respective adjacent handle at the juncture between the long and short legs of the respective handle; the two base portion-handle pivots being equidistantly spaced from the center axis and being normally aligned on an axis which is perpendicular to the center axis and which is approximately coaxial with the pivotal interconnection between the two handles; the clamp arm having a clamping portion, formed integral with its base portion, arranged to clamp against an anvil portion formed integral with the anvil arm base portion;

the improvement comprising the anvil arm base portion being considerably longer than the clamp arm base portion and crossing the center axis and with its inner end overlapping the inner end of the clamp arm base portion and being pivotally connected thereto at a point spaced, relative to the center axis, approximately midway between the handle pivotal interconnection and the handle-clamp arm base portion pivotal connections, and spaced forwardly of the axis, on which the two handle-base pivots are aligned, a distance which is less than its spacing from the center axis, whereby the clamp arm clamping portion may swing towards and away from the relatively non-swinging anvil arm anvil portion for clamping and releasing, by manually swinging the long legs of the handles, about their common pivotal interconnection.

3,097,554
FLUID DRIVEN MECHANISM
Harold B. Rice, Contra Costa County, Calif., and John G. Aguilar, deceased, late of Contra Costa County, Calif., by Clotiel Aguilar, administratrix, Contra Costa County, Calif., assignors to John Barton Machinery Corporation, Concord, Calif.
Continuation of applications Ser. No. 725,312 and Ser. No. 725,416, Mar. 31, 1958. This application Jan. 18, 1960, Ser. No. 3,205
12 Claims. (Cl. 82—59)

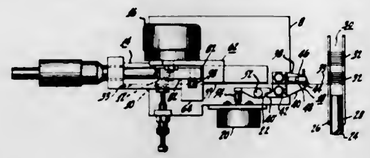


5. A fluid driven tool comprising: a fixed casing having a substantially circular radially inwardly directed side, a member floatingly mounted within said casing and free for movement in a plane at right angles to the axis of said side, the outer periphery of said member being radially inwardly spaced from said inner side of said casing when said member and said side are coaxial to provide a circular unobstructed passageway, means for directing fluid under pressure along the length of said passageway for revolving said member about said axis, said member and said casing being formed to provide a central opening adapted to receive a workpiece therein, and a work engaging element carried by said member for engaging said workpiece.

3,097,555
APPARATUS FOR NOTCHING VACUUM TUBE GRID LATERAL WIRE
Charles W. Lindsley, Crestkill, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,130
13 Claims. (Cl. 83—6)

1. Apparatus for notching a moving wire without substantial interference with the motion thereof comprising

a frame, a chisel having a notch producing end and mounted for sliding motion in said frame, means for causing motion of said chisel in a direction such that said notch producing end leads, a stop means mounted on said chisel, cooperative stop means mounted on said frame for stopping motion of said chisel in said direction and means



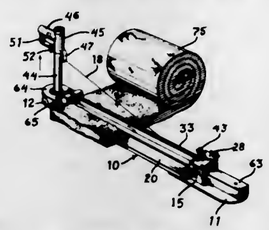
mounted on said frame and resiliently engaged with said cooperative stop means for adjusting said cooperative stop means, a striker plate mounted at a point along the direction of motion of said chisel, means for moving said wire across a surface of said striker plate between said striker plate and said chisel and means for causing the motion of said chisel while said wire is moving.

3,097,556
SNUBBER TYPE TRIGGER MECHANISM
Eugene L. Mackey, Fairview Park, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed June 19, 1959, Ser. No. 821,540
14 Claims. (Cl. 83—287)



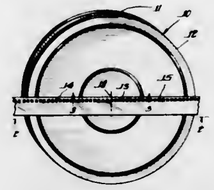
1. In a snubber type trigger mechanism for flying shears and the like comprising shear means mounted for movement with an elongated moving stock, flag means in the path of such stock, inertia absorbing means interconnecting said flag and said shear means for relative movement resiliently to absorb the inertial impact of such stock engaging said flag means; and latch means to lock said flag means and shear means against such relative movement after such inertia has resiliently been absorbed.

3,097,557
INSULATION CUTTER
Albert L. Langstaff, Moran, Mich.
Filed Apr. 6, 1960, Ser. No. 20,428
4 Claims. (Cl. 83—454)



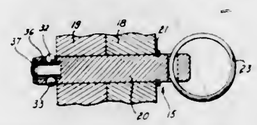
4. Apparatus for cutting insulation material, comprising an elongated base assembly having a working surface, clamping means for holding material to be cut on said working surface, means mounted on said base assembly pivotally supporting said clamping means for movement between a raised position clear of said base assembly to a working position adjacent said working surface to hold the material to be cut on said surface, spring means mounted on said base assembly having a connection to said clamping means and arranged to urge said clamping means from said working position to said raised position, a cutting wire having one end attached to said base assembly adjacent the pivotal support of said clamping means, an upright support mounted on said base assembly remote from said pivotal support, a slide mounted on said upright support and movable thereon between lowered and raised positions, means connecting said wire to said slide in tensioned relation for movement therewith into shearing engagement with said material held on said base by said clamping means, latch means on said base adjacent said upright support for releasably securing said clamping means in said working position, and means on said slide engageable with said latch means in said lowered position for releasing said latch means providing for the movement of said clamping means by said spring means from said working position to said raised position.

3,097,558
COMBINATION FILM CAN AND SPLICER
Norman B. Jacob, Morton Grove, Ill., assignor to Keystone Ferrule & Nut Corp., Burlington, Wis., a corporation of Wisconsin
Filed Aug. 25, 1961, Ser. No. 133,900
8 Claims. (Cl. 83—648)



1. A film container comprising a film receiving section and a cover therefor, a surface of the container being provided with at least one group of aligned and spaced registration pins for engaging with sprocket-receiving openings in a film strip to be trimmed, the pins serving to fixedly support and position the film strip on the surface of the container for trimming, and means in the surface of the container for receiving and guiding a separate cutting edge, said means being so positioned with respect to the pins to enable the cutting edge to trim the film strip at a point substantially through the center of one sprocket-receiving opening in the film strip.

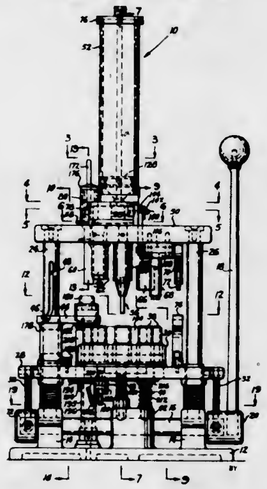
3,097,559
CLEVIS PIN WITH SPRING URGED DETENTS AND MEANS TO LIMIT SPRING MOVEMENT
David Z. Chapman, Los Angeles, Calif., assignor, by mesne assignments, to Aerpat A.G., Glarus, Switzerland, a corporation of Switzerland
Filed July 28, 1958, Ser. No. 751,208
3 Claims. (Cl. 85—5)



1. A quick release clevis pin for rotary members having aligned openings therein, said clevis pin comprising: a cylindrical body receivable in the aligned openings and having a laterally projecting shoulder adjacent one end a coaxial bore in the other end; a cap closing the outer

end of said bore to define with said bore, a spring chamber, said body also having opposed radial passages extending from said chamber, outwardly to the exterior of said body; a ball detent carried in each of said radial passages and movable inwardly and outwardly between inner retracted and outer extended positions, said ball detents projecting radially beyond the exterior of said body when in said extended positions, the outer ends of said radial passages having means providing a restricted portion to limit outward movement of said ball detents; a U-shaped compression spring having at least two outwardly biased arms, said spring being positioned within said chamber with said arms extending generally axially of said bore and urging said ball detents to said outer extended position, said arms, said ball detents and said bore being relatively dimensioned so that said arms engage the wall of said bore with said ball detents spaced radially inwardly from said means, whereby the force with which said ball detents are urged outwardly against the outer restricted end of said radial passages upon rotation of the rotary members is unaffected by said spring.

3,097,560
PROGRESSIVE RELOADING MACHINE FOR SHOT SHELL
Lloyd E. Ponsness, Rathdrum, and Robert N. Barker, Hayden Lake, Idaho; said Barker assignor to said Lloyd E. Ponsness and Dorothy P. Ponsness, both of Rathdrum, Idaho
Filed July 28, 1961, Ser. No. 127,524
7 Claims. (Cl. 86—27)



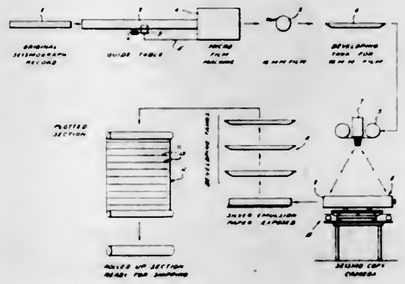
1. In a shell loading machine, a base, a supporting plate having a shell receiving hole therein mounted for reciprocating movement above the base, linkage for reciprocating said supoprting plate, a shell holding table rotatably mounted on said supporting plate and having bores therein for receiving the shells positioned on a circle around its axis of rotation and selectively alignable with the shell receiving hole in the supporting plate, mechanism connected to the linkage for reciprocating the supporting plate for intermittently rotating the shell holding table to selected positions, detent means for releasably positioning the shell holding table in the selected positions with one of the bores in the latter in alignment with the shell receiving hole in the supporting plate, a shell holder mounted on the base for inserting a shell through the aligned hole in the supporting plate and the bore in the shell holding table in the lowermost position of the supporting plate, a powder container positioned above the supporting plate, a valve in the bottom of the powder container, mechanism connected to the linkage for reciprocating the supporting plate for operating said valve to release a charge of powder into the shell in a selected position of the shell holding table beyond the shell receiving position, a wad positioning tool carried by the supporting plate and operable by the latter for placing a wad over the shell and a wad inserting ram positioned above the supporting plate and shell holding table for inserting a wad from the wad positioning tool into the shell as the supporting plate moves upwardly to advance the shell holding table to a position beyond the powder receiving position, and a shell ejecting plunger positioned above the supporting plate and the shell holding table for ejecting the shell from the bore in the latter in a position beyond the wad receiving position.

3,097,561
METHOD OF LUBRICATING THREAD AND TEXTILE MACHINERY SURFACES
Alfred Ernst Stein, Annastr. 63, Rheinberg, Rhineland, Germany
Filed Aug. 30, 1960, Ser. No. 52,998
Claims priority, application Germany Sept. 4, 1959
2 Claims. (Cl. 87—4)



2. A method of lubricating thread and machinery surfaces in the manufacture of reticulate fabrics, comprising the step of dispensing a dry pulverulent lubricant upon the surfaces to be lubricated, said lubricant being a mixture of boric acid with a substantially colorless comminuted filler of flat molecular structure, the boric acid constituting at least 20% by weight of said mixture.

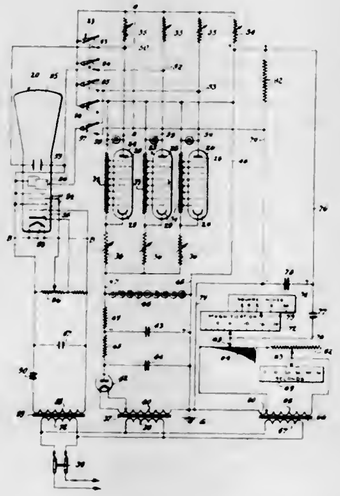
3,097,562
METHOD FOR PHOTOGRAPHICALLY CORRELATING A PLURALITY OF SEISMOGRAMS
Charles A. Gurrola and Gary C. Elliott, both of 301 M & M Bldg., Houston, Tex.
Filed May 15, 1959, Ser. No. 813,519
4 Claims. (Cl. 88—24)



1. A method of preparing a record representing a sectional view of an area of the earth's subsurface compris-

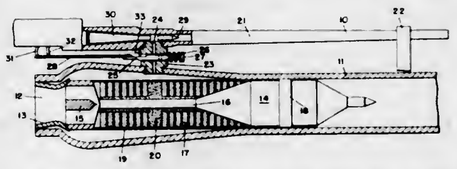
ing the steps of, assembling a plurality of seismograms each having a plurality of galvanometer traces photographically printed thereon, aligning the datum reference point of each seismogram with respect to the datum reference point of each adjacent seismogram, then marking a datum reference line on the adjacent seismograms, photographically reproducing the seismograms on a film, projecting the first photographically reproduced seismogram on a non-light transmitting plate with photosensitive material therebeneath, adjusting the relative positions of the photographically reproduced seismogram and the plate to align a reference mark on the plate in alignment with the projected datum reference line on the first photographically reproduced seismogram, removing the plate and then projecting the aligned photographically reproduced seismogram on the photosensitive material, stepwise projecting each successive photographically reproduced seismogram on the plate and aligning the projected datum reference line on each seismogram with the reference mark on the plate, and after each projection removing the plate to expose a portion of the photosensitive material to each aligned photographically reproduced seismogram.

3,097,563
EXPOSURE CONTROL FOR COLOR PRINTS
Louis L. Weisglass, New York, N.Y., assignor to Simmon Brothers, Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 27, 1960, Ser. No. 24,946
12 Claims. (Cl. 88—24)



1. An exposure control device for photographic printers and enlargers comprising a plurality of color filters each one of which is adjustable to control the intensity of light of one of the primary colors in a light beam passing through a film transparency and impinging upon sensitized paper during the making of a print, said exposure control light device comprising means operable to measure the intensities of several differently color components of the light beam of said photographic enlarger including photosensitive tubes respectively operable to pass currents proportional to the intensities of each color component in the light beam impinging thereon, voltage generating means connected to said photosensitive tubes and operable in response to the passage of current therethrough to produce voltages proportional to such respective current values, and said voltage generating means being normally operable in response to the initial setting of the color filters of said photographic enlarger to cause a voltage differential between a first and second of said proportional voltages and between the first and a third of said proportional voltages respectively, and indicator means connected to said voltage generating means and operable to give a visual indication as to when said voltage differentials become zero in response to adjustment of the color filters of said photographic enlarger from their initial setting.

3,097,564
SPOTTING RIFLE IGNITION FOR LARGER CALIBER GUN
Thomas Stevenson, 1039 Arthur Ave., Huntingdon Valley, Pa.
Filed July 21, 1961, Ser. No. 125,881
2 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

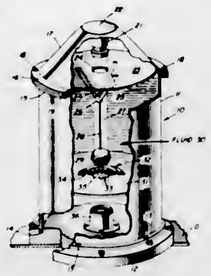


1. In a combination of a recoilless weapon with a spotting rifle secured thereto and of substantially smaller caliber than said weapon, each of said weapon and spotting rifle having a chamber in which a projectile is adapted to be located for firing, and each of said spotting rifle and weapon having a propellant chamber in rear of said projectile chamber, the combination therewith of the improvement for rendering a service round in said spotting rifle capable of firing a propellant in said weapon, said improvement including a short direct enclosed flame passageway leading from adjacent a propellant chamber in said spotting rifle into a propellant chamber in said weapon and generally radially through a side wall of said weapon propellant chamber for igniting a caseless propellant when in said weapon from an ignited round of propellant in said spotting rifle, said passageway having a diameter of between about 50% to 75% of the spotting rifle bore, and a valve by which said passageway may be opened or closed to allow or prevent the passage of an igniting flame to said weapon, said spotting rifle being provided with a trigger means by which it is fired and a connection between said valve means and at least a portion of said trigger means whereby said valve means may be controlled by said trigger means to which connected.

3,097,565
SHIP DECK LEVEL SENSOR
Vahey S. Kupelian, Chevy Chase, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 14, 1962, Ser. No. 173,311
7 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

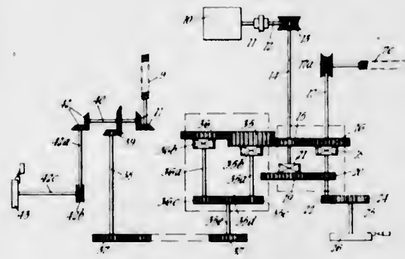
4. In a level sensing device fixedly mounted on the deck of a ship for producing a rocket firing signal when the deck of the ship is in a level condition, a light sensitive cell rendered ineffective as a shadow is cast thereon, means for projecting light onto said light sensitive cell, an omni-directional movable pendulum responsive to the pitch and roll of the ship for interrupting said light and casting said shadow onto the light sensitive cell to inactivate the cell and produce said firing signal only

when the deck of the ship is in said level condition and the pendulum is in axial alignment with the light sensi-



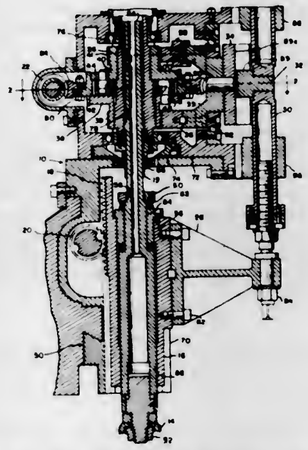
tive cell, and means including a firing circuit for receiving said firing signal when the cell is inactivated thereby to initiate ignition of the rocket.

3,097,566
GEAR FINISHING MACHINES
John Alfred Mills, 24 Kingsley Ave., North Gosforth, Newcastle-upon-Tyne, England
Filed June 20, 1960, Ser. No. 37,249
Claims priority, application Great Britain Feb. 15, 1960
5 Claims. (Cl. 90—1.6)



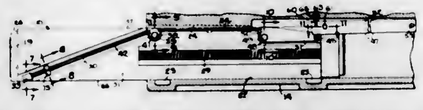
1. A gear shaving machine of the kind set forth provided with a single reversible motor, in-feed and traverse feed screws for said machine, gearing comprising two gearing paths connecting said motor and said in-feed screw to give an initial quick in-feed and a relatively slow in-feed, a first electro-magnetic clutch incorporated in said gearing and energized on closing the motor circuit to transmit a quick in-feed via one said gearing path, a second electro-magnetic clutch also incorporating said gearing and energized to transmit a relatively slow in-feed via the other said gearing path, switch operating means rotated in synchronism with the in-feed screw and which has at all times a rotational position corresponding to the in-feed position of the table, a switch operated by the switch operating means to deenergize the first said clutch and thereby interrupt the quick in-feed, reversible gearing between the motor and the traverse feed screw, two electro-magnetic clutches incorporated in said gearing and controlling the direction of drive transmitted by said gearing, further switch operating means rotated in synchronism with and in a direction corresponding to the traverse of the table and a switch operated by said switch operating means which, when contacted, reverses the energizing of the two clutches in the traverse gearing and energizes the clutch through which the slow in-feed is transmitted, whereby a quick initial in-feed and thereafter a rela ively slow and short in-feed increment synchronized with the reversal of the traverse of the table is provided.

3,097,567
MECHANISM FOR ADJUSTING HELIX ANGLE ON GEAR SHAPER CUTTERS
David W. Daniel and Zenon Kokorzycki, Detroit, Mich., assignors to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 7, 1959, Ser. No. 857,605
22 Claims. (Cl. 90—7)



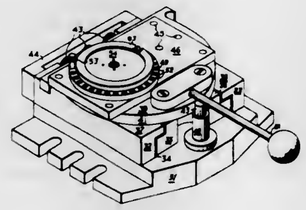
1. In a gear shaping machine including a shaft having a gear cutting tool mounted thereon, pilot means for guiding the shaft during axial reciprocal and axial rotational movement thereof and drive means operable to impart axial reciprocal and unidirectional axial rotational movement to the shaft and attached gear cutting tool in synchronism with the movement of a gear to be shaped by the gear shaping machine; means associated with the shaft and drive means operable to impart an oscillatory rotational movement to said shaft which is superimposed on the axial rotational and axial reciprocal movement thereof to shaper cut helical gears, said means comprising a second shaft in transverse spaced relation to the first mentioned shaft connected directly to said first mentioned shaft for reciprocation in synchronism with the axial reciprocation of the first-mentioned shaft and means connected between the shafts for converting the axial reciprocation of said second shaft into oscillatory rotational movement of the first-mentioned shaft.

3,097,568
MACHINE TOOL
Frederick J. Kampmeier, Rockford, Ill., assignor to The Ingersoll Milling Machine Company, Rockford, Ill., a corporation of Illinois
Filed Oct. 9, 1961, Ser. No. 143,627
10 Claims. (Cl. 90—11)



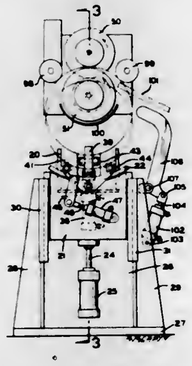
10. The combination of, a support, an elongated member mounted on said support for endwise sliding relative thereto along a generally horizontal path and between an extended position and a retracted position, one end portion of said member projecting outwardly from said support when said member is in said extended position, a brace connected to said one end portion at a point spaced outwardly from said support in said extended position, said brace extending upwardly from said point and toward said support, and means for tensioning said brace as said member slides toward said extended position thereby to urge said one end portion upwardly.

3,097,569
AUTOMATIC POSITIONING MEANS FOR MACHINE TOOLS
Vito F. Scandale, Newton, and Raymond Blanchard, Natick, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Feb. 3, 1960, Ser. No. 6,538
5 Claims. (Cl. 90—13)



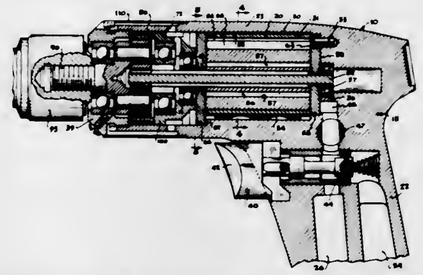
3. In combination: a structural means forming a slideway; an idler fixed to one end of said structural means; a bed member disposed in said slideway moveable to and from said idler; a cam member carried by said bed member and rotatable about its axis, the periphery of said cam being adapted for and a portion thereof being in contact with said idler; rotatable workholding means concentric about a second axis passing through said cam and parallel to said cam axis for attaching a work piece thereto; and means for releasably securing said workholding means in successive fixed relations to said cam.

3,097,570
RING FINISHING APPARATUS
Eugene L. Mackey, Fairview Park, Ohio, assignor to The Yoder Company, Cleveland Ohio, a corporation of Ohio
Filed Mar. 29, 1960, Ser. No. 18,359
5 Claims. (Cl. 90—16)



1. The method of removing a weld bead from a ring or the like comprising the steps of placing such ring with the bead thereof in engagement with an external bead removing device, placing an internal bead removing device in engagement with such bead, said bead removing devices being in the same plane normal to the axis of such ring, and pivoting such ring about a fixed axis effectively to remove such bead.

3,097,571
ROTARY FLUID MOTOR
Frank A. Kaman, Aurora, Ill., assignor to Thor Power Tool Company, Aurora, Ill., a corporation of Delaware
Filed Sept. 5, 1961, Ser. No. 137,711
5 Claims. (Cl. 91—80)



1. In a pressure fluid operated rotary motor including a housing section having a rotor mounted eccentrically within a motor cylinder member in said housing and having circumferentially spaced compressed fluid inlet and outlet passage communicating with interior of said motor cylinder, said inlet passage having a source of pressure fluid connected thereto, and said rotor having means associated therewith for operatively driving a work piece, the improvement comprising: a generally cylindrical opening formed in said housing section, a pressure fluid motor cylinder disposed in said cylindrical opening, said motor cylinder having an outer diameter less than the inner diameter of said cylindrical opening, a rotor member eccentrically mounted within said motor cylinder and having a plurality of circumferentially spaced vanes adapted to form a continuous engagement with the inner surface of said motor cylinder when the said rotor is rotated rapidly, and spring means engaging said motor cylinder to position said motor cylinder in a fluid sealing and sliding engagement with the periphery of said rotor.

3,097,572
SERVO CLUTCH
Robert L. Macy, 1017 E. Spurgeon, Fort Worth, Tex.
Filed Feb. 19, 1962, Ser. No. 174,226
4 Claims. (Cl. 92—13)



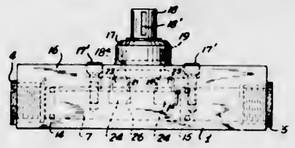
1. A servo clutch for longitudinal displacement of a rod, said servo clutch comprising: a cylinder coaxially receiving said rod through opposite ends of said cylinder, a sleeve loosely and slidably positioned about said rod within said cylinder, a first piston slidably positioned within said cylinder about said sleeve and in slidable sealed engagement with said sleeve, a first casing attached to and extending from said first piston about said sleeve and extending through one end of said cylinder, sealing means slidably receiving said first casing at one end of said cylinder, a second piston slidably positioned about said sleeve and in sealing contact therewith within said cylinder between said first piston and the other end of said cylinder, a second casing attached to and extending from said second piston about said sleeve and extending through said other end of said cylinder, sealing means slidably receiving said second casing at said other end of said cylinder, a first orifice communicating said first end of said cylinder with a fluid source, a second orifice communicating said other end of said cylinder with a fluid source, a third orifice communicating the interior of said cylinder between said

pistons with a fluid source, and circumferential projections attached to said rod at positions exteriorly spaced from said ends of said cylinder.

3,097,573
ACTUATOR FOR CONVERTING STRAIGHT-LINE MOVEMENT TO OSCILLATORY MOTION AND VICE VERSA

Alfred R. Deedman, 6092 Fulton Drive NW., Canton, Ohio

Filed May 5, 1961, Ser. No. 108,121
4 Claims. (Cl. 92—68)

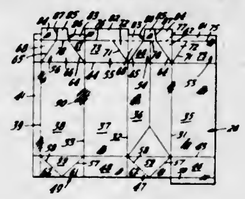


1. An actuator comprising a body having two parallel cylindrical chambers therein, a reciprocatable piston in each of said chambers, an oscillatable spindle mounted in said body midway between said chambers and with its axis of movement normal to the length of said chambers, said pistons being provided with duplicate rectangular recesses midway of the length thereof, said spindle having one end extending outward of said body for operative connection thereto and having its other end enclosed within said body and provided with diametrically located oscillatable rectangular pawls in co-operative engagement within said recesses, said body having end ports for attachment of fluid pressure and exhaust means thereto, one of said ports being connected with the chamber at one end of one of said pistons and with the chamber at the opposite end of the other of said pistons, the other of said ports being connected with the chamber at the other end of said first-named piston and with the chamber at the opposite end of said second-named piston.

3,097,574
METHOD OF PRODUCING A COLLAPSED CONTAINER AND A UNITARY BLANK THEREFOR

Morris W. Kuchenbecker, Neenah, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Original application Nov. 16, 1959, Ser. No. 853,337, now Patent No. 3,024,959, dated Mar. 13, 1962. Divided and this application Nov. 9, 1960, Ser. No. 72,268
4 Claims. (Cl. 93—36)

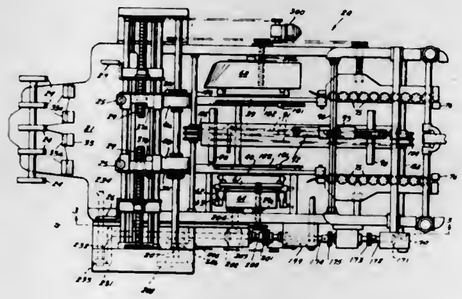


1. A method of producing a collapsed container having integral top and bottom end closures formed from a unitary blank comprising the steps of providing a sheet of container material, pre-cutting said sheet of container material to produce predetermined cut-through portions therein, laminating a liner sheet to said sheet of container material to produce a composite laminated sheet, providing a lap side seam portion of said liner sheet free and unattached to said sheet of container material, said liner sheet bridging over and sealing said cut-through portions of said container material, forming crease lines in said laminated sheet to define four adjacent container body side walls, lap side seam portions and top and bottom end closures extending from said side walls, cutting said creased laminated sheet to container blank size and configuration to produce a blank having a liner sheet of the same size and configuration as and entirely covering said blank and having one lap side seam portion with the liner sheet secured to said container material and another lap side seam portion having the liner sheet free of attachment therewith, said bridged over cut-through portions of said container material being disposed interiorly of the edges of said blank, applying adhesive to said one lap side seam portion, folding said blank along two of said body side wall creases to position two of said body side walls in overlapping relation to the remaining two body side walls, interposing said one lap side seam portion of said blank into position between the free portion of said liner sheet and its overlapping lap side seam portion of said container material, and pressing said lap side seam portions together to bond them into a lap side seam to unite said body side walls into a collapsed container having a full lining including said top and bottom end closures and with said liner sheet enclosing the interiorly disposed raw edge of said container material in said side seam.

3,097,575
FOLDER TAPER MACHINE

Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Company, Inc., Brooklyn, N.Y., a corporation of New York

Filed Aug. 21, 1961, Ser. No. 132,816
7 Claims. (Cl. 93—49)

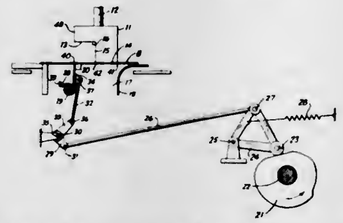


1. In a folding machine for forming flat, collapsed tubular box blanks from scored flat sheets having a pair of longitudinally extending side sections defined by score lines and foldable about said score lines into said collapsed tubular box blanks; said machine comprising a folding station including stop means; means for moving said blanks successively forward against said stop means; means at said folding station for folding over said side sections along said score lines; conveyor means for moving folded blanks forward out of said folding station; longitudinally extending bar means upon which said stop means is adjustably mounted; an operating mechanism for raising said stop means into the path of unfolded blanks and for lowering said stop means out of the path of folded blanks longitudinally extending folding guide bars at said folding station; longitudinally extending supporting guide bars positioned below said folding guide bars with a space therebetween so proportioned that blanks passing therebetween will have a gradually decelerating force applied thereto prior to engagement with said stop means; said supporting guide bars including a relatively extensive upper surface upon which blanks are supported as they move against said stop means.

3,097,576
DEVICES FOR FORMING HINGE COVER FOLDING BOXES

Thomas F. Burke, Redwood City, Calif., assignor to Atlas General Industries, Inc., New York, N.Y., a corporation of Massachusetts

Filed Sept. 18, 1961, Ser. No. 138,773
9 Claims. (Cl. 93—49)

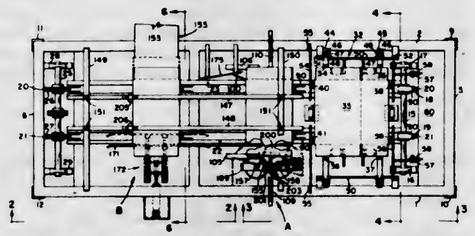


1. A device for forming a box blank into the shape of a folding box, the device comprising, in combination, a blank folding die comprising a lateral folding element and end folding elements, said lateral and said end folding elements defining three sides of a substantially rectangular die throat open at top and bottom, said end elements being movable relatively to each other to vary the distance between them; a step-bottom plunger movable into the die throat from the top, the step of the plunger being parallel to said lateral folding element; a folding blade mounted on said die with freedom to tilt about an axis substantially parallel to said lateral folding elements to swing into the step space and crease a portion of a plunger engaged blank and move the creased blank portion into the step space, as the plunger moves into the die; means for moving said plunger and tilting said blade in timed relationship, said blade having two major positions, a first positon in which it is substantially parallel to the plunger axis, remote from the plunger and pointed towards the die entrance as the plunger approaches the die, and a second position in which the blade is substantially normal to the plunger axis and extends into the step space when the plunger has reached the end of its stroke into the die; and power means timed with respect to said moving means for moving said end elements closer together to clamp a plunger supported blank against the plunger when the plunger has reached the end of its stroke into the die.

3,097,577
CASING MACHINE

Melvin Salwasser, P.O. Box 101, and Leslie F. Salwasser, 49 Jefferson St., both of Reedley, Calif.

Original application Sept. 17, 1960, Ser. No. 49,543. Divided and this application Aug. 8, 1961, Ser. No. 130,012
4 Claims. (Cl. 93—53)

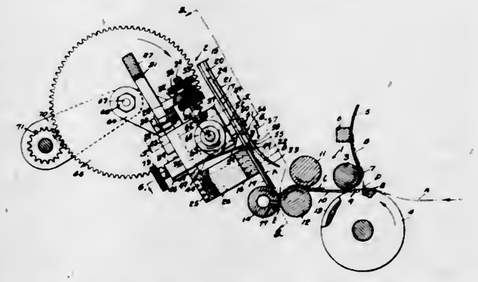


1. In an opening device for a case provided with two pairs of opposed sidewalls hingedly secured together along four fold lines to form a rectangular sleeve open at opposite ends and provided with end flaps hingedly secured to the corresponding ends of said sidewalls to form upper and lower layers of flaps and adapted to be folded at right angles to said sidewalls to close an end of said sleeve, conveyor means for moving said case in a flat condition along a horizontal path of travel with said fold lines at right angles to said path and with said flaps extending outwardly of said ends and in continuation thereof, a flap depressing means at a point along said path engageable with the upper side of the leading portion of said flaps adjacent the free ends thereof for bending both of said layers of said flaps downwardly from the plane of said flat case, whereby the flaps at the trailing portion thereof tend to move apart, spreading means movable from a position laterally offset from said case to a position between said flaps at said trailing portion for spreading the sides of said flat case further apart for partially opening the case, and opening means engageable with the leading portion of said case for swinging the lower leading sidewall upwardly to a vertical position for fully opening said case.

3,097,578
APPARATUS FOR FOLDING THE CLOSURE FLAPS OF ENVELOPES AND SIMILAR ARTICLES

Richard Winkler, Rengsdorf, near Neuwied, Rhineland, and Kurt Dunnebier, Wollendorf, near Neuwied, Rhineland, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri

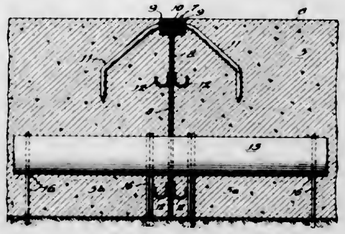
Filed Nov. 10, 1960, Ser. No. 68,386
Claims priority, application Germany Dec. 16, 1959
5 Claims. (Cl. 93—62)



1. An apparatus for registering and folding the closure flap of an envelope in which side and bottom flaps of the envelopes have been previously folded and sealed in completing the body of the envelope, said apparatus including a pair of counter-rotating folding rollers having a pass therebetween, an inclined trap above the folding rollers and having a lower guide means terminating substantially tangentially with the periphery of one of the folding rollers and having an upper guide means terminating to provide an entrance to said trap, a feed roller cooperating with the other of said folding rollers to provide a pass into said entrance of the trap through which the envelope is directed under driven contact by the said other folding roller and the feeding roller with the folded edge of the bottom flap leading into said trap and sliding upon the lower guide means and with the closure flap trailing between said rollers, laterally spaced apart leaf springs extending resiliently across the trap to be engaged by the fold of the bottom flap of the envelope, rotatable cam means having low lobe portions for controlling movement of the leaf springs in movement with the envelope into said trap to exert a yieldable retarding pressure upon said bottom fold in opposition to feed by said feed roller and the other of said folding rollers to maintain the body of the envelope in contact with the lower guide means, a stop rail extending transversely of said trap to provide the ultimate stop for the envelope to assure alignment of the envelope with respect to the folding rollers, resilient pads carried by the stop rail for impress therein of the leaf springs for contact of the envelope with the stop rail,

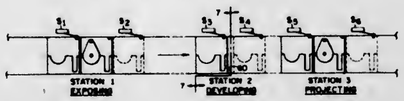
said cam means having high lobe portions to reverse movement of the leaf springs to start the envelope from said trap and buckle the closure flap into the bight between the folding rollers, and suction means carried by the said one folding roller for engaging the body of the envelope near the fold to be imparted in the buckled closure flap to carry the body of the envelope between the folding rollers for folding and creasing the trailing closure flap.

3,097,579
JOINT SEALING DEVICE
Yoshiki Fujihara, Lyons, Ill., assignor to Servicised Products Corporation, a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,526
4 Claims. (Cl. 94—18)



1. A preassembled device for sealing substantially the entire length of a joint between a pair of concrete sections when said device is located in said joint, comprising: a pair of adjacent side members adapted to be located in said joint between said sections; means attached to said side members for anchoring said side members to the respective concrete sections, said side members being adapted to move away from and toward each other under the forces of contraction and expansion of said sections, each said side member having an edge portion adapted to be adjacent an outer surface of one of said sections when said device is located in said joint, said edge portions being spaced apart; and a resilient, yieldable, rubbery sealing member sealingly attached to and extending between said edge portions, said side members extending inwardly and being in substantial contact at a distance from said upper edge portions to provide support for said side members when said side members are toward each other under the forces of said expansion.

3,097,580
SEGMENTED LINEAR GENEVA INDEXING MECHANISM
Clement H. Kalthoff, San Diego, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 6, 1961, Ser. No. 157,346
14 Claims. (Cl. 95—1.7)



1. A segmented Geneva gear system having a plurality of work stations for simultaneously performing a plurality of processes upon a plurality of transportable work pieces which are sequentially presented to the work stations comprising:

(*a*) a plurality of transportable work pieces, each of which comprises a unitary segment of a driven member of a Geneva gear,

(*b*) a continuously moving work piece transporting means for transporting said work pieces between said work stations,

(*c*) first, second and third work stations,

(*d*) the first of said work stations having a first predetermined processing time between the initiation of an indexing operation on a new work piece and the later initiation of an ejection operation on said work piece to eject said piece onto said transporting means,

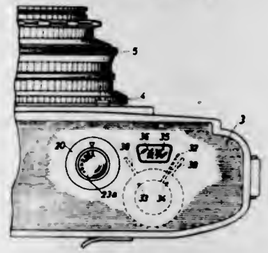
(*e*) the second of said work stations having a second predetermined processing time between arrival of a work piece and its later ejection onto said transporting means, said second predetermined processing time being less than said first predetermined processing time,

(*f*) said third station comprising means cooperating with said segments of said work pieces for indexing an arriving work piece and ejecting the work piece contained therein in response to the arrival of a work piece from said second station,

(*g*) said indexing and ejecting means comprising the driving member of a Geneva gear, and

(*h*) means responsive to the arrival of a work piece at said third station for energizing said driving member so as to go through one cycle of operation to thereby index the newly arrived work piece and simultaneously eject the previous work piece.

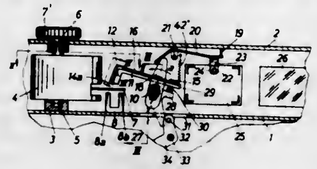
3,097,581
LIGHT METER ASSEMBLY
Rudolf Kremp and Ferdinand Wagner, Munich, Friedrich Biedermann, Unterhaching, near Munich, and Alfred Kubitzek, Grueuwald, near Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Mar. 15, 1960, Ser. No. 15,149
Claims priority, application Germany Mar. 25, 1959
17 Claims. (Cl. 95—10)



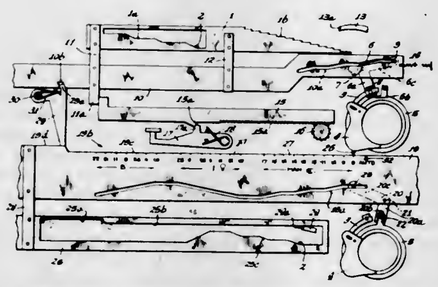
1. A light meter assembly adapted to be used with cameras and the like, comprising, in combination, rotary light measuring means including a rotary pointer turnable through a given range; means cooperating with said pointer for rendering at least part thereof visible through a fraction of said range of movement thereof, said means for rendering said pointer visible including a stationary index with which said pointer is aligned during use of the light meter assembly; and indicating means moved by said light measuring means for indicating when said pointer is in the region of at least one end of said range.

3,097,582
SCANNING ASSEMBLY FOR CAMERAS
Alfred Winkler, Munich, and Franz Jakob, Unterhaching, near Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Mar. 22, 1961, Ser. No. 97,665
Claims priority, application Germany Apr. 2, 1960
17 Claims. (Cl. 95—10)

1. In a camera, in combination, support means; elongated stop means carried by said support means; scanning lever means turnably carried by said support means for movement about an axis substantially parallel to said elongated stop means, said lever means having an elongated scanning edge which is located substantially within a given plane and which is directed toward said stop means, and said lever means being turnable from a rest position where said scanning edge is spaced from and defines an elongated gap with said stop means toward said stop means to a scanning position where said scanning edge is closely adjacent to said stop means; and an electrical instrument carried by said support means and forming part of a light-measuring assembly, said instrument having a turnable pointer part of which is located at all times in said gap in the path of movement of said scanning edge and engaging said scanning edge when said lever means turns from said rest position to said scanning position, to be placed by said scanning edge against said stop means to limit turning of said lever means.

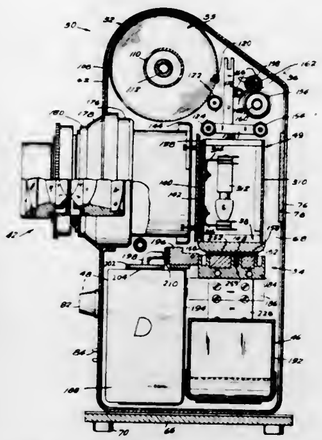


3,097,583
PHOTOGRAPHIC CAMERA
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Continuation of application Ser. No. 11,865, Feb. 29, 1960. This application June 29, 1962, Ser. No. 207,852
Claims priority, application Germany Mar. 2, 1959
7 Claims. (Cl. 95—10)



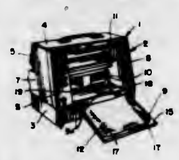
1. In a photographic camera, in combination, fixedly connected, movable speed and diaphragm setting members movable at all times as a single unit, said diaphragm setting member including a control mechanism which is related to the speed setting member to provide uniform exposure value gradations over a given range of movement of the unit; two physically separate reciprocally adjustable diaphragm adjusting members which are separate from said speed and diaphragm setting members and which are adapted for carrying the diaphragm blades, movement of either member effecting adjustment of the diaphragm aperture; coupling means between one adjusting member and said setting members, effecting adjustment of said one adjusting member in response to movement of said setting members; light-responsive means for effecting automatic adjustment of the said setting members; manually operable means for effecting adjustment of the other of said adjusting members; a shutter control device for influencing the amount of open time of the shutter; and means, separate from said speed setting member, for actuating said device in response to adjustment of the said other of said adjusting members.

3,097,584
RAPID PROCESSING APPARATUS
Joseph H. Wright, Jr., Port Jefferson, N.Y., assignor to Photomechanisms, Inc., Huntington Station, N.Y.
Filed May 4, 1960, Ser. No. 26,807
15 Claims. (Cl. 95—12)



1. Apparatus for developing a recorded image on a film strip having a radiation sensitive surface and a support means, said apparatus having a housing; support means within said housing for a source of supply of film; film processing means including a stationary porous applicator adapted to apply a relatively thin layer of processing fluid having capillarity and meniscal boundaries to an exposed predetermined portion of the film, said processing means including a fixed substantially flat support spaced from said porous applicator and proximately located relative thereto for forming a narrow passage therewith for reception of said film strip and for engaging the support means of the film adjacent the exposed predetermined portion such that the sensitive surface of the film is disposed a relatively short distance in the order of a capillary space from the porous applicator such that the film is free from contact with the porous applicator and the thin layer of processing fluid is disposed between the porous applicator and the film; guide means for guiding said film through said processing means; and means for providing a controlled time relationship between the film transport through the processing means and application of the processing fluid such that an excess of the processing fluid is presented by the applicator at all times.

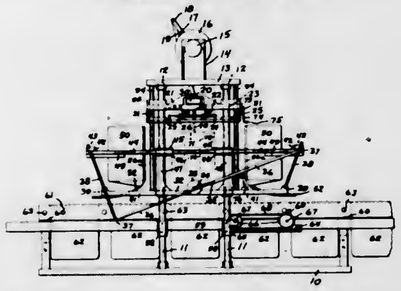
3,097,585
PHOTOCOPYING DEVICES
John W. Carlson, Chicago, Ill., assignor to Speed-O-Print Business Machines Corporation, a corporation of Illinois
Filed July 17, 1959, Ser. No. 827,903
11 Claims. (Cl. 95—89)



1. In a developer of the type including a cabinet having a container therein normally disposed in predetermined fixed position in said cabinet, an outer wall hinged on said cabinet for pivotal movement between a raised

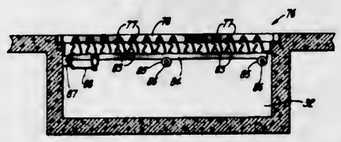
closed position and a lower open position, a second container for liquid mounted on said wall for movement therewith, and means connecting said second container to said first mentioned container in position to feed liquid from said first mentioned container in said fixed position into said second mentioned container during said pivotal movement of said wall from closed position to said open position and feeding said liquid from said second container to said first mentioned container in said fixed position during said pivotal movement of said wall from said open position to said closed position.

3,097,586
APPARATUS FOR DEVELOPING COLOR FILM AND MAKING COLOR PRINTS
Paul A. Weber, 426 Benson Bldg., Sioux Falls, S. Dak.
Filed June 29, 1961, Ser. No. 120,647
5 Claims. (Cl. 95—89)



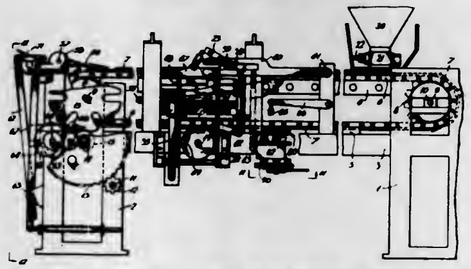
2. An apparatus for developing color film or paper comprising a base, vertical supports attached to said base, an upper platform supported by said supports, an intermediate platform, means for suspending film or paper from said intermediate platform, a pair of opposed casings mounted on said supports, means for advancing said opposed casings towards each other, said casings being open inwardly and said casings being adapted to receive said film or paper, and whereby movement of said casings towards each other will provide a film or paper processing chamber, means for lighting said chamber, and means for injecting water into said chamber, means for retracting said casings, a frame mounted on said base, means for advancing said frame along said base, said frame including a plurality of spaced tanks, each of said tanks including a solution therein for processing said film or paper, means for moving said intermediate platform downwardly whereby said film or paper will enter certain of said tank in pre-determined relation, means for agitating said intermediate platform to agitate said film or paper at desired pre-determined sequences.

3,097,587
AIR FLOW CONTROL MEANS FOR AIR SCREEN STRUCTURES
Edwin J. Kurek, Indianapolis, Ind., assignor to New Castle Products, Inc., New Castle, Ind., a corporation of Indiana
Continuation of application Ser. No. 788,949, Jan. 26, 1959. This application Apr. 23, 1962, Ser. No. 189,539
5 Claims. (Cl. 98—36)



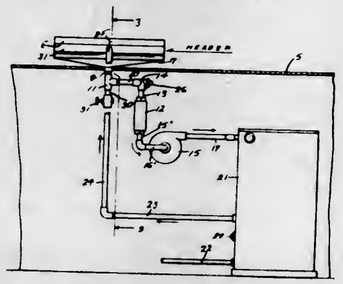
1. In an air screen structure wherein air moving means establishes a recycling flow of air through air delivery means and air return means both in communication with a door area and positioned on opposite top and bottom surface areas thereof to establish a downward flow of air, the provision of directional air flow control means defining said air delivery means, and air mass flow control means defining said return means, said air mass flow control means being in the form of a grating which includes a series of spaced inverted members having downwardly divergent side portions depending from association with transverse grating members, one of said side portions of each inverted member being of less length in a downwardly direction than the other, and a movable series of spaced baffles each of which are inclined to assume the inclination of a shorter side portion of an inverted member and constitute a downward extension of the same upon movement into association therewith, said baffles cooperating with each of the other of said side portions to define therebetween a groove-like air trapping area and restricted throats to control the mass of air flowing downwardly through said grating.

3,097,588
MACHINES FOR THE COOKING OF PANCAKES AND LIKE HOT-PLATE GOODS
Arthur Leslie De Jersey, 20 Scheele St., Surrey Hills, Victoria, Australia
Filed Feb. 11, 1959, Ser. No. 792,654
Claims priority, application Australia Feb. 20, 1958
35 Claims. (Cl. 99—353)



1. A machine for cooking pancakes and like hot-plate goods, comprising in combination an endless conveyor system supported by a frame and embodying an endless series of hot-plates in side-by-side relationship and disposed to form upper and lower substantially horizontal stretches of hot-plates; means operative to move the endless conveyor and hot-plates assembly intermittently; means for heating the hot-plates; means located near the leading end of the endless conveyor and hot-plates assembly to deposit measured quantities of pancake batter on each hot-plate in a transverse row relative to the travel direction of the hot-plates; pancake-turnover means comprising a travelling carriage located transversely above the upper stretch of hot-plates at a suitable point intermediate the length of the endless conveyor and hot-plates assembly and mounted pivotally to rock on a pair of reciprocating slide-members supported at the sides of the machine frame, a transverse battery of pancake-turnover slicing and lifting blades supported by said carriage and disposed to face said leading end of the endless conveyor and comprising a row of blade members carried by a row of spindles mounted for axial reciprocal turning movement on the transverse carriage member, and operative means comprising means for imparting rocking movement to said transverse carriage member, means for imparting reciprocating movement to said slide-members, and means for imparting reciprocal turning movement to each of the spindles carrying the row of blade members, all operative in timed relationship with the intermittent movement of each hot-plate to move said travelling carriage and blades from an elevated neutral position and in a direction opposite to the travel direction of the hot-plates and lower said blades into slicing engagement with a hot-plate located immediately beneath said blades in said lowered position and load the partly cooked pancakes from said hot-plate onto said blades, thence raise said blades, thence retract the travelling carriage and turn the blades over sidewardly to deposit the pancakes with the uncooked side downwards on said hot-plate and return said travelling carriage and blades to the elevated neutral position, said pancake-turnover operative means being operative to repeat the cycle of movements coincidental with the intermittent movement of each successive hot-plate; and pancake discharge means located near the trailing end of the endless conveyor and hot-plate assembly to slicingly separate from the hot-plates the cooked pancakes approaching the trailing end of the endless conveyor and hot-plates assembly and discharge said pancakes from the machine.

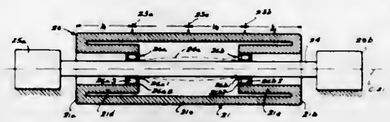
3,097,589
DEEP FAT FRYER
Lewis F. Moore, % The Frymaster Corp., P.O. Box 7065, 410 Fortson St., Shreveport, La.
Filed June 13, 1960, Ser. No. 35,683
1 Claim. (Cl. 99—408)



An apparatus of the class described comprising a deep fat frying vat having a top and a bottom, a remote heater including a vertical housing having an interior and an exterior, a vertical heating coil having a lower end, an upper end and a lowermost coil and positioned within said housing, a feed pipe connected between the lower end of said heating coil, and offset therefrom, and the top of said deep fat frying vat through which frying fat is delivered from said heating coil to said vat, a line from the offset portion of said feed pipe to the exterior of said housing, a thermostatic control in said line, a return pipe connecting the upper end of said heating coil with said deep fat frying vat at the bottom thereof through which frying fat is returned from said deep fat frying vat to said heating coil, a pump in said return pipe for circulating hot fat through said pipes, a valve-controlled filter in said return pipe, offset with respect to said return pipe, and adapted to filter the circulating fat entering the upper end of said heating coil, a return pipe from said filter to said pump for recirculation of the filtered fat, a burner mounted directly under the lowermost coil of said heating coil adjacent said thermostatic control and frying fat to be circulated through said heating coil.

3,097,590
ANTI-DEFLECTION ROLL
Edgar J. Justus, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Apr. 12, 1961, Ser. No. 102,571
17 Claims. (Cl. 100—155)

2. In combination, a roll shell whose centroidal axis is subject to deflection in response to a load applied to said shell, shaft means in the shell and in radially spaced relation thereto for rotatably mounting the shell, and allochiral mounting means surrounding the shaft means and extending appreciably axially inwardly of each of the shell ends intermediate the shell and the shaft means, each such mounting means being secured rigidly to the shell solely at its outer end and mounted on the shaft means solely at its inner end appreciably axially inwardly of the shell ends, each said mounting means being radially



spaced from the shaft means axially outwardly from its inner end mounted on the shaft means and being radially spaced from the shell axially inwardly from its outer end secured to the shell, thereby applying internal counter-deflection moments to said shell in response to the application of a load to said shell.

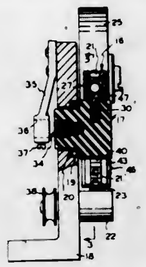
3,097,591
ANTI-DEFLECTION ROLL
Edgar J. Justus, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Nov. 24, 1961, Ser. No. 154,801
8 Claims. (Cl. 100—155)

1. In combination, a roll shell whose centroidal axis is subject to deflection in response to a load applied to said shell, separate and independent allochiral co-axially spaced shaft means in each end of the shell and rotatably mounting the shell, and allochiral co-axially spaced mounting means surrounding the shaft means and extending appreciably axially inwardly of each of the shell ends intermediate the shell and the shaft means, each such mounting means being secured rigidly to the shell solely at its outer end and mounted on the shaft means solely at its inner end appreciably axially inwardly of the shell ends, each said mounting means being radially spaced from the shell axially outwardly from its inner end mounted on the shaft means and being radially spaced from the shell axially inwardly from its outer end secured to the shell, thereby applying internal counter-deflection moments to said shell in response to the application of a load to said shell.

3,097,592
HEAT STAMPING DEVICES
Jerome Friedman, 36 Eastwood Lane, Valley Stream, N.Y.
Filed Jan. 31, 1962, Ser. No. 170,133
10 Claims. (Cl. 101—6)

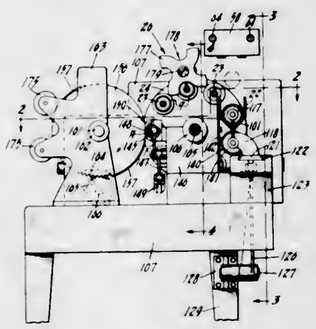
1. In a heat-stamping device of the character described, a hub member rotatably mounted on a frame, a type wheel member positioned as a removable collar on said hub, electrically-operated heater means carried by the type wheel, adapted when actuated to heat the type on said wheel, a pair of electrically conductive detents on one of said members and insulated from each other, a pair of electrically conductive open sockets carried by the other of said members and insulated from each other; said detents being releasably entered into said sockets and in contact therewith respectively; said detents being

spring-biased to remain in said sockets, that pair of electrically conductive components which is on the type wheel, being connected respectively to the terminals of said heater means and means on the hub affording accessible terminal connections to a source of electrical en-



ergy, connected respectively to the conductive components comprising the pair associated with the said hub; the movement of the type wheel in being slid off the hub, causing said detents to shift out of said sockets and the movement of said type wheel in being mounted onto said hub, causing said detents to shift into said sockets.

3,097,593
APPARATUS FOR HANDLING AND TREATING TUBULAR PLASTIC CONTAINERS
Alexander George Makowski, Fayville, Arthur Jordan Blood, Framingham, and John Moss Wathen, Jr., Bedford, Mass., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 31, 1959, Ser. No. 803,250
9 Claims. (Cl. 101—38)



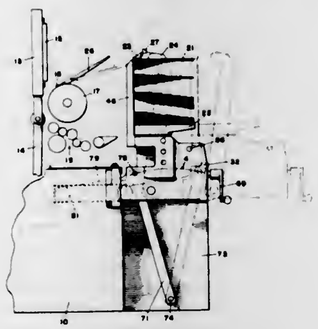
3. An apparatus for handling and treating sleeves comprising a mandrel having an outside diameter substantially equal to the inside diameter of the sleeves to be treated for receiving and firmly holding a sleeve thereon in telescoping relation, conveyor means for supporting a procession of sleeves in end-to-end relation for advancing sleeves toward said mandrel, a stop element disposed adjacent said conveyor means to arrest advancement of said procession of sleeves, a pressure member disposed adjacent said conveyor means for engaging said sleeves behind the leading sleeve of said procession to hold back said procession of sleeves, means for actuating said stop element and said pressure member in timed relation, a sleeve locating hopper intermediate said mandrel and said conveyor means for receiving said leading sleeve, finger means reciprocable between said conveyor means and said hopper for conveying said leading sleeve to said hopper, a pusher head disposed in said hopper and reciprocable relative to said mandrel to advance said sleeve in said hopper to a position on said mandrel, means for reciprocating said pusher head, means for treating the sleeve on the mandrel, and means for stripping the sleeve from the mandrel.

3,097,594
ASSEMBLED COMPOSITION PRINTING PROCESS
Charles A. Bankhead, 2430 S. Oakland St., Arlington 6, Va.
Filed Feb. 14, 1962, Ser. No. 174,359
3 Claims. (Cl. 101—128.4)



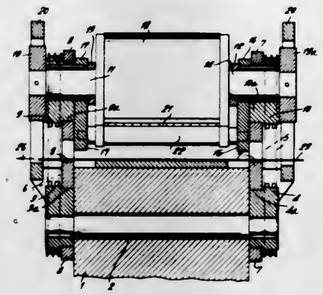
1. A method of preparing movable type and converting it to a screen stencil which consists in forcing a composition of water repellant gum through a screen stencil onto a backing sheet, dividing the sheet into legends or letter units bearing gum bodies, placing a silk screen over the gum bodies and in contact therewith, causing the gum bodies to adhere to the screen, pressing and blotting the screen into said gum bodies, removing the backing sheet, applying a coating of water soluble glue to the screen, drying the glue coating, and removing the gum bodies by the application of a solvent.

3,097,595
RETRACTABLE SHEET FEEDING MECHANISM
Bruno B. Pasquinelli, Evergreen Park, Ill., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 78,166
7 Claims. (Cl. 101—279)



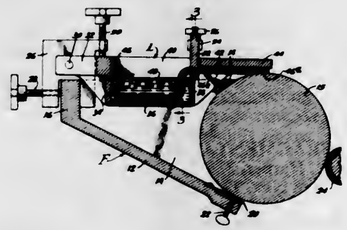
1. A sheet feeder assembly for a printing press having a main frame and an impression member, said sheet feeder assembly including a feeder frame having a normally horizontal surface thereon for supporting a stack of sheets to be printed, means mounting said feeder frame on said main frame for movement between operative and inoperative positions with respect to said impression member including a channel member fixed to the main frame, and a coacting follower attached to the feeder frame, means for moving said feeder frame between said operative and inoperative positions, and means connected between the main frame and the feeder frame and having coaction with said channel member and follower to tilt said feeder frame in a forward direction during its movement between said positions.

3,097,596
DRIVE MEANS FOR PRINTING PLATEN MACHINES
Johann Georg Schick, Sankt Gallen, Switzerland, assignor to Ferdinand Rüesch Maschinenfabrik, Sankt Gallen, Switzerland
Filed Sept. 19, 1960, Ser. No. 57,058
Claims priority, application Switzerland Sept. 18, 1959
5 Claims. (Cl. 101—320)



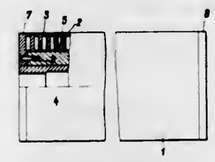
1. A printing press comprising, in combination, a printing bed; a printing head mounted for substantially vertical reciprocation relative to said bed, and having a pair of coaxial oppositely directed stub shafts; a drive shaft rotatably mounted in said printing bed; a pair of concentric drive sprockets eccentrically fixed on opposite ends of said drive shaft; a pair of concentric driven sprockets each eccentrically rotatable on a respective stub shaft; a pair of drive chains each connecting a drive sprocket to an associated driven sprocket; head reciprocating means moveable in synchronism with said drive sprockets and connected to said head and including means maintaining a constant spacing between the centers of each drive sprocket and its associated driven sprocket; an inking roller assembly; support means revolvably mounting said assembly on said stub shafts for revolution about said printing head; and means drivingly connecting said support means to said driven sprockets for revolution of said assembly in synchronism with the reciprocation of said printing head.

3,097,597
INK ROLLER LUBRICATOR
Martin K. Visser, Des Moines, Iowa, assignor to Meredith Publishing Company, Des Moines, Iowa, a corporation of Iowa
Filed May 1, 1961, Ser. No. 106,711
2 Claims. (Cl. 101—364)



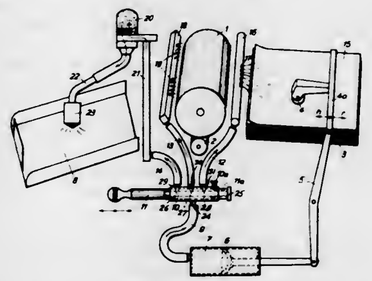
2. An ink roller lubricator comprising an oil reservoir, a C-clamp for mounting on the back wall of the ink fountain of a printing press, said reservoir being pivoted to said C-clamp, a wick in said reservoir having a portion extending therefrom, a pressure plate carried by said reservoir and in opposition to the ink roller of the printing press with said portion of said wick between said pressure plate and the ink roller, and means to pivotally adjust said reservoir to adjust the distance of said pressure plate from the ink roller and thereby the pressure of said pressure plate on said wick portion against the ink roller.

3,097,598
PRINTING CYLINDER
Werner Hotop, Heinz Günter Meese, and Erwin Masjoshusmann, Dortmund-Aplerbeck, Ulrich Böhle, Schwerte (Ruhr), and Günter Ginzel, Dortmund-Aplerbeck, Germany, assignors to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany
Filed Dec. 11, 1961, Ser. No. 158,344
3 Claims. (Cl. 101—378)



1. A cylinder for mounting a flexible magnetisable printing plate including co-axial elements each comprising a soft iron annular member and at least one permanent magnet which is magnetised across its thinnest section and is affixed to a diametral face of said member, longitudinal rib members of non-ferromagnetic material, said elements being mounted in axial adjacency on said rib members in such manner as to provide a closely spaced sequence of poles of alternating polarity in the peripheral surface of the cylinder.

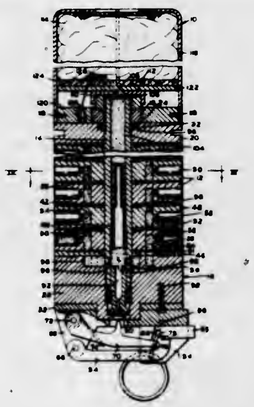
3,097,599
DUPLICATING MACHINE
Edgar Rutishauser, Todistrasse 1, Zurich, Switzerland
Filed Sept. 4, 1959, Ser. No. 838,317
Claims priority, application Switzerland Sept. 10, 1958
3 Claims. (Cl. 101—416)



1. In a duplicating machine having a rotated drum adapted to carry a stencil for marking successive sheets as the latter are fed by a reciprocated sheet feeding member from a stack of the sheets at a feeding station along a path that includes a portion of the surface of the drum to a discharge station; the combination of air pumping means operative to supply air under pressure, mechanical linkage means connecting said sheet feeding member with said air pumping means for operating the latter in response to reciprocation of the sheet feeding member, selector valve means having an inlet connected with said air pumping means for receiving air under pressure from the latter and a plurality of outlets, said valve means being actuable to selectively communicate said outlets with said inlet,

first, second and third nozzle means located to direct streams of air against the successive sheets at said feeding station, at said portion of the surface of the drum and at said discharge station, respectively, conduit means connecting said first, second and third nozzle means with respective outlets of said selector valve means, and a container for powdery material interposed in the conduit means between said valve means and said third nozzle means so that air streaming from the latter entrains powdery material from said container.

3,097,600
SOUND GENERATOR
James C. Hopkins, Cambridge, Mass., and Owen G. Bennett, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 25, 1946, Ser. No. 664,870
7 Claims. (Cl. 102—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An underwater sound generator comprising a series of discs stacked one upon the other, each disc having a series of spaced openings, an explosive charge in each of said openings, an annular groove in each disc interconnecting said openings and having an opening leading therefrom intercommunicating with the annular groove of the next adjacent disc, fuse means in said openings and grooves, means for retaining said discs in stacked formation with said lead openings in uniform or different relative positions with respect to each other and means for initiating the ignition of the fuse associated with the first disc of the series.

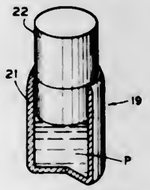
3,097,601
PENTOLITE-DIPPED CAP WELLS IN SEISMIC CANS
George L. Griffith, Coopersburg, and George A. Lyte, Bethlehem, Pa., assignors to Trojan Powder Company, New York, N.Y., a corporation of New York
Filed July 22, 1960, Ser. No. 44,789
4 Claims. (Cl. 102—23)

1. The method of counteracting loss of sensitivity of explosives used in land seismic work due to undue pressures such as hydrostatic heads when a train of connected cans is used in a bore hole in which chosen spaced cans of seismic explosive of the train are replaced by primer cans containing priming material, each such primer can having a centrally positioned elongated cap well container extending within the can; which consists in coating, prior to filling the primer can with primer material, the outside of the wall of the primer cap well container with a smooth thin coat of even thickness of pentolite extending from the bottom of the well container upwardly, the total weight of the pentolite coating being between one



and six grams and extending a substantial portion of the length of the cap well container.

3,097,602
LIQUID PROPELLANT CARTRIDGE
Charles F. Turner, Mount Carmel, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Oct. 28, 1960, Ser. No. 65,824
3 Claims. (Cl. 102—39)

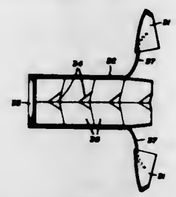


1. A method of utilizing potential energy within a liquid propellant susceptible of ignition by adiabatic compression where the propellant is confined within a cartridge comprising the steps of providing a cylindrical case and cooperating piston, disposing a quantity of said propellant within the cylinder and advancing the piston into the cylinder in a direction which tends to pressurize the propellant without igniting the propellant and securing the piston relative to the cylinder so as to maintain the pressure level established and subsequently introducing energy to the piston to drive the piston further into the case operative to increase the pressure level of the propellant effective to bring about ignition.

3,097,603
FRAGMENTATION PROJECTILE
Richard G. Harper, 330 E. 10th Ave., Denver 3, Colo.
Filed Nov. 12, 1959, Ser. No. 852,402
4 Claims. (Cl. 102—91)

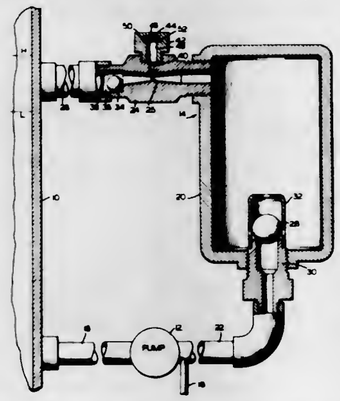
4. A fragmentation projectile for rifled firearms which comprises a plurality of longitudinal rows of complementary segments interfitting to form a bullet-shaped body, a soft metal casing holding said rows of segments in assembled relationship to form said body, elongated members secured to the forwardmost segments and extending rearwardly under said casing along said body and being anchored therebetween at their rearmost ends, and means at the forward end of said body for admitting air

between said forwardmost segments whereby upon flight of the projectile said forwardmost segments separate and said elongated members are drawn through and tear the



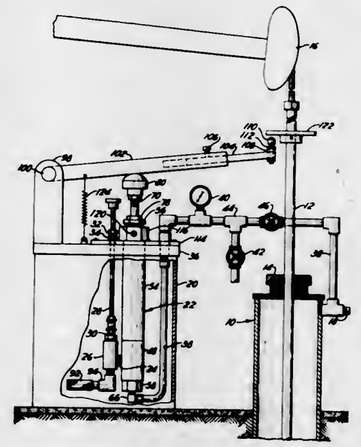
casing due to the centrifugal forces on said forwardmost segments to facilitate the release and scattering of the remaining segments of said body.

3,097,604
CONVERTIBLE AIR VOLUME CONTROL
David Luke Morgan, Shelton, Conn., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Dec. 13, 1961, Ser. No. 159,099
1 Claim. (Cl. 103—6)



In a fluid pressure system, the combination including a fluid storage tank, a pump for supplying liquid to said tank, and air volume control means for maintaining a desired air pressure in said storage tank comprising a housing containing fluids of liquid and air and having port means adjacent its top and bottom, means connecting the bottom port means of said housing to the suction side of said pump whereby operation of said pump causes a flow of liquid through the bottom port means, valve means including a ball float valve operative in response to a predetermined liquid level in said housing for controlling the flow of liquid through said bottom port means, horizontal conduit means connecting the top port means of said housing to said storage tank, venturi means having a venturi throat in said conduit means, an enlarged chamber in said conduit means between one end of said venturi means and said tank, a ball float valve in said enlarged chamber cooperating with the said one end of said venturi means to prevent flow of liquid from said tank to said venturi means, bored fitting means vertically carried by said conduit means and including a passage perpendicularly intersecting said venturi throat for establishing communication between the atmosphere and said venturi throat, an atmosphere opening on one end of said bored fitting means and an inlet bore on the opposite end thereof having a larger diameter than said atmosphere opening, a check valve chamber intermediate said atmosphere opening and said inlet bore having a larger diameter than said inlet bore, a check valve disc of resilient material loosely disposed in said check valve chamber for sealing said atmosphere opening, and a flow passage in said check valve disc being offset from said atmosphere opening and permitting an air flow to said venturi throat when said check valve disc is moved away from said atmosphere opening.

3,097,605
CHEMICAL PUMP FOR OIL WELLS
Charles R. Berkley, Odessa, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 10, 1962, Ser. No. 186,406
5 Claims. (Cl. 103—6)

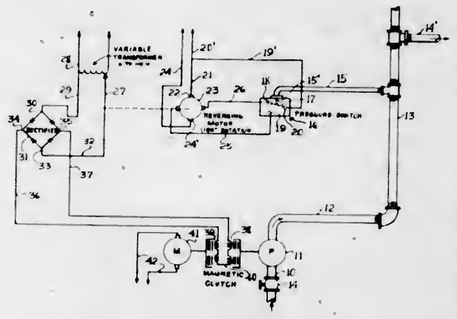


1. Apparatus for the injection of a liquid into the flow line of an oil well equipped with a reciprocating pump driven by a polish rod extending upwardly from the well head comprising a storage tank for the liquid, a pump cylinder positioned in said storage tank, said pump cylinder having a bore extending vertically therethrough, an inlet port extending through the cylinder and intersecting the bore above the lower end thereof, conduit means from the lower end of the cylinder to the flow line of the pump for delivery of liquids from the pump into the flow line, a check valve in the conduit means, a plunger movable in the bore of the cylinder from a position above the inlet port to a position below the inlet port, a striker plate mounted on the polish rod, an arm unattached to the striker plate extending to a position below the striker plate whereby said arm is engaged and moved downwardly by the striker plate on downward movement of the striker plate, said arm extending over the upper end of the plunger and adapted to move the plunger downwardly on downward movement of the polish rod to its lowermost position to drive the plunger downwardly in the bore of the pump, means for adjusting the length of the plunger to control the distance below the inlet valve traveled by the plunger, and resilient means engaging the plunger to urge said plunger upwardly against the arm.

3,097,606
WATER BOOSTER SYSTEM
Herman Finzel, Chicago, Ill., assignor to Well Pump Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 20, 1961, Ser. No. 146,515
1 Claim. (Cl. 103—23)

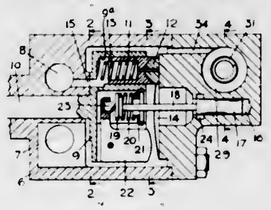
A water booster system for industrial, commercial and residential use comprising a constant operating motor, a

pump for delivering water from a supply main to a header pipe, an electromagnetic clutch providing connection between the motor and the pump, means responsive to variation of water pressure in said header pipe resulting from drain of water from the header pipe, for actuating said clutch to vary the speed of operation of the pump while the speed of operation of the motor remains constant, said means comprising a reversing motor having a degree of rotation of 180°, a variable transformer actuated by said reversing motor and in circuit with the clutch



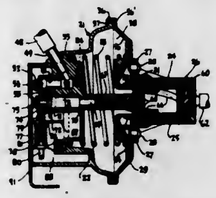
for varying the magnetic field thereof and having a potential of zero to 110 volts, a rectifier having circuit connections with said transformer, a pressure-responsive switch for controlling the direction of operation of the reversing motor in response to variation of pressure in said header pipe, and a single conduit opening communication between the header pipe and said switch and through which water flows in opposite directions in response to the variation of water pressure in said header pipe.

3,097,607
LIQUID FUEL PUMPS
Frank G. Freeman, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Feb. 28, 1961, Ser. No. 92,220
Claims priority, application Great Britain Mar. 1, 1960
1 Claim. (Cl. 103—41)



A liquid fuel pump of the kind specified, comprising in combination a hollow body provided with a fuel inlet, a fuel outlet, an internal cam surface, and a bleed passage communicating at one end thereof with said outlet, a rotor mounted within said hollow body, and provided with a plurality of longitudinal bores which are angularly spaced relative to the axis of said rotor, and each of which communicates alternately, at one end of said rotor, with said inlet and said outlet during rotation of said rotor, a plurality of spring-loaded plungers respectively mounted within said bores, and extending from the other end of said rotor into contact with said cam surface which is disposed so that rotation of said rotor is accompanied by reciprocation of said plungers for enabling fuel from said inlet to be admitted to said bores in turn, and to be discharged from said bores in turn through said outlet, a valve member in the form of a piston which is coaxial with said rotor, and which serves to control the escape of fuel from the end of said bleed passage remote from said outlet, means whereby said piston is connected to said rotor so as to be rotatable therewith, and capable of axial movement relative thereto, centrifugally operable means which is carried by said rotor, and under the action of which said piston is movable axially to permit escape of fuel from said bleed passage when said rotor attains a predetermined speed, a valve cylinder in which said piston is mounted, and which at one end communicates through the interior of said hollow body with said inlet, and an adjustable pressure-responsive relief valve for controlling pressure in the other end of said cylinder, the latter being provided adjacent the first mentioned end thereof with an opening which communicates with the end of said bleed passage remote from said outlet, and through the medium of which communication is establishable between said bleed passage and the first mentioned end of said cylinder by movement of said piston under the action of said centrifugally operable means, said hollow body being provided with a restricted orifice in communication with said outlet, and being also provided with a second passage which communicates at opposite ends respectively with the said other end of said cylinder and the end of said restricted orifice remote from said outlet, and said second passage being also in communication with said relief valve.

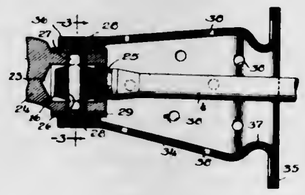
3,097,608
WINDSHIELD WASHER
Raymond A. Deibel, Cheektowaga, and William C. Riester, Williamsville, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Nov. 29, 1960, Ser. No. 72,466
5 Claims. (Cl. 103—43)



1. A windshield washer pump comprising a housing, a solvent chamber in said housing, an intake conduit in communication with said solvent chamber, a discharge conduit in communication with said solvent chamber, piston means mounted for reciprocation in said solvent chamber along a predetermined axis to provide an intake stroke and a discharge stroke, check valve means operatively associated with both said intake conduit and said discharge conduit to permit the charging of said solvent chamber with solvent during said intake stroke of said piston means and the discharging of said solvent during said discharge stroke of said piston means, spring means in said housing for biasing said piston means in a direction to effect said discharge stroke, a fluid pressure chamber in said housing adapted to be placed in communication with a fluid pressure source for moving said piston means against the bias of said spring means to effect said intake stroke, valve means operable in synchronism with the movement of said piston means for alternately placing said fluid pressure chamber in communication with said fluid pressure source to move said piston means against the bias of said spring means to effect said intake stroke and for thereafter venting said fluid pressure chamber to thereby permit said spring means to move said piston means to effect said discharge stroke, said valve means including a slide valve oscillatable in a direction which is substantially perpendicular to the axis of reciprocation of

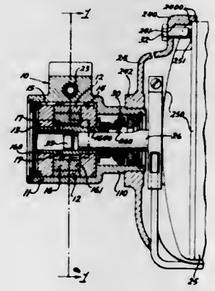
said piston means and about an axis which is substantially parallel to the axis of reciprocation of said piston means, linkage means operatively interconnecting said slide valve and said piston means to convert the reciprocatory motion of said piston means into oscillatory movement of said slide valve, said linkage means including cam means telescopically engaging said piston means operatively interconnecting said piston means and said slide valve and sealing means intermediate said solvent chamber and said fluid pressure chamber.

3,097,609
RAG GUARD FOR POSITIVE DISPLACEMENT PUMPS
Leonard M. Nechine, Highland Park, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed Oct. 23, 1959, Ser. No. 848,447
6 Claims. (Cl. 103—117)



1. In combination with a pump having a housing forming a suction chamber, a drive shaft having one end positioned in said suction chamber, and a rotor having one end secured to said one end of said drive shaft, a flexible tubular rag guard enclosing the connection between said rotor and said drive shaft, said rag guard having apertures providing passageways for liquid from said suction chamber to the space enclosed by said rag guard to equalize the pressure within said rag guard and said suction chamber, said apertures being too small to admit rags into the space enclosed by said rag guard, one end of said rag guard slidably engaging the connection between said rotor and said drive shaft, and the other end of said rag guard being fixed relative to said housing.

3,097,610
PUMP AND MOTOR CONSTRUCTION
Victor E. Swanson, Birmingham, Mich., assignor to Procon Pump & Engineering Co., Oak Park, Mich., a corporation of Michigan
Filed Jan. 18, 1962, Ser. No. 167,002
1 Claim. (Cl. 103—118)



In a pump and motor construction wherein the motor includes a circular end cap having threaded studs extending therefrom adjacent the periphery thereof, and a motor shaft extending from said motor having a flat key formed on one side of said shaft,

a centrally apertured mounting spider formed for disposition centrally on said motor end cap,

a vane type pump including a housing and a pump rotor rotatably mounted in fluid sealed relationship therein,

said rotor having radially disposed vane slots therein and vanes reciprocatingly mounted in said vane slots,

said rotor including a hollow rotor shaft with a flat keyway formed therein at one end thereof,

said pump housing including a tubular sleeve concentric with respect to said rotor shaft extending therefrom axially of said rotor shaft and fixedly mounted centrally on said mounting spider,

said motor shaft extending centrally through said spider and into said one end of said hollow pump rotor shaft in key mated drive relationship thereto,

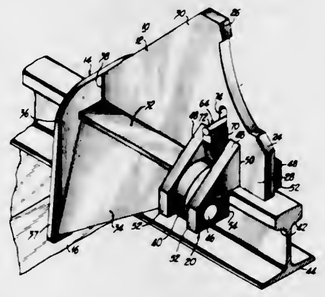
the mating flat face of the key of said motor shaft and flat face of the keyway of said pump rotor being slightly spaced,

a fixed seal in said other end of said hollow rotor shaft spaced from the end of said motor shaft forming a fluid reservoir therein,

said rotor shaft having suitable radially disposed apertures therein communicating with said pump vanes whereby to prevent a build-up of hydraulic pressure behind said pump vanes,

and means securing said mounting spider concentrically on said motor end cap.

3,097,611
WHEEL STOP
Stanley W. Hayes, Wayne Township, near Richmond, Wayne County, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana
Filed Jan. 24, 1962, Ser. No. 168,336
10 Claims. (Cl. 104—258)



1. A wheel stop for installation upon a rail, including in combination, wheel abutment means adapted to be placed on a rail including structure located above the rail, means including rail clamping elements movably mounted upon opposite sides of the structure for movement between rail clamping and released positions, means including structure on said clamping elements engageable with the rail upon placement of the stop on the rail for effecting movement of the clamping elements to rail clamping position, and means including vertically movable wedge means mounted on the structure engageable with said clamping elements for maintaining the latter in their clamping positions.

3,097,612
OUTLET STRUCTURE FOR RAILWAY HOPPER CARS
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 6, 1959, Ser. No. 851,459
7 Claims. (Cl. 105—282)



1. A discharge outlet assembly comprising, in combination,
(*a*) a foursided chute-like enclosure defining a discharge opening,
(*b*) a gate for said opening movable beyond one of the sides of said enclosure to open position,
(*c*) support means on opposite sides of said enclosure extending toward each other on which said gate is movable,
(*d*) said gate including an upstanding flange wall at each side extending in the general direction of movement of the gate and tapering in height from a location adjacent said one side of said enclosure when said gate is in closed position,
(*e*) ledge means along each of said opposite sides of said enclosure in overlying relation to the respective side flange of said gate,
(*f*) resilient gasket means interposed between the undersurfaces of said ledge means and the upper surfaces of said side flanges when said gate is fully closed, and
(*g*) means for moving said gate between open and closed positions.

3,097,613
VALVE AND ACTUATOR
Irl I. Tubbs, 819 North Ave., Galva, Ill.
Filed Aug. 19, 1959, Ser. No. 834,835
14 Claims. (Cl. 107—14)



1. A valve for a container comprising, a resilient body extending through an opening formed in the container and compressed thereby, a slit formed through the resilient body and extending from the inside to the outside of the container, a hollow cylindrical-shaped member receivable over the outer portion of the resilient body and formed with an opening from which the contents of the container may pass, a strip shaped member attached to the inside of the cylindrical-shaped member and receivable within the slit of the resilient body to open and close the valve, and a handle for turning the cylindrical-shaped member.

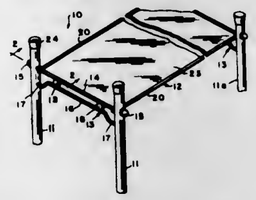
2. In apparatus according to claim 1 wherein the opening in the cylindrical-shaped member is formed so as to produce a decorative effect on the contents of the container as they are discharged.

3,097,614
TABLE EXTENSION SLIDE MECHANISM
William J. Duncan, Statesville, N.C., assignor to Acme Homes Metal Works, Inc., a corporation of North Carolina
Filed Apr. 26, 1962, Ser. No. 193,043
7 Claims. (Cl. 108—83)



1. A table extension slide mechanism for association with primary table leaves to allow spacing thereof for accommodating at least one intermediate extra leaf, said mechanism comprising at least two inner slide members assembled in telescoping relation with an outer slide structure for sliding extension in opposite directions therefrom, said inner slide members being inclined downwardly with respect to said outer slide structure in the direction of their respective sliding extension, and said downward inclination being obtained by a first boss struck downwardly in the lower surface of each inner slide member adjacent its trailing end so as to cause said end to ride high within said outer slide structure and by second bosses struck downwardly in the top surface of said outer slide structure at the portions thereof from which said inner slide members are respectively extended so as to maintain the inner slide members riding low thereat.

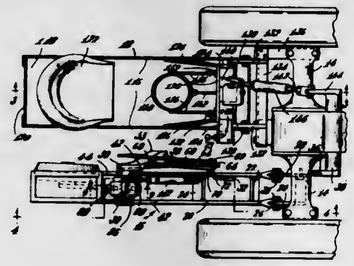
3,097,615
FURNITURE CONSTRUCTION
Lon Ross, East Rockaway, N.Y., assignor to Maurice Duchin Creations, Inc., New York, N.Y., a corporation of New York
Filed Sept. 27, 1961, Ser. No. 141,048
1 Claim. (Cl. 108—155)



In an article of furniture, the combination of a pair of spaced uprights, a horizontally elongated panel-like member, and means connecting said panel-like member to said uprights for support of the panel-like member in a horizontal position by the uprights and for retaining the uprights in a vertical position by the panel-like member, said connecting means comprising a first horizontal rod rigidly secured to and extending transversely of said panel-like member between said uprights, end portions of said rod projecting through transverse apertures formed in the uprights, a second rod spaced vertically from and parallel to said first rod, means rigidly securing intermediate portions of said first and second rods together, end portions of the second rod constituting a pair of rod-shaped keeper elements disposed in vertically spaced parallel relation to the respective end portions of the first rod, said uprights being provided at points spaced vertically from said apertures with sockets receiving said rod-shaped keeper elements, said sockets having blind inner ends in abutment with the ends of said keeper elements,

longitudinal side edges of said panel-like member abuting said uprights interiorly of the latter, and retaining elements provided on the end portions of said first rod exteriorly of the uprights to retain the parts assembled.

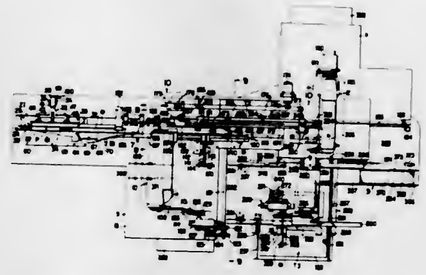
3,097,616
PLANTER
Henry N. Arnold, 17 Exchange St., Providence, R.I.
Filed Dec. 19, 1956, Ser. No. 629,328
19 Claims. (Cl. 111—3)



1. Apparatus for planting seedling trees comprising a tractor including a clutch, a brake and frames pivotally supported at their forward ends to the tractor; means suspending the frames rearwardly of their pivoted forward ends, substantially parallel with the ground, said means permitting upward movement of the frames and including means for damping downward movement, a shaft on one frame, a colter and packing wheel, means mounting the colter and packing wheel on the shaft in angularly spaced relation, means on said one frame operable to rock the packing wheel or colter into engagement with the ground and simultaneously to lift the other out of the ground so as to make a furrow and close it, a double-acting cylinder and piston assembly connected to said last means for effecting operation thereof, the other frame mounting a seat for the planter, a treadle on said other frame, and a treadle-operated control valve, means connecting the control valve to the double-acting cylinder and piston assembly, said control valve being operable to effect movement of the piston in the cylinder in opposite directions, a control shaft on the tractor operably connected to the clutch and brake so as to declutch the tractor wheels and simultaneously apply the brake, and means operable, when the control valve is operated by the treadle to effect movement of said piston in a direction to raise the colter, to effect operation of said control shaft to stop the tractor.

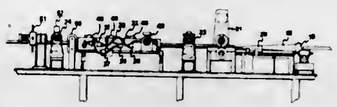
3,097,617
AUTOMATIC SEWING UNITS
Orland B. Reid, Kenilworth, John A. Herr, Garwood, and Edgar P. Turner and George J. Abel, Watchung, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed May 26, 1958, Ser. No. 737,775
18 Claims. (Cl. 112—2)

1. In combination, a supporting structure, a sewing machine mounted on said supporting structure, said sewing machine having a work supporting surface, stitch forming mechanism including an endwise movable needle defining a point of stitch formation on said work supporting surface, traversing mechanism for moving work relative to said point of stitch formation to produce a seam of a predetermined configuration, said traversing mechanism comprising a traversing element for carrying the work and mounted upon said supporting structure for universal movement in a horizontal plane, means for driving said traversing element comprising a rack conforming to the predetermined configuration and a driven pinion cooperating with said rack, said rack and pinion being carried by said traversing element and said supporting structure, means for initiating operation of said traversing element, and control means responsive to the



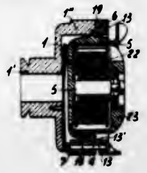
operation of said traversing mechanism for automatically controlling the operation of the sewing machine to initiate operation thereof and to stop the same at the completion of the sewing cycle and for automatically stopping said traversing mechanism upon completion of the traverse cycle.

3,097,618
MANUFACTURE OF MULTI-WALL BAG HAVING HEAT-SEALED LINER
Craig E. Davis, Fairfield, Ohio, assignor to Raymond Bag Corporation, Middletown, Ohio, a corporation of Ohio
Filed Dec. 1, 1960, Ser. No. 73,050
4 Claims. (Cl. 112—10)



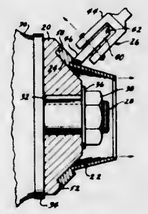
1. A method for continuously forming multi-wall bags having an inner liner composed of heat sealable material, such as polyethylene, which comprises advancing a plurality of paper webs and a preformed tube of liner forming material, superposing said paper webs and said liner tube with said liner tube overlying said paper webs and spaced inwardly from the opposite side edges thereof, concurrently infolding the opposite side edges of said paper webs about said liner tube and joining together their corresponding edges to provide a plurality of tubes lying one within the other, with said liner tube innermost, severing said combined tubes crosswise into bag lengths, and thereafter advancing said bag lengths so formed in a direction at right angles to their length, closing the ends of said bag lengths by heat sealing at least one end of each inner liner through the surrounding paper tubes to form an end seal for said liner tube and closing the corresponding ends of said surrounding paper tubes by a line of stitching extending along marginal end portions of said surrounding tubes and passing completely through all of the plies of said bag length including said inner liner, said line of stitching passing through the sealed end of said liner tube along a line spaced outwardly from the innermost edge of said end seal, whereby said line of stitching secures said inner liner to the surrounding plies of the bag so formed and yet does not interfere with the sealed condition of said inner liner.

3,097,619
ROTARY HOOK DEVICES FOR SEWING MACHINES
Maurizio Cerlianl, Frazione Mascherpa, Pavia, Italy
Filed Jan. 9, 1961, Ser. No. 81,551
Claims priority, application Italy July 13, 1960
7 Claims. (Cl. 112—228)



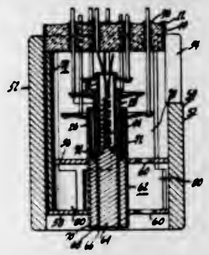
1. A rotary hook unit of the closed seat type for sewing machines comprising
a hook cup having a seat for a casing containing a bobbin,
said seat being formed by an annular slot in the interior rim portion of said hook cup,
a C-ring for mounting the bobbin casing in said slot of the hook cup,
resilient means for holding the C-ring in position for mounting said bobbin casing while permitting limited axial movement of the C-ring with respect to the hook cup,
said resilient means comprising a central body portion and a plurality of radial arms,
means for mounting said resilient means in the central part of the bottom of said hook cup,
said hook cup containing a plurality of radial slots adjacent the bottom thereof adapted to accommodate the radial arms of said resilient means,
said hook cup also containing bores extending from said radial slots to the rim of said cup, and
means for connecting the C-ring to the arms of said resilient means through said bores.

3,097,620
METHOD OF MAKING HOLLOW ARTICLES
John H. Peters 3rd, Rockville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 14, 1960, Ser. No. 55,887
11 Claims. (Cl. 113—52)



1. The method of forming a hollow metal article of varying circular cross section which method comprises the steps of, providing a mandrel having a tapered working surface of circular cross section, providing an annular metal blank having an inner surfacee conforming closely to said mandrel working surface, placing said blank on said mandrel with the inner surface thereof in engagement with said mandrel working surface, applying a forming tool to said blank in such relation to said mandrel as to pinch said blank between said forming tool and said mandrel working surface and simultaneously therewith imparting relative rotation between said forming tool and blank to effect a reduction in the thickness of said blank along the full circumference thereof at the zone of said tool, moving said forming tool in a direction generally lengthwise of said blank and toward the larger inner diameter end thereof while maintaining the forming tool in blank-pinching relationship with said mandrel, and restraining said larger inner diameter end of said blank against movement relative to said mandrel in the general direction of movement of said forming tool so that the unworked material of said blank is placed in compression by the generally lengthwise movement of said tool and is expressed in a generally axial direction between said forming tool and outer-mandrel surface with a consequent reduction in wall thickness and growth in length to produce the desired article.

3,097,621
BRAZING JIG FOR ELECTRON TUBE FABRICATION
George A. Lalak, Springfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 13, 1960, Ser. No. 35,795
6 Claims. (Cl. 113—99)



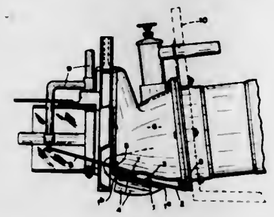
1. A brazing jig comprising a housing having a cylindrical opening therein, a pair of support disks mounted transversely within said opening in longitudinal spaced relationship with each other along the longitudinal axis of said cylindrical opening, each of said support disks having a central aperture therethrough, one of said support disks having a plurality of peripheral recesses therein, a cylindrical jigging assembly extending through the central apertures of and fixed to said support disks, and a plurality of elongated sheet metal inserts disposed within said housing, each of said inserts extending longitudinally along the wall of said cylindrical opening from the other of said disks and through one of said peripheral recesses in said one disk.

3,097,622
STABILIZATION OF FLOATING BODIES
John Bell, Beckenham, Kent, England, assignor to Muirhead & Co. Limited, Kent, England
Filed Mar. 28, 1962, Ser. No. 183,175
Claims priority, application Great Britain Feb. 13, 1962
2 Claims. (Cl. 114—125)



1. A floating body having a stabilizer tank the top of which is below the water line and open so that water fills the tank up to a level determined by pressure of gas in the tank, pump means for pressurizing the gas in the tank so that the tank is normally substantially filled with gas when the tank is in its central position of vertical movement, valve means controlling the flow of gas into and out of the tank and means for opening the valve means for a period when the tank is near the downward limit of its vertical movement to permit water to enter the tank and for opening the valve means for a period when the tank is near its upward limit of vertical movement to permit water to leave the tank.

3,097,623
HYDRAULIC JET PROPULSION APPARATUS FOR WATER-BORNE CRAFT
Charles W. F. Hamilton, Irishman Creek, Private Bag, Timaru, Canterbury, New Zealand
Filed Apr. 26, 1961, Ser. No. 105,816
Claims priority, application New Zealand Apr. 30, 1960
7 Claims. (Cl. 115—12)



1. For hydraulic jet propulsion apparatus for water-borne craft of the type including means for propelling the craft astern by means of a forwardly directed water jet, plate means constituting a directional control, means turnably mounting the plate means on the apparatus adjacent to the point of discharge of the forwardly directed jet, a plurality of vanes arranged in parallelism on and depending from the lower face of the plate means with such vanes lying in the path of the jet and serving to direct the jet in the desired direction, steering means aft of the plate means, and means connecting the plate means to the steering means whereby movement of the steering means effects turning of the plate means thereby changing the angle of the vanes in relation to the forwardly directed jet.

3,097,624
BOW PULL INDICATOR
Palmer Bergquist, R.R. 2, Campbell River, British Columbia, Canada
Filed Nov. 20, 1961, Ser. No. 153,446
13 Claims. (Cl. 116—67)



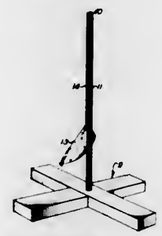
1. A bow pull indicator comprising a spring steel strip of curved cross section and adapted to give an audible click when the strip has been bent a predetermined amount, a bendable container adapted to confine the ends of said strip and to permit said strip to bend when the container and the strip are placed on a bendable part of a bow limb, attachment means for attaching said container and said strip to the bow limb to bend therewith whereby the strip is substantially parallel to the bow limb and the strip faces said limb with its concave surface.

3,097,625
SANITARY FLOORS FOR ANIMALS
Albert H. Sievers, Rte. 1, Fieldon, Ill.
Filed Sept. 13, 1960, Ser. No. 55,693
4 Claims. (Cl. 119—15)



1. A self-cleaning feeding floor comprising a pair of loafing floor sections, an open sewer trench disposed between said sections, each of said sections sloped toward said trench, and means spaced vertically above said sections for discharging fluid into said sections for carrying debris on said sections into said trench, and sleeping floor sections disposed immediately adjacent said loafing floor sections remote from said trench, and shed means mounted around said sleeping floor sections, said shed means including a closed roof, side, and end walls, said roof sloped toward said trench, said fluid discharge means including a perforated pipe secured to said roof above the junction between said sleeping and loafing floor sections and directed toward said loafing floor section.

3,097,626
ANIMAL EXERCISER
Major Felten, Box 2233, Gallsteo, N. Mex.
Filed Oct. 11, 1962, Ser. No. 232,640
1 Claim. (Cl. 119—29)

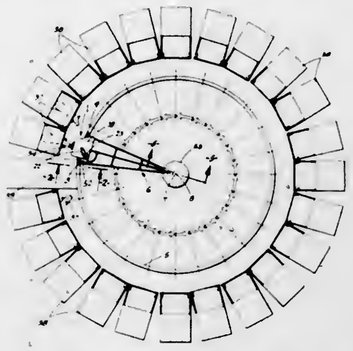


A cat exerciser comprising a demountable cruciform base, an elongated helical spring, a screw having a diameter slightly greater than the internal diameter of said helical spring, said screw passing vertically up through the center of the base into the lower end of said spring to thereby hold the lower end of the helical spring vertical, a flexible suspensory element having a length of less than the length of the helical spring being secured to the upper end of the spring, a stuffed bag being attached to the lower end of said suspensory element, said helical spring being formed of spring wire having a torsional resistance of not over thirty percent of the tumbling moment of the base.

3,097,627
AUTOMATIC TIME OPERATED FEEDING MEANS FOR SUCCESSIVELY FEEDING ANIMALS IN A PLURALITY OF STALLS
Robert E. Garcia, Rte. 1, Box 1140, Escalon, Calif.
Filed Oct. 23, 1961, Ser. No. 146,751
7 Claims. (Cl. 119—51.11)

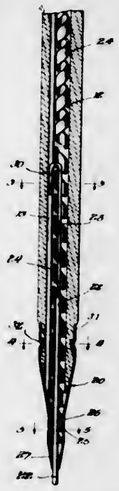
1. In an animal feeding device which includes a carriage mounted for movement past a row of individual

animal stalls and having feeding means thereon, means to move the carriage including an electric motor, and automatically functioning means arranged to cause inter-



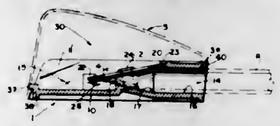
mittent operation of the motor so that the carriage will be moved from stall to stall in succession and will be halted for a predetermined period at each stall.

3,097,628
MECHANICAL PENCIL
Frank J. Stoeberl, Chicago, Ill., assignor to Dur-O-Lite Pencil Company, Melrose Park, Ill., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,372
2 Claims. (Cl. 120—18)



1. In a mechanical pencil, a body portion having an approximately central longitudinally extending bore, said body portion having a section of its length at its lower terminal end reduced in diameter, a circumferential groove formed in the section of reduced diameter, a circumferentially expandable sheet metal tip in telescoped relation on the exterior of the section of reduced diameter, said metal tip having a tapering formation in the direction of its length and having a slit extending longitudinally from end to end, at least one detent formed in the metal tip adjacent its top end and which has interfitting relation with the circumferential groove, whereby the metal tip is resiliently retained on the section of reduced diameter by the expandability of the metal tip while permitting relative rotation of the metal tip, means for propelling a length of lead through the metal tip to cause the lead to project from the tapered end of the metal tip, said lead propelling means at one end having a location within the metal tip and being fixed thereto, and said lead propelling means having its other end extending into the longitudinal bore of the said body portion.

3,097,629
PENCIL SHARPENER FOR COSMETIC PENCILS
Jack Fairchild Fleming, Summit, and Otto Lehre, Springfield, N.J., assignors to Sterling Plastics Co., Union, N.J., a corporation of New Jersey
Filed Sept. 28, 1960, Ser. No. 58,968
6 Claims. (Cl. 120—93)

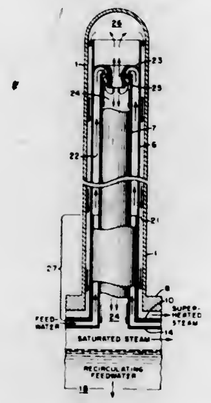


1. A pencil sharpener adapted for sharpening a cosmetic pencil having a relatively soft axial core occupying most of the diameter of the pencil, comprising an elongated body member having a backward portion forming a passageway to receive and support for relative rotation therein an end portion of said pencil, said passageway comprising a cylindrical section of nearly the same diameter as the pencil and a frusto-conical section merging at its base and coaxial with said cylindrical section, said frusto-conical section terminating in an end opening substantially smaller in diameter than said core of the pencil and having a slot therein extending along its top side from said end opening substantially to its base, a blade mounted on said body member at one side of said frusto-conical section, said blade having a cutting edge lying in and along said slot, parallel to and slightly inside the surface of the cone defined by said frusto-conical section, to cut said end portion to the taper desired for the tip of the pencil, a forward portion of said cutting edge extending forwardly and downwardly ahead of said end opening through an intersection of said edge with the axis of said frusto-conical section, and a clearance cavity formed in the forward portion of said body member ahead of said end opening and said blade, said cavity being open beneath and to a side and forwardly of said forward portion of said cutting edge and below said end opening and providing clearances between said edge and bottom and side walls of said cavity which at all points along said forward portion of said cutting edge are greater than the diameter of said end opening, so that in the event of breakage of said tip the broken core tip will be shed freely away from the path of sharpening movement of the pencil core into said cavity.

3,097,630
STEAM GENERATOR
Brice W. Kinyon and Graydon D. Whitman, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Feb. 24, 1961, Ser. No. 91,558
6 Claims. (Cl. 122—34)

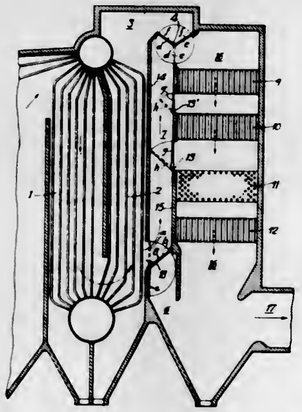
1. In a steam generator wherein a heating liquid is circulated over the exterior of vertically-disposed, water-conducting tubes, the improved water-conducting tube which comprises an inner tube, an intermediate tube having a diameter slightly larger than the diameter of said inner tube and disposed coaxially therewith, thus defining a first annulus, an outer tube having a diameter slightly larger than the diameter of said intermediate tube and disposed coaxially therewith, thus defining a

second annulus, means to direct a flow of feed water upwardly through said first annulus, means located at the upper end of said first annulus to direct the flow of water downwardly into the interior of said inner tube and permit separation of steam therefrom, and a steam



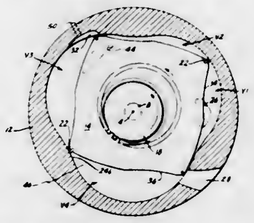
chamber located above and communicating with the interior of said inner tube and said second annulus for collecting steam formed in the water traversing said first annulus, and directing it downwardly through the second annulus.

3,097,631
COMBUSTION GAS FLOW CONTROL IN BOILER FLUES
Johannes J. Martin, 14 Montsalvatstrasse, Munich 23, Germany
Filed Jan. 18, 1961, Ser. No. 83,431
Claims priority, application Germany Jan. 20, 1960
4 Claims. (Cl. 122—235)



1. A heat exchanger for transferring heat from hot combustion gases to heating surfaces, comprising:
a first flue having an inlet and an outlet,
first heating surfaces placed in said first flue,
a second flue having an inlet connected to said outlet for receiving heating gas therefrom,
an uptake for discharging combustion gases from the heat exchanger,
said second flue having an outlet connected to said uptake for discharging combustion gases,
second heating surfaces placed in said second flue,
a gas duct having a first end portion connected to said uptake,
a first passage connecting the inlet of said first flue and said first end portion of said gas duct,
said gas duct having a second end portion forming a second passage connecting said gas duct and the inlet of said second flue,
damper means placed adjacent to said second gas passage for controlling the flow of combustion gases through the outlet of said first flue, through said second passage, and through the inlet of said second flue, and
gas flow control means placed adjacent to said first passage and constructed and arranged so as to simultaneously control the gas flow from the inlet of said first flue through said first passage and through said gas duct.

3,097,632
ROTARY INTERNAL COMBUSTION ENGINE AND METHOD OF OPERATION THEREOF
Walter Froede and Hanns-Dieter Paschke, Neckarsulm, Germany, assignors to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Germany, and Wankel G.m.b.H., Lindau (Bodensee), Germany
Filed Apr. 13, 1960, Ser. No. 21,939
Claims priority, application Germany Apr. 17, 1959
19 Claims. (Cl. 123—8)

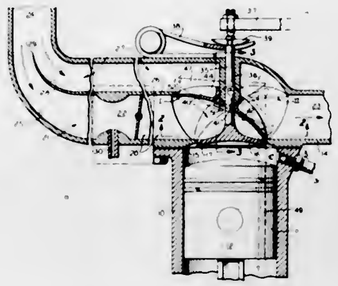


1. A method of operating a rotary engine having a working cycle with six phases and at least three variable volume working chambers comprising the steps of supplying a charge of a first combustion medium into one of said chambers during the first phase thereof; compressing the charge in said one chamber during the second phase thereof and transferring at least a portion of the compressed charge under its own pressure from said one chamber to a second of said chambers during the second phase of said one chamber; expanding the volume of said one chamber, during the third phase of said one chamber, to reduce the pressure therein to a lower pressure, thereafter inserting a charge of a second combustion medium into said one chamber during said third phase, and thereafter transferring into said one chamber during said third phase, for mixture with the charge of said second combustion medium previously inserted therein, a compressed charge of said first combustion medium from a third of said chambers; compressing the mixture of charges of said first and second combustion mediums in said one chamber, during the fourth phase thereof, and initiating combustion of the compressed mixture during the fourth phase; expanding the combusting mixture in said one chamber to do work during the fifth phase; and, exhausting the combustion product from said one chamber, during the sixth phase.

3,097,633
INTERNAL COMBUSTION ENGINE
Fritz Klein, 14520 Debell Drive, Los Altos Hills, Calif.
Filed May 8, 1961, Ser. No. 108,474
7 Claims. (Cl. 123—79)

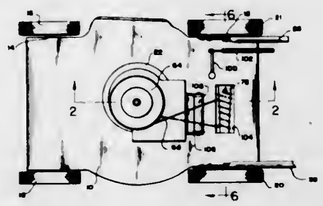
1. In combination with the cylinder of an internal combustion engine having a piston reciprocable therein, a

cylinder head casting comprising a closure for the upper end of said cylinder, a manifold formed in said head transverse to said cylinder and having an inttake and a discharge side relative theretot, a single valve port formed in said head concentric to said cylinder and approximately 70% of the diameter thereof facilitating maximum communication of said cylinder with said manifold, a valve for said port having a stem extending upwardly therefrom for overhead operation to open and close the latter in timed relation with the reciprocation of said piston, a guide sleeve in said cylinder head casting having a lower



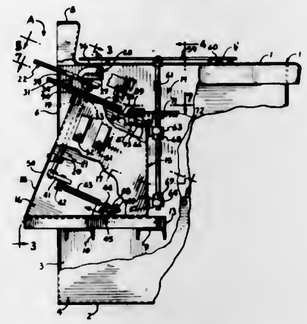
end rounded on an axis transverse to said manifold, a flow switch mounted on said valve stem for controlled movement about the axis of the rounded end of said guide sleeve between two extreme positions, one in which only the intake side of said manifold is in communication with said single valve port and the other in which only the exhaust side of said manifold is in communication with said port, and means operatively connected to said flow switch and operating in timed relation with said piston and valve for controlling the movement of said flow switch.

3,097,634
ENGINE STARTER
William C. Wehner, Detroit, Mich., assignor, by mesne assignments, to Dura Corporation, a corporation of Michigan
Filed July 22, 1959, Ser. No. 828,776
6 Claims. (Cl. 123—179)



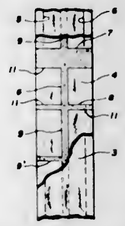
1. In combination with a hand guided, walking attendant type of implement having a deck, an axle and a wheel fixed on said axle, an engine mounted on said deck, said engine having an engine shaft, a coil spring carried by the implement, a drum of frusto-conical configuration mounted on said axle for rotary movement relative thereto, clutch means on the axle releasably connected to the drum for rotating the drum with the axle when said clutch means is engaged, a cable fastened to the drum adjacent its larger end for winding thereon, means connecting said cable to said spring for winding the latter upon rotation of the drum, and means for applying the stored energy of the spring to the engine shaft for starting the engine.

3,097,635
TARGET THROWING APPARATUS
Carl R. Freeman, 1237 W. 47th St., Chicago 9, Ill.
Filed Mar. 2, 1961, Ser. No. 92,931
8 Claims. (Cl. 124—8)



1. Target throwing apparatus for projecting a target outwardly by centrifugal force, said apparatus comprising an arcuate target guide, first means for pushing a target by a continuous movement from a position radially inwardly of the guide to a position along the guide and then continuing the movement uninterruptedly along the guide in an arcuate direction determined by the guide whereby the target is forced against the guide by centrifugal force, second means effective in response to the first means having pushed the target to a predetermined position for then continuing the pushing with increasing velocity of said target pushing means through a cycle of movement, said second means including a spring actuated by the movement of the first means in the first portion of its cycle of movement, and means controlled by the spring for then moving the first means at an accelerating rate, said target guide coacting with said target pushing means for guiding the target during said first portion of its cycle of movement and having a terminus beyond which the first means pushes the target whereupon the target is projected outwardly by the centrifugal force acting thereon.

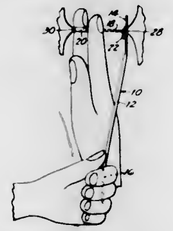
3,097,636
STRING FOR MARKING INTERNAL BLEEDING AND METHOD OF MAKING SAME
William F. Haynes, Jr., 163 Nassau St., Princeton, N.J., and Fred E. Pittman, 525 E. 68th St., New York, N.Y.
Filed May 3, 1961, Ser. No. 107,400
3 Claims. (Cl. 128—2)



1. In a blood-absorbent tape string taken orally for locating bleeding in the gastro-intestinal tract, as described, and provided with vertical and horizontal radio-opaque marking strips adhered thereon, the improvement comprising a length of first tape onto which said marking strips are attached, said marking strips comprising primary horizontal equally-spaced length-marking strips of one width and secondary horizontal greater length marking strips of greater width applied on one side of said first tape, and a second tape of the same length as the first, superimposed over the marked side of said first tape in attached relation thereto.

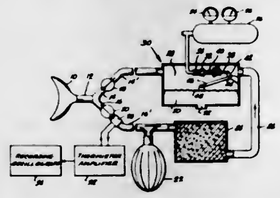
2. A method for making a blood-absorbent tape string taken orally for locating bleeding in the gastro-intestinal tract, as described, and provided with vertical and horizontal radio-opaque marking strips adhered thereon, comprising applying to a face of a cotton tape a thin centrally-disposed vertical continuous radio-opaque plastic strip, applying a thin horizontal plastic strip at every two inches of length and a wider horizontal plastic strip at very foot of length, said horizontal plastic strips being extended over the entire width of the tape, coating a face of another tape with a water-soluble glue, superimposing the other tape of the same size as the aforesaid tape over the marking strips of the first tape in gluing relation, and sewing both tapes lengthwise at each edge so as to incorporate the horizontal strips within the sewn portion.

3,097,637
PELVIC MEASURING DEVICE
Robert R. Horton, St. Paul, Minn., assignor, by mesne assignments, to Wynlit Pharmaceuticals, Inc., Madison, N.J., a corporation of Delaware
Filed Nov. 28, 1961, Ser. No. 155,266
4 Claims. (Cl. 128—2)



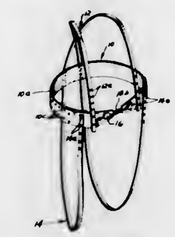
1. A device for internally measuring the distance between ischial spines which comprises an elongated stem for insertion into the vagina, said stem terminating in a distal end portion adapted to bear against an ischial spine, a flexible element of fixed length attached to said distal end portion and having a finger manipulable member for extending said flexible element between the ischial spines, the proximal end portion of said stem being adapted to project exteriorly of the vagina for maintaining said distal end portion in position while said flexible element is extended.

3,097,638
METABOLATORS
Irving Streimer, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Feb. 27, 1961, Ser. No. 91,711
6 Claims. (Cl. 128—2.07)



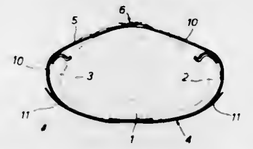
1. A metabolator comprising a closed-circuit breathing system including a patient utilization device, a carbon dioxide absorber unit having input and output, a demand regulator unit having a low-pressure flow space and a high-pressure flow space therein, an exhaling duct connecting said patient utilization device to said input, means connecting said low-pressure flow space to said output, an inhaling duct connecting said patient utilization device to said low-pressure flow space, a source of compressed oxygen connected to said high-pressure flow space, said demand regulator unit further including a passage interconnecting said flow spaces, a valve normally closing said passage, and a valve-actuating device including means responsive to the differential of ambient atmospheric pressure and pressure in said low-pressure flow space and operable to open said valve when such latter pressure drops by a predetermined amount below such ambient atmospheric pressure, thereby continuously to provide oxygen at substantially atmospheric pressure to the patient, and means to measure the quantity of oxygen consumed by the patient.

3,097,639
RESPIROMETERS
Irving Streimer, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Mar. 28, 1961, Ser. No. 98,851
7 Claims. (Cl. 128—2.08)



1. A respirometer device comprising a chest encircling band including a relatively long inelastic portion having separated ends interconnected by a relatively short elastic portion adapted to stretch and contract elastically as the patient breathes, a potentiometer having a base mounted on one of said ends and having cooperating electrical resistance and wiper elements mounted on the base, one such element for rotation relative to the other, actuating means including an inelastic link connecting the rotary element with the other of said ends to effect rotation of the element proportional to change of length of said elastic portion, and electric circuit means connected to the resistance element and to the wiper for detecting such rotation, and thereby chest contraction and expansion.

3,097,640
BODY SUPPORT FOR PERSONAL WEAR
James Anthony Morgan, Leighton Buzzard, England, assignor to Solarota Limited, London, England, a British company
Filed June 8, 1961, Ser. No. 115,688
1 Claim. (Cl. 128—78)



A belt comprising a band of flexible material adapted to encircle the body of the wearer in the pelvic area, a

pair of hooking pull members secured to the inside of said band and disposed to hook around and engage the forward ends of the ilium on each side, means for adjusting and shortening the length of the rear portion of the band between said pull members, said rear band portion adjusting means capable of being initially adjusted to cause said hooking pull members to engage the forward ends of the ilium and tend to pull the same rearwardly with a desired force, and means for adjusting the length of the forward portion of said band, said forward band portion adjusting means allowing for a desired fit about the body of the wearer after the rearward pull on the ilium has been set.

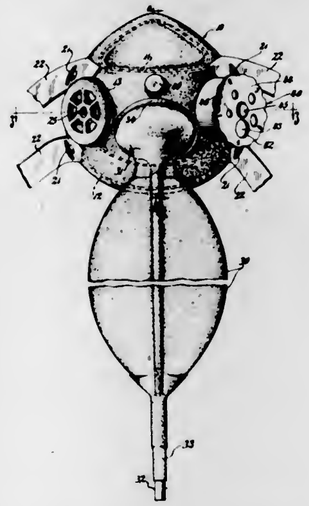
3,097,641
ONE-PIECE BODY PORTION TRUSS
Henry G. Nelkin, Kansas City, Mo., assignor to H. G. Enterprises, a co-partnership
Filed Aug. 4, 1960, Ser. No. 47,528
2 Claims. (Cl. 128—96)



2. A truss comprising a one-piece body portion of one continuous piece of strong flexible inextensible fabric, means for detachably securing the opposite ends of said body portion together in fixed overlapping relation to encircle the body of the wearer, said body portion having a transverse fold on each side of the middle thereof, a transverse stay at each fold extending back of each fold in alignment therewith, a strip of webbing over each stay, stitching securing the plies of the folds together and said webbing thereto, to mount said stays in fixed position with respect to said folds in a position to stiffen said folds vertically and a transverse stay on each side of the middle thereof spaced further from the middle of said body portion than said fold and further from the ends of said body portion than from the middle thereof, pairs of flat faced adjusting straps each pair comprising a strap secured to said body portion at said fold and a strap secured to said body portion across the middle thereof from said fold at said stay spaced further from said middle and means adjustably connecting said straps for adjusting the effective length of said body portion to form a flexible belt of fixed length extending entirely around the body with said adjusting means at the rear of the body and said ends at the front of said body, said body portion between said folds forming an integral shielding member between said straps and the body of the wearer, and a flat sponge rubber pad detachably mounted on the inner face of said shielding member midway between said transverse folds.

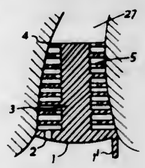
3,097,642
FACE MASK
Allan M. Russell, 19101 Van Aken Blvd., Shaker Heights, Ohio
Filed Aug. 21, 1956, Ser. No. 605,248
4 Claims. (Cl. 128—146)

1. Apparatus for the administration of gaseous fluids, comprising a mask adapted to enclose the oral and nasal passages and formed of soft, pliable material, said mask being provided with a thin flexible face engaging flange of substantial breadth and means comprising a wire loop embedded in said mask having at least a portion thereof extending to an intermediate area of the mask adjacent the oral and nasal passages for adjustably conforming the mask in the areas of the oral and nasal passages to insure its engagement with the face, a plurality of turrets in said mask in the area of the nasal and oral passages, each of said turrets being provided with an opening, stiffening means in said turret openings, a check valve in at least



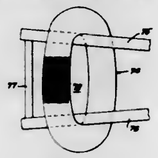
one of said turret openings, and adjustable means removably mounted over one of said turrets to provide preselected resistance to exhalation of gaseous fluids while at all times permitting exhalation therethrough, comprising valve means including means forming a series of constricted openings graduated in size, said valve means being arranged to permit exhalation through a selected one of said constricted openings.

3,097,643
EAR-PLUGS
Louis Santi, 1506 Rue Paradis, Marseille, France
Filed Aug. 24, 1961, Ser. No. 133,710
Claims priority, application France Aug. 26, 1960
3 Claims. (Cl. 128—152)



1. An ear-plug comprising an apertured base, a tab on said base for manipulation of the plug, a stem projecting from the base for introduction into the ear channel, and a plurality of circumferential axially-spaced apertured blades on the stem to contact the wall of the ear channel, the apertures of the blades being staggered each with respect to the next, the whole being made of resilient material.

3,097,644
TUBULAR SURGICAL BANDAGES, CASTS, AND MOLDS
Leon O. Parker, San Francisco, Calif., assignor to San Francisco Research Corporation, San Francisco, Calif., a corporation of California
Filed Aug. 24, 1961, Ser. No. 133,677
84 Claims. (Cl. 128—157)



1. A firm, tight, doughnut-like roll of tubular fabric, said tubular fabric being extendible and contractible both radially and axially such that when it is extended in one direction it simultaneously contracts in the transverse direction, said roll being stretched radially substantially to its greatest diameter.

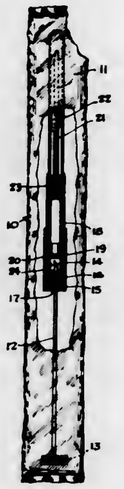
3,097,645
NEBULIZER
Victor E. Lester, P.O. Box 608, Sonora, Calif.
Filed Mar. 22, 1960, Ser. No. 16,776
14 Claims. (Cl. 128—194)



1. A nebulizer, comprising: a covered bowl-like liquid container; an atomizing nozzle assembly comprising an inner tubular air-nozzle extending up generally vertically through the bottom of the bowl to a point inside said container and above the bottom thereof and an outer tubular spray-nozzle inside said container concentric with and spaced from said air nozzle, said spray-nozzle having liquid inlet means near its lower end by which liquid from said container can enter, and both said air-nozzle and said spray-nozzle having orifices at their upper ends; and a relatively large, generally horizontal tubular outlet means for nebulized material spaced from said nozzle assembly such that a stream of nebulized material emanating from said nozzle assembly impinges the wall of said outlet means before it enters said outlet means, said outlet means having an opening leading from said container into said outlet means.

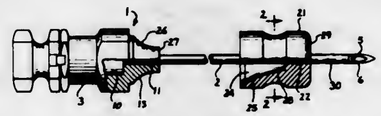
3,097,646
VENOUS CATHETER APPARATUS
Henry M. Scislowicz, Lake Bluff, Ill., assignor to Abbott Laboratories, Chicago, Ill., a corporation of Illinois
Filed Dec. 6, 1960, Ser. No. 74,194
10 Claims. (Cl. 128—214)

1. In a venous catheter assembly, a combination, comprising: a hub member; a length of flexible tubing axially aligned with and in fluid tight engagement with said hub member; a reseal plug attached to said hub member; a trocar having a sharpened end slidably mounted in said flexible tubing, said hub member and said reseal plug, said trocar being of sufficient length to project said sharpened end of said trocar a short distance beyond the end of said tubing, said reseal plug and said hub member being in axial alignment, and means for guiding said trocar axially through said reseal plug and into said flexible tubing; whereby after said tubing and the point



of said trocar are inserted into a vein, said trocar is withdrawable from said tubing and said reseal plug, and communication with said vein can be established by again piercing said reseal plug.

3,097,647
SURGICAL APPARATUS
Zbislaw M. Roehr, Deland, Fla., assignor, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,614
1 Claim. (Cl. 128—221)



A surgical apparatus for forming a deep penetration into a body under sterile conditions, said apparatus having a hub, a body-penetrating element secured to said hub and having a penetrating end remote from said hub, said body-penetrating element being of sufficient thinness in relation to its length to be subject to possible buckling when subjected to compression during its penetrating operation, and a guide for preventing misdirection of the body penetrating element due to buckling during its body-penetrating operation, said guide comprising a generally cylindrical bushing open at one end and having at its opposite end a closure with a centrally located axially extending bore therethrough and through which bore the body-penetrating element extends, said bore making a snug fit on the body-penetrating element while permitting longitudinal sliding of the body-penetrating element therethrough, the opening in the open end of said bushing comprising an axial bore contiguous with and of greater axial extent than said first-mentioned bore and facing said hub, and being of sufficient size to enable it to receive the end of the hub whereby the bushing may

be telescoped over the end of the hub, said bushing having a maximum width substantially the width of said hub and the entire bushing being of a length which is a minor fractional part of the length of the body penetrating element and said second bore having an axial length which is a major fractional part of the length of the bushing, the part of the bushing around said bores forming a peripheral wall which provides a lateral finger-gripping portion to enable digital gripping pressure to be applied to the wall and in a direction radially inwardly toward the bores to hold the guide in place with said axially extending bore adapted to be accurately disposed at any desired angular position with respect to a patient's body during the body-penetrating operation.

3,097,648
CATAMENIAL PAD
Marie J. A. Dupuis, West Hartford, Conn.
(P.O. Box 297, Farmington, Conn.)
Filed Feb. 10, 1961, Ser. No. 88,463
1 Claim. (Cl. 128—290)



A method for forming a catamenial pad from a sheet of flexible cloth which comprises the steps of cutting said sheet to a size to be worn by a person to form a flat sheet section having two straight edges intersecting at right angles and an arcuately curved edge connecting together the ends of said straight edges remote from said intersection; and folding said sheet section upon itself at the intersection of the straight edges to form said pad in such manner that the intersection of said adjacent edges forms a narrow end of the pad and said curved edge forms a tapered broad end of the pad.

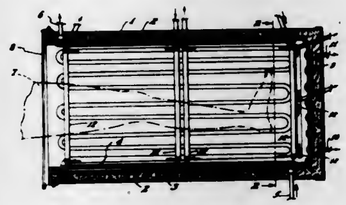
3,097,649
METHOD AND APPLICATION OF SURGICAL SPONGE
Russell M. Gray, San Bernardino, Calif.
Filed Jan. 18, 1960, Ser. No. 2,916
1 Claim. (Cl. 128—296)



A surgical sponge, comprising: a pad formed of laminated gauze material; and a capsule securely embedded therein by stitching, said capsule being formed of an impervious non-toxic heat and pressure resistant casing and a radio active pellet located within same.

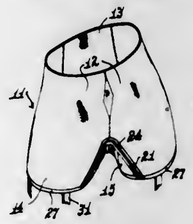
3,097,650
THERAPEUTIC RADIANT COOLING SYSTEM
Clarence A. Mills, Cincinnati, Ohio, assignor to Reflectotherm, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed June 12, 1958, Ser. No. 741,678
1 Claim. (Cl. 128—402)

A therapeutic treatment for reducing temperature within the body which consists in exposing the body to a carbon coated heat absorber and thereby causing ultra long radiant rays from a feverous portion within the body to penetrate the skin surface, to be absorbed by the heat absorber, and maintaining a predetermined temperature at the skin surface to avoid shock by passing



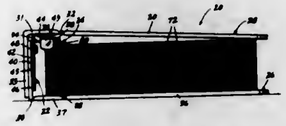
warm air currents over the skin surfaces of the body through which the ultra long radiant rays pass.

3,097,651
PANTY GIRDLE
Howard M. Lehman, 411 S. Sangamon St., Glencoe, Ill.
Filed Apr. 14, 1961, Ser. No. 103,030
1 Claim. (Cl. 128—526)



A panty girdle comprising a tubular body portion and depending thigh portions each having front and back edges defining a substantially V-shaped open crotch, a substantially square crotch portion, stitches securing one edge of said crotch portion to the back edges of said open crotch, a slide fastener element secured to the front edge of said open crotch, a complemental slide fastener element secured to the opposed edge of the crotch portion, and an elastic strap sewn to the free bottom edge of the thigh portions and terminating at the attached slide fastener components and extending along opposed side edges of the crotch portion, said crotch portion being adapted in attached position to define with each thigh portion a complete thigh embracing portion.

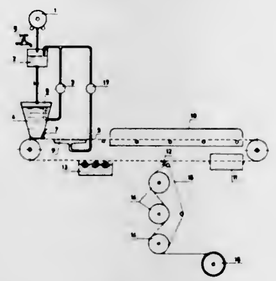
3,097,652
TRANSFER BAR AND LOCKING MECHANISM
George Joseph Villhard, St. Johns, Mo., assignor to Loose Leaf Metals Company, St. Louis, Mo., a corporation of Missouri
Filed Sept. 3, 1959, Ser. No. 837,855
2 Claims. (Cl. 129—8)



1. In a binder having an upper side, a lower side and an end between the upper and lower sides, a locking mechanism comprising a transfer bar, said transfer bar including spaced sheet receiving posts supported by the lower side of the binder, a latch plate mounted adjacent the transfer bar, pin and slot connecting means between

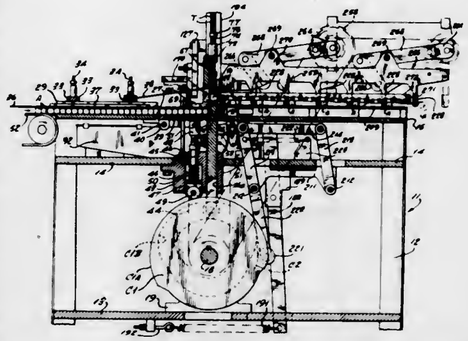
the latch plate and transfer bar to permit restricted sliding movement of the latch plate relative to the transfer bar, spring means for biasing he latch plate to one extreme of its sliding movement as permitted by the pin and slot connecting means, a plurality of studs extending from the upper side toward the lower side of the binder when the binder is closed, each stud having a shaft and an enlarged head on the end of the shaft, a plurality of recesses in the transfer bar, each recess being opposite a stud and each recess opening through the side of the transfer bar nearest the end of the binder, the width of each recess as measured in a direction parallel to the end of the binder being greater than the diameter of the stud heads, the latch plate having a plurality of slots corresponding to the number of studs, each slot having a wide portion opening to the side of the latch plate nearest the end of the binder and wider than the diameter of the stud heads, each slot also having an extension from the side of the slot portion opposite the direction toward which the latch plate is biased by the spring means, the slot extension being large enough to receive the shaft of a stud but being smaller than the stud head, the slot extensions being positioned directly opposite the stud heads when the latch plate is in the aforementioned one extreme, and a lever on the latch plate for sliding the latch plate against the force of the spring means to move the wide slot portions to positions directly opposite the stud heads.

3,097,653
TOBACCO SHEET AND METHOD OF MAKING SAME
Gerrit de Gooijer, 15 Donkeregaard, Oudewater, Netherlands
Filed Jan. 27, 1958, Ser. No. 711,464
Claims priority, application Netherlands Feb. 1, 1957
11 Claims. (Cl. 131—17)



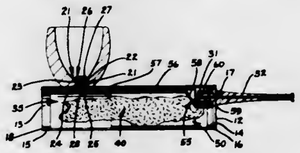
1. The process of producing tobacco sheet material containing only tobacco and compounds which are used to improve the quality of tobacco leaves, comprising wet-grinding said tobacco with water in a ball mill to give a concentrated slurry of fine particles of tobacco in water which particles are of such a size that at least 5% but not more than 30% by weight are retained on a 100 mesh sieve with square mesh openings of 0.21 mm. and at least 99% by weight of the particles of the slurry pass through an 18 mesh sieve with square mesh openings of 1.02 mm., diluting said slurry with an aqueous liquid in such a quantity that the ratio by weight of tobacco to water is between 1:20 and 1:50, forming a film of this slurry on the surface of a moving conveyor belt having very fine openings, which conveyor belt substantially retains all of the particles of the slurry, removing at least 80% of the liquid present in said slurry through said openings in said conveyor belt, drying and recovering said tobacco sheet material.

3,097,654
CIGAR TIP APPLYING MACHINE
Olof B. Carlson, Philadelphia, Pa., assignor to Consolidated Cigar Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 11, 1961, Ser. No. 130,860
17 Claims. (Cl. 131—88)



1. An apparatus for applying tips or the like to cigars comprising means for transporting a cigar to a tipping station, means for applying a tip to said cigar at said tipping station, a tip magazine having a discharge opening and adapted to feed individual tips to said tip applying means, a closure gate movable between an advanced and retracted position in and out of registry with said discharge opening, means for motivating said apparatus, an electrical switch for activating and deactivating said motivating means and normally positioned in an activate position, a feeler member, means reciprocating said feeler member along a path between a retracted position and an advanced position intersected by a tip carried by said cigar at said tipping station, a switch control member movable with said feeler member between corresponding retracted and advanced positions and urging said switch to a deactivate position when said feeler member is in its advanced position, and means reciprocating said gate in synchronism with said feeler member.

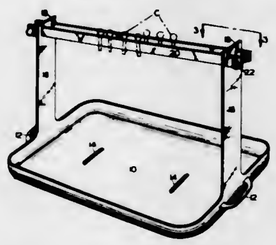
3,097,655
SMOKING PIPE
Shalmy C. Oden, 1593 Jefferson St., Muskegon, Mich.
Filed Feb. 29, 1960, Ser. No. 11,732
1 Claim. (Cl. 131—207)



A smoking pipe comprising: a bowl; a smoke conduit from said bowl; a generally cylindrical body defining a filter chamber of sufficient size to receive a loosely wadded, randomly disposed sheet of soft, smoke-pervious cellulosic fibrous material substantially filling said filter chamber; a stem having a smoke passage formed therethrough, said conduit and passage terminating in said chamber at opposite ends thereof, said stem being detachable from said chamber; and a hook-and-shield member substantially in the form of a bent wire having an attachment portion fixedly holding it to said stem, a shield portion adjacent said attachment portion, said shield portion extending diametrically across the inner

end of said smoke passage close thereto but spaced therefrom so as to form a barrier to prevent said sheet from coming into contact with said inner end but allow smoke to enter said inner end, a central portion extending throughout the length of said filter chamber adjacent the perimeter of said cylinder so as to avoid confining said sheet, and a radially inwardly turned hook portion at its end most remote from said stem for engaging said sheet and pulling it out of said chamber when said stem is detached and moved away from said chamber.

3,097,656
BEAUTICIAN'S ACCESSORY HOLDER
Frances C. Morris, 2915 H St., Vancouver, Wash.
Filed June 14, 1960, Ser. No. 35,925
1 Claim. (Cl. 132—1)



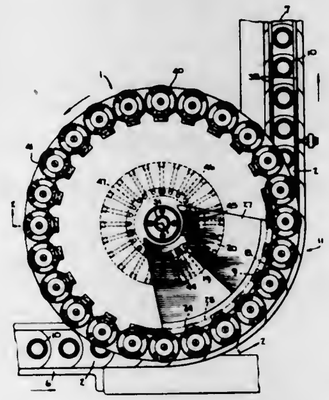
A holder for beautician's accessories comprising a container portion for holding certain of the accessories, end upright members on said container portion, at least one thin, elongated strip having a supporting connection at its opposite ends with the upper end of said end upright members and adapted for receiving hair clips thereon, the supporting connection between the strip and the upright members comprising a freely releasable connection whereby said strip is adapted freely to be mounted on or removed from the uprights, said strip being flexible for attachment in contoured relation to the body of a person, and spring pressed clamp means on each end of said strip for connection to a garment of a person to which the strip is to be attached.

3,097,657
HAIR CURLERS
Nathan L. Solomon, 343 Highview Road, Englewood, N.J.
Filed Aug. 25, 1959, Ser. No. 835,999
3 Claims. (Cl. 132—39)



1. A hair curling device comprising an elongated bristle support member having a pair of ends, resilient bristles radially projecting from and longitudinally extending along said bristle support member, said bristles having ends defining a cylindrical body surface, and a resilient curl support member having at opposite ends a toroidal shaped central member with a plurality of radially extending arms therefrom, each arm of one central end member planarly aligned with a respective arm of the other of said central end member forming a planar pair of arms, a longitudinally extending straight resilient rib interconnecting each arm of said planar pairs of radially extending arms, said ribs having outer faces defining an interrupted cylindrical surface of a diameter less than the diameter of said cylindrical body surface of said bristles, each of said central end members having a radial slit between adjacent correspondingly planarly aligned radial arms so that said slits are coplanar, said slits being smaller than the smallest width of said ends of said elongated bristle support member, said radial slits in each of said central end members adapted to be enlarged upon urging apart the respective radial arms adjacent each of said radial slits for receiving a respective end of said elongated bristle support member and adapted to resume their normal position upon removal of said urging apart of adjacent radial arms so that said ribs are in spaced apart relation below the cylindrical body surface of said resilient bristles, said ribs adapted to yield resiliently inwardly as hair is wrapped on said bristle body surface.

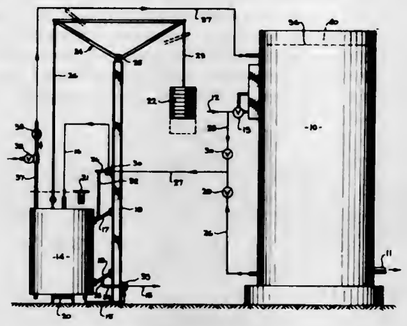
3,097,658
ROTARY JAR WASHER
Joseph C. Runco, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Feb. 27, 1961, Ser. No. 91,813
5 Claims. (Cl. 134—81)



1. A washer for unsealed containers comprising the combination of means to move a plurality of containers in an arcuate path, a container sealer rotatably mounted above said container moving means including a plurality of spaced container sealing members and positioned so that a portion of the rotational path of said sealer is above the arcuate path of the containers on said container moving means, means to move a sealing member of said sealer into sealing contact with each of the mouths of containers on said container moving means, container washing means positioned to clean said containers while sealed by said container sealer, and sealer washing means positioned to clean each of said sealing members when it is remotely positioned from said arcuate path.

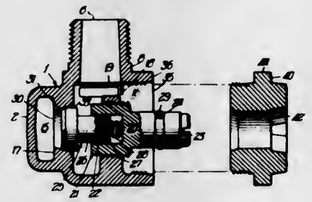
3,097,659
WATER TANK PRESSURIZING SYSTEM
Bert S. Calvert, Rte. 8, Box 317, Tucson, Ariz.
Filed May 8, 1961, Ser. No. 108,334
3 Claims. (Cl. 137—209)

1. A liquid tank pressurizing system, comprising a main closed tank containing liquid and an air space above the liquid, a relatively small pressurizing vessel, means mounting said vessel for counterbalanced up and down movements in a range of travel below the liquid level in the tank and in response to introduction to and removal of liquid from the vessel, a return line receiving liquid from a lower elevation region of the tank for delivering to said vessel liquid which is pressurized by the air in said tank space and by the weight of the tank liquid above said lower elevation region, said tank having a liquid inlet and also a liquid supply outlet which is at a lower elevation, a conduit through which air is displaced from said vessel into the tank as liquid is delivered into the vessel, a valve-



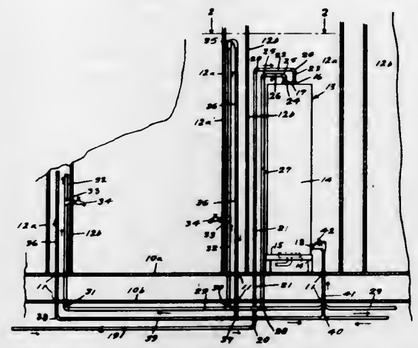
controlled air inlet for the vessel, means for bleeding liquid from the vessel, and means for alternately opening and closing liquid delivery through said line to said vessel in response to said movements of the vessel.

3,097,660
CHECK VALVE WITH REMOVABLE FILTER
Charles H. Priesmeyer, Wilmette, Ill., assignor to The Powers Regulator Company, Skokie, Ill., a corporation of Illinois
Filed Aug. 5, 1960, Ser. No. 47,706
2 Claims. (Cl. 137—316)



1. An adjustable check valve comprising: a valve casing having inlet and outlet openings to accommodate the flow of fluid into and out of said casing, respectively, a partition disposed between said inlet and outlet openings to form inlet and outlet compartments, said partition having a valve port and a valve seat, an access opening for said outlet compartment and said outlet opening in the wall of said casing, a transversely projecting support comprising a web extending partially across said compartment in a plane substantially parallel with said valve port so as to define a space between said web and the wall of said casing, said web having an aperture therein substantially aligned with said valve port, a shaft mounted on said support for axial movement, a valve resiliently coupled to said shaft and adapted for sealing engagement with said valve seat, said valve exerting against said valve seat a thrust having a magnitude predetermined by the axial position of said shaft relative to said support, a filter in said outlet compartment effectively disposed across said outlet port, said filter being movable through said space for purposes of inserting and withdrawing said filter in and from said compartment and a removable cover for said access port, said cover having a centrally disposed cylindrical hole engaging said shaft in rotatable, axially movable and fluid tight relation.

3,097,661
INSTANT HOT WATER SYSTEM
John W. G. Lee, 741 Barnes Mill Road, Marietta, Ga.
Filed Sept. 20, 1960, Ser. No. 57,183
2 Claims. (Cl. 137—335)

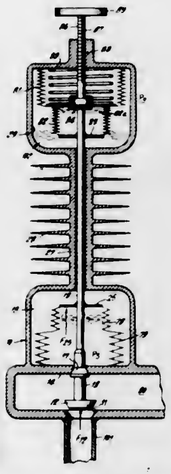


1. A water heating and circulating system for a building having double walls comprising a hot water heater, a hot water supply line connected to the top of said heater and including a horizontal run section, risers in the walls connected to the horizontal run section and extending to a level above the heater, outlets on said risers, a return line including downcomers in the walls extending to a level above the heater, return bends connecting the upper ends of said risers to the upper ends of said downcomers, a horizontal run section to which the lower ends of said downcomers are connected, and a riser connecting the last mentioned horizontal run section adjacent the bottom of said heater, a check valve in said last mentioned riser immediately before its connection to said heater, said check valve allowing flow from said return line into said heater and preventing flow from said heater into said return line, said return line having a smaller cross sectional area than said hot water supply line and said risers and said hot water supply line and a major portion of said return line being insulated against heat dissipation, a minor portion of said return line including part of said last mentioned horizontal run section and said last mentioned riser being free from insulation.

3,097,662
HIGH PRESSURE HIGH TEMPERATURE VALVE ASSEMBLIES
Melville F. Peters, Livingston, N.J., assignor of fifty percent to Joseph J. Mascuch, Millburn, N.J.
Filed Dec. 7, 1959, Ser. No. 857,612
2 Claims. (Cl. 137—338)

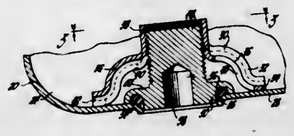
1. A valve assembly for controlling fluids at high temperatures comprising a housing, a ported valve seat in said housing, an inlet and an outlet valve passage connected to each side of said seat, a valve disk receivable upon the seat to control fluid passing through the valve seat, a valve stem secured at one end to the valve disk and extending therefrom within the housing, an hermetically sealed control chamber in the housing receiving said stem and having a lower portion adjacent the valve disk, a bellows within the lower control chamber portion around the valve stem, an opening in said housing communicating with said outlet valve passage and said chamber to conduct high temperature fluid within said outlet valve passage to the interior of said bellows, said bellows being hermetically sealed and secured at one end to said housing around said opening and at its opposite end to said valve stem to form a fluid receiving compartment within said bellows, said control chamber having an upper portion in the housing spaced from said lower portion, a bel-

low assembly within the upper portion of the control chamber around the valve stem, said bellows assembly secured at one end to the housing and at its opposite end to the valve stem, a quantity of liquid filling the space within said hermetically sealed control chamber and in contact with the outer surfaces of said bellows and bellows assembly, said housing including an elongated tubular heat dissipating valve guide portion interconnecting the lower and upper portions of said chamber and disposed about the valve stem whereby the high temperature impressed upon the bellows by the fluid passing through the valve is



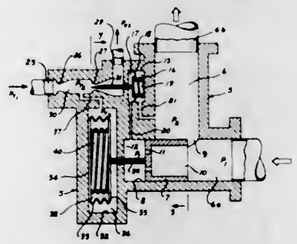
attenuated before reaching the bellows assembly in the upper portion of said control chamber, means connected to said valve stem to control the valve stem to open and close the valve, said bellows assembly including expansible and contractable portions of different diameters whereby the fluid in said sealed chamber may expand or contract without moving said valve stem, and spring means connected to said larger diameter portion of said bellows assembly, said spring means urging said larger diameter portion to an expanded configuration so as to reduce the effective volume of said chamber and apply pressure to the liquid therein.

3,097,663
OIL PAN AND DRAIN PLUG ASSEMBLY
Robert M. Buchwald, Berkley, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 1, 1961, Ser. No. 106,700
4 Claims. (Cl. 137—351)



3. In combination with a thin wall receptacle having a drain aperture in the bottom wall thereof, a drain closure comprising a support member mounted within said receptacle and having a peripheral flange portion defining a plurality of arcuate flange segments secured to said bottom wall in radially spaced concentric relation to the drain aperture, and a plurality of port defining legs extending upwardly and radially inwardly from said peripheral flange portion and supporting an internally threaded cylindrical portion in coaxial spaced relation to the drain aperture, said legs and said cylindrical and flange portions cooperating to define primary oil drain ports therebetween and said legs being transversely bowed upwardly and cooperating with said bottom wall between said flange segments to define a plurality of secondary oil drain ports, and a drain plug member having a shank portion threadably mounted within said cylindrical support portion and a head portion sealingly and frictionally engageable with said bottom wall adjacent said aperture to restrain opening rotation of said drain plug member.

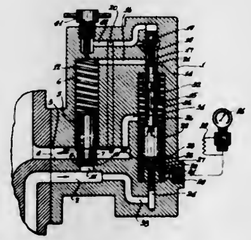
3,097,664
FLUID FLOW REGULATOR
William H. Henley, Granada Hills, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Dec. 15, 1960, Ser. No. 75,988
2 Claims. (Cl. 137—487)



1. A fluid flow regulator comprising a fluid flow passage, a movable valve for controlling the amount of fluid flow through said passage, means for sensing the instantaneous fluid flow through said passage, an input pressure for controlling fluid flow, pressure divider means having an upstream orifice connected with said input pressure and having a downstream orifice and a pressure chamber therebetween, means responsive to said sensing means for varying the area of one of said orifices to produce a pressure in said chamber proportional to said input pressure, and means responsive to said proportional pressure for positioning said valve to maintain said fluid flow proportional to said input pressure, said orifice varying means comprising; a needle valve connected with said sensing means, said one variable orifice and said needle valve being contoured to vary the area of said one orifice in proportion to the square root of the fluid flow.

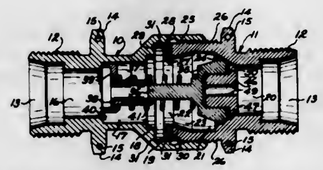
3,097,665
PILOT OPERATED RELEASE VALVE STRUCTURE
Kenneth Gauldie, Toronto, Ontario, Canada, assignor to Hydraulic Crushers Limited, New Liskeard, Ontario, Canada
Filed June 2, 1961, Ser. No. 114,533
1 Claim. (Cl. 137—491)

A pilot-operated hydraulic release valve comprising a valve body having therein a main valve cylinder, a pilot valve cylinder, a dashpot piston cylinder of larger diameter than said pilot valve cylinder and axially aligned therewith, a pilot valve piston cylinder of smaller diameter than said dashpot piston cylinder and axially aligned therewith, a hydraulic fluid inlet passage, and a hydraulic fluid outlet passage, said fluid inlet passage having a first orifice communicating with said fluid outlet passage and a second orifice communicating with said pilot valve piston cylinder, a cylindrical main valve member reciprocally mounted in said main valve cylinder and having a closed position closing said first orifice and an open position opening said first orifice, said main valve cylinder having a fluid-receiving zone surmounting said main valve member, said main valve member having a constantly open passage extending axially therethrough and leading from said inlet passage to said fluid-receiving zone to subject said zone to fluid pressure, said main valve member having a normally closed position in response to fluid pressure in said zone, a cylindrical pilot valve member reciprocally mounted in said pilot valve cylinder, a dashpost piston fixed to said pilot valve member and in sliding engagement with said dashpot piston cylinder, a pilot valve piston fixed to said dashpot piston and in sliding engagement with said pilot valve piston cylinder, said valve body having a first passage connecting said pilot valve cylinder with said main valve cylinder zone and a second passage connecting said pilot valve cylinder with said fluid outlet passage, said pilot valve member having an annular recess therein, a closed position closing said second passage to disconnect said first and second passages and



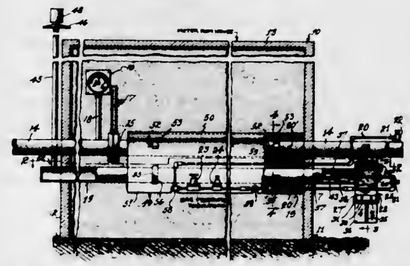
an open position connecting said first and second passages through said recess to dissipate fluid pressure in said main valve cylinder zone and permit opening movement of said main valve member, spring means urging said pilot valve member into said closed position, said pilot valve member being movable to open position in response to fluid pressure on said pilot valve piston through said second orifice, passage means in said body providing fluid communication between said outlet passage and dashpot cylinder, means forming fluid flow ducts leading from said dashpot piston cylinder on one side of said dashpot piston to said dashpot piston cylinder on the other side of said dashpot piston to permit substantially free opening movement of said pilot valve member, and a non-return valve closing said ducts during closing movement of said pilot valve member whereby fluid leakage between said dashpot piston and cylinder retards said closing movement.

3,097,666
CHECK VALVE
Doron S. Antrim, Garfield Heights, and Nelson G. Kling, Euclid, Ohio, and Vincent A. Gill, Montclair, N.J., assignors to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 11, 1959, Ser. No. 858,946
5 Claims. (Cl. 137—515.5)



1. A valve comprising a body, a conical valve seat on said body, said valve seat flaring rearwardly from a reduced diameter portion at the forward end to an enlarged diameter portion, an axially movable poppet in said body coaxial with said valve seat, a radial face and an annular conical face on said poppet, said radial poppet face having a diameter intermediate those of the reduced and enlarged portions of said valve seat, said conical poppet face having an apex angle less than that of said valve seat, a seal retainer having a radial face opposed to said first-named radial face secured to said poppet, and a centrally perforated annular sealing member of resilient sheet material secured between said poppet and said retainer, said sealing member extending across the radial face of said poppet to said conical poppet face, said sealing member having a rearwardly extending conical lip portion adapted to sealingly engage with said conical valve seat, the rearward end of said lip being spaced away from said conical poppet face and in contact with said conical valve seat when said poppet is in the closed position with the forward end of said conical lip compressed between said poppet and said valve seat with said poppet and said retainer being spaced away from said valve seat at all points.

3,097,667
METER RUN HEATER
Chester R. Thatcher, 2913 E. 24th St., Farmington, N. Mex.
Filed Feb. 24, 1961, Ser. No. 91,375
4 Claims. (Cl. 138—32)

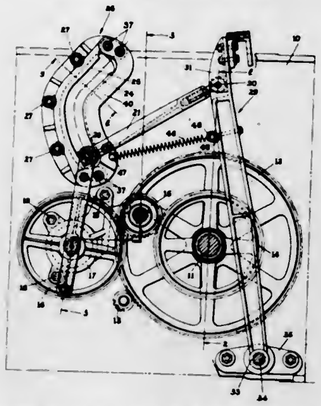


1. In a meter run heater, a house having a meter run extended therethrough, orifice flanges mounted in said meter run, a horizontally disposed burner tube extending through said house and positioned below said meter run, an elongate open-ended hood of inverted U-shape in cross-section positioned in said house with its arcuate bight portion including saddle elements seated at spaced points along said meter run and the leg portions thereof extending downward below said burner tube, one end of said hood being contiguous with an end wall of said house and the other end thereof terminating adjacent said orifice flanges for directing heated air currents to the latter, a housing arranged outside of the meter run house, said housing being connected to an end of said burner tube, and a small diameter pipe having one end connected to said meter run, and a portion of said pipe extending through the housing and into said burner tube, and a burner nozzle arranged in said burner tube and connected to said pipe.

3,097,668
METAL-COATED PLASTICS
Fritz Langer, Hamburg, Germany, assignor to Asbest- und Gummiwerke Martin Merkel K.G., Hamburg-Wilhelmsburg, Germany
Filed Nov. 16, 1959, Ser. No. 853,221
Claims priority, application Germany Nov. 15, 1958
3 Claims. (Cl. 138—145)

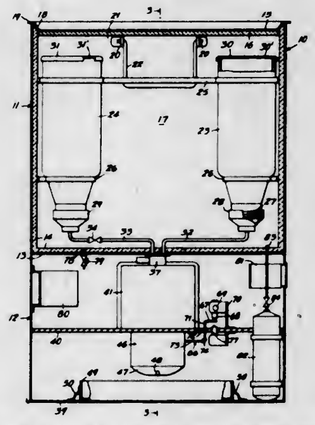
1. A composite structure, comprising, in combination, a Teflon base; a relatively thin intermediate conductive coating enveloping said Teflon base, contacting the same without firmly adhering thereto; and a relatively thick exterior metal layer integral with said intermediate conductive coating.

3,097,669
LAY MOTION FOR LOOMS
Waldo H. Banks, Hopedale, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Sept. 28, 1961, Ser. No. 141,453
4 Claims. (Cl. 139—190)



1. In a lay motion for a loom, a rock shaft, swords and a lay attached to the upper ends thereof, said swords being rockable on said rock shaft, a crank gear member, a stationary cam member having an arcuated cam track integrally formed therein, a cam follower, a driving crank and a connecting rod, said driving crank being freely rotatable and eccentrically connected at one side of said crank gear member, the opposite end being pivotally connected to said cam follower and to one end of said connecting rod, the opposite end of said connecting rod being pivotally connected to said sword for imparting thereto a rocking motion as said cam follower is caused to follow said arcuated cam track of said cam member.

3,097,670
MIXED LIQUID DISPENSER
Sanford Berman, 1850 Wood Road, Scotch Plains, N.J.
Filed May 5, 1961, Ser. No. 108,092
16 Claims. (Cl. 141—83)



1. A mixed liquid dispenser comprising two suitably supported containers, a liquid in one container, another contrasting liquid in the other container, a solenoid mixing valve in an electric circuit, means including tubes placing each container in communication with said mixing valve, said means of one container including a manually adjustable needle valve controlling proportionate discharge of liquid from said container to that of the associated container, said mixing valve having a discharge positioned over a receptacle support for discharge of a liquid mix discharged from said mixing valve into a receptacle arranged on said support, and a switch in the circuit with said mixing valve actuated by the weight of a receptacle placed on said support for putting said mixing valve into operation to discharge a mixture from said liquid containers into said receptacle.

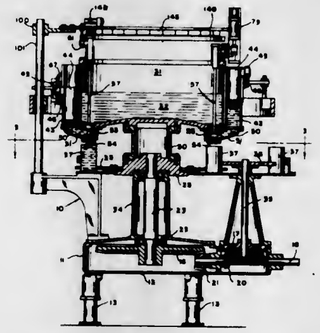
3,097,671
FLUID DELIVERY DEVICE
Nathaniel W. R. Bonetti, Baytown, and Ralph James, Jr., Channelview, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Aug. 5, 1960, Ser. No. 47,789
5 Claims. (Cl. 141—116)



4. A fluid delivery device for supplying fluid to a container comprising: a stationary barrel; inner and outer telescoping members slidably mounted in said barrel and adapted to fall as a single unit in response to gravity to extend below the barrel, the inner member extending upwardly within the barrel a greater distance than the outer member and having a fluid outlet at its lower extremity and a plurality of fluid outlets extending upwardly for a particular desired distance; a spring retaining member mounted on the inner member and above the outer member; a spring in contact with the retaining member and the outer member whereby the flow of fluid through the inner member causes the inner member to extend beyond the outer member; engaging means on the barrel and the outer telescoping member adapted to interengage to limit the downward movement of the fall by gravity of the unit; and a tubular member mounted within the inner member and in fluid contact with the fluid outlet at the lower extremity of the inner member whereby suction applied within the inner member retracts the telescoping members and draws into the inner member any fluid droplets sticking on the outside of the inner member.

3,097,672
MAGNETIC VALVE CONTROL MECHANISM FOR RECEPTACLE FILLING MACHINES
Everett S. Minard, Laguna Beach, Calif., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,887
10 Claims. (Cl. 141—142)

4. A rotary filling machine having a plurality of filling assemblies overlying and movable along a path in synchronism with a plurality of container receiving pockets, comprising a common reservoir for material; means associated with each of said filling assemblies for automatically flowing a measured quantity of material into a container located beneath its corresponding filling assembly comprising an outlet, a filler control valve reciprocable between two positions, a path communicating with said reservoir through said port and with said outlet; each said filler control valve including a cam follower connected thereto, surface means in the path of said cam follower for guiding said control valve in a first position, magnetic holding means in fixed relation to said filling machine for magnetically holding said filler control valve in a second position during valve movement along a path, a movable camming surface in the path of said cam follower for effecting an inclined movement of each said control valve from said first position to said second position, detection means for determining the presence or absence of an individual empty container beneath the outlet of a particular filling assembly, and means normally responsive to said detection means detecting a container beneath said particular outlet for maintaining said movable cam in said inclined position to permit said control valve to be held by said magnetic holding means,

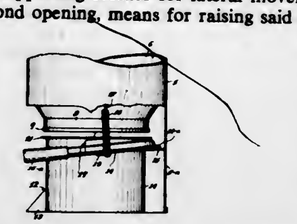


and for moving said movable cam surface to a position relative to said first position to prevent control of said control valve by said magnetic holding means only at such time as no container is disposed beneath said outlet for maintaining the outlet of the particular filling assembly closed while opening the reservoir.

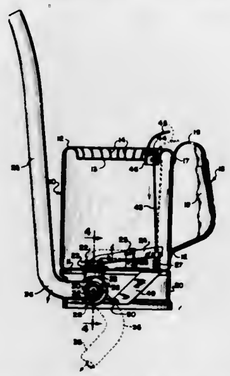
7. In a filling machine adapted to receive a line of containers and to fill same while they are conducted along a path beneath a corresponding plurality of filling assemblies traveling said path, each filling assembly comprising a control valve and a cam roller attached thereto for moving said control valve from a lower closed position to an upper open position to control the flow of material into the containers, said cam rollers normally rolling on guide rails and cams, the improvement comprising means for maintaining each said control valve in its upper open position while it moves along said path until the container is completely full, said means including a magnet fixedly mounted relative to said filling machine adjacent the path of said control valve and a cooperating magnetic material element forming part of said control valve.

3,097,673
VACUUM CLEANERS
David H. Hunt, Simsbury, Conn., assignor to The Spencer Turbine Company, Hartford, Conn., a corporation of Connecticut
Filed June 8, 1959, Ser. No. 818,693
3 Claims. (Cl. 141—272)

1. A vacuum cleaner including a housing having a portion containing a dust chamber with a first opening in the bottom thereof, a depending base portion supporting said housing, the lower edge of which is normally placed on a planar supporting surface substantially parallel to the plane of said opening, a container having a rim engageable with said bottom opening to thereby place said container in communication with said dust chamber through said opening, said base portion having a second opening therein extending laterally and sized to freely pass said container therethrough by sliding it along said supporting surface, the distance between said bottom opening and said supporting surface being greater than the depth of said container, whereby said container may be disengaged from said bottom opening and dropped to said supporting surface for lateral movement through said second opening, means for raising said container from said surface and securing it in operative position relative to said bottom opening, said means including abutment means on said container and a lever pivotally mounted within said base portion, said lever having legs extending on opposite sides of said container, abutment surfaces on the legs of said lever engageable with said abutment means on said container for raising and lowering said container and holding it in operative position and spring means giving said lever a constant upward bias to fix said container in operative position against said first bottom opening unless said lever is held downwardly by hand pressure.



3,097,674
SWINGSPOUT DISPENSER
Scott E. Allen, Los Angeles, Calif., assignor to Swingspout Measure Co., Los Angeles, Calif., a corporation of California
Filed Jan. 12, 1961, Ser. No. 82,241
3 Claims. (Cl. 141—366)



1. A swingspout dispenser for liquids comprising an open top container having a supporting side handle at the top thereof, an outlet through the bottom of said container located off-center with respect to said bottom, a swing joint connected to said outlet and having a spout extending therefrom arranged to swing downwardly, said swing joint comprising an elbow member having vertical and horizontal portions, said vertical portion being secured to the bottom of said container surrounding said outlet and said horizontal portion being disposed adjacent

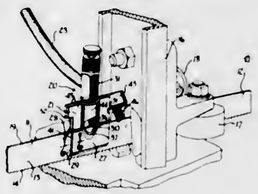
and directly below the vertical portion, a thimble member having the inlet end of said spout mounted on one side thereof, said thimble member being disposed in axial relation to the horizontal portion of said elbow member, a sealing joint between the mouth of said thimble member and said horizontal portion permitting oscillation of said thimble member with respect to said elbow member, means for securing said thimble member and said elbow member in oscillating relationship, and a stop member having a portion positioned to engage the spout when said spout is swung to a downward position, the spout being of a length to extend down into a filling tube a distance sufficient to support the receptacle in a supporting relationship when the stop engages the spout, whereby when the spout is extended down into a filling tube the weight of the receptacle is transmitted through said stop to the spout and the spout acts as a support for the receptacle.

2. In a liquid dispenser including an open top container having a supporting side handle at one side thereof, an outlet through the bottom of said container, and a spout extending from the outlet and arranged to swing downwardly, the improvement which comprises a support within the container, a lever pivoted to said support, a valve member for closing said outlet mounted at one end of the lever, an arm connected to said lever and extending to the top of said container for actuating said lever, a spring having two arms, one arm of said spring engaging said lever and to urge it to a position to close said valve, and the other arm of said spring having a portion extending through said support and forming a fixed pivot for said lever.

3,097,675
BAND LUBRICATOR FOR CUTOFF MACHINES AND THE LIKE

Joseph Benedict, Downers Grove, Ill., assignor to The DoAll Company, Des Plaines, Ill., a corporation of Illinois

Filed Apr. 19, 1961, Ser. No. 104,072
3 Claims. (Cl. 143—158)

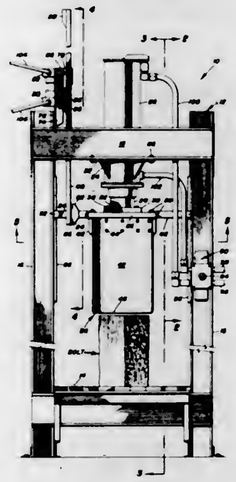


1. An applicator for applying liquid lubricant to an endless saw band in a band machine of the type wherein a straight substantially horizontal cutting stretch of the band is held by a pair of spaced apart guide means with its side surfaces substantially upright and its teeth lowermost, said applicator comprising: an elongated shoe having an inverted U-shaped cross section, with a lengthwise extending bight portion defining an elongated downwardly facing surface and a pair of opposite legs projecting downwardly from the bight portion and having opposing elongated upright surfaces spaced apart by a distance substantially equal to the thickness of a saw band, said shoe being adapted to slidingly straddle a saw band in the cutting stretch thereof with its said bight portion seated directly on the upper edge of the band and its legs closely but slidably contacting the side surfaces of the band along substantially all of its width between its upper edge and the gullets of its teeth; means on the shoe providing an abutment which faces in a direction substantially lengthwise of the shoe and which is engageable with a relatively fixed part on a band saw machine adjacent to one of its band guide means to restrain the shoe against moving forwardly along the saw band which the shoe straddles; means in the shoe defining a passage that opens downwardly through its bight portion and through which liquid lubricant can be introduced into the space between the legs to be spread over the side surfaces of a saw band between the legs by said opposing surfaces on the legs as the saw band moves relatively to the shoe; and means for communicating said passage means with a source of liquid lubricant.

3,097,676
DEVICE FOR DEBARKING STAVE AND HEAD BOLTS

Charles T. Calk, 344 Greenlow Road, Baltimore 28, Md.

Filed July 6, 1960, Ser. No. 41,143
3 Claims. (Cl. 144—208)

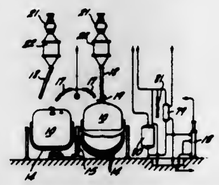


3. A stave and head bolt debarking machine, comprising, a structural supporting frame having a pair of spaced, vertically extending guide tracks, a carriage mounted for reciprocating movement in said spaced guide tracks, fluid circuit means including a cylinder having a piston mechanically connected to said carriage for driving and retracting said carriage along said spaced guide tracks, an arcuate shaped blade, said carriage including a horizontally positioned flange plate means secured to the lower end of said piston and a blade mounting plate mounted vertically on said flange plate means, said mounting plate having an arcuate shape corresponding to that of said blade and having means adapted to hold said blade in abutting contact with said flange plate means and said mounting plate downwardly from said flange plate means to a distance intermediate therewith and the cutting edge of said blade, said fluid circuit means including a first fluid line connected to said cylinder for passing fluid for advancing said piston and a second fluid line connected to said cylinder for passing fluid for retracting said piston, a fluid by-passing device for each said first and second fluid lines, means for opening the respective by-passing devices to pass fluid on predetermined stroke limits of said piston in said cylinder to halt movement of said piston, and a support positioned at the lower end of said spaced guide tracks for supporting and positioning a bolt to be debarked, whereby upon downward movement of said carriage said bolt is debarked by said arcuate shaped blade.

3,097,677
COLLAPSIBLE CONTAINERS

James A. Mitchell, Englewood, N.J., assignor to Union Carbide Corporation, a corporation of New York

Application Jan. 17, 1957, Ser. No. 634,707, now Patent No. 2,957,282, dated Oct. 25, 1960, which is a division of application Ser. No. 475,183, Dec. 14, 1954, now Patent No. 2,875,562, dated Mar. 3, 1959. Divided and this application Aug. 11, 1960, Ser. No. 48,922
4 Claims. (Cl. 150—1)



1. A gas-tight shipping container of the collapsible type capable of retaining therein a gas under superatmospheric pressure while it is being filled with solid material, said container having a filling opening surrounded by a metal ring, a gas check valve outside said ring, a substantially gas-tight closure removably secured to said ring and accessible from outside said container, a flexible sleeve of substantially gas-impervious material having one end portion substantially gas-tightly secured to said ring within said closure, means for substantially gas-tightly closing said sleeve adjacent said ring to provide a pouch for supporting the outer portion of the sleeve within the container, when the sleeve is closed and such outer portion tucked therein, the outer end portion of said sleeve being adapted to be substantially gas-tightly fitted around the outside of a filling or emptying pipe, whereby after the sleeve outer end portion has been fitted to said pipe said sleeve closing means may be opened for the movement of material through said sleeve.

3,097,678
MOUNTING MEANS FOR BAG FRAME HARDWARE

Melvin E. Paynor, Providence, R.I., assignor to Fulford Manufacturing Company, a corporation of Rhode Island

Filed Sept. 18, 1961, Ser. No. 138,648
4 Claims. (Cl. 150—29)

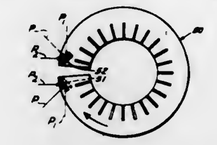


1. In a bag, a closure frame comprising two sections hinged together, each in substantially the shape of a U and of channel shaped cross section with spaced inner and outer walls connected by a bridge portion for receiving through their free edges the edges of the bag to be closed, a nonmetallic material covering the outer surface of the two hinged sections, a clamp of channel shape in cross section having a bridge portion and legs extending therefrom snugly frictionally embracing said covering along a portion of the length of one of said sections to attach itself thereto and an item of bag hardware attached to the bridge portion of said clamp.

3,097,679
SPLIT SELF-LOCKING WASHER

Ernst Jordan, Leinpfad 17, Hamburg 39, Germany

Filed Dec. 7, 1959, Ser. No. 857,806
7 Claims. (Cl. 151—36)

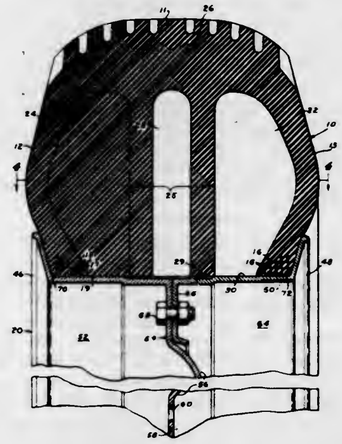


1. A self-locking split washer comprising a ring having axially and radially extending surfaces, a gap, radial upstanding locking teeth in an annular zone on an axially extending surface of the ring for gripping the members between which the washer is tightened, a biting edge having side faces and outstanding from one radially extending surface of said ring on one side of said gap and displaced radially from said annular zone containing said teeth, and another biting edge having side faces outstanding from the opposite radially extending surface of said ring on the other side of said gap and displaced radially from said annular zone containing said teeth, each of said biting edges being inclined to a radius of the ring, the angle of inclination between said biting edges forming an acute angle opening towards the center of said ring, and the elevation of each of said biting edges being more than the elevation of said teeth, so that said members are gripped by the biting edges before being gripped by said teeth, and the side faces defining said biting edges being so formed that the forces acting on the biting edges during tightening of the washer tend to close said gap in the washer and so resist splaying of the washer.

3,097,680
VEHICLE TIRE AND MOUNTING MEANS THEREFOR

Durward E. Willis, Charlotte, N.C., assignor to Willis Acceptance Corp., Charlotte, N.C., a corporation of New Jersey

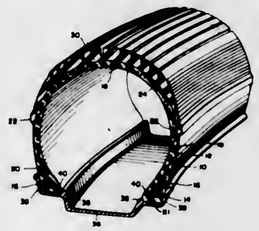
Filed Aug. 16, 1961, Ser. No. 131,776
8 Claims. (Cl. 152—331)



4. In combination with a vehicle wheel having a cylindrical tire receiving part and opposed rims on the opposite sides of said part, a tire comprising a unitary substantially solid molded annular body of resilient material

having a relatively thick tread part, an inner annular central part normally radially spaced from the cylindrical part of said wheel, and opposed beads sealingly engaging the rims of said wheel, a plurality of air cells molded into said body and having openings of limited circumferential extent extending through the inner annular part of said tire, means affording an annular airspace between the cylindrical part of said wheel and the inner annular part of said tire whereby all of said openings of said cells are interconnected with each other, said inner annular part being responsive to the compression of said tire caused by the downwardly acting weight of a vehicle acting thereon so that a circumferential portion of the inner part in line with the downwardly acting weight is moved into tight engagement with the adjacent surface of the cylindrical part of said wheel to seal off any cell opening embraced by the circumferential portion of the inner central part of said tire in tight engagement with said wheel.

3,097,681
TIRE
Carlyle M. Harkins, 2134 N. Hampton Court, Peoria, Ill.
Filed Jan. 25, 1960, Ser. No. 4,376
6 Claims. (Cl. 152—352)



1. A vehicle wheel support comprising a tubeless tire having beads, a carcass with a crown portion having diagonally criss-crossed superposed layers of cords interconnecting the beads and an elastomer tread upon the crown portion integral therewith, said crown portion when inflated being free to assume cross-sectionally an outwardly rounded arc defining a lateral overall diameter and to provide a peripheral circular wheel circumference defining an expanded radius, said elastomer tread being under circumferential tension at said expanded radius and being relieved of said tension and circumferentially unstressed at the ground engaging surface thereof when loaded to a rolling radius that is reduced from the expanded radius by approximately 20 percent of said diameter, and a flanged wheel rim receiving the beads between flanges that are spaced a distance in excess of 80 percent of said diameter with the outer edges of the flanges spaced a distance less than said diameter.

3,097,682
TIRE FILLER VALVE
Carlyle M. Harkins, 2134 N. Hampton Court, Peoria, Ill.
Filed June 1, 1960, Ser. No. 33,294
5 Claims. (Cl. 152—429)

1. In combination a tubeless pneumatic tire having a passage through a side wall thereof and a filler valve received therein comprising, a metallic valve housing including internal and external ends, a valve mechanism secured within the housing, a flat washer integrally formed on the internal end of the valve housing, a metallic insert including flared internal and external ends, a first sealing means disposed about the valve housing between the flared internal end of the insert and the flat washer as the valve housing is positioned within the insert, a resilient plug secured about the insert, a resilient flange formed integrally on one end of the plug, said flange extending outwardly adjacent to the flat washer, a second sealing means disposed about the external end of the valve housing, said external end extending outwardly from the plug, and a sealing member threadably engaging the ex-



ternal end of the valve housing to compress the second sealing means between the flared external end of the insert and the sealing member, said sealing member contoured to mount flush with the surface of the side wall in the sealing position to prevent contamination of the filler valve.

3,097,683
RAM FOR CIRCUMFERENTIAL CRIMPING
David Dibner, Wilton, Conn., assignor to Burndy Corporation, a corporation of New York
Filed May 2, 1960, Ser. No. 26,379
4 Claims. (Cl. 153—1)



1. A pair of mating dies for crimping a therebetween inserted connector; each of said dies having an inner surface forming a cavity including a pressure applying face; an arcuately formed leaf spring member mounted adjacent the face of one of said dies and having the distal ends thereof biased radially outward to resiliently bear against and slide along the other die inner surface, to obstruct the gap between adjacent surfaces of the dies as they are moved toward mating position; said leaf spring member being adapted to resiliently conform to the adjacent surface of the therein inserted connector as said dies are closed into full mating relationship and to resume its undeflected arcuate form when the dies are parted.

3,097,684
METHOD OF FORMING A CLOSED CORNER IN A HOLLOW RECTILINEAR METAL WORKPIECE
Frank Le Tarte, Wales Township, St. Clair County, Mich., assignor to The Le Tarte Company, Inc., a corporation of Michigan
Filed Jan. 14, 1960, Ser. No. 6,336
5 Claims. (Cl. 153—2)

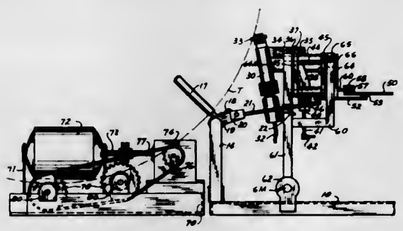
1. The method of forming a closed corner from a hollow rectilinear metal workpiece including the steps of selecting an elongated workpiece having a closed shaped hollow cross section structure which has at least two sides extending angularly to each other, supporting the workpiece on a bed, relatively positioning the workpiece and a pair of angularly disposed circular saws for cutting engagement by both saws of all but one of said sides

without deforming the cross section of the workpiece and so that the apex of the resulting notch is in a position to permit the workpiece to bend about said one side to form a closed corner, rotating said saws, simultaneously moving the saws through relatively angularly disposed planes of rotation of the respective saws, wherein the path of one of the saws overlaps that of the other saw and the periphery of the overlapping saw is tangent to the plane of the outer surface of said overlapped saw when said saws pass through said workpiece, wherein the kerf of the resulting cut of the overlapping saw lies in



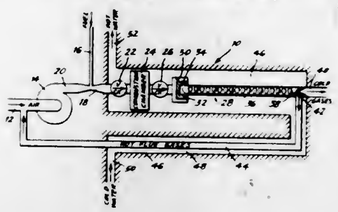
the plane of the outside edge of the resulting cut of the overlapped saw, said paths being in such close proximity that the path of the periphery of the overlapped saw is juxtaposed the plane of the inside face of the overlapping saw so that substantially all material will be removed from the workpiece at the apex of the resulting notch and bending said one side at said apex wherein said side defines the periphery of said corner and continuing said bending until the opposing edges of the workpiece cut by said saws join each other to define a closed corner.

3,097,685
TIRE REGROOVING MACHINE
Norman O. Woodard, 4611 W. Cayuga, Tampa, Fla.
Filed May 24, 1960, Ser. No. 31,436
2 Claims. (Cl. 157—13)



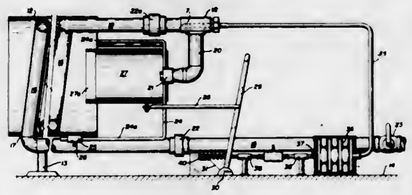
1. A truck tire regrooving machine including a pair of separate bases adapted to be located on opposite sides of a truck tire while such tire is mounted on a truck, tire rotating means on one of said bases and multiple tire grooving tools mounted on the other of said bases, said tools being mounted for oscillatory movement toward and from a tire and for pivoted transverse movement across the face of a tire.

3,097,686
FURNACE SYSTEM
Robert D. Morrow, Baltimore, Md., assignor to Product Development Associates, Ltd., Baltimore, Md.
Filed May 12, 1960, Ser. No. 28,588
14 Claims. (Cl. 158—1)



1. A furnace system comprising a combustion chamber, means for supplying fuel to said chamber, means forming an output path for combustion products from said chamber, means in said path for dividing the combustion products into relatively hot and cold components and means for feeding at least a portion of said hot component back to said combustion chamber.

3,097,687
VAPORIZING BURNER WITH TEMPERATURE REGULATED MIXER TO CONTROL FLAME HEATING OF RETORT
Ray B. Fannin, Denver, Colo., assignor to Gas Engineering & Equipment Co., Denver, Colo., a corporation of Colorado
Filed Mar. 30, 1959, Ser. No. 803,022
2 Claims. (Cl. 158—79)



1. In a fuel burner assembly, a burner housing open at both ends, a line for connection with a source of butane or propane maintained under pressure and including a coiled portion disposed interiorly of said burner housing and an extension portion supported rearwardly of said housing, a temperature-sensitive instrument mounted in said extension portion, a fuel-air mixer mounted at the rear of said housing with a forward portion in the housing and including telescoping tubular members open at both ends, a branch conduit for receiving the gaseous discharge of the extension portion and carrying a forwardly-directed discharge nozzle extending into the rear end of the telescoping members, and means including a pressure-actuated member responsive to measured temperature variations for changing the effective combined length of said telescoping members so as to vary flame impingement on said coil.

3,097,688
BAY CLOSURE DEVICE WITH BUILT-IN BLIND
Jean Léon Schwartz, Paris, France, assignor to Societe Anonyme des Ateliers de Construction Schwartz-Hautmont, Paris, France, a body corporate of France
Filed Dec. 29, 1960, Ser. No. 79,335
Claims priority, application France Oct. 5, 1960
5 Claims. (Cl. 160—30)

5. A window means comprising a stationary window frame having an opening, a horizontally pivotable sash

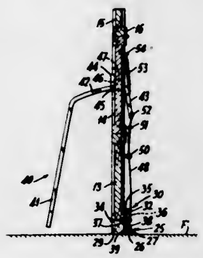
in said opening, said frame having attached thereto a casing at its upper end for swinging movement forwardly and rearwardly of said opening, an extendable blind carried in said casing of a size to substantially cover said sash when lowered from the bottom of said casing to either side of said opening.



3,097,689
VEHICLE OPERATED GARAGE DOOR OPENING MEANS

Arthur W. Faecher, 46 Henry Drive, Glen Cove, N.Y.

Filed Apr. 3, 1962, Ser. No. 184,800
5 Claims. (Cl. 160—189)

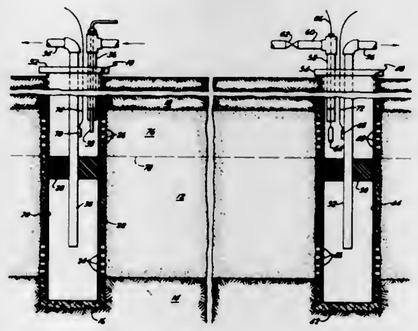


1. In combination with a vertically movable garage door having a plurality of horizontally disposed, hinged panels, spring means operatively connected to said door for exerting a lifting force thereon, an opening in one of said door panels and fulcrum means on said panel at said opening therein, and keeper means on the floor of said garage adjacent the bottom edge of the lowermost door panel, a pair of members, one of said members being pivotally mounted on the inner surface of the lowermost door panel for releasably engaging said keeper means, the other of said members being pivotally mounted on said fulcrum means and comprising a vertically disposed vehicle abutment portion adjacent the outer surface of said one door panel arranged for movement toward said one door panel upon contact therewith by a vehicle moving towards said door and an arm portion angularly related to said abutment portion and extending through said door panel opening and in a downward direction, and means connecting said arm portion and said one pivoted member for moving said one pivoted member to release said keeper means in response to movement of the abutment portion of said other member toward said door panel.

3,097,690
PROCESS FOR HEATING A SUBSURFACE FORMATION

Paul L. Terwilliger, Oakmont, and Lawrence A. Wilson, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Dec. 24, 1958, Ser. No. 782,904
11 Claims. (Cl. 166—11)



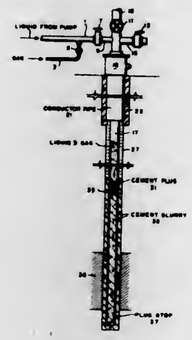
1. A process for heating a subsurface formation containing oil penetrated by a first well and a second well spaced from the first well comprising injecting an injection mixture of a fuel gas and air into the formation at the first well and displacing it through a permeable channel in the formation to the second well, said injection mixture having a ratio of fuel to air adapted to form a fuel-air mixture at the second well having a fuel-air ratio at least sixty percent and less than about six hundred percent of the stoichiometric ratio, igniting the fuel-air mixture at the second well, containing the injection of the injection mixture at the first well to cause reverse combustion of the injected fuel to proceed from the second well toward the first well, and changing the composition of the injection mixture injected at the first well to a fuel-air ratio below about forty percent of the stoichiometric ratio to convert the combustion of the injected fuel to forward burning whereby the combustion front travels back and forth in the formation to heat oil in the formation.

3,097,691
CEMENTING AND COMPLETING WELLS IN THE EARTH

Floyd A. Smith, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed July 26, 1961, Ser. No. 127,015
5 Claims. (Cl. 166—28)

1. A method of completing a well containing a pipe string extending from the earth's surface into a hydrocarbon-containing earth formation and having wiper plug latching means near the lower end thereof, comprising: pumping a cementitious fluid down the pipe string and up the annulus thereabout with a wiper plug driven by pressurized, normally liquid fluid and pressurized, normally gasiform fluid until the wiper plug is latched in the wiper plug latching means to close the pipe string and prevent cementitious fluid from flowing up the pipe string; releasing the pressure on the normally liquid fluid and normally gasiform fluid in the pipe string; and, when equilibrium conditions obtain in the fluid column, perforating the pipe string at the level of the productive earth formation.



3,097,692
SAND CONSOLIDATION METHOD

Warren E. Holland, Robert E. Williams, and Horace H. Spain, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,759
11 Claims. (Cl. 166—33)

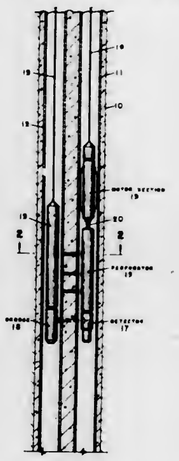
1. A method for consolidating the sands of an incompetent, water wet, formation comprising injecting into said formation a resin-forming mixture including a water-soluble aldehyde, a catalyst, a low molecular weight hydroxy aryl compound, and oil in two parts, the first part injected which is free of said low molecular weight hydroxy aryl compound comprising said water-soluble aldehyde and catalyst and the second part injected comprising said low molecular weight hydroxy aryl compound and oil, the first part injected miscibly displacing connate liquid wetting the sand grains of the formation and a portion of the first part remaining on the surfaces of the sand grains in the connate position, and the second part injected immiscibly partially displacing the first part injected, said portion of the first part injected remaining on the sand grain surfaces in the connate position extracting a fraction of the low molecular weight hydroxy aryl compound from the second part injected to form the resin and thereby consolidate the sands of the formation, the relative volumes of said aldehyde, catalyst, and hydroxy aryl compound being selected so as to yield from 20% to 40% resin.

3,097,693
METHOD OF PERFORATION OF WELL PIPE

Garland C. Terrel, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed July 21, 1960, Ser. No. 44,339
1 Claim. (Cl. 166—35)

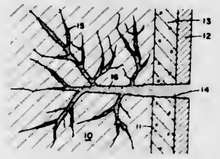
A method for perforating in wells to establish communication between two parallel nonconcentric pipe strings comprising the steps of lowering a pipe perforator in one pipe string having a selected radial direction of perforation to adjacent the depth in a well to which it is desired to establish communication between the two pipe strings; lowering in the other pipe string perforator energy absorbing means to the same depth to which the perforator was lowered; detecting the radial direction of said other pipe string relative to the direction of perforation of said perforator; orienting said perforator so that the direction of perforation faces in the direction of the other pipe string; and then actuating the perforator to perforate both pipe strings to establish communication between the pipe strings, the energy absorbing means absorbing energy of the perforator in excess of that necessary to perforate and establish communication between the pipe strings.



3,097,694
HYDRAULIC FRACTURING PROCESS

John K. Kerver, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Apr. 29, 1959, Ser. No. 809,841
8 Claims. (Cl. 166—42)



1. A method for hydraulically fracturing a subsurface formation penetrated by a well bore to retain in place propping agents used to prop open the fractures comprising the sequential steps of: treating said propping agents with a water-soluble silicate; dispersing said treated propping agents in a liquid to be used to hydraulically fracture said formation; pumping said mixture of fracture liquid and treated propping agents into said well bore and forcing said mixture into said formation under pressure sufficient to cause hydraulic fracturing thereof; and then overflushing said fractured formation with a coagulating agent which reacts with said silicate to precipitate an insoluble silicate reaction product at the surface of the propping agents to cement said propping agents to each other and to said formation.

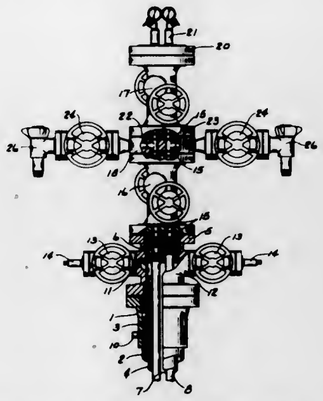
3,097,695
MULTIPLE STRING TUBING HANGER

Robert K. Le Rouax, Claude R. Nellon, and William W. Ward, Jr., Houston, Tex.; said Le Rouax assignor, by mesne assignments, to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Nov. 8, 1955, Ser. No. 545,720
32 Claims. (Cl. 166—75)

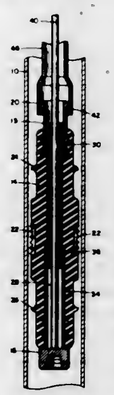
1. A multiple string tubing well head assembly structure comprising a well head body member having a bore and a seat from which to support pipe depending in a

well, a Christmas tree body member to be supported by said well head body member and having a plurality of passage means for interconnection between said Christmas tree body member and said well head member, tubing hanger means supported from said seat on said well head body member and also having passage means for



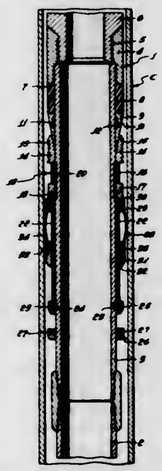
interconnection with passage means on said Christmas tree body member, and guide means comprising a laterally extending member and a cooperating slot to receive said laterally extending member between said tubing hanger means and at least one of said body members to cooperate in their orientation with each other and line up their interconnecting passage means.

3,097,696
SELF-EXPANDING RETRIEVABLE OR PERMANENT BRIDGE PLUG
Willis P. Orr, Tyler, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed July 27, 1961, Ser. No. 127,228
5 Claims. (Cl. 166—135)



1. A plug member for casing comprising: a self-expanding, stretchable member having a coaxial passageway extending therethrough, said passageway being open at the top and closed at the bottom; a fishing neck at the open end of the passageway; and gripping members on the outside of the self-expanding, stretchable member whereby a running tool having a rod adapted to enter the passageway and engage the bottom of the passageway may be used to lower the member down the casing in stretched condition to the desired location and the tool then removed to permit the self-expanding member to expand into contact with the casing.

3,097,697
LINER HANGER
William H. States, Long Beach, Calif., assignor to Midway Fishing Tool Co., a corporation of California
Filed Apr. 7, 1958, Ser. No. 726,834
8 Claims. (Cl. 166—138)



1. A well device of the class described comprising a body adapted to be run into a well casing on a running-in string of pipe; means on said body shiftable into engagement with said casing and operable to secure the device against downward movement in the well; means shiftably disposed on said body for operating said securing means; retainer means releasably retaining said operating means against operation; and casing engaging friction means engageable with said retaining means for releasing said retaining means upon longitudinal movement of said body in one direction with respect to said casing and engageable with said operating means for shifting said operating means upon subsequent longitudinal movement of said body in the other direction with respect to said casing to operate said securing means.

3,097,698
WIRE LINE CEMENTING TOOL
Charles B. Corley, Jr., and Garland C. Terrel, Houston, and Samuel E. Loy III, Midland, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 5, 1960, Ser. No. 73,801
1 Claim. (Cl. 166—162)

For use in a well comprising at least one pipe string disposed in a borehole, cemented to the sides of the borehole and perforated to open fluid communication to a productive earth formation, apparatus for squeeze-cementing through the perforations comprising:

an elongated container for cementitious fluid including an elongated upper member and a lower member in telescoping relationship;

a first port in said upper member near the lower end thereof and a second port in said lower member, said first and second ports being adapted to be brought into alignment when said telescoping members are substantially in their most telescoped position;

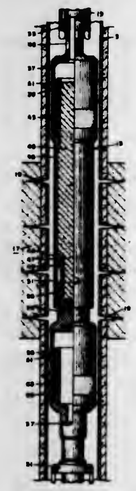
stop means on said telescoping members defining the limits of the telescoping relationship thereof;

anchoring means adapted to be set at a predetermined level in the pipe string to prevent further downward movement thereof;

annular packer means connecting said anchor means and said lower telescoping member so as to permit limited relative movement therebetween, said annular packer means being adapted to be laterally expanded into sealing engagement with the inner wall of the pipe string by setting down of said lower member on said stop means to hold fluid between said container and the inner wall of the pipe string, said annular packer means being of normal lateral diameter less than the diameter of the pipe string to permit fluid passage therearound;

said anchoring means terminating at its upper end in a downwardly facing serrated section;

shear pin means connected to said lower telescoping member and engaging said serrations constructed and arranged to hold said anchoring means against downward movement relative to said lower telescoping member under pressure exerted by said annular packer means;



a cap member extending over the upper end of said upper telescoping member, having a passageway therein for providing fluid communication between the upper portion of the pipe string and the interior of the container whereby hydraulic pressure may be exerted on fluid in the container to force the fluid through said first and second ports, up the annulus between the container and the pipe string, and into the perforations through the pipe string;

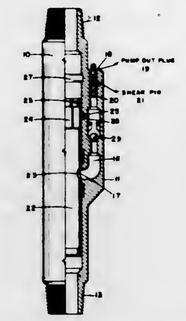
an annular upper packer member connecting said cap member to said upper telescoping member, constructed and arranged to expand against the walls of said pipe responsive to downward force exerted on said cap member;

said upper telescoping member terminating at its upper end in a downwardly facing serrated section;

second shear pin means connected to said cap member and engaging said serrations in said upper telescoping member, constructed and arranged to hold said upper telescoping member against downward movement relative to said cap member under pressure exerted by said annular packer means acting alone;

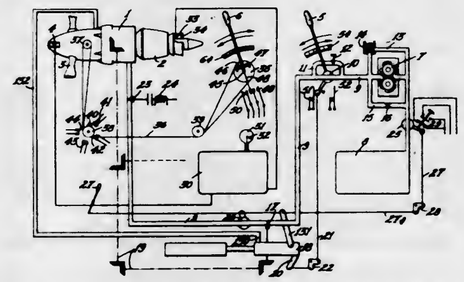
said cap member including a fishing neck adapted to be connected to a wire line retrieving tool.

3,097,699
CEMENTING OF WELL PIPE IN STAGES
Willis P. Orr, Tyler, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 6, 1961, Ser. No. 143,336
2 Claims. (Cl. 166—224)



1. Apparatus for use in stage cementing of well pipe in a borehole comprising a hollow body member connected in said well pipe and in fluid communication therewith and having an offset mandrel mounted thereon; said mandrel having a fluid passageway therethrough terminating in a lateral passage opening into said hollow body member; a sleeve valve slidable in said body member between one position which opens fluid communication between the interior of said body member and said mandrel passageway and another position which closes off fluid communication between the interior of said body member and said mandrel passageway; a check valve positioned in said mandrel passageway for permitting flow of fluid when said sleeve valve is in said one position from the interior of said body member through said passageway but preventing flow of fluid to the interior of said body member through said passageway; a fluid pressure releasable plug positioned in said passageway further from said sleeve valve than check valve and adapted to prevent flow of fluid through said passageway; and means for locking said sleeve valve in its other closed position.

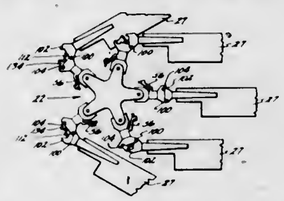
3,097,700
GAS TURBINE CONTROL METHOD AND SYSTEM
Joseph Szydlowski, Usine Turbomeca, Bordes, Basses-Pyrenees, France
Filed Jan. 11, 1960, Ser. No. 1,600
Claims priority, application France Mar. 27, 1959
28 Claims. (Cl. 170—135.72)



1. A control system for a gas turbine and a variable pitch propeller driven thereby, comprising, in combination, means for adjusting the quantity of fuel delivered to the turbine in order to maintain constant the working rotation speed thereof, means for independently control-

ling the blade pitch of the propeller between reverse and feathering, means for continuously comparing the actual turbine temperature with the maximum permissible temperature for said turbine, means for reducing the blade pitch as soon and as long as the actual turbine temperature tends to exceed said maximum permissible temperature, means connected to said pitch controlling means and controlled by said temperature comparing means for automatically increasing the blade pitch until maximum loading is attained for the turbine as long as the actual turbine temperature is less than said maximum permissible temperature, means interconnecting said temperature comparing means and said pitch automatically increasing means for rendering said last means ineffective as soon as the actual turbine temperature is equal to said maximum permissible temperature and for starting again said pitch automatic increasing means as soon as the actual turbine temperature decreases below said maximum permissible temperature, means for automatically rendering effective said pitch reducing means as soon as the actual turbine temperature overreaches said maximum permissible temperature, and means for rendering ineffective said last means and the pitch reducing and automatic increasing means as soon as the decreasing pitch attains a predetermined positive value.

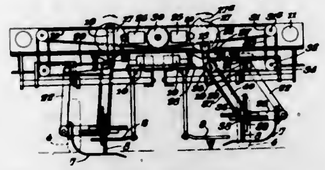
3,097,701
BLADE FOLDING MECHANISM
Michel D. Buivid, Milford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 27, 1960, Ser. No. 65,348
14 Claims. (Cl. 170—160.12)



1. In a helicopter, a rotor, a blade, an arm projecting from said rotor for said blade, means mounting said blade on said arm, said arm being hollow with an open outer end, said means mounting said blade to said arm including a pivot for folding said blade with respect to said rotor, said means mounting said blade to said arm including a releasable holding means for fixedly positioning said blade with relation to said arm preventing movement about said pivot, actuating means fixed to said blade for moving it about its pivot, and operating means positioned in said hollow arm for controlling said actuating means.

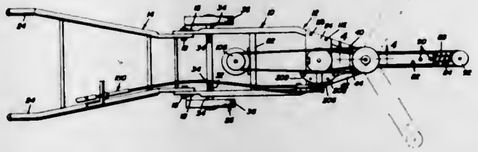
3,097,702
APPARATUS FOR THINNING GROWING SEEDLINGS, AND HOEING BETWEEN PLANTS, GROWING IN ROWS
John Cracknell and John Colin Cracknell, both of The Grove, Great Henny, near Sudbury, Suffolk, England, and Derek Norman Cooper, The Firs, New Queen's Road, Sudbury, Suffolk, England
Filed June 2, 1961, Ser. No. 114,480
Claims priority, application Great Britain June 3, 1960
4 Claims. (Cl. 172—6)

1. Apparatus for thinning out or weeding between plants or seedlings growing in rows comprising a chassis, means for supporting the chassis for movement over the ground, a plant cutting device, actuating means for retracting said cutting device to an inoperative position and retaining it in this position for a predetermined time, and for then returning the device to an operative cutting position, said actuating means comprising a swingable link supporting the cutting device and an oscillatable shaft supported by the chassis and to which one end of said link is fixed, means for coupling said shaft to a source of power, a solenoid for actuating said coupling means, a switch



for energizing the solenoid and a trip arm operable at will by an operator to close the switch, a hold-on switch for retaining the solenoid energized, and a rotary timing disc driven by said source of power for opening the hold-on switch when the cutting device returns to a ground penetrating position.

3,097,703
DIGGING MACHINE
Harold Alvik, 10767 Oregon Ave., Culver City, Calif.
Filed Oct. 4, 1961, Ser. No. 142,875
8 Claims. (Cl. 172—43)

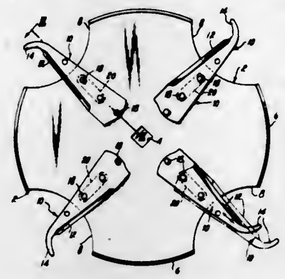


1. A digging machine comprising an elongated frame, handle means carried by the rear end of said frame, rotary soil working means, means mounting said soil working means for pivotal movement in a substantially horizontal plane, said mounting means consisting of a support arm, a vertical swivel pin pivotally mounting the support arm on the forward end of the frame in forward projecting relation thereto, a horizontal sprocket wheel secured to the swivel pin, a vertical pivot shaft mounted on the frame in line with and to the rear of said swivel pin, a horizontal wheel rotatably mounted on said pivot shaft, a chain anchor mounted on the periphery of said wheel, an elongated link chain, said link chain being entrained about the sprocket wheel and having the ends thereof being directed in opposite directions about said wheel and secured by said chain anchor, and means for effecting a rotational movement of said wheel and thus a subsequent pivotal movement of the soil working means support arm.

3,097,704
NOTCHED TILLAGE DISC WITH RADIALLY PROJECTING TEETH
Howard L. Gillespie, 415 E. Steadman, Anthony, Kans.
Filed July 30, 1962, Ser. No. 213,264
1 Claim. (Cl. 172—540)

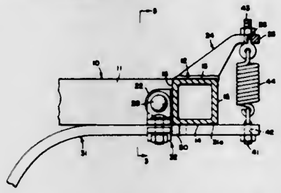
A soil-working device comprising: a circular cutting disc having a circular periphery adapted to roll on the earth; a plurality of notches, not exceeding four, in the periphery of said disc, the peripheral extent of each notch being of the order of one-eighth the circumference of said

disc; a soil cutting tillage member for each notch, each member being secured to said disc and extending radially



thereof, substantially centrally of its notch, and extending outwardly beyond the circular periphery of said disc.

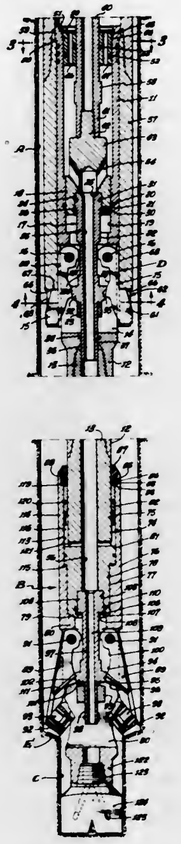
3,097,705
FLAT SPRING STANDARD MOUNTING
Edward C. Bopf, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,505
4 Claims. (Cl. 172—710)



1. Means mounting an earth working vibratory tool having an upper generally horizontal forwardly extending shank and a lower ground engaging portion to a generally transverse support bar, comprising rearwardly extending apertured lug means fixed to the rear side of said support bar, upwardly extending apertured first bracket means connected with said shank rearwardly of the front end thereof, pivot pin means pivotally connecting said first bracket means to said apertured lug means to the rear of said support bar to provide upward and rearward swinging of the rear end portion of said tool, an intermediate portion of the shank contacting the lower face of said support bar and a forward portion of the shank extending forwardly of the forward face of said support bar, second bracket means fixed to said support bar and extending generally forwardly therefrom, and spring means extending downwardly from said second bracket means to the forward portion of the shank to yieldably restrain swinging of the front end of the latter downwardly and rearwardly about the pivot axis defined by said apertured lug means.

3,097,706
RETRIEVABLE WELL BORE APPARATUS
Archer W. Kammerer, Fullerton, Calif., assignor, by mesne assignments, of three-fifths to said Kammerer, one-fifth to Jean K. Lamphere, and one-fifth to Archer W. Kammerer, Jr., all of Fullerton, Calif.
Filed Oct. 6, 1959, Ser. No. 844,692
12 Claims. (Cl. 175—258)

1. In combination: a string of pipe adapted to be lowered within a well bore; a coupling device movable longitudinally through said pipe and including an initially retracted coupling member and fluid conducting means communicating with the pipe to receive fluid under pressure therefrom; a well tool secured to said coupling device and depending therefrom and movable longitudinally through said pipe, said well tool including hydraulically operable means and passage means communicating with said fluid conducting means and hydraulically operable means to receive fluid under pressure from said fluid conducting means and conduct it under pressure to said hydraulically operable means to operate the same; said pipe having stop means therein at its lower portion; said coupling device having stop means engageable with said other stop means to locate said well tool substan-

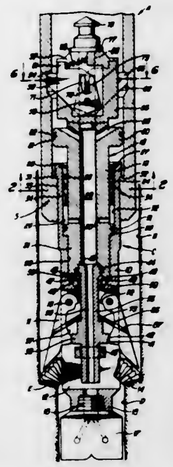


tially below the lower end of said pipe; shiftable means for expanding said coupling member outwardly into coupling engagement with said pipe; actuating means connected to said expanding means and extending through said pipe to the top of the well bore for shifting said expanding means to expand said coupling member outwardly; and means on said pipe at the top of the well bore engaging said actuating means to suspend the same on the pipe with said coupling member expanded outwardly.

3,097,707
APPARATUS FOR DRILLING WELL BORES WITH CASING
Archer W. Kammerer, 800 N. Raymond Ave., Fullerton, Calif.
Filed Apr. 25, 1960, Ser. No. 24,338
12 Claims. (Cl. 175—258)

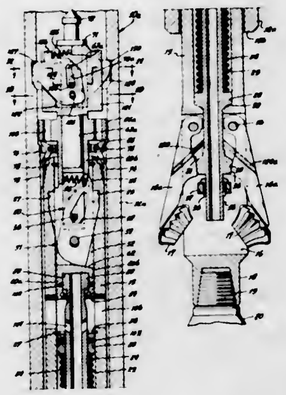
1. In a retrievable drilling bit adapted to be lowered within and coupled to the lower portion of a string of pipe disposed in a well bore: a body movable longitudinally through the pipe; initially retracted cutter means mounted

on said body for expansion laterally outwardly of said body; said body having stop means engageable with a lower portion of the pipe to locate the bit in the pipe with said cutter means projecting below the lower end of the pipe; a mandrel movable longitudinally in said body for expanding said cutter means laterally outwardly; means on said mandrel responsive to the pressure of fluid in the



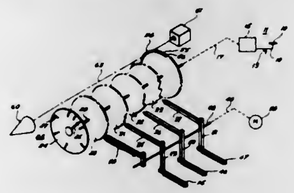
pipe for moving the mandrel longitudinally in said body to expand said cutter means; said body having means for coupling said body to the pipe whereby rotary motion and torque is transmittable directly from the pipe to said body; retractable means on said mandrel expandible against the pipe for transmitting downweight from the pipe to the bit; and means movable relative to said mandrel for retracting said retractable means.

3,097,708
RETRIEVABLE DRILLING APPARATUS
Archer W. Kammerer, Archer W. Kammerer, Jr., and Jean K. Lamphere, Fullerton, Calif., assignors, by mesne assignments, of three-fifths to said Archer W. Kammerer, one-fifth to said Archer W. Kammerer, Jr., and one-fifth to said Jean K. Lamphere
Filed May 11, 1959, Ser. No. 812,387
19 Claims. (Cl. 175—260)



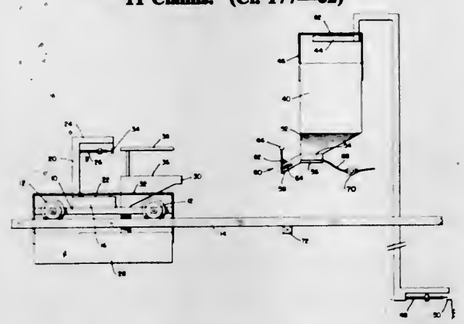
1. In a retrievable drilling bit adapted to be lowered within and coupled to the lower portion of a string of pipe disposed in a well bore: a unitary body movable longitudinally through the pipe; a plurality of initially retracted cutter means mounted on and circumferentially spaced about said body for expansion laterally outwardly of said body; said bit including means adapted to engage a lower portion of the pipe to locate the bit in the pipe with said cutter means projecting below the lower end of the pipe; means carried by said body for expanding said cutter means from its initially retracted position laterally outwardly of the body to drill an effective hole diameter greater than the outside diameter of the pipe; and means for coupling said expanding means to the pipe, whereby the pipe is adapted to rotate the bit and transmit torque through said expanding means and body to said cutter means.

3,097,709
SCALE WITH PRINTER DELAY
Edward B. Farmer, Waban, and David R. Whitehouse, Cambridge, Mass., and Paul G. Lindsay, Moline, Ill., assignors to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Filed Sept. 11, 1959, Ser. No. 839,324
1 Claim. (Cl. 177—12)



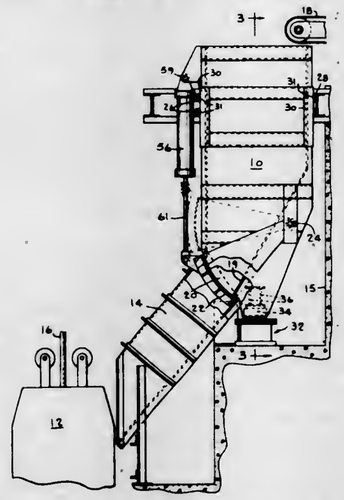
In weighing apparatus including a load receiver, for weighing and recording the weight of a load on the receiver, a shaft, means responsive to the application of a load on said receiver for causing rotation movement of said shaft in angular extent proportional to the weight of the load, means providing a light beam, a light sensitive device in registration with the light beam and affording electrical resistance variable as a function of the intensity of light impinging thereon, a disc secured on said shaft with its peripheral portion in intercepting relation to said light beam, the peripheral portion of said disc providing alternate radial opaque fingers and slots of like uniform width, for effecting intermittent interruption of the light beam during rotational movement of the disc, with consequent variation in resistance of said light sensitive device at a variation rate corresponding to the rate of rotational movement of the disc, weight recorder means, a recorder control having an active condition permitting recording operation of said weight recorder means and an inactive condition preventing operation of the weight recorder means, control circuit means sensitive to resistance variations of said light sensitive device and adjustable to respond to rates of resistance variation above a predetermined minimum rate for retaining said recorder control in inactive condition, said control circuit means causing said recorder control to assume its active condition when the rate of resistance variation is at or below said predetermined minimum rate, the control circuit means including adjustably settable time delay means effective to delay for a time period predetermined according to its setting, action of the said control circuit means to cause the said recorder control to assume its active condition, and regulatable means in said control circuit means operable for varying the predetermined minimum rate of resistance variation response of the control circuit means at and below which it causes said recorder control to assume said active condition.

3,097,710
AUTOMATIC GLASS LOADER
John E. Copenhefer, Anchorage, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,631
11 Claims. (Cl. 177—62)



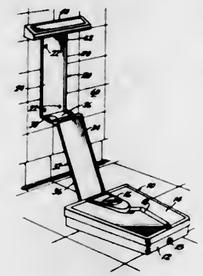
1. In apparatus for spinning condensed filamentous mats, a supply material hopper, a continuously reciprocating furnace periodically traversing a charge receiving location and from which filamentous material is continuously drawn, means for continually weighing said furnace and its contents, first switching means selectively responsive to a predetermined decrease of the weight of said continuously moving furnace and its contents from its tare weight value, second switching means selectively responsive to the positional disposition of said continuously moving reciprocating furnace within said charge receiving location and means responsive to coincident actuation of said first and second switching means for selectively effecting incremental transfer of supply material from said hopper into said moving furnace while the same is traversing said charge receiving location.

3,097,711
SKIP LOADING AND WEIGHING APPARATUS
James W. Clark, Iron Mountain, Mich., assignor to Lake Shore, Inc., Iron Mountain, Mich., a corporation of Michigan
Filed Nov. 9, 1959, Ser. No. 851,594
3 Claims. (Cl. 177—108)



1. Apparatus for discharging the contents of a storage bin into a skip in a mine when the contents reach a given weight, comprising, a bin, a discharge opening in the bottom portion of said bin through which the contents will flow by gravity, a dumping door pivotally mounted along the upper edge of said discharge opening and adapted to open and close said opening as it is actuated from one position to another, actuating means including a pneumatic cylinder and a toggle mechanism for actuating said door, said pneumatic cylinder pivotally mounted on the front of said bin above said dumping door, mounting means on the sides of said bin to provide lateral support to said bin and to permit its vertical movement, and weight sensitive means supported and mounted centrally below said bin, said means being responsive to and resisting the vertical movement of said bin as it is being loaded and adapted to energize said door actuating means to open said door and dump said bin when the contents of said bin reach the given weight.

3,097,712
WEIGHING SCALE
Walter R. Johnson, Chicago, Ill., assignor to The Borg-Erickson Corporation, Chicago, Ill.,
Filed Feb. 18, 1960, Ser. No. 9,487
6 Claims. (Cl. 177—126)

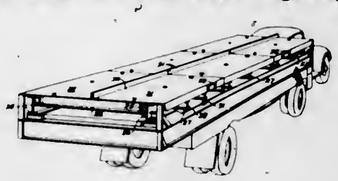


4. In combination, a weighing scale adapted to be flat upon a horizontal supporting surface during use thereof and upon a vertical supporting surface during non-use thereof, a bracket member fixedly secured to said vertical supporting surface at a point spaced above said horizontal supporting surface, an elongated link member of lesser width than said weighing scale pivotally connected at one end thereof to the lower portion of said bracket member and pivotally connected by hinge means at the other end thereof to one end of said scale, and releasable lock means including a resiliently biased lock member pivotally connected to said bracket member for automatically engaging said hinge means and locking said scale in non-use position when the latter is moved upwardly to pivotally operate said lock member and further operative for automatically releasing said scale when the latter is rotated outwardly to again pivotally operate said lock member to be returned to its position of use upon said horizontal supporting surface.

3,097,713
TRANSPORTABLE SCALE WITH EXTENSIBLE DECK
Leslie R. Murphy, Sacramento, Calif., assignor to L. R. Murphy Scale Company, Sacramento, Calif., a corporation of California
Filed Dec. 7, 1961, Ser. No. 157,723
5 Claims. (Cl. 177—126)

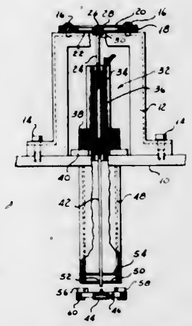
1. A transportable scale comprising a base frame; a weighbridge supported on said base frame by a lever system, said weighbridge having a rigid frame, including longitudinal side members with outer flanges and with extension members projecting laterally out therefrom; outrigger members pivotally supported by said extension

members and having an upper surface portion bearing against said flanges and upper surface portions substantially coplanar with the upper surface of said longitudinal side members and adapted to individually be swung out to extend the effective width of said weighbridge frame



or to fold individually into a position in which they extend out no further than said extension members; a pair of platforms releasably supported on said weighbridge; and releasable means for locking each of said outrigger members to its said extension member when said outrigger members are in their extended position.

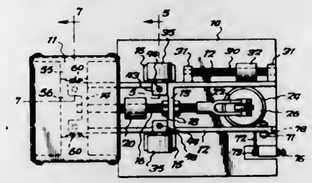
3,097,714
FORCE MEASURING DEVICE
Ronald C. Vickery, Malibu, Calif., assignor to Nuclear Corporation of America, Denville, N.J., a corporation of Delaware
Filed May 25, 1961, Ser. No. 112,621
6 Claims. (Cl. 177—210)



4. A force measuring device including in combination a member to which the force to be measured is applied, a support, a spiral spring carried by said support, means for securing said member to said spiral spring to permit movement of said member in the direction of the axis of the spring while restraining said member against movement in a direction generally perpendicular to the spiral axis, means for applying the force to be measured to said member in the direction of the spiral axis, means responsive to minute displacements of said member in the direction of spiral axis under the influence of said force for indicating said force and a scale pan carried by said member.

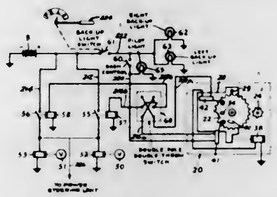
3,097,715
WEIGHING SCALE
Alexander Litchard, 322 N. Main St., Wellsville, N.Y.
Filed Oct. 18, 1960, Ser. No. 63,324
4 Claims. (Cl. 177—246)

1. A weighing scale having a base and a lever pivoted on said base, a column extending upwardly from said base and at an inclination to the vertical, a bearing member supported on said column and having a V-shaped recess formed therein, another bearing member mounted on said lever and having a knife edge formed to bear in said recess, said recess of said first mentioned bearing member being inclined with relation to said knife edge, whereby said knife edge will contact said recess in said



first mentioned bearing member at a point only, and adjustable means for varying the positions of said bearing members lengthwise of each other.

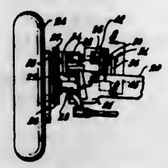
3,097,716
AUTOMATIC STEERING APPARATUS
Herbert R. Pfister, Glen Cove, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 17, 1955, Ser. No. 488,840
7 Claims. (Cl. 180—1)



4. In a system for automatically operating the steering mechanism of a vehicle to permit the vehicle to be backed into a parking space, the combination of a source of fluid pressure, means connecting said source of pressure and said steering mechanism and including valve means, solenoid means to operate said valve means for establishing a fluid circuit to turn the wheels of the vehicle in one direction and to establish a fluid circuit to turn the wheels in the opposite direction, electrical circuit means to energize said solenoid means, a source of electrical power, switch means in said electrical circuit means to establish the flow of current from the electrical power source to the solenoid means, driving means, driven means, means carried by said driven means to operate said switch means to effect predetermined operation of the solenoid means and the valve means thereby, said driving means and said driven means being normally out of operative engagement, means for establishing the operative connection between said driving means and said driven means, and a manually controlled means for energizing said last named means to establish said operative connection.

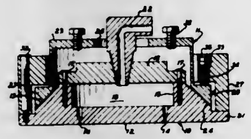
3,097,717
AUTOMATIC SELF-STEERING AUXILIARY FOR PARKING PURPOSES
John J. Gilvarry, Los Angeles, Linn A. Gore, Santa Monica, Bruno W. Augenstein, Woodland Hills, and William C. Randels, Studio City, Calif., assignors, by direct and mesne assignments, to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 21, 1955, Ser. No. 547,907
6 Claims. (Cl. 180—1)

1. Apparatus for accomplishing automatically a predetermined maneuver of an automotive vehicle comprising dirigible means, said apparatus including a power source, steering means operatively connected mediate said dirigible means and said power source, means incorporated in said steering means for operably connecting said power source to said dirigible means through said steering means, and self-dependent control means carried in its entirety by the vehicle and operably associated with said steering means to govern the same, said control means



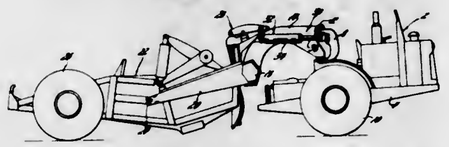
through its construction providing a pattern determining the displacement of said dirigible means necessary to accomplish the maneuver.

3,097,718
SUPPORT SYSTEM
David J. Jay, Detroit, and Harlan W. Peithman, Livonia, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 25, 1958, Ser. No. 744,416
6 Claims. (Cl. 180—7)



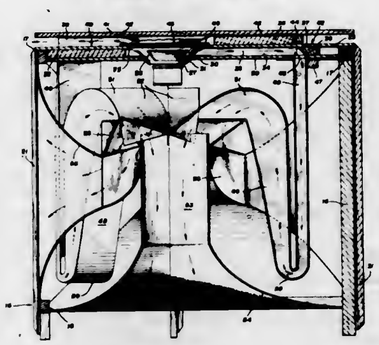
1. A gas pressure levitation device comprising a bearing member having a substantially flat bearing surface and a curved bearing surface, said bearing member having a plurality of nozzles positioned therein terminating at said substantially flat bearing surface, means for supplying said nozzles with a compressed gas, and means having a curved bearing surface adapted to be affixed to an object to be supported, said last mentioned curved bearing surface being complementary to the curved bearing surface on said bearing member and positioned thereagainst so that relative motion may take place between said bearing member and the object to be supported about said curved bearing surface, the center of the curved bearing surfaces being located on the opposite side of said substantially flat bearing surface from the curved bearing surfaces.

3,097,719
POWER STEERING FOR ARTICULATED VEHICLES
Alvin A. Rood, Willoughby, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 6, 1960, Ser. No. 60,966
13 Claims. (Cl. 180—79.2)



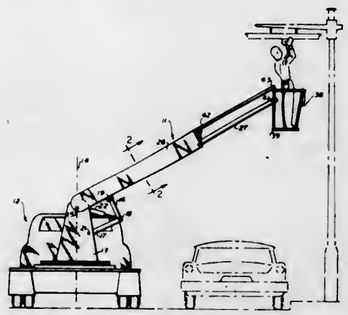
1. In combination, a vehicle comprising first and second frame sections, means pivotally interconnecting said frame sections on a steering axis for relative steering articulation therebetween to either side of straight-ahead steering alignment of said frame sections, a fluid pressure-operated steering jack including relatively reciprocable piston and cylinder members, means operatively connecting said jack between said frame sections to articulate the latter relative to each other a relatively constant amount throughout the entire steering range of said frame sections in response to each change of a given amount in the length of said jack to provide a relatively constant mechanical advantage for said jack in articulating said frame sections about said steering axis, said means including a pair of links, one of said links pivotally connected to the first frame member about a first pivot axis, the other of said links pivotally connected to the second frame member about a second pivot axis, means interconnecting said links about a third pivot axis, and means for selectively supplying operating fluid under pressure to the opposite ends of said cylinder, respectively, to steer said vehicle in opposite directions.

3,097,720
ACOUSTICAL ENCLOSURE AND LOW FREQUENCY SOUND AMPLIFIER FOR A LOUDSPEAKER
George H. Taylor, Jr., P.O. Box 404, Hendersonville, N.C.
Filed Sept. 20, 1960, Ser. No. 57,243
9 Claims. (Cl. 181—31)



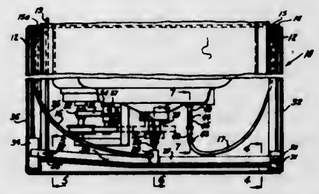
1. An acoustical enclosure for a loudspeaker comprising a substantially cubical frame body portion having a top and vertical sides, a loudspeaker disposed at the top of the frame body portion substantially centrally thereof and having an upwardly flaring speaker cone, horizontal panel means secured to and supporting said loudspeaker at the top of the frame body portion and including baffle means forming a plurality of substantially horizontal shallow individual low frequency sound wave passages extending from the side wall of the speaker cone toward the vertical corners of said frame body portion, a substantially flat top panel disposed horizontally above said panel means and speaker and adapted to serve as a table-like support, a downwardly tapering conical sound deflector secured dependingly to the top panel and interfitting with the speaker cone centrally thereof, spacer baffle means between said top panel and panel means and supporting the top panel and forming between the top panel and panel means a plurality of horizontal shallow individual outwardly flaring high frequency sound wave passages between the top of the speaker cone and the vertical sides of the cubical body portion, substantially vertical sound wave conduits extending below said panel means and communicating directly with the outer ends of said low frequency sound wave passages, and folded flaring low frequency sound wave amplifying horns connected with the lower ends of said conduits and having open discharge ends disposed at the vertical sides of said cubical body portion for emitting amplified low frequency sound waves from all of said sides simultaneously with the emission of the high frequency sound waves from said high frequency sound passages.

3,097,721
AERIAL LADDER
Gordon L. Thym, 36567 Darvon St., Newark, Calif.
Filed Mar. 26, 1962, Ser. No. 182,358
12 Claims. (Cl. 182—2)



1. An expansible aerial ladder comprising a lower section, an upper section disposed to telescope into said lower section, a pedestal, said lower section mounted at one end on said pedestal to rotate about a first axis, a first link also mounted on said pedestal to rotate about a second axis, a second link pin-connected by one end to said first link to rotate about a third axis therewith and pin-connected by its other end to said lower section to rotate about a fourth axis therewith whereby said lower section, said pedestal, said first link and said second link form a parallelogram linkage; a lever pin-connected to said upper section and disposed to rotate therewith on a fifth axis; said first and fourth axes being substantially parallel, and said fifth axis being free to move in the plane formed by said first and fourth axes and substantially parallel thereto; and means for securing said lever to said first link at a fixed spaced distance from said fifth axis and in sliding relation to said first link whereby said lever remains substantially parallel to said second link when said ladder is expanded and rotated to higher elevations and to lower elevations.

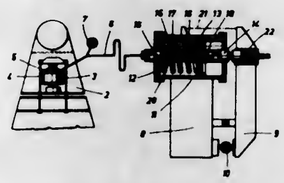
3,097,722
LUBRICATING SYSTEM
George F. Asire, P.O. Box 495, Worland, Wyo.
Filed Mar. 30, 1962, Ser. No. 183,932
2 Claims. (Cl. 184—105)



1. In a washing machine including a casing having a front panel, a main drive pulley support shaft and a pulley rotatable thereon, said shaft having a bore therein, a channel on the periphery of said shaft interiorly of said pulley, and a duct between said bore and said channel, a grease fitting communicating with said bore, a flexible tube engageable with said grease fitting and extending through the front panel of the machine, a second grease fitting on the extending end of said tube,

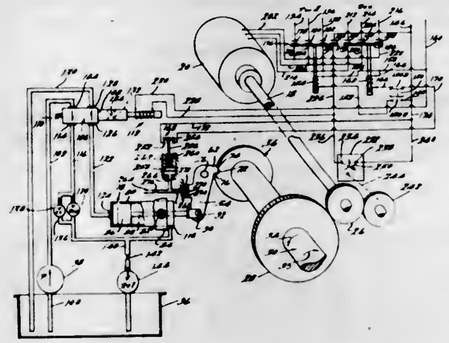
said tube including a cup-shaped fitting movable into and out of engagement with said first-mentioned grease fitting, and means for moving said cup-shaped fitting into and out of engagement with said first-mentioned grease fitting.

3,097,723
BRAKE MEANS FOR A CABLE RAILWAY CAR ASSEMBLY
Rudolf Schaler, Linz, Austria, assignor to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria
Filed Sept. 5, 1962, Ser. No. 221,468
Claims priority, application Austria Sept. 28, 1961
9 Claims. (Cl. 188—42)



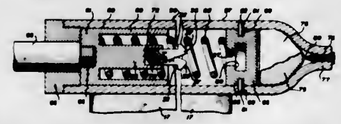
1. A cable railway car assembly which comprises a running gear adapted to be carried by and to run on a carrying cable, a cable railway car, a weighing device by which said car is suspended from said running gear, and a carrying cable brake having at least one brake shoe, brake applying means for applying said brake shoe with gradually increasing force against said carrying cable carrying said running gear, a brake retarding device arranged to retard the application of force on said brake shoe by said brake applying means, and adjusting means for adjusting the retarding effect of said brake retarding device, said adjusting means being operatively connected to said weighing device for automatically adjusting said retarding effect in dependence on said weighing device.

3,097,724
ROTARY LATCH MECHANISM FOR MACHINE TOOLS
John A. Bryant II, Grosse Pointe Farms, and Guy Donald Pierce, Franklin, Mich., assignors to The Cross Company, Fraser, Mich., a corporation of Michigan
Filed Nov. 2, 1961, Ser. No. 149,729
15 Claims. (Cl. 188—82.7)



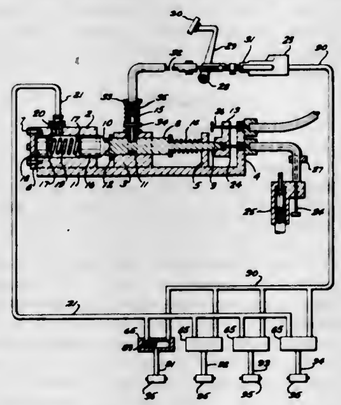
1. A rotary latch mechanism for machine spindle assemblies and the like, comprising a latch plate rotatable with the spindle assembly and having a locking portion, a latch normally disengaged from said latch plate movable against the locking portion thereof to hold the same in a rotatably locked position, and a fluid system including means for maintaining fluid pressure in the system, a fluid motor connected to said latch and operative by fluid pressure in the system to move the latch into and out of engagement with the locking portion of said latch plate, and a pressure relief device communicating with said fluid motor and operative when said locking portion engages said latch to relieve pressure in the system sufficiently to permit said latch plate to override said locked position against the action of said latch and said fluid motor so as to reduce the impact shock of said engagement but not sufficiently to permit the locking portion of said latch plate to override and disengage said latch completely or to prevent the latch and said motor from pulling the overriding latch plate back to the locked position.

3,097,725
KINETIC ENERGY ABSORBER
Gerald H. Peterson, Santa Monica, Calif.
(575 Tahquitz, Pacific Palisades, Calif.)
Original applications May 29, 1951, Ser. No. 228,847, and Oct. 22, 1956, Ser. No. 617,648. Divided and this application Sept. 2, 1959, Ser. No. 837,749
6 Claims. (Cl. 188—94)



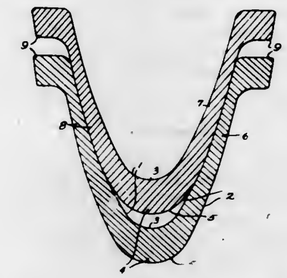
1. A shock-absorbing device to be mounted in impact-receiving position between an obstacle and a vehicle, said device comprising a holder having a discharge port, a container containing a liquid fluid material within said holder, said fluid being flowable through said port on impact of sufficient force to rupture said container, and means movable within said holder for receiving the impact and transmitting the force thereof to said container to compress to rupture said container and cause said fluid to flow through said discharge port, thereby absorbing kinetic energy of impact.

3,097,726
BRAKE SYSTEM FOR VEHICLES
Arthur B. Euga, 728½ Franklin Ave., Columbus, Ohio
Original application Feb. 8, 1956, Ser. No. 564,281, now Patent No. 2,940,551, dated June 14, 1960. Divided and this application Apr. 27, 1960, Ser. No. 32,067
4 Claims. (Cl. 188—106)



1. A braking system for a vehicle comprising, in combination, a fluid energy translating means for pressurizing fluid in a service brake system of said vehicle; actuating means for said fluid energy translating means; a fluid motor for applying braking action at a wheel of said vehicle; means forming a chamber in fluid communication with fluid of said service brake system; a member movably disposed in said chamber in communication with the fluid therein; means forming a source of stored energy for applying force to said movable member to move said member in a direction to pressurize said service brake system; means for releasing energy from said source upon failure of said fluid energy translating means to produce normal service brake operating pressure during operation of said actuating means in a direction to apply the service brake; valve means including a first position wherein said motor is connected to said service brake system and a second position wherein said motor is connected to said chamber and isolated from said service brake system and a valve means for venting said service brake fluid system to release service fluid pressure on said moveable member after normal brake application by said actuating means whereby energy from said source of stored energy pressurizes said brake motor with said first mentioned valve means in said second position.

3,097,727
FRAME FOR MINE ROOF SUPPORT
Karl Theodor Jasper, Grunstrasse 36a, and Hans Werner vom Felde, Ruhrstrasse 17, both of Hagen, Germany
Filed Nov. 19, 1958, Ser. No. 774,917
Claims priority, application Germany Nov. 23, 1957
2 Claims. (Cl. 189—34)

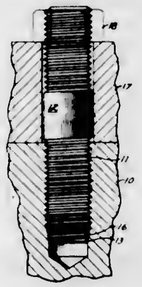


1. Roof support frame for underground mine roof support or the like comprising a plurality of segments comprising channel sections of identical or symmetrical cross-section, which are arranged in one another at their ends and are clamped yieldably to one another by frictional locking over parts of their surfaces, and whose outer and inner envelope curves follow a parabolic course, the inner parabolic envelope curve being taken to the apex point of the section bottom, characterised in that the outer parabolic envelope curve merges into an arc in the region of the section bottom so that the sections when arranged one within the other are in areal contact only at the parabolic regions of their webs.

3,097,728
TAPERED END STUD AND STRUCTURE WITH TAPERED END BORE TO PROVIDE A WEDGING LOCK
Ralph W. Yocum, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Sept. 16, 1954, Ser. No. 456,570
2 Claims. (Cl. 189—36)

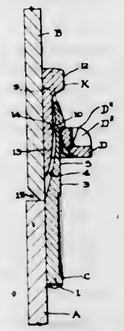
2. The combination which comprises a member of solid substantially non-expandable structure having a tapped hole therein, a second member to be secured to the first member and having a plain through hole for alignment with said tapped hole, a solid stud-like member threaded on both ends with the threads on a first end

being uninterrupted and fitting said tapped hole, a nut to fit the opposite end of said stud-like member to secure the second member tightly against the first member, the threads in said tapped hole being straight throughout the greater part of the length and tapered only adjacent its inner end where the roots of the threads follow the contour of a truncated cone, the stud-like member having straight threads throughout most of its length on its said first end and being tapered only adjacent its end providing the crests of the threads with a complementary frusto-



conical contour, the angle of said tapers being such as to provide a wedging action which limits the depth to which the stud-like member can be threaded into the tapped hole, and the straight threads on said first end of the stud-like member being relatively loosely fitted in said tapped hole whereby it may be freely threaded into the hole but firmly and compressively engaged therein when a final torque is applied to cause the wedging action between the tapered parts of the tapped hole threads and the stud threads.

3,097,729
COLUMN ERECTION CONNECTOR
Van Rensselaer P. Saxe, 1701 St. Paul St., Baltimore 2, Md.
Filed Nov. 9, 1960, Ser. No. 68,277
5 Claims. (Cl. 189—36)



5. A connector for vertically super-posed columns having at least one pair of co-planar faces, comprising, in combination,

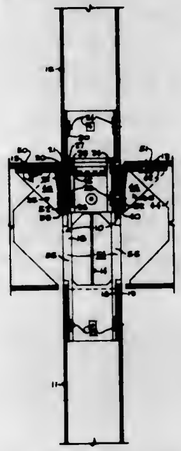
a yoke secured to one of said faces and having a bar portion spaced from said face,

and a splice member including an attaching body secured at one end to the related face of the other column,

and an upwardly extending tongue of less thickness than the attaching portion and having its inner face spaced outwardly of the plane of the column to which the yoke is attached,

said tongue having a hook portion to engage the bar portion of the yoke.

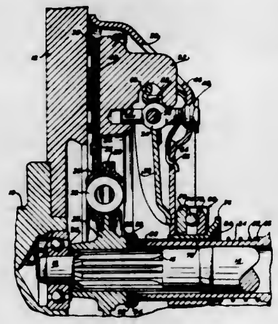
3,097,730
CONNECTION OF STRUCTURAL ELEMENTS IN THE ART OF BUILDING
Roger J. Halle, Pound Ridge, N.Y.
Filed Nov. 14, 1960, Ser. No. 69,035
23 Claims. (Cl. 189—36)



1. Connecting means for connecting beams to a column at a region of intersection having a predetermined vertical dimension, comprising a vertically extending body having top and bottom regions separated by said dimension, and having a cross-section not substantially larger than the column and having a plurality of beam-receiving vertical sides, said body having means adapted to interfit with the column and including horizontal surface structure engageable with horizontal surface structure of the column for transmission of vertical load in bearing between the body and the column, and said body having horizontal edge means permanently incorporated at each of its beam-receiving sides, within its said cross-section, and spaced below its top region and comprising an upwardly-facing edge disposed for removably receiving a beam-carrying hanger thereon, for supporting said hanger in bearing to transmit load from said hanger to said body, said upwardly-facing edge being disposed at an upper part of the side of the body, and said last-mentioned side of the body having vertically extending surface structure below the upwardly facing edge, adapted to be abutted by structure of the hanger for receiving horizontally transmitted stress therefrom.

3,097,731
POWER TRANSMITTING CLUTCH WITH ANTI-INERTIA BRAKING MEANS
John D. Wells, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,070
5 Claims. (Cl. 192—13)

1. In a power transmission mechanism adapted to transfer power from a power source to a driven member and including a power input shaft, a stationary sleeve shaft disposed about said power input shaft, a friction clutch mechanism adapted to form a releasable driving connection between said power input shaft and said power source, said clutch mechanism comprising a hub connected to the power input shaft, a clutch disc carried by said hub, personally operable means for applying and releasing said clutch mechanism, a first brake element connected to said power input shaft, a second brake element connected to said sleeve shaft, said brake elements being disposed adjacent said hub and between said hub and one end of said sleeve shaft, one portion of said personally operable means being engageable with one of said brake elements and adapted to urge the same



into frictional engagement with the other brake element when said clutch mechanism is released, said hub accommodating the thrust forces applied to said brake elements.

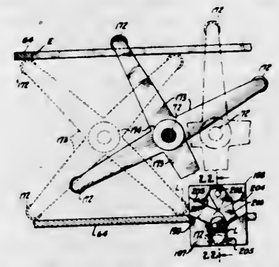
3,097,732
APPARATUS FOR REMOVING MALPOSITIONED ARTICLES FROM A CONVEYER
Harry E. Engleson, Morton Grove, and Elmer D. Sramek, Cicero, Ill., assignors, by mesne assignments, to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 16, 1961, Ser. No. 96,328
9 Claims. (Cl. 198—33)



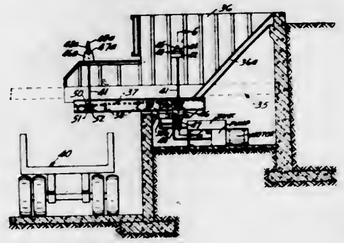
1. Apparatus for removing malpositioned elongated articles from a conveyer having a horizontal conveying surface and guide rails upstanding therefrom, said apparatus comprising an offset section along the guide rails for guiding the articles toward and along an edge of the conveyer, and an opening in the guide rail of the offset section which is positioned away from the edge of the conveyer, said opening sized to permit a malpositioned article lying on its side to pass therethrough and off the conveyer and to prevent correctly positioned upstanding articles from passing therethrough.

3,097,733
AUTOMATIC MACHINE
John T. Frydryk, Springfield, Mass., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Feb. 12, 1959, Ser. No. 792,741
7 Claims. (Cl. 198—33)

1. Means for turning and indexing a rotatable unit adapted for simultaneous linear movement in a given path normal to its axis of rotation, which comprises track means for retaining said unit in a given angular position with respect to its direction of rotation, a follower connected to said unit for cooperating with said track means for controlling the angular position of said unit, indexing means for blocking the forward linear motion of said follower while allowing it to move transversely of said path, said indexing means defining a Y-shaped passage having a base portion extending normal to said path, an entrance portion formed by one half of the top of the Y and an exit portion formed by the other half of the top of the Y, said follower being adapted first to enter the entrance portion of the passage and then to enter the base of said passage where the follower can move in a direction normal to said path but not parallel thereto, said follower moving outwardly in said base as the axis of said rotatable unit approaches said indexing means and inwardly in said base as said axis leaves said indexing means until the follower enters the exit portion of said passage and leaves the indexing means, whereby said unit is caused to rotate a predetermined angle with respect to its original angular position, and track means for retaining said unit in its new angular position as it continues its linear motion in said path.



3,097,734
RECIPROCATING PLATE FEEDER
Lewis C. Erickson, Duluth, Minn., assignor to National Iron Company, Duluth, Minn., a corporation of Delaware
Filed Mar. 28, 1958, Ser. No. 724,567
5 Claims. (Cl. 198—53)



1. In a withdrawal-type heavy-duty service reciprocating feed mechanism for use in feeding material comprising

(*a*) material containing and supplying means,

(*b*) a feeder deck means,

(*c*) and suspension means for reciprocably supporting said feeder deck means beneath the discharge of said material containing and supplying means in position to receive and support such material thereon for ready discharge therefrom,

(*d*) said suspension means being comprised of a plurality of substantially rigid support rods having upper and lower end portions,

(*e*) at least two upper support rod mounting elements one of which is fixed adjacent each side of said discharge opening,

(*f*) at least two other support rod mounting elements one each of which is carried by opposite sides of said feeder deck in substantial vertical alignment with said upper rod mounting elements,

(*g*) each of said upper rod mounting elements having an upwardly directed weight-bearing surface,

(*h*) each of said other support rod mounting elements

carried by said feeder deck having a downwardly directed weight-bearing surface,

(*i*) weight-bearing elements carried by the upper and lower end portion of each of said rods,

(*j*) the weight-bearing elements carried by the upper end portion of each of said rods having a downwardly directed weight-bearing surface and the weight-bearing element carried by the lower end portion of each of said rods having an upwardly directed weight-bearing surface,

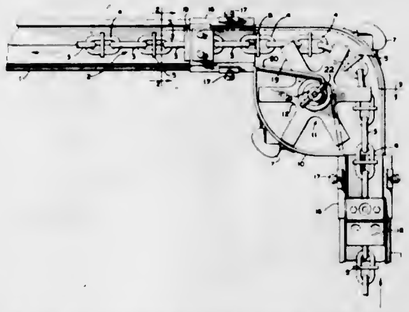
(*k*) the weight-bearing surfaces of each of said rod mounting elements engaging and cooperating with one of said weight-bearing surfaces of one of said weight-bearing elements to support a portion of the weight of said feeder deck means and its load,

(*l*) the end portions of each of said rods extending through an unrestricting passage in its respective support rod mounting elements,

(*m*) one of said cooperating weight-bearing surfaces being substantially flat and the other being convex to provide a rocking movement between said surfaces to avoid friction and prevent said rods from flexing during reciprocation of said feeder deck, and

(*n*) means on each of said end portions of each of said rods for maintaining said weight-bearing elements in operating position.

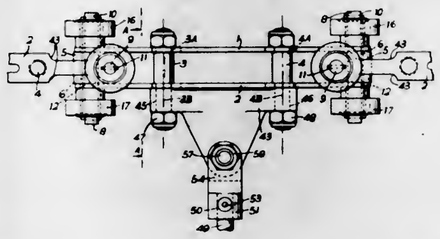
3,097,735
SPROCKET WHEELS
Anthony J. Siciliano, Vineland, N.J., assignor to Keen Manufacturing Corporation, Vineland, N.J., a corporation of New Jersey
Filed June 15, 1960, Ser. No. 36,280
7 Claims. (Cl. 198—171)



1. A non-jamming idler sprocket wheel for the conveyor chain of a poultry feeding device or the like comprising a hub having a flat bottom surface, means mounting the hub for rotation about a central vertical axis, a plurality of spokes radiating from the hub and having their outer ends free and unconnected with each other and providing inter-spoke spaces flaring radially outwardly from said hub, and a foot rigid with and depending from each spoke intermediate between the hub and the free end of the spoke and terminating in a free end in substantially the plane of the flat bottom surface of the hub.

3,097,736
LINK CONVEYOR WITH ARTICLE SUPPORTED HOOK
Rowland John James de Courcy, Loughton, England, assignor to Baker Perkins Inc., Saginaw, Mich., a corporation
Filed Feb. 10, 1961, Ser. No. 88,567
5 Claims. (Cl. 198—177)

1. A chain comprising a pivot member having a first pivotal axis and a second pivotal axis substantially normal to and linearly spaced from said first axis; a first pair of spaced apart links; a second pair of spaced apart links normal to and partially overlapping the said first pair of links, the links of said first pair of links having their corresponding ends terminating adjacent said first axis and extending toward and beyond said second axis, the links of said second pair of links having their corresponding ends



terminating adjacent said second axis and extending toward and beyond said first axis; means connecting the corresponding ends of said first pair of links to said first pivotal axis; and means connecting the corresponding ends of said second pair of links to said second pivotal axis, whereby tensioning of said pairs of links stresses said pivot member in compression.

3,097,737
RESILIENT BELT TRAINING TROUGHING IDLER ASSEMBLY
William E. Goodman and Roy F. Lo Presti, Chicago, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed July 18, 1960, Ser. No. 43,599
1 Claim. (Cl. 198—192)



A belt training troughing idler assembly especially adapted for downhill conveying runs, said troughing idler assembly including, in combination,

a uniform diameter, solid shaft,

said shaft extending from end to end of the idler assembly,

a plurality of rollers carried by the shaft, said rollers being rotatable with respect to the shaft,

structure for connecting the shaft, by its end portions, to the wire rope side frames of a wire rope conveyor,

said structure being effective to position the end portions of the shaft downstream with respect to the mid-portion of the shaft in an unloaded condition,

the mid-portion of said shaft, in a belt-supporting, unloaded condition, thereby lying,

firstly, in an upstream, belt training position, with respect to a line substantially perpendicular to the direction of belt travel which passes through the points of connection of the end portions of the shaft to the wire ropes, and,

secondly, a substantial distance below said line, said downward displacement being greater than that due to the weight of the rollers and belt alone,

the downward displacement being sufficient in an unloaded condition, to provide contact over the entire width of a belt which may be supported by the rollers

whereby good belt-roller contact is provided throughout the entire width of the conveyor belt,

said shaft being resilient, and pre-bowed, over at least its belt contacting length to thereby enable the end portions of the shaft to move toward and away from one another in a direction transverse to the conveying run in response to variations in load,

said connecting means including

a pair of tubular liners, one at each end portion of the shaft, the shaft being received in the liners,

a pair of rope clamp assemblies, one at each end of the troughing idler assembly,

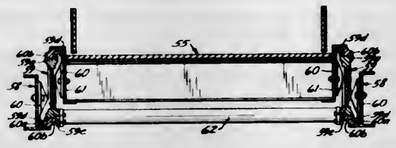
each rope clamp assembly including a rope clamp, a web extending therefrom, and a sleeve carried by the web,

the tubular liner being received in the sleeve, and

a threaded fastener received on the end of the shaft which prevents longitudinal movement of the shaft with respect to the linear and sleeve,

said connecting means lying transversely outwardly from the end rollers.

3,097,738
HEAVY BURDEN PLATE FEEDER SUSPENSION
Lewis C. Erickson, Duluth, Minn., assignor to National Iron Company, Duluth, Minn., a corporation of Delaware
Original application Mar. 28, 1958, Ser. No. 724,567. Divided and this application Aug. 1, 1960, Ser. No. 46,725
1 Claim. (Cl. 198—220)



A withdrawal-type heavy-duty service reciprocating feed mechanism for positively feeding materials, said mechanism comprising

(*a*) a pair of rigid transversely spaced parallel elongated frame members,

(*b*) a plurality of rigid transverse frame members extending between and rigidly connecting said elongated frame members at points spaced longitudinally thereof and forming therewith a rigid rectangular frame,

(*c*) a plurality of bracket members fixed to inner side surfaces of said elongated frame members in oppositely disposed pairs,

(*d*) each of said bracket members having an upwardly facing flat weight-bearing surface disposed adjacent the lower portions of said elongated frame members and extending longitudinally and inwardly thereof,

(*e*) each of said bracket members having a keeper opening formed therein outwardly and oppositely of said weight-bearing surface and extending therebelow,

(*f*) a plurality of pairs of axially spaced, oppositely disposed equally-sized rocker elements each rocker element of which has an upper and a lower opposed convex weight-bearing surface of equal radius,

(*g*) the lower convex weight-bearing surface of each of said rocker elements bearing upon said flat weight-bearing surface of one of said brackets in non-interengaging supported relation and rocking thereupon longitudinally of said elongated frame members,

(*h*) flange means carried by each of said rocker elements at its lower and upper portions and extending radially outwardly along the inner side of its supporting bracket member beyond the flat weight-bearing surface thereof,

(*i*) rigid tie means extending between and rigidly connecting the lower portions of each of said oppositely disposed rocker elements and rocking therewith,

(*j*) a feeder deck extending between said elongated frame members and longitudinally thereof,

(*k*) said feeder deck having an upper rigid material supporting surface and including rigid side members extending vertically upwardly and slightly above said material supporting surface,

(*l*) a plurality of second bracket members fixed to outer side surfaces of said elongated frame members adjacent the upper portion thereof in transversely oppositely disposed pairs,

(*m*) each of said second bracket members having a downwardly facing flat weight-bearing surface extending longitudinally of said elongated frame members and rocking upon the upper convex weight-bearing surface of one of said rocker elements in non-interengaging supported relation whereby said feeder deck may be reciprocated relative to said frame,

(*n*) each of said second bracket members having a keeper opening formed therein inwardly and oppositely of the weight-bearing surface thereof and extending thereabove and between said weight-bearing surface and the side member of said feeder deck to which said bracket member is attached,

(*o*) keeper elements carried by each of said rocker elements and extending into said keeper openings of its supporting and supported bracket members, and

(*p*) means connected to said feeder deck for reciprocating the same.

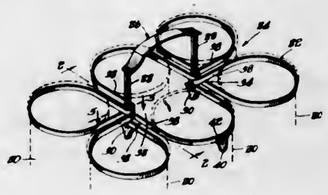
3,097,739
DISPENSING MAGAZINE FOR BALL POINT REFILL CARTRIDGES
Robert Jay Burnham, 179—39 Tudor Road, Jamaica 32, N.Y.
Filed Dec. 18, 1961, Ser. No. 160,199
6 Claims. (Cl. 206—56)



6. A magazine for successively singly dispensing therefrom the uppermost cartridge of a stack of vertically registered ball point cartridges contained therein, wherein each of the cartridges constitutes an ink tube having a pinch intermediate its ends and having a point of smaller diameter extending forwardly from the front end of the ink tube and defining a shoulder in conjunction with the ink tube, the front end of the point being provided with a writing ball, said pinch having at least one transverse dimension exceeding the maximum transverse dimension of the balance of the ink tube: said magazine comprising, a hollow rectangular casing having a front wall, a rear wall, a top wall, a bottom wall and two end walls, the interior of said casing defining a high thin long hollow rectangular space in which said stack is located, the dimension of said space between the front and back walls slightly exceeding the maximum transverse dimensions of the pinches, the dimension of said space between the end walls slightly exceeding the lengths of the cartridges and the dimension of the space between the top and bottom walls substantially exceeding the combined maximum transverse dimensions, exclusive of the pinches, of all the ink tubes in the stack, at least the front or back wall of the casing being provided with a different rib near each end wall and extending in a direction having a sub-

stantial component parallel thereto, one rib being located nearer the rear ends than the front ends of the cartridges in the stack and the other rib being located nearer the front ends than the rear ends of said cartridges, the rib nearer the rear ends reducing the internal dimension of the space between the front and back walls to a dimension slightly in excess of the maximum transverse dimensions of the ink tubes exclusive of the pinches, the other rib reducing the internal dimension of the space between the front and back walls to a dimension slightly in excess of the maximum transverse dimension of the cartridges in the region of said other rib, one end wall of the casing being provided with a dispensing aperture adjacent the top wall and in axial alignment with the uppermost cartridge, said dispensing aperture having a size and shape to freely pass a cartridge therethrough, said casing further being provided with an ejecting notch in the top wall and in the other end wall which ejecting notch exposes the rear end and a portion of the side of the uppermost cartridge in the stack for access to a user's finger for the direct manual application of forward thrust on said cartridge, and means biasing the lowermost cartridge in the stack toward the top wall.

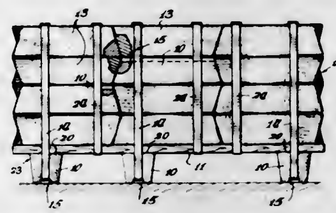
3,097,740
CONTAINER CARRIER PACK AND METHOD OF MAKING SAME
Ougljesa Jules Poupitch, Itasca, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,140
21 Claims. (Cl. 206—65)



18. A carrier pack of containers comprising, in combination, a cluster of containers arranged in two rows, anchoring means disposed within said cluster, a freely flexible tension element extending around containers in said cluster and including a plurality of inner loops extending inwardly between adjacent containers in said cluster, adjacent ones of said loops being connected together by intervening portions of said tension element integral with said loops and extending around the outer portions of the adjacent containers, and said inner loops each being looped around a portion of said anchoring means to anchor the individual loops to the anchoring means to effect by tension in the tension element holding of the tension element in close contact with outer portions of the containers with respect to said anchoring means to hold the containers together in the cluster.

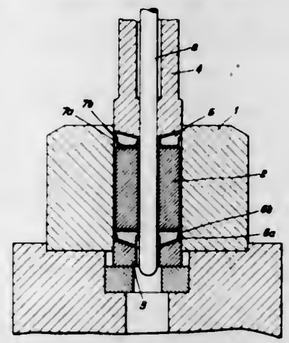
3,097,741
INGOT AND PACKAGE UTILIZING SAME
Earl S. Schwartz, Chicago, Ill., assignor to H. Kramer & Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 10, 1962, Ser. No. 186,529
8 Claims. (Cl. 206—65)

1. An ingot package comprising:
a plurality of laterally spaced rows of base ingots;
a planar member resting on said spaced rows;
a stack of ingots on said planar member;
each of said rows including a plurality of elongated base ingots extending lengthwise in end-abutting relation;
said stack including a layer having ingots extending lengthwise in a direction transverse to the lengthwise direction of said base ingots;
each of said base ingots having a slot extending along the length of said ingot from ingot end to ingot end at the bottom of the ingot;
said slot extending inwardly from the bottom surface of said ingot;
each slot being longitudinally aligned with a corresponding slot in an adjacent base ingot in the same row;
and a plurality of strapping means each extending longitudinally within the aligned slots in a respective row



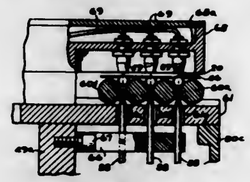
of base ingots, and each extending around said stack of ingots to bind the stack of ingots, the planar member and the base ingots into a unitary package;
each slot including an innermost surface having a configuration conforming to the configuration of said strapping means for receiving said strapping means;
each slot having a width, at said innermost surface, sufficient to accommodate said strapping means and narrow enough to prevent substantial lateral movement by the strapping means;
said received strapping means being located above the bottom surface of the base ingot.

3,097,742
LUBRICATION METHOD FOR HOT-EXTRUSION PRESS
Matthias Lamberty, Remscheid, Germany, assignor to Mannesmann Aktiengesellschaft, Dusseldorf, Germany, a German company
Filed Nov. 1, 1960, Ser. No. 66,518
Claims priority, application Germany Nov. 5, 1959
4 Claims. (Cl. 207—10)



1. In a method for hot extruding metals which are difficult to deform, in which a metal block is forced through a die by a plunger, and the block is lubricated during extrusion by a glass lubricant, the improvement which comprises inserting into a heat destructible container, a desired quantity of powdered glass, placing said container, containing the glass in powdered form, next to the block, and extruding said block by means of said plunger, thus destroying said container and enabling the powdered glass to lubricate the block during extrusion.

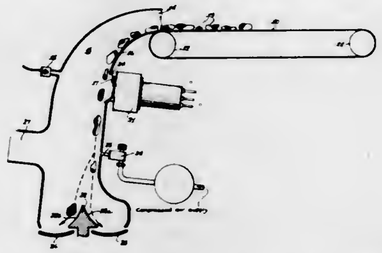
3,097,743
INSPECTION METHOD AND MACHINE
Lawrence M. Scholten, Ypsilanti, and Stewart H. McMillan, Ann Arbor, Mich., and Wilfred A. Sutton, Sunnyvale, Calif., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 19, 1961, Ser. No. 83,783
24 Claims. (Cl. 209—111.5)



1. A method for inspecting an object for defects which represent, with respect to one axis of the object, circumferential variations in the conductivity of the object for the type of radiant energy hereinafter defined including the steps of projecting a beam of radiant energy from a source thereof through the object in a direction transverse to said axis, said beam of radiant energy being of a type which is capable of being transmitted through the object with a reduction in beam intensity proportional to the radiant energy conductivity of the object, causing relative movement between the object and beam in the direction of said axis at a predetermined velocity to cause the leading and trailing edges and other circumferentially continuous axial variations in said conductivity of the object to modulate the intensity of said beam at a first frequency corresponding to the relative axial velocity between the beam and the object, simultaneously rotating the object about said axis with a predetermined angular velocity sufficient to produce a surface velocity of the object relative to the beam substantially greater than the axial velocity thereof to cause said circumferential conductivity variations in the object to modulate the intensity of said beam at a second frequency corresponding to the angular velocity of the object, translating said modulated beam into an electrical signal, the amplitude of which varies in proportion to variations in the intensity of said modulated beam and utilizing those variations in the second frequency signal which exceed a predetermined amplitude for indicating that the object contains a circumferentially non-continuous defect of the above type.

3,097,744
QUANTITATIVE PHOTOMETRIC MATERIALS SORTER
James F. Hutter and Leonard Kelly, Bancroft, Ontario, and George R. Mounce and Eric W. Leaver, Toronto, Ontario, Canada, assignors to K & H Equipment Limited, Toronto, Ontario, Canada
Filed Feb. 27, 1961, Ser. No. 91,801
36 Claims. (Cl. 209—111.5)

8. In a sorting system for sorting ore fragments the combination comprising, a vertically extending sorting zone, handling means for introducing said fragments in single row alignment into the upper part of said sorting zone for free fall therethrough, a first light source for directing into said zone a steady light polarized in a first direction, a first photometric detector means adapted to receive diffuse light reflected from each fragment as it passes through said zone, a polarized filter positioned in the path of light travelling towards said first photometric detector means, said polarized filter being polarized in a second direction substantially at right angles to said first direction to reduce the amount of specular reflected light reaching said first photometric detector means, a reference reflector of material which reflects a high proportion of diffuse light positioned to receive light from said first light source and reflect it towards said first photometric detector means, a rotatable scanning disc adjacent a slotted mask in the path of light reflected towards said first photometric detector means whereby said first photometric detector is exposed to light reflected from successive scanned portions of each said fragment interspersed with light reflected from said reference reflector, said first photometric detector means providing a first signal having portions indicative of the reflectance characteristics of the scanned surface of each fragment interspersed with portions indicative of the reflectance of said reference reflector, control means responsive to that portion of said first signal caused by the scanning of said reference reflector to control the output of said first photometric detector means so that the portion of the first signal caused by the scanning of said reference reflector remains at a substantially constant amplitude, a second light source positioned above the level of said first photometric detector and having a transverse slot projecting a thin beam of light across the path of said fragments through said sorting zone, a second photometric detector means positioned on the opposite side of said



sorting zone from said second light source and adapted to receive light emitted from said second source through said narrow slot, said second photometric detector means providing a second and a third signal, said second signal being proportional to the light occulted by each fragment as it passes between said narrow slot and said second photometric detector means and said third signal representing the time taken by each fragment to pass the thin beam of light between said narrow slot and said second photometric detector means, a fluid nozzle having a control for fluid flow therethrough, said nozzle being positioned a predetermined distance below said first photometric detector means whereby said fragments pass directly in front of it, circuit means for deriving from said third signal a fourth signal representing a period of time during which each said fragment is in front of said nozzle, said fourth signal acting on said control for fluid flow to place it in condition whereby a fluid stream is directed on each said fragment to alter its course, comparing means having said first and second signals applied thereto, and means responsive to a predetermined relationship between said first and second signals to inhibit said control for fluid flow and prevent flow through said nozzle.

3,097,745
GENERAL PURPOSE DOCUMENT SORTING SYSTEM
Robert E. Leo, Bozeman, Mont., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1961, Ser. No. 149,062
6 Claims. (Cl. 209—111.5)

1. In a system for sorting documents, each document having data comprising characters recorded thereon and separated into fields by arbitrarily selected ones of a plurality of distinct types of symbols, the combination comprising:
an apparatus having a plurality of pockets into which

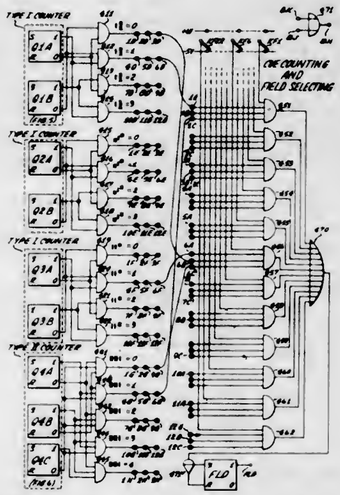
the documents are deposited as they are sorted in accord with a character read from a specified character position of a specified field of each document;

a mechanism for transporting the documents into proper pockets as they are read and sorted;

means for reading said characters and symbols in sequence to produce thereby electrical signals characteristic of said characters and symbols;

separate means for counting signals characteristic of each type of different ones of said symbols;

field identifying means selectively coupled to different one of said separate counting means for recognizing



a predetermined combination of count configurations of said separate counting means, said predetermined count configuration uniquely defining said specified field;

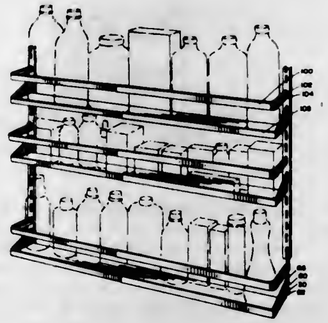
means responsive to said electrical signals characteristic of said characters for locating said specified character position;

means responsive to said identifying field means and to said character position locating means for producing a sorting control signal;

and sorting means responsive to said sorting control signal for causing said transport mechanism to transport said given document into a proper pocket.

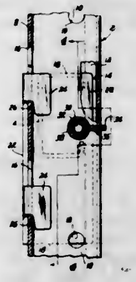
3,097,746
TRAY SHELVING
Milton E. Handler, Evanston, and Ralph J. Bellon, Glenview, Ill., assignors to S. A. Hirsh Manufacturing Company, Skokie, Ill., a corporation of Illinois
Original application June 20, 1957, Ser. No. 666,962, now Patent No. 2,982,423, dated May 2, 1961. Divided and this application Aug. 25, 1960, Ser. No. 56,330
1 Claim. (Cl. 211—126)

A tray shelving structure comprising a plurality of upright suports having a substantially U-shaped cross sectional configuration with the central portion thereof mounted outwardly and defining a plurality of longitudinally aligned, evenly spaced slots of uniform dimensions, a tray having horizontally spaced end wall member each defining an outwardly and downwardly inclined upper edge and an upper ear and a lower ear in coplanar relationship therewith for each support and spaced apart a vertical distance substantially corresponding to the distance between said slots, each of said ears having a depending extension and each of said upper ears being above the level of the front end of its end wall member and having an upwardly disposed extension, and a rail for said tray disposed above the level of said front end and having a pair of end piece members parallel to the end wall members on said tray, each of said end piece members having an ear constructed like the said upper ears, said members being paired in side by side contacting relationship for



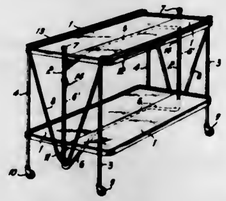
relative movement in parallel planes with their respective adjacent ears adapted to be received in side by side relationship for their relative movement in one of said slots selectively for individual and concurrent insertion and removal, said slots being wide enough to receive and support thereby the adjacent ears and paired members in face to face contact with each other respectively.

3,097,747
PALLET RACK
Edward M. Selkregg, Jr., and Rodney C. Colligan, North East, Pa., assignors to Bernard Gloekler North East Co., North East, Pa., a corporation of Pennsylvania
Filed May 19, 1959, Ser. No. 814,226
3 Claims. (Cl. 211—182)



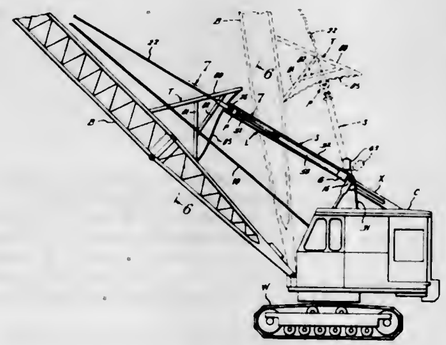
1. In a pallet rack, a column member having a front face and a side flange, forwardly facing openings in said front face, means at the rear edge of said side flange defining a forwardly facing groove, a stringer having a plate at one end thereof abutting said side flange of said column member, means at said one end defining hooks engaging in said forwardly facing openings in said front face, said stringer having a holding element engaging in said forwardly facing groove at the rear edge of said side flange, a locking opening through said side flange and a locking opening in said end plate, said openings being in alignment when said hooks and holding element are in their corresponding forwardly facing openings and grooves and being adjacent said grooves, and a locking and supporting element in said aligned openings to prevent separation of said column member and said support bar and to distribute vertical loads transmitted from said support bar to said column member.

3,097,748
FOLDABLE TABLES
Fritz Edmund Drabert and Klaus Eduard Geffers, Minden, Westphalia, Germany, assignors to Fr. Drabert Sohne, Minden, Westphalia, Germany, a partnership
Filed June 27, 1960, Ser. No. 38,949
Claims priority, application Germany Feb. 18, 1960
11 Claims. (Cl. 211—149)



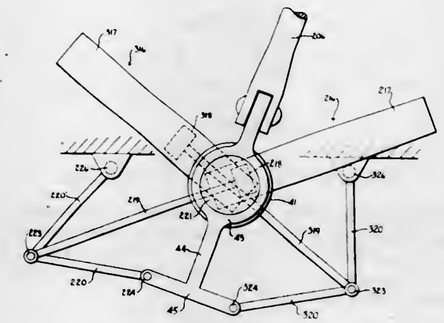
1. A foldable table comprising in combination: four leg columns, two tubular middle columns, an upper yoke fixedly connecting the said middle columns to one another, a lower yoke having the ends bent upwardly and each including an extension slidably connected to one of the said tubular middle columns, a pair of table top halves pivotally connected to said leg columns and articulated at their inner ends about horizontal axes to the said middle columns, and links articulating the said lower yoke to the said table top halves at the outer ends thereof, the said table top halves being folded down so as to face outwardly by raising the said middle columns while the said leg columns keep standing on the floor.

3,097,749
BOOM STABILIZING AND SAFETY CONTROL APPARATUS
Oscar W. Hahn, 4606 Waynesboro St., Houston, Tex.
Filed Jan. 25, 1962, Ser. No. 169,709
18 Claims. (Cl. 212—59)



1. In a hoisting apparatus having a pivotally mounted boom and a working line connected to a working drum for normally raising and lowering the boom about its pivot, the improvement residing in, a safety apparatus having means therewith for controlling the rate of lowering of the boom in the event the working line breaks or other hoist failure occurs.

3,097,750
DEVICE FOR TRANSLATING AXIAL MOTION INTO SWINGING MOTION
Wilfried Stummer, Stubbenhuk 10, Hamburg, Germany
Filed July 8, 1960, Ser. No. 41,689
3 Claims. (Cl. 212—66)

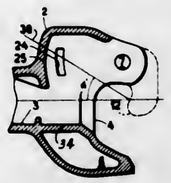


1. In combination with a mast, a jib, and a knuckle member by which one end of the jib is journalled on the mast for lateral swinging motion in opposite directions about the mast axis, hydraulically actuated means for imparting swinging movement to the jib, comprising: a pair of hydraulic operators each having relatively axially extensible and retractable elements; means mounting said operators on the mast with their axes transverse to that of the mast, and with one element of each operator constrained to rotary movement about the mast axis so that the outer end portion of the other element of each operator is movable toward and from the mast axis in consequence of its retraction and extension; and a pair of links for each operator, each of the links of each pair having one end pivotally connected to the outer end portion of the extensible and retractable element of the operator, the opposite end of one link of each pair being pivotally connected to the knuckle member at a fixed distance from the mast axis, and the opposite end of the other link of each pair being pivotally connected to a part which is fixed with respect to the mast and spaced from its axis, and all of said pivotal connections having their axes parallel to that of the mast; the links of each pair thereof normally extending to opposite sides of the axis of their operator in divergent relationship to one another, and the angle of divergence of one pair of said links being increased, and the angle of divergence of the other pair of links being simultaneously decreased in consequence of extension of one of the extensible and retractable elements concurrently with retraction of the other, to thus smoothly translate such concurrent actuation of the operators into swinging movement of the jib.

3,097,751
AUTOMATIC RAILWAY COUPLERS
Paul Emile Ernest Alfred André Henricot, Court-St.-Etienne, Belgium
Filed July 24, 1959, Ser. No. 829,266
9 Claims. (Cl. 213—152)

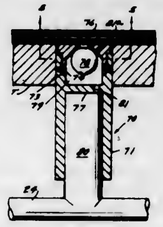
9. An automatic coupling mechanism comprising a coupler casting for connection with a car structure through a compressible draft gear or the like, said coupler casting having knuckle-carrying wing means at one of its sides and a guard arm at its other side, a pivot pin carried by said wing means for positioning the same within said coupler casting, a knuckle rotatable around said pivot pin, said knuckle having a vertical locking face at one side of its tail end, a lock adapted to be disposed between said vertical locking face and an inside vertical surface of an adjacent side of said coupler casting for locking said

knuckle against rotation, said lock having an upwardly protruding ledge at its rear top edge, said coupler casting having a backwall provided with a first depending ridge, means for mounting said lock to dispose said ledge under said first ridge to prevent accidental unlocking thereof, a



second depending ridge on said backwall of said coupler casting, and lock lifting means operatively associated with said lock and disposed under said second ridge when in its lowered position so as to further provide against accidental unlocking of said lock.

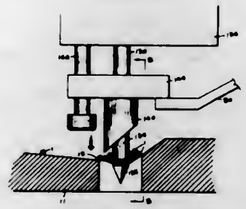
3,097,752
CUTTING KNIFE-STACK SUPPORT
Carl Thumim, Westbury, N.Y., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Oct. 12, 1960, Ser. No. 62,178
9 Claims. (Cl. 214—1)



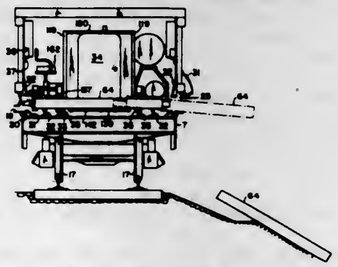
1. In a paper cutting machine, a horizontal table for supporting a paper stack; a plurality of openings in said table; a valve structure for each opening; each valve structure comprising a chamber having a valve seat at its upper end, a passage between the valve seat and the opening and a valve in said chamber; a compressed air entry port into said chamber; a by-pass passage connecting the portion of said chamber below the valve seat with the first mentioned passage between said valve seat and said opening, wherein said stack normally covers said openings and compressed air maintains said valves against said seats until pressure is equalized on said valves due to air by-passing into said first-mentioned passages, effective to permit opening of said valves to render air support for said stack, and wherein said valves close due to air pressure thereon when said stack is removed.

3,097,753
ARTICLE PICKUP AND TRANSFER METHOD AND APPARATUS
John W. Wallace, Salem, and Roland L. Bienvenue, Lawrence, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 27, 1961, Ser. No. 98,466
5 Claims. (Cl. 214—1)

1. In apparatus for selecting a wire from a supply thereof, the combination of: a reservoir within which a plurality of wires are disposed; a pickup needle having a groove at the lower end thereof; means for reciprocating said needle into and out of the body of wires in said reservoir; and means comprising a sleeve shiftable along the needle and biased to move downwardly of the needle so that at least a portion thereof is opposite said groove for trapping one of said wires in said needle by the withdrawal stroke of said needle said wire having been initially engaged in said groove when the needle had been inserted into the reservoir and withdrawn.



3,097,754
APPARATUS FOR HANDLING TIES AND THE LIKE
Richard E. Franklin, Chevy Chase, Md., and Herbert C. Fox, Atlanta, Ga., assignors to Railway Maintenance Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Original application Apr. 17, 1957, Ser. No. 653,315, now Patent No. 3,048,289, dated Aug. 7, 1962. Divided and this application July 26, 1961, Ser. No. 132,518
6 Claims. (Cl. 214—82)



1. A tie unloader for unloading ties from a car in which they are positioned in a plurality of stacks one above the other, the ties extending transversely of the car and the stacks being adjacent each other along the length of the car, said unloader comprising,

(A) a frame having a side extending generally parallel to the stacked ties,

(B) a chain on said side having

(1) a path of travel parallel to the ties and

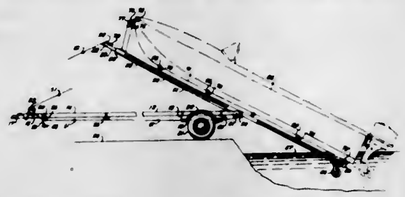
(2) a finger extending out from the chain to engage a tie,

(3) said chain being at a level with the lowermost tie of a stack adjacent the frame whereby on movement of the chain the finger will engage the end of the lowermost tie and move it transversely of the car increasing its speed of movement as it leaves the car so that it is thrown from the car in a substantially horizontal plane, and

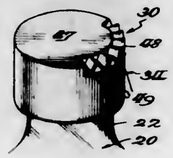
(C) means for moving the frame towards and against the stacks of ties.

3,097,755
BOAT TRAILER
Garland J. Fulcher, 907 Main St., Gatesville, Tex.
Filed Jan. 17, 1961, Ser. No. 83,235
4 Claims. (Cl. 214—505)

1. In a boat trailer having a wheeled main frame, and a launching and loading frame, having spaced parallel channelled side members, slidably arranged within said main frame, a carriage for said launching and loading frame comprising, a bar on each side of said launching and loading frame pivoted intermediate its ends to each side of said main frame at the rearmost end thereof, a roller on each end of each of said bars engaging the channelled side members of said launching and loading frame and adapted to slidably and pivotally support the same longitudinally of said main frame, means on said launching and loading frame for supporting a boat, and cable means for operating said launching and loading frame whereby to launch or load said boat.

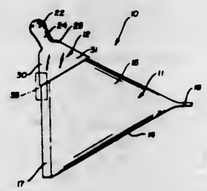


3,097,756
SAFETY CLOSURE
Dennis B. Dorsey, 15 Westwood Place, Danville, Ill.
Filed Jan. 18, 1960, Ser. No. 3,050
34 Claims. (Cl. 215—9)



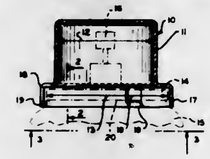
1. A safety closure for a container having a threaded neck, said closure adapted to be screwed onto said neck for sealing the container and unscrewed therefrom to provide access to the contents of the container, said closure comprising, an inner cap having screw means for matingly engaging with the threaded neck and an outer shell having said cap telescopically assembled therein, said outer shell and inner cap having a selectively severable connection therebetween for rendering the shell independently rotatable relative to the cap, and said shell and cap having cooperable coupling means enabling insertion of a tool into the closure to couple the cap and shell together for simultaneous rotary movement in the event said connection is severed.

3,097,757
CONTAINER-DISPENSER FOR INFANT FEEDING
Harold J. Searer, 712 Palisades Drive, Akron, Ohio
Filed July 25, 1961, Ser. No. 126,609
3 Claims. (Cl. 215—11)



1. A container-dispenser for use in the feeding of edible fluids to infants, comprising, a polyhedral container with a fluid dispensing nipple removably attached thereto, said container having a bottom portion and side portions, there being an opening at the apex of said side portions communicating with the interior of said container, said nipple having a mouthpiece, an axial stem inserted and closely fitted through said container opening to provide a conduit for flow of fluid from within said container to said mouthpiece, and a resilient polyehdral skirt portion located radially outwardly of said stem portion and being elastically biased to adhere in close fit to said container side portions adjacent to and below said container opening.

3,097,758
PILFER PROOF CAP FOR AEROSOL CONTAINERS
Irvin J. Gershen, Springfield, N.J. (% Gershen Industrial Design, 1877 Springfield Ave., Maplewood, N.J.), and Arthur L. Krebs, % Gershen Industrial Design, 33 Brown Terrace, Cranford, N.J.
Filed July 21, 1961, Ser. No. 126,813
2 Claims. (Cl. 220—27)



1. A pilfer proof cap for engagement with a marginal bead defining the discharge end of an aerosol container, for sealing said container end, said cap comprising a hollow, cup-shaped body portion of small diameter than said bead, an L-shaped throat portion extending from the end of the cup-shaped portion and of greater diameter than and telescoping over said bead portion, said throat portion being provided with a plurality of apertures extending marginally inwardly of the throat portion, and a plurality of protuberances on the throat portion in line with said apertures and located immediately therebelow proportioned to engage the underside of said marginal bead of the aerosol container while the L-shaped throat portion of the cap engages the top of said bead, said apertures thus weakening the point of connection between the protuberances and the throat portion of the cap, said protuberances having a tapered inner surface extending downwardly and outwardly to facilitate engagement with said marginal bead so that, on assembly of the cap onto the aerosol container, said protuberances will snap over and engage the marginal underside of the aerosol container bead and on first removal of the cap therefrom, the protuberances will break off, said apertures providing immediate inspection for the presence of said protuberances to indicate lack of previous use.

3,097,759
SEED DISPENSING DEVICE
Ernest W. Jett, Santa Rosa, Calif.
Filed June 15, 1961, Ser. No. 117,311
3 Claims. (Cl. 221—190)

1. A seed dispensing device including a receptacle having a lower end, and having an upper end having a wall having a dispensing passage formed therethrough, a plunger operable through the lower end with the receptacle manually depressable thereon, and including spring means for returning the plunger to its normal position, and a plurality of angularly spaced dispensing cavities formed in the upper end of the plunger and being selectively registrable with the dispensing passage,

indexing means comprising a bushing having its upper

end fixed in the said lower end of the receptacle and extending therebelow, and with the said plunger slidable therein,

angularly spaced slots formed upwardly from the lower end of said bushing,

a pin radially projecting from said plunger and selectively slidable in said slots,

the upper end walls of the slots forming stops for cooperation with the pin for limiting depression of the receptacle oh the plunger,

a washer normally seated against the lower end of said bushing and normally cooperative with said pin,

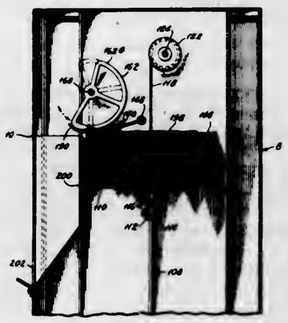


a bracket depending from said lower end of said receptacle and spaced therebelow and having a plunger receiving passage and

resilient means cooperative between said washer and said bracket for normally retaining the pin within the selected slots,

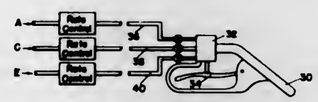
manual retraction of the plunger against the urgence of said resilient means retracting the pin with the cooperative washer to a position clearing the lower end of the bushing to provide for rotative adjustment of the plunger for selective registry of another cavity with the dispensing passage.

3,097,760
APPARATUS FOR DISPENSING TOWELS AND THE LIKE
Joe T. Short, West Point, Ga., assignor to Callaway Mills Company, La Grange, Ga., a corporation of Georgia
Original application June 6, 1960, Ser. No. 34,339. Divided and this application July 28, 1961, Ser. No. 127,721
7 Claims. (Cl. 221—216)



7. In apparatus for dispensing towels one at a time from the top of a stack of towels: means for supporting the stack of towels; a shaft extending horizontally above the stack of towels; a towel discharge chute spaced below and laterally in front of said shaft; an arcuate member fixed to said shaft, said arcuate member having a front portion thereof spaced a greater distance from said shaft than a rear portion thereof with said portions merging along a smooth surface; at least one pointed pin projecting from said front portion of said arcuate member at an inclination such that when said front portion of said arcuate member is directly below said shaft said pin extends downwardly from said front portion of said arcuate member and forwardly toward said discharge chute; means for controlling the relative heights of said stack supporting means and said shaft to cause said front portion of said arcuate member to contact the top towel of the stack when said front portion of said arcuate member is directly below said shaft; drive means for oscillating said shaft back and forth about its axis through an angle less than 360 degrees; and control means for causing said drive means to oscillate said shaft over a complete cycle beginning and ending at an angular position where said pin is disposed forwardly of the lowermost point in its path of travel, said pin swinging forwardly and upwardly about the axis of said shaft during a first part of the cycle and then swinging downwardly and rearwardly past the lowermost point in its path of travel during the second part of the cycle and then swinging forwardly again during a terminal part of the cycle.

3,097,761
METHOD AND APPARATUS FOR DISPENSING MOTOR FUEL
James F. Dempsey, Claymont, Del., and Frank R. Shuman, Jr., Media, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Dec. 19, 1957, Ser. No. 703,808
7 Claims. (Cl. 222—1)

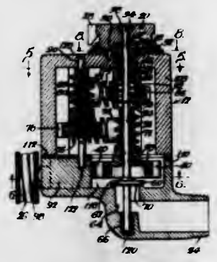


1. Process for dispensing motor fuel which comprises: supplying motor fuel to a dispensing zone in two separate streams having different octane numbers; blending said streams in continuous flow to obtain a blend; directly dispensing the blend in continuous flow from the dispensing zone; subsequently supplying motor fuel to the dispensing zone in a third stream having octane number outside the range between the octane numbers of the first two streams; dispensing a fuel containing the third stream from the dispensing zone; the three streams constituting the sole supply of motor fuel to the dispensing zone; maintaining the dispensing zone closed to the stream having the highest octane number of the three streams whenever the stream having the lowest octane number of the three streams is supplied to the dispensing zone; and maintaining the dispensing zone closed to the stream having the lowest octane number of the three streams whenever the stream having the highest octane number of the three streams is supplied to the dispensing zone.

3,097,762
LIQUID METERING VALVE UNIT
Steven Charnota, 4945 Normandy Ave., Chicago, Ill., and Arnold F. Wolf, 5511 Warren Ave., Morton Grove, Ill.
Filed June 15, 1960, Ser. No. 36,242
6 Claims. (Cl. 222—20)

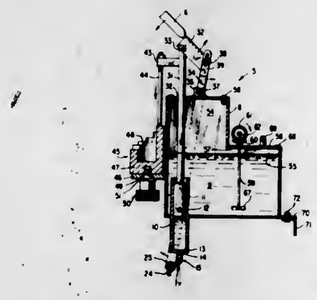
1. A liquid metering valve unit comprising in combination, a casing having formed therein an inlet, an outlet, and an impeller chamber interposed between said inlet and said outlet and in communication therewith, a valve

seat formed on the interior portion of said outlet, a valve member coacting with said valve seat to control fluid flow through said outlet, means mounting said valve member for movement between open and closed positions, means acting on said mounting means biasing said valve member toward closed position, a quick snap locking mechanism having a pair of coaxial, relatively rotatable elements operable to control the movement of said valve member to closed position, the first of said elements being connected to said valve member mounting means and being movable



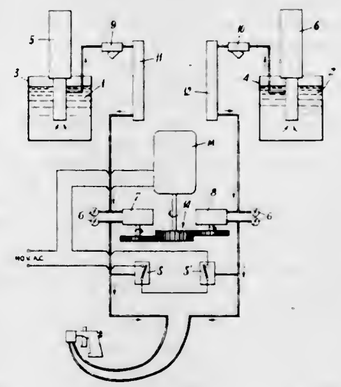
axially and rotatably to move said valve member to open position, the second of said elements being movable only rotatably, means releasably interconnecting said elements, an impeller wheel rotatably mounted in said impeller chamber and driven by the flow of liquid through said inlet and said impeller chamber, and speed reducing gearing interposed between and connected to said impeller wheel and said second locking mechanism element to rotate the latter and said first element into a locking position at a rate of speed greatly reduced from that of said impeller wheel.

3,097,763
LIQUID DISPENSING APPARATUS
Dominick M. Aluotto, 684 Maple St., Brooklyn, N.Y.
Filed Nov. 30, 1960, Ser. No. 72,685
6 Claims. (Cl. 222—43)



1. A liquid dispensing apparatus comprising a receptacle for holding a liquid, a dispensing cylinder passing through the bottom of the receptacle, the cylinder extending partly within and partly without the receptacle, the end of the cylinder outside the receptacle being closed, a port in a portion of the dispensing cylinder within the receptacle through which liquid may flow from the receptacle into the dispensing cylinder, a discharge orifice in said closed end of the cylinder, means including a pressure-openable valve for closing said discharge orifice, a dispensing piston within the dispensing cylinder, means for reciprocating the dispensing piston in the dispensing cylinder past the port to trap and pressurize liquid between the piston and said closed end, said means for reciprocating said piston including a piston rod and means for actuating said piston rod, a contact rod attached to and movable with the piston rod, a cylindrical stop member disposed in the path of movement of the contact rod on a dispensing stroke of the piston, said stop member being adjustable to different positions beneath said contact rod and having a plurality of ledges formed on one end thereof each adapted to lie a different distance from the contact rod on adjustment of the stop member, the other end of the stop member being closed, a shelf attached to and protruding from the receptacle and having an opening therethrough, said stop member being supported on said shelf, a knob having one end passing through and being rotatable in the opening in the shelf and being secured to the closed end of the stop member, whereby the stop member selectively may be rotated to position a selected ledge thereof in the path of movement of the contact rod to selectively limit movement of the contact rod on a dispensing stroke of the piston.

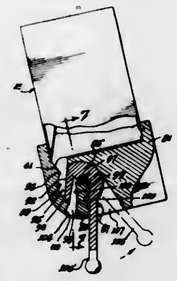
3,097,764
PROPORTIONING SYSTEM
Theodore S. Loeser, New Brunswick, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Feb. 9, 1960, Ser. No. 7,621
4 Claims. (Cl. 222—55)



1. A proportioning system particularly adaptable for feeding an epoxy resin and hardener therefor in accurately metered, volumetric proportions to a mixing and spraying head in which the epoxy resin and hardener are admixed and from which the admixed materials are discharged comprising separate containers for said epoxy resin and for said hardener, a positive displacement, volumetric metering pump connected to each container through a conduit, means for feeding each material from its container to the metering pump connected thereto, means for operating each of said metering pumps, said metering pumps operating at a discharge pressure substantially equal to their intake pressure whereby each of said materials is fed through its metering pump under substantially zero pressure differential and to a mixing and spraying head in accurately metered, volumetric quantities, and sensing means, mounted at each metering pump and connected in series to each other and to the means which operates each of said metering pumps, for sensing the discharge pressure of said metering pumps and in response thereto, starting the operation of said metering pumps when the discharge pressure thereof is less than

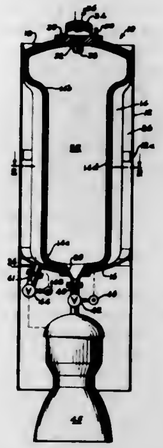
the predetermined discharge pressure and stopping the operation of said metering pumps when the discharge pressure thereof is greater than the predetermined discharge pressure.

3,097,765
APPARATUS FOR PUNCTURING AND DISPENSING A MEASURED QUANTITY OF MATERIAL
Richard Corlett Newton, 13869 Mercer St., Pacoima, Calif.
Filed Aug. 26, 1959, Ser. No. 836,268
3 Claims. (Cl. 222—82)



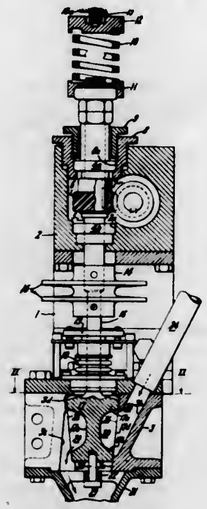
1. A dispensing apparatus for supplying a measured quantity of particulate material from a package of such material comprising: a five sided open housing having the open side generally upwardly oriented, said housing defining a receptacle section adapted to receive said package and a dispensing section beneath said receptacle section; a cutter member mounted to the inner surface of a side wall of said receptacle section near the bottom thereof and extending upwardly and inwardly into said receptacle section, said cutter being positioned to engage said package at a lowermost portion thereof; guide means resiliently mounted in said receptacle section above said cutter member to guide said package into contact with the said cutter member; an opening in said receptacle defined beneath said cutter member, said dispensing section having a discharge port through the lower side thereof; said dispensing section housing a transverse cylindrical volume; a dispensing member pivotally mounted in said volume; said dispensing volume communicating with said opening and said port, said dispensing member including a transversely oriented pivotal cylindrical body mateable with and pivotally mounted within said cylindrical volume, said cylindrical body having a radial section removed therefrom, the innermost portion of said radial section defining a linear pivotal mounting surface extending along the longitudinal axis of said cylindrical body, said cylindrical body being pivotally mounted at said pivotal surface to a pivot bar secured to said dispensing section and extending into said radial section, the rotational movement of said cylindrical body being limited by the extent of said radial section between first and second pivotal positions, said cylindrical body having a flat surface formed thereon to define a chord section, said chord section and a cylindrical wall of said cylindrical volume thereby defining a receiving volume, said receiving volume being in communication with said opening at said first pivotal position of said cylindrical body and in communication with said discharge port from said cylindrical volume at said second pivotal position of said cylindrical body; a pendulum bar affixed to said cylindrical body extending radially therefrom through an opening in the said dispensing section, said pendulum bar being affixed to said cylindrical body at a predetermined position such that by force of gravity said pendulum bar urges said cylindrical body to said first pivotal position, said pendulum bar being selectively movable to said second pivotal position.

3,097,766
PRE-FILLED PROPELLANT TANK FOR ROCKETS
Richard E. Biehl, Pearl River, N.Y., Harry N. Price, East Paterson, N.J., and Marvin Sternberg, San Fernando, Calif., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 840,663
2 Claims. (Cl. 222—135)



1. Apparatus for storing two liquids out of contact with each other and for supplying said liquids through individual ports, said apparatus comprising a container having an outer wall with opposed end wall portions interconnected by a generally cylindrical side wall portion; an inner tubular flexible wall dividing the interior of said container into an outer chamber and an inner chamber for separate storage of liquids therein, said tubular flexible wall being secured at its ends with said outer wall end portions and said tubular flexible wall having a plurality of circumferentially-spaced longitudinally-extending folds for unfolding outwardly toward the outer wall cylindrical portions to decrease the volume of said outer chamber; said container also having a pair of outlet passages, one for each of said chambers; liquid stored in each of said chambers; and means for supplying a gas under pressure against the liquid within said inner chamber for forcing liquid therein out of said inner chamber through its outlet passage and for unfolding said tubular flexible wall outwardly toward the outer wall cylindrical portion to decrease the volume of said outer chamber for forcing liquid therein out of said outer chamber through its outlet passage, said gas supplying means being disposed adjacent to one of the end wall portions of the container outer wall and said outlet passages being disposed adjacent to the other end wall portion of the container outer wall, said folds in the flexible tubular wall extending from the end wall portion of the container adjacent to the outlet passages to a point short of the other end wall portion of the container with the remaining portion of the flexible tubular wall adjacent to said other end wall being substantially cylindrical and having a diameter substantially equal to the diameter of the adjacent side wall of the container and with the longitudinal length and circumferential perimeter of the flexible tubular wall being substantially the same as the corresponding dimensions of the container cylindrical wall toward which the flexible wall expands under the gas pressure.

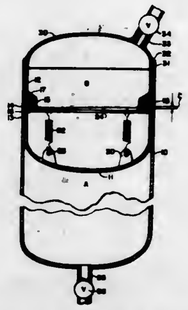
3,097,767
DEVICE FOR FEEDING PULVERIZED MATERIAL
Harrison L. Wirt, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 1, 1961, Ser. No. 106,940
5 Claims. (Cl. 222—368)



1. A device for feeding pulverized material, comprising a casing, a vertical rotor having a tapered starwheel disposed in said casing and mounted for rotation therein, said starwheel defining circumferentially-spaced feed pockets, some of which are closed off by portions of said casing, inlet conduit means carrying pulverized material and discharging into said pockets at at least two circumferentially-spaced symmetrically disposed locations on the starwheel, outlet conduit means receiving pulverized material from said pockets at at least two circumferentially-spaced symmetrically disposed locations, means drivingly connected to rotate said starwheel in said casing, means for automatically lifting said starwheel in the casing as the torque resisting rotation of the starwheel increases, and adjustable biasing means resisting lifting of the starwheel, whereby when a preselected reactive torque occurs, the starwheel will be lifted in the casing enough to clear the obstruction.

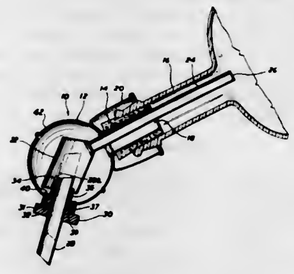
3,097,768
FLUID STORAGE VESSEL
Angelo G. Tasca, Woodland Hills, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Jan. 11, 1960, Ser. No. 1,579
2 Claims. (Cl. 222—389)

1. In a liquid storing and dispensing device the combination of a tank and a piston assembly, said piston assembly including an upper portion and a lower portion, a seal interposed between said piston upper portion and said piston lower portion, said piston lower portion having a closed end capable of retaining fluid pressure, a first pressure area isolated below said piston assembly, a second pressure area isolated above said piston assembly, a resilient element tending to place said piston lower portion and said piston upper portion in a collapsed position and tending to put said seal in compression, and in sealing relation with said tank, whereby if the pressure in said first pressure area is reduced in pressure below the pressure of said second pressure area, the pressure in said second pressure area will tend to force said piston lower portion and said piston upper portion into an uncollapsed position and said seal withdrawn from sealing relation



from said tank, whereby said piston assembly is slidable within said tank.

3,097,769
SIPHONING LIQUID DISPENSER
Harold Payne, Toronto, Ontario, Canada
Filed Mar. 13, 1961, Ser. No. 95,222
4 Claims. (Cl. 222—416)



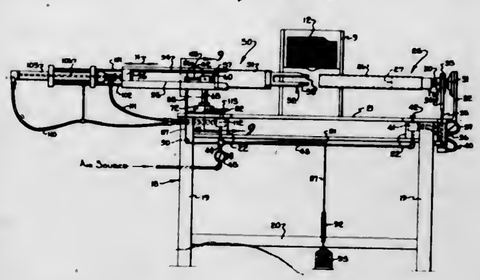
1. A device for dispensing liquid in predetermined amounts from a bottle, said device comprising a bulb, neck means extending from said bulb for entry into the neck of said bottle, a passage for liquid through said neck means through which liquid can enter from said bottle to said bulb, a measuring cup mounted within said bulb and having its open end facing the top portion of said bulb, a vent tube connecting with the bottom of said measuring cup and extending through said neck whereby air can pass from the bottom of said cup to the inside of said bottle in use, a pouring spout carried by said bulb the input end of which projects into said measuring cup and the output end of which is exterior to said bulb, an opening in the back of said bulb to achieve atmospheric pressure in said bulb during pouring, means carried by said bulb for varying the projection of said pouring spout into said measuring cup whereby a predetermined amount of liquid dispensed by said device can be varied.

3,097,770
APPARATUS AND METHOD FOR PACKAGING HOSIERY
James E. Garrou, Valdese, N.C., assignor to Alba-Waldensian, Inc., a corporation of North Carolina
Filed Oct. 20, 1959, Ser. No. 847,592
15 Claims. (Cl. 223—1)

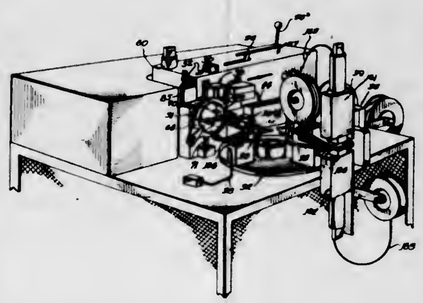
1. A method of packaging hose of the type having a foot portion and a leg portion comprising the steps of first arranging the hose inside-out, then positioning an insert in overlying relationship with the foot portion of the

hose, and then turning the leg portion of the hose right-side-out while positioning the leg portion to surround the insert and the foot portion of the hose.

7. In an apparatus for packaging of a hose of the type having a foot portion and a leg portion comprising an elongate means for receiving the hose in an extended inside-out condition, said elongate means comprising a foot portion receiving member and a leg portion receiving member with the proximal end of the foot portion receiving member being positioned inside said leg portion receiving member, the overlapping portions of said foot and leg portion receiving members defining an opening therebetween for receiving the end portion of an insert therein, and means within the overlapping portion of said foot portion receiving member for engaging the foot portion of a hose positioned thereon and to hold the foot portion against an insert for preventing relative movement of the foot portion of the hose.

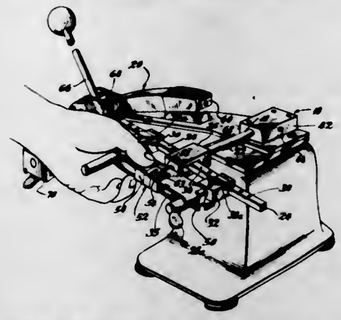


3,097,771
HANK FORMING MACHINE AND METHOD
James E. Kerrigan, Arlington Heights, and Raimonds Grikis, Chicago, Ill., assignors to Chicago Printed String Co., Chicago, Ill., a corporation of Delaware
Filed Oct. 2, 1961, Ser. No. 142,422
20 Claims. (Cl. 223—46)



2. In a machine adapted for forming a hank designed to form a decorative bow, anvil means, support means for holding a multilayer coil of ribbon with opposite side portions of the coil on opposite sides of said anvil means, means for placing a mounting strip with a portion adjacent each of such opposite side portions of said coil, and securing means for applying a separate securing device to the portion of the mounting strip and side portion of the coil on each such opposite side of said anvil for independently securing said mounting strip to each such opposite side portion of such coil.

3,097,772
BOW FORMING MACHINE
James E. Kerrigan, Arlington Heights, and Raimonds Grikis, Chicago, Ill., assignors to Chicago Printed String Co., Chicago, Ill., a corporation of Delaware
Filed Dec. 30, 1960, Ser. No. 79,909
13 Claims. (Cl. 223—46)



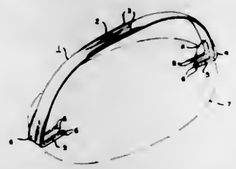
1. A device adapted for use in forming a decorative bow having a mounting strip for attaching said bow to a package or the like, said device comprising means for winding a length of ribbon into a composite loop of several coextensive contiguous layers and having opposite ends and opposite sides, means for fastening the mounting strip to said ribbon and for fastening said contiguous layers together at each of said opposite sides, independently of such fastening of the layers at the other of said opposite sides, while said composite ribbon loop is on said winding means, whereby when said composite ribbon loop is removed from said winding means, the intermediate unfastened portions of each layer of ribbon may be removed from the corresponding unfastened portions of the adjacent overlying layer to form a decorative bow.

3,097,773
CHILD CARRIER
Gerald Arthur Cunningham, Box 128, Ward, Colo.
Filed Mar. 14, 1960, Ser. No. 14,780
1 Claim. (Cl. 224—6)



A child carrier assembly adapted to be detachably mounted to the back of a person comprising, in combination, a substantially rigid frame member having an upper cross member adapted to engage the shoulders of the carrier person, two top leg portions each of which is connected at one end to one end of said cross member and extending rearwardly and outwardly therefrom in substantially the same plane as said cross member, two inclined leg portions each of which is integrally sceured at one end to the outer end of each top leg portion and extending inwardly and downwardly therefrom in angular relationship therewith in the direction of the waist portion of the carrier person which is to receive the carrier assembly, each of said inclined leg portions terminating at a point substantially in the vertical plane of said upper cross member, a pair of short bottom leg portions each of which is integrally connected at one end to the lower end of said vertical leg portions and extending downwardly and outwardly therefrom and adapted to engage the rear hip and pelvic region of the carrier person, connecting means secured adjacent the lower end of each of said short bottom leg portions connecting them to one another, and flexible strap means connected directly to and spanning the distance between said bottom leg portions and adapted to be engageable with the rear hip and pelvic region below the waist, and a flexible pouch for receiving a child, said pouch having a top portion secured only to said upper cross member and said top leg portions, said flexible pouch having leg holes therein in the forward facing portion thereof and adapted to surround and support a child from the crotch and buttocks to the upper portion of the torso in a natural forward facing piggy-back position and in body to body contact with the back of the carrier person, and a pair of shoulder straps each secured at one end to the upper cross member and adapted to be placed over the carrier person's shoulders, with the other end of each secured to the frame member adjacent the lower end of each of said short bottom leg portions.

3,097,774
MELON CARRIER
William R. Houston, Jr., 107 Rodgers St., Monongahela, Pa.
Filed Mar. 19, 1962, Ser. No. 180,467
1 Claim. (Cl. 224—45)



A melon carrier comprising an arched strap member of flexible springy material, said arched strap member being a continuous unitary strip of uniform width and having its end portions corrugated lengthwise whereby said end portions are substantially stiff and inflexible, the ends of said end portions each being turned inwardly directly toward the other and partly backwardly on the balance of its respective end portion to form an acute angle therewith, the leading edges of said ends being serrated to form teeth therealong, said arched strap member being corrugated lengthwise in the central portion thereof to form a substantially stiff and inflexible handle portion therein.

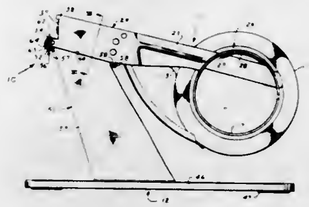
3,097,775
TAPE DISPENSER WITH MOUNTING BASE
Edward Waltz, Grand Rapids, Mich., assignor to E. O. Bulman Manufacturing Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Aug. 15, 1960, Ser. No. 49,479
3 Claims. (Cl. 225—66)

1. An apparatus for supporting and dispensing adhesive tape from a roll thereof, comprising:

a pedestal including a substantially flat base member and a standard of substantially inverted U-shape having a pair of upwardly extending flanges secured at their lower ends upon said base member, said standard having a platform at its upper end, said platform being sloped toward the rearward end of said base member;

a pair of spaced hook members secured to and extending upwardly from said platform near the front and rear ends of said platform, said hook members defining a pair of recesses opening toward each other;

a body member having means defining a frontwardly facing edge portion and a rearwardly facing edge

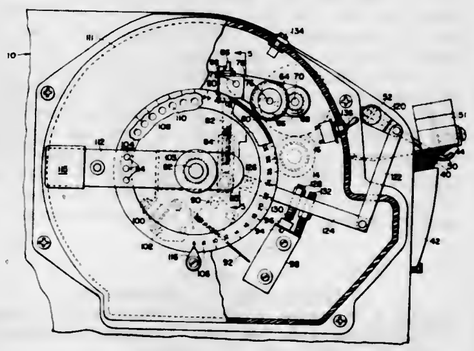


portion spaced from each other and located near the lower side of said body member, said edge portions being snugly and respectively received into said recesses so that said body member is gripped between said hook members and is releasably held thereby adjacent said platform;

roll supporting means secured to said body member near the rearward end thereof for holding a roll of said tape above the rearward end of said base member; and

cutting means on said body member near the frontward end thereof, said cutting means including an upwardly facing cutting edge.

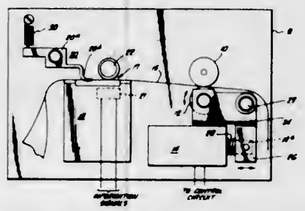
3,097,776
TAPE SERVING MACHINE
Theodore H. Krueger, Stratford, Conn. (% Better Packages, Inc., Shelton, Conn.)
Filed Apr. 22, 1960, Ser. No. 24,031
8 Claims. (Cl. 226—11)



1. In a machine for dispensing strip material in measured lengths, intermittently acting tape dispensing means, electrical means including a resettable switch for starting and stopping the tape dispensing means, a tape contacting element movable by the advancing tape being fed, a switch actuating element connected with said tape contacting element and settable in a condition to actuate said switch to start the feed of tape when a piece of previously fed

tape is removed from contact with said tape contacting element, and means for resetting the switch to stop the tape feeding operation immediately on completion of the feeding of a measured length of tape and to simultaneously place the machine in condition for another tape dispensing operation.

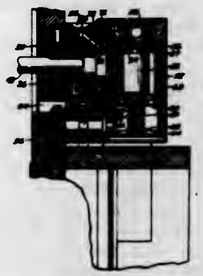
3,097,777
TAPE HANDLING APPARATUS
George W. Floyd, Los Angeles, Calif., assignor, by mesne assignments, to Rheem Electronics Corporation, Los Angeles, Calif., a corporation of California
Filed Jan. 9, 1961, Ser. No. 81,574
7 Claims. (Cl. 226—39)



1. In tape handling apparatus for information bearing tape having information recorded thereon in spaced apart groups including braking means for continuously frictionally engaging the tape, a continuously rotating cylindrical drive member, a rotating cylindrical jam member positioned adjacent said drive member for frictional driving contact with said drive member whereby to receive and drive tape arranged therebetween, means for pivotally mounting the jam member adjacent to and out of driving contact with said drive member, solenoid means including an energizable winding connected to said latter means for swinging the jam member into and out of frictional driving contact with said drive member, and control circuit means connected for selectively energizing and de-energizing said solenoid means, said control circuit means including a switching circuit connected to energize and de-energize the solenoid winding and arranged to be energized for placing the jam member in driving contact with said drive member, an impedance device connected to the solenoid winding for dissipating the energy thereof, a feedback amplifier connected in parallel circuit relationship with said switching circuit and controlled thereby to be in the opposite conductive condition therefrom, means for delivering a stop signal to said switching circuit, a capacitor connected between said feedback amplifier in common with the impedance device and the solenoid winding to receive and temporarily store the energy from said winding and then discharge same through the impedance device to cause the solenoid means to be quickly de-energized and thereby the tape to be quickly stopped with the aid of said braking means.

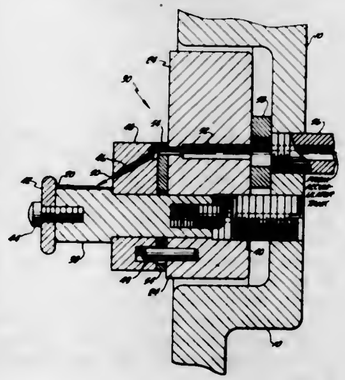
3,097,778
MECHANICAL APPARATUS
Robert A. Pendleton, Dedham, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 18, 1960, Ser. No. 15,861
6 Claims. (Cl. 226—95)

1. Improved apparatus for controlling the movement of a record tape comprising a rotatable cylindrical member forming a capstan having a circumferential surface adapted to engage the record tape, said circumferential surface being divided into a plurality of grooves each extending substantially across the surface of said capstan and being transverse to the path of tape travel and parallel to the axis of rotation of said capstan, a plurality of air passages formed within said cylindrical member in air communication with said grooves, said cylindrical member being formed with a co-axial, recessed portion to define an annular flange containing said plurality of grooves and air passages, a stationary air flow distributing member positioned within said recessed portion and having an outer diameter smaller than the inner diameter



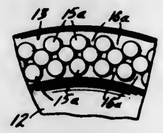
of said annular flange to provide a uniformly spaced clearance therebetween such that the capstan and the air flow distributing member are in closely adjacent but noncontacting relation relative to each other during the rotation of the capstan annular flange around the distributing member, and means defining an air flow passage in said distributing member for supplying air to the grooves which are placed sequentially in operative relation to the record tape during the rotation of said capstan.

3,097,779
TAPE GUIDING MEANS FOR MAGNETIC TAPE TRANSPORTS
Jerome Robert Rock, La Puente, and Kenji J. Sameshima, West Covina, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 16, 1961, Ser. No. 117,569
8 Claims. (Cl. 226—97)



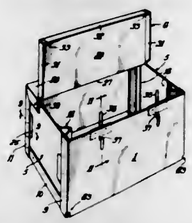
1. Apparatus for guiding a thin flexible strip of material having first and second opposing surfaces comprising: a guide member having a surface engaging the first surface of the strip; means providing a shoulder extending along the surface of the guide member; and means for directing a fluid stream against the second surface of the strip and toward the shoulder to maintain an edge of the strip in engagement with the shoulder.

3,097,780
PAPER PLATE
Clarence Le Roy Witmer, Landsdale, Pa., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 12, 1961, Ser. No. 137,640
4 Claims. (Cl. 229—1.5)



1. In a paper plate composed of a relatively flexible paperboard and having a central panel, a wall extending obliquely upwardly from said panel, and a rim extending substantially outwardly from said wall, the improvement comprising a first line of regularly shaped bosses extending around said rim, and a second line of said bosses spaced outwardly from and adjacent to said first line, the bosses in said first line being contiguous the juncture of said wall and said rim, the bosses in each of said first and second lines being regularly spaced, and each boss in said second line being contiguous and in staggered relation to a boss in said first line.

3,097,781
ICE PACKED FOOD CONTAINER
Joseph J. Masi, Bala-Cynwyd, Pa., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,491
4 Claims. (Cl. 229—23)



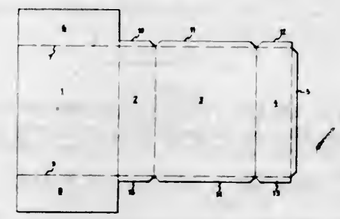
3. A reinforced container formed of foldable paper board, comprising:
(*a*) a horizontally disposed bottom wall;
(*b*) a plurality of interconnected vertically disposed side walls of the same height connected to and upstanding from said bottom wall; and
(*c*) at least one vertically disposed V-shaped reinforceing member positioned entirely within the container against one of said side walls;
(*d*) said member including a pair of vertically extending side panels attached to said one side wall in parallel relationship therewith, and
(*e*) a pair of uninterrupted inwardly converging vertically extending center panels;
(*f*) said center panels being hingedly interconnected at their inner edges throughout their entire length and being hingedly connected at their outer edges to the respective side panels;
(*g*) all of the panels of said member being of the same height as the side walls of the container;
(*h*) one of said reinforcing member side panels being disposed at a corner of the container adjacent another side wall of the container and being hingedly connected to said other side wall.

3,097,782
CONVERTIBLE AND DISPOSABLE PICNIC BASKET AND TABLE TOP DEVICE
Stephen Koropatkin, 197 Pratt St., Glastonbury, Conn., and Melvin W. Noble, 30 Rentschler St., East Hartford, Conn.
Filed May 22, 1961, Ser. No. 111,684
6 Claims. (Cl. 229—31)



6. A foldable container comprising a sheet, said sheet being divided into a checkerboard pattern consisting of three sets of three longitudinally arrayed rectangular panels each, two of said sets being on opposite sides of a central set, the four corner panels of said sheet having an outwardly extending diagonal fold line, fold lines between all adjacent panels, two endless cords, a pair of spaced apart apertures in each of those panels intermediate a pair of corner panels in each set, said pair of apertures being located near the outer edge of its respective panel, and a pair of spaced apart apertures in each of the corner panels, said corner panel apertures defining between them a line intersecting said first mentioned diagonal fold line in the respective corner panel, said apertures in said corner panels being disposed on opposite sides of said diagonal fold line each of said cords being laced through the apertures of two corner panels on the inner side thereof and through the apertures of the panel therebetween on each side of said sheet, the tensioning of each of said cords causing said respective corner panels to fold outwardly along their diagonal fold lines and to form triangularly shaped wings, and to cause all of the panels excepting the center panel of said sheet to move upwardly to form a box-like structure, said wings being caused by the tensioning of said cords to fold one over the other on the outer surface of the panel positioned therebetween.

3,097,783
DUST-PROOF CARTON
Robert V. Burt, Cincinnati, Virgil E. Gex, Wyoming, and Norman J. Franz, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 6, 1961, Ser. No. 93,490
2 Claims. (Cl. 229—37)



1. A seal-end dust-proof rectangular carton having oppositely disposed front and back walls, two oppositely disposed side walls, and end closures comprising narrow end flaps extending inwardly from the front and side walls

in substantially the same plane, the adjacent ends of the said narrow end flaps being mitered to an angle of between about 42° and 44° with respect to their line of articulation, the other end of the narrow end flaps extending from the side walls being squared at an angle of about 90° with respect to their line of articulation, broad end flaps extending inwardly from both ends of the back wall and being approximately equal in size to the cross-section of the said carton, said broad end flaps overlapping the said narrow end flaps and being bonded thereto with a thermoplastic adhesive, said adhesive being solid but flexible at room temperature and gradually softening to a fluid state above 200° F., an excess of the said adhesive lying between the said adjacent mitered ends of the narrow end flaps and forming an integral part of the said carton, and a double thickness of adhesive interposed between the square ends of the narrow flaps extending from the side walls and the superposed portion of the broad end flaps whereby a carton with dustproof corners is formed.

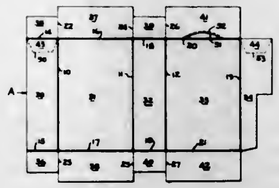
3,097,784
EASY OPENING CARTON
Bernard J. Schaus, Whitefish Bay, Wis., assignor, by mesne assignments, to Beed Company, a partnership
Filed Feb. 9, 1959, Ser. No. 792,215
6 Claims. (Cl. 229—51)



2. A carton comprising a top, one side, a bottom and another side connected along their longitudinal edges, said top, bottom and sides being unitary across their entire surface, said top having a pair of top flaps connected along the transverse edges thereof, said bottom having a pair of bottom flaps connected along the transverse edges thereof, each of said sides having a pair of side flaps connected along the transverse edges thereof, said top, bottom and side flaps folded to close the ends of said carton, said side flaps folded to lie inside said top and bottom flaps and in overlapping relationship therewith, said top and bottom flaps adhered to said side flaps, said side flaps being cut along lines which extend between the edges of said top and bottom flaps, said cuts in said side flaps leaving a small connecting portion between the portions thereof to facilitate bending and gluing the flaps, and a thin strip of strong material adhered to the inside of one of said sides and extending along a line which intersects said cuts in said side flaps, one end of said strip made accessible from outside the carton by a tab to which the end of said strip is adhered, said side opposite to that to which said strip is adhered being weakened along a line which extends parallel to said strip and intersects the lines along which said side flaps are cut, said carton being filled through one end thereof prior to bending and gluing the flaps at said one end thereof.

3,097,785
OPENING MEANS FOR VERMIN-PROOF CARTON
George L. Meyers, Menasha, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed June 5, 1961, Ser. No. 114,992
6 Claims. (Cl. 229—51)

1. An opening means for a tamperproof carton, the carton including a pair of opposed main panels, a pair of opposed side panels hingedly connected to said main panels, a pair of end closure flaps coextensive with the distance between said main panels hingedly connected by non-perforated, solid score lines to adjacent ends of said main panels, a pair of dust flaps coextensive with the distance between said main panels hingedly connected to adjacent ends of said side panels and adhered to the underlying one of said pair of end closure flaps, said means comprising a first tear path along the non-perforated, solid score line connecting the underlying closure flap with the adjoining main panel in the portions overlying the immediately adjacent edges of the dust flaps and



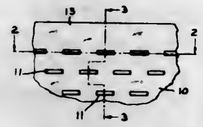
including a force directing, non-linear, shaped line of weakness in said underlying closure flap between the adjacent ends of the underling dust flaps and a second tear path along the non-perforated, solid score line connecting the overlying one of said pair of end closure flaps and the adjoining main panel, the edges of the underlying one closure flap and dust flaps in conjunction with the non-linear shaped line of weakness precisely directing the tearing forces along the tear paths.

3,097,786
OPENING MEANS FOR CONTAINERS
Frank A. Militana, 550 Monterey Ave., Pelham Manor, N.Y.
Filed Sept. 22, 1961, Ser. No. 139,899
2 Claims. (Cl. 229—51)



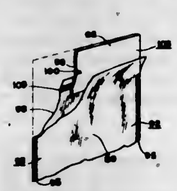
1. A quick opening carton comprising a rectangular-shaped box-like structure having front, rear, end, top and bottom walls, a flexible strand along the top of the front wall at its center, on the inside thereof, rings on the ends of the strand disposed outside the wall, a strand extending from one end of said top strand downwardly to the bottom and inwardly toward the center of the front wall, rings on the ends of the latter strand disposed outside the front wall, another strand extending downwardly to the bottom and inwardly toward the center of the front wall, rings on the ends of the latter strand disposed outside the front wall, said arrangement of strands being such that pulling on the rings opens the carton along the front wall top and at points to each side of the center of the front wall, a pair of strands on the top of one of said end walls on both sides of the center thereof, rings on the ends of said strands disposed outside the end wall, a pair of strands on the bottom of said one end wall on both sides of its center, rings on the ends of the latter pair of strands, disposed outside the structure, a strand at the center of said one end wall extending from the top to the bottom thereof, rings on the ends of the latter strand disposed outside the end wall, the arrangement of rings on said one end wall being such that pulling on the rings opens the end wall along the top and bottom thereof and at the center thereof.

3,097,787
PACKAGING FILM
Milton O. Schur, Asheville, N.C., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Sept. 15, 1961, Ser. No. 138,331
10 Claims. (Cl. 229—53)



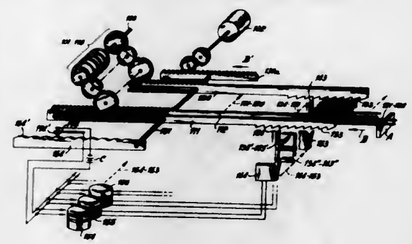
1. A vented packaging film comprising a ductile polymeric film, a plurality of spaced embossments in the said film, each of said embossments being spaced from the neighboring embossments, said embossments constituting entire spaced portions of the film deformed beyond a surface thereof and having a plurality of connected wall portions protruding beyond the surface of the undeformed portions of the film, thereby leaving open bases equal in area to said spaced portions, and openings in at least one of the said wall portions in a plane substantially perpendicular to the plane of the film, said openings being in communication with the said open bases.

3,097,788
REENFORCED BAGS
Robert G. Nichols, 211 Skyline Drive, Barrington, Ill.
Continuation of application Ser. No. 801,426, Feb. 25, 1959. This application Feb. 23, 1962, Ser. No. 176,486
2 Claims. (Cl. 229—55)



2. A bag, including a sheet of thermoplastic film material folded on itself to provide front and back panels and having an open end spaced from the panel-providing fold line, said front and back panels each having first and second edge portions extending transversely of the panel-providing fold line, means sealing said first and second edge portions of said front and back panels together to form an envelope open at the fourth side, the envelope-defining bonds adjacent said fourth side terminating short of said fourth side to provide end flaps on said front and back panels, a paper strip having first and second sides coated with thermoplastic film material heat bondable to the first-named film material and positioned in said open end of said envelope, said strip having a dimension parallel to said fold line substantially equal to the distance between the first and second edges of each of said panels and a dimension perpendicular to said fold line greater than the flap dimension perpendicular to said fold line, said strip extending but part way into the envelope, said paper strip being heat bonded to only one of said end flaps, and said other flap at the opposed unbonded ends thereof defining slits facilitating the unfolding of said other flap to provide access to the envelope with the bonds adjacent said fourth side opposing the tendency of the slits to enlarge.

3,097,789
ACCUMULATOR READOUT DEVICE
Martin Kassel, Grafelfing, near Munich, and Günter Martens, Schliersee, Upper Bavaria, Germany, assignors to Kienzle Apparate G.m.b.H., Villingen, Black Forest, Germany
Filed Dec. 19, 1958, Ser. No. 781,779
Claims priority, application Germany May 21, 1955
25 Claims. (Cl. 235—61)

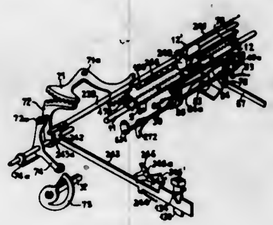


1. In an arrangement for transferring a numerical value accumulated in an electronic accumulator including at least one counting stage capable of storing such numerical value, to a mechanical counting, indicating or printing apparatus having at least one set of incrementally movable digit-determining primary control elements and digit-exhibiting secondary elements operatively connected with each other and capable of assuming two states of motion, one of which is standstill, the other one being movement, said elements being capable of sequentially assuming consecutive positions respectively associated with a series of digits forming part of a numerical value to be indicated or printed, in combination, drive means for advancing said primary control elements incrementally through said consecutive position; an impulse generator means operatively connected with said drive means and capable of generating impulse sequences of predetermined numbers of electric impulses synchronously with the passing of said primary control elements through a corresponding number of said consecutive positions, respectively; first circuit means connecting said impulse generator means with said counting stage for injecting said predetermined number of said electric impulses as counting impulses into the latter so as to shift revolvingly a numerical value stored in said counting stage through the latter; electromagnetic means for causing said secondary elements to undergo a change from one of said states of motion to the other one, said electromagnetic means being responsive to a control impulse applied thereto and being capable of effecting said change in any one of said positions of said primary control elements upon application of such a control impulse; and second circuit means connecting said counting stage with said electromagnetic means and capable of transmitting thereto said control impulse every time when coincidently with injecting the last one of said predetermined number of electric impulses in one of said sequences into said counting stage the counting capacity thereof is exhausted.

3,097,790
DIVIDEND-DIVISOR ALIGNING MECHANISM FOR COMPUTING MACHINES
Werner Julich, Wallisellen, Zurich, Switzerland, assignor to Precisa A.G. Rechenmaschinenfabrik, Zurich, Switzerland
Filed Sept. 15, 1961, Ser. No. 138,529
3 Claims. (Cl. 235—63)

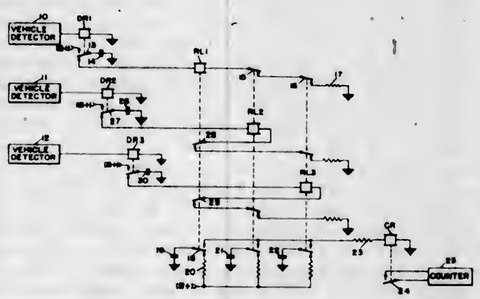
1. In a computing machine for addition, subtraction, multiplication and division, ten single digit numerals keys, a plurality of setting racks, a setting unit, means connect-

ible with said numerals keys for entering values into said setting unit and for causing shifting of said setting unit transversely of said setting racks, calculator units, means adapted to selectively connect said setting unit and said calculator units with said setting racks for transfer of values therebetween, abutment means secured to said setting unit, a stop member engageable with said abutment means, means supporting said stop member for sliding motion substantially parallel with the shifting path of said setting unit, a division key, means operatively



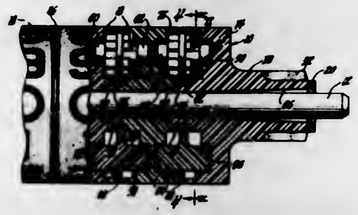
connecting said division key with said stop member for locking said stop member in a selected position in accordance with the ordinal position of said abutment means by depression of said division key whereby a subsequent depression of said division key following resetting of the setting unit releases said setting unit for shifting towards said locked stop member and stops the setting unit with said abutment means in engagement with said stop member, and means operatively connected with said stop member for release and restoration thereof.

3,097,791
COUNTING SYSTEM
Theodore A. Conklin, Avon, N.Y., assignor to General Signal Corporation, a corporation of New York
Filed Dec. 22, 1961, Ser. No. 161,631
5 Claims. (Cl. 235—99)



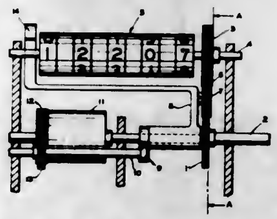
1. A system for coupling a plurality of object detectors to a common counter comprising in combination, a capacitor and a repeater relay associated with each said detector, means governed by said detector responsive to a passing object for first charging said capacitor and then connecting said capacitor in circuit with said relay, circuit means governed by said relays for completing a discharge circuit including any one relay and its associated capacitor only when all others of said relays are in their normal conditions, and counter control means coupling each said relay to said counter and controlling said counter to advance one step each time any one of said relays is operated from its normal condition.

3,097,792
MULTIPLE WHEEL COUNTING DEVICE
Henry H. Harada, Grand Blanc, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 15, 1962, Ser. No. 166,207
8 Claims. (Cl. 235—117)



1. A multiple wheel counting device comprising a shaft, two numeral wheels having hubs coaxial with said shaft, one of said hubs having a reduced diameter portion constituting a male portion journaled on said shaft, the other of said hubs having an annular portion constituting a female portion journaled on said reduced diameter portion, a fixed pinion carrier mounted between facing portions of said wheels and surrounding said male portion, a pinion gear rotatably retained by said pinion carrier to serve as a transfer mechanism of rotative motion between said wheels, and the end of said male portion engaging said other hub to determine clearance space for said two numeral wheels as measured in a direction parallel with the axis of said shaft and relative to said pinion carrier and pinion gear.

3,097,793
NAVIGATIONAL DEVICE AND REVERSIBLE COUNTER DRIVING MECHANISM THEREFOR
James I. Mitchell, River Edge, and Ernest Weiss, Maywood, N.J., assignors to The Bendix Corporation, Teterboro, N.J., a corporation of Delaware
Filed Apr. 3, 1962, Ser. No. 184,767
8 Claims. (Cl. 235—132)

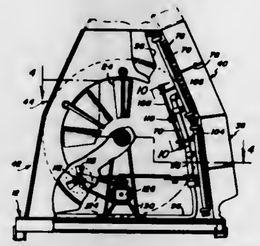


1. A reversing mechanism having an input shaft, a first gear drivingly engaged by the input shaft, a second gear meshed with the first gear, a third gear meshed with the second gear, a pivoted arm mounting the second and third gears, a cam slidably contacting the pivoted arm for positioning the arm in either of two positions, means for moving the cam in accordance with the number of input shaft revolutions, and a driven gear for driving an output shaft meshed with the third gear when the arm is in one position and meshed with the second gear when the arm is in the other position.

3,097,794
SPRAYING DEVICE
Euzell Dawson, P.O. Box 217, Orod, Calif.
Filed July 7, 1961, Ser. No. 122,443
1 Claim. (Cl. 239—78)

In a spray machine including a vehicle mounted for earth traversing movement in a predetermined direction,

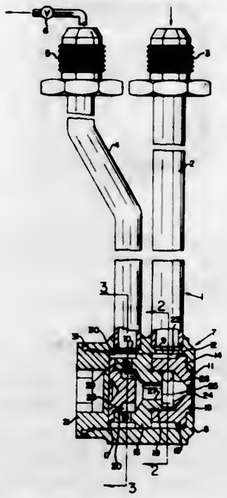
a fan housing mounted on the vehicle and having an erect elongated outlet slot opening from the housing transversely of the vehicle, power driven means carried by the vehicle for forcing an air blast out through the outlet, and means supported on the housing for introducing spray material into the air blast to form an air-borne spray stream; a mechanism for oscillating the spray stream to achieve maximum spray distribution and foliage penetration comprising a pair of substantially parallel vanes, means mounting the vanes on opposite sides of the outlet for pivotal movement about respective axes parallel to each other annd lying in respective planes substantially normal to the predetermined direction, the vanes defining a spray stream passage therebetween in registry with the



housing outlet slot, means pivotally mounting the spray material introducing means on the housing substantially equidistantly between the longitudinal limits of said outlet slot to permit discharge of the material into the air blast in selective directions, power driven means connected to the vanes oscillating the vanes about their respective axes in substantial parallelism whereby the spray stream is discharged laterally of the vehicle and oscillated longitudinally thereof during earth traversing movement including means connected to the pivotal mounting means for the introducing means to effect oscillation of the introducing means synchronized with oscillation of the vanes whereby the discharge direction of the spray material is substantially aligned with the vanes and the spray stream direction.

3,097,795
SPILL TYPE FUEL INJECTION NOZZLE
Harold C. Simmons, Cleveland Heights, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 1, 1960, Ser. No. 66,538
2 Claims. (Cl. 239—124)

1. A spill-type fuel injection nozzle comprising a holder formed with fuel inlet and return passages leading thereinto; and a coaxial series of interfitting and abutting nozzle parts clamped in said holder and forming therebetween a spin chamber having tangential passages leading into the periphery thereof from such inlet, a central fuel discharge orifice at one end of such chamber, a central spill passage at the other end of such chamber, and an annular diffusion chamber into which fuel passes from such spill passage and from the periphery of which fuel passes to such return passage; said holder and nozzle parts being made of heat-resisting alloy to enable use of the nozzle in nuclear aircraft and the like wherein said holder and nozzle parts become highly heated, the alloy employed for said nozzle parts having a coefficient of thermal expansion of about 9.20 micro-in./in./° F. at 68 to 1800° F. as compared with about 10.14 micro-in./in./° F. at 68 to 1830° F. for the alloy employed for said holder whereby initial clamping stresses of said nozzle parts in said holder are relieved at elevated temperatures and stresses introduced by thermal shock of relatively colder fuel supplied to said nozzle are minimized.



3,097,796
APPARATUS FOR SPRAYING LAWNS, GOLF FAIRWAYS AND THE LIKE
Thomas Festo, 14 Greenwood Ave., Darien, Conn.
Filed Aug. 31, 1961, Ser. No. 135,252
7 Claims. (Cl. 239—167)

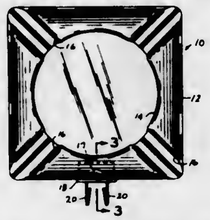


4. Apparatus for spraying lawns, golf fairways and the like, mounted on its own wheel supports and adapted to be propelled by a tractor, including, a pair of arms and means for pivotally connecting their rear ends respectively to a tractor to permit swinging movement of said arms individually in vertical planes, a pair of spray pipes, and wheel support means for supporting each of said pipes adjacent its outer and inner ends respectively, said arms having at their outer ends respectively vertically disposed sleeves, and the wheel support means for the inner ends of said pipes respectively, including wheel shank means adapted to be received in said sleeves respectively, and horizontally disposed pivot means projecting forwardly from said sleeves respectively on which the inner ends of said pipes are pivotally mounted for rotation in a vertical plane.

3,097,797
ILLUMINATED ASH TRAY
Robert E. Crain, 1524 NW. 29th, Oklahoma City, Okla.
Filed Sept. 29, 1961, Ser. No. 141,695
1 Claim. (Cl. 240—2)

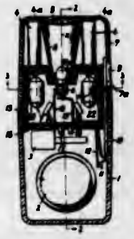
A light radiating container, comprising: a receptacle formed of translucent material and having a thickened wall portion and having a recess extending inwardly of one of its walls; a neon lamp imbedded in the recess and contiguously contacted by the material forming said one wall of said receptacle; a lamp holder extending into

and closing the recess; electrical conducting prongs connected with said lamp and said holder and projecting



outwardly from said receptacle wall; and an electrical resistance element connected in series between one said prong and said lamp.

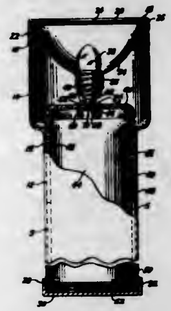
3,097,798
FLASHLIGHTS
Gerhard Schmidt, Berlin-Frohnau, and Heinrich Feindt, Berlin-Grunewald, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed Sept. 16, 1960, Ser. No. 56,577
Claims priority, application Germany Oct. 14, 1959
2 Claims. (Cl. 240—10.65)



1. In a flashlight incorporating a casing having a longitudinal axis and a partition transverse to said axis and dividing the interior of said casing into two sections, a rechargeable battery arranged in said casing, a recharging unit also arranged in said casing and electrically connected to said battery, a pair of prongs electrically connected to said recharging unit and enabling the flashlight to be electrically and mechanically connected to a source of electrical energy, and a cover removably mounted on said casing for covering said prongs when the same are disconnected from the source of electrical energy, the improvement which comprises: a lamp arranged generally between said prongs and occupying along said longitudinal axis of said casing a position spaced inwardly from the free outer ends of said prongs, and resistor means electrically interposed between said prongs and said recharging unit and occupying in said casing approximately the same position along said longitudinal axis as does said lamp, said lamp and said resistor means being located in one of said sections of said casing, said rechargeable battery and said recharging unit being located in the other of said sections of said casing, whereby the heat generating components of the flashlight are grouped together in one place and the heat-sensitive components of the flashlight are grouped together in another place.

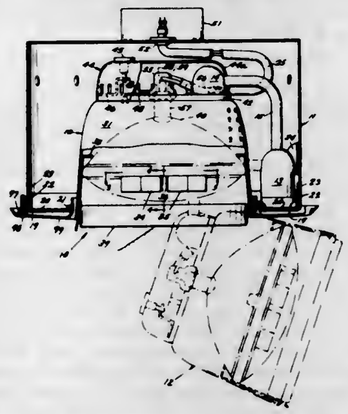
3,097,799
BATTERY BULB CONNECTION FOR FLASHLIGHTS
Donald F. Mosman, 14 Wellsville Ave., New Milford, Conn.
Filed July 16, 1959, Ser. No. 827,471
2 Claims. (Cl. 240—10.66)

1. A standard battery powered portable flashlight comprising: a conventional cylindrical casing; a conventional bulb disposed within and supported by said casing and having a central terminal; a conventional cylindrical battery in said casing having a terminal; means for biasing said battery terminal toward said central terminal; said terminals being disposed so as to be spaced within said casing out of contact with the inner walls thereof and mounted so that there is normally slight lateral play between them; a rigid unitary connector disposed within said casing out of contact with the inner walls thereof, made of electrical conducting material and interposed between and in direct contact with both of said terminals



for at all times effecting electrical connection of said terminals, said connector having a recess for receiving said central terminal; and a cup-shaped spacer made of electrical insulating material secured to said connector to form a separately handled unit therewith, said spacer having a cylindrical portion telescoped on said battery and disposed between and in substantial contact with said battery and the inner walls of said casing, whereby said connector and spacer unit is operative to prevent relative lateral movement of said terminals and thereby eliminate the play between them that would otherwise exist in the absence of the connector and spacer unit.

3,097,800
RECESSIBLE LIGHTING FIXTURE FOR LAMP HAVING PLUG TERMINALS
Nathan R. Schwartz, Yonkers, N.Y., assignor, by mesne assignments, to Swivelier Company, Inc., Nanuet, N.Y., a corporation of New York
Filed May 26, 1959, Ser. No. 815,861
3 Claims. (Cl. 240—78)



1. A lighting fixture comprising a housing, a lamp shade, connecting means pivotally mounting said shade

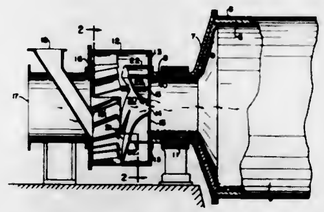
to said housing; said connecting means comprising a first swivel unit secured to said shade, a member secured at one end to said first swivel unit, a second swivel unit secured to the other end of said member, a ring means having said second swivel unit secured thereto; said housing having track means for guiding movement of said ring means whereby said shade is pivotable about a first axis normal to the plane of said ring means; said swivel units forming spaced apart pivotal axes for said shade which are positioned parallel to said plane; first means for positioning and removably maintaining a lamp in said shade; flexible electrical conducting means entered into said housing; a receptacle connected to said conducting means and adapted to engage terminals of a lamp all but a small portion of which is disposed within said shade with lamp terminals external of said shade; said first means being separate from said receptacle; said shade being movable to a position out of said housing while remaining mounted to said connecting means; said receptacle being manually accessible when said shade is in said position whereby said receptacle is disengageable from terminals of a lamp prior to disengagement of this lamp from the first means for positioning and removably maintaining a lamp in the lamp shade; said shade having a first opening through which said small portion extends and a second opening through which a lamp is enterable into said shade.

3,097,801
METHOD FOR COMMINUTING KAOLIN CLAY
James B. Duke, Metuchen, N.J., assignor to Minerals & Chemicals Philipp Corporation, Menlo Park, N.J., a corporation of Maryland
No Drawing. Filed Aug. 9, 1961, Ser. No. 130,240
15 Claims. (Cl. 241—16)

12. A method for reducing the particle size of kaolin clay which comprises agitating kaolin clay in water containing a deflocculating agent so as to obtain an aqueous dispersion of kaolin clay, incorporating into said dispersion −10 +35 mesh particles of silica sand as a grinding medium in amount to exceed substantially the weight of said clay, partially filling an agitator-free drum having a smooth inner surface with said dispersion and said sand, subjecting said clay to a grinding action with a low energy expenditure and without grinding said sand by continuously rotating said drum with said slip and said sand with the drum disposed in a manner such that the longitudinal axis of said drum is in horizontal plane at a peripheral velocity within the range of about 200 to about 300 feet per minute, said velocity being less than critical speed for said drum, for a time sufficient to reduce substantially the ultimate particle size of said clay, and separating said sand from the clay dispersion.

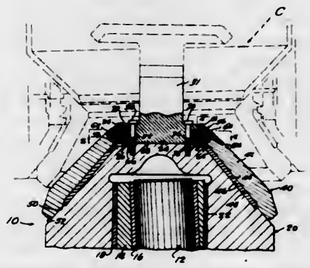
3,097,802
TUBE MILL TRUNNION
Otto Peder Frankert, Copenhagen-Valby, Denmark, assignor to F. L. Smidth & Co., New York, N.Y., a corporation of Delaware
Filed May 25, 1962, Ser. No. 197,683
Claims priority, application Great Britain May 29, 1961
4 Claims. (Cl. 241—54)

1. In a tube mill adapted to grind moist solid material while a hot gas is passed in contact with the material to effect drying thereof, the mill being provided with an inlet end and a discharge end and the inlet end of the mill being rotatably supported by a hollow trunnion through which the hot gas and the solid material are charged to the mill, the improvement which comprises a preliminary drying drum mounted on the inlet side of the trunnion, the preliminary drying drum being provided with an end wall extending over the inlet side of the trunnion and having a central opening and a plurality of surrounding openings all of which communicate with the interior of the trunnion, feed means for supplying the moist solid material and the hot gas to the preliminary drying drum, a bellmouth positioned within the preliminary drying drum with its small end communicating with the central opening of the drum end wall so as to direct a major portion of the hot gas from the preliminary drying



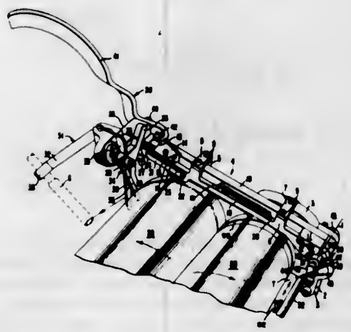
drum substantially axially through the trunnion, and baffles mounted on the rearward surface of the bellmouth adapted upon rotation of the drum to raise moist solid material within the drum upwardly and through the drum end wall openings surrounding the central opening thereof and onto the inner surface of the trunnion.

3,097,803
HEAD AND MANTLE ASSEMBLIES FOR CRUSHERS
Mercer M. Dorsey, 461 La Mina Ave., Ajo, Ariz.
Filed Aug. 11, 1961, Ser. No. 130,947
4 Claims. (Cl. 241—293)



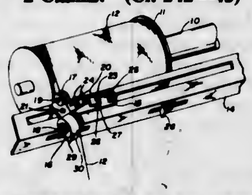
1. A crusher head and mantle assembly comprising a frusto-conical head adapted to be journaled on a gyratory crusher stubshaft, a hollow frusto-conical mantle engaged onto the head, said mantle having a concentric opening in its upper end exposing the upper end of the head and defining a bearing surface, a circular locking cap smaller in diameter than the mantle opening and fixed to the upper end of the head concentric with the mantle opening, said locking cap being formed with a peripheral groove opening to the bottom of the cap, said groove having a top wall spaced from the lower end of the cap and the upper end of the head, a locking ring surrounding the cap and occupying the space between the periphery of the cap and said bearing surface, said locking ring having a peripheral surface bearing against said bearing surface and an inner surface bearing against the periphery of the locking cap, the inner surface of the locking ring being formed with a groove opening to the top of the locking ring and having a bottom wall spaced downwardly from the top wall of the peripheral groove of the cap, said grooves opening to each other, and opposed and interengaged upper and lower ram rings severally fixed to the top wall of the cap groove and the bottom wall of the locking ring groove.

3,097,804
TRANSFER TAIL WINDING DEVICE
Ivan Ulysses Jackson, Petersburg, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 23, 1962, Ser. No. 168,158
6 Claims. (Cl. 242—19)



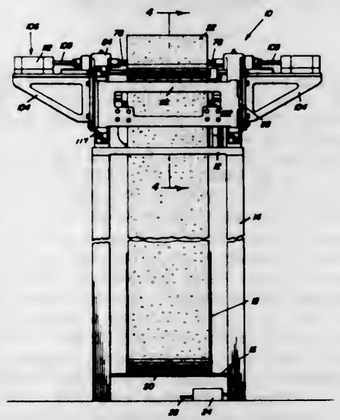
1. In combination with a high speed yarn windup apparatus comprising a fixed supporting structure, a rotary drive roll operatively mounted on said structure, a rotatable bobbin having a first portion for supporting a main yarn package and a second portion for supporting a yarn transfer tail, said bobbin operatively mounted in said structure in driven engagement with said drive roll, and a yarn traversing guide movably mounted on said structure in operative relationship with said drive roll and said bobbin for controlling winding of the main yarn package on the bobbin; a yarn transfer tail forming and controlling assembly mounted on said supporting structure, said assembly comprising a movable yarn guide means operative in one position to guide a moving yarn line in a path aligned with the second portion of said bobbin, a yarn cutting means positioned adjacent said bobbin in operative relationship to a moving yarn line guided into alignment with the second portion of said bobbin by said yarn guide means, means for actuating said cutting means, means cooperating with said cutting means and said yarn guide means and operative in response to actuation of said cutting means for moving said yarn guide means to another position operative from said one position to guide a moving yarn line out of alignment with the second portion of said bobbin and into engagement with said yarn traversing guide, after a predetermined time period, for windup on the first portion of said bobbin.

3,097,805
WINDING APPARATUS
Louis A. Oberly, Chagrin Falls, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 2, 1960, Ser. No. 47,114
2 Claims. (Cl. 242—43)



1. In a winding apparatus, a yarn support comprising a spool having end cheeks at right angles to the barrel, means for rotating said yarn support, a traversing member, means for reciprocating said member axially across said yarn support between said cheeks, a pivotally mounted yarn laying guide on said traversing member also reciprocating therewith axially relative said yarn support, an elongated flexible means, spaced supports for said flexible means, one of said supports being secured to said traversing member and firmly holding one end of said flexible means and the other support being secured to said pivotal yarn laying guide and being slotted so that the other end of the flexible means is slidably positioned therein, stationarily positioned spaced impact members adjacent said traversing means, and said yarn laying guide upon reciprocating contact with either said spaced impact member is axially pivotally moved at an increased velocity in the direction of travel across said yarn support, said yarn guide movement being resisted by said flexible means.

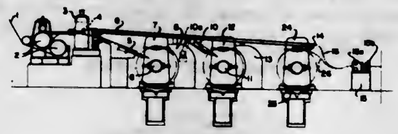
3,097,806
TOWEL ROLL WINDING MACHINE
Joseph M. Darman, Utica, N.Y., assignor to Darman Manufacturing Co., Inc., Utica, N.Y., a corporation of New York
Filed Feb. 21, 1961, Ser. No. 90,811
10 Claims. (Cl. 242—57)



1. A towel roll winding machine comprising a frame, means on said frame forming freely rotatable supporting spindle means for a roll of toweling, drive means mounted on said frame in engagement with the roll of toweling for rotatably driving the spindle means and roll of toweling at a constant peripheral linear speed, means on said frame for smoothing and straightening the toweling as it is wound into a roll, and means responsive to the presence or absence of toweling being rolled on the roll for automatically interrupting the operation of the drive means when the toweling has been completely rolled into a roll.

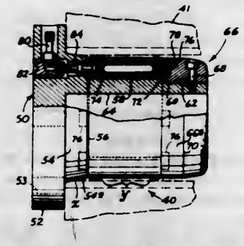
3,097,807
STRIP HANDLING APPARATUS
Robert J. Erskine, Howland Township, Trumbull County, Ohio, assignor to The Wean Engineering Company, Inc., Warren, Ohio, a corporation of Ohio
Filed Aug. 11, 1955, Ser. No. 527,845
2 Claims. (Cl. 242—67.1)

1. In strip handling apparatus having a first strip processing line capable of operating at relatively high speeds, the maximum speed being limited and varied by operating conditions, and a second strip processing line aligned therewith adapted to handle the product of the first strip processing line, said second strip processing line having a lower maximum operating speed than the speed of said first strip processing line under some conditions, whereby the speeds of the two lines are compatible at some times and are incompatible at other times, the combination of strip conveyor means extending from the delivery end of the first strip processing line to the second strip processing line, whereby when said lines are operating at compatible speeds strip is conducted without interruption and intermediate handling from said first strip processing line to said second strip processing line, at least two spaced strip winding reels placed below said



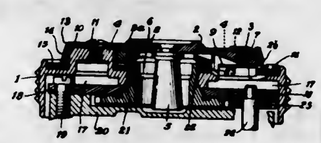
strip conveyor means and adapted to receive and coil the product of said first strip processing line at the operating speed thereof when the lines are operating at incompatible speeds, at least one coil holder placed below said strip conveyor means and adapted to deliver strip from a coil mounted thereon to said second strip processing line at the operating speed thereof, said strip conveyor and said reels and coil holder comprising alternate parallel paths for delivery of strip from said first strip processing line to said second strip processing line at compatible and incompatible speeds, respectively.

3,097,808
EXPANSION CHUCK
Arthur T. Williams, Camas, Wash., assignor of one-half to Charles R. Tidland, Camas, Wash.
Filed Aug. 21, 1961, Ser. No. 132,765
3 Claims. (Cl. 242—68.2)



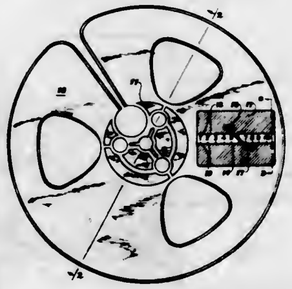
1. Means for attaching to the inside and end of a hollow roll core comprising an arm, an insertable chuck for gripping the inside of the hollow roll core mounted on said arm and projecting out to one side thereof, said chuck comprising a rigid body including an end plate disposed with one side thereof facing said arm and a frusto-conical centering portion joined to the other side of said end plate with the larger diameter end of the centering portion next to said end plate, said end plate including a marginal portion that projects radially outwardly from said centering portion, a substantially cylindrical expansible section axially aligned with said centering portion having a diameter substantially the same as the diameter of the smaller diameter end of said centering portion, said expansible section having stationary ends mounted on said chuck body, said expansible section having one of its said ends adjoining the smaller diameter end of said centering portion, means for shifting said arm and the chuck thereon in a direction paralleling the axis of said centering portion whereby the chuck may be moved into a roll core with said end plate abutting the end of the core, and means for circumferentially expanding said expansible section between the stationary ends thereof.

3,097,809
FILM REWIND DEVICE ON PHOTOGRAPHIC CAMERAS
Willi Günther, Stuttgart-Mohringen, Germany, assignor to Zeiss Ikon Aktiengesellschaft, Stuttgart S, Germany
Filed Mar. 23, 1959, Ser. No. 801,066
Claims priority, application Germany Mar. 27, 1958
2 Claims. (Cl. 242—71.3)



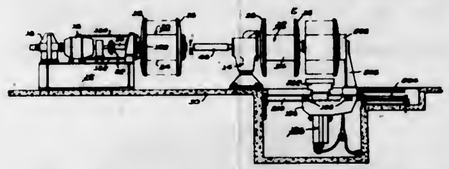
1. In a film rewinding device for a photographic camera, a circular rewinding knob having a radial slot extending from a central recess, an arm pivotally mounted by means of its ends on the outer end face of said knob about an axis located between the center of said knob and its circumference, the free end of said arm being enlarged to form a cover for said recess, a handle extending at right angles from the enlarged end of said arm, said knob having a central cavity adapted to receive said handle when said arm is tilted about said axis from its operative position in which said enlarged end of said arm extends beyond the circumference of said knob to its inoperative position in which said enlarged end of said arm covers said central recess, means including spring means for releasably locking said arm in its operative and in its inoperative positions, said arm when tilted into its operative position forming a crank for rotating said rewinding knob, and gear members positioned in said cavity for operatively connecting said knob with an eccentrically mounted shaft in the camera, which shaft is coupled with the film spool upon which film is to be rewound.

3,097,810
REEL
Myron Kerney, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 12, 1961, Ser. No. 158,827
4 Claims. (Cl. 242—71.8)



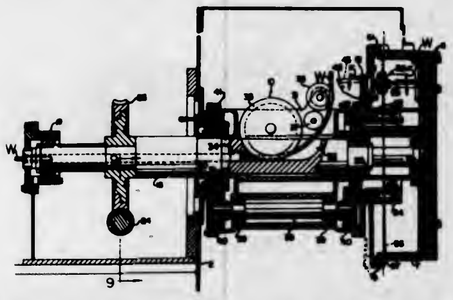
1. A reel adapted to accommodate a coil of information recording web medium, said reel comprising at least one flange having an outwardly facing flat surface in which is formed a shallow channel substantially as wide as said web medium and accessible to said web medium coiled on said reel for receiving a portion of said medium, and a narrow groove slightly deeper than said channel extending thereacross.

3,097,811
APPARATUS FOR COILING LENGTHS OF STOCK
George A. Mitchell, Youngstown, Ohio, assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio
Filed Feb. 24, 1961, Ser. No. 91,422
4 Claims. (Cl. 242—80)



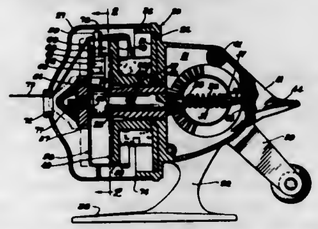
1. Apparatus for coiling continuous lengths of stock comprising a base, a rotatable horizontal shaft supported above said base, a rotatable vertical shaft extending upwardly from said base and having an axis lying in a common vertical plane with the axis of said horizontal shaft, a plurality of arms connected to said vertical shaft and spaced above said base whereby any one of said arms may be rotated into alignment with said rotatable horizontal shaft, reels carried on said arms, each of said reels comprising an expandable central drum having a first flange fixed to its one end and a second flange removably secured to its other end, apparatus for sliding a reel from an arm onto said rotatable horizontal shaft and vice versa when in alignment therewith, an evenwind mechanism for winding stock onto a reel positioned on said rotatable horizontal shaft, and means for removing a wound coil of stock from one of said reels while stock is being wound on another of the reels, said latter-mentioned means comprising a carriage movable along a path extending parallel to the axis of a reel while in unloading position, a cradle carried by said carriage and adapted to pass under and elevate a wound coil of stock on a collapsed reel drum whereby the carriage may move the coil axially off of the collapsed drum, and a clamping device on the carriage for engaging said second flange to carry it with the carriage away from the drum as a coil is removed therefrom.

3,097,812
WIRE PACKAGING MACHINE
Maurice A. Nye and Jess C. Bittman, Cuyahoga Falls, Ohio, assignors to The Vaughn Machinery Company, Cuyahoga Falls, Ohio, a corporation of Ohio
Filed Dec. 15, 1960, Ser. No. 75,965
5 Claims. (Cl. 242—82)



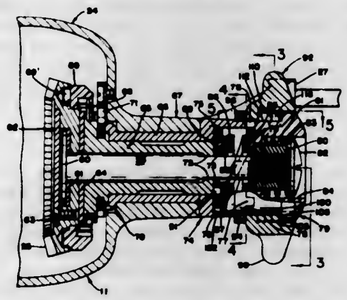
1. In a wire packaging machine, the combination of a stationary takeup block; a rotary flyer assembly rotatable about an axis coinciding with the centerline of said block to wrap wire around said block in the form of successive convolutions; a wobbling pushoff ring adjacent one end of said block effective to push the convolutions therearound axially toward the other end; said ring and assembly having a rotary, axially fixed connection between them about an axis which is tilted with respect to the centerline of said block; and universal joint means between said ring and block radially outward of said rotary connection arranged to hold said ring against rotation with respect to said block but to permit wobbling of said ring through such rotary connection.

3,097,813
SPINNING TYPE FISHING REEL
Edward J. Golec, Chicago, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Aug. 16, 1962, Ser. No. 217,446
12 Claims. (Cl. 242—84.2)



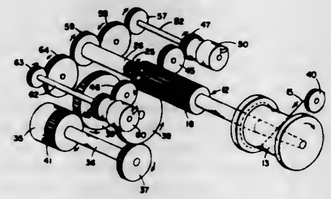
10. In a fishing reel of the character described,
(*a*) a casing,
(*b*) a spooling member supported for rotation and axial movement within said casing,
(*c*) a ring element within said casing arranged coaxially of said spooling member,
(*d*) a pick-up pin element for spooling the line carried on said spooling member and moveable radially relative thereto,
(*e*) one of said elements being formed of a permanent magnet and the other of said elements being formed of a paramagnetic material,
(*f*) and means for shifting said spooling member axially to effect alignment of said pick-up pin with said ring whereby magnetic attraction will project said pickup pin outwardly to line engaging position.

3,097,814
DRAG ADJUSTMENT FOR SPINNING REEL
Thomas F. Sarah, Akron, Ohio, assignor to The Enterprise Manufacturing Company, Akron, Ohio, a corporation of Ohio
Filed May 11, 1961, Ser. No. 109,448
8 Claims. (Cl. 242—84.54)



1. In a spinning reel having a drag mechanism, a crank handle operatively associated therewith and a turn button, spring means normally urging said turn button into non-rotatable engagement with said crank handle, said turn button adapted when disengaged to adjust the tension on said drag mechanism, means interposed between said turn button and said crank handle and manually operable to disengage said turn button from and to rotate it with respect to said crank handle for adjusting the initial tension on said drag mechanism.

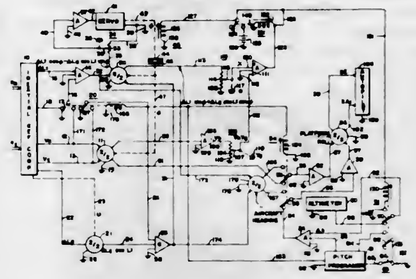
3,097,815
APPARATUS FOR SPOOLING FILAMENTARY MATERIAL
Charles P. Smith, Towanda, and Leadom A. Warner, Sayre, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 29, 1961, Ser. No. 155,587
4 Claims. (Cl. 242—158.4)



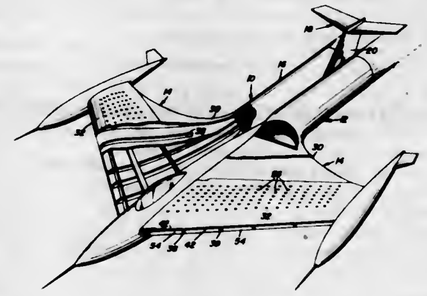
1. Apparatus for spooling filamentary material including a lead screw for supporting a spool, a nut engaging the lead screw, a lead screw driving means for rotating said lead screw in one direction, a first nut driving means adapted to be operated by said lead screw driving means and to rotate said nut in said one direction at a speed less than the speed said lead screw is rotated by the lead screw driving means whereby the lead screw is moved along its axis in one direction relative to said nut, a second nut driving means adapted to be operated by said lead screw driving means and to rotate said nut in said one direction at a speed greater than the speed said lead screw is rotated by the lead screw driving means whereby the lead screw is moved along its axis in the opposite direction relative to said nut said first nut driving means including a first clutch means for placing said first nut driving means in engagement with said lead screw driving means, said second nut driving means including a second clutch means for placing said second nut driving means in engagement with said lead screw driving means, a first switching means adapted to inactivate said first clutch means and activate said second clutch means when said lead screw is moved along its axis in said one direction with respect to the nut to a first predetermined point, and a second switching means adapted to inactivate said second clutch means and activate said first clutch means when said lead screw is moved along its axis in said opposite direction with respect to the nut to a second predetermined point.

3,097,816
ATTITUDE CONTROLS
Henry W. Berry, Largo, Fla., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,488
5 Claims. (Cl. 244—14)

4. The method of controlling the movement of a dirigible craft to cause it to pass through a point defined by its latitude, longitude, and elevation, when the differences between the latitudes and longitudes of the craft and the point, the northerly and easterly velocities of the craft, and its heading are known, which comprises the steps of computing from said differences the bearing of the point from the craft, resolving said velocities into components perpendicular to said bearing, resolving said differences into components perpendicular to said heading, initially controlling the craft in azimuth in accordance with the first named components, and ultimately controlling the craft in azimuth in accordance with the last named components.

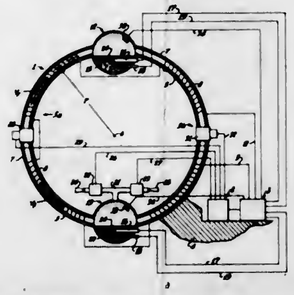


3,097,817
AIRFOIL DESIGN FOR JET ENGINED AIRCRAFT
Hugh E. Towzey, Jr., Goleta, Calif.
(1837 Clark Ave., Apt. 10, Palo Alto, Calif.)
Filed Apr. 5, 1962, Ser. No. 185,317
19 Claims. (Cl. 244—15)



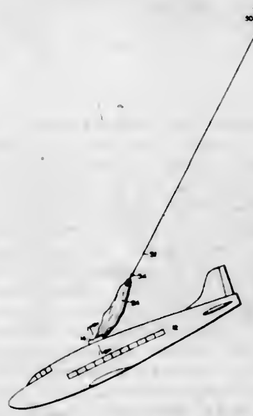
1. In combination, an aircraft having an airfoil member including an upper outer camber member supported therefrom and extending over the upper surface of said airfoil member in spaced relation thereto and from a point adjacent the leading edge of said airfoil member to a point adjacent the trailing edge of said airfoil member defining an air passage between said airfoil member and said camber member, said air passage having an inlet and an outlet adjacent the leading and trailing edges of said airfoil member respectively, air pump means having an air intake, said air intake being disposed adjacent the trailing edge of said airfoil member and communicated with said air passage outlet, control valve means movably supported from said aircraft and operable to vary the effective opening of said air intake, said camber member having a plurality of air inlet openings formed therein adjacent its leading edge, movable closure intake valve means operable to selectively open and close said camber member air inlet openings, and movable closure valve means supported from said aircraft for selectively varying the effective opening of said air passage inlet.

3,097,818
ANGULAR MOMENTUM EXCHANGE CONTROL DEVICE FOR SPACE VEHICLES
Kenneth G. Heller, Menlo Park, Calif., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed July 28, 1960, Ser. No. 45,881
6 Claims. (Cl. 244—78)



1. An angular momentum exchange attitude-control device for space vehicles comprising: a first vapor-generator including a first liquid compartment and a first vapor plenum; a second vapor-generator spaced from said first vapor-generator and including a second liquid compartment and a second vapor plenum; means in each of said liquid compartments for holding liquid therein away from its associated vapor plenum; a first conduit interconnecting said first and second vapor plenums; a second conduit interconnecting said first and second vapor plenums; a first flow-modulating valve interposed in said first conduit; a second flow-modulating valve interposed in second conduit; each of said vapor-generators being provided with a heater for heating the liquid contents thereof; and means for heating each of said conduits.

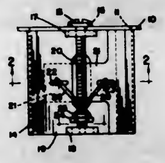
3,097,819
SAFETY PARACHUTE FOR DISABLED AIRPLANES
John E. Raistakka, 1414 SW. 12th Ave., Portland, Oreg.
Filed May 14, 1962, Ser. No. 194,228
3 Claims. (Cl. 244—139)



1. A parachute assembly for aircraft comprising a receptacle secured within the fuselage of the aircraft and open exteriorly thereof, remotely actuated hatch covers for said receptacle, a main parachute in said receptacle, an auxiliary parachute secured to said main parachute in said receptacle, a hollow lighter than air body secured to said auxiliary parachute, means for releasing said body and said auxiliary parachute prior to release of said main parachute, said lighter than air body comprising a helium filled cone,

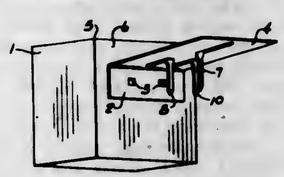
a stem on said cone, and spring ejecting means for said stem.

3,097,820
INSTRUMENT CLAMPS
Alfred B. Castle, Brookmont, Md. (4104 Maryland Drive, Washington 16, D.C.)
Filed Oct. 24, 1960, Ser. No. 64,392
9 Claims. (Cl. 248—27)



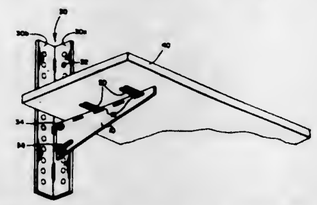
1. A clamp comprising a band having its end portions in overlapping relation, one of said end portions being provided with a slot receiving the other end portion, each radially outwardly overlapping end portion being provided with a circumferentially extending slot, an operating screw positioned outwardly of said band, means on said end portions confining said screw in a position axially parallel to the axis of said band, nut means on said screw, an interconnected pair of links having one end of each link connected to said nut, and the other end of each link pivotally connected to the cooperating end portion of the band and passing through the circumferentially extending slot whereby rotation of said screw will cause a change of the angular relation of said link means and move said end portions relative to each other.

3,097,821
BRACKET SUPPORT FOR ELECTRIC OUTLET BOX
John R. Richards, Mount Lebanon Township, Allegheny County, Pa., assignor to J. R. Richards Company, Carnegie, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1960, Ser. No. 68,493
1 Claim. (Cl. 248—216)



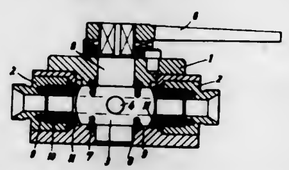
A bracket for supporting electrical boxes on nailable material consisting of a metal flange for securing the bracket to an outlet box, a laterally extending plate on said flange, a plurality of closely spaced rigid nailing prongs integral with and extending in the same direction at substantially right angles from the bottom of said plate, said prongs are indented along one side and have a pointed free end, a portion of said indented prong being flattened to provide barbs on the indented edges adjacent the pointed free end, said prongs closely spaced from each other to define in said plate a rigid hammering area with a hammering face on the top of said plate between the positions from where each of said prongs are integral with said plate, said rigid hammering area when struck simultaneously drives all of said prongs into the nailable material to secure the bracket and its electrical box.

3,097,822
SHELF BRACKET AND CLIPS
Warren R. Attwood, Belleville, Mich. (% Attwood Development Co., 4077 2nd St., Wayne, Mich.)
Filed Nov. 25, 1960, Ser. No. 71,512
6 Claims. (Cl. 248—250)



1. A bracket for use with metal framing for adjustably supporting shelving thereon, comprising a flat, longitudinally extending sheet metal member having a top edge, side edge and a lower edge, one or more spaced slots arranged in said member parallel with the top edge for receiving clips horizontally mounted therein at right angles to said member, a perforation at the common corner between the top and side edges for pivotally supporting the bracket to a framing member, and in combination therewith, a clip having a flat shelf-supporting surface, and at its opposite end a bent offset tongue for insertion in the slots of said member, said shelving being supported on the top edge of the sheet metal member and the flat shelf supporting surface of the clip.

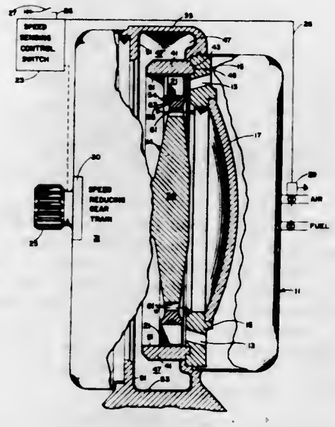
3,097,823
SHUTOFF COCK HAVING A SPHERICAL PLUG
Rudolf Kaiser, Rohrerweg 18, Ettlingen, Baden, Germany
Filed Sept. 14, 1960, Ser. No. 56,001
Claims priority, application Germany Oct. 28, 1959
7 Claims. (Cl. 251—172)



1. A shut-off cock for a flowing medium, comprising a housing having inflow and outflow openings therein, a spherical plug in said housing for sealing said openings, a piston-type packing ring arranged coaxially in each of the respective openings in said housing, the rear side of the packing ring being under the pressure of the flowing medium and also under spring pressure, and means for sealing the outer periphery of the packing rings, said means comprising oppositely spring pressed interengaging conical wedge rings which are loaded by the spring pressure and by the pressure of the flowing medium and are of relatively small volume and consist of heat-stable and chemically stable synthetic plastic material.

3,097,824
TURBINE, WHEEL CONTAINMENT
Dennen J. Bunger, Whitesboro, Francis V. Emery, New Hartford, Alphonse A. Cavalier, Utica, John R. Ferguson, Jr., Sauquoit, and Henry R. Schmider and Howard A. Alexanderson, Utica, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,494
3 Claims. (Cl. 253—77)

1. A turbine comprised of a turbine wheel, said turbine wheel including a disc and a plurality of blade elements extending radially from the periphery of the disc, each blade element having a rim part and a thin peripheral blade, said blades having tips which are free of connecting structure, nozzle means adjacent said blades and arranged to direct gases to said blades, a heavy containment ring facing the tips of said thin peripheral blades and providing a channel wall for confining gases flowing through said blades, said rim parts having radial sides in abutting relation and having an axial cross-section which flares radially outwardly to provide a turbine wheel rim, said blade elements being attached to said disc by being welded to the periphery of said disc at the radially-inner end of each of said rim parts of said blade elements, each of two of said blade elements at diametrically opposite

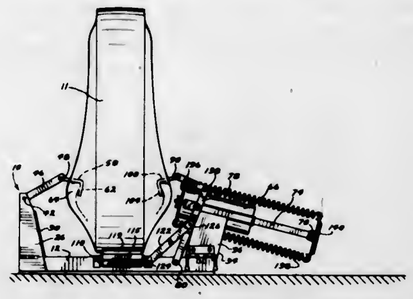


locations having at its inner end a reduced cross-section between one abutting radial side of its rim part and the other abutting radial side of its rim part to provide triggered blade elements having only a failure section connected to said disc, the others of said blade elements being free of any reduced cross-section, said failure sections being so dimensioned that said two triggered blade elements can separate before other blade elements tend to separate, said containment ring and said blade elements being so constructed that, when a triggered blade element is separated, it will be radially contained outwardly of said turbine wheel rim and other turbine blades will be sheared off thereby whereby uncontrolled disintegration of a turbine wheel is avoided.

3,097,825
TIRE SPREADER
Walter F. Ruhland, Shakopee, Minn., assignor to Bishman Manufacturing Company, Osseo, Minn., a corporation of Minnesota
Filed Apr. 4, 1961, Ser. No. 100,695
4 Claims. (Cl. 254—50.3)

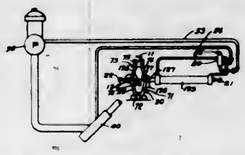
4. A tire spreading apparatus comprising a frame, tire engaging means attached to one end of said frame for securely retaining a portion of one bead of said tire in a fixed position with respect to said frame, a pressure cylinder affixed to the end of said frame opposite said first tire engaging means, said pressure cylinder having a movable pressure element operatively associated therewith, said movable pressure element being adapted to move along a path extending away from said first tire engaging means and said pressure cylinder, vertically disposed lever means pivotally connected at the lower end thereof to said frame, a second tire engaging means connected to the upper end of said lever means for gripping a portion of the other bead of said tire opposite said one

bead, a first linkage means pivotally connected at one end thereof said lever means and pivotally connected at the other end thereof to said pressure element whereby outward movement of said pressure element is adapted to cause pivotal movement of said lever means and said second tire engaging means with respect to said frame thereby spreading apart the walls of said tire, a tire support carriage, said tire support carriage being mounted on said frame for sliding movement in the direction of



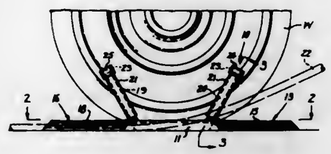
movement of said second tire engaging means, a second linkage means connecting said lever means and said carriage whereby said carriage is caused to slide on said frame in the direction of movement of said lever means and said second tire engaging means, said second linkage means being connected to said lever means at a medial point between the pivot at the lower end of said lever means and the connection between said lever means and said second tire engaging means.

3,097,826
JACK
Brooks Walker, 1280 Columbus Ave., San Francisco, Calif.
Original application Dec. 16, 1957, Ser. No. 703,213, now Patent No. 3,057,423, dated Oct. 9, 1962. Divided and this application Oct. 13, 1960, Ser. No. 62,350
4 Claims. (Cl. 254—93)



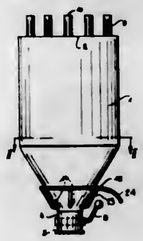
1. A hydraulic jack comprising a hydraulic cylinder, a piston dividing said cylinder into two chambers, a scissors type jack having pivoted parallelogram jacking arms with top, bottom, and horizontally opposite central pivots, and a horizontal bar connected to said piston and connected to the said central pivot furthest from the cylinder for raising the jack by moving the two central pivots toward each other, and means for establishing hydraulic pressure in either said chamber, for positive action on both sides of said piston, the end of said cylinder distant from said jack having a first grip, said bar being provided with a second grip at its outer end and two separate flexible elements, each of said grips being adapted to engage one flexible element for serving as a power come-along to pull a vehicle when one of said grips is attached to said vehicle by one said flexible element and the flexible element connected to the other said grip is anchored to a suitable stationary object, said jack serving to support said cylinder and rod when said flexible elements are slack.

3,097,827
HOSE GUIDE
Gerald E. McDaniel, 125 Front St., Trumann, Ark.
Filed July 24, 1961, Ser. No. 126,211
4 Claims. (Cl. 254—190)



1. A hose guide adapted to be positioned adjacent a vehicle wheel comprising a base including a front portion, a pair of legs divergingly extending from opposite ends of said front portion in the same plane, spindles, having sleeves rotatably mounted thereon, secured to opposite ends of said front portion and extending angularly upwardly therefrom, said front portion being in abutting relation to the wheel and said legs having portions thereof engageable with the periphery of the wheel at spaced points when the hose guide is in an operative position, and said spindles being in parallel spaced relation to the side of the wheel.

3,097,828
METHOD AND APPARATUS FOR MIXING PULVERULENT OR FINE-GRAIN MATERIAL
Gustav Grün, 73 Ortenberger Strasse, Lissberg, Germany
Filed Apr. 28, 1959, Ser. No. 809,404
Claims priority, application Germany Apr. 30, 1958
4 Claims. (Cl. 259—4)



1. An apparatus for mixing pulverulent materials of different specific gravity, comprising, in combination,
- a cylindrical container providing a single mixing chamber,
- a roof for said container and having air outlet filter means,
- a downwardly narrowing conical portion at the lower end of the container and having an outlet,
- an annular series of nozzles disposed in said conical portion, said nozzles discharging obliquely to the axis of the cylindrical container,
- and air pulsing means connected to said nozzles to create successive waves of air pressure of short duration with relatively quiescent materials settling intervals therebetween,
- whereby, the material in the container is alternately whirled upwardly in the form of a vortex by each pressure wave to mix and distribute the material throughout the cylinder, and the intervals between successive waves cause the material to settle toward the bottom of the container as pressure in the chamber reaches equilibrium due to the pulsing pressure passing through said filter means before the next wave begins.

3,097,829
ROOF SUPPORT IN MINES
Jeffrey William Seddon, Standish, England, assignor to Gullick Limited, Wigan, England, a company of Great Britain
Filed Jan. 12, 1960, Ser. No. 1,989
Claims priority, application Great Britain Jan. 16, 1959
7 Claims. (Cl. 262—1)



5. In combination with a coal conveyor, a self-advancing mine roof support located on one side of said conveyor and comprising two support members positioned in side-by-side relationship and movable independently towards the conveyor and each having hydraulically extensible prop means whereby it can be secured between floor and roof, a pair of hydraulic ram cylinders, means securing one of said ram cylinders to each of said support members, a ram proper working in each of said ram cylinders and directed for movement towards and away from said conveyor, an anchorage on the conveyor opposite said rams proper, and a flexible member connecting the two rams proper together and looped around said anchorage and having a length equal to the distance from the forward ends of the rams proper extending about the anchorage.

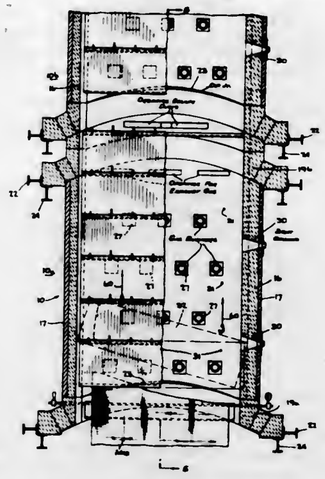
3,097,830
MINING METHODS AND SYSTEMS INCLUDING CAVING TO RELIEVE PRESSURE
Robert F. Love, Rowayton, Conn., and Thomas S. Bernatis, Rock Springs, Wyo., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 60,054
4 Claims. (Cl. 262—1)



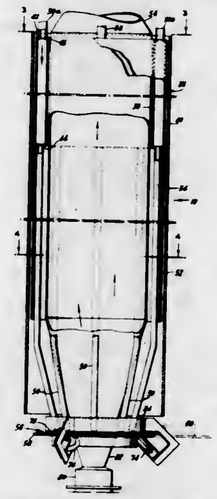
2. The method of mining trona and relieving overburden pressure in the mining operation which comprises driving two adjacent rooms into the trona bed between the active mining area and the unmined trona area, the said rooms being close enough so that upon caving the room adjacent the unmined trona area the overburden pressure will be reduced to avoid unplanned, premature caving in the active mining area, caving the room adjacent the unmined trona area and, mining the pillars in the active mining area from the uncaved room.

3,097,831
MUFFLE FURNACE
Horace L. Smith, Jr., Richmond, Va., assignor, by mesne assignments, to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Aug. 31, 1960, Ser. No. 53,192
3 Claims. (Cl. 263—3)

2. In a furnace of the class described, a housing having vertical recesses in opposed side walls thereof, means for advancing a material web to be treated vertically through said housing, heat generating means for raising the temperature within said housing to a desired level, a series of heat radiating plates having mutually cooperating means at the upper and lower edges thereof rendering adjacent plates removably dependent one from another and separable by vertical movement of a lower plate relative to the next upper adjacent plate, said plates when assembled forming a vertical partition in said housing and separating said advancing material from said heat generating means, said plates extending across said housing and into said vertical recesses and being so dimensioned relatively to the width of said furnace and the depth of said recesses as to enable said plates to be cocked in a vertical plane and removed from said recesses.



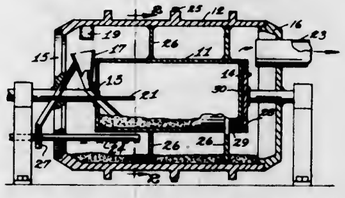
3,097,832
FURNACE FOR EXPANDING PERLITE AND SIMILAR SUBSTANCES
John B. Murdock, 15 Runnemede Ave., Lansdowne, Pa., and Herbert A. Stein, R.D. 2, Station Road, Glen Mills, Pa.
Filed Dec. 21, 1960, Ser. No. 77,354
16 Claims. (Cl. 263—21)



9. A feeder for feeding perlite granules into a furnace, comprising a multiplicity of essentially vertical ducts, means for constantly filling the upper ends of said ducts with perlite granules, a rotating disc located below the bottom of the said ducts, a burner, a central hole in said rotating disc through which passes the flame and hot

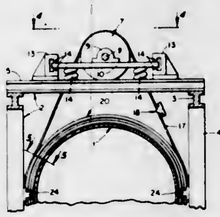
gases from the burner, and means for moving said perlite granules off said rotating disc into the flame.

3,097,833
ROTARY REACTION KILN
Frederick John Harris, Leith, Edinburgh, Scotland, and George Ellis Boughey, Chester, England, assignors to Scottish Agricultural Industries Limited, Edinburgh, Scotland, a corporation of Great Britain
Filed Mar. 17, 1961, Ser. No. 96,590
Claims priority, application Great Britain Mar. 18, 1960
10 Claims. (Cl. 263—32)



1. Kiln for reacting a solid material with a reactant to provide an uncontaminated gaseous product or the like, comprising: a first drum rotatably mounted on a substantially horizontal axis; a second drum mounted within said first drum in generally concentric relationship; stationary closure plates associated with both ends of said inner drum and with at least one end of said outer drum; means associated with the stationary plates of said inner drum for providing a transfer of solids between said inner drum and said outer drum during rotation thereof while providing a seal between the atmospheres of said drums in cooperation with the solids being transferred; means for introducing reactant into one of said drums; duct means for exhausting gas from said outer drum; and duct means fixed to adjacent stationary plates of said inner and outer drum for exhausting gas from said inner drum.

3,097,834
WIRE ROPE CONNECTOR AND KILN STRUCTURE
George P. Hurst, 719 Northampton Ave., Palo Alto, Calif.
Filed Jan. 18, 1962, Ser. No. 167,076
12 Claims. (Cl. 263—33)



10. A connector for connecting a plurality of wire ropes that are adapted to extend around a sheave and cylinder for suspending such cylinder therefrom for rotation of the latter said connector comprising:

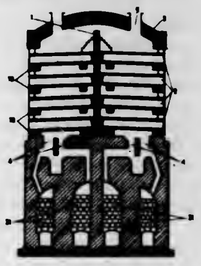
(*a*) a body formed with separate pairs of passageways of corresponding shape, size and positions in which said pairs are in side by side relation in a row of parallel planes,

(*b*) each pair of passageways opening oppositely outwardly of the same side of said body for receiving therein the opposite end portions of said wire ropes when the portions of said ropes adjoining the open ends of said passageways and extending away from said body are in axial alignment,

(*c*) the passageways of each pair being curved oppositely away from said open ends and from each other,

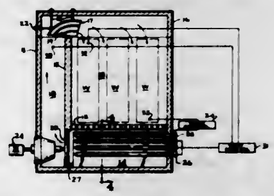
(*d*) means for securing the end portions of each of such ropes within said passageways against withdrawal from said open ends thereof.

3,097,835
HEATING OF ZINC OVENS
Albert André Joseph Quintin, Overpelt, Belgium, assignor to Compagnie des Metaux d'Overpelt-Lommel et de Corphalie, S.A., Overpelt-lez-Neerpelt, Belgium
Filed Apr. 21, 1961, Ser. No. 104,710
Claims priority, application Great Britain June 14, 1960
6 Claims. (Cl. 263—37)



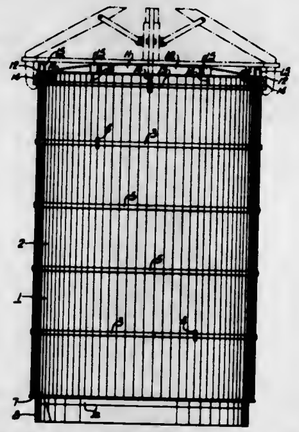
1. A process for heating zinc ovens having an enclosure in which a plurality of retorts is provid.d between which incandescent gases pass which heat the surfaces of the retorts, which comprises moving combustion air in an upward direction between the retorts, while injecting liquid fuel in a downwards direction between the retorts in jets, controlling the diameter of the jets of liquid fuel and the speed of the jets to allow the liquid fuel to be substantially completely converted into vapor state under the combined effect of the contact with the incandescent gases and of radiation of the hot surfaces of the retorts before they reach the floor of the oven, thus avoiding carbonaceous deposits upon the inner surface of the oven or the retorts.

3,097,836
INGOT HEATING FURNACE
Donald Beggs and William A. Phillips, Toledo, Ohio, assignors to Midland-Ross Corporation, Toledo, Ohio, a corporation of Ohio
Continuation of application Ser. No. 817,901, June 3, 1959. This application May 18, 1962, Ser. No. 199,557
8 Claims. (Cl. 263—41)



5. A furnace for heating elongate metal billets to a substantially uniform predetermined temperature comprising in combination: wall means forming a heating chamber for the billets to be heated, said chamber having a first opening and a second opening disposed vertically from said first opening; support means disposed generally horizontally within said chamber and adjacent the bottom thereof for supporting a plurality of billets disposed generally vertically within said chamber; duct means connecting said second opening to said first opening and forming a generally closed recirculating path with said chamber; recirculating means for recirculating a mosphere through the generally closed path vertically through said chamber from said first opening to said second opening and thence back to said first opening through said duct; first heating means in said duct means for supplying heat to said recirculating atmosphere wi hout direct radiation to said billets; a temperature controller comprising a temperature sensing element within said closed path and adjacent said first opening for regulating the heat input from said first heating means in response to the temperature sensed by the sensing means; second heating means adjacent said second opening for radiating heat to said billets; and regulating means for regulating the rate at which heat is radiated from said second heating means to said billets independently of the rate at which heat is supplied by the first heating means to the recirculating atmosphere.

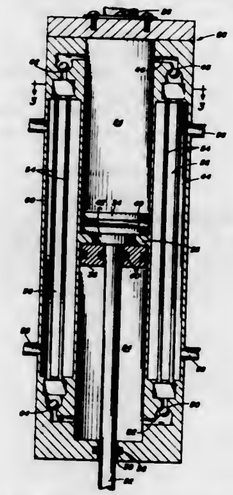
3,097,837
INNER COVER FOR ANNEALING FURNACES
Morris L. Jacob, Pittsburgh, Pa., assignor to Pittsburgh Annealing Box Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 3, 1961, Ser. No. 86,995
7 Claims. (Cl. 263—49)



1. An inner annealing cover for an annealing furnace, comprising, in combination, a substantially vertical enclosure wall forming a complete perimeter and enclosing a space, a top secured to the upper end of said wall to close the upper end of said space, a substantially perimetral lifting member in surrounding and laterally spaced adjacency to said wall, and a plurality of perimetrally spaced supports secured to said wall adjacent said top and having their respective lower parts secured to said lifting member.

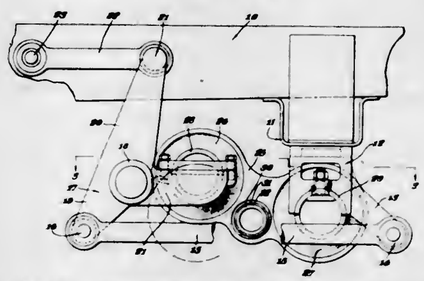
3,097,838
PNEUMATIC HEAT TRANSFER TYPE AIR DAMPER
Zenas B. Andrews, Los Altos, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 27, 1961, Ser. No. 92,111
6 Claims. (Cl. 267—1)

1. A gas filled shock absorber for use in damping the relative movement of two members comprising, a housing enclosing a working chamber wherein is contained a piston in slidable engagement having a connecting means attached thereto and extending through an end of said housing, a heat exchanging passage external of said chamber forming a connection between the opposite ends of said working chamber, a second chamber surrounding said heat exchanging passage having means for circulating



a heat absorbing fluid around said heat exchanging passage whereby damping is effected by absorption of internal energy within the gas.

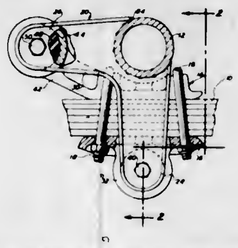
3,097,839
VEHICLE SPRING SUSPENSION SYSTEMS
Archie John Hirst, Leicester, England, assignor to Metalastik Limited, Leicester, England, a British company
Filed Feb. 28, 1961, Ser. No. 92,369
Claims priority, application Great Britain Mar. 22, 1960
14 Claims. (Cl. 267—11)



1. An axle suspension for a road vehicle, comprising an axle casing extending transversely of the vehicle between a pair of road wheels of the vehicle, one on each side of the vehicle, a pair of suspension links extending longitudinally of the vehicle on the same side of the axle casing, said suspension links being spaced apart transversely of the vehicle one on each side of the vehicle, a pivot member connecting one end of each of said suspension links with said axle casing about a transverse pivot axis, a pivot member connecting the other end of each of said links with the vehicle chassis about a transverse pivot axis, at least one of the pivot members associated with each suspension link being of rubber or the like material to resist angular displacement of the suspension link in torsion in the rubber, means interconnecting the vehicle chassis and the axle casing towards each end of the axle casing, said means constraining the axle casing to move relatively to the chassis along a predetermined deflection path under the action of vertical loads on the wheels and,

over at least an upper part of the normal loading range of the vehicle and on overload, subjecting the suspension links to lengthwise tension placing the rubber pivot members in compression in the lengthwise direction of the suspension links, and a structural member extending between and connected at one end to one of the suspension links between the pivot members of the link and at its other end of the other of said suspension links between the pivot members of the link to stiffen the suspension against transverse displacement of the vehicle chassis relative to the axle casing and to increase the roll stiffness of the suspension.

3,097,840
SPRING MOUNTING MEANS
Jacques Bajer, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 1, 1960, Ser. No. 40,270
7 Claims. (Cl. 267—52)



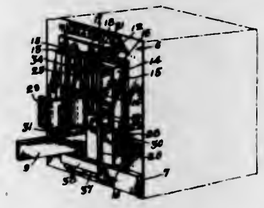
7. A vehicle suspension system having sprung and unsprung components, a suspension means interconnecting said sprung and unsprung components and adapted to permit both jounce and rebound movement and fore and aft movement of said unsprung components relative to said sprung components, said suspension means including a member connected to said sprung components and extending in a direction towards said unsprung components, said member having a portion adapted to traverse a substantially vertical jounce and rebound path, bracket means secured to said unsprung components, said bracket means having first and second arms connected to vertically spaced upper and lower parts of said portion respectively, said last mentioned connections being of the elastic pivot type.

3,097,841
COIL EXPANDER
Dewey D. Boyd, 3702 Lenore Way, North Highlands, Calif.
Filed June 24, 1960, Ser. No. 38,616
2 Claims. (Cl. 267—60)



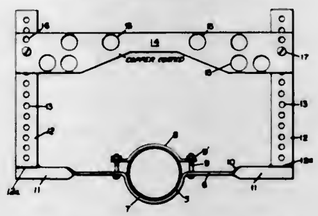
1. A coil expander comprising:
(*a*) a pair of opposed elongated wedge elements each substantially traingular in longitudinal section including an apex and a base, and substantially rectangular in transverse section, each of said wedge elements including a planar outer surface extending from the outer edge of said base to said apex and interrupted by a transverse groove, each of said wedge elements further including an inner camming surface having an arcuate portion adjacent said apex and a planar portion merging smoothly with said arcuate portion and extending to the inner edge of said base, said inner camming surface being interrupted by a central longitudinal groove;
(*b*) a bolt including a generally rectangularly shaped head having one pair of camming sides parallel to and in engagement with said inner camming surfaces of said wedge elements, said bolt further including an arcuate neck portion shaped to conform with said arcuate portions of said inner camming surfaces of said wedge elements, and a stem extending longitudinally between said wedge elements in registry with said central longitudinal grooves, said stem having a threaded portion projecting beyond said bases of said wedge elements, said wedge elements being disposed on opposite sides of said bolt with one pair of said sides of said bolt head and said outer surfaces of said wedge elements together forming in closed position of said wedge elements a susbtantially continuous, uninterrupted wedge-shaped member beginning at said head and extending along said outer surfaces to said transverse grooves; and
(*c*) a nut engaged on said threaded portion of said nut and bearing against said bases of said wedge elements for translating said bolt and said head toward said bases and for thereby camming apart said wedge elements about said bases as fulcrums.

3,097,842
BI-PARTING DOORS FOR TRACK PORT
Fortune Odend'hal, Hagerstown, Md., assignor to Jamison Cold Storage Door Company, Hagerstown, Md., a corporation of Maryland
Filed Nov. 5, 1957, Ser. No. 694,552
4 Claims. (Cl. 268—14)



3. In combination, a bracket, two pairs of spaced substantially parallel links suspended from the front edge of the bracket, a door pivotally supported from each pair of links, the outer links of each pair having depending free ends extended to the bottom of said doors for engagement with deflecting means.

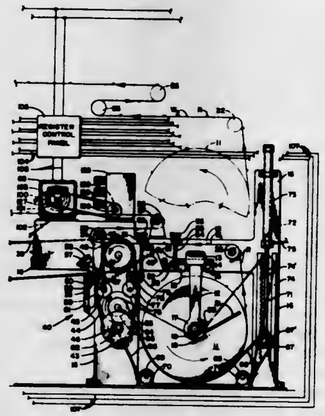
3,097,843
POSITIONING AND MAINTAINING DEVICE FOR ROUGHED-IN SERVICE PIPES
Robert C. Morrow, 725 S. 21st St., Paducah, Ky.
Filed Dec. 6, 1962, Ser. No. 242,883
4 Claims. (Cl. 269—40)



1. In a position maintaining structure for the roughed-in water supply pipes of a plumbing fixture, an elongated

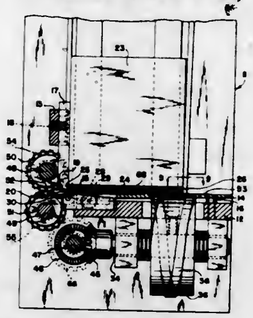
member having means whereby it may be securely mounted upon the waste pipe for such fixture, a rigid strap extending perpendicularly from each end of said member, a plate spanning the space between said straps, and means for adjusting said plate along said rigid straps, said plate having a plurality of water pipe receiving openings therethrough of a size to receive and temporarily position pipes being roughed in.

3,097,844
AUTOMATIC WEB REGISTER CONTROLS
William F. Huck, Forest Hills, N.Y., assignor, by mesne assignments, to William F. Huck, doing business as Huck Company, New York, N.Y.
Filed Sept. 17, 1959, Ser. No. 840,744
43 Claims. (Cl. 270—52)



1. In a machine for feeding at least one continuous web provided with register marks at spaced apart locations therealong from a source thereof in a predetermined timed relationship and in register with respect to a function performed at a station of the machine to which the web is to be fed continuously, the combination of:
guiding means engageable with the web and defining a feeding path for the latter extending from the source of the web to said station
variable speed drive means controlling the speed of movement of the web along said path
web displacing means moveable to vary the length of the portion of said path between said drive means and said station and thereby cause displacement of the web along said path
means for detecting said register marks as they pass through a predetermined point in said path at which a predetermined positional relationship of said marks to said point corresponds to correct register between the web and said station
means for generating signals at a uniform frequency synchronized to the rate of performance of said function
and register control means responsive to signals from said detecting means and to the signals from said generating means and operative upon variations of the relationship in time of the respective signals, corresponding to deviations of the positions of said marks relative to said point from said predetermined positional relationship, to vary the speed of said drive means and simultaneously move said web displacing means in the sense for restoring said positional relationship, whereby to correct any substantial errors of registration.

3,097,845
FORM FEEDER
Arthur J. Federkiel, 23135 Maybelle Drive, Westlake, Ohio
Filed Apr. 12, 1962, Ser. No. 187,057
14 Claims. (Cl. 271—41)



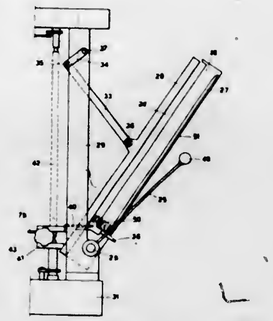
1. A mechanism for feeding substantially flat forms from one end of a stack comprising, in combination, a frame,
a rotatable shuttle wheel journalled relative to said frame,
a cam surface in a generally helical form on said shuttle wheel,
said cam surface having an integral number of cycles per revolution of said shuttle wheel and having an active portion and a passive portion together forming one cycle,
means on said frame defining a reference plane,
means to urge a stack of substantially flat forms flatwise toward said reference plane,
means defining a discharge throat at an angle to said reference plane,
each of said forms having first and second edges with a first edge of each form adjacent said throat,
means exposing beyond said reference plane a drive abutment portion of said active portion generally perpendicular to said reference plane by an amount substantially equal to the thickness of one of said forms,
and means effecting drive of the second edge of the form contiguous with the reference plane in a direction through said throat in accordance with movement of said drive abutment portion relative to said throat upon rotation of said shuttle wheel.

3,097,846
DEVICES FOR UNLOADING ADDRESS PLATES ON ADDRESSING MACHINES
Ivo Spiazzi, Milan, Italy, assignor to Fabbrica Italiana Macchine Aziendali, Milan, Italy, a company of Italy
Filed Dec. 8, 1961, Ser. No. 157,917
Claims priority, application Italy Dec. 16, 1960
7 Claims. (Cl. 271—88)

1. In an addressing machine including a horizontally disposed table, and means for conveying address plates one by one past a printing station on said table to at least one discharge openipg in said table, means beneath said table for collecting the address plates one above another as they fall through said opening, comprising
(*a*) at least one guide member extending downwardly beneath said table,
(*b*) a vertically movable platform mounted beneath said table in registry with said opening in said table,
(*c*) means mounting said guide member adjacent the lower end thereof for limited pivotal movement about a horizontal axis between a first position in which said member is positioned vertically beneath said

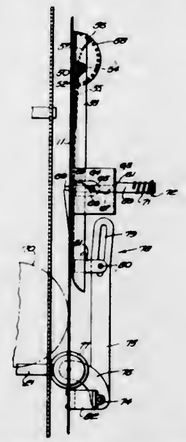
opening and a second position in which said member is inclined from the vertical, and

(*d*) means for removably supporting beneath said table for pivotal movement with said guide member, a plate-holding tray having a plate receiving opening at its top at least as long as the stack of plates collectable on said platform,



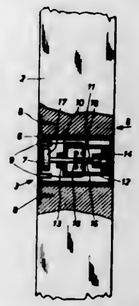
(*e*) said guide member, when in said first position, being operative to guide a plate onto said platform as it falls through said opening, and being operative, upon the pivoting thereof from said first to said second position, to engage the plates stacked on said platform and to push the plates off of said platform and into a plate-holding tray.

3,097,847
BOWLING PIN AND BALL KICKER
Thomas M. Di Stefano, 10 Brook St., and Nicandro Pistacchio, 5 Newton St., both of North Providence, R.I.
Filed May 12, 1961, Ser. No. 109,779
8 Claims. (Cl. 273—43)



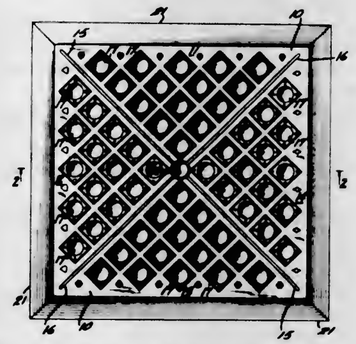
1. In a bowling pin setting machine a lifting mechanism for balls and pins comprising opposite upwardly moving lifting bars, said bars cooperating to engage between them balls and pins to be lifted, a ball kick-off mechanism comprising a member pivoted to swing between said opposite bars, a spring urging the member to swing about its pivot into the path of travel of a ball, latch means to hold said member against the action of said spring, and trigger means in the path of movement of a ball only to be engaged thereby to release the latch and permit said member to swing under the action of said spring to move a ball from the lifting mechanism.

3,097,848
SHOOTING INSTALLATION
Cesar Massa, Klingnau, Switzerland, assignor to Aktiengesellschaft Conrad Zschokke, Zweigniederlassung Dottingen, Dottingen, Switzerland
Filed Oct. 27, 1959, Ser. No. 849,023
Claims priority, application Switzerland Oct. 29, 1958
11 Claims. (Cl. 273—102.2)



1. A shooting installation for practice with arms, comprising a target, an indicating device for indicating hits on said target by a missile from said arms, a pulse switch controlling said indicating device, said pulse switch comprising a pair of cooperating switching elements, one of said switching elements being rigidly connected to the target and the other of said switching elements being movably guided with respect to the first switching element, a mass, said other switching element being connected for movement with said mass, said one switching element being in front of said other switching element in the direction of shooting so that the impact of said missile accelerates said target and said one switching element while said other switching element remains initially at rest due to the inertia of said mass whereby an initial relative movement is effected between said switching elements, which relative movement causes energization of said indicating device.

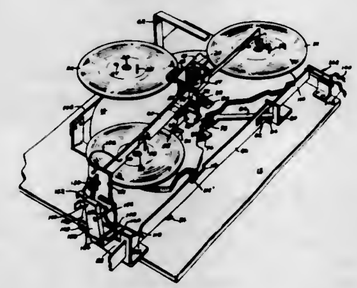
3,097,849
PUTTING GAME
Everett M. Rice, R.F.D. 1, Rexford, N.Y.
Filed July 15, 1960, Ser. No. 43,138
4 Claims. (Cl. 273—180)



1. An apparatus for playing a putting game comprising a gameboard having a flat, square member mounted on a baseboard within a four-sided frame to provide a golf putting area, said square member extending into and having its edges overlapping adjacent portions of said frame, the frame having four flat beveled edges of equal width so inclined that a golf ball can be made to roll

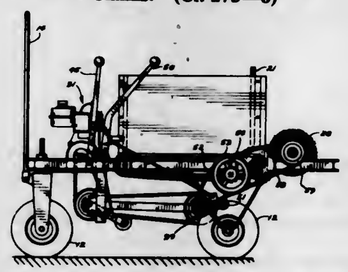
smoothly onto the surface of the board without bouncing when the apparatus is placed on a substantially flat surface, two diagonal marks on the square member which divide the member into four substantially equal triangular areas, an equal number of recesses formed in each of the triangular areas and one recess formed in the center of the square member substantially at the intersection of the two diagonal marks, and a distinctive marking on each recess in each of the triangular areas.

3,097,850
PHONOGRAPH RECORD-CHANGING APPARATUS
Alfred Curci, 183 London Drive, Hamden, Conn.
Filed June 7, 1960, Ser. No. 34,504
10 Claims. (Cl. 274—10)



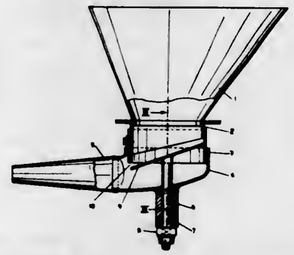
1. In a phonograph record-changing apparatus including a rotatably supported carriage, a plurality of record turntables mounted on said carriage such that each turntable may be brought into a record-playing position by rotational movement of said carriage, and a sound-reproducing element movable into and out of sound-producing engagement with a record on the turntable in said record-playing position, the combination therewith of a reciprocating element supported for reciprocal movement with respect to the turntable in said record-playing position, said reciprocating element having means for moving said sound-reproducing element out of engagement with said record upon movement of said reciprocating element in one direction, and means for moving said reciprocating element in said direction prior to rotation of said carriage for selecting another record.

3,097,851
DIRT METERING AND SPREADING MACHINE
Arthur H. Cohrs, 124 5th Ave. N., and Bennett I. Larson, 37 7th Ave. S., both of Hopkins, Minn.
Filed Nov. 28, 1960, Ser. No. 71,955
4 Claims. (Cl. 275—8)



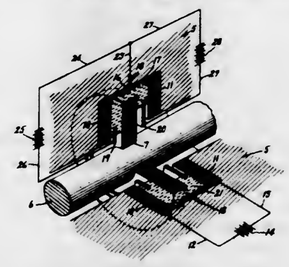
1. Apparatus for discharging predetermined metered quantities of black dirt onto a golf green or the like, said apparatus comprising a hopper, an endless conveyor assembly having an upper run forming the bottom of said hopper, a downwardly curved discharged deck disposed at the rear end of said conveyor and overlying the same adjacent the top thereof, said hopper having a rear portion with the lower end thereof terminating in spaced relation above the discharge deck to define a discharge opening through which the dirt is moved by said conveyor, a rotary generally cylindrical brush disposed rearwardly of the downwardly curved portion of the deck with the axis thereof lying substantially in the plane of the upper run of the conveyor and being driven at a predetermined rate with a peripheral portion thereof disposed in close association to the depending portion of said deck travelling downwardly to positively meter and spread the dirt delivered by said conveyor through said opening.

3,097,852
OSCILLATORY SPREADER FOR GRANULAR OR PULVERIZED MATERIALS
Cornelis J. Steketee, 11 Korteweg, Driewegen (Z.B.), Netherlands
Filed Feb. 1, 1962, Ser. No. 170,375
Claims priority, application Netherlands Mar. 6, 1961
6 Claims. (Cl. 275—8)



1. In an apparatus for spreading or sowing granular or pulverized materials having a hopper supported by a traveling frame and from which the material is discharged by a spreading member located below the cylindrical outlet mouth of the hopper and being rotated or angularly reciprocated about a vertical axis, the improvements comprising a disc secured on the vertical axis of the spreading member at an inclination with respect to said axis and in the outlet mouth of the hopper, said disc on part of its circumference extending below the lower edge of the outlet mouth of the hopper to provide a discharge slot, and said lower edge of the hopper outlet mouth at least on part of its circumference being located in a plane perpendicular to said axis of the spreading member.

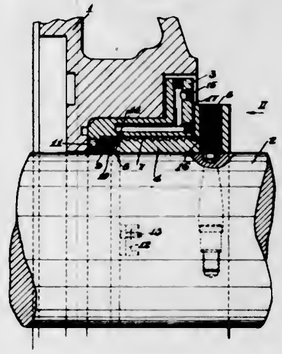
3,097,853
DYNAMIC SEAL
James D. McHugh, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 29, 1961, Ser. No. 141,682
7 Claims. (Cl. 277—13)



1. In a seal, the combination of first member having means defining a channel, an electrically conductive fluid

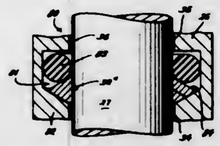
located in said channel, a second member extending into the channel, said first and second members being adapted to move relative to one another, means for passing an electric current through said fluid, and means for passing magnetic lines of force in a direction substantially normal to the current for electromagnetically propelling the fluid.

3,097,854
SHAFT PACKING GLAND
Herbert Kaiser, Heaton Moor, Stockport, England, assignor to Francis Shaw & Company Limited, Manchester, England, a British company
Filed June 9, 1960, Ser. No. 34,966
Claims priority, application Great Britain June 17, 1959
4 Claims. (Cl. 277—24)



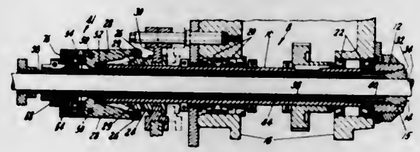
1. A shaft gland for an internal mixer for rubber or plastic material, said mixer including a housing and a shaft, said gland comprising an elongated packing member adapted to be secured to and to rotate with the shaft with one end disposed within the housing, an elongated stationary gland bush disposed in the housing surrounding the packing member and spaced therefrom, said packing member having a helical groove on its outer surface, a ring of radial teeth on said one end of the packing member, and radial teeth on said bush in facing spaced relationship with and adapted to cooperate with the teeth on said packing member to grind and reduce material passing between said teeth, said material flowing outwardly between said packing member and said bush.

3,097,855
SEALING ARRANGEMENT
George H. Allen, La Porte, Tex.
Filed June 26, 1959, Ser. No. 823,255
5 Claims. (Cl. 277—188)



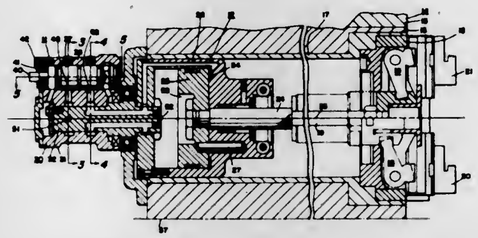
1. A sealing arrangement for sealing between one member and another member including, a combination seal and back-up ring for positioning in an annular groove of said one member to seal with said other member, said seal and back-up ring having a configuration to provide a surface for seating on one surface of said groove and a surface for seating against said other member, said seal and back-up ring having a circumferential slit which extends from said ring surface seating in said groove to said ring surface seating against said other member, and said circumferential slit forming circumferentially extending portions which seal on surfaces defined by said circumferential slit, and said portions sealing against said groove surface and said surface on said other member, and an annular sealing member positioned in said groove and resting on said back-up ring.

3,097,856
CHUCKING MECHANISM
Roger W. Brown, Windsor, Vt., assignor to Cone Automatic Machine Company, Inc., Windsor, Vt., a corporation of Vermont
Filed May 12, 1961, Ser. No. 109,774
7 Claims. (Cl. 279—4)



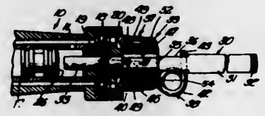
1. A chucking mechanism for use with a spindle assembly having a collet support and a collet adapted for relative rectilinear movement therein in stock-locking and releasing directions, comprising, a cylinder and a piston therein reciprocably mounted for movement along the axis of relative movement of the collet, means operably connecting the piston and the collet assembly and moving the collet relative to the spindle in the stock-locking direction upon movement of the piston in one direction, an hydraulic fluid disposed in the cylinder and adapted when under pressure to create a force on the piston in said one direction, means for moving the cylinder in said one direction for pressurizing the fluid, and a pressure relief valve connected to the cylinder limiting the maximum pressure of the hydraulic fluid.

3,097,857
CHUCKING CYLINDER VALVE
William F. Morgan, Euclid, Ohio, assignor to The National Acme Company, a corporation of Ohio
Filed Feb. 26, 1962, Ser. No. 175,717
13 Claims. (Cl. 279—4)



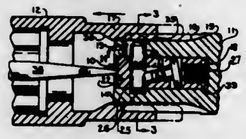
1. In a rotatable machine tool spindle having a chuck, the provision of, a fluid actuator coaxial with and rotatable with the spindle,
means to connect said fluid actuator to a chuck mechanism for axial movement thereof to perform chucking operations with movement of said fluid actuator in one direction closing an external chuck and opening an internal chuck,
a distributor having two relatively rotatable parts with one part being coaxial with said axis of rotation and connected for rotation with said fluid actuator,
a valve fixed relative to one of said distributor parts and having a valve housing with control port means,
conduit means connecting said control port means with a chamber at one end of said fluid actuator,
said valve having a valve spool in said valve housing,
inlet port means in said valve housing communicating with said valve spool,
said valve spool being movable between first and second positions,
and duct means in said valve spool selectively connecting said inlet port means to said control port means with said valve spool in said first and second positions.

3,097,858
ADAPTER AND RETAINER ASSEMBLY FOR NON-ROTARY TOOL ELEMENTS USED WITH A ROTARY-HAMMER DEVICE
Oliver O. Amundsen, Chicago, and Richard H. Koclan, Rolling Meadows, Ill., assignors to Skil Corporation, Chicago, Ill., a corporation of Delaware
Filed May 11, 1961, Ser. No. 109,409
10 Claims. (Cl. 279—19.1)



1. An adapter and retainer assembly for the nose of a rotary-hammer device for preventing rotation of a tool element mounted in the device for hammer-like actuation only, said assembly comprising, an adapter member adapted to be disposed against the nose of the device and having means associated therewith adapted for engagement with a tool element mounted in the device in a manner preventing rotation of the tool element during hammer-like actuation thereof, and a tool retainer separate from said adapter member mounted on the nose of the device with a portion thereof being adapted for retaining said adapter against the nose of the device.

3,097,859
DETENT COUPLING MEANS FOR SOCKET OF ROTARY POWER TOOL
William F. Sindelar, Seven Hills, Ohio, assignor to Master Power Corporation, Solon, Ohio, a corporation of Ohio
Filed Nov. 13, 1961, Ser. No. 151,880
16 Claims. (Cl. 279—97)

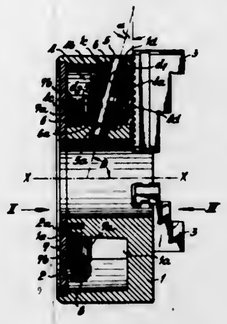


1. Detent coupling means for the socket of a rotary tool, comprising:
(*a*) a shank;
(*b*) said shank having a forward face and further having an external surface;
(*c*) a socket slidably received upon said shank;
(*d*) means forming a rotative engagement between said shank and said socket;
(*e*) said shank having an axial opening terminating at said forward face of said shank;
(*f*) said shank further having a transverse opening leading from said axial opening to said external surface of said shank, said transverse opening being axially spaced rearwardly from said forward face of said shank, and said transverse opening including a rearward portion and further including a forward wall;
(*g*) a detent carrying member slidably received in said axial opening in said shank and accessible internally of said socket, said detent carrying member having a normal position and a depressed position in said axial opening of said shank;
(*h*) said detent carrying member having a through transverse opening;
(*i*) a detent slidably received in said through transverse opening of said detent carrying member;
(*j*) said shank further having an internal pocket communicating with said axial opening in said shank and axially spaced rearwardly from said forward face of said shank, said internal pocket being disposed circumferentially opposite from said rearward portion of said transverse opening in said shank;
(*k*) a ledge formed within said shank coterminous with said axial opening of said shank, said ledge being adjacent to said internal pocket and forwardly therefrom;
(*l*) yieldable means to urge said detent carrying member out of said axial opening in said shank, whereby in the normal position of said detent carrying member, said detent is in its normal position resting upon said ledge and passing through said detent carrying member to be disposed against said forward wall of said transverse opening in said shank and to protrude beyond said external surface of said shank, and whereby in the depressed position of said detent carrying member, said detent is in its retracted position, being received within said internal pocket and being retracted in said transverse opening of said detent carrying member to be disposed below said external surface of said shank;
(*m*) means in said axial opening of the shank to automatically return said detent from its retracted position to its normal position; and
(*n*) said socket having a first abutting surface and a second abutting surface, and said means forming a rotative engagement between said socket and said shanks being intermediate said first and second abutting surfaces, whereby as said socket is initially received upon said shank, said first abutting surface engages said detent and moves said detent carrying member from its normal position to its depressed position, said detent thereby moving into its retracted position to allow said socket to be slidably received upon said shank, said second abutting surface of said socket thereafter engaging said detent to preclude an inadvertent removal of said socket from said shank when said socket is fully received upon said shank, and whereby, to remove said socket from said shank, said detent carrying member is depressed internally of said socket to move said detent into its retracted position.

3,097,860
CHUCK FOR MACHINE TOOLS
Heribert Feldhoff, Helmgartenstrasse 7, Dillingen (Danube), Germany
Filed May 8, 1961, Ser. No. 108,473
11 Claims. (Cl. 279—113)

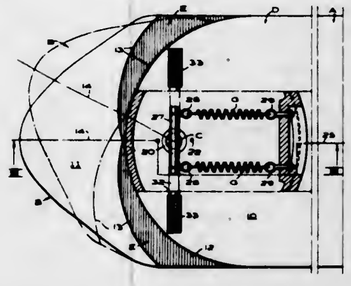
1. A chuck for machine tools comprising a substantially cylindrical housing having elongated, radially extending apertures in one end wall thereof forming guide surfaces, at least two clamping jaws having rack teeth thereon slidably mounted within said apertures and guided by said guide surfaces, a spur bevel gear rotatably mounted with and coaxially to said housing and also hav-

ing peripheral worm gear teeth thereon, at least two intermediate gear units rotatably mounted within said housing and each comprising a conical worm meshing with said rack teeth on one of said jaws and a bevel gear



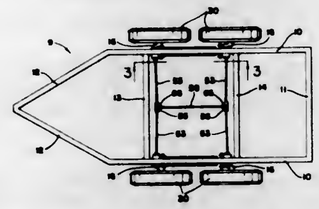
meshing with said spur bevel gear, the axis of rotation of each of said gear units extending at an acute angle to said guide surfaces for each of said jaws, and a worm rotatably mounted within said housing and meshing with said worm gear teeth on said spur bevel gear.

3,097,861
STEERABLE SLED PROVIDED WITH A RUDDER BOW
Stephen Allen Holcomb, 3608 E. 54th St., Maywood, Calif.
Filed Jan. 31, 1961, Ser. No. 86,179
2 Claims. (Cl. 280—21)



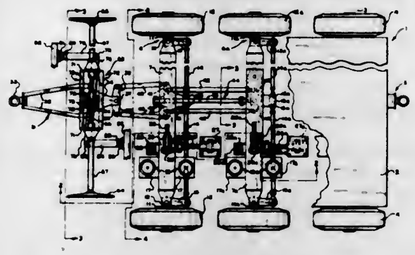
1. In a steerable sled provided with a rudder bow: a sled body defining a semi-cylindrical leading edge; a rudder bow disposed to extend ahead of the sled body and being swingably secured to the latter for horizontal swinging movement in either lateral direction about a vertical axis; the vertical axis acting as a pivotal axis for the rudder bow, said axis being spaced forwardly of the center of the circle defined by the leading edge; the rudder bow being fashioned with a pair of arcuate trailing edges, one being disposed on each lateral side of the longitudinal axis of the rudder bow; each of the arcuate trailing edges of the rudder bow having a radius equal to the radius of the circle defined by the semi-cylindrical leading edge and adapted to abut the semi-cylindrical leading edge of the sled body throughout the entire length of that arcuate trailing edge when the arcuate trailing edge is moved against said semi-cylindrical edge, when the rudder bow is swung about said vertical axis through a predetermined angular movement, thereby limiting the angular swinging movement of the rudder bow.

3,097,862
TRAILER STABILIZING AND SUSPENSION ASSEMBLY
Clyde V. Dye, 436 Wildwood Ave., Akron 20, Ohio
Filed Nov. 8, 1960, Ser. No. 68,014
8 Claims. (Cl. 280—104.5)



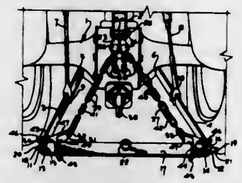
1. A trailer frame comprising, longitudinal frame members, journals on said longitudinal frame members, tandem floating axles journaled in said journals, lateral stiffening members between said longitudinal members, stabilizing rods laterally between said longitudinal members, pairs of anchor lugs extending beneath each journal, each said pair of lugs having a space therebetween adapted to receive an end portion of one of said stabilizing rods, a resilient filler in said space into which said rod imbeds, fastening means engaging said rod to said pair of lugs in which it is received, a tension rod connecting said stabilizing rods medially of said longitudinal frame members in an H-shaped assembly, application of tensile stress to said tension rod adapted to impart a tensile stress to said H-shaped assembly.

3,097,863
STEERABLE TRAILER VEHICLE
Ronald D. Moore, Saginaw, Mich., assignor to Saginaw Products Corporation, Saginaw, Mich., a corporation of Michigan
Filed Mar. 1, 1961, Ser. No. 92,548
13 Claims. (Cl. 280—445)



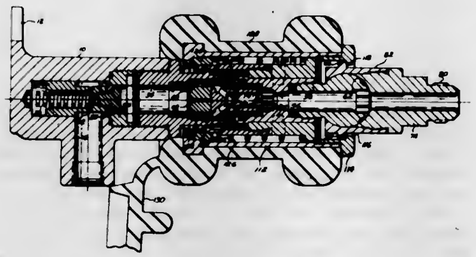
3. Steering apparatus for a vehicle comprising frame means; first swivelable axle means; first means yieldably suspending said first axle means from said frame means; second swivelable axle means; second means yieldably suspending said second axle means from said frame means in tandem with said first axle means; drawbar means; means pivotally mounting said drawbar means on said frame means; first motion transmission means interconnecting said drawbar means and said first axle means for swivelling the latter in response to pivoting of said drawbar means; second motion transmitting means interconnecting said first motion transmitting means and said second axle means for swivelling the latter in response to pivoting of said drawbar means; force transmitting means reacting between said frame means and said drawbar means for pivoting the latter; and support means interconnecting at least one of said yieldable suspension means to both of said first and second motion transmission means.

3,097,864
HITCH STABILIZER AND SUPPORT
George K. Snuggins, Box 25, Tiff City, Mo.
Filed Sept. 18, 1961, Ser. No. 138,784
2 Claims. (Cl. 280—474)



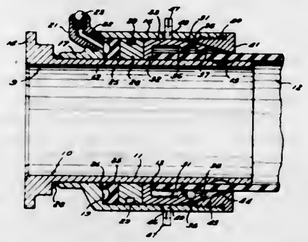
1. A hitch bar stabilizer and support device for use on a hitch for a tractor, said hitch being of the type having a pair of rearwardly diverging flexible tension members secured at one end respectively to the tractor and a pair of rearwardly extending drawbars pivotally connected to the tractor at the front ends thereof, the rear ends of said drawbars terminating in bosses having transverse bores therethrough, and a transversely extending hitch bar pivotally engaged at opposite ends thereof in said drawbar boss bores, said hitch bar being substantially rectangular in cross section between said drawbar bosses, said device comprising; a Y-shaped member having a first, a second and a third radially extending leg, said first leg having means forming a slot therethrough slidably receiving said hitch bar between said drawbar bosses and engaging said hitch bar for pivoting therewith, said second leg having means forming a slot therethrough slidably receiving one of said drawbar bosses and engaging the respective drawbar, said third leg being connected to the other end of one of said tension members, whereby said device stabilizes said hitch bar with respect to said hitch and prevents pivoting of said hitch bar about the longitudinal axis thereof.

3,097,865
QUICK RELEASE PIPE JOINT
Stanley H. Zeeb and Elmer R. Steinert, Jackson, Mich., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Apr. 8, 1959, Ser. No. 804,924
4 Claims. (Cl. 285—1)



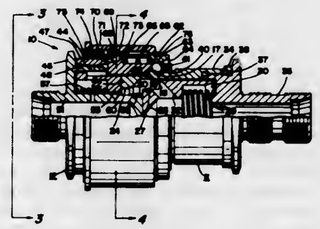
3. In a fluid coupling comprising first and second hollow body parts, locking means cammed by said body parts for maintaining said parts in interlocking, communicating relation, a universal swivel joint having a passageway therethrough affixed to said first body part and providing fluid communication therewith, a conduit fitting swivel mounted on said joint in communication therewith normally coaxial with respect to said first body part and means interconnecting the locking means carried by said first body part with the conduit fitting responsive to pivotal axial deflection of said fitting with regard to the axis of said joint whereby pre-determined deflection of said fitting will release the locking means of said first body part.

3,097,866
PRESSURIZED HOSE END
Richard N. Iversen, Mayfield Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 14, 1960, Ser. No. 68,974
2 Claims. (Cl. 285—18)



1. A hose coupling for attachment to the end of a hose comprising a sleeve adapted to fit over the end of the hose, a tubular insert secured within said sleeve and adapted to fit within the hose, said sleeve and said insert defining an annular chamber therebetween, an annular piston within said annular chamber and spaced from the end of the hose, an annular groove on the outer periphery of said piston, a clamping ring within said annular chamber, said clamping ring having a plurality of resilient fingers extending axially over the outer periphery of the hose, said sleeve having a conical cam portion engageable by the ends of said resilient fingers, means to admit fluid pressure from an exterior source into said annular chamber to apply an axial force to said annular piston to shift said piston and said clamping ring toward said cam portion whereby said cam portion forces said resilient fingers radially inward to grip the hose, and spring loaded detent means adapted to snap into said piston groove to retain said piston and said clamping ring in the clamped position, said detent means being releasable out of said groove to allow retraction of said piston and said clamping ring to release the hose.

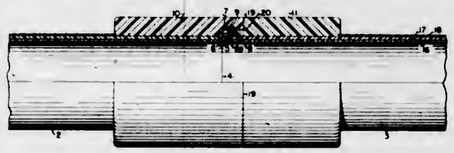
3,097,867
COUPLING
Edward E. Saloum, Corry, Pa., assignor to Snap-Tite, Inc., a corporation of Pennsylvania
Filed Apr. 13, 1961, Ser. No. 102,731
3 Claims. (Cl. 285—86)



1. A coupling for conducting fluid under pressure comprising male and female members, said female member having a bore for the reception of said male member, said male member having an annular locking groove on the outer surface thereof, said female member having circumferentially spaced sockets, balls in said sockets projectable into said locking groove when said male member

is inserted into said female member bore to lock said members in coupled condition, a primary locking sleeve surrounding and axially slidable on the outer surface of said female member and having an inclined surface for engagement with said balls whereby the fluid pressure in said coupling acts between said balls and said inclined surface exerting an axial component of force on said primary locking sleeve tending to unlock the same, spring means to constantly urge said primary locking sleeve to a locked position, said primary locking sleeve having circumferentially spaced sockets, said female member having a secondary annular locking groove on the outer surface thereof, secondary balls in said primary locking sleeve sockets normally residing in said secondary locking groove, a secondary locking sleeve surrounding and axially slidable on said primary locking sleeve and having a surface for engagement with said secondary balls to lock said primary locking sleeve in a locked position on the outer surface of said female member, spring means to constantly urge said secondary locking sleeve to the locked position whereat said surface thereof engages said secondary balls to hold same in said secondary annular locking groove which prevents axial movement of said primary locking sleeve on the outer sleeve of said female member and removal of said balls from said locking groove and separation of said male and female members.

3,097,868
PIPE JOINT AND COUPLING THEREFOR
Robert M. Levy, Roselle Park, N.J., and Carl de Ganahl, Greenlawn, N.Y.; said Levy assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 3, 1959, Ser. No. 837,957
1 Claim. (Cl. 285—95)



A pipe joint between a first pipe member and a second pipe member abutting in axial alignment wherein said pipe members are of substantially equal internal diameters and wherein said pipe members are of plastic composition, the joint which comprises in combination:

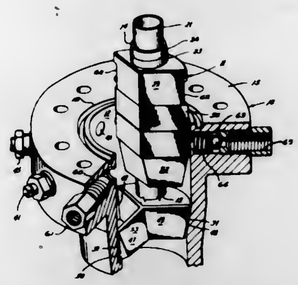
I. a female collar of enlarged external diameter firmly attached to an outer surface of said first pipe member,
  (*a*) said female collar extending from the plane of abutment of said first and second pipe members axially along said first pipe member a substantial predetermined distance,
  (*b*) said female collar extending radially outward in the plane of abutment of said pipe members to an enlarged internal diameter, thereby forming a first female shoulder; then extending axially in the direction of said second pipe member a predetermined distance, thereby forming an inwardly directed surface of enlarged internal diameter; and then extending radially outward a distance coincident with said enlarged external diameter, thereby forming a second female shoulder lying in a radial plane,

II. a male collar of enlarged external diameter firmly attached to an outer surface of said second pipe member,
  (*a*) said male collar extending from a point spaced axially from the plane of abutment of said first and second pipe members axially along said second pipe member a substantial predetermined distance,
  (*b*) said male collar extending radially outward from said point a distance substantially equal to said enlarged internal diameter of said female collar, thereby forming a first male shoulder lying in a radial plane; then extending axially away from said plane of abutment of said first and second pipe members a predetermined distance, thereby forming an outwardly directed surface abutting a portion of said inwardly directed surface of said female collar; then extending radially outward a distance coincident with said enlarged external diameter, thereby forming a second male shoulder in abutment with said second female shoulder, said second male shoulder lying in a radial plane,

III. an O ring seal of substantially round cross section fitting between said first female shoulder and said first male shoulder and limited in axial movement thereby, said O ring seal being in contact with the outer surface of said second pipe member and in contact with said inwardly directed surface of said female collar and

IV. clamping means in the form of circumferential sleeves enclosing said female collar and said male collar and having radial abutting surfaces to prevent axial separation thereof.

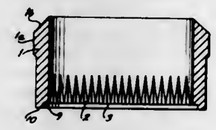
3,097,869
WELLHEAD EQUIPMENT FOR SUSPENDING MULTIPLE TUBING STRINGS
Herbert Allen and Marvin R. Jones, Houston, Tex., assignors to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Original application Oct. 15, 1956, Ser. No. 615,976, now Patent No. 2,939,727, dated June 7, 1960. Divided and this application Oct. 6, 1959, Ser. No. 844,748
9 Claims. (Cl. 285—137)



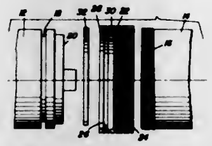
1. Wellhead equipment, comprising a tubing head having a vertical bore therethrough and an annular upwardly disposed seat within the bore, supporting means seated on said seat, a plurality of tubing hangers engaging the wall of said bore, said supporting means adapted to be lowered through the bore and landed on said seat to bridge the bore and align said hangers in side-by-side relation within the bore, at least one of said tubing hangers having means for seating on a portion of the wall of the tubing head bore and on said supporting means.

3,097,870
SEALING RING
Hans Zeller, Dresden, Germany, assignor, by mesne assignments, to The Weatherhead Company, Cleveland, Ohio
Filed Nov. 17, 1958, Ser. No. 774,217
1 Claim. (Cl. 285—341)

In a tube coupling including a body member having a flared mouth adapted to receive the end of a tube, a coupling member adapted to be drawn up toward the body, and a sleeve between said members and having a circumferentially continuous forward end portion which is deformable radially inwardly, said forward end portion having an outer camming surface adapted to enter said flared mouth and to be forced radially inwardly and simultaneously moved forwardly toward the body member when said coupling member is drawn up toward the body member, said sleeve having a smooth inner peripheral surface, the coupling having abutment means limiting forward movement of the tube, the improvement comprising a serrated surface at the forward end portion of the sleeve adjoining and lying radially outside said inner peripheral surface, said serrated surface comprising teeth having spaced crest portions connected by diverging flank portions, said flank portions forming grooves disappearing at a gradually decreasing radius and width away from said crest portions, the juncture of said crest portions and said flank portions with said inner peripheral surface forming a sharp cutting edge, whereby said edge cuts into the surface of the tube when said forward end portion is deformed inwardly to shear up the material of said tube into said grooves to form a seal between said sleeve and said tube when said groove is filled by the material of said tube for the full radial depth of the groove at a point forward of the rearward end of said grooves.

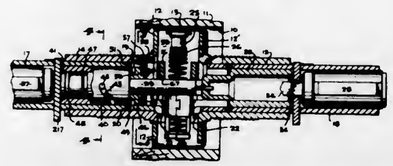


3,097,871
COUPLING DEVICE
Donald L. McNally, Grantsburg, Wis., assignor to McNally Bros. Machine & Gear Company, Inc., Grantsburg, Wis., a corporation of Wisconsin
Filed July 5, 1961, Ser. No. 121,916
4 Claims. (Cl. 287—117)



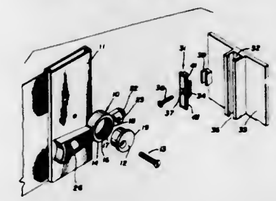
1. A coupling device for clamping abutting ends of housing members respectively provided with an external threaded portion and an annular housing groove, comprising, a coupling ring having internal threads at one axial end for threadedly engaging the threaded portion on one of the housing members, an internal coupling groove formed in the coupling ring adjacent the other axial end in radial alignment with the annular groove on the other of the housing members and a split coupling spring member disposed between the coupling groove and housing groove and alternately engageable with the housing member and coupling ring at circumferentially spaced points 60° apart for locking the housing members together, said coupling ring including an internal conical camming surface connecting and extending between the coupling groove and the internal threads for unlocking of the coupling device by axial displacement of the coupling ring in one direction with respect to the housing groove.

3,097,872
HOLD BACK RETRACTOR
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif.
Filed Apr. 21, 1961, Ser. No. 104,657
5 Claims. (Cl. 292—169)



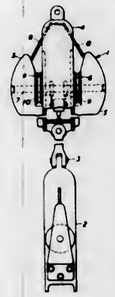
4. A door lock comprising a relatively stationary frame having a bearing member on at least one side thereof, a tubular spindle rotatably mounted on the bearing member and having roll-back means thereon, a latch retractor slide member reciprocatably mounted in said frame for movement in transverse direction and means on the slide engageable with said roll-back means for operation thereby, and a blocker assembly for said slide comprising a cam member mounted in said spindle and having an obliquely extending camway thereon, a second cam member within said spindle having a cam element extending into camming engagement with said camway, one of said cam members being movable axially, actuating means extending through the spindle from the other of said cam members to the exterior, and a single blocker in operating engagement with the cam member which is movable axially whereby said blocker is slidable in response to actuation of said cam elements between blocking and unblocking positions, said retractor slide having a shoulder means in alignment with the blocker when the retractor slide is in withdrawn position and engageable when the blocker is advanced to blocking position whereby the retractor slide is withheld in said withdrawn position.

3,097,873
REVERSIBLE LATCHING ASSEMBLY FOR SLIDING DOOR
Ralph T. Casebolt, 1610 E. 12th St., Oakland, Calif.
Filed Nov. 10, 1960, Ser. No. 68,489
10 Claims. (Cl. 292—244)



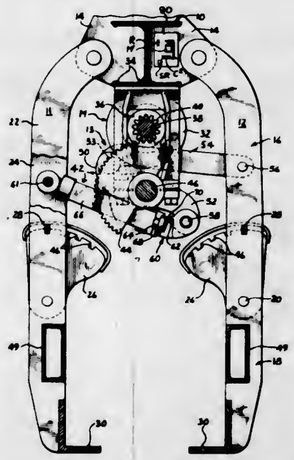
1. In an adjustable assembly for locking a door adjacent a cooperating jamb, a latching member, support means for rotatably supporting said latching member adjacent the leading edge of a door for rotation about an axis, a latch retaining member supportable along the side of a cooperating door jamb, coarse adjustment means for slidably positioning the latch retaining member along the extent of the jamb to a position approximately opposite the rotatably supported latching member, and fine adjustment means associated with said support means for variably fixedly positioning the axis, said fine adjustment means being operable to vary vertically the point of engagement between the latching member and the retaining member to assure a proper fit therebetween.

3,097,874
GRAPNELS FOR SUBMARINE CABLES
Robert Alston Brockbank, Kenton, Harrow, Middlesex, England, assignor to Her Majesty's Postmaster General, London, England
Filed Mar. 12, 1962, Ser. No. 178,981
8 Claims. (Cl. 294—66)



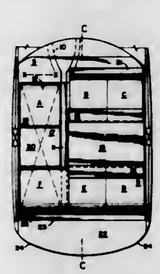
1. A submarine cable grapnel comprising in combination, a body portion, cable prongs extending externally from the body portion, cable pulleys rotatably mounted at the roots of the prongs, an acoustic signal emitter mounted on said body portion, and means for energising the emitter on rotation of any one of the pulleys.

3,097,875
CONTROL MECHANISM FOR ELECTRICALLY OPERATED LIFTERS
Louis G. Kaplan, Evanston, Ill., assignor to Cullen-Friestedt Company, Chicago, Ill., a corporation of Illinois
Original application Dec. 23, 1957, Ser. No. 704,385, now Patent No. 2,959,411, dated Nov. 8, 1960. Divided and this application Mar. 2, 1959, Ser. No. 796,506
1 Claim. (Cl. 294—67)



In a lifter construction of the character described, a lifter framework, a pair of cooperating lifter jaws pivoted to said framework and each swingable about a horizontal axis from an elevated open jaw position to a lowered closed jaw position wherein they may engage an article to be lifted therebetween, a crank arm interposed between said lifter jaws for actuating the same, a lost motion connection between said crank arm and one of said lifter jaws, a limit switch operable under the control of said lost motion connection, said limit switch including a pair of normally open contacts adapted to become closed when the limit switch is operated by said lost motion connection, a reversible series wound direct current motor carried by the framework for moving said jaws between their open and their closed positions, a power train operatively connecting said motor and jaws, an armature circuit for said motor, a source of direct current for energizing said circuit, a reversing switch remote from the lifter and operable to selectively energize said armature circuit with current of opposite polarity from said source, a pair of normally closed relay-actuated contacts in said armature circuit, a relay magnet operable upon energization thereof to open said normally closed contacts, a circuit for the magnet operatively connected to said source through said reversing switch, a unidirectional device in said magnet circuit, and a current limiting resistance disposed in said armature circuit and arranged in shunt relation across the pair of normally closed contacts, said unidirectional device establishing current flow in the magnet circuit when the polarity current applied to the armature is of such polarity as to cause said motor to move said jaws toward their closed positions through the medium of said power train, said limit switch being disposed in said magnet circuit in shunt relation to the unidirectional device, said normally closed relay-actuated contacts, relay magnet, unidirectional device, and current-limiting resistance being mounted on and bodily movable with the lifter framework.

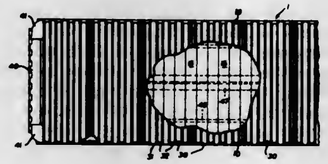
3,097,876
FAMILY CAR ENSEMBLES
Corwin D. Willson, 525 Goldengate St., Lake Orion, Mich.
Filed Nov. 15, 1961, Ser. No. 152,593
6 Claims. (Cl. 296—23)



2. A family car ensemble within the passenger compartment of an automobile body, driving controls in said compartment and said ensemble comprising a tabletop having one side secured demountably to the body and second and third sides extending in the longitudinal center axis of the body and a driver's seat facing said controls and having a seatback backwardly leveled to make up a temporary seat along the fourth side of said tabletop, and an aftseat having a bottom cushion extending right behind, and next to, and level with said temporary seat.

3,097,877
VEHICLE BODY CONSTRUCTION
Oscar Erlandsen, Garden City, N.Y., assignor to Grumman Aircraft Engineering Corporation, Bethpage, N.Y., a corporation of New York
Filed Aug. 29, 1957, Ser. No. 680,938
1 Claim. (Cl. 296—28)

A metal trailer body construction comprising a plurality of inverted U-shaped corrugated panel elements, each comprising side wall portions and a top, inwardly facing abutting flanges on adjacent panel elements and terminating outside a plane tangent to the inner surface of the corrugated side wall panel elements, rivets securing said abutting flange elements together, a pair of rub-rails and means securing the lower edges of the said panel elements to the said rub-rails, the said panel elements comprising overlapped and spliced corrugated metal sec-



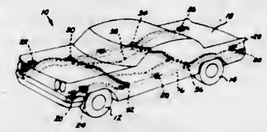
tions, each section comprising flat parallel inner and outer portions and flat connecting portions at an acute angle to the plane of parallelism of the first said portions, the inwardly facing abutting flanges on one of the said spliced sections being offset and fitting within and against the inwardly facing flange of the section spliced thereto, whereby the inwardly facing flange elements of the spliced sections present a substantially flat surface abutting the flanges of adjacent elements.

3,097,878
AUTOMOBILE BODY AND DOOR CONSTRUCTION
Béla Barényl, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed July 13, 1959, Ser. No. 826,578
Claims priority, application Germany July 16, 1958
2 Claims. (Cl. 296—28)



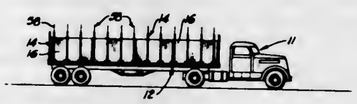
1. In a passenger car having a closed upper body including a plurality of outer body parts, at least one sliding door mounted in said body and having an outer surface with edge portions thereof noticeably and intentionally offset from adjacent outer body parts of said body forming joints including separating gaps between said door and said adjacent outer body parts of said body, means enabling an initial outward transverse movement of said door and a subsequent sliding movement of said door in the longitudinal direction of said car to an open position, upper and lower vertical joints at each side of said door being interconnected at a point approximately corresponding to the midpoint of the height of said door by an intermediate substantially horizontally extending joint, each intermediate substantially horizontally extending joint being formed by edge portions of said door and of said adjacent outer parts noticeably offset in the transverse direction of the car with respect thereto, and all of said horizontal joints around said door that are visible from the outside of said car being of an angular shape as viewed in transverse vertical planes through said body, the above described construction of said joints including the intentional offset of said outer surface of said door relative to said outer body parts being effective to facilitate assembly of the car and to render minor irregularities in the size of the respective elements less discernible.

3,097,879
VEHICLE BODY
Glenn Looper, 508 S. Thornton Ave., Dalton, Ga.
Filed Oct. 25, 1961, Ser. No. 147,625
8 Claims. (Cl. 296—35)



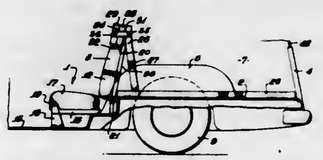
1. A vehicle comprising a chassis; a body resiliently supported on said chassis; and a linkage connecting at least three spaced points on said body and at least three spaced points on said chassis, said linkage comprising at least one first pivot secured to said body; at least one second pivot secured to said chassis and having an axis spaced from that of said first pivot; a first rigid member connected to said first and second pivots; at least one third pivot secured to said chassis and having an axis spaced from those of said first and second pivots; at least one fourth pivot secured to said body and having an axis spaced from those of said first, second, and third pivots; and a second rigid member connected to said third and fourth pivots; said first and second rigid members being pivotally connected to each other.

3,097,880
SIDE RACK STAKE AND SIDE WALL CONSTRUCTION
Ange R. Reader, Lynwood, Calif., assignor to Reader Properties, Inc., Los Angeles, Calif., a corporation of California
Filed Feb. 21, 1961, Ser. No. 90,713
18 Claims. (Cl. 296—36)



1. A wall stake, comprising: an elongated member having an upper end and a lower end; and a flexible rod having the upper end thereof fastened to the upper end of the elongated member and including a body portion substantially parallel with and spaced a predetermined distance from the elongated member for receiving panel members therebetween, the body portion being free of the elongated member and the lower end of the rod extending to adjacent the lower end of the elongated member.

3,097,881
VEHICLE CUSHION ARRANGEMENT
Gilbert E. Aguilar, 1150 23rd St., Manhattan Beach, Calif.
Filed Jan. 10, 1961, Ser. No. 81,711
6 Claims. (Cl. 296—66)



1. In a vehicle having a rear seat provided with a back and a substantially flat area rearwardly of said seat back,

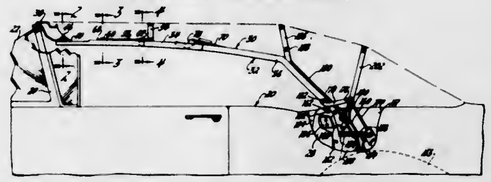
a cushioning arrangement comprising a first cushion on said flat area adjacent said seat back, a second cushion extending upwardly from said first cushion, said second cushion inclining forwardly and engaging the rear face of the top edge portion of said seat back, the top edge of said second cushion extending above said top edge of said seat back, and a third cushion connected to said top edge of said second cushion and extending downwardly therefrom to engage the top face of said top edge portion of said seat back, thereby to form an extension of said seat back.

3,097,882
REAR WINDOW DEFLECTOR FOR AUTOMOBILES
Alvadore M. Andrews, 4621 SW. Beaverton-Hillsdale Highway, Portland, Oreg.
Filed Apr. 10, 1961, Ser. No. 103,678
8 Claims. (Cl. 296—91)



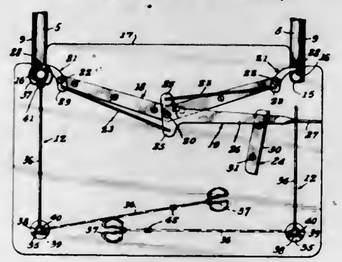
1. In combination an automotive vehicle including a body having a roof with a luggage rack mounted thereon including a bar extending transversely of said roof adjacent the rear edge thereof, said body including a rear surface having a window therein, and means for preventing the impingement of foreign matter upon said window when the vehicle is in forward motion, said means comprising a sheet of flexible plastic material, a pair of the opposite edges of said sheet being folded back upon said sheet and secured thereto to form pockets along said opposite edges, a first rod disposed in one of said pockets and a second rod disposed in the other of said pockets, first releasable clamp means securing said first rod to said bar with said first rod and the corresponding edge of said sheet positioned above the surface of said roof and slightly forwardly of the rear edge thereof, second releasable clamp means securing said second rod to said body at a position spaced rearwardly of said rear surface and immediately above said window so that said sheet will intercept the air stream along the top of said body and deflect it downwardly across said window, the portion of said sheet adjacent said vehicle and defining said other pocket having a plurality of apertures therein through which moisture collecting on the surface of said sheet may flow to said other pocket.

3,097,883
CONVERTIBLE TOP
Joseph H. Gilson, Warren, and Edward G. Podolan, St. Clair Shores, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 23, 1960, Ser. No. 30,960
8 Claims. (Cl. 296—137)



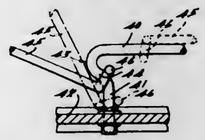
1. In combination with an automobile body, a convertible top movable between raised and lowered positions comprising, a pair of spaced foldable side rails, each rail including front and rear rail sections movable between folded and extended positions, means pivotally interconnecting the sections of each rail for movement of said rail sections relative to each other between said positions, means on said body defining a pair of converging axes, means swingably mounting each of said rear rail sections on a respective axis for folding each of said rails upon pivotal movement of said rear rail sections about said axes, means concurrently swinging each of said rear rail sections about a respective axis, and control means mounted on each of said rails adjacent said pivotal interconnecting means and operatively interconnecting the rail sections of each pair of rails, said control means being operative upon movement of said rear rail sections about said axes to concurrently fold the front rear rail sections of each rail with respect to the rear rail sections thereof whereby said rails fold concurrently and in unison with respect to each other.

3,097,884
CHAIR TRAY
Carl C. Alford, 1214 Elm Ave., Glendale, Calif.
Filed May 22, 1961, Ser. No. 111,584
5 Claims. (Cl. 297—153)



1. A tray adapted to be removably connected to transversely spaced vertical tubular members of a chair in which lower enlargements are provided, said tray comprising a board having transversely spaced recesses into which said chair members are adapted to fit, hook members carried by the board on the under side thereof to partly encircle said chair members, means to lock the hook members to retain said chair members in their recesses, said means comprising pivoted hook-provided locking dogs and means to move said dogs on their pivots between retracted and partly encircling engagement with the chair members, and brace means carried by the board and angularly directed to engage the lower portions of the chair members and to rest upon the enlargements thereof.

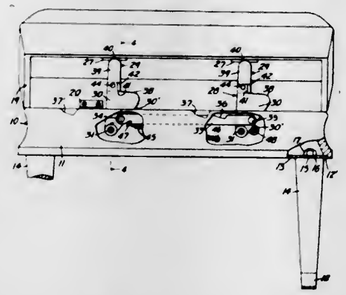
3,097,885
SEAT CONSTRUCTION
Marcel O. De Vos, Grosse Pointe Woods, Mich., assignor, by mesne assignments, to Grow-Rite Corporation, a corporation of New York
Filed Dec. 27, 1961, Ser. No. 162,468
6 Claims. (Cl. 297—378)



1. A seat construction comprising, a support member, a member having angularly extending legs secured to said support member to extend substantially perpendicular

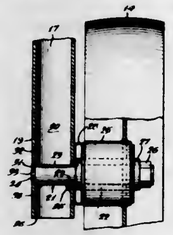
thereto and having an intermediate portion spaced therefrom, a substantially U-shaped back frame, and loops carried by the legs of the U-shaped back frame encircling said member for slidable movement thereon, said loops engaging the angularly extending legs of said member in canted relation thereto to hold the back frame in its raised position.

3,097,886
COMBINATION ADJUSTABLE LEG REST AND CONTAINER
Samuel N. Small, Valley Stream, N.Y., assignor to Alfred G. Cohen and Paul Weiss, both of Flushing, N.Y.
Filed Jan. 26, 1962, Ser. No. 168,938
10 Claims. (Cl. 297—439)



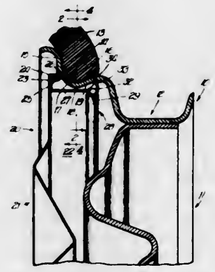
1. A device of the character defined comprising a base part, a top part hingedly supported in connection with the base part, said parts having front walls, a support unit pivotally supported in connection with and movable longitudinally of the front wall of one of said parts and operatively engaging means on the front wall of the other of said parts for support of said top part in different raised positions with respect to the base part, and means coupled with said unit whereby said support unit is moved automatically into operative position in manual movement of the top part in said different raised positions.

3,097,887
WHEEL MOUNTING FOR CART
Robert J. Carpenter, Jackson, Mich., assignor, by mesne assignments, to Tote-Cart Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 13, 1960, Ser. No. 62,382
1 Claim. (Cl. 301—1)



Means for rotatively mounting a wheel on a cart base structure comprising: a tubular base structure portion having an open end, a first radial opening and a second opening diametrically aligned with the first opening adjacent said open end, said second opening having a cross-section smaller than that of said first opening; an axle including a first outer portion, a mid-portion extending through said first opening and diametrically across the interior of said tubular portion, and a second outer portion extending at least partially through said second opening and terminating closely adjacent the outer surface of said tubular portion whereby the space outwardly of said second opening is unobstructed; means for removably rotatably retaining a wheel on said first outer portion of the axle; and weld means within said tubular portion fixedly securing said mid-portion of the axle to said tubular portion adjacent each of said openings, said open end providing facilitated access to the interior of said tubular portion in providing the weld means therein.

3,097,888
WHEEL COVER CONSTRUCTION
Lewis Kafoure and Robert E. Huffman, Valdosta, Ga., assignors to Thompson Industries, Inc., Indianapolis, Ind., a corporation of Massachusetts
Filed June 20, 1961, Ser. No. 118,343
1 Claim. (Cl. 301—37)



In combination:

(*a*) an automobile wheel having a tire receiving rim provided with a convex radially inwardly facing annular rib having a radially outwardly inclined wheel cover retaining surface on its inner side,

(*b*) a wheel cover overlying said wheel on the outer side of said rib and having an annular retaining ring extending laterally from near the peripheral edge thereof in radially inwardly spaced relation to and beyond said convex annular rib,

(*c*) a bead along the distal edge of said retaining ring constituting an integral extension thereof and spaced from said convex annular rib,

(*d*) said bead having an inturned section extending immediately from said ring and merging with an outturned section and forming therewith a circular cross section the outermost surface of which lies along a circle whose diameter is substantially the same as the inner diameter of said annular rib, and

(*e*) a plurality of retaining tooth portions integral with and spaced along said outturned section of said bead having their outermost edges along a circle whose diameter is slightly greater than said inner diameter of said annular rib and frictionally gripping said wheel cover retaining surface thereof.

3,097,889
DIVERTING VALVE FOR FLUIDIZING GRAVITY CONVEYOR
Herbert S. Lenhart, Allentown, Pa., assignor to Fuller Company, a corporation of Delaware
Filed Nov. 4, 1960, Ser. No. 67,251
15 Claims. (Cl. 302—29)

1. A fluidizing gravity conveyor for pulverulent material comprising a pair of conveyor sections each including a gas-permeable conveying deck and a plenum chamber underlying said gas-permeable deck from which a gas is adapted to be passed upwardly through said gas-permeable deck, and a diverting section interposed between said pair

of conveying sections and having its ends connected to the respective adjacent ends of said pair of conveyor sections, said diverting section comprising a hinge pintle extending transversely of the direction of flow of material through said section, means for turning said hinge pintle about its axis, a diverting valve mounted on said hinge pintle to swing therewith as said hinge pintle is turned, said diverting valve including an upper gas-permeable conveying deck and an underlying plenum chamber for receiving gas under pressure to pass upwardly through said gas-permeable deck into overlying material to fluidize it, said hinge pintle having a bore, one end of said bore communi-



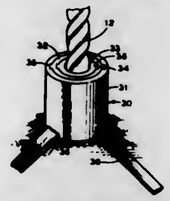
cating with the plenum chamber of said diverting valve and the other end thereof being adapted for connection to a source of gas under pressure, whereby gas may be supplied to the plenum chamber of the diverting valve through the bore of said pintle, and means for limiting the swinging movement of said diverting valve towards its closed position to position the gas-permeable deck thereof substantially in planar alignment with the gas-permeable decks of the adjacent conveying sections, said diverting section having an opening in its lower side through which material flowing along said conveyor may be diverted when said diverting valve is in its open position.

3,097,890
ADJUSTABLE HANDLE FOR FLOOR MACHINES
Patrick E. Doyle, Grand Rapids, Mich., assignor to Doyle Vacuum Cleaner Company, Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 16, 1961, Ser. No. 96,237
2 Claims. (Cl. 306—4)



1. A handle for a floor machine, or the like, comprising an elongated shank, having an elongated rack extending longitudinally along one side thereof, said rack including a plurality of teeth, a sleeve disposed around said shank for movement longitudinally thereof, an elongated lever having elongated arcuate-shaped teeth projecting from the longitudinal central portion thereof, said lever being pivotally mounted at the longitudinal central portion thereof in said sleeve in position for swinging said last mentioned teeth longitudinally across said rack teeth in wiping contact therewith into and out of operative engagement with said rack teeth, the end portions of said lever projecting outwardly from said sleeve in position to afford handles, said sleeve being movable longitudinally of said shank when said lever teeth are disposed out of said operative engagement with said rack teeth, and said sleeve being held against said movement when said lever teeth are disposed in said operative engagement with said rack teeth, and means on said one end portion of said shank and on said sleeve for pivotally attaching said shank and said sleeve to such a machine.

3,097,891
TOOL GUIDE
James Brideau, 4141 Madison Ave., Trumbull, Conn.
Filed Jan. 10, 1961, Ser. No. 81,771
1 Claim. (Cl. 308—4)



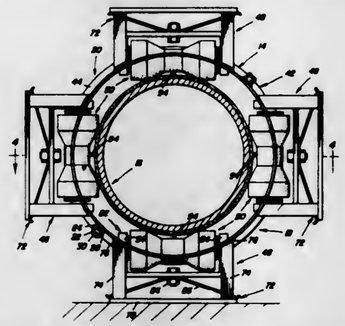
A heavy duty variable diameter guide accommodating any of several heavy duty drill bits of different sizes falling within a given range of sizes to accurately position any of said drill bits within said range of sizes at a given spot, said guide comprising

(*a*) an outermost guide sleeve,
(*b*) an innermost guide sleeve, and
(*c*) at least one intermediate guide sleeve,
(*d*) each of said guide sleeves being concentrically nested one within the other so that the top and bottom thereof are substantially flush,
(*e*) and each of said concentrically nested sleeves being sized to receive a different size drill bit falling within said given range of sizes,
(*f*) cooperating means disposed on adjacent concentrically disposed sleeves for maintaining one of said sleeves fixed relative to its adjacent sleeve,
(*g*) said cooperating means including a longitudinally extending key projecting radially outwardly along the outer surfaces of the respective innermost and intermediate sleeves,
(*h*) and an aligned keyway extending longitudinally along the inner surfaces of outermost and said intermediate sleeves respectively so that in the nested position of said sleeves the key along the outer surface of one sleeve is received within the cooperating aligned keyway of the next adjacent sleeve whereby said cooperating key and keyway of adjacent sleeves prohibit relative movement between the respective sleeves during a drilling operation,
(*i*) each of said sleeves per se forming the guide for its respectively sized drill bit,
(*j*) and foot bars connected to the outermost sleeve,
(*k*) said foot bars extending radially outwardly from said outer sleeve upon which an operator may stand to hold the guide in place, whereby the size of said guide is varied merely by subtracting one or more of the nested sleeves smaller than the drill size to be used.

3,097,892
PIPE GUIDE
Bryan J. Newbury, 2700 Riggan, Corpus Christi, Tex.
Filed Aug. 2, 1961, Ser. No. 129,212
5 Claims. (Cl. 308—6)

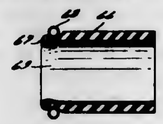
1. A pipe guide for centering a pipe with respect to a casing into which a pipe is to be inserted, said pipe guide comprising an open frame-like member including means adapting one end for securement to one end of a casing in axial alinement therewith, pipe guide means spaced about said frame-like member and projecting inwardly of the inner surfaces thereof adapted to embracingly and

guidingly engage the outer surfaces of a pipe being slid therebetween and into said casing and to maintain the adjacent surfaces of said pipe in spaced relation from the inner surfaces of said casing, said pipe guide means each including a roller, means mounting each of said rollers for movement about an axis extending transversely of the longitudinal axis of said frame-like member, said frame-like member being cylindrical, each of said mounting means including a pair of transversely spaced and outwardly projecting mounting lugs carried by said frame-



like member disposed on parallel chords thereof, a generally U-shaped carriage member having a pair of legs interconnected by a bight portion, said carriage opening inwardly of said cylindrical member and disposed between said mounting lugs with said legs generally paralleling said lugs, means on said lugs slidably guiding said carriage for radial movement therebetween, said roller journalled for rotation between the confronting surfaces of said legs, and means connected between said carriage and said cylindrical member resiliently urging the former inwardly and radially of said cylindrical member.

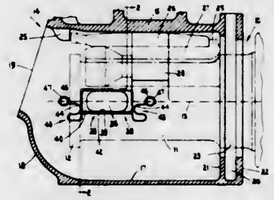
3,097,893
SEALING AND BEARING DEVICE HAVING LOW FRICTION SEALING FACES
Charles S. White, Rte. 3, Box 454–H, Palmdale, Calif.
Original application Nov. 4, 1955, Ser. No. 544,944, now Patent No. 2,906,552, dated Sept. 29, 1959. Divided and this application Aug. 11, 1959, Ser. No. 833,012
3 Claims. (Cl. 308—36.2)



1. A combination bearing and seal for a shaft comprising a bushing made of elastomeric material, a low friction clothlike material having polytetrafluoroethylene filaments therein on the inner surface of said bushing adapted to slidably engage the shaft to provide a bearing surface therefor, and a resilient element encircling one end of said bushing for continuously exerting a resilient radially inward force thereon to form a seal with said shaft.

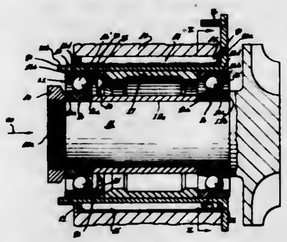
3,097,894
JOURNAL BOX CONSTRUCTION FOR RAILWAY CARS
Theodore J. Sweger, Riverdale, Ill., assignor to Illinois Railway Equipment Co., Chicago, Ill., a corporation of Illinois
Filed Mar. 2, 1962, Ser. No. 177,079
7 Claims. (Cl. 308—40)

1. In a railway car journal box construction adapted to receive therein an axle journal, said journal box having spaced vertical side walls with the axle journal in spaced relation therebetween, top and bottom walls interconnecting said side walls above and below said axle journal, a journal bearing overlying said axle journal with its sides extending downwardly, a wedge interposed between said top wall and said journal bearing, and a wedge stop depending from said top wall to prevent endwise movement of said wedge out of said journal box; said journal box being movable upwardly relative to said journal bearing for a limited distance to relieve the weight of the car applied to said axle journal through said top wall, wedge and journal bearing and sufficient to elevate said wedge stop out of interfering relation with said wedge to permit removal of said wedge and said journal bearing from said journal box; the improvement which comprises: a journal



guide interposed between each side wall and the diametrically opposite sides of said axle journal with the upper side of each journal guide in interfering relation respectively with the depending sides of said journal bearing when said journal box is elevated as aforesaid, a support surrounding each journal guide, and spring means interposed between each support and said journal box characterized by permitting said journal guides to be depressed a substantial distance by said journal bearing when said journal box is elevated through an extent sufficient to allow withdrawal of said wedge and subsequent removal of said journal bearing and further characterized by holding said journal guides in operative position between said side walls and said axle journal when said journal guides are not depressed as aforesaid.

3,097,895
BEARING SUSPENSION
Richard J. Matt, South Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 10, 1960, Ser. No. 68,509
16 Claims. (Cl. 308—184)



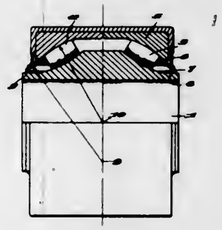
14. In combination, a shaft housing and a rotatable shaft mounted in said shaft housing, a bearing structure having metal disposed therein and being disposed between said shaft and said shaft housing, the shaft housing being comprised of a lighter metal having a higher coefficient of expansion than said bearing structure, said bearing structure including a pair of axially spaced ball bearing units and a spacer element and a spring axially between said units, said bearing structure further including a bearing liner containing said units, said spacer element and said spring, the bearing units each having a radially inner

bearing race fixedly secured to said shaft and an axially outer bearing race slidably contained in said bearing liner, said bearing liner having an extension bearing against one of said bearing units and a nut secured to said shaft bearing against another of said units whereby the bearing units are urged towards one another and said spring functions to maintain the said units and said spacer element under axial load, and a variable temperature resilient bearing mounting connected between the shaft housing and the bearing liner and which resilient bearing mounting is deformable relative to the shaft housing and said bearing liner to compensate for the differences in the rates of coefficients of expansion of the shaft housing and the bearing structure to insure the maintenance of proper clearances between the shaft housing and the components of said bearing structure over a wider temperature range as compared to a combination of this type not possessing said variable temperature resilient bearing mounting, the resilient bearing mounting including a series of annularly arranged rods engaged between said liner and said housing and a pair of rings connected to said rods at opposite ends of said rods for securing said rods together and to facilitate the assembly of said rods with said bearing structure.

3,097,896
BEARING SEAL

Arthur Justin Wasley, Bristol, Conn., assignor to Wasley Products, Inc., Plainville, Conn., a corporation of Connecticut

Filed June 10, 1959, Ser. No. 819,491
1 Claim. (Cl. 308—187.2)



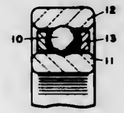
A bearing for a shaft comprising an inner race and an outer race, bearings disposed between said inner and outer races, said bearings having the longitudinal axes thereof angularly disposed with respect to the axis of rotation of the shaft so that the shaft may be angularly displaced with respect to the outer race, a V-shaped channel member mounted on the inner race, a flexible seal mounted on the outer race, said flexible seal having a lip engageable with a face of said channel member, said face of the channel member being arcuate to maintain the lip in engagement therewith when the shaft shifts angularly, microscopic craters on said face of the channel member and lubricant within the craters to provide a lubrication film covering the entire face of the channel member, vent holes within said face of the channel member, said vent holes being disposed outside the area of contact of the channel member with the flexible seal.

3,097,897
BEARING COMBINATION

Kenneth M. Taylor, Lewiston, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

Filed Mar. 16, 1961, Ser. No. 96,304
9 Claims. (Cl. 308—193)

3. A ball bearing consisting of balls of alumina and a race-way of titanium carbide cermet, said balls and race-way having a density of at least 95% of theoretical and a spacer ring of molybdenum-titanium alloy wherein

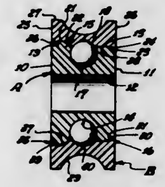


molybdenum constitutes 99.5% by weight of said alloy and titanium constitutes the remainder.

3,097,898
ANTI-FRICTION BEARING

Earl W. Ferdig, Burbank, Calif., assignor to George F. McMurray, Glendale, Calif.

Filed July 29, 1960, Ser. No. 46,310
10 Claims. (Cl. 308—190)



1. A ball bearing roller construction of the character referred to including, an elongate hub member having axially disposed ends, a cylindrical outer surface, a radially outwardly opening concaved ball race intermediate its ends, a radially and axially outwardly opening stop flange receiving recess at one end and a radially outwardly projecting retaining flange at its other end, an elongate roller member having axially disposed ends, a cylindrical outer surface, a central bore, a radially inwardly opening concaved race opposing the race in the hub member, a radially inwardly projecting stop flange at one end and an axially outwardly opening retaining flange receiving socket opening at the other end, and an annular row of balls engaged between the members and in the races, said stop and retaining flanges extending into the stop and retainer flange receiving recess and socket, respectively, said outer race member being formed of resilient material, said race in the outer member relieving the section whereby one end of the section will flex radially outwardly to receive the balls when the inner member with the balls engaged in the race therein is shifted axially into engagement in the outer member.

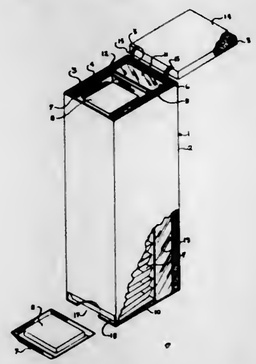
3,097,899
INSULATED BUTTER DISPENSER

Lester M. Dean, 167 Newburgh Ave., Buffalo 15, N.Y., and William D'Esopo, 405 Capen Blvd., Eggertsville, N.Y.

Filed Oct. 24, 1961, Ser. No. 147,266
2 Claims. (Cl. 312—36)

2. In a refrigerated dispenser for butter pats, carried on individual trays, the combination of a rectangular vertically elongated container adapted to hold a plurality of said butter pats, said container having a front, back, sides, a pivotally mounted, insulated top closure, and a bottom; an inner wall, substantially U-shaped in cross-section, within said container and spaced from the back and sides thereof, said inner wall having the open end of said U disposed toward and in contact with the front of said container and extending from the bottom of said container substantially to the top thereof; heat insulation filling the space between said inner wall and the back and sides of said container; a partition arranged transversely within said container, said partition extending

from the bottom of said container substantially to the top thereof and forming with said inner wall a vertically disposed butter storage chamber adjacent the front of said container and a refrigeration chamber adjacent the back of said container, said partition being so constructed as to facilitate heat transfer between said chambers; said

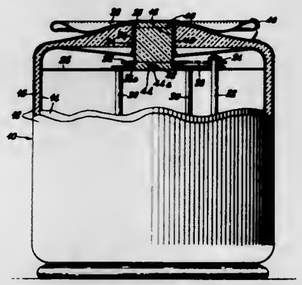


front of said container having a transverse opening adjacent the bottom of said container for withdrawal of butter pats on said individual trays without contact with the butter, and said bottom having a cut-away portion adjacent the front thereof permitting finger contact with the bottom of the lowermost of said trays.

3,097,900
CRYOGENIC STORAGE APPARATUS

Remo J. Berta and Wilfried Haumann, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York

Filed May 11, 1961, Ser. No. 109,443
6 Claims. (Cl. 312—214)

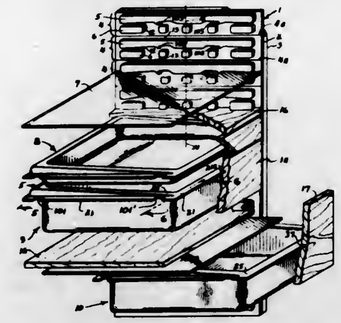


1. In an apparatus for storing and dispensing low-temperature materials comprising a double-walled vacuum-insulated storage container having an access port in the top wall thereof communicating with the container interior, a conveyor means positioned in such interior, transmission means located within said interior and rotatably communicating with said conveyor means, a rotatable drive member positioned in said interior and operably attached to said transmission means, and a removable low-heat conductive means for closing said access port thereby substantially completely sealing said interior from the effects of ambient heat, the improvement comprising a rotatable transmission actuating means fitted within said access port such that operation of such actuating means does not effect the accessibility of said interior; said actuating means comprising a tube which is connected to said transmission means by said rotatable drive member, and a rotatable disk integrally attached to the upper portion of said actuating means such that upon rotating such disk, said actuating means actuates said transmission means thereby operating said conveyor means.

3,097,901
MOLDED DRAWERS FOR MODULAR STORAGE FACILITIES

Robert A. Schless, Jr., deceased, late of Elizabethtown, N.Y., by William R. La Flure, Keeseville, and Shirley Schless, Elizabethtown, N.Y., co-executors

Filed Jan. 16, 1961, Ser. No. 83,114
9 Claims. (Cl. 312—330)

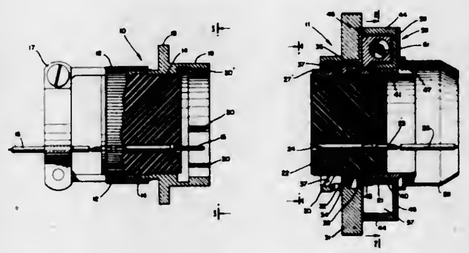


1. A drawer formed of plastic sheet material and having a bottom and walls at the front, back and sides thereof, said bottom and walls being of one-piece construction, the drawer also having upper end portions of the side walls extending outwardly and then downwardly and with an outwardly extending rim at the lower end of the downwardly extending portions of the side walls, said upper end portions of each side wall including said outwardly and downwardly extending portions of the rim forming a beam for strengthening the side wall of the drawer, said rim extending at an acute angle to the top of the side wall to give at least a portion of the beam a tapered section in the direction of its length, said rim serving for supporting the drawer from a guide in which it slides.

3,097,902
QUICKLY DISCONNECTABLE ELECTRICAL CONNECTOR

Walter F. Hennessey, Jr., Sidney, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

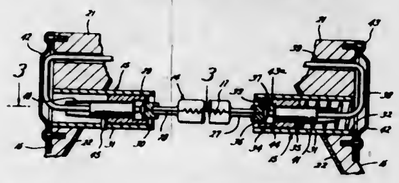
Filed Dec. 17, 1959, Ser. No. 860,216
15 Claims. (Cl. 339—45)



1. A releasable connector between aligned first and second bodies, comprising confronting attaching formations on the first and second bodies, the attaching formation on the first body comprising radially projecting pins thereon, the attaching formation on the second body comprising a rotatable sleeve with a plurality of helical

grooves therein, the grooves being adapted to receive the radial pins and, upon rotation of the sleeve relative to the first body to draw the bodies together in operative connected relationship and to maintain them in such condition, and power means mounted on one of the bodies rapidly to rotate the sleeve in the connector part-releasing direction, said power means comprising a linearly expansible, explosively powered cartridge, means fixedly mounted on said one body for restraining expansion of said cartridge in one direction, and a thrust member operatively connected with said sleeve and adapted to be propelled by the cartridge in the other direction so as to rotate the sleeve relative to said bodies to release the same when the cartridge is energized.

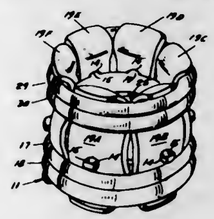
3,097,903
LIGHT FIXTURE
Buell Moore, Houston, Tex., assignor to Esquire, Inc., a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,994
3 Claims. (Cl. 339—55)



1. A light fixture, comprising an enclosed metal case having spaced-apart sockets in the end walls thereof to electrically mount a lamp therebetween, each socket comprising means on the end wall of the case providing an elongated cylindrical opening which extends inwardly from the outer side to the inner side of said end wall, a ceramic sleeve disposed within and having an outer cylindrical surface contacting along said opening, a terminal received within the sleeve in contacting relation thereto and spaced from the inner end thereof to provide a recess within the sleeve for receiving an end of the lamp, spring means for urging the terminals within said sleeves into engagement with the terminals on the ends of the lamps when said ends are received within said recesses and being yieldable to permit first one and then the other lamp end to be inserted within or relieved from its recess, and a cover removably attached to the outer side of the end wall of the housing to enclose the outer end of each socket, the thickness of each end wall from its inner to its outer side and the longitudinal extent of the contact between the sleeve and socket opening extending through said end wall each being relatively large with respect to the diameter of said opening.

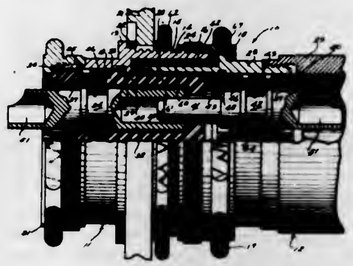
3,097,904
TULIP CLIP PRIMARY CONTACTS WITH STAR SPACER
Charles J. Yarrick, Barrington, N.J., and Roland F. Mertz, Philadelphia, Pa., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 25, 1960, Ser. No. 45,153
3 Claims. (Cl. 339—64)

1. An electrical connecting means; said connecting means comprising a plurality of elongated contact fingers formed of a conducting material, and a spacing means; a first and a second conductor; said plurality of elongated fingers mounted to said spacing means and arranged in a parallel relationship to one another; said spacing means positioning said elongated finger contacts in a predetermined spatial shaping; said predetermined spatial shape being circular; first and second biasing means; one of said first and second biasing means located at the top of said plurality of contact fingers, and the other of said first and second biasing means located at the bottom of said plurality of contact fingers; said first and second biasing means biasing said electrical connecting means into high pressure electrical contact with said first and second conductors; said first conductor entered through the top of said electrical connecting means, and said second conductor entered through the bottom of said electrical connecting means; said spacing means being a rigid member having receiving means for mechanically receiving each of said plurality of elongated contact fingers; said spacing means being planar and having a thickness substantially limited to the longitudinal area of



mechanical engagement with said contact fingers; said receiving means being a plurality of radially spaced projections of substantially the same thickness as said spacer means; each of said plurality of contact fingers having an aperture therein; each of said plurality of projections engaging with said apertures and extending completely through said apertures and beyond past the outer surface of said fingers to pivotally mount said plurality of finger contacts the engagement of said projections and apertures being limited to a small intermediate area of said contact fingers while providing substantial stability to collapse of said connecting means, preventing movement of said fingers from said predetermined spatial shape and movement of said fingers perpendicular to the plane of said spacing means.

3,097,905
INDEXABLE KEY CONNECTOR
Jack F. Shearer, Highland Park, and Joseph A. Nava, Villa Park, Ill., assignors to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 16, 1961, Ser. No. 89,814
11 Claims. (Cl. 339—186)



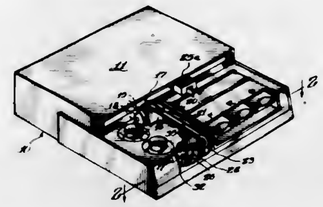
5. A line connector comprising
male and
female interfitting parts,
one of said parts having an axially extending groove formed therein,
the other of said parts having a plurality of notches circumferentially spaced from one another at one end of said other part,
a polarization adapter
and a lock nut,
said adapter comprising a sleeve telescoping over said other part and including
a first lug for engaging said groove,
said adapter having other lugs engaging said notches in said other part at different angular alignments of said adapter relative to said other part,
said adapter being apertured
and said other part being indicia calibrated in register with the apertured portion of said adapter
to identify the relative angular alignment therebetween,
and said lock nut being threadedly engageable with said one end of said other part
and engaging said adapter to lock the adapter in fixed position on said other part,
thereby to preindex the connector.

3,097,906
ELECTRICAL CONNECTOR
Suel G. Shannon, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed May 26, 1960, Ser. No. 31,981
3 Claims. (Cl. 339—253)



1. An electrical spring clip connector including a tab-receiving receptacle portion and a wire-attaching portion, said receptacle portion comprising an elongated strip of sheet metal folded back upon itself to define a bight and a pair of spring plates extending therefrom, said plates being smoothly curved over substantially their full length about axes of curvature parallel to the longitudinal axis of said bight, to present opposed convex contact surfaces, normally spaced near the mid-point of said length less than the thickness of a mating contact tab, and an integral locking member extending from the distal end of one plate and engaging the other plate to cooperate with said bight to restrain movement of the ends of said plates on insertion of the mating contact tab, the plates at said distal end being spatially disposed prior to insertion of the mating tab which, upon insertion, tends to flatten said plates against the resistance to separate of the ends thereof.

3,097,907
RECORDING-REPRODUCING MACHINE
Robert E. Schroeder, Geneva, and Floyd E. Smithberg, St. Charles, Ill., assignors to Dukane Corporation, St. Charles, Ill., a corporation of Delaware
Filed Apr. 20, 1961, Ser. No. 104,416
3 Claims. (Cl. 346—17)



1. In a machine for recording or reproducing signals on a record belt, said machine having a transducer head cooperating with the record belt and the machine including as a part thereof a manually controlled power drive for moving said record belt past said transducer head during machine operation, said power drive beginning with an electric motor as the power source and having power transmitting components for directing the flow of power from said power source to said record belt, said power transmitting components including a mandrel in frictional engagement with said record belt for driving the same, said machine including a housing substantially concealing the mechanism and said record belt from observation during normal use of said machine, an electric lamp supported within said housing and continuously energized during machine energization, said housing having a window at the end of a light path entirely within said housing and having the electric lamp at the other end of said light path, said window permitting light to pass through it to the exterior of said housing, mechanical means disposed in the light path for blinking said light, and means for operating said light blinking means from said power drive at a power take-off point which is at least as remote from said power source as said drive mandrel whereby the blinking of the light at the window provides an indication that in response to the manual control, power is available at said drive mandrel for driving the record belt.

CHEMICAL

3,097,908
DYEINGS AND PRINTS POSSESSING FASTNESS TO WET PROCESSING AND THEIR MANUFACTURE ON CELLULOSE MATERIALS AND PROTEIN FIBERS
Karl Jellinek, Offenbach (Main), and Thomas Hegedüs, Hans Ulmer, and Hugo Barti, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed July 26, 1960, Ser. No. 45,277
Claims priority, application Germany Mar. 16, 1960
11 Claims. (Cl. 8—22)

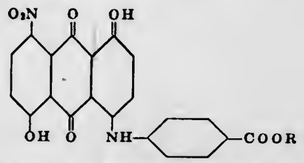
1. The process for producing wet-fast dyeing and prints on shaped articles of a material selected from the group consisting of cellulose and native protein and mixtures thereof which comprises treating said shaped articles with dispersed elementary sulfur and a water-soluble organic dyestuff selected from the group consisting of phthalocyanine dyestuffs, metal-phthalocyanine dyestuffs, azo-dyestuffs and pyrazolone-dyestuffs containing at least one thiosulfuric acid group bound to a carbon atom of an aromatic nucleus thereof through a member of the group consisting of —CH_2—, —SO_2—NH-lower alkylene,

$$-SO_2-\underset{\text{lower alkyl}}{\overset{|}{N}}-\text{lower alkylene}$$

and —CO—NH-lower alkylene, and subsequently subjecting the resulting dyeings and prints to a permanent fixation at an elevated temperature.

3,097,909
PROCESS FOR DYEING OR PRINTING FIBROUS MATERIALS OF AROMATIC POLYESTERS
Paul Rhyner, Basel, Paul Grossmann, Binningen, and Raymond Defago, Riehen, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland
No Drawing. Filed Sept. 7, 1960, Ser. No. 54,349
Claims priority, application Switzerland Sept. 23, 1959
5 Claims. (Cl. 8—39)

1. Polyethylene terephthalate fibers dyed with a dyestuff of the formula



in which R represents a member selected from the group consisting of lower alkyl, lower alkoxyalkyl and benzyl.

3,097,910
PROCESS FOR DYEING TEXTILES WITH DYESTUFFS CONTAINING PYRIMIDINE RING
Herbert Francis Andrew and Victor David Poole, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Original application June 29, 1960, Ser. No. 39,723. Divided and this application Mar. 16, 1961, Ser. No. 96,099
Claims priority, application Great Britain Oct. 23, 1959
9 Claims. (Cl. 8—54.2)

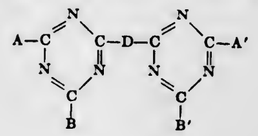
1. Process for colouring textile materials which consists essentially in treating the textile materials with a water-soluble dyestuff of the formula:

D—A—X

wherein D is a dyestuff chromophoric radical selected from the class consisting of azo, anthraquinone, nitro, and phthalocyanine radicals, A is a member selected from the group consisting of —O—, —S— and —NR—, R represents a member of the group consisting of hydrogen, substituted alkyl and unsubstituted alkyl radicals and X represents a pyrimidine ring which is attached to A through the carbon atom in one of the 2- and 4-positions of the pyrimidine ring, and which carries a substituent selected from the group consisting of cyano, carboxy and carboalkoxy groups attached to the 5-position of the pyrimidine ring, and which carries two halogen atoms, selected from the group consisting of chlorine to bromine atoms, attached to the remaining carbon atoms of the pyrimidine ring, and said group —A—X is attached to a carbon atom in the dyestuff.

3,097,911
PROCESS OF RESERVING WOOL WITH BIS-TRIAZINE DIPHENYLSULFIDE COMPOUNDS
Jan J. A. Moll, Vlaardingen, Netherlands, assignor, by mesne assignments, to Fabriek van Chemische Producten Vondelingenplaat N.V., Rotterdam, Netherlands
No Drawing. Filed Sept. 23, 1960, Ser. No. 57,882
Claims priority, application Netherlands Oct. 14, 1959
3 Claims. (Cl. 8—65)

1. Process of reserving natural proteins and synthetic polyamides against dyeing by substantive dyes which comprises applying thereto a reserving agent having the formula:



wherein A, A', B and B' are radicals selected from the group consisting of amino, alkylamino, alkylolamino, arylamino, and morpholino, bonded to the cyanuric radical at the amino nitrogen atom, and D is a diaminodiphenylsulfide radical bonded to the cyanuric radical at the amino nitrogen atoms.

3,097,912
HAIR AND WOOL DEPILATION METHOD AND COMPOSITION
Henry Booth, 165 Radley Road, Abingdon-on-Thames, England
No Drawing. Filed Mar. 30, 1959, Ser. No. 802,611
13 Claims. (Cl. 8—94.16)

1. A composition for the depilation of animal skins by painting the flesh side of said skins, comprising a substantially lime-free, water soluble alkali from the group consisting of sodium hydroxide and potassium hydroxide, an accelerator for the alkali composed of a water soluble sulphide comprising not more than 3% of the composition by weight, an inhibitor for the oxidation of the sulphide comprising sodium sulphite in a concentration of not more than 2% of the composition by weight, and a promoter for the oxidation of the sulphide, said promoter containing finely divided ferric oxide present in a concentration of about half the concentration of the inhibitor, and said promoter being incapable of diffusion through the animal skin.

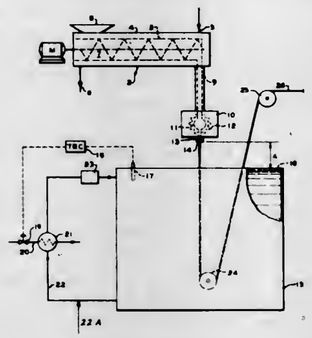
3,097,913
METHOD FOR PRODUCING WASH-AND-WEAR FABRICS WHICH ARE WHOLLY OR IN PART OF ANIMAL ORIGIN
Werner Von Bergen, North Caldwell, and Harold W. Wolf, Clifton, N.J., assignors to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 29, 1960, Ser. No. 18,261
10 Claims. (Cl. 8—128)

1. A method of imparting wash and wear characteristics, including dimensional stability, to fabrics containing animal fibers and selected from the group consisting of wool, mohair, part wool, and part mohair fabrics comprising treating said fabrics with an oxidizing solution which is maintained at about 50° F. to 100° F., which has a concentration from about 0.10 to 0.40 percent by weight of the oxidizers, and which is selected from the group of oxidizers consisting of (*a*) peracetic acid and (*b*) mixtures of peracetic acid and potassium permanganate at a pH less than 7 and thereafter treating said fabrics with a reducing solution which is maintained at about 65° F. to 140° F., which has a concentration from about 0.5 to 5.0 percent by weight of the metal salts, and which is selected from the group consisting of alkali metal and alkali earth metal salts of (*a*) sulfites and (*b*) bisulfites.

3,097,914
PROCESS FOR THE PRODUCTION OF A RIBBON FILAMENT YARN OF REGENERATED CELLULOSE
Peter Lewis, Healing, Grimsby, England, assignor to Courtaulds Limited, London, England, a British company
Filed Sept. 7, 1961, Ser. No. 136,580
Claims priority, application Great Britain Sept. 7, 1960
4 Claims. (Cl. 18—54)

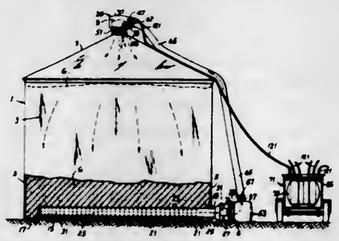
1. A process for the production of a ribbon filament yarn of regenerated cellulose, consisting of extruding viscose having a cellulose to caustic soda ratio of at least 1 and at a salt point between 4 and 6, through a multihole jet the holes of which have no re-entrant segment in their cross-sections into a coagulating bath maintained at a temperature of 40° C. to 60° C. and containing at least 24 percent of sodium sulphate, from 9 to 12 percent of sulphuric acid and not more than 0.02 percent of zinc sulphate as an impurity, drawing the incompletely regenerated filaments from the bath and subsequently completely regenerating the filaments.

3,097,915
METHOD FOR OBTAINING IMPROVED FILM
Robert Doyle, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,607
6 Claims. (Cl. 18—57)



1. In a process wherein transparent polyethylene film is prepared by extruding molten polyethylene through a slot die and quenching the resulting film by immersion in a bath of water, maintaining said water at a predetermined temperature by withdrawing a stream of said water during said quenching and subjecting the withdrawn stream to heat exchange and then returning said stream to said bath, the improvement which comprises filtering said stream after said heat exchange and prior to returning said stream to said bath.

3,097,916
FUMIGATION OF GRAIN
Joseph Carl Dawson and Raymond P. Millard, Ferguson, Mo., assignors to Ferguson Fumigants, Inc., Ferguson, Mo., a corporation of Missouri
Original application July 6, 1959, Ser. No. 825,168, now Patent No. 3,041,684, dated July 3, 1962. Divided and this application Oct. 5, 1961, Ser. No. 143,169
3 Claims. (Cl. 21—58)



1. A method of fumigating grain in storage in a grain storage structure which has an opening at the top and an air duct at the bottom having a connection with a fan outside the structure adapted to cause movement of air vertically through the grain, comprising the steps of applying an air-tight bonnet of flexible sheet material in substantially air-tight manner to the structure at said top opening, said bonnet having an opening for flow of air, applying an air-tight plenum chamber of flexible sheet material in substantially air-tight manner to the fan, said plenum chamber having an opening for flow of air, connecting a length of air-tight flexible tubing between the plenum chamber and the bonnet openings, operating said fan to circulate air through the grain, introducing fumigant into the air, and maintaining the circulation of the air for a period of time such as to distribute the fumigant substantially evenly throughout the grain.

3,097,917
METHOD FOR HIGH PRESSURE SELECTIVE ABSORPTION OF GASES
Walter M. Dotts, Jr., Richmond, Va., and Wayne E. Stevens, El Paso, Tex., assignors to Development, Ltd., Midland, Tex., a partnership
Filed Apr. 19, 1961, Ser. No. 104,164
20 Claims. (Cl. 23—2)

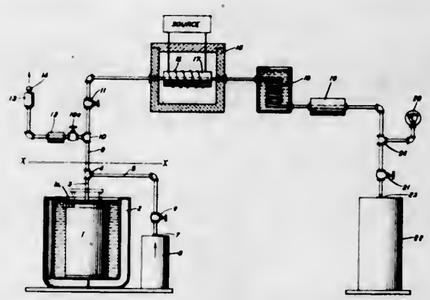


1. In the art of changing the concentration of a component of a gaseous mixture by selective absorption, the method which comprises introducing an absorbent having a preferential absoring capacity for said component into the top of a treatment zone contained in a downwardly extending lined hole in the earth and supported thereby, said treatment zone having a vertical dimension which exceeds 100 feet and which exceeds 33 times the square root of the average cross-sectional area in square feet thereof which is devoted to contacting; flowing said absorbent downwardly in said treatment zone; introducing said mixture to said treatment zone near the lower end thereof; flowing said mixture upwardly throughout said treatment zone in countercurrent contact at high pressure with said absorbent flowing downwardly therein, and thereby preferentially absorbing said component in said absorbent; maintaining throughout said treatment zone pressure, in addition to hydrostatic pressure, which is substantially in excess of atmospheric pressure; flowing from a point near the top of said treatment zone the unabsorbed fraction of said mixture containing a lower concentration of said component than was present in said mixture initially; withdrawing said fraction from said hole; separately withdrawing enriched absorbent from a point near the lower end of said treatment zone; and flowing said enriched absorbent from said hole.

3,097,918
PURIFICATION AND HIGH-PRESSURE CHARGING OF GAS INTO CONTAINERS
Walter B. Moen, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,424
5 Claims. (Cl. 23—4)

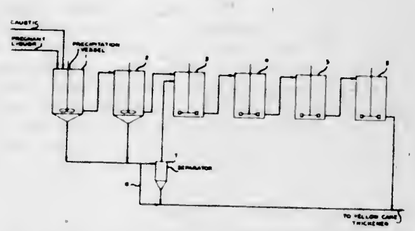
2. The method of charging a gas selected from the group consisting of oxygen, air, and the relatively inert atmospheric gases under high pressure into a container, said gas containing impurities including hydrogen and

hydrocarbon compounds, which comprises the steps of completely evaporating a quantity of said gas from the liquid state in a gas-tight system to which said container is connected, wherein the ratio of the volume of said quantity of liquefied gas to the total internal volume of said gas-tight system exceeds about 0.4, submitting said gas at the resultant high pressures and at a temperature



within the range of 750 to 850 degrees Fahrenheit to catalytic action to cause said impurities to oxidize to form products including carbon dioxide and water, cooling the said gas and said products substantially to room temperature, and submitting said gas at said high pressures including said products to absorbing means for selectively absorbing said products from said gas before said gas is charged into said container.

3,097,919
METHOD OF PRECIPITATION OF SODIUM DIURANATE
George E. Hays and Kenneth R. Cantwell, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,495
2 Claims. (Cl. 23—14.5)



1. In the process of precipitating uranium values as a yellow cake from a liquor containing said values in the form of sodium uranyl tricarbonate which comprises the continuous introduction of said liquor into the first of a series of precipitation vessels, adding thereto a caustic solution, admixing the liquor and caustic solution causing the precipitation and growth of yellow cake crystals; an improvement comprising the slow agitation of the admixture, permitting the larger crystals to settle in a separate phase in the lower region of said vessel, withdrawing said crystals from the bottom of said vessel, withdrawing mother liquor containing suspended yellow cake crystals from the lower region of said vessel, passing said mother liquor and said suspended crystals to the upper region of a second precipitation vessel, slowly agitating the admixture within said second precipitation vessel, permitting the larger crystals to settle in the separate phase in the lower region of said second precipitation vessel, withdrawing the crystals from the bottom of said second precipitation vessel, withdrawing mother liquor and suspended crystals from the lower region of said second precipitation vessel, passing said liquor and said crystals withdrawn from said second precipitation vessel to the upper region of a third precipitation vessel, maintaining the crystals in suspension in said third precipitation vessel by agitation, passing the mother liquor and suspended crystals from the lower region of said third precipitation vessel to succeeding vessels in like manner until precipitation substantially ceases, withdrawing the crystals from the bottom of the last in a series of precipitation vessels, and passing said crystals withdrawn from said vessel, said second precipitation vessel and said last in a series of precipitation vessels to a precipitate thickener.

3,097,920
REMOVAL OF CESIUM FROM AQUEOUS SOLUTIONS BY ADSORPTION
Kenneth C. Knoll, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Oct. 30, 1961, Ser. No. 148,770
5 Claims. (Cl. 23—25)

1. A process of separating microquantities of cesium values from aqueous solutions containing with said cesium values other ions in macroquantities, consisting in heating clinoptilolite at about 400° C. for at least two hours, cooling the clinoptilolite to room temperature, contacting the clinoptilolite with said aqueous solution to be treated, whereby cesium is preferentially taken up by the clinoptilolite, and separating the solution containing said other ions from the cesium-containing clinoptilolite.

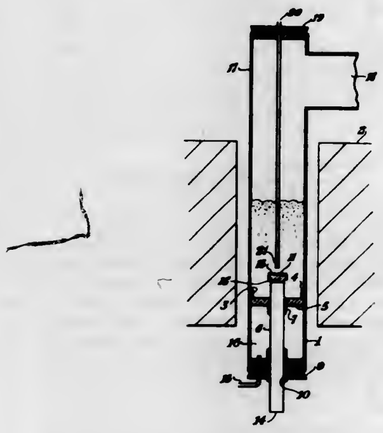
3,097,921
PRODUCTION OF HYDROGEN CYANIDE
Douglas J. Kennedy, Shawinigan, Quebec, and Noel B. Shine, Shawinigan South, Quebec, Canada, assignors to Shawinigan Chemicals Limited, Quebec, Canada, a corporation of Canada
No Drawing. Filed Mar. 15, 1961, Ser. No. 95,795
4 Claims. (Cl. 23—151)

1. In a process for the production of hydrogen cyanide which comprises maintaining a bed of electrically conductive carbon particles in a fluidized state in a reaction furnace by passing upwardly through the said bed a stream of ingoing gas comprising a mixture of ammonia and a hydrocarbon gas, and passing an electric current between electrodes through the said fluidized bed with sufficient power to maintain the bed at an elevated temperature of about 1300° to 1600° C. sufficient to maintain reaction to form hydrogen cyanide, the improvement which comprises introducing hydrogen into the reaction furnace at a volume ratio to ammonia of at least 0.25 to 1.

3,097,922
PROCESS FOR THE PREPARATION OF MINERAL PHOSPHATES INTENDED FOR THE MANUFACTURE OF PROSPHORIC ACID BY THE WET METHOD
Pierre Beetz, Liege, Belgium, assignor to Panmetals and Processes Inc., Panama, Panama, a company of Panama
No Drawing. Filed Aug. 12, 1960, Ser. No. 49,154
Claims priority, application France Aug. 14, 1959
5 Claims. (Cl. 23—165)

1. A process for the manufacture of phosphoric acid from calcium carbonate containing mineral phosphate comprising reacting mineral phosphate with sulphuric acid in a reaction zone, washing and filtering the resulting pulp and recovering phosphoric acid solution therefrom, the mineral phosphate being submitted to a preliminary treatment in a pre-mixing zone for about 30–240 seconds by mixing the same with phosphoric acid and a substantial amount of pulp recycled directly from the reaction zone and before filtering, the latter said pulp comprising a substantial solid phase consisting substantially of gypsum crystals and a liquid phase consisting substantially of phosphoric acid and sulphuric acid, and agitating the mixture to abrade the phosphate with the solid phase and to purge CO_2 therefrom and to destroy froth which has formed, the SO_3 introduced into the pre-mixing zone being limited to less than about 15% of the SO_3 introduced by the sulphuric acid in the reaction zone.

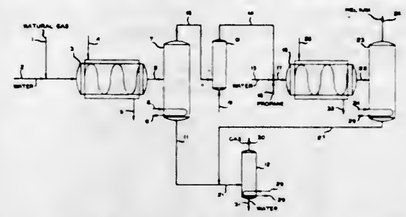
3,097,923
PREPARATION OF TITANIUM DIOXIDE
Kenneth Arkless, Stockton-on-Tees, England, assignor to British Titan Products Company Limited, Durham, England, a company of the United Kingdom
Filed May 27, 1960, Ser. No. 32,445
8 Claims. (Cl. 23—202)



1. In a method of preparing titanium dioxide by introducing titanium tetrachloride and oxygen into a fluidised bed of inert particles maintained at a temperature sufficient to form titanium dioxide from reaction of titanium tetrachloride with oxygen so that some titanium dioxide is carried out with gases emanating from the bed and some titanium dioxide adheres to inert particles of the bed, the improvement which comprises while so preparing titanium dioxide, introducing to the bed a chlorinating agent comprising chlorine and carbonaceous substance capable of causing reconversion of at least a portion of the titanium dioxide adhering to the inert particles to titanium tetrachloride whereby to reduce said adherence in said bed and providing in the bed sufficient oxygen to oxidize the titanium tetrachloride produced on said reconversion to form titanium dioxide.

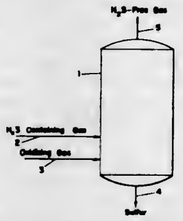
3,097,924
HELIUM RECOVERY FROM NATURAL GAS
Patrick J. Kinney, Ames, Iowa, and Leroy C. Kahre, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed June 30, 1960, Ser. No. 40,020
13 Claims. (Cl. 23—209)

1. The process of recovering helium from a helium-containing natural gas which comprises contacting said natural gas with water in a contact zone, maintaining the temperature and pressure of said contact zone in the range of 32 to 75° F. and in the range of 5,000 to 25,000 p.s.i.g., respectively, so as to form nitrogen hydrate crystals within said contact zone-withdrawing helium from said con-



tact zone, and withdrawing said nitrogen hydrate crystals from said contact zone.

3,097,925
METHOD OF RECOVERING SULPHUR
Paul M. Pitts, Jr., Media, and Robert W. Rieve, Drexel Hill, Pa., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 17, 1958, Ser. No. 729,184
1 Claim. (Cl. 23—225)

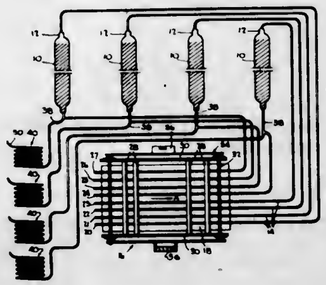


A continuous process for the quantitative production of elemental sulfur from a hydrogen sulfide-containing gaseous hydrocarbon stream which comprises mixing an aqueous solution of a compound selected from the group consisting of ferric chloride and ferric nitrate with an aqueous solution of the sodium salt of N,N-dihydroxyethylglycine to form an aqueous iron-chelate solution, concurrently introducing said hydrocarbon stream and a free-oxygen containing gas into said aqueous iron-chelate solution at a pH in excess of 7 and ranging up to about 10 and recovering elemental sulfur.

3,097,926
REMOVAL OF HYDROGEN SULPHIDE FROM GASES BY A WASH SOLUTION AND OXIDATION THEREIN TO FORM SULFUR
Thomas Nicklin and Anthony W. Sommerville, Manchester, England, assignors to North Western Gas Bonrd, Manchester, England, a British corporation, and The Clayton Aniline Company Limited, Manchester, England, a British company
No Drawing. Filed Nov. 24, 1961, Ser. No. 154,815
Claims priority, application Great Britain Nov. 29, 1960
4 Claims. (Cl. 23—225)

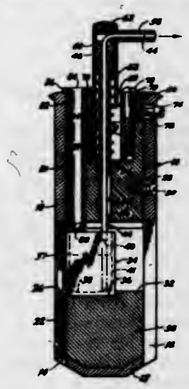
1. A process for the absorption and subsequent removal as sulphur of hydrogen sulphide from gas mixtures, in which the material containing hydrogen sulphide is washed with an aqueous alkaline solution containing a substance selected from the group consisting of ortho-, meta- and pyro-vanadates of ammonia and alkali metals, a salt of a metal selected from the group consisting of iron, copper, manganese, chromium, nickel and cobalt, and a sequestering agent for maintaining the metal salt in solution whereby the hydrogen sulphide is oxidized to form elemental sulphur and the vanadate in the solution is reduced, removing the elemental sulphur from the solution, and the reduced vanadate is oxidized by the use of free oxygen for recycling in the process.

3,097,927
CHROMATOGRAPHY ANALYSIS APPARATUS AND METHOD
Leonard T. Skeggs, Cleveland, Ohio, assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed July 21, 1959, Ser. No. 828,582
3 Claims. (Cl. 23—230)



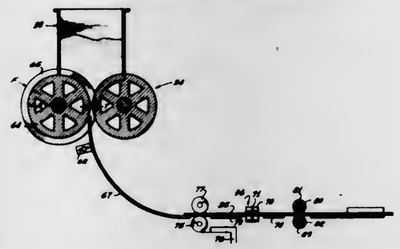
3. A method of chromatography analysis according to which there is provided a chromatography column having an upper inlet for the supply of an eluting liquid to the column and having a lower outlet for the discharge of eluent from the column and according to which there is employed an automatic analysis apparatus for analyzing the eluent discharging from said column, said method comprising detachably connecting a length of tubing to the outlet of said column for collecting and storing the eluent discharged from the column through said outlet, introducing an inert gas into the eluent as it flows from the outlet of said column into said length of tubing and thereby forming the eluent into a stream of successive segments of eluent spaced from each other in the line of flow by intervening segments of said gas, whereby diffusion of successive portions of the eluent with each other in said length of tubing is prevented, and thereafter connecting said tubing to said automatic analysis apparatus for the analysis of the eluent collected in said tubing.

3,097,928
ULTRA-MICRO CUVETTE ASSEMBLY
John J. J. Staunton, Oak Park, Ill., assignor to Coleman Instruments, Inc., Maywood, Ill., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,664
10 Claims. (Cl. 23—292)



1. In an ultra-micro cuvette assembly for spectrophotometers and the like, the improvement which comprises a plane-parallel sided flat-bottomed cuvette, a container for removably holding said cuvette, and apertured mask removably mountable on said container, a top-mounted suction tube removably mountable in said container and vertically reciprocable between the inside bottom of said cuvette and a raised position above the bottom, and horizontal orifice means at the lower end of said tube, whereby when the suction tube is lowered to the bottom of the cuvette, the surface tension of the liquid meniscus in the corners is overcome and the cuvette will be drained.

3,097,929
METHOD FOR CONTINUOUS MANUFACTURE OF CERAMIC SHEATHING
Randall C. Ragan, Tarzana, Calif., assignor to Gladding, McBean & Co., Los Angeles, Calif., a corporation of California
Filed Apr. 16, 1956, Ser. No. 578,485
6 Claims. (Cl. 25—156)

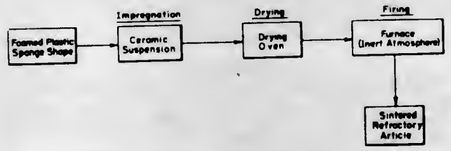


1. In a method of continuously forming a strip of compacted, coherent, homogeneous and dense ceramic body composition, said strip having smooth, calendered surfaces and a moisture content of between about seven per cent and seventeen percent, the steps of: continuously depositing a free-flowing ceramic body composition by gravity into a zone between a pair of converging cylindrical surfaces of equal radius moving concurrently downward toward a gap; continuously removing a continuous, dense, compacted and flexible strip of ceramic body from said gap; and controlling the density and thickness of the strip in accordance with the relation

$$\frac{R}{R+T}=0.950$$

to 0.98, wherein R is the radius of each of the cylindrical surfaces and T is the thickness of the strip.

3,097,930
METHOD OF MAKING A POROUS SHAPE OF SINTERED REFRACTORY MATERIAL
Ivor James Holland, Milford Haven, England, assignor to Consolidated Beryllium Limited, London, England
Filed Mar. 7, 1961, Ser. No. 93,843
Claims priority, application Great Britain Mar. 9, 1960
8 Claims. (Cl. 25—156)



1. A method of making a porous shape of sintered refractory material which comprises impregnating a foamed plastic sponge shape of the intercommunicating cell type with a suspension of refractory particles in a liquid, drying the impregnated shape to remove the liquid, and firing the dried shape in an inert atmosphere to volatilize the material of the sponge and to sinter the refractory particles together.

3,097,931
METHODS OF JOINING GRAPHITIC SURFACES
Hugh Wilson Davidson, Pinner, and John Walter Ryde, Northwood, England, assignors to The General Electric Company Limited, London, England
No Drawing. Filed Oct. 28, 1957, Ser. No. 692,538
Claims priority, application Great Britain Oct. 29, 1956
4 Claims. (Cl. 29—195)

3. A method of joining a graphitic surface to a surface of a metal selected from the class consisting of nickel and zirconium, said method comprising, exposing said graphitic surface to an atmosphere in which nickel carbonyl is suspended, heating said surface to cause decomposition of said nickel carbonyl to take place at the surface and to coat said surface with a thin layer of nickel, bringing said coated surface into contact with said metallic surface, urging said surfaces toward each other, and while urging said surfaces toward each other heating them to at least a temperature sufficient to cause the nickel coating to melt and flow so as to unite the butting graphitic surface and metallic surface.

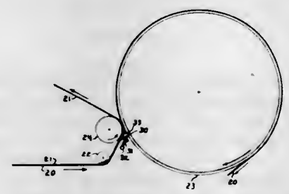
4. A composite graphitic metallic body whose graphitic and metallic parts are united by the method as set forth in claim 3.

3,097,932
ANTI-FOULING MULTIPLE COATING
Samuel L. Goldheim, 1113 N. Rolling Road, Baltimore 28, Md.
Filed May 16, 1961, Ser. No. 110,325
1 Claim. (Cl. 29—195)



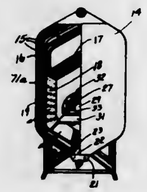
An article of manufacture adapted to prevent marine growth comprising, in combination, a rigid base adapted for underwater use, having a protective coating applied to the surface of the base, the coating comprising, a flame-sprayed porous zinc metal, an alloy of zinc and mercury metal covering the outer surface and pores of the zinc metal and a coating of an insoluble mercury iodide salt affixed to the outer surface of the alloyed zinc and mercury metal.

3,097,933
PAPERMAKING DRYING MACHINE
Harry B. Kellogg, Appleton, and William A. Dickens, Neenah, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed July 7, 1958, Ser. No. 747,039
9 Claims. (Cl. 34—41)



1. The method of increasing the drying capacity of a sheet drying apparatus, the apparatus comprising a heated rotatable drier drum and means for continuously applying a wet sheet to the surface thereof and for removing the dried sheet therefrom, comprising increasing the heat applied to the drum to raise its surface temperature and thereby increase its sheet-drying capacity, and simultaneously reducing the thus-increased temperature of the surface only of said drum primarily just ahead of and at the point of application of said sheet, said method of reduction comprising applying a cooling medium to the surface of the drum in close proximity to and rotationally ahead of the point of sheet application, said cooling medium being applied in amount and at the temperature to reduce the temperature of the drier surface at the point of sheet application to obviate formation of steam between the sheet and drier surface in amount sufficient to substantially interfere with drying contact therebetween.

3,097,934
PORTABLE CONTINUOUS DRIER
Robert D. Applegate, R.R. 1, Attica, Ind.
Filed Aug. 7, 1958, Ser. No. 753,738
3 Claims. (Cl. 34—55)



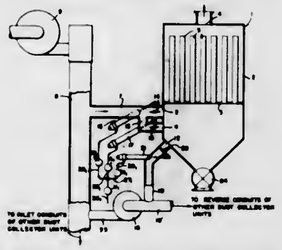
3. A portable continuous grain drier comprising a housing, a liner extending between the end walls of said housing and having perforated side walls spaced from the housing sidewalls, loading means for metering grain into the space between the adjacent side walls of said housing and liner, unloading means at the base of said housing for removing grain therefrom, said unloading means comprising an unloading auger assembly, an electric motor for driving said auger and a source of electrical power therefor, fan means for passing air through said space between the side walls of said liner and said housing, heating means for raising the temperature of the air so passed, and control means for shutting down said auger driving motor upon either a failure of said heating means or upon a predetermined temperature rise of said space between the liner and housing, said control means including a first switch closed in response to the production of heat by said heating means and a second switch normally closed but opened upon a predetermined temperature rise of said space between said liner and housing, said first and second switches being connected in series between said power source and said auger driving motor.

3,097,935
PRODUCTION OF UNSATURATED GASEOUS HYDROCARBONS AND OF SYNTHESIS GAS
Adolf Steinhofer and Otto Frey, Ludwigshafen (Rhine), and Walter Knobloch, Mannheim-Feudenheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Jan. 6, 1958, Ser. No. 707,122
Claims priority, application Germany Jan. 12, 1957
3 Claims. (Cl. 48—215)

1. A continuous process for the production of gaseous unsaturated hydrocarbons, carbon monoxide, and hydrogen which comprises cracking a hydrocarbon oil with oxygen in a fluidized bed of solids selected from the group consisting of high temperature coke, brown coal low temperature coke, anthracite, oil coke, and catalytically-active substances contained within a reaction vessel at a temperature between about 600° C. and 900° C. whereby

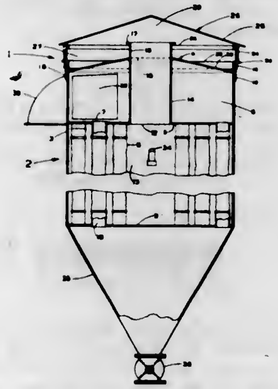
gaseous olefins, carbon monoxide, hydrogen, and liquid hydrocarbons are formed; separating said liquid hydrocarbons into fractions boiling above about 250° C. and fractions boiling below about 250° C.; returning to said reaction vessel said hydrocarbons boiling above 250° C. in a ratio of from about 0.2 to 2 parts by weight of recycled hydrocarbons for each one part of hydrocarbon oil feed, recracking said liquid hydrocarbons boiling above 250° C. in said reaction vessel along with additional hydrocarbon feed; and reacting said hydrocarbons boiling below about 250° C. with oxygen at a temperature above 700° C. in a separate reactor to produce carbon monoxide and hydrogen.

3,097,936
DUST COLLECTOR CONTROL SYSTEM
Roland L. Lincoln, Macungie, Pa., assignor to Fuller Company, a corporation of Delaware
Filed Sept. 30, 1960, Ser. No. 59,691
20 Claims. (Cl. 55—273)



1. A dust collector system comprising a plurality of dust collector units, each dust collector unit including a casing having an inlet for dust-laden gas, an outlet for filtered gas, a filter medium therein and in the path of the flow of gas from the inlet to the outlet and an exhaust outlet at the side of the casing, with respect to the filter medium, at which the inlet is located, an inlet conduit connected to the inlet of each casing, an exhaust conduit connected to the exhaust outlet of each casing, means for causing a flow of dust-laden gas through each inlet conduit into its connected casing, means for withdrawing gas from each casing through its connected exhaust conduit for reverse-gas-flow cleaning of the respective filter mediums, a valve in each inlet conduit for controlling the flow of dust-laden gas therethrough into the connected casing, a valve in each exhaust conduit for controlling the flow of gas therethrough from the casing, means for opening and closing the valves in the respective inlet conduits, means for opening and closing the valves in the respective exhaust conduits, a main supply line for a medium for actuating the valve opening and closing means for the valves in the inlet conduits and the valves in the exhaust conduits, a main branch line leading from said main supply line for each dust collector unit, a manifold, each of said main branch lines being connected to said manifold, branch lines leading from each of said manifolds to the means for opening and closing the valves in the inlet and exhaust conduits of the respective dust collector units for the conduction of an actuating force to said means, means for controlling the transmission of the actuating force through the main branch lines leading from the main supply line to the respective manifolds, means for controlling the flow of the actuating force from the respective manifolds through each of the branch lines leading therefrom to the means for opening and closing the valves in the inlet and exhaust conduits, a timer having a first stage and a second stage, switches in the first stage of the timer which selectively control the actuation of the means for controlling the flow of the actuating force from the main supply line through the respective main branch lines to the respective manifolds, switches in the second stage of the timer for selectively controlling the actuation of the means for controlling the flow of the actuating force from the respective manifolds through the respective branch lines leading to the means for opening and closing the respective valves in the inlet and exhaust conduits of the respective dust collector units, and means for selectively actuating said switches of the timer of the respective dust collector units in a predetermined series arrangement to cause the actuating force to be supplied to the actuating means for the valve in the inlet conduit of at least one, but not all, of the dust collector units to close the valves in said inlet conduit and for causing the actuating force to be supplied to the actuating means for the valve in the exhaust conduit of the same dust collector unit to open that valve, whereby predetermined ones of said dust collector units may be subjected to reverse-gas-flow cleaning while the remainder of the dust collector units continue to filter dust-laden gases.

3,097,937
GAS-MATERIAL SEPARATOR
Roland L. Lincoln, Allentown, Pa., assignor to Fuller Company, a corporation of Delaware
Filed June 10, 1960, Ser. No. 35,290
3 Claims. (Cl. 55—292)

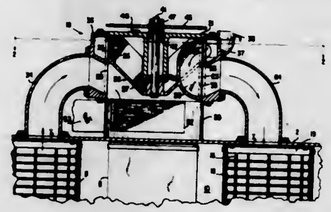


1. A vent unit for a gas-material separator or the like, said separator comprising a side wall and a top wall having a raised portion in the central region thereof, said raised portion of the top wall having a vent aperture, a hood spaced above said top wall to provide a space therebetween, said hood extending substantially over the full area of said top wall, the space between the outer edge of the hood and the outer edge of said top wall forming a peripheral vent opening for the free flow of gases therebetween, and a generally vertically-extending annular member in said peripheral vent opening and extending peripherally thereof, said annular member being substantially aligned with the side wall of the separator and spaced from the top wall thereof to form a drain opening between said member and said top wall.

3,097,938
GAS-MATERIAL SEPARATOR
Leo G. Weller, Catasauqua, Pa., assignor to Fuller Company, Catasauqua, Pa., a corporation of Delaware
Filed Sept. 1, 1961, Ser. No. 136,404
5 Claims. (Cl. 55—302)

1. An air-material separator comprising a main casing having an inlet for air carrying suspended material and an outlet for air from which suspended material has been separated, at least one filtering unit in said casing, in the path of flow of gas from said inlet to said outlet, and

including a gas-permeable filtering medium through which the air must pass during such flow, a valve casing having a first port subtending a substantial circular angle, through which air which is passed through the filter medium on the cleaning cycle is adapted to pass and a discharge outlet, a conduit connecting the outlet of the main casing with said first valve casing port, said valve casing having a second port communicating with a source of external air and subtending a circular angle substantially smaller than the circular angle subtended by said first valve casing port, a valve in said valve casing, said valve including a delivery chamber having a first port adapted to register with said first valve casing port, and a plurality of laterally-spaced second ports adapted, upon movement of the valve, successively to register with said second valve casing port, said first valve port subtending a circular angle substantially smaller than the angle subtended by said first valve casing port, and adapted to be brought



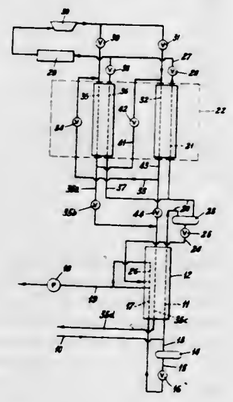
into registry with said first valve casing port, the plurality of said laterally-spaced second ports of the delivery chamber being located in an area of the valve subtending a circular angle not substantially larger than that subtended by said first valve casing port, and means for moving said valve selectively (1) to bring it into a position in which it permits passage of cleaned air from said first casing port to the discharge outlet in the valve casing, and (2) to bring it to positions in which it cuts off communication between said first valve casing port and the discharge outlet of the valve casing and establishes communication through said first valve casing port, said first delivery chamber port, said delivery chamber, and successively through said second delivery chamber ports to said second valve casing port, whereby air from an external source may be passed through said main casing outlet for reverse-flow cleaning of said filter medium.

3,097,939
SPRING CLIP BAG HANGER
George Schneider, University Heights, and Frank Basa, Bedford, Ohio, assignors to Fuller Company, a corporation of Delaware
Filed May 4, 1960, Ser. No. 26,760
4 Claims. (Cl. 55—378)



1. Filtering apparatus having a filter through which dust-laden gases are adapted to pass, a support for one end of said filter, a resilient clip for clasping said end of the filter to the support, said clip comprising a single piece of resilient material including a first part clasping said end of the filter to one side of said support, said first part having a free end turned inwardly providing a flange which engages said end of the fil er and clasps it to one side of said support, a second part clasping said end of the filter to the opposite side of said support, and a third part attached to said first two parts and projecting away from the support a substantial distance to assist in the removal of the clip and thereby in the detachment of said filter from said support, said third part being reversely bent to provide two legs spaced a substantial distance apart and extending parallel to said first and second parts.

3,097,940
PROCESS FOR PURIFYING GASES
Reagan Houston, Williamsville, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Mar. 1, 1961, Ser. No. 92,524
10 Claims. (Cl. 62—12)

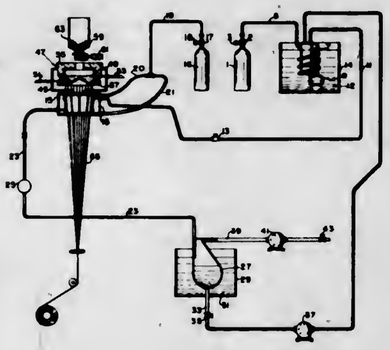


1. A process for cooling and cleaning an impurity-containing gas comprising the steps of providing a first heat exchange zone having first and second thermally associated passageways and a second heat exchange zone having third and fourth thermally associated passageways; providing an impurity-containing feed gas at the lower end of said first passageway for upward flow therethrough to the top end of such passageway; providing a first refrigerant fluid for flow through said second passageway; cooling said impurity-containing feed gas by heat exchange with said first refrigerant during said upward flow to a temperature between the liquefaction and snow points of said impurity thereby condensing the impurity as a liquid on the walls of said first passageway; draining the condensed impurity from the first passageway lower end; discharging the impurity-depleted feed gas from said top end of said first passageway and directing the gas to the lower end of said third passageway for upward flow therethrough to the top end of such passageway; providing a second refrigerant fluid for flow through said fourth passageway in said second heat exchange zone; further cooling said impurity-depleted feed gas by heat exchange with said second refrigerant during said upward flow to a temperature below the snow point of said impurity thereby depositing the frozen impurity on the walls of said third passageway; discharging an impurity-further depleted product gas from the top end of said third passageway; terminating the flow of said impurity-depleted feed gas to said third passageway and the flow of said second refrigerant to said fourth passageway; warming said third passageway sufficiently to melt said frozen impurity; draining the melted impurity from the third passageway lower end and flowing such liquid impurity in heat exchange relation with said impurity-containing feed gas in said first passageway thereby effecting cooling of such feed gas and evaporation of the impurity.

3,097,941
METHOD AND APPARATUS FOR GAS PLATING OF METAL ON GLASS FIBERS

Harry A. Toulmin, Jr., Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York

Filed June 21, 1952, Ser. No. 294,774
26 Claims. (Cl. 65—3)



1. In a method of producing metal sheathed glass filaments the steps of continuously drawing molten glass into the form of a plurality of filaments, subjecting said filaments while in the drawing condition and at a temperature in the range of decomposition of a gaseous heat decomposable metal-bearing compound, and continuously drawing the filaments thus heated to said temperature range and simulaneously contacting the same with a non-oxidizing atmosphere of a heat decomposable metal-bearing compound to effect deposition of metal on said glass filaments.

12. In combination, pot means for holding a body of molten glass, means to draw glass filaments from a body of molten glass in said pot means, means to heat said glass in said pot means to retain said body molten, gas plating means supported below said pot means for the metal plating of filaments drawn from said pot means, said plating means comprising an outer double walled shell surrounding an inner spacing of the shell and having spaced plates defining the end limits of the spacing, said plates and inner wall of the shell forming a passageway therebetween for said filaments, said shell having thereinto inlet and outlet conduits and also having in the interior wall thereof apertures communicating with the spacing and with the conduits for the passage of plating gases inwardly and outwardly of the spacing.

3,097,942
PROCESS FOR DRAWING GLASS SHEET

Robert A. James, Decatur, Ill., and Cecil R. Ward, Chesswick, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Filed Nov. 3, 1958, Ser. No. 771,393
4 Claims. (Cl. 65—85)

1. A process of drawing sheet glass upwardly from a molten bath through a cooled drawing chamber located above said bath,

said drawing chamber being provided with coolers in a lower region thereof disposed above the bath on opposed side surfaces of the sheet, which coolers extend in the direction of the draw of the sheet and

wherein said sheet of glass is withdrawn through an opening in the drawing chamber through which gas enters the chamber and flows toward cool regions therein

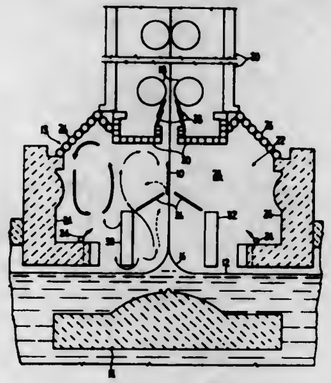
and gas flows longitudinally along the side surfaces of said sheet in the direction of the draw to leave said chamber through said opening therein and wherein

ambient gas currents containing said gas entering said chamber through said opening exist in the drawing chamber

which currents produce wave in the drawn sheet, the improvement which comprises;

forming a stream of hot gas on each side of the sheet in a lower region of said chamber at a location above the molten bath and spaced from each side surface of said sheet,

establishing a velocity of each said hot gas streams sufficient to carry said gas into an upper region of said chamber and directing said streams upwardly



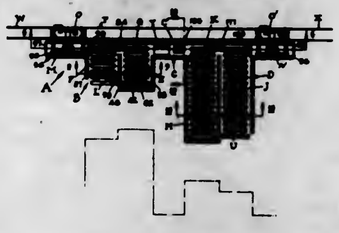
in a direction which is offset horizontally away from said sheet with respect to the edges of said opening while permitting flow of gas longitudinally along the sides of said sheet in the direction of the draw through said chamber, and the opening therein, past said gas entering said chamber, and

establishing a path of flow of each said hot gas streams in a direction extending toward a location in the uppermost region of said chamber where said gas enters said opening which flow diverts the ambient gas currents to regions remote and laterally spaced from the sides of said sheet whereby the wave in said sheet is materially reduced.

3,097,943
APPARATUS FOR PRODUCING MULTIPLE GLASS SHEET GLAZING UNITS

Harry N. Dean, Waterville, and Albert W. Olson, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Mar. 18, 1960, Ser. No. 15,852
18 Claims. (Cl. 65—152)



1. In apparatus for producing all-glass multiple sheet glazing units, a preheating section including a preheating

tunnel, means for supporting pairs of glass sheets in vertically disposed face-to-face relation in said preheating tunnel, means for moving said supporting means and the pairs of glass sheets through the preheating tunnel in a direction normal to their surfaces, a sealing section extending transversely of the preheating section and including a sealing chamber in open communication with the exit end of the preheating tunnel and having a sealing station therein, means in the sealing station for sealing the edge portions of the glass sheets to one another to form a sealed glazing unit, means for supporting a pair of glass sheets in vertically disposed spaced face-to-face relation in the sealing chamber, means for moving said support means and pair of glass sheets carried thereby in an edgewise direction forwardly and rearwardly through the sealing station to seal the marginal edge portions of the sheets together, means for rotating the sheets at the end of each rearward movement to present another side of the sheets in position for sealing upon forward movement thereof through the sealing station, an annealing section arranged substantially parallel with the preheating section and including an annealing tunnel in open communication at the entry end thereof with the sealing chamber, and means for receiving the glazing units from the support means in the sealing chamber and conveying them in a vertical position through said annealing tunnel in a direction normal to their surfaces.

3,097,944
HERBICIDAL METHOD

John A. Riddell and Bogislav von Schmeling, both of Hamden, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 12, 1961, Ser. No. 144,576
12 Claims. (Cl. 71—2.5)

1. The method of controlling weeds in soil which comprises treating the soil before emergence of weeds with a herbicidal amount of a chemical selected from the group consisting of N-phenylitaconimide, N-(methylphenyl)itaconimides, N-(dimethylphenyl)itaconimides, N-(methoxyphenyl)itaconimides and N-(chlorophenyl)itaconimides.

3,097,945
PROCESS OF AGGLOMERATING FINES OF MATERIALS CONTAINING IRON OF WHICH A PORTION HAS BEEN COMPLETELY REDUCED

Michel Henri Louis Marcel Paris, Pont-a-Mousson, and Eugène Marie Burstlein, Meudon, France, assignors to Compagnie de Pont-a-Mousson, Nancy, France, and SOVACO Societe pour la Vallorisation des Combustibles, Minerais et autres Matieres Minerales, Paris, France, both French bodies corporate

No Drawing. Filed Nov. 3, 1961, Ser. No. 149,840
Claims priority, application France Feb. 7, 1959
2 Claims. (Cl. 75—3)

1. Process of agglomerating finely divided products containing iron, said process comprising the following successive steps: completely reducing an auxiliary charge comprising a product in the divided state substantially constituted by iron oxidized at least superficially so that after said reduction all the oxidized portions of the auxiliary charge are entirely de-oxidized; crushing the completely reduced auxiliary charge into fine particles; adding pulverulent sodium chloride to the crushed and reduced auxiliary charge, mixing and stirring the finely divided products to be agglomerated with the auxiliary charge added to the sodium chloride and with water, so as to obtain a homogeneous mixture, moulding under pressure said mixture in the form of agglomerates, and drying said agglomerates in air.

3,097,946
EDIBLE LOW CALORIE COMPOSITION AND PROCESS OF PRODUCTION

Robert F. Menzi, Geneva, Switzerland, assignor to Dr. A. Wander, S.A., Bern, Switzerland, a corporation of Switzerland

No Drawing. Filed Sept. 14, 1960, Ser. No. 55,844
Claims priority, application Switzerland Sept. 16, 1959
19 Claims. (Cl. 99—1)

1. A solid edible composition of matter having a low calorie content which comprises, a polysaccharide which is incapable of yielding an assimilable sugar during digestion after ingestion by humans having dispersed therethrough between about 2 and 15 percent by weight of a protein which has been converted in situ to an insoluble form by heat and said polysaccharide being held by a net of said protein extending throughout said polysaccharide, and said protein having amine groups thereof reacted with sugar moieties of said polysaccharide to form insoluble macromolecules of the polysaccharide-protein composition.

3,097,947
NUTRITIONAL COMPOSITION AND PROCESS

Kenneth Stanley Kemmerer, Evansville, Ind., assignor to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Jan. 30, 1961, Ser. No. 85,456
40 Claims. (Cl. 99—63)

1. A nutritional composition comprising, on a dry weight basis, milk solids and containing from 52% to 81% nonfat milk solids, from 1% to 4% milk fat, from 6% to 18% soy flour and from 4% to 12% of a sugar selected from the group consisting of sucrose, maltose, dextrose and fructose.

3,097,948
PROCESS OF MILLING WHEAT WITH THE AID OF CHLORENE DIOXIDE

Kyuichi Ishikawa, 440 3-chome Sinmachi, Setagayaku, Tokyo City, Japan

Filed May 31, 1961, Ser. No. 113,858
4 Claims. (Cl. 99—80)

1. The method of conditioning tempered wheat to facilitate the separation of its skin from its endosperm which comprises the steps of adding water and chlorine dioxide to the tempered wheat, the weight of said water being about 2–3% of that of said tempered wheat and said chlorine dioxide amounting to from 2 to 15 parts per million in terms of the weight of said wheat, maintaining said wheat in contact with said water and chlorine dioxide for from 1 to 2 minutes, thereby causing said water to penetrate said skin until its water content is 10–15% greater than that of said endosperm, so as to permit the chlorine dioxide to penetrate, soften and toughen the skin, and milling said wheat while said skin remains in said softened and toughened condition.

3,097,949
NOVEL COMPLEX SODIUM ALUMINUM ORTHOPHOSPHATE REACTION PRODUCTS AND WATER-INSOLUBLE FRACTIONS THEREOF

Robert M. Lauck, Park Forest, Reginald E. Vanstrom, Crete, and James W. Tucker, Park Forest, Ill., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 9, 1962, Ser. No. 208,571
2 Claims. (Cl. 99—115)

1. A sodium aluminum phosphate reaction product composition prepared by exothermically reacting under agitation a compound selected from the group consisting of aluminum oxide, aluminum hydroxide, sodium aluminate, and mixtures thereof, and a compound selected from the group consisting of sodium hydroxide, sodium carbonate, and mixtures thereof, with orthophosphoric

acid, the proportions being selected to furnish between 6 and 15 gram atoms of sodium and between 1.5 and 4.5 gram atoms of aluminum for each 8 gram atoms of phosphorus; removing any excess water from the reaction mixture and recovering the dried particulate sodium aluminum phosphate reaction product composition.

3,097,950

CHEESE PRODUCT

Peter F. Noznick and Edwin A. Bernardoni, Chicago, Ill., assignors to Beatrice Foods Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 1, 1960, Ser. No. 19,195

11 Claims. (Cl. 99—116)

1. A process comprising mixing broken cheese with heated water and disodium sulfate as a water soluble edible emulsifier, and continuing the heating until an emulsion of the cheese is formed in the aqueous emulsifier solution.

3,097,951

PROCESS OF MAKING GELLED CONFECTIONS

Joseph E. Greninger, Hillsdale, and Robert A. Lewis, Old Tappan, N.J., assignors to Henry Heide, Incorporated, New Brunswick, N.J., a corporation of New York

No Drawing. Filed Feb. 17, 1960, Ser. No. 9,203

4 Claims. (Cl. 99—134)

1. The method of producing a starch base candy which comprises, forming in a kettle capable of withstanding in its closed condition relatively high internal pressures, a large batch of an aqueous slurry composed of starch and sugar, tightly closing the kettle against substantial loss of the ingredients of the batch during the cooking step, then while maintaining the closed kettle static with the batch of slurry held therein as a unitary solid candy mass, heating such mass through the enclosing wall of the kettle from that side of the mass which is in contact with the inner surface of such wall, by subjecting the exterior side of such wall to steam of relatively high pressure until the mass rises to a given temperature within the range of from 240° to 300° F. and there is produced within the closed kettle a given internal pressure within the range of from 10 to 50 p.s.i., reducing the high external steam pressure to such extent that the temperature of the steam is capable of maintaining the candy mass at such given internal pressure and temperature for a prolonged period and then cooking the candy mass by maintaining it at such given internal pressure and temperature for a period of from 5 to 30 minutes and until the starch in the mass has been fully gelatinized, then while maintaining the gelatinized candy mass in the stationary closed kettle, cooling the mass by applying a coolant to the exterior side of said enclosing wall of the kettle until such mass has cooled to the desired temperature for removal from the kettle, and then removing the cooked candy mass from the kettle.

3,097,952

PROCESS FOR PURIFYING SALT AND PRODUCT THEREOF

George E. Bresette, Haverford, Pa., assignor of one-half to Pauline Lobb Parrish, Devon, Pa.

No Drawing. Filed Feb. 9, 1961, Ser. No. 88,010

7 Claims. (Cl. 99—143)

1. A method for purifying sodium chloride which comprises forcing an aqueous slurry of impure sodium chloride particles under pressure through a small orifice at high velocity and impacting the stream emerging from said orifice against a surface in a zone of reduced pressure to reduce the size of said particles to colloidal size and to separate therefrom associated impurities, and removing the separated impurities from the resulting colloidal suspension of substantially pure sodium chloride particles.

3,097,953

SORBITOL TREATMENT OF POULTRY

Thomas William Humphreys, Plainfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 14, 1959, Ser. No. 786,691

1 Claim. (Cl. 99—194)

The method of preserving a dressed poultry carcass member, which comprises pre-cooling the carcass member by maintaining it immersed in ice water for a time sufficient to cool it to about freezing temperature, dipping the resulting pre-cooled carcass member in an aqueous solution containing about 10% to about 50%, by weight, of sorbitol, in order to apply the sorbitol to the skin of the carcass member, whereby susceptibility of the poultry to freezer burn is reduced, and thereafter freezing the carcass member.

3,097,954

PHOSPHATIC WASTE MATERIALS FOR PRODUCTION OF CERAMIC WARES

Lorenzo Robert Whitaker, R.F.D. 3, U.S. Highway 1, Columbia, S.C.

No Drawing. Filed Oct. 26, 1960, Ser. No. 64,983

4 Claims. (Cl. 106—39)

1. A mix for kiln production of ceramic products which consists essentially of from 25% to 75% by weight of phosphate slime and the balance 25% to 75% by weight of phosphate overburden, said mix having a chemical analysis which approximates: phosphate 26%, alumina 24%, iron oxide 4%, lime 8%, silica 15%, and the balance combined water.

3,097,955

CEMENT PRODUCT

Philip H. Harris, Upland, Calif., assignor to American Cement Corporation, Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,217

6 Claims. (Cl. 106—95)

1. A cement product consisting essentially of a hydraulic cement, water, from about 0.02% to about 0.13% by weight of the cement of an oleaginous substance selected from the group consisting of fatty acids and fats and oils convertible by hydrolysis to fatty acids, and from about 0.02% to about 0.13% by weight of the cement of an oleophilic petroleum sulfonate, the combined amount of oleaginous substance and oleophilic petroleum sulfonate varying in the range from about 0.05% to about 0.25% by weight of the cement.

3,097,956

CYANOETHYLATED CELLULOSE SOLUTIONS

Kenneth W. Saunders, Darien, and Norbert M. Bikales, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 7, 1960, Ser. No. 67,457

5 Claims. (Cl. 106—169)

5. A method of preparing a clear uniform sheet of cyanoethylated cellulose containing from about 11.5 to about 13 weight percent of nitrogen and having at least 2.3 cyanoethyl groups per anhydroglucose unit which comprises: dissolving a cyanoethylated cellulose having the desired nitrogen content to a clear solution in acetonitrile, said solution having a dissolved cyanoethylated cellulose content of at least ten weight percent; casting a film of resultant solution on a suitable surface and removing substantially all the acetonitrile from said film.

3,097,957

COATING COMPOSITION WITH BLOCKED ALCOHOLATES THEREIN

Ober C. Slotterbeck, Rahway, and John F. McKay, deceased, late of Cranford, N.J., by C. Winifred McKay, administratrix, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 18, 1959, Ser. No. 821,100

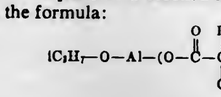
7 Claims. (Cl. 106—285)

1. A composition of matter consisting essentially of:

(1) 100 parts of a liquid polymer selected from the class consisting of poly C_4 to C_8 conjugated diolefins and the copolymers of 0 to 25 wt. percent of styrene with said diolefins; which have been reacted with

(2) 0.01 to 2.5 parts of an anhydride of an unsaturated carboxylic acid selected from the class consisting of maleic anhydride, chloromaleic anhydride, and citraconic anhydride;

(3) 1 to 10 parts of a blocked metal alcoholate which has the formula:



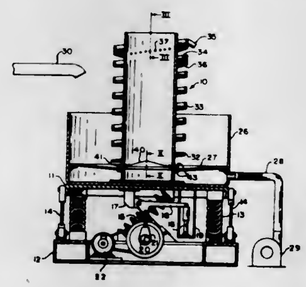
3,097,958

FLUIDIZED COATING MACHINE

John M. Morris, Louisville, Ky., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 10, 1958, Ser. No. 741,179

9 Claims. (Cl. 117—20)



8. A method of coating tacky relatively coarse particles of material with a fine powdery material capable of adhering to the tacky particles comprising the steps of fluidizing a bed of the fine powdery material in a container having an ascending ramp, introducing the tacky coarse particles into the bed of fine powdery material in the container, vibrating the container along a path at an amplitude and frequency to intermix the coarse and fine materials to coat the coarse material and to convey the coarse particles through the bed and up the ascending ramp, and separating the coated coarse particles from loose fine material arriving at the upper end of the ascending ramp.

3,097,959

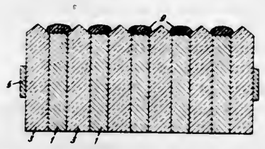
METHOD FOR HARD-SURFACING METAL EDGES

Neil J. Zachman, Willowdale, Ontario, Canada, assignor to Union Carbide Canada Limited, Toronto, Ontario, Canada

Filed Nov. 24, 1961, Ser. No. 154,612

2 Claims. (Cl. 117—22)

1. In a process for providing an adherent hard-surface on metal edges by stacking together a plurality of metal pieces, depositing a hard-surface metallic powder in contact with selected edges of the metal pieces and heat-treating the deposited hard-surfacing metallic material whereby the hard-surfacing metallic material is fused and bonded to the selected edges and reduced in volume, the improvement which comprises inserting spacers between adjacent metal pieces prior to the deposition of the hard-surfacing metallic powder thereon, said spacers



being adhesion-resistant to the hard-surfacing material and extending beyond the selected edges of the metal pieces and into the subsequently deposited hard surfacing metallic powder to the extent that, as a result of heat treatment of the deposited hard surfacing metallic material and the consequent reduction in volume thereof, said hard surfacing metallic material is cut through by the spacers.

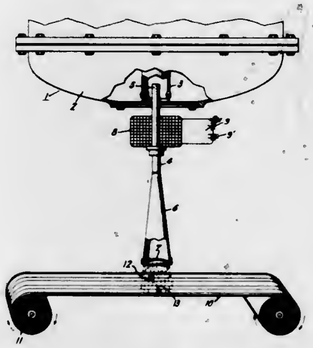
3,097,960

PROCESS FOR IMPROVING THE CROCKING AND COLOR-FASTNESS OF PIGMENT-PRINTED FIBROUS SHEETS BY IRRADIATION

Elliott J. Lawton, Schenectady, N.Y., and Howard C. Woodruff, Coral Gables, Fla., assignors to General Electric Company, a corporation of New York

Filed May 28, 1956, Ser. No. 587,880

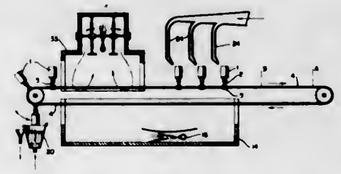
11 Claims. (Cl. 117—38)



1. The process for improving the crocking and color-fastness properties of pigment-printed surfaces of fibrous sheet material in which the pigmented printing composition comprises, by weight, from 1 to 6 parts of a pigment, from 40 to 70 parts of a resinous carrying agent, and from 10 to 40 parts of a binder for the pigment convertible by high energy electrons to a higher molecular weight composition, the said resinous carrying agent being selected from the class consisting of saturated alkyd resins, oil-modified saturated alkyd resins, ethyl cellulose, cellulose acetate, cellulose acetobutyrate, oil-modified phenol-formaldehyde resins, urea-formaldehyde resins, butyrated urea-formaldehyde resins, melamine-formaldehyde resins, and aniline-formaldehyde resins, the said binder being selected from the class consisting of styrene, vinyl toluene, ethyl acrylate, n-butyl acrylate, ethylene glycol dimethacrylate, tetraethylene glycol dimethacrylate, tetraethylene glycol diacrylate, acrylonitrile, diethylene glycol maleate, diethylene glycol maleate adipate, mixtures of unsaturated alkyd resins with other copolymerizable monomers, homopolymers of butadiene,

homopolymers of chlorobutadiene, copolymers of butadiene-1,3 and styrene, copolymers of butadiene-1,3 and vinyl toluene, copolymers of butadiene-1,3 and acrylonitrile, natural rubber, and mixtures of the aforesaid binders, which process comprises (1) carrying out the pigment printing on the aforesaid sheet material employing the above-described pigmented printing composition in the form of an aqueous suspension, (2) drying the aforesaid sheet material and (3) thereafter irradiating the pigment-printed surface with high energy electrons with an irradiation dose of at least 1×10^6 R. while said sheet material is being passed through the electrons, the said high energy electrons being allowed to impinge on the sheet material to convert the above-mentioned binder to a higher molecular weight composition.

3,097,961
PLASTIC COATING OF GLASS OBJECTS
Claude Duperriez, Sucy-en-Brie, France, assignor to Cie de Saint-Gobain, Paris, France
Filed Sept. 28, 1959, Ser. No. 844,603
Claims priority, application France Sept. 26, 1958
3 Claims. (Cl. 117—54)



1. A process of coating a glass object with a layer of vinyl plastisol which comprises preparing a bath of vinyl plastisol, heating the object at about 130–180° C., immersing the object in the bath, withdrawing it from the bath before its heat reserve has been exhausted and while its temperature is still above the setting temperature of the resin and while this temperature is at least sufficient to set the outer surface of the layer deposited on its external surface, heating the resinous layer at a hardening temperature from about 350 to about 400° C., ending the heating before deterioration of the coating, and cooling the object to room temperature.

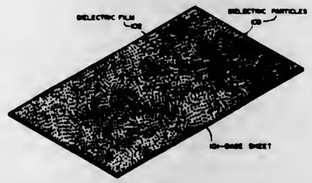
3,097,962
GAS PLATING METAL ON FIBERS FOR ANTISTATIC PURPOSES
John R. Whitacre, Dayton, and Jack J. Bulloff, Columbus, Ohio, assignors to Union Carbide Corporation, New York, N.Y.
No Drawing. Original application Aug. 17, 1954, Ser. No. 450,539. Divided and this application Feb. 23, 1960, Ser. No. 10,051
2 Claims. (Cl. 117—107)

1. A method of treating natural and organic synthetic fiber material which has a tendency to accumulate static electrical charges to substantially eliminate this tendency, said method comprising gas plating a coating of metal onto the surface of said fiber material and which consists of a continuous film of an electrical conducting metal, said metal being deposited onto the surface of said fiber material by bringing said metal in the form of a heat decomposable metal compound in contact with said fiber material while heated to a temperature to cause decomposition of said metal compound and deposition of the metal onto said fiber material, to form a continuous molecular film of the metal of a thickness which is on the order of 0.0000001 of an inch, said metal being selected from the group consisting of nickel and chromium.

3,097,963
SIZED GLASS FIBERS AND COMPOSITION
Remus F. Caroselli and Alfred Marzocchi, Cumberland, R.I., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
No Drawing. Filed Mar. 30, 1959, Ser. No. 802,601
21 Claims. (Cl. 117—126)

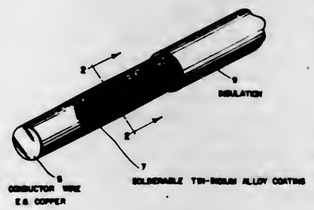
1. Glass fibers and fabrics formed thereof and a size on the glass fiber surfaces having, as an essential ingredient, the reaction product of an imidazoline having a long chain fatty acid group in which the long chain fatty acid group contains at least 5 carbon atoms and an unsaturated polyester resin former in an uncured stage.

3,097,964
DIELECTRIC RECORDING MEDIUM
Philip A. Stowell, Berwyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 30, 1959, Ser. No. 824,010
11 Claims. (Cl. 117—155)



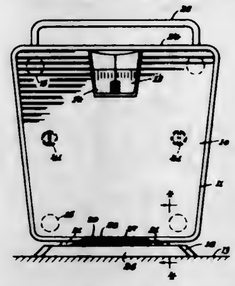
2. A dielectric recording medium comprising a flexible absorbent base sheet which has on one side a substantially continuous electric-charge-retentive coating of non-hygroscopic dielectric material, said coating having partially embedded therein discrete sharp particles of average size of the order of less than a micron of a second electric-charge-retentive dielectric resin material and being physically harder than the material of said coating.

3,097,965
CONDUCTIVE WIRE COATING ALLOYS, WIRES COATED THEREWITH AND PROCESS FOR IMPROVING SOLDERABILITY THEREFOR
Richard A. Wilkins, R.D. 2, Hinman Road, Trenton, N.Y.
Filed June 27, 1961, Ser. No. 127,295
4 Claims. (Cl. 117—231)



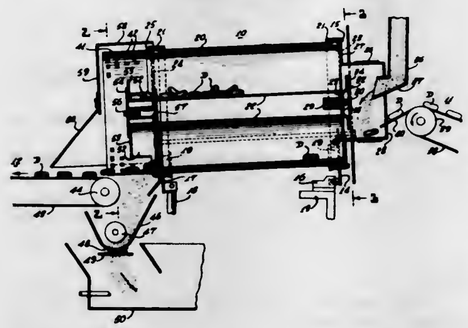
1. A coated copper or copper-base-composition conductor wire possessing superior solderability and reduced susceptibility to deterioration under insulative processing heating and wherein the coating of the wire is a tin-base alloy consisting of 0.01% to 1.0% indium, from 1% to 7% of copper, and the balance tin substantially free of impurities save for permissible fractional percentage quantities of metals of the group comprising silver, zinc and cadmium.

3,097,966
PORTABLE STAND-UP TYPE BATHROOM SCALE
Mike A. Provi, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois
Filed May 20, 1960, Ser. No. 30,525
6 Claims. (Cl. 177—239)



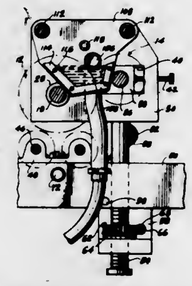
1. A portable bathroom scale comprising a supporting base of generally rectangular form, a generally rectangular platform connected in assembled relation to the base but supported on and movable downwardly with respect thereto in a weighing operation, when the base and platform are horizontally disposed for use in weighing with the base resting on a floor, said scale being constructed to be adapted for use only in horizontal position resting on a floor and to permit its being stood on end on the floor, and a horizontal auxiliary base plate of generally rectangular form whose long dimension is approximately the same length as the width of said scale base and platform, said plate being hingedly connected on a horizontal axis on its one longitudinal edge portion with the bottom of said base on one end, whereby said scale is swingable upwardly from its horizontal operative position into upright position over said plate to rest thereon when not in use, the scale being swingable in the opposite direction relative to said plate to rest on the floor in horizontal position for use.

3,097,967
APPARATUS FOR COATING COMESTIBLES
Edward W. Fries, Baltimore, Md., and Harold B. Kaufman, Jr., New York, N.Y., assignors to DCA Food Industries Inc., a corporation of New York
Filed May 16, 1961, Ser. No. 110,409
11 Claims. (Cl. 118—19)



10. A comestible coating apparatus comprising a longitudinally extending forwardly downwardly inclined barrel, means supporting said barrel for rotation about its longitudinal axis, a plurality of tunnel members located in said barrel about said longitudinal axis and rotatable with said barrel and extending along the length thereof and having trailing end openings, a tubular feed member projecting coaxially rearwardly from and rotating with said barrel, the leading edge of said feed member extending across said trailing end openings of said tunnel members, walls closing the portions of said tunnel member trailing end opening disposed radially outwardly of said feed member, and a discharge bucket projecting forwardly of and communicating with each of said tunnel members and having openings therein directed radially outwardly relative to said barrel member longitudinal axis.

3,097,968
COATING APPLYING APPARATUS
Charles Frederick Schaefer, 94 Botsford Place, Trumbull, Conn.
Filed Nov. 25, 1960, Ser. No. 71,713
9 Claims. (Cl. 118—259)



1. In an apparatus for applying a liquid adhesive coating substance to sheet or slab material; the combination of a coating roller and a coating control roller of the same length and mounted rotatably side-by-side with their axes extending horizontally and being spaced apart so as to substantially establish rolling contact therebetween along a horizontal line, end plates at the opposite ends of said rollers and extending above said line of rolling contact, at least one of said end plates having an overflow opening therein with the bottom of said overflow opening at a level above said line of rolling contact, a generally U-shaped sealing element having a substantial thickness and being secured to the inner surface of each of said end plates, means acting on said end plates to cause the sealing elements of the latter to slidably bear against the adjacent ends of said rollers, each of said sealing elements having an inner periphery that extends across the adjacent end of said line of rolling contact and then upwardly across said adjacent ends of the rollers at the opposite sides of said line of rolling contact thereby defining an upwardly opening recess between said inner surface of the adjacent end plate and the adjacent ends of the rollers so that, when liquid adhesive coating substance is supplied to the space between said rollers above said line of rolling contact, the liquid coating substance circulates in each recess to prevent hardening of the coating substance on said ends of the rollers and said end plates and sealing elements effectively contain the supply of liquid adhesive coating substance at the ends of said rollers.

3,097,969
STARCH PRODUCT
Gertrude A. Roscelli, Columbus, Ohio, assignor to National Industrial Products Company, Columbus, Ohio
Filed Feb. 10, 1960, Ser. No. 7,823
9 Claims. (Cl. 127—33)

2. A process of producing an extra thick paste high viscosity stabilized starch which comprises:
forming a starch slurry;

mixing with such starch slurry up to 0.5% of citric acid based upon the dry weight of the starch;
maintaining the mixture as a starch citric acid slurry



at a temperature of from 117° F. to 122° F. for a period of from 3 to 16 hours;
filtering; and
drying.

3,097,970
METHOD OF CLARIFYING CANE SUGAR JUICE
Juan Delfin, Alvarado, Veracruz, Mexico, assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Dec. 8, 1960, Ser. No. 74,459
5 Claims. (Cl. 127—48)

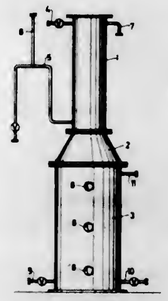
1. In the clarification of aqueous cane sugar juice solutions the improvement consisting of adding to said solution at least 0.5 part by weight fluid organosiloxane polymer per million parts by weight of solution.

3,097,971
METHOD OF AND APPARATUS FOR SUPPORTING OR GUIDING STRIP MATERIAL
Samuel Skipton Carlisle and Genefer Margaret Boxall, London, England, assignors to The British Iron and Steel Research Association, London, England
Filed Nov. 9, 1960, Ser. No. 68,226
15 Claims. (Cl. 134—15)



1. A method of supporting an article which comprises introducing a supply of pressurized fluid through a surface, across which the article is caused to travel, to flow between the surface and the article whereby the article is maintained out of contact with the surface, the fluid being supplied at least in jets originating at the periphery of said surface and angled inwardly relative to the normal between said surface and the path of the article thereacross.

3,097,972
DI-PHASE PICKLING PROCESS
Anders Lennart Fredrik Hydén, Farsta, Sweden, assignor to Aktiebolaget Atomenergi, Stockholm, Sweden, a company of Sweden
Filed Sept. 26, 1960, Ser. No. 58,223
Claims priority, application Sweden Oct. 19, 1959
2 Claims. (Cl. 134—28)



1. A method of pickling objects of zirconium and zirconium alloys which comprises establishing a stratified bath consisting of a heavier bottom layer of an aqueous solution of nitric acid and hydrofluoric acid, a lighter top layer of water and a boundary layer of a mixture of the liquids of said top and bottom layers, the liquids of said layers being miscible with each other in all proportions, supplying water to said top layer adjacent to the upper surface thereof and withdrawing water mixed with said aqueous solution from said top layer at a point adjacent to said boundary layer, and moving said objects from said bottom layer through said boundary layer into said top layer.

3,097,973
PROTECTIVELY CONTAINED SENSING APPARATUS
Emil S. Wieszeck, Box 175, Salem, N.H.
Filed May 23, 1960, Ser. No. 30,793
7 Claims. (Cl. 136—4)



1. A temperature-measuring device for a salt bath, and the like, comprising:
(A) an outer tubular element having generally an L shape and defined by
(1) a hot leg portion adapted to be generally vertically disposed, and
(2) a cold leg portion adapted to be generally horizontally disposed, thereby defining substantially a right angle, with said leg portions being united by a generally elliptically-shaped weld,
(B) an inner tubular element concentrically disposed within said hot leg portion to provide an annular space therebetween,
(C) means closing the lower end of said hot leg portion and the lower end of said inner tubular element,
(D) a centrally apertured elliptical-shaped plate extending between the upper end of said inner tubular element and the weld junction between said hot and cold leg portions and weldably secured therebetween,

said plate, with said closing means, defining a sealed chamber between said inner tubular element and said hot leg portion,
(E) a pressure fluid in said chamber, and
(F) generally L-shaped thermocouple means in said inner tubular element extending past said junction and within said cold leg, said thermocouple means being equipped with cold end connection means adjacent the end of said cold leg portion opposite the end thereof welded to said hot leg portion.

3,097,974
FUEL CELL ELECTRODE
James E. McEvoy, Morton, and Harold Shalit, Drexel Hill, Pa., assignors to Air Products and Chemicals, Inc., a corporation of Delaware
No Drawing. Filed Nov. 7, 1960, Ser. No. 67,521
15 Claims. (Cl. 136—120)

1. The method for making a catalytic fuel cell which comprises the steps of: forming a water solution of a noble metal compound selected from the group consisting of palladium chloride and chloroplatinic acid, the metallic component thereof being present in the amount required in the finished electrode; combining with said solution a quantity of high surface area, activated carbon powder finer than 200 mesh so as to form a slurry; admixing the slurry-forming components for a time sufficient to effect maximum adsorption of said noble metal compound on said activated carbon; removing excess liquid from said slurry and further drying the activated carbon containing adsorbed noble metal compound; forming a suspension of said activated carbon containing adsorbed noble metal; introducing said suspension by deposition into the pores of a thin porous electrode matrix having an average pore diameter substantially greater than the particle size range of said activated carbon powder; and drying said matrix.

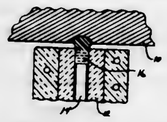
3,097,975
SEPARATOR FOR ELECTRIC BATTERIES
Lutz Horn, Hagen, Westphalia, and Fritz Philipp, Hagen-Haspe, Germany, assignors to Varta Aktiengesellschaft, a corporation of Germany
Filed May 17, 1960, Ser. No. 29,635
2 Claims. (Cl. 136—145)



1. In a storage battery of the type described, in combination, a separator consisting essentially of a plurality of superposed sheets consisting of crimped electrolyte-resistant polyamide fibers; and an ion-permeable fluid-impermeable foil interposed between and contacting at least two of said plurality of sheets.

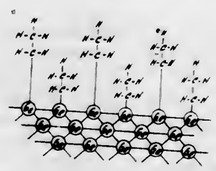
3,097,976
SEMICONDUCTOR ALLOYING PROCESS
Kurt Lehovec, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed July 6, 1959, Ser. No. 825,181
2 Claims. (Cl. 148—1.5)

1. In a process of producing an alloy junction in a semiconductor body, and the attachment of a lead wire in interrelated steps, the steps comprising providing a plurality of closely spaced capillaries, connecting said capillaries to a reservoir of a molten material capable of changing the conductivity of a semiconductor body, positioning a semiconductor body within one capillary diameter of said plurality of capillaries, passing a wire through at least one of said capillaries, exerting pressure on said molten material to force said material through at least one of said capillaries into contact with said semiconductor body and said lead wire and thereby dissolving the contacted portion of said semiconductor body in said



material, crystallizing the liquid phase consisting of said material and said dissolved semiconductor body, with said wire in contact with said crystallizing liquid, maintaining said capillaries in position until the alloy contacts are solidified so as to prevent spreading of the contacts, breaking off the column of molten material after wetting of said semiconductor body to leave an empty space between the column and the alloyed materials, and whereby in an integrated process a conductivity junction is produced with a wire secured thereto.

3,097,977
SEMICONDUCTOR DEVICES
James A. Amick and Glenn W. Cullen, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed June 1, 1961, Ser. No. 114,067
11 Claims. (Cl. 148—6.14)



1. A method of controlling the surface characteristics of a crystalline semiconductive wafer, said wafer consisting of a material selected from the group consisting of germanium, silicon, and germanium-silicon alloys, said method comprising the steps of halogenating the surface of said wafer, and then treating said wafer with a reactive alkylating agent.

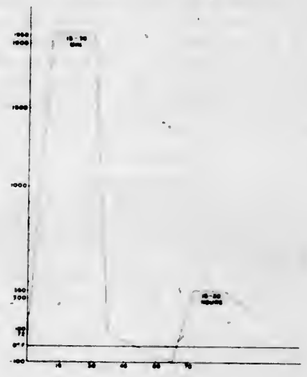
3,097,978
METHOD OF COATING ZINC SURFACES
Isaac L. Newell, 209 Brimfield Road, Wethersfield, Conn., and Ernest A. Walen, 222 Farmington Road, Longmeadow, Mass.
No Drawing. Filed Aug. 17, 1961, Ser. No. 132,020
4 Claims. (Cl. 148—6.14)

1. In the method of chromate conversion coating zinc and zinc alloys, the improvement which comprises treating the chromate containing coating following formation thereof with a separate aqueous solution having a concentration of betwen about 0.0025 and 0.5 gram mole per liter of a member selected from the group consisting molybdate ions, tungstate ions, vanadate ions, phosphate ions and mixtures of the foregoing.

3,097,979
MAGNETIC FLUX-GAS SHIELDED METAL ARC WELDING
Francis E. Amsel, Colonia, William B. Sharav, Short Hills, and Frank T. Stanchus, West Orange, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Dec. 5, 1960, Ser. No. 73,600
4 Claims. (Cl. 148—26)

1. A magnetic granular flux powder for gas shielded electric arc welding, composed of trace–20 percent manganese dioxide, trace–10 percent magnesium oxide, 10–30 percent rutile, 0–15 percent alumina, 1–10 percent fluoride, 2–20 percent silicon (as ferro-alloy), 2–20 percent manganese (as ferro-alloy) 5–25 percent ferro-magnetic material, 2–20 percent potassium titanate, and a binder.

3,097,980
HEAT TREATMENT OF STAINLESS STEEL
John Howard Swarr, Lititz, and Leon A. Hurwitz, Lancaster, Pa., assignors to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 22, 1957, Ser. No. 679,648
6 Claims. (Cl. 148—135)



1. A process for heat treating a series of martensitic stainless steel parts of slightly varying sizes to bring all parts to substantially the same size within specified tolerances comprising preparing a record of variation in linear dimensions of said parts at the completion of the following recited process as a function of solution heating at different temperatures, and carrying out the following steps which are recited in reverse order: stress relieving all said parts at substantially the same temperature within the range of 300–600° F., chilling all said parts to at least as low as −100° F., solution heating parts of different sizes at different temperatures within the range of about 1700–2100° F. which said record indicates will cause dimensional changes to bring all said parts within tolerance.

3,097,981
PROPELLANT COMPOSITIONS
James E. Pritchard, Bartlesville, Okla., and Jo L. Reger, McGregor, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Feb. 24, 1955, Ser. No. 490,431
12 Claims. (Cl. 149—19)

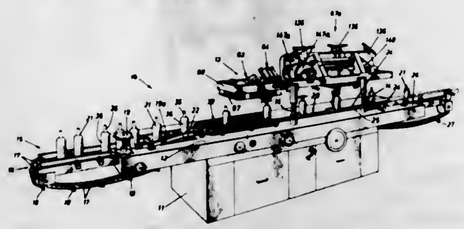
1. A propellant composition consisting essentially of a major amount of an inorganic oxidizing salt and a minor amount of a salt formed by reacting an acid selected from the group consisting of phosphoric acid, nitric acid, sulfuric acid, hydrochloric acid, hydrobromic acid, formic acid, acetic acid, propionic acid and butyric acid with a polymer prepared by polymerizing 5 to 25 percent by weight of an alkyl substituted monovinylpyridine and 95 to 75 percent of a conjugated diene having 4 to 12 carbon atoms, said acid reacting with the polymer to form the corresponding pyridinium salt.

3,097,982
METHOD OF FABRICATING AIRFOILS
Eugene M. Stoner, 1707 Tradewinds Lane, Newport Beach, Calif.
Filed June 6, 1960, Ser. No. 34,058
6 Claims. (Cl. 156—211)



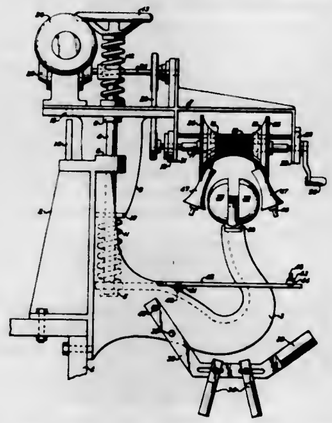
1. In a method of fabricating a honeycomb core reinforced airfoil, the steps of: placing portions of the external skin of said airfoil in overlying relationship with adjacent dies incorporating cavities having configurations corresponding to the configuration of opposite sides of said airfoil; urging said portions of said skin into contact with the wall of the associated die cavity to cause said portions to assume the configuration thereof; placing a layer of honeycomb core material in overlying relationship with each of said skin portions; disposing the lower surface of the layer of honeycomb core material in contiguity with the upper surface of said associated skin portion; securing the lower surface of said honeycomb core layer to said associated skin portion; removing portions of the upper surface of the layer associated with each skin portion to provide co-planar mating surfaces thereupon; lifting one of said skin portions and the associated core layer out of the associated die cavity and rotating it into a position where the planar surface of said core layer engages the corresponding planar surface of the core layer associated with said other skin portion; and bonding the adjacent surfaces of said core layers to each other.

3,097,983
AUTOMATIC LABELLING APPARATUS
Donald A. Caulford and James R. Phin, Toronto, Ontario, Canada, assignors to Universal Labelling Machines Limited, Toronto, Ontario, Canada
Filed Feb. 9, 1961, Ser. No. 88,209
54 Claims. (Cl. 156—364)



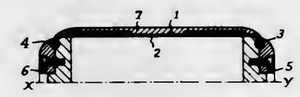
1. In automatic labelling apparatus, an elongated base structure, endless conveyor means mounted upon said base structure to extend longitudinally thereof, the upper reach of said endless conveyor means presenting a generally horizontal support surface extending in a straight line path for transporting containers to be labelled to a labelling station and to a label-conforming station continuously and at spaced intervals, means for moving said conveyor at a constant velocity, a support formation mounted on said base structure to overlie said conveyor means and vertically spaced therefrom, means carried by said support formation for depositing an adhesive-carrying label on a container being transported on said conveyor means, an endless belt formation mounted on said support formation beyond said label-depositing means with reference to the direction of travel of said conveyor means, means supporting said endless belt formation for movement in a vertical plane, the lower reach of said endless belt formation being arranged to overlie said endless conveyor means and to extend in substantially parallel relation thereto, means for moving said endless belt formation at the same velocity as said endless conveyor means, support means carried by said endless belt formation for travel therewith in its endless path, reciprocable means mounted on said support means to extend beyond same in a direction away from said endless belt formation, said reciprocable means having a socket formation at the end thereof furthest away from said endless belt formation and having a configuration to register with a selected surface of a container transported on said endless conveyor means upon which a label has been deposited, pressure pad means mounted on said support means at opposite sides of said reciprocable means and means operable upon displacement of said reciprocable means in a direction to move said socket formation towards said support means under registration of said socket formation with such selected surface of a container to move said pressure pad means into substantial parallelism on opposite sides of said reciprocable means and depending below said socket formation, said pressure pad means having a spacing therebetween when in substantial parallelism to apply conforming pressure to a label to be applied against opposed selected surfaces of a container in conjunction with the application of conforming pressure by said socket formation to the first-mentioned selected surface of a container and means for controlling the position of a container transported on said conveyor means to present the aforementioned selected surfaces thereof to be labelled to said label-depositing means and to said socket formation and pressure pad means.

3,097,984
TIRE RETREAD MATERIAL ROLLING MACHINE
Elmore M. Godfrey, Jr., % Godfrey Tire Co., Knoxville, Tenn.
Filed Sept. 14, 1955, Ser. No. 534,292
8 Claims. (Cl. 156—408)



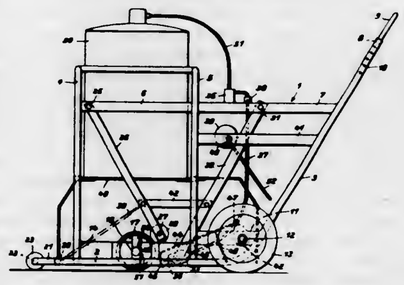
1. A tire retread material applying machine comprising circumferentially spaced rollers for supporting a tire at the interior thereof in position for having applied a strip of retread material on the exterior periphery thereof, coaxial rollers intermediate said supporting rollers in position to apply a rolling action onto the retread material at the periphery of the tire, and means operatively connected with the rollers for driving the same.

3,097,985
TIRE BUILDING DRUM
René Heuzé, Saint Ouen, France, assignor to Pneumatiques et Caoutchouc Manufacture Kleber-Colombes, Paris, France, a corporation of France
Filed June 24, 1960, Ser. No. 38,531
Claims priority, application France June 30, 1959
5 Claims. (Cl. 156—416)



1. A tire building drum comprising a pair of fluid impervious side members at least one of which is axially movable relative to the other, an annular membrane of flexible impervious material reinforced by flexible inextensible elements extending generally axially of the membrane, and means for clamping the edges of said membrane in sealing relationship with the peripheries of said side members so that introduction of fluid under pressure into the region between said side members and membrane shapes the latter to a transversely arcuate configuration, the said membrane including an integral cover of elastomeric material radially outwardly of said reinforcing elements with separate circumferentially extending inflation chambers between said cover and the said inextensible elements on either side of the circumferential center line of the members, a wall of each of said chambers being provided with an opening for the introduction therein of fluid under pressure to thereby effect movement of the portions of said cover over said chambers outwardly relative to the reinforcing elements.

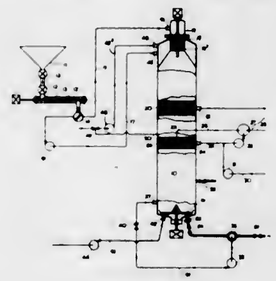
3,097,986
SHEET APPLYING APPARATUS
Walter Kauer, Tramstrasse 119, Zurich, Switzerland
Original application Aug. 29, 1958, Ser. No. 758,012. Divided and this application Aug. 10, 1961, Ser. No. 130,684
9 Claims. (Cl. 156—497)



1. In a device for applying to a surface to be covered a sheet which adheres to said surface, in combination, carriage means movable along the surface to be covered; roll carrying means turnably supported by said carriage means for carrying a roll of the sheet to be applied to said surface so that during movement of said carriage means along said surface the sheet will unroll onto said surface, said roll carrying means supporting said roll in a position where at any given instant during movement of said carriage means and unrolling of said roll a surface portion of said roll is directed toward and about to move into

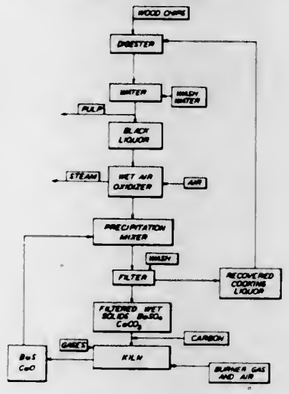
contact with said surface and defines an elongated gap with said surface; heating means carried by said carriage means and extending along substantially the entire length of said roll carrying means for heating a sheet carried by the latter, said heating means being formed with burner openings which are directed toward said gap for simultaneously heating said surface as well as said sheet at the portion of the latter which is about to move in engagement with the portion of the surface heated by said heating means; and positioning means carried by said carriage means and being responsive to the thickness of the roll carried by said roll carrying means for automatically maintaining said heating means at a predetermined distance from the outer surface of the roll as the thickness thereof diminishes.

3,097,987
CONTINUOUS PULPING PROCESS
Arthur Raymond Sloman, Burnie, Tasmania, Australia, assignor to Associated Pulp and Paper Mills Limited, Melbourne, Victoria, Australia, a corporation of Victoria, Australia
Filed Jan. 3, 1961, Ser. No. 80,238
Claims priority, application Australia Feb. 8, 1960
5 Claims. (Cl. 162—17)



1. A method for the production of pulp from wood by an alkaline process in a generally vertical continuous digester at superatmospheric pressure and elevated temperatures, which comprises feeding black liquor and the wood in the form of chips to an entry point adjacent the top of the digester and causing the chips to move downwardly through the digester to a discharge point adjacent the bottom thereof, the wood moving under gravity through a preliminary treatment zone, a cooking zone and a diffusion-displacement zone in the digester; the wood chips in the preliminary treatment zone being in contact with black liquor, the black liquor passing through said preliminary treatment zone in a direction co-current to that of the wood; introducing an alkaline cooking liquor, containing active chemical, at an elevated temperature and pressure, into the digester at a point where the wood is substantially cooked; the cooking liquor passing through the cooking zone in a direction countercurrent to the movement of wood therethrough, retaining at least 90% of the active chemical contained in the cooking liquor in the digester with the cooked wood and therefore available for use in the cooking of more wood; introducing washing liquid into the digester at a point between the point of entry of the cooking liquor and the point of discharge of the cooked wood from the digester, the washing liquid passing serially through the diffusion-displacement zone and the cooking zone in a direction countercurrent to the movement of wood therethrough, the movement of wood through the cooking zone and diffusion-displacement zone being effected without mechanical disintegration or agitation in the said zones; discharging black liquor from the digester between the preliminary zone and the cooking zone, and discharging cooked wood substantially free of active chemical from the digester at said discharge point.

3,097,988
PROCESS FOR REGENERATING BLACK LIQUOR
Eugene W. Schoeffel, Kronenwetter, Wis., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 12, 1958, Ser. No. 773,252
3 Claims. (Cl. 162—31)

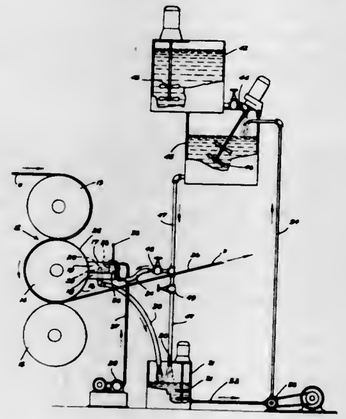


1. A process for regenerating an alkaline sulfide pulping liquor from black liquor containing sodium hydroxide, sodium sulfide, sodium sulfate and sodium carbonate which includes oxidizing black liquor to destroy organic matter therein and convert the sodium salts to sodium sulfate and sodium carbonate by heating under pressure sufficient to maintain at least part of the reaction mixture in the liquid phase at elevated temperature with sufficient oxygen to convert the carbon to carbon dioxide and all the hydrogen to steam; adding a recycled, previously kilned mixture of barium sulfide containing barium carbonate and calcium oxide to the resulting oxidized aqueous liquor to precipitate barium sulfate, barium carbonate, calcium hydroxide and calcium carbonate; separating said wet precipitated mixture from its supernatant liquid; adding carbon to said precipitated mixture; passing the carbon-containing mixture to a roasting zone; heating said carbon-containing mixture in said roasting zone to convert substantially quantitatively the barium sulfate to barium sulfide and the calcium hydroxide to calcium carbonate to calcium oxide; withdrawing a mixture of barium sulfide containing barium carbonate and calcium oxide from said roasting zone; and, recycling said withdrawn mixture of barium sulfide containing barium carbonate and calcium oxide to said addition step.

3,097,989
MANUFACTURE OF SLIP-RESISTANT PAPER
Justin D. Hill and Dean J. Cain, Lawrence, Kans., assignors to The Lawrence Paper Company, Lawrence, Kans., a corporation of Kansas
Filed Dec. 28, 1959, Ser. No. 862,374
7 Claims. (Cl. 162—135)

5. In a process of producing paper sheet, the steps comprising, collecting fibers in a web, pressing said fibers into a thin sheet, calendering said sheet to further compress same and smooth one surface thereof, treating said one surface of said sheet at the starting of the calendering thereof by applying to said sheet surface an aqueous suspension consisting essentially of discrete particles of diatomaceous earth at a rate of approximately

1/10 to 1/20 pound to 1,000 square feet of said surface whereby said particles are wiped and partially embedded mechanically into said one surface by the calendering thereof.



3,097,990
POLYTETRAFLUOROETHYLENE SATURATED CROCIDOLITE FIBER PRODUCT
Richard B. Holly, Lancaster, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 16, 1961, Ser. No. 82,674
5 Claims. (Cl. 162—135)

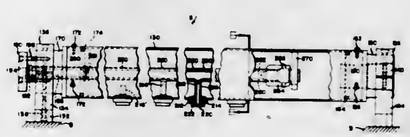
1. A process for obtaining fibrous structures impregnated with tetrafluoroethylene polymer, which comprises forming a slurry of crocidolite asbestos fibers, treating the slurry with a water solution of alum, depositing a synthetic rubber binder on said fibers in the range of from 2–15% by weight of rubber based on the weight of the fibers, forming a sheet from said rubber-coated fibers, drying said sheet, and immersing said sheet in an aqueous colloidal dispersion of tetrafluoroethylene polymer for a period of time sufficient to uniformly disperse and deposit the saturant throughout the sheet, and drying the sheet.

3,097,991
SYNTHETIC FIBROUS PRODUCTS
Walter A. Miller, North Caldwell, and Charles N. Merriam, Jr., Florham Park, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed June 10, 1957, Ser. No. 664,772
6 Claims. (Cl. 162—157)



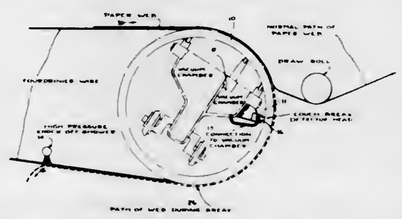
1. As an article of manufacture a fibrous pulp comprising inert liquid dispersed molecularly oriented composite fibers of synthetic plastic material having lateral surfaces and ends frayed into microscopic fibrillate and having diameters from 0.2 to 100 microns and lengths from 1/32 to 1/2 inch, said fibers comprising one or more fibrils of each of two or more normally solid, mutually incompatible, synthetic thermoplastic resins.

3,097,992
AUTOMATIC STRIPPER SHOWER
Edward L. Strempel, Glens Falls, N.Y., assignor to The Sandy Hill Iron & Brass Works, Hudson Falls, N.Y., a corporation
Filed July 7, 1960, Ser. No. 41,380
3 Claims. (Cl. 162—255)



2. Apparatus for use in showering a broken web on a papermaking machine comprising, a shower tube carrying a pressurized supply of shower water and supported adjacent a location on the paper making machine where the broken web accumulates, a plurality of jet nozzles carried by said shower tube in positions to discharge the shower water therefrom towards the broken web, and automatic means for opening the said jet nozzles for the discharge of the pressurized shower water within said shower tube onto the broken web constituting a flexible pressure responsive diaphragm disposed within a trigger housing within said shower tube, the diaphragm of said automatic means having a plurality of regions of flexure each adjacent a pressure relief orifice in the trigger housing of said automatic means and being aligned to one of said jet nozzles and being extended as pressure conditions therewithin vary for the actuation of said jet nozzles, said jet nozzles each extending from approximately the circumference of said trigger housing to outwardly of said main shower tube.

3,097,993
APPARATUS FOR AUTOMATIC KNOCK-OFF SHOWER FOR PAPER MACHINE
Denis A. Goddard, Como, Quebec, Canada, assignor to Dominion Engineering Works Limited
Filed May 23, 1961, Ser. No. 112,044
11 Claims. (Cl. 162—255)

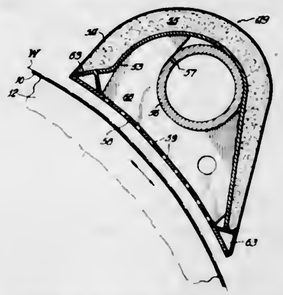


11. In a paper machine having a couch roll, a Fourdrinier wire carried thereby and a vacuum chamber, the combination comprising a normally non-operating shower adapted to be actuated to prevent the paper web from clinging to said wire in the event of breakage of said paper web and a vacuum sensor means adjacent said wire and connected to said vacuum chamber, means for controlling the supply of water to said shower, said means being adapted to be actuated upon blockage of said vacuum sensor upon breakage of said paper web, said vacuum sensor means being positioned at said couch roll and said shower being positioned adjacent said couch roll.

3,097,994
STEAMING DEVICE FOR A PAPERMAKING MACHINE

William A. Dickens, Neenah, and Karl E. Sager, Appleton, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Feb. 3, 1961, Ser. No. 86,920
6 Claims. (Cl. 162—297)

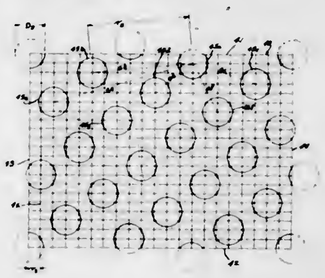


1. In web forming apparatus of the type in which a fibrous web of wet stock is formed on a moving fabric and is transferred to a drier section, a steam chest having a patterned array of steam discharge openings in a side thereof facing the web arranged in such a regular pattern to uniformly cover the web with steam, the smallest dimension of each of said openings being 1/16 inch to 3/8 inch and said side being spaced from said web 2 inches or less, and means for supplying steam at such a pressure to said chest that it is discharged through said openings on to said web at a velocity greater than 10 feet per second and less than 600 feet per second.

3,097,995
SUCTION ROLL PERFORATION DESIGN

Edward D. Beachler, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Jan. 6, 1956, Ser. No. 557,786
13 Claims. (Cl. 162—371)



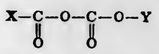
13. In a combination, a straight stationary sealing strip, a suction roll having in its cylindrical surface a plurality of drilled holes arranged in a regularly recurring pattern of generally axial rows and generally circumferential columns, and means for rotating said roll at high speed to cause said rows of holes to pass successively beyond said sealing strip; the provision of an inclination between the line of extent of said sealing strip and the line of each row of holes such as to cause optimum attenuation of noise in the audible frequency range; within said hole pattern each of said holes having a depth h of 1 to 4 inches and within a lateral dimension of $3h/2$ for each first hole there being three additional holes peripherally spaced therefrom one, two and three multiples of a distance d, d being $sh/30c$, wherein c is the speed of sound in feet per second and s is the peripheral roll surface speed and is within the range of 100 to 1500 feet per minute, said holes defining the corners of a parallelogram with the hole one multiple of d away from said first hole being the greatest distance away from said first hole, and the hole two multiples of d away from said first hole being the next greatest distance away from said first hole.

3,097,996
PRESERVATIVES CONSISTING OF MIXED ANHYDRIDES OF ALKYLCARBONIC ACIDS

Wilhelm Thoma, Cologne-Flittard, and Hermann Genth, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 29, 1960, Ser. No. 25,546
Claims priority, application Germany May 2, 1959
6 Claims. (Cl. 167—22)

1. A process of preserving a perishable substance containing a carbohydrate that is susceptible to deterioration by the enzymatic action of microorganisms which comprises mixing with the said substance a mixed anhydride of an alkylcarbonic and a carboxylic acid of the group having the formula



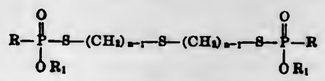
in which X is a radical of the group consisting of methyl and 1,3-pentadienyl and Y is a lower alkyl radical in an amount sufficient to inhibit enzymatic deterioration of the said substance.

3,097,997
BISORGANOPHOSPHORUS ESTERS AND THEIR PREPARATION

Karoly Szabo, Yonkers, N.Y., and John G. Brady, Campbell, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 7, 1961, Ser. No. 150,624
8 Claims. (Cl. 167—22)

5. A method of killing pests which comprises applying to a pest habitat a small but effective amount of a bisorganophosphorus ester having the following general formula:



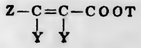
wherein R and R_1 represent lower alkyl radicals and n is an integer of from 2 to 3.

3,097,998
HALOACRYLATE PESTICIDES

Lee A. Miller, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Dec. 21, 1959, Ser. No. 860,662, now Patent No. 3,040,086, dated June 19, 1962. Divided and this application Dec. 6, 1961, Ser. No. 157,585
9 Claims. (Cl. 167—22)

1. The method of combatting insects and their larvae which comprises applying to their habitat an insecticide comprising as the essential ingredient a carboxylate of the general formula



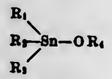
in which Z is selected from the class consisting of hydrogen and hydrocarbon radicals which are free of aliphatic unsaturation and contain from 1 to 12 carbon atoms, T is an alkyl radical of from 1 to 5 carbon atoms and Y is selected from the class consisting of halogen, alkyl-S—, aryl-S—, and alkylaryl-S— radicals of from 1 to 12 carbon atoms and halogen substitution products of such radicals, and in which one Y, and only one Y, is halogen.

3,097,999
ORGANO-TIN COMPOSITIONS AND METHOD FOR TREATING PLANTS

Martinus Johannes Koopmans, Weesp, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application Nov. 13, 1958, Ser. No. 773,566, now Patent No. 3,031,483, dated Apr. 24, 1962. Divided and this application Apr. 12, 1962, Ser. No. 195,354
4 Claims. (Cl. 167—22)

1. A fungicidally effective composition suitable for combating micro-organisms in particular moulds on living plants comprising a fungicidally effective amount of an organo-tin compound of the general structural formula



wherein R_1, R_2 and R_3 are each members of the group consisting of phenyl, chlorophenyl, tolyl, benzyl and alkyl radicals from 1 to 12 carbon atoms and R_4 is a monoacylamino substitution product of a member selected from the group consisting of the saturated aliphatic, unsaturated aliphatic, aromatic and mixed aliphatic-aromatic acyls and sulfonyls of monocarboxylic acids wherein the acylamino group replaces a carbon linked hydrogen atom and an inert carrier therefor.

3,098,000
NON-PHYTOCIDAL SPRAY OIL

Robert D. Harrison, Orinda, Calif., assignor to Tidewater Oil Company, Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed Mar. 2, 1961, Ser. No. 92,740
16 Claims. (Cl. 167—27)

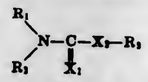
14. A process for ridding plants of pests without undue inhibition of plant growth and development comprising spraying the plant with non-phytocidal petroleum spray oil of at least 88% unsulfonated residue and a viscosity lying in the range of 50 to 120 S.U.S. at 100° F., in which is dissolved an effective amount of an oil-soluble, water-insoluble ultraviolet light absorbing non-phytotoxic chemical and an effective amount of oil-soluble, water-insoluble non-phytotoxic antioxidant.

3,098,001
ACARICIDE AGENT

Horst Werres, Berlin-Charlottenburg, Alfred Czyzewski, Berlin-Tempelhof, and Albert Jager, Berlin-Hermsdorf, Germany, assignors to Schering A.G., Berlin, Germany

No Drawing. Filed Dec. 28, 1960, Ser. No. 102,080
Claims priority, application Germany Dec. 28, 1959
10 Claims. (Cl. 167—30)

1. The method of killing acarids, which comprises contacting the acarids with a compound of the formula:



wherein R_1 is selected from the group consisting of hydrogen and alkyl, wherein R_2 is alkyl, wherein X_1 is selected from the group consisting of oxygen and sulfur, wherein X_2 is selected from the group consisting of oxygen and sulfur, and wherein R_3 is selected from the group consisting of benzyl and halogen-substituted benzyl radicals.

3,098,002
METHOD OF CONTROLLING FUNGI AND ALGAE WITH N-PHENYL-ITACONIMIDES

John A. Riddell and Bogislav von Schmeling, both of Hamden, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 12, 1961, Ser. No. 144,577
20 Claims. (Cl. 167—33)

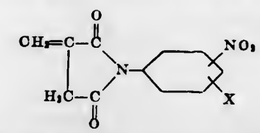
5. The method of controlling fungi on plants which comprises applying a chemical selected from the group consisting of N-phenylitaconimide, N-(chlorophenyl)itaconimides having only chlorine substitution in the phenyl radical, N-(alkylphenyl)itaconimides having only alkyl substitution in the phenyl radical, N-(alkoxyphenyl)itaconimides having only alkoxy substitution in the phenyl radical, N-(carboxyphenyl)itaconimides having only carboxy substitution in the phenyl radical, N-(carbalkoxyphenyl)itaconimides having only carbalkoxy substitution in the phenyl radical, and N,N'-phenylene bisitaconimides having only unsubstituted phenylene radicals attached to the nitrogens to the plants at a rate of ¼ to 10 pounds per acre.

3,098,003
ITACONIMIDE FUNGICIDES AND ALGAECIDES

John A. Riddell, Hamden, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 12, 1961, Ser. No. 144,578
20 Claims. (Cl. 167—33)

5. The method of controlling fungi on plants which comprises applying a chemical having the formula



in which X is selected from the group consisting of NO_2 and CH_3 to the plants at a rate of ¼ to 10 pounds per acre.

3,098,004
THERMOCLINE PENETRATING EMULSIFIABLE FISH TOXICANT COMPOSITIONS

Joseph B. Haus, Clifton, and Ivan C. Brooks, Bloomfield, N.J., and Robert W. Price, Pearl River, N.Y., assignors to S. B. Penick & Company, New York, N.Y., a corporation of Delaware

Filed Jan. 3, 1961, Ser. No. 80,304
8 Claims. (Cl. 167—46)

1. A thermocline-traversing emulsifiable fish-toxicant composition, comprising a fish toxicant, a water-immiscible solvent for said fish toxicant, an emulsifier and an acidic thermocline-penetrant, soluble in said water-immiscible solvent and only slightly soluble in water.

3,098,005
ANTHELMINTIC COMPOSITION CONTAINING 2-NITRO-1-PHENYL-1-PROPENE AND PROCESS FOR USING SAME

Edward B. Hodge, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Feb. 23, 1961, Ser. No. 90,971
7 Claims. (Cl. 167—53)

1. An anthelmintic animal feed composition containing from about 500 to about 4,000 parts per million of 2-nitro-1-phenyl-1-propene.

3,098,006

ANTHELMINTIC 1,4-PHENYLENE-DIISOTHIOCYANATE COMPOSITIONS AND METHOD OF USING SAME

Alfons Söder, Bad Soden, Taunus, Georg Lämmler and Gerhard Ross, Frankfurt am Main, and Walter Kempe, Wiesbaden, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed May 15, 1961, Ser. No. 109,849
4 Claims. (Cl. 167—53)

1. A method of treating animals infected by parasitic helminthes which comprises orally administering 1,4-phenylene-diisothiocyanate to said animals.

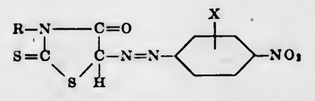
3,098,007

ANTHELMINTIC 5-ARYLAZO RHODANINES

Gerald Brody, Quincy, Ill., assignor to Moorman Manufacturing Company, Quincy, Ill., a corporation of Illinois

No Drawing. Filed Jan. 17, 1962, Ser. No. 166,905
13 Claims. (Cl. 167—53.1)

1. A medicated feed composition for treatment, control and prevention of ascarids in poultry and dogs, and hookworms in dogs comprising alimentary material containing sufficient 5(nitrophenylazo) rhodanine of the following structural formula to provide from about 0.00625% to about 0.2% by weight of a poultry ration and from about 0.0088% to about 0.33% by weight of a dog ration:



in which R represents a number selected from the group consisting of hydrogen, methyl, ethyl, propyl, and butyl radicals, and X represents a member selected from the group consisting of methyl, chloro and nitro substituents.

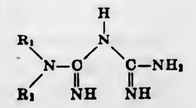
3,098,008

METHOD FOR TREATMENT OF DERMATOLOGICAL DISORDERS

Seymour L. Shapiro, Hastings on Hudson, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 5, 1960, Ser. No. 60,548
2 Claims. (Cl. 167—55)

1. The method of treatment of acne, furunculosis and pyoderma which comprises oral administration to a human so afflicted, a biguanide having the following free base formula



and which is one of the group consisting of: (*a*) the compound wherein R_1 is a C_4–C_5 alkyl, and R_2 is hydrogen; (*b*) the compound wherein R_1 is aryl-$(CH_2)_n$—, where *n* is an integer in the range 1 to 2, the total number of carbon atoms in R_1 being 6–8, and R_2 is hydrogen; and (*c*) the compound wherein R_1 is benzyl and R_2 is methyl; and the substantially non-toxic salts thereof; said oral administration being in an amount which is sufficient to exert curative and alleviative effects in acne, furunculosis and pyoderma.

3,098,009

COMPOSITION COMPRISING QUINAZOLINE DIURETICS POTENTIATED BY CARBONIC ANHYDRASE INHIBITORS

James Daniel Gallagher, Upper Saddle River, N.J., and John Rhodes Cummings, Suffern, Lillian Mary Ann Lipchuck, New York, and Edgar Henry Stokey, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 25, 1960, Ser. No. 51,790
4 Claims. (Cl. 167—65)

1. A composition of matter comprising a mixture of acetazolamide and a 1,2,3,4-tetrahydro-7-halo-6-sulfamyl-4-quinazolinone in the proportion of 1:1 to 1:5.

3,098,010

PROCESS FOR INCREASING THE EFFECTS OF MONOAMINE OXIDASE INHIBITORS BY MEANS OF CATECHOL-O-METHYL TRANSFERASE

Guy M. Everett, Chicago, and Arthur A. Wykes, Deerfield, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 5, 1961, Ser. No. 143,054
7 Claims. (Cl. 167—65)

1. The process of controlling depression in warm-blooded animals so afflicted which comprises administering a therapeutic dose of monoamine oxidase inhibitor in conjunction with an O-methyl transferase inhibitor in a non-toxic amount sufficient to increase and prolong the effect of said monoamine oxidase inhibitor.

3,098,011

PROCESS OF PRODUCING A VACCINE AGAINST DISTEMPER

Gunnar Rockborn, Stockholm, Sweden, assignor to Behringwerke Aktiengesellschaft, Marburg (Lahn), Germany, a corporation of Germany

No Drawing. Filed Aug. 30, 1960, Ser. No. 52,781
Claims priority, application Great Britain Sept. 3, 1959
4 Claims. (Cl. 167—78)

1. A process of producing a canine distemper vaccine which comprises cultivating pathogenic canine distemper virus which is naturally adapted to propagate in canine tissue culture by serially passing said virus through a total of at least fifty canine kidney tissue cultures, at a pH value between 7.0 and 8.0, and harvesting the thus obtained nutrient fluid containing the modified virus.

3,098,012

1,3-DIPHENYLPROPYL CARBAMATE DERIVATIVES

Burton Kendall Wasson, Valois, Quebec, and John Mulvin Parker, Montreal, Quebec, Canada, assignors to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of the Province of Quebec

No Drawing. Filed Sept. 4, 1962, Ser. No. 221,344
1 Claim. (Cl. 167—84.5)

A method of inducing in an experimental animal a state resembling Parkinsonian-like rigidity comprising administering to said animal a dose of from about 130 to about 500 mg./kg. of a 1,3-diphenylpropyl carbamate selected from the group consisting of 1,3-diphenyl-2-propyl carbamate, 1,1-diphenyl-2-propyl carbamate and 1,3-diphenyl-1-propyl carbamate.

3,098,013

UREA-FATTY ALCOHOL ADDUCT DYEING COMPOSITION AND HAIR DYEING THEREWITH

William E. Austin, Bronx, N.Y., and Fred A. Levin, Paterson, and Theodore H. Binaski, Jersey City, N.J., assignors to The Nestle-Le Mur Company, New York, N.Y., a corporation of Ohio

No Drawing. Filed Mar. 15, 1960, Ser. No. 15,061
14 Claims. (Cl. 167—88)

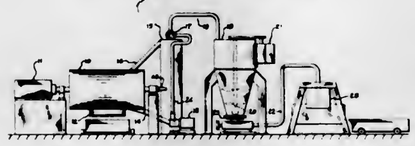
1. A composition suitable for use as a hair coloring comprising an aqueous medium, an insoluble dye dispersed in the medium, and as dispersing agent for the dye in the medium the system of polyoxyethylene ether of a C_{10} to C_{30} fatty alcohol and urea-C_{10} to C_{30} fatty alcohol adduct.

3,098,014

ENZYMATIC REMOVAL OF MEAT FROM BONES

Arnold E. Denton, Moorestown, N.J., and Jack F. Beuk, Hinsdale, John M. Hogan, Oak Lawn, and William J. McBrady, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

Filed Apr. 28, 1960, Ser. No. 25,273
9 Claims. (Cl. 195—2)



1. A method for removing meat from bones having meat attached thereto comprising mixing meat-containing bones with water and a proteolytic enzyme, heating said mixture to enhance the activity of said enzyme and cause said meat to be partially freed from said bones, agitating said mixture and moving said bones relative to one another to exert pressure and friction on one another further freeing said meat from said bones, inactivating said enzyme, and removing the liquid phase of said mixture from said freed meat.

3,098,015

ENZYME PURIFICATION

Teuvo Pekka Äyräpää, Stockholm, Sweden, assignor to Ab Kabi, Stockholm, Sweden, a corporation of Sweden

No Drawing. Filed Jan. 8, 1962, Ser. No. 164,985
Claims priority, application Sweden Jan. 21, 1961
11 Claims. (Cl. 195—66)

1. The method for purifying enzymes selected from the group consisting of streptokinase, streptodornase, and mixtures thereof to render the same substantially free of impurities such as pyrogens, hemolysins and hyaluronidase, that comprises treating a starting material, selected from the group consisting of filtered mash produced by fermentation of streptococci in suitable nutrient medium and enzyme concentrates prepared therefrom, at a buffered alkaline pH with a surface active agent selected from the group consisting of anionic, cationic and non-ionic surface active agents having the capacity to form association colloids in water solution, whereby an interaction between said surface active agent and impurities is attained inactivating the same without substantial impairment of said enzymes, and separating said enzymes from the surface active agent preparatory to concentration and recovery of said enzymes by known methods.

3,098,016

PROCESS FOR PRODUCING STERILE VIALS CONTAINING CULTURE MEDIA AND A CARBON DIOXIDE ATMOSPHERE

Murray Sam Cooper, Dumont, N.J., and Vito Anthony Di Benedetto, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 26, 1961, Ser. No. 126,878
6 Claims. (Cl. 195—102)

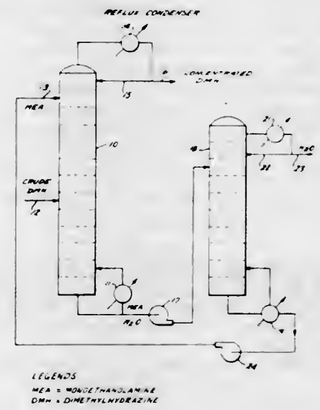
1. A process for the production of sealed sterile vials containing sterile culture medium which comprises incorporating in the culture medium in each vial an amount of citric acid which on reaction with a bicarbonate will produce a volume of carbon dioxide approximating 10% of the free space above the culture medium in the vial, adding a bicarbonate in the form of a delayed dissolving tablet, the rate of dissolution being such that there is negligible carbon dioxide production for from 5 to 10 minutes, the tablet containing materials which, except for reaction with the citric acid, will not decompose at autoclaving temperatures of 15 pounds per square inch, do not result in the production of bacteriostatic and bactericidal products and produce after reaction with citric acid a final product having a pH between 6.8 and 7.5, all constituents of the tablet and their reaction products being completely soluble in water, and capping, sealing and sterilizing the vials.

3,098,017

PROCESS OF SEPARATING UNSYMMETRICAL DIMETHYLHYDRAZINE FROM AQUEOUS SOLUTIONS CONTAINING SAME

Charles R. Walter, Jr., Hopewell, Va., and Billy E. Lloyd, Memphis, Tenn., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Oct. 12, 1959, Ser. No. 845,996
4 Claims. (Cl. 202—39.5)



1. A process of separating unsymmetrical dimethylhydrazine from aqueous solutions containing unsymmetrical dimethylhydrazine which comprises extractively distilling the aqueous solution of unsymmetrical dimethylhydrazine in the presence of monoethanolamine and taking off overhead unsymmetrical dimethylhydrazine substantially free of water and of monoethanolamine, while removing as bottoms an aqueous solution of monoethanolamine.

3,098,018

SEALING ANODIZED ALUMINUM

Gerald H. Kissin and Richard L. Smith, Spokane, Wash., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

No Drawing. Filed July 13, 1961, Ser. No. 123,655
9 Claims. (Cl. 204—35)

1. A bath for sealing oxidized aluminous surfaces produced by the method of anodic oxidation using an electrolyte consisting essentially of an aqueous solution of sulfosalicylic acid and at least one substance selected from the group consisting of metal sulfates and sulfuric acid, said bath consisting of an aqueous solution of from 0.02 to 0.8 gram/liter of nickel acetate and from 0.1 to 3.0 grams/liter of a ligno-sulfonate and having a pH value of between 4 and 6.

3,098,019
ELECTROLYTIC PRODUCTION OF ZINC

Richard F. Pagel, Belleville, Ill., assignor to American Zinc, Lead and Smelting Company, St. Louis, Mo., a corporation of Maine

No Drawing. Filed Mar. 9, 1962, Ser. No. 178,568
4 Claims. (Cl. 204—55)

1. In the method of electrolytically depositing high quality zinc, the step comprising adding to an acidic zinc electrolyte a quantity of a halogenated p-benzoquinone within the range of 0.0001 and 0.1 gram per liter of said electrolyte.

3,098,020
PROCESS FOR THE ISOTOPIC ENRICHMENT OR FRACTIONATION OF HYDROGEN

Grégoire Dirian, Palaiseau, Henri Sack, Le Raincy, Fernande Botter, born Bergheaud, Chatillon-sous-Bagneux, and Bernard Lefrançois, Noeux-les-Mines, France, assignors to Houilleres du Bassin du Nord et du Pas-de-Calais, Douai, France, a public establishment of France, and Commissariat a l'Energie Atomique, Paris, France

Filed Aug. 11, 1960, Ser. No. 48,959
Claims priority, application France Aug. 28, 1959
5 Claims. (Cl. 204—59)

1. A process for the isotopic fractionation of hydrogen by the electrolysis of liquid ammonia comprising electrolyzing said liquid ammonia in the presence of an acid electrolyte using a current density of between about 0.01 and 0.5 amp./cm.², a voltage of between about 0.5 and 30 volts and a cathode made of a material selected from the group consisting of iron, copper, nickel and alloys of these metals to thereby release hydrogen gas and nitrogen gas, said hydrogen gas having a lower deuterium concentration than said liquid ammonia whereby said liquid ammonia is enriched in said deuterium.

3,098,021
PROCESS FOR PRODUCING DUCTILE VANADIUM

Donald J. Hansen, Niagara Falls, and William J. West, Lewiston, N.Y., and James G. Farmer, Riverside, Conn., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 15, 1960, Ser. No. 22,409
4 Claims. (Cl. 204—64)

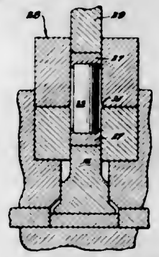
1. In a process for the electrorefining of oxygen-contaminated vanadium in an electrolytic cell wherein an electrode and the vanadium to be refined are immersed in, and separated from each other by, an electrolyte comprising a lower vanadium halide dissolved in fused electrolytic salt, and said electrode is rendered cathodic and said vanadium is rendered anodic under the influence of direct current applied to said electrolytic cell to effect the deposition of vanadium from said electrolyte on said electrode and the dissolution of the anodic vanadium in said electrolyte, the improvement for producing vanadium with substantially reduced oxygen content which comprises introducing elemental aluminum into said electrolyte in electrical relation with said vanadium to render said aluminum anodic and electrodepositing vanadium from said electrolyte on the cathodic electrode.

3,098,022
COVERING A CORE BY EXTRUSION

Anthony J. Karnie, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 11, 1960, Ser. No. 49,111
1 Claim. (Cl. 204—154.2)

A method of applying a jacket to a cylindrical core, said method comprising placing flat sides of two cylindrical blocks of jacketing material against the flat ends of the cylindrical core, exerting opposing pressures at a temperature between 640° and 800° F. against the flat sides of the blocks opposite the sides against the flat sides of the core, thereby causing the jacketing material to flow around the core in two skirts which approach each other from opposite ends of the core, the said skirts being completely protected from the oxygen of the atmosphere except for their approaching edges, continuing the said opposing pressures for a time sufficient to cause the said approaching edges to meet and flow outward from the core in the shape of an annular raised portion, thereby

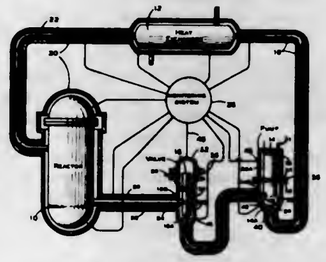


carrying with them oxides formed by reason of their exposure to the oxygen of the atmosphere and causing said raised portion to occlude said oxides and to form, immediately next to the core, an annular bond free of oxides between portions of the said skirts just above and below said approaching edges, discontinuing the pressures and cooling the core so jacketed by the skirts, and cutting off the annular raised portion of the jacketing material occluding the said oxides, thereby removing the said oxides from the jacketed core.

3,098,023
NUCLEAR REACTOR CONTAINMENT SYSTEM

Donald C. Schluderberg, Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Sept. 15, 1958, Ser. No. 761,074
5 Claims. (Cl. 204—193.2)



1. In a nuclear reactor primary coolant system having a closed circuit for the continuous circulation of a primary coolant fluid, said reactor primary coolant system comprising separate components including a reactor and a heat exchanger joined by connecting piping for the flow of primary coolant therethrough, the improvement comprising a closely fitting fluid-tight pressure shell completely enclosing said components and connecting piping which form the closed circuit in a continuous integral structure having a configuration generally conforming to the shape of the contained components and piping and forming therewith a narrow flow space and means for circulating a fluid through said flow space.

3,098,024
COMPOSITE FUEL ELEMENTS FOR NUCLEAR REACTORS

Greenlief H. Barney, Attleboro, Mass., and Lawrence C. Burman, New York, N.Y., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed Jan. 27, 1959, Ser. No. 789,447
3 Claims. (Cl. 204—193.2)

1. A fuel element for nuclear reactors comprising a core clad with a laminated metal, the core comprising a material selected from the group consisting of natural uranium and thorium metal and compounds thereof, the laminated metal consisting of an outer layer of one of the metals taken from the group consisting of zirconium and stainless steel bonded to and in direct contact with an inner layer, the inner layer being composed of a metal taken from the group consisting of zirconium and stainless steel containing enriched uranium, the outer and inner layers being composed of similar metals.

3,098,025
FOIL ELEMENT FOR NUCLEAR REACTOR

Robert A. Noland, Chicago, David E. Walker, Park Forest, and Bernard I. Spinrad, Naperville, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 18, 1961, Ser. No. 139,017
10 Claims. (Cl. 204—193.2)

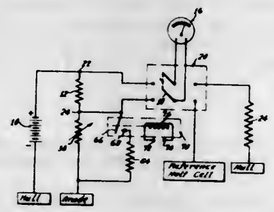


1. A nuclear reactor fuel element comprising an inner foil of nuclear fuel material having tessellated perforations therein and sheets of cladding metal covering the foil of fuel material and in intimate contact with it on both sides, the said sheets of cladding metal being joined to one another around the outer edges and through the perforations of the inner foil.

3,098,026
CATHODIC PROTECTION SYSTEM

Edward P. Anderson, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed Oct. 8, 1958, Ser. No. 766,147
1 Claim. (Cl. 204—196)

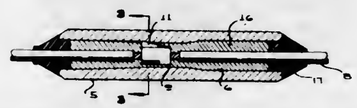


In a system for cathodically protecting the hull of a ship driven by an engine provided with an electrical ignition circuit, at least one anode, a cathodic protection current circuit connected to said anode, variable resistance means connected in series in the protective current circuit, an additional second resistor, and a relay responsive to energization of the ignition circuit for connecting said second resistor across said variable resistance means to increase the protective current.

3,098,027
ANODE CONNECTOR

Archibald Thomas Flower, Glenside, Pa. (Queen St. and Ivy Hill Road, Philadelphia 18, Pa.)

Filed Dec. 9, 1960, Ser. No. 74,964
4 Claims. (Cl. 204—196)

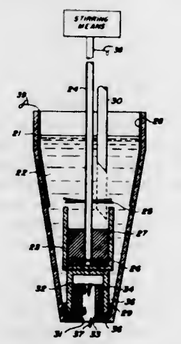


4. An anode connector for conductor wires comprising an anode of high silicon iron having an axial bore throughout its length, a conductor wire extending through the bore of said anode, a compressible split sleeve mounted on said conductor wire and compressed into tight contact with said wire, one end of said sleeve being flared outwardly and having on its outer surface a series of spaced longitudinal fins having sharp outer edges, the overall diameter of said sleeve and fins being greater than the diameter of said bore, said sleeve being press fitted in the bore of said anode to cause the fins to gouge against the inner wall of the anode to establish a clean electrical contact between the sleeve and anode.

3,098,028
PLUTONIUM ELECTROREFINING CELLS

Lawrence J. Mullins, Jr., Joseph A. Leary, Carl W. Bjorklund, and William J. Maraman, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

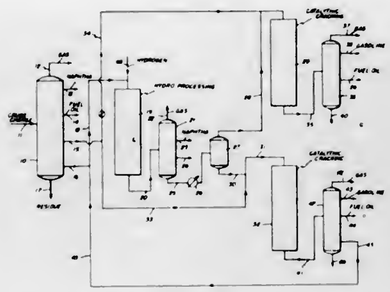
Filed Feb. 17, 1961, Ser. No. 90,152
1 Claim. (Cl. 204—245)



A plutonium electrorefining cell comprising a generally cylindrical first ceramic container having an outer cylindrical wall and a reentrant sleeve extending up from its bottom with an open top, a second ceramic container in the form of an inverted cylindrical cup disposed between the outer wall and the reentrant sleeve of said first container to define outer and inner annuli therewith, said second container having at least one fluid passageway therethrough near the bottom of said first container, a third ceramic container in the form of an open top cylinder supported from the inverted bottom of said second container, a cathode sleeve adjacent the inside surface of said first container extending to at least the top of said third vessel, an anode rod extending down to the bottom of said third container and having at least two stirrer blades mounted thereon, one at the end of said anode rod and one in said first container, tube means for adding plutonium to said anode, said cathode, anode rod, stirrer blades and tube means being selected from the class of

metals consisting of tungsten and tantalum, means for applying a constant voltage between said anode rod and said cathode, and a means for rotating said anode rod.

3,098,029
COMBINATION CATALYTIC CRACKING-HYDROPROCESSING OPERATION
Paul W. Snyder, Jr., Pitman, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 22, 1959, Ser. No. 828,814
2 Claims. (Cl. 208—61)



1. A process for the efficient conversion of a hydrocarbon charge stock boiling in the range from about 650° F. to about 1050° F. to lower boiling products with a minimum build-up of refractory components which comprises:

(1) reacting said hydrocarbon charge stock in the presence of hydrogen utilizing reaction conditions wherein said reaction results in a net consumption of hydrogen to produce a hydroprocessed product;

(2) separating the portion of the hydroprocessed product boiling above about 380° F. from said hydroprocessed product into a lower boiling fraction boiling in the range from about 380° F. to about 650° F. and a higher boiling fraction boiling in the range from about 650° F. to about 900° F.;

(3) catalytically cracking said lower boiling portion of said hydroprocessed product to a gasoline-containing product, all of which is removed from the system;

(4) [*a*] catalytically cracking said higher boiling hydroprocessed fraction in a separate catalytic cracking zone to lower boiling gasoline-containing products;

[*b*] separating a catalytic gas oil boiling in the range from about 400° F. to about 650° F. from said gasoline-containing product;

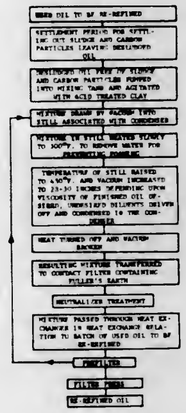
[*c*] recycling said catalytic gas oil to the hydroprocessing step (1); and

[*d*] processing said catalytic gas oil through the sequence of steps (1), (2), (3), (4*a*), (4*b*) and (4*c*).

3,098,030
CATALYTIC HYDROCRACKING WITH A PLATINUM COMPOSITE CATALYST
Harry L. Coonradt, Woodbury, Wilbur K. Leaman, Medford Lakes, and Joseph N. Miale, Runnemede, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed June 24, 1960, Ser. No. 38,444
10 Claims. (Cl. 208—111)

5. A process for hydrocracking a hydrocarbon charge which comprises contacting the same in the presence of hydrogen under hydrocracking conditions with a catalyst consisting essentially of a physical particle-form mixture of (1) molybdenum oxide intimately combined in an amount of between about 1 and about 30 percent by weight of the resulting composite with an acidic silica-alumina component having an activity index of at least 25 and (2) a porous alumina support having an activity index of less than 20 and having deposited thereon between about 0.05 and about 10 percent by weight of platinum and constituting between about .1 and .9 weight fraction of said mixture.

3,098,031
METHOD OF RE-REFINING
Velma Claver Harris, 3621 Belleview, Kansas City 11, Mo.
Filed Sept. 30, 1958, Ser. No. 764,215
4 Claims. (Cl. 208—183)



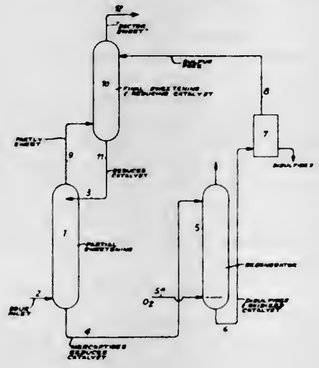
2. A process for re-refining used petroleum oil which comprises desludging the oil by acid treatment, mixing activated clay into the desludged oil in the proportions of approximately twenty pounds of clay to fifty gallons of oil, vaporizing diluents from said mixture in a still under vacuum, breaking said vacuum, contacting said mixture in a contact vessel containing 200 mesh fuller's earth in proportions of approximately eight pounds to fifty gallons of oil, adding a neutralizer in the proportions of approximately one-half pound to fifty gallons of oil, passing the contacted oil to a prefilter, and then re-circulating the oil repeatedly in a cyclic path from said prefilter in heat exchange relation to a batch of oil to be re-refined to said contact vessel and back to said prefilter, bypassing a portion of said oil from said cyclic path and discharging it into said still to remove any deposit remaining in said oil, discharging the oil from the prefilter and the bypassed portion of the oil from the still and returning it to the cyclic path, and finally passing said oil from said prefilter to a filter press.

3,098,032
HYDRODESULFURIZATION PROCESS EMPLOYING COBALT - MOLYBDENUM - MOLECULAR SIEVE CATALYST
Elroy Merle Gladrow, Edison Township, Middlesex County, N.J., and Paul Thomas Parker, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Original application May 22, 1957, Ser. No. 660,761, now Patent No. 2,967,159, dated Jan. 3, 1961. Divided and this application Nov. 29, 1960, Ser. No. 72,313
4 Claims. (Cl. 208—216)

1. In a process for catalytically hydrodesulfurizing a hydrocarbon fraction to remove sulfur compound contaminants therefrom by intimate contact of hydrogen

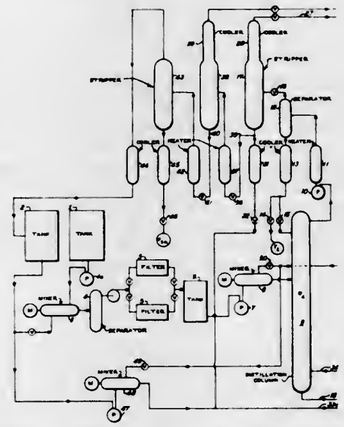
with the hydrocarbon fraction in the presence of a catalyst, the improvement which comprises using as the catalyst a crystalline sodium aluminosilicate suitable for adsorbing aromatic hydrocarbon molecules in its pores and having pore openings up to about 15 Angstrom units in which more than 50% of the sodium ions are replaced by cobalt ions and containing from about 5 to about 20% of an oxide of molybdenum.

3,098,033
PROCESS FOR REFINING PETROLEUM PRODUCTS
Edouard Weisang and Claude Scherrer, Le Havre, and Andre Gislon, Paris, France, assignors to Société Anonyme dite: Compagnie Francaise de Raffinage, Paris, France, a corporation of France
Filed Sept. 25, 1959, Ser. No. 842,346
Claims priority, application France Feb. 13, 1959
10 Claims. (Cl. 208—227)



1. In a process for refining petroleum hydrocarbons by the removal therefrom of sulfur impurities present therein as mercaptans, the steps which comprise extracting from said petroleum hydrocarbons a major portion less than all said mercaptans with an aqueous alkaline solution including an organic oxidation catalyst undergoing reversible transformation between an oxidized state and a reduced state, said catalyst being in said reduced state during said extracting step and said extracting step being conducted in counter-current flow in a closed system and substantially in the absence of oxygen, separating from said extracting step a hydrocarbon phase containing a minor portion of said original mercaptans and an aqueous alkaline phase containing said extracted major portion of mercaptans as mercaptides, subjecting substantially all of said separated aqueous alkaline phase to an oxidizing step for oxidizing said mercaptans in said aqueous alkaline phase to disulfides and effecting during said oxidizing step conversion of said catalyst in said aqueous phase from said reduced state to said oxidized state thereof, separating said disulfide produced in said oxidizing step from said aqueous alkaline phase for obtaining a regenerated aqueous alkaline solution containing said catalyst in said oxidized state thereof, treating said hydrocarbons from said first extracting step with said regenerated aqueous alkaline solution in a second treating step for oxidizing said minor portion of said mercaptans therein and effecting conversion of said catalyst back to said reduced state thereof, said second treating step also being conducted with counter-current flow and in a closed system substantially in the absence of the addition of oxygen thereto, withdrawing from said second treating and oxidizing step said petroleum hydrocarbons substantially free of mercaptan impurities, separately withdrawing from said second treating and oxidizing step said alkaline solution containing said catalyst converted to said reduced state thereof, and recycling substantially all of said withdrawn alkaline solution directly into said first extracting step through a closed system and substantially in the absence of the addition of oxygen thereto for extracting said mercaptans from additional said petroleum hydrocarbons in said first extracting step.

3,098,034
FRACTIONATION OF OILS BY SELECTIVE EXTRACTION
Herbert P. A. Groll, Kyrkogatan 1A, Molndal, Sweden
Filed Aug. 23, 1954, Ser. No. 451,566
Claims priority, application Sweden Aug. 24, 1953
15 Claims. (Cl. 208—316)



1. Method for the fractionation of high molecular weight organic material which comprises intimately contacting the organic material to be fractionated in a fractionating step with a liquid solvent containing a predetermined amount of a dissolved gas which decreases its solvent power to thereby selectively extract a fraction of said material, removing the solvent with the extracted fraction dissolved therein, separating at least a portion of the extracted fraction from the solvent, contacting at least one of the extracted fractions and the extraction residue with the liquid solvent containing a different predetermined quantity of dissolved gas in at least one further fractionating step to thereby selectively extract a further fraction of said material, removing the solvent with the further extracted fraction dissolved therein and separating at least a portion of the extracted fraction from the solvent.

3,098,035
SLIME CONTROL IN HEAVY-MEDIA ORE SEPARATION
Frank F. Aplan, Warwick, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 25, 1960, Ser. No. 44,887
2 Claims. (Cl. 209—5)

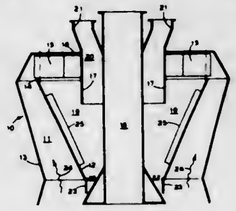
1. In heavy-media suspension processes for the fractionation and recovery of comminuted materials wherein the comminuted materials are charged into a slime-containing heavy-media suspension maintained at a specific gravity intermediate between the specific gravities of the components of the comminuted materials whereby a float and a sink product is fractionated, the improvement comprising adding to said heavy-media suspension sodium

hexametaphosphate in an amount between about 0.008 and about 0.2 percent by weight of the solids in said suspension.

3,098,036
CLASSIFYING APPARATUS

Willy Neumann, Emden, Germany, assignor to Babcock & Wilcox, Limited, London, England, a company of Great Britain

Filed Aug. 18, 1960, Ser. No. 50,356
Claims priority, application Germany Sept. 11, 1959
3 Claims. (Cl. 209—144)

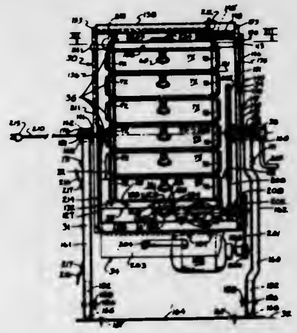


1. Apparatus for separating the coarse particles from an air-borne stream of mixed fine and coarse particle materials which comprises a separator having a cylindrical wall forming an upper end portion merging with the base of an inverted frusto-conical wall forming a lower portion thereof, said cylindrical and inverted frusto-conical wall portions having a common substantially upright axis, a cylindrical outlet duct coaxial with and of lesser diameter than the cylindrical portion of said separator, said outlet duct extending through the cylindrical portion and opening into the frusto-conical portion of said separator, means for the admission of said air-borne material into said separator with a tangential component of motion to effect a whirling motion therein, means for interrupting the peripheral portions of said whirling stream of air-borne material only in and to direct the coarser particles of said material only along the wall of said frusto-conical portion and out of the whirling stream of the finer air-borne material moving toward said outlet duct, and annular sealing discharge means at the lower end of said inverted frusto-conical portion for the discharge of coarse material from said separator.

3,098,037
PORTABLE TILTABLE SEPARATOR

Burl D. Tonjes, Malinta, and Robert A. Cline, Napoleon, Ohio, assignors to The Gilson Screen Company, Malinta, Ohio, a partnership

Filed Mar. 14, 1960, Ser. No. 14,742
19 Claims. (Cl. 209—260)



1. A particle sifter and sorter device, comprising: a reciprocable combination of a solid bottomed vertical walled tray, a plurality of open ended frames arranged in a tier over said tray, a plurality of separate sifting screens removably interspersed between said frames and said tray adjacent the open ends of said frames, clamping means spanning said tier of frames, said screens, and said tray, reciprocation means connected to said clamping means, means for driving said reciprocation means; a supporting means for said reciprocable combination, an intermediate frame encircling said combination between said clamping means and said supporting means, and axle means between said supporting means and said intermediate frame for rockably mounting said reciprocable combination.

3,098,038
TREATMENT OF SUBSURFACE EARTH FORMATIONS

Gene D. Thompson, Houston, Harold M. Hibbs, Tyler, and Eldred W. Hough, Austin, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,587
16 Claims. (Cl. 252—8.55)

1. In a method for fracturing a subsurface earth formation with a suspension of water containing a sand-propping agent in which the sand propping agent is lodged in and maintains the resulting fracture open, the improvement which comprises rendering the sand-propping agent wet with hydrocarbon by contacting the sand-propping agent with a composition consisting essentially of a liquid hydrocarbon and a surface-active agent having a low HLB in the range from about 0 to about 8 prior to suspending it in said water whereby the tendency of the sand-propping agent to settle is decreased.

3,098,039
PROCESS FOR THE CONTROL OF BACTERIA

Edward B. Hodge, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,566
4 Claims. (Cl. 252—8.55)

1. In a process of secondary oil recovery characterized by the step of injecting flooding water into oil-bearing subterranean formations to displace portions of the residual oil therein, the improvement which comprises incorporating in the said injected flooding water in excess of 10–25 parts per million of a nitro-substituted alkyl ester formed from the condensation of lower nitroalkanols and alkyl carboxylic acids selected from the group consisting of tartaric acid, citric acid, and adipic acid to inhibit the growth of bacteria within said formations.

3,098,040
WATER-RESISTANT GREASE COMPOSITIONS

Kenneth A. Loftman, Holbrook, Mass., and Peter B. Marsden, Durham, England, assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Filed Dec. 19, 1960, Ser. No. 76,467
7 Claims. (Cl. 252—28)

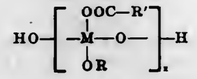
1. A grease composition consisting essentially of a moderately refined mineral lubricating oil selected from the group consisting of (1) a paraffinic oil with a flash point of between about 340° F. and about 440° F., a viscosity index of between about 70 and about 90 and a pour point between about 20° F. and about 35° F. and (2) a naphthenic oil with a flash point of between about 330° F. and about 430° F., a viscosity index of between about 25 and about 35 and a pour point of between about —40° F. and about —10° F.; sufficient pyrogenic silica having an average particle size of between 10 and 40 millimicrons to gel the oil into a grease-like consistency; and from about 15% to about 30% by weight of the silica of a water-insoluble polyalkylene glycol compound having a viscosity at 100° F. of between about 10 and about 400 centistokes.

3,098,041
LUBRICATING COMPOSITION

James O. Koehler, Parma Heights, Ohio, and Headlee Lamprey, Lewiston, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 20, 1961, Ser. No. 153,751
9 Claims. (Cl. 252—35)

1. A lubricating composition consisting essentially of a mineral oil of lubricating viscosity selected from the group consisting of petroleum lubricating oils and petroleum engine oils, and containing as a corrosion inhibitor, pour point depressant, and dispersant between 0.1 and 5 weight percent of at least one compound selected from the group consisting of the acylates having the formula:



wherein M is selected from the group consisting of silicon, tin, and lead; R is a short chain alkyl group having up to 10 carbon atoms; R′ is a long chain alkyl group having from 10 to 19 carbon atoms; and x is a small number up to about 10; the aminoalcohol derivatives having the formula:

$$(R^1O)_yQ[O(CH_2)_zNR^2_2]_{4-y}\cdot(HO_2CR^3)_p$$

wherein R^1 is a short chain alkyl group having up to 10 carbon atoms; Q is selected from the group consisting of tin, lead, zirconium, and silicon; R^2 is selected from the group consisting of hydrogen and short chain alkyl and hydroxyalkyl groups having up to 10 carbon atoms; R^3 is a long chain alkyl group having from 10 to 19 carbon atoms; y is a member from 0 to 3; and z is a number from 2 to 5; and p is a number having a maximum value of $4-y$; and the polyhydric alcohol derivatives having the formula:

$$(R^4O)_yQ[OZ(OH)_v]_{4-y}$$

wherein Q is selected from the group consisting of tin, lead, zirconium, and silicon; R^4 is a short chain alkyl group having up to 10 carbon atoms; Z is a short chain acyclic polyvalent saturated hydrocarbon radical having up to 10 carbon atoms; y is a number from 0 to 3; and v is a number from 1 to 3.

3,098,042
LUBRICANTS CONTAINING POLYBUTENE-1

Arnold J. Morway, Clark, Joseph M. Kelley, Jr., and Charles W. Seelbach, Cranford, and Delmer L. Cottle, Highland Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Jan. 17, 1957, Ser. No. 634,610
2 Claims. (Cl. 252—39)

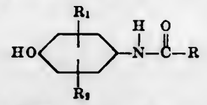
1. A solid lubricating grease having a dropping point in excess of about 120° F. comprising:

(*a*) a major proportion of a lubricating oil;

(*b*) about 3 to 35 wt. percent of calcium acetate, said calcium acetate being the sole metal salt of fatty acid present in said lubricating grease composition; and

(*c*) about 0.5 to 10.0 wt. percent of a normally solid polybutene-1 having a molecular weight within the range of about 10,000 to 200,000.

2. A method of preparing dispersions of polybutene-1 of 10,000 to 200,000 mol. wt. in lubricating oil, which comprises heating said polybutene-1 in said lubricating oil in the presence of 0.01 to 5.0 wt. percent, based on the weight of polybutene-1, of an N-acyl p-amino phenolic derivative having the formula



wherein R is an alkyl group containing 12 to 24 carbon atoms and R_1 and R_2 are members selected from the group consisting of hydrogen atoms and alkyl groups of 2 to 8 carbon atoms.

3,098,043
ETCHANT FOR MOLYBDENUM

Douglas C. Wendell, Jr., Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

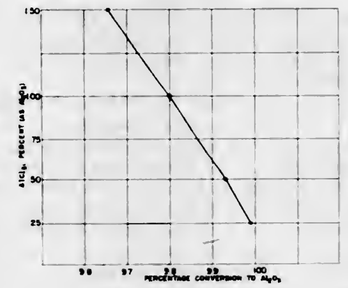
No Drawing. Filed Aug. 17, 1961, Ser. No. 132,018
6 Claims. (Cl. 252—79.5)

1. An aqueous solution for etching molybdenum comprising water, .091 to 1.5 moles per liter of an alkali metal ferricyanide, .075 to 1.25 moles per liter of an alkali metal hydroxide and .00375 to .045 mole per liter of an alkali metal oxalate.

3,098,044
METHOD OF PRODUCING HYDROUS METAL OXIDE SOLS

Everett D. Glover, Dallas, Tex., assignor to Nalco Chemical Company, a corporation of Delaware

Filed Nov. 25, 1955, Ser. No. 548,949
8 Claims. (Cl. 252—313)



1. A method of producing a hydrous metal oxide sol which comprises exchanging the anions of a dilute solution of an acidic metal salt having a monovalent anion and capable of forming an insoluble hydrous metal oxide for anions of a weak, volatile inorganic acid by contacting said dilute solution with a water insoluble anion exchange resin which has as its exchangeable anion an anion of a weak volatile inorganic acid, said anion being selected from the group consisting of carbonate and bicarbonate.

3,098,045
SUGAR REFINING ADSORBENT

Aldo P. Allegrini, Westfield, and Tom A. Cecil, Highland Park, N.J., assignors to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Mar. 1, 1960, Ser. No. 11,975
4 Claims. (Cl. 252—455)

1. A method of producing a hard granular sugar decolorizing and ash removal agent from bauxite fines which comprises forming a uniform mixture of fine uncalcined

bauxite aggregates with a small amount of an alkali metal hydroxide and a small amount of a clay selected from the group consisting of colloidal attapulgite clay and colloidal sepiolite clay, together with water sufficient to form a mixture of plastic consistency, forming said mixture into granules larger than said bauxite aggregates, and, without removing said alkali metal hydroxide from said granules, calcining them at a temperature in excess of 1600° F. and below the fusion point of the mixture for a time sufficient to dehydrate completely said granules.

3,098,046

METHOD OF PREPARING FINELY DIVIDED POLYETHYLENE TEREPHTHALATE FROM POLYETHYLENE TEREPHTHALATE SCRAPS

Erhard Siggel, Laudenbach am Main, and Lothar Riehl, Obernburg am Main, Germany, assignors to Vereinigte Glanzstoff-Fabriken AG., Wuppertal-Elberfeld, Germany

Filed Apr. 12, 1960, Ser. No. 21,629
Claims priority, application Germany Apr. 18, 1959
3 Claims. (Cl. 260—2.3)

3. A continuous process for converting polyethylene terephthalate scrap into powder form which comprises passing said scrap through a vessel heated to a temperature of from about 220° C. to about 240° C., contacting said scrap with a countercurrent flow of superheated steam, regulating the contact time and temperature of the steam so that the scrap will have a relative viscosity of less than about η_{rel} 1.4 when it reaches the lower end of said vessel and so that said scrap will be maintained in a solid state, continuously withdrawing the scrap from said vessel and thereafter reducing the polyethylene terephthalate to a powder.

3,098,047

FLAME RETARDANT CELLULAR PRODUCT

John C. Tapas and Israel J. Dissen, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 20, 1955, Ser. No. 535,510
6 Claims. (Cl. 260—2.5)

1. A flame retardant, rigid, cellular plastic foam comprising from about 19 to about 38 weight percent of an aromatic diisocyanate reacted with from about 81 to about 62 weight percent of a fluid alkyd resin having an acid number between about 25 and about 60 and containing as constituent components between 14 mole percent and 22 mole percent chlorendic acid, an aliphatic dibasic acid containing from 5 to 10 carbon atoms inclusive, and a tri-hydric alcohol containing from 5 to 10 carbon atoms inclusive, said cellular plastic foam containing at least about 12 weight percent chlorine.

3,098,048

DETERGENT POLYURETHANE PRODUCTS

Morris V. Shelanski, Gulph Mills, and Theodore Levenson, Philadelphia, Pa., assignors to Industrial Biology Laboratories, Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 26, 1958, Ser. No. 763,467
12 Claims. (Cl. 260—2.5)

1. A product consisting of a solid shaped body formed by the reaction of an organic diisocyanate and a surfactant, wherein the diisocyanate is present in an amount exceeding the stoichiometric amount necessary for the reaction and wherein the surfactant comprises sequentially added hydrophobic and hydrophilic portions, the hydrophobic portion being an alkyl amide, and the hydrophilic portion comprising at least two ethylene oxide chains individually linked to the hydrophobic portion, the reaction product being cured and having an ethylene oxide content of 30–80% by weight.

3,098,049

COMPOSITION COMPRISING REACTION PRODUCT OF HYDROLYZED VINYL ACETATE POLYMER AND PERIODATE OXIDIZED POLYSACCHARIDE AND PROCESS FOR PREPARING SAME

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,895
8 Claims. (Cl. 260—17.4)

1. A composition comprising the reaction product of (*a*) a partially hydrolyzed polymer of vinyl acetate having a hydroxyl content expressed as percent of polyvinyl alcohol of about from 2% to 80% selected from the group consisting of homopolymers of vinyl acetate and copolymers of vinyl acetate with ethylenically unsaturated monomers with (*b*) a periodate oxidized polysaccharide, wherein said periodate oxidized polysaccharide is present in an amount of about between 0.05% to 2% based on the weight of said polymer of vinyl acetate.

3,098,050

BUILDING MATERIAL COMPOSITIONS FOR THE MANUFACTURE OF WATER REPELLENT MASONRY

Walter Noll, Leverkusen-Bayerwerk, and Klaus Damm and Helmut Weissbach, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 31, 1958, Ser. No. 771,160
Claims priority, application Germany Nov. 8, 1957
6 Claims. (Cl. 260—18)

1. A composition for making water-repellent masonry, which comprises a dry intimate mixture of a member selected from the group consisting of plaster mortars, concrete, asbestos cement, magnesia cement, gypsum and anhydrite and a methyl polysiloxane powder insoluble in water having a grain size of below 1μ, the weight of said methyl polysiloxane being from 0.1 to 5% of the weight of the entire composition.

3,098,051

ADDUCT OF AN ANHYDRIDE OF AN AROMATIC POLYBASIC ACID AND A FATTY ACID ESTER

Joseph Z. Matt, Chicago, Ill., assignor, by mesne assignments, to Reichhold Chemicals, Inc., White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 13, 1958, Ser. No. 754,719
19 Claims. (Cl. 260—21)

1. The adduct of an anhydride group of an anhydride of an aromatic polybasic acid which acid has at least three carboxylic acid groups with an hydroxyl group of a fatty acid ester containing at least two alcoholic hydroxyl groups including at least one in the fatty acid chain, said adduct containing at least one —COOH group deriving from said anhydride group, and an ester linkage at said hydroxyl group of the fatty acid chain, said ester linkage also deriving from said anhydride group.

3,098,052

THIXOTROPIC COATING SOLUTIONS

John V. Schmitz, Louisville, Ky., and Roswell J. Blackinton, Schenectady, N.Y., assignors, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Dec. 12, 1957, Ser. No. 702,240
6 Claims. (Cl. 260—22)

1. Process for the production of thixotropic coating solutions which comprises coreacting the following components at a temperature in about the range 80° C.–180° C. in the presence of an inert organic solvent to the incipient gel stage: (1) an oil-modified polyester resin of a polyfunctional alcohol and acid material selected from the group consisting of polyfunctional carboxylic acids and their anhydrides, said resin having an acid number below 100; and (2) a cross-linking epoxidized unsaturated glyceride oil having at least two epoxy groups per molecule in an amount up to 20 percent by weight based on combined weight of the polyester resin and epoxidized oil; the concentration of said solvent being no less than 15 percent, by weight, based on the reactants and solvent, at the conclusion of the reaction.

3,098,053

WOOD PATCHING COMPOSITION CONTAINING ACRYLIC ESTER POLYMER AND METHOD OF USE

Earland G. Hallonquist, Nanaimo, British Columbia, Canada, assignor to MacMillan & Bloedel Limited, Vancouver, British Columbia, Canada

No Drawing. Filed Sept. 29, 1959, Ser. No. 843,068
8 Claims. (Cl. 260—31.2)

1. A wood patching composition consisting essentially of about 3 to 10% by weight of a thermoplastic resin selected from the group consisting of polymethyl methacrylate, polyethyl methacrylate, polyisobutyl methacrylate, and styrene-methyl methacrylate copolymer; about 20 to 40% by weight of an organic solvent for the resin having a boiling point in the range of 50° C. to 150° C. at atmospheric pressure; and about 50 to 80% by weight of a substantially insoluble, inert, non-fibrous, filler of a particle size such that the major portion ranges from 14 microns to 74 microns in diameter, with substantially none above 49 microns in diameter.

3,098,054

COMPOSITION COMPRISING EPOXY RESIN, POLYVINYL ACETAL, SILICA, AND A BF_3-AMINE COMPLEX

Joseph Rosenberg, Erie, Pa., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Nov. 20, 1959, Ser. No. 854,224
7 Claims. (Cl. 260—41)

1. A composition of matter comprising, by weight, 100 parts of epoxy resin containing 1,2 epoxy groups, from about 35 to 100 parts of polyvinyl acetal resin, from about 25 to 79 parts of a material comprising fumed silica, and from about 1 to 10 parts of a boron trifluoride-amine complex curing material, said curing material having a decomposition point of over about 130° C.

3,098,055

WATER RESISTANT HALOGENATED COPOLYMERS

Theodore Lemiszka, Roselle, Francis P. Baldwin, Colonia, and Lawrence T. Eby, Linden, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Feb. 20, 1959, Ser. No. 794,505
19 Claims. (Cl. 260—41.5)

1. A composition comprising a major proportion of a rubbery halogenated copolymer of about 85 to 99.5 weight percent of a C_4 to C_7 isoolefin and about 15 to 0.5 weight percent of a C_4 to C_{14} multiolefin and vulcanizing amounts of a combination of lead oxide and a nitrogen compound selected from the group consisting of C_4 to C_{24} monofunctional primary amines, C_4 to C_{24} polyfunctional amines, and C_4 to C_{24} polyfunctional imines, said composition being free of zinc oxide and said halogenated copolymer containing between about 0.5 wt. percent of combined halogen based on the copolymer and an amount of combined halogen selected from the group consisting of not more than about one atom of chlorine per double bond in the copolymer and not more than about 3 atoms of bromine per double bond in the copolymer.

3,098,056

PROCESS FOR THE PRODUCTION OF HARDENED, POLYCARBONATE-MODIFIED EPOXY RESIN BODIES

Hermann Schnell, Krefeld-Uerdingen, and Heinrich Krimm, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 6, 1961, Ser. No. 93,313
Claims priority, application Germany Mar. 8, 1960
9 Claims. (Cl. 260—42)

1. A process for the production of a hardened ester-modified epoxy resinous solid, which comprises heating together at a temperature between 100 and 220° C., while molding the same, a mixture of

(*a*) an epoxy resin having at least two epoxy groups in its molecule,

(*b*) a meltable linear polycarbonate of an organic polyhydroxy compound having at least two free terminal hydroxyl radicals, and

(*c*) a hardener of the group consisting of high-boiling amines, alkali-metal compounds, catalysts of the Friedel-Crafts type, sulfur trioxide, sulfuric acid, aromatic sulfonic acids, and anhydrides of organic dicarboxylic acids

for a period sufficient to convert the mixture into an essentially insoluble and infusible solid.

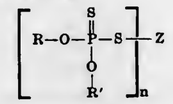
3,098,057

PROPYLENE POLYMER STABILIZED WITH A SYNERGISTIC COMBINATION OF A PARA-TERTIARYALKYL PHENOL-FORMALDEHYDE RESIN AND A DITHIOPHOSPHATE

Bernard O. Baum, Plainfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 5, 1960, Ser. No. 497
11 Claims. (Cl. 260—43)

1. A propylene resin composition having improved stability toward heat and light induced molecular degradation which comprises a normally solid propylene polymer, a stabilizing amount of an A-stage para-tertiaryalkylphenol-formaldehyde resin in which the alkyl group of the para-tertiaryalkylphenol contains from 4 to 20 carbon atoms, and a synergistic phosphorus-containing compound having the general formula



wherein R and R′ are each a monovalent hydrocarbon radical containing from 1 to 16 carbon atoms, Z is an element selected from Group I and Group II of the Mendeléeff Periodic System of Elements and having an atomic weight of less than 150, and *n* is an integer having a value equal to the positive valence of Z.

3,098,058

PROCESS FOR REACTING A DIOLEFINIC POLYMER WITH HEXACHLOROCYCLOPENTADIENE PRODUCTION OF NEW POLYMERIC COMPOSITIONS AND PRODUCTS THEREOF

George C. Schweiker and Arthur W. Carlson, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed May 5, 1960, Ser. No. 26,930
16 Claims. (Cl. 260—45.5)

1. A process for the production of new chlorine-containing, xylene-soluble, polymeric compositions of matter

which comprises heating a reaction mixture consisting substantially of a substantially linear unsaturated hydrocarbon homopolymer prepared from a hydrocarbon diolefinic monomer selected from the group consisting of butadiene, methyl butadiene, dimethyl butadiene, cyclohexadiene, cyclopentadiene and methyl cyclopentadiene and a minimum of about 0.2 moles of hexachlorocyclopentadiene per unit of unsaturation of said polymeric reactant by heating them in a relatively inert solvent.

3,098,059

RESINOUS COMPOSITIONS FROM TRIMELLITIC ANHYDRIDE AND VIC-EPOXIDES

Richard E. Van Strien, Griffith, Ind., and William Hodes, Stamford, Conn., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Sept. 17, 1958, Ser. No. 761,479
13 Claims. (Cl. 260—78.5)

1. A resinous composition consisting essentially of the product obtained by reacting trimellitic anhydride with a mono-epoxide compound having a 1,2-epoxy group selected from the class consisting of lower-alkyl mono-epoxides, aryl lower-alkyl mono-epoxides, glycidyl esters of lower alkenoic acids and glycidyl ethers of lower alkenols in the presence of an alkaline catalyst at a temperature between about 20° C. and about 200° C.

3,098,060

PREPARATION OF HIGH MOLECULAR WEIGHT POLYACRYLONITRILE WITH n-BUTYL LITHIUM AS CATALYST

Mary L. Miller, New York, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 27, 1960, Ser. No. 32,073
2 Claims. (Cl. 260—88.7)

1. A method of producing a white homopolymer of acrylonitrile having a molecular weight of at least 400,000 which comprises polymerizing dry, oxygen-free acrylonitrile monomer at a temperature of from about —50° C. to about —100° C. in a single phase polymerization solution consisting essentially of toluene and from about 0.01% to about 1.0%, by weight, based on the weight of said monomer, of butyl lithium, said polymerization being effected by adding the said acrylonitrile monomer to the said toluene-butyl lithium solution.

3,098,061

CRYSTALLINE POLY(VINYL 2-CHLOROETHYL ETHER)

Richard F. Heck, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,220
1 Claim. (Cl. 260—91.1)

A crystalline poly(vinyl 2-chloroethyl ether) soluble in boiling dimethylformamide and insoluble in boiling acetone and having a reduced specific viscosity of at least about 0.4 as measured on an 0.1% solution in chloroform at 25° C.

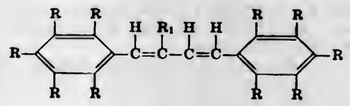
3,098,062

PRODUCTION OF POLYMERS OF PROPYLENE

John P. Hogan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 5, 1960, Ser. No. 40,572
18 Claims. (Cl. 260—93.7)

1. In a process for the polymerization of 1-olefins selected from the group consisting of propylene and mixtures of propylene and copolymerizable 1-olefins in the presence of a catalyst comprising chromium oxide and at least one material selected from the group consisting of silica, alumina, zirconia, and thoria, at least part of the chromium being in the hexavalent state, the improvement which comprises contacting said propylene with said catalyst in the presence of a compound selected from the group consisting of aryl-substituted 1,3-butadienes having the following formula:



wherein R_1 is selected from the group consisting of hydrogen and a methyl radical, R is selected from the group consisting of hydrogen, alkyl groups, cycloalkyl groups and aryl groups, said alkyl groups have 1 to 10 carbon atoms per molecule, said cycloalkyl and aryl groups have 5 to 8 carbon atoms per molecule, and the maximum number of carbon atoms in the R group on any one phenyl substituent is 10 under conditions wherein the isotactic content of the polymer is increased.

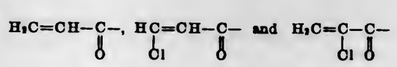
3,098,063

WATER-SOLUBLE MONOAZO DYESTUFFS

Julius Eisele, Ludwigshafen (Rhine), Wilhelm Federkiel, Frankenthal (Pfalz), Guenter Krehbiel, Ludwigshafen (Rhine), Hans Krzikalla, Heidelberg, and Guenter Lange and Heinz Pohlemann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,078
Claims priority, application Germany Dec. 13, 1957
8 Claims. (Cl. 260—163)

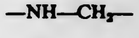
1. A water-soluble monoazo dyestuff consisting of a benzene diazo component coupled by way of an azo group with a coupling component selected from the group consisting of the benzene, naphthalene and pyrazolone series, said coupling component having at least one sulfonic acid substituent in an aromatic ring and said benzene diazo component being free from sulfonic acid groups but containing a reactive substituent selected from the group consisting of



combined by way of a bridge member selected from the group consisting of



and



wherein the imino nitrogen atom is linked to said reactive substituent, the bridge member —NH— being connected to the benzene diazo component in one of the positions meta and para with respect to the azo group and the bridge member —NH—CH_2— being connected to the benzene diazo component in para position with respect to the azo group.

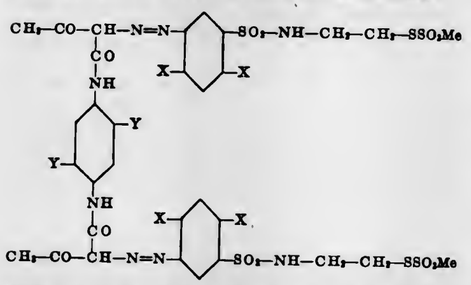
3,098,064

WATER-SOLUBLE DISAZO DYES CONTAINING TWO THIOSULFURIC ACID GROUPS

Werner Schultheis, Kronigstein, Taunus, Kurt Schimmelschmidt, Frankfurt am Main, Hermann Hoffmann, Bad Soden, Taunus, and Edwin Baier, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,718
Claims priority, application Germany Apr. 24, 1959
6 Claims. (Cl. 260—176)

1. Water-soluble disazo-dyestuffs of the formula



wherein one X on each of the benzene nuclei stands for hydrogen and the other X for a member of the group consisting of hydrogen, methyl, methoxy and chlorine, one Y stands for a member of the group consisting of hydrogen and methoxy and the other Y for a member of the group consisting of hydrogen, methyl, methoxy and chlorine, and Me represents a member of the group consisting of alkali metals and ammonium.

3,098,065

ORGANIC COMPOUNDS AND PROCESS OF PRODUCING THEM

Samuel B. Crecelius and Thomas E. Brunelle, St. Paul, Minn., assignors to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Apr. 12, 1961, Ser. No. 102,370
2 Claims. (Cl. 260—234)

1. The process of producing an acidic organic product which comprises reacting one mol of monosaccharide in aqueous solution with about four mols of butylene oxide at a temperature of from 75° to 90° C. in the presence of a catalyst of the group consisting of boric acid and sulfuric acid, and reacting the product of the aforementioned reaction with a cyclic anhydride of the group consisting of phthalic anhydride and maleic anhydride at a temperature not above 120° C. to produce an acidic product including a half-ester of monosaccharide and butylene oxide reaction product.

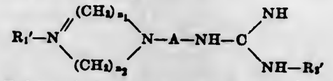
3,098,066

DIAZA-HETEROCYCLIC GUANIDINE COMPOUNDS

Robert Paul Mull, Florham Park, N.J., assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Mar. 4, 1960, Ser. No. 12,681
12 Claims. (Cl. 260—239)

1. A member selected from the group consisting of a compound of the formula



in which R_1' stands for a member selected from the group consisting of lower alkyl, cycloalkyl having from five to six ring carbon atoms, cycloalkyl-lower alkyl, in which cycloalkyl has from five to six ring carbon atoms, phenyl, (lower alkyl)-phenyl, (lower alkoxy)-phenyl and (halogeno)-phenyl, each of the symbols n_1 and n_2 stands for an integer from the group consisting of 2, 3 and 4, with the proviso that the total of n_1+n_2 stands for an integer selected from the group consisting of 4, 5 and 6, A is lower alkylene, which has from two to three carbon atoms and separates the guanidino group from the ring nitrogen atom by from two to three carbon atoms, and R_2' is a member of the group consisting of hydrogen, lower alkanoyl, benzoyl, (lower alkyl)-benzoyl, (lower alkoxy)-benzoyl and (halogeno)-benzoyl, and pharmaceutically acceptable acid addition salts thereof.

9. 2-[1-N,N-(3-aza-3-methyl - 1,6 - hexylene) - imino]-ethyl-guanidine.

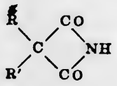
3,098,067

3,3-DISUBSTITUTED-2,4-AZETIDINEDIONE COMPOUNDS

Emilio Testa, San Simone, Vacallo, Canton of Ticino, Switzerland, assignor to Lepetit S.p.A., Milan, Italy

No Drawing. Filed June 6, 1960, Ser. No. 33,932
Claims priority, application Great Britain July 7, 1959
9 Claims. (Cl. 260—239)

1. A 3,3-disubstituted-2,4-azetidinedione of the formula:



wherein R is lower alkyl and R' is a member of the class consisting of lower alkyl and phenyl.

2. 3-phenyl-3-ethyl-2,4-azetidinedione.

3,098,068

18-OXYGENATED PREGNANES AND PROCESS FOR THEIR MANUFACTURE

Oskar Jeger, Zurich, Switzerland, assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Dec. 15, 1959, Ser. No. 859,576
Claims priority, application Switzerland Dec. 19, 1958
12 Claims. (Cl. 260—239.5)

1. Process for the manufacture of 18-hydroxy-20-oxo-pregnanes, wherein a $\Delta^{20:N}$-18:20-imino-pregnene compound is treated with nitrous acid.

8. Process for the manufacture of $\Delta^{20:N}$-18:20-imino-pregnenes, wherein 18:20-imino-pregnanes are reacted with an N-halogenated carboxylic acid amide and the product obtained is treated with a base.

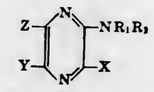
3,098,069

PYRAZINE DERIVATIVES

Bruno Camerino and Giorgio Palamidessi, Milan, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

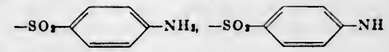
No Drawing. Filed Sept. 11, 1962, Ser. No. 222,949
Claims priority, application Great Britain July 14, 1959
16 Claims. (Cl. 260—239.7)

1. A compound of the formula

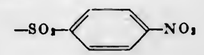


in which X is a member selected from the group consisting of OCH_3 and OC_2H_5; Y is a member selected from the group consisting of H, Br and lower alkyl; Z is a member selected from the group consisting of H and lower alkyl, when Y is Br, Z is H; R_1 is a member selected from the

group consisting of H and lower alkanoyl; and R_2 is a member of the group consisting of



lower alkanoyl and

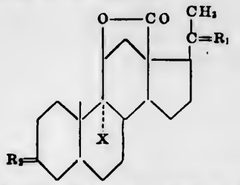


3,098,070
9-HALOGENATED 18:11-LACTONES OF 11β-HYDROXY-PREGNANE-18-ACIDS

Charles Meystre, Basel, Albert Wettstein, Riehen, and Georg Anner, Karl Heusler, and Peter Wieland, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Dec. 8, 1960, Ser. No. 74,488
Claims priority, application Switzerland Dec. 11, 1959
8 Claims. (Cl. 260—239.57)

8. A compound of the formula



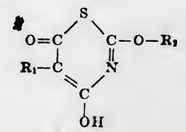
in which X is a member selected from the group consisting of fluorine, chlorine and bromine, R_1 is a member selected from the group consisting of an oxo group, a ketalized oxo group, a hydrogen atom together with a hydroxyl group and a hydrogen atom together with a hydroxyl group esterified with a lower hydrocarbon carboxylic acid and R_2 is a member selected from the group consisting of (1) an oxo group in the compounds having a double bond in the 4:5-position and (2) a ketalized oxo group in the compounds having a double bond in the 5:6-position.

3,098,071
THIACYCLES

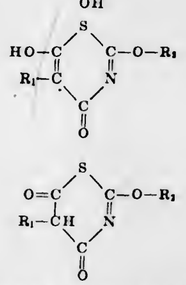
Herbert Morton Blatter, Millburn, and George de Stevens, Willow Knoll, New Providence, N.J., assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Nov. 9, 1961, Ser. No. 151,148
6 Claims. (Cl. 260—243)

1. A member selected from the group consisting of a compound having one of the formulae selected from the group consisting of



and



in which R_1 stands for a member selected from the group consisting of hydrogen, lower alkyl, cycloalkyl having from three to eight carbon atoms, and cycloalkyl-lower alkyl, in which cycloalkyl has from three to eight carbon atoms, and R_2 is lower alkyl, an alkali metal salt thereof and an alkaline earth metal salt thereof.

5. 2-ethoxy-4-hydroxy-6H-1,3-thiazin-6-one.

3,098,072
IMPROVED PROCESS FOR PHOSPHORYLATING AMINO-ALCOHOLS

Emile Cherbuliez, Conches, Geneva, and Joseph Rabinowitz, Geneva, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Apr. 30, 1958, Ser. No. 731,878
Claims priority, application Switzerland May 3, 1957
3 Claims. (Cl. 260—247)

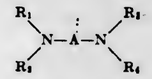
1. In a process of treating an amino-alcohol with a phosphorylating agent the improvement which consists in using as the phosphorylating agent a member selected from the group consisting of pyrophosphoric acid and polyphosphoric acid in an amount at least about 0.5 mol but less than the stoichiometric amount necessary to form the phosphoric acid monoester, at a temperature between 150° and 250° C. and under a reduced pressure of 3–30 mm. of mercury.

3,098,073
UNSYMMETRICAL N,N'-(N,N-DISUBSTITUTED AMINOALKYL)-HYDRAZINES

John H. Biel, Milwaukee, Wis., assignor, by mesne assignments, to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Jan. 13, 1960, Ser. No. 2,123
8 Claims. (Cl. 260—247.5)

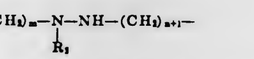
1. A member of the group consisting of compounds of the formulae



wherein A is a member of the group consisting of

$$-(CH_2)_m-NH-N=CH-(CH_2)_n-$$

and



wherein m is an integer from 2 to 10, n is an integer from 1 to 9, R_1 and R_2 are lower alkyl,



represents a member of the group consisting of pyrrolidino, piperidino, 4-lower alkyl-piperazino, morpholino, 3-hydroxypiperidino and 1,2,3,4-tetrahydroisoquinolino, and R_5 is a member of the group consisting of hydrogen and lower alkyl groups, and nontoxic pharmaceutically acceptable acid addition salts thereof.

8. N - dimethylaminoethyl - N' - morpholinoethyl hydrazine.

3,098,074
6-THIOCARBOXAMIDOPURINE

George H. Hitchings, Yonkers, Gertrude B. Elion, Bronxville, and Lottie E. Mackay, Pleasantville, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Nov. 18, 1959, Ser. No. 853,684
1 Claim. (Cl. 260—252)

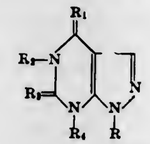
6-thiocarboxamidopurine.

3,098,075
NEW PYRAZOLO-PYRIMIDINES

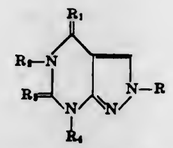
Jean Druey, Riehen, Paul Schmidt, Therwil, and Kurt Eichenberger, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed May 26, 1959, Ser. No. 815,825
Claims priority, application Switzerland Feb. 10, 1956
24 Claims. (Cl. 260—256.4)

1. A member of the group consisting of 4,5,6,7-tetrahydro-pyrazolo(3,4-d)pyrimidines of the formulae:

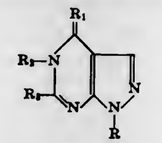


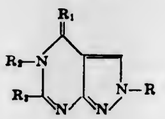
and

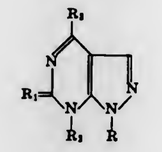


wherein R is a member selected from the group consisting of hydrogen, lower alkyl, hydroxy-lower alkyl, di-lower alkylamino-lower alkyl and cyclo-lower alkyl and R_2 and R_4 are members selected from the group consisting of lower alkyl, hydroxy: lower alkyl, di-lower alkylamino-lower alkyl and cyclo-lower alkyl and R_1 and R_3 are members of the group consisting of oxo, imino and thiono, but at least one of these stands for oxo, and their therapeutically useful acid addition salts.

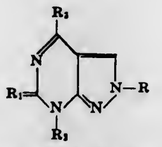
2. A member of the group consisting of dihydro-pyrazolo(3,4-d)pyrimidines of the formulae:







and



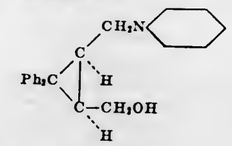
and their tautomeric forms, wherein R is a member selected from the group consisting of lower alkyl, hydrogen, hydroxy-lower alkyl, di-lower alkylamino-lower alkyl and cyclo-lower alkyl, and R_2 is a member selected from the group consisting of lower alkyl, hydroxy-lower alkyl, di-lower alkylamino-lower alkyl and cyclo-lower alkyl, and R_1 is a member selected from the group consisting of oxo, imino and thiono, and R_3 is a member of the group consisting of hydroxy, amino, mercapto, lower alkoxy, lower alkylamino and lower alkylmercapto but at least one of R_1 and R_3 is a member selected from the group consisting of oxo and hydroxy, and their therapeutically useful acid addition salts.

3,098,076
1,1 - DIPHENYL - 2 - TERTIARY AMINOMETHYL-3-HYDROXY METHYL - CYCLOPROPANES AND ESTERS THEREOF

Richard Baltzly, Tuckahoe, N.Y., Peter Byrom Russell, Bryn Mawr, Pa., and Narriman B. Mehta, White Plains, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

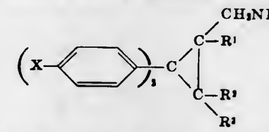
No Drawing. Filed Aug. 26, 1958, Ser. No. 757,179
11 Claims. (Cl. 260—294.7)

4. A base of the structure



wherein Ph is the phenyl radical.

11. A compound of the formula



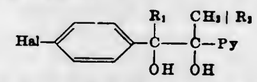
wherein X is selected from the class consisting of hydrogen, methyl, methoxy and chlorine, NR_2 is selected from the class consisting of the lower dialkylamino, piperidino, pyrrolidino and morpholino radicals, R^1 and R^2 are selected from the class consisting of the lower alkyl radicals and hydrogen and R^3 is selected from the class consisting of the hydroxymethyl, acetoxymethyl and cinnamyloxymethyl radicals.

3,098,077
CERTAIN 2-(4-HALOPHENYL)-3-PYRIDYL-BUTANE-DIOLS

Milton Joel Allen, Summit, N.J., assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,584
2 Claims. (Cl. 260—297)

1. A member selected from the group consisting of a compound of the formula:



in which R_1 is lower alkyl, R_2 stands for a member of the group consisting of hydrogen and lower alkyl, Py stands for a member of the group consisting of 3-pyridyl and 4-pyridyl, and Hal represents halogeno, and acid addition salts thereof.

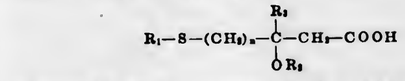
3,098,078
THIO ALKANE CARBOXYLIC ACIDS AND FUNCTIONAL DERIVATIVES THEREOF

Jean Druey, Riehen, and Hans Ulrich Daeniker, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Feb. 5, 1959, Ser. No. 791,256
Claims priority, application Switzerland Feb. 19, 1958
13 Claims. (Cl. 260—327)

10. β-Methyl-β-hydroxy-δ-mercapto-valeric acid-δ-thiolactone.

13. A member selected from the group consisting of compounds of the formula:



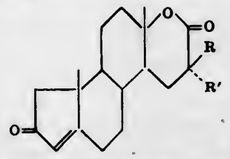
in which R_1 and R_2 represent members selected from the group consisting of hydrogen, lower alkyl, lower cycloalkyl, phenyl, mono-halo-phenyl, mono-hydroxy-phenyl, phenyl-lower alkyl, mono-halo-phenyl-lower alkyl, mono-hydroxy-phenyl-lower alkyl and an acyl radical selected from the group consisting of those of lower fatty acid acyl, halo-substituted lower fatty acid acyl and benzoic acid acyl, R_3 represents lower alkyl, and n is an integer from one to eight, both inclusive, their alkali group salts, alkaline earth group salts and therapeutically useful amine acid-addition salts and functional carboxylic group derivatives selected from the group consisting of lower alkyl esters, benzyl esters and primary amides derived from ammonia.

3,098,079
A-NORTESTOLOLACTONES

Allen I. Laskin and Frank L. Weisenborn, Somerset, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 30, 1962, Ser. No. 191,255
4 Claims. (Cl. 260—343.2)

1. A compound of the formula

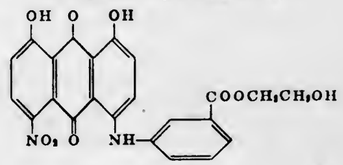


wherein R is hydrogen, R′ is selected from the group consisting of α-hydroxy and α-acyloxy, wherein the acyl radical is of an unsubstituted organic hydrocarbon carboxylic acid of less than twelve carbon atoms selected from the group consisting of lower alkanoic acids, monocyclic aryl carboxylic acids, monocyclic aryl lower alkanoic acids, cycloalkane carboxylic acids and cycloalkene carboxylic acids, and together R and R′ is keto.

3,098,080
ALPHA-HYDROXY ANTHRAQUINONES

Rütger Neeff, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 20, 1959, Ser. No. 800,669
Claims priority, application Germany Apr. 26, 1958
1 Claim. (Cl. 260—376)

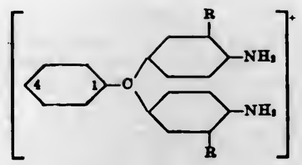


3,098,081
PROCESS FOR PURIFYING TRIPHENYL METHANE DYES

Josef Pikl, Ghasboro, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 6, 1960, Ser. No. 53,916
3 Claims. (Cl. 260—393)

1. The process of purifying a chloranil-oxidized triphenylmethane dye, the cation of which has the formula



wherein R is selected from the group consisting of H, CH_3 and C_2H_5, the numbered phenyl radical containing chlorine in a known position taken from the group consisting of the 2-, 4-, 2,4- 2,5- and 2,6-positions, said process being one wherein said dye is dissolved in an aqueous water-soluble alcohol solution, the alcohol component of said solution being present in an amount within the range of 10% to 90% by weight of said solution, said alcohol component being selected from the group consisting of methanol, ethanol, isopropyl alcohol, n-propyl alcohol, tertiary butyl alcohol, ethylene glycol, and mixtures of said alcohols, said dye being dissolved therein at a temperature within the range of 20° C. to 90° C., said aqueous water-soluble alcohol solution having from 10% to about 30% by weight thereof of said dye dissolved therein, followed by filtration to remove insoluble impurities.

3,098,082
PROCESS OF EXTRACTING 3-AMINO COMPOUNDS FROM THE GENUS FUNTUMIA

Jean Louis Paul Mainil, Watermael-Boitsfort, Belgium, and Qui Khuong Huu, Paris, France, assignors to Societe Anonyme Oletta, Luxembourg, Luxembourg

No Drawing. Filed Feb. 15, 1960, Ser. No. 8,485
Claims priority, application Luxembourg Feb. 13, 1959
7 Claims. (Cl. 260—397.3)

1. A process for obtaining predetermined compounds from plants of the genus Funtumia (Apocynaceae), species *africana*, said process comprising treating the finely crushed leaves of said plants with an alkaline solution to dissociate said compounds from the complex combination of triterpenes, alkaloids, tannoids, rubber and chlorophyll in the leaves and to obtain a product which is then submitted to extraction by treating with a strong alkali at a temperature of about 40° C. for substantially two hours the bulk of the combination to which has been added an organic salt forming acid, the bulk being extracted by a solvent, evaporated to dryness, the residue redissolved in benzene being conveyed to a chromatography alumina column, the eluants successively removing
a principle having a melting point of 176° C.,
a principle having a melting point of 160° C.,
a principle having a melting point of 172° C.,
a principle having a melting point of 214° C.,
a principle having a melting point of 173° C.

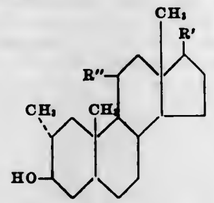
3,098,083
2α-METHYL-11-OXYGENATED-5α-ANDROSTANES

John C. Babcock, Portage Township, Kalamazoo County, J Allan Campbell, Kalamazoo Township, Kalamazoo County, and Raymond L. Pederson, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Dec. 9, 1957, Ser. No. 701,348
4 Claims. (Cl. 260—397.45)

2. 2α,17α-dimethyl-3,17β-dihydroxy-5α - androstan-11-one.

4. 2α-methyl-11-oxygenated-17-oxygenated-5α - androstane of the formula:



wherein R′ is selected from the group consisting of



wherein Ac is the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive, and



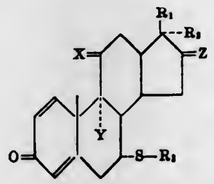
wherein R″ is selected from the group consisting of β-hydrox and keto; and the 3-acylates thereof wherein the acyl radical is that of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

3,098,084
ANABOLIC ALKYLTHIO-STEROIDS

Klaus Brückner, Klaus Irmscher, and Josef Gillissen, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany

No Drawing. Filed Jan. 29, 1962, Ser. No. 169,658
Claims priority, application Germany Feb. 2, 1961
3 Claims. (Cl. 260—397.4)

1. Compounds of the formula:



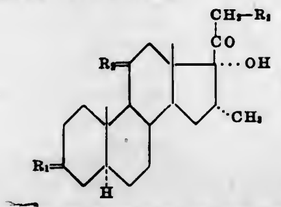
wherein:
R_1 represents a member of the group consisting of a free and esterified hydroxyl group, said ester being physiologically compatible;
R_2 represents a member of the group consisting of hydrogen and methyl;
R_3 represents an alkyl group having 1–5 carbon atoms;
X represents a member of the group consisting of two hydrogens; one hydrogen and a member of the group consisting of a free and esterified hydroxyl group, said ester being physiologically compatible; and =O;
Y represents a member of the group consisting of hydrogen and fluorine;
Z represents a member of the group consisting of two hydrogens and methylene; and
with the provision that of the substituents R_2, X, Y and Z, only up to three of said substituents can simultaneously represent hydrogen.
2. 7α-ethylthio-16-methylene-17α-methyl-testosterone.

3,098,085
PROCESS FOR THE MANUFACTURE OF 16α-METHYL-ALLOPREGNANES SUBSTITUTED IN THE 21-POSITION

Albert Wettstein, Georg Anner, Charles Meystre, Peter Wieland, Ludwig Ehmann, Karl Heusler, Alfred Hunger, and Jindrich Kebrle, all of Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed July 1, 1959, Ser. No. 824,210
Claims priority, application Switzerland July 4, 1958
9 Claims. (Cl. 260—397.45)

1. A compound of the formula



in which R_1 represents a member selected from the group consisting of (1) an oxo group and (2) a hydrogen atom together with a free hydroxyl group, and R_2 represents a member selected from the group consisting of (1) a hydrogen atom with a free α-hydroxyl group, (2) a hydrogen atom with a lower α-acyloxy group and (3) a hydrogen atom with an α-sulfonyloxy group, and R_3 a member selected from the group consisting of a free hydroxy and a lower acyloxy group.

3,098,086
PROCESS FOR THE MANUFACTURE OF 11β-HYDROXY-PREGNANE COMPOUNDS

Albert Wettstein, Riehen, and Peter Wieland, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,743
Claims priority, application Switzerland Jan. 22, 1959
3 Claims. (Cl. 260—397.45)

1. Process for the manufacture of a member selected from the group consisting of 3-R_1-11β,17α-dihydroxy-16-R_2-20-oxo-pregnane and the 5-dehydro derivative thereof, in which R_1 represents a member selected from the group consisting of (1) hydroxy and (2) acyloxy in which the acyl radical is that of a lower aliphatic carboxylic acid and R_2 represents a member selected from the group consisting of hydrogen and a lower alkyl group, wherein a member selected from the group consisting of $\Delta^{17(20)}$-3-R_3-11-oxo-16-R_2-20-R_4-pregnene and the 5-dehydro derivative thereof, in which R_2 has the meaning above-given and each of R_3 and R_4 represents acyloxy in which the acyl radical is that of a lower aliphatic carboxylic acid, is treated with a complex alkali metal hydride, to form the corresponding 11β-hydroxyl compound which is then reacted with an organic peracid and the resulting 17(20)-oxido-11β-hydroxy-steroid is hydrolysed to form the 17-hydroxy-20-oxo-steroid.

3,098,087
16,21-DIOCYLOXY-Δ^5-PREGNENE-3OL-20-ONE DERIVATIVES AND PROCESS FOR THE PRODUCTION THEREOF

Albert Wettstein, Basel, Charles Meystre, Arlesheim, and Walter Voser, Binningen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Dec. 17, 1956, Ser. No. 628,519
Claims priority, application Switzerland June 12, 1953
4 Claims. (Cl. 260—397.47)

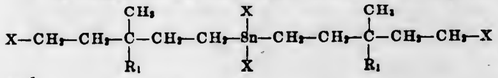
1. A 3,16β,21 - tris - (lower alkanoyloxy) - 17α - hydroxy-5-pregnene-20-one.

3,098,088
PRODUCTION OF HALOALKYLTIN(IV) HALIDES

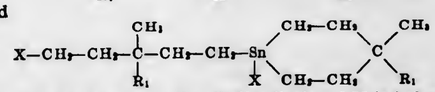
Rudolf Polster, Heidelberg, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Oct. 3, 1961, Ser. No. 142,517
Claims priority, application Germany Oct. 5, 1960
9 Claims. (Cl. 260—429.7)

1. A compound selected from the class consisting of:



and



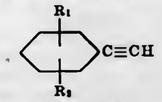
in which R_1 is a C_1 to C_4 alkyl radical and X is halogen.

3,098,089
STABLE LEAD ALKYL COMPOSITIONS AND A METHOD FOR PREPARING THE SAME

Shirl E. Cook and Wilford H. Thomas, Baton Rouge, La., assignors to Ethyl Corporation, New York N.Y., a corporation of Virginia

No Drawing. Filed June 8, 1962, Ser. No. 200,930
6 Claims. (Cl. 260—437)

1. A method of inhibiting the decomposition of an alkyllead compound at temperatures of from about 100° C. to about 195° C. which comprises incorporating with said compound from about 5 to about 25 weight percent based on the weight of the alkyllead compound of a phenyl acetylenic hydrocarbon having from 8 to about 12 carbon atoms in the molecule and having the formula



wherein R_1 and R_2 are selected from the group consisting of hydrogen and alkyl groups; and from about 5 to about 25 weight percent based on the weight of the alkyllead compound of a fused ring aromatic hydrocarbon containing from 10 to about 14 carbon atoms in the molecule.

3,098,090
STABLE LEAD ALKYL COMPOSITIONS AND A METHOD FOR PREPARING THE SAME

Wilford H. Thomas and Shirl E. Cook, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 8, 1962, Ser. No. 200,936
7 Claims. (Cl. 260—437)

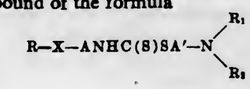
1. A method of inhibiting the decomposition of an alkyllead compound at temperatures of from about 100° C. to about 195° C. which comprises incorporating with said compound from about 5 to about 25 weight percent each of a C_8 acyclic hydrocarbon selected from the group consisting of alkanes and alkenes, and of a C_{10} acyclic hydrocarbon selected from the group consisting of alkanes and alkenes, the foregoing percentages being based upon the weight of said alkyllead compound.

3,098,091
AMINOALKYL ESTERS OF ETHER SUBSTITUTED DITHIOCARBAMIC ACIDS

John J. D'Amico, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,101
8 Claims. (Cl. 260—455)

1. A compound of the formula



where R represents a radical selected from the group consisting of alkyl of one to eight carbon atoms inclusive, 3,6-dioxaheptyl, vinyl, allyl, phenyl and benzyl, X is selected from a group consisting of oxygen and sulfur, A represents lower alkylene, A′ represents alkylene containing less than four carbon atoms which separates the sulfur and nitrogen by at least two carbon atoms, R_1 is selected from a group consisting of hydrogen, alkyl of one to four carbon atoms inclusive, allyl, 2-chloroallyl, propynyl, phenyl and cyclohexyl, R_2 is selected from a group consisting of hydrogen, alkyl of one to four carbon atoms inclusive and allyl and R_2 taken with R_1 and the nitrogen atom represents the morpholine ring.

3,098,092
PROCESS OF PREPARING 4-AMINO-4′-CHLORO-2-STILBENECARBONITRILE

Eldred Welch, Westfield, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 21, 1960, Ser. No. 77,280
8 Claims. (Cl. 260—465)

1. The process of preparing 4-amino-4′-chloro-2-stilbenecarbonitrile which comprises reducing by the addition of hydrogen at a temperature of from 50° to 100° C. and a pressure of from atmospheric to 50 p.s.i.g. to 4′-chloro-4-nitro-2-stilbenecarbonitrile in the presence of at least one 2-alkoxyethanol as solvent-diluent having the following general formula:

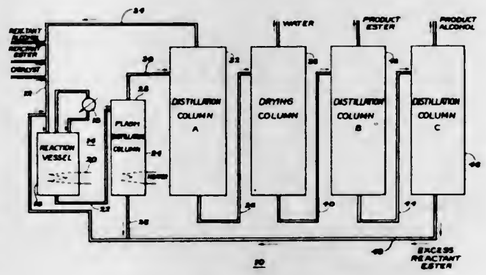
$$ROCH_2CH_2OH$$

wherein R is an alkyl group of from 1 to 5 carbon atoms.

3,098,093
PROCESS FOR THE PRODUCTION OF ESTERS BY ALCOHOLYSIS

Hugh J. Hagemeyer, Jr., and Howard N. Wright, Jr., Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Feb. 6, 1961, Ser. No. 87,200
3 Claims. (Cl. 260—491)



1. In the method for the continuous production of an ester product, the steps which comprise

(1) continuously introducing into a reaction vessel containing a refluxing mixture substantially stoichiometric amounts of

(*a*) isobutyl isobutyrate and

(*b*) an alcohol having the structural formula

$$R''—OH$$

wherein R″ is an alkyl radical of from 1 to 3 carbon atoms, said refluxing mixture being comprised of an equilibrium mixture of isobutyl isobutyrate, alcohol (*b*), an ester interchange catalyst, an ester reaction product, and isobutyl alcohol reaction product, said equilibrium mixture being derived by admixing and heating to reaction from 2 to 9 moles of isobutyl isobutyrate, 1 mole of alcohol (*b*), and an ester interchange catalyst,

(2) feeding equilibrium mixture continuously from the the bottom of the reaction vessel into a flash distillation column heated at the base thereof and operating under reduced pressure and at a reflux ratio of about 3:1 to 1:1 wherein there is provided substantially immediately an overhead fraction comprised of isobutyl isobutyrate, alcohol (*b*), ester reaction product, and isobutyl alcohol and a residual fraction comprised of substantially all the catalyst carried over in the equilibrium mixture and isobutyl isobutyrate,

(3) returning to the reaction vessel a continuous stream of the residual fraction at a rate sufficient to maintain a substantially constant volume thereof in the base of the flash distillation column,

(4) feeding continuously the overhead fraction into a distillation column A operating at atmospheric pressure and at a reflux ratio of from about 10:1 to 6:1 and distilling therefrom an overhead fraction comprised of an azeotrope of alcohol (*b*) and ester reaction product whereby substantially all alcohol (*b*) is removed,

(5) feeding continuously a stream of residual fraction comprised of isobutyl isobutyrate, ester reaction product, and isobutyl alcohol from the base of column A into a distillation column B operated at atmospheric pressure and at a reflux ratio of from 12:1 to 8:1 wherein an overhead product comprising substantially all ester reaction product is removed and there is provided a residual fraction comprised substantially of isobutyl alcohol and isobutyl isobutyrate,

(6) feeding continuously a stream of residual fraction from the base of column B into a distillation column C operated at atmospheric pressure and at a reflux ratio of from about 12:1 to 8:1 wherein isobutyl alcohol is substantially all removed as an overhead fraction and there is provided a residual fraction comprised essentially of isobutyl isobutyrate, and

(7) feeding continuously all the residual fraction from column C to the reaction vessel.

3,098,094
PRODUCTION OF CARBOXYLIC ACIDS AND SALTS THEREOF FROM ASPHALTENES

Armin C. Pitchford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed May 9, 1960, Ser. No. 27,526
3 Claims. (Cl. 260—524)

1. A method comprising separating asphaltenes from asphalt by solvent extraction, treating said separated asphaltenes with an oxidizing agent consisting essentially of nitric acid having a concentration in the range between 10 to 70 weight percent at an acid/asphaltene weight ratio in the range between 1/2 to 10/1 and at a temperature in the range between 150 to 350° F., separating the resulting water insoluble residue comprising asphaltene carboxylic acids from the resulting reaction mixture, neutralizing the latter with a basic neutralizing agent selected from the group consisting of ammonia, primary monoamines having 1 to 20 carbon atoms per molecule, diamines having 3 to 30 carbon atoms per molecule, alkali metal salts, alkali metal oxides, alkali metal hydroxides, alkaline earth metal salts, alkaline earth metal oxides, and alkaline earth metal hydroxides, and separating from the resulting neutralized mixture the resulting water soluble asphaltene carboxylic acid salts.

3,098,095
PROCESS FOR RESOLVING AROMATIC POLYCARBOXYLIC ACIDS CAPABLE OF FORMING INTRAMOLECULAR ANHYDRIDES

James O. Knobloch, Hobart, and John W. Shepard, Griffith, Ind., and Hsiang P. Liao, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,866
6 Claims. (Cl. 260—525)

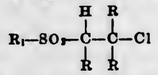
1. A process for resolving a mixture of at least two aromatic polycarboxylic acids, each of said acids having two carboxyl groups sterically capable of forming an intramolecular anhydride and possessing characteristically different dehydration temperatures, said mixture being selected from the combinations of (*a*) 3-nitro orthophthalic acid and 4-nitro orthophthalic acid, (*b*) chloro orthophthalic acids and orthophthalic acid, (*c*) methyl orthophthalic acids and 3,6-dimethyl orthophthalic acids, (*d*) 4-carboxy orthophthalic acid and orthophthalic acid, (*e*) 4-carboxy orthophthalic acid and 4-methyl orthophthalic acid, and (*f*) 4-t-butyl orthophthalic acid and 4-carboxy orthophthalic acid, which process comprises heating said mixture in the presence of a refluxing aromatic hydrocarbon to a temperature intermediate of said individual dehydration temperatures for a period of time sufficient to dehydrate only one of said aromatic acids to the anhydride thereof while minimizing dehydration of the other of said aromatic acids, thereby forming a liquid fraction containing aromatic acid anhydride and aromatic hydrocarbon and a solid fraction comprising aromatic polycarboxylic acid, and thereafter separating the two fractions.

3,098,096
3- AND 4-(2-CHLORETHYLSULFONYL)-BENZOYL CHLORIDE

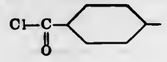
James F. Feeman, West Reading, Pa., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

No Drawing. Filed June 27, 1960, Ser. No. 38,733
3 Claims. (Cl. 260—544)

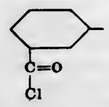
1. A compound having the following structure—



wherein R is a radical selected from the group consisting of —H and -lower alkyl and R_1 is a radical selected from the group consisting of



and



3,098,097
UNSATURATED ALIPHATIC AMINO-DIOLS

Cyril Grob and Erwin F. Jenny, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

No Drawing. Filed July 3, 1958, Ser. No. 746,346
Claims priority, application Switzerland July 12, 1957
5 Claims. (Cl. 260—584)

1. A member of the group consisting of unsaturated aliphatic amino-diols of the formula:

$$CH_3(CH_2)_n—A—CHOH—CHNH_2—CH_2OH$$

in which A stands for —CH=CH— and *n* for the odd whole number 7–11, their N-lower alkanoyl derivatives, and their salts with pharmaceutically acceptable acids.

3,098,098
METHOXYTETRALONE TETRACYCLIC ADDITION PRODUCTS

John A. Cella, Lake Forest, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

Filed Apr. 21, 1960, Ser. No. 23,851
4 Claims. (Cl. 260—586)

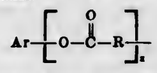
1. A compound selected from the group consisting of (*a*) a compound of empirical formula, $C_{16}H_{22}O_3$, characterized by a melting point of about 224–225° C.; ultraviolet absorption bands at 223 and 242 mμ when dissolved in methyl alcohol; infrared absorption bands at 2.83, 6.04, 6.17, 6.35, 6.82, 6.95, 7.29, 7.35, 7.59, 7.69, 7.92, 8.01, 8.30, 8.65, 9.05, 9.20, 9.53, 9.71, 9.92, 10.30, 10.74, 10.90, 11.00, 11.28, 11.50, 11.63, 12.18, 12.56, 12.83, 13.59, 13.82, and 14.43μ when incorporated in a potassium bromide disc, substantially as shown in FIG. 1; ready solubility in each of benzene, toluene, and glacial acetic acid; slight solubility in each of ethyl acetate, methyl alcohol, and ethyl alcohol; and substantial insolubility in each of water, dilute aqueous mineral acid, dilute aqueous alkali, normal hexane, and cyclohexane; (*b*) a compound of empirical formula, $C_{16}H_{22}O_3$, characterized by a melting point of about 198–201° C.; ultraviolet absorption bands at 231 and 242 mμ when dissolved in methyl alcohol; infrared absorption bands at 2.97, 6.00, 6.14, 6.35, 6.87, 6.99, 7.10, 7.31, 7.41, 7.51, 7.60, 7.88, 8.03, 8.33, 8.62, 9.06, 9.17, 9.58, 9.90, 10.20, 10.75, 10.85, 10.95, 11.43, 11.60, 12.21, 13.05, 13.50, 14.00, and 14.50μ when incorporated in a potassium bromide disc, substantially as shown in FIG. 2; ready solubility in each of benzene, toluene, and glacial acetic acid; slight solubility in each of ethyl acetate, methyl alcohol, and ethyl alcohol; and substantial insolubility in each of water, dilute aqueous mineral acid, dilute aqueous alkali, normal hexane, and cyclohexane; and (*c*) a compound of empirical formula, $C_{19}H_{20}O_3$, characterized by a melting point of about 178–180° C.; an ultraviolet absorption band at 230 mμ when dissolved in methyl alcohol; infrared absorption bands at 6.00, 6.14, 6.30, 6.34, 6.84, 6.91, 7.00, 7.28, 7.32, 7.42, 7.53, 7.58, 7.65, 7.91, 8.04, 8.19, 8.29, 8.49, 8.56, 8.72, 8.91, 9.19, 9.28, 9.52, 9.68, 9.97, 10.18, 10.38, 10.72, 10.84, 11.39, 11.52, 11.75, 11.97, 12.58, 12.77, 13.36, 13.72, and 14.12μ when incorporated in a potassium bromide disc, substantially as shown in FIG. 3; ready solubility in each of benzene, toluene, and glacial acetic acid; slight solubility in each of ethyl acetate, methyl alcohol, and ethyl alcohol; and substantial insolubility in each of water, dilute aqueous mineral acid, dilute aqueous alkali, normal hexane, and cyclohexane.

3,098,099
ESTER-KETONE CONVERSION

Louis B. Conte, Jr., Newark, and Francis N. Apel, Nutley, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 19, 1960, Ser. No. 23,127
6 Claims. (Cl. 260—590)

1. Method for converting esters of phenols into phenolic ketones which comprises contacting a solution in an inert liquid organic solvent of an ester of a phenol which has the formula



wherein *x* is an integer from 1 to 2, Ar is an aromatic hydrocarbon radical having a valence equal to *x* which can be substituted with at least one member of the class consisting of alkyl groups, alkenyl groups, aryl groups, aralkyl groups, alkoxy groups, alkoxyaryl groups and halogen groups, and R is selected from the class consisting of alkyl groups, aryl groups, alkaryl groups, aralkyl groups, alkenylaryl groups, alkoxyaryl groups, hydroxyaryl groups and haloalkyl groups with a strongly acidic polymeric cation exchange resin which is saturated with a liquid inert organic solvent, under substantially anhydrous conditions and at a temperature above 25° C. to convert said ester to the corresponding phenolic ketone and thereafter separating the phenolic ketone thus produced.

3,098,100
PROCESS FOR THE PRODUCTION OF DIISOPROPYL KETONE

Benjamin T. Freure, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,206
3 Claims. (Cl. 260—596)

1. The process for the production of diisopropyl ketone which comprises contacting 2,2,4-trimethyl-1,3-pentanediol in the vapor phase with cadmium phosphate at a temperature of from 250–400° C. and recovering the ketone formed.

3,098,101
PREPARATION OF OXYGENATED COMPOUNDS

Clyde Lee Aldridge, Baton Rouge, and Neville Leverne Cull, Baker, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 21, 1958, Ser. No. 756,430
13 Claims. (Cl. 260—604)

1. A process for converting an olefinic hydrocarbon having *n* carbon atoms in the molecule, *n* being an integer ranging from 2 to 20, into an aldehyde having $2n+2$ carbon atoms per molecule which comprises reacting said olefinic hydrocarbon at elevated temperatures and pressures with hydrogen and carbon monoxide in a carbonylation zone in the presence of: a cobalt carbonylation catalyst, as a reaction modifier an oil soluble compound of a metal selected from the group consisting of zinc, magnesium, barium, cadmium, strontium, calcium and beryllium, and as an activator an olefin soluble salt of a metal having an atomic number between 80 and 83 inclusive, said activator being present in an amount of from 0.1 to 10 millimoles per liter of olefinic hydrocarbon.

3,098,102
PRODUCTION OF UNSATURATED ALIPHATIC ALDEHYDES

James Robert Bethell and David James Hadley, Epsom Downs, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,218
Claims priority, application Great Britain Feb. 17, 1959
4 Claims. (Cl. 260—604)

1. The process for the production of an unsaturated aldehyde selected from the group consisting of acrolein and methacrolein which comprises reacting at about 300–500° C. in the vapour phase and in the presence of an inert gaseous diluent a substance selected from the group consisting of propylene and isobutene with oxygen, the proportion of olefine in the feed being between about 2 and 10% by volume, the proportion of oxygen in the feed between 2 and 15% by volume, over cobalt molybdate as an oxidation catalyst, and recovering the unsaturated aldehyde from the reaction products.

3,098,103
PURELY PARA THIOETHER POLYMERS

Walter Reifschneider, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 27, 1962, Ser. No. 205,501
1 Claim. (Cl. 260—609)

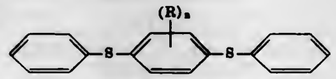
Bis(p-phenylthio)phenyl)sulfide.

3,098,104
ALKYLPHENYL BIS THIOETHERS

Walter Reifschneider, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 27, 1962, Ser. No. 205,504
5 Claims. (Cl. 260—609)

1. Compound of the formula



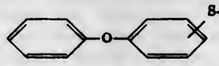
wherein R represents a lower alkyl group being of from 1 to 6, inclusive, carbon atoms and *n* is an integer from 1 to 2, inclusive.

3,098,105
ALKANOL PHENOXY THIOETHERS

Walter Reifschneider, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 27, 1962, Ser. No. 205,521
3 Claims. (Cl. 260—609)

1. A compound corresponding to the formula



wherein "hydroxyalkyl" represents a group of the formula

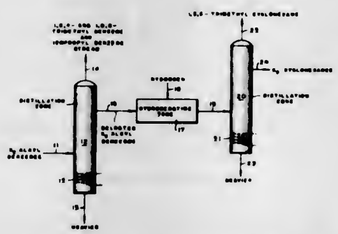
$$-C_nH_{2n}OH$$

wherein *n* represents an integer from 2 to 6, inclusive.

3,098,106
PRODUCTION OF ROCKET FUEL

William Rogers Edwards, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Dec. 7, 1959, Ser. No. 857,596
5 Claims. (Cl. 260—666)



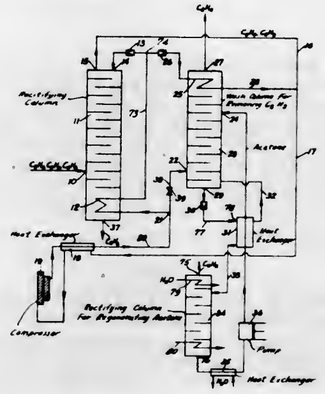
2. A rocket and missile fuel consisting of about 13 mol percent of n-propylcyclohexane, about 22 mol percent of 1-methyl-2-ethylcyclohexane, about 43 mol percent of 1-methyl-3-ethylcyclohexane, and about 22 mol percent of 1-methyl-4-ethylcyclohexane, said fuel boiling in the range from about 300° to about 320° F., being thermally stable and having a specific gravity of about 0.792.

3. A method for producing a rocket and missile fuel which comprises fractionally distilling a C_9 alkyl benzene fraction under conditions to form a first fraction containing 1,2,4- and 1,2,3-trimethylbenzenes and isopropylbenzene and a second fraction containing other C_9 alkyl benzenes including 1,3,5-trimethylbenzene, discarding said first fraction, contacting said second fraction with a hydrogenating catalyst at a temperature within the range from about 300° F. to about 600 F., at a pressure within the range of about 100 to about 1000 p.s.i.g., and at a space velocity within the range from about 0.25 to about 2.00 volumes of liquid feed per volume of catalyst per hour, whereby said other C_9 alkyl benzenes form a hydrogenated product containing C_9 alkyl cyclohexanes, distilling said product under conditions to form a third fraction containing 1,3,5-trimethylcyclohexane and a fourth fraction containing other C_9 alkyl cyclohexanes, discarding said third fraction and recovering said fourth fraction as a rocket and missile fuel.

3,098,107
METHOD FOR PRODUCING ETHYLENE

Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Munich, Germany, a German company

Filed May 22, 1959, Ser. No. 815,217
4 Claims. (Cl. 260—677)



1. In a method for producing pure ethylene free of acetylene and ethane by:

(1) rectifying in a distillation column a mixture consisting essentially of ethylene with acetylene and ethane as impurities, thereby producing liquid ethane as bottoms and a vaporous mixture of ethylene-acetylene as overhead product; and

(2) purifying the overhead product by washing with a solvent to remove the acetylene impurity; the improvement which comprises compressing the overhead product leaving the distillation column, cooling the same, and prior to its liquefaction, branching off a predetermined portion of the ethylene-acetylene and washing this latter portion with a solvent to remove the acetylene impurity; and passing the remaining portion of the ethylene-acetylene, in indirect heat-transfer relationship, through the contents of the bottom of the distillation column, thereby supplying heat for the operation of said column and simultaneously condensing the ethylene-acetylene; and utilizing at least a portion of said condensed ethylene-acetylene as reflux for the operation of said distillation column.

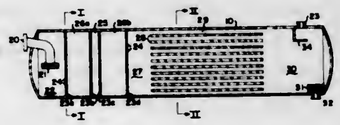
3,098,108
COALESCING SULPHURIC ACID-HYDROCARBON EMULSIONS

Aaron Preiser, Scotch Plains, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 16, 1960, Ser. No. 76,380
12 Claims. (Cl. 260—683.62)

7. In the process of forming branched chain saturated hydrocarbon by contacting an olefin hydrocarbon with

an emulsion of isoparaffinic hydrocarbon and liquid acid catalyst in a confined reaction zone under reaction conditions and withdrawing a portion of said emulsion from said reaction zone, separating reaction product from said withdrawal emulsion and returning catalyst to said reaction zone, the improvement in the separation of liquid catalyst from hydrocarbon which comprises contacting said withdrawn emulsion with a member of the group consist-



ing of polytetrafluoroethylene and polytrifluorochloroethylene polymer of random length, width, and thickness of about 20 to 1000 microns which material is preferentially wet by hydrocarbon, at a flow rate of emulsion to polymer of 10 to 20 v./v./h. and a linear velocity of about .01 to 0.2 f.p.s. wherein the thickness of the halogenated ethylene polymer pad is about 8 to 18 inches and the pressure drop across the pad is 1 to 5 p.s.i.g.

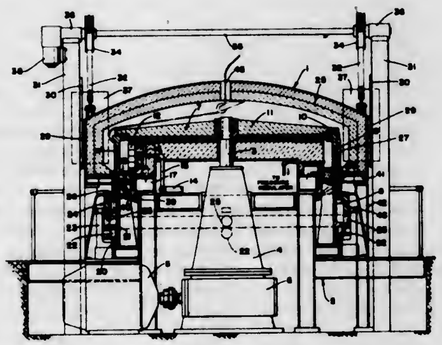
3,098,109

APPARATUS FOR CONTINUOUSLY MODIFYING THE TEMPERATURE OF WIRE AND THE LIKE

Maurice A. Nye and Jess C. Bittman, Cuyahoga Falls, Ohio, assignors to The Vaughn Machinery Company, Cuyahoga Falls, Ohio, a corporation of Ohio

Filed Sept. 13, 1960, Ser. No. 55,651

2 Claims. (Cl. 266—3)



1. Wire heat treating apparatus comprising a housing defining a chamber therewithin; a generally cylindrical drum in said housing adapted to have wire wrapped thereabout for travel through said housing upon rotation of said drum; drive means operative to rotate said drum so to advance such wire through said housing; heating means effective to heat the helical loops of wire disposed in said chamber; a push ring keyed to said drum for rotation therewith, and actuating means for said push ring comprising a fixed support rotatably mounting a plurality of rollers, the axes of said rollers being inclined with respect to a plane transverse to the axis of said drum whereby said push ring is rotatably supported on said rollers to continuously helically advance the coils of wire wrapped about said drum.

3,098,110

COOLING ARRANGEMENTS FOR MOLTEN METALS

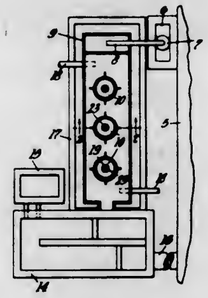
Thomas Ronald Albert Davey, Bristol, and Walter Lindsay Linton, Langford, near Bristol, England, assignors to Metallurgical Processes Limited, Nassau, Bahamas, and The National Smelting Company Limited, London, England, doing business together as Metallurgical Development Company, Nassau, Bahamas

Filed Sept. 17, 1959, Ser. No. 840,600

Claims priority, application Great Britain Oct. 17, 1958

5 Claims. (Cl. 266—15)

1. In the combination of a condenser in which zinc vapor is condensed in molten lead that is circulated successively through the condenser, through a cooling tank having cooling means for cooling the zinc-containing molten lead, through a settling zone where molten metallic zinc is separated and removed, the molten lead then being returned to the condenser, the improvement in said cooling means which comprises at least one generally cylindroid cooling drum rotatably mounted for rotation about the generally vertically disposed longitudinal axis of the drum, said drum being adapted to be substantially completely immersed in the zinc-containing molten lead in the cooling tank, an upright tubular extension secured to the drum and communicating with the interior thereof



through a hole in the top of the drum, means for introducing cooling fluid into the drum and for withdrawing cooling fluid therefrom through said tubular extension, means for rotating the tubular extension and the drum secured thereto, means for preventing substantial rotation of cooling fluid in the drum, caused by rotation of the drum, comprising at least one radially-disposed stationary baffle positioned within the rotatable cooling drum, and means for preventing substantial rotation of the zinc-containing molten lead in the cooling tank immediately surrounding the rotatable cooling drum comprising at least one baffle extending in a direction generally vertically and radially with respect to said drum.

ELECTRICAL

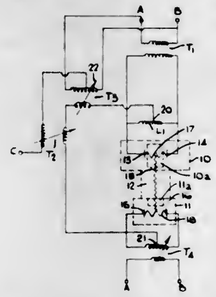
3,098,111

FURNACE FOR MELTING OR REFINING GLASS ELECTRICALLY

Douglas Graeme Hann, Ryton, Shifnal, and Robert Fleming Ramsay, Tilgate, Crawley, England, assignors to Elemelt Limited, Bilston, England, a British company

Filed Oct. 19, 1961, Ser. No. 146,265

10 Claims. (Cl. 13—6)



1. In a glass melting furnace having at least one chamber for containing a body of molten glass, means for heating said glass by the passage of alternating electric current along a path therethrough and for effecting control over the distribution of current over a transverse cross-section of said path, comprising a first electrode means including respective electrodes spaced apart crosswise of the current path, a second electrode means spaced from the first electrode means longitudinally of the current path, a first source of alternating voltage connected between the electrodes of the first electrode means, a second source of alternating voltage including at least a component in quadrature with the first source and connected between the first and second electrode means, a third source of alternating voltage connected in circuit with at least one of said first and second sources, and means for varying said third source of voltage to vary the magnitude of the resultant voltage appearing between the second electrode means and one of said electrodes of the first electrode means relatively to the resultant voltage appearing between the second electrode means and another one of said electrodes of the first electrode means.

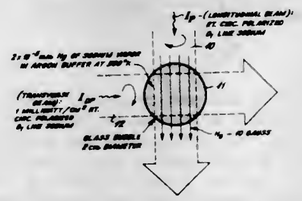
3,098,112

VAPOR CELL LIGHT MODULATOR

John W. Horton, New York, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 22, 1959, Ser. No. 828,908

5 Claims. (Cl. 88—61)



1. An optical device comprising a light cell having a light medium therein, said medium having the following characteristics:

(1) a ground state

(2) an excited state

(3) exhibits splitting into a plurality of Zeeman levels upon the application to said medium of a weak static magnetic field

(4) One of said levels is a photon relatively non-absorbing level to a pumping radiation, means providing a weak static magnetic field for application to said medium to cause said splitting, a source of a beam of pumping radiation for illuminating said medium to cause Zeeman transition of substantially all of the atoms of said medium to said non-absorbing level whereby said non-absorbing level becomes highly populated and said medium becomes translucent to said pumping radiation, a source of a beam of depumping radiation for illuminating said medium to cause said non-absorbing level to become de-populated and said medium to become substantially opaque to said pumping radiation and means to control said radiations, the direction of said magnetic field being the same as the direction of propagation of said pumping radiation, said depumping radiations being of substantially identical frequency and direction of polarization, said depumping radiation being propagated in the direction at right angles to said field direction.

3,098,113

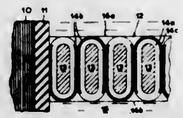
OIL-IMMERSED ELECTRICAL APPARATUS HAVING OIL-IMPREGNATED MAIN INSULATION PARTLY COVERED BY LIQUID-IMPERVIOUS MATERIAL

Albert Edward Brierley, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company

Filed Nov. 18, 1960, Ser. No. 70,229

Claims priority, application Great Britain Dec. 4, 1959

10 Claims. (Cl. 174—26)

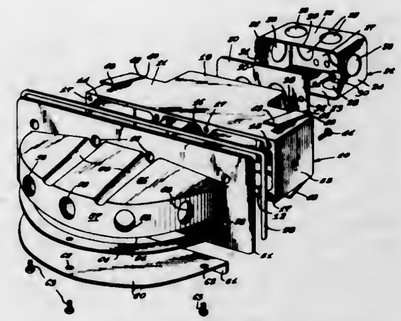


1. Electrical apparatus of the kind which is immersed in oil comprising a plurality of electrical conductors which in use are of different potentials and adjacent to one another and are closely wound to form a coil having two main surfaces in contact with the oil, each conductor being covered by a main insulating covering of a material which in use is impregnated by the oil and each conductor further having an insulating part-covering of a material which is impervious to liquids, the part-covering surrounding and partly but not wholly covering the main insulating covering so as to allow the impregnation of the main insulating covering with insulating oil but to restrict the absorption of water by said main covering and wherein the insulating part-covering of alternate conductors is disposed around that portion of the conductor which forms part of one of said main surfaces and the insulating part-covering of the intermediate conductors is disposed around that portion of the conductor which forms part of the other main surface.

3,098,114
JUNCTION BOX FOR RECESSED WALL INSTALLATION

Walter Myrton Hawn, Bridgeville, Pa., and David Chann, Forest Park, Robert J. Besal, Hinsdale, and Donald V. Vesely, Hillside, Ill., assignors to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey

Filed May 12, 1959, Ser. No. 812,605
12 Claims. (Cl. 174—58)

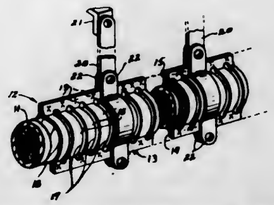


8. Mounting means for light units comprising an entrance box, a junction box connected to one side of said entrance box, and a face plate removably fastened to said junction box and having means formed therein comprising a wiring compartment having upper and lower walls and an arcuate front wall extending therebetween, said arcuate front wall having a plurality of light units mounted thereon, said lower wall of said wiring compartment comprising a removable access cover for affording selective access to said wiring compartment.

3,098,115
ELECTRICAL DISTRIBUTION SYSTEM

Stephen Guarnaschelli, Garden City, N.Y., assignor, by mesne assignments, to Atlas Corporation, a corporation of Delaware

Filed Apr. 7, 1960, Ser. No. 20,623
3 Claims. (Cl. 174—102)

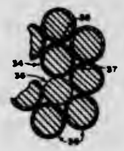


1. In an electrical distribution system, a conduit comprising two similar elongated ribbon-like members, each having substantially co-planar longitudinally-extending edge portions which are interconnected by longitudinally-spaced crossbands substantially uniformly located along the length of the edge portions, the crossbands of each member being bowed outwardly in a common direction from the plane of the edge portions and being also curved in the direction of the length of the conduit and in a direction to give each of the crossbands a convex curvature in its inside surface to prevent insulation, splices or other parts of an electrical conductor from catching on the edges of the crossbands when an electrical conductor is pulled through the conduit and across said bands, and the different members being bowed in opposite directions from one another to enclose a substantially cylindrical space through which electrical conductors can be pulled, the edge portions of said members being connected together but being flexible enough when connected to the conduit to be bent in one plane to desired paths in a structure where the conduit is used, the edge portions being stiff in the directions of their planar extent to prevent bending of the conduit in the plane of said edge portions, said conduit having open ends, and at least one electrical conductor within the conduit and extending lengthwise thereof.

3,098,116
LEAK-DETECTING TELEPHONE CABLE

Bjorn Jore, Hastings on Hudson, Ralph G. D'Ascoli, Yonkers, and John W. Olson, Dobbs Ferry, N.Y., assignors to Anaconda Wire and Cable Company, a corporation of Delaware

Filed Oct. 7, 1959, Ser. No. 844,931
6 Claims. (Cl. 174—115)

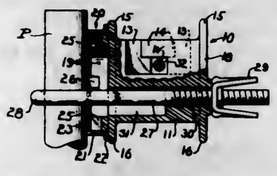


3. In a telephone cable having an outer protective jacket and a multiplicity of conductor pairs enclosed within and extending through said jacket, each conductor of each pair being surrounded by an insulating layer of non-porous thermoplastic dielectric material, means for detecting leaks in said cable comprising at least one twisted pair of detector conductors enclosed within and extending through said cable, each of said detector conductors being surrounded by a layer of non-porous thermoplastic dielectric material normally insulating it from the other detector conductor, the insulating layers on the detector conductors being formed with small closely spaced openings along their entire length through which the surface of the detector conductors are exposed, whereby when a voltage drop is impressed across the twisted pair of detector conductors and water enters through a leak in said cable the detector conductors are wetted and a circuit is closed between them.

3,098,117
ELECTRIC FENCE INSULATOR

Robert M. Wilson, Battle Creek, Mich., assignor to Dare Products, Incorporated, Battle Creek, Mich., a corporation of Michigan

Filed Aug. 3, 1960, Ser. No. 47,315
4 Claims. (Cl. 174—166)



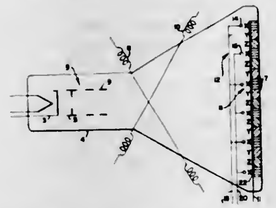
1. An electrical insulator comprising a heat-flowable, plastic body portion terminating at one end in a peripheral flange, said body portion including a through aperture extending through opposite ends thereof for receiving a pressure-applying fastener therethrough, said body portion including intermediate wire-receiving means for removably receiving a current conducting wire, said body portion including an integral rib projecting axially beyond said peripheral flange, inwardly and adjacent the outer edge thereof and surrounding said through aperture, and

a rigid metal sleeve circumjacent to the other surface of said rib and including an outwardly extending, continuous flange seated on the outer surface of said peripheral flange of said body portion and adjacent the outer edge thereof, said sleeve projecting beyond the terminal end of said rib and terminating in a terminal edge including a serrated portion opening in the direction toward which said rib projects, said sleeve restraining said rib against deformation and expansion flow during installation, and said continuous flange of said sleeve providing a pressure base outwardly of said rib for distributing the application of pressure on said insulator outwardly of said rib when the insulator is installed.

3,098,118
POST-DEFLECTION TUBE WITH XYZXZY SEQUENCE

Paul Raibourn, Southport, Conn.

Filed July 5, 1960, Ser. No. 40,678
9 Claims. (Cl. 178—5.4)

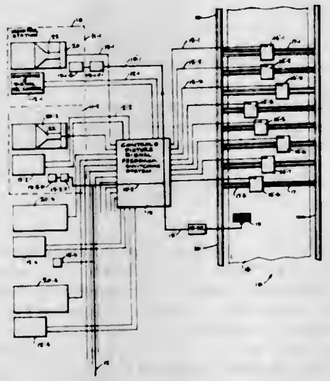


1. A cathode ray tube comprising an electron gun, a target area having a multiplicity of strips of material disposed thereon fluorescent in a plurality of primary colors X, Y, Z, and a grid of interlaced mutually insulated conductors arranged between the gun and target area, said strips being laid down in a repeating cycle according to the sequence XYZXZY, with said strips extending substantially parallel to said conductors and with adjacent of the strips fluorescent in the color X electron optically centered behind adjacent of said conductors.

3,098,119
INFORMATION STORAGE SYSTEM

Jerome H. Lemelson, 43A Garfield Apts., Metuchen, N.J.

Filed Jan. 12, 1959, Ser. No. 786,324
14 Claims. (Cl. 178—6.6)

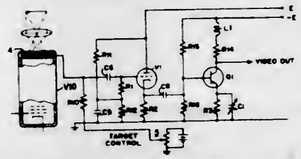


12. A searching system for automatically locating selected of a plurality of document recordings comprising in combination with a plurality of monitor stations, a video signal input to each of said monitor stations, a storage system for a plurality of document recordings including an endless track conveyor, said recordings each being of substantially equal area and arranged in close proximity as a plurality of parallel tandem aligned frames which frames also extend as substantially parallel rows across said conveyor, at least one video scanner, a guide means for guiding said scanner across said conveyor parallel to said rows of image frames, a first servomotor for driving said scanner, a selective control means for positioning said scanner in alignment with a selected frame column, means for generating a plurality of signals for indicating incremental movement of said conveyor, a presettable frame selector means at at least one of said stations responsive to said signals and operative when a preset condition is attained to gate a video signal generated by said scanner in scanning a predetermined portion of said conveyor to said input of said one of said monitor stations, storage means at each of said monitor stations for recording a plurality of said video signals, including a recording member, a transducer operatively connected to said video signal input and adapted to record signals as they are received onto predetermined areas of said recording member, and means for controlling said storage means for the selective monitoring of said recorded signals whereby the selected document recording is recorded in a particular monitor station recording member to be monitored while said scanner is released to serve other monitor stations.

3,098,120
VIDICON CAMERA INPUT STAGE

Max H. Diehl, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 18, 1960, Ser. No. 50,361
6 Claims. (Cl. 178—7.2)

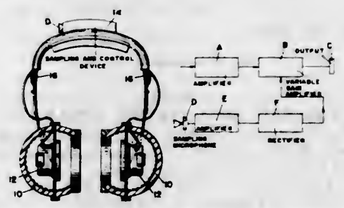


1. A television camera preamplifier comprising a camera tube, a cathode follower tube stage responsive to said camera tube, a transistor stage responsive to the output of said cathode follower tube stage, said cathode follower stage eliminating microphonic noise and providing a low impedance input to the transistor stage, said transistor stage thereby reducing random noise.

3,098,121
AUTOMATIC SOUND CONTROL

William B. Wadsworth, Concord, Mass., assignor to David Clark Company Incorporated, Worcester, Mass., a corporation of Massachusetts

Filed Sept. 15, 1958, Ser. No. 761,217
1 Claim. (Cl. 179—1)



Audio communication apparatus with volume control operated by ambient noise; comprising in combination an

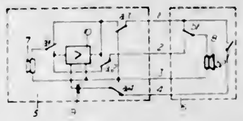
ear protector shell adapted to be applied to the head of a user against the user's ear, support means for retaining said shell in position on the user's head, said shell having relatively high attenuation of exterior sound waves and ambient noise, a transducer mounted in said shell for communicating wanted sound to the user's ear as the function of an electrical signal applied to the transducer, means for picking up wanted sound and transforming the same into an electrical signal, a variable gain amplifier connected to said wanted sound pick up means and to said transducer for applying to the latter a signal of a variable gain, a sampling microphone mounted on said support means for picking up unwanted ambient noise, second amplifying means connected to said microphone, and rectifying means connected to said second amplifying means and to said variable gain amplifier for applying a rectified electrical signal to the latter to increase the gain of the signal applied to said transducer in response to an increase in volume of ambient noise sampled by said microphone, and conversely to decrease the gain of the signal in response to a decrease in volume of ambient noise.

3,098,122

CIRCUIT ARRANGEMENT FOR AN INTERCOM SYSTEM WITH ALTERNATIVE OPERATION

Hans-Ulrich Knauer, Kornwestheim, and Georg Vogel, Schwieberdingen, Ludwigsburg, Germany, and Rudolf Bayer, Vienna, Austria, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Feb. 8, 1961, Ser. No. 87,866
Claims priority, application Austria Feb. 10, 1960
7 Claims. (Cl. 179—1)



1. An intercommunication system comprising a master station and a remote station interconnected by a three-wire transmission line, transducer means in each station for transmitting and receiving speech signals, amplifier means in said master station for amplifying said speech signals from each of said transducer means, switch means in said master station having a first position for connecting the associated transducer means to the output of said amplifying means and for connecting the transducer means of said remote station to the input of said amplifying means and having a second position for reversing the last said connections, and switch means in said remote station having a first position for connecting the associated transducer means to the output of said amplifying means when said master station switch means is in its said first position and having a second position for connecting the associated transducer means to the input of said amplifying means when said master station switch means is in its said first position and for connecting the last-said transducer means to the output of said amplifying means when said master station switch means is in its said second position.

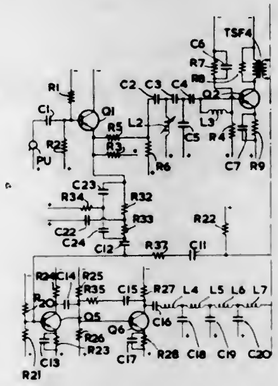
3,098,123

AUTOMATIC SIGNALLING APPARATUS

Charles R. P. Stonor, Chowns Mead, Tylers Green, near Haywards Heath, England, assignor to Sound Diffusion (Sales) Limited, Portslade, England

Filed Dec. 4, 1959, Ser. No. 857,335
8 Claims. (Cl. 179—2)

1. In a supervisory apparatus for electrically transmitting different predetermined sounds in message form from a first station to a second station wherein said sounds represent different states of a condition under supervision, a single recorded medium upon which are recorded a plurality of discrete sounds in message form individually representing a plurality of the different possible variations of the conditions selected for supervision, means having an electrical output at said first station and including a reproducing device operatively connected to said recording medium to consecutively sense and convert said recorded sounds into electrical signals, a transmitting



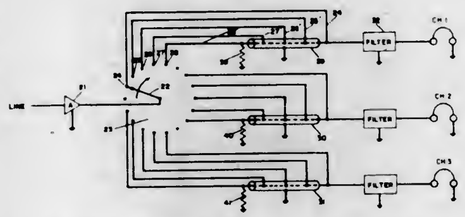
circuit connected to said output for transmitting said electrical signals from said first station to said second station, means for determining the status of the condition under supervision, and means under the control of said determining means to transitorily disconnect said transmitting circuit from said output whenever the converted recorded sounds fail to correspond to the determined status of said condition thereby preventing the transmission of those electrical signals which fail to represent the status of said condition.

3,098,124

MULTIPLEX TELEPHONY

Charles B. Fisher, 2850 Hill Park Road, Montreal 25, Quebec, Canada

Filed Oct. 13, 1958, Ser. No. 766,920
6 Claims. (Cl. 179—15)



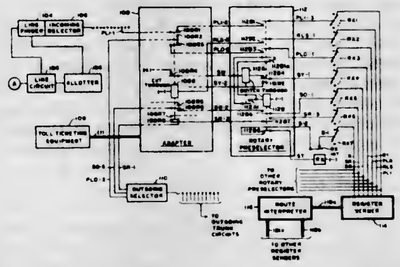
3. A receiver for multiplex telephone signals transmitted as interleaved portions of the signals in a plurality of channels compressed in time in proportion to the number of channels, comprising means for separating the received signal portions corresponding to the different channels and producing therefrom sequences of pulses representing consecutive instantaneous voltages of the separated signal portions, means individual to each channel for delaying consecutive pulses of each sequence by progressively increasing amounts to expand the signal portions to their original lengths.

3,098,125

ROUTING MEANS FOR TELEPHONE SYSTEM

William H. Berch, Penfield, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed May 1, 1958, Ser. No. 732,250
63 Claims. (Cl. 179—18)



1. In a telephone system, a plurality of telephone exchanges, call extending circuits, and trunk circuits interconnecting said exchanges to provide primary and alternate trunk routes between at least two of said exchanges, routing means at one of said two exchanges for controlling the extension of a call forwarded thereto and comprising a group of route determining relays, means for applying a first portion of directive impulse signals to said routing means in response to the initiation of each connection at said one exchange, first means for operating a selected one of said relays in response to the application of said directive signals to said routing means, and second means for controlling the subsequent operation of said routing means in a manner which is determined by the particular one of said relays which is operated to complete a connection between said two exchanges over a primary, or alternate route, if available, as may be most expedient depending upon the availability of the trunk circuits interconnecting said two exchanges.

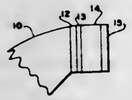
61. In a telephone system, a translator for use with a plurality of groups of registers, said translator comprising voltage-operated translating means and a plurality of voltage-operated connector means each of which is associated with an individual group of registers, each of said connector means being operable to forward to said translating means a group of voltage signals to be translated which are applied thereto from the group of registers with which that connector means is associated, and means for obtaining the operating voltage for each of said connector means solely from the group of registers with which that connector means is associated.

3,098,126

MAGNETIC TRANSDUCER DEVICE

Erika Erna Kaspaul, Stamford, Conn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Jan. 11, 1960, Ser. No. 1,618
2 Claims. (Cl. 179—100.2)



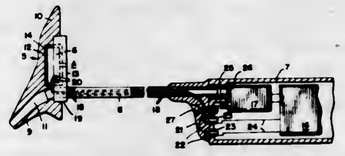
1. In a magnetic transducer head for magnetic recording-reproducing apparatus, a magnetic core for a magnetic circuit having pole pieces with substantially planar parallel confronting faces defining a magnetic gap, the said magnetic gap being completely filled by laminae of non-magnetic metals coextensive in area with the said faces and with each other and vapor deposited on the said faces in substantially uniform thickness and integrally bonded to at least one of said faces, and consisting of a first planar lamina of a soft, malleable metal of low magnetic permeability having hardness on the Mohs' scale of the order of not greater than about 3, and of thickness in the range of about 50 to 150 A. units, bonded to a pole piece face; a second lamina of a substantially non-malleable metal of low magnetic permeability of hardness greater than that of the magnetic pole piece, of the order of not less than about 5, and thickness in the range of about .2 to about .8 micron, bonded to said first lamina, and a third lamina of the said relatively soft metal of substantially uniform thickness in the range of about 50 to 150 A. units bonded to said second lamina.

3,098,127

HEARING AID

Walter H. Huth, 315 W. Adams St., Chicago 6, Ill.

Filed July 3, 1961, Ser. No. 121,747
5 Claims. (Cl. 179—107)



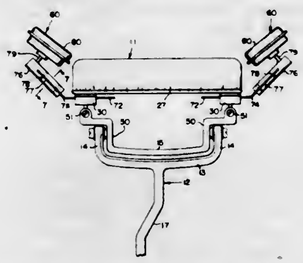
2. A hearing aid comprising, an ear plug having a sound channel therethrough, a separate housing enclosing an amplifier and a receiver powered by the amplifier, means operatively connecting the amplifier and receiver, a sound tube connecting the housed receiver with the ear plug channel, a microphone mounted on the ear plug, and connecting wires within the sound tube for completing an operating circuit between the microphone and the amplifier.

3,098,128

HEAD RESTS FOR DENTAL CHAIRS AND THE LIKE

Anthony L. Andin, 50 Stanford Drive, Rochester, N.Y.

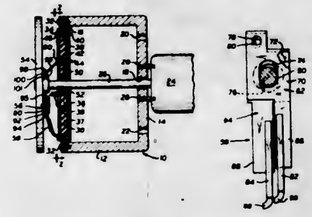
Filed July 14, 1961, Ser. No. 125,041
7 Claims. (Cl. 179—146)



1. A head rest for a dental chair and the like comprising a support member, a single, thin flexible plate having a length sufficient to extend across the back of a patient's head, spaced mounting members secured rigidly to the back of said plate adjacent opposite longitudinal ends thereof, respectively, and a pair of spaced links, one of said links connecting one of said mounting members to one end of said support member, and the other of said links connecting the other of said mounting members to the other end of said support member, the connections of said links with said mounting members and with said sup-

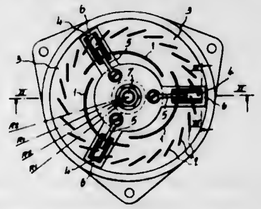
port member comprising, for corresponding ends at one end of said links, a pivotal connection about an axis transverse to the longitudinal direction of said plate, and comprising for the corresponding opposite ends of said links a slidable connection longitudinally of said plate whereby said plate may flex between said members under weight of a patient's head when the latter is pressed against the plate, and so that said plate will cradle the patient's head between said members.

3,098,129
SWITCHING MECHANISMS
George J. Lynch, Bloomfield, and William J. Ormston, Nutley, N.J., assignors to Mycalex Electronics Corporation, Clifton, N.J., a corporation of New York
Filed Sept. 23, 1958, Ser. No. 762,792
4 Claims. (Cl. 200—11)



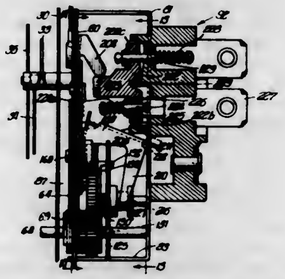
1. In a commutation switch, a commutation plate having a circular row of equi-spaced substantially identical raised contacts and a slip ring concentric with said circular row of contacts, alternate contacts in said circular row being adapted to be connected to electrical devices and the remaining of said contacts being unconnected, and rotatable brush means engageable with said contacts and slip ring for sequentially electrically connecting said contacts to said slip ring, said brush means including a brush engaging said slip ring and a pair of laterally and longitudinally offset brushes both engaging in sequence each of said contacts in said circular row of contacts, and resilient means biasing said pair of brushes into engagement with said circular row of contacts.

3,098,130
ELECTRIC SWITCHES
Jean Clavel, Nanterre, France, assignor to L'Electro-Commutation, Zainvillers-Vagney, Vosges, France, a company of France
Filed June 15, 1959, Ser. No. 820,417
Claims priority, application France June 19, 1958
8 Claims. (Cl. 200—11)



1. A sliding contact rotary electric switch having at least one switch section consisting of an insulating support carrying a series of spaced fixed contacts having flat elongated rectangular contact surfaces arranged on a circular path and a common fixed contact having a flat contact surface with all of the contact surfaces being arranged in the same plane, and a rigid conducting bridge member having a continuous flat contact surface disposed in said plane and mounted for sliding movement over the flat contact surfaces of said fixed contacts and rotatable about the centre of the circular path on which are located the spaced fixed contacts, whereby any of the series of spaced fixed contacts can be selectively and individually connected to the common fixed contact by the continuous flat contact surface of said conducting bridge member and spring means urging the flat contact surface of said bridge member into engagement with the flat contact surface of said fixed contacts, said spaced fixed contacts being disposed to minimize capacitance therebetween with the longest dimensions of their rectangular contact surfaces oblique relative to the radius which extends from the centre of rotation of the bridge member and which is located equidistantly from the geometric centres of two adjacent contacts and with the neighbouring ends of adjacent ones of said spaced fixed contacts being spaced apart by a distance which is large in relation to the contact cross-section, but meeting said radius so that said bridge member is always in electrical contact with at least one of said spaced fixed contacts when passing from one of said spaced fixed contacts to the next adjacent spaced fixed contact.

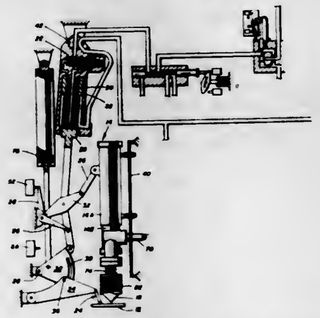
3,098,131
TIMING MECHANISM
William P. Gallagher, Coral Gables, and Richard J. Dykinga, Perrine, Fla., assignors to International Register Company, Richmond, Ill., a corporation of Illinois
Filed Aug. 17, 1960, Ser. No. 54,560
15 Claims. (Cl. 200—38)



1. In a range timer, the combination of a time driven member, an electric switch, a stop time dial, a first rotatable, but non-shiftable, setting knob and shift for setting up on said stop time dial a desired stop time, a cooking hours dial having a series of numerals thereon for indicating a scale of cooking hours, and also having an "Off" indication and a "Manual" indication thereon, a second rotatable, but non-shiftable, setting knob and shaft for manually setting up on said cooking hours dial a desired number of cooking hours, a planetary gear transmission mechanism comprising a sun gear, a planetary gear meshing with and rotating in an orbital path around said sun gear and an outer planetary ring gear surrounding the orbital path of said planetary gear and meshing with said planetary gear, means responsive to settings imparted to said stop time dial for transmitting adjusting motion to said sun gear and thence to said planetary gear, means responsive to settings imparted to said cooking hours dial for transmitting adjusting motion to said outer planetary ring gear and thence to said planetary gear, a first time driven tripping means responsive to the operation of said time driven member for effecting continuous time driven rotation, a second tripping means responsive to said planetary gear and adapted to effect tripping engagement with said first tripping means at a time which is automatically predetermined by the settings given to said stop time dial and to said cooking hours dial,

means responsive to such cooperative engagement between said first and second tripping means for causing movement of said electrical switch to closed position, means operative during the cooking operation for driving said cooking hours dial backwardly to a switch off position, means responsive to said cooking hours dial reaching said switch off position for turning said electrical switch into off condition, means responsive to the manually actuated rotation of said cooking hours dial from said "Off" position into a position denoting the desired number of cooking hours for thereby automatically placing the range timer in its set condition, and means responsive to the manually actuated rotation of said cooking hours dial into its "Manual" position for thereby automatically moving said electrical switch into closed position.

3,098,132
MISSILE CONTACTOR
Arthur G. Blomquist, Ludolph Larsen, and Palmer G. Wermager, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 8, 1961, Ser. No. 130,195
8 Claims. (Cl. 200—50)



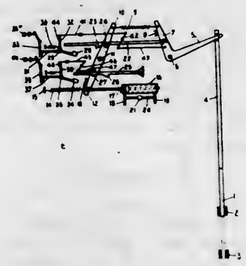
5. A missile contactor for use in warming up missile weapons preparatory to firing comprising
a housing,
said housing having telescopically engaged upper and lower portions,
spring means housed within said housing functioning to resiliently bias said telescoping portions into their extended position whereby shock loadings encountered by said contactor on being rammed into missile engagement are minimized,
an electrical contactor within said housing,
a vertically disposed track along which said contactor may be caused to reciprocate,
a door movable betwen eopen and closed positions,
a piston, and
an actuating linkage actuated by said piston and interconnecting said door and contactor to simultaneously open the door as the contactor is extended into a missile engaging position, and to close the door upon withdrawal of said contactor.

3,098,133
ELECTRICAL APPARATUS COMPRISING A VOLTAGE COMMUTATOR
Jan van den Driest, Drachten, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 3, 1960, Ser. No. 33,782
Claims priority, application Germany June 4, 1959
2 Claims. (Cl. 200—51.07)

1. An electrical connector for electrical apparatus comprising a housing member for said apparatus having an elevation portion defining an aperture, a transverse locking groove within said elevation portion adjacent one end of said aperture adapted to receive commutator means having pins located within the aperture of said elevation portion, counterplug means receivable within said elevation portion, said counterplug means comprising an intermediate portion fitting within the said aperture for preventing relative rotation therebetween and having contact means adapted to engage said pins, a terminal portion projecting from one side of said intermediate portion having means adapted to engage said pins for rotation of said commutator with said aperture without electrically connecting said pins and counterplug, and a plug portion on the other side of said intermediate portion.



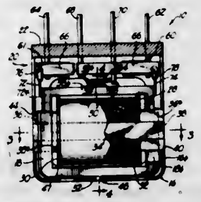
3,098,134
DRIVING MECHANISMS FOR ELECTRIC CIRCUIT-BREAKERS
Hendrik A. Hidde Nijland, Laren, Netherlands, assignor to N.V. "COQ," Utrecht, Netherlands, a corporation of the Netherlands
Filed July 3, 1961, Ser. No. 121,533
Claims priority, application Netherlands July 2, 1960
2 Claims. (Cl. 200—78)



1. A driving mechanism for an electric circuit-breaker, comprising in combination a movable part, at least one switching contact carried by said movable part, a movable intermediate member, at least one switching-off spring, a first locking device for keeping said spring in tensioned condition, said switching-off spring and said first locking device connecting said movable part with said intermediate member, at least one switching-on spring, a second locking device for keeping the latter spring in tensioned condition, said switching-on spring and said second locking device connecting said intermediate member with a stationary part of the circuit-breaker, an operating member acting on the intermediate member and adapted to bring all springs in their tensioned condition and both locking devices in their locking positions simultaneously by moving said intermediate member against the forces of all springs, a first unlocking means and a second unlock-

ing means for the release from their locking positions of said first and said second locking devices respectively, said first unlocking means including a spring loaded movable unlocking member, a pawl holding said unlocking member in a spring loaded working position until the pawl is released from outside the circuit breaker, and a lost motion coupling interconnecting said unlocking member and said movable part so to force and hold said unlocking member to said working position when the movable part is moved to open the switching contact and to prevent the release of said pawl from releasing said unlocking member from said working position, said lost motion coupling freeing the unlocking member so that it can be released by said pawl from said working position when said switching contact is closed.

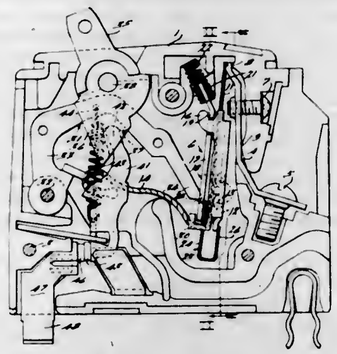
3,098,135
RELAY CONSTRUCTION
Robert B. Farmer, Asheville, N.C., assignor to C. P. Clare & Company, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 709,375, Jan. 16, 1958. This application Feb. 15, 1962, Ser. No. 176,846
13 Claims. (Cl. 200—87)



1. A relay construction comprising a coil structure defining an axially extending passageway; a frame having a pair of spaced end walls each defining an opening; a first core element mounted in said openings and passing through said passageway, said first core element having an enlarged portion disposed between one of said end walls and one end of said coil structure to provide a first pole piece; and a second core element mounted in said openings and passing through said passageway parallel to said first core element, said second core element having an enlarged portion disposed between the other of said end walls and the other end of said coil structure to provide a second pole piece.

3,098,136
CIRCUIT BREAKER
Harris I. Stanback and Ralph H. Kingdon, Birmingham, Mich., assignors to Square D Company, Detroit, Mich., a corporation of Michigan
Filed June 9, 1955, Ser. No. 514,222
24 Claims. (Cl. 200—88)

1. In an automatic electric circuit breaker having separable contacts and means releasable to effect separation of said contacts, current responsive means for effecting the release of said releasable means upon the passage of an overload current through said circuit breaker comprising a bimetallic member fixed at one end within said circuit breaker and adapted to be heated in response to the flow of current through said circuit breaker, a magnetic yoke supported near one end upon the free end of said current responsive bimetallic member, said magnetic yoke having a body portion extending toward the fixed end of said current responsive bimetallic member, a magnetic armature member supported upon said yoke member and extending generally parallel to said yoke, an ambient temperature responsive bimetallic member fixed to the unsupported end of said armature member and extending beyond the said armature at the unsupported end thereof, said ambient temperature responsive



bimetallic member being movable in response to movement of said current responsive bimetallic member to effect release of said releasable means.

3,098,137
THERMAL SWITCH
Leonard W. Cook, Warwick, R.I., assignor to General Electric Company, a corporation of New York
Filed Oct. 10, 1960, Ser. No. 61,467
12 Claims. (Cl. 200—113.5)

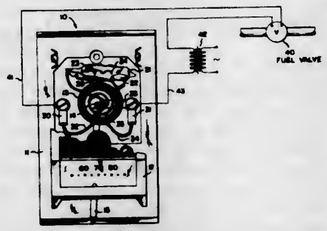


12. A thermal switch comprising a hollow gas-tight metal housing, a terminal rod extending through one end of said housing spaced in glow discharge relation with the opposite end of said housing, said terminal rod being insulatingly sealed from said housing, and an elongated bimetal element mounted on said rod on the interior of said housing near the free end thereof and extending toward the sealed portion of said rod, the free end of said bimetal element being deformable into contact with said housing when a glow discharge within said housing heats said bimetal to deforming temperature, the glow discharge and bimetal contact areas being in different portions of said housing.

3,098,138
THERMAL CONTROL APPARATUS
Warren H. Scott, Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 10, 1959, Ser. No. 858,735
4 Claims. (Cl. 200—122)

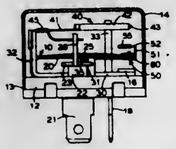
3. In a thermostat having a variable heat anticipation level, a base, a spiral bimetal, a switch adapted to control the operation of a load device, means connecting one end

of said bimetal to said base, means connecting said switch to a free end of said bimetal to be actuated as said bimetal is exposed to a changing temperature, a first circuit comprising said bimetal when said switch is connected to said load whereby the complete length of said bimetal is used as an electrical heater to provide heat anticipation to false-



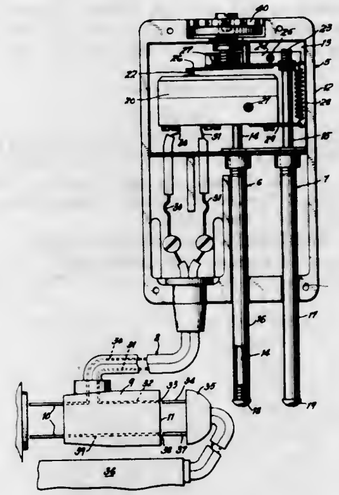
ly heat said bimetal, a second parallel circuit comprising a low resistance wire connected to shunt a portion of said bimetal whereby a remaining portion of said bimetal is used as a heater for heat anticipation, said second circuit being adapted to be cut to select whether said complete bimetal or said remaining portion is used as an electrical heater.

3,098,139
CURRENT OPERATED FLASHER WITH VOLTAGE AND TEMPERATURE COMPENSATION
Arthur F. Bleiweiss, Great Neck, George Colombo, East Rockaway, John B. Dickson, Kew Gardens, and Boris Orlov, Richmond Hill, N.Y., assignors to Signal-Stat Corporation, Brooklyn, N.Y., a corporation of New York
Filed July 27, 1961, Ser. No. 127,167
23 Claims. (Cl. 200—122)



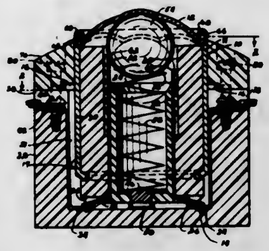
9. A thermomotive circuit breaker comprising, in combination, a snap action vane of electrically conductive metal normally constrained to assume a pre-set restored bent position; a relatively elongated heat expansible electric resistance pull element secured at opposite ends to said vane in the cold and contracted state to constrain said vane to be bent to a stress-deformed position, said vane snapping to its restored position upon pre-set expansion of said pull element; means fixedly mounting said vane at a point spaced laterally from said pull element, for movement of the portion of the vane carrying said pull element during snapping of the vane; a pair of load circuit controlling contacts in electric circuit connection with said pull element, and including a first relatively fixed contact and a movable contact carried by one of said elements and movable therewith; said contacts being closed in one position of said vane for flow of heating current through said pull element, and open in the other position of said vane; an electrically conductive thermomotive member having a fixed end electrically connected to said vane, and a movable free end; a second relatively fixed contact electrically and mechanically secured to said vane and in the path of movement of said free end of said thermomotive member; a relatively elongated flexible resistance member having a fixed end in electric circuit connection with said load circuit controlling contacts in parallel with said resistance element, said resistance member having a free end in the path of movement of the free end of said thermomotive member and engageable by the latter for movement toward said second relatively fixed contact; and an electric heater for said thermomotive member in circuit connection with said load circuit controlling contacts and subjected to any potential drop across said contacts; said thermomotive member, when said potential drop exceeds a first preselected value, deflecting to move its free end to engage the free end of said resistance member to establish a current carrying circuit in shunt with said pull element and including said thermomotive member and said resistance member in series; said thermomotive member, when said potential drop exceeds a second and higher preselected value, deflecting said free end of said resistance member to engage said second relatively fixed contact to short said thermomotive member to establish a current carrying circuit in shunt with said pull element and including said resistance member.

3,098,140
QUICK ACTING, SENSITIVE REMOTE CONTROL FOR ROOM HEATING AND COOLING UNITS
Frank Reingruber, Intervale, N.H., assignor to General Thermostat Corporation, Bartlett, N.H., a corporation of New Hampshire
Filed Mar. 15, 1962, Ser. No. 179,882
6 Claims. (Cl. 200—137)



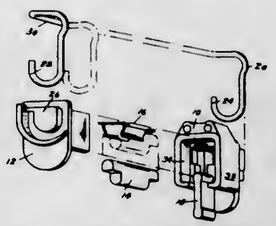
1. A quick acting, sensitive, remote control for room heaters or coolers or the like, comprising in combination,
a control switch,
electrical connections extending from said switch for effecting control of such a unit,
actuating members cooperable to effect operation of said switch and
probe thermostats exposed to air and positioned, one to actuate one of said members and one to actuate the other of said members, both to the same effect in the operation of said switch,
said switch including a pivotally supported switch body provided with a switch operating button and constituting one of said members and the other of said members being a pivoted lever engageable with said button.

3,098,141
ENCLOSED PRECISION SWITCH
George Wiutriss, Carversville, Pa.
Filed Oct. 4, 1960, Ser. No. 60,378
7 Claims. (Cl. 200—159)



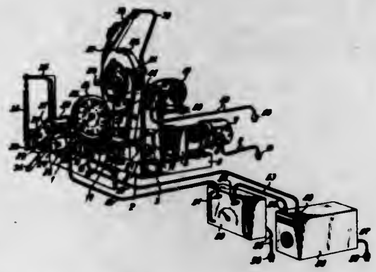
1. A switch including a housing enclosing a chamber with resilient contacts confronting one another across the chamber, a plunger moveable axially in the chamber into an out of contact with said contacts, the contacts being positioned axially in the chamber so that the plunger touches one before it touches the other during its axial movement toward the contacts, said plunger being loose and rotatable in the chamber about an axis on which it is turned by friction against one contact before touching the other contact whereby contacting areas of the plunger are different for successive operations of the switch, the plunger being a ball, and the switch including also a helical spring holding the ball at one end of the chamber, said resilient contacts being leaf springs of different lengths.

3,098,142
SWITCH HEAD CONSTRUCTION PERMITTING OBSERVATION OF CONTACT JAWS
Robert R. Farrell, Toronto, Ontario, Canada, assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 8, 1960, Ser. No. 20,927
2 Claims. (Cl. 200—168)



2. In a molded switch head; said molded switch head having an internal chamber; said internal chamber having a contact slug mounted therein; said internal chamber having an insulation member extending from the bottom of said contact slug to an area external of said molded switch head; said molded switch head having a skirt member surrounding said insulation member and defining a first and second channel on either side of said insulation member respectively extending from said internal chamber to said area external of said molded switch head; a first and second contact member; means mounting said first and second contact members adjacent said molded switch head, whereby the ends of said first and second contact members are adapted to enter said internal chamber through said first and second channels respectively; said molded switch head and said first and second contact members being relatively movable between an engaged and disengaged position; said contact slug engaging said first and second contact members when said molded switch head is in said engaged position; at least said end portions of said first and second contact members located within the volume defined by said molded switch head at said engaged and disengaged positions; said ends positioned within said internal chamber corresponding to said engaged position; said ends positioned within said first and second channels corresponding to said disengaged position, and located a predetermined distance from said contact slug; said elongated skirt clearing the ends of said first and second contact members when said molded switch head is in said disengaged position whereby said ends of said first and second contact members are exposed for visual observation; said channels including barrier means operatively positioned adjacent said second contact member to guide the movement between said disengaged and engaged positions.

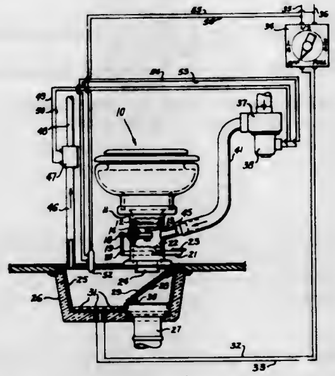
3,098,143
PERFORATING APPARATUS
Rudolf Warmt, Munich, Germany, assignor to H. F. & Ph. F. Reemtsma, Hamburg, Germany
Filed Feb. 24, 1961, Ser. No. 91,385
Claims priority, application Germany Feb. 24, 1960
7 Claims. (Cl. 219—19)



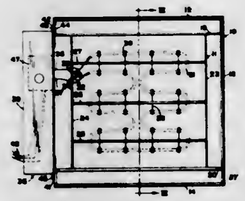
7. In a perforating apparatus, the combination which comprises: two electrode means at least one of which is a roller having a plurality of electrode elements distributed about its periphery; means for feeding between said electrode means a sheet-like web to be perforated; means for producing a preionizing high frequency field between said electrode means, said field being of a strength insufficient to cause arc-over between said electrode means and through the web being fed therebetween; and means for periodically applying high voltage impulses to said electrode means sufficient to cause arc-over between said electrode means, whereby the web will be perforated uniformly.

3,098,144
SEWAGE DISPOSAL APPARATUS
Emmett O. Dale, Sidney, Ohio, assignor to Airstream, Inc., Jackson Center, Ohio, a corporation of Delaware
Filed June 15, 1961, Ser. No. 117,228
1 Claim. (Cl. 219—19)

In a sewage disposal apparatus, the combination of a mechanical sealed toilet bowl stand, a tank underlying said stand, a burner grid in said tank, a mechanical timer switch, an electrical connection between said timer switch and said burner grid, a blower, an air connection between said blower and said tank, an exhaust vent, an electrical catalyzer in said exhaust vent, a thermal switch in said tank, an electrical connection between said thermal switch and said blower, an electrical connection between said thermal switch and said catalyzer, said thermal switch being maintained in an open condition below a predetermined temperature and closing when heated above said predetermined temperature.

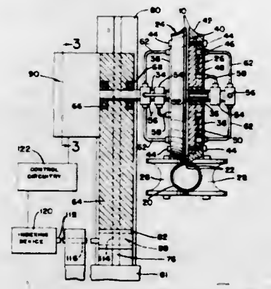


3,098,145
AIR CONDITIONING SYSTEM HEATER ASSEMBLY
Glendon A. Raymond, Fulton, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 26, 1960, Ser. No. 31,994
1 Claim. (Cl. 219—34)



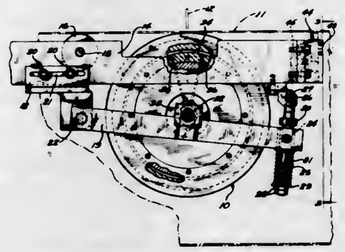
In an air conditioning system, the combination of a casing having an air inlet and an air outlet therein, said casing having a raised lip surrounding the air outlet; a duct for conducting air from the casing to an area to be treated, said duct having a flange thereon; and a heating assembly for heating air passing through the duct, said heating assembly comprising an outer frame including U-shaped side members and a rear member, a flange extending from each side member engaging the lip surrounding the air outlet, support members connecting the ends of each U-shaped member and forming channels to slidably receive an inner frame; an inner frame including side members, a rear member and a transverse brace member, said side members being slidably supported on the support members, rods extending between the transverse brace member and the rear member, insulators, supports mounted on said rods carrying the insulators, and a helical coil supported by said insulators; a control box connected to the inner frame side members including a casing having flanges adapted to be connected to the U-shaped members, means for detachably connecting the casing flanges to the U-shaped members, and means for securing the flange of the duct to the outer frame.

3,098,146
RESISTANCE WELDING METHOD AND APPARATUS
William E. Benninghoff, Brecksville, and James W. Thomas, Brook Park, Ohio, assignors to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 8, 1960, Ser. No. 54,712
10 Claims. (Cl. 219—59)



1. In apparatus for seam welding moving material, a pair of coaxial disc-like electrodes each of which is insulated from the other and adapted to engage one edge of the seam to be welded, and an indexing device for rotating the electrodes about a stationary axis through short arcs at spaced intervals as the material to be welded moves thereby, whereby electrical power may be transmitted from the electrodes to the material by sliding contact at spaced points around the peripheries of the electrodes.

3,098,147
ARC WELDER BACK-UP WHEEL
Thomas R. Rosenberger, Fredonia, Wis., assignor to Banner Welder, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 31, 1961, Ser. No. 148,938
3 Claims. (Cl. 219—60)



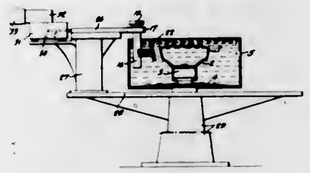
1. In combination, a support for an article having a seam to be welded, an arm resiliently depended from the support, a back-up wheel revolubly carried by the arm in a position to peripherally engage and have rolling contact with the under-surface of the supported article adjacent its seam, and a roller revolubly carried by the support to peripherally engage the under-surface of the supported article remote from the engagement of the latter with the back-up wheel.

3,098,148

PROCESS AND APPARATUS FOR PRODUCING PERFORATIONS OF VERY SMALL CROSS-SECTION

Paul Piot, Deuil La Barre, and Jacques Barassin, Paris, France, assignors to Compagnie de Saint-Gobain, Neuilly-sur-Seine, France, a corporation of France

Filed Mar. 4, 1960, Ser. No. 12,719
Claims priority, application France Mar. 9, 1959
7 Claims. (Cl. 219—69)



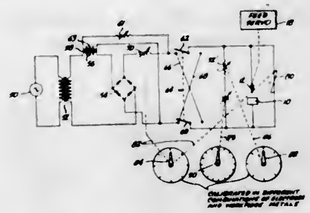
1. An apparatus for producing perforations of minute and uniform diameter in a metallic workpiece, which comprises a tank adapted to contain a dielectric liquid, means for supporting said workpiece within said tank, a support for a plurality of cylindrical wire electrodes of minute and uniform diameter, a spark discharge circuit having the opposite terminals thereof connected to said support and to said workpiece, means for advancing said support towards said workpiece to generate spark discharges between the ends of said wire electrodes and said workpiece to disintegrate the metal of the workpiece at the points of said discharges, guide means of insulating material provided with apertures at displacements corresponding to the spacing between said wire electrodes for guiding the ends of said wire electrodes in their travel towards said workpiece, and means for arresting said support before the wire electrodes penetrate the workpiece completely.

3,098,149

SPARK DISCHARGE MACHINING APPARATUS FOR HARD METALS

Kiyoshi Inoue, 182 Yoga Tamagawa Setagaya-ku, Tokyo, Japan

Filed June 6, 1960, Ser. No. 34,187
8 Claims. (Cl. 219—69)



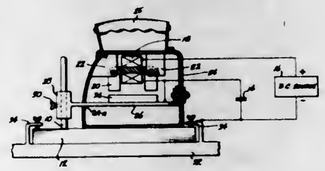
1. Electric spark discharge machining apparatus including, in combination with a metal work piece, a cooperating electrode establishing a spark discharge gap with said work piece, means immersing the opposing spark discharge surfaces of the electrode and work piece in machining fluid, and means to effect relative feed movement between the electrode and work piece as machining progresses; an energy storage capacitance, a source of energy for charging said capacitance, a charging circuit serially interconnecting said source and capacitance, and a discharging circuit including electrical conductors connecting said electrode and work piece gap across said capacitance, whereby the capacitance intermittently charges from said source and discharges across said gap, said discharging circuit including a series resistance therein prolonging the discharge period of said capacitance just sufficiently thereby to remove substantially the short-circuiting mounds inherently produced by such discharge on the mutually opposing surfaces and which otherwise substantially remain thereon after the discharge without such prolongation of the discharge period.

3,098,150

SPARK DISCHARGE METAL DEPOSITING APPARATUS

Kiyoshi Inoue, 182 Yoga Tamagawa Setagaya-ku, Tokyo, Japan

Filed June 13, 1960, Ser. No. 35,693
13 Claims. (Cl. 219—69)



1. Apparatus for depositing metal on a work piece, comprising a voltage source, a first conductor for connecting such a work piece to one side of said source, an electrode, a second conductor for connecting said electrode to the opposite side of said source, thereby to form a discharge circuit including the electrode and work piece, an apparatus base including electrode support means adapted for positioning the electrode in contact with the work piece non-fluid environment, means for initially biasing said electrode into contact with said work piece, said electrode support means being movable on said base to permit relative vibrational movement of the electrode into and from contact with such work piece and including means normally applying force between the support means and work piece for driving the electrode against the work piece with hammer-like abruptness thereby to draw a spark discharge creating a partial weld therebetween, electromagnet means mounted on said base and operable when energized to draw the electrode support means abruptly away from the work piece to break the weld, the electrode being thermally less conductive than the work piece and drawing heat from the weld at a slower rate, whereby metal from the electrode is left deposited on the work piece when the weld is broken, said electromagnet means including a coil connected in said circuit to be energized momentarily by flow of current serially through the electrode and work piece during the brief instant of contact therebetween, thereby to effect vibration of the electrode by the attendant switching action of the electrode making and breaking contact with the work piece, and an energy storage capacitance connected in shunt across the electrode and work piece to be charged thereby during that portion of the vibration cycle in which the electrode is withdrawn from the work piece and to discharge through the spark gap therebetween during relative approach movement of the electrode and work piece, said capacitance preventing arcing between the electrode and work piece as the same are being separated.

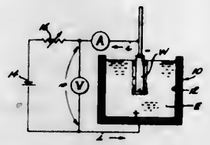
3,098,151

ELECTRICAL DISCHARGE OF METALS IN ELECTROLYTES

Kiyoshi Inoue, 182 Yoga Tamagawa Setagaya-ku, Tokyo, Japan

Filed Jan. 31, 1963, Ser. No. 257,809
9 Claims. (Cl. 219—71)

1. The electric discharge heating process comprising immersing a metal work piece in an electrolyte comprising potassium acetate solution, and passing electric current through the electrolyte with the work piece as one electrode, at a sufficient voltage and for a sufficient time period



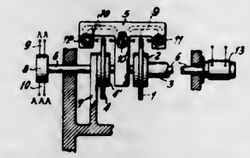
to produce, in the latter stage of said process, gaseous-electric discharge heating through the gaseous blanket generated electrolytically and by volatilization at the work piece surface in the initial stages of said process.

3,098,152

MEANS FOR MEASURING SCALE MOTIONS

Peter Von Mathes, Berlin-Lichterfelde, Germany, assignor to Continental Elektroindustrie A.G., Askania-Werke, Berlin-Mariendorf, Germany, a corporation of Germany

Filed Sept. 30, 1958, Ser. No. 764,418
Claims priority, application Germany Oct. 1, 1957
7 Claims. (Cl. 235—92)



3. Apparatus for continuously indicating the rotational position of a shaft comprising a first transducer element mounted on the shaft, a second transducer element mounted for rotation about the axis of the shaft adjacent to the first element, said elements being operatively associated for the continuous production of pulses at all times directly proportional in rate of occurrence to the rate of relative motion therebetween, means for rotating the second element in a constant direction at a speed exceeding the maximum speed of the shaft under measurement, second pulse-producing means for producing pulses at all times directly proportional in rate of occurrence only to the speed of rotation of the second element, the factors of proportionality being equal, and means for continuously registering the difference in the total numbers of pulses produced by said second pulse-producing means and said transducer elements, whereby the registering means continuously indicates the rotational position of the shaft under measurement.

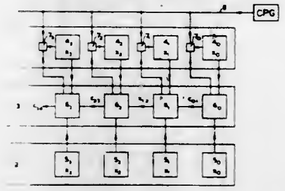
3,098,153

PARALLEL ADDING DEVICE WITH CARRY STORAGE

Herman Jacob Helin, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 699,812
Claims priority, application Netherlands Jan. 16, 1957
2 Claims. (Cl. 235—175)

1. A parallel operating arithmetic element for a digital computer comprising an adder producing the result and intermediate results of an addition operation to be performed on a plurality of operands, at least one register for registering and storing said results in the form of pulses, each pulse corresponding to a digit, said adder being subdivided into a plurality of sections, each section corresponding to a predetermined number of sequential digits of said operands and said results, all adjacent sections being separated by a storage member which stores information in the form of pulses representative of the carry resulting from the addition operation performed in one of said sections, the carry formed within each section rippling sequentially through said section, a plurality of



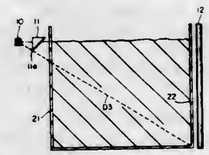
gate circuits for controlling the transfer of said results from said adder to said registers, and means for applying clock pulses simultaneously to said gate circuits and said storage members, said clock pulses acting to transfer results in the form of pulses to said registers and to transfer pulses representative of carries from a preceding section of said arithmetic element to a following section.

3,098,154

TANK LEVEL MEASUREMENT SYSTEM

Jack G. Crump, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed Dec. 15, 1958, Ser. No. 780,501
6 Claims. (Cl. 250—43.5)



1. Apparatus for determining the fill level of a container which comprises a point source of penetrative radiation fixedly positioned on the outside of said container and in line with the uppermost level of said fill, an elongated radiation detector fixedly positioned on the opposite side of said container at a right angle to said fill and of a length approximating the distance between the upper and lower levels of said fill; and a compensation means positioned between said source and said detector for linearly changing the radiation received by said detector for an equivalent change in fill level.

3,098,155

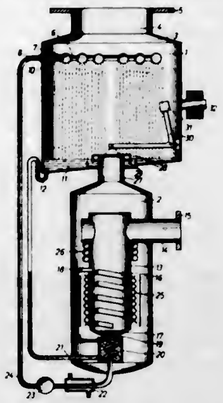
METHODS OF AND APPARATUS FOR THE PRODUCTION OF HIGH VACUA

Willi Becker, Ehringshausen, Kreis Wetzlar, Germany, assignor to Arthur Pfeiffer G.m.b.H., Wetzlar, Germany

Filed Mar. 9, 1960, Ser. No. 13,894
Claims priority, application Germany May 29, 1959
9 Claims. (Cl. 230—69)

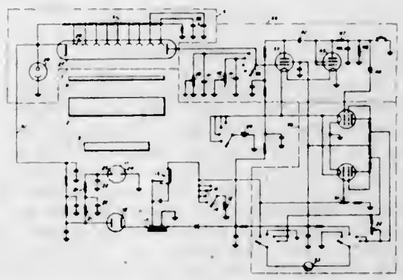
1. Apparatus for attaining a high vacuum in a vessel by the getter principle, comprising two communicating casings of which one is adapted to be connected with a vessel to be evacuated and the second casing is adapted to be connected with a high vacuum pump, means operable to deliver to the first-mentioned casing a liquid metal selected from the group consisting of gallium and a gallium alloy to expose the liquid metal to gas contained in the first-mentioned casing when a vacuum is maintained therein by said high vacuum pump when connected to the second casing whereby gas is absorbed by the liquid metal, means to deliver a gas-charged liquid metal from

the first-mentioned casing to the second-mentioned casing, means cooperating with the second-mentioned casing to effect degassing of the gas-charged liquid metal delivered



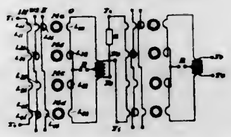
thereto, and means included in said first mentioned means to return the degassed liquid metal to the first-mentioned casing.

3,098,156
NUCLEAR RADIATION DOSIMETER READER APPARATUS
George A. Work, 520 E. Adams, Apt. 17, Long Beach, Calif.
Filed July 29, 1960, Ser. No. 46,318
4 Claims. (Cl. 250—71.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



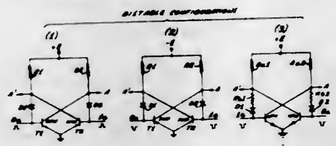
1. A dosimeter reader for use with a glass-type of dosimeter adapted upon exposure to light to exhibit fluorescence of an intensity proportional to its absorbed radiation, said reader comprising a fluorescence-producing arc-discharge high-firing potential light source, light source driving means adapted for producing high peak intensity low duty cycle light pulses, said light source being capable of directing said pulsed light onto said dosimeter whereupon the intensity of said dosimeter fluorescence is made a function of said pulse intensity, photodetector means responsive to said fluorescence for producing a photoelectric current proportional in amplitude to said fluorescence intensity, a current-indicating means directly responsive to said photoelectric current amplitude, and a self-contained low-voltage direct current power source for operatively energizing both said light source driving means and said indicating means, said indicating means directly indicating radiation absorption in said dosimeter due to the aforementioned relationship of said absorption to the exhibited fluorescence intensity, said indicating means including a peak voltmeter having pulse stretching means coupled to the photodetector output, and a voltmeter coupled to the output of said stretching means, and said driving means being adapted to produce light pulses with a duty cycle no greater than about one part in 10^5.

3,098,157
LOGICAL ELEMENT
Hajime Enomoto, Ichikawa-shi, and Saburo Shirai, Nerima-ku, Tokyo-to, Japan, assignors to Kokusai Denshin Denwa Kabushiki Kaisha, Tokyo-to, Japan, a joint-stock company of Japan
Filed Dec. 16, 1958, Ser. No. 780,849
Claims priority, application Japan Dec. 23, 1957
11 Claims. (Cl. 307—88)



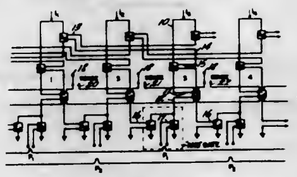
1. A logical element comprising four magnetic cores having rectangular hysteresis characteristic, each of the four cores being provided with signal input coils of odd number, a writing and resetting coil, and an output coil, the coils of the same kinds being connected in series to form, respectively, input windings, a writing and resetting winding and an output winding, and all the said coils being wound on respective cores in such a manner that three kinds of the coils of one core are wound on said core in the same direction, one of three kinds of the coils of each of the other three cores is wound in the direction reverse to those of the remaining two kinds of the coils and each of said input windings, writing and resetting winding and output winding includes one of said reversely wound coils; erasing coils wound on either one pair of two pairs of the four magnetic cores, the respective input and output coils of the said pair of cores having the same winding direction, one of the said erasing coils being wound on the same direction as the input coil of the same core and the other of said erasing coils being wound in the direction reverse to the input coil of the same core; a reset pulse current means supplying a reset pulse current to the writing and resetting winding for magnetizing two cores to a similar polarity and the other two cores to the opposite polarity; writing pulse current means supplying, after said reset pulse current, a writing pulse current for producing a magnetic force equal to coercive magnetic force of each of the said magnetic cores to the writing and resetting winding in the direction opposite to that of said reset pulse current; input signal pulse current means impressing simultaneously with the said impression of said writing pulse current, input signal pulse currents having, respectively, the same amplitude and a positive or negative polarity corresponding to the decision by majority of the information signals to the signal input windings, whereby magnetization states of only two cores among four cores are changed and those of the other two cores are unchanged, thus causing the writing of the information signals in the form of polarity of the residual magnetization; and read-out pulse current means impressing a reading-out pulse current to the erasing winding for inducing an electric voltage according to positive or negative polarity of the writing condition in the one or the other of the output coils wound on the cores having the erasing coil whereby an output pulse current having a positive or negative polarity is obtained at the terminals of the output winding, said reset pulse current means being impressed, thereafter for resetting the magnetic cores.

3,098,158
MULTIVIBRATOR CIRCUITS EMPLOYING VOLTAGE BREAK-DOWN DEVICES
Cravens L. Wanlass, Whittier, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 6, 1955, Ser. No. 513,426
8 Claims. (Cl. 307—88.5)



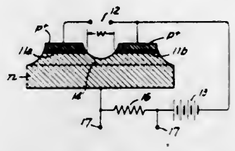
1. A multivibrator circuit comprising: first and second amplifiers each operable between high and low voltage output conditions, each amplifier having a relatively low impedance input circuit and a relatively high impedance output circuit that includes a respective load impedance; and at least one voltage break-down element conductively coupled between the load impedance of said first amplifier and the input circuit of said second amplifier, the load impedance of said second amplifier being coupled to the input circuit of said first amplifier, said break-down element comprising a diode, bias means connected to said first amplifier load impedance back-biasing said diode, such that it substantially inhibits the passage of any current therethrough for one condition of said first amplifier and passes substantially all of the current applied thereto to the input circuit of the second amplifier in response to the other condition of said first amplifier.

3,098,159
CRYOGENIC RING CIRCUIT
Andrew E. Brennemann, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1957, Ser. No. 705,553
1 Claim. (Cl. 307—88.5)



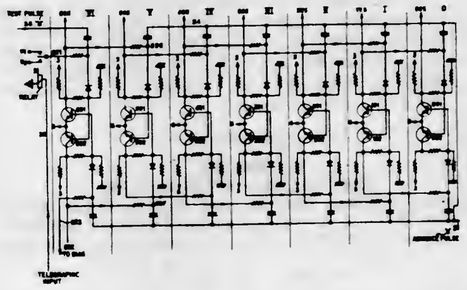
A ring circuit having a plurality of stages, each stage comprising first and second parallel current paths, first and second cryotrons connected in series with said first current path, third and fourth cryotrons connected in series with said second current path, a first winding means connected in series with said first current path and positioned in magnetic field applying relation with a cryotron in said second parallel current path, an "AND" gate connected in series with said first parallel current path, said "AND" gate being operable by coincident currents from a preceding stage and a control current pulse, second and third winding means connected in series with said second parallel current path, said second winding means being positioned in magnetic field applying relation with a cryotron in the second parallel current path of a preceding stage, said third winding means being positioned in magnetic field applying relation with the "AND" gate of the next succeeding stage, and output terminal means connected in series through the first winding means of two adjacent stages such that an output will be sensed only when said first winding means of two adjacent stages are deenergized.

3,098,160
FIELD CONTROLLED AVALANCHE SEMICONDUCTIVE DEVICE
Robert N. Noyce, Los Altos, Calif., assignor, by mesne assignments, to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 24, 1958, Ser. No. 716,913
8 Claims. (Cl. 307—88.5)



1. A semiconductor device comprising a region of one conductivity type, first and second spaced regions of opposite conductivity type each forming a junction therewith and disposed on one surface thereof, said first and second regions being closely spaced with respect to one another, means for applying an input signal between said two regions of opposite conductivity type, said signal creating a high electric field in said region of one conductivity type whereby carriers flowing between said first and second regions serve to set up avalanche in the portion of the region of one conductivity type between said first and second regions, and means for reverse biasing the junctions between said one region of one conductivity type and said first and second regions of opposite conductivity type.

3,098,161
BILATERALLY OPERABLE TRANSISTORIZED SHIFTING REGISTER
Pierre Michel Bizet, Saint-Ouen, France, assignor to Compagnie Industrielle des Telephones, Paris, France, a corporation of France
Filed July 21, 1958, Ser. No. 749,865
10 Claims. (Cl. 307—88.5)



1. A bilaterally operable shifting register, comprising, between a source of information and utilization means, a chain of stages of which each stage includes a bistable transistorized multi-vibrator each provided with two inputs and with two outputs and four connecting circuit means;

the four connecting circuit means of a respective stage essentially consisting of two output circuit means and two input circuit means;

each output circuit means being constituted by the operative association of a resistance in series with a rectifier and of condenser means having two terminals, one of the two terminals of said condenser means being connected to a common point between a respective resistance and rectifier;

first source means operatively connected with the other of the two terminals of said condenser means for

causing shifting of information registered in each stage to a following stage, if any, of the chain by varying the potential of the said other terminal of the condenser means;

each input circuit means being constituted by the operative association of a rectifier in series with a resistance and of condenser means having two terminals, one of the terminals of said last-mentioned condenser means being connected to a common point between a respective resistance and rectifier;

second source means operatively connected with the other of the two terminals of said last-mentioned condenser means for causing of information registered in each stage to a preceding stage, if any, of the chain by varying the potential of the said last-mentioned other condenser terminals;

the potentials simultaneously applied to the condenser means of the input and output circuit means being such that the shifting control of the information takes place in one predetermined direction;

the resistance of one of the two output circuit means being operatively connected with one of the two outputs of the respective stage, and the resistance of the other of the two output circuit means being operatively connected with the other of the two outputs of the respective stage;

the rectifier of one of the two output circuit means being operatively connected to one of the two inputs of a following multi-vibrator stage, and the rectifier of the other output circuit means being operatively connected to the other of the two inputs of a following multi-vibrator stage;

the rectifier of one of the two input circuit means being operatively connected with one of the two inputs of the respective multi-vibrator stage, and the rectifier of the other of the two input circuit means being operatively connected with the other of the two inputs of the respective multi-vibrator stage;

the resistance of one of the two input circuit means being operatively connected to one of the two inputs of a preceding multi-vibrator stage, if any, and the resistance of the other of the two input circuit means being operatively connected with the other of the two inputs of a preceding multi-vibrator stage, if any, whereby each output of each multi-vibrator stage is connected to two resistances and each input thereof to two rectifiers.

3,098,162
AMPLITUDE COMPARATOR
Martin Fischman, Wantagh, and William Geller, Plainview, N.Y., assignors to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware
Filed Nov. 1, 1961, Ser. No. 149,238
6 Claims. (Cl. 307—88.5)



1. An amplitude comparison circuit comprising

(*a*) input means,

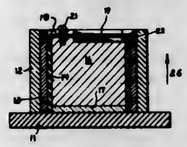
(*b*) a tunnel diode having first and second electrodes coupled to said input means,

(*c*) a transistor having first, second and third electrodes,

(*d*) a transformer having a plurality of windings, the first electrode of said tunnel diode being coupled to the first electrode of said transistor, the second electrode of said tunnel diode being coupled through a first winding of said transformer to the second electrode of said transistor, and the third electrode of said transistor being coupled through a second winding of said transformer to a source of voltage, and

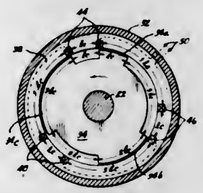
(*e*) output means coupled across a winding of said transformer, an output pulse appearing across said output means when the magnitude of a signal applied to said input means exceeds a predetermined value.

3,098,163
INERTIAL ENERGY GENERATOR STORAGE SYSTEM
Robert W. Bliss, Champaign, Ill., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,783
7 Claims. (Cl. 310—8.4)



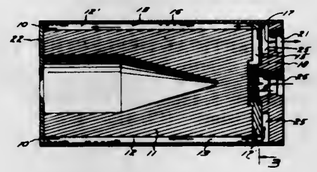
1. An inertial energy generator-storage system comprising: a crystal disposed between a pair of relatively movable parts and an electrical switch in a circuit across said crystal, said switch having a contact in fixed relation to one of said parts, and a contact mounted on the other of said parts in movable relation thereto; said movable contact and one of said parts being movable with respect to the other of said parts in the same direction, and said movable contact being normally resiliently separated from said fixed contact and closeable with said fixed contact in response to acceleration in a direction of relative movability between said parts whereby electrical potentials are generated and stored by said crystal in response to changes of motion of said parts.

3,098,164
IMPULSE GENERATOR
Kiyoshi Inoue, 182 Yoga Tamagawa Setagaya-ku, Tokyo, Japan
Filed May 18, 1959, Ser. No. 813,759
3 Claims. (Cl. 310—111)



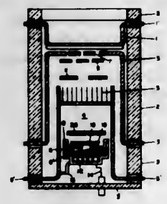
1. Impulse generator means comprising cooperable rotor and stator members, said rotor member comprising a succession of circumferentially spaced coils connected in a closed series, said stator means comprising circumferentially spaced magnetic poles of alternately opposite polarity, the circumferential pole width materially exceeding the circumferential pole spacing, and the circumferential coil width materially exceeding said pole spacing and being materially less than said pole width, commutator means comprising a succession of separately insulated segments mounted on said rotor of a circumferential width materially exceeding said pole width and individually connected electrically to the intercoil connections, respectively, and a series of brushes engaging said commutator means, with alternate brushes connected electrically to respectively opposite sides of said output, the circumferential brush spacing from center to center being substantially equal to the similar coil spacing and with the segments being circumferentially positioned intermediate the coils.

3,098,165
COLLECTOR COOLANT SYSTEM
Louis T. Zitelli, Palo Alto, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed July 21, 1960, Ser. No. 44,338
2 Claims. (Cl. 313—21)



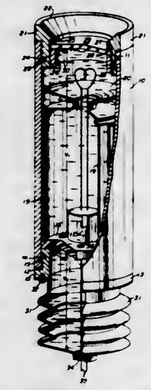
1. In a collector for dissipating the energy of a high velocity beam of charged particles including; a tubular collector for receiving the beam incident therein; a plurality of cooling fins on the outer surface of said collector, said cooling fins being of approximately equal width and depth; said cooling fins defined by a plurality of peripherally spaced-apart longitudinally directed channels, said channels having a width less than the width of said cooling fins; a connecting channel for connecting adjacent pairs of said longitudinally directed channels; a tubular jacket surrounding said cooling fins; said longitudinally directed channels, said connecting channel, said fins and said jacket defining cooling annulus; and means for distributing an inlet and outlet flow of coolant fluid to said cooling annulus.

3,098,166
GASEOUS RESERVOIR AND METHOD
Seymour Goldberg, Lexington, Mass., assignor to Edgerton, Germeshausen & Grier, Inc., Boston, Mass., a corporation of Massachusetts
Filed July 11, 1960, Ser. No. 42,018
9 Claims. (Cl. 313—179)



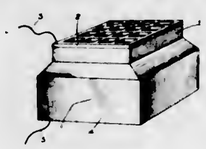
1. A gas reservoir for a closed vessel that is to remain pressurized within predetermined pressure limits, having, in combination, a member comprising zirconium containing absorbed gas, and means for operating the member within a range of temperature in which the plateau in the equilibrium-dissociation-pressure versus atomic ratio of absorbed gas characteristic thereof lies within the said predetermined pressure limits and within the atomic ratio range of approximately 0.2 to 1.4.

3,098,167
HIGH PRESSURE LAMP
Dennis C. Jensen, 4740 Mount La Platta Drive, San Diego 17, Calif., and Erhard J. Michel, 512 E. 148th St., Bronx 55, N.Y.
Filed Oct. 30, 1961, Ser. No. 148,778
10 Claims. (Cl. 313—232)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A light source suitable for use in a high pressure medium comprising; a housing having a light permeable opening therein; mounting means in said housing; light producing means removably attached to said mounting means for producing light energy; pressure compensating means attached to said housing and communicating with the interior of said housing; a liquid medium enclosed within said pressure compensating means and said housing, said pressure compensating means acting to prevent said housing from collapsing at extremely high pressures.

3,098,168
HOT ELECTRON COLD LATTICE SEMICONDUCTOR CATHODE
Pierre Aigrain, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Mar. 20, 1959, Ser. No. 800,820
Claims priority, application France Mar. 24, 1958
9 Claims. (Cl. 313—346)



1. A cold cathode structure comprising an emissive body having a single zone of one conductivity type impurity containing semiconductor material having an exposed emissive surface, said cold cathode structure further comprising means for creating an electric field within said material for causing it to emit electrons from said exposed surface.

3,098,169
TRAVELLING WAVE TUBES
Charles Raymond Buckley and John Mervyn Tompsett, Chelmsford, England, assignors to English Electric Valve Company Limited, London, England, a British company
Filed Dec. 8, 1960, Ser. No. 74,521
Claims priority, application Great Britain Feb. 8, 1960
7 Claims. (Cl. 315—3.5)

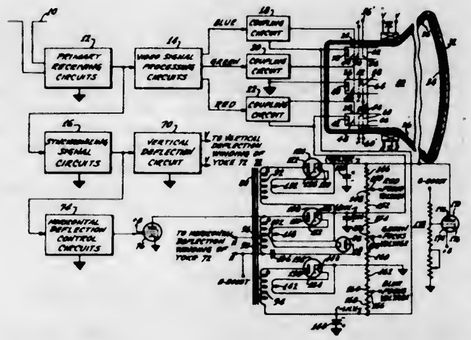
1. A travelling wave tube having a tube envelope, insulating support rods, a delay line and electrodes for con-

necting the delay line into circuit, the delay line being supported coaxially within the tube envelope by said insulating support rods, said rods extending beyond said delay line at one end thereof and wherein each of said insulating support rods is provided over the extending end



thereof with a coating of conductive material connected to one of the said electrodes to prevent electrical charging phenomena on the said end of the rod by providing a conductive discharge path for electrical charges on the said end of the rod.

3,098,170
POWER SUPPLY CIRCUIT FOR TELEVISION RECEIVERS
Roland N. Rhodes, Levittown, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 20, 1961, Ser. No. 153,285
6 Claims. (Cl. 315—13)



1. In a television receiver having an image reproducing cathode ray tube including a plurality of electron guns, each having a cathode and an accelerating anode, to produce a plurality of electron beams, said receiver further having an electron beam deflection circuit including a transformer having first and second windings across which high voltage retrace pulses are developed, each winding including high and low pulse voltage end terminals, a direct voltage generating circuit for supplying operating voltages to the electron guns of said tube, comprising in combination:

a first rectifier having an anode and a cathode;

means connecting the low pulse voltage end terminal of said first winding to a point of reference potential for said receiver;

means connecting the anode of said first rectifier to the high pulse voltage end terminal of said first winding for rectifying the retrace pulse across said winding to develop a first direct voltage at the cathode of said rectifier;

means for applying said first direct voltage to the cathode of one of said plurality of electron guns;

means connecting the low pulse voltage end terminal of said second winding to the cathode of the first rectifier;

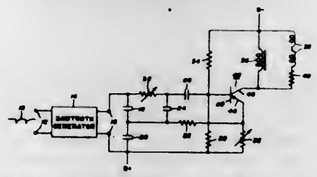
a second rectifier having a cathode and an anode;

means connecting the anode of said second rectifier to the high pulse voltage end terminal of said second winding for rectifiying the voltage on the anode of said second rectifier to develop a second direct voltage at the cathode of said second rectifier;

means for applying said second direct voltage to the accelerating anodes of said plurality of electron guns to provide in conjunction with said first direct voltage an accelerating voltage between the cathode and accelerating anode of said one of said plurality of electron guns; and

means for connecting the cathode of another of said plurality of electron guns to the point of reference potential for said receiver to provide in conjunction with said second direct voltage on the accelerating anode of said last named electron gun an accelerating voltage for said last named electron gun greater than the accelerating voltage for said one of said plurality of electron guns.

3,098,171
TRANSISTOR VERTICAL DEFLECTION CIRCUIT
Robert B. Ashley, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 5, 1960, Ser. No. 40,947
5 Claims. (Cl. 315—27)



1. A vertical deflection circuit comprising in combination: electrical signal generator means having a pair of output terminals thereof and providing therebetween a signal having a sawtooth waveform; a first capacitor and a second capacitor serially connected between said output terminals; a first integrating network coupled in parallel with said first capacitor; a transistor having base, emitter and collector electrodes; means for coupling said first integrating network to said base electrode; an output load circuit for said transistor including a vertical deflection coil coupled to said collector electrode; impedance means coupled to said emitter electrode for providing feedback for said transistor; and a resistive impedance coupled between said emitter electrode and a junction of said first and second capacitors, said resistive impedance and said second capacitor forming a second integrating network.

3,098,172
KEEP-ALIVE CONES AND METHOD OF MAKING SAME
Jack H. Burthe, North Linthicum, Irvin John Kenner, Baltimore, and James D. Woermbke, Linthicum, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 24, 1961, Ser. No. 154,912
6 Claims. (Cl. 315—58)



1. The method of constructing a keep-alive cone comprising:

(*a*) first placing an insulator inside a cavity of a cone,

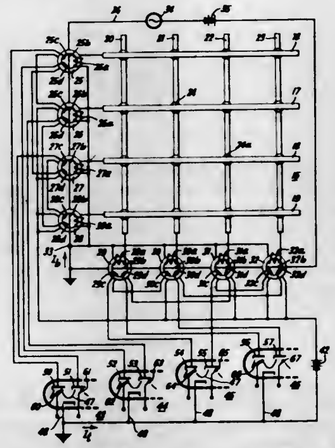
(*b*) then positioning one end of a center conductor in said insulator,

(*c*) then filling the remaining cavity of said cone with powdered glass,

(*d*) then heating said powdered glass whereby said glass is fused to said center conductor and said cone, and

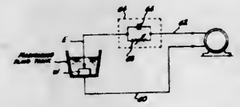
(*e*) then potting the remaining portion of said center conductor with a thermosetting resin.

3,098,173
SWITCHING CIRCUIT FOR USE WITH ELECTRO-LUMINESCENT DISPLAY DEVICES
Donald C. Livingston, Bayside, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,253
4 Claims. (Cl. 315—169)



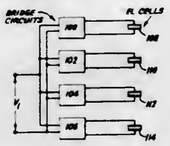
1. An electroluminescent device comprising first and second spaced arrays of electrical conductors, the conductors in said first array passing over the conductors in said second array to form a plurality of crossover points, a plurality of electroluminescent cells located between said conductors at said crossover points, and a plurality of single-apertured ring-shaped magnetic cores each having an output winding, an input winding, and at least one control winding, one end of the output winding on each of said magnetic cores being connected to a corresponding one of said electrical conductors, the other ends of said output windings being connected to a common junction, beam switching tube means coupled to each of said control windings, said beam switching tube means coupling a direct voltage to selected control windings in response to an applied signal.

3,098,174
POWER SUPPLY FOR SPARK DISCHARGE MACHINING
Kiyoshi Inoue, 182 Yoga Tamagawa Setagaya-ku, Tokyo, Japan
Filed Apr. 28, 1961, Ser. No. 106,282
9 Claims. (Cl. 315—174)



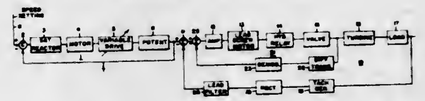
1. In combination with an electric discharge machining apparatus including an electrode and work piece, an electric power supply connected to said electrode and work piece to produce a machining discharge across the gap formed therebetween, said power supply comprising means for generating a machining discharge waveform comprising recurring impulses of predetermined duration and magnitude and relatively high-frequency oscillations of predetermined amplitude superimposed on said impulses, and means in said power supply controllable to vary the magnitude of said impulses in relation to the amplitude of said oscillations.

3,098,175
ELECTROLUMINESCENT CELLS CONTROLLED BY IMPEDANCE NETWORKS
Hans G. Blank, New York, N.Y., assignor to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,690
9 Claims. (Cl. 315—250)



8. An electroluminescent display device comprising a plurality of electroluminescent cells, a like plurality of gates, each gate having an input circuit and an output circuit, each cell being directly coupled to the output circuit of the corresponding gate, the input circuits of all of said gates being connected in parallel, each gate responding to a variable input voltage applied to all input circuits simultaneously to produce an output voltage when the input voltage values fall within a given voltage range and producing essentially a zero output voltage when the input voltage values fall outside of said range, each gate having a different given voltage range.

3,098,176
ELECTRIC LONG RANGE SPEED GOVERNOR
Markus A. Eggenberger, Paul H. Troutman, and Josef J. Sauter, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,290
20 Claims. (Cl. 317—5)



1. In a control system for a prime mover of the type having valve means for controlling the admission of motive fluid to the prime mover to thereby control its speed of operation,

the combination including electrically driven motor means operatively coupled to said valve means for moving the same,

and an acceleration control circuit electrically coupled to said motor means for controlling its operation,

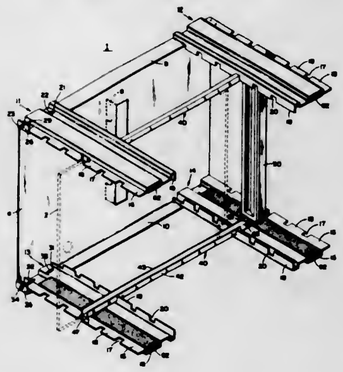
said acceleration control circuit comprising a first variable source of electric potential for supplying a first electric potential representative of a desired final speed,

and means controlled by said first electric potential for developing a varying reference electric potential that varies at a preset rate, said varying reference electric potential being used to control said motor means.

3,098,177
UNIVERSAL CELL FOR PRINTED CIRCUIT BOARDS

Ernest L. Bleier, Fairport, and Thaddeus W. Kucharski, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Sept. 15, 1961, Ser. No. 138,516
6 Claims. (Cl. 317—101)

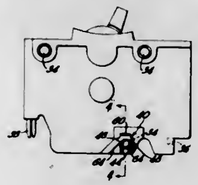


1. In a universal cell for slidably mounting a plurality of printed circuit boards in spaced, parallel relation, the combination comprising, a load-bearing frame including upper and lower front, longitudinally extending, opposed guide support beams and upper and lower rear, longitudinally extending opposed guide support beams, said upper front and upper rear beams spaced a given first distance apart, said lower front and lower rear beams spaced a distance substantially equal to said given first distance apart, each of said upper and lower front beams presenting outwardly directed front mounting flanges lying substantially in given upper and lower parallel planes, respectively, each of said upper and lower rear beams presenting outwardly directed rear mounting flanges lying substantially in said upper and lower planes, respectively, each of said outwardly directed front and rear mounting flanges on said upper and lower front and rear beams including similarly aligned slots communicating with the outwardly directed edge thereof spaced at given points along the longitudinal axis of said upper front and lower front and upper rear and lower rear beams, respectively, a plurality of pairs of readily detachable, similarly shaped, grooved printed circuit board guides, one of said guides in said pair being spanningly supported by said upper front and upper rear beams at corresponding ones of said given points along the longitudinal axis of said upper front and upper rear beams, the other one of said guides in said pair of guides being spanningly supported by said lower front and lower rear beams at points along the longitudinal axis of said lower front and lower rear beams in opposition to said corresponding ones of said given points along the longitudinal axis thereon, whereby said pair of guides are vertically and horizontally aligned to receive said one of said boards edgewise, each of said guides having first and second distorted T tabs on a side opposite to said grooves in said guides, said first and second distorted T tabs being substantially normal to the longitudinal axis of said guides, said first and second distorted T tabs being spaced a given distance apart substantially equal to said given first distance, said distorted T tabs including a stem portion slidable in said given slots in said mounting flanges, and means coupled to said frame for varying the separation distance between said beams from said given first separation distance to a given second separation distance, said given second separation distance being less than said given first separation distance, whereby said pair of guides are secured to said mounting flanges when said mounting flanges are separated said given first separation distance and detachable when said mounting flanges achieve said second separation distance.

3,098,178
NONINTERCHANGEABLE CIRCUIT BREAKER

Alexander R. Norden, New York, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware

Filed Apr. 24, 1959, Ser. No. 808,710
14 Claims. (Cl. 317—119)

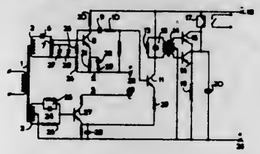


13. A circuit breaker including an enclosure of insulating material containing the operative mechanism thereof, said enclosure having a recess, a rivet extending through a portion of said enclosure and into the recess, and a circuit breaker rating-classification m mber in the form of a channel confined between said rivet and the surface of said recess, said rating-classification member having at least one projecting rating-classification leg.

3,098,179
SIGNALLING RECEIVER

Hendrikus Cornelis van Rossum, Hilversum, Netherlands, and Carlos Villalaz, Zuerich, Switzerland, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 12, 1959, Ser. No. 798,886
Claims priority, application Netherlands Apr. 3, 1958
8 Claims. (Cl. 317—147)

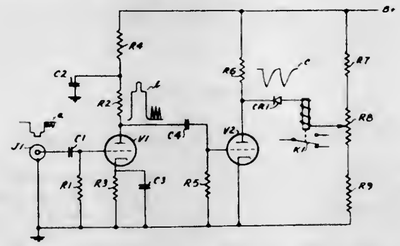


1. A signal receiver for the reception of signal pulses of oscillations of a given frequency, said given frequency being within a frequency band of other signals, said receiver comprising first and second channels, means applying said pulse signals and other signals to said channels, said first channel comprising frequency selective means for passing only signals of said given frequency, said second channel comprising means rejecting signals of said given frequency, signal relay means, means applying the output of said first channel to said relay means to effect the operation of said relay means upon the occurrence of said signal pulses, said last-mentioned means comprising a transistor having an input electrode connected to the output of said first channel and an output electrode connected to said relay means, rectifier means connected to said second channel to provide a rectified output, means applying said rectified output to said transistor to block the operation thereof, and means for limiting the amplitude of the signal pulses applied from said first channel to said transistor.

3,098,180
REMOTE CONTROL FOR MICROWAVE SYSTEM

Jack Smith, Lynchburg, Va., assignor to General Electric Company, a corporation of New York

Filed Mar. 10, 1960, Ser. No. 14,085
5 Claims. (Cl. 317—149)

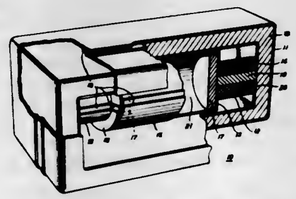


1. Remote control apparatus adapted to respond to the selective presence or absence of repetitive pulse signals comprising means for deriving said repetitive pulse containing signal, an amplifier coupled to said means including an active element and a load impedance, said active element being responsive in the presence or absence of said pulses to assume one or the other of two conduction conditions and thereby causing one of two voltages to appear across said load impedance, and voltage responsive switching means responsive to change of said voltage in said load impedance comprising a relay coupled in series with a unidirectional conductive means between said load impedance and a source of potential intermediate the potentials appearing at said load impedance at said respective conduction conditions.

3,098,181
MAGNETIC CIRCUIT USING SUPERCONDUCTOR PROPERTIES

Paul P. Cioffi, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 29, 1960, Ser. No. 52,393
8 Claims. (Cl. 317—158)



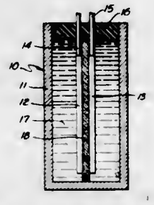
1. Means for preventing the loss of flux from a magnetic circuit comprising a superconductive magnetic insulator member having an internal magnetic induction substantially equal to zero, said superconductive member substantially enclosing the flux path around said magnetic circuit and defining a volume to which the flux in said path is to be confined, and means for maintaining said superconductive member in a superconducting state.

3,098,182
ELECTROLYTIC CAPACITORS

John Burnham, Los Angeles, Calif.

Filed Oct. 21, 1958, Ser. No. 768,698
6 Claims. (Cl. 317—230)

1. An electrolytic capacitor consisting essentially of two metal electrodes, the surfaces of each of said electrodes containing no oxide dielectric; being in direct contact with, and separated by an electrolyte comprising a liquid mixture of at least one heterocyclic amine containing a nitrogen heterocyclic atom located between two carbon atoms, and a compound selected from the group consisting of aliphatic acids containing from 1 to 6 carbon

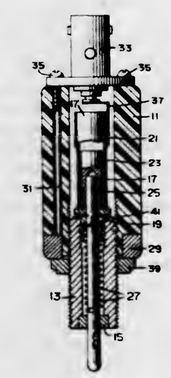


atoms, alpha-halogen substituted aliphatic acids containing from 1 to 6 carbon atoms and anhydrides thereof said electrolyte having a resistivity of from 25 to 5,000 ohm-cm. at room temperature.

3,098,183
CAPACITY DISPLACEMENT TRANSDUCER

Samuel E. Mitchell, Dunbar, W. Va., assignor to Union Carbide Corporation, a corporation of New York

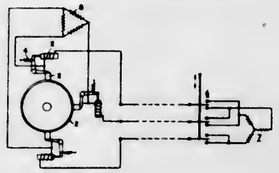
Filed July 21, 1960, Ser. No. 44,350
1 Claim. (Cl. 317—246)



A continuously variable capacitance electrical circuit element comprising, in combination, an electrically nonconductive housing having a cylindrical cavity extending concentrically longitudinally therethrough and a bore extending longitudinally therethrough parallel to said cylindrical cavity; a coaxial cable connector affixed to one end of said housing and defining a first end closure for said cavity; an electrically conductive ferrule affixed to the other end of said housing and defining a second end closure for said cavity; grounding ring means adjacent said ferrule and in electrical connection therewith; electrical connection means extending through the bore in the housing and connecting the grounding ring means with one pole of said coaxial cable connector; a hollow cylindrical first electrode arranged within the cavity in said housing and electrically connected to the other pole of the coaxial cable connector; a cylindrical second electrode arranged concentrically in radially spaced relationship with respect to said hollow cylindrical first electrode and adapted to move reciprocally along a longitudinally extending concentric axis common to both said electrodes; an actuating stem affixed to said second electrode and extending therefrom through said ferrule to a point accessible to external mechanical stimuli; and electrically conductive resilient means mechanically and electrically con-

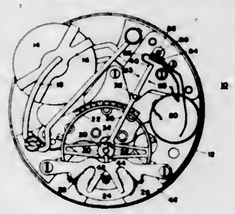
necting said second electrode and said actuating stem to said ferrule.

3,098,184
GEARING MECHANISM MOTOR DRIVE
Paul Deriaz, Rugby, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Mar. 11, 1960, Ser. No. 14,393
Claims priority, application Great Britain Apr. 7, 1959
1 Claim. (Cl. 318—12)



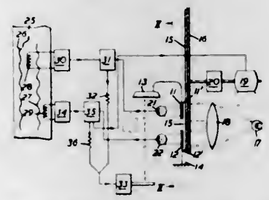
A gearing mechanism comprising in combination: a main shaft, a reversible electric adjuster motor having a casing mounted on one end of said main shaft so as to take part in the rotation thereof, an adjuster shaft arranged co-axially inside the said main shaft and rotatable independently of the latter, reduction gearing interposed between the said adjuster motor and the said adjuster shaft, self-arresting reduction gear mounted at the other end of said main shaft and in driving connection with said adjuster shaft as its input shaft, at least one output shaft of the said self-arresting gear journalled at the said other end of the said main shaft, slip rings mounted electrically insulated on the said casing of the electric adjuster motor and electrically connected to the said motor, a stationary casing surrounding said electric adjuster motor, brushes pivotally mounted in the said casing, springs connected to the said casing and to the said brushes and biasing the latter off the said slip rings, solenoids mounted in the said casing and having armatures connected to the said brushes in the sense of forcing the latter against the said slip rings when the said solenoids are energized, overcoming the bias of the said spring, electrical conductors connected to the said solenoids and to the said brushes, and an electric switch controlling the said conductors in the sense of simultaneously connecting and disconnecting, respectively, the said solenoids and brushes to and from an external current source.

3,098,185
ELECTRIC WATCH HAVING TRANSISTOR CONTROLLED CONTACT
Roderick M. Jackson, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 20, 1957, Ser. No. 679,208
6 Claims. (Cl. 318—128)



1. An electric timepiece comprising a coil mounted for oscillation on a balance staff, means in said timepiece for creating a relatively concentrated magnetic field through which said mounted coil moves, a battery for energizing said coil periodically, a semi-conductor switching device for connecting said battery to said mounted coil, a control means actuated by oscillation of said balance staff but separate therefrom, said control means being so constructed that its circular movement is less than the circular movement of the balance staff, and means connecting the control means to the switching device so that the operation of the control means will cause periodic energization of said mounted coil in synchronism with the oscillation of said staff.

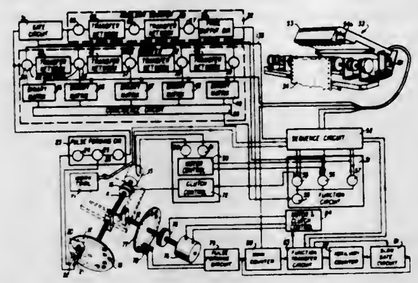
3,098,186
CONTROL APPARATUS FOR POSITIONING AN OBJECT
David Theodore Nelson Williamson, Priorwood, Polton, Donald Ferguson Walker, Barnton, and Alexander Turnbull Shepherd and David William Holmes Hampshire, Edinburgh, Scotland, assignors to Ferranti, Limited, Lancashire, England, a company of Great Britain and Northern Ireland
Filed June 4, 1959, Ser. No. 818,227
Claims priority, application Great Britain June 11, 1958
15 Claims. (Cl. 318—162)



1. Measuring apparatus responsive to the movement of an object relative to a reference structure including means for producing a reference cyclic optical pattern, a first optical grating secured to said object, a second optical grating in optical registration with and movable with respect to the first grating, the gratings being ruled so as to set up in combination with one another a control cyclic optical pattern which is similar to said reference pattern and which is displaceable in phase relative thereto in dependence on the movement of the object relative to the reference structure, a light source for irradiating said patterns, control and reference photocell devices so disposed as to be irradiated by light from the irradiated control and reference patterns, respectively, means for causing the output signals from the photocell devices to alternate at a predetermined frequency, with a relative phase displacement equal to that of the patterns, and utilisation equipment responsive to the relative phase displacement of the alternating output signals from the photocell devices.

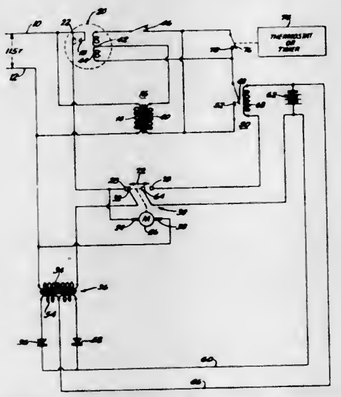
3,098,187
CONTROL SYSTEM
David Sciaky, Chicago, Ill., assignor to Welding Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 24, 1959, Ser. No. 861,983
16 Claims. (Cl. 318—162)

16. A system for controlling the positioning of a member including in combination, means for moving the member, pulsing means producing a pulse in response to each increment of movement of the member, counter means responsive to pulses and including a plurality of stages representing the digits of a number and each having a plurality of operative conditions representing the numerals of one digit, program means coupled to said stages and automatically operative to select one of said conditions of each stage to thereby preset different numbers corresponding to different predetermined counts, means coupling said pulsing means to said counter means to apply pulses thereto upon each increment of movement of said member, and control means coupled to said counter means and to said moving means, said control



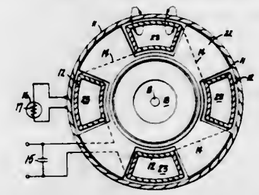
means causing operation of said moving means and stopping the same, said counter means actuating said control means to cause said moving means to stop when the number preset by said program means is reached.

3,098,188
CHARGE TERMINATING CIRCUITS
Kenneth Dawkins, Minneapolis, Minn., assignor, by mesne assignments, to Studebaker Corporation, South Bend, Ind., a corporation of Michigan
Filed Mar. 21, 1960, Ser. No. 16,292
3 Claims. (Cl. 320—31)



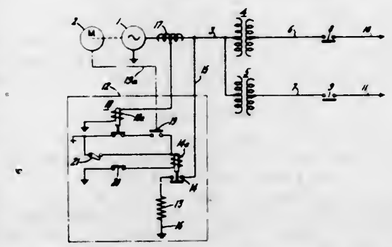
1. The improvement of battery charging means comprising a source of charging voltage, a differential relay having a pair of opposed windings and relay contacts associated with said windings, said relay contacts being connected in circuit with said source of charging voltage upon energization of one of said opposed windings, cyclically operated switch means having a plurality of switch contacts, a first pair of said switch contacts connected between said relay contacts, said source of charging voltage and the battery terminals for applying the charging voltage to the battery during a portion of the switch cycle and for removing the source of charging voltage from the battery during the remainder of the switch cycle, a voltage responsive device, a second pair of said switch contacts connected between said voltage responsive device and the battery for connecting the battery to the voltage responsive device during the portion of the switch cycle when the source of charging voltage is removed from the battery whereby the voltage responsive device is responsive to the open circuit voltage of the battery, first switch means operatively associated with said voltage responsive device for automatically terminating the charging operation of said battery when the open circuit voltage of the battery exceeds a predetermined value, and second switch means connected in parallel with said first switch means for automatically terminating the charging operation of said battery in response to the occurrence of a predetermined event, said first and second switch means each serving upon actuation to energize the other one of said opposed windings to disconnect said source of charging voltage from said battery terminals.

3,098,189
CRYOGENIC D.C. TO A.C. AMPLIFIER
Theodor A. Buchhold, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 11, 1960, Ser. No. 21,515
7 Claims. (Cl. 321—8)



1. A noise-free zero drift amplifier including in combination first and second inductively coupled windings fabricated from superconducting materials, a movable member fabricated at least in part of superconductive materials in juxtaposition to said first and second windings for influencing the inductive relation between the windings, means for moving said movable member at a predetermined rate to thereby vary the inductive relation between the coils, means for impressing an input signal to be amplified on said first winding, and means for deriving an amplified alternating current replica of said input signal from said second winding.

3,098,190
CONTROL APPARATUS FOR REGULATING AN OVERSPEED CONDITION OF AN ELECTRIC GENERATOR
Robert C. Spencer, Jr., Scotia, and Markus A. Eggenberger, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 8, 1960, Ser. No. 74,627
4 Claims. (Cl. 322—29)



3. Control apparatus for regulating an overspeed condition of an electric generator driven by a prime mover comprising an impedance of predetermined magnitude, means for electrically connecting said generator to a load, an electric circuit breaker including an actuating coil and a pair of contacts, means electrically connecting the contacts of said circuit breaker in series with said impedance

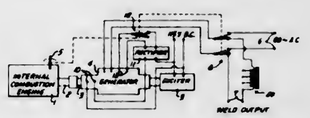
to said generator, a first source of electric current electrically connected in series with said coil, a relay having a pair of circuit interrupting contacts electrically connected in series with said coil and said first source of current, a transformer having one winding thereof disposed in inductive relation with the current supplied by the generator to the load to provide a second source of electric current proportional to generator output, said transformer being electrically connected to energize said relay thereby to maintain the relay contacts open when the load exceeds a predetermined value and to effect a closing of said contacts when the load current falls below said predetermined value, a time-limit switch having a pair of circuit-interrupting contacts electrically connected in series with the actuating coil of said circuit breaker, said time-limit switch being effective to open its series-connected contacts after a predetermined time interval, means responsive to the energization of the actuating coil of said circuit breaker for initiating said time interval, a second switch electrically connected in parallel with the contacts of said relay, said second switch being adapted for operation independent of the operation of said relay thereby to afford means for testing the overspeed regulating means by energizing the actuating coil of said circuit breaker to connect the impedance to the generator without interrupting the load current of said generator.

3,098,191

MULTIPLE PURPOSE GENERATOR

Clyde F. Cavert, Menasha, and Russell E. Hall and Earl W. Schabo, Appleton, Wis., assignors to Miller Electric Manufacturing Company, Inc., Appleton, Wis., a corporation of Wisconsin

Filed June 27, 1960, Ser. No. 39,130
19 Claims. (Cl. 322—79)



4. A revolving field generator for selectively supplying A.C. power of predetermined different frequencies in accordance with different speeds of the generator and having a field exciter driven in synchronism with the generator and establishing optimum excitation of the revolving field at a base speed, which comprises a rectifier having an output connected in series between the exciter and the field of the generator and having an input, said rectifier being polarized to pass the current from the exciter to the field, voltage compensating means connected to the output of the generator, and switch means to selectively connect the voltage compensating means to the input of the rectifier in accordance with a predetermined speed of the generator varying from the base speed to maintain optimum excitation of the revolving field for all generator speed.

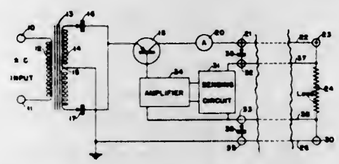
3,098,192

PROTECTIVE CIRCUIT FOR DIRECT CURRENT VOLTAGE REGULATORS

Ernest Levy, Jr., Norwalk, and Russell D. Loucks II, Ridgefield, Conn., assignors, by mesne assignments, to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Feb. 6, 1961, Ser. No. 87,137
7 Claims. (Cl. 323—22)

1. A protective circuit for direct current voltage regulators comprising; a voltage regulator circuit connected to a power source which may vary in voltage, load terminals for connection to a direct current load having a voltage lying within a restricted range of values, a controlled passing impedance in series between the power source and a load terminal, and a sensing circuit having an error voltage as the output thereof indicating whether the actual load voltage is above or below a desired load voltage; a pair of sensing circuit terminals for connection to a pair of conductors which are connected across the load for



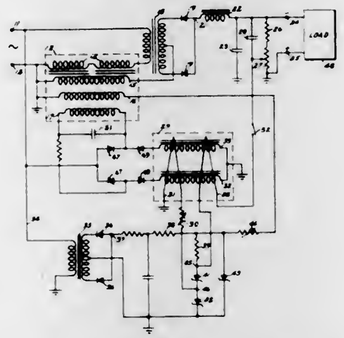
determining the load voltage and for applying the load voltage as an input to the sensing circuit; the output of the sensing circuit connected to the passing impedance to control the passing impedance in accordance with the error voltage to thereby stabilize the output voltage; and a pair of diode rectifiers each respectively connected between one of the load terminals and one of the sensing terminals.

3,098,193

MAGNETICALLY REGULATED VARIABLE HIGH VOLTAGE POWER SUPPLY

Robert B. Wallace and Walter L. Wuster, Indianapolis, Ind., assignors to the United States of America as represented by the Secretary of the Navy

Filed Sept. 11, 1961, Ser. No. 137,446
1 Claim. (Cl. 323—66)
(Granted under Title 35, U.S. Code (1952), sec. 266)



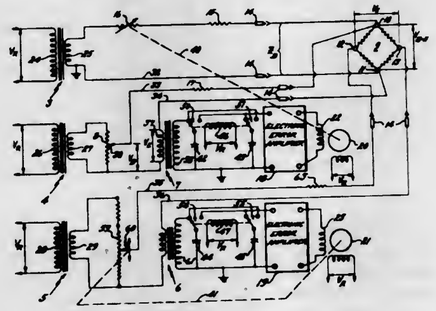
A completely solid-state, magnetically regulated, low voltage controlled, high voltage power supply comprising: an alternating current potential source having first and second terminal means for providing power to a load; a saturable reactor having at least a gate winding, a bias winding, a first load current sensitive control winding, and a second load voltage sensitive control winding, said gate winding having an end terminal thereof coupled to said first terminal means of said alternating current potential source, and said bias winding having one end terminal coupled to ground potential and the other end terminal coupled via a variable impedance to a first source of constant direct current reference potential; a high voltage transforming means having primary and center-tapped secondary windings, said primary winding having one end terminal thereof coupled to said second terminal of said alternating current potential source for receiving an alternating current and the other end terminal thereof coupled to the other end terminal of said gate winding of said saturable reactor for regulating the current flow through said primary winding, and said secondary winding having its center tap coupled to an end terminal of said first load current sensitive control winding of said saturable reactor and each of its end terminals respectively coupled through diode rectifying means to a common terminal point to form a full wave rectifying configuration; a ripple reducing filter means for filtering the full-wave rectified voltage from said secondary winding having a first input terminal coupled to said common terminal point and a second input terminal coupled via ground to the other end terminal of said first load current sensitive control winding of said saturable reactor, and having first and second output terminals for supplying a ripple-free direct current voltage to a load; a suitable load having first and second input terminals for receiving a direct current potential respectively coupled to said first and second output terminals of said filter means; an output voltage sensing means coupled across said first and second output terminals of said filter means; a self-saturating, gain-producing magnetic amplifier for supplying a direct current potential to a load, having first and second input terminals coupled respectively to said first and second terminal means of said alternating current potential source for receiving an energizing potential, having first and second output terminals coupled respectively to the end terminals of said second load voltage sensitive control winding of said saturable reactor for supplying a control current thereto, having a bias winding coupled in series with a variable resistance to a second source of constant direct current reference potential for providing the desired operating point in said magnetic amplifier, and having a control winding with one of its end terminals coupled to a third source of constant direct current reference potential and the other end terminal coupled to said output voltage sensing means to enable said magnetic amplifier to control the amount of direct current supplied to said second load voltage sensitive control winding of said saturable reactor which, in co-operation with the current in said first load current sensitive control winding, controls the effective impedance of said saturable reactor in the primary circuit of said voltage transforming means to thereby regulate the high direct current potential supplied to said suitable load.

3,098,194

AUTOMATIC A.-C. VOLTAGE RATIO CONTROLLER

Pat L. Clemens, Tullahoma, Tenn., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Oct. 16, 1961, Ser. No. 145,518
2 Claims. (Cl. 323—66)



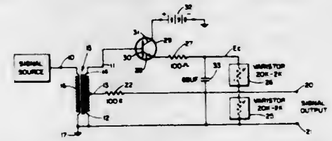
1. An automatic alternating current voltage ratio control system particularly adapted to servo devices for maintaining a constant ratio between servo system reference voltage and transducer input voltage comprising means for providing an input reference voltage, said input reference voltage being equal to the desired transducer input voltage, means for comparing said input reference voltage with the transducer input voltage, means for generating an error signal responsive to the difference between said input voltage and said input reference voltage, and phase selecting means for obtaining a single valued component of said error signal, said phase selecting means comprising a switch operative to open at the positive and negative peaks of the desired component of said error signal.

3,098,195

AUTOMATIC GAIN CONTROL CIRCUIT

George V. Lennon III and Hermann Lins, Jr., Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Nov. 1, 1960, Ser. No. 66,532
5 Claims. (Cl. 323—79)



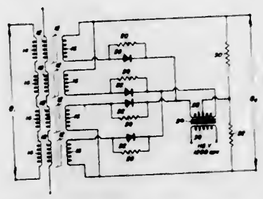
1. An automatic signal gain control circuit comprising a transformer with primary and secondary windings, a signal source coupled to said primary winding, a varistor with a non-linear voltage-current characteristic, a fixed resistor, said varistor and said resistor being connected in series across a portion of said secondary winding, an output terminal connected to the junction of said resistor and said varistor, a direct current source coupled across said varistor, an amplifier with a controlling circuit and a controlled circuit, said controlled circuit being connected in circuit between said direct current source and said varistor, said controlling circuit of said amplifier being connected to said secondary winding for regulating the current through said varistor in accordance with the signal voltage of said signal source.

3,098,196

USE OF ULTRASONIC BIAS IN MAGNETIC AMPLIFIERS

Lawrence J. Viernstein, Kensington, Md., assignor to the United States of America as represented by the Secretary of the Navy

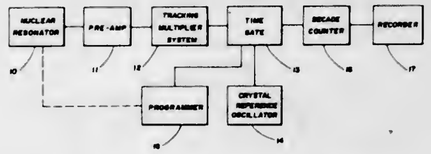
Filed Jan. 18, 1961, Ser. No. 83,601
12 Claims. (Cl. 323—89)



10. A magnetic amplifier comprising two pairs of saturable magnetic cores having load and control windings, an output circuit including an alternating current power source, a power transformer having a primary winding and a center tapped secondary winding, rectifiers connected to each load winding, a pair of load impedances connected in series relation to each other and in parallel with each pair of load windings, the center connection of each pair of load windings being connected to opposite ends of the secondary winding of the power transformer

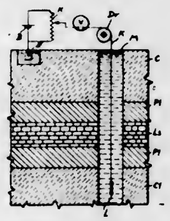
and the center point of said load impedances being connected to the center tap of said secondary winding such that one pair of load windings will conduct on one-half cycle of the supply voltage and the other pair of load windings will conduct on the other half cycle of the supply voltage, and a magnetic bias field of ultrasonic frequency applied to said cores to maintain the cores in a state of magnetic agitation.

3,098,197
METHOD AND APPARATUS FOR THE MEASUREMENT OF MAGNETIC FIELDS
Anthony René Barringer, Agincourt, Ontario, Canada, and Sholly Kagan, Cochituate, Mass., assignors to Barringer Research Limited
Filed Aug. 9, 1960, Ser. No. 48,532
5 Claims. (Cl. 324—.5)



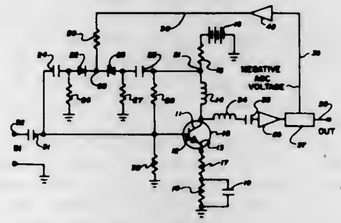
1. Apparatus for measuring magnetic fields comprising: a nuclear resonance frequency sensing means; amplifier means amplifying the signals received from said nuclear resonance frequency sensing means; at least one pair of parallel band pass filters covering consecutive frequency bands; steering gate means for each said pair of filters switching out the weaker of the filtered signals; at least two frequency doublers connected in cascade for multiplying the signal passed by said steering gate; band pass filtering and wave shaping means between said frequency doublers; reference oscillator controlled time gate means for sampling portions of the multiplied signal; counting means counting the number of cycles of said sampled portion of said multiplied signal.

3,098,198
METHOD AND APPARATUS FOR ELECTRICALLY LOGGING EARTH FORMATIONS BY SENSING THE REDOX POTENTIAL ARISING IN A MUD FILLED BOREHOLE
Gherardo Bartolini Salimbeni, 54 Via Pier Capponi, Florence, Italy
Filed Mar. 16, 1959, Ser. No. 799,777
Claims priority, application Italy Mar. 18, 1958
9 Claims. (Cl. 324—1)



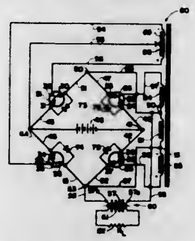
2. A method of locating sub-surface formations containing oxidizable or reducible minerals along a borehole filled with a water base mud or liquor which does not contain organic reducing substances, comprising the steps of adding to the mud a reagent which is capable of reacting with at least some of the materials of the formations surrounding the borehole and changing the electrolytical characteristics of the mud in correspondence with said formations, running into the borehole at least one reversible electrode, measuring at the end the redox potentials set up at said electrode with respect to a reference potential and recording the redox potential versus depth, whereby the formations containing oxidizable or reducible minerals are detected by the variations in said redox potential.

3,098,199
AUTOMATIC GAIN CONTROL CIRCUIT
Patrick Edward Carney, Orlando, Fla., and Joe H. Keahey, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Feb. 1, 1962, Ser. No. 170,611
5 Claims. (Cl. 330—29)



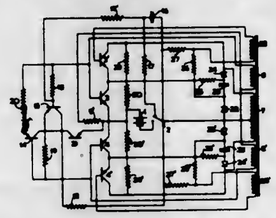
1. A gain control circuit comprising:
(*a*) an amplifying stage having input and output terminals,
(*b*) a signal source connected to said input terminal,
(*c*) means coupled to said output terminal and adapted to produce a gain control voltage related in magnitude to the amplified signals appearing on said output terminal,
(*d*) a negative feedback path between said output and input terminals, said feedback path including a pair of diodes connected together in series opposition,
(*e*) and means connecting said gain control voltage to the juncture of said pair of diodes whereby the diodes will both be biased by an amount related to the magnitude of said gain control voltage.

3,098,200
SEMICONDUCTOR OSCILLATOR AND AMPLIFIER
James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 619,003
13 Claims. (Cl. 331—113)



1. Semiconductor amplifying apparatus comprising: a normally balanced bridge network having four legs and having power input terminals and output terminals; a source of electrical potential; means connecting said source to said power input terminals; a plurality of semiconductor amplifying devices, each of said devices having a plurality of electrodes including output and control electrodes, said control electrodes controlling the conductivity state of said devices dependent upon the potential applied to said control electrodes; means connecting the output electrodes of said plurality of devices, respectively, into the legs of said bridge network, said devices being in current controlling relation to said legs; a plurality of asymmetrical current conducting devices; means connecting said asymmetrical conducting devices, respectively, in parallel with but in opposing conductivity relation to the output electrodes of said semiconductor amplifying devices in said legs; and means connecting said control electrodes to a variable source of signal.

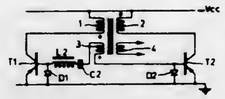
3,098,201
SELF-STARTING TRANSISTOR CONVERTER WITH OVERLOAD PROTECTION
Hette Smedema, Johannes Noordanis, and Johan Geert Damstra, all of Hilversum, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 16, 1959, Ser. No. 806,877
Claims priority, application Germany Apr. 18, 1958
9 Claims. (Cl. 331—113)



1. A voltage converter comprising: an oscillator composed of at least one oscillator transistor having base, emitter and collector electrodes, a transformer having a primary winding and a two-part feedback winding, said primary winding being connected between said emitter and collector electrodes in series with a source of direct-current input voltage, one of said parts of said feedback winding being connected between said base electrode and one of said emitter and collector electrodes, an output circuit coupled to said oscillator, means connected between said base electrode and said source for supplying a forward bias current to said base electrode, said means including an auxiliary transistor having base, emitter and collector electrodes, the emitter electrode of the auxiliary transistor being connected to the base electrode of the oscillator transistor, the collector electrode of the auxiliary transistor being coupled to said source, the base electrode of said auxiliary transistor being connected to one end of the second of said parts of said feedback winding, the other end of said second part being coupled to one terminal of said source, the said two parts of said feedback winding having voltages induced therein such that the oscillation voltages across said one part are in phase opposition to those across said second part, the conductivity of said auxiliary transistor suddenly decreasing when the amplitude of the oscillator voltage across said second part of said feedback winding falls beneath a predetermined value thereby suddenly reducing said forward bias current when a load current flowing through said output circuit increases beyond a second predetermined value.

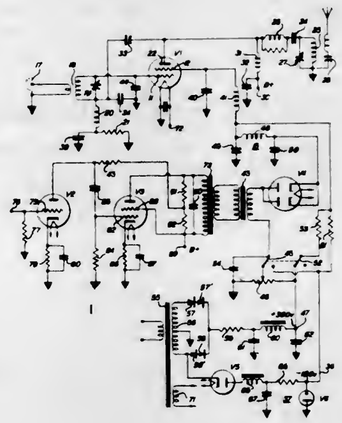
3,098,202
PUSH-PULL TRANSISTOR INVERTER
Allen Frederick Newell, Southampton, and William Lawrence Stephenson, Horley, England, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,291
Claims priority, application Great Britain June 29, 1959
4 Claims. (Cl. 331—114)

1. A push-pull transistor inverter or square-wave generator circuit arrangement comprising: a pair of transistors each having a collector-, a base- and an emitter-electrode, a source of D.C. potential having two terminals, a transformer having a core, a pair of collector windings arranged on said core, said windings being connected in series with said source of potential in the collector-emitter circuits of said transistors, respectively, a feedback winding on said core, said feedback winding being connected in



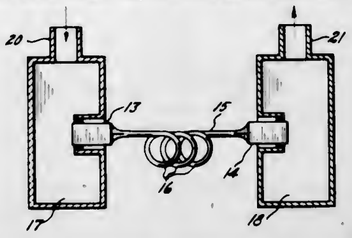
series with a capacitor and an inductor between the respective base electrodes of said transistors, said feedback winding, said capacitor and said inductor forming in combination a feedback loop determining the timing of the operation of the arrangement, said capacitor and said inductor having such values that said core does not saturate during operation.

3,098,203
SIGNALING SYSTEM CONTROL FOR A MODULATOR
Charles H. Starn, 1117 SE. 6th St., Fort Lauderdale, Fla.
Filed Oct. 30, 1959, Ser. No. 849,856
7 Claims. (Cl. 332—44)



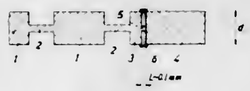
1. A modulating system including a modulator tube having power supply means for producing current in the tube, control electrode means including a screen grid for controlling tube current, means for coupling a source of radio frequency energy to said tube so that the tube current is a function of the radio frequency energy supplied, circuit means including bias means and half-wave rectifier means for connecting a modulating signal exclusively to said screen grid, said rectifier means being operable to rectify the modulating signal so that modulating signals of one polarity only are effective to modulate the radio frequency energy and said bias means being normally operable to suppress a substantial part of the carrier constituted by said radio frequency energy in the absence of a modulating signal of said one polarity, and output means connected to said tube for utilizing modulated radio frequency energy.

3,098,204
MICROWAVE DELAY LINE AND METHOD OF FABRICATION
Joseph B. Brauer, Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 24, 1961, Ser. No. 105,241
1 Claim. (Cl. 333—30)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A microwave delay circuit comprising an input transducer, an output transducer, and a delay medium disposed therebetween, said input and output transducer and said delay medium being fabricated from a single piezoelectric crystal, said input transducer being adapted to generate mechanical vibrations in response to an electromagnetic microwave input, said delay medium being adapted to propagate said mechanical vibrations and said output transducer being adapted to generate an electromagnetic microwave output responsive to said mechanical vibrations, said delay medium being filamentary in form and consisting of a plurality of helical loops and having a length such that the time required for said mechanical vibrations to pass therealong is equal to the desired delay time.

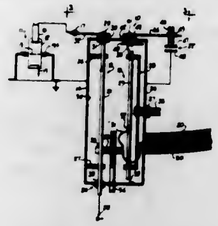
3,098,205
BUTT JOINT FOR UNWELDABLE VIBRATORY BODIES
Günther Reuter, Ulm (Danube), Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Aug. 20, 1959, Ser. No. 835,067
Claims priority, application Germany Aug. 23, 1958
2 Claims. (Cl. 333—71)



1. In a mechanical frequency filter system, the combination which comprises a ferrite transducer body and a steel resonator body, said bodies having, respectively, opposed surfaces of considerable area, there being a butt joint between said bodies which butt joint includes at least one projection extending from at least one of said surfaces toward the other surface and a bonding glaze mass fused to both surfaces around said projection, said projection being of such length as to limit the approach of one surface toward the other during forming of the bond to assure adequate thickness of said mass to absorb mechanical stresses due to large temperature changes during manufacture of the system.

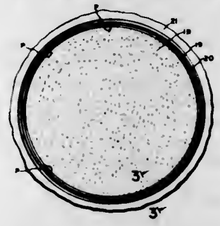
3,098,206
WAVE BAND UHF OUTPUT NETWORK
Eric W. Moulton, Cincinnati, Ohio, assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,521
5 Claims. (Cl. 333—73)

1. A transformer comprising tuned primary and secondary circuits, the primary circuit comprising a coaxial line section formed by a primary conductor disposed within an outer conducting shield, the secondary circuit comprising a coaxial line section formed by a secondary conductor disposed within said shield parallel to and spaced from said primary conductor, said secondary conductor having one end connected to said shield to form



a short circuited end for its coaxial line section, said primary and secondary conductors being movable relative to each other to adjust the coupling between said primary and secondary circuits, and an output coaxial cable with a center conductor connected to said secondary conductor and means for moving the connection therealong to control the loading on said transformer.

3,098,207
OUTPUT WINDOW FOR ELECTRON TUBE APPARATUS
Ronald H. Gordon, Los Altos, and Arthur E. Schoennauer, Palo Alto, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Original application Nov. 14, 1955, Ser. No. 546,624. Divided and this application Apr. 4, 1960, Ser. No. 19,709
8 Claims. (Cl. 333—98)

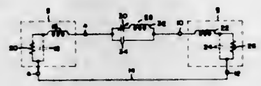


1. In a high frequency apparatus, an apertured member through which electromagnetic energy is to pass, a wave-energy permeable member mounted on said member substantially closing the aperture, protuberances extending from the surface of said apertured member adjacent the wave permeable member whereby the spacing between said wave-energy permeable member and said apertured member may be accurately controlled, and a sealing material disposed between said wave permeable material and said apertured member whereby a vacuum-tight seal is provided between said members.

3,098,208
COUPLING CIRCUIT FOR CONNECTING TOGETHER TWO RESONANT CIRCUITS AND TUNING THE WHOLE OVER A BAND OF FREQUENCIES
William S. Winfield, Kirkville, and Robert A. Muschamp, North Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 29, 1958, Ser. No. 764,192
7 Claims. (Cl. 334—64)

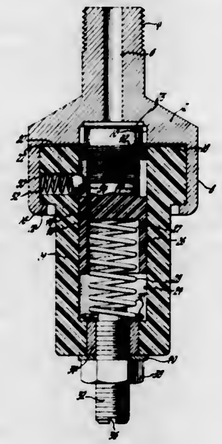
1. A circuit for tuning over a wide range of frequencies comprising in combination, a first device having a

pair of output terminals, a second device having a pair of input terminals, there being effectively between each pair of terminals a capacitance and inductance connected in series which in combination are series resonant at a predetermined frequency within the desired frequency range, a connection between one terminal of said first pair and one terminal of said second pair, a coupling



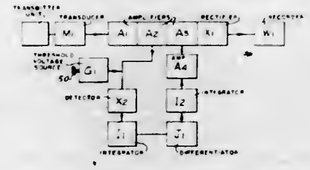
circuit connected between the remaining terminals of each pair so as to complete a loop, said coupling circuit being comprised of a series branch having a capacitor and an inductor and a capacitor connected in shunt with said series branch, the values of the components of said latter coupling circuit being such as to cause the entire loop to be resonant at any frequency to which the circuit is to be tuned within the range.

3,098,209
PRESSURE TRANSDUCER
Bryce L. Stevens, Davison, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 10, 1960, Ser. No. 7,873
3 Claims. (Cl. 338—39)



1. In transducer means, a hollow casing formed in part of electrically conductive material and in part of electrically non-conductive material and having an entrance duct through which pressure to be measured can be applied, a piston formed of electrically insulating material fitting snugly within the hollow casing and mounted for axial movement therein, biasing means directly engaging one end surface of the piston and the inside surface of one end wall of the electrically non-conductive part of the hollow casing for biasing said piston toward one end of its travel, an electrical contact mounted through said wall and engaging the biasing means to form an electrically conductive circuit therewith, a flexible diaphragm mounted across the opposite end of the piston inside the casing and pressing against the same, a resistance wire helically wound on a reduced section of said piston and electrically connected to the opposite end of the biasing means, and a spring biased contact mounted in and electrically connected to the electrically conductive portion of said case engaging and sliding over said resistance wire to connect a predetermined amount of wire in circuit dependent upon the axial position of the piston for measuring purposes.

3,098,210
ECHO RANGING WITH REFERENCE TO BOUNDARY CONDITIONS
Stanley Capel Sparling, Roy William George Haslett, Peter Roy Hopkin, and John Ernest Leon Sothcott, Barkingside, England, assignors to Kelvin & Hughes Limited, Glasgow, Scotland, a British company
Filed Apr. 26, 1957, Ser. No. 655,212
Claims priority, application Great Britain May 1, 1956
8 Claims. (Cl. 340—3)

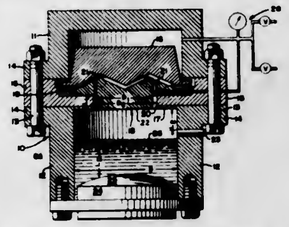


1. Echo ranging apparatus for the location of fish in the sea, comprising a transmitter for transmitting pulsed exploring signals into the sea. a receiving transducer adapted to produce electric signals in response to echo signals resulting from the reflection of the exploring signals by fish in the sea and by the sea bed, electric amplifying means connected to said receiving transducer to amplify said electric signals and comprising a gated stage capable of being rendered non-conducting upon the application of a suitable electric control pulse thereto, a display device adapted to display the output signals from the electric amplifying means in relation to time, an electric control pulse generator, circuit means for applying said electric signals as input signals to said generator, said generator producing an electric control pulse when the amplitude of said electric signals exceeds a predetermined value, the said predetermined value being so chosen that it is exceeded only by a signal value corresponding to the receipt of a sea bed echo, said generator having delay means such that the initiation of said control pulse has a predetermined time delay in relation to the commencement of the sea bed echo, circuit means for applying said electric control pulse to said gated stage, so that the display of received signals is inhibited for a predetermined time period commencing subsequently to the commencement of the sea bed echo to ensure the display of at least a portion of the leading edge of the bottom echo of greater amplitude than the display of fish echoes before said interruption occurs, so as to provide an index such that fish echoes merged with said bottom echo stand out and can be readily detected by the irregularities they produce in the leading edge of the bottom echo as displayed on said display device.

3,098,211
UNDERWATER ACOUSTIC PRESSURE MEASURING DEVICE
Henry Gerber, 2834 R St. SE., Washington, D.C.
Filed Oct. 14, 1960, Ser. No. 62,803
11 Claims. (Cl. 340—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)

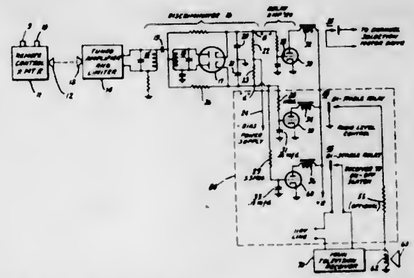
1. Apparatus for testing the response of a test transducer comprising: chamber means for receiving the test transducer therewithin, a reference transducer secured within said chamber means, acoustic signal producing means disposed within said chamber for impressing an acoustic signal upon said reference transducer and the

test transducer, and means for providing a liquid-gas interface between said acoustic signal producing means



and the test transducer thereby to simulate a free field radiation load on the test transducer.

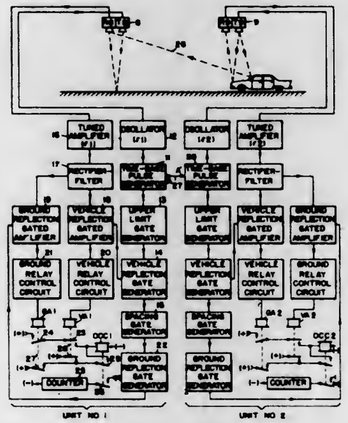
3,098,212
REMOTE CONTROL SYSTEM WITH PULSE DURATION RESPONSIVE MEANS
Edgar M. Creamer, Jr., Melrose Park, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,370
2 Claims. (Cl. 340—15)



1. A system for remotely controlling the power circuit of a television receiver and for remotely changing the level of sound reproduced by said receiver, comprising a transmitter to be located remote from said receiver including means under manual control of the operator for transmitting a continuous wave signal either of a short duration or of a substantially longer duration, means at the location of said receiver to receive said signal, means for translating the received signal into a unidirectional signal of a duration corresponding to the duration of the transmitted signal, a first channel connected to said translating means and including time constant means such that it will respond to said unidirectional signal regardless of whether the latter is of said short duration or of said substantially longer duration, a first bistable relay connected to said channel for control thereby, a circuit arranged to be opened or closed by said relay for changing the level of sound reproduced by said receiver, a second channel connected to said translating means and including time constant means such that it will respond to said undirectional signal only if the latter is of said substantially longer duration, and a second bistable relay connected to said second channel for control thereby and arranged to control the power circuit of said receiver.

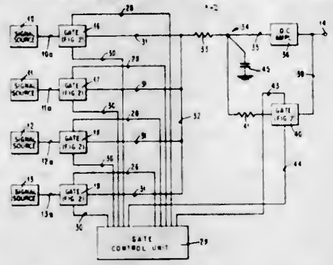
3,098,213
ULTRASONIC VEHICLE DETECTION SYSTEM
John H. Auer, Jr., Rochester, N.Y., assignor to General Signal Corporation, a corporation of New York
Filed May 20, 1960, Ser. No. 30,667
17 Claims. (Cl. 340—38)

1. In a system for detecting the passage of vehicles through adjacent first and second detection zones each defined by a respective beam of repetitive energy pulses the combination comprising, first and second transmitting means for transmitting said respective beams of energy pulses, first and second receiving means for said first and second detection zones for at least at times receiving reflections of said energy pulses from at least one reflecting surface whose position is dependent upon whether or not a vehicle is present in the respective detection zone, said reflection pulses for each zone being received by the receiving means for that zone during at least one predetermined time interval following the transmission of the last transmitted pulse for that zone, output means for each detection zone controlled by the receiving means for that zone for indicating the passage of a vehicle through such zone, gating means for controlling each receiving means to be responsive to received energy only throughout said predetermined interval, and control means for preventing said second receiving means from producing an output in response to spurious reflection pulses originating with said first transmitting means and travelling over paths resulting in their having a particular range of expected reception times by said second receiving means, said control means governing said first and second transmitting means to transmit their repetitive pulses at the same repetition rate and with a predetermined time relationship, said time relationship being selected to cause the time of occurrence of said predetermined interval throughout which said second receiving means is controlled by said gating means to be responsive to received energy pulses to be non-contemporanous with said expected reception time of said spurious received pulses.



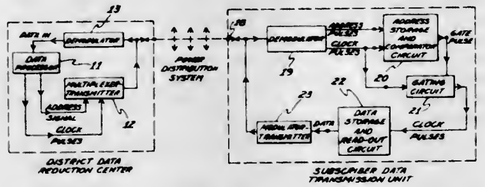
3,098,214
ANALOG SIGNAL SWITCHING APPARATUS
Frank V. Windes, Poughkeepsie, and Archie J. Paul, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1958, Ser. No. 784,134
4 Claims. (Cl. 340—147)

3. Multiplexing apparatus for accepting analog signals from a plurality of signal sources and providing an output signal which is equal and opposite in magnitude to the analog signal from a selected one of said signal sources comprising: an amplifier circuit capable of amplifying and inverting signals applied to its input terminal and of providing said inverted signal at its output terminal; a plurality of non-linear gates, each gate having a low impedance state during which signals are transmitted therethrough, and a high impedance state during which signal transmission therethrough is inhibited; a first, and a second resistor of equal value; circuit means for connecting said first resistor and one of said gates in a series circuit having one end connected to said output terminal and the other end connected to said input terminal; circuit means connecting one end of said second resistor to said input terminal; circuit means connecting each of the remaining gates between one of said signal



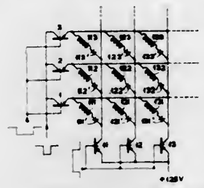
sources and the unconnected end of said second resistor; means for simultaneously rendering one of said gates connected to said signal sources and said gate connected to said output terminal in said low impedance state whereby signals transmitted through said gates in the low impedance state tend to cancel each other at said input terminal, the signal resulting from said cancellation at said input terminal driving said amplifier.

3,098,215
DATA STORAGE AND TRANSMISSION SYSTEM
David P. Waite, Topsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 27, 1957, Ser. No. 705,528
3 Claims. (Cl. 340—151)



2. A system for collecting data from a plurality of subscribers including a data processor located at a data reduction center, a plurality of subscriber data transmission units, each unit responsive to a corresponding unique interrogation signal from said data processor including a unique address pulse code group and uniformly recurring pulses, a first communication means between said center and all of said units for transmitting any one of a plurality of unique interrogation signals from said center to each of said units, a given one of said units comprising a first register means for storing unique address information in digital form and delivering in response to said uniformly recurring pulses a unique address signal consisting of a pulse code group representing the address information stored; a comparator means connected to said first register means and first communication means for serially comparing the pulse code group of said unique address signal with the pulse code group of said interrogation signal and for providing a coincidence signal when said pulse code groups correspond; a second register means connected to said comparator means for storing data in digital form and effective upon receipt of said coincidence signal from the comparator to generate a pulse code group representative of said data stored therein in response to said uniformly recurring pulses; and a second communication means between the second register of said given unit and said data reduction center for serially transmitting said pulse code group representative of said data from said given unit to said data processor.

3,098,216
TRANSISTOR COMMON-EMITTER GATE CIRCUIT WITH INDUCTIVE LOAD
Johannes Arnoldus Samwel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,525
Claims priority, application Germany July 17, 1958
7 Claims. (Cl. 340—166)

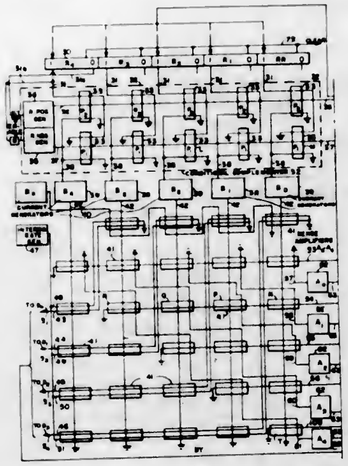


1. A circuit for supplying an input pulse to an inductive load comprising: a transistor having base, emitter and collector electrodes, collector-base and emitter-base junctions and a base zone, means for applying an input voltage signal pulse to said collector electrode having a polarity to reverse-bias said collector-base junction, an inductive load, said emitter electrode being coupled to said inductive load, means operable to complete a circuit to said inductive load including means applying a gating signal to said base electrode, said gating signal having a polarity and magnitude to drive said base electrode beyond saturation in the forward direction thereby producing an excess of free charge carriers in the base zone, said input pulse and said gating signal being simultaneously applied, said input pulse having a leading edge operable to cause a short voltage pulse to be produced across said inductive load which materially exceeds said gating signal in amplitude and biases the emitter-base junction in the reverse direction, said excess of free charge carriers preventing the cutting off of said transistor at the occurrence of said short voltage pulse.

3,098,217
MAGNETIC DEVICE SENSING, SHIFTING AND ENCODING CIRCUIT
Abraham Franck and George F. Marette, Minneapolis, and Berc I. Parsegyan, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 24, 1959, Ser. No. 855,219
25 Claims. (Cl. 340—172.5)

1. Digital data analyzing and processing apparatus comprising an input register on *n* bistable stages for containing a digital word input, at least two data storage devices coupled to each stage, means coupled in common to one of the devices of each stage for causing the same to contain as a first row a digital word related digit by digit to said input word, a plurality of means each coupled in common to another one of the devices of each stage to cause each of said means to form other rows, each of said other rows containing a digital word related digit by digit to the complement of the digital word of said first row, a first plurality of sensing means, means coupling one of said sensing means in common to one of the devices of said first row and at least one of the devices of a first of said other rows, means coupling another one of said first plurality of sensing means in common to another one of the devices of said first row

and to at least two of the devices of a second of said other rows and means respectively coupling each succeeding sensing means in common to one device of said first row and one additional number of devices of said other rows.

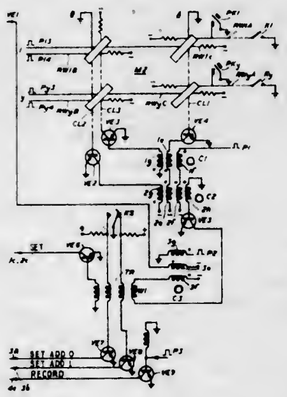


3,098,218

BINARY DIGITAL NUMBER STORING AND ACCUMULATING APPARATUS

Thomas Harold Flowers, Mill Hill, London, England, assignor to Her Majesty's Postmaster General, London, England

Filed Aug. 17, 1961, Ser. No. 132,048
Claims priority, application Great Britain Aug. 22, 1960
12 Claims. (Cl. 340—174)



1. Binary digital number storing and accumulating apparatus including a matrix of rectangular-hysteresis-loop magnetic cores capable of being set in either one of two opposite states of magnetic saturation to indicate a first binary digit stored or a second binary digit stored respectively, the matrix containing for each number to be stored a row of magnetic cores, each core in a row corresponding to a different order digit of the number; the cores in respective rows in the matrix having row-write windings connected in series in a like sense, and also having row-read-out windings connected in series in a like sense; matrix cores corresponding to the same order digit in the several rows arranged in respective columns, the matrix cores in the respective columns having column-write windings connected in series in a like sense, and also having output-windings connected in series in a like sense; first and second two-condition devices operatively associated with respective matrix columns, means for applying a pulse to all the first and second devices at a first pulse time to set those devices in a first of the two conditions; third, fourth and fifth two-condition devices operatively associated with respective matrix columns, means for applying a pulse to all the third, fourth and fifth devices at the first pulse time for setting those devices in the first of the two conditions when a unit is to be added to a number stored in a particular matrix row, and means for applying a pulse to all the third, fourth and fifth devices at the first pulse time to set all those devices in the second of the two conditions when zero is to be added to the number stored in a matrix row; means for application to the row-read-out windings of a matrix row at a second pulse time of a read-out pulse individual to that row for switching to an opposite state those cores in the row which are in a predetermined one of the two states of magnetic saturation to produce a pulse in the output winding of any cores so switched, means for monitoring the electrical condition of the output windings to provide an analogue of the number stored in a particular matrix row to which a read-out pulse is being applied, means for changing from the first condition to the second condition those first and second devices associated with matrix cores of that row which were switched by the readout pulse and for changing those third, fourth and fifth devices associated with matrix cores of that row corresponding to digits of a higher order than in any core of that matrix row which was switched by the read-out pulse to be changed to the second condition if those devices are not already in that condition, means for changing, at a third pulse time, the condition of any fourth device in the first condition and any fifth device in the second condition, whereby change of any fourth device to the second condition at the third pulse time causes its associated core in that matrix row to be switched to the said predetermined state only if the second device associated with that row core is in the first condition and if a row-write is applied to the row-write windings of that matrix row at the third pulse time, and whereby change of any fifth device to the first condition, at the third pulse time, causes its associated core in that matrix row to be switched to the said predetermined state only if the first device associated with that core is in the second condition, and if a row-write pulse is applied to the row-write windings of that matrix row at the third pulse time.

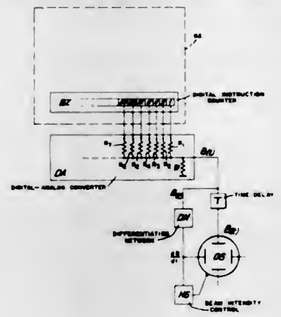
3,098,219

MONITORING ARRANGEMENT FOR PROGRAM-CONTROLLED ELECTRONIC COMPUTERS OR SIMILAR SYSTEMS

Heinz E. Voigt and Wolfgang Händler, Backnang, Germany, assignors to Telefunken G.m.b.H., Berlin, Germany

Filed Jan. 27, 1958, Ser. No. 711,346
Claims priority, application Germany Feb. 23, 1957
1 Claim. (Cl. 340—213)

In a program-controlled electronic computer having storage means containing coded data information, monitoring apparatus comprising converter means converting said data information to analog voltages representing the instantaneous information in said storage means; said monitoring apparatus including oscilloscope means; oscilloscope sweep means for delivering a deflection voltage, said sweep means being connected to the output of said converter means to deliver said deflection voltage with the reading out of said stored information; said oscilloscope means being connected to be deflected in one direction by said analog voltage and in the other direction by said sweep voltage, said sweep means comprising a differentiating network connected with said analog voltage and delivering a sweep voltage proportional to the rate of change of said analog voltage, said oscilloscope means comprising a cathode ray oscilloscope having an intensity control electrode and having coordinate deflection means connected respectively with said analog voltage and the differentiated deflection voltage, and cathode ray intensity control means connected with the output of said differentiating network and with said electrode and brightening the intensity of the cathode ray beam in proportion to the instantaneous magnitudes of the differentiated deflection voltage.

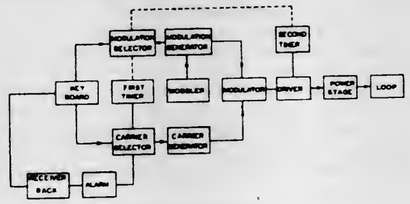


3,098,220

PERSONAL CALL SYSTEM

Nicolaas R. de Graaf, Emmen, Netherlands, assignor to N.V. Nederlandsche Industrie Radio Artikelen, Emmen, Netherlands

Filed Jan. 19, 1959, Ser. No. 787,485
Claims priority, application Australia Aug. 20, 1958
7 Claims. (Cl. 340—311)



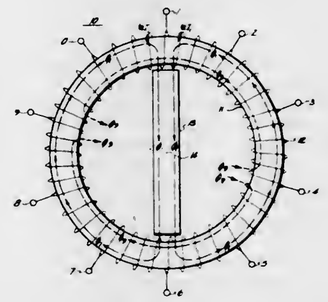
1. A personal call system for selectively calling a plurality of individuals in a given area, comprising a closed loop circuit in said area, a carrier frequency generator, a modulating frequency generator tunable to a plurality of modulating frequencies lower than the frequency of said carrier generator, means comprising a set of selector members connected to said modulating frequency generator each operable individually for tuning said modulating frequency generator to a corresponding one of said modulating frequencies, a modulator coupled with said carrier generator and said modulating frequency generator to modulate the carrier with the selected modulating frequency, a transmitter connected to supply the output energy of said modulator to said loop circuit, means operable by any one of said selector members for initiating the transmission of said modulated carrier to said loop circuit, a timing circuit having means actuated by operation of any one of said selector members to interrupt the transmission of said modulated carrier to said loop circuit after a suitable time interval, and a plurality of portable receivers each constructed to be carried by a respective one of the individuals to be paged, each receiver comprising means for receiving and detecting the signal supplied to said loop circuit, a resonance relay mechanically tuned to one of said modulating frequencies which is characteristic for the individual carrying the receiver, means to apply the detected signal to said resonance relay, and means controlled by said resonance relay to produce an audible signal when said relay is actuated, an electromagnetic selector switch having a driving magnet, a plurality of switch arms and a plurality of separate banks of contacts, each bank of contacts cooperating with a corresponding one of said switch arms, a plurality of frequency determining impedances in said modulating frequency generator connected with the contacts of at least one of said banks and connected so as to be put in circuit by the respective switch arm, means actuated by operation of any one of said selector members for starting said selector switch, and means for stopping said selector switch when a position determined by the actuated selector member is reached whereby the modulating frequency is adjusted to the desired value.

3,098,221

DISPLAY DEVICE HAVING A RETENTIVE MEMORY

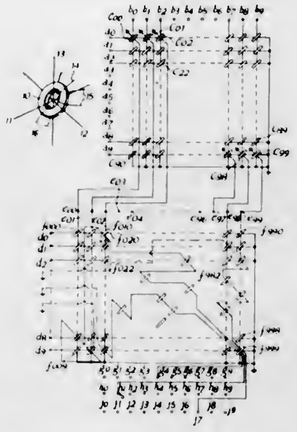
Charles H. Propster, Jr., San Jose, Calif., assignor to General Electric Company, a corporation of New York

Filed Sept. 13, 1961, Ser. No. 137,838
8 Claims. (Cl. 340—324)



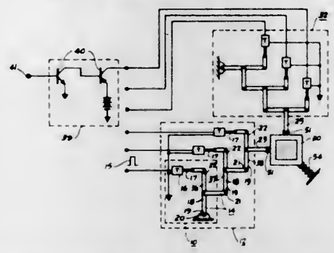
1. A display device for presenting a selected one of a plurality of visual symbols comprising, a ring of magnetic material having a substantially rectangular hysteresis loop characteristic, an electrical winding on said ring, a plurality of terminals each connected to said winding at a respective different spaced position on said winding, means for energizing said winding through a selected diametrically opposed pair of said terminals for establishing a retentive magnetic flux in a first angular direction in a selected half portion of said ring and a retentive magnetic flux in the opposite angular direction in the other half portion of said ring, means comprising a rotatable magnetic member positioned within said ring and adapted to rotate about the axis of said ring for providing a low reluctance path for said retentive magnetic flux between the diametrically opposed portions of said ring adjacent to the positions where said selected pair of terminals are connected to said winding, and visual display means responsive to the angular position of said rotatable magnetic member, said visual display means comprising a drum concentrically positioned around said ring, said drum having symbols to be displayed upon its outer surface, and means connecting said drum to said rotatable magnetic member.

3,098,222
ELECTRICAL TRANSLATORS
Arye L. Freedman, Stevenage, England, assignor to Ericsson Telephones Limited, London, England, a British company
Filed July 11, 1958, Ser. No. 747,887
Claims priority, application Great Britain July 23, 1957
9 Claims. (Cl. 340—347)



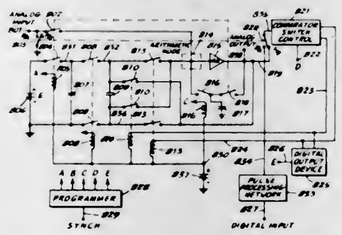
1. An electrical translator including two arrays of switchable magnetic cores having two stable remanent states, each array providing effectively a plurality of rows and columns of series connected input circuits including three groups of input circuits and a further group of input circuits comprising input windings, the cores of the first array having associated therewith input windings of the first and second groups of input circuits and the cores of the second array having associated therewith input windings of the third group, said translator further comprising intermediate output windings associated with the cores of said first array, intermediate input windings associated with the cores of said second array, said intermediate input circuits forming the further group of input circuits and operatively connecting said intermediate input windings with said intermediate output windings, means including said input circuits and operatively interconnecting said input and output windings in respective circuits and interrelating said circuits with said cores to provide, on the application of operating pulses through a combination of input circuits comprising one circuit from each of said groups, a change of the state of magnetization of one of said cores of said first array in response to the operating pulses applied to the input circuits in said first and second groups and a change of the state of magnetization of one of said cores of said second array in response to the operating pulse applied to the input circuit of said third group and the pulse supplied by said one core in said first array through the intermediate output winding associated therewith to the intermediate input winding connected thereto, said one core in said second array being a different core for each said combination of three input circuits, output circuits associated with the cores of said second array with each output circuit comprising a plurality of output windings connected in series and associated with a different combination of cores of said second array selected from said rows and columns to provide the desired translating effect, each core of said second array having associated therewith a plurality of said output windings in different output circuits, said second array including means for operatively interrelating each output circuit with certain cores of said second array to provide energization of a unique combination of output circuits in response to the change of state of each individual core of said second array.

3,098,223
MEANS FOR CONVERTING AN INPUT TO MECHANICAL OUTPUT CONTROL
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,754
8 Claims. (Cl. 340—347)



1. A system responsive to a group of N binary signals to produce composite linear output movement of an output means in accordance with the information contained in said binary signals comprising a plurality of N transducer means, each of which is responsive to a signal representative of binary one applied thereto to produce a discrete linear output movement at its output; means for applying individual ones of said N binary signals to a corresponding one of said N transducer means; a plurality of N linkage means each of which comprises a lever and a link pivotally connected to the midpoint of said lever, each of said levers being of equal length; means for connecting one extremity of each lever to the output of the associated one of said transducer means; means for pivotally connecting the other extremity of the lever of the first linkage means to a fixed point; and means for connecting the other extremities of the levers of the second through the Nth linkage means to the link of the immediately preceding one of said linkage means; output means; means for linearly moving said output means in response to the linear movement of the link of said N^{th} linkage means; and means for resiliently biasing said output means against the linear movement imparted by said N^{th} linkage means to thereby produce composite linear movement of said output means a distance representative of the information contained in said group of binary signals.

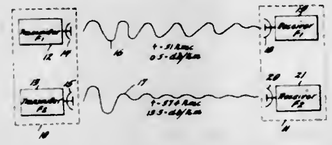
3,098,224
REVERSIBLE ANALOG TO DIGITAL CONVERTER
Philip A. Hoffman, Towson, Md., assignor to Hoffman and Eaton, Towson, Md., a partnership
Filed Apr. 28, 1960, Ser. No. 25,343
20 Claims. (Cl. 340—347)



1. A signal generator for analog to digital and digital to analog converters comprising first and second signal storage means, means for storing a reference signal on

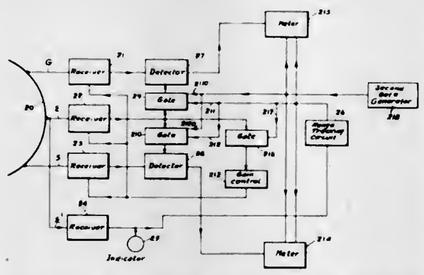
said first storage means, means for periodically coupling said first and second storage means together in signal sharing relationship whereby successive portions of said reference signal are periodically transferred between said first storage means and said second storage means in successively weighted quantities representative of the successive digits of a number system starting with the most significant digit first, means for changing the signal on one of said storage means after each said periodic coupling by an amount equal to the last transferred portion of said reference signal, and accumulating means coupled to one of said storage means for accumulating an output signal from said one storage means directly proportional to the algebraic sum of each of said transferred portions of said reference signal.

3,098,225
MEASURING PROCESS
Harold C. Anderson, Silver Spring, Md., assignor to Litton Systems, Inc., College Park, Md.
Filed June 20, 1961, Ser. No. 118,467
15 Claims. (Cl. 343—12)



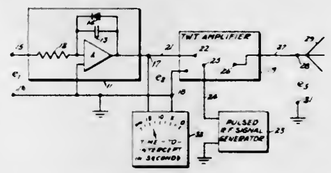
1. In a process for measuring the distance between two objects displaced by a selective frequency absorbing atmosphere, the steps of actively producing a pair of closely related different fixed frequency microwave electromagnetic radiations at one of the objects, with the frequency of one of said radiations being at the frequency of an atmospheric absorption line and being attenuated at a known rate in passing through the atmosphere and the other being at a closely related different microwave frequency being outside of any of t e atmospheric absorption lines, and receiving both radiations at the second object and comparing the relative attenuations of the two radiations to determine the distance between the objects.

3,098,226
TARGET TRACKING SYSTEMS
Guy Révillon, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Mar. 16, 1959, Ser. No. 799,515
Claims priority, application France Mar. 20, 1958
5 Claims. (Cl. 343—16)



1. A receiver arrangement system for an automatic target tracking, monopulse radar system, including means for receiving signal echoes of radar pulses, comprising: detectors for providing error signals indicative of the angular deviation of said target with respect to the pointing direction of said radar system; reference channel means for locally providing a first, target bound gate signal; means for locally providing a second gate signal in fixed time relationship with said radar pulses; gate means controlling the operation of said detector; first means for actuating said gate means upon provision of said first gate signal; second means for actuating said gate means upon provision of said second gate signal; and means for subtracting from the error signal, provided upon actuation of said gate means by said first gate signal, the error signal provided upon actuation of said gate means by said second gate signal.

3,098,227
CONSTANT CLOSING VELOCITY RADAR TARGET SIMULATOR
William L. Letsch, Baltimore, and Vincent P. Pusateri, Laurel, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 7, 1961, Ser. No. 136,681
8 Claims. (Cl. 343—17.7)

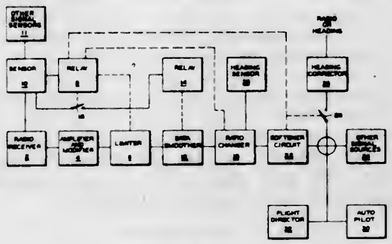


1. A radar target simulator comprising: an integrating operational amplifier having a first input means for receiving an input signal composed of a triangular voltage waveform, and a first output means for providing an integrated and amplified output signal to subsequent circuitry; radio frequency amplifying means having a first input means for receiving radio frequency energy to be amplified and modulated, having a second input means for receiving a modulating signal coupled to said first output means of said integrating operational amplifier, and having output terminal means for providing modulated and amplified radio frequency energy to a transmitting antenna system; a signal generating means coupled to said first input means of said radio frequency amplifying means for supplying pulsed radio frequency energy thereto; and transmitting antenna means coupled to said output terminal means of said radio frequency amplifying means for radiating said modulated and amplified radio frequency energy to radar equipment to be tested.

3,098,228
NAVIGATION SYSTEM
William W. Medlinski, Paterson, and Morey L. Hodgman, Westwood, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Sept. 5, 1958, Ser. No. 759,170
30 Claims. (Cl. 343—107)

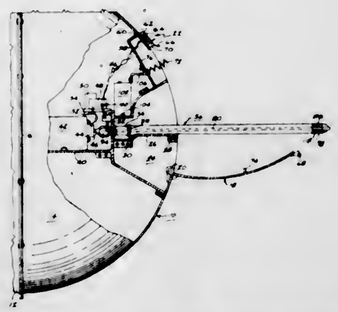
6. A navigation system for guiding a craft to intercept, capture, and track a radio beam, comprising radio means for providing signals corresponding to the displacement of the craft from the beam, direction responsive means for providing signals corresponding to the heading of the craft relative to the direction of the beam, means for combining the signals at one fixed ratio while the craft intercepts the beam, means responsive to the signals for guiding the craft, means for changing the ratio of the displacement and heading signals relative to one another, and means for sensing the amplitude of the displacement

signals and operating said ratio changing means when the displacement signal amplitude drops to a predetermined value substantially greater than zero irrespective



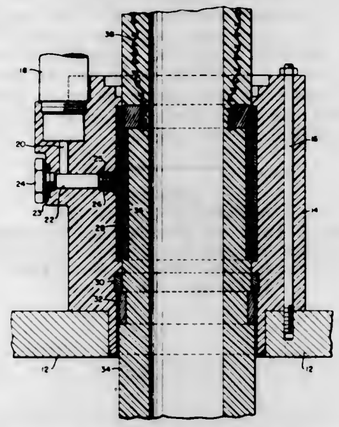
of the heading of the craft to change the ratio of the displacement and heading signals to a second fixed ratio to capture and track the beam.

3,098,229
TRANSMISSION LINE ERECTED BY PRESSURIZED PLASTIC
Herbert P. Raabe, St. Paul, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed June 17, 1959, Ser. No. 820,917
21 Claims. (Cl. 343—705)



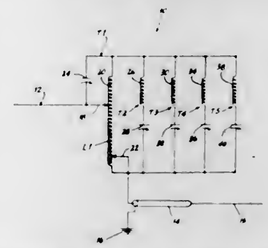
21. An inflatable and unfurlable transmission line for projection from a space vehicle comprising in combination means for securing one end of the transmission line to the space vehicle, said transmission line being comprised of a waveguide including at least one hollow, collapsible and unfurlable tube in an initially flattened, coiled and flexible condition, said tube having a lightweight, conductive metal coating adhered to one surface, and means for inflating and unfurling the transmission line and projecting it to an extended and substantially rigid position by at least partially filling the tube with an expansible, hardenable, non-conducting fluid medium whereby said transmission line becomes substantially inflated and extended to a second rigid condition, said means for inflating, unfurling and projecting the transmission line including a movable plunger inserted within the waveguide, said plunger having substantially the same cross-sectional shape as the desired cross-sectional shape of the transmission line, said means for at least partially filling the waveguide with an expansible, hardenable fluid medium including a pressurized chamber for containing the fluid medium, means for attaching said chamber near the secured end of the transmission line, tubular means for connecting the chamber to said transmission line, and means for controlling the discharge of the fluid medium into the transmission line whereby axial movement will be imparted to the movable plunger.

3,098,230
TELESCOPING SUBMARINE ANTENNA WITH CAPACITIVE COUPLING
Richard G. Nickerson, Sudbury, and Paul A. Crandell, Bedford, Mass., assignors to Electronautics Corporation, Maynard, Mass., a corporation of Massachusetts
Filed May 22, 1961, Ser. No. 111,781
2 Claims. (Cl. 343—709)



2. An antenna system for a submarine having a hull which is normally at least partly submerged in sea water comprising an insulated housing attached to said hull, said hull and said insulating housing having similar openings formed therein and defining a substantially continuous passage therethrough, a cable for carrying RF energy sealed into said housing, a first conductive sleeve embedded in said housing and connected to said cable for RF energy transfer therebetween, said first conductive sleeve surrounding said opening in said housing, an antenna mast formed of insulating material and mounted for reciprocal axial movement in said passage, an antenna element and a second conductive sleeve embedded in the insulating material of said antenna mast, said antenna element and said second conductive sleeve being electrically connected together, said first and second conductive sleeves being closely spaced but insulated from one another whereby RF energy may be coupled capacitively therebetween.

3,098,231
MULTIPLE FREQUENCY ANTENNA SYSTEM
Wallace E. St. Vrain, Kirkwood, and Curt A. Locke, St. Johns, Mo., assignors to Mosley Electronics, Inc., Bridgeton, Mo., a corporation of Missouri
Filed July 18, 1960, Ser. No. 43,448
4 Claims. (Cl. 343—745)



4. A multiple frequency antenna tuning system cooperable with an antenna to provide resonance for at least four separate frequencies, said antenna system compris-

ing a low frequency coil having high impedance to the higher frequencies, a parallel resonant isolating circuit comprising an inductance and capacitance connected in parallel and tuned to the lowest frequency and having high impedance to the higher frequencies, the low frequency coil and the inductance in the parallel resonant circuit being adjustable in impedance and formed by providing divider tap means upon a single impedance coil and at least three separate series resonant circuits connected in parallel to one another, said series resonant circuits being individually resonant to at least three separate higher frequencies and comprising an inductance and capacitance connected in series, said series resonant circuits being connected as a group in series with the parallel resonant circuit and all of said circuits being connected in parallel to said low frequency coil.

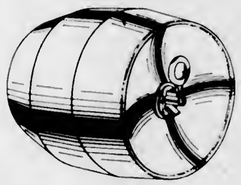
DESIGNS

JULY 16, 1963

195,663
LIQUID DISPENSER
Siegfried H. A. Schmaus, Philadelphia, Pa., assignor to Ametek, Inc., a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 59,793
Term of patent 14 years
(Cl. D2—3)



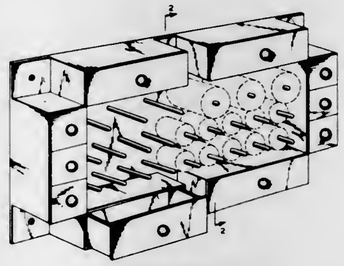
195,664
DISPENSER
John B. Wilson, Chesterfield County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Oct. 13, 1960, Ser. No. 62,471
Term of patent 14 years
(Cl. D2—3)



195,665
CLIP NECKTIE
Warren W. Welch, 1224 E. Monument St., Colorado Springs, Colo.
Filed Sept. 4, 1962, Ser. No. 71,555
Term of patent 14 years
(Cl. D3—16)



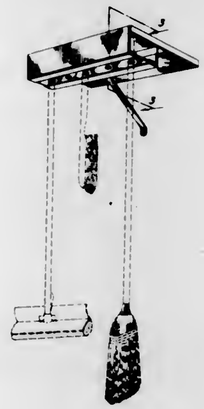
195,666
SEWING RACK
Ecce D. Sheline, 2938 Madrona Drive, Longview, Wash.
Filed Sept. 14, 1962, Ser. No. 71,696
Term of patent 14 years
(Cl. D3—19)



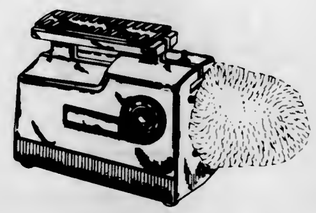
195,667
SLIPPER
Florence B. Zacks, Columbus, Ohio, assignor to R. G. Barry Corporation, Columbus, Ohio, a corporation of Ohio
Filed July 13, 1962, Ser. No. 70,917
Term of patent 14 years
(Cl. D7—7)



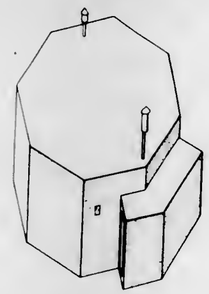
195,668
HOLDER FOR MOPS, BROOMS AND THE LIKE
Eldridge W. Thompson, 3212 Yanceyville Road, Greensboro, N.C.
Filed Dec. 20, 1960, Ser. No. 63,280
Term of patent 3½ years
(Cl. D9—2)



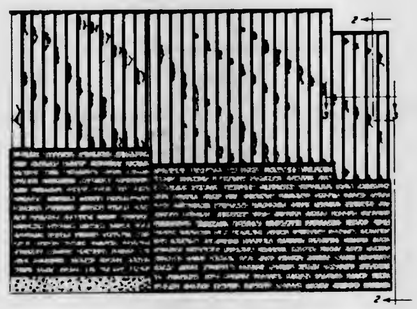
195,669
SHOE POLISHER
Albert J. Dremel and Robert E. Dremel, Racine, Wis., assignors to Dremel Manufacturing Co., Racine, Wis., a corporation of Wisconsin
Filed July 19, 1961, Ser. No. 65,985
Term of patent 14 years
(Cl. D9—2)



195,670
FALL-OUT SHELTER
Jeanette M. St. Pierre, 1256 37th Ave., Vero Beach, Fla.
Filed Nov. 8, 1961, Ser. No. 67,419
Term of patent 3½ years
(Cl. D13—1)



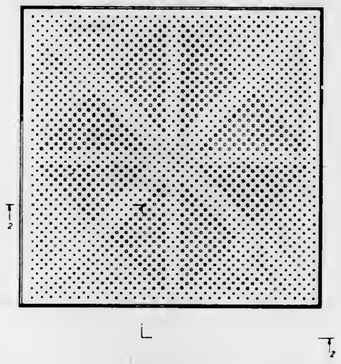
195,671
BREEZEWAY WALL UNIT
Arthur J. Hansmann, 222 White Sand Lane, Racine, Wis.
Filed Nov. 20, 1961, Ser. No. 67,604
Term of patent 3½ years
(Cl. D13—1)



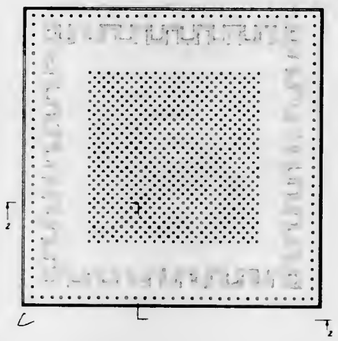
195,672
INFANT'S CHAIR
Earl F. Hamilton and Ralph B. Lay, Columbus, Ind., assignors to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Feb. 12, 1962, Ser. No. 68,786
Term of patent 14 years
(Cl. D15—1)



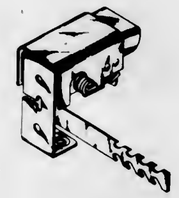
195,673
CEILING TILE
Arthur W. Hopkins, Edgewater, N.J., assignor to The Flintkote Company, New York, N.Y., a corporation of Massachusetts
Filed Dec. 31, 1962, Ser. No. 73,021
Term of patent 14 years
(Cl. D18—2)



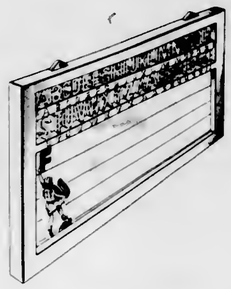
195,674
CEILING TILE
Arthur W. Hopkins, Edgewater, N.J., assignor to The Flintkote Company, New York, N.Y., a corporation of Massachusetts
Filed Dec. 31, 1962, Ser. No. 73,022
Term of patent 14 years
(Cl. D18—2)



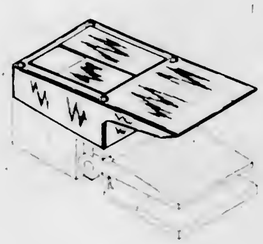
195,675
COMBINED PULL CORD LOCK AND DRAPERY SUPPORT
Orville T. Stall, 7908 Chatfield Ave., Whittier, Calif.
Filed Mar. 19, 1962, Ser. No. 69,324
Term of patent 14 years
(Cl. D21—1)



195,676
PACKAGED EDUCATIONAL BOARD TOY
Robert I. Genin, New Rochelle, and Leon S. Wirch, Forest Hills, N.Y., assignors to Child Guidance Toys, Inc., Bronx, N.Y., a corporation of New York
Filed Aug. 10, 1961, Ser. No. 66,286
Term of patent 7 years
(Cl. D25—1)



195,677
COMBINED COVER AND GUARD FOR A FOOT OPERATED ELECTRIC SWITCH UNIT
Harry J. Collins, Jr., Bayside, Wis., assignor to Cutler, Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed July 19, 1961, Ser. No. 65,981
Term of patent 14 years
(Cl. D26—13)



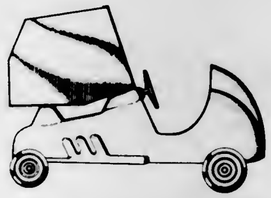
195,678
FISHING LINE SINKER
Leslie E. Young, deceased, late of Cincinnati, Ohio, by Maureen Young Imfeld, administratrix, Hamilton, Ohio
Filed Oct. 31, 1962, Ser. No. 72,348
Term of patent 14 years
(Cl. D31—4)



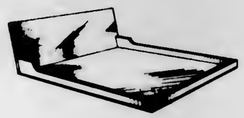
195,679
TOY RAILROAD TRACK BRIDGE SECTION
Robert I. Genin, New Rochelle, and Leon S. Wirch, Forest Hills, N.Y., assignors to Child Guidance Toy, Inc., Bronx, N.Y., a corporation of New York
Filed Aug. 10, 1961, Ser. No. 66,294
Term of patent 7 years
(Cl. D34—15)



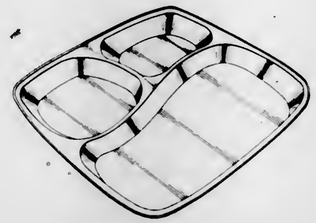
195,680
AMUSEMENT VEHICLE APPARATUS
David H. Braun, Miami, and Harry J. Mabs, Hollywood, Fla., assignors to All-Tech Industries, Inc., Hialeah, Fla., a corporation of Florida
Filed Dec. 18, 1962, Ser. No. 72,890
Term of patent 14 years
(Cl. D34—15)



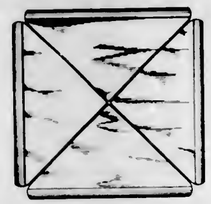
195,681
TRAY
Thomas R. Ross, P.O. Box 1182, Tucumcari, N. Mex.
Filed June 8, 1962, Ser. No. 70,471
Term of patent 14 years
(Cl. D44—10)



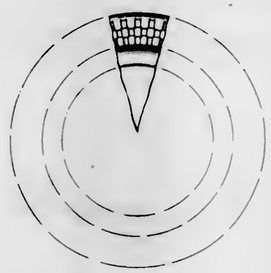
195,682
TRAY OR THE LIKE
Merrill A. Grogel, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed June 27, 1962, Ser. No. 70,701
Term of patent 14 years
(Cl. D44—10)



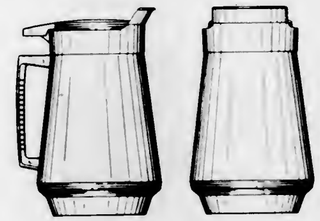
195,683
TRAY
Jens H. Quistgaard, Meggen, Lucerne, Switzerland, assignor to Dansk Rare Wood Company, Inc., Great Neck, N.Y., a corporation of New York
Filed Dec. 7, 1962, Ser. No. 72,763
Term of patent 14 years
(Cl. D44—10)



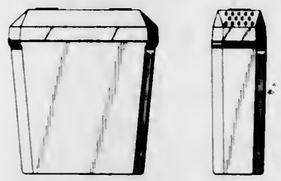
195,684
PLATE
Clarence Le Roy Witmer, Lansdale, Pa., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 12, 1961, Ser. No. 66,702
Term of patent 14 years
(Cl. D44—15)



195,685
INSULATED PITCHER OR THE LIKE
David L. Cornelius, Coon Rapids, Minn., assignor to N.F.C. Engineering Company, Anoka, Minn., a corporation of Minnesota
Filed Dec. 31, 1962, Ser. No. 73,009
Term of patent 14 years
(Cl. D44—21)



195,686
COMBINED SALT AND PEPPER SHAKER
William F. Vernon, Newton, Iowa, assignor to The Vernon Company, Newton, Iowa
Filed Dec. 27, 1961, Ser. No. 68,078
Term of patent 14 years
(Cl. D44—22)



195,687
ROAST BASKET
John Petroff, 1103 E. 67th St., Cleveland, Ohio
Filed May 25, 1961, Ser. No. 65,341
Term of patent 14 years
(Cl. D44—29)



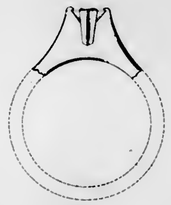
195,688
APPLIANCE HANDLE
Dominic J. De Fano, River Grove, Ill., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Oct. 26, 1962, Ser. No. 72,277
Term of patent 14 years
(Cl. D44—29)



195,689
HOLDER FOR COCKTAIL OLIVES AND THE LIKE
James H. Ogg, North Hollywood, Calif., assignor to Zoo-Piks, Inc., a corporation of California
Filed Jan. 4, 1963, Ser. No. 73,050
Term of patent 14 years
(Cl. D44—29)



195,690
FINGER RING
Robert N. Gibeault, 40 Hunting St., North Attleboro, Mass.
Filed Nov. 30, 1961, Ser. No. 67,752
Term of patent 14 years
(Cl. D45—10)



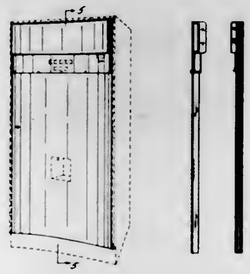
195,691
INTERLOCKING FINGER RING SET
John L. Hazelquist, Garden City, Mich., assignor to Traub Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 16, 1962, Ser. No. 69,300
Term of patent 14 years
(Cl. D45—10)



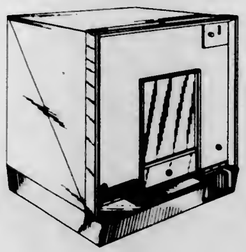
195,692
INTERLOCKING FINGER RING
William F. Roberts, Jr., Farmington, Mich., assignor to Traub Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed May 11, 1962, Ser. No. 70,085
Term of patent 14 years
(Cl. D45—10)



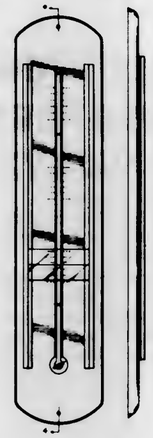
195,693
BEVERAGE VENDING MACHINE
E. Burton Benjamin, Chicago, Ill., assignor to Northwest Automatic Products Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 6, 1961, Ser. No. 64,633
Term of patent 14 years
(Cl. D52—3)



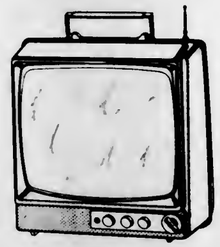
195,694
CURRENCY CHANGER
James E. Jones, University City, and Walter E. Moore, Bel Nor, Mo., assignors to National Rejectors. Inc., St. Louis, Mo., a corporation of Missouri
Filed Oct. 11, 1962, Ser. No. 72,069
Term of patent 14 years
(Cl. D52—4)



195,695
THERMOMETER
George Dean Hunt, Springfield, Ohio, assignor to The Ohio Thermometer Co., Springfield, Ohio, a corporation of Ohio
Filed Feb. 14, 1962, Ser. No. 68,852
Term of patent 14 years
(Cl. D52—7)



195,696
TELEVISION RECEIVER
Richard E. Lee, Cazenovia, and Charles F. Pohlmann, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed Apr. 2, 1962, Ser. No. 69,533
Term of patent 14 years
(Cl. D56—4)



195,697
JUG
Clarence A. Price, Ann Arbor, Mich., assignor to Hoover Ball and Bearing Company, Ann Arbor, Mich., a corporation of Michigan
Filed July 3, 1961, Ser. No. 65,790
Term of patent 14 years
(Cl. D58—5)



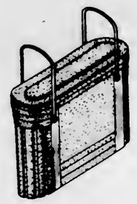
195,698
DECANTER
Walter T. Heintze, New Canaan, Conn., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 6, 1962, Ser. No. 72,748
Term of patent 14 years
(Cl. D58—6)



195,699
DISPLAY PACKAGING CONTAINER
John Donald Bostrom, Niles, Ill., assignor to Poster Packaging, Inc., Chicago, Ill., a corporation of Delaware
Filed Feb. 1, 1961, Ser. No. 63,790
Term of patent 14 years
(Cl. D58—11)



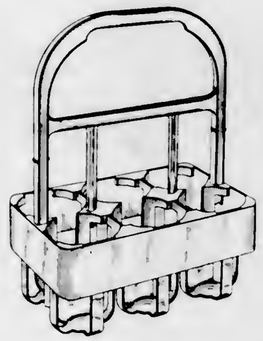
195,700
INSULATED FOOD AND BEVERAGE CONTAINER
Marten Gottsegen, Chicago, Ill., assignor to Gotham Industries, Inc., Chicago, Ill., a corporation of New York
Filed Nov. 20, 1962, Ser. No. 72,550
Term of patent 14 years
(Cl. D58—17)



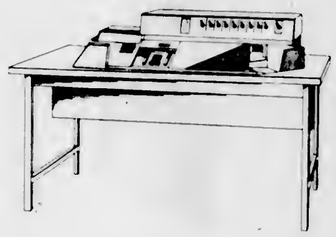
195,701
PRESSURIZED CAN
Ivan Chermayeff, New York, N.Y., assignor to S. C. Johnson & Son Inc., Racine, Wis.
Continuation of design application Ser. No. 65,211, May 17, 1961. This application Feb. 7, 1963, Ser. No. 73,475
Term of patent 14 years
(Cl. D58—17)



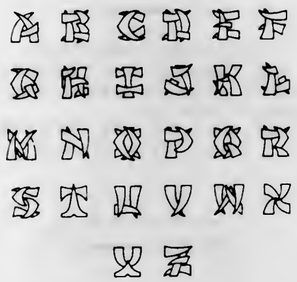
195,702
BOTTLE CARRIER
Michael T. Russo, Bloomfield Hills, Mich., assignor to Mr. Porto, Inc., Wayne County, Mich., a corporation
Filed June 27, 1962, Ser. No. 70,705
Term of patent 14 years
(Cl. D58—26)



195,703
PRINTER CONSOLE
Frank Wilkey, Jr., Johnson City, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 6, 1960, Ser. No. 62,139
Term of patent 14 years
(Cl. D64—11)



195,704
PRINTING TYPE FACE
Gerald E. Stahl, Rye, N.Y., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Jan. 8, 1962, Ser. No. 68,216
Term of patent 14 years
(Cl. D64—12)

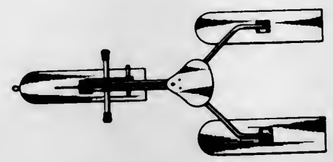


195,705
FONT OF TYPE
Joseph C. Noto, 152 Emily Ave., Elmont, N.Y.
Filed Aug. 23, 1962, Ser. No. 71,427
Term of patent 14 years
(Cl. D64—12)

195,706
BOAT
Milton M. Siegel, Los Angeles, Calif., assignor to Columbia Plastics Corp., Los Angeles, Calif., a corporation of California
Filed July 21, 1961, Ser. No. 66,017
Term of patent 3½ years
(Cl. D71—1)



195,707
RIDING SKI
William M. Neece, 1138 Hilock Ave., Columbus, Ohio
Filed Oct. 5, 1962, Ser. No. 72,001
Term of patent 14 years
(Cl. D71—1)



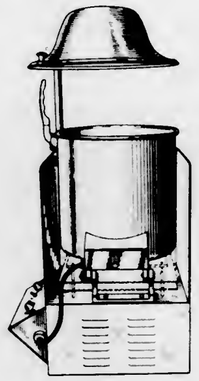
195,708
BALL PEN POINT
Tozaburo Nakada, 19 Otakimachi, Nakano-ku, Tokyo, Japan
Filed Dec. 28, 1959, Ser. No. 58,834
Term of patent 14 years
(Cl. D74—17)



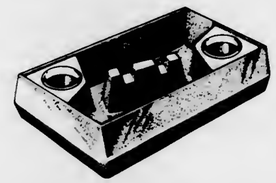
195,709
PORTABLE GAS TANK
James P. Parker, Cambridge City, Ind., assignor to Golay & Co., Inc., Cambridge City, Ind.
Filed Aug. 29, 1961, Ser. No. 66,530
Term of patent 14 years
(Cl. D81—2)



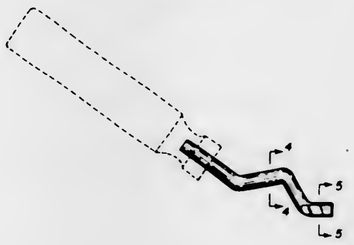
195,710
POPCORN COATING MACHINE
Samuel M. Waas, Kansas City, Mo., assignor to Manley, Inc., Kansas City, Mo., a corporation of Missouri
Filed Jan. 30, 1961, Ser. No. 63,758
Term of patent 14 years
(Cl. D81—10)



195,711
ASH TRAY
Donald J. O'Connor, 65 Bissell St., East Hartford, Conn.
Filed Sept. 21, 1962, Ser. No. 71,792
Term of patent 14 years
(Cl. D85—2)



195,712
COMBINED CUTTER AND TOOL FOR REMOVING PLUGS OR APERTURED CAPS
James F. Campbell, Box 842, Grand Junction, Colo.
Filed June 2, 1961, Ser. No. 65,432
Term of patent 14 years
(Cl. D93—4)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Alamance Industries, Inc.: *See*—
Comer, Marvin H. Re. 25,416.

Amason, Myron P., to Douglas Aircraft Co., Inc. Lightning arrestor for radomes. Re. 25,417, 7–16–63, Cl. 244—1.

Comer, Marvin H., to Alamance Industries, Inc. Stretch yarn and fabric and method of making same. Re. 25,416, 7–16–63, Cl. 66—180.

Douglas Aircraft Co., Inc.: *See*—
Amason, Myron P. Re. 25,417.

Gougelot, Alain H. E.: *See*—
Merritt, Henry E., Tiberghien, and Gougelot. Re. 25,415.

Grant, Charles H. Airplane with stabilizing fins. Re. 25,418, 7–16–63, Cl. 244—91.

Massey-Ferguson, Ltd.: *See*—
Merritt, Henry E., Tiberghien, and Gougelot. Re. 25,415.

Merritt, Henry E., P. F. Tiberghien, and A. H. E. Gougelot, to Massey-Ferguson, Ltd. Hydraulic power unit and control system for tractors. Re. 25,415, 7–16–63, Cl. 172—9.

Tiberghien, Pierre F.: *See*—
Merritt, Henry E., Tiberghien, and Gougelot. Re. 25,415.

LIST OF PLANT PATENTEES

Hemet Wholesale: *See*—
Lindquist, Robert V. 2,269.

Lindquist, Robert V., to Hemet Wholesale. Rose plant. 2,269, 7–16–63, Cl. 47—61.

LIST OF DESIGN PATENTEES

All-Tech Industries, Inc.: *See*—
Braun, David H., and Mabs. 195,680.

American Can Co.: *See*—
Witmer, Clarence L. R. 195,684.

Ametek, Inc.: *See*—
Schmaus, Siegfried H. A. 195,663.

Benjamin, E. Burton, to Northwest Automatic Products Corp. Beverage vending machine. 195,693, 7–16–63, Cl. D52—3.

Berry, R. G., Corp.: *See*—
Zacks, Florence B. 195,667.

Bostrom, John D., to Poster Packaging, Inc. Display packaging container. 195,699, 7–16–63, Cl. D58—11.

Braun, David H., and H. J. Mabs, to All-Tech Industries, Inc. Amusement vehicle apparatus. 195,680, 7–16–63, Cl. D34—15.

Campbell, James F. Combined cut'er and tool for removing plugs or apertured caps. 195,712, 7–16–63, Cl. D93—4.

Chermayeff, Ivan, to S. C. Johnson & Son Inc. Pressurized can. 195,701, 7–16–63, Cl. D58—17.

Child Guidance Toys, Inc.: *See*—
Genin, Robert I., and Wirch. 195,676.
Genin, Robert I., and Wirch. 195,679.

Collins, Harry J., Jr., to Cutler, Hammer, Inc. Combined cover and guard for a foot operated electric switch unit. 195,677, 7–16–63, Cl. D26—13.

Columbia Plastics Corp.: *See*—
Siegel, Milton M. 195,706.

Cornelius, David L., to N.F.C. Engineering Co. Insulated pitcher or the like. 195,685, 7–16–63, Cl. D44—21.

Cutler, Hammer, Inc.: *See*—
Collins, Harry J., Jr. 195,677.

Dansk Rare Wood Co., Inc.: *See*—
Quistgaard, Jens H. 195,683.

De Fano, Dominic J., to McGraw-Edison Co. Appliance handle. 195,688, 7–16–63, D44—29.

Dremel, Albert J., and R. E., to Dremel Mfg. Co. Shoe polisher. 195,669, 7–16–63, Cl. D9—2.

Dremel Mfg. Co.: *See*—
Dremel, Albert J., and R. E. 195,669.

Dremel, Robert E.: *See*—
Dremel, A. J., and R. E. 195,669.

Flintkote Co., The: *See*—
Hopkins, Arthur W. 195,673.
Hopkins, Arthur W. 195,674.

General Electric Co.: *See*—
Lee, Richard E., and Pohlmann. 195,696.

Genin, Robert I., and L. S. Wirch, to Child Guidance Toys, Inc. Packaged educational board toy. 195,676, 7–16–63, Cl. D25—1.

Genin, Robert I., and L. S. Wirch, to Child Guidance Toys, Inc. Toy railroad track bridge section. 195,679, 7–16–63, Cl. D34—15.

Gibeault, Robert N. Finger ring. 195,690, 7–16–63, Cl. D45—10.

Golay & Co., Inc.: *See*—
Parker, James P. 195,709.

Gotham Industries, Inc.: *See*—
Gottsegen, Marten. 195,700.

Gottsegen, Marten, to Gotham Industries, Inc. Insulated food and beverage container. 195,700, 7–16–63, Cl. D58—17.

Grogel, Merrill A., to Reynolds Metals Co. Tray or the like. 195,682, 7–16–63, Cl. D44—10.

Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F., and Lay. 195,672.

Hamilton, Earl F., and R. B. Lay, to Hamilton Cosco, Inc. Infant's chair. 195,672, 7–16–63, Cl. D15—1.

Hansmann, Arthur J. Breezeway wall unit. 195,671, 7–16–63, Cl. D13—1.

Habelquist, John L., to Traub Mfg. Co. Interlocking finger ring set. 195,691, 7–16–63, Cl. D45—10.

Heintze, Walter T., to Schenley Industries, Inc. Decanter. 195,698, 7–16–63, Cl. D58—6.

Hoover Ball and Bearing Co.: *See*—
Price, Clarence A. 195,697.

Hopkins, Arthur W., to The Flintkote Co. Ceiling tile. 195,673, 7–16–63, Cl. D18—2.

Hopkins, Arthur W., to The Flintkote Co. Ceiling tile. 195,674, 7–16–63, Cl. D18—2.

Hunt, George D. to The Ohio Thermometer Co. Thermometer. 195,695, 7–16–63, Cl. D52—7.

Imfeld, Maureen Y.: *See*—
Young, Leslie F. 195,678.

International Business Machines Corp.: *See*—
Wilkey, Frank, Jr. 195,703.

Johnson, S. C., & Son Inc.: *See*—
Chermayeff, Ivan. 195,701.

Jones, James E., and W. E. Moore, to National Reflectors, Inc. Currency changer. 195,694, 7–16–63, Cl. D52—4.

Lay, Ralph B.: *See*—
Hamilton, Earl F., and Lay. 195,672.

Lee, Richard E., and C. F. Pohlmann, to General Electric Co. Television receiver. 195,696, 7–16–63, Cl. D56—4.

Mabs, Harry J.: *See*—
Braun, David H., and Mabs. 195,680.

Manley, Inc.: *See*—
Waas, Samuel M. 195,710.

McGraw-Edison Co.: *See*—
De Fano, Dominic J. 195,688.

Minnesota Mining and Mfg. Co.: *See*—
Stahl, Gerald E. 195,704.

Moore, Walter E.: *See*—
Jones, James E., and Moore. 195,694.

N.F.C. Engineering Co.: *See*—
Cornelius, David L. 195,685.

Nakada, Tozaburo. Bal. pen point. 195,708, 7–16–63, Cl. D74—17.

National Reflectors, Inc.: *See*—
Jones, James E., and Moore. 195,694.

Neece, William M. Riding ski. 195,707, 7–16–63, Cl. D71—1.

Northwest Automatic Products Corp.: *See*—
Benjamin, E. Burton. 195,693.

Noto, Joseph C. Font of type. 195,705, 7–16–63, Cl. D64—12.

O'Connor, Donald J. Ash tray. 195,711, 7–16–63, Cl. D85—2.

Ogg, James H., to Zoo-Piks, Inc. Holder for cocktail olives and the like. 195,689, 7–16–63, Cl. D44—29.

Ohio Thermometer Co., The: *See*—
Hunt, George D. 195,695.

Parker, James P., to Golay & Co., Inc. Portable gas tank. 195,709, 7–16–63, Cl. D81—2.

Petroff, John. Roast basket. 195,687, 7–16–63, Cl. D44—29.

Pohlmann, Charles F.: *See*—
Lee, Richard E., and Pohlmann. 195,696.

Porto, Mr., Inc.: *See*—
Russo, Michael T. 195,702.

Poster Packaging, Inc.: *See*—
Bostrom, John D. 195,699.

Price, Clarence A., to Hoover Ball and Bearing Co. Jug. 195,697, 7–16–63, Cl. D58—5.
Quistgaard, Jens H., to Dansk Rare Wood Co., Inc. Tray. 195,683, 7–16–63, Cl. D44—10.
Reynolds Metals Co.: *See*—
Grogel, Merrill A. 195,682.
Wilson, John B. 195,664.
Roberts, William F., Jr., to Traub Mfg. Co. Interlocking finger ring. 195,692, 7–16–63, Cl. D45—10.
Ross, Thomas R. Tray. 195,681, 7–16–63, Cl. D44—10.
Russo, Michael T., to Mr. Porto, Inc. Bottle carrier. 195,702, 7–16–63, Cl. D58—26.
St. Pierre, Jeanette M. Fall-out shelter. 195,670, 7–16–63, Cl. D13—1.
Schenley Industries, Inc.: *See*—
Heintze, Walter T. 195,698.
Schmaus, Siegfried H. A., to Ametek, Inc. Liquid dispenser. 195,663, 7–16–63, Cl. D2—3.
Sheline, Ecce D. Sewing rack. 195,666, 7–16–63, Cl. D3—19.
Siegel, Milton M., to Columbia Plastics Corp. Boat. 195,706, 7–16–63, Cl. D71—1.
Stahl, Gerald E., to Minnesota Mining and Mfg. Co. Printing type face. 195,704, 7–16–63, Cl. D64—12.
Stall, Orville T. Combined pull cord lock and drapery support. 195,675, 7–16–63, Cl. D21—1.
Thompson, Eldridge W. Holder for mops, brooms and the like. 195,668, 7–16–63, Cl. D9—2.
Traub Mfg. Co.: *See*—
Hazelquist, John L. 195,691.
Roberts, William F., Jr. 195,692.
Vernon Co., The: *See*—
Vernon, William F. 195,686.
Vernon, William F., to The Vernon Co. Combined salt and pepper shaker. 195,686, 7–16–63, Cl. D44—22.
Waas, Samuel M., to Manley, Inc. Popcorn coating machine. 195,710, 7–16–63, Cl. D81—10.
Welch, Warren W. Clip necktie. 195,665, 7–16–63, Cl. D3—16.
Wilkey, Frank, Jr., to International Business Machines Corp. Printer console. 195,703, 7–16–63, Cl. D64—11.
Wilson, John B., to Reynolds Metals Co. Dispenser. 195,664, 7–16–63, Cl. D2—3.
Wirch, Leon S.: *See*—
Genin, Robert I., and Wirch. 195,676.
Genin, Robert I., and Wirch. 195,679.
Witmer, Clarence L. R., to American Can Co. Plate. 195,684, 7–16–63, Cl. D44—15.
Young, Leslie E., deceased; by M. Y. Imfeld, administratrix. Fishing line sinker. 195,678, 7–16–63, Cl. D31—4.
Zacks, Florence B., to R. G. Berry Corp. Slipper. 195,667, 7–16–63, Cl. D7—7.
Zoo-Piks, Inc.: *See*—
Ogg, James H. 195,689.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

A-B-C Packaging Machine Corp.: *See*—
Neal, James L. and M. P., and Dice. 3,097,463.
AMP Inc.: *See*—
Shannon, Suel G. 3,097,906.
A & T Development Corp.: *See*—
Avril, Arthur C. 3,097,461.
Abbott Laboratories: *See*—
Everett, Guy M., and Wykes. 3,098,010.
Scislowicz, Henry M. 3,097,646.
Abel, George J.: *See*—
Reid, Orland B., Herr, Turner, and Abel. 3,097,617.
Acme Homes Metal Works, Inc.: *See*—
Duncan, William J. 3,097,614.
Aerojet-General Corp.: *See*—
Tasca, Angelo G. 3,097,708.
Aeroquip Corp.: *See*—
Zeeb, Stanley H., and Steinert. 3,097,865.
Aeroscience, Inc.: *See*—
Young, Shirrel R. 3,097,536.
Aerpat A.G.: *See*—
Chapman, David Z. 3,097,559.
Agfa Aktiengesellschaft: *See*—
Kremp, Rudolf, Wagner, Biedermann, Kubitzek. 3,097,581.
Winkler, Alfred, and Jakob. 3,097 582.
Aguilar, Gilbert E. Vehicle cushion arrangement. 3,097,881, 7–16–63, Cl. 296—66.
Aguilar, John G.: *See*—
Rice, Harold B., and Aguilar. 3,097,554.
Aigrain, Pierre, to Compagnie Generale de Telegraphie Sans Fil. Hot electron cold lattice semi-conductor cathode. 3,098,168, 7–16–63, Cl. 313—346.
Air Products and Chemicals, Inc.: *See*—
McElroy, James E., and Shalit. 3,097,974.
Air Reduction Co., Inc.: *See*—
Moen, Walter B. 3,097,918.
Airstream, Inc.: *See*—
Dale, Emmett O. 3,098,144.
Alamance Industries, Inc.: *See*—
Pike, Jesse A., and Eulliss. 3,097,513.
Alba-Waldensian, Inc.: *See*—
Garrou, James E. 3,097,770.
Aldridge, Clyde L., and N. L. Cull, to Esso Research and Engineering Co. Preparation of oxygenated compounds. 3,098,101, 7–16–63, Cl. 260—604.
Alexanderson, Howard A.: *See*—
Bunger, Dennen J., Emery, Cavalier, Ferguson, Schmider, and Alexanderson. 3,097,824.
Alford, Carl C. Chair tray. 3,097,884, 7–16–63, Cl. 297—153.
Allegrini, Aldo P., and T. A. Cecil, to Minerals & Chemicals Philipp Corp. Sugar refining adsorbent. 3,098,045, 7–16–63, Cl. 252—455.
Allen, George H. Sealing arrangement. 3,097,855, 7–16–63, Cl. 277—188.
Allen, Herbert, and M. R. Jones, to Cameron Iron Works, Inc. Wellhead equipment for suspending multiple tubing strings. 3,097,869, 7–16–63, Cl. 285—137.
Allen, Milton J., to Ciba Corp. Certain 2(4-halophenyl) 3-pyridylbutane-diols. 3,098,077, 7–16–63, Cl. 260—297.
Allen, Scott E., to Swingspout Measure Co. Swingspout dispenser. 3,097,674, 7–16–63, Cl. 141—366.
Allied Chemical Corp.: *See*—
Walter, Charles R., Jr., and Lloyd. 3,098,017.
Alston, Otis B., to Swift Spinning Mills, Inc. Process and apparatus for carding cotton fibers. 3,097,399, 7–16–63, Cl. 19—98.
Aluotto, Dominick M. Liquid dispensing apparatus. 3,097,763, 7–16–63, Cl. 222—43.
Alvik, Harold. Digging machine. 3,097,703, 7–16–63, Cl. 172—43.
American Air Filter Co., Inc.: *See*—
Copenhefer John E. 3,097,710.
American Can Co.: *See*—
Kuchenbecker, Morris W. 3,097,574.
Makowski, Alexander G. 3,097,423.
Makowski, Alexander G., Blood, and Wathen. 3,097,593.
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Witmer, Clarence L. 3,097,780.
American Cement Corp.: *See*—
Harris, Philip H. 3,097,955.
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Miller Mary L. 3,098,060.
Saunders, Kenneth W., and Bikales. 3,097,956.
American Radiator & Standard Sanitary Corp.: *See*—
Heller, Kenneth G. 3,097,818.
American Zinc, Lead and Smelting Co.: *See*—
Pagel, Richard F. 3,098 019.
Amick, James A., and G. W. Cullen, to Radio Corp. of America. Semiconductor devices. 3,097,977, 7–16–63, Cl. 148—6.14.
Amsel, Francis E., W. B. Sharav, and F. T. Stanchus, to Union Carbide Corp. Magnetic flux-gas shielded metal arc welding. 3,097,979, 7–16–63, Cl. 148—26.
Amundsen, Oliver O., and R. H. Kocain, to Skil Corp. Adapter and retainer assembly for non-rotary tool elements used with a rotary-hammer device. 3,097,858, 7–16–63, Cl. 279—191.1.
Anaconda Wire and Cable Co.: *See*—
Jore, Bjorn, D'Ascoli, and Olson. 3,098,116.
Anchor Hocking Glass Corp.: *See*—
Runco, Joseph C. 3,097,658.
Anderson, Edward P., to Engelhard Industries Inc. Cathodic protection system. 3,098,026, 7–16–63, Cl. 204—196.
Anderson, Harold C., to Litton Systems, Inc. Measuring process. 3,098,225, 7–16–63, Cl. 343—12.
André, Joseph G. E., and J. M. D. Rech, to Sud-Aviation Societe National de Constructions, Aeronautiques. Thrust reverses for jet engines. 3,097,484, 7–16–63, Cl. 60—35.54.
Andrew, Herbert F., and V. D. Poole, to Imperial Chemical Industries Ltd. Process for dyeing textiles with dyestuffs containing pyrimidine ring. 3,097,910, 7–16–63, Cl. 8—54.2.
Andrews, Alvadore M. Rear window deflector for automobiles. 3,097 882, 7–16–63, Cl. 296—91.
Andrews, Zenas B., to United States of America, Navy. Pneumatic heat transfer type air damper. 3,097,838, 7–16–63, Cl. 267—1.
Angle, Robert L. Egg washer. 3,097,382, 7–16–63, Cl. 15—3.13.
Anner, Georg: *See*—
Meystre, Charles, Wettstein, Anner, Heusler, and Wieland. 3,098,070.
Anner, Georg: *See*—
Wettstein, Albert, Anner, Meystre, Wieland, Ehmann, Heusler, Hunger, and Kebrle. 3,098,085.
Antrim, Doron S., N. G. Kling, and V. A. Gill, to The Weatherhead Co. Check valve. 3,097,666, 7–16–63, Cl. 137—515.5.
Apel, Francis N.: *See*—
Conte, Louis B., Jr., and Apel. 3,098,099.
Aplan, Frank F., to Union Carbide Corp. Slime control in heavy-media ore separation. 3,098,035, 7–16–63, Cl. 209—5.
Applegate, Robert D. Portable continuous drier. 3,097,934, 7–16–63, Cl. 34—55.
Arkless, Kenneth, to British Titan Products Co. Ltd. Preparation of titanium dioxide. 3,097,923, 7–16–63, Cl. 23—202.
Armantrout, Kenneth M.: *See*—
Kelbel, Donald W., and Armantrout. 3,097,546.
Armco Steel Corp.: *See*—
Hudson, Edwin B. 3,097,549.
Le Roux, Robert K., Nellon, and Word. 3,097,695.
Armstrong Cork Co.: *See*—
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Langer, Fritz. 3,097,668.
Ashley, Robert B., to General Electric Co. Transistor vertical deflection circuit. 3,098,171, 7–16–63, Cl. 315—27.
Asire, George F. Lubricating system. 3,097,722, 7–16–63, Cl. 184—105.
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Sloman, Arthur R. 3,097,987.
Ateliers de Construction Schwartz-Hautmont, Societe Anonyme, des: *See*—
Schwartz, Jean L. 3,097,688.
Atlantic Refining Co., The: *See*—
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Atlantic Research Corp.: *See*—
Silver, Bernard. 3,097,481.
Atlas Corp.: *See*—
Guarnaschelli, Stephen. 3,098,115.
Atlas General Industries, Inc.: *See*—
Burke, Thomas F. 3,097,576.
Atomenergi, Aktiebolaget: *See*—
Hyden, Anders L. F. 3,097,972.
Attwood, Warren R. Shelf bracket and clips. 3,097,822, 7–16–63, Cl. 248—250.
Audin, Anthony L. Head rests for dental chairs and the like. 3,098,128, 7–16–63, Cl. 179—146.
Auer, John H., Jr., to General Signal Corp. Ultrasonic vehicle detection system. 3,098,213, 7–16–63, Cl. 340—38.
Augenstein, Bruno W.: *See*—
Gilvarry, John J., Gore, Augenstein, and Randels. 3,097,717.

Austin, William E., F. A. Levin, and T. H. Binaski, to The Nestle-Le Mur Co. Urea-fatty alcohol adduct dyeing composition and hair dyeing therewith. 3,098,013, 7-16-63, Cl. 167—88.

Avril, Arthur C., to A & T Development Corp. Bag closing machine. 3,097,461, 7-16-63, Cl. 53—137.

Ayrapaa, Teuvo P., to A. Kabi. Enzyme purification. 3,098,-015, 7-16-63, Cl. 195—66.

Babcock, John C., J. A. Campbell, and R. L. Pederson, to The Upjohn Co. 2a-methyl-11-oxygenated-5a-androstanes. 3,098,053, 7-16-63, Cl. 260—397.45.

Babcock & Wilcox, Ltd.: *See*—
Neumann, Willy. 3,098,036.

Babcock & Wilcox Co., The: *See*—
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Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Elsele, Julius, Federkiel, Krebbiel, Krzikalla, Lange, and Bohlemann. 3,098,063.
Polster, Rudolf. 3,098,088.
Steinhofer, Adolf, Frey, and Knobloch. 3,097,935.

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Baker Perkins Inc.: *See*—
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Baltzly, Richard, P. B. Russell, and N. B. Mehta, to Burroughs Wellcome & Co. (U.S.A.) Inc. 1,1-diphenyl-2-tertiary aminoalkyl-3-hydroxymethyl-cyclopropanes and esters thereof. 3,098,076, 7-16-63, Cl. 260—294.7.

Bankhead, Charles A. Assembled composition printing process. 3,097,594, 7-16-63, Cl. 101—128.4.

Banks, Waldo H., to Draper Corp. Lay motion for looms. 3,097,669, 7-16-63, Cl. 139—190.

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Barassin, Jacques: *See*—
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Barényi, Béla, to Daimler-Benz Aktiengesellschaft. Automobile body and door construction. 3,097,878, 7-16-63, Cl. 296—28.

Barker, Robert N.: *See*—
Ponsness, Lloyd E., and Barker. 3,097,560.

Barney, Greenlief H., and L. C. Burman, to Engelhard Industries, Inc. Composite fuel elements for nuclear reactors. 3,098,024, 7-16-63, Cl. 204—193.2.

Barrie, Robert B. Amphibious vehicle. 3,097,372, 7-16-63, Cl. 9—1.

Barringer, Anthony R., and S. Kagan, to Barringer Research Ltd. Method and apparatus for the measurement of magnetic fields. 3,098,197, 7-16-63, Cl. 324—.5.

Barringer Research Ltd.: *See*—
Barringer, Anthony R., and Kagan. 3,098,197.

Barti, Hugo: *See*—
Jellinek, Karl, Hegedüs, Ulmer, and Barti. 3,097,908.

Bartolini Salimbeni. Method and apparatus for electrically logging earth formations by sensing the redox potential arising in a mud filled borehole. 3,098,198, 7-16-63, Cl. 324—1.

Basa, Frank: *See*—
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Baum, Bernard O., to Union Carbide Corp. Propylene polymer stabilized with a synergistic combination of a para-tertiaryalkyl phenol-formaldehyde resin and a dithiophosphate. 3,098,057, 7-16-63, Cl. 260—43.

Baustert, George N., to The Ford Motor Co. Fast action toggle hand clamp. 3,097,553, 7-16-63, Cl. 81—351.

Bayer, Rudolf: *See*—
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Beachler, Edward D., to Beloit Iron Works. Suction roll perforation design. 3,097,995, 7-16-63, Cl. 162—371.

Beatrice Foods Co.: *See*—
Noznick, Peter P., and Bernardoni. 3,097,950.

Beaunit Corp.: *See*—
Woodell, Rudolph. 3,097,414.

Becher, Robert P., to E. I. du Pont de Nemours and Co. Yarn treating apparatus. 3,097,412, 7-16-63, Cl. 28—1.

Becker, Rudolf, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Method for producing ethylene. 3,098,107, 7-16-63, Cl. 260—677.

Becker, Willi, to Arthur Pfeiffer G.m.b.H. Methods of and apparatus for the production of high vacua. 3,098,155, 7-16-63, Cl. 230—69.

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Beetz, Pierre, to Panmetals and Processes Inc. Process for the preparation of mineral phosphates intended for the manufacture of phosphoric acid by the wet method. 3,097,-922, 7-16-63, Cl. 23—165.

Beggs, Donald, and W. A. Phillips, to Midland-Ross Corp. Ingot heating furnace. 3,097,836, 7-16-63, Cl. 263—41.

Behringwerke Aktiengesellschaft: *See*—
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Belfiore, Samuel. Rotary lawn mower blade. 3,097,469, 7-16-63, Cl. 56—295.

Bell Intercontinental Corp.: *See*—
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Freeman, Ardee H., and Pichard. 3,097,451.
Freeman, Ardee H., and Pichard. 3,097,452.

Bell, John, to Muirhead & Co. Ltd. Stabilization of floating bodies. 3,097,622, 7-16-63, Cl. 114—125.

Bell Telephone Laboratories, Inc.: *See*—
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Justus, Edgar J. 3,097,591.

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Mitchell, James I., and Weiss. 3,097,793.

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Benninghoff, William E., and J. W. Thomas, to The Ohio Crankshaft Co. Resistance welding method and apparatus. 3,098,146, 7-16-63, Cl. 219—59.

Berch, William H., to General Dynamics Corp. Routing means for telephone system. 3,098,125, 7-16-63, Cl. 179—18.

Berens, Heinrich, to Reimers Getriebe K.G. Automatic chain tightening mechanism for infinitely variable cone pulley gears. 3,097,540, 7-16-63, Cl. 74—230.17.

Bergquist, Palmer. Bow pull indicator. 3,097,624, 7-16-63, Cl. 116—67.

Berkley, Charles R., to Gulf Oil Corp. Chemical pump for oil wells. 3,097,605, 7-16-63, Cl. 103—6.

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Berman, Sanford. Mixed liquid dispenser. 3,097,670, 7-16-63, Cl. 141—83.

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Berry, Henry W., to Minneapolis-Honeywell Regulator Co. Attitude controls. 3,097,816, 7-16-63, Cl. 244—14.

Bers, Naum S., to Space Technology Laboratories, Inc. Transducing and control systems. 3,097,535, 7-16-63, Cl. 74—5.7.

Berta, Remo J., and W. Haumann, to Union Carbide Corp. Cryogenic storage apparatus. 3,097,900, 7-16-63, Cl. 312—214.

Besal, Robert J.: *See*—
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Besly-Welles Corp.: *See*—
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Bethell, James R., and D. J. Hadley, to The Distillers Co. Ltd. Production of unsaturated aliphatic aldehydes. 3,098,102, 7-16-63, Cl. 260—604.

Beuk, Jack F.: *See*—
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Bickford, Frank H.: *See*—
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Bidwell, Joseph B., to General Motors Corp. Gas turbine accelerator. 3,097,485, 7-16-63, Cl. 60—39.14.

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Biel, John H., to Lakeside Laboratories, Inc. Unsymmetrical N,N'-(N,N-disubstituted aminoalkyl)-hydrazines. 3,098,-073, 7-16-63, Cl. 260—247.5.

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Nye, Maurice A., and Bittman. 3,097,812.
Nye, Maurice A., and Bittman. 3,098,109.

Bixson, Louis L., and H. H. Deboi, to United States of America, Air Force. Instantaneous and simultaneous propellant shutoff for a bipropellant flow system. 3,097,483, 7-16-63, Cl. 60—35.6.

Bizet, Pierre M., to Compagnie Industrielle des Telephones. Bilaterally operable transistorized shifting register. 3,098,-161, 7-16-63, Cl. 307—88.5.

Bjorklund, Carl W.: *See*—
Mullins, Lawrence J., Jr., Leary, Bjorklund, and Maraman. 3,098,028.

Blakesley, George R., Sr. Air conditioner apparatus. 3,097,-506, 7-16-63, Cl. 62—263.

Blanchard, Raymond: *See*—
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Blank, Hans G., to General Telephone and Electronics Laboratories, Inc. Electroluminescent cells controlled by impedance networks. 3,098,175, 7-16-63, Cl. 315—250.

Blankevoort, Dirk. Method of constructing movable building sections and apparatus applying this method. 3,097,-493, 7-16-63, Cl. 61—43.

Blatter, Herbert M., and G. de Stevens, to Ciba Corp. Thiacycles. 3,098,071, 7-16-63, Cl. 260—243.

Bleier, Ernest L., and T. W. Kucharski, to General Dynamics Corp. Universal cell for printed circuit boards. 3,098,-177, 7-16-63, Cl. 317—101.

Bleiweiss, Arthur F., G. Colombo, J. B. Dickson, and B. Orlov, to Signal-Stat Corp. Current operated flasher with voltage and temperature compensation. 3,098,139, 7-16-63, Cl. 200—122.

Bliss, Robert W., to The Magnavox Co. Inertial energy generator storage system. 3,098,163, 7-16-63, Cl. 310—8.4.

Blodgett, Norman S.: *See*—
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Blomquist, Arthur G., L. Larsen, and P. G. Wermager, to United States of America, Navy. Missile contactor. 3,098,132, 7-16-63, Cl. 200—50.

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Streimer, Irving. 3,097,639.

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Bonetti, Nathaniel W. R., and R. James, Jr., to Esso Research and Engineering Co. Fluid delivery device. 3,097,-671, 7-16-63, Cl. 141—116.

Booth, Henry. Hair and wool depilation method and composition. 3,097,912, 7-16-63, Cl. 8—94.16.

Bopf, Edward C., to Deere & Co. Flat spring standard mounting. 3,097,705, 7-16-63. Cl. 172—710.

Borchert, Peter J., to Miles Laboratories, Inc. Composition comprising reaction product of hydrolyzed vinyl acetate polymer and periodate oxidized polysaccharide and process for preparing same. 3,098,049, 7-16-63, Cl. 260—17.4.

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Bowen, Stuart W., and M. L. Marks, to Consolidated Electrodynamics Corp. Chromatography. 3,097,517, 7-16-63, Cl. 73—23.

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Carlisle, Samuel S., and Boxall. 3,097,971.

Boyd, Dewey D. Coil expander. 3,097,841, 7-16-63, Cl. 267—60.

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Brauer, Joseph B., to United States of America, Air Force. Microwave delay line and method of fabrication. 3,098,-204, 7-16-63, Cl. 333—30.

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Brennemann, Andrew E., to International Business Machines Corp. Cryogenic ring circuit. 3,098,159, 7-16-63, Cl. 307—88.5.

Bresette, George E., ½ to P. L. Parrish. Process for purifying salt and product thereof. 3,097,952, 7-16-63, Cl. 99—143.

Brideau, James. Tool guide. 3,097,891, 7-16-63, Cl. 308—4.

Brierley, Albert E., to The English Electric Co. Ltd. Oil-immersed electrical apparatus having oil-impregnated main insulation partly covered by liquid-impervious material. 3,098,113, 7-16-63, Cl. 174—26.

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Brockbank, Robert A., to Her Majesty's Postmaster General. Grapnels for submarine cables. 3,097,874, 7-16-63, Cl. 294—66.

Brody, Gerald, to Moorman Mfg. Co. Anthelmintic 5-arylazo rhodanines. 3,098,007, 7-16-63, Cl. 167—53.1.

Brooks Ivan C.: *See*—
Haus, Joseph B., Brooks, and Price. 3,098,004.

Brown, Albert M., to G. Stibbe & Co., Ltd. Needle selecting mechanisms in knitting machines. 3,097,510, 7-16-63, Cl. 66—50.

Brown, Robinson W., and W. L. Mynatt, to W. H. Curtin and Co. Tank thermometer and valve therefor. 3,097,-531 7-16-63, Cl. 73—354.

Brown, Robinson W., and W. E. Oakey, to W. H. Curtin and Co. Liquid sampling device. 3,097,532, 7-16-63, Cl. 73—425.4.

Brown, Roger W., to Cone Automatic Machine Co., Inc. Chucking mechanism. 3,097,856, 7-16-63, Cl. 279—4.

Browning, John E., to Continental Copper & Steel Industries, Inc. Aluminum life float with plywood platform. 3,097,374, 7-16-63, Cl. 9—11.

Bruckner, Klaus, K. Irmscher, and J. Gillissen, to E. Merck Aktiengesellschaft. Anabolic alkylthio-steroids. 3,098,084, 7-16-63, Cl. 260—397.4.

Brunelle, Thomas E.: *See*—
Crecelius, Samuel B., and Brunelle. 3,098,065.

Brunswick Corp.: *See*—
Roehr, Zbislaw M. 3,097,647.

Bryant, John A., II, and G. D. Pierce, to The Cross Co. Rotary latch mechanism for machine tools. 3,097,724, 7-16-63, Cl. 188—82.7.

Buchhold, Theodor A., to General Electric Co. Cryogenic D.C. to A.C. amplifier. 3,098,189, 7-16-63, Cl. 321—8.

Buchwald, Robert M., to General Motors Corp. Oil pan and drain plug assembly. 3,097,663, 7-16-63, Cl. 137—351.

Buckley, Charles R., and J. M. Tompsett, to English Electric Valve Co. Ltd. Travelling wave tubes. 3,098,169, 7-16-63, Cl. 315—3.5.

Bulvid, Michel D., to United Aircraft Corp. Blade folding mechanism. 3,097,701, 7-16-63, Cl. 170—160.12.

Bulloff, Jack J.: *See*—
Whitacre, John R., and Bulloff. 3,097,962.

Bulman, E. O., Mfg. Co., Inc.: *See*—
Waltz, Edward. 3,097,775.

Bunger, Dennen J., F. V. Emery, A. A. Cavalier, J. R. Ferguson, Jr., H. R. Schmider, and H. A. Alexanderson, to The Bendix Corp. Turbine, wheel containment. 3,097,-824, 7-16-63, Cl. 253—77.

Burke, Thomas F., to Atlas General Industries, Inc. Devices for forming hinge cover folding boxes. 3,097,576, 7-16-63, Cl. 93—49.

Burlington Industries, Inc.: *See*—
Smith, Horace L., Jr. 3,097,831.

Burman, Lawrence C.: *See*—
Barney, Greenlief H., and Burman. 3,098,024.

Burndy Corp.: *See*—
Dibner, David. 3,097,683.

Burnham, John. Electrolytic capacitors. 3,098,182, 7-16-63, Cl. 317—230.

Burnham, Robert J. Dispensing magazine for ball point refill cartridges. 3,097,739, 7-16-63, Cl. 206—56.

Burns and Roe, Inc.: *See*—
Roe, Ralph C. 3,097,486.

Burroughs Corp.: *See*—
Rock, Jerome R., and Sameshima. 3,097,779.
Stowell, Philip A. 3,097,964.
Wendell, Douglas C., Jr. 3,098,043.

Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Baltzly, Richard, Russell, and Mehta. 3,098,076.
Hitchings, George H., Elion, and Mackay. 3,098,074.

Burstlein, Eugène M.: *See*—
Paris, Michel H. L. M., and Burstlein. 3,097,945.

Burt, Robert V., V. E. Gex, and N. J. Franz, to The Procter & Gamble Co. Dust-proof carton. 3,097,783, 7-16-63, Cl. 229—37.

Burthe, Jack H., I. J. Kenner, and J. D. Woermbke, to United States of America, Navy. Keep-alive cones and method of making same. 3,098,172, 7-16-63, Cl. 315—58.

Burton, John, Machinery Corp.: *See*—
Rice, Harold B., and Aguilar. 3,097,554.

C.I.C. Engineering Ltd.: *See*—
Hawkins, Wallace G. 3,097,379.

"COQ," N.V.: *See*—
Hidde Nijland, Hendrik A. 3,098,134.

Cabot Corp.: *See*—
Loftman, Kenneth A., and Marsden. 3,098,040.

Cain, Dean J.: *See*—
Hill, Justin D., and Cain. 3,097,989.

California Research Corp.: *See*—
Schmitz, John V., and Blackinton. 3,098,052.

Calk, Charles T. Device for debarking stave and head bolts. 3,097,676, 7-16-63, Cl. 144—208.

Calkin, Fenton. Scarifier attachment. 3,097,439, 7-16-63, Cl. 37—117.5.

Callan, Patrick C.: *See*—
Eggenberger, Markus A., Troutman, and Callan. 3,097,-488.

Callan, Patrick C., M. A. Eggenbergr, P. E. Malone, and P. H. Troutman, to General Electric Co. Electro-hydraulic control system for turbine with pressure feedback. 3,097,-490, 7-16-63, Cl. 60—73.

Callaway Mills Co.: *See*—
Short, Joe T. 3,097,760.

Calvert, Bert S. Water tank pressurizing system. 3,097,-659, 7-16-63, Cl. 137—209.

Camerino, Bruno, and G. Palamidessi, to Societa' Farmaceutic Italia. Pyrazine derivatives. 3,098,069, 7-16-63, Cl. 260—239.7.

Cameron Iron Works, Inc.: *See*—
Allen, Herbert, and Jones. 3,097,869.

Campbell, J Allan: *See*—
Babcock, John C., Campbell, and Pederson. 3,098,083.

Cantarutti, Armindo: *See*—
Mallory, Edwin E., and Cantarutti. 3,097,394.

Cantwell, Kenneth R.: *See*—
Haya, George, and Cantwell. 3,097,919.

Carborundum Co., The: *See*—
Taylor, Kenneth M. 3,097,897.

Carlisle, Samuel S., and G. M. Boxall, to The British Iron and Steel Research Association. Method of and apparatus for supporting or guiding strip material. 3,097,971, 7-16-63, Cl. 134—15.

Carlson, Arthur W.: *See*—
Schweiker, George C., and Carlson. 3,098,058.

Carlson, Carl J., Jr., and D. W. Carlson. Fastener assemblage. 3,097,360, 7-16-63, Cl. 1—56.

Carlson, Donald W.: *See*—
Carlson, Carl J., Jr., and D. W. Carlson. 3,097,360.

Carlson, John W., to Speed-O-Print Business Machines. Photocopying devices. 3,097,585, 7-16-63, Cl. 95—89.

Carlson, Olof B., to Consolidated Cigar Corp. Cigar tip applying machine. 3,097,654, 7-16-63, Cl. 131—88.

Carney, Patrick E., and J. H. Keahey, to Texas Instruments Inc. Automatic gain control circuit. 3,098,199, 7-16-63, Cl. 330—29.

Caroselli, Remus F., and A. Marzocchi, to Owens-Corning Fiberglas Corp. Sized glass fibers and composition. 3,097,-963, 7-16-63, Cl. 117—126.

Carpenter, Robert J., to Tote-Cart Co. Wheel mounting for cart. 3,097,887, 7-16-63, Cl. 301—1.

Carrier Corp.: *See*—
Raymond, Glendon A. 3,098,145.

Casebolt, Ralph T. Reversible latching assembly for sliding door. 3,097,873, 7-16-63, Cl. 292—244.

Castle, Alfred B. Instrument clamps. 3,097,820, 7-16-63, Cl. 248—27.

Caterpiliar Tractor Co.: *See*—
Yocum, Ralph W. 3,097,728.

Caulford, Donald A., and J. R. Phin, to Universal Labelling Machines Ltd. Automatic labelling apparatus. 3,097,983, 7-16-63, Cl. 156—364.

Cavalier, Alphonse A.: *See*—
Bunger, Dennen J., Emery, Cavalier, Ferguson, Schmider, and Alexanderson. 3,097,824.

Cavert, Clyde F., R. E. Hall, and E. W. Schabo, to Miller Electric Mfg. Co., Inc. Multiple purpose generator. 3,098,-191, 7-16-63, Cl. 322—79.

Cecil, Tom A.: *See*—
Allegrini, Aldo P. and Cecil. 3,098,045.

Cella, John A., to G. D. Searle & Co. Methoxytetralone tetracyclic addition products. 3,098,098, 7-16-63, Cl. 260—586.

Ceriani, Maurizio. Rotary hook devices for sewing machines. 3,097,619, 7-16-63, Cl. 112—228.

Cerness, Joseph F., and B. M. Luce, to Clevite Corp. Silver lead alloy for cavitation erosion resistance. 3,097,422, 7-16-63, Cl. 29—183.5.

Chain Belt Co.: *See*—
Morris, Joan M. 3,097,958.

Chann, David: *See*—
Hawn, Walter M., Chann, Besal, and Vesely. 3,098,114.

Chapman, David Z., to Aerpat A.G. Clevis pin with spring urged detents and means to limit spring movement. 3,097,-559, 7-16-63, Cl. 85—5.

Chapron, Georges. Supporting framework for a mine gallery or shaft. 3,097,494. 7-16-63, Cl. 61—45.

Charnota, Steven, and A. F. Wolf. Liquid metering valve unit. 3,097,762, 7-16-63, Cl. 222—20.

Chayne, Charles A., to General Motors Corp. Brake pedal assembly. 3,097,542, 7-16-63, Cl. 74—560.

Chelwin Productions, inc.: *See*—
Winchell, Paul. 3,097,366.

Chemetron Corp.: *See*—
Minard, Everett S. 3,097,672.
Rodgers, Felix C. 3,097,499.
Williams, David A. 3,097,498.

Cherbuliez, Emile, and J. Rabinowitz, to Ciba Corp. Improved process for phosphorylating amino-alcohols. 3,098,-072, 7-16-63, Cl. 260—247.

Chicago Printed String Co.: *See*—
Kerrigan, James E., and Grikis. 3,097,771.
Kerrigan, James E., and Grikis. 3,097,772.

Ciba Corp.: *See*—
Allen, Milton J. 3,098,077.
Blatter, Herbert M., and De Stevens. 3,098,071.
Cherbuliez, Emile, and Rabinowitz. 3,098,072.
Druey, Jean, and Daeniker. 3,098,078.
Druey, Jean, Schmidt, and Eichenberger. 3,098,075.
Grob, Cyril, and Jenny. 3,098,097.
Jeger, Oskar. 3,098,068.
Meystre, Charles, Wettstein, Anner, Heusler, and Wieland. 3,098,070.
Mull, Robert P. 3,098,066.
Wettstein, Albert, Anner, Meystre, Wieland, Ehrmann, Heusler, Hunger, and Kebrle. 3,098,085.
Wettstein, Albert, Meystre, and Voser. 3,098,087.
Wettstein, Albert, and Wieland. 3,098,086.

Ciba Ltd.: *See*—
Rhyner Paul, Grossmann, and Defago. 3,097,909.

Cie de Saint-Gobain: *See*—
Duperriez, Claude. 3,097,961.

Cincinnati Mine Machinery Co., The: *See*—
Krekeler, Claude B. 3 097,547.

Cioffi, Paul P., to Bell Telephone Laboratories, Inc. Magnetic circuit using superconductor properties. 3,098,181, 7-16-63, Cl. 317—158.

Claiborne, Jefferson L., to Dixie Mercerizing Co. Seal for yarn package treating apparatus. 3,097,515, 7-16-63, Cl. 68—198.

Clare, C. P., & Co.: *See*—
Farmer, Robert B. 3,098,135.

Clark, David, Co. Inc.: *See*—
Wadsworth, William B. 3,098,121.

Clark, Gordon W., to General Electric Co. System for preventing overheating of a steam turbine. 3,097,487, 7-16-63, Cl. 60—73.

Clark, James W., to Lake Shore, Inc. Skip loading and weighing apparatus. 3,097,711, 7-16-63, Cl. 177—108.

Clark, John V., to B. M. Bailey. Automatically shielded scraping devices. 3,097,384. 7-16-63, Cl. 15—111.

Clavel, Jean, to l'Electro-Commutation. Electric switches. 3,098,130, 7-16-63, Cl. 200—11.

Clayton Aniline Co. Ltd., The: *See*—
Nicklin, Thomas, and Sommerville. 3,097,926.

Clemens, Pat L., to United States of America, Air Force. Automatic A.-C. voltage ratio controller. 3,098,194, 7-16-63, Cl. 323—66.

Clevite Corp.: *See*—
Cerness, Joseph F., and Luce. 3,097,422.
Noyce, Robert N. 3,098,160.

Cline, Robert A.: *See*—
Tonjes, Burl D., and Cline. 3,098,037.

Cohen, Alfred G.: *See*—
Small, Samuel N. 3,097,886.

Cohrs, Arthur H., and B. L. Larson. Dirt metering and spreading machine. 3 097,851, 7-16-63, Cl. 275—8.

Coleman Instruments, Inc.: *See*—
Staunton, John J. J. 3,097,928.

Colligan, Rodney C.: *See*—
Skelkregg, Edward M., Jr., and Colligan. 3,097,747.

Collins, Charles D. Aquatic sporting device. 3,097,377, 7-16-63, Cl. 9—313.

Collins, Welby H. Portable knockdown cot. 3,097,368, 7-16-63, Cl. 5—114.

Colombo, George: *See*—
Bielweiss, Arthur F., Colombo, Dickson, and Orlov. 3,098,139.

Colville, William T.: *See*—
Petta, Ronald G., and Colville, and Parsons. 3,097,496.

Commercial Solvents Corp.: *See*—
Hodge, Edward B. 3,098,005.
Hodge, Edward B. 3,098,039.

Commissariat a l'Energie Atomique: *See*—
Dirian, Gregoire, Sack, Botter, and Lefrancois. 3,098,-020.

Compagnie Generale de Telegraphie Sans Fil: *See*—
Algrain, Pierre. 3,098,168.
Révillon, Guy. 3,098,226.

Compagnie Industrielle des Telephones: *See*—
Bizet, Pierre M. 3,098,161.

Computers, Inc.: *See*—
Davis, Billy E., and Gormley. 3,097,527.

Cone Automatic Machine Co., Inc.: *See*—
Brown, Roger W. 3,097,856.

Conklin, Theodore A., to General Signal Corp. Counting system. 3,097,791, 7-16-63, Cl. 235—99.

Consolidated Beryllium Ltd.: *See*—
Holland, Ivor J. 3,097,930.

Consolidated Cigar Corp.: *See*—
Carlson, Olof B. 3,097,654.

Consolidated Electrodynamics Corp.: *See*—
Bowen, Stuart W., and Marks. 3,097,517.

Container Corp. of America: *See*—
Masi, Joseph J. 3,097,781.

Contant, Peter R., V. H. Hardy, and E. E. Reese, to General Motors Corp. Squeegee and wiper blade assembly embodying same. 3,097,389, 7-16-63, Cl. 15—250.42.

Conte, Louis B., Jr., and F. N. Apel, to Union Carbide Corp. Ester-ketone conversion. 3,098,099, 7-16-63, Cl. 260—590.

Continental Copper & Steel Industries, Inc.: *See*—
Browning, John E. 3,097,374.

Continental Elektroindustrie A.G., Askaniawerke: *See*—
Von Mathes, Peter. 3,098,152.

Cook, Leonard W., to General Electric Co. Thermal switch. 3,098,137, 7-16-63, Cl. 200—113.5.

Cook, Shirl E., and W. H. Thomas, to Ethyl Corp. Stable lead alkyl compositions and a method for preparing the same. 3,098,089, 7-16-63, Cl. 260—437.

Cook, Shirl E.: *See*—
Thomas, Wilford H., and Cook. 3,098,090.

Coonradt, Harry L., W. K. Leaman, and J. N. Miale, to Socony Mobil Oil Co., Inc. Catalytic hydrocracking with a platinum composite catalyst. 3,098,030, 7-16-63, Cl. 208—111.

Cooper, Derek N.: *See*—
Cracknell, John, Cracknell and Cooper. 3,097,702.

Cooper, Murray S., and V. A. Di Benedetto, to American Cyanamid Co. Process for producing sterile vials containing culture media and a carbon dioxide atmosphere. 3,098,-016, 7-16-63, Cl. 195—102.

Copenhefer, John E., to American Air Filter Co., Inc. Automatic glass loader. 3,097,710, 7-16-63, Cl. 177—62.

Corley, Charles B., Jr., G. C. Terrel, and S. E. Loy III, to Jersey Production Research Co. Wire line cementing tool. 3,097,698, 7-16-63, Cl. 166—162.

Correct-Air Corp.: *See*—
Smith, John H. 3,097,505.

Cottle, Delmer L.: *See*—
Morway, Arnold J., Kelley, Seelbach, and Cottle. 3,098,-042.

Courtaulds Ltd.: *See*—
Lewis, Peter. 3,097,914.

Cracknell, John and J. C., and D. N. Cooper. Apparatus for thinning growing seedlings, and hoeing between plants, growing in rows. 3,097,702, 7-16-63, Cl. 172—6.

Cracknell, John C.: *See*—
Cracknell, John, and J. C., and Cooper. 3,097,702.

Crain, Robert E. Illuminated ash tray. 3,097,797, 7-16-63, Cl. 240—2.

Crandell, Paul A.: *See*—
Nickerson, Richard G., and Crandell. 3,098,230.

Creamer, Edgar M., Jr., to Philco Corp. Remote control system with pulse duration responsive means. 3,098,212, 7-16-63, Cl. 340—15.

Crecelius, Samuel B., and T. E. Brunelle, to Economics Laboratory, Inc. Organic compounds and process of producing them. 3,098,065. 7-16-63, Cl. 260—234.

Crompton & Knowles Corp.: *See*—
Engleson, Harry E., and Sramek. 3,097,732.
Feeman, James F. 3,098,096.

Cronin, Leo J., to Semicon of California, Inc. High-frequency energy absorbing material. 3,097,421, 7-16-63, Cl. 29—182.5.

Cross Co., The: *See*—
Bryant, John A., II, and Pierce. 3,097,724.

Cross, S. C.: *See*—
Reeves, Willard D. 3,097,464.

Cross, St. Elmo: *See*—
Reeves, Willard D. 3,097,464.

Croteau, Thomas H., and W. A. Grouten, to The Seeburg Corp. Automatic electric can opener. 3,097,427, 7-16-63, Cl. 30—4.

Crump, Jack G., to Industrial Nucleonics Corp. Tank level measurement system. 3,098,154, 7-16-63, Cl. 250—43.5.

Cubberly, Walter E., Jr., to Schlumberger Well Surveying Corp. Borehole apparatus. 3,097,433, 7-16-63, Cl. 33—178.

Cull, Neville L.: *See*—
Aldridge, Clyde L., and Cull. 3,098,101.

Cullen-Friestedt Co.: *See*—
Kaplan, Louis G. 3,097,875.

Cullen, Glenn W.: *See*—
Amick, James A., and Cullen. 3,097,977.

Cummings, John R.: *See*—
Gallagher, James D., Cummings, Lipchuck, and Stokey. 3,098,009.

Cunningham, Gerald A. Child carrier. 3,097,773, 7-16-63, Cl. 224—6.

Curci, Alfred. Phonograph record-changing apparatus. 3,097,850, 7-16-63, Cl. 274—10.

Curtin, W. H., and Co.: *See*—
Brown, Robinson W., and Mynatt. 3,097,531.
Brown, Robinson W., and Oakey. 3,097,532.

Curtiss-Wright Corp.: *See*—
Biehl, Richard E., Price, and Sternberg. 3,097,766.

Czerbina, Anatoly G.: *See*—
Kolenko, Evgeny A., Tauber, and Czerbina. 3,097,425.

Czyzewski, Alfred: *See*—
Werres, Horst, Czyzewski, and Jager. 3,098,001.

DCA Food Industries Inc.: *See*—
Fries, Edward W., and Kaufman. 3,097,967.

Daeniker, Hans U.: *See*—
Druey, Jean, and Daeniker. 3,098,078.

Daimler-Benz Aktiengesellschaft: *See*—
Barényi, Béla. 3,097,878.

Dale, Emmett O., to Airstream, Inc. Sewage disposal apparatus. 3,098,144, 7-16-63, Cl. 210—19.

D'Amico, John J., to Monsanto Chemical Co. Aminoalkyl esters of ether substituted dithiocarbamic acids. 3,098,091, 7-16-63, Cl. 260—455.

Damm, Klaus: *See*—
Noll, Walter, Damm, and Weissbach. 3,098,050.

Damstra, Johan G.: *See*—
Smedema, Hette, Noordanis, and Damstra. 3,098,201.

Daniel, David W., and Z. Kokorsycki, to National Broach & Machine Co. Mechanism for adjusting helix angle on gear shaper cutters. 3,097,567, 7-16-63, Cl. 90—7.

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Darman, Joseph M., to Darman Mfg. Co., Inc. Towel roll winding machine. 3,097,806, 7-16-63, Cl. 242—57.

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Darman, Joseph M. 3,097,806.

D'Ascoli, Ralph G.: *See*—
Jore, Bjorn D'Ascoli, and Olson. 3,098,116.

Davey, Thomas R. A., and W. L. Linton, to Metallurgical Processes Ltd. and The National Smelting Co. Ltd., doing business together as Metallurgical Development Co. Cooling arrangements for molten metals. 3,098,110, 7-16-63, Cl. 266—15.

Davidson, Hugh W., and J. W. Ryde, to The General Electric Co. Ltd. Methods of joining graphitic surfaces. 3,097,931, 7-16-63, Cl. 29—195.

Davis, Billy E., and L. E. Gormley, to Computers, Inc. Flow meter. 3,097,527, 7-16-63, Cl. 73—205.

Davis, Craig E., to Raymond Bag Corp. Manufacture of multi-wall bag having heat-sealed liner. 3,097,618, 7-16-63, Cl. 112—10.

Davis, Linly H., and J. E. Ellsworth. Folding shelter. 3,097,400, 7-16-63, Cl. 20—2.

Davis, Merton L., to E. I. du Pont de Nemours and Co. Acrylonitrile fiber and process for preparing same. 3,097,-415, 7-16-63, Cl. 28—82.

Dawkins, Kenneth, to Studebaker Corp. Charge terminating circuits. 3,098,188, 7-16-63, Cl. 320—31.

Dawson, Euzell. Spraying device. 3,097,794, 7-16-63, Cl. 239—78.

Dawson, Joseph C., and R. P. Millard, to Ferguson Fumigants, Inc. Fumigation of grain. 3,097,916, 7-16-63, Cl. 21—58.

Dean, Harry N., and A. W. Olson, to Libbey-Owens-Ford Glass Co. Apparatus for producing multiple glass sheet glazing units. 3,097,943, 7-16-63, Cl. 65—152.

Dean, Lester M., and W. D'Esopo. Insulated butter dispenser. 3,097,899, 7-16-63, Cl. 312—36.

Debol, Herbert H.: *See*—
Bixson, Louis L., and Debol. 3,097,483.

De Courcy, Rowland J. J., to Baker Perkins Inc. Link conveyor with article supported hook. 3,097,736, 7-16-63, Cl. 198—177.

Deedman, Alfred R. Actuator for converting straight-line movement to oscillatory motion and vice versa. 3,097,-573, 7-16-63, Cl. 92—68.

Deere & Co.: *See*—
Bopf, Edward C. 3,097,705.

Defago, Raymond: *See*—
Rhyner, Paul, Grossmann, and Defago. 3,097,909.

Dega, Robert L., to General Motors Corp. Gauging apparatus and method for measuring seal quality. 3,097,521, 7-16-63, Cl. 73—40.

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Levy, Robert M., and De Ganahl. 3,097,868.

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De Graaf, Nicolaas R., to Nederlandsche Industrie Radio Artikelen, N.V. Personal call system. 3,098,220, 7-16-63, Cl. 340—311.

Deibel, Raymond A., and W. C. Riester, to Trico Products Corp. Windshield washer. 3,097,608, 7-16-63, Cl. 103—43.

De Jersey, Arthur L. Machines for the cooking of pancakes and like hot-plate goods. 3,097,588, 7-16-63, Cl. 99—353.

Delfin, Juan, to Dow Corning Corp. Method of clarifying cane sugar juice. 3,097,970, 7-16-63, Cl. 127—48.

Dempsey, James F., and F. R. Shuman, Jr., to Sun Oil Co. Method and apparatus for dispensing motor fuel. 3,097,-761, 7-16-63, Cl. 222—1.

Denton, Arnold E., J. F. Beuk, J. M. Hogan, and W. J. McBrady, to Swift & Co. Enzymatic removal of meat from bones. 3,098,014, 7-16-63, Cl. 195—2.

Derias, Paul, to The English Electric Co. Ltd. Gearing mechanism motor drive. 3,098,184, 7-16-63, Cl. 318—12.

D'Esopo, William: *See*—
Dean, Lester M., and D'Esopo. 3,097,899.

De Stevens, George: *See*—
Blatter, Herbert M., and de Stevens. 3,098,071.

Deutsche Edelstahlwerke Aktiengesellschaft: *See*—
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Development, Ltd.: *See*—
Dotts, Walter M., Jr., and Stevens. 3,097,917.

De Vos, Marcel O., to Grow-Rite Corp. Seat construction. 3,097,885, 7-16-63, Cl. 297—378.

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Downey, William E., Jr. 3,097,404.

Diamond, Harry L. Setting tool for heat sealing die machines. 3,097,434, 7-16-63, Cl. 33—181.

Diamond, Milton J., R. F. Spain, and R. H. Lutch, to General Motors Corp. Sonic testing decay detector. 3,097,-523, 7-16-63, Cl. 73—69.

Di Benedetto, Vito A.: *See*—
Cooper, Murray S., and Di Benedetto. 3,098,016.

Dibner, David, to Burndy Corp. Ram for circumferential crimping. 3,097,683, 7-16-63, Cl. 153—1.

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Neal, James L. and M. P., and Dice. 3,097,463.

Dickens, William A.: *See*—
Kellogg, Harry B., and Dickens. 3,097,933.

Dickens, William A., and K. E. Sager, to Kimberly-Clark Corp. Steaming device for a papermaking machine. 3,097,-994, 7-16-63, Cl. 162—297.

Dickson, Herbert F., Jr., to Sylvania Electric Products Inc. Heater-cathode assemblies. 3,097,419, 7-16-63, Cl. 29—155.62.

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Dinn, Leo J. Simulated four-in-hand tie construction. 3,097,-302, 7-16-63, Cl. 2—153.

Dirian, Gregoire, H. Sack, F. Botter (born Bergheaud), and B. Lefrancois, to Houilleres du Bassin du Nord et du Pas-de-Calais, and Commissariat a l'Energie Atomique. Process for the isotopic enrichment or fractionation of hydrogen. 3,098,020, 7-16-63, Cl. 204—59.

Dissen, Israel J.: *See*—
Tapas, John C., and Dissen. 3,098,047.

Di Stefano, Thomas M., and N. Platacchio. Bowling pin and ball kicker. 3,097,847, 7-16-63, Cl. 273—43.

Distillers Co. Ltd., The: *See*—
Bethell, James R., and Hadley. 3,098,102.

Dixie Mercerizing Co.: *See*—
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DoAll Co., The: *See*—
Benedict, Joseph. 3,097,675.

Dominion Engineering Works Ltd.: *See*—
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Dorey, George B., to Enterprise Railway Equipment Co. Outlet structure for railway hopper cars. 3,097,612, 7-16-63, Cl. 105—282.

Dorsey, Dennis B. Safety closure. 3,097,756, 7-16-63, Cl. 215—9.

Dorsey, Mercer M. Head and mantle assemblies for crushers. 3,097,803, 7-16-63, Cl. 241—293.

Dotts, Walter M., Jr., and W. E. Stevens, to Development, Ltd. Method for high pressure selective absorption of gases. 3,097,917, 7-16-63, Cl. 23—2.

Dow Chemical Co., The: *See*—
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Dow Corning Corp.: *See*—
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Downey, William E., Jr., to Diamond Alkali Co. Process for treating carbolic oils. 3,097,404, 7-16-63, Cl. 23—63.

Doyle, Patrick E., to Doyle Vacuum Cleaner Co. Adjustable handle for floor machines. 3,097,890, 7-16-63, Cl. 306—4.

Doyle, Robert, to Phillips Petroleum Co. Method for obtaining improved film. 3,097,915. 7-16-63, Cl. 18—57.

Doyle Vacuum Cleaner Co.: *See*—
Doyle, Patrick E. 3,097,890.

Drabert, Fr., Sohne: *See*—
Drabert, Fritz E., and Geffers. 3,097,748.

Drabert, Fritz E., and K. E. Geffers, to Fr. Drabert Sohne. Foldable tables. 3,097,748, 7-16-63, Cl. 211—149.

Draper Brothers Co.: *See*—
Draper, John H., Jr. 3,097,413.

Draper Corp.: *See*—
Banks, Waldo H. 3,097,669.

Draper, John H., Jr., to Draper Brothers Co. Unwoven papermaker's felt. 3,097,413, 7-16-63, Cl. 28—79.

Druey, Jean, P. Schmidt, and K. Eichenberger, to Ciba Corp. New pyrazolo-pyrimidines. 3,098,075, 7-16-63, Cl. 260—256.4.

Druey, Jean, and H. U. Daeniker, to Ciba Corp. Thio alkane carboxylic acids and functional derivatives thereof. 3,098,-078, 7-16-63. Cl. 260—327.

Duchin, Maurice, Creations, Inc.: *See*—
Ross, Lon. 3,097,615.

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Schroeder, Robert E., and Smithberg. 3,097,907.

Duke, James B., to Minerals & Chemicals Philipp Corp. Method for comminuting kaolin clay. 3,097,801, 7-16-63, Cl. 241—16.

Duncan, William J., to Acme Homes Metal Works, Inc. Table extension slide mechanism. 3,097,614, 7-16-63, Cl. 108—83.

Dunnebier, Kurt: *See*—
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Duperriez, Claude, to Cie de Saint-Gobain. Plastic coating of glass objects. 3,097,961, 7–16–63, Cl. 117—54.

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Davis, Merton L. 3,097,415.
Jackson, Ivan U. 3,097,804.
McKinney, Alfred H. 3,097,416.
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Dupuis, Maria J. A. Catamenial pad. 3,097,648, 7–16–63, Cl. 128—290.

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Dur-O-Lite Pencil Co.: *See*—
Stoeberl, Frank J. 3,097,628.

Dye, Clyde V. Trailer stabilizing and suspension assembly. 3,097,862, 7–16–63, Cl. 280—104.5.

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Kerney, Myron L. 3,097,810.

Eby, Lawrence T.: *See*—
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Edgerton, Germeshausen & Grier, Inc.: *See*—
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Eggenberger, Markus A., P. H. Troutman, and J. J. Sauter, to General Electric Co. Electric long range speed governor. 3,098,176, 7–16–63, Cl. 317—5.

Eggenberger, Markus A., P. H. Troutman, and P. C. Callan, to General Electric Co. Turbine control system. 3,097,488, 7–16–63, Cl. 60—73.

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Wettstein, Albert, Anner, Meystre, Wieland, Ehmann, Heusler, Hunger, and Kebrle. 3,098,085.

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Elemelt Ltd.: *See*—
Hann, Douglas G., and Ramsay. 3,098,111.

Elion, Gertrude B.: *See*—
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Emch, Paul J. Fold-away device for bed unit. 3,097,369, 7–16–63, Cl. 5—136.

Emery, Francis V.: *See*—
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Engelhard Industries Inc.: *See*—
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Aldridge, Clyde L., and Cull. 3,098,101.
Bonetti, Nathaniel W. R., and James. 3,097,671.
Edwards, William R. 3,098,106.
Gladrow, Elroy M., and Parker. 3,098,032.
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Thomas, Wilford H., and Cook. 3,098,090.

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Spiazzi, Ivo. 3,097,846.

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Fannin, Ray B., to Gas Engineering & Equipment Co. Vaporizing burner with temperature regulated mixer to control flame heating of retort. 3,097,687, 7–16–63, Cl. 158—79.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
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Noll, Walter, Damm, and Weissbach. 3,098,050.
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Thoma, Wilhelm, and Genth. 3,097,996.

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Jellinek, Karl, Hegedüs, Ulmer, and Bartl. 3,097,908.
Schultheis, Werner, Schimmelschmidt, Hoffmann, and Baier. 3,098,064.
Söder, Alfons, Lümmler, Ross, and Kempe. 3,098,006.

Farmaceutic Italia, Societa: *See*—
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Farmer, Edward B., D. R. Whitehouse, and P. G. Lindsay, to Fairbanks, Morse & Co. Scale with printer delay. 3,097,709, 7–16–63, Cl. 177—12.

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Farmer, Robert B., to C. P. Clare & Co. Relay construction. 3,098,135, 7–16–63, Cl. 200—87.

Farrell, Robert R., to I-T-E Circuit Breaker Co. Switch head construction permitting observation of contact jaws. 3,098,142, 7–16–63, Cl. 200—168.

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Federkiel, Arthur J. Form feeder. 3,097,845, 7–16–63, Cl. 271—41.

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Ferranti, Ltd.: *See*—
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Fetterman, Roy A., Jr., to Vara-Trol Inc. Mechanism for spinning. 3,097,476, 7–16–63, Cl. 57—110.

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Frankert, Otto P. to F. L. Smidth & Co. Tube mill trunnion. 3,097,802, 7–16–63, Cl. 241—54.

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Freeman, Ardee H., and F. J. Pichard, to Bell Intercontinental Corp. Blast machine system and method. 3,097,451, 7–16–63, Cl. 51—13.

Freeman, Ardee H., and F. J. Pichard, to Bell Intercontinental Corp. Casting core knock-out and cleaning machine and method. 3,097,452, 7–16–63, Cl. 51—13.

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Lincoln, Roland L. 3,097,410.
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Garcia, Robert E. Automatic time operated feeding means for successively feeding animals in a plurality of stalls. 3,097,627, 7–16–63, Cl. 119—51.11.

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Kaiser, Rudolf. Shutoff cock having a spherical plug. 3,097,823, 7–16–63, Cl. 251—172.

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Kammerer, Archer W., ⅝ to said Kammerer, ⅛ to J. K. Lamphere, and ⅛ to A. W. Kammerer, Jr. Retrievable well bore apparatus. 3,097,706, 7–16–63, Cl. 175—258.

Kammerer, Archer W. Apparatus for drilling well bores with casing. 3,097,707, 7–16–63, Cl. 175—258.

Kammerer, Archer W., A. W. Kammerer, Jr., and J. K. Lamphere: ⅝ to A. W. Kammerer, ⅛ to A. W. Kammerer, Jr., and ⅛ to J. K. Lamphere. Retrievable drilling apparatus. 3,097,708, 7–16–63, Cl. 175—260.

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Kammerer, Archer W. 3,097,706.
Kammerer, Archer W., A. W. Kammerer, Jr., and Lamphere. 3,097,708.

Kampmeier, Frederick J., to The Ingersoll Milling Machine Co. Machine tool. 3,097,568, 7–16–63, Cl. 90—11.

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Kaspaul, Erika E., to Minnesota Mining and Mfg. Co. Magnetic transducer device. 3,098,126, 7–16–63, Cl. 179—100.2.

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Kerrigan, James E., and R. Grikis, to Chicago Printed String Co. Bow forming machine. 3,097,772, 7–16–63, Cl. 223—40.

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Koopmans, Martinus J., to North American Philips Co., Inc. Organo tin compositions and method for treating plants. 3,097,999, 7–16–63, Cl. 167—22.

Koropatkin, Stephen, and M. W. Noble. Convertible and disposable picnic basket and table top device. 3,097,782, 7–16–63, Cl. 229—31.

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Pitts, Paul M. Jr., and R. W. Rieve, to The Atlantic Refining Co. Method of recovering sulfur. 3,097,925, 7–16–63, Cl. 23—225.

Pittsburgh Annealing Box Co.: *See*—
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Pittsburgh Plate Glass Co.: *See*—
James, Robert A., and Ward. 3,097,942.

Pneumatiques et Caoutchouc Manufacture Kleber-Colombes: *See*—
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Podolan, Edward G.: *See*—
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Ponsness, Dorothy P.: *See*—
Ponsness, Lloyd E., and Barker. 3,097,560.

Ponsness, Lloyd E., and R. N. Barker; said Barker assor. to said L. E. and D. P. Ponsness. Progressive reloading machine for shot shell. 3,097,560, 7–16–63, Cl. 86—27.

Pont-A-Mousson, Compagnie de: *See*—
Paris, Michel H. L. M., and Burstlein. 3,097,945.

Poole, Victor D.: *See*—
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Postmaster General, Her Majesty's: *See*—
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Flowers, Thomas H. 3,098,218.

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Powers Regulator Co., The: *See*—
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Preiser, Aaron, to Esso Research and Engineering Co. Coalescing sulphuric acid-hydrocarbon emulsions. 3,098,108, 7–16–63, Cl. 260—683.62.

Price, Harry N.: *See*—
Biehl, Richard E., Price, and Sternberg. 3,097,766.

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Haus, Joseph B., Brooks, and Price. 3,098,004.

Priesmeyer, Charles H., to The Powers Regulator Co. Check valve with removable filter. 3,097,660, 7–16–63, Cl. 137—316.

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Burt, Robert V., Gex, and Franz. 3,097,783.

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Propster, Charles H., Jr., to General Electric Co. Display device having a retentive memory. 3,098,221, 7–16–63, Cl. 340—324.

Provi, Mike A., to The Bearley Co. Portable stand-up type bathroom scale. 3,097,966, 7–16–63, Cl. 177—239.

Prunkard, Franklin C. Magnetic toy. 3,097,448, 7–16–63, Cl. 46—241.

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Letsch, William L., and Pusateri. 3,098,227.

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Quick, Desmond F. J., and D. J. Leech, to Normalair Ltd. Cooling systems for aircraft. 3,097,504, 7–16–63, Cl. 62—241.

Quinn, Edward, to United Shoe Machinery Corp. Lasting apparatus. 3,097,380, 7–16–63, Cl. 12—107.

Quintin, Albert A. J., to Compagnie des Metaux d'Overpelt-Lommell et de Corphalie S.A. Heating of zinc ovens. 3,097,835, 7–16–63, Cl. 263—87.

Raabe, Herbert P., to General Mills, Inc. Transmission line erected by pressurized plastic. 3,098,229, 7–16–63, Cl. 343—705.

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Cherbulies, Emile, and Rabinowitz. 3,098,072.

Radio Corp. of America: *See*—
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Reifschneider, Walter, to The Dow Chemical Co. Purely para thioether polymers. 3,098,103, 7–16–63, Cl. 260—609.

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Reipold, Walter, to Ets. Valerca and Kontinitro. Rocket fuel. 3,097,479, 7–16–63 Cl. 60—35.4.

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Retterath, Raymond G. Portable sickle and tool grinding devices. 3,097,456, 7–16–63, Cl. 51—178.

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Rice, Everett M. Putting game. 3,097,849, 7–16–63, Cl. 273—180.

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Riddell, John A., and B. von Schmeling, to United States Rubber Co. Method of controlling fungi and algae with N-nhenyl-itaconimides. 3,098,002, 7–16–63, Cl. 167—33.

Riddell, John A., to United States Rubber Co. Itaconimide fungicides and algaecides. 3,098 003, 7–16–63, Cl. 167—33.

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Rodgers, James S., to Rodgers Hydraulics Inc. Track press and track assembly tool therefor. 3,097,477, 7–16–63, Cl. 59—7.

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Rood, Alvin A., to General Motors Corp. Power steering for articulated vehicles. 3,097,719, 7–16–63, Cl. 180—79.2.

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Paris, Michel H. L. M., and Burstlein. 3,097,945.

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Salwasser, Melvin and L. F. Casing machine. 3,097,577, 7–16–63, Cl. 93—53.

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Santi, Louis. Ear-plugs. 3,097,843, 7–16–63, Cl. 128—152.

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Saxe, Van Rensselaer P. Column erection connector. 3,097,729, 7–16–63, Cl. 189—36.

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Schick, Johann G., to Ferdinand Rüesch Maschinenfabrik. Drive means for printing platen machines. 3,097,596, 7–16–63, Cl. 101—320.

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Schluderberg, Donald C., to The Babcock & Wilcox Co. Nuclear reactor containment system. 3,098,023, 7–16–63, Cl. 204—193.2.

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Schmidt, Gerhard, and H. Feindt, to Licentia Patent-Verwaltungs-G.m.b.H. Flashlights. 3,097,798, 7–16–63, Cl. 240—10.65.

Schmidt, Oltmann G. Hydraulically operated land contouring machine. 3,097,440, 7–16–63, Cl. 37—129.

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Schmitz, John V., and R. J. Blackinton, to California Research Corp. Thixotropic coating solutions. 3,098,052, 7–16–63, Cl. 260—22.

Schneider, George, and F. Basa, to Fuller Co. Spring clip bag hanger. 3,097,939, 7–16–63, Cl. 55—378.

Schnell, Hermann, and H. Krimm, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of hardened, polycarbonate-modified epoxy resin bodies. 3,098,056, 7–16–63, Cl. 260—42.

Schoeffel, Eugene W., to Sterling Drug Inc. Process for regenerating black liquor. 3,097,988, 7–16–63, Cl. 162—31.

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Schroeder, Robert E., and F. E. Smithberg, to Dukane Corp. Recording-reproducing machine. 3,097,907, 7–16–63, Cl. 346—17.

Schultheis, Werner, K. Schimmelschmidt, H. Hoffmann, and E. Baier, to Farbwerke Hoechst Aktiengesellshaft vormals Meister Lucius & Brüning. Water-soluble disazo dyes containing two thiosulfuric acid groups. 3,098,064, 7–16–63, Cl. 260—176.

Schur, Milton O., to Olin Mathieson Chemical Corp. Packaging film. 3,097,787, 7–16–63, Cl. 229—53.

Schwartz, Earl S., to H. Kramer & Co. Ingot and package utilizing same. 3,097,741, 7–16–63, Cl. 206—65.

Schwartz, Jean L., to des Ateliers de Construction Schwartz-Hautmont, Societe Anonyme. Bay closure device with built-in blind. 3,097,688, 7–16–63, Cl. 160—30.

Schwartz, Nathan R., to Swivelier Co., Inc. Recessible lighting fixture for lamp having plug terminals. 3,097,800, 7–16–63, Cl. 240—78.

Schweiker, George C., and A. W. Carlson, to Velsicol Chemical Corp. Process for reacting a dielenic polymer with hexachlorocyclopentadiene production of new polymeric compositions and products thereof. 3,098,068, 7–16–63, Cl. 260—45.5.

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Harris, Frederick J., and Boughey. 3,097,833.

Searer, Harold J. Container-dispenser for infant feeding. 3,097,757, 7–16–63, Cl. 215—11.

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Shannon, Suel G., to AMP Inc. Electrical connector. 3,097,906, 7–16–63, Cl. 339—253.

Shapiro, Seymour L., and L. Freedman, to U. S. Vitamin & Pharmaceutical Corp. Method for treatment of dermatological disorders. 3,098,008, 7–16–63, Cl. 167—55.

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Amsel, Francis E., Sharav, and Stanchus. 3,097,979.

Shaw, Francis, & Co. Ltd.: *See*—
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Shaw, George R., to W. R. Weaver. Reticle for variable power telescope sights. 3,097,732, 7–16–63, Cl. 33—50.

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Knobloch, James O., Shepard, and Liao. 3,098,095.

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Sievers, Albert H. Sanitary floors for animals. 3,097,625, 7–16–63, Cl. 119—15.

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Bleiweiss, Arthur F., Colombo, Dickson, and Orlov. 3,098,139.

Silver, Bernard, to Atlantic Research Corp. Propellant grains. 3,097,481, 7–16–63, Cl. 60—35.6.

Simmon Brothers, Inc.: *See*—
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Simmons, Edward C.: *See*—
Mann, Leonard J., Williamitis, and Simmons. 3,097,509.

Simmons, Harold C., to Parker-Hannifin Corp. Spill type fuel injection nozzle. 3,097,795, 7–16–63, Cl. 239—124.

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Sindelar, William F., to Master Power Corp. Detent coupling means for socket of rotary power tool. 3,097,659, 7–16–63, Cl. 279—97.

Singer Mfg. Co., The: *See*—
Reid, Orland B., Herr, Turner, and Abel. 3,097,617.

Skeggs, Leonard T., to Technicon Instruments Corp. Chromatography analysis apparatus and method. 3,097,927, 7–16–63, Cl. 23—230.

Skil Corp.: *See*—
Amundsen, Oliver O., and Kocian. 3,097,858.

Sloman, Arthur R., to Associated Pulp and Paper Mills Ltd. Continuous pulping process. 3,097,987, 7–16–63, Cl. 162—17.

Slotterbeck, Ober C., and J. F. McKay, deceased (by W. McKay, administratrix), to Esso Research and Engineering Co. Coating composition with blocked alcoholates therein. 3,097,957, 7–16–63, Cl. 106—285.

Small, Samuel N., to A. G. Cohen and P. Weiss. Combination adjustable leg rest and container. 3,097,886, 7–16–63, Cl. 297—439.

Smedema, Hette, J. Noordanis, and J. G. Damstra, to North American Philips Co., Inc. Self-starting transistor converter with overload protection. 3,098,201, 7–16–63, Cl. 331—113.

Smidth, F. L., & Co.: *See*—
Frankert, Otto P. 3,097,802.

Smith, Charles P., and L. A. Warner, to Sylvania Electric Products Inc. Apparatus for spooling filamentary material. 3,097,815, 7–16–63, Cl. 242—158.4.

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Smith, Horace L., Jr., to Burlington Industries, Inc. Muffle furnace. 3,097,831, 7–16–63, Cl. 263—3.

Smith, Jack, to General Electric Co. Remote control for microwave system. 3,098,180, 7–16–63, Cl. 317—149.

Smith, John H., to Correct-Air Corp. Air conditioner for industrial control quarters. 3,097,505, 7–16–63, Cl. 62—261.

Smith, Richard L.: *See*—
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Smithberg, Floyd E.: *See*—
Schroeder, Robert E., and Smithberg. 3,097,907.

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Snuggins, George K. Hitch stabiliser and support. 3,097,864, 7–16–63, Cl. 280—474.

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Socony Mobil Oil Co., Inc.: *See*—
Coonradt, Harry L., Leaman, and Miale. 3,098,030.
Snyder, Paul W., Jr. 3,098,029.

Soder, Alfons, G. Lämmler, G. Ross, and W. Kempe, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Anthelmintic 1,4-phenylene-diisothiocyanate compositions and method of using same. 3,098,006, 7–16–63, Cl. 167—53.

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Morgan, James A. 3,097,640.

Solomon, Nathan L. Hair curlers. 3,097,657, 7–16–63, Cl. 132—39.

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Nicklin, Thomas, and Sommerville. 3,097,926.

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Sparling, Stanley C., Haslett, Hopkin, and Sothcott. 3,098,210.

Sound Diffusion (Sales) Ltd.: *See*—
Stonor, Charles R. P. 3,098,123.

Space Technology Laboratories, Inc.: *See*—
Bers, Naum S. 3,097,535.

Spain, Horace H.: *See*—
Holland, Warren E., Williams, and Spain. 3,097,692.

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Diamond, Milton J., Spain, and Lutch. 3,097,523.

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Spencer, Robert A.: *See*—
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Spiazzi, Ivo, to Fabbrica Italiana Macchine Aziendali. Devices for unloading address plates on addressing machines. 3,097,846, 7–16–63, Cl. 271—88.

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Sprague Electric Co.: *See*—
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Engleson, Harry E., and Sramek. 3,097,732.

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Van Strien, Richard E., and Hodes. 3,098,059.

Starn, Charles H. Signaling system control for a modulator. 3,098,203, 7–16–63, Cl. 332—44.

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Stauffer Chemical Co.: *See*—
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Szabo, Karoly, and Brady. 3,097,997.

Staunton, John J. J., to Coleman Instruments, Inc. Ultramicro cuvette assembly. 3,097,928, 7–16–63, Cl. 23—292.

Stein, Alfred E. Method of lubricating thread and textile machinery surfaces. 3,097,561, 7–16–63, Cl. 87—4.

Stein, Herbert A.: *See*—
Murdock, John B., and Stein. 3,097,832.

Steiner, Charles. Book holder. 3,097,444, 7–16–63, Cl. 45—57.

Steinert, Elmer R.: *See*—
Zeeb, Stanley H., and Steinert. 3,097,865.

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Steketee, Cornelius J. Oscillatory spreader for granular or pulverized materials. 3,097,852, 7–16–63, Cl. 275—8.

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Sterling Plastics Co.: *See*—
Fleming, Jack F., and Lehre. 3,097,629.

Sternberg, Marvin: *See*—
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Dotts, Walter M., Jr., and Stevens. 3,097,917.

Stevenson, Thomas. Spotting rifle ignition for larger caliber gun. 3,097,564, 7–16–63, Cl. 89—1.7.

Stibbe, G., & Co. Ltd.: *See*—
Brown, Albert M. 3,097,510.

Stirling, James. Apparatus for making rope strand. 3,097,472, 7–16–63, Cl. 57—15.

Stoeberl, Frank J., to Dur-O-Lite Pencil Co. Mechanical pencil. 3,097,628, 7–16–63, Cl. 120—18.

Stokey, Edgar H.: *See*—
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Stoner, Eugene M. Method of fabricating airfoils. 3,097,982, 7–16–63, Cl. 156—211.

Stonor, Charles R. P., to Sound Diffusion (Sales) Ltd. Automatic signalling apparatus. 3,098,123, 7–16–63 Cl. 179—2.

Stowell, Philip A., to Burroughs Corp. Dielectric recording medium. 3,097,964, 7–16–63, Cl. 117—155.

Streimer, Irving, to Boeing Airplane Co. Metabolators. 3,097,638, 7–16–63, Cl. 128—2.07.

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Strempel, Edward L., to The Sandy Hill Iron & Brass Works. Automatic stripper shower. 3,097,992, 7–16–63, Cl. 162—255.

Studebaker Corp.: *See*—
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Stummer, Wilfried. Device for translating axial motion into swinging motion. 3,097,750, 7–16–63, Cl. 212—66.

Sud-Aviation Societe National de Constructions, Aeronautiques: *See*—
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Superior Sports Specialties: *See*—
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Sutton, Wilfred A.: *See*—
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Swanson, Floyd A., to National Automatic Tool Co., Inc. Honing apparatus. 3,097,453, 7–16–63, Cl. 51—34.

Swanson, Victor E., to Procon Pump & Engineering Co. Pump and motor construction. 3,097,610, 7–16–63, Cl. 103—118.

Swarr, John H., and L. A. Hurwitz, to Hamilton Watch Co. Heat treatment of stainless steel. 3,097,980, 7–16–63, Cl. 148—135.

Sweger, Theodore J., to Illinois Railway Equipment Co. Journal box construction for railway cars. 3,097,894, 7–16–63, Cl. 308—40.

Swift & Co.: *See*—
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Alston, Otis B. 3,097,899.

Swingspout Measure Co.: *See*—
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Sylvania Electric Products Inc.: *See*—
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Petts, Ronald G., Colville, and Parsons. 3,097,496.
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Szabo, Karoly, and J. G. Brady, to Stauffer Chemical Co. Bisorganophosphorus esters and their preparation. 3,097,997, 7–16–63, Cl. 167—22.

Szydlowski, Joseph. Gas turbine control method and system. 3,097,700, 7-16-63, Cl. 170—135.72.

Tapas, John C., and I. J. Dissen, to Velsicol Chemical Corp. Flame retardant cellular product. 3,098,047, 7-16-63, Cl. 260—2.5.

Tasca, Angelo G., to Aerojet-General Corp. Fluid storage vessel. 3,097,768, 7-16-63, Cl. 222—389.

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Taylor, Charles H. Sweeper. 3,097,383, 7-16-63, Cl. 15—41.

Taylor, George H., Jr. Acoustical enclosure and low frequency sound amplifier for a loudspeaker. 3,097,720, 7-16-63, Cl. 181—31.

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Technicon Instruments Corp.: *See*—
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Telefunken G.m.b.H.: *See*—
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Voigt, Heinz E., and Händler. 3,098,219.

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Terrel, Garland C.: *See*—
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Testa, Emilio, to Lepetit S.p.A. 3,3-disubstituted-2,4-azetidinedione compounds. 3,098,067, 7-16-63, Cl. 260—239.

Texas Instruments Inc.: *See*—
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Thaler, Anton, and A. Siebert, to Gebrueder Buehler. Holding device for scraper blades of roller mills. 3,097,890, 7-16-63, Cl. 15—256.51.

Thatcher, Chester R. Meter run heater. 3,097,667, 7-16-63, Cl. 138—32.

Thiokol Chemical Corp.: *See*—
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Benninghoff, William E., and Thomas. 3,098,146.

Thomas, Wilford H.: *See*—
Cook, Shirl E., and Thomas. 3,098,089.

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Thompson, Gene D., H. M. Hibbs, and E. W. Hough, to Jersey Production Research Co. Treatment of subsurface earth formations. 3,098,038, 7-16-63, Cl. 252—8.55.

Thompson Industries, Inc.: *See*—
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Thompson Ramo Wooldridge Inc.: *See*—
Matt, Richard J. 3,097,895.
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Thompson, Wilmer R., to Union Carbide Corp. Reducing thermal upsets in fluid measuring cells. 3,097,520, 7-16-63, Cl. 73—27.

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Thym, Gordon L. Aerial ladder. 3,097,721, 7-16-63, Cl. 182—2.

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Tonjes, Burl D., and R. A. Cline, to The Gilson Screen Co. Portable tiltable separator. 3,098,037, 7-16-63, Cl. 209—260.

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Toulmin, Harry A., Jr. Method and apparatus for gas plating of metal on glass fibers. 3,097,941, 7-16-63, Cl. 65—3.

Towzey, Hugh E., Jr. Airfoil design for jet engined aircraft. 3,097,817, 7-16-63, Cl. 244—15.

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Trojan Powder Co.: *See*—
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Eggenberger, Markus A., and Troutman. 3,097,489.
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Berta, Remo J., and Haumann. 3,097,900.
Conte, Louis B., Jr., and Apel. 3,098,099.
Freure, Benjamin T. 3,098,100.
Hansen, Donald J., West, and Farmer. 3,098,021.
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Peters, John H. III. 3,097,620.

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U.S. Industries, Inc.: *See*—
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Riddell, John A., and von Schmeling. 3,097,944.
Riddell, John A., and von Schmeling. 3,098,002.

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Van Rossum, Hendrikus C., and C. Villalaz, to North American Philips Co., Inc. Signalling receiver. 3,098,179, 7-16-63, Cl. 317—147.

Van Strien, Richard E., and W. Hodes, to Standard Oil Co. Resinous compositions from trimellitic anhydride and vic-epoxides. 3,098,059, 7-16-63, Cl. 260—78.5.

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Nye, Maurice A., and Bittman. 3,098,109.

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Vickery, Ronald C., to Nuclear Corp. of America. Force measuring device. 3,097,714, 7-16-63, Cl. 177—210.

Viernstein, Lawrence J., to United States of America, Navy. Use of ultrasonic bias in magnetic amplifiers. 3,098,196, 7-16-63, Cl. 323—89.

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Walker, Donald F.: *See*—
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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 16, 1963 Volume 792 Number 3

TRADEMARKS

NOTICES

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

International Convention for the Protection of Industrial Property

Ratification of the Lisbon 1958 Revision by the Federation of Rhodesia and Nyasaland

The Secretary of State has been notified by the Embassy of Switzerland of the ratification, effective June 16, 1963, by the Federation of Rhodesia and Nyasaland of the International Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Tanganyika to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective June 16, 1963, of the Republic of Tanganyika to the International Convention for the Protection of Industrial Property as revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

Order No. 5315

Jerome W. Paxton of Washington, D.C. whose registration number is 15,517, is hereby excluded, beginning on January 25, 1963, from practice as a patent agent in any application before the United States Patent Office, without prejudice to his re-registration, upon a sufficient showing, after a period of not less than one year.

This action is taken under the provisions of Section 32 of Title 35 of the United States Code and Rule 348 of the Rules of Practice of the United States Patent Office in Patent Cases.

EDWIN L. REYNOLDS,
Jan. 25, 1963. *First Assistant Commissioner of Patents.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 339,329 (DO-ALL), Continental Machine Specialties, Inc. (Republished as The DoAll Company), Combination bandsawing and filing machine; **Reg. No. 390,678** (DOALL),

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 16,358
Date of oldest new application ..... Oct. 18, 1962
Date of oldest amended application ..... Oct. 1, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-18-62	10-1-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-1-62	10-4-62
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Applications filed during the month of May 1963—2,342

Registrations Issued ..... 380—No. 752,705 to No. 753,084
Renewals Issued 62

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C. to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

same, Grinders of the machine tool type suitable for precision surface grinding; **Reg. No. 394,885**, same, Files, file segments, filebands, saws and saw bands; **Reg. No. 424,899** (DO ALLOY), same, Dies and cutting tools; **Reg. No. 429,124**, same; **Reg. No. 585,424** (DO ALL AND DESIGN), same, Tool steel, etc.; lubricant, etc.; electrical apparatus, etc.; machine tools, etc.; **Reg. No. 600,333**, same, Desk type staplers and pocket knives; **Reg. No. 610,668**, same, Saw pitching gages used for gaging the pitch of saw teeth and steel rules; **Reg. No. 679,956** (DO ALL), same, Taps, reamers, end mills, cutters, counterbores, tool bits and slicing and dicing machines; **Reg. No. 679,957** (DO ALL AND DESIGN), same, Tool bits and lathe centers, slicing and dicing machines and precision lapping machines, filed Mar. 27, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c513, *The DoAll Company* v. *Du-All Wire & Metal Products Corporation.*

Reg. No. 390,078. (See Reg. No. 339,329.)

Reg. No. 394,885. (See Reg. No. 339,329.)

Reg. No. 424,899. (See Reg. No. 339,329.)

Reg. No. 429,124. (See Reg. No. 339,329.)

Reg. No. 563,751 (JOHN STUART INC.), John Stuart Inc., Articles of furniture, the particular articles of furniture being beds, dressers, mirrors, etc., filed Apr. 23, 1963, D.C. Conn. (New Haven), Doc. 8782, *John Stuart, Inc.* v. *Stuart's Furniture & Bedding Shop, Inc. et al.*

Reg. No. 571,798 (ROQUEFORT), The Community of Roquefort, Cheese, filed May 13, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c838, *Community of Roquefort* v. *Morton's Restaurant, Inc.*

Reg. No. 585,424. (See Reg. No. 339,329.)

Reg. No. 592,771 (EXQUISITE FORM), Exquisite Form Brassiere, Inc., Brassieres, garter belts and girdles; **Reg. No. 642,681** (EXQUISITE), same, filed Apr. 3, 1963, D.C., S.D.N.Y., Doc. 63/936, *Exquisite Form, Inc.* v. *Robles Packaging Corporation.*

Reg. No. 600,333. (See Reg. No. 339,329.)

Reg. No. 610,668. (See Reg. No. 339,329.)

Reg. No. 642,681. (See Reg. No. 592,771.)

Reg. No. 650,793 (FABULITE), Wm. V. Schmidt Co., Inc., Synthetic stones resembling diamonds and zircons for use as and in jewelry, filed Jan. 17, 1963, D.C.N.J. (Newark), Doc. 28/63, *Wm. V. Schmidt Co., Inc.* v. *Roy Lishansky.* Consent judgment dismissing complaint May 15, 1963.

Reg. No. 679,956. (See Reg. No. 339,329.)

Reg. No. 679,957. (See Reg. No. 339,329.)

Reg. No. 680,548 (NAUTOLEX), The General Tire & Rubber Company, Vinyl sheet material for marine applications such as deck coverings, topping, boat covers and the like, filed Mar. 20, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63/287, *The General Tire & Rubber Co.* v. *Jervis Corporation et al.*

Reg. No. 687,371 (HARVEY HOUSE), Fred Harvey, Restaurant services, filed Apr. 2, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 33187, *Fred Harvey* v. *Harvey House.*

Reg. No. 734,006 (LOCK AND KEY), Simonis Company, Floor polish; **Reg. No. 734,318**, same, Floor polish remover, filed Jan. 24, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c144, *Simonis Company* v. *Kasys Eirgules et al., doing business as Lunax Chemical Co.* Trademarks held valid and infringed; defendants enjoined Mar. 29, 1963.

Reg. No. 734,318. (See Reg. No. 734,006.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 150,332. Goodyear Aircraft Corporation, Akron, Ohio. Filed Aug. 2, 1962.

AIRMAT

For Dual-Walled Inflatable Fabric Material.
First use July 11, 1962.

SN 156,638. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.

POLYESTER
CHEMSTRAND

No claim is made to the word "Polyester" apart from the mark as shown. Owner of Reg. Nos. 600,796, 735,517, and others.

For Fiber and Filaments.
First use Oct. 15, 1962.

SN 158,053. Calcium Carbonate Company, Quincy, Ill. Filed Nov. 28, 1962.

G-WHITE

For Ground Limestone.
First use Oct. 23, 1961.

Class 2—Receptacles

SN 114,188. Creative Packaging, Incorporated, Indianapolis, Ind. Filed Feb. 23, 1961.

For Paperboard Boxes of the Setup and Folding Carton Type.
First use Feb. 9, 1961.

SN 134,233. Illinois Tool Works Inc., Chicago, Ill. Filed Dec. 18, 1961.

THE FLAVOR SHOWS THRU

Owner of Reg. Nos. 724,346 and 728,120.
For Plastic Containers—Namely, Cups and the Like.
First use Dec. 8, 1961.

SN 136,512. Hoague-Sprague Corporation, Lynn, Mass. Filed Jan. 17, 1962.

Strongbox

No claim is made herein to an exclusive right to use of the word "Strongbox" apart from the mark as shown. Owner of Reg. No. 245,862.

For Pasteboard Boxes or Cartons, and Box Blanks and Cover Blanks Used in the Manufacture Thereof.
First use in or about July 1926.

SN 143,459. Stone Container Corporation, Chicago, Ill. Filed Apr. 30, 1962.

STONE CANTEENER

Owner of Reg. No. 729,311.
For Corrugated Containers With Plastic Bag Inserts for Bulk Shipment and Storage of Fluids.
First use on or about Oct. 15, 1961.

SN 156,494. Hollywood Plastics Inc., Los Angeles, Calif. Filed Nov. 2, 1962.

For Plastic Boxes.
First use June 30, 1962.

SN 156,529. Solo Cup Company, Chicago, Ill. Filed Nov. 2, 1962.

JIM-DANDY

For Paper Cups.
First use Sept. 24, 1962.

SN 156,530. Solo Cup Company, Chicago, Ill. Filed Nov. 2, 1962.

JACK FROST

For Paper Cups.
First use Sept. 26, 1962.

SN 157,298. The B. F. Goodrich Company, Akron, Ohio. Filed Nov. 15, 1962.

MOV-A-TAINER

For Tanks Made of Flexible Liquid-Impervious Material.
First use Oct. 31, 1962.

SN 157,337. Steele Canvas Basket Company, Inc., Cambridge, Mass. Filed Nov. 15, 1962.

STEELITE

For Molded Fiber-Reinforced Plastic Baskets.
First use June 4, 1962.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 149,217. Shwayder Brothers, Inc., Denver, Colo. Filed July 17, 1962.

TRAVELCRAFT

For Luggage.
First use June 8, 1962.

SN 156,195. United Products Corporation, Kansas City, Mo. Filed Oct. 29, 1962.

TELESTAR

For Suitcases and Luggage.
First use Sept. 3, 1962.

Class 4 — Abrasives and Polishing Materials

SN 134,730. Dynamatics, Inc., New Canaan, Conn. Filed Dec. 27, 1961.

FREE-TIME

For Cleaning and Polishing Wax.
First use June 22, 1961.

SN 144,048. The Continental Chemical Co., Cleveland, Ohio. Filed May 8, 1962.

LUSTRO

For Composition for Cleaning, Dustproofing, Dressing, and Polishing Floors, Woodwork, Furniture, Metal, Etc.
First use on or about June 15, 1945.

SN 145,011. Western Chemical Company, St. Joseph, Mo. Filed May 18, 1962.

NU-BRITE

For Self-Polishing Floor Wax.
First use Mar. 16, 1962.

SN 146,329. U.S. Mop Co., Cedar Rapids, Iowa. Filed June 6, 1962.

U.S. HOME PARTY

Applicant hereby disclaims the term "U.S." apart from the mark as shown.
For Floor Waxes.
First use May 4, 1962.

SN 151,264. I. Rokeach & Sons, Inc., Long Island City, N.Y. Filed Aug. 15, 1962.



The drawing is lined for gold and red but no claim is made to the color red. Owner of Reg. Nos. 82,261, 250,918, and others.
For Silver Polish, Soap Pads, Aluminum Cleanser, Scouring Powder, Steel Wool.
First use Nov. 14, 1961.

SN 158,878. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Dec. 10, 1962.

RPW

For Ingredient Compound Used in Floor Polishes.
First use July 30, 1962.

SN 163,231. Charles C. Elmers, d.b.a. United States Products Co., Pittsburgh, Pa. Filed Feb. 21, 1963.

KWIK-AK-SHUN

For Abrasive Compounds Used in Grinding, Lapping, and Polishing of Metal and Other Surfaces Including the Surfaces of Valves and Bearings.
First use on about July 3, 1920.

Class 5 — Adhesives

SN 152,187. Continental Tapes, Inc., d.b.a. Anchor Continental, Columbia, S.C. Filed Aug. 30, 1962.



Owner of Reg. No. 669,142.
For Adhesive Tapes.
First use May 22, 1962.

SN 164,546. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 13, 1963.

Scotch Magic Mending Tape

The words "Brand" and "Mending Tape" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 417,265, 522,761 and others.
For Adhesive Tape.
First use July 17, 1958.

Class 6 — Chemicals and Chemical Compositions

SN 127,689. Wilson & Co., Inc., Chicago, Ill. Filed Sept. 11, 1961.

WILZYME

For Enzymes.
First use on or about Mar. 18, 1960.

SN 153,678. Petrolite Corporation, St. Louis, Mo. Filed Sept. 21, 1962.

BENDER

For Catalyst for Hydrocarbon Sweetening Process.
First use May 11, 1957.

SN 154,328. Arkansas Company, Inc., Newark, N.J. Filed Oct. 2, 1962.

DYTERGE

For Leveling Agent Used in One Bath Dyeing Processing of Textile Materials.
First use May 1, 1962.

SN 157,428. J. Lee Smith & Co. Incorporated, New Brunswick, N.J. Filed Oct. 10, 1962.



For Iron Oxide Pigments and Pigment Dispersions.
First use Dec. 31, 1930.

SN 157,730. Shell Oil Company, New York, N.Y. Filed Nov. 21, 1962.

FRM

For Hydraulic Fluid.
First use July 21, 1960.

SN 158,028. Stauffer Chemical Company, New York, N.Y. Filed Nov. 27, 1962.

KASAL

For Sodium Aluminum Phosphates.
First use Nov. 8, 1962.

SN 159,973. The Diversey Corporation, Chicago, Ill. Filed Dec. 31, 1962.

BRU-TAC

For Additive To Pasteurize Water for Deodorizing and Corrosion and Algae Control in Breweries.
First use Dec. 17, 1962.

SN 160,038. Baumann Photo Chemical Corporation, Chicago, Ill. Filed Jan. 2, 1963.

ACUFINE

For Film Developer.
First use Nov. 1, 1960.

Class 7 — Cordage

SN 147,032. Puritan Cordage Mills, Louisville, Ky. Filed June 15, 1962.

SUNNY DAY

Applicant claims use for the area comprising all states of the United States of America, with the exception of Massachusetts, Maine, Vermont, New Hampshire, Rhode Island, Pennsylvania, New Jersey, and Delaware.
For Clothesline.
First use May 2, 1961.
Subj. to concurrent use proceeding with Reg. No. 739,592.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 122,734. James S. Wilkinson, Prescott, Ariz. Filed June 23, 1961.

RIFLE RANCH

For Guns and Gun Components and Accessories—Namely, Gunslings, Recoil Pads, Cleaning Rods, and Leather Sight Covers.
First use August 1947.

SN 138,738. J. P. Sauer & Sohn G.m.b.H., Norderschanze, Eckernforde, Germany. Filed Feb. 27, 1962.



Owner of German Reg. No. 689,231, dated Apr. 4, 1956.
For Hunting and Sporting Arms—Namely, Firearms.

SN 140,124. Hartford Gun Choke Company Incorporated, Newington, Conn. Filed Mar. 19, 1962.

DUO-VENT

For Shot Gun Chokes.
First use June 28, 1961.

SN 150,934. Firearms International Corporation, Washington, D.C. Filed Aug. 10, 1962.

FINNBEAR

For Rifles.
First use Dec. 12, 1960.

SN 150,935. Firearms International Corporation, Washington, D.C. Filed Aug. 10, 1962.

FORESTER

For Rifles.
First use May 10, 1958.

SN 150,936. Firearms International Corporation, Washington, D.C. Filed Aug. 10, 1962.

VIXEN

For Rifles.
First use Sept. 2, 1959.

SN 155,473. Aguirre y Aranzabal, S.R.C., Eibar, Guipuzcoa, Spain. Filed Oct. 19, 1962.

MATADOR

Owner of Spanish Reg. No. 399,172, dated June 28, 1962.
For Shot Guns, Rifles, Carbines and Other Portable Arms—Namely, Fire and Compressed Air Guns, and Parts Therefor.

Class 10—Fertilizers

SN 157,570. The O M Scott & Sons Company, Marysville, Ohio. Filed Nov. 19, 1962.

SENTRY

For Mulch.
First use Nov. 12, 1962.

Class 11—Inks and Inking Materials

SN 140,545. Eaton Chemical Corporation, Detroit, Mich. Filed Mar. 23, 1962.



The drawing is lined for red and blue.
For Printers' Inks.
First use Feb. 1, 1962.

Class 12—Construction Materials

SN 129,033. Powerlock Floors, Inc., Philadelphia, Pa. Filed Oct. 2, 1961.

HYDRA-THERM

For Emulsified Bituminous Preparation for Cold Application to Concrete Beneath Wood Flooring To Provide a Moisture Barrier.
First use Apr. 17, 1961.

SN 139,387. Columbian Steel Tank Co., Kansas City, Mo. Filed Mar. 8, 1962.



"Master-Crafted" is disclaimed except as used in conjunction with other features of the mark. Owner of Reg. Nos. 420,942 and 576,184.
For Prefabricated Sheet Metal Buildings.
First use on or about Feb. 1, 1960; on or about June 1, 1941, as to "Columbian."

SN 143,403. Jonny Shower Door Co., El Cajon, Calif. Filed Apr. 30, 1962.

JONNY

For Plastic Panels, Shower Enclosures, Doors, and Stalls.
First use Dec. 27, 1955.

SN 143,825. Henges Company, Incorporated, St. Louis, Mo. Filed May 4, 1962.

KWIK-WALL

For Room Partition and Divider Assemblies for Home and Industrial Installation.
First use Apr. 16, 1962.

SN 144,112. Simpson Timber Company, Seattle, Wash. Filed May 8, 1962.

GUNSTOCK

For Plywood.
First use Apr. 16, 1962.

SN 144,517. Missouri Portland Cement Company, St. Louis, Mo. Filed May 14, 1962.



The drawing is lined for red. Owner of Reg. No. 331,614.
For High Early Strength Portland Cement.
First use June 17, 1935.

SN 145,454. Franklin Concrete, Inc., Nashville, Tenn. Filed May 25, 1962.

SPAN DECK

For Structural Concrete Members.
First use Feb. 26, 1962.

SN 154,797. Alside Inc., Akron, Ohio. Filed Oct. 9, 1962.

GARD-IT

For Aluminum Siding With a Protective Wax Coating Applied Thereto.
First use Aug. 13, 1962.

SN 155,886. Bertol Industries, Inc., Chicago, Ill. Filed Oct. 25, 1962.

BELLAMAR

For Construction Materials, Television Antennas, Bathtub Enclosures, Shower Stalls, and Window Sills.
First use Aug. 24, 1962.

SN 156,142. National Gypsum Company, Buffalo, N.Y. Filed Oct. 29, 1962.

FIBERLOK

For Structural Insulation Board, Roof Insulation, and Shingle Backer.
First use on or about Jan. 9, 1957.

SN 159,899. New Castle Products, Inc., New Castle, Ind. Filed Dec. 28, 1962.

SOUNDMASTER

Owner of Reg. Nos. 596,211, 720,552, and others.
For Folding Doors.
First use Mar. 1, 1960.

SN 160,244. Zonolite Company, Chicago, Ill. Filed Jan. 4, 1963.

ECONO-FILL

Owner of Reg. No. 325,529.
For Bulk Insulation for Buildings.
First use September 1959.

SN 160,865. Korwall Industries, Inc., Arlington, Tex. Filed Jan. 17, 1963.



For Laminated Sandwich Wall Panels.
First use Aug. 16, 1962.

SN 160,872. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.



Owner of Reg. Nos. 431,008, 735,861, and others.
For Doors.
First use December 1949.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 137,783. Northwestern Steel and Wire Company, Sterling, Ill. Filed Feb. 12, 1962.

E-ZEE MEASURE

For Hardware Cloth.
First use Sept. 1, 1961.

SN 146,085. Marson Fastener Corporation, Revere, Mass. Filed June 4, 1962.

KLIK FAST

For Rivets.
First use Jan. 3, 1962.

SN 149,055. Joseph Delacy, d.b.a. The Hex-Insert Company, Costa Mesa, Calif. Filed July 16, 1962.



For Attachments for Providing Drive Sockets in Screw and Bolt Heads.
First use May 28, 1962.

Class 16—Protective and Decorative Coatings

SN 142,264. The Bon Ami Company, New York, N.Y. Filed Apr. 16, 1962.

bon ami

Owner of Reg. Nos. 21,425, 726,863, and others.
For Synthetic-Resin Finish in Liquid Form for Use as a Protective Coating for Floors; and an Acrylic Finish in Gel Form for All Types of Floor Coverings.
First use Mar. 14, 1961.

SN 146,329. U.S. Mop Co., Cedar Rapids, Iowa. Filed June 6, 1962.

U.S. HOME PARTY

Applicant hereby disclaims the term "U.S." apart from the mark as shown.
For Floor Surface Sealers.
First use May 4, 1962.

SN 149,327. Sam H. Senor, d.b.a. The Sylvania Chemical Co., Cleveland, Ohio. Filed July 16, 1962.

SYLVUS

For Paints and Enamels.
First use in the year 1929.

Class 17—Tobacco Products

SN 126,733. Daniel Blumenthal, d.b.a. Danby Cigar Co., New York, N.Y. Filed Aug. 28, 1961.

FLOR DEL CARIBE

For Tobacco Products—Namely, Cigars.
First use September 1959.
Subj. to Intf. with SN 132,459.

SN 132,459. Nick M. Garcia, d.b.a. Brion Cigar Co., Tampa, Fla. Filed Nov. 21, 1961.

FLOR DEL CARIBE

For Cigars.
First use May 1940.
Subj. to Intf. with SN 126,733.

Class 18—Medicines and Pharmaceutical Preparations

SN 137,937. Peter Hand Brewery Company, Chicago, Ill. Filed Feb. 14, 1962.

CULTURE 5

No claim is made to the word "Culture" apart from the mark as shown, but applicant does not waive any existing rights or rights which may arise hereafter in the word "Culture."
For Poultry and Livestock Feed Supplements.
First use November 1958.

SN 141,532. Laboratorios Funk, S.A., Barcelona, Spain. Filed Apr. 4, 1962.

RINOMICINE

Owner of Spanish Reg. No. 244,152, dated July 17, 1951.
For Pharmaceutical Preparations for Symptomatic Treatment of Nasal Colds in the Form of Tablets, Oral Solutions and Nasal Sprays and Drops.

SN 146,141. Ultravite Laboratories Limited, Downsview, Ontario, Canada. Filed May 17, 1962.

TRI VITES

For Vitamin Supplement for Human Consumption.
First use Mar. 17, 1962; in commerce Mar. 17, 1962.

SN 147,523. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed June 22, 1962.

SERACHOL

For Serum Cholesterol Standard-in-Serum for Use as a Diagnostic Reagent.
First use Mar. 29, 1962.

SN 151,340. L'Equilibre Biologique (Association Technique Pharmaceutique et Equilibre Biologique Reunis) Societe Anonyme, Amilly near Montargis, Loiret, France. Filed Aug. 16, 1962.

BUTRANIX

Owner of French Reg. No. 2,235, dated Dec. 28, 1960.
For Medicines and Pharmaceutical Preparations.

SN 152,079. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Aug. 28, 1962.

SUPERSTAT

For Anti-Infective Preparation for Use as a Feed Additive.
First use Nov. 7, 1961.

SN 152,876. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Sept. 11, 1962.

ALUPENTAL

Owner of German Reg. No. 753,856, dated Oct. 13, 1961; and U.S. Reg. No. 722,168.
For Pharmaceutical Preparation Containing Bronchodilating and Antiasthmatic Agent.

SN 153,368. Beecham Research Laboratories Limited, Brentford, Middlesex, England. Filed Sept. 18, 1962.

DECEMIN

Owner of British Reg. No. 831,419, dated Feb. 28, 1962.
For Antibiotic-Containing Pharmaceutical Preparations.

SN 153,520. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Sept. 19, 1962.

VADEPHEN

Owner of French Reg. No. 502,772, dated Feb. 22, 1962 (Paris); Natl. Inst. No. 179,963.
For Sedative.

SN 155,562. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Oct. 22, 1962.

DABERUN

Owner of German Reg. No. 760,022, dated Apr. 2, 1962.
For Diuretic.

SN 156,678. Sterling Drug Inc., New York, N.Y. Filed Nov. 5, 1962.

PONTRAL

Owner of Reg. No. 337,729.
For Antibacterial Agent.
First use Oct. 1, 1962.

SN 156,749. McNeil Laboratories, Incorporated, Fort Washington, Pa. Filed Nov. 6, 1962.

INNOVAN

For Anesthetic Preparations.
First use Aug. 14, 1962.

SN 156,825. Parke, Davis & Company, Detroit, Mich. Filed Nov. 7, 1962.

PONSTAN

For Analgesic Preparation.
First use on or before Oct. 16, 1962.

SN 156,949. The Dow Chemical Company, Midland, Mich. Filed Nov. 9, 1962.

TENIAZINE

For Veterinary Anthelmintic.
First use Sept. 7, 1961.

SN 157,005. The Purdue Frederick Company, New York, N.Y. Filed Nov. 9, 1962.

PHYSIOLAX

For Laxative Preparation.
First use Oct. 31, 1962.

SN 157,006. The Purdue Frederick Company, New York, N.Y. Filed Nov. 9, 1962.

TRAVELAX

For Laxative Preparation.
First use Oct. 31, 1962.

SN 157,007. The Purdue Frederick Company, New York, N.Y. Filed Nov. 9, 1962.

PANALAX

For Laxative Preparation.
First use Oct. 31, 1962.

SN 157,835. Philips Roxane, Inc., New York, N.Y. Filed Nov. 23, 1962.

EPLID

For Anticholesterol Drug.
First use Oct. 5, 1962.

SN 158,098. The Purdue Frederick Company, New York, N.Y. Filed Nov. 28, 1962.

SENOGEL

For Laxative Preparation.
First use Nov. 2, 1962.

SN 158,146. Crane Hall Corporation, Washington, D.C. Filed Nov. 29, 1962.

GUM-KARE

Owner of Reg. No. 689,654.
For Medicated Salve for Direct Application to Gums.
First use on or about Nov. 10, 1957.

SN 158,182. Schering Corporation, Bloomfield, N.J. Filed Nov. 29, 1962.

DRIXINE

For Topical Decongestant Preparation.
First use Oct. 22, 1962.

SN 158,245. The Fielding Pharmaceutical Company, d.b.a. The Fielding Company, Webster Groves, Mo. Filed Nov. 30, 1962.

LURLINE

For Preparation for the Control of Obesity.
First use Nov. 19, 1962.

SN 158,530. Geigy Chemical Corporation, Ardsley, N.Y. Filed Dec. 5, 1962.

SOVALEST

For Antibacterial Preparation.
First use Nov. 19, 1962.

SN 158,563. Purepac Corporation, Elizabeth, N.J. Filed Dec. 5, 1962.



For Cough Syrup.
First use Nov. 13, 1962.

SN 158,796. Crookes-Barnes Laboratories, Inc., Wayne, N.J. Filed Dec. 10, 1962.

MARFAMID

For Sterile Ophthalmic Solution.
First use Oct. 29, 1962.

SN 159,023. UCB (Union Chimique-Chemische Bedrijven) S.A., Saint-Gilles, near Brussels, Belgium. Filed Nov. 1, 1962.

ESUCOS

For Pharmaceutical Preparations Used in the Treatment of Psychosomatic and Psychic Disturbances, of Neurovegetative Dystonias and Organic Complaints of Neurogenic Origin.
First use in the year 1957; in commerce on or about May 10, 1962.

SN 159,110. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Dec. 13, 1962.

NACIDETE

For Antacid Preparation.
First use Nov. 7, 1962.

SN 159,140. Abbott Laboratories, North Chicago, Ill. Filed Dec. 14, 1962.

PINKACIN

For Anti-Infective Preparation for Veterinary Use.
First use Nov. 2, 1962.

SN 159,191. Arturo Bezanilla Brass, d.b.a. Laboratorios Imperiales, Mexico City, Mexico. Filed Dec. 17, 1962.

ESTOMAROL

For Preparation for the Relief of Gastric Hyperacidity.
First use Nov. 2, 1962; in commerce Nov. 2, 1962.

SN 159,288. Scientific Associates, Inc., St. Louis, Mo. Filed Dec. 17, 1962.

WORK OUT

For Alcohol Rubbing Preparation.
First use Dec. 1, 1962.

SN 159,929. The Warren-Teed Products Company, Columbus, Ohio. Filed Dec. 28, 1962.

VENTUSSIN LOZ-TABLETS

Owner of Reg. No. 731,413.
For Anti-Tussive Drug Preparation for Use by Oral Administration.
First use Nov. 27, 1962.

SN 160,424. International Latex Corporation, Dover, Del. Filed Jan. 9, 1963.

COFAREST

For Pharmaceutical Preparation for the Treatment of Coughs.
First use Nov. 29, 1962.

SN 160,912. The G. F. Harvey Company, Inc., Yonkers, N.Y. Filed Jan. 9, 1963.

ISADOX

Owner of Reg. No. 654,042.
For Laxative Preparation.
First use Nov. 29, 1962.

SN 164,583. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 13, 1963.

CHOLATRAST

For Contrast Medium for Gall Bladder Diagnosis.
First use Jan. 16, 1963.

Class 19—Vehicles

SN 110,696. Midas, Inc., Chicago, Ill. Filed Dec. 22, 1960.

MIDAS BRAKE SHOP

Applicant claims exclusive right to the term "Brake Shop" as a part of its trademark, but not otherwise. Owner of Reg. Nos. 620,322, 736,168, and others.
For Brake Parts—Namely, Bonded Brake Shoes, Wheel Cylinders, Master Cylinders, Wheel Cylinder Kits, Master Cylinder Kits.
First use on or about Dec. 6, 1960.

SN 110,697. Midas, Inc., Chicago, Ill. Filed Dec. 22, 1960.

MIDAS AUTO SAFETY CENTER

Applicant claims the exclusive right to the term "Auto Safety Center" as a part of its trademark, but not otherwise. Owner of Reg. Nos. 620,322, 736,168, and others.

For Brake Parts—Namely, Bonded Brake Shoes, Wheel Cylinders, Master Cylinders, Wheel Cylinder Kits, Master Cylinder Kits.

First use on or about Dec. 6, 1960.

SN 110,698. Midas, Inc., Chicago, Ill. Filed Dec. 22, 1960.

MIDAS SAFETY SHOP

Applicant claims the exclusive right to the term "Safety Shop" as a part of its trademark, but not otherwise. Owner of Reg. Nos. 620,322, 736,168, and others.

For Brake Parts—Namely, Bonded Brake Shoes, Wheel Cylinders, Master Cylinders, Wheel Cylinder Kits, Master Cylinder Kits.

First use on or about Dec. 6, 1960.

SN 110,967. Midas, Inc., Chicago, Ill. Filed Dec. 22, 1960.

MIDAS SAFETY CENTER

Applicant claims the exclusive right to the term "Safety Center" as a part of its trademark, but not otherwise. Owner of Reg. Nos. 620,322, 736,168, and others.

For Brake Parts—Namely, Bonded Brake Shoes, Wheel Cylinders, Master Cylinders, Wheel Cylinder Kits, Master Cylinder Kits.

First use on or about Dec. 6, 1960.

SN 121,135. Allm Association, Inc., Miami, Fla., assignee of South Atlantic Shipbuilders, Inc., Miami, Fla. Filed May 31, 1961.



The "V" portion of the design is colored gold with a black marginal outline. The numeral "20" and the words "Step Lift" are disclaimed apart from the mark, as shown.

For Boats.

First use Apr. 16, 1961.

SN 124,556. The Kristi Co., Arvada, Colo. Filed July 24, 1961.



The words "Snow Vehicles With Ski-Action" are disclaimed apart from their use with the mark.

For Off-the-Road Transportation Vehicles and Ski Planes.

First use February 1953.

SN 131,784. Aro Top Sales Company, Newton, Mass. Filed Nov. 13, 1961.

ARO

For Shaped Replacement Top Fabrics for Convertible Automobiles and Accessories Sold in Kit Form.

First use prior to 1936.

SN 146,718. Gentex Corporation, New York, N.Y. Filed June 12, 1962.

REGENCY

For Vehicle Safety Belts.

First use Aug. 15, 1955.

SN 154,793. Xtra, Inc., Boston, Mass. Filed Oct. 8, 1962.

X-TAINER

For Containers of Truck Trailers.

First use Sept. 28, 1962.

SN 156,913. Tomahawk Boat Manufacturing Corporation, Tomahawk, Wis. Filed Nov. 8, 1962.



Owner of Reg. No. 715,844.

For Wooden, Metal, and Fiberglass Boats.

First use Oct. 1, 1962.

SN 156,965. Estate Homes, Inc., Elkhart, Ind. Filed Nov. 9, 1962.

ESTATE HOMES

Applicant disclaims the word "Homes" apart from the mark as shown.

For Mobile Homes.

First use Aug. 13, 1962.

SN 163,881. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 4, 1963.

Scott

Owner of Reg. Nos. 406,229, 737,600, and others.

For Aircraft Tailwheel, Stabilizer Yoke and Aileron Assemblies, and Brake Cylinders and Valves.

First use on or about Mar. 26, 1942.

SN 163,883. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 4, 1963.

SCOTT

Owner of Reg. Nos. 406,229, 737,600, and others.

For Aircraft Tailwheel, Stabilizer Yoke and Aileron Assemblies, and Brake Cylinders and Valves.

First use on or about Mar. 26, 1942.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 92,839. Wincharger Corporation, Sioux City, Iowa. Filed Mar. 14, 1960.



For Dynamo-Electric Generator Apparatus.

First use Apr. 7, 1959.

SN 125,538. H. H. Robertson Company, Pittsburgh, Pa. Filed Aug. 7, 1961.

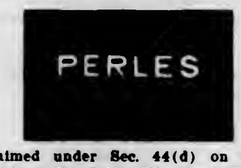
ROBERTSON Q-ELECTRICAL

Applicant disclaims the word "Electrical" apart from the mark. Owner of Reg. Nos. 395,248 and 562,120.

For Electrical Fittings Primarily Sold in Conjunction With and for Use With Metal Cellular Flooring, Including Metal Header Duct, Junctions, Elbows, Expansion Joints, Couplings, Connectors, Closures, Conduit Adapters, Bushings, Cover Plates, Markers and Decorative Floor Outlet Housings.

First use July 25, 1960.

SN 138,805. Perles Elektrowerkzeuge & Motoren A.G., Pieterlen, Berne, Switzerland. Filed Feb. 28, 1962.



Priority claimed under Sec. 44(d) on Swiss Reg. No. 188,304, dated Sept. 28, 1961. The word "Perles" is French for "pearls."

For Electric Tools—Namely, Drills, Screwdrivers, Nutsetters, Impact Wrenches, Percussion Drills, Hammers, Tappers, Sheet Metal Shears, Nibblers, Sanders, Polishers, Grinders, Concrete Vibrators, Circular Saws, Jig Saws, Jig Saw Attachments, Circular Saw Attachments, Sanding, Grinding, Polishing, Sawing, and Drilling Kits for Do-It-Yourself Tool Combinations, Electric Motors, Frequency Changers, Switch Gears, and Electronic Controllers.

SN 140,221. Automation, Inc., Chatsworth, Ga. Filed Mar. 20, 1962.

TELESENSOR

For Electronic Equipment—Namely, Antennas.

First use Mar. 8, 1962.

SN 141,612. General Electric Company, Schenectady, N. Y. Filed Apr. 5, 1962.



The background texture is not a claimed feature of the mark. Owner of Reg. Nos. 250,756, 291,505, and 595,122.

For Electric Resistance Heating Elements of the Sheathed Tubular Type.

First use January 1961.

SN 141,614. Grayhill Moldtronics, Inc., Clarendon Hills, Ill. Filed Apr. 5, 1962.



For Electrical Coil Forms, Electrical Plug Components, Electrical Socket Components, and Electrical Switch Parts.

First use Mar. 10, 1959.

SN 142,059. Servo-Tek Products Co., Incorporated, Hawthorne, N.J. Filed Apr. 11, 1962.

SERVO-TEK

For Electric Motor Speed Control Systems and Apparatus, Voltage Regulator Apparatus, Current Control Apparatus, R.P.M. Sensing Equipment, and D.-C. Tachometer Generators.

First use in or about 1949.

SN 143,229. Hardware Distributors, Inc., New York, N.Y. Filed Apr. 27, 1962.

TUL·SHED

For Electric Drills, Jig Saws, Power Saws, Sanders, Buffers, Drill Kits, Spotlight Brackets, Sockets, Electric Wall Receptacles, Ceiling Lamp Holders, Electric Switches, Extension Cord Sets, Trouble Lights, Auto Spotlights, Fuses, Flashlights, Electric Bells, Transformers, Cable Boxes, Flashlight Batteries, Lamp Bulbs, Post Lanterns, and Magnets.

First use as early as 1952.

SN 143,254. Microdot Inc., South Pasadena, Calif. Filed Apr. 27, 1962.

MICRODOT

Owner of Reg. Nos. 636,399 and 668,300.

For Electrical Components Including Electrical Connectors, Cables, Cable Splicers, Strain Gauges, D.C. Amplifiers, Power Supplies; Calibration Instruments, Electrical Instruments for Balancing Electrical Bridges, Telemetry Equipment, Frequency Converters, Test Oscillators for Producing Laboratory Test Signals, Voltage Breakdown Testers, and Force Measuring Transducers.

First use Apr. 1, 1952.

SN 143,255. Microdot Inc., South Pasadena, Calif. Filed Apr. 27, 1962.



Owner of Reg. Nos. 632,600 and 636,399.

For Electrical Components Including Electrical Connectors, Cables, Cable Splicers, Strain Gauges, D.C. Amplifiers, Power Supplies; Calibration Instruments, Electrical Instruments for Balancing Electrical Bridges, Telemetry Equipment, Frequency Converters, Test Oscillators for Producing Laboratory Test Signals, Voltage Breakdown Testers, and Force Measuring Transducers.

First use Jan. 10, 1959.

SN 143,990. Milwaukee Relays, Inc., Milwaukee, Wis. Filed May 7, 1962.

MR

For Electrical Relays.
First use June 15, 1961.

SN 147,030. Plymouth Rubber Company, Inc., Canton, Mass. Filed June 15, 1962.

SLIPKNOT

Owner of Reg. No. 503,216.
For Plastic-Backed Pressure Sensitive Electrical Tape.
First use January 1950.

SN 147,938. Magnetic Industries Incorporated, Palo Alto, Calif. Filed June 28, 1962.

MI

For Toroidal Coils and Transformers, Electronic Filters, Magnetic Tape Record and Reproduce Heads, Automatic Tape Degaussers.
First use Apr. 13, 1962.

SN 158,480. So-Cal Electro Products, Inc., Los Angeles, Calif. Filed Dec. 4, 1962.

SUR-GROUND

For Conduit Connector Hubs, Insulators, Meter Seal Rings, Meter Mounting Rings, and Components and Accessories Used in Conjunction With Electrical Service, Entrance, Distribution, Switch, and Metering Equipment.
First use Sept. 1, 1955.

SN 163,905. Vapor Corporation, Chicago, Ill. Filed Mar. 4, 1963.

DOR-TROL

For Vehicle Door Operators.
First use Feb. 15, 1963.

SN 164,086. LEL, Inc., Copiague, N.Y. Filed Feb. 25, 1963.

LEL LINE

For Microwave Transmission Line Components.
First use on or about Nov. 1, 1962.

SN 164,884. Gulton Industries, Inc., Metuchen, N.J. Filed Mar. 18, 1963.

LIFECAD

For Alkaline Storage Batteries.
First use Mar. 7, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 106,255. W. Goebel Porzellanfabrik Oeslau und Wilhelmsfeld, Oeslau, near Coburg, Bavaria, Germany. Filed Oct. 12, 1960.

huldah

The name "Huldah" is the Christian name of Mrs. E. F. Jeffee, whose consent is of record.
For Dolls.
First use March 1960; in commerce March 1960.

SN 114,212. W. Goebel Porzellanfabrik Oeslau und Wilhelmsfeld, Oeslau, near Coburg, Bavaria, Germany. Filed Feb. 23, 1961.

Albert Staehle

"Albert Staehle" is a living individual whose consent is of record.
For Rubber Animal Figures.
First use in August 1958; in commerce in August 1958.

SN 131,355. Economy Products Corporation, Chicago, Ill. Filed Nov. 6, 1961.

PARKA PAK

For Sleeping Bags for Outdoor or Campers' Use.
First use Aug. 18, 1961.

SN 133,772. Dow-Lee Co., Wichita, Kans. Filed Dec. 11, 1961.

HOME RUN

For Equipment Sold as a Unit for Playing a Baseball-Type Board Game.
First use on or about Nov. 29, 1961.

SN 134,365. Auburn Rubber Company, Inc., Deming, N. Mex. Filed Dec. 20, 1961.

AUBURN SAFE PLAY TOYS

No claim of exclusive right is made to "Safe Play Toys" apart from the mark as used. The drawing is lined for red and blue but color is not claimed as a feature of the mark.
Owner of Reg. No. 709,298.
For Toy Musical Instruments and Molding Clay.
First use Dec. 11, 1961.

SN 139,361. Universal Manufacturing Company, Inc., Bossier City, La. Filed Mar. 7, 1962.

Owner of Reg. Nos. 544,321 and 714,991.
For Children's Play Equipment—Namely, Gyms, Gym Frames, Swinging Equipment, Merry-Go-Rounds, Rocking Rides, Wheeled Equipment, Slides, and Climbing Equipment.
First use 1945.

SN 142,950. Knickerbocker Toy Co., Inc., Brooklyn, N.Y. Filed Apr. 24, 1962.

KNICKINS

Owner of Reg. No. 674,123.
For Stuffed Toys.
First use Nov. 10, 1961.

SN 143,067. Joseph Weider, Union City, N.J. Filed Apr. 25, 1962.

BEAUTI-BOOTS

For Weights for Use in Gymnastics.
First use on or about Feb. 1, 1960.

SN 144,151. Donald F. Duncan, Incorporated, Evanston, Ill. Filed May 9, 1962.

SIR DUNCAN

Owner of Reg. Nos. 298,697, 618,981, and 700,880.
For Spinning Top.
First use Apr. 16, 1962.

SN 148,890. General Sportcraft Company, Ltd., Bergenfield, N.J. Filed July 12, 1962.

Jimmy Walters

For Badminton Sets and Accessory Parts, Volley Ball Sets and Accessory Parts, Badminton-Volley Ball Combination Game Sets, Dartboard Sets, Boards and Darts, Suction Dart Games, Table Tennis Sets and Accessory Parts, Indoor Shuttlecock Games, Tether Ball Games and Accessory Parts, Exerciser Kits and Accessory Parts, Tennis Rackets, Rubber Horseshoe Sets and Rubber Ring Toss Games.
First use July 10, 1957.

SN 150,031. Donald F. Duncan, Incorporated, Evanston, Ill. Filed July 30, 1962.

IMPERIAL

Owner of Reg. No. 609,514.
For Spinning Top.
First use June 29, 1962.

SN 150,305. Albin Enterprises, Inc., d.b.a. Jack Built Toy Manufacturing Co., Burbank, Calif. Filed Aug. 2, 1962.

AQUA-BIRD

For Children's Toy Boats.
First use May 10, 1962.

SN 151,480. Dunlop Tire and Rubber Corporation, Buffalo, N.Y. Filed Aug. 20, 1962.

Maxflex

Owner of Reg. Nos. 511,928 and 659,542.
For Tennis Balls.
First use July 17, 1962.

SN 152,067. Ideal Toy Corporation, Hollis, N.Y. Filed Aug. 28, 1962.

THE KLUNKS

For Stuffed Caricature Dolls.
First use Mar. 29, 1962.

SN 153,103. Multiple Products Corporation, New York, N.Y. Filed Sept. 13, 1962.

TEENETTES

For Doll Type Toys and Kits of Doll Type Toys.
First use May 14, 1962.

SN 154,475. Consolidated Thermoplastics Company, Los Angeles, Calif. Filed Oct. 4, 1962.

POLY ZOO

For Inflatable Plastic Animal Toys.
First use May 4, 1962.

SN 157,173. Vornado, Inc., Garfield, N.J. Filed Nov. 13, 1962.



For Baseball Gloves and Mitts.
First use on or about Feb. 15, 1961.

SN 157,979. The Die Cast Finishing Company, Cleveland, Ohio. Filed Nov. 27, 1962.

CIRCA-WALK

For Self-Propelled Balancing and Riding Toy.
First use Sept. 29, 1961.

SN 158,011. The Oak Rubber Company, Ravenna, Ohio. Filed Nov. 27, 1962.



Owner of Reg. Nos. 654,090 and 731,093.
For Toy Balloons and Packages of Toy Balloons.
First use September 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 122,984. American Drill Bushing Co., Los Angeles, Calif. Filed June 28, 1961.

TAPER-LOK

For Drill Bushings.
First use May 22, 1961.

SN 136,287. R & R Carbide Mfg. Co., Inc., Carlstadt, N.J. Filed Jan. 22, 1962.

R&R

For Rotary Files and Burs.
First use April 1960.

SN 136,765. The Harriman Manufacturing Company, Chattanooga, Tenn. Filed Jan. 29, 1962.

ROTOWEEDER

For Earthworking Cultivators.
First use Nov. 1, 1961.

SN 139,506. McGraw-Edison Company, Chicago, Ill. Filed Mar. 9, 1962.

FAMILY BARBER

For Hair Cutting Sets, Comprising Clippers, Scissors, Brushes, and Combs.
First use Sept. 1, 1958.

SN 142,584. Advanced Wyrepak Company, Incorporated, Bridgeport, Conn. Filed Apr. 19, 1962.



For Wire Winding Equipment.
First use Apr. 15, 1959.

SN 142,585. Advanced Wyrepak Company, Incorporated, Bridgeport, Conn. Filed Apr. 19, 1962.

WyrePak

For Wire Winding Equipment.
First use Apr. 15, 1959.

SN 142,847. L. F. Peterson, d.b.a. Frederick Manufacturing Company, Kansas City, Mo. Filed Apr. 23, 1962.



For Lawn Mower Parts and Blades.
First use December 1961.

SN 143,716. Henry P. Boggis Company, Cleveland, Ohio. Filed May 3, 1962.

HYBCO

For Grinding Machines.
First use August 1938.

SN 143,996. The Paymaster Corporation, Chicago, Ill. Filed May 7, 1962.

RIBBON WRITER

Owner of Reg. No. 675,738.
For Check Protecting Machines.
First use Jan. 7, 1957.

SN 144,911. Adrema Limited, London, England. Filed May 18, 1962.

BRADATA

Priority claimed under Sec. 44(d) on British Reg. Nos. 829,434, 829,435, 829,436, and 829,437, all dated Jan. 9, 1962.

For Machines for Office Use, for Use in Printing Works and for Bookbinding, Accounting Machines, Adding Machines, Analysis Machines, Collating Machines, Calculating Machines, Counting Apparatus and Machines, Electronic Data Processing Apparatus and Instruments, Letter and Parcel Balances, Stamp-Issuing Machines, Photo-Copying Apparatus and Instruments, Microfilm Prepared for Exhibition, Apparatus for Viewing Microfilm, Ticket-Issuing Machines, Electric and Electronic Apparatus and Instruments for Use in the Automatic Control of Industrial Operations and Machines for

Recording Information by Means of Punched, Embossed, Perforated or Tabbed Cards, Plates or Tape, Addressing and Listing Machines, Parts of Such Machines; Address Plates for Addressing Machines, Index Trays, Indexing Cabinets (not Being Furniture) and Indicator Tabs for Indexing Systems; Addressing Machines, Copying Paper, Cheque-Signing and Cheque-Writing Machines, Dating and Numbering Machines (Stationery), Duplicators (for Office Use) and Plates Therefor, Filing Cabinets of Metal (not Being Furniture), Form-Feeding Devices, Form-Writing Machines, Franking Machines (Stamping Machines), Typewriter Ribbons, Stationery; and Envelope-Opening and Sealing Machines, Paper-Folding Machines, Paper-Folding and Inserting Machines, Gumming and Glueing Machines, Label-Sticking Machines, Numbering Apparatus, Perforating Presses and Stapling Presses All for Use; Storage Containers (for Office Use) for Address Plates and Cabinets (not Being Furniture) for Such Containers; Index Cards, Index Strips, Holders for Index Cards and Strips and Containers for Such Holders; Document Holders; and Typewriters Automatically Operated by Actuating Impulses, Furniture.

SN 146,071. Carl O. Lassy, d.b.a. Lassy Tool Co., Plainville, Conn. Filed June 4, 1962.

Rapid LOX

For Work-Holding Devices Such as Vises, Clamps, and Fixture Locks.
First use May 2, 1961.

SN 146,072. Carl O. Lassy, d.b.a. Lassy Tool Co., Plainville, Conn. Filed June 4, 1962.

Slide LOX

For Work-Holding Devices Such as Vises, Clamps, and Fixture Locks.
First use June 6, 1961.

SN 146,273. Coffee Chef, Inc., Philadelphia, Pa. Filed June 6, 1962.

COFFEE-CHEF

For Hot Coffee Vending Machines.
First use Jan. 17, 1962.

SN 148,844. Research Industries, Inc., Des Moines, Iowa. Filed July 11, 1962.

BUNT BAG

The word "Bag" is disclaimed apart from the mark as shown.
For Insecticide Applicator Device for Livestock.
First use Nov. 2, 1961.

SN 155,826. Muskegon Tool Industries, Inc., Muskegon, Mich. Filed Oct. 24, 1962.

SCOTCH NOTCH

For Boring Cutters.
First use June 6, 1960.
Subj. to Intf. with SN 158,549.

SN 158,549. Madison Industries Inc., Pawtucket, R.I. Filed Dec. 5, 1962.

SCOTCH NOTCH

For Hole Reaming Cutters.
First use Oct. 13, 1961.
Subj. to Intf. with SN 155,826.

SN 165,559. American Type Founders Co., Inc., Elizabeth, N.J. Filed Mar. 28, 1963.

CHIEF

Owner of Reg. Nos. 386,777 and 622,169.
For Printing Presses and Sheet-Fed Offset Presses.
First use Aug. 5, 1940.

Class 26—Measuring and Scientific Appliances

SN 104,494. Wild Heerbrugg AG, Heerbrugg, Sankt Gallen, Switzerland. Filed Sept. 14, 1960.

FALCONAR

Priority claimed under Sec. 44(d) on Swiss Reg. No. 180,302, dated Apr. 23, 1960.
For Photographic Lenses.

SN 129,075. Kindermann & Co., Ochsenfurt (Main), Germany. Filed Sept. 26, 1961.

KINDERMANN

Owner of German Reg. No. 672,977, dated Mar. 14, 1955.
For Light Radiation Equipment, Such as Cameras and Projection Devices for Photo-Film and X-Ray Photographs; Spare Parts and Accessories for Light Radiation Equipment, Such as Tripods, Tripod Heads, Copy and Projector Enlarging Devices, Negative Holders, Range Finders, and Photo-Electric Cells for the Purpose of Measuring Units of Light, Photo Flood Lights, and Induction Type and Electronic Flash Equipment, Light Filters, Lenses, Shutters and Shutter Release Devices, Projection Screens, Slide and Positive Film Mounts and Appropriate Containers Thereof, Copy and Picture Frames; Developing and Copying Devices, as Well as Darkroom Equipment, Such as Trays, Developing Tanks, Deep Tanks and Devices, Washing Apparatus, Squeegee Devices for the Purpose of Flattening of Prints or Positives, Drying Cabinets, Trimmers, Numbering Devices for Sensitized Plates, Films and Papers, Clips, Plate Racks, Print Tongs, Measuring Containers, Pails, Darkroom Safelights and Lamps; Sensitized Materials Such as Plates, Films and Papers.

SN 129,502. Komline-Sanderson Engineering Corporation, Peapack, N.J. Filed Oct. 9, 1961.

ZETAMETER

For Apparatus To Measure the Electric Charge of Electrons on Colloidal Surfaces.
First use July 1960.

SN 130,690. Elba Corporation, Boulder, Colo. Filed Oct. 26, 1961.

the VIP elba

For Sound Slide Film Strip Projectors.
First use June 1959.

SN 158,011. The Oak Rubber Company, Ravenna, Ohio. Filed Nov. 27, 1962.



Owner of Reg. Nos. 654,090 and 731,093.
For Toy Balloons and Packages of Toy Balloons.
First use September 1962.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 122,984. American Drill Bushing Co., Los Angeles, Calif. Filed June 28, 1961.

TAPER-LOK

For Drill Bushings.
First use May 22, 1961.

SN 136,287. R & R Carbide Mfg. Co., Inc., Carlstadt, N.J. Filed Jan. 22, 1962.

R&R

For Rotary Files and Burs.
First use April 1960.

SN 136,765. The Harriman Manufacturing Company, Chattanooga, Tenn. Filed Jan. 29, 1962.

ROTOWEEDER

For Earthworking Cultivators.
First use Nov. 1, 1961.

SN 139,506. McGraw-Edison Company, Chicago, Ill. Filed Mar. 9, 1962.

FAMILY BARBER

For Hair Cutting Sets, Comprising Clippers, Scissors, Brushes, and Combs.
First use Sept. 1, 1958.

SN 142,584. Advanced Wyrepak Company, Incorporated, Bridgeport, Conn. Filed Apr. 19, 1962.



For Wire Winding Equipment.
First use Apr. 15, 1959.

SN 142,585. Advanced Wyrepak Company, Incorporated, Bridgeport, Conn. Filed Apr. 19, 1962.

WyrePak

For Wire Winding Equipment.
First use Apr. 15, 1959.

SN 142,847. L. F. Peterson, d.b.a. Frederick Manufacturing Company, Kansas City, Mo. Filed Apr. 23, 1962.



For Lawn Mower Parts and Blades.
First use December 1961.

SN 143,716. Henry P. Boggis Company, Cleveland, Ohio. Filed May 3, 1962.

HYBCO

For Grinding Machines.
First use August 1938.

SN 143,996. The Paymaster Corporation, Chicago, Ill. Filed May 7, 1962.

RIBBON WRITER

Owner of Reg. No. 675,738.
For Check Protecting Machines.
First use Jan. 7, 1957.

SN 144,911. Adrema Limited, London, England. Filed May 18, 1962.

BRADATA

Priority claimed under Sec. 44(d) on British Reg. Nos. 829,434, 829,435, 829,436, and 829,437, all dated Jan. 9, 1962.
For Machines for Office Use, for Use in Printing Works and for Bookbinding, Accounting Machines, Adding Machines, Analysis Machines, Collating Machines, Calculating Machines, Counting Apparatus and Machines, Electronic Data Processing Apparatus and Instruments, Letter and Parcel Balances, Stamp-Issuing Machines, Photo-Copying Apparatus and Instruments, Microfilm Prepared for Exhibition, Apparatus for Viewing Microfilm, Ticket-Issuing Machines, Electric and Electronic Apparatus and Instruments for Use in the Automatic Control of Industrial Operations and Machines for

Recording Information by Means of Punched, Embossed, Perforated or Tabbed Cards, Plates or Tape, Addressing and Listing Machines, Parts of Such Machines; Address Plates for Addressing Machines, Index Trays, Indexing Cabinets (not Being Furniture) and Indicator Tabs for Indexing Systems; Addressing Machines, Copying Paper, Cheque-Signing and Cheque-Writing Machines, Dating and Numbering Machines (Stationery), Duplicators (for Office Use) and Plates Therefor, Filing Cabinets of Metal (not Being Furniture), Form-Feeding Devices, Form-Writing Machines, Franking Machines (Stamping Machines), Typewriter Ribbons, Stationery; and Envelope-Opening and Sealing Machines, Paper-Folding Machines, Paper-Folding and Inserting Machines, Gumming and Glueing Machines, Label-Sticking Machines, Numbering Apparatus, Perforating Presses and Stapling Presses All for Use; Storage Containers (for Office Use) for Address Plates and Cabinets (not Being Furniture) for Such Containers; Index Cards, Index Strips, Holders for Index Cards and Strips and Containers for Such Holders; Document Holders; and Typewriters Automatically Operated by Actuating Impulses, Furniture.

SN 146,071. Carl O. Lassy, d.b.a. Lassy Tool Co., Plainville, Conn. Filed June 4, 1962.

Rapid LOX

For Work-Holding Devices Such as Vises, Clamps, and Fixture Locks.
First use May 2, 1961.

SN 146,072. Carl O. Lassy, d.b.a. Lassy Tool Co., Plainville, Conn. Filed June 4, 1962.

Slide LOX

For Work-Holding Devices Such as Vises, Clamps, and Fixture Locks.
First use June 6, 1961.

SN 146,273. Coffee Chef, Inc., Philadelphia, Pa. Filed June 6, 1962.

COFFEE-CHEF

For Hot Coffee Vending Machines.
First use Jan. 17, 1962.

SN 148,844. Research Industries, Inc., Des Moines, Iowa. Filed July 11, 1962.

BUNT BAG

The word "Bag" is disclaimed apart from the mark as shown.
For Insecticide Applicator Device for Livestock.
First use Nov. 2, 1961.

SN 155,826. Muskegon Tool Industries, Inc., Muskegon, Mich. Filed Oct. 24, 1962.

SCOTCH NOTCH

For Boring Cutters.
First use June 6, 1960.
Subj. to Intf. with SN 158,549.

SN 158,549. Madison Industries Inc., Pawtucket, R.I. Filed Dec. 5, 1962.

SCOTCH NOTCH

For Hole Reaming Cutters.
First use Oct. 13, 1961.
Subj. to Intf. with SN 155,826.

SN 165,559. American Type Founders Co., Inc., Elizabeth, N.J. Filed Mar. 28, 1963.

CHIEF

Owner of Reg. Nos. 386,777 and 622,169.
For Printing Presses and Sheet-Fed Offset Presses.
First use Aug. 5, 1940.

Class 26—Measuring and Scientific Appliances

SN 104,494. Wild Heerbrugg AG, Heerbrugg, Sankt Gallen, Switzerland. Filed Sept. 14, 1960.

FALCONAR

Priority claimed under Sec. 44(d) on Swiss Reg. No. 180,302, dated Apr. 23, 1960.
For Photographic Lenses.

SN 129,075. Kindermann & Co., Ochsenfurt (Main), Germany. Filed Sept. 26, 1961.

KINDERMANN

Owner of German Reg. No. 672,977, dated Mar. 14, 1955.
For Light Radiation Equipment, Such as Cameras and Projection Devices for Photo-Film and X-Ray Photographs; Spare Parts and Accessories for Light Radiation Equipment, Such as Tripods, Tripod Heads, Copy and Projector Enlarging Devices, Negative Holders, Range Finders, and Photo-Electric Cells for the Purpose of Measuring Units of Light, Photo Flood Lights, and Induction Type and Electronic Flash Equipment, Light Filters, Lenses, Shutters and Shutter Release Devices, Projection Screens, Slide and Positive Film Mounts and Appropriate Containers Thereof, Copy and Picture Frames; Developing and Copying Devices, as Well as Darkroom Equipment, Such as Trays, Developing Tanks, Deep Tanks and Devices, Washing Apparatus, Squeegee Devices for the Purpose of Flattening of Prints or Positives, Drying Cabinets, Trimmers, Numbering Devices for Sensitized Plates, Films and Papers, Clips, Plate Racks, Print Tongs, Measuring Containers, Pails, Darkroom Safelights and Lamps; Sensitized Materials Such as Plates, Films and Papers.

SN 129,502. Komline-Sanderson Engineering Corporation, Peapack, N.J. Filed Oct. 9, 1961.

ZETAMETER

For Apparatus To Measure the Electric Charge of Electrons on Colloidal Surfaces.
First use July 1960.

SN 130,690. Elba Corporation, Boulder, Colo. Filed Oct. 26, 1961.



For Sound Slide Film Strip Projectors.
First use June 1959.

SN 132,456. Engelhard Industries, Inc., Newark, N.J. Filed Nov. 21, 1961.

TRI-LAY

For Composite Metal Crucibles for Laboratory Use.
First use Mar. 11, 1960.

SN 132,867. O. C. Rudolph & Sons, Inc., Township of Caldwell, Essex County, N.J. Filed Nov. 27, 1961.



For Optical Research and Control Instruments—Namely, Polarimeters, Saccharimeters, Spectropolarimeters, Spectrometers, Monochromators, Ellipsometers, Light Sources, Adaptometers and Polarization Photometers.
First use Oct. 1, 1958.

SN 134,670. Photo-Entwicklungsgerate AG, Zurich, Switzerland. Filed Dec. 26, 1961.

POLYFAX

Priority claimed under Sec. 44(d) on Swiss Reg. No. 186,545, dated June 27, 1961.
For Photographic Apparatus for Multiple Use for Preparing Photostatic Copies, for Preparing Prints From Exposed and Processed Negative Films and for Processing Exposed and Undeveloped Photographic Papers; and Photographic Paper.
First use June 1961; in commerce Nov. 22, 1961.

SN 135,441. Geodyne Corporation, Waltham, Mass. Filed Jan. 9, 1962.

GEODYNE

For Scientific Instruments, Equipment and Apparatus—Namely, Oceanographic Underwater Housings, Amplifiers, Geophysical and Meterological Measuring and Recording Devices and Controls for Same, Temperature Recorders, Flowmeters, Oceanographic Sea-Bed Drifters, Compasses, Chart Drives, Recorders, Buoys, Beacon Lights, and Instrument Towers.
First use Oct. 19, 1961.

SN 138,842. Computer Control Company, Inc. (Delaware corporation), Framingham, Mass., by merger from Computer Control Company, Inc. (Massachusetts corporation), Framingham, Mass. Filed Mar. 1, 1962.

DICOTRON

For Optical Precision Shaft Angle Encoders.
First use on or about Jan. 31, 1962.

SN 139,261. Atlantic Research Corporation, Alexandria, Va. Filed Mar. 7, 1962.

ARCATRON

For Electron Generators Producing an Ionized Gas Containing Free Electrons and Components Therefor.
First use Jan. 25, 1962.

SN 140,401. Tech Serv, Inc., College Park, Md. Filed Mar. 21, 1962.

EX

For Transistorized Digital Logic Packages.
First use Nov. 28, 1960.

SN 141,093. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Mar. 29, 1962.

TRADELINE

For Temperature, Pressure, Humidity, Time, Liquid Level, and Flame Responsive Control Devices of the Electric, Pneumatic, and Electronic Type for Use With Heating, Cooling, and Air Conditioning Apparatus.
First use at least as early as August 1961.

SN 141,919. Gilford Instrument Laboratories, Inc., Oberlin, Ohio. Filed Apr. 4, 1962.

gilford

For Instruments and Apparatus for Use in Biology and Chemistry and Comprising Blood Pressure Recorders, Pulse Counters and Tachometers, Spirometers, Optical Density Measuring and Recording Systems and Components Thereof, Densitometers, and Recorders for Use With Blood Pressure and the Said Pulse Counters and Tachometers, Spirometers, and Densitometers.
First use on or about June 30, 1961.

SN 144,892. Justin J. Shapiro, d.b.a. Labindustries, Berkeley, Calif. Filed May 17, 1962.

REPIPET

For Laboratory Glassware.
First use Oct. 1, 1961.

SN 146,564. Automation Industries, Inc., Torrance, Calif. Filed June 11, 1962.

REFLECTOSCOPE

For Non-Destructive Flaw Detection Apparatus.
First use 1944.

SN 146,880. Chicago Aerial Industries, Inc., Wilmington, Del. Filed June 14, 1962.

PERIPHOTO

For Optical Equipment—Namely, Lenses and Lens Systems.
First use October 1954.

SN 147,676. Art Craft Optical Company, Inc., Rochester, N.Y. Filed June 26, 1962.

SIR-LITE

For Ophthalmic Mountings and Parts Thereof.
First use Feb. 23, 1962.

SN 147,937. Macalaster Scientific Corporation, Cambridge, Mass. Filed June 28, 1962.



For Laboratory and Scientific Equipment and Apparatus—Namely, Equipment and Apparatus for Science Instruction; Laboratory Glassware; Weighing Instruments Such as Analytical Balances; Optical Equipment, Such as Microscopes, Polarimeters, Refractometers, Spectrophotometers, Colorimeters, Nephelometers, Photofluorometers and Metallographs; Controlled Temperature Equipment, Such as Ovens, Furnaces, Incubators, Hot Plates, Heating Mangles and Water Baths; Sample Preparation Equipment, Such as Centrifuges, Cut-Off Machines, Polishing Machines, Grinding Machines, Presses, Shakers and Microtomes; Testing Equipment Such as Hardness Testers; Measuring Equipment, Such as pH Meters, Titrators and Densitometers; Laboratory Furniture, Such as Cabinets, Fume Hoods, Laboratory Carts and Stools; and Pumps, Such as Vacuum, Pressure and Liquid.
First use June 1, 1962.

SN 148,495. Fototype, Incorporated, Chicago, Ill. Filed July 6, 1962.

SIMPLE-SIMON

For Photographic Apparatus—Namely, a Vertical Process Camera for Preparing Line and Halftone Negatives for Lithographic Plate Burning.
First use June 23, 1961.

SN 149,121. The Plastic Contact Lens Company, Chicago, Ill. Filed July 16, 1962.

LUMICON

For Contact Lenses.
First use June 20, 1962.

SN 149,122. The Plastic Contact Lens Company, Chicago, Ill. Filed July 16, 1962.

CYCON

For Contact Lenses.
First use during the month of August 1960.

SN 149,150. Wilkens Instrument & Research, Inc., Walnut Creek, Calif. Filed July 16, 1962.

AUTOPREP

For Automatic Preparatory Gas Chromatograph.
First use Mar. 7, 1962.

SN 149,249. Art-Craft Optical Company, Inc., Rochester, N.Y. Filed July 18, 1962.

ART.MAN

Owner of Reg. No. 271,706.
For Ophthalmic Mountings and Parts Thereof.
First use June 9, 1961.

SN 149,431. Airnav, Inc., Seattle, Wash. Filed July 20, 1962.

AIRNAV

For Airborne Communications and Navigation Equipment and Systems and Component Parts—Namely, Marker Beacon Receivers.
First use Mar. 15, 1962.

SN 156,853. General Precision, Inc., Little Falls, N.J. Filed Oct. 31, 1962.

MINAC

For Navigation Computer.
First use Dec. 30, 1961.

SN 156,682. Test Equipment Corporation, Houston, Tex. Filed Nov. 5, 1962.

TEQUIPCO

For Electronic Testing and Measuring Equipment, Useful Particularly in the Measurement and Evaluation of Electrical and Signal Characteristics of Electronic Components and Circuits Including Electronic Components, and Accessory Supplies and Equipment.
First use at least as early as Feb. 13, 1962.

SN 157,119. American Optical Company, South Bridge, Mass., assignee of Litton Systems, Inc., Beverly Hills, Calif. Filed Nov. 13, 1962.

BIOPACK

For Apparatus for Monitoring Physiological Phenomena Such as Temperature, Respiration, Heart-Beat and the Like.
First use between July 1, 1960 and Sept. 30, 1960.

SN 157,362. Farrington Manufacturing Company, Needham Heights, Mass. Filed Nov. 16, 1962.

FARRINGTON

The drawing is lined for shading purposes only. Owner of Reg. Nos. 669,865 and 707,195.
For Automatic Character Sensing Equipment, and Equipment Used in Conjunction Therewith.
First use Oct. 4, 1960.

SN 157,603. Consolidated Electric Lamp Company, d.b.a. Vulcan Electric Company, Danvers, Mass. Filed Nov. 20, 1962.

CAL-STAT

For Electro-Mechanical Thermostats.
First use Nov. 2, 1962.

SN 158,286. Tele-Scale, Inc., Cheektowaga, N.Y. Filed Nov. 30, 1962.

TELE-SCALE

For Extensible Linear Measuring Devices.
First use Oct. 1, 1962.

SN 158,963. Dan River Mills, Incorporated, Danville, Va. Filed Dec. 12, 1962.

DURATROL

For Cloth Inspection Machinery.
First use Oct. 15, 1962.

SN 159,041. Carter Products, Inc., New York, N.Y. Filed Dec. 13, 1962.

ULTRA-COMPARATOR

For Measuring Appliance—Namely, a Vacuum Tube Voltage Comparison Regulator.
First use Nov. 1, 1962.

SN 159,169. National Precision Corporation, Buffalo, N.Y. Filed Dec. 14, 1962.

YARDARM

For Liquor Carrying and Dispensing Apparatus Having an Automatic Measuring Feature.
First use Oct. 18, 1962.

SN 159,345. Interphoto Corporation, Long Island City, N.Y. Filed Dec. 18, 1962.

INTERPHOTO

For Photographic Articles—Namely, Finders, Distance Meters, Range Finders, Exposure Meters, Color Filters With and Without Mountings, Auxiliary Lenses, Automatic Releases, Cases, Tripods, Tripod Heads, Enlarging Apparatus, Projection Apparatus and Tables, Printing Apparatus, Film Spools, Film Slides, Lenses, Camera Shutters, Carrying Straps, Stereo Auxiliaries, Stereo Viewers, Lens Caps, Solar Diaphragms, Apparatus for Developing Sensitized Photographic Materials, Viewing Lenses and Apparatus for Determining the Depth of Focus Tables, Thermometers for Photographic Developing Tanks, Electrical Flash Bulbs and Synchronizers, Flash Gun Units (Synchronizers), Film Rewinds for Rewinding Photographic Films From One Reel to Another, Binoculars, Telescopes, Plastic Recording Tape, Lighting Units, Batteries, Viewers, Sensitized Plates, Developing Trays, Sensitized Film, Sensitized Photographic Papers, Cameras, Camera Parts, Audio-Visual Projectors, Teaching Machines, Tape Recorders, Microfilm Readers, Motion Picture Projectors, Still Projectors.
First use October 1962.

SN 159,401. H. & M. Neckwear Co., Inc., New York, N.Y. Filed Dec. 19, 1962.

HANKASE

For Eyeglass Cases Embellished With Fabric Simulating a Handkerchief.
First use Oct. 18, 1962.

SN 159,792. Wayne-George Corporation, Newton, Mass. Filed Dec. 26, 1962.

DIGISEC

For Data Processing Apparatus, Particularly, Digital Data Processing Apparatus.
First use Nov. 30, 1962.

SN 159,861. Allied Research Associates, Inc., Concord, Mass. Filed Dec. 28, 1962.

VIBRA-PLANE

For Vibration Testing Equipment.
First use on or before July 27, 1959.

SN 159,867. Jessie B. Bornemann, d.b.a. Bornemann Products Co., Aurora, Ill. Filed Dec. 28, 1962.

DEPTH-O-PLUG

For Water Temperature and Water Depth Determining Instruments.
First use June 1948.

SN 159,941. Ametek, Inc., New York, N.Y. Filed Dec. 31, 1962.

COLOR-GLANCE

For Testing Machines for Determining Mechanical Properties of Construction Materials.
First use Oct. 17, 1962.

SN 160,166. John Dritz & Sons, Inc., Spartanburg, S.C. Filed Jan. 4, 1963.

EZY-HEM

For Hem Gauge.
First use Feb. 1, 1959.

SN 160,242. Wright Chemical Corporation, Chicago, Ill. Filed Jan. 4, 1963.

WRICOMATIC

For Apparatus for Controlling Solids Concentration, Make-Up Water, Basin Water Level and Rate of Chemical Feed in Industrial Water Treating Systems.
First use Oct. 9, 1962.

SN 160,291. Imperial Camera Corp., Chicago, Ill. Filed Jan. 7, 1963.

BEL-AIR

For Cameras.
First use Nov. 29, 1962.

SN 160,292. Imperial Camera Corp., Chicago, Ill. Filed Jan. 7, 1963.

DART

For Cameras.
First use Nov. 29, 1962.

SN 160,293. Imperial Camera Corp., Chicago, Ill. Filed Jan. 7, 1963.

DELTA

For Cameras.
First use Nov. 29, 1962.

SN 160,294. Imperial Camera Corp., Chicago, Ill. Filed Jan. 7, 1963.

FURY

For Cameras.
First use Nov. 29, 1962.

SN 160,296. Imperial Camera Corp., Chicago, Ill. Filed Jan. 7, 1963.

SIGMA

For Cameras.
First use Nov. 29, 1962.

SN 160,557. Sawyers, Inc., Portland, Oreg. Filed Jan. 11, 1963.

PORTOPAK

For Collapsible Stands for Projectors With Electrical Sockets and Connector Cords.
First use Nov. 8, 1962.

SN 160,660. Qualitrol Corporation, Fairport, N.Y. Filed Jan. 14, 1963.

QualiTROL

Owner of Reg. Nos. 421,549 and 517,036.
For Measuring and Control Instruments and Equipment—Namely, Defrost Controls, Thermostats, Pressure Controls, and Pressure Relief Valves.
First use on or about Aug. 17, 1962, on pressure controls; in or about 1945 as to "Qualitrol" in another display.

SN 160,836. Centre Circuits, Inc., State College, Pa. Filed Jan. 17, 1963.

Centrepoint

For Numerical Tool Controls.
First use Oct. 5, 1961.

SN 161,411. Morton J. Fried, d.b.a. Precision Sensing Equipment, Berkeley, Calif. Filed Jan. 25, 1963.

PSE

For Electrical Apparatus for Measurement and Control of High Voltage Waveforms and Current Waveforms.
First use Feb. 6, 1962.

SN 161,422. Reeves Instrument Corporation, Garden City, N.Y. Filed Jan. 25, 1963.

PRELORT

For Radar Systems and Accessories.
First use on or about Dec. 13, 1961.

SN 161,583. Zeiss Ikon A.G., Stuttgart, Germany. Filed Jan. 25, 1963.

XENOSOL

Owner of German Reg. No. 693,180, dated July 26, 1956.
For Lighting Equipment for Photographic and Motion Picture Purposes.
First use February 1958; in commerce June 26, 1959.

SN 161,874. Roy D. Faigenbaum, Melrose Park, Pa. Filed Feb. 1, 1963.

TESTAMATIC

For Machines for Inspecting Stockings for Defects.
First use on or about Jan. 10, 1963.

SN 161,906. The Shore Instrument & Mfg. Co., Jamaica, N.Y. Filed Feb. 1, 1963.

SHORE

For Instruments Used To Calibrate Hardness of Metal, Plastics, and Rubber.
First use on or about June 15, 1907.

Class 27 — Horological Instruments

SN 144,061. Elgin National Watch Company, Elgin, Ill. Filed May 8, 1962.

The 'INSTANT'

TIME TEACHER

Applicant disclaims the term "Time Teacher" apart from the mark as shown. The drawing is lined to indicate the colors red and blue.
For Wrist Watches.
First use Nov. 25, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 141,913. Frank S. White, d.b.a. L. I. Pendleton & Sons, Boston, Mass. Filed Apr. 9, 1962.

L·I·P·

For Men's Jewelry—Namely, Cuff Links, Tie Clips, Tie Slides, Tie Tacks, Tie Chains, Key Chains and Waldemar Chains, Money Clips, Belt Buckles, Studs, and Collar Holders.
First use in 1959; in 1906 as to "LIP."

SN 157,013. S. & M. Jewelry Co., New York, N.Y. Filed Nov. 9, 1962.

LoveBeau

For Wedding Rings.
First use 1933.

Class 29 — Brooms, Brushes, and Dusters

SN 145,190. Kleen Chemical Manufacturing Company, Chicago, Ill. Filed May 22, 1962.

KLEEN D

The word "Kleen" is disclaimed apart from the mark as shown.
For Denture Cleaning Brush.
First use Feb. 2, 1961.

SN 154,192. Amway Sales Corporation, Ada, Mich. Filed Oct. 1, 1962.

AMWAY

Owner of Reg. Nos. 707,656, 736,656, and others.
For Cleaning and Maintenance Equipment—Namely, Rug and Upholstery Shampoo Applicators.
First use Jan. 12, 1962.

SN 158,258. Joseph Lieberman & Sons, Inc., Philadelphia, Pa. Filed Nov. 30, 1962.

CHEERIO

For Paint Brushes.
First use Aug. 1, 1962.

SN 158,259. Joseph Lieberman & Sons, Inc., Philadelphia, Pa. Filed Nov. 30, 1962.

CHINALON

For Paint Brushes.
First use Aug. 1, 1962.

Class 31 — Filters and Refrigerators

SN 158,522. The Firewel Company, Inc., Cheektowaga, N.Y. Filed Dec. 5, 1962.

FIREWEL

For Cryogenic Equipment and Composite Parts Thereof.
First use on or about Oct. 1, 1952.

Class 32 — Furniture and Upholstery

SN 160,874. Mengel Wood Industries, Inc., Louisville, Ky. Filed Jan. 17, 1963.

Owner of Reg. Nos. 431,008, 735,861, and others.
For Kitchen Cabinets and Vanitories.
First use December 1950.

Class 33 — Glassware

SN 136,002. René Pierre Marie Savary, Paris, France. Filed Feb. 21, 1963.

YALACTA

Owner of French Reg. No. 417,776, dated Feb. 7, 1952 (Seine); Natl. Inst. No. 508,506.
For Glass Jars for Apparatus for Making Yoghourt.
First use Mar. 11, 1931; in commerce June 1, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 131,319. Tranter Manufacturing, Inc., Lansing, Mich. Filed Nov. 8, 1961.

FLEXOPLATE

For Transformer Radiator.
First use Oct. 20, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 142,588. American Biltrite Rubber Co. Inc., Chelsea, Mass. Filed Apr. 19, 1962.

BOSTON REEL-KING

Owner of Reg. Nos. 684,787, 728,822, and others.
For Fire Hose.
First use Mar. 23, 1962.

SN 142,620. Dayco Corporation, Dayton, Ohio. Filed Apr. 19, 1962.

DURAPOWER

For Power Transmission Belts.
First use Mar. 12, 1962.

SN 158,882. W. J. Voit Rubber Corp., Los Angeles, Calif. Filed Dec. 10, 1962.

ORBITREAD

For Nonmetallic Pneumatic Tires and Cured and Uncured Elastomers Applied as External Layers to Such Tires, First in Uncured Form and Then Transformed Into Cured Elastomers.
First use April 1962.

Class 36 — Musical Instruments and Supplies

SN 127,151. The Soundscriber Corporation, North Haven, Conn. Filed Sept. 1, 1961.

SATELLITE

For Dictation Recording and Reproducing Equipment.
First use Dec. 7, 1959.

SN 135,862. Ad Lib Records Inc., Staten Island, N.Y. Filed Jan. 12, 1962.

Applicant makes no claim to the word "Records," the name of the goods.
For Phonograph Records.
First use August 1961.

SN 144,409. National Sound Systems, Inc., Long Island City, N.Y. Filed May 11, 1962.

SYMPHONAIRE

For Sound Reproducing Equipment for Playing Pre-Recorded Music, Continuous-Play Magnetic Tape Cartridges, and Accessories for Said Equipment Including Public Address Microphone and Remote Music Cut-Off Control.
First use Dec. 9, 1961.

SN 145,145. Verbaleta Recorder Corporation, Garden City, N.Y. Filed May 21, 1962.

VERBALETA

For Tape Recorders, Recording Tapes and Component Parts Thereof.
First use May 8, 1962.

SN 156,438. The Seeburg Corporation, Chicago, Ill. Filed Nov. 1, 1962.

SELECT-O-MATIC

For Automatic Phonographs and Remote Control Devices Therefor.
First use Oct. 1, 1940.

SN 156,558. Roscoe M. Krawl and Grace E. Krawl (joint owners), d.b.a. Krawl Publishing Company, San Bernardino, Calif. Filed Nov. 5, 1962.

Callfaye

For Phonograph Records.
First use Sept. 25, 1962.

SN 158,427. Leon Cabat, Paris, Seine, France. Filed Dec. 4, 1962.

MODE disques

No claim is made to the word "Disques" apart from the other features of the mark shown in the drawing. Owner of French Reg. No. 485,268, dated Jan. 7, 1960 (Seine); Natl. Inst. No. 137,026.
For Phonograph Records.

SN 159,659. Joseph S. Moshay, d.b.a. Preview Records, Beverly Hills, Calif. Filed Dec. 24, 1962.

PREVIEW

For Phonograph Records.
First use on or about Nov. 28, 1962.

SN 162,486. Record Guild of America Manufacturing Company, Inc., Great Neck, N.Y. Filed Feb. 11, 1963.

SIMON SAYS

For Musical Phonograph Records, Story and Novelty Phonograph Records, Combination Musical and Story Phonograph Records.
First use July 30, 1962.

SN 163,177. Anna B. Smiernow, d.b.a. Chanteclair Recording Company, Philadelphia, Pa. Filed Feb. 20, 1963.

CHANTECLAIR

For Phonograph Records.
First use Feb. 4, 1963.

SN 163,687. John A. Wilson, d.b.a. Jack Wilson Company, Thousand Oaks, Calif. Filed Feb. 28, 1963.

AURATONE

For High Fidelity Furniture and Parts Thereof—Namely, Loudspeaker Enclosures, Loudspeaker Wall Baffles, Extension Loudspeaker Enclosures, Loudspeaker Enclosure Grilles and Grille Boards, Loudspeaker Enclosure Speaker Port Covers, Loudspeaker Enclosure Tuning Ducts, Loudspeaker Enclosure Mounting Bracket Kits, Loudspeaker Adapter Boards, High Fidelity Component Equipment Cabinets, and Record Changer Bases; Also, High Fidelity Loudspeaker Systems, Extension Loudspeakers, and Loudspeakers.
First use Nov. 19, 1958.

SN 163,853. Monarch Electronics International, Inc., North Hollywood, Calif. Filed Mar. 4, 1963.

MONACOR

For Tape Recorders, Phonographs, Record Changers, Recording Tape, and Spindles.
First use Dec. 4, 1961.

SN 167,647. Moore & Gorlin, Atlanta, Ga. Filed Apr. 26, 1963.

MEMORY LANE

For Phonograph Records.
First use on or about Apr. 2, 1963.

Class 37 — Paper and Stationery

SN 144,856. Wilson Jones Company, Chicago, Ill. Filed May 17, 1962.

THE YEAR IN BRIEF

For Diaries.
First use Mar. 1, 1962.

SN 148,637. McCrory Corporation, New York, N.Y. Filed July 9, 1962.

PENLAWN

For Writing Paper, Tablets, Envelopes, Notebook Paper, and Note Pads.
First use 1959.

SN 153,335. Standard & Poor's Corporation, New York, N.Y. Filed Sept. 17, 1962.

STANDARD AND POOR'S CHARTASTOCK

Owner of Reg. Nos. 133,490 and 527,414.
For Book of Chart Forms.
First use Sept. 5, 1962.

SN 157,124. The Marvellum Company, Holyoke, Mass. Filed Nov. 13, 1962.

markrome

For Coated Glossy Cover Paper.
First use Oct. 29, 1962.

Class 38 — Prints and Publications

SN 141,785. Robert G. Lesher, d.b.a. Guestguide Publishers, Denver, Colo. Filed Apr. 6, 1962.

Guestguide

For Information Booklet for Tourists.
First use Aug. 30, 1961.

Class 39 — Clothing

SN 123,453. Acme Boot Company, Inc., Clarksville, Tenn. Filed July 6, 1961.

ALAMO

For Leather Boots.
First use June 15, 1961.

SN 124,370. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed July 20, 1961.

HEALTHGARD

For Men's Underwear—To Wit, Shorts, Shirts, and Union Suits.
First use 1930 on union suits.

SN 125,693. Style Footwear Co., Inc., South Norwalk, Conn. Filed Aug. 9, 1961.

STYLETTES

For Women's Sneakers.
First use Aug. 2, 1961.

SN 126,139. J. Allen Rubber Company Limited, Whitecroft, Lydney, England. Filed Aug. 17, 1961.

MARIGOLD

Owner of British Reg. Nos. 659,803, dated June 6, 1947, and 793,293, dated July 14, 1959.
For Gloves for Household Cleaning and Industrial Purposes, and Infants' Pants of Rubber or Plastic.

SN 126,207. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed Aug. 18, 1961.

CATHAY

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers, and Vests.
First use Aug. 7, 1961.

SN 126,720. American Shoe Company, Incorporated, d.b.a. Hill Bros., St. Louis, Mo. Filed Aug. 28, 1961.

HILLCREST

For Shoes for Women and Children.
First use Aug. 8, 1961.

SN 126,785. The Louis Marcus Corporation, Baltimore, Md. Filed Aug. 28, 1961.

Dorsé

For Fur Trimmed Coats for Women, Misses, and Juniors.
First use June 15, 1961.

SN 140,449. I. C. Herman & Company, Inc., New York, N.Y. Filed Mar. 22, 1962.

SKANDIA PRINTS

The word "Prints" is disclaimed apart from the mark as shown.
For Handkerchiefs.
First use Jan. 18, 1962.

SN 140,735. Lady Lynne Lingerie, Inc., New York, N.Y. Filed Mar. 26, 1962.

BACK MAGIC

Owner of Reg. No. 618,687.
For Slips, Nightgowns, Brassieres, and Girdles for Women.
First use Jan. 3, 1956.

SN 140,738. Olga Company, Van Nuys, Calif. Filed Mar. 26, 1962.

SUDDENLY PERFECT

Owner of Reg. Nos. 726,021 and 726,023.
For Foundation Garments.
First use Mar. 2, 1962.

SN 154,782. Mary Tibbitts, Woodland, Calif. Filed Oct. 8, 1962.

TOOTSIE TISSUES

For Disposable Tissue Shoe Liners.
First use Sept. 17, 1962.

SN 158,572. Southland Manufacturing Company, Inc., Wilmington, N.C. Filed Dec. 5, 1962.

SIR WILLIAM

Owner of Reg. No. 867,811.
For Outer and Under Shirts, Pajamas, Men's and Boys' Underwear, and Men's and Boys' Polo Shirts, Sport Shirts, and Slacks.
First use Nov. 1, 1938.

SN 158,835. Liberty Hosiery Mills, Inc., Gibsonville, N.C. Filed Dec. 10, 1962.

CRAZY LEGS

For Hosiery Tights, and Leotards for Ladies and Children.
First use September 1958.

SN 159,124. The Shirtcraft Company, Inc., New York, N.Y. Filed Dec. 13, 1962.

COUNTRY CORNER

For Women's Dresses, Blouses, Shirts, Pants, Bathing Suits, Shorts, and Skirts.
First use July 10, 1962.

SN 159,151. Cambridge Rubber Company, Cambridge, Mass. Filed Dec. 14, 1962.

Tred-Lite

The drawing is lined for red. Owner of Reg. Nos. 357,425, 704,665, and others.
For Men's, Women's, and Children's Shoes.
First use Jan. 4, 1961; June 18, 1928, as to "Tred-Lite."

SN 159,195. Bellgrade Manufacturing Co., Inc., Athens, Ga. Filed Dec. 17, 1962.

DOUBLE HEADER

Owner of Reg. No. 135,198.
For Men's Casual Pants, Men's Work Pants, Western Jeans, Overalls, and Bermuda Shorts.
First use July 25, 1915.

SN 159,279. Pons Full Fashion Mills, Inc., Valdese, N.C. Filed Dec. 17, 1962.

PONS

Owner of Reg. Nos. 569,280 and 655,109.
For Sweaters.
First use July 15, 1955.

SN 159,483. Jack Schultz, Inc., St. Louis, Mo. Filed Dec. 19, 1962.

COBB HALL

For Slacks.
First use Nov. 5, 1962.

SN 159,463. Beckerman Shoe Corporation, New York, N.Y. Filed Dec. 20, 1962.

ResTep Juniors

For Misses', Children's, Infants', Boys', and Girls' Shoes.
First use Aug. 18, 1954.

SN 159,599. Pendleton Woolen Mills, Portland, Oreg. Filed Dec. 21, 1962.

PEN-NORTHWESTER

Owner of Reg. Nos. 701,017, 680,056, and others.
For Men's Jackets.
First use Mar. 20, 1962.

SN 159,600. Pendleton Woolen Mills, Portland, Oreg. Filed Dec. 21, 1962.

PEN-ACTIONMASTER

Owner of Reg. No. 722,007 and others.
For Men's Jackets.
First use Oct. 31, 1962.

SN 159,601. Pendleton Woolen Mills, Portland, Oreg. Filed Dec. 21, 1962.

PEN-KNOCKABOUT

Owner of Reg. Nos. 722,007, 728,025, and others.
For Men's Jackets.
First use Mar. 20, 1962.

SN 159,602. Pendleton Woolen Mills, Portland, Oreg. Filed Dec. 21, 1962.

PEN-TURNABOUT

Owner of Reg. Nos. 326,185, 728,025, and others.
For Men's Jackets.
First use Mar. 20, 1962.

SN 159,660. J. C. Penney Company, New York, N.Y. Filed Dec. 24, 1962.

Arresta-Run

For Women's Hosiery.
First use June 29, 1962.

SN 159,735. Interstate Latex Company, Youngstown, Ohio. Filed Dec. 26, 1962.

GAY MASTER

For Brassiere Pads.
First use Oct. 15, 1962.

SN 159,737. Izod, Ltd., New York, N.Y. Filed Dec. 26, 1962.



Owner of Reg. Nos. 655,860, 736,456, and others.
For Raincoats.
First use Dec. 4, 1962.

SN 160,179. Gutman-Lann Glove Company, Inc., New York, N.Y. Filed Jan. 4, 1963.

CONTOURA

For Gloves.
First use Dec. 5, 1962.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 160,167. John Dritz & Sons, Inc., Spartanburg, S.C. Filed Jan. 4, 1963.

PLEAT-O-MATIC

For Pleated Fabric Band Used To Facilitate Pleating of Fabrics.
First use May 15, 1962.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 140,325. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Mar. 21, 1962.

BANCORA

For Cotton Piece Goods.
First use Mar. 14, 1962.

SN 144,746. M. Lowenstein & Sons, Inc., New York, N.Y. Filed May 16, 1962.

COMPLEXION TONES

For Bed Sheets Made of Cotton and/or Synthetic Fibres.
First use Apr. 10, 1962.

SN 149,727. Emerson Textile Co., d.b.a. Hope Webbing Co., Chelsea, Mass. Filed July 25, 1962.

HOPE

Owner of Reg. No. 133,432.
For Braided and Narrow Woven Fabrics.
First use 1883.

SN 160,074. Scarves by Vera, Inc., New York, N.Y. Filed Jan. 2, 1963.



For Table Cloths, Draperies, Bath and Beach Towels, Place Mats, Napkins, Toaster Covers and Pot Holders.
First use February 1951.

SN 160,266. Blue Ridge Textile Co., Inc., Bangor, Pa. Filed Jan. 7, 1963.

ROYALCAMA

For Tricot Knit Fabric Sold by the Yard for Making Into Dresses, Robes, Blouses, Shoes, Handbags, Children's Wear, Millinery, Men's Hats, Sport Jackets, Bathrobes, and the Like.
First use May 31, 1962.

Class 43 — Thread and Yarn

SN 156,638. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.



No claim is made to the word "Polyester" apart from the mark as shown. Owner of Reg. Nos. 600,796, 735,517, and others.
For Thread and Yarn, Comprised in Whole or in Substantial Part of Polyester.
First use Oct. 15, 1962.

Class 44 — Dental, Medical, and Surgical Appliances

SN 146,410. Oxford Laboratories, Redwood City, Calif. Filed June 7, 1962.

PROTHROMETER

For Prothrombin Time Determining Apparatus.
First use Mar. 18, 1959.

SN 158,142. Centrx Custom Centre, Inc., St. Louis, Mo. Filed Nov. 29, 1962.

Centrx

The medical prescription symbol of an "x" is disclaimed apart from the mark as shown.
For Electrically Operated Massage Machines of a Portable Nature for Massaging a Portion of the Body.
First use July 23, 1962.

SN 158,522. The Firewel Company, Inc., Cheektowaga, N.Y. Filed Dec. 5, 1962.

FIREWEL

For Life Saving Equipment of the Oxygen Breathing Type and Component Parts Thereof.
First use on or about Oct. 1, 1952.

SN 162,233. Clay-Adams, Inc., New York, N.Y. Filed Feb. 7, 1963.

JUSTRITE

For Surgical Wound Clips.
First use in or about October 1930.

SN 163,882. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 4, 1963.

SCOTT

Owner of Reg. Nos. 406,229, 737,600, and others.
For Breathing Equipment—Namely, Portable and Fixed Air and Oxygen Breathing Systems and Self-Contained Underwater Breathing Systems; and Seat Back Portable Oxygen Holders, Mask Hose Connections, Demand Regulators, Pressure Regulators, Audible Low Pressure Alarms, Therapeutic Plug-Ins, Oxygen Outlets, Filler and Charging Couplings, Plug-In Couplings, Manifold Assemblies, Cylinder Valves and Turn-On Valves, Masks and Mask Assemblies, Flow Indicators, Oxygen Flow Control Units, Oxygen Cylinder and Valve Assemblies, External Recharging Valve Assemblies, Harness Assemblies, Connectors, Breathing Tubes, Filter and Control Assemblies, and Oxygen Drop-Out Compartment Latches for Such Systems.
First use on or about Mar. 26, 1942.

SN 163,884. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 4, 1963.

Scott

Owner of Reg. Nos. 406,229, 737,600, and others.
For Breathing Equipment—Namely, Portable and Fixed Air and Oxygen Breathing Systems and Self-Contained Underwater Breathing Systems; and Seat Back Portable Oxygen Holders, Mask Hose Connections, Demand Regulators, Pressure Regulators, Audible Low Pressure Alarms, Therapeutic Plug-Ins, Oxygen Outlets, Filler and Charging Couplings, Plug-In Couplings, Manifold Assemblies, Cylinder Valves and Turn-On Valves, Masks and Mask Assemblies, Flow Indicators, Oxygen Flow Control Units, Oxygen Cylinder and Valve Assemblies, External Recharging Valve Assemblies, Harness Assemblies, Connectors, Breathing Tubes, Filter and Control Assemblies, and Oxygen Drop-Out Compartment Latches for Such Systems.
First use on or about Mar. 26, 1942.

Class 45 — Soft Drinks and Carbonated Waters

SN 153,643. Fruitvale Canning Company, Oakland, Calif. Filed Sept. 21, 1962.

HILLCREST

Owner of Reg. No. 516,754.
For Nonalcoholic Beverages—Namely, Carbonated Soft Drinks.
First use May 18, 1962.

Class 46 — Foods and Ingredients of Foods

SN 116,235. Jahn's Since 1897, Inc., Brooklyn, N.Y. Filed Mar. 22, 1961.

JAHN'S

Owner of Reg. No. 642,154.
For Ice Cream.
First use 1897.

SN 130,914. Kentucky Fried Chicken, Inc., Shelbyville, Ky. Filed Oct. 30, 1961.



For Freshly Prepared Chicken and Gravy, Packaged and Sold in Retail Trade.
First use in April 1952.

SN 132,275. The Black Steer, Yankton, S. Dak. Filed Nov. 17, 1961.

Black Steer



The drawing is lined in the appropriate places to indicate the color red.
For Salad Dressing.
First use May 31, 1957.

SN 133,412. Puritan Canners Ltd., Richmond, British Columbia, Canada. Filed Dec. 5, 1961.

BRAND 7

Applicant disclaims the word "Brand" apart from the mark as shown. Priority claimed under Sec. 44(d) on Canadian application filed Aug. 21, 1961, Reg. No. 127,254, dated July 13, 1962.
For Pork and Beans, Canned Meats and Stews.

SN 145,259. Gristede Bros. Inc., New York, N.Y. Filed May 23, 1962.

GARDEN BEAUTY

Owner of Reg. No. 185,096.
For Preserved, Evaporated, Frozen or Canned Apricots, Cranberry Sauce, Kadota Figs, Grapefruit Sections, Freestone Peaches, Yellow-Cling Peaches, Bartlett Pears, Fruit Cocktail, and Light Sweet Royal Anne Cherries.
First use Aug. 1, 1922.

SN 145,975. Ramo Inc., Omaha, Nebr., assignee of Sunshine Pecan Company, d.b.a. Guil-Pak, San Antonio, Tex. Filed June 1, 1962.

GUIL-PAK

For Shelled and In-Shell Pecans.
First use November 1959.

SN 146,303. National Dairy Products Corporation, Chicago, Ill. Filed June 6, 1962.

DORIA

For Cheese.
First use Mar. 11, 1957.

SN 146,506. National Dairy Products Corporation, New York, N.Y. Filed June 8, 1962.

POLY-SAFF

For Edible Vegetable Oil.
First use May 16, 1962.

SN 147,460. Jan Evans, Incorporated, Westport, Conn. Filed June 22, 1962.

JAN'S

For Prepared Foods—Namely, Mustard Sauce and Peach Chutney.
First use on or about Dec. 1, 1960, on mustard sauce.

SN 150,440. Norris Inc., d.b.a. Norris Candy Company, Atlanta, Ga. Filed Aug. 3, 1962.

BETTY NORRIS

The mark is not known to be the name of any particular living person. Owner of Reg. Nos. 534,905, 651,534, and others.
For Candy.
First use June 1, 1955.

SN 151,417. M & R Dietetic Laboratories, Inc., Columbus, Ohio. Filed Aug. 17, 1962.

ALPHALAC

For Liquid Food, Designed as Part of the Diet, Containing Skimmed Milk, Safflower Oil, Lactose, Sucrose, Artificial Flavor and Coloring.
First use July 16, 1962.

SN 151,559. Armour Pharmaceutical Company, Chicago, Ill. Filed Aug. 21, 1962.

ARANOX

For Antioxidants for Edible Fat Products Such as Shortenings and the Like.
First use on or about Mar. 5, 1956.

SN 152,472. United Salt Corporation, Houston, Tex. Filed Sept. 4, 1962.

UNITED

For Table and Evaporated Salt for Use in Foods.
First use Feb. 26, 1958.

SN 153,374. Blatchford Calf Meal Company, Waukegan, Ill. Filed Sept. 18, 1962.

SURECALF

For Livestock Feeds.
First use Aug. 10, 1962.

SN 153,616. Barbana Frozen Foods Inc., York, Pa. Filed Sept. 21, 1962.

BARBANA

For Frozen Confection, in Bar, Dessert Molds or on a Stick Form.
First use July 7, 1962.

SN 154,197. Geo. Bassett & Co. Limited, Sheffield, England. Filed Oct. 1, 1962.

TREE TOP

For Liquorice Confectionery.
First use on or about July 10, 1962; in commerce on or about July 10, 1962.

SN 154,378. J. Fred Schmidt Packing Co., Columbus, Ohio. Filed Oct. 2, 1962.

Schmidt's

"Brand" is disclaimed apart from the mark as shown.
For Canned Bouillon.
First use Sept. 21, 1962.

SN 155,092. John Morrell & Co., d.b.a. Morrell, Ottumwa, Iowa. Filed Oct. 12, 1962.

E-Z-REDI

Owner of Reg. Nos. 356,791, 723,177, and others.
For Fresh and Frozen Boneless, Bone-In and Ground Beef.
First use Apr. 30, 1962.

SN 155,464. Eugene Word, d.b.a. Tastit Extract Company, Lorena, Tex. Filed Oct. 18, 1962.

TASTIT

For Pure Vanilla Extract, Imitation Vanilla Extract, Lemon Extract, Orange Extract, Pineapple Extract, Banana Extract, Almond Extract, and Extracts of Numerous Other Fruit Flavors for Food Purposes and Also for Ingredients of Foods.
First use July 25, 1934.

SN 155,816. Marsh Supermarkets, Inc., Yorktown, Ind. Filed Oct. 24, 1962.

YORKTOWN

Owner of Reg. No. 650,214.
For Soda Crackers, Chocolate Syrup, Salad Dressing, Canned Beets, Tomato Juice, Cherries, Crushed Pineapple, Sliced Pineapple, Orange Food Drink, Pineapple Juice, Tea Bags, Ice Tea in Powdered Form, and Oleomargarine.
First use June 1, 1958, on chocolate syrup.

SN 159,310. United Biscuit Company of America, Melrose Park, Ill. Filed Dec. 17, 1962.

KITCHEN RICH

For Cookies and Crackers.
First use Feb. 27, 1961, on cookies.

SN 159,340. Thomas S. Ferguson, d.b.a. Lorenzo Choice Brands, San Francisco, Calif. Filed Dec. 18, 1962.

LORENZO

For Vinegar.
First use Nov. 30, 1962.

SN 159,585. H. P. Hood & Sons, Inc., d.b.a. H. P. Hood & Sons, Boston, Mass. Filed Dec. 21, 1962.

SOUTHERN BELLE

For Frozen Concentrated Orange Juice and Reconstituted Orange Juice.
First use Aug. 17, 1959, on frozen concentrated orange juice.

SN 159,786. Frank J. Italiano, Inc., La Crosse, Wis. Filed Dec. 26, 1962.

PLEASONING

Owner of Reg. No. 694,987.
For All Purpose Seasoning.
First use Nov. 1, 1951.

SN 160,161. Chesterton Candy Company, d.b.a. Orchard Hill Farms Candy Company, Chicago, Ill. Filed Jan. 4, 1963.

TRINIDADS

For Candy.
First use Dec. 8, 1962.

SN 160,452. Swift & Company, Chicago, Ill. Filed Jan. 9, 1963.

GOOD DEED

For Bird Food.
First use on or about Oct. 10, 1962.

SN 160,757. Double Stamp Brands Inc., Birmingham, Ala. Filed Jan. 16, 1963.

DOUBLE STAMP

For Dog Food.
First use Jan. 7, 1963.

SN 160,758. Double Stamp Brands Inc., Birmingham, Ala. Filed Jan. 16, 1963.

DOUBLE STAMP

For Coffee.
First use Jan. 7, 1963.

SN 161,058. Howind Fitzsimmons, Birmingham, Ala. Filed Jan. 21, 1963.

SUNNYCLIME

For Inhibitor for the Growth of Mold in Bakery Goods.
First use Oct. 16, 1962.

SN 161,565. Santa Clara Produce Inc., Oxnard, Calif. Filed Jan. 28, 1963.

6 WHEELS

For Fresh Vegetables.
First use Jan. 16, 1963.

SN 161,620. Krim-Ko Corporation, Bensenville, Ill. Filed Jan. 29, 1963.

Beep for Breakfast

For Food Drink Made From a Variety of Fruit Juices.
First use on about May 15, 1961.

Class 47 — Wines

SN 146,434. The Westminster Corporation, Long Island City, N.Y. Filed June 7, 1962.

CREME DE KAKOWA

Applicant disclaims the words "Creme de," apart from the mark shown.
For Fruitwine Specialty.
First use Apr. 23, 1962.

Class 49—Distilled Alcoholic Liquors

SN 153,121. Schenley Industries, Inc., New York, N.Y. Filed Sept. 13, 1962.

SCHENLEY

THE WORLD'S FAIREST BRAND

Applicant disclaims the words "The World's Fairest Brand" apart from the mark as shown but by this disclaimer does not relinquish or waive any common law rights. Owner of Reg. Nos. 544,397 and 597,703.
For Whiskey.
First use July 5, 1962.

Class 50—Merchandise Not Otherwise Classified

SN 106,254. W. Goebel Porzellanfabrik Oeslau und Wilhelmsfeld, Oeslau, near Coburg, Bavaria, Germany. Filed Oct. 12, 1960.

ROBSON

The name "Robson" is the surname of Miss Janet Robson, whose consent is of record.
For Ceramic Figurines.
First use June 1959; in commerce September 1959.

SN 106,256. W. Goebel Porzellanfabrik Oeslau und Wilhelmsfeld, Oeslau, near Coburg, Bavaria, Germany. Filed Oct. 12, 1960.

Huldah

The name "Huldah" is the Christian name of Mrs. E. F. Jeffee, whose consent is of record.
For Ceramic Figurines.
First use March 1960; in commerce May 1960.

SN 136,296. The Sculpcraft Corporation, Cleveland, Ohio. Filed Jan. 22, 1962.

FORMITE

For Cellular Ceramic Sheets and Blocks for Sculpting Which Are Incorporated in a Hobby Kit or Packaged in Bulk.
First use July 1, 1961.

SN 141,013. Joseph Weider, Union City, N.J. Filed Mar. 28, 1962.

JOSEPH WEIDER'S ARCHITECT OF BEAUTY

For Kits Comprising Gymnastic and Beauty Treatment Instruction Booklets and Weights for Use in Gymnastics.
First use on or about Feb. 1, 1960.

SN 142,683. Benjor Products, Culver City, Calif. Filed Apr. 20, 1962.

GRANDMA'S GANG

For Block Having Picture Frames on Its Sides and on a Rectangular Wooden Panel Having a Backward Slope and of Varying Lengths Permanently Affixed to a Wooden Base of Corresponding Length to the Panel, Said Panel Accommodating Picture Frames on the Face of the Panel.
First use July 15, 1960.

SN 142,684. Benjor Products, Culver City, Calif. Filed Apr. 20, 1962.

TAX EXEMPTIONS

For Block Having Picture Frames on Its Sides and on a Rectangular Wooden Panel Having a Backward Slope and of Varying Lengths Permanently Affixed to a Wooden Base of Corresponding Length to the Panel, Said Panel Accommodating Picture Frames on the Face of the Panel.
First use Apr. 30, 1960.

SN 142,685. Benjor Products, Culver City, Calif. Filed Apr. 20, 1962.

GRANDPA'S GANG

For Block Having Picture Frames on Its Sides and on a Rectangular Wooden Panel Having a Backward Slope and of Varying Lengths Permanently Affixed to a Wooden Base of Corresponding Length to the Panel, Said Panel Accommodating Picture Frames on the Face of the Panel.
First use Oct. 10, 1961.

SN 142,686. Benjor Products, Culver City, Calif. Filed Apr. 20, 1962.

FAMILY JEWELS

For Block Having Picture Frames on Its Sides and on a Rectangular Wooden Panel Having a Backward Slope and of Varying Lengths Permanently Affixed to a Wooden Base of Corresponding Length to the Panel, Said Panel Accommodating Picture Frames on the Face of the Panel.
First use Apr. 30, 1960.

SN 143,068. Joseph Weider, Union City, N.J. Filed Apr. 25, 1962.

"THRUWAY TO BEAUTY"

For Kits Comprising Gymnastic and Beauty Treatment Instruction Booklets and Weights for Use in Gymnastics.
First use on or about Feb. 1, 1960.

SN 154,721. The Greneker Corporation, New York, N.Y. Filed Oct. 8, 1962.

GRENEKER

Owner of Reg. Nos. 418,536, 431,182, and 507,158.
For Heads and Manikins Used for the Display of Hats and Clothing.
First use about Dec. 28, 1945.

SN 156,075. Brella Corporation, Altadena, Calif. Filed Oct. 29, 1962.

BRELLA

For Foldable Flannel Board for Educational Purposes.
First use Feb. 6, 1961.

Class 51—Cosmetics and Toilet Preparations

SN 111,481. Clairol Incorporated, New York, N.Y. Filed Jan. 9, 1961.

WIPE AWAY

For Preparation for Removing Stains From the Skin.
First use Oct. 27, 1960.

SN 129,344. Helene Curtis Industries, Inc., Chicago, Ill. Filed Oct. 6, 1961.

TENDER TOUCH

Owner of Reg. No. 692,190.
For Moisturizing Lotion.
First use on or about Sept. 25, 1961.

SN 132,520. Biendax-Werke R. Schneider & Co., Mainz (Rhine), Germany. Filed Nov. 22, 1961.

Blend-a-med

Owner of German Reg. No. 603,999, dated Jan. 9, 1951; and U.S. Reg. Nos. 592,288 and 692,927.
For Dentifrices.

SN 133,192. Robert D. Abbott, d.b.a. Black-Tie Products Company, St. Louis, Mo. Filed Dec. 4, 1961.

BLACK TIE

For Personal Deodorant and Body Refresher.
First use Feb. 1, 1960.

SN 135,201. Hy-Grade Laboratories, Inc., Grand Junction, Colo. Filed Jan. 4, 1962.

RESTORE

For Skin Lotion for Relief of Chapped, Rough, and Cracked Hands.
First use Dec. 4, 1961.

SN 142,627. Marie Earle Corporation, New York, N.Y. Filed Apr. 19, 1962.

ESSENTIAL

For Face Powder, Dusting Powder, Face Creams, Lipstick, Rouge, and Bath Salts.
First use July 15, 1922.

SN 143,221. Faberge, Inc., d.b.a. Juliette Margien, New York, N.Y. Filed Apr. 27, 1962.

SUNFLOWER

For Lipstick, Nail Polish, and Face Powder.
First use on or about Mar. 15, 1960, on lipstick and nail polish.

SN 148,776. Isaac H. Watkins, d.b.a. I. H. Watkins Company, Chattanooga, Tenn. Filed July 10, 1962.

HARMO-TONE

For Hair and Scalp Tonic.
First use June 11, 1962.

SN 150,762. Colgate-Palmolive Company, New York, N.Y. Filed Aug. 8, 1962.

1·2·3

For Facial Cleanser.
First use June 18, 1962.

SN 151,010. Chesebrough-Pond's Inc., New York, N.Y. Filed Aug. 13, 1962.

AQUA LIQUA

For Cosmetic Skin Preparation—Namely, Facial Lotion.
First use July 27, 1962.

SN 153,876. Funel, Societe Anonyme, Le Cannet, Alpes-Maritimes, France. Filed Sept. 25, 1962.

REVANCHE

Priority claimed under Sec. 44(d) on French Reg. No. 1,096, dated July 11, 1962 (Cannes); Natl. Inst. No. 188,950. "Revanche" translated means "revenge."
For Perfume, Toilet Water, Cosmetic Lotions, Cosmetic Skin Creams, Lipsticks, Rouge, Face Powder, Hair Lotions, and Dentifrices.

SN 155,283. Yvonne Marie Vermeiren (nee Le Bras), Mareuil-sur-Lay, Vendee, France. Filed Oct. 16, 1962.

BLUE DENT

Priority claimed under Sec. 44(d) on French Reg. No. 503, dated July 20, 1962 (La Roche-sur-Yon); Natl. Inst. No. 190,190.
For Perfumery, Rouge, Cosmetic Lotions, and Dentifrices.

SN 155,775. John H. Breck, Inc., Springfield, Mass. Filed Oct. 24, 1962.

PHD

For Hair Dressing for Men.
First use Oct. 12, 1962.

SN 156,761. Parfums Lucien Lelong Corporation, New York, N.Y. Filed Nov. 6, 1962.

SAHARA

Owner of Reg. No. 509,865.
For Perfume, Cologne, Powder, Deodorant, and Suntan Lotion.
First use Oct. 7, 1947.

Class 52—Detergents and Soaps

SN 129,344. Helene Curtis Industries, Inc., Chicago, Ill. Filed Oct. 6, 1961.

TENDER TOUCH

Owner of Reg. No. 692,190.
For Hair Shampoo.
First use on or about Sept. 25, 1961.

SN 145,191. Kleen Chemical Manufacturing Company, Chicago, Ill. Filed May 22, 1962.

KLEEN D

The word "Kleen" is disclaimed apart from the mark as shown.
For Denture Cleaning and Sanitising Compound in Cake Form.
First use Feb. 2, 1961.

SN 146,329. U.S. Mop Co., Cedar Rapids, Iowa. Filed June 6, 1962.

U.S. HOME PARTY

Applicant hereby disclaims the term "U.S." apart from the mark as shown.
For Floor Cleaners and Floor Cleaning Compounds for Spray or Other Application to Dust Mops.
First use May 4, 1962.

SN 149,218. Sanitation Corporation, Chicago, Ill. Filed July 17, 1962.

KOST KUTTER

For Cleaners and Detergents.
First use on or about Mar. 18, 1952.

SN 154,872. Paul C. Vasel, d.b.a. Schmidt Sales Co., New York, N.Y. Filed Oct. 9, 1962.

speed Queen

For Plastic Sponge Containing a Special Cleaning Agent Released Through Use of Water, Particularly Suitable for General Household Cleaning.
First use Sept. 20, 1961.

SN 157,480. The Drackett Company, Cincinnati, Ohio. Filed Nov. 19, 1962.

BOWL KING

Owner of Reg. No. 334,589.
For Toilet Bowl Cleaner for Institutional Use Having Cleansing, Disinfecting, and Deodorising Properties.
First use Nov. 9, 1963; in April 1932 as to "Drain-King."

SN 157,587. Yadro Chemical Company, Milwaukee, Wis. Filed Nov. 19, 1962.

CRAVE

Owner of Reg. No. 678,220.
For China and Glass-Ware Cleaning Composition and Washing Compounds.
First use Oct. 13, 1962.

SN 158,801. Dumas Milner Corporation, Jackson, Miss. Filed Dec. 10, 1962.

MYSTIC

Owner of Reg. Nos. 390,983, 733,931, and others.
For Degreaser for the Removal of Grease From Kitchen Utensils, Sinks, Spattered Walls, Counter Tops, Kitchen Appliances, Garbage Disposals, Exhaust Vents, Filters, and Other Implements.
First use June 19, 1962.

SN 159,966. The Diversey Corporation, Chicago, Ill. Filed Dec. 31, 1962.

BULK-ET

For Tank and Utensil Cleaner in Powder Form.
First use Dec. 7, 1962.

SN 159,968. The Diversey Corporation, Chicago, Ill. Filed Dec. 31, 1962.

VAPAN

For Granular Caustic-Type Vacuum Pan Cleaner in Dairies.
First use Dec. 17, 1962.

SN 162,227. Colgate-Palmolive Company, New York, N.Y. Filed Feb. 7, 1963.

WHITE TORNADO

For Cleaner, Cleanser, and Detergent.
First use Jan. 19, 1963.

SERVICE MARKS

Class 100 — Miscellaneous

SN 120,967. Consolidated Natural Gas Company, New York, N.Y. Filed May 29, 1961.



The drawing is lined for blue but applicant claims exclusive rights in the mark as shown irrespective of color.
For Utility Services—Namely, Supplying Natural Gas to Residential, Commercial, and Industrial Users for Heat, Light and Power Purposes; and Service and Maintenance of Household, Commercial, and Industrial Appliances and Equipment.
First use on or about Apr. 15, 1959.

SN 133,422. Steer Inn Systems, Inc., Jenkintown, Pa. Filed Dec. 5, 1961.

STEER INN

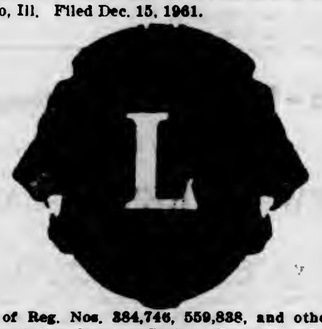
Applicant disclaims the word "Inn" apart from the mark as shown.
For Restaurant Services.
First use Sept. 18, 1961.

SN 133,883. Kellogg Company, Battle Creek, Mich. Filed Dec. 12, 1961.

Kellogg's

Owner of Reg. Nos. 115,848, 707,012, 739,186, and others.
For Systematic Dissemination of Authoritative Nutritional Information.
First use at least as early as Jan. 1, 1911.

SN 134,121. The International Association of Lions Clubs, Chicago, Ill. Filed Dec. 15, 1961.



Owner of Reg. Nos. 384,746, 559,838, and others.
For Association Services Such as Promoting Good Fellowship Among the Peoples of the World; Encouraging Activity of Members in Civic Welfare of the Community; and Promoting Efficiency and High Ethical Standards in the Business and Professions of the Community.
First use Oct. 7, 1961.

SN 144,071. Hoover Ball and Bearing Company, Saline, Mich. Filed May 8, 1962.

TOTE SYSTEMS

The word "Systems" is disclosed apart from the mark "Tote Systems." Owner of Reg. Nos. 517,618 and 519,345.
For Engineering and Design Service of Bulk Material Handling Systems.
First use on or about July 1, 1949.

SN 146,733. Lodding Engineering Corporation, Auburn, Mass. Filed June 12, 1962.

IN TEC

For Consulting and Advisory Engineering Services—Namely, Tooling Techniques and Training of Engineering and Management Personnel To Apply Same to Production.
First use March 1962.

SN 160,803. Howard Johnson's Motor Lodges, Inc., Wollaston, Mass. Filed Jan. 7, 1963.



For Establishing, Maintaining and Operating Motor Lodges and Furnishing Lodging to the Motoring Public Through Related Companies.
First use during February 1955.

Class 101 — Advertising and Business

SN 112,549. King Korn Stamp Company, Chicago, Ill. Filed Jan. 26, 1961.

PETERKIN

For Providing Premium Stamps to Various Business Establishments and Redeeming Such Stamps for Merchandise at Redemption Centers.
First use on or about Aug. 1, 1960.

SN 125,101. Federated Department Stores, Inc., Dallas, Tex. Filed July 31, 1961.

SANGER HARRIS

For Retail Department Store Services.
First use July 1, 1961.

SN 133,359. Walter W. Brand, d.b.a. Sands Associated Motels, Lubbock, Tex. Filed Dec. 5, 1961.



No claim is made to the words "Associated Motels" apart from the mark.
For Motel Reservation and Referral Services.
First use July 15, 1961.

SN 138,790. King V Premium Stamp Co. Inc., Chicago, Ill. Filed Feb. 28, 1962.



For Promoting the Sale of Goods and Services of Others by Means of Trading Stamps.
First use Feb. 20, 1962.

SN 154,071. Ultronic Systems Corp., Pennsauken, N.J. Filed Sept. 27, 1962.

ULTRONIC

For Furnishing of Quotations, Prices, and Related Information of Security Market Transactions by Means of an Electronic Computer and Communication System.
First use April 1961.

Class 102 — Insurance and Financial

SN 135,518. Liberty Mutual Insurance Company, Boston, Mass. Filed Jan. 10, 1962.

PROTECTION IN DEPTH

For Underwriting of Insurance.
First use Sept. 16, 1958.

SN 142,825. Investors Diversified Services, Inc., Minneapolis, Minn. Filed Apr. 23, 1962.

INVEST-O-MATIC

For Collecting Periodic Investment Payments in Accordance With a Predetermined Plan by Pre-Authorized Checks.
First use Apr. 9, 1962.

SN 151,482. The First National Bank of Boston, Boston, Mass. Filed Aug. 20, 1962.

MULTI-PAY

For Banking Services To Facilitate Payment of a Plurality of Bills by Directly Debiting the Deposit or Account of a Payor and Crediting Accounts of Payees.
First use June 5, 1962.

SN 153,348. The United States Life Insurance Company in the City of New York, New York, N.Y. Filed Sept. 17, 1962.

INSUROTRONIC

For Analyzing and Computing the Insurance Needs of an Individual.
First use Sept. 12, 1962.

SN 155,236. Citizens Savings and Loan Company, Painesville, Ohio. Filed Oct. 16, 1962.



For Savings and Loan Services.
First use Feb. 14, 1958.

SN 156,626. Life Insurance Company of North America, Philadelphia, Pa. Filed Nov. 5, 1962.

LIVING DOLLAR

For Underwriting of Insurance Wherein the Benefits Thereunder Are Automatically Adjusted in Accordance With Cost of Living Increases.
First use Aug. 10, 1962.

Class 103 — Construction and Repair

SN 124,507. Borg-Warner Corporation, Chicago, Ill. Filed July 24, 1961.

VILLAGE

For Providing Coin Operated Laundry and Dry Cleaning Service.
First use prior to Nov. 10, 1960.

Class 104 — Communication

SN 153,832. Taft Broadcasting Company, Cincinnati, Ohio. Filed Sept. 24, 1962.

WILL WITH A WAY

For Title of a Radio Program.
First use Dec. 14, 1959.

Class 105 — Transportation and Storage

SN 154,084. Airways Rent-A-Car System, Los Angeles, Calif. Filed Sept. 28, 1962.

AIRWAYS RENT-A-CAR SYSTEM

No registration rights are claimed for the words "Rent-A-Car System" apart from the mark as a whole, shown in the drawing, but the applicant waives none of its common law rights in the mark shown in the drawing or any feature thereof. Owner of Reg. No. 713,970.
For Car Rental Service.
First use Feb. 4, 1960.

Class 106 — Material Treatment

SN 105,781. Hydrocarbon Research, Inc., New York, N.Y. Filed Aug. 17, 1960.

H-IRON

For Engineering Services in the Development of Processes for and in the Design, Construction and Operation of Plants for the Reduction of Iron Oxides by Hydrogen To Produce Various Iron Products Known and Reduced Iron, Sponge Iron, and Iron Powder as Well as Compacted and Melted Forms of Such Iron Products.
First use at least as early as Mar. 1, 1956.

SN 133,659. General Magnaplate Corporation, Belleville, N.J. Filed Dec. 8, 1961.

MACH II LUBE

Applicant hereby disclaims the term "Lube" apart from the mark as shown.
For Applying a Lubricating Bearing Surface to the Goods of Others.
First use January 1961.

Class 107 — Education and Entertainment

SN 146,839. James T. Reeves, d.b.a. Jim Reeves Enterprises and Jim Reeves, Madison, Tenn. Filed June 13, 1962.

THE BLUE BOYS

For Entertainment Services—Namely, Music Provided by a Vocal and Instrumental Group.
First use Jan. 1, 1959.

SN 154,060. Royal American Shows, Inc., Tampa, Fla. Filed Sept. 27, 1962.



The words "The World's Largest Midway" are disclaimed apart from the mark as shown.
For Entertainment Service in the Nature of a Circus and Midway Attractions.
First use June 1, 1962.

SN 156,076. Cameo-Parkway Records, Inc., Philadelphia, Pa. Filed Oct. 29, 1962.

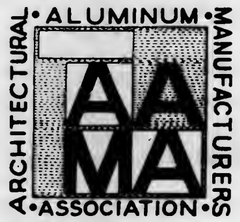
THE DOVELLS

For Vocal and Instrumental Musical Entertainment Services Through the Medium of Television and Radio and by Personal Appearances.
First use Mar. 1, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 148,126. Architectural Aluminum Manufacturers Association, Chicago, Ill. Filed July 2, 1962.



The drawing is lined for the color silver.
For Indicating Membership in the Applicant, Said Organization Being Formed of Manufacturers of Prime Aluminum Windows.
First use Jan. 15, 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

752,705. PROPYLEX. Versapak Film and Packaging Machinery Corporation. SN 148,546. Pub. 1–29–63. Filed 7–6–62.

752,706. CELLU-AID. Great Lakes Carbon Corporation. SN 149,181. Pub. 4–30–63. Filed 7–17–62.

752,707. YAKIMA GOLDING. John I. Haas, Inc. SN 152,400. Pub. 4–30–63. Filed 9–4–62.

752,708. SECRON. Sechrist Chemicals, Inc. SN 152,839. Pub. 4–30–63. Filed 9–10–62.

752,709. PLASTI/CARVE. Original Bradford Soap Works, Inc. SN 154,050. Pub. 4–30–63. Filed 9–27–62.

Class 2 — Receptacles

752,710. DROPETTE. Dougherty Brothers Company. SN 140,340. Pub. 4–30–63. Filed 3–21–62.

752,711. ROLL-A-MAT. Bright Star Industries. SN 141,415. Pub. 4–30–63. Filed 4–3–62.

752,712. LOKSTRIP. Container Corporation of America. SN 142,691. Pub. 4–30–63. Filed 4–20–62.

752,713. HAPPY HOURS. Southern California Plastic Company. SN 145,863. Pub. 4–30–63. Filed 5–31–62.

752,714. FANCIFUL HEART DESIGN. Maryland Cup Corporation. SN 149,859. Pub. 4–30–63. Filed 7–26–62.

752,715. DP AND DESIGN. Dairypak Inc. SN 150,398. Pub. 4–30–63. Filed 8–3–62.

752,716. PLASTAINER. Owens-Illinois Glass Company. SN 150,446. Pub. 4–30–63. Filed 8–3–62.

752,717. REDI-SEAL. Sonoco Products Company. SN 150,642. Pub. 4–30–63. Filed 8–6–62.

752,718. VILLA. The Keller Pottery Company. SN 151,141. Pub. 4–30–63. Filed 8–14–62.

752,719. THERMO WALL. Marvel Plastics Manufacturing Corporation. SN 151,243. Pub. 4–30–63. Filed 8–15–62.

752,720. DIVIDE-A-RACK. Rexall Drug and Chemical Company, d.b.a. Tupperware. SN 151,257. Pub. 4–30–63. Filed 8–15–62.

752,721. EPIC. United States Envelope Company. SN 151,701. Pub. 4–30–63. Filed 8–22–62.

Class 4 — Abrasives and Polishing Materials

752,722. ALMCO. King-Seeley Thermos Co. SN 156,127. Pub. 4–30–63. Filed 10–29–62.

Class 6 — Chemicals and Chemical Compositions

752,723. TRIZINOC. Fabriek van Chemische Producten Vondelingenplaat N.V. SN 128,667. Pub. 10–16–62. Filed 9–26–61.

752,724. IONOX. Shell Oil Company. SN 136,685. Pub. 10–16–62. Filed 1–26–62.

752,725. ERASE. Signal Chemical Manufacturing Co., Inc. SN 149,009. Pub. 4–30–63. Filed 7–13–62.

752,726. FLORASYNTH ETC. AND DESIGN. Florasynth Laboratories, Incorporated. SN 149,643. Pub. 4–30–63. Filed 7–24–62.

752,727. VERTAGARD. Armour and Company. SN 149,697. Pub. 4–30–63. Filed 7–25–62.

752,728. ARMOBLEN. Armour and Company. SN 150,148. Pub. 4–30–63. Filed 7–31–62.

Class 8 — Smokers' Articles, Not Including Tobacco Products

752,729. VISTA. I. Smallman & Sons Co. SN 140,996. Pub. 4–30–63. Filed 3–28–62.

752,730. KINGSWOOD. I. Smallman & Sons Co. SN 140,998. Pub. 4–30–63. Filed 3–28–62.

Class 10 — Fertilizers

752,731. MINI-PAK. Goodpasture Grain & Milling Co., Inc. SN 150,554. Pub. 4–30–63. Filed 8–6–62.

Class 11 — Inks and Inking Materials

752,732. SEAWAY. Port Huron Sulphite & Paper Company. SN 151,999. Pub. 4–30–63. Filed 8–27–62.

752,733. QUESTEL. Quest Manufacturing Company. SN 152,628. Pub. 4–30–63. Filed 9–6–62.

Class 12 — Construction Materials

752,734. BREWER COTE. The Brewer Company. SN 122,263. Pub. 4–30–63. Filed 6–19–61.

752,735. UTIL-SEAL. Dresser Industries, Inc. SN 130,891. Pub. 4–30–63. Filed 10–30–61.

752,736. WELD-TRUSION. Airline Welding and Manufacturing, Inc. SN 134,599. Pub. 4–30–63. Filed 12–26–61.

752,737. ELL-JACS. Childers Manufacturing Company. SN 137,043. Pub. 4–30–63. Filed 2–1–62.

752,738. NATCO UNIWALL. Natco Corporation. SN 138,521. Pub. 4–30–63. Filed 2–23–62.

752,739. SCOTSMAN. Delta Brick & Tile Company, Inc. SN 138,591. Pub. 4–30–63. Filed 2–26–62.

752,740. HRP. Hexcel Products Inc. SN 138,862. Pub. 4–30–63. Filed 3–1–62.

752,741. CUSTOM-FLAKE. Pope & Talbot Inc. SN 138,881. Pub. 4–30–63. Filed 3–1–62.

752,742. CUSTOM-BOND. Pope & Talbot Inc. SN 138,882. Pub. 4–30–63. Filed 3–1–62.

752,743. CUSTOM-BLEND. Pope & Talbot Inc. SN 138,883. Pub. 4–30–63. Filed 3–1–62.

752,744. HARDSTONE. Master-Krete, Inc. SN 140,702. Pub. 4–30–63. Filed 3–26–62.

752,745. HRS. Hexcel Products Inc. SN 142,510. Pub. 4–30–63. Filed 4–18–62.

752,746. HRL. Hexcel Products Inc. SN 142,511. Pub. 4–30–63. Filed 4–18–62.

752,747. MITI-MITE. Sears Stanley Smith, d.b.a. Unique Products. SN 142,905. Pub. 4–30–63. Filed 4–20–62.

752,748. PANCRETE. Pannell Products, Inc. SN 145,211. Pub. 4–30–63. Filed 5–22–62.

752,749. DYACOR. Ultra Plastics, Inc. SN 145,981. Pub. 4–30–63. Filed 6–1–62.

752,750. FILITE. Filon Corporation. SN 146,608. Pub. 4–30–63. Filed 6–11–62.

752,751. BANNER TRIM AND DESIGN. The William L. Bonnell Company, Inc. SN 147,993. Pub. 4–30–63. Filed 6–29–62.

752,752. REPRESENTATION OF A BIRD IN FLIGHT. Bruynzeel Vloerenfabriek N.V. SN 148,708. Pub. 4–30–63. Filed 7–10–62.

752,753. PB AND DESIGN. Exchange Builders & Supply Co., Inc. SN 149,457. Pub. 4–30–63. Filed 7–20–62.

752,754. SECURITILE AND DESIGN. Arketex Ceramic Corporation. SN 149,523. Pub. 4–30–63. Filed 7–23–62.

752,755. LPI. Latex Process, Inc. SN 150,078. Pub. 4–30–63. Filed 7–30–62.

752,756. SPEED-SET. Louis Goldey Co., Inc. SN 150,242. Pub. 4–30–63. Filed 8–1–62.

752,757. LANGWOOD. The Langdale Company. SN 151,065. Pub. 4–30–63. Filed 8–13–62.

752,758. MIRROR. Mirror Insulation Company, Inc. SN 151,153. Pub. 4–30–63. Filed 8–14–62.

752,759. M-THANE AND DESIGN. Mundet Cork Corporation. SN 151,156. Pub. 4–30–63. Filed 8–14–62.

752,760. HUSKY, REPRESENTATION OF DOG AND DESIGN. Husky Oil Company. SN 151,230. Pub. 4–30–63. Filed 8–15–62.

752,761. SPARKLETS. American Olean Tile Company. SN 151,287. Pub. 4–30–63. Filed 8–16–62.

752,762. AGGRE-BOND NI. Nethercutt Industrial Corp. SN 151,509. Pub. 4–30–63. Filed 8–20–62.

752,763. SHELLFLOR. Shell Oil Company. SN 152,007. Pub. 4–30–63. Filed 8–27–62.

752,764. MAR-VAIL. Dixie Concrete Products, Inc. SN 152,385. Pub. 4–30–63. Filed 9–4–62.

752,765. PLASMATIC. W. R. Meadows, Inc. SN 152,611. Pub. 4–30–63. Filed 9–6–62.

752,766. JETLOCK. George Wilbert Jackson, d.b.a. Jackson Scaffolding Limited. SN 154,418. Pub. 4–30–63. Filed 10–3–62.

752,767. VIB-RO-PAC. W. T. Liston Company. SN 154,904. Pub. 4–30–63. Filed 10–10–62.

752,768. PLUM LINE. P. W. Plumly Lumber Corporation. SN 155,639. Pub. 4–30–63. Filed 10–22–62.

752,769. PLUM LINE. P. W. Plumly Lumber Corporation. SN 155,640. Pub. 4–30–63. Filed 10–22–62.

752,770. PLUM LINE AND DESIGN. P. W. Plumly Lumber Corporation. SN 155,641. Pub. 4–30–63. Filed 10–22–62.

752,771. ELECTRO LAM AND DESIGN. Potlatch Forests, Inc. SN 155,643. Pub. 4–30–63. Filed 10–22–62.

752,772. VERCO CRETE. Vermont Paving Corporation. SN 155,951. Pub. 4–30–63. Filed 10–25–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

752,773. ULTRA-HIGH-SPEED. "Automatic" Sprinkler Corporation of America. SN 125,579. Pub. 4–30–63. Filed 8–8–61.

752,774. SKINNER SEAL. Textron Oregon, Inc. SN 131,160. Pub. 4–30–63. Filed 11–1–61.

752,775. TAP-RITE. Vending Components, Inc., by change of name from Tap-Rite Products Corp. SN 134,905. Pub. 4–30–63. Filed 12–29–61.

752,776. TOPTITE. Flexigrip, Inc. SN 137,131. Pub. 4–30–63. Filed 2–2–62.

752,777. TOPGRIP. Flexigrip, Inc. SN 137,132. Pub. 4–30–63. Filed 2–2–62.

752,778. WAVY DESIGN. Pulsation Controls Corporation. SN 146,098. Pub. 4–30–63. Filed 6–4–62.

752,779. DRAIN RING. Robert J. Newlon, d.b.a. Newlon Manufacturing Co. SN 147,139. Pub. 4–30–63. Filed 6–18–62.

752,780. HY-LANDER. Bruner Corporation. SN 148,296. Pub. 4–30–63. Filed 7–3–62.

752,781. COMBO-DRIVE AND DESIGN. American Fastener Corporation, assignee of William A. De Vellier. SN 148,606. Pub. 4–30–63. Filed 7–9–62.

752,782. PRUDENTIAL WARE AND DESIGN. Ekco Products Company. SN 155,245. Pub. 4–30–63. Filed 10–9–62.

Class 14 — Metals and Metal Castings and Forgings

752,783. COMPCO ETC. AND DESIGN. Compco Metal Products Company. SN 134,440. Pub. 4–30–63. Filed 12–21–61.

752,784. GIL AND DESIGN. General International Limited. SN 150,411. Pub. 4–30–63. Filed 8–3–62.

752,785. GRC AND DESIGN. Gries Reproducer Corporation. SN 151,752. Pub. 4–30–63. Filed 8–23–62.

752,786. INTERCAST. Gries Reproducer Corporation. SN 151,753. Pub. 4–30–63. Filed 8–23–62.

752,787. PICTURE OF A PANDA BEAR. The Plume & Atwood Manufacturing Company. SN 151,841. Pub. 4–30–63. Filed 8–24–62.

Class 15 — Oils and Greases

752,788. S.P.S. The American Oil Company. SN 144,035. Pub. 4–30–63. Filed 5–8–62.

752,789. TRANS-CURE AND DESIGN. Kapro Corporation. SN 150,174. Pub. 4–30–63. Filed 7–31–62.

752,790. ACTIESEL. Aetna Chemical Corporation. SN 150,839. Pub. 4–30–63. Filed 8–9–62.

752,791. VIS-A-POUR. Southwest Grease & Oil Co., Inc. SN 150,975. Pub. 4–30–63. Filed 8–10–62.

752,792. RUST FIGHTER. American Grease Stick Company. SN 151,116. Pub. 4–30–63. Filed 8–14–62.

Class 16 — Protective and Decorative Coatings

752,793. ALUMI-FLO. National Titanium Company, Inc. SN 149,484. Pub. 4–30–63. Filed 7–20–62.

Class 17 — Tobacco Products

752,794. MAYFLOWER. Kristinus Kommanditgesellschaft. SN 126,525. Pub. 5–15–62. Filed 8–23–61.

752,795. COAT OF ARMS ETC. AND DESIGN. Schermerhorn Cigar Stores, Inc. SN 144,990. Pub. 4–30–63. Filed 5–18–62.

752,796. BERING BLUE LABEL ETC. AND DESIGN. Corral, Wodiaka y Ca. SN 145,670. Pub. 4–30–63. Filed 5–29–62.

752,797. PAGE BOY AND DESIGN. Philip Morris Incorporated. SN 146,089. Pub. 4–30–63. Filed 6–4–62.

752,798. BEAR DESIGN. Rothmans of Pall Mall Export Limited. SN 151,615. Pub. 4–30–63. Filed 8–21–62.

Class 18 — Medicines and Pharmaceutical Preparations

752,799. BARRY MARTIN AND DESIGN. Barry Martin Pharmaceuticals, Inc. SN 149,438. Pub. 4–30–63. Filed 7–20–62.

752,800. VITA-METRAZOL. Knoll Pharmaceutical Company. SN 150,074. Pub. 4–30–63. Filed 7–30–62.

752,801. "WIFE'S FRIEND." W. J. Rendell Limited. SN 152,249. Pub. 4–30–63. Filed 8–30–62.

752,802. MEASURIN. Chesebrough-Pond's Inc. SN 152,493. Pub. 4–30–63. Filed 9–5–62.

752,803. BRONDECON. Warner-Lambert Pharmaceutical Company. SN 152,541. Pub. 4–30–63. Filed 9–5–62.

752,804. DENTAPEN. Thomas Leeming & Company, Inc. SN 152,588. Pub. 4–30–63. Filed 9–6–62.

752,805. DENTAMYCIN. Thomas Leeming & Company, Inc. SN 152,589. Pub. 4–30–63. Filed 9–6–62.

752,806. SPARTOCIN. Benton Laboratories, Inc. SN 152,671. Pub. 4–30–63. Filed 9–7–62.

752,807. DILAC. B. F. Ascher & Company, Inc. SN 152,745. Pub. 4–30–63. Filed 9–10–62.

752,808. ORBENIN. Beecham Research Laboratories Limited. SN 152,749. Pub. 4–30–63. Filed 9–10–62.

752,809. RAPENTON. Dr. Karl Thomae GmbH. SN 152,933. Pub. 4–30–63. Filed 9–11–62.

752,810. VIBISONE. Invenex Pharmaceuticals. SN 153,000. Pub. 4–30–63. Filed 9–12–62.

752,811. PENISTAT. American Home Products Corporation. SN 153,054. Pub. 4–30–63. Filed 9–13–62.

752,812. DERMA-GUARD. John F. Greer Company. SN 153,276. Pub. 4–30–63. Filed 9–17–62.

752,813. TRIPIRIN. Joseph E. Seagram & Sons, Inc. SN 153,517. Pub. 4–30–63. Filed 9–19–62.

752,814. VASOPRED. Smith, Miller & Patch, Inc. SN 153,600. Pub. 4–30–63. Filed 9–20–62.

752,815. ENDOGESIC. Endo Laboratories Inc. SN 153,748. Pub. 4–30–63. Filed 9–24–62.

752,816. SUCRETS. Merck & Co., Inc., d.b.a. Quinton Company. SN 153,789. Pub. 4–30–63. Filed 9–24–62.

752,817. LACRIBASE. Merck & Co., Inc. SN 153,790. Pub. 4–30–63. Filed 9–24–62.

752,818. WHITTAHIST. A. H. Robins Company, Inc. SN 163,022. Pub. 4–30–63. Filed 2–20–63.

752,819. WHITTANE. A. H. Robins Company, Inc. SN 163,023. Pub. 4–30–63. Filed 2–20–63.

Class 19—Vehicles

752,820. ROTUNDA. Ford Motor Company. SN 133,145. Pub. 4–30–63. Filed 12–1–61.

752,821. FLOOR-KING. Albert H. Cayne Equipment Corp. SN 142,924. Pub. 4–30–63. Filed 4–24–62.

752,822. TURTLE MAT. Turtle Wax, Inc. SN 143,693. Pub. 4–30–63. Filed 5–2–62.

752,823. SAFETY TOT. Safety-Tot, Inc. SN 148,655. Pub. 4–30–63. Filed 7–9–62.

752,824. JET. Kysor Heater Company. SN 149,095. Pub. 4–30–63. Filed 7–16–62.

752,825. CUBMARINE. Perry Submarine Builders, Inc. SN 153,980. Pub. 4–30–63. Filed 9–26–62.

752,826. DETAX AND DESIGN. Callahan Engineering Company. SN 155,487. Pub. 4–30–63. Filed 10–19–62.

752,827. SEA-CREST AND DESIGN. Aluminum Cruisers, Inc. SN 155,550. Pub. 4–30–63. Filed 10–22–62.

752,828. BREEZE BACK. Claredan Corporation. SN 156,078. Pub. 4–30–63. Filed 10–29–62.

752,829. DEFLECTA-SHIELD. Deflecta-Shield Corp. SN 156,091. Pub. 4–30–63. Filed 10–29–62.

752,830. CONCERTINA. Rubbermaid Incorporated. SN 156,169. Pub. 4–30–63. Filed 10–29–62.

752,831. B WITH CROWN DESIGN. Brunswick Corporation. SN 156,462. Pub. 4–30–63. Filed 11–2–62.

752,832. UNIFRATE. American Steel Foundries Incorporated. SN 156,854. Pub. 4–30–63. Filed 11–8–62.

752,833. PROTECTOFRAME–40. Pullman Incorporated. SN 156,901. Pub. 4–30–63. Filed 11–8–62.

752,834. PARKPRIDE. Estate Homes, Inc. SN 156,964. Pub. 4–30–63. Filed 11–9–62.

752,835. PARKPLAZA. Estate Homes, Inc. SN 156,966. Pub. 4–30–63. Filed 11–9–62.

752,836. PETERBILT. Pacific Car and Foundry Company. SN 157,240. Pub. 4–30–63. Filed 11–14–62.

752,837. DESIGN CONTAINING LETTER K. Carter Pyle Enterprises, d.b.a. Newport Boats. SN 157,554. Pub. 4–30–63. Filed 11–19–62.

Class 20—Linoleum and Oiled Cloth

752,838. POXY TILE AND DESIGN. Colonial Tile, Inc. SN 142,414. Pub. 4–30–63. Filed 4–17–62.

Class 21—Electrical Apparatus, Machines, and Supplies

752,839. OAK DESIGN. Oak Manufacturing Co. MULTIPLE CLASS (Classes 21 and 26). SN 131,761. Pub. 4–30–63. Filed 11–10–61.

752,840. LAMP FAIR. S. Cavallo, Inc. SN 134,011. Pub. 4–30–63. Filed 12–14–61.

752,841. STAT-O-MATIC AND DESIGN. General Precision, Inc. SN 134,218. Pub. 4–30–63. Filed 12–18–61.

752,842. WASP. Malco Manufacturing Company. SN 135,026. Pub. 4–30–63. Filed 1–2–62.

752,843. CHLOREXTOL. Allis-Chalmers Manufacturing Company. SN 135,313. Pub. 4–30–63. Filed 1–8–62.

752,844. ABC AND DESIGN. Kepco, Inc. SN 135,364. Pub. 4–30–63. Filed 1–8–62.

752,845. VISTA. Sunbeam Corporation. SN 136,506. Pub. 4–30–63. Filed 1–24–62.

752,846. MULTICOUPLE. Samuel Moore & Company. SN 136,794. Pub. 4–30–63. Filed 1–29–62.

752,847. DECORATOR CONVERTIBLE. Zenith Radio Corporation. SN 136,860. Pub. 4–30–63. Filed 1–29–62.

752,848. GLOWTEX. Rotaflex of Canada, Limited. SN 140,043. Pub. 4–30–63. Filed 3–16–62.

752,849. STELLAR AND STAR DESIGN. Astra Trading Corporation. SN 140,811. Pub. 4–30–63. Filed 3–16–62.

752,850. GLASTRONICS. Radio Cores, Inc. SN 142,136. Pub. 4–30–63. Filed 4–12–62.

752,851. FLUOROCOR. Plastron Corporation. SN 143,564. Pub. 4–30–63. Filed 5–1–62.

752,852. SKY BUDDY II. The Hallicrafters Co. SN 143,823. Pub. 4–30–63. Filed 5–4–62.

752,853. SIGNET. General Dynamics Corporation. SN 145,256. Pub. 4–30–63. Filed 5–23–62.

752,854. WAFCO. Waterloo Foundry Co., Inc. SN 146,130. Pub. 4–30–63. Filed 6–4–62.

752,855. CAPRI. Industrial Suppliers Company. SN 147,117. Pub. 4–30–63. Filed 6–18–62.

752,856. ELMATCO AND DESIGN. Electro-Matic Products Co. SN 148,716. Pub. 4–30–63. Filed 7–10–62.

752,857. LEADER. Lucky International Co. SN 148,898. Pub. 4–30–63. Filed 7–12–62.

752,858. WELTRON. Womack Electronics, Inc. SN 149,428. Pub. 4–30–63. Filed 7–19–62.

752,859. VARI-BIT AND DESIGN. Consolidated Avionics Corporation. SN 150,022. Pub. 4–30–63. Filed 7–30–62.

752,860. ELECTRO-SAFE AND DESIGN. Summit Manufacturing Corp. SN 150,116. Pub. 4–30–63. Filed 7–30–62.

752,861. UNIBLEND. Anaconda Wire and Cable Company. SN 150,841. Pub. 4–30–63. Filed 8–9–62.

752,862. PORTASOUND. Special Instruments Laboratory, Incorporated. SN 151,169. Pub. 4–30–63. Filed 8–14–62.

752,863. UNIVAC. Sperry Rand Corporation. SN 152,163. Pub. 4–30–63. Filed 8–29–62.

752,864. U/V AND DESIGN. McGraw-Edison Company. SN 155,269. Pub. 4–30–63. Filed 10–16–62.

752,865. IMPERVALL. Crescent Insulated Wire & Cable Co. SN 156,277. Pub. 4–30–63. Filed 10–31–62.

752,866. PERMACAD. Minneapolis-Honeywell Regulator Company. SN 156,314. Pub. 4–30–63. Filed 10–31–62.

752,867. ISOREX. Elcor, Inc. SN 156,588. Pub. 4–30–63. Filed 11–5–62.

752,868. TEMP-O-GUIDE. The Proctor-Silex Corporation. SN 156,765. Pub. 4–30–63. Filed 11–6–62.

752,869. CTC AND DESIGN. Central Transformer Corporation. SN 157,063. Pub. 4–30–63. Filed 11–13–62.

752,870. CTC. Central Transformer Corporation. SN 157,064. Pub. 4–30–63. Filed 11–13–62.

752,871. CHAMPION AND DESIGN. Champion Spark Plug Company. SN 157,282. Pub. 4–30–63. Filed 11–15–62.

752,872. LAMPETTE. Koch Creations, Inc. SN 157,304. Pub. 4–30–63. Filed 11–15–62.

752,873. UVASER. Semi-Elements, Inc. SN 157,409. Pub. 4–30–63. Filed 11–16–62.

752,874. XRASER. Semi-Elements, Inc. SN 157,410. Pub. 4–30–63. Filed 11–16–62.

752,875. KARGO. Price Battery Corporation. SN 158,019. Pub. 4–30–63. Filed 11–27–62.

752,876. RUSSELECTRIC. R. G. Russell Company, Inc. SN 158,385. Pub. 4–30–63. Filed 12–3–62.

Class 22—Games, Toys, and Sporting Goods

752,877. HOLGATE. Hampshire Manufacturing Company, assignee of Holgate Toys, Inc. SN 131,367. Pub. 4–2–63. Filed 11–6–61.

752,878. KILLIES. Harley J. Ennest, d.b.a. Killies Sporting Goods Company. SN 149,174. Pub. 4–30–63. Filed 7–17–62.

752,879. TWIN ACTION. Wilson Sporting Goods Co. SN 149,235. Pub. 4–30–63. Filed 7–17–62.

752,880. WIGGLES. Uneeda Doll Co. Inc. SN 149,344. Pub. 4–30–63. Filed 7–18–62.

752,881. SUPER POWER. Wilson Sporting Goods Co. SN 149,505. Pub. 4–30–63. Filed 7–20–62.

752,882. BOWL-A-TRON 300. Hassenfeld Bros. Inc. SN 149,570. Pub. 4–30–63. Filed 7–23–62.

752,883. STC AND DESIGN. Styro Toy Corporation. SN 149,679. Pub. 4–30–63. Filed 7–24–62.

752,884. GANG FISHER. John R. Ditson, d.b.a. Ditson Manufacturing Company. SN 149,720. Pub. 4–30–63. Filed 7–25–62.

752,885. LITTLE ACE AND DESIGN. Donald F. Duncan, Incorporated. SN 149,824. Pub. 4–30–63. Filed 7–26–62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

752,886. DESIGN OF MAN'S ARM AND HAND HOLDING MACHINE FITTING. Rotary Oil Tool Company. SN 122,375. Pub. 4–30–63. Filed 6–19–61.

752,887. HYDRA-RAMP. Philadelphia Gear Corporation. SN 134,837. Pub. 4–30–63. Filed 12–28–61.

752,888. ROANOKE MERRIMAC AND DESIGN. Harrington Manufacturing Company, Inc. SN 136,236. Pub. 4–30–63. Filed 1–22–62.

752,889. SIDE BOY. Harrington Manufacturing Company, Inc. SN 136,237. Pub. 4–30–63. Filed 1–22–62.

752,890. ADJUSTAMAGIC. Sunbeam Corporation. SN 136,302. Pub. 4–30–63. Filed 1–22–62.

752,891. ARVINODE AND DESIGN. Arvin Industries, Inc. SN 136,423. Pub. 4–30–63. Filed 1–24–62.

752,892. TAYLOR-WINFIELD. The Taylor-Winfield Corporation. SN 138,244. Pub. 4–30–63. Filed 2–19–62.

752,893. FLEX-GRIP. West Essex Printing Plates, Inc. SN 138,681. Pub. 4–30–63. Filed 2–26–62.

752,894. CRALL AND DESIGN. Petroleum Specialty Company. SN 139,238. Pub. 4–30–63. Filed 3–6–62.

752,895. HUFFY-VAC. The Huffman Manufacturing Company. SN 139,493. Pub. 4–30–63. Filed 3–9–62.

752,896. DRI-GLIDE. Garlock Inc. SN 141,521. Pub. 4–30–63. Filed 4–4–62.

752,897. M AND DESIGN. Federal-Mogul-Bower Bearings, Inc. SN 141,719. Pub. 4–30–63. Filed 4–6–62.

752,898. COMPUTAMATIC. Dover Corporation. SN 142,023. Pub. 4–30–63. Filed 4–11–62.

752,899. ALFRED APPLEBY. Renold Chains Limited. SN 143,429. Pub. 4–30–63. Filed 4–30–62.

752,900. ROLLINER. Industrial Ovens, Incorporated. SN 146,057. Pub. 4–30–63. Filed 6–4–62.

752,901. PATCH FORCE. Essick Manufacturing Company. SN 146,989. Pub. 4–30–63. Filed 6–15–62.

752,902. GOLF. Northrup, King & Co. SN 148,832. Pub. 3–26–63. Filed 7–11–62.

752,903. WISS AND DESIGN. J. Wiss & Sons Co. SN 149,794. Pub. 4–30–63. Filed 7–25–62.

752,904. BELLAIRE. Atlas Tool & Manufacturing Co. SN 150,002. Pub. 4–30–63. Filed 7–30–62.

752,905. CRYSTAL DESIGN. Diamond Crystal Salt Company. SN 150,027. Pub. 4–30–63. Filed 7–30–62.

752,906. THE OUTDOOR POWER APPLIANCE AND DESIGN. S. L. Allen & Co., Inc. SN 150,145. Pub. 4–30–63. Filed 7–31–62.

752,907. EARTHMASTER. The Union Fork and Hoe Company. SN 150,200. Pub. 4–30–63. Filed 7–31–62.

752,908. MASTER-LITE. The Union Fork and Hoe Company. SN 150,201. Pub. 4–30–63. Filed 7–31–62.

752,909. M AND DESIGN. Acme Metal Goods Mfg. Co. SN 150,210. Pub. 4–30–63. Filed 8–1–62.

752,910. DYNAMIX. The Jaeger Machine Company. SN 150,351. Pub. 4–30–63. Filed 8–2–62.

752,911. VAC-U-MITE. Milwaukee Electric Tool Corporation. SN 150,357. Pub. 4–30–63. Filed 8–2–62.

752,912. VITAMATIC. Joe Lowe Corporation. SN 150,571. Pub. 4–30–63. Filed 8–6–62.

752,913. ROTH. Roy E. Roth Company. SN 150,621. Pub. 4–30–63. Filed 8–6–62.

752,914. DC DESIGN. Dura Corporation. SN 150,683. Pub. 4–30–63. Filed 8–7–62.

752,915. DISPENS-O-BAR. Mask-O-Matic, Inc. SN 150,703. Pub. 4–30–63. Filed 8–7–62.

752,916. KIMWOOD PACIFIC COAST. Kimwood Machine Co. SN 152,138. Pub. 4–30–63. Filed 8–29–62.

752,917. BET'R-GRIP. Pendleton Tool Industries, Inc., d.b.a. Proto Tool Company. SN 152,240. Pub. 4–30–63. Filed 8–30–62.

752,918. PERIFORM. National Broach and Machine Co. SN 153,104. Pub. 4–30–63. Filed 9–13–62.

752,919. ECONOVERSIONS. Ashworth-McDade Machine Co. SN 153,243. Pub. 4–30–63. Filed 9–17–62.

752,920. MICRO-AIR. Modernair Corporation. SN 153,970. Pub. 4–30–63. Filed 9–26–62.

752,921. G DESIGN. David W. Mattos, d.b.a. Grove Dale Manufacturing & Supply Co. SN 154,267. Pub. 4–30–63. Filed 10–1–62.

752,922. THE WORLD TURNS ON COLCHESTER LATHES AND GLOBE DESIGN. The Colchester Lathe Co. Limited. SN 154,692. Pub. 4–30–63. Filed 10–8–62.

752,923. GOLDEN DOVE AND DESIGN. General Motors Corporation. SN 154,820. Pub. 4–30–63. Filed 10–9–62.

752,924. ROAD-ALL. Pavement Salvage, Inc. SN 156,244. Pub. 4–30–63. Filed 10–30–62.

752,925. SILVER POWER. Fuel Control Corp. SN 156,395. Pub. 4–30–63. Filed 11–1–62.

752,926. CAS. Toyobo-Howa Textile Engineering Co., Ltd. SN 156,775. Pub. 4–30–63. Filed 11–6–62.

752,927. FLO-TEL. The Servco Company. SN 157,411. Pub. 4–30–63. Filed 11–16–62.

752,928. NITE-LINER AND DESIGN. Prismo Safety Corporation. SN 157,724. Pub. 4–30–63. Filed 11–21–62.

Class 24 — Laundry Appliances and Machines

752,929. TRI-POINT NO-STICK "IRON-GLIDER" AND DESIGN. Tri-Point Industries, Inc. SN 131,730. Pub. 4–30–63. Filed 11–9–61.

752,930. PRINCESS. Herbert Glatt, d.b.a. Princess Products. SN 150,689. Pub. 4–30–63. Filed 8–7–62.

Class 25 — Locks and Safes

752,931. TROJAN. Trans-Atlantic Company. SN 148,105. Pub. 12–11–62. Filed 6–29–62.

Class 26 — Measuring and Scientific Appliances

752,932. DECATHERM. J. E. Watkins Co. SN 134,296. Pub. 4–30–63. Filed 12–18–61.

752,933. OPTIVISOR. Donegan Optical Co., Inc., d.b.a. Donegan Optical Co. SN 140,929. Pub. 4–30–63. Filed 3–28–62.

752,934. OPTILOUPE. Donegan Optical Co., Inc. SN 140,930. Pub. 4–30–63. Filed 3–28–62.

752,935. KOWA. Kowa American Corporation. SN 140,954. Pub. 4–30–63. Filed 3–28–62.

752,936. ZOOMISCOPE. Bach Auricon, Inc. SN 141,787. Pub. 4–30–63. Filed 4–9–62.

752,937. IMPAC. Monterey Research Laboratory, Inc. SN 146,206. Pub. 4–30–63. Filed 6–5–62.

Class 27 — Horological Instruments

752,938. HC AND DESIGN. Hycraft Jewelry Mfg. Co., Inc. SN 150,419. Pub. 4–30–63. Filed 8–3–62.

Class 28 — Jewelry and Precious-Metal Ware

752,939. FC AND DESIGN. Lossau & Kramer, Inc. SN 141,535. Pub. 4–30–63. Filed 4–4–62.

752,940. BENNETT. Bennett Brothers, Inc. SN 143,205. Pub. 4–30–63. Filed 4–27–62.

752,941. LO. Loray Jewelry Co. SN 145,572. Pub. 4–30–63. Filed 5–28–62.

752,942. ADS. A. D. Solarz. SN 145,626. Pub. 4–30–63. Filed 5–28–62.

752,943. HOL AND DESIGN. Holzer Watch Co., Inc. SN 148,620. Pub. 4–30–63. Filed 7–9–62.

752,944. C AND DESIGN. Comet Ring Manufacturing Company, Inc. SN 148,797. Pub. 4–30–63. Filed 7–11–62.

752,945. AMCO JEWELS. A. Micallef & Co., Inc. SN 148,901. Pub. 4–30–63. Filed 7–12–62.

752,946. AFA. Al Fox and Associates, Inc. SN 148,968. Pub. 4–30–63. Filed 7–13–62.

752,947. NN. Nelson & Nelson Manufacturing Jewelers Inc. SN 150,713. Pub. 4–30–63. Filed 8–7–62.

752,948. N. J. Nierenburg & Sons, Inc. SN 150,886. Pub. 4–30–63. Filed 8–9–62.

752,949. G 14K AND DESIGN. Globe Jewelry, Inc. SN 150,940. Pub. 4–30–63. Filed 8–10–62.

Class 29 — Brooms, Brushes, and Dusters

752,950. SAF-T-EDGE CONTOUR. Liquid Glaze, Inc. SN 100,132. Pub. 7–3–62. Filed 7–1–60.

Class 30 — Crockery, Earthenware, and Porcelain

752,951. OXFORD AND DESIGN. Lenox, Incorporated. SN 146,732. Pub. 4–30–63. Filed 6–12–62.

Class 31 — Filters and Refrigerators

752,952. HY-LINE AND DESIGN. J. F. Pritchard & Co. of California. SN 134,346. Pub. 4–30–63. Filed 12–19–61.

752,953. CROWN AND DESIGN. Walker Manufacturing Company. SN 144,659. Pub. 4–30–63. Filed 5–15–62.

752,954. CERAMA-PORE. R. P. Adams Company, Inc. SN 148,118. Pub. 4–30–63. Filed 7–2–62.

752,955. ARDCO. Aluminum Refrigerator Door Co., Inc. SN 148,347. Pub. 4–30–63. Filed 7–5–62.

752,956. MAGNI-MATIC. Aluminum Refrigerator Door Co., Inc. SN 149,432. Pub. 4–30–63. Filed 7–20–62.

752,957. LINDSAY. Union Tank Car Company. SN 150,122. Pub. 4–30–63. Filed 7–30–62.

Class 32 — Furniture and Upholstery

752,958. BRASILIA. Broyhill Furniture Factories. SN 139,465. Pub. 4–30–63. Filed 3–9–62.

752,959. STYLAIRE. Hamilton Cosco, Inc. SN 140,448. Pub. 4–30–63. Filed 3–22–62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

752,960. THERMO-PANEL. Dean Products, Inc. SN 130,777. Pub. 4–30–63. Filed 10–27–61.

752,961. GRAPHIC-ALARMLIGHT. Graphics, Inc. SN 131,673. Pub. 4–30–63. Filed 11–9–61.

752,962. 3-IN-ONE GOURMETTE. Leitner Equipment Company. SN 132,686. Pub. 4–30–63. Filed 11–24–61.

752,963. SPOT GUARD. S. H. Leggitt Company. SN 148,818. Pub. 4–30–63. Filed 7–11–62.

752,964. PRIMERGON. Temp-Matic, Inc. SN 149,024. Pub. 4–30–63. Filed 7–13–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

752,965. MARSHAL. Tractor Supply Co. SN 126,819. Pub. 4–30–63. Filed 8–28–61.

752,966. EXTRAMAN. Extraman Corporation, d.b.a. Extraman Products. SN 146,370. Pub. 4–30–63. Filed 6–7–62.

752,967. GENERAL TIRE AND DESIGN. The General Tire & Rubber Company. SN 150,938. Pub. 4–30–63. Filed 8–10–62.

752,968. TRIOVAC. Acme-Hamilton Manufacturing Corporation. SN 153,918. Pub. 4–30–63. Filed 9–28–62.

752,969. CONGO. Thor Power Tool Company. SN 154,117. Pub. 4–30–63. Filed 9–28–62.

752,970. EASY-STAT. Standard-Thomson Corporation. SN 155,661. Pub. 4–30–63. Filed 10–22–62.

752,971. SEA-FLEX. The Flexible Tubing Corporation. SN 156,106. Pub. 4–30–63. Filed 10–29–62.

752,972. WINTER WAY. The General Tire & Rubber Company. SN 156,113. Pub. 4–30–63. Filed 10–29–62.

752,973. MIRAGLAZE. The Arbee Corporation, d.b.a. Manheim Manufacturing and Belting Company. SN 156,311. Pub. 4–30–63. Filed 10–31–62.

752,974. COMMANDO. The Gates Rubber Company. SN 156,872. Pub. 4–30–63. Filed 11–8–62.

752,975. NYLAIR. The B. F. Goodrich Company. SN 156,971. Pub. 4–30–63. Filed 11–9–62.

Class 36 — Musical Instruments and Supplies

752,976. EDUPHONICS. Lillian Bell Popkins, d.b.a. Eduphonics Recording Company. SN 137,002. Pub. 4–30–63. Filed 1–31–62.

752,977. DUSTAT. Grado Laboratories, Inc. SN 146,622. Pub. 4–30–63. Filed 6–11–62.

752,978. 3M. Minnesota Mining and Manufacturing Company. SN 147,491. Pub. 4–30–63. Filed 6–22–62.

752,979. LESLEY AND DESIGN. F. I. Brodie, d.b.a. Lesley Records. SN 149,358. Pub. 4–30–63. Filed 7–19–62.

752,980. CRESCENDO. G.N.P. Crescendo Records. SN 151,484. Pub. 4–30–63. Filed 8–20–62.

752,981. HARDMAN DUO. Hardman, Peck & Company. SN 152,894. Pub. 4–30–63. Filed 9–11–62.

752,982. SOUND MASTER. Remo, Inc. SN 156,165. Pub. 4–30–63. Filed 10–29–62.

752,983. ARTISAN. Electronic Organ Arts. SN 156,730. Pub. 4–30–63. Filed 11–6–62.

752,984. TRAVEL. Allen Lawson, d.b.a. Travel Records. SN 157,307. Pub. 4–30–63. Filed 11–15–62.

752,985. TARHEEL. London Records, Inc. SN 159,655. Pub. 4–30–63. Filed 12–24–62.

752,986. DDC. John Visaggi, d.b.a. Dictation Disc Company. SN 159,668. Pub. 4–30–63. Filed 12–24–62.

752,987. SINCERELY YOURS. Alfred J. Willbrand, d.b.a. Sincerely Yours. SN 159,669. Pub. 4–30–63. Filed 12–24–62.

Class 37 — Paper and Stationery

752,988. VISATEX. Vereinigte Papierwerke Schickedanz & Co. SN 131,433. Pub. 4–30–63. Filed 11–6–61.

752,989. GIBSON'S. C. R. Gibson & Company. SN 131,565. Pub. 3–27–62. Filed 11–8–61.

752,990. GLO-MARKERS. Glo-Mark Products Co., Inc. SN 149,733. Pub. 4–30–63. Filed 7–25–62.

Class 38 — Prints and Publications

752,991. DISCOUNTERS DIGEST. Dun & Bradstreet, Inc. SN 151,894. Pub. 4–30–63. Filed 8–27–62.

752,992. THE TELEPHONE SECRETARY. Associated Telephone Answering Exchanges, Inc. SN 152,035. Pub. 4–30–63. Filed 8–28–62.

752,993. THE CANDY MARKETER. Magazines for Industry, Inc. SN 152,225. Pub. 4–30–63. Filed 8–30–62.

752,994. LOCATORY. Richard Lechner Enterprises, Inc. SN 152,315. Pub. 4–30–63. Filed 8–31–62.

Class 39 — Clothing

752,995. MARTEX. Elko Clothing Corporation. SN 107,826. Pub. 6–12–62. Filed 10–28–60.

752,996. FLEECIES. P. H. Hanes Knitting Company. SN 134,022. Pub. 8–7–62. Filed 12–14–61.

752,997. MAGNETON. Monarch Tool & Machinery Co., assignee of Universal Magnetic Lock, Inc. SN 134,056. Pub. 4–30–63. Filed 12–14–61.

752,998. SKAPE. Algene Sportswear Company, Inc. SN 136,096. Pub. 4–30–63. Filed 1–19–62.

752,999. SOIL-GARD. Chestnut Hill Industries, Inc. SN 136,956. Pub. 4–30–63. Filed 1–31–62.

753,000. SCHRANK PLUS CROWN AND S DESIGN. M. C. Schrank Company. SN 138,430. Pub. 4–30–63. Filed 2–21–62.

753,001. RODIER AND DESIGN. "Tissages Rodier S.A." SN 138,676. Pub. 4–30–63. Filed 2–26–62.

753,002. SUITED FOR SUCCESS. Joseph H. Cohen & Sons, Inc. SN 140,426. Pub. 4–30–63. Filed 3–22–62.

753,003. PICK-UPS. Mishawaka Rubber Company, Inc. SN 140,969. Pub. 4–30–63. Filed 3–28–62.

753,004. BACHELOR BOY. Kayser-Roth Corporation. SN 143,240. Pub. 4–30–63. Filed 4–27–62.

753,005. PLAY-TOGETHERS. The House of Perfection, Inc. SN 144,843. Pub. 4–30–63. Filed 5–17–62.

753,006. SYLCRA. Character Foundations, Inc. SN 145,443. Pub. 4–30–63. Filed 5–25–62.

753,007. MR. WHISTLERS AND DESIGN. Saul Bros. & Block, Inc. SN 146,108. Pub. 4–30–63. Filed 6–4–62.

753,008. MODESTO. Modesto Ltd. SN 146,505. Pub. 4–30–63. Filed 6–8–62.

753,009. WENDY LANE. Eugene F. Coracci. SN 146,708. Pub. 4–30–63. Filed 6–12–62.

753,010. PADDINGTON. Saks & Company. SN 148,755. Pub. 4–30–63. Filed 7–10–62.

753,011. CAPRIEL. Capriel, Inc. SN 152,203. Pub. 4–30–63. Filed 8–30–62.

753,012. THOM McAN BOOTMASTER. Melville Shoe Corporation. SN 152,323. Pub. 4–30–63. Filed 8–31–62.

753,013. RIALTO LADY. Delightform Foundations, Inc. SN 152,501. Pub. 4–30–63. Filed 9–5–62.

Class 40 — Fancy Goods, Furnishings, and Notions

753,014. THE 6TH FINGER. Alan Products, Inc. SN 150,212. Pub. 4–30–63. Filed 8–1–62.

Class 41 — Canes, Parasols, and Umbrellas

753,015. IH. International Harvester Company. SN 155,993. Pub. 4–30–63. Filed 10–26–62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

753,016. ACROCEL. United Merchants and Manufacturers, Inc. SN 136,013. Pub. 8–7–62. Filed 1–17–62.

753,017. PROMENADE. Smith Manufacturing Limited. SN 145,496. Pub. 4–30–63. Filed 4–27–62.

753,018. LALONDE AND DESIGN. Société à Responsabilité Limitée: Lalonde. SN 145,625. Pub. 4–30–63. Filed 5–28–62.

753,019. CUSHIONAIRE. The Albany Felt Company. SN 146,445. Pub. 4–30–63. Filed 6–8–62.

753,020. WHALEBONE. McGregor-Doniger Inc. SN 146,642. Pub. 4–30–63. Filed 6–11–62.

753,021. LASTIC-EASE-CORNERS. Fieldcrest Mills, Inc. SN 150,544. Pub. 4–30–63. Filed 8–6–62.

753,022. LINTON TWEED. Linton Tweeds Limited. SN 151,344. Pub. 4–30–63. Filed 8–16–62.

753,023. INNER GUARD. Collins & Aikman Corporation. SN 153,065. Pub. 4–30–63. Filed 9–13–62.

753,024. ICE-BREAKER. Collins & Aikman Corporation. SN 153,066. Pub. 4–30–63. Filed 9–13–62.

753,025. RICOCHET. Collins & Aikman Corporation. SN 153,067. Pub. 4–30–63. Filed 9–13–62.

753,026. K WITHIN A CIRCLE FORMED OF KLOPMAN MILLS, INC. Klopman Mills, Inc. SN 154,255. Pub. 4–30–63. Filed 10–1–62.

Class 43 — Thread and Yarn

753,027. ACROCEL. United Merchants and Manufacturers, Inc. SN 136,016. Pub. 8-7-62. Filed 1-17-62.

753,028. AB AMERICAN BEMBERG ARISTOCRAT OF RAYON YARN. Beaunit Corporation, by change of name from Beaunit Mills, Inc. SN 141,789. Pub. 4-30-63. Filed 4-9-62.

Class 44 — Dental, Medical, and Surgical Appliances

753,029. VERY PERSONALLY YOURS AND DESIGN. Kimberly-Clark Corporation. SN 140,359. Pub. 4-30-63. Filed 3-21-62.

753,030. ETHAIRE. Air-Shields, Inc. SN 140,510. Pub. 10-2-62. Filed 3-23-62.

753,031. MURRAY'S. Murray's Superior Products Company. SN 150,809. Pub. 4-30-63. Filed 8-8-62.

753,032. WIFE'S FRIEND. W. J. Rendell Limited. SN 152,250. Pub. 4-30-63. Filed 8-30-62.

753,033. TAB. Thuresson-Angrabright-Bennett, Inc. SN 153,526. Pub. 4-30-63. Filed 9-19-62.

753,034. STERILRAY. V. J. Curcio Co., Inc. SN 154,697. Pub. 4-30-63. Filed 10-8-62.

753,035. AMPOVIAL. Abbott Laboratories. SN 155,956. Pub. 4-30-63. Filed 10-26-62.

753,036. B-W AND BORG-WARNER INGERSOLL PRODUCTS AND DESIGN. Borg-Warner Corporation. SN 156,074. Pub. 4-30-63. Filed 10-29-62.

753,037. REDI-JECT. Organon Inc. SN 156,242. Pub. 4-30-63. 10-30-62.

753,038. AUROPHONE. Mears Radio Hearing Device Corporation. SN 156,313. Pub. 4-30-63. Filed 10-31-62.

753,039. GOLDENT. Hastings & Co., Inc. SN 156,491. Pub. 4-30-63. Filed 11-2-62.

753,040. POLY TRANS. Dental Perfection Company. SN 156,575. Pub. 4-30-63. Filed 11-5-62.

753,041. CAST-O-SOCK. William A. Smallberg. SN 156,770. Pub. 4-30-63. Filed 11-6-62.

Class 45 — Soft Drinks and Carbonated Waters

753,042. HUBIE AND DESIGN. Thomas Carvel. SN 149,638. Pub. 4-30-63. Filed 7-24-62.

753,043. GOLD-EN GIRL AND DESIGN. Sun Drop Sales Corporation of America, d.b.a. Sun Drop Sales Corp. SN 151,537. Pub. 4-30-63. Filed 8-20-62.

Class 46 — Foods and Ingredients of Foods

753,044. CLASICO AND DESIGN. Rodriguez Hermanos de Córdoba S.A., SN 95,282. Pub. 4-4-61. Filed 4-18-60.

753,045. PREMIUM SEAL. Ralston Purina Company. SN 97,704. Pub. 6-20-61. Filed 5-23-60.

753,046. STERLING. Sterling Cider Co., Inc. SN 99,016. Pub. 12-26-61. Filed 6-14-60.

753,047. WIENER WAGON. Gai's Seattle French Baking Company, Inc., d.b.a. Gai's French Bakery. SN 120,401. Pub. 2-12-63. Filed 5-19-61.

753,048. Q-POP. Marian Company. SN 136,912. Pub. 9-18-62. Filed 1-30-62.

753,049. ICY-Q. Marian Company. SN 136,913. Pub. 9-18-62. Filed 1-30-62.

753,050. T 200. Universal Foods Corporation. SN 152,172. Pub. 4-30-63. Filed 8-29-62.

753,051. NORTHERN STAR. Wilbur-Ellis Company, d.b.a. Wilbur-Ellis Co. SN 152,363. Pub. 4-30-63. Filed 8-31-62.

753,052. ALPHA BLOX. General Foods Corporation. SN 152,510. Pub. 4-30-63. Filed 9-5-62.

753,053. K-O-O-L-D-O-G AND DESIGN. William W. Humphries. SN 153,406. Pub. 4-30-63. Filed 9-18-62.

753,054. K-O-O-L B-E-R-G AND DESIGN. William W. Humphries. SN 153,407. Pub. 4-30-63. Filed 9-18-62.

753,055. SINGING VALLEY. A. A. Wernsing, D.C., d.b.a. A & W Products. SN 153,846. Pub. 4-30-63. Filed 9-24-62.

753,056. HONEY CREEK AND DESIGN. Falls City Creamery Company. SN 153,948. Pub. 4-30-63. Filed 9-26-62.

753,057. FREEDENT. Wm. Wrigley Jr. Company. SN 154,791. Pub. 4-30-63. Filed 10-8-62.

753,058. COUNTRY MILL. Dixie Lily Milling Co. SN 155,394. Pub. 4-30-63. Filed 10-18-62.

753,059. GARLAND. Nebraska Consolidated Mills Company. SN 155,431. Pub. 4-30-63. Filed 10-18-62.

Class 49 — Distilled Alcoholic Liquors

753,060. JOHN HANDY. Saserac Company, Inc., d.b.a. John Handy Co. SN 149,214. Pub. 4-30-63. Filed 7-17-62.

Class 50 — Merchandise Not Otherwise Classified

753,061. PIONEER. Valley Forge Flag Company, Inc. SN 129,427. Pub. 8-28-62. Filed 10-6-61.

753,062. CLING AND DESIGN. Martin-Marietta Corporation. SN 138,309. Pub. 4-30-63. Filed 2-20-62.

753,063. CALENDAR CUTIES. National Potteries Corporation. SN 155,428. Pub. 4-30-63. Filed 10-18-62.

Class 51 — Cosmetics and Toilet Preparations

753,064. LA TONA. Conner & Walters Company. SN 126,988. Pub. 6-26-62. Filed 8-31-61.

753,065. RAINING RUBIES. Richard Hudnut. SN 149,084. Pub. 4-30-63. Filed 7-16-62.

753,066. REGE MADAME. L'Oreal (Societe Anonyme). SN 149,304. Pub. 4-30-63. Filed 7-18-62.

753,067. LES NUANCES VENITIENNES. L'Oreal (Societe Anonyme). SN 149,305. Pub. 4-30-63. Filed 7-18-62.

753,068. BURMA SHAVE. Philip Morris Incorporated, assignee of Burma-Vita Company. SN 151,472. Pub. 4-30-63. Filed 8-20-62.

753,069. DEW. Clairol Incorporated. SN 155,575. Pub. 4-30-63. Filed 10-22-62.

753,070. ULTRA DEW. Clairol Incorporated. SN 155,577. Pub. 4-30-63. Filed 10-22-62.

753,071. INSTANT DEW. Clairol Incorporated. SN 155,578. Pub. 4-30-63. Filed 10-22-62.

Class 52 — Detergents and Soaps

753,072. CHANGE-X. Purex Corporation, Ltd., d.b.a. Turco Products, Inc. SN 153,513. Pub. 4-30-63. Filed 9-19-62.

Service Marks

Class 100 — Miscellaneous

753,073. UAP AND DESIGN. United Aircraft Products, Inc. SN 141,663. Pub. 4-30-63. Filed 4-5-62.

Class 101 — Advertising and Business

753,074. MILES. Melville Shoe Corporation. SN 150,090. Pub. 4-30-63. Filed 7-30-62.

753,075. "A" ETC. AND DESIGN. Burt M. McCormick, d.b.a. "A" Stand-By Telephone Secretary. SN 152,610. Pub. 4-30-63. Filed 9-6-62.

Class 102 — Insurance and Financial

753,076. WSB AND DESIGN. Waterbury Savings Bank. SN 152,542. Pub. 4-30-63. Filed 9-5-62.

753,077. GLAMOUR GUILD OF AMERICA. Glamour Guild of America. SN 153,401. Pub. 4-30-63. Filed 9-18-62.

Class 105 — Transportation and Storage

753,078. TRAIL RIDERS OF THE WILDERNESS. The American Forestry Association. SN 144,435. Pub. 4-30-63. Filed 5-14-62.

Class 107 — Education and Entertainment

753,079. JUNIOR ACHIEVEMENT AND DESIGN. Junior Achievement, Incorporated. SN 151,830. Pub. 4-30-63. Filed 8-24-62.

753,080. MISS NATIONAL TEENAGE SAFETY. The Miss National Teenage Safety Pageant Inc. SN 153,887. Pub. 4-30-63. Filed 9-25-62.

Collective Membership Marks

Class 200

753,081. PHI KAPPA THETA EMBLEM. Phi Kappa Theta Fraternity. SN 153,112. Pub. 4-30-63. Filed 9-13-62.

753,082. MISCELLANEOUS DESIGN. Phi Kappa Psi Fraternity. SN 154,840. Pub. 4-30-63. Filed 10-9-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 18 — Medicines and Pharmaceutical Preparations

753,083. Fairfield Laboratories, Inc., Pasadena, Calif., assignee, by mesne assignment, of Rawson Drug & Sundry Company, Inc., Oakland, Calif. SN 89,376. Filed P.R. 1-20-60; Am. S.R. 11-27-62.

PROFESSIONAL

For Aspirin and Saccharin.
First use Dec. 7, 1959.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

753,084. Nordberg Manufacturing Company, Milwaukee, Wis. SN 113,438. Filed P.R. 2-10-61; Am. S.R. 5-27-63.

PROGRAMED POWER

For Marine Engine Control Systems.
First use Nov. 15, 1960.

TRADEMARK REGISTRATIONS RENEWED

22,752. PS STUBS. Cl. 14. 4-4-1893.
22,753. STUBS. Cl. 14. 4-4-1893.
22,843. PEARS AND DESIGN. Cl. 52. 4-18-1893.
23,353. HOOD'S SARSAPARILLA AND DESIGN. Cl. 18. 7-11-1893.
23,632. BEE SOAP AND DESIGN. Cl. 52. 9-19-1893.
163,288. JUPITER AND DESIGN. Cl. 45. 1-9-23.
163,469. GLACIER. Cl. 46. 1-16-23.
165,357. CITRUS LEAVES. Cl. 38. 3-6-23.
165,567. DASCO. Cl. 23. 3-13-23.
166,943. TRANSIT. Cl. 37. 4-17-23.
167,152. "VALID." Cl. 37. 4-24-28.
167,713. WETORDRY. Cl. 4. 5-8-23.
168,226. DICTATION. Cl. 37. 5-15-23.
168,322. PARTOLA ETC. Cl. 18. 5-22-23.
168,884. MOCCASIN AND DESIGN. Cl. 46. 5-29-23.
169,221. INGERSOLL. Cl. 23. 6-12-23.
169,341. BANNER. Cl. 12. 6-12-23.
169,596. OLD HONESTY AND DESIGN. Cl. 16. 6-26-23.
169,637. MIQUON. Cl. 15. 6-26-23.
170,095. THOM McAN. Cl. 39. 7-10-23.
170,109. THE SHIELD C.S.M.C. AND DESIGN. Cl. 38. 7-10-23.
170,847. CLOVER FARM. Cl. 46. 7-24-23.
170,923. OUT-O-WALL. Cl. 34. 7-24-23.
171,810. CACTUS AND DESIGN. Cl. 13. 8-14-23.
171,811. COOSA AND DESIGN. Cl. 13. 8-14-23.
171,812. CHEROKEE AND DESIGN. Cl. 13. 8-14-23.
171,971. ILETIN. Cl. 18. 8-21-23.
173,240. OPTIMUS. Cl. 51. 9-18-23.
173,245. DE LUXE. Cl. 51. 9-18-23.
173,337. ROUGH RIDER. Cl. 39. 9-25-23.
173,417. AMERICAN. Cl. 26. 9-25-23.
173,601. THE KANSAS CITY STAR. Cl. 38. 10-2-23.
173,826. CHIMES. Cl. 46. 10-2-23.
174,219. STOCK EXCHANGE. Cl. 37. 10-9-23.
174,232. WALL STREET. Cl. 37. 10-9-23.
174,390. SUN BRAND. Cl. 1. 10-16-23.
174,489. VENUS. Cl. 16. 10-16-23.
174,861. PINE-O-CIDE AND DESIGN. Cl. 6. 10-23-23.
175,299. CREDIT. Cl. 37. 11-6-23.
175,394. AMERICAN BEAUTY. Cl. 46. 11-6-23.
399,442. MAZITAS AND DESIGN. Cl. 46. 1-5-43.
399,838. YH AND DESIGN. Cl. 34. 2-2-43.
400,347. KORAGAN AND DESIGN. Cl. 18. 3-2-43.
401,325. CHEVRON AND DESIGN. Cl. 25. 5-11-43.
401,416. NYRAY. Cl. 52. 5-18-63.
401,419. CHEVRON AND DESIGN. Cl. 6. 5-18-43.
401,701. STUDIO. Cl. 27. 6-1-43.
401,712. BIKE. Cl. 44. 6-1-43.
401,747. SILVER-LUX. Cl. 16. 6-8-43.
402,156. GENERAL. Cl. 50. 7-6-43.
402,344. LISTERINE. Cl. 51. 7-13-43.
402,614. VITAMIN Q. Cl. 21. 8-3-43.
402,728. IRIDITE. Cl. 14. 8-10-43.
402,858. FRITOLA. Cl. 18. 8-17-43.
402,867. "KEX" SANA-WIPE. Cl. 42. 8-17-43.
402,869. BLACK-MAGIC. Cl. 6. 8-17-43.
403,034. TAL'-WI-WI. Cl. 46. 8-31-43.
403,612. PETITE. Cl. 52. 10-5-43.
403,879. FREON-22. Cl. 6. 10-19-43.
403,927. HYDRATANE. Cl. 6. 10-26-43.
403,983. NEODEX. Cl. 18. 10-26-43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

443,427. IRALITE. Cl. 14. 10–4–49.
444,727. HI POP. Cl. 46. 10–2–49.

The following registrations issued May 28, 1957

645,927. COHRFOAM. Cl. 1.
645,929. MUSE. Cl. 1.
645,935. PETTIBED. Cl. 3.
645,943. DELTALAM. Cl. 5.
645,948. SURE-SAFE. Cl. 6.
645,954. HP–18. Cl. 6.
645,957. NACROSOL. Cl. 6.
645,958. LITHOLAC. Cl. 6.
645,960. PHILGRO. Cl. 10.
645,962. SPRAY GREEN. Cl. 10.
645,968. S STEINEN AND DESIGN. Cl. 13.
645,972. GREENFARM. Cl. 13.
645,973. SHOWER-MISER. Cl. 13.
645,978. PERFECT POWER AND DESIGN. Cl. 15.
645,979. PLYSEAL. Cl. 16.
645,980. CRESTLINE. Cl. 16.
645,981. U-KOTE. Cl. 16.
646,002. NEBU-DIAZINE. Cl. 18.
646,005. REFORMIL. Cl. 18.
646,007. RCN AND DESIGN. Cl. 18.
646,012. AN ULTRA-VAC AND DESIGN. Cl. 21.
646,021. LAMPS BY LEHIGH. Cl. 21.
646,027. "POLI-SKRUB." Cl. 21.
646,031. "LINAR" EDGETROL. Cl. 21.
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149,397. RIGI AND DESIGN. Cl. 46. 12–13–21. Gust. & H. Probst A.G. Erich Probst, Langnau, Berne, Switzerland. Amended: In the statement, column 1, lines 10 through 12 are deleted, and the drawing is amended to appear:



736,975. ANTOZITE. Cl. 6. 9–4–62. The B. F. Goodrich Company, Akron, Ohio. Corrected: In the statement, column 2, line 1, "antioxodants" should be deleted and *antioxidants* should be inserted.

737,807. STAR RAY DESIGN. Cl. 21. 9–18–62. Standard Elektrik Lorenz Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany. Corrected:



740,673. WAGON BOSS AND DESIGN. Cl. 39. 11–13–62. Burlington Industries, Inc., New York, N.Y. Amended to appear:



747,436. VITONEX. Cl. 6. 4–2–63. Hydroponic Chemical Company, Inc., Copley, Ohio. Corrected: In the statement, column 2, line 4, "716,689" should be deleted and *716,687* should be inserted.

748,869. HURDY GURDY. Cl. 46. 4–30–63. Egan, Fickett & Co., Inc., Mountainside, N.J. Corrected: In the statement, column 1, line 1, "New York" should be deleted and *Delaware* should be inserted.

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General Motors Corp., Detroit, Mich. 752,923, pub. 4–30–63. Cl. 23.
General Precision, Inc. Little Falls, N.J. 752,841, pub. 4–30–63. Cl. 21.
General Tire & Rubber Co., The, Akron, Ohio. 402,156, ren. 7–16–63. Cl. 50.
General Tire & Rubber Co., The, Akron, Ohio. 752,967, pub. 4–30–63. Cl. 35.
General Tire & Rubber Co., The, Akron, Ohio. 752,972, pub. 4–30–63. Cl. 35.
Geneva Bottling Works, Inc.: *See*—
Boggiano, Louis.
Geske, Francis G., d.b.a. Francis Industries, Chicago, Ill. 646,191, canc. Cl. 46.
Gibson, C. R., & Co., Norwalk, Conn. 752,989, pub. 3–27–62. Cl. 37.
Giordano, Vincent, Brooklyn, N.Y. 648,878, canc. Cl. 22.
Glam Float Co., Seattle, Wash. 646,067, canc. Cl. 23.
Glamour Foods, Inc., New York, N.Y. 646,194, canc. Cl. 46.
Glamour Guild of America, Philadelphia, Pa. 753,077, pub. 4–30–63. Cl. 102.
Glaredan Corp., Lafayette, Calif. 752,828, pub. 4–30–63. Cl. 19.
Glas-Laminates, Inc., Costa Mesa, Calif. 646,231, canc. Cl. 19.
Glatt, Herbert, d.b.a. Princess Products, Newark, N.J. 752,930, 4–30–63. Cl. 24.

Globe Jewelry, Inc., New York, N.Y. 752,949, pub. 4–30–63. Cl. 28.
Glo-Mark Products Co., Inc., New York, N.Y. 752,990, pub. 4–30–63. Cl. 37.
Goheen Corp., The, Wilmington, Del., and Warren, Ohio, to Textron Industries, Inc., d.b.a. Vita-Var Co., Orange, N.J. 169,596, ren. 7–16–63. Cl. 16.
Goldey, Louis, Co., Inc., New York, N.Y. 752,756, pub. 4–30–63. Cl. 12.
Gold-Por Corp.: *See*—
Nat Gold.
Goodpasture Grain & Milling Co., Inc., Brownfield, Tex. 752,781, pub. 4–30–63. Cl. 10.
Goodrich, B. F., Co., The, Akron, Ohio. 752,975, pub. 4–30–63. Cl. 35.
Grado Laboratories, Inc., Brooklyn, N.Y. 752,977, pub. 4–30–63. Cl. 36.
Grand Rapids Varnish Corp., Grand Rapids, Mich. 645,980, canc. Cl. 16.
Graphics, Inc., Kearny, N.J. 752,961, pub. 4–30–63. Cl. 34.
Great Lakes Carbon Corp., New York, N.Y. 752,706, pub. 4–30–63. Cl. 1.
Greenfarm Sprinkler Corp., Seattle, Wash. 645,972, canc. Cl. 13.
Greer, John F., Co., Oakland, Calif. 752,812, pub. 4–30–63. Cl. 18.
Gries Reproducer Corp., New Rochelle, N.Y. 752,785–6, pub. 4–30–63. Cl. 14.
Grove Dale Mfg. & Supply Co.: *See*—
Mattoa, David W.
Gulf States Steel Co., Birmingham, Ala., to Republic Steel Corp., Cleveland, Ohio. 171,810–12, ren. 7–16–63. Cl. 13.
Haas, John I., Inc., Washington, D.C. 752,707, pub. 4–30–63. Cl. 1.
Hallicrafters Co., The, Chicago, Ill. 752,852, pub. 4–30–63. Cl. 21.
Hamilton Cosco, Inc., Columbus, Ind. 752,959, pub. 4–30–63. Cl. 32.
Hampshire Mfg. Co., from Holgate Toys, Inc., Chicago, Ill. 752,877, pub. 4–2–63. Cl. 22.
Handy, John, Co.: *See*—
Sazerac Co., Inc.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 752,996, pub. 8–7–62. Cl. 39.
Hardman, Peck & Co., New York, N.Y. 752,981, pub. 4–30–63. Cl. 36.
Harrington Mfg. Co., Inc., Lewiston, N.C. 752,888–9, pub. 4–30–63. Cl. 23.
Hassenfeld Bros., Inc., Central Falls, R.I. 752,882, pub. 4–30–63. Cl. 22.
Hastings & Co., Inc., Philadelphia, Pa. 753,039, pub. 4–30–63. Cl. 44.
Heimbinder, Barney, New York, N.Y. 646,117, canc. Cl. 37.
Herndon, L. Houston, d.b.a. Humboldt Canning Co., Humboldt, Tenn. 646,184, canc. Cl. 46.
Heurich, Chr., Brewing Co., Washington, D.C. 524,687, canc. Cl. 48.
Heurich, Chr., Brewing Co., Washington, D.C. 412,856, canc. Cl. 48.
Heurich, Chr., Brewing Co., Washington, D.C. 45,063, canc. Cl. 48.
Hexcel Products Inc., Berkeley, Calif. 752,740, pub. 4–30–63. Cl. 12.
Hexcel Products, Inc., Berkeley, Calif. 752,745–6, pub. 4–30–63. Cl. 12.
Heyday Shoes, Inc., St. Louis, Mo. 588,326, canc. Cl. 39.
Higgins-Babcock-Hurd Co., The, to Clover Farm Stores Corp., Cleveland, Ohio. 170,847, ren. 7–16–63. Cl. 46.
Hillyard Chemical Co.: *See*—
Hillyard, Newton S.
Hillyard, Newton S., d.b.a. Hillyard Chemical Co., to Hillyard Chemical Co., St. Joseph, Mo. 174,861, ren. 7–16–63. Cl. 6.
Holgate Toys, Inc.: *See*—
Hampshire Mfg. Co.
Holzer Watch Co., Inc., New York, N.Y. 752,943, pub. 4–30–63. Cl. 28.
Hood, Charles I., Lowell, Mass., to Standard Laboratories, Inc., Morris Plains, N.J. 23,353, ren. 7–16–63. Cl. 18.
House of Perfection, Inc., The, New York, N.Y. 753,005, pub. 4–30–63. Cl. 39.
Hudnut, Richard, Morris Plains, N.J. 753,065, pub. 4–30–63. Cl. 51.
Huffman Mfg. Co., The, Dayton, Ohio. 752,895, pub. 4–30–63. Cl. 23.
Humboldt Canning Co.: *See*—
Herndon, L. Houston.
Humphries, William W., Dover, Ohio. 753,053–4, pub. 4–30–63. Cl. 46.
Husky Oil Co., Cody, Wyo. 752,760, pub. 4–30–63. Cl. 12.
Hycraft Jewelry Mfg. Co., Inc., New York, N.Y. 752,938, pub. 4–30–63. Cl. 27.
Industrial Ovens, Inc., Cleveland, Ohio. 752,900, pub. 4–30–63. Cl. 23.
Industrial Suppliers Co., San Francisco, Calif. 752,855, pub. 4–30–63. Cl. 21.
Infra-Red Systems, Inc., Wayne, N.J. 683,194, canc. Cl. 21.
Ingersoll Milling Machine Co., The, Rockford, Ill. 169,221, ren. 7–16–63. Cl. 23.
Intercontinental Dynamics Corp., Englewood, N.J. 646,031, canc. Cl. 21.
International Harvester Co., Chicago, Ill. 753,015, pub. 4–30–63. Cl. 41.
International Laboratories Ltd., London, England, to U.S. Ethicals, Inc., Long Island City, N.Y. 403,983, ren. 7–16–63. Cl. 18.
International Latex Corp., Dover, Del. 646,155, canc. Cl. 39.
Invenex Pharmaceuticals, San Francisco, Calif. 752,810, pub. 4–30–63. Cl. 18.
Jackson, George W., d.b.a. Jackson Scaffolding Ltd., Vancouver, British Columbia, Canada. 752,766, pub. 4–30–63. Cl. 12.
Jackson Scaffolding Ltd.: *See*—
Jackson, George W.
Jaeger Machine Co., The, Columbus, Ohio. 752,910, pub. 4–30–63. Cl. 23.
Johnston, J. W., Magnolia, Ark. 645,973, canc. Cl. 13.
Junior Achievement, Inc., New York, N.Y. 753,079, pub. 4–30–63. Cl. 107.
Kansas City Star Co., The: *See*—
Nelson-Kirkwood, Laura.
Kapro Corp., Chicago, Ill. 752,789, pub. 4–30–63. Cl. 15.
Kayser-Roth Corp., New York, N.Y. 753,004, pub. 4–30–63. Cl. 39.
Keller Pottery Co., The, North Wales, Pa. 752,718, pub. 4–30–63. Cl. 2.
Kendall Co., The: *See*—
Bike Web Co., The.
Kepco, Inc., Flushing, N.Y. 752,844, pub. 4–30–63. Cl. 21.
Keystone Lamp Mfg. Corp., Slatington, Pa. 646,021, canc. Cl. 21.
Killies Sporting Goods Co.: *See*—
Ennest, Harley J.
Kimberly-Clark Corp., Neenah, Wis. 753,029, pub. 4–30–63. Cl. 44.
Kimwood Machine Co., Cottage Grove, Oreg. 752,916, pub. 4–30–63. Cl. 23.
Kinetic Chemicals, Inc., to E. I. du Pont de Nemours and Co., Wilmington, Del. 403,879, ren. 7–16–63. Cl. 6.
King-Seeley Thermos Co., Ann Arbor, Mich. 752,722, pub. 4–30–63. Cl. 4.
Klopman Mills, Inc., New York, N.Y. 753,026, pub. 4–30–63. Cl. 42.
Knoll Pharmaceutical Co., Orange, N.J. 752,800, pub. 4–30–63. Cl. 18.
Knox Co., The, to The Knox Co., Los Angeles, Calif. 400,347, ren. 7–16–63. Cl. 18.
Koch Creations, Inc., Lynbrook, N.Y. 752,872, pub. 4–30–63. Cl. 21.
Kowa American Corp., New York, N.Y. 752,935, pub. 4–30–63. Cl. 26.
Kristinus Kommanditgesellschaft, Munich, Germany. 752,794, pub. 5–15–62. Cl. 17.
Kruck, Eugene, Huntington Station, N.Y. 645,935, canc. Cl. 3.
Krusius, Erwin, d.b.a. Gebr. Krusius, Solingen, Germany. 646,061, canc. Cl. 23.
Kysor Heater Co., Cadillac, Mich. 752,824, pub. 4–30–63. Cl. 19.
L.E.E. Inc., Washington, D.C. 646,041–2, canc. Cl. 21.
Lambert Pharmacal Co., Wilmington, Del., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 402,344, ren. 7–16–63. Cl. 51.
Langdale Co., The, Valdosta, Ga. 752,757, pub. 4–30–63. Cl. 12.
Latex Process, Inc., Melrose, Mass. 752,755, pub. 4–30–63. Cl. 12.
Lawson, Allen, d.b.a. Travel Records, West Columbia, S.C. 752,984, pub. 4–30–63. Cl. 36.
Lechner, Richard, Enterprises, Inc., Glendale, Calif. 752,994, pub. 4–30–63. Cl. 38.
Leeming, Thomas, & Co., Inc., New York, N.Y. 752,804–5, pub. 4–30–63. Cl. 18.
Leggitt, S. H., Co., Marshall, Mich. 752,963, pub. 4–30–63. Cl. 34.
Lehigh Paint Co., Philadelphia, Pa. 645,981, canc. Cl. 16.
Lehn & Fink Products Corp.: *See*—
Stewart & Holmes Drug Co.
Leitner Equipment Co., Franklin Park, Ill. 752,962, pub. 4–30–63. Cl. 34.
Lenox, Inc., Trenton, N.J. 752,951, pub. 4–30–63. Cl. 30.
Lesley Records: *See*—
Brodie, F. I.
Lilly, Eli, & Co.: *See*—
Lilly, Eli, and Co., The.
Lilly, Eli, and Co., The, Indianapolis, Ind., to Eli Lilly & Co., Indianapolis, Ind. 171,971, ren. 7–16–63. Cl. 18.
Lindsay Co-Operative Citrus Association, to Suntreat Growers & Shippers, Inc., Lindsay, Calif. 173,826, ren. 7–16–63. Cl. 46.
Linton Tweeds Ltd., Carlisle, Cumberland, England. 753,022, pub. 4–30–63. Cl. 42.
Liquid Glaze, Inc., Lansing, Mich. 752,950, pub. 7–3–62. Cl. 29.
Liston, W. T., Co., Harlingen, Tex. 752,767, pub. 4–30–63. Cl. 12.
London Records, Inc., New York, N.Y. 752,985, pub. 4–30–63. Cl. 36.
Loray Jewelry Co., New York, N.Y. 752,941, pub. 4–30–63. Cl. 28.
L'Oreal (Societe Anonyme), Paris, France. 753,066–7, pub. 4–30–63. Cl. 51.
Lossau & Kramer, Inc., Chicago, Ill. 752,939, pub. 4–30–63. Cl. 28.
Lowe, Joe, Corp., New York, N.Y. 752,912, pub. 4–30–63. Cl. 23.
Lucky International Co., New York, N.Y. 752,857, pub. 4–30–63. Cl. 21.
Lux Clock Mfg. Co., Inc., The, Waterbury, Conn. 646,085, canc. Cl. 27.
Mackintosh-Hemphill Co., Pittsburgh, Pa. 448,427, canc. Cl. 14.
Mahteslan, A. Charles: *See*—
Partola Distributing Co.
Maiden Form Brassiere Co., Inc., New York, N.Y. 646,151, canc. Cl. 39.
Magazines for Industry, Inc., New York, N.Y. 752,993, pub. 4–30–63. Cl. 38.

Malco Mfg. Co., Chicago, Ill. 752,842, pub. 4–30–63. Cl. 21.
Manatee Fruit Co., Tampa, Fla. 168,884, ren. 7–16–63. Cl. 46.
Manheim Mfg. and Belting Co.: *See*—
Arbee Corp., The.
Manley, Inc., Kansas City, Mo. 444,727, canc. Cl. 46.
Manning, Maxwell & Moore, Inc.: *See*—
American Steam Gauge & Valve Mfg. Co.
Marian Co., Chicago, Ill. 753,048–9, pub. 9–18–62. Cl. 46.
Martin, Barry, Pharmaceuticals, Inc., Coral Gables, Fla. 752,799, pub. 4–30–63. Cl. 18.
Martin-Marietta Corp., Chicago, Ill. 753,062, pub. 4–30–63. Cl. 50.
Marvel Plastics Mfg. Corp., Brooklyn, N.Y. 752,719, pub. 4–30–63. Cl. 2.
Maryland Cup Corp., Owings Mills, Md. 752,714, pub. 4–30–63. Cl. 2.
Mask-O-Matic, Inc., Hawthorne, N.J. 752,915, pub. 4–30–63. Cl. 23.
Mattos, David W., d.b.a. Grove Dale Mfg. & Supply Co., San Jose, Calif. 752,921, pub. 4–30–63. Cl. 23.
Master-Krete, Inc., Kansas City, Mo. 752,744, pub. 4–30–63. Cl. 12.
Mavar Shrimp and Oyster Co., Ltd.: *See*—
Biloxi Packing & Trading Co.
McCormick, Burt M., d.b.a. "A" Stand-By Telephone Secretary, Huntington Park, Calif. 753,075, pub. 4–30–63. Cl. 101.
McGraw-Edison Co., Elgin, Ill. 752,864, pub. 4–30–63. Cl. 21.
McGregor-Doniger Inc., New York, N.Y. 753,020 pub. 4–30–63. Cl. 42.
Meadows, W. R., Inc., Elgin, Ill. 752,765, pub. 4–30–63. Cl. 12.
Mears Radio Hearing Device Corp., Mamaroneck, N.Y. 753,038, pub. 4–30–63. Cl. 44.
Melville Shoe Corp., New York, N.Y. 170,095, ren. 7–16–63. Cl. 39.
Melville Shoe Corp., New York, N.Y. 753,074, pub. 4–30–63. Cl. 101.
Melville Shoe Corp., New York, N.Y. 753,012, pub. 4–30–63. Cl. 39.
Merck & Co., Inc., d.b.a. Quinton Co., Rahway, N.J. 752,816, pub. 4–30–63. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 752,817, pub. 4–30–63. Cl. 18.
Micallef, A., & Co., Inc., Providence, R.I. 752,945, pub. 4–30–63. Cl. 28.
Milwaukee Electric Tool Corp., Milwaukee, Wis. 752,911, pub. 4–30–63. Cl. 23.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 752,866, pub. 4–30–63. Cl. 21.
Minnesota Mining & Mfg. Co., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 167,713, ren. 7–16–63. Cl. 4.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,978, pub. 4–30–63. Cl. 36.
Mirror Insulation Co., Inc., Lambertville, N.J. 752,758, pub. 4–30–63. Cl. 12.
Mishawaka Rubber Co., Inc., Mishawaka, Ind. 753,003, pub. 4–30–63. Cl. 39.
Miss National Teenage Safety Pageant Inc., The, Baltimore, Md. 753,080, pub. 4–30–63. Cl. 107.
Mr. Arnold, Inc., New York, N.Y. 646,130, canc. Cl. 39.
Mitchell-Bradford Chemical Co., Bridgeport, Conn., to The Mitchell-Bradford Chemical Co., Milford, Conn. 402,869, ren. 7–16–63. Cl. 6.
Mitchell-Bradford Chemical Co., The: *See*—
Mitchell-Bradford Chemical Co.
Modernair Corp., San Leandro, Calif. 752,920, pub. 4–30–63. Cl. 23.
Modesto Ltd., Kowloon, Hong Kong. 753,008, pub. 4–30–63. Cl. 39.
Monarch Tool & Machinery Co., from Universal Magnetic Lock, Inc., Chicago, Ill. 752,997, pub. 4–30–63. Cl. 39.
Monark Silver King, Inc., Chicago, Ill. 646,076, canc. Cl. 23.
Monterey Research Laboratory, Inc., Monterey, Calif. 752,937, pub. 4–30–63. Cl. 26.
Moore, Roland R., d.b.a. Poli-Skrub Co., not Inc., Chicago, Ill. 646,027, canc. Cl. 21.
Moore, Samuel, & Co., Mantua, Ohio. 752,846, pub. 4–30–63. Cl. 21.
Morris, Philip, Inc., New York, N.Y. 752,797, pub. 4–30–63. Cl. 17.
Morris, Philip, Inc., New York, N.Y., from Burma-Vita Co., Minneapolis, Minn. 753,068, pub. 4–30–63. Cl. 51.
Mundet Cork Corp., North Bergen, N.J. 752,759, pub. 4–30–63. Cl. 12.
Murray's Superior Products Co., Detroit, Mich. 753,031, pub. 4–30–63. Cl. 44.
Mutual Orange Distributors, to Pure Gold, Inc., Redlands, Calif. 165,357, ren. 7–16–63. Cl. 38.
Nat Gold, to Gold-Por Corp., Newark, N.J. 646,166, canc. Cl. 44.
Natco Corp., Pittsburgh, Pa. 752,738, pub. 4–30–63. Cl. 12.
National Broach and Machine Co., Detroit, Mich. 752,918, pub. 4–30–63. Cl. 23.
National Comics Publications, Inc., New York, N.Y. 646,128, canc. Cl. 38.
National Gypsum Co.: *See*—
National Mortar and Supply Co. of Pittsburgh.
National Mortar and Supply Co. of Pittsburgh, Pittsburgh, Pa., to National Gypsum Co., Buffalo, N.Y. 169,341, ren. 7–16–63. Cl. 12.
National Potteries Corp., Bedford, Ohio. 753,063, pub. 4–30–63. Cl. 50.
National Titanium Co., Inc., Pico Rivera, Calif. 752,793, pub. 4–30–63. Cl. 16.
Nebraska Consolidated Mills Co., Omaha, Nebr. 753,059, pub. 4–30–63. Cl. 46.
Nelson & Nelson Mfg. Jewelers Inc., Minneapolis, Minn. 752,947, pub. 4–30–63. Cl. 28.
Nelson, William R.: *See*—
Nelson-Kirkwood, Laura.
Nelson-Kirkwood, Laura, trustee of the estate of W. R. Nelson, deceased, to The Kansas City Star Co., Kansas City, Mo. 173,601, ren. 7–16–63. Cl. 38.
Nethercutt Industrial Corp., Sylmar, Calif. 752,762, pub. 4–30–63. Cl. 12.
Newlon Mfg. Co.: *See*—
Newlon, Robert J.
Newlon, Robert J., d.b.a. Newlon Mfg. Co., Dallas, Tex. 752,779, pub. 4–30–63. Cl. 13.
Newport Boats: *See*—
Pyle, Carter, Enterprises.
Nierenburg, J., & Sons, Inc., Waterbury, Conn. 752,948, pub. 4–30–63. Cl. 28.
Nitro-Liquid Fertilizer Co., Rochester, Minn. 645,962, canc. Cl. 10.
Nordberg Mfg. Co., Milwaukee, Wis. 753,084. Cl. 23.
Northrup, King & Co., Minneapolis, Minn. 752,902, pub. 3–26–63. Cl. 23.
Oak Mfg. Co., Crystal Lake, Ill. 752,839, pub. 4–30–63. Classes 21 and 26.
Obermayer, S., Co., The, Chicago, Ill. 645,929, canc. Cl. 1.
Organon Inc., West Orange, N.J. 753,037, pub. 4–30–63. Cl. 44.
Original Bradford Soap Works, Inc., West Warwick, R.I. 752,709, pub. 4–30–63. Cl. 1.
Overton, Anthony, d.b.a. The Overton-Hygienic Mfg. Co., to The Overton-Hygienic Mfg. Co., Chicago, Ill. 173,245, ren. 7–16–63. Cl. 51.
Overton-Hygienic Mfg. Co., The: *See*—
Overton, Anthony.
Owens-Illinois Glass Co., Toledo, Ohio. 752,716, pub. 4–30–63. Cl. 2.
Oxnard Electrical Mfg. Co., Inc., Oxnard, Calif. 646,032, canc. Cl. 21
Pacific Car and Foundry Co., Renton, Wash. 752,836, pub. 4–30–63. Cl. 19.
Palm Beach Co., Sanford, Maine. 646,145, canc. Cl. 39.
Palmer Mfg. Corp., Phoenix, Ariz. 646,108, canc. Cl. 34.
Pannell Products, Inc., Midland, Tex. 752,748, pub. 4–30–63. Cl. 12.
Partola Distributing Co., New York, N.Y., to A. C. Mahtesian, Chicago, Ill. 168,322, ren. 7–16–63. Cl. 18.
Pavement Salvage, Inc., Pittsburgh, Pa. 752,924, pub. 4–30–63. Cl. 23.
Pears, A. & F., Ltd., Isleworth, England. 22,843, ren. 7–16–63. Cl. 52.
Pendleton Tool Industries, Inc., Jamestown, N.Y. 752,917, pub. 4–30–63. Cl. 23.
Perfect Power Corp., Chicago, Ill. 645,978, canc. Cl. 15.
Perminova Ltd., Zurich, Switzerland. 645,005, canc. Cl. 18.
Perry Submarine Builders, Inc., West Palm Beach, Fla. 752,825, pub. 4–30–63. Cl. 19.
Perspective Inc., Seattle, Wash. 646,080, canc. Cl. 26.
Petroleum Specialty Co., Pampa, Tex. 752,894, pub. 4–30–63. Cl. 23.
Phi Kappa Theta Fraternity, Worcester, Mass. 753,081–2, pub. 4–30–63. Cl. 200.
Philadelphia Gear Corp., King of Prussia, Pa. 752,887, pub. 4–30–63. Cl. 23.
Phillips Petroleum Co., Bartlesville, Okla. 645,960, canc. Cl. 10.
Pinus Medicine Co., Monticello, Ill., to Pluto Corp., Cincinnati, Ohio. 402,858, ren. 7–16–63. Cl. 18.
Plositron Corp., New York, N.Y. 752,851, pub. 4–30–63. Cl. 21.
Plume & Atwood Mfg. Co., The, Thomaston, Conn. 752,787, pub. 4–30–63. Cl. 14.
Plumly, P. W., Lumber Corp., Winchester, Va. 752,768–70, pub. 4–30–63. Cl. 12.
Pluto Corp.: *See*—
Pinus Medicine Co.
Poli-Skrub Co., not Inc.: *See*—
Moore, Roland R.
Pope & Talbot Inc., San Francisco, Calif. 752,741–3, pub. 4–30–63. Cl. 12.
Popkins, Lillian B., d.b.a. Eduphonics Recording Co., Santa Clara, Calif. 752,976, pub. 4–30–63. Cl. 36.
Port Huron Sulphite & Paper Co., Port Huron, Mich. 752,732, pub. 4–30–63. Cl. 11.
Potlatch Forests, Inc., Lewiston, Idaho. 752,771, pub. 4–30–63. Cl. 12.
Price Battery Corp., Hamburg, Pa. 752,875, pub. 4–30–63. Cl. 21.
Princess Products: *See*—
Glatt, Herbert.
Priamo Safety Corp., Huntingdon, Pa. 752,928, pub. 4–30–63. Cl. 23.
Pritchard, J. F., & Co. of California, Kansas City, Mo. 752,952, pub. 4–30–63. Cl. 31.
Proctor-Silex Corp., The, Philadelphia, Pa. 752,868, pub. 4–30–63. Cl. 21.
Progressive Musical Instrument Corp., New York, N.Y. 439,385, canc. Cl. 36.
Pullman Inc., Chicago, Ill. 752,833, pub. 4–30–63. Cl. 19.
Pulsation Controls Corp., Santa Paula, Calif. 752,778, pub. 4–30–63. Cl. 13.
Pure Gold, Inc.: *See*—
Mutual Orange Distributors.
Purex Corp., Ltd., Wilmington, Calif., d.b.a. Turco Products, Inc., Wilmington, Calif. 753,072, pub. 4–30–63. Cl. 52.
Pyle, Carter, Enterprises, d.b.a. Newport Boats, Newport Beach, Calif. 752,837, pub. 4–30–63. Cl. 19.
Quest Mfg. Co., Chicago, Ill. 752,783, pub. 4–30–63. Cl. 11.
Quinton Co.: *See*—
Merck & Co., Inc.
Quonset Tackle Corp., Providence, R.I. 646,057, canc. Cl. 22.

Radio Cores, Inc., Oak Lawn, Ill. 752,850, pub. 4–30–63. Cl. 21.
Radwin Organization: *See*—
Roosevelt Homes Organization, Inc.
Ralston Purina Co., St. Louis, Mo. 753,045, pub. 6–20–61. Cl. 46.
Rawson Drug & Sundry Co., Inc.: *See*—
Fairfield Laboratories, Inc.
Remo, Inc., North Hollywood, Calif. 752,982, pub. 4–30–63. Cl. 36.
Rendell, W. J., Ltd., London, England. 752,801, pub. 4–30–63. Cl. 18.
Rendell, W. J., Ltd., London, England. 753,032, pub. 4–30–63. Cl. 44.
Renold Chains Ltd., Wythenshawe, Manchester, England. 752,899, pub. 4–30–63. Cl. 23.
Republic Game Co., Cleveland Heights, Ohio. 646,045, canc. Cl. 22.
Republic Steel Corp.: *See*—
Gulf States Steel Co.
Rexall Drug and Chemical Co., Los Angeles, Calif. 752,720, pub. 4–30–63. Cl. 2.
Rheem Mfg. Co., Washington, D.C., to Allied Research Products Inc., Baltimore, Md. 402,728, ren. 7–16–63. Cl. 14.
Rietz, Albert C., Palisades Park, N.J. 646,048, canc. Cl. 22.
Rock Island Register Co., Rock Island, Ill. 170,923, ren. 7–16–63. Cl. 34.
Robins, A. H., Co., Inc., Richmond, Va. 752,818–19, pub. 4–30–63. Cl. 18.
Rodriguez Hermanos de Cordoba S.A., Cordoba, Spain. 753,044, pub. 4–4–61. Cl. 46.
Roos, Ed, Co. of Forest Park, Forest Park, Ill. 430,041, canc. Cl. 32.
Roosevelt Homes Organization, Inc., change of name Radwin Organization, Buffalo, N.Y. 646,216, canc. Cl. 100.
Rotary Oil Tool Co., Buena Park, Calif. 752,886, pub. 4–30–63. Cl. 23.
Roth, Roy E., Co., Rock Island, Ill. 752,913, pub. 4–30–63. Cl. 23.
Rothman, Nathan, d.b.a. Rough Rider Mfg. Co., San Francisco, Calif., to Rough Rider, Inc., Napa, Calif. 173,337, ren. 7–16–63. Cl. 39.
Rothmans of Pall Mall Export Ltd., London, England. 752,798, pub. 4–30–63. Cl. 17.
Rough Rider Mfg. Co.: *See*—
Rothman, Nathan.
Rough Rider, Inc.: *See*—
Rothman, Nathan.
Rotaflex of Canada, Ltd., Toronto, Ontario, Canada. 752,848, pub. 4–30–63. Cl. 21.
Rubbermaid Inc., Wooster, Ohio. 752,830, pub. 4–30–63. Cl. 19.
Rubin, Louis, Long Island City, N.Y. 646,012, canc. Cl. 21.
Russell, R. G., Co., Inc., Boston, Mass. 752,876, pub. 4–30–63. Cl. 21.
Safety-Tot, Inc., New Orleans, La. 752,823, pub. 4–30–63. Cl. 19.
Sailors, William E., Longview, Wash. 645,979, canc. Cl. 16.
Saks & Co., New York, N.Y. 753,010, pub. 4–30–63. Cl. 39.
Saul Bros. & Block, Inc., Atlanta, Ga. 753,007, pub. 4–30–63. Cl. 39.
Sazerac Co., Inc., d.b.a. John Handy Co., New Orleans, La. 753,060, pub. 4–30–63. Cl. 49.
Schermerhorn Cigar Stores, Inc., Chicago, Ill. 752,795, pub. 4–30–63. Cl. 17.
Schrank, M. C., Co., Bridgeton, N.J. 753,000, pub. 4–30–63. Cl. 39.
Scripto, Inc., Atlanta, Ga. 646,116, canc. Cl. 37.
Seagram, Joseph E., & Sons, Inc., New York, N.Y. 752,813, pub. 4–30–63. Cl. 18.
Sechrist Chemicals, Inc., Bayonne, N.J. 752,708, pub. 4–30–63. Cl. 1.
Semi-Elements, Inc., Sazonburg, Pa. 752,873–4, pub. 4–30–63. Cl. 21.
Senefelder Co., Inc., The, New York, N.Y. 645,958, canc. Cl. 6.
Servco Co., The, Long Beach, Calif. 752,927, pub. 4–30–63. Cl. 23.
Shell Oil Co., New York N.Y. 752,724, pub. 10–16–62. Cl. 6.
Shell Oil Co., New York, N.Y. 752,763, pub. 4–30–63. Cl. 12.
Signal Chemical Mfg. Co., Inc., Bedford, Ohio. 752,725, pub. 4–30–63. Cl. 6.
Sincerely Yours: *See*—
Willbrand, Alfred J.
Skookum Rotator Co., Yakima, Wash. 646,072, canc. Cl. 23.
Smallberg, William A., El Paso, Tex. 753,041, pub. 4–30–63. Cl. 44.
Smallman, I., & Sons Co., New York, N.Y. 752,729–30, pub. 4–30–63. Cl. 8.
Smiles, Christopher, & Co., Inc., New York, N.Y. 662,010, canc. Cl. 50.
Smith, Landon P., Inc., Irvington, N.J. 390,124, canc. Cl. 23.
Smith Mfg. Ltd., Weston, Ontario, Canada. 753,017, pub. 4–30–63. Cl. 42.
Smith, Miller & Patch, Inc., New York, N.Y. 752,814, pub. 4–30–63. Cl. 18.
Smith, Sears S., d.b.a. Unique Products, Chicago, Ill. 752,747, pub. 4–30–63. Cl. 12.
Smithline Coat Co., Inc.: *See*—
Smithline Coat Co.
Smithline Coat Co., to Smithline Coat Co., Inc., New York, N.Y. 646,154, canc. Cl. 39.
Societe a Responsabilite Limitee: Lalonde, Paris, France. 753,018, pub. 4–30–63. Cl. 42.
Solarz, A. D., New York, N.Y. 752,942, pub. 4–30–63. Cl. 28.
Sonnenschein, J., Hop Co. Inc., New York, N.Y. 174,390, ren. 7–16–63. Cl. 1.
Sonoco Products Co., Hartsville, S.C. 752,717, pub. 4–30–63. Cl. 2.
Soris Kroll Fabrics, Inc., New York, N.Y. 646,164, canc. Cl. 42.
Southern California Plastic Co., Glendale, Calif. 752,713, pub. 4–30–63. Cl. 2.
Special Instruments Laboratory, Inc., Knoxville, Tenn. 752,862, pub. 4–30–63. Cl. 21.
Sperry Rand Corp., New York, N.Y. 752,863, pub. 4–30–63. Cl. 21.
Sprague Electric Co.: *See*—
Sprague Specialties Co.
Sprague Specialties Co., to Sprague Electric Co., North Adams, Mass. 402,614, ren. 7–16–63. Cl. 21.
Standard Laboratories, Inc.: *See*—
Hood, Charles I.
Standard Oil Co. of California: *See*—
Standard Oil Co.
Standard Oil Co. of California, San Francisco, Calif. 401,325, ren. 7–16–68. Cl. 25.
Standard Oil Co. of California, San Francisco, Calif. 401,419, ren. 7–16–63. Cl. 6.
Standard Oil Co., to Standard Oil Co. of California, San Francisco, Calif. 169,637, ren. 7–16–63. Cl. 15.
Standard-Thomson Corp., Waltham, Mass. 752,970, pub. 4–30–63. Cl. 35.
Steele Canning Co., Springdale, Ark. 646,195, canc. Cl. 46.
Sterling Cider Co., Inc., Sterling, Mass. 753,046, pub. 12–26–61. Cl. 46.
Steinen, Wm., Mfg. Co., Newark, N.J. 645,968, canc. Cl. 13.
Stewart & Holmes Drug Co., Seattle, Wash., to Lehn & Fink Products Corp., Bloomfield, N.J. 173,240, ren. 7–16–63. Cl. 51.
Stubs, Peter, Ltd., Warrington and Rotherham, England. 22,752–3, ren. 7–16–63. Cl. 14.
Styro Toy Corp., McAllen, Tex. 752,883, pub. 4–30–63. Cl. 22.
Summit Mfg. Corp., Providence, R.I. 752,860, pub. 4–30–63. Cl. 21.
Sun Drop Sales Corp.: *See*—
Sun Drop Sales Corp. of America.
Sun Drop Sales Corp. of America, d.b.a. Sun Drop Sales Corp., St. Louis, Mo. 753,043, pub. 4–30–63. Cl. 45.
Sunbeam Corp., Chicago, Ill. 752,845, pub. 4–30–63. Cl. 21.
Sunbeam Corp., Chicago, Ill. 752,890, pub. 4–30–63. Cl. 23.
Sure-Safe Co., St. Louis, Mo. 645,948, canc. Cl. 6.
Suntreat Growers & Shippers, Inc.: *See*—
Lindsay Co-Operative Citrus Association.
Sweetpak Farms, Inc., Mountain View, Calif. 646,197, canc. Cl. 46.
Tal'-Wi-Wi Ranches: *See*—
Bumstead, Dale.
Tap-Rite Products Corp.: *See*—
Vending Components, Inc.
Taylor-Winfield Corp., The, Warren, Ohio. 752,892, pub. 4–30–63. Cl. 23.
Temp-Matic, Inc., Houston, Tex. 752,964, pub. 4–30–63. Cl. 34.
Textron Industries, Inc.: *See*—
Goheen, Corp., The.
Vita-Var Corp.
Thor Power Tool Co., Aurora, Ill. 752,969, pub. 4–30–63. Cl. 35.
Thuresson-Angrabright-Bennett, Inc., Skokie, Ill. 753,033, pub. 4–30–63. Cl. 44.
Tissages Rodier S.A., Paris (Seine), France. 753,001, pub. 4–30–63. Cl. 39.
Tractor Supply Co., Chicago, Ill. 752,965, pub. 4–30–63. Cl. 35.
Trans-Atlantic Co., Philadelphia, Pa. 752,931, pub. 12–11–62. Cl. 25.
Travel Records: *See*—
Lawson, Allen.
Tri-Point Industries, Inc., Albertson, Long Island, N.Y. 752,929, pub. 4–30–63. Cl. 24.
Toy Guidance Council, Inc., New York, N.Y. 646,220, canc. Cl. A.
Toyobo-Howa Textile Engineering Co., Ltd., Kita-Ku, Osaka, Japan. 752,926, pub. 4–30–63. Cl. 23.
Turco Products, Inc.: *See*—
Purex Corp., Ltd.
Turtle Wax, Inc., Chicago, Ill. 752,822, pub. 4–30–63. Cl. 19.
Thomae, Dr. Karl, G.m.b.H., Biberach an der Riss, Germany. 752,809, pub. 4–30–63. Cl. 18.
Textron Oregon, Inc., South Bend, Ind. 752,774, pub. 4–30–63. Cl. 13.
Ultra Plastics, Inc., Philadelphia, Pa. 752,749, pub. 4–30–63. Cl. 12.
Uneeda Doll Co., Inc., Brooklyn, N.Y. 752,880, pub. 4–30–63. Cl. 22.
Union Fork and Hoe Co., The, Columbus, Ohio. 752,907–8, pub. 4–30–63. Cl. 23.
Union Tank Car Co., Chicago, Ill. 752,957, pub. 4–30–63. Cl. 31.
Unique Products: *See*—
Smith, Sears S.
United Aircraft Products, Inc., Dayton, Ohio. 753,073, pub. 4–30–63. Cl. 100.
United Merchants and Manufacturers, Inc., New York, N.Y. 753,016, pub. 8–7–62. Cl. 42.
United Merchants and Manufacturers, Inc., New York, N.Y. 753,027, pub. 8–7–62. Cl. 43.
United States Bronze Powder Works, Inc., New York, N.Y., to United States Bronze Powders, Inc., Flemington, N.J. 174,489, ren. 7–16–63. Cl. 16.
United States Bronze Powders, Inc.: *See*—
United States Bronze Powder Works, Inc.
United States Envelope Co., Springfield, Mass. 752,721, pub. 4–30–63. Cl. 2.
U.S. Ethicals, Inc.: *See*—
International Laboratories Ltd.

Universal Foods Corp., Milwaukee, Wis. 753,050, pub. 4–30–63. Cl. 46.
Universal Magnetic Lock, Inc.: *See*—
Monarch Tool & Machinery Co.
Vair Furniture Co. of California: *See*—
Gallet, William J.
Valley Forge Flag Co. Inc., New York, N.Y. 753,061, pub. 8–28–62. Cl. 50.
Vallone Mfg. Inc., Buffalo, N.Y. 646,098, canc. Cl. 32.
Vending Components, Inc., from Tap-Rite Products Corp., Hackensack, N.J. 752,775, pub. 4–30–63. Cl. 13.
Vereinigte Papierwerke Schickedanz & Co., Nurnberg, Bavaria, Germany. 752,988, pub. 4–30–63. Cl. 37.
Vermont Paving Corp., Burlington, Vt. 752,772, pub. 4–30–63. Cl. 12.
Versapak Film and Packaging Machinery Corp., New York, N.Y. 752,705, pub. 1–29–63. Cl. 1.
Visaggi, John, d.b.a. Dictation Disc Co., New York, N.Y. 752,986, pub. 4–30–63. Cl. 36.
Vita-Var Co.: *See*—
Goheen Corp., The.
Vita-Var Corp.
Vita-Var Corp., Newark, N.J., to Textron Industries, Inc., d.b.a. Vita-Var Co., Orange, N.J. 401,747, ren. 7–16–63. Cl. 16.
Vulcan Radiator Co., The, Hartford, Conn. 646,103, canc. Cl. 34.
Walker Mfg. Co., Racine, Wis. 752,953, pub. 4–30–63. Cl. 31.
Wallerstein Co., Inc., New York, N.Y., to Baxter Laboratories, Inc., Morton Grove, Ill. 403,612, ren. 7–16–63. Cl. 52.
Warner-Lambert Pharmaceutical Co.: *See*—
Lambert Pharmacal Co.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 752,803, pub. 4–30–63. Cl. 18.
Waterbury Savings Bank, Waterbury, Conn. 753,076, pub. 4–30–63. Cl. 102.
Waterloo Foundry Co., Inc., Waterloo, Iowa. 752,854, pub. 4–30–63. Cl. 21.
Watkins, J. E., Co., Maywood, Ill. 752,932, pub. 4–30–63. Cl. 26.
Wernsing, A. A., D. C., d.b.a., A. & W. Products, Hollywood, Calif. 753,055, pub. 4–30–63. Cl. 46.
West Essex Printing Plates, Inc., Caldwell, N.J. 752,893, pub. 4–30–63. Cl. 23.
Western Industrial Engineering Co., Los Angeles, Calif. 401,578, canc. Cl. 26.
Whiteford Paper Co., Inc., New York, N.Y. 646,118–19, canc. Cl. 37.
Wilbur-Ellis Co., d.b.a. Wilbur-Ellis Co., San Francisco, Calif. 753,051, pub. 4–30–63. Cl. 46.
Willbrand, Alfred J., d.b.a. Sincerely Yours, Odessa, Tex. 752,987, pub. 4–30–63. Cl. 36.
Wilson Sporting Goods Co., River Grove, Ill. 752,879, pub. 4–30–63. Cl. 22.
Wilson Sporting Goods Co., River Grove, Ill. 752,881, pub. 4–30–63. Cl. 22.
Wiss, J., & Sons Co., Newark, N.J. 752,903, pub. 4–30–63. Cl. 23.
Womack Electronics, Inc., Danville, Va. 752,858, pub. 4–30–63. Cl. 21.
Woodlawn Farm Dairy Co., Scranton, Pa. 646,188, canc. Cl. 46.
Wrigley, Wm., Jr., Co., Chicago, Ill. 753,057, pub. 4–30–63. Cl. 46.
Wyandotte Chemicals Corp., Wyandotte, Mich. 646,207, canc. Cl. 52.
Yale Woolen Mills, Yale, Mich. 646,159, canc. Cl. 42.
York Oil Burner Co., Inc., to York-Shipley, Inc., York, Pa. 399,838, ren. 7–16–63. Cl. 34.
York-Shipley, Inc.: *See*—
York Oil Burner Co., Inc.
Zenith Radio Corp., Chicago, Ill. 752,847, pub. 4–30–63. Cl. 21.

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Malco Mfg. Co., Chicago, Ill. 752,842, pub. 4–30–63. Cl. 21.
Manatee Fruit Co., Tampa, Fla. 168,884, ren. 7–16–68. Cl. 46.
Manheim Mfg. and Belting Co.: *See*—
Arbee Corp., The.
Manley, Inc., Kansas City, Mo. 444,727, canc. Cl. 46.
Manning, Maxwell & Moore, Inc.: *See*—
American Steam Gauge & Valve Mfg. Co.
Marian Co., Chicago, Ill. 753,048–9, pub. 9–18–62. Cl. 46.
Martin, Barry, Pharmaceuticals, Inc., Coral Gables, Fla. 752,799, pub. 4–30–63. Cl. 18.
Martin-Marietta Corp., Chicago, Ill. 753,062, pub. 4–30–63. Cl. 50.
Marvel Plastics Mfg. Corp., Brooklyn, N.Y. 752,719, pub. 4–30–63. Cl. 2.
Maryland Cup Corp., Owings Mills, Md. 752,714, pub. 4–30–63. Cl. 2.
Mask-O-Matic, Inc., Hawthorne, N.J. 752,915, pub. 4–30–63. Cl. 23.
Mattos, David W., d.b.a. Grove Dale Mfg. & Supply Co., San Jose, Calif. 752,921, pub. 4–30–63. Cl. 23.
Master-Krete, Inc., Kansas City, Mo. 752,744, pub. 4–30–63. Cl. 12.
Mavar Shrimp and Oyster Co., Ltd.: *See*—
Biloxi Packing & Trading Co.
McCormick, Burt M., d.b.a. "A" Stand-By Telephone Secretary, Huntington Park, Calif. 753,075, pub. 4–30–63. Cl. 101.
McGraw-Edison Co., Elgin, Ill. 752,864, pub. 4–30–63. Cl. 21.
McGregor-Doniger Inc., New York, N.Y. 753,020 pub. 4–30–63. Cl. 42.
Meadows, W. R., Inc., Elgin, Ill. 752,765, pub. 4–30–63. Cl. 12.
Mears Radio Hearing Device Corp., Mamaroneck, N.Y. 753,038, pub. 4–30–63. Cl. 44.
Melville Shoe Corp., New York, N.Y. 170,095, ren. 7–16–63. Cl. 39.
Melville Shoe Corp., New York, N.Y. 753,074, pub. 4–30–63. Cl. 101.
Melville Shoe Corp., New York, N.Y. 753,012, pub. 4–30–63. Cl. 39.
Merck & Co., Inc., d.b.a. Quinton Co., Rahway, N.J. 752,816, pub. 4–30–63. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 752,817, pub. 4–30–63. Cl. 18.
Micallef, A., & Co., Inc., Providence, R.I. 752,945, pub. 4–30–63. Cl. 28.
Milwaukee Electric Tool Corp., Milwaukee, Wis. 752,911, pub. 4–30–63. Cl. 23.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 752,866, pub. 4–30–63. Cl. 21.
Minnesota Mining & Mfg. Co., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 167,713, ren. 7–16–63. Cl. 4.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 752,978, pub. 4–30–63. Cl. 36.
Mirror Insulation Co., Inc., Lambertville, N.J. 752,758, pub. 4–30–63. Cl. 12.
Mishawaka Rubber Co., Inc., Mishawaka, Ind. 753,003, pub. 4–30–63. Cl. 39.
Miss National Teenage Safety Pageant Inc., The, Baltimore, Md 753,080, pub. 4–30–63. Cl. 107.
Mr. Arnold, Inc., New York, N.Y. 646,130, canc. Cl. 39.
Mitchell-Bradford Chemical Co., Bridgeport, Conn., to The Mitchell-Bradford Chemical Co., Milford, Conn. 402,869, ren. 7–16–63. Cl. 6.
Mitchell-Bradford Chemical Co., The: *See*—
Mitchell-Bradford Chemical Co.
Modernair Corp., San Leandro, Calif. 752,920, pub. 4–30–63. Cl. 23.
Modesto Ltd., Kowloon, Hong Kong. 753,008, pub. 4–30–63. Cl. 39.
Monarch Tool & Machinery Co., from Universal Magnetic Lock, Inc., Chicago, Ill. 752,997, pub. 4–30–63. Cl. 39.
Monark Silver King, Inc., Chicago, Ill. 646,076, canc. Cl. 23.
Monterey Research Laboratory, Inc., Monterey, Calif. 752,937, pub. 4–30–63. Cl. 26.
Moore, Roland R., d.b.a. Poll-Skrub Co., not Inc., Chicago, Ill. 646,027, canc. Cl. 21.
Moore, Samuel, & Co., Mantua, Ohio. 752,846, pub. 4–30–63. Cl. 21.
Morris, Philip, Inc., New York, N.Y. 752,797, pub. 4–30–63. Cl. 17.
Morris, Philip, Inc., New York, N.Y., from Burma-Vita Co., Minneapolis, Minn. 753,068, pub. 4–30–63. Cl. 51.
Mundet Cork Corp., North Bergen, N.J. 752,759, pub. 4–30–63. Cl. 12.
Murray's Superior Products Co., Detroit, Mich. 753,031, pub. 4–30–63. Cl. 44.
Mutual Orange Distributors, to Pure Gold, Inc., Redlands, Calif. 165,357, ren. 7–16–63. Cl. 38.
Nat-Gold, to Gold-Por Corp., Newark, N.J. 646,166, canc. Cl. 44.
Natco Corp., Pittsburgh, Pa. 752,738, pub. 4–30–63. Cl. 12.
National Broach and Machine Co., Detroit, Mich. 752,918, pub. 4–30–63. Cl. 23.
National Comics Publications, Inc., New York, N.Y. 646,128, canc. Cl. 38.
National Gypsum Co.: *See*—
National Mortar and Supply Co. of Pittsburgh.
National Mortar and Supply Co. of Pittsburgh, Pittsburgh, Pa., to National Gypsum Co., Buffalo, N.Y. 169,341, ren. 7–16–63. Cl. 12.
National Potteries Corp., Bedford, Ohio. 753,063, pub. 4–30–63. Cl. 50.
National Titanium Co., Inc., Pico Rivera, Calif. 752,793, pub. 4–30–63. Cl. 16.
Nebraska Consolidated Mills Co., Omaha, Nebr. 753,059, pub. 4–30–63. Cl. 46.
Nelson & Nelson Mfg. Jewelers Inc., Minneapolis, Minn. 752,947, pub. 4–30–63. Cl. 28.
Nelson, William R.: *See*—
Nelson Kirkwood, Laura.
Nelson-Kirkwood, Laura, trustee of the estate of W. R. Nelson, deceased, to The Kansas City Star Co., Kansas City, Mo. 173,601, ren. 7–16–63. Cl. 38.
Nethercutt Industrial Corp., Sylmar, Calif. 752,762, pub. 4–30–63. Cl. 12.
Newlon Mfg. Co.: *See*—
Newlon, Robert J.
Newlon, Robert J., d.b.a. Newlon Mfg. Co., Dallas, Tex. 752,779, pub 4–30–63. Cl. 13.
Newport Boats: *See*—
Pyle, Carter, Enterprises.
Nierenburg, J., & Sons, Inc., Waterbury, Conn. 752,948, pub. 4–30–63. Cl. 28.
Nitro-Liquid Fertilizer Co., Rochester, Minn. 645,962, canc. Cl. 10.
Nordberg Mfg. Co., Milwaukee, Wis. 753,084. Cl. 23.
Northrup, King & Co., Minneapolis, Minn. 752,902, pub 3–26–63. Cl. 23.
Oak Mfg. Co., Crystal Lake, Ill. 752,839, pub. 4–30–63. Classes 21 and 26.
Obermayer, S., Co., The, Chicago, Ill. 645,929, canc. Cl. 1.
Organon Inc., West Orange, N.J. 753,037, pub. 4–30–63. Cl. 44.
Original Bradford Soap Works, Inc., West Warwick, R.I. 752,709, pub. 4–30–63. Cl. 1.
Overton, Anthony, d.b.a. The Overton-Hygienic Mfg. Co., to The Overton-Hygienic Mfg. Co., Chicago, Ill. 173,245, ren. 7–16–63. Cl. 51.
Overton-Hygienic Mfg. Co., The: *See*—
Overton, Anthony.
Owens-Illinois Glass Co., Toledo, Ohio. 752,716, pub. 4–30–63. Cl. 2.
Oxnard Electrical Mfg. Co., Inc., Oxnard, Calif. 646,032, canc. Cl. 21.
Pacific Car and Foundry Co., Renton, Wash. 752,836, pub. 4–30–63. Cl. 19.
Palm Beach Co., Sanford, Maine. 646,145, canc. Cl. 39.
Palmer Mfg. Corp., Phoenix, Ariz. 646,108, canc. Cl. 34.
Pannell Products, Inc., Midland, Tex. 752,748, pub. 4–30–63. Cl. 12.
Partola Distributing Co., New York, N.Y., to A. C. Mahteslan, Chicago, Ill. 168,322, ren. 7–16–63. Cl. 18.
Pavement Salvage, Inc., Pittsburgh, Pa. 752,924, pub. 4–30–63. Cl. 23.
Pears, A. & F., Ltd., Isleworth, England. 22,843, ren. 7–16–63. Cl. 52.
Pendleton Tool Industries, Inc., Jamestown, N.Y. 752,917, pub. 4–30–63. Cl. 23.
Perfect Power Corp., Chicago, Ill. 645,978, canc. Cl. 15.
Perminova Ltd., Zurich, Switzerland. 645,005, canc. Cl. 18.
Perry Submarine Builders, Inc., West Palm Beach, Fla. 752,825, pub. 4–30–63. Cl. 19.
Perspective Inc., Seattle, Wash. 646,080, canc. Cl. 26.
Petroleum Specialty Co., Pampa, Tex. 752,894, pub. 4–30–63. Cl. 23.
Phi Kappa Theta Fraternity, Worcester, Mass. 753,081–2, pub. 4–30–63. Cl. 200.
Philadelphia Gear Corp., King of Prussia, Pa. 752,887, pub. 4–30–63. Cl. 23.
Phillips Petroleum Co., Bartlesville, Okla. 645,960, canc. Cl. 10.
Pinus Medicine Co., Monticello, Ill., to Pluto Corp., Cincinnati, Ohio. 402,858, ren. 7–16–63. Cl. 18.
Plasitron Corp., New York, N.Y. 752,851, pub. 4–30–63. Cl. 21.
Plume & Atwood Mfg. Co., The, Thomaston, Conn. 752,787, pub. 4–30–63. Cl. 14.
Plumly, P. W., Lumber Corp., Winchester, Va. 752,768–70, pub. 4–30–63. Cl. 12.
Pluto Corp.: *See*—
Pinus Medicine Co.
Poll-Skrub Co., not Inc.: *See*—
Moore, Roland R.
Pope & Talbot Inc., San Francisco, Calif. 752,741–3, pub. 4–30–63. Cl. 12.
Popkins, Lillian B., d.b.a. Eduphonics Recording Co., Santa Clara, Calif. 752,976, pub. 4–30–63. Cl. 36.
Port Huron Sulphite & Paper Co., Port Huron, Mich. 752,732, pub. 4–30–63. Cl. 11.
Potlatch Forests, Inc., Lewiston, Idaho. 752,771, pub. 4–30–63. Cl. 12.
Price Battery Corp., Hamburg, Pa. 752,875, pub. 4–30–63. Cl. 21.
Princess Products: *See*—
Glatt, Herbert.
Prismo Safety Corp., Huntingdon, Pa. 752,928, pub. 4–30–63. Cl. 23.
Pritchard, J. F., & Co. of California, Kansas City, Mo. 752,952, pub. 4–30–63. Cl. 31.
Proctor-Silex Corp., The, Philadelphia, Pa. 752,868, pub. 4–30–63. Cl. 21.
Progressive Musical Instrument Corp., New York, N.Y. 439,385, canc. Cl. 36.
Pullman Inc., Chicago, Ill. 752,833, pub. 4–30–63. Cl. 19.
Pulsation Controls Corp., Santa Paula, Calif. 752,778, pub. 4–30–63. Cl. 13.
Pure Gold, Inc.: *See*—
Mutual Orange Distributors.
Purex Corp., Ltd., Wilmington, Calif., d.b.a. Turco Products, Inc., Wilmington, Calif. 753,072, pub. 4–30–63. Cl. 52.
Pyle, Carter, Enterprises, d.b.a. Newport Boats, Newport Beach, Calif. 752,837, pub. 4–30–63. Cl. 19.
Quest Mfg. Co., Chicago, Ill. 752,733, pub. 4–30–63. Cl. 11.
Quinton Co.: *See*—
Merck & Co., Inc.
Quonset Tackle Corp., Providence, R.I. 646,057, canc. Cl. 22.

Radio Cores, Inc., Oak Lawn, Ill. 752,850, pub. 4–30–63. Cl. 21.
Radwin Organization: *See*—
Roosevelt Homes Organization, Inc.
Ralston Purina Co., St. Louis, Mo. 753,045, pub. 6–20–61. Cl. 46.
Rawson Drug & Sundry Co., Inc.: *See*—
Fairfield Laboratories, Inc.
Remo, Inc., North Hollywood, Calif. 752,982, pub. 4–30–63. Cl. 36.
Rendell, W. J., Ltd., London, England. 752,801, pub. 4–30–63. Cl. 18.
Rendell, W. J., Ltd., London, England. 753,032, pub. 4–30–63. Cl. 44.
Renold Chains Ltd., Wythensbawe, Manchester, England. 752,899, pub. 4–30–63. Cl. 23.
Republic Game Co., Cleveland Heights, Ohio. 646,045, canc. Cl. 22.
Republic Steel Corp.: *See*—
Gulf States Steel Co.
Rexall Drug and Chemical Co., Los Angeles, Calif. 752,720, pub. 4–30–63. Cl. 2.
Rheem Mfg. Co., Washington, D.C., to Allied Research Products Inc., Baltimore, Md. 402,728, ren. 7–16–63. Cl. 14.
Rietz, Albert C., Palisades Park, N.J. 646,048, canc. Cl. 22.
Rock Island Register Co., Rock Island, Ill. 170,923, ren. 7–16–63. Cl. 34.
Robins, A. H., Co., Inc., Richmond, Va. 752,818–19, pub. 4–30–63. Cl. 18.
Rodriguez Hermanos de Cordoba S.A., Cordoba, Spain. 753,044, pub. 4–4–61. Cl. 46.
Roos, Ed, Co. of Forest Park, Forest Park, Ill. 430,041, canc. Cl. 32.
Roosevelt Homes Organization, Inc., change of name Radwin Organization, Buffalo, N.Y. 646,216, canc. Cl. 100.
Rotary Oil Tool Co., Buena Park, Calif. 752,886, pub. 4–30–63. Cl. 23.
Roth, Roy E., Co., Rock Island, Ill. 752,913, pub. 4–30–63. Cl. 23.
Rothman, Nathan, d.b.a. Rough Rider Mfg. Co., San Francisco, Calif., to Rough Rider, Inc., Napa, Calif. 173,337, ren. 7–16–63. Cl. 39.
Rothmans of Pall Mall Export Ltd., London, England. 752,798, pub. 4–30–63. Cl. 17.
Rough Rider Mfg. Co.: *See*—
Rothman, Nathan.
Rough Rider, Inc.: *See*—
Rothman, Nathan.
Rotaflex of Canada, Ltd., Toronto, Ontario, Canada. 752,848, pub. 4–30–63. Cl. 21.
Rubbermaid Inc., Wooster, Ohio. 752,830, pub. 4–30–63. Cl. 19.
Rubin, Louis, Long Island City, N.Y. 646,012, canc. Cl. 21.
Russell, R. G., Co., Inc., Boston, Mass. 752,876, pub. 4–30–63. Cl. 21.
Safety-Tot, Inc., New Orleans, La. 752,823, pub. 4–30–63. Cl. 19.
Sailors, William E., Longview, Wash. 645,979, canc. Cl. 16.
Saks & Co., New York, N.Y. 753,010, pub. 4–30–63. Cl. 39.
Saul Bros. & Block, Inc., Atlanta, Ga. 753,007, pub. 4–30–63. Cl. 39.
Sazerac Co., Inc., d.b.a. John Handy Co., New Orleans, La. 753,060, pub 4–30–63. Cl. 49.
Schermerhorn Cigar Stores, Inc., Chicago, Ill. 752,795, pub. 4–30–63. Cl. 17.
Schrank, M. C., Co., Bridgeton, N.J. 753,000, pub. 4–30–63. Cl. 39.
Scripto, Inc., Atlanta, Ga. 646,116, canc. Cl. 37.
Seagram, Joseph E., & Sons, Inc., New York, N.Y. 752,813, pub. 4–30–63. Cl. 18.
Sechrist Chemicals, Inc., Bayonne, N.J. 752,708, pub. 4–30–63. Cl. 1.
Semi-Elements, Inc., Sazonburg, Pa. 752,873–4, pub. 4–30–63. Cl. 21.
Senefelder Co., Inc., The, New York, N.Y. 645,958, canc. Cl. 6.
Serveo Co., The, Long Beach, Calif. 752,927, pub. 4–30–63. Cl. 23.
Shell Oil Co., New York N.Y. 752,724, pub. 10–16–62. Cl. 6.
Shell Oil Co., New York, N.Y. 752,763, pub. 4–30–63. Cl. 12.
Signal Chemical Mfg. Co., Inc., Bedford, Ohio. 752,725, pub. 4–30–63. Cl. 6.
Sincerely Yours: *See*—
Willbrand, Alfred J.
Skookum Rotator Co., Yakima, Wash. 646,072, canc. Cl. 23.
Smallberg, William A., El Paso, Tex. 753,041, pub. 4–30–63. Cl. 44.
Smallman, I., & Sons Co., New York, N.Y. 752,729–30, pub. 4–30–63. Cl. 8.
Smiles, Christopher, & Co., Inc., New York, N.Y. 662,010, canc. Cl. 50.
Smith, Landon P., Inc., Irvington, N.J. 390,124, canc. Cl. 23.
Smith Mfg. Ltd., Weston, Ontario, Canada. 753,017, pub. 4–30–63. Cl. 42.
Smith, Miller & Patch, Inc., New York, N.Y. 752,814, pub. 4–30–63. Cl. 18.
Smith, Sears S., d.b.a. Unique Products, Chicago, Ill. 752,747, pub. 4–30–63. Cl. 12.
Smithline Coat Co., Inc.: *See*—
Smithline Coat Co.
Smithline Coat Co., to Smithline Coat Co., Inc., New York, N.Y. 646,154, canc. Cl. 39.
Societe a Responsabilite Limitee: Lalonde, Paris, France. 753,018, pub 4–30–63. Cl. 42.
Solarz, A. D., New York, N.Y. 752,942, pub. 4–30–63. Cl. 28.
Sonnenschein, J., Hop Co. Inc., New York, N.Y. 174,390, ren. 7–16–63. Cl. 1.
Sonoco Products Co., Hartsville, S.C. 752,717, pub. 4–30–63. Cl. 2.
Sorls Kroll Fabrics, Inc., New York, N.Y. 646,164, canc. Cl. 42.
Southern California Plastic Co., Glendale, Calif. 752,713, pub. 4–30–63. Cl. 2.
Special Instruments Laboratory, Inc., Knoxville, Tenn. 752,862, pub. 4–30–63. Cl. 21.
Sperry Rand Corp., New York, N.Y. 752,863, pub. 4–30–63. Cl. 21.
Sprague Electric Co.: *See*—
Sprague Specialties Co.
Sprague Specialties Co., to Sprague Electric Co., North Adams, Mass. 402,614, ren. 7–16–63. Cl. 21.
Standard Laboratories, Inc.: *See*—
Hood, Charles I.
Standard Oil Co. of California: *See*
Standard Oil Co.
Standard Oil Co. of California, San Francisco, Calif. 401,325, ren. 7–16–63. Cl. 25.
Standard Oil Co. of California, San Francisco, Calif. 401,419, ren. 7–16–63. Cl. 6.
Standard Oil Co., to Standard Oil Co. of California, San Francisco, Calif. 169,637, ren. 7–16–63. Cl. 15.
Standard Thomson Corp., Waltham, Mass. 752,970, pub. 4–30–63. Cl. 35.
Steele Canning Co., Springdale, Ark. 646,195, canc. Cl. 46.
Sterling Cider Co., Inc., Sterling, Mass. 753,046, pub. 12–26–61. Cl. 46.
Steinen, Wm., Mfg. Co., Newark, N.J. 645,968, canc. Cl. 13.
Stewart & Holmes Drug Co., Seattle, Wash., to Lehn & Fink Products Corp., Bloomfield, N.J. 173,240, ren. 7–16–63. Cl. 51.
Stubs, Peter, Ltd., Warrington and Rotherham, England. 22,752–3, ren. 7–16–63. Cl. 14.
Styro Toy Corp., McAllen, Tex. 752,883, pub. 4–30–63. Cl. 22.
Summit Mfg. Corp., Providence, R.I. 752,860, pub. 4–30–63. Cl. 21.
Sun Drop Sales Corp.: *See*—
Sun Drop Sales Corp. of America
Sun Drop Sales Corp. of America, d.b.a. Sun Drop Sales Corp., St. Louis, Mo. 753,043, pub. 4–30–63. Cl. 45.
Sunbeam Corp., Chicago, Ill. 752,845, pub. 4–30–63. Cl. 21.
Sunbeam Corp., Chicago, Ill. 752,890, pub. 4–30–63. Cl. 23.
Sure-Safe Co., St. Louis, Mo. 645,948, canc. Cl. 6.
Suntreat Growers & Shippers, Inc.: *See*—
Lindsay Co-Operative Citrus Association.
Sweetpak Farms, Inc., Mountain View, Calif. 646,197, canc. Cl. 46.
Taf-Wi-Wi Ranches: *See*—
Rumstead, Dale.
Tap-Rite Products Corp.: *See*—
Vending Components, Inc.
Taylor-Winfield Corp., The, Warren, Ohio. 752,892, pub. 4–30–63. Cl. 23.
Temp-Matic, Inc., Houston, Tex. 752,964, pub. 4–30–63. Cl. 34.
Textron Industries, Inc.: *See*—
Goheen, Corp., The.
Vita-Var Corp.
Thor Power Tool Co., Aurora, Ill. 752,969, pub. 4–30–63. Cl. 35.
Thuresson-Angrabright-Bennett, Inc., Skokie, Ill. 753,033, pub. 4–30–63. Cl. 44.
Tissages Rodier S.A., Paris (Seine), France. 753,001, pub. 4–30–63. Cl. 39.
Tractor Supply Co., Chicago, Ill. 752,965, pub. 4–30–63. Cl. 35.
Trans-Atlantic Co., Philadelphia, Pa. 752,931, pub. 12–11–62. Cl. 25.
Travel Records: *See*—
Lawson, Allen.
Tri-Point Industries, Inc., Albertson, Long Island, N.Y. 752,929, pub. 4–30–63. Cl. 24.
Toy Guidance Council, Inc., New York, N.Y. 646,220, canc. Cl. A.
Toyobo-Howa Textile Engineering Co., Ltd., Kita-Ku, Osaka, Japan. 752,926, pub. 4–30–63. Cl. 23.
Turco Products, Inc.: *See*—
Purex Corp., Ltd.
Turtle Wax, Inc., Chicago, Ill. 752,822, pub. 4–30–63. Cl. 19.
Thomae, Dr. Karl, G.m.b.H., Biberach an der Riss, Germany. 752,809, pub. 4–30–63. Cl. 18.
Textron Oregon, Inc., South Bend, Ind. 752,774, pub. 4–30–63. Cl. 13.
Ultra Plastics, Inc., Philadelphia, Pa. 752,749, pub. 4–30–63. Cl. 12.
Uneeda Doll Co., Inc., Brooklyn, N.Y. 752,880, pub. 4–30–63. Cl. 22.
Union Fork and Hoe Co., The, Columbus, Ohio. 752,907–8, pub. 4–30–63. Cl. 23.
Union Tank Car Co., Chicago, Ill. 752,957, pub. 4–30–63. Cl. 31.
Unique Products: *See*—
Smith, Sears S.
United Aircraft Products, Inc., Dayton, Ohio. 753,073, pub. 4–30–63. Cl. 100.
United Merchants and Manufacturers, Inc., New York, N.Y. 753,016, pub. 8–7–62. Cl. 42.
United Merchants and Manufacturers, Inc., New York, N.Y. 753,027, pub. 8–7–62. Cl. 43.
United States Bronze Powder Works, Inc., New York, N.Y., to United States Bronze Powders, Inc., Flemington, N.J. 174,489, ren. 7–16–63. Cl. 16.
United States Bronze Powders, Inc.: *See*—
United States Bronze Powder Works, Inc.
United States Envelope Co., Springfield, Mass. 752,721, pub. 4–30–63. Cl. 2.
U.S. Ethicals, Inc.: *See*—
International Laboratories Ltd.

Universal Foods Corp., Milwaukee, Wis. 753,050, pub. 4–30–63. Cl. 46.
Universal Magnetic Lock, Inc.: *See*—
Monarch Tool & Machinery Co.
Vair Furniture Co. of California: *See*—
Gallet, William J.
Valley Forge Flag Co. Inc., New York, N.Y. 753,061, pub. 8–28–62. Cl. 50.
Vallone Mfg. Inc., Buffalo, N.Y. 646,098, canc. Cl. 32.
Vending Components Inc., from Tap-Rite Products Corp., Hackensack, N.J. 752,775, pub. 4–30–63. Cl. 13.
Vereinigte Papierwerke Schickedanz & Co., Nurnberg, Bavaria, Germany. 752,988, pub. 4–30–63. Cl. 37.
Vermont Paving Corp., Burlington, Vt. 752,772, pub. 4–30–63. Cl. 12.
Versapak Film and Packaging Machinery Corp., New York, N.Y. 752,705, pub. 1–29–63. Cl. 1.
Visaggi, John, d.b.a. Dictation Disc Co., New York, N.Y. 752,986, pub. 4–30–63. Cl. 36.
Vita-Var Co.: *See*—
Goheen Corp., The.
Vita-Var Corp.
Vita-Var Corp., Newark, N.J., to Textron Industries, Inc., d.b.a. Vita-Var Co., Orange, N.J. 401,747, ren. 7–16–63. Cl. 16.
Vulcan Radiator Co., The, Hartford, Conn. 646,103, canc. Cl. 34.
Walker Mfg. Co., Racine, Wis. 752,953, pub. 4–30–63. Cl. 31.
Wallerstein Co., Inc., New York, N.Y., to Baxter Laboratories, Inc., Morton Grove, Ill. 403,612, ren. 7–16–63. Cl. 52.
Warner-Lambert Pharmaceutical Co.: *See*—
Lambert Pharmacal Co.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 752,803, pub. 4–30–63. Cl. 18.
Waterbury Savings Bank, Waterbury, Conn. 753,076, pub. 4–30–63. Cl. 102.
Waterloo Foundry Co., Inc., Waterloo, Iowa. 752,854, pub. 4–30–63. Cl. 21.
Watkins, J. E., Co., Maywood, Ill. 752,932, pub. 4–30–63. Cl. 26.
Wernsing, A. A., D. C., d.b.a., A. & W. Products, Hollywood, Calif. 753,055, pub. 4–30–63. Cl. 46.
West Essex Printing Plates, Inc., Caldwell, N.J. 752,893, pub. 4–30–63. Cl. 23.
Western Industrial Engineering Co., Los Angeles, Calif. 401,578, canc. Cl. 26.
Whiteford Paper Co., Inc., New York, N.Y. 646,118–19, canc. Cl. 37.
Wilbur-Ellis Co., d.b.a. Wilbur-Ellis Co., San Francisco, Calif. 753,051, pub. 4–30–63. Cl. 46.
Willbrand, Alfred J., d.b.a. Sincerely Yours, Odessa, Tex. 752,987, pub. 4–30–63. Cl. 36.
Wilson Sporting Goods Co., River Grove, Ill. 752,879, pub. 4–30–63. Cl. 22.
Wilson Sporting Goods Co., River Grove, Ill. 752,881, pub. 4–30–63. Cl. 22.
Wiss, J., & Sons Co., Newark, N.J. 752,903, pub. 4–30–63. Cl. 23.
Womack Electronics, Inc., Danville, Va. 752,858, pub. 4–30–63. Cl. 21.
Woodlawn Farm Dairy Co., Scranton, Pa. 646,188, canc. Cl. 46.
Wrigley, Wm., Jr., Co., Chicago, Ill. 753,057, pub. 4–30–63. Cl. 46.
Wyandotte Chemicals Corp., Wyandotte, Mich. 646,207, canc. Cl. 52.
Yale Woolen Mills, Yale, Mich. 646,159, canc. Cl. 42.
York Oil Burner Co., Inc., to York-Shipley, Inc., York, Pa. 399,838, ren. 7–16–63. Cl. 34.
York-Shipley, Inc.: *See*—
York Oil Burner Co., Inc.
Zenith Radio Corp., Chicago, Ill. 752,847, pub. 4–30–63. Cl. 21.

U S GOVERNMENT PRINTING OFFICE: 0—1963

DIRECTORY FOR REORGANIZED PATENT EXAMINING OPERATIONS

	Room	Phone
CHEMICAL EXAMINING OPERATION—P. E. Mangan, Director	4701	5161
General Chemistry, Group **110**—R. L. Campbell	4083	2856
General Organic Chemistry, Group **120**—I. Marcus	4733	2806
Petroleum Chemistry, Group **130**—J. S. Bailey	4618	2831
High Polymer Chemistry, Group **140**—M. Sterman	4706	2850
Compositions and Molding, Group **150**—L. H. Gaston	4091	2864
Coating and Laminating, Group **160**—J. Rebold, Acting	4629	2825
Specialized Chemical Arts and Industries, Group **170**—W. B. Knight	4063	2863
Chemical Engineering, Group **180**—G. D. Mitchell	4876	2832
ELECTRICAL EXAMINING OPERATION—N. H. Evans, Director	6098	3748
Power, Group **210**—M. L. Levy	6897	2848
Security, Group **220**—S. Boyd	3618	2810
Information Transmission, Group **230**—S. W. Capelli	6516	2841
Information Storage and Retrieval, Group **240**—W. W. Burns, Jr.	6511	2868
Electronic Component Systems and Devices, Group **250**—B. G. Miller	6616	2865
Radiation and Instruments, Group **260**—F. M. Strader	6086	2854
Elements, Group **270**—E. J. Sax	6625	2837
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. Wahl, Director	7701	5175
Material or Article Handling and Dispensing, Group **310**—A. Berlin	7064	2835
Metal and Plastics Working, Group **320**—N. Berger	7620	2815
Manufacturing and Assembling Miscellaneous Articles, Group **330**—A. Horton	2088	2514
Machine Tools, Mechanisms, and Elements, Group **340**—F. Bronaugh	4057	2858
Hardware Tools and Joints, Group **350**—T. Hickey	7868A	2857
Fluid Handling, Group **360**—E. Paul	7838	2839
Power Plants, Motor and Pumps, Group **370**—C. Gareau	7842	2818
Heating, Cooling and Ventilating, Group **380**—P. Patrick	7087B	2819
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. Manian, Director	5701	3711
Agriculture, Group **410**—A. Ruegg	5891	2501
Civil Engineering, Group **420**—B. Bendett	3885	2549
Physics, Group **430**—R. L. Evans	5898C	2523
Textiles and Apparel, Group **440**—R. C. Mader	7898C	2521
Transportation, Group **450**—P. Arnold	5600	2547
Furniture and Receptacles, Group **460**—W. S. Cole	5609	2552
Printing, Stationery and Material Treatment, Group **470**—L. W. Varner	3510	2517
Personal Treatment, Adornment and Amusement, Group **480**—L. R. Prince	2320	2562
Designs—J. A. Manian	614DNB	2423

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 23, 1963 Volume 792 Number 4

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of June 1963

Examiner affirmed	305
Examiner affirmed in part	51
Examiner reversed	101
Total	457

International Convention for the Protection of Industrial Property

Ratification of the Lisbon 1958 Revision by the Federation of Rhodesia and Nyasaland

The Secretary of State has been notified by the Embassy of Switzerland of the ratification, effective June 16, 1963, by the Federation of Rhodesia and Nyasaland of the International Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Tanganyika to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective June 16, 1963, of the Republic of Tanganyika to the International Convention for the Protection of Industrial Property as revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

Order No. 5315

Jerome W. Paxton of Washington, D.C. whose registration number is 15,517, is hereby excluded, beginning on January 25, 1963, from practice as a patent agent in any application before the United States Patent Office, without prejudice to his re-registration, upon a sufficient showing, after a period of not less than one year.

This action is taken under the provisions of Section 32 of Title 35 of the United States Code and Rule 348 of the Rules of Practice of the United States Patent Office in Patent Cases.

EDWIN L. REYNOLDS,
Jan. 25, 1963. *First Assistant Commissioner of Patents.*

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 2,789,919, J. W. Eastes and T. F. Cooke, Hydrophobic, organophilic pigments and process of producing the same, decided Jan. 23, 1963, Interference No. 90,142, claim 1.

Patent No. 2,825,046, J. M. Herbert and A. W. Simpson, Production of magnetic material for use in computers or magnetic memory systems, decided Sept. 18, 1961, Interference No. 89,400, claim 1.

Patent No. 2,832,897, D. A. Buck, Magnetically controlled gating element, decided Feb. 14, 1963, Interference No. 91,653, claims 19, 20, 21 and 22.

Patent No. 2,933,414, L. Beck, Electrostatic spray painting method and apparatus, decided Feb. 21, 1963, Interference No. 91,630, claim 1.

Patent No. 2,939,956, G. I. Parks, Method and apparatus for treating plastic materials, decided Apr. 23, 1963, Interference No. 92,601, claims 1, 2, 3, 4, 5, 6 and 7.

Patent No. 2,959,594, M. Gordon and J. J. Lafferty, Isobenzmorphan derivatives, decided May 14, 1963, Interference No. 93,057, claims 1, 2, 3, 4, 5 and 6.

Patent No. 2,962,761, C. D. Hobson, Apparatus for molding flashless rubber articles, decided Feb. 19, 1963, Interference No. 91,874, claim 8.

Patent No. 2,969,131, J. B. Black, R. W. Meyer and W. F. Shurts, Power transmission, decided Apr. 26, 1963, Interference No. 92,434, claim 1.

Patent No. 2,978,576, R. L. Watters, Radio-frequency amplifier and converter circuits, decided Apr. 22, 1963, Interference No. 92,092, claims 1, 2, 3, 4, 5 and 8.

Patent No. 2,981,055, J.-M. Froidevaux and F. Bandi, Self-winding time-piece, decided May 21, 1963, Interference No. 93,066, claim 1.

Patent No. 3,007,179, E. Bertulli, Strainer, decided Apr. 30, 1963, Interference No. 92,542, claims 1, 2, 3, 4, 5 and 6.

Adjudicated Patents

(C.A. Pa.) Sendzimir Patent No. 2,110,893 (117—71), for coating metallic objects with layers of other metals, *Held* invalid and not infringed. *Armco Steel Corp.* v. *U.S. Steel Corp.*, 316 F.2d 472; 137 USPQ 329.

(C.A. Pa.) Sendzimir Patent No. 2,136,957 (118—48), for coating metallic objects with layers of other metals, *Held* invalid and not infringed. *Id.*

New Applications Received During May 1963

Patents	7,692
Designs	475
Plant Patents	7
Reissues	23
Total	8,197

Issue

Patents	779	No. 3,098,232 to No. 3,099,010, incl.
Designs	43	No. 195,713 to No. 195,755, incl.
Reissues	8	No. 25,419 to No. 25,426, incl.
Total	830	

(C.A. Pa.) Sendzimir Patent No. 2,197,622 (117—51), for galvanizing sheet metal, *Held* invalid and infringed. *Id.*

(C.A. Calif.) Kieruiff Patent No. 2,919,042 (214—15), for traveling ship-loading crane, *Held* not infringed. *Kieruiff* v. *Metropolitan Stevedore Co.*, 314 F.2d 839; 137 USPQ 195.

(C.A. Wash.) Knowles Patent No. 2,927,443 (62—341), for plate freezer for packaged goods, *Held* valid and infringed. *Americ Contact Plate Freezers Inc.* v. *Belt-Ice Corporation.* 316 F.2d 459; 137 USPQ 282.

(D.C. Pa.) Hamilton Patent No. 2,442,042 (51—38) for grinding apparatus. Claims 7 and 10 *Held* invalid. *Hamilton* v. *Mid-West Abrasive Co.*, 215 F. Supp. 411; 137 USPQ 309.

(D.C. Mo.) Graham Patent No. 2,627,798 (172—708), for clamp for vibrating shank plows. Claims 1 and 2 *Held* valid and infringed. *Graham* v. *John Deere Co. of Kansas City*, 216 F. Supp. 272; —USPQ —.

(D.C. Ill.) Johnson Patent No. 2,732,919 (189—34), for sliding door frame assembly. Claims 1 and 2 *Held* invalid and not infringed. *Kennatrack Corp.* v. *Stanley Works*, 216 F. Supp. 394; 136 USPQ 531.

(D.C. Ill.) Lorenz Patent No. 2,918,113 (297—89), for multiple position reclining chair. Claims 1, 2, 5, 6, 10, and 12 to 15 *Held* invalid and not infringed. *Lorenz* v. *Berkline Corp.*, 215 F. Supp. 869; 137 USPQ 29.

(D.C. Ill.) Fletcher Patent No. 2,940,509 (297—89), for multiple position chair. Claims 1, 2, 5, 10, 11, 14 and 16 *Held* invalid but not infringed. *Id.*

(D.C. Ill.) Schliephacke Patent No. 2,940,510 (297—88), for multiple position reclining chair. Claims 1, 2, and 6 to 10 *Held* invalid and not infringed. *Id.*

Classification Order No. 352

Classification Order No. 352, dated June 14, 1963, incorporates changes in the following classes:

43, FISHING, TRAPPING AND VERMIN DESTROYING
60, POWER PLANTS
74, MACHINE ELEMENTS AND MECHANISMS
91, MOTORS, EXPANSIBLE CHAMBER TYPE—Established (Bulletin No. 453)
92, EXPANSIBLE CHAMBER DEVICES—Established (Bulletin No. 454)
121, MOTORS, EXPANSIBLE-CHAMBER TYPE — Abolished (Bulletin No. 167)
123, INTERNAL-COMBUSTION ENGINES
137, FLUID HANDLING
173, TOOL DRIVING OR IMPACTING—Established (Bulletin No. 456)
175, BORING OR PENETRATING THE EARTH
277, JOINT PACKING
308, MACHINE ELEMENTS, BEARINGS, AND GUIDES
309, MACHINE ELEMENTS, CYLINDERS AND PISTONS—Abolished (Bulletin No. 371)
343, COMMUNICATIONS, RADIO WAVE

The above changes will be incorporated in the Manual of Classification replacement pages dated July 1963.

H. B. WHITMORE,
Superintendent, Examining Corps.

Patents Available for Licensing or Sale

2,667,335. Foldable Fence. J. Samann, 43 Klosbachstrasse, Zurich 7, Switzerland.

3,075,484. Method of and Apparatus for Continuously Producing Small Section Welded Steel Tubes. Helmut Benteler, Kreis Paderborn, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,079,081. Digital Compnting Apparatus Utilising Algebraic-Binary Number Representation, Pere Louis Etienne Coste, Chevilly, France. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,091,983. Automobile Body Dent Repair Device. Charles J. Kliss, 179 Palisade Ave., Garfield, N.J.

General Electric Company is prepared to grant non-exclusive licenses under the following 20 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 8 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,814,355. Electrostatic Gas Filter.
2,864,460. Electrode Arrangement for Electrostatic Gas Filter.
2,888,092. Electrostatic Gas Filter.
2,917,130. Electrostatic Gas Filter Having Arrangement for Cancelling Captured Charge.
3,089,314. Fan Construction.
3,089,315. Convertible Self-Contained Cooling Unit for Air Conditioning.
3,089,407. Temperature Sensor for Roasting Oven.
3,091,682. Heating Unit With Collapsible Terminals.

Applications for license under the following 5 patents may be addressed to: General Electric Company, Transformer Division, 100 Woodlawn Ave., Pittsfield, Mass. Attn: Patent Counsel.

2,930,839. Combined Grading and Corona Shield.
2,960,756. Method of Making Magnetic Cores.
3,074,038. Magnetic Core.
3,085,680. Filter Paper Package and Method of Packaging Filter Paper.
3,086,184. Coil Structure for Electromagnetic Induction Apparatus.

Applications for license under the following 7 patents may be addressed to: General Electric Company, Flight Propulsion Division, 1000 Western Ave., West Lynn 3, Mass. Attn: Patent Counsel.

3,060,679. Powerplant.
3,065,596. Reignitable Solid Rocket Motor.
3,065,597. Reignitable Solid Rocket Motor.
3,065,598. Reignitable Solid Rocket Motor.
3,065,955. Rotor Blade and Shroud Assembly.
3,080,876. Measuring Device and Method.
3,084,511. Wave Type Pressure Exchanger With Overall Pressure Rise.

Disclaimer

3,083,089.—*Victor A. Renner*, Marysville, Ohio. GRANULAR HERBICIDAL COMPOSITION AND METHOD. Patent dated Mar. 26, 1963. Disclaimer filed May 2, 1963, by the assignee, *The O. M. Scott & Sons Company.*

Hereby disclaims the terminal portion of the term of said patent extending from Feb. 6, 1980, through Mar. 26, 1980, both dates being inclusive.

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application: New	Oldest Application: Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	10-6-61	9-14-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Aso; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	2-2-62	2-9-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	12-7-61	11-17-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6-27-61	7-20-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-1-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	12-4-61
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	11-24-61	10-11-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-11-62	1-25-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-28-61	10-16-61
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	12-1-61	1-3-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-6-61	10-9-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	11-16-61	11-7-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	11-1-61	11-3-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	11-9-61	11-3-61

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1963

Total number of pending applications (excluding Designs)	200, 178
Total number of Design applications pending	6, 195
Total number of applications awaiting action (excluding Designs)	115, 956
Total number of Design applications awaiting action	2, 329
Date of oldest new application awaiting action	June 27, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,402,939 to 2,405,106, inclusive
Plant Patents ..... Numbers 702 to 708 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-5-62	2-26-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	12-13-61	12-21-61
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	1-31-62	12-4-61
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	1-16-62	1-15-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	1-12-62	9-29-61
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner..... Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	2-28-62	3-12-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner..... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-5-62	3-5-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner..... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	1-17-62	1-8-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner..... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	5-25-62	7-2-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner..... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-19-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-6-62	2-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner..... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-2-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner..... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	2-12-62	2-5-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner..... Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	4-18-62	5-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner..... Printing; Typewriters; Stationery; Material Treatment.	1-15-62	12-12-61
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner..... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	3-9-62	3-5-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner..... Industrial Arts; Household, Personal and Fine Arts.	12-26-62	12-18-62
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....		
93. PURDY, W. F. (acting), Wire Working.....	6-8-62	6-1-62
94. BERLOWITZ, W.....	8-6-62	10-15-62
95. ANGEL, C. D., (REZNEK, J., acting).....		

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Commissioner's Decision

IN THE MATTER OF THE CHARGES PREFERRED AGAINST JEROME W. PAXTON OF WASHINGTON, D.C.

Decided January 25, 1963

1. ATTORNEYS AND AGENTS REGISTERED TO PRACTICE BEFORE PATENT OFFICE—EXCLUSION FROM PRACTICE.

"* * * the respondent did not appear at the hearing and failed to testify, thus refusing to subject himself to cross examination. It is evident that his statements with respect to the matters under consideration are vague and evasive and do not squarely meet the issues presented, and that they frequently contradict other evidence. Without discussing the charges in further detail, it is considered evident that the record, even giving it the most favorable interpretation from the respondent's point of view, shows an inexcusable dereliction of duty with respect to his client such as to require his exclusion from practice before the Patent Office."

2. SAME—SAME.

Registered patent agent excluded from practice before the Patent Office for a period of not less than one year.

REYNOLDS, *First Assistant Commissioner.*

This case comes up for consideration of charges preferred against respondent by the Solicitor of the Patent Office on July 24, 1962. [1] The respondent filed an answer to the charges but did not appear or present testimony at the hearing on them which was held on November 27, 1962. He did, however, file an affidavit with respect to the charges shortly after the hearing.

The first charge alleges that the respondent failed to submit the necessary fee for the correction of the drawing of the application of Allen E. Arthur, Serial No. 372,451, as a result of which failure the application became abandoned. In support of that showing, the Solicitor presented certified copies of portions of the application showing that the respondent was duly notified of the requirement for a new drawing, response to such requirement being due April 27, 1960; that on the said date a paper was filed by the respondent requesting the correction of the drawing by the Patent Office draftsman and stating that the required fee was enclosed. At the hearing, Robert T. Collins, a mail supervisor, in the employ of the Patent Office, stated that the fee referred to was not in fact enclosed and that the respondent was so notified on or about April 27, 1960. The record of the Arthur application also shows that the respondent was advised by an Office letter on May 17, 1960 that the fee for the drawing had not been received and that the attorney had been so notified by telephone by the mail room of the Patent Office.

In his affidavit filed after the hearing, the respondent alleges that the fee for the drawing was submitted to the Office in currency, and that he did not receive the Office letter of May 17, 1962. He has produced no receipt for the alleged payment in currency. The Office letter, it may be noted, was not returned to the Patent Office by the Post Office. The respondent does not specifically deny that he was advised by telephone that the fee had not been received. Further, the record shows no inquiry by the respondent over the period from April

1960 to January 1962 as to why the correction of the drawing had not been made. He explains this by asserting that the preparation of drawings often requires considerable time and that he did not feel an investigation to be necessary. It seems obvious that a delay of eighteen months in preparing drawings could not reasonably be expected.

The second charge alleges that the respondent failed to advise the applicant Arthur of the status of his application despite several requests for such information. This charge is based on an affidavit by Arthur, supported by copies of correspondence.

In answer to this charge, the respondent denied "that Mr. Allen E. Arthur was not apprised of the status of said application" but he does not state when such apprisal was made nor does he deny the genuineness of the copies of letters attached to the Arthur affidavit nor any specific statement contained in that affidavit.

The third charge alleges that the respondent failed or refused to provide the new attorneys appointed by the applicant with an affidavit explaining the circumstances under which the application became abandoned. This charge is supported by the testimony of Attorney Eugene Sabol who described a number of attempts to contact the respondent and testified that he never received the requested statement from the respondent despite being twice assured that it would be forthcoming. In reply to this charge, the respondent alleges that he did forward to Sabol an unverified statement. He does not, however, indicate when the statement was forwarded and although his affidavit filed after the hearing states that a copy of the letter containing this statement is attached to the affidavit, no such copy was in fact attached.

As previously indicated, the respondent did not appear at the hearing and failed to testify, thus refusing to subject himself to cross examination. It is evident that his statements with respect to the matters under consideration are vague and evasive and do not squarely meet the issues presented, and that they frequently contradict other evidence. Without discussing the charges in further detail, it is considered evident that the record, even giving it the most favorable interpretation from the respondent's point of view, shows an inexcusable dereliction of duty with respect to his client such as to require his exclusion from practice before the Patent Office.

The records of this Office show that on February 25, 1960, First Assistant Commissioner Arthur W. Crocker rendered a decision on charges preferred against this respondent in which he stated:

> "The above findings clearly indicate a pattern of dilatory tactics on the part of respondent and a failure to observe a proper agent-client relationship. . . .
>
> "This opinion will be made of record in the respondent's file, together with the charges and the showing in response thereto and will be considered in dealing with any further complaint or evidence of misconduct which may come to the attention of this Office."

Consideration of that decision indicates a continuation of the pattern referred to and strengthens the conclusion already reached that the respondent must be excluded from practice. [2] Accordingly, an Order will be issued of even date herewith excluding the respondent from practice before the Patent Office for a period of not less than one year. After the expiration of that period, a request for reinstatement may be considered if accompanied by a showing indicating that conduct of the kind here involved will not be repeated.

U.S. Court of Customs and Patent Appeals

IN RE GEORGE J. HANDEL, JR.

No. 6902. Decided February 18, 1963

[50 CCPA —; 312 F.2d 943; 136 USPQ 460]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—GROUNDS OF REJECTION NOT REVERSED BY BOARD.
   "It seems to us that our function is to pass only on such grounds of rejection as have not been reversed by the highest tribunal of the Patent Office."
2. REISSUE—CLAIMS—INVENTION DISCLOSED IN ORIGINAL PATENT—35 U.S.C. 251.
   "The Board erred in applying the wrong test to determine whether appellant's claims are for 'the invention disclosed in the original patent,' which is the only provision of section 251 relied on by the Patent Office. In looking only to the *claims* of the patent it disregarded the express command of the statute, which is to look at the disclosure. The cases relied on by the Board, *U.S. Industrial Chemicals, Inc.* v. *Carbide & Carbon Chemicals Corporation*, 315 U.S. 668, 53 USPQ 6, and *Parker and Whipple Company* v. *Yale Clock Company*, 123 U.S. 87, 1887 C.D. 584, do not support its position. Although these cases were prior to the enactment of the Patent Act of 1952, which changed the words of the prior law, 'for the same invention,' to the words above quoted, even they stand for the proposition that the entire disclosure of the original patent is to be considered in determining what the patentee intended to claim and what invention the patent discloses."
3. SAME—SAME—CLAIMING MORE OR LESS THAN ENTITLED—35 U.S.C. 251.
   "* * * the whole purpose of the statute [35 U.S.C. 251], so far as claims are concerned, is to permit limitations to be added to claims that are too broad or to be taken from claims that are too narrow. That is what the statue means in referring to 'claiming more or less than he had a right to claim.'"
4. SAME—SAME—INVENTION DISCLOSED IN ORIGINAL PATENT—SAME INVENTION.
   "The decisions of this court, both before and after the effective date of the 1952 act, are also to the effect, as stated in *In re De Jarlais*, 43 CCPA 900, 904, 233 F.2d 323, 110 USPQ 36, that 'It is also well settled that the same invention means whatever invention was described in the original patent, and which appears to have been intended to be secured thereby.'"

APPEAL from the Patent Office. Serial No. 755,830.

REVERSED.

Roger L. Hansel, Stevens, Davis, Miller & Mosher, William Hintze (*Truman S. Safford* and *Marshall M. Holcombe* of counsel) for appellant.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 4–6 of appellant's application Ser. No. 755,830, filed August 1, 1958, for reissue of his Patent No. 2,705,797, granted April 12, 1955, for "Terminal Applicator Construction."

The sole issue in the case is whether the appealed claims are "for the invention disclosed in the original patent," as required by 35 U.S.C. 251, the statute governing the granting of reissues. The Patent Office held they are not and appellant argues to the contrary.

The invention disclosed in the original patent [1] is a machine for applying electrical terminals to pieces of wire, the terminals being

[1] The patent is not included in the record. The Patent Office Solicitor's brief admits, however, that the specifications of the patent and of the application are identical. We presume this admission includes the drawings. There were 3 original patent claims which are allowed claims in this reissue application, viz., claims 1, 2, and 3, the same numbers they have in the patent.

fed by the machine from a reel to the point of application in continuous strips from which they are severed, as applied, one at a time. The need appellant sought to fill by his invention was for a machine capable of being variously set up to apply automatically "a considerable variety of electrical terminals or connectors." To this end, the machine, which is in the nature of a stamping press, is arranged to employ a variety of sets of matched crimping and shearing dies suited for use with the different terminals or connectors; and the feeding mechanism, which advances the strips of terminals or connectors one unit at a time, is made adjustable. Two of the more significant objects of the invention stated in the application read as follows:

> Another object is the provision in a press of a practicable apparatus for applying terminals in which any one of several terminal *feeding relationships* may be selected and *with which* any one of several terminal *applying assemblies* may be combined all as a matter of mere routine. * * * A still further object resides in the provision of a *feeding assembly* wherein the length of feed may readily and accurately be adjusted. [Emphasis ours.]

It is not questioned that the specification and drawings fully describe a machine which carries out these objects.

The Claims

The Patent Office admits that appealed claims 4, 5, and 6 incorporate entirely (with the exception of changing the word "mechanism" to "machine") the language of original patent claims 1, 2, and 3 and differ therefrom in subject matter only in that each of the appealed claims adds one or two elements to the patent claim on which it is based. We quote as acceptable the Solicitor's explanation:

> Claim 4 adds to claim 1 a storing means (the reel) and a means for sequentially feeding the connector strip, the latter having an adjustable stroke. Claim 5 is similar in scope to claim 4, except that it omits the storing means of the latter claim. Claim 6 likewise omits the storing means, but specifies that the feeding means or mechanism has "a plurality of settings corresponding to different feed strokes required by the different size and shape strip connectors."

The Solicitor also states, and we agree, that the issue before us is the same as to all claims, notwithstanding their slight differences.

The Rejection

There is some confusion as to the rejection before us.

The Examiner rejected the claims on two grounds: (1) "that they are drawn to the old combination of a fastener applicator and feed means," citing two references to show the combination; (2) "that the original patent was not partially inoperative and defective by reason of applicant's claiming less than he had a right to claim in his patent." [2]

[1] The reference here is obviously to the opening clauses of 35 U.S.C. 251, the first paragraph of which reads as follows:

> Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the Commissioner shall, on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent. No new matter shall be introduced into the application for reissue.

Quoting from McCrady, Patent Office Practice, 4th ed., 1959, p. 309, "The term 'inoperative' has been construed to mean inoperative adequately to protect the invention, which may be due to failure of the Solicitor to understand the invention * * *." There is no issue of new matter in this case. At oral arugment the Solicitor admitted that the reissue claims on appeal are *narrower* than the claims of the original patent. Hence, the defect of the original claims would seem to be that they claimed *more*, not less, as the Examiner said, than the applicant had a right to claim.

The Examiner's error seems to be traceable to the reissue oath. While in its entirety the oath makes it perfectly clear that appellant's purpose was to *narrow* his claims (at least claims 4, 5, and 6) to avoid the possibility of their being invalid in view of an alleged prior public use, he too asserted that his patent was partly inoperative "by reason of his claiming less than he had a right to claim in his patent." The term "less" appears to have been used in the sense of *fewer* claims than he could properly have made, rather than in the statutory sense of subject matter included within the claims. Since the patent claims have been retained, neither more nor less is being claimed. The narrower appealed claims are simply a hedge against possible invalidity of the original claims should the prior use be proved, which is a proper reason for asking that a reissue be granted.

The Board reversed ground (1), saying, "we shall not sustain the rejection of claims 4, 5 and 6 on the ground that the recited combination is disclosed by either of the * * * references." That rejection is, therefore, clearly out of the case.

As to ground (2) it is necessary to recite some added facts [3] before the statements of the Board can be understood. It appears that at some time during the prosecution of the application for the original patent the Examiner required "division" (restriction) as between claims to "1. Combination of applicator and feed; 2. Subcombination of applicator." The Examiner says the applicant elected to prosecute claims to the subcombination, which resulted in the allowance of the three claims of the patent and in the issuance of the patent. In his answer, in connection with his second ground of rejection, the Examiner said:

> The claims appealed herein are drawn to the same combination as the nonelected claims of the original application. The claims set forth the combination of a connector applicator and a feed mechanism. The present claims emphasize a different detail ["feature," the Board called it] of the feed mechanism than those of the combination claims of the original application, however, that does not change the basic combination. * * *
>
> Therefore, it is not seen that the patent is defective and partially inoperative by reason of applicant claiming less [sic] than he had a right to claim.

It will thus be seen that underlying the Examiner's refusal of the claims was his requirement for restriction and the applicant's election in the original application, including cancellation of nonelected claims. The Board stated its understanding of the Examiner's position as follows:

> He has taken the position that appellant may not obtain claims by reissue that could have been obtained in a divisional application properly filed in response to the requirement for division in the original application.

The Board then pointed out that appellant's argument was that since the appealed claims and the nonelected claims were to *distinctly different combinations* he was *not estopped* to present the instant claims in a reissue application.

Against this background, we now quote the Board's ruling on the Examiner's second ground of rejection:

> It is established that an applicant is estopped from obtaining in a reissue application a claim which because of a requirement for division, with which he acquiesced, was not allowable in his original application. [Cases cited.] However, since the instant claims recite a different character of connector feed mechanism from that recited in the claims cancelled in the original application, *we do not regard the requirement for division and cancellation of nonelected claims in the original application as constituting an estoppel with respect to the appealed claims.* [Emphasis ours.]

In view of this statement, as well as other discussion of the matter in the Board's opinion, we cannot conclude otherwise than that the Board rejected the entire rationale of the Examiner's second rejection, which was predicated on the requirement for restriction and appellant's acceptance thereof.

The Board nevertheless sustained the Examiner's rejection of claims 4, 5, and 6, but on a basis never suggested by the Examiner,

[3] These facts are assumed on the basis that the Examiner stated them in his answer and the appellant has not denied them. However, we have nothing in the record before us on the basis of which we can see these facts for ourselves since they appear only from the record of the prosecution of the application resulting in the issuance of the patent, no part of such record having been included in the record on appeal.

and one which we regard, on the whole, as contrary to law. It said (emphasis ours):

> Nevertheless, it is fundamental that a reissue must pertain to the same invention as that recited *in the claims of the patent. Parker & Whipple Company* v. *Yale Clock Company*, 123 U.S. 87; 41 O.G. 811; 1887 C.D. 584. The *claims of the patent* recite a "connector applicator mechanism" for applying connectors to wires by means of severing and crimping die assemblies and do not comprehend any means for feeding the connectors to the mechanism. The appealed claims recite a "connector applicator machine" and include, in addition to the aforementioned connector applicator mechanism, a mechanism for feeding connectors to said applicator mechanism. Consequently, by the introduction of an additional element *the appealed claims are not directed to the same invention recited in the claims of the patent.* Furthermore, we find in the patent no clear evidence of an intention to claim the particular subject matter of the appealed claims. Accordingly, we are of the opinion that the appealed claims are not merely a restatement of *the invention claimed in the patent* in narrower form but are a recitation of a different invention.

On request for reconsideration the Board clearly reaffirmed its position saying that its decision had been that the appealed claims are directed to "a different invention *from that recited in the claims of the patent* sought to be reissued." [Emphasis ours.] It also reaffirmed its finding of *no intent* to claim the subject matter of the appealed claims but amplified its position by stating that this finding was based on an examination of the claims presented for prosecution in the application for the issued patent.[4]

On the basis of the foregoing holdings in the tribunals below, we arrive at the following conclusions as to the rejection which is before us. The Board clearly reversed ground (1) based on old combination. The Board effectively reversed ground (2) by entirely disagreeing with the only reasoning used by the Examiner to support it. The Board said, however, that it was "not convinced of any fundamental error in the Examiner's position," which we can take in this context as meaning no more than that he was right in rejecting the claims. But the Board substituted for the Examiner's reasoning an entirely different statutory basis of its own for holding that appellant could not have claims 4, 5, and 6 in a reissue.

The Examiner's reason was that appellant had not shown that he had claimed *less* than he had *a right to claim in the original patent*, a reason based on section 251 (see fn. 2, supra) coupled with an estoppel due to cancellation of nonelected claims. It appears clearly to us that the Board substituted for the Examiner's reasons for saying appellant had not brought himself within section 251, which reasons it rejected, entirely new reasons of its own, which were two: First, that the patent claims and the reissue claims are not for the same invention, *on the basis of a comparison of both sets of claims alone;* second, that looking to the patent as a whole a clear *intention* to claim the subject matter of the appealed claims does not appear.

We stated at the beginning of this opinion that the issue before us is whether the claims are for the invention disclosed in the patent. We say this notwithstanding the Patent Office Solicitor's opening statement in his brief that the appeal is from a decision affirming a rejection on the ground that appellant has not shown that he claimed less than he had a right to claim in his patent. Only in a very technical sense is the Solicitor correct, because the Examiner made such a rejection and the Board held it not to be "fundamentally" in error and affirmed it. But in reality the Board affirmed it only by reversing all the underlying reasoning of the Examiner and substituting its own, relying on the same *section* of the statute but not on the same clause. The Examiner's rejection was left an empty shell notwithstanding the affirmance.

[1] It seems to us that our function is to pass only on such grounds of rejection as have not been reversed by the highest tribunal of the Patent Office. In the instant case that means that the only grounds before us are the final reasons given by the Board for refusing the appealed claims. We believe the issue to be as we have stated it.

Our Opinion

[2] The Board erred in applying the wrong test to determine whether appellant's claims are for "the invention disclosed in the original patent," which is the only provision of section 251 relied on by the Patent Office. In looking only to the *claims* of the patent it disregarded the express command of the statute, which is to look at the disclosure. The cases relied on by the Board, *U.S. Industrial Chemicals, Inc.* v. *Carbide & Carbon Chemicals Corporation*, 315 U.S. 668, 53 USPQ 6, and *Parker and Whipple Company* v. *Yale Clock Company*, 123 U.S. 87, 1887 C.D. 584, do not support its position. Although these cases were prior to the enactment of the Patent Act of 1952, which changed the words of the prior law, "for the same invention," to the words above quoted, even they stand for the proposition that the entire disclosure of the original patent is to be considered in determining what the patentee intended to claim and what invention the patent discloses.

We are constrained to agree with appellant that if the Board's view were to prevail, the reissue statute would be of very little practical effect, for, by elementary principles of claim interpretation, whenever an element or other limitation is added to or taken from a claim it becomes a claim to a different invention. [3] Yet the whole purpose of the statute, so far as claims are concerned, is to permit limitations to be added to claims that are too broad or to be taken from claims that are too narrow. That is what the statute means in referring to "claiming more or less than he had a right to claim."

[4] The decisions of this court, both before and after the effective date of the 1952 act, are also to the effect, as stated in *In re De Jarlais*, 43 CCPA 900, 904, 233 F.2d 323, 110 USPQ 36, that "It is also well settled that the same invention means whatever invention was described in the original patent, and which appears to have been intended to be secured thereby." See *In re Mayo*, 29 CCPA 1192, 129 F.2d 700, 54 USPQ 322, and *In re Murray, Jr.*, 20 CCPA 1046, 64 F.2d 788, 17 USPQ 365. In the District Court for the District of Columbia the same rule was applied in *Kinnear* v. *Marzall*, 95 F. Supp. 55, 88 USPQ 524. The Patent Office Solicitor admits that in these cases the courts found it sufficient to examine the specifications and claims but urges us, over several pages of brief, to "give due weight to the 'division aspect' of the prosecution history of the patented application * * *." By this he apparently means the following, with which he concludes his brief:

> Appellant showed a clear intent not to secure the invention directed to the claimed combination by canceling claims directed thereto in the patented application. In effect, he conceded away the right to claim the combination in

[4] It is difficult to understand how the Board could have expected to find, for the purpose of *supporting* a reissue, an *intent* to claim in claims presented in *but cancelled from* the patent application in view of a long line of reissue cases holding that deliberate cancellation of claims in the original application, to obtain issuance, is not inadvertence (error) and therefore *bars* the grant of *similar* claims in the reissue, even though the claims were cancelled merely in response to a requirement for division. See McCrady, op. cit. fn. 2, p. 311–312.

that application. Since such right is a basic requirement of section 251, it is submitted that there is no legal basis for granting a reissue of the original patent.

Since the Patent Office has not seen fit to include in the record a single one of the allegedly canceled claims we do not see how we could, even if we would, determine what appellant may have "conceded away." But this is of no moment inasmuch as the Board disposed of this point and put it beyond our reach in its opinion on request for reconsideration, wherein it said:

> We further pointed out in our decision that *we found no claim presented during the prosecution of [the] patent application directed to a connector applicator machine of the character recited in the appealed claims* and consequently found no clear evidence of appellant's intention to therein claim the subject matter of the herein appealed claims. [Emphasis ours.]

It would appear, therefore, that appellant has been adjudged by the Board never to have made a claim to the subject matter of the appealed claims or of that character. Consequently he never cancelled such a claim. It follows that the Solicitor's argument is directly contradicted by the finding of the Board, based, moreover, on information to which we have no access.

As for the Board's holding on intent, we find it to be contrary to the clear indication of the specification of the original patent, which the Board failed to take into consideration, particularly the statement of objects quoted early in this opinion. They clearly point to the subject matter of the appealed claims as part of appellant's invention, especially when read with the detailed description of the machine and its mode of operation. Since we find this to be sufficient to sustain appellant's right to claim the subject matter of the appealed claims, we find it unnecessary to consider his other arguments based on the claims of his original patent.

The decision of the Board is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,450,152, H. B. Miller, Fruit picker's crane, **filed** Apr. 5, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/396–TC, *FMC Corporation* v. *McCabe-Powers Body Co., Inc.*

2,482,837, W. N. Buckner, Pimento coring machine, **filed** Apr. 10, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/420–EC, *Elmer J. Touros* v. *Consolidated Foods Corporation.*

2,483,032, J. Baer, Excavating tooth, **filed** Nov. 12, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1798, *Electric Steel Foundry Company* v. *American Steel Foundries.* Dismissed by stipulation without prejudice Feb. 4, 1963.

2,510,438, K. M. Tuohy, Contact lens, **filed** Apr. 9, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c589, *Plastic Contact Lens Company* v. *Benjamin D. Ritholz et al.*

2,597,704, C. V. Carlson, Process of making hollow bodies from fusible plastic materials; **2,665,739**, Carlson and Schober, Machine for manufacturing hollow bodies from thermoplastic shell members, **filed** July 6, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1313, *Cosom Corporation* v. *Beco Products Corporation.* Stipulation and order dismissing cause with prejudice Oct. 2, 1962.

2,607,067, F. K. Minerley, Suction operated floor cleaning tool; **2,607,068**, same, Suction operated floor cleaning device employing liquid; **2,693,000**, same, Suction operated floor tool, **filed** Sept. 14, 1959, D.C., N.D. Ohio (Toledo), Doc. 8278, *The Hoover Company* v. *Air-Way Branches, Inc.* Complaint and counterclaim dismissed with prejudice Apr. 8, 1963.

2,607,068. (See 2,607,067.)

2,665,739. (See 2,597,704.)

2,693,000. (See 2,607,067.)

2,697,525, J. C. Breneman, Dish drainer, **filed** Mar. 6, 1962, D.C., S.D.N.Y., Doc. 62/1048, *Rubbermaid Incorporated* v. *Artcraft Wire Works, Inc.* Stipulation and order of dismissal Apr. 9, 1963.

2,733,647, D. J. Bauer, Plow attachment; **Reg. No. 602,366** (THE COVER BOARD), Spred-All, Inc., same, **filed** Mar. 29, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c543, *Donald J. Bauer* v. *International Harvester Co.* Stipulation and order dismissing complaint with prejudice; counterclaim dismissed without prejudice Apr. 3, 1963.

2,733,902, B. C. Phillips, Charge forming device; **2,796,838**, same, Fuel feed and charge forming apparatus; **2,823,905**, H. K. Brown, Charge forming and fuel feeding apparatus; **2,841,372**, same, Apparatus for delivering combustible mixture to an internal combustion engine; **2,903,250**, same, Fuel feed and charge forming apparatus, **filed** Aug. 13, 1960, D.C., N.D. Ohio (Toledo), Doc. 8071, *The Tillotson Manufacturing Company* v. *Textron, Inc.* Claims 1 and 2 of Patent No. 2,733,902 held invalid; claims 1 through 10 of Patent No. 2,796,838 held invalid; claims 1 and 2 of Patent No. 2,823,905 held invalid; claims 3, 8 and 13 of Patent No. 2,841,372 held invalid; claims 4 through 7, 9 through 12 and 14 through 17 of Patent No. 2,841,372 held valid and infringed; injunction granted (notice Apr. 11, 1963).

2,736,054, J. M. White, Anchor trim, **filed** Oct. 16, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 1069–59K, *Joseph M. White* v. *Tak-Trak, Inc., doing business as Royal Sales & Manufacturing Co. et al.* Defendant enjoined; patent held valid (notice Apr. 11, 1963); same, Doc. 1068–59–MC, *Joseph M. White* v. *Sydney Roth and Otto Powell, doing business as S. Roth Company.* Defendant enjoined; patent held valid (notice Apr. 11, 1963).

2,753,663, D. F. Jones, Production of hybrid seed corn, **filed** Apr. 10, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c597, *Research Corporation* v. *Pfister Associated Growers, Inc.*

2,796,838. (See 2,733,902.)

2,823,905. (See 2,733,902.)

2,841,372. (See 2,733,902.)

2,856,653, R. H. Sutter, Method and apparatus for making hollow shell foundry sand articles; **2,867,017**, same, Method of and apparatus for making resin bonded sand shell molds and cores, **filed** Apr. 8, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c579, *Sutter Products Company* v. *Pettibone Mulliken Corporation.*

2,867,017. (See 2,856,653.)

2,875,534, E. Grossman, Heel protector, **filed** June 22, 1962, D.C.N.J. (Camden), Doc. 506–62, *Evlyn Grossman* v. *Judy Jewel Co., Inc.* Stipulation of dismissal Apr. 11, 1963.

2,875,851, P. Vakos, Starter for a gasoline engine, **filed** Apr. 10, 1963, D.C., E.D. Wisconsin (Milwaukee), Doc. 63–C–88, *Peter Vakos* v. *Tecumseh Products Company.*

2,883,654, J. Bauer, Jr., Horn-light combination, **filed** Feb. 27, 1961, D.C., S.D.N.Y., Doc. 60/731, *Bert Scheuer, Inc.* v. *G. Joannou Cycle Co., Inc.* Stipulation and order of dismissal without prejudice Apr. 11, 1963.

2,883,985, R. P. Evans, Medical appliance, **filed** June 27, 1962, D.C.N.J. (Newark), Doc. 542/62, *Sterilon Corporation* v. *C. R. Bard, Inc.* Stipulation of dismissal Apr. 3, 1963.

2,900,915, W. G. Rowell, Automatic engine cut-off for pump-equipped tank truck vehicles, **filed** Sept. 18, 1962, D.C. Mass. (Boston), Doc. 62–707–W, *Scully Signal Company* v. *Harold J. Olson and Olson Throttle Control, Inc.* Patent held valid and not infringed Apr. 2, 1963.

2,903,250. (See 2,733,902.)

2,903,736, F. C. Osten, Automatically-locking sash balance for removable sash windows, **filed** Nov. 27, 1961, D.C., E.D. Mich. (Detroit), Doc. 21913, *Malta Mfg. Co.* v. *Fred C. Osten, Sr. et al.* Patent held invalid; decree dismissing counterclaim Apr. 8, 1963.

2,906,382, R. T. Rosten et al., Controls for water softening apparatus and system, **filed** Mar. 5, 1963, D.C., W.D. Wis. (Madison), Doc. 3620, *Randolph T. Rosten et al., doing business as Capital Plating & Machine Co.* v. *Borgerud Mfg. Co., Inc.*

2,950,793, W. G. Axtell, Luggage case, **filed** Apr. 11, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63C–403, *Schwayder Bros., Inc.* v. *Eastern Case Co., Inc.*

2,974,055, W. G. Scharf, Lustrous fabrics and methods of producing same, **filed** Feb. 2, 1962, D.C., W.D.N.C. (Charlotte), Doc. 1666, *Metal Film Company, Inc.* v. *Riegel Paper Corporation et al.* Patent held valid; defendants enjoined Apr. 11, 1963.

Des. 171,472, Willinger & Nestler, Aquarium breeding trap, **filed** Apr. 3, 1963, D.C.N.J. (Newark), Doc. 276–63, *Aquariums, Incorporated* v. *Ludwig Stark et al.*

Des. 178,803, A. J. Quellette, Baby chair, **filed** Apr. 5, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–406–Y, *Infanseat Company* v. *Manufacturers Distributors, Inc.*

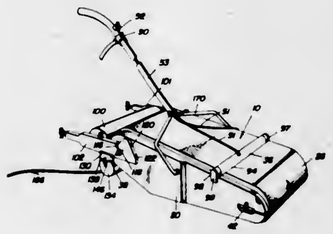
REISSUES

JULY 23, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,419
AUTOMATIC ELECTRIC MOP

Tyndall D. Evans, Dexter, Minn.
Original No. 2,930,057, dated Mar. 29, 1960, Ser. No. 747,476, July 9, 1958. Application for reissue Mar. 27, 1961, Ser. No. 98,728
21 Claims. (Cl. 15—99)

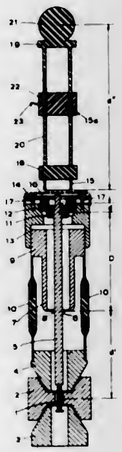


1. An electric mop comprising a frame, a handle connected to said frame, a plurality of rollers, means rotatively mounting said rollers on said frame, an endless belt entrained over said rollers, means reacting on a first of said rollers for laterally moving said first roller in a direction to tighten said belt, an electric motor carried by said frame, means drivingly connecting said motor to at least one of the other of said rollers to propel said endless belt, a wringer roller in contact with said belt and located adjacent to a second of said plurality of rollers to squeeze liquid from the belt, a drip pan located below said wringer roller and said adjacent roller to collect the liquid squeezed from said belt, and mechanical means selectively positionable with respect to said second roller for supporting said wringer roller and said pan so that the mop may be disposed at various angles for cleaning floors, walls and ceilings with the pan located below the wringer and second rollers to collect the liquid squeezed from said belt.

25,420
MAGNETRONS

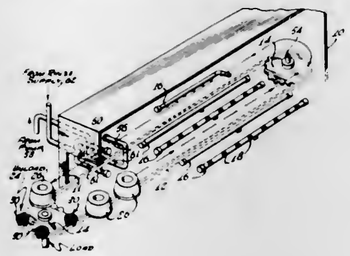
James Rodney Mitchell Vaughan, Scotia, N.Y., and Robert Henry Bright, Stanwell, England, assignors to Electrical & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Original No. 2,894,171, dated July 7, 1959, Ser. No. 674,715, July 29, 1957. Application for reissue July 3, 1961, Ser. No. 125,031
Claims priority, application Great Britain Sept. 19, 1956
11 Claims. (Cl. 315—39.67)

1. A magnetron comprising a cathode disposed within an aperture in an anode, wherein said cathode is mounted at one end of an elongated support, which support is pivotably mounted about a point intermediate its ends and is provided near its end remote from said cathode with a collar having a part spherical outer surface which engages with a complementary spherical inner surface of an actuating member having a part spherical outer surface engaging a complementary surface in a bearing and wherein the [centre] *center* of curvature of the outer surface of said actuating member is not coincident with the [centre] *center* of curvature of the outer surface of said collar so that tilting of said actuating member with respect to the axis of said cathode support causes pivotal movement of said support thus enabling said cathode to be [centred] *centered* with respect to said aperture.



25,421
ARTICLE WASHING MACHINE

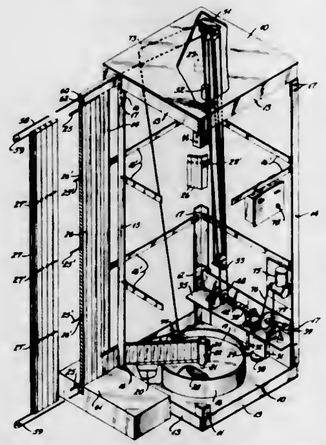
Robert K. Nolte, Chatham, N.J., assignor to Metalwash Machinery Company, Elizabeth, N.J., a copartnership
Original No. 3,056,414, dated Oct. 2, 1962, Ser. No. 79,609, Dec. 30, 1960. Application for reissue Nov. 27, 1962, Ser. No. 241,110
10 Claims. (Cl. 134—60)



7. A machine for cleaning ring type baking pans having a central hollow cake hole coring member, comprising a housing, conveyor means for transporting baking pans through said housing, said conveyor means including a plurality of spaced upstanding pan supports, said pan supports including an upstanding member adapted to engage the hollow cake hole coring member of a ring type baking pan placed in inverted fashion thereover, fluid projecting means below said conveyor to direct fluid upwardly to obliquely contact the inside surface of the outer wall of the inverted baking pans, thereby rotating the pans relative to said conveyor means and means for limiting upward displacement of the rotating baking pans.

25,422
COILABLE PARTITION

Clarence E. Carlo, Dubuque, Iowa, assignor to Dubuque Products, Inc., Dubuque, Iowa, a corporation of Iowa
Original No. 2,978,019, dated Apr. 4, 1961, Ser. No. 783,295, Dec. 29, 1958. Application for reissue Jan. 8, 1963, Ser. No. 250,194
5 Claims. (Cl. 160—23)

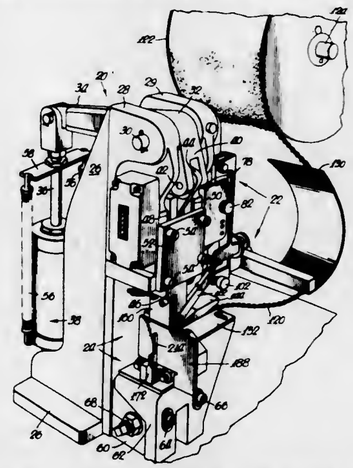


5. A coilable partition and operating means therefor comprising a holder, a coilable partition rotatably mounted in said holder, said operating means comprising a drive shaft, power means adapted to drive said drive shaft in either direction, driving means for coiling said partition, a first freely rotatable means mounted about said drive shaft and connected to said driving means, a clutch member on said first freely rotatable means, a second freely rotatable means mounted about said drive shaft in spaced relation to said first freely rotatable means, a clutch member on said second freely rotatable means, partition extending means connected to said second freely rotatable means, a slidable clutch mounted on said drive shaft intermediate said first clutch member and said second clutch member for selective engagement with one or the other of said members depending upon the direction of rotation of said drive shaft whereby when the drive shaft is rotated in one direction the clutch will engage said first freely rotatable means and operate the driving means to coil the partition and when the drive shaft is rotated in the opposite direction the clutch will engage the second freely rotatable means to operate said partition extending means and cause the partition to be extended.

25,423
TERMINAL APPLICATOR CONSTRUCTION

George J. Handel, Jr., Camp Hill, Pa., assignor to AMP Incorporated, a corporation of New Jersey
Original No. 2,705,797, dated Apr. 12, 1955, Ser. No. 65,646, Dec. 16, 1948. Application for reissue Aug. 1, 1958, Ser. No. 755,830
6 Claims. (Cl. 1—177)

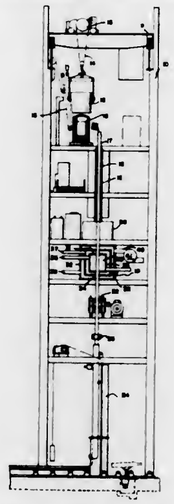
4. A connector applicator machine for applying a plurality of different sized and shaped connectors onto wires comprising a press including ram and bed members each having an open wall, a multiple element die assembly including in combination opposed subassemblies adapted for relative reciprocal movement, each of said subassemblies comprising a plurality of replaceable die elements with at least one of said elements being adapted to project into interleaved relation between portions of the opposed said subassembly, said subassemblies including crimper and anvil elements and a severing element spaced from said crimper and anvil for severing the lead connector from a connector strip, stacking means for aligning said subassemblies into respective units and affixing said units to the ram and bed walls respectively whereby a desired die set may be quickly and easily assembled from various combinations of elements, means for storing a supply of preformed connectors sufficient for substantial operation,



and feeding means for sequentially advancing said connectors into said machine and in operative relation to said die assembly, said feeding means having an adjustable stroke for coordinating the connector feed with the pitch distance of said die assembly, whereby to accurately position for application the connectors of said different size and shape, respectively.

25,424
CONTINUOUS METAL PRODUCTION AND CONTINUOUS GAS PLATING

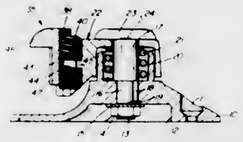
Harry A. Toulmin, Jr., Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York
Original No. 2,657,457, dated Nov. 3, 1953, Ser. No. 115,033, Sept. 10, 1949. Application for reissue Nov. 1, 1955, Ser. No. 544,387
22 Claims. (Cl. 29—417)



1. A process of casting and plating metal simultaneously and continuously which comprises the steps of

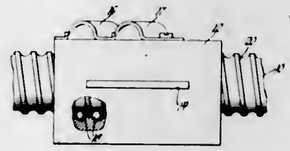
pouring molten metal into a mold and continuously withdrawing hot congealed metal from the mold in a downwardly direction, cooling said continuously cast metal to a temperature in the range of 300 to 600° F., thereafter subjecting said cast metal while continuously moving along to a heat-decomposable metal vapor compound, at least a portion of said vapor decomposing at said temperature range whereby metal is deposited on said continuously moving cast metal, and severing the resultant continuously cast and gaseous metal plated product into a desired length.

25,425
TOE HOLDING DEVICE FOR SKIS
Hjalmar Hvam, Rte. 1, Box 404, Beaverton, Oreg.
Original No. 2,994,543, dated Aug. 1, 1961, Ser. No. 27,811, May 9, 1960. Application for reissue May 7, 1962, Ser. No. 193,372
12 Claims. (Cl. 280—11.35)



1. A toe holding device for a ski comprising a base adapted to be mounted on the upper surface of a ski, vertical pivot means mounted on said base, a toe holding device arm pivotally mounted on said pivot means and having a free end, strain-release means normally holding said toe holding device arm in fixed relation to said pivot means, said free end having a vertical guideway formed thereon, a toe holding jaw slideably engaged with said guideway for vertical movement with respect to said toe holding device arm, a toe holding jaw adjusting screw vertically positioned between said arm and said jaw, said jaw and said arm having contiguous surfaces, in one of which there is a half-nut surface threadedly engaging a portion of said screw, and in the other of which there is a recess surrounding the remainder of said screw, said screw having a non-threaded portion, and means formed on the other of said surfaces and engaging said non-threaded portion for preventing longitudinal movement of said screw.

25,426
BALL NUT SCREW ASSEMBLY
William H. Doerfner, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original No. 2,779,206, dated Jan. 29, 1957, Ser. No. 529,150, Aug. 18, 1955. Application for reissue Feb. 10, 1958, Ser. No. 715,166
12 Claims. (Cl. 74—459)



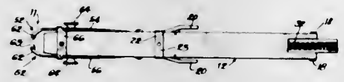
1. In a worm and nut device wherein the connection between the worm and nut comprises a ball train confined in a passageway formed by the worm groove and a complementary internal helical groove in the nut, the improvement which resides in gradually varying the pitch diameter of the thread of one or both of said worm and said nut outward of center so as to obtain a condition of no-lash on center and progressively increasing lash off-center.

PATENTS

GRANTED JULY 23, 1963

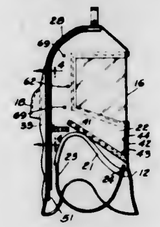
GENERAL AND MECHANICAL

3,098,232
SURGICAL CLIP APPLICATOR
Adolph M. Brown, Beverly Hills, Calif., assignor of twenty percent to Ernest C. Wood and of twenty percent to Rene G. Le Vaux
Filed Feb. 24, 1960, Ser. No. 10,595
5 Claims. (Cl. 1—349)



1. An instrument for applying clips of U-shape having a rear bail portion and a pair of spaced parallel side arms extending forwardly from said bail with spicules extending inwardly and downwardly from the forward edge portion of the spaced parallel side arms, comprising a magazine for receiving a number of said clips in said instrument aligned in end-to-end relation, said magazine including a clip-receiving guideway in said body, means in said guideway for urging clips therethrough, said guideway engaging and slidably supporting the lateral edge portions of the side arms of said clips, and means for sequentially applying the clips in the magazine to the work including jaws and positioned in advance of said guideway a distance substantially equal to the length of an individual clip, said jaws having seats for receiving and supporting the front edge of the side arm of said clip while the adjacent end of said guideway is designed to support the rear edge of the clip, whereby the area between the arms of said clip is unobstructed and the points of the clip can be easily observed and movable abutment means movable to one position with the abutting surface thereof normally located within said guideway a distance substantially equal to the length of comprising an individual clip from the end of said guideway and movable from its normal position out of said guideway whereby the body of the clip following the clip next to be applied may be normally restrained and whereby said following clip may be released to effect urging thereof into application position.

3,098,233
SHOULDER-MOUNTED SAFETY HOOD
Earl J. Hoagland, Barrington, Ill., assignor to Standard Safety Equipment Co., a corporation of Illinois
Filed Sept. 19, 1960, Ser. No. 56,726
12 Claims. (Cl. 2—3)



1. A shoulder-mounted windowed safety hood formed in large part of soft material and including a head hood adapted to cover the human head, a downward extension therefrom having front and back portions connected by shoulder portions adapted to rest on the human shoulders, a transversely extending relatively rigid transverse brace secured across the back portion near the shoulder portions, an upwardly extending relatively rigid brace secured along the back portion to be supported by the shoulders through the transverse brace, extending below the transverse brace to be positioned by the back of the wearer and crossing the transverse brace and extending substantially to the top of the head hood to support the head hood independently of the head therein, said head hood including a transparent portion in the front.

3,098,234
CONSTRUCTION OF BASEBALL GLOVES
Harry B. Latina, East St. Louis, Ill., assignor to A. G. Spalding & Bros., Inc., Chicopee, Mass., a corporation of Delaware
Filed May 1, 1961, Ser. No. 106,923
3 Claims. (Cl. 2—19)

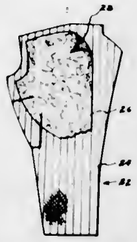


3. In a baseball glove comprising a body having a face side and a back side and a heel defining a marginal part of a ball receiving pocket in the face side, and the body having a hand receiving opening in the back side, the improvement of a palm ply in the face side of the body having a margin extending to and along the heel, a heel ply having a margin extending adjacent said palm ply margin and defining an extremity of the heel part of the ball receiving pocket, said palm ply margin and heel ply margin being arranged in lapped relation to form a multi-ply line in the face side defining a raised seam between the heel and ball receiving pocket, and means extending through the lapped margins forming said raised seam to secure the palm and heel plies together and fix said multi-ply line in the face side of the glove body.

3,098,235
CLOTHING WITH ADHESIVELY APPLIED BODYING LAYER
Albert D. Gusman, 300 Central Park W., New York, N.Y.
Filed Dec. 10, 1959, Ser. No. 858,728
3 Claims. (Cl. 2—97)

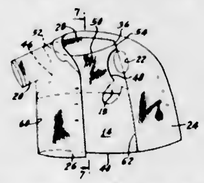
1. An article of apparel comprising a base fabric cut to the desired pattern and a bodying layer bonded thereto by thermoplastic pellets having a melt index between 20 and 200, said pellets being positioned at discrete, separated locations and fused to the mating surfaces of both the bodying layer and the base fabric, the separation between adjacent pellets being greater than the major di-

mension of the pellets so that approximately 50% of the material surface is bonded together by the fused pellets



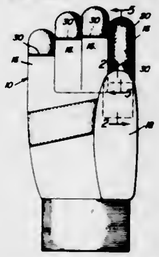
and so that the fabric may be flexed against the weave of the fabric without physical contact of adjacent pellets.

3,098,236
GARMENT CONSTRUCTION
Isabel M. Bernfeld, 509 Franklin Turnpike, Allendale, N.J.
Filed Aug. 29, 1961, Ser. No. 134,622
2 Claims. (Cl. 2—106)



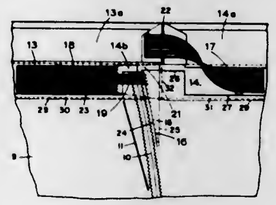
1. An upper garment comprising, a back section secured to left and right front sections along a pair of shoulder seams and along a pair of side seams, respectively, a panel having a top edge defined between upper left and right corners, said top edge being secured only at said upper left and right corners thereof, respectively, to said shoulder seams, whereby said top edge remains unsecured between said corners, said panel extending from said shoulder seams downwardly and terminating below said back section, said panel having side edges secured only along the lower parts thereof to said left and right front sections, respectively, whereby the upper parts of said side edges between said corners and said lower parts remain unsecured the portion of said panel below said back section being adapted to be tucked into a lower garment when said upper garment is worn and said tucked in portion being prevented from riding up during bending movement of the wearer.

3,098,237
DUAL FEEL GLOVE AND MITT
Morris L. Slimovitz, % Morris Mfg. Co., P.O. Box 308, Newbern, Tenn.
Filed Aug. 8, 1961, Ser. No. 130,188
4 Claims. (Cl. 2—164)



1. A glove providing increased sensitivity of feel for the wearer comprising an outer covering and a lining disposed within and secured to said outer covering, said outer covering and said lining being complementary and having corresponding finger stalls in each, said lining having an opening in a lining finger stall positioned to enable passage of a finger of the hand of the wearer therethrough into the associated covering finger stall and into the space between said lining and said covering, said covering being unbroken in an area which is adjacent and overlies said opening whereby to promote sensitivity of feel for the wearer while still completely enclosing the finger of the wearer's hand which is projected through said opening and into the space between said lining and covering.

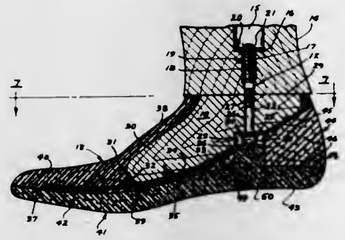
3,098,238
SELF-SUPPORTING TROUSERS
Alfred Diamond, London, England, assignor to S. Simpson Limited, London, England, a British company
Filed Nov. 14, 1960, Ser. No. 68,911
2 Claims. (Cl. 2—237)



1. Self supporting trousers comprising a body portion and a waistband secured thereto, said waistband being formed in four sections, two at each side of the trousers, said sections provided with linings, one of the two sections at each side of the trousers being movable toward and away from the second section, a pleat in the material of the body portion at each side of the trousers, said pleat extending into the waistband with one edge of said pleat anchored to the movable section of the waistband, a band of elastic webbing attached at one end to the movable section of the waistband and at its other end to said second waistband section at a point remote from its point of attachment to the movable section, a band of elastic webbing attached at one end to the lining of one of said two sections and at the other end to the waistband of the second of said two sections on the same side of the trousers at a point remote from its point of attachment to the lining of said one section and a further band of elastic webbing connecting one of said bands of elastic webbing to the inner side of the pleat.

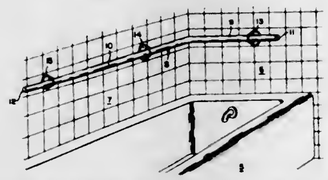
3,098,239
PROSTHETIC FOOT
Hugo Otto Max Nader, Duderstadt, Hannover am Euzenberg 20, Germany
Filed Jan. 18, 1961, Ser. No. 83,570
4 Claims. (Cl. 3—7)

1. A solid ankle-cushion heel prosthetic foot comprising, a keel having a portion thereof extending forwardly and downwardly to provide a bottom surface sloping generally forwardly and downwardly from an elevated rear terminus, attaching means extending upwardly from said keel at a position rearwardly of the forward and downward portion and adapted to secure said foot to a prosthetic ankle segment, an upper foot portion constructed of a tough but resilient material and overlying the forward portion and sides of said keel and extending forwardly of the forwardmost terminus of said keel, said upper portion also underlying the bottom of said keel to thereby completely cover said forward portion, said sides and bottom of the keel with at least the section of said upper foot portion that underlies the rear portion of said keel bottom being in direct contact therewith, a generally horizontal sole portion constructed of resilient material having á density less than that of the upper and secured to the bottom of said upper between the forward terminus thereof and the forward terminus of said keel, and a uni-



tary wedge-shaped keel segment of resilient material having a density less than that of said sole portion and secured at the rear of the foot between said underlying upper portion and said sole, said heel segment having its greatest thickness underlying said rear terminus of the keel and overlying the rear terminus of said sole, whereby said foot will have improved walking characteristics with good resistance to wear and abrasion.

3,098,240
BATHROOM HAND RAIL FIXTURE
Charles M. Fleenor, 817 NE. 16th St., Fort Lauderdale, Fla.
Filed Aug. 3, 1962, Ser. No. 214,700
1 Claim. (Cl. 4—185)



A hand grip and safety device for use in combination with a bathtub having a vertical wall along at least one end and along one side thereof comprising

(*a*) an elongated rail horizontally adjacent to but spaced a relatively short distance from the vertical wall and located above the top of the bathtub,

(*b*) a second elongated rail lying in the same horizontal plane as said first elongated rail and extending at right angles thereto,

(*c*) said second elongated rail horizontally adjacent to but spaced a relatively short distance from the vertical wall extending along the end of the bathtub,

(*d*) said second elongated rail located above the top of the bathtub,

(*e*) a plurality of fastening means for securing the elongated rails to the adjacent vertical wall,

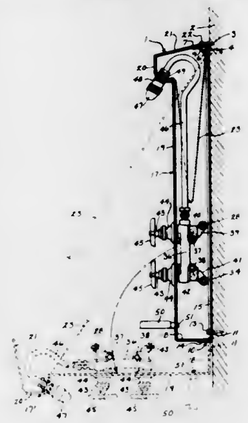
(*f*) each of said fastening means comprised of a T-shaped member with means securing said T-shaped member to the wall,

(*g*) the outer surface of each of said T-shaped member being shaped to conform to the shape of the surface of the elongated rail members,

(*h*) a fastening element extending through the elongated rail member and into each of the T-shaped members, and

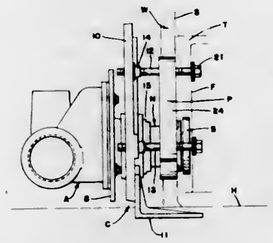
(*i*) a cover plate over each of said T-shaped members disposed between the elongated rails and the adjacent vertical wall.

3,098,241
MODULAR SHOWER UNIT
Robert J. Booker and Howard G. Mullett, Milwaukee, Wis., assignors to Bradley Washfountain Co., Milwaukee, Wis., a corporation of Wisconsin
Filed May 11, 1962, Ser. No. 193,994
7 Claims. (Cl. 4—192)



1. A modular shower unit comprising: a framework adapted to be securely mounted on a vertical supporting structure and including an upper support member and a lower support member; a housing having an upper edge releasably attached to the upper support member and a lower edge hingedly attached to the lower support member; a water supply system disposed within the housing that is releasably attached to a water supply; and means to attach the water supply system to the housing, whereby upon release of the upper edge of the housing and the connection of the water supply system to the water source the housing and water supply system may be pivoted together about the lower support member.

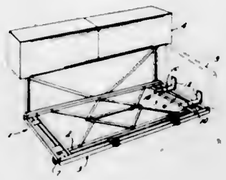
3,098,242
WALL-HUNG FIXTURE CARRIER COMBINATION WITH A DEVICE FACILITATING WALL FINISHING
John A. Armbruster, Columbus, Ohio, and Ralph N. Woodcock, Lambertville, Mich., assignors to Josam Manufacturing Co., Michigan City, Ind., a corporation of Delaware
Filed Feb. 23, 1962, Ser. No. 175,013
3 Claims. (Cl. 4—252)



1. For supporting a wall-hung closet fixture having a mounting flange in predetermined relation to a soil line

fitting, the combination of: a fixture carrier rigidly mounted rearwardly of the wall including two horizontally spaced upper fixture-mounting studs and at least one lower fixture mounting stud, said studs adjustably threadedly engaged in the carrier to extend outwardly beyond a wall finish line and being symmetrically disposed relative to a vertical centerline of the carrier to project through the fixture flange; nipple means supported on the carrier for connecting the fixture outlet to the fitting; a rigid frame having a rim portion adjacent and rigidly connected to the rim portion having also apertured localized web portions for receiving said studs within said rim portion, said frame being otherwise generally open within said rim portion and independent of other above described parts of the combination and said rim portion adapted in shape to circumscribe said studs and nipple means and to lie within the outline of the flange of a fixture mounted on the studs, and means on each stud clamping the apertured portions of the frame with the outer edge of said frame adjusted to the plane of the finished wall surface.

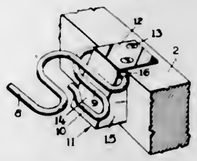
3,098,243
ARM OR HEADBOARD SUPPORT FOR DIVANS AND THE LIKE
Melvin E. Roché, Berea, Ohio, assignor to The Harvard Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 26, 1960, Ser. No. 58,341
1 Claim. (Cl. 5—52)



In a divan, sofa-divan or the like, a frame including a pair of spaced parallel end members at one end of said frame extending from front to rear thereof and having upper surfaces defining a plane in the frame, a support bracket positioned to extend across and beyond said end members and having a flat center section, an upstanding end and a downwardly directed hook at the other end of said center section, said hook slidably engaging the inner one of said end members, a clamp plate having an upwardly extending flange on one edge thereof, and means securing said clamp plate to the lower surface of said center section of said support bracket, said clamp plate having a portion bearing on the outer of said end members for clamping engagement therewith, said flange on said clamp plate engaging said support bracket to reenforce said clamp plate and position it parallel to said plane, a pair of said support brackets being provided at spaced portions of said end members to engage and position an arm rest on the divan.

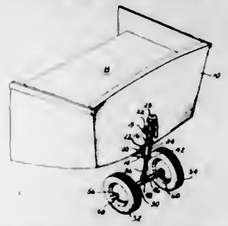
3,098,244
SUPPORT FRAME FOR FURNITURE
Louis J. Rothbauer, Jr., Chicago, Ill., assignor to Modern Sleep Products Company, Marshfield, Wis., a corporation of Illinois
Filed Feb. 10, 1961, Ser. No. 88,464
1 Claim. (Cl. 5—247)

In a support frame, a longitudinal frame member and a wedge-shaped bracket for securing the end of a transversely extending spring to said longitudinal frame member, said bracket having a lip secured to said frame member and a flat surface extending downwardly at an obtuse angle to the plane of said lip, said flat surface butting against the free end of said spring to help support the



intermediate portion of said spring in the form of an arch extending above the upper surface of said frame member, the end of said arch having a predetermined angular relationship to said frame member.

3,098,245
BOAT AND TRUNDLING MECHANISM
Arthur M. Corey, 109 E. 53rd St., and Lawrence W. Webb, 1312 N. 78th, both of Seattle, Wash.
Filed Sept. 6, 1960, Ser. No. 54,307
3 Claims. (Cl. 9—1)

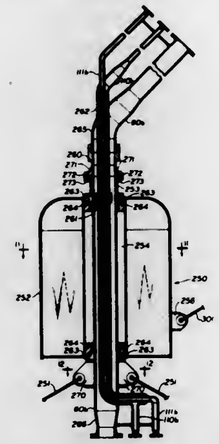


1. In combination with a small boat having an outboard motor mounted on the stern transom of the boat; a hollow mounting tube affixed to the stern transom of said boat with an open, lower end contiguous to and at substantially the level of the keel heel of the boat, a trundling mechanism comprising a post snugly and removably insertable into said tube, means non-rotatably locking said post in said tube, a support ring adjustable along the length of said post, situated thereon to contact the lower end of said tube when said post is locked therein, axle means across said post at the lower end thereof, and wheels rotatably mounted on said axle means at the ends thereof, the said post, axle and wheels when on the boat being dimensioned to place the trundling mechanism forwardly with the wheels somewhat below the lower outboard portion of the outboard motor mounted on the transom of the boat, said trundling mechanism thereby not interfering with normal operation of the outboard motor even though such mechanism be left on the boat when the latter is waterborne.

3,098,246
BUOY
Charles B. Pekor and Fares K. Hanna, Houston, Tex., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed May 3, 1961, Ser. No. 107,498
1 Claim. (Cl. 9—8)

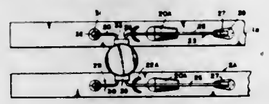
A buoy for underwater liquid storage systems, comprising a buoyant chamber having a central vertical cylindrical opening therein; a bearing disposed in said opening and directly attached to the vertical walls thereof; and a plurality of varying diameter pipeline sections rotatably supported in said opening by said bearing, each of said pipeline sections comprising an upper and a lower part, said pipeline sections being disposed one within the other; each pipeline section further comprising a

swivel joint connecting its upper and lower parts; said swivel joints, said pipeline sections, said opening in said buoyant chamber and said bearing all having a common



axis therethrough, whereby said upper and lower parts of each of said pipeline sections can rotate about said common axis with respect to each other and with respect to said buoyant chamber.

3,098,247
WATER CRAFT
Sanford W. Stein and Josephine Stein, both of Star Rte. W, Box 105, Tillamook, Oreg.
Filed May 26, 1961, Ser. No. 112,892
1 Claim. (Cl. 9—310)



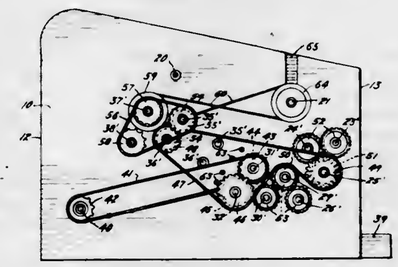
Watercraft of the class described comprising a pair of skis,
a forward frame and a rearward frame mounted upon the skis and securing the skis in parallel spaced relation to each other.
each of said frames comprising a pair of legs of flexible material secured respectively at their bottom ends to the skis and provided with transverse means at their top ends with the transverse means of one frame being spaced from the corresponding means of the other frame in the direction of the length of the skis,
a plate of inverted C-shape engaging said spaced-apart transverse means of both of said frames,
a coil spring disposed within said plate and at all times bearing against said transverse means of both frames,
and a seat secured to said plate member whereby flexing of said leg members will be absorbed by said spring so as not to disturb the normal position of the seat.

3,098,248
BATHING DRAWERS
Adam Geler, 6 Markgrafenstr., Nurnberg, Germany
Filed June 16, 1961, Ser. No. 118,237
4 Claims. (Cl. 9—335)

1. A pair of bathing trunks including a plurality of vertically disposed inflatable air channels connected across the front portion of the trunks and interior thereof, a plurality of horizontally disposed inflatable air channels communicatingly connected with each other along their horizontal edges and disposed to extend above the top edge of the trunks in their inflated position, said plurality of horizontally disposed chambers being of a size to cover the front portion of the wearer from the top of said trunks to substantially the breastbone, said vertical air channels terminating adjacent the top edge of said trunks and opening into communication with said plurality of horizontally disposed air chambers, inflating tube means connected with one of said horizontal air chambers for simultaneous inflation of said plurality of horizontally disposed air chambers above said trunks and said vertically disposed air channels within said trunks, and support bands connected between the back portion of said trunks and opposite ends of the uppermost horizontally disposed air chamber of said plurality of horizontally disposed air chambers and normally engaging the sides of the wearer for maintaining said horizontally disposed air chambers in position.



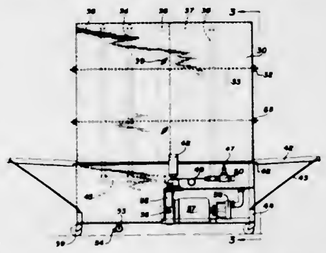
3,098,249
SCRUBBING AND DRYING MACHINE FOR FLEXIBLE SHEETS
Arthur J. Tice and Arnold D. Wallace, Golden, Colo., assignors, by mesne assignments, to SMC Corporation, Denver, Colo., a corporation of Colorado
Filed Oct. 23, 1961, Ser. No. 146,791
5 Claims. (Cl. 15—4)



1. A machine for cleaning the surfaces of flexible plastic sheets comprising: an inclined feed chute for receiving a stack of said sheets; means for feeding the sheets individually forward from said stack; a pair of guide rollers receiving the sheets from said feeding means and directing them downwardly; a third guide roller receiving the sheets from said pair of guide rollers and directing them rearwardly; a solution roller; a first scrubbing roller receiving the sheets from said third guide roller and contacting one side of and urging the sheets against said solution roller; a second scrubbing roller contacting the other side of said sheets and urging them against the first scrubbing roller; said scrubbing rollers operating at a greater peripheral speed than said guide rollers, a pair of

wringer rolls between which the sheets are received from said second scrubbing roller; a pair of juxtaposed absorbent belts between which said sheets are received from said wringer rollers; means for driving said rollers to impart travel to said sheets; means for supplying cleaning solution to said solution roller; and means for successively receiving and piling the sheets received from said belts.

3,098,250
PORTABLE WASHING APPARATUS FOR LIGHT FIXTURE PANELS AND THE LIKE
Larry C. Creech, 1523 43rd Ave., San Francisco 22, Calif.
Filed May 15, 1961, Ser. No. 110,084
2 Claims. (Cl. 15—77)



1. Portable apparatus for washing panels comprising in combination;

a housing member including a pair of opposing, upstanding, spaced apart side wall members;

a guide means disposed between said side wall members on which panels are placed when they are passed between said wall members;

a pair of brushes disposed in opposing facing relationship between said wall members and extending in a generally vertical direction from said guide means, said brushes disposed approximately midway between the vertical edges of said wall members;

first fluid spray means disposed between said wall members and on one side of said brushes, said spray means disposed above said guide means so as to direct fluid onto panels passed between said walls on said guide means;

second fluid spray means disposed between said wall members and on the other side of said brushes; said second fluid spray means disposed above said guide means so as to direct fluid onto panels passed between said wall members on said guide means;

a first compartment disposed below said first fluid spray means, said compartment providing means for reclaiming fluid passed through said first fluid spray means;

a second compartment disposed below said second fluid spray means, said compartment providing means for reclaiming fluid passed through said second spray means;

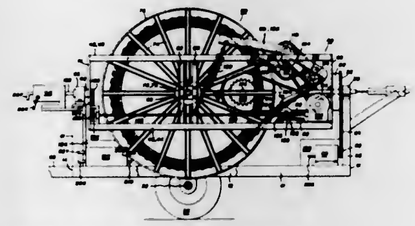
means for recycling fluid in said first and second compartments through said first and second fluid spray means respectively;

a pair of guide rails disposed between said wall members at a distance above said guide means, each of said guide rails spaced from a vertical plane passing through said guide means wherein each of said rails is on an opposite side of said plane, said rails adjustable in a horizontal direction to accommodate panels of varying sizes;

means adjustably securing said brushes in position. the distance between said brushes being variable by said adjustable securing means such that the distance between said brushes and the amount of said distance which extend between said guide rails can be selected to meet the requirements of various panel shapes and sizes; and

low friction support means on which said washing apparatus is mounted.

3,098,251
RODDING MACHINE
William H. Stewart, Jr., 301 Cherry Road, Syracuse, N.Y.
Filed Nov. 10, 1961, Ser. No. 151,537
3 Claims. (Cl. 15—104.3)



1. A sewer rodding machine comprising:

(*a*) a reel having a rim and a pair of side walls,

(*b*) a rod coiled on said rim,

(*c*) means for rotating said reel forwardly and rearwardly in the direction of feed of said rod,

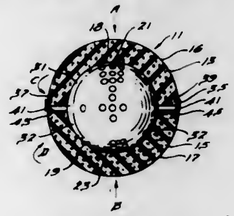
(*d*) said reel being mounted on a frame elongated in the direction of feed of the rod and in a position askew of the lengthwise axis of said frame to facilitate the feeding of said rod,

(*e*) said frame being mounted on a chassis for rotation about a longitudinal axis of said frame substantially perpendicular to the axis of rotation of said reel, whereby to impart rotation to said rod during the feeding and retraction thereof,

(*f*) means for retaining said coiled rod on said reel rim including an endless belt arranged to rotate with said reel between the side walls thereof to hold said rod on said reel rim, said belt being in engagement with said rod for a major portion of the circumference of said reel rim,

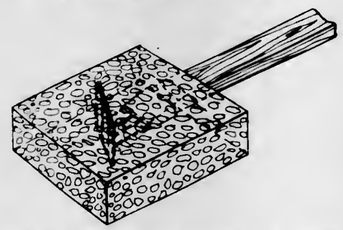
(*g*) said endless belt being provided with tensioning means for automatically varying the tension on said belt in response to a variation in the amount of rod coiled on said reel rim.

3,098,252
GOLF BALL CLEANING DEVICE
Victor J. Sundquist, 16850 Stansbury, Detroit, Mich.
Filed May 15, 1962, Ser. No. 194,843
3 Claims. (Cl. 15—506)



1. A portable golf ball cleaning device comprising two elastic cups, each having a pocket shaped to be expanded by a golf ball received therein, whereby upon placement of a golf ball in said pockets and twisting of said cups relative to each other the surface of said golf ball is rubbed by the surfaces of said pockets to remove foreign matter from the ball and clean the same, and fastening means on the peripheral rim of one of said cups for encircling the peripheral rim of the other of said cups when a ball is not in cleaning position, said fastening means, cups and the pockets therein being constructed and proportioned so that during cleaning of said golf ball said fastening means does not encircle the peripheral rim of said other cup.

3,098,253
CLEANING DEVICE
Henry C. Harrison, 94 Bayview Ave., Port Washington, N.Y.
Filed Apr. 26, 1962, Ser. No. 190,466
16 Claims. (Cl. 15—118)



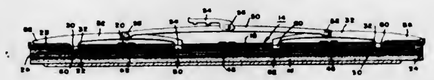
1. A cleaning device comprising: a compressible sponge having opposed side walls and having first and second passages therein in transverse relationship to one another, said second passage communicating with at least one of said opposed side walls, and in communication with said first passage; scraping means of rigid but yieldable one-piece construction carried within said sponge and including substantially parallel fingers positioned within said first passage, and chisel members integrally joined to said fingers and positioned within said second passage, said chisel members including chisel edges adjacent the opposed sponge wall communicating with said second passage; and means securing said scraping means within said sponge passages.

3,098,254
LUMINATED DIP STICK WIPER
Robert H. Rose, Vassar Road, Poughkeepsie, N.Y.
Filed Nov. 1, 1962, Ser. No. 234,658
8 Claims. (Cl. 15—210)



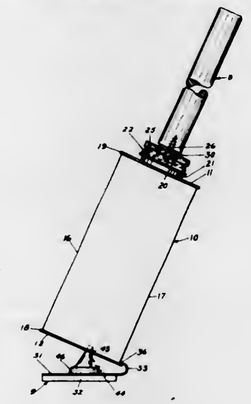
1. In combination with an upstanding tube of the type communicated at its lower end with an oil reservoir and adapted to have a dip stick removably positioned therein and supported thereby, a dip stick wiper comprising a cylindrical member having one end portion adapted to be snugly telescoped over the upper end of said tube and including means defining an inwardly projecting annular abutment shoulder of a width at least equal to the thickness of the walls of said tube for abutting engagement with the upper terminal end of said tube limiting the penetration of the latter in the lower end portion of said cylindrical member, the upper end portion of said cylindrical member including a thin walled over-bored portion having its lower end spaced above said abutment shoulder and its upper end spaced below the upper terminal end of said cylindrical member, a flexible sleeve of fibrous material seated in said bored portion, and said cylindrical member being constructed of flexible but semi-rigid material.

3,098,255
WINDSHIELD WIPER BLADE
Elmer E. Reese, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 8, 1960, Ser. No. 21,005
2 Claims. (Cl. 15—250.42)



1. A windshield wiper blade including, an elongate freely flexible elastomeric squeegee having a wiping lip along one edge and a retention portion along the opposite edge, a plurality of backing strips secured to the retention portion of said squeegee and arranged in end to end relationship with the ends being spaced apart, each backing strip having notched side rails, and a pressure applying superstructure comprising a primary pressure distributing member and a plurality of secondary pressure distributing members having claws at their free ends, said claws being adapted to straddle the notched side rails of said backing strips, each claw having a lower wall and an upper wall with the upper wall inclined with respect to the lower wall whereby said backing strips are supported for tilting movement relative to the secondary pressure distributing members so as to assume a position substantially tangent to a portion of a convexly curved surface to be wiped.

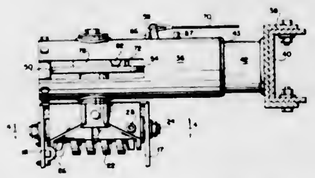
3,098,256
LIQUID DISPENSER OR APPLICATOR
Richard De Gregorio, 143 W. 3rd St., Reno, Nev.
Filed May 26, 1961, Ser. No. 112,832
4 Claims. (Cl. 15—565)



3. The combination of a container for containing liquid to be dispensed, said container having a top, a bottom and beaded edge, said bottom having at least one opening adjacent said beaded edge, an applicator shaped to spread said liquid on a surface, means mounted on said applicator insertable in said opening having a small passageway to permit a limited flow of liquid from said container to said applicator, biased means mounted on said applicator co-acting with said beaded edge for securing said pad to said container, a handle, and means co-acting with said

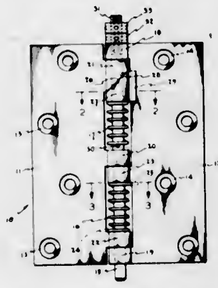
container and handle for securing said handle to said container whereby a user through manual efforts applied to the handle may move said applicator relative to the surface to spread liquid over a surface as desired.

3,098,257
CASTER WHEEL FOR TRAILERS
Abe Zaha, Rte. 2, Box 310, Pendleton, Oreg.
Filed May 17, 1960, Ser. No. 29,692
2 Claims. (Cl. 16—35)



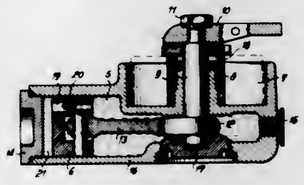
2. A caster wheel for use on automotive type trailers, comprising: an automotive type wheel having a pneumatic tire thereon, a horizontal wheel spindle having bearings thereon and disposed to operatively support said wheel; an inclined fork for supporting said spindle; a revolvable, vertically disposed shaft having a housing member secured to its lower end; a supporting bracket for said revolvable shaft adapted to be secured to the frame of a trailer, said housing having horizontal pivot means for supporting said fork; resilient means operatively connecting said fork and said housing; locking means for said vertical shaft to normally prevent caster action of said wheel; said locking means composed of a notched member disposed for limited rotation on said vertical shaft and a rigid spring biased lock pawl member; flexible tension means for remotely disengaging said locking means; a movable toe-in adjusting means for securing said notched member and said vertical shaft in adjusted angular relationship; and said adjusting means composed of an outstanding boss on said notched member; a coacting toe-in adjusting member fixedly secured to said shaft and bifurcated to provide spaced apart lugs disposed on each side of said outstanding boss with clearance permitting an adequate range of angular adjustment between said vertical shaft and said adjusting means, and means threadedly engaging said boss for securing said shaft and said outstanding boss in adjusted position.

3,098,258
SELF-CLOSING DOOR HINGE
William B. Ruiz, 315 E. 5th St., Miami, Fla.
Filed Mar. 1, 1961, Ser. No. 103,669
3 Claims. (Cl. 16—50)



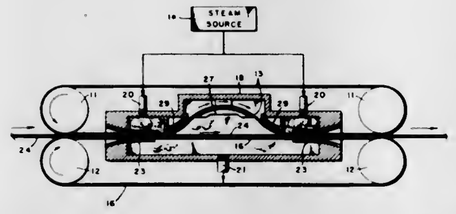
1. In a self-closing door hinge, the combination comprising, a pair of hinge leaves having interfitting knuckles providing a common pivotal opening, a pintle received in said pivotal opening and holding said hinge leaves in relative swinging relation, a first cylindrical cam member secured to one of said hinge leaves and surrounding said pintle and having at one end a flat cam surface inclined to the longitudinal axis of said pintle, a second cylindrical cam member slidably arranged on said pintle and having guide means constraining said second cam member to movement along an edge portion of the other of said hinge leaves in the direction of said longitudinal axis, said second cylindrical cam member having at one end a flat cam surface face-to-face in abutment with said cam surface of said first cam member when said hinge leaves are in substantially fully open position, means for resiliently constraining said second cam member into abutting relation with said first cam member for urging said hinge leaves in substantially fully open position, a torsion spring circumjacent said pintle and having end portions hookingly engaged over opposed marginal edge portions of said hinge leaves, said torsion spring being so arranged and stressed to normally urge said hinge leaves in relatively closed position in opposition to the urging of said second cam member constraining means, said second cam member constraining means comprising a helical compression spring circumjacent said pintle, one end of said compression spring being secured against axial movement in the outward direction with respect to said pintle, and the other end of said compression spring being in abutment against the other end of said second cam member.

3,098,259
AUTOMATIC DOOR CLOSER
Heinz Bomm, Ennepetal-Voerde, and Klaus Berghaus, Volmarstein (Ruhr), Germany, assignors to Dorken & Mankel K.G., Ennepetal-Voerde, Germany, a firm
Filed Oct. 4, 1960, Ser. No. 60,492
Claims priority, application Germany Oct. 16, 1959
3 Claims. (Cl. 16—59)



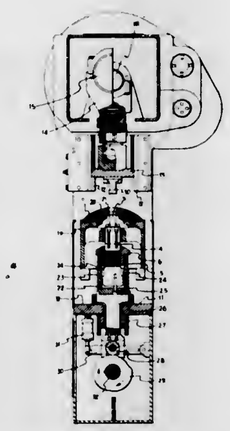
1. An automatic door closer comprising, in combination, a casing forming a damping cylinder at one end thereof and having in the region of the other end thereof a depressed portion providing a recess extending transverse to the cylinder below the uppermost portion thereof for receiving a spiral spring, said casing having a bottom wall portion located opposite said recess and formed with an aperture, said bottom wall potrion of said casing having a greater thickness than the opposite wall portion forming the bottom wall of said recess; a bearing neck projecting into said recess and being integrally formed with said casing; a shaft supported at an upper portion thereof by said bearing neck and adapted to be connected to a spiral spring located in said recess so as to be loaded thereby; an eccentric fixedly mounted on said shaft for rotation therewith; a damping piston slidably mounted in said damping cylinder; connecting means connecting said eccentric with said pitson so as to oscillate said piston during turning of said shaft; and bearing means having at least the same thickness as said bottom wall portion of said casing and closing said aperture and supporting said shaft and said eccentric, so that the distance between said eccentric and said spring recess is smaller than the distance between said eccentric and the bottom face of said bottom wall portion of said casing.

3,098,260
ANNEALING APPARATUS
James P. Richeson, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Feb. 8, 1962, Ser. No. 171,877
5 Claims. (Cl. 18—1)



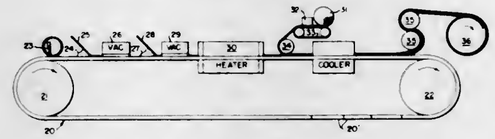
1. A continuous annealer, comprising an annealing chamber having openings at the opposite sides thereof, a pair of continuous belts extending through the openings in the chamber in face-to-face relationship for holding a filament therebetween and carrying said filaments through the chamber, and a guide inside the chamber for separating the belts to expose the filament.

3,098,261
POWDERED METAL COMPACTING PRESS
John J. Littley and Robert Burns, Hamilton, Ohio, assignors to The Cincinnati Shaper Company, Cincinnati, Ohio, a corporation of Ohio
Filed Jan. 6, 1961, Ser. No. 81,036
13 Claims. (Cl. 18—16.5)



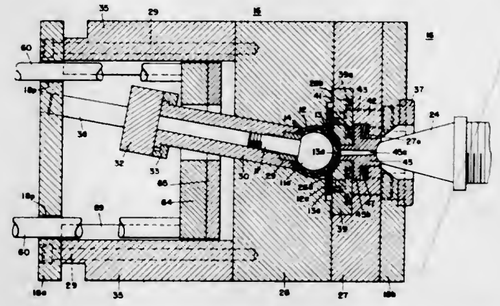
1. A compacting press for compacting powdered material into a finished product of arcuate form, comprising an eccentric driven ram, a curved upper punch secured to said ram, a die table curved to an arc approximately equal to the desired arc of the finished product, a die mounted in said table, a curved lower punch adapted to be reciprocated within said die, means for reciprocating said lower punch, feeder means mounted for arcuate travel over said curved die table and die, and means for effecting the arcuate travel of said feeder means, said feeder means thus filling said die with said powdered material and leaving a curved top surface on said powdered material prior to compacting between said curved upper and lower punches.

3,098,262
ELASTOMERIC PRODUCT, PROCESS AND APPARATUS
Reuben Wisotzky, Lexington, Mass., assignor to American Biltrite Rubber Co., Inc., Chelsea, Mass., a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,539
4 Claims. (Cl. 18—26)



4. Apparatus of the class described comprising means for supporting and moving in a horizontal path an endless flexible molding band presenting a multiplicity of fine closely-spaced tubular passages opening at substantially right angles into its upper surface and closed on its lower surface and having a greater length than diameter, means for progressively spreading a continuous body of viscous elastomeric resin upon the upper surface of the band, vacuum means for thereafter creating a partial vacuum about a section of the movable band and thereby filling said tubular passages with the said elastomeric resin, and a heater transversely located at a distance from the vacuum means for receiving the band together with its elastomeric body and filled passages after being subjected to vacuum.

3,098,263
APPARATUS FOR MOLDING A BALL AND SOCKET JOINT ASSEMBLY
William B. Campbell, Haddonfield, N.J., assignor, by mesne assignments, to Garlock Inc., Palmyra, N.Y., a corporation of New York
Filed June 22, 1960, Ser. No. 38,058
6 Claims. (Cl. 18—36)



1. Apparatus for making a ball joint assembly comprising a mold including a plurality of sections, one of said sections having a mold cavity shaped to receive a ball stud and a housing surrounding a portion of the ball on the stud, means in said mold cavity for supporting the ball stud in spaced relation with the housing preparatory to receiving a plastic material therebetween, another mold section disposed adjacent said first-named mold section in face to face relation and adapted to maintain a cover in predetermined relation with the housing, said last-named section including spring-biased means for engaging the cover and having an area less than that of the face of said last-named mold section and as great as that of the cover, said spring-biased means having an opening therethrough for passage of the plastic material between said mold sections and into the spacing formed between the ball stud and housing, said spring-biased means being

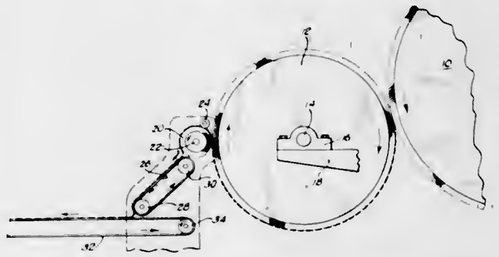
movable within an enclosure formed between said mold sections and permitting the respective faces of said mold sections to be maintained in tight engagement while accommodating assembled covers and housings of the ball joint assembly within a predetermined tolerance.

3,098,264
MULTIPLE SWIFT TEXTILE WASTE TEARING MACHINE
Erich Meinicke, Bruckner Allee 132, Rheydt, Germany
Filed June 23, 1961, Ser. No. 120,467
Claims priority, application Germany June 25, 1960
4 Claims. (Cl. 19—82)



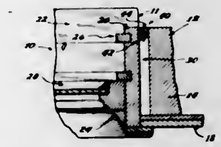
1. A rag or textile-waste tearing machine comprising first and second sequentially disposed means for receiving and tearing fibres from said waste, web-forming means between said first and second means to receive the fibres from said first means and to form the fibres into a web, and inverting means between said web forming means and second means for receiving and inverting the web and delivering the inverted web to said second means for processing by the latter.

3,098,265
METHODS FOR DOFFING AND DRAFTING TEXTILE FIBERS
Frank Kalwaites, Somerville, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Feb. 19, 1960, Ser. No. 9,965
2 Claims. (Cl. 19—106)



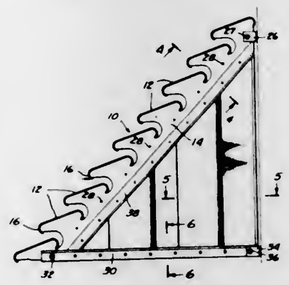
1. A method of doffing a fibrous web from a rotatable surface and substantially simultaneously drafting the same which comprises: carrying a fibrous web on a rotatable surface; transferring said fibrous web from said rotatable surface to a second rotatable surface closely adjacent to but spaced from said first-mentioned rotatable surface, said rotatable surfaces moving in the same direction at the point of closest adjacency with the ratio of the peripheral surface linear velocity of the second rotatable surface to that of the first-mentioned rotatable surface being in the range of from about 1½:1 to about 2½:1, whereby the fibrous web is doffed and substantially simultaneously drafted to become permanently more highly oriented in the long direction and to have its grain weight per square yard permanently reduced; and pressing the transferred fibrous web against the peripheral surface of the second rotatable surface at a point relatively close to the point of transfer of the fibrous web from the first-mentioned rotatable surface to the second rotatable surface to enable the fibrous web to be drafted during its transfer from the first-mentioned rotatable surface and to prevent its return thereto.

3,098,266
CAULKING COMPOUND BACKSTOP FOR WINDOW STRUCTURES
Robert G. Oehmig, 8059 S. Winchester, Chicago, Ill.
Filed June 29, 1961, Ser. No. 120,609
3 Claims. (Cl. 20—11)



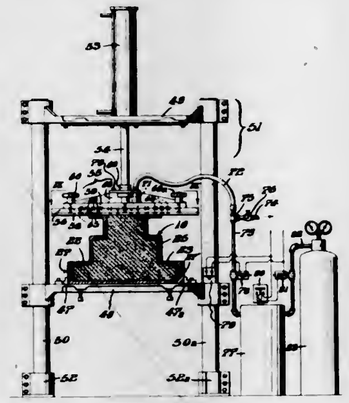
1. A building structure comprising a wall structure formed to define a window opening, a window frame mounted in said opening and including spaced jamb members positioned in said opening to define a tolerance gap between the respective jamb members and the adjacent vertical sides of the window opening, a caulking compound backstop mounted in each of said gaps, said caulking compound backstop each comprising an elongated tubular member formed from resilient material and split lengthwise thereof, with its split edges overlapping to render said elongate member compressible transversely thereof, said members in their free and unstressed conditions having a transverse dimension which respectively require same to be compressed transversely thereof when inserted in the respective gaps, said backstops each being positioned inwardly of the outwardly facing side of the respective gaps, and a caulking compound mass filling said gaps between the respective backstops thereof and the outwardly facing sides of the respective gaps lengthwise of the respective jambs.

3,098,267
VENTILATED METAL AWNING
Ralph K. Dean, Emil J. Slatkovski, and Herman E. Wegner, Riverside, Calif., assignors to National Distillers and Chemical Corporation, a corporation of Virginia
Original application Oct. 3, 1955, Ser. No. 537,942, now Patent No. 3,015,135, dated Jan. 2, 1962. Divided and this application Jan. 25, 1960, Ser. No. 10,013
1 Claim. (Cl. 20—57.5)



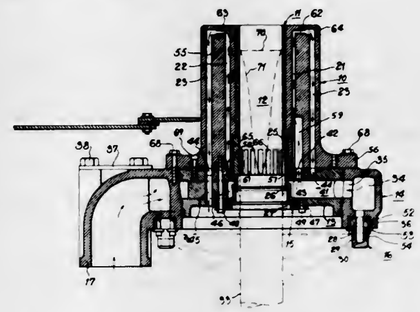
A horizontal panel awning comprising at least two laterally spaced, downwardly inclined stringers attached at their upper ends to a support, each of said stringers being in the form of a generally U-shaped channel of sheet metal having upwardly projecting side walls, the upper edges of said side walls being cut out to provide a plurality of uniformly spaced, parallel panel seats along the length thereof, each of said panel seats comprising a downwardly and outwardly inclined straight portion terminating at opposite ends in downwardly curved, arcuate end portions, the outer end portion of one panel seat overhanging the next lower panel seat and being undercut with a hook-shaped cut-out extending from the bottom of the downwardly curved outer portion of the upper panel seat to the bottom of the downwardly curved inner end portion of the lower panel seat, a plurality of elongated horizontal panels of sheet metal mounted on said panel seats, each of said panels having a flat bottom portion which bears against said straight portion of said panel seat, and downwardly curled side edges which engage said arcuate end portions of said panel seats, said side edges of said panels being sprung over said arcuate end portions of said panel seats and gripping the same with spring tension, said hook-shaped cut-out providing clearance to permit the curled rear edge of the associated panel to be inserted behind and hooked down over the downwardly curved inner end portion of the panel seat, and bracing means holding the outer ends of said stringers.

3,098,268
APPARATUS FOR VACUUM GASSING SAND FORMS
Lothar R. Zifferer, R.D. 3, Glen Rock, Pa.
Filed Feb. 6, 1959, Ser. No. 791,689
14 Claims. (Cl. 22—10)



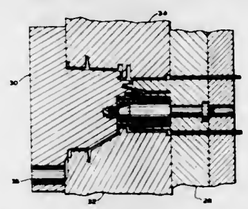
1. In a check vent for a core box adapted for use in curing a sand form the combination which comprises a rigid metal cylinder disposed in an aperture in a wall of said core box and arranged in sealing contact therewith, said cylinder having a transverse barrier provided with a plurality of substantially parallel slotted openings which extend therethrough, said openings being sized to obstruct the passage of sand while permitting the passage of gas therethrough and a flexible disk seated in said aperture adjacent said cylinder and extending across the bore thereof, said disk having a surface arranged for sealing contact at the periphery of said aperture to seal said aperture against the entry of gas into said core box whenever the pressure of gas therewithin is less than atmospheric pressure and to open said aperture to allow the passage of gas out of said core box whenever the pressure of gas therewithin is greater than atmospheric pressure, said disk having a ridge molded upon a surface thereof, a fastener receptacle disposed adjacent said disk and an elongated metal fastener lodged in said ridge of said disk, said fastener extending through at least a part of said disk into said fastener receptacle and retentively engaged therein.

3,098,269
MOLD FOR CONTINUOUS CASTING
Richard Baier, New Brunswick, N.J., assignor to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey
Filed May 9, 1960, Ser. No. 27,930
4 Claims. (Cl. 22—57.2)



1. A mold for continuously casting metal, of the type comprising a metal wall enclosing a mold cavity, a graphite liner fitted in said mold cavity, said metal wall comprising in effect, three sleeve-like zones, namely, an inner zone, an intermediate zone and an outer zone, the metal of said intermediate zone being integral with the adjoining metal of said inner and outer zone, said intermediate zone having a plurality of cooling passages separated by connecting members integrally connecting said inner and outer zones, said cooling passages being close enough together to form a heat barrier between inner and outer zones, said connecting members being close enough together and sufficiently heavy to provide a stiff connection between inner and outer zones, said inner zone, under the temperature of operation, being subject to expansion and plastic deformation, said outer zone being of such strength that, at its lower temperature maintained by the heat barrier of said intermediate zone, it is not plastically deformed by the forces exerted upon it by said inner zone and therefore enables said connecting members to restrict plastic deformation and outward expansion of said inner zone and thus to hold said liner under sufficient compression to maintain a fluid-free, solid-to-solid contact at the interface between metal wall and liner.

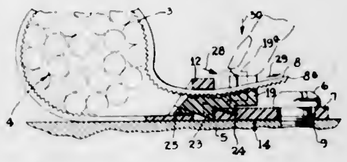
3,098,270
DIE CASTING METHOD AND ARTICLE
Alfred F. Bauer, Toledo, Ohio, assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 18, 1961, Ser. No. 103,867
5 Claims. (Cl. 22—204)



1. A method of making a composite die-cast article having an insert of a metal of higher melting point than the remainder of the casting comprising, heating the insert to a temperature higher than that of a holder therefor, positioning the heated insert over the holder, decreasing the temperature difference between the insert and

the holder to establish a shrink fit between the two over the entire area of the insert subject to die casting pressures, supporting the holder with the insert shrunk thereon relative to other parts of a die so that an outer face of the insert defines a part of the die cavity, closing the die, casting metal of lower melting point than the metal of the insert under elevated die-casting pressure into the die and around the insert, cooling the die-cast metal to cause shrinkage thereof around the insert, removing the solidified casting with the insert united therewith, and the holder from the die, cooling the holder to cause shrinkage thereof away from the insert, withdrawing the holder from the casting, and passing the holder for re-use with another insert for a subsequent casting.

3,098,271
WIRING BINDER
Jack E. Caveney, 10132 S. Washtenaw Ave., Chicago 43, Ill.
Filed Aug. 4, 1959, Ser. No. 831,591
7 Claims. (Cl. 24—16)



4. A wiring binder comprising a flexible strap having a connector at one end, the connector being provided with a surrounding wall defining an opening through which the strap can be passed after being bent into a loop about a bundle of wires, said strap being drawn tight on the bundle by drawing the strap through the opening and shrinking the loop, a check pawl slidable on an incline formed on the bottom portion of the surrounding wall of the connector in the region of the opening, slidable movement of the check pawl up the incline causing the check pawl to engage the strap and press it against said wall and arrest its passage through the opening and slidable movement down the incline causing the check pawl to release the strap and provide clear passage of the strap through the opening, the engaging portions of both the check pawl and the strap having angular teeth to provide a secure grip between them when they are engaged, the slope of the angular teeth being steeper than the slope of the incline to preferentially urge movement of the check pawl on the incline rather than allow slippage between the teeth once they are engaged.

3,098,272
SELF ADHESIVE CLIP AND METHOD
Bruce J. Frye, 1806 Longview Drive, New Brighton, Minn.
Filed Nov. 17, 1961, Ser. No. 152,990
5 Claims. (Cl. 24—67)



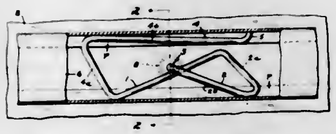
5. A device forming a clip of the type described comprising a body portion formed as an elongated strip of material having one side thereof adhesive to a polished surface, there being a slot partially across said body portion extending therethrough, and means carried by said body portion aligned with said slot and comprising a jaw portion.

3,098,273
CONDUIT RETAINER
Clarence W. Cochran, deceased, late of Belmont, Mass., by Lois Cochran, administratrix, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 60,246
1 Claim. (Cl. 24—73)



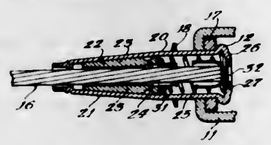
The combination of a wire fastening device, a relatively thin sheet-like support having at least two spaced apertures and a wire or the like, said wire fastening device comprising a one-piece, continuous, relatively thin, flexible strip of molded plastic material having an inner surface contacting said wire, a first end portion of said strip extending through an aperture formed in said support at substantially a right angle to the plane of a portion of the support and having at least one support engaging projection extending from said inner surface and beyond a face plane of said strip and beyond the aperture in the support thereby engaging said support to anchor said first end portion, said strip having a portion extending from said first end portion over the said wire or the like, and said strip also having a second end portion passing through a second aperture in said support at an acute angle to the plane of a portion of the support and having at least two support engaging projections extending from said inner surface, one of said support engaging projections of said second end portion engaging the support adjacent to said second aperture and located at least partially within the aperture while another projection is spaced laterally therefrom on the strip a distance to be free of interference of engagement with the support thereby to provide for an adjusted second engagement of the wire fastening device to the support when desired.

3,098,274
MOLDING FASTENER
Warren L. Trafton, Grosse Pointe, Mich., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Continuation of application Ser. No. 777,942, Dec. 3, 1958. This application May 26, 1961, Ser. No. 116,643
3 Claims. (Cl. 24—73)



3. A one-piece fastener device for securing molding and the like to a support which comprises an elongated yieldable arm portion, a first arm portion secured to one end of said yieldable arm portion in angled relationship therewith forming a bearing portion for engagement with one side of the molding, a molding-engaging bent portion secured to the other end of said yieldable arm portion for engaging the same side of the molding as the formed bearing portion but in laterally spaced relation thereto, a central arm portion secured at one end to the other end of said first arm portion and extending therefrom in inclined relation to and in the general direction of said yieldable arm portion thereby forming a second bearing portion for engaging the opposite side edge of the molding, a third arm portion secured at one end to the other end of said central arm portion and extending away therefrom in angled relationship thereto in a general direction opposite to the direction of said first arm portion, said third arm portion being of a length less than said first arm portion, whereby said yieldable arm portion may be flexed inwardly in a direction toward said third arm portion to maintain the fastener device in tensioned position within the molding, and a fourth arm portion connected at one end to the other end of said third arm portion and extending therefrom in angled relationship therewith in a direction toward said central arm portion thereby forming a third bearing portion for engaging with the same side of the molding as the formed second bearing portion but in laterally spaced relation thereto, the free end of said fourth arm portion being bent over said central arm portion in substantially right angular relationship therewith to form a shank portion, said shank portion adapted to receive means thereon for attaching same to a support.

3,098,275
DEADEND CARTRIDGE
James E. Schweitzer, Melrose Park, Ill., assignor to Reliable Electric Company, Franklin Park, Ill., a corporation of Illinois
Filed Apr. 4, 1961, Ser. No. 100,586
5 Claims. (Cl. 24—126)



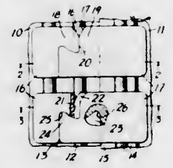
1. In a deadend cartridge having a shell, and a tapered jaw assembly and spring located within said shell, said shell being tapered at one end for cooperation with said tapered jaw assembly and having at the other end a spring abutment, the combination of a pilot device surrounded by said spring and comprising a mounting ring and a cup releasably secured to each other, said ring having a portion which is received between the rear end of said jaw assembly and the front end of said spring for maintaining said pilot device in a position where it will be engaged by the leading end of a conductor as it is being threaded through said cartridge, the engagement of said cup by said conductor end serving to separate said cup from said ring so that said cup will move longitudinally with said conductor and serve as a shield for the leading end thereof as said conductor is pushed through said cartridge.

3,098,276
SLIDE-FASTENERS
Paul Rechsteiner, Herisau, Switzerland, assignor to Zelzer & Co., Vienna, Austria
Filed Sept. 11, 1958, Ser. No. 760,352
Claims priority application Switzerland Sept. 12, 1957
4 Claims. (Cl. 24—201)



1. A slide fastener of two parts of identical cross section reversed with respect to each other, each having a flexible coextensive tape-like extension, and comprising two portions, one of said portions comprising a body forming a hook portion to closely engage and hook into the corresponding hook portion of the other said part of the slide fastener, the faces of said hooks engaging in a plane normal to the plane of said extensions, and the other of said portions comprising a cover portion, the body of the hook portion lying principally to one side of the central plane of said extension and provided with a shoulder adjacent said extension, and the cover portion lying entirely to the other side of the side plane, the cover portion of each part closely encompassing the body of the hook portion of the other said part and engaging the shoulder of the body of the hook portion of said other part at a distance from the engaging surfaces of the hooks toward the flexible coextensive tape-like extension of the last-mentioned part, said cover portions being transversely grooved to provide greater longitudinal flexibility.

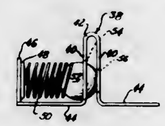
3,098,277
ONE-SIDED SEPARABLE FASTENER
Louis H. Morin, 125 Beechwood Ave., Bronx, N.Y.
Filed Apr. 21, 1961, Ser. No. 104,738
10 Claims. (Cl. 24—205.1)



1. A one-sided separable fastener comprising a pair of stringer tapes, each tape having bead means projecting on one surface and spaced from one edge thereof, scoops fixed to said surface of the tapes, the scoops of one stringer being directly opposed to the scoops of the opposed stringers when said stringers are coupled together, the scoops of each stringer having at coupling end portions thereof projecting hook-shaped coupling members operatively engaging sockets in the scoops of a companion stringer in coupling the stringers together, the scoops of at least one stringer having a wear shelf, over which the coupling members of the scoops of the opposed stringer ride in coupling and uncoupling said stringers, said shelf having a wear surface superimposed but spaced from and parallel to the surface of the tape to which the scoops are attached, and the longitudinal parting line of said scoops spaced transversely of said stringer tapes from the longitudinal parting line of said tapes

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3,098,278
HOLDER CONSTRUCTION
Henry L. Cerniak, Westchester, Ill., assignor to Wilbert W. Haase Co., Broadview, Ill., a corporation of Illinois
Filed Oct. 16, 1961, Ser. No. 145,230
8 Claims. (Cl. 25—130)



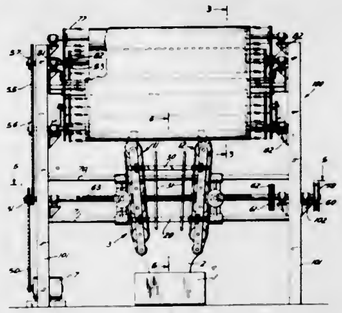
1. In a holder of the type described, a U-shaped main body having opposed apertured walls, said walls being joined by a connecting bight, a flange portion formed integrally with and disposed outwardly at substantially right angles to an end portion of one of said wall portions, a base portion connected to said flange portion disposed substantially parallel to said wall portions, a raised lip portion formed on the base portion surface disposed to-

ward said wall apertures and in substantial alignment therewith, a coil spring mounted on said base portion raised lip, ball means partially disposed in both apertures of said wall portions, at least one of said apertures being of insufficient cross-sectional dimensions to permit passage of said ball therethrough, one end limit of said coil spring urging said ball means into said wall apertures; said base portion raised lip preventing lateral movement of said spring relative to said base.

3,098,279
APPARATUS FOR PROVIDING A FINISHED KNITTED FABRIC WITH PREDETERMINED DIMENSIONS

Robert Brunner, 165 Dachslern Strasse, Zurich, Switzerland

Filed July 22, 1960, Ser. No. 44,788
Claims priority, application Switzerland Jan. 24, 1957
5 Claims. (Cl. 26—18.5)



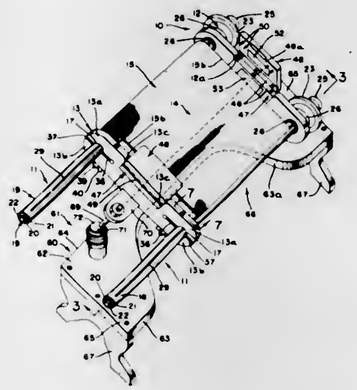
1. In an apparatus for manufacturing a finished knitted tubular fabric which is shrink-proof, in combination, an expansion form adapted to be located within a tube of unfinished knitted fabric for transversely expanding the same; moving means cooperating with said form for moving a tube of fabric in which the form is located longitudinally along said form so that the fabric is transversely expanded while it moves along said form; a pair of band means adjacent said form for receiving the tube of fabric therefrom and for transporting the fabric from said form, said pair of band means engaging each other and gripping the tube of fabric therebetween to prevent longitudinal contraction of the tube of fabric; means cooperating with a portion of one of said band means for locating said portion thereof at a predetermined distance from an opposite portion of the other of said band means to provide a predetermined gap between said portions of said pair of band means, respectively, in which the tube of fabric is capable of contracting transversely in a controlled manner while being longitudinally transported by said pair of band means; fixing means located along the path through which said pair of band means move the tube of fabric for fixing the latter to prevent further changes in the loops of the knitted fabric after the fabric moves beyond said fixing means; and finishing means located along said path through which said pair of band means moves the tube of fabric after said fixing means for finishing the fabric after it is moved beyond said fixing means by said pair of band means.

3,098,280
ART NEEDLEWORK FRAME

Ida M. Harris and Jack J. Harris, both of 20755 Donnybrook Road, Maple Heights, Ohio

Filed Jan. 15, 1962, Ser. No. 166,121
21 Claims. (Cl. 28—15)

1. Needlepoint apparatus comprising a frame for supporting material to be worked on in a working zone of the frame, said frame including spaced apart substantially parallel reels at opposite ends of the zone for holding opposite ends of the material and cross members extending transversely of and rotatably supporting the reels and defining sides of the working zone, one of said cross members being axially movable relative to the reels whereby the width of the zone can be adjusted to accommodate materials of different widths, means on the one of said cross members to lock said reels against rotation and said one cross member against movement axially of the reels, a base for said frame including a top member and legs extending downwardly therefrom, said top member having sides and ends and a recess extending from one of said sides toward the other side, and connector means adapted to support said frame in a working location spaced above said base, said connector means being secured to said top member adjacent an end thereof and to one of said cross members, the space between the frame and top member being otherwise unobstructed, the working zone of said frame overlying said recess when said frame is in the working location, whereby said recess facilitates working adjacent the underside of material in said working zone, said connector means including a pivotable joint for adjusting the position of said frame in the working location.



3,098,281
BRAIDED RUG

Harry Flitterman, 507 N. Foothill Road, Beverly Hills, Calif.

Filed May 1, 1961, Ser. No. 106,566
10 Claims. (Cl. 28—78)

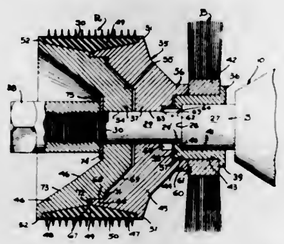


2. A braiding strip for use with similar strips to form a braid adapted to be looped into a covering article comprising: a strip of textile material having its original edges return bent toward each other and secured together and to the strip to present curved edges on the strip at the wearing surface of the article, said original strip edges being secured together and to the main body of the strip to form substantially a flattened tube.

3,098,282
COMBINED RASP AND BRUSH MOUNT

Elmer Wesley Robertson, Berkeley, Calif., assignor, by mesne assignments, to Elrick Industries, Inc., Oakland, Calif.

Filed Feb. 13, 1961, Ser. No. 88,847
5 Claims. (Cl. 29—78)

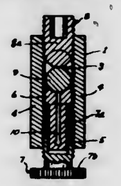


1. For an arbor shaft of a length to support a single buffing drum or the like, said shaft having an enlarged base end providing an abutment shoulder for such buffing drum and a threaded end spaced from said shoulder a distance accommodating one such buffing drum; a dual mount for a rasp band and a brush block comprising an adapter mounted on said enlarged base to receive and support said brush block and having a shoulder flange spaced inwardly of the shoulder on said shaft to limit inward movement of said brush block, and split drums providing spaced diverging half rim peripheries, a resilient pad on said diverging half rims having said rasp band circumscribing the same, said pad being expandable upon movement of said diverging half rims toward each other, each said split drum having an inwardly offset hub portion of combined length to fit upon said shaft between the threaded end of the latter and said adapter with the hub portion of the inner one of said split drums engaging said brush block, and a retaining nut on the threaded end of said shaft for urging said split drums together for expanding said pad against said rasp band and for simultaneously clamping said brush block between the hub of said innermost split drum and said shoulder flange on said adapter.

3,098,283
SELF-CENTERING TOOL HOLDER

John H. Blomstrand, Minneapolis, Minn., assignor of one-half to Frederick W. Nyquist, St. Paul, Minn.

Filed Aug. 8, 1960, Ser. No. 48,009
2 Claims. (Cl. 29—96)

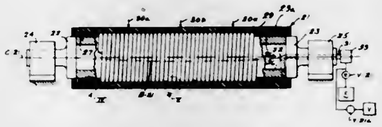


1. A tool holder comprising, a body terminating in a mounting member at one end and a slotted opening at the other end, said slotted opening being bounded by a pair of confronting side walls and a pair of confronting end walls, an abutting means threadably advanceable through one of said pair of confronting end walls and terminating within said slotted opening, a bifurcated V-block wedge means positioned in said slotted opening and adapted to have a tool held between it and said abutting means, means for advancing said bifurcated V-block wedge means toward, and for retracting away from, said abutting means along an axis parallel to that of said abutting means, said bifurcated V-block wedge means having sides positioned in slidable relation with said confronting side walls, such that when a tool is positioned between said bifurcated V-block wedging means and said abutting means, and said abutting means is advanced into pressing engagement with said tool, said bifurcated V-block wedge means will spread outwardly and frictionally bear against said side walls.

3,098,284
ROLL SUBJECT TO DEFLECTION

Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Aug. 22, 1961, Ser. No. 133,150
3 Claims. (Cl. 29—113)

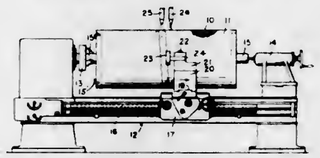


1. A roll whose axis is subject to deflection in response to a load applied to the roll, said roll comprising a supporting generally cylindrical body, an expansible hose of generally uniform cross-sectional area wrapped helically about the outer surface of said body to present an outer surface of substantially uniform peripheral dimension when the hose is in unexpanded form, cover means surrounding the outer periphery of the hose and presenting an operating roll surface, said hose having a central fluid pressure receiving passageway of substantially greater peripheral dimension at the central region of the roll than at the roll ends, and means for selectively introducing fluid under pressure into said hose means to effect relatively greater expansion of said hose in the central region of said roll and withdrawing fluid from said hose means to effect maintenance of a smaller outer peripheral dimension of the roll at the central region of the roll.

3,098,285
METHOD FOR INTIMATELY SHEATHING FOUNDATION BODIES WITH SHEET METAL JACKETS

Matthias Kelzenberg, incompetent, Duren-Rolsdorf, Rhineland, Germany, by Josef Maubach, guardian, Koenenstrasse 1, Duren, Rhineland, Germany

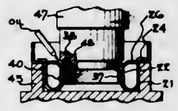
Filed May 2, 1960, Ser. No. 25,993
5 Claims. (Cl. 29—148.4)



1. A method of applying a thin-walled metallic jacket to a relatively thick-walled substantially cylindrical foundation body comprising: applying said thin-walled jacket telescopically over said foundation body, supporting the telescoped jacket and foundation body for rotation in unison and rotating the jacket and foundation body in unison, applying heat to soften said jacket progressively along a continuous spiral path around the periphery of said jacket, engaging the periphery of the jacket while the same is rotating with a forming-element and applying inward radial pressure to the jacket progressively along said spiral path in trailing relation to the heating of said jacket while the path is still heated thereby deforming the jacket into intimate contact with said foundation body and elongating the jacket only in the direction of the advancing spiral path of the inwardly

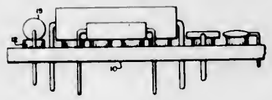
applied pressure, and then cooling said jacket along the same spiral path in trailing relation to the forming of the jacket to shrink the jacket into more intimate contact with the foundation body, and continuing the process until the jacket is secured to the foundation body along substantially the entire coextensive length of the jacket and foundation body.

3,098,286
BEARING FOR WINDOW SHADE ROLLER
James A. Anderson, Jacob A. Ash, and Sterling S. Bushnell, Jr., Muskegon, Mich., assignors to Breneman-Hartshorn, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 18, 1960, Ser. No. 22,901
8 Claims. (Cl. 29—149.5)



1. In a window shade, the method of forming a bearing for a cup assembly comprising the steps of forming a stick cup having a cup shaped portion and an aperture through which a tang passes, inserting a nylon sleeve in said cup to project through said aperture, spinning said sleeve against the internal contour of said stick cup, applying oil to the internal surface of said sleeve during said spinning step so that the heat and pressure of the spinning operation will impregnate said bearing with oil, and spinning said sleeve over the bottom of said cup.

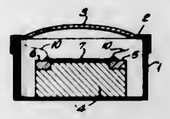
3,098,287
METHOD OF ASSEMBLING COMPONENTS ON PRINTED WIRING BOARDS
Walter H. Buchsbaum, Bellerose, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed July 22, 1958, Ser. No. 750,192
1 Claim. (Cl. 29—155.5)



A method of assembling components on printed wiring boards whereby the components are spaced away from the board, comprising: the step of depositing material through apertures in a mask onto the areas in which the components are to be mounted and to a depth effectively equal to the thickness of the desired spacing on the component side of the board; the step of mounting the components on the board so that the components rest against said material; and the step of removing said material after the components have been mounted.

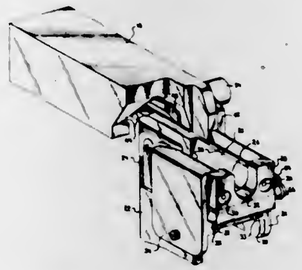
3,098,288
METHOD OF FABRICATION OF AIR-BACKED THERMISTOR BOLOMETER
Robert C. Jones, Cambridge, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application Oct. 18, 1957, Ser. No. 691,115, now Patent No. 2,986,034, dated May 30, 1961. Divided and this application Nov. 10, 1960, Ser. No. 75,043
4 Claims. (Cl. 29—155.69)

1. The method of fabricating a bolometric thermistor which comprises, fastening one end of a thermistor element to a face of an individual electrically insulating block and fastening the other end of said element to the face of another electrically insulating block, securing said blocks with attached thermistor element, while the blocks are separated from one another, to a supporting metallic base with said thermistor element parallel to and in close



proximity to, but spaced slightly from a face of said base, attaching electrical circuit connections to the ends of said element, then enclosing the base with the thermistor element mounted thereon in a closed housing, and replacing substantially all of the air with an inert gas at low pressure.

3,098,289
CONNECTOR ASSEMBLING TOOL
Henry W. Demler, Lebanon, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed July 20, 1960, Ser. No. 44,199
8 Claims. (Cl. 29—203)



1. A tool for axially moving two mating parts of an electrical connector into engagement with each other comprising, a track portion and a nest portion, said track portion having a track therein for guiding a first part of said connector towards said nest portion; said nest portion having a recess for holding a second part of said connector, said recess and said track portion being in substantial alignment with, but axially offset from, each other, whereby upon movement of said first connector part along said track portion, said first part is moved into engagement with said second part, resilient means for moving said first part along said track, and a stop in said track portion for retaining said first part against movement, said first connector part being disengageable from said stop to permit movement of said first part.

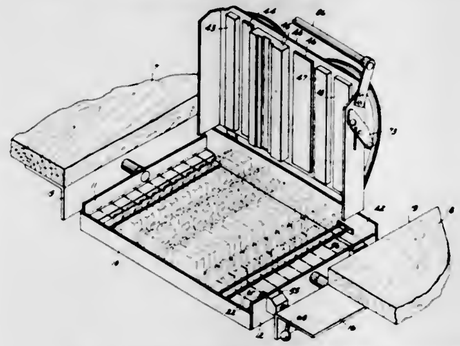
3,098,290
METHOD OF EXPANDING PASSAGEWAY PANEL ON ONE SIDE
Jesse B. Thomas and James A. Hall, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Apr. 27, 1954, Ser. No. 425,926
8 Claims. (Cl. 29—157.3)

1. A method of expanding an unexpanded pressure welded passageway panel on one side comprising: clamping the unexpanded passageway panel between a pair of opposed rigid platens with a yieldable blanket interposed between one face of the panel and the adjacent platen and with the other face of the panel engaged in face-to-face engagement with the other platen; and, while holding said panel and blanket in a clamped condition, subjecting the panel passageway system to an internal expansion pressure



to expand said one face of the panel into the adjacent blanket.

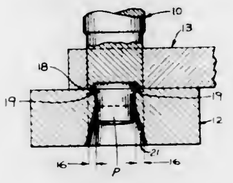
3,098,291
APPARATUS FOR ASSEMBLING ARTICLES
Albert L. Pizzi, Union, and Samuel Zolner, Cranford, N.J., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed Dec. 1, 1960, Ser. No. 73,105
7 Claims. (Cl. 29—203)



1. An apparatus for assembling electrical components on mounting plates comprising a hollow carriage with an open bottom, having parallel flange structures extending inwardly from end members of the carriage to support ends of mounting plates having apertures therein short of the ends for terminals of components and for securing means, and an open top through which the carriage may be loaded with the ends of the mounting plates disposed on the flange structures and positioned perpendicular thereto and the components placed in upside-down order in their respective positions on the mounting plates, parallel supporting members mounted at fixed positions, aligned spindles mounted at fixed positions on the supporting members, means mounted on the spindles and fixed to the end members to rotatably support the carriage for movement on the spindles between a loading position and a securing position, means movably mounted on the carriage actuable to hold the components and mounting plates in the carriage, a lock mounted at a fixed position on one of the supporting members, and spaced units mounted on the carriage and having apertures for respectively interengaging the lock when the carriage is in its loading and securing positions so that the lock will releasably hold the carriage successively in said positions.

3,098,292
METHOD AND APPARATUS FOR FORMING GENERALLY CYLINDRICAL PARTS FROM THICK METAL STOCK
Hugo Bunk, Sylvania, Ohio, assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 2, 1959, Ser. No. 837,627
3 Claims. (Cl. 29—412)

3. A method of producing a plurality of generally cylindrical articles from deformable sheet stock, said articles being of a uniform, predetermined diameter throughout their lengths, said method comprising: supporting the sheet stock parallel to a planar die face, severing a first cylindrical part having a diameter greater than the predetermined diameter from said sheet stock by moving a circular cutting edge having a diameter greater than said predetermined diameter through said sheet stock and toward the die face, simultaneously reducing the diameter of a first portion of said part remote from said sheet stock and said cutting edge to said predetermined diameter by forcing said first portion through a flared opening at the die face and directly into a cylindrical restriction having a diameter substantially equal to



said predetermined diameter, while leaving a second portion of said first part toward said cutting edge projecting out of the opening and above the die face, moving said sheet stock parallel to the die face, severing a second cylindrical part from said sheet stock near a cavity left by said first part by moving the circular cutting edge through said sheet stock and into contact with the die face, at the same time causing a first portion of said second part to engage the second portion of said first part to push the remainder of said first part completely through said restriction, and reducing the diameter of the first portion of said second part by forcing the first portion of said second part into the cylindrical restriction.

3,098,293
DISPERSION HARDENING OF LEAD
Denis Keith Ebdon, Harlow, England, assignor to Associated Electrical Industries Limited, London, England, a British company
No Drawing. Filed Nov. 25, 1960, Ser. No. 71,410
Claims priority, application Great Britain Dec. 1, 1959
3 Claims. (Cl. 29—528)

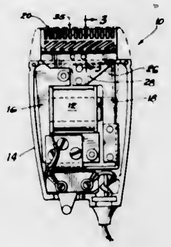
1. A method of producing hardened lead alloy which comprises removing the lead oxide coating from a mass of lead particles by means of a solvent, coating the particles with one metal of the group consisting of copper and silver by chemical deposition, thereafter extruding the lead particles cold through a die to form a piece of lead alloy of predetermined cross-section, and then rolling this extruded piece of lead alloy along and across the direction of extrusion to form a thin sheet.

3,098,294
LUBRICANT FOR METAL FORMING PROCESS
Arthur M. Shapiro, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
No Drawing. Filed Nov. 30, 1960, Ser. No. 72,809
3 Claims. (Cl. 29—528)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a process of cold drawing a small article from a draw piece made of a metal selected from the group consisting of 70–30 brass, 80–20 brass, and mild steel, the steps comprising immersing the metal to be cold drawn in an aqueous solution of about 1 to 2% sodium behenate soap, said solution being maintained at a temperature between about 150 to 200° F., permitting said immersed metal to remain submerged in said heated solution for a period ranging between about 3 to 5 minutes, removing said immersed metal from the heated solution

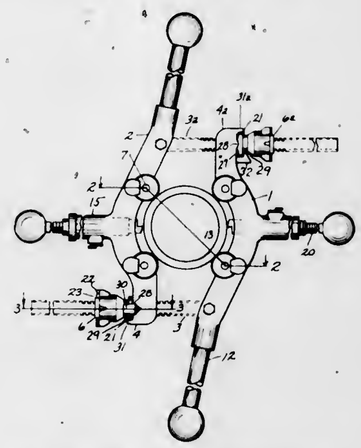
and cold drawing said removed metal into a small article while flooding with said heated solution.

3,098,295
BLADE FOR A DRY SHAVER
John F. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois
Filed Feb. 19, 1960, Ser. No. 9,991
3 Claims. (Cl. 30—43)



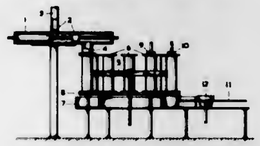
1. A blade for an electric shaver including a metal portion having a cutting region arcuate in cross section and a base portion, said base portion having a lower part, an upper part and a neck connecting said parts, a boss on each side of said neck, said metal portion having cooperating notches in which the bosses are received, at least a portion of said metal portion having resilience and flexibility to provide the transition necessary to permit the cutting region of the blade to move in a straight path while the base portion is moved along an arcuate path.

3,098,296
PIPE CUTTER
Thorvald Petersen, Erie, Pa., assignor to Reed Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed May 31, 1962, Ser. No. 199,081
3 Claims. (Cl. 30—95)



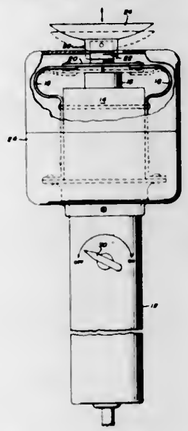
1. A cutter for pipe comprising a plurality of wheels spaced about the axis of the pipe, each wheel having a tread wide enough to ride on the outer surface of the pipe without substantial penetration, two frame sections respectively on opposite sides of the axis of the pipe with the ends of the frame sections opposite each other, a link connecting the ends of the frame sections opposite each other, each link being connected to one of the opposite ends of the frame sections and having a threaded end projecting through the other of the opposite ends of the frame sections, a nut screwed on the projecting end of the link, a socket slidably and non rotatably receiving the nut and bearing on said other of the opposite ends of the frame sections, a coil spring within the socket surrounding the nut, opposed shoulders on the socket and nut engaging the ends of the spring and forming a thrust transmitting connection from the nut through the spring to said other of the opposite ends of the frame sections, a cutting tool on at least one frame section in a plane perpendicular to the axis of the pipe, and means for advancing the tool into the pipe.

3,098,297
CHEESE MOLD ASSEMBLY
Geert de Boer, Lippenhuizen, Netherlands, assignor to N.V. Volma, Gorredijk, Netherlands, a corporation of the Netherlands
Filed Nov. 2, 1959, Ser. No. 850,380
Claims priority, application Netherlands Nov. 19, 1958
7 Claims. (Cl. 31—44)



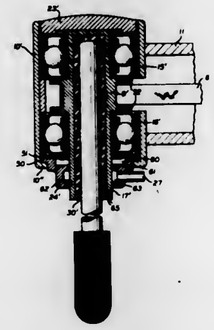
1. Apparatus for automatically filling cheese molds with metered quantities of curd in non-fluid condition comprising a sieve cylinder, means for delivering a mass consisting of curd and whey in metered quantities to the sieve cylinder, a plunger working in the sieve cylinder to compress the mass while the whey flows off from the sieve cylinder, said sieve cylinder having a lower open end, means closing off said end as the mass is being compressed, a cheese mold registerable with the lower end and receiving the compressed curd when said last-named means is removed to expose said lower end of the sieve cylinder with the compressed curd being forced into the cheese mold by the plunger.

3,098,298
DENTAL PROCESS AND APPARATUS
Albert R. Cerveris, 733 Washington Road, Pittsburgh, Pa.
Filed Jan. 25, 1960, Ser. No. 5,088
7 Claims. (Cl. 32—19)



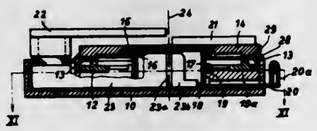
1. A process for accurately recording the contacts of upper and lower teeth when the mandible is disposed in centric relation, said process including the steps of disposing a recording substance on an occlusal surface of the teeth and applying to the mandible from its rest position an intermittent elevating force at a frequency within about the range of 40 to 150 cycles per second, said force raising the mandible up to a point at which tooth contact is first made.

3,098,299
DRILLING INSTRUMENT
Richard W. Page, 307 Quaker Road, Chappaqua, N.Y.
Filed Aug. 12, 1957, Ser. No. 677,669
4 Claims. (Cl. 32—27)



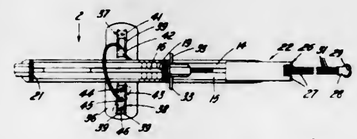
1. A dental drilling instrument comprising a casing structure, a tubular shaft having one end adapted to receive a drill shank, bearings supported in the casing structure and, in turn, rotatably supporting the tubular shaft, and closure means around the drill shank receiving end of the shaft, the said closure means comprising a washer plate supported in the casing structure adjacent the bearings and closely fitting around the said shaft, means defining a grease chamber adjacent the said washer plate and outwardly thereof, means outwardly of the grease chamber defining an air chamber and including an outer closure member for the air chamber fitting around the shaft with clearance, and means for supplying air under pressure to the air chamber for maintaining a current of air out through the space between the last said member and the tubular shaft during operation of the drill and thereby preventing the entry into the casing of water and gritty material.

3,098,300
ANGLE MEASURING INSTRUMENT
Gustav Zieher, Aalen, Germany, assignor to Carl Zeiss, Wurttemberg, Germany, a firm
Filed Apr. 21, 1959, Ser. No. 807,943
Claims priority, application Germany Apr. 22, 1958
5 Claims. (Cl. 33—1)



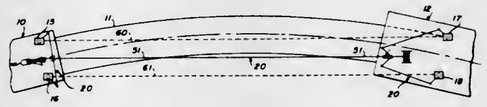
1. In an angle measuring instrument, means defining a supporting base, first gear means secured to said base in horizontal position having a plane upper side provided with an annular series of substantially radially extending teeth thereon, second gear means disposed concentrically above said first gear means and having a plane lower side provided with an annular series of teeth thereon adapted to mesh with the teeth of said first gear means, at least one of said gear means having a horizontal circular undercut removing a portion of the bottom walls of the horizontal radial grooves formed between said radial teeth so as to render the undercut gear teeth flexible, and means including threadedly engaged members arranged within said supporting base connected with said second gear means for raising it out of mesh with said first gear means to a position where it is freely rotative about its axis.

3,098,301
APPARATUS FOR MEASURING FEET FOR BOOTS, SHOES AND OTHER FOOTWEAR
William Gordon Simpson, 15 Glemsford Drive, Harpenden, England
Filed Oct. 2, 1961, Ser. No. 142,048
Claims priority, application Great Britain Oct. 3, 1960
8 Claims. (Cl. 33—3)



1. Apparatus for measuring feet for boots, shoes or other footwear comprising a carrier having a scale to show the size of the footwear required, a fitment on the carrier at one end of the scale to be engaged by the heel of a foot being measured, a slider unit mounted for sliding movement on the carrier towards and away from the fitment and comprising a pallet to engage the toe, and a girth band forming an open loop over the foot-receiving-space between the fitment and the slider to fit over the foot, said band being carried at one position in its length by the carrier, being carried at another position in its length by the slider unit and being guided so that movement of the slider unit causes variation in the peripheral length of the open loop formed by the girth band.

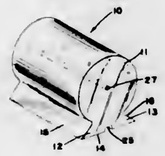
3,098,302
MOUNTING MEANS FOR INFRA-RED TRANSMITTERS AND RECEIVERS
John Kenneth Stewart, Dorval, Quebec, Canada, assignor to Canada Iron Foundries, Limited, Montreal, Quebec, Canada
Filed June 30, 1961, Ser. No. 121,079
7 Claims. (Cl. 33—46)



1. In a railroad track surveying device, a first carriage adapted for movement in a railroad track, high frequency beam transmitter means pivotally mounted on said first carriage; a second carriage adapted for movement on the railroad track and normally spaced from said first carriage; high frequency beam receiver means pivotally mounted on said second carriage and adapted to receive the transmitter beam from said transmitter means; and linkage means between said transmitter means and said receiver means adapted to maintain the transmitter means and the receiver means in substantial alignment with respect to each other, said linkage means including a flexible

link substantially spanning the distance between the carriages.

3,098,303
FLUORESCENT GUN SIGHT
Leonard N. Plisk, Hilton, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Dec. 11, 1961, Ser. No. 158,350
2 Claims. (Cl. 33—52)



1. A gun sight having in combination an elongated plastic block,

a pair of substantially flat optical surfaces formed on two opposite ends of said block,

said block being formed of transparent material,

a cylindrical wall formed in said block so as to define an opening connecting said optical surfaces,

a cylindrical light diffusing and transparent element formed of fluorescent material, said element being coextensive with and fitted to said wall so as to provide a luminescent directional sighting means extending between said optical surfaces,

a pair of substantially flat optical surfaces formed on the terminal ends of said element substantially coplanar with the first pair of optical surfaces, and

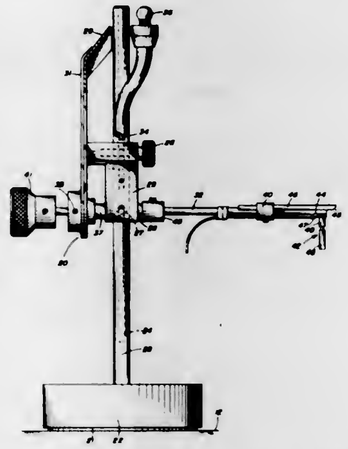
means for mounting said block so that said element is aligned with the barrel of a gun on which it is mounted.

3,098,304
COMPASS
Harlan N. Harris, 1850 N. Avenue 51, Los Angeles, Calif.
Filed Apr. 5, 1961, Ser. No. 101,016
5 Claims. (Cl. 33—154)



1. A compass, comprising: a pair of leg members; hinge means connecting said members at corresponding ends for swinging movements; an adjustable articulate connection between points on said legs spaced from said hinge means for varying the angular relationship of said legs, said hinge means being relatively movable towards said connection as the angular relationship of said legs is increased; and a part carried by said hinge means for abutment with said connection to limit the maximum angular separation of said legs.

3,098,305
ELECTRIC ANGLE CHECKING GAGE
Richard P. Anderson, Danvers, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 29, 1961, Ser. No. 134,780
9 Claims. (Cl. 33—174)

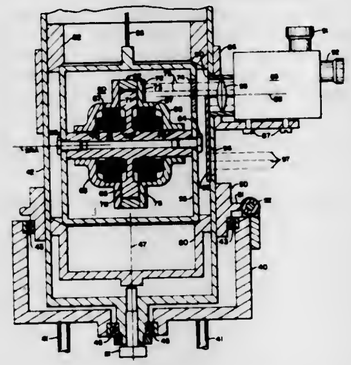


1. An apparatus for checking the chord angle of a compressor stator vane after being mounted on the stator assembly, said apparatus comprising a base, a shaft vertically mounted on said base, support means mounted on said shaft, angular measuring means mounted on said support means for indicating the chord angle, a boom perpendicularly extending from said support means, electrical contact means consisting of two conducting portions with an insulating material therebetween, said contact means attached to the extreme outer end of said boom, an electrical circuit comprising a battery, a pair of lead wires connected to said battery, an indicating light and said electrical contact means, the components of said electrical circuit being connected in series, said electrical circuit being completed when contact is made with both edges of the blade being checked by the conducting portions of said contact means whereby said indicating light is energized and said angular measuring means may be observed and recorded.

3,098,306
GYROCOMPASS
Henry A. Dinter, Jr., Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 29, 1961, Ser. No. 120,559
8 Claims. (Cl. 33—226)

1. A north-seeking gyroscope comprising: a mounting element; a casing element, said casing element being mounted upon said mounting element for rotation about a first axis perpendicular to the earth's surface; a gimbal element, said gimbal element pendulously suspended within said casing element for rotation about said first axis; an air-bearing spin motor including a rotor element mounted within said gimbal element for rotation about a second axis perpendicular to said first axis, said axis of said rotor element oscillating about the true north direction upon rotation of said rotor element, said oscillation being about said first axis, said rotor element having a reflecting surface perpendicular to said second axis; autocollimator means rigidly attached to said casing means, said autocollimator means having an optical axis perpendicular to said first axis, said autocollimator means

projecting an image along said optical axis; a readout mirror rigidly attached to said casing means and positioned so as to reflect a first image back to said autocollimator means, said surface reflecting a second image back to said autocollimator means when said optical axis is perpendicular to said surface; and means for rotating



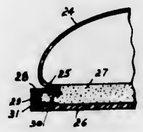
said casing element about said first axis so as to continuously maintain said optical axis perpendicular to said surface, said autocollimator means transferring the information of the direction of said axis of said rotor element from said surface to said readout mirror so as to provide a primary indication of the true north direction.

3,098,307
LANGUAGE INSTRUCTION APPARATUS
Stephen A. Caldwell, Jr., Baton Rouge, La., assignor to Acoustron Corporation, Houston, Tex., a corporation of Texas
Filed Sept. 1, 1961, Ser. No. 135,631
7 Claims. (Cl. 35—35)



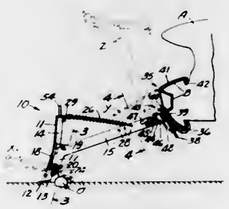
1. Apparatus for language instruction adapted to permit a student to hear instructional signals and the student's acoustic response thereto comprising means for producing an electrical instructional signal, a student's head set adapted to be worn by the student and having a pair of transducer earphones, means for coupling the electrical instructional signal to the transducer earphones of the student head set for activating the latter to produce acoustical signals corresponding to said electrical instructional signals, sound propagating tube means mounted on said transducer earphones having a sound entrance opening to be positioned adjacent the student's mouth and sound exit openings immediately inwardly of said transducer earphones in the zone between the latter and the student's ear canals for propagating the student's acoustic response to the instructional signals directly to said zone.

3,098,308
FOOTWEAR HAVING AN OUTSOLE OF ELASTOMERIC MATERIAL CURED DIRECTLY TO THE SOLE
Anton Liebscher, Ernest E. Rollman, and Andrew S. Szerenyi, Waynesville, N.C., assignors to Ro-Search, Inc., Waynesville, N.C.
Filed Aug. 15, 1957, Ser. No. 678,412
2 Claims. (Cl. 36—14)



1. Footwear comprising an upper, a outsole of thin moldable non-porous rubber material having a substantially flat portion constituting the wear surface of the footwear and an integral upstanding rim extending around the periphery thereof, and a filler of porous rubber material between the bottom portion of said outsole and upper formed integrally with said outsole and secured to said upper, said rim being molded and vulcanized in situ around said filler and directly to said upper for securing said outsole to said upper.

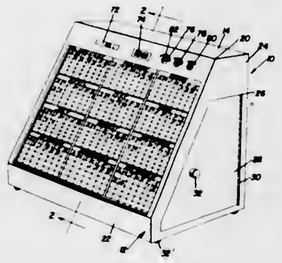
3,098,309
SNOWPLOW ATTACHMENT FOR AUTOMOBILES
John E. Koch, 5549 York Ave. S., Minneapolis, Minn.
Filed Mar. 15, 1961, Ser. No. 95,862
4 Claims. (Cl. 37—42)



1. A snowplow attachable to the bumper of an automobile, comprising an elongate snow-pushing moldboard normally extending along the ground in a substantially upright position in front of the automobile, the moldboard having a ground-engaging edge and an upper portion, a pair of parallel and rigid plow-pushing arms extending in a forwardly and downwardly inclined direction toward the moldboard, said arms having front and rear ends, means removably attaching the rear ends of the arms to an automobile bumper, the front ends of said arms being bar-shaped and oriented in a vertical plane, and said front ends being bent downwardly to define elongate moldboard-engaging edges bearing against the moldboard, pivot means below the front ends of said arms and adjustably attaching the front ends of the arms to the moldboard at spaced positions longitudinally along the moldboard and for swinging movement about upright and substantially horizontal axes extending generally parallel to the moldboard whereby to permit the moldboard to swing downwardly when the lower edge of the moldboard encounters an obstruction and to permit the arms to be folded against the moldboard when removed from the automobile, elongate springs above the arms and extending therealong, said springs having opposite ends anchored on the arms and on the upper portion of the moldboard respectively for returning the moldboard to upright position after having been swung downwardly, the moldboard having a pair of rigid plates thereon and having a plurality of rearwardly projecting rigid arm-guiding and retain-

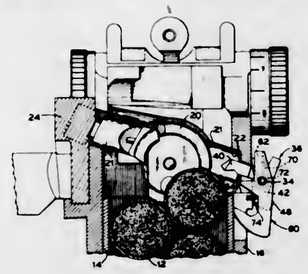
ing lugs in spaced side by side relation with each other and affixed to said plates adjacent each of the arms and receiving said edges of the arms therebetween to maintain the front end of said arms in predetermined relation with the moldboard and to cause the moldboard to return to a preset position each time the moldboard is swung upwardly after having been swung downwardly by an obstruction.

3,098,310
PERPETUAL CALENDAR WITH BUILT-IN TABULATOR
Sam F. Elwood, P.O. Box 2612, Sacramento 12, Calif.
Filed Nov. 15, 1961, Ser. No. 152,527
7 Claims. (Cl. 40—107)



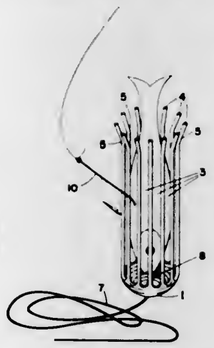
1. A perpetual calendar machine comprising a hollow casing having an inclined front wall, said front wall including a generally rectangular recessed portion covering the major portion of the surface thereof for receiving calendar cards, spring means mounted in the front wall for engaging the bottom edge of the calendar cards for retaining the calendar cards in position, and means for ejecting the cards from the recess portion of the front wall, said spring means for retaining the calendar card in position including a spring clip having a rounded edge engaging substantially the entire length of the bottom edge of the calendar card, means mounting the clip from the interior of the casing.

3,098,311
BOLT STOP FOR SEMIAUTOMATIC FIREARM
Giulio V. Savioli, Westfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 27, 1962, Ser. No. 176,164
6 Claims. (Cl. 42—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a firearm having a slidable bolt disposed for longitudinal reciprocation between battery and recoil positions, a releasable magazine for holding a vertical stack of cartridges, and a spring-biased follower in the magazine for successively lifting the uppermost cartridge in the stack into the path of the bolt upon movement thereof into recoil position, the improvement of means for retaining the bolt in the recoil position independently of the magazine comprising in combination, a bolt stop pivoted below the longitudinal path of the bolt and adjacent the recoil position thereof, spring means normally urging said stop in a counterclockwise direction away from engagement with the bolt, a lock pivotally mounted in adjacent coaxial relation with said bolt stop, spring means normally urging said lock in a clockwise direction into supporting engagement with said bolt stop for locking the bolt in the recoil position thereof in the absence of the magazine in the firearm, and means for transferring the pivotal movement of said lock to said bolt stop following the withdrawal of the supporting engagement therebetween upon the reinsertion of the magazine into the firearm.

3,098,312
MINNOW HOLDER
Frank P. Shannon, 124 11th St., Silvis, Ill.
Filed Apr. 3, 1961, Ser. No. 100,047
1 Claim. (Cl. 43—4)



A minnow holder comprising an elongated member of generally cylindroidal configuration and having one end in the form of a base generally oval in section from the generally peripheral portions of which extend a plurality of peripherally spaced rod-like parts generally in parallelism and extending in an axial direction and defining a minnow-receiving area of substantially constant cross-section, the outer ends of said parts being unconnected with one another, forming thereby hook-receiving spaces between said parts and an open end for said holder dimensioned to accommodate the insertion of a minnow into said holder, there being flared out portions on the ends of said rod-like parts and the number of said parts being at least greater than four so that the circumferential spacing between said parts is sufficiently small that a minnow, inserted down through said open end into the space within said plurality of rod-like parts, will be loosely held in place therein, said spacing being sufficient to accommodate the insertion of a fish hook into the body of the minnow inserted wholly or partially into said holder, the unconnected end portions of said rod-like parts providing for the passage of the hook, with minnow attached thereto, outwardly past the ends of said parts with the minnow impaled thereon.

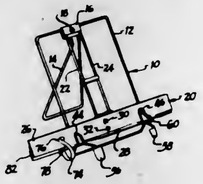
3,098,313
REEL MOUNTING MEANS FOR FISHING RODS
William E. Portz, Geneva, Ohio, assignor to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 7, 1960, Ser. No. 20,696
3 Claims. (Cl. 43—22)

1. Real seat mounting means for detachably securing a reel to a fishing rod comprising a fishing rod, a first tubular member telescoped over said rod, filler means positioned between said tubular member and said rod along a substantial portion of the length of said first tubular member, said first member, rod and filler means constituting a rigid assembly, means secured at the forward end of said first tubular member for seating the toe of a reel base, a second tubular member telescopically and slidably mounted upon said first member and having an upstructure portion adapted to seat the heel of a reel base, means mounting said second member on said first member to facilitate relative reciprocal movement therebetween, and compression spring means telescoped



over said rod and within said first tubular member, said spring abutting said mounting means at its forward end, and abutting an end portion of said first tubular member at its rearward end, rearward movement of said tubular member serving to further compress said spring and unseat the heel potion of said reel base, and wherein subsequent forward motion of said second tubular member, accomplished by releasing said compressed spring, moves said second tubular member so that the upstruck portion thereof seats the heel portion of said reel base.

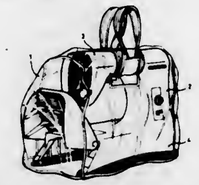
3,098,314
BOOK SUPPORT
Stanislaw D. Degorski, 2910 Oliver Road, and Vincent T. Borka, 332 E. Parent, both of Royal Oak, Mich.
Filed Feb. 6, 1962, Ser. No. 171,466
2 Claims. (Cl. 45—57)



1. A support for a book in which portions of the book pages may be turned while other portions of the pages are securely clamped comprising a support structure for receiving a book in open position; a first relatively strong spring mechanism to securely clamp first portions of the book pages of each side of the book to the support structure; and a second relatively weak spring mechanism to releasably clamp a second portion of the book pages to one side of a book for subsequent turning; said second spring mechanism being secured to said first spring mechanism and comprising a flat spring element having a spirally coiled portion with a free end bearing towards the book support structure.

3,098,315
CARRYING CASE FOR SEWING MACHINES
Luigi Bono, Pavia, Italy, assignor to Necchi Societa per Azioni, Pavia, Italy
Filed Jan. 17, 1962, Ser. No. 166,751
Claims priority, application Italy Feb. 10, 1961
1 Claim. (Cl. 45—68.2)

Container for a sewing machine having a base and an arm; said container comprising a housing of pliable material having an open bottom so that it can be placed in downward direction over the sewing machine, said housing having a slot, a strap adapted to support the weight of the machine fastened to the inside of the housing and having an extension to the outside of the housing, a handle provided at the end of the strap and adapted to pass below the arm of the machine, then from the inside to the outside



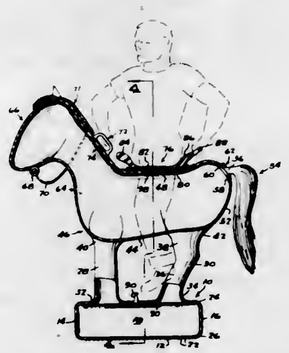
of the housing through the said slot, cooperating means borne by the said extension which cooperate with said handle for lifting the machine.

3,098,316
CHILD'S TOY
Jeremiah T. McCarthy, Chicago, Ill., assignor of twenty percent to Michael St. J. McCarthy, Sr., twenty percent to Michael St. J. McCarthy, Jr., and ten percent to Leonard S. Knox, all of Chicago, Ill.
Filed Oct. 23, 1959, Ser. No. 848,427
2 Claims. (Cl. 46—43)



1. A child's toy comprising a ball, an upwardly-concave, dish-shaped body symmetrical about its vertical axis having a marginal track portion for constraining the ball to travel in a circular path upon gyratory motion imparted to the body, cap means substantially homologous with the conformation of the crown of a child's head to support the body thereon, and means securing said body to said cap means, said securing means including a resilient member intermediate said cap means and body providing relatively free wobbly motion of the body upon an essentially gyratory movement of the head.

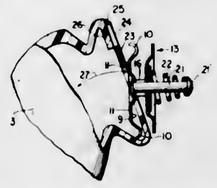
3,098,317
INFLATED PLAY HORSE
George G. Guzman, 14 La Cadena St., Santa Barbara, Calif.
Filed Nov. 24, 1961, Ser. No. 154,631
2 Claims. (Cl. 46—87)



1. An inflatable play riding horse comprising a flat hollow base having a top wall, a pair of tubular front legs

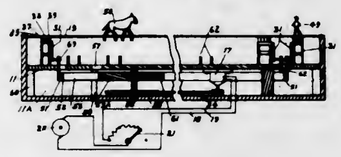
and a pair of tubular rear legs rising from said top wall, a hollow body having a bottom wall secured upon the upper ends of the legs, said base, said legs, and said body being resilient and in communication with each other, the front legs being perpendicular to the base, said rear legs having perpendicular upper portions and forwardly and downwardly angled lower portions reaching to the top wall of the base, and means for inflating the horse.

3,098,318
DOLL WALKING MECHANISM
Robert Gardel, 11 Riverside Drive, New York, N.Y.
Filed Feb. 16, 1961, Ser. No. 89,845
7 Claims. (Cl. 46—173)



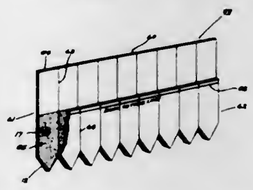
1. A doll walking mechanism comprising, a doll leg having at its upper end an opening defined by an annular rim, at least one discontinuity in a surface of said rim and a lever unit adapted to be inserted and fixed in said opening, including a lower plate having a transverse dimension smaller than the diameter of said rim whereby said plate can be passed edgewise through said opening and to lie against the under surface of said rim at diametrically opposite points, an upper plate rotatably and axially movable with respect to the lower plate, an upwardly projecting lever having an integrally formed flat base adapted to rest against the upper plate, a pin passing through said base and said upper plate and fixed to said lower plate, and a spring acting to hold said base against said upper plate and to urge said upper and lower plates axially toward each other, said upper plate having means adapted to cooperate with said discontinuity to prevent rotation of said plate from a predetermined set position.

3,098,319
ANIMATED FIGURINE AND MEANS FOR OPERATING SAME
Robert Ellis, San Diego, Calif.
(350 E. Plaza, Solano Beach, Calif.)
Filed July 10, 1961, Ser. No. 123,391
11 Claims. (Cl. 46—240)



1. An amusement device for simulating walking creatures comprising a plane surfaced floor, two laterally adjacent reciprocating elements, means for reciprocating said elements, said elements traversing said floor in the same direction as the reciprocations of said reciprocating elements, a permanent magnet attached to each of said reciprocating elements, said magnets loosely contacting the underside of an additional plane surfaced non-magnetic floor, said additional floor spaced above said first mentioned floor, and a two-legged erect walking figurine provided with an armature at the bottom of each foot of said figurine and adapted to be superimposed on the said additional plane surfaced floor above the aforesaid magnets, the legs of said two-legged figurine comprising the lower elements of a vertically disposed lazy-tong mechanism operable within the hollow body of said figurine.

3,098,320
MARKER SEED TABS
Michael H. Estkowski, Sun Valley, Calif.
(R.R. 2, P.O. Box 757, St. Joseph, Mich.)
Filed Sept. 22, 1960, Ser. No. 57,846
9 Claims. (Cl. 47—56)



1. A seed planting and marker device comprising a vertically elongated rigid tab proportioned to have one end driven into soil to a predetermined level with the other end thereof projecting upwardly above the soil, said one end of said tab having at least a portion of one surface thereof coated with a thin layer of adhesive material, and a predetermined number of seeds adhered to the surface of said layer.

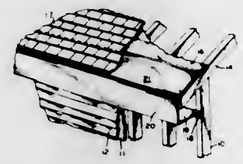
3,098,321
MARKER SEED TABS
Michael H. Estkowski, Los Angeles, Calif. (R.R. 2, P.O. Box 757, St. Joseph, Mich.), and Jerald V. Dunlap, 2045 Mandeville Canyon Road, Los Angeles 49, Calif.
Filed May 2, 1961, Ser. No. 107,219
13 Claims. (Cl. 47—56)



1. A marker seed tab comprising: a vertically elongated rigid flat tab proportioned to have one end portion thereof driven into soil to a predetermined level with the other end portion thereof projecting above the soil, said tab being formed of stiff relatively thin self-supporting material, said one end portion having an indentation formed in one surface thereof; a predetermined quantity of seed positioned in said indentation; and a relatively thin layer of moisture-absorbent material adhered to and covering at least a part of said one surface of said one end portion, said layer covering at least a portion of said indentation defining a cavity therewith and covering said seed, said seed being secured to a wall of said cavity, said cavity being proportioned to permit emergence of a seedling thereupon.

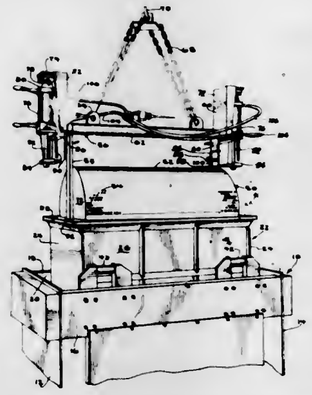
3,098,322
STRUCTURAL EAVES COVERING
George Greene, 14 Wildwood St., R.F.D. 2, Peekskill, N.Y.
Filed Feb. 27, 1961, Ser. No. 91,775
2 Claims. (Cl. 50—4)

1. In combination with a building having a vertical wall and a sloping roof and covering therefor, the provision of a structural eaves covering formed from an elongated strip of sheet metal having a plurality of longitudinal bend lines forming a plurality of juxtaposed panel sections having an angular relation to each other and including a lower vertical flange section secured to said vertical wall, a horizontal soffit section at generally right angles to the flange section, an upwardly extending vertical facia section, and a flashing section extending diagonally upwardly from the facia section and underlying the lower section of said roof covering, the eaves



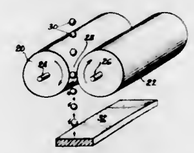
covering having an upwardly opening substantially U-shaped narrow channel forming the juncture between the facia section and the flashing section, the leg portions of said channel being in close alignment with each other and defining a flange-receiving support, the juncture with the facia section being below the edge of the flashing section.

3,098,323
MEANS FOR SEPARATION AND REMOVAL OF PARTS FROM A VIBRATING MACHINE
Paul H. Setzler, York, Pa., assignor to Bell Intercontinental Corporation, Mishawaka, Ind., a corporation of Delaware
Filed Nov. 10, 1961, Ser. No. 151,504
6 Claims. (Cl. 51—7)



1. In a machine for the treatment of the surfaces of material with media in vibratory movement including a bowl having an open top and a rounded bottom, means supporting the bowl for vibratory movement and means for imparting vibratory movement to the bowl, the improvement which comprises means for separation of the material from the media within the bowl and for removing the separated material from the bowl without the handling of the media, comprising a bucket mounted for vertical movement into and out of the open end of the bowl between a lowered position and a raised position in which the bucket is clear of the bowl, said bucket having a rounded bottom corresponding to the rounded bottom of the bowl and in which the rounded bottom is formed with foramens dimensioned to be larger than the media but smaller than the material, means mounting the bucket for rotational movement about an axis which substantially corresponds to the central axis of the rounded bottom of the bowl when the bucket is in lowered position within the bowl whereby the bucket is rotatable to an upright position concentric with the rounded bottom of the bowl, and means for releasably latching the bucket in an inverted position for first insertion into the bowl whereby, when the bowl is released from the latching means, the bowl can rotate about its axis to displace material and media from the bottom of the bowl into the bucket and whereby, when the bucket is raised from lowered position within the bowl, the continued vibrational movement causes the media to sift through the foramens of the bucket to separate the material from the media.

3,098,324
POLISHING METHOD AND MEANS
John C. Straub, South Bend, Ind., assignor to Bell Intercontinental Corporation, Mishawaka, Ind., a corporation of Delaware
Filed May 1, 1961, Ser. No. 106,938
25 Claims. (Cl. 51—9)

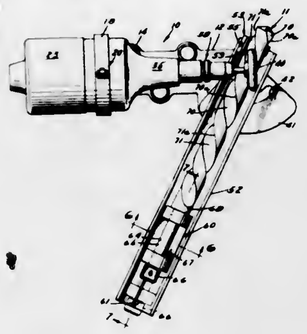


4. A device for polishing surfaces of work by the projection of resilient particles onto said surfaces with a motion having a linear component and a rotational component comprising a pair of adjacent surfaces spaced one from the other by an amount corresponding to the cross-sectional dimension of the resilient particles for simultaneous engagement of the particles when displaced therebetween, means for feeding said particles into the area between said adjacent surfaces, and means for displacement of said surfaces in opposite directions with one surface travelling at a surface speed greater than the other, whereby the particles displaced therebetween will be thrown from between said surfaces with a linear component in the direction of the surface of higher linear speed and a velocity related to the difference between the surface speeds and with a rotational component which is related to the sum of the speeds of said surfaces, and means for positioning the work surface to be polished in the path of the particles thrown from between said surfaces.

3,098,325
FLUTED-CUTTER SHARPENER
Austin Gudmundsen, Inglewood, and Ray Francis Davis, Los Angeles, Calif., assignors to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed May 15, 1961, Ser. No. 110,154
5 Claims. (Cl. 51—95)

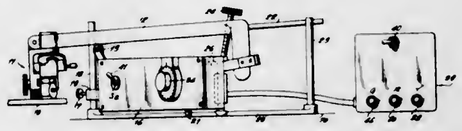
1. In a fluted-cutter sharpener: a base member; a motor secured on said base member; a motor shaft extending from and driven by said motor; a grinding wheel secured on the shaft of said motor to be driven thereby; a trough secured to said base member and extending under said grinding wheel; means to position said trough on said base member to place a flute edge surface of a cutter therein adjacent to a grinding wheel surface for sharpening; a guide sleeve slidable in said trough for securing to a cutter for moving said cutter in said trough toward and away from said grinding wheel surface while said flute edge surface is in position for sharpening; a cutter guide secured in said trough for rotatably guiding the flute edge surface in position for sharpening to maintain it in its proper rotational relationship with respect to

said grinding wheel as the cutter is moved toward and away from said grinding wheel; and means to vertically



position said grinding wheel with respect to the flute edge surface in position for sharpening.

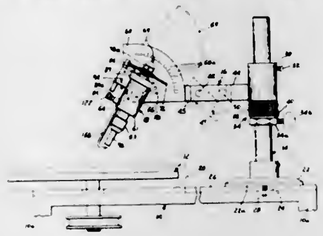
3,098,326
DIAMOND CUTTING AND POLISHING DEVICE
Berek Dembinski, 368 Brooklyn Ave., Brooklyn, N.Y.
Filed Jan. 18, 1961, Ser. No. 83,410
5 Claims. (Cl. 51—125)



1. A diamond abrading device comprising, in combination, a rotatable abrasive wheel, means for holding a diamond in contact with said abrasive wheel, said diamond-holding means being provided with a vertically movable arm engaged with an inclined control arm pivotably supported in a housing, said control arm being contactable with presettable means corresponding with a predetermined depth of cut of said diamond, the said housing also being provided with a solenoid energized while said control arm is withdrawn from contact with said pre-settable means, a trigger being retained within said solenoid during energization thereof, the said trigger supporting a vertically depending latch engaged with a spring-biased hammer while said trigger is retained within said solenoid, the said solenoid being de-energized upon contact between said control arm and said presettable means, whereby said trigger releases said latch and said latch is withdrawn from engagement with said spring-biased hammer, the said latch being urged out of said engagement with said spring-biased hammer by spring means anchored within said housing, the said hammer striking said control arm upon said disengagement with said latch, whereby said control arm raises said vertically movable arm of said diamond-holding means and withdraws said diamond from said abrasive wheel.

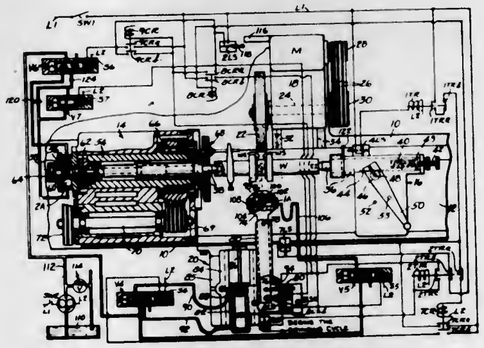
3,098,327
GRINDING AND POLISHING MACHINE FOR PRECIOUS OR SEMI-PRECIOUS STONES
Charles G. Malin, 22725 Cedar Point Road, Cleveland, Ohio
Filed July 31, 1962, Ser. No. 213,648
13 Claims. (Cl. 51—125)

1. In a machine for grinding stone-like items, such as precious or semi-precious gems, comprising, a movable support, an arm projecting generally laterally outwardly from said support, a head mounted on said arm, said head including means for holding a stone thereon, means pivotally mounting said head on said arm for movement in a generally vertical plane and with respect to said arm, means for locking said head in selected angled condition with respect to said arm, and said arm being articulated



and comprising an inner section and an outer section, said outer section supporting said head and being swingable in a generally vertical plane and with respect to said inner section, and means for limiting at least the downward movement of said outer section with respect to said inner section of said arm.

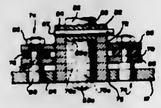
3,098,328
GRINDING MACHINE
Roger H. Fournier, Millbury, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Dec. 18, 1961, Ser. No. 159,896
6 Claims. (Cl. 51—165)



1. In apparatus for machining a work piece having opposed spaced surfaces, including a work-supporting assembly for supporting a work piece for axial movement, and a cutting tool supported for transverse movement into engagement with a work piece; a device for aligning the opposed spaced surfaces axially with respect to the cutting tool preparatory to a machining operation, comprising a cam having symmetrically disposed lobes, said cam being supported for pivotal movement about a first axis and for rotary movement about a second axis spaced therefrom and parallel thereto, means for positioning the cam between the opposed spaced surfaces of a work piece, means for effecting rotation of the cam about the first axis to engage its lobes with both of the opposed spaced surfaces, drive means operable to effect axial movement of the work piece supported in the apparatus and concurrent displacement of the cam engaged therewith relative to the cutting tool, and control means actuated by movement of said cam into a predetermined position relative to the second axis to deactivate said drive means

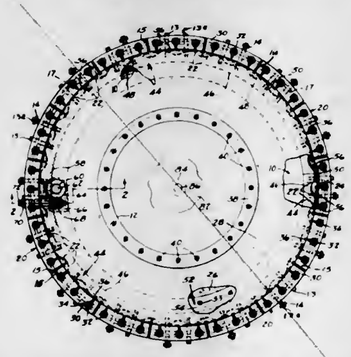
and secure a work piece supported in the apparatus with its opposed spaced surfaces in a predetermined axial position relative to the cutting tool.

3,098,329
CEMENT FLOOR FINISHING MACHINE
John T. Doran, 119 Grant Ave., Takoma Park, Md.
Filed Aug. 19, 1959, Ser. No. 834,828
2 Claims. (Cl. 51—177)



1. In a floor grinding machine including a driven rotary shaft and an abrasive supporting disc, a flexible drive coupling between said shaft and said disc comprising, a tubular sleeve telescoped over and secured rigidly to said shaft, a plate centraly telescoped over and secured rigidly to said sleeve, a second plate loosely telescoped over said sleeve, resilient collars interposed between said plates in diametrically opposed pairs, fastener elements interconnecting said spaced plates, and said fasteners projecting to loosely engage in depressions in said abrasive supporting disc.

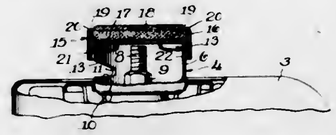
3,098,330
ABRADING DEVICE
Dirck J. Olton, Loudonville, N.Y., and Russell P. Hook, Sutton, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 22, 1961, Ser. No. 154,149
6 Claims. (Cl. 51—197)



1. An abrading device comprising, a backing plate, supporting means disposed adjacent the perimeter of said backing plate, a plurality of members supported by and outwardly movable on said supporting means, a sheet of abradant supported by said backing plate, means to clamp said sheet of abradant to each of said movable members, and means mounted adjacent said backing plate operable to move all of said movable members outwardly in unison by coordinated amounts to uniformly tension said sheet of abradant.

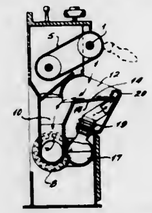
3,098,331
SHARPENER ATTACHMENT FOR GASOLINE ENGINES
Richard E. Fox, Northbrook, Ill., assignor, by mesne assignments, to Midwest Mower Corporation, St. Louis, Mo., a corporation of Missouri
Filed Sept. 28, 1956, Ser. No. 612,749
5 Claims. (Cl. 51—241)

4. In combination, a starter cup for a gasoline engine and a grinding unit, said engine having a vertical power shaft, said starter cup having a bottom wall apertured to fit over said vertical power shaft, and an upstanding cylindrical wall, said grinding unit comprising a frame and a grinding stone rigidly secured in said frame, said



frame having a cylindrical skirt depending below said grinding stone, and complementary locking means on said upstanding cylindrical wall and said depending cylindrical skirt to secure said grinding unit to said starter cup.

3,098,332
GRINDINGS COLLECTOR
Roy N. Sutton, Kirkwood, Mo., assignor to Sutton Shoe Machinery Co., St. Louis, Mo., a corporation of Missouri
Filed Oct. 5, 1960, Ser. No. 60,600
2 Claims. (Cl. 51—270)



1. In a machine for grinding, buffing and the like, having a dust generating device whose periphery is exposed at and moving downward through an arcuate operating zone adjacent a horizontal plane through the axis of said arcuate zone so that dust generated at said zone is cast centrifugally downward as a stream, said dust generating device being free of auxiliary means which produce a downwardly directed jet of air athwart said horizontal plane, a suction system having its intake mouth located adjacent the path of said dust stream and substantially below said horizontal plane, a fluid jet emission device having a constricted mouth located substantially below said horizontal plane and disposed to direct a jet of fluid through said dust stream and toward said mouth, and means for forcing fluid through said emission device.

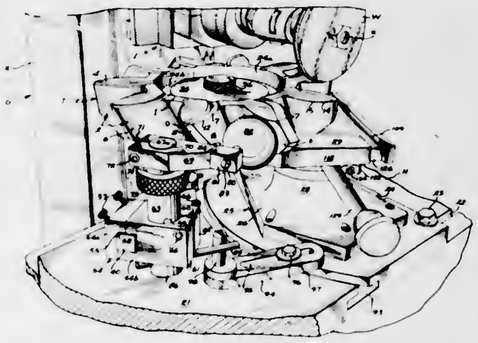
3,098,333
METHOD OF SHARPENING GEAR CUTTING TOOLS
Charles M. Hannum, Birmingham, Mich., assignor, by mesne assignments, to National Cleveland Corporation, Cleveland, Ohio, a corporation of Ohio
Filed June 23, 1959, Ser. No. 822,329
1 Claim. (Cl. 51—288)

A method of sharpening the involute edges on the cutting teeth of a helical gear cutting tool by a rotatable grinding wheel, said method comprising the step of mounting the tool so as to be swingable about a vertical axis which is located directly vertically below the rotatable axis of said grinding wheel, the step of locating the cutting tool so that its center is spaced radially from said vertical axis a distance as determined by the equation $D = YBCR$, where D is the radial distance between the center of said cutting tool and said vertical axis, y is a constant having a range of .9 to 1.1; and BCR is the base circle radius of said tool, the step of spacing a cutting edge of said tool at a distance

C_1 from said vertical axis as determined by the equation $C_1=a+.34$ addendum where the addendum is the addendum of the cutting teeth of said tool and a is a finite value which may vary within the range of .400 to .450 inch, the step of locating a grinding surface of said grinding wheel which has a diameter determined by the equation

$$\text{Wheel dia.}=WF\left\{\text{adden.}+\frac{PD-BCD}{2}\right\}$$

at said distance C_1 from said vertical axis where adden. is the addendum of the cutting tool in inches; PD is the pitch diameter of the said tool in inches; BCD is the base

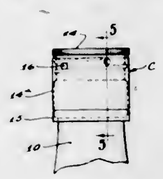


circle diameter in inches of said tool; and WF is a multiplying factor as determined by the equation

$$(WF+\alpha)^3=100\ DP$$

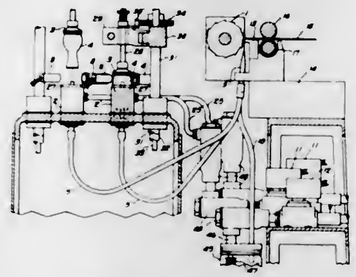
where α is a constant with a range of ± 1.2; and DP is the diametral pitch, the step of presenting said cutting edge to said grinding surface by swinging said tool about said vertical axis, and the step of successively locating the remaining cutting edges of said tool at said distance C_1 from said vertical axis and successively presenting said remaining cutting edges to said grinding surface of said wheel.

3,098,334
METHOD OF CLOSING GLASS CONTAINERS
Herbert A. Barnby and Sam M. Edwards, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 3, 1958, Ser. No. 771,564
5 Claims. (Cl. 53—42)



1. The method which consists in temporarily sealing a newly formed empty jar having an externally threaded neck with a closure cap comprising an unthreaded cup-like shell of readily deformable sheet metal including an attaching skirt dimensioned to be frictionally yet readily removably held on the neck, removing the closure cap substantially at the inlet end of a jar filling and closing line, filling the jar with a product to be packaged therein, utilizing said closure cap to finally seal the product-filled jar by again telescoping it over the jar neck into hermetic sealing engagement with the latter and rolling-in areas of the attaching skirt to produce screw threads conforming to and in holding engagement with the threads on the jar.

3,098,335
FLASH BULB FILLING APPARATUS
Clarence F. Sindy, Willoughby, Ohio, assignor to General Electric Company, a corporation of New York
Filed Aug. 26, 1960, Ser. No. 52,142
5 Claims. (Cl. 53—59)



1. Apparatus for filling a flash lamp bulb with a charge of shredded light-producing material comprising, in combination, cutting mechanism for producing a charge of shredded material, a filling head receiving the open neck of a lamp bulb to mount the bulb on said head, means including a vacuum system for transporting the charge from said cutting mechanism to said filling head for insertion into the interior of the bulb, an auxiliary transport system for removing the charge from said cutting mechanism, and means responsive to mounting of a defective bulb on said filling head to stop operation of said first transporting means and start operation of said auxiliary transport system.

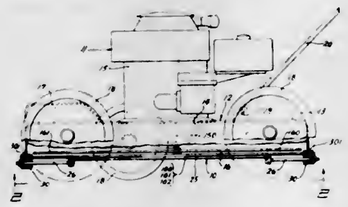
3,098,336
LEAD HALTER
Henry E. Bearss, Minonk, Ill., assignor of one-third each to Lawrence A. Bearss, Minonk, and Robert E. Bearss, Sterling, Ill.
Filed July 13, 1962, Ser. No. 209,657
2 Claims. (Cl. 54—24)



1. A lead halter for domestic animals which comprises an inverted U-shaped head strap, a pair of head strap rings one of which is secured to each end of said head strap, a forwardly extending U-shaped nose strap one end of which is secured to one of said head strap rings and the other end of which is secured to the other of said

head strap rings, a pair of nose strap rings permanently secured in fixed position to said nose strap in spaced relation to each other one of which is disposed in spaced relation to the said one of said head strap rings and the other of which is disposed in spaced relation to the said other of said head strap rings, a pair of crossing chains one of which extends through the said other of said head strap rings and is connected to the said one of said nose strap rings and the other of which extends through the said one of said head strap rings and is connected to the said other of said nose strap rings, the free ends of said chains being connected to a connecting ring which is adapted to have a lead rope connected thereto.

3,098,337
POWER LAWN MOWER GUARDS
Oswald A. Teachworth, Holly, Mich., assignor of one-third to George J. Fulkerson, Birmingham, Mich., and one-third to Orin T. Fulkerson, Pontiac, Mich.
Filed Apr. 23, 1962, Ser. No. 189,520
6 Claims. (Cl. 56—25.4)



1. In a rotary type power lawn mower, a horizontally disposed rotating cutter blade and drive means therefor, said cutter blade having a cutting edge adjacent each end facing in the direction of rotation thereof, a housing over said rotating cutter blade including a depending periphery extending below said rotating cutter blade and having a cut grass outlet therein, and wheel means supporting the lower periphery of said housing at a selected distance above the turf whereby to admit of the cutting of grass by said rotating cutter blade,

an annular wire guard disposed over the bottom of the said housing located substantially at the bottom of the depending periphery thereof,

said annular guard having its outer periphery substantially coextensive of said housing with the distance between the inner annulus and outer periphery thereof being substantially the length of the cutting edge of said cutter blade,

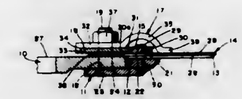
said annular guard including generally spirally disposed intermediate wires spaced sufficiently between the inner and outer peripheries thereof to permit blades of grass to be cut to extend upwardly therebetween in the path of the cutting edge of said cutter blade,

a pair of spaced suspension wires fixed at the central portion thereof to the inner wire of said annular guard and at circularly spaced points to the intermediate and outer wires thereof,

means connected to said suspension wires and to the depending peripheral portion of said housing at opposite sides thereof securing said annular guard in taut relationship to the housing.

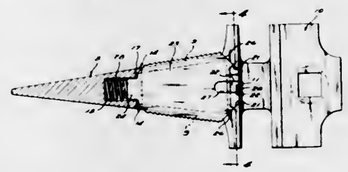
3,098,338
SICKLE GUARD CONSTRUCTION
Edward C. Myers, 105 E. De La Goins St., Santa Barbara, Calif.
Filed May 23, 1960, Ser. No. 30,877
5 Claims. (Cl. 56—296)

1. In a cutter bar construction having a cutter bar extending substantially the length of such construction and a knife assembly located adjacent the leading edge of said cutter bar for reciprocal movement with respect thereto, said knife assembly comprising a plurality of sickle blades fixed in forwardly extending substantially side-to-side relationship, each of said sickle blades having a leading edge, a trailing edge and rearwardly diverging cutting edges, the combination of a plurality of shear plates, and a support means for individually supporting each of said shear plates with said cutter bar in substantially side-to-side relationship and forwardly displaced from the lead-



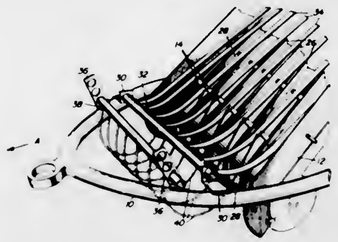
ing edge of said guard bar, each of said shear plates having a leading edge, a trailing edge, and rearwardly diverging cutting edges, the leading ede of said sickle blade extending forwardly beyond the leading edge of said shear plate so as to move into initial contact with the material to be cut, and the configuration of each of said shear plates being substantially the same as the configuration of each of said sickle blades, each of said support means having substantially parallel sides and said sides being substantially normal to the trailing edge of its respective shear plate.

3,098,339
GUARD FINGER AND LEDGER PLATE
Martin R. Sehm, Peoria, Ill., assignor to R. Herschel Manufacturing Co., Peoria, Ill., a corporation of Illinois
Filed July 6, 1961, Ser. No. 122,288
3 Claims. (Cl. 56—311)



1. In a device of the character described in an elongated guard finger having an elongated ledger plate seat having a front and a rear end, a lateral notch in said guard finger at the front end of said seat providing a lateral wall parallel to said seat, a bore in said guard finger at said front end of said seat, said guard finger having upstanding portions defining a pair of opposed rearwardly converging underbeveled walls in said guard finger at the rear end of said seat, a lug mounted between said pair of said converging walls and having a pair of parallel opposed axial walls on said guard finger at said rear end of said seat, both of said parallel axial walls extending normal to the plane of said seat, a rigid ledger plate on said seat, a pair of complemental rearwardly converging beveled surfaces on said ledger plate with one engaging each of said underbeveled walls preventing movement of said ledger plate away from said seat, a pair of parallel axial surfaces on said ledger plate with one engaging each of said axial walls on said lug preventing lateral movement of said ledger plate at said rear end of said seat, said ledger plate extending into said notch engaging said lateral wall preventing movement of said ledger plate away from said front end of said seat, a projection of said ledger plate extending into said bore engaging the wall thereof and preventing lateral movement of said ledger plate at said front end of said seat, and a spring in said bore engaging said projection resiliently urging complemental beveled surfaces into engagement with said converging underbeveled walls.

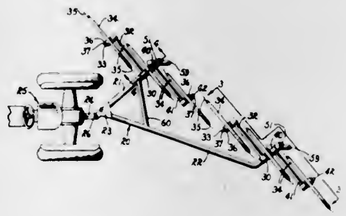
3,098,340
PEANUT VINE FEED CONTROL DEVICE
Joseph J. Harrington, General Delivery, Lewiston, N.C.; John D. Mitchell, General Delivery, Woodville, N.C.; and Bertram L. Jordan, General Delivery, Lewiston, N.C.
Filed Jan. 14, 1960, Ser. No. 2,393
4 Claims. (Cl. 56—345)



1. In the known combination of a peanut combine comprising a harvester section and a pick-up feed section, wherein the feed section comprises an inclined feed conveyor surface which is continually swept by a plurality of rows of aligned pick-up fingers, the improvement which comprises a plurality of spaced apart approximately U-shaped restraining means, each of said spaced apart restraining means being disposed in separate vertical planes which are parallel to each other, each of said U-shaped restraining means being characterized by an open end which faces upwardly and which is inclined slightly toward the rear of the havester, a closed curved bottom end section which generally points downwardly and forwardly, a front leg section, and a back leg section which is preferably slightly longer than said front leg section, the upper extremity of each of said front leg sections of said restraining means being joined to an elongated support member which is disposed horizontally across the front of the harvester a predetermined distance above the ground, the said closed curved bottom end sections of said plurality of restraining means being disposed approximately eight inches above the ground at their lowermost extremities, the back leg sections of said restraining means extending in a generally backward and upward direction, the minimum distance between said back leg sections and the feed surface of the harvester being approximately eight inches, said plurality of restraining means being freely swingable through a vertical plane in a generally upward and backward direction by virtue of the fact that the said elongated support member which is attached to the upper extremity of each of said restraining means front sections is pivotably mounted, said restraining means being disposed in advance of said conveyor.

3,098,341
ROTARY HARVESTERS
Richard M. Worrel, Fresno, Calif., assignor of one-half to Herbert A. Huebner, Los Angeles, Calif.
Filed Apr. 10, 1961, Ser. No. 101,779
10 Claims. (Cl. 56—377)

1. A rotary side delivery forage harvester wherein toothed wheel elements rotated by ground or crop engagement when drawn at an angle oblique to their axes move engaged crops laterally, the improvement which comprises an elongated draft frame element provided at a forward end with tractor coupling means permitting vertical rise and fall of the rear end, said rear end terminating in a first axle integral therewith, a toothed wheel element freely rotatably mounted on said first axle, a pair of crank arms also mounted concentrically on said axle for elevational pivotal movement and oppositely extended therefrom generally normal thereto, second and third axles provided respectively at the outward extremity of each crank arm and having their axes generally parallel to the axis of the first axle, and toothed wheel elements freely rotatably mounted on said second and third axles, whereby the three wheel elements can individually and independently rise and fall in their draft course over terrain.

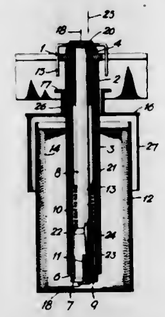


3,098,342
ELECTRIC HARNESS ROVING MACHINE AND METHOD
Bruce W. Smith, Pacoima, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 23, 1961, Ser. No. 133,400
16 Claims. (Cl. 57—15)



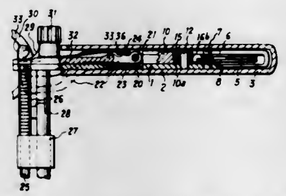
1. An electric harness roving machine comprising: an elongated frame; storage means on one end of said frame for storing a predetermined plurality of wires of predetermined lengths and sizes; distributing means mounted on said frame adjacent to said storage means and having a plurality of circumferentially spaced apertures, each adapted to receive one of a selective plurality of wires therethrough; sizing means on said frame adjacent to said distributing means and having an aperture of predetermined diametrical dimension extending therethrough, said sizing means being adapted to receive collectively therethrough the selective wires extending through said apertures of said distributing means for sizing thereof; spindle means mounted on said frame for reciprocal longitudinal movement relative to said frame; power drive means on said frame and having a driven shaft; first power transmission means connecting said power drive means and said spindle means for selectively moving said spindle means in one direction longitudinally relative to said frame; gripping means on said spindle means for gripping collectively ends of said selective plurality of said wires for longitudinal movement with said spindle means; and second power transmission means connecting said power drive means and said spindle means for translating rotation of said driven shaft of said power drive means into a rotation of said spindle means in one direction for roving the selective wires gripped thereby.

3,098,343
YARN END CONTROLLING DEVICE FOR A CENTRIFUGAL SPINNING MACHINE
Eizaburo Negishi, 3 of No. 9 Oaza Nakazato, Yono-shi, Saitama-ken, Japan
Filed May 10, 1962, Ser. No. 193,781
Claims priority, application Japan May 30, 1961
4 Claims. (Cl. 57—34)



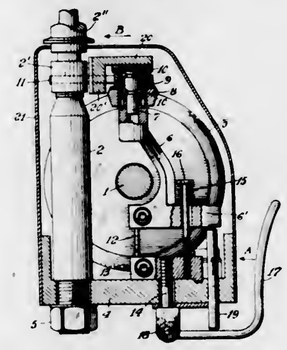
1. A yarn end controlling device comprising a bobbin supporting tube member, a yarn guide tube member slidably supported within said bobbin supporting tube member, means for reciprocably moving the members with respect to one another, the bobbin supporting tube member having an end which is provided with a groove opening externally at said end for engaging yarn in said groove during a winding operation of yarn onto a bobbin supported on said bobbin supporting tube member, said bobbin supporting tube member having a sharp edge bounding said groove to constitute a knife edge, and cutter means on said yarn guide tube member and movable therewith for cooperating with said knife edge to sever yarn contained in said groove upon relative reciprocating movement between the tube members.

3,098,344
APPARATUS FOR APPLYING TRAVELLERS AND THREAD ONTO THE RINGS OF SPINNING AND TWISTING MACHINES
Paul Ramseier, Pfaffikon, Switzerland, and Fritz Austel, Konstanz, Germany, assignors to Bräcker AG., Pfaffikon, Switzerland, a corporation of Switzerland
Filed Sept. 18, 1962, Ser. No. 224,347
Claims priority, application Switzerland Apr. 11, 1962
18 Claims. (Cl. 57—34)



1. Apparatus for applying travellers to the rings of spinning and twisting machines with simultaneous drawing-in of the yarn through the traveller to be applied; comprising a tool fork which is adapted to be placed onto said ring, a tongue member supported for movement relative to said tool fork for pushing a traveller onto said ring, a pair of catcher hooks for the yarn, one of said catcher hooks being mounted for movement transverse to the direction of movement of said tongue member, means for producing a relative movement between said tool fork and said tongue member, and means for producing a transverse movement of said movable catcher hook, said movement producing means for said tongue member and said movable catcher hook being constructed and arranged in such a manner that the transverse movement of the catcher hook takes place prior to the relative movement of said tongue member.

3,098,345
SPINDLE DRIVE ARRANGEMENT FOR A SPINNING MACHINE AND THE LIKE
Rolf Krämer, Stuttgart-Feuerbach, Erwin Breitinger, Waiblingen, Wurttemberg, and Fritz Wilhelm Gerber, Kirchheim, Unterteck, Germany, assignors to SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung, Stuttgart-Bad Cannstatt, Germany, a German company
Filed Aug. 8, 1960, Ser. No. 48,103
Claims priority, application Germany Aug. 29, 1959
12 Claims. (Cl. 57—102)

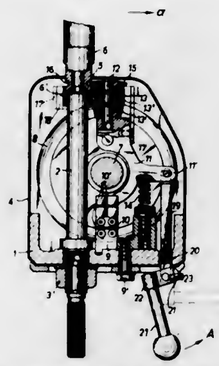


1. In a textile machine, a drive shaft mounted for rotation, wheel means carried by said shaft, a support, a spindle mounted on said support, said spindle having a whorl portion, a rotary member mounted on said support for frictional engagement with said wheel means to be rotated by said wheel means, a pulley member to be jointly rotated with said rotary member, belt means trained about said pulley member and whorl portion, bracket means mounted on said support and swingably supporting said rotary member and pulley member for movements of said pulley member toward and from said whorl portion, and means ordinarily urging said pulley member away from said whorl portion for tensioning said belt means.

3,098,346
SPINDLE DRIVE ARRANGEMENT FOR A SPINNING OR TWISTING FRAME
Joseph Steichele, Stuttgart-Weilimdorf, Germany, assignor to SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung, Stuttgart-Bad Cannstatt, Germany, a company of Germany
Filed June 2, 1960, Ser. No. 33,594
Claims priority, application Germany June 6, 1959
13 Claims. (Cl. 57—103)

1. A drive arrangement for a spinning machine and the like, comprising a drive shaft mounted for rotation; a spindle releasably mounted for rotation about an axis; a support; intermediate wheel means movable on said support between a first position in which said intermediate wheel means is in simultaneous motion transmitting engagement with said drive shaft and with said spindle, and a disengaged second position spaced from said first position; brake means movable on said support between a first position of brake release and a second position in which said brake means is in braking engagement with said spindle; spindle lock means movable on said support between

a first position in which said lock means retains said spindle on said support, and a spindle releasing second position; and actuator means movably mounted on said support for actuating simultaneous movement of said intermediate wheel means, of said brake means, and of said



spindle lock means from the first to the second respective positions thereof, and for retaining said intermediate wheel means and said spindle lock means in the respective second positions thereof while simultaneously moving said brake means from the second to the first position thereof.

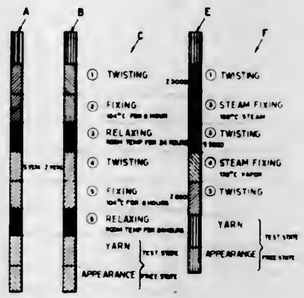
3,098,347
ELASTIC YARN AND METHOD OF MAKING THE SAME
Wilbert D. Smith, Philadelphia, Pa., assignor to Parayarn Elastic Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 20, 1962, Ser. No. 181,020
10 Claims. (Cl. 57—152)



1. A truly balanced elastic yarn comprising an elastic untwisted core filament and an inelastic untwisted cover thread helically wound about the core filament.

3,098,348
PROCESS FOR THE MANUFACTURE OF STABLE SINGLE - THREAD TWIST - COMPENSATED YARNS
Hans Bryner, Milan, Italy, assignor to Setar Aktiengesellschaft, Vaduz, Liechtenstein, a corporation of Liechtenstein
Filed Dec. 28, 1960, Ser. No. 79,014
Claims priority, application Switzerland May 20, 1954
8 Claims. (Cl. 57—157)

1. A method of producing a stable elasticized yarn from a single thread of synthetic fibers which comprises, in combination, the steps of twisting said thread about its longitudinal axis in a first direction to impart to said thread a first predetermined number of correspondingly directed turns per unit length, treating said twisted thread with saturated steam at a predetermined temperature to fix and stabilize said thread, thereafter twisting said thread in a second direction which is opposite to said first direction and to an extent which is greater than said twisting in said first direction to impart to said thread a second predetermined number of turns per unit length which is greater than and directed oppositely to said first number of turns, allowing said thread to expand freely, thereafter treating said thread a second time with saturated steam at a predetermined temperature higher than said first temperature, whereby said thread is fixed and stabilized, and finally, after said fixing and stabilizing, twisting said thread a second time in said first direction



a number of turns about equal to the excess of said second number of turns over said first number of turns whereby said thread becomes a stable stretch yarn substantially free from kinking.

3,098,349
LINKAGE WITH MEANS INCLUDING AUXILIARY LINKS LIMITING FLEXIBILITY IN TWO DIRECTIONS
Gilbert Waninger, Ettlingen, Baden, Germany, assignor to Kabelschlepp G.m.b.H., Siegen, Westphalia, Germany
Filed June 4, 1959, Ser. No. 818,226
Claims priority, application Germany June 7, 1958
6 Claims. (Cl. 59—78.1)



1. In a chain band for a drag chain with self-supporting sections when moving along a straight line: a plurality of alternate first and second flat link plate means in end to end and overlapping relation, each of said first link plate means being formed of a pair of plates in straddling relation to the respective adjacent two second link plate means, first pivots pivotally interconnecting said first and second link plate means for tilting movement relative to each other to permit the chain band to pass along a curved path, a plurality of pairs of spaced parallel link members, said pairs being respectively associated with said first and second link plate means, the link members of each pair of link members having one end thereof in overlapping arrangement with regard to the link members of an adjacent pair, a plurality of second pivots respectively carried by said pairs of link members only, the overlapping ends of said adjacent pairs of link members being pivotally interconnected by a single one only of said second pivots, third pivots spaced from said first pivots and respectively pivotally connecting the other ends of each pair of link members with the respective adjacent first and second link plate means, and abutment means respectively carried by said

second pivots only for abutment with the link plate means of the respective two adjacent link plate means when the latter move from a tilted position to a straightened out position, said chain band being constructed so that straight lines joining the centers of adjacent ones of the second and third pivots form a series of angles each having one of said second pivots at its vertex and opening toward one of said first pivots, each said angle being less than a straight angle in all positions of said chain to thereby assure buckling of the link members when the link plate means carrying the respective pair of link members tilt relative to each other.

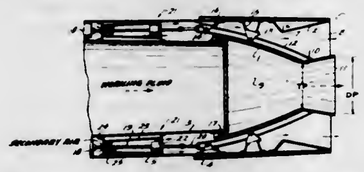
3,098,350
METHOD OF PROPULSION EMPLOYING CATALYZED NITROALKANE - ALKYLENE OXIDE COMPOSITION
John P. Barry, Glendora, and Herman Schneiderman, West Covina, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 14, 1955, Ser. No. 488,155
15 Claims. (Cl. 60—35.4)

1. In the method of producing thrust for propulsion by combusting a fluid propellant composition consisting essentially of a mixture of liquid nitroalkane and lower alkylene oxide in a combustion chamber; the improvement which comprises combusting the fluid propellant composition in the presence of a combustion rate acceleration catalyst selected from the group consisting of the lower diketone coordination compounds of chromium, molybdenum, tungsten, manganese, cobalt, nickel, iron and platinum, and mixtures thereof.

3,098,351
METHOD OF PROPULSION USING SOLID PROPELLANT COMPOSITIONS
Horace M. Higgins and Calvin A. Gongwer, Glendora, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 18, 1955, Ser. No. 489,731
10 Claims. (Cl. 60—35.4)

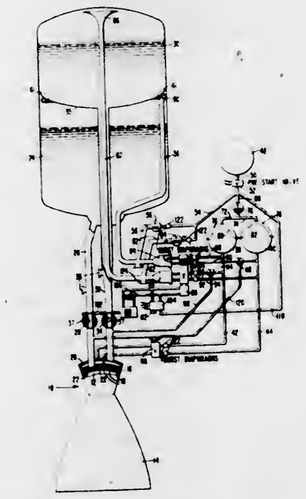
1. In a method of producing thrust for propulsion by burning a solid propellant composition, consisting essentially of an intimate mixture of a reducing metal selected from the group consisting of the metals of Periodic Groups IA, IIA, and IIB exhibiting electrode potentials of sufficient magnitude to displace hydrogen from acids, and an inorganic oxidizing salt in essentially stoichiometric proportions; the improvement which comprises combusting said propellant in the presence of a burning rate acceleration catalyst selected from the group consisting of the oxides of nickel and cobalt and mixtures thereof.

3,098,352
ADJUSTABLE JET PROPULSION NOZZLE WITH SECONDARY AIR FLOW CONTROL
Alvin Taub and Martin Mayer Feldman, Wakefield, and Clarence Edgar Le Bell, Peabody, Mass., assignors to General Electric Company, a corporation of New York
Filed Apr. 1, 1960, Ser. No. 19,421
2 Claims. (Cl. 60—35.6)



1. In an exhaust nozzle for a reaction engine: a primary nozzle section receiving working fluid from said engine, means supporting said primary nozzle section and actuating means for moving said primary nozzle section to vary the form thereof and the area of discharge therefrom, said actuating means including an actuating member connected to said primary nozzle section, a secondary nozzle section circumferentially spaced about said primary nozzle section, said primary and secondary nozzle sections forming a circumferential ejector passage therebetween, duct means connected to said ejector passage to supply secondary fluid at subsonic velocity thereto, adjustable throttle means in said duct means upstream of said ejector passage for throttling the flow of secondary fluid, and means directing the entire flow of secondary fluid through said adjustable throttling means, said adjustable throttling means comprising at least one throttling duct having varying cross section along its length and a movable throttle body mounted therein to vary the flow area defined between said throttling duct and said throttle body in accordance with the position of said throttle body, said movable throttle body fixed to said actuating member for movement therewith, whereby the amount of throttling of the secondary fluid is controlled in accordance with the position of said actuating member and said primary nozzle.

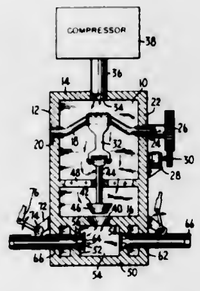
3,098,353
ROCKET ENGINE PROPELLANT FEEDING AND CONTROL SYSTEM
Robert N. Abild, New Britain, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 31, 1961, Ser. No. 99,873
13 Claims. (Cl. 60—35.6)



1. A rocket engine, comprising: a combustion chamber having an oxidizer injector and a fuel injector therein; and, a propellant feeding and control system including a main source of liquid oxidizer; a main source of liquid fuel; first separate means connecting said main sources of liquid oxidizer and liquid fuel with said oxidizer injector and said fuel injector, respectively, including a flow control valve in each connecting means; an auxiliary source of liquid oxidizer; an auxiliary source of liquid fuel; second separate means connecting said auxiliary sources of liquid oxidizer and liquid fuel with said oxidizer injector and said fuel injector, respectively, to supply oxidizer and fuel to said combustion chamber,

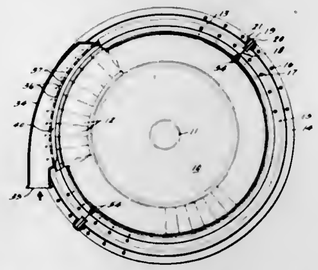
including a flow control valve in each connection; common means to pressurize said main and said auxiliary sources of liquid oxidizer and liquid fuel, including a source of gas under pressure and interconnecting valve controlled connections; and selectively operable means to open and close the valve controlled connections between said source of gas and said main and auxiliary sources of oxidizer and fuel, and to open and close said valves in said first and said second connecting means, whereby oxidizer and fuel from said main sources or from said auxiliary sources or from both of said sources, may be selectively supplied to said combustion chamber through said injectors.

3,098,354
HIGH PRESSURE EJECTION IMPELLER
Juan D. Mendez-Llamozas, Av. "B"—Urb. El Pinar, Qta. "Coromoto"—El Paraiso, Caracas, Venezuela
Filed July 10, 1962, Ser. No. 208,794
3 Claims. (Cl. 60—35.54)



1. A jet propulsion device comprising: a fluid compressor; a stationary substantially-closed compression chamber connected to receive pressure fluid from said fluid compressor; an ejection chamber adjacent to said compression chamber, said chambers being interconnected through a common valve seat opening defined therebetween, and said ejection chamber additionally defining two diametrically opposite valve seat holes having a concentric axis transverse to the longitudinal axis of the common valve seat opening; a valve mounted for reciprocation in said compression chamber between two limiting positions in said compression chamber on the longitudinal axis of said common valve seat opening, and adapted to seat therein at one of said limiting positions to close said common valve set opening, and to be lifted therefrom to open it; means for continuously reciprocating said valve between said limiting positions; two oppositely disposed valves, having hollow stems, slidably mounted in said respective opposite seat valve holes, said valves being mounted with hollow stems extending outwardly through said holes; and means operatively connected to said opposite valves for individually sliding said valves to open and close said opposite valve seat holes, one of said holes being normally open and the other closed, whereby pressure fluid is released in a succession of jets from said compression chamber to said ejection chamber, the rate of release of said jets being dependent on the speed of reciprocation of the valve mounted in the compression chamber, and jetted through the open valve seat hole and out of the hollow stem of the associated valve in one of the two opposite directions the hollow stems are oppositely disposed in, thereby driving the device in the opposite direction.

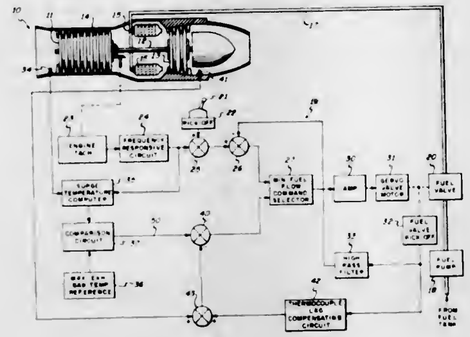
3,098,355
STARTER NOZZLE FOR GAS TURBINES
Louis Ernest Varadi, Danvers, Theodore Edmond Bourque, Beverly, and Walter Pesarek, Swampscott, Mass., assignors to General Electric Company, a corporation of New York
Filed Nov. 29, 1960, Ser. No. 72,470
1 Claim. (Cl. 60—39.14)



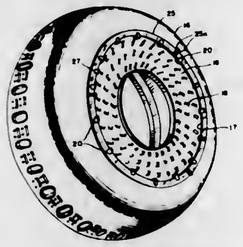
In a gas turbine engine, the combination comprising; an annular segmented casing enclosing a working fluid flow path, said casing formed with a row of circumferentially spaced ports therein, webs forming an integral part of said casing separating adjacent ones of said ports, a turbine mounted for rotation in said working fluid flow path, an annular segmented nozzle diaphragm including a row of circumferentially-spaced partitions having contoured surfaces and arranged to direct a stream of working fluid into said turbine, said diaphragm further including a segmented band circumferentially spaced about said partitions and secured to radially outer edges thereof, a starter nozzle box comprising a plurality of planar partition plates spaced apart circumferentially about said nozzle diaphragm interiorly of said casing, each of said plates extending inwardly through said band to the outer edge of a corresponding partition and secured thereto, each of said plates having edges adjacent to the corresponding partition disposed parallel to a tangent to a trailing edge portion of curved surfaces of the correponding partition, an outer edge of each of said plates abutting said casing interiorly thereof, and retaining means engaging circumferential end surfaces of the segments of said casing and said diaphragm to locate said diaphragm and said nozzle box in predetermined circumferential position with respect to said casing, said predetermined position being such that each of said ports is located intermediate said outer edges of an adjacent pair of said plates for admitting starting fluid between said adjacent pair of said plates and the corresponding partitions to said turbine.

3,098,356
FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES
Everett S. Joline, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,946
3 Claims. (Cl. 60—39.28)

3. In a fuel control system for a gas turbine engine having an adjustable fuel flow control valve, said fuel flow control valve being contoured in order that the log of the fuel flow is proportional to the stroke of said valve, thermal couple means responsive to the actual exhaust gas temperature of said engine for providing a signal substantially representative thereof, said thermocouple signal inherently lagging changes in the actual exhaust gas temperature, pick-off means responsive to the position of said fuel flow control valve for providing a signal in accordance therewith, high pass filter means responsive to said pick-off signal for providing a rate signal in accordance with the rate of change thereof, said high pass filter means having a time constant which provides a compensating signal that compensates for the lag in said thermocouple signal, and means for combining said thermocouple signal and said compensating signal to provide a synthesized signal representative of the actual exhaust gas temperature.

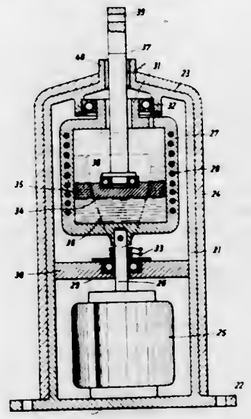


3,098,357
GAS TURBINE ENGINE CONSTRUCTION
Francis X. Marsh, Grosse Pointe Woods, Mich., assignor to Continental Aviation and Engineering Corporation, Detroit, Mich., a corporation of Virginia
Filed Jan. 26, 1959, Ser. No. 788,829
2 Claims. (Cl. 60—39.31)



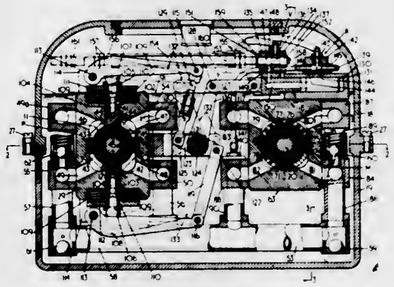
1. In a gas turbine engine, a combustion chamber housing assembly comprising a combustor structure subject to combustion gas temperature and having an annular central opening, an annular swirl vane structure covering said opening and subject to inlet air temperature, and means removably attaching said swirl vane structure to said combustor structure, said means comprising a plurality of circumferentially spaced substantially U-shaped clip elements, each of said clip elements facing radially outwardly and having one leg secured near the outer edge of said swirl vane structure, the edge of said combustor opening adapted to be engaged between the legs of said clip element and radially spaced from the base thereof to permit radial thermal expansion and contraction of said combustor structure relative to said swirl vane structure, the edge of said combustor central opening having radially extending notches circumferentially spaced equally with the circumferential spacing of said clip elements to permit assembly of said structures upon passing one leg of each clip through a notch and relatively rotating said structures to engage the clips with the combustor opening edge portions intermediate said notches, and a retainer means inserted between the combustor opening edge and the last-mentioned leg of each clip, said retainer means covering said notches to prevent removal of the clip elements therethrough, said retainer means comprising a ring element having an inner peripheral edge substantially of the diameter of said combustor central opening, and means securing said ring element against rotation relative to said combustor structure.

3,098,358
ELECTROHYDRAULIC ADJUSTING APPARATUS
Heinrich Paschke, Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed Feb. 21, 1961, Ser. No. 90,688
Claims priority, application Germany Feb. 26, 1960
15 Claims. (Cl. 60—52)



1. Electrohydraulic apparatus for converting a rotary movement, by means of pressure developed in an operating medium as a result of the said rotary movement, into a linear movement, comprising a cylinder, a piston mounted to reciprocate in the cylinder, and means to direct the pressure of the operating medium into the cylinder, the said operating medium being selected from a group consisting of a metal and a metal alloy which is in a fluent condition at least during the operation of the apparatus.

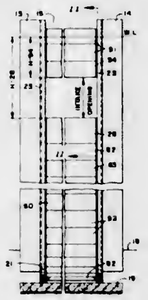
3,098,359
REVERSIBLE HYDROSTATIC TORQUE CONVERTER
Julius Yarmak, Swadlincote, and Josef Synac, Woodville, England, assignors to Coal Industry (Patents) Limited, London, England, a company of Great Britain
Filed July 3, 1961, Ser. No. 121,592
Claims priority, application Great Britain July 14, 1960
4 Claims. (Cl. 60—53)



1. In combination, a hydraulic motor having an output shaft; a motor-driven pump of the vane type and having a cam track adapted to co-operate with said vanes; hydraulically-actuated displacement adjustment means oper-

atively connected to said pump, said adjustment means comprising a cylinder closed at one end and defining a cylindrical chamber, a piston slidably mounted in said chamber and connected by means of a mechanical linkage to means adapted to vary the profile of the said cam track to thereby vary the displacement of the said pump, whereby movement of the piston within said chamber controls the displacement of the said pump; first and second conduits connecting said pump to said motor to form a hydraulic circuit therewith, having high and low pressure sides whereby said motor can be energised by said pump when driven; a third conduit connecting said chamber to the high pressure side of said hydraulic circuit, servo valve means located in said third conduit and adapted to control the supply of liquid from the high pressure side of said hydraulic circuit to said chamber, said servo valve means being adapted to permit the flow of liquid to said chamber only when the pressure in the high pressure side of said hydraulic circuit exceeds a predetermined value, said flow of liquid being arranged to act on said piston which is thereby caused to slide axially within said chamber to progressively reduce the displacement of said pump, until said pressure attains a maximum value at which the displacement of the said pump is zero, whereby when the torque on the said output shaft is greater than a predetermined limit, the rotational speed of said output shaft varies inversely in accordance with the said torque.

3,098,360
WATER QUALITY CONTROL MEANS
Val M. Gwyther, 515 Granville St., Vancouver, British Columbia, Canada
Filed Nov. 14, 1960, Ser. No. 68,978
3 Claims. (Cl. 61—28)



1. Water quality control means within a passage through which water passes from a reservoir to a forebay, said water having a surface, the passage defined by vertical sidewalls and an invert, said means comprising in combination the following elements to form an intake opening of variable vertical dimension at a variable depth below the surface aforesaid,

(*a*) a first pontoon, submerged at a variable depth below the surface and extending horizontally across the passage to close it, the pontoon having a top wall, a bottom wall, and end walls closely adjacent to the passage sidewalls, said pontoon slidable vertically within the passage,

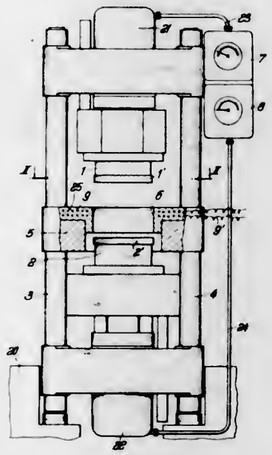
(*b*) a cutoff membrane attached to and supported by the top wall of the first pontoon extending upwards thereof, the membrane extending across the passage to close it, the said membrane slidable vertically in channel members attached to the passage sidewalls,

(*c*) a second submerged pontoon similarly mounted and disposed below the first pontoon,

(*d*) a flexible sectional membrane attached to and dependent from the bottom wall of the second pontoon, the membrane extending across the passage to close it, said membrane slidable vertically in channel members attached to the passage sidewalls,

(*e*) means independently to vary the buoyancy of each pontoon whereby each may be submerged to a variable depth below the surface, the bottom wall of the first pontoon defining, with the top wall of the second pontoon and the passage sidewalls, the intake passage aforesaid, the said means including for each pontoon a valve, a supply line containing air under pressure attached to the valve, said valve adapted selectively to admit water to the interior of the pontoon, to close, and to admit air under pressure to the interior of the pontoon to displace the water therein.

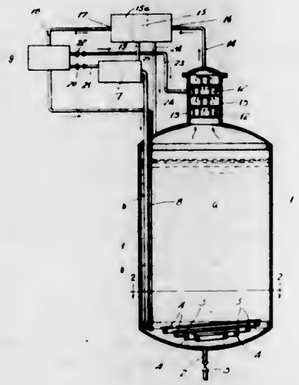
3,098,361
METHOD OF PRODUCING CARBON DIOXIDE ICE AND PRODUCT THEREOF
Ludwig Werner Haase, Südwestkorso 24a, Berlin-Wilmersdorf, Germany
Filed Dec. 4, 1961, Ser. No. 156,636
Claims priority, application Germany Aug. 9, 1961
9 Claims. (Cl. 62—1)



1. A solid body of carbon dioxide ice substantially free from capillary pores and having a specific gravity of approximately 1.33.

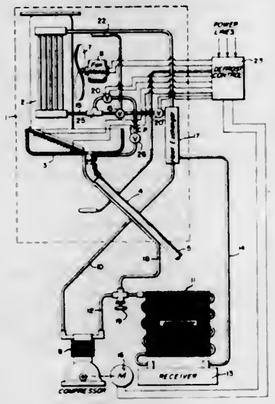
3,098,362
CONTAINER VESSEL FOR STORAGE AND TRANSPORTATION OF LIQUEFIED NATURAL GASES
Yoshitoshi Sohda and Yoshimi Sohda, Tokyo, Japan; said Yoshimi Sohda assignor to said Yoshitoshi Sohda
Filed Nov. 1, 1960, Ser. No. 67,964
Claims priority, application Japan Nov. 4, 1959
10 Claims. (Cl. 62—54)

1. Container vessel assembly for storage and transportation of liquefied natural gases, said assembly comprising in combination: a vessel adapted for reception therein of a body of liquefied natural gases; a plurality of combined cooling injection coil assemblies having gaseous nitrogen coolant injection coil means and liquefied nitrogen coolant injection coil means; said combined cooling injection coil assemblies being positioned in said vessel and at a level below the level of said body of liquefied natural gases; multi-stage compressor means connected with top of said vessel; a gaseous nitrogen coolant reservoir connected with a stage of said compressor; a liquefied nitrogen coolant reservoir connected with the delivery side of said compressor; first piping means connecting said gas reservoir with said gaseous nitrogen injection coil means;



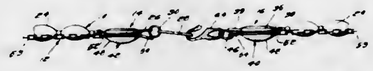
and second piping means connecting said liquid reservoir with said liquefied nitrogen injection coil means.

3,098,363
REFRIGERATION SYSTEM DEFROSTING BY CONTROLLED FLOW OF GASEOUS REFRIGERANT
Raymond M. Shrader, Decatur, Ga., assignor to Larkin Coils, Inc., Atlanta, Ga., a corporation of Georgia
Filed Feb. 24, 1961, Ser. No. 91,528
6 Claims. (Cl. 62—151)



1. In a refrigeration system, a compressor, condenser, receiver, evaporator, expansion valve, and the usual suction line from the evaporator to the low side of the compressor, the hot gas line from the high side of the compressor to the condenser, the liquid line from the receiver to the expansion valve, and the connection from the expansion valve to the evaporator, means for defrosting the evaporator comprising a branch conduit from said hot gas line to the connection between said expansion valve and evaporator, a defrosting valve in said branch conduit normally closed when said system is in its freezing cycle, means for opening said defrosting valve periodically to effect defrosting, and an automatic downstream pressure responsive modulating valve in said branch conduit constructed to respond to the weight per unit volume gas flow of the gaseous refrigerant into the evaporator during the defrost cycle and adjusted to automatically regulate evaporator pressure and compressor suction pressure to a predetermined point during defrosting and to permit only a gradual build up of flow of hot refrigerant gas into the evaporator at the beginning of the defrost cycle.

3,098,364
NECKLACES USEABLE SEPARATELY OR IN PARALLEL STRANDS
Gene Verri, Warwick, R.I., assignor to Coro, Inc. of Rhode Island, Providence, R.I., a corporation of Rhode Island
Filed Apr. 22, 1960, Ser. No. 24,093
2 Claims. (Cl. 63—2)



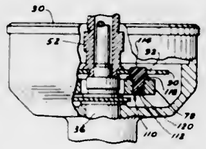
1. In a necklace construction, a first necklace unit, a second necklace unit detachably secured to said first necklace unit thus forming a composite having opposite ends, means attached to the ends of said first necklace unit for joining said ends thereof when said first necklace unit is detached from said second necklace unit and used independently therefrom, means attached to the ends of said second necklace unit for joining said ends thereof when said second necklace unit is detached from said first necklace unit and used independently therefrom, the joining means of said first and second necklace units including hooks, one of said hooks being joined to an end of said first unit at one end of said composite, the other of said hooks being joined to said second unit at the other end of said composite, said hooks being adapted to be interconnected for joining the ends of said necklace units when they are located in the secured position thereof, the means attached to the ends of said first unit for joining the ends thereof further including resilient plastic rings, the means attached to the ends of said second unit for joining the ends thereof further including metal discs, said plastic rings being mounted on projecting means on said metal discs for detachably securing said necklace units together.

3,098,365
COUPLING FOR RODS OR SHAFTS
Arthur Stanley Pearson, Sherwood, England, assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed May 14, 1962, Ser. No. 194,569
Claims priority, application Great Britain May 16, 1961
2 Claims. (Cl. 64—7)



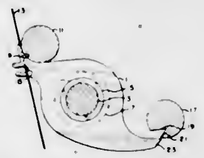
1. A coupling for rods or shafts comprising a male and a female member each made of a single piece of resilient synthetic plastic material, and each including a shank-like portion for attachment to an end of a rod or shaft, the shank of the male member having a spherically shaped element at one end provided with laterally projecting integral molded spigots and the shank of the female member having a socket element at one end formed with a substantially hemispherically shaped restricted opening cavity corresponding to the dimensions of the spherically shaped element of the male member, and surrounded by a continuous resilient wall of the cavity for resiliently engaging the element of the male member, when inserted and said wall being formed with slots or recesses for receiving the spigots of the male member.

3,098,366
IGNITION DISTRIBUTOR
Robert K. Frank, Mount Clemens, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed Nov. 16, 1961, Ser. No. 152,829
6 Claims. (Cl. 64—25)



3. An improvement in an ignition distributor of the type in which angular adjustment of the distributor cam with respect to the distributor drive shaft on which the cam is mounted is accomplished by the action between centrifugal weights pivotally mounted on said shaft and arms extending from said cam due to a pin extending from one of said elements and being in engagement with suitably disposed slots formed in the other of said elements, said improvement comprising said pins being formed and mounted on one of said elements so as to be rotatable with respect thereto, the free end of each of said pins received in one of said slots being formed with oppositely disposed flat surfaces to engage the edges of said slot.

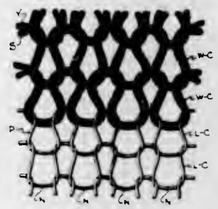
3,098,367
CONTROL SYSTEM FOR WARP KNITTING MACHINE
George W. Taylor, Johnstown, N.Y., assignor of one-half to Walter F. Wessendorf, Jr., Guilderland, N.Y.
Filed Mar. 23, 1961, Ser. No. 97,851
10 Claims. (Cl. 66—164)



1. A control system for a warp knitting machine comprising driven means including a first shaft and a second shaft, drops arranged on said first shaft, said drops guiding yarns fed into the knitting machine, said drops having upper tail portions abutting a rod and lower tail portions adjacent said second shaft, control means to shut off said knitting machine upon breakage of a yarn, slackness in a yarn, or a yarn having a slub; said control means cooperating with said driven means and said second shaft having means cooperating with the lower tail portion of the drop upon breakage of a yarn, slackness in a yarn, or a yarn having a slub; all of the foregoing recited structure and means being so cooperatively and correlatively associated, arranged and constructed such that upon breakage of a yarn, slackness in a yarn, or a yarn having a slub said knitting machine is shut off.

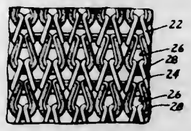
3,098,368
KNIT FABRIC FOR A WELT OR THE LIKE
Charlie A. Miles, Burlington, N.C., assignor to Alamance Industries, Inc., Burlington, N.C., a corporation of North Carolina
Filed Jan. 17, 1961, Ser. No. 83,329
5 Claims. (Cl. 66—178)

1. An improved ladies' knit hose having a plurality of serially knit courses of stitches forming welt and leg portions, said stitches in the leg portion being knit of a thermoplastic yarn, and each of said stitches in the welt portion being knit of a non-stretchable multifilament



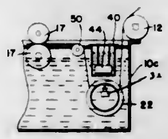
thermoplastic yarn and a stretchable multifilament thermoplastic yarn in plated relationship.

3,098,369
COMPRESSIVE STOCKING
Aaron Burleson and Mark Nicholas Holmes, Burlington, N.C., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Dec. 1, 1961, Ser. No. 156,459
4 Claims. (Cl. 66—178)



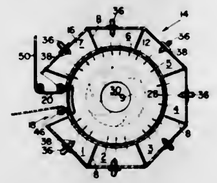
1. A knit compressive stocking knit throughout at least the leg portion thereof with nylon body yarn,
said portion having bare elastomeric polyurethane yarn knitted in alternate courses to give compressive support in the longitudinal and coursewise directions,
said polyurethane yarn being embedded in the fabric so that the yarn exposed at the surface is predominantly nylon,
the body yarn in the same courses with the polyurethane yarn being lighter in weight than the body yarn in the intervening courses,
whereby the appearance of the fabric approximates that of a nylon fabric.

3,098,370
TREATMENT OF LIQUID IMMERSED MATERIAL
Harmon A. Poole, North St., and Francis W. Bellows, Goshen Road, both of Litchfield, Conn.
Filed Aug. 17, 1955, Ser. No. 529,062
5 Claims. (Cl. 68—3)



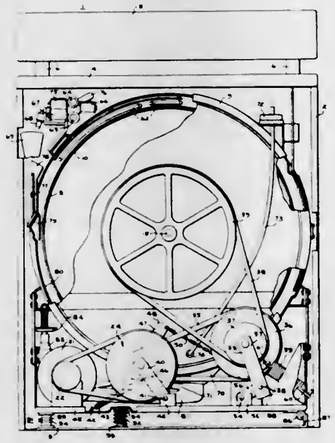
1. Apparatus for treating materials in the form of filaments, fibers, yarns and fabrics, strands and other elements formed therefrom; and comprising a tank for holding a treating liquid of predetermined composition selected to impart desired characteristics and quality to the material, an immersion roller containing a separate confining liquid isolated from the treating liquid and at least partially submerged in the treating liquid, means for directing the material through the treating liquid in said tank and in contact with the immersed surface of said roller, and transducer means separately immersed in the confining liquid in said roller and disposed in close proximity to the material in the treating liquid for imparting sonic through ultrasonic vibrations effective to increase impregnation and intimate association of the treating liquid with the material and within the interstices thereof.

3,098,371
PERFORATED DRUM MATERIAL TREATMENT DEVICE HAVING A PLURALITY OF TREATMENT ZONES
Gerold Fleissner, Egelsbach, Germany, assignor to Fleissner G.m.b.H., Egelsbach, Germany, a German firm
Filed Oct. 26, 1960, Ser. No. 65,159
Claims priority, application Germany Oct. 26, 1959
13 Claims. (Cl. 68—5)



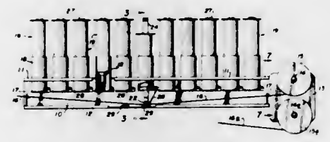
1. A device for treating permeable materials, comprising a rotatable perforated drum closed at one end and having an opening at the opposite end, a casing surrounding said drum, wall means on the interior of said casing extending from the interior wall of said casing inwardly to a location spaced radially from said drum by an amount to permit passage of material on said drum and defining a plurality of zones in said casing between the interior wall thereof and said drum, and a fan having an inlet disposed in the opening at one end of said drum and including means to discharge fluid into said zones.

3,098,372
CLOTHES WASHING MACHINE HAVING UNBALANCE SENSING MEANS
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 31, 1962, Ser. No. 198,866
4 Claims. (Cl. 68—24)



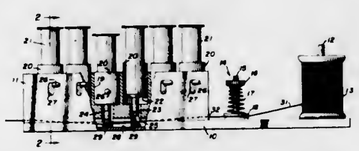
1. A washing machine comprising:
(*a*) a moving system including a rotatably mounted clothes receiving basket;
(*b*) means for washing clothes in said basket and for rotating said basket at high speed;
(*c*) a rigid frame system provided for supporting said moving system, said moving system being pivotally mounted on said frame system and being seated on said frame system in rigid engagement therewith at a point removed from the pivot so that said systems are held together at said point by a predetermined gravitational force and separate when vibrational forces in said moving system overcome said predetermined force;
(*d*) controlling means for causing said basket to rotate at high speed at the end of a washing operation;
(*e*) switch means adjacent said point of rigid engagement having a pair of contacts enabling and disabling said controlling means to cause high speed rotation of said basket when said contacts are respectively closed and opened;
(*f*) said systems cooperating to press said contacts together by gravitational force when said systems are rigidly held together by said predetermined force, said contacts being arranged so that they open when said systems start to separate.

3,098,373
MULTIPLE COLOR THREAD DYEING DEVICE
Claude C. Langston, 1701 W. Berry, Fort Worth, Tex.
Filed May 8, 1961, Ser. No. 108,637
5 Claims. (Cl. 68—27)



1. A thread dyeing device comprising a chassis having a horizontal base and a parallel flange thereabove, at least two open end barrels in vertical side-by-side relation supported by said flange, cylindrical dye markers slidably received in said barrels, said dye markers having depending marker tips, a resilient pad supported by said chassis beneath each said marker tip, and means movably supporting a thread beneath said marker tips and above said pads.

3,098,374
MULTIPLE COLOR THREAD DYEING DEVICE
Claude C. Langston, 1701 W. Berry, Fort Worth, Tex.
Filed Feb. 5, 1962, Ser. No. 171,111
5 Claims. (Cl. 68—27)



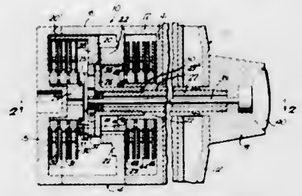
1. In a multiple color thread dyeing device comprising a body for mounting on the head of a shoe sewing machine, said body including at least two vertical bores in side by side relation, dye marker assemblies slidably received within said bores, each said dye assembly including a cylindrical body and a depending marker felt, a base plate beneath said body, means guiding a thread beneath said felts and guide means coacting said markers with said bores, said guide means of sufficient longitudinal movement to permit said felts to contact said thread.

3,098,375
CLEANING PROTECTIVE DEVICE
Max H. Friedler, Lewiston, Maine, assignor to Saf-A Products, Inc., Lewiston, Maine, a corporation
Filed Dec. 21, 1959, Ser. No. 860,968
2 Claims. (Cl. 68—235)



1. A foldable protective device adapted to shield an object affixed to clothing during the cleaning process comprising a unitary flexible strip, said unitary strip including a first portion, a second portion, said second portion characterized by a slit defining a first arm and a second arm, and fastening means adapted to fasten said arms in overlapping position to said first portion said overlapping position of said arms forming said second portion into a cup-like enclosure over said first portion, enclosing said object affixed to clothing.

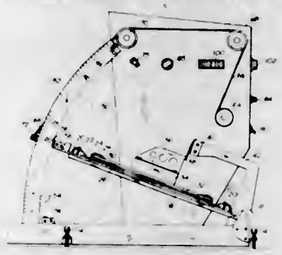
3,098,376
COMPROMISE RESISTING COMBINATION LOCK
Harry C. Miller, 24 Seneca Ave., Rochester 21, N.Y.
Filed Feb. 2, 1962, Ser. No. 170,618
5 Claims. (Cl. 70—333)



1. In a combination lock of the type having a plurality of peripherally recessed tumbler wheels spaced axially along and in concentric relation with a selected axis, a rotatable driving cam, a bolt, and a fence lever intercoupled with said bolt having a fence overlying and operatively associated with the peripheries of said tumbler wheels, and a driving cam for adjusting said tumbler wheels and actuating said fence lever; the improvement comprising means for confusing radiological images of the lock produced by radiant energy rays passing therethrough generally along said selected axis including a plurality of auxiliary peripherally recessed tumbler wheels of similar configuration and density to said first mentioned tumbler wheels disposed in concentric relation with said selected axis at a position spaced out of operative relation with said fence, and coupling means responsive to angular adjustment of said driving cam for adjusting said auxiliary tumbler wheels concurrently with adjustment of said first-mentioned tumbler wheels.

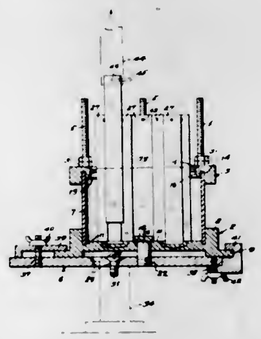
3,098,377
SKID RESISTANCE TESTER
Albert J. Beauchamp, 108 N. 92nd Ave., Vancouver, Wash.
Filed Jan. 16, 1961, Ser. No. 82,970
3 Claims. (Cl. 73—9)

1. Apparatus for testing the static frictional characteristics of paper and the like comprising:
a base,
a slideway platform rotatably mounted on said base,
a weighted slide body supported upon said platform for sliding movement thereon due to the force of gravity,
mounting means for securing said paper between the adjacent surfaces of said platform and said body,
a reversible motor connected to said platform for rotating said platform through several angles of inclination,
indicating means coupled to the rotation of said platform for showing said angles of inclination,
manual means for starting said motor to elevate said platform,
means for detecting initiation of sliding movement of



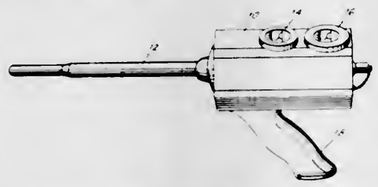
said body on said platform, and means operatively connecting said detecting means to said motor for reversing said motor automatically at the instant of time said body begins to slide on said platform so that the direction of rotation of said platform is reversed and the maximum reading obtained on said indicating means corresponds accurately to the actual angle of initial slippage of said paper.

3,098,378
CORE RELEASE TEST FIXTURE
Erwin Marsh, Marshall, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Feb. 16, 1962, Ser. No. 173,843
5 Claims. (Cl. 73—103)



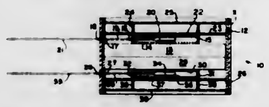
1. A test fixture for supporting a series of test strips which are coated with a core release agent for successive testing in a tensile test machine, said fixture comprising in combination a circular base for holding the lower ends of said strips in symmetrical spaced relation, a tubular case for holding a propellant therein and encircling the test strips, the lower rim of said case being fitted in said base, a holding ring fitted over the upper rim of said case, an alignment plate for holding the upper ends of the test strips in vertically aligned relation with respect to the axis of said fixture, adjustable means for securing said case between said base and said holding ring and the test strips between said base and said alignment plate and means for rotating and shifting said fixture through successive testing positions with respect to the test machine.

3,098,379
ENGINE BALANCE CLASSIFIER
Arthur R. Crawford, Worthington, Ohio, assignor to International Research & Development Corporation, Columbus, Ohio, a corporation of Ohio
Original application July 13, 1955, Ser. No. 521,744, now Patent No. 3,023,613, dated Mar. 6, 1962. Divided and this application Jan. 30, 1961, Ser. No. 85,595
8 Claims. (Cl. 73—116)



1. A portable engine balance classifier comprising a small portable casing containing: a transducer resonant to the frequency of vibration of an engine to be classified when it is running at a predetermined speed, a rectifier directly connected to the output of said transducer, a first meter, D.C. means connecting said first meter to said rectifier to cause said meter to indicate the amplitude of that component of the vibration to which the transducer is resonant, a terminal on said casing for electrically connecting said classifier to said engine to transmit the frequency of rotation of said engine to the classifier, a rectifier connected to said terminal, a second meter, and means connected between said meter and said rectifier to cause said meter to indicate the speed of rotation of said engine under classification for indicating said predetermined speed.

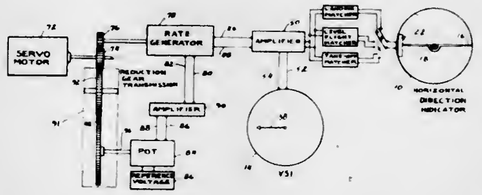
3,098,380
RADIATION MEASURING DEVICE
Verner E. Suomi, Madison, and Peter M. Kuhn, McFarland, Wis., assignors to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin
Filed Sept. 6, 1960, Ser. No. 54,097
5 Claims. (Cl. 73—170)



5. A radiation measuring device comprising thermal insulating means defining an enclosure having at least one open end, a pane of plastic film transparent to thermal radiant energy positioned across said open end, a thermal radiation absorptive surface in said enclosure spaced inwardly of said pane a distance on the order of about 0.7 cm. and parallel thereto, and a thermal detector, including a thermally sensitive element responsive to changes in temperature thereof, positioned in the space defined by said pane and said thermal radiation absorptive surface, said element being in thermally conductive relationship with said surface, whereby the temperature of said element is a function of the thermal radiation to and from said surface.

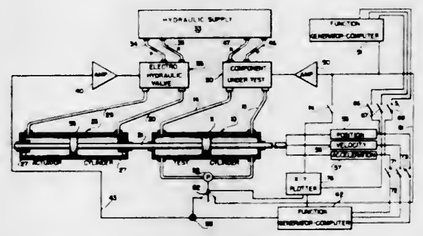
3,098,381
VERTICAL SPEED INDICATOR
David S. Little, 35 Bogart Ave., Port Washington, N.Y., and Edward W. Pike, 135 Ellerman Ave., Twickenham, England
Filed Sept. 10, 1959, Ser. No. 839,238
7 Claims. (Cl. 73—179)

1. In combination with an altimeter having a servo motor coupled to an altitude scale to drive said scale past an index position in response to changes in altitude, means coupled to said servo motor for generating an electrical signal having an amplitude variation proportional to the rate of change of altitude with respect to time and having a polarity indicative of the direction of altitude change, said generating means comprising a rate generator coupled to said servo, said rate generator having an input



winding and an output winding and an input signal source coupled across said input winding, said input signal having an amplitude varying as a function of servo motor rotation, an indicator responsive to an applied signal to provide a numerical indication of the signal amplitude and relative polarity, and means coupling said output winding to said indicator.

3,098,382
HYDRAULIC TEST EQUIPMENT
Jess H. Hoffman, North Hollywood, James I. Detweiler, Burbank, and Forest O. Riek, Jr., Los Angeles, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Mar. 4, 1960, Ser. No. 12,743
9 Claims. (Cl. 73—168)

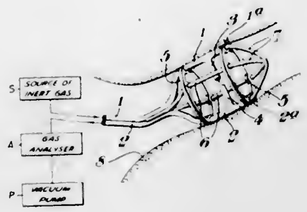


1. A method of determining the characteristics of a hydraulic component comprised of the steps of confining a volume of fluid in a closed space, forcibly changing the size of the volume, conducting the fluid from the volume through the component whose characteristics are to be determined, sensing the rate of change of the volume, sensing the internal characteristics of the component as related to the action of forces and existence of conditions internally thereof, and visually presenting the rate of volume change with relation the internal characteristics.

3,098,383
METHOD AND MEANS FOR DETERMINING GAS FLOW VELOCITY
John Burnard West, London, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Sept. 22, 1960, Ser. No. 57,802
Claims priority, application Great Britain Sept. 29, 1959
5 Claims. (Cl. 73—194)

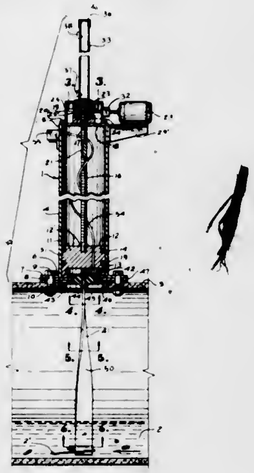
1. Method for determining the velocity of flow of a subject gas through a tubular duct consisting of leading

an inert gas by a first tube to an open end thereof situated in the said duct, forcing the inert gas as a jet from said open end across the path of the subject gas to an open



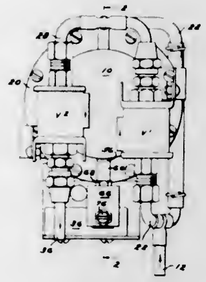
end of a second tube whereby it is deflected by the incidence of the stream of subject gas, the extent of deflection being dependent upon the flow velocity of the latter, whereupon the remanent inert gas jet is directed into the second tube, then conducting the remanent inert gas with any entrained subject gas by the second tube to a gas analyser, and obtaining a record of the inert gas concentration from the analyser, such concentration affording a measure of the flow velocity of the subject gas.

3,098,384
FLOW METER
Wellman E. Nusbaum, 8008 Ensley Lane, Leawood, Kans.
Filed May 16, 1961, Ser. No. 110,371
5 Claims. (Cl. 73—228)



1. A flow meter adapted to measure the flow of liquids containing debris through a conduit comprising, an elongated flow sensing blade, means for firmly supporting said blade at least partially submerged in the flow of liquid, means associated with said sensing blade for measuring liquid flow as a function of strain on said sensing blade caused by liquid flow, means cooperating with said supporting means and adapted to automatically periodically withdraw said blade from the liquid, and a wiping device adapted to clean said blade as it is withdrawn whereby debris is removed from said blade.

3,098,385
LIQUID MEASURING DEVICE
Roy Deming, Royal Oak, Mich., assignor to Kent-Moore Organization, Inc., Warren, Mich., a corporation of Michigan
Filed May 27, 1960, Ser. No. 32,222
11 Claims. (Cl. 73—270)

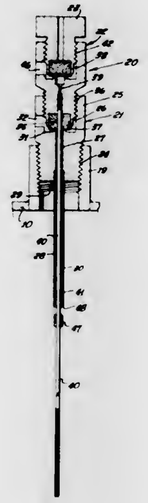


1. A liquid measuring device comprising, in combination, a liquid-containing vessel divided by a flexible diaphragm into first and second liquid-containing chambers, a liquid delivery system communicating with both chambers to deliver liquid thereinto or to discharge liquid from said first chamber, valve means in said system controlling the flow of liquid therein operable to deliver liquid into both chambers simultaneously or into said second chamber only and to discharge liquid in measured increments from said first chamber, an electric circuit including valve control mechanism for the valve means, said circuit including switch mechanism operable to one position to make the circuit through said valve control mechanism to actuate the valve means to permit liquid to be admitted into both chambers simultaneously and to prevent liquid from being discharged from said first chamber, said switch mechanism operable to a second position to make the circuit through said valve control mechanism to actuate the valve means to permit liquid to be delivered into said second chamber only and to permit liquid to be discharged from said first chamber in a measured increment to thereby complete a single cycle of delivery of liquid into and discharge of a measured increment of liquid from said vessel, said diaphragm being responsive to flexure under pressure of admission of liquid into said second chamber only to cause liquid to be discharged from said first chamber in measured increment.

3,098,386
LIQUID LEVEL INDICATOR FOR L. P. GAS TANKS
Kenneth K. Kennepohl, 44073 N. Sierra Highway, Lancaster, Calif.
Filed Nov. 17, 1961, Ser. No. 153,123
4 Claims. (Cl. 73—297)

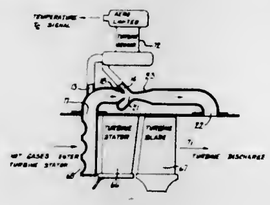
1. In an L. P. gas tank having a chamber in the tank and an indicator passage from the chamber to the exterior, an indicator comprising an inner high level fitting having a high level passage therethrough, and a connection at one end adapted to engage said tank at the indicator passage, said fitting having a threaded portion at the other end and a high level vent passage in communication with the exterior, a high level tube extending from said one end of the fitting to an upper level of said chamber, an outer low level fitting having a low level passage therethrough, threads at one end engageable with the high level fitting, a seal between the low level fitting and the high level fitting adapted to close said high level passage

in the high level fitting, a low level tube extending from said one end of the low level fitting telescopingly through said high level tube and providing a vent clearance therebetween, said low level fitting having a threaded portion at the other end and a transverse low level vent passage in communication with the exterior, a closure plug in threaded engagement with said low level fitting, a seal between the plug and the low level fitting normally sealing



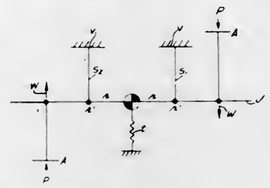
said low level tube, said closure plug being partially releasable to indicate a low level tank condition by gas flow through said low level vent passage, said high level fitting being partially releasable to indicate a high level tank condition by liquid flow through said high level vent passage.

3,098,387
TURBINE
Marshall J. Corbett, Mayfield Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Aug. 19, 1957, Ser. No. 678,811
5 Claims. (Cl. 73—357)



3. In a hot gas flow system, an aerodynamically speed-limited turbine having an inlet and an outlet, means for applying hot gas from said system to said inlet, means for maintaining a constant pressure ratio between said inlet and said outlet, and pump means driven by said turbine and arranged to produce a fluid pressure signal proportional to the square of the velocity of rotation of said turbine.

3,098,388
BAROMETRIC PRESSURE TRANSDUCER
Norman J. Appleton, Plainview, N.Y., assignor to General Precision, Inc., Little Falls, N.J., a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,708
10 Claims. (Cl. 73—384)



1. In an altimeter and casing for a desired altitude range, in combination, a lever of the first class; a pair of strings designed to vibrate connected to opposite ends of said lever and casing, said strings being of a length L in inches where

$$L=\frac{1}{2f_0}\times\sqrt{S_0/p}$$

where

f_0 is a selected operable fundamental frequency
S_0 is the stress on the strings at the fundamental frequency in p.s.i.
p is the density in pounds $\times$ seconds^2 divided by inches^4 of a string of a cross-sectional area A_s in inches^2 determined by the slenderness ratio to minimize column effect;

a bias tension T_s applied to each string by tension means on the lever located at the centerpoint between said strings, determined by the equation

$$T_s=S_0A_s$$

A_s being the cross-sectional area of the string in inches^2 and, a pair of pistons including an atmosphere pressure area loading said lever on opposite sides thereof and on opposite sides of the centerpoint thereof, the size of the atmosphere pressure area, and the location of the pistons on the lever being determined by the formula

$$A(r'/r)\frac{Df}{G\times DP}$$

where

A is the atmosphere pressure area size of the piston in inches^2
r' is the distance that each piston is located from said centerpoint in inches
r is ½ the distance between strings in inches
Df is the selected frequency difference between the ceiling and floor of the selected altitude range

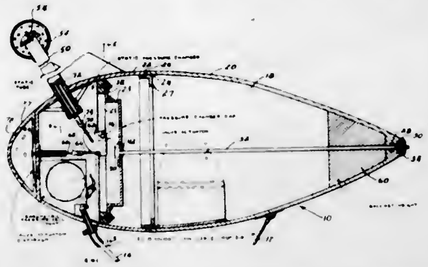
$$G \text{ is } \frac{1}{f_0\times(4pA_sL^2)}$$

DP is the difference in pressure between the ceiling and floor of the selected altitude range of a selected model atmosphere.

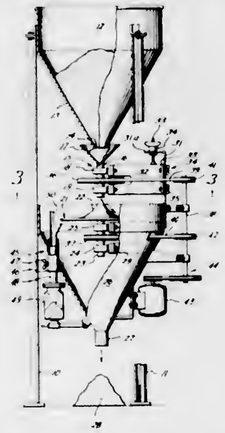
3,098,389
SUBMARINE SURFACE SENSING SYSTEM
Frederick C. Melchior, 258 Riverside Drive, New York, N.Y.
Substitute for abandoned application Ser. No. 15,669, Mar. 17, 1960. This application Dec. 22, 1961, Ser. No. 163,957
9 Claims. (Cl. 73—384)

1. A buoyant sensing unit adapted for flotation on the surface of water comprising a barometric sensor to

measure barometric pressure at the water surface, said sensor being housed within said unit, and means responsive to water pressure on the unit when submerged in said water to seal said unit, said last named means including a valve.



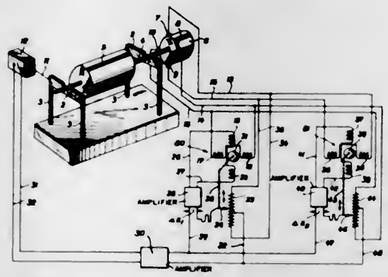
3,098,390
SAMPLING DEVICE
Douglas J. Bourne and William H. Park, Carlsbad, N. Mex., assignors to Duval Sulphur and Potash Company, Houston, Tex., as corporation of Texas
Filed Dec. 22, 1960, Ser. No. 77,750
8 Claims. (Cl. 73—424)



1. A sampling device comprising, a hopper having a discharge opening, a distributor positioned below and receiving material from the hopper discharge opening, said distributor having a discharge opening in its lower end, means mounting said distributor for rotation about a vertical axis, a slinger disc positioned below and receiving material from said distributor discharge opening, means mounting said slinger disc for rotation about a vertical axis, means for rotating said distributor and slinger disc relative to the hopper and relative to each other, and a sample cutter positioned adjacent the slinger disc and receiving material therefrom.

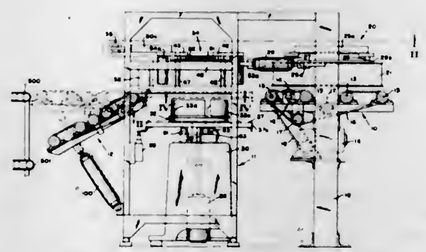
3,098,391
APPARATUS FOR ELECTRICALLY MEASURING UNBALANCE OF ROTATING WORKPIECES
Otfrid G. H. Maus and Alfred J. A. Giers, Darmstadt, Germany, assignors to Carl Schenck Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany
Filed Aug. 1, 1958, Ser. No. 752,554
Claims priority, application Germany Aug. 10, 1957
5 Claims. (Cl. 73—462)

5. Apparatus for electrically measuring unbalance of rotating workpieces, comprising journalling structure for rotationally supporting the workpiece to be tested, pickup means connected to said structure for providing an alternating pickup voltage in response to oscillatory unbalance effects due to rotation of the workpiece, auxiliary generator means adapted for connection with the workpiece and having two alternating output voltages 90° phase displaced from each other, first and second potentiometer resistors connected to said generator voltages respectively and having each a fixed tap and a slide contact, first and second reversible two-phase motors each having a rotor and two field circuits for rotating said rotor in response to said respective field circuits being simultaneously excited by phase-different respective voltages, said first motor having one of its two field circuits connected to the



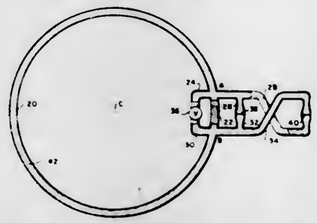
one generator voltage to which said second resistor is connected, said second motor having one of its two field circuits connected to the other generator voltage, circuit means connecting said other field circuits of said first and second motors to said pickup voltage through said fixed tap and said slide contact of said first and second resistors respectively for energizing said other field circuits by the difference between the pickup voltage and the respective voltages tapped from said two potentiometers, and mechanical transmission means connecting said rotor of said first and second motors with said slide contacts of said first and second resistors respectively, whereby said motors displace said respective contacts to positions where said differences are zero and said positions are indicative of the unbalance to be measured.

3,098,392
APPARATUS FOR DEVELOPING A SIGNAL REPRESENTING THE CONDITION OF BALANCE OF AN OBJECT
Henry S. Mika, Birmingham, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed July 10, 1958, Ser. No. 747,741
8 Claims. (Cl. 73—485)



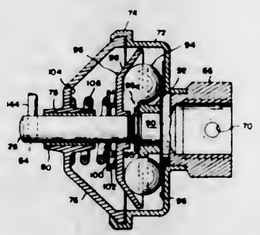
1. Apparatus for developing a signal representing the condition of balance of an object comprising: normally balanced means for supporting an object thereon and capable of assuming a stationary position of unbalance representative of any unbalance of the object; electromechanical means attached to said supporting means at spaced points thereof corresponding to different regions of the object and responsive to said stationary position of unbalance of said supporting means for individually developing signals representative of the displacement of said supporting means at said spaced points in response to any unbalance of the object; and means for combining said signals to develop a resultant signal uniquely representative of any unbalance of the object.

3,098,393
ANGULAR ACCELEROMETER
George W. Cook, 9 Morningside Ave., Yardley, Pa.
Filed June 9, 1961, Ser. No. 116,923
19 Claims. (Cl. 73—516)
(Granted under Title 35, U.S. Code (1952), sec. 266)



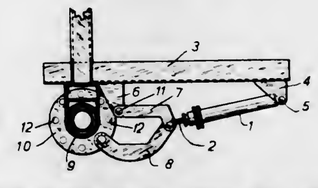
1. An angular accelerometer of a type described comprising a liquid filled loop having means for completely blocking the flow of liquid in said loop, said loop including a pair of spaced points on opposite sides of said blocking means, a pair of differential pressure responsive means each comprising a diaphragm, said diaphragms being similar in construction and similarly arranged with respect to said loop, each of said diaphragms having a first side toward a first of said points and a second side toward the second of said points, said loop comprising branch means connecting said first point to said first side of a first of said diaphragms and to said second side of the second of said diaphragms, said loop comprising another branch means connecting said second point to said second side of said first diaphragm and to said first side of said second diaphragm.

3,098,394
SPEED RESPONSIVE SWITCH
Herman G. Adler, Detroit, Mich., assignor to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Original application Jan. 15, 1958, Ser. No. 709,089. Divided and this application Dec. 14, 1959, Ser. No. 859,186
5 Claims. (Cl. 73—551)



1. A speed responsive device comprising
(*a*) a rotary drive member,
(*b*) a first annular ball race fixed to said drive member for rotation therewith,
(*c*) a second annular ball race disposed in axial alignment with said first race and spaced transversely therefrom,
(*d*) means mounting said second race for movement toward and away from said first race and for preventing rotation of said second race,
(*e*) one of said races having a planar surface extending normal to the axis of rotation of said first race and the other of said races having a dished surface spaced from and in axial alignment with said planar surface,
(*f*) an annular spacer mounted for rotation independently of said drive member and disposed intermediate said races,
(*g*) said spacer having generally radially extending slots,
(*h*) balls disposed in said slots and engaged at opposite sides by said surfaces of said races, and
(*i*) resilient means operatively connected to said race to oppose movement thereof in a direction away from said first race.

3,098,395
CRANES, EXCAVATORS AND THE LIKE
Martin Haganes, Ovre Banegate 43, Stavanger, Norway
Filed Nov. 3, 1961, Ser. No. 150,101
1 Claim. (Cl. 74—105)

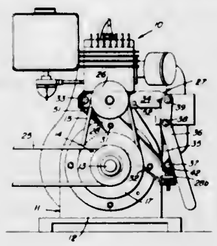


A device for slewing the main stem of a crane or the like, said device comprising a hydraulic cylinder having a piston rod, means pivotally securing one end of said cylinder, a first member having first and second ends, said first end of said first member being pivotally secured near said main stem of said crane, said second end of said first member being pivotally secured to the piston rod of said cylinder, said second end of said first member being disposed between and in front of said means pivotally securing one end of said cylinder and said first end of said first member when said piston rod is retracted within said cylinder, a second member having first and second ends, said first end of said second member being pivotally secured to said second end of said first member, and means fixed to said main stem containing at least two positions disposed on either side of said main stem, said second end of said second member being selectively and pivotally attached to one of the positions contained in said means fixed to said main stem, said second member curving rearwardly extending about said main stem when the piston rod of said cylinder is extended, said means fixed to said main stem comprising a disk containing apertures spaced about the disk, said second end of said second member being selectively and pivotally secured in said apertures in said disk.

3,098,396
V-BELT CLUTCH DEVICE
Vernon A. Unruh, Rte. 2, Great Bend, Kans.
Filed Mar. 1, 1962, Ser. No. 176,669
5 Claims. (Cl. 74—242)

1. In a V-belt clutch device, the combination of an internal combustion engine having a body and a crank shaft projecting therefrom, a split pulley carried by said shaft and having one flange fixed to rotate with said shaft and a complementary flange formed with a hub having

an annular groove to provide a pulley for a machine driving belt, means mounting said hub for free rotation on said shaft but holding it against axial movement, a belt tightening pulley mounting and adjusting means comprising a mounting member fixed to the body of the engine, a lever pivoted to said member, a belt-tightening pulley rotatably mounted on said lever and disposed in alinement with the flanges of said split pulley, a V-belt engaged with said split pulley and said belt tightening pulley, means for adjusting said lever, said engine body having a flat wall portion adjacent said projecting crank shaft, said mounting member being a flat plate disposed in parallel relation to said wall portion and fixed thereto,



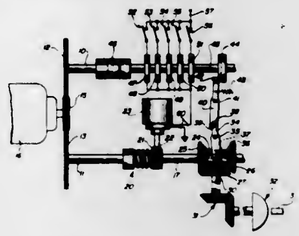
a pivot connecting one end of said lever to one end of said plate to pivotally mount the lever, said belt tightening pulley being mounted on an intermediate portion of said lever, means adjustably connecting the other end of said lever to the other end of said plate to provide said lever adjusting means, said lever adjusting means comprising a toggle lever device comprising long and short links pivoted at one end respectively to said other ends of the lever and the plate, said long link being angular and having the other end of the short link pivoted to its intermediate portion, the other or free end of the long link serving as a handle, and means for adjusting the pivotal connection between said short link and said plate.

3,098,397
TENSION CONTROL APPARATUS
John W. Schaefer, Kankakee, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Mar. 31, 1961, Ser. No. 99,763
5 Claims. (Cl. 74—242.14)



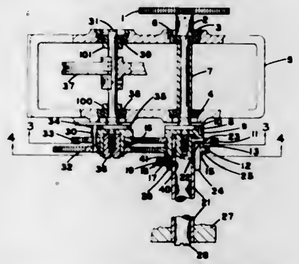
1. A tension control for an endless member, comprising a hydraulic unit having a tubular housing member and a piston member mounted therein, one of said members being generally immovably mounted and the other of said members being movably mounted in engagement with said endless member, resilient means coupled to the movable member to continuously place the endless member in tension, said piston member defining forward and rearward chambers within the housing member, a substantially incompressible liquid within said chambers, a passageway connecting said chambers, valve means in the passageway permitting liquid flow between the chambers only in one direction, said direction permitting the movement of said movably mounted member by said resilient means to maintain the endless member in tension, and normally inoperative means actuable to operatively disable said valve means to allow opposite movement of the movable member.

3,098,398
DRIVE MEANS
William P. Ryan, Avon, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Oct. 20, 1960, Ser. No. 63,916
11 Claims. (Cl. 74—321)



1. A drive mechanism; comprising a drive shaft, an output shaft, clutch means operable to couple said drive and output shafts, a control shaft, means for driving said control and drive shafts, means operated in timed relation to the rotation of said control shaft for maintaining said clutch means in its engaged condition for a predetermined period so as to impart a desired angular stroke to said output shaft, and means operated by said control shaft in timed relation to said period for reversing the direction of output drive of said output shaft.

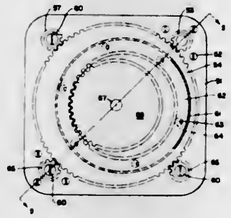
3,098,399
TRANSMISSION
Leon A. Berthiaume, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Sept. 21, 1961, Ser. No. 139,767
6 Claims. (Cl. 74—366)



1. A gear transmission comprising, a driving means, a driven means, a constant gear ratio means connecting the driving means to the driven means through a clutching means, a logarithmic ratio gear means connecting the driving means to the driven means through the clutching means, said clutching means selectively connecting the desired ratio of gear means for transmitting a driving force between said driving means and said driven means.

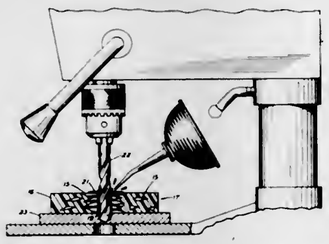
3,098,400
POWER TRANSMISSION
George D. Hedges, Roseville, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,409
4 Claims. (Cl. 74—804)

1. In combination: a circular internally toothed ring gear having an outer rim concentric with the pitch circle of the internal teeth; a circular externally toothed gear continuously meshing with said ring gear and having a pitch circle of smaller diameter; means mounting said ring gear for movement consisting of revolution about the center of said externally toothed gear without substantial rotation about its own center; and drive means



including a drive member mounted for rotation about the center of said externally toothed gear and having an eccentric bore including anti-friction means adapted to receive said rim without substantial play, so that rotation of said drive member causes said movement of said ring gear.

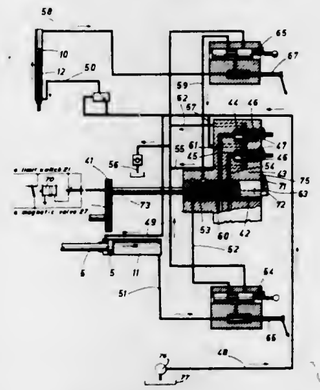
3,098,401
DRILL PLATE AND METHODS OF MAKING A DRILL PLATE
Marvin M. Breeze, Jr., and John O. Etchison, Jr., both of Forsyth, N.C., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 24, 1961, Ser. No. 112,345
6 Claims. (Cl. 77—62)



4. A drill plate having tool guide holes comprising a body composed of a resin with chips of metal suspended in the resin and concentrated in the walls of said holes to produce tool engaging walls and having cavities in said tool engaging walls about said metal chips.

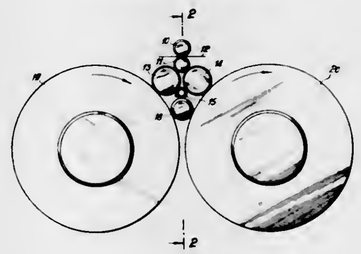
3,098,402
FORGING MACHINE
Bruno Kralowetz, St. Ulrich, near Steyr, Austria
Filed Mar. 14, 1961, Ser. No. 95,559
Claims priority, application Austria Mar. 18, 1960
9 Claims. (Cl. 78—20)

1. A forging machine which comprises hammers formed as connecting rods, eccentric shafts operable to drive said hammers, angularly adjustable housings eccentrically mounting said shafts, workpiece feed means, a first hydraulic setting piston operable to axially move said workpiece feed means, a second hydraulic setting piston operable to effect an angular movement of said housings, first and second control conduits adapted to apply hydraulic pressure to said first and second pistons, respectively, two stepping rollers which are coupled for joint rotation to a plurality of predetermined positions and associated each with one of said pistons and arranged to perform an angular movement to the next of said predetermined positions in response to the completion of a movement of one of said pistons, and a valve system arranged to control said setting pistons in dependence on the position of said stepping rollers, said valve system comprising a common rotary valve arranged to be moved by said stepping rollers to a plurality of positions corresponding to said positions of said stepping rollers, a plurality of pairs of control valves, each of said pairs of valves being associated with one of said predetermined positions, said rotary valve being arranged to connect in



each of said predetermined positions said first control conduit to one and said second control conduit to the other of said control valves of the pair associated with said position, said machine comprising further a pressure fluid supply conduit and a drain conduit, each of said control valves being arbitrarily pre-adjustable to three positions, in one of which it is connected to said supply conduit, in the second of which it is connected to said drain conduit and in the third of which it is closed.

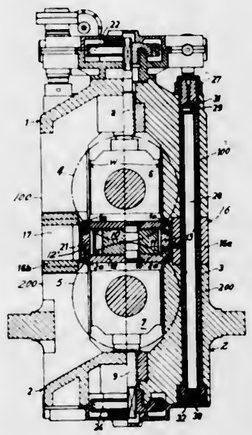
3,098,403
ROLLING MILL STRUCTURE
Hans Siegfried Metzger, St. Ingbert (Saar), Germany, assignor to Moeller & Neumann G.m.b.H., St. Ingbert (Saar), Germany
Filed Apr. 11, 1960, Ser. No. 21,203
Claims priority, application Germany Apr. 11, 1959
7 Claims. (Cl. 80—38)



1. Rolling mill structure including two working rolls, one of said rolls being disposed above and the other disposed below the rolling plane, two pairs of horizontally spaced intermediate rolls freely movable radially in all

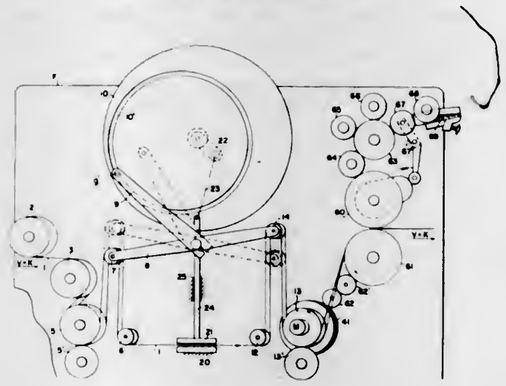
directions, one pair engaging one working roll and the other pair engaging the other working roll to support and drive the same, center rolls positively guided for vertical movement only in the plane of said working rolls and engaging each pair of said intermediate rolls, said center rolls being movable vertically with respect to all other rolls, supporting rolls disposed in the plane of said working rolls and engaging each of said center rolls and a pair of positively driven horizontally spaced backing rolls of relatively large diameter with respect to the other rolls, said backing rolls engaging said intermediate rolls and said supporting rolls to support and drive the same and thereby drive said working roll, the axes of said intermediate rolls being disposed inwardly of lines between the axes of said working rolls and the axes of the respective backing rolls, whereby said intermediate rolls are maintained in operative position, the engagement between all of said rolls being frictional only, whereby torque is transmitted from any of said rolls to an engaging roll solely by friction.

3,098,404
UNIVERSAL ROLLING MILL
Günther Morath, Walter Waldura, and Karl Neumann, all of St. Ingbert, Germany, assignors to Moeller & Neumann G.m.b.H., St. Ingbert, Germany
Filed Aug. 4, 1959, Ser. No. 831,666
Claims priority, application Germany Aug. 8, 1958
6 Claims. (Cl. 80—55)



1. A universal roll stand of the type including cooperating upper and lower vertically aligned horizontal rolls and transversely spaced vertical rolls lying in a common plane with their axes in alignment with the axes of the horizontal rolls for rolling work pieces of generally I-shaped configuration, said stand including vertically spaced upper and lower frame members, each having four columns disposed at the corners of a rectangular cross section, the columns of the upper frame member being in alignment with the columns of the lower frame member, the space between the columns on opposite lateral sides of the frame members defining side windows, roll chocks in each side window, horizontal rolls carried by said roll chocks, a separate, unitary open frame positioned between said frame members, said separate, unitary, open frame including side members spaced from one another and extending parallel to the axes of the horizontal rolls, further roll chocks guided between said spaced side members for movement in a direction transverse to the direction of rolling, vertical rolls carried by said further roll chocks, the distance between the facing surfaces of said two side members being greater than the extent of said side windows in the frame members whereby said further roll chocks are guided between adjacent upper and lower surfaces of the respective columns of said frame members so that said separate, unitary, open frame is firmly seated on the upper ends of the columns of the lower frame member, means for adjusting the position of said further roll chocks, and thus the position of said vertical rolls relative to said horizontal rolls, said columns and unitary open frame having vertically aligned apertures therethrough, stay bolt means passing through said apertures for clamping the upper and lower frame members to said unitary open frame for stressing the same, said horizontal rolls having a greater diameter than the extent of said side windows in the rolling direction and the space between said side members of said unitary open frame, and said side members of said unitary open frame lying within the cross sectional limits in the direction of rolling of said upper and lower frame members.

3,098,405
STRIP FEEDING AND REGISTRATION MEANS
Floyd A. Lyon, Brookville, and Theodore F. Aronson, Glen Cove, N.Y., assignors to Commercial Envelope Manufacturing Co., Inc., New York, N.Y.
Filed Sept. 14, 1960, Ser. No. 56,038
4 Claims. (Cl. 83—236)



1. In a web feeding machine means to adjust the alignment of equally spaced reference points on said web relative a reference point on said machine comprising a pair of brackets pivotally mounted on said frame, a pair of idler rollers for said web rotatably mounted on said brackets, said rollers being tangent to a common horizontal plane, means to feed said web to the first of said idler rollers at a substantial angle to said horizontal plane, means to feed said web from the second of said idler rollers at a substantial angle to said horizontal plane, a horizontal link bar connecting said pivotally mounted brackets, to hold said rollers tangent to a common horizontal plane, means to oscillatably adjust said brackets in parallel relation whereby said rollers remain tangent to a common horizontal plane, comprising an eccentric cam rotatably mounted on said frame adapted to bear against one of said brackets and handle means outside the frame casing of said machine to adjust the rotational position of said cam and means to hold said brackets in fixed position following adjustment to thereby adjust the registration of said web with respect to the reference point on said machine, while said machine is running at full speed.

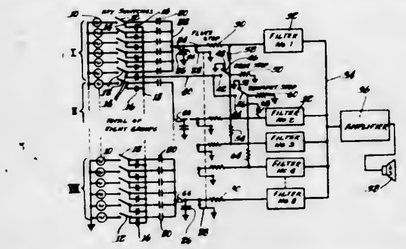
3,098,406
PERFORATION OF SHEET MATERIAL
Howard M. Dodge, Wabash, Ind., and Daniel P. Reynolds, Canton, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 2, 1958, Ser. No. 725,864
2 Claims. (Cl. 83—588)



1. A high speed perforating apparatus comprising a stationary die, an opening in said die having a marginal sheet-engaging edge, a punch sleeve in alignment with the die opening and having a cylindrical bore, means mounting the punch sleeve for movement vertically toward and away from said opening, a work-engaging member mounted in the end portion of said sleeve and having a convex nose portion projecting beyond the sleeve for engaging the edge of the die opening, said nose portion being larger than said opening and receding from its terminus, yieldable means for biasing said work-engaging member toward a normal position at the end of the punch sleeve comprising an axially elongated insert of elastomeric rubber, a first axially elongated rigid member mounted in the bore of said punch sleeve for limited vertical sliding movement relative to said sleeve, said insert being located in said bore between said rigid member and said work-engaging member to bias the rigid member away from the work-engaging member to a normal position in engagement with a rigid portion of the punch sleeve, said insert resisting movement of said rigid member and said work-engaging member out of their normal positions relative to said punch sleeve, a second axially elongated rigid member mounted in the bore of the punch sleeve between said insert and said work-engaging member for vertical sliding movement relative to the punch sleeve, each of said rigid members being in the form of a solid metal cylinder slidably mounted for reciprocation in said bore, and means for reciprocating the punch sleeve at high velocity to cause the nose portion of the work-engaging member to engage the marginal edge of the die opening substantially throughout the perimeter thereof and to pinch off the material between the punch sleeve and the die.

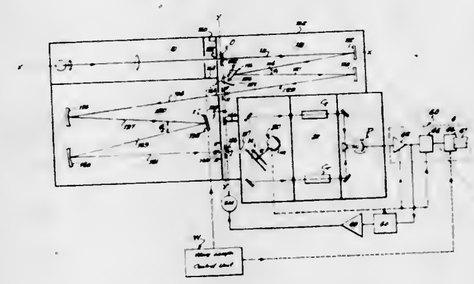
3,098,407
TONE FILTERS
John R. Brand and Joseph H. Hearne, Corinth, Miss., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed June 20, 1960, Ser. No. 37,243
7 Claims. (Cl. 84—1.11)

1. A tone producing system for an electronic musical instrument comprising a plurality of generators corresponding to the notes of such a musical instrument and each producing a complex electrical oscillation, means connecting said generators in groups of sequential tones, a plurality of tone filters each tuned to pass the fundamentals of a corresponding group of generators and to discriminate against the harmonics thereof, means respectively connecting said groups of generators to said filters, amplifier means connected to said filters, electro-acoustic translating means connected to said amplifier means for converting the amplified oscillations into audible musical tones, playing key operated means interconnected with said generators for selectively rendering said generators effective, a common collector, means connecting all of



said generators to said common collector, and switch means for connecting said common collector to at least one of said filters.

3,098,408
DOUBLE FOLDED-Z-CONFIGURATION MONOCHROMATOR
Henry H. Cary, Alhambra, Calif., assignor to Applied Physics Corporation, Monrovia, Calif., a corporation of California
Filed Feb. 11, 1959, Ser. No. 795,311
12 Claims. (Cl. 88—14)



1. A monochromator including:
combined supporting and housing structure provided with a separating wall portion and two terminal-slit wall portions, said separating wall portion being provided with a light-transmitting aperture;
two monochromator sections arranged on said combined supporting and housing means, said two monochromator sections being contiguous at said separating wall portion, each section having a terminal slit in a corresponding one of said terminal-slit wall portions and containing a dispersing element and a pair of collimating mirrors arranged in a folded-Z configuration, whereby radiation passing through one terminal slit is transmitted by said mirrors and dispersing elements through the two monochromator sections in succession and emerges through the other terminal slit, the path of transmission in each monochromator section being of folded-Z configuration, radiation being deflected along each such path only by the dispersing element and the collimating mirrors of the respective sections, the legs of the respective folded-Z paths being straight and being free from light-deflecting reflection surfaces, the legs of the respective folded-Z configurations that are optically remote from the corresponding terminal slits being collinear and extending through said aperture, said terminal slits being defined at spaced portions of said separating wall means; and means including a narrow aperture located at the junction of said collinear

legs and larger than the monochromatic image of either terminal slit at said junction for reducing the amount of stray radiation transmitted through one monochromator section to the other, said narrow aperture constituting substantially the sole region for transmission of radiation from either of said monochromator sections to the other.

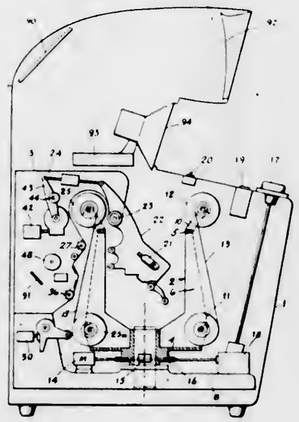
3. In a monochromator having a first monochromator section and a second monochromator section arranged in cascade between two terminal slits, said first monochromator section comprising a dispersing prism and said second monochromator section comprising a dispersing diffraction grating:

means for rotating said diffraction grating to vary the selected wavelength of radiation transmittable through the diffraction-grating monochromator section;

a transformer interconnecting said diffraction grating and said prism, said transformer including a pair of rotatable cam elements, one of which rotates with the diffraction grating, said cam elements having a cam lift action that varies continuously throughout the spectrum including a low-lift cam action in a long-wavelength region and a high-lift cam action in a short-wavelength region; and

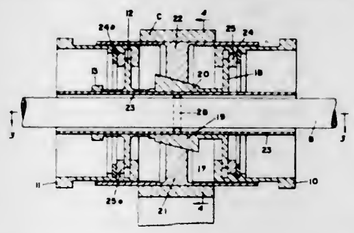
a multiplying mechanism interconnecting the other cam element and said prism, said multiplying mechanism having a multiplying action that varies continuously throughout the spectrum, the effective multiplication factor being less than 1 in said long-wavelength region and more than 1 in said short-wavelength region.

3,098,409
FILM PROJECTOR DEVICES
Frédéric Mathieu, Paris, France, assignor to Compagnie d'Application Mecaniques a l'Electronique, Au Cinema et a l'Atomistique (C.A.M.E.C.A.), a corporation of France
Filed Aug. 15, 1960, Ser. No. 49,770
Claims priority, application France Aug. 31, 1959
9 Claims. (Cl. 88—17)



1. A device for selectively projecting one of a plurality of films on a screen, said device comprising, in combination, a magazine shaped as a generally circular lantern, means mounting said magazine for rotation about the vertical axis thereof, a plurality of pairs of takeup reels mounted on said magazine, one reel of each pair being mounted adjacent the top of said magazine and the other adjacent the base thereof, a film extending from the base reel of each pair to the top reel of said pair, said film normally lying in a plane substantially tangent to the periphery of said lantern shaped magazine, a projector comprising a body portion mounted in a fixed position relative to said magazine and an arm portion pivotally mounted on said body portion and lying within the periphery of said magazine, a driving sprocket mounted on said body portion, a film track mounted on said body portion, a projection lamp and a pair of idler rollers mounted on said arm portion, said idler rollers being spaced to lie at the ends of a diameter of said driving sprocket when said arm is pivoted to thereby cause said film to be moved out of its normal path and into engagement with a major portion of the periphery of said driving sprocket and into position against said film track and means for causing pivotal movement of said arm in one direction to cause a selected film to be projected in an opposite direction to permit rotation of said magazine to position a newly selected film for projection.

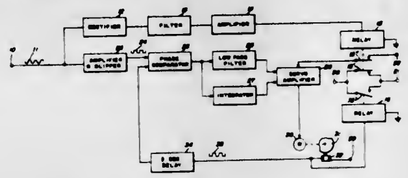
3,098,410
ADJUSTING MECHANISM FOR RECOILLESS RIFLE SPOTTING BARREL
Edward M. Giza, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 26, 1962, Ser. No. 240,185
5 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a recoilless rifle having a smaller caliber spotting rifle secured thereto, a ball and socket bearing adjacent a rear portion of said spotting rifle and about which the spotting rifle is adjustable, the combination therewith of means whereby the spotting rifle may be easily and quickly adjusted with respect to the recoilless rifle in either or both azimuth and elevation in nearly linear movements with improved ability to stay in adjusted position, said improvement including adjusting means for each of azimuth and elevation including a pair of opposite wedges secured together, a flange secured to said pair of wedges, a sleeve on which said wedges are longitudinally shiftable, a threaded adjusting ring for each pair of wedges, a housing containing two pairs of opposite wedges one pair of which is in cooperation with the first mentioned pair of wedges, and a pivot ring secured within said sleeve and spacing said spotting rifle barrel from an inner surface of said sleeve in each adjusted position of said spotting rifle barrel about said ball and socket bearing.

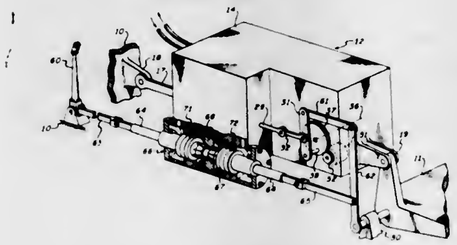
3,098,411
MOTION RESPONSIVE ROCKET FIRING SYSTEM
George H. Fry, Jr., Pittsfield, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Aug. 9, 1961, Ser. No. 130,428
18 Claims. (Cl. 89—41)

6. A motion predictor comprising drive means; switch means driven by said drive means; delay means connected to said switch means for delaying the output thereof for a prescribed time period; an input indicative of oscillatory movement of an object; an amplifier and clipper responsive to said input for converting said input into a square wave; a power supply; a relay responsive to a prescribed amplitude of said input and comprising a first contact in a fire control circuit and a second contact in the power supply wherein in response to the prescribed amplitude of said input said relay opens said first



contact and closes said second contact; and a speed control means connected to said power supply and delay means and said amplifier and clipper for controlling said drive means whereby said switch means produces pulses which, after being delayed by said delay means, match said input in frequency and phase.

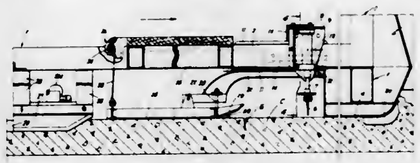
3,098,412
SERVO SYSTEM
Lester J. Reitman, Long Beach, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Aug. 4, 1961, Ser. No. 129,337
9 Claims. (Cl. 91—216)



1. In a manual booster servo system for maneuverable craft, a servomotor responsive to a differential fluid pressure input, a valve for controlling the differential fluid pressure input to the servomotor operable to move the craft about an axis, a manual controller, a mechanical connection between the controller and the servomotor valve having a rod part, differential fluid pressure responsive feel means having a piston movable axially on the rod part of the mechanical connection, means responsive to a differential fluid pressure input to said feel means including a clutch for coupling the piston of the feel means to the rod part of the mechanical connection to impart artificial feel to the controller, a fluid flow line between the servomotor and feel means having a control valve, and means for conditioning the line control valve to connect the servomotor to the feel means for operation in accordance with the differential fluid pressure input to the servomotor.

3,098,413
CONCRETE PAVEMENT LAYING MACHINE WITH GROOVING MECHANISM
Ronald M. Guntert and Wilbur F. Earley, Stockton, Calif., assignors to Guntert & Zimmerman Const. Div., Inc., Stockton, Calif., a corporation of California
Filed May 9, 1960, Ser. No. 27,583
15 Claims. (Cl. 94—39)

1. In a concrete pavement laying machine adapted for continuous advance, a transverse concrete grooving blade, means mounting the blade on the machine for vertical movement and including two-way hydraulic rams to force the blade into the concrete from a predetermined raised position and to then raise the blade from the concrete back to such position, a fluid pressure system in which



the rams are interposed, a four-way valve in said system, and means connected to and actuated by forward movement of the machine to actuate the valve.

3,098,414
HEADER ASSEMBLY FOR CONCRETE LAYING MACHINES
Ronald M. Guntert and Wilbur F. Earley, Stockton, Calif., assignors to Guntert & Zimmerman Const. Div., Inc., Stockton, Calif., a corporation of California
Filed Mar. 18, 1960, Ser. No. 16,068
2 Claims. (Cl. 94—46)

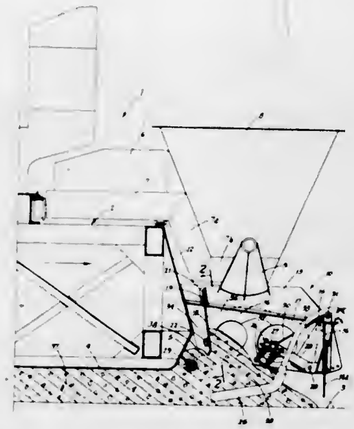


1. A header assembly for a concrete laying machine having a transverse downwardly discharging concrete distributing hopper, and a concrete engaging pan projecting rearwardly from the hopper; the assembly comprising a pair of transversely opposed headers projecting rearwardly from ahead of and adjacent the side edges of the hopper below the same, the headers extending beyond the rear end of the pan and contacting the same, and means mounting the headers in fixed connection with the hopper and pan; the mounting means for each header comprising brackets on the machine at the front end of the hopper and at the rear end of the pan and overlying such header, a vertical pivot bolt connecting the header and the front end bracket, another bolt depending from the other bracket and connected to the header, and means between said other bracket and bolt to shift the other bolt laterally whereby the header will be swung in a horizontal plane about the pivot bolt as an axis.

3,098,415
HOPPER UNIT FOR CONCRETE SLAB LAYING MACHINES
Ronald M. Guntert, Stockton, Calif., assignor to Guntert & Zimmerman Const. Div., Inc., Stockton, Calif., a corporation of California
Filed Nov. 21, 1960, Ser. No. 70,554
5 Claims. (Cl. 94—46)

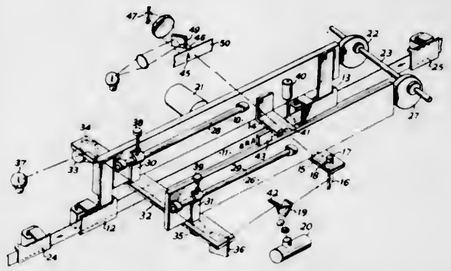
2. In a slab laying machine which includes a forwardly movable above-ground slab forming pan, and a mix-receiving hopper disposed immediately ahead of the pan and open to the ground, the hopper including a rear wall extending upwardly from the front end of the pan and transversely of the machine, and forwardly extending end walls; a transversely extending upstanding baffle plate structure in the hopper extending between the end walls ahead of and relatively close to but spaced from the rear wall, means to feed mix into the hopper instead of the baffle plate structure and to a level above the lower edge thereof, such structure being disposed with said lower

edge a material distance above the pan, and means pivotally mounting the baffle plate structure at its upper edge



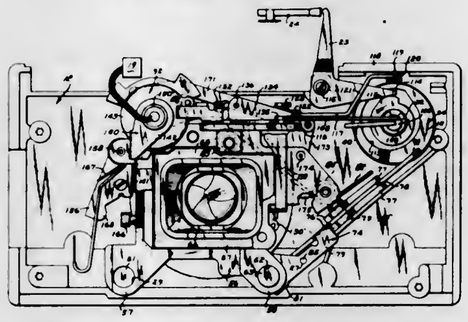
in the hopper for forward swinging movement from a predetermined normal position.

3,098,416
MEANS FOR PRODUCING OR CONTROLLING MOVEMENTS
Gerald Frankel, Wembley Park, England, assignor to Caps Limited, London, England
Filed July 23, 1959, Ser. No. 829,019
Claims priority, application Great Britain July 25, 1958
7 Claims. (Cl. 95—4.5)



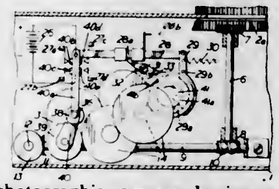
1. Photographic type composing apparatus in which successive lines of characters are photographically composed by optical projection of the characters successively onto a radiation sensitive tape, which apparatus comprises a tape transport bar which moves from and to a fixed starting position taking the tape with it during its return movements to advance the tape in intermittent steps between successive projections of characters, an optical projection system for projecting a linear dimension signal associated with each character during the projection of the character, a sensing device carried by the tape transport bar for sensing the projected signal during the movement of the tape transport bar outwardly from the fixed starting position, means actuated by said sensing device controlling the distance the tape is advanced during the return movement of the transport bar, and a second bar arranged to be moved in parallel relationship with said tape transport bar by means which are controlled by the movement of the tape transport bar and are adjustable to move the said second bar either the same distance or double the distance the transport bar moves, the second bar carrying a second sensing device spaced from the said first-mentioned sensing device a distance equal to the selected length of line.

3,098,417
CAMERA CONTROL MECHANISM
Orbie E. Lind, Jr., and William H. Trow, Ann Arbor, Mich., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,967
14 Claims. (Cl. 95—10)



6. In a camera having a body, a support reciprocably mounted on said body and carrying a shutter and lens assembly, a meter having a part slidable for clamping the meter pointer in a light indicating position mounted on said support, a movable shutter release member on the body, a shutter firing lever pivoted on said support, a shutter release lever pivoted on the body and having one end operably connected to said release member and the other end operably connected to said shutter firing lever, and a clamp arm pivoted on said support and operably connected to be rocked by said shutter firing lever to shift said slidable meter part.

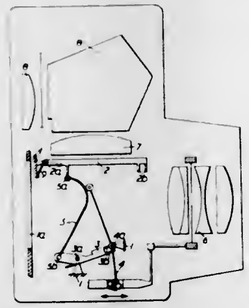
3,098,418
PHOTOGRAPHIC CAMERA WITH ELECTRIC MOTOR DRIVE
Wolfgang Reiher and Klaus Hintze, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Nov. 4, 1960, Ser. No. 67,387
11 Claims. (Cl. 95—31)



1. In a photographic camera having a housing, a shutter device arranged in the housing, a shutter cocking mechanism operatively connected to said shutter device, an objective lens assembly carried by said housing, an objective lens setting mechanism operatively connected to said objective lens assembly, a film-winding mechanism including a film drive sprocket arranged in the housing, the provision of:

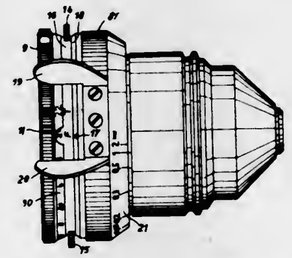
(*a*) a first gear mechanism arranged in the housing and drivably connected to both said shutter cocking mechanism and said film-winding mechanism,
(*b*) a second gear mechanism drivably connected to the objective lens setting mechanism,
(*c*) an electric motor mounted in the housing and having a driving shaft extending from said motor,
(*d*) a pinion mounted on said shaft,
(*e*) a lever pivotally mounted in the housing coaxial with said pinion and having two arms extending from the pivotal axis of said lever,
(*f*) a movable actuating rod arranged in the housing,
(*g*) one of said arms being operatively connected to said actuating rod which is thereby capable of moving said lever into each of two operative positions through an intermediate position,
(*h*) a toothed coupling wheel in permanent mesh with said pinion,
(*i*) said toothed coupling wheel being carried by one of said arms and being engageable alternately, on actuation of said lever, with said first gear mechanism when the lever is in one position and with said second gear mechanism when the lever is in the other position to effect a drive alternately to said shutter cocking mechanism and said film winding mechanism together and to said objective lens setting mechanism respectively,
(*j*) electric current supply means in the housing,
(*k*) an electric change-over switch electrically connected to said supply means,
(*l*) said switch being operable by one of said arms to close the circuit between said electric motor and said supply means in each of said operative positions of the lever, and
(*m*) a locking mechanism controlled by said actuating rod and engageable with said first gear mechanism for locking the latter at the end of a film-winding-on and shutter cocking operation.

3,098,419
MONOCULAR MIRROR REFLEX CAMERA WITH BETWEEN-THE-LENS SHUTTER
Hans-Joachim Daeche, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed May 9, 1960, Ser. No. 27,845
4 Claims. (Cl. 95—42)



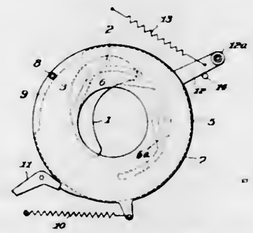
1. In a monocular mirror reflux camera having a housing, a between-the-lens shutter mounted in the housing, a cocking mechanism mounted in the housing, a spring-urged mirror hingably mounted in the housing and movable between two opposite end positions, and a covering flap pivotally mounted in the housing, the provision of co-acting shaped portions on the mirror and on the covering flap, a coupling element pivoted to the mirror and to the covering flap, and a two-armed lever pivotally mounted in the housing, the lever being connected to the cocking mechanism at one end and arranged to bear against the coupling element at the other end, the coupling element causing the covering flap to pivot so that said portions engage when the lever is moved by said cocking mechanism, the mirror being moved by the coupling element into the objective light ray path of the camera, said portions forming a light seal to prevent the further passage of light along the objective light ray path, said mirror being urged by said spring toward the other end position out of the objective light ray path.

3,098,420
PHOTOGRAPHIC OBJECTIVES
Hans Sauer and Fritz Köber, Heidenheim (Brenz), Otto Weiss, Aufhausen, Kreis Aalen, Siegfried Grosser, Heidenheim (Brenz), and Karl-Heinz Wöhner, Oberkochen, Wurttemberg, Germany, assignors to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed Jan. 4, 1960, Ser. No. 247
Claims priority, application Germany Apr. 29, 1959
4 Claims. (Cl. 95—64)



1. In a photographic objective provided with an adjustable diaphragm, a rotatable diaphragm setting ring provided with a diaphragm scale thereon, a sleeve on said diaphragm setting ring and connecting the latter with said adjustable diaphragm, an index carrying ring adjacent said diaphragm setting ring and rotatably surrounding said sleeve, said index carrying ring having thereon two selectively usable index marks permitting the reading of *f*-stops and T-stops respectively, which are arranged opposite said diaphragm scale, said diaphragm scale being provided with uniform spaces between the individual diaphragm numbers, said index marks being circumferentially spaced from each other a distance which is approximately equal to the distance between two adjacent scale lines of said diaphragm scales, and a latching means between said sleeve and said index carrying ring for releasably locking said sleeve and said ring in predetermined positions between the smallest and largest diaphragm number, said positions being spaced apart a distance equal to one diaphragm scale interval.

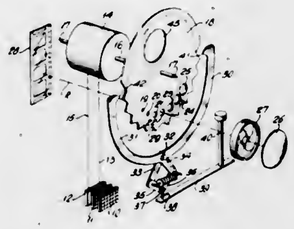
3,098,421
DEPTH OF FIELD VERIFYING DEVICE
Naoyuki Ohara, 436 1-chome, Soshigaya, Setagaya-ku, Tokyo-to, Japan
Filed Mar. 25, 1960, Ser. No. 17,695
Claims priority, application Japan Mar. 30, 1959
2 Claims. (Cl. 95—64)



1. Diaphragm means for a single lens reflex camera, comprising a plurality of diaphragm leaves, which form an aperture of variable diameter, each leaf being provided

with a first pin and a second pin, a first diaphragm operating disc mounted coaxially of said single lens provided with a plurality of apertures each to receive said first pin of one of said leaves, a second diaphragm operating disc mounted coaxially of said single lens provided with a plurality of slots each to receive the said second pin of one of said leaves, said slots being of generally V form, one arm of the V being arcuate concentric with said aperture, the other arm of the V being generally straight and parallel to a tangent to said aperture, one of said discs being adapted to rotate in one direction through a fixed angle to open the diaphragm for view finding, and movable through the same fixed angle in the opposite direction to close the diaphragm as required for picture taking, the other said disc being adjustably rotatable to determine the diaphragm opening size when said one of said discs is in the position for picture taking, said second pins of each said leaf lying in the arcuate portion of its corresponding V-shaped slot when one of said discs is rotated to open the diaphragm for view finding and lying in the other arm of said V-shaped slot when rotated to the position for picture taking, the position in said generally straight portion of said V-shaped slot of said second pin being determined by the adjustment of the other of said discs to determine the diaphragm opening size for picture taking.

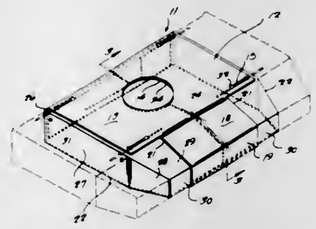
3,098,422
CAMERA DIAPHRAGM
Tomisuke Urabe, % Sankyo Seiki Mfg. Co., Ltd., 3836 Ooaza Kamisuwa, Suwa-shi, Negano Pref., Japan
Filed Sept. 1, 1960, Ser. No. 53,554
Claims priority, application Japan Mar. 23, 1960
3 Claims. (Cl. 95—64)



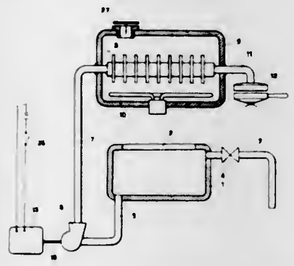
3. An automatic diaphragm comprising a rotatable diaphragm blade, a plurality of diaphragm openings arcuately distributed on the diaphragm blade and successively movable into a light path upon rotation of the diaphragm blade, means for rotating the diaphragm blade to bring a desired diaphragm opening into the vicinity of the light path, means for centering the diaphragm opening in the light path upon release of a shutter, the latter means comprising a pair of indexing edges movable toward the axis of rotation on opposite sides thereof and engageable with serrations being so formed that with the index edges fully engaged with serrations the center of a diaphragm opening is in the light path, and each index edge being formed on a lever, the two levers having a common pivot, and means connected with a shutter release for moving them together about the pivot in causing the index edges to engage the serrations.

3,098,423
ADJUSTABLE EXHAUST HOOD
Anthony J. Giannini, 114 Upland Terrace, Bala-Cynwyd, Pa.
Filed Feb. 10, 1961, Ser. No. 88,371
3 Claims. (Cl. 98—115)

1. A laterally expansible exhaust hood comprising a plate-like main body having a depending rear flange, said rear flange and said main body being formed with vent apertures, said main body having a depending straight front flange of substantially reduced width as compared with said main body, whereby to define respective notches adjacent the front corners of said main body, an upwardly facing guide channel projecting inwardly from the bottom edge of said front flange, a pair of box-like side sections telescopically engaged in the opposite end portions of said main body and having side portions exposed adjacent said notches, said side sections and main body being formed with registering longitudinal slots, said side sections having depending straight front flange portions slidably received in said guide channel, and bolt means extending through said registering slots and clampingly securing said side sections in laterally adjusted positions relative to said main body.

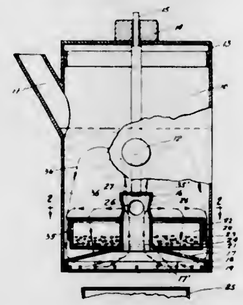


3,098,424
MACHINE FOR THE PREPARATION OF COFFEE INFUSION
Pietro Perucca, Via P. Sarpi 1, Milan, Italy
Filed Apr. 6, 1961, Ser. No. 101,246
Claims priority, application Italy Apr. 12, 1960
4 Claims. (Cl. 99—302)



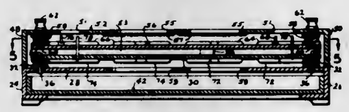
1. Brewing apparatus comprising a water reservoir adapted for storing water under the pressure of ambient atmosphere, filter means adapted for accommodating an infusible powder, pumping means coupled to and adapted for pumping water from said reservoir to and through said filter means, said pumping means including an impeller and defining a pumping chamber in which said impeller is located, said chamber being provided with an inlet opening coupled to said reservoir and an outlet opening coupled to said filter, said impeller occupying a portion of said chamber and leaving a free path between said inlet and outlet openings, said reservoir and pumping means and filter means being connected in series to constitute a system, heating means in said system for heating said water, said filter means being at the extreme end of the system so that the water can be directly discharged from the system via said filter means, said filter means being elevated above the pumping means and at least part of said reservoir so that water can return to the reservoir via the free path in the pumping means when the latter is inactive.

3,098,425
POT FOR BREWING COFFEE AND METHOD OF EFFECTING THE BREWING
Fernando Falla, 59 Elm St., Millburn, N.J.
Filed Apr. 21, 1960, Ser. No. 23,728
8 Claims. (Cl. 99—317)



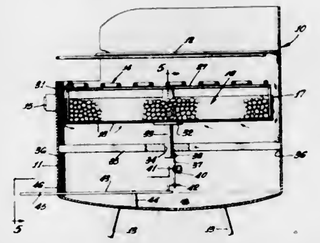
1. A pot for brewing coffee, comprising: A container for water and embodying a spout, handle and cover; a closed, annular, ground roasted coffee retaining vessel, the top and the bottom thereof being perforated; and means to support said vessel to immerse the same vertically in the container slightly displaced from the bottom thereof, said supporting means including a vertical tubular element fitting coaxially through the vessel, tightly fitting at the center of the ground roasted coffee retaining vessel, projecting above the upper part of the ground roasted coffee retaining vessel, the projecting portion thereof being perforated and a vertical rod forming integral part of the tubular element projecting vertically so as to be held centrally in position by the cover and said tubular element being supported by the bottom of the container.

3,098,426
STEAK COOKER AND TENDERIZER
Maurice W. Lee, Sr., Box 188, Boley, Okla.
Filed Aug. 3, 1961, Ser. No. 129,145
2 Claims. (Cl. 99—339)



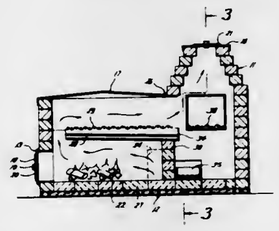
1. An electrical resistance cooker, comprising: a downwardly open rectangular box-like base; a downwardly open box-like cover hingedly connected to said base and forming a cooking compartment above the upper surface of said base, the walls forming the top of said base and said cover each having a series of enlarged vertically aligned food receiving apertures therethrough; a pair of superposed rectangular conduction plates of less dimensions than said base and said cover disposed within said cooking compartment in horizontal spaced-apart relation; electrical insulating posts connecting the uppermost said plate to the lower surface of the top of said cover and connecting the lowermost said plate to the upper surface of the top of said base; an electrical resistance heating element secured in current conducting relation to the upper surface of said upper plate; another electrical resistance heating element secured in current conducting relation to the lower surface of said lower plate in cooperating relation with respect to the aligned enlarged apertures in said cover and said base; and means connecting a source of electrical energy to said electrical resistance heating elements.

3,098,427
FULLY ADJUSTABLE ELECTRICAL BROILER
Joel A. Del Francia, Los Angeles, Calif., assignor to Institutional Food Equipment Corp., Los Angeles, Calif., a corporation of California
Filed Aug. 4, 1959, Ser. No. 831,518
6 Claims. (Cl. 99—446)



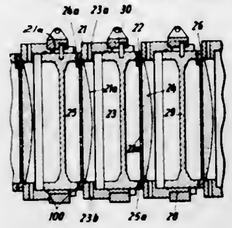
1. A rapidly temperature-controllable electric broiler, comprising an upright housing, a broiling grid including spaced cross members overlying the upper interior of the housing, an openly exposed and open formation electrical heating element underlying the grid, and a bed of loose ceramic bodies underlying the heating element for intercepting grease drippings falling from the grid through said element and for passing air upwardly between said ceramic bodies to at times burn said intercepted drippings, said electrical heating element and said bed being rapidly movable up and down relative to said grid for quickly varying the temperature at the grid, said bed continuing to underlie the major extent of the heating element during said movement, said bed and heating element extending generally horizontally at all times during said up and down movement.

3,098,428
MASONRY BARBECUE PIT
Charlie J. Maxwell, 8699 Gulf Freeway, Houston 17, Tex.
Filed Oct. 6, 1961, Ser. No. 143,472
2 Claims. (Cl. 99—446)



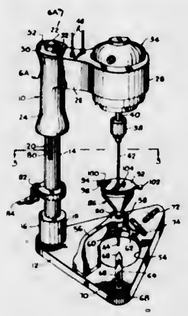
1. A portable barbecue pit comprising a concrete base member, masonry walls affixed to said base member about the perimeter thereof to define an interconnected firebox and open-top masonry smokestack, a fire door in the masonry wall at one end of said firebox, a removable cover atop said masonry walls over the firebox, a grill mounted on said masonry walls spaced above said base member over the firebox, a drip tray mounted on said masonry walls below said grill spaced apart from said firebox door end wall, said drip tray comprising a top member and a bottom member joined at their edges with an insulating air space therebetween, a baffle wall between the firebox and the smokestack extending upwardly to the bottom of said drip tray, and an adjustable laterally-opening damper in one side wall adjacent said baffle wall and opening into the firebox.

3,098,429
DIAPHRAGM FILTER PRESS
Sven Erik Hägglund, Lund, Sweden, assignor to Borsig Aktiengesellschaft, Berlin-Tegel, Germany, and Aktiebolaget Svensk Torvforadling, Sosdala, Sweden
Filed Dec. 28, 1960, Ser. No. 78,885
Claims priority, application Germany Dec. 31, 1959
9 Claims. (Cl. 100—115)



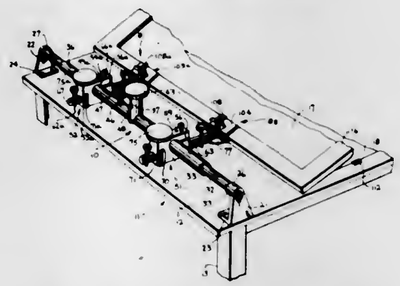
7. In a diaphragm filter press for withdrawing liquid from a suspension containing material to be pressed into a cake, a peripheral wall formed by a plurality of abutting separable rim-like rigid support elements comprising, a filter support and a diaphragm support, a filter supported by said filter support adjacent said diaphragm support and defining with said filter support at least a portion of a filtrate chamber adapted to receive and discharge liquid filtered through said filter, an elastic diaphragm supported by said diaphragm support adjacent said filter support and defining with said diaphragm support at least a portion of a pressure chamber adapted to receive and discharge a pressure medium, said filter and said diaphragm defining therebetween when the supports are in abutting relationship, a chamber for receiving said suspension under pressure, thereby expanding said diaphragm to increase the size of said suspension chamber and exerting force of said diaphragm on the material in said suspension chamber, at least one of said separable elements being movable to open said suspension chamber for discharge of material remaining therein.

3,098,430
ELECTRIC DRILL TO LOCATE MARKING NOTCHES IN PLY FABRICS
Milton Ruthen, 56 Rockaway Parkway, Brooklyn, N.Y., and Abraham Bisberg, 244 N. Idaho Ave., North Massapequa, N.Y.
Filed July 26, 1961, Ser. No. 126,992
3 Claims. (Cl. 101—26)



1. In a machine of the character described, a base having an opening therein, an upright hollow post supported on the base, a sleeve bearing member slidably mounted on the post, a radial crossbar integral with the top end of the sleeve bearing member, a ring bearing member on the free end of the crossbar, an electric motor supported in said ring bearing member with its shaft extending downwardly, a chuck fastened to the bottom end of the motor shaft, a needle secured to and depending from said chuck, means for aligning the needle with a small area on a stack of fabric sections desired to be marked, said aligning means including a bracket on the base having a ring bearing member underneath and in alignment with the needle and over the opening in the base, and a guide sleeve supported in said ring bearing member and adapted to receive the needle in its downward movement and prevent sagging of the needle, an adjustable guide bar on the base having a pointed end extending over the opening in the base and aligned with the guide sleeve, and means for indicating that the base is truly horizontal and the needle truly perpendicular, said indicating means comprising a pair of spirit levels on the top surface of the base in right angular relationship.

3,098,431
REGISTRATION APPARATUS FOR SILK SCREEN PRINTING MACHINE
Elmer C. Weaver, Portage Township, Kalamazoo County, Mich., assignor of one-half to Paul L. Lee and Georgia W. Lee, and one-half to Elmer C. Weaver and Emma D. Weaver
Filed Mar. 3, 1960, Ser. No. 12,546
6 Claims. (Cl. 101—126)



3. In a silk screen printing machine having a base structure supporting a substantially horizontal top member and having a screen frame movable into and out of a position adjacent to and parallel with said top member, an apparatus for effecting registration of said screen frame with a worksheet supported upon said top member, comprising: a pair of brackets rigidly secured to said base structure near one edge thereof; a support shaft supported upon and between said brackets; sleeve means supported upon said support shaft between said brackets for movement lengthwise of said shaft; first cam means secured to said shaft within said sleeve; first manually operable means rotatably mounted upon said sleeve means for movement around an axis transverse of said shaft, said manually operable means having eccentric pin means engageable with said first cam means so that rotation of said manually operable means around said axis effects relative lengthwise movement between said shaft and said sleeve; a pair of spaced support members mounted upon said sleeve; a pair of elongated, substantially parallel support elements slidably and respectively supported upon said support members for lengthwise movement with respect to said support members and transversely of said shaft; second cam means secured to each of said support elements adjacent to said support members; second manually operable means rotatably mounted upon each of said support members for movement around axes transverse respectively of said support elements, said second manually operable means having eccentric pin means respectively engageable with said

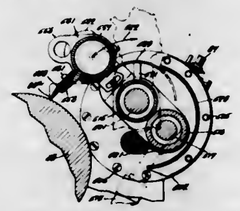
second cam means so that rotation of said second manually operable means around said axes effects said movement of said support elements with respect to said support members; and engaging means secured to the extended ends of said support elements and connected to one of the screen frame and the top member, said engaging means including pivot means.

3,098,432
WEB TENSION CONTROL FOR MULTI-UNIT PRINTING PRESS
Donald C. Bechtold, Mountville, and Edward W. Stanley, Lancaster, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 29, 1961, Ser. No. 134,711
4 Claims. (Cl. 101—152)



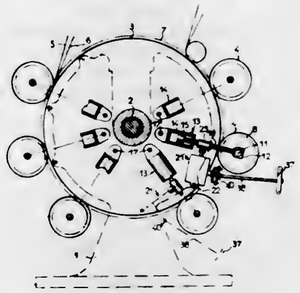
1. In a multi-color gravure printing press having a plurality of printing units through which a travelling web passes with printing cylinders in each unit adapted to imprint a color on the web, means for establishing and maintaining a precise and constant web tension from the infeed end of the press to the outfeed end, said means including an infeed tension stand positioned immediately before the first printing unit and an outfeed tension stand positioned following the last printing unit, tension rolls rotatably mounted in each said tension stand having the web passing thereover and in driving engagement therewith, variable speed drive means for each said tension roll and so adjustable that speed of the infeed tension roll will transport web at the same speed as the surface speed of the printing cylinders and the speed of the outfeed tension roll is at a slight overspeed with respect to the surface speed of the printing cylinders, means pressing the web against said tension rolls, frictional material coverings on said tension rolls, said coverings have different frictional coefficients such that at the so adjusted speeds of said tension rolls and with selected preset pressure on the web from the pressing means the web will be locked in speed time relationship with the surface speed of the printing cylinders and speed metered with no slippage by the infeed tension roll but can tend to creep or slip on the outfeed tension roll when the desired value of web tension is attained.

3,098,433
DOCTOR BLADE AND DRIVE FOR ROTARY PRINTING PRESS
Clarence L. Hornberger and Edward W. Stanley, Lancaster, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 29, 1961, Ser. No. 134,684
6 Claims. (Cl. 101—157)



1. A doctor blade assembly and drive for a rotary printing press comprising support plates mountable on the side frames of a press, a main axis journalled in said support plates for rotation and axial movement, holder supports rotatably mounted by and on said main axis in proximity to said support plates, a rigid self-supporting tube extending between said holder supports and removably and adjustably supported solely at its ends thereby, a blade support shelf secured to said tube, lifting means secured proximate the ends of said tube, said tube, said shelf and said lifting means constituting a unitary rigid self-supporting removable blade holder assembly to mount a doctor blade thereon, a crank member operatively connected to said holder plates adapted for rotation thereof about the axis of said main axis, rotation of said holder supports by said crank member moving said blade into or out of engagement with an engraved cylinder in said press, said blade holder assembly constituting a sole removable support for the doctor blade.

3,098,434
DEVICE FOR THE ADJUSTMENT OR "CORRELATING" OF THE ENGRAVED ROLLERS IN ROTARY PRINTING MACHINES
Jean Lime, Mulhouse, France, assignor to Societe Alsacienne de Constructions Mecaniques, Mulhouse, France, a company of France
Filed Apr. 19, 1960, Ser. No. 23,175
Claims priority, application France Apr. 24, 1959
9 Claims. (Cl. 101—178)

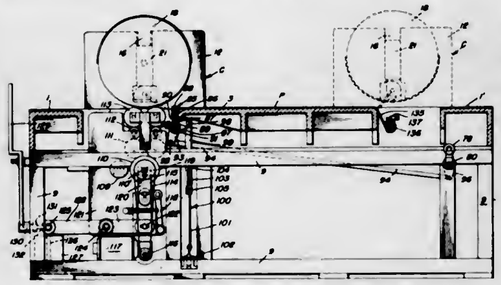


1. A rotary printing machine for printing sheet material, comprising a central freely mounted cylinder, a plurality of printing rollers in contact with said cylinder, a toothed wheel fast with each roller, a central common gear wheel coaxial with said cylinder, each of said toothed wheels meshing with said gear wheel, and means for ensuring correct relative positioning, on the sheet material, of the motifs printed by the said rollers, said means comprising individual adjustment means to selectively move the geometric axis of each roller parallel to itself over a theoretical cylindrical surface co-axial with said central cylinder, so that the roller remains in contact with the cylinder, the pitch circle diameter of the toothed gear wheel being different from the diameter of the central cylinder whereby displacement of a roller is accompanied by a sliding of its periphery over the periphery of the central cylinder when the said individual adjustment means are actuated.

3,098,435
PROOF PRESS FOR CURVED PRINTING PLATES
Walter T. Flower, Short Hills, N.J., and Daniel C. Green, Scranton, Pa., assignors to Wesel Manufacturing Company, Scranton, Pa.
Filed July 19, 1960, Ser. No. 43,956
12 Claims. (Cl. 101—212)

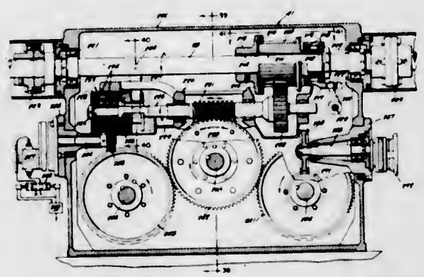
1. In a proof press for proving printing plates of different curvatures, utilizing replaceable plate cylinders of correspondingly different curvatures, a stationary press bed, a plate cylinder carriage movable lengthwise of the bed, a plate cylinder assembly, including a cylinder hav-

ing a bearer and a gear of unitary construction, separate from the cylinder, removably mounted on the carriage, and means to couple the cylinder and the bearer-gear member for rotation as a unit and to release the cylinder for rotation independently of the bearer-gear member



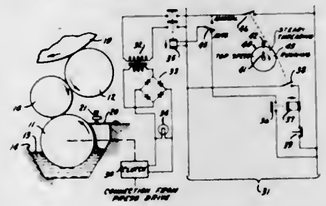
comprising a cam secured to the carriage and a cam follower pivotally mounted on the cylinder gear, said cam follower incorporating pin means movable into and out of locking engagement with the cylinder and the cylinder bearer-gear member.

3,098,436
REGISTER CONTROL FOR ROTARY PRINTING PRESS
Clarence L. Hornberger, Lancaster, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 29, 1961, Ser. No. 134,685
5 Claims. (Cl. 101—248)



1. In a rotary printing press an engraved cylinder, an impression cylinder spaced from said engraved cylinder, an offset cylinder interposed between said engraved and impression cylinders and in operable printing relation therewith, drive means for said cylinders including a main drive shaft, an internal drive gear secured to said drive shaft, an external toothed drive clutch gear slidably mounted on said drive shaft and having the teeth thereon engageable with the internal drive gear, an auxiliary shaft rotatably mounted adjacent said main drive shaft, a pinion gear on said auxiliary shaft in mesh with said drive clutch gear, a worm gear secured on said auxiliary drive shaft, a worm wheel operatively connected to the drive shaft for said offset cylinder and meshing with said worm gear, main cylinder drive gears on the drive shaft for each said cylinder in meshing engagement one with another for simultaneous drive of all said cylinders, a bearing unit rotatably mounting said auxiliary drive shaft having at one end thereof an internally screw threaded portion, a circular register adjusting gear rotatably secured on said auxiliary drive shaft, but fixed against displacement, said adjusting gear being externally toothed and having screw threads formed in said teeth engaging with said screw threads in said bearing, said auxiliary drive shaft and gears thereon being slidably mounted in said bearing parallel with said main drive shaft, a circular register drive gear in mesh with the teeth on said circular register adjusting gear and means responsive to improper registry of a web being printed by said cylinders operable to rotate said register gear drive in one direction or the other to thereupon rotate said register adjusting gear whereby through coaction of the threaded portions said auxiliary shaft will be translated coaxially to thereby rotate said offset cylinder an increased increment by coaction with said worm wheel to re-establish proper register.

3,098,437
INKING ARRANGEMENT FOR ROTARY PRINTING PRESSES
Louis S. Tyma, Jr., Hinsdale, and Frank J. Doyle, Bellwood, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,383
6 Claims. (Cl. 101—350)



2. In a printing press, an ink feeding arrangement comprising, in combination, an ink fountain, a fountain roller journalled for rotation in said fountain, means for rotating said fountain roller, a transfer roller journalled parallel to said fountain roller and being spaced therefrom, a pickup roller journalled parallel to said fountain and transfer rollers with the surface of the pickup roller being in contact with said transfer roller and slightly spaced from said fountain roller, said surface being formed by a pattern of shallow, closely spaced grooves formed helically about said roller and defining rounded ridges and valleys as seen in cross section, and means for rotating said pickup and transfer rollers.

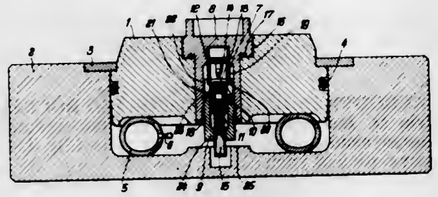
3,098,438
METHOD OF PRINTING
Erich A. Freund, 410 26th Ave., San Francisco, Calif.
No Drawing. Filed Aug. 11, 1960, Ser. No. 48,849
4 Claims. (Cl. 101—426)

1. The method of letter press printing, comprising: applying a heat driable liquid printing medium to a printing form; heating said medium on the form for not more than about six seconds at a temperature sufficient to dry the medium to the touch on the form; and applying the heated medium while said medium is still hot to a stock that is substantially at room temperature by pressing the form and hot medium against the stock, said method resulting in the complete transfer of the dry hot medium from the form to the room temperature stock.

3,098,439
LAND MINE, MORE PARTICULARLY ANTI-TANK MINE
Fritz Berger, Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed June 2, 1960, Ser. No. 33,533
Claims priority, application Germany June 4, 1959
1 Claim. (Cl. 102—8)

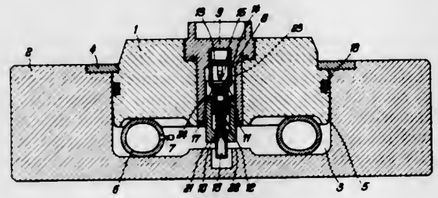
A detonator for a land mine particularly for anti-tank mines, comprising two parts of which one is an inner

and the other an outer part and both parts being relatively movable one within the other, a fuze body in the inner part comprising a safety sleeve having integral depending arms each with an inwardly projecting claw, a firing pin secured in the sleeve, a clamping bushing having slots therein one for each arm and cam surfaces adjacent each slot, a striker in the clamping bushing and provided with a firing cap, a spring in the bushing and contacting against the striker without tension in its normal position, said clamping bushing when movable relative to the fuze body compressing the spring and the arms contacting the cam surfaces to force the firing pin



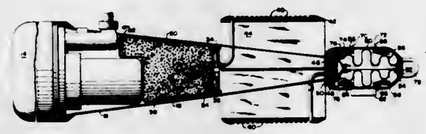
into the firing cap after a predetermined relative movement of the two parts has been exceeded with the claws releasing the safety sleeve, the claws of the depending arms being directed at right angles to the axis of the detonator whereby in the position of rest of the mine the claws will contact against the striker, the safety sleeve and its arms, the striker, the clamping bushing and the spring being composed of a plastic material, and a shear plate on the clamping bushing and cooperating with the fuze body so that when the shear plate is broken off by the clamping bushing striking the outer part it will be movable into the fuze body to cause a compression of the spring and ignition of the firing cap.

3,098,440
LAND MINE, MORE PARTICULARLY ANTI-TANK MINE
Fritz Berger, Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed June 2, 1960, Ser. No. 33,534
Claims priority, application Germany June 4, 1959
2 Claims. (Cl. 102—8)



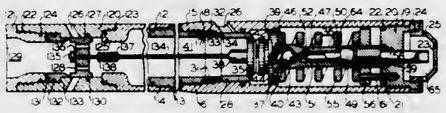
1. A land mine, more particularly an anti-tank mine, comprising an inner and an outer part which are guided so as to be capable of movement relative to each other and each part is composed of a solid compressed charge of a high explosive and weather resistant stable material, a fuse mechanism in one of the parts and actuated by the relative movement of the parts, an air cushion in the form of a flexible tube element interposed between the inner and the outer parts, the outer diameter of the inner part being less than that of the outer part and the inner part being guided as a piston in a cylindrical recess in the outer part, and the outer surfaces of the inner and outer parts being exposed at all times, and a pressure relief valve is provided secured to the flexible tube element.

3,098,441
WEAPON RECOVERY SYSTEM
Thomas M. Amundson, Sunnyvale, Calif., and Marvin A. Sandgren, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 23, 1959, Ser. No. 841,913
1 Claim. (Cl. 102—13)



A drill mine recovery apparatus for automatically surfacing a mine comprising a gas generator attached to the mine and having a quantity of material therein for generating a gas upon immersion in water, an inflatable bag of sufficient size to render the apparatus positively buoyant when inflated, a conduit for conducting the generated gas from said generator to said bag to inflate said bag, said conduit being exposed to the ambient water when the mine is immersed whereby the gas is cooled prior to entry into said bag, a rotatably mounted gas intake tube coupled to one end of said conduit and in communication with the interior of said generator, and means for automatically orienting the intake end of said intake tube away from water lying within said generator to preclude the generated gas from forcing water from said generator into said conduit.

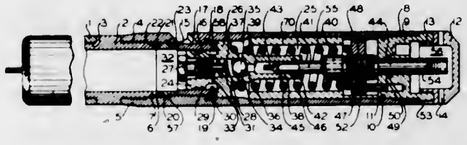
3,098,442
GAS LIBERATING CARTRIDGE
Ralph V. Wakefield, Godfrey, and Harry Clark Foster, East Alton, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Oct. 11, 1960, Ser. No. 62,041
1 Claim. (Cl. 102—25)



A gas liberating cartridge including a generally cylindrical body member closed at one end and having means at the opposite end for introducing gas under pressure, first and second discharge ports longitudinally spaced in said body, a first pressure responsive sleeve valve slidably mounted in said body and normally closing said first discharge ports, a second pressure responsive sleeve valve slidably mounted in said body and normally closed and second discharge ports, a control chamber adjacent said second sleeve valve, pressure responsive control piston means slidably mounted in said control chamber and adapted to move away from said second sleeve valve as the charging pressure in the cartridge is increased, a rod connecting said control piston and said first sleeve valve, said rod being effective to move said first sleeve valve out of engagement with said first discharge ports at a predetermined discharge pressure as the control piston is moved in response to the charging pressure in the cartridge, vent means in said control chamber, said control piston being further adapted to simultaneously actuate said vent means in said control chamber and reduce the pressure therein, the reduction in pressure in said control chamber being effective to move and second sleeve valve out of

engagement with said second discharge ports to completely discharge said cartridge.

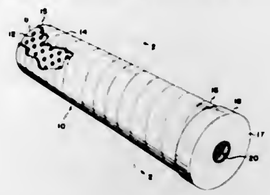
3,098,443
GAS DISCHARGE MECHANISM
Russell C. Spencer, Farmersburg, Ind., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Mar. 7, 1961, Ser. No. 93,889
3 Claims. (Cl. 102—25)



2. A gas operated device comprising a cartridge having a substantially cylindrical main chamber adapted to receive a charge of compressed gas, gas inlet means at one end of the main chamber, lateral discharge outlets for the main chamber intermediate its ends, a secondary chamber positioned adjacent the other end of said main chamber, a pressure responsive sleeve valve slidable within the cartridge between the chambers and normally positioned to span and seal the discharge outlets, said valve having a greater cross sectional area at one end exposed to the pressure in the chambers than at the opposite end, the differential effective cross sectional areas of the valve urging the valve into a closed position during charging of the main chamber, a pressure equalizing passageway connecting the chambers, a slidable pressure responsive control piston adjacent the valve, the piston having a terminal portion with a diameter slightly less than the inside diameter of the sleeve valve and being provided with a shoulder having a diameter greater than the inside diameter of the sleeve valve, the terminal portion and shoulder of the piston being joined by a portion of reduced diameter, the terminal portion of the piston being normally positioned within the sleeve valve, and the shoulder portion normally abutting said valve, the cross sectional areas of the piston exposed to the pressure in the chambers being greater at one end than at the opposite end of said piston, pressure acting on the differential effective cross sectional areas of the control piston urging it away from the valve, interlocking means between the piston and the valve to prevent complete removal of the piston from the valve, said piston having a vent opening to the secondary chamber at one end and the interior of the piston at the other end, means defining a passageway from the interior of said piston to the atmosphere, control valve means within the control piston normally closing said passageway adapted to vent the secondary chamber at a predetermined discharge pressure, and means in the secondary chamber operative to open said control valve means upon a predetermined movement of said control piston.

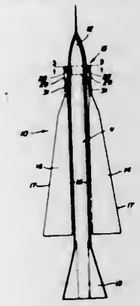
3,098,444
EXPENDABLE PROPELLANT CASING
George J. Walkey, Burbank, Howard B. Sipple, Glendale, Vernon S. Sorenson, La Crescenta, and Frank C. Norris, Sun Valley, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Oct. 12, 1960, Ser. No. 71,855
1 Claim. (Cl. 102—43)

A recoilless tubular ammunition casing containing ignitable propellant, said casing comprising, an inner layer of oxidizable resin impregnated glass fabric, said inner layer having evenly distributed apertures therein, an outer layer of spirally wound oxidizable resin tape having glass fabric embedded therein bound to said inner layer and covering all of said apertures, said casing being



frangible and disintegratable upon combustion of said propellant.

3,098,445
AERODYNAMICALLY SUPPORTED ROCKET
Calvin D. Jackson, Salt Lake City, Utah, assignor to Auradynamics, Incorporated, Salt Lake City, Utah, a corporation of Utah
Filed June 27, 1960, Ser. No. 38,937
9 Claims. (Cl. 102—49)

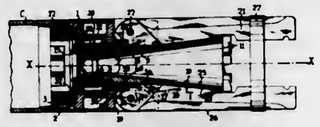


1. A rocket comprising an elongate body having a nose portion; aerodynamic blades having hub sections; a rotatably mounted hub structure at the nose portion of said rocket body for mounting said blades; means rotatably mounting said hub structure on an axis extending longitudinally of the rocket body; means pivotally and rotatably mounting said blade hub sections in said hub structure on respective, angularly related, pivotal and rotatable axes transversely disposed with respect to the aforementioned axis to provide retracted and extended positions for said blades; cam means in said hub structure; means projecting from each of said blade hub sections in operative association with said cam means for controlling the attitude of said blades as they are shifted from retracted to outwardly extended positions; and resilient means normally urging said blades outwardly toward aerodynamic positions, said means having insufficient strength to overcome the counterbalancing force of the atmosphere during projected upward flight of the rocket therethrough.

3,098,446
OPENABLE FIN ARRANGEMENT
Joseph Raymond Jasse, Paris, France, assignor to Hotchkiss-Brandt, Paris, France, a corporation of France
Filed July 10, 1961, Ser. No. 122,988
Claims priority, application France July 11, 1960
7 Claims. (Cl. 102—50)

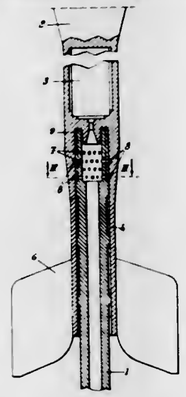
1. The combination of an ejection nozzle for the expulsion of propelling gases and an openable fin arrangement for use on a self propelled projectile, the combination comprising a body adapted for being connected to the projectile, the body having a longitudinal axis and

being provided with an axially extending opening passing through the body, the body being further provided with a plurality of cylindrical apertures angularly arranged around said opening at a common distance therefrom and extending parallel to the axis of the body, a fixedly supported nozzle in the opening for expelling rearwardly gases from the projectile to cause a thrust to be exerted thereon, a plurality of fins supported on said body for pivotal movement about transverse axes to enable opening and closing of said fins in longitudial radial planes, a piston slidably supported in each of said apertures and adapted for movement rearwardly in the associated aperture under the propelling action of the gases from the



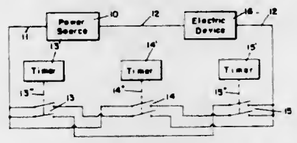
projectile, means defining a cylindrical bearing element rigid with and coaxial with the body and an intermediate ring of annular shape positioned between the fins and the pistons, the ring being guidedly mounted on the bearing element for sliding movement along the bearing element in a longitudinal direction, the ring being operatively associated with respect to the pistons and fins such that the ring undergoes sliding movement in a longitudinal rearwardly direction under the action of the pistons, when the latter are displaced by the propelling gases, to exert a force on the fins to cause the latter to open, whereby the ring distributes the overall force exerted thereon by the pistons uniformly to the fins so that the latter open uniformly and symmetrically from the body.

3,098,447
PROJECTILES TO BE SLIDABLY FITTED ON THE END OF A GUN BARREL
Hansjakob Hösli, Zurich, Switzerland, assignor to Brevets Aero-Mecaniques S.A., Geneva, Switzerland, a society of Switzerland
Filed Apr. 27, 1961, Ser. No. 105,921
Claims priority, application Luxembourg May 5, 1960
8 Claims. (Cl. 102—51)



1. A projectile adapted to be launched from a gun barrel having a cylindrical surface by the pressure created from a propelling charge in the gun, the gun barrel being of the type which includes at least one passage through its wall in the vicinity of the muzzle, which projectile comprises: a body portion, a tubular tail having its front end fixed to said body portion, said tubular tail having a cylindrical surface adapted to slidably and substantially sealingly engage such a cylindrical surface of the gun from which the projectile is to be fired, a rocket motor carried by said body portion, said rocket motor comprising a reaction charge and a rearwardly directed nozzle opening into said tubular tail at the forward end thereof, and means for causing said projectile to spin about its longitudinal axis, first by utilizing the action of pressurized gases from the combustion of a propelling charge in a launching gun and then by utilizing the reaction effect of pressurized gases from the combustion of said reaction charge, said means comprising at least two transverse nozzles extending through the wall of said tubular tail rearwardly of the most rearward extension of said body portion, whereby gases issuing through said transverse nozzles have free access to the surrounding atmosphere when said transverse nozzles are clear of a gun barrel from which the projectile is to be launched, said tubular tail providing a continuously open path between the rear end of the tail and the rocket motor nozzle whereby hot gases created by the combustion of a propelling charge in a gun from which the projectile is to be launched may pass through the tubular tail and the rocket motor nozzle to ignite said reaction charge, at least one of said transverse nozzles being physically located so as to be selectively communicable with the passage through the barrel wall in the vicinity of the gun barrel muzzle when the projectile is mounted on the barrel.

3,098,448
PRECISION AND RELIABILITY OF TIMING DEVICES
Henry Gisser, 7708 Revere St., Philadelphia, Pa., and Gene Rove, 15340 Longview, Sherman Oaks, Calif.
Filed Nov. 15, 1961, Ser. No. 152,693
3 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electromechanical timing system for detonating explosive missiles which permits the achievement of reduced dispersion and reduced dud and premature fractions, said system comprising an electric power source and an electric actuating device serially connected to each other and to each end, respectively, of an assembly of mechanical timer-electrical switch arrangements, n in number, each of said arrangements comprising a mechanical timer articulated by means of a movable linkage to an opened multiple pole (k in number)-single throw switch, where n equals an odd number and k equals

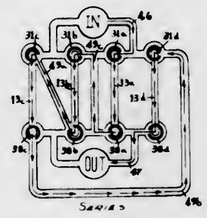
$$\frac{n+1}{2}$$

said linkage being operatively responsive to close said switch upon functioning of said timer, the poles of all algebraic combinations of said switches taken k at a time being serially interconnected by conductive leads which are so constructed and arranged that the functioning of any algebraic combination of said mechanical timers taken k at a time results in a closed circuit.

3,098,449
SLUSH PUMP
Robert H. Hill, 2809 Broadway, Fort Wayne, Ind.
Filed Dec. 7, 1959, Ser. No. 857,761
7 Claims. (Cl. 103—4)

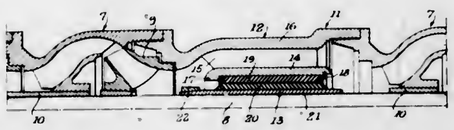
1. A pumping apparatus, comprising a plurality of pumps each having a barrel provided internally with a

helical groove and a helical rotor within the barrel, an annular inlet manifold provided with a plurality of angularly spaced valve housings, an annular outlet manifold having a plurality of valve housings respectively aligned with those of said inlet manifold, a valve sleeve mounted in each of said housings, each of said valve sleeves having an axial opening receiving an end of one of said pump barrels and also having a lateral port communicating with the axial opening, each valve sleeve being rotatable about the axis of the associated pump barrel to control commu-



nication of the pump barrel with the associated manifold through said lateral port, an annular series of pinions connected respectively to said rotors, a common drive gear meshing with said pinions, each of said valve sleeves being removable from its associated manifold by movement axially of itself, and releasable means for retaining each valve sleeve in fixed axial position in its associated manifold, one of the valve sleeves associated with each pump barrel being releasably secured to such pump barrel whereby it and the barrel can be removed as a unit from the manifold.

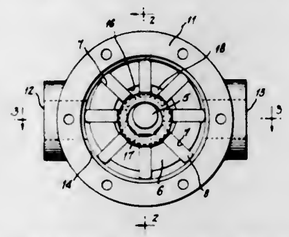
3,098,450
PUMP SHAFT BEARING MEANS
Clark D. Bower, Whittier, Calif., assignor to Layne & Bowler Pump Company, Los Angeles, Calif., a corporation of California
Filed July 26, 1961, Ser. No. 126,935
2 Claims. (Cl. 103—108)



1. In a pump for moving therethrough abrasive-containing liquid, an elongated housing having an inlet and an outlet, an elongated operating shaft rotational in said housing, said housing having longitudinally arranged bowl units between the pump inlet and outlet, impellers carried by the shaft and operatively engaged with said bowl units to move liquid through said units from the inlet to the outlet of the pump, bearings mounting longitudinally spaced portions of the shaft in the bowl units, an intermediate resilient bearing disposed between and longitudinally spaced from the first-mentioned bearings to hold the shaft engaged and axially aligned with the housing, said bearings being disposed within the liquid flow through the pump and subject to attrition of abrasive in the flow, said resilient bearing comprising two rotationally engaged rubber bushings.

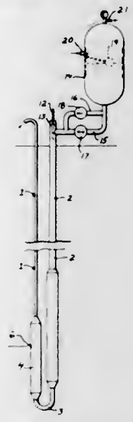
3,098,451
ROTARY MACHINE
Frank Scognamillo, Oakland, N.J.
(118 Walnut St., Ridgewood, N.J.)
Filed Nov. 4, 1960, Ser. No. 67,256
2 Claims. (Cl. 103—136)

1. A rotary machine comprising a casing having a cylindrical body portion and end walls cooperatively forming a cylindrical pump chamber, a shaft journaled eccentrically in said cylindrical pump chamber, a rotor carried by said shaft in eccentric relation to said cylindrical pump chamber, the cylindrical body portion of the casing having inlet and outlet ports at opposite sides of said rotor, said rotor having radial slots therein, blades slidingly confined in said slots and having the ends of the same flush with the opposite ends of the rotor, said rotor having concentric annular recesses in the ends of the same about the shaft intercepted by said slots and whereby the inner edges of the blades at opposite ends are exposed in said annular recesses and blade controlling rings loosely seated in said annular recesses in the ends of the rotor, said rings having an internal diameter greater than and



clear of said shaft and an external diameter sufficient in engagement with the blades to hold them radially outward in cooperative relation with the cylindrical wall of the casing, the end walls of said casing each being smooth and flat in a single plane, with said rings, the rotor and the ends of said blades in flush, free sliding engagement therewith, and said free rings having annular pressure relieving grooves in the peripheral portions of the same and forming circular passages communicating different portions of said annular recesses in the ends of the rotor with the ends of the radial slots in which the blades are slidingly confined and said rings having passages therethrough from side to side in communication with the slots in the rotor.

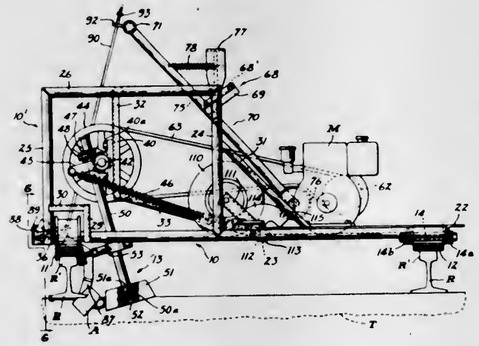
3,098,452
WELL PUMPS FOR ABRASIVE FLUIDS
Eugene L. Davis, 411 Flint Ave., Long Beach 14, Calif.
Filed July 21, 1961, Ser. No. 125,831
6 Claims. (Cl. 103—165)



1. A well pump, comprising:
(*a*) a well fluid conduit;
(*b*) a counterbalancing fluid conduit;
(*c*) both of said conduits extending from the mouth to the pumping level of a well;
(*d*) means forming a plunger chamber at the lower end of the counterbalancing fluid chamber;

(*e*) means forming a well fluid collecting chamber having an upper end above the lower end of said plunger chamber;
(*f*) a connecting tube joining the lower ends of said chambers;
(*g*) a well fluid inlet valve disposed in said fluid collecting chamber above the lower end of said plunger chamber;
(*h*) a discharge valve above said inlet valve for admitting fluid into said well fluid conduit from said fluid collecting chamber;
(*i*) a reciprocable plunger in said plunger chamber;
(*j*) a string of sucker rods extending therefrom to the mouth of the well to reciprocate said plunger thereby to draw well fluid into said collecting chamber and expel fluid through said well fluid conduit;
(*k*) and a counterbalancing fluid in said counterbalancing conduit supported by said plunger.

3,098,453
RAILROAD TRACK MAINTENANCE MACHINES
Graham M. Fee, Erie, Pa., assignor to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 13, 1958, Ser. No. 734,953
9 Claims. (Cl. 104—2)



1. A railroad maintenance machine adapted to travel upon rails and to apply striking blows to a work surface adjacent a rail comprising a frame mounted on rail engaging wheels, a tool having a weighted driving portion and a handle, said tool pivotally mounted upon said frame adjacent said rail and adapted to swing toward said rail, means for retracting said tool, a pivot shaft for said tool, the axis of said pivot shaft being parallel with said rail, a driven pulley fixed upon said shaft, said tool and said driven pulley adajted to pivot unitarily with said pivot shaft, a constantly running motor mounted upon said frame and provided with a driving pulley, a pulley belt loosely connecting said driving and driven pulleys whereby said driving pulley turns freely relative to said belt, and belt tightening means adapted to tighten said belt whereby rotational motion is transferred from said driving pulley to said driven pulley to pivot said tool into driving engagement with said rail anchor.

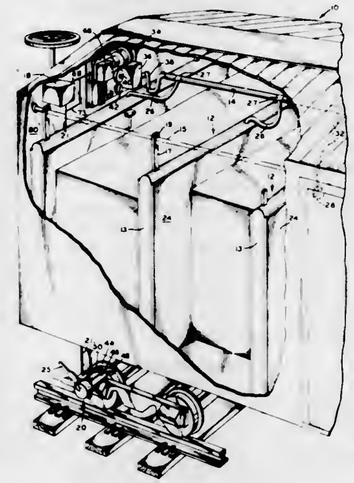
3,098,454
AUTOMATIC STEERING SYSTEM FOR VEHICLES SUPPORTED ON PNEUMATIC TIRED WHEELS
Raffaello Maestrelli, Via Carnaghi 2, Milan, Italy
Filed Oct. 4, 1960, Ser. No. 60,408
Claims priority, application Italy Nov. 7, 1959
8 Claims. (Cl. 104—247)

1. A vehicle steering system comprising two tracks for pneumatic tired drive wheels of a vehicle, a lateral guide rail extending above said tracks and arranged on the outside of said tracks, and in the region of switch points, an additional lateral guide rail opposed to the former, and on each side of the vehicle, steering means comprising wheels or rollers mounted for rotation about vertical axes arranged on the inside and outside of said



lateral guide rails to cooperate respectively with said first lateral guide rail, and, in the region of the points with said additional lateral guide rail, the arrangement being such that the vehicle passing over the points is guided on the lateral guide rails of the outer side of the points.

3,098,455
CARGO CUSHIONING SYSTEMS
Charles W. McElroy and John S. Klein, Hamden, Conn., assignors to Safety Electrical Equipment Corp., New Haven, Conn.
Filed Aug. 17, 1961, Ser. No. 132,182
8 Claims. (Cl. 105—369)



1. A cargo cushioning system, comprising, in combination:
(A) an air manifold, having
(*a*) an air inlet and
(*b*) an air outlet;
(B) a plurality of inflatable dunnage bags,

(a) each connectable for inflation to said air manifold;

(C) a check valve,
(a) at said air manifold inlet,
(b) said check valve allowing air to enter said manifold through said air inlet but not allowing air to exit therethrough;

(D) an air blower
(a) having an air intake and an air discharge outlet,
(1) said air discharge outlet connecting through said check valve to said air manifold, and
(2) said air intake open to the atmosphere;

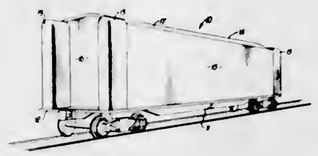
(E) an electric motor
(a) drivingly connected to said air blower;

(F) a source of electrical energy;

(G) a low pressure sensitive switch
(a) having a pressure sensing element connected to said air manifold
(b) said switch connecting said electric motor to said source of electrical energy when the pressure in said manifold drops below a first predetermined pressure; and,

(H) high pressure sensitive relief means
(a) at said air outlet of said air manifold,
(b) said relief means opening to allow air to escape from said manifold when the pressure therein is greater than a second predetermined pressure.

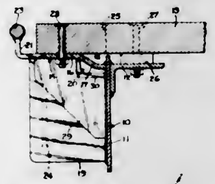
3,098,456
RAILROAD BOX CAR
Edwin C. Elsner, 695 Columbia St., Pasadena, Calif.
Filed May 8, 1961, Ser. No. 108,609
3 Claims. (Cl. 105—379)



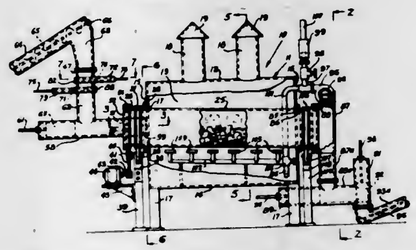
1. A vehicle which comprises: an undercarriage; a substantially rectangular floor mounted on said undercarriage; an envelope body having sides, ends, and a roof, open at the bottom, and substantially overlying said floor; vertical side posts mounted on the sides of said envelope body; means mounted adjacent the corners of said floor externally of said envelope body for elevating said envelope body above said floor a distance substantially equivalent to the height of said envelope body and lowering said envelope body to resting position on said floor; telescoping vertical side braces mounted on the sides of said envelope body; and means for selectively latching said telescoping side braces to said floor.

3,098,457
LADING ANCHOR CONSTRUCTION
Raymond M. Shaver, Michigan City, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Sept. 21, 1955, Ser. No. 535,725
4 Claims. (Cl. 105—404)

1. In a freight vehicle, an underframe structure including a longitudinal side sill having a vertical web portion and a horizontal inwardly directed top flange, a lading anchoring and floor supporting member comprising a generally horizontal plate having its inner edge welded to the upper zone of the vertical web portion of the side sill and extending outwardly therefrom in substantially the plane of said top flange thereof, said member having a notch formed in its outer edge, floor boards overlying the side sill and extending over the member in supported relation to the member and having their outer ends spaced from the outer edge of the member, an anchor element secured to the member in outwardly spaced relation to the inner end of the notch therein and opposite to and spaced outwardly from the outer end of the adjacent floor board to close the notch and thereby form an enclosed opening for receiving an anchor band, the end portions of said member being downwardly directed and being spaced longitudinally of the vehicle from the downwardly directed end portion of a next adjacent identical member and having their inner edges welded to the vertical web portion of the side sill to rigidify the member and its connection to the side sill and cooperate with the side sill in forming three of the four walls of a stake pocket, a vertical plate spaced outwardly from and parallel to the vertical web portion of the side sill and connecting said end portions of the two adjacent members to form the fourth wall of said stake pocket, and additional rigidifying means comprising a brace intermediate the downwardly directed end portions of each member welded to the under surface of the member and the outer surface of the vertical web portion of the sill.

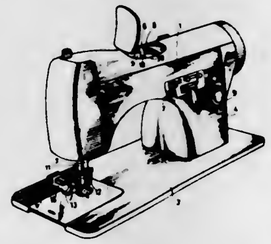


3,098,458
ROTARY REFUSE CONVERTER
Dae C. Lantz, Jr., Burbank, Calif., assignor to Pan American Resources, Inc., Burbank, Calif.
Filed Nov. 1, 1961, Ser. No. 149,288
2 Claims. (Cl. 110—14)



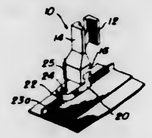
1. In a refuse converter, the combination of a housing, a rotary converter extending longitudinally of said housing, burner means in said housing for heating said converter, means for rotating said converter, a fixed refuse inlet tube structure at one end of said converter, a fixed discharge receptacle and a charred refuse outlet tube at the other end of said converter, sealing means between said rotary converter and said discharge receptacle and sealing means between said rotary converter and said inlet tube structure to preclude escape of gases from said converter extending from said discharge receptacle to said burner means, sealing means for said refuse inlet tube, sealing means for said charred refuse outlet tube, valve means in said outlet pipe for selectively directing a portion of said recovered combustible gases to said burner means, said refuse inlet tube structure including a horizontal tube extending into said converter and a vertical tube communicating with said horizontal tube, a piston reciprocable in said horizontal tube to force refuse falling from said vertical tube into said converter, said sealing means for said refuse inlet tube structure comprising a pair of horizontally slidable plates in said vertical tube, means for selectively sliding one of said plates to tube opening position when the other of said plates is in tube closing position, said vertical tube being substantially rectangular in cross-section and said plates conforming to the interior configuration thereof, guide channels for said plates extending transversely across said vertical tube, and a sealing gasket in said vertical tube for engagement by the end of each plate.

3,098,459
ATTACHMENT FOR THE FASTENING OF BUTTONS WHICH CAN BE APPLIED TO ZIG-ZAG SEWING MACHINES
Luigi Bono, Pavia, Italy, assignor to Necchi Societa per Azioni, Pavia, Italy
Filed Aug. 12, 1960, Ser. No. 49,297
Claims priority, application Italy Sept. 24, 1959
3 Claims. (Cl. 112—114)



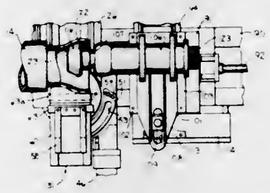
1. For use in combination with a sewing machine of the zig-zag type and having means for controlling the width of the zig-zag as well as the usual presser bar and needle, an attachment for fastening buttons comprising a support for attachment to the presser bar, a jaw assembly, and means adjustably mounting said jaw assembly on said support for aligning buttonholes with the needle, said jaw assembly mounting means including a support plate, means mounting said support plate on said support for sliding movement in the normal direction of cloth feed, means carried by said support for restricting the movement of said support plate, said last mentioned means including a stop plate, and means mounting said stop plate for movement transversely of the direction of movement of said support plate, said stop plate being notched to permit the desired variation of positions of said support plate.

3,098,460
SEWING MACHINE PRESSER FOOT
Tadao Yoshida, 339 2-chome, Suwada-machi, Ichikawa-shi, Chiba-ken, Japan
Filed Aug. 18, 1961, Ser. No. 132,407
1 Claim. (Cl. 112—235)



A presser foot, used in combination with a presser support post of a sewing machine, for securing concealed slide fastener tapes to garment materials, comprising a base for attachment to said presser foot support post, a presser foot element slidably carried by said base for lateral movement between laterally spaced apart sewing positions, a longitudinal groove provided on the under end surface thereof for guiding a strip of the slide fastener element, an internal pocket formed in the under end surface of said base and opening at said surface, a spring disposed in said pocket, a ball detent disposed in said pocket, said ball detent being pushed outwardly by said spring, a pair of laterally spaced apart indents formed in the upper surface of said presser foot element, whereby said presser foot element is restrained at desired positions in relation to said base, and a needle passthrough aperture of laterally elongated shape formed in said presser foot element and communicating with said longitudinal groove for guiding the fastener strips.

3,098,461
TUBE SHAPING MACHINE
Howard A. Kinney, Kalamazoo Township, Kalamazoo County, Mich., assignor to Crescent Machine & Nipple Company, Allegan, Mich., a corporation of Michigan
Filed Aug. 12, 1959, Ser. No. 833,188
5 Claims. (Cl. 113—52)

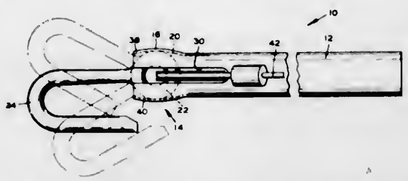


1. A machine for shaping substantially cylindrical workpieces, comprising: an upright base member; an open center chuck secured to said base member for engaging and rotating said workpiece around a substantially horizontal, first axis; a cross slide supported upon said base member for movement in a direction perpendicular to said horizontal axis; a swing member supported upon said cross slide for movement with respect to said cross slide around a second axis substantially perpendicular to said first axis and said direction of movement, said second axis being movable with said cross slide into and out of a position intersecting said horizontal axis; a tool holder slidably supported upon said swing member for movement toward and away from said second axis; an elongated arcuate cam supported upon said cross slide independently of said swing member and means for adjusting said cam substantially radially of said second axis, said cam defining a pattern around said second axis; a cam follower on said tool holder engageable with said cam for controlling said movement of said tool holder with respect to said swing member; first actuating means for effecting said movement of said cross slide with respect to said base member; and second actuating means for moving said swing member around said second axis.

3,098,462
BOAT RETRIEVING DEVICE
James W. Holzman, Muhlenburg Park, Pa., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Dec. 19, 1960, Ser. No. 76,583
3 Claims. (Cl. 114—221)

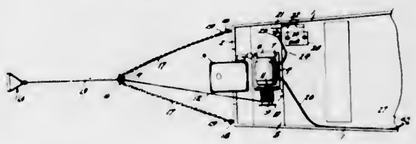
1. A retrieving device for effecting the engagement of a line with an inaccessible attaching means comprising in combination, a body member, a socket means disposed at one end of said body member, said socket means defining an axially extending opening having a major and a minor axis in cross-section and being provided with an axial slot whereby it may resiliently deform, a hook means hav-

ing a portion thereof substantially conforming to said major and minor axes, said line being attached to said hook means, said conforming portion of said hook means being received within said socket means and adapted for



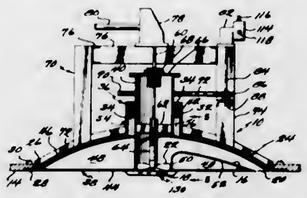
uniplanar pivotal movement relative thereto, and said socket means being resiliently deformed by said hook means whereby said hook means is frictionally engaged by said socket means and adapted for disengagement therefrom.

3,098,463
WATER SKI TOWLINE RETRIEVER
Donald D. Brown, Verden, Okla.
Filed Dec. 23, 1959, Ser. No. 861,685
6 Claims. (Cl. 114—235)



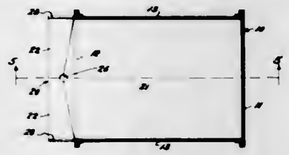
1. Means for connecting a towline to a boat having a propeller at the stern thereof, whereby the towline may be trailed from the stern, free from entanglement with the propeller, comprising: a winding spool mounted inboard of said boat, a towline to be wound thereupon secured at its inner end to said spool, guide and support means including a constricted portion through which the towline passes, an enlarged portion located on the towline between said spool and said guide and support means, said enlargement being of such size as will prevent its passage through the guide and support means, suspension means flexibly secured adjacent the stern of the boat, securing and suspending the guide and support means, said suspension means acting, when the enlargement engages the guide and support means, to transmit the towing function through the support means and the suspension means to the boat and, when the towline is slack, to hold the towline out of entanglement with the propeller.

3,098,464
PROPULSION UNIT FOR SHALLOW DRAFT BOATS OR THE LIKE
Barney B. Holland, 2809 N. Main St., Fort Worth, Tex.
Filed Apr. 10, 1962, Ser. No. 186,422
14 Claims. (Cl. 115—16)



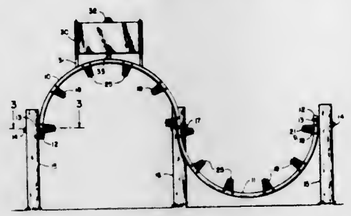
1. In a shallow draft boat having a substantially flat bottom with an opening therein, an improvement in a propulsion unit therefor comprising: a housing attached to the bottom of the boat and closing the opening thereof, a second housing mounted within said first housing and rotatably adjustable on a vertical axis with respect to the first housing, said second housing having a planar bottom portion lying substantially in the plane of the flat bottom of the boat, said second housing having an inlet opening in its planar bottom portion coaxial with the vertical axis of rotation of the same and an outlet opening in its planar bottom portion spaced radially outwardly from the inlet opening, said inlet opening being circular in cross-section and said outlet opening being elongated and having a cross-sectional area substantially equal to the cross-sectional area of said inlet opening, a duct in said second housing having a portion extending vertically upwardly from the inlet opening and then another portion extending in a radial plane to the vertical axis of the vertical portion and downwardly to the outlet opening for providing a channel for water having one change of direction therein, the downwardly extending portion of said duct communicating with the outlet opening at an acute angle to the plane of the same, said duct having a cross-sectional area throughout its length substantially equal to the cross-sectional area of the inlet opening and the outlet opening, an axial flow propeller supported in the vertical portion of said duct and rotatable on the vertical axis of the same for drawing water through said inlet opening and discharging the same through said outlet opening, said propeller having blades with leading edges lying in the same plane as the plane of said inlet opening and having a maximum diameter slightly less than the diameter of the vertical portion of said duct so the tips of the blade lie in close proximity to the walls of the vertical portion of the duct, and means for rotating said propeller.

3,098,465
DOG CAGE
Lee R. Ivey, Morristown, N.J., assignor to Lab-Crafts Inc., Morristown, N.J., a corporation of New Jersey
Filed Oct. 3, 1962, Ser. No. 228,076
5 Claims. (Cl. 119—15)



1. An animal cage comprising:
a body element including front, back, side, bottom and top walls, of which the back wall has a transverse evacuation slot for alignment with a gutter forming part of the wall of a building in which the cage is installed;
an excreta flushing element in the form of a rearwardly tilted broad flatly-pitched funnel-like drain floor having a substantially level rear edge portion projecting through the back wall evacuation slot of the cage body element and provided with bottom drainage surfaces that slope toward the lowest point of said drain floor, which point is located outside the cage body element and has a discharge opening; and a urine collection element including:
a downspout projecting from the discharge opening in the drain floor of the excreta flushing element;
a track supported within the cage body element beneath the excreta flushing element and arranged to extend from front to rear in underlying relation to the downspout; and
a slide movable lengthwise on said track and having seating means for a urine sample receiver located at its rear end portion.

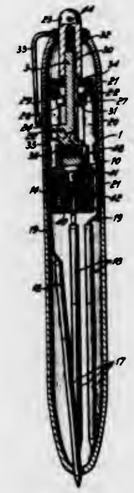
3,098,466
CATTLE SCRATCHER AND OILER
Leslie D. O'Donnell, P.O. Box 552, Benkelman, Nebr.
Filed May 29, 1961, Ser. No. 113,161
2 Claims. (Cl. 119—157)



1. A cattle scratching and oiling device comprising: a reversally curved pipe having an upper curved portion and a lower curved portion; means supporting said pipe in a vertical plane with the two portions horizontally opposed; a solution tank mounted on and above said pipe; a conduit feeding solution from said tank to said pipe; a plurality of spaced-apart scratching members mounted on said pipe and lying in the plane of the latter, the scratching members on the upper curved portion extending radially downward and inward and the scratching members on the lower curved portion extending radially upward and inward, said scratching members including a group of relatively stiff rods secured to said pipe at their one extremity, and extending radially inward of said arched pipe; a circular spacing-ring, the radially inward extremities of said rods being secured to and acting to support said spacing ring; a discharge nipple communicating with said pipe in alignment with the axis of said ring; a valve housing mounted on said nipple; a flexible tubular nozzle mounted on said housing and projecting axially through said ring; a valve seat in said housing; a valve normally closing said seat; and a valve stem projecting from said valve into the interior of said flexible nozzle so that when said nozzle is flexed by an animal rubbing against said ring, said valve will be opened to allow fluid to escape from said pipe through said nozzle.

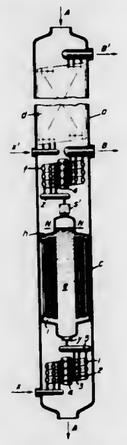
3,098,467
MULTI-COLOR PRESSURE ADJUSTABLE WRITING INSTRUMENT
Bernhard Nägele, Jr., Goethestr. 59, Schwabisch Gmund, Germany
Filed Apr. 7, 1959, Ser. No. 804,753
Claims priority, application Germany Apr. 9, 1958
8 Claims. (Cl. 120—14.5)

1. In a writing instrument: a casing having a writing end, an axially slotted tubular insert in said casing, a rotatable feed spindle axially movable in said insert from a retracted position downwardly toward the writing end of the casing into advanced position, spring means urging said spindle toward its retracted position, a plurality of carriers in the casing respectively provided with tongues extending along said insert and ending in hook-shaped portions extending into the upper ends of the slots in the insert, said spindle being provided with radially extending means having a recess therein located in the plane of said hook-shaped portions when the spindle is retracted and movable by rotation of the spindle into predetermined rotated positions into selective engagement with any one only of said hook-shaped portions, a spring urged locking member carried by said spindle, an abutment in the insert engageable by said locking member for locking the spindle in said advanced position, means protruding from said casing and connected to said spindle for moving said spindle into said advanced position and for moving said spindle beyond said advanced position, means freely reciprocably mounted in said casing and frictionally engaging and retracting said locking member when the spindle is advanced beyond its advanced position thereby to permit said spring means to return said spindle to its retracted position, retainer ring means rotatably but axially nondisplaceably mounted in the insert engaging beneath said hook-shaped portions for retaining those carriers not engaged by said recess means, and abutment means at the end



of said insert which is opposite the writing end of the casing engageable with the spindle for limiting the movement of said spindle from its advanced position into its retracted position, said locking member being so angularly related to radially extending means as to engage a slot of said insert when said spindle is in one of its said rotated positions.

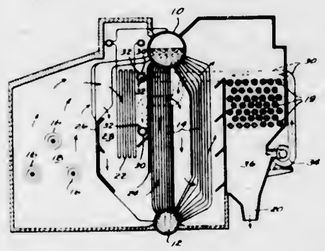
3,098,468
LIGHT BOILER FOR USE IN A NUCLEAR ENERGY INSTALLATION
André Huet, 48 Ave. du President Wilson, Paris 16, France
Filed Nov. 12, 1957, Ser. No. 695,851
Claims priority, application France Nov. 30, 1956
12 Claims. (Cl. 122—32)



1. An installation for the generation of steam by recovering the heat from a fluid issuing from a nuclear

reactor comprising, in combination, a large plurality of assembled identical casings in the form of elongated columns having an axial dimension substantially greater than the transverse diameter, each identical casing being provided with water-feed means, means providing a plurality of heat-exchange surfaces for providing indirect heat exchange between said water and the evolved water vapor and said fluid, said water-feed means communicating with the lower portion of said means providing said heat-exchange surfaces, and vapor-outlet means for removing generated water vapor from the upper portion of said means providing said heat-exchange surfaces, each of said casings being provided with feed means for the introduction of said fluid from the nuclear reactor and being provided with outlet means for removal of said fluid after it has passed through the casing in indirect heat exchange with said water, a common effluent conduit adjacent said casings and means for conducting the water vapor issuing from said vapor-outlet means into said common conduit, whereby said water vapor is removed from the installation through said conduit, said means providing said plurality of heat-exchange surfaces comprising a first tubular coil having the same axis as the casing, a light boiler comprising a central cylindrical water tank and radially-spaced parallel water tubes disposed around said tank and in fluid-communicating relationship therewith, and a second tubular coil having the same axis as the casing, said first tubular coil, said tank and said second tubular coil being directly interconnected for the flow of said water therethrough seriatim as it is converted into water vapor, said water-feed means being connected to an inlet end of said first coil and said vapor-outlet means being connected to an outlet end of said second coil.

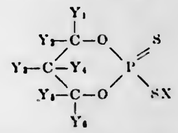
3,098,469
VAPOUR GENERATORS
Ronald Henry Paddon Row, Bexley, Kent, England, assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Dec. 11, 1961, Ser. No. 158,404
1 Claim. (Cl. 122—478)



A water tube vapor generator comprising an elongated bank of superheater tubes; means housing said bank and defining an elongated gas passage which extends longitudinally of said bank, said bank of superheater tubes and housing means being in a convection zone of said vapor generator, gas inlet and outlet means adjacent the ends of said passage such that the flow of hot gas is approximately in the direction of the length of the passage and along the length of said bank of said superheater tubes, said passage being substantially wider than the bank as measured across the general direction of flow of the gas and said bank being disposed along one side of the passage so as to provide on the opposite side a space approximately coextensive with the bank which is unoccupied; said gas inlet means, passage and bank however being arranged such that the flow of hot gas normally is through the superheater; means for withdrawing cool gas from an area of said generator downstream of said space; and adjustable means disposed in said passage along a side of said bank removed from said space adapted to blow said cool gases in a substantially transverse direction across said bank in a manner to divert a variable proportion of the stream of inflowing hot gases into said space.

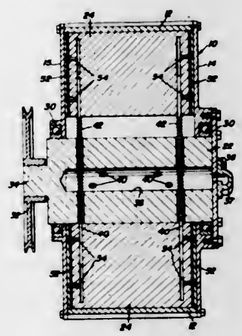
3,098,470
MOTOR FUEL
Fred K. Kawahara, Park Forest, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Feb. 27, 1959, Ser. No. 795,893
9 Claims. (Cl. 123—1)

9. In the method of operating spark-ignition internal combustion engines, the improvement which comprises supplying to said engines a hydrocarbon motor fuel of the gasoline boiling range containing a minor amount of tetraethyl lead and, in combination therewith, in an amount sufficient to provide a mol ratio of phosphorus to lead of from about 0.01 to about 1.0, a thioester of a cyclic dithiophosphoric acid having the formula



wherein the Y groups are each selected from the group consisting of hydrogen atoms and alkyl radicals of 1–4 carbon atoms each, and X is selected from the group consisting of alkyl, aryl, aralkyl, and alkaryl radicals having up to about 15 carbon atoms.

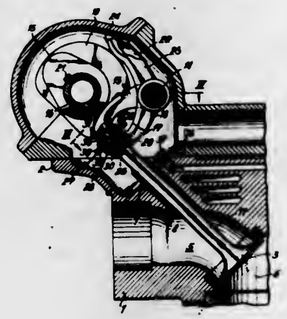
3,098,471
SLIDING VANE ROTARY PISTON ENGINE AND COMPRESSION SEALS THEREFOR
Cecil C. Cassady, 3001 Estero Blvd., Fort Myers, Fla.
Filed Oct. 27, 1960, Ser. No. 65,438
8 Claims. (Cl. 123—16)



1. A rotary internal combustion engine comprising a casing having therein a cylindrical working chamber including a cylindrical peripheral side wall and a pair of circular end walls connected thereto, a rotor journaled in said casing for rotation about an axis eccentric to said cylindrical wall whereby to variably space the adjacent peripheral surfaces of the rotor and cylindrical wall throughout their circumferences, said rotor having an axial bore opening inwardly from one end of the rotor for the flow of lubricant thereinto, said rotor having circumferentially spaced pairs of diametrically opposed slots extending inwardly from the periphery of said rotor and having bottom walls spaced from said axial bore, said rotor having circumferentially spaced pairs of axially

spaced radial bores, each of said pair of radial bores establishing communication between said axial bore and one of said slots through the bottom wall of the latter, a compression blade slidably disposed in each slot and projectible therefrom into continuous sealing engagement with said cylindrical side wall, said blades defining with said casing side and end walls a plurality of circumferentially spaced combustion chambers, fuel supply, exhaust and ignition means on said casing cooperating with said combustion chambers, each blade having a pair of guide bores opening into the associated slot adjacent its bottom wall and alined with the radial bores of said associated slot, a pair of guide rods for each pair of diametrically opposed blades, each guide rod being slidably disposed in the aligned radial bores of said rotor and the aligned guide bores in the associated blades, a spring embracing each guide rod and extending through said axial bore and abutting the adjacent ends of the pair of associated blades.

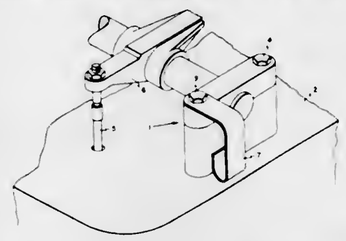
3,098,472
VALVE CONTROL MECHANISM FOR INTERNAL COMBUSTION ENGINE
Hans H. Hoenick, Gerlingen, Wurttemberg, Germany, assignor to Firma Dr. Ing. h.c. F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed Oct. 24, 1960, Ser. No. 64,609
Claims priority, application Germany Nov. 26, 1959
9 Claims. (Cl. 123—90)



1. A positive action valve control mechanism for high speed internal combustion engines in which the movements of the valve is effected by means of cam followers, comprising valve means, means for producing the opening movement of said valve means including cam means and drag lever means operatively connected between said cam means and said valve means, and solid means for positively and unyieldingly effecting the entire closure movement of said valve means including two-armed lever means located on both sides of said drag lever means, said two-armed lever means acting on said valve means, and cam disk means mounted coaxially with said cam means and cooperating with said two-armed lever means.

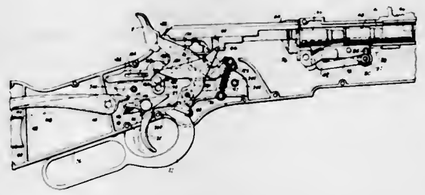
3,098,473
CATHODIC PROTECTION OF INTERNAL COMBUSTION ENGINES
Dale A. Young, Roselle Park, N.J., and George J. Farris, Chicago, Ill., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 25, 1962, Ser. No. 168,763
7 Claims. (Cl. 123—90)

5. In combination with a metallic oil-containing lubricating system of an internal combustion engine, a cathodically protected hydraulic valve train assembly comprising a valve train assembly having a rocker arm assembly, and a sacrificial anode attached to said rocker arm assembly, said sacrificial anode being composed of



metal higher in the galvanic series than any component metal in said hydraulic valve train assembly.

3,098,474
TOY REPEAT FIRING CAP GUN WITH PERCUSSIVE FIRING NOISE AND SIMULATED USED SHELL EJECTION
Mahlon E. Hirsch, Fairview, and Carl Merl, Erie, Pa., assignors to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed Apr. 15, 1960, Ser. No. 22,493
17 Claims. (Cl. 124—2)

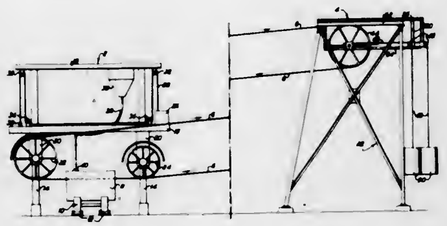


1. A toy repeat-firing cap gun arranged to produce a percussive firing noise and also to simulate a used shell ejection from the breech portion of the gun for each percussive firing noise, said gun having an anvil, a hammer, a hammer spring, a trigger, a cap strip magazine, a cap strip feed means, a magazine extending forward from the breech portion of the gun to receive a quantity of shells, a helical spring for urging the shells in the magazine rearwardly toward the breech portion of the gun, a longitudinally movable slide at the top of the breech portion of the gun, a cocking lever to operate the cap strip feed means and to cock the hammer, a means whereby the cocking lever moves the slide to provide a shell ejection opening at the top of the gun, a shell ejector beneath the slide, and means to move the ejector upward to eject a shell when the slide is retracted by the cocking lever and to restore the ejector downward when the slide is returned by the cocking lever, at which time another shell is fed into the slide by the helical spring.

3,098,475
LONG WIRE STONE SAWING APPARATUS
Nic L. Knoph and Ralph E. Sonneland, Knoxville, Tenn., assignors, by mesne assignments, to Tysaman Machine Company, Inc., Knoxville, Tenn., a corporation of Delaware
Filed Jan. 31, 1961, Ser. No. 86,052
4 Claims. (Cl. 125—21)

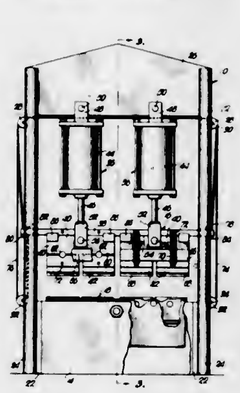
4. In a stone cutting saw of the long wire type having a cutting station, a remotely located wire take-up station and an endless saw wire extending between said stations, the improvement which comprises a longitudinally movable carriage depending from said track, a pair of trolley

wheels at each end of said carriage operatively associated with said track, another trolley wheel at the bottom of said carriage mounted for rotation about an upright axis, members fixed to the end portions of said track and extending downwardly therefrom, elongated guide means affixed to said members in position to cooperate with the



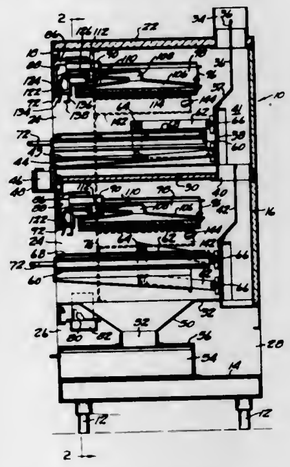
last-mentioned trolley wheel to prevent lateral movements of the lower end of the carriage, a take-up wheel around which the saw wire is looped, means rotatably mounting said take-up wheel on said carriage, and means for urging said carriage rearwardly to take up slack in the saw wire looped around the take-up wheel.

3,098,476
STONE SPLITTER
George A. Mayer, Miami, Okla., assignor to Miami Stone, Inc., Miami, Okla., a corporation of Oklahoma
Filed Jan. 6, 1961, Ser. No. 81,018
7 Claims. (Cl. 125—23)



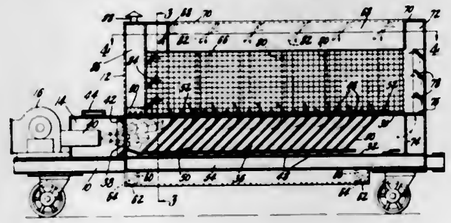
1. In a stone splitter, a pressure equalizing device comprising a hollow base; a support including a pair of spaced, elongated plate elements; first shaft means pivotally mounting said plate elements within said base for vertical rocking movement relative to the latter; a pair of horizontally spaced primary members; second shaft means pivotally mounting said primary members on said support between said elements for vertical rocking movement relative to the latter; a pair of horizontally spaced secondary members for each primary member; third shaft means pivotally mounting said secondary members on corresponding primary members for vertical rocking movement relative thereto, said secondary members projecting upwardly from the corresponding primary member to provide stone supporting surfaces for engaging a stone along two spaced lines, the axes of pivotal movement of said primary and secondary members being substantially coplanar.

3,098,477
BROILER
William Lotter, South Bend, Ind., assignor to South Bend Range Corporation, South Bend, Ind., a corporation of Indiana
Filed Aug. 11, 1960, Ser. No. 49,077
18 Claims. (Cl. 126—41)



1. A broiler comprising a housing having a flue and a broiler compartment therein open at its front and communicating with said flue, a grill in the lower part of said compartment, a plurality of gas-fired burners mounted in the upper part of said compartment, said burners being of the type generating infra red heat, and air supply means for said burners including a substantially sealed primary air chamber supplying all burners and an elongated air supply duct communicating with and adapted to pressurize said primary air chamber at substantially constant pressure and having an air inlet spaced from and below said broiler compartment.

3,098,478
SNOW MELTER
Earle S. Philbrook, 392 Wibird St., Portsmouth, N.H.
Filed Sept. 6, 1961, Ser. No. 136,245
8 Claims. (Cl. 126—343.5)



1. Apparatus for melting snow, comprising a chassis, an open-top tank on said chassis, said tank having side and end walls, a floor having drain apertures and a false floor above said floor, said walls and floors enclosing a compartment having an opening at one end, means on said chassis for supplying through said opening a stream of hot gases, said false floor having a series of rows of apertures therethrough in staggered array, an inclined baffle plate for each said aperture extending upward from said floor to said false floor beneath each said aperture in the false floor and inclined away from said opening, and means cooperating with said floor for draining water resulting from melting snow without permitting the escape of gases from the bottom of the apparatus.

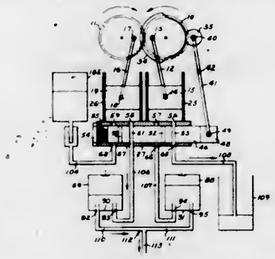
3,098,479
BODY AND LIMB HOLDER
Edgar J. Storey, San Mateo, Calif., assignor to Zimmon & Company, Inc., Belmont, Calif.
Filed May 22, 1962, Ser. No. 196,691
14 Claims. (Cl. 128—134)



1. A holder of the character described comprising a major fabric portion having an elongated, narrow tapered shape with substantially straight top and bottom edges converging outwardly, and an inner tranverse edge, a minor fabric portion having a triangular shape, the base of said triangular shape being of substantially the same length as said transverse edge of said major fabric portion, said base and inner transverse edge being positioned in proximity to each other and spaced apart to define the side edges of a transversely extending slit, the sides of said minor fabric portion converging in the opposite direction from the top and bottom edges of said major fabric portion, first web reinforcing extending continuously along one face of one edge of said major fabric portion and the contiguous side of said minor fabric portion, second web reinforcing extending continuously on the same face of said major fabric portion as said first reinforcing and along the opposite edge of said major fabric portion and contiguous side of said minor portion, said web reinforcings extending across and defining the ends of said slit, and elongated webbing ties extending out beyond the outer ends of said major and minor fabric portions, the length of said major fabric portion being substantially greater than the length of said minor fabric portion, the base of said minor fabric portion and inner transverse edge being hemmed and reinforced to maintain straight margins for said slit.

3,098,480
SYSTEM FOR FLUID TRANSFUSION
William D. Worthington, Charlotte, Vt.
Filed Nov. 29, 1960, Ser. No. 72,376
9 Claims. (Cl. 128—214)

1. A unitary system for blood exchange transfusion for patients including a pump and valve chambers and wherein replacement blood is effectively substituted for the blood withdrawn from the patient, comprising storage means for replacement blood, disposal means for the withdrawn blood and catheter means for communicating with the blood stream of the patient in which each of said means are interconnected by means of fluid passageways and said fluid passageways also are connected to said pump and valve chambers, a power source, continuously rotatable drive means driven from said power source, cylinder means defining a first chamber and a second chamber, piston means slidably mounted in said chambers, means extending from said drive means to said piston means for imparting a simultaneous reciprocating motion thereto consisting of continuous suction strokes and pressure strokes, axially slidable valve means



positioned beneath said chambers, means extending from said drive means to said valve means for axially shifting said valve means into a first position at the beginning of each suction stroke to provide unobstructed passageways between said first chamber and said storage means and between said second chamber and said catheter means and for axially shifting said valve means into a second position at the beginning of each pressure stroke to provide unobstructed passageways between said first chamber and said catheter means and between said second chamber and said disposal means.

3,098,481
STERILE FLUID DISPENSER
Erik Lennart Wikander and David Georg Dahlinder, Sodertalje, Sweden, assignors to Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden, a company of Sweden
Filed Jan. 17, 1961, Ser. No. 83,298
Claims priority, application Sweden Jan. 20, 1960
4 Claims. (Cl. 128—215)



1. In a device for the sterile extraction of liquid from a container having a puncturable resealable seal and a hollow needle having a first end adapted to puncture said seal when moved from a first position disengaged from said seal to a second position wherein it punctures said seal, and a second end adapted to communicate with means for dispensing liquid extracted from said container, the combination with said needle and said container of means for guiding said needle along a fixed path between said first and said second positions and means for springedly locking said needle in each of said first and said second positions.

3,098,482
DISPOSABLE SYRINGE
James O'Sullivan, Adamston, N.J.
Filed Jan. 7, 1958, Ser. No. 707,583
1 Claim. (Cl. 128—220)

An empty sterilized completely sealed ready to use disposable syringe comprising a transparent syringe barrel

having a closed end provided with an annularly projecting finger grip forming flange and open at the opposite end, a piston operable in said barrel, an operating plunger connected with said piston and projecting from the open end of the barrel, said plunger being of plastic material and carrying graduations on that portion of the same within the barrel and visible through the transparent barrel, a tubular needle carried by said plunger, said needle extending from the piston through the plunger and projecting beyond the end of the plunger, the projecting portion of said plunger having a flange engageable with the



open end of the barrel to close the open end of the barrel and limit inward movement of the plunger in the barrel, a second flange on the projecting portion of the plunger spaced a distance from the first mentioned flange and the plunger between said flanges being of reduced diameter for admitting fingers for operating the syringe between said flanges, a cover over the projecting portion of the needle, said cover being readily removable to expose the needle and permit free operation of the syringe by said finger grip forming flanges on the barrel and the plunger and readily releasable sealing means removably securing said cover in said protective position over the needle.

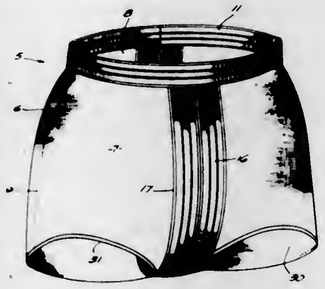
3,098,483
TWO-COMPARTMENT HYPODERMIC SYRINGE FOR SEPARATE STORING OF MORE COMPONENTS
Helmuth Nielsen, Herlev, Denmark, assignor to Lovens Kemiske Fabrik ved A. Kongsted, a Danish firm
Filed Dec. 29, 1961, Ser. No. 163,354
Claims priority, application Denmark Jan. 3, 1961
16 Claims. (Cl. 128—220)



1. Hypodermic syringe comprising two cylindric compartments placed in aligned coaxial relation to each other and separated by an immovable pierceable partition, and a piston inserted in each of said cylindric compartments so as to be tightly movable towards the immovable partition along the cylindric wall thereof, the piston inserted in one of the cylinders carrying a piercing needle extending into the space enclosed by the walls of the cylinder, the piston and the immovable partition and pointing towards the latter, and the one inserted in the other of said cylinders carrying a hypodermic needle the rear end of which is directed against the immovable partition and, the point of which is directed away from the immovable partition and the interior cavity of which is in connection with the space confined by the wall of the cylinder, the piston and the immovable partition.

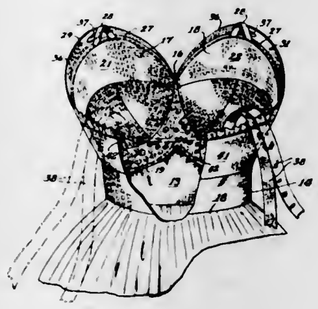
3,098,484
CATAMENIAL PANTS
Joy Margaret Younger, Sacramento, Calif., assignor to Mense, Incorporated, a corporation of California
Filed Jan. 3, 1961, Ser. No. 80,501
5 Claims. (Cl. 128—291)

1. Catamenial pants for retaining a sanitary napkin in position against a wearer's body, comprising a fabric main body portion, an elastic waist band extending around the upper margin of said body portion, and continuous elastic web inserted in said body portion and extending from the front of said waist band, through the crotch to



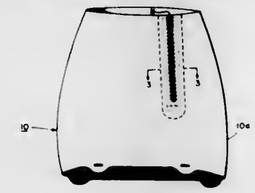
support said napkin and to the rear of said waist band, said web being attached on its opposite lateral margins to the adjacent margins of the fabric main body portion.

3,098,485
COMPOSITE GARMENT
Dixie Howell, McComb, Miss., assignor to Kellwood Company, Chicago, Ill., a corporation of Delaware
Filed May 2, 1962, Ser. No. 191,932
6 Claims. (Cl. 128—455)



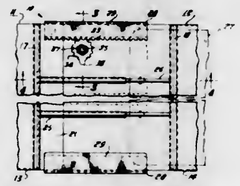
1. A composite garment comprising,
(*a*) a skirt portion,
(*b*) a waistband stitched to the upper edge of said skirt portion,
(*c*) a pair of breast receiving pockets,
(*d*) an elastic section interposed between said pockets and said waistband and stitched thereto along corresponding edges,
(*e*) said elastic section being stretchable in a direction circumferentially of the body of the wearer,
(*f*) an elastic back section stitched to the upper edge of said waistband and to the side edges of said breast pockets,
(*g*) said back section being stretchable in a direction circumferentially of the body of the wearer,
(*h*) an elastic tape longitudinally stretchable and secured coextensively with the upper edge of said back section,
(*i*) a pair of overlay sections each overlying a respective breast pocket and substantially concealing the same,
(*j*) an elastic loop attached to the upper edge of each of said breast pockets,
(*k*) each of said overlay sections having an aperture near an upper edge thereof,
(*l*) and a pair of tie straps secured to the upper edge of said back section with each strap passing through a corresponding loop and aperture for adjustably securing the garment on the body of the wearer.

3,098,486
DEPOSITED LATEX UNDERGARMENTS
William J. Dorsey, Dover, Del., assignor to International Latex Corporation, Dover, Del., a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,111
1 Claim. (Cl. 128—521)



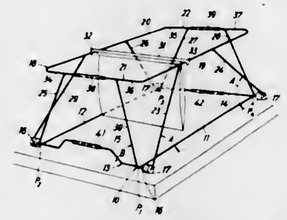
In a figure molding garment having a highly stretchable thin rubber wall, a slide fastener closure positioned in a slot in said wall, fabric binding tapes to which said slide fastener closure is attached, said tapes being sewed to the marginal portion of the rubber wall surrounding said slot rendering said marginal portion substantially unstretchable, the improvement comprising a relatively stretchable pliable knitted fabric embedded in said rubber wall during formation thereof and extending from the marginal portion of said wall where the binding tape is sewed to the rubber wall to beyond the boundaries of said tapes in the marginal portion to provide a zone of intermediate stretch in the garment between the substantially unstretchable closure region and the highly stretchable body portion of the garment and to reinforce the area where the tapes are attached to said wall, said embedded fabric being oriented to provide its maximum stretch in the direction of stress applied thereto.

3,098,487
BINDER
William M. Fenston, 936 Fairview, Shreveport, La.
Filed May 3, 1962, Ser. No. 192,110
4 Claims. (Cl. 129—13)



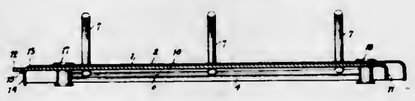
1. A loose leaf binder including front and rear covers, coacting post means extending transversely between the inner end portions of the covers, complementary back members extending inward transversely from the inner margins of the covers in overlapping relationship, means mounted on and extending transversely of one of the back members for slidably confining the other member and permitting transverse movement of said members relative to each other to vary the distance between said covers, the confining means including a gear rack, a pinion rotatably mounted on the slidably confined back member in meshing engagement with the gear rack for rotation upon relative transverse movement of said members, and means projecting from the periphery of the pinion for engagement with said gear rack to prevent rotation of said pinion and limit relative movement of said members.

3,098,488
FILE SUPPORT
Herbert Schnelle, Waldstrasse 12, Barmstedt, Holstein, Germany
Filed Mar. 31, 1958, Ser. No. 725,273
Claims priority, application Germany Aug. 27, 1957
5 Claims. (Cl. 129—16)



1. A file support comprising a substantially rectangular horizontal top frame including a pair of lateral longitudinal rail wire means and a pair of transverse front and rear wire means; a file holder extending in transverse direction and having end portions supported on said rail wire means for movement in longitudinal direction of the same; only one pair of longitudinal supports, each longitudinal support comprising a horizontal longitudinal base wire means and a pair of upright support wire means extending upwardly from the front and rear ends of said longitudinal base wire means and being located in a common longitudinal plane with the same, said planes of said longitudinal supports converging upwardly toward each other, said upright wire support means at said front ends and at said rear ends having upper ends respectively secured to said transverse front and rear wire means of said top frame; only one pair of transverse supports which are, respectively, located in the front and rear, each transverse support comprising a horizontal transverse base wire means and a pair of upright support wire means extending upwardly from the ends of said transverse base wire means and being located in a common plane with the same, said planes of said transverse supports converging upwardly toward each other, the upper ends of the last-mentioned upright support wire means located on opposite sides of said transverse supports being secured to the undersides of the corresponding lateral longitudinal rail wire means of said top frame, said transverse base wire means passing through said longitudinal supports and being longer than the transverse spacing between said longitudinal base wire means and being secured to the same, said transverse base wire means having end portions projecting outwardly from said longitudinal base wire means; and rollers turnably mounted on each outwardly projecting end portion of said transverse base wire means between each longitudinal support and an upright support wire means of the respective transverse support so that axial movement of said rollers is limited.

3,098,489
LOOSE LEAF BINDER CONSTRUCTION
Murray Vernon, New York, N.Y., assignor to S. E. & M. Vernon, Inc., New York, N.Y., a corporation of New York
Filed Mar. 23, 1961, Ser. No. 97,904
3 Claims. (Cl. 129—24)



1. In a ring binder, an elongated springy housing for attachment to the inside of the back of a binder, a pair of

plates disposed in side-by-side relation within the housing, ring segments having their inner ends connected to the plates, said ring segments being capable of pivotal movement by inclination of the plates to separate the ring segments, spaced rivets for attaching the housing to the back of a binder, a locking bar within the housing and positioned between the inner ends of the ring segments and the inside surface of the top of the housing, said bar being capable of longitudinal sliding movement relatively to the housing, the bar having slots in engagement with the rivets and limiting the longitudinal sliding movement of the bar, the bar having its opposite side edges provided with spaced notches, the notches being positioned to register with the inner ends of the ring segments to permit separating movement of the ring segments when the locking bar is so positioned relatively to the housing that a portion of the locking bar extends beyond one end of the housing, said end of the housing having an opening through which a part of the locking bar can extend, the locking bar being longitudinally slidable to an extent to completely house it within the housing to render it inaccessible and disalign its notches with the inner ends of the ring segments, the locking bar having an angular end portion movable through the opening and arranged to become disaligned with the opening after said end enters the housing so that it cannot be reached by the insertion of a tool or other object through said opening.

3,098,490
LOOSE LEAF RING BINDER

Frank Wance, Linden, N.J., assignor to S. E. & M. Vernon, Inc., New York, N.Y., a corporation of New York

Filed June 9, 1961, Ser. No. 116,201
1 Claim. (Cl. 129—24)

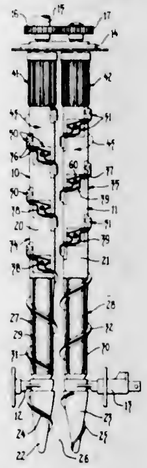


A ring binder having an elongated housing provided with opposite flanged edge, a pair of ring-carrying plates disposed within the housing and confined between the flanges thereof, the plates carrying ring halves which are brought to closed position by downward inclination of the plates from their outer edges and are brought to a separated position by upward inclination of the plates, each of the plates having a notch in one end, the notches being separated by parts of the plates, a ring opening and closing lever entering the housing at one end and being pivotally movable between a raised position to close said ring halves and a lowered position to open said ring halves, said lever having an upper body portion and having at its lower end a closed loop with the legs thereof joining the said body portion, the upper portion of said loop being bent in a direction transversely of the plane of said lever, and the lower closed portion of said loop extending downwardly from said upper portion generally in the direction of the plane of said lever, the legs of said loop extending through said notches and the closed lower end of said loop being located below the said plates, the body portion of said lever having a lip projecting between the legs of said loop for operative engagement against the top faces of the plates at a point between the notches, and said lever further having upwardly directed stop shoulder means engageable with said housing when said lever is in raised position.

3,098,491
CORN SNAPPING ROLLS

Melville J. Mitchell, Birmingham, Mich., assignor to Massey-Ferguson Inc., Detroit, Mich., a corporation of Maryland

Filed Oct. 4, 1960, Ser. No. 60,474
4 Claims. (Cl. 130—5)

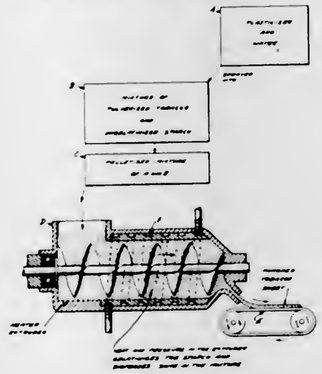


3. A snapping roll construction for corn harvesting machines comprising, in combination, an elongated body of generally cylindrical configuration, a portion of said body having a series of recesses being successively staggered so as to lie along a helical path about said body but with each recess slightly overlapping the adjacent recesses, and a plurality of similarly formed inserts with one insert being releasably locked in each of said recesses, said inserts having an outer configuration which rounds out said body and defines a continuous, generally helical projection running about said body and above said overlapping portions of the recesses, said inserts and said body having radially extending, interengaging surfaces for preventing peripheral shifting of said inserts.

3,098,492
METHOD OF MAKING TOBACCO PRODUCT

Otto B. Wurzburg, Whitehouse Station, N.J., and Walter G. Kunze and Raymond B. Evans, Catonsville, Md., assignors to National Starch and Chemical Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 25, 1960, Ser. No. 71,384
5 Claims. (Cl. 131—140)



1. The method of making a tobacco product comprising mixing a pulverized tobacco, an ungelatinized starch, a plasticizer and water, and forcing said mixture through an extruder with the application of both heat and pressure within said extruder sufficient to simultaneously effect the gelatinization of the starch and its dispersion in the mixture and the ejection of the mixture from said extruder in product form, the amount of water within said mixture being from 30% to 80% by weight of the tobacco.

3,098,493
PIPE FOR SMOKING TOBACCO

Frank J. Garrison, 1031 Riverview Ave., Dayton, Ohio

Filed Oct. 16, 1961, Ser. No. 145,201
2 Claims. (Cl. 131—203)

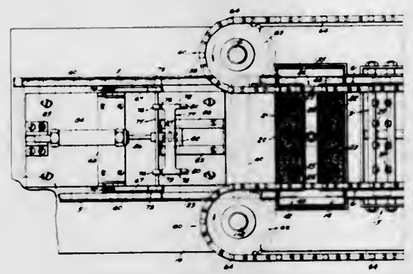


1. A pipe for smoking tobacco, said pipe consisting of a stem having a bit portion, there being a recess in the stem adjacent its end opposite the bit portion, a bowl removably secured in said recess and having a bottom wall forming a top closure member for said recess, this recess providing a moisture receiving chamber, a pair of diverging ducts extending lengthwise of the stem and having a lower conduit providing an unrestricted passage constituting the sole communication between the end of the bit portion and the moisture receiving chamber, and having an upper downwardly inclined conduit connecting the interior of the bowl with the duct at a point substantially at the midpoint of said pipe so as to be remote from the said chamber, and a moisture absorbing pad in said chamber.

3,098,494
APPARATUS FOR TREATING ARTICLES

Robert M. Drexinger, Bethlehem, and Samuel Kuba, Allentown, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed May 24, 1962, Ser. No. 197,409
6 Claims. (Cl. 134—70)

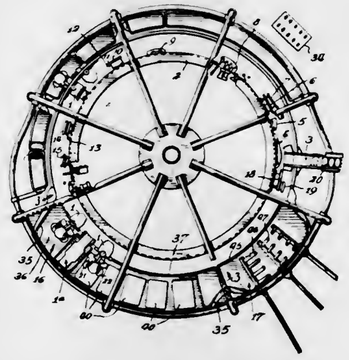


1. An apparatus for treating portions of groups of articles carried by like elongated racks with the portions to be treated initially extending downwardly from the racks, comprising:
a main support,
open top tanks of treating liquids mounted on the support at spaced treating stations,
spaced parallel tracks for supporting ends of the racks extending through the apparatus from entrance ends to exit ends thereof, positioned above the main support and supported thereby,
endless conveyors supported above the tracks,
push pins extending downwardly from the conveyors to engage opposing ends of the racks and move the racks into and out of the treating stations,
drive shafts are operatively connected to the conveyors,
power means operable to cause the drive shafts to move the conveyors like distances to advance the racks successively to the stations,
movable sections for the tracks disposed at certain of the stations,
holders for the track sections, and
means operable to move the holders to cause submersion of the portions of the articles into the treating liquid of certain of the tanks comprising:
movable supports for the holders, and
means actuable to secure the holders at variable positions on said supports to align the movable track sections with the tracks.

3,098,495
CLEANING SYSTEM FOR EGG BREAKING AND SEPARATING DEVICES

Robert G. Bush, Green Bay, Wis., assignor to Leonard Shelton, Omaha, Nebr.

Filed Mar. 6, 1962, Ser. No. 177,895
3 Claims. (Cl. 134—77)



1. In an egg breaking and separating machine having egg breaking and separating heads wtih an egg contacting and egg product handling element thereon, a cleaning system to remove egg parts and egg products from the egg contacting and egg product handling elements, said cleaning system including a tank to contain a cleaning bath and a well in the bottom of the tank adjacent to one end thereof, a plurality of closely adjacently disposed ultrasonic energy generators in said well immediately adjacent to a path of movement of said egg contacting and egg product handling elements when said elements travel through said bath, and means to energize said generators to an energy level sufficient to create a condition in the bath in the tank whereby egg parts and egg products are removed from said elements.

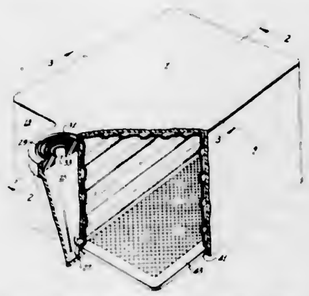
3,098,496
DENTURE CLEANER

Benjamin K. Milbourne, 319 Winchester Road, San Jose, Calif.

Filed Feb. 6, 1961, Ser. No. 87,450
4 Claims. (Cl. 134—166)

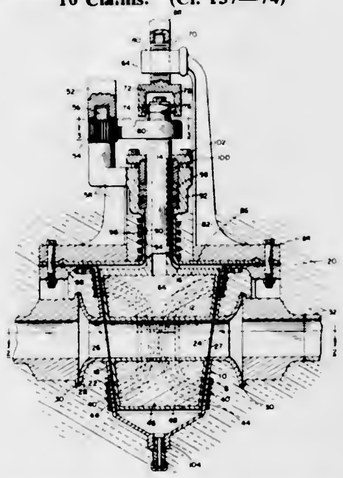
1. A denture cleaner and soaker comprising a double-walled, box-like member open over substantially its entire bottom and having a removable perforated cover for the bottom, the outer wall of said double walled structure being closed except for an opening substantially at the bottom thereof, a series of passages formed between the

inner and outer walls of the box and having a plurality of spray passages leading to the interior of the box from the inner wall, means for introducing water under pressure in



the space between said inner and outer walls, said box being usable as a spray device when in a first upright position and usable as a soaking device when in a second inverted position.

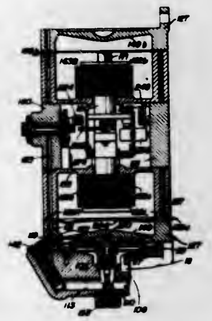
3,098,497
FREEZE SEAL LIQUID METAL VALVE
Lyle E. Glasgow, Woodland Hills, and Eldon O. Dryer, Canoga Park, Calif., assignors to North American Aviation, Inc.
Filed Apr. 21, 1961, Ser. No. 104,743
10 Claims. (Cl. 137—74)



1. A valve comprising a housing having inlet and outlet ports, a shafted valve plug in said housing, said plug and said housing defining a channel therebetween connecting said inlet and outlet ports, said plug being adapted to control fluid flow through said valve between said ports and to direct fluid into said channel, and means for freezing said fluid in said channel to form a leak-tight frozen plug and shaft seal.

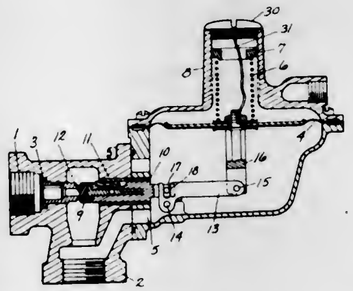
3,098,498
PNEUMATIC CONTROLLERS
Nathaniel Brewer, Newtown, Edmund D. Haigler, Hatboro, and Edward D. Woodring, Plumsteadville, Pa., assignors to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed June 8, 1953, Ser. No. 361,128
26 Claims. (Cl. 137—86)

1. A sectional pneumatic controller including a stack of sections, operatively juxtaposed and detachably secured to each other in such stacks, the said sections being reversible within the stack so as to convert the controller from left-hand controller to the right-hand controller or vice versa, one of said sections being an input-and-detector section and at least one of said sections being a feedback section which is also reversible through a 180°



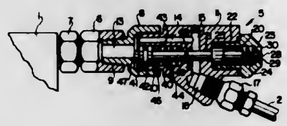
inversion, within the stack, to permit it to be placed above or below said input-and-detector section to reverse the direction of its effect on said input-and-detector section, and at least one of said sections being a partition section reversible through a 180° inversion within in the stack to permit it to be placed either above or below the input-and-detector section in the stack.

3,098,499
PRESSURE REGULATOR
Robert Schwerter, Anaheim, Calif., assignor to American Meter Company, Incorporated, Philadelphia, Pa., a corporation of Delaware
Filed Mar. 7, 1961, Ser. No. 93,998
4 Claims. (Cl. 137—463)



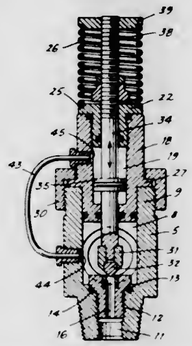
1. In a gas pressure regulator having a housing with an inlet, an inlet orifice connected to the inlet and having a port discharging to the housing, an outlet, a chamber communicating with the outlet and closed by a diaphragm, and a tubular section housing a spring loading the side of the diaphragm remote from the outlet, a plunger mounted in the housing outside the inlet orifice for movement toward and away from said port, a linkage connecting the diaphragm and plunger for moving the plunger toward and away from said port in accordance with the outlet pressure, a valve member mounted on the plunger and movable from a retracted position in which the valve member is positioned to regulate the outlet pressure and an extended position in which the valve member closes said port, means urging the valve member to the extended position, a latch holding the valve member in the retracted position, means for tripping the latch when the plunger moves away from said port to a position corresponding to excessively low pressure, and a pull member in said tubular section for lifting the diaphragm against the force of the diaphragm loading spring to reset the latch.

3,098,500
BROKEN DISCHARGE LINE INDICATOR
Thomas J. Gruber, Chagrin Falls, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 11, 1961, Ser. No. 137,414
20 Claims. (Cl. 137—456)



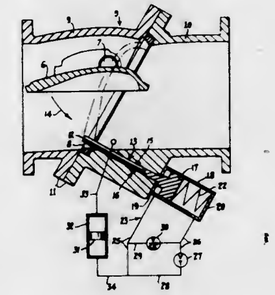
4. A broken line indicator for a lubricating system and the like comprising a pilot piston and an indicator piston in tandem, means to move said indicator piston in response to movement of said pilot piston to expose an end of said indicator piston to line pressure, and means to return said pilot piston to its original position.

3,098,501
REGULATING VALVE
Hector B. McLeod, 3285 Highland Ave., Beaumont, Tex.
Filed Oct. 5, 1961, Ser. No. 143,087
1 Claim. (Cl. 137—505.13)



A pressure regulating valve, comprising, a body having axially aligned opposed openings therein, there being a substantially unrestricted communication therebetween, a transverse bore extending through the body intermediate the said openings, an output fitting disposed normally with the openings and aligned with the bore, a valve seat secured in the output fitting inwardly of the bore, a cylindrical body having a concentric bore secured in one end of the transverse bore, said concentric bore communicating with the transverse bore through a smaller concentric bore, a valve cooperating with the valve seat and having a stem extending through the smaller concentric bore and outwardly beyond the open end of the concentric bore to terminate with a threaded end portion, a piston flange mounted about the stem and cooperating with the sides of the concentric bore, spring means adjustably urging said valve away from the valve seat, and a pressure pipe communicating between the transverse bore and the concentric bore such that liquid pressure introduced into the transverse bore will be exerted against a face of the piston flange within the concentric bore such that an increase in pressure effects movement of the valve in a closing direction and thereby control of the flow outwardly between said valve and said valve seat, said aligned openings adapted to pass liquid through said transverse bore in a substantially unrestricted manner, and an adjustable threaded stop member threadably mounted on a protruding portion of the valve stem, a bushing closing the open end of said concentric bore, said stop member selectively abutting with the exterior of said bushing, said spring means being disposed over the protruding portion of the valve stem, and an adjustable clamp threaded on the valve stem to retain said spring means against the exterior of said bushing.

3,098,502
VALVE AND DASH-POT ASSEMBLY
Vagn Devé, L'Abord a Plouffe, Quebec, Canada, assignor to Dominion Engineering Works Limited, Montreal, Quebec, Canada
Filed Apr. 21, 1961, Ser. No. 104,723
19 Claims. (Cl. 137—514)

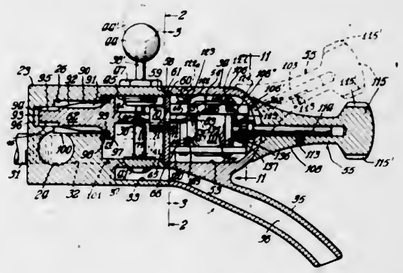


1. A valve and dash-pot assembly comprising a valve housing having a valve seat therein, a valve member movably mounted in said valve housing for movement in one direction to a valve-closing position against said seat or in the opposite direction to a valve-opening position away from said seat, a dash-pot system including a closed hydraulic circuit filled with damping fluid and an operative member positioned to be engaged and moved against the resistance of said damping fluid by said valve member during the final part of the movement of the valve member in at least one of said directions, a path of possible leakage between said valve housing and said dash-pot system, sealing means arranged in said path to prevent commingling of the "valved" fluid and the damping fluid by leakage past said operative member, and means for maintaining the damping fluid in the hydraulic circuit of the dash-pot system under a pressure as close as possible to the pressure of the "valved" fluid.

3,098,503
MIXING FAUCET
Lukas Hunsinger, Chicago, Ill.
Filed Mar. 15, 1960, Ser. No. 15,080
19 Claims. (Cl. 137—597)

1. A mixing valve comprising a main body portion formed with a mixing chamber operatively connected to passageways, said passageways being adapted for connection to respectively hot and cold water lines, a discharge spout connected to the mixing chamber, valve means operatively associated with said mixing chamber for controlling the aforesaid passageways for hot and cold water discharge to the mixing chamber, a spout housing operatively associated with said main body portion, said spout housing formed with a chamber, spring-biased spherical control means operatively mounted within said chamber, said valve means including disc valve means for closing

each of said first-mentioned passageways, sliding pin means operatively connecting said disc valve means to said spring-biased spherical control means, a closure plate for said mixing chamber, said sliding pin means operatively mounted on said closure plate, said sliding pin means at one end operatively engaging said disc valve means and said sliding means at the opposite end operatively engaging said spring-biased spherical control means, operator-operated means angularly and rotatably connected to said spring-biased spherical control means for operating said disc valve means for closing each of said first-mentioned passageways and opening one or the other of said first-mentioned passageways and for intermediate opening of said passageways for blending the mixture of hot and cold fluids within said mixing chamber, said operator-operated means operatively connected to said spring-biased spherical control means for actuating said disc valve means within a predetermined vertical angular movement from full closed at one position of



said operator-operated means, full open at another position of said operator-operated means, and upon rotation of said operator-operated means in one direction to full open position of said disc valve means for the cold water line and upon rotation of the operator-operated means in the opposite direction to full open position of the disc valve means for said hot water line and full closed position of said disc valve means for said cold water line, and intermediate positions of said operator-operated means for blending the fluid from said hot and cold water lines for the maximum discharge of said blended fluids, and upon intermediate movement of said operator-operated means within the angular movement from closed to open position, the quantity of fluid discharged from the mixing faucet is varied between maximum and no-flow and also upon rotation of the operator-operated means in either direction, the temperature of the blended fluid is varied for the respective position of the quantity of fluid discharged from the mixing faucet.

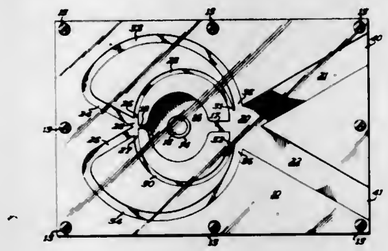
3,098,504

TWO-STAGE FLUID OSCILLATOR

Frederick D. Joesting, Park Ridge, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 26, 1962, Ser. No. 182,323
5 Claims. (Cl. 137—624.14)

1. In a two-stage fluid amplifier type oscillator wherein all the fluid flow paths of both stages are disposed in a generally concentric single layer, including: a fluid inlet supplied with a fluid under pressure; said inlet having two diametrically opposed fluid flow passages each of which is directed into separate outlet means each having two outlet channels; a pair of control ports directed into each flow passage and said ports disposed on opposite sides of said flow passages; a first control port of each pair of control ports being connected together by a flow path and a second control port of each pair of control ports also being connected together by a flow path thereby providing feedback control paths between said fluid flow passages; a third pair of control ports directed into one of said flow passages and each of said third pair being connected to a separate outlet channel of a first of said outlet means which is opposite the flow passage into



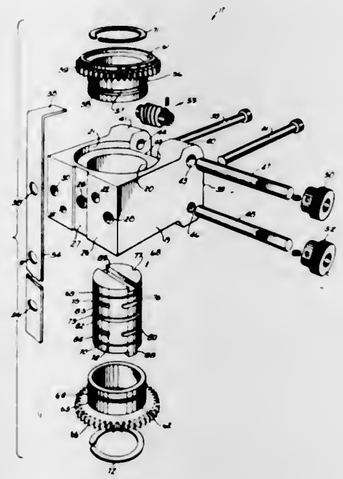
which the third pair of ports is directed to receive the entire fluid flow in said first outlet means; and said second outlet means supplying a fluid outlet for said oscillator wherein said fluid shifts periodically between said two outlet channels dependent upon the fluid flow in said flow passages and through control ports thereby providing a free running fluid oscillator.

3,098,505

FLUID PRESSURE TIMER MECHANISM

Anthony Zappia, 3960 Southeastern Ave., Indianapolis, Ind.

Filed Sept. 14, 1961, Ser. No. 138,050
13 Claims. (Cl. 137—624.15)



1. In a device of the class described, a housing formed to provide a straight-through, cylindrical bore and further formed to provide a first passage, a second passage and a third passage disposed at spaced levels along the axis of said bore and opening from said bore to the exterior of said housing, a first sleeve mounted in said bore for turning movement relative to said housing about the axis of said bore and extending from one end of said bore past

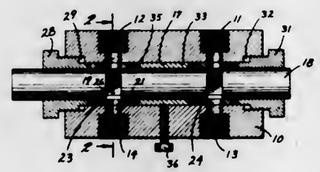
the level of said first passage but terminating short of the level of said third passage, said first sleeve having a peripheral groove in its external surface registering with said first passage and having a port opening from said groove to the interior of said sleeve, a second sleeve mounted in said bore for turning movement relative to said housing and to said first sleeve about the axis of said bore and extending from the other end of said bore past the level of said second passage but terminating short of the level of said third passage, said second sleeve having a peripheral groove in its external surface registering with said second passage and having a port opening from said groove to the interior of said second sleeve, and a plug journalled in both of said sleeves for rotation relative thereto and to said housing upon the axis of said bore, said plug being formed with a continuous peripheral groove at the level of said third passage, said plug further being formed with a first minor peripheral groove and with a first major peripheral groove angularly separated from said first minor groove, said major and minor grooves being disposed at the level of said first passage, said plug further being formed with a second minor peripheral groove and with a second major peripheral groove angularly separated from said second minor groove, said second major and minor grooves being disposed at the level of said second passage, one of said first grooves and one of said second grooves being continuously open to the atmosphere, said plug further being formed with duct means connecting the other of said first grooves and the other of said second grooves with said continuous peripheral groove, and both ends of said plug being accessible.

3,098,506

VALVE PACKING ASSEMBLY

George F. Spragens, Lyndon, Ky., assignor to The Martin Sweets Company, Louisville, Ky., a Kentucky proprietorship

Filed Oct. 2, 1958, Ser. No. 764,850
3 Claims. (Cl. 137—625.19)



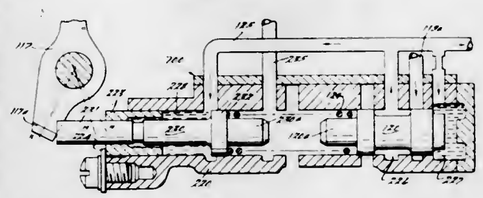
1. A sealed valve assembly comprising a valve housing, two sets of valve ports formed in the housing and spaced apart from each other, a movable actuator accommodated in the housing and having two spaced-apart valve passages formed therein which cooperate with the said ports, a pair of spaced-apart sealing sleeves surrounding each of said valve passages formed in the actuator and providing a low coefficient of friction, long life bearing for the actuator, each of said sealing sleeves being a relatively tough, slippery, semi-rigid, axially compressible, deformable, but nevertheless relatively resilient element, having passages formed therein in alignment with said ports, a stationary tube intermediate the spaced-apart sealing sleeves in edge-to-edge coaxial relationship with the sealing sleeves, said intermediate stationary tube surrounding the actuator but in out-of-contact relationship therewith, a pair of compression elements threadably coupled with the housing and operatively connected with the outer edges of the sealing sleeves so as to apply axial compression on the sleeves, thereby increasing the effectiveness of the sealing action between the surfaces of the valve actuator and the housing to be sealed, and means connecting the sealing sleeves and the intermediate stationary tube for preventing rotation of the sealing sleeves relative to the valve housing.

3,098,507

HYDRODYNAMIC TRANSMISSION CONTROL

Leonard E. Frosli, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Original application Feb. 18, 1957, Ser. No. 640,804, now Patent No. 3,000,230, dated Sept. 19, 1961. Divided and this application Mar. 27, 1961, Ser. No. 98,486
3 Claims. (Cl. 137—628)



1. In a transmission control system, a combination kickdown and throttle pressure control valve comprising a casing having an axially extending valve receiving bore and a plurality of ports piercing the casing and connecting to axially spaced portions of said bore, a kickdown valve and a throttle pressure control valve mounted in spaced series arrangement within said valve bore and shiftable axially thereof independently and conjointly relative to each other, shift of said throttle valve axially of said bore across a line pressure fluid inlet between the ends of said bore providing a metered throttle pressure supply to a throttle pressure chamber intermediate the ends of said valve bore, a compressible resilient means arranged between and interconnecting said kickdown and throttle pressure control valves, a sleeve piston mounted in one end of said bore and arranged concentrically about said kickdown valve for axial movement both relative to the kickdown valve and conjointly therewith, and a valve operator arranged to engage and shift said kickdown valve independently of said piston for a predetermined movement after which further movement of the kickdown valve by said valve operator causes conjoint movement of said kickdown valve and said piston, the portion of said bore between said sleeve piston and said kickdown valve being connected by conduit means with a reaction chamber at the end of said bore adjacent said throttle valve and with the throttle pressure chamber of said valve bore to apply throttle pressure thereto, the throttle pressure applied to said piston opposing movement of the throttle valve towards said piston and cooperating with the throttle pressure in said reaction chamber to permit normal operation of said throttle valve with minimum effort due to the opposed forces applied thereto.

3,098,508

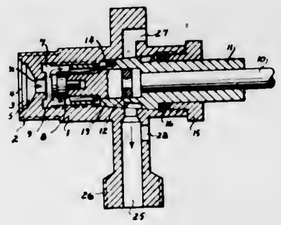
MIXING VALVE

Claus-Holmer Gerdes, 18a–b Carl-Peters-Strasse, Luneburg, Germany

Filed May 5, 1960, Ser. No. 27,178
Claims priority, application Germany May 8, 1959
7 Claims. (Cl. 137—637.4)

1. A fitting for the infinitely variable mixing of hot and cold water comprising, in combination, a valve housing; an entrance chamber for cold water from a cold water supply conduit; an internal plate valve consisting

of a valve body provided with a packing plate and arranged for opening and closing the entrance chamber and controlling the entire quantity of water passing through the fitting; a spindle connected to the internal plate valve for actuating the same; an external distributing valve with a hollow valve cone which is rigidly secured to a hollow spindle and has in its outer surface a spiral-shaped recess, extending throughout the entire length thereof; a discharge outlet disposed substantially below said hollow cone, facilitating a straight downward



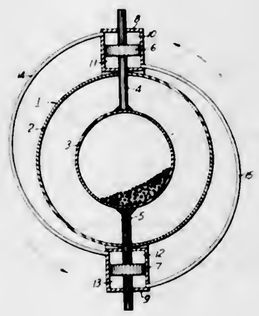
flow of the water; an opening in said housing substantially above said hollow cone, adapted to lead and facilitate the flow of the water to a heating element; said discharge outlet having a side inlet through which heated water enters said outlet; said recess serving for the preselection of the path of the cold water from said entrance chamber to said discharge outlet and to the opening; both said valves being independently operable by means of their spindles, the spindle of the internal valve plate being located in the hollow spindle of the external distributing valve.

3,098,509

RADIAL EXPANSION COMPENSATING SUPPORT FOR THERMALLY EXPANSIBLE BODY

Larry O. Bagnall, Waukesha, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Sept. 11, 1962, Ser. No. 222,787
6 Claims. (Cl. 138—114)



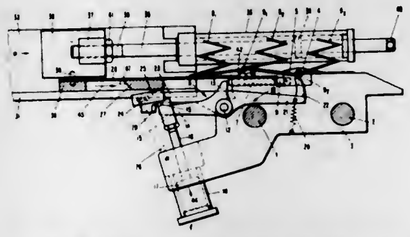
3. In an assembly having an inner tube arranged coaxially within an outer tube, an expansion compensating inner tube support assembly for maintaining the inner tube coaxial with the outer tube regardless of expansion and contraction, said support comprising first and second cylinders secured to diametrically opposite locations on the outer tube, a piston in each of said cylinders dividing each cylinder into a pair of spaced chambers, a rod connected to each piston with at least a first end of each such rod projecting outwardly from its cylinder and radially inward of the outer tube for engaging and supporting the inner tube therebetween, each of said chambers being filled with a hydraulic relatively incompressible fluid, the chamber in said first cylinder in close proximity to the said first end of the rod projecting therefrom being hydraulically connected to the remote chamber in said second cylinder, and the chamber in said second cylinder in close proximity to said first end of the rod projecting therefrom being hydraulically connected to the remote chamber in said first cylinder.

3,098,510

APPARATUS FOR MANUFACTURING INTERCONNECTED SPRINGS

Walter Spühl, 9 Hompelistrasse, Sankt Gallen, Switzerland

Filed June 12, 1961, Ser. No. 116,318
Claims priority, application Germany July 12, 1960
8 Claims. (Cl. 140—92.8)



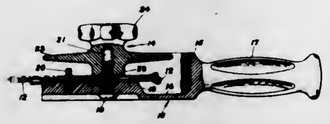
1. In apparatus for manufacturing spring interiors, in which apparatus two series of coil springs are held side by side whilst they are interconnected; the combination comprising a series of supports, a series of clamping means mounted respectively on said supports and adapted to hold an end winding of each of the springs whilst the end windings of said springs are interconnected, means for opening and closing said clamping means, an expeller element cooperating with each of said clamping means and adapted by an expel movement to expel the interconnected springs from said clamping means when open, a reciprocable table serving to receive the interconnected springs, a series of elements secured to said table extending parallel to said series of clamping means and serving to engage the spring interconnections, means for imparting a reciprocating movement to said table, said reciprocating movement comprising an advance movement with said elements in positive driving engagement with said spring interconnections to advance the expelled springs and a return movement with said elements out of positive engagement with the spring interconnections, a lever pivotably mounted on each of said supports and having two arms, one of said arms comprising said expeller element, a cam pivotally mounted on the other of said arms, first spring bias means biassing said lever against said expel movement, second spring bias means weaker than said first spring bias means biassing said cam to an erect position, and a control bar on said table extending parallel to said series of clamping means and adapted to co-operate with said levers to actuate said expellers in synchronism with movement of said table, said cam, during a part of the return movement of the table top, being held in a non-erect position by the control bar against said second spring bias means and said cam, during a part of the advance movement of the table top, exerting in its erect position a force on the lever sufficient to pivot the lever against said first spring bias means to effect said expel movement.

3,098,511

AUXILIARY HANDLE AND CHAIN GUARD FOR POWER CHAIN SAWS

Paul C. Consoletti, Milford, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine

Filed Oct. 10, 1960, Ser. No. 61,578
1 Claim. (Cl. 143—32)



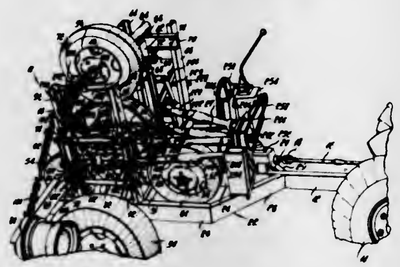
In a chain saw, a guide bar having a rounded outer end, a chain encompassing the periphery of said guide bar including said rounded outer end, the improvement which comprises a combination chain guard and handle including a first member having a base portion with an inwardly directed boss flushingly engaged with one face of said guide bar, an integral flange extending around a portion of the periphery of said base portion, an outwardly projecting handle integral with said flange, a locating pin and a threaded stud both fixed to said boss and extending inwardly therefrom and projecting through said guide bar, and a second member comprising a centrally threaded combination hand nut and guard disc receivable on said threaded stud to clamp said guide bar between said boss and combination hand nut and disc, the latter extending over an area substantially coextensive with the base portion of said first member.

3,098,512

DEBARKING MACHINE

Carl W. Kendrick, Box 182, Broken Bow, Okla.

Filed Sept. 4, 1959, Ser. No. 838,210
11 Claims. (Cl. 144—208)



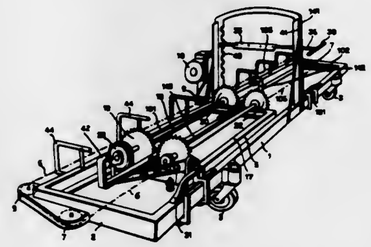
1. A post debarker comprising: a frame structure; at least three wheels journalled on said frame structure disposed with their axes in spaced apart parallel relationship arranged substantially equilaterally with the wheels in a co-planar relationship; a bark peeling blade assembly comprising a channel rimmed drum rotatably supported and axially positioned solely by engagement of its rim with each of said plurality of wheels, a plurality of peeling blades pivotally mounted on the said drum and having centrifugally responsive means engaging each of said blades providing a centrifugal biasing force upon rotation of said drum tending to force said blades toward the center of said drum; means comprising portions of said wheels and said drum rim providing resilience in the axial and radial positioning of said drum; means including at least one of said wheels for rotating said drum; and means on said frame structure for guiding and driving a log through the center of said drum.

3,098,513

LOG DEBARKING MACHINE

Nello Giugni, Bruno Giugni, and Rino Giugni, all of Via Pianta, Voltana, Ravenna, Italy

Filed Apr. 28, 1961, Ser. No. 106,335
Claims priority, application Italy Feb. 14, 1961
5 Claims. (Cl. 144—208)



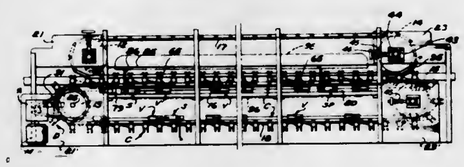
1. A log de-barking machine comprising a frame, an elongated log carriage supported for horizontal longitudinal movement on said frame, means for effecting movement of said log carriage alternately in opposite directions, stationary blade means extending transversely of the log carriage and spaced above the log carriage for engaging the upper surface portion of a log supported thereby, wheels mounted in pairs spaced lengthwise of the log carriage, the wheels of each pair being transversely spaced to receive therebetween and support one end of a log, slide members extending transversely of said log carriage and longitudinally slidably supported thereby, locking means for securing the said members in longitudinally adjusted position on the log carriage, means mounting the wheels of each pair of wheels on one of said slide members in adjustable lengthwise spaced relation with respect thereto, locking means for securing the said wheel mounting means in lengthwise adjusted position on said slide member, and means for effecting simultaneous rotation of at least one wheel of each pair of wheels.

3,098,514

CONTINUOUS WOOD LAMINATING PRESS

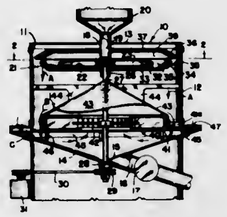
John L. Rados, 2209 Dalodies Drive, San Pedro, Calif., and Theodore Roosevelt Drake, 1780 Crestview, Seal Beach, Calif.

Filed Sept. 20, 1961, Ser. No. 139,501
20 Claims. (Cl. 144—281)



1. A wood laminating press of the character referred to including, an elongate, endless chain of U-shaped clamping units each having a wood supporting beam, normally upwardly projecting yokes at each end of the beam and a hydraulic ram carried by one yoke and opposing the other yoke and adapted to exert pressure on wood supported on the beam, means for supporting and driving said chain and an elongate endless chain of elongate tie units, each unit including a tie bar to engage the wood supported by the clamping units and to engage and extend between the yokes of the clamping units.

3,098,515
SEED HULLING AND SEPARATING MACHINE
Arthur R. Forsberg, Thief River Falls, Minn.
Filed Jan. 23, 1961, Ser. No. 84,074
2 Claims. (Cl. 146—253)



1. Apparatus for removing the seed kernels from their hulls and separating the kernels and hulls, comprising an upright housing having a sidewall and a top wall with a seed inlet therein and an inclined bottom wall, a kernel outlet at the lowest portion of said bottom wall and including an air lock preventing inward movement of air and permitting outward movement of kernels, a rotor on a vertical axis beneath said seed inlet, said rotor having centrally seed-receiving means and having substantially radial seed guides directing the seeds radially therefrom as the rotor is revolved at high speed, a first annular ring having an inner substantially cone-shaped surface obliquely confronting the outer ends of the guides to engage and deflect the radially impelled seeds, said cone-shaped surface of said annular ring also obliquely facing a first endwise direction and being disposed inwardly from said housing sidewall, a second ring having an inner substantially cone-shaped surface disposed outwardly of said first annular ring and obliquely facing a second endwise direction and obliquely facing the cone-shaped surface of said first annular ring to be engaged by the seeds and kernels deflected from the first annular ring, said rings causing the hulls to be slightly retarded and to permit the kernels to break through and separate from the hulls, means revolving the rotor at high speeds, a fan in the housing below said rotor and having a casing spaced inwardly from said sidewall and having an air intake opening facing downwardly in spaced and confronting relation with said bottom wall and said fan also having a discharge extending to the exterior of the housing, said housing having air inlet openings in said sidewall below said fan and above said bottom whereby the air moves through the falling hulls and kernels and sweeps the hulls into the fan and to the discharge.

3,098,516
TIRE TRACTION ARRANGEMENT
Tomislav P. Vasiljevic, 607 S. Glen St., Anchorage, Alaska
Filed Feb. 19, 1962, Ser. No. 174,007
8 Claims. (Cl. 152—210)



1. In combination with a pneumatic tire having an outer circumferential surface and sidewalls extending inwardly therefrom, a traction-improving device for said tire comprising

an annular member having an outer wall circumscribing said outer circumferential surface of said tire,

said annular member having sidewall portions extending inwardly of said outer wall,

a cable annularly arranged in each of said sidewall portions of said annular member,

said outer wall having a plurality of openings therethrough,

a sleeve member in each of said openings,

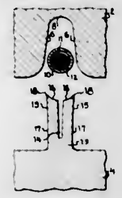
an elongated element in each of said sleeves and projecting outwardly beyond said outer wall for gripping media traversed by said annular member,

a liner interposed between said outer circumferential surface of said tire and said outer wall of said tire,

said liner including resilient pad means adjacent the inner end of each of said elongated members,

and filamentous means in said outer wall interconnecting and retaining said sleeves.

3,098,517
CONNECTOR CRIMPING DIE SET
Dale R. Zell, Harrisburg, and John A. Zimmerman, Jr., Hershey, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed Mar. 9, 1960, Ser. No. 13,778
6 Claims. (Cl. 153—1)

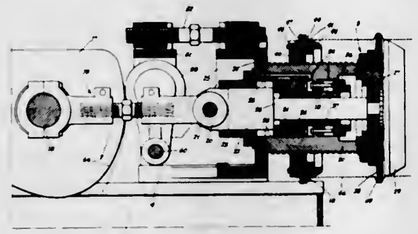


1. A crimping die set for crimping electrical terminals onto the ends of wires comprising, a crimping die and a crimping anvil, said die having a recess with opposed convergent surfaces for reception of an uncrimped terminal, the depth of said recess being substantially greater than the diameter of the uncrimped terminal, said anvil being adapted to enter said die recess to crimp said terminal by a confined crimp, said anvil having a relatively deep slot extending thereacross parallel to the axis thereof, said slot dividing said anvil into two fingers, said fingers being movable by flexure with respect to each other and into engagement with said convergent surfaces during crimping whereby said terminal is substantially completely circumferentially confined against radial extrusion.

3,098,518
FLANGING AND SWEDGING MACHINE FOR DRUM BODIES
Joseph P. Calcaterra, Stockton, Calif., assignor to Carando Machine Works, Stockton, Calif., a partnership
Filed Aug. 9, 1961, Ser. No. 130,425
9 Claims. (Cl. 153—79)

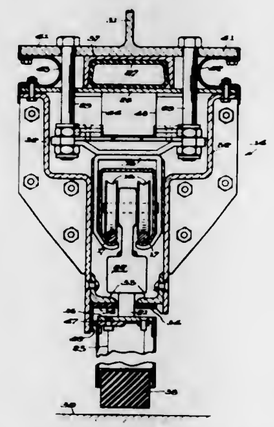
1. In a swedging machine for sheet metal drums, a mounting bed, a longitudinally reciprocating initially retracted slide on the bed, a normally contracted expansible die head mounted on the slide for advance into and retraction from one end of a drum by slide movement, a mechanism to advance the slide along the bed into the drum to a predetermined position and to then cause expansion of the die head to form a circumferential rib in the drum intermediate its ends, a drum-end engaging ring on the slide back from the die head arranged to form a radially outward projection on the drum end upon the final advance of the slide, and means mounting the

ring on the slide for longitudinal adjustment thereon; the slide including a cylindrical threaded barrel concentric with the die head and on the outer end of which the latter is mounted, and said ring mounting means comprising



another ring threaded on the barrel for movement therealong upon rotation of said other ring; the first named ring being reversibly secured on said other ring and projecting radially outward therefrom.

3,098,519
ACOUSTICALLY SEALED TRACK SYSTEM FOR MOVABLE PARTITIONS
Charles R. Myers, Glenarm, and Frank K. Hedler, Baltimore, Md., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,595
10 Claims. (Cl. 160—40)



1. Apparatus for acoustically sealing a movable partition comprising in combination a plurality of hinge-connected soundproof panels, an overhead support, substantially horizontal elongated track means depending from said overhead support in fixed position relative thereto. carriage means mounted on said track means, suspension means connecting said carriage means with the alternate panels of said plurality of panels whereby said alternate panels depend from said carriage means, the balance of said plurality of panels being supported by said alternate panels by means of hinge connections thereto, said suspension means including biasing means arranged within said alternate panels to urge said plurality of panels upwardly, said carriage means together with said plurality of panels being movable along said track, a strip of resilient material attached to the length of the under-edge of each panel of said plurality of panels, upper sealing means connected to said overhead support and substantially enclosing said track means throughout the length thereof being movable vertically relative thereto and means located between said upper sealing means and said overhead support for automatically applying positive downward-acting force to said upper sealing means along the length thereof for urging said upper sealing means into sealing engagement with the tops of said plurality of panels and moving said plurality of panels downward to force said strips of material into sealing engagement with the surface below said plurality of panels whereby sound is prevented from flanking said plurality of panels both at the bottom and at the top thereof.

3,098,520
DRAPERY APPARATUS
Joseph C. Greenstadt, Los Angeles, and David F. Ziers, Monterey Park, Calif., assignors to Manufacturing Specialties Co., Inc., Los Angeles, Calif., a corporation of California
Filed Mar. 27, 1961, Ser. No. 98,590
13 Claims. (Cl. 160—346)

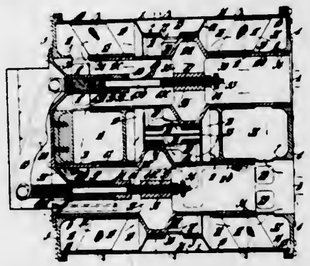


11. A track for supporting a carrier attachable to a drapery and the like and movable along the track by a draw cord, comprising a central web, side flanges depending from said web, opposed lower webs extending inwardly from said side flanges, and opposed intermediate webs extending inwardly from said side flanges and defining opposed upper grooves with said upper web in which the carrier is adapted to be movably supported and opposed lower grooves with said lower webs in which the cord is adapted to be shiftably mounted, said central web having longitudinally extending relief grooves therein and holes in said central web between said relief grooves for the reception of fastening elements adapted to be secured to a supporting structure, said relief grooves allowing material of said central web to be deformed thereinto during production of said holes, said central web having a centering groove therein between said relief grooves, said centering groove being defined by side walls diverging inwardly of said central web and laterally outwardly toward said relief grooves to center a tool for producing a hole through said central web between said relief grooves.

3,098,521
REGENERATIVE HEAT EXCHANGERS
Hugo Heinrich Ludolf Ritz, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed July 20, 1955, Ser. No. 523,244
Claims priority, application Great Britain Aug. 9, 1954
3 Claims. (Cl. 165—7)

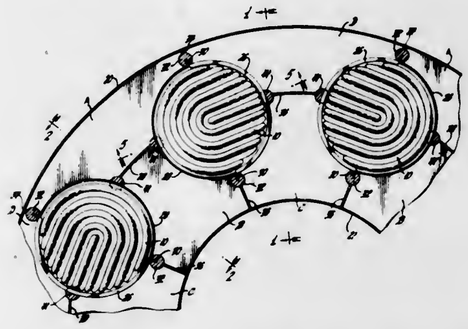
1. A regenerative heat exchanger comprising a heat storing matrix and a sleeve valve arrangement for controlling the flow through the matrix of relatively hot and cold fluids between which heat exchange is to occur, the matrix being constructed in two portions spaced apart from each other within a housing and having inlets and outlets so arranged that the hot fluid is admitted to at least one of the matrix portions through an inlet positioned therebetween and substantially the whole of the hot fluid is caused to flow through the matrix portion outwardly of the housing to an end outlet thereof and that the cold fluid is admitted to at least one of the matrix portions through an inlet at an end of the housing and substantially the whole of the cold fluid is caused to flow inwardly of the housing through the matrix portion

to an outlet between the matrix portions, and the sleeve valve arrangement comprising two sleeve valves interconnected for simultaneous operation, one sleeve valve controlling the inlet to and the outlet from one matrix portion of fluid to be heated whilst the other sleeve valve controls the inlet to and outlet from the other matrix portion of fluid to be cooled, each sleeve valve including a hollow tubular sleeve having end portions and a central portion of larger diameter than the end



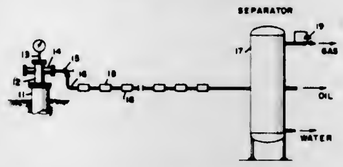
portions and co-operating with a similarly shaped casing having ports positioned in the flow paths of the fluids and arranged to be covered or uncovered by the sleeve, sealing between the sleeves and their associated casing portions is effected by means of sealing rings fitted to the sleeves and which said sealing rings are lubricated by oil fed to grooves containing the rings from the inside of the sleeve which is kept cool at all times by cool heat exchanging fluid.

3,098,522
STACKED PLATE HEAT EXCHANGERS
Hamilton L. McCormick, Carmel, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1959, Ser. No. 832,212
3 Claims. (Cl. 165—166)



1. A heat exchanger comprising a stack of sheet metal plates, each of said plates being corrugated to form two sets of U-shaped ridges, said two sets defining open ended grooves on opposite sides of the given plate, the open ends of the grooves of said two sets being oppositely directed, the ridges of each of said plates being in contact with the ridges of an adjacent plate, manifolding surrounding said heat exchanger, baffles in said manifolding cooperating with the latter in defining four separate chambers outside said stack and extending the length of the latter, two of said chambers being in communication with opposite open ends of said grooves as defined by alternate plates and adapted to conduct one fluid, the other two of said four chambers being in communication with opposite open ends of those grooves defined by the plates separated by said alternate plates and adapted to conduct a second fluid, said manifolding defining four ports, each of said four ports communicating with one of said four separate chambers, and the arrangement being such that each of said fluids will flow through one of said ports, into one of said chambers, through said stack between adjacent plates, into another of said chambers and out from another of said ports.

3,098,523
METHOD AND APPARATUS FOR PRODUCING HIGH-PRESSURE WELLS
Douglas C. Meyers, Metairie, La., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,327
4 Claims. (Cl. 166—45)



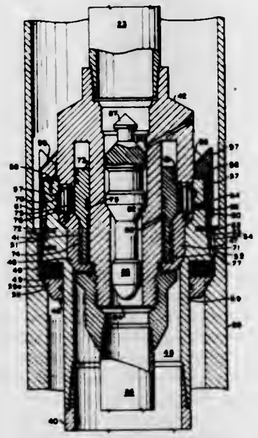
1. A method of producing a multi-phase emulsifiable fluid of gas, oil and water from a high-pressure well to a low-pressure separator apparatus without substantial emulsification of said multi-phase fluid, said method comprising the steps of containing a multi-phase emulsifiable well production fluid under pressure within a well open to at least one high-pressure formation, discharging a continuously flowing flow stream of said multi-phase production fluid from said well, controlling the rate of flow of said flow stream, reducing the pressure of said flow stream between said well and said separator by a plurality of stepwise stages, controlling the rate of pressure reduction in said plurality of stepwise stages wherein the ratio of the pressure downstream of each stage to the pressure upstream thereof is at least 0.58.

3,098,524
METHODS OF AND APPARATUS FOR COMPLETING MULTIPLE ZONE WELLS
Cicero C. Brown, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas
Filed Apr. 16, 1958, Ser. No. 728,967
15 Claims. (Cl. 166—48)



1. The method of completing a multiple zone well which includes, connecting a lower hydraulically-actuated well packer to the lower end of a first production string and lowering said packer and string a predetermined distance within the well bore, the lower end of said first production string communicating with the area below the lower packer, then connecting a hydraulically-actuated intermediate well packer to said first production string and continuing the lowering of said first string and packers, lowering a tubular conductor into the well and connecting the lower end thereof to the intermediate packer to extend upwardly therefrom, the lower end of said conductor communicating with the area between the lower and intermediate packers, thereafter connecting an upper hydraulically-actuated packer to said first production string and also coupling the upper packer to said tubular conductor, then further lowering the first production string, packers and conductor to locate said packers in final position within the well bore, then running the upper portion of a second production string and releasably connecting it to the upper packer to communicate with the tubular conductor, said upper portion of the second string and the tubular conductor forming the complete second production string, running a third production string and releasably connecting it with the upper packer to communicate with the area between the upper and intermediate packers, landing all production strings in final position in the well bore, and thereafter setting all hydraulically-actuated well packers by applying a pressure thereto from the bores of the production strings.

3,098,525
APPARATUS FOR INSTALLING AND RETRIEVING EQUIPMENT FROM UNDERWATER WELLS
John A. Haeber, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1961, Ser. No. 105,969
6 Claims. (Cl. 166—66.5)



1. Apparatus for installing, from an operational base positioned above a body of water, strings of casing and tubing in a well drilled in the formation below the body of water and hanging said strings within a well casinghead fixedly positioned at a substantial depth below the surface of the water, said apparatus comprising an operational base positioned above a body of water and above said well casinghead covered with water, an elongated pipe string normally supported from said operational base and adapted to extend to said casinghead, hydraulically-actuated connector means having a bore therethrough and being secured to the lower end of said pipe string, outwardly-extendible latching elements carried by said connector means for engaging one of said strings at least partially surrounding said connector means, actuating means carried by said connector means and operatively engaging said latching elements, conduit means in said connector means in communication between the bore thereof and the actuating means for introducing a pressure fluid thereto to move said actuating means against said latching elements to force them outwardly, a seating shoulder formed within the wall forming the bore of said connector means below said conduit means, and plug means positionable on said seating shoulder for closing the bore of said connector means.

3,098,526
SHUT-OFF VALVE FOR DUAL COMPLETION UPPER PACKER
David H. Heron, Maracaibo, Venezuela, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Dec. 6, 1960, Ser. No. 74,057
4 Claims. (Cl. 166—128)

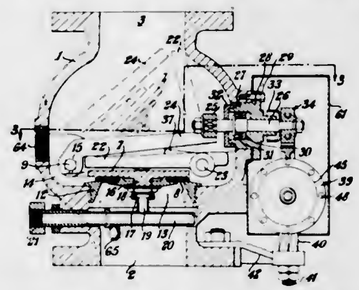


1. A well packer apparatus adapted to be set in a fluid-tight manner in a well casing to close off the space around a pair of tubing strings, said well packer comprising a body member provided with outwardly expansible sealing means carried thereon and having first and second longitudinal passages therethrough, a first tubing string adapted to extend through said first longitudinal passage, a slidable sleeve valve member positioned in said second longitudinal passage for limited axial movement therein, said valve member having a flow passage therethrough in communication in its open position between the spaces above and below said body member and out of communication in its closed position, cooperating stop and valve positioning means carried by said sleeve valve member and said packer for limiting the movement of said sleeve valve member in both directions, a second tubing string having a lower end of a size adapted to be positioned in the upper end of said second longitudinal passage and seated in the upper end of the sleeve valve member, and cooperating latch means carried by the lower end of said second tubing string and the upper end of said sleeve valve member.

3,098,527
SPRINKLER ALARM VALVE
George Allen, Eastcote, Pinner, and Douglas Michael Venison, Billericay, England, assignors to Matthew Hall & Co. Limited, London, England, a company of England
Filed Mar. 22, 1961, Ser. No. 97,558
Claims priority, application Great Britain Sept. 9, 1960
11 Claims. (Cl. 169—19)

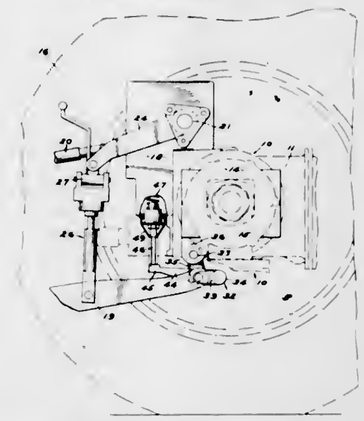
1. An alarm valve for alternate sprinkler systems, comprising a valve body having an inlet opening and an alarm port arranged in said inlet opening, a clack hingedly mounted within said body to effect closure of said inlet opening and said alarm port, a lever system operatively co-operating with said clack, and means operable externally of said body for holding said lever system

in an operative position to engage said clack in the dry state of the system and for holding said lever system in



an inoperative position to leave said clack free in the wet state of the system.

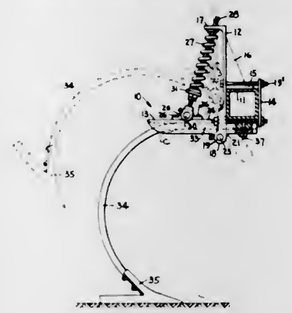
3,098,528
TRACTOR HITCHES
Clarence B. Richey, Royal Oak, and John F. O'Donnell, Rochester, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 16, 1960, Ser. No. 76,242
6 Claims. (Cl. 172—7)



1. In a tractor having a rear axle assembly including a center housing, a pair of liftable lower draft links and a hydraulic lift mechanism for lifting the draft links; a unitary rocker shaft extending transversely of the tractor beneath the center housing and having a pair of spaced arms pivotally mounted on the rear axle assembly for fore and aft swinging movement of the rocker shaft on an axis extending transversely of the tractor through the center housing, the lower draft links having their forward ends pivotally connected to the rocker shaft on an axis parallel to and offset from the transversely extending axis, and the rocker shaft having a third arm projecting rearwardly therefrom, and means displaceable by said third arm for controlling operation of the hydraulic lift mechanism.

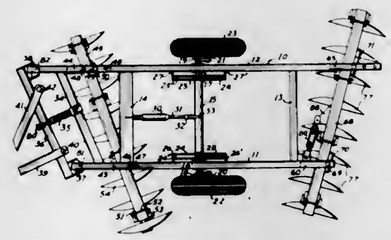
3,098,529
PLOW CLAMPING MEANS
Robert Edgar Wade and William Cecil Wade, Consort, Alberta, Canada
Filed Mar. 7, 1960, Ser. No. 13,264
6 Claims. (Cl. 172—265)

1. A clamp assembly for mounting a chisel plow to a plow frame comprising, a mounting plate adapted to be secured to a plow frame, said mounting plate having a pivot bearing, a clamp box pivotally supported by said pivot bearing, said clamp box being provided with a longitudinal opening therethrough for receiving a plow shank, and biasing means joining said clamp box and



said mounting plate at positions mutually spaced with respect to said pivot bearing for rotating, whereby a chisel plow mounted in said clamp box will be urged into the ground but capable of being forced out under initial increasing and then subsequent decreasing resistance from said biasing means.

3,098,530
DISC HARROW
William D. Kenney and William O. Vernon, Columbus, Ga., assignors to Columbus Iron Works Company, Columbus, Ga., a corporation of Georgia
Filed May 15, 1961, Ser. No. 110,052
9 Claims. (Cl. 172—591)

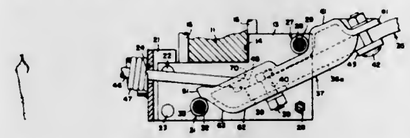


1. In a disc harrow of the type having a frame which is moved over the ground and a gang assembly carried by the frame and comprising a movable gang bar having disc blades mounted thereon for engagement with the ground, the combination therewith of a turnbuckle connected between said gang bar and said frame for varying the axial position of said gang bar on said frame, and a pivot pin positioned on said frame adjacent said turnbuckle about which said gang bar may be pivoted in a horizontal plane.

3,098,531
CUSHION SPRING STANDARD FOR AN EARTH WORKING TOOL
George D. Hunter, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 13, 1961, Ser. No. 137,836
9 Claims. (Cl. 172—710)

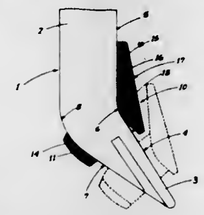
1. In an agricultural implement, a transverse frame bar, an earth-working tool having a rear earth-penetrating portion and a forwardly extending horizontal shank portion, and tool mounting means comprising a first part,

means fixedly clamping said first part to said frame bar, a second part separate from said tool and shiftable in a generally fore-and-aft direction relative to said first part, means fixing the shank of said earth-working tool to said second part so as to hold said tool out of contact with any portion of said first part, resilient means connected to act between said first and second parts for yieldably resisting movement of said second part and said tool relative to said first part, a first guide means



carried by said first part and engageable with said second part to limit initial movement of the latter relative to said first part to linear movement in a generally rearward direction, and a second guide means carried by said first part in a position to engage said second part in position-determining relation, said second part being shaped so as to provide for swinging movement of said second part and said earth-working tool in a generally vertical direction with continued rearward movement of said second part.

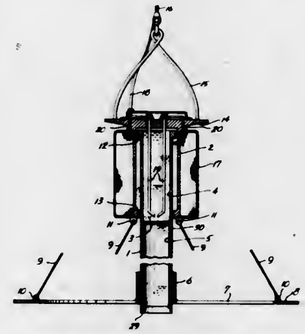
3,098,532
WEAR PLATE UNIT FOR SCARIFIER SHANKS
Ervin C. Dobbratz and James A. Green, Modesto, Calif.; Walta Dobbratz, administratrix of Ervin Carl Dobbratz, deceased
Filed Feb. 6, 1961, Ser. No. 87,312
5 Claims. (Cl. 172—719)



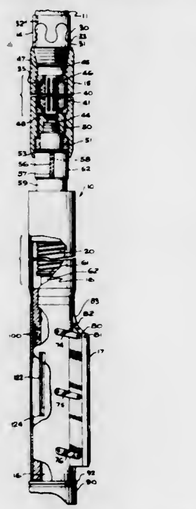
1. A wear plate unit for a scarifier shank of substantially rectangular form in section and which includes an upper straight bar portion and a foot extending forwardly and downwardly from the lower end of the bar portion, the forward edge of the foot being disposed at an angle to the forward edge of the bar portion, there being a scarifying tooth removably mounted on the foot and whose upper edge is below the upper end of the foot; the unit comprising a plate adapted to upstand in front of the shank from a point adjacent and above the upper end of the tooth and to follow and substantially engage such forward edges of the foot and bar portion to an upper end termination a predetermined distance above the junction of said edges, and a collar projecting rearwardly from the plate and slidably embracing the shank above and from a point adjacent the tooth.

3,098,533
ELECTRIC DISCHARGE IMPULSE SUBMARINE DRIVERS
Cyrus Warren Ostrom, 3201 1st Ave. S., Seattle 4, Wash.
Filed July 5, 1960, Ser. No. 40,791
6 Claims. (Cl. 175—6)

4. An electric discharge impulse submarine driver immersible in a body of water comprising electrodes having adjacent, but spaced-apart, end portions forming a spark gap, a condenser in close proximity to said electrodes, heavy, short leads connecting said electrodes and said condenser, means for charging said condenser and for effecting discharge thereof through said spark gap, an elongated member drivable lengthwise into the bottom of such body of water, having one end thereof located adjacent to said spark gap and an opposite water body penetrating end projecting away from said spark gap, and a body of liquid in which said spark gap is submerged and in engagement with the end of said member adjacent to said spark gap, developing great force from an intense electric discharge across said spark gap and transmitting and applying such force to such adjacent end of said elongated member as a lengthwise driving force.



3,098,534
DIRECTIONAL DRILL WITH HYDRAULICALLY EXTENDED SHOE
Warren Farrell Carr, 227 S. Leaf Ave., West Covina, Calif., and Merlin Denver Wood, 4611 N. Riohondo Parkway, El Monte, Calif.
Filed June 14, 1960, Ser. No. 36,005
9 Claims. (Cl. 175—73)



1. A directional drilling system for deflecting a drill bit from the center line of a bore hole by means actuated by the pressure of a drilling liquid, which system includes: a tubular mandrel forming a part of the drill string near the drilling bit, said tubular mandrel having an axial passage for conducting drilling liquid under pressure from

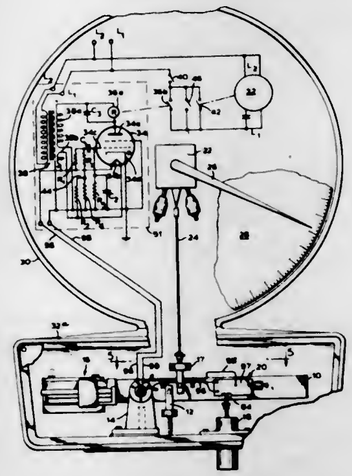
the interior of the drill string above it to the drill bit; a hydraulic system housing enclosing a hydraulic fluid reservoir, said housing being coupled to said mandrel; a distensible bladder forming a conduit passing through said hydraulic reservoir chamber and forming part of a drilling liquid passage through said hydraulic system housing; an annular piston reciprocable on said tubular mandrel adjacent said hydraulic system housing; walls integral with said hydraulic system housing forming a cylinder enclosing one end of said annular piston, and providing an annular hydraulic actuating chamber for actuating said piston, said hydraulic actuating chamber being in open communication with said hydraulic reservoir chamber but separated from the drilling liquid passage through said hydraulic reservoir by said bladder; a bearing of the antifriction type having its inner race reciprocable and rotatable with said annular piston, and its outer race reciprocable without rotation; a reciprocable structure mounted on the outer race of said reciprocable bearing; a helical spring encircling said tubular mandrel for a part of its length adjacent said reciprocal bearings, and urging said annular piston into said hydraulic actuating chamber by thrust transmitted through the inner race of said reciprocable bearing; anchoring means for anchoring the end of said helical spring opposite said reciprocable bearing to said tubular mandrel, to constrain said helical spring to longitudinal compression when said piston is expelled from said hydraulic cylinder; a reciprocable structure mounted on the outer race of said reciprocable bearing and reciprocable therewith; a non-reciprocating bearing mounted on said tubular mandrel at a point spaced from said reciprocable bearing, and having its inner race rotatable with said tubular mandrel, and its outer race rotationally free of mandrel rotation; a longitudinally extended shoe for engaging the sidewall of said bore hole, said shoe having a retracted rest position adjacent said tubular mandrel, and an extended drilling position spaced from said tubular mandrel toward the sidewalls of said bore hole stationary structure supported on the outer race of said non-reciprocable bearing and adapted to remain relatively free of reciprocation and rotation during rotation of said tubular mandrel; holding link means between said stationary structure and said shoe for preventing said shoe from movement longitudinal to said tubular mandrel with said reciprocable structure; and link means between said reciprocable structure and said shoe for thrusting said shoe outwards from its rest position to its bore hole wall engaging position upon displacement of said reciprocable structure by movement of said hydraulic piston partially out of said hydraulic actuating chamber.

3,098,535
TRI-CONE BIT WITH INSERTS
Austin E. Ragon, Box 682, Rangely, Colo.
Filed Sept. 23, 1960, Ser. No. 58,035
1 Claim. (Cl. 175—374)



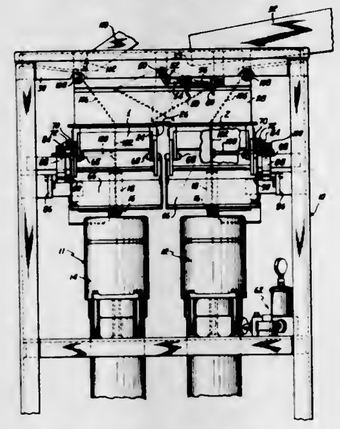
A well drill bit comprising a head including three complementary sections, a longitudinal extension on said head for attachment to a drill pipe, downwardly inclined inwardly extending shafts having one end thereof secured in each of said sections, conical cutters rotatably mounted on the free ends of said shafts, one of said cutters having first circumferentially spaced sets of axially aligned sharply pointed teeth adjacent the base thereof, second circumferentially spaced sets of axially aligned sharply pointed teeth spaced from said first sets, a second cutter having first circumferentially spaced sets of axially aligned sharply pointed teeth adjacent the base thereof, second circumferentially spaced sets of axially aligned sharply pointed teeth adjacent the apex of said conical cutter, a third cutter having first circumferentially spaced sets of axially aligned sharply pointed teeth adjacent the base thereof, second circumferentially spaced sets of axially aligned sharply pointed teeth spaced from said first sets, the apex of said third conical cutter terminating in a plurality of sharply pointed teeth substantially filling the space at the intersection of the three conical cutters, the second sets of teeth on each of said conical cutters registering with the space between the first and second sets of teeth on adjacent cutters during rotation thereof, and a plurality of conical sharply pointed teeth circumferentially positioned between each of the first sets of axially aligned teeth on each of said conical cutters.

3,098,536
AUTOMATIC LOCK-OUT SWITCH
George A. Bartlett, Clarendon Springs, Vt., assignor to Howe Richardson Scale Company, a corporation of Delaware
Filed July 2, 1959, Ser. No. 824,508
2 Claims. (Cl. 177—12)



1. In automatic-recording scale apparatus, a self-positioning balance beam rockably mounted about a substantially horizontal fulcrum axis, an electrically powered motor adapted to operate, a weight-printing device driven by said motor to record the weight of a load applied to said beam, an energizing circuit for said motor including a switch mounted on said balance beam, said switch having an arm rockably mounted on said balance beam about an axis spaced from and substantially parallel to said fulcrum axis and extending substantially parallel to said beam, a pair of electrical switch contacts fixedly mounted in substantially vertically opposed relation on one end of said arm, a pair of spaced vertically opposed contacts fixed on said beam in vertical alignment with said first pair of contacts, said arm extending between the contacts fixed to said beam, resilient means connected to said beam and said arm to bias said arm to a central position between said contacts on said beam to open the contacts when said beam is in an equilibrium position, dampening means connected to said arm to retard movement of said arm upon movement of said beam enabling said contacts to close upon rocking movement of said beam in either direction, said contacts, when closed, establishing a mechanical motion transmitting linkage between said dampening means, said arm, said contacts and said balance beam enabling said dampening means to retard rocking movement of said balance beam about its axis, a relay in said circuit energizable to automatically start operation of said printing motor, said circuit energizing said relay in response to the opening of said contacts when said balance beam is restored to a static equilibrium position.

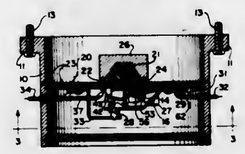
3,098,537
LARGE VOLUME WEIGHER
James C. Petrea, Durham, N.C., assignor to Sperry Rand Corporation, Wilmington, Del., a corporation of Delaware
Filed Nov. 13, 1961, Ser. No. 151,719
15 Claims. (Cl. 177—98)



1. A weighing apparatus comprising; a pair of weighing devices each having a moveable material-receiving receptacle, said receptacles being positioned closely adjacent each other; means for delivering a continuous stream of material to a position adjacent said receptacles; a pair of moveable deflector members each being moveable, to selectively deflect material from said stream into one or the other of said receptacles; said deflector members being independently and separately moveable and one being arranged to deflect the major portion of said stream while the other is arranged to deflect the remaining minor portion thereof; and actuator means for moving said deflector members; said actuator means being responsive to weighing movements of said receptacles to sequentially position said deflector members to: deflect said entire stream into one receptacle until a predetermined bulk weight of material is accumulated therein; then to move said one member to deflect the major portion of said stream into the other receptacle; to thereafter move said other member, when the desired final weight of material is in said one receptacle, to deflect said minor portion to said other receptacle; and to repeat said described cycle.

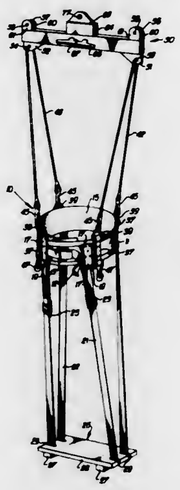
14. A weighing device comprising, a vertically moveable material-receiving receptacle; feed means for dropping a stream of material into said receptacle from a predetermined elevation adjacent the top thereof; means responsive to vertical weighing movement of said receptacle for interrupting said stream upon deposit of a predetermined weight of material in said receptacle; and means for changing the volumetric capacity of said receptacle whereby a selected predetermined weight of material will fill said receptacle substantially up to said predetermined elevation so that the last increments of material do not fall through an appreciable distance and, therefore, do not produce spurious vertical weighing movements of said receptacle by their momentum.

3,098,538
NOVEL AND SAFETY PROCESS AND DEVICE FOR USE IN CONNECTION WITH MOTOR VEHICLES
Quang-Hsi Hu, Willard, N.Y.
Filed Jan. 18, 1961, Ser. No. 83,482
4 Claims. (Cl. 180—82)



1. In a vehicle having an electrical ignition switch and warning devices, gravity and inertia responsive weight means having a conical mounting recess therein, mounting and supporting means therefor having a conical mounting portion thereon and a hole therethrough aligned with said mounting portion, a despressible pin in the hole, switch means located beneath the hole on said supporting means, having a flexible and resiliently upwardly urged contact bearing member thereon, normally depressed to a closed condition by reason of said weight means acting through pressure of said pin thereon to energize said ignition switch, and a pair of back contacts on said supporting means, contactable by said contact bearing member when undepressed, for energizing said warning devices.

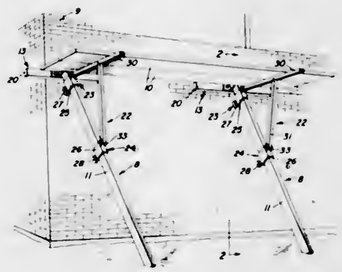
3,098,539
AERIAL HARNESS
Francis P. Gorman, 1332 Franklin St., Apt. A, Santa Monica, Calif.
Filed Nov. 13, 1961, Ser. No. 151,696
4 Claims. (Cl. 182—3)



1. An aerial harness for a single occupant comprising a belt having adjustable means for fastening the belt

around the waist of the occupant, a beam adapted to extend horizontally spaced above the belt, tie means for suspending the belt from the ends of the beam, two pulleys on the ends respectively of the beam with their axes being transverse with respect to the longitudinal axis of the beam, the beam having an anchor piece and a cleat intermediate its ends, a double pulley block adapted to be secured in a position against rotation of the block on its vertical axis and with the axis of its sheaves extending horizontally, a rope secured at one end thereof to said anchor piece, and the rope passing from its secured end through said block over one sheave, thence reeved on one of said beam pulleys, thence passing through said anchor piece and reeved on the other of said beam pulleys, thence reeved on the other sheave of said block, and thence passing to said cleat for actuation by said occupant.

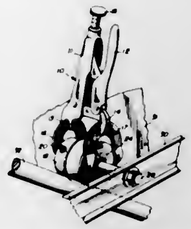
3,098,540
SCAFFOLD
Edward C. Hiner, Coffeyville, Kans.
(714 S. Stuben St., Chanute, Kans.)
Filed Feb. 12, 1962, Ser. No. 172,656
4 Claims. (Cl. 182—152)



1. A scaffold comprising, in combination, a pair of spaced, parallel duplicate props, stabilizing crossheads on the upper end portions of the props engageable horizontally with a wall for supporting said props at an inclination thereagainst, said crossheads being of a material length for spanning window openings, in the wall, brackets mounted on the props, and planks mounted on said brackets, said crossheads including sleeves mounted for sliding adjustment on the upper end portions of the props, vertical plates having their upper portions affixed to the upper portions of the sleeves, spacing members extending between the lower portions of the plates and the corresponding portions of the sleeves, and elongated horizontal bars removably secured on the plates and adapted to bear on the wall.

3,098,541
LUBRICATING TOOL
Charles F. Kadas, Oceana, Va.
(P.O. Box 3097, Oceana Station, Virginia Beach, Va.)
Filed Nov. 7, 1961, Ser. No. 150,699
6 Claims. (Cl. 184—1)

5. A lubricating tool for a roller bearing having an annular lubricant receiving slot on each side thereof, comprising, bearing gripping means having first and second, generally spaced-apart, movable jaws, said jaws being relatively thin and planar for fitting into a confined space and pivotally connected for movement with respect to each other, the first of said jaws having a cup member secured thereto with its opening facing the second of said jaws and having its rim adapted to engage the side of said bearing for enclosing the annular slot therein, said cup member having a lubricant receiving aperture in the wall thereof, whereby said bearing may be lubricated by clamping the sides of said bearing between said cup member



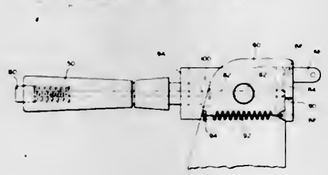
and said second jaw, respectively, and forcing a lubricant through said lubricant receiving aperture.

3,098,542
SAFETY LATCH ARRANGEMENT
George A. Wallace, Philadelphia, and Andrew T. Browne, Springfield, Pa., assignors to Globe Hoist Company, Philadelphia, Pa., a corporation of Maryland
Filed Sept. 13, 1961, Ser. No. 137,916
10 Claims. (Cl. 187—8.49)



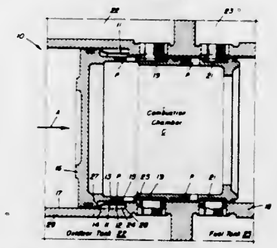
1. A safety latch arrangement for a lift having a superstructure comprising an elongated tube having an open upper end for substantially vertical installation in the ground adjacent said lift, an elongated piston inserted to slide up and down into and out of said open upper end of said tube when the top of said elongated piston is attached to said superstructure, a portion of said piston being cut out to provide a substantially vertically oriented slot, a latching bar mounted to rotate within said slot between a substantially vertical stored position and a substantially horizontal locking position, the length of said latching bar being long enough to overhang said upper end of said tube when said latching bar is horizontally oriented, the width of said latching bar being narrow enough to permit said latching bar to be received within said tube when said latching bar is substantially vertically oriented, said latching bar having opposite storing and releasing ends, slotted hole and shaft means extended in the direction of said length and mounting said latching bar upon said piston to rotate and shift transversely within said slot to transverse locking and storing positions, said releasing end being long enough to extend over said upper end of said tube when said latching bar is substantially horizontally disposed and in said transverse locking position, said releasing end being short enough for disposition within said tube in both horizontal and vertical orientations when said latching bar is shifted into said transverse storing position, said storing end being long enough to overhang said upper end of said tube in all substantially horizontal transverse positions for cooperating with said releasing end upon downward movement when said latching bar is respectively in said transverse locking and storing positions for arresting the downward movement of said latching bar upon said upper end of said tube and for rotating said latching bar into said substantially vertical stored position within said tube with said storing end disposed above said releasing end, means for arresting the downward rotation of said storing end of said latching bar to maintain it substantially horizontally oriented when it rises above said upper end of said cylinder, said slot providing sufficient clearance and said releasing end being short enough to permit rotation of said latching bar from said substantially vertical stored transverse locking to said horizontal locking position, the weight of said latching bar reacting in a direction to shift it into said transverse locking position when said latching bar assumes said substantially vertical stored position to permit said latching bar to be rotated into said substantially horizontal and transverse locking position every time that said latching bar moves out of said upper end of said tube, and resilient means reacting between said latching bar and said piston when said latching bar is in said substantially vertical stored position whereby said latching bar is biased to rotated toward said substantially horizontal locking position.

3,098,543
MULTI-PURPOSE CONTROL MEANS FOR INDUSTRIAL TRUCKS AND THE LIKE
Russell Hastings, Jr., Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Original application June 8, 1959, Ser. No. 818,869. Divided and this application Dec. 22, 1961, Ser. No. 161,592
10 Claims. (Cl. 187—9)



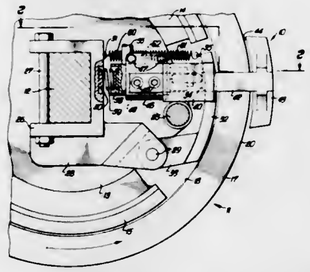
1. In a control system for a vehicle having an operator's station, an operator vehicle control means located at the station comprising supporting means, pivot means mounted on said supporting means, a member connected to said pivot means for upward and downward pivotal movement relative to the supporting means, a handle member pivotally supported upon the connecting member and extending outwardly therefrom, said handle member being supported for rotational movement in both directions about its own axis by the connecting member and being also adapted to cause the connecting member to be pivoted upwardly and downwardly relative to the supporting member for effecting a plurality of vehicle controls, said supporting means cooperating with said connecting member and with said handle member such that the handle member is prohibited from moving in a plane transverse to the plane of movement of the connecting member to afford positive support for the operator in a direction longitudinal of the vehicle.

3,098,544
DEFORMABLE SHOCK ABSORBER
De Lacy F. Ferris, Mine Hill, Dover, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 28, 1962, Ser. No. 206,560
3 Claims. (Cl. 188—1)



1. In a deformable shock absorber the combination of a cylinder, a pressure responsive slide movably mounted within the cylinder, means for arresting the motion of the slide with a minimum of shock by absorbing the energy of motion by deforming upon movement of the slide with respect to the cylinder, said means including an annulus disposed between the cylinder and the slide in abutting engagement therewith, a rigid annular straight wall on the annulus, an annular angularly disposed flange at one end of said straight wall, and an inwardly extending flange at the other end of the straight wall, said inwardly disposed flange being in engagement with said cylinder and said angularly disposed flange being in engagement with said pressure responsive slide.

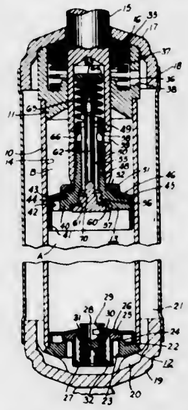
3,098,545
EMERGENCY BRAKE
Patrick N. Murphy, 2304 Edwards Ave., Bakersfield, Calif.
Filed July 10, 1961, Ser. No. 123,398
3 Claims. (Cl. 188—76)



1. An emergency brake designed as an accessory to be applied to an axle of a highway freight vehicle in association with a cylindrical brake drum provided on a wheel rotatably mounted on said axle, the combination of: a clamp designed to tightly grip said axle to mount said brake thereon, a substantial portion of said clamp when so applied to said axle lying within said brake drum; an internal brake shoe mounting arm provided on said clamp and extending towards said drum; an arcuate internal brake shoe pivotally mounted on said arm for swinging movement towards and away from face-to-face contact with the cylindrical inner surface of said drum; a slide block integrally united with said internal shoe along an edge of the latter disposed adjacent the open mouth of said drum, a major portion of said block being disposed outside said mouth, said slide

block having a slideway of rectangular cross section, said slide way being disposed approximately normal to the axis of said drum; a slide bar of rectangular cross section slidably fitting within said slideway; an external brake shoe fixed to the outer end of said slide bar in an offset relation therewith so as to be disposed radially outwardly from said brake drum in closely juxtaposed relation therewith, said external shoe being arcuate in shape and adapted to closely fit said drum when moved into contact with the latter; a hydraulic ram including a cylinder which is rigidly fixed on an inwardly extending portion of said slide bar, and a plunger slidable in said cylinder, said plunger being extended, when said ram is actuated, into contact with said internal shoe to move said shoe away from said cylinder and into engagement with said brake drum and to draw said slide bar inwardly through said block and cause said external shoe to pressurally engage said brake drum on the opposite face thereof from where said drum is engaged by said internal brake shoe.

3,098,546
SHOCK ABSORBER PISTON VALVING
Wayne A. Karlgaard, Englewood, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 10, 1960, Ser. No. 68,433
2 Claims. (Cl. 188—88)



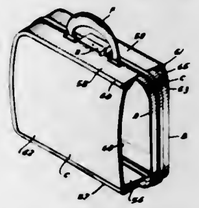
1. In combination in a hydraulic shock absorber construction, a cylinder, a piston reciprocable in said cylinder and dividing the same into compression and rebound chambers, a piston rod carrying the piston and extending through a rod seal at one end of said cylinder, said rod having an axial bore in the end thereof adjacent the said piston, said piston having an axial extension projecting into said bore in said rod attaching said piston to said rod thereby in abutting relation to the end of said rod, said piston having an axial bore extending through the same including said extension thereof, said piston having a shoulder around said bore therein on the side thereof in said compression chamber, a valve member seated on said shoulder and including an axially extending stem projecting through said bore in said piston projection and into said axial bore in said rod, said rod having a transverse bore connecting the axial bore thereof with said rebound chamber, and spring means between the axial extension on said piston and the end of said stem in said axial bore in said rod urging said valve member into seating engagement with said shoulder, said axial extension on said piston having passage means therein connecting the axial bore in the said extension with the axial bore in said rod to provide thereby free flow of hydraulic fluid through the said transverse bores in said rod and said piston extension when said spring is fully closed by full opening of said valve.

3,098,547
MOLDING AND HOLDDOWN SPACER FOR WALL PANELS
Daniel L. Zinn, 3839 Chene St., Detroit 7, Mich.
Filed Sept. 21, 1960, Ser. No. 57,443
1 Claim. (Cl. 189—35)



A ceiling panel mounting means for receiving the sharp edge of a thin sheet metal ceiling panel and for mounting such panel in place; such means comprising a wall mounted C-shaped channel molding formed of thin sheet metal and having a wall mounted vertical portion and integral horizontal top and bottom flanges, the bottom flange having a sharp edge; such means also including a resilient, C-shaped channel holding member arranged in such molding and being also formed of thin sheet metal and also having a vertical portion which is slightly shorter than and is disposed against the vertical portion of the channel molding, and also having an integral horizontal top flange arranged within and adjacent the top flange of the molding, and an integral bottom flange normally spaced slightly above the bottom flange of the channel molding at said vertical portions a distance approximately equal to the thickness of a ceiling panel edge and sloping towards and into line contact with said bottom flange of the channel molding remote from said vertical portions, and the free edge of the bottom flange of the holding member being formed as a guide lip turned upwardly and in a direction away from the vertical portions to provide a guide for the sharp edge of the ceiling panel which can be slid horizontally into the space between the horizontal flanges of the molding and holding member.

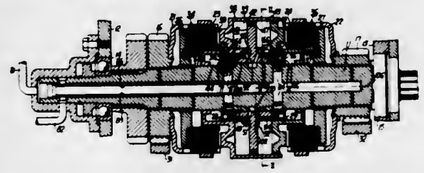
3,098,548
LUGGAGE CONSTRUCTION
Walter Bialo, New Rochelle, N.Y.
(836 Broadway, New York, N.Y.)
Filed Jan. 26, 1960, Ser. No. 4,669
1 Claim. (Cl. 190—49)



A substantially rectangular luggage construction comprising a container section and a cover section, each of said container and cover sections having a mouth portion, a substantially rectangular frame member circumscribing each mouth portion, an enclosure portion and a flexible fabric covering material surrounding said enclosure portion; a hinge means pivotally connecting said container and cover sections so that said luggage construction may be in an opened position with said mouth portions being separated and in a closed position with said mouth portions being in juxtaposition to each other; the substantially rectangular frame member of said container section having in cross section a first heavy base member positioned in a plane parallel to the plane of the mouth portion of said container section, said first heavy base member having a top end extending away from said mouth portion and a bottom end extending into said mouth portion, an integral first thin flange member extending inwardly of said container enclosure portion and having a top surface in a plane perpendicular to the plane of said first heavy base member and spaced a distance slightly in excess of the thickness of said flexible fabric from said top end of said first heavy base member, and an integral first telescoping flange member extending outwardly of said container enclosure portion and having a top surface, a bottom surface, and an outer end, said top surface of said first telescoping flange member being in a plane which is obique to the plane of said first heavy base member and intersecting said first heavy base member at a point which is a predetermined distance from said top end of said first heavy base member; the substantially rectangular frame member of said cover section having in cross section a second heavy base member positioned in a plane parallel to the plane of said mouth portion of said cover section, said second heavy base member having a top end extending away from said mouth portion and a bottom end extending into said mouth portion, an integral second thin flange member extending inwardly of said cover enclosure portion and having a top surface in a plane perpendicular to the plane of said second heavy base member and spaced a distance slightly in excess of the thickness of said flexible fabric from said top end of said second heavy base member, and an integral second telescoping flange member extending outwardly of said cover enclosure section and having a top surface, a bottom surface, and an outer end, said outer end being slightly less in thickness than said predetermined distance, said top surface of said second telescoping flange member being in a plane which is perpendicular to said second heavy base member and in line with said top end of said second heavy base member, said bottom surface of said second telescoping flange member being in a plane which is oblique to the plane of said second heavy base member; the flexible fabric covering material of said container enclosure section being stitched to the top surface of said first thin flange member, and the flexible fabric covering material of said cover enclosure section being stitched to the top surface of said second thin flange member, the top surfaces of said first and second thin flange members being in the same plane and aligned with each other when said luggage construction is in said closed position, the oblique bottom surface of said second telescoping flange member being in a plane which is less oblique than the plane of the oblique top surface of said first telescoping flange member, the oblique top surface of said first telescoping flange member being contacted at a point between the outer end of said first telescoping flange member and the first heavy base member by the oblique bottom surface of said second telescoping flange member to provide a wedging action as said luggage construction is being closed; the outer end of said first telescoping flange member being in abutting relationship with said second heavy base member and the outer end of said second telescoping flange member being in abutting relationship with said first heavy base member when said luggage construction is in said closed position.

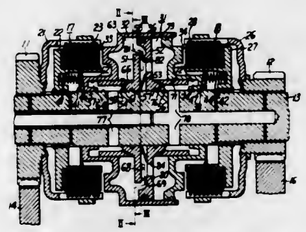
3,098,549
DOUBLE ACTING HYDRAULIC ACTUATOR
Frederick A. Schick, Springfield, Ill., and Charles L. Schwab, Wauwatosa, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Sept. 26, 1961, Ser. No. 140,758
11 Claims. (Cl. 192—87)

1. A double acting hydraulic actuator for selectively engaging a pair of clutch packs operatively interposed between a shaft member and gearing rotatably mounted on said shaft member, comprising: a cylindrical piston having opposite ends in axially confronting relation to said clutch packs, respectively, and mounted coaxially on said shaft member for axial movement relative thereto between positions of engagement with said clutch packs; a reaction member within said cylindrical piston dividing each end of the latter into radially inner and outer chambers; fluid passage means between one of the pairs of inner and outer chambers including a passageway in said reaction member; means for controlling fluid flow through said passageway including a pair of axially



spaced fluid sealing surfaces on one of said reaction and shaft members and a fluid control surface on the other of said reaction and shaft members in complementary engageable relation to said sealing surfaces; and means mounting said reaction member on said shaft member for limited axial movement in opposite directions from a position in which said surfaces are not in engagement and fluid is permitted to transfer freely between said one pair of chambers through said passage means to axially spaced positions wherein said control surface is in sealing engagement with one of said sealing surfaces and fluid is prevented from flowing between said one pair of chambers through said passage means.

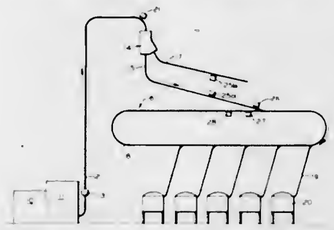
3,098,550
DOUBLE ACTING CLUTCH
Charles L. Schwab, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Oct. 12, 1961, Ser. No. 144,709
11 Claims. (Cl. 192—87)



1. A double acting hydraulic actuator for actuating a pair of axially spaced clutch packs interposed between a shaft and gearing mounted thereon, comprising: a cylindrical piston mounted coaxially on said shaft for predetermined axial movement relative thereto from an intermediate position to a position of engagement with one of said clutch packs; a pair of axially spaced reaction members slidably mounted on said shaft within said piston and having relatively engageable annular sealing surfaces, respectively, disposed radially between said shaft and piston; stop means for limiting axial movement of said reaction members to a distance substantially less than said predetermined axial movement of said piston; biasing means for resiliently urging said reaction members axially away from one another thereby urging said sealing surfaces out of engagement; walls on said reaction members and piston defining a pair of radially outer chambers

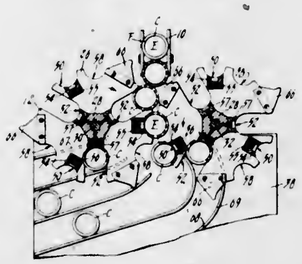
and a pair of radially inner chambers; and a passageway between one of said pairs of chambers including an opening extending axially through one of said reaction members radially inward from said sealing surface thereon, fluid transfer through said opening between said one pair of chambers being prevented upon engagement of said sealing surfaces.

3,098,551
CAN FEEDING AND DIVIDING APPARATUS AND SYSTEM
Edmond R. Dudley, Santa Clara, Calif., assignor to Peerless Equipment Company, Mountain View, Calif., a corporation of California
Filed Dec. 14, 1959, Ser. No. 859,294
4 Claims. (Cl. 193—31)



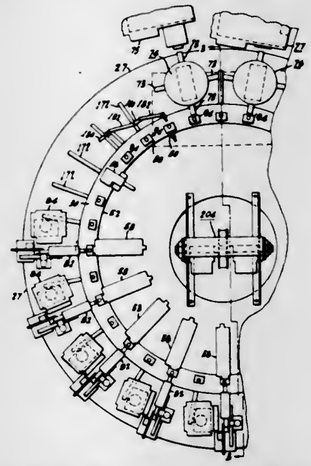
1. A can divider comprising a frame having an inlet end and an outlet end, can guide means supported by said frame to form a common passage leading inwardly from the inlet end of the frame and first and second branch passages each connected to the inner end of said common passage and diverging therefrom to the outlet end of the frame; a first, fixed electromagnetic means operable when energized to attract cans and cause their passage through said common passage and said first branch passage, a second, fixed electromagnetic means opposed to said first electromagnetic means and operable when energized to attract cans and cause their passage through said common passage and second branch passage and means for energizing either of said first and second electromagnetic means selectively.

3,098,552
CAN DIVIDER
Charles Matthew Schulz, Dumont, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 5, 1959, Ser. No. 831,824
5 Claims. (Cl. 198—31)



1. A mechanism for dividing a single line of cans into four lines of cans, comprising a pair of oppositely rotatable rotors disposed in substantially tangential relationship on spaced parallel axes, means for feeding a single line of cans into the bight of said rotors, a plurality of shallow pockets formed at spaced intervals around the periphery of each of said rotors and extending radially inwardly into said rotors for receiving cans from said feeding means, can holding means associated with each of said shallow pockets for holding the cans in said shallow pockets while the rotors carry them through divergent arcuate paths of travel, a first stationary stripper mounted adjacent each of said rotors and extending inwardly relative to said rotor to a point adjacent the innermost portions of said shallow pockets to intercept the cans therein and to force them outwardly from said shallow pockets against the holding action of the can holding means associated with said shallow pockets, a plurality of deep pockets formed at spaced intervals around the periphery of said rotors for also receiving cans from said feeding means, can holding means associated with each of said deep pockets for holding the cans in said deep pockets while the rotors carry them through divergent arcuate paths of travel which are disposed inwardly of and concentric with the paths of travel through which the cans in the shallow pockets are carried, said deep pockets being arcuately offset relative to said shallow pockets and extending radially inwardly into said rotors beyond the innermost portions of said first strippers whereby the cans which are held in said deep pockets by the can holding means associated therewith are carried past the said first strippers, and a second stationary stripper mounted adjacent each of said rotors and extending radially inwardly relative thereto to a point adjacent the innermost portions of said deep pockets to intercept the cans therein and to force them outwardly from said deep pockets against the holding action of the can holding means associated with said deep pockets.

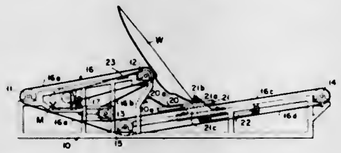
3,098,553
TUBE CAGE ORIENTING AND POSITIONING APPARATUS
Heinrich Hermanny, Cincinnati, Ohio, assignor to Radio Corporation of America, a corporation of Delaware
Filed June 16, 1960, Ser. No. 36,536
14 Claims. (Cl. 198—33)



1. Apparatus for moving a work holder through successive work positions and rotating said work holder at each of said positions to position a work piece carried by said work holder at different angular positions at said work position to a tool to be applied to said work piece, including a support, a turret rotatably mounted on said support, means for rotating and indexing said turret to move the work holder to successive positions, said work holder having clamping means thereon for engaging a work piece, said clamping means including a rotatable sleeve mounted on said turret for rotation therewith,

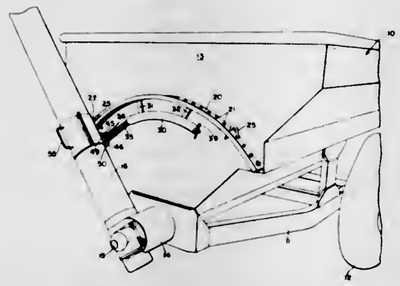
means for rotating said sleeve, a clamping jaw fixed to said sleeve for rotation therewith, a slidable member extending through said sleeve and fastened thereto for rotation therewith and slidable along the axis of said sleeve, said slidable member having a clamp on one end thereof for cooperation with said clamping jaw, biasing means associated with said slidable member for biasing said clamp to clamping position with respect to said clamping jaw, and a means positioned adjacent said turret at a work position for engaging said slidable member whereby said clamp may be moved to non-clamping position.

3,098,554
WORKPIECE TURNOVER DEVICE
Leo Zeligowsky, Narberth, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 31, 1961, Ser. No. 113,930
5 Claims. (Cl. 198—33)



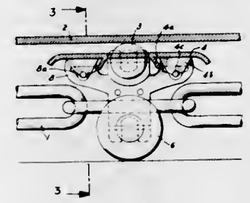
1. A workpiece turnover device comprising in combination,
a first conveyor having an overhang for transporting a workpiece in a first direction,
a second conveyor having one end below said overhang of said first span for transporting a workpiece in said first direction,
a slidable pusher mounted over a portion of said second conveyor for movement parallel thereto opposite to said first direction,
and a catcher on said pusher for catching the leading edge of a downward tilted workpiece fed in said first direction from said first conveyor for pivoting said downward tilted workpiece against said first conveyor by the movement of said catcher and said pusher to turn said workpiece over upon said second conveyor.

3,098,555
DISCHARGE ELEVATOR
Billie L. Harriott, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed May 3, 1961, Ser. No. 107,474
8 Claims. (Cl. 198—122)



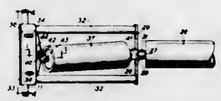
1. For use with a discharge elevator for a material container having an upright side wall, the elevator being of the type having a vertically disposed elevator housing adopted to swing about a horizontal axis and in a plane substantially parallel to the wall, the improvement comprising: a rigid tubular member fixed to the wall above the axis with opposite ends thereof extending to opposite sides of the axis, the tubular member further being arcuate shaped with a radius of curvature struck substantially on said axis; a coil spring contained within the tubular member with opposite ends thereof extending outwardly the respective ends of the member; lugs mounted on opposite ends of the spring and extending outwardly therefrom to contact the ends of the tubular member; an arcuate track spaced from the tubular member and mounted on the wall, the track being arcuate shaped with a radius of curvature struck substantially on the axis; rigid elements rigidly mounted on the elevator housing projecting toward the wall, part of the elements being positioned to engage the lugs on the spring and part of said elements being positioned alongside the track; and means on the track for locking the latter part of said elements against movement.

3,098,556
CONVEYOR
Hermann J. Steinbach, Lancaster, Pa.
Filed May 13, 1960, Ser. No. 28,907
Claims priority, application Germany May 16, 1959
11 Claims. (Cl. 198—189)



1. A conveyor comprising a movable endless drive chain, a plurality of longitudinally spaced carriages connected to said drive chain for movement therewith, each of said carriages having a support roller mounted thereon for rotation relative thereto and extending transverse to the extent of said chain, an endless material carrying belt resting relatively loosely on said rollers and extending parallel to said chain, said belt being connected to said carriages solely by the weight of the belt and the material carried thereon which causes said belt to sag between consecutive support rollers and deters rotation thereof whereby said belt and material are carried along with said carriages.

3,098,557
TROUGHING ROLLER ASSEMBLY AND BELT CONVEYOR
Keith McCann, Taylorville, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Continuation of abandoned application Ser. No. 704,483, Dec. 23, 1957. This application July 13, 1959, Ser. No. 827,417
3 Claims. (Cl. 198—192)

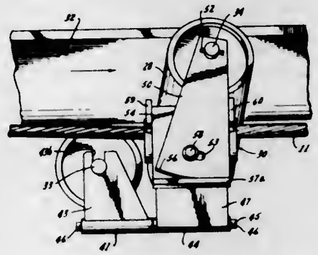


1. A two directional training roller assembly for supporting and automatically training the conveying reach of a conveyor belt in a flexible strand conveyor of the type in which at least a pair of flexible strands are trained in generally parallel relationship to one another along a conveying course, said training roller assembly including, in combination,

at least one intermediate load carrying roller,
at least a pair of wing rollers flanking the intermediate roller, and
means for bypassing the load carried by the intermediate roller around the wing rollers to thereby enable the wing rollers to swing to a belt training position, said bypassing means including
a pair of rigid frame structures for supporting and maintaining the intermediate roller generally transverse to the direction of belt travel at all times and substantially stationary with respect to the conveyor strands independently of the direction of belt travel and independently of the amount of load on the assembly, and for transmitting load from the intermediate roller around the wing rollers to the strands,
a pair of strand connectors, each strand connector being engageable with an associated strand and secured to a frame structure to thereby prevent relative movement between the strand, connector, and rigid frame structure,
each rigid frame structure including an inner frame member and means for connecting the end of an adjacent intermediate roller thereto for flexing movement in a generally vertical plane,
and an outer frame member, said outer frame member carrying a strand connector,
at least one elongated substantially transversely positioned frame member for each rigid frame structure, said transversely positioned frame member being rigidly secured at its inner end to the inner frame member, and at its outer end to the outer frame member,
to thereby provide a rigid tension bypass path from the intermediate roller, through the connecting means, and around the wing roller via the rigid frame structure,
a pivot for connecting the inner end of each wing roller to an associated inner frame member which enables the wing roller to move in a plane generally parallel to the plane of the belt passing thereover,
the means connecting the end of the intermediate roller adjacent its associated inner frame member being independent of the pivot connecting the inner end of the wing roller to its associated inner frame member,
and means for connecting the outer end of each wing roller to the outer frame member which enables the outer end of the wing roller to move downstream with respect to the direction of belt travel so as to exert a training effect on the belt.

3,098,558
AUTOMATICALLY REVERSABLE TROUGHING IDLER ASSEMBLY
Roy F. Lo Presti, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1959, Ser. No. 862,561
5 Claims. (Cl. 198—202)

2. For use in a belt conveyor,
a belt training troughing idler assembly in which training rollers in the assembly are automatically movable to a new training position upon reversal of the direction of belt travel solely in response to passage of the belt thereover,
said idler assembly including, in combination,
a roller assembly,
said roller assembly having at least one intermediate roller flanked by a pair of wing rollers,
the outermost end portion of each wing roller being swingable in a plane generally parallel to the plane of the belt passing thereover into a new training position consistent with the direction of belt travel,
a supporting and repositioning arm for each wing roller,
each arm being connected, at its upper end portion to the outermost end portion of an associated wing roller,



a surface of the lower end portion of each arm resting in rolling engagement on an associated stationary base,
the engaging surfaces of each repositioning arm and its associated stationary base being so contoured that the outermost end portion of each wing roller traverses a horizontal path as each arm rolls along its supporting surface, and
stop means for limiting the movement of the outermost end portion of each wing roller.

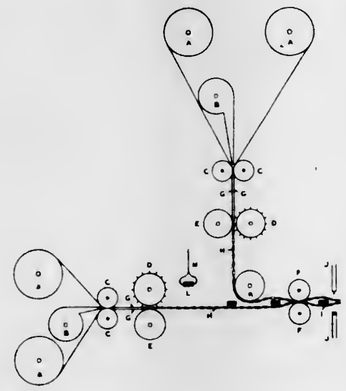
3,098,559
PACKING CONTAINER
Wenzel Bienert, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Nov. 19, 1958, Ser. No. 775,062
Claims priority, application Germany Dec. 7, 1957
2 Claims. (Cl. 206—62)



1. In a packing container arrangement for holding at least one article therewithin, including a rectangular tubular container of transparent plastic having an opening defined at one end thereof and a cap closing said opening, the improvement which comprises an insert sheet bent about its longitudinal axis and longitudinally disposed in the packing container in arcuately flexed condition, said sheet being snugly and removably positioned in flexed tension abutment with three sides of the rectangular container and serving to cover directly at least a portion of the article within the container and serving to separate the article from said three sides of the rectangular container, said insert sheet having a wedge-shaped cut-out portion on the side thereof directed toward the container opening permitting a supplemental insert sheet means to be removably inserted between the container and said insert sheet at the wedge-shaped cut-out portion.

3,098,560
INSULATING MATERIAL FOR PREVENTION OF THE TRANSFER OF HEAT
Hugh B. Skees, 10514 Sonata Drive, Afton 23, Mo.
Filed July 14, 1958, Ser. No. 748,455
10 Claims. (Cl. 206—45.33)

1. A heat insulating system consisting of an insulated object and a heat insulating barrier member enclosing said object, said heat insulating barrier member consisting of a plurality of spaced-apart relatively thin sheets sealed together at their common edges and at various points over their respective common areas and being inflated with a gas, one of said sheets having one surface thereof facing said object and another of said sheets having one surface exposed to and facing the surroundings of the system, said object being at a temperature substantially the same as the temperature of said sheet surface facing said object and substantially different from the temperature of said sheet surface exposed to and facing the surroundings of the system.

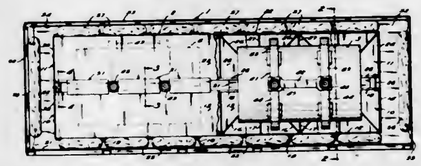


3,098,561
PACKAGE INCLUDING HANGER FOR CLOTHING
David Kass, Kew Gardens, N.Y., assignor to Original Toy Corporation, Brooklyn, N.Y., a corporation of New York
Filed Mar. 2, 1962, Ser. No. 177,011
19 Claims. (Cl. 206—45.34)



16. A package for clothing, including a hanger and a bag, said hanger comprising oppositely directed arms to receive an article of clothing, a hook thereabove, a tab projecting downward below the hook, said bag being open at the bottom and closed at the side edges and at the top edge except for a slit in the center, the hook of the hanger passing through the slit at the top of the bag, and one edge of the slit of the bag being received beneath the tab of the hanger.

3,098,562
LOADING SYSTEM APPARATUS
Lawrence C. Simmons, Cleveland, Ohio, assignor to Cleveland Technical Center, Inc., Cleveland, Ohio, a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,444
3 Claims. (Cl. 206—46)

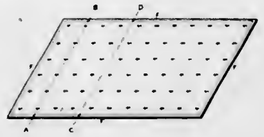


2. A rigid, longitudinally extending shipping container, adapted to enclose and support from the sides thereof an article to be shipped, comprising a lower, rigid, longitudinally extending section which includes a bottom wall having a substantially smooth bottom surface extending substantially throughout the length of said section, a pair of upwardly extending parallel side walls connected to said bottom wall and each having an outwardly facing substantially smooth surface extending substantially throughout the length of said section, and at the upper edges of said side walls a pair of parallel longitudinally extending members of substantial cross section each of which is adapted to reinforce the side wall on which it is mounted and act as a roller guide rail; a carrier, adapted to support an article to be shipped, comprising a transversely extending frame having at each side thereof a pair of longitudinally spaced rollers adapted to engage in rolling contact, and be supported by, the longitudinally extending member fixed to the top edge of the adjacent side wall of said lower section, each roller and the longitudinally extending member supporting it being adapted to prevent substantial relative transverse movement between said roller and said member; an upper rigid, longitudinally extending section which includes a top, a pair of downwardly extending side walls connected to said top and each having an outwardly facing substantially smooth surface extending substantially throughout the length of said section, and at the lower edges of said side walls a pair of longitudinally extending reinforcing members each adapted to reinforce the side wall on which it is mounted; and at each side of said container, a plurality of longitudinally extending spacer members each of which is demountably rigidly connected to, and spaces apart, said longitudinally extending reinforcing members at the longitudinal edges of said upper and lower sections and has a substantially smooth outwardly facing surface, the ends of said spacer members at the sides of said container being spaced apart and serving to locate said rollers longitudinally of said container, and said spaced upper and lower longitudinal reinforcing members serving to locate said rollers vertically and transversely of said container, whereby an article to be shipped mounted in said carrier is supported in said container and secured against substantial longitudinal, vertical and transverse movements relative to said container.

3,098,563
INFLATABLE HEAT INSULATING MATERIAL
Hugh B. Skees, 10514 Sonata Drive, Affton, Mo.
Filed Oct. 3, 1960, Ser. No. 60,220
5 Claims. (Cl. 206—46)

1. A heat insulating system consisting of an insulated object and a heat insulating barrier member enclosing said object, said heat insulating barrier member consisting of relatively thin sheets sealed together at their common edges and at various points over their respective areas and means for producing a gas, said means including at least

two materials capable of reacting with each other, said means being between said sheets, said materials being separated prior to reacting, one of said sheets having one surface thereof facing said object and another of said sheets having one surface exposed to and facing the surroundings of the system, said object being at a temperature substantially the same as the temperature of said sheet surface facing said object and substantially different from the temperature of said sheet surface exposed to and facing the surroundings of the system.



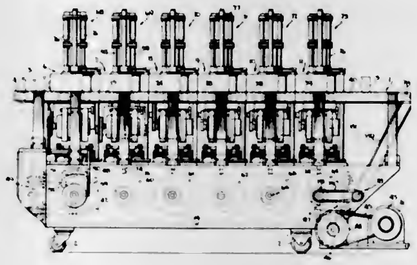
3,098,564
AUTOMATIC CONTAINER INSPECTION MACHINE
Frederick Z. Fouse and Jay F. Kidwell, Lancaster, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Aug. 18, 1961, Ser. No. 132,509
18 Claims. (Cl. 209—75)



1. An inspection machine for detecting defective transparent containers and for automatically rejecting the defective containers comprising three or more container inspection stations, means for moving the containers consecutively to said stations, inspecting means at each of said stations including a scanning light beam and a light sensitive means positioned to receive light from a flaw, said light beam being directed to pass inwardly of said containers at one of said stations, said light sensitive means being positioned outside of said container at said one station to receive light reflected by a flaw, said light beam being directed inwardly of said container at a second station, said light sensitive means being positioned within said container at said second station to receive light refracted by a flaw, and said light beam being directed outwardly through the container walls at said third station to receive light refracted by a flaw, and said light sensitive means being positioned outside said container at said third station.

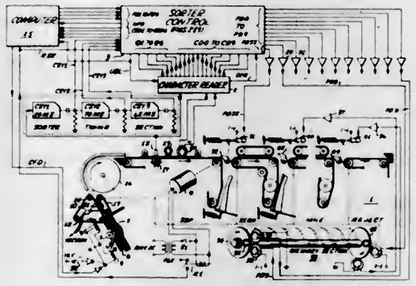
3,098,565
AUTOMATIC CONTAINER INSPECTION MACHINE
Frederick Z. Fouse and Jay F. Kidwell, Lancaster, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Sept. 8, 1960, Ser. No. 54,616
19 Claims. (Cl. 209—111.5)

9. An inspection machine for glass containers comprising two spaced container inspection stations, means to transfer containers between said stations, means to direct a narrow light beam through the container walls at each station, means at one station to receive and sense a light beam diverted along a first path by defects in the container walls, means at the other station to receive and sense a light beam diverted by other defects in the container walls, container reject means operatively connected to each of said defect sensing means, and each of said container inspection stations comprising a pair of container inspection positions, a container drive means at each position



for rotating the pair of containers at each inspection station in opposite directions.

3,098,566
DOCUMENT SORTING SYSTEM
Byron F. Burch, Jr., Phoenix, Ariz., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1961, Ser. No. 149,120
15 Claims. (Cl. 209—111.5)



1. In a system for sorting documents, each document having data comprising characters recorded thereon and separated into fields, means for allowing identification and special sorting of a predetermined class of documents defined by specified characters in specified character positions of any number of said fields comprising:

an apparatus having at least two pockets into one of which documents of said predetermined class are deposited as they are sorted in accord with said specified characters;

a mechanism for transporting documents into said pocket as they are sorted;

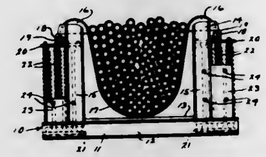
first means for reading said characters of a given document in sequence to produce electrical signals characteristic of said characters;

second means for sequentially locating said specified character position of said given document;

third means for effectively comparing in sequence characters read from said specified character positions of said given document with said specified characters;

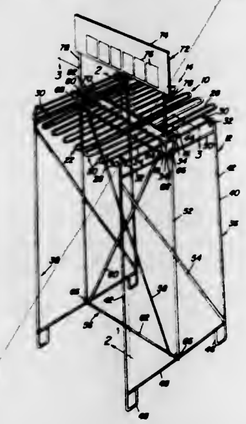
and control means responsive to said third means for sorting said documents of said predetermined class of documents and depositing them in one of said pockets in response to a comparison between characters read from said specified character positions of said given document with said specified characters.

3,098,567
PIPE RACK
Homer J. Steel, 915 Madera Circle, Elm Grove, Wis.
Filed Mar. 5, 1962, Ser. No. 177,333
4 Claims. (Cl. 211—49)



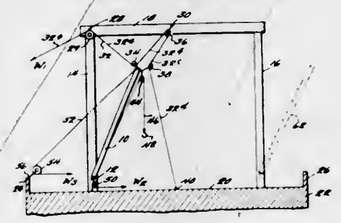
1. An apparatus for receiving and bundling pipes incident to manufacturing steps, said apparatus comprising a pair of substantially identical racks disposed in parallel spaced relationship, each of said racks including a base, a pair of upright members disposed in parallel spaced relationship on said base, a flexible non-elastic strap trained over the tops of said upright members and supported thereby, said strap including a pipe supporting and pipe conforming portion disposed between said upright members and end portions lying adjacent to said upright members, the straps carried by the racks being disposed in spaced parallel relation leaving intermediate and end portions of pipe on said straps clear for engagement by handling apparatus, and yieldable strap anchoring means disposed between the ends of said strap and said base to maintain said strap in substantially taut condition whereby the application of pipes on said pipe supporting portions of said straps resulting in the elongation of said yieldable anchoring means to maintain the loading level of said rack at a substantially constant height.

3,098,568
SUPPORT STAND
Thomas H. La Pierre, Jackson, Mo.; Mary J. Crabtree, executrix of said Thomas H. La Pierre, deceased, assignor to E. L. Keathley, Bernie, Mo.
Filed Sept. 18, 1961, Ser. No. 138,684
6 Claims. (Cl. 211—60)



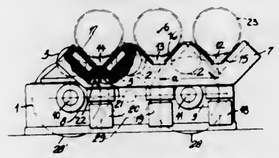
1. A support stand for supporting tool handles, said support stand comprising a pair of upstanding generally planar end leg frames interconnected by means of a central upstanding generally planar web frame extending therebetween whose opposite ends are pivotally secured to the corresponding end leg frames for rotation about upstanding axes disposed generally equidistant from the opposite ends of said end frames, a generally planar clamp assembly defining a plurality of generally parallel and horizontally disposed recesses each including opposite sides defining abutment surfaces adapted to embrace and support the enlarged end portions of hickory tool handles, said clamp assembly including opposite ends disposed in removable overlying relation to the upper surfaces of said end frames with the latter generally paralleling each other and disposed normal to the plane of said web frame, said clamp assembly including means releasably engaged with the upper edge portions of said end frames retaining said end frames in position against rotation relative to said web frame.

3,098,569
BOOM RIGGING
Valdemar C. Farrell, Rte. 1, Box 172, Harwood, Md.
Filed Jan. 26, 1962, Ser. No. 168,930
10 Claims. (Cl. 212—3)



1. In combination with a boom which is pivotally heeled at a given point, means positioned at an elevation above said heel point for providing at least one topping anchor point, means positioned to one side of said heel point and at an elevation below said topping anchor point for providing a vang anchor point, means positioned to the other side of said heel point for providing a further anchor point, first cable means acting between a point on the boom spaced from the heel point and said vang anchor point, and second cable means acting between said topping anchor point thence over pulley means on the boom to said further anchor point, the arrangement being such that all forces exerted by the second cable means are exerted from the boom to the topping and further anchor points.

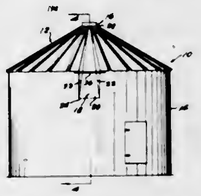
3,098,570
PIPE FEEDING APPARATUS
Hans Lindemann, Bielefeld, Germany, assignor to Th. Calow & Co. Maschinenfabrik u. Eisengiesserei, Bielefeld, Germany
Filed May 20, 1958, Ser. No. 736,531
Claims priority, application Germany May 21, 1957
2 Claims. (Cl. 214—1)



1. In an apparatus for transporting an elongated substantially cylindrical workpiece from one to the other of a plurality of work positions, and for rotating said workpiece when in one of said work positions, in combination, a support; a plurality of first roller means having parallel axes of rotation and mounted on said support for carrying respective elongated workpieces annd for rotatably supporting the same about respective longitudinal axes of said workpieces, said axes being substantially parallel to each other and to said axes of rotation and spaced from each other in a transverse direction; a mov-

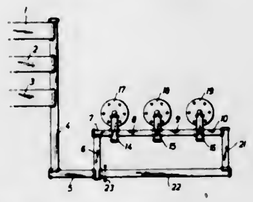
able frame mounted on said support for movement transverse of said longitudinal axes in a composite movement having a component parallel to a plane passing through said axes and another component transverse to said plane; a plurality of second roller means mounted on said frame and having axes of rotation transverse to said axes, said second roller means moving during said transverse movement of said frame toward and away from respective positions aligned in the direction of said respective longitudinal axes with respective ones of said first roller means and spaced from each other in a transverse direction, each of said second roller means being rotatable for affecting longitudinal movement of workpieces carried by said second roller means; and means for actuating rotation of two transversely adjacent ones of said second roller means in such a manner as to actuate longitudinal movement in opposite directions of respective workpieces carried by said two roller means.

3,098,571
GRAIN BIN CONVEYOR SUPPORTING CHANNEL
Henry Fehr, P.O. Box 491, Sutton, Nebr.
Filed Mar. 23, 1962, Ser. No. 182,046
3 Claims. (Cl. 214—17)



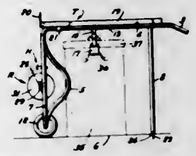
1. A grain bin having a declining roof, a sidewall, and an inlet opening at the upper end of the roof, said roof being formed with a radial opening extending from said inlet opening to the lower end of the roof, a channel having spaced side walls fixed at their upper edges to the edges of the radial opening and a bottom wall fixed to the lower edges of said side walls, said bottom wall declining at a greater angle than the roof, the sidewall of the bin having an opening extending downwardly from the lower end of the roof to edges of which the depressed ends of the side walls and bottom wall of the channel are fixed.

3,098,572
METHOD FOR THE CONTROLLED FEEDING OF MATERIAL TO PROCESSING UNITS
Wilhelm Walter Karl Quester, Cologne, Germany, assignor to Wilh. Quester, Cologne-Sulz, Germany, a firm
Filed Dec. 8, 1959, Ser. No. 858,277
Claims priority, application Germany Dec. 10, 1958
2 Claims. (Cl. 214—152)



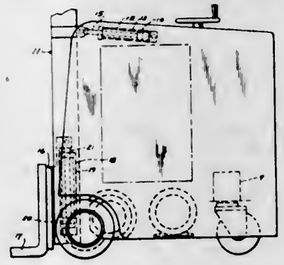
1. A method for the controlled continuous feeding of bulk material to a plurality of material processing units comprising the steps of continuously supplying bulk material from a bulk material source at a rate at least equal to the combined maximum requirements of the plurality of material processing units over a given period of time determined by the maximum consumption of said processing units, delivering bulk material intermittently and sequentially and in a constant direction to the material processing units in relation to the actual demand requirements of the material processing units during said given period of time continuously accumulating excess material not accepted by said material processing units during the given period of time and making it available to said material processing units during a subsequent time interval and uniformly directing an accumulated supply of excess material during said subsequent time interval to said processing units prior to and independently of supplying said processing units from said bulk source.

3,098,573
UTILITY VEHICLE
Glenn E. Wise, 501 13th St. NW., Washington 4, D.C.
Filed Aug. 24, 1960, Ser. No. 51,593
6 Claims. (Cl. 214—394)



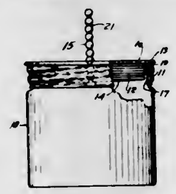
1. A utility vehicle comprising: a pair of spaced apart substantially horizontal load-supporting portions each having a front end and a rear end; a handle portion attached to the rear end of each of said supporting portions; a leg attached to and depending from each of said supporting portions near the rear end thereof; a knee-forming portion attached to and extending downwardly inwardly and rearwardly and then downwardly, outwardly and forwardly from each of said supporting portions; an axle-attaching portion attached to and extending inwardly from the lower end of each of said knee forming portions; an axle attached to and extending between said axle-attaching portions; a wheel rotatably mounted on said axle; and load suspending means attached to and depending from each of said load-supporting portions forwardly of said legs but rearwardly of said knee-forming portions, said knee-forming portions providing a pair of spaced-apart knees adapted to simultaneously engage and stabilize a load suspended from said load-suspending means.

3,098,574
HYDRAULICALLY DRIVEN INDUSTRIAL TRUCK
Robert F. De Marco, Mentor, Ohio, assignor to The Helfred Corporation, Willoughby, Ohio, a corporation of Ohio
Filed June 8, 1961, Ser. No. 115,721
17 Claims. (Cl. 214—674)



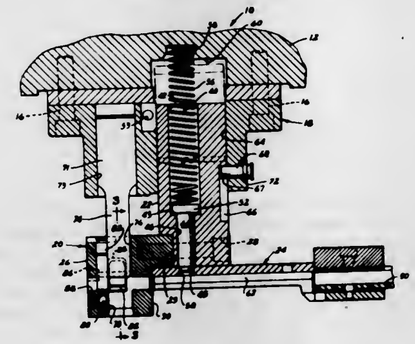
16. An industrial truck including a chassis, a pair of driving wheels, a hoist mast carried by the chassis, a hoist on the mast, hydraulic motors drivingly connected to the wheels, respectively, a first piston and cylinder assemblage for operating the hoist, a second piston and cylinder assemblage for tilting the mast, a single unidirectional direct current electric motor, a battery carried by the chassis for energizing the electric motor, two separate variable delivery hydraulic pumps connected to the electric motor means and driven thereby, one circuit connecting one pump to the hydraulic motors in parallel and an additional circuit connecting the other pump to the assemblages, said two last mentioned circuits being normally disconnected from each other, valve means for controlling the direction of flow of pressure fluid in said one circuit to the hydraulic motors and in the additional circuit to the assemblages, respectively, and additional valve means for diverting the pressure fluid from the additional circuit to the pressure side of said one circuit.

3,098,575
VACUUM SEAL CONTAINER CAP
Raymond J. Siebelt, 229 Velma Drive, Largo, Fla.
Filed Jan. 25, 1962, Ser. No. 168,672
5 Claims. (Cl. 215—37)



1. In a vacuum seal container closure, the combination which comprises a cap designed to be secured on the open end of a container, a bellows carried by the cap and arranged to be positioned in a container on which the cap is positioned, said cap having a keyhole slot therein, and a flexible corrugated stem extended from the bellows through the keyhole slot of the cap and designed to be retained in said keyhole slot with the bellows collapsed.

3,098,576
ELECTRONICALLY CONTROLLED FEED HEAD
Jerry H. Steward, Detroit, Mich., assignor to Multifastener Corp., Redford, Mich.
Filed Sept. 18, 1958, Ser. No. 761,887
1 Claim. (Cl. 218—2)

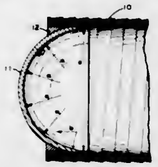


In an apparatus for simultaneously installing a plurality of pierce nuts in a panel and including a press, a plurality of press-actuated feed heads each having a nut-locating bore, means for supplying nuts one after another to an initial position in each of said bores and a punch movable by said press in each of said bores respectively, between a first retracted position at which a nut is in said initial position in bore between the punch and the panel and an extended position at which the nut located in each bore is displaced from said initial position toward said panel, the improvements of a control system for preventing actuation of the press in response to the absence of a nut in any one of said bores and for indicating such bore, comprising means connecting each of said heads, respectively, to one side of a separate relay element corresponding to such head, a contact means located in each of said bores, each of said contact means being insulated from its feed head and being connected to the other side of said relay elements, each of said contact means being adapted to be touched by a nut in its bore so that when a nut is in such bore and in contact with its feed head both sides of the corresponding relay element are connected together, each of said relay elements being operative in response to connection of its sides to open a set of normally closed contacts and to close a set of normally open contacts, a limit switch responsive to the position of the press and having a first contact arm closed when the press is open and said punches are in their retracted positions and having a second contact arm closed in response to predetermined movement of the punches away from said retracted position, a separate warning light supplied with current when each of said contact means in said bores is touched by a nut, said lights being connected in parallel to one side of a source of electrical current and connected to the other side of said source by said normally closed contacts and through the first contact arm of said limit switch, an additional safety relay connected to one side of said source of current and connected to the other side of said source through all of said sets of normally open contacts in series when such contacts are closed by said relay elements, said safety relay having a pair of normally closed contacts, said second switch arm of said limit switch also connecting said additional safety relay to the other side of said source of current to by-pass said normally open contacts of said relay elements, a press trip solenoid energizable to prevent actuation of said press, said solenoid being connected to one side of said source of current and being connected to the other side of said source by said normally closed contacts of said safety relay, whereby said relay elements are each controlled by the presence of a pierce nut in the bore of the corresponding feed head to prevent supply of current to said warning lights from the first contact arm of the limit switch when said punches are in their retracted positions and whereby said additional safety relay is conditioned by the closure of all the normally open contacts of said relay elements to de-energize said trip solenoid when said nuts are in position, said additional safety relay being maintained in said de-energizing condition by the second contact arm of said limit switch as the press is actuated to thereby maintain de-energized said solenoid despite displacement of said nuts and consequent disconnection of the sides of the relay elements, and whereby the absence of a nut in any one of said feed heads prior to actuation of said press will light the corresponding warning light and will energize said solenoid to prevent press actuation.

3,098,577
PRESSURE VESSEL JOINT
Karl A. Dietrich, Hamburg Cove, Lyme, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,604
19 Claims. (Cl. 220—3)

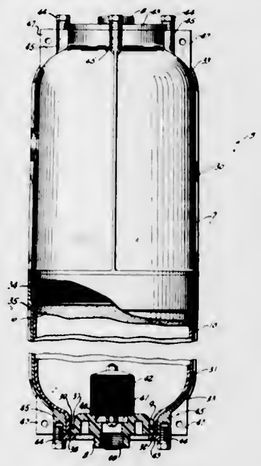
1. A cylindrical pressure vessel, comprising a domed round end member having an outer cylindrical surface at the wide end thereof; a ring member coaxially surround-

ing said end member and having an outer substantially cylindrical face providing together with said cylindrical face of the domed member a combined cylindrical attachment area, and having an inner substantially conical face substantially conforming to an adjacent annular portion of the surface of the domed member and adapted to restrain the same against internal pressure in the vessel; a tubular construction consisting of helically wound strip material of substantial tensile strength with a large ratio of width to thickness, said strip material having an end portion wound around said combined attachment area with the windings of the strip material tightly wound heli-



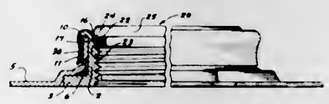
cally one upon the other in overlapping relationship and the overlap large enough to constitute a wall thickness comprising a plurality of thicknesses of said strip material, and with the outer edge portion of the strip material stretched relative to the inner edge thereof to accommodate said overlap; first bonding means provided at the interface between said tubular construction and said combined attachment area, second bonding means effective at the interface between the overlapping portions of said windings, each of said bonding means providing sufficient shear resistance to absorb the longitudinally directed forces present in said wall thickness due to said internal pressure in the vessel.

3,098,578
PRESSURE VESSEL
John Rudelick, Milwaukee, Wis., assignor to Bruner Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 15, 1960, Ser. No. 2,644
5 Claims. (Cl. 220—5)



1. In a tank:
A. means defining a hollow outer shell having high tensile strength and having its interior shaped to provide an elongated cylindrical body and convergent shoulders connecting with coaxial smaller diameter tubular neck portions on the ends of the body;
B. a hollow inner one piece fluid retaining member inside the shell, which is substantially stiff and normally form retaining, and which has a cylindrical body wall contiguous to the shell body and tubular neck portions at its ends projecting coaxially into those on the shell and contiguous thereto, said inner member having convergent shoulders engaging those on the shell so that the latter secures the inner member against endwise movement relative to the shell, and said inner member being made of a homogeneous, nonporous plastic material having elastic characteristics on the order of those of "Kralastic," and its wall being sufficiently elastic to enable those portions thereof which do not fit the cylindrical body of the shell closely enough to engage the same in the absence of internal pressure to be distended into engagement with the shell body in response to internal pressure, to thus transmit to the outer shell the force which fluid imposes on the inner member so that the latter can safely withstand pressures far exceeding those that would rupture it if it were unreinforced;
C. end closure means at the ends of the tank, each having a portion projecting into the adjacent tubular neck portion on the inner member and cooperating with a surrounding portion of the outer shell to define a cylindrical well into which the adjacent tubular portion on the inner member projects, the end closure means at one end of the tank having a hole therethrough communicating with the interior of the tank to provide for connection of the same with a source of fluid under pressure;
D. means connecting the end closure means with the outer member so that the latter holds the end closure means engaged with the tubular neck portions at the ends of the inner member and receives the force which fluid under pressure in the tank imposes upon the end closure means;
E. and means sealing the end closure means in said tubular end portions on the inner member, comprising an annular pressure seal gasket in each of said wells, concentrically interposed between the inner surfaces of said tubular end portions on the inner member and those portions of the end closure means that project thereinto.

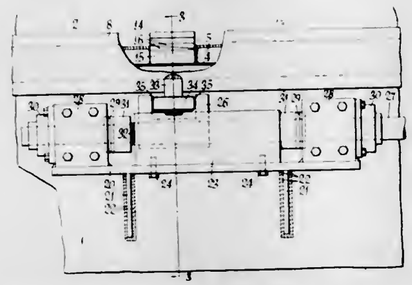
3,098,579
CLOSURE RECONDITIONING MEANS AND METHODS
Herbert F. Wheaton, Murray Hill, N.J., assignor to American Flange & Manufacturing Co. Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 12, 1958, Ser. No. 773,457
8 Claims. (Cl. 220—39)



1. A reconditioning collar for the reconditioning of steel drum closures, which closures include an upstanding neck formed out of the container wall stock and a closure flange having a cylindrical portion within said neck, said flange having a portion beaded over the upper end of said container wall neck and having a laterally extending portion, at the other end of said cylindrical portion, securing a gasket between the same and the inner surface of the container wall stock at the base of the neck, which reconditioning collar comprises, a substantially cylindrical skirt portion and an integral inwardly beaded rim portion at the upper end of said skirt portion, said bead portion being formed for mated engagement with the

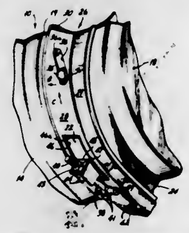
beaded over portion of said closure flange and said skirt portion formed to extend downwardly past said bead in opposition to said container wall neck spaced outwardly therefrom and for a substantial portion of the height thereof, the lower portion of said skirt portion, in one position of the securing thereof, flaring outwardly away from said container wall neck, said reconditioning collar being formed of light weight deformable sheet steel of substantially less thickness than the thickness of said container wall stock.

3,098,580
QUICK OPENING CLOSURE MECHANISM
Richard G. Lyall, Buffalo, N.Y., assignor to Yuba Consolidated Industries, Inc., San Francisco, Calif.
Filed Feb. 21, 1961, Ser. No. 90,877
4 Claims. (Cl. 220—40)



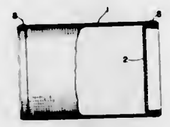
4. In combination with a vessel, a closure member for said vessel, and a locking ring carried by said vessel for rotation relative thereto and to said closure member, said locking ring when in a first rotary position locking said closure member in closed position on said vessel and when in a second rotary position releasing said closure member for opening movement relative to said vessel, an actuating device for rotating said locking ring between said first and second positions comprising, a drive member mounted on said vessel for substantially rectilinear movement relative to said vessel generally peripherally thereof, means selectively operable to so move said drive member, and means placing said drive member in driving engagement with said locking ring, said last-named means including roller means carried by said locking ring and engaging said drive member for translating rectilinear motion of said drive member into rotation of said locking ring.

3,098,581
LAUNDERING APPARATUS
Dominic O. Marsilio, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Mar. 3, 1961, Ser. No. 93,197
6 Claims. (Cl. 220—46)



1. Fabric laundering apparatus comprising a tub having an open end, a cover member closing said open end, a strap having two portions disposed generally at right angles with respect to each other, one of said portions encircling said tub adjacent the mentioned end thereof, the other of said portions overlapping said cover member, compressible sealing material interposed between said tub and said one of said portions and between said end and said cover member, camming slots in said one of said strap portions, protuberances on said tub adjacent said end and disposed in engagement with said slots to displace said strap laterally to force said cover member in a direction for compressing said material between said end and said other of said portions in response to rotational movement of said strap about said tub, means including a latch bolt connected to said tub and to said strap for imparting rotational movement to the latter, said strap having terminal ends located one adjacent the other, and means including a tie-bolt interconnecting said terminal ends to tighten said strap for compressing said material between said tub and said one of said strap portions.

3,098,582
FIBER REINFORCED PLASTIC VESSEL AND METHOD OF MAKING THE SAME
Wesley G. Martin, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed June 19, 1959, Ser. No. 821,415
5 Claims. (Cl. 220—67)

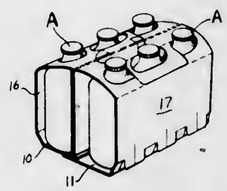


4. A reinforced plastic vessel, comprising a generally cylindrical shell having an end portion diverging inwardly toward the axis of the shell, a head disposed within the end portion of the shell and having a central portion extending across the shell and having a peripheral flange facing outwardly of the end of the shell and diverging inwardly toward the axis of the shell, said flange being disposed in lapping relation with the inner surface of said shell and located longitudinally outward toward the end of the shell from the central portion of said head, and a strand of resin impregnated substantially continuous fibers disposed circumferentially around the outer surface of the shell in radial alignment with the lapping surfaces and located longitudinally outward toward the end of the shell from said central portion of the head, said strand being under a high degree of tension and maintaining the outer end portion of the shell and said flange in said diverging condition to thereby firmly hold the head within the end of the shell.

3,098,583
CARTON LOCK
Earle C. Sherman, Monroe, La., and Raymond A. Cote, Metuchen, N.J., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Aug. 28, 1961, Ser. No. 134,174
3 Claims. (Cl. 220—113)

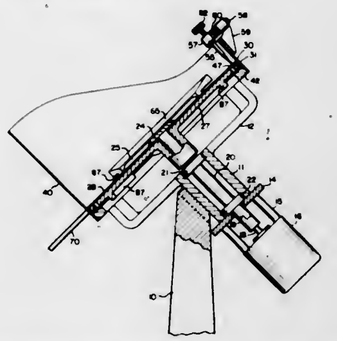
1. A wrap around carrier for containers including a pair of vertical side walls joined to a top wall, an inner margin joined to one of said side walls and extending generally normal thereto, an outer margin secured to the other side wall and extending generally normal thereto in overlapping relation with said inner margin, a first hinge flap cutout of said inner margin and folded normal thereto along a transverse hinge line to define an opening bounded along one edge by a locking bar, said first hinge flap being provided with a tuck flap along a free edge

thereof, said outer margin including a second hinge flap rotatably secured thereto along a transverse score line, said second hinge flap including locking tongue means integral therewith, said locking tongue means projecting



toward said other side wall and engageable with said locking bar when said second hinge flap is rotated into a position generally normal to said outer margin, and cutouts in said second hinge flap adapted to accommodate said tuck flap.

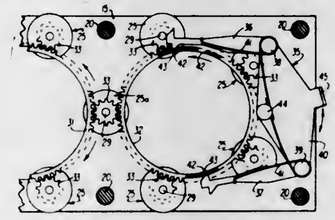
3,098,584
BUTTON FEEDER AND SORTER
Darcy Andrews Young, Jr., Rochester, N.Y., assignor to Rochester Button Company, Rochester, N.Y., a corporation of New York
Filed Sept. 28, 1960, Ser. No. 59,055
6 Claims. (Cl. 221—12)



1. The combination with a conduit, of a hopper for holding articles and having a discharge port therein through which articles may pass from said hopper into said conduit, feeding means movably mounted in said hopper and movable therein to feed the articles in said hopper toward said port, means for actuating said feeding means, a movable gate for closing said port, spring means constantly urging said gate to closed position, means operatively connected to said feeding means for periodically opening said gate against the resistance of said spring means, and means operatively connected to said gate and positioned to engage an article in said conduit, when said conduit is filled with the articles to a predetermined point, to positively prevent said gate from being opened.

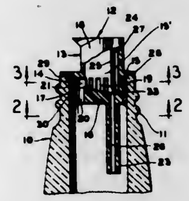
3,098,585
CUP DISPENSER
Hubert M. Giepen, Chicago, Ill., assignor to Giepen Associates, Inc., River Grove, Ill., a corporation of Illinois
Filed Oct. 19, 1960, Ser. No. 63,523
2 Claims. (Cl. 221—116)

1. A cup dispenser comprising, in combination, a frame including a generally horizontal frame plate having a pair of spaced circular cup stack receiving openings, a plurality of cup-feeding cams journalled in said frame about each of said openings with one cam spaced midway between the two openings, said cams each having supporting ledges and dropping ledges diametrically disposed and vertically spaced so that said ledges alternately underlie the rims of the bottom and next to bottom cups of stacks in said openings upon rotation of the cams, said cams being phased so that each cam is identically disposed with respect to its adjacent opening as is that cam which is midway between



the openings, each of said cams having a gear portion, an annular ring gear journalled in each of said frame openings, said ring gears being respectively in meshing engagement with the gear portions on each of those cams surrounding the respective openings and both ring gears meshing with the gear portion of that cam midway between the openings, and means for rotating said cams in one direction.

3,098,586
LIQUID POURING DEVICE AND INSERT MEMBER FOR A BOTTLE
Charles Wasserberg, 187 Forest Hill Road, West Orange, N.J.
Filed Feb. 14, 1961, Ser. No. 89,314
12 Claims. (Cl. 222—147)



1. A liquid dispenser for use in the neck of a bottle comprising a liquid chamber having circumferentially spaced ribs forming inlet ports thereto, said ribs forming longitudinal passages to permit liquid in the bottle to be discharged into said chamber, a pouring spout extending above said chamber for receiving liquid therefrom, upper air vent means adjacent said spout and in communication with said chamber, lower air vent means in communication with said chamber and extending below said chamber with its upper end spaced from the lower end of said upper vent means, and means in the bottom of said liquid chamber to cause a liquid seal across said chamber when liquid is poured into said bottle.

3,098,587
PUMP APPARATUS
Fred P. Hopfeld, Elmwood Park, Ill., assignor to Grand Specialties Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 14, 1960, Ser. No. 22,194
1 Claim. (Cl. 222—176)

In a lift truck having a wheel supported base and an upright frame supporting a vertically movable lift carriage thereon, a hydraulically operated ram including a normally vertically operable cylinder and piston adapted to

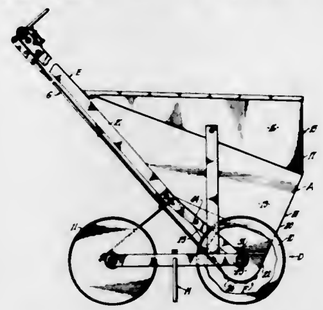
elevate the carriage, and pump apparatus including a manually operable piston for supplying fluid under pressure to said cylinder, said pump apparatus comprising: reservoir means for containing hydraulic fluid, said reservoir means including a tank having flat side walls including a forward side wall and top and bottom end walls, a base member having a flat forward face extending from a forward corner edge of the base member and integrally joined in a side wall of the tank along the portion of the side wall which is immediately adjacent the bottom wall of the tank, said base member having conduit means formed therein, which conduit means include an outlet opening in the base member portion thereof other than in said flat face and interconnected passageways for conducting fluid between the tank and the outlet opening, and fluid-pressurizing means including another cylinder integrally joined to said base member and a piston reciprocable



within the cylinder for pumping hydraulic fluid from said tank through said outlet opening for supplying fluid under pressure to said cylinder, a handle connected to the piston of said other cylinder and having a free end projected beyond said base member in position to be grasped, said conduit means including a fluid inlet passageway extending from said fluid-pressuring means and opening at an inlet opening in said flat face of said base member in a location closely adjacent said forward corner edge of the base member most remote from the free end of said handle and communicating with the reservoir afforded by the tank at a point closely adjacent the forward side wall of the tank whereby the pump apparatus is positionable on the lift truck with said handle in either an outermost substantially horizontal position or an uppermost substantially vertical position, with said inlet opening in either instance located at the bottom of the reservoir.

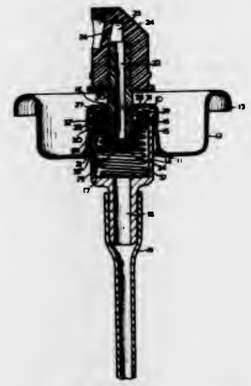
3,098,588
LINE MARKER
Herl J. Ryan, 3421 Mentone Ave., Los Angeles, Calif.
Filed Apr. 4, 1961, Ser. No. 100,714
12 Claims. (Cl. 222—177)

3. Line-marking apparatus comprising: a hopper for holding a quantity of line-marking powder and having a bottom provided with a discharge aperture; a rotary actuator disposed within said hopper and having a plurality of circumferentially spaced actuator elements; means mounting said actuator for rotation on a transverse axis; means for rotating said actuator in a direction in which said actuator elements move forwardly in its upper area; and oscillatory agitator mechanism comprising a rocker head extending longitudinally within said hopper above said rotary actuator, fulcrum means projecting downwardly from an intermediate portion of said rocker head and pivoted to said hopper on an axis parallel to the rotational axis of said actuator, supporting said rocker head for combined vertical rocking and longitudinal swinging movements; means yieldingly urging said rocker forwardly and downwardly at its forward end; said rocker head riding on said actuator elements and successively engaged



thereby so as to generate said rocking and swinging movements.

3,098,589
LIQUID DISPENSING DEVICE
Cecil Robert Montgomery Graham, Lagonda Ave., Killara, New South Wales, Australia
Filed May 20, 1960, Ser. No. 30,519
Claims priority, application Australia May 21, 1959
5 Claims. (Cl. 222—394)



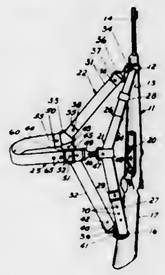
1. A manually operable device for controlling the discharge of liquid under the action of a propellant from a container having an opening, including a resiliently deformable sealing disc for mounting in said opening and having a central aperture, a valve body having a central cavity formed with a seat and a rim surrounding said cavity and said seat, means which resiliently urge the rim of said valve body into sealing engagement with one side of said disc, a liquid discharge tube having openings in both ends and having a gas-tight fit with the wall of said central aperture of said sealing disc, said tube projecting from opposite sides of said disc and one portion of said tube extending into said cavity and being provided with an exterior flange which is spaced from said sealing disc and rests on the seat formed in said cavity, a lip on said valve body for retaining said flange on said seat, and passages permitting the flow of liquid from one side to the other of said exterior flange and along said one tube portion to the opening in the end of said one tube portion, the area of said opening being restricted to act as a metering inlet orifice to the interior of said tube, the inlet orifice being of circular cross-section and having its flow axis in line with the longitudinal axis of the liquid discharge tube.

3,098,590
COAT RETAINER
Elmer L. Richardson, 4216 Polk Ave., Houston, Tex.
Filed Dec. 19, 1960, Ser. No. 76,631
2 Claims. (Cl. 223—71)



2. In a coat retainer, a strip of rigid material to be mounted on a garment in longitudinal relation thereto, one portion of said strip having elongated button receiving means formed therein and the other portion of the strip being reduced in width, a buttonhole receiving tab in said strip in horizontal alignment with said button receiving means and another buttonhole receiving tab formed in the opposing end of said strip in longitudinal alignment with said first mentioned tab.

3,098,591
GUN CARRYING HARNESS
Leslie R. Lerude, 195 Crummer Lane, Reno, Nev.
Filed Mar. 20, 1961, Ser. No. 96,867
1 Claim. (Cl. 224—1)



In combination a gun and harness, said gun having upper and lower swivels, an adjustable sling attached at its ends to the upper and lower swivels, a slide on said sling, said harness comprising a first strap means having first and second sections, each of said sections being slightly longer than one-half the length of said sling, a securing means, one end of said first section being connected to said upper swivel and one end of said second section being connected to said lower swivel, said other ends of said first and second sections being connected to said securing means, an adjustable waist strap, said waist strap being secured at one end to said securing means and at its other end to said slide on said sling.

3,098,592
FISH STRINGER
Sol Eisman, 7031 Sheridan Road, Chicago, Ill.
Filed June 29, 1961, Ser. No. 120,782
1 Claim. (Cl. 224—7)

A fish stringer comprising, four spring pins each having a rear leg, a central upstanding bracket enclosing and rigidly securing the rear legs of said pins with the pins being 90° apart and said bracket rigidly non-yieldingly supporting said legs,

said bracket being the sole support for said pins and positioned at the mid-portion of said legs with yieldable free leg portions above and below the bracket,

the lower portion of each pin leg having a wound loop bottom projecting radially out from said leg,

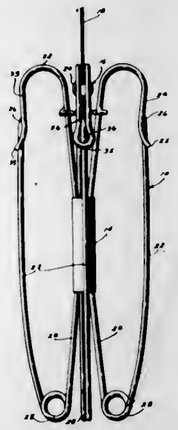
each loop bottom terminating in an upstanding prong biased outwardly from said rear leg,

a sharp point on the terminal end of each prong,

each rear leg having a hook-shaped top and extending radially outward and downwardly from the leg,

each said top end having a prong receiving recess to releasably retain the pointed end of the prong,

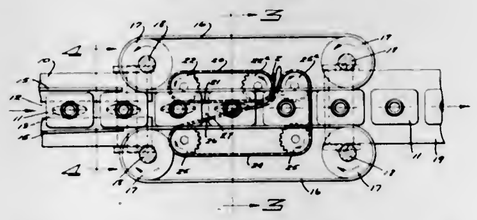
said upstanding central bracket and multiple leg assembly holding said prongs in circumferentially spaced relationship to receive fish jaws without piercing the fish gills to thereby hold



the fish in relatively free swimming relationship around said central bracket with said yieldable free leg portions above and below the bracket affording resiliency to the pins relative to the bracket and both of said portions bending with forces on the pins from attached fish,

and a central coaxial retainer extending downwardly between the upper portions of said pin legs and free from attachment thereto being secured to said bracket and having a loop at the upper end below the hook-shaped tops of the pins for attachment of a support line radially within said pins.

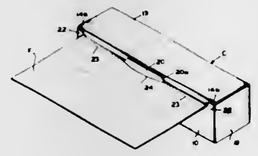
3,098,593
PLASTIC BOTTLE FORMING METHOD AND APPARATUS
James E. Helder, Princeton, N.J., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 8, 1961, Ser. No. 108,460
7 Claims. (Cl. 225—4)



1. The method of removing pendent tails from the bottom end of plastic containers consisting in advancing the containers continuously in normal upright position along

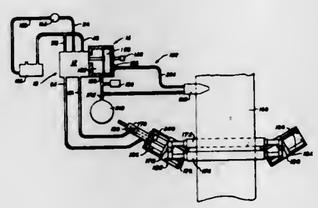
a preselected path, gripping the tails and then pulling them laterally out of the path being traveled by and relative to the containers.

3,098,594
CONTAINER FOR SHIPPING, STORING AND DISPENSING SHEET MATERIAL IN PREDETERMINED LENGTHS
John M. Williamson, Rochester, N.Y., assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed Jan. 23, 1961, Ser. No. 84,348
3 Claims. (Cl. 225—48)



1. In combination, a container for the shipping, storing and successive dispensing of thermoplastic bags of predetermined lengths, and a continuous roll thereof produced from tubular material which has been sealed transversely at spaced intervals and provided with a transversely disposed tear line adjacent each transverse seal, each of said tear lines including a centrally located slit, said container being provided with a dispensing orifice having an edge over which material being dispensed is withdrawn, said edge being provided with a guide tab adjacent each extremity thereof over which material to be withdrawn is supported and also being provided with an integral centrally located arresting tab located in alignment with the slit portions of said tear lines and spaced from said guide tabs by opposed notches, said arresting tab entering the first of said slits as material is withdrawn from the container whereby bags of predetermined lengths may be severed along successive tear lines with the material on each side of the arresting tab being supported within said opposed notches.

3,098,595
DITHERING SERVO VALVE AND WEB GUIDE SYSTEM
John J. Shelton, Tuttle, Okla., assignor to Fife Manufacturing Company, Oklahoma City, Okla.
Filed Feb. 26, 1962, Ser. No. 175,590
12 Claims. (Cl. 226—22)



10. A web guiding system for guiding a traveling web comprising:

a valve housing forming a valve cavity having a power fluid inlet port and a pair of power fluid outlet ports in fluid communication with the valve cavity;

a spool member reciprocally disposed in the valve cavity for alternately placing each of the power fluid outlet ports in fluid communication with the power fluid inlet port;

a source of high pressure power fluid connected to supply high pressure power fluid to the power fluid inlet port;

a guide means for guiding the relative path of travel of a web, the guide means having a fluid servo motor for actuating the means, the power fluid outlet ports being connected to the fluid servo motor for actuating the servo motor in response to the position of the spool member;

a first working surface connected to the spool member for applying a force to the spool member as a result of fluid pressure applied to the working surface;

a first fluid chamber for applying a fluid pressure to the first fluid working surface;

a second fluid working surface connected to the spool member for applying a force to and moving the spool member in correspondence to the pressure of a control signal fluid;

a second fluid chamber for applying a fluid pressure to the second fluid working surface;

counterbalancing means for applying a counter-balancing force to the spool member which is equal and opposite to the average vector sum of the forces applied to the spool member;

a source of pulsating, constant average pressure fluid;

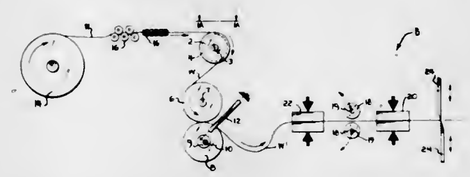
means placing the source of pulsating, constant average pressure fluid in fluid communication with the first fluid chamber;

fluid operated sensing means for producing a control signal fluid pressure which varies in accordance with the position of the edge of a web, the sensing means having a fluid input port and a fluid output port for transmitting the control signal fluid pressure;

means placing the source of pulsating, constant average pressure fluid in fluid communication with the input port; and,

means for applying a fluid pressure to the second fluid chamber proportional to the pressure in the output port.

3,098,596
MEASURING AND FEEDING APPARATUS
Frederick W. Kulicke, Jr., Philadelphia, and Glendon H. Schwalm and Robert Ullman, Harrisburg, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed July 15, 1958, Ser. No. 748,703
3 Claims. (Cl. 226—117)



1. Means for feeding continuous material intermittently comprising a pair of feed rolls on spaced apart axes, said feed rolls having adjacent peripheral portions between which said material extends, at least one of said feed rolls having a power transmission roll mounted coaxially therewith and coupled to said feed roll for rotation therewith, said power transmission roll being of a diameter less than said feed roll, and a driving roll normally in peripheral tangential contact with said power transmission roll, and means for disengaging said driving roll from said power transmission roll during non feeding intervals.

3,098,597
COOKING AND BAKING UTENSIL
Alpha J. Johnson and John A. Moore, Los Angeles, Calif., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Feb. 27, 1953, Ser. No. 339,222
1 Claim. (Cl. 229—2.5)



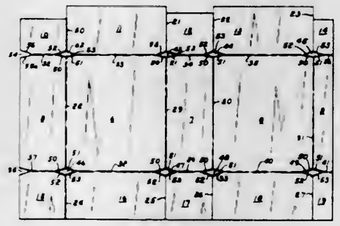
A thin metallic pie plate comprised of thin aluminum foil, a circular main bottom portion, an outwardly flaring side wall portion integrally joined to said main bottom portion, said outwardly flaring side wall portion being formed with a plurality of corrugations, and a rim integrally joined to the upper outer edge of the outwardly flaring side wall portion and extending therefrom, the corrugations in the outwardly flaring side wall portion being continued over into and terminating in said rim, said rim having a flattened margin encircling said plate, the free edge of the margin terminating in an integral bead, the radial extent of said flattened margin being a minor portion of the radial extent of the rim and said corrugations terminating at the inner edge of the flattened margin.

3,098,598
DAIRY WAX COMPOSITION
George A. Weisgerber, Cranford, and Arthur J. Reinsch, Middletown, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 1, 1961, Ser. No. 114,004
8 Claims. (Cl. 229—3.1)

1. An improved wax coating composition which comprises essentially a refined paraffin wax present in a concentration from about 70 to 90% by weight, a first overhead microcrystalline wax present in a concentration of from about 8 to 12% by weight, said first overhead microcrystalline wax having a congealing point of about 130° F., a 5% distillation temperature at 10 mm. pressure of about 490° F. and a 95% distillation temperature of about 706° F., a second overhead microcrystalline wax present in a concentration from about 3 to 12% by weight, said second overhead microcrystalline wax having a congealing point of about 182° F., a 5% distillation temperature at 1 mm. pressure of about 509° F. and a 95% distillation temperature of about 659° F., and a third overhead microcrystalline wax present in a concentration of from about 3 to 7% by weight, said third overhead microcrystalline wax having a congealing point of about 136° F., a 5% distillation temperature at 1 mm. pressure of about 436° F. and a 95% distillation temperature of about 661° F.

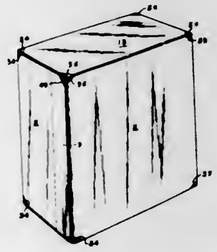
3,098,599
CARTON
Albert W. Hagan, Stratford, Conn., assignor to Roy S. Sanford & Company, Oxford, Conn., a partnership
Filed Aug. 24, 1961, Ser. No. 133,705
6 Claims. (Cl. 229—37)

1. A one-piece blank for a sift-proof carton formed of sheet material including a plurality of vertical wall panels, each pair of adjacent panels being joined along a vertical score line, a foldable end flap at the upper end of each wall panel joined to the corresponding wall panel along a horizontal score line, a cut line separating each pair of adjacent end flaps and terminating an appreciable distance above the center line of the horizontal score lines between the wall panels and end flaps, and score lines on each pair of adjacent wall panels and corresponding end flaps defining a small diamond shaped panel common to the wall panels of said pair and to the corresponding end flaps, the horizontally opposed apices of the diamond shaped panel being positioned respectively on opposite sides of the center line between the wall panels of said pair and lying at the ends of the horizontal score lines



between said wall panels and corresponding end flaps, and the vertically opposed apices of said diamond shaped panel being positioned respectively above the center line of said horizontal score lines at the terminus of the cut line between said corresponding end flaps and at the end of the vertical score line between said pair of wall panels below the center line of said horizontal score lines.

3,098,600
CARTON
Albert W. Hagan, Stratford, Conn., and Paul F. Simpson, Mechanicsburg, Pa., assignors to Roy S. Sanford & Company, Oxford, Conn., a partnership
Filed Aug. 24, 1961, Ser. No. 133,706
5 Claims. (Cl. 229—37)



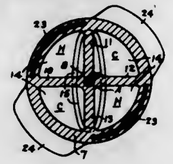
1. A one-piece blank for a sift-proof carton of rectangular cross section formed of sheet material, said blank including four vertical sidewall panels joined along vertical score lines, a foldable end flap at the end of each sidewall panel, the end flaps being jointed to the sidewall panels along a horizontal score line and the two end flaps at the ends of two alternate sidewall panels having substantially the same length as the width of each of the other two wall panels, cut lines separating said end flaps and terminating substantially at said horizontal score line, diverging score lines on each adjacent pair of wall panels extending from a point on the vertical score line therebetween to the horizontal score line on either side of said vertical score line, converging score lines on the end flaps at the ends of said adjacent wall panels extending from the junctions of the diverging score lines with the horizontal score line to the cut line between said last named end flaps and being at an angle of 45° to the horizontal score, line, and diagonal score lines at the outer corners of each of said two end flaps extending from the cut lines at the edges of the flaps to the ends of the flaps at an angle of 45° to the cut lines, said diagonal score lines having substantially the same length as said converging score lines.

3,098,601
TEAR TAPE FOR THERMOPLASTIC PACKAGING MATERIALS
Donald C. Anderson, Malcolm B. Lucas, and Howard N. Watrous, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 31, 1958, Ser. No. 784,289
3 Claims. (Cl. 229—51)



3. A heat-sealable package made from a grained, thermoplastic material and having a heat-sealable thermoplastic tear tape fused to a narrow area on the outer surface of the package so that the long dimension of the tear tape is substantially perpendicular to the machine direction of the grain in the package material, said tear tape being thicker than said thermoplastic material, said heat-sealed area having a thickness not less than the sum of the thicknesses of the package and tear tape materials, the strength of the package material along the heat-sealed area being substantially equivalent to the strength of the package material in other areas, said tear tape being capable of tearing open said package by pulling on the tear tape whereby the package material is severed along the edges of the heat-sealed area.

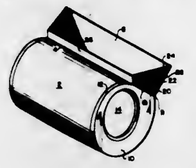
3,098,602
THERMAL CENTRIFUGAL COMPRESSOR
Keith R. Torluemke, Rte. 1, Box 351-D, Fall City, Wash.
Filed Sept. 12, 1962, Ser. No. 223,153
4 Claims. (Cl. 230—1)



1. In a thermal centrifugal compressor, a rotatively driven housing; alternate hot and cold sections in said housing; and a continuous helical tube in said housing extending alternately through said hot and cold sections, said tube extending back and forth in said housing between positions which are alternately near the axis and near the periphery of said housing.

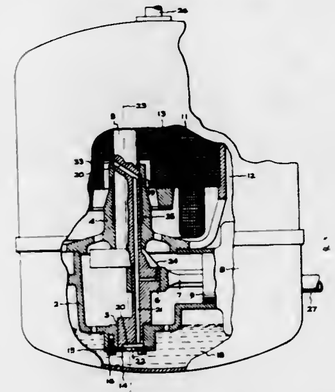
3,098,603
CENTRIFUGAL FAN HOUSINGS
Forrest G. Baker, Davenport, Iowa, assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,310
8 Claims. (Cl. 230—133)

1. A centrifugal fan housing, which is substantially scroll-shaped in longitudinal cross-section and is of generally rectangular-shape in lateral cross-section, said housing having a cutoff, an end of spiral, and an isosceles trapezoid-shaped outlet area, said outlet area having one boundary defined by said cutoff, and having an opposite boundary which is directly across said outlet area from said cutoff and which is the longer of the two parallel sides of said trapezoid, said housing including opposite housing sides having generally triangular-shaped portions adjacent said outlet area, each of said triangular-shaped portions including a base line side defined generally at opposite ends thereof by said cutoff and said end of spiral, each of said triangular-shaped portions further including



an apex opposite said base line side, said triangular-shaped portions diverging from each other from said base lines to said apexes to form the non-parallel sides of said isosceles trapezoid-shaped outlet area.

3,098,604
HERMETIC REFRIGERANT COMPRESSOR
Charles A. Dubberley, Mountain Lakes, N.J., assignor to General Electric Company, a corporation of New York
Filed July 7, 1955, Ser. No. 520,554
7 Claims. (Cl. 230—206)

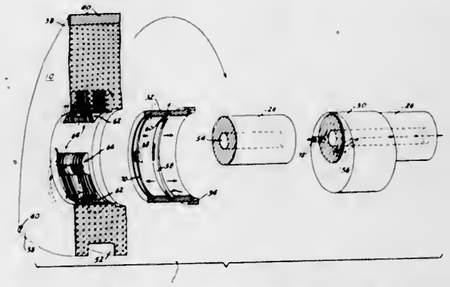


1. In a refrigerating compressor, the combination of a housing having therein a refrigerant space and a lubricant storage space; a shaft rotatably mounted within said housing and having therein a lubricant receiving passage communicating with said lubricant space and a connecting inclined vent passage communicating with said refrigerant space, the inclination of said vent passage being in a direction toward the center line of said shaft to thereby prevent the passage of lubricant through said vent passage.

3,098,605
COOLING AND LUBRICATION SYSTEM FOR ROTARY MECHANISMS
Max Bentele, Ridgewood, and Charles Jones and Alexander H. Raye, Paramus, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,413
22 Claims. (Cl. 230—210)

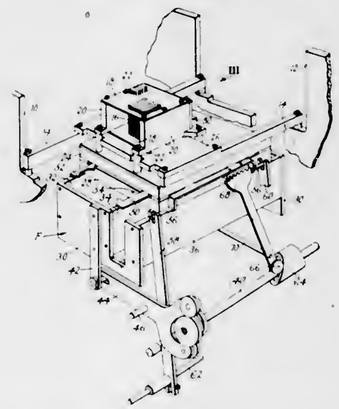
18. In combination with a rotary mechanism having a hollow outer body and a rotor disposed therein having a plurality of circumferentially-spaced apex portions, the improvement of a cooling system for the rotor comprising a plurality of sets of passage means within the rotor for the flow of a coolant fluid through the rotor, there being one set of passage means within each apex portion of the

rotor, each set of passage means comprising a plurality of inter-connected passages, the rotary mechanism including a rotatable shaft having an eccentric portion, the rotor being rotatably mounted upon the eccentric portion and including a bearing bore having a bearing surface, the bearing surface being in contact with the eccentric portion



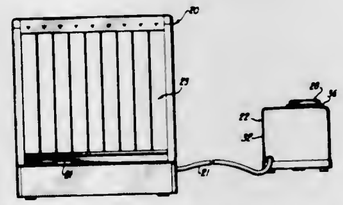
of the shaft, the shaft having a central bore, the eccentric portion including a radial passage communicating with the central bore, and the bearing surface of the rotor having an inlet annulus communicating with the radial passage in the eccentric portion and also communicating with an inlet to the sets of passage means within the rotor.

3,098,606
TAG MARKING MACHINES WITH ERROR CHECKS
Thaddeus C. Ross, Reading, Mass., assignor, by mesne assignments, to A. Kimball Company, Brooklyn, N.Y., a corporation of New York
Filed Jan. 8, 1960, Ser. No. 1,288
7 Claims. (Cl. 234—33)



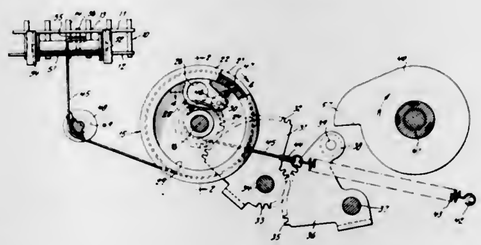
4. In apparatus for checking a record member marked at parallel columns of index points with data designations in a code requiring that a valid designation have a predetermined number of marks in a column, said predetermined number being greater than one, in combination, means for feeding said record member through a sensing station, sensing means disposed in relation to said feeding means for sensing the designations marked in said columns, indicating means, means controlled by said sensing means in response to the sensing of a column having a number of marks different from, whether greater or lesser than, said predetermined number of marks for operating said indicating means for manifesting an error, and means controlled by said sensing means for inhibiting the operation of said indicating means when an unmarked column is sensed.

3,098,607
APPARATUS FOR USE IN SETTING VOTING MACHINE FOR VOTER CLASSIFICATION
Robert B. McCaskill, Tulsa, Okla., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,214
18 Claims. (Cl. 235—54)



1. In a voting machine, a main housing including a panel containing different selectors for permitting the voter to make a selection, means for registering the selections made by the voter, electrically operated means in said main housing for rendering different groups of selectors effective to actuate the registering means with the different groups respectively corresponding with different classifications of voters, and auxiliary housing remote from said main housing, and electrical conductor means connecting said main housing and said auxiliary housing, said auxiliary housing carrying selector means operated in accordance with each voter's classification and electrically connected via said conductor means to said electrically operated means, said selector means causing said electrically operated means to render effective only the group of selectors corresponding to the classification of the particular voter using the voting machine.

3,098,608
RESTORING MECHANISM FOR PIN CARRIAGES
Edward J. Dombrowski, Derby, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 26, 1962, Ser. No. 175,734
7 Claims. (Cl. 235—60)



1. In a restoring mechanism for an escapable pin carriage for returning the latter from an escaped position to a start position,

(*a*) a support member disposed in a plane extending normal to the plane in which the pin carriage travels,
(*b*) a spool mounted for rotation on said support for rotation about an axis arranged normal to the first mentioned plane,
(*c*) a spring having a fixed end,
(*d*) a flexible drive member having one end connected to the pin carriage and the other end connected to the other end of said spring,

(*e*) said flexible drive member having a portion intermediate the ends thereof wrapped on said spool and said portion maintained taut thereon by said spring,
(*f*) said flexible drive member moving the pin carriage from an escaped position to a start position upon rotation of the spool in one direction,
(*g*) a guide roller mounted on said support member between the spool and pin carriage and disposed in the plane of travel of said pin carriage,
(*h*) said flexible drive member guided from said spool and partially around said guide roller and extending transversely of the longitudinal axis thereof to said pin carriage to effect straight line movement of said flexible drive member upon rotation of said spool in said one direction,
(*i*) and means coacting with the spool and effective for rotating said spood in said one direction.

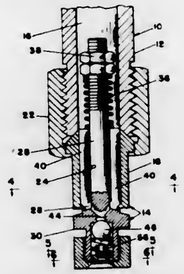
3,098,609
CALCULATING MACHINE DRIVING MECHANISM AND THE LIKE
William S. Gubelmann, deceased, late of Convent, N.J., by Walter S. Gubelmann, executor, Oyster Bay, N.Y.; said William S. Gubelmann assignor to Realty and Industrial Corporation, a corporation of Delaware
Original application Nov. 6, 1950, Ser. No. 194,273, now Patent No. 2,969,177, dated Jan. 24, 1961. Divided and this application Oct. 7, 1960, Ser. No. 61,322
24 Claims. (Cl. 235—62)



20. A motivating device comprising an output shaft supported for rotation about its axis, motor means engaging said output shaft for rotating said shaft, first, second and third drive unit means carried on said shaft for rotation thereon, each said drive unit means comprising a plurality of means rotatable therewith, transmission means between each of said drive unit means and said output shaft and rotated by said shaft, for operating said drive unit means and stop means for engaging any of said drive unit means for stopping the rotation of said drive unit means.

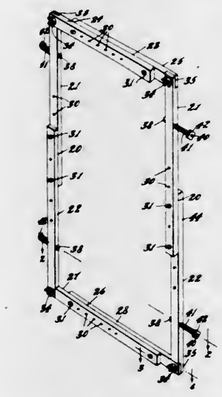
3,098,610
BREAD PAN GREASING NOZZLE
George H. Stram, Hellam, Pa., assignor, by mesne assignments, to Baker Perkins Inc., New York, N.Y., a corporation of New York
Filed Nov. 13, 1961, Ser. No. 151,634
6 Claims. (Cl. 239—441)

5. A liquid grease spray nozzle comprising a body defining a bottom opening grease cavity and having an inlet for grease under pressure; a bottom end closure for said grease cavity having a control grease discharge opening; a core in said grease cavity supported on said end closure defining a shallow cylindrical whirl chamber in surrounding communication with said grease discharge opening; means forming restricted passages opening tangentially into said cylindrical whirl chamber providing communication between said grease cavity and said whirl chamber to impart a whirling motion to the grease in said whirl chamber for emission through said grease discharge opening in an annular conically expanding band; and a grease discharge orifice in the top wall of said whirl chamber of lesser diameter than the diameter of said grease discharge opening and axially alined therewith providing communication between said grease cavity



and said whirl chamber for emission of grease under pressure in an extending spray centrally through the whirling grease in said whirl chamber.

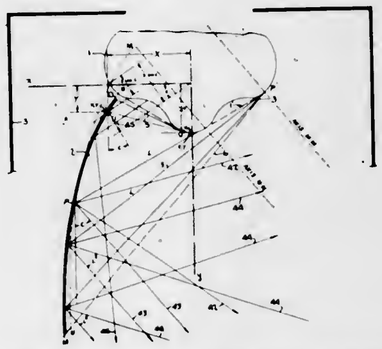
3,098,611
ILLUMINATED DECORATIVE FRAME
George W. Connell, 5831 Florence Ave., Philadelphia, Pa.
Filed Apr. 21, 1961, Ser. No. 104,582
2 Claims. (Cl. 240—10)



1. In a display device, an adjustable frame comprising side, top and bottom elements connected together at the corners, said elements having overlapping parts, a plurality of spaced adjustment holes extending through said overlapping parts, adjustable fasteners extending through one of said adjustment holes and interconnecting said parts and adapted to be introduced in a plurality of different adjustment holes to permit dimensional adjustment of the frame in both the horizontal and vertical direction, openings in the sides of the frame at upper and lower positions extending generally toward the outside of the frame, frictional engaging elements mounted in the openings and passing outward to a position beyond the frame, each of said frictional engaging elements having a plunger including a spring retainer abutment on its outer end and a plunger retainer head toward its inner end, and a helical compression spring surrounding said plunger and urging said plunger outward by action from the frame against the said spring retaining abutment, said frictional engaging element adapted to engage a window opening, an electric light assembly interconnected with and mounted on said frame and removable bodily from said window opening with said frame, said electric light assembly comprising continuous electrical conductors on said overlapping elements permitting plug-in at

any desired position along the frame, a connector extending from each conductor of the overlapping frame element to each conductor of an underlapping frame element, electric sockets removably plugged into the said conductors at any desired position along the frame, and electric lamps in the sockets.

3,098,612
LIGHTING FIXTURES
Edison Price, 17 King St., New York, N.Y., and Isaac Goodbar, New York, N.Y. (93—02 211th St., Queens Village 28, N.Y.)
Filed Sept. 18, 1958, Ser. No. 857,641
4 Claims. (Cl. 240—41.35)



1. A light fixture having a light source of substantial dimensions relative to the dimensions of the fixture with a surface of resolution about its vertical axis positioned therein adapted to substantially limit reflections from the interior of the fixture when the fixture is viewed from an angle greater than c with the vertical axis of the fixture comprising a specular surface of revolution which intersects with planes containing the axis of revolution of the light source and of the specular surface in accordance with the following equations:

$$X=x+\frac{E-s-x.\sin c+y.\cos c}{\sin c-y'\cos c+\sqrt{1+y'^2}}$$

$$Y=y+\frac{E-s-x.\sin c+y.\cos c}{\sin c-y'\cos c+\sqrt{1+y'^2}}y'$$

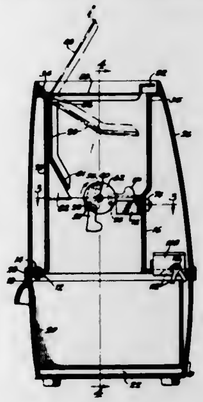
where:

x and y are the coordinates of the points of intersection of the surface of the light source with the plane of coordinates considered which contains the axis of revolution and y' is the derivation of y with reference to x; $y=f(x)$ defines the intersection of the source surface with the plane of coordinates; E is a constant; c is the angle of the vertical axis of the fixture beyond which reflections are substantially limited; and X and Y are the coordinates of the points of intersection of the specular surface with the plane of coordinates:

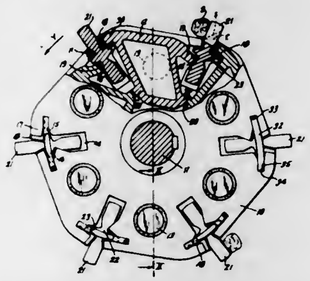
$$s=\int_0^x\sqrt{1+\left(\frac{dy}{dx}\right)^2}dx$$

3,098,613
HAMMER ROTOR CONSTRUCTION FOR MATERIAL CRUSHERS
John T. Hellyer, Wayne, Ill., assignor of one-half to Robert S. Strom, Wheaton, Ill.
Filed May 5, 1958, Ser. No. 732,880
3 Claims. (Cl. 241—190)

1. A unitary, portable, household appliance for crushing ice comprising a rotatable shaft, means for rotating said shaft, a pair of axially spaced hubs mounted for rotation with said shaft, an impact hammer pivotally mounted between said hubs and having an impact edge and a weighted head at the outer free end, extending in a direction oppositely from said impact edge, said impact hammer being freely movable about its pivot mounting by centrifugal force created upon rotation of said hubs to a position with the mass thereof disposed in radial alignment with the axis of said pivot and the axis of said shaft, and means for limiting the extent of pivotal movement of said impact hammer, said hubs and hammer being so dimensioned and correlated whereby the hammer may be moved incident to impact with a piece of material radially inwardly in a direction opposite the rotation of said shaft and disposed substantially within the peripheral limits of said hubs.

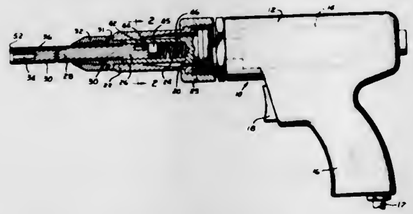


3,098,614
IMPELLERS FOR COMMINUTORS
Ludwig Johannes Meyer, Munster, Westphalia, Germany, assignor to Hazemag, Munster, Westphalia, Germany
Filed Mar. 6, 1962, Ser. No. 177,770
Claims priority, application Germany Mar. 7, 1961
8 Claims. (Cl. 241—193)



8. In an impeller for comminutors and the like, in combination, a rotary impeller body being formed with a plurality of elongated openings extending in substantially radial direction from the periphery of said body toward the axis of rotations thereof and being distributed about said axis, said body having at each opening an elongated trailing portion extending parallel to said axis and forming a first abutment surface transverse to the elongation of said opening and having an elongated leading portion located ahead of said trailing portion in the direction of rotation of said body and forming a second abutment surface extending substantially in axial direction and being located nearer to said axis than said first abutment surface; and a plurality of elongated comminuting bars projecting with free end portions thereof radially beyond said outer periphery of said body and having each an inner portion located with clearance in said openings, respectively, each bar having a trailing rib located radially inwardly of said first abutment surface and urged, during rotation of said body, by centrifugal force outwardly into engagement with said first abutment surface, the engagement of said rib with said abutment surface tending to turn each bar in a direction which maintains said bar pressed against said second abutment surface, whereby said bars are maintained by centrifugal force in predetermined positions with respect to said impeller body which will not be changed under the impact of the material to be comminuted onto said free end portions of said bars while at the same time said bars can be easily removed in direction of said axis from said openings when said impeller body does not rotate.

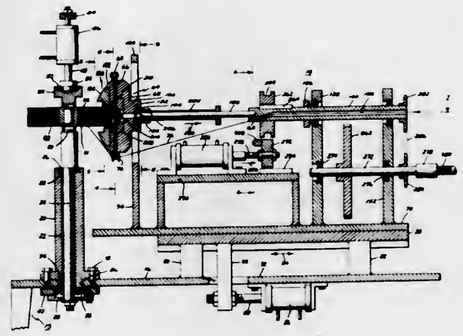
3,098,615
TOOL FOR WINDING WIRES ONTO TERMINALS
Jacob C. Bach, La Grange, William F. Fivek, Berwyn, and Robert A. Heyden, Palos Heights, Ill., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed June 17, 1960, Ser. No. 36,808
2 Claims. (Cl. 242—7)



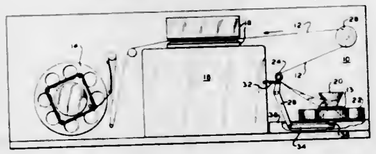
1. A wire winding tool comprising a wire winding bit having a laterally projecting shoulder, a bit driving member, means interconnecting said wire winding bit and said bit driving member for rotational and axial movement of said bit, means for driving said bit driving member, a housing for supporting said driving means and said bit driving member for rotational movement, means removably attached to said housing for supporting said bit for rotational movement and for engaging said shoulder to limit axial movement in a direction away from said bit driving member, and spring means interposed between said bit and said bit driving member for axially moving said bit into engagement with said shoulder.

3,098,616
COIL WINDING MACHINE
Robert J. Eminger, Kendallville, Ind., assignor to Fort Wayne Tool and Die, Inc., Fort Wayne, Ind.
Filed Mar. 20, 1961, Ser. No. 97,052
13 Claims. (Cl. 242—13)

1. In combination: an externally slotted core member having at least two slots extending inwardly from an external face thereof; and apparatus for winding a coil in said two slots comprising endless flexible wire carrying means spaced from said core face, means interiorly of said carrying means for forming the carrying means into two runs respectively parallel with said two slots, means exteriorly of said carrying means for driving the same, said carrying means having means thereon and driven therewith for feeding a continuous length of wire to said core; first wire guide means on said forming means having edges respectively spaced from said core face and parallel with said two runs of said carrying means; and a pair of second wire guide means having edges respectively spaced from said core face and closely spaced from said first wire guide means and parallel therewith, respective first and second wire guide means edges being positioned adjacent said two slots for guiding said length of wire from said feeding means into said two slots.



3,098,617
FLEXIBLE RECORD TRANSPORT APPARATUS
Leslie R. Day, Old Bridge, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,374
10 Claims. (Cl. 242—55.11)

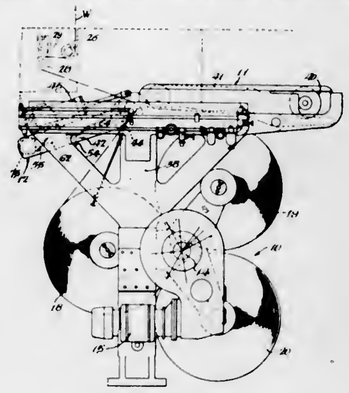


6. Flexible record transport apparatus comprising a frame member, an axle member associated with and supported by the frame member, a spindle having a storage portion and a take-up portion, said spindle portions being mounted for independent rotation about the common axis of the axle member, the said portions having slopes of opposite sense with respect to said axis so as to form truncated cones of abutting minor cross-sections.

3,098,618
WEB SPLICING APPARATUS
Corson Walter Chase, Oak Park, and Walter J. Jasinowski, La Grange Park, Ill., and Arne V. Pedersen, Gentofte, Denmark, assignors to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Original application Apr. 21, 1955, Ser. No. 502,923, now Patent No. 2,963,234, dated Dec. 6, 1960. Divided and this application Sept. 26, 1960, Ser. No. 58,378
8 Claims. (Cl. 242—58.3)

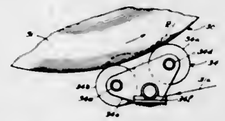
1. In a paster carriage for web splicing apparatus, the combination of a rotatable shaft, a plurality of brushes fixed on brackets along said shaft, a torsion spring for urging said shaft in one direction, means for cocking said shaft against the force of said spring, releasable latch means for holding the shaft cocked, an anchor collar connected to said spring and rotatable about said shaft to increase or decrease the torsional bias in that spring, gear teeth on said anchor collar, a rotatable cap-

stan having gear teeth thereon meshed with the collar teeth, and a spring biased, releasable pawl engaged with



said capstan teeth to lock the capstan and the collar in adjusted angular positions which determine the cocked bias of said spring.

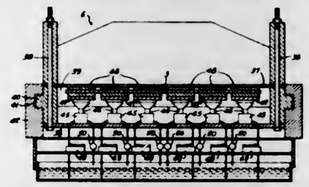
3,098,619
WINDER DRUM ARRANGEMENT
Robert S. Washburn, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Dec. 23, 1960, Ser. No. 78,173
7 Claims. (Cl. 242—66)



1. In a device for winding a traveling sheet upon itself to form a wound roll, a plurality of spaced underwinder drum assemblies adapted to support the wound roll from beneath, at least one of said assemblies comprising a pair of closely spaced uniplanar rollers and mounting means maintaining such uniplanar rollers in a plane generally tangential to said wound roll during windup of the sheet, each of said rollers creating a local compacting pressure wave in the roll, said rollers of each pair being spaced sufficiently close so that their pressure waves overlap and the intensity of the pressure waves is reduced and whereby the area supporting the weight of the wound roll via said pair of rollers is increased beyond that of the normal line of contact between a single underwinder drum and the wound roll, and means for guiding the traveling sheet through said area for effecting winding of such sheet into the wound roll.

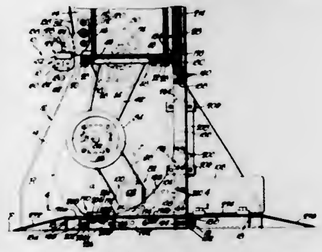
3,098,620
METHOD AND APPARATUS FOR MANUFACTURING OF HIGH STRENGTH CYLINDRICAL SHELLS
Fred A. Carstens, Milwaukee, Wis., assignor, by mesne assignments, to Chicago Bridge & Iron Company, Oak Brook, Ill., a corporation of Illinois
Filed July 25, 1960, Ser. No. 45,099
6 Claims. (Cl. 242—75.2)

1. Apparatus for coiling sheet material in the forming of high strength cylindrical structures, comprising a rotary spindle upon which the structure is to be coiled, means to supply a continuous length of sheet material to the structure as said spindle rotates, a pair of spaced parallel bars defining a throat therebetween through which said material passes from said supply means to said rotary spindle, means rigidly joining said bars at their corresponding ends, frictional elements carried by one of said bars and facing the other at said throat, a plurality of pressure cylinders carried by said other bar and having



corresponding pistons movable toward said first bar, and frictional elements carried by said pistons and facing said first named friction elements to frictionally clamp the sheet material therebetween and provide a frictional drag on the material as it is pulled through the throat by said rotary spindle.

3,098,621
REEL WINDING APPARATUS
Alden W. Nelson, West Mystic, and Gilbert E. Sisson, Mystic, Conn., assignors, by mesne assignments, to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 25, 1961, Ser. No. 105,457
14 Claims. (Cl. 242—79)

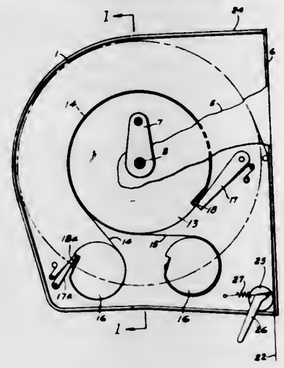


1. In reel winding apparatus, the combination with a frame, of axially aligned bearings on said frame for rotary support of a reel above the floor, with one of said bearings being axially movable in first and second directions into reel supporting and releasing positions, respectively; an elevator having a base and a slide with a reel track on said base, said elevator being guided on said frame for movement into lower and upper positions in which said base is substantially on the floor for rolling a reel therefrom onto said slide track and a reel on said slide track is between said bearings and with its axis in alignment with the bearing axis, respectively, and said slide being guided on said base for movement in said first and second directions to bring a reel on the track thereof into and from supporting relation, respectively, with the other bearing in said upper elevator position; first and second devices for moving said one bearing and operating said elevator, respectively, and means for moving said slide.

3,098,622
TAPE-MEASURES
Donald Bishop, St. Albans, and Jonathan Heath Ripper, Barnhurst, Kent, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed Nov. 21, 1961, Ser. No. 154,012
19 Claims. (Cl. 242—84.8)

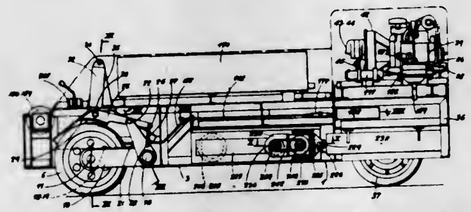
1. A tape measure comprising a casing; a tape drum journalled in said casing; a restraint bobbin journalled

coaxially with said tape drum; a spool journalled beside said bobbin; a spring band anchored at one end to said



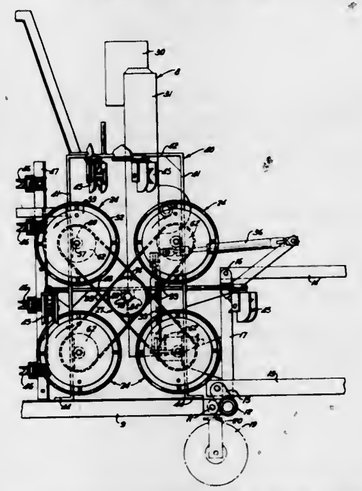
spool and at the other end to said bobbin and oppositely wound on said spool and said bobbin; and means for interconnecting said tape drum and said bobbin.

3,098,623
CARRIAGE FOR HANDLING AND DISPLACING CABLE REELS
Lucien André Mortier, 16bis Rue de Strasbourg, Asnieres, France
Filed Mar. 19, 1962, Ser. No. 180,735
Claims priority, application France Mar. 20, 1961
15 Claims. (Cl. 242—86.5)



1. A carriage, for lifting, transporting and rotating cable reels, comprising, in combination, a chassis U-shape in plan and including a pair of laterally spaced and relatively elongated side members interconnected at one end by a cross member, said side members being arranged to have a cable reel supported therebetween with its axis transverse to said side members; a steering platform supporting said cross member and rotatable relative thereto about a substantially vertical axis; a steering and driving wheel rotatably mounted on and supporting said platform; driving means connected to said steering and driving wheel to rotate the latter; a pair of freely rotatable support wheels each rotatably mounted in a respective support; means mounting each support on a respective side member adjacent the free end of the latter for vertical adjustment of each support wheel relative to its associated side member; a pair of first reel support rollers each mounted on the free end of a respective side member on the inner side thereof for movement between a reel-engaging position, in which said first rollers are axially aligned transversely of the side members to engage the rims of a reel between said side members, and a retracted position in which said first rollers are swung out of the way to provide for entry of a reel between said side members; a pair of second reel support rollers secured in axially spaced relation to an axle extending transversely of said side member inwardly of said first rollers; and means selectively operable to adjust said axle longitudinally of said side members; whereby, when a reel has been entered between said side members with said first rollers in a retracted position and said first rollers thereafter moved to the reel-engaging position, said second rollers may be moved towards said first rollers to engage the rims of the reel and, acting conjointly with said first rollers engaged with the reel rims, to lift the reel.

3,098,624
APPARATUS FOR STRINGING AND TENSIONING PLURAL STRANDS OF FENCE WIRE
Sherwood S. De Forest, Coraopolis, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 8, 1961, Ser. No. 87,833
12 Claims. (Cl. 242—86.7)

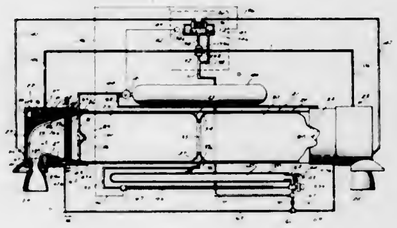


1. Apparatus for stringing plural strands of fence wire under tension along a line of fence posts comprising the combination with a platform movable along said fence line, and a plurality of rotatable fence wire dispensing reels mounted on said platform, there being one of said reels for each of said strands and each being adapted to support a coil of fence wire from which one of said strands is dispensed when said platform is moved along said fence line, of a common braking unit comprising a plurality of rotatable members mounted in axially spaced positions for rotation about a common axis, there being one of said members for each of said strands, a plurality of separate means for rotating said rotatable members respectively in response to dispensing movement of said strands, and frictional braking means for resisting the rotation of each of said rotatable members and operating through said responsive means for applying tension to each of said wire strands.

3,098,625
ROCKET MOTOR AND CONTROL SYSTEM
Russell F. Thielman, Seven Hills, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 19, 1960, Ser. No. 76,744
9 Claims. (Cl. 244—4)

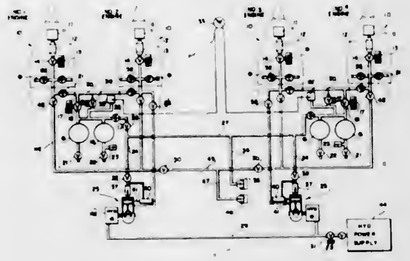
1. An integrated propulsion and attitude control system adapted to render persons and material airborne comprising: a reaction motor swivelably connected to each of the opposed ends of a fuel container, each of said motors in communication with a gimbaled gas discharge

nozzle; fuel injection metering means communicating the reaction chamber of each of said motors with the fuel container for controlling flow of fuel to the reaction chamber; firs. means for simultaneously swiveling each of said reaction motors in the same direction and in synchronized unison to control movement of the fuel container about its pitch axis; second means for selectively



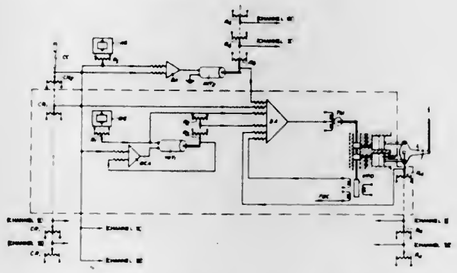
moving each of the gas discharge nozzles to control movement of the fuel container about its yaw axis; common means for simultaneously controlling supply of fuel under pressure to said reaction motors, each of said first and second means and initation of ignition of fuel in said reaction motors, and means for terminating flow of fuel from said fuel container to said reaction motors.

3,098,626
SYSTEM FOR STARTING GAS TURBINE POWER PLANTS
Bernard L. Messinger, Sherman Oaks, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Nov. 21, 1960, Ser. No. 70,672
6 Claims. (Cl. 244—53)



1. An engine starting system for multi-engine aircraft comprising, an aircraft self-contained source of pressurized air carried on the aircraft, each engine having a starter unit, main ducting means connecting the self-contained source to the starter unit on a first engine of the aircraft, engine bleed air ducting connecting bleed air from a second engine of the aircraft to the main ducting means for supplying pressurized engine bleed air to the starter means of the first engine, ducting connected to the main ducting for detachably connecting a ground source of pressurized air independent of the aircraft to the starter unit of the first engine, valve means included in the main ducting for selectively connecting the main ducting with air supplied from the aircraft source, the ground source and the second engine bleed air source respectively, and an airborne compressor and ducting means connected to the self-contained source for recharging the source, and means connecting the bleed air ducting to the compressor for selective airborne operation of the compressor while in aircraft flight.

3,098,627
AUTOMATIC STABILIZING APPARATUS FOR AIRCRAFT
Ian Kennan Bertram Lasbrey, Belfast, Northern Ireland, assignor to Short Brothers & Harland Limited, Belfast, Northern Ireland
Filed May 23, 1960, Ser. No. 31,112
11 Claims. (Cl. 244—77)



1. Stabilizing apparatus for an aircraft control system having an output member comprising a plurality of signal transmission channels for commonly controlling said output member; each channel comprising a respective rate gyroscope responsive to the rate of change of attitude of the aircraft about a predetermined axis which axis is the same for all said channels, a respective integrator unit coupled to receive a rate signal derived from the respective said gyroscope, and a respective servo motor coupled to drive the said output member in response to signals applied thereto from the output of the respective said integrator unit; an attitude gyroscope common to all said channels for generating an output signal representative of the attitude of the aircraft about said predetermined axis; and means in each channel for comparing the output signal from the respective integrator unit with the output signal from the attitude gyroscope to generate a correction signal to modify the output signal from the respective integrator unit to reduce errors therein.

3,098,628
AIRCRAFT
Roland Henry Chaplin, Weybridge, England, assignor to Hawker Aircraft Limited, Kingston-upon-Thames, England
Filed Jan. 30, 1961, Ser. No. 85,517
2 Claims. (Cl. 244—83)



1. In an aircraft of the vertical take-off and landing type, wherein vertical lift and forward propulsion is obtained by efflux nozzles capable of orientation between vertical and horizontal positions, control mechanism for effecting such orientation, means operable as a result of movement of said control mechanism to move said nozzles from a vertical to a horizontal position to produce a slow speed of orientation, said means being inoperative when said control mechanism is operated to move said nozzles in the opposite direction to ensure rapid orientation of said nozzles from a horizontal position to a vertical position, a control lever movable in either direction according to the required direction of orientation, a dash-pot brought into operation by movement of the lever when the latter is moved to give a slow orientation, a gate in which the lever moves, the gate being calibrated to show

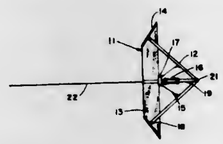
different angles of orientation of the nozzles and a preselector stop in the gate which can be set to limit angular movement of the lever in the direction which will produce a quick orientation of the nozzles and an override and follow up lever which is operable if required to increase the speed of orientation or for use in an emergency in the event of the dash-pot not operating efficiently.

3,098,629
SHOCK ABSORBER FOR AIRPLANE ARRESTING DEVICES
Per Börje Fondén, Hejdegatan 3, and Karl Ove Torgny Wålander, Vasavagen 49, both of Linkoping, Sweden
Filed Jan. 21, 1960, Ser. No. 3,937
2 Claims. (Cl. 244—110)



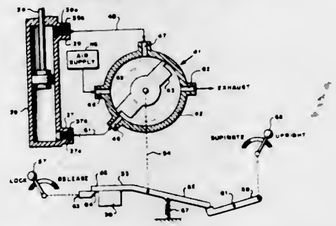
1. A device for preventing the runaway of airplanes in landing comprising in combination, an arresting net, a pair of tiltable masts, means for suspending said net in a substantially vertical plane between said masts, a braking mechanism having a large static inertia located in front of each end of said net, connections between the ends of the net and said braking mechanism, and shock absorbing assemblies inserted in said connections, having small static inertia compared with that of said braking mechanism, and becoming active only when the net is subjected to loads exceeding normally existing loads which may be attended to by said braking mechanism, said shock absorbing mechanism comprising means for transforming kinetic energy into heat, said shock absorbing assemblies each comprising a set of straps made of a material which on tensional load gives a characteristic tension-to-elongation curve including a first sharp steep portion and a less steep and nearly horizontal second portion.

3,098,630
ANNULAR SUPERSONIC DECELERATOR OR DROGUE
James F. Connors, North Olmsted, Ohio, assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Dec. 20, 1960, Ser. No. 77,252
9 Claims. (Cl. 244—113)
(Granted under Title 35, U.S. Code (1952), sec. 266)



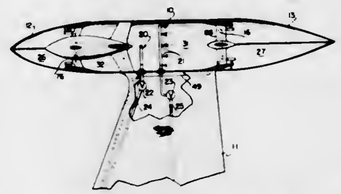
2. A supersonic decelerator comprising means for obstructing a supersonic fluid stream, thereby effecting a shock wave, said obstruction means having an open area, means for supporting said obstruction means, said support means being disposed downstream of said obstruction means, and means for interconnecting said support means to a supersonic vehicle, said interconnecting means having a cross-section area substantially smaller than the open area associated with said obstruction means, thereby preventing intersection of the shock wave with said interconnecting means whereby interconnecting means boundary layer separation is eliminated.

3,098,631
SUPINATING PILOT'S SEAT
Archie A. Hall and Jerome R. Sabbia, Dallas, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 22, 1961, Ser. No. 161,754
11 Claims. (Cl. 244—122)



2. In an aircraft capsule structure:
a pilot's seat having a back portion pivotally connected to a seat portion,
pneumatic actuator means including piston means connected to said back portion for actuating said pilot's seat to and from a supinating position,
first and second valve means disposed respectively at each end of said pneumatic actuator means,
air supply means,
rotary valve means including a rotatable element having a first position for connecting said air supply means to said first valve means and a second position for connecting said air supply means to said second valve means,
control means including arm means having a mass at one end, said arm means operably connected to said rotatable element whereby said rotatable element is rotated to said first position when the acceleration forces acting on said mass are above a predetermined value and to said second position when the accleration forces acting on said mass are below a predetermined value.

3,098,632
COMBINATION AIRCRAFT FUEL TANK AND POWERPLANT ARRANGEMENT
Charles H. Christenson, Burbank, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Sept. 11, 1953, Ser. No. 379,641
9 Claims. (Cl. 244—135)

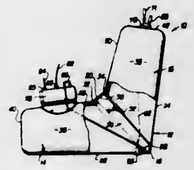


1. In combination with an airplane, jettisonable tanks suspended externally therefrom, comprising streamlined ducts, jet type powerplants mounted in said ducts, fairings normally closing said ducts, and means to jettison said fairings whereby to convert said tanks into jet type powerplants.

3,098,633
AIRCRAFT AUXILIARY FUEL TANK
Martin A. Price, 514 N. Helberta, Redondo Beach, Calif
Filed July 20, 1959, Ser. No. 828,370
4 Claims. (Cl. 244—135)

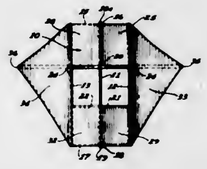
1. An aircraft auxiliary fuel tank adapted to be mounted and retained in an aircraft seat having bottom

and back portions, said tank comprising a generally horizontal lower section which includes a generally flat bottom wall mountable on the seat bottom, side, forward and top walls, and a generally vertical upper section extending upwardly from said lower section, said upper section including a generally flat back wall mountable against the seat back, side, forward and top walls, the



two sections being hermetically joined at a waist section, the three sections forming an L shape in side profile and providing a unitary closed and hermetically impervious container, and the waist section having a girth adapting it to encirclement by a conventional aircraft seat belt with the seat belt extending from below and behind the tank upwardly on opposite sides of the tank and around said waist section.

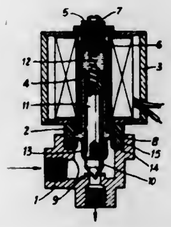
3,098,634
FOLDING KITE STRUCTURE
Robert D. Finklea, 1801 E. Medlock, Phoenix 16, Ariz.
Filed Apr. 25, 1963, Ser. No. 275,731
3 Claims. (Cl. 244—153)



3. A box kite structure comprising in combination:
a. a plurality of four parallel support members,
b. means interconnecting each of two diagonally opposite support members to form two rectangular frame structures,
c. means for pivotally interconnecting the mid-points of the shorter sides of said rectangular frame structure,
d. longitudinally spaced sleeves around the longer sides of said pivotally connected rectangular frame connected to two of said diagonally opposite parallel support members while unattached relative to the other of said parallel support members.

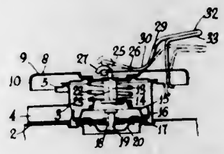
3,098,635
ELECTROMAGNETIC VALVES
Louis Adolphe Delaporte, 147 Rue d'Estienne d'Orves, Clamart, France, and Jean André Denisselle, 43 Blvd. Victor Hugo, Paris, France
Filed Feb. 13, 1961, Ser. No. 88,793
Claims priority, application France Mar. 14, 1960
4 Claims. (Cl. 251—54)

1. An electromagnetic valve comprising a valve body provided with a passageway for a liquid to be handled and with a seat in said passageway, a tubular member carried by said body and opening into said passageway in front of said seat, an electromagnetic winding surrounding said tubular member, a pole-piece closing the outer end of said tubular member, a plunger core adapted to slide outwardly of said valve body in said tubular member under the action of said winding when energized, with a clearance between said plunger core and the wall of the tubular member, a spring urging the plunger core away from the pole-piece, a needle valve carried by the plunger core and adapted to normally close said seat and



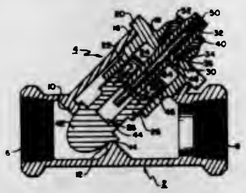
to open said seat upon energization of the electromagnetic winding, a single, very yielding diaphragm fitted across the lower end of the tubular member between the plunger core and the inner wall of said tubular member, and a mass of non-corrosive, non-compressible liquid completely filling the tubular member above the diaphragm and the pressure of which deforms the latter when the plunger core is actuated upon energization of the electromagnet.

3,098,636
AUTOMOBILE RADIATOR CAP
Samuel L. Contella, Buffalo, N.Y.
(16 Maple Grove, Tonawanda, N.Y.)
Filed July 18, 1961, Ser. No. 124,999
4 Claims. (Cl. 251—98)



1. In combination with a radiator cap having a top, a retaining member depending from said top, a valve unit slidably received on said retaining member, and a resilient member acting between said top and said valve unit to urge the latter downwardly relative to said top,
an actuating lever carried by said top for lifting said valve unit in opposition to said resilient member to thus effect a pressure-relieving action,
said actuating lever having an elongate main body presenting a base portion at one end, a finger portion at the opposite end and a fulcrum portion joining the base and finger portions,
a first leg member joined with said base portion remote from said fulcrum portion and depending therefrom through said cap and into engagement beneath a portion of said valve unit, said leg member being a length to normally position said base portion close to said upper surface of the cap under the action of said resilient member, and said actuating lever being so shaped as to simultaneously space said finger portion above said upper surface of the cap,
a second leg member joined with said finger portion remote from said fulcrum portion and depending therefrom through said cap, whereby the first and second leg members guide and position said actuating lever relative to said cap.

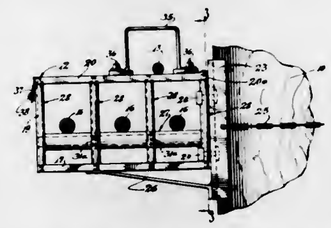
3,098,637
BALANCING AND SHUTOFF VALVE
Gordon N. Baustian, Bettendorf, Iowa, assignor to American Air Filter Company, Inc., Jefferson, Ky., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,245
2 Claims. (Cl. 251—122)



1. In a balancing and shutoff valve construction: a hollow body having a main portion including an inlet port and an outlet port and an intermediate obliquely disposed wall defining a valve seat, and having a branch portion extending at a right angle to said obliquely disposed wall; a valve bonnet enclosing the open end of said branch portion and having an internally threaded sleeve projecting into said branch portion; a valve element including an unbroken generally paraboloid shaped working surface end adapted to be moved into and out of engagement with said valve seat and a hollow sleeve portion extending outwardly into said branch portion and being externally threaded for engagement with said internal threads of said bonnet sleeve, the bore of said hollow sleeve portion being of non-circular cross section; a hollow stem projecting through said bonnet in sealed relationship and having an inner end slidably projecting into said valve element bore, said inner end being of a non-circular cross section to substantially conform to said valve element bore cross section whereby rotation of said stem causes a corresponding rotation of said valve element and proportional axial displacement of said valve element relative to said seat; slip fitted rod means in said hollow stem bore and having its inner end projecting into said hollow sleeve portion of said valve element for engaging said valve element upon predetermined movement thereof away from said seat, said rod means including an intermediate annular groove receiving an O-ring compressed within said hollow stem; and separate adjustable means, in the form of a plug member, unattached to said rod means, threadably received and recessed within said stem outer end for axial displacement therewithin to correspondingly displace said rod means, whereby movement of said valve element away from said seat is selectively limited.

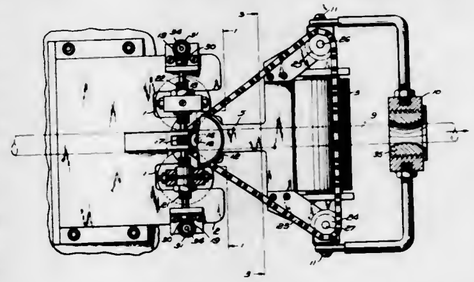
3,098,638
STRINGING BLOCK
Anthony McAuley, Maywood, Ill., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri
Filed Aug. 27, 1959, Ser. No. 836,448
3 Claims. (Cl. 254—134.3)

1. A stringing block comprising a rectangular frame having a base two ends and a cover, said cover being hingedly attached to one of said ends; a releasable lock normally maintaining said cover connected with the other end; a row of spaced, vertical axles, each having one end thereof rigid with said base and disposed substantially perpendicular thereto, said cover having a plurality of recesses therein for receiving the other end of corresponding axles; a horizontal axle rigidly interconnecting said ends, whereby to define a number of wire guide sections; a cylindrical sleeve roller in surrounding rotatable relationship with each axle respectively, whereby wires may be easily drawn through the wire guide sections when the cover is connected to said other end and the wires may be easily withdrawn from the string block when the cover



is released from said other end; and means on the frame for supporting the same.

3,098,639
CABLE GUIDING APPARATUS
Menashe Bromberg, West Orange, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 28, 1961, Ser. No. 120,370
7 Claims. (Cl. 254—190)

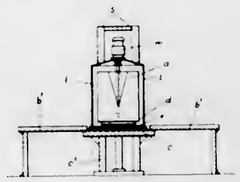


7. An apparatus for guiding cables of different diameter comprising a first pair of spaced rollers mounted on axes extending in a first direction, a second pair of spaced rollers mounted on axes extending in a direction normal to the first direction, means pivotally mounting the second pair of rollers to pivot about an axis normal to the axes of the second pair of rollers, adjusting means for simultaneously moving the rollers of each pair toward or away from each other, and a pivotal guide means coupled to the pivotal mounting means and pivotable about an axis parallel to the axes of the second pair of rollers.

3,098,640
VACUUM GYPSUM MIXERS
Helmut Rossmann, Selb, Bavaria, Germany, assignor to Gebrüder Netsch, Maschinenfabrik, Selb, Bavaria, Germany
Filed Aug. 26, 1960, Ser. No. 52,071
7 Claims. (Cl. 259—122)

1. Vacuum gypsum mixer, comprising a two-part vacuum tank, a flat carrier plate forming the bottom part of said tank, means mounting said carrier plate in fixed position below the upper part of the tank, a run-in track and a run-out track leading to and from said carrier plate respectively on opposite sides thereof, a mixing vessel supported on said plate during mixing operation and being shiftable on to said plate from said run-in track and off said plate on to said run-out track after the mixing operation, a hood forming the top part of said tank adapt-

ed to be lowered on to said carrier plate over said mixing vessel in its operative position on said plate and to be raised to withdraw said vessel from said plate, a stirring mechanism carried by said hood and adapted to be lowered into and removed from said mixing vessel during



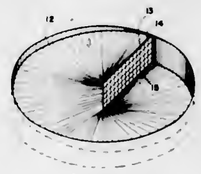
the lowering and raising of said hood, and a vacuum producing and relieving device communicating with the interior of said hood for producing a vacuum therein during the mixing operation and relieving the vacuum at the end of the mixing operation to enable the raising of said hood and the removal of the mixing vessel.

3,098,641

METHOD OF MAKING HOLES IN THE EARTH

Ronald C. Baldwin, Hillsdale, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Nov. 28, 1960, Ser. No. 71,937
4 Claims. (Cl. 262—1)



1. A method of making a hole in a bed of rock by forming the bottom of the hole in the shape of a spiral surface terminating in a generally vertical face, drilling a series of blasting bores at the elevated portion of the spiral surface, placing explosives in said blasting bores, detonating said explosives in a predetermined delay sequence such that the explosives adjacent said vertical face are first detonated, removing a portion of the rock loosened by said explosion, and proceeding along a spiral path to form the hole.

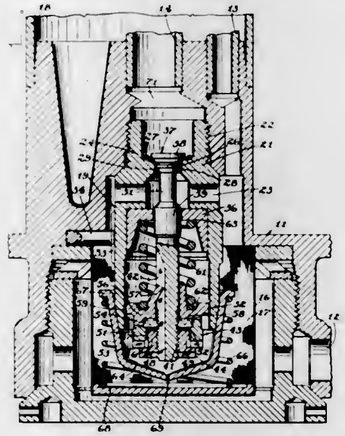
3,098,642

SPRING ADJUSTING MECHANISM FOR FLOW DIVIDER VALVE

Theodore L. Kucmerosky and Merle E. Peterson, Elmira, N.Y., assignors to The Bendix Corporation, Elmira, Heights, N.Y., a corporation of Delaware

Filed Feb. 1, 1961, Ser. No. 86,437
3 Claims. (Cl. 267—1)

1. A vernier spring adjusting mechanism comprising, in combination: a stem having threads at one end; annular thrust piston means slidably but non-rotatably supported adjacent said one end of the stem; a spring concentrically disposed about said stem in compressive relationship between said piston means and a fixed spring seat; a nut member threadedly received on said one end of the stem rearwardly of the thrust piston means; a collar member concentrically disposed about the stem between the thrust piston means and the nut member; a first clutch means between the collar member and the nut member for alternatively connecting and disconnecting the collar and the nut; and, a second clutch means between the thrust piston means and the collar for alter-



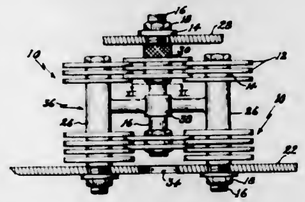
natively connecting and disconnecting the collar and thrust piston means.

3,098,643

SHOCK AND VIBRATION ISOLATOR

Albert A. Ondrejka, Delta Ave., Rome, N.Y.

Filed Mar. 15, 1962, Ser. No. 180,059
15 Claims. (Cl. 267—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A shock and vibration isolator unit comprising at least a pair of shafts, wafer elements on each of said shafts, spacer elements on said shafts between consecutive wafer elements, the radial extension of said spacer elements from said shafts being less than that of said wafer elements, and means for securing said spacer elements and said wafer elements on said shafts, said shafts being oriented in the same direction and having the wafer elements of each shaft in mesh with the wafer elements of at least one other shaft.

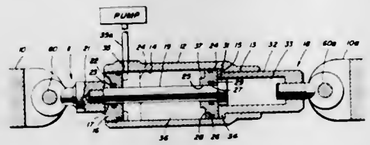
3,098,644

DOUBLE ACTING SPRING DEVICE

Stanley D. Phillips, San Jose, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed May 1, 1962, Ser. No. 191,647
11 Claims. (Cl. 267—1)

1. A device for controlling the relative approach and recession of two elements which comprises a body disposed between said elements and having a bore therethrough and containing a fluid, each of said elements having a member attached thereto and extending into and along said bore toward the other element, said members at their adjacent ends in said bore telescoping one another, a piston slidably mounted on one of said members, and said one of said members having means preventing removal of said piston from the free end of said one member, the other of said members clearing said one member and said means thereon and engaging said piston to shift the latter along said one member in a direc-



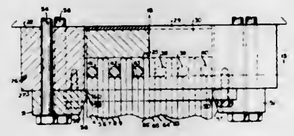
tion away from said removal preventing means, said body having a restricted opening from said bore for controlling the flow of said fluid into and out of said bore whereby the rate of approach and recession of said elements is controlled by said restrictive opening.

3,098,645

LAMINATED TORSION BAR SUSPENSION

Walter J. Owens, Shrivenham, near Swindon, England, assignor to Her Majesty the Queen in right of Canada as represented by the Minister of National Defence

Filed Jan. 11, 1962, Ser. No. 165,613
Claims priority, application Canada Jan. 11, 1961
13 Claims. (Cl. 267—57)



1. In a vehicle suspension system the combination which comprises: a laminated torsion bar having a central transverse axis; and end-restraint means for securing said bar and transmitting torsional forces thereto; said bar comprising a first plurality of resilient leaves and a second plurality of resilient leaves, said leaves being arranged in a contiguous parallel relationship so that at least one leaf of said first plurality of leaves alternates with at least one leaf of said second plurality of leaves and the midpoints of said alternate leaves are disposed on opposed sides of said transverse axis.

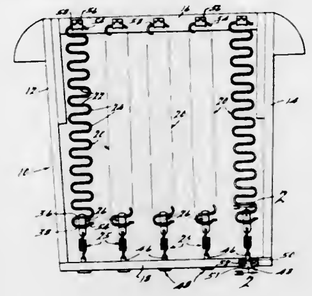
3,098,646

SPRING ANCHOR MEANS

Edward M. Knabusch and Edwin J. Shoemaker, Monroe, Mich., assignors to La-Z-Boy Chair Company, Monroe, Mich., a corporation of Michigan

Filed Oct. 17, 1961, Ser. No. 145,701
3 Claims. (Cl. 267—112)

1. In a supporting seat structure, a frame, a fore and aft extending zig-zag spring disposed in an arched path and having substantially parallel reaches joined by semicircular portions, an elongated fore and aft extending clip having a surface adjacent its front end pivotally engaging a radially outer surface of one of said parallel reaches of said arched spring and an elongated flat portion extending rearwardly from said clip front end and engaging a radially inner surface of an adjacent reach of said arched spring, means connecting the front end of said spring to said frame and means including a tension spring connecting the rearward end of said spring to said



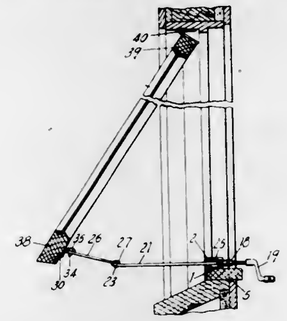
frame and for holding said spring under tension in its arched path.

3,098,647

OPERATOR FOR WINDOWS, VENTILATORS, AND THE LIKE

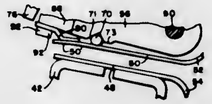
Claude J. Teggelaar and Michael N. Swierbut, Grand Rapids, Mich., assignors to Grand Rapids Hardware Company, Grand Rapids, Mich.

Filed May 6, 1957, Ser. No. 657,428
4 Claims. (Cl. 268—105)



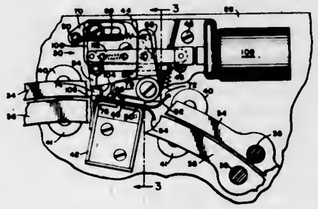
1. In a window operator, a support comprising a base support member adapted to be superimposed upon a window sill or the like and having front and rear centrally positioned flange-like bearing members projecting upwardly from its front and rear edges, said bearing members having upwardly projecting lugs on their upper edges, said base support member having upwardly offset actuating arm seats disposed one at each side of its said bearing members, a top support member disposed upon said base support member and having slots therein receiving said lugs on said bearing members and having downwardly offset portions disposed in vertically spaced relation to said arm seats on said base member, an actuating worm disposed above and transversely of said base member and between and journaled in said bearing members thereon, said base and top support members and said bearing members constituting a housing for said worm, bar-like actuating arms of flat section having toothed segments on their inner end edges coacting with said worm, and pivots for said arms disposed through said base and top support members, said pivots being shouldered at their inner ends to supportedly engage said base support member and headed at their outer ends to retainingly engage said top support member and constituting connecting rivets for said support members.

3,098,648
SHEET STOPPING MECHANISM
Larry L. Cruzen, Livonia, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 16, 1961, Ser. No. 96,192
2 Claims. (Cl. 271—46)



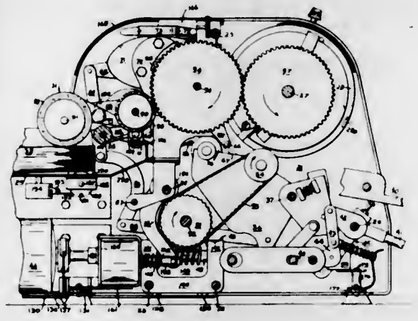
2. In a sheet braking mechanism for a sheet stop station of a high velocity sheet transporting apparatus, a stationary brake plate, a retractable brake plate in opposed broadside relationship to said stationary brake plate, said brake plates having corresponding forward edges defining an entrance to receive a sheet edgewise and having opposite corresponding rear edges forming a sheet exit, a retractable stop member closing said exit, a movable fulcrum member overlying said movable plate and movable toward and away from said stationary plate, said movable plate fulcrumed on said movable fulcrum member between and closer to the sheet exit than to the sheet entrance, yieldable thrust means acting on said fulcrum member and normally holding said movable plate against said stationary plate, said movable plate having a curved portion along the rear edge thereof with the concave surface toward said stationary plate and the rear edge offset from the plane of said movable plate to space the latter from said stationary plate between said fulcrum member and the rear edge of said stationary plate.

3,098,649
SHEET STOPPING MECHANISM
Larry L. Cruzen, Livonia, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 21, 1961, Ser. No. 160,999
20 Claims. (Cl. 271—46)



5. A sheet braking mechanism for a station of a high velocity sheet transporting apparatus comprising supporting means, a brake plate supported by said supporting means, a pressure plate overlying said brake plate in broadside relationship thereto, said plates having corresponding forward ends defining a sheet entrance therebetween and corresponding rearward ends defining a sheet exit, a fulcrum member mounted for movement on said supporting means toward and away from said brake plate and disposed on the other side of said pressure plate from said brake plate, said pressure plate pivotal on said fulcrum member by a sheet engaging between the forward ends of said plates, said fulcrum member disposed closer to the sheet exit than to the sheet entrance, a yieldable thrust member exerting a braking force on said pressure plate, said fulcrum member interposed between said thrust member and said pressure plate and transmitting the force of said thrust member to said pressure plate to normally hold the latter flat against said brake plate, a retractable stop member normally overlying the sheet exit, a latch member normally latching said stop member in the normal position thereof, a power element operatively connected to said latch member and operable when activated to release said stop member, a lost-motion connection between and connecting said power element and said stop member to effect a delayed retraction of said stop member subsequent to release said latch member, and a second lost-motion connection between and connecting said power element and said fulcrum member to effect a delayed movement of said fulcrum member away from said brake plate subsequent to retraction of said stop member, spring means suspending the front end of said pressure plate from said supporting means and normally overcome by said thrust member, and means on said stop member operable to lift the rear end of said pressure plate and normally spaced therefrom.

3,098,650
OPERATING CONTROL MECHANISM FOR DUPLICATING MACHINES
Henry P. Keil, Chicago, Ill., assignor to Fixture Hardware Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 8, 1960, Ser. No. 20,931
7 Claims. (Cl. 271—57)

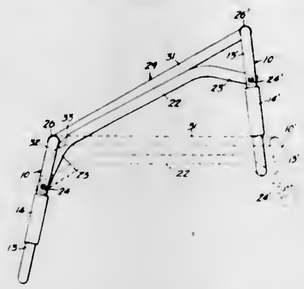


1. In a duplicating machine having a feed tray, a rotatable wheel mounted on a lever pivoted to the frame of the machine and adapted to rest upon the copy sheets being fed into the machine, and drive means connected to the wheel adapted to periodically rotate the wheel, the improvement comprising a second wheel mounted on the feed tray in the pivotal path of the rotatable wheel and below the lower copy sheet, and switch means operatively connected to said second wheel adapted to be operated in response to rotation of said second wheel by the rotatable wheel when the two wheels are in engagement with one another.

3,098,651
SWINGABLE WALKERS
Charles E. Murcott, Valley Drive, Bay Crest, Huntington, N.Y.
Filed Sept. 8, 1961, Ser. No. 136,864
9 Claims. (Cl. 272—70.3)

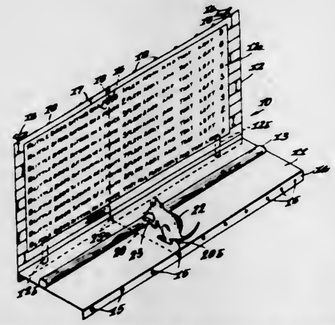
1. A swingable walker of the character defined comprising two reinforced U-shaped side frames having upper crossheads forming integral handgrip portions and front and rear depending posts, bracing means positioned between the upper portion of the front posts, said means and said frames being swingably coupled for movement of the frames one with respect to the other, a check rod adjacent the front posts, means pivotally supporting said rod in connection with the side frames for controlling

relative spacing and movement of said frames, said check rod having diverging ends, and said diverging ends en-



gaging the front posts of the side frames in checking swinging movement of said frames.

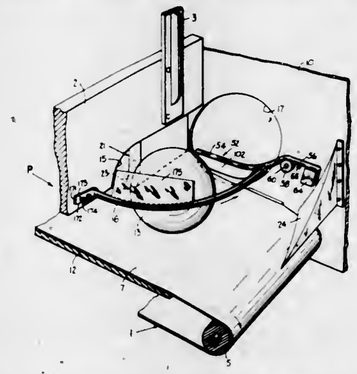
3,098,652
CAT AND BIRD GAME
James Lee, 1130 Brookdale Ave., Bayshore, N.Y.
Filed Dec. 14, 1962, Ser. No. 244,745
3 Claims. (Cl. 273—1)



1. A game of the class described comprising, in combination, a horizontal base of rectangular contour having a vertical flange at each of the longer sides of said rectangle, a vertical board secured to one of said flanges, the other flange having a row of holes, the holes in said row located equidistant from each other, a row of holes in the opposite flange in alignment with the holes in the first flange, a row of cartoon characters mounted to the upper edge of said vertical board, springs upon which said characters are mounted, said springs being held upright on the upper edge of said board, a row of cartoon characters disposed along the entire length of said base, and a number of flexible cords being threaded through the holes in said flanges, one end of each cord being secured to a character perched on said board with the other end being held to a character on said base, the pulling upon said cartoon characters on said base operating the cartoon characters perched to said board to operate the game.

3,098,653
BOWLING BALL HANDLING MECHANISM
George A. Gruss, Lowell E. McKean, and Donald L. Zelters, Shelby, Ohio, assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Nov. 25, 1960, Ser. No. 71,660
15 Claims. (Cl. 273—43)

8. Ball handling mechanism for use in the pit of a bowling alley comprising a substantially horizontal ball and pin supporting surface, a backstop in said pit and mounted above said supporting surface a distance less than the diameter of a bowling ball, said backstop having an opening for receiving a bowling ball therethrough, a boundary of said pit being provided with a ball receiving opening located behind said backstop, guide means mounted behind said backstop for guiding a ball from said backstop opening to said pit boundary opening, and



means for causing a ball to roll through both of said openings, said ball guide means including a member having a generally horizontal curved portion extending from the backstop ball opening to the pit boundary ball opening and adapted to engage a ball therealong, and guide means mounted on said member for directing pins downwardly onto said surface thereby preventing obstruction to the passage of balls through said opening.

3,098,654
BOWLING GLOVE DEVICE
Lee D. Larsen, 540 N. Main, Pocatello, Idaho
Filed Oct. 19, 1961, Ser. No. 146,301
1 Claim. (Cl. 273—54)



A glove for bowlers comprising, an elongated main body overlying the palm of the bowler's hand and having a portion extending forwardly to terminate adjacent the finger tips, said body extending rearwardly to embrace the wrist, strap means to secure the wrist embracing portion of the body about the wrist in a circumferential manner, means holding the main body against the palm and fingers of the bowler, a cylindrical finger, said finger adapted to releasably engage in a socket formed in a bowling ball, means including a short flexible chain connecting said cylindrical finger to the forwardly terminating portion of the body, and a U-shaped frame anchored to the body and conforming to the periphery thereof, said frame having a bight formed centrally thereof to receive one end of a swivel hook, said hook providing anchorage for said chain.

3,098,655
PLASTIC BOWLING PIN
Harold W. Martin, Shelby, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Nov. 20, 1959, Ser. No. 854,418
3 Claims. (Cl. 273—82)

3. In a molded plastic bowling pin, the combination of a pin body including a neck portion having a substan-

tially circular transverse cross-section of smaller diameter than the portions of the body adjacent thereto, said body being provided at said neck portion with a shallow annular transversely extending groove of such width as to extend over substantially the entire area of said neck portion, a thin annular protective band disposed in and

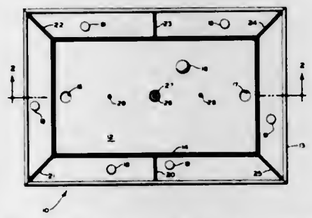


completely filling said groove, said band being of a material characterized by substantially greater deformability than the material of said body to prevent said neck portion from being notched by impact with other objects and a single continuous solid film covering and adhered to the outer surfaces of both said body and said band.

3,098,656
VEHICLE FRAME ASSEMBLY
Charles W. Gregory, Grants, N. Mex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 7, 1960, Ser. No. 61,157
2 Claims. (Cl. 280—106)

1. A heavy load bearing vehicle frame assembly comprising two spaced box-shaped side rails of hollow cross section, transversely box-shaped cross rails of hollow cross section interconnecting said side rails at points adjacent their respective forward and rearward ends, each of said side rails and each of said cross rails comprising inwardly facing abutting channels in fixed relationship to each other, a reinforcing plate member adjacent to and in fixed relationship to each outer surface of said abutting channels, said reinforcing plate members surrounding said inwardly facing abut.ing channels, first and second spaced cross members forwardly secured to said side rails, said spaced cross members substantially disposed in a horizontal plane beneath said side rails with that portion of each of said cross members secured to said side rails extending outwardly and upwardly from the horizontally disposed portion of each of said cross members, a force-resisting member parallel to and secured to said forward cross rail, said force-resisting member ex.ending beyond said forward cross rail and in front of the ends of said side rails, and a trunnion plate member supported by said cross members and restrictively pivoted about the center of each of said first and second spaced cross members.

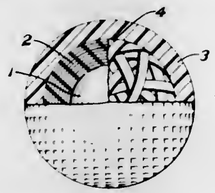
3,098,657
ACTION GAME BOARD
George L. Bell, 230 Center St., Huron, Ohio
Filed July 18, 1961, Ser. No. 124,829
1 Claim. (Cl. 273—123)



An action game comprising a game board having a flat, rectangular playing surface, an edge frame extending around the margins of said playing surface and protruding upwardly therefrom, a continuous rail, means for mounting said rail in spaced relationship upwardly from said edge frame and parallel thereto and spaced vertically above said playing surface for defining a rectangular court in the central portion of said board and a passage beneath said rail, markings on a marginal surface portion of said board between said rail and said edge frame for dividing said marginal surface portion into at least a single zone at each end thereof and a plurality of zones at each side thereof, said playing surface having openings therein near opposed ends of said court for defining goals, and three ball retaining depressions in said playing surface, said depressions being located substantially in longitudinal alignment and at the two quarter points and the center of said playing surface, a resilient ball for rolling on said playing surface within said court, said ball having a diameter greater than the vertical height of the passage between said rail and said surface and so related to the diameter of each of said openings that said ball may drop into said openings, and a plurality of discs for sliding on said playing surface and striking said ball to impel the same toward said goals, each of said discs having a thickness less than the vertical spacing between said playing surface and said rail whereby said discs may be propelled under said rail from any of said zones into said court for striking said ball and under said rail out of said court into another of said zones for contacting said frame.

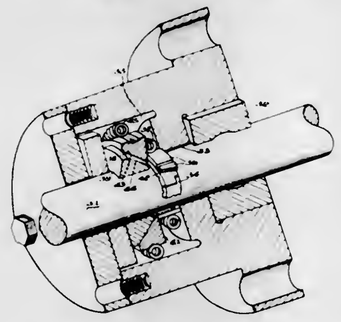
3,098,658
GOLF BALL HAVING A POLYETHER-URETHANE CORE
Walter T. Murphy, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Nov. 12, 1958, Ser. No. 773,482
5 Claims. (Cl. 273—230)

1. In combination, a golf ball having a core, a thread wrapped center about said core and a molded cover about said center, said core comprising a highly resilient polyetherurethane composition comprising the reaction product of a mixture of (1) 2 chemical equivalents of a polyalkylene ether glycol having an average molecular weight of from about 1,000 to 5,000, having from 4 to 8 carbon atoms in its alkylene groups and being a liquid at a temperature below about 100° C., (2) from about 0.45 to 2.0 equivalents of an aliphatic polyol soluble in said glycol and having from 3 to 40 carbon atoms and from 3 to 8 hydroxyl groups selected from the group consisting of primary and secondary hydroxyl radicals and being free of nitro groups and of amino hydrogen atoms, and (3) from about 2.45 to 4.0 equivalents of an aromatic diisocyanate



soluble in said glycol, the equivalents of said diisocyanate being at least equal to the total of the equivalents of said glycol and said polyol.

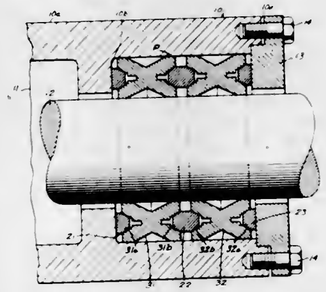
3,098,659
FRICTION-SPRING ARRANGEMENT FOR SHAFT SEALS
Paul R. Shepler, Towson, Md., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Sept. 13, 1960, Ser. No. 55,655
2 Claims. (Cl. 277—144)



1. A fluid seal for an axially moveable rotating shaft comprising a sealing housing about said shaft, a sealing face formed on one wall thereof, an annular sealing ring disposed within said housing and encircling said shaft and means arranged in said housing girding said shaft in non-sealing engagement therewith and abutting said sealing ring for biasing said sealing ring against said sealing face with a force varying with the direction of axial movement of said shaft, said force being increased as the axial movement of said shaft tends to separate said sealing ring from said sealing face and said force being diminished as the axial movement of said shaft tends to urge said sealing ring toward said sealing face, said biasing means comprising an outer annular split-ring, an inner solid annular ring and a spiral spring encircling said split-ring and applying a radially-directed force thereto, said solid ring having a conical outer surface, said split-ring having a conical inner surface in mating relationship with said conical outer surface and slidable relative thereto and said split-ring having an annular plane surface abutting the rim of the sealing ring.

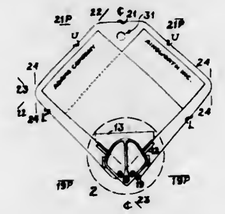
3,098,660
PACKING ASSEMBLY
Johann Karl Hausner, Chicago, Ill., assignor to Neotronic Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 16, 1960, Ser. No. 8,985
2 Claims. (Cl. 277—187)

1. In a packing housing surrounding a relatively movable shaft, in combination at least three axially spaced wedge means having wedge faces terminating at a radial end face with the wedge faces defining therebetween an acute angle and the wedge being formed of chrome plated metal bodies surrounding the shaft in closely spaced relation thereto, and an annular packing element formed of a relatively yieldable porous metal impregnated with a solid metallic lubricant and interposed between each pair of said wedge means sealingly engaging said shaft, each said packing element having a generally X-shaped cross-section of small axial dimension with axially opposed grooves having generally flat bottoms smaller in radial



dimension and spaced from said radial wedge faces, and having disposed at substantially said acute angle side walls for matingly receiving the wedge faces for receiving said wedge means, said groove bottoms having axially aligned slots, said packing elements having radially facing axially centered V-shaped notches, said notches, said slots and the spacing between the wedge radial faces and the groove bottom cooperating to facilitate easy spreading of the grooves, said wedge means being adapted to be urged together so as to spread said grooves and urge the packing element into tighter sealing engagement with said shaft.

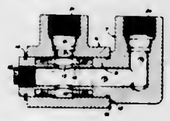
3,098,661
CLIPBOARD
Nicholas Rippen Abberly, Dallas, Tex.
(% Malueg, 922 25th St. SE., Cedar Rapids, Iowa)
Filed May 15, 1962, Ser. No. 194,865
5 Claims. (Cl. 281—44)



1. A clipboard including a mounting panel and a thereto affixed clamp and being adapted to hold two pluralities of rectangular elongated equidimensioned sheets, a part of the clamp providing a sheet-corner-accommodating space which is substantially a right-angle V in which the sheet corners are lodged, the panel edges including a base edge and a thereto maximally opposed crown edge, both relatively short, a pair of upper edges and a pair of lower edges, these four being relatively long, each upper edge and laterally corresponding said lower edge extending mutually angularly and jointly adjoiningly intervening between the base edge and the crown edge, the clamp neighboring the base edge, the clamp and the panel face, specifically the base edge and the crown edge, being in the main substantially bilaterally symmetrical to a single

plane of symmetry, one said plurality of sheets being leftwardly obliquely disposed, the other being rightwardly obliquely disposed respecting the plane of symmetry by an angle which, in the case of each sheet plurality, measures substantially forty-five degrees, the panel-face plane-of-symmetry dimension between the base edge and the crown edge measuring from nine twelfths to sixteen twelfths of the thereto rectangular longest panel-face dimension, the clamp including a jaw mount secured to the panel at the face thereof, a pivotally jaw-mount-affixed jaw, and, between the jaw and the jaw mount, a spring means which is affixed to the jaw and panelwardly resiliently urges a sheet-engaging lip which is a jaw portion, the right-angle-V-constituting part of the clamp consisting of two jaw-mount portions or guides having respectively two mutually obliquely confronting guide surfaces lying in two planes which are substantially rectangular to one another and to the plane of the panel face, the sheets edgewise engaging said guide surfaces, each of two portions of the spring means intervening between a said guide and a corresponding one of said lower edges.

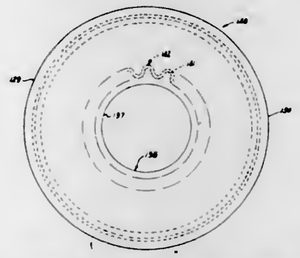
3,098,662
METAL JOINT OR SEAL
Richard N. Iversen, Mayfield Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 7, 1959, Ser. No. 844,998
3 Claims. (Cl. 285—18)



1. A metal swivel fitting comprising a body member having a longitudinal bore therethrough and a radial passage, a spool member rotatably mounted within said bore, a passage in said spool member adapted to communicate with said radial passage, one of said members having a cylindrical bearing and sealing surface adjacent the other member, said other member having a pair of axially spaced annular bearing portions, one on each side of said radial passage, said annular bearing portions being spaced from said cylindrical surface by a radial gap, a thin flexible annular sealing lip on said other member extending axially inward from each annular bearing portion to make sealing contact with said cylindrical surface, said one member having a martensitic structure, said annular bearing portions and said sealing lips having an austenitic structure adapted to be transformed into martensite in response to treatment at a temperaure of about −100° F., to produce a dimensional change to increase the sealing contact pressure between said sealing lips and said cylindrical surface and to bring said annular bearing portions into bearing contact with said cylindrical surface.

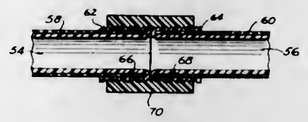
3,098,663
ROOF COLLAR CONSTRUCTION
Raymond A. Dibley, 13435 Loretto, Detroit, Mich.
Filed Apr. 23, 1962, Ser. No. 192,023
14 Claims. (Cl. 285—43)

1. In a roof collar construction for use with a vent pipe which extends angularly through the roof of a building, the combination of, a substantially flat, rectangular body member; an upwardly extending conical embossure struck from the central area of said flat body member; an opening in said conical embossure; a downwardly depending flange portion formed on the inside diameter of said opening terminating in an upwardly formed, generally S-shaped lip, below the upper plane surface of said conical embossure, to form a pocket, the upper plane surface thereof terminating in angular relationship to the plane of said flat body member; an annular flat disc of thin resilient material; a downwardly depending flange portion integral with said disc and intermediate the inner and outer boundaries of said disc; an enlarged end on said portion, said end received and locked in said pocket; an opening in the central area of said thin disc, said opening having a



tapered edge portion which is resiliently yieldable and of somewhat lesser diameter than the vent pipe; distortion of said opening during installation causing said tapered edge portion of said thin disc to elliptically engage the vent pipe to form a watershedding joint therebetween, the periphery of said disc extending downwardly into sealing engagement with the external surface of said conical embossure, while the body of said flat flange engages the roof proper.

3,098,664
PLASTIC PIPE
Robert E. Waugh, Camp Hill, Pa., assignor to The Englander Company, Inc., Baltimore, Md., a corporation of Delaware
Filed Jan. 7, 1958, Ser. No. 707,579
5 Claims. (Cl. 285—55)



2. A pipe comprising a pair of axially alined thermoplastic tubes, a pair of fabric sleeves enclosing said tubes and impregnated with resin, each of said tubes having ends folded back over said impregnated fabric to form collars of said thermoplastic material, one collar on one tube being in contact with one collar on the other tube, said contacting collars being screw threaded, and a threaded coupling joining said threaded collars and tubes together.

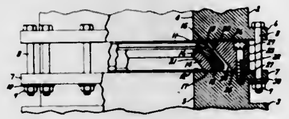
3,098,665
PRESSURE COMPENSATOR FOR ROTARY FLUID JOINTS
William George S. Smith, 18 Marcelle Ave., Corner Brook, Newfoundland, Canada
Filed Mar. 17, 1960, Ser. No. 15,753
15 Claims. (Cl. 285—134)

1. Pressure compensation apparatus for use with a rotary fluid joint, comprising a thrust-transmitting assembly adapted to bear on the joint, a pressure responsive means adapted to act on the end of said assembly remote from the joint, a thrust-generating means adapted to act on said assembly intermediate the pressure responsive means and the joint, the pressure responsive means having a fixed member and a movable member, the movable member being associated with said remote end of said assembly, means adapted to support the thrust-generating means independently of said fixed member whereby the pressure responsive means may be dissociated from the apparatus while the thrust-generating means maintains a thrust against the joint, and a chamber defined by said fixed and movable members, said chamber being



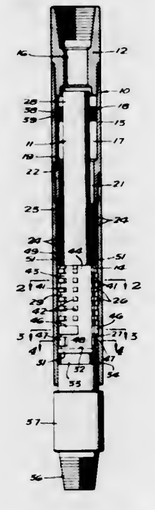
adapted for open communication with the joint whereby said thrust-transmitting assembly brings to bear upon said joint a degree of thrust, acting in one direction, at least equal to the opposing force tending to open the joint.

3,098,666
SEAL
Dallas E. Cain, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 6, 1959, Ser. No. 825,021
2 Claims. (Cl. 285—363)



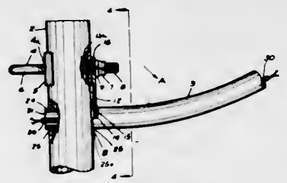
1. In a static seal, the combination of a first sealing plate, a second sealing plate, a first sealing member having a first sealing surface and a second frusto-conical sealing surface, said first sealing surface being in sealing engagement with the first sealing plate, a second sealing member having a first sealing surface and a second frusto-conical sealing surface, said first sealing surface of the second sealing member being in sealing engagement with the second sealing plate, said second frusto-conical sealing surface of the first sealing member being in sealing engagement with the second frusto-conical sealing surface of the second sealing member, said first sealing member at least partially enveloping the second sealing member, bolt means for urging the first sealing plate toward the second sealing plate to place the first and second sealing members under longitudinal compressive forces to create circumferenial tensive forces in the first sealing member accompanied by circumferential compressive forces in the second sealing member, and stop means located between the first and second sealing members to determine the minimum distance between the first and second sealing plates, the first sealing member and the second sealing member each having a longitudinal length less than the distance between the first and second sealing plates, said stop means additionally including an annular abutment having an inner surface for aligning the first and second sealing members between the first and second sealing plates, said stop means being attached to the second sealing plate and having at least a portion of the inner surface of the stop means coacting with the first sealing member so as to retain the first and second sealing members adjacent the second sealing plate in the event that the bolt means connecting the first and second sealing plates are disconnected.

3,098,667
SAFETY JOINT FOR OIL WELL DRILLING STRING
Eugene C. Greenwood, Corona del Mar, Calif.
Filed Jan. 26, 1959, Ser. No. 789,075
15 Claims. (Cl. 285—376)



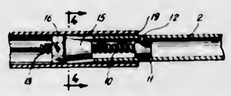
1. A releasing tool, which comprises a pair of parallel elongated elements capable of movement both longitudinally and rotationally relative to each other when in predetermined positions relative to each other, a plurality of individual keys provided on one of said elements in alignment longitudinally of said one element and spaced from each other longitudinally thereof, a plurality of individual keys provided on the other of said elements in alignment longitudinally of said other element and spaced from each other longitudinally thereof, the dimension of each of said last-mentioned keys longitudinally of said other element being less than the corresponding space between each pair of adjacent keys on said one element, the spaces between said keys on said one element corresponding to the positions of said keys on said other element whereby said keys on said other element may move between said keys on said one element during rotation of said one element and other element relative to each other when said elements are in predetermined longitudinal positions relative to each other, means provided on said one element to stop the relative rotational movement of said other element when said keys on said other element have rotated past said keys on said one element and may therefore shift longitudinally relative to said one element to lock positions at which said keys on said elements are circumferentially adjacent each other, spring means connected between said one element and said other element to shift said elements longitudinally relative to each other until said key elements are in said circumferentially adjacent lock positions, thrust means to prevent shifting of said elements relative to each other past said lock positions at which said keys are circumferentially adjacent each other despite the continued bias of said spring means, and stop means to limit the longitudinal movement of said one element and other element relative to each other when said elements are in said predetermined longitudinal positions relative to each other.

3,098,668
STREET LIGHT BRACKET CONNECTION MEANS
Jordan Paine, 208 S. 55th Ave., P.O. Box 14427, Phoenix 31, Ariz.
Filed Feb. 27, 1961, Ser. No. 91,927
1 Claim. (Cl. 287—56)



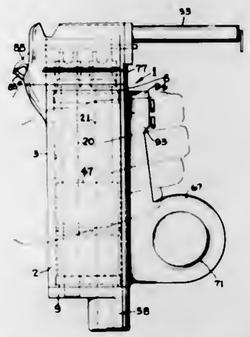
A detachable light bracket attachment for a tubular light pole wherein said pole has an upper pair of horizontal opposing holes aligned along a horizontal axis from front to rear and a lower pair of horizontal opposing holes similarly aligned, said bracket attachment comprising an elongated tubular body adapted to enclose an electric supply cable and having its rearward end inserted rearwardly through said lower pair of holes in said hole extending outwardly from said hole as a cantilever beam, an elongated suspension plate extending substantially perpendicular and upward from said tubular body adjacent the front face of said pole, said elongated plate having an arcuate cutout at its lower end partially encircling said tubular body and rigidly fixed thereto, said plate having a curved inner face to conform to the front face of said pole so as to prevent radial movement of said body relative to the pole, said plate having a bolt hole at its upper end, a bolt passing through said upper bolt holes in said pole and said bolt hole in said plate, a strengthening piece between said bolt and the rear face of said pole, a nut threaded onto said bolt and adapted to secure said plate to said pole and thereby secure said body to said pole, said bolt acting to at least partially support said plate and thereby at least partially support said tubular body at said lower front hole in said pole, said tubular body being unsupported at any point outside the immediate area of said pole and said bracket including said plate and tubular body being retained in assembled position on said pole by only said bolt.

3,098,669
TELESCOPIC TUBE
Louis Philippe Fortin, St. Jean, Quebec, and Eugene Lemieux, Rosemont, Montreal, Quebec, Canada, assignors of sixty-six and two-thirds to Ernest Beaupre, Montreal, Quebec, Canada, and thirty-three and one-third to said Fortin
Filed Apr. 17, 1961, Ser. No. 103,530
4 Claims. (Cl. 287—58)



1. A telescopic tube comprising an outer tube section and an inner tube section in telescopic engagement, said outer tube section having inner longitudially extending ribs and intervening recesses, said inner tube section having an outer cylindrical surface slidably engageable with said ribs and rotatable and longitudinally movable with respect to said outer tube section, the telescoped end of said inner tube section having slits defining expandable leaves therebetween, a bolt disposed coaxially of said inner tube section and having one end secured to the same in a zone spaced inwardly from said telescoped end and protruding from said leaves, an expander in threaded engagement with said bolt and consisting of a frusto-conical portion having its smaller end fitting within said inner tube section and engageable with said leaves to expand the same and cause said leaves to frictionally and tightly engage said ribs in order to lock said two tube sections in adjusted position said expander further having an integral head located outside of said inner tube section and providing radial projections engageable with said recesses, and ribs to prevent rotation of said expander with respect to said outer tube section and yet allow longitudinal displacement of said expander with respect to said outer tube section.

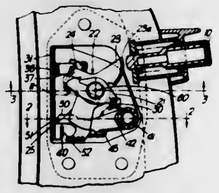
3,098,670
CORD TENSIONER AND KNOT TYER
Jack E. Caveney, 10132 S. Washtenaw, Chicago, Ill.
Filed Oct. 17, 1961, Ser. No. 145,612
12 Claims. (Cl. 289—17)



1. A tool for securing a binding cord around a bundle of one or more objects comprising, a housing provided with a cord receiving passage into which a length of cord drawn off from a cord supply can be extended longitudinally, means intersecting said passage for releasably retaining the cord in the passage, a looper positioned adjacent the passage and having a notch aligned with the direction of the length of cord, means for causing said looper to be moved toward the cord positioned in the passage with the notch engaging the cord and thereafter to be twisted through a large angle to twist the cord into a cord loop, a shuttle on the housing, and operating means to cause the shuttle to be extended in the direction of the passage and through the loop, and provided with a cord gripper movable to grip the free end of the cord after it is encircled about the bundle to be secured, said operating means thereafter causing said shuttle to be retracted to carry the free cord end through the cord loop to a holding position where it can be held stationary relative to the tool while the supply end of the cord is withdrawn to shrink the cord around the bundle and secure the cord loop and the free cord end into a tight knot.

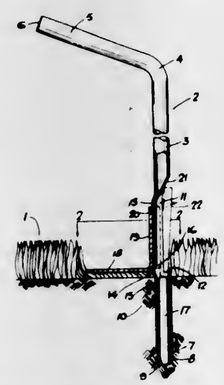
3,098,671
VEHICLE DOOR LATCHES
Norman Sidney Moss, Solihull, England, assignor to Wilmot Breeden Limited, Birmingham, England, a British company
Filed Mar. 23, 1962, Ser. No. 181,863
Claims priority, application Great Britain Mar. 27, 1961
8 Claims. (Cl. 292—221)

1. A vehicle door latch having means operable externally of the vehicle to release the latch for opening of the door, and handle operated means operable internally of the vehicle either to lock the latch against operation by the outside releasing means or to release the latch for opening of the door, characterised by blocking means which are accessible only at the edge or shut face of the door when the door is open, for manual movement between a position in which they are movable by the in-



ternal-handle-operable-locking means into blocking relation with the external release means to prevent operation thereof and a position in which they block the operation of the internal-latch-locking and releasing means while leaving the external latch releasing means free for operation.

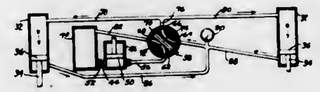
3,098,672
TURF PLUGGER
William M. Husband, 1904 Wynwood Drive, Rocky River, Ohio
Filed Sept. 29, 1960, Ser. No. 59,253
4 Claims. (Cl. 294—50.7)



1. A turf plugger comprising a thin walled tubular member having an upper laterally bent portion forming a handle, a reduced diameter annular cutting edge at the lower end thereof adapted to penetrate such turf to produce a plug, one side portion of the wall of said tubular member spaced upwardly from said edge being cut and stamped and thus compressed against the opposite wall thereof to form on one side of said tubular member a vertically elongated lateral outlet opening for such plug and on the opposite side a semi-circular vertically elongated circumferentially continuous double thickness wall portion, and a horizontal stop member firmly secured to the thus produced double wall thickness of said tubular member.

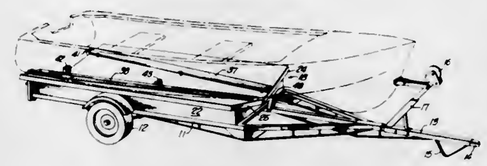
3,098,673
LIFTING DEVICE
John Carlesimo, 24885 Glenside, Southfield, Mich.
Filed Nov. 14, 1960, Ser. No. 68,776
2 Claims. (Cl. 294—63)

1. A device for lifting a stack of blocks comprising, a frame, downwardly extending bars pivotally supported at their upper ends to the opposite ends of said frame, a pair of spaced longitudinally extending beams, each end of each of said beams being supported by the lower ends of several of said bars which are arranged in parallogram formation for swinging movement of said beams toward and



away from each other, a cylinder secured to each of the opposite ends of one of said beams, a piston rod secured to each of the opposite ends of the other of said beams, a piston carried by said rods for reciprocation within said cylinder, and fluid pressure means for moving said pistons.

3,098,674
VEHICLE BODY CONVERTIBLE FROM A FLAT BED TO A BOAT CARRIER
James W. White, 1812 Osage, Fort Smith, Ark.
Filed Dec. 21, 1960, Ser. No. 77,324
8 Claims. (Cl. 296—23)

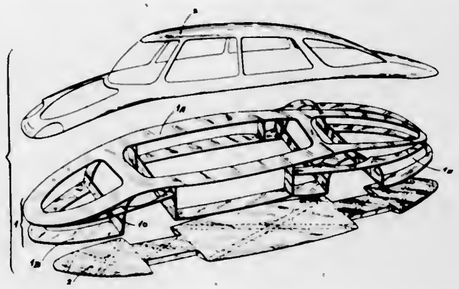


1. A vehicle body convertible between a boat carrier and a flat bed comprising a frame, a pair of road wheels supporting said frame and rotatable about an axis transverse to the direction of movement of the vehicle body, a pair of elongated flat members, each of said members extending a substantial distance both forwardly and rearwardly of said axis and having a dimension transverse to said axis substantially greater than its corresponding dimension parallel to said axis, means carried by said frame to support said members in side by side relationship for movement between alternative load-bearing positions, said members together defining a flat bed in one of said positions and a boat carrier having a generally V-shaped cross section parallel to said axis in the other of said positions, and elongated bar means providing boat supporting pads above the upper surface of said members and having releasable connections to said members, said bar means including forward portions spaced apart relatively narrowly and oriented to support the narrow, steeply sloped bottom at the bow of a boat and rearward portions spaced apart relatively widely and oriented to support the wide relatively flat bottom at the stern of a boat.

3,098,675
SHOCK-RESISTING MOTOR VEHICLES
Jacques Jean-Marie Jules Gerin, 24 Rue de la Tourelle, Boulogne-sur-Seine, France
Filed Sept. 26, 1961, Ser. No. 140,704
Claims priority, application France Oct. 7, 1960
7 Claims. (Cl. 296—28)

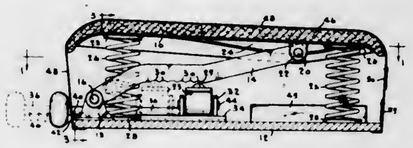
1. A vehicle with a car body with at least one seat capable of withstanding shocks comprising in combination a car body shell, and a strengthening support within said car body shell comprising main ribbing surrounding the body of an occupant above seat cushion height extending substantially from the front to the rear of said car body shell, said ribbing having a wider flat surface in the hori-

zontal plane than in the vertical plane, whereby the maximum strength of said ribbing is exerted in the horizontal



plane in support of said car body shell against horizontally imposed forces.

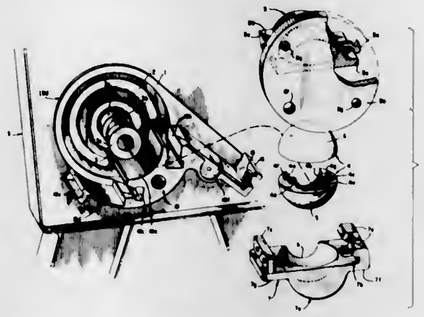
3,098,676
SEAT SUSPENSION SYSTEM
Allison K. Simons, Milwaukee, Wis., assignor to Bostrom Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 20, 1961, Ser. No. 104,350
4 Claims. (Cl. 297—307)



1. A seat suspension system comprising, a seat, a base, suspension means for supporting said seat on said base for generally vertical motion, said suspension means including adjustable biasing means for resisting the motion of the seat, and means for enclosing said seat and said suspension means to provide an air cushion between said seat and said base, and damping means including an air vent for restricting the flow of air from atmosphere into and out of the enclosure to damp high frequency and amplitude vibrations between the seat and the base.

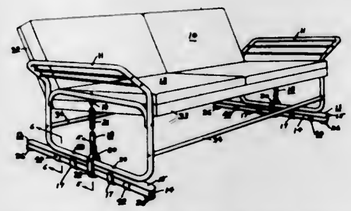
3,098,677
CHAIR SEAT OR THE LIKE HINGE
Herbert E. Williams, Temple, Tex., assignor to American Desk Manufacturing Company, Temple, Tex., a corporation of Texas
Filed Sept. 15, 1961, Ser. No. 138,389
12 Claims. (Cl. 297—332)

1. In a hinge construction for rockably mounting a chair seat element or the like on a relatively fixed frame element, a body structure comprising a pintle having respective portions of relatively large and relatively small diameters, and a part having a curved surface spaced radially from and facing inwardly toward said pintle; a generally spherical bearing insert comprising mating insert sections which are conjointly formed to provide an internal bore having respective portions of relatively large and relatively small diameters interfitting with the relatively large and small diameter portions of said pintle for mounting said insert sections on said pintle with said insert being spaced radially inwardly from said inwardly facing surface of said body structure part and for preventing movement of said spherical bearing insert axially of said pintle, said insert sections being joined substantially in a plane parallel to and containing the axis of said pintle whereby said insert sections, divided at the insert joint, may be assembled together to surround said pintle by placing one of said insert sections on said pintle and moving the other of said insert sections laterally toward said pintle and said one of said insert sections in a direction normal to the pintle axis; a first outer bearing member having a generally hemispherical inner surface conforming to said spherical bearing insert and an outer surface curved similarly to said inwardly facing curved surface of said body structure part, the radial dimensions of said first outer bearing member being so related to the space between said bearing insert when on



said pintle and said inwardly facing curved surface of said body structure part that said first outer bearing member can be inserted into said space by relative movement parallel to the pintle axis only when neither of said bearing insert sections is on said pintle and within said space; a second outer bearing member having a generally hemispherical inner surface conforming to said spherical bearing insert; and means for securing said first and second outer bearing members together so as conjointly to embrace said spherical bearing insert with the latter embracing said pintle.

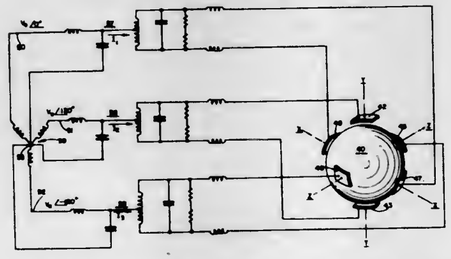
3,098,678
GLIDER CONSTRUCTION
Morton Pearlstine, Bala-Cynwyd, Pa., assignor to The Bunting Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed June 6, 1960, Ser. No. 34,252
5 Claims. (Cl. 297—344)



1. In a glider, in combination, a rigid superstructure including a seat and back rest unit, a pair of laterally spaced parallel straight tracks secured to the bottom of said superstructure and extending fore and aft thereof, a pair of floor-supported elongated straight tracks respectively disposed beneath and in substantial vertical registry with said superstructure straight tracks, and plural revoluble bearing means interposed between each floor-supported track and its associated superstructure track for supporting said superstructure upon said floor supported tracks for gliding movement therealong in opposite directions from an at-rest position, said revoluble bearing means being free to move longitudinally of both tracks between

which it is disposed when said tracks move longitudinally relative to each other, each of said floor-supported straight tracks being formed with a pair of shallow depressions therein spaced apart longitudinally along the track length within which first and second portions of said plural revoluble bearing means are respectively disposed when the glider is in its normal at-rest position, each of said superstructure straight tracks being formed with a pair of shallow depressions therein spaced apart longitudinally along the track length and positioned immediately above and in facing relation to the shallow depressions in the below-lying floor-supported track so that said revoluble bearing means are also disposed respectively therewithin when the glider is in its normal at-rest position, and harness means intercoupling the spaced apart first and second portions of the plural revoluble bearing means disposed between each floor-supported track and its associated superstructure track, said harness means being carried by and shifting with said bearing means when the latter move longitudinally along said tracks and including means to maintain substantially constant the spacing between the intercoupled portions of the revoluble bearing means.

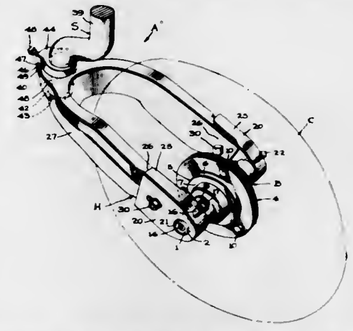
3,098,679
PASSIVE CONTROL CIRCUIT FOR ELECTROSTATIC BEARING
William F. De Boice, Long Beach, Calif., assignor to North American Aviation, Inc.
Filed Aug. 2, 1961, Ser. No. 128,781
13 Claims. (Cl. 308—8)



1. In an electrostatic bearing control circuit for controlling the support of a member between at least a pair of plates, means for establishing an A.-C. potential between said plates and said supported member, separate inductive means for forming a resonant circuit with the capacitance of an associated one of said plates when said one of said plates is further from said member than the other of plates, and means interposed between said means for establishing a potential and said inductive means for introducing an electrical phase lead into said control circuit.

3,098,680
COLTER ASSEMBLY
Henry E. Lohman, 301 S. 8th Ave., Salina, Kans.
Filed Sept. 28, 1961, Ser. No. 141,358
2 Claims. (Cl. 308—19)

1. A colter assembly for agricultural implements, comprising a generally cylindrical bearing including a non-rotatable axle member having an enlarged cylindrical hub disposed substantially midway between the opposite ends of said axle member, a two-part housing shell composed of complementary halves rotatably mounted on the hub aforesaid in juxtaposed relation to each other and having means for mounting a colter disc therebetween for rotation therewith, about the hub, said axle member having lubricating passageways provided therein and extending radially inwardly from a lubricant inlet at the outer periphery thereof and thence axially therethrough from one end of said axle member and communicating with a diametrical passageway provided substantially through the middle of said hub, said hub being further provided with an annular peripheral lubricant distribution groove communicating with the opposite ends of the diametrical passageway aforesaid through the hub, hanger means fixedly connected to the opposite ends of said axle member for supporting the latter, said hanger means including a unitary yoke having a pair of laterally spaced arms in which the opposite ends of the axle member are respectively seated and anchored thereto, one of said arms having a hollow lubricant fitting threadedly mounted therein and extending therethrough into clamping engagement with the periphery of the axle member adjacent to and around the radially extended passageway aforesaid, said fitting communicating with the radially extended pasageway in the axle member, each half of the housing shell being provided with an annular flange extending axially outwardly therefrom in radially spaced relation to the axle member, an annular packing member seated within



each annular flange aforesaid and encircling the axle member, a cup member telescopically fitting about each annular flange aforesaid for retaining the respective packing members therein, said cup member having a radially inwardly extended flange abutting the outer face of the annular packing member, a coil spring interposed between each cup member and its adjacent hanger arm, with one end of each spring seated on the adjacent hanger arm and its other end seated on the radially inwardly extended flange of the opposing cup member, said coil springs encircling the shaft member and yieldably urging the cup members into firm seating engagement with the respective packing members, with consequent yieldable compression of the latter, and an annular dirt and weed guard sleeve extended axially from the outer face of each cup member and terminating in close proximity to the adjacent hanger member, said sleeves being radially spaced from the axle member and enclosing the respective coil springs therein.

3,098,681
JOURNAL-TYPE STAFF BEARINGS FOR MOVEMENTS AND THE LIKE
Walter Kohlhagen, Elgin, Ill., and Louis R. Burghoff, Delavan, Wis., assignors to Amphenol-Borg Electronics Corporation, Delavan, Wis., a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 87,419
5 Claims. (Cl. 308—22)

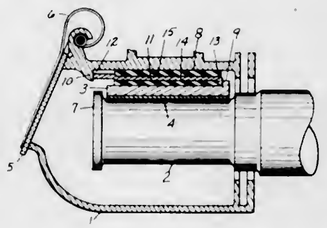
1. In a movement, the combination with spaced metal end plates and a rotary staff with end journals of which at least one journal is of a diameter larger than the wall thickness of one of the plates, of aligned end bearings for said staff journals on said plates, of which the bearing for said one end journal comprises a substantially cylindrical protrusion on one side of said one plate of a diameter larger than that of said one journal and of such height that the wall thickness of said one plate is thereat

increased beyond the diameter of said one journal, and a bearing recess in said one plate centrally of said protrusion and open at the side of said one plate facing the other plate and otherwise closed, with said recess being cross-sectionally dimensioned for fitted reception of said



one end journal and being of a depth in excess of the non-increased wall thickness of said one plate, and said recess and protrusion being formed by punch-and-die impression in and struck-up from said one plate, respectively.

3,098,682
RAILWAY JOURNAL BEARING
David G. Thomas, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Apr. 13, 1962, Ser. No. 187,411
9 Claims. (Cl. 308—54)

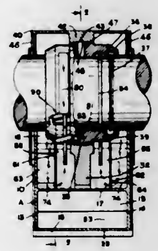


1. In combination with a railway journal box and bearing, said journal box having a shoulder at the front of the box and said bearing having a shoulder at the back of the box, a wedge having an elastomeric body in load carrying relation between the box and bearing, and a rigid core fastened to the body and extending in thrust transmitting relation between said shoulders.

3,098,683
BEARING STRUCTURE
Evert H. Jernberg, St. Paul, Minn., assignor to Electric Machinery Mfg. Company, Minneapolis, Minn., a corporation of Minnesota
Filed May 9, 1962, Ser. No. 193,450
4 Claims. (Cl. 308—76)

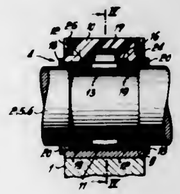
1. In a bearing structure having a base formed with a wall structure providing a chamber in the interior of the base containing lubricating oil, a sleeve bearing supported by said base, a journal journalled for rotation in said sleeve bearing, said bearing and journal having juxtaposed parts, one of said parts having an arcuate groove formed therein, said groove having an opening in the lower portion thereof, a ring of greater diameter than said journal and received in said groove and resting on said journal, the lower portion of said ring extending through said opening, means within said chamber forming an oil reservoir into which said ring extends, the combination of

(*e*) a partition in said chamber dividing the same into an oil reservoir and a cooling compartment in heat transfer relation with respect to said wall structure,
(*f*) a baffle in said cooling compartment forming an inner and an outer passageway,



(*g*) said inner passageway extending toward the center of said chamber,
(*h*) said outer passageway extending along said wall structure,
(*b*) an oil deflector directing oil discharged from said ring into said inner passageway,
(*d*) and means forming a passageway conducting oil from said outer passageway and to said oil reservoir.

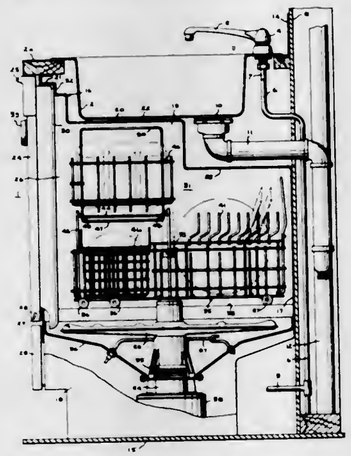
3,098,684
BEARING SEALS FOR BOTTOM DRAFTING ROLLERS
Stefan Staneff, Herzogenaurach, near Nurnberg, Germany, assignor to Industriewerk Schaeffler & HG, Herzogenaurach, near Nurnberg, Germany, a German company
Filed Dec. 23, 1960, Ser. No. 77,907
Claims priority, application Germany Jan. 16, 1960
4 Claims. (Cl. 308—187.1)



2. An antifriction bearing for the bottom rollers of drafting mechanisms in spinning machines, the bearing comprising rolling elements, a lower part provided with a raceway for said elements, an upper part detachably secured to the lower part to cover the rolling elements, and sealing means at opposite ends of the bearing, said sealing means including a packing ring of elastic material, and each ring has a plurality of collars.

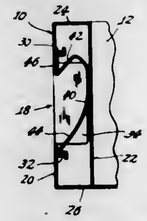
3,098,685
DISHWASHER HAVING CABINET AND RACK CONFIGURATION FOR USE BENEATH KITCHEN STRUCTURES SUCH AS SINKS
James E. Stiner, New Albany, Ind., and John F. Dullmeyer, La Habra, Calif., assignors to General Electric Company, a corporation of New York
Filed May 21, 1962, Ser. No. 196,176
6 Claims. (Cl. 312—311)

1. For use beneath a kitchen structure such as a sink, a dishwasher comprising: a housing having a dish chamber therein and an access opening formed at the front thereof, said housing having a top surface formed with a portion of maximum height at the front thereof adjacent said opening, an intermediate stepped-down generally flat portion behind said front portion, and a lower stepped-down generally flat portion behind said intermediate portion, said lower portion extending substantially to the back of said housing; and a door pivotally connected adjacent its



lower edge to said housing for movement between a generally vertical closed position wherein it closes said opening beneath said portion of maximum height of said top surface and a generally horizontal open position.

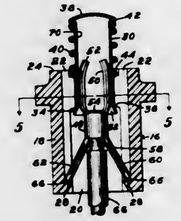
3,098,686
DRAWER PULL
Roland A. Benoit, Dayville, Conn., assignor, by mesne assignments, to Royalmetal Corporation, New York, N.Y., a corporation of Illinois
Filed Mar. 17, 1961, Ser. No. 96,575
1 Claim. (Cl. 312—320)



In combination with a drawer having a drawer front, said drawer front including spaced substantially parallel front and rear wall portions, said front wall of said drawer front having a drawer pull cavity therein, and said cavity being defined by upper and lower rearwardly extending flanges,

(*a*) a drawer pull formed of a resilient sheet material adapted to be recessed in said cavity,
(*b*) said drawer pull including a main body having an expansive back wall that is curvilinear in cross-section,
(*c*) a top wall, and
(*d*) a bottom wall attached to and extending forwardly from said curvilinear back wall and located opposite each other,
(*e*) said top wall sloping downwardly and forwardly from said back wall at an acute angle relative said back wall,
(*f*) said main body portion further comprising a facing wall extending upwardly from the foremost part of the top wall,
(*g*) and an upper and lower rearwardly extended mounting clip joined to said facing wall portion and the foremost end of said bottom wall respectively,
(*h*) each of said clips including a rearwardly extending substantially horizontal portion and a vertically extending detent portion disposed normal to the respective horizontal clip portion,
(*i*) the resiliency of said formed sheet enabling said back wall to be flexed in a manner to move said mounting clips closer to each other to facilitate insertion of the drawer pull into the drawer front cavity shaped to receive the same whereby the horizontal portions of the respective clip members upon release of the flexing force are biased against the upper and lower flange of said cavity,
(*j*) said vertical detent portions retaining said drawer pull in position within said cavity and,
(*k*) said back wall of said pull drawer being disposed in engagement with said rear wall of the drawer front to maintain a positive and continued pressure on said drawer pull so as to minimize any tendency of the drawer pull to loosen.

3,098,687
ELECTRICAL CONNECTOR
Robert E. Fitz Gerald, Quincy, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 5, 1960, Ser. No. 73,851
1 Claim. (Cl. 339—188)

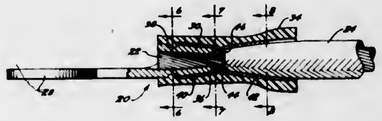


A lamp socket assembly comprising, in combination, a contact member consisting of a hollow eyelet positioned within a bore of an insulated housing, said housing having a pair of internal opposed shoulders adjacent to said bore and adjacent one end thereof and a wire terminal connector including a wire engaging mid-portion having a pair of arms extending upwardly therefrom into the hollow eyelet for electrical contact therewith, a pair of diverging legs extending from a lower edge of said mid-portion and having their distal ends spaced from each other a greater distance than the diameter of the mid-portion, whereby said arms are in frictional sliding engagement with said insulated housing and the distal ends of said legs cooperate with said shoulders to prevent retrograde withdrawal of the connector from said housing.

3,098,688
INSULATED TERMINAL CONNECTOR
David J. Crimmins, Nutley, and Harold B. Martin, Roselle, N.J., assignors to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Dec. 8, 1959, Ser. No. 858,266
2 Claims. (Cl. 339—223)

1. An electrical connection comprising in combination a terminal connector of the aperture tongue, wire-barrel type having an annular groove adjacent the inner end of said wire-barrel, a thin metal sleeve of uniform wall thickness having a reduced end portion terminating in an inclined annular shoulder defining a V-groove in cross section midway of the length of said sleeve, the reduced

end of said thin metal sleeve being frictionally secured on said wire-barrel in partial telescopic relation, an insulating sleeve of polytetrafluoroethylene plastic frictionally secured on said thin metal sleeve in full telescopic relation with its opposite ends extending beyond the respective ends of said thin metal sleve and over the inner end of said wire-barrel, and an insulated, multi-strand conductor having a bare end portion thereof intruded into said thin metal sleeve from the outer free end of said insulating sleeve and said wire barrel deformed thereon in-



directly through said thin metal sleeve and said insulating sleeve whereby said annular groove and said V-groove receive portions of said insulating sleeve in cold flow keying relation upon controlled deformation of said insulating sleeve in the plane of the tongue portion of said connector and in a plane normal thereto and tapering from the inner end of said insulating sleeve to a point adjacent the outer end thereof without undue elongation of said insulating sleeve, said outer end portion beyond said first taper being reversely tapered and presenting a slightly larger elliptical configuration than the inner end portion thereof.

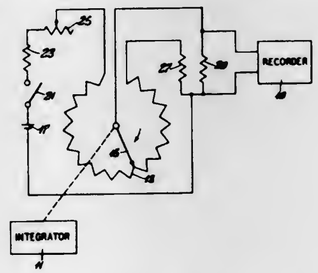
3,098,689

INTEGRAL RECORDING

Edward G. Caflisch and Frederick A. Lory, South Charleston, and Thomas P. Wilson, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

Filed Dec. 13, 1960, Ser. No. 75,585
2 Claims. (Cl. 346—49)

1. A system for recording the integral of a variable function, said system comprising, in combination, an integrator having a component which moves at a rate proportional to the rate of change of the integral of a variable function being integrated; a recorder adapted to produce graphic representations on coordinate axes by means of a controllably moveable pen, said pen being controllably moveable by and responsive to input voltage signals applied to said recorder; a rotary type continuous rotation potentiometer having a rotor operably connected to and continuously repeatedly driven by said integrator from a low potential position through increasing potential positions to a high potential position and from said high potential position through a zero potential position to said low potential position at a rate proportional to the rate of change of the integral of a variable function being integrated to produce a varying potential sig-



nal continually proportional to the integral of said variable function; a potential source and electrical circuitry connecting said potential source, said potentiometer and said recorder, said electrical circuitry comprising a first conductor connecting one side of the potential source to the high potential position on the potentiometer, a second conductor connecting the rotor to a first input terminal of the recorder, a third conductor connecting the other side of the potential source to a second input terminal of the recorder and a fourth conductor connecting the low potential position on the potentiometer to said second input terminal of the recorder whereby the varying potential signal produced in said potentiometer is applied to said recorder.

CHEMICAL

3,098,690

PROCESS FOR UNION DYEING OF ACRYLONITRILE POLYMERS AND BASIC NITROGENOUS FIBER BLENDS

Thomas H. Guion, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Oct. 25, 1954, Ser. No. 464,629
13 Claims. (Cl. 8—21)

1. A method of union dyeing blends of fibers comprising acrylonitrile fibers of blended polymers containing at least 80% by weight acrylonitrile in polymeric form and from 2 to 10% of a vinylpyridine-in polymeric form with other basic nitrogenous fibers selected from the group consisting of wool fibers, regenerated protein fibers, polyamide fibers, and mixtures thereof which comprises subjecting the blend to the action of a dyebath containing a wool dye selected from the group consisting of level dyeing acid dyes, chrome dyes, metallized acid dyes, weak acid dyes, and pre-metallized neutral dyes, sulphuric acid, a cationic surface active agent and a non-ionic surface active agent selected from the group consisting of condensation products of polyglycols with higher fatty acids, condensation products of polyglycols with higher fatty alcohols, condensation products of polyglycols with amides of higher fatty acids, and condensation products of polyglycols with long-chain alkyl substituted phenols.

3,098,691

DYEING OF POLYESTER FIBER

Ivan Pascal, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 17, 1961, Ser. No. 89,910
2 Claims. (Cl. 8—55)

1. A process of dyeing textile fiber of the group consisting of polyethylene terephthalate fiber and sulfonate modified polyethylene terephthalate fiber, which comprises applying thereto a dyebath consisting of a solution of a disperse dye in dioxane, said application of the dyebath being effected at about the boiling point of the dyebath.

3,098,692

TREATMENT AND COLORING OF POLYOLEFINS

Domenick Donald Gagliardi, 185 Howland Road, East Greenwich, R.I.

No Drawing. Filed Feb. 27, 1961, Ser. No. 91,639
30 Claims. (Cl. 8—55)

1. A process for coloring a preformed article composed of solid polyolefin which comprises:
(*a*) treating said article with an oleophilic organic compound, having a molecular weight between about 100 and 800 containing a basic nitrogen atom, and
(*b*) dyeing said article with a water-soluble anionic textile dye.

3,098,693

TREATMENT OF PROTEIN AND PEPTIDE MATERIALS TO FORM AMIDE LINKAGES

John C. Sheehan, Cambridge, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

No Drawing. Continuation of application Ser. No. 766,406, Oct. 10, 1956, now Patent No. 2,938,892, dated May 31, 1960. This application May 27, 1960, Ser. No. 32,112
15 Claims. (Cl. 8—127.6)

1. The method of improving the shrink and crease resistance of a fabric composed of fibers consisting essentially of a proteinaceous substance selected from the group consisting of wool and silk which comprises immersing said fabric in an aqueous solution of a water-soluble organic monocarbodiimide having the formula:

$$R_1—N=C=N—R_2$$

wherein one of the monovalent radicals R_1 and R_2 is an aliphatic radical and the remaining of said radicals is a radical selected from the group consisting of aliphatic and aromatic radicals, removing said fabric from said solution, washing said fabric with water and drying said fabric.

3,098,694

CONTINUOUS TREATMENT OF WOOL TO SHRINK-PROOF AND SENSITIZE THE SAME

Malcolm J. Reider, Shillington, Pa., assignor to Drew Chemical Corporation, a corporation of Delaware

No Drawing. Filed July 11, 1960, Ser. No. 41,760
14 Claims. (Cl. 8—128)

1. A continuous method of treating wool to shrink-proof and sensitize the same which comprises—
(1) passing said wool through a bath of an aqueous solution of an acid and depositing on said wool about 2.5% to 15% of said acid based on the weight of said wool,
(2) then passing said wool through an aqueous solution of an alkali metal bromate and an alkali metal salt of an acid radical taken from the class consisting of bromide and chloride,
(3) thereafter neutralizing excess of acid while leaving said wool on the acid side, and
(4) subsequently passing said wool through an aqueous solution of a substance taken from the class consisting of alkali metal sulfite and bisulfite
(5) and at a temperature not over about 175° F. to sensitize said wool.

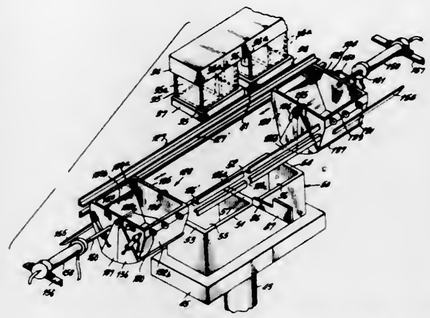
3,098,695

PROCESS OF BALING PARTICULATE MATERIAL

Herbert F. Jurgeleit, Oceanside, N.Y., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed Sept. 16, 1960, Ser. No. 56,483
2 Claims. (Cl. 18—48)

1. The process of baling, without curing, tacky polymer material having the property of post-compression recovery, comprising weighing out at least one batch of crumbs of said material at high speed to prevent coalescence thereof; permitting said batch of crumbs to fall freely through a chute into a transfer bucket having substantially the same shape as the bale to be formed, the distance of free fall being such as to permit individual crumbs to rebound and collide with subsequent crumbs, thereby to form an agitated mass which settles without any loss of crumbs into said bucket with a substantially plane top surface; rapidly transporting said mass in said bucket to a discharge station; dropping said mass as a unit and without any loss of or substantial reorientation of its particles into a cavity having substantially the same



shape as said bucket; and compressing said mass in said cavity into a block-shaped bale.

3,098,696

MANUFACTURE OF STERILE SURGICAL SUTURE COLLAGEN

Edwin Lawrence Ball, Nanuet, and James Charles Vitucci, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Aug. 18, 1959, Ser. No. 834,373
8 Claims. (Cl. 18—54)

1. A method ot sterilizing surgical suture collagen which comprises immersing the gut from which the sutures are to be made in a water bath having therein about 0.1% to 5.0% by volume of beta-propiolactone, thereby sterilizing the interior of the gut, forming a suture strand from said gut, and sealing the thus formed sutures in a tubing fluid comprising beta-propiolactone.

3,098,697

PROCESS FOR PREPARING POLYOLEFIN FIBRES OF IMPROVED DYE RECEPTIVITY

Vittorio Cappuccio and Ubaldo Riboni, Terni, and Carlo Viganó, Milan, Italy, assignors to Montecatini-Società Generale per l'Industria Mineraria e Chimica, Milan, Italy, an Italian corporation

Filed Jan. 17, 1961, Ser. No. 83,141
Claims priority, application Italy Jan. 21, 1960
10 Claims. (Cl. 18—54)

1. In a process for preparing polyolefin fibres of improved dye receptivity by the extrusion of polyolefins, the improvement which comprises admixing at least one polyolefin prior to extrusion with 0.5 to 25%, based on the weight of the polyolefin, of a basic nitrogen-containing condensation product obtained from dichloroethane and 0.01 mol to 2.5 mols per mol of dichloroethane of a compound selected from the group consisting of polyfunctional amines and ammonia, and extruding the resulting mixture to produce the fibre.

3,098,698

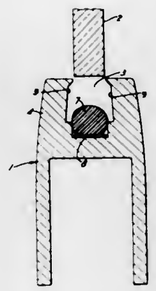
METHOD OF ATTACHING A METAL CHANNEL TO A GLASS PLATE

Theodore W. Glynn, Kingsport, Tenn., assignor to American-Saint Gobain Corporation, Kingsport, Tenn., a corporation of Delaware

Filed Oct. 31, 1961, Ser. No. 148,950
4 Claims. (Cl. 18—59)

3. The method of holding a metal channel on an edge of a glass plate, comprising placing a strip of absorbent material in the base of the channel, saturating the strip with water, applying to said strip a strip of plastic silicone rubber adapted to set when exposed to moisture, insert-

ing an edge of the plate in the channel, and pressing said channel base and plate toward each other to force said



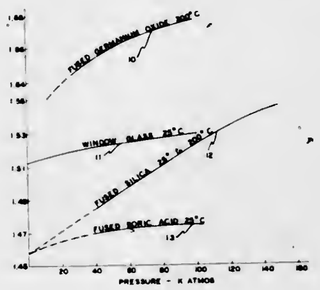
plastic rubber between the sides of the plate and channel where it will absorb moisture from said absorbent material and set.

3,098,699

DENSIFICATION OF GLASS, GERMANIUM OXIDE, SILICA OR BORIC ACID

Rustum Roy, State College, Pa., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Feb. 3, 1961, Ser. No. 86,961
4 Claims. (Cl. 18—59.2)



1. The method of densifying germanium oxide glass comprising the steps of, reducing the germanium oxide material to a pulverulent mass, pressing the pulverulent mass of material to a pressure within the range of 22,000 to 100,000 atmospheres, heating the pulverulent mass of material to a temperature of approximately 200° C. during the pressing step, and maintaining the pressure on the material for a time of a few seconds and not exceeding one minute.

3,098,700

METHOD OF CONTROLLING CORROSION OF FERROUS METAL DUE TO PITTING BY ADDITION OF MINERAL ACID

George G. Bernard, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Oct. 12, 1961, Ser. No. 144,660
4 Claims. (Cl. 21—2.7)

1. The method of mitigating pitting corrosion of ferrous metal structures contacted by aqueous solutions containing ferrous ions, sulfate ions, and sulfate-reducing bacteria comprising adding to said solutions mineral acid in about the minimum amount sufficient to prevent precipitation of ferrous sulfide.

3,098,701

METHOD OF REDUCING WATER EVAPORATION LOSSES IN OPEN RESERVOIRS

Campbell R. McCullough, Rockville, Md., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 11, 1960, Ser. No. 48,845
8 Claims. (Cl. 21—60.5)

1. The method of reducing evaporative losses of water in open reservoirs which comprises substantially covering the surface of the water with pieces of a thin, solid and flexible polyethylene polymer film selected from the group consisting of: homopolymers of ethylene and copolymers of ethylene and wherein the said polyethylene film has been rendered hydrophilic.

3,098,702

METHOD OF STORING PETROLEUM OIL

Alfred L. Baker, Jr., Brinton Lea, Thornton, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Oct. 26, 1960, Ser. No. 64,989
1 Claim. (Cl. 21—60.5)

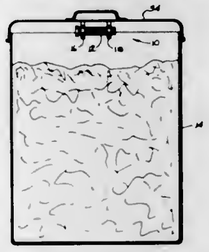
The method of storing non-volatile petroleum oil containing less than 30 parts per million water which comprises in combination: confining the petroleum oil as a stationary liquid in a storage vessel equipped with breathing means; introducing a stream of hereinafter specified air into said vessel at a level above the surface of the oil; compressing ambient air to a pressure within the range of 30 to 500 pounds per square inch gauge, cooling said compressed air until a dew point of less than 50° F. is attained, removing from said cooled air the condensed water, and introducing the treated air into said vessel as hereinabove specified; passing said treated air over the surface of the oil, and removing from said vessel at a level above the surface of the stored oil the stream of air having substantially unchanged water content.

3,098,703

APPARATUS AND METHOD FOR INSECT CONTROL

William R. Snyder, Detroit, and Gilbert G. Reuter, Dearborn, Mich., assignors, by direct and mesne assignments, to Gilbert G. Reuter Company, a corporation of Michigan

Filed Aug. 4, 1959, Ser. No. 831,611
8 Claims. (Cl. 21—106)



1. In a device for sanitizing refuse containers including means forming a perforated container with a closed refuse container, the improvement comprising sanitizing material carried in the perforated container; said material being decomposed by evaporation upon exposure to the ambient atmosphere to release sanitizing agents including an insecticide into the refuse container; a portion of said sanitizing material beginning to decompose substantially as soon as exposed to the ambient atmosphere and at a rate to release effective amounts of sanitizing agents; the remaining portion of said sanitizing material beginning to decompose to release effective amounts of sanitizing agents at a time subsequent to exposure to the ambient atmosphere.

3,098,704

METHOD AND APPARATUS FOR MIXING AND CARRYING OUT REACTIONS

Fritz Schoppe, Munich-Pasing, Germany, assignor to Metallbau Semler, G.m.b.H., a company of Germany

Filed Nov. 3, 1959, Ser. No. 850,609
Claims priority, application Germany Nov. 2, 1956
19 Claims. (Cl. 23—1)



1. A method of causing a plurality of reactants to react comprising: creating a spiral outer flow of a first reactant; confining the spiral flow to a fixed tubular path of sufficient length so that at a distance down the flow path a reversal in the flow of the first reactant occurs in the form of an inflow becoming a concentric counterflow in a path along the axis on the inner side of the spiral flow, whereby an annular elongated zone of intensely violent turbulence occurs between the spiral flow and the counterflow; feeding a second reactant into and substantially parallel to the direction of one of said paths of flow of said first reactant, whereby said second reactant will pass into said zone of turbulence and mix with said first reactant; causing said first and second reactants to react in said turbulent zone to form a reaction product; creating a second spiral outer flow of a fluid inert to said first and second reactants and said reaction product; confining the second spiral flow to a fixed tubular path of sufficient length so that at a distance down the path a reversal occurs in the flow of said inert fluid in the form of an inflow becoming a counterflow along the axis on the inner side of the second spiral flow, whereby a second annular elongated zone of intensely violent turbulence occurs between the second spiral flow and its counterflow; feeding an unreacted portion of said first and second reactants from said first mentioned turbulent zone into and substantially parallel to one of said paths of flow of said inert fluid whereby said portion of reactants will pass into said second zone of turbulence and continue to react therein; and discharging the reaction product of said first and second reactants from said second zone of turbulence.

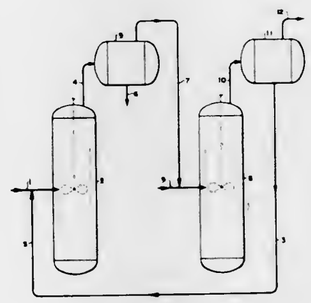
3,098,705

PROCESS FOR REMOVING CARBONYL SULFIDE FROM PETROLEUM GASES

Adrianus P. Bally, The Hague, Netherlands, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Dec. 5, 1960, Ser. No. 73,736
5 Claims. (Cl. 23—3)

1. The method of removing carbonyl sulfide from admixture with normally gaseous hydrocarbons which comprises intimately contacting said hydrocarbons in vapor phase with an aqueous solution consisting essentially of 10–60% by weight di(isopropanol)amine at a temperature of 0–70° C. for ¼–30 minutes, whereby carbonyl sulfide is selectively extracted from the hydrocarbon phase by the aqueous solution, and separating the hydrocarbon phase essentially free of carbonyl sulfide.



3,098,706

PREPARATION OF BIMETALLIC HYDRIDES

Sidney M. Blitzer, Albert P. Giraitis, and Joseph R. Zietz, Jr., Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 12, 1961, Ser. No. 158,893
5 Claims. (Cl. 23—14)

1. A process for the preparation of bimetallic hydride comprising the thermal decomposition of a bimetallic alkyl aluminum hydride of the formula

$$M(AlR_{4-n}H_n)_m$$

wherein

M is a metal selected from the group consisting of alkali metals and alkaline earth metals,
R is a hydrocarbon radical selected from the group consisting of alkyl and cycloalkyl radicals, and having up to 20 carbon atoms,
n is an integer of not more than 3, and
m is the valence of M,

said process being conducted at a pressure not in excess of about atmospheric pressure and in the presence of a catalyst, said catalyst being a standard reduction catalyst selected from the group consisting of platinum, palladium, platinum black, chloro platinic acid, platinum oxide, palladium black, palladium oxide, nickel, nickel oxide, Raney nickel, cobalt, copper oxide, zinc oxide, chromium oxide, molybdenum oxide, copper chromite, zinc chromite, and molybdenum sulfide.

3,098,707

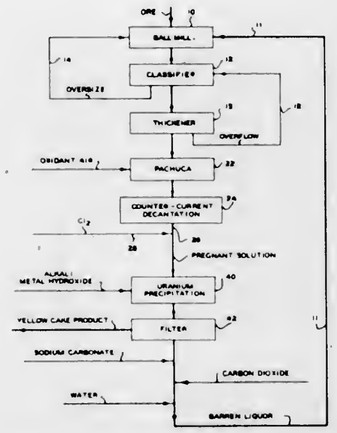
URANIUM ORE-CARBONATE LEACH PROCESS INVOLVING ADDITION OF CHLORINE, ALKALI METAL HYPOCHLORITE OR AMMONIUM HYPOCHLORITE TO PREGNANT LIQUOR DERIVED THEREFROM

Clifford J. Lewis, Golden, Colo., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 25, 1958, Ser. No. 756,961
6 Claims. (Cl. 23—14.5)

1. In the process of recovering uranium values from an ore by leaching the ore with a basic carbonate solution and then separating pregnant liquor containing soluble uranium values from the resulting leach slurry by

filtering the latter, the improvement comprising adding to said separated pregnant liquor a material selected from



the group consisting of chlorine and the hypochlorites of alkali metals and of ammonium.

3,098,708
URANIUM OXIDE AND THORIUM OXIDE RECOVERY

Raymond A. Foos, Loveland, and Edgel P. Stambaugh, Montgomery, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 26, 1959, Ser. No. 836,049
11 Claims. (Cl. 23—14.5)

1. A process for preparing purified oxides of a metal selected from the group consisting of thorium, uranium, and mixtures thereof from an impure feed solution comprising said metal and metallic impurities including lanthanide elements which comprises (1) heating for less than about 120 minutes an aqueous acidic solution of said metal containing said metallic impurities, said solution having an acid concentration of about 5 to 150 grams per liter, at a temperature between about 170° and 250° C. and at a pressure above about 100 p.s.i. to precipitate said metal oxides in purified form, (2) releasing said pressure, and (3) recovering said precipitated purified metal oxides from said impure feed solution containing lanthanide elements.

3,098,709
FLUORINATION OF OXIDIC NUCLEAR FUEL

William J. Mecham, Hinsdale, and John D. Gabor, Cicero, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Oct. 26, 1961, Ser. No. 147,997
12 Claims. (Cl. 23—14.5)

1. A process of separating fissionable material from fission products present in neutron-bombarded uranium oxide fuel, comprising contacting said oxide fuel with an oxygen-fluorine gas mixture containing at least 10% by volume of oxygen at a temperature of between 350 and 500° C., whereby said fissionable material is converted to a fluoride and volatilized as such while the fission products remain as a residue and removing the volatilized fluoride from a residue.

3,098,710
ALKALI AND SULFITE RECOVERY

Nils Knut G. Ahlborg and Karl N. Cederquist, Falun, Sweden, assignors to Stora Kopparbergs Bergslags Aktiebolag, a corporation of Sweden

Filed July 16, 1959, Ser. No. 827,498
3 Claims. (Cl. 23—129)

1. A method for the preparation of alkali sulfite from alkali and sulfide sulfur recovered from a melt soda solution containing the same which comprises the steps of (1) reacting said solution with substantially pure carbon dioxide gas whereby a substantially sulfide-free solution and a gaseous mixture of carbon dioxide and hydrogen sulfide are formed, (2) reacting said mixture of carbon dioxide and hydrogen sulfide with sulfur dioxide in vapor phase whereby a mixture of carbon dioxide, water vapor and elemental sulfur is formed, (3) separating the carbon dioxide from the the elemental sulfur, (4) introducing carbon dioxide separated in step (3) into reaction step (1), (5) burning the elemental sulfur with air to produce a gaseous mixture containing sulfur dioxide, (6) contacting said gaseous mixture with water whereby a portion of the sulfur dioxide is absorbed in the water and remaining sulfur dioxide is in gaseous form, (7) recovering sulfur dioxide from the water, (8) introducing essentially pure sulfur dioxide gas from step (7) into reaction step (2), (9) passing the unabsorbed gaseous sulfur dioxide from step (6) into contact with aqueous sodium sulfite whereby aqueous sodium bisulfite is formed, (10) reacting part of the aqueous sodium bisulfite thus formed with said substantially sulfide-free solution produced in step (1) whereby aqueous sodium sulfite and carbon dioxide gas are formed, (11) introducing part of the aqueous sodium sulfite thus formed into reaction step (9) and (12) recovering remaining sodium bisulfite of step (9) and remaining sodium sulfite of step (10).

3,098,711
RECOVERY OF HAFNIUM HYDROXIDE

Irwin J. Groce, Robert W. Ritchey, and Russell W. Peters, Ashtabula, Ohio, assignors, by mesne assignments, to National Distillers and Chemical Corporation, a corporation of Virginia

Filed Aug. 24, 1959, Ser. No. 835,540
4 Claims. (Cl. 23—140)

1. A method for recovering hafnium hydroxide from a hafnium raffinate containing hafnyl sulfate and an excess of sulfuric acid which comprises neutralizing said raffinate with ammonium hydroxide to a pH between about 7 and 8.5, cooling said neutralized raffinate, adding about an equal amount of water to said cooled raffinate, settling a hafnium hydroxide precipitate out of said raffinate, decanting supernatant liquid from said precipitated hafnium hydroxide, washing the precipitate with water, and then recovering said precipitate hafnium hydroxide.

3,098,712
METHOD FOR SELECTIVE REMOVAL OF OXYGEN FROM GASEOUS MIXTURES OF OXYGEN AND NITRIC OXIDE

Holger C. Andersen, Morristown, Philip L. Romeo, Elizabeth, and William J. Green, Newark, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

No Drawing. Filed Dec. 29, 1959, Ser. No. 862,447
6 Claims. (Cl. 23—159)

1. A process for effecting the selective removal of oxygen from a gaseous mixture consisting essentially of oxygen and nitric oxide which comprises contacting an admixture of a normally gaseous hydrocarbon and said gaseous mixture with a catalyst selected from the group consisting of palladium and rhodium at a temperature in

the range of about 350° to 600° C., said normally gaseous hydrocarbon being present in an amount at least stoichiometrically equivalent to the oxygen present in said gaseous mixture.

3,098,713
STABILIZATION OF SULFUR TRIOXIDE AND HIGH STRENGTH OLEUMS

James R. Jones, Tonawanda, and Russell F. Fogle, Jr., Niagara Falls, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Mar. 21, 1958, Ser. No. 722,828
16 Claims. (Cl. 23—174)

1. The method of stabilizing material selected from the group consisting of sulfur trioxide and oleum of at least about 80% strength which comprises adding thereto in an amount at least effective to stabilize the sulfur trioxide and oleum but not more than 2% by weight of an aromatic compound selected from the group consisting of benzene, alkylbenzene in which the alkyl group contains from 1 to 4 carbon atoms, haloalkylbenzene in which the alkyl group contains 1 to 4 carbon atoms, chlorobenzene, diphenyl, chlorodiphenyl, naphthalene, chloronaphthalene and alkylnaphthalene in which the alkyl group contains from 1 to 4 carbon atoms.

9. A stabilized composition consisting essentially of material selected from the group consisting of liquid sulfur trioxide and oleum of at least about 80% strength, said material having been stabilized by the addition thereto in at least an amount effective to stabilize the sulfur trioxide and oleum but not more than 2% by weight of an aromatic compound selected from the group consisting of benzene, alkylbenzene in which the alkyl group contains from 1 to 4 carbon atoms, haloalkylbenzene in which the alkyl group contains 1 to 4 carbon atoms, chlorobenzene, diphenyl, chlorodiphenyl, naphthalene, chloronaphthalene and alkylnaphthalene in which the alkyl group contains from 1 to 4 carbon atoms.

3,098,714
PROCESS FOR THE MANUFACTURE OF HYDROGEN PEROXIDE

Gerhard Käbisch, Rheinfelden, and Hans Herzog, Konstanz, Germany, assignors, by mesne assignments, to FMC Corporation, a corporation of Delaware

No Drawing. Filed June 7, 1960, Ser. No. 34,351
Claims priority, application Germany June 13, 1959
4 Claims. (Cl. 23—207)

1. In the manufacture of hydrogen peroxide by the cyclic process of hydrogenating a work solution containing an alkylated anthraquinone in the presence of a noble metal catalyst selected from the group consisting of platinum and palladium to produce the corresponding alkylated anthrahydroquinone, oxidizing said alkylated anthrahydroquinone to produce hydrogen peroxide and reform said alkylated anthraquinone, and extracting said hydrogen peroxide from said work solution, the improvement which comprises adding an alkaline, water-soluble compound to said work solution of a type which is capable of significantly raising the pH of said solution, in the amount of about 1×10^{-6} to 1×10^{-1} moles per liter, said compound being selected from the group consisting of alkali metal salts, alkaline earth metal salts, alkali metal hydroxides, alkaline earth metal hydroxides, alkali metal oxides, alkaline earth metal oxides, ammonia, ammonium salts and water-soluble amines, and carrying out said catalytic hydrogenation of said solution of said alkylated anthraquinone in the presence of said compound, said compound increasing the activity of said catalyst during hydrogenation and then passing said solution to said oxidation stage.

3,098,715
PROCESS FOR THE MANUFACTURE OF HYDROGEN PEROXIDE

Gerhard Käbisch and Siegmar Läufer, Rheinfelden, Baden, Germany, assignors, by mesne assignments, to FMC Corporation, a corporation of Delaware

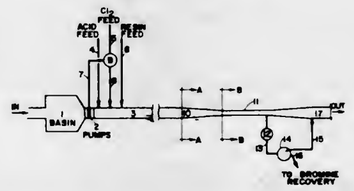
No Drawing. Filed June 27, 1960, Ser. No. 38,757
Claims priority, application Germany July 8, 1959
6 Claims. (Cl. 23—207)

1. In the cyclic process of producing hydrogen peroxide by the alternate reduction and oxidation of an anthraquinone working compound carried in a liquid organic solvent, the improvement which comprises employing as said working compound an ester whose acid residue is selected from the group consisting of anthraquinone and tetrahydroanthraquinone carboxylic acids having from one to two carboxylic acid radicals, and whose alcoholic residue is selected from the group consisting of aliphatic and cycloaliphatic alcohols.

3,098,716
RECOVERY OF BROMINE FROM SOLUTIONS THEREOF

Frederick John Gradishar and Rowland Frank Hein, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Aug. 31, 1960, Ser. No. 53,262
4 Claims. (Cl. 23—217)



1. A process for removing bromine from a dilute bromide-containing chloride brine wherein the Cl/Br ratio is within the range 20/1 to 500/1 which comprises acidifying said brine, oxidizing the bromide content thereof to bromine, and cocurrently and continuously contacting said brine with a strong base anion exchange resin in an elongated channel, said brine and resin flowing in the same direction under conditions of turbulent flow and then separating the resulting bromine-laden resin from the residual water phase and recovering the bromine from the bromine-laden resin.

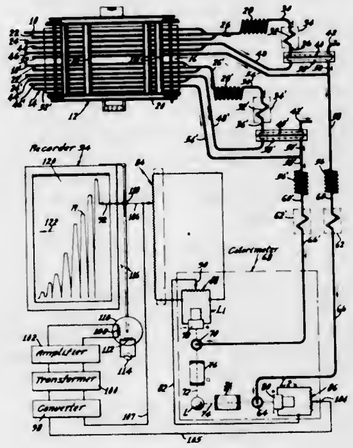
3,098,717
FLUID TREATMENT METHOD AND APPARATUS WITH DOUBLE-FLOW COLORIMETER

Andres Ferrari, Jr., Scarsdale, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

Filed Apr. 27, 1959, Ser. No. 809,303
5 Claims. (Cl. 23—230)

1. A method of continuous colorimetric analysis, comprising providing a colorimeter having a flow cell for the flow therethrough of a fluid stream and having another flow cell for the flow therethrough of another fluid stream concurrently with the flow of said first mentioned stream, simultaneously forming separate streams of a fluid which is to be colorimetrically examined with respect to a constituent thereof, simultaneously and separately transmitting said streams to said colorimeter, dialyzing one of said streams during its flow to form a dialyzate stream and introducing into said dialyzate stream during its flow a fluid stream containing a color-producing reagent, dialyzing the other of said streams concurrently with the dialysis of said one stream during the flow of said other

stream to form another dialyzate stream, introducing into said other dialyzate stream, concurrently with the introduction of said color-producing reagent into said first mentioned dialyzate stream, a stream of fluid containing a colorless non-reacting fluid in lieu of said color-producing reagent, introducing one of said treated dialyzate



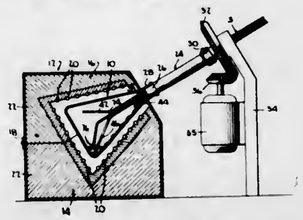
streams into one of said flow cells of the colorimeter and simultaneously introducing the other of said treated dialyzate streams into the other of said flow cells, and simultaneously comparing the light transmittance characteristics of said streams as they flow through their respective flow cells.

3,098,718

CONCENTRATION APPARATUS FOR QUANTITATIVE ANALYSIS OF A SUBSTANCE IN A LIQUID

Andres Ferrari, Scarsdale, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

Filed Sept. 8, 1959, Ser. No. 838,579
6 Claims. (Cl. 23—253)



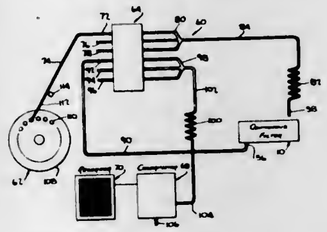
5. Apparatus for treating a liquid for quantitative analysis in respect to a substance present therein in a small quantity, comprising a vessel mounted for rotation about its longitudinal axis and having a downwardly inclined inner surface means for rotating said vessel about said axis, means for heating said vessel while it is being rotated about said axis, an inlet tube for said liquid having its outlet end positioned above the bottom of said vessel adjacent said inner turface so that liquid admitted through said inlet end flows down and around said inner surface during the rotation of said vessel to form a liquid film thereon for effecting a rapid evaporation of a portion of said liquid as it flows to the bottom of said vessel, an outlet tube having its inlet end adjacent the bottom of said vessel for withdrawing the heated liquid therefrom in the form of a stream, said tubes being stationary and said vessel being rotated around the axes of said tubes by said rotating means while the flask is being heated and means in liquid flow communication with said outlet tube for treating said withdrawn liquid stream for analysis concurrently with said evaporation operation and rotation of said vessel.

3,098,719

FLUID PROCESSING SYSTEM WITH CONTINUOUS FILTER APPARATUS

Leonard T. Skeggs, Cleveland, Ohio, assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

Filed June 16, 1960, Ser. No. 36,583
9 Claims. (Cl. 23—253)



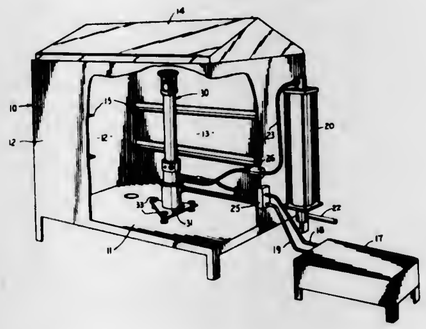
1. Apparatus for processing a liquid for analysis in respect to an ingredient thereof, comprising a liquid supply station, means to transmit a stream of said liquid to said supply station, means including a filter having successive fresh portions only movable past said supply station to receive and filter said stream of liquid, means for receiving the filtered liquid from said successive fresh portions of the movable filter and for transmitting a stream of the filtered liquid to a predetermined point concurrently with the transmission of the first mentioned stream of liquid to said supply station, means for treating said stream of filtered liquid, during the flow thereof, for colorimetric examination in respect to said ingredient while said first mentioned stream of liquid is being transmitted to said supply station for the filtering operation.

3,098,720

CORROSION TESTING MECHANISM

Carel H. Neffenger, Elyria, Ohio, assignor to The G. S. Equipment Company, Cleveland, Ohio, a corporation of Ohio

Filed June 7, 1961, Ser. No. 115,467
13 Claims. (Cl. 23—253)



1. A corrosion testing mechanism comprising an enclosure resistant to attack by a corrosive test fluid, said enclosure defining a test-conducting space for retaining an atmosphere of corrosion testing mist therein and including a specimen access opening and a movable closure therefor, an axially upwardly extending tube in said

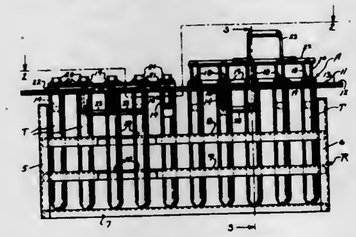
enclosure having an upper outlet opening, a mist-producing aspirator nozzle positioned within said tube and orientated toward said outlet, said nozzle being spaced from said outlet and from the walls of said tube to permit relatively large liquid drops in the mist to gravitate downwardly past said nozzle as the mist rises in said tube toward said outlet, trap means below said nozzle and adjacent the bottom end of said tube for collecting said liquid drops, and supply conduit means connected to said nozzle for supplying a test liquid and a gas under pressure.

3,098,721

MULTIPLE STOPPER UNIT

Ralph P. Jewell, Racine, Wis., assignor to Moeller Manufacturing Company, Inc., Racine, Wis., a corporation

Filed Feb. 20, 1961, Ser. No. 90,486
8 Claims. (Cl. 23—259)



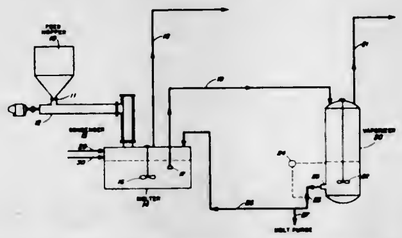
8. In a laboratory appliance, a rack, a plurality of open ended test tubes loosely fitted in the rack and said rack having end walls, and a multiple stoppering unit for association with the tubes and said rack including an elongated top carrier plate overlying the top of the rack and terminating adjacent to the end walls of the rack, a plurality of expansible stoppers carried by the plate and depending therefrom inserted in the open ends of said tubes, each of said stoppers including a resilient expansible body, a cam lever for each expansible body having lobes movable into and out of engagement with the carrier plate for contracting the bodies longitudinally and expanding the bodies circumferentially, said stoppers being arranged in groups, and means operatively connecting the cam levers of groups together for simultaneous operation.

3,098,722

PURIFICATION OF METAL HALIDES

Eugene C. Carlson, Baytown, Tex., and Werner C. Muller, Roslyn, N.Y., assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

Filed Jan. 16, 1959, Ser. No. 787,282
9 Claims. (Cl. 23—294)



1. A method for purifying an impure metal tetrahalide selected from the group consisting of zirconium tetrahalide, hafnium tetrahalide, and mixtures thereof which comprises the following sequential steps

(1) forming in a melter a molten mixture comprising about 70 to 90 weight percent of said impure metal tetrahalide and about 10 to 30 weight percent of at least one alkali metal halide,

(2) heating said molten mixture in said melter to a temperature within the range of about 550° to 650° F. to remove gaseous impurities therefrom and separating the gaseous impurities from said molten mixture, said molten mixture containing a minor amount of finely divided metal selected from the group consisting of zirconium and hafnium,

(3) passing the thus treated molten mixture from said melter to a separate and distinct vaporizer,

(4) heating the thus treated molten mixture at a temperature at least as high as that at which the metal tetrahalide is vaporized therefrom,

(5) recovering said evolved purified metal tetrahalide,

(6) recycling the molten mixture from which said metal tetrahalide has been vaporized from said vaporizer back to said melter, and

(7) adding to said molten mixture in said melter impure metal tetrahalide at substantially the same rate at which the purified metal tetrahalide is being recovered.

3,098,723

NOVEL STRUCTURAL COMPOSITE MATERIAL

William R. Micks, Woodland Hills, Calif., assignor to The Rand Corporation, Santa Monica, Calif., a nonprofit corporation of California

Filed Jan. 18, 1960, Ser. No. 3,197
1 Claim. (Cl. 29—183.5)



A turbine blade, which comprises: a ductile metal matrix, the metal being selected from the group consisting of niobium, magnesium, aluminum, zinc, chromium, molybdenum, iron, cobalt, nickel, copper, rhenium, silver, gold, and titanium, and a multiplicity of spaced micron-sized elongated filaments of ceramic material, embedded within said matrix, said filaments of material having a diameter of less than about 10 microns, the material of said matrix having a thermal expansion greater than the thermal expansion of said filaments whereby to place said matrix in compression and said filaments in tension, as the temperature of the composite material increases, said filaments extending in the direction generally coincident with the direction of stress to which the turbine blade is subjected, and extending the length of approximately the entire load path of the stress.

3,098,724

ALUMINOUS METAL ARTICLE

William A. Anderson, Verona, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

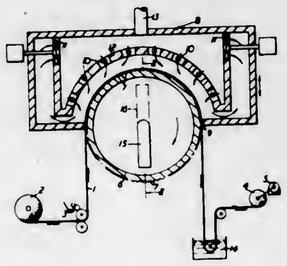
No Drawing. Filed July 8, 1960, Ser. No. 41,503
10 Claims. (Cl. 29—195)

1. An aluminous metal article having a specularly reflective surface with an anodically produced film thereon substantially free from bloom and having a percent yellowness value of 1.8 to 6 as determined by a photoelectric tristimulus colorimeter, the oxide film being at least 0.1 mil in thickness, the metallic surface of said article underlying the oxide film consisting of an alloy composed of aluminum, 0.4 to 2.0% magnesium, 0.05 to 0.15% copper and 0.05 to 0.15% chromium, the impurities present including up to 0.15% iron, up to 0.15% silicon and up to 0.05% manganese, said alloy surface extending over at least one entire face of said article.

3,098,725
DRYING LIQUID-COATED THIN METAL COIL STOCK

Arthur Leslie Stuchbery, Enfield, and John Edward Cook, Winchmore Hill, London, England, assignors to The Metal Box Company Limited, London, England, a British company

Filed Mar. 11, 1960, Ser. No. 14,309
Claims priority, application Great Britain Mar. 25, 1959
2 Claims. (Cl. 34—13)

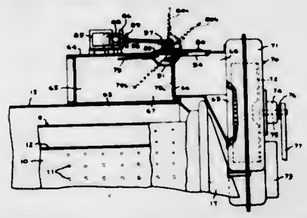


1. The method of drying a liquid coating of lacquer, varnish, or paint freshly applied to a side of thin metal stock drawn from a coil thereof, which includes subjecting the freshly coated side to a coating drying temperature of the order of 1,000 degrees F. while opposite side of the stock is engaged by an outer surface of a hollow member, passing a heated cooling fluid at a maximum temperature of the order of 212 degrees F. through the hollow member to maintain the mass of the stock at a temperature considerably less than that to which the coating is subjected, and moving the stock lengthwise at a linear speed which ensures drying, and curing if necessary, of the coating during subjection thereof to said coating drying temperature, and venting said outer surface to prevent the formation between the hollow member and stock of air pockets which might disturb the geometric relation between the stock and a heat source by which said relatively high coating drying temperature is produced.

3,098,726
CLOTHES DRYING MACHINE

Aidan M. Stone, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Feb. 27, 1961, Ser. No. 91,934
2 Claims. (Cl. 34—133)



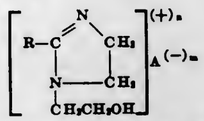
1. A combination clothes washer and dryer comprising: means defining a washing and drying chamber having first and second openings formed therein; means for introducing water to and removing water from said chamber and means for washing fabrics therein; heating means for evaporating moisture from damp fabrics within said chamber; centrifugal fan means having inlet means and outlet means; said first chamber opening and said outlet means being respectively connected to atmosphere; conduit means connecting said second chamber opening to said inlet means, said conduit means having an additional opening formed therein intermediate said second chamber opening and said inlet means; first means for closing said conduit upstream of said additional opening; second means for closing said additional opening; said first and second closing means being joined and formed so that when they are in a first position said first closing means closes said conduit and said second closing means opens said additional opening and when they are in a second position said first closing means opens said conduit and said second closing means closes said additional opening; and means for moving said closing means between said first and second positions thereby to provide a stream of air flowing directly from atmosphere over said centrifugal fan means to clean said fan means when said conduit is closed and said additional opening is open.

3,098,727
MOTOR FUEL COMPOSITION

Martin Hamer, Chicago, Ill., and Russell H. Brown, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,491
8 Claims. (Cl. 44—56)

1. A hydrocarbon motor fuel composition for spark-ignition internal combustion engines to render said engines non-stalling due to carburetor icing comprising (A) a major amount of a hydrocarbon distillate in the gasoline distillation range; (B) from about 0.002 to about 0.05% of a hydroxyl-substituted imidazoline salt having the structural formula



in which R is a hydrocarbon radical having from about 10 to about 24 carbon atoms of the group consisting of alkyl, alkenyl, and alkadienyl radicals, A is an anion of an organic carboxylic acid having from about 10 to about 60 carbon atoms in a hydrocarbon structure of the group consisting of an aliphatic carboxylic acid, a cycloaliphatic carboxylic acid, and mixtures of such acids, and *n* and *m* are integers of the group consisting of 1, 2 and 3; and (C) from about 0.01 to about 3.0% of a C_{1-4} alkanol.

3,098,728
LEADED GASOLINE CONTAINING PHOSPHORATE

Everett N. Case and Robert R. Chambers, Homewood, Ill., assignors, by mesne assignments, to Sinclair Research Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,854
5 Claims. (Cl. 44—69)

1. A leaded gasoline consisting essentially of base gasoline, about 0.5 to 4.5 cc. per gallon of tetraalkyl lead anti-knock agent and about 0.05 to 2 theories of a phosphorate product obtained by reacting a molecular oxygen-containing gas, yellow phosphorus and an olefinic hydrocarbon of 8 to 20 carbon atoms to combine about 2 moles of phosphorus per mole of olefin, at a temperature of about 20 to 100° C.

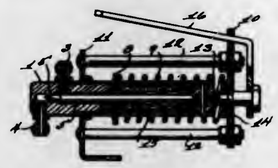
3,098,729
DEVICE FOR SUPPLYING AN AMOUNT OF WATER INTO AN ACETYLENE-PRODUCING FULMINATING CANNON

René Verbrugge, 130 Markegemstraat, Wakken, Belgium

Filed Apr. 25, 1960, Ser. No. 24,287
Claims priority, application Belgium Apr. 29, 1959
6 Claims. (Cl. 48—37)

1. Apparatus for controlling the amount of water supplied to a cannon in which acetylene is produced by the

action of water on calcium carbide and which is provided with a rod actuated by said cannon which acts on a plurality of synchronized members comprising a lever rockingly mounted on a shaft and axially movable relative thereto, means connecting the lever to said rod, cam means interposed between said lever and a fixed portion



of the apparatus and cooperating to transform rocking movement of the lever into axial movement, and a water-controlling needle valve having a needle positioned in an axial bore within the shaft about which the lever rocks and is axially movable when actuated by axial movement of the lever.

3,098,730
GRINDING WHEELS HAVING UNSATURATED ORGANIC POLYMERIC BONDS AND THE LIKE

Robert A. Rowse, Shrewsbury, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

No Drawing. Filed July 22, 1959, Ser. No. 828,717
6 Claims. (Cl. 51—298)

1. An organic bonded abrasive article comprising abrasive grains having a Knoop hardness greater than 1000 and unsaturated polymer bond selected from the group consisting of rubber mixed with phenolic resin, polymers and copolymers of butadiene, said polymer bond being adhered to the abrasive grains with the aid of a previous applied organo functional alkenyl polysiloxane coating on said grains, at least 5% by weight of said article being composed of abrasive grains selected from the group consisting of Al_2O_3 and SiC and mixtures thereof, said polysiloxane being derived from the basic silane structure



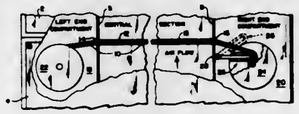
where R is an alkenyl group selected from the class consisting of vinyl and allyl capable of reacting with unsaturated polymer, C is a hydrolyzable chemical compound selected from the group consisting of methoxy, ethoxy, propoxy, butoxy, methoxy ethoxy, fluorine, chlorine, bromine, iodine, and hydrogen, and A and B are the same or different chemical groups selected from the group consisting of R and C and chemical groups non-reactive toward unsaturated polymer and non-hydrolyzable, said article having superior water resistance compared to a similar article having no alkenyl polysiloxane coating on said grains.

3,098,731
AIR FILTERING APPARATUS

Earnest J. Greene and William V. Millman, Moline, Ill., assignors to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Dec. 21, 1960, Ser. No. 77,317
5 Claims. (Cl. 55—274)

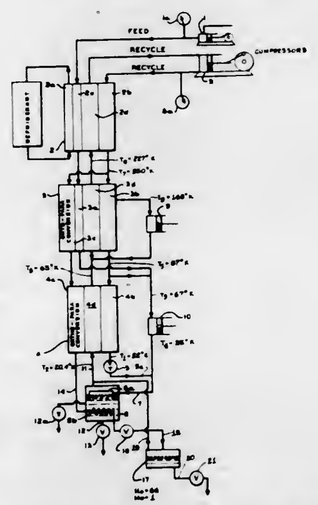
1. In ap air conditioning unit of the type having a central section through which air to be conditioned is passed, and oppositely disposed end compartments separated from said central zone by opposite partitions: means forming an air filtering zone extending transversely across said central section and defining a passage for an air filtering medium adapted to be advanced thereinto through an entry aperture in one of said partitions, and out of an exit aperture in the other of said partitions; a supply of air filter medium of a length adapted to provide a plurality of complete filter changes mounted in said end compartment adjacent said entry aperture; a rotatable mandrel in said opposite end compartment adapted to be rotated for effecting the advance of filter medium through said passage and out of said exit aperture by winding said medium thereon; means in said opposite end compartment for compressing said used medium as it is wound on said mandrel including rotatable roller means disposed to displace said medium sufficiently out of a direct line of travel between said exit aperture and said mandrel that said medium must loop around and then under said roller means to be wound on said mandrel; means mounting said compressing means to urge it toward said mandrel but permitting progressive arcual displacement away from said mandrel as said used medium is progressively wound thereon; means for indicating the extent of said medium advanced around said roller means including a rotatable indicator; and means connecting said roller means and said indicator for effecting rotation of said indicator proportionally to the rotation of said roller means.



3,098,732
LIQUEFACTION AND PURIFICATION OF LOW TEMPERATURE GASES

Wolcott Dennis, Basking Ridge, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 19, 1959, Ser. No. 847,296
14 Claims. (Cl. 62—9)



4. In a system for liquefying a gas having a critical temperature below about 35 degrees Kelvin, said system operating through a cycle and recycle in which the gas including a feed-stream and a recycled stream is compressed and a portion of said recycled stream cooled and converted to the liquid phase in a throttle-valve, and the remainder of said recycled stream returned for recompres-

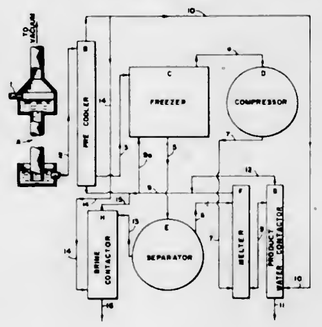
sion and recycling in said system, the method of removing from the low-temperature stages of said system including said throttle-valve small amounts of impurities which solidify in the mixture of said gas below the temperature range of liquid nitrogen but above the liquefaction temperature of said gas, which comprises the steps of cooling the high pressure feed-stream of said gas including said impurities separately from the high-pressure recycled gas to a temperature slightly in excess of the freezing temperatures of said impurities, diverting the entire compressed feed-stream into a path which avoids said throttle-valve, expanding said diverted feed-stream in an expansion device with the performance of external work thereby causing said impurities to freeze out of said feed-stream in a fine suspension at a temperature-pressure point above the liquefaction point of said gas, and thereafter passing said expanded feed-stream including said frozen-out impurities in suspension into the liquid phase formed in said system, whereby the purified gas bubbles through said liquid and returns through a path whereby it cools said compressed gas in said system and is subsequently compressed as said recycled stream, and permittings said impurity particles to be entrained in said liquid.

3,098,733

REMOVAL OF WATER FROM AQUEOUS SOLUTIONS AND RECOVERY OF FRESH WATER

Ludwig Rosenstein, 2010 Lyon St., and Manuel H. Gorin, 1867 26th Ave., both of San Francisco, Calif.

Filed June 25, 1957, Ser. No. 668,284
17 Claims. (Cl. 62—58)



1. A process for producing a second less concentrated solution from a first more concentrated solution which comprises:

(1) cooling said first solution to near its freezing point by direct contact countercurrent heat exchange with an immiscible liquid,

(2) vaporizing a vaporizable liquid refrigerant through contact thereof with said cooled first solution, thus forming (*a*) solids, (*b*) a third residual solution more concentrated than said first solution, and (*c*) refrigerant vapors,

(3) separating said solids from said third solution,

(4) compressing said refrigerant vapors formed in step (2),

(5) contacting said solids with compressed refrigerant vapors formed in step (4) thus condensing said refrigerant vapors to a liquid and converting said solids to said second solution, and

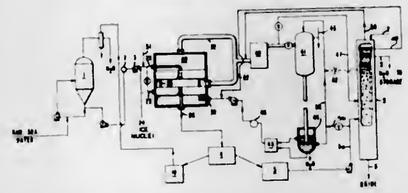
(6) cooling said immiscible liquid from step (1) by direct contact countercurrent heat exchange individually with said second solution resulting from step (5) and said third solution resulting from step (2), thus cooling said immiscible liquid for reuse in step (1).

3,098,734

PROCESS FOR THE PREPARATION OF FRESH WATER FROM SEA WATER

Hans Svanoe, Warren, Pa., assignor to Struthers Wells Corporation, Warren, Pa., a corporation of Maryland

Filed Feb. 20, 1959, Ser. No. 794,664
9 Claims. (Cl. 62—58)



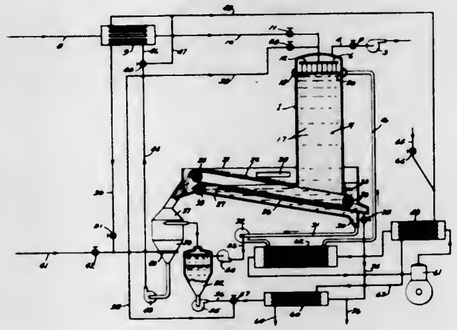
1. In a process for the preparation of potable water from sea water the steps which comprise nucleating sea water, subjecting the nucleated sea water liquor to crystallization by the latent heat of evaporation of a substantially water immiscible organic fluid at a temperature between minus 1.5° C. and minus 10° C. conducting substantially all of the nucleation and crystallization of the sea water to discrete ice crystals while the sea water is in a slurry of ice crystals and in direct heat exchange contact with the evaporating organic refrigerant, the endothermicity of the evaporating refrigerant being sufficient to propogate the formation of ice and the growth of ice crystals on the crystals present and also sufficient to avoid the establishment of an equilibrium state between the ice and the saline water and sufficient to avoid the reversion of the ice to water in the suspension and maintaining the temperature of the sea water liquor within a fraction of a degree Centigrade of the temperature of the ice crystals, thereby rapidly crystallizing fresh water crystals from the sea water.

3,098,735

ART OF SEPARATING WATER FROM AQUEOUS LIQUIDS

Herbert H. Clark, Oshkosh, Wis., assignor to Appleton Wire Works Corp., Appleton, Wis., a corporation of Wisconsin

Filed Feb. 12, 1962, Ser. No. 172,623
21 Claims. (Cl. 62—58)



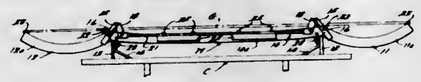
1. The method of treating an aqueous liquid comprising: advancing a body of a water-immiscible carrier liquid cooled to an ice-forming temperature through a freezing zone as an uninterrupted flowing stream having physical continuity through the zone; introducing an aqueous liquid into the stream of carrier liquid wherein the aqueous liquid becomes engulfed by and mixed with the carrier liquid and is carried by and moved along therewith through the freezing zone to form a heterogeneous mixture comprising a carrier liquid phase, a partially concentrated aqueous liquid phase, and solid ice particles formed from the water of the aqueous liquid; and separating the constituents of the resultant mixture.

3,098,736

GLASS BENDING MOLD

Harvey J. Little, Trenton, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,580
5 Claims. (Cl. 65—291)



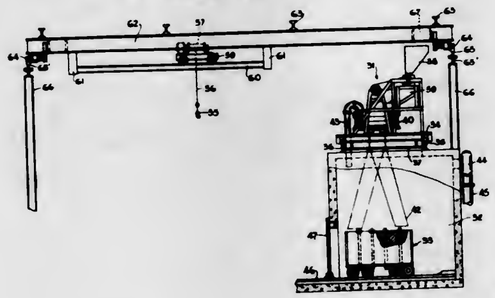
1. A ring-type glass bending mold comprising an intermediate fixed section and a pair of upwardly curved, vertically swinging, wing sections pivotally mounted on the opposite ends of said fixed section for movement between depressed open mold and elevated closed mold positions, said wing sections being arranged to form with said fixed section a longitudinally concave, ring-type, shaping surface when said wing sections are in their uppermost closed mold positions, said wing sections when moved to their depressed, open mold positions providing means wherein the opposite ends of the mold fixed section support the glass sheet to be bent on the mold and the wing sections are disposed beneath the end portions of the glass sheet mounted on the fixed section, lever means rigidly fixed on each of said mold wing sections and extending longitudinally of and inwardly towards and beyond the pivot axis of the associated wing section on said fixed mold section, link means pivotally connected to and depending from the inwardly disposed free end portions of the lever means on each wing section, and a weighted connector bar pivotally connected to, floatingly supported by and extending between the lower ends of the longitudinally spaced link means at a level beneath the mold open position glass supporting level.

3,098,737

PROCESSES FOR PRODUCING FERTILIZERS AND PRODUCTS THEREOF

Leroy Henry Facer, deceased, late of Phelps, N.Y., by Helen Mogenhan Facer, executrix, Phelps, N.Y. assignor, by mesne assignments, to Glen E. Cooley, trustee, Schenectady, N.Y.

Original application Feb. 25, 1942, Ser. No. 432,350, now Patent No. 2,739,886, dated Mar. 27, 1956. Divided and this application Mar. 22, 1956, Ser. No. 573,118
15 Claims. (Cl. 71—37)



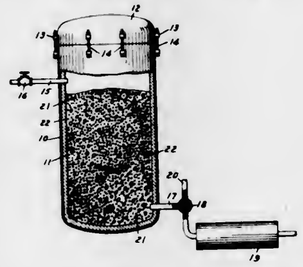
1. A process of manufacturing superphosphate which comprises mixing phosphate rock and a strong inorganic acid, pouring said mixture into a den, removing the superphosphate from the den at the substantial completion of the primary reaction and disintegrating it, placing a plurality of ventilating tubes spaced from said den, piling the disintegrated superphosphate about said tubes, and leaving said superphosphate in said ventilated pile and removing the exothermic heat of the secondary reaction during said secondary reaction with minimal loss of moisture and until it has cured.

3,098,738

METHOD OF HEATING AND SINTERING

Julius D. Madaras, Longview, Mich., assignor to Gas Incorporated, Detroit, Mich., a corporation of Michigan

Filed Aug. 30, 1954, Ser. No. 452,913
4 Claims. (Cl. 75—34)



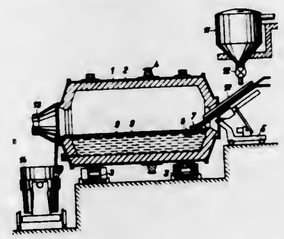
2. Process which comprises mixing finely divided iron ore about 200 to 400 mesh with a limited amount of water and an organic binder to form pellets of a size about ¼" to 1", further mixing with added coke breeze to coat the surface of the pellets, charging said coated pellets into a pressure vessel having a gas inlet and a gas outlet, closing the vessel to make it gas-tight, introducing air into the gas inlet to burn with the carbonaceous material thereby producing the heat to raise the temperature of said ore pellets and also raising the pressure above atmospheric, exhausting the combustion products through said gas outlet to lower the pressure, and repeating the cycle until the ore is heated to a final temperature about 1700° F.

3,098,739

PROCESS FOR REFINING METALS

Rudolf Graef, Oberhausen, and Ludwig von Bogdandy, Essen-Printrop, Germany, assignors to Huttenwerk Oberhausen Aktiengesellschaft, Oberhausen, Germany

Filed Nov. 4, 1960, Ser. No. 67,187
Claims priority, application Germany Nov. 24, 1959
5 Claims. (Cl. 75—51)



1. In a method of refining carbon containing pig iron in the presence of an oxygen containing atmosphere in a drum furnace rotatable about a substantially horizontal axis and adapted to retain pig iron to be refined throughout the refining process, the employment of the following steps: forming a liquid slag layer, feeding in

succession new quantities of slag formers into said drum furnace at one portion thereof while the refining process is being carried out, and during said refining process, corresponding to the feeding of new slag formers into said drum furnace and at the same rate thereof at another drum furnace portion spaced from said first drum furnace portion withdrawing slag from the slag layer forming on the pig iron bath in said drum furnace while maintaining the slag layer forming on the pig iron bath at a desired thinness whereby the area of contact of said slag with the furnace lining is reduced, and while retaining the pig iron bath in said drum furnace until the desired refining of said pig iron bath in said drum furnace has been completed.

3,098,740

PROCESS FOR THE REFINING OF PIG IRON IN OTHER THAN ROUND VESSELS

Paul Ernst Hardt, Hagen-Haspe, Germany, assignor to Klockner-Werke A.G., Duisburg, Germany, a corporation of Germany

No Drawing. Filed Aug. 1, 1960, Ser. No. 46,342
Claims priority, application Germany Aug. 7, 1959
2 Claims. (Cl. 75—60)

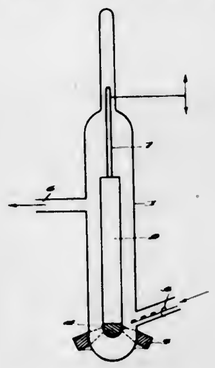
1. A process for the refining of pig iron comprising: providing a non-round refining vessel having a minor axis to major axis ratio of from 1:2 to 1:5, charging the vessel with material to be refined, rotating the refining vessel about its longitudinal axis at a speed lying in the range of 16 to 34 revolutions per minute and supplying oxygen to the vessel at a pressure of about 6 atmospheres and at a rate between 4 to 10 $Nm.^3$ per minute per ton of pig iron.

3,098,741

PROCESS FOR EFFECTING CRUCIBLELESS MELTING OF MATERIALS AND PRODUCTION OF SHAPED BODIES THEREFROM

Eduard Enk and Julius Nickl, Burghausen-Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

Filed Mar. 31, 1959, Ser. No. 803,271
Claims priority, application Germany Apr. 3, 1958
3 Claims. (Cl. 75—65)



1. In a process for the melting of a material selected from the group consisting of silicon and germanium and shaping bodies therefrom, the steps of providing a downwardly free hanging fused body of such material at the lower end of a solid body of such material, said free hanging fused body being surrounded at its bottom with a liquid in which the material of said fused body is substantially immiscible, supplying, in solid form, further material from which the body is to be shaped to the surface of the free hanging fused body at the lower end of the solid body from an external source through the surrounding liquid medium and fusing said further material in contact with said fused body.

3,098,742

URANIUM-MOLYBDENUM-ALUMINUM TERNARY ALLOY

Gilbert S. Layne, Midland, Mich., and Robert J. Teitel, Northridge, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Aug. 9, 1962, Ser. No. 215,804
2 Claims. (Cl. 75—122.5)

1. A ternary metal alloy comprising on a weight basis about 24 weight percent uranium, about 19 weight percent molybdenum and about 57 weight percent aluminum.

3,098,743

BRAZING ALLOY

Paul R. Mobley, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,832
6 Claims. (Cl. 75—171)

1. A nickel base brazing alloy particularly suitable for brazing at about 1950° F. consisting essentially, by weight, of: 3–8% Cr; 3–8% Pd; 16–25% Ge; 4–22% Cu, with the balance nickel and incidental impurities.

3,098,744

PROCESS TO TREAT FOOD PRODUCTS BY THE USE IN PRESENCE OF ANTIBIOTICS AND EITHER ANTIBIOTIC RESISTANT OR ANTIBIOTIC DEPENDENT BACTERIA STRAINS

Littoria von Lorch, Rodolfo Negri, Giuseppe Penso, and Paolo Savi, all of Rome, Italy, assignors of one-half to Fondazione Emanuele Paterno, Rome, Italy

No Drawing. Filed Apr. 8, 1960, Ser. No. 20,844
Claims priority, application Italy July 30, 1957
23 Claims. (Cl. 99—1)

1. In a process for preparing a finished food product selected from the group consisting of meat products and milk products, the improvement of mixing with a food consisting essentially of a member selected from the group consisting of meat and milk, (1) an antibiotic in amounts of about 2 to 10 micrograms per gram of said food, and (2) a culture of a nutritionally acceptable bacterial strain selected from the group consisting of strains resistant to said antibiotic and strains, the metabolism of which depends on the presence of said antibiotic; the culture being added in such amounts that the bacterial cell concentration in the resulting mixture corresponds to about 20 to 50 times 10^9 cells per kilogram of said food; said antibiotic being completely degradable in the presence of said bacterial strain during the preparation of the finished food product; and fermenting the resulting mixture at least until said antibiotic is completely degraded.

3,098,745

GROWTH-PROMOTING METHOD EMPLOYING 3,3-BIS(4-HYDROXY-PHENYL)PENTANE

Granville B. Kline and Robert Q. Thompson, Greenwood, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Dec. 21, 1961, Ser. No. 161,289
3 Claims. (Cl. 99—2)

1. The method of growing and fattening animals which comprises orally administering 3,3-bis(4-hydroxyphenyl)-pentane to an animal at spaced intervals of time and regulating the quantities of said pentane to accelerate the rate of weight gain, the amount of said compound administered ranging from about 0.1 to about 10 mg. of said compound per 100 pounds of body weight for each 24-hour period.

3,098,746

PROCESS OF PREPARING A COMPRESSED CHOCOLATE CHIP PRODUCT AND THE RESULTING PRODUCT

Peter P. Noznick, 2730 Thayer St., Evanston, Ill.; Charles W. Tatter, 18433 Martin Ave., Homewood, Ill.; and Carl F. Obenauf, 3005 Longfellow, Hazel Crest, Ill.

No Drawing. Filed Sept. 2, 1960, Ser. No. 53,631
7 Claims. (Cl. 99—23)

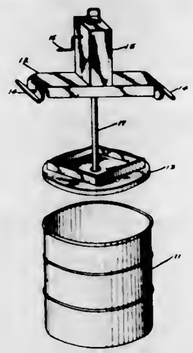
1. A process of preparing a compressed chocolate chip product, said process comprising melting sweet milk chocolate, withdrawing a portion of the melted chocolate and adding the same to water, homogenizing the mixture of the withdrawn chocolate and water and spray drying the same to form a powder, said powder having a core of milk fat and cocoa fat encased in a hull of milk and cocoa solids, adding said powder to the remaining melted chocolate and dispersing the same therein, holding the mass at the fat crystallization point and allowing the fat to crystallize slowly into very fine crystals, compressing the mass into sheets and thereafter chilling the sheets to harden and solidify the product.

3,098,747

METHOD FOR PREPARING A GROUND BEEF PRODUCT

Matthew Dubil, Parlin, N.J., assignor to Dubil Manufacturing, Inc., Spotswood, Monroe Township, N.J., a corporation of New Jersey

Filed Mar. 10, 1960, Ser. No. 14,062
2 Claims. (Cl. 99—108)



1. A method for preparing a ground beef product which comprises the steps of grinding muscle tissue beef to the consistency of hamburger, confining said ground beef in a zone, said zone being substantially totally enclosed but not fluid-tight, removing air and residual blood by maintaining said beef under a sustained pressure of at least 2 pounds per square inch for at least 15 hours, releasing said pressure, breaking up the resulting meat cake and aerating said meat.

3,098,748

WHIPPING AND POWDERED SHORTENING COMPOSITIONS

Peter P. Noznick and Charles W. Tatter, both % Beatrice Foods Co., 1526 S. State St., Chicago, Ill.

No Drawing. Filed Mar. 24, 1960, Ser. No. 17,273
24 Claims. (Cl. 99—118)

1. A whipping composition in the form of a water soluble dry powder containing edible fat about 40 to 60%, mono- and di-glycerides in amount of about 0.0 to 10%, a whipping agent selected from the group consisting of glycerol lacto monopalmitate, and glycerol lacto oleate in amount of about 0.5 to 15%, sweetener in amount of 5 to 35%, and protein about 1 to 15%, all amounts being by weight of the finished powder.

3,098,749

SWEETENING AGENT AND PROCESS OF PRODUCING THE SAME

Fred J. Helgren, Waukegan, Ill., assignor to Abbott Laboratories, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 16, 1960, Ser. No. 69,560
10 Claims. (Cl. 99—141)

1. In the process of granulating an artificial sweetening composition, the improvement comprising the step of triturating 100 parts of a physiologically acceptable salt of cyclohexylsulfamate with 5–20 parts of a physiologically acceptable salt of saccharin dissolved in 40–100 parts of a liquid, said liquid comprising 50–100% of a water-soluble, easily volatilizing organic solvent and 50–0% of water.

3,098,750

METHOD OF PREPARING TOASTED DEHYDRATED ONIONS

Arthur N. Prater, Sherman Oaks, and Thomas M. Lukes, Santa Clara, Calif., assignors to Consolidated Foods Corporation, a corporation of Maryland

No Drawing. Filed July 10, 1961, Ser. No. 122,662
8 Claims. (Cl. 99—204)

1. The method of preparing toasted dehydrated onion, comprising the steps of partially rehydrating dehydrated onion pieces with an aqueous toasting agent selected from the group consisting of an aqueous slurry of onion powder, an aqueous extract of dehydrated onion, fresh onion juice, blanched onion juice, an aqueous solution of amino acid, an aqueous solution of protein hydrolyzates and an aqueous solution of reducing sugars, and then toasting said rehydrated pieces at temperatures within the range of about 160° to 350° F. for a length of time to give the desired degree of toasting.

3,098,751

PRINTING INK COMPOSITION FOR ETHYLENE OXIDE STERILIZATION INDICATORS

Willard M. Huyck, Woodland Hills, and Vincent A. Romito, North Hollywood, Calif., assignors to Aseptic Thermo Indicator Company, North Hollywood, Calif., a corporation of California

No Drawing. Filed July 18, 1960, Ser. No. 43,320
3 Claims. (Cl. 106—20)

1. A composition for printing telltale insignia indicating that selected sterilizing conditions of ethylene oxide concentration, moisture concentration, temperature and time had been attained, consisting essentially of a flexographic printing ink base including a thickener ingredient and a solvent ingredient in proportions to give a practicable ink substance in a flexographic printing process; 3 to 5 percent (based on the ink base) of powdered crystallized magnesium chloride ($MgCl_2.6H_2O$); and a pH indicator in a small but adequate amount to visibly show a change from acidity to alkalinity in said printing when dried, followed by exposure to ethylene oxide in the presence of water vapor.

3,098,752

FLUOALUMINATE COMPOSITION AS DIELECTRIC MATERIAL

Isadore Mockrin, Plymouth Meeting, and Alexander Kowalski, Levittown, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Apr. 12, 1961, Ser. No. 102,518
5 Claims. (Cl. 106—39)

1. As a novel composition useful as a dielectric, a solid solution consisting of $KAlF_4$ and $RbAlF_4$.

3,098,753
PORCELAIN ENAMELING FRIT

Harry J. Van Dolah, Wheaton, and Otto C. Linhart, Cicero, Ill., assignors to Eagle Picher Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 20, 1961, Ser. No. 153,701
2 Claims. (Cl. 106—48)

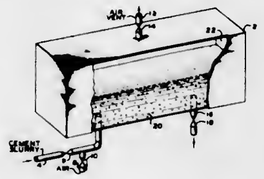
1. A porcelain enameling frit consisting essentially of:

	Percent by weight
SiO_2	55–65
Na_2O	12–15
F_2	4–8
ZrO_2	5–8
V_2O_5	0–5
Li_2O	1–4
TiO_2	2–9
Mo_2O_3	1–5
CoO	1–2
MnO	0.5–5
BaO	0–7

3,098,754
METHOD FOR PREPARING CELLULAR CEMENT

Henry O. Dixon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Jan. 23, 1959, Ser. No. 788,621
2 Claims. (Cl. 106—88)



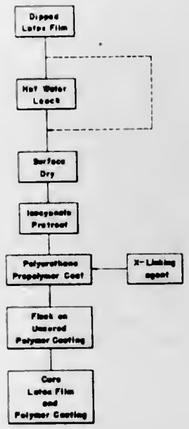
1. The method for forming a rigid unit of cellular cement which comprises providing a confined form, forming a slurry consisting essentially of between about 4 and about 25 volumes of hydratable clay, between about 10 and about 20 volumes of shale and between about 100 and about 250 volumes of water per 100 volumes of Portland cement, introducing the slurry to said form in an amount sufficient to fill only a portion of the form, introducing air only into said form in sufficient quantity to agitate said slurry and expand said slurry to fill said form, agitating said slurry for a period between about 1 and about 5 hours and thereafter allowing the agitated mix to set until hard, said set mixture filling said form.

3,098,755
COATED RUBBER ARTICLES AND METHOD OF PRODUCING SAME

Harry J. Barth and Philip T. Gay, Dover, Del., assignors to International Latex Corporation, Dover, Del., a corporation of Delaware

Filed June 29, 1959, Ser. No. 823,617
14 Claims. (Cl. 117—33)

1. A method of producing adherent elastomeric polyurethane coatings on deposited latex rubber substrates which comprises water leaching the uncured rubber surface, drying said water leached surface treating said leached surface with a solution of isocyanate, applying to said surface a coating of an isocyanate-terminated prepolymer selected from the group consisting of polyesters and polyethers, said prepolymers being curable to an elastomeric state, and curing the prepolymer with a non-aqueous cross-linking agent at a temperature and for a time sufficient also to cure the rubber substrate, the curing agent being present in amount to provide a ratio of NCO groups in the prepolymer to NCO-reactive groups in the cross-linking agent of at least 1 and less than 2.

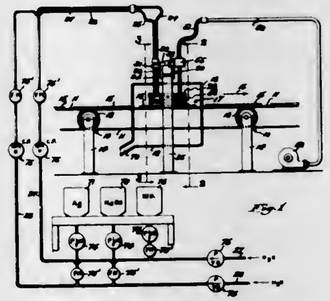


3. A method according to claim 1 in which a flock layer is deposited on the surface of said prepolymer coating prior to curing the coating.

3,098,756
PROCESS AND APPARATUS FOR APPLYING SILVER FILMS

Edward F. Haracz, 161 Pershing Road, Clifton, N.J.

Filed Feb. 4, 1959, Ser. No. 791,184
21 Claims. (Cl. 117—35)

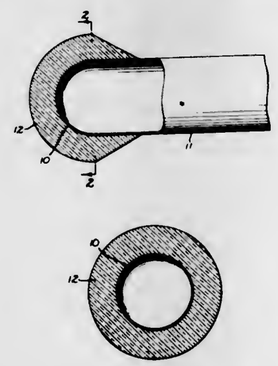


14. In the method of making mirrors by depositing a silver film onto a surface which comprises moving a liquid conduit means relative to the surface over a course on the surface, flowing onto said course from said conduit means a first stream of liquid which contains a silver salt and a second stream of liquid which contains a reducing agent onto said course so that said streams are admixed on the surface and form a liquid medium, and allowing reducing agent to reduce silver salt present in the liquid medium and precipitate silver on the surface, and form a spent liquid medium, whereby spent liquid medium flows onto a portion of said course subsequently to be traversed by the liquid conduit means, the improvement which comprises forming said first stream continuously during the flowing of said first and second streams of liquid onto the surface by admixing a concentrated aqueous silver salt solution and an aqueous medium, flowing each the first and second stream onto the surface as a continuous liquid stream, and directing a stream of gas onto at least part of said course adjacent and in advance of liquid medium directed onto the course by the liquid conduit means thereby clearing said part of the course of spent liquid medium in preparation thereof for receiving liquid medium from the liquid conduit means.

3,098,757
HEAT RESISTANT STRUCTURE

Willard F. Libby, % Dept. of Chemistry, University of California, Los Angeles, Calif.

Filed May 26, 1961, Ser. No. 113,026
5 Claims. (Cl. 117—35)

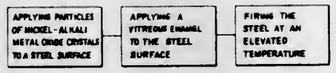


1. In a structure for resisting heat generated at the outer surface thereof, the combination of:
a substrate with an outwardly directed surface having substantially one hundred percent optical reflectance for reflecting light away from the interior of the structure; and
a layer of optically transparent material in the order of several inches thick on said surface.

3,098,758
VITREOUS ENAMEL-COATED FERROUS ARTICLE AND METHOD OF MAKING THE SAME

James D. Sullivan, Pewaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed May 19, 1961, Ser. No. 111,191
14 Claims. (Cl. 117—70)



3. A vitreous enamel base stock, comprising a ferrous base having a coating of finely divided particles thereon, said particles comprising a nucleus of nickelous oxide and an outer layer of nickel-alkali metal oxide crystals bonded to said nucleus, said particles being present in an amount greater than 0.05 gram of dry particles per square foot of ferrous base and serving to prevent hydrogen defects and improve adherence between the ferrous base and a vitreous enamel coating subsequently applied thereto.

8. A method of glass coating steel to eliminate fish-scaling and other hydrogen defects in the glass coating, comprising applying a layer of nickel-alkali metal oxide crystals to the outer surface of fine particles of nickelous oxide to provide a plurality of divided composite particles, applying the composite particles to a surface of the steel in an amount greater than 0.05 gram per square foot of steel surface, applying a glass composition to a surface of the steel base, and firing the steel at an elevated temperature to fuse the glass to the steel with the composite particles serving to eliminate fishscaling and other hydrogen defects during the firing operation.

3,098,759
METHOD FOR COATING A HONEYCOMB LOG

John D. Lincoln, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed May 15, 1959, Ser. No. 813,513
14 Claims. (Cl. 117—95)



1. A method of coating and curing a honeycomb log comprising the steps of providing a honeycomb log of the type defining a plurality of cells and wherein each of the cells is defined by a plurality of single thickness walls and a plurality of double thickness walls, dipping said honeycomb log into a coating material, removing the honeycomb log from the coating material, resting said honeycomb log with first one of the cells single thickness walls disposed lowermost in the cells and generally horizontal, permitting the coating material to drain onto said first walls and cure, again dipping, removing and resting said honeycomb log with another one of the cells single thickness walls disposed lowermost in the cells and generally horizontal, permitting the coating material to drain onto said other walls and cure, and repeating said dipping, said removing, said resting and said curing steps until all of said single thickness walls are coated.

3,098,760
DIMENSIONAL STABILIZATION OF CELLULOSE

Walter P. Ericks, Lockport, N.Y., assignor to The Upson Company, Lockport, N.Y.

No Drawing. Filed Feb. 7, 1961, Ser. No. 87,539
12 Claims. (Cl. 117—143)

2. The process of preparing a dimensionally stabilized sheet composed of cellulose fibers, comprising impregnating said sheet with a solvent solution containing a monomeric ester of an unsaturated aliphatic carboxylic acid and a monoether of a glycol, said monoether having the general formula

$$RO(R'O)_nH$$

where R is a member selected from the group consisting of alkyl, alkoxyalkyl, aryl and alkaryl groups, R' is an alkylene group and n is an integer between 1 and 110; heating said impregnated sheet to drive off said solvent without removing said ester, said solvent solution containing sufficient of said ester that the dried impregnated sheet contains from 1 to 50% of said ester based on the weight of said sheet; impregnating said sheet containing said ester with a compatible polymerizable liquid monomeric compound containing an ethylenic linkage; and heating said sheet containing said ester and said monomeric compound to copolymerize said ester and said monomeric compound, said sheet containing as copolymer at least 1% of said monomeric compound based on the weight of said sheet.

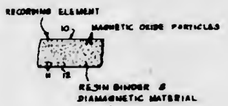
3,098,761
MAGNETIC RECORDING ELEMENT CONTAINING DIAMAGNETIC MATERIAL

Horace Clifford Westcott, 917 Drexel Lane, Bryn Mawr, Pa.

Filed Apr. 15, 1959, Ser. No. 806,698
13 Claims. (Cl. 117—145)

1. A magnetic recording element comprising particles of a ferromagnetic oxide dispersed in and separated by a resinous binder in which binder is incorporated from about

.3% to about 15% by weight, calculated as pure metal, of a diamagnetic material having negative permeability



greater than the negative permeability of the resin of the binder.

3,098,762
PROCESS FOR IMPROVING DIFFUSION ELECTRODES

Leland H. S. Roblee, Jr., Metuchen, John V. Clarke, Jr., Cranford, and Charles W. Foust, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

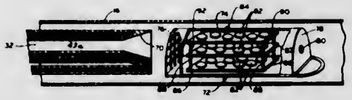
No Drawing. Filed July 3, 1961, Ser. No. 121,345
4 Claims. (Cl. 117—228)

1. A process for improving a porous carbon electrode having major pores whose average diameter is above about 0.2×10^4 A. and minor pores of lesser average diameter for use in a fuel cell employing an aqueous acidic electrolyte and oxygen gas so as to bring said electrode, said electrolyte and said gas into three phase contact, which comprises flooding said electrode with a C_6 to C_7 liquid paraffin, selectively removing said paraffin from said major pores by air blowing of said electrode, passing water vapor through said major pores and adsorbing a film of water thereon, passing an essentially anhydrous stream of nitrogen containing an alkylchlorosilane compound through said major pores until essentially all of said film has reacted with said compound leaving a continuous silicone film bonded to the walls of said major pores and rapidly heating said electrode to about 350° to 400° F. until said paraffin is removed from said minor pores.

3,098,763
CHEMICAL REACTOR

Bruce E. Deal, Palo Alto, and William Peterson, San Francisco, Calif., assignors, by mesne assignments, to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed May 29, 1961, Ser. No. 113,389
11 Claims. (Cl. 118—49.5)

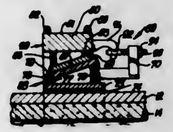


10. Apparatus for reacting a chemical at the surface of a hot body, the apparatus comprising an elongated furnace tube in which the body is disposed, an elongated furnace disposed around the furnace tube for heating the body in it, said body being maintained in a covered boat disposed in said furnace, a supply conduit extending a substantial distance into the furnace and furnace tube and having one end terminate adjacent one end of said boat, means for delivering a stream of the chemical to the other end of the conduit to discharge a supply of the chemical into the furnace tube in the immediate vicinity of said boat, said boat having at one end thereof a grid for uniformly distributing the chemical stream throughout said boat and at the other end thereof means for controlling the flow of chemical from said boat whereby a pressure differential is maintained within said boat and means for maintaining the supply conduit and stream in it at a temperature substantially below that of the heated body.

3,098,764
ANNULAR TRACK MEMBER FOR A SPINNING CYLINDRICAL PIPE CORE DURING INTERIOR LINING OPERATION

Paul W. Kao, Bakersfield, and Charles H. Brannen, Lockeford, Calif., assignors to Cen-Vi-Ro Pipe Corporation, Shafter, Calif., a corporation of California

Filed July 31, 1961, Ser. No. 128,163
7 Claims. (Cl. 118—55)

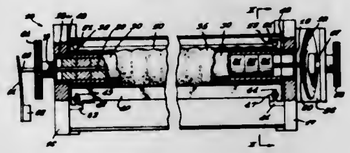


1. In a pipe core spinning machine a pair of core supporting wheels, an annular track member adapted to be releasably mounted on the exterior circumference of a pipe core comprising an anchoring band and a traction band, said anchoring band comprising arcuate segments releasably secured together and adapted to anchor to the exterior of the core, said traction band comprising a circumferentially continuous traction surface adapted to engage the wheels, an inwardly facing positioning area on the traction band and an outwardly facing positioning area on the anchoring band, said positioning areas having a shiftable engagement with respect to each other, and mutually engaging connecting means having elements on the respective bands adapted to force said bands into engagement whereby to provide a firm, smooth rolling surface between said core and said wheels.

3,098,765
XEROGRAPHIC BRUSH

Daniel Franklin Keller, Kenilworth, and William R. Beck, Jr., Norridge, Ill., assignors to Robertson Photo-Mechanix, Inc., Chicago, Ill., a corporation of Illinois

Filed Mar. 16, 1959, Ser. No. 799,545
8 Claims. (Cl. 118—637)



1. A xerographic brush comprising a rotatable non-magnetic shaft, a plurality of magnets and non-magnetic members alternately spaced in a longitudinal row on said shaft to form a cylindrical core rotatable with said shaft, and a cylindrical sleeve of non-magnetic material on the outer periphery of said cylindrical core and co-rotatable therewith, said sleeve having an outer peripheral surface adapted to support brush-like tufts of xerographic developer mixture thereon, said core and said sleeve being relatively axially reciprocable and drive means rotatably driving said shaft and comprising a rotatably driven wobble plate, and spring biasing means loading said shaft against said wobble plate, thereby to effect said reciprocation concurrently with the rotation of said shaft.

3,098,766
PROCESS FOR CLARIFYING SUGAR JUICES BY ADDITION OF A BUFFER

Peel René Payet, Cambuston, France

No Drawing. Filed May 3, 1960, Ser. No. 26,406
Claims priority, application France July 20, 1959
3 Claims. (Cl. 127—50)

1. In a process for clarifying sugar juices extracted from a sugar producing plant, said sugar juice having a natural pH level of approximately 5.5 to 7, the step of introducing a buffer system into the sugar juice, said buffer system acting to maintain the pH level of the sugar juice at said natural value throughout said clarification procedure.

3,098,767
PROCESS FOR AGGLOMERATING BROWN SUGAR

Freeman Bush, Philadelphia, Pa., assignor to The American Sugar Refining Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,676
1 Claim. (Cl. 127—63)

The process of producing agglomerates from a dry brown sugar, wherein said brown sugar consists essentially of sucrose crystals coated with molasses,

comprising the steps of pulverizing the brown sugar to form a flowable pulverized material of which about 90% will pass through a 200-mesh Tyler screen,

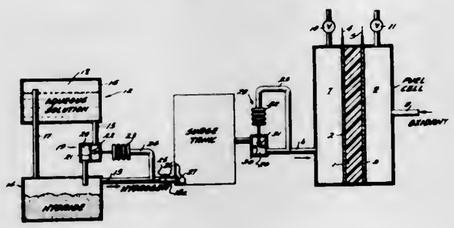
exposing said pulverized material to a humid atmosphere at about room temperature without direct liquid addition to said material and for a time sufficient to bring the moisture content of the material up to a predetermined value in the range of about 2 to 5 percent, and during all said exposure, agitating said material so as to retain it in a free flowing condition, and thereby forming it into agglomerates,

and thereafter drying said agglomerates to a total moisture content of not over about ½%, while maintaining them in a flowable condition with some agitation throughout the drying step.

3,098,768
FUEL GAS SYSTEM FOR FUEL CELLS

William Alexander Titterington, Lynnfield Center, and Richard Hardin Blackmer, Topsfield, Mass., assignors to General Electric Company, a corporation of New York

Filed Dec. 23, 1959, Ser. No. 861,704
7 Claims. (Cl. 136—86)

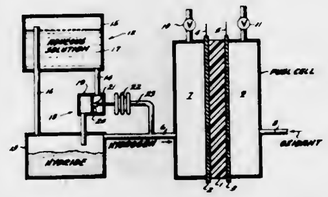


1. A fuel gas system for a fuel cell comprising, in combination; a fuel gas generator comprising means for mixing fuel gas-generating reactants and valve means operable to vary the rate of mixing of the reactants; a surge tank connected in fluid flow relation with said generator for receiving fuel gas generated thereby; a fuel cell comprising a pair of electrodes and an electrolyte positioned between and in contact with said electrodes, said fuel cell adapted to consume fuel gas; conduit means connecting one of said electrodes in fuel gas flow relation with said surge tank; and pressure-regulating control means operable in response to the pressure of fuel gas in said conduit means, said control means operative to regulate the rate of flow of fuel gas in said conduit means such as to maintain a preselected range of pressures of the fuel gas supplied to said one of said electrodes.

3,098,769
FUEL GAS GENERATOR CONTROL SYSTEM FOR FUEL CELLS

Herman Alfred Liebhafsky and Leonard William Niedrach, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed May 13, 1960, Ser. No. 29,032
5 Claims. (Cl. 136—86)

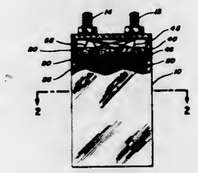


1. A fuel cell gas generator control system comprising, in combination: a fuel gas generator comprising means for mixing fuel gas-generating reactants and reaction control means operable to vary the rate of mixing of the reactants; a fuel cell comprising a pair of electrodes and an electrolyte positioned between and in contact with said electrodes, said fuel cell adapted to consume fuel gas; one of said electrodes communicating with said generator for fuel gas flow therebetween; said reaction control means being operable in response to the pressure of fuel gas supplied to said fuel cell by said generator to regulate the rate of mixing of the reactants such as to maintain a preselected range of pressures of said fuel gas.

3,098,770
ANHYDROUS ELECTRIC BATTERY

Carl Horowitz, Brooklyn, and Thomas Breitner, New York, N.Y., assignors to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Feb. 3, 1958, Ser. No. 713,034
10 Claims. (Cl. 136—100)



1. An electrochemical battery comprising a positive electrode, a negative electrode, and a substantially anhydrous electrolyte, said electrolyte comprising a low molecular weight organic solvent selected from the group consisting of ketones and nitriles having a dielectric constant greater than 12 and having dissolved therein an inorganic compound which constitutes a Lewis acid with respect to said solvent, said Lewis acid being selected from the group consisting of aluminum trichloride, aluminum tribromide, boron trichloride, boron tribromide, zirconium tetrachloride, aluminum sulfate, tin tetrachloride, ferric chloride, zinc dichloride, molybdenum pentachloride, and zinc trichloride said Lewis acid being capable of forming ionic complexes of good mobility with said solvent and being present in sufficient quantity to materially lower the electrical resistance and the freezing point of said solvent.

3,098,771
PRIMARY BATTERY CELL FOR HIGH CURRENT LOADS AND METHOD OF ITS MANUFACTURE

Richard Huber, Ellwangen an der Jagst, Germany, assignor to Pertrix-Union G.m b.H., Ellwangen an der Jagst, Germany, a company of Germany

Filed Sept. 30, 1959, Ser. No. 843,450
Claims priority, application Germany Oct. 3, 1958
10 Claims. (Cl. 136—103)



1. In a primary battery cell for high loads and comprising a zinc solution electrode: a depolarizing mix containing manganese dioxide as a depolarizer and between 20% and 25%, by weight of the depolarizer, of carbon black, the mix being so finely comminuted that at least about 80% thereof passes through a sieve having 10,000 mesh/sq. cm. and containing between 70% and 80%, based on the weight of the dry mix, of an electrolyte consisting of a zinc chloride solution containing between 50% and 60%, by weight, of zinc chloride.

3,098,772
ELECTRODE FOR FUEL CELL

Walter G. Taschek, Long Branch, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed June 1, 1962, Ser. No. 199,547
5 Claims. (Cl. 136—120)
(Granted under Title 35, U.S. Code (1952), sec. 266)



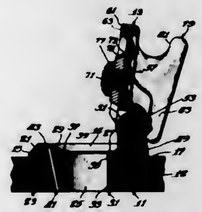
1. The method of preparing a carbon electrode for use in a fuel cell using an acid electrolyte including the steps of

(1) weighting the carbon electrode,
(2) firing the carbon electrode in an oxidizing atmosphere for controlled oxidation of the carbon,
(3) cooling the carbon electrode,
(4) reweighing the carbon electrode and determining that a total weight loss of 7 to 10 percent has occurred,
(5) dusting off the activated electrodes,
(6) inserting the activated electrodes in a wet proofing solution,
(7) drying the electrodes with a vacuum pump to insure a dry pore structure,
(8) heating the wet proofed electrodes in an oven at 200° C. for two hours,
(9) applying a chloroplatinic acid solution containing about 90 mg. of platinum per ml. of solution on the hot electrode so that one square centimeter of electrode area contains 2 mg. of platinum, and
(10) placing the electrode in a vacuum oven at 200° C. for six hours.

3,098,773
VENT COVER

Marion Ward Dickover, Glenview, Ill., and Joseph N. Jammal, Ashtabula, Ohio, assignors to K-W Battery Company, Skokie, Ill.

Filed July 8, 1960, Ser. No. 41,568
2 Claims. (Cl. 136—177)

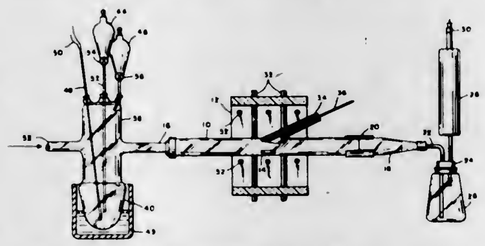


1. A top closure for the service opening of a storage battery case, which closure comprises a base portion which is adapted to be secured in said case and a lid hingedly mounted on said base, a passageway through said base portion, said passageway being provided with an inwardly extending pliable lip which defines an opening having pliable edges, which opening lies in a plane generally normal to the axis of said passageway, said lip being adapted to flex freely in directions generally parallel to the axis of said passageway as said lid is raised and lowered, said closure lid including a plug which is adapted to overlie and engage the upper surface of said flexible lip so as to prevent upward flexing of said lip when said lid is in the closed position, said plug also including a section which extends into the opening defined by said pliable lip, the edges of said pliable lip which define said opening engaging the periphery of the section of said plug which extends into said opening.

3,098,774
PROCESS FOR PRODUCING SINGLE CRYSTAL SILICON SURFACE LAYERS

Albert Mark, Toms River, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed May 2, 1960, Ser. No. 26,384
1 Claim. (Cl. 148—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



The method of producing a layer of single crystal silicon of one conductivity type upon a body of silicon of the opposite conductivity type, comprising the steps of passing hydrogen over a liquid surface of silicon tetrachloride maintained at a temperature ranging between −20° C. to −55° C. to form a gaseous atmosphere, adding an impurity of said one conductivity type to said gaseous atmosphere, sustaining the rate of flow of said atmosphere over said body to a range of between 250 to 500 cubic centimeters per minute, and simultaneously maintaining a temperature gradient between said atmosphere and said body such that said body is in a range between 25° C. to 50° C. lower than the temperature of said atmosphere with the temperature of said atmosphere being chosen from the range of about 1125° C. to 1250° C.

3,098,775
METHOD OF APPLYING A CHROMATE CONVERSION COATING TO THE SURFACE OF ALUMINUM

James H. Thirsk, Meadowbrook, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

Filed Aug. 9, 1961, Ser. No. 130,398
6 Claims. (Cl. 148—6.2)



2. In the art of forming a chromate conversion coating on an aluminum surface by treating the surface with a chromate conversion coating solution, the method which comprises moving the surface in one direction past and in contact with a roller the surface of which is being driven in the opposite direction and simultaneously applying coating solution to the region of contact between the metal and the roller, the surface speed of the roller being from 33⅓% to 133⅓% of the speed of the moving aluminum surface.

3,098,776
METHODS OF HEAT-TREATING LOW CARBON STEEL

Paul F. Elarde, Naperville, Ill., assignor to Western Electric Company, Incorporated, a corporation of New York

No Drawing. Filed Dec. 9, 1960, Ser. No. 74,759
3 Claims. (Cl. 148—122)

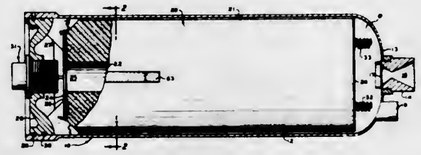
1. The method of increasing the magnetic permeability of ordinary commercial SAE 1010 low-carbon steel from a maximum permeability value of the order of 2000 to a maximum permeability value between about 6000 and 10,000, which consists in heating the steel at a temperature between about 1500 and 1550° F. in a wet forming gas atmosphere for a period of about 3 to 6 hours, cooling the steel at an initial rate of approximately 200° F. per hour to a transition temperature of approximately 1000° F. in a dry forming gas atmosphere, and then cooling the steel further at an increased rate of approximately 400 to 600° F. per hour to a temperature at least as low as 200° F. in a dry forming gas atmosphere, after which the cooling conditions are substantially immaterial.

3,098,777
COMPOSITE PROPELLANTS CONTAINING A CARBON-ALKALI METAL BURNING RATE CATALYST

Herbert R. Anderson, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 4, 1958, Ser. No. 778,262
6 Claims. (Cl. 149—19)

1. A solid propellant composition of the composite type consisting essentially of (1) a major amount of a mixture of 50 to 95 weight percent of a solid inorganic oxidizing salt and 5 to 50 weight percent of a rubber binder, the sum of said amounts of said salt and said binder totaling 100 weight percent of said mixture, and (2) a minor but significant amount of a reaction product of carbon and an alkali metal, the amount of said reaction product being sufficient to increase the burning rate of said propellant composition, said reaction product being prepared by contacting vaporized alkali metal and

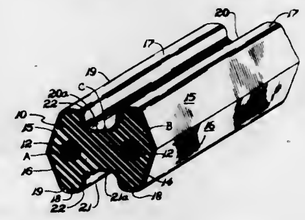


carbon in the absence of oxygen and at elevated temperature in the range between 375° and 500° C.

3,098,778
BELT

Ralph F. Garner, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed May 8, 1957, Ser. No. 657,907
7 Claims. (Cl. 154—52.2)

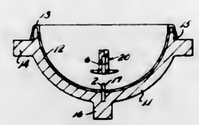


1. A side-driving power transmission belt comprising a flexible resilient rubber body having only side-driven faces and having a single pair of laterally-spaced flexible cabled elements each embedded longitudinally in the body near a driving face, and said body having inner and outer circumferential faces in each of which there is a groove opening from adjacent the margins of said inner and outer faces and extending longitudinally of the body, the grooves of said faces extending toward each other in opposed relation and their bottoms defining opposing sides of a longitudinal flexible hinge portion of the body free of longitudinal reinforcing members and integral with the portions of the rubber body in which the reinforcing elements are embedded and located between and in the plane of said cable elements and about which hinge portion the body is transversely flexible.

3,098,779
METHOD OF MAKING A PLASTIC VALVE AND ATTACHING SAME TO A HOLLOW INFLATABLE ARTICLE

Alvon R. Cox, Ashland, Ohio, assignor to The Faultless Rubber Company, Ashland, Ohio, a corporation of Ohio

Filed Apr. 13, 1961, Ser. No. 102,841
7 Claims. (Cl. 156—228)



1. The method of making a hollow inflatable ball of thermoplastic material which comprises forming a pair

of hemispherical walls by deposit from plastisol, forming an aperture through one of said walls, separately forming an inflation valve of only partially fused thermoplastic material having a base attaching flange and having a cylindrical body terminating in a pair of axially extending abutting sealing lips, said valve having a bore extending thereinto from its base end, said lips connecting to said bore and being coated on their adjacent surfaces with a silicone oil having a viscosity of approximately 60,000 centipoises assembling the valve with its bore aligned with said aperture in one of said walls and connected thereto, uniting the hemispherical walls one to another about their margins by pressure applied thereto to form an assembled article, and heat-curing the assembled article to unite the walls and the valve, said silicone oil preventing said lips from fusing together during the heat-curing.

3,098,780

CURL RESISTANT FOIL TO PAPER LAMINATION AND METHOD OF MAKING SAME

James N. Krause, Louisville, Ky., assignor, by mesne assignments, to Anaconda Aluminum Company, Louisville, Ky.

Filed Aug. 4, 1958, Ser. No. 752,693
3 Claims. (Cl. 156—280)



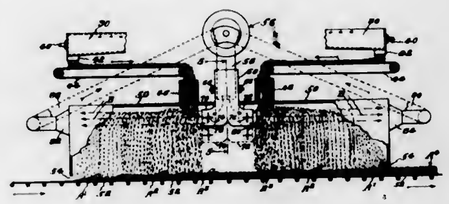
3. The method of making a foil to paper lamination for use as a label or similar article having improved curl resistant properties when stored in stacks comprising the steps of bonding the paper to the foil, treating the exposed surface of the paper with a solution containing a treating agent operable to reduce the ability of the paper to take up moisture, and subsequently drying the lamination to reduce the moisture content of the paper to substantially 6% of the weight of the paper.

3,098,781

APPARATUS FOR PRODUCING WOOD PARTICLE BOARDS

Ernst Greten, Springe, near Hannover, Germany, assignor to Metallwerk Bahre K.G., Springe, Deister, Germany

Filed Jan. 18, 1960, Ser. No. 2,878
1 Claim. (Cl. 156—373)



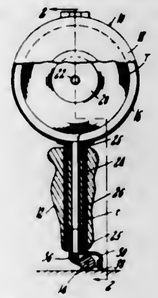
Apparatus comprising a mat forming unit, means for delivering particles to said unit to fall by gravity therethrough, means for directing vertically spaced streams of air horizontally from adjacent the center of said unit toward each end thereof to effect size distribution of said particles, means for recirculating air from each end of said unit and means for adjusting the relationship of said vertically spaced horizontal air streams with respect to the falling particles delivered to said unit.

3,098,782

TAPE DISPENSER

Howard A. Powers, Medfield, Mass., assignor to W. H. Brady Co., Milwaukee, Wis., a corporation of Wisconsin

Filed Jan. 14, 1960, Ser. No. 2,466
2 Claims. (Cl. 156—577)



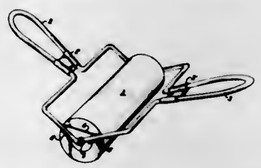
2. A dispenser for pressure sensitive adhesive tape comprising a storage unit for storing a roll of pressure sensitive tape, said storage unit having means for supporting said roll within said storage unit for rotation, a longitudinal member secured to said storage unit having a longitudinal passage extending generally away from said storage unit, said longitudinal member carrying bearing means therearound, a handle disposed around said longitudinal member and supported on said bearing means for free rotation relative to said longitudinal member about an axis, a roller housing secured at the end of said longitudinal member, and tape applying roller means mounted for rotation in said roller housing and offset from the said axis so that the surface of said tape applying roller contacts the non-sticky side of tape drawn through said longitudinal member, said tape storage unit, said longitudinal member, said roller housing and said tape applying roller being mounted for free rotation as a unit relative to said handle member.

3,098,783

HAND PRESSURE ROLLER

Dieter Busch, Gelsenkirchen, Frido Eicher, Haan, Rheinland, and Anton Krämer, Dusseldorf, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf, Germany, a German corporation

Filed Feb. 12, 1959, Ser. No. 792,884
6 Claims. (Cl. 156—579)



1. Hand pressure roller which comprises roller means, a pair of handle means, said handle means having additional means rotatably securing said handle means to said roller means and pivotally securing said handle means for movement outwardly and inwardly with respect to each other, at least a portion of said additional means rotatably abutting a portion of the roller means for transmitting pressure exerted on both the handle means to said roller means at said abutting portions, and means for limiting the outward pivotal movement of the handle means under the resultant pressure exerted on both the handle means, said means for limiting the outward pivotal movement including angle stop means on

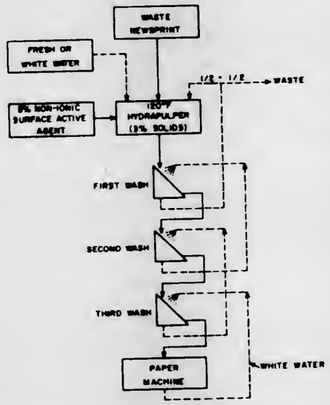
at least one side of said roller means, said stop means having two connected side means, the apex of said angle stop means being located immediately below the means for rotatably securing said handle means to said roller means, and the side means of said angle stop means being upwardly diverging, whereby said handle means will abut the corresponding side means of said angle stop means at their outermost position with respect to each other.

3,098,784

PROCESS OF DEINKING PRINTED PAPER

William S. Gorman, Jr., Tonawanda, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware

Filed Aug. 6, 1959, Ser. No. 832,083
12 Claims. (Cl. 162—5)



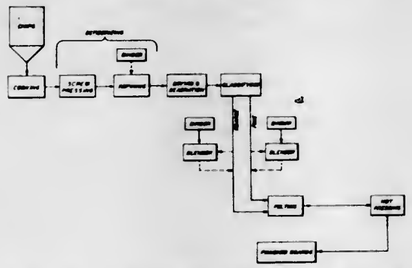
1. The process of separating the cellulosic fibers of printed paper from the ink therein contained, which comprises the steps of adding said printed paper in substantially dry form to a solution of water and approximately .2% to 5.0% of a water soluble non-ionic surface active agent at a temperature of from about 90° to 180° F., forming a slurry thereby of from about 1% to 6% solids, substantially immediately agitating said slurry sufficiently to reduce said paper substantially to individual fibers, removing said fibers from said solution, and washing said fibers.

3,098,785

METHOD OF MAKING LIGNOCELLULOSIC FIBERBOARD

John G. Meller, Cleveland, Tenn., assignor to Bowater Board Company, Calhoun, Tenn., a corporation of Delaware

Filed Mar. 3, 1959, Ser. No. 796,920
7 Claims. (Cl. 162—11)



1. A process for producing consolidated lignocellulosic fiberboard which comprises exposing chips of lignocellulosic material to an atmosphere of steam at a pressure and for a time sufficient only to soften the chips but insufficient to form more than about 5% by weight of dry fiber of water solubles from constituents of the chips, subjecting the steamed chips to sufficient high pressure essentially non-defibering work in a screw press to render the chips more suitable for defibering, and thereafter reducing the chips to fibers in a disc refiner, dry forming the resulting fibers into a mat, and subjecting the mat to consolidating temperature and pressure to produce said fiberboard.

3,098,786

PAPER MAKING PROCESS

James R. Biles, Decatur, Ala., and Richard R. Holmes, Charlotte, N.C., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Dec. 28, 1960, Ser. No. 78,868
5 Claims. (Cl. 162—157)

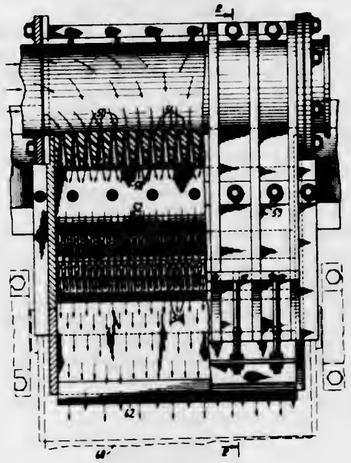
1. In a process for making paper from an aqueous suspension of wet-spun acrylic fibers, the step which comprises first adding, to said suspension after all operations designed to modify the fibrous constituents by mechanical means are completed and prior to the formation of the paper web, from 3 to 20 percent of deacetylated karaya gum and thereafter slowly adding as a further component from 4 to 10 percent of sulfuric acid, all percentages being based on the weight of the fibers present in said aqueous suspension, and finally passing said aqueous suspension to a paper web forming device.

3,098,787

FLOW SYSTEM

Herman L. Sieber, Stamford, Conn., assignor to Time, Incorporated, New York, N.Y., a corporation of New York

Filed July 21, 1960, Ser. No. 44,443
4 Claims. (Cl. 162—216)

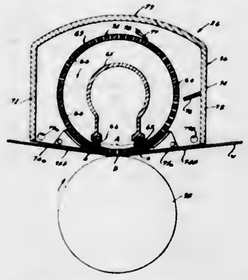


1. Apparatus for supplying a paper stock to a paper-making machine comprising a slice and a pre-slice flow chamber connected to said slice for directing a flow of paper stock to said slice, a portion of said pre-slice flow chamber defining a plurality of venturis disposed in a row substantially transverse to the direction of said flow.

3,098,788
LIQUID REMOVAL MEANS FOR ROTATABLE PERFORATED SHELLS

Lloyd Hornbostel, Jr., Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed April 18, 1961, Ser. No. 103,921
6 Claims. (Cl. 162—274)



1. Apparatus for removing liquids from perforated rotating shells forming part of a press nip comprising, a housing surrounding a major portion of the circumference of the shell, and a liquid collection device in said housing in closely spaced relation to the shell withdrawing liquid from the perforations in the shell during rotation past said device, said liquid collection device having a lip portion extending to a point closely adjacent the nip on the off-running side thereof and a perforated wall portion closely spaced from the shell for assisting centrifugal forces and receiving liquid from the perforations in the shell during rotation past said device.

3,098,789
AGRICULTURAL SPRAY EMULSION CONCENTRATES AND THEIR METHOD OF MANUFACTURE

Francis W. Littler, Mineola, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,229
3 Claims. (Cl. 167—42)

3. The method of preparing a highly concentrated emulsion capable of being diluted for spray application by water which comprises mixing between about 35% to 60% by weight of finely divided 2,2-bis (p-chlorophenyl)-1,1,1-trichloroethane with 5–25% by weight of a highly aromatic oil having an aniline point of about 65–85° F. and boiling substantially continuously over the range about 330–560° F., separately mixing about 0.1% to 10% by weight of a polyoxyethylene ether of t-octyl phenol having about 15–16 mols of ethylene oxide per mol of finished product, 0.1% to 10% by weight of a sodium salt of polyoxyethylene ether sulfonate of t-octyl phenol having about 17–18 mols of ethylene oxide per mol of finished product with water to a balance of 100%, commingling the two mixtures in a Manton-Gaulin homogenizer at a temperature of 150–250° F. and passing the mixture through the homogenizer under pressure sufficient to provide a stable, uniform emulsion, capable of being diluted with additional water to provide a finished DDT emulsion spray.

3,098,790
ADMIXTURE OF ALUMINUM METAL POWDER AND POWDERED VEGETABLE GUM FOR TREATMENT OF OPEN WOUNDS

Michael W. Mettentleiter, 885 Park Ave., New York, N.Y.

No Drawing. Filed July 10, 1958, Ser. No. 747,584
3 Claims. (Cl. 167—58)

1. A preparation for the treatment of open wounds, comprising a dry admixture of aluminum metal powder of palpable fineness and a highly comminuted, powdered vegetable gum capable of absorbing moisture.

3,098,791
ANTI-EPILEPTIC TERTIARY ALICYCLIC UREA DERIVATIVE

Otis E. Fancher, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Oct. 16, 1961, Ser. No. 145,483
4 Claims. (Cl. 167—65)

1. A method for preventing epileptic seizures in epileptic patients which comprises administering to epileptic patients at least about 0.4 gram daily of a member selected from the group consisting of 1-(1′-methylcyclohexyl)urea, 1-(1′-methylcyclopentyl)urea and 1-(1′-ethylcyclopentyl)-urea.

3,098,792
PROCESS FOR PREPARING PRODUCT HAVING ENHANCED LACTOGENIC ACTIVITY

Ralph A. Reisfeld, Scotch Plains, and George L. Tong, Elizabeth, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,674
1 Claim. (Cl. 167—74)

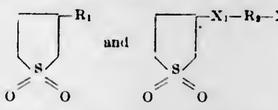
A process for the preparation of a product having enhanced lactogenic activity which comprises subjecting a multicomponent prolactin composition derived from sheep pituitary glands to chromatography over (diethylaminoethyl)-cellulose, eluting said cellulose with tris-(hydroxymethyl) - aminomethane - (ethylenedinitrilo)-tetraacetic acid-borate buffer, collecting separate small fractions of the resulting eluate which exhibit substantial absorption of ultraviolet light having a wavelength of 280 mμ, combining the eluate fractions having as a major constituent a protein having an electrophoretic mobility of about 3.80×10^{-5} cm.^{2} sec.$^{-1}$ volt^{-1} in glycine-sodium hydroxide buffer at pH 10 and as a minor constituent a protein having a higher electrophoretic mobility than 3.80×10^{-5} cm.^{2} sec.$^{-1}$ volt^{-1} in glycine-sodium hydroxide buffer at pH 10 to form a first combined eluate fraction, recovering as a mixture said major and said minor constituents from said first combined eluate fraction, subjecting said mixture to rechromatography over (diethylaminoethyl) cellulose, combining rechromatography eluate fractions having substantial ultraviolet absorption at a wavelength of 280 mμ and having as the substantially sole constituent a protein having an electrophoretic mobility of 3.80×10^{-5} cm.^{2} sec.$^{-1}$ volt^{-1} in clycine-sodium hydroxide buffer at pH 10 to form a second combined eluate fraction and recovering said protein from said second combined eluate fraction.

3,098,793
SULFOLANE PHARMACEUTICAL COMPOSITIONS

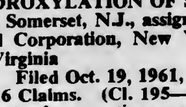
Bernard Loev, Broomall, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 29, 1960, Ser. No. 52,348
5 Claims. (Cl. 167—82)

1. A pharmaceutical composition comprising a solvent selected from the group consisting of:



in which R_1 is a member selected from the group consisting of hydrogen, methyl, hydroxy, methoxy, ethoxy and allyloxy; X_1 is a member selected from the group consisting of —NH—, —NR_3—, S and O; X_2 is a member selected from the group consisting of hydroxy, —OR_3,



R_2 is lower alkylene having 2–4 carbon atoms and R_3 is lower alkyl having 1–3 carbon atoms; and a difficultly soluble medicinal agent substantially soluble in said solvent.

3,098,794
PROCESS FOR TREATING HUMAN HAIR WITH AMINO OXIDE COMPOSITIONS

Roman Dohr, Dusseldorf, and Wilhelm Jakob Kaiser, Dusseldorf-Holthausen, Germany, assignors to Therachemie Chemisch therapeutische Gesellschaft m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed July 20, 1960, Ser. No. 44,001
Claims priority, application Germany Aug. 8, 1959
4 Claims. (Cl. 167—87)

1. A process for the simultaneous washing, dyeing and grooming of human hair, which comprises rubbing said hair with a liquid mixture of a cationic hair dye and a compound selected from the group consisting of aliphatic, aromatic and heterocyclic amino oxides having at least 8 carbon atoms in their molecules, leaving said mixture on said hair to act thereon, for a period of substantially 15 to 30 minutes, rinsing said hair with water and removing said mixture.

3,098,795
COSMETIC COMPOSITIONS CONTAINING LACTIC ACID ESTERS OF FATTY ALCOHOLS

Saul I. Kreps, Cedar Grove, N.J., assignor to Van Dyk & Company, Inc., a corporation of New Jersey

No Drawing. Filed Nov. 4, 1958, Ser. No. 771,717
3 Claims. (Cl. 167—90)

1. A cosmetic composition comprising as essential ingredients a homogeneous dispersion of anhydrous lanolin, a vegetable oil and a straight-chain fatty alcohol lactic acid ester in which the fatty alcohol radical contains eight to eighteen carbon atoms, said composition being film-forming when applied to the human skin,

3,098,796
16-HYDROXYLATION OF STEROIDS

Allen I. Laskin, Somerset, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Oct. 19, 1961, Ser. No. 146,346
6 Claims. (Cl. 195—51)

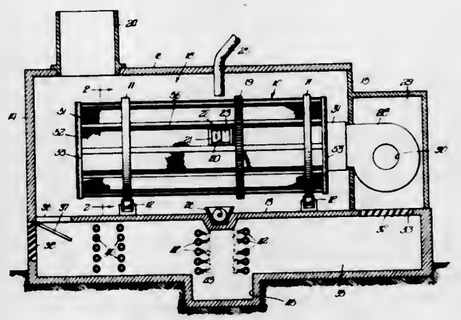
1. The method of converting a steroid into a 16α-hydroxy derivative thereof, which comprises subjecting a steroid selected from the group consisting of a steroid of the pregnane series, a steroid of the androstane series and a steroid of the estrane series to the action of enzymes of a microorganism of the class consisting of *Streptomyces californicus*, *Streptomyces coelicolor* and *Streptomyces vinaceus*, under oxidizing conditions, and recovering the 16α-hydroxy steroid formed.

3,098,797
ROTARY MALTING DRUM WITH ADJUSTABLE LOUVERS

Alan R. Graff, Flossmoor, Ill., Ralph B. Oesting, Valparaiso, Ind., and Perry K. Marple, Chicago, Ill., assignors to The Columbia Malting Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 19, 1961, Ser. No. 83,747
15 Claims. (Cl. 195—131)

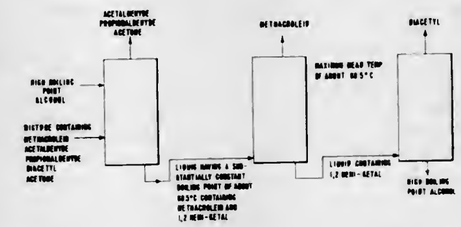
1. In a rotary malting drum, the combination with an outer cylindrical member, of an inner cylindrical member disposed concentric with respect thereto, the cylindrical walls of the inner member being perforated to permit the escape of air from within the member, a plurality of louvers located within the inner member in associated relation with the circumference thereof, and means having connected relation with the louvers for locking the louvers in either closed or in adjusted open position.



3,098,798
PREPARATION OF PURIFIED METHACROLEIN

Barnard Mitchel Marks, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 18, 1960, Ser. No. 15,827
3 Claims. (Cl. 202—42)



1. A process for the production of purified methacrolein from a mixture containing methacrolein, acetaldehyde, propionaldehyde, acetone, and diacetyl which comprises:

(*a*) adding an alcohol having a boiling point above 75° C. to said mixture,

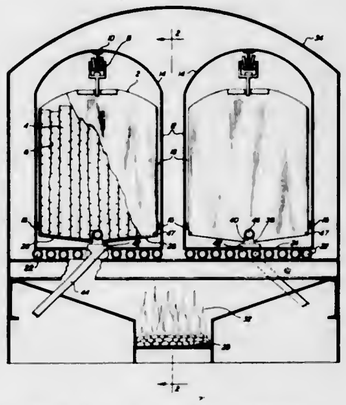
(*b*) heating said mixture containing said alcohol, under high reflux conditions, in a first stage, until a substantially constant boiling point of about 68.5° C. is attained, while distilling off said acetaldehyde, propionaldehyde and acetone, and while forming a thermally-unstable-high-boiling 1,2-hemi-ketal from said alcohol and said diacetyl,

(*c*) heating, in a second stage, under reflux at a maximum head temperature of about 68.5° C., the reflux of said first stage to distill off said methacrolein in purified form,

(*d*) heating, in a third stage, the reflux of said second stage to break up said thermally-unstable-high-boiling 1,2-hemi-ketal and

(*e*) recovering said alcohol.

3,098,799
WOOD TREATING APPARATUS AND PROCESS
David J. Crawford, deceased, late of Cobb Island, Md., by Madeleine B. Sadtler, executrix, Washington, D.C., assignor of one-half to International Bank, Washington, D.C., a corporation of the Republic of Panama
Filed Dec. 20, 1960, Ser. No. 77,243
5 Claims. (Cl. 202—93)



1. In a device for the destructive distillation of wood the combination comprising an oven having sidewalls, end walls, and bottom and top surfaces, movable rack means within said oven having side walls, end walls and a bottom portion for supporting a batch of raw wood, said bottom portion including gate means for discharging spent wood from said rack, fuel burning means beneath said oven for providing heat to said oven, cooling means beneath said oven for controlling the temperature of said rack bottom portion and said oven bottom surface, means for creating a downdraft through said raw wood whereby vaporized products from said wood are condensed on said cooled rack bottom portion, pipe means positioned along said rack and between the side walls of said rack and said oven for injecting steam and solvents into said downdraft, and trough means adjacent said rack bottom portion for collecting and conveying away the condensed products.

3,098,800
LABORATORY DISTILLATION APPARATUS
John J. Moran and Harold Wood, both of 230 Medical Arts Bldg., Houston, Tex.
Filed Dec. 9, 1960, Ser. No. 74,996
3 Claims. (Cl. 202—170)

1. A unitary glass protein bound iodine distillation apparatus for the extraction of micro quantities of iodine from a boiling solution having an integral glass body comprising,

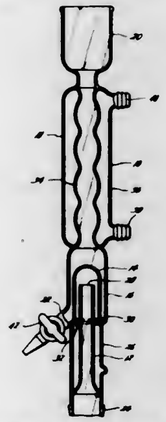
a tubular receiving chamber having upper and lower ends for receiving boiling vapors of iodine, said lower end adapted to be positioned adjacent a container having a boiling solution for receiving said boiling vapors,

an air evacuated insulation jacket positioned about said receiving chamber,

an enclosure telescopically and completely enclosing the upper end of said receiving chamber except for having a plurality of ports positioned below the upper end of the receiving chamber,

an extraction solution chamber surrounding said telescopic enclosure for containing an extraction fluid for trapping said iodine vapors, said extraction chamber positioned to enclose the plurality of ports whereby fluid placed in the extraction chamber will cover said ports,

a condenser chamber in fluid communication with the top of the extraction chamber, the upper end of the condenser chamber being in communication with the



atmosphere for receiving pressures and for providing an entrance for insertion of fluids into the extraction solution chamber, and

a drain outlet connected to the lower end of the extraction chamber.

3,098,801
APPARATUS AND METHOD FOR MEASURING CORROSIVENESS OF AQUEOUS LIQUIDS
Glenn A. Marsh and Edward Schaschl, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed June 30, 1959, Ser. No. 824,017
19 Claims. (Cl. 204—1)

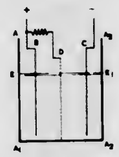


1. The method of determining the cathodic-anodic cell current of the corrosion of a metallic material of construction in a corrosive electrolytic environment which comprises exposing at first test specimen to said environment for a time sufficient to form a layer of corrosion products on the surface thereof, exposing a second test specimen, said second test specimen having an exposed area substantially equal to the exposed area of said first test specimen to said environment at a known distance from said first test specimen whereby said first test specimen becomes anodic with respect to said second test specimen, measuring the cell current generated between said specimens, and recording same in relation to said distance, said test specimens being substantially identical test specimens of said metallic material of construction.

3,098,802
DIAPHRAGM FOR USE IN ELECTROLYSIS
Henri Bernard Beer, The Hague, Netherlands, assignor to Amalgamated Curacao Patents Company N.V., Willemstad, Curacao, Netherlands Antilles, a corporation of the Netherlands
Filed Oct. 22, 1959, Ser. No. 848,037
Claims priority, application Netherlands Oct. 29, 1958
4 Claims. (Cl. 204—1)

1. A method of carrying out electrolysis in which it is desired to keep two portions of the electrolyte separated

yet allow ions to migrate to the electrodes, comprising placing a diaphragm of a metal selected from the group consisting of titanium and titanium alloy, said diaphragm having pores therethrough of a size such that substantially no intermingling of liquids on opposite sides thereof can take place and having a barrier layer of titanium oxide



thereon, between an anode and a cathode in an electrolysis apparatus, placing a non-fluoride containing electrolyte on opposite sides of the diaphragm, passing a current from the anode to the cathode through the electrolyte portions and the diaphragm, and supplying anodic current to the diaphragm for continuously maintaining the barrier layer thereon.

3,098,803
THIN MAGNETIC FILM
Ludwig E. Godycki, Cold Spring, and Ronald G. Stevens and Ignatius Tsu, Beacon, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 23, 1960, Ser. No. 38,284
4 Claims. (Cl. 204—38)



1. A process of making a bistable magnetic memory element exhibiting a coercive force of less than 5 oersteds and a switching constant of approximately 0.02 oersted-microsecond comprising the steps of:

(1) immersing a non-magnetic substrate in an electroless nickel plating bath having the composition:
30 g./l. $NiCl \cdot 6H_2O$,
10 g./l. $NaH_2PO_2 \cdot 2H_2O$,
50 g./l. NH_4Cl,
100 g./l. sodium citrate,
said bath having a pH of 7.5–8.0 and a temperature of 95° C.,
for between 4 to 10 seconds to form an adherent layer of electrolessly deposited nickel on said substrate;

(2) rinsing the electrolessly deposited nickel layer to remove excess plating bath solution;

(3) baking the substrate with the electrolessly deposited nickel layer at a temperature between 130°–190° C. for 10 to 25 minutes;

(4) thereafter subjecting the baked electrolessly deposited nickel layer to electrolytic action in an electroplating bath having the composition:
10 g./l. $FeSO_4 \cdot 7H_2O$,
200 g./l. $NiCl_2 \cdot 6H_2O$,
25 g./l. H_2BO_3,
0.84 g./l. saccharin,
0.42 g./l. sodium lauryl sulfate,
said electroplating bath having a pH of 2.85 and being maintained at room temperature.
for about 1 minute to deposit a nickel-iron alloy having a thickness in the order of 2000 A. on the electrolessly deposited nickel layer.

3,098,804
METAL TREATMENT
Henry J. Wittrock, Opportunity, Wash., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
No Drawing. Filed Mar. 28, 1960, Ser. No. 17,754
5 Claims. (Cl. 204—41)

1. A method of producing a firmly adherent coating of a metal selected from the group consisting of nickel and chromium

on an article of an aluminum alloy containing by weight not more than 0.25% silicon, not more than 0.25% iron, 1.30 to 3.70% copper, not more than 0.25% manganese, 0.20 to 1.20% magnesium, not more than 0.30% zinc, a small but effective amount of titanium sufficient for grain refinement, impurities in normal amounts, balance substantially aluminum,

said method comprising the steps of

immersing said aluminum alloy as an anode in an aqueous electrolyte consisting essentially of phosphoric acid and sulfuric acid, balance water,

passing an electric current through said electrolyte for a time period of from 1 to 30 minutes, at current density of from 12 to 120 amperes per square foot and a voltage of less than 40 volts,

thereby producing an oxide coating on the surface of said article

thereafter electrodepositing a layer of metal selected from the group consisting of nickel and chromium directly on said oxide-coated surface.

3,098,805
PROCESS FOR THE EXTRACTION OF RELATIVELY PURE TITANIUM AND OF RELATIVELY PURE ZIRCONIUM AND HAFNIUM
Guy Ervin, Jr., and Herbert F. G. Ueltz, Shrewsbury, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed June 25, 1959, Ser. No. 822,797
20 Claims. (Cl. 204—64)

1. Process for the preparation of metal selected from the fourth group consisting of titanium, zirconium and hafnium and mixtures thereof which comprises passing a direct electric current through a cell having a solid anode and a solid cathode in a direct current electric circuit, the electrolyte in said cell consisting, apart from any fourth group metal halide content, essentially of fused halide of metal selected from the group consisting of alkali metals and alkaline earth metals including magnesium and mixtures of such halides, said cell containing fourth group metal carbide in said halide electrically connected to the positive side of the electric circuit and collecting the fourth group metal electrolytically liberated at the cell cathode.

3,098,806
CROSS LINKING OF FATTY POLYAMIDES WITH IONIZING RADIATION
Raymond F. Paschke, Anoka, Minn., assignor to General Mills, Inc., a corporation of Delaware
No Drawing. Filed Dec. 10, 1959, Ser. No. 858,583
5 Claims. (Cl. 204—154)

1. A method of cross linking a fatty acid polyamide having a melting point below 130° C., said fatty acid polyamide being selected from the group consisting of (*a*) the self condensation product of amidic fatty acids, (*b*) a polyamide derived from the reaction of polymeric fat acids and a polyamine of the formula $H_2N(R'NH)_xH$ where R' is an alkylene radical having from 1 to 4 carbon atoms and *x* is an integer from 1 to 6, and (*c*) a polyamide derived from the reaction of a polyamine of the formula $H_2N(RNH)_xH$ where R is selected from the group consisting of arylene and alkylene radicals and *z* is an integer from 1 to 8 and a fatty acid derivative

selected from the group consisting of the epoxidized fatty acids and the alkyl esters thereof, comprising subjecting said fatty acid polyamide to high energy ionizing radiation in a dosage of from 10 to 160 megarads.

3,098,807

HIGH ENERGY RATE EXTRUSION OF URANIUM

Lawrence Lewis, Bridgeport, Conn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 22, 1961, Ser. No. 140,654
3 Claims. (Cl. 204—154.2)

1. The method of forming fine grained randomly oriented natural uranium suitable for reactor fuel, that comprises heating a preformed natural uranium slug to a temperature of about 100° F.–1100° F.; immediately extruding the slug at a pressure to cause a rise in the alpha-beta phase transformation temperature in accordance with the Clausius-Clapeyron equation and at a temperature intermediate the normal and the increased alpha-beta transformation temperature, to form uranium in the alpha phase; permitting the uranium to transform to the beta phase after extrusion, and rapidly cooling the uranium.

3,098,808

PROMOTION OF HIGH ENERGY RADIATION EFFECTS IN POLYMERIC MATERIALS

Herbert R. Anderson, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Apr. 14, 1958, Ser. No. 728,246
33 Claims. (Cl. 204—162)

28. A method of vulcanizing a butadiene-styrene copolymer which comprises forming a mixture of butadiene-styrene copolymer with from about 0.01 to 0.1 gram mol of a metal salt of stearic acid per 100 grams of copolymer, and exposing said mixture in the uncured state to neutron-free gamma radiation at a rate in the range of about 10^3 to 3×10^7 rep per hour for a total dosage of about 10^5 to 5×10^8 rep.

3,098,809

NUCLEAR REACTOR WITH FUEL UNDER SPHEROIDAL FORM

Andre Huet, 48 Ave. du President Wilson, Paris 16, France

Filed June 30, 1959, Ser. No. 823,895
Claims priority, application France July 9, 1958
4 Claims. (Cl. 204—193.2)



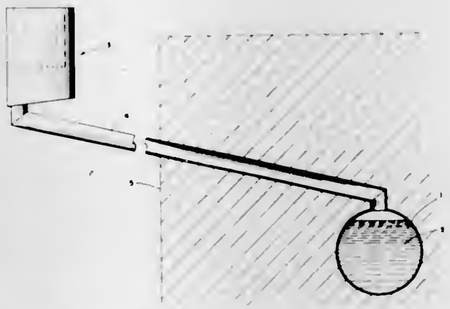
1. Nuclear fuel elements each in the form of a small spheroidal element of fissionable material, each element being enclosed in a casing having thin walls, and said casing comprising a plurality of cooperating parts, the contours of said parts ending in flanged edges, and said flanged edges of the parts of each casing being joined together to encase the fissionable material of each element, said flanged edges of the casing being formed with cuts to define fins around the spheroidal element and extending outwardly therefrom.

3,098,810

VAPOR PRESSURE WATER BOILER REACTOR

William Nordell McElroy, Canoga Park, and Grant O. Haroldsen, Woodland Hills, Calif., assignors to North American Aviation, Inc.

Original application Aug. 20, 1956, Ser. No. 605,081. Divided and this application July 1, 1960, Ser. No. 42,743
2 Claims. (Cl. 204—193.2)



1. A closed cycle water boiler reactor system comprising in combination a core vessel, a housing defining a chamber, duct means connecting said vessel to said housing and having one end extending into the bottom of said chamber for passing gases and liquids between said vessel and said chamber, said extended end of said duct and said housing defining a spillover volume at the bottom of said chamber, a deflector plate disposed above said duct end for deflecting core overflow solution into said spillover volume, means for catalytically recombining oxygen and hydrogen generated in said core and condensing said recombined gas, said last-named means being located above said deflector plate and communicating with said spillover volume, said deflector plate and said housing directing said liquid condensate into said spillover volume, and means connecting said spillover volume with the interior of said duct for controlling the return of liquids from said spillover volume to said core vessel.

3,098,811

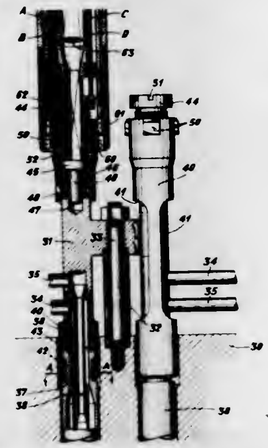
MANIPULATORS FOR REPLACING FUEL UNITS IN A NUCLEAR REACTOR

Eugen Guidi, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed May 26, 1961, Ser. No. 112,877
Claims priority, application Switzerland June 8, 1960
7 Claims. (Cl. 204—193.2)

1. In a nuclear reactor having a moderator part, a plurality of oblong fuel units disposed in said moderator part, each fuel unit including a rodlike part containing fissionable material, means for conducting a coolant in heat exchange relation with said rodlike part, and a securing device operatively connected to each of said fuel units for securing the respective fuel unit to said moderator part, said securing device including a support connected to said moderator part and locking means movably connected to said support for locking the fuel unit to said support and including pipe connections for supplying a coolant to and relieving the coolant from said coolant conducting means: a handling device for locking said locking means to and unlocking said locking means from said support, said handling device being adapted to be selectively moved to one of said securing devices and including a plurality of coaxial, relatively movable tubes individually having end portions adapted to be temporarily engaged with said locking means and having second end portions adapted to

be manipulated for moving said tubes to actuate said locking means, and a radiation shield interposed between said



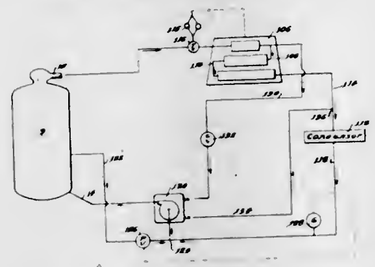
end portions for biologically screening said second end portions from said first end portions.

3,098,812

APPARATUS FOR CONTROL OF A BOILING REACTOR RESPONSIVE TO STEAM DEMAND

Michael Treshow, Del Mar, Calif., assignor to the United States of America, as represented by the United States Atomic Energy Commission

Filed Aug. 14, 1961, Ser. No. 131,446
1 Claim. (Cl. 204—193.2)



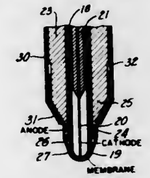
A boiling reactor-turbine system comprising a plurality of vertical tubes arranged side by side in parallel spaced relationship; a plurality of fuel elements containing fissionable material and being positioned in the tubes; a tank containing the tubes; means for injecting feed water in the lower end of each tube, the injecting means including nozzles located at the lower ends of the tubes in spaced relationship thereto for causing moderator water to be drawn thereinto along with feed water, there being an individual nozzle associated with each of the tubes for causing injection of feed water into the particular tube to draw moderator water along the exterior of the particular tube; means associated with a region of the tank above the tubes for separating water from the mixture of water and steam issuing from the top of the tubes and returning the water to the moderator around the tubes; a pump for supplying water to the nozzles; a multi-stage turbine operated by steam from said reactor; a condenser associated with said turbine; a feed water pipe communicating between said condenser and said pump; a pressure gauge connected to said feed water pipe; a reactor outlet pipe communicating between the reactor pressure vessel and a junction with the feed water pipe; a valve inserted into said reactor outlet pipe, responsive to the changes in pressure measured by said gauge; a throttle valve controlling steam flow to said turbine responsive to turbine speed; and a steam line from an interstage position of said turbine to said pump, whereby the pump is caused to operate at a speed proportional to the steam pressure at a between stage point of said turbine.

3,098,813

ELECTRODE

Cedric H. Beebe, Fullerton, and Max D. Liston, La Habra, Calif., and Earl W. McKinley, Springdale, Conn., assignors to Beckman Instruments, Inc., a corporation of California

Filed Feb. 6, 1959, Ser. No. 791,752
6 Claims. (Cl. 204—195)



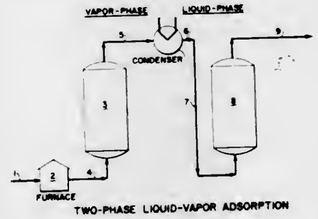
1. In a polarographic electrode assembly adapted to be inserted through a hypodermic needle for determining the proportional quantity of a constituent of a composition, the combination of: an elongated support body of non-conducting material; a sensing electrode element in the form of a conductor enclosed within said body with an end of said conductor projecting through an end of said body to the outer surface thereof; a reference electrode element in the form of an annular ring of conducting material disposed around said body and spaced from said end defining an annular space between the periphery of said body and said ring for retaining an electrolyte; a membrane having a thickness greater than the maximum width of the end of said conductor projecting through said end of said body, selectively permeable to said constituent and formed over said end and said ring enclosing said annular space; means for electrically connecting each of said electrode elements to an external measuring circuit; and means for clamping said membrane in position.

3,098,814

TWO-STAGE ADSORPTION PROCESS

William R. Epperly, Roselle, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

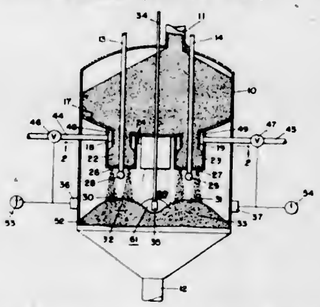
Filed Sept. 8, 1959, Ser. No. 838,642
10 Claims. (Cl. 208—91)



10. The process for preparing the feed for an isomerization reaction which comprises vaporizing said feed, passing the vaporized feed containing benzene, sulfur and olefins to a first adsorption zone containing a zeolitic molecular sieve of uniform pore size from 6–15 Angstroms at a rate of from about 0.5 to 5.0 w./w./hr., maintaining said

adsorption zone at a temperature of from about 200 to about 350° F. and under a pressure of from about 15 to 50 p.s.i.a., desorbing benzene and sulfur in said first adsorption zone, withdrawing from said first adsorption zone said feed substantially free of benzene and sulfur, condensing said feed, passing said feed to a second adsorption column containing a sodium-calcium zeolitic molecular sieve of a uniform pore size of from 6–15 Angstroms at a rate of from about 0.5 to 5.0 w./w./hr., maintaining a liquid phase operation at a temperature of from about 70–150° F. and a pressure of from about 15 to 50 p.s.i.a. in said second adsorption zone, withdrawing said feed from second adsorption zone, and then passing said feed to an isomerization reactor.

3,098,815
PROCESS FOR REGULATING FLOW OF CONTACT MATERIAL
Howard R. Daily, Toledo, Ohio, assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Original application Mar. 21, 1957, Ser. No. 647,534, now Patent No. 3,011,662, dated Dec. 5, 1961. Divided and this application June 30, 1959, Ser. No. 824,056
3 Claims. (Cl. 208—167)



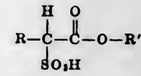
1. Process for regulating flow of granular solid contact material which comprises: passing granular solid contact material through a portion of the height of an elongated contacting zone as a plurality of horizontally spaced apart falling streams, onto the upper surface of a compact, downwardly moving bed of contact material; transmitting penetrative radiation from a central position relative to said falling streams laterally through each of the spaces directly beneath the upper ends of said falling streams; detecting the amount of radiation transmitted through each of the spaces, the amount being in inverse relationship to the height of the upper surface of the bed in the portion of the zone through which the radiation passes; decreasing the rate of flow of contact material in a given falling stream in response to a decrease in the amount of radiation transmitted through the space beneath the upper end of that falling stream; and increasing the rate of flow of contact material in a given falling stream in response to an increase in the amount of radiation transmitted through the space beneath the upper end of that falling stream.

3,098,816
REMOVAL OF METALS FROM PETROLEUM FRACTIONS
Ronald Alfred Dean and Ronald Basil Girdler, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation
No Drawing. Filed Oct. 6, 1961, Ser. No. 143,279
Claims priority, application Great Britain Oct. 10, 1960
8 Claims. (Cl. 208—253)

1. A process for reducing the metal content of petroleum fractions boiling above 250° C., consisting of directly contacting a petroleum feedstock having at least a proportion of metal-containing material boiling above 250° C. with an active Raney metal selected from the class consisting of active Raney nickel, active Raney iron and active Raney cobalt, and recovering a product of reduced metal content.

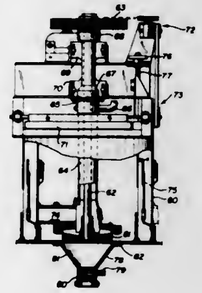
3,098,817
PHOSPHATE ORE FLOTATION PROCESS
Robert E. Baarson, La Grange, Harold B. Treweek, Park Forest, Charles W. Jonaitis, Chicago, and Charles L. Ray, Wheaton, Ill., assignors, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Oct. 28, 1960, Ser. No. 65,604
16 Claims. (Cl. 209—166)

1. An ore flotation process, comprising subjecting a phosphate ore containing silica to froth flotation in the presence of a collector represented by the type formula:



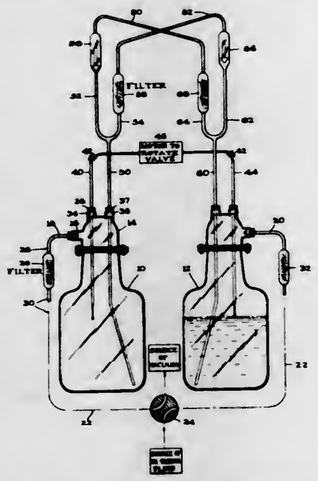
wherein R is an aliphatic group containing from 10 to 20 carbon atoms, and R′ contains from 1 to 10 carbon atoms and is selected from the class consisting of alkyl, hydroxyalkyl and sulfoalkyl groups, recovering the phosphate ore concentrate from the overflow, and removing the separated silica in the underflow.

3,098,818
CONCENTRATION APPARATUS AND METHOD
Arthur C. Daman, Denver, Colo., and Thomas S. Bailey, Jr., Johannesburg, Transvaal, Republic of South Africa, assignors to Denver Equipment Company, Denver, Colo., a corporation of Colorado
Filed Apr. 5, 1961, Ser. No. 100,879
9 Claims. (Cl. 209—169)



1. In a froth flotation process in which one pulp constituent is floated and other pulp constituents settle and are removed as tailings, the improvement which comprises moving settled solids from the flotation stage into a vortex zone beneath and in direct communication with said flotation stage, continuously discharging a segregated pulp fraction from the bottom of said vortex zone in a volume less than its intake capacity so as to confine a body of pulp in said zone, and subjecting the solids so confined to a vortex action in said vortex zone thereby directing a continuous return flow of lighter or finer solids into said flotation stage and another continuous flow of heavier or coarser solids from the vortex zone with the bottom discharge.

3,098,819
APPARATUS FOR THE PREPARATION OF CLEAR SOLUTIONS
Hans Sager, Riehen, Switzerland, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
Filed Sept. 13, 1960, Ser. No. 55,761
Claims priority, application Switzerland Sept. 25, 1959
7 Claims. (Cl. 210—97)



1. A fluid-tight apparatus for the repeated filtration of liquids to remove contaminants therefrom which comprises:

two open mouth flasks, said flasks comprising a first flask containing liquid to be filtered and a second flask adapted to receive said liquid after it has been filtered;

a cover seated on the mouth of each flask to form an air tight joint;

means including two conduits connecting the lower portions of said two flasks to one another;

at least one filter and one check valve in each of said two conduits disposed so that the passage of liquid from the first flask to the second flask is permitted in the first of said conduits while it is prevented in the reverse direction and the passage of liquid from the second flask to the first flask is permitted in the second of said conduits while it is prevented in the reverse direction;

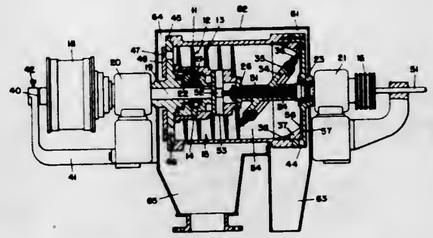
two sources of gas under pressure, the first of said sources of gas being at a pressure greater than the second of said sources of gas;

a third conduit means connecting the upper portions of said two flasks with said two sources of gas under pressure;

a valve in said third conduit, said valve having two separate and distinct passages therein; said valve being movable to a first position wherein the first of said passages in said valve connects the first of said flasks to the source of higher gas pressure and the second of said passages in said valve connects the second of said flasks to the source of lower pressure gas whereby the liquid contained in said first flask is transferred through the first conduit and the filter therein and into the second flask, and said valve being movable to a second position wherein the first of said passages in said valve connects the second of said flasks with the source of higher pressure gas and the second of said passages in said valve connects the first of said flasks with the source of lower pressure gas whereby the liquid is caused to be returned from the second flask to the first flask in which it was originally present by passage through said second conduit and the filter therein

and means to actuate said valve after each transfer is completed between said first and said second positions whereby said liquid is repeatedly filtered on passage alternately through said first and second conduits and the filters therein.

3,098,820
CENTRIFUGE
Fred P. Gooch, Pine Ridge, Media, Pa., assignor to The Sharples Corporation, a corporation of Delaware
Filed Nov. 23, 1960, Ser. No. 71,239
4 Claims. (Cl. 233—7)



1. A centrifugal separator comprising:

(*a*) a hollow rotor having outlets for the discharge from said rotor of liquid and solids at opposite ends of the rotor respectively, the outlet for solids being inward from the outlet for liquid,

(*b*) a plow mount positioned in the rotor for rotation about the axis of the rotor in a posture oblique to the axis of the rotor and disposed adjacent the solids outlet,

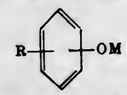
(*c*) screw flight means having a leading and a trailing terminal and mounted for rotation in the rotor about the axis of the rotor and disposed on the opposite side of the plow mount from the solids outlet,

(*d*) feed means for delivering feed mixture into the rotor at a point spaced from the plow mount and intermediate the leading and trailing terminals of the screw flight means,

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3,098,821
CUTTING OIL PREPARATION
Jacob Faust, Belleville, N.J., and Ira Kukin, Bronx, N.Y., assignors to Sonneborn Chemical and Refining Corporation, a corporation of Delaware
No Drawing. Filed Dec. 30, 1958, Ser. No. 783,675
13 Claims. (Cl. 252—33.3)

1. A cutting oil of the stable oil-in-water emulsion type comprising between 80 to 98 percent of water and between 2 to 20 percent of a composition capable of forming an aqueous emulsion of the oil-in-water type composed of between 1 to 9 parts by volume of a normally liquid petroleum hydrocarbon and 1 part by volume of an aqueous phase emulsifying agent for said hydrocarbon and 1 to 7 percent of a salt of a substituted phenol having the general formula



in which R is a member selected from the group consisting of alkyl radicals having between 5 and 24 carbon atoms, cycloalkyl radicals and aralkyl radicals, and M is a member selected from the group consisting of sodium, potassium, lithium and tetraethanol ammonium hydrox-

ide calculated on said emulsifying base for imparting corrosion-inhibiting properties to said cutting oil.

3. Cutting oil according to claim 1 in which said petroleum hydrocarbon has a viscosity of between about 75 and 200 sec. Saybolt at 100 degrees F. and said emulsifying base consists of about 70 percent by weight of a petroleum mahogany sulfonate having a 30–50 percent occluded oil content, about 20 percent of soda-rosin soap and about 5 percent of diethylene glycol.

3,098,822
LUBRICANTS PREPARED FROM ISO-OLEIC ACID
Arnold J. Morway, Clark, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed July 1, 1960, Ser. No. 40,137
6 Claims. (Cl. 252—39)

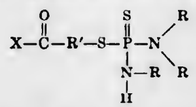
1. A lubricant comprising a major amount of lubricating oil and within the range of about 2 to 50 wt. percent of a soap-salt thickener consisting essentially of alkaline earth metal salts of C_2 to C_4 fatty acid and elaidic acid in a molar ratio of about 5 to 20 molar proportions of said alkaline earth metal salt of C_2 to C_4 fatty acid per molar proportion of said alkaline earth metal salt of elaidic acid.

3,098,823
LUBRICANTS CONTAINING THICKENERS PREPARED FROM TALL OIL
Arnold J. Morway, Clark, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,861
6 Claims. (Cl. 252—39)

1. A lubricant comprising a major amount of lubricating oil and about 2 to 50 wt. percent of a soap-salt thickener, said thickener consisting essentially of alkaline earth metal salt of about 5 to 60.0 molar proportions of C_2 to C_4 fatty acid per one molar proportion of alkaline earth metal soap of tall oil.

3,098,824
LUBRICATING COMPOSITION
Allen F. Millikan, Crystal Lake, and Gifford W. Crosby, River Forest, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Original application Nov. 15, 1957, Ser. No. 696,604, now Patent No. 2,996,532, dated Aug. 15, 1961. Divided and this application Aug. 24, 1960, Ser. No. 51,494
22 Claims. (Cl. 252—46.7)

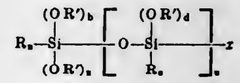
1. A lubricating composition comprising a major amount of a mineral lubricating oil and about 0.1 to 5.0 weight percent of a carbonyl-substituted alkyl N,N'-trialkyl phosphorodiamidodithioate of the formula



wherein R is an alkyl radical having 3 to 25 carbon atoms, R' is of the group consisting of methylene and ethylene, and X is of the group consisting of hydrogen, acetyl, amino, diethylamino, hexylamino, t-octylamino, dodecylamino, pentacosylamino, and 2-ethyl hexyloxy radicals.

3,098,825
NON-CORROSIVE HYDRAULIC FLUIDS
Richard W. Shiffler, Pittsburgh, Pa., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 28, 1958, Ser. No. 751,145
9 Claims. (Cl. 252—78)

1. A non-corrosive hydraulic brake fluid composition consisting essentially of a hydraulic fluid selected from the group consisting of polyhydric alcohols, polyhydric alcohol ethers and mixtures thereof; an alkaline inhibitor sufficient to provide a pH value of from about 7.0 to 11.5, and as a corrosion inhibitor therefor a C—Si bonded silicon compound of the formula



wherein *n* represents a value of 0 to 5; R is a radical, having 1–18 carbon atoms, selected from the group consisting of alkyl, aryl, and carbalkoxyalkyl; R' is a member selected from the group consisting of hydrogen, alkyl radicals having 1–18 carbon atoms, aryl radicals having 6–18 carbon atoms and cations selected from the group consisting of sodium, potassium and ammonium; *x* is a member selected from the group consisting of R and OR'; *a* represents a value of 1 to 3; *b* and *c* represent a value of 0 to 2; *d* represents a value of 0 to 1; and *e* represents a value of 1 to 2, said silicon compound being present in an amount sufficient to effectively inhibit corrosion.

3,098,826
RECLAMATION OF HYDRAULIC FLUID
Warren C. McMordie, Jr., and George J. Petrovich, Jr., Fort Worth, Tex., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,245
12 Claims. (Cl. 252—78)

5. The method for recovering the hexa (2-ethyl butoxy) disiloxane base of a first hydraulic fluid free of decompositon products and contaminants and for the reblending of said base to produce a useful second hydraulic fluid therefrom substantially similar in composition to said first hydraulic fluid, said first hydraulic fluid including as constituents hexa (2-ethyl butoxy) disiloxane, methyl ethyl silicone, p,p' dioctyldiphenylamine, and quinizarin, the method comprising first passing said first hydraulic fluid through a filter to remove any metal particles, sludge and water therefrom, next subjecting said hydraulic fluid to a first extraction comprising mixing same with alcoholic potassium hydroxide prepared from a .115 N solution of purified methanol and potasium hydroxide to separate the hexa (2-ethyl butoxy) disiloxane and methyl ethyl silicone from the other of the said fluid constituents and from said decomposition products and contaminants, next subjecting the separated hexa (2-ethyl butoxy) disiloxane and methyl ethyl silicone to a second extraction by mixing said separated ingredients with acetone, withdrawing the resultant acetone-disiloxane mixture and removing the acetone therefrom by distillation, introducing nitrogen into the disiloxane remainder and drawing a vacum thereon, heating the result to a temperature in the approximate range of from 145° C. to 155° C. under a vacuum of approximately 20 mm. mercury to remove any 2-ethyl-1-butanol, analyzing the resultant composition to determine the constituents therein and their respective quantities, and adding thereto in predetermined carefully controlled quantities, methyl ethyl silicone, p,p' dioctyldiphenylamine, and quinizarin to produce said second hydraulic fluid.

3,098,827
DEMULSIFICATION OF PETROLEUM OIL EMULSIONS
Willard H. Kirkpatrick, Sugar Land, and Virgil L. Seale, Alice Walker and Robert E. Law, Houston, Tex., assignors to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,809
16 Claims. (Cl. 252—341)

1. In processes for breaking water-in-petroleum oil emulsions, adding to said emulsions, at a weight ratio of one part per 2000–75,000 parts of said emulsion, dicarboxy acid esters, wherein essentially all of the carboxy groups of the dicarboxy acids are esterified with two polyhydroxy lower alkylene oxide adducts of organic compounds, said adducts each having a molecular weight of at least 1000, and at least 20% by weight of said adducts being oxyalkylated, monocarboxylic acid, partial esters of pentaerythritols, said monocarboxylic acid selected from the group consisting of monocarboxylic resin acids, monocarboxylic fatty acids of 12–36 carbons, and mixtures thereof, at least one of the hydroxyl groups of said pentaerythritols being esterified with said monocarboxylic acids and at least two of said hydroxyl groups being polyoxyalkylated with alkylene oxides selected from the group consisting of propylene oxide and mixtures of ethylene oxide and propylene oxide wherein the propylene oxide constitutes at least 50% by weight of the oxide mixture, said oxyalkylated, partial esters having a molecular weight in excess of 1000, the remainder of said adducts being members selected from the group consisting of terminally oxyethylated polyoxypropylene glycols wherein the polyoxypropylene glycol nuclei have a molecular weight of at least 1200 and not exceeding 3500 and have 2–20 mols of adducted ethylene oxide per mol of polyoxypropylene glycol; polyoxyethylene, polyoxypropylene glycols having a molecular weight of 1200–3500 in which said glycol molecule is composed of a heterogeneous mixture of oxyethylene and oxypropylene groups in which the weight ratio of oxyethylene to oxypropylene does not exceed 4:1; oxyethylated castor oil having a molecular weight in the range of 1400 to 3500; oxyalkylated castor oil which is oxyalkylated with both ethylene oxide and propylene oxide in a weight ratio of 1:1 to 10:1, respectively, said oxyalkylated castor oil having a molecular weight in the range of 1500 to 3600; oxyethylated monoalkyl phenol-formaldehyde condensation products in which the alkyl group of the phenol has up to 15 carbon atoms, said alkyl phenol-formaldehyde condensation product having 3–15 phenolic nuclei per molecule, the weight ratio of ethylene oxide to alkyl phenol-formaldehyde condensation product being in the range of 1:2.5 to 2.5:1, respectively; oxyethylated, oxypropylated monoalkyl phenol-formaldehyde condensation products in which the alkyl group of the phenol has up to 15 carbon atoms, said alkyl phenol-formaldehyde condensation product having 3–15 phenolic nuclei per molecule, the weight ratio of the oxyethylene and oxypropylene groups to the monoalkyl phenol-formaldehyde condensation product being in the range of 2:3 to 2.5:1; oxyalkylated condensation products of a monoalkyl phenol, formaldehyde, and a lower alkylene polyamine containing about 4–15 phenolic nuclei per resin molecule, the oxyalkylene groups being a member selected from the group consisting of oxyethylene, oxypropylene, and both oxyethylene and oxypropylene, the weight ratio of the oxyalkylene groups to the monoalkyl phenol-formaldehyde-alkylene polyamine condensation product being in the range of 2:3 to 10:1, respectively; polyoxypropylene adducts of lower alkylene polyamines, which adducts are terminally oxyethylated and have a molecular weight of at least 1,000; polyoxypropylene adducts of lower polyhydric alcohols having 2–3 hydroxyl groups, which adducts are terminally oxyethylated and have a molecular weight of at least 1,000; adducts of both ethylene oxide and propylene oxide on lower alkylene polyamines, said adducts having a molecular weight of at least 1,000; and adducts of both ethylene oxide and propylene oxide on lower polyhydric alcohols having 2–3 hydroxyl groups, said adducts having a molecular weight of at least 1,000, and thereafter separating the water of the broken emulsion from the oil.

3,098,828
CATALYST PREPARED BY GRINDING ZIRCONIUM AND ALUMINUM CHLORIDE
Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Nov. 4, 1957, Ser. No. 694,104
4 Claims. (Cl. 252—442)

1. The method of preparing a catalyst suitable for the polymerization of olefins, which comprises the step of grinding at room temperature and at ambient temperatures under inert conditions a mixture consisting essentially of Zr and $AlCl_3$ in the ratio of 1–100 parts by weight of Zr to 1–100 parts by weight of $AlCl_3$.

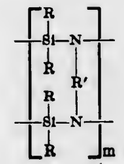
3,098,829
SUPPORTED NICKEL CATALYSTS
Peter Thomas White and Robert William Aitken, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation
No Drawing. Filed Apr. 19, 1961, Ser. No. 103,982
Claims priority, application Great Britain May 4, 1960
4 Claims. (Cl. 252—466)

1. A method of preparing catalysts of metallic nickel supported on a carrier which includes the steps of forming a catalyst composition of nickel formate on a carrier, said composition containing from 1–50% of nickel expressed as elemental nickel by weight of total catalyst, and thereafter, reducing the nickel formate to elemental nickel, the improvement comprising forming said catalyst composition by extrusion and reducing the said nickel formate to elemental nickel at a temperature from above about 400° C. to about 600° C. whereby the catalyst activity of said extruded catalyst is increased.

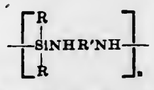
3,098,830
POLYMERIC SILAZANES
Eugene G. Rochow, Winchester, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Apr. 14, 1961, Ser. No. 102,926
17 Claims. (Cl. 260—2)

1. A polymeric material comprising two silazane chains, each of which consists of a plurality of alternate silicon and nitrogen atoms, with each silicon atom in each of said chains containing two silicon-bonded monovalent hydrocarbon radicals, the nitrogen atoms of the first of said chains being attached to the nitrogen atoms of the second of said chains through a divalent hydrocarbon radical of at least two carbon atoms and free of aliphatic unsaturation.

8. The process of forming a cross-linked polymeric silazane having the formula:



which comprises heating a polymeric diorganosilylamine having the formula:



with a metal salt selected from the class consisting of $CuCl_2$, NCl_3, $ThCl_4$, and $CoCl_2$, where R is a monovalent hydrocarbon radical, R' is a divalent hydrocarbon radical having at least two carbon atoms and being free of aliphatic unsaturation and *m* and *n* have values of from about 5 to 150, inclusive.

3,098,831

EXPANDED POLYETHYLENE AND METHOD OF MAKING THE SAME

Clide I. Carr, Wayne Township, Passaic County, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed May 1, 1959, Ser. No. 810,252
5 Claims. (Cl. 260—2.5)

1. The process which comprises subjecting a solid polyethylene material containing (1) an effective amount of an organic peroxide having a half-life of more than 5 minutes at 275° F. and less than one hour at 375° F., and (2) a solid rubber blowing agent which decomposes with liberation of gas at a temperature of about 300° to 700° F., to a temperature at which the polyethylene becomes structurally transformed so that at least 10% of the polyethylene is insoluble when maintained in toluene at 100° C. for 24 hours and below that at which significant decomposition of the blowing agent occurs, and then subjecting the transformed product to a higher temperature at which the blowing agent decomposes and thereby causing the polyethylene to expand.

3,098,832

PROCESS FOR EXPANDING POLYETHYLENE

Robert W. Pooley, Mishawaka, and Gerald L. Barnes, South Bend, Ind., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed May 1, 1959, Ser. No. 810,253
7 Claims. (Cl. 260—2.5)

1. A process which comprises subjecting polyethylene having not more than about 90% crystalline material and containing

(1) a solid rubber blowing agent which decomposes with liberation of gas at a temperature of about 300° to 700° F. and

(2) an effective amount of an organic peroxide having a half-life of more than 5 minutes at 275° F. and less than one hour at 375° F.,

while occupying the entire space in a confined zone where expansion is not possible, to a temperature at which the polyethylene becomes structurally transformed so that at least 10% of the polyethylene is insoluble when maintained in toluene at 100° C. for 24 hours and at which the blowing agent decomposes with liberation of gaseous material, cooling the confined polyethylene containing the gaseous material trapped therein, removing the cooled polyethylene from the confined zone and heating the cooled polyethylene to a temperature at which the entrapped gaseous material causes expansion of the polyethylene.

3,098,833

ORGANOPOLYSILOXANE EMULSION CONTAINING A CURING CATALYST COMPRISING ZINC STEARATE, A METAL SALT AND AN ALKANOLAMINE-FATTY ACID CONDENSATE

Michael M. Solomon, Albany, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,514
2 Claims. (Cl. 260—18)

1. The process for preparing a catalyzed organopolysiloxane emulsion which comprises adding to an aqueous emulsion consisting essentially of water and a curable organopolysiloxane fluid a catalyst emulsion consisting essentially of zinc stearate, a metal salt, the cation of which is selected from the group consisting of aluminum, zinc sodium, iron, cobalt, barium, and potassium, and the anion of which is selected from the group consisting of nitrate, sulfate, chloride, and acetate, and an alkanolamine-fatty acid condensation product, said curable organopolysiloxane fluid having the formula

$$(R)_a(H)_b(OH)_cSiO_{\frac{4-a-b-c}{2}}$$

where R is a member selected from the class consisting of monovalent hydrocarbon radicals, halogenated monovalent hydrocarbon radicals and cyanoalkyl radicals, a has a value of from 1.0 to 2.0, inclusive, b has a value of from 0 to 1.0, inclusive, c has a value of from 0 to 0.4, inclusive, the sum of b plus c is equal to from 0.01 to 1.4, inclusive, and the sum of a plus b plus c is equal to from 2 to 3, inclusive.

3,098,834

PREPARATION OF WATER-SOLUBLE OIL-RESIN VEHICLES

Robert D. Jerabek, Allegheny County, Pa., assignor to Archer-Daniels-Midland Company, a corporation of Delaware

No Drawing. Filed June 2, 1960, Ser. No. 33,368
7 Claims. (Cl. 260—23.7)

5. A cyclopentadiene modified drying-oil resin varnish composition which is dilutable with water to form a substantially clear solution and which will dry and harden by oxidation and polymerization to form a water-insoluble film said composition consisting essentially of the substantially neutral salt of (1) an acidic reaction product having an acid number of within the range from about 30 to about 175 of an alpha-beta-unsaturated ethylenic carboxylic acid and a cyclopentadiene modified drying-oil varnish resin containing in the molecule residual unsaturated groups derived from the drying oil and reactive with the ethylenic group of alpha-beta-unsaturated ethylenic carboxylic acids, said reaction product being the product of reaction of said unsaturated groups and ethylenic groups of said alpha-beta-unsaturated acid, and (2) a volatile ammonia base selected from the group consisting of ammonia and strongly basic organic amines, in solution in a sufficient amount of a coupling solvent to dissolve and convert the neutral salt to a water-dilutable varnish, said coupling solvent being miscible with water and selected from the group consisting of organic aliphatic alcohols, thioalcohols, ethers, ketones and esters, polyoxyethylated phenols and rosin acids, organic phosphates and amides having from one to twenty carbon atoms.

3,098,835

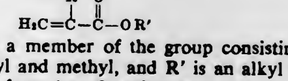
NEW THERMOSETTING COMPOSITIONS OF ACRYLIC POLYESTER AND AMINE-ALDEHYDE RESINS

Norman G. Gaylord, New Providence, N.J., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,956
22 Claims. (Cl. 260—33.6)

1. A thermosetting composition comprising

(*a*) An organic solvent soluble acrylic copolymer made by free-radical initiated copolymerization of a mixture of monomers comprising (1) from about 5% to about 30% by weight of a non-allylic alcohol containing the norbornene nucleus, and (2) from about 60% to about 90% by weight of olefinically unsaturated ester material having the formula:



in which R is a member of the group consisting of hydrogen, ethyl and methyl, and R′ is an alkyl radical containing from 1 to 8 carbon atoms,

(*b*) A polyester resin comprising the reaction product of (1) an aromatic dicarboxylic acid selected from the group consisting of isophthalic acid and phthalic anhydride, (2) an acid member selected from the group consisting of maleic anhydride, fumaric acid and adipic acid, (3) a mono-carboxylic acid selected from the group consisting of pelargonic acid, lauric acid and benzoic acid, (4) neopentyl glycol and (5) a polyhydric alcohol having at least 3 hydroxyl groups selected from the group consisting of trimethylol ethane, trimethylol propane, 1,2,5 hexane triol, and pentaerythritol, and (*c*) an amine-aldehyde resin selected from the group consisting of urea-aldehyde resins and triazine-aldehyde resins.

12. A surface coating composition comprising a volatile aromatic hydrocarbon solvent solution of the composition defined in claim 1.

3,098,836

ORGANOPOLYSILOXANE RUBBER STABILIZED WITH NICKEL, COPPER OR TUNGSTEN SALTS OR OXIDES

William J. Bobear, Latham, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Apr. 11, 1960, Ser. No. 21,141
4 Claims. (Cl. 260—37)

4. A process for producing an organopolysiloxane rubber composition having improved resistance to heat-aging comprising mixing together by weight, (1) 0.01 to 3 parts of a metallic element in the form of a metal salt selected from the class consisting of nickel acetate, nickel chloride, and nickel octoate, (2) 100 parts of an organopolysiloxane, (3) 10 to 200 parts of a filler, (4) and a peroxide curing catalyst, and curing the resulting composition at temperatures in the range of 80° C. to 200° C., said organopolysiloxane having a viscosity of at least 100,000 centipoises when measured at 25° C., and consisting essentially of chemically combined diorganosiloxane units, monoorganosiloxane units, and triorganosiloxane units, the organo radicals of said organopolysiloxane being members selected from the class consisting of monovalent hydrocarbon radicals, halogenated monovalent hydrocarbon radicals, and cyanoalkyl radicals, there being an average of about 1.98 to 2.01 organo radicals per silicon atom.

3,098,837

LATEX MASTERBATCHING OF SILICA WITH VINYL PYRIDINE RUBBERS

Henry E. Haxo, Jr., Wayne, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,218
1 Claim. (Cl. 260—41.5)

The process of preparing a silica-filled vinyl pyridine rubber stock comprising: mixing a latex of a copolymer of a monomer mixture consisting of about 75% by weight of 1,3-butadiene and 25% by weight of 2-methyl-5-vinyl pyridine said latex being flowable and containing from about 15 to about 60% by weight of said copolymer, with a water dispersion of a particulate rubber-reinforcing silica having an average particle size of less than about 1 micron, said dispersion being flowable, containing from about 5% to about 20% by weight of suspended solids and having a pH of from about 10 to about 11, in relative proportions such that there are present from 10 to 100 parts by weight of silica per 100 parts of said copolymer; adding the latex-dispersion mixture to an aqueous coagulating solution having a pH of less than about 2.5 and containing up to 5% by weight of a compound selected from the class consisting of hydrochloric acid and formic acid, said coagulating solution being at a temperature of from about 70° C. to about 100° C. and being employed in an amount from about 5 to 20 cc. of solution per gram of solid silica contained in the system, whereby the solid materials in the system are caused to coagulate; filtering the mixture and thereafter drying the solid material at a temperature of from about 40° C. to about 90° C.; whereby a crumb-like material is obtained which can be further compounded with sulfur and other additives and vulcanized in accordance with conventional rubber compounding and vulcanizing procedures.

3,098,838

POLYVINYL ETHYL ETHER-VINYL ACETATE GRAFT COPOLYMERS

Albert I. Goldberg, Berkeley Heights, and Victor Jasinski, North Plainfield, N.J., assignors to National Starch and Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,216
3 Claims. (Cl. 260—45.5)

1. A process for preparing a polyvinyl ethyl ether-vinyl acetate graft copolymer which comprises solution polymerizing vinyl acetate with the aid of a polymerization catalyst in the presence of the homopolymer of vinyl ethyl ether, the vinyl acetate and the homopolymer of vinyl ethyl ether being in solution in an organic solvent which also acts as a solvent for the resulting graft copolymer, and the vinyl acetate and homopolymer of vinyl ethyl ether being in the following proportions by weight:

vinyl acetate 95% to 75% and

homopolymer of vinyl ethyl ether 5% to 25%.

3,098,839

BLEND OF POLYSTYRENE, STYRENE-POLYBUTADIENE GRAFT COPOLYMER AND CONJUGATED DIENE-DIVINYLBENZENE COPOLYMER

Wendell R. Conard, Kent, and Robert J. Reid, Fulton, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Apr. 21, 1961, Ser. No. 104,603
7 Claims. (Cl. 260—45.5)

1. A blend of (1) 80 to 95 percent polystyrene, (2) 2 to 8 percent of a graft copolymer of 30 to 50 percent of styrene on 70 to 50 percent of polybutadiene, and (3) 3 to 12 percent of a copolymer which is prepared in emulsion from a mixture of monomers containing a small amount of divinyl benzene, which copolymer is of the class consisting of (*a*) a copolymer consisting of hydrocarbon conjugated dienes containing 4 to 5 carbon atoms and 0.4 to 0.7 percent of divinyl benzene based on the polymerized diene and (*b*) a copolymer consisting of butadiene, styrene and divinyl benzene containing up to 15 percent of styrent with 0.2 to 0.6 percent of divinyl benzene based on the total weight of the styrene and butadiene.

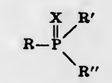
3,098,840

COATING COMPOSITION COMPRISING A SOLVENT SOLUTION OF RUBBER AND AN ISOCYANATO ARYL PHOSPHOROUS COMPOUND

Hans Holtschmidt, Cologne-Stammheim, and Franz von Spulak, Erwin Müller, and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Feb. 26, 1959, Ser. No. 795,620
Claims priority, application Germany Mar. 1, 1958
8 Claims. (Cl. 260—45.9)

1. A coating composition comprising an organic solvent solution of conjugated diene rubber and an isocyanato aryl phosphorous compound having the formula



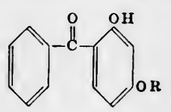
wherein X is selected from the group consisting of oxygen and sulfur, R is selected from the group consisting of O-aryl, O-aralkyl, O-alkaryl, S-aryl, S-aralkyl, S-alkaryl, N-(aryl)$_2$, N-(alkyl)(aryl), N-(alkaryl)$_2$ and N(aralkyl)$_2$; R′ and R″ are selected from the group consisting of R as set out above, O-alkyl and S-alkyl; at least two aromatically bonded —NCO groups being present in the molecule.

3,098,841
POLYNUCLEAR POLYAMINES
Rupert C. Morris, Berkeley, and Karl J. Sax, Orinda, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 11, 1960, Ser. No. 41,741
9 Claims. (Cl. 260—45.9)

1. The stabilized composition consisting essentially of a polymer selected from the group consisting of hydrocarbon rubbers and polymerized hydrocarbon alpha-olefins, containing an amount, sufficient to stabilize the polymer against oxidative deterioration, of a poly(3,5-dialkyl-4-hydroxybenzyl)hydrocarbon diamine, selected from the group consisting of alkane diamine and mononuclear aromatic diamine, wherein said alkane and mononuclear aromatic moieties have up to 12 carbon atoms each, and each alkyl group on said benzyl nuclei has up to 8 carbon atoms.

3,098,842
STABILIZED POLYOLEFINS
John Brian Armitage and Rolf Dessauer, Wilmington, and Archibald Miller Hyson, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 17, 1961, Ser. No. 132,019
7 Claims. (Cl. 260—45.95)

1. A light resistant composition containing a normally solid polymer of an α-monoolefin containing less than 5 carbon atoms; and 0.0005% to about 1% by weight of the polymer of a compound having the formula:



in which R is a hydrocarbon of the group consisting of alkyl and aralkyl groups containing 8 to 20 carbon atoms; and 0.001 to 0.5% by weight of the polymer of an antioxidant selected from the class consisting of 4,4'thiobis(6-t-butyl-m-cresol); 2,2'-methylene bis(4-methyl-6-t-butyl-m-cresol); 4,4'-butylidene(6-t-butyl-m-cresol); 4,4'-methylene bis (2,6-di-t-butyl phenol); and 4,4'-bis(2,6-di-t-butyl phenol).

3,098,843
NEW CATALYST SYSTEM FOR LINEAR AND CYCLIC POLYMERIZATION OF MONO SUBSTITUTED ACETYLENES
Lionel B. Luttinger, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Original application Oct. 6, 1959, Ser. No. 844,632 Divided and this application May 27, 1960, Ser. No. 32,103
6 Claims. (Cl. 260—91.3)

1. A method of polymerizing a polymerizable compound having the general formula:

$$RC{\equiv}CH$$

wherein R represents a member of the class consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl, hydroxy substituted alkyl, halo substituted alkyl, hydroxy substituted aryl, amino substituted alkyl, alkoxy, vinyl, allyl, alkanoylcarboxy and alkanolyoxy by the reaction of said compound in the presence of a catalyst composition comprising a mixture of (1) a transition metal complex represented by the general formula:

$$X_n[M(R'_3Y)_p]_m$$

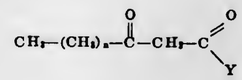
wherein X is an anion selected from the group consisting of Cl, Br, CNS, NO_3, SO_4, PO_4, and CN; M is a metal selected from the group consisting of nickel, cobalt, palladium, platinum, rhodium, iridium, ruthenium and osmium; R' represents at least one member selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl and cyanoalkyl; Y is an element selected from the group consisting of phosphorous, arsenic, nitrogen, antimony and bismuth wherein m and n are integers from 1 to 4, inclusive, and p is an integer from 1 to 6, inclusive, when M is any of the metals set forth in the above definition for M except osmium; and m and n are integers from 1 to 6, inclusive, and p is an integer from 1 to 8, inclusive, when M is osmium; and (2) a metal hydride having at least one metal to hydridic hydrogen bond wherein said hydric hydrogen atom is attached to some other atom by a bond which is polarized so that the hydrogen atom is negatively charged.

3,098,844
POLYMERIZATION OF HALOGEN-SUBSTITUTED OLEFINS WITH NOVEL CATALYSTS
Arthur T. Polishuk, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Nov. 29, 1957, Ser. No. 699,461
23 Claims. (Cl. 260—92.1)

1. A process for preparing solid homopolymers of a halogen-substituted olefin, which comprises contacting, at a temperature of from 0 to 250° C., and a pressure of from atmospheric to 10,000 p.s.i.g., a halogen-substituted monoenic alpha-olefin having from 3 to 8 carbon atoms with a dispersion in an inert reaction medium of solid particles of a halide of a metal selected from the group consisting of titanium, zirconium, hafnium, vanadium, niobium, chromium, molybdenum, and tungsten wherein said metal is at a valance state below its highest valance state, and an activator therefor selected from the group consisting of aluminum alkyls, magnesium alkyls, zinc alkyls, alkali metal hydrides, alkali metal aluminum hydrides, alkali metal borohydrides, alkyl aluminum halides, alkyl magnesium halides and phenyl magnesium halides, and recovering solid homopolymers of halogen-substituted alpha-olefins therefrom.

3,098,845
REMOVAL OF METAL CONTAMINANTS FROM POLYMERS WITH CHELATING AGENTS
Neville Leverne Cull and Clyde Lee Aldridge, Baker, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 23, 1955, Ser. No. 548,762
18 Claims. (Cl. 260—94.9)

1. Method for removing heavy metal constituents in catalyst residues from solid polymerized alpha olefins selected from the group consisting of ethylene and propylene prepared with a heavy metal catalyst formed by admixing an aluminum alkyl with compounds of the group consisting of metals of the group IV–B, V–B, and VI–B of the periodic system which comprises washing the polymer in the solid, plastic phase at a temperature between 80 and 250° F. and in the absence of water with a liquid organic solvent containing 0.1 to 50 weight percent, based on polymer, of a dicarbonyl compound chelating agent having the formula



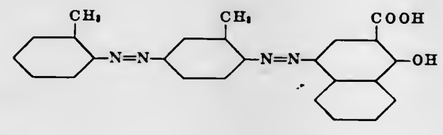
where a is an integer having a value of 0 to 3 and Y represents a member selected from the group consisting of a hydrogen atom and the radicals OR and R', R and R' representing alkyl radicals containing 1 to 4 carbon atoms, the volume of such solvent being equal to 3 to 20 times the volume of polymer being washed.

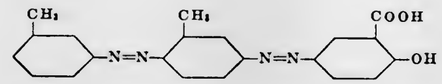
3,098,846
VAPOR PHASE POLYMERIZATION WITH SOLID SOLVENT COATED CATALYST
John W. Eldridge, Charlottesville, and Charles R. Outterson, Richmond, Va., assignors to Albemarle Paper Manufacturing Company, Richmond, Va., a corporation of Virginia
No Drawing. Filed Nov. 20, 1959, Ser. No. 854,251
10 Claims. (Cl. 260—94.9)

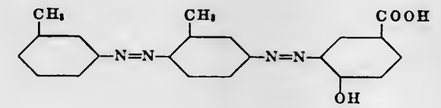
1. In a polymerization process wherein solid polymer is formed when a polymerizable gaseous monomer is brought into physical contact with the surface of particles of a solid polymerization catalyst, supported in a solely vapor-containing polymerization zone; the improvement which comprises coating the surface of said particle with a thin film of solvent for said polymer prior to polymerization maintaining the catalytic activity of the surfaces of said catalyst particles by flushing the freshly formed polymer from the surfaces of said particles with said solvent for said polymer and reintroducing the flushed catalyst particles, bearing a thin film of said solvent, into the solely vapor containing polymerization zone and repeating the sequence consisting of polymerization of the gaseous monomer and the removal of polymer.

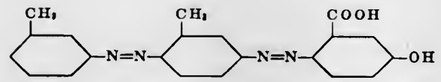
3,098,847
DISAZO DYES
Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini, A.C.N.A., S.p.A., Milan, Italy, a corporation of Italy
No Drawing. Filed Apr. 14, 1960, Ser. No. 22,123
Claims priority, application Italy Dec. 15, 1959
6 Claims. (Cl. 260—187)

1. A disazo dye insoluble in water, selected from the group consisting of dyes of the formulae:

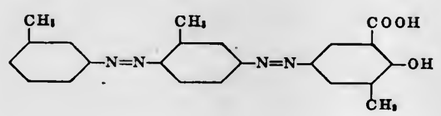






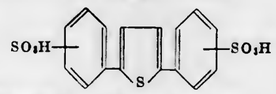


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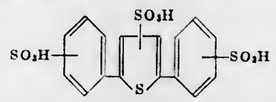


3,098,848
DIARYLTHIOPHENE SULFONIC ACIDS
Harry Braus, Springdale, and Otto A. Homberg, Woodlawn, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Aug. 15, 1960, Ser. No. 49,411
5 Claims. (Cl. 260—329)

1. The compound having the formula



2. The compound having the formula



3,098,849
EXTRACTION OF AN ALKALOID FROM PHYLLANTHUS DISCODEUS
Jean Louis Paul Mainil, Watermael-Boitsfort, Brabant, Belgium, assignor to Societe Anonyme Oletta, Luxembourg, Luxembourg
No Drawing. Filed Aug. 15, 1958, Ser. No. 755,152
Claims priority, application Belgium Aug. 16, 1957
1 Claim. (Cl. 260—236)

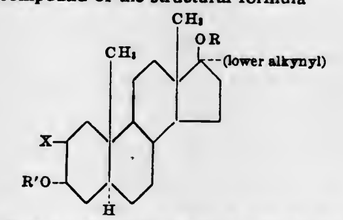
A process for preparing an alkaloid comprising finely grinding a part of the *discodeus* species of the genus Phyllanthus (Euphorbiaceae), rendering said part alkaline, subjecting the resulting product to the action of a solvent selected from the group consisting of ether, benzene, chloroform and ethyl acetate to extract the active material from the plant, acidifying the extract, adding a base to make the solution alkaline thereby forming a crude alkaloidal product and then recovering and purifying the alkaloid by recrystallization.

3,098,850
3-ENAMINE DERIVATIVES OF 2α-METHYL-5α-ANDROSTANES
John C. Babcock, Portage Township, Kalamazoo County, J Allan Campbell, Kalamazoo Township, Kalamazoo County, and Raymond L. Pederson, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Filed Dec. 9, 1957, Ser. No. 701,347
3 Claims. (Cl. 260—239.5)

1. The 3-pyrrolidyl enamine of 2α-methyl-17β-hydroxy-5α-androstan-3-one.

3,098,851
17α-ALKYNYL - 2β-HALO-5α-ANDROSTANE-3α,17β-DIOLS, ESTERS THEREOF, AND INTERMEDIATES THERETO
Raymond E. Counsell, Skokie, and Paul D. Klimstra, Northbrook, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Nov. 20, 1961, Ser. No. 153,703
7 Claims. (Cl. 260—239.55)

1. A compound of the structural formula



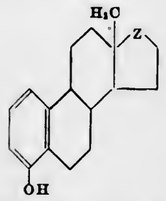
wherein X is a halo radical and R and R' are selected

from the group consisting of hydrogen and lower alkanoyl radicals.

7. 2α,3α-epoxy-17α-ethynyl-5α-androstan-17β-ol.

3,098,852
17-OXYGENATED ESTRA-1,3,5(10)-TRIEN-4-OLS AND INTERMEDIATES
William F. Johns, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Feb. 2, 1962, Ser. No. 170,798
11 Claims. (Cl. 260—239.55)

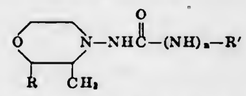
1. A compound of the formula



wherein Z represents a member of the group consisting of carbonyl, β-hydroxymethylene, and β-(lower alkanoyloxy)methylene radicals.

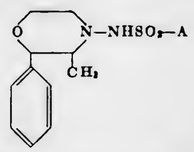
3,098,853
N-ACYLATED DERIVATIVES OF 4-AMINO-2-CARBOCYCLIC-3-METHYLMORPHOLINES
Max J. Kalm, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed June 14, 1961, Ser. No. 116,975
9 Claims. (Cl. 260—247.1)

1. A compound of the formula



wherein R is selected from the group of radicals consisting of phenyl and cyclohexyl, R′ is selected from the group of radicals consisting of phenyl, phenyl-(lower alkylene), halophenyl, (lower alkoxy)phenyl, cyclohexyl, pyridyl, and 5-methyl-3-isoxazolyl, and *n* is selected from the group of integers consisting of 0 and 1.

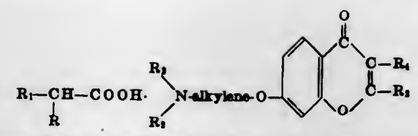
3. A compound of the formula



wherein A is selected from the group of radicals consisting of phenyl, (lower alkyl)-phenyl, and lower alkanoyl) amidophenyl.

3,098,854
ACID ADDITION SALTS OF BASICALLY SUBSTITUTED FLAVONES AND PREPARATION THEREOF
Josef Klosa, Berlin-Zehlendorf, Germany, assignor to Dr. med. Hans Voigt Chem.-Pharm. Fabrik, Berlin-Waidmannslust, Germany
No Drawing. Filed Feb. 9, 1961, Ser. No. 88,015
Claims priority, application Germany Oct. 18, 1960
9 Claims. (Cl. 260—247.2)

1. Acid addition salts of flavones basically substituted in the 7-position and of xanthine ring derivatives of acetic acid, said salts having the formula



wherein R is a member selected from the group consisting of hydrogen, lower alkyl and phenyl, R_1 is a xanthine ring system selected from the group consisting of xanthine,

7. The acid addition salt of theophyllin-7-acetic acid and 7-(β-N-morpholinoethoxy)-flavone.

3,098,855
PROCESS FOR SEPARATING BENZENE CARBOXYLIC ACIDS
Alistair S. Couper and Charles D. Kalfadelis, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Apr. 17, 1959, Ser. No. 807,017
7 Claims. (Cl. 260—525)

1. A process for separating "A" from "B", wherein "A" is a member of the group consisting of benzoic acid and orthophthalic acid and "B" is a member of the group consisting of isophthalic acid and terephthalic acid, and wherein "A" and "B" are in the form of crystals having a broad size distribution, which process comprises:

commingling said mixture with a solvent selected from the group consisting of water and acetic acid in an amount at least sufficient to dissolve substantially all of said "A" at the temperature for physical separation hereinafter described but not sufficient to dissolve all of said "B" at said temperature;

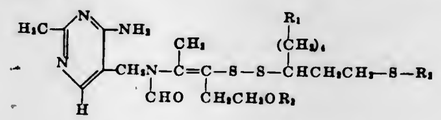
heating the resultant slurry of said mixture and said solvent to a temperature sufficient to dissolve at least about five times the amount of said "B" that will dissolve at the temperature for physical separation but not sufficient to dissolve all of said "B";

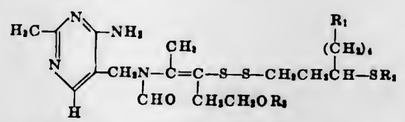
slowly cooling said slurry to deposit the dissolved portion of said "B" on the undissolved crystals of said "B" substantially without forming new crystals of said "B," the rate of such cooling being within the range of from about 0.05 to 5° F. per minute;

and thereafter physically separating a liquid phase containing solvent and said "A" from a solid phase containing said "B."

3,098,856
THIAMINE DISULFIDE DERIVATIVES OF OCTANOIC ACID AND THEIR PREPARATION
Masao Ohara, Ibaraki, Kiyotsugu Yamamoto, Osaka, and Yoshio Deguchi, Suita, Japan, assignors to Fujisawa Pharmaceutical Co., Ltd., Osaka, Japan, a corporation of Japan
No Drawing. Filed Aug. 14, 1961, Ser. No. 131,081
Claims priority, application Japan Aug. 19, 1960
10 Claims. (Cl. 260—256.5)

1. A compound of the formula selected from the group consisting of:

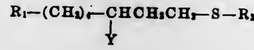




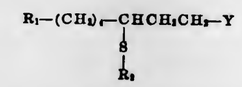
and non-toxic acid addition salts thereof wherein R_1 is selected from the group consisting of carboxyl, carbo-

lower-alkoxy and carboxamide, R_2 is selected from the group consisting of lower alkanoyl and benzoyl, and R_3 is selected from the group consisting of hydrogen, lower alkanoyl, benzoyl and pyrophosphate.

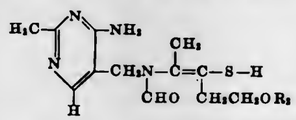
7. A process which comprises reacting in an alkaline medium an acylthiooctanoic acid derivative selected from the group consisting of:



and



wherein Y is a chemically active sulfur-containing radical, R_1 is selected from the group consisting of carboxyl, carbo-lower-alkoxy and carboxamide, R_2 is selected from the group consisting of lower alkanoyl and benzoyl, with the thiol form of vitamin B_1 having the general formula:



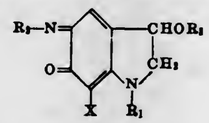
wherein R_3 is selected from the group consisting of hydrogen, lower alkanoyl, benzoyl and pyrophosphate.

3,098,857
α-PHENYL - 4 - PYRIDINEMETHYL 2,2-DIMETHYL-3 - (2 - METHYLPROPENYL)CYCLOPROPYLCARBOXYLATE
Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Nov. 3, 1961, Ser. No. 149,859
1 Claim. (Cl. 260—295)

α-Phenyl-4-pyridinemethyl 2,2-dimethyl-3-(2 - methylpropenyl)cyclopropylcarboxylate.

3,098,858
7-HALOGENATED ADRENOCHROME DERIVATIVES
Norman Barsel, Laurelton, N.Y., assignor to Chem Research Company, Laurelton, N.Y., a partnership
No Drawing. Filed June 11, 1962, Ser. No. 201,267
9 Claims. (Cl. 260—295)

1. A compound selected from the group consisting of 7-halogenated aminochrome of the formula



wherein R_1 is a member of the group consisting of hydrogen, methyl, ethyl, isopropyl, normal propyl, normal butyl and isobutyl; R_2 is a radical selected from the group consisting of —OH, —NH_2, —NH C_6H_5, —NH $CONH_2$ and

R_3 is a member selected from the group consisting of hydrogen, SO_2Na and SO_2—K and wherein X is a halogen atom selected from the group consisting of chlorine, bromine and iodine and the non-toxic pharmacologically acceptable acid addition salts of said 7-halogenated aminochrome with inorganic acids.

3,098,859
EXTRACTION OF ALKALOIDS FROM *FUNTUMIA LATIFOLIA*
Jean Louis Paul Mainil, 28 Rue Behrensheyde, Watermael-Boitsfort, Brabant, Belgium
No Drawing. Filed Sept. 26, 1958, Ser. No. 763,431
Claims priority, application Belgium Sept. 27, 1957
1 Claim. (Cl. 260—397.3)

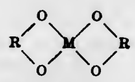
A process for the extraction of an alkaloid selected from the group of alkaloids corresponding to the formulae $C_{21}H_{37}ON$ and $C_{21}H_{35}ON$; said process comprising washing part of a *Funtumia latifolia* plant in petroleum ether, rendering the resulting extract alkaline, subjecting the resulting product to the extraction action of a solvent selected from the group consisting of ether, benzene, chloroform and ethyl acetate and mixtures thereof, mixing the thusly obtained product with an acid solution selected from the group consisting of acetic, hydrochloric and oxalic acid solutions, separating the acid solution and rendering the same alkaline to dissociate to said alkaloids, extracting said alkaloids with a solvent selected from the group consisting of ether, chloroform, ethyl alcohol, methyl alcohol, and mixtures thereof, and separating the alkaloids from each other by recrystallization.

3,098,860
17-ETHER DERIVATIVES OF PREGNANES
Frances G. Hoffman, Newark, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 20, 1961, Ser. No. 161,776
18 Claims. (Cl. 260—397.4)

4. 17α-lower alkoxy-1,4,6-pregnatriene-3,20-dione.

3,098,861
METHOD OF PREPARING TITANIUM OR ZIRCONIUM BIS(DIOXY ALKYLENE) COMPOUNDS
Richard W. Russell, Berkeley, Calif., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 25, 1960, Ser. No. 71,413
4 Claims. (Cl. 260—429.3)

1. A method of preparing organo-metallic compounds of the formula



wherein M is a metal selected from the group consisting of titanium and zirconium and R is an alkylene radical, comprising: refluxing a material selected from the group consisting of titania and zirconia and an alkyl diol wherein the two hydroxyl groups therein are separated by a plurality of carbon atoms not exceeding three carbon atoms, removing water formed by the reaction from the reaction zone as it is formed, and recovering the organo-metallic compound thus formed.

3,098,862
COMPLEX BIMETALLIC ORGANOMETALLIC COMPOUNDS AND METHOD FOR THEIR PREPARATION
Paul Kobetz, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed July 11, 1960, Ser. No. 41,784
7 Claims. (Cl. 260—429.7)

1. As a new composition of matter, a bimetallic organometallic compound having the formula

$$M(AlR_mR'_{4-m})_n$$

wherein

M is a metal selected from the group consisting of tin and chromium,

R is a hydrocarbon radical selected from the group con-

sisting of cycloalkyl, aryl, and alkyl radicals having from 1 to 8 carbon atoms,

R′ is a radical selected from the group consisting of hydride, fluoride, and cyanide, *m* is a number of 3 to 4, and

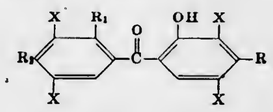
n is the valence of M.

3,098,863
NICKEL AND COBALT CHELATES OF ORTHO-HYDROXYBENZOPHENONES

Rolf Dessauer, Wilmington, Del., and Sidney Benjamin Maerov, Kinston, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 15, 1959, Ser. No. 846,758
9 Claims. (Cl. 260—439)

1. Water insoluble metal chelates of ortho-hydroxybenzophenones, said metal being taken from the group consisting of nickel and cobalt, and said ortho-hydroxybenzophenone having the structure



wherein X is a radical selected from the group consisting of hydrogen and C_1 to C_4 alkyl, and wherein R, R_1 and R_2 each represent a radical selected from the group consisting of hydrogen, hydroxy and C_1 to C_4 alkoxy, with the proviso that at least one of the radicals R, R_1 and R_2 is selected from the group consisting of hydroxy and C_1 to C_4 alkoxy radicals.

3,098,864
ARYLFERROCENES AND A PROCESS FOR PREPARING THEM

Marvin D. Rausch, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 19, 1961, Ser. No. 104,008
7 Claims. (Cl. 260—439)

1. A process for preparing an arylferrocene compound which comprises reacting diferrocenylmercury with a diarylmercury compound which has from 6 to 18 carbon atoms in each aryl group in the presence of a metallic silver-containing catalyst at a temperature of from about 230° C. to 350° C.

3,098,865
PROCESS FOR MAKING VINYL PHOSPHONIC ACID DICHLORIDE, VINYL PHOSPHONIC ACID, AND ESTERS THEREOF

Kurt Schimmelschmidt and Walter Denk, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Mar. 11, 1957, Ser. No. 645,028
Claims priority, application Germany Mar. 14, 1956
10 Claims. (Cl. 260—461)

1. A process which comprises reacting an ester of vinyl phosphonic acid at a temperature in the range from 100 to 160° C. with phosphorus pentachloride.

2. A process which comprises reacting an ester of vinyl phosphonic acid at a temperature in the range from 100 to 160° C. with phosphorus pentachloride and reacting the vinyl phophonic acid dichloride thus obtained with water in a solvent inert towards the reaction to yield vinyl phosphonic acid.

3. A process which comprises reacting an alcohol ester of vinyl phosphonic acid at a temperature in the range from 100 to 160° C. with phosphorus pentachloride and reacting the vinyl phosphonic acid dichloride thus obtained in a solvent inert towards the reaction with a different hydrocarbon alcohol containing from three to ten carbon atoms and at most one olefinic bond to yield vinyl phosphonic acid diesters.

3,098,866
PROCESS FOR DECOLORIZING AND PURIFYING O,O-DIALKYLTHIOPHOSPHORYL CHLORIDES AND THIOPHOSPHATE CONDENSATES FORMED THEREFROM

Ralph D. Divine, Westfield, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 6, 1961, Ser. No. 150,193
7 Claims. (Cl. 260—461)

5. A process for improving the color and purity of a composition containing at least 90% of O,O-di-lower alkylthiophosphoryl chloride, which composition is prepared by the chlorination of the corresponding dithio acid, which comprises treating said chlorination product with an alkali metal bisulfite to convert the sulfur as sulfur chloride present to water-soluble sulfur-containing salts, removing said sulfur-containing salts to prepare a composition containing color-forming impurities and treating said composition with an alkali metal sulfide at a temperature of from about 20 to about 60° C. and thereafter recovering a product of improved color and purity.

3,098,867
PROCESS FOR PRODUCING POLYCARBOXYLIC ACIDS AND ESTERS

Carl S. Marvel, Urbana, and Robert D. Vest, Champaign, Ill., assignors to the United States of America as represented by the Secretary of the Air Force

No Drawing. Filed July 11, 1958, Ser. No. 748,094
13 Claims. (Cl. 260—485)

1. The synthesis of tetraethyl-1,1,5,5-pentanetetracarboxylate by charging a multiple necked reflux flask with 1500 milliliters of 99.8% ethanol; adding to the ethanol with frequent cooling 3 moles of sodium; heating gently the flask containing the ethanol solution of sodium while adding 14.5 moles of redistilled diethyl malonate over a period of one hour; reflux the contents of the flask for the substantially complete formation of the sodium salt of the malonic ester over a representative period of three hours; add to the flask with rapid stirring 1.5 moles of redistilled 1,3-dibromopropane by drops over a period of about eight hours; reflux gently the flask contents; remove the ethanol from the flask; wash the contents of the flask with 2% sulfuric acid for accomplishing the removal of inorganic salts and unreacted base; dry the organic layer in the flask by the addition with agitation of anhydrous calcium sulfate; remove the excess diethyl malonate under an aspirator vacuum; distill the resulting product under a diminished pressure as a viscous oil of a boiling range between 160 and 170° C. at 0.3 mm. mercury pressure and the viscous oil having an index of refraction at 25° C. of 1.4409.

3,098,868
AMINE SALTS OF GLYCURONIC ACID

Luigi Rovati, Milan, Italy, assignor to Rotta Research Laboratorium S.p.A., Milan, Italy

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,153
3 Claims. (Cl. 260—501)

1. Glycuronic acid salts of the general formula

$$CHO—(CH—OH)_4—COOR$$

wherein R is a radical selected from the group consisting of $N(CH_3)_2CH_2COOH$ and $NH(CH_2CH_2OH)_2$.

3,098,869
PREPARATION OF DIALDEHYDE POLYSACCHARIDE ADDITION PRODUCTS

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed July 7, 1960, Ser. No. 41,242
11 Claims. (Cl. 260—513)

1. A process for the preparation of bisulfite addition compounds of dialdehyde polysaccharides which comprises reacting a dialdehyde polysaccharide with a water soluble bisulfite salt in slurry in a reaction medium consisting of a mixture of a lower aliphatic alcohol and water and recovering the dialdehyde polysaccharide bisulfite thereby obtained.

2. A process according to claim 1 wherein the dialdehyde polysaccharide is dialdehyde starch.

3,098,870
PREPARATION OF ALKYL o-CARBOXYBENZYL SULFONES

Maurice J. Schlatter, Kensington, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 5, 1962, Ser. No. 177,249
4 Claims. (Cl. 260—515)

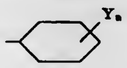
1. n-Alkyl o-carboxybenzyl sulfones having 12 to 18 carbon atoms in the alkyl group.

3,098,871
PREPARATION OF CYCLIC PHOSPHONITRILES

Irving I. Bezman, Pittsburgh, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed June 16, 1961, Ser. No. 117,519
8 Claims. (Cl. 260—551)

1. In a method of forming a mixture of cyclic phosphonitriles of the formula $(RR'PN)_m$ where *m* in the mixture is predominantly 3 and 4 and where R and R′ are members selected from the class consisting of a phenyl and a substituted phenyl of the formula



where Y is a member selected from the class consisting of methyl, methoxy, cyano, thiocyano, isothiocyano, dialkylamino where the alkyl group is of from 1–4 carbon atoms, nitro and halogen and *n* is an integer from 1–5, the improvement which comprises reacting a disubstituted pentavalent phosphorus halide of the formula $RR'PX_3$, dissolved in a nonreactive organic solvent, with an excess of gaseous anhydrous ammonia at a temperature in the range of about 0° C. to 60° C. to form a stable compound of the formula $R_2R'_2P_2N_3H_4X$ and heating said compound to form a mixture of said cyclic phosphonitriles.

3,098,872
PRODUCTION OF NITROUREA

Martin L. Weakley, Sam M. Moffett, and Louis E. Craig, Pryor, Okla., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

No Drawing. Filed Mar. 6, 1958, Ser. No. 719,498
1 Claim. (Cl. 260—553)

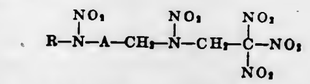
A method for producing nitrourea which comprises preparing a solution of urea by dissolving urea in a solvent selected from the group consisting of concentrated sulfuric acid and sulfuric acid containing free SO_3, combining said urea solution with a mixture of nitric acid and sulfuric acid containing free SO_3, in a reactor at a rate such that a temperature of about minus 5° C. to plus 10° C. and a residence time of about 5 to 30 minutes is maintained in the reactor, and then diluting the reaction mixture with water while maintaining the temperature thereof between about 0° C. and 10° C., to precipitate nitrourea.

3,098,873
NITRAMINES, NITROSAMINES AND THEIR PREPARATION

Milton B. Frankel, Pasadena, and Karl Klager, Monrovia, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed June 13, 1957, Ser. No. 666,274
19 Claims. (Cl. 260—583)

1. As a composition of matter, a dinitramine having the general formula:



wherein R is a lower alkyl radical and A is a lower alkylene radical.

3,098,874
PROCESS OF PREPARING 1-(4-HYDROXY PHENYL)-BUTANONE-(3)

Friedrich Porsch, Holzminden, Germany, assignor to Dragoco Spezialfabrik konz. Riech- und Aromastoffe Gerberding & Co., G.m.b.H., Holzminden (Weser), Germany, a company of Germany

No Drawing. Filed July 2, 1959, Ser. No. 824,480
Claims priority, application Germany July 3, 1958
8 Claims. (Cl. 260—590)

1. In a process of preparing 1-(4-hydroxy phenyl) butanone-(3), the step which comprises reacting phenol with methyl vinyl ketone in the presence of a catalyst selected from the group consisting of a Friedel-Crafts catalyst, phosphoric acid, polyphosphoric acid, sulfuric acid, mixtures of said acids, and mixtures of phosphoric acid and formic acid, and of an inert solvent at a temperature between about −10° C. and about +50° C.

3,098,875
PRODUCTION OF SALICYLALDEHYDES

Louis Schmerling, Riverside, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed July 5, 1960, Ser. No. 40,511
16 Claims. (Cl. 260—600)

1. A process for the production of a salicylaldehyde compound selected from the group consisting of salicylaldehyde and alkyl salicylaldehydes which comprises heating a phenol, in which at least one carbon atom ortho to the hydroxy substituent has hydrogen attached thereto, selected from the group consisting of phenol and monoalkyl- and dialkylphenols, said alkyl radicals containing from 1 to about 18 carbon atoms, with carbon monoxide and a phenoxide selected from the group consisting of alkali metal phenoxides, alkaline earth metal phenoxides and aluminum phenoxides, at a temperature in the range of from about 100° to about 350° C. and at a pressure in the range of from about atmospheric to about 300 atmospheres in a proportion and for a sufficient time to form the desired salicylaldehyde compound, and recovering the last-mentioned compound.

3,098,876
PRODUCTION OF HYDROCARBON DERIVATIVES OF DECABORANE

Murray S. Cohen, Dover, and Carl E. Pearl, Morristown, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

No Drawing. Filed July 1, 1955, Ser. No. 519,623
10 Claims. (Cl. 260—606.5)

1. A method for the preparation of liquid, hydrocarbon derivatives of decaborane which comprises reacting

decaborane, a metal alkyl selected from the group consisting of alkali metal alkyls containing from 1 to 5 carbon atoms, magnesium dialkyls containing not more than 5 carbon atoms and alkyl magnesium halides containing from 1 to 5 carbon atoms and a hydrocarbon halide selected from the group consisting of alkyl, alkene, alkine and phenyl substituted alkyl monohalides in which the hydrocarbon portion of said halides contains not more than 8 carbon atoms in solution in an organic solvent which is inert under the reaction conditions to produce a hydrocarbon derivative of the decaborane, an alkane and a metal halide.

3,098,877

PRODUCTION OF ALKYLATED DECABORANES

Murray S. Cohen, Dover, and Carl E. Pearl, Morristown, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

No Drawing. Filed July 1, 1955, Ser. No. 519,624

11 Claims. (Cl. 260—606.5)

1. A method for the preparation of a liquid alkyldecaborane which comprises reacting decaborane and from 0.5 to 3 moles, per mole of decaborane, of a metal alkyl selected from the group consisting of alkali metal alkyls containing from 1 to 5 carbon atoms, magnesium dialkyls containing not more than 5 carbon atoms and alkyl magnesium monohalides containing from 1 to 5 carbon atoms at a temperature of −70 to 100° C. while the decaborane is in solution in an organic solvent which is inert under the reaction conditions, adding from 0.5 to 5 moles, per mole of decaborane, of a dialkyl sulfate containing from 1 to 5 carbon atoms in each alkyl radical to the reaction mixture and continuing the reaction at a temperature of −70 to 100° C.

3,098,878

SYNTHESIS OF METHYLENE BIS(PHOSPHONIUM BROMIDES)

John E. Harris, Hyde Park, and Clifford N. Matthews, Winchester, Mass., assignors to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 16, 1962, Ser. No. 166,682

7 Claims. (Cl. 260—606.5)

1. The method of making a methylene bis(trihydrocarbylphosphonium bromide), which comprises contacting a trihydrocarbylphosphine with a halomethane selected from the class consisting of CH_2ClBr, $CHCl_2Br$, $CHBr_2Cl$ and $CHBr_3$ under conditions conducive to the formation of a polyphosphonium salt.

3,098,879

TRIOLS

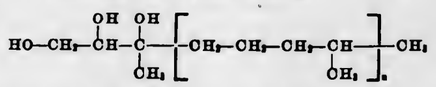
Gustav Erlemann, Riehen, and Waldemar Guex, Rudolf Ruegg, and Sidney Frank Schaeren, Bottmingen, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 22, 1961, Ser. No. 133,072

Claims priority, application Switzerland Sept. 7, 1960

4 Claims. (Cl. 260—635)

1. A compound having the formula



wherein *n* is a whole number ranging from 1–3.

3,098,880

GLYCOL SEPARATION

Bernard A. Saffer and Julian Feldman, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Jan. 5, 1960, Ser. No. 491

5 Claims. (Cl. 260—637)

1. A process for the separation of 1,12-dodecanediol from a mixture of crude isomeric aliphatic, saturated C_{12} alkanediols which comprises admixing said crude isomeric mixture at about 0° to 40° C. with an aliphatic, saturated dialkyl ketone having from about 3 to about 8 carbon atoms to selectively precipitate the 1,12-dodecanediol.

3. A process for the separation of 1,10-decanediol from a mixture of crude isomeric aliphatic, saturated C_{10} alkanediols which comprises admixing said crude isomeric mixture at about 0° to 40° C. with an aliphatic, saturated dialkyl ketone having from about 3 to about 8 carbon atoms to selectively precipitate the 1,10-decanediol.

3,098,881

METHOD FOR THE PREPARATION OF VINYL-ALKALI METAL COMPOUNDS

Bodo K. W. Bartocha, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Aug. 26, 1959, Ser. No. 836,310

2 Claims. (Cl. 260—665)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process for preparing vinyllithium which comprises adding vinylbromide to a lithium dispersion in tetrahydrofuran at −20° C. until a dark blue precipitate forms.

3,098,882

SELECTIVE HYDROGENATION PROCEDURE AND CATALYST THEREFOR

Melvin R. Arnold, Louisville, Ky., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,840

4 Claims. (Cl. 260—677)

1. A method of selectively hydrogenating acetylenic hydrocarbons in a gas wherein the major proportion of the unsaturated hydrocarbons is olefinic, which comprises contacting said gas, admixed with a quantity of hydrogen sufficient to reduce the acetylenic hydrocarbons to olefins, with a palladium and chromium on alumina catalyst which comprises from 0.01% to 0.5% by weight of palladium metal and from 0.01% to 0.5% by weight of chromium metal on an alumina carrier, at a temperature in the range of 100° F. to 400° F. at an hourly space velocity of 50 to 2000 volumes of gas per volume of catalyst.

3,098,883

PROCESS AND APPARATUS FOR CARRYING OUT CHEMICAL REACTIONS AT HIGH TEMPERATURES

Otto Heuse, Kronberg, Taunus, Werner Fischer, Bad Soden, Taunus, and Friedrich Horn and Rudolf Wimmer, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

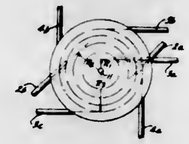
Filed Feb. 24, 1959, Ser. No. 795,077

Claims priority, application Germany Feb. 28, 1958

13 Claims. (Cl. 260—683)

1. In a process for the pyrolysis of aliphatic hydrocarbons by continuously forming a stream of hot combustion gas in a combustion zone, contacting said combustion gas

for a short time with an atomized aliphatic hydrocarbon for pyrolysis thereof to yield C_2- to C_4-unsaturated hydrocarbons having less hydrogen in the molecule than the starting material, and chilling the effluent mixture of pyrolyzed hydrocarbon and combustion gas, the improvement which comprises introducing into the combustion zone an



excess of atomized fuel and an oxidizing gas therefor separately and with an oppositely directed angular momentum at a different distance from the axis of said combustion zone to form rotating coaxially arranged hollow atmospheres of different diameter which contrarotate in one another.

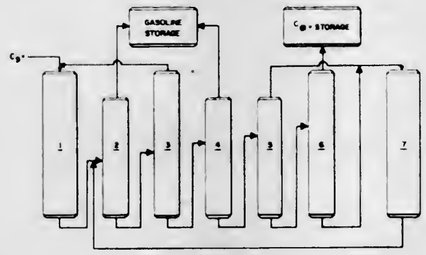
3,098,884

PROCESS FOR PRODUCING OLEFIN POLYMERS

Willis C. Keith, Lansing, Ill., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

Filed July 22, 1959, Ser. No. 828,760

7 Claims. (Cl. 260—683.15)



1. In a process for producing olefin polymers which comprises polymerizing in the liquid phase, monoolefins in the C_5–C_{12} range to dimerize the monoolefins by contact with a catalyst consisting essentially of silica-alumina at a temperature of about 200 to 375° F., separating the dimer from the reaction products and depolymerizing in the liquid phase the olefin polymers boiling above said dimer by contact with a catalyst consisting essentially of silica-alumina at a temperature from about 350 to 550° F. substantially all material converted in said depolymerization being transformed into lower boiling liquid material including the dimer and separating the dimer product.

3,098,885

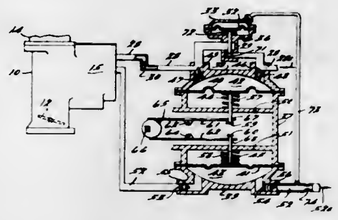
RETURN FLOW CARBURETOR

Thomas M. Ball, Bloomfield Hills, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed June 5, 1959, Ser. No. 818,349

10 Claims. (Cl. 261—36)

1. In a carburetor for an internal combustion engine, a floatless fuel bowl, a fuel pump, inlet conduit means connecting said pump and bowl to supply the latter with pressurized fuel, means for maintaining the fuel in said bowl at a predetermined level comprising an overflow weir in said bowl defining at least in part a chamber adapted to receive excess fuel overflowing said weir from said bowl when the fuel in said bowl attains said predetermined level, fuel return means in communication with said chamber to drain fuel therefrom upon overflow of excess fuel from said bowl into said chamber, bypass



conduit means connected with said inlet conduit means downstream of said pump, valve means in said bypass conduit means for controlling fuel flow in the latter, said fuel return means including pumping means for pumping the excess fuel from said chamber, and means responsive to the output of said pumping means for adjusting said valve means to increase the fuel flow in said bypass conduit means progressively with increasing output from said pumping means.

3,098,886

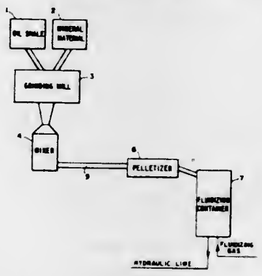
PROCESS FOR PRODUCING HYDRAULIC LIMES FROM OIL SHALE

Günter Friese, Frankfurt am Main, Germany, assignor to Metallgesellschaft A.-G., Frankfurt am Main, Germany, a German corporation

Filed Apr. 5, 1961, Ser. No. 100,818

Claims priority, application Germany Apr. 14, 1960

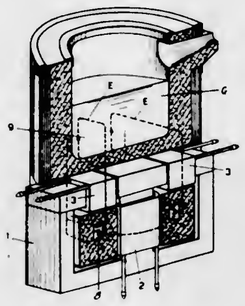
7 Claims. (Cl. 263—53)



1. In a process for preparing hydraulic lime by heat treating at elevated temperature a mixture of oil shale and mineral material said mixture containing limestone and some silica and alumina, the quantities of the components of the mixture being regulated so as to produce a hydraulic lime having optimum strength characteristics, the improvements which comprise grinding oil shale and a mineral material to a particle size of less than 0.1 mm., treating the finely ground oil shale and mineral material to form an intimate admixture thereof, treating the resulting admixture to form therefrom pellets having a diameter of from about 2 to 10 mm., thereafter fluidizing said pellets at an elevated temperature using as fluidizing gas an oxygen-containing gas igniting the fluidized pellets and thereby combusting the organic constituents of the oil shale, and recovering the hydraulic lime free of organic constituents.

ELECTRICAL

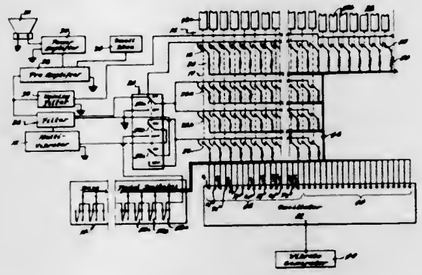
3,098,887
INDUSTRIAL FREQUENCY ELECTRIC INDUCTION FURNACE WITH SUBMERGED HORIZONTAL CHANNEL FOR THE MELTING OF ANY METAL
Elio Ezio Calamari, Via del Gelsomini 2, Milan, Italy
Filed Nov. 18, 1958, Ser. No. 774,620
Claims priority, application Italy Nov. 28, 1957
2 Claims. (Cl. 13—29)



1. An industrial frequency electric induction furnace for the melting of metal or metallic alloy comprising a melting chamber, an inductor housing located transversely of said chamber, said inductor housing having a magnetic core therein and a yoke above said core and at right angles therewith, a primary coil spaced from and mounted about said magnetic core, at least one coil-shaped cooling chamber spaced from and mounted about said yoke and acting as a primary inductor coil, and a refractory lining enclosing said magnetic core, said yoke and said cooling chamber and extending across said melting chamber to divide the bottom portion thereof into two vertical compartments, said refractory lining being formed with at least one through passage located below the cooling chamber and establishing a permanent communication between said two vertical compartments, said melting chamber comprising a top section and a lower section joining in a horizontal plane substantially at the level of said cooling chamber, whereby to at times provide access to said cooling chamber.

3,098,888
ELECTRICAL MUSICAL INSTRUMENT
Daniel J. Tomcik, Buchanan, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana
Filed Mar. 21, 1961, Ser. No. 97,354
13 Claims. (Cl. 84—1.17)

1. An electrical organ comprising, in combination, a plurality of electrical generators having frequencies in the audio range respectively corresponding to successive notes of a musical scale, an electroacoustic transducer having an input for electrical signals, a first keyboard and a second keyboard disposed in a common plane adjacent to each other, a first electrical switch mechanically coupled to each key of the first keyboard and the second keyboard, each of the first switches being normally open and electrically connected between the input of the electroacoustic transducer and one of the tone generators, a second switch mechanically ganged to each first switch associated with a key of the first keyboard, the second switch being normally open and having two terminals, a manually actuable third electrical switch having a first terminal connected to the input of the electroacoustic transducer and a second terminal connected to one terminal of each second switch, the other terminal of each second switch being electrically connected to two tone



generators different than the tone generator connected to the first switch associated with the same key of the first keyboard, said three tone generators associated with each key of the first keyboard having frequencies corresponding to the notes of a musical chord.

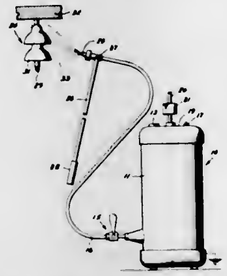
3,098,889
PHOTOELECTRIC TONE GENERATOR
Thomas J. Bultkus, 838 Lenox Ave., Waukegan, Ill.
Filed Nov. 14, 1960, Ser. No. 68,973
3 Claims. (Cl. 84—1.18)



1. A photoelectric transducer comprising, in combination, a substantially disc shaped photoelectric cell having a photosensitive area on each face, a plurality of endless concentric optical sound tracks depicted upon said photosensitive areas, light sources coinciding with said optical sound tracks and means for removing electrical output of said photoelectric cell.

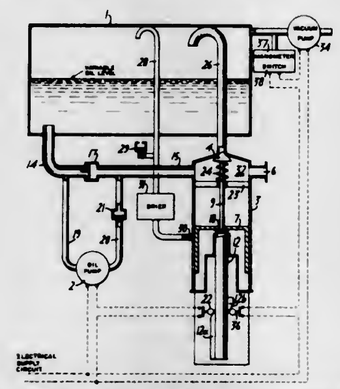
3,098,890
LIQUID TRANSMISSIVE AND ELECTRIC CURRENT NON-TRANSMISSIVE APPARATUS
Floyd V. Peterson, 20728 Ventura Blvd., Woodland Hills, Calif.
Filed Nov. 15, 1960, Ser. No. 69,441
8 Claims. (Cl. 174—5)

1. A pressurized closed-circuit liquid-transmissive and electric-current-non-transmissive apparatus which offers a readily transmissive path to a liquid supplied to an input portion of said apparatus under an input pressure greater than that exterior of the apparatus, with said liquid being delivered to an output portion of said apparatus at an output pressure slightly less than said input pressure by a differential pressure corresponding to the pressure drop across the apparatus from the input portion to the output portion, with said output pressure being in excess of the pressure exterior of said apparatus, and with said apparatus being substantially electrically non-conductive from the liquid input portion of the liquid output portion, comprising: a hollow, sealed interior-pressure-holding tank, said tank having an electrically non-conductive interior surface; liquid flow inlet conduit means connected to said hollow tank means adjacent the top thereof; liquid flow outlet conduit means connected to said hollow tank means adjacent the bottom thereof; at least one of said conduit means connected to said tank being electrically insulated therefrom; means for pressurizing the interior of said tank to an interior pressure greater than the pressure exterior of said tank; and spray nozzle means positioned within said



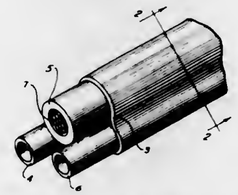
hollow tank above the bottom thereof and connected to said liquid flow inlet conduit means and adapted to be supplied with liquid therefrom under a pressure slightly greater than said interior pressure of said tank by a pressure difference corresponding to the pressure drop across the spray nozzle means whereby to spray said liquid under pressure downwardly in the form of a plurality of separated fine liquid droplets whereby to electrically isolate and insulate said spray nozzle means from liquid collecting in the bottom of the tank.

3,098,891
APPARATUS FOR THE PRESERVATION AND REGENERATION OF INSULATING OIL FOR ELECTRICAL APPARATUS PROVIDED WITH AN OIL RESERVOIR
Paul Delguste, Loverval, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium, a Belgian company
Filed June 17, 1960, Ser. No. 36,816
Claims priority, application France June 18, 1959
9 Claims. (Cl. 174—15)



7. Apparatus for preserving and regenerating insulating liquid for liquid-cooled electrical devices having an insulating liquid expansion reservoir comprising, an expansion cylinder, means providing a communication between said cylinder and said device and means for providing communication between said cylinder and said reservoir, a piston reciprocable in said cylinder in response to volume variations of said insulating liquid in said device, first valve means operable by said piston to an open position allowing liquid to flow into said reservoir when the liquid in said device expands and operable by said piston to a closed position when the liquid in said device contracts, one-way valve means connected to allow liquid to flow from said reservoir through said means providing communication between said cylinder and said reservoir to said cylinder toward said device when the liquid contracts, a pump in communication with said device and said reservoir, and means for operating said pump intermittently in response to preselected positions of said piston for causing said pump to pump liquid from said reservoir to said device to maintain a preselected volume of insulating liquid in said device.

3,098,892
WELDING CABLE
Robert L. Spade and John F. Voss, Richmond, Ind., assignors to Belden Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 15, 1961, Ser. No. 131,631
1 Claim. (Cl. 174—47)

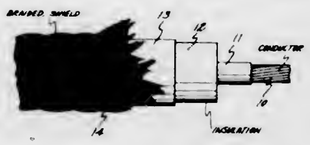


An improved flexible cable adapted for use in an electric arc-welding system, which system involves the supply of electric welding current, a liquid coolant, and a system gas to a welding head, which cable includes a flexible stranded metallic electrical conductor for supplying welding current to the welding head, a flexible electrically non-conductive cylindrical conduit which supplies liquid coolant to the welding head and encloses said conductor leaving therein a passageway for the coolant around said conductor, a second separate flexible cylindrical conduit for returning the coolant from the welding head, a third separate flexible cylindrical conduit for conveying system gas to the welding head, said cylindrical conduits abutting one another along their lengths, and a single outer flexible non-conductive tubular protective sheath of substantially uniform wall thickness enclosing all of said conduits and being distinct from said conduits, said sheath being contiguous with portions of the outer surfaces of each of said cylindrical conduits and having an indentation formed therein between each pair of adjacent cylindrical conduits and extending inwardly toward the line of abutment thereof, so that adjacent indentations define a longitudinal channel in said sheath wherein the conduit disposed between said adjacent indentations reside, said indentations also being of generally arcuate shape so that there are open spaces between the lines of abutment of said conduits and the inner surfaces of said indentations, whereby the cable can be readily bent in any direction.

3,098,893
LOW ELECTRICAL RESISTANCE COMPOSITION AND CABLE MADE THEREFROM
Ross A. Pringle, Woodbridge, and Charles F. Wallace, Jr., Fairfield, Conn., assignors to General Electric Company, a corporation of New York
Filed Mar. 30, 1961, Ser. No. 99,559
8 Claims. (Cl. 174—102)

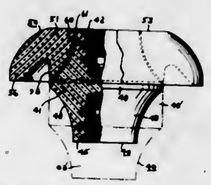
1. A low electrical resistance composition comprising 30 to 70 weight percent of polybutene having a mean

molecular weight of 1500 to 2500, 7 to 15 weight percent of a carbon black having a volume resistivity of 10 to 30 ohm-cm. when incorporated in a natural rubber mixture consisting of one-third by weight of said carbon



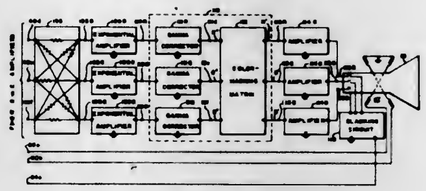
black, and the remainder a dialkyl phthalate in which there is incorporated from 0.2 to 1.0 weight percent of a compound selected from the group consisting of bisphenol A and derivatives thereof.

3,098,894
ELECTRICAL INSULATOR CONSTRUCTIONS
Donald G. Sprigings, Lynchburg, Va., assignor to H. K. Porter Company, Incorporated, Lynchburg, Va., a corporation of Delaware
Filed Oct. 16, 1961, Ser. No. 145,339
7 Claims. (Cl. 174—178)



7. An electrical insulator device comprising a body element and an initially separate skirt element interfitted with the body element and permanently bonded thereto, said body element being formed of insulating material having high mechanical strength and said skirt element being formed of insulating material characterized by high tracking resistance and high arc track resistance; said body element comprising, a pair of opposite end surfaces disposed in spaced apart parallel planes with the said end surfaces each being symmetrical with respect to a common axis which is normal to the planes in which said end surfaces lie and which axis also defines the longitudinal axis of the body element, a body portion symmetrical in and coaxial with the said longitudinal axis of the body elemnt and disposed axially between said end surfaces but being of larger cross sectional area than the cross-sectional area of at least one of said end surfaces, the axial extent of said symmetrical body portion being less than the spacing between said end surfaces, a radially outwardly flaring surface extending axially inward from said at least one end surface to the end of said symmetrical body portion closest to that end surface, and means extending axially into the body element from each end surface for effecting mechanical connections thereto; said skirt element comprising, an axially apertured hub portion having upper and lower ends disposed in parallel planes orthogonal to the longitudinal axis of the skirt element, and an annular skirt portion extending radially outward from the upper end of said hub portion and turning axially downward toward the lower end of said hub portion with the inner surface of the annular skirt being spaced radially outward from the outer axially extending surface of said hub portion, the inner axially extending surface of said hub which defines the axial aperture through said hub flaring radially outward as it extends from the hub upper end toward the hub lower end to provide an aperture shaped complementally to the said flared surface of the body element, said body element projecting axially thereinto and being permanently bonded thereto by an intervening film of bonding material.

3,098,895
ELECTRONIC PREVIEWER FOR TELEVISED COLOR PICTURES
Bernard D. Loughlin, Huntington, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 2, 1958, Ser. No. 777,726
10 Claims. (Cl. 178—5.2)

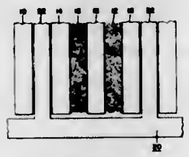


1. An electronic previewer for simulating the color-processing characteristics of a system wherein a derived color picture is photochemically prepared from an original color picture and the derived picture is utilized in a color-television system to obtain a received color-television image thereof, said photochemical process involving production of a plurality of color dyes in the derived picture having densities determined by the relative proportions of corresponding color components of a printing light transmitted through said original color picture, and said color-television system including a transmitter which scans the derived picture to produce original signals representative of predetermined color components thereof and processes those signals to convert them to resultant signals for actuating a color-television receiver, to display an image of said derived picture said previewer comprising: the combination of means for scanning said original picture and means adapted to simulate said photochemical process and the spectral taking characteristics of said television transmitter so as to obtain color-representative signals respectively proportional corresponding to the original signals produced by said transmitter from said derived color picture, said simulating means being adapted to adjust the relative proportions of said color-representative signals; means for nonlinearly translating those signals; signal-processing circuit means for modifying each of said nonlinearly translated color-representative signals in accordance with at least part of the signal processing by which said color-television transmitter converts the corresponding ones of said original signals to said resultant signals; and color-image-reproducing means responsive to said modified signals to produce a color image corresponding thereto; whereby the color image produced by said previewer will have substantially the same appearance as that which will be produced by said color-television receiver when the relative proportions of the color components of the printing light employed in said photochemical process are adjusted in accordance with the adjustment of said simulating means.

3,098,896
CATHODE RAY TUBE SYSTEM USING INDEXING SIGNALS
Edward I. Lynch, Syracuse, and Thomas T. True, Camillus, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 1, 1960, Ser. No. 46,670
9 Claims. (Cl. 178—5.4)

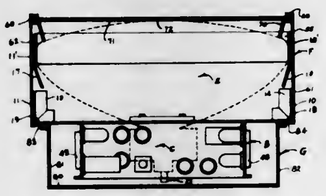
7. A cathode ray tube system comprising: a cathode ray tube having a plurality of vertical phosphor stripes

positioned on a face of the tube; a guard band separating each stripe from an adjacent one of said stripes; each of said stripes having a same width; each of said guard bands having a same width; an electron gun for said tube for generating an index beam; an electrode for said tube for controlling the intensity of asid index beam; means for periodically sweeping the index beam across the tube face in a scanning raster; means for generating an index signal responsive to impingement of the beam in-



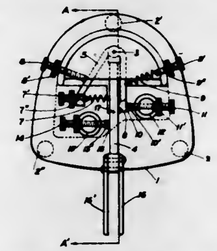
cluding an index comb having a tooth superimposed on a guard band between each triad of stripes; means for amplifying said index signal, for tripling the frequency of said index signal, and for coupling said index signal to said beam intensity control electrode; a source of chroma intelligence; and a servo circuit arrangement responsive to said index signal for automatically providing correspondence in time between the occurrence of chroma intelligence and the impingement of an electron beam on a corresponding color stripe.

3,098,897
UNITARY TELEVISION EQUIPMENT
Russell J. Callender, 115 Wildwood Beach, Mahtomedi, Minn.
Filed Sept. 10, 1959, Ser. No. 839,212
6 Claims. (Cl. 178—7.9)



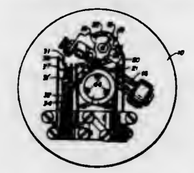
1. In an electronic picture receiver system of the direct-view, enclosed cabinet model type, the combination of; a superstructure frame forming an open ended enclosure having top, bottom and side wall frame portions for mounting a cathode ray tube, a cathode ray tube including a frontal picture viewing screen having relatively rectangular physical and linear dimensions and a rearwardly extending stem portion; an encircling band secured at equal distant interior points to the wall frame portions of said superstructure, said band encircling the outside circumference of said tube about said picture viewing screen and adapted with the support of said encircled tube portion to rigidly secure said wall portions and support said tube; a small tube component mounting chassis supported by said superstructure and comprising a relatively flat plate surface encircling the stem end of said tube and in substantially parallel relationship thereto extending rearwardly of the wall frame portions of said superstructure frame for mounting receiving system small tubes, component elements and circuitry therefor of said receiver system in angularly spaced relationship about said tube stem externally of said superstructure and within the confines of the physical and linear area of said frontal picture viewing screen; an outer cabinet shell secured to and enclosing the top and side wall portions of said superstructure frame forwardly of said small tube component mounting chassis, and a removable back cover having perforated side walls enclosing said chassis, whereby when said cover is removed, the small tubes and other components including the circuitry therefor mounted on said chassis are freely visible and replaceable without disturbance of the said chassis and remainder of said cabinet structure.

3,098,898
TELEGRAPH KEY
John Jay Jakosky and John J. Jakosky, Jr., both of 2500 West Coast Highway, Newport Beach, Calif.
Filed June 5, 1961, Ser. No. 114,959
5 Claims. (Cl. 178—108)



1. Manually operable electric key mechanism comprising a base, an elongate key lever pivoted one end to said base for oscillation about a substantially vertical axis, a bifurcated yoke bracketing said lever and pivoted at its bight to said base coaxially with said lever, a spring compressed between said lever and one arm of said yoke and biasing said lever into firm engagement with the other arm of said yoke, a stop on said base for limiting movement of said yoke, a spring compressed between said yoke and said base and biasing said yoke into said firm engagement with said stop, a first pair of spaced contacts mounted on said base and lever, respectively, and engageable by moving said lever in the opposite direction, said lever having at least one flat paddle on the end thereof opposite said axis and made of material appreciably more flexible than the remainder of said lever.

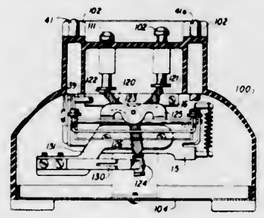
3,098,899
UNIVERSAL SPOTTER CAM ARRANGEMENT
Leonard Licata, Santa Monica, Calif., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Feb. 13, 1962, Ser. No. 173,004
2 Claims. (Cl. 179—90)



1. In a dialing device having the usual impulse sending springs, a rotatable shaft having a finger wheel mounted on one end for manually rotating the shaft in one direction and a spring for rotating the shaft in the other direction to operate said springs, a set of auxiliary contact springs mounted adjacent one end of said shaft with a trigger associated with the auxiliary springs to operate the same, a cam member adjustably mounted on said one end of the shaft, said cam member comprising a disc of insulating material having a series of threaded holes along one edge thereof in a circular row concentric with the outer edge of the disc, a plurality of control members

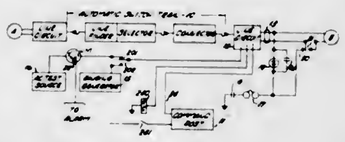
mounted in certain of said threaded holes, each control member comprising a screw having a head with threads on the shank adjacent the head cooperating with the threads of one of the holes and a smooth stem projecting beyond the threads and beyond the surface of the disc into the path of said trigger, the stems of said screws engaging said trigger as the shaft is rotated, in such a manner as to operate said auxiliary springs only as the shaft moves in one direction.

3,098,900
TELEPHONE HOOKSWITCH AND EXCLUSION KEY INTERLOCKING ARRANGEMENT
Lawrence H. Bracken and William R. Watson, Brockville, Ontario, Canada, assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,295
6 Claims. (Cl. 179—99)



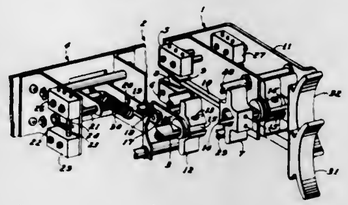
1. A telephone desk set having a top portion comprising a cradle having a pair of front tines and a pair of rear tines for resting therein a handset, a first spring pileup, a first pair of plungers in said cradle, each of said plungers controlled by the removal of said handset from said cradle to release said first spring pileup, a second spring pileup, a second pair of plungers extending through said top portion in an area between said front tines, said second pair of plungers comprising an operating plunger and a separate release plunger, a rocker-type operating member rotated responsive to depression of said operating plunger to operate said second spring pileup, and a mechanical linkage between said rocker-type operating member on the one hand and one only of said first pair of plungers on the other hand, for restoring said operating member, such that said second spring pileup is released from operation responsive to depression of said release plunger and also under the control of said one but not the other of said first pair of plungers, whereby said other plunger may be intermittently operated without affecting the condition of said second spring pileup.

3,098,901
TELEPHONE SECURITY SYSTEM
Thomas B. Norling, Chicago, Ill., assignor to International Telephone and Telegraph Corporation
Filed Nov. 17, 1960, Ser. No. 70,024
15 Claims. (Cl. 179—175.2)



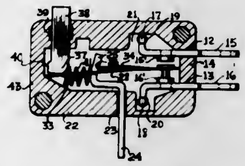
1. A telephone security system comprising a plurality of multi-conductor subscriber lines extending from a central location to remotely located subscriber stations, means at said central location for applying a low frequency voltage, to a first conductor of each of said lines when idle, means connected to another conductor of each of said lines for detecting alternating current caused by said voltage when applied to said lines when a complete alternating current loop is then extended to an associated subscriber station, and means triggered responsive to said last named means detecting an absence of said alternating current for giving an alarm if a call is not then in progress.

3,098,902
ROCKER SWITCH ASSEMBLY
Ralph J. Meyer, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Mar. 14, 1960, Ser. No. 14,598
6 Claims. (Cl. 200—5)



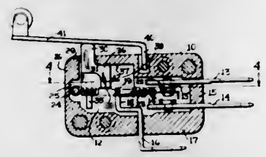
6. In combination: a plurality of rocker switches each of which has a control member; means for pivotally mounting each said control member for actuation in opposite direction; a memory switch having actuating means movable between two stable position; and means connecting said actuating means with said movable control members so that said actuating means is caused to assume a first stable position when any one of said movable control members is actuated in one direction and is caused to assume a second stable position when any one of said movable control members is thereafter actuated in the opposite direction, the position of said actuating means being unaffected by actuation of any of said movable control members in said one direction while in said first stable position and being unaffected by actuation of any of said movable control members in said opposite direction when in said second stable position.

3,098,903
SNAP ACTION SWITCH
Fred N. Anderson, Highland Park, Ill., assignor to Cherry Electrical Products Corp., Highland Park, Ill., a corporation of Illinois
Filed July 21, 1961, Ser. No. 125,775
4 Claims. (Cl. 200—67)



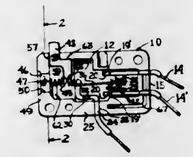
1. In a switch of the class described comprising
(*a*) a substantially flat switch blade formed of spring material slotted longitudinally to form a pair of parallel side tension bars connected together at opposite ends,
(*b*) one end of said blade having an electrical contact thereon adapted for movement between two spaced apart fixed contacts with the opposite end of said blade providing an actuator seat.
(*c*) said blade providing between said tension bars confronting spaced apart fingers each having a substantial portion of their length angularly disposed out of and beneath the longitudinal plane of said tension bars when said blade is mounted in said switch,
(*d*) a fixed terminal post member provided by said switch and having pivotal connection with the free end of one of said fingers at a point below the normal longitudinal plane of said blade,
(*e*) a coil spring disposed between said terminal post and said other finger for urging said blade in one direction relative to its longitudinal length so as to place under compression said one of said fingers and to yieldably urge said actuator seat into engagement with a switch actuator,
(*f*) and a switch actuator slidably carried by said switch and having a portion thereof in contact with said seat provided by said opposite end of said switch blade,
(*g*) said actuator movable perpendicularly against said seat provided by said blade to move said tension bars thereof relative to said terminal post member and said fingers into a substantially parallel relation on opposite sides of said tension bars in a switch actuated position,
(*h*) said coil spring yieldably resisting the perpendicular movement of said actuator while maintaining contact pressure between said electrical contact on one end of said blade and a fixed contact and said actuator seat on the opposite end of said blade in engagement with said actuator.

3,098,904
SNAP ACTION SWITCH
Fred N. Anderson, Highland Park, Ill., assignor to Cherry Electrical Products Corp., Highland Park, Ill., a corporation of Illinois
Filed July 21, 1961, Ser. No. 125,776
2 Claims. (Cl. 200—67)



1. A snap action switch comprising a housing including a removable side cover which cooperates to provide an internal cavity, fixed terminal members extending into the cavity from one end of the housing and providing spaced apart confronting contacts, a third fixed terminal member extending into said cavity through the bottom wall of said housing and having its inner end bifurcated so as to provide spaced apart pivotal posts, a movable blade pivotally connected to said posts and having its opposite end extending between and in contact with one of the contacts of said fixed terminal members, a tension member connected at one end to said movable blade and anchored at the other end to said housing for tensioning said blade in pivotal connection with said pivotal posts, means carried by said housing and said side cover for pivotally anchoring the opposite end of said tension member so that the same lies in a predetermined vertical and horizontal plane with respect to said blade, an actuator extending through an opening in the top wall of said housing, one wall of said actuator being of an elongated substantially rectangular shape so as to lie in facial abutment throughout its length with one wall of said housing and having its lower edge extending beneath the predetermined horizontal plane of said tension member, said one wall of said actuator provided with a laterally extending guide member movable in a corresponding slot formed in said one wall of said housing defining said cavity, said actuator providing a lateral offset portion intermediate its ends for engaging said tension member adjacent one side of said pivotal posts, said offset portion movable through the same axis of movement of said actuator so as to cause said tension member to be deformed out of its horizontal plane to cause the blade to move with a snap action movement into contact with the other of said fixed contact bearing terminal members.

3,098,905
SNAP-ACTION SWITCH
Fred N. Anderson, Highland Park, Ill., assignor to Cherry Electrical Products Corp., Highland Park, Ill., a corporation of Illinois
Filed Oct. 20, 1961, Ser. No. 146,608
4 Claims. (Cl. 200—67)

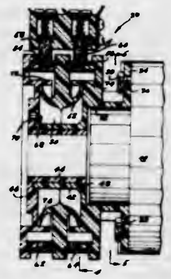


1. A snap-action switch housing, having a body normally open at one side and a cover therefor, with said body and cover providing an interior cavity containing a snap-acting mechanism including
(*a*) an elongated coil spring,
(*b*) said coil spring having one end connected to a movable switch blade and its opposite end attached to a supporting means carried by said housing,
(*c*) a supporting means extending transversely between said body and said cover and upon which one end of said coil spring is hooked,
(*d*) said housing providing a compartment for said supporting means,
(*e*) said compartment comprising a notched-out opening formed in one end wall of said body of a depth less than said cavity formed therein,
(*f*) and means carried by a corresponding end wall of said cover for closing said notched-out opening and for positioning the hooked end of said coil spring upon said supporting means for maintaining said coil spring in a predetermined longitudinal plane with respect to the movable switch blade.

3,098,906
ZERO SPEED SWITCH
Otto Hermann, Cincinnati, Ohio, assignor to The R. K. Le Blond Machine Tool Co., Cincinnati, Ohio, a corporation of Delaware
Filed Feb. 2, 1962, Ser. No. 170,686
6 Claims. (Cl. 200—80)

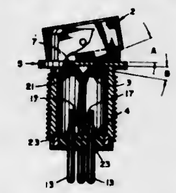
1. In a rotary switch;
a body part adapted for rotation on a predetermined axis,
a generally cylindrical cavity in said body part concentric with said axis,
spaced slip rings on said body part,
mercury in said cavity,
said slip rings being in continuous electrical engagement with said mercury,
said switch having a condition of rotation on said axis and a condition of non-rotation,
means for causing said mercury to change from a single body in one of said conditions to two separate bodies in the other of said conditions,
said two bodies each being in electrical engagement with a respective one of said slip rings whereby the

opening of the circuit through the switch is accomplished entirely within the body of mercury,



and means in said cavity restricting the movement of the mercury from its condition of two separate bodies into its condition of a single body.

3,098,907
MAGNETIC SWITCHES
Donald E. Reed, Kensington, Md., Stanley F. Reed, McLean, and Emmett F. Deady, Arlington, Va., and Edward R. Fairbanks, Silver Spring, Md., assignors to Space Components Inc., Washington, D.C., a corporation of the District of Columbia
Filed Feb. 21, 1961, Ser. No. 90,703
15 Claims. (Cl. 200—87)



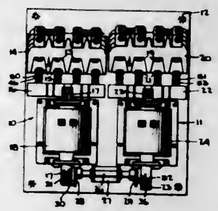
1. In an electrical switch, the combination comprising: a supporting housing, said housing comprising a sealed switching cavity and a rigid wall, said wall comprising a body portion of non-magnetic material with four apertures therein arranged in a generally quadrangular configuration and an insert of magnetic material sealed within each of said apertures; a magnetic actuator mounted on said housing externally of said cavity for movement between two switching positions, said actuator comprising a permanent magnet having N and S poles, each of said poles having a pair of actuating portions, said actuating portions aligned so that one actuating portion of each of said poles is in substantial contact with said wall whenever said actuator is in one of said switching positions, each of said actuating portions aligned with one of said inserts; an armature within said cavity supported by said housing for pivotal movement between two switching positions, said armature magnetically associated with said actuator so that said armature assumes a predetermined angular position for each of said two switch positions, said armature comprising two separate blocks of magnetic material, a non-magnetic supporting means for said blocks, and first contact means mounted thereon; and second contact means within said cavity supported by said housing, whereby one actuating portion of each of said poles of said magnet, two of said inserts, and one of said blocks form a strong magnetic circuit to maintain contact between said first and second contact means whenever said actuator is positioned in one of said switching positions.

3,098,908
REED SWITCH
Arthur W. Heath, Linden, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 28, 1961, Ser. No. 162,732
7 Claims. (Cl. 200—87)



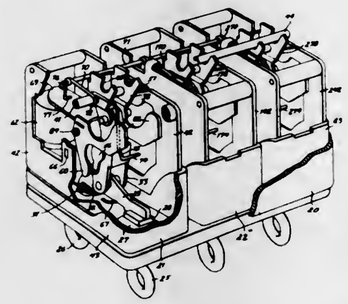
1. A reed switch comprising:
(*a*) an envelope having side walls with a pair of opposed grooves internally thereof,
(*b*) a flat switch reed having a longitudinal axis, a pair of opposed wings on each side of said axis, and an embossed portion substantially between said wings,
(*c*) a spring clip having a pair of opposed edges,
(*d*) said wings and said edges being engaged in said grooves with the said embossed portion pressed against said spring clip and thereby forcing a bowing of said spring clip away from said reed,
whereby the reed is securely cantilevered in the grooves.

3,098,909
MECHANICAL INTERLOCK FOR ELECTRIC SWITCHES
John Scheib, Jr., Elmsford, N.Y., assignor to Ward Leonard Electric Co., Mount Vernon, N.Y., a corporation of New York
Filed Dec. 27, 1960, Ser. No. 78,379
3 Claims. (Cl. 200—98)



1. An electric control means comprising a first contactor having first fixed contacts, a first movable armature with first movable contacts and a solenoid for actuating said armature to move said first movable contacts in and out of engagement with said first fixed contacts, a second contactor having second fixed contacts, a second movable armature with second movable contacts and a second solenoid for actuating said armature to move said second movable contacts in and out of engagement with said second fixed contacts, said first fixed contacts positioned closer to said first movable contacts than said second fixed contacts to said second movable contacts to provide an engagement of said first contacts prior and subsequent to the engagement of said second contacts, interconnecting means movably mounted and having a first means attached thereto and solely engaging said first armature over a pressure contact area between said first means and said armature for transmitting force urging said first armature to a contact closed position and separable from said first armature in the opposite direction to permit independent movement of said armature and second means attached to said interconnecting means and solely engaging said second armature over a pressure contact area between said second means and said second armature for transmitting force from said second armature to said second means and said interconnecting means on movement of said second means to a contact closed position and separable from said first armature in the opposite direction to permit independent movement of said second armature from said second means whereby said armatures are coupled on the assuming of closed contact position and separable on assuming an open contact position.

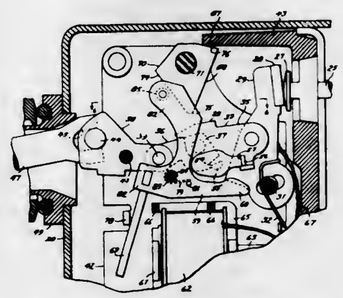
3,098,910
INTERCONNECTED CIRCUIT BREAKERS
Norman J. Schwartz, Yardley, Pa., assignor to Heinemann Electric Company, Trenton, N.J., a corporation of New Jersey
Filed July 1, 1960, Ser. No. 40,380
7 Claims. (Cl. 200—106)



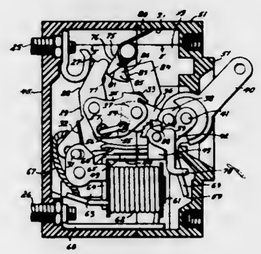
1. The combination of a plurality of similar switch units, each switch unit having a pair of relatively movable contacts, an automatically resettable mechanism including a toggle linkage operatively connected between one of said contacts and a manual operator, an overload sensing and toggle tripping device associated with said toggle linkage, said toggle linkage being collapsible by said device to a position for opening said contacts, an automatically resettable movable common trip member associated with each overload sensing device, each toggle linkage being independent of the associated movable common trip member in that the former is out of force transmitting relationship with the latter in the closed and open positions of the contacts and in force transmitting relationship therewith only during the collapsing movement of the toggle linkage, each of said movable common trip members being interconnected, whereby the collapsing movement of the associated toggle linkage for opening said contacts of one switch unit also moves all of the other common trip members of the associated switch units in the direction necessary to cause all of their associated toggle linkages to collapse and move to the contacts open position.

3,098,911
INTERCONNECTED CIRCUIT BREAKERS
Norman J. Schwartz, Yardley, and Hale H. Goldblatt, Morrisville, Pa., assignors to Heinemann Electric Company, Trenton, N.J., a corporation of New Jersey
Filed July 7, 1960, Ser. No. 41,421
5 Claims. (Cl. 200—106)

1. The combination of a plurality of similar switch units, each switch unit having a pair of relatively movable contacts, an automatically resettable mechanism movable to open and close said contacts, a tripping device capable of initiating movement of said mechanism by collapsing said mechanism upon overload, an automatically resettable common trip cam member associated with each mechanism and each tripping device, each of the common trip cam members being engageable with the associated mechanism at one portion and engageable with the associated tripping device at another portion, each tripping device being also capable of being acted upon by the associated common trip cam member to trip the devices of the associated non-overloaded switch units, a bar for interconnecting all of the common trip cam members for simultaneous movement upon the movement of any one, all the cams being pivotal about the longitudinal axis of the interconnecting bar, the mechanism, the associated tripping device portion engageable thereby and the cam being all spaced from each other in the open and closed positions of the contacts, the collapsing movement of the mechanism for engagement with the associated cam, the movement of the tripping device for tripping the associated mechanism, and the movement of the cam for engagement with the associated tripping device being all in the same direction, whereby the associated members act upon the tripping devices of the associated switches to substantially simultaneously trip all of said mechanisms and open all the contacts.

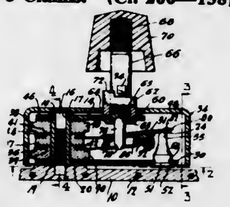


3,098,912
MOVABLE ARM ACTUATED INTERCONNECTED CIRCUIT BREAKERS
John M. Sprague, Trenton, N.J., assignor to Heinemann Electric Company, Trenton, N.J., a corporation of New Jersey
Filed Aug. 28, 1961, Ser. No. 134,373
10 Claims. (Cl. 200—107)



1. The combination of a plurality of switch units, each switch unit having a pair of relatively movable contacts, an automatically resettable mechanism including a movable arm carrying one of the contacts and pivotal to a position for opening said contacts, an electromagnetic tripping device including an armature for initiating movement of said mechanism to the open position of the contacts, a cam member associated with each mechanism, all of the cam members being interconnected for simultaneous movement upon the movement of any one to move all of said mechanisms in the contacts opening direction, each of the cam members having a portion engageable with the associated movable arm and another portion engageable with the associated armature.

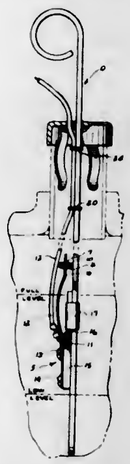
3,098,913
THERMOSTAT SWITCH
John W. Huffman, Mansfield, Ohio, assignor to Pace, Inc., Mansfield, Ohio, a corporation of Ohio
Filed June 29, 1960, Ser. No. 39,520
5 Claims. (Cl. 200—138)



5. Switch mechanism, in combination, support means including a cylindrical shaped member, a pair of switch arms, contacts mounted by said arms, a plurality of circular disks of insulating material mounted on said cylindrically shaped member, each of said switch arms being formed with an opening, the disks adjacent said arm being formed with tenon portions received in the openings in said switch arms, the disk below one switch arm and the disk above the other switch arm being formed with outwardly extending peripheral flanges, connector terminals mounted by said disks and in contact with said respective switch arms, thermoresponsive means arranged to influence the position of one of said switch arms, manually adjustable means for adjusting the relative position of the other of said switch arms, a strip of insulating material supported on the switch arm influenced by the thermoresponsive means and extending outwardly beyond the edges of the said switch arm, and a comparatively thin-walled housing of molded resin enclosing the support means and switch arms, the walls of said housing adjacent the connector terminals having openings to accommodate the connector terminals, the portions of said housing walls adjacent said openings being arranged to be flexed outwardly to admit the connector terminals into the openings in the housing and reflexed inwardly in engagement with the connector terminals.

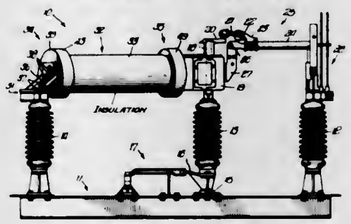
3,098,914
OIL LEVEL WARNING DEVICES
Amedio W. Giannino, 1618 E. 51st St., Brooklyn, N.Y.
Filed Apr. 27, 1961, Ser. No. 106,068
3 Claims. (Cl. 200—138)

1. A device for indicating the oil level in an automatic transmission comprising a dipstick, said dipstick including an elongated conductive body adapted to extend generally vertically through an opening in the automatic transmission, a handle secured on the upper end of said body, oil measuring indicia and a switch mounted on a lower end portion of said body, stop means secured to said elongated body between said handle and switch, said stop means adapted to engage said transmission and limit movement of said body into said opening whereby said indicia extends into liquid in said transmission when said liquid is at a safe operating level, an elongated insulated conductor having an end portion extending along and secured to said body between said handle and said switch, said conductor adapted to be connected in series with electric warning means, said switch including a pair of contacts connected in series between said conductor end portion and said body, said switch also including thermostatic means on the lower end portion of said body and said thermostatic means normally maintaining said contacts closed so as to electrically connect said conductor to said elongated body, said thermostatic means when immersed in the transmission liquid being responsive to a rise in temperature of the liquid in said transmission to open said switch and disconnect said warning means from said body so as to cause said warning means



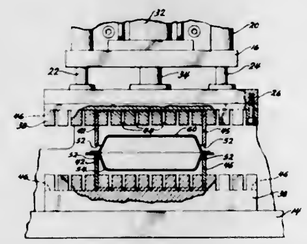
to be de-energized and thereby indicate a proper quantity of liquid in said transmission.

3,098,915
CIRCUIT INTERRUPTER
Leonard V. Chabala, Maywood, Ill., assignor to S & C Electric Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 16, 1961, Ser. No. 152,843
18 Claims. (Cl. 200—146)



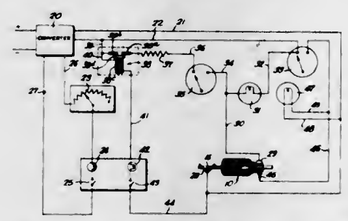
1. In a circuit interrupter, in combination, first and second circuit terminals in insulated spaced relation, a stationary contact connected to said first terminal and extending toward said second terminal, a movable contact connected to said second terminal and engaging said stationary contact in closed position, operating means connected to said movable contact for moving it along an axis endwise of said stationary contact between open and closed position, a first arcing contact mounted on said stationary contact for movement along said axis, biasing means for said first arcing contact urging it toward said first terminal, a second arcing contact mounted on and movable with said movable contact and engaging said first arcing contact in closed position, carriage means connected to said operating means and movable with said movable contact, disengageable connecting means between said carriage means and said first arcing contact for maintaining contact engagement between said first and second arcing contacts during the initial movement toward open position of said operating means and said movable contact, and trip means cooperating with said connecting means after said movable contact has disengaged said stationary contact to disengage said connecting means from said first arcing contact whereupon said first arcing contact is moved by said biasing means away from said second arcing contact to interrupt the circuit between said first and second terminals.

3,098,916
UNIVERSAL SEALING ELECTRODE
Mitchell J. Souligney, Harper Woods, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Jan. 8, 1960, Ser. No. 1,232
1 Claim. (Cl. 219—10.53)



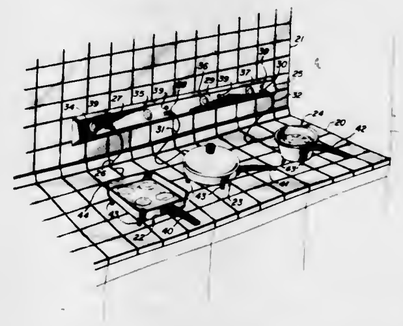
An apparatus for sealing thermoplastic films, comprising a base member having an upper surface and a lower mounting surface, a plurality of receiving slots formed in said base member and extending through said upper surface, said slots being so formed as to have the sides thereof substantially perpendicular to the plane of said mounting surface, a plurality of segmented electrode members adapted to be selectively pressed into said receiving slots in a manner so as to form a desired geometric pattern, said plurality of segmented electrode members also being so positioned within said receiving slots so as to cause the respective upper edges of said segmented electrode members to form a second plane substantially parallel to said lower mounting surface, an upper member mounted to suitable means capable of reciprocation, said upper member having an upper mounting surface adapted to be placed in juxtaposition with said reciprocating means, and a lower sealing surface formed on said upper member parallel to said upper mounting surface and said second plane for sealing said thermoplastic films between said respective upper edges of said segmented electrode members and said lower sealing surface.

3,098,917
METHOD AND APPARATUS FOR REPAIRING ARMATURES AND THE LIKE
Ralph A. Williams, 735 Dickinson St., Memphis, Tenn.
Filed Sept. 26, 1961, Ser. No. 140,877
6 Claims. (Cl. 219—19)



5. Apparatus for repairing automotive type armatures having a plurality of coil conductors supported on and normally insulated from a metallic coil supporting body having a defect in the form of a grounding connection between at least one of the conductors and the supporting body comprising a source of direct current voltage, contactor means to be disposed in electrically conductive engagement with the shaft for applying voltage of positive polarity from said source to the shaft and body of said armature, brush means to be disposed in electrically conductive engagement with said conductors for applying voltage of opposite polarity from said source to at least the conductor grounded to said body, sensible indicator means responsive to current flow from said source through the grounding fault for indicating the presence or absence and general level of current flow, and means for regulating the voltage output of said source to produce a voltage level below values which would damage the insulation between the conductors and said body and a current flow of sufficiently high amperage through the grounding path to cause an arcing condition which burns away a portion of the conductive material providing a part of the grounding path and produces an air space insulating the conductor from the body.

3,098,918
REMOTELY CONTROLLED ELECTRIC HEATING AND COOKING VESSELS
Ludvik J. Koci, Hinsdale, Robert D. Andersen, Elmhurst, and Ivar Jepson, Oak Park, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 11, 1956, Ser. No. 590,694
15 Claims. (Cl. 219—20)

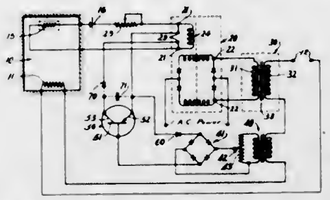


1. A cooking device comprising a completely immersible cooking vessel, an electric heating element forming a unitary part of said vessel and disposed in intimate heat exchange relationship with said vessel, electrical means associated with said vessel having an electrical characteristic which varies in response to changes in temperature of said vessel, a control unit remote from said vessel, first conductive means for supplying alternating current electrical energy from said control unit to said electric heating element, switching means connected in circuit with said heating element, second conductive means for electrically interconnecting said electrical means and said control unit, and selectively adjustable means in said control unit responsive to the variation of said electrical characteristic for selectively controlling said switching means and consequently the electrical energy supplied to said heating element.

3,098,919
CONDITION CONTROL SYSTEM
William A. Paulson, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed May 13, 1959, Ser. No. 813,000
8 Claims. (Cl. 219—20)

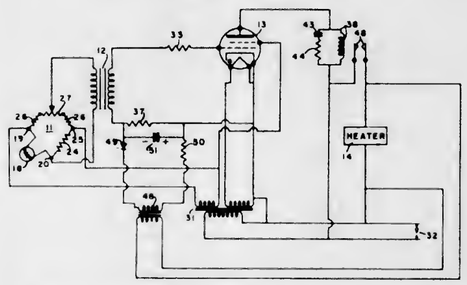
8. In a control system for controlling a variable condition, the combination comprising sensing means for providing a condition responsive signal, amplifying means including a pair of input terminals coupled to said sensing means, a final control element coupled to said am-

plifying means for varying a manipulated variable for corrective control of the condition, a controlled impedance signal shunt means coupled to said input terminals, and shunt control means coupled to said final control



element for sharply reducing the shunt impedance in response to the exceeding of a predetermined magnitude of the manipulated variable to thereby limit the manipulated variable when the variable condition exceeds a given level.

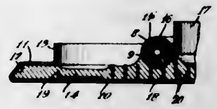
3,098,920
CONTROL CIRCUIT
John R. Bray, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed July 27, 1961, Ser. No. 127,192
1 Claim. (Cl. 219—20)



A heater control system; comprising a bridge having therein a thermistor for sensing a temperature and producing a control signal having a magnitude varying with deviations of the sensed temperature from a predetermined value; a thyratron tube having its control grid connected to receive said control signal; an A.C. power supply; a relay connected in series with the thyratron across the power supply and having a plurality of contacts; a heater connected across the power supply in series with said contacts; and a feedback network having therein a first resistor, a capacitor and a diode connected in series across the heater so that when the heater is energized an exponentially increasing feedback signal appears across the capacitor; said feedback network also having a second resistor connected in parallel with the capacitor and in series with and between the bridge and the thyratron control grid so that when the heater is deenergized the capacitor provides an exponentially decreasing feedback voltage across the second resistor, said feedback network being such that the feedback signals are opposite in polarity to the control signal.

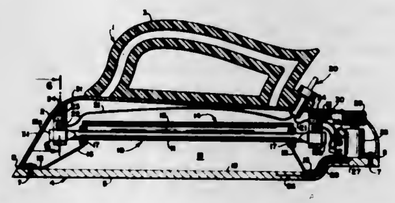
3,098,921
COMPOSITE ELECTRICALLY HEATED DEVICES
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed July 10, 1957, Ser. No. 671,003
6 Claims. (Cl. 219—25)

1. In an electrically heated device, a facing sheet of steel, a spreader element of steel mounted on one face of said sheet and being substantially coextensive with said sheet, said element including a plurality of filaments comprising portions raised out of plane of said element so as to be spaced from said sheet extending substantially



parallel to said sheet, an electrically insulated resistance heater extending along said element and being disposed entirely on one side of said element, and a layer of copper fused to said face of said sheet and embedding at least portions of said element and said heater therein.

3,098,922
DOMESTIC SMOOTHING IRON
John J. Paxton, Amwell Road, Middlebush, N.J.
Filed Mar. 21, 1962, Ser. No. 181,325
1 Claim. (Cl. 219—25)



An electrically operated smoothing iron comprising:

[A] a thin, metallic sole plate having an absorbing surface and a smoothing surface and a high thermal conductivity;

[B] an elongated tubular quartz infrared lamp lying in a plane parallel to and vertically above said absorbing surface;

[C] a reflector disposed above and to the sides of said lamp and fixed to said sole plate adjacent the periphery thereof so as to establish an envelope enclosing a substantial portion of the length of said lamp between said reflector and said sole plate, the ends of said lamp projecting through said reflector and outside said envelope and the enclosed portion of the lamp bearing such a relationship to said reflector and said absorbing surface that the direct radiation and reflected radiation from said lamp are combined to tend to provide an even distribution of infrared radiation throughout said absorbing surface wherein the radiation is converted into heat conducted through said sole plate for raising the temperature evenly throughout said smoothing surface;

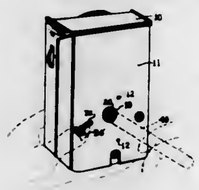
[D] a thermostat mounted outside said envelope and responsive to the temperature of said sole plate for intermittently interrupting the flow of electricity to said lamp to regulate the emanation of energy from said lamp and maintain the temperature of said smoothing surface at a selected value;

[E] a main body detachably secured to said sole plate and enveloping said reflector and the projecting ends of said lamp;

[F] electrical contacts mechanically secured to said main body and electrically insulated therefrom, said contacts being disposed adjacent said ends of said lamp and being detachably electrically connected thereto for conducting electrical operating current to said lamp; and

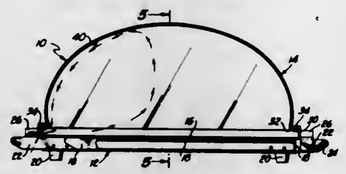
[G] vent means in said body adjacent said projecting ends of said lamp for maintaining said ends relatively cool in comparison to the portion of said lamp lying within said envelope.

3,098,923
BATTERY-OPERATED CIGARETTE LIGHTER
John G. Behrendt, 1929 73rd Court, Elmwood Park, Ill.
Filed Mar. 26, 1962, Ser. No. 182,301
3 Claims. (Cl. 219—32)



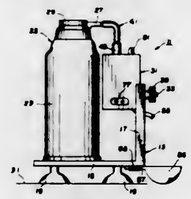
1. In combination, a casing within which is arranged
(*a*) a power source,
(*b*) said casing having a wall having formed therein an opening and elongated slot adjacent said opening,
(*c*) a mounting plate having an opening and a slot formed therein and arranged in said casing against said wall with the opening and slot of the mounting plate in registration with the opening and slot in said wall.
(*d*) a lighting filament arranged in the casing and carried by the mounting plate to the rear of and exposed through said opening,
(*e*) a shutter pivotally carried by the mounting plate within the casing for closing said opening to conceal said filament,
(*f*) circuit means for connecting said filament with said power source, said circuit means including as an element thereof said shutter and a contact plate the latter carried by said mounting plate and engageable by the shutter when the shutter is moved from concealed position with respect to said filament, and
(*g*) a finger button carried by the shutter and extending through and operable in said slot to facilitate moving said shutter from and to concealing position with respect to said filament.

3,098,924
ELECTRICALLY HEATED COVERED WARMING TRAY
Lewis L. Salton, New York, and Fred J. Burg, Bellerose, N.Y.; said Burg assignor to said Salton
Filed June 7, 1961, Ser. No. 115,560
6 Claims. (Cl. 219—35)



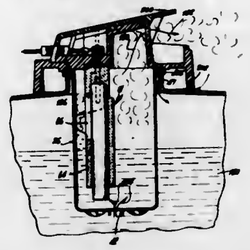
1. A heating device which comprises, in combination: an imperforate flat tray structure having an upper surface capable of radiating heat in generally upward direction and means for heating the same; a dome structure coextensive with said tray structure and disposed in covering relation thereon, said dome structure including an imperforate transparent dome having a concave inner surface facing towards said tray surface; and means supporting the dome structure from the tray structure in position such that the lower margin of the dome structure is spaced a predetermined uniform distance above the corresponding margin of the tray structure throughout substantially their respective full peripheries, the spacing between said margins being such as to effect flow of ambient air inwardly to the dome interior, thence upwardly therein, and thence downwardly-outwardly along the inner surface of and finally from the dome as prevents fogging of said dome inner surface.

3,098,925
HEATING DEVICE FOR AEROSOL SHAVING LATHER DISPENSERS AND THE LIKE
H. D. Fouts, 2421 Lamar Circle, and Aarol D. McCarver, 822 White Clover Lane, both of Memphis, Tenn.
Filed Feb. 7, 1962, Ser. No. 171,762
7 Claims. (Cl. 219—39)



3. A heating device adapted to be used with a valve operated aerosol shaving lather dispenser having an outlet, comprising a stand including a horizontal portion for supporting the lather dispenser, a housing, means adjustably and movably mounting said housing on said stand for vertically positioning said housing relative to said horizontal portion to accommodate different sizes of dispensers, tubular means carried by said housing for interconnection with the outlet of the aerosol dispenser whereby the shaving lather can be dispensed therethrough; said tubular means including a receptacle adjacent one end thereof, an exit spout adjacent the opposite end thereof, and a heat conducting portion in said housing intermediate said receptacle and said exit spout; and heating means adjacent said heat conducting portion for heating the shaving lather dispensed through said tubular means.

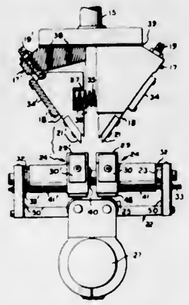
3,098,926
VAPORIZER AND HEATING CHAMBER
Lawrence Katzman, 11 Riverside Drive, New York 23, N.Y.
Filed May 12, 1961, Ser. No. 109,562
2 Claims. (Cl. 219—40)



1. A vaporizer comprising a container having a neck, a cap positioned on said container and including a body having a peripheral side wall surrounding said neck of said container, said body further including an upper wall provided with a downwardly extending cylindrical rim on the

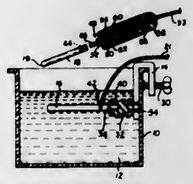
under surface thereof, a heating chamber secured to said upper wall centrally of said rim, said heating chamber extending into said container, an electrode assembly, studs extending through said cap suspending said electrode assembly from said cap, said electrode assembly extending into said heating chamber, said upper wall having a steam chamber integrally formed therewith in communication with said heating chamber and being further provided with a well for receiving medication, said well being formed in the upper surface of said upper wall, said upper wall having a substantially vertically extending portion between said well and said steam chamber, said vertically extending portion having an aperture therethrough so that steam passing through said aperture from said steam chamber will pass over medication in said well, an electric cord connected to said studs, a resilient fitting disposed about said cord and seating on said cap, said fitting having an annular groove therein, and a cover seated on said steam chamber and overlying said well and said aperture, said cover including portions disposed in said groove in said fitting and engaging said cap for safeguarding connections between said cord and said studs.

3,098,927
BUTT WELDING APPARATUS
Edward J. Onny, 346 60th St., Brooklyn, N.Y., and Stanley Rezin, 62—39 60th Drive, Maspeth, N.Y.
Filed Sept. 19, 1961, Ser. No. 139,135
2 Claims. (Cl. 219—57)



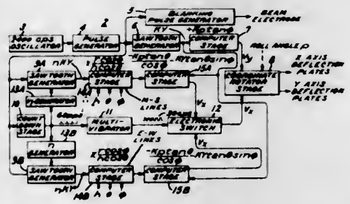
1. In an electric welding apparatus, the combination of two spaced work-supporting members on the bed of a press-type machine, for carrying respectively one of two pieces of work in abutment between said members, two spaced work-shifting members extending from the ram of said press-type machine, directly towards said work-supporting members respectively, adapted to be intercepted respectively by pieces of work on the respective work-supporting members upon movement of said ram towards the bed and to engage said work pieces respectively; said work-shifting members being swingably mounted about spaced axes on the ram so that at least the respective parts of said work-shifting members which contact the work pieces move towards and away from each other; the distance between said axes being greater than the distance of those parts of the respective work-shifting members which contact the respective pieces of work; such axes being each offered by the tip of a screw threadedly engaged on the ram; each work-shifting member having a socket; the tips of said screws resting in said sockets respectively, means on said apparatus, biasing said work-shifting members apart; those surfaces of said work-shifting members which are most remote, being in converging relation towards the bed; elements fixed on said ram, in linear contact with said surfaces respectively and means on the machine, associated with said work-shifting members and arranged to make said work-shifting members move upon their interception by the work pieces and continued pressure applied to the ram so that the said parts contacting said work pieces, move towards each other in engagement with said work pieces respectively whereby said work pieces are maintained in constant abutment; said work-supporting members and work-shifting members being electrically insulated from each other on the bed and ram respectively; at least one of said members which contacts one piece of work respectively, being electrically conductive and adapted for connection to a welding current supply terminal; only one of the members contacting one work piece serving for such connection.

3,098,928
WELDING APPARATUS AND METHOD
William Wagner, Rockaway, N.J.
(5055 Collins Ave., Miami Beach, Fla.)
Filed July 9, 1956, Ser. No. 596,778
1 Claim. (Cl. 219—78)



A resistance welder, comprising a container, liquid in said container, a first electrode holder, a second electrode holder, a pair of electrodes supported by said holders within said liquid and adapted to receive work pieces between them, whereby the contact surfaces between the electrodes and the work pieces and also between the work pieces themselves are immersed in said liquid, said liquid being adapted to wet all of said contact surfaces and to provide good electrical contact between them, and a power source connected to said electrodes, one of said electrodes being in contact with one of said work pieces, the other electrode being in contact with the other of said work pieces, either of said electrode holders being manually movable to move its electrode relative to the work piece with which it is in contact while remaining in contact therewith, both electrodes and both work pieces remaining immersed in the liquid at the time of such movement of the movable electrode relative to the work piece with which it is in contact, the movable electrode being conical in shape and adapted to support conically shaped work, the other electrode being cylindrical in shape.

3,098,929
ELECTRONIC CONTACT ANALOG SIMULATOR
Paul H. Kirchner, Ithaca, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 2, 1959, Ser. No. 784,717
6 Claims. (Cl. 235—187)

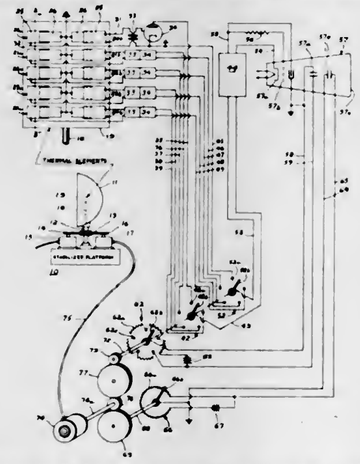


1. In an airborne electronic system for visually indicating the posture of an aircraft with respect to the ground terrain beneath the aircraft on a cathode ray tube, a first channel for deriving Y-axis deflection voltages which includes a saw tooth generator and a computer stage connected to said saw tooth generator for computing the analog contribution $+Kp \tan \phi$; second and third channels for deriving a pair of X-axis deflection voltages, said channels each including a saw tooth generator and computer stages connected to said saw tooth generator for deriving and combining the analog contributions KX and

$$\frac{Kp \tan \theta}{\cos \phi}$$

and electronic switching means for rendering said X-axis deflection voltages alternately available to the X-axis deflection plates within said cathode ray tube.

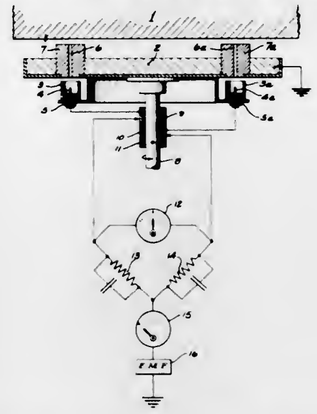
3,098,930
THERMO-ELECTRIC DETECTING DEVICE
Harry L. Clark, 1404 Oglethorpe St. NW., Washington 11, D.C.
Filed Jan. 5, 1945, Ser. No. 571,489
5 Claims. (Cl. 250—83.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for determining the direction of a source of infrad-red radiation comprising a reflector arranged to concentrate the received radiation, a plurality of detector units mounted one above the other in the focal plane of said reflector, an oscilloscope, means for scanning said reflector horizontally, means synchronized with operation of said reflector scanning means for applying a linear sweep voltage to the horizontal beam deflection means on said oscilloscope, means for applying an incremental voltage to the vertical deflection means on said oscilloscope whereby a plurality of parallel horizontal lines will be traced simultaneously across the screen of said oscilloscope, switching means for electrically scanning the outputs of said detector units, and means connecting said switching means in circuit relation with the brightening grid of said oscilloscope whereby target indication will be portrayed to the operator by a change in intensity of the beam traces appearing on the screen.

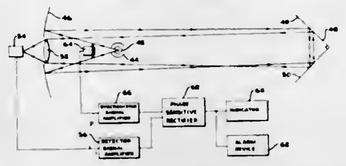
3,098,931
APPARATUS FOR USE IN DETERMINING PARTICLE SIZE AND DISTRIBUTION OF PARTICLE SIZE
Seymour Z. Lewin, New York, N.Y., assignor to Evans Research & Development Corporation, New York, N.Y., a corporation of New York
Filed Mar. 4, 1959, Ser. No. 797,125
6 Claims. (Cl. 250—83.3)

1. A particle size analyzer for use in obtaining data relating to particle size and particle size distribution with respect to a composition having an imperfectly ordered arrangement of particles, comprising means for applying to said composition radiant energy which reacts substantially simultaneously with a plurality of said particles and which is sensitive to the several phases of the composition; means for controlling the degree of irradiation by



said radiant energy, means for adjusting the dimension of a sample region of said composition to a magnitude which is of the same order of magnitude as the dimension of a small number of certain of said particles, and means for measuring the reaction of said sample region to said radiant energy to provide data with respect to said sample.

3,098,932
INFRA-RED GAS DETECTION SYSTEM
Herbert Landon, Forest Hills, N.Y., assignor to Leesona Corporation, Providence, R.I., a corporation of Massachusetts
Filed Nov. 19, 1959, Ser. No. 854,171
8 Claims. (Cl. 250—83.3)

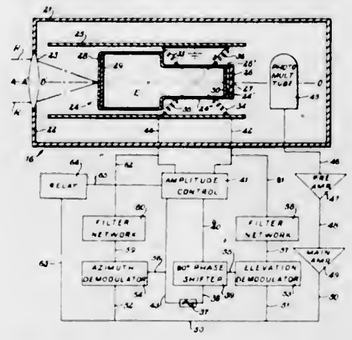


4. An area monitoring gas detection system including a plurality of separate transmitters and receivers each spaced about the periphery of the area to be monitored and each having their axis directed toward the center of said area, a polygonal reflector rotatably mounted at the intersection of said axes and means for rotating said reflector.

3,098,933
PHOTOSENSITIVE ELECTRONIC TRACKING HEAD
Hans P. Barasch, New York, N.Y., assignor to Republic Aviation Corporation, Farmingdale, N.Y., a corporation of Delaware
Filed Oct. 23, 1957, Ser. No. 692,959
13 Claims. (Cl. 250—203)

1. An optical tracking device comprising a closed case having a wall with an opening therethrough, an optical system mounted in said opening and having a fixed field of view about its optical axis, said optical system being adapted to receive light rays from an optically perceptible object within said field of view and to focus the light

rays within said case, a diaphragm within said case having an aperture the center of which is coincident with the optical axis of said optical system, an image converter tube in said case constructed and arranged to receive the focused light rays from said optical system and in response thereto to project a light image onto said diaphragm, means associated with said image converter tube for moving the light image in a decreasing spiral path on said diaphragm whereby at some point in its

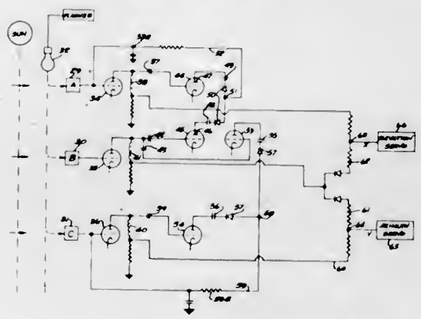


spiral path the light image enters and passes through the aperture in said diaphragm, a photomultiplier tube in said case position to receive the light image passing through said aperture and responsive thereto to generate a voltage the phase of which is proportional to the direction of displacement of the center of the spiral path of movement of the light image relative to the center of said aperture, and means for converting the voltage output of said photomultiplier tube into a signal indicating the position of the object relative to the optical axis.

3,098,934
SUN TRACKER

Donald K. Wilson, North Caldwell, and Robert L. Willes, Glen Rock, N.J., assignors to General Precision, Inc., Little Falls, N.J., a corporation of Delaware

Filed Feb. 4, 1960, Ser. No. 6,785
7 Claims. (Cl. 250—203)

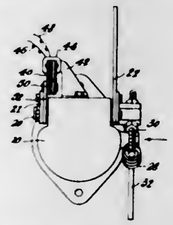


1. In a sun tracker, in combination, a telescope adapted to sight the sun and project its image; at least three detectors so disposed in side by side relationship that when said telescope is aimed at the sun center, each detector will sense equal sun sectors, and if said telescope is off-center, the image sensed by at least one detector will be smaller than the others; electrical output giving means associated with each detector adapted to have a linear output current flow responsive to the sun intensity on said each detector; bridge means between said outputs so disposed that when the outputs across said bridge means are equal, no current flows across the bridge; servo means responsive to the current flow in said bridge to move said telescope until said outputs across said bridges are null; flashing means adapted to illuminate said detectors equally, thereby causing said detectors to have an output from said sun and alternating output from said flashing means; output separating means to separate said alternating output from said linear output; A.C. bridge means between said alternating outputs; and feedback means from said A.C. bridge means to said detector output to bring the alternating outputs across said bridges to a null.

3,098,935
LOAD-SENSING BOOSTER FOR MECHANICAL GOVERNORS

Robert F. Summers, 22 Putnam Ave., Cambridge 39, Mass.

Filed Oct. 21, 1960, Ser. No. 64,225
7 Claims. (Cl. 290—40)
(Granted under Title 35, U.S. Code (1952), sec. 266)

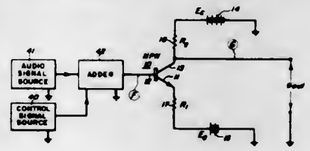


4. The combination of an engine having a throttle, a governor adapted to operate said throttle, including a governor output shaft and housing, a generator connected to the engine, and a compensating mechanism responsive to voltage change of the said generator, said compensating mechanism consisting of an armature rigidly secured to the governor rocker shaft and an electromagnet rigidly mounted on the governor housing in spaced relation to the armature, electrical signal producing means for producing an electric signal responsive and proportionate to the current output of the generator, means electrically connecting the electrical signal producing means to the generator, and means for supplying the electrical signal to the electromagnet for substantially instantaneous adjustment of the engine throttle through the governor output lever.

3,098,936
SIGNAL TRANSLATORS UTILIZING INPUT SIGNAL LEVEL WHICH SELECTIVELY SATURATES TRANSISTOR BASE-COLLECTOR JUNCTION

Jean G. V. Izabeau, Lombard, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed July 14, 1958, Ser. No. 748,272
32 Claims. (Cl. 307—88.5)



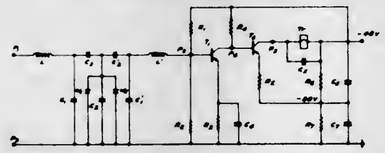
5. Signal-translating apparatus comprising: a junction-type transistor having an emitter, a base and a collector; a two-terminal emitter resistive load one terminal of which is connected to said emitter; a collector resistive load coupled to said collector; a source of unidirectional supply potential defining a predetermined potential range

coupled in series with said emitter and said collector loads, said apparatus having an input voltage-output voltage transfer characteristic, from said base to said collector with the other terminal of said emitter load as a reference, covering said predetermined potential range and having two portions of opposite polarity slope joining at a common vertex located within said potential range at a point determined by the ratio of the resistance of said emitter load and the resistance of said collector load; and means including a voltage source for applying between said base and said other terminal of said emitter load a varying input voltage having an amplitude characteristic established at a particular operating point on said transfer characteristic with respect to said vertex such that the envelope of said input voltage embraces at least a part of each of said opposite polarity slope portions of said transfer characteristic to produce between said collector and said other terminal of said emitter load an output voltage having an instantaneous variation polarity with respect to that of said input voltage determined by the sense of the amplitude excursions of said input voltage with respect to said vertex.

3,098,937
COMBINED LIMITER AND TWO SECTION BANDPASS FILTER

Jean Victor Martens, Antwerp, Belgium, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 30, 1959, Ser. No. 862,818
Claims priority, application Netherlands Jan. 19, 1959
5 Claims. (Cl. 307—88.5)



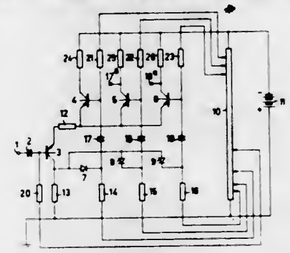
1. In a signal receiver for receiving signals lying within a predetermined range of frequencies and having varying amplitudes, a symmetrical bandpass filter of the unbalanced type having an input section and an output section capacitively coupled for passing signals lying within said range, each of said sections of said filter comprising a tuned circuit, thereby rendering each section frequency selective, said filter further comprising a first and second circuit branch with a first inductance, a first and second condenser and a second inductance in series in said first circuit branch, a third, fourth and fifth condenser connected between the second circuit branch and the junction points between said first inductance and said first condenser, between the said first and second condensers, and between the said second condenser and said second inductance, respectively, and a signal amplitude limiter circuit being connected between the second filter circuit branch and the junction point of said first and second condensers.

3,098,938
PULSE AMPLITUDE DISCRIMINATOR

Frank Bregman, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 10, 1961, Ser. No. 109,163
Claims priority, application Netherlands May 11, 1960
4 Claims. (Cl. 307—88.5)

1. A pulse amplitude discriminator circuit for a given amplitude spectrum having first and second limits comprising an input transistor of a given conductivity type having input means associated therewith for the application of a pulse signal, a plurality of opposite conductivity type transistors, said transistors of both types each having respective emitter, base and collector electrodes, a common emitter resistor to connect serially the emitter electrode of said input transistor to the emitter electrode of each of said plurality of transistors, respective collector resistors connected to the collector electrode of each of said transistors of both types, a source of supply voltage having at least a pair of relatively opposite polarity terminals compatibly coupled to said collector resistors, respective means to couple the base electrodes of said plurality of transistors to the collector electrode of said input transistor, each of said respective means to couple comprising serially connected capacitor and rectifier means,

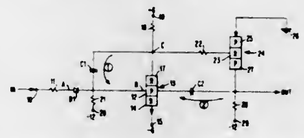


and bias means adapted to provide mutually exclusive series conduction, respectively, between said input transistor and a predetermined opposite conductivity type transistor for amplitudes of said signal below said second limit, a first one of said opposite conductivity type transistors being in said mutually exclusive series conduction with said input transistor at amplitudes of said pulse signal less than said first limit, the remaining said opposite conductivity type transistors being in a respective said mutually exclusive series conduction with said input transistor at amplitudes of said pulse signal within different bands of said amplitude spectrum, and all of said transistors of both types being cut off at amplitudes of said pulse signal greater than said second limit.

3,098,939
INTEGRATING PULSE CIRCUIT HAVING REGENERATIVE FEED BACK TO EFFECT PULSE SHAPING

Genung L. Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

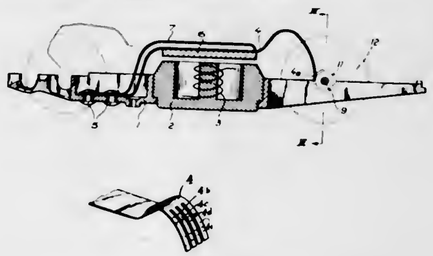
Filed Dec. 21, 1961, Ser. No. 161,181
7 Claims. (Cl. 307—88.5)



2. An integrating pulse shaper comprising, a first amplifier inverter means having an output circuit, a source of input pulses, input circuit means connected between said signal source and said amplifier inverter means, a second amplifier inverter means connected to the output of said first amplifier inverter means and including an output circuit, degenerative feedback circuit means connected between the output circuit of said first amplifier inverter means and said input circuit means and responsive to said input pulses for effecting operation of said first and second amplifier inverter means in an integrating mode to produce an integrated output pulse in the output circuit of said second amplifier means, and a regenerative feed-

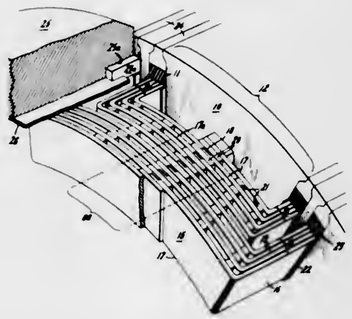
back circuit means connected between the output circuit of said second amplifier inverter means and the input circuit means of said first amplifier inverter means and responsive to the transient portions of said integrated output pulse for effecting operation of both said amplifier inverter means in a pulse shaping mode to shape said integrated output pulse.

3,098,940
RATCHET AND PAWL DRIVE MAGNETIC MOTOR
Charles Ruby, Paris, France, assignor to Societe Anonyme dite: L'Usine a Idees, Sartrouville, France, a French society
Filed Oct. 23, 1961, Ser. No. 146,920
Claims priority, application France Oct. 24, 1960
8 Claims. (Cl. 310—22)



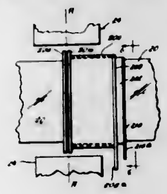
8. In electro-magnetic shaft propulsion means, an electro-magnet, said electro-magnet having a cooperating armature adapted to vibrate when said electro-magnet is energised with alternating current, a pawl, said pawl having a plurality of spaced teeth and being secured to said armature for vibration therewith, and a plurality of ratchet wheels equal in number to said spaced teeth, said ratchet wheels each having a plurality of ratchet teeth and being fixed on the shaft to be propelled with the ratchet teeth of each ratchet wheel angularly displaced relative to the ratchet teeth of the other ratchet wheels.

3,098,941
DYNAMOELECTRIC MACHINE WINDING WITH EDGE-STANDING FLUID-COOLED CONDUCTORS
David M. Willyoung, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 27, 1960, Ser. No. 65,404
17 Claims. (Cl. 310—262)



1. A wound magnetic core comprising a core defining slots therein, a winding for said slots comprising a strip of electrically conductive material having a length greater than the core slot length, a width greater than the slot transverse dimension and only slightly less than the slot depth, and a mean thickness less than one-tenth of the strip width, the strip being disposed on edge in the slot together with similar strips to comprise an edge-standing slot group, the strips of said slot group being electrically connected in series with strips of other slot groups to form a rotor winding, each of said strips in each slot group defining exposed uninsulated surfaces at substantially the same depth in the slot, whereby a coolant fluid circulated at said depth will come in contact with all of the strips in the slot.

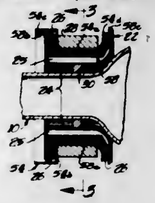
3,098,942
MAGNETIC CENTERING DEVICE FOR CATHODE RAY TUBES
Sol L. Reiches, Shaker Heights, Ohio, assignor, by mesne assignments, to Zenith Radio Corporation, a corporation of Delaware
Filed Feb. 24, 1955, Ser. No. 490,296
13 Claims. (Cl. 313—77)



3. A beam centering device, for use in conjunction with a cathode-ray tube having a neck a portion of which is surrounded by an electromagnetic deflection yoke of a physical shape defining a magnetic deflection center and a space of predetermined size in its interior externally of said neck portion, comprising:

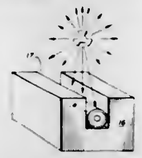
means, including a static field producing element receivable in said space substantially at said deflection center, for creating a static magnetic field oriented generally transverse to and rotatable about the axis of said neck, said element being of a material having substantially unity permeability and maintaining a preselected strength of said static field in the presence of an operating deflection yoke field.

3,098,943
CATHODE RAY PERMANENT MAGNET BEAM POSITIONER
Sol L. Reiches, Shaker Heights, Ohio, assignor, by mesne assignments, to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 18, 1957, Ser. No. 684,738
8 Claims. (Cl. 313—77)



1. Cathode-ray-beam deflection apparatus mountable on a cathode ray tube neck and comprising: a deflection yoke responsive to energizing current to develop a field having a predetermined flux line pattern in a plane transverse to said neck; and a ring-shaped magnet aligned with said yoke and polarized to develop a field having a flux line pattern in the plane of the magnet substantially alike said predetermined pattern.

3,098,944
GAMMA PROPORTIONAL COUNTER CONTAINING HIGH Z GAS AND LOW Z MODERATOR
Raymond Fox, Oakland, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 22, 1960, Ser. No. 38,085
3 Claims. (Cl. 313—93)



1. In a detector of gamma radiation, the combination comprising a cylindrical gas proportional counter, a high Z gas contained in said counter, and a low Z gamma radiation moderator having a flat base and a plurality of parallel rectangular walls extending from one face of said base, said gas proportional counter being positioned between two of said walls.

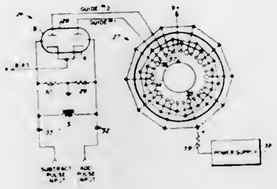
3,098,945
CONFIGURATED LAMP
Eugene Lemmers, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
Filed June 8, 1961, Ser. No. 115,642
5 Claims. (Cl. 313—109)



1. A low pressure electric discharge lamp comprising a configurated elongated light-transmitting envelope having electrodes sealed into opposite ends and containing an ionizable medium including an inert starting gas and a metal vapor in equilibrium with an excess of non-vaporized metal, said envelope having an outer wall of generally circular section and a plurality of relatively short longitudinally extending grooves alternating on opposite sides of the envelope, said grooves being asymmetrically located relative to a diametral horizontal plane through the longitudinal axis of the envelope, groups of said grooves being offset in one direction relative to said plane on one side of the envelope and the corresponding groups on the opposite side being offset in the opposite direction, whereby to provide improved vapor pressure regulation and control and an increase in the effective length of the discharge path.

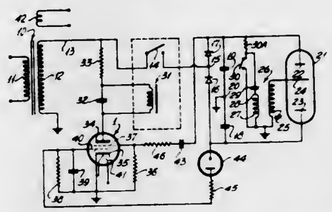
3,098,946
BIDIRECTIONAL COLD-CATHODE COUNTING CONTROL CIRCUIT
Vernon J. Meyers, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 30, 1961, Ser. No. 85,923
8 Claims. (Cl. 315—84.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A bidirectional cold-cathode counting circuit comprising, in combination, a glow transfer tube having an anode, a plurality of electrically connected digital indicator cathodes spatially disposed about said anode, and first and second guide electrodes uniformly positioned between each of said plurality of electrically connected digital indicators, said first guide electrodes being electrically connected to each other and said second guide electrodes being electrically connected to each other, a first triode having a cathode, a grid, and a plate, a second triode having a cathode, a grid, and a plate, said plates of said first and second triodes being connected to the aforesaid first and second guide electrodes respectively, said triode cathodes being coupled to each other and adapted for connection to a positive bias potential, a pair of series connected resistors interconnecting the grids of said first and second triodes, a ground connected to the interconnecting junction of said series connected resistors, an inductance shunting said series connected resistors and interconnecting said grids, and a pair of input capacitors connected to the grids of said triodes adapted for electrically coupling received add and subtract signals thereto respectively.



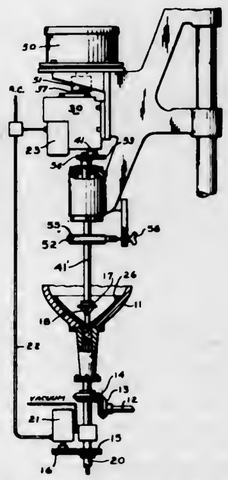
6. In a bidirectional cold-cathode counting circuit, a counting control circuit comprising in combination, a first triode having a plate, a cathode, and a grid, a second triode having a plate, a cathode and a grid, said cathodes being interconnected and adapted for being connected to a positive bias potential, a pair of series connected resistors interconnecting said grids, a ground connected to the common junction of said series connected resistors, an inductance interconnecting said grids, a first input coupling capacitor connected to one of said grids, a second input coupling capacitor connected to the other of said grids, and electrical conductor means connected to each said plates adapted for respective connection with and actuation of predetermined sequentially electrically switched apparatus.

3,098,947
ELECTRICAL SYSTEMS INCLUDING CAPACITORS
Robert A. Flieder, East Brunswick, N.J., assignor to American Speedlight Corporation, Middle Village, Queens, N.Y.
Filed May 2, 1960, Ser. No. 26,024
14 Claims. (Cl. 315—188)



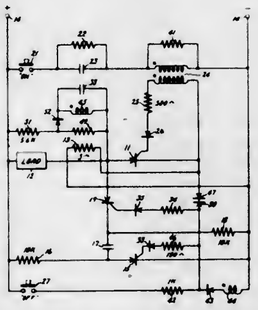
1. An electrical system comprising a source of electricity, a main capacitor, means for charging the main capacitor from the source, a load, means to discharge the main capacitor into the load, a control capacitor, means responsive to the discharge of the control capacitor for disconnecting the main capacitor from the source, and means to impress a voltage responsive to the voltage across the main capacitor on the control capacitor, whereby upon the discharge of the main capacitor into the load the voltage of the main capacitor is reduced and the voltage is reduced across the control capacitor resulting in a pulse discharge thereof so that the main capacitor is disconnected from the source of electricity.

3,098,948
METHOD AND APPARATUS FOR FORMING GLASS
Raymond G. Ormsby and Frederick J. Trementozzi, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed June 9, 1960, Ser. No. 35,007
2 Claims. (Cl. 317—6)



1. The combination with a driven shaft of a second shaft to be driven in synchronism therewith, a synchro-transmitter coupled with said driven shaft for producing an electrical output proportional to the velocity of rotation of the driven shaft, a synchro-receiver directly connected to the electrical output of said synchro-transmitter for producing a mechanical torque output proportional to such electrical output, a mechanical torque amplifier directly coupled with the output of said synchro-receiver and having motor means for mechanically amplifying such output, such amplifier producing an amplified mechanical torque output proportional to the output of said synchro receiver and directly coupled with said second shaft.

3,098,949
CONTROLLED RECTIFIER D.C. SWITCHING CIRCUIT
Leon J. Goldberg, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 20, 1960, Ser. No. 30,484
7 Claims. (Cl. 317—33)



1. A switching circuit including in combination a pair of controlled rectifiers each having control gate elements, a first one of said controlled rectifiers being adapted to be connected in series circuit relationship with a load device across a source of electric energy, a quenching circuit including a quenching capacitor connected in series circuit relationship with said remaining controlled rectifier and adapted to divert load current from said first controlled rectifier, a charging device connected in circuit relationship with said quenching capacitor for precharging said quenching capacitor with a potential having a polarity such that its negatively charged plate is connected to the positive electrode of said first mentioned controlled rectifier, an On triggering circuit coupled to the gate element of the first controlled rectifier for switching the circuit to its On condition, an Off triggering circuit coupled to the gate element of the remaining controlled rectifier for turning On said remaining controlled rectifier and thereby switch the circuit to its Off condition, and an overload sensing device connected in series circuit relationship with the load device for sensing an overload condition instantaneously, said overload sensing device being electrically coupled to the control gate element of said remaining controlled rectifier for turning off the circuit instantaneously in response to an overload condition.

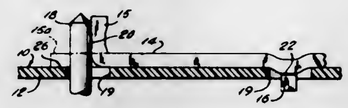
3,098,950
ENCAPSULATED ELECTRIC COMPONENT ASSEMBLY
Robert A. Geshner, Rochester, N.Y., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 13, 1959, Ser. No. 786,523
1 Claim. (Cl. 317—101)



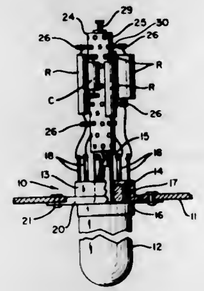
An encapsulated electrical component assembly comprising a first insulative block having a stepped recess and a plurality of slots in and extending to the edges of opposite walls thereof, a plurality of components positioned on and between the steps so that the upper surfaces of said components form an upward concavity and the leads of said components are supported by the slots, a plurality of additional components positioned within said concavity and extending beyond said first block, a second insulative block having a stepped recess and a plurality of slots in and extending to the edges of opposite walls thereof, said second block being positioned on the first block by the components in the stepped recess to align slots in the second insulative block with slots in the first insulative block to cooperate in providing free access to the recesses within said insulative blocks, a pair of printed circuit boards having conducting apertures through which the leads of said components are inserted, said printed circuit boards being mounted on said leads to form a passageway between said boards and blocks, and an encapsulating material positioned around the boards and within the passageways, the slots, and the recesses for encapsulating the assembly while leaving the leads of said components exposed.

3,098,951
WELDABLE CIRCUIT CARDS
William H. Ayer, Scituate, and Robert W. Joslin, Marion, Mass., assignors, by mesne assignments, to The Sippican Corporation, Marion, Mass., a corporation of Massachusetts
Filed Oct. 29, 1959, Ser. No. 849,577
4 Claims. (Cl. 317—101)

1. A printed circuit board comprising a first conductor bonded on one side of the board, a second conductor bonded on the opposite side of the board crossing said first conductor, means filling a hole located through the board at the point where the first and second conductors cross with a removable compound, and means for directly fastening said first conductor to said second conductor upon removal of said compound whereby electrical continuity is obtained between conductors on opposite sides of the printed circuit board.



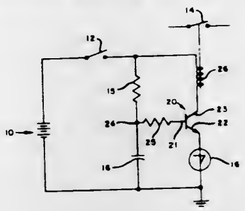
3,098,952
TURRET TERMINAL STRUCTURE FOR VACUUM TUBE SOCKETS
Lee E. Mason, San Jose, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,267
5 Claims. (Cl. 317—101)



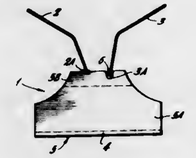
1. In combination with an electronic tube socket having a central ground terminal and a plurality of terminal elements around the ground terminal, means for mounting circuit components adjacent to said terminal elements comprising a tubular post having an axial bore defining the post wall, a plurality of radially extending circumferentially and axially spaced openings in the post wall, a plurality of conductive pegs removably inserted in certain of said openings and projecting outwardly from said post for supporting said components, each of said pegs being inserted in an opening to a depth less than the thickness of the post wall, and a conductive adapter lug in one end of said post and supporting the latter on said ground terminal, said pegs being spaced from said lug whereby to be electrically insulated therefrom.

3,098,953
TIME DELAY CIRCUIT
Joseph R. Herr, Palo Alto, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,566
2 Claims. (Cl. 317—148.5)

1. A time delay circuit comprising a semiconductor device having an emitter, a collector and a base electrode, a semiconductor diode connected to said emitter electrode and operative to change from a non-conducting state to a conducting state when a firing voltage is impressed thereon, said diode in the conducting state being characterized by a voltage drop thereacross that is substantially less than said firing voltage, relay means having a current coil connected to said collector electrode, a charging capacitor and a charging resistor connected in series, means for connecting the resistor side of said capacitor to said base electrode whereby the voltage developed across said capacitor is impressed on said diode through said semiconductor device, a power supply, and switch means for connecting said power supply across said resistor and said capacitor and across said coil and said diode, the closing of said switch means causing said capacitor to charge and the voltage thereacross to increase slowly with time until it equals the firing voltage of said diode whereupon current flows through said relay coil to operate the relay means.

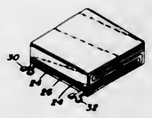


3,098,954
MESA TYPE TRANSISTOR AND METHOD OF FABRICATION THEREOF
Raj P. Misra, West Caldwell, N.J., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 24,966
3 Claims. (Cl. 317—234)



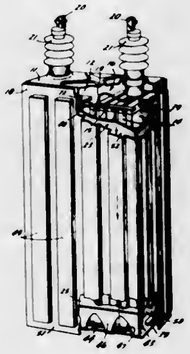
1. A transistor device comprising:
(*a*) a wafer of semiconductor material predominately of one conductivity-type,
(*b*) a diffused surface portion of the opposite conductivity-type on one major face of the wafer occupying only a limited area of said major face, said surface portion providing a varying resistance gradient which increases with depth, the interface between the surface portion and the remainder of the wafer defining a P-N junction which is substantially planar and generally parallel to said one major face,
(*c*) a collector contact secured to the opposite major face of said wafer making ohmic connection to said semiconductor material of said one conductivity-type,
(*d*) a base contact secured to said surface portion on said one major face,
(*e*) an emitter contact secured within a depression defined entirely in said surface portion, said depression extending into said surface portion to a region adjacent to the P-N junction but not intersecting the P-N junction, said emitter contact making rectifying contact with said surface portion in a region having resistivity greater than that exhibited at the top surface of the surface portion.

3,098,955
TAPE CAPACITOR
Benjamin L. Davis, Washington, D.C., and Wilbur C. Nyberg, Youngstown, Ohio, assignors to the United States of America as represented by the Secretary of the Navy
Filed July 31, 1959, Ser. No. 830,966
5 Claims. (Cl. 317—242)
(Granted under Title 35, U.S. Code (1952), sec. 266)



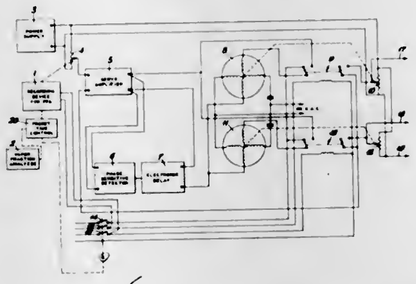
1. In a capacitor, an intermediate product thereof comprising in combination, an electrically non-conductive carrier, said carrier having a substantially flat surface, irregularly spaced notches along the edges of said carrier, an electrically conductive layer composed of electrically conductive material disposed in a first resin binder at least partially covering said surface and constituting one plate of a capacitor, a first leader extending from one edge of the electrically conductive layer to one of the notches, a tape of porous electrically non-conductive material impregnated with electrically conductive material disposed in a second resin binder, said tape being substantially coextensive with said conductive layer and constituting a second plate of said capacitor, a second leader extending from one edge of the tape to another of the notches, a coating substantially coextensive with said tape disposed between said impregnated tape and said electrically conductive layer, being composed of dielectric material dispersed in a tacky third resin binder, said coating being adhered by said tacky resin on one side thereof to said impregnated tape and on the other side thereof to the surface of said electrically conductive layer.

3,098,956
ELECTRICAL CAPACITOR
Elmer G. Hammer, Jr., and Gerald A. Rynders, Milwaukee, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed June 13, 1960, Ser. No. 35,501
10 Claims. (Cl. 317—243)



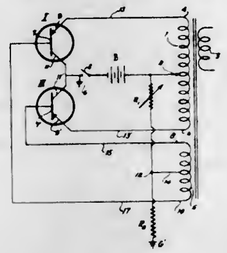
1. An electrical capacitor comprising, in combination, a hollow metallic casing, liquid dielectric within said casing, a plurality of flat capacitor packs disposed in side-by-side relation within said casing forming an assembly having generally rectangular sides and generally rectangular top and bottom surfaces, an envelope of insulation abutting snugly against the interior surface of all of the sidewalls of said casing and closely surrounding all of said rectangular sides of said assembly and insulating said packs from the walls of said casing, said envelope extending beyond said pack assembly at the upper and lower ends thereof and having said extending portions folded over to enclose sad top and bottom surfaces of said assembly, said folded portions being spaced apart horizontally and defining openings through said envelope at the upper and lower ends thereof, spacer means within said insulation envelope defining vertical channels within said assembly in heat exchange relation with relatively large surfaces of said packs generally parallel to the flat sides of said packs for the upward flow of said liquid dielectric in heat transfer relation with said packs, the sidewalls of said casing having vertically extending, outwardly projecting grooves therein defining, together with said insulation envelope, vertical ducts isolated from said packs and in communication with the openings at the top and bottom of said insulation envelope, said liquid dielectric flowing by convection in a path upwardly through said channels interior of said assembly and then downwardly through said ducts exterior of said envelope and dissipating to the atmosphere through the sidewalls of said casing the heat absorbed from said packs by said liquid dielectric in flowing through said channels.

3,098,957
SERVO SYSTEM FOR PEAK SIGNAL STORAGE
Wilmer R. Thompson, South Charleston, and Louis J. Rogers, Nitro, W. Va., assignors to Union Carbide Corporation, a corporation of New York
Filed Nov. 25, 1960, Ser. No. 71,549
10 Claims. (Cl. 318—19)



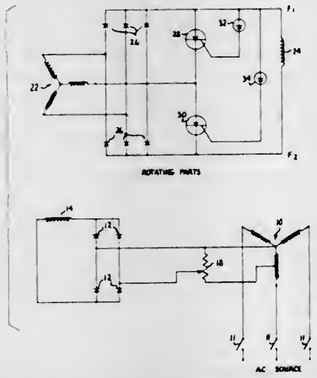
1. A signal processing system for determining and storing the peak magnitude of a recurring signal having varying amplitude occurring at fixed predetermined times, said system comprising signal storage means mechanically adjustable to develop and store a second electrical signal, means connecting said first and second electrical signals to an amplifier means which detects and amplifies the difference in magnitude and direction between said two signals, motor means connected to the output of said amplifier operable on said output signal mechanically connected to said storage means for adjusting same in a direction which will reduce the difference between the first and second electrical signals and phase detection means also connected to the output of the amplifier means which will produce an output signal when the magnitude of the second electrical signal exceeds the magnitude of the first electrical signal, and means connected to the output of said phase detector means for interrupting power to the motor means upon an output therefrom.

3,098,958
DIRECT-CURRENT MOTOR AND THE LIKE
Leonhard Katz, 19 Ward St., Woburn, Mass.
Filed Apr. 7, 1959, Ser. No. 804,750
14 Claims. (Cl. 318—138)



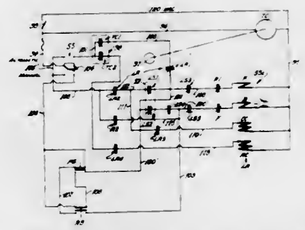
1. Motor apparatus and the like having, in combination, a stator magnetic circuit comprising a pair of fixed windings one of which constitutes the stator winding of the motor and the like and the other fixed winding of which is coupled to the stator winding, a movable secondary winding constituting the rotor disposed adjacent the said stator winding and electro-magnetically coupled thereto, a source of direct-current voltage, a pair of transistor switching means connected in push pull to the said stator winding and to the source, and a feedback path connected from the said other fixed winding to the transistor switching means for limiting the period of operation thereof in order to apply an alternating-current voltage to the said stator winding, said fixed windings being connected through a D.C. path including impedance means, the time constants of the circuit including the switching means, the feedback path, the impedance means and the stator winding determining the frequency of the said alternating-current voltage substantially independently of the movement of the rotor.

3,098,959
STARTING CIRCUIT FOR A SYNCHRONOUS MOTOR
George M. Rosenberry, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1961, Ser. No. 81,130
7 Claims. (Cl. 318—181)



1. A brushless synchronous machine comprising a synchronous motor and an exciter, each being equipped with windings and wherein the rotating magnetic cores for both the motor and exciter are mounted on the same shaft, rectifiers mounted on the shaft for rectifying the exciter output and providing direct current to the field winding in the motor, the improvement comprising at least one unidirectional switching device mounted on the shaft and connected across each of the motor field winding and the exciter output terminals for furnishing a path for one polarity of induced field current while the other polarity is carried by the exciter during starting.

3,098,960
MOTOR DRIVEN ROTARY SELECTOR VALVE
Paul Huska, 739 Moreno Ave., Los Angeles 49, Calif.
Filed June 22, 1959, Ser. No. 821,734
2 Claims. (Cl. 318—443)

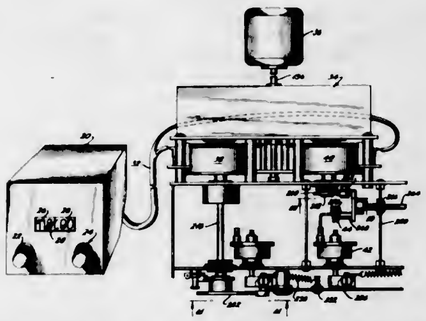


1. Indexing mechanism for actuating a rotary selector valve, having a valve housing, said indexing mechanism comprising, in combination: an indexing disc having a periphery comprising a succession of circumferentially spaced segmental circular raised cam faces and a corresponding series of concave detents between said raised cam faces; said detents being positioned to correspond to a series of lateral ports in said valve housing; a cam follower including a roller, means mounting said roller for radial movement in contact with said disc periphery, and a switch actuator following said radial roller movement, said roller yieldingly engaging said indexing disc periphery; means including a reversible electric actuator motor for simultaneously rotating said valve and indexing disc in unison; control means for initiating a stage of operation of said motor wherein said disc is advanced from a position where said follower has been in engagement with one of said detents to a position where it engages a succeeding detent, and means responsive to radial movement of said follower to said last mentioned position, for terminating said stage of operation, said responsive means comprising a limit switch adapted to maintain an energizing circuit to said motor while said roller rides against one of said raised cam faces and to interrupt said circuit when said roller drops into one of said detents; said control means including a control circuit interconnecting said limit switch and said initiating control means adapted from the beginning of a complete cycle of operation to main recurring forward indexing movements of said indexing disc and rotor through a number of stages corresponding to the number of said lateral ports, and further including reversing control means, responsive to arrival of said indexing disc and valve at a final position of forward indexing movement, to set said control circuit for reverse operation of said motor from said final position back to the position of starting said full cycle of operation, in an uninterrupted resetting movement.

3,098,961
MOTOR CONTROL FOR SELECTING SHAFT POSITIONS
Paul B. King, Jr., Mountain Lakes, N.J., assignor to Aircraft Radio Corporation, Boonton, N.J., a corporation of New Jersey
Filed Apr. 29, 1959, Ser. No. 809,835
4 Claims. (Cl. 318—467)

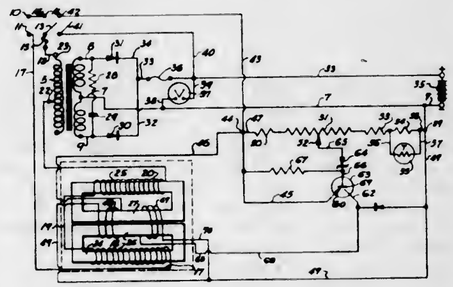
1. Control apparatus comprising a frame, a shaft rotatably supported in said frame, ratchet means rotatively

coupled to said shaft, pawl means pivotally supported upon said frame for engagement with said ratchet means, drive means operable when energized to oscillate said pawl means about its pivotal support to rotatively advance said ratchet means through a given angular increment upon each oscillation of said pawl means, input means for selecting a desired rotative position of said shaft, means on



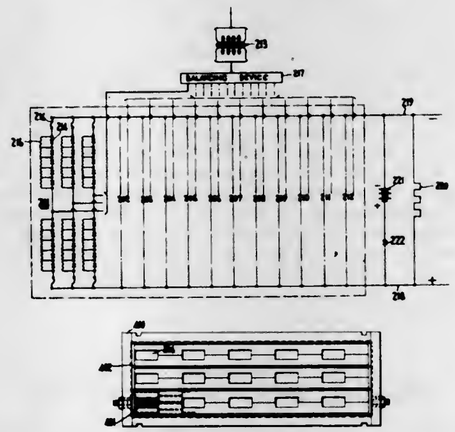
said shaft for indicating the rotative position of said shaft, means coupled to said input means and said shaft position indicating means for energizing said drive means until said shaft is located in said desired rotative position, and latch means operable to latch said pawl means in engagement with said ratchet means to latch said shaft in desired rotative position upon the de-engerization of said drive means.

3,098,962
BATTERY CHARGING APPARATUS
Charles B. Berg, 819 E. 17th St., Kansas City 8, Mo.
Filed Mar. 28, 1961, Ser. No. 98,862
2 Claims. (Cl. 320—39)



1. In a battery charger, a transformer, a reactor having a core provided with a pair of outer legs and a pair of closely adjacent inner legs, an impedance winding on each of said outer legs, said windings being serially connected with each other and with a variable portion of the primary winding of said transformer, means for supplying current from an alternating current source through said impedance and portion of said primary winding in series therewith, a pair of windings wound oppositely around said pair of adjacent inner legs, a battery, full wave rectifying means interposed between said battery and the secondary of said transformer, the terminals of said battery being connected with one of the windings of said pair to increasingly polarize said inner legs and progressively reduce the impedance of said reactor as the battery voltage increases and means for supplying direct current from said battery to the other winding of said pair upon said battery reaching a predetermined maximum voltage comprising a semi-conductor having its anode directly connected with one of said battery terminals and its cathode directly connected with one end of said other winding, voltage responsive means controlling the conductivity of said semi-conductor, and means connecting the other end of said other winding directly with the other terminal of said battery, said voltage responsive means comprising a voltage divider network including a resistor, a contact adjustable along said resistor to establish a voltage source having a predetermined relationship to the output voltage of said battery, and a zener diode having its cathode connected with the controlling terminal of said semi-conductor and its anode connected with said adjustable contact.

3,098,963
METHOD AND APPARATUS FOR CONTROLLING A DIRECT CURRENT POWER SOURCE
John L. Michaelis, Pittsburgh, Pa., assignor, by mesne assignments, to Pittsburgh Plate Glass Company
Filed Aug. 25, 1958, Ser. No. 756,824
19 Claims. (Cl. 321—11)

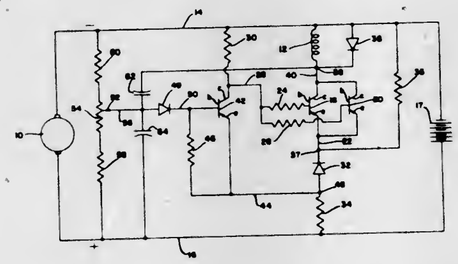


2. A direct current power source comprising a plurality of semiconducting rectifier circuits coupled in parallel and connected to an alternating current source of power and arranged to provide direct current of high amperage to a load, each of said parallel rectifier circuits having a plurality of semiconducting rectifiers therein connected in series, individual cooling air channels associated with each of said rectifiers, said channels communicating at their end with a common source of cooling fluid and discharging the cooling fluid into contact with the rectifier, a fluid cooler in the path of the coolant fluid beyond the rectifier and means for circulating cooling fluid from said common source through the channels past the rectifier unit and to the cooler in a path out of contact with substantially all other diodes, and for returning cooled fluid to the common source, the size of each channel being substantially the same whereby substantially the same amount of fluid content is delivered to each individual rectifier.

3,098,964
TRANSISTOR REGULATOR FOR GENERATORS
Lewis R. Hetzler, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 22, 1958, Ser. No. 756,685
18 Claims. (Cl. 322—28)

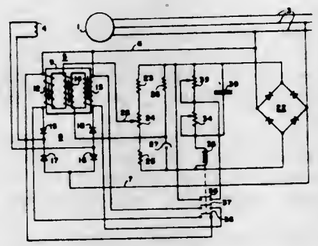
18. In an electric corcuit for controlling the current flow through a circuit element, the combination com-

prising, a power source, an output circuit energized by said power source, a first transistor having base, emitter and collector electrodes, a second transistor having base, emitter and collector electrodes, a first circuit connected across said output circuit including said circuit element and the emitter-collector circuit of said first transistor, a second circuit connected across said output circuit including the emitter-collector circuit of said second transistor, means connecting the collector electrode of said second transistor with the base electrode of said first transistor,



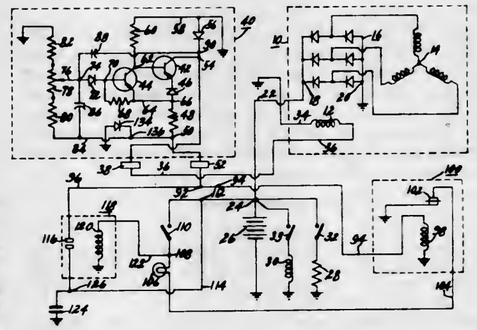
control means connected across said output circuit and with the base electrode of said second transistor developing a voltage which is proportional to the output voltage of the power source, and means causing said first transistor to be suubstantially fully non-conductive when said second transistor is substantially fully conductive, said last named means including a semiconductor diode connected in said first circuit and connected to cancel the voltage appearing across the emitter-collector circuit of said second transistor.

3,098,965
CLOSED LOOP CONTROL DEVICE
De Witt H. Miller, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed May 16, 1961, Ser. No. 110,394
6 Claims. (Cl. 322—28)



6. In an alternating current generator voltage regulator, a saturable reactor, having a gate winding and a control winding, means to supply voltage from the output of said generator through said gate winding and a unidirectional conducting device to the excitation field of said generator, a bridge circut, a rectifier means to supply voltage from said output through said rectifier to diagonally opposite corners of said bridge circuit, said bridge comprising two paths between said corners, one including a voltage regulator tube adjacent one of said corners, said control winding being connected between the terminal of said tube remote from said adjacent corner, and a desired point on the opposite path, whereby said control winding is supplied with current varying with said output voltage, a relay connected in shunt with said paths through a resistance shunted by a condenser, whereby said condenser is normally charged from said rectifier and upon abrupt drop in said output voltage discharges through said relay to cause its deenergization, and means responsive to deenergization of said relay to short circuit said gate winding and said resistance.

3,098,966
PROTECTIVE CIRCUIT FOR TRANSISTOR REGULATORS
Louis J. Raver, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,237
8 Claims. (Cl. 322—73)

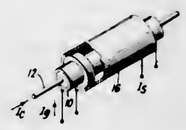


1. In combination, an alternating current generator having a three phase output winding and a field winding, a three phase full wave bridge rectifier network having a pair of D.C. output terminals and a plurality of A.C. input terminals connected with said output winding, a transistor voltage regulating means comprising first and second transistors each having emitter, collector and base electrodes, said transistor voltage regulating means having a positive terminal, a field terminal and a negative terminal, conductor means connecting one side of said field winding with the field terminal of said transistor voltage regulating means, conductor means connecting said field terminal with the collector electrode of said first transistor, a circuit connecting said positive terminal and the emitter electrode of said first transistor including a first diode poled to conduct current towards said emitter of said first transistor, means connecting the collector electrode of said second transitor with the base electrode of said first transistor, means connecting the emitter electrode of said second transistor to a side of said first diode opposite from its connection with the emitter electrode of said first transistor, a voltage dividing network connected across the positive and negative terminals of said transistor voltage regulator, a Zener diode connected between the base electrode of said second transistor and said voltage divider network, a second diode connected in parallel with said field winding, and a third diode connected between said positive and negative terminals of said transistor voltage regulator.

3,098,967
CRYOTRON TYPE SWITCHING DEVICE
Paul H. Keck, Bayside, N.Y., assignor, by mesne assignments to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Jan. 9, 1959, Ser. No. 785,963
4 Claims. (Cl. 323—94)

4. A switching device consisting of an electrically conductive cylinder through which a load current flows; an

electrically conductive wire extending axially within said cylinder, a control current flowing through said wire; and means to maintain said cylinder and said wire at an extremely low temperature at which said cylinder is a superconductor for control current values falling below a designated minimum value, said cylinder being normally conductive when said control current attains a value



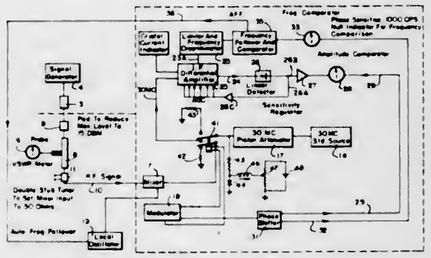
at least equal to said minimum value, and an electrically conductive sensing element extending in the same direction as said wire and positioned adjacent the outer surface of said cylinder, said element being magnetically shielded from said wire when said cylinder is superconductive whereby no current is induced in said element, a sensing current being induced in said element when said cylinder is normally conductive.

3,098,968

STANDARD SOURCE COMPARISON SYSTEM FOR HIGH-FREQUENCY VOLTAGE RATIO METER INCLUDING ALTERNATELY CONNECTABLE LOAD TERMINATIONS

Bruno O. Weinschel, Bethesda, and Gunther U. Sorger, Rockville, Md., assignors to Weinschel Engineering Co., Inc., Kensington, Md., a corporation of Delaware

Filed Aug. 17, 1961, Ser. No. 132,233
6 Claims. (Cl. 324—58)



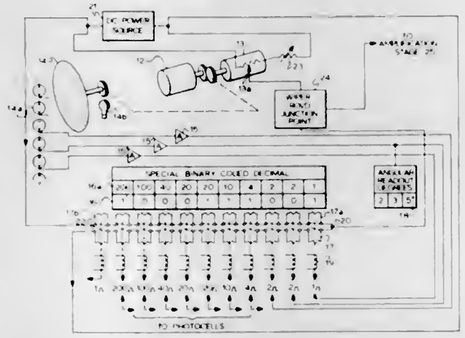
1. In an insertion loss test system comprising a high-frequency signal generator, a standard source of I.F.; a local oscillator; a mixer for beating the output of said generator with the output of the local oscillator to provide a beat frequency output at the same frequency as the standard I.F. source; an I.F. amplifier; and means for alternately supplying the output from said standard source and from said mixer in counterphase to said I.F. amplifier for comparison during continuous-wave operation of both the mixer and the standard source, comprising transfer means for alternately supplying each of said outputs to the I.F. amplifier in turn, and means for supplying the other of said outputs to a respective load termination for each device, during the alternate periods when the output of each device is not supplied to the I.F. amplifier, each said load termination being of the same value as the load seen by the device during the interval when its output is supplied to the I.F. amplifier, whereby the mixer and the standard source are respectively under constant load during the comparison.

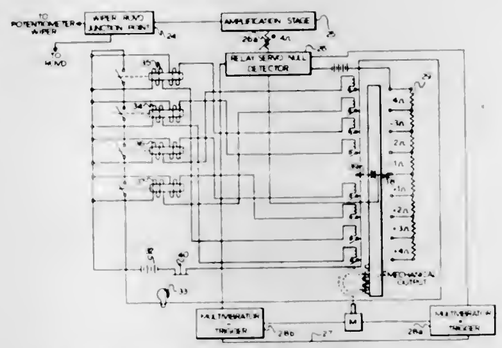
3,098,969

APPARATUS FOR AUTOMATIC TESTING OF A POTENTIOMETER'S LINEARITY AND TOTAL RESISTANCE INCLUDING ACTUATING MEANS RESPONSIVE TO A PREDETERMINED PERCENT OF ERROR

Saul Liss and Rubin R. Kaylin, Fair Lawn, N.J., assignors to General Precision Inc., Little Falls, N.J., a corporation of Delaware

Filed June 20, 1960, Ser. No. 37,257
6 Claims. (Cl. 324—63)





1. A potentiometer tester comprising in combination;
holding means for holding a potentiometer under test including leads for coupling to a direct current source;
a code holder for holding a code of radix powers and coefficients;
moving means coupled to said holding means and said code holder for simultaneously turning said potentiometer along the wiper positions thereof and moving said code holder along a predetermined path of travel;
code reading means adjacent said code holder and having separate output signal producing means for each radix power and coefficient which can be read;
a relay having windings coupled to each of said separate output signal means and responsive thereto;
a relay operated voltage divider including input and output leads at the ends for correction to said source in a closed circuit, said relay operated voltage divider having a center tap and two sets of in series resistors on the one and the other side of said center tap adapted to be switched in or shorted out of a bank of resistors, there being one resistor in each set having an ohmic value corresponding to a radix power or coefficient of a code held by said code holder, each one of said relays having a pair of switches connected to energize resistors in each set

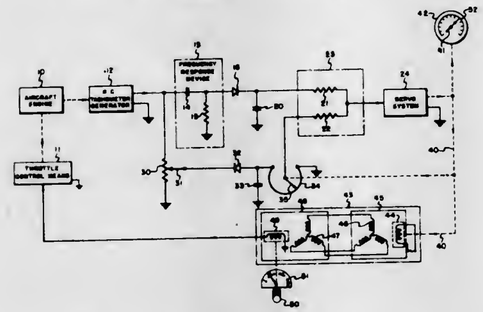
having an ohmic value corresponding to the particular radix powers or coefficients read at said station, said switches switching in and shorting out resistors in each set having the same ohmic value, so that the total resistors in said bank between said input lead and center tap will correspond in ohmic value to said radix powers and coefficients at said station;
a servo null detector to which is fed the output of said center tap and said wiper, said detector having a null value when said outputs are equal;
polarity responsive output trigger means responsive to said detector and electromechanical means responsive to said triggers, one trigger causing said electromechanical means to move in one direction when said detector has a value below the null value, the other trigger causing said electromechanical means to move in the other direction when said detector circuit has a value above said null value;
stepped resistors connected in series in said detector circuit, so disposed that resistors are added to said detector circuit when said electromechanical means move in one direction whereas resistors are deducted from said detector circuit when said electromechanical means move in the other direction;
memory contacts corresponding to each of said stepped resistors and being engaged by said electromechanical means when a stepped resistor is added or deducted from said detector circuit, each memory contact being coupled with another memory contact which is separated therefrom by the amount of stepped resistors totalling the maximum predetermined permissible number of errors; memory means remembering and totalling the first engagement of either one of any of said coupled memory contacts; and
signal means giving a signal when said total exceeds said predetermined permissible number.

3,098,970

SPEED RESPONSIVE SYSTEM

Harry D. Smith, Massapequa Park, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed May 2, 1958, Ser. No. 732,639
9 Claims. (Cl. 324—70)



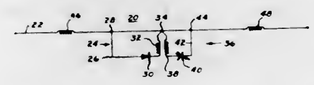
1. In a speed responsive system, signal generating means for providing an A.C. output having an amplitude which varies in accordance with the product of its amplitude gradient which is susceptible of undesired variations and its speed, and a frequency proportional to said speed, means responsive to said output for providing a first signal which varies in accordance with the product of said amplitude gradient and the square of said speed, means responsive to said output for providing a second signal which varies in accordance with the product of said amplitude gradient and said speed, and means including quotient-obtaining means responsive to said first and second signals for providing the quotient of said first signal with respect to said second signal to provide a third signal proportional to said speed and independent of the undesired variations of said amplitude gradient.

3,098,971

REMOTELY ACTUATED RADIO FREQUENCY POWERED DEVICES

Robert M. Richardson, Sterling, Va.

Filed Sept. 26, 1961, Ser. No. 140,892
2 Claims. (Cl. 325—9)



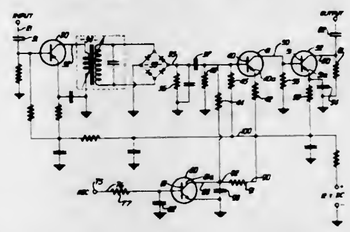
1. A transponder circuit comprising a dual band antenna for receiving radio frequency energy at a fundamental frequency and re-transmitting said energy at a harmonic of said fundamental frequency, a first passive network resonant at said harmonic frequency selectively coupled with said antenna for receiving energy at said fundamental frequency and multiplying the fundamental frequency to the harmonic frequency, said first passive network comprising a first matching section tuned to feed radio frequency energy at the fundamental frequency from the antenna to the first network, a diode in series with the matching section for clipping said energy, a first inductance in series with said diode and connected through the antenna with the first matching section, the diode, first matching section and first inductance comprising a resonant circuit tuned to resonate at a desired harmonic of the fundamental frequency and being powered totally by the energy received by the antenna and clipped by the diode, and a second passive network resonant at the harmonic frequency coupled with the first network and energized thereby, the second network being selectively coupled to the antenna to feed energy to said antenna at the harmonic frequency whereby transmission of energy at said harmonic frequency is effected.

3,098,972

TRANSISTORIZED PULSE GATE NOISE LIMITER

James Wesley Howard, 510 S. Gloster, Tupelo, Miss.

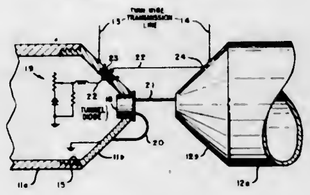
Filed Oct. 10, 1961, Ser. No. 144,141
1 Claim. (Cl. 325—319)



A pulse gate noise limiter for a transistorized radio frequency communications receiver having a radio frequency signal path, which comprises: first circuit means connected to said radio frequency signal path for sampling the signal in the radio frequency signal path of the receiver; second circuit means connected to said first circuit means for producing D.C. pulses comparable to unwanted noise pulses in the radio frequency signal path; third circuit means connected to said second circuit means and connected to the radio frequency signal path after the connection of said first circuit means, said third circuit means including an electronic circuit element in said radio frequency signal path having means biasable by said

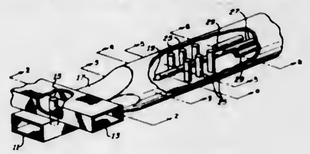
D.C. pulses for reducing said unwanted noise pulses; and means for controlling the operating level of said second circuit means, said means comprising a transistorized AGC voltage source in the receiver at a point after the connection of said third circuit means to the radio frequency signal path, and an electrical connection between said source and said second circuit means.

3,098,973
ANTENNA INCORPORATING ACTIVE ELEMENTS
Arthur F. Wickersham, Jr., Sunnyvale, and Ross L. Bell, San Jose, Calif., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,235
2 Claims. (Cl. 325—375)



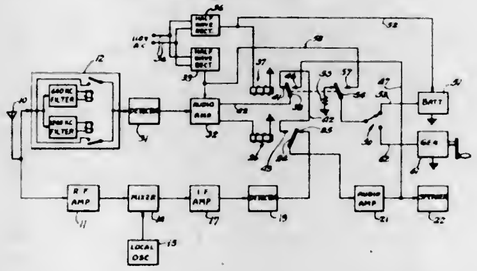
1. A dipole antenna comprising a pair of axially aligned hollow conducting elements having their inner adjacent ends axially spaced apart, a tunnel diode mounted within one of said elements and having two leads, bias voltage supply means mounted within one of said elements, means for electrically connecting the leads of said diode to the inner ends respectively of said elements, means for electrically connecting the output of said supply means across said elements whereby the supply means and the elements and the diode are connected together in electrical series, the output of said supply means being of such magnitude that said diode operates in the negative resistance region of its voltage-current characteristic, each of said dipole elements having a length slightly greater than its resonant length at the midpoint of the operating frequency range of the antenna whereby said elements and said tunnel diode jointly function as a microwave amplifier of signals impressed on said elements.

3,098,974
MIXER EMPLOYING GYROMAGNETIC ELEMENTS
Bobby J. Duncan, Clearwater, Fla., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 30, 1961, Ser. No. 148,369
6 Claims. (Cl. 325—448)



1. Apparatus for mixing two signals of different frequencies comprising a section of coaxial transmission line, means for supplying first and second signals to said coaxial transmission line in the TE_{11} mode of propagation, a pair of gyromagnetic mixing elements disposed symmetrically on opposite sides of the center conductor of said coaxial transmission line and in the planes of circular polarization of the incident energy, means for magnetically biasing each gyromagnetic element of said pair in a sense opposite to each other and in a direction perpendicular to the axis of said transmission line, and gyromagnetic elements when thus magnetized and excited cooperating to yield a microwave signal having a frequency equal to the difference of the frequencies of said first and second input signals and propagating in the TEM mode, a mode suppressor for passing only the energy propagating in the TEM mode, and output means for coupling the TEM mode energy to utilization means.

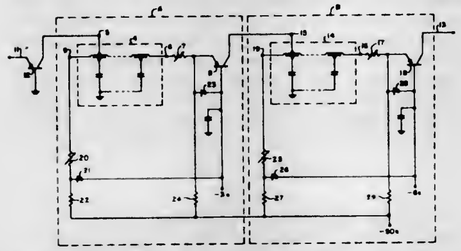
3,098,975
EMERGENCY RADIO RECEIVER
Joseph Schneiderman, 6649 N. Rockwell St., Chicago, Ill.
Filed Jan. 25, 1960, Ser. No. 4,278
3 Claims. (Cl. 325—466)



1. A radio receiver adapted to receive conventionally broadcast programs and, in the alternative, to receive emergency intelligence carried on one or more predetermined carrier frequencies comprising: an antenna, a frequency-responsive device having an input connected to the antenna, said device including filter circuits one individual to each said frequency, switching means connected to and actuable by the output of the filter circuit then active in accordance with the one of the frequencies then being received, a detector adapted to be connected to the then-active filter circuit through said switching means for demodulating the intelligence on the then received frequency, an audio amplifier receiving the demodulated signal from the detector, relay means actuated by the output of said amplifier, a speaker continuously connected to a source of power, circuit means connected between said relay means and said speaker for activating the speaker upon energization of said relay means to render audible the intelligence carried on the received frequency, a conventional broadcast receiver adapted to utilize said speaker connected to said antenna including a second audio amplifier providing an output to said speaker, and circuit means between said second amplifier and relay means to connect said speaker to said second amplifier in the absence of any of said predetermined carrier frequencies.

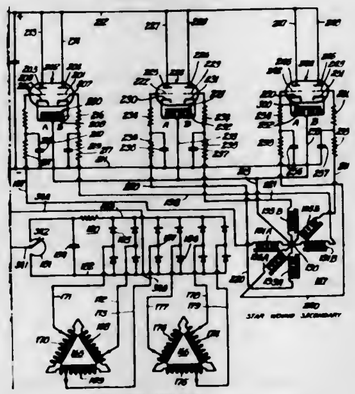
3,098,976
LOW CROSS-TALK DELAY CIRCUIT
David M. Leakey, Eastcote, Ruislip, England, assignor to The General Electric Co., Ltd.
Filed Sept. 15, 1960, Ser. No. 56,180
Claims priority, application Great Britain Oct. 8, 1959
9 Claims. (Cl. 328—55)

1. A low cross-talk delay circuit adapted to delay a pulse train for a period such that reflections of pulses in said delay circuit tend to interact with later pulses of said train, comprising: a plurality of delay stages connected in cascade, the over-all delay time of the cascaded stages being equal to said period; each stage including a delay line having an input to which the pulses to be delayed are applied and means for responding to pulses delayed by said line to pass them to an output of the stage but not responding to reflections of said pulses in said line; and the delay line of each stage having a delay time such that the appearance at the input of the first reflection of any pulse within that delay line



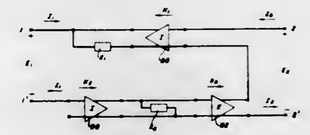
is not concurrent with the application to that input of another later pulse of the pulse train.

3,098,977
AUTOMATIC VOLTAGE COMPENSATOR FOR THREE PHASE
Albert M. Sciaky, Chicago, Ill., assignor to Welding Research, Inc., Chicago, Ill., a corporation of Illinois
Original application Dec. 2, 1958, Ser. No. 777,774. Divided and this application Feb. 23, 1961, Ser. No. 91,107
6 Claims. (Cl. 328—69)



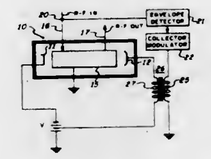
1. In a voltage compensating circuit, the combination with a poly-phase alternating current supply, of a dual-triode electric valve for each phase having a primary winding connected to the cathodes thereof and having a resistance-capacity network connected to each grid, means coupling the grid-cathode circuits of each valve with its respective phase of the alternating current supply and in a manner whereby each valve will have push-pull operation so that the primary winding having connection with each valve will be center tapped providing two sections, means rectifying the poly-phase alternating current to produce a direct current voltage which will vary in magnitude as the voltages of the alternating current supply may vary, a second group of dual-triode electric valves including one for each phase, a secondary winding inductively associated with each said primary winding and having connection with the grids of a valve of the second group, means connecting the rectifier to the grid-cathode circuits of the second group of valves including a conductor having a center-tapped relation with each secondary winding to provide two sections respectively, a primary winding in each plate-cathode circuit of said second group of valves and wherein phase-shifted electric pulses are produced as a result of operation of the valves, and a regulator valve capable of producing a direct current voltage and which is also supplied to the grid-cathode circuits of the second group of valves for setting a voltage level in excess of which the valves will conduct.

3,098,978
NONRECIPROCAL WAVE TRANSLATING NETWORK
Jack M. Sipress, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 30, 1959, Ser. No. 849,844
7 Claims. (Cl. 330—12)



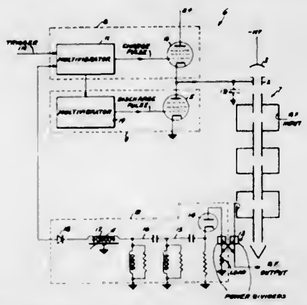
2. A nonreciprocal signal translating network comprising two signal paths, the first of said paths comprising, in cascade, a first current amplifier and a first current-to-voltage transducer, the second of said paths comprising a second current amplifier, a second current-to-voltage transducer and a voltage amplifier, said amplifiers and said transducers each having a pair of input terminals and pair of output terminals, one of said output terminals of said voltage amplifier being connected to one of the input terminals of said first current amplifier, means for connecting an output circuit between the other output terminal of said voltage amplifier and the other input terminal of said first current amplifier, one of the output terminals of said first transducer being connected to said one output terminal of said voltage amplifier, and means for connecting an input circuit between the other output terminal of said first transducer and an input terminal of said second current amplifier.

3,098,979
DEPRESSED POTENTIAL OPERATION OF ELECTRON BEAM TUBES
James Robert Ashley and Carol McCauley Veronda, Gainesville, Fla., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 133,463
5 Claims. (Cl. 330—44)



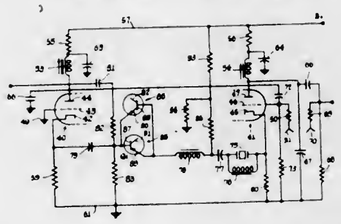
1. The method of achieving linear operation of a depressed collector velocity modulation electron tube when used as a linear amplifier for amplitude modulated waves comprising the steps of abstracting a sample of the input wave to be amplified, passing the sampled wave through a detector to obtain the envelope of the amplitude modulation of said input wave, and controlling the potential on the collector of said tube in accordance with the amplitude of said envelope to increase the potential on the collector when a high amplitude signal is coupled to the input of said tube and decrease the potential on said collector when a lower amplitude signal is coupled to the input of said tube.

3,098,980
PULSE SHAPING KLYSTRON MODULATOR
Sven H. M. Dodington, Mountain Lakes, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Oct. 6, 1958, Ser. No. 765,355
14 Claims. (Cl. 332—7)



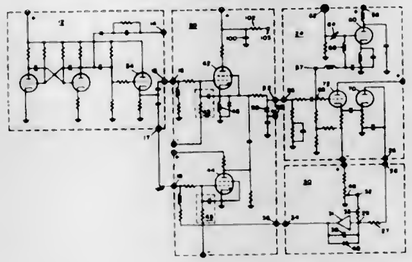
9. A klystron modulator system comprising:
a klystron having a modulating anode disposed therein;
first means to periodically generate and apply a first modulating voltage to said anode which varies linearly with time;
second means to periodically generate and apply a second modulating voltage to said anode which also varies linearly with time;
means interconnecting said first and second means;
means coupled to said first means to control the instant said first voltage is generated and applied to said anode; and
means coupled to the output of said klystron and one of said first and second means responsive to the zero rate of change of amplitude of the radio frequency modulation envelope to control the instant said first voltage is removed from and said second voltage is generated and applied to said anode.

3,098,981
FREQUENCY MODULATED CRYSTAL OSCILLATOR
Harry R. Foster, Montville, and Elmo E. Crump, West Caldwell, N.J., assignors to Ohmega Laboratories, Pine Brook, N.J., a corporation of New Jersey
Filed Oct. 10, 1958, Ser. No. 766,480
8 Claims. (Cl. 332—26)



1. In a signal generating apparatus, an oscillator comprising a pair of electron discharge devices each having an anode, a grid and a cathode; power-supply means providing a potential difference between each cathode and its associated anode; two cathode-anode oscillatory circuits connected respectively with said devices; a coupling circuit between the anode of one discharge device and the grid of the other discharge device; an output circuit connected to the anode of the said other discharge device; a cathode coupling circuit having in series a piezo-electric crystal directly coupled therein, said coupling circuit being connected between the cathodes of said devices; an input circuit connected to the said cathode coupling circuit; a conductive crystal device comprising a pair of transistors series connected back-to-back, said devices being connected in the said cathode coupling circuit and constituting a variable impedance therein, said input circuit being connected to feed a signal to the said conductive crystal device whereby the oscillator produces a frequency-modulated signal when a suitable audio signal is applied to the said input circuit.

3,098,982
SUPERREGENERATIVE AMPLIFIER
John H. Kuck, Silver Spring, Md., assignor of fifty percent to Walter G. Finch, Baltimore, Md.
Filed July 21, 1959, Ser. No. 828,617
6 Claims. (Cl. 332—31)



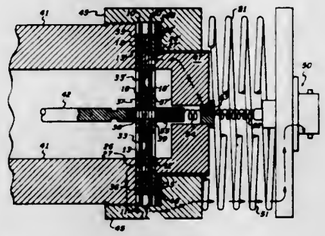
4. In a circuit arrangement, means including an oscillator in which oscillations are enabled by a keying pulse for the duration of said keying pulse, means for receiving a portion of the output of said oscillator and using it to provide said keying pulse so that said duration is less than the time required for the oscillation of said oscillator to build up to maximum amplitude, thereby forming a closed feedback loop which can be used to control and stabilize the maximum amplitude to which the oscillations build up and to modulate the output of said oscillator by means of a modulating signal injected into the control loop.

3,098,983
WIDEBAND MICROWAVE HYBRID
Arthur A. Oliner, Brooklyn, N.Y., assignor to Merrimac Research and Development, Inc., Flushing, N.Y., a corporation of New York
Filed June 29, 1960, Ser. No. 39,671
13 Claims. (Cl. 333—10)



1. Wideband microwave hybrid apparatus operative over a substantial frequency range centered at a predetermined midrange frequency comprising a first rectangular waveguide structure of conductive material, a second rectangular waveguide structure of conductive material having a narrow wall at least partly in common with a narrow wall of said first waveguide structure, an aperture in the conductive material of said common wall portion providing an interaction region for said waveguide structures, said waveguide structures being capable of supporting first and second modes of propagation in said interaction region in the vicinity of said aperture, and means placed in said interaction region to affect one of said modes to a substantially greater extent than the other for differentially altering the phase velocity for said two modes of propagation, said means comprising a structure having a thickness in the direction of the wide transverse dimension of said waveguide structures which is small compared to the width of one of said waveguide structures, the relation between the dimensions, location, and differential phase velocity effect of said structure with respect to said two modes causing the first derivatives of phase velocity with respect to frequency for the said two modes to be substantially equal to each other at a frequency within the design frequency range of said apparatus.

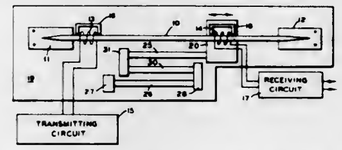
3,098,984
BOLOMETER MOUNTING MEANS FOR USE IN COAXIAL TRANSMISSION LINES
Howard L. Martin, Safety Harbor, Fla., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Feb. 28, 1961, Ser. No. 92,229
6 Claims. (Cl. 333—22)



1. Apparatus for mounting a bolometer element for insertion in a coaxial transmission line bolometer mount comprising a thin disc of dielectric material, a first pair of centrally concave arcuate conductive surfaces disposed diametrically opposite each other on a first face of said disc, said arcuate conductive surfaces of said first pair being separated from each other at their ends by a pair of small gaps disposed diametrically opposite each other, a centrally positioned conductive surface on said first face and separated from each of said arcuate surfaces by a small gap adjacent the mid-region of each of said arcuate surfaces, a second pair of centrally concave arcuate conductive surfaces disposed diametrically opposite each other on the other face of said disc and in substantial registration with the first pair of arcuate conductive surfaces, a centrally positioned conductive surface on said other face, means for providing conductive continuity between the centrally positioned conductive surfaces on opposite faces of said disc and also between two registering arcuate surfaces on opposite faces of said disc, and a bolometer element conductively connected across one of said gaps on said first face between said centrally positioned conductive surface and the arcuate conductive surface having conductive continuity with a registering arcuate conductive surface on said other face of said disc.

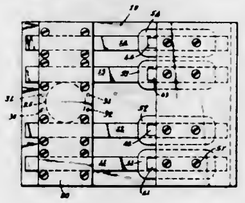
3,098,985
COMPENSATING MEANS FOR DELAY LINES
Cecil Earl Rhodes, Brooklyn, N.Y., assignor to Sealectro Corporation, Mamaroneck, N.Y.
Filed May 23, 1961, Ser. No. 111,975
1 Claim. (Cl. 333—30)

A temperature compensated magnetostrictive delay line comprising; a magnetostrictive system including a transmitting winding connected to a transmitting circuit, a receiving winding connected to a utilization circuit, a magnetostrictive line supported on a base and magnetically coupled to both of said windings which are separated by a distance along said line, and a metal rod assembly connected between the receiving winding and the base, said assembly including a plurality of metal rods coupled in end to end relationship, one end of said assembly secured to the base and the other end secured to one of said windings, said assembly positioned so that all



of said rods are substantially parallel to said line and adapted to expand and contract in a linear direction to vary the distance between windings in response to temperature changes.

3,098,986
BAND PASS AUDIO FILTER
Thomas W. Holden, 301 W. 16th Place, Chicago Heights, Ill.
Filed June 15, 1960, Ser. No. 36,195
10 Claims. (Cl. 333—71)

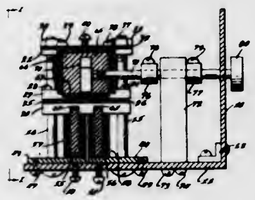


1. An audio frequency band pass filter comprising a base of magnetic material including spaced generally parallel portions and a connecting portion, a series of mechanical filter assemblies on said base each comprising a pair of magnetic cores connected to spaced opposed portions of the base adjacent the connecting portion and extending toward each other to define an air gap therebetween, vibrating reed means of magnetic material resonant at a respective different frequency of a band of frequencies including a desired intermediate frequency extending along said base and having a free end portion projecting into a corresponding one of said gaps, permanent magnet means connected between the base and the end of each of said reed means opposite the free end portion thereof, and input and output electric coil means linking the respective opposing magnetic cores of each assembly, the input electric coil means being on first magnetic cores extending from one of said spaced generally parallel portions of said base, and the output electric coil means being on second magnetic cores extending from the other of said spaced generally parallel portions of said base toward respective ones of said first magnetic cores, and means interconnecting the output electric coil means in balanced opposed relation with respect to frequencies outside of said band of frequencies to substantially balance out frequencies outside of said band of frequencies at said output electric coil means, said output electric coil means being essentially conductively isolated from said input electric coil means.

3,098,987
VARIABLE BAND PASS AUDIO FILTER
Thomas W. Holden, 301 W. 16th Place, Chicago Heights, Ill.
Filed Jan. 12, 1962, Ser. No. 165,881
7 Claims. (Cl. 333—71)

7. An audio frequency band pass filter comprising a plurality of reed means having vibrating portions of

magnetic material and being resonant at respective audio frequencies which together define a desired band pass width, coil means coupled to the vibrating portions of the respective reed means, means for producing a unidirectional magnetic flux threading said coil means under the control of the vibrating portions of said reed means, an input circuit coupled to said reed means for driving said reed means in accordance with an input signal to be filtered, said input circuit driving said reed means in accordance with desired input signal frequencies of said input signal within said band pass width to produce a modulation of the unidirectional magnetic flux threading said coil means, said input circuit being responsive to undesired input signal frequencies of said input signal outside said desired band pass width to produce magnetic flux components of corresponding undesired frequencies threading said



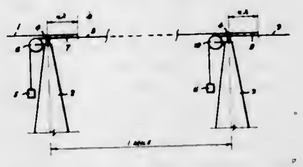
coil means, output terminals connected with said coil means for providing an output signal from said filter, said coil means comprising an even number of coils coupled to respective ones of said reed means, and means connecting said even number of coils in balanced opposing relation with respect to undesired input signal frequencies to balance out said undesired input signal frequencies at said output terminals, and adjustable permanent magnet means coupled to said vibrating portions of magnetic material for supplying to said vibrating portions an adjustable magnetic flux separate from and additional to said unidirectional magnetic flux from said producing means, said adjustable permanent magnet means having manually operable means for selectively incrementally adjusting the position of said permanent magnet means to selectively and adjustable modify the band pass width of said filter.

3,098,988

SUSPENSION AND TENSIONING OF SUCCESSIVE SECTIONS OF SURFACE WAVE TRANSMISSION LINES BETWEEN SUPPORTS WITH COUPLING BETWEEN SECTIONS AT SUPPORTS

Theodore Hafner, 265 Riverside Drive, New York, N.Y.

Filed Dec. 8, 1960, Ser. No. 74,585
4 Claims. (Cl. 333—95)



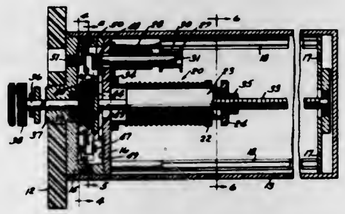
1. In a surface wave transmission system suspended on poles spaced from each other, a first surface wave conductor suspended between successive poles, means for tensioning said first conductor at one end thereof at one of said poles and means including another surface wave conductor for continuing said first conductor from said pole to another pole including means including a second surface wave conductor tensioned at said other pole for coupling said two conductors by closely arranging these conductors in parallel to each other for a distance extending over several operative wavelengths.

3,098,989

SERIALLY CONNECTED COURSE AND FINE INDUCTORS WITH CONTINUOUS ADJUSTMENT

Louis G. Metzger and Harold Goodman, New York, N.Y., assignors to Cosmos Industries, Inc., Long Island City, N.Y., a corporation of New York

Filed Oct. 18, 1960, Ser. No. 63,313
4 Claims. (Cl. 336—131)



1. A tuning mechanism for a variable frequency oscillator comprising a shielding container including a front panel, having a closable access opening therein, a main inductance element disposed within said shielding container, a rotatable threaded shaft extending along a preselected axis through said container, said main inductance element including a coil member rigidly fixed within said container and a core member threadedly coupled to said threaded shaft within said container, said core member being moved along said axis in telescoping relation to said coil member in response to relative rotation between said core member and said threaded shaft to vary the inductance of said inductance element and vary the frequency of the oscillator consistently and continuously through a elected range at a predetermined rate, guide means for holding said core member against rotation about the axis of said shaft, rotatable means extending externally of said container for rotating said threaded shaft in preselected relation to rotation of said external rotatable means, a compensating inductance element intercoupled in circuit relation with said main inductance element to vary the cumulative inductance of said elements, said compensating inductance element including a rigidly mounted coil and an axially movable tuning slug, a cam plate intercoupled with said threaded shaft for coordinate rotation with said threaded shaft, said cam plate having a plurality of adjusting screws disposed on a circular path concentric with the axis of the cam plate, each of said adjusting screws having a head portion forming a working cam surface and a slotted portion disposed to be presented to the access opening in said front panel to permit axial adjustment of the position of said working head portion by a tool projected through said access opening into engagement with said slotted portion, a cam follower member having a cam follower nose biased toward said working cam surfaces of said adjusting screws for transmitting motion to said tuning slug of said compensating inductance element to vary the longitudinal position of said tuning slug and thus the inductance of said compensating inductance element in accordance with the axial adjusted portion of said adjusting screws, the rotation of said cam plate, the circumferential spacing of the adjusting screws, and the configuration of the cam follower nose being such as to continuously adjust the compensating inductance element to produce cumulative inductance variation of said inductance elements producing a constant frequency change characteristic in accordance with a preselected function throughout the selected range of frequencies.

3,098,990

PRECISION VOLTAGE RATIO TRANSFORMER

Clair L. Farrand, Bronxville, N.Y., and Harold J. Hasbrouck, Teaneck, N.J., assignors to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada

Filed Aug. 25, 1959, Ser. No. 835,879
11 Claims. (Cl. 336—172)



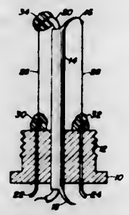
1. An inductive device comprising a winding, a field member of magnetic material enclosing said winding and completing its magnetic circuit, said field member including an inner core member and forming an annular enclosure for said winding and having apertures spaced around the said field member, said winding having a tap extending through one of said apertures so that a fractional part of the total flux of said field member is interlinked by said tap.

3,098,991

CORROSION PROBE WITH CATHODICALLY PROTECTED COMPENSATING ELEMENT

James E. Wolber, Roselle, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Nov. 30, 1960, Ser. No. 72,736
5 Claims. (Cl. 338—13)



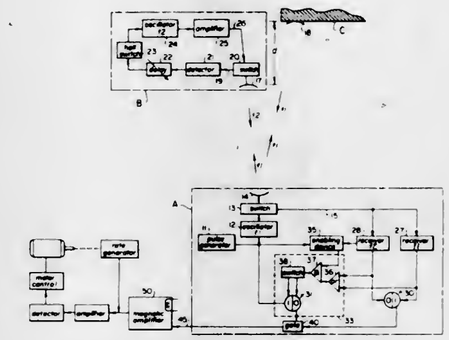
1. A corrosion test probe comprising a base, an anode supported by said base and projecting therefrom, an elongated test element fabricated of a corrodible, conductive metal operably supported at one end by said base and at the other end by said anode, said test element and anode being in electrically insulated relationship, an elongated, metallic compensating element having a temperature-resistance characteristic similar to that of said test element operatively supported at one end by said base and at the other end by said anode, said anode and compensating element being electrically connected, the exterior surface of said anode being of a metal anodic with respect to said compensating element to cathodically protect the same, and electrical conductors connected to the ends of said test element and to the base-supported end of said compensating element.

3,098,992

POSITION SENSING AND CONTROL MEANS

Robert E. Rath, Morristown, N.J., assignor to The Peelle Company, Brooklyn, N.Y., a corporation of New York

Filed Dec. 30, 1960, Ser. No. 79,712
6 Claims. (Cl. 340—1)



1. A control system for providing at a primary station a control signal corresponding in magnitude to the amount of displacement and in sign to the direction of displacement of a controlled moving object with respect to a subsidiary reference station remote to said primary station, said control system comprising means for periodically transmitting an outgoing ultrasonic wave train toward said subsidiary reference station and said object, signal return means at said subsidiary reference station and at said object and responsive to reception of each said transmitted ultrasonic wave train for transmitting a returning ultrasonic wave train toward said primary station, at least one of said signal return means including means for giving a distance-independent signal characteristic to each said wave train returned therefrom to render said each said wave train discriminatable by said characteristic, and not merely by direction or time of reception, from a wave train returned from the other of said signal return means, and logic means at said primary station for utilizing said discriminatability to indicate in the form of a control signal the sign as well as the magnitude of the time interval between the arrival of different returning ultrasonic wave trains resulting from the same outgoing ultrasonic wave train.

3,098,993

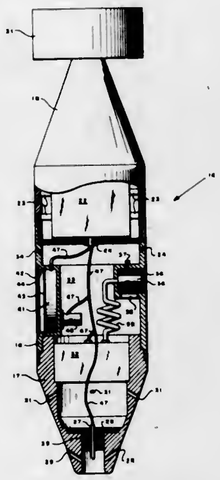
SONOBUOY-BATHYTHERMOGRAPH SYSTEM

Jesse J. Coop, Willow Grove, Pa., assignor to the United States of America, as represented by the Secretary of the Navy

Filed Dec. 21, 1959, Ser. No. 861,149
7 Claims. (Cl. 340—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

4. In a bathythermograph for obtaining the vertical temperature distribution of a large body of water of the character described, means dispensable from an aircraft into the water, comprising: a ballistic-shaped casing including a stabilizer mounted thereon, a cavity formed by the walls of said casing, passage means formed by the wall of said casing for communicating said cavity with the outside of said casing, flooding means sealingly inserted in said passage means, actuator means operatively responsive to water immersion when said bathythermograph is immersed for ejecting said flooding means from said passage means after a predetermined time interval,

transducer means for producing signals in accordance with the temperature of the water, and projector means



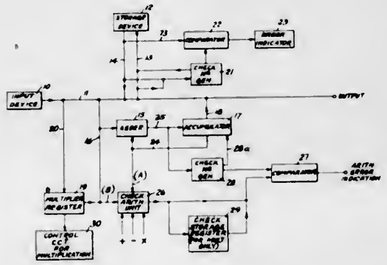
for propagating an acoustical wave signal as a function of the signals.

3,098,994

SELF CHECKING DIGITAL COMPUTER SYSTEM

Thomas G. Brown, Jr., Paramus, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Oct. 26, 1956, Ser. No. 618,556
5 Claims. (Cl. 340—146.1)



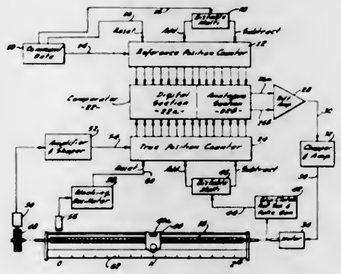
5. A remainder modulo-n checking system comprising sources of first and second binary signals representative of respective first and second decimal numbers, first and second means coupled respectively to said first and second sources for producing binary signals representative of the sum (modulo-n) of the digits of said respective first and second decimal numbers, third means coupled to said first and second means for marking one of 2^n-1 output lines in accordance with the combined output conditions of said first and second means, absent that combination associated with simultaneous values of zero (modulo-n), and a plurality of switching circuits coupled to said third means for operating on the marking signal produced at the output thereof in accordance with a selected one of three arithmetic operations.

3,098,995

SERVO SYSTEM AND COMPARATOR

Edward Mundt, Pasadena, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware

Filed Aug. 14, 1959, Ser. No. 833,880
15 Claims. (Cl. 340—146.2)



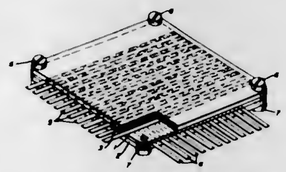
1. In a servo system, a first $(m+n)$-stage digital counter; a second $(m+n)$-stage digital counter; a comparator having a digital section and an analogue section, the digital section including means for comparing the contents of the m stages of said first and second counters and generating a first output signal of predetermined magnitude when the contents of the m stages of said first digital counter is greater than the contents of the m stages of said second digital counter, and generating a second output signal of the same predetermined magnitude when the contents of the m stages of said second digital counter is greater than the contents of the m stages of said first digital counter, and the analogue comparator section including means for converting the contents of the n stages of said first digital counter into a third output signal of magnitude proportional to the contents of the n stages thereof, means for converting the contents of the n stages of said second digital counter into a fourth output signal of magnitude proportional to the contents of the n stages thereof, the third and fourth output signals having a predetermined maximum magnitude smaller than the predetermined magnitudes of the first and second output signals, and means for combining the first and second output signals respectively with the third and fourth output signals; and a differential operational amplifier having the combined output signals applied thereto to provide an output signal of one polarity when the contents of said first digital counter is greater than that of said second digital counter and of reversed polarity when such condition is reversed, the output signal of said differential operational amplifier being proportional to the difference in magnitude of the combined signal pairs.

3,098,996

INFORMATION STORAGE ARRANGEMENT

Ernest R. Kretzmer, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 28, 1959, Ser. No. 816,451
20 Claims. (Cl. 340—173)



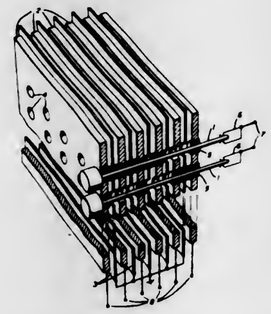
2. An arrangement for the storage of binary coded information comprising first and second pluralities of conductors arranged in orthogonal relationship so as to define a plurality of conductor crossovers, an insulating layer comprising a material having a high dielectric constant positioned between said first and second pluralities, said layer comprising capacitive couplings in first selected regions thereof and having apertures positioned in second selected regions thereof, means for positioning said conductors and said capacitive couplings in alignment at predetermined ones of said conductor crossovers, means for applying interrogation signals to selected conductors of said first plurality, and sensing means connected to conductors of said second plurality for sensing the signals thereon.

3,098,997

INFORMATION STORAGE ARRANGEMENT

Winthrop J. Means, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 28, 1959, Ser. No. 816,550
15 Claims. (Cl. 340—173)



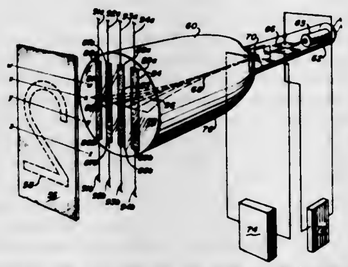
1. A capacitive storage matrix comprising a plurality of conducting plates arranged in a parallel configuration, each of said plates having a plurality of apertures therein, the apertures of each plate being aligned with corresponding apertures in the other said plates, and means for providing capacitive couplings at preselected ones of said apertures corresponding to the information to be stored thereat, said last-mentioned means comprising removable members of equal length each threading a corresponding group of said apertures.

3,098,998

MAGNETIC TRANSDUCER

James T. Smith, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 30, 1958, Ser. No. 745,533
1 Claim. (Cl. 340—174.1)



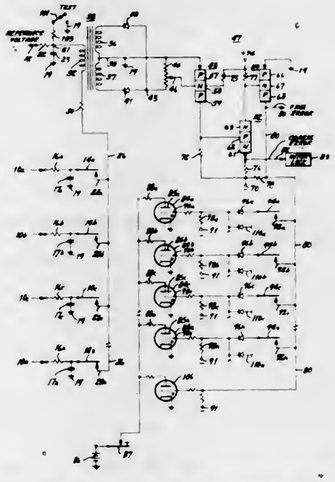
A magnetic transducer for recovering information recorded upon a card in the form of magnetic and non-magnetic areas comprising an evacuated envelope having a flat end, said flat end having an outer surface adapted for contact with a recording card of the type defined and an inner surface bearing elongated transversely spaced strips of a crystalline semi-conductive material, an electron gun located within said envelope at the end thereof opposite to said flat end and operable to direct a beam of electrons against said flat end in a direction substantially perpendicular to the plane determined by said strips. means effective to spread said beam in a transverse plane so that its fanned-out end may encompass all said strips in a direction transversely thereof and operable to sweep said spread electron beam over said strips in a direction longitudinally thereof so as to produce individual voltage impulses across the opposite ends of each strip as the fanned-out electron beam encounters in said strips magnetic fields emanating from a recording card held against the outer surface of said flat end, and means including leads extending from the opposite ends of said strips through said envelope to the outside for utilizing the voltages developed across said strips.

3,098,999

VOLTAGE MONITOR SYSTEM

Genung Leland Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

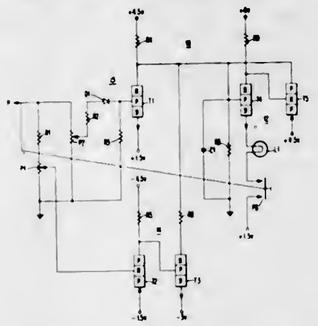
Filed Dec. 11, 1958, Ser. No. 779,737
2 Claims. (Cl. 340—248)



1. A system for monitoring the voltages present at a plurality of locations comprising means for sampling the voltages at the respective locations, a source of reference potential, means for producing an error voltage when the voltage sampled is not substantially equal to said reference potential, sense amplifier means connected to said last named means for measuring the magnitude of the error voltage, said sense amplifier comprising first, second and third transistor amplifiers, each of said transistor amplifiers having a respective emitter, base and collector electrode, means connecting the collector electrode of said first transistor to the base electrode of said second transistor, means connecting the collector electrode of said second transistor to the base electrode of said third transistor, means for supplying the error voltage to the base electrode of said first transistor, first output means connected to the collector electrode of said third transistor, said first, second and third transistors operating as substantially linear amplifiers in response to an error

voltage of less than a predetermined magnitude and thereby producing an output signal at said first output means, and second output means connected to the emitter electrode of said second transistor, said third transistor being saturated by an error voltage of a magnitude greater than said predetermined magnitude and causing an output signal to be produced at said second output means, a plurality of indicators, each one of said indicators corresponding to a respective one of said locations, and means for connecting the indicator corresponding to the location whose voltage is being sampled to said first output means of said amplifier during the time the voltage is sampled, a respective indicator producing an indication which represents the location where the sampled voltage did not substantially equal the reference potential in response to an output signal at said first output means.

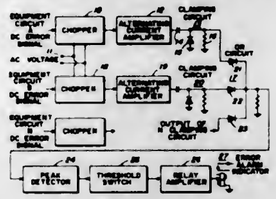
3,099,000
SIGNAL MONITOR
Joseph E. Dunning, Glen Aubrey, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 20, 1959, Ser. No. 814,566
2 Claims. (Cl. 340—248)



2. In combination, an indicating device, means including a manual switch, a delay circuit, and a first semiconductor switch for connecting the indicating device to a source of electrical energy, an additional semiconductor switch activated by the first semiconductor switch to apply a feed-back signal thereto, a probe, control means including a semiconductor switch connected for controlling the first semiconductor in accordance with variations in a voltage signal from one voltage level, means including a voltage divider connecting the probe to said control means, additional control means including another semiconductor switch connected for controlling said first semiconductor switch in accordance with variations in the voltage signal from a different voltage level, and additional voltage divider means connecting said additional control means to the probe.

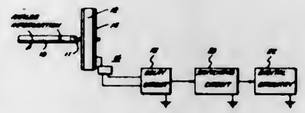
3,099,001
VOLTAGE COMPARATOR THRESHOLD ALARM CIRCUIT
Donald M. Syptak, Richardson, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed July 3, 1961, Ser. No. 121,725
1 Claim. (Cl. 340—248)

A threshold alarm circuit responsive to low-level direct-current voltages irrespective of polarity from a plurality of input circuits comprising, a chopper, an alternating-current amplifier, and a clamping circuit connected respectively in series for each of said input circuits, said input circuits being connected to said respective choppers, means for operating said choppers in synchronism, each of said clamping circuits receiving the amplified output of the respective one of said choppers to establish the peaks of a predetermined polarity of the voltages applied to all of said clamping circuits at a common potential regardless of the polarities and amplitudes of the voltages applied to the inputs of said threshold alarm circuit, an OR circuit, the output of each of said clamping circuits being connected to a respective input of said OR circuit, said OR circuit having a diode for each of said input cir-



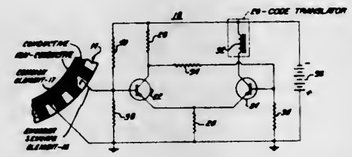
cuits, said diodes being conductive to pass voltage to the output of said OR circuit, any one of said diodes being conductive in response to the application of voltage greater than the peak voltage applied to any other of said diodes providing said peak voltage has polarity opposite from said predetermined polarity, and indicator means operative in response to the application of peak voltage from the output of said OR circuit exceeding a predetermined value.

3,099,002
ENCODER CIRCUITS
Carl P. Spaulding, San Marino, and Merton Carr Wilson, Pasadena, Calif., assignors to Datex Corporation, Monrovia, Calif., a corporation of California
Filed Feb. 24, 1959, Ser. No. 794,872
11 Claims. (Cl. 340—347)



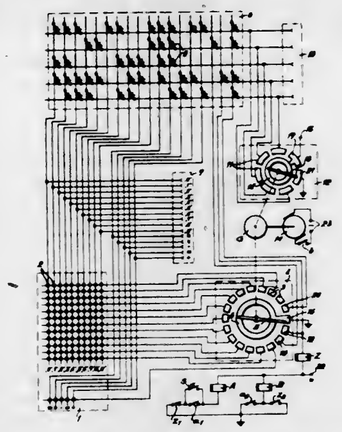
11. In an encoder, a rotatable shaft mounting a disc having at least a single continuous track thereon having a binary characters recorded as conductive and nonconductive segments, sensing means mounted for continuously engaging said disc for sensing the segments thereof to continuously provide binary coded electrical signals corresponding thereto, said rotatable shaft being adapted to be responsive to analog information to drive the shaft at a rate to cause the sensing means to intermittently engage and disengage any one segment on the disc and thereby provide electrical signals corresponding to the recorded binary characters whereby erroneous signals may be derived from the encoder, switching circuit means having two conductive conditions and continuously switchable therebetween coupled to said sensing means to be switchably responsive to each change in the binary character of the signal coupled thereto, said switching circuit comprising a pair of transistors each having an input, output, and control electrode, impedance means including a common impedance element for biasing the input-control electrode circuit of each of said transistors relative to a reference potential to assure one of said transistors is in a nonconductive condition while the other is in a conductive condition, impedance means coupled between the output electrode of one of said transistors and the control electrode of the other of said transistors, individual impedance means coupled to each output electrode and a point of opposite potential with respect to said reference potential, a resistance-capacitance time delay circuit coupled to the control electrode for said one transistor, an asymmetrical conductive device connected to the junction of said resistance-capacitance circuit and to the output electrode of the other transistor and poled to cause the charging and discharging of the capacitor in accordance with the conductive and nonconductive condition respectively of said one transistor, another time delay means having a time delay greater than the time intervals during which the sensing means is disengaged from the disc and coupled intermediate said sensing means and the input-control circuit of said one transistor to thereby transmit thereto only the electrical signals corresponding to a sensed conductive or nonconductive segment, the resistance-capacitance time delay circuit coupled to said one transistor is responsive to the signals derived from said another delay circuit to maintain the transistors in their respective conductive conditions for a preselected interval after they have assumed their respective conductive conditions.

3,099,003
ENCODER CIRCUITS
Carl P. Spaulding, San Marino, and Merton Carr Wilson, Pasadena, Calif., assignors to Datex Corporation, Monrovia, Calif., a corporation of California
Filed Feb. 24, 1959, Ser. No. 794,873
4 Claims. (Cl. 340—347)



1. In an encoder, a rotatable shaft mounting a disc having at least a continuous single track thereon comprising spaced conductive and nonconductive segments representative of binary coded characters, said rotatable shaft is adapted to be responsive to analog information derived from a revolving shaft, sensing means for continually engaging said disc to serially sense said segments and to provide electrical signals representative of the sensed binary characters, and switching means having two conductive conditions coupled to be continuously and solely responsive to the electrical signals provided by said sensing means for unambiguously reproducing the sensed segments as binary coded electrical characters in terms of the conductive and nonconductive conditions thereof without regard to the direction of rotation of said shaft, said switching means comprising a pair of transistors each having an emitter, collector and base electrode, impedance means coupling the collector electrode of one of said transistors with the base electrode of the other transistor, common impedance means connected to the emitter electrodes of each of said transistors and a point of reference potential, impedance means coupled to the base electrode for the transistor and the point of reference potential, impedance means coupled to the base electrode of said one transistor and a point of negative potential relative to said reference potential, and individual impedance means each separately connected to the collector electrode of one of said transistors and the point of negative potential, and means for applying the electrical signals representative of the sensed binary characters from said sensing means in parallel circuit relationship with the base-emitter circuit of said one transistor connected to said reference potential whereby said transistors are alternately rendered conductive and nonconductive in accordance with the conductive and nonconductive characteristics of the sensed binary characters.

3,099,004
ARRANGEMENT FOR SERIES-TRANSMISSION OF CODED SIGNALS
Hans Heuer, Wilhelmshaven, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany
Filed May 29, 1959, Ser. No. 816,871
Claims priority, application Germany Oct. 23, 1958
11 Claims. (Cl. 340—347)



1. An information output arrangement for delivering the output of an information handling system simultaneously in different forms including different forms of a chosen multi-order code, comprising, in combination,

(*a*) means for supplying electric energy;

(*b*) information transfer means for making available multi-order digital information having a plurality of control pulse input means respectively associated with different order positions of said multi-order digital information, and a plurality of pulse output means respectively associated with different digital values, said transfer means releasing an output pulse representing a digital value upon application of a control pulse;

(*c*) electrical coding means connected with said output means for translating output pulses representing digital values released from said transfer means into output signals representing such digital values in terms of a multi-order code and having a plurality of output means for delivering said output signals as a group of code pulses in parallel;

(*d*) first stepwise operable selector switch means connected with said output means of said coding means and having an output terminal for delivering during each cycle of operation thereof said output signals as a coded sequence of pulses in terms of said multi-order code;

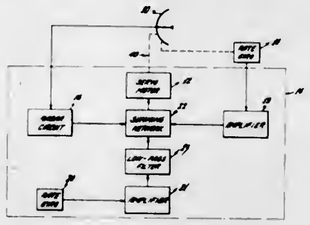
(*e*) second stepwise operable selector switch means connected between said means for supplying electric energy and said control pulse input means of said information transfer means for applying sequentially during each of its cycles of operation a control pulse to each of said control pulse input means; and

(*f*) drive means for operating said first and second selector switch means in such a manner that said first selector switch means carries out at least one complete cycle of operation while said second selector switch means applies one of said control pulses to said information transfer means,

whereby with consecutive steps of said second selector switch means output pulses representing digital values are released in the sequence of their re-

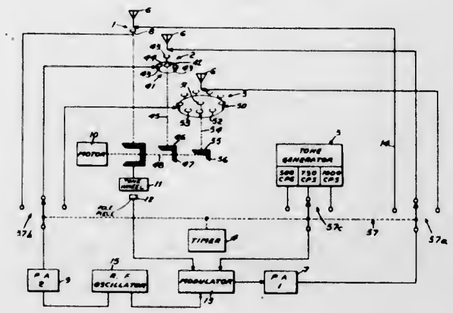
spective order positions from said transfer means, translated by said coding means into output signals in terms of the multi-order code and these output signals are delivered simultaneously in parallel and in series.

3,099,005
STABILIZED TRACKING SYSTEM
Edwin Allen Goldberg, Princeton Junction, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 1, 1957, Ser. No. 688,805
6 Claims. (Cl. 343—7)



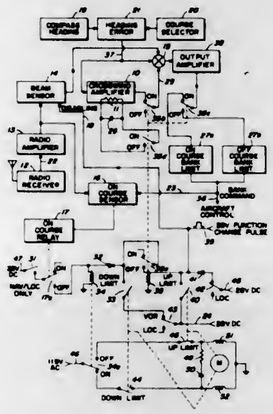
1. In a servo-system, of the type adapted to be mounted on a support which is capable of motion with respect to a reference plane, in combination, a first sensing means producing an error signal in response to the departure of an object, the position of which is being sensed, from a predetermined relationship between said object and said first sensing means, drive means responsive to said error signal and driving said first sensing means in a sense to reduce said error signal, and an open loop stabilization circuit comprising a second sensing means for sensing the rate of said motion and producing an output which is proportional thereto, and means for applying said output to said drive means.

3,099,006
NAVIGATION SYSTEM
Louis A. De Rosa, Upper Montclair, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Mar. 2, 1960, Ser. No. 12,390
16 Claims. (Cl. 343—106)



1. An omnirange transmitter system comprising means to transmit sequentially rotating electro-magnetic radiation patterns at a fundamental frequency and at least one other frequency which is a harmonic of said fundamental frequency, and a source of signals coupled to said transmitting means whereby each of said radiations contains reference phase signals and variable phase signals.

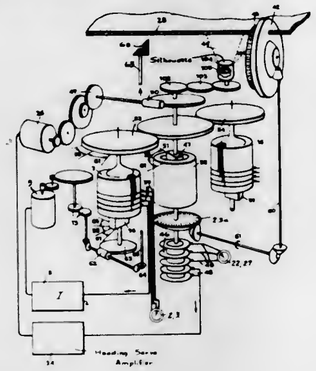
3,099,007
AIRCRAFT GUIDANCE CONTROL SIGNAL DEVELOPMENT SYSTEM
Richard L. Kittrell, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Nov. 8, 1961, Ser. No. 151,095
11 Claims. (Cl. 343—107)



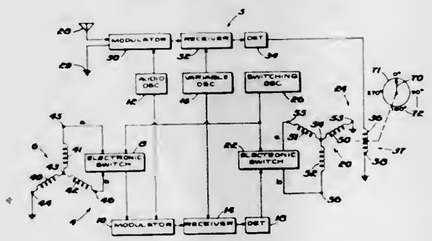
1. An aircraft guidance control signal development system comprising a source of radio deviation signals indicative of aircraft displacement from a selected radio-defined course, means for developing a heading error signal proportional to the difference between the magnetic heading of said aircraft and said selected radio-defined course, signal mixing means receiving said radio deviation signal and said heading error signal, crosswind compensation means receiving said heading error signal, said crosswind compensating including signal integrating and inverting means, the output from said crosswind compensating means being connectible to said mixing means, said mixing means developing from the inputs thereto a composite command signal, first switching means signal sensing means comprising a threshold sensitive amplifier receiving said radio deviation signal and said composite command signal and being adapted in response to input signals thereto beneath a predetermined magnitude to deactivate said first switching means, timing means including second switching means, control means for said timing means connected to and operative in response to said first switching means being deactivated to deactivate said second switching means a predetermined time thereafter, said second switching means being operably connected to the output from said crosswind compensating means to effect connection between said crosswind compensating means and said mixing means upon being deactivated.

3,099,008
SYSTEM OF CONTINUOUS RADIOLOCATION FOR AIRCRAFT
Manuel Castro Fernández, Madrid, Spain, assignor of fifty percent to Carlos C. Goetz, Lisbon, Portugal
Filed Mar. 1, 1957, Ser. No. 643,374
Claims priority, application Spain Apr. 10, 1956
20 Claims. (Cl. 343—112)

20. In a navigation system for projecting light-beams on a screen from a plurality of projectors, each of said beams representing bearing lines from a respective ground station to craft to obtain craft positions at beam intersections, including the steps of feeding a directional angle value involving a line component from a ground station to craft into a projector control servomechanism, feeding corrective angular values with respect to said direction angle value into a corrector servomechanism, connecting said servomechanisms for angular summation at the control servomechanism, and mechanically transferring said summation from the control servomechanism to the projector for corresponding angular rotation thereof.

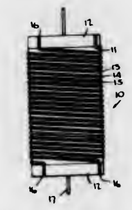


3,099,009
AUTOMATIC DIRECTION FINDER SYSTEM
Edwin M. Stryker, Jr., Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 5, 1960, Ser. No. 6,949
6 Claims. (Cl. 343—119)



1. A direction finding receiving system, comprising: a non-directional antenna element; first receiving means connected to said non-directional antenna element; a non-rotatable direction sensing antenna element having a plurality of windings, the axes of which have non-parallel horizontal components; second receiving means providing a plurality of current paths connected to the windings of said non-rotatable antenna element; variable tuning means connected with said first and second receiving means for selecting an incoming signal of the same frequency from both said antennas; a rotor assembly connected with said non-directional antenna element through said first receiving means; a stator assembly adjacent to said rotor assembly and having a plurality of windings corresponding in number and angular disposition to the windings of said non-rotatable antenna element; said stator windings being connected to the windings of said non-rotatable antenna element through the paths of said second receiving means to thereby cause said rotor assembly to assume a position with respect to said stator assembly determined by the direction of said selected incoming signal coupled to the stator assembly from said direction sensing antenna element; and display means connected with said rotor assembly to automatically indicate the direction of the origin of said selected signal.

3,099,010
HIGH-Q LOADING COIL HAVING PLURAL INTERLEAVED PARALLELED WINDINGS IN COMBINATION WITH AXIAL ANTENNA
John Taylor, Columbia, S.C., assignor to Columbia Products Company, Columbia, S.C., a corporation of South Carolina
Filed Feb. 19, 1960, Ser. No. 9,792
5 Claims. (Cl. 343—749)

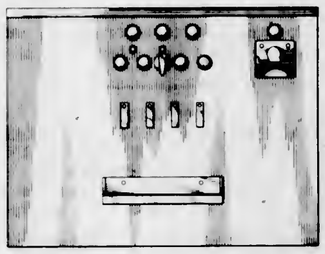


4. A unitary dipole antenna having an integrally formed high Q loading coil therein disposed in coaxial relation with said antenna at an intermediate portion along its length, said coil comprised of a plurality of conductors interwound in the same plane about a common core with said antenna and disposed at axially spaced positions along said antenna, conductive means at each end of said coil and electrically interconnected with the respective ends of said conductors at symmetrically spaced points on said conductive means, an antenna conductor disposed longitudinally in said antenna and connected at its inner end to one of said conductive means, and means for operatively connecting the other conductive means to radio apparatus.

DESIGNS

JULY 23, 1963

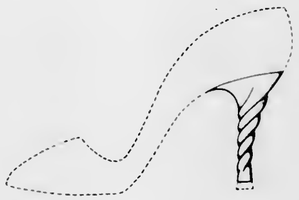
195,713
COIN OPERATED LIQUOR DISPENSER
George W. Bayers, Jr., 2314 Champa St., Denver, Colo.
Filed June 11, 1962, Ser. No. 70,520
Term of patent 14 years
(Cl. D2—3)



195,714
BAR VALVE OR SIMILAR ARTICLE
Richard T. Cornelius, Minneapolis, Minn., assignor to The Cornelius Company, Anoka, Minn., a corporation of Minnesota
Filed Apr. 5, 1962, Ser. No. 69,587
Term of patent 14 years
(Cl. D2—3)



195,715
TWIST HEEL
John H. Schell, 1636 N. Western Ave., Chicago, Ill.
Filed Nov. 7, 1962, Ser. No. 72,413
Term of patent 14 years
(Cl. D7—5)



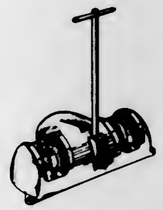
195,716
SLIPPER
Florence B. Zacks, Columbus, Ohio, assignor to R. G. Barry Corporation, Columbus, Ohio, a corporation of Ohio
Filed July 9, 1962, Ser. No. 70,852
Term of patent 14 years
(Cl. D7—7)



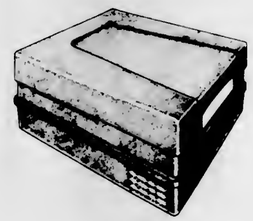
195,717
RUG WASHER OR SIMILAR ARTICLE
Ralph A. W. Johanson, White Plains, N.Y., assignor to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed July 23, 1962, Ser. No. 71,022
Term of patent 14 years
(Cl. D9—2)



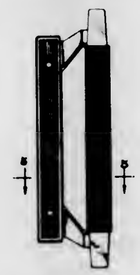
195,718
MACHINE FOR CLEANING SHOES
Duane C. Maddux, 3016 W. Verdugo Road, Burbank, Calif., and Lloyd H. Leonard, 14877 Valley Vista Blvd., Sherman Oaks, Calif.
Filed Jan. 15, 1962, Ser. No. 68,315
Term of patent 14 years
(Cl. D9—2)



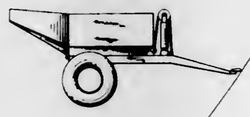
195,719
SUCTION CLEANER
Alexander B. Musichuk, Tallmadge, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed Aug. 14, 1962, Ser. No. 71,275
Term of patent 14 years
(Cl. D9—2)



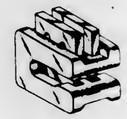
195,720
DOOR HANDLE
Courtney A. Leubner, Forest Park, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Feb. 11, 1963, Ser. No. 73,495
Term of patent 14 years
(Cl. D10—8)



195,721
DUMP TRAILER
Francis K. Quinn, 3420 Sweet Drive, Lafayette, Calif.
Filed Jan. 31, 1962, Ser. No. 68,585
Term of patent 14 years
(Cl. D14—3)



195,722
ELECTRICAL CONNECTOR
Edgar W. Forney, Jr., 2405 Paxton Church Road, R.D. 2, Harrisburg, Pa., and Richard S. Hogendobler, 6 Nottingham Drive, Camp Hill, Pa.
Filed Nov. 28, 1961, Ser. No. 67,725
Term of patent 14 years
(Cl. D26—1)



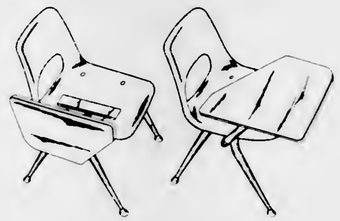
195,723
FAMILY ALTAR
William H. Banck, 6819 8th St. NW., Washington, D.C.
Filed Sept. 17, 1962, Ser. No. 71,734
Term of patent 14 years
(Cl. D29—23)



195,724
FISHING ROD HANDLE
David C. McElroy, 9818 Grinnell, Detroit, Mich.
Filed July 21, 1960, Ser. No. 65,407
Term of patent 14 years
(Cl. D31—4)



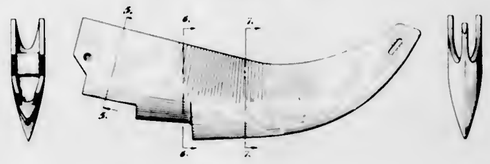
195,725
CONVERTIBLE CHAIR-DESK OR THE LIKE
Dave Chapman, Chicago, and Kim Yamasaki, Lombard, Ill., assignors to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 8, 1961, Ser. No. 67,839
Term of patent 14 years
(Cl. D33—11)



195,726
HAT RACK CABINET
David Harper, 2122 Webster Ave., Pittsburgh, Pa.
Filed May 18, 1962, Ser. No. 70,197
Term of patent 14 years
(Cl. D33—19)



195,727
SHOE FOR OPENING A FURROW IN SEED PLANTING IMPLEMENTS
Donald E. Williams, Garden City, Kans., assignor to Acra-Plant, Inc., Newton, Kans., a corporation of Kansas
Filed Dec. 26, 1962, Ser. No. 72,954
Term of patent 14 years
(Cl. D35—2)



195,728
MIXING IMPELLER
Lawrence I. Freedman and John W. Tone, Wilmington, Del., assignors to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Mar. 21, 1962, Ser. No. 69,365
Term of patent 14 years
(Cl. D44—1)



195,729
REPLACEMENT SPOUT FOR TEAPOTS OR THE LIKE
Margaret C. Brinkman, 320 E. King St., Chardon, Ohio
Filed July 18, 1961, Ser. No. 65,965
Term of patent 3½ years
(Cl. D44—26)



195,730
DRINK STIRRER
Jerold P. Drucker, North Hollywood, Calif., assignor to Zoo-Piks, North Hollywood, Calif., a partnership
Filed Feb. 6, 1963, Ser. No. 73,462
Term of patent 14 years
(Cl. D44—29)



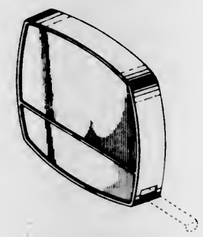
195,731
COMBINED LIGHTER AND CIGARETTE PACKAGE HOLDER
Erwin Thomas Steppan, 1705 De Lucon Ave., Duvernay, Quebec, Canada
Filed June 25, 1962, Ser. No. 70,664
Term of patent 14 years
(Cl. D48—27)



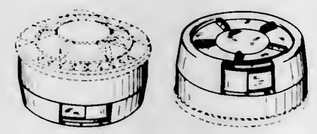
195,732
COMBINED LIGHTER AND CIGARETTE PACKAGE HOLDER
Erwin Thomas Steppan, 1705 De Lucon Ave., Duvernay, Quebec, Canada
Filed July 11, 1962, Ser. No. 70,871
Term of patent 14 years
(Cl. D48—27)



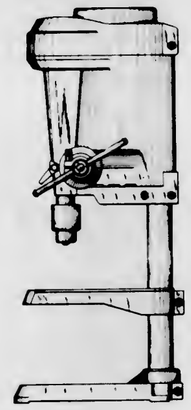
195,733
TAPE RULE
Neil G. Kane, Santa Fe Springs, Calif., assignor to H. K. Porter Company (Delaware), Danville, Va., a corporation of Delaware
Filed Nov. 13, 1962, Ser. No. 72,482
Term of patent 14 years
(Cl. D52—1)



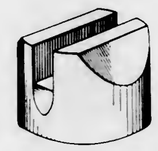
195,734
PILL DISPENSER
Raymond Beaumann, Les Bois, Switzerland, assignor to Ebauches S.A., Neuchatel, Switzerland
Filed Nov. 17, 1960, Ser. No. 62,875
Claims priority, application Switzerland May 27, 1960
Term of patent 14 years
(Cl. D52—2)



195,735
DRILL PRESS
Rutherford B. Snyder, Jr., Bradford Woods, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 17, 1962, Ser. No. 72,160
Term of patent 14 years
(Cl. D54—14)



195,736
WRENCH SOCKET FOR VALVES AND THE LIKE
Julian W. McManus, 3733 Delmas Terrace, Los Angeles, Calif.
Filed Mar. 27, 1962, Ser. No. 69,455
Term of patent 14 years
(Cl. D54—16)



195,737
NAIL CLIPPER MERCHANDISING DISPLAY PACKAGE
Henry W. Bassett, South Britain, Conn. (% The W. E. Bassett Company, Roosevelt Drive, Derby, Conn.)
Filed Dec. 21, 1960, Ser. No. 63,292
Term of patent 14 years
(Cl. D58—2)



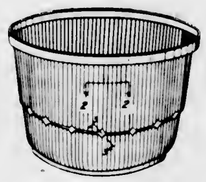
195,738
BOTTLE
William P. Grasty, Zion, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
Filed Nov. 26, 1962, Ser. No. 72,597
Term of patent 14 years
(Cl. D58—6)



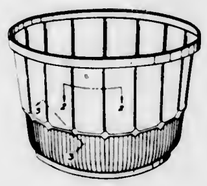
195,739
BOTTLE
George W. Worthington, Castro Valley, Calif., assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Mar. 4, 1963, Ser. No. 73,792
Term of patent 14 years
(Cl. D58—8)



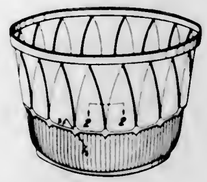
195,740
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,415
Term of patent 3½ years
(Cl. D58—17)



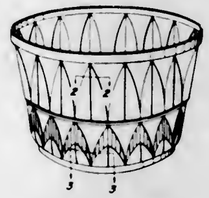
195,741
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,416
Term of patent 3½ years
(Cl. D58—17)



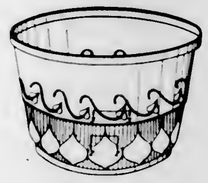
195,742
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,417
Term of patent 3½ years
(Cl. D58—17)



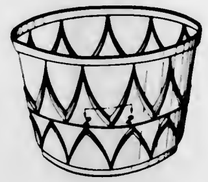
195,743
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,421
Term of patent 3½ years
(Cl. D58—17)



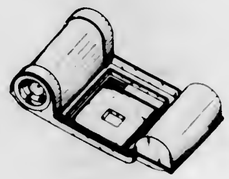
195,744
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,422
Term of patent 3½ years
(Cl. D58—17)



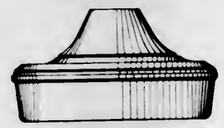
195,745
PACKAGING CUP FOR FOOD PRODUCTS OR THE LIKE
Howard H. Kulow, Berea, Ohio, assignor to Wilson Plastics, Inc., Sandusky, Ohio, a corporation of Ohio
Filed Mar. 26, 1962, Ser. No. 69,424
Term of patent 3½ years
(Cl. D58—17)



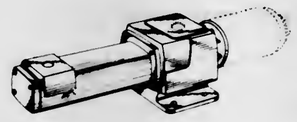
195,746
FILM MAGAZINE
Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 11, 1962, Ser. No. 72,812
Term of patent 14 years
(Cl. D61—1)



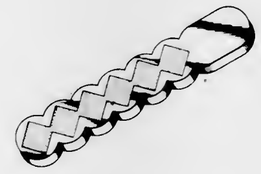
195,747
HUMIDIFIER
Edward M. Stolarz, New York, N.Y., assignor to Walton Laboratories, Inc., Irvington, N.J., a corporation of New Jersey
Filed Sept. 14, 1961, Ser. No. 66,779
Term of patent 14 years
(Cl. D62—4)



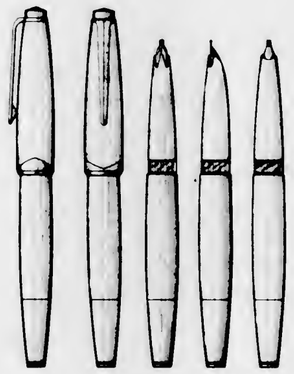
195,748
PUMP
Ernest T. Lorenz, Bellmore, Long Island, N.Y., assignor to Red Jacket Manufacturing Co., Davenport, Iowa, a corporation of Iowa
Filed Nov. 28, 1961, Ser. No. 67,732
Term of patent 7 years
(Cl. D65—1)



195,749
REFLECTIVE HAND SIGNAL FOR PEDESTRIANS
Bruce W. Anderson, 21 Crown Park Road, Toronto, Ontario, Canada
Continuation of design applications Ser. No. 62,044 and Ser. No. 62,046, Sept. 7, 1960. This application Nov. 21, 1962, Ser. No. 72,611
Claims priority, application Canada Mar. 11, 1960
Term of patent 14 years
(Cl. D72—1)



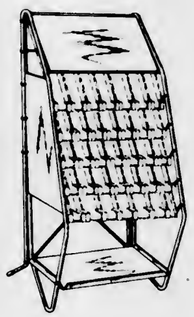
195,750
FOUNTAIN PEN
Ernst Rösler, Hamburg, and Konrad Kressel, Hamburg-Poppenbuttel, Germany, assignors to Montblanc-Simplo G.m.b.H., Hamburg, Germany
Filed Feb. 20, 1961, Ser. No. 63,989
Claims priority, application Germany Dec. 13, 1958
Term of patent 14 years
(Cl. D74—17)



195,751
GARMENT HANGER SUPPORT
Richard T. Kennedy, Oaklawn, and Richard S. Latham, Chicago, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 8, 1962, Ser. No. 72,030
Term of patent 14 years
(Cl. D80—8)



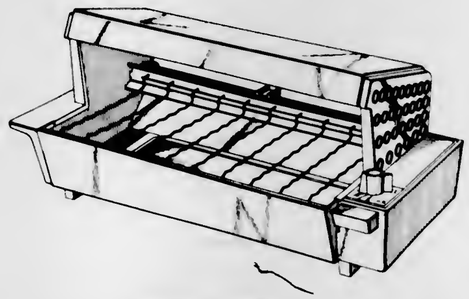
195,752
COMBINED DISPLAY AND MERCHANDISING RACK FOR PACKAGED GOODS
Stephen Belejack, 716 Columbus Ave., Boston 20, Mass.
Filed Nov. 3, 1960, Ser. No. 62,726
Term of patent 14 years
(Cl. D80—9)



195,753
MERCHANDISE DISPLAY FIXTURE
Nathan Grosher, Van Nuys, Calif., assignor to Lindy Pen Co., Inc., Culver City, Calif.
Filed Apr. 17, 1962, Ser. No. 69,748
Term of patent 14 years
(Cl. D80—10)



195,754
TOASTER OR SIMILAR ARTICLE
Paul O. Rawson, Jr., Trumbull, and Theodore G. Daher, Stratford, Conn., assignors to General Electric Company, a corporation of New York
Filed Jan. 7, 1963, Ser. No. 73,072
Term of patent 14 years
(Cl. D81—10)



195,755
MOTOR SCOOTER CAB OR THE LIKE
Hal D. Stribling, 149 17th St. NE., Atlanta, Ga.
Filed Dec. 24, 1962, Ser. No. 72,937
Term of patent 14 years
(Cl. D90—8)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See*—
Handel, George J., Jr. Re. 25,423.
Bright, Robert H.: *See*—
Vaughan, James R., and Bright. Re. 25,420.
Carlo, Clarence E. to Dubuque Products, Inc. Collable partition. Re. 25,422, 7–23–63, Cl. 160—23.
Doerfner, William H., to General Motors Corp. Ball nut screw assembly. Re. 24,526, 7–23–63, Cl. 74—459.
Dubuque Products, Inc.: *See*—
Carlo Clarence E. Re. 25,422.
Electrical Musical Industries Ltd.: *See*—
Vaughan, James R. M., and Bright. Re. 25,420.
Evans, Tyndall D. Automatic electric mop. Re. 25,419, 7–23–63, Cl. 15—99.
General Motors Corp.: *See*—
Doerfner, William H. Re. 24,526.
Handel, George J., Jr., to AMP Inc. Terminal applicator construction. Re. 25,423, 7–23–63, Cl. 1—177.
Hvam, Hjalmar. Toe holding device for skis. Re. 25,425, 7–23–63, Cl. 280—11.35.
Metalwash Machinery Co.: *See*—
Nolte, Robert K. Re. 25 421.
Nolte, Robert K., to Metalwash Machinery Co. Article washing machine. Re. 25,421, 7–23–63, Cl. 134—60.
Toulmin, Harry A., Jr., to Union Carbide Corp. Continuous metal production and continuous gas plating. Re. 25,424, 7–23–63, Cl. 29—417.
Union Carbide Corp.: *See*—
Toulmin, Harry A., Jr. Re. 25,424.
Vaughan, James R. M., and R. H. Bright, to Electrical Musical Industries Ltd. Magnetrons. Re. 25,420, 7–23–63, Cl. 315—39.67.

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Abbott Laboratories: *See*—
Grasty, William P. 195,738.
Acra-Plant, Inc.: *See*—
Williams, Donald E. 195,727.
Amerock Corp.: *See*—
Leubner, Courtney A. 195,720.
Anderson Bruce W. Reflective hand signal for pedestrians. 195,749, 7–23–63, Cl. D72—1.
Banck, William H. Family altar. 195,723, 7–23–63, Cl. D29—23.
Barry, R. G., Corp.: *See*—
Zacks Florence B. 195,716.
Bassett, Henry W. Nail clipper merchandising display package. 195,737, 7–23–63, Cl. D58—2.
Bayers, George W., Jr. Coin operated liquor dispenser. 195,713, 7–23–63, Cl. D2—3.
Beaumann Raymond, to Ebauches S.A. Pill dispenser. 195,734, 7–23–63, Cl. D52—2.
Belejack, Stephen. Combined display and merchandising rack for packaged goods. 195,752, 7–23–63, Cl. D80—9.
Brinkman, Margaret C. Replacement spout for teapots or the like. 195,729, 7–23–63, Cl. D44—26.
Brunswick Corp.: *See*—
Chapman, Dave, and Yamasaki. 195,725.
Chapman, Dave, and K. Yamasaki, to Brunswick Corp. Convertible chair-desk or the like. 195,725, 7–23–63, Cl. D33—11.
Cornelius Co., The: *See*—
Cornelius, Richard T. 195,714.
Cornelius, Richard T., to The Cornelius Co. Bar valve, or similar article. 195,714, 7–23–63, Cl. D2—3.
Daher, Theodore G.: *See*—
Rawson, Paul O., Jr. 195,754.
Drucker, Jerold P., to Zoo-Piks. Drink stirrer. 195,730, 7–23–63, Cl. D44—29.
Eastman Kodak Co.: *See*—
Nerwin, Hubert. 195,746.
Ebauches S.A.: *See*—
Beaumann, Raymond. 195,734.
Ekco Products Co.: *See*—
Kennedy, Richard T., and Latham. 195,751.
Electrolux Corp.: *See*—
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Forney, Edgar W., Jr., and R. S. Hogendobler. Electrical connector. 195,722, 7–23–63, Cl. D26—1.
Freedman Lawrence I., and J. W. Tone, to Ronson Corp. Mixing impeller. 195,728, 7–23–63, Cl. D44—1.
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Rawson, Paul O., Jr., and Daher. 195,754.
Grasty, William P., to Abbott Laboratories. Bottle. 195,738, 7–23–63, Cl. D58—6.
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Kane, Neil G., to H. K. Porter Co. (Delaware). Tape rule. 195,733, 7–23–63, Cl. D52—1.
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Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,740, 7–23–63, Cl. D58—17.
Kulow, Howard H., to Wilson Plastics Inc. Packaging cup for food products or the like. 195,741, 7–23–63, Cl. D58—17.
Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,742, 7–23–63, Cl. D58—17.
Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,743, 7–23–63, Cl. D58—17.
Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,744, 7–23–63, Cl. D58—17.
Kulow, Howard H., to Wilson Plastics, Inc. Packaging cup for food products or the like. 195,745, 7–23–63, Cl. D58—17.
Latham, Richard S.: *See*—
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Leubner, Courtney A., to Amerock Corp. Door handle. 195,720, 7–23–63, Cl. D10—8.
Lindy Pen Co., Inc.: *See*—
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Lorenz, Ernest T., to Red Jacket Mfg. Co. Pump. 195,748, 7–23–63, Cl. D65—1.
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McElroy, David C. Fishing rod handle. 195,724, 7–23–63, Cl. D31—4.
McManus, Julian W. Wrench socket for valves and the like. 195,736, 7–23–63, Cl. D54—16.
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Musichuk, Alexander B., to The Hoover Co. Suction cleaner. 195,719, 7–23–63, Cl. D9—2.
Nerwin, Hubert, to Eastman Kodak Co. Film magazine. 195,746, 7–23–63, Cl. D61—1.
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Worthington, George W. 195,739.
Porter, H. K., Co. (Delaware): *See*—
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Quinn, Francis K. Dump trailer. 195,721, 7–23–63, Cl. D14—3.
Rawson, Paul O., Jr., and T. G. Daher, to General Electric Co. Toaster or similar article. 195,754, 7–23–63, Cl. D81—10.
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Schell, John H. Twist heel. 195,715, 7–23–63, Cl. D7—5.
Snyder, Rutherford B., Jr., to Rockwell Mfg. Co. Drill press. 195,735, 7–23–63, Cl. D54—14.
Steppan, Erwin T. Combined lighter and cigarette package holder. 195,731, 7–23–63 Cl. D48—27.
Steppan, Erwin T. Combined lighter and cigarette package holder. 195,732, 7–23–63, Cl. D48—27.
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LIST OF PATENTEES

TO WHOM

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Zell, Dale R., and Zimmerman. 3,098,517.

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Frankel, Milton B., and Klager. 3,098,873.
Higgins, Horace M., and Gongwer. 3,098,351.

Ahlborg, Nils K. G., and K. N. Cederquist, to Stora Kopparbergs Bergslags Aktiebolag. Alkali and sulfite recovery. 3,098,710, 7-23-63, Cl. 23—129.

Air Reduction Co., Inc.: *See*—
Dennis, Wolcott. 3,098,732.

Aircraft Radio Corp.: *See*—
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Aitken, Robert W.: *See*—
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Alamance Industries, Inc.: *See*—
Miles, Charlie A. 3,098,368.

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Eldridge, John W., and Outterson. 3,098,846.

Aldridge, Clyde L.: *See*—
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Allen, George, and D. M. Venison, to Matthew Hall & Co. Ltd. Sprinkler alarm valve. 3,098,527, 7-23-63, Cl. 169—19.

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Anderson, William A. 3,098,724.

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Baustian, Gordon N. 3,098,637.
Greene, Earnest J., and Millman. 3,098,731.

American Biltrite Rubber Co., Inc.: *See*—
Wisotzky, Reuben. 3,098,262.

American Can Co.: *See*—
Schulz, Charles M. 3,098,552.

American Cyanamid Co.: *See*—
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Luttinger, Lionel B. 3,098,843.

American Desk Mfg. Co.: *See*—
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American Flange & Mfg. Co. Inc.: *See*—
Wheaton, Herbert F. 3,098,579.

American Machine & Foundry Co.: *See*—
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Martin, Harold W. 3,098,655.

American Meter Co., Inc.: *See*—
Schwerter, Robert. 3,098,499.

American Smelting and Refining Co.: *See*—
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American-Saint Gobain Corp.: *See*—
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American Speedlight Corp.: *See*—
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American Sugar Refining Co., The: *See*—
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Amphenol-Borg Electronics Corp.: *See*—
Kohlhagen, Walter, and Burghoff. 3,098,681.

Amundson, Thomas M., and M. A. Sandgren, to United States of America, Navy. Weapon recovery system. 3,098,441, 7-23-63, Cl. 102—13.

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Fouse, Frederick Z., and Kidwell. 3,098,565.

Andersen, Holger C., P. L. Romeo, and W. J. Green, to Engelhard Industries, Inc. Method for selective removal of oxygen from gaseous mixtures of oxygen and nitric oxide. 3,098,712, 7-23-63, Cl. 23—159.

Andersen, Robert D.: *See*—
Kocl, Ludvik J., Andersen, and Jepson. 3,098,918.

Anderson, Donald C., M. B. Lucas, and H. N. Watrous, to The Procter & Gamble Co. Tear tape for thermoplastic packaging materials. 3,098,601, 7-23-63, Cl. 229—51.

Anderson, Fred N., to Cherry Electrical Products Corp. Snap action switch. 3,098,903, 7-23-63, Cl. 200—67.

Anderson, Fred N., to Cherry Electrical Products Corp. Snap action switch. 3,098,904, 7-23-63, Cl. 200—67.

Anderson, Fred N., to Cherry Electrical Products Corp. Snap-action switch. 3,098,905, 7-23-63, Cl. 200—67.

Anderson, Herbert R., Jr., to Phillips Petroleum Co. Composite propellants containing a carbon-alkali metal burning rate catalyst. 3,098,777, 7-23-63, Cl. 149—19.

Anderson, Herbert R., Jr., to Phillips Petroleum Co. Promotion of high energy radiation effects in polymeric materials. 3,098,808, 7-23-63, Cl. 204—162.

Anderson, James A., J. A. Ash, and S. S. Bushnell, Jr., to Breneman-Hartshorn, Inc. Bearing for window shade roller. 3,098,286, 7-23-63, Cl. 29—149.5.

Anderson, Richard P., to United States of America, Navy. Electric angle checking gage. 3,098,305, 7-23-63, Cl. 33—174.

Anderson, William A., to Aluminum Co. of America. Aluminous metal article. 3,098,724, 7-23-63, Cl. 29—195.

Appleton, Norman J., to General Precision, Inc. Barometric pressure transducer. 3,098,388, 7-23-63, Cl. 73—384.

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Armbruster, John A., and R. N. Woodcock, to Josam Mfg. Co. Wall-hung fixture carrier combination with a device facilitating wall finishing. 3,098,242, 7-23-63, Cl. 4—252.

Armitage, John B., R. Dessauer, and A. M. Hyson, to E. I. du Pont de Nemours and Co. Stabilized polyolefins. 3,098,842, 7-23-63, Cl. 260—45.95.

Armour & Co.: *See*—
Baarson, Robert E., Treweek, Jonaitis, and Ray. 3,098,817.

Armstrong Cork Co.: *See*—
Bechtold, Donald C., and Stanley. 3,098,432.
Bezman, Irving I. 3,098,871.
Hornberger, Clarence L. 3,098,436.
Hornberger, Clarence L., and Stanley. 3,098,433.

Arnold, Melvin R., to Chemetron Corp. Selective hydrogenation procedure and catalyst therefor. 3,098,882, 7-23-63, Cl. 260—677.

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Ash, Jacob A.: *See*—
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Auradynamics, Inc.: *See*—
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Bracken, Lawrence H., and Watson. 3,098,900.
Licata, Leonard. 3,098,899.

Ayer, William H., and R. W. Joslin, to The Sippican Corp. Weldable circuit cards. 3,098,951, 7-23-63, Cl. 317—101.

Aziende Colori Nazionali Affini Acna S.p.A.: *See*—
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Baarson, Robert E., H. B. Treweek, C. W. Jonaitis, and C. L. Ray, to Armour & Co. Phosphate ore flotation process. 3,098,817, 7-23-63, Cl. 209—166.

Babcock, John C., J. A. Campbell, and R. L. Pederson, to The Upjohn Co. 3-enamine derivatives of 2a-methyl-5a-androstanes. 3,098 850, 7-23-63, Cl. 260—239.5.

Bach, Jacob C., W. F. Fivek, and R. A. Heyden, to Western Electric Co., Inc. Tool for winding wires onto terminals. 3,098,615, 7-23-63, Cl. 242—7.

Bagnall, Larry O., to Allis-Chalmers Mfg. Co. Radial expansion compensating support for thermally expansible body. 3,098,509, 7-23-63, Cl. 138—114.

Baier Richard, to American Smelting and Refining Co. Mold for continuous casting. 3,098,269, 7-23-63, Cl. 22—57.2.

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Baker, Alfred L., Jr., to Sun Oil Co. Method of storing petroleum oil. 3,098,702, 7-23-63, Cl. 21—60.5.

Baker, Forrest G., to Amedican Air Filter Co., Inc. Centrifugal fan housings. 3,098,603, 7-23-63, Cl. 230—133.

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Baldwin, Ronald C., to Ingersoll-Rand Co. Method of making holes in the earth. 3,098.641, 7-23-63, Cl. 262—1.

Ball, Edwin L., and J. C. Vitucci, to American Cyanamid Co. Manufacture of sterile surgical suture collagen. 3,098,696, 7-23-63, Cl. 18—54.

Ball, Thomas M., to Chrysler Corp. Return flow carburetor. 3,098,885, 7-23-63, Cl. 261—36.

Bally, Adrianus P., to Shell Oil Co. Process for removing carbonyl sulfide from petroleum gases. 3,098,705, 7-23-63, Cl. 23—3.

Barasch, Hans P., to Republic Aviation Corp. Photosensitive electronic tracking head. 3,098,933, 7-23-63, Cl. 250—203.

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Barsel, Norman, to Chem Research Co. 7-halogenated adrenochrome derivatives. 3,098,858, 7-23-63 Cl. 260—295.

Barth, Harry J., and P. T. Gay, to International Latex Corp. Coated rubber articles and method of producing same. 3,098,755, 7-23-63, Cl. 117—33.

Bartlett, George A., to Howe Richardson Scale Co. Automatic lock-out switch. 3,098,536, 7-23-63, Cl. 177—12.

Bartocha Bodo K. W., to United States of America, Navy. Method for the preparation of vinyl-alkali metal compounds. 3,098,881, 7-23-63, Cl. 260—665.

Bauer, Alfred F., to National Lead Co. Die casting method and article. 3,098,270, 7-23-63, Cl. 22—204.

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Bearss, Henry E., 1/3 each to L. A. Bearss, and R. E. Bearss. Lead halter. 3,098,336, 7-23-63, Cl. 54—24.

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Beauchamp, Albert J. Skid resistance tester. 3,098,377, 7-23-63, Cl. 73—9.

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Beebe, Cedric H., M. D. Liston, and E. W. McKinley, to Beckman Instruments, Inc. Electrode. 3,098,813, 7-23-63, Cl. 204—195.

Beer, Henri B., to Amalgamated Curacao Patents Co. N.V. Diaphragm for use in electrolysis. 3,098,802, 7-23-63, Cl. 204—1.

Behrendt John G. Battery-operated cigarette lighter. 3,098,923. 7-23-63, Cl. 219—32.

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Bell, George L. Action game board. 3,098,657, 7-23-63, Cl. 273—123.

Bell Intercontinental Corp.: *See*—
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Benoit, Roland A., to Royalmetal Corp. Drawer pull. 3,098,686, 7-23-63, Cl. 312—320.

Bentele, Max, C. Jones, and A. H. Raye, to Curtiss-Wright Corp. Cooling and lubrication system for rotary mechanisms. 3,098,605, 7-23-63, Cl. 230—210.

Berg, Charles B. Battery charging apparatus. 3,098,962, 7-23-63, Cl. 320—39.

Berger, Fritz. to Rheinmetall G.m.b.H., Firma. Land mine, more particularly anti-tank mine. 3,098,439, 7-23-63, Cl. 102—8.

Berger, Fritz. to Rheinmetall G.m.b.H., Firma. Land mine, more particularly anti-tank mine. 3,098,440, 7-23-63, Cl. 102—8.

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Bernard, George G., to The Pure Oil Co. Method of controlling corrosion of ferrous metal due to pitting by addition of mineral acid. 3,098,700, 7-23-63, Cl. 21—2.7.

Bernfeld, Isabel M. Garment construction. 3,098,236, 7-23-63, Cl. 2—106.

Berthiaume, Leon A., to Bausch & Lomb Inc. Transmission. 3,098,399, 7-23-63, Cl. 74—366.

Bezman, Irving I., to Armstrong Cork Co. Preparation of cyclic phosphonitriles. 3,098,871, 7-23-63, Cl. 260—551.

Bialo, Walter. Luggage construction. 3,098,548, 7-23-63, Cl. 190—49.

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Biles, James R., and R. R. Holmes, to Monsanto Chemical Co. Paper making process. 3,098,786, 7-23-63, Cl. 162—157.

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Blomstrand, John H., 1/2 to F. W. Nyquist. Self-centering tool holder. 3,098,283, 7-23-63, Cl. 29—96.

Bobear, William J., to General Electric Co. Organopolysiloxane rubber stabilized with nickel, copper or tungsten salts or oxides. 3,098,836, 7-23-63, Cl. 260—37.

Bochan, John, to General Electric Co. Clothes washing machine having unbalance sensing means. 3,098,372, 7-23-63, Cl. 68—24.

Bomm, Heinz, and K. Berghaus, to Dorken & Mankel K.G. Automatic door closer. 3,098,259, 7-23-63, Cl. 16—59.

Bono, Luigi, to Necchi Societa per Azioni. Carrying case for sewing machines. 3,098,315, 7-23-63, Cl. 45—68.2.

Bono, Luigi, to Necchi Societa per Azioni. Attachment for the fastening of buttons which can be applied to zig-zag sewing machines. 3,098,459, 7-23-63, Cl. 112—114.

Booker, Robert J., and H. G. Mullett, to Bradley Washfountain Co. Modular shower unit. 3,098,241, 7-23-63, Cl. 4—192.

Borchert, Peter J., to Miles Laboratories, Inc. Preparation of dialdehyde polysaccharide addition products. 3,098,869, 7-23-63, Cl. 260—233.3.

Borka, Vincent T.: *See*—
Degorski Stanislaw D., and Borka. 3,098,314.

Borsig Aktiengesellschaft, and Svensk Toroforadling, Aktiebolaget: *See*—
Häggiund, Sven E. 3,098,429.

Bostrom Corp.: *See*—
Simons, Allison K. 3,098,676.

Bourne, Douglas J., and W. H. Park, to Duval Sulphur and Potash Co. Sampling device. 3,098,390, 7-23-63, Cl. 73—424.

Bourque Theodore E.: *See*—
Varadi, Louis E., Bourque, and Pesarek. 3,098,355.

Bowater Board Co.: *See*—
Meller, John G. 3,098,785.

Bower, Clark D., to Layne & Bowler Pump Co. Pump shaft bearing means. 3,098,450, 7-23-63, Cl. 103—108.

Bracken, Lawrence H., and W. R. Watson, to Automatic Electric Laboratories Inc. Telephone hookswitch and exclusion key interlocking arrangement. 3,098,900, 7-23-63, Cl. 179—99.

Brücker AG: *See*—
Ramseier, Paul, and Austel. 3,098,344.

Bradley Washfountain Co.: *See*—
Booker, Robert J., and Mullett. 3,098,241.

Brady, W. H., C.: *See*—
Powers, Howard A. 3,098,782.

Brand John R. and J. H. Hearne, to The Wurlitzer Co. Tone filters. 3,098,407, 7-23-63, Cl. 84—1.11.

Brannen, Charles H.: *See*—
Kao, Paul W., and Brannen. 3,098,764.

Braus, Harry, and O. A. Homberg, to National Distillers and Chemical Corp. Diarylthiophene sulfonic acids. 3,098,848, 7-23-63, Cl. 260—329.

Bray, John R., to Monsanto Chemical Co. Control circuit. 3,098,920, 7-23-63, Cl. 219—20.

Breeze, Marvin M., Jr., and J. O. Etchison, Jr., to Western Electric Co. Inc. Drill plate and methods of making a drill plate. 3,098,401, 7-23-63, Cl. 77—62.

Bregman, Frank, to North American Philips Co., Inc. Pulse amplitude discriminator. 3,098,938, 7-23-63, Cl. 307—88.5.

Breitinger, Erwin: *See*—
Krämer, Rolf, Breitinger, and Gerber. 3,098,345.

Breitner, Thomas: *See*—
Horowitz, Carl. 3,098,770.

Breneman-Hartshorn, Inc.: *See*—
Anderson, James A., Ash, and Bushnell. 3,098,286.

Brevets Aero-Mecaniques S.A.: *See*—
Hosli, Hansjakob. 3,098,447.

Brewer, Nathaniel, E. D. Haigler, and E. D. Woodring, to Fisher & Porter Co. Pneumatic controllers. 3,098,498, 7-23-63, Cl. 137—86.

British Petroleum Co. Ltd., The: *See*—
Dean, Ronald A., and Girdler. 3,098,816.
White, Peter T., and Aitken. 3,098,829.

Bromberg, Menashe, to Western Electric Co., Inc. Cable guiding apparatus. 3,098,639, 7-23-63, Cl. 254—190.

Brown, Adolph M., 20% to E. C. Wood, and 20% to R. G. Le Vaux. Surgical clip applicator. 3,098,232, 7-23-63, Cl. 1—349.

Brown, Cicero C., to Brown Oil Tools, Inc. Methods of and apparatus for completing multiple zone wells. 3,098,524, 7-23-63, Cl. 166—48.

Brown, Donald D. Water ski towline retriever. 3,098,463, 7-23-63, Cl. 114—235.

Brown Oil Tools, Inc.: *See*—
Brown, Cicero C. 3,098,524.

Brown, Russell H.: *See*—
Hamer, Martin, and Brown. 3,098,727.

Brown, Thomas G., Jr., to International Telephone and Telegraph Corp. Self checking digital computer system. 3,098,694, 7-23-63, Cl. 340—146.1.

Browne, Andrew T.: *See*—
Wallace, George A., and Browne. 3,098,542.

Bruner Corp.: *See*—
Rudellek, John. 3,098,578.

Brunner, Robert. Apparatus for providing a finished knitted fabric with predetermined dimensions. 3,098,279, 7-23-63, Cl. 26—18.5.

Bryner, Hans, to Setar Aktiengesellschaft. Process for the manufacture of stable single-thread twist-compensated yarns. 3,098,348, 7-23-63, Cl. 57—157.

Buchsbaum, Walter H., to Hazeltine Research, Inc. Method of assembling components on printed wiring boards. 3,098,287, 7-23-63, Cl. 29—155.5.

Budd Co., The: *See*—
Zeligowsky, Leo. 3,098,554.

Buitkus, Thomas J. Photoelectric tone generator. 3,098,889, 7-23-63, Cl. 84—1.18.

Bunk, Hugo, to National Lead Co. Method and apparatus for forming generally cylindrical parts from thick metal stock. 3,098,292, 7-23-63, Cl. 29—412.

Bunting Co., Inc., The: *See*—
Pearistine, Morton. 3,098,678.

Burch, Byron F., Jr., to General Electric Co. Document sorting system. 3,098,566, 7-23-63, Cl. 209—111.5.

Burg, Fred J.: *See*—
Salton, Lewis L., and Burg. 3,098,924.

Burghoff, Louis R.: *See*—
Kohlhagen, Walter, and Burghoff. 3,098,681.

Burleson, Aaron, and M. N. Holmes, to Burlington Industries, Inc. Compressive stocking. 3,098,369, 7-23-63, Cl. 66—178.

Burleson, Aaron, and M. N. Holmes, to Burlington Industries, Inc. Compressive stocking. 3,098,389, 7-23-63, Cl. 66—178.

Burlington Industries, Inc.: *See*—
Burleson, Aaron, and Holmes. 3,098,369.
Burleson, Aaron, and Holmes. 3,098,389.

Burns, Robert: *See*—
Littley, John J., and Burns. 3,098,261.

Burroughs Corp.: *See*—
Cruzen, Larry L. 3,098,648.
Cruzen, Larry L. 3,098,649.

Busch, Dieter, F. Eicher, and A. Kramer, to Henkel & Cie. G.m.b.H. Hand pressure roller. 3,098,783, 7-23-63, Cl. 156—579.

Bush, Freeman, to The American Sugar Refining Co. Process for agglomerating brown sugar. 3,098,767, 7-23-63, Cl. 127—63.

Bush, Robert G., to L. Shelton. Cleaning system for egg breaking and separating devices. 3,098,495, 7-23-63, Cl. 134—77.

Bushnell, Sterling S., Jr.: *See*—
Anderson, James A., Ash, and Bushnell. 3,098,286.

Caflisch, Edward G., F. A. Lory, and T. P. Wilson, to Union Carbide Corp. Integral recording. 3,098,689, 7-23-63, Cl. 346—49.

Cain, Dallas E., to General Electric Co. Seal. 3,098,666, 7-23-63, Cl. 285—363.

Calamari, Ello E. Industrial frequency electric induction furnace with submerged horizontal channel for the melting of any metal. 3,098,887, 7-23-63, Cl. 13—29.

Calcaterra, Joseph P., to Carando Machine Works. Flanging and swedging machine for drum bodies. 3,098,518, 7-23-63, Cl. 153—79.

Caldwell, Stephen A., Jr., to Acoustron Corp. Language instruction apparatus. 3,098,307, 7-23-63. Cl. 35—35.

California Research Corp.: *See*—
Schlatter, Maurice J. 3,098,870.

Callender, Russell J. Unitary television equipment. 3,098,897, 7-23-63, Cl. 178—7.9.

Calow, Th., & Co. Maschinenfabrik u. Eisengiesserei: *See*—
Lindemann, Hans. 3,098,570.

Campbell, J Allan: *See*—
Babcock, John C., Campbell, and Pederson. 3,098,850.

Campbell, William B., to Garlock Inc. Apparatus for molding a ball and socket joint assembly. 3,098,263, 7-23-63, Cl. 18—36.

Canada, Her Majesty the Queen in right of: *See*—
Owens, Walter J. 3,098,645.

Canada Iron Foundries, Ltd.: *See*—
Stewart, John K. 3,098,302.

Cappuccio, Vittorio, U. Riboni, and C. Viganó, to Montecatini-Società Generale per l'Industria Mineraria e Chimica. Process for preparing polyolefin fibres of improved dye receptivity. 3,098,697, 7-23-63, Cl. 18—54.

Caps Ltd.: *See*—
Frankel, Gerald. 3,098,416.

Carando Machine Works: *See*—
Calcaterra, Joseph P. 3,098,518.

Carlesimo, John. Lifting device. 3,098,673, 7-23-63, Cl. 294—63.

Carlson, Eugene C., and W. C. Muller, to National Distillers and Chemical Corp. Purification of metal halides. 3,098,722, 7-23-63, Cl. 23—294.

Carr, Clide L., to United States Rubber Co. Expanded polyethylene and method of making the same. 3,098,831, 7-23-63, Cl. 260—2.5.

Carr, Warren F., and M. D. Wood. Directional drill with hydraulically extended shoe. 3,098,534, 7-23-63, Cl. 175—73.

Carstens, Fred A., to Chicago Bridge & Iron Co. Method and apparatus for manufacturing of high strength cylindrical shells. 3,098,620, 7-23-63, Cl. 242—75.2.

Cary, Henry H., to Applied Physics Corp. Double folded-Z-configuration monochromator. 3,098,408, 7-23-63, Cl. 88—14.

Case, Everett N., and R. R. Chambers, to Sinclair Research Inc. Leaded gasoline containing phosphorate. 3,098,728, 7-23-63, Cl. 44—69.

Cassady, Cecil C. Sliding vane rotary piston engine and compression seals therefor. 3,098,471, 7-23-63, Cl. 123—16.

Caveney, Jack E. Wiring binder. 3,098,271, 7-23-63, Cl. 24—16.

Caveney, Jack E. Cord tensioner and knot tyer. 3,098,670, 7-23-63, Cl. 289—17.

Cederquist, Karl N.: *See*—
Ahlborg, Nils K. G., and Cederquist. 3,098,710.

Cen-Vi-Ro Pipe Corp.: *See*—
Kao, Paul W., and Brannen. 3,098,764.

Cerniak, Henry L., to Wilbert W. Haase Co. Holder construction. 3,098,278, 7-23-63, Cl. 25—130.

Cerveris, Albert R. Dental process and apparatus. 3,098,298, 7-23-63, Cl. 32—19.

Chabala, Leonard V., to S & C Electric Co. Circuit interrupter. 3,098,915, 7-23-63, Cl. 200—146.

Chambers, Robert R.: *See*—
Case, Everett N., and Chambers. 3,098,728.

Chance, A. B., Co.: *See*—
McAuley, Anthony. 3,098,638.

Chaplin, Roland H., to Hawker Aircraft Ltd. Aircraft. 3,098,628, 7-23-63, Cl. 244—83.

Chase, Corson W., W. J. Jasinowski, and A. V. Pedersen, to Miehle-Goss-Dexter, Inc. Web splicing apparatus. 3,098,618, 7-23-63, Cl. 242—58.3.

Chem Research Co.: *See*—
Barsel, Norman. 3,098,858.

Chemetron Corp.: *See*—
Arnold, Melvin R. 3,098,882.

Cherry Electrical Products Corp.: *See*—
Anderson, Fred N. 3,098,903-5.

Chicago Bridge & Iron Co.: *See*—
Carstens, Fred A. 3,098,620.

Christenson, Charles H., to Lockheed Aircraft Corp. Combination aircraft fuel tank and powerplant arrangement. 3,098,632, 7-23-63, Cl. 244—135.

Chrysler Corp.: *See*—
Ball, Thomas M. 3,098,885.
Frosile, Leonard E. 3,098,507.
Little, Harvey J. 3,098,736.

Cincinnati Shaper Co., The: *See*—
Littley, John J. and Burns. 3,098,261.

Clapper, Genung L., to International Business Machines Corp. Integrating pulse circuit having regenerative feed back to effect pulse shaping. 3,098,939, 7-23-63, Cl. 307—88.5.

Clapper, Genung L., to International Business Machines Corp. Voltage monitor system. 3,098,999, 7-23-63, Cl. 340—248.

Clark Equipment Co.: *See*—
Hastings, Russell, Jr. 3,098,548.

Clark, Harry L. Thermo-electric detecting device. 3,098,930, 7-23-63, Cl. 250—83.3.

Clark, Herbert H., to Appleton Wire Works Corp. Art of separating water from aqueous liquids. 3,098,735, 7-23-63, Cl. 62—58.

Clarke, John V., Jr.: *See*—
Roblee, Leland H. S., Jr., Clarke, and Foust. 3,098,762.

Cleveland Technical Center, Inc.: *See*—
Simmons, Lawrence C. 3,098,562.

Coal Industry (Patents) Ltd.: *See*—
Yarmak, Julius, and Synac. 3,098,359.

Cochran, Clarence W., deceased (by L. Cochran, adminstratrix), to United-Carr Fastener Corp. Conduit retainer. 3,098,273, 7-23-63, Cl. 24—73.

Cochran, Lois: *See*—
Cochran, Clarence W. 3,098,273.

Cohen, Murray S., and C. E. Pearl, to Thiokol Chemical Corp. Production of hydrocarbon derivatives of decaborane. 3,098,876, 7-23-63, Cl. 260—606.5.

Cohen, Murray S., and C. E. Pearl, to Thiokol Chemical Corp. Production of alkylated decaboranes. 3,098,877, 7-23-63, Cl. 260—606.5.

Collins Radio Co.: *See*—
Kittrell, Richard L. 3,099,007.
Meyer, Ralph J. 3,098,902.
Stryker, Edwin M., Jr. 3,099,009.
Syptak, Donald M. 3,099,001.

Columbia Malting Co., The: *See*—
Graff, Alan R., Oesting, and Marple. 3,098,797.

Columbia Products Co.: *See*—
Taylor, John. 3,099,010.

Columbus Iron Works Co.: *See*—
Kenney, William D., and Vernon. 3,098,530.

Commercial Envelope Mfg. Co., Inc.: *See*—
Lyon, Floyd A., and Aronson. 3,098,405.

Compagnie d'Application Mecaniques a l'Electronique, Au Cinema et a l'Atomistique (C.A.M.E.C.A.): *See*—
Mathieu, Frédéric. 3,098,409.

Conard, Wendell R., and R. J. Reid, to The Firestone Tire & Rubber Co. Blend of polystyrene, styrene-polybutadiene graft copolymer and conjugated diene-divinylbenzene copolymer. 3,098,839, 7-23-63, Cl. 260—45.5.

Connell, George W. Illuminated decorative frame. 3,098,611, 7-23-63, Cl. 240—10.

Connors, James F., to United States of America, National Aeronautics and Space Administration. Annular supersonic decelerator or drogue. 3,098,630, 7-23-63, Cl. 244—113.

Consoletti, Paul C., to Draper Corp. Auxiliary handle and chain guard for power chain saws. 3,098,511, 7-23-63, Cl. 143—32.

Consolidated Foods Corp.: *See*—
Prater, Arthur N., and Lukes. 3,098,750.

Contella, Samuel L. Automobile radiator cap. 3,098,636, 7-23-63, Cl. 251—98.

Continental Aviation and Engineering Corp.: *See*—
Marso, Francis X. 3,098,357.

Continental Can Co., Inc.: *See*—
Lincoln, John D. 3,098,759.

Continental Motors Corp.: *See*—
Adler, Herman G. 3,098,394.

Cook, George W. Angular accelerometer. 3,098,393, 7-23-63, Cl. 73—516.

Cook, John E.: *See*—
Stuchbery, Arthur L., and Cook. 3,098,725.

Cooley, Glen E.: *See*—
Facer, Leroy H. 3,098,737.

Coop, Jesse J., to United States of America, Navy. Sonobuoy-bathythermograph system. 3,098,993, 7-23-63, Cl. 340—5.

Corbett, Marshall J., to Thompson Ramo Wooldridge Inc. Turbine. 3,098,387, 7-23-63, Cl. 73—357.

Corey, Arthur M., and L. W. Webb. Boat and trundling mechanism. 3,098,245, 7-23-63, Cl. 9—1.

Corning Glass Works: *See*—
Ormsby, Raymond G., and Trementozzi. 3,098,948.

Coro, Inc. of Rhode Island: *See*—
Verri, Gene. 3,098,364.

Cosmos Industries, Inc.: *See*—
Metzger, Louis G., and Goodman. 3,098,989.

Cote, Raymond A.: *See*—
Sherman, Earle C., and Cote. 3,098,583.

Counsell, Raymond E., and P. D. Klimstra, to G. D. Searle & Co. 17α-alkynyl-2β-halo-5α-androstane-3α, 17β-diols, esters thereof, and intermediates thereto. 3,098,851, 7-23-63, Cl 260—239.55.

Couper, Alistair S., and C. D. Kalfadelis, to Standard Oil Co. Process for separating benzene carboxylic acids. 3,098,855, 7-23-63, Cl. 260—525.

Cox, Alvon R., to The Faultless Rubber Co. Method of making a plastic valve and attaching same to a hollow inflatable article. 3,098,779, 7-23-63, Cl. 156—228.

Crabtree, Mary J.: *See*—
La Pierre, Thomas H. 3,098,568.

Craig, Louis E.: *See*—
Weakley, Martin L., Moffett, and Craig. 3,098,872.

Crawford, Arthur R., to International Research & Development Corp. Engine balance classifier. 3,098,379, 7-23-63, Cl. 73—116.

Crawford, David J., deceased (by M. B. Sadtler, executrix), ½ to International Bank. Wood treating apparatus and process. 3,098,799, 7-23-63, Cl. 202—93.

Creech, Larry C. Portable washing apparatus for light fixture panels and the like. 3,098,250, 7-23-63, Cl. 15—77.

Crescent Machine & Nipple Co.: *See*—
Kinney, Howard A. 3,098,461.

Crimmins, David J., and H. B. Martin, to The Thomas & Betts Co. Insulated terminal connector. 3,098,688, 7-23-63, Cl 339—223.

Crompton & Knowles Corp.: *See*—
Nelson, Alden W., and Sisson. 3,098,621.

Crosby, Gifford W.: *See*—
Millilkan Allen F., and Crosby. 3,098,824.

Crump, Elmo E.: *See*—
Foster, Harry R., and Crump. 3,098,981.

Cruzen, Larry L., to Burroughs Corp. Sheet stopping mechanism. 3,098,648, 7-23-63, Cl. 271—46.

Cruzen, Larry L., to Burroughs Corp. Sheet stopping mechanism. 3,098,649, 7-23-63, Cl. 271—46.

Cull, Neville L., and C. L. Aldridge, to Esso Research and Engineering Co. Removal of metal contaminants from polymers with chelating agents. 3,098,845, 7-23-63, Cl. 260—94.9.

Curtiss-Wright Corp.: *See*—
Bentele, Max, Jones, and Raye. 3,098,605.

Daeche, Hans-Joachim, to VEB Kamera- und Kinowerke Dresden. Monocular mirror reflex camera with between-the-lens shutter. 3,098,419, 7-23-63, Cl. 95—42.

Dahlinder, David G.: *See*—
Wikander, Erik L., and Dahlinder. 3,098,481.

Daily, Howard R., to Sun Oil Co. Process for regulating flow of contact material. 3,098,815, 7-23-63, Cl. 208—167.

D'Alelio, Gaetano F., to Dal Mon Research Co. Catalyst prepared by grinding zirconium and aluminum chloride. 3,098,828, 7-23-63, Cl. 252—442.

Dal Mon Research Co.: *See*—
D'Alelio, Gaetano F. 3,098,828.

Daman, Arthur C., and T. S. Bailey, Jr., to Denver Equipment Co. Concentration apparatus and method. 3,098,818, 7-23-63, Cl. 209—169.

Dana Corp.: *See*—
Holzman, James W. 3,098,462.

Datex Corp.: *See*—
Spaulding, Carl P., and Wilson. 3,099,002.
Spaulding, Carl P., and Wilson. 3,099,003.

Davis, Benjamin L., and W. C. Myberg, to United States of America, Navy. Tape capacitor. 3,098,955, 7-23-63, Cl. 317—242.

Davis, Eugene L. Well pumps for abrasive fluids. 3,098,452, 7-23-63, Cl. 103—165.

Davis, Ray F.: *See*—
Gudmundsen, Austin, and Davis. 3,098,325.

Day, Leslie R., to Monroe Calculating Machine Co. Flexible record transport apparatus. 3,098,617, 7-23-63, Cl. 242—55.11.

Deal, Bruce E., and W. Peterson, to Raytheon Co. Chemical reactor. 3,098,763, 7-23-63, Cl. 118—49.5.

Dean, Ralph K., E. J. Slatkovski, and H. E. Wegner, to National Distillers and Chemical Corp. Ventilated metal awning. 3,098,267, 7-23-63, Cl. 20—57.5.

Dean, Ronald A., and R. B. Girdler, to The British Petroleum Co. Ltd. Removal of metals from petroleum fractions. 3,098,816, 7-23-63, Cl. 208—253.

De Boer, Geert, to Volma, N.V. Cheese mold assembly. 3,098,297, 7-23-63, Cl. 31—44.

De Boice, William F., to North American Aviation, Inc. Passive control circuit for electrostatic bearing. 3,098,679, 7-23-63, Cl. 308—8.

Deere & Co.: *See*—
Harriott, Billie L. 3,098,555.
Hunter, George D. 3,098,531.
Weakley, Martin L., Moffett, and Craig. 3,098,872.

De Forest, Sherwood S., to United States Steel Corp. Apparatus for stringing and tensioning plural strands of fence wire. 3,098,624, 7-23-63, Cl. 242—86.7.

Degoraki, Stanislaw D., and V. T. Borka. Book support. 3,098,314, 7-23-63, Cl. 45—57.

De Gregorio, Richard. Liquid dispenser or applicator. 3,098,256, 7-23-63, Cl. 15—565.

Deguchi, Yoshio: *See*—
Ohara, Masso, Yamamoto, and Deguchi. 3,098,856.

Delaporte, Louis A., and J. A. Denisselle. Electromagnetic valves. 3,098,635, 7-23-63, Cl. 251—54.

Del Francia, Joel A., to Institutional Food Equipment Corp. Fully adjustable electrical broiler. 3,098,427, 7-23-63, Cl. 99—446.

Delguste, Paul, to Ateliers de Constructions Electriques de Charleroi. Apparatus for the preservation and regeneration of insulating oil for electrical apparatus provided with an oil reesrvoir. 3,098,891, 7-23-63, Cl. 174—15.

De Marco, Robert F., to The Heifred Corp. Hydraulically driven industrial truck. 3,098,574, 7-23-63, Cl. 214—74.

Dembinski, Berek. Diamond cutting and polishing device. 3,098,326, 7-23-63, Cl. 51—125.

Deming, Roy, to Kent-Moore Organization, Inc. Liquid measuring device. 3,098,385, 7-23-63, Cl. 73—270.

Demler, Henry W., to AMP Inc. Connector assembling tool. 3,098,289, 7-23-63, Cl. 29—203.

Denisselle, Jean A.: *See*—
Delaporte, Louis A., and Denisselle. 3,098,635.

Denk, Walter: *See*—
Schimmelschmidt, Kurt, and Denk. 3,098,863.

Dennis, Wolcott, to Air Reduction Co., Inc. Liquefaction and purification of low temperature gases. 3,098,732, 7-23-63, Cl. 62—9.

Denver Equipment Co.: *See*—
Daman, Arthur C., and Bailey. 3,098,818.

De Rosa, Louis A., to International Telephone and Telegraph Corp. Navigation system. 3,099,006, 7-23-63, Cl. 343—106.

Dessauer, Rolf: *See*—
Armitage, John B., Dessauer, and Hyson. 3,098,842.

Dessauer, Rolf, and S. B. Maerov, to E. I. du Pont de Nemours and Co. Nickel and cobalt chelates of ortho-hydroxy benzophenones. 3,098,863, 7-23-63, Cl. 260—439.

Detweiler, James I.: *See*—
Huffman, Jess H., Detweiler, and Rick. 3,098,382.

Devé, Vagn, to Dominion Engineering Works Ltd. Valve and dash-pot assembly. 3,098,502, 7-23-63, Cl. 137—514.

Diamond, Alfred, to S. Simpson Ltd. Self-supporting trousers. 3,098,238, 7-23-63, Cl. 2—237.

Dibley, Raymond A. Roof collar construction. 3,098,663, 7-23-63, Cl. 285—43.

Dickover, Marion W., and J. N. Jammal, to K-W Battery Co. Vent cover. 3,098,773, 7-23-63, Cl. 136—177.

Dietrich, Karl A., to Dorr-Oliver Inc. Pressure vessel joint. 3,098,577, 7-23-63, Cl. 220—3.

Dinter, Henry A., Jr., to Minneapolis-Honeywell Regulator Co. Gyrocompass. 3,098,306, 7-23-63, Cl. 33—226.

Divine, Ralph D., to American Cyanamid Co. Process for decolorizing and purifying O,O-dialkylthiophosphoryl chlorides and thiophosphate condensates formed therefrom. 3,098,866, 7-23-63, Cl. 260—461.

Dixon, Henry O., to Phillips Petroleum Co. Method for preparing cellular cement. 3,098,754, 7-23-63, Cl. 106—88.

Dobbratz, Ervin C., deceased (W. Dobbratz, administratrix), and J. A. Green. Wear plate unit for scarifier shanks. 3,098,532, 7-23-63, Cl. 172—719.

Dobbratz, Walta: *See*—
Dobbratz, Ervin C., and Green. 3,098,532.

Dodge, Howard M., and D. P. Reynolds, to The General Tire & Rubber Co. Perforation of sheet material. 3,098,406, 7-23-63, Cl. 83—588.

Dodington, Sven H. M., to International Telephone and Telegraph Corp. Pulse shaping klystron modulator. 3,098,980, 7-23-63, Cl. 332—7.

Dohr, Roman, and W. J. Kaiser, to Therachemie Chemisch therapeutische Gesellschaft m.b.H. Process for treating human hair with amino oxide compositions. 3,098,794, 7-23-63, Cl. 167—87.

Dombrowski, Edward J., to Sperry Rand Corp. Restoring mechanism for pin carriages. 3,098,608, 7-23-63, Cl. 235—60.

Dominion Engineering Works Ltd.: *See*—
Devé, Vagn. 3,098,502.

Doran, John T. Cement floor finishing machine. 3,098,329, 7-23-63, Cl. 51—177.

Dorken & Mankel K.G.: *See*—
Bomm, Heinz, and Berghaus. 3,098,259.

Dorr-Oliver Inc.: *See*—
Dietrich, Karl A. 3,098,577.

Dorsey, William J., to International Latex Corp. Deposited latex undergarments. 3,098,486, 7-23-63, Cl. 128—521.

Doyle, Frank J.: *See*—
Tyma, Louis S., Jr., and Doyle. 3,098,437.

Dragoco Spezialfabrik Konz, Riech- und Aromastoffe Gerberding & Co., G.m.b.H.: *See*—
Pursch, Friedrich. 3,098,874.

Drake, Theodore R.: *See*—
Rados, John L., and Drake. 3,098,514.

Draper Corp.: *See*—
Consoletti, Paul C. 3,098,511.

Drew Chemical Corp.: *See*—
Reider, Malcolm J. 3,098,694.

Drexinger, Robert M., and S. Kuba, to Western Electric Co., Inc. Apparatus for treating articles. 3,098,494, 7-23-63, Cl. 134—70.

Dryer, Eldon O.: *See*—
Glasgow, Lyle E., and Dryer. 3,098,497.

Dubbelley, Charles A., to General Electric Co. Hermetic refrigerant compressor. 3,098,604, 7-23-63, Cl. 230—206.

Dubil Mfg., Inc.: *See*—
Dubil, Matthew. 3,098,747.

Dubil, Matthew, to Dubil Mfg., Inc. Method for preparing a ground beef product. 3,098,747, 7-23-63, Cl. 99—108.

Dudley, Edmond R., to Peerless Equipment Co. Can feeding and dividing apparatus and system. 3,098,551, 7-23-63, Cl. 193—31.

Dullmeyer, John F.: *See*—
Stiner, James E., and Dullmeyer. 3,098,685.

Duncan, Bobby J., to Sperry Rand Corp. Mixer employing gyromagnetic elements. 3,098,974, 7-23-63, Cl. 325—448.

Dunlap, Jerald V.: *See*—
Estkowski, Michael H., and Dunlap. 3,098,321.

Dunning, Joseph E., to International Business Machines Corp. Signal monitor. 3,099,000, 7-23-63, Cl. 340—248.

Du Pont de Nemours, E. I., and Co.: *See*—
Armitage, John B., Dessauer, and Hyson. 3,098,842.
Dessauer, Rolf, and Maerov. 3,098,863.
Gradisbar, Frederick J., and Hein. 3,098,716.
Marks, Barnard M. 3,098,798.
Pascal, Ivan. 3,098,691.

Duval Sulphur and Potash Co.: *See*—
Bourne, Douglas J., and Park. 3,098,390.

Eagle Picher Co.: *See*—
Van Dolah, Harry J., and Linhart. 3,098,753.

Earley, Wilbar F.: *See*—
Guntert, Ronald M., and Earley. 3,098,413.
Guntert, Ronald M., and Earley. 3,098,414.

Eaton Mfg. Co.: *See*—
Graber, Thomas J. 3,098,500.

Ebdon, Denis K., to Associated Electrical Industries Ltd. Dispersion hardening of lead. 3,098,293, 7-23-63, Cl. 29—528.

Edwards, Sam M.: *See*—
Barnby, Herbert A., and Edwards. 3,098,334.

Eicher, Erido: *See*—
Busch, Dieter, Eicher, and Kramer. 3,098 783.

Eisman, Sol. Fish stringer. 3,098,592, 7-23-63, Cl. 224—7.

Elarde, Paul F., to Western Electric Co., Inc. Methods of heat-treating low carbon steel. 3,098,776, 7-23-63, Cl. 148—122.

Eldridge, John W., and C. R. Outterson, to Albemarle Paper Mfg. Co. Vapor phase polymerization with solid solvent coated catalyst. 3,098,846, 7-23-63, Cl. 260—94.9.

Electric Machinery Mfg. Co.: *See*—
Jernberg, Evert H. 3,098,683.

Electro-Voice, Inc.: *See*—
Tomcik, Daniel J. 3,098,888.

Ellis, Robert. Animated figurine and means for operating same. 3,098,319, 7-23-63, Cl. 46—240.

Elrick Industries, Inc.: *See*—
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Elsner, Edwin C. Railroad box car. 3,098,456, 7-23-63, Cl. 105—379.

Elwood, Sam F. Perpetual calendar with built-in tabulator. 3,098,310, 7-23-63, Cl. 40—107.

Eminger, Robert J., to Fort Wayne Tool and Die, Inc. Coil winding machine. 3,098,616, 7-23-63, Cl. 242—13.

Engelhard Industries, Inc.: *See*—
Andersen, Holger C., Romeo, and Green. 3,098,712.

Englander Co., Inc., The: *See*—
Waugh, Robert E. 3,098,664.

Enk, Eduard, and J. Nickl, to Wacker-Chemie G.m.b.H. Process for effecting crucibleless melting of materials and production of shaped bodies therefrom. 3,098,741, 7-23-63, Cl. 75—65.

Epperly, William R., to Esso Research and Engineering Co. Two-stage adsorption process. 3,098,814, 7-23-63, Cl. 208—91.

Ericks, Walter P., to The Upson Co. Dimensional stabilization of cellulose. 3,098,760, 7-23-63, Cl. 117—143.

Erlemann, Gustav, W. Guex, R. Ruegg, and S. Schaeren, to Hoffmann-La Roche Inc. Triols. 3,098,879, 7-23-63, Cl. 260—635.

Ervin, Guy, Jr., and H. F. G. Deltz, to Norton Co. Process for the extraction of relatively pure titanium and of relatively pure zirconium and hafnium. 3,098,805, 7-23-63, Cl. 204—64.

Esso Research and Engineering Co.: *See*—
Cull, Neville L., and Aldridge. 3,098,845.
Epperly, William R. 3,098,814.
Morway, Arnold J. 3,098,822.
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Weisgerber, George A., and Reinsch. 3,098,598.
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Estkowski, Michael H. Marker seed tabs. 3,098,320, 7-23-63, Cl. 47—56.

Estkowski, Michael H., and J. V. Dunlap. Marker seed tabs. 3,098,321, 7-23-63, Cl. 47—56.

Etchison, John O., Jr.: *See*—
Breeze, Marvin M., Jr., and Etchison. 3,098,401.

Ethyl Corp.: *See*—
Blitzer, Sidney M., Giraitis, and Zietz. 3,098,706.
Kobetz, Paul. 3,098,862.

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Wurzburg, Otto B., Kunze, and Evans. 3,098,492.

Evans Research & Development Corp.: *See*—
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FMC Corp.: *See*—
Käbisch, Gerhard, and Herzog. 3,098,714.
Käbisch, Gerhard, and Laufer. 3,098,715.

Facer, Helen M.: *See*—
Facer, Leroy H. 3,098,737.

Facer, Leroy H., deceased, by H. M. Facer, executrix, to G. E. Cooley, trustee. Processes for producing fertilizers and products thereof. 3,098,737, 7-23-63, Cl. 71—37.

Fala, Fernando. Pot for brewing coffee and method of effecting the brewing. 3,098,425, 7-23-63, Cl. 99—317.

Fancher, Otis E., to Miles Laboratories, Inc. Anti-epileptic tertiary alicyclic urea derivative. 3,098,791, 7-23-63, Cl. 167—65.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
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Holtschmidt, Hans, von Spulak, Müller, and Bayer. 3,098,840.

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Heuse, Otto, Fischer, Horn, and Wimmer. 3,098,883.
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Farrand, Clair L., and H. J. Hasbrouck, to Inductosyn Corp. Precision voltage ratio transformer. 3,098,990, 7-23-63, Cl. 336—172.

Farrell, Valdemar C. Boom rigging. 3,098,569, 7-23-63, Cl. 212—3.

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Young, Dale A., and Farris. 3,098,473.

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Cox, Alvon R. 3,098,779.

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Fee, Graham M., to True Temper Corp. Railroad track maintenance machines. 3,098,453, 7-23-63, Cl. 104—2.

Fehr, Henry. Grain bin conveyor supporting channel. 3,098,571, 7-23-63, Cl. 214—17.

Feldman, Julian: *See*—
Saffer, Bernard A., and Feldman. 3,098,880.

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Feuston, William M. Binder. 3,098,487, 7-23-63, Cl. 129—13.

Fernandez, Manuel C., 50% to C. C. Goetz. System of continuous radiolocation for aircraft. 3,099,008, 7-23-63, Cl. 343—112.

Ferrari, Andres, to Technicon Instruments Corp. Concentration apparatus for quantitative analysis of a substance in a liquid. 3,098,718, 7-23-63, Cl. 23—253.

Ferrari, Andres, Jr., to Technicon Instruments Corp. Fluid treatment method and apparatus with double-flow colorimeter. 3,098,717, 7-23-63, Cl. 23—230.

Ferris, De Lacy F., to United States of America, Navy. Deformable shock absorber. 3,098,544, 7-23-63, Cl. 188—1.

Fife Mfg. Co.: *See*—
Shelton, John J. 3,098,595.

Finch, Walter G.: *See*—
Kuck, John H. 3,098,982.

Finklea, Robert D. Folding kite structure. 3,098,634, 7-23-63, Cl. 244—153.

Firestone Tire & Rubber Co., The: *See*—
Conard, Wendell R., and Reid. 3,098,839.

Fischer, Werner: *See*—
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Fisher & Porter Co.: *See*—
Brewer, Nathaniel, Haigler, and Woodring. 3,098,498.

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Fixture Hardware Corp.: *See*—
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Fleenor, Charles M. Bathroom hand rail fixture. 3,098,240, 7-23-63, Cl. 4—185.

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Fleissner, Gerold. 3,098,371.

Fleissner, Gerold, to Fleissner G.m.b.H. Perforated drum material treatment device having a plurality of treatment zones. 3,098,371, 7-23-63, Cl. 68—5.

Flieder, Robert A., to American Speedlight Corp. Electrical systems including capacitors. 3,098,947, 7-23-63, Cl. 315—188.

Flitterman, Harry. Braided rug. 3,098,281, 7-23-63, Cl. 28—78.

Flower, Walter T., and D. C. Green, to Wesel Mfg. Co. Proof press for curved printing plates. 3,098,435, 7-23-63, Cl. 101—212.

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Jones, James R., and Fogle. 3,098,713.

Fondazione Emanuele Paterno: *See*—
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Fondén, Per B., and K. O. T. Wälander. Shock absorber for airplane arresting devices. 3,098,629, 7-23-63, Cl. 244—110.

Foos, Raymond A., and E. P. Stambaugh, to National Distillers and Chemical Corp. Uranium oxide and thorium oxide recovery. 3,098,708, 7-23-63, Cl. 23—14.5.

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Richey, Clarence B., and O'Donnell. 3,098,528.

Forsberg, Arthur R. Seed hulling and separating machine. 3,098,515, 7-23-63, Cl. 146—253.

Fort Wayne Tool and Die, Inc.: *See*—
Eminger, Robert J. 3,098,616.

Fortin, Louis P., and E. Lemieux, 66⅔ to E. Beaupre, and 33⅓ to said Fortin. Telescopic tube. 3,098,669, 7-23-63, Cl. 287—58.

Foster, Harry C.: *See*—
Wakefield, Ralph V., and Foster. 3,098,442.

Foster, Harry R., and E. E. Crump, to Ohmega Laboratories. Frequency modulated crystal oscillator. 3,098,981, 7-23-63, Cl. 332—26.

Foster Wheeler Corp.: *See*—
Row, Ronald H. P. 3,098,469.

Fournier, Roger H., to Norton Co. Grinding machine. 3,098,328, 7-23-63, Cl. 51—165.

Fouse, Frederick Z., and J. F. Kidwell, to Anchor Hocking Glass Corp. Automatic container inspection machine. 3,098,564, 7-23-63, Cl. 209—75.

Fouse, Frederick Z., and J. F. Kidwell, to Anchor Hocking Glass Corp. Automatic container inspection machine. 3,098,565, 7-23-63, Cl. 209—111.5.

Foust, Charles W.: *See*—
Roblee, Leland H. S., Jr., Clarke, and Foust. 3,098,762.

Fonts, H. D., and A. D. McCarver. Heating device for aerosol shaving lather dispensers and the like. 3,098,925, 7-23-63, Cl. 219—39.

Fox, Raymond, to United States of America, Atomic Energy Commission. Gamma proportional counter containing high Z gas and low Z moderator. 3,098,944, 7-23-63, Cl. 313—93.

Fox, Richard E., to Midwest Mower Corp. Sharpener attachment for gasoline engines. 3,098,331, 7-23-63, Cl. 51—241.

Frank, Robert K., to Holley Carburetor Co. Ignition distributor. 3,098,366, 7-23-63, Cl. 64—25.

Frankel, Gerald, to Capa Ltd. Means for producing or controlling movements. 3,098,416, 7-23-63, Cl. 95—4.5.

Frankel, Milton B., and K. Klager, to Aerojet-General Corp. Nitramines, nitrosamines and their preparation. 3,098,873, 7-23-63, Cl. 260—583.

Frenud, Erich A. Method of printing. 3,098,438, 7-23-63, Cl. 101—426.

Friedler, Max H., to Saf-A Products, Inc. Cleaning protective device. 3,098,375, 7-23-63, Cl. 68—235.

Friese, Gunter, to Metallgesellschaft A.-G. Process for producing hydraulic limes from oil shale. 3,098,886, 7-23-63, Cl. 263—53.

Froelle, Leonard E., to Chrysler Corp. Hydrodynamic transmission control. 3,098,507, 7-23-63, Cl. 137—628.

Fry, George H., Jr., to United States of America, Navy. Motion responsive rocket firing system. 3,098,411, 7-23-63, Cl. 89—41.

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Fulkerson, Orin T.: *See*—
Teachworth, Oswald A. 3,098,337.

G.S. Equipment Co., The: *See*—
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Gabor, John D.: *See*—
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Gaetani, Ermanno, to Aziende Colori Nazionali Affini Acna S.p.A. Disazo dyes. 3,098,847, 7-23-63, Cl. 260—187.

Gagliardi, Domenick D. Treatment and coloring of polyolefins. 3,098,692, 7-23-63 Cl. 8—55.

Gardel, Robert. Doll walking mechanism. 3,098,318, 7-23-63, Cl. 46—173.

Garlock Inc.: *See*—
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Garner, Ralph F., to The B. F. Goodrich Co. Belt. 3,098,778, 7-23-63, Cl. 154—52.2.

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Geier, Adam. Bathing drawers. 3,098,248, 7-23-63, Cl. 9—335.

General Dynamics Corp.: *See*—
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General Electric Co.: *See*—
Bobear, William J. 3,098,836.
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Burch, Byron F., Jr. 3,098,566.
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General Electric Co.: *See*—
Pringle, Ross A., and Wallace. 3,098,893.
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General Electric Co., Ltd., The: *See*—
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General Mills, Inc.: *See*—
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General Motors Corp.: *See*—
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Karlgaard, Wayne A. 3,098,546.
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General Precision, Inc.: *See*—
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Lias, Saul, and Kaylin. 3,098,969.
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Gerdes, Claus-Holmer. Mixing valve. 3,098,508, 7-23-63, Cl. 137—637.4.

Gerin, Jacques J.-M. J. Shock-resisting motor vehicles. 3,098,675, 7-23-63, Cl. 296—28.

Geshner, Robert A., to Western Electric Co., Inc. Encapsulated electric component assembly. 3,098,950, 7-23-63, Cl. 317—101.

Giannini, Anthony J. Adjustable exhaust hood. 3,098,423, 7-23-63, Cl. 98—115.

Giannino, Amedio W. Oil level warning devices. 3,098,914, 7-23-63, Cl. 200—138.

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Giepen, Hubert M., to Giepen Associates, Inc. Cup dispenser. 3,098,585, 7-23-63, Cl. 221—116.

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Maus, Otfrid G. H., and Giers. 3,098,391.

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Glasser, Henry, and G. Rove. Precision and reliability of timing devices. 3,098,448, 7-23-63, Cl. 102—70.2.

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Giugni, Nello, B. and R. Log debarking machine. 3,098,513, 7-23-63, Cl. 144—208.

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Giugni, Nello, B. and R. 3,098,513.

Giza, Edward M., to United States of America, Army. Adjusting mechanism for recoilless rifle spotting barrel. 3,098,410, 7-23-63, Cl. 89—1.7.

Glasgow, Lyle E., and E. O. Dryer, to North American Aviation, Inc. Freeze seal liquid metal valve. 3,098,497, 7-23-63, Cl. 137—74.

Globe Hoist Co.: *See*—
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Glynn, Theodore W., to American-Saint Gobain Corp. Method of attaching a metal channel to a glass plate. 3,098,698, 7-23-63, Cl. 18—59.

Godycki, Ludwig E., R. G. Stevens, and I. Tsu, to International Business Machines Corp. Thin magnetic film. 3,098,803, 7-23-63, Cl. 204—38.

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Goldberg, Albert L., and V. Jasinski, to National Starch and Chemical Corp. Polyvinyl ethyl ether-vinyl acetate graft copolymers. 3,098,838, 7-23-63, Cl. 260—45.5.

Goldberg, Edwin A., to Radio Corp. of America. Stabilized tracking system. 3,099,005, 7-23-63, Cl. 343—7.

Goldberg, Leon J., to General Electric Co. Controlled rectifier D.C. switching circuit. 3,098,949, 7-23-63, Cl. 317—33.

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Higgins, Horace M., and Gongwer. 3,098,351.

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Price, Edison, and Goodbar. 3,098,612.

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McCann, Keith. 3,098,557.

Goodrich, B. F., Co., The: *See*—
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Gorin, Manuel H.: *See*—
Rosenstein, Ludwig, and Gorin. 3,098,733.

Gorman, Francis P. Aerial harness. 3,098,539, 7-23-63, Cl. 182—3.

Gorman, William S., Jr., to National Gypsum Co. Process of delinking printed paper. 3,098,784, 7-23-63, Cl. 162—5.

Gradisbar, Frederick J., and R. F. Hein, to E. I. du Pont de Nemours and Co. Recovery of bromine from solutions thereof. 3,098,716, 7-23-63, Cl. 23—217.

Graef, Rudolf, and L. von Bogdandy, to Huttenwerk Oberhausen Aktiengesellschaft. Process for refining metals. 3,098,739, 7-23-63, Cl. 75—51.

Graff, Alan R., R. B. Oesting, and P. K. Marple, to The Columbia Malting Co. Rotary malting drum with adjustable louvers. 3,098,797, 7-23-63, Cl. 195—131.

Graham, Cecil R. M. Liquid dispensing device. 3,098,589, 7-23-63, Cl. 222—394.

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Grand Specialties Co.: *See*—
Hopfeld, Fred P. 3,098,587.

Green, Daniel C.: *See*—
Flower, Walter T., and Green. 3,098,435.

Green, James A.: *See*—
Dobbratz, Ervin C., and Green. 3,098,532.
Green, William J.: *See*—
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Greene, Earnest J., and W. V. Millman, to American Air Filter Co., Inc. Air filtering apparatus. 3,098,731, 7–23–63, Cl. 55—274.
Greene, George. Structural eaves covering. 3,098,322, 7–23–63, Cl. 50—4.
Greenstadt, Joseph C., and D. F. Ziers, to Mfg. Specialties Co., Inc. Drapery apparatus. 3,098,520, 7–23–63, Cl. 160—3+6.
Greenwood, Eugene C. Safety joint for oil well drilling string. 3,098,667, 7–23–63, Cl. 285—376.
Gregory, Charles W., to Phillips Petroleum Co. Vehicle frame assembly. 3,098,656, 7–23–63, Cl. 280—106.
Greten, Ernst, to Metallwerk Bahre K.G. Apparatus for producing wood particle boards. 3,098,781, 7–23–63, Cl. 156—373.
Groce, Irwin J., R. W. Ritchey, and R. W. Peters, to National Distillers and Chemical Corp. Recovery of hafnium hydroxide. 3,098,711, 7–23–63, Cl. 23—140.
Grosser, Siegfried: *See*—
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Gruber, Thomas J., to Eaton Mfg. Co. Broken discharge line indicator. 3,098,500, 7–23–63, Cl. 137—456.
Gruss, George A., L. E. McKean, and D. L. Zelters, to American Machine & Foundry Co. Bowling ball handling mechanism. 3,098,653, 7–23–63, Cl. 273—43.
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Gubelmann, William S., deceased; by Walter S. Gubelmann, executor; said William S. Gubelmann, assor. to Realty and Industrial Corp. Calculating machine driving mechanism and the like. 3,098,609, 7–23–63, Cl. 235—62.
Gudmundsen, Austin, and R. F. Davis, to McCulloch Corp. Fluted-cutter sharpener. 3,098,325, 7–23–63, Cl. 51—95.
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Erlemann, Gustav, Guex, Ruegg, and Schaeren. 3,098,879.
Guidi, Eugen, to Sulzer Freres, S.A. Manipulators for replacing fuel units in a nuclear reactor. 3,098,811, 7–23–63, Cl. 204—193.2.
Guion, Thomas H., to Monsanto Chemical Co. Process for union dyeing of acrylonitrile polymers and basic nitrogenous fiber blends. 3,098,690, 7–23–63, Cl. 8—21.
Guntert, Ronald M., and W. F. Earley, to Guntert & Zimmerman Const. Div., Inc. Concrete pavement laying machine with grooving mechanism. 3,098,413, 7–23–63, Cl. 94—39.
Guntert, Ronald M., and W. F. Earley, to Guntert & Zimmerman Const. Div., Inc. Header assembly for concrete laying machines. 3,098,414, 7–23–63, Cl. 94—46.
Guntert, Ronald M., to Guntert & Zimmerman Const. Div., Inc. Hopper unit for concrete slab laying machines. 3,098,415, 7–23–63, Cl. 94—46.
Guntert & Zimmerman Const. Div. Inc.: *See*—
Guntert, Ronald M. 3,098,415.
Guntert, Ronald M., and Earley. 3,098,413.
Guntert, Ronald M., and Earley. 3,098,414.
Gusman, Albert D. Clothing with adhesively applied bodying layer. 3,098,235, 7–23–63, Cl. 2—97.
Guzman, George G. Inflated play horse. 3,098,317, 7–23–63, Cl. 46—87.
Gwyther, Val M. Water quality control means. 3,098,360, 7–23–63, Cl. 61—28.
Haase, Ludwig W. Method of producing carbon dioxide ice and product thereof. 3,098,361, 7–23–63, Cl. 62—1.
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Cernisk, Henry L. 3,098,278.
Haeber, John A. Apparatus for installing and retrieving equipment from underwater wells. 3,098,525, 7–23–63, Cl. 166—66.5.
Hafner, Theodore. Suspension and tensioning of successive sections of surface wave transmission lines between supports with coupling between sections at supports. 3,098,988, 7–23–63, Cl. 333—95.
Hagan, Albert W., to Roy S. Sanford & Co. Carton. 3,098,599, 7–23–63, Cl. 229—37.
Hagan, Albert W., and P. F. Simpson, to Roy S. Sanford & Co. Carton. 3,098,600, 7–23–63, Cl. 229—37.
Haganes, Martin. Cranes, excavators and the like. 3,098,395, 7–23–63, Cl. 74—105.
Hägglund, Sven E., to Borsig Aktiengesellschaft, and Svensk Toroforadling, Aktiebolaget. Diaphragm filter press. 3,098,429, 7–23–63, Cl. 100—115.
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Brewer, Nathaniel, Haigler, and Woodring. 3,098,498.
Hall, Archie A., and J. R. Sabbia, to United States of America, Navy. Supinating pilot's seat. 3,098,631, 7–23–63, Cl. 244—122.
Hall, James A.: *See*—
Thomas, Jesse B., and Hall. 3,098,290.
Hall, Matthew, & Co. Ltd.: *See*—
Allen, George, and Venison. 3,098,527.
Hamer, Martin, and R. H. Brown, to Standard Oil Co. Motor fuel composition. 3,098,727, 7–23–63, Cl. 44—56.
Hammer, Elmer G., Jr., and G. A. Rynders, to McGraw-Edison Co. Electrical capacitor. 3,098,956, 7–23–63, Cl. 317—243.
Hanna, Fares K.: *See*—
Pekor, Charles B., and Hanna. 3,098,246.
Hannum, Charles M., to National Cleveland Corp. Method of sharpening gear cutting tools. 3,098,333, 7–23–63, Cl. 51—288.
Haracz, Edward F. Process and apparatus for applying silver films. 3,098,756, 7–23–63, Cl. 117—35.
Hardt, Paul E., to Klockner-Werke AG. Process for refining of pig iron in other than round vessels. 3,098,740, 7–23–63, Cl. 75—60.
Haroldsen, Grant O.: *See*—
McElroy, William N., and Haroldsen. 3,098,810.
Harrington, Joseph J., J. D. Mitchell, and B. L. Jordan. Peanut vine feed control device. 3,098,340, 7–23–63, Cl. 56—345.
Harriott, Billie L., to Deere & Co. Discharge elevator. 3,098,555, 7–23–63, Cl. 198—122.
Harris, Harlan N. Compass. 3,098,304, 7–23–63, Cl. 33—154.
Harris, Ida M. and J. J. Art needlework frame. 3,098,280, 7–23–63, Cl. 28—15.
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Harris, Ida M., and J. J. 3,098,280.
Harris, John E., and C. N. Matthews, to Monsanto Research Corp. Synthesis of methylenebis (phosphonium bromides). 3,098,878, 7–23–63, Cl. 260—606.5.
Harrison, Henry C. Cleaning device. 3,098,253, 7–23–63, Cl. 15—118.
Harvard Mfg. Co., The: *See*—
Roche, Melvin E. 3,098,243.
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Hausner, Johann K., to Neutronic Corporation. Packing assembly. 3,098,660, 7–23–63, Cl. 277—187.
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Haxo, Henry E., Jr., to United States Rubber Co. Latex masterbatching of silica with vinyl pyridine rubbers. 3,098,837, 7–23–63, Cl. 260—41.5.
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Loughlin, Bernard D. 3,098,895.
Hazemag: *See*—
Meyer, Ludwig J. 3,098,614.
Hearne, Joseph H.: *See*—
Brand, John R., and Hearne. 3,098,407.
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Schwartz, Norman J., and Goldblatt. 3,098,911.
Sprague, John M. 3,098,912.
Helgren, Fred J., to Abbott Laboratories. Sweetening agent and process of producing the same. 3,098,749, 7–23–63, Cl. 99—141.
Hellyer, John T., ½ to R. S. Strom. Hammer rotor construction for material crushers. 3,098,613, 7–23–63, Cl. 241—190.
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Hermann, Otto, to The R. K. Le Blond Machine Tool Co. Zero speed switch. 3,098,906, 7–23–63, Cl. 200—80.
Hermanny, Heinrich, to Radio Corp. of America. Tube cage orienting and positioning apparatus. 3,098,553, 7–23–63, Cl. 198—33.
Heron, David H., to Shell Oil Co. Shut-off valve for dual completion upper packer. 3,098,526, 7–23–63, Cl. 166—128.
Herr, Joseph R., to Sylvania Electric Products Inc. Time delay circuit. 3,098,953, 7–23–63, Cl. 317—148.5.
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Heuer, Hans, to Olympia Werke AG. Arrangement for series-transmission of coded signals. 3,099,004, 7–23–63, Cl. 340—347.
Heuse, Otto, W. Fischer, F. Horn, and R. Wimmer, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process and apparatus for carrying out chemical reactions at high temperatures. 3,098,883, 7–23–63, Cl. 260—683.
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Hill, Robert H. Slush pump. 3,098,449, 7–23–63, Cl. 103—4.
Hiner, Edward C. Scaffold. 3,098,540, 7–23–63, Cl. 182—152.
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Hongland, Earl J., to Standard Safety Equipment Co. Shoulder-mounted safety hood. 3,098,233, 7–23–63, Cl. 2—3.
Hoenick, Hans H., to Dr. Ing. h.c.F. Porsche KG, Firma. Valve control mechanism for internal combustion engine. 3,098,472, 7–23–63, Cl. 123—90.

Hoffman, Frances G., to Merck & Co., Inc. 17-ether derivatives of pregnanes. 3,098,860, 7–23–63, Cl. 260—397.4.
Hoffman, Jess H., J. I. Detweiler, and F. O. Riek, Jr., to Lockheed Aircraft Corp. Hydraulic test equipment. 3,098,382, 7–23–63, Cl. 73—168.
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Erlemann, Gustav, Guex, Ruegg, and Schaeren. 3,098,870.
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Holden, Thomas W. Band pass audio filter. 3,098,986, 7–23–63, Cl. 333—71.
Holden, Thomas W. Variable band pass audio filter. 3,098,987, 7–23–63, Cl. 333—71.
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Souligney, Mitchell J. 3,098,916.
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Holzman, James W., to Dana Corp. Boat retrieving device. 3,098,462, 7–23–63, Cl. 114—221.
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Hornbostel Lloyd, Jr., to Beloit Iron Works. Liquid removal means for rotatable perforated shells. 3,098,788, 7–23–63, Cl. 162—274.
Horowitz, Carl, and T. Breitner, to Yardney International Corp. Anhydrous electric battery. 3,098,770, 7–23–63, Cl. 136—100.
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Howard, James W. Transistorized pulse gate noise limiter. 3,098,972, 7–23–63, Cl. 325—319.
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Hu, Quang-Hsi. Novel and safety process and device for use in connection with motor vehicles. 3,098,538, 7–23–63, Cl. 180—82.
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Huet, André. Light boiler for use in a nuclear energy installation. 3,098,468, 7–23–63, Cl. 122—32.
Huet, André. Nuclear reactor with fuel under spheroidal form. 3,098,809, 7–23–63, Cl. 204—193.2.
Huffman, John W., to Pace, Inc. Thermostat switch. 3,098,913, 7–23–63, Cl. 200—138.
Hunsinger, Lukas. Mixing faucet. 3,098,503, 7–23–63, Cl. 137—597.
Hunter, George D., to Deere & Co. Cushion spring standard for an earth working tool. 3,098,531, 7–23–63, Cl. 172—710.
Husband, William M. Turf plugger. 3,098,672, 7–23–63, Cl. 294—50.7.
Huska, Paul. Motor driven rotary selector valve. 3,098,960, 7–23–63, Cl. 318—443.
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Institutional Food Equipment Corp.: *See*—
Del Francia, Joel A. 3,098,427.
Interchemical Corp.: *See*—
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International Bank: *See*—
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International Business Machines Corp.: *See*—
Clapper, Genung L. 3,098,939.
Clapper, Genung L. 3,098,999.
Dunning, Joseph E. 3,099,000.
Godycki, Ludwig E., Stevens, and Tsu. 3,098,803.
Smith, James T. 3,098,998.
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De Rosa, Louis A. 3,099,006.
Dodington, Sven H. M. 3,098,980.
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Isabeau, Jean G. V., to Zenith Radio Corp. Signal translators utilizing input signal level which selectively saturates transistor base-collector junction. 3,098,936, 7–23–63, Cl. 307—88.5.
Iversen, Richard N., to The Weatherhead Co. Metal joint or seal. 3,098,662, 7–23–63, Cl. 285—18.
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Jerabek, Robert D., to Archer-Daniels-Midland Co. Preparation of water-soluble oil-resin vehicles. 3,098,834, 7–23–63, Cl. 260—23.7.
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Kao, Paul W., and C. H. Brannen, to Cen-Vi-Ro Pipe Corp. Annular track member for a spinning cylindrical pipe core during interior lining operation. 3,098,764, 7-23-63, Cl. 118—55.

Karlgaard, Wayne A., to General Motors Corp. Shock absorber piston valving. 3,098,546, 7-23-63, Cl. 188—88.

Kass, David, to Original Toy Corp. Package including hanger for clothing. 3,098,561, 7-23-63, Cl. 206—45.34.

Katz, Leonhard. Direct-current motor and the like. 3,098,958, 7-23-63, Cl. 318—138.

Katzman, Lawrence. Vaporizer and heating chamber. 3,098,926, 7-23-63, Cl. 219—40.

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Fouse, Frederick Z., and Kidwell. 3,098,565.

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Kirkpatrick, Willard H., V. L. Seale, A. Walker, and R. E. Law, to Nalco Chemical Co. Demulsification of petroleum oil emulsions. 3,098,827, 7-23-63, Cl. 252—341.

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Knabusch, Edward M., and E. J. Shoemaker, to La-Z-Boy Chair Co. Spring anchor means. 3,098,646, 7-23-63, Cl. 267—112.

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Kobetz, Paul, to Ethyl Corp. Complex bimetallic organometallic compounds and method for their preparation. 3,098,862, 7-23-63, Cl. 260—429.7.

Koch, John E. Snowplow attachment for automobiles. 3,098,309, 7-23-63, Cl. 37—42.

Koci, Ludvik J., R. D. Andersen, and I. Jepson, to Sunbeam Corp. Remotely controlled electric heating and cooking vessels. 3,098,918, 7-23-63, Cl. 219—20.

Kohlhagen, Walter, and L. R. Burghoff, to Amphenol-Borg Electronics Corp. Journal-type staff bearings for movements and the like. 3,098,681, 7-23-63, Cl. 308—22.

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Kramer, Anton: *See*—
Busch, Dieter, Eicher, and Kramer. 3,098,783.

Krämer, Rolf, E. Breitinger, and F. W. Gerber, to SKF Kugellagerfabriken Gesellschaft mit beschraukter Haftung. Spindle drive arrangement for a spinning machine and the like. 3,098,345, 7-23-63, Cl. 57—102.

Krause, James N., to Anaconda Aluminum Co. Curl resistant foil to paper lamination and method of making same. 3,098,780, 7-23-63, Cl. 156—280.

Kreps, Saul I., to Van Dyk & Co., Inc. Cosmetic compositions containing lactic acid esters of fatty alcohols. 3,098,795, 7-23-63, Cl. 167—90.

Kretzmer, Ernest R., to Bell Telephone Laboratories, Inc. Information storage arrangement. 3,098,996, 7-23-63, Cl. 340—173.

Kuba, Samuel: *See*—
Drexinger, Robert M., and Kuba. 3,098,494.

Kuck, John H., 50% to W. G. Finch. Superregenerative amplifier. 3,098,982, 7-23-63, Cl. 332—31.

Kucmerosky, Theodore L., and M. E. Peterson, to The Bendix Corp. Spring adjusting mechanism for flow divider valve. 3,098,642, 7-23-63, Cl. 267—1.

Kuhn, Peter M.: *See*—
Suomi, Verner E., and Kuhn. 3,098,880.

Kukin, Ira: *See*—
Faust, Jacob, and Kukin. 3,098,821.

Kulicke, Frederick W., Jr., G. H. Schwalm, and R. Ullman, to AMP Inc. Measuring and feeding apparatus. 3,098,596, 7-23-63, Cl. 225—117.

Kunze, Walter G.: *See*—
Wurzburg, Otto B., Kunze, and Evans. 3,098,492.

Lab-Crafts, Inc.: *See*—
Ivey, Lee R. 3,098,465.

Langston, Claude C. Multiple color thread dyeing device. 3,098,373, 7-23-63, Cl. 68—27.

Langston, Claude C. Multiple color thread dyeing device. 3,098,374, 7-23-63, Cl. 68—27.

Lantz, Dae C., Jr., to Pan American Resources, Inc. Rotary refuse converter. 3,098,458, 7-23-63, Cl. 110—14.

La Pierre, Thomas H., deceased; M. J. Crabtree, executrix, to E. L. Keathley. Support stand. 3,098,568, 7-23-63, Cl. 211—60.

Larkin Coils, Inc.: *See*—
Shrader, Raymond M. 3,098,363.

Larsen, Lee D. Bowling glove device. 3,098,654, 7-23-63, Cl. 273—54.

Lasbrey, Ian K. B., to Short Brothers & Harland Ltd. Automatic stabilizing apparatus for aircraft. 3,098,627, 7-23-63, Cl. 244—77.

Laskin, Allen I., to Olin Mathieson Chemical Corp. 16-hydroxylation of steroids. 3,098,796, 7-23-63, Cl. 195—51.

Latina, Harry B., to A. G. Spalding & Bros., Inc. Construction of baseball gloves. 3,098,234, 7-23-63, Cl. 2—19.

Laudon, Herbert, to Leesona Corp. Infra-red gas detection system. 3,098,942, 7-23-63, Cl. 250—83.3.

Läufer, Siegmar: *See*—
Käbisch, Gerhard, and Läufer. 3,098,715.

Law, Robert E.: *See*—
Kirkpatrick, Willard H., Seale, Walker, and Law. 3,098,827.

Layne & Bowler Pump Co.: *See*—
Bower, Clark D. 3,098,450.

Layne, Gilbert S., and R. J. Teitel, to United States of America, Atomic Energy Commission. Uranium-molybdenum-aluminum ternary alloy. 3,098,742, 7-23-63, Cl. 75—122.5.

La-Z-Boy Chair Co.: *See*—
Knabusch, Edward M., and Shoemaker. 3,098,646.

Leakey, David M., to The General Electric Co., Ltd. Low cross-talk delay circuit. 3,098,976, 7-23-63, Cl. 328—55.

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Taub, Alvin, Feldman, and Le Bell. 3,098,352.

Le Blond, R. K., Machine Tool Co., The: *See*—
Hermann, Otto. 3,098,906.

Lee, Georgia W.: *See*—
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Lee, James. Cat and bird game. 3,098,652, 7-23-63, Cl. 273—1.

Lee, Maurice W., Sr. Steak cooker and tenderiser. 3,098,426, 7-23-63, Cl. 99—339.

Lee, Paul L.: *See*—
Weaver, Elmer C. 3,098,431.

Leesona Corp.: *See*—
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Lemieux, Eugene: *See*—
Fortin, Louis P., and Lemieux. 3,098,669.

Lemmers, Eugene, to General Electric Co. Configurated lamp. 3,098,945, 7-23-63, Cl. 313—109.

Lerude, Leslie R. Gun carrying harness. 3,098,591, 7-23-63, Cl. 224—1.

Le Vaux, Rene G.: *See*—
Brown, Adolph M. 3,098,232.

Lewin, Seymour Z. to Evans Research & Development Corp. Apparatus for use in determining particle size and distribution of particle size. 3,098,931, 7-23-63, Cl. 250—83.3.

Lewis, Clifford J., to Phillips Petroleum Co. Uranium ore-carbonate leach process involving addition of chlorine, alkali metal hypochlorite or ammonium hypochlorite to pregnant liquor derived therefrom. 3,098,707, 7-23-63, Cl. 23—14.5.

Lewis, Lawrence, to United States of America, Atomic Energy Commission. High energy rate extrusion of uranium. 3,098,807, 7-23-63, Cl. 204—154.2.

Libby, Willard F. Heat resistant structure. 3,098,757, 7-23-63, Cl. 117—35.

Licata, Leonard, to Automatic Electric Laboratories, Inc. Universal spotter cam arrangement. 3,098,899, 7-23-63, Cl. 179—90.

Liebhafsky, Herman A., and L. W. Niedrach, to General Electric Co. Fuel gas generator control system for fuel cells. 3,098,769, 7-23-63, Cl. 136—86.

Liebscher, Anton, E. E. Rollman, and A. Szerenyi, to Ro-Search, Inc. Footwear having an outsole of elastomeric material cured directly to the sole. 3,098,308, 7-23-63, Cl. 36—14.

Lilly, Eli, and Co.: *See*—
Kline, Granville B., and Thompson. 3,098,745.

Lime, Jean, to Societe Alsacienne de Construction Mecaniques. Device for the adjustment or "correlating" of the engraved rollers in rotary printing machines. 3,098,434, 7-23-63, Cl. 101—178.

Lincoln, John D., to Continental Can Co., Inc. Method for coating a honeycomb log. 3,098,759, 7-23-63, Cl. 117—95.

Lind, Orbie E., Jr., and W. H. Trow, to Sylvania Electric Products Inc. Camera control mechanism. 3,098,417, 7-23-63, Cl. 95—10.

Lindemann, Hans, to Th. Calow & Co. Maschinenfabrik u. Eisengiesserei. Pipe feeding apparatus. 3,098,570, 7-23-63 Cl. 214—1.

Linhart, Otto C.: *See*—
Van Dolah, Harry J., and Linhart. 3,098,753.

Liss, Saul, and R. R. Kaylin, to General Precision Inc. Apparatus for automatic testing of a potentiometer's linearity and total resistance including actuating means responsive to a predetermined percent of error. 3,098,969, 7-23-63, Cl. 324—63.

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Beebe, Cedric H., Liston, and McKinley. 3,098,813.

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Little, David S., and E. W. Pike. Vertical speed indicator. 3,098,381, 7-23-63, Cl. 73—179.

Little, Harvey J., to Chrysler Corp. Glass bending mold. 3,098,736, 7-23-63, Cl. 65—291.

Littler, Francis W., to Socony Mobil Oil Co., Inc. Agricultural spray emulsion concentrates and their method of manufacture. 3,098,789, 7-23-63, Cl. 167—42.

Littley, John J., and R. Burns, to The Cincinnati Shaper Co. Powdered metal compacting press. 3,098,261, 7-23-63, Cl. 18—16.5.

Lockheed Aircraft Corp.: *See*—
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Hoffman, Jess H., Detweiler, and Riek. 3,098,382.
Messinger, Bernard L. 3,098,626.
Smith, Bruce W. 3,098,342.
Walkey, George J., Sipple, Sorenson, and Norris. 3,098,444.

Loev, Bernard, to Smith Kline & French Laboratories. Sulfolane pharmaceutical compositions. 3,098,793, 7-23-63, Cl. 167—82.

Lohman, Henry E. Colter assembly. 3,098,680, 7-23-63, Cl. 308—19.

Lo Presti, Roy F., to Goodman Mfg. Co. Automatically reversable troughing idler assembly. 3,098,558, 7-23-63, Cl. 198—202.

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Lory, Frederick A.: *See*—
Caflisch, Edward G., Lory, and Wilson. 3,098,689.

Lotter, William, to South Bend Range Corp. Broiler. 3,098,477, 7-23-63, Cl. 126—41.

Loughlin, Bernard D., to Hazeltine Research, Inc. Electronic previewer for televised color pictures. 3,098,895, 7-23-63, Cl. 178—5.2.

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Lucas, Malcolm B.: *See*—
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Lukes, Thomas M.: *See*—
Prater, Arthur N., and Lukes. 3,098,750.

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Ruby, Charles. 3,098,940.

Luttinger, Lionel B., to American Cyanamid Co. New catalyst system for linear and cyclic polymerization of mono substituted acetylenes. 3,098,843, 7-23-63, Cl. 260—94.1.

Lyall, Richard G., to Yuba Consolidated Industries, Inc. Quick opening closure mechanism. 3,098,580, 7-23-63, Cl. 220—40.

Lynch, Edward I., and T. T. True, to General Electric Co. Cathode ray tube system using indexing signals. 3,098,896, 7-23-63, Cl. 178—5.4.

Lyon, Floyd A., and T. F. Aronson, to Commercial Envelope Mfg. Co., Inc. Strip feeding and registration means. 3,098,405, 7-23-63, Cl. 83—236.

Madaras, Julius D., to Gas Inc. Method of heating and sintering. 3,098,738, 7-23-63, Cl. 75—34.

Maerov, Sidney B.: *See*—
Dessauer, Rolf, and Maerov. 3,098,863.

Maestrelli, Raffaello. Automatic steering system for vehicles supported on pneumatic tired wheels. 3,098,454, 7-23-63, Cl 104—247.

Mainil, Jean L. P., to Oletta Societe Anonyme. Extraction of an alkaloid from phyllanthus discodeus. 3,098,849, 7-23-63, Cl. 260—236.

Mainil, Jean L. P. Extraction of alkaloids from funtumia latifalia. 3,098,859, 7-23-63, Cl. 260—397.3.

Malin, Charles G. Grinding and polishing machine for precious or semi-precious stones. 3,098,327, 7-23-63, Cl. 51—125.

Mfg. Specialties Co., Inc.: *See*—
Greenstadt, Joseph C., and Ziers. 3,098,520.

Mark, Albert, to United States of America, Army. Process for producing single crystal silicon surface layers. 3,098,774, 7-23-63, Cl. 148—1.5.

Marks, Barnard M., to E. I. du Pont de Nemours and Co. Preparation of purified methacrolein. 3,098,798, 7-23-63, Cl. 202—42.

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Graff, Alan R., Oesting, and Marple. 3,098,797.

Marsh, Erwin, to United States of America, Army. Core release test fixture. 3,098,378, 7-23-63, Cl. 73—103.

Marsh, Francis X., to Continental Aviation and Engineering Corp. Gas turbine engine construction. 3,098,357, 7-23-63, Cl. 60—39.31.

Marsh, Glenn A., and E. Schaschl, to The Pure Oil Co. Apparatus and method for measuring corrosiveness of aqueous liquids. 3,098,801, 7-23-63, Cl. 204—1.

Marsillo, Dominic O., to Philco Corp. Laundering apparatus. 3,098,581, 7-23-63, Cl. 220—46.

Martens, Jean V., to International Standard Electric Corp. Combined limiter and two section bandpass filter. 3,098,937, 7-23-63, Cl. 307—88.5.

Martin, Harold B.: *See*—
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Martin, Howard L., to Sperry Rand Corp. Bolometer mounting means for use in coaxial transmission lines. 3,098,984, 7-23-63, Cl. 333—22.

Martin, Harold W., to American Machine & Foundry Co. Plastic bowling pin. 3,098,655, 7-23-63, Cl. 273—82.

Martin Sweets Co., The: *See*—
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Martin, Wesley G., to A. O. Smith Corp. Fiber reinforced plastic vessel and method of making the same. 3,098,582, 7-23-63, Cl. 220—67.

Marvel, Carl S., and R. D. Vest, to United States of America, Air Force. Process for producing polycarboxylic acids and esters. 3,098,867, 7-23-63, Cl. 260—485.

Marx, Louis, & Co., Inc.: *See*—
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Harris, John E, and Matthews. 3,098,878.

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Maxwell, Charlie J. Masonry barbecue pit. 3,098,428, 7-23-63, Cl. 99—446.

Mayer George A., to Miami Stone, Inc. Stone splitter. 3,098,476, 7-23-63, Cl. 125—23.

McAuley, Anthony, to A. B. Chance Co. Stringing block. 3,098,638, 7-23-63, Cl. 254—134.3.

McCann, Keith, to Goodman Mfg. Co. Troughing roller assembly and belt conveyor. 3,098,557, 7-23-63, Cl. 198—192.

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McCarthy, Jeremiah T. 3,098,316.

McCarthy, Michael St. J., Jr.: *See*—
McCarthy, Jeremiah T. 3,098,316.

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McCullough, Campbell R., to Monsanto Chemical Co. Method of reducing water evaporation losses in open reservoirs. 3,098,701, 7-23-63, Cl. 21—60.5.

McElroy, Charles W., and J. S. Klein, to Safety Electrical Equipment Corp. Cargo cushioning systems. 3,098,455, 7-23-63, Cl. 105—369.

McElroy, William N., and G. O. Haroldsen, to North American Aviation, Inc. Vapor pressure water boiler reactor. 3,098,810, 7-23-63, Cl. 204—193.2.

McGraw-Edison Co.: *See*—
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Meinicke, Erich. Multiple swift textile waste tearing machine. 3,098,264, 7-23-63, Cl. 19—82.

Melchior, Frederick C. Submarine surface sensing system. 3,098,389, 7-23-63, Cl. 73—384.

Mendez Llamozas, Juan D. High pressure ejection impeller. 3,098 354, 7-23-63, Cl. 60—35.54.

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Metal Box Co. Ltd., The: *See*—
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Mettenleiter, Michael W. Admixture of aluminum metal powder and powdered vegetable gum for treatment of open wounds. 3,098,790, 7-23-63, Cl. 167—58.

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Meyer, Ludwig J., to Hazemag. Impellers for comminutors. 3,098,614, 7-23-63, Cl. 241—193.

Meyer, Ralph J., to Collins Radio Co. Rocker switch assembly. 3,098,902, 7-23-63, Cl. 200—5.

Meyers, Douglas C., to Shell Oil Co. Method and apparatus for producing high-pressure wells. 3,098,523, 7-23-63, Cl. 166—45.

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Midwest Mower Corp.: *See*—
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Morin, Louis H. One-sided separable fastener. 3,098,277, 7-23-63, Cl. 24—205.1.

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Mortier, Lucien A. Carriage for handling and dispacing cable reels. 3,098,623, 7-23-63, Cl. 242—86.5.

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Morway, Arnold J., to Esso Research and Engineering Co. Lubricants containing thickeners prepared from tall oil. 3,098,823, 7-23-63, Cl. 252—39.

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Myers, Charles R., and F. K. Hedler, to Koppers Co., Inc. Acoustically sealed track system for movable partitions. 3,098,519, 7-23-63, Cl. 160—40.

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Cohen, Murray S., and Pearl. 3,098,877.

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Schneiderman, Joseph. Emergency radio receiver. 3,098,975, 7–23–63, Cl. 325—466.

Schnelle, Herbert. File support. 3,098,488, 7–23–63, Cl. 129—16.

Schoppe, Fritz, to Metallbau Semler, G.m.b.H. Method and apparatus for mixing and carrying out reactions. 3,098,704, 7–23–63, Cl. 23—1.

Schulz, Charles M., to American Can Co. Can divider. 3,098,552, 7–23–63, Cl. 198—31.

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Schwartz, Norman J., and H. H. Goldblatt, to Heinemann Electric Co. Interconnected circuit breakers. 3,098,911, 7–23–63, Cl. 200—106.

Schweitzer, James E., to Reliable Electric Co. Deadend cartridge. 3,098,275, 7–23–63, Cl. 24—126.

Schwerter, Robert, to American Meter Co., Inc. Pressure regulator. 3,098,499, 7–23–63, Cl. 137—463.

Sciaky, Albert M., to Welding Research, Inc. Automatic voltage compensator for three phase. 3,098,977, 7–23–63, Cl. 328—69.

Scognamillo, Frank. Rotary machine. 3,098,451, 7–23–63, Cl. 103—136.

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Setzler, Paul H., to Bell Intercontinental Corp. Means for separation and removal of parts from a vibrating machine. 3,098,323, 7–23–63, Cl. 51—7.

Shannon, Frank P. Minnow holder. 3,098,312, 7–23–63, Cl. 43—4.

Shapiro, Arthur M. to United States of America, Army. Lubricant for metal forming process. 3,098,294, 7–23–63, Cl. 29—528.

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Shaver, Raymond M., to Pullman Inc. Lading anchor construction. 3,098,457, 7–23–63, Cl. 105—404.

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Heron, David H. 3,098,526.
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Shepler, Paul R., to Koppers Co., Inc. Friction-spring arrangement for shaft seals. 3,098,659, 7–23–63, Cl. 277—144.

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Shrader, Raymond M., to Larkin Coils, Inc. Refrigeration system defrosting by controlled flow of gaseous refrigerant. 3,098,363, 7–23–63, Cl. 62—151.

Siebelt, Raymond J. Vacuum seal container cap. 3,098,575, 7–23–63, Cl 215—37.

Sieber, Herman L., to Time, Inc. Flow system. 3,098,787, 7–23–63, Cl. 162—216.

Simmons, Lawrence C., to Cleveland Technical Center, Inc. Loading system apparatus. 3,098,562, 7–23–63, Cl. 206—46.

Simons, Allison K., to Bostrom Corp. Seat suspension system. 3,098,676, 7–23–63, Cl. 297—307.

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Smith, Harry D., to Sperry Rand Corp. Speed responsive system. 3,098,970, 7–23–63, Cl. 324—70.

Smith, James T., to International Business Machines Corp. Magnetic transducer. 3,098,998, 7–23–63, Cl. 340—174.1.

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Smith, William G. S. Pressure compensator for rotary fluid joints. 3,098,665, 7–23–63, Cl. 285—134.

Snyder, William R., and G. G. Reuter; said Reuter assor. to Gilbert G. Reuter Co. Apparatus and method for insect control. 3,098,703, 7–23–63, Cl. 21—106.

Societe Alsacienne de Construction Mecaniques: *See*—
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Sohda, Yoshitoshi and Yoshimi; said Yoshimi Sohda assor. to Yoshitoshi Sohda. Container vessel for storage and transportation of liquefied natural gases. 3,098,362, 7–23–63, Cl. 62—54.

Solomon, Michael M., to General Electric Co. Organopolysiloxane emulsion containing a curing catalyst comprising zinc stearate, a metal salt and an alkanolamine-fatty acid condensate. 3 098,833. 7–23–63 Cl. 260—18.

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Spaulding, Carl P., and M. C. Wilson, to Datex Corp. Encoder circuits. 3,099,003, 7–23–63, Cl. 340—347.

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Spragens, George F., to The Martin Sweets Co. Valve packing assembly. 3,098,506, 7–23–63, Cl. 137—625.19.

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Sprigings, Donald G., to H. K. Porter Co., Inc. Electrical insulator constructions. 3,098,894, 7–23–63, Cl. 174—178.

Spuhl, Walter. Apparatus for manufacturing interconnected springs. 3,098,510, 7–23–63, Cl. 140—92.6.

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Standard Safety Equipment Co.: *See*—
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Stein, Sanford W. and J. Water craft. 3,098,247, 7–23–63, Cl. 9—310.

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Stewart, William H., Jr. Rodding machine. 3,098,251, 7–23–63, Cl. 15—104.3.

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Suomi, Verner E., and P. M. Kuhn, to Wisconsin Alumni Research Foundation. Radiation measuring device. 3,098,380, 7–23–63, Cl. 73—170.

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Taylor, John, to Columbia Products Co. High-Q loading coil having plural interleaved paralleled windings in combination with axial antenna. 3,099,010, 7–23–63, Cl. 343—749.

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Cohen, Murray S., and Pearl. 3,098,877.

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NOTE.—First number=class, second number=subclass, third number=patent number

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2—	3: 3,098,233		412: 3,098,292		3,098,374	104—	2: 3,098,453	156—	228: 3,098,779		162: 3,098,808
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	59: 3,098,259	47—	56: 3,098,320		122.5: 3,098,742		16: 3,098,471		15: 3,098,891		3,098,919
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	36: 3,098,263	51—	7: 3,098,323	80—	38: 3,098,403	125—	21: 3,098,475	175—	6: 3,098,533		32: 3,098,923
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20—	11: 3,098,266		241: 3,098,331		17: 3,098,409		215: 3,098,481		108: 3,098,898		39: 3,098,579
	57.5: 3,098,267		270: 3,098,332	89—	1.7: 3,098,410		220: 3,098,482	179—	90: 3,098,899		40: 3,098,580
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	106: 3,098,703		59: 3,098,335		46: 3,098,414		521: 3,098,486	182—	3: 3,098,539	221—	12: 3,098,564
22—	10: 3,098,268	54—	24: 3,098,336		3,098,415	129—	13: 3,098,487		152: 3,098,540		116: 3,098,585
	57.2: 3,098,269	55—	274: 3,098,731	95—	4.5: 3,098,416		16: 3,098,488	184—	1: 3,098,541	222—	147: 3,098,586
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	3: 3,098,705		311: 3,098,339		42: 3,098,419	130—	5: 3,098,491	188—	1: 3,098,544		304: 3,098,589
	14: 3,098,706		345: 3,098,340		64: 3,098,420	131—	140: 3,098,492		76: 3,098,545	223—	71: 3,098,590
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	129: 3,098,710		3,098,344	99—	1: 3,098,744		77: 3,098,495	192—	87: 3,098,549		48: 3,098,594
	140: 3,098,711		102: 3,098,345		2: 3,098,745		166: 3,098,496		3,098,550	226—	22: 3,098,595
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	174: 3,098,713		152: 3,098,347		108: 3,098,747		3,098,769	195—	51: 3,098,796	229—	2.5: 3,098,597
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	253: 3,098,718		35.54: 3,098,354		317: 3,098,425	137—	74: 3,098,497		122: 3,098,555	230—	1: 3,098,602
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	3,098,720		3,098,353		446: 3,098,427		456: 3,098,500		192: 3,098,557		206: 3,098,604
	259: 3,098,721		39.14: 3,098,355		3,098,428		463: 3,098,499		202: 3,098,558		210: 3,098,605
	294: 3,098,722		39.28: 3,098,356	100—	115: 3,098,429		505.13: 3,098,501	200—	5: 3,098,902	233—	7: 3,098,820
24—	16: 3,098,271		39.31: 3,098,357	101—	26: 3,098,430		514: 3,098,502		67: 3,098,903	234—	33: 3,098,606
	67: 3,098,272		52: 3,098,358		126: 3,098,431		597: 3,098,503		3,098,904	235—	54: 3,098,607
	73: 3,098,273		53: 3,098,359		152: 3,098,432		624.14: 3,098,504		3,098,905		60: 3,098,608
	3,098,274	61—	28: 3,098,360		157: 3,098,433		624.15: 3,098,505		80: 3,098,906		62: 3,098,609
	126: 3,098,275	62—	1: 3,098,361		178: 3,098,434		625.19: 3,098,506		87: 3,098,907		187: 3,098,929
	201: 3,098,276		9: 3,098,732		212: 3,098,435		628: 3,098,507		3,098,908	239—	441: 3,098,610
	205.1: 3,098,277		54: 3,098,362		248: 3,098,436		637.4: 3,098,508		98: 3,098,909	240—	10: 3,098,611
25—	130: 3,098,278		58: 3,098,733		350: 3,098,437	138—	114: 3,098,509		106: 3,098,910		41.35: 3,098,612
26—	18.5: 3,098,279		3,098,734		426: 3,098,438	140—	92.8: 3,098,510		3,098,911	241—	190: 3,098,613
28—	15: 3,098,280		3,098,735	102—	8: 3,098,439	143—	32: 3,098,511		107: 3,098,912		193: 3,098,614
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	96: 3,098,283	64—	7: 3,098,365		25: 3,098,442		281: 3,098,514		146: 3,098,915		55.11: 3,098,617
	113: 3,098,284		25: 3,098,366		3,098,443	146—	253: 3,098,515	202—	42: 3,098,798		58.3: 3,098,618
	148.4: 3,098,285	65—	291: 3,098,736		43: 3,098,444	148—	1.5: 3,098,774		93: 3,098,799		66: 3,098,619
	149.5: 3,098,286	66—	164: 3,098,367		49: 3,098,445		6.2: 3,098,775		170: 3,098,800		75.2: 3,098,620
	155.5: 3,098,287		178: 3,098,368		50: 3,098,446		122: 3,098,776	204—	1: 3,098,801		79: 3,098,621
	155.69: 3,098,288		3,098,369		51: 3,098,447	149—	19: 3,098,777		3,098,802		84.8: 3,098,622
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	183.5: 3,098,723		5: 3,098,371	103—	4: 3,098,449	153—	1: 3,098,517		41: 3,098,804		86.7: 3,098,624
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45.95: 3,098,842
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187: 3,098,847
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239.55: 3,098,851
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247.2: 3,098,854
256.5: 3,098,856
295: 3,098,857
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397.4: 3,098,860
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429.7: 3,098,862
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606.5: 3,098,876
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307— 88.5: 3,098,936
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315—39.67: Re.25,420
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CLASSIFICATION OF DESIGNS

D 2— 3: 195,713
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D 7— 5: 195,715
7: 195,716
D 9— 2: 195,717
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D10— 8: 195,720

D14— 3: 195,721
D26— 1: 195,722
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D35— 2: 195,727

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D65— 1: 195,748

D72— 1: 195,749
D74— 17: 195,750
D80— 8: 195,751
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D81— 10: 195,754
D90— 8: 195,755

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 23, 1963 Volume 792 Number 4

TRADEMARKS
NOTICES

Annual Index of Patents

The 1962 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: Buckram bound, $6.75.

International Convention for the Protection of Industrial Property

Ratification of the Lisbon 1958 Revision by the Federation of Rhodesia and Nyasaland

The Secretary of State has been notified by the Embassy of Switzerland of the ratification, effective June 16, 1963, by the Federation of Rhodesia and Nyasaland of the International Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Tanganyika to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective June 16, 1963, of the Republic of Tanganyika to the International Convention for the Protection of Industrial Property as revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

Order No. 5315

Jerome W. Paxton of Washington, D.C. whose registration number is 15,517, is hereby excluded, beginning on January 25, 1963, from practice as a patent agent in any application before the United States Patent Office, without prejudice to his re-registration, upon a sufficient showing, after a period of not less than one year.

This action is taken under the provisions of Section 32 of Title 35 of the United States Code and Rule 348 of the Rules of Practice of the United States Patent Office in Patent Cases.

EDWIN L. REYNOLDS,
Jan. 25, 1963. *First Assistant Commissioner of Patents.*

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,358
Date of oldest new application	Oct. 18, 1962
Date of oldest amended application	Oct. 1, 1962

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-18-62	10-1-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-1-62	10-4-62
Renewals (All Classes)	5-9-63	5-25-63
Sec. 12 (c) Publications (All Classes)	5-6-63	5-29-63

Applications filed during the month of May 1963—2,342

Registrations Issued	429—No. 753,085 to No. 753,513
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Benson Dry Plate & Camera Co., Inc., New York, N.Y., Reg. No. 109,971, Canc. No. 8069.

Arthur B. Gruver, Wilmington, Del., Reg. No. 551,957, Canc. No. 8077.

Becopa Glove Mills, Yonkers, N.Y., Reg. No. 415,912, Canc. No. 8084.

HORACE B. FAY, Jr.,
Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA), The Coca-Cola Company, Beverage; **Reg. No. 47,189**, same, Tonic beverages and syrups for the manufacture of such beverages; **Reg. No. 238,145**, same; **Reg. No. 238,146**, same; **Reg. No. 415,755** (COKE), same, Non-alcoholic maltless beverages and the syrups for making such beverages, **filed** Feb. 9, 1963, D.C., E.D. Tenn. (Greenville), Doc. 1653, *The Coca-Cola Company* v. *Giant Chef, etc.* Decree enjoining defendant Mar. 7, 1963. **Same, filed** Mar. 28, 1963, D.C. Conn. (New Haven), Doc. 9728, *The Coca-Cola Company* v. *Putnam Hotel (Bar)*. **Same, filed** Jan. 30, 1963, D.C.N.J. (Trenton), Doc. 94/63, *The Coca-Cola Company* v. *Fireside Restaurant (Bar)*. Consent judgment; injunction granted Apr. 9, 1963. **Same, filed** May 7, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 33378, *The Coca-Cola Company* v. *Huey's Paul Revere also known as Paul Revere Inn*. **Same, filed** Mar. 28, 1963, D.C. Conn. (New Haven), Doc. 9728, *The Coca-Cola Company* v. *Putnam Hotel (Bar)*. Consent judgment; defendant enjoined May 8, 1963.

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 238,145. (See Reg. No. 22,406.)

Reg. No. 238,146. (See Reg. No. 22,406.)

Reg. No. 280,660 (ALEXANDRA DE MARKOFF—in script), Alexandra de Markoff, Inc., Cosmetics—namely, skin tonics, cold cream, astringents and perfumes; **Reg. No. 374,863** (ALEXANDRA DE MARKOFF AND DESIGN), Martin De Botelho (republished as Alexandra de Markoff Sales Corporation, Facial preparations, including nourishing cream, stimulation cream, skin cleanser, etc.; **Reg. No. 409,550** (ALEXA), Ballarde, Inc., Perfumes; **Reg. No. 508,525** (ALEXANDRA DE MARKOFF), Alexandra de Markoff, Inc., Facial preparations, including nourishing cream, liquid skin cleanser, etc.; **Reg. No. 555,928** (ALEXANA ETC.), Alexandra de Markoff Sales Corporation, Cosmetic oils for dry and normal skin; **Reg. No. 631,937** (ALEXANDRA DE MARKOFF), same, Soaps; **Reg. No. 634,466**, same, Eye-brow pencils, cosmetic eye creams, personal deodorants, sun tan preparations and make-up kits, etc., **filed** Oct. 31, 1962, D.C., S.D.N.Y., Doc. 62/3598, *Alexandra de Markoff Sales Corporation* v. *Martin de Botelho et al.* Consent judgment; injunction granted Apr. 3, 1963.

Reg. No. 374,863. (See Reg. No. 280,660.)

Reg. No. 409,550. (See Reg. No. 280,660.)

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 421,730 (IH AND DESIGN), International Harvester Company, Farm machinery—namely, manure loaders, corn pickers, etc.; **Reg. No. 428,377**, same, Automotive trucks, farm wagons, tractor trailers and structural parts thereof, **filed June 12, 1961**, D.C., S.D.N.Y., Doc. 61/2080, *International Harvester Company* v. *Industrial Electronic Hardware Corporation et al.* Consent judgment; defendant enjoined Apr. 2, 1963.

Reg. No. 428,377. (See Reg. No. 421,730.)

Reg. No. 506,525. (See Reg. No. 280,660.)

Reg. No. 529,060 (ORLON), E. I. du Pont de Nemours and Company, Synthetic fiber-forming polymers and copolymers of acrylic acid or its derivatives produced in the form of fibers for further use in the industrial arts; **Reg. No. 536,272**, same, Yarns of synthetic fibers, **filed** Apr. 2, 1963, D.C., S.D.N.Y., Doc. 63/930, *E. I. du Pont de Nemours & Co.* v. *Havenshire Knitwear Co., Inc.*

Reg. No. 536,272. (See Reg. No. 529,060.)

Reg. No. 543,934 (DESIGN OF PENCIL), A. T. Cross Pencil Company, Mechanical pencils, **filed** Apr. 9, 1963, D.C., S.D.N.Y., Doc. 63/1009, *A. T. Cross Company* v. *Nathan Berg et al.*

Reg. No. 555,928. (See Reg. No. 280,660.)

Reg. No. 609,200 (KEYBAK), Chicopee Manufacturing Corporation, Non-woven fabrics; **Reg. No. 720,392**, same, Interfacing for clothing that may be applied by heat and pressure—e.g., by an iron, **filed** Mar. 21, 1962, D.C.N.J. (Newark), Doc. 235/62, *Chicopee Manufacturing Corporation* v. *Madison Research & Development Corporation*. Dismissed by stipulation Apr. 3, 1963.

Reg. No. 616,985 (HOLLOWAY HOUSE), John R. Thompson Co., doing business as Holloway House Cafeterias, Restaurant services, **filed** Mar. 5, 1963, D.C., N.D. Tex. (Fort Worth), Doc. 4/63/25, *Holloway House, Inc. et al.* v. *Holloway's.*

Reg. No. 631,937. (See Reg. No. 280,660.)

Reg. No. 634,466. (See Reg. No. 280,660.)

Reg. No. 679,186 (FRISBEE), Wham-O Mfg. Co., Toy flying saucers for toss games, **filed Jan. 29, 1963**, D.C., S.D.N.Y., Doc. 63/291, *Wham-O Mfg. Co., Inc.* v. *Empire Plastics Corp. et al.* Consent judgment; defendants enjoined Apr. 25, 1963.

Reg. No. 684,697 (PRO-TEXTION RAY), E. S. Gremse, doing business as Atlantic Ultra-Violet Co., Electrically-operated ozone-producing devices employing ultra-violet ray lamps, for sanitizing the inside of footwear, **filed** Apr. 3, 1963, D.C., S.D.N.Y., Doc. 63/948, *Atlantic Ultra-Violet Co., Inc.* v. *American Machine & Foundry Co. et al.*

Reg. No. 720,392. (See Reg. No. 609,200.)

Reg. No. 733,562 (TAILORED PROTECTION PLAN), American Republic Insurance Company, Underwriting and writing of hospital, surgical and medical insurance, **filed** Nov. 9, 1962, D.C., E.D. Mo. (St. Louis), Doc. 62-C-381(2), *American Republic Insurance Company* v. *Central National Life Company*. Consent decree; trademark held infringed; defendant enjoined (notice Apr. 23, 1963).

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 148,529. Henry Pollak, Inc., New York, N.Y. Filed July 6, 1962.

VYCRAFT

For Vinyl Plastic Film and Sheeting for Use in the Manufacture of Table Cloths, Shower Curtains, Baby Pants, and Related Goods.
First use June 1, 1962.

SN 154,399. The D. S. Brown Company, North Baltimore, Ohio. Filed Oct. 3, 1962.



Owner of Reg. No. 627,573.
For Self-Sanitizing Rubber.
First use Aug. 28, 1962.

SN 156,046. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



Owner of German Reg. No. 638,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,819, 642,457, 746,155, and others.
For Raw or Partly Prepared Materials—i.e., Natural and Artificial Resins; Spun Fibres, Rubber and Rubber Substitutes, Packing Materials.

SN 156,403. Goodyear Aircraft Corporation, Akron, Ohio. Filed Nov. 1, 1962.

SPRAYPREG

For Resin Impregnated Molding Material.
First use Sept. 19, 1962.

SN 157,609. Ferro Corporation, Cleveland, Ohio. Filed Nov. 20, 1962.



Owner of Reg. Nos. 419,064, 710,108, and others.
For Glass Fibers in Bulk and Variously Assembled for Use in Fabricating Molded and Other Products Wherein Such Fibers Are Incorporated.
First use in or about June 1953.

SN 159,373. Ralph Wilson Plastics, Inc., Temple, Tex. Filed Dec. 18, 1962.



Owner of Reg. No. 652,886.
For High Pressure Laminated Plastic Sheets.
First use April 1956.

SN 159,744. Lowe's, Inc., Cassopolis, Mich. Filed Dec. 26, 1962.

CARV-A-WAY

For Clay.
First use Nov. 13, 1962.

SN 159,796. Allied Chemical Corporation, New York, N.Y. Filed Dec. 27, 1962.

HALON

For Thermoplastic Synthetic Resins Containing Fluorine.
First use Sept. 22, 1960.

SN 160,016. South River Sand Company, Old Bridge, N.J. Filed Dec. 31, 1962.

TRACTIONITE

For Rough-Cut Sand.
First use Dec. 10, 1962.

SN 160,117. Hamilton Manufacturing Co., Inc., Richmond, Va. Filed Jan. 4, 1963.

HYBAR

For Water Vapor Barrier Material in Sheet or Roll Form for Use in Bags, Wrappers, Tubes, Cans, Etc.
First use Feb. 16, 1954.

SN 160,367. Crest-Foam Corporation, Flushing, N.Y. Filed Jan. 8, 1963.

CRESTHANE

For Plastic in the Form of Sheets and Other Unfinished Shapes.
First use on or about Oct. 15, 1962.

SN 160,378. Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio. Filed Jan. 8, 1963.

SN

Owner of Reg. No. 740,773.
For Synthetic Elastomers and Compositions Containing Synthetic Elastomers, Particularly a Rubbery Synthetic Polymer of Isoprene Having a Structure Substantially Similar to Natural Rubber.
First use on or about June 20, 1958.

SN 160,564. Albert Trostel & Sons Company, Milwaukee, Wis. Filed Jan. 11, 1963.

STAMPEDE

For Leather.
First use Nov. 1, 1962.

Class 2 — Receptacles

SN 150,946. Hudson Pulp & Paper Corp., New York, N.Y. Filed Aug. 10, 1962.

HUDSON

Owner of Reg. Nos. 518,686, 722,723, and others.
For Paper Bags and Multiwall Paper Bags.
First use 1909.

Class 4 — Abrasives and Polishing Materials

SN 138,029. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Feb. 15, 1962.



For Shoe and Leather Polishes.
First use July 1924; in commerce July 1924.

SN 142,041. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Apr. 11, 1962.

CAVALIER

For Shoe and Leather Polishes.
First use July 1924; in commerce July 1924.

SN 142,042. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Apr. 11, 1962.



For Shoe and Leather Polishes.
First use July 1924; in commerce July 1924.

Class 6 — Chemicals and Chemical Compositions

SN 111,525. Mobay Chemical Company, Pittsburgh, Pa. Filed Jan. 9, 1961.

TD-80

For Toluylene Diisocyanate.
First use Mar. 9, 1956.

SN 118,452. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Apr. 24, 1961.



KIWI

Owner of U.S. Reg. Nos. 294,328, 497,306, and others.
For Spray for Renewing, Restoring, and Softening Suede Leather.
First use Aug. 3, 1960; in commerce Aug. 3, 1960.

SN 128,750. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Sept. 27, 1961.

HINAC

Owner of Reg. No. 592,131.
For Chemical Compositions for Producing Chromium-Containing Coatings.
First use July 1, 1953.

SN 132,147. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Nov. 16, 1961.

NOPYRON

Owner of German Reg. No. 646,939, dated Oct. 28, 1953.
For Flameproofing and Impregnating Agents.

SN 140,754. Ram Chemicals, Inc., Gardena, Calif. Filed Mar. 26, 1962.

RAM

For Chemicals for the Plastic Industry—Namely, Pigment Concentrates, Emulsifiers, Dispersion Agents and Catalysts.
First use June 25, 1956.

SN 143,227. Forest Lab Associates, Exeter, N.H. Filed Apr. 27, 1962.

TRE-JEL

For Poison for Use in Killing Trees.
First use Sept. 13, 1961.

SN 144,135. The Bon Ami Company, New York, N.Y. Filed May 9, 1962.



Owner of Reg. Nos. 656,641 and 702,420.
For Insect Killer.
First use Apr. 3, 1962.

SN 144,136. The Bon Ami Company, New York, N.Y. Filed May 9, 1962.



Owner of Reg. Nos. 656,641 and 702,420.
For Air Freshener.
First use Apr. 3, 1962.

SN 147,518. Sun Chemical Corporation, New York, N.Y. Filed June 22, 1962.

SUNBOW

Owner of Reg. No. 550,560.
For Water-in-Oil Base Pigments.
First use May 1962.

SN 147,587. G. W. Jones, d.b.a. J & S Sales and Service, Dickinson, Tex. Filed June 25, 1962.

TAT'L

For Chemical Preparation Which Locates Leaks in Gas Pipes and Tubing Systems.
First use Jan. 18, 1962.

SN 148,415. Petro-Tex Chemical Corporation, Houston, Tex. Filed July 5, 1962.

BU-TUF

For Polybutene-1 and Polybutene-1 Compositions.
First use Mar. 19, 1962.

SN 148,431. Spray Products Corporation, Camden, N.J. Filed July 5, 1962.



For Preparation Which Melts Ice and Snow on Windshields, Windows, and the Like, and Prevents Icing and Lock Freezing.
First use August 1961.

SN 148,648. Packer-Scott Company, Portland, Oreg. Filed July 9, 1962.

ALPHA-DYNE

For General Purpose Liquid Disinfectant for Industrial and Institutional Use.
First use June 19, 1962.

SN 150,764. The Dow Chemical Company, Midland, Mich. Filed Aug. 8, 1962.

DHA-S

Owner of Reg. No. 553,421.
For Synthetic Organic Chemical Used To Suppress the Growth of Microorganisms.
First use Dec. 16, 1957.

SN 151,855. Vineland Chemical Co., Vineland, N.J. Filed Aug. 24, 1962.



For Herbicides and Fungicides.
First use Apr. 26, 1962.

SN 152,268. Atway Products Co., Joliet, Ill. Filed Aug. 31, 1962.



The mark is a circle with an × extending slightly thru the circle with a small square directly in the center.
For Bacteria Activator for Septic Tanks.
First use May 1, 1962.

SN 153,934. California Chemical Company, San Francisco, Calif. Filed Sept. 26, 1962.

DIFOLATAN

For Fungicide for Use in Agriculture and Horticulture.
First use Sept. 17, 1962.

SN 154,133. Metal Hydrides Incorporated, Beverly, Mass. Filed Sept. 28, 1962.

HYDRITEX

For Stabilized Aqueous Solution of Sodium Borohydride and Sodium Hydroxide, for Use in the Textile Industry.
First use Apr. 7, 1961.

SN 154,311. Union Oil Company of California, Los Angeles, Calif. Filed Oct. 1, 1962.

UNOWAX

For Wax-Polymer Blends.
First use Aug. 22, 1962.

SN 156,214. Biddle Sawyer Corporation, New York, N.Y. Filed Oct. 30, 1962.

CELNITE

For Blowing Agent Used To Produce Expanded Rubber and Plastic Products.
First use Oct. 24, 1962.

SN 156,215. Biddle Sawyer Corporation, New York, N.Y. Filed Oct. 30, 1962.

AZOFOAM

For Blowing Agent Used To Produce Expanded Rubber and Plastic Products.
First use Oct. 24, 1962.

SN 156,253. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Oct. 30, 1962.

FABRICARE

For Laundry Borax for Use in Washing and Deodorizing Clothing and Diapers.
First use May 17, 1962.

SN 160,332. Sandoz, Inc., New York, N.Y. Filed Jan. 7, 1963.

NYLOSAN

Owner of Reg. No. 542,592.
For Dyestuffs.
First use Dec. 19, 1962.

SN 160,954. Koppers Company, Inc., Pittsburgh, Pa. Filed Jan. 18, 1963.

SPERSAL

For Dyeing Assistant To Be Used in the Dyeing of Polyester Fibers.
First use July 27, 1962.

SN 161,046. General Aniline & Film Corporation, New York, N.Y. Filed Jan. 21, 1963.

LEOPHEN

For Wetting Agents.
First use Dec. 27, 1933.

SN 161,047. General Aniline & Film Corporation, New York, N.Y. Filed Jan. 21, 1963.

HUMECTOL

For Wetting Agents.
First use July 17, 1930.

SN 161,068. Koppers Company, Inc., Pittsburgh, Pa. Filed Jan. 21, 1963.

STABILON

For Textile Dyeing Assistants.
First use Apr. 29, 1941.

SN 161,069. Koppers Company, Inc., Pittsburgh, Pa. Filed Jan. 21, 1963.

LEVELENE

For Textile Dyeing Assistants.
First use Apr. 29, 1941.

SN 161,081. Monsanto Chemical Company, St. Louis, Mo. Filed Jan. 21, 1963.

SUZAC

For Furnace Black.
First use Oct. 12, 1962.

SN 161,098. Shulton, Inc., Clifton, N.J. Filed Jan. 21, 1963.

HELOPLEX

For Electroplating Chemical.
First use Aug. 17, 1962.

SN 161,316. Eastman Kodak Company, Rochester, N.Y. Filed Jan. 24, 1963.

EASTMAN 910

Owner of Reg. No. 700,324.
For Surface Activator.
First use Jan. 2, 1963.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 155,966. Borneo Sumatra Trading Co., Inc., New York, N.Y. Filed Oct. 26, 1962.

POLLY-GAZ

For Cigarette Lighters.
First use Sept. 12, 1962.

Class 10 — Fertilizers

SN 143,888. Stonehill & Tree, Inc., Chicago, Ill. Filed May 4, 1962.

TAM-O-SHANTER

For Fertilizer.
First use Mar. 15, 1961.

SN 151,916. The Hubbard-Hall Chemical Company, d.b.a. Green Ribbon Products Co., Waterbury, Conn. Filed Aug. 27, 1962.

Green Ribbon

For Fertilizers.
First use Mar. 1, 1960.

SN 151,928. N. S. Koos & Son Co., Kenosha, Wis. Filed Aug. 27, 1962.

HOLIDAY

For Lawn and Garden Products—Namely, Fertilizers and Herbicides.
First use May 25, 1962.

SN 153,220. Shattuck Denn Mining Corporation, New York, N.Y. Filed Sept. 14, 1962.



The exclusive use of the word "Iron" as shown in applicant's mark is disclaimed apart from the mark as a whole.
For Soil Supplements and Soil Additives.
First use Aug. 28, 1961.

SN 158,450. Hercules Powder Company, Wilmington, Del. Filed Dec. 4, 1962.



For Nitrogen Fertilizer Solutions.
First use Oct. 16, 1962.

Class 12 — Construction Materials

SN 138,488. Friendly Wood Corporation, Bethel, Conn. Filed Feb. 23, 1962.

Friendly Wood

The word "Wood" is disclaimed apart from the mark.
For Fence Posts.
First use June 1955.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 145,231. American Hoist & Derrick Company, St. Paul, Minn. Filed May 23, 1962.

LEBUS

Owner of Reg. No. 643,739.
For Load Binders, Snatch Blocks, Chain Hooks, Chain Accessories, Tail Chains, Swivels, Clevises, Turn Buckles, Rope, Chain and Wire Line Fittings and Clips.
First use June 1, 1946.

Class 14 — Metals and Metal Castings and Forgings

SN 132,876. Société Metallurgique d'Imphy, Paris, France. Filed Nov. 27, 1961.

DURIMPHY

Priority claimed under Sec. 44(d) on French Reg. No. 496,637, dated June 1, 1961 (Paris); Natl. Inst. No. 165,435.
For Metals and Stainless Alloys.

Class 15 — Oils and Greases

SN 98,120. Motor Formula 9 Corporation, Portland, Oreg., assignee of Motor Formula 9 Co., Portland, Oreg. Filed May 31, 1960.



Although the drawing is lined for the color red, it is not intended as a limiting feature of the mark.
For Lubricating Oils, Gasoline Additives and Internal Combustion Engine Cleaners.
First use Aug. 25, 1953.

SN 153,718. Amway Sales Corporation, Ada, Mich. Filed Sept. 24, 1962.

WONDER MIST

Applicant disclaims the word "Mist" apart from the mark.
For Multi-Use Spray for Lubricating, Waterproofing, Corrosion Retardation and Prevention of Surface Condensation.
First use on or about June 11, 1962.

SN 155,871. Acheson Industries, Inc., Port Huron, Mich. Filed Oct. 25, 1962.

AEROLON

For Spray Type Dry Film Lubricants Containing Colloidal Dispersions.
First use on or about Oct. 9, 1962.

SN 157,798. Hercules Packing Corporation, Alden, N.Y. Filed Nov. 23, 1962.

MOLY CODDLE

For Lubricant Containing Molybdenum Disulfide To Improve Internal Combustion Engine Performance.
First use Apr. 16, 1960.

SN 157,817. K & W Products, Inc., Whittier, Calif. Filed Nov. 23, 1962.

KNOCK'ER LOOSE

For Penetrating Oils.
First use Oct. 17, 1945.

Class 16—Protective and Decorative Coatings

SN 137,176. Tri-Delta Products Co., Phoenix, Ariz. Filed Feb. 2, 1962.



For Construction Materials, Particularly Synthetic Plastic Coatings for Masonry Such as Cinder Blocks, Concrete Blocks, Clay Brick, Concrete Walls, Plaster Walls, and Gypsum Board.
First use Dec. 13, 1960.
Subj. to Intf. with SN 141,855.

SN 141,855. Lord Manufacturing Company, Erie, Pa. Filed Apr. 9, 1962.

CHEMGLAZE

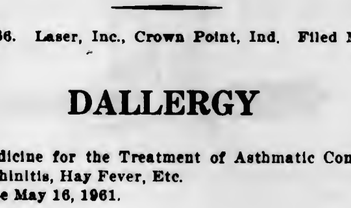
For Polyurethane-Based Coating Materials of Paint-Like Consistency, and Thinners, Curing Catalysts, Wood Fillers and Metal Primers To Be Used in Conjunction Therewith; To Provide Protective and Decorative Coatings, Resistant to Wear, Abrasion and Chemical Attack, on Rigid Surfaces Such as Metals, Wood, Concrete, Ceramics and Rigid Plastics, and on Flexible Surfaces Such as Rubber, Leather, Textiles and Flexible Plastics.
First use Oct. 5, 1960.
Subj. to Intf. with SN 137,176.

SN 143,039. Magna Corporation, Santa Fe Springs, Calif. Filed Apr. 25, 1962.

MACOR

For Protective Coatings—Namely, Paints.
First use Mar. 5, 1962.

SN 158,451. Hercules Powder Company, Wilmington, Del. Filed Dec. 4, 1962.



For Ingredient (Chlorinated Rubber Base) for Use in Paints, Varnishes, Lacquers, and Other Protective Coatings.
First use Oct. 24, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 131,563. Clarence F. George, Jr., d.b.a. C. F. George Co., Vallejo, Calif. Filed Nov. 8, 1961.

GREENFIELD

For Veterinary Preparation for Fungus Infection, Ring Worm, Eczema and Other Minor Skin Disturbances in Dogs and Cats.
First use in August 1949.

SN 136,076. Physicians and Hospitals Supply Company, Inc., d.b.a. Ulmer Pharmacal Company, Minneapolis, Minn. Filed Jan. 18, 1962.

DI-FERRIN

For Iron Injectable Preparation Useful in the Treatment of Dimorphic Anemia.
First use Dec. 1, 1961.

SN 140,566. Laser, Inc., Crown Point, Ind. Filed Mar. 23, 1962.

DALLERGY

For Medicine for the Treatment of Asthmatic Conditions, Allergic Rhinitis, Hay Fever, Etc.
First use May 16, 1961.

SN 142,003. White-Hudson and Company Limited, Southport, England. Filed Apr. 10, 1962.

HACKS
HACKS
HACKS

The drawing is lined for red. Owner of U.S. Reg. Nos. 708,676 and 712,415; and British Reg. Nos. 765,199, dated May 3, 1957, and 796,278, dated Oct. 7, 1959.
For Medicated Cough Sweets.
First use June 5, 1961; in commerce June 5, 1961.

SN 159,428. William H. Rorer, Inc., Fort Washington, Pa. Filed Dec. 19, 1962.

ANDILASE

For Bronchial Dilator.
First use Sept. 6, 1962.

SN 168,893. U.S. Ethicals Inc., Long Island City, N.Y. Filed May 17, 1963.

VITERALS 28

For Multiple Vitamin Mineral Preparation.
First use July 28, 1959.
Subj. to Intf. with SN 129,127.

Class 19—Vehicles

SN 158,484. Stemco Manufacturing Company, Inc., Longview, Tex. Filed Dec. 4, 1962.

Skeeter

Owner of Reg. No. 570,648.
For Boats.
First use Dec. 30, 1960.

SN 159,220. Fabco Manufacturing Company, Oakland, Calif. Filed Dec. 17, 1962.

FABCO

For Motor Trucks and Trailer Equipment—Namely, Extension Motor Truck Frames, Extra Wheel Units for Motor Trucks, Truck-Trailers, Including Semi and Full Trailers, Lowbed Machinery Type Trailers, Log Trailers and Agricultural Trailers, Including Sugar Cane Trailers, Logging Dollies, and Special Purpose Heavy Duty Trucks.
First use Apr. 20, 1921.

SN 159,261. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Dec. 17, 1962.

TINY WORLD

Owner of Reg. No. 732,772.
For Baby Buggies, Strollers, Car Seats, and Car Beds.
First use July 15, 1958, on baby buggies.

SN 160,501. J.B.E. Olson Corporation, Garden City, N.Y. Filed Jan. 10, 1963.

KURB VAN

The word "Van," being descriptive of the goods is disclaimed. Owner of Reg. No. 519,984.
For Aluminum Truck Bodies.
First use Dec. 18, 1962.

SN 163,787. Auto Seat Cover Co., Erie, Pa. Filed Mar. 4 1963.

ASCO

For Tops and Seat Covers for Boats and Automobiles.
First use Feb. 14, 1963.

SN 163,947. Inter-American Transport Equipment Co., Miami, Fla. Filed Mar. 5, 1963.

VANGUARD

For Sugar Cane Carts and Wheels Therefor.
First use Feb. 8, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 159,159. Globe-Union Inc., Milwaukee, Wis. Filed Dec. 14, 1962.

SPINNING POWER

Owner of Reg. No. 387,665.
For Storage Batteries and Components of Storage Batteries.
First use in or about 1935.

SN 160,217. Paragon Electric Company, Inc., Two Rivers, Wis. Filed Jan. 4, 1963.

PARAGON

For Electric Motors, Time Delay Relays, and Electric Switches.
First use at least as early as Dec. 31, 1913.

SN 162,988. Soderberg Manufacturing Company, Inc., Alhambra, Calif. Filed Feb. 18, 1963.

MINIBUOY

For Marine Distress Lighted Markers.
First use Jan. 11, 1963.

SN 164,561. The Scott & Fetzer Company, Cleveland, Ohio. Filed Mar. 13, 1963.

Kirby

Owner of Reg. Nos. 615,220 and 623,790.
For Electric Vacuum Cleaners and Parts and Accessories Therefor.
First use Feb. 11, 1963.

SN 164,957. Electronic Wholesalers, Inc., Washington, D.C. Filed Mar. 19, 1963.



For Wire Spools, Antenna Cartons, and Television Picture Tube Cartons.
First use Sept. 1, 1962.

SN 165,013. AMP Incorporated, Harrisburg, Pa. Filed Mar. 20, 1963.

TAYP-AIR

For Electrical Connectors.
First use Mar. 8, 1963.

SN 165,071. Multi-Products Company, Oak Park, Mich. Filed Mar. 20, 1963.



For Radio Receivers; Radio Transmitters; Combination Radio Transmitter-Receivers; Power Amplifiers, and Accessory Equipment—Namely, Power Supplies, Antennas, and Antenna Relays.
First use Jan. 14, 1963.

SN 165,442. C. & E. Marshall Company, Chicago, Ill. Filed Mar. 26, 1963.

micro SONIC

For Ultrasonic Cleaning Machines for Jewelry and Watches.
First use Feb. 14, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 128,194. Multiple Products Corporation, New York, N.Y. Filed Sept. 19, 1961.

multiple M

For General Line of Play Toys and Kits.
First use Dec. 15, 1959.

SN 128,195. Multiple Products Corporation, New York, N.Y. Filed Sept. 19, 1961.

multiple M M

For General Line of Play Toys and Kits.
First use Apr. 4, 1961.

SN 150,017. Arne L. Carson and Robert D. Pierson (joint owners), Seattle, Wash. Filed July 30, 1962.

SPACE MONEY

The applicants hereby disclaim the word "Money" in the trademark and make no claim of exclusive right to "money" for the goods recited.
For Toy Money.
First use Mar. 10, 1962.

SN 157,308. Stewart J. Leonard, Norwalk, Conn. Filed Nov. 15, 1962.

SKEE-TRAINER

For Water Ski Starting Devices.
First use Nov. 13, 1962.

SN 158,106. Southern Tackle Distributors, Inc., Miami, Fla. Filed Nov. 28, 1962.

VISCOUNT

For Fishing Rods and Reels, and Parts Thereof.
First use Oct. 1, 1962.

SN 158,667. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed Dec. 6, 1962.

TOOTHUMS

For Dolls.
First use Aug. 3, 1962.

SN 158,695. Fabrikona, Inc., East Taunton, Mass. Filed Dec. 7, 1962.

HOLLIDAY

For Fishing Reels.
First use Nov. 1, 1962.

SN 158,740. Shakespeare Company, Kalamazoo, Mich. Filed Dec. 7, 1962.

WONDER CENTER

No claim is made to the word "Center" apart from the mark as shown.
For Golf Balls.
First use Aug. 15, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 111,091. A. A. Gage Company, Detroit, Mich. Filed Dec. 30, 1960.

ULTRA-RON

For Rotary Tables for Supporting Work Pieces for Machine Operations.
First use Aug. 29, 1960.

SN 121,713. Conveyor Systems, Inc., Morton Grove, Ill. Filed June 9, 1961.

Farquhar

For Conveyor Systems.
First use Apr. 15, 1960.

SN 125,945. Fred H. Schaub Engineering Co., Downers Grove, Ill. Filed Aug. 14, 1961.

HYDRODYNE

For Boiler Feed Pumps and Condensate Handling Pumps.
First use Mar. 31, 1961.

SN 130,868. Avery Adhesive Products, Inc., Monrovia, Calif. Filed Oct. 30, 1961.

AVERY

For Machine Products Such as Label Dispensers, Labeling Machines, Applicators, and Imprinters.
First use 1941.

SN 134,893. Morrison Company, Cleveland, Ohio. Filed Dec. 29, 1961.

-O-LIFT-

For Attachment for Fork Lift Trucks for Handling Automobile Tires and Similar Cored Articles.
First use Oct. 16, 1961.

SN 143,177. Vernon E. Stephens, Bell Gardens, Calif. Filed Apr. 26, 1962.

TIP-NIP

For Tools for Refacing, Cleaning, and Reconditioning the Ends of Metal Tubes Such as Found in Torches Used for Flame Cutting, Gas Welding, and the Like.
First use May 2, 1961.

SN 144,489. The Hartford Special Machinery Company, Simsbury, Conn. Filed May 14, 1962.

HARTFORD

Owner of Reg. Nos. 596,682 and 644,150.
For Thread Forming Apparatus—Namely, Thread Rolling Machines and the Like.
First use August 1960; at least as early as Jan. 1, 1939, on related goods.

SN 149,360. Budow Manufacturing Co., Inc., Birmingham, Ala. Filed July 19, 1962.

BUDOW

For Log Debarkers, Wood Chippers, Chip Screens, Log Kickers, Log Stop and Loaders, Log Conveyors, Bark Conveyors, and Wood Chip Conveyors.
First use Mar. 9, 1959.

SN 150,872. The International Silver Company, Meriden, Conn. Filed Aug. 9, 1962.

WM. ROGERS & SON

Owner of Reg. No. 329,754.
For Stainless Steel Flatware—Namely, Knives, Forks, and Spoons.
First use Aug. 21, 1953.

SN 152,666. Art's-Way Manufacturing Co., Armstrong, Iowa. Filed S.R. Sept. 7, 1962; Am. P.R. May 23, 1963.

ARTS-WAY

For Mobile Feed Mixers.
First use July 2, 1955.

SN 155,711. Dura Business Machines, Inc., Oak Park, Mich. Filed Oct. 23, 1962.

ALPHATRON

For Electrically Operated Typewriting Systems and Dating Devices Therefor.
First use Aug. 31, 1962.

SN 155,712. Dura Business Machines, Inc., Oak Park, Mich. Filed Oct. 23, 1962.

Alphatron

For Electrically Operated Typewriting Systems and Dating Devices Therefor.
First use Aug. 31, 1962.

SN 156,527. Simon-Carves Limited, Cheadle Heath, Stockport, England. Filed Nov. 2, 1962.

SIMCAR

Owner of British Reg. Nos. 752,814 and 756,961, dated Apr. 12, 1956 and Aug. 25, 1956, respectively; and U.S. Reg. Nos. 653,369 and 657,342.
For Machines for the Treatment of Sewage and/or Industrial Effluents Whereby Solids Are Maintained in Suspension in a Body of Liquid and Air or Other Gas Entrained for the Purpose of Dissolving the Gas, or for the Purpose of Chemical Reaction or Froth Formation.

SN 156,553. The Leon J. Barrett Co., Millbury, Mass. Filed Nov. 5, 1962.

CLARIFUGE

For Centrifugal Liquid Clarifier.
First use June 13, 1962.

SN 156,753. John Oster Manufacturing Co., Milwaukee, Wis. Filed Nov. 6, 1962.

SNOFLAKE

For Ice Crushers and Parts Therefor.
First use Aug. 29, 1958.

SN 158,291. Triumph Machinery Company, Hackettstown, N.J. Filed Nov. 30, 1962.

HYDRO-BLOWER

Without prejudice to its common law rights, and for purposes of this registration only, the design feature of the mark is disclaimed apart from the composite mark shown in the drawing.
For Snow Removal Equipment.
First use Oct. 10, 1962.

SN 158,375. Punch Products Corporation, Buffalo, N.Y. Filed Dec. 3, 1962.

UNIPRESS

Owner of Reg. No. 637,999.
For Power Machine for Punching Holes in Sheet Metal, Metal Plates, Channels and Angles.
First use Sept. 28, 1962.

SN 158,857. Perfection Manufacturing Co., St. Louis, Mo. Filed Dec. 10, 1962.

jet pac

For Grass Catchers for Detachable Mounting on Power Lawn Mowers.
First use in April 1959.

SN 159,220. Fabco Manufacturing Company, Oakland, Calif. Filed Dec. 17, 1962.

FABCO

For Front Driving Axles and Transfer Cases.
First use Apr. 20, 1921.

Class 26—Measuring and Scientific Appliances

SN 108,056. Argus Incorporated, Chicago, Ill., by change of name from Mansfield Industries, Inc., Chicago, Ill. Filed Nov. 8, 1960.

PRESTO-MATIC

For Photographic Slide Changer.
First use in April 1958.

SN 132,876. Société Metallurgique d'Imphy, Paris, France. Filed Nov. 27, 1961.

DURIMPHY

Priority claimed under Sec. 44(d) on French Reg. No. 496,637, dated June 1, 1961 (Paris); Natl. Inst. No. 165,435.
For Springs for Precision Instruments.

SN 143,636. Kollsman Instrument Corporation, Elmhurst, N.Y. Filed May 2, 1962.

CODIR

For Direction and Location Determining and Controlling Devices Including Generation Emission of Coherent Electromagnetic Beams From Lasers and Masers and Sensing Devices for Determining Deflection and Other Characteristics of Said Beams for Aircraft Beams.
First use Apr. 1, 1962.

SN 145,248. Ch. Dillemann & Polyclair, S.A., d.b.a. Polyclair, Paris, France. Filed May 23, 1962.

FILMARCOR

Priority claimed under Sec. 44(d) on French Reg. No. 500,923, dated Dec. 14, 1961; Natl. Inst. No. 175,712.
For Apparatus for Photographic Display and Duplication; and Accessories Therefor.

SN 149,910. Frank G. Back, Glen Cove, N.Y. Filed July 27, 1962.

DATADOT

For Photographic Apparatus and Particularly Photographic Reproducing Devices in the Nature of Cameras, Copying Machines, Sensitized Paper, and Film.
First use June 29, 1962.

SN 149,911. Frank G. Back, Glen Cove, N.Y. Filed July 27, 1962.

MUFILE

For Photographic Apparatus and Particularly Photographic Reproducing Devices in the Nature of Cameras, Copying Machines, Sensitized Paper, and Film.
First use June 29, 1962.

SN 150,979. Swieco, Inc., Fort Worth, Tex. Filed Aug. 10, 1962.

BABY "DOUGHTER"

For Thermometers for Testing the Temperature of Dough for Baking.
First use Sept. 7, 1954.

SN 153,913. TA Mfg. Corp., Los Angeles, Calif. Filed Sept. 25, 1962.

VISCODYNE

For Built-In, Self-Contained Fluid Control Systems for Camera and Tripod Pan Heads.
First use Aug. 7, 1962.

SN 156,120. Ilford, Limited, Ilford, Essex, England. Filed Oct. 29, 1962.

ILFOCOPY

Owner of British Reg. No. 823,248, dated July 20, 1961; and U.S. Reg. Nos. 116,139 and 745,799.
For Films, Plates and Papers, All Being Sensitized and All Being for Photographic Purposes.

SN 156,399. Galileo Corporation of America, New York, N.Y. Filed Nov. 1, 1962.

GaMi 16

Applicant disclaims any exclusive rights in the numeral "16" apart from the mark as shown.
For Cameras and Camera Parts and Accessories, Film Cutters, Lenses, View Finders, Enlargers, Copying Equipment, Viewers, Developing Tanks, Light Filters, Devices To Mount Flash Equipment on Cameras.
First use in July 1953.

SN 158,517. The Eastern Company, Naugatuck, Conn. Filed Dec. 5, 1962.

LODESTAR

For Marine Compasses.
First use Nov. 28, 1962.

SN 159,276. Picker X-Ray Corporation, White Plains, N.Y. Filed Dec. 17, 1962.

MAGNACHANGER

For Radiation Detectors.
First use Apr. 1, 1962.

SN 160,216. Paragon Electric Company, Inc., Two Rivers, Wis. Filed Jan. 4, 1963.

PARAGON

For Electric Timing Devices of the Horological Instrument Type, Geared so as to Actually Measure Time in Controlling Intervals in Connection With Electric Circuits Including Time Controls, Cycle Repeaters, Interval, Reset and Sequence Timers.
First use at least as early as Dec. 31, 1913.

SN 162,032. W. F. Sprengnether Instrument Company, St. Louis, Mo. Filed Feb. 4, 1963.

AUTOCORDER

For Seismograph Recorder.
First use Oct. 1, 1962.

SN 162,150. Edex Corporation, Palo Alto, Calif. Filed Feb. 6, 1963.

EDEX

For Teaching Systems—Namely, Teaching Machines, Programing Units, Student Stations, Remote Control Boxes, Projectors, Film Strip and Communicators.
First use May 20, 1962.

SN 162,327. Americana Interstate Corp., Mundelein, Ill. Filed Feb. 8, 1963.

READAMATIC

For Machines for Progressively Indicating Successive Lines of Printed Matter at Selectable Constant Speed.
First use Nov. 17, 1962.

SN 162,435. Freeland Gauge Company, Detroit, Mich. Filed Feb. 11, 1963.

ACROAIRE

For Air Ganging Apparatus.
First use Sept. 25, 1962.

SN 162,491. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Feb. 11, 1963.

OVEN-WITH-A-MIND

For Controls for Gas Ovens and Components Thereof.
First use Nov. 30, 1961.

SN 162,492. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Feb. 11, 1963.

AUTO-MAGIC FLAME MASTER

For Controls for Gas Ovens and Components Thereof.
First use Dec. 18, 1961.

SN 162,522. C. S. Ashcraft Mfg. Co., Inc., Long Island City, N.Y. Filed Feb. 12, 1963.

CORE-LITE

For Projection Lamps for Motion Pictures and Parts for Such Projection Lamps Including Rectifiers, Ellipsoidal Mirrors and Carbons.
First use Oct. 11, 1962.

SN 162,606. Charles Adler, Jr., Baltimore, Md. Filed Feb. 13, 1963.

SPACEOMETER

For Indicators for Use in Motor Vehicles To Advise the Driver Automatically of the Safe Distance at Different Speeds To Allow Between the Driver's Vehicle and the One Immediately Ahead, To Permit Safe Emergency Stopping.
First use Sept. 6, 1962.

SN 162,696. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Feb. 11, 1963.

LEVELAC

For Level Controls.
First use Nov. 22, 1961.

SN 162,730. Fostoria Corporation, Huntingdon Valley, Pa. Filed Feb. 14, 1963.

RAY-CON

For Temperature Sensing Devices.
First use Dec. 28, 1962.

SN 163,043. Irving P. Filderman, Memphis, Tenn. Filed Feb. 19, 1963.

BI-PED

For Contact Lenses.
First use Feb. 15, 1963.

SN 163,115. Charles Beseler Company, East Orange, N.J. Filed Feb. 20, 1963.

DISPLAYMATE

For Sound Slide Film Projectors.
First use Jan. 11, 1963.

Class 27 — Horological Instruments

SN 132,876. Société Metallurgique d'Imphy, Paris, France. Filed Nov. 27, 1961.

DURIMPHY

Priority claimed under Sec. 44(d) on French Reg. No. 496,637, dated June 1, 1961 (Paris); Natl. Inst. No. 165,435.
For Springs for Watches.

Class 29 — Brooms, Brushes, and Dusters

SN 158,545. Joseph Lieberman & Sons, Inc., Philadelphia, Pa. Filed Dec. 5, 1962.

CHINYLON

For Paint Brushes.
First use Oct. 23, 1962.

SN 158,744. Swanson Plastics, Inc., Windsor, Colo. Filed Dec. 7, 1962.

NU-BAC

For Massaging Back Washers.
First use Oct. 3, 1962.

Class 31 — Filters and Refrigerators

SN 139,544. Standard, Inc., Little Rock, Ark. Filed Mar. 9, 1962.

SCOTCH-MAGIC

For Filtering Devices for Dry Cleaning Fluids.
First use Jan. 10, 1962.

SN 139,885. F. H. Prince & Co. Inc., Chicago, Ill. Filed Mar. 14, 1962.

CONTINENTAL

For Frozen Food Display Cabinets.
First use Feb. 5, 1962.

SN 140,371. Midland-Ross Corporation, Toledo, Ohio. Filed Mar. 21, 1962.

FANDAIRE

Owner of Reg. Nos. 676,966 and 723,096.
For Condensers for Refrigeration Apparatus.
First use Feb. 21, 1962.

SN 143,017. Edwards Engineering Corporation, Pompton Plains, N.J. Filed Apr. 25, 1962.

AIRVEC-CHILLER

Owner of Reg. No. 674,596.
For Chillers for Cooling Liquids or Air.
First use in July 1961.

SN 143,752. Merlinstone Mining Corporation, Santa Barbara, Calif. Filed May 3, 1962.



For Water Rectifiers and Filter Stones.
First use on or about Jan. 1, 1959.

SN 146,784. Bell & Gossett Company, Morton Grove, Ill. Filed June 13, 1962.



The drawing is lined for blue, but said color is not an important feature of the mark.
For Refrigeration Apparatus Including Motor-Compressor Units; Motor-Compressor-Condenser Units; Motor-Compressor-Condenser-Evaporator Units.
First use May 16, 1962.

Class 32 — Furniture and Upholstery

SN 146,955. Airway Products Corporation, Schiller Park, Ill. Filed June 15, 1962.

MR

For Metal Display Shelves.
First use Apr. 26, 1962.

SN 147,232. Silent Daddy, Inc., St. Petersburg, Fla. Filed June 19, 1962.

SILENT DADDY

For Pulsating Crib Mattress.
First use Jan. 20, 1962.

SN 156,058. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Upholstery Stuffing Materials and Packing Materials.

SN 158,120. Lee L. Woodard Sons, Inc., Owosso, Mich. Filed Nov. 28, 1962.

WOODARD

For Ornamental Furniture.
First use in 1866.

SN 163,393. National Mattress Company, d.b.a. Namaco, Huntington, W. Va. Filed Feb. 25, 1963.

Posture Queen

For Innerspring Mattresses and Boxsprings.
First use Dec. 3, 1962.

SN 163,490. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Feb. 26, 1963.

GLIDE-A-MIRROR

For Wardrobe Doors.
First use at least as early as Oct. 25, 1962.

SN 163,691. The Necos Company, Ltd., Chuo-ku, Tokyo, Japan. Filed Feb. 28, 1963.

NECOS

For Chairs, Lockers, Desks, Tables, and Cabinets.
First use Dec. 7, 1962, on chairs and desks; in commerce Dec. 7, 1962.

Class 33 — Glassware

SN 156,059. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Glassware—i.e., Glass and Goods Made Thereof, e.g., Ampoules.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 146,784. Bell & Gossett Company, Morton Grove, Ill. Filed June 13, 1962.



The drawing is lined for blue, but said color is not an important feature of the mark.
For Air Conditioning Apparatus Including Motor-Compressor Units; Motor-Compressor-Condenser Units; Motor-Compressor-Condenser-Evaporator Units.
First use May 16, 1962.

SN 148,000. Bunn Capitol Company, Springfield, Ill. Filed June 29, 1962.

BUNN

Owner of Reg. No. 694,904.
For Coffee Brewing Equipment.
First use at least as early as December 1957.

SN 153,886. The McKay Company, Pittsburgh, Pa. Filed Sept. 25, 1962.

IN-FLUX

For Welding Electrodes.
First use Sept. 12, 1962.

SN 157,146. Bell & Gossett Company, Morton Grove, Ill., assignee of Reznor Manufacturing Company, Mercer, Pa. Filed Nov. 13, 1962.

THERMOCORE

For Furnaces, Duct Furnaces, Blower and Duct Units, and Oil and Gas Fired Unit Heaters.
First use Oct. 8, 1962.

SN 157,373. Holophane Company, Inc., New York, N.Y. Filed Nov. 16, 1962.

PRISMPACK

For Illumination Equipment—Namely, Lamp Panels, Screens, Globes, Reflectors, Refractors, and Fixtures.
First use Oct. 26, 1962.

SN 157,802. Louis D. Houlis, d.b.a. Master Baker Oven & Equipment Co., Dallas, Tex. Filed Nov. 23, 1962.

HUMIDAIRE

For Air Conditioning Equipment for Bakeries—Namely, Fermentation and Dough Rooms, Proof Boxes, Bread and Room Coolers, Steam Boilers, Steam Jet Humidifiers, and Air Conditioning Units.
First use on or about Oct. 1, 1927.

Class 36 — Musical Instruments and Supplies

SN 125,996. American Bosch Arma Corporation, Garden City, N.Y. Filed Aug. 15, 1961.

TELE-BUFFER

For Electrostatic Tape Recorder and Reader.
First use June 27, 1961.

SN 160,281. Carl Fischer Musical Instrument Co., Inc., New York, N.Y. Filed Jan. 7, 1963.



The drawing is lined for brown. Owner of Reg. Nos. 660,352 and 660,353.
For Reed and Brass Musical Instruments.
First use Sept. 21, 1962; about the year 1931 in a different form.

SN 168,361. H. & A. Selmer Inc., Elkhart, Ind. Filed May 7, 1963.

DE VILLE

For Band Instruments—Namely, Brass-Wind and Wood-Wind Instruments and Parts Thereof.
First use Nov. 21, 1961.

Class 37 — Paper and Stationery

SN 89,466. James L. Smith, d.b.a. James L. Smith Company, Des Moines, Iowa. Filed Jan. 21, 1960.

TWIN CHECK GUIDE

Owner of Reg. No. 600,530.
For Index Filing Card.
First use Aug. 27, 1952.

SN 116,581. Scott Paper Company, Philadelphia, Pa. Filed Mar. 27, 1961.

SCOTT MAKES IT BETTER FOR YOU

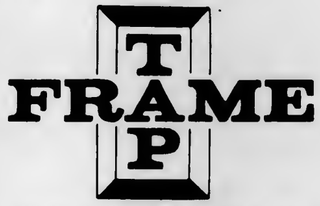
Owner of Reg. No. 669,919.
For Sanitary Paper Products—Namely, Paper Towels, Paper Napkins, Toilet Tissues.
First use Dec. 28, 1960.

SN 130,869. Avery Adhesive Products, Inc., Monrovia, Calif. Filed Oct. 30, 1961.

AVERY

For Unprinted Labels and Blank Label Stock.
First use 1941.

SN 144,146. The Chilcote Company, Cleveland, Ohio. Filed May 9, 1962.



Applicant makes no claim of exclusive right to the use of the word "Frame" nor to the representation of a frame apart from the mark as shown.
For Photo and Portrait Frames Made Entirely or in Major Part of Paper or Cardboard.
First use Mar. 20, 1962.

SN 150,946. Hudson Pulp & Paper Corp., New York, N.Y. Filed Aug. 10, 1962.

HUDSON

Owner of Reg. Nos. 518,686, 722,728, and others.
For Tissue paper, Facial Tissue, Cleansing Tissue, Disposable Paper Handkerchiefs, Toilet Tissue, Paper Napkins, Paper Towels, Paper Roll Towels, and Kraft Paper.
First use 1909.

SN 151,457. All-Matic Corporation, Hudson, Ohio. Filed Aug. 20, 1962.



For Arch Binders and File Boards, Arch Files and Hand-Operated Perforators.
First use March 1960.

SN 156,998. Mason Marking Systems Corporation, Norfolk, Va. Filed Nov. 9, 1962.

CONTINUTYPE-N

For Stencils.
First use on or about Sept. 26, 1962.

SN 157,114. Kimberly-Clark Corporation, Neenah, Wis. Filed Nov. 13, 1962.

BACLIN

For Fibrous Sheet Material Impregnated With Latex and Especially Adapted for Backlining Books.
First use Oct. 11, 1962.

Class 38 — Prints and Publications

SN 133,238. Sidney A. Eisenberg, d.b.a. Official Publishing Company, Cleveland, Ohio. Filed Dec. 4, 1961.

DOLLAR$ FOR $CHOLAR$

For Brochure Published From Time to Time, and a Newspaper Column, Both of Which Are Directed to the Subject of Financial Aid for Students.
First use on or about Nov. 25, 1961.

SN 134,196. Corcoran's Ink Spot, Lynbrook, N.Y. Filed Dec. 18, 1961.



For Brochures, Printed Cards, Calendars, Blotters, Tags, Labels, Greeting Cards, Booklets, Record Forms, Announcements, Party Invitations, Birth Announcements, Dance Programs, Tally and Place Cards.
First use during the year 1918.

SN 144,284. Squier Cards, Milford, Conn. Filed May 10, 1962.



Applicant hereby makes no claim to and disclaims the slogan "Creative Thoughts in Cards," apart from the mark as shown.
For Greeting Cards and Decorative Note Paper.
First use Apr. 19, 1962.

SN 145,852. Rescue Breathing Film Associates, Tujunga, Calif. Filed May 31, 1962.

REPVAR

For Training Films.
First use May 1, 1962.

SN 146,124. The Television, Radio and Film Commission of the Methodist Church, Nashville, Tenn. Filed June 4, 1962.



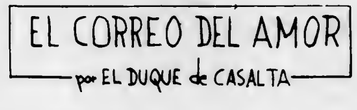
For Series of Motion Picture Films Pertaining to Religious Subject Matter.
First use on or about Nov. 4, 1961.

SN 147,564. The Emeloid Co. Inc., Hillside, N.J. Filed June 25, 1962.

EMELOID

For Advertising Material in the Nature of Printed or Decorated Cards, Calendars, Charts, Display Pieces, and Placards.
First use Jan. 10, 1919.

SN 150,681. Jose Sainz de la Pena, d.b.a. El Duque de Casalta, New York, N.Y. Filed Aug. 7, 1962.



The mark translated means "The Mail of Love (by the Duke of Casalta)."
For News-Magazine Section.
First use August 1961.

SN 154,356. The Law List Publishing Company, Inc., New York, N.Y. Filed Oct. 2, 1962.



For Directory of Lawyers Published Annually.
First use Apr. 1, 1904.

SN 154,639. Scalawag Productions, Inc., Murray Hill, N.J. Filed Oct. 5, 1962.

SCALAWAG

For Decorative Decals.
First use Apr. 10, 1962.

SN 155,363. Berkley Publishing Corporation, New York, N.Y. Filed Oct. 18, 1962.



The colors used in the drawing are red, yellow, and black. The use of the word "Books" as part of the subject mark is hereby disclaimed.
For Books.
First use Oct. 4, 1962.

SN 155,727. Lancet Publications, Inc., Minneapolis, Minn. Filed Oct. 23, 1962.

THE JOURNAL LANCET

For Periodical Medical Magazine.
First use Jan. 1, 1912.

SN 157,211. France Editions & Publications, Paris, France. Filed Nov. 14, 1962.

ELLE

An English translation of the French word "Elle" is "she."
For Magazine.
First use Nov. 1, 1945; in commerce 1945.

Class 39—Clothing

SN 122,121. Royal Manufacturing Company, Inc., Allentown, Pa. Filed June 15, 1961.

AMERICAN STAR

For Men's and Boys' Dress, Negligee, and Work Shirts, Blouses, Polo Shirts, and Underwear.
First use Jan. 10, 1933.

SN 134,763. Sportmaker, Inc., New York, N.Y. Filed Dec. 27, 1961.

SPORTMAKER

For Ladies' Pants for Outer Wear.
First use Nov. 30, 1961.

SN 141,371. M. C. Schrank Company, Bridgeton, N.J. Filed Apr. 2, 1962.

ESPRESSO COAT

Without waiving any of its common law rights and for the purposes of this registration only, applicant makes no exclusive claim herein to the word "Coat" apart from the mark as shown.
For Women's and Girls' Sleepwear and Lounging Coats.
First use during October 1960.

SN 142,160. International Latex Corporation, Dover, Del. Filed Apr. 12, 1962.

PLAYTEX PLAYLITE

Owner of Reg. Nos. 381,682, 716,915, and 719,371.
For Foundation Garments.
First use Mar. 24, 1962.

SN 147,733. Greenhall Bros., Inc., New York, N.Y. Filed June 26, 1962.

SPRINGEZE

For Trouser Supporting Belts and Apparel Belt and Buckle Combinations.
First use June 7, 1962.

SN 147,967. Superior Pants, Inc., New York, N.Y. Filed June 28, 1962.

GARY NORMAN

The name "Gary Norman" is fanciful.
For Men's Shorts, Walking Shorts, Slacks, Trousers, and Pants.
First use Apr. 12, 1962.

SN 149,021. Sunny South Fashions Inc., Dallas, Tex. Filed July 13, 1962.

Sunny South

For Women's Wear—Namely, Blouses, Skirts, Shorts, Pants, Matching and Coordinated Sets of Blouses With Shorts and/or Skirts and Pants.
First use 1949.

SN 149,221. Jeff Stevens Inc., New York, N.Y. Filed July 17, 1962.

JEFF STEVENS

For Ladies' Dresses, Skirts, Blouses.
First use Apr. 30, 1962.

SN 149,275. G.M.S. Inc., Lexington, N.C., assignee of Fashion Knits, Inc., Lexington, N.C. Filed July 18, 1962.

LOCKRIDGE

For Men's and Boys' Sport Shirts, Sweaters, and Swimwear.
First use May 28, 1962, on men's shirts.

SN 149,956. Palm Beach Company, Portland, Maine. Filed July 27, 1962.

NITE-OWL

For Men's Dress Suits Commonly Known as Tuxedo Suits.
First use Dec. 27, 1961.

SN 149,975. Vogue Hosiery Mills, Inc., Oxford, N.C. Filed July 27, 1962.

Vogue-Knit

For Men's, Boys', Girls', Misses', and Ladies' Hosiery.
First use June 4, 1962.

SN 151,053. Howard Stores Corporation, Brooklyn, N.Y. Filed Aug. 13, 1962.

ALTON-AMES

For Men's Suits, Topcoats, Overcoats, Shirts, Slacks, and Sweaters, Hats and Gloves.
First use July 30, 1962.

SN 152,513. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. Filed Sept. 5, 1962.

Hall-Cord

For Men's Sport Coats.
First use on or about Aug. 9, 1962.

SN 153,612. Trante Franke, Vienna, Austria. Filed Aug. 31, 1962.

LASTILEN

Owner of Austrian Reg. No. 46,142, dated Aug. 11, 1961; and U.S. Reg. No. 743,500.
For Brassieres, Girdles, Corsets, Corselets, Bodices, Garters, Bathing Trunks, and Bathing Costumes.

SN 153,622. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Sept. 21, 1962.



No claim is made to the word "Teeners" apart from the mark as shown.
For Slacks.
First use Mar. 15, 1962.

SN 155,032. Wales Manufacturing Company, Boston, Mass. Filed Oct. 11, 1962.

LADY WALES

The name "Lady Wales" is fictitious and does not identify a particular designer or other living individual. Owner of Reg. Nos. 597,940 and 714,442.
For Ladies' Raincoats.
First use Oct. 5, 1962.

SN 155,681. S. Augatein & Co., Inc., College Point, N.Y. Filed Oct. 23, 1962.

COSTA BRAVA

For Women's and Children's Jackets, Blouses, Shirts, Slacks, Halters, Shorts, Sunsuits, and Skirts.
First use on or about Oct. 11, 1962.

SN 157,055. E. Borgecight & Co. Inc., New York, N.Y. Filed Nov. 13, 1962.

THREE-FERS

For Collarless Dresses Sold With Two Changeable Slip-In Collars.
First use Nov. 1, 1962.

SN 157,654. Tru Balance Corsets, Inc., New York, N.Y. Filed Nov. 20, 1962.

SPAN "B"

For Ladies' Corsets, Girdles, Panty Corselettes, Bathing Suits, and Underwear.
First use May 26, 1962.

SN 157,655. Tru Balance Corsets, Inc., New York, N.Y. Filed Nov. 20, 1962.

SPAN "A"

For Ladies' Corsets, Girdles, Panty Corselettes, Bathing Suits, and Underwear.
First use May 26, 1962.

SN 160,233. J. Leon Touro, Inc., Boston, Mass. Filed Jan. 4, 1963.

FuTouro

For Women's Shoes.
First use Feb. 1, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

SN 140,444. The Governor Fastener Company, Meriden, Conn. Filed Mar. 22, 1962.

ITALIANOS

For Fasteners, Supporters, and/or Coupling Devices for Undergarments.
First use Mar. 14, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 120,414. Interchemical Corporation, New York, N.Y. Filed May 19, 1961.

Cohyde

For Fabrics Coated With Plastic for Use as Wall Coverings, Upholstery and the Like.
First use Feb. 15, 1956.

SN 128,802. Saks & Company, New York, N.Y. Filed Sept. 20, 1961.

Ronica

For Piece Goods Made of Synthetic Fibers or Filaments.
First use Sept. 5, 1961.

SN 136,852. The Villager, Inc., Philadelphia, Pa. Filed Jan. 29, 1962.

VILLAGELAWN

For Fabrics in the Piece for Making Into Coats, Jackets, Dresses, and the Like.
First use Dec. 29, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 115,485. Kampo, Padova, Italy. Filed Mar. 13, 1961.

KAMPO

Priority claimed under Sec. 44(d) on Italian application filed Dec. 14, 1960; Reg. No. 160,672, dated Dec. 12, 1962.
For Syringes.

SN 115,486. Kampo, Padova, Italy. Filed Mar. 13, 1961.

K

Priority claimed under Sec. 44(d) on Italian application filed Dec. 14, 1960; Reg. No. 160,674, dated Dec. 12, 1962.
For Syringes.

SN 115,487. Kampo, Padova, Italy. Filed Mar. 13, 1961.

KAMPO INTERCHANGEABLE

Priority claimed under Sec. 44(d) on Italian application filed Dec. 14, 1960; Reg. No. 160,673, dated Dec. 12, 1962. The word "Interchangeable" is disclaimed apart from the mark.
For Syringes.

SN 146,904. International Drug and Surgical Corporation, New York, N.Y. Filed June 14, 1962.

LEKTRO-SOM

For Electrical Apparatus for Inducing Conditions of Sleep, Hypnosis, Narcosis and the Like, Said Apparatus Comprising a Source of Electrical Impulses and Electrical Leads for Applying the Pulses to the Head of a Person.
First use Apr. 23, 1962.

SN 147,767. Sucora Corp., Lynchburg, Va. Filed June 26, 1962.

MAR-K

For Sanitary Panties.
First use Nov. 13, 1961.

SN 155,015. William S. Rice, Inc., Adams, N.Y. Filed Oct. 11, 1962.

COMPO-SEAL

For Medical Trusses.
First use Nov. 29, 1949.

SN 156,060. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

HOECHST

Owner of German Reg. No. 638,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 642,547, 746,155, and others.
For Dental, Medical, and Surgical Appliances, Including Materials for Making Dental Impressions and Dental Fillings; Medical Apparatus and Instruments; Syringes, Injection Needles and Ampoules; Bandages and Tapes, Plasters, and Bandage Materials.

SN 157,232. Meadox Medicals, Incorporated, Haledon, N.J. Filed Nov. 14, 1962.

WEAVENIT

For Prosthetic Devices, Particularly Tubular Synthetic Implants and Grafts for Surgical Use.
First use on or about Oct. 30, 1962.

Class 45—Soft Drinks and Carbonated Waters

SN 145,485. Seminole Flavor Company, Chattanooga, Tenn. Filed May 25, 1962.

DOUBLE

Owner of Reg. No. 394,666.
For Carbonated Soft Drinks and Flavoring Syrups for Making Same.
First use Feb. 19, 1962.

SN 160,887. Paulsboro Bottling Co., Inc., Paulsboro, N.J. Filed Jan. 17, 1963.

SOBER UP

For Non-Alcoholic, Non-Cereal, Maltless Beverages Sold as Soft Drinks and Sirups and Extracts for Making the Same.
First use September 1935.

Class 46—Foods and Ingredients of Foods

SN 645,791. Food Fair Stores, Inc., Philadelphia, Pa. Filed Apr. 23, 1953. CONCURRENT USE to be restricted to all the United States, its territories and possessions except the following contingent exception by New England Food Fair Stores Trading Corp., a Massachusetts corporation, with its principal place of business in Brookline, Massachusetts insofar as such corporation may have derived a right to use and has used the mark "New England Food Fair" since 1948 in the Commonwealth of Massachusetts for miscellaneous groceries and provisions pursuant to the Decree of the United States District Court for the District of Massachusetts made October 1, 1948 in Civil Action No. 7375, and the opinions of record in that action, such right to use being subject to change in the same or other litigation, or by other operation of law, or by agreement. Concurrent use with user, New England Food Fair, Inc., Brookline, Mass.

FOOD FAIR

Owner of Reg. No. 366,223.
For Primal Parts of Dressed Carcasses of Beef, Veal, and Lamb—Namely, Fresh Beef, Pork, Veal and Lamb Roasts, Beef Steaks, Veal Cutlets and Chops, and Lamb Cutlets and Chops; for Fresh Dressed Poultry; for Fresh Frozen Chicken Croquettes, Chicken Pies, Clam Cakes, Crab Cakes, Fish Cakes, and Oyster Pies; for Cheeses; for Sauerkraut; for Pickles; for Pickled Tomatoes; for Pickled Peppers; for Potato Salad; for Cole Slaw; and for Fresh Milk.
First use February 1947.

SN 662,784. Food Fair Stores, Inc., Philadelphia, Pa. Filed Mar. 17, 1954. CONCURRENT USE to be restricted to all the United States, its territories and possessions except the following contingent exception by New England Food Fair Stores Trading Corp., a Massachusetts corporation, with its principal place of business in Brookline, Massachusetts insofar as such corporation may have derived a right to use and has used the mark "New England Food Fair" since 1948 in the Commonwealth of Massachusetts for miscellaneous groceries and provisions pursuant to the Decree of the United States District Court for the District of Massachusetts made October 1, 1948 in Civil Action No. 7375, and the opinions of record in that action, such right to use being subject to change in the same or other litigation, or by other operation of law, or by agreement. Concurrent use with user, New England Food Fair, Inc., Brookline, Mass.

FOOD FAIR

Owner of Reg. No. 366,223.
For Coffee.
First use Dec. 16, 1953.

SN 77,282. Gordon Baking Company, Detroit, Mich. Filed July 8, 1959.

SILVERCUP SOFT TWIST

Applicant disclaims the words "Soft" and "Twist" apart from the mark as shown. Owner of Reg. Nos. 179,870, 549,457, and others.
For Bread.
First use May 25, 1959.

SN 114,420. Brokay Products, Inc., Philadelphia, Pa. Filed Feb. 27, 1961.

BROKAY
GLASSI - HONI - GLAZE

The drawing is lined for the color red. No claim is made to the words "Glassi-Honi-Glaze" except in the association shown. Owner of Reg. No. 631,877.
For Syrup for Glazing Doughnuts.
First use Jan. 20, 1950.

SN 114,421. Brokay Products, Inc., Philadelphia, Pa. Filed Feb. 27, 1961.

BROKAY
WRAPPABLE DRIER

The drawing is lined for the color red. No claim is made to the exclusive right to the words "Wrappable Drier" except in the association shown. Owner of Reg. No. 631,877.
For Doughnut Glaze Stabilizer.
First use on or about Jan. 5, 1950.

SN 116,754. Rodriguez Hermanos de Cordoba S.A., Cordoba, Spain. Filed Mar. 29, 1961.

Clásico



The English translation of the word feature of the mark is "Classic." Owner of Spanish Reg. No. 360,037, dated June 18, 1960.
For Olive Oil (Edible Oil).

SN 127,031. Mountain States Wholesale Company, Boise, Idaho. Filed Aug. 31, 1961.



The drawing is lined for red and blue, but no claim is made to the colors so named.

For Canned Fruits, Vegetables, and Vegetable Juices; Bottled Vinegar; Canned, Meatless Sauces; Syrups Bottled for Food Purposes; Canned and Packaged Milk; Canned Vegetable Shortening; Bottled Cooking and Salad Oil; Canned Dog Food; Packaged Margarine; Bottled Salad Dressing; Bottled Sandwich Spread; Bottled Catsup; Canned Olives; Bottled Pickles.

First use June 30, 1959.

SN 132,298. Chesterton Candy Company, Chicago, Ill. Filed Nov. 20, 1961.



Applicant disclaims the words "Big Kisses" apart from the mark as shown.

For Candy.

First use Nov. 10, 1961.

SN 136,946. Basic Foods Sales Corporation, Englewood, N.J. Filed Jan. 31, 1962.



For Icing for Cakes and Cookies.

First use Aug. 9, 1960.

SN 138,369. Acme Markets, Inc., Philadelphia, Pa., by change of name from American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

Glenside

Owner of Reg. No. 287,098.

For Fresh, Glass, Canned, Frozen, Dried, and Pickled Fruits and Vegetables; Fish; Soups; Shell Fish; Fruit and Berry and Vegetable Juices, Hollandaise and Hard Sauces, Apple Butter, Meat Sauces; Ice Creams, Fluid Milks, Sherbets; Bread Products; Coffees; Teas; Food Flavors, Extracts, Imitation or Natural; Table and Syrups To Be Used in the Preparation of Foods and/or Eating of the Same; Spices, Herbs, Salts; Salad Dressings; Salad and Cooking Oils; Vinegars; Frozen Waffles; Pickles, Peppers, Vegetable Relishes; Olives; Margarines; Cheeses; Gelatin Dessert Powders; Pudding Dessert Powders; Jams, Jellies, Preserves; Mustard; Spaghetti Sauces, With or Without Meat; Marshmallow Cream; Fresh Eggs; Honey; Mince Meat.

First use June 15, 1910, on vinegar and salad oil.

SN 138,784. Fromagerie Franco-Suisse Le Ski (Societe Cooperative), Forest, Brussels, Belgium. Filed Mar. 19, 1962.

CROKETSKI

Owner of Belgian Reg. No. 90,282, dated Aug. 30, 1960.

For Croquettes, Especially Cheese-Croquettes, Fowl-Croquettes, Mushroom-Croquettes, Shrimp-Croquettes, Potato-Croquettes.

SN 138,924. L. L. Antle & Co., Inc., Atlanta, Ga. Filed Feb. 28, 1962.

CABIN CREEK

For Blend of Cane and Maple Sugar Syrups.

First use on or about Jan. 29, 1962.

SN 145,277. Roland R. Mink, d.b.a. Mink's Candies and L. C. Good & Co., Allentown, Pa. Filed May 23, 1962.



The drawing is lined for red.

For Hard Candy.

First use January 1961.

SN 147,383. Merco Stores, Inc., Jamaica, N.Y. Filed June 21, 1962.



For Fresh Cuts of Meats, Frozen Fresh Cuts of Meats, Canned Meats, Delicatessen Meats—Namely, Salami, Pastrami, Corned Beef, Rolled Beef, Tongue, Ham, Frankfurters, and Luncheon Meats.

First use Aug. 1, 1961.

SN 151,903. Fruitvale Canning Company, Oakland, Calif. Filed Aug. 27, 1962.



Owner of Reg. No. 516,754.

For Canned Fruits, Canned Vegetables, Canned Tomato Catsup, Canned Stewed Tomatoes, Tomato Juice.

First use July 26, 1919, on canned fruits.

SN 152,657. N.V. Verenigde Textiel- en Oliefabrieken, Krommenie, Netherlands. Filed Sept. 4, 1962.

CROKLAAN

Owner of Dutch Reg. No. 142,978, dated Jan. 11, 1962.

For Raw Materials for the Confectionery and Baking Industries—Namely, Fats and Oils and Emulsions Thereof, and Margarine.

SN 154,516. Rodriguez Hermanos de Cordoba, S.A., Cordoba, Spain. Filed Oct. 4, 1962.

CHAVAL

The term "Chaval" is Spanish for "lad." Owner of Spanish Reg. No. 288,739, dated Sept. 20, 1955.

For Lard, Edible Oils, Cheese, Butter, Ham, Powdered Milk, Conserved Fish and Sausages.

SN 154,952. Cinch Products, Inc., Los Angeles, Calif. Filed Oct. 11, 1962.

Cinch MOUNTAIN BREAKFAST

Owner of Reg. Nos. 385,495, 444,704, and 444,738.

For Pancake Mix.

First use Aug. 3, 1962.

SN 154,953. Cinch Products, Inc., Los Angeles, Calif. Filed Oct. 11, 1962.

MOUNTAIN BREAKFAST

For Pancake Mix.

First use Aug. 3, 1962.

SN 155,416. A. E. Iles Company, Dallas, Tex. Filed Oct. 18, 1962.

"GOLDEN LEMON"

No registration rights are claimed in the word "Lemon" apart from the mark shown.

For Food Flavorings in Extract, Syrup, and Powder Form.

First use Oct. 10, 1962.

SN 156,177. Stilwell Frozen Foods, Incorporated, Stilwell, Okla. Filed Oct. 29, 1962.

COLD KING

No claim of exclusive right is made to the descriptive word "Cold" apart from the mark shown in the drawing.

For Frozen Fruits and Vegetables.

First use 1950.

SN 156,560. Central Nebraska Packing Co., d.b.a. Crown Prince Pet Food Co., North Platte, Nebr. Filed Nov. 5, 1962.

CROWN Prince

Owner of Reg. No. 627,506.

For Dog and Cat Food.

First use June 15, 1955.

SN 157,489. George W. Goodman, Central Point, Oreg. Filed Nov. 19, 1962.

SPANISH ROGUE

For Melons.

First use Sept. 8, 1962.

SN 157,859. F. M. Stamper Company, d.b.a. Banquet Canning Company, St. Louis, Mo. Filed Nov. 23, 1962.

BANQUET

Owner of Reg. Nos. 411,202, 680,882, and 691,375.

For Frozen Prepared Food Products, Including Boil-in-the-Bag Products—Namely, Turkey, Chicken, and Beef in Various Forms Including Beef Stew; Frozen Fish Dinners Consisting Mainly of Fish With One or More Vegetables and/or Potatoes; Frozen Salisbury Steak, Chopped Beef, and Beef Enchilada Dinners; Frozen Casseroles—Namely, Beef Enchilada, and Tacos; Frozen Dinners of National Origin—Namely, Mexican Style Consisting Mainly of Tamales, Beans, Chili Gravy, Rice, and Beef Enchilada and Italian Style Consisting Mainly of Mostaccioli With Meat Balls, Sauce, and Bread; Frozen Fried Chicken; and Frozen Dessert Pies.

First use November 1942.

SN 157,989. Fairmont Foods Company, Omaha, Nebr. Filed Nov. 27, 1962.

FAIRMONT IS FINER . . . NATURALLY

Owner of Reg. No. 579,011.

For Dairy Products—Namely, Fluid Milk.

First use Oct. 18, 1962.

SN 158,152. Gorton's of Gloucester, Inc., Gloucester, Mass. Filed Nov. 29, 1962.

FRESH-LOCK

For Frozen Fish and Shellfish.

First use Aug. 22, 1961.

SN 158,183. Schoener Candies, Inc., Reading, Pa. Filed Nov. 29, 1962.

bright moments

For Confectionery—Namely, Candies.
First use Nov. 21, 1962.

SN 160,279. Mel Finerman Co., Inc., Oxnard, Calif. Filed Jan. 7, 1963.

first fiddle

For Fresh Vegetables.
First use Dec. 20, 1962.

SN 160,302. Chet W. Johns & Sons, Phoenix, Ariz. Filed Jan. 7, 1963.

SURE FIRE

For Fresh Vegetables.
First use Oct. 4, 1959.

SN 160,399. Dorotha L. Andrews, d.b.a. Walter T. Andrews & Son, Cambridge, Md. Filed Jan. 9, 1963.

BAY BIRD

For Canned Vegetables.
First use July 1952.

SN 160,451. Swift & Company, Chicago, Ill. Filed Jan. 9, 1963.

AROUND THE WORLD IN CHEESE

Applicant makes no claim to the word "Cheese" apart from the mark as shown.
For Cheese.
First use on or about May 1, 1962.

SN 161,198. Pel-Freez Rabbit Meat, Inc., Rogers, Ark. Filed Jan. 22, 1963.

PEL-FREEZ

For Quick Frozen Domestic Rabbit Meat.
First use Oct. 27, 1939.

Class 47 — Wines

SN 111,435. H. Sichel Sons, Inc., New York, N.Y., assignee of Sichel & Fils Freres, Stuttenberg, Bordeaux, France. Filed Jan. 6, 1961.



For Wines.
First use Nov. 30, 1958; in commerce Jan. 2, 1959.

Class 49 — Distilled Alcoholic Liquors

SN 156,352. J. T. S. Brown's Son Company, d.b.a. Masterson's Station Distilling Co., Cincinnati, Ohio. Filed Oct. 30, 1962.

WHISKY REBELLION

No claim is made to the word "Whisky" apart from the mark as shown in the drawing.
For Whiskey.
First use Oct. 22, 1962.

Class 50 — Merchandise Not Otherwise Classified

SN 148,165. A. O. Smith Harvestore Products, Kankakee, Ill., assignee of Farm Automation, Inc., Escalon, Calif. Filed July 2, 1962.

ROUND-ABOUT

For Poultry Cages, and Feeding, Watering, and Cleaning Apparatus Assembled With Such Cages.
First use on or about Feb. 1, 1959.

SN 153,424. Royster Chemical Company, Farmville, N.C. Filed Sept. 18, 1962.

CHEM-FILM

For Polyethylene Film Used as a Cover for Tobacco Beds in Connection With the Spraying of Such Plants.
First use Aug. 29, 1962.

Class 51 — Cosmetics and Toilet Preparations

SN 132,370. Revlon, Inc., New York, N.Y. Filed Nov. 20, 1961.

COUTURINE

For Lipstick.
First use Oct. 20, 1961.

SN 148,144. Clairol Incorporated, New York, N.Y. Filed July 2, 1962.

SHE DOESN'T? . . . SHE WILL NOW

Owner of Reg. Nos. 709,159 and 743,115.
For Hair Tinting, Dyeing, and Coloring Preparation.
First use Jan. 24, 1962.

SN 153,470. Ellen Kaye Laboratories, Inc., St. Paul, Minn. Filed Sept. 19, 1962.

COLOR 28

The term "Color" is disclaimed apart from the mark as shown.
For Semi-Permanent Hair Tints in Liquid Form.
First use Jan. 4, 1962.

SN 155,497. Gambine Products, Inc., New York, N.Y. Filed Oct. 19, 1962.

SURGI-CREAM

For Depilatory.
First use June 15, 1955.

SN 156,063. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

HOECHST

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Perfumes, Agents for Body and Beauty Care, Essential Oils.

SN 158,603. Helene Curtis Industries, Inc., Chicago, Ill. Filed Dec. 6, 1962.

SEA OF WAVES

For Hair Setting Lotion.
First use on or about Aug. 28, 1962.

SN 159,141. Advance Brands, Inc., Chicago, Ill. Filed Dec. 14, 1962.

DISCIPLINE

For Hair Grooming Aid.
First use Oct. 17, 1962.

Class 52 — Detergents and Soaps

SN 148,978. Kerns United Corporation, Calumet City, Ill. Filed July 13, 1962.

CATYLATOR

For Additive for Pickling Baths for Metals Which Acts as an Activator To Enhance Descaling Action.
First use Apr. 24, 1962.

SN 149,323. Red Bay Wholesale Co., Inc., d.b.a. Sunshine Industries, Red Bay, Ala. Filed July 18, 1962.

PINE ROX

No claim is made to the word "Pine" apart from the mark shown in the drawing.
For Liquid Cleaning Preparation Having Deodorizing and Disinfecting Properties for General Household Use.
First use June 26, 1962.

SN 149,942. Maurice Mogavero, d.b.a. Star-Brite Mfg. Co., Newark, N.J. Filed July 27, 1962.

STAR-BRITE

For Jewelry and Gem Cleaning Fluid.
First use Aug. 1, 1952.

SN 150,214. Armour and Company, Chicago, Ill. Filed Aug. 1, 1962.

ANNE WHITFIELD

"Anne Whitfield" is a fanciful name.
For Soap.
First use July 3, 1962.

SN 152,759. Caro, Inc., d.b.a. Kirby Sales Co., Los Angeles, Calif. Filed Sept. 10, 1962.

'DOZ'R

For Drain Opener.
First use Feb. 27, 1962.

SN 156,064. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

HOECHST

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.

For Detergents and Soaps—i.e., Soaps, Washing Agents, Color Additions for Washing, Stain-Removing Agents.

SN 160,803. Restorz Products, Inc., Prospect, Conn. Filed Jan. 16, 1963.



For Gun Oil Consisting of a Protective Coating and Rust-Proof Liquid Preparation To Clean, Lubricate, and Remove Stains and Water Marks From Both Wood and Metal Parts of Modern and Antique Guns, Which Will Not Wash Off or Gum Up.

First use Jan. 1, 1957.

SERVICE MARKS

Class 100 — Miscellaneous

SN 113,945. Pipe Trades Industry Program, Inc. of Arizona, Phoenix, Ariz. Filed Feb. 17, 1961. COLLECTIVE MARK.



"Peter Piper"

For Association Services to Members of the Pipe Trades Industry, Such as Public Relation Services and the Promotion of Cooperation Among Members of the Association.

First use on or about Oct. 1, 1959.

SN 118,839. Western Geophysical Company of America, Los Angeles, Calif. Filed Apr. 27, 1961.

FREQUENTIAL

For Processing and Analyzing Seismograph Records and Record Sections.

First use Nov. 2, 1960.

SN 152,882. Dixie Boys Baseball, Inc., Pineville, La. Filed Sept. 11, 1962.

DIXIE BOYS BASEBALL

The word "Baseball" is disclaimed apart from the mark as shown.

For Organization of Baseball Clubs for Boys.

First use in 1957.

Class 101 — Advertising and Business

SN 125,100. Federated Department Stores, Inc., Dallas, Tex. Filed July 31, 1961.

SANGER HARRIS

For Retail Department Store Services.

First use July 1, 1961.

Class 102 — Insurance and Financial

SN 157,067. Chicago Title Insurance Company, Chicago, Ill. Filed Nov. 13, 1962.

CT IC

For Real Estate Title Insurance.

First use Oct. 2, 1961.

Class 106 — Material Treatment

SN 86,462. Velvetone Advertising Displays, Inc., d.b.a. Velvetone Company, San Francisco, Calif. Filed Dec. 1, 1959.

VELVETONE

Owner of Reg. No. 713,534.

For Printing Services Including Color Reproductions.

First use about 1908.

SN 135,654. The Amerbelle Corporation, Rockville, Conn. Filed Jan. 12, 1962.

AMERBELLE Colortron

Owner of Reg. No. 631,952.

For Fabric Dyeing and Foam Laminate Processing Service Applied to the Goods of Others.

First use Nov. 20, 1961.

Class 107 — Education and Entertainment

SN 147,763. Scripps-Howard Broadcasting Company, Cincinnati, Ohio. Filed June 26, 1962.

THE CONTEMPORARIES

For Title of a Television Program.

First use Feb. 14, 1962.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 154,839. Phi Kappa Psi Fraternity, Cleveland, Ohio. Filed Oct. 9, 1962.

ΦΚΨ

For Indicating Membership in Applicant.

First use on or about Feb. 19, 1852.

SN 154,841. Phi Kappa Psi Fraternity, Cleveland, Ohio. Filed Oct. 9, 1962.

PHI KAPPA PSI

For Indicating Membership in Applicant.

First use on or about Feb. 19, 1852.

SN 154,842. Phi Kappa Psi Fraternity, Cleveland, Ohio. Filed Oct. 9, 1962.



For Indicating Membership in Applicant.

First use in about June 1909.

CERTIFICATION MARKS

Class A — Goods

SN 146,526. Svenska Annonsörers Förening, Stockholm, Sweden. Filed June 8, 1962.



The mark certifies firstly, that the goods are made in Sweden, and secondly, that the persons and firms offering the goods for sale meet applicant's standards of ethical selling and advertising practices.

For Goods.

First use October 1958; in commerce October 1958.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

753,085. PARALLITE. Houze Glasa Corporation. SN 126,024. Pub. 5–7–63. Filed 8–15–61.

753,086. MODEL. L. A. Dreyfus Company. SN 128,535. Pub. 5–7–63. Filed 9–25–61.

753,087. VEGAS. Armour and Company. SN 131,541. Pub. 5–7–63. Filed 11–8–61.

753,088. BLEN-TEX. Bell Clay Company, assignee of Southwestern Talc Corporation and Bell Clay Company (joint owners). SN 134,162. Pub. 5–7–63. Filed 12–15–61.

753,089. SCOTCHFOAM. Minnesota Mining and Manufacturing Company. SN 134,481. Pub. 5–7–63. Filed 12–21–61.

753,090. NITRO-CHARGE. L. Teweles Seed Co. SN 134,496. Pub. 5–7–63. Filed 12–21–61.

753,091. SMA. Sinclair Petrochemicals, Inc., assignee of Texas Butadiene & Chemical Corporation. SN 138,554. Pub. 5–7–63. Filed 2–23–62.

753,092. POWMET. Powder Weld, Inc. SN 138,646. Pub. 5–7–63. Filed 2–26–62.

753,093. BLAKOTE. G. E. Smith, Inc. SN 138,822. Pub. 5–7–63. Filed 2–28–62.

753,094. PPG MONOGRAM. Pittsburgh Plate Glass Company. SN 140,175. Pub. 5–7–63. Filed 3–19–62.

753,095. 3 LITTLE INDIANS AND DESIGN. Anderson, Clayton & Co. SN 140,414. Pub. 5–7–63. Filed 3–22–62.

753,096. CALF-A-TERIA TESTED. Anderson, Clayton & Co. SN 140,418. Pub. 5–7–63. Filed 3–22–62.

753,097. D.E.N. The Dow Chemical Company. SN 141,273. Pub. 5–7–63. Filed 4–2–62.

753,098. GEOMETRIC DESIGN. American Viscose Corporation. SN 141,567. Pub. 5–7–63. Filed 4–5–62.

753,099. FIREBUGS. Patio Party Products, Inc. SN 141,977. Pub. 5–7–63. Filed 4–10–62.

753,100. HUSKY AND REPRESENTATION OF DOG IN RED BACKGROUND. Husky Oil Company. SN 150,782. Pub. 5–7–63. Filed 8–8–62.

753,101. SELECTROFOAM. Pittsburgh Plate Glass Company. SN 151,163. Pub. 5–7–63. Filed 8–14–62.

753,102. H & N AND DESIGN. Heisdorf & Nelson Farms, Inc. SN 152,060. Pub. 5–7–63. Filed 8–28–62.

753,103. GRILONIT. Emser Werke, A.G. SN 152,292. Pub. 5–7–63. Filed 8–31–62.

753,104. N. National Plastic Products Company, Inc. SN 152,618. Pub. 5–7–63. Filed 9–6–62.

753,105. OLESYN. Avisun Corporation. SN 152,668. Pub. 5–7–63. Filed 9–7–62.

753,106. OLEPRENE. Avisun Corporation. SN 152,669. Pub. 5–7–63. Filed 9–7–62.

Class 2 — Receptacles

753,107. SOUNDS FOR SAFETY. Falcon Alarm Company, Inc. SN 120,195. Pub. 5–7–63. Filed 5–17–61.

753,108. BOATBATH. Boatbath, Inc. SN 137,196. Pub. 5–7–63. Filed 2–5–62.

753,109. WILSON AND DESIGN. Wilson Plastics, Inc. SN 137,297. Pub. 5–7–63. Filed 2–5–62.

753,110. IPSCO AND DESIGN. Industrial Piping Supply Company. SN 138,505. Pub. 5–7–63. Filed 2–23–62.

753,111. FANCIFUL HEART DESIGN. Maryland Cup Corporation. SN 149,860. Pub. 5–7–63. Filed 7–26–62.

753,112. BMT AND DESIGN. Kimberly-Clark Corporation. SN 153,771. Pub. 5–7–63. Filed 9–24–62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

753,113. CONNIE'S COLLARS "FASHION HAS GONE TO THE DOGS" AND DESIGN. Connie's Collars Inc. SN 139,998. Pub. 5–7–63. Filed 3–16–62.

753,114. MARY LEWIS. Sears, Roebuck and Co. SN 150,628. Pub. 5–7–63. Filed 8–6–62.

753,115. BUDDY PAK. Stein Bros. Mfg. Co. SN 152,638. Pub. 5–7–63. Filed 9–6–62.

753,116. AERO PAK. Seward Luggage Manufacturing Company, Incorporated. SN 153,597. Pub. 5–7–63. Filed 9–20–62.

Class 4 — Abrasives and Polishing Materials

753,117. FINESSE. K. J. Quinn & Co., Inc. SN 129,693. Pub. 5–7–63. Filed 10–11–61.

753,118. CHAN. The Drackett Company of Canada, Ltd. SN 152,775. Pub. 5–7–63. Filed 9–10–62.

Class 5 — Adhesives

753,119. STIX-A-LOT. The Carter's Ink Company. SN 136,203. Pub. 5–7–63. Filed 1–22–62.

753,120. I.P.S. Industrial Polychemical Service. SN 136,979. Pub. 5–7–63. Filed 1–31–62.

753,121. UNIPOX. Berco Industries Corp. SN 152,041. Pub. 3–19–63. Filed 8–28–62.

753,122. FOAMGRAB. Dacar Chemical Products Company. SN 154,015. Pub. 5–7–63. Filed 9–27–62.

Class 6 — Chemicals and Chemical Compositions

753,123. FLIXIMEL. Les Usines de Melle. SN 115,819. Pub. 5–7–63. Filed 3–16–61.

753,124. PROTO-PEPTONE. Wilson & Co. Inc. SN 118,844. Pub. 5–7–63. Filed 4–27–61.

753,125. NICOTOL. Durban's S.p.A. SN 121,372. Pub. 5–7–63. Filed 6–5–61.

753,126. PERMA-DIP. Murial Lane, Inc. SN 135,371. Pub. 5–7–63. Filed 1–8–62.

753,127. WINDOTINT. Robert H. Allgood, d.b.a. Windotint Coating Company. SN 138,568. Pub. 5–7–63. Filed 2–26–62.

753,128. WOOD TOX AND DESIGN. Wood Treating Chemicals Co. SN 138,746. Pub. 5–7–63. Filed 2–27–62.

753,129. BONDAID. W. S. Shamban & Co. SN 138,820. Pub. 5–7–63. Filed 2–28–62.

753,130. SULFOSET. J. P. Stevens & Co., Inc. SN 138,990. Pub. 5–7–63. Filed 3–2–62.

753,131. TUFFIN. The Atlantic Refining Company. SN 139,014. Pub. 5–7–63. Filed 3–5–62.

753,132. CMC WITHIN A DIAMOND DESIGN. CMC, Inc., d.b.a. Cumberland Mfg. Company. SN 139,588. Pub. 5–7–63. Filed 3–12–62.

753,133. SEA CREST. Research Chemicals, Inc. SN 139,683. Pub. 5–7–63. Filed 3–12–62.

753,134. EDGE-A-LINE. P. W. Howard, Jr., d.b.a. National Scent Company. SN 139,856. Pub. 5–7–63. Filed 3–14–62.

753,135. FAULTLESS DRI-SOFT AND DESIGN. Faultless Starch Company. SN 139,935. Pub. 5–7–63. Filed 3–15–62.

753,136. SILVEX AND DESIGN. H. E. Butt Grocery Company, d.b.a. H.E.B. Food Stores. SN 139,990. Pub. 5–7–63. Filed 3–16–62.

753,137. CONSAN. Michigan Tool Company. SN 140,031. Pub. 5–7–63. Filed 3–16–62.

753,138. EMOIL-O-PAQUE. Nypac, Incorporated. SN 140,172. Pub. 5–7–63. Filed 3–19–62.

753,139. POSITOP. Azoplate Corporation. SN 140,222. Pub. 5–7–63. Filed 3–20–62.

753,140. NAUTOX. Osmose Wood Preserving Co. of America, Inc. SN 140,380. Pub. 5–7–63. Filed 3–21–62.

753,141. MALA-THOX. The Weevil-Cide Company. SN 140,411. Pub. 5–7–63. Filed 3–21–62.

753,142. RAY-O-PAQUE. Nypac, Incorporated. SN 140,974. Pub. 5–7–63. Filed 3–28–62.

753,143. UNIQUAT. Universal Chemicals Corp. SN 141,007. Pub. 5–7–63. Filed 3–28–62.

753,144. ALKAWET. Universal Chemicals Corp. SN 141,008. Pub. 5–7–63. Filed 3–28–62.

753,145. LUCEL. Wallace & Tiernan Inc. SN 141,012. Pub. 5–7–63. Filed 3–28–62.

753,146. CORNELOWAX. Cornelius Wax Refining Corporation. SN 141,039. Pub. 5–7–63. Filed 3–29–62.

753,147. CORNOX. Cornelius Wax Refining Corporation. SN 141,040. Pub. 5–7–63. Filed 3–29–62.

753,148. SOLVAWAX. Cornelius Wax Refining Corporation. SN 141,041. Pub. 5–7–63. Filed 3–29–62.

753,149. C-11 NICKELAD. Puma Corporation. SN 141,110. Pub. 5–7–63. Filed 3–29–62.

753,150. THALCIDE. Lilbry Bio-Chem Laboratories, Inc., d.b.a. Lilbry Biochem Laboratories, Inc. SN 141,320. Pub. 5–7–63. Filed 4–2–62.

753,151. SPINE-O-PAQUE. Nypac, Incorporated. SN 141,346. Pub. 5–7–63. Filed 4–2–62.

753,152. CHROM-O-PAQUE. Nypac, Incorporated. SN 141,347. Pub. 5–7–63. Filed 4–2–62.

753,153. VERT-O-PAQUE. Nypac, Incorporated. SN 141,348. Pub. 5–7–63. Filed 4–2–62.

753,154. FABRI-SEAL. Crocker Industries, Inc. SN 141,577. Pub. 5–7–63. Filed 4–5–62.

753,155. TUASAL. The Dow Chemical Company. SN 141,823. Pub. 5–7–63. Filed 4–9–62.

753,156. STADUST. Macmillan Ring-Free Oil Co., Inc. SN 141,962. Pub. 5–7–63. Filed 4–10–62.

753,157. VALCO AND DESIGN. Valley Chemical Company. SN 149,229. Pub. 4–30–63. Filed 7–17–62.

753,158. COMO-WET. William E. Goodfellow, d.b.a. Comet Fire Equipment Co. SN 150,048. Pub. 5–7–63. Filed 7–30–62.

753,159. ACIDON. Dura Commodities Corporation. SN 150,331. Pub. 5–7–63. Filed 8–2–62.

753,160. REPROFLO. General Aniline & Film Corporation. SN 151,748. Pub. 5–7–63. Filed 8–23–62.

Class 7 — Cordage

753,161. SCRAPER FLEX. The Colorado Fuel and Iron Corporation. SN 133,867. Pub. 5–7–63. Filed 12–12–61.

753,162. RIVER EDGE. King Fisher Products. SN 140,360. Pub. 5–7–63. Filed 3–21–62.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

753,163. OLD RELIABLE. Old Reliable Cartridge Company. SN 138,222. Pub. 5–7–63. Filed 2–19–62.

753,164. JETCORD. Explosive Technology, Inc. SN 139,562. Pub. 5–7–63. Filed 3–9–62.

753,165. THE PEACEMAKER. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 151,569. Pub. 5–7–63. Filed 8–21–62.

753,166. THE FRONTIER. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 151,570. Pub. 5–7–63. Filed 8–21–62.

753,167. 4895. B. E. Hodgdon, Inc. SN 153,956. Pub. 5–7–63. Filed 9–26–62.

Class 10 — Fertilizers

753,168. FERTAL-GRO. Eastern Dehydrating Company. SN 137,123. Pub. 5–7–63. Filed 2–2–62.

753,169. MAGAMP. W. R. Grace & Co. SN 151,860. Pub. 5–7–63. Filed 8–22–62.

753,170. HERITAGE HOUSE. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 152,094. Pub. 5–7–63. Filed 8–28–62.

753,171. HERITAGE HOUSE AND DESIGN. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 152,095. Pub. 5–7–63. Filed 8–28–62.

Class 11 — Inks and Inking Materials

753,172. SUNGLO. Sun Chemical Corporation. SN 135,061. Pub. 5–7–63. Filed 1–2–62.

753,173. CURL-LESS. Burroughs Corporation. SN 140,087. Pub. 5–7–63. Filed 3–19–62.

Class 12 — Construction Materials

753,174. GENERAL FLAGCRETE. General Concrete Products, Inc. SN 122,076. Pub. 5–7–63. Filed 6–15–61.

753,175. PACO. Paco Textures Corporation. SN 122,637. Pub. 5–7–63. Filed 6–22–61.

753,176. CAPASTIC. Engelhard Industries, Inc. SN 133,379. Pub. 5–7–63. Filed 12–5–61.

753,177. "RHOMBIC." California Metal Enameling Company. SN 136,734. Pub. 5–7–63. Filed 1–29–62.

753,178. CASTEX. Illinois Clay Products Company. SN 137,439. Pub. 5–7–63. Filed 2–7–62.

753,179. FRAME-AHL. American Screen Products Company. SN 138,144. Pub. 5–7–63. Filed 2–19–62.

753,180. CUSTOM FIBER. Pope & Talbot Inc. SN 138,879. Pub. 5–7–63. Filed 3–1–62.

753,181. CUSTOM-BLOCK. Pope & Talbot Inc. SN 138,880. Pub. 5–7–63. Filed 3–1–62.

753,182. POLYVERBEL AND DESIGN. Glaverbel, Societe Anonyme. SN 142,987. Pub. 5–7–63. Filed 2–2–62.

753,183. PITCO. H. K. Porter Company, Inc. SN 144,188. Pub. 5–7–63. Filed 5–9–62.

753,184. NATILCO. North American Tile Corporation. SN 145,958. Pub. 5–7–63. Filed 6–1–62.

753,185. F AND TRIANGLE DESIGN. Florida Steel Corporation. SN 147,098. Pub. 5–7–63. Filed 6–18–62.

753,186. BMT AND DESIGN. Kimberly-Clark Corporation. SN 153,772. Pub. 5–7–63. Filed 9–24–62.

753,187. MIRACLE. Miracle Adhesives Corporation. SN 154,665. Pub. 5–7–63. Filed 9–14–62.

753,188. SPANEX. Dura-Tech Corporation. SN 155,398. Pub. 5–7–63. Filed 10–18–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

753,189. PHILLIPS POZIDRIV. Phillips Screw Company. SN 130,380. Pub. 5–7–63. Filed 10–20–61.

753,190. PHIL-NUT AND DESIGN. Phillips Screw Company. SN 131,706. Pub. 5-7-63. Filed 11-9-61.

753,191. FLEXISEAT. Frank Edward Swain. SN 132,761. Pub. 5-7-63. Filed 11-24-61.

753,192. U.T.I. Ekco Products Company. SN 132,822. Pub. 5-7-63. Filed 11-27-61.

753,193. SWA IN DESIGN FORM. Crane Co. SN 133,133. Pub. 5-7-63. Filed 12-1-61.

753,194. TROJAN. Standard Manufacturing Co. SN 134,848. Pub. 5-7-63. Filed 12-28-61.

753,195. UT. FMC Corporation. SN 135,938. Pub. 5-7-63. Filed 1-16-62.

753,196. PUSH-LOK. Parker Hannifin Corporation. SN 136,390. Pub. 5-7-63. Filed 1-23-62.

753,197. IPSCO AND DESIGN. Industrial Piping Supply Company. SN 138,506. Pub. 5-7-63. Filed 2-23-62.

Class 14 — Metals and Metal Castings and Forgings

753,198. W AND DESIGN. Winters Foundry & Machine Company, Inc. SN 142,154. Pub. 5-7-63. Filed 4-12-62.

753,199. TRONAMANG. American Potash & Chemical Corporation. SN 151,558. Pub. 5-7-63. Filed 8-21-62.

Class 15 — Oils and Greases

753,200. O.K. O.K. Rubber Welders, Incorporated. SN 112,759. Pub. 5-7-63. Filed 1-30-61.

753,201. HESS AND DESIGN. Hess Oil & Chemical Corporation, assignee, by mesne assignments, of Hess, Inc. SN 127,224. Pub. 5-7-63. Filed 9-5-61.

753,202. STEER SEAL AND DESIGN. Radiator Specialty Company. SN 152,869. Pub. 5-7-63. Filed 9-5-62.

Class 16 — Protective and Decorative Coatings

753,203. NITE-LINE AND DESIGN. Prismo Safety Corporation. SN 134,899. Pub. 5-7-63. Filed 12-29-61.

Class 17 — Tobacco Products

753,204. MEDALLION DESIGN. Brown & Williamson Tobacco Corporation. SN 149,710. Pub. 5-7-63. Filed 7-25-62.

753,205. MARK IV THE CIGAR OF PRECISION AND DESIGN. W. H. Snyder and Sons Incorporated. SN 151,437. Pub. 5-7-63. Filed 8-17-62.

Class 18 — Medicines and Pharmaceutical Preparations

753,206. PEDELITE. William V. Kramer, d.b.a. Pedelite Products. SN 98,106. Pub. 5-7-63. Filed 5-31-60.

753,207. REPRESENTATION OF GRAY BAND ON WHITE CAPSULE. Parke, Davis & Company. SN 112,978. Pub. 5-7-63. Filed 2-2-61.

753,208. BUTY. Geigy Chemical Corporation. SN 119,765. Pub. 5-7-63. Filed 5-11-61.

753,209. THEAN. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 123,060. Pub. 5-7-63. Filed 3-27-62.

753,210. FAITHFULLY YOURS. Robert F. McCann, d.b.a. McCann Products Co. SN 128,361. Pub. 5-7-63. Filed 9-21-61.

753,211. DULCA. Andomia Products Limited. SN 140,216. Pub. 5-7-63. Filed 3-20-62.

753,212. MAGNITE. Savage Laboratories, Inc. SN 151,485. Pub. 5-7-63. Filed 8-17-62.

753,213. 7+. Gyneco Products Incorporated. SN 151,755. Pub. 5-7-63. Filed 8-23-62.

753,214. CEREBRATONE. The Purdue Frederick Company. SN 152,867. Pub. 5-7-63. Filed 8-28-62.

753,215. HYDREA. Olin Mathieson Chemical Corporation. SN 153,976. Pub. 5-7-63. Filed 9-26-62.

753,216. TRI-AZO-TAB. First Texas Pharmaceuticals, Inc. SN 154,105. Pub. 5-7-63. Filed 9-28-62.

Class 19 — Vehicles

753,217. BERG. Berg Mfg. & Sales Co. SN 126,004. Pub. 5-7-63. Filed 8-15-61.

753,218. CAPTAIN COOK. Bridgestone Tire Company Limited. SN 128,319. Pub. 5-7-63. Filed 9-20-61.

753,219. FLYING CARPET. Bridgestone Tire Company Limited. SN 128,320. Pub. 5-7-63. Filed 9-20-61.

753,220. SURF-RIDER. Bridgestone Tire Company Limited. SN 128,322. Pub. 5-7-63. Filed 9-20-61.

753,221. BABCO. Babcock Mfg. Co. SN 132,439. Pub. 5-7-63. Filed 11-21-61.

753,222. A AND DESIGN. Airheart Products, Inc. SN 147,528. Pub. 5-7-63. Filed 6-25-62.

753,223. SPORTCREST. The May Department Stores Company. SN 151,837. Pub. 5-7-63. Filed 8-24-62.

753,224. UNIVERSAL AND DESIGN. Universal Trailer Corporation. SN 153,842. Pub. 5-7-63. Filed 9-24-62.

753,225. TWO FOR THE ROAD. Market Forge Company. SN 155,732. Pub. 5-7-63. Filed 10-23-62.

Class 21 — Electrical Apparatus, Machines, and Supplies

753,226. TELECONOMY. Wintronics, Ltd. SN 129,592. Pub. 5-7-63. Filed 10-10-61.

753,227. P AND DESIGN. Potter Instrument Company, Inc. SN 131,064. Pub. 5-7-63. Filed 10-31-61.

753,228. HAMILTON. Hamilton Watch Company. SN 131,129. Pub. 5-7-63. Filed 11-1-61.

753,229. BABCO. Babcock Mfg. Co. SN 132,440. Pub. 5-7-63. Filed 11-21-61.

753,230. BRAMCO. Bramco, Inc. SN 133,050. Pub. 5-7-63. Filed 11-30-61.

753,231. FUELECTRIC. Allis-Chalmers Manufacturing Company. SN 133,437. Pub. 5-7-63. Filed 12-6-61.

753,232. BLISS AND DESIGN. E. W. Bliss Company, assignee of The Gamewell Company. SN 133,656. Pub. 5-7-63. Filed 12-8-61.

753,233. KEIC AND DESIGN. Kondo Electrical Industrial Company Limited. SN 134,991. Pub. 5-7-63. Filed 1-2-62.

753,234. FREE-FLEX. Garlock Inc. SN 140,117. Pub. 5-7-63. Filed 3-19-62.

753,235. TIMEMARK. Litton Industries, Inc. SN 141,322. Pub. 5-7-63. Filed 4-2-62.

753,236. PYRE-M.L. E. I. du Pont de Nemours and Company. SN 144,473. Pub. 5-7-63. Filed 5-14-62.

753,237. FIL-T-VAC. Leo G. Furness, d.b.a. Fil-T-Vac Cleaner Co., Ltd. SN 146,609. Pub. 5-7-63. Filed 6-11-62.

753,238. ERICODEBAR. Telefonaktiebolaget LM Ericsson. SN 149,892. Pub. 5-7-63. Filed 7-26-62.

753,239. ERICODE. Telefonaktiebolaget LM Ericsson. SN 149,893. Pub. 5-7-63. Filed 7-26-62.

753,240. MACHINE-O-MATIC AND DESIGN. Machine-O-Matic, Inc. SN 153,006. Pub. 5-7-63. Filed 9-12-62.

753,241. A.F.P. AND DESIGN. Anna Cunningham, d.b.a. A.F.P. Co. SN 153,257. Pub. 5-7-63. Filed 9-17-62.

753,242. SEATEST. Manhattan Marine & Electric Co., Inc. SN 154,358. Pub. 5-7-63. Filed 10-2-62.

753,243. VARITRIM. Voltronica Corporation, assignee of Voltronics, Inc. SN 157,580. Pub. 5-7-63. Filed 11-19-62.

753,244. POWERFORMER. Jefferson Electric Company. SN 158,163. Pub. 5-7-63. Filed 11-29-62.

Class 22 — Games, Toys, and Sporting Goods

753,245. ARITHMETIC CAN BE FUN. Ed-U-Cards Mfg. Corp. SN 69,042. Pub. 5-7-63. Filed 3-3-59.

753,246. PERMIWHITE. Nocona Leather Goods Company. SN 95,516. Pub. 5-7-63. Filed 4-21-60.

753,247. GRAVCO VALET. Gravco, Incorporated. SN 101,170. Pub. 5-7-63. Filed 7-20-60.

753,248. LABEL DESIGN. Rawlings Sporting Goods Company. SN 128,923. Pub. 5-7-63. Filed 9-29-61.

753,249. PUTTER HOUSE AND DESIGN. Charles S. Bassin. SN 131,261. Pub. 5-7-63. Filed 11-3-61.

753,250. CARLTON. Carlton Shuttlecocks Limited. SN 131,551. Pub. 5-7-63. Filed 11-8-61.

753,251. CHATTERBOX. Mattel, Inc., assignee, by mesne assignment, of Royal Doll Manufacturing Co., Inc. SN 131,879. Pub. 7-10-62. Filed 11-13-61.

753,252. TRU-FISH. Alfred Malcolm Layson. SN 133,682. Pub. 5-7-63. Filed 12-8-61.

753,253. ANNETTE. Goldberger Doll Mfg. Co. Inc. SN 134,318. Pub. 5-7-63. Filed 12-19-61.

753,254. CHATTY BABY. Mattel, Inc. SN 139,115. Pub. 5-7-63. Filed 3-5-62.

753,255. TEEBIRD NINETY-PLUS AND DESIGN. S. Klein Department Stores, Inc. SN 141,080. Pub. 5-7-63. Filed 3-29-62.

753,256. ENFORCER. Louis Marx & Co., Inc. SN 150,088. Pub. 5-7-63. Filed 7-30-62.

753,257. CLUB MASTER. Anthony P. Pearson, d.b.a. Pearson Enterprises. SN 150,181. Pub. 5-7-63. Filed 7-31-62.

753,258. TARGET KING. Wonel Corp. SN 150,204. Pub. 5-7-63. Filed 7-31-62.

753,259. WAKE-BREAKER. W. R. Blake, d.b.a. W. R. Blake Company. SN 150,510. Pub. 5-7-63. Filed 8-6-62.

753,260. CLAIM. Fuld Publishing Co. Inc. SN 150,550. Pub. 5-7-63. Filed 8-6-62.

753,261. BAYMASTER. Penn Fishing Tackle Mfg. Co. SN 150,595. Pub. 5-7-63. Filed 8-6-62.

753,262. BEACHMASTER. Penn Fishing Tackle Mfg. Co. SN 150,596. Pub. 5-7-63. Filed 8-6-62.

753,263. DELMAR. Penn Fishing Tackle Mfg. Co. SN 150,597. Pub. 5-7-63. Filed 8-6-62.

753,264. LONG BEACH. Penn Fishing Tackle Mfg. Co. SN 150,599. Pub. 5-7-63. Filed 8-6-62.

753,265. MARINER. Penn Fishing Tackle Mfg. Co. SN 150,600. Pub. 5-7-63. Filed 8-6-62.

753,266. SAILFISHER. Penn Fishing Tackle Mfg. Co. SN 150,603. Pub. 5-7-63. Filed 8-6-62.

753,267. SEA-BOY. Penn Fishing Tackle Mfg. Co. SN 150,604. Pub. 5-7-63. Filed 8-6-62.

753,268. SENATOR. Penn Fishing Tackle Mfg. Co. SN 150,605. Pub. 5-7-63. Filed 8-6-62.

753,269. SILVER BEACH. Penn Fishing Tackle Mfg. Co. SN 150,606. Pub. 5-7-63. Filed 8-6-62.

753,270. SQUIDDER. Penn Fishing Tackle Mfg. Co. SN 150,607. Pub. 5-7-63. Filed 8-6-62.

753,271. SURFMASTER. Penn Fishing Tackle Mfg. Co. SN 150,608. Pub. 5-7-63. Filed 8-6-62.

753,272. MONTEREY. Wilson Sporting Goods Co. SN 150,903. Pub. 5-7-63. Filed 8-9-62.

753,273. STRAGGLER. Leonard L. Lussier. SN 150,960. Pub. 5-7-63. Filed 8-10-62.

753,274. REPRESENTATION OF CROWN. Brunswick Corporation. SN 147,437. Pub. 5-21-63. Filed 6-22-62.

753,275. MARAUDER. Ament-Douglass Manufacturing Corporation. SN 151,113. Pub. 5-7-63. Filed 8-14-62.

753,276. MICRO-MITE. Ament-Douglass Manufacturing Corporation. SN 151,114. Pub. 5-7-63. Filed 8-14-62.

753,277. RAMY. René Ramillon. SN 154,848. Pub. 5-7-63. Filed 10-9-62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

753,278. ROTO-FLO. FMC Corporation, by change of name from Food Machinery and Chemical Corporation. SN 121,641. Pub. 2-19-63. Filed 6-8-61.

753,279. PHILLIPS POZIDRIV. Phillips Screw Company. SN 130,943. Pub. 5-7-63. Filed 10-30-61.

753,280. D/M AND DESIGN. Davis Manufacturing, Inc. SN 133,767. Pub. 5-7-63. Filed 12-11-61.

753,281. "CHAMP" AND DESIGN. JDD Lubricants Company. SN 135,683. Pub. 5-7-63. Filed 1-12-62.

753,282. GEOMETRIC DESIGN. Aerojet-General Corporation. SN 135,944. Pub. 5-7-63. Filed 1-17-62.

753,283. BUILT STRONGER TO LAST LONGER. Powell Muffler Company, Inc. SN 136,586. Pub. 5-7-63. Filed 1-25-62.

753,284. ULTRADEX. A. A. Gage Company. SN 137,738. Pub. 5-7-63. Filed 2-12-62.

753,285. ULTRA-SPIN. A. A. Gage Company. SN 137,739. Pub. 5-7-63. Filed 2-12-62.

753,286. MAC-PAK. McHutchison & Co. SN 138,102. Pub. 5-7-63. Filed 2-16-62.

753,287. PI AND DESIGN. Prosser Industries, Inc. SN 139,527. Pub. 5-7-63. Filed 3-9-62.

753,288. QIK-TIP. Speaker Sortation Systems, Inc. SN 140,876. Pub. 5-7-63. Filed 3-27-62.

753,289. ALLIGATOR. Carson-Newton Corporation. SN 143,006. Pub. 1-8-63. Filed 4-25-62.

753,290. REPRESENTATION OF AN ALLIGATOR IN OVAL. Carson-Newton Corporation. SN 143,007. Pub. 1-8-63. Filed 4-25-62.

753,291. GIRETTE. Trump Engineers Ltd., assignee of Trump Ltd. SN 143,470. Pub. 4-16-63. Filed 4-30-62.

753,292. JET TABLE. Sjostrom Automations, Inc. SN 146,226. Pub. 5-7-63. Filed 6-5-62.

753,293. NESCO. West Coast Sewing Supply Co. SN 148,548. Pub. 5-7-63. Filed 7-6-62.

753,294. MICROSIZER. Richard E. Rhodes, d.b.a. Device Development. SN 147,038. Pub. 5-7-63. Filed 6-15-62.

753,295. WHIRL-O-MISER. The DeVilbiss Company. SN 155,302. Pub. 5-7-63. Filed 10-17-62.

753,296. SQUEEZALL. Albert Taylor, d.b.a. Various Products Co. SN 155,758. Pub. 5-7-63. Filed 10-23-62.

753,297. LUMBERMASTER. Clary Corporation. SN 155,892. Pub. 5-7-63. Filed 10-25-62.

753,298. DROPLIFT. The United Industrial Syndicate, Inc. SN 157,341. Pub. 5-7-63. Filed 11-15-62.

Class 26 — Measuring and Scientific Appliances

753,299. ASCORLUME. American Speedlight Corporation. SN 134,508. Pub. 5-7-63. Filed 12-22-61.

753,300. DIRECTO-MATIC. General Electric Company. SN 140,551. Pub. 5-7-63. Filed 3-23-62.

753,301. EGONITE. Pikes Peak Plastics, Inc. SN 149,871. Pub. 5-7-63. Filed 7-26-62.

753,302. LETTER P DESIGN. Pikes Peak Plastics, Inc SN 149,873. Pub. 5-7-63. Filed 7-26-62.

753,303. BOWSER AND DESIGN. Bowser, Inc. SN 153,456. Pub. 5–7–63. Filed 9–19–62.

Class 27 — Horological Instruments

753,304. LA CLOCHE. W. Bell & Company, Inc. SN 137,417. Pub. 5–7–63. Filed 2–7–62.

753,305. MENU. Sunbeam Corporation. SN 138,552. Pub. 5–7–63. Filed 2–23–62.

753,306. VERICHRON. Harris & Mallow Products, Inc. SN 147,002. Pub. 5–7–63. Filed 6–15–62.

Class 28 — Jewelry and Precious-Metal Ware

753,307. BEAU. Beaucraft, Inc. SN 134,434. Pub. 5–7–63. Filed 12–21–61.

753,308. PENDLETON BOSTON TOWN. Frank S. White, d.b.a. L. I. Pendleton & Sons. SN 141,914. Pub. 5–7–63. Filed 4–9–62.

753,309. SYL. Sylvania Jewelry Co. SN 144,287. Pub. 5–7–63. Filed 5–10–62.

753,310. LEF. Leon E. Fisher Co. Inc. SN 147,462. Pub. 5–7–63. Filed 6–22–62.

753,311. JS. J. Segaloff & Sons, Inc. SN 147,963. Pub. 5–7–63. Filed 6–28–62.

753,312. COLONIAL. Colonial Bead Co. Inc. SN 152,283. Pub. 5–7–63. Filed 8–31–62.

Class 31 — Filters and Refrigerators

753,313. TRUE. True Manufacturing Co. Inc. SN 136,509. Pub. 5–7–63. Filed 1–24–62.

753,314. LINDSAY AND DESIGN. Union Tank Car Company. SN 153,530. Pub. 5–7–63. Filed 9–19–62.

Class 32 — Furniture and Upholstery

753,315. DUX AND DESIGN. Dux Incorporated. SN 121,278. Pub. 5–7–63. Filed 6–2–61.

753,316. BROY-SLIDE. Broyhill Furniture Factories. SN 146,972. Pub. 5–7–63. Filed 6–15–62.

753,317. CORONET WONDERFOLD AND DESIGN. Norquist Products, Inc. SN 152,429. Pub. 5–7–63. Filed 9–4–62.

753,318. MD. M & D Store Fixtures, Inc. SN 152,711. Pub. 5–7–63. Filed 9–7–62.

753,319. RAMY. René Ramillon. SN 154,849. Pub. 5–7–63. Filed 10–9–62.

Class 33 — Glassware

753,320. EXBOR CZECHOSLOVAKIA. Borske Sklo, Narodni Podnik. SN 147,692. Pub. 5–7–63. Filed 6–26–62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

753,321. DRY O MATION. Farm Fans, Inc. SN 135,438. Pub. 5–7–63. Filed 1–9–62.

753,322. TRIBOTRON. Tribotron Corporation. SN 135,477. Pub. 5–7–63. Filed 1–9–62.

753,323. VERNCO AND DESIGN. Verneo Corporation. SN 137,475. Pub. 5–7–63. Filed 2–7–62.

753,324. WASSCO. American Electrical Heater Company. SN 154,671. Pub. 5–7–63. Filed 10–8–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

753,325. THERMOBLOCK. H. K. Porter Company, Inc. SN 134,758. Pub. 5–7–63. Filed 12–27–61.

753,326. JET-CRAFT. O.K. Rubber Welders, Incorporated. SN 151,511. Pub. 5–7–63. Filed 8–20–62.

753,327. ULTIMATE. The B. F. Goodrich Company. SN 151,751. Pub. 5–7–63. Filed 8–23–62.

753,328. TEXACONE. The Texacone Company. SN 152,462. Pub. 5–7–63. Filed 9–4–62.

753,329. MET-L-LOY. The Firestone Tire & Rubber Company. SN 155,495. Pub. 5–7–63. Filed 10–19–62.

753,330. DEPUTY. Dunlop Tire and Rubber Corporation. SN 155,90[illegible]. Pub. 5–7–63. Filed 10–25–62.

753,331. METL-KING. Raybestos-Manhattan, Inc. SN 156,249. Pub. 5–7–63. Filed 10–30–62.

753,332. GUARDIAN. United States Rubber Company. SN 157,268. Pub. 5–7–63. Filed 11–14–62.

753,333. POWERSTAR. O.K. Rubber Welders, Incorporated. SN 157,394. Pub. 5–7–63. Filed 11–16–62.

753,334. HAULSTAR. O.K. Rubber Welders, Incorporated. SN 157,395. Pub. 5–7–63. Filed 11–16–62.

753,335. TRAC-STAR. O.K. Rubber Welders, Incorporated. SN 157,396. Pub. 5–7–63. Filed 11–16–62.

753,336. TORQUE-STAR. O.K. Rubber Welders, Incorporated. SN 157,397. Pub. 5–7–63. Filed 11–16–62.

753,337. DURA-SYN. O.K. Rubber Welders, Incorporated. SN 157,398. Pub. 5–7–63. Filed 11–16–62.

753,338. 150. Seiberling Rubber Company. SN 157,407. Pub. 5–7–63. Filed 11–16–62.

Class 36 — Musical Instruments and Supplies

753,339. D.J. AND DESIGN. D.J. Records. SN 129,651. Pub. 5–7–63. Filed 10–11–61.

753,340. GIL RECORDS AND DESIGN. Levi I. Galperin. SN 159,716. Pub. 5–7–63. Filed 12–26–62.

753,341. MINARET. Minaret Records, Inc. SN 159,898. Pub. 5–7–63. Filed 12–28–62.

753,342. GOLETTE. M. Hohner, Inc. SN 162,092. Pub. 5–7–63. Filed 2–5–63.

Class 37 — Paper and Stationery

753,343. REDIFIXT. Consolidated Business Systems, Inc. SN 121,710. Pub. 5–7–63. Filed 6–9–61.

753,344. THE PEN THAT REMEMBERS. Columbia Pen and Pencil Co., Inc. SN 128,521. Pub. 5–7–63. Filed 9–25–61.

753,345. DESIGN OF STENCIL, HAND AND PENCIL, ETC. Stenso Lettering Company, Inc., d.b.a. Stenso Lettering Co. SN 129,544. Pub. 5–7–63. Filed 10–9–61.

753,346. KVP S AND DESIGN. KVP Sutherland Paper Company. SN 150,068. Pub. 5–7–63. Filed 7–30–62.

753,347. "QUIKSERT." The J. C. Hall Co., Inc. SN 151,820. Pub. 5–7–63. Filed 8–24–62.

753,348. MEAD MARK I. The Mead Corporation. SN 152,230. Pub. 5–7–63. Filed 8–30–62.

753,349. NCR AND DESIGN. The National Cash Register Company. SN 152,233. Pub. 5–7–63. Filed 8–30–62.

753,350. TWIN COR. West Virginia Pulp and Paper Company. SN 152,258. Pub. 5–7–63. Filed 8–30–62.

753,351. SHAMROCK. Union Bag-Camp Paper Corporation. SN 152,357. Pub. 5–7–63. Filed 8–31–62.

753,352. SHAMROCK. Eversharp, Inc., d.b.a. Schick Safety Razor Company. SN 152,390. Pub. 5–7–63. Filed 9–4–62.

753,353. CHUBBY. Kimberly-Clark Corporation. SN 152,414. Pub. 5–7–63. Filed 9–4–62.

753,354. FREIGHTMASTER. Moore Business Forms, Inc. SN 152,423. Pub. 5–7–63. Filed 9–4–62.

753,355. I.P.B. International Paper Company. SN 153,178. Pub. 5–7–63. Filed 9–14–62.

753,356. COMPANION. L. L. Brown Paper Company. SN 153,547. Pub. 5–7–63. Filed 9–20–62.

Class 38 — Prints and Publications

753,357. NUDE LIVING. Elysium Inc. SN 120,626. Pub. 5–7–63. Filed 5–23–61.

753,358. SUN DIAL. Elysium Inc. SN 120,627. Pub. 5–7–63. Filed 5–23–61.

753,359. AVERY. Avery Adhesive Products, Inc. SN 130,870. Pub. 5–7–63. Filed 10–30–61.

753,360. MIDCONTINENT ABSTRACT MAPS AND DESIGN. The Midcontinent Map Company. SN 139,719. Pub. 5–7–63. Filed 3–12–62.

753,361. APARTMENT 3–G. Publishers Newspaper Syndicate (joint venture), assignee, by mesne assignments, of Publishers Syndicate. SN 150,100. Pub. 3–5–63. Filed 7–30–62.

753,362. GINGER. United Feature Syndicate, Inc. SN 152,539. Pub. 5–7–63. Filed 9–5–62.

753,363. PERFECTO. Electrographic Corporation, d.b.a. Typographic Service Company. SN 152,570. Pub. 5–7–63. Filed 9–6–62.

753,364. LIVING AMERICAN STORIES. Rudolph J. Wagner, d.b.a. The Wagner Company. SN 152,652. Pub. 5–7–63. Filed 9–6–62.

753,365. CHINA-CAL. The Meyercord Co. SN 153,009. Pub. 5–7–63. Filed 9–12–62.

753,366. SALES SPARKLERS. Kirby, Block & Company, Inc. SN 153,088. Pub. 5–7–63. Filed 9–13–62.

753,367. WESCOS. West Printing Company. SN 153,139. Pub. 5–7–63. Filed 9–13–62.

753,368. TEMPO AND DESIGN. Grosset & Dunlap, Inc. SN 153,563. Pub. 5–7–63. Filed 9–20–62.

753,369. RISS. Medical Economics, Inc. SN 153,968. Pub. 5–7–63. Filed 9–26–62.

753,370. THE SIDEBANDER. Single Sideband Amateur Radio Association. SN 153,991. Pub. 5–7–63. Filed 9–26–62.

753,371. STUBS. Meyer Schattner. SN 154,062. Pub. 5–7–63. Filed 9–27–62.

Class 39 — Clothing

753,372. PRIZZANI. Harry Tilkin, d.b.a. Tilkin's Shoe Store. SN 105,577. Pub. 5–7–63. Filed 9–30–60.

753,373. ACCENT DELICADOS. International Shoe Company. SN 109,874. Pub. 5–7–63. Filed 12–8–60.

753,374. REPRESENTATION OF BOY AND DOG. Buster Brown Textiles, Inc. SN 119,351. Pub. 5–7–63. Filed 5–5–61.

753,375. LOUIS FERAUD. Saks & Company. SN 128,300. Pub. 5–7–63. Filed 9–20–61.

753,376. AT A GLANCE. Shelby Seamless Hosiery Mills, Inc. SN 128,858. Pub. 5–7–63. Filed 9–28–61.

753,377. AMY ROSS AND DESIGN. Amy Ross, Inc. SN 138,656. Pub. 5–7–63. Filed 2–26–62.

753,378. TRIMFIT. Kramer Brothers, Inc. SN 140,272. Pub. 5–7–63. Filed 3–20–62.

753,379. GUSSIE & BECKY. Gussie & Becky, Inc. SN 146,896. Pub. 5–7–63. Filed 6–14–62.

753,380. PERMA-LOC. Adams-Millis Corporation. SN 147,252. Pub. 5–7–63. Filed 6–20–62.

753,381. DAWNELLE. Dawnelle, Inc. SN 147,807. Pub. 5–7–63. Filed 6–27–62.

753,382. DEPUTY. Blue Gem Manufacturing Company. SN 148,292. Pub. 5–7–63. Filed 7–3–62.

753,383. DROPSAN. Societe Rhodiaceta. SN 148,761. Pub. 5–7–63. Filed 7–10–62.

753,384. CANDY PETITE AND DESIGN. Adrian Tabin Corporation. SN 153,919. Pub. 5–7–63. Filed 9–26–62.

Class 40 — Fancy Goods, Furnishings, and Notions

753,385. PRESTIGE. McCrory Corporation. SN 141,332. Pub. 5–7–63. Filed 4–2–62.

753,386. LIGHTNING STREAKS. Charles of the Ritz, Inc. SN 151,006. Pub. 5–7–63. Filed 8–13–62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

753,387. LENO-WEB. The Kendall Company. SN 136,664. Pub. 5–7–63. Filed 1–26–62.

753,388. HEIL HOLDER AND DESIGN. Ruth M. Heil. SN 138,303. Pub. 5–7–63. Filed 2–20–62.

753,389. RAMEY. M. H. Raab-Meyerhoff Co., Inc. SN 138,321. Pub. 5–7–63. Filed 2–20–62.

753,390. "A BLOOM OF THE SOUTH." United Merchants and Manufacturers, Inc. SN 140,063. Pub. 5–7–63. Filed 3–16–62.

753,391. RIB-EYE. P. H. Hanes Knitting Company. SN 146,187. Pub. 5–7–63. Filed 6–5–62.

753,392. E-Z-SHIR. Cameo Curtains Inc. SN 152,973. Pub. 5–7–63. Filed 9–12–62.

753,393. BAN-GUARD. Joseph Bancroft & Sons Co. SN 153,058. Pub. 5–7–63. Filed 9–13–62.

753,394. WATER-BOI. Chapel Hill Manufacturing Company. SN 153,863. Pub. 5–7–63. Filed 9–25–62.

753,395. NEFERTITI. Graniteville Company. SN 154,349. Pub. 5–7–63. Filed 10–2–62.

Class 43 — Thread and Yarn

753,396. DROPSAN. Societe Rhodiaceta. SN 148,763. Pub. 5–7–63. Filed 7–10–62.

Class 44 — Dental, Medical, and Surgical Appliances

753,397. SPHEROID ACTION. American Massage Sales & Mfg. Corp. SN 103,640. Pub. 5–7–63. Filed 8–30–60.

753,398. "VARICK." Meinecke & Company, Inc. SN 144,968. Pub. 5–7–63. Filed 5–18–62.

753,399. DART. J. Wiss & Sons Co. SN 149,791. Pub. 5–7–63. Filed 7–25–62.

753,400. CAPRI. J. Wiss & Sons Co. SN 149,793. Pub. 5–7–63. Filed 7–25–62.

753,401. CONDITIONAIRE. Turner Hall Corporation. SN 151,445. Pub. 5–7–63. Filed 8–17–62.

753,402. ZENITH. Williams Manufacturing Co., Inc. SN 153,848. Pub. 5–7–63. Filed 9–24–62.

753,403. BEL-O-PAK. Quest, Inc. SN 155,648. Pub. 5–7–63. Filed 10–22–62.

753,404. CLEARITE. Empire State Thermometer Co., Inc. SN 156,731. Pub. 5–7–63. Filed 11–6–62.

753,405. LIT-O-SPLINT. Union Bag-Camp Paper Corporation. SN 157,172. Pub. 5–7–63. Filed 11–13–62.

753,406. FRIGIPLATE. U.S. Climatronic Corp. SN 157,741. Pub. 5–7–63. Filed 11–21–62.

753,407. DENT-KOTE. The Dentists' Supply Company of New York. SN 157,778. Pub. 5-7-63. Filed 11-23-62.

753,408. PRE-PAK. W. R. Grace & Co. SN 157,792. Pub. 5-7-63. Filed 11-23-62.

Class 46 — Foods and Ingredients of Foods

753,409. ARCHWAY 'HOME STYLE COOKIES' AND DESIGN. Archway Cookies, Inc., assignee of Ruth L. Venn, d.b.a. Swanson's Cookie Company. SN 107,295. Pub. 5-7-63. Filed 10-27-60.

753,410. SYMBOL OF EXCELLENCE AND DESIGN. Salada-Shirriff-Horsey Ltd. SN 116,923. Pub. 5-7-63. Filed 3-31-61.

753,411. CHESSMAN SYMBOL WITH WORD EXCELLENCE. Salada-Shirriff-Horsey Ltd. SN 116,924. Pub. 5-7-63. Filed 3-31-61.

753,412. FUN-FEST. Herbert Winer. SN 118,846. Pub. 5-7-63. Filed 4-27-61.

753,413. SOY-DEENS. Elitha A. Shaw, d.b.a. Mrs. Lyman W. Shaw. SN 119,430. Pub. 5-7-63. Filed 5-5-61.

753,414. ROMA WHEELS. Roma Macaroni Factory, d.b.a. Roma Macaroni Company. SN 121,942. Pub. 4-16-63. Filed 6-13-61.

753,415. DINERS DELIGHT. K and R, Incorporated. SN 128,053. Pub. 5-7-63. Filed 9-18-61.

753,416. COUNTRY STYLE. Barricini, Inc. SN 132,019. Pub. 5-7-63. Filed 11-15-61.

753,417. VIRGINIA GENTLEMAN. A. Smith Bowman Distillery, Incorporated, assignee of Marketers Plus, Inc., d.b.a. Virginia Gentleman Gifts. SN 133,969. Pub. 5-7-63. Filed 12-13-61.

753,418. BRACE-MATE AND DESIGN. Martin's Feed Mills, Inc. SN 134,246. Pub. 5-7-63. Filed 12-18-61.

753,419. BRACE-MATE. Martin's Feed Mills, Inc. SN 134,247. Pub. 5-7-63. Filed 12-18-61.

753,420. PRE-SHOAT-38. Cargill, Incorporated, assignee of Nutrena Mills, Inc. SN 137,268. Pub. 5-7-63. Filed 2-5-62.

753,421. HANOVER GUEST QUALITY AND DESIGN. Hanover Canning Company. SN 139,849. Pub. 3-19-63. Filed 3-14-62.

753,422. MADE WITH A LITTLE BIT OF LOVE. New England Provision Co., Inc., SN 140,212. Pub. 5-7-63. Filed 3-19-62.

753,423. DIXIE DOG. Mont L. Davis, Jr., d.b.a. Dixie Drive-In System. SN 150,025. Pub. 5-7-63. Filed 7-30-62.

753,424. AIBONITO. Midsal, Inc. SN 151,605. Pub. 5-7-63. Filed 8-21-62.

753,425. MORNING STAR ETC. AND DESIGN. Morningstar-Paisley, Inc. SN 153,012. Pub. 5-7-63. Filed 9-12-62.

753,426. SPREE. Imperial Ice Cream Company. SN 153,177. Pub. 5-7-63. Filed 9-14-62.

753,427. PARADISE ISLAND. Dole Corporation, d.b.a. Hawaiian Pineapple Company. SN 153,261. Pub. 5-7-63. Filed 9-17-62.

753,428. IRISH COFFEE BAR. Williams & Woods Ltd. SN 153,847. Pub. 5-7-63. Filed 9-24-62.

753,429. GREEN GIANT. Green Giant Company. SN 154,111. Pub. 5-7-63. Filed 9-28-62.

753,430. MEXICORN. Green Giant Company. SN 154,113. Pub. 5-7-63. Filed 9-28-62.

Class 47 — Wines

753,431. SQUARE DANCE. John Bardenheier Wine & Liquor Co., d.b.a. Bardenheier's Wine Cellars. SN 140,619. Pub. 5-7-63. Filed 3-26-62.

Class 49 — Distilled Alcoholic Liquors

753,432. RIVA. Mr. Boston Distiller Inc., d.b.a. Essex Bottlers. SN 132,358. Pub. 5-7-63. Filed 11-20-61.

753,433. LANGSHIRE. Imported Brands, Inc., d.b.a. Channel Imports, Ltd. SN 150,871. Pub. 5-7-63. Filed 8-9-62.

753,434. NEWPORT "QUICKIES." McKesson & Robbins, Incorporated. SN 151,978. Pub. 5-7-63. Filed 8-27-62.

753,435. J & B. Justerini & Brooks Limited. SN 152,220. Pub. 5-7-63. Filed 8-30-62.

Class 50 — Merchandise Not Otherwise Classified

753,436. HOLLY BRAND AND DESIGN. B. Wilmsen, Incorporated. SN 119,252. Pub. 5-7-63. Filed 5-3-61.

753,437. ANIMATIC. Clement P. Salla. SN 129,296. Pub. 5-7-63. Filed 10-5-61.

753,438. JON GNAGY AND DESIGN. Visual Art Industries, Inc. SN 133,512. Pub. 5-7-63. Filed 12-6-61.

753,439. RES CAP. Bio-Tech, Inc. SN 134,009. Pub. 5-7-63. Filed 12-14-61.

753,440. KNOBBY DOOR MAID. Joseph V. Cummiskey. SN 134,198. Pub. 5-7-63. Filed 12-18-61.

753,441. O & B CINARAMIC AND DESIGN. National Guard Products, Inc. SN 139,515. Pub. 5-7-63. Filed 3-9-62.

Class 51 — Cosmetics and Toilet Preparations

753,442. STYLE. La Maur, Inc. SN 49,443. Pub. 5-7-63. Filed 4-10-58.

753,443. MISS MANTAN. Drug Research Corporation. SN 100,231. Pub. 5-7-63. Filed 7-5-60.

753,444. PLAISIR D'AMOUR. Harry B. Morton, d.b.a. Parfums Dinard. SN 115,073. Pub. 5-7-63. Filed 3-7-61.

753,445. SURGEX. Chemway Corporation. SN 121,703. Pub. 5-7-63. Filed 6-9-61.

753,446. FREVO. Viviane Woodard Corporation. SN 127,690. Pub. 5-7-63. Filed 9-11-61.

753,447. WALTER SCOTTS' AND DESIGN. Walter Scott, Inc. SN 132,872. Pub. 5-7-63. Filed 11-27-61.

753,448. LOVELAND. Lander Co., Inc., d.b.a. Loveland. SN 134,026. Pub. 5-7-63. Filed 12-14-61.

753,449. RAP-I-DOL. Rapidol Distributing Corporation. SN 137,276. Pub. 5-7-63. Filed 2-5-62.

753,450. CANNOLENE. Cannolene Company. SN 140,091. Pub. 5-7-63. Filed 3-19-62.

753,451. AZTEC. The B.V.D. Company, Inc. SN 140,905. Pub. 5-7-63. Filed 3-28-62.

753,452. ALWAYS YOURS. Helene Curtis Industries, Inc. SN 141,166. Pub. 5-7-63. Filed 3-30-62.

753,453. HAPPY HANDS. Studio Girl-Hollywood, Inc., d.b.a. Studio Girl. SN 152,641. Pub. 5-7-63. Filed 9-6-62.

753,454. EVERYTHING NICE. Studio Girl-Hollywood, Inc., d.b.a. Studio Girl. SN 152,645. Pub. 5-7-63. Filed 9-6-62.

753,455. 'TWEEN-TIME. Roux Laboratories, Inc. SN 152,716. Pub. 5-7-63. Filed 9-7-62.

Class 52 — Detergents and Soaps

753,456. NATIONAL EASY CLEAN. National Laboratories, Inc. SN 84,934. Pub. 5-7-63. Filed 11-9-59.

753,457. MAGIC WAND. Cinderella International Company, Inc. SN 133,538. Pub. 5-7-63. Filed 12-7-61.

753,458. ALBERTO VO5 AND DESIGN. Alberto-Culver Company. SN 137,310. Pub. 5-7-63. Filed 2-6-62.

753,459. ST. JOHNS. West Indies Bay Company. SN 139,709. Pub. 5-7-63. Filed 3-12-62.

753,460. 20/20 GLASS CLEANER IN DIAMOND DESIGN. Darris Products, Inc. SN 139,931. Pub. 5-7-63. Filed 3-15-62.

753,461. QUICK 'N PRETTY. The Milton Company. SN 141,331. Pub. 5-7-63. Filed 4-2-62.

753,462. MAXIMUM. The Procter & Gamble Company. SN 151,359. Pub. 5-7-63. Filed 8-16-62.

753,463. DOGGIE WET-A-WAY AND DESIGN. Dee-Gee Enterprises. SN 151,479. Pub. 5-7-63. Filed 8-20-62.

753,464. ANGYA. Nethercutt Laboratories, d.b.a. Cosgenic Labs. SN 151,990. Pub. 5-7-63. Filed 8-27-62.

753,465. AGE OF ELEGANCE. Marton Freres, Inc. SN 152,394. Pub. 5-7-63. Filed 9-4-62.

753,466. AIRLION. Purex Corporation, Ltd., d.b.a. Turco Products, Inc. SN 152,438. Pub. 5-7-63. Filed 9-4-62.

753,467. TRU-PINE. Sprayway, Inc., d.b.a. Tru-Pine Company. SN 152,636. Pub. 5-7-63. Filed 9-6-62.

Service Marks

Class 100 — Miscellaneous

753,468. TRA AND REPRESENTATION OF RACEHORSE AND JOCKEY WITHIN AN OVAL DESIGN. Thoroughbred Racing Associations of the United States, Inc. SN 134,055. Pub. 5-7-63. Filed 12-14-61.

753,469. GROTESQUE SCOTCHMAN DESIGN. Milner Hotels, Inc. SN 137,261. Pub. 5-7-63. Filed 2-5-62.

753,470. DESIGN OF THREE ARROWHEADS IN A CIRCLE ADJACENT TO A PAIR OF PARALLEL ARCS. Space-General Corporation. SN 139,542. Pub. 5-7-63. Filed 3-9-62.

Class 101 — Advertising and Business

753,471. TELERAMA. Public Relations Research Service, Inc. SN 120,336. Pub. 5-7-63. Filed 5-18-61.

753,472. MID-CONTINENT AND DESIGN OF OUTLINE MAP OF U.S.A. WITHIN A CIRCLE. Mid-Continent Corporation. SN 124,663. Pub. 5-7-63. Filed 7-25-61.

753,473. FANCIFUL REPRESENTATION OF A HUMAN MALE. CASH, Inc. SN 128,511. Pub. 5-7-63. Filed 9-25-61.

753,474. CINESELL INTERNATIONAL. York, Rubin and Belport, Inc., d.b.a. Cinesell International. SN 130,668. Pub. 5-7-63. Filed 10-25-61.

Class 102 — Insurance and Financial

753,475. SAVERCARD. Home Federal Savings and Loan Association of San Diego. SN 101,448. Pub. 5-7-63. Filed 7-25-60.

753,476. HAPPY HOME LOANS AND DESIGN. Portland Federal Savings and Loan Association. SN 133,814. Pub. 5-7-63. Filed 12-11-61.

753,477. MIGHTY MIDGET. Mutual Indemnity Company. SN 139,316. Pub. 5-7-63. Filed 3-7-62.

753,478. REPRESENTATION OF ATLAS HOLDING A GLOBE DESIGN. Atlas Assurance Company Limited. SN 150,496. Pub. 5-7-63. Filed 8-6-62.

753,479. REPRESENTATION OF ATLAS HOLDING A GLOBE DESIGN. Atlas Assurance Company Limited. SN 150,497. Pub. 5-7-63. Filed 8-6-62.

Class 103 — Construction and Repair

753,480. HARBOUR AND NO. 1 WITH DESIGN. Breuil Boat Company, Inc. SN 130,419. Pub. 5-7-63. Filed 10-23-61.

753,481. THE GENTLE TOUCH ETC. AND DESIGN. Associated Professional Launderers of America, Inc. SN 137,496. COLLECTIVE MARK. Pub. 5-7-63. Filed 2-8-62.

Class 105 — Transportation and Storage

753,482. AS YOU TRAVEL ASK US. The American Oil Company. SN 128,139. Pub. 5-7-63. Filed 9-19-61.

Class 106 — Material Treatment

753,483. PERROTTELL. Perrotts Limited. SN 129,388. Pub. 5-7-63. Filed 10-6-61.

Class 107 — Education and Entertainment

753,484. GOOFY GOLF. Lee Koplin. SN 84,777. Pub. 5-7-63. Filed 11-6-59.

753,485. LOOK UP TO LEARNING. Susquehanna Broadcasting Company. SN 134,356. Pub. 5-7-63. Filed 12-19-61.

Collective Membership Marks

Class 200

753,486. EK AND DESIGN. Sigma Kappa Sorority. SN 131,313. Pub. 5-7-63. Filed 11-3-61.

753,487. GOOD NEWS CLUB AND DESIGN. National Child Evangelism Fellowship of U.S.A. SN 131,919. Pub. 5-7-63. Filed 11-13-61.

Certification Mark

Class A — Goods

753,488. FALLOUT SHELTER ETC. AND DESIGN. United States Department of the Army SN 129,165. Pub. 5-7-63. Filed 3-5-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

753,489. R. P. Scherer Corporation, Detroit, Mich. SN 96,745. Filed P.R. 5-9-60; Am. S.R. 11-2-61.



For Soft Gelatin Capsules for Use in Packaging Liquid Products of All Kinds.
First use Feb. 22, 1960.

753,490. Leipzig & Lippe, Inc., New York, N.Y. SN 137,444. Filed P.R. 2-7-62; Am. S.R. 5-15-63.

AMERICAN MAID

For Trays, Buckets, Spice Racks, Canister Sets, Bread Boxes, Waste Baskets, Sewing Boxes, Planters.
First use July 19, 1961.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

753,491. Asher I. Kelty, d.b.a. A. I. Kelty Mfg. Co., Glendale, Calif. SN 152,801. Filed P.R. 9-10-62; Am. S.R. 5-17-63.

KELTY Pack

For Racks, Bags, Parts Thereof and Accessories Therefor for Carrying Back Supported Loads.
First use June 1956.

Class 18 — Medicines and Pharmaceutical Preparations

753,492. Vitamix Pharmaceuticals, Incorporated, Philadelphia, Pa. SN 128,934. Filed P.R. 9-29-61; Am. S.R. 5-9-63.

DAILY RATION

For Multiple Vitamins.
First use on or about Feb. 23, 1958.

753,493. Amfre-Grant, Inc., Brooklyn, N.Y. SN 133,735. Filed 12-11-61.

PANCREATIC HARMONE GRANT

For Liquid Medicine Used as Vasodilator and Parasympathetic Stimulant.
First use Dec. 15, 1936.

Class 21 — Electrical Apparatus, Machines, and Supplies

753,494. The Emerson Electric Manufacturing Company, St. Louis, Mo., assignee of U.S. Electrical Motors Inc., Los Angeles, Calif. SN 144,021. Filed P.R. 5-7-62; Am. S.R. 5-21-63.

AUTOSTOP

For Internal Brakes Forming Parts of Electric Motors.
First use Apr. 25, 1962.

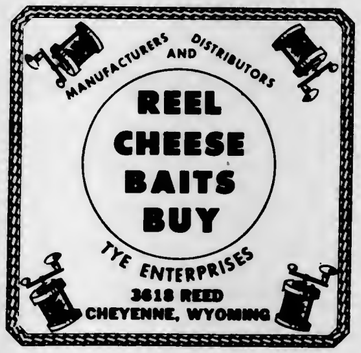
Class 22 — Games, Toys, and Sporting Goods

753,495. John C. Melling, d.b.a. Micris Distributing Co., Provo, Utah. SN 138,630. Filed P.R. 2-26-62; Am. S.R. 5-16-63.

KARRI ARROW

For Container for Holding Archery Equipment Including Arrows.
First use Oct. 24, 1961.

753,496. Tye Enterprises, Cheyenne, Wyo. SN 142,380. Filed P.R. 4-16-62; Am. S.R. 4-25-63.



For Fish Bait.
First use Feb. 15, 1962.

Class 26 — Measuring and Scientific Appliances

753,497. American Seating Company, Grand Rapids, Mich. SN 120,365. Filed P.R. 5-19-61; Am. S.R. 4-24-63.

ELECTRONIC Learning Center

The drawing is lined for grey and pink.
For Language Laboratories, Such a Laboratory Comprising a Teacher Console in Which Is Housed Electronic Equipment for Recording and Playback, and Student Booths in Which Is Housed Equipment for Signal Receiving and Transmitting Electrically Connected to the Electronic Equipment in the Teacher Console, Such Laboratories Being Primarily Intended for Use in Schools as an Aid in the Teaching of Foreign Languages or Other Subjects.
First use Feb. 8, 1960.

753,498. Inflight Motion Pictures, Inc., New York, N.Y. SN 133,878. Filed P.R. 12-12-61; Am. S.R. 5-15-63.



For Apparatus and Accessories for Showing Motion Pictures Including Projectors, Pallets, Screens, Earsets, Seat Plaques, Audio Systems, and the Like.
First use May 1961.

Class 28 — Jewelry and Precious-Metal Ware

753,499. His Lordship Products Company, New York, N.Y. SN 144,166. Filed P.R. 5-9-62; Am. S.R. 5-13-63.

AUROCLAD

For Gold Plated Jewelry for Personal Wear for Men and Women.
First use May 1, 1962.

Class 36 — Musical Instruments and Supplies

753,500. G. Ricordi & C., S.p.A., Milan, Italy. SN 109,102. Filed P.R. 11-25-60; Am. S.R. 10-31-62.

RICORDI

Owner of Italian Reg. No. 139,252, dated Dec. 24, 1957.
For Musical Instruments—Namely, Wind Musical Instruments, Stringed Musical Instruments, Brass Musical Instruments, Percussion Musical Instruments; Records—Namely, Sound Discs, Wires and Tapes Embodying a Recording for Musical and Acoustical Reproductions.

Class 37 — Paper and Stationery

753,501. Edwin F. Wolff, Indianapolis, Ind. SN 134,773. Filed P.R. 12-27-61; Am. S.R. 4-29-63.

HOT LINE

For Paper Charts for Use by Bowlers in Recording Their Proper Positions When the Bowling Ball Is Released for a Particular Throw.
First use on or about Apr. 11, 1960.

Class 39 — Clothing

753,502. Alexander Lipton, Van Nuys, Calif., assignee of Alexander Lipton, Inc., Los Angeles, Calif. SN 113,932. Filed P.R. 2-17-61; Am. S.R. 2-26-63.



The drawing is lined for silver, however, no claim is made to any specific color. Alexander Lipton is the original creator and designer of the Alexander Lipton line of casual clothing and his consent to use and register his name is of record.
For Casual Dresses for Women and Children.
First use Nov. 1, 1954.

753,503. Crescendoe Gloves, Inc., Johnstown, N.Y. SN 158,432. Filed 12-4-62.

LEATHERSPUN MOCHA

For Ladies' Gloves.
First use Sept. 5, 1961.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

753,504. Stretchnit, Inc., New York, N.Y. SN 143,178. Filed P.R. 4-26-62; Am. S.R. 5-6-63.

STRETCHNIT

For Knitted Fabrics Used for Making Skirts, Trousers, Shorts, Bathing Suits, Ski Pants, Slacks, Blouses, Pajamas, Jackets, Leotards, and Pool Covers and the Like.
First use Sept. 15, 1961.

Class 46 — Foods and Ingredients of Foods

753,505. The North Carolina Egg Marketing Association, Inc., Raleigh, N.C. SN 131,170. Filed P.R. 9-25-61; Am. S.R. 4-26-63.



For Fresh Eggs, Liquid Eggs, Powdered Eggs, Dried Eggs, and Frozen Eggs.
First use July 25, 1961.

Class 47 — Wines

753,506. San Martina Wines, Inc., Yonkers, N.Y. SN 127,274. Filed P.R. 9-5-61; Am. S.R. 5-14-63.

TOSCANI

For Wines and Vermouth.
First use Oct. 23, 1940.

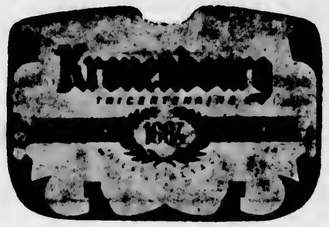
Class 48 — Malt Beverages and Liquors

753,507. Brasserie de Kronenbourg, Ancienne Maison F. G. Hatt, Brasserie du Bas-Rhin, S.A., Strasbourg-Cronenbourg, Bas-Rhin, France. SN 145,320. Filed P.R. 5–24–62; Am. S.R. 5–17–63.

BIÈRE HATT

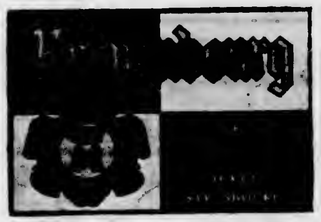
The term "Bière" means "beer." Owner of French Reg. No. 6,971, dated Mar. 16, 1959 (Grande de Strasbourg); Natl. Inst. No. 123,715.
For Beer.

753,508. Brasserie de Kronenbourg, Ancienne Maison F. G. Hatt, Brasserie du Bas-Rhin, S.A., Strasbourg-Cronenbourg, Bas-Rhin, France. SN 145,663. Filed P.R. 5–29–62; Am. S.R. 5–17–63.



The meaning of the trademark in English is "Kronenbourg three-hundred year jubilee, Hatt-Beermakers 1664 from father to son, Beer from Alsace." Owner of French Reg. No. 7,106, dated June 20, 1960 (Strasbourg); Natl. Inst. No. 147,446.
For Beer.

753,509. Brasserie de Kronenbourg, Ancienne Maison F. G. Hatt, Brasserie du Bas-Rhin, S.A., Strasbourg-Cronenbourg, Bas-Rhin, France. SN 145,664. Filed P.R. 5–29–62; Am. S.R. 5–17–63.



Owner of French Reg. No. 7,147, dated July 29, 1960 (Strasbourg); Natl. Inst. No. 149,265.
For Beer.

Class 52 — Detergents and Soaps

753,510. Stern Dental Laboratory Co., Houston, Tex. SN 127,053. Filed P.R. 8–31–61; Am. S.R. 5–20–63.

JET STREAM

For Liquid Cleaner for Protective Mouth Pieces.
First use May 25, 1961.

Service Marks

Class 101 — Advertising and Business

753,511. Clarance B. Dickinson, Highland Park, Ill. SN 147,809. Filed P.R. 6–27–62; Am. S.R. 5–8–63.

CORPORATE AVIATION CONSULTANTS

Applicant disclaims any exclusive right to the word "Consultants," apart from its use in the complete service mark.
For Advice to Companies or Individuals Interested in Purchasing or Leasing Airplanes.
First use February 1962.

Class 102 — Insurance and Financial

753,512. Truman Hayes & Company Insurance Agency, Inc., Boston, Mass. SN 96,856. Filed P.R. 5–11–60; Am. S.R. 5–20–63.



For Insurance Brokerage Services.
First use Dec. 11, 1958.

Class 107 — Education and Entertainment

753,513. Inflight Motion Pictures, Inc., New York, N.Y. SN 133,879. Filed P.R. 12–12–61; Am. S.R. 5–15–63.



For Designing, Installing and Servicing Apparatus and Accessories for Showing Motion Picture Film in Airplanes, Including Supplying Motion Picture Film.
First use May 1961.

TRADEMARK REGISTRATIONS RENEWED

28,782. TWO BICYCLES AND WINGED WHEEL. Cl. 22. 11–7–1893.
164,300. OLYMPIC. Cl. 27. 2–20–23.
165,749. DUCKWORTH. Cl. 28. 3–20–23.
166,199. UNI-LAK. Cl. 16. 3–27–23.
166,414. MO-LYB-DIE. Cl. 14. 4–3–23.
168,468. STEER'S HEAD AND CAMPING SCENE. Cl. 46. 4–22–23.
168,631. SANTA DAMIANA. Cl. 17. 5–29–23.
168,655. VERMONT'S PRIDE AND DESIGN. Cl. 46. 5–29–23.
168,707. BAMBU. Cl. 8. 5–29–23.
168,713. PREMIER. Cl. 44. 5–29–23.
168,862. CARNATION. Cl. 1. 5–29–23.
169,351. STANOLIND. Cl. 12. 6–12–23.
169,515. GOLDSEAL. Cl. 5. 6–19–23.
169,613. PULVIS ALKANTIS. Cl. 18. 6–26–23.
169,872. BAKER'S. Cl. 16. 7–3–23.
170,045. THE DAILY OKLAHOMAN. Cl. 38. 7–10–23.
170,320. HYLO M.F. Cl. 37. 7–10–23.
170,321. PRIMO M.F. Cl. 37. 7–10–23.
170,322. ROTO M.F. Cl. 37. 7–10–23.
170,435. THOM McAN AND DESIGN. Cl. 39. 7–17–23.
170,751. VELVET. Cl. 6. 7–24–23.
170,853. SUGAR-CRISP. Cl. 46. 7–24–23.
172,010. WHIRLWIND. Cl. 21. 8–21–23.
172,044. THE GOODYEAR NEWS AND DESIGN. Cl. 38. 8–21–23.
172,215. ANTI-DARN. Cl. 39. 8–28–23.
172,349. OZITE. Cl. 32. 8–28–23.
173,345. KING-KO. Cl. 46. 9–25–23.
174,110. COOLFUT. Cl. 39. 10–2–23.
174,957. KENLASTIC. Cl. 42. 10–30–23.
175,401. WIZARD. Cl. 29. 11–6–23.
175,472. ACCO AND DESIGN. Cl. 1. 11–6–23.
175,495. JAMES I. FELLOWS AND DESIGN. Cl. 18. 11–6–23.
175,801. PATRICIA. Cl. 46. 11–13–23.
398,004. PRIVIN. Cl. 6. 10–6–42.
400,400. RHINO-SOLE AND DESIGN. Cl. 5. 3–9–43.
400,630. DESIGN OF A ROOSTER. Cl. 39. 3–23–43.
400,772. ALERT. Cl. 22. 3–30–43.
400,773. GO BANG. Cl. 22. 3–30–43.
400,775. FERRY COMMAND. Cl. 22. 3–30–43.
401,182. TRAFFIK. Cl. 37. 4–27–43.
401,213. FIGHTING MARINES. Cl. 22. 4–27–43.
401,403. WETORDRY. Cl. 5. 5–18–63.
401,503. UM-M-M. Cl. 46. 5–25–43.
401,545. WIZARD. Cl. 13. 5–25–43.
401,589. HAMILTON. Cl. 24. 5–25–43.
401,711. RANCH HOUSE. Cl. 46. 6–1–43.
401,757. TERRY-TOONS. Cl. 38. 6–8–43.
401,796. BEAN-BAG. Cl. 8. 6–8–43.
401,810. MINE. Cl. 38. 6–8–43.
401,907. CAFE-CREME. Cl. 51. 6–15–43.
401,976. DUSTKOP. Cl. 21. 6–22–43.
402,282. GEOMETRIC DESIGN. Cl. 6. 7–13–43.
402,788. DEVOPAKE. Cl. 16. 8–10–43.
402,892. KOOLITE. Cl. 34. 8–24–43.
402,920. PLIOCOTE. Cl. 37. 8–24–43.
403,056. SMASH. Cl. 22. 8–31–43.
403,151. PAPER DOES EXPRESS. Cl. 37. 9–7–43.
403,152. PAPER IS PART OF THE PICTURE. Cl. 37. 9–7–43.
403,509. STRATHMORE EXPRESSIVE PAPERS. Cl. 37. 9–28–43.
403,813. "HASN'T SCRATCHED YET" AND DESIGN. Cl. 52. 10–19–43.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

738,473. TESSERAMIC. Cl. 12. 10–2–62.
749,595. TYTREL. Cl. 1. 5–21–63.

Section 8

346,096. BANQUET ALE. Cl. 48. 5–18–37.
346,259. XPLO. Cl. 6. 5–18–37.

The following registrations issued June 4, 1957

646,240. COURPLETA. Cl. 1.
646,241. MOLTOPREN AND DESIGN. Cl. 1.
646,245. GREXITE. Cl. 1.
646,246. GREXINE. Cl. 1.
646,250. ISOLON. Cl. 1.
646,251. HYLON. Cl. 1.
646,255. PERMA-HANDLE. Cl. 2.
646,258. TROPI-COOLER. Cl. 2.
646,266. ASCOT. Cl. 4.
646,271. DOITAPE. Cl. 5.
646,279. CORD-CIDE. Cl. 6.
646,300. PAREX. Cl. 6.
646,307. KRUM. Cl. 10.
646,309. EMTAR. Cl. 12.
646,310. PANELEATHER. Cl. 12.
646,311. SUN-BRELLA. Cl. 12.
646,314. STAK-DOR AND DESIGN. Cl. 12.
646,316. GROWING FOR THE FUTURE AND DESIGN. Cl. 12.
646,320. "POSTOLITE." Cl. 12.
646,323. PITT-WRAP. Cl. 12.
646,324. BOLY. Cl. 12.
646,330. DEC-O-LITE AND DESIGN. Cl. 13.
646,341. PIERCE AND DESIGN. Cl. 13.
646,350. DRIWYND Cl. 14.
646,352. AL CHEM AND DESIGN. Cl. 14.
646,353. YALE. Cl. 14.
646,356. WYNOIL AND DESIGN. Cl. 15.
646,357. PICTURE OF THREE HORSES. Cl. 15.
646,361. DIESTROIL. Cl. 15.
646,364. "IT HOLDS" AND ANCHOR DESIGN. Cl. 16.
646,365. CEDAR-SEAL AND DESIGN. Cl. 16.
646,366. SPECKLE-LAC. Cl. 16.
646,368. VIEUX CARRE AND DESIGN. Cl. 16.
646,372. DEHYDROID. Cl. 18.
646,373. PLEXATOID. Cl. 18.
646,374. ANHYDROID. Cl. 18.
646,375. THALAJEN. Cl. 18.
646,376. NEOFACTRIN. Cl. 18.
646,377. MAGNA NUJOL. Cl. 18.
646,380. VIOTHENAT. Cl. 18.
646,381. NEOTHENAT. Cl. 18.
646,385. MEDIHALER-NITRO. Cl. 18.
646,388. RACOBAMIN. Cl. 18.
646,392. UTIFOR. Cl. 18.
646,399. SUPER-DERMA. Cl. 18.
646,402. TEL-A-DRIV E-Z-PAS. Cl. 19.
646,406. SOJURN. Cl. 19.
646,408. STAR CONSTELLATION. Cl. 19.
646,411. PLAYTIME TOYS. Cl. 22.
646,413. SLIM-GYM AND DESIGN. Cl. 22.
646,418. HISPORT. Cl. 22.
646,422. SCAR-NEE. Cl. 22.
646,425. ELESCO AND DESIGN. Cl. 23.
646,426. REGINAMATIC. Cl. 23.
646,429. SPEE-D-THRED. Cl. 23.
646,438. BLUE LAKE. Cl. 23.
646,443. DIAVERT. Cl. 23.
646,444. DENMAW. Cl. 23.
646,451. BAKER BOY AND DESIGN. Cl. 23.
646,452. STURMVOGEL. Cl. 23.
646,459. SHAWNEE CHIEF. Cl. 23.
646,463. SNOW-QUEEN. Cl. 23.
646,465. ROLASLIVUP. Cl. 23.
646,468. JET SELFEED. Cl. 26.

646,470. ZADIIX ZOOM UP. Cl. 26.
646,471. XEBEC. Cl. 26.
646,473. MOTOR PEAKER. Cl. 26.
646,474. COILMASTER. Cl. 26.
646,475. MIXTURE MASTER. Cl. 26.
646,476. TROUBLE SHOOTER. Cl. 26.
646,477. AUTO-EX. Cl. 26.
646,478. BARAMAC. Cl. 26.
646,479. CAMBINOX. Cl. 26.
646,487. ADJUSTETTE. Cl. 28.
646,491. MICROGLAS. Cl. 31.
646,492. ACI AND DESIGN. Cl. 31.
646,497. BODI-FLO. Cl. 32.
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646,503. GONDOLA. Cl. 32.
646,508. PLEASURE PIT AND DESIGN. Cl. 34.
646,509. SMP CO. AND DESIGN. Cl. 34.
646,510. MAGIC CEILING. Cl. 34.
646,512. VENT-RITE. Cl. 34.
646,514. LEADER. Cl. 34.
646,515. RADI-HEATOR. Cl. 34.
646,518. POLAR. Cl. 35.
646,522. REMEMBRANCE ADVERTISING AND DESIGN. Cl. 38.
646,523. SUCCESSFUL FAMILY. Cl. 38.
646,524. TRU COLOR DEPTH AND DESIGN. Cl. 38.
646,533. TOMMY TUCKER ETC. Cl. 39.
646,540. REST-RITE ETC. AND DESIGN. Cl. 39.
646,542. STAR POINT. Cl. 39.
646,551. WEAR-SET. Cl. 42.
646,552. COLOR TRIQUE. Cl. 42.
646,554. TROPICANA. Cl. 42.
646,557. RESPILATOR. Cl. 44.
646,562. KUHNE AND DESIGN. Cl. 46.
646,563. TIP-TOP AND DESIGN. Cl. 46.
646,564. TIP-TOP. Cl. 46.
646,565. MINUTE MAID. Cl. 46.
646,567. BRAZIL HUMPS. Cl. 46.
646,579. DIDEE'S. Cl. 46.
646,580. DESIGN OF MAN HOLDING CUP. Cl. 46.
646,582. SAMBAND. Cl. 46.
646,583. SINGLE AND DESIGN. Cl. 46.
646,585. LUCKY PENNY. Cl. 46.
646,586. SPREEZ. Cl. 46.
646,587. FORTY-NINER. Cl. 46.
646,588. PEEBLES' WAY-SWEET. Cl. 46.
646,590. VIV THE THOROUGH BREAD OF BREADS. Cl. 46.
646,598. GLENGARRY. Cl. 46.
646,599. YOYO. Cl. 46.
646,600. GINGER PEACHIES. Cl. 46.
646,602. SPOT AWARDS AND DESIGN. Cl. 50.
646,604. SLIM-MODERN. Cl. 50.
646,607. DOUBL-GLO AND DESIGN. Cl. 50.
646,615. MEMENTO. Cl. 51.
646,616. WYNOIL AND DESIGN. Cl. 52.
646,624. SOOTH-OFF. Cl. 52.
646,630. MEMBER OWNED AND DESIGN. Cl. 101.
646,632. VANTAGE STOCKS ETC. AND DESIGN. Cl. 102.
646,631. CREDI-GRAPHIC. Cl. 101.
646,633. COLONIAL AND DESIGN. Cl. 105.
646,634. COLONIAL. Cl. 105.
646,636. DESIGN OF GIRL AND SWITCHBOARD. Cl. 107.
646,640. GOLD 'N' FACE ETC. AND DESIGN. Cl. 2.
646,641. OK MEND-IT KIT. Cl. 5.
646,650. FISHCATCHER. Cl. 22.
646,652. COLOR-LURE AND DESIGN. Cl. 22.
646,655. FUL-VU. Cl. 34.
646,656. CHANGE-A-CARD. Cl. 38.
646,659. FISHIN' FAX. Cl. 38.
646,663. TALL 'N' TALLER 6' TO 6'11". Cl. 39.
646,665. EVEN THE FISH WHISTLE! Cl. 39.
646,667. KING SIZE HOSIERY BY MALBAR AND DESIGN. Cl. 39.
646,671. FOODS OF ALL NATIONS AND DESIGN. Cl. 46.
646,673. FRIGID FRESH. Cl. 46.
646,676. DR. PARK'S. Cl. 46.
646,678. DESIGN OF FISH LINE FLOAT. Cl. 49.
646,683. "IF YOU DON'T KNOW LUMBER KNOW YOUR LUMBER DEALER." Cl. 106.

Section 18

683,939. FIREFLY AND DESIGN. Cl. 19. 8-25-59.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

309,074. MEDICONE. Cl. 18. 1-2-34. Medicone Company, Inc., New York, N.Y. Corrected: In the statement, column 1, line 1, "Medicine" should be deleted and *Medicone* should be inserted.

434,530. KIRBY BEARD. Cl. 40. 11-18-47. Kirby Beard & Company Limited. George Goodman Limited, Birmingham, England. Amended: In the statement, column 1, lines 9 through 13, the description of goods is deleted and *hair pins and hair grips* is inserted.

646,144. FUNITO. Cl. 39. 5-28-57. Phil Rose of California, Inc., Los Angeles, Calif. Corrected: In the statement, column 1, line 1, after "California" first occurrence, , *Inc.* should be inserted.

646,359. BONDED. Cl. 15. 6-4-57. Ex parte Gaseteria, Inc. Humble Oil & Refining Company, Houston, Tex. Amended to appear:

BONDED

647,003. DX. Cl. 15. 6-18-57. Mid-Continent Petroleum Corporation, now by merger and change of name Sunray Mid-Continent Oil Company, assignor to D-X Sunray Oil Company. Sunray DX Oil Company, Tulsa, Okla. Amended to appear:

DX

694,713. WE SELL INSTALL SERVICE GUARANTEE ETC. AND DESIGN Cl. 200. 3-15-60. National Association of Plumbing Contractors. National Association of Plumbing-Heating-Cooling Contractors, Washington, D.C. Amended: In the statement, column 1, after line 2, , *now by change of name National Association of Plumbing-Heating-Cooling Contractors* is inserted, and the drawing is amended to appear:

NATIONAL ASSOCIATION OF PLUMBING-HEATING-COOLING CONTRACTORS
We SELL INSTALL SERVICE GUARANTEE

717,581. SHALIMAR. Cl. 28. 6-27-61. Simon Golub & Sons, Inc., Seattle, Seattle, Wash. Corrected: In the statement, column 1, line 1, after "Inc." , *Seattle* should be inserted.

749,601. BUTACITE. Cl. 1. 5-21-63. E. I. du Pont de Nemours and Company, Wilmington, Del. Corrected: In the statement, column 2, line 3, after "tubes" *and* should be inserted.

750,072. COLOR FLAME. Cl. 21. 5-28-63. Duro-Test Corporation, North Bergen, N.J. Corrected: In the statement, column 2, line 2, "1961" should be deleted and *1962* should be inserted.

750,199. CRAY-CILS. Cl. 37. 5-28-63. Standard Toykraft, Inc., by change of name from Standard Toykraft Products, Inc., Brooklyn, N.Y. Corrected: In the statement, column 1, line 1, "Toycraft Products" should be deleted and *Toykraft* should be inserted.

750,222. VIVALDI. Cl. 39. 5-28-63. Pauker Brothers, New York, N.Y. Corrected: In the statement, column 1, line 1, "New York corporation" should be deleted and *partnership* should be inserted.

INDEX OF REGISTRANTS

JULY 23, 1963

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

A.A. Gage Co., Detroit, Mich. 753,284–5, pub. 5–7–63. Cl. 23.

A.F.P. Co. : *See*—
Cunningham, Anna.

Abbott Laboratories, North Chicago, Ill. 646,388, canc. Cl. 18.

Abington Textile Machinery Works, North Abington, Mass. 646,465, canc. Cl. 23.

Adams-Millis Corp., High Point, N.C. 753,380, pub. 5–7–63. Cl. 39.

Aerojet-General Corp., Azusa, Calif. 753,282, pub. 5–7–63. Cl. 23.

Aget Mfg. Co., Adrian, Mich. 401,976, ren. 7–23–63. Cl. 21.

Airheart Products, Inc., Van Nuys, Calif. 753,222, pub. 5–7–63. Cl. 19.

Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. 753,209, pub. 5–7–63. Cl. 18.

Alberto-Culver Co., Melrose Park, Ill. 753,458, pub. 5–7–63. Cl. 52.

Allgood, Robert H., d.b.a. Windotint Coating Co., Los Angeles, Calif. 753,127, pub. 5–7–63. Cl. 6.

Allis-Chalmers Mfg. Co., West Allis, Wis. 753,231, pub. 5–7–63. Cl. 21.

Aluminum and Chemical Corp.; Newport, Ark. 646,352, canc. Cl. 14.

Ambassador Plastics and Mfg. Corp., Chicago, Ill. 646,604, canc. Cl. 50.

Ament-Douglass Mfg. Corp., Redwood City, Calif. 753,275–6, pub. 5–7–63. Cl. 22.

American Cigar Corp. : *See*—
Carbajal, H. de Cabanas y.

American Coils Co., Inc., Newark, N.J. 646,492, canc. Cl. 31.

American Electrical Heater Co., Detroit, Mich. 753,324, pub. 5–7–63. Cl. 34.

American Hair Felt Co., to Ozite Corp., Chicago, Ill. 172,349, ren. 7–23–63. Cl. 32.

American Home Products Corp. : *See*—
Wizard Products Co.

American Massage Sales & Mfg. Corp., Silver Creek, N.Y. 753,397, pub. 5–7–63. Cl. 44.

American Oil Co., The, Chicago, Ill. 753,482, pub. 5–7–63. Cl. 105.

American Potash & Chemical Corp., Los Angeles, Calif. 753,199, pub. 5–7–63. Cl. 14.

American Screen Products Co., Chicago, Ill. 753,179, pub. 5–7–63. Cl. 12.

American Seating Co., Grand Rapids, Mich. 753,497. Cl. 26.

American Speedlight Corp., Middle Village, N.Y. 753,299, pub. 5–7–63. Cl. 26.

American Viscose Corp., Philadelphia, Pa. 753,098, pub. 5–7–63. Cl. 1.

Amfre-Grant, Inc., Brooklyn, N.Y 753,493. Cl. 18.

Anderson, Clayton & Co., to Anderson, Clayton & Co., Houston, Tex. 175,472, ren. 7–23–63. Cl. 1.

Anderson, Clayton & Co., Houston, Tex. 753,095–6, pub. 5–7–63. Cl. 1.

Andomia Products Ltd., Bradford, England. 753,211, pub. 5–7–63. Cl. 18.

Archway Cookies, Inc., from R. L. Venn, d.b.a. Swanson's Cookie Co., Battle Creek, Mich. 753,409, pub. 5–7–63. Cl. 46.

Armour and Co., Chicago, Ill. 753,087, pub. 5–7–63. Cl. 1.

Associated Professional Launderers of America Inc., Charlotte, N.C. 753,481, pub. 5–7–63. Cl. 103.

Atlantic Refining Co., The, Philadelphia, Pa. 753,131, pub. 5–7–63. Cl. 6.

Atlas Assurance Co. Ltd., New York, N.Y. 753,478–9, pub. 5–7–63. Cl. 102.

Avery Adhesive Products, Inc., Monrovia, Calif. 753,359, pub. 5–7–63. Cl. 38.

Avisun Corp., Philadelphia, Pa. 753,105–6, pub. 5–7–63. Cl. 1.

Azoplate Corp., Murray Hill, N.J. 753,139, pub. 5–7–63. Cl. 6.

B.V.D. Co., Inc., The, Cincinnati, Ohio. 753,451, pub. 5–7–63. Cl. 51.

Babcock Mfg. Co., Oakland, Calif. 753,221, pub. 5–7–63. Cl. 19.

Babcock Mfg. Co., Oakland, Calif. 753,229, pub. 5–7–63. Cl. 21.

Baker Paint & Varnish Co., Jersey City, N.J. 169,872, ren. 7–23–63. Cl. 16.

Bancroft, Joseph, & Sons Co., Wilmington, Del. 753,393, pub. 5–7–63. Cl. 42.

Bardenheier, John, Wine & Liquor Co., d.b.a. Bardenheier's Wine Cellars, St. Louis, Mo. 753,431, pub. 5–7–63. Cl. 47.

Bardenheier's Wine Cellars : *See*—
Bardenheier, John, Wine & Liquor Co.

Barricini, Inc., Long Island City, N.Y. 753,416, pub. 5–7–63. Cl. 46.

Barwel Folding Doors, Inc., Brooklyn, N.Y. 646,314, canc. Cl. 12.

Bassin, Charles S., Chicopee, Mass. 753,249, pub. 5–7–63. Cl. 22.

Beard, Kirby, & Co. Ltd. George Goodman Ltd., Birmingham, England. 434,530. Am. 7(d). Cl. 40.

Beaucraft, Inc., Providence, R.I. 753,307, pub. 5–7–63. Cl. 28.

Bell Clay Co., Gleason, Tenn., from Southwestern Talc Corp., and Bell Clay Co., San Antonio, Tex. 753,088, pub. 5–7–63. Cl. 1.

Bell, W., & Co., Inc., Washington, D.C. 753,304, pub. 5–7–63. Cl. 27.

Bemis Bro. Bag Co., Minneapolis, Minn. 646,271, canc. Cl. 5.

Berco Industries Corp , Westbury, N.Y. 753,121, pub. 3–19–63. Cl. 5.

Berg Mfg. & Sales Co., Chicago, Ill. 753,217, pub. 5–7–63. Cl. 19.

Bio-Tech, Inc., Cambridge, Mass. 753,439, pub. 5–7–63. Cl. 50.

Blake, W. R., Co. : *See*—
Blake, W. R.

Blake, W. R., d.b.a. W. R. Blake Co., Baxter Springs, Kans. 753,259, pub. 5–7–63. Cl. 22.

Bliss, E. W., Co., Canton, Ohio, from The Gamewell Co., Newton Upper Falls, Mass. 753,232, pub. 5–7–63. Cl. 21.

Blue Gem Mfg. Co., Greensboro, N.C. 753,382, pub. 5–7–63. Cl. 39.

Boatbath, Inc., Los Angeles, Calif. 753,108, pub. 5–7–63. Cl. 2.

Boly Products Co., Minneapolis, Minn. 646,324, canc. Cl. 12.

Bon Ami Co., The, New York, N.Y. 403,813, ren. 7–23–63. Cl. 52.

Borg-Warner Corp., Chicago, Ill. 646,518, canc. Cl. 35.

Borske Sklo, Narodni Podnik Novy Bor, Czechoslovakia. 753,320, pub. 5–7–63. Cl. 33.

Bottum, Edward W., d.b.a. Refrigeration Research, Brighton, Mich. 646,491, canc. Cl. 31.

Bowman, A. Smith, Distillery Inc., Sunset Hills, Va., from Marketers Plus, Inc., d.b.a. Virginia Gentleman Gifts, Forest, Va. 753,417, pub. 5–7–63. Cl. 46.

Bowser, Inc., Greenville, Tenn. 753,303, pub. 5–7–63. Cl. 26.

Bradley, Milton, Co., Springfield, Mass. 400,772–3, ren. 7–23–63. Cl. 22.

Bradley, Milton, Co., Springfield, Mass. 400,775, ren. 7–23–63. Cl. 22.

Bradley, Milton, Co., Springfield, Mass. 401,182, ren. 7–23–63. Cl. 37.

Bradley, Milton, Co., Springfield, Mass. 401,213, ren. 7–23–63. Cl. 22.

Bramco, Inc., Detroit, Mich. 753,230, pub. 5–7–63. Cl. 21.

Brasserie de Kronenbourg, Ancienne Maison F. G. Hatt, Brasserie du Bas-Rhin, S.A., Strasbourg-Cronenbourg, France. 753,507–9. Cl. 48.

Breier's, Marcus, Sons, New York, N.Y., to White Stag Mfg. Co., Portland, Oreg. 400,630, ren. 7–23–63. Cl. 39.

Breuil Boat Co., Inc., North Miami Beach, Fla. 753,480, pub. 5–7–63. Cl 103.

Bridgestone Tire Co. Ltd., Chuo-ku, Tokyo, Japan. 753,218–20, pub. 5–7–63. Cl. 19.

Brown & Bigelow Agency, Inc., St. Paul, Minn. 646,522–4, canc. Cl. 38.

Brown, L. L., Paper Co., Adams, Mass. 753,356, pub. 5–7–63. Cl. 37.

Brown & Williamson Tobacco Corp., Louisville, Ky. 753,204, pub. 5–7–63. Cl. 17.

Broyhill Furniture Factories, Lenoir, N.C. 753,316, pub. 5–7–63. Cl. 32.

Brunswick Corp., Chicago, Ill. 753,274, pub. 5–21–63. Cl. 22.

Brushmaster Saw, Inc. : *See*—
Rowco Mfg. Co., Inc.

Burroughs Corp., Detroit, Mich. 753,173, pub. 5–7–63, Cl. 11.

Buster Brown Textiles, Inc., Wilmington, Del. 753,374, pub. 5–7–63. Cl. 39.

Butt, H. E., Grocery Co., d.b.a. H.E.B. Food Stores, Corpus Christi, Tex. 753,136, pub. 5–7–63. Cl. 6.

CASH, Inc., Indianapolis, Ind. 753,473, pub. 5–7–63. Cl. 101.

CBS Films, Inc. : *See*—
Terrytoons, Inc.

CMC, Inc., d.b.a. Cumberland Mfg. Co., Nashville, Tenn. 753,132, pub. 5–7–63. Cl. 6.

California Metal Enameling Co., Los Angeles, Calif. 753,177, pub. 5–7–63. Cl. 12.

Cameo Curtains, Inc., New York, N.Y. 753,392, pub. 5–7–63. Cl. 42.

Cedar-Seal Corp., The, Decherd, Tenn. 646,365, canc. Cl. 16.

Change-A-Card Co., Arlington, Va. 646,656, canc. Cl. 38.

Cannolene Co., Atlanta, Ga. 753,540, pub. 5–7–63. Cl. 51.

Carbajal, H. de Cabanas y, Jersey City, N.J. and New York, N.Y., to American Cigar Corp., Flemington, N.J. 168,631, ren. 7–23–63. Cl. 17.

Cargill, Inc., from Nutrena Mills, Inc., Minneapolis, Minn. 753,420, pub. 5–7–63. Cl. 46.

Carlton Shuttlecocks Ltd., Hornchurch, Essex, England. 753,250, pub. 5–7–63. Cl. 22.

Carnation Co.: *See*—
Carnation Stock Farms.
Carnation Stock Farms, Seattle, Wash., to Carnation Co., Milwaukee, Wis. 168,862, ren. 7–23–63. Cl. 1.
Carrier Corp., Syracuse, N.Y. 646,514, canc. Cl. 84.
Carson-Newton Corp., Belleville, N.J. 753,289–90, pub. 1–8–63. Cl. 23.
Carter's Ink Co., The, Cambridge, Mass. 753,119, pub. 5–7–63. Cl. 5.
Chain Belt Co.: *See*—
Duckworth Chain & Mfg. Co.
Channel Imports, Ltd.: *See*—
Imported Brands, Inc.
Chapel Hill Mfg. Co., Huntingdon Valley, Pa. 753,394, pub. 5–7–63. Cl. 42.
Charles of The Ritz, Inc., New York, N.Y. 753,386, pub. 5–7–63. Cl. 40.
Chemie Grunenthal G.m.b.H., Stolberg, Rhineland, Germany. 646,380, canc. Cl. 18.
Chemie Grunenthal G.m.b.H., Stolberg, Rhineland, Germany. 646,381, canc. Cl. 18.
Chemway Corp., Wayne, N.J. 753,445, pub. 5–7–63. Cl. 51.
Chopak Fabrics, Inc., South Williamsport, Pa. 646,552, canc. Cl. 42.
Ciba Corp.: *See*—
Society of Chemical Industry In Basle.
Cinderella International Co., Inc., Chicago, Ill. 753,457, pub. 5–7–63. Cl. 42.
Cinesell International: *See*—
York, Rubin and Belport, Inc.
Clary Corp., Fort Worth, Tex. 753,297, pub. 5–7–63. Cl. 23.
Coastal Footwear Corp., Canovanas, Puerto Rico. 646,540, canc. Cl. 39.
Colonial Airlines, Inc., to Eastern Airlines, Inc., New York, N.Y. 646,633–4, canc. Cl. 105.
Colonial Bead Co., Inc., New York, N.Y. 753,312, pub. 5–7–63. Cl. 28.
Colorado Fuel and Iron Corp., The, Denver, Colo. 753,161, pub. 5–7–63. Cl. 7.
Colorado Milling & Elevator Co., The: *See*—
Omar Inc.
Colorlure Co., McMinnville, Tenn. 646,652, canc. Cl. 22.
Colt's Patent Fire Arms Mfg. Co., Inc., Hartford, Conn. 753,165–6, pub. 5–7–63. Cl. 9.
Columbia Pen and Pencil Co., Inc., New Hyde Park, N.Y. 753,344, pub. 5–7–63. Cl. 37.
Combustion Engineering, Inc., New York, N.Y. 646,425, canc. Cl. 23.
Comeau, George P., Huntington, N.Y. 646,624, canc. Cl. 52.
Comet Fire Equipment Co.: *See*—
Goodfellow, William E.
Concannon, Catherine: *See*—
Forsyth, George H.
Congoleum-Nairn Inc.: *See*—
Dewey and Almy Chemical Co.
Connie's Collars Inc., San Diego, Calif. 753,113, pub. 5–7–63. Cl. 3.
Consolidated Business Systems, Inc., New Brunswick, N.J. 753,343, pub. 5–7–63. Cl. 37.
Cook Paint & Varnish Co., Kansas City, Mo. 646,279, canc. Cl. 6.
Cornelius Wax Refining Corp., Edison, N.J. 753,146–8, pub. 5–7–63. Cl. 6.
Cosgenic Labs.: *See*—
Nethercutt Laboratories.
Coty, Inc., New York, N.Y. 401,907, ren. 7–23–63. Cl. 51.
Courtaulds Ltd., London, England. 646,240, canc. Cl. 1.
Cox, Wilbur B.: *See*—
Kings County Packing Co.
Crane Co., Johnstown, Pa. 753,193, pub. 5–7–63. Cl. 13.
Credit Exchange, Inc., New York, N.Y. 646,631, canc. Cl. 101.
Crescendoe Gloves, Inc., Johnstown, N.Y. 753,503. Cl. 39.
Crocker Industries, Inc., Chicago, Ill. 753,154, pub. 5–7–63. Cl. 6.
Cumberland Mfg. Co.: *See*—
CMC, Inc.
Cummiskey, Joseph V., Elmira Heights, N.Y. 753,440, pub. 5–7–63. Cl. 50.
Cunningham, Anna, d.b.a. A.F.P. Co., Chicago, Ill. 753,241, pub. 5–7–63. Cl. 21.
Curtis, Helene, Industries, Inc., Chicago, Ill. 753,452, pub. 5–7–63. Cl. 51.
D.J. Records, Auburndale, Fla. 753,339, pub. 5–7–63. Cl. 36.
D–X Sunray Oil Co.: *See*—
Mid-Continent Petroleum Corp.
Dacar Chemical Products Co., Pittsburgh, Pa. 753,122, pub. 5–7–63. Cl. 5.
Darris Products, Inc., Denver, Colo. 753,460, pub. 5–7–63. Cl. 52.
Davidson, James A., d.b.a. Port Tackle Shop, Port Jefferson, N.Y. 646,659, canc. Cl. 38.
Davis Mfg., Inc., Wichita, Kans. 753,280, pub. 5–7–63. Cl. 23.
Davis, Mont L., Jr., d.b.a. Dixie Drive-In System, Lubbock, Tex. 753,423, pub. 5–7–63. Cl. 46.
Dawnelle, Inc., New York, N.Y. 753,381, pub. 5–7–63. Cl. 39.
Dayton Spice Mills Co., The, Dayton, Ohio. 646,580, canc. Cl. 46.
Dec-O-Grilles, Inc., Long Beach, N.Y. 646,330, canc. Cl. 13.
Dee-Gee Enterprises, Redondo Beach, Calif. 753,463, pub. 5–7–63. Cl. 52.
Dentists' Supply Co. of New York, The, York, Pa. 753,407, pub. 5–7–63. Cl. 44.
Device Development: *See*—
Rhodes, Richard E.
DeVilbiss Co., The, Toledo, Ohio. 753,295, pub. 5–7–63. Cl. 23.
Devoe & Raynolds Co., Inc., New York, N.Y. 402,788, ren. 7–23–63. Cl. 16.
Dewey and Almy Chemical Co., Cambridge, Mass., to Congoleum-Nairn Inc., Kearney, N.J. 169,515, ren. 7–23–63. Cl. 5.
Diamond Match Co., The, New York, N.Y. 646,816, canc. Cl. 12.
Dickinson, Clarance B., Highland Park, Ill. 753,511. Cl. 101.
Didee's: *See*—
Lewis, Clarence.
Dixie Drive-In System: *See*—
Davis, Mont L., Jr.
Dole Corp., d.b.a. Hawaiian Pineapple Co., Honolulu, Hawaii. 753,427, pub. 5–7–63. Cl. 46.
Donco Industries: *See*—
Donnell, James W.
Donnell, James W., d.b.a. Donco Industries, Gardena, Calif. 646,406, canc. Cl. 19.
Dow Chemical Co., The, Midland, Mich. 753,097, pub. 5–7–63. Cl. 1.
Dow Chemical Co., The, Midland, Mich. 753,155, pub. 5–7–63. Cl. 6.
Drackett Co. of Canada, Ltd., The, Toronto, Ontario, Canada. 753,118, pub. 5–7–63. Cl. 4.
Dreyfus, L. A., Co., South Plainfield, N.J. 753,086, pub. 5–7–63. Cl. 1.
Drug Research Corp., New York, N.Y. 753,443, pub. 5–7–63. Cl. 51.
Duckworth Chain & Mfg. Co., Springfield, Mass., to Chain Belt Co., West Milwaukee, Wis. 165,749, ren. 7–23–63. Cl. 23.
Dunlop Tire and Rubber Corp., Buffalo, N.Y. 753,880, pub. 5–7–63. Cl. 35.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 749,595, canc. Cl. 1.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 749,601, cor. Cl. 1.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 753,236, pub. 5–7–63. Cl. 21.
Dura Commodities Corp., New York, N.Y. 753,159, pub. 5–7–63. Cl. 6.
Dura-Tech Corp., Boca Raton, Fla. 753,188, pub. 5–7–63. Cl. 12.
Durban's S.p.A., Milan, Italy. 753,125, pub. 5–7–63. Cl. 6.
Duro-Test Corp., North Bergen, N.J. 750,072, cor. Cl. 21.
Dux Inc., Burlingame, Calif. 753,315, pub. 5–7–63. Cl. 32.
Eastern Airlines, Inc.: *See*—
Colonial Airlines, Inc.
Eastern Dehydrating Co., Lexington, N.C. 753,168, pub. 5–7–63. Cl. 10.
Ed-U-Cards Mfg. Corp., Long Island City, N.Y. 753,245, pub. 5–7–63. Cl. 22.
Ekco Products Co., Chicago, Ill. 753,192, pub. 5–7–63. Cl. 13.
Electro Products Co., New York, N.Y. 646,473–6, canc. Cl. 26.
Electrographic Corp., d.b.a. Typographic Service Co., New York, N.Y. 753,363, pub. 5–7–63. Cl. 38.
Elgeet Optical Co., Inc., Rochester, N.Y. 646,477, canc. Cl. 26.
Elon of California: *See*—
Taliaferro, E. H., Mfg. Co.
Elysium Inc., Los Angeles, Calif. 753,357–8, pub. 5–7–63. Cl. 38.
Emerson Electric Mfg. Co., The, St. Louis, Mo. from U.S. Electrical Motors Inc., Los Angeles Calif. 753,494. Cl. 21.
Emoleum (Australia) Ltd., Sydney, Australia. 646,309, canc. Cl. 12.
Empire State Thermometer Co., Inc., New York, N.Y. 753,404, pub. 5–7–63. Cl. 44.
Emser Werke, A.G., Domat/Ems, Switzerland. 753,103, pub. 5–7–63. Cl. 1.
Engelhard Industries, Inc., Newark, N.J. 753,176, pub. 5–7–63. Cl. 12.
Englander Co., Inc., The, Baltimore, Md. 646,250–1, canc. Cl. 1.
Essex Bottlers: *See*—
Mr. Boston Distiller Inc.
Eversharp, Inc., d.b.a. Schick Safety Razor Co., Culver City, Calif. 753,352, pub. 5–7–63. Cl. 37.
Ex parte Gaseteria, Inc. Humble Oil & Refining Co., Houston, Tex. 646,359. Am. 7(d). Cl. 15.
Explosive Technology, Inc., Santa Clara, Calif. 753,164, pub. 5–7–63. Cl. 9.
FMC Corp., Chicago, Ill. 753,195, pub. 5–7–63. Cl. 13.
FMC Corp., from Food Machinery and Chemical Corp., San Jose, Calif. 753,278, pub. 2–19–63. Cl. 23.
Fairhill Co., Inc., New York, N.Y. 646,413, canc. Cl. 22.
Falcon Alarm Co., Inc., Summit, N.J. 753,107, pub. 5–7–63. Cl. 2.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 646,241, canc. Cl. 1.
Farm Fans, Inc., Indianapolis, Ind. 753,321, pub. 5–7–63. Cl. 34.
Faultless Starch Co., Kansas City, Mo. 753,15, pub. 5–7–63. Cl. 6.
Fellows Medical Mfg. Co., Inc., Detroit, Mich. 175,495, ren. 7–23–63. Cl. 18.
Fil-T-Vac Cleaner Co.: *See*—
Furness, Leo G.
Finkl, A., & Sons Co., Chicago, Ill. 166,414, ren. 7–23–63. Cl. 14.
Firestone Tire & Rubber Co., The, Akron, Ohio. 753,329, pub. 5–7–63. Cl. 35.
Firma Carl Kuhne, Hamburg-Altona, Germany. 646,562, canc. Cl. 46.
First Texas Pharmaceuticals, Inc., Dallas, Tex. 753,216, pub. 5–7–63. Cl. 18.
Fishcatcher Bait Co., Bristol Va. 646,650, canc. Cl. 22.
Fisher, Leon E. Co. Inc., Albany, N.Y. 753,310, pub. 5–7–63. Cl. 28.

Florence Utt Switchboard (PBX) Receptionist Schools, Inc., Detroit, Mich. 646,636, canc. Cl. 107.
Florida Steel Corp., Tampa, Fla. 753,185, pub. 5–7–63. Cl. 12.
Food Machinery and Chemical Corp.: *See*—
FMC Corp.
Food Manufacturers, Inc.: *See*—
M. & M. Ltd.
Foods of All Nations, Inc., Elmont, N.Y. 646,671, canc. Cl. 46.
Forstner, Inc., Irvington, N.J. 646,487, canc. Cl. 28.
Forsyth, George H., Evanston, Ill., to Catherine Concannon, executor of the estate of George H. Forsyth, Oak Park, Ill. 403,056, ren. 7–23–63. Cl. 22.
Fuld Publishing Co. Inc., San Pedro, Calif. 753,260, pub. 5–7–63. Cl. 22.
Furness, Leo G., d.b.a. Fil-T-Vac Cleaner Co., Phoenix, Ariz. 753,287, pub. 5–7–63. Cl. 21.
Gadger Breeders Cooperative, Richmond, Wis. 646,630, canc. Cl. 101.
Galperin, Levi I., Havertown, Pa. 753,340, pub. 5–7–63. Cl. 36.
Gamewell Co., The: *See*—
Bliss, E. W., Co.
Garlock Inc., Palmyra, N.Y. 753,234, pub. 5–7–63. Cl. 21.
Geigy Chemical Corp., Ardsley, N.Y. 753,208, pub. 5–7–63. Cl. 18.
General Aniline & Film Corp., New York, N.Y. 753,160, pub. 5–7–63. Cl. 6.
General Concrete Products, Inc., Van Nuys, Calif. 753,174, pub. 5–7–63. Cl. 12.
General Electric Co., New York, N.Y. 753,300, pub. 5–7–63. Cl. 26.
General Foods Corp.: *See*—
Postum Cereal Co., Inc.
Vermont Maple Syrup Co., Inc.
Glaverbel Societe Anonyme, Brussels, Belgium. 753,182, pub. 5–7–63. Cl. 12.
Goldberger Doll Mfg. Co., Inc., Brooklyn, N.Y. 753,253, pub. 5–7–63. Cl. 22.
Golub, Simon, & Sons, Inc., Seattle, Wash. 717,581, cor. Cl. 28.
Goodenough Pumps Ltd., Twickenham, Middlesex, England. 646,443, canc. Cl. 23.
Goodfellow, William E., d.b.a. Comet Fire Equipment Co., Haddon Heights, N.J. 753,158, pub. 5–7–63. Cl. 6.
Goodman, George, Ltd.: *See*—
Beard, Kirby, & Co. Ltd.
Goodrich, B. F. Co., The, Akron, Ohio. 753,327, pub. 5–7–63. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 172,044, ren. 7–23–63. Cl. 38.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 402,920, ren. 7–23–63. Cl. 37.
Grace, W. R., & Co., Cambridge, Mass. 753,408, pub. 5–7–63. Cl. 44.
Grace, W. R., & Co., New York, N.Y. 646,245–6, canc. Cl. 1.
Grace, W. R., & Co., New York, N.Y. 753,169, pub. 5–7–63. Cl. 10.
Graniteville Co., Graniteville, S.C. 753,395, pub. 5–7–63. Cl. 42.
Gravco, Inc., St. Louis, Mo. 753,247, pub. 5–7–63. Cl. 22.
Green Giant Co., Le Sueur, Minn. 753,429–30, pub. 5–7–63. Cl. 46.
Grosset & Dunlap, Inc., New York, N.Y. 753,368, pub. 5–7–63. Cl. 38
Gsell, R., & Co., Inc.: *See*—
Gsell, Roland A.
Gsell, R., & Co., Inc. of New York, N.Y.: *See*—
Gsell, Roland A.
Gsell, Roland A., to R. Gsell & Co., Inc. of New York, N.Y., New York, N.Y., to R. Gsell & Co., Inc., New York, N.Y. 164,300, ren. 7–23–63. Cl. 27.
Gussle & Becky, Inc., New York, N.Y. 753,379, pub. 5–7–63. Cl. 39.
Gyneco Products Inc., Roslyn, Pa. 753,213, pub. 5–7–63. Cl. 18.
H.E.B. Food Stores: *See*—
Butt, H. E., Grocery Co.
Hall, J. C., Co., Inc., The, Pawtucket, R.I. 753,347, pub. 5–7–63. Cl. 37.
Hamilton Mfg. Co., Two Rivers, Wis. 401,589, ren. 7–23–63. Cl. 24.
Hamilton Watch Co., Lancaster, Pa. 753,228, pub. 5–7–63. Cl. 21.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 753,391, pub. 5–7–63. Cl. 42.
Hanover Canning Co., Hanover, Pa. 753,421, pub. 3–19–63. Cl. 46.
Hansen, F. Louie R., d.b.a. Hansen & Hansen Lumber Co., Council Bluffs, Iowa. 646,683, canc. Cl. 106.
Hansen & Hansen Lumber Co.: *See*—
Hansen, F. Louie R.
Harris & Mallow Products, Inc., Farmingdale, N.J. 753,306, pub. 5–7–63. Cl. 27.
Hawaiian Pineapple Co.: *See*—
Dole Corp.
Hay Market Mills, Nashville, Tenn. 646,563, canc. Cl. 46.
Hay Market Mills, Nashville, Tenn. 646,564, canc. Cl. 46.
Hayes, Truman, & Co. Insurance Agency, Inc., Boston, Mass. 753,512 Cl. 102.
Heil, Ruth M., Cleveland, N. Dak. 753,388, pub. 5–7–63. Cl. 42.
Heisdorf & Nelson Farms, Inc., Houghton, Wash. 753,102, pub. 5–7–63. Cl. 1.
Henderson, J. L., d.b.a. J. L. Henderson & Co., San Francisco, Calif. 646,587, canc. Cl. 46.
Henderson, J. L., & Co.: *See*—
Henderson, J. L.
Heritage House Products, Inc., from Seaboard Seed Co., Inc., Pittsburgh, Pa. 753,170–1, pub. 5–7–63. Cl. 10.
Hess, Inc.: *See*—
Hess Oil & Chemical Corp.
Hess Oil & Chemical Corp., from Hess, Inc., Perth Amboy, N.J. 753,201, pub. 5–7–63. Cl. 15.
Higley Chemical Co., Dubuque, Iowa. 646,300, canc. Cl. 6.
His Lordship Products Co., New York, N.Y. 753,499. Cl. 28.
Hodgdon, B. E., Inc., Shawnee Mission, Kans. 753,167, pub. 5–7–63. Cl. 9.
Hohner, M., Inc., Hicksville, N.Y. 753,342, pub. 5–7–63. Cl. 36.
Home Federal Savings and Loan Association of San Diego, San Diego, Calif. 753,475, pub. 5–7–63. Cl. 102.
House of Huston, Inc., Coral Gables, Fla. 646,411, canc. Cl. 22.
Houze Glass Corp., Point Marion, Pa. 753,085, pub. 5–7–63. Cl. 1.
Howard, P. W., Jr., d.b.a. National Scent Co., Garden Grove, Calif. 753,134, pub. 5–7–63. Cl. 6.
Humble Oil & Refining Co.: *See*—
Ex parte Gaseteria, Inc.
Hunter Douglas Aluminum Corp., New York, N.Y. 646,500, canc. Cl. 32.
Husky Oil Co., Cody, Wyo. 753,100, pub. 5–7–63. Cl. 1.
Iceland Products, Inc., New York, N.Y. 646,582, canc. Cl. 46.
Illinois Clay Products Co., Joliet, Ill. 753,178, pub. 5–7–63. Cl. 12.
Imperial Ice Cream Co., Pasadena, Calif. 753,426, pub. 5–7–63. Cl. 46.
Imported Brands, Inc., d.b.a. Channel Imports, Ltd., Brooklyn, N.Y. 753,433, pub. 5–7–63. Cl. 49.
Industrial Piping Supply Co., Charlotte, N.C. 753,110, pub. 5–7–63. Cl. 2.
Industrial Piping Supply Co., Charlotte, N.C. 753,197, pub. 5–7–63. Cl. 13.
Industrial Polychemical Service, Gardena, Calif. 753,120, pub. 5–7–63. Cl. 5.
Industrial Raw Materials Corp., New York, N.Y. 646,361, canc. Cl. 15.
Infilco Inc., Tucson, Ariz. 646,468, canc. Cl. 26.
Inflight Motion Pictures, Inc., New York, N.Y. 753,498. Cl. 26.
Inflight Motion Pictures, Inc., New York, N.Y. 753,513. Cl. 107.
Interiors' Import Co., Inc., New York, N.Y. 646,503, canc. Cl. 32.
International Business Machines Corp., New York, N.Y. 646,478, canc. Cl. 26.
International Paper Co., New York, N.Y. 753,355, pub. 5–7–63. Cl. 37.
International Shoe Co., St. Louis, Mo. 753,373, pub. 5–7–63. Cl. 39.
Irvin, Jewell and Vinson Co., The, Dayton, Ohio. 646,364, canc. Cl. 16.
J D D Lubricants Co., Sioux City, Iowa. 753,281, pub. 5–7–63. Cl. 23.
J & M Products Co., Brooklyn, N.Y. 646,470, canc. Cl. 26.
Jefferson Electric Co., Bellwood, Ill. 753,244, pub. 5–7–63. Cl. 21.
Jenkins Laboratories, Inc., Auburn, N.Y. 646,375, canc. Cl. 18.
Justerini & Brooks Ltd., London, England. 753,435, pub. 5–7–63. Cl. 49.
Juvenile Shoe Corp. of America, The, Aurora, Mo. 174,110, ren. 7–23–63. Cl. 39.
KVP Sutherland Paper Co., Kalamazoo, Mich. 753,346, pub. 57–63. Cl. 37.
K and R, Inc., Hastings, Nebr. 753,415, pub. 5–7–63. Cl. 46.
Kaufman, William J., Monroe, Mich. 646,402, canc. Cl. 19.
Kelly, Farquhar & Co., Tacoma, Wash. 646,673, canc. Cl. 46.
Kelty, A. I., Mfg. Co.: *See*—
Kelty, Asher I.
Kelty, Asher I., d.b.a. A. I. Kelty Mfg. Co., Glendale, Calif. 753,491. Cl. 3.
Kendall Co., The, Walpole, Mass. 753,387, pub. 5–7–63. Cl. 42.
Kendrick, James R., Co. Inc., Philadelphia, Pa. 174,957, ren. 7–23–63. Cl. 42.
Kepec Chemical Corp.: *See*—
Mathes, Kirke B.
Kimberly-Clark Co., to Kimberly-Clark Corp., Neenah, Wis. 170,320–2, ren. 7–23–63. Cl. 37.
Kimberly-Clark Corp.: *See*—
Kimberly-Clark Co.
Kimberly-Clark Corp., Neenah, Wis. 753,112, pub. 5–7–63. Cl. 2.
Kimberly-Clark Corp., Neenah, Wis. 753,186, pub. 5–7–63. Cl. 12.
Kimberly-Clark Corp., Neenah, Wis. 753,353, pub. 5–7–63. Cl. 37.
King Fisher Products, Millington, Tenn. 753,162, pub. 5–7–63. Cl. 7.
Kings County Packing Co., Armona, Calif., to Wilbur B. Cox, d.b.a. Kings Food Products, San Francisco, Calif. 173,345, ren. 7–23–63. Cl. 46.
Kings Food Products: *See*—
Kings County Packing Co.
Kirby, Block & Co., Inc., New York, N.Y. 753,366, pub. 5–7–63. Cl. 38.
Klein, Joseph M., Inc., New York, N.Y. 646,663, canc. Cl. 39.
Klein, S., Department Stores, Inc., New York, N.Y. 753,255, pub. 5–7–63. Cl. 22.
Klopstock & Samson Mfg. Co., San Carlos, Calif. 683,939, canc. Cl. 19.

Kondo Electrical Industrial Co. Ltd., Tokyo, Japan. 753,233, pub. 5–7–63. Cl. 21.
Koplin, Lee, Panama City, Fla. 753,484, pub. 5–7–63. Cl. 107.
Kramer Brothers, Inc., New York, N.Y. 753,378, pub. 5–7–63. Cl. 39.
Kramer, William V., d.b.a. Pedelite Products, Boston, Mass. 753,206, pub. 5–7–63. Cl. 18.
Lafayette Pharmacal Co., The, to Lafayette Pharmacal, Inc., Lafayette, Ind. 169,613, ren. 7–23–63. Cl. 18.
Lafayette Pharmacal, Inc.: *See*—
Lafayette Chemical Co., The.
La Maur, Inc., Minneapolis, Minn. 753,442, pub. 5–7–63. Cl. 51.
Lander Co., Inc., d.b.a. Loveland, New York, N.Y. 753,448, pub. 5–7–63. Cl. 51.
Landers, Frary & Clark, New York, N.Y. 172,010, ren. 7–23–63. Cl. 21.
Landon, Inc., North Hollywood, Calif. 646,488, canc. Cl. 23.
Lane, Murial, Inc., St. Louis, Mo. 753,126, pub. 5–7–63. Cl. 6.
Layson, Alfred Malcolm, Waukegan, Ill. 753,252, pub. 5–7–63. Cl. 22.
Leipzig & Lippe, Inc., New York, N.Y. 753,490. Cl. 2.
Les Usines de Melle, Deux-Sevres, France. 753,123, pub. 5–7–63. Cl. 6.
Lever Brothers Co., New York, N.Y. 646,586, canc. Cl. 46.
Lewis, Clarence, d.b.a. Didee's, Opelousas, La. 646,579, canc. Cl. 46.
Lilbry Biochem Laboratories, Inc.: *See*—
Lilbry Bio-Chem Laboratories, Inc.
Lilbry Bio-chem Laboratories, Inc., d.b.a. Lilbry Biochem Laboratories, Inc., Arcadia, Calif. 753,150, pub. 5–7–63. Cl. 6.
Lipton, Alexander, Van Nuys, from Alexander Lipton, Inc., Los Angeles, Calif. 753,502. Cl. 39.
Lipton, Alexander, Inc.: *See*—
Lipton, Alexander.
Litton, Industries, Inc., Beverly Hills, Calif. 753,235, pub. 5–7–63. Cl. 21.
Logan, Hugh H., d.b.a. Logan Mfg. Co., to The Logan Mfg. Co., Glendale, Calif. 401,545, ren. 7–23–63. Cl. 13.
Logan Mfg Co., The: *See*—
Logan, Hugh H.
Loveland: *See*—
Lander Co., Inc.
Lussier, Leonard L., Norwalk, Calif. 753,273, pub. 5–7–63. Cl. 22.
M & D Store Fixtures, Inc., Industry, Calif. 753,318, pub. 5–7–63. Cl. 32.
M. & M. Ltd., Newark, N.J., to Food Manufacturers, Inc., Hackettstown, N.J. 401,503, ren. 7–23–63. Cl. 46.
MacDonald, William, & Sons (Biscuits) Ltd., Glasgow, Scotland. 646,598–9, canc. Cl. 46.
Machine-O-Matick, Inc., Evanston, Ill. 753,240, pub. 5–7–63. Cl. 21.
Macmillan Ring-Free Oil Co., Inc., Los Angeles, Calif. 753,156, pub. 5–7–63. Cl. 6.
Mallory Randal Corp., Brooklyn, N.Y. 646,258, canc. Cl. 2.
Manhattan Marine & Electric Co., Inc., New York, N.Y. 753,242, pub. 5–7–63. Cl. 21.
Market Forge Co., Everett, Mass. 753,225, pub. 5–7–63. Cl. 19.
Marketers Plus, Inc.: *See*—
Bowman, A. Smith, Distillery Inc.
Martin-Senour Co., The, Chicago, Ill. 646,366, canc. Cl. 16.
Martin's Feed Mills, Inc., New Paris, Ind. 753,418–19, pub. 5–7–63. Cl. 46.
Marton Freres, Inc., Long Island City, N.Y. 753,465, pub. 5–7–63. Cl. 52.
Maryland Cup Corp., Owings Mills, Md. 753,111, pub. 5–7–63. Cl. 2.
Marx, Louis, & Co., Inc., New York, N.Y. 753,256, pub. 5–7–63. Cl. 22.
Mathes, Kirke B., d.b.a. The Uni-Lak Co., Batavia, N.Y., to Kepec Chemical Corp., West Allis, Wis. 166,199, ren. 7–23–63. Cl. 16.
Mattel, Inc., Hawthorne, Calif. 753,254, pub. 5–7–63. Cl. 22.
Mattel, Inc., Hawthorne, Calif., from Royal Doll Mfg. Co., Inc., New York, N.Y. 753,251, pub. 7–10–62. Cl. 22.
Maurice Ducastaing, Paris, Seine, France. 646,678, canc. Cl. 49.
May Department Stores Co., The, New York, N.Y. 753,223, pub. 5–7–63. Cl. 19.
May Hosiery Mills, Nashville, Tenn. 172,215, ren. 7–23–63. Cl. 39.
McCandless Corp., The, New York, N.Y. 646,444, canc. Cl. 23.
McCann Products Co.: *See*—
McCann, Robert F.
McCann, Robert F., d.b.a. McCann Products Co., Pompano Beach, Fla. 753,210, pub. 5–7–63. Cl. 18.
McCrory Corp., New York, N.Y. 753,385, pub. 5–7–63. Cl. 40.
McDonald Products Corp., to McDonald Products Corp., Buffalo, N.Y. 401,796, ren. 7–23–63. Cl. 8.
McHutchison & Co., Ridgefield, N.J. 753,286, pub. 5–7–63. Cl. 23.
McKay Chemical Co., Inc.: *See*—
McKay Co.
McKay Co., New York, N.Y., to McKay Chemical Co. Inc., Brooklyn, N.Y. 170,751, ren. 7–23–63. Cl. 6.
McKesson & Robbins, Inc., New York, N.Y. 753,434, pub. 5–7–63. Cl. 49.
Mead Corp., The, Dayton, Ohio. 753,348, pub. 5–7–63. Cl. 37.
Medical Economics, Inc., Oradell, N.J. 753,369, pub. 5–7–63. Cl. 38.
Medicone Co., Inc., New York, N.Y. 309,074, cor. Cl. 18.
Meiling, John C., d.b.a. Micris Distributing Co., Provo, Utah. 753,495. Cl. 22.
Meinecke & Co., Inc., New York, N.Y. 753,398, pub. 5–7–63. Cl. 44.
Melville Shoe Corp., New York, N.Y. 170,435, ren. 7–23–63. Cl. 39.
Merck & Co., Inc., Rahway, N.J. 646,392, canc. Cl. 18.
Meyercord Co., The, Chicago, Ill. 753,365, pub. 5–7–63. Cl. 38.
Michigan Tool Co., Detroit, Mich. 753,137, pub. 5–7–63. Cl. 6.
Mickel, Joseph, & Son, Monroe, La. 646,542, canc. Cl. 39.
Micris Distributing Co.: *See*—
Meiling, John C.
Mid-Continent Corp., Memphis, Tenn. 753,472, pub. 5–7–63. Cl. 101.
Midcontinent Map Co., The, Tulsa, Okla. 753,360, pub. 5–7–63. Cl. 38.
Mid-Continent Petroleum Corp., by merger and change of name to Sunray Mid-Continent Oil Co., to D-X Sunray Oil Co. Sunray DX Oil Co., Tulsa, Okla. 647,003. Am. 7(d). Cl. 15.
Midgley, Charles W., Sacramento, Calif. 646,590, canc. Cl. 46.
Midsal, Inc., New York, N.Y. 753,424, pub. 5–7–63. Cl. 46.
Mid-States Corp., Union City, Mich. 646,408, canc. Cl. 19.
Mid-West Bottle Cap Co., Belvidere, Ill. 646,255, canc. Cl. 2.
Miller Laboratories, Inc., New York, N.Y. 646,372, canc. Cl. 18.
Miller Laboratories, Inc., New York, N.Y. 646,373, canc. Cl. 18.
Miller Laboratories, Inc., New York, N.Y. 646,374, canc. Cl. 18.
Millers Forge Mfg. Corp.: *See*—
Premier Cutlery, Inc.
Milner Hotels, Inc., Detroit, Mich. 753,469, pub. 5–7–63. Cl. 100.
Milton Co., The, El Segundo, Calif. 753,461, pub. 5–7–63.
Minaret Records, Inc., Val Paraiso, Fla. 753,341, pub. 5–7–63. Cl. 36.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 753,089, pub. 5–7–63. Cl. 1.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 401,403, ren. 7–23–63. Cl. 5.
Minute Maid Corp., New York, N.Y. 646,565, canc. Cl. 46.
Miracle Adhesives Corp., Bellmore, N.Y. 753,187, pub. 5–7–63. Cl. 12.
Mr. Boston Distiller Inc., d.b.a. Essex Bottlers, Boston, Mass. 753,432, pub. 5–7–63. Cl. 49.
Mohasco Industries, Inc., Amsterdam, N.Y. 646,554, canc. Cl. 42.
Moller, J. D., Optische Werke G.m.b.H., Wedel, Holstein, Germany. 646,479, canc. Cl. 26.
Moore Business Forms, Inc., Niagara Falls, N.Y. 753,354, pub. 5–7–63. Cl. 37.
Morningstar-Paisley, Inc., New York, N.Y. 753,425, pub. 5–7–63. Cl. 46.
Morton, Harry B., d.b.a. Parfums Dinard, New York, N.Y. 753,444, pub. 5–7–63. Cl. 51.
Mutual Indemnity Co., Madison, Wis. 753,477, pub. 5–7–63. Cl. 102.
Narragansett Brewing Co., Cranston, R.I. 346,096, canc. Cl. 48.
National Association of Plumbing Contractors. National Association of Plumbing-Heating-Cooling Contractors, Washington, D.C. 694,713. Am 7(d). Cl. 200.
National Association of Plumbing-Heating-Cooling Contractors: *See*—
National Association of Plumbing Contractors.
National Cash Register Co., The, Dayton, Ohio. 753,349, pub. 5–7–63. Cl. 37.
National Child Evangeliam Fellowship of U.S.A., Grand Rapids, Mich. 753,487, pub. 5–7–63. Cl. 200.
National Guard Products, Inc., Memphis, Tenn. 753,441, pub. 5–7–63. Cl. 50.
National Laboratories, Inc., Chicago, Ill. 753,456, pub. 5–7–63. Cl. 52.
National Plastic Products Co., Inc., Odenton, Md. 753,104, pub. 5–7–63. Cl. 1.
National Scent Co.: *See*—
Howard, P. W., Jr.
National Welding Equipment, Richmond, Calif. 402,892, ren. 7–23–63. Cl. 34.
Nelson Tool Works: *See*—
Nelson, W. T.
Nelson, W. T., d.b.a. Nelson Tool Works, Houston, Tex. 646,508, canc. Cl. 34.
Nethercutt Laboratories, d.b.a. Cosgenic Labs., Hollywood, Calif. 753,464, pub. 5–7–63. Cl. 52.
New England Provision Co., Inc., Boston, Mass. 753,422, pub. 5–7–63. Cl. 46.
Nocona Leather Goods Co., Nocona, Tex. 753,246, pub. 5–7–63. Cl. 22.
Norquist Products, Inc., Jamestown, N.Y. 753,317, pub. 5–7–63. Cl. 32.
North American Tile Corp., Montreal, Quebec, Canada. 753,184, pub. 5–7–63. Cl. 12.
North Carolina Egg Marketing Association, Inc., The, Raleigh, N.C. 753,505. Cl. 46.
Norton & McElroy Produce, Inc.: *See*—
Westside Farms.
Nutrena Mills, Inc.: *See*—
Cargill, Inc.
Nypac, Inc., Elizabeth, N.J. 753,138, pub. 5–7–63. Cl. 6.
Nypac, Inc., Elizabeth, N.J. 753,142, pub. 5–7–63. Cl. 6.
Nypac, Inc., Elizabeth, N.J. 753,151–3, pub. 5–7–63. Cl. 6.
O. K. Rubber Welders, Inc., Littleton, Colo. 753,200, pub. 5–7–63. Cl. 15.
O. K. Rubber Welders, Inc., Littleton, Colo. 753,326, pub. 5–7–63. Cl. 35.
O. K. Rubber Welders, Inc., Littleton, Colo. 753,333–7, pub. 5–7–63. Cl. 35.

Oklahoma Publishing Co., The, Oklahoma City, Okla. 170,045, ren. 7–23–63. Cl. 38.
Old Reliable Cartridge Co., Milwaukee, Wis. 753,163, pub. 5–7–63. Cl. 9.
Olin Mathieson Chemical Corp., New York, N.Y. 753,215, pub. 5–7–63. Cl. 18.
Omar Inc., Omaha, Nebr., to The Colorado Milling & Elevator Co., Denver, Colo. 401,711, ren. 7–23–63. Cl. 46.
Osmose Wood Preserving Co. of America, Inc., Buffalo, N.Y. 753,140, pub. 5–7–63. Cl. 6.
Ozite Corp.: *See*—
American Hair Felt Co.
Paco Textures Corp., Richmond, Calif. 753,175, pub. 5–7–63. Cl. 12.
Paneleather Corp., The, Cleveland, Ohio. 646,310, canc. Cl. 12.
Papeleras Reunidas, S.A.: *See*—
Sobrinos De R. Abad Santonja.
Paper Novelty Mfg. Co., Stamford, Conn. 646,607, canc. Cl. 50.
Parfums Dinard: *See*—
Morton, Harry B.
Parke, Davis & Co., Detroit, Mich. 753,207, pub. 5–7–63. Cl. 18.
Parker-Hannifin Corp., Cleveland, Ohio. 753,196, pub. 5–7–63. Cl. 13.
Patio Party Products, Inc., Marshall, Tex. 753,099, pub. 5–7–63. Cl. 1.
Pauker Brothers, New York, N.Y. 750,222, cor. Cl. 39.
Pearson, Anthony P., d.b.a. Pearson Enterprises, Seattle, Wash. 753,257, pub. 5–7–63. Cl. 22.
Pearson Enterprises: *See*—
Pearson, Anthony P.
Pedelite Products: *See*—
Kramer, William V.
Pendleton & Sons: *See*—
White, Frank S.
Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. 753,261–71, pub. 5–7–63. Cl. 22.
Pepperell Mfg. Co., Boston, Mass. 646,551, canc. Cl. 42.
Perfect Power Corp., Chicago, Ill. 646,357, canc. Cl. 15.
Perrotts Ltd., Manchester, England. 753,483, pub. 5–7–63. Cl. 106.
Personal Beauty Institute, New York, N.Y. 646,640, canc. Cl. 2.
Phillips Screw Co., East Boston, Mass. 753,189–90, pub. 5–7–63. Cl. 13.
Phillips Screw Co., East Boston, Mass. 753,279, pub. 5–7–63. Cl. 23.
Pierce, R. H., Mfg. Co., Eugene, Oreg. 646,341, canc. Cl. 13.
Pikes Peak Plastics, Inc., Colorado Springs, Colo. 753,301–2, pub. 5–7–63. Cl. 26.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 646,323, canc. Cl. 12.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 753,094, pub. 5–7–63. Cl. 1.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 753,101, pub. 5–7–63. Cl. 1.
Plough, Inc., Memphis, Tenn. 646,377, canc. Cl. 18.
Pollak Luminescent Corp., Chicago, Ill. 646,266, canc. Cl. 4.
Pope & Talbot Inc., San Francisco, Calif. 753,180–1, pub. 5–7–63. Cl. 12.
Port Tackle Shop: *See*—
Davidson, James A.
Porter, H. K., Co., Inc., Pittsburgh, Pa. 753,163, pub. 5–7–63. Cl. 12.
Porter, H. K., Co., Inc., Pittsburgh, Pa. 753,325, pub. 5–7–63. Cl. 35.
Portland Federal Savings and Loan Association, Louisville, Ky. 753,476, pub. 5–7–63. Cl. 102.
Poston Brick & Concrete Products Co., Springfield, Ill. 646,320, canc. Cl. 12.
Postum Cereal Co., Inc., Battle Creek, Mich., to General Foods Corp., White Plains, N.Y. 170,853, ren. 7–23–63. Cl. 46.
Potter Instrument Co., Inc., Plainview, N.Y. 753,227, pub. 5–7–63. Cl. 21.
Powder Weld, Inc., Brooklyn, N.Y. 753,092, pub. 5–7–63. Cl. 1.
Powell Muffler Co., Inc., Chicago, Ill. 753,283, pub. 5–7–63. Cl. 23.
Premier Cutlery, Inc., to Millers Forge Mfg. Corp., New York, N.Y. 166,713, ren. 7–23–63. Cl. 44.
Prisma Products Corp., New Orleans, La. 646,368, canc. Cl. 16.
Prismo Safety Corp., Huntingdon, Pa. 753,203, pub. 5–7–63. Cl. 16.
Procter & Gamble Co., The, Cincinnati, Ohio. 753,462, pub. 5–7–63. Cl. 52.
Professional Veterinary Services, Inc., Miami, Fla. 646,557, canc. Cl. 44.
Program Aids Co., Inc., The, Tuckahoe, N.Y. 646,602, canc. Cl. 50.
Prosser Industries, Inc., Anaheim, Calif. 753,287, pub. 5–7–63. Cl. 23.
Public Relations Research Service, Inc., Pittsburgh, Pa. 753,471, pub. 5–7–63. Cl. 101.
Publishers Newspaper Syndicate, from Publishers Syndicate, Chicago, Ill. 753,361, pub. 3–5–63. Cl. 38.
Publishers Syndicate: *See*—
Publishers Newspaper Syndicate.
Puma Corp., East Farmingdale, N.Y. 753,149, pub. 5–7–63. Cl. 6.
Purdue Frederick Co., The, New York, N.Y. 753,214, pub. 5–7–63. Cl. 18.
Purex Corp., Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. 753,466, pub. 5–7–63. Cl. 52.
Quest, Inc., Marion, Ind. 753,403, pub. 5–7–63. Cl. 44.
Quinn, K. J., & Co., Inc., Malden, Mass. 753,117, pub. 5–7–63. Cl. 4.
Raab-Meyerhoff, M. H., Co., Inc., Philadelphia, Pa. 753,389, pub. 5–7–63. Cl. 42.
Radiator Specialty Co., Charlotte, N.C. 753,202, pub. 5–7–63. Cl. 15.
Ramillon, Rene, Grenoble (Isere), France. 753,277, pub. 5–7–63. Cl. 22.
Ramillon, Rene, Grenoble (Isere), France. 753,319, pub. 5–7–63. Cl. 32.
Rapidol Distributing Corp., Garden City, N.Y. 753,449, pub. 5–7–63. Cl. 51.
Rawlings Sporting Goods Co., St. Louis, Mo. 753,248, pub. 5–7–63. Cl. 22.
Raybestos-Manhattan, Inc., Passaic, N.J. 753,331, pub. 5–7–63. Cl. 35.
Refrigeration Research: *See*—
Bottum, Edward W.
Regina Sewing Machine Corp., New York, N.Y. 646,426, canc. Cl. 23.
Rentner, Maurice, Inc., New York, N.Y. 646,615, canc. Cl. 51.
Republic Foil & Metal Mills, Inc., Danbury, Conn. 646,350, canc. Cl. 14.
Research Chemicals, Inc., Fort Worth, Tex. 753,133, pub. 5–7–63. Cl. 6.
Rhino-Sole Ltd., Beckenham, England. 400,400, ren. 7–23–63. Cl. 5.
Rhodes, Richard E., d.b.a. Device Development, Phoenix, Ariz. 753,294, pub. 5–7–63. Cl. 23.
Rialto Shoe Co. Inc., New York, N.Y. 646,538, canc. Cl. 39.
Ricordi, G. & C., S.p.A. Milano, Italy. 753,500. Cl. 36.
Riker Laboratories, Inc., Los Angeles, Calif. 646,385, canc. Cl. 18.
Roma Macaroni Co.: *See*—
Roma Macaroni Factory.
Roma Macaroni Factory, d.b.a. Roma Macaroni Co., San Francisco, Calif. 753,414, pub. 4–16–63. Cl. 46.
Rose, Phil, of California, Inc., Los Angeles, Calif. 646,144, cor. Cl. 39.
Ross, Amy, Inc., Bartow, Fla. 753,377, pub. 5–7–63. Cl. 39.
Roux Laboratories, Inc., New York, N.Y. 753,455, pub. 5–7–63. Cl. 51.
Rowco Mfg. Co., Inc., d.b.a. Brushmaster Saw, Inc., Keene, N H. 646,463, canc. Cl. 23.
Royal Doll Mfg. Co., Inc.: *See*—
Mattel, Inc.
Ryolex Corp. Champaign, Ill., and Silbrico Corp., Chicago, Ill. 646,307, canc. Cl. 10.
Saila, Clement P., Toronto, Ontario, Canada. 753,437, pub. 5–7–63. Cl. 50.
Saks & Co., New York, N.Y. 753,375, pub. 5–7–63. Cl. 39.
Salada-Shirriff-Horsey Ltd., Don Mills, Ontario, Canada. 753,410–11, pub. 5–7–63. Cl. 46.
San Jose Canning Co., to San Jose Canning Co., San Jose, Calif. 175,801, ren. 7–23–63. Cl. 46.
San Martina Wines, Inc., Yonkers, N.Y. 753,506. Cl. 27.
Savage Laboratories, Inc., Houston, Tex. 753,212, pub. 5–7–63. Cl. 18.
Scarne, John, Games, Inc., Fairview, N.J. 646,422, canc. Cl. 22.
Schattner, Meyer, New York, N.Y. 753,371, pub. 5–7–63. Cl. 38.
Scherer, R. P., Corp. Detroit, Mich. 753,489. Cl. 2.
Schick Safety Razor Co.: *See*—
Eversharp, Inc.
Schnellpressenfabrik Koenig & Bauer A.-G., Wuerzburg, Germany. 646,452, canc. Cl. 23.
Schuler Chocolates, Inc., Winona, Minn. 646,567, canc. Cl. 46.
Schulze and Burch Biscuit Co., Chicago, Ill. 646,600, canc. Cl. 46.
Scott, Walter, Inc., Miami, Fla. 753,447, pub. 5–7–63. Cl. 51.
Screw Machine Products Co., Portland, Oreg. 646,509, canc. Cl. 34.
Seaboard Seed Co., Inc.: *See*—
Heritage House Products, Inc.
Sears, Roebuck and Co., Chicago, Ill. 646,655, canc. Cl. 34.
Sears, Roebuck and Co., Chicago, Ill. 753,114, pub. 5–7–63. Cl. 3.
Seiberling Rubber Co., Barberton, Ohio. 753,338, pub. 5–7–63. Cl. 35.
Segaloff, J. & Sons, Inc., Boston, Mass. 753,311, pub. 5–7–63. Cl. 28.
Seward Luggage Mfg. Co., Inc., Petersburg, Va. 753,116, pub. 5–7–63. Cl. 3.
Shamban, W. S., & Co., Culver City, Calif. 753,129, pub. 5–7–63. Cl. 6.
Shaw, Elitha A., d.b.a. Mrs. Lyman W. Shaw, Pocatello, Idaho. 753,413, pub. 5–7–63. Cl. 46.
Shaw, Mrs. Lyman W.: *See*—
Shaw, Elitha A.
Shawnee Mfg. Co., Inc., Topeka, Kans. 646,459, canc. Cl. 23.
Shelby Seamless Hosiery Mills, Inc., Shelby, N.C. 753,376, pub. 5–7–63. Cl. 39.
Sigma Kappa Sorority, Indianapolis, Ind. 753,486, pub. 5–7–63. Cl. 200.
Silbrico Corp.: *See*—
Ryolex Corp., and Silbrico Corp.
Sinclair Petrochemicals, Inc., from Texas Butadiene & Chemical Corp., New York, N.Y. 753,091, pub. 5–7–63. Cl. 1.
Single Sideband Amateur Radio Association, New York, N.Y. 753,370, pub. 5–7–63. Cl. 38.
Sjostrom Automations, Inc., Boca Raton, Fla. 753,292, pub. 5–7–63. Cl. 23.
Smith, G. E., Inc., Pittsburgh, Pa. 753,093, pub. 5–7–63. Cl. 1.
Snyder, W. H. and Sons Inc., Windsor, Pa. 753,205, pub. 5–7–63. Cl. 17.
Sobrinos De R. Abad Santonja, to Papeleras Reunidas, S.A., Alcoy, Spain. 168,707, ren. 7–23–63. Cl. 8.

Societe Rhodiaceta, Paris, France. 753,383, pub. 5–7–63. Cl. 39.
Societe Rhodiaceta. Paris, France. 753,396, pub. 5–7–63. Cl. 43.
Society of Chemical Industry In Basle, Basel, Switzerland, to Ciba Corp., New York, N.Y. 398,004, ren. 7–23–63. Cl. 6.
Southwestern Talc Corp.: *See*—
Bell Clay Co.
Space-General Corp., Glendale, Calif. 753,470, pub. 5–7–63. Cl. 100.
Speaker Sortation Systems, Inc., Brookfield, Wis. 753,288, pub. 5–7–63. Cl. 23.
Sport-Wear Hosiery Mills, Inc., Etowah, Tenn. 646,667, canc. Cl. 39.
Sprayway, Inc., Chicago, Ill., d.b.a. Tru-Pine Co., Chicago, Ill. 753,467, pub. 5–7–63. Cl. 52.
Staley Marine Inc., d.b.a. Staley Tackle Co., Fort Wayne, Ind. 646,418, canc. Cl. 22.
Staley Tackle Co.: *See*—
Staley Marine Inc.
Standard Mfg. Co., Cedar Falls, Iowa. 753,194, pub. 5–7–63. Cl. 13.
Standard Merchandising Co., Inc., Hillside, N.J. 646,399, canc. Cl. 18.
Standard Oil Co., Chicago, Ill. 169,351, ren. 7–23–63. Cl. 12.
Standard Toykraft, Inc., from Standard Toykraft Products, Inc., Brooklyn, N.Y. 750,199, cor. Cl. 37.
Standard Toykraft Products, Inc.: *See*—
Standard Toykraft, Inc.
Stein Bros. Mfg. Co., Chicago, Ill. 753,115, pub. 5–7–63. Cl. 3.
Stenso Lettering Co., Inc., Baltimore, Md. 753,345, pub. 5–7–63. Cl. 37.
Stern Dental Laboratory Co., Houston, Tex. 753,510. Cl. 52.
Stevens, J. P., & Co., Inc., New York, N.Y. 753,130, pub. 5–7–63. Cl. 6.
Stone, Harry D., d.b.a. Summit Products, Uniontown, Pa. 646,515, canc. Cl. 34.
Strathmore Paper Co., to Strathmore Paper Co., Inc., West Springfield, Mass. 403,151–2, ren. 7–23–63. Cl. 37.
Strathmore Paper Co., to Strathmore Paper Co., Inc., West Springfield, Mass. 403,509, ren. 7–23–63. Cl. 37.
Strathmore Paper Co., Inc.: *See*—
Strathmore Paper Co.
Stretchnit, Inc., New York, N.Y. 75,504. Cl. 42.
Stuart Co., The, Pasadena, Calif. 646,376, canc. Cl. 18.
Studio Girl: *See*—
Studio Girl-Hollywood, Inc.
Studio Girl-Holiywood, Inc., d.b.a. Studio Girl, Glendale, Calif. 753,453–4, pub. 5–7–63. Cl. 51.
Summit Products: *See*—
Stone, Harry D.
Sun Chemical Corp., New York, N.Y. 753,172, pub. 5–7–63. Cl. 11.
Sun Koki Kabushiki Kaisha (English Style Sun Optical Co.), Ichikawa-shi, Chiba-ken, Japan. 646,471, canc. Cl. 26.
Sunbeam Corp., Chicago. Ill. 753,305, pub. 5–7–63. Cl. 27.
Sunray DX Oil Co.: *See*—
Mid-Continent Petroleum Corp.
Sunray Mid-Continent Oil Co.: *See*—
Mid-Continent Petroleum Corp.
Susquehanna Broadcasting Co., York, Pa. 753,485, pub. 5–7–63. Cl. 107.
Swain, Frank Edward, Leicester, England. 753,191, pub. 5–7–63. Cl. 13.
Swanson's Cookie Co.: *See*—
Archway Cookies, Inc.
Sylvania Jewelry Co., New York, N.Y. 753,309, pub. 5–7–63. Cl. 28.
Tabin, Adrian, Corp., Chicago, Ill. 753,384, pub. 5–7–63. Cl. 39.
Taliaferro, E. H., Mfg. Co., d.b.a. Elon of California, San Diego, Calif. 646,665, canc. Cl. 39.
Taylor, Albert, d.b.a. Various Products Co., Detroit, Mich. 753,296, pub 5–7–63. Cl. 23.
Telefonaktiebolaget L M Ericsson, Stockholm, Sweden. 753,238–9, pub. 5–7–63. Cl. 21.
Terrytoons, Inc., New Rochelle, N.Y., to CBS Films, Inc., New York, N.Y. 401,757, ren. 7–23–63. Cl. 38.
Teweles, L., Seed Co., Milwaukee, Wis. 753,090, pub. 5–7–63. Cl. 1.
Texacone Co., The, Dallas, Tex. 753,328, pub. 5–7–63. Cl. 35.
Texas Butadiene & Chemical Corp.: *See*—
Sinclair Petrochemicals, Inc.
Thoroughbred Racing Associations of the United States, Inc., New York, N.Y. 753,468, pub. 5–7–63. Cl. 100.
Tile Council of America, Inc., New York, N.Y. 738,473, canc. Cl. 12.
Tilkin, Harry, d.b.a. Tilkin's Shoe Store, Charlestown, Mass. 753,372, pub. 5–7–63. Cl. 39.
Tilkin's Shoe Store: *See*—
Tilkin, Harry.
Tip-Top Products Co., Omaha, Nebr. 646,641, canc. Cl. 5.
Trail-O-Porch and Mobile Rooms, Inc., Toledo, Ohio. 646,311, canc Cl. 12.
Tribotron Corp., Petaluma, Calif. 753,322, pub. 5–7–63. Cl. 34.
True Mfg. Co., Inc., St. Louis, Mo. 753,313, pub. 5–7–63. Cl. 31.
Trump Engineers Ltd., from Trump Ltd., Oliver, Canada. 753,291, pub. 4–16–63. Cl. 23.
Trump Ltd.: *See*—
Trump Engineers Ltd.
Tru-Pine Co.: *See*—
Sprayway, Inc.
Turco Products, Inc.: *See*—
Purex Corp., Ltd.
Turner Hall Corp., New York, N.Y. 753,401, pub. 5–7–63. Cl. 44.
Tye Enterprises, Cheyenne, Wyo. 753,496. Cl. 22.
Typographic Service Co.: *See*—
Electrographic Corp.
Uni-Lak Co., The: *See*—
Mathes, Kirke B.
Union Bag-Camp Paper Corp., New York, N.Y. 753,351, pub. 5–7–63. Cl. 37.
Union Bag-Camp Paper Corp., New York, N.Y. 753,405, pub. 5–7–63. Cl. 44
Union Tank Car Co., Chicago, Ill. 753,314, pub. 5–7–63. Cl. 31.
United Carbon Co. Inc., (Maryland): *See*—
United Carbon Co., Inc.
United Carbon Co., Inc., to United Carbon Co. Inc., (Maryland), Charleston, W. Va. 346,259, canc. Cl. 6.
United Feature Syndicate, Inc., New York, N.Y. 753,362, pub. 5–7–63. Cl. 38.
United Industrial Syndicate, Inc., The, Portland, Maine. 753,298, pub. 5–7–63. Cl. 23.
United Merchants and Manufacturers, Inc., New York, N.Y. 753,390, pub 5–7–63. Cl. 42.
U.S. Climatronic Corp., Northvale, N.J. 753,406, pub. 5–7–63. Cl. 44.
United States Department of The Army, Washington, D.C. 753,488, pub. 5–7–63. Cl. A.
U.S. Electrical Motors Inc.: *See*—
Emerson Electric Mfg. Co., The.
United States Playing Card Co., The: *See*—
United States Printing Co., The.
United States Printing Co., The, to The United States Playing Card Co., Cincinnati, Ohio. 23,782, ren. 7–23–63. Cl. 22.
United States Rubber Co., New York, N.Y. 402,282, ren. 7–23–63. Cl. 6.
United States Rubber Co., New York, N.Y. 753,332, pub. 5–7–63. Cl. 35.
Universal Chemicals Corp., Central Falls, R.I. 753,143–4, pub. 5–7–63. Cl. 6.
Universal Trailer Corp., North Bergen, N.J. 753,224, pub. 5–7–63. Cl. 19.
Valley Chemical Co., Greenville, Miss. 753,157, pub. 4–30–63. Cl. 6.
Various Products Co.: *See*—
Taylor, Albert.
Venn, Ruth L.: *See*—
Archway Cookies, Inc.
Ventilating Products Corp., Austin, Tex. 646,512, canc. Cl. 34.
Vermont Maple Syrup Co., Inc., Essex Junction, Vt., to General Foods Corp., White Plains, N.Y. 168,655, ren. 7–23–63. Cl. 46.
Verneo Corp., Columbus, Ind. 753,323, pub. 5–7–63. Cl. 34.
Virginia Gentleman Gifts: *See*—
Bowman, A. Smith, Distillery Inc.
Visual Art Industries, Inc., Brooklyn, N.Y. 753,488, pub. 5–7–63. Cl. 50.
Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 753,492. Cl. 18.
Voltronics Corp., Hanover, N.J., from Voltronics, Inc., Westbury, N.Y. 753,243. pub. 5–7–63. Cl. 21.
Voltronics, Inc.: *See*—
Voltronics, Corp.
Wagner Co., The: *See*—
Wagner, Rudolph J.
Wagner, Rudolph J., d.b.a. The Wagner Co., Los Angeles, Calif. 753,364, pub. 5–7–63. Cl. 38.
Wakefield Co., The, Vermilion, Ohio. 646,510, canc. Cl. 34.
Wallace & Tiernan Inc., Belleville, N.Y. 753,145, pub. 5–7–63. Cl. 6.
Waildow, Carl B., Los Gatos, Calif. 646,497, canc. Cl. 32.
Wanoca Foods, Inc., Wadesboro, N.C. 646,585, canc. Cl. 46.
Warner, Albert C., d.b.a. Warner Development Co., Beloit, Wis. 646,429, canc. Cl. 23.
Warner Development Co.: *See*—
Warner, Albert C.
Weber, Rudolf H., New York, N.Y. 646,632, canc. Cl. 102.
Weevil-Cide Co., The, Kansas City, Mo. 753,141, pub. 5–7–63. Cl. 6.
West Coast Sewing Supply Co., Los Angeles, Calif. 753,293, pub. 5–7–63. Cl. 23.
West Indies Bay Co., Minneapolis, Minn. 753,459, pub. 5–7–63. Cl. 52.
West Printing Co., Detroit, Mich. 753,367, pub. 5–7–63. Cl. 38.
West Virginia Pulp and Paper Co., New York, N.Y. 753,350, pub. 5–7–63. Cl. 37.
Western Condensing Co., Appleton, Wis., to Foremost Dairies, Inc., San Francisco, Calif. 646,588, canc. Cl. 46.
Westside Farms, to Norton & McElroy Produce, Inc., Phoenix, Ariz. 646,583, canc. Cl. 46.
White, Frank S., d.b.a. L I. Pendleton & Sons, Boston, Mass. 753,308, pub. 5–7–63. Cl. 28.
White Stag Mfg. Co.: *See*—
Breier's, Marcus, Sons.
Williams Mfg. Co., Inc., Elgin, Ill. 753,402, pub. 5–7–63. Cl. 44.
Williams & Woods Ltd., Dublin, Ireland. 753,428, pub. 5–7–63. Cl. 46.
Wilmsen, B., Inc., Philadelphia, Pa. 753,436, pub. 5–7–63. Cl. 50.
Wilson Brothers, Springfield, Mo. 646,451, canc. Cl. 23.
Wilson & Co. Inc., Chicago, Ill. 753,124, pub. 5–7–63. Cl. 6.
Wilson Plastics, Inc., Sandusky, Ohio. 753,109, pub. 5–7–63. Cl. 2.
Wilson Sporting Goods Co., River Grove, Ill. 753,272, pub. 5–7–63. Cl. 22.
Windotint Coating Co.: *See*—
Allgood, Robert H.

Winer, Herbert, Norwood, Mass. 753,412, pub. 5–7–63. Cl. 46.
Winters Foundry & Machine Co., Inc., Canton, Ohio. 753,198, pub. 5–7–63. Cl. 14.
Wintronics, Ltd., New York, N.Y. 753,226, pub. 5–7–63. Cl. 21.
Wiss, J., & Sons Co., Newark, N.J. 753,399–400, pub. 5–7–63. Cl. 44.
Wizard Products Co., Chicago, Ill., to American Home Products Corp. New York, N.Y. 175,401, ren. 7–28–63. Cl. 29.
Wolff, Edwin F., Indianapolis, Ind. 753,501. Cl. 37.
Wonel Corp., Inglewood, Calif. 753,258, pub. 5–7–63. Cl. 22.
Wood Treating Chemicals Co., St. Louis, Mo. 753,128, pub. 5–7–63. Cl. 6.
Woodard Foods, Inc., St. Louis Park, Minn. 646,676, canc. Cl. 46.
Woodard, Viviane, Corp., Panorama City, Calif. 753,446, pub. 5–7–63. Cl. 51.
Wurm, Joseph G., New York, N.Y. 168,468, ren. 7–23–63. Cl. 46.
Wynn, Clarence M., d.b.a. Wynoil Laboratories, Azusa, Calif. 646,856, canc. Cl. 16.
Wynn, Clarence M., d.b.a. Wynoil Laboratories, Azusa, Calif. 646,616, canc. Cl. 52.
Wynoil Laboratories: *See*—
Wynn, Clarence M.
Yale & Towne Mfg. Co., The, New York, N.Y. 646,353, canc. Cl. 14.
York, Rubin and Belport, Inc., d.b.a. Cinesell, International, New York, N.Y. 753,474, pub. 5–7–63. Cl. 101.
Youths Associates Co., Minneapolis, Minn. 401,810, ren. 7–23–63. Cl. 38.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 30, 1963 Volume 792 Number 5

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of June 1963

Examiner affirmed	305
Examiner affirmed in part	51
Examiner reversed	101
Total	457

Foreign Patents Received in the Scientific Library as of June 30, 1963

Source	Date received	Highest number
Australia :		
(*Abstracts*)	June 24, 1963	3,952/61
(*Patents*)	June 24, 1963	241,828
Austria	June 24, 1963	227,150
Belgium	Oct. 16, 1962	573,100
Canada	June 27, 1963	665,811
Czechoslovakia	Feb. 27, 1963	103,500
Denmark	June 10, 1963	95,165
East Germany	June 24, 1963	25,448
Egypt	Jan. 8, 1963	3,417
Finland	May 27, 1963	32,900
France :		
(*Patents*)	June 24, 1963	1,319,456
(*Additions*)	June 24, 1963	80,000
(*Medicaments*)	May 1, 1963	1,400M
(*Additions*)	May 13, 1963	15CAM
Germany :		
(*Auslegeschriften*)	June 17, 1963	1,146,819
(*Patents*)	June 17, 1963	1,137,939
Great Britain	June 28, 1963	928,805
India	Apr. 19, 1963	79,433
Ireland	Feb. 12, 1963	23,400
Italy	Apr. 25, 1963	616 900
Japan	June 24, 1963	7,200/63
Netherlands	June 5, 1963	104,935
Norway	June 18, 1963	101,895
Pakistan	June 24, 1963	111,630
Philippine Republic	Apr. 13, 1962	458
Poland	June 24, 1963	46,808
Rumania	May 31, 1963	42,141
Sweden	May 27, 1963	183,072
Switzerland	June 24, 1963	368,762
U.S.S.R	June 24, 1963	152,834

Australia : First 2,000 incomplete
Belgium : First printed 493,079/1950
Canada : First printed 445,931/1948
Czechoslovakia : Not received between 81,300/1952 and 91,901/1959
Finland : First printed 19,428/1941
First 500 incomplete
Hungary : First received 5 792/1896
Latest 140,582/1951
Ireland : Missing 1–10,000
Italy : First 243,000 incomplete
Rumania : First received 40,380/1957
U.S.S.R. : Not received between 2,496/1928 and 116,000/1958
Yugoslavia : First received 10,001/1933
Latest 16,461/1941

International Convention for the Protection of Industrial Property

Ratification of the Lisbon 1958 Revision by the Federation of Rhodesia and Nyasaland

The Secretary of State has been notified by the Embassy of Switzerland of the ratification, effective June 16, 1963, by the Federation of Rhodesia and Nyasaland of the International Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Tanganyika to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective June 16, 1963, of the Republic of Tanganyika to the International Convention for the Protection of Industrial Property as revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

ASSISTANT SECRETARY OF COMMERCE FOR SCIENCE AND TECHNOLOGY

Duties and Responsibilities

The following amendment to the order was issued by the Secretary of Commerce on June 21, 1963. The material appearing at 27 F.R. 11244 of November 14, 1962 is amended as follows :

Department Order No. 177 (Revised) of October 25, 1962, is amended to make explicit reference to assignment of the Civilian Industrial Technology Program to the Assistant Secretary of Commerce for Science and Technology.

Section 4 of Department Order No. 177 (Revised) of October 25, 1962 is hereby amended to read as follows :

SEC. 4. *Duties and responsibilities.* The Assistant Secretary of Commerce for Science and Technology shall serve as the principal adviser to the Secretary on all scientific and technological matters of concern to the Department, and shall serve as adviser to all Departmental officials with respect to matters of science and technology, in which capacity he shall have cognizance of the research and development activities carried out in the fields of science and

New Applications Received During May 1963

Patents	7,692
Designs	475
Plant Patents	7
Reissues	23
Total	8,197

Issue

Patents	826	No. 3,099,011 to No. 3,099,836, incl.
Designs	54	No. 195,756 to No. 195,809, incl.
Plant Pats	1	No. 2,270
Reissues	4	No. 25,427 to No. 25,430, incl.
Total	885	

technology by all organization units of the Department. His particular duties and responsibilities shall include:

1. The coordination and evaluation of existing programs of the Department in the fields of science and technology;

2. The expansion of such programs where deemed desirable to meet the national needs;

3. The development and implementation of new research and development programs in furtherance of the Department's objectives;

4. Administering the Civilian Industrial Technology Program;

5. Representing the Department on top policy level scientific committees and groups, including the Federal Council for Science and Technology; and

6. The coordination of the Department's scientific and technological activities with other agencies of Government.

Effective date: June 21, 1963.

HERBERT W. KLOTZ,
Assistant Secretary for Administration.

[F.R. Doc. 63-7106; Filed, July 5, 1963; 8:45 a.m.]

Published in 28 F.R. 6921, July 6, 1963

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	10-6-61	9-14-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	2-2-62	2-9-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	12-7-61	11-17-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6-27-61	7-20-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-1-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	12-4-61
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	11-24-61	10-11-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-11-62	1-25-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-28-61	10-16-61
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	12-1-61	1-3-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-6-61	10-9-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	11-16-61	11-7-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	11-1-61	11-3-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	11-9-61	11-3-61

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1963

Total number of pending applications (excluding Designs)	200,178
Total number of Design applications pending	6,195
Total number of applications awaiting action (excluding Designs)	115,956
Total number of Design applications awaiting action	2,329
Date of oldest new application awaiting action	June 27, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,402,939 to 2,405,106, inclusive

Plant Patents ..... Numbers 702 to 708 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-5-62	2-26-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	12-13-61	12-21-61
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	1-31-62	12-4-61
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	1-16-62	1-15-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	1-12-62	9-29-61
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner..... Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	2-28-62	3-12-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner..... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-5-62	3-5-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner..... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	1-17-62	1-8-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner..... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	5-25-62	7-2-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner..... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-19-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-6-62	2-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner..... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-2-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner..... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	2-12-62	2-5-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner..... Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	4-18-62	5-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner..... Printing; Typewriters; Stationery; Material Treatment.	1-15-62	12-12-61
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner..... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	3-9-62	3-5-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner..... Industrial Arts; Household, Personal and Fine Arts.	12-26-62	12-18-62
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....		
93. PURDY, W. F. (acting), Wire Working.....	6-8-62	6-1-62
94. BERLOWITZ, W.....	8-6-62	10-15-62
95. ANGEL, C. D., (REZNEK, J., acting).....		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE GENE O. SINEX

No. 6834. On petition for rehearing March 20, 1963

Wm. Griffith Edwards, McGrew and Edwards, Jesse Bowyer for appellant.

Clarence W. Moore (*Lutrelle F. Parker* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, RICH and SMITH, *Associate Judges*, Judge JOSEPH R. JACKSON, retired, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*.

PER CURIAM:

Appellant's petition for rehearing of January 4, 1963 is hereby granted only to the extent of changing language in the opinion of November 14, 1962 as follows:

1. Delete old footnote [5].

2. Substitute a new footnote [5] after "vapors" in line 1 of page 11, the new footnote to read as follows:

[5] Ethyl alcohol and water form an azeotropic or constant boiling point mixture. Pure ethyl alcohol boils at 78.4° C. while the azeotropic mixture of 95.5% alcohol by weight and 4.5% water by weight boils at 78.1° C. Thus, the Harris patent, in referring to "alcohol vapors," technically must mean vapors of the azeotropic mixture containing 95.5% alcohol by weight. See Lange's Handbook of Chemistry, 9th ed., 1956.

U.S. Court of Customs and Patent Appeals

BEMIS BRO. BAG CO. *v.* CONTINENTAL CAN CO., INC.

No. 6912. Decided February 13, 1963

[50 CCPA —; 312 F.2d 837; 136 USPQ 474]

1. TRADEMARK—CONFUSING SIMILARITY—"DUOTITE" AND "DUOTEX" FOR BAGS.

In reversing the decision of the Trademark Trial and Appeal Board, and sustaining the opposition by appellant, the registrant of DUOTEX, to the application of appellee to register DUOTITE, *Held* that "We agree with the Board that the prefix DUO is highly suggestive when applied to the bags of parties but when we consider the marks in their entireties, we come to the conclusion that in appearance, sound and in the overall impression that the marks make, they are so similar that the use by appellee of the mark DUOTITE on its merchandise is likely to cause confusion among purchasers."

APPEAL from the Patent Office. Opposition No. 39,655.

REVERSED.

John D. Pope III (*J. Harold Kilcoyne, Koenig, Pope, Senninger and Powers*, of counsel) for appellant.

William A. Dittmann for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

Appellant, Bemis Bro. Bag Company, appeals from a decision of the Patent Office Trademark Trial and Appeal Board dismissing its opposition to an application by appellee, Continental Can Company, Inc., for registration of DUOTITE for bags composed principally of

laminated paper, plastic film and/or metal foil. Use of the mark by appellee on the designated goods since 1956 is alleged.

Appellant is the registrant of DUOTEX for fabric bags made either of fabric alone or a combination of fabric and paper.[1]

The record shows appellant's use of DUOTEX has been on a textile bag that has either a paper or other barrier attached to the textile by means of a colorless adhesive and that all the bags sold by appellant with the DUOTEX trademark are fabric laminated bags. In the last ten years appellant has used DUOTEX in connection with a minimum of twenty million bags.

The Board found appellant's registrations sufficient to establish appellant's ownership of and prior rights in the mark DUOTEX per se. It further found that the different types of bags "marketed under the marks DUOTITE and DUOTEX are products which can be produced by a single manufacturer." It also found that appellant

> * * * have continuously advertised its "DUOTEX" bags in trade publications by direct mailing of descriptive literature, by exhibits at trade shows, and by personal solicitation by its staff of salesmen.

The Board considered the question of likelihood of confusion to turn on whether DUOTITE so resembles DUOTEX that purchasers are likely to attribute the bags sold under said mark to opposer.

In dismissing the opposition, the Board stated:

> The marks "DUOTITE" and "DUOTEX" are alike primarily in that each comprises the term "DUO" as the prefix. "DUO" is defined in Webster's New International Dictionary, second edition (1947), as a combining form meaning two. In view thereof and since the bags in connection with which the parties use these marks are two-ply or two layer bags, it is apparent that the term "DUO" has and would have to purchasers a highly suggestive significance as applied to the bags of the parties. Considering therefore the nature of the term "DUO" and the differences between the suffix portions, "TITE" and "TEX," it is concluded that the marks "DUOTITE" and "DUOTEX," when considered in their entireties, are sufficiently different to obviate any likelihood of confusion in trade as to source.

Appellant argues that the Board is in error in holding the marks DUOTEX and DUOTITE are sufficiently different to obviate the likelihood of confusion in the trade as to the source of the goods to which the marks are applied, in spite of its finding that the bags of the types marketed under the marks could be and were produced by a single manufacturer. It also urges that the Board's dissection of the marks DUOTEX and DUOTITE is improper since both marks represent an integral unit when applied to the goods of the parties and that each mark accordingly makes a unitary impact upon purchasers. Appellant contends that it has sold "a tremendous quantity of bags under the trademark DUOTEX so that obviously a secondary meaning has been secured irrespective of any criticism which could have been directed at appellant's trademark DUOTEX initially" and that this secondary meaning has been secured for the trademark DUOTEX as a unit. It is argued that DUOTEX and DUOTITE are similar in both sound and appearance.

Appellee, on the other hand, urges that while the Board did consider the respective parts of the marks, its decision was based upon the consideration of DUOTITE and DUOTEX in their entireties. It argues further that the record does not show that DUOTEX was even used on the bags themselves, and, therefore, the fact that appellant sold 20 or 30 million bags is irrelevant.

[1] Reg. No. 290,810, issued Jan. 19, 1932, published under Sec. 12(c) of the Act of 1946 on Mar. 30, 1948, and renewed; and Reg. No. 500,705, issued June 22, 1948.

It is true that the record does not establish the fact that DUOTEX was printed on the bags themselves. However, there is sufficient evidence in the record to convince us that the mark has been employed in various ways in connection with appellant's bags and that appellant has established DUOTEX as an indication of source of its bags through various media. Furthermore, even though appellant employs a different trademark on the bag it manufactures which is substantially similar to that manufactured by appellee, it is obvious from the fact that it does manufacture such a bag and other evidence in the record, that the merchandise as a whole of both parties is such that it could emanate from the same source. There is no doubt that the channels of trade are the same in most instances and that the bags are usually bought in large quantities by a class of people which might place them in a more or less discriminating category. However, we do not believe that this fact would preclude confusion among them if the marks themselves are likely to cause purchaser confusion.

[1] We agree with the Board that the prefix DUO is highly suggestive when applied to the bags of the parties but when we consider the marks in their entireties, we come to the conclusion that in appearance, sound and in the overall impression that the marks make, they are so similar that the use by appellee of the mark DUOTITE on its merchandise is likely to cause confusion among purchasers.

For the above reasons we reverse the decision of the Trademark Trial and Appeal Board.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE CHARLES CURTIS SIMMONS

No. 6872. Decided February 13, 1963

[50 CCPA —; 312 F.2d 821; 136 USPQ 450]

1. PATENTABILITY—DOUBLE PATENTING—PATENT CAN ONLY BE RELIED ON FOR WHAT IS CLAIMED.

   "* * * the Simmons patent, being a copending patent of appellant himself, may be relied on only for what it claims."

2. CLAIMS—CONSTRUCTION OF CLAIMS—RELIANCE UPON SPECIFICATION TO DETERMINE WHAT IS CLAIMED.

   "Of course, it is proper to look to the disclosure to determine what is claimed."

3. PATENTABILITY—DOUBLE PATENTING—MULTIPLE PATENTS GRANTED ON RELATED SUBJECT MATTER ONLY IF CLAIMS PATENTABILITY DISTINCT.

   "Where, * * * to applications of the same applicant for closely related subject matter are copending, a patent can properly be granted on each of them only if there is a patentable distinction between their respective claims. * * * If two patents are to be granted, there must be two separately patentable inventions."

4. SAME—SAME—SAME—OBVIOUSNESS.

   "In the present case, the matter of whether Simmons has made a second patentable invention narrows down to the question of whether a person of ordinary skill in the art would find the subject matter of the appealed claims obvious over the subject matter claimed in the Simmons patent in view of Ransburg."

5. SAME—SAME—SAME.

   "Even though all of the claims of the patent and of the application might exist side by side in one application without restriction being required, * * * they may not exist in two separate patents unless two patentable inventions exist. The mere fact that appellant filed two separate applications in the considered belief that two patentable inventions were present does not entitle him to two patents. Appellant suggests that he is being 'penalized' for not

consolidating the copending applications. If appellant is penalized, it is his own doing."

6. SAME—PARTICULAR SUBJECT MATTER—"SPRAY COATING OF ARTICLES."

The refusal of the claims in an application entitled "Spray Coating of Articles," as unpatentable over the claims of applicant's copending patent in view of a secondary reference, is affirmed.

APPEAL from the Patent Office. Serial No. 358,846.

AFFIRMED.

William H. Stellman (*Verne A. Trask* of counsel) for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, JR., *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 16 and 17, the only claims remaining in application Ser. No. 358,846, filed June 1, 1953, for "Spray Coating of Articles."

The invention relates to an apparatus for spraying articles with electrostatically charged coating material. As noted in the specification, the invention is an improvement on the apparatus of appellant's copending application Ser. No. 274,909, filed March 5, 1952, which matured into Patent No. 2,808,343, issued October 1, 1957.

The claims read:

16. In an electrostatic coating arrangement comprising a circular edged atomizer mounted for rotation about a substantially vertical axis, means for feeding liquid coating material to a surface of the atomizer, means for rotating the atomizer to flow the coating material to the outer edge thereof for atomization therefrom as a spray of finely divided particles, a grounded conveyor lying in a generally horizontal plane and a plurality of supports each having an article supporting portion spaced perpendicularly from said conveyor each supporting an article for moving the articles in a generally horizontal, curved path surrounding the atomizer and spaced vertically from the conveyor, a source of high voltage connected to the atomizer to create a high electrostatic potential between the atomizer and the surrounding grounded articles electrostatically to deposit the particles on the articles as a coating, *the improvement comprising* a deflecting member, means independent of the rotating atomizer for supporting the deflecting member spaced axially from said atomizer and on the same side thereof as the conveyor and the supports are from the articles, said deflecting member having an outer edge substantially concentric with and parallel to the outer edge of said atomizer, and means for connecting said deflecting member to said high voltage source for maintaining said deflecting member at substantially the same potential as said atomizer to inhibit the deposition of spray particles onto the supports and the conveyor.

17. Apparatus according to claim 16 in which the deflecting member is a metal member whose outer diameter is substantially the same as that of the atomizer. [Emphasis added.]

The references of record relied on are:

Ransburg, 2,658,009, November 3, 1953.
Simmons, 2,808,343, October 1, 1957.

The Simmons patent discloses and claims an apparatus for coating a plurality of articles located on article supports attached to a conveyor. The conveyor carries the articles on the article supports past a rotating disc maintained at high electrical potential which atomizes coating material in an expanding spray from the edge of the disc. The spray is electrostatically charged by the disc and the articles on the conveyor are given a different charge in order to attract the spray. Conveniently, the articles are connected to ground through the article supports and conveyor.

A problem was encountered in operating the apparatus of the Simmons patent in coating the more remote surfaces of the articles which were adjacent to the article supports. Inasmuch as the articles, the supports and the conveyor are all maintained at the same electrical potential (e.g., ground), part of the spray would sometimes be deposited on the article supports rather than the adjacent surface of the article. The problem would be especially acute when the distance to the particular surface to be coated was about the same as the distance to the article support or conveyor, in which case the spray would be attracted in several directions and would not effectively coat the work.

The problem was solved by employing a secondary deflecting electrode bearing the same charge as the atomizing disc and the spray therefrom. Utilizing the principle that like charges repel, the deflecting electrode was so located as to direct the charged spray to the desired surfaces.

In the final rejection, the Examiner rejected all of the claims as unpatentable over the *claims* of the Simmons patent in view of the secondary reference of Ransburg. However, the Examiner's answer does not specifically refer to the claims of the Simmons patent. Instead, the Examiner states therein:

Claims 16 and 17 stand rejected over Simmons in view of Ransburg.

Reference was made by the Examiner to the second paragraph of the Simmons patent as a teaching of a secondary electrode. The Board, in its opinion, stated that the Examiner was in error with respect to the interpretation of the second paragraph of the Simmons patent, and affirmed the rejection referring to what the Simmons patent "discloses and claims."

The appellant contends that the Board erred in considering the Simmons patent as a prior art reference because "A man cannot be prior to himself." He argues that the Board utilized the entire disclosure instead of just the claims. Appellant does concede, nevertheless, that the Simmons patent "has place in the record only to the extent necessary to fulfill the demand of the law that one may not obtain two patents for the same invention." He takes the position that only the claims of the copending patent may be considered, if it may be considered at all.

The Solicitor argues that these contentions include new arguments not previously presented to the Patent Office and, accordingly, are not entitled to the consideration of this court, citing *In re Griner*, 48 CCPA 852, 287 F.2d 178, 129 USPQ 61; *In re Davis*, 26 CCPA 1249, 103 F.2d 922, 41 USPQ 674, and *In re Goldberg*, 35 CCPA 1225, 168 F.2d 527, 78 USPQ 69. Be tht as it may, the Solicitor continues, only the claims were relied upon by the Patent Office.

[1] Whether or not these arguments have been raised before, the Simmons patent, being a copending patent of appellant himself, may be relied on only for what it claims. We therefore, find no merit in the Solicitor's contention that the alleged new arguments are not entitled to consideration.

Nevertheless, it is clear that the Examiner, in the final rejection, relied on the Simmons patent only for the subject matter claimed. The only apparent reliance on the specification in the Examiner's answer was expressly rejected by the Board. The Board never indicated any reliance on anything in the patent other than what was claimed. [2] Of course, it is proper to look to the disclosure to deter-

mine what is claimed. *In re Greenlee*, 42 CCPA 926, 222 F.2d 739, 106 USPQ 104. Moreover, we find full correspondence in the claims of the Simmons patent with everything recited in the claims on appeal before the word "improvement." By using the so-called "Jepson" form, employed in *Ex parte Jepson*, 1917 C.D. 62, 243 O.G. 525, appellant is relying on the subject matter following "improvement" for novelty. The subject matter after the word "improvement" in claim 16 is not present in the Simmons patent disclosure and, of course, is not included in the patented Simmons claims.

[3] Where, as here, two applications of the same applicant for closely related subject matter are copending, a patent can properly be granted on each of them only if there is a patentable distinction between their respective claims. *In re Greenlee*, supra. If two patents are to be granted, there must be two separately patentable inventions. *In re Ockert*, 44 CCPA 1024, 1027, 245 F.2d 467, 114 USPQ 330, and cases there cited.

In the case of *In re Ward et al.*, 43 CCPA 1007, 236 F.2d 428, 111 USPQ 101, this court found an applicant's claims unpatentable on the basis of consideration of a prior art patent in combination with the claimed subject matter of a patent having common ownership with the application. In connection with a like question, we have held claims unpatentable on the basis that a modification of the device claimed in the applicant's prior copending patent was obvious, "especially in view of" a prior art reference. *In re Ockert*, supra.

[4] In the present case, the matter of whether Simmons has made a second patentable invention narrows down to the question of whether a person of ordinary skill in the art would find the subject matter of the appealed claims obvious over the subject matter claimed in the Simmons patent in view of Ransburg.

The Examiner and the Board answered that question affirmatively. The Ransburg patent shows an electrostatic coating apparatus in which a secondary electrode, spaced from the electrostatic spray field, is employed to control fluctuations, irregularities and spreading in the projected electrostatic spray. It illustrates the use of a nozzle or unidirectional spray, whereas the claims under consideration call for "a circular edged atomizer" from which spray iis atomized; that is, an omnidirectional spray. The Board found this variation in spray means of no moment, stating:

> Ransburg is clearly concerned with the problem of controlling electrostatic sprays, without regard for the particular atomizer which produces the spray, and many of the claims of the patent express the deflecting electrode concept without defining any special form of atomizer. In our opinion, *it would be wholly obvious to a person of no more than ordinary skill in this art to adapt the principles of Ransburg to any electrostatic coating apparatus wherein problems of diffusion of spray are encountered, as in the apparatus of Simmons.* [Emphasis added.]

The spray is directed horizontally in the claimed apparatus because the atomizer rotates about "a substantially vertical axis" and the spray would depart generally perpendicular to the axis of rotation. The claimed deflecting electrode has "an outer edge substantially concentric with and parallel to the outer edge of said atomizer." In Ransburg, on the other hand, the spray is, in the drawings, directed downwardly along a generally vertical path. The Board considered this aspect, and stated:

> * * * As for the particular structural arrangement to effect the desired control, it is noted that the spray of Ransburg is projected vertically and the deflecting electrodes are spaced in a horizontal plane around the atomizing means to prevent horizontal diffusion of the spray. Obviously, if the spray were projected horizontally, as in the Simmons apparatus, it would be advisable to space the deflecting electrodes in a vertical plane, above and/or below the atomizing means, in order to prevent vertical diffusion of the spray. In essence, Ransburg's arrangement has merely been turned through an angle of 90°. With respect to the shape of the deflecting electrode, appellant has merely followed the suggestion of Ransburg in the sentence bridging columns 7 and 8 of the patent to the effect that the shape of the deflecting electrode should be dictated by the shape of the jet to be controlled. Accordingly, a circular atomizer would call for a circular deflecting electrode.

Appellant argues that the Ransburg patent is concerned with the problem of spray stability to prevent erratic wandering and scattering of the sprayed material, whereas the purpose of the present application is "to alter the direction of movement of coating material particles while in flight." We find no distinction of any patentable significance between the two. In either event, the flight path of sprayed particles is altered by means of a secondary electrode bearing substantially the same charge as the particles being sprayed. The same physical law of like charges repelling is employed. With each deflector, the purpose is to restrict the spray to a portion of the articles to be sprayed. We see no distinction when irregular scattering and uncontrolled spray is deflected *into* a particular pattern or *away from* a conveyor and article support. The attraction of the conveyor and article support would cause "irregular scattering" of the charged spray. It would be obvious to one working in this art to solve the problem of uncontrolled spray in the same manner it was solved in an earlier electrostatic spray apparatus. Relying on the teachings of Ransburg, the deflecting electrode may be shaped to accomplish the desired control. We agree with the Board that the limitation of claim 17 merely adapts the contour of the deflecting electrode to the contour of the atomizer in accordance with the suggestion in Ransburg.

We believe that the instant claims do not define an unobivous improvement over the device claimed in the Simmons patent, considered with the teaching of the Ransburg patent.

[5] Even though all of the claims of the patent and of the application might exist side by side in one application without restriction being required, as argued by appellant, they may not exist in two separate patents unless two patentable inventions exist. The mere fact that appellant filed two separate applications in the considered belief that two patentable inventions were present does not entitle him to two patents. Appellant suggests that he is being "penalized" for not consolidating the copending applications. If appellant is penalized, it is his own doing.

[6] For the foregoing reasons, the decision of the Board of Appeals is affirmed.

AFFIRMED.

SMITH, *J.*, concurs in result only.

REISSUES

JULY 30, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

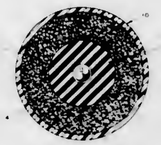
25,427

STEEL POWER-CENTER GOLF BALL

Jack Harkins, Chattanooga, Tenn., assignor to Professional Golf Company, Chattanooga, Tenn., a corporation of Tennessee

Original No. 2,914,328, dated Nov. 24, 1959, Ser. No. 739,741, June 4, 1958. Application for reissue Nov. 22, 1961, Ser. No. 155,247

5 Claims. (Cl. 273—230)



1. A golf ball comprising a spherical tempered spring steel core, a solid rubber spherical casing tightly enclosing said steel core, rubber threads wrapped tightly around said rubber casing and an outer cover tightly encasing said rubber threads.

25,428

SLIDE BRACKETS

Morris Manson, Great Neck, N.Y., assignor to Corox Corporation, Yonkers, N.Y., a corporation of New York

Original No. 3,022,129, dated Feb. 20, 1962, Ser. No. 72,467, Nov. 29, 1960. Application for reissue Mar. 22, 1962, Ser. No. 183,987

6 Claims. (Cl. 312—343)



6. The combination of a slide bracket device and a drawer construction having a case and a drawer slidably movable therein, comprising a stationary guide member affixed to the bottom of said case, said guide member having laterally opposite inner and outer track portions extending longitudinally therealong, a slide member attached to the underside of said drawer and movably mounted on said inner track portions of said guide member, whereby said slide member and said drawer are movable longitudinally relative to said stationary guide member and said case, said slide member extending rearwardly beyond said drawer, and retaining means on and attached to said rearwardly extending portion of said slide member and having opposite hooked portions in slidable engagement with said outer track portions of said guide member, said hooked portions having bottom end portions underlying said outer tracks.

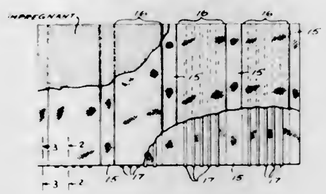
25,429

RESIN MOLDED FABRIC

Henry A. Scheel, Mystic, Conn., assignor to A. Wimpfheimer & Bro. Inc., Stonington, Conn., a corporation of New York

Original No. 3,045,319, dated July 24, 1962, Ser. No. 84,914, Jan. 25, 1961. Application for reissue Aug. 31, 1962, Ser. No. 221,411

6 Claims. (Cl. 28—80)



5. A resin-impregnated rigid fabric element comprising a pair of plies of woven fabric, each of said plies having interwoven filler yarns and warp yarns, said plies being spaced apart uniformly and having tie yarns woven into and extending between the plies, said tie yarns being disposed to leave straight open channels extending entirely through the fabric and stuffer yarns having wicking characteristics disposed in and extending along said channels, said plies of woven fabric, the space between said plies, and said stuffer yarns being impregnated with a resin, said resin being in the cured state whereby said impregnated fabric constitutes a rigid product.

25,430

POLYHALOOCTAHYDROALKANONAPHTHALENEDICARBOXYLIC ACIDS, ANHYDRIDES AND METHOD OF PREPARATION THEREOF

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Original No. 3,017,431, dated Jan. 16, 1962, Ser. No. 724,832, Mar. 31, 1958. Application for reissue Oct. 8, 1962, Ser. No. 230,029

10 Claims. (Cl. 260—346.3)

1. A halo-substituted polyhydroalkanonaphthalene-dicarboxylic acid in which the halogen is selected from the group consisting of chlorine and bromine, said acid resulting from the Diels-Alder condensation, at a temperature of from about 50° C. to about 250° C., of a conjugated halocycloalkadiene selected from the group consisting of conjugated halocyclopentadienes and halocyclohexadienes in which the halogen is selected from the group consisting of chlorine and bromine, with the condensation product, formed at a temperature of from about 80° C. to about 250° C., of a conjugated aliphatic diene hydrocarbon containing from 4 to 9 carbon atoms per molecule, and an olefinic dicarboxylic acid consisting of carbon, hydrogen and oxygen and containing not more than 18 carbon atoms per molecule.

10. 5,6,7,8,9,9 - hexachloro-1,2,3,4,4a,5,8,8a-octahydro-5,8-methano-2,3-naphthalenedicarboxylic acid anhydride resulting from the Diels-Alder condensation of 1,2,3,6-tetrahydrophthalic anhydride with hexachlorocyclopentadiene at an elevated temperature of from about 50° C. to about 250° C.

PLANT PATENTS

GRANTED JULY 30, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,270

CHRYSANTHEMUM PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed July 19, 1962, Ser. No. 211,147

1 Claim. (Cl. Plt.—81)

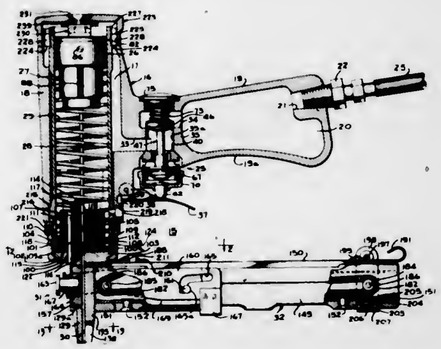
A new and distinct variety of chrysanthemum plant of the decorative class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a hardy plant habit, a free, heavy and upright habit of plant growth, large plant size, extra-large leaf size, a reflexed flower petal form in the finished flowers, and a distinctive and attractive general color tonality of the flowers corresponding to Tyrian Rose, lightly overcast with Spinel Red.

PATENTS

GRANTED JULY 30, 1963

GENERAL AND MECHANICAL

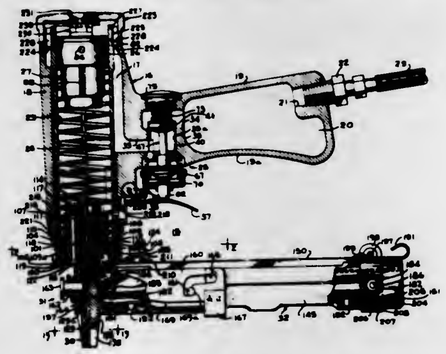
3,099,011
PNEUMATICALLY OPERATED TACKER
Oscar A. Wandel, Mundelein, Ill., assignor to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 11, 1955, Ser. No. 527,697
17 Claims. (Cl. 1—44.4)



1. In a pneumatically operated tacker, the combination of a two-part piston structure for slidable movement in a supporting cylinder, said parts being constructed such that in an assembled juxtaposed condition a recess is defined therebetween, means defining an aperture in one of said parts communicating with said recess, said aperture being parallel with the path of movement of said piston and said parts being interconnected along a surface transverse to said path, a driver blade extending into said recess through said aperture, that end of said blade which is disposed within said recess being enlarged so as to prevent withdrawal of the blade from the piston while said two piston parts are in an assembled condition, and resilient means interposed between said enlarged portion of said blade and said one of said piston parts, whereby an impact force imparted to one of said piston parts is not transmitted through said blade to said other piston part.

3,099,012
PNEUMATICALLY OPERATED TACKER
Oscar A. Wandel, Mundelein, Ill., assignor to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Original application Aug. 11, 1955, Ser. No. 527,697. Divided and this application Aug. 10, 1959, Ser. No. 832,687
14 Claims. (Cl. 1—49)

1. In a fastener-applying machine comprising a magazine for holding a suply of fasteners, and a fastener-driver, said magazine having a slotted wall at its end with openings through which the fasteners may be fed, a closure adapted to fit against said wall with a throat therebetween for receiving the fasteners and providing a raceway for said driver, a clamp at the front of said closure, and cam-means for binding said clamp against



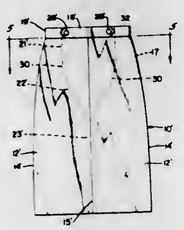
said closure to fixedly hold it in closed relationship at the front of the throat.

3,099,013
TURNABOUT DICKEY
Shirley Thorpe, Brooklyn, N.Y., assignor of one-half to Tibor Laszlo, New York, N.Y.
Filed Feb. 25, 1963, Ser. No. 260,792
2 Claims. (Cl. 2—103)



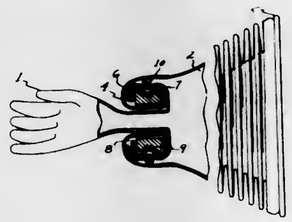
1. An article of clothing comprising a central body panel, a pair of opposed panel sections arranged on opposite sides of said body panel, said panel sections having upper portions and quarter neck sections, said body panel having an upper portion and a half neck section, said quarter neck sections being sewn to said half neck section in abutted relationship with flush neck seams for forming a tubular neck for said article, said upper portions of said panel sections being sewn to said upper portion of said body panel below said neck seams with overedge seams defining shoulder sections for said article, a first set of buttons on one panel section and a first set of button holes in the other panel section as fastening means for detachably securing said panel sections to each other opposite from said body panel, said tubular neck being foldable to form a cuff collar, second fastening means for securing said tubular quarter neck sections together, said second fastening means including a button hole in the quarter neck section of said one panel section and a button on the quarter neck section of said other panel section so that when said tubular neck is arranged as a cuff collar, said button is exposed in the same direction as and is in linear alignment with said set of buttons.

3,099,014
MATERNITY GARMENT
Florence F. Smith, 315 N. Tejon, Colorado Springs, Colo.
Filed May 20, 1960, Ser. No. 30,637
5 Claims. (Cl. 2—221)



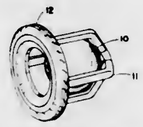
1. A garment conformable for conventional and maternity wear comprising panel portions connected to define a number of spaced vertical seams including a pair of front panels, means adjustably securing said front panels together in predetermined relation to form a center separable seam therebetween each front panel including a flap forming a continuation of each front panel at the center seam for inward extension therefrom, said flaps each being dimensioned to be relatively wide throughout the abdominal portion and to curve downwardly and inwardly therefrom, and corresponding segments of said flaps being connectable together at the center seam to increase the width of said front panels to conform to increases in size of the wearer.

3,099,015
JOINT FOR INTERCONNECTING TUBULAR MEMBERS
William J. Renehan, North Plainfield, N.J. (36 Howitt Road, West Roxbury, Mass.)
Filed June 14, 1960, Ser. No. 36,048
3 Claims. (Cl. 2—270)



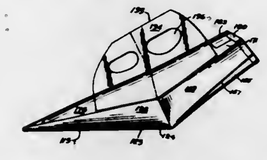
3. A joint for detachably interconnecting a glove to an arm sleeve comprising a rigid ring having an outer circumferential groove, a sleeve cuff and a glove cuff arranged in circumferentially overlapped relationship adjacent registering ends thereof with said sleeve cuff forming the inside ply, said registering ends bearing against one end of said rigid ring and a fold in said overlapped portions of said sleeve and glove cuff overlying the other end of said ring, a resilient band surrounding said sleeve and glove cuffs and confining the surrounded portions in said groove to form a seal, said overlapped portions of said sleeve and glove cuffs extending through said ring and said sleeve cuff being reverse folded about the ring to confine said registering ends and said resilient band between itself and the ring whereby a pull applied to said glove tightens said joint.

3,099,016
HEART VALVE
Miles Lowell Edwards, 13191 Sandhurst Place, Santa Ana, Calif.
Filed Aug. 11, 1960, Ser. No. 49,044
6 Claims. (Cl. 3—1)



1. A heart valve comprising: a valve body; a movable valve member contained in said body; a suturing ring for connecting said valve body with the heart tissues by sutures, said suturing ring surrounding and being connected with said valve body and having a circular periphery radially outstanding from the valve body and having a substantial axial extent; said suturing ring comprising a layer of fabric folded upon itself to provide said substantial axial extent of said suture ring.

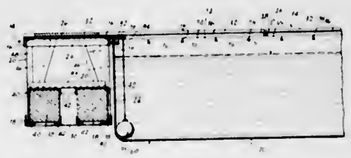
3,099,017
DISPOSABLE, COLLAPSIBLE URINAL
Lawrence J. Sullivan, Los Angeles, Calif. (5260 Palm Drive, La Canada, Calif.)
Filed May 31, 1962, Ser. No. 200,603
12 Claims. (Cl. 4—110)



8. A disposable, collapsible urinal formed up from a scored blank of foldable material to a non-leaking structure having a bottom, a body at least partly overlaying the bottom, said body including a top, a pair of sides and a pair of side flutes connected to the bottom, a neck extending upwardly and at an acute angle to the bottom to form a neck having a neck bottom, a neck top, and two fluted neck sides joining the neck top and neck bottom, the neck having an opening at its end farthest removed from the bottom, and joining to the bottom and body at its other ends, said blank when flat having: a bottom edge, two side edges and a neck edge; a substantially trapezoidal bottom surface bounded by a pair of bottom side scores, a bottom front score and an edge, the edge and bottom front score being parallel, and the bottom side scores converging toward the bottom front score; two pairs of body flute surfaces, one pair being contiguous to each of the bottom side scores, a first surface of each pair being at least partially bounded by the respective bottom side score and a bottom flute score, the other surface of each pair being at least partially bounded by the respective bottom flute score and a body side score, the body side score, bottom flute score and bottom side score all substantially intersecting at a body flute base junction at respective ends of the bottom front score, and said intersecting scores diverging from each other so that the body flute surfaces form substantially isosceles triangles with acute apex angles; two side surfaces, each bounded by a respective one of the body side scores, a body top score, and a transition score, the transition scores being substantial continuations of the bottom front score and intersecting the body top score at a front junction; a neck bottom surface contiguous to the bottom surface and partially bounded by the bottom front score, and a pair

of neck side scores, one neck side score extending away from each of the body flute base junctions, said neck side scores converging toward each other as they depart from the bottom front score; a first neck flute surface contiguous to each of the neck side scores partially bounded by a neck side score, and a neck flute score which extends from the body flute base junction and makes an acute angle with the respective neck side score; a second neck flute surface contiguous to each first neck flute surface which is partially bounded by the neck flute score, a neck top score which extends from the respective front junctions, and a transition score which extends from the body flute base junction to the front junction; two body top surfaces, one contiguous to each of the side surfaces and partially bounded by a respective top score; two neck top surfaces, each partially bounded by a respective neck top score, and a top medial score, whereby the urinal is folded up by folding the blank at the bottom flute scores and the bottom side scores so that the body flute surfaces and the bottom flute score overlay the bottom surface, the blank being folded at the body side scores and body top scores so that the side surfaces rise from the body flute surfaces and the body top surfaces overlap each other, the blank being folded at the bottom front score so that the neck bottom surface rises forwardly from the bottom surface, the blank being folded at the neck scores so that the neck top surfaces overlap each other, the blank being sealed at the joinder of the edges of the bottom surface and body flute surfaces, and at the overlapped neck top surfaces, whereby the device is set up, and whereby to collapse it the flute surfaces are pressed toward each other and the top pressed toward the bottom to form a rounding tab, and in which a locking tab is formed on one of the neck top surfaces.

3,099,018
FLOATING SWIMMING POOL
William A. O'Connell, 9301 Scottdale Ave., Jennings, Mo.
Filed Sept. 4, 1962, Ser. No. 221,121
3 Claims. (Cl. 4—171)



1. A swimming pool of the character described, including in combination:

a plurality of pairs of float units, each float unit being comprised of a rectangular skeleton framework of light weight material;

a pair of horizontally spaced pontoons supporting each unit from a body of water;

means hingedly connecting adjacent units to form a rectangular structure;

a deck panel atop each unit and coextensive therewith;

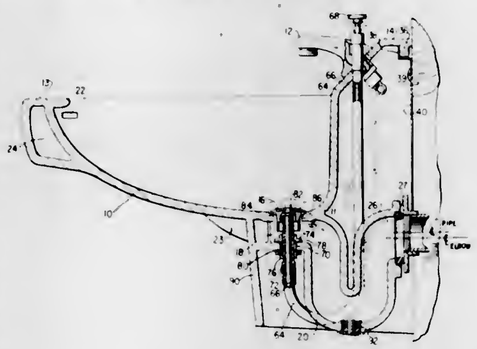
a basin of specially treated canvas material for containing a determined quantity of clear water dependingly supported from the float units within the inner area defined by the frameworks thereof;

a weight dependingly supported at each corner of the basin;

means for anchoring or mooring the connected float units and the basin supported thereby, said means comprising a pair of eye elements each rigid with one of the corner float units closest to shore, a pair of stakes driven into the ground inland of said body of water, and a pair of guy rods each having one end secured to one of said eye elements and its opposite end secured to one of the stakes;

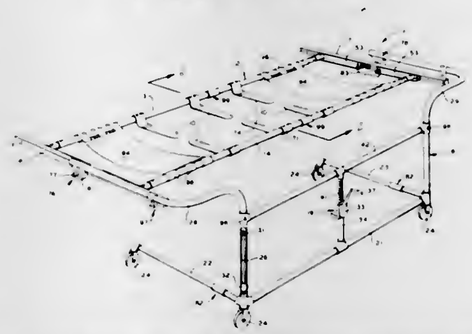
and means providing access from the shore to at least one deck panel and vice versa, said means comprising a gangplank having its inland end portion resting on the shore aforesaid and its opposite end portion resting on a deck panel.

3,099,019
DRAIN PLUG MECHANISM
James A. Tiller, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 23, 1962, Ser. No. 181,907
6 Claims. (Cl. 4—200)



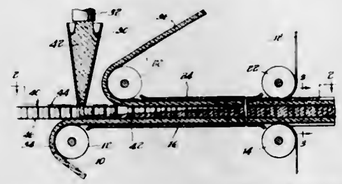
1. A drain operating structure comprising a bathroom fixture, a drain opening formed in said fixture, a drain plug adapted to close said opening, an annular flange depending from said drain plug, a flexible cable operating plunger for engaging the underside of said plug within said flange, said plug having free play clearance between said drain opening and said operating plunger and means to support the end of said cable underneath and inside of said drain plug flange to prevent drain water from entering into the end of said flexible cable.

3,099,020
PATIENT-HANDLING APPARATUS
Sidney R. Garfield, 1015 Timothy Lane, Lafayette, Calif., and William P. Davis, 124 Marian Place, Pleasant Hill, Calif.
Filed Apr. 17, 1961, Ser. No. 103,563
9 Claims. (Cl. 5—81)



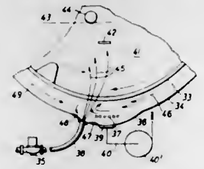
1. In a patient-handling apparatus, a patient-supporting device, comprising a pair of elongated end members mounted in spaced parallel relation, said end members being of channel shape with the opening of the channels providing longitudinally extending guideways, a pair of elongated side members extending between said end members, roller means secured to the opposite ends of said side members and engaged in said guideways for mounting said side members in parallel relation while permitting movement thereof together and apart, and a plurality of elongated thin blades secured in spaced relation along each of said side members and extending therefrom toward the opposite side member.

3,099,021
FOAM MATTRESS
Justin J. Wetzler, Evanston, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed May 28, 1957, Ser. No. 662,085
6 Claims. (Cl. 5—353)



1. A mattress comprising a plurality of coil springs defining a network of confluent spaces, an individual filmy envelope enclosing each coil spring, and an integral resilient cellular pad foamed in place within said network of spaces to encircle said springs.

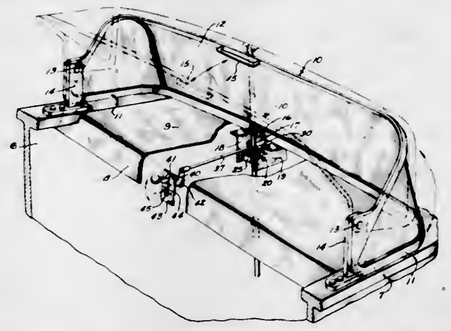
3,099,022
METHOD OF OPERATING A WASHING MACHINE
Hugo Werner Geschka, Angermund, Bezirk Dusseldorf, Josef Leonard Gillessen, Unterbach, near Dusseldorf, and Albert Heidenreich, Lintorf, Bezirk Dusseldorf, Germany, assignors to Maschinenfabrik Peter Pfennlingsberg G.m.b.H., Dusseldorf, Germany
Filed July 12, 1961, Ser. No. 123,491
Claims priority, application Germany Jan. 25, 1961
5 Claims. (Cl. 8—158)



1. In a method of operating an automatic washing machine in which fresh water is supplied during the wetting, washing and rinsing stages in separate portions at intervals to a washing drum which is intermittently driven, and a corresponding amount of used liquid is discharged through an overflow, the improvement which comprises the step of controlling the flow of water so that the supply of portions of fresh water during the wetting and rinsing stages takes place during the rotary movements of the washing drum and in the washing stage when the washing drum is stationary.

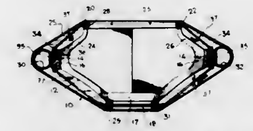
3,099,023
WRAP SPRING ADJUSTMENT LOCK FOR BOAT WINDSHIELD
Albert E. Buchholz, Kenosha, Wis., and Ralph R. Heck, Zion, Ill., assignors to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,969
4 Claims. (Cl. 9—1)

1. The combination of a boat hull, a windshield pivotally mounted on said boat hull, a control rod connected to said windshield, an anchorage on said boat hull through which said rod is axially movable, a wrap spring encircling said rod, said wrap spring having one end connected with said anchorage and having a portion adjacent its other end in releasable contractile engagement with said rod, said spring having, between said one end and said other end portion, at least a pair of axially spaced and resilient coils with a relaxed radius of no less than



that of said rod so as to be normally free of contractile engagement with said rod to permit limited resilient axial movement of said rod relative to said anchorage when said other end portion is contractively engaged with said rod, and means connected with said other end of said spring for effecting release of the contractile engagement of said other end portion of said spring with said rod.

3,099,024
FOLDING BOAT
Arnold S. Lewis, 200 Riverside Drive, New York, N.Y.
Filed Jan. 23, 1961, Ser. No. 84,350
2 Claims. (Cl. 9—2)



1. In a foldable boat, a frame having a plurality of substantially U-shaped cross ribs and substantially vertical parallel side walls carried by bights of the ribs, collapsible, inflatable and detachable air tubes extending outside of and along said side walls, spacer means interposed between the tubes and side walls to prevent shifting and chafing of the tubes on said side walls, and a flexible covering enclosing the boat frame and tightly stretched around the tubes when the tubes are inflated with air, said spacer means being resilient pads having corrugated faces juxtaposed to the tubes, a plurality of spaced cross braces detachably secured to upper ends of the ribs, deck boards extending transversely over the braces, and inflatable pontoons detachably carried at outer ends of the cross braces, and rods holding the pads in place.

3,099,025
WATER SKI
Thurman G. Merkley, 8015 SW. Westmoor Way, Portland, Oreg., and Ray H. Kruger, 16401 SE. River Road, Milwaukie, Oreg.
Filed Mar. 29, 1963, Ser. No. 270,496
2 Claims. (Cl. 9—310)

1. A water ski comprising:

an elongate ski member which is essentially flat in cross section and has a width a plurality of times greater than its thickness,

said member having a front end and a rear end and a topside to support a person,

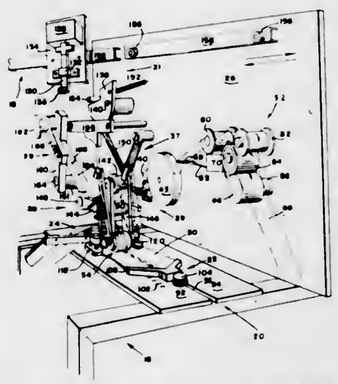
the underside of said member being defined by two

downwardly facing longitudinally extending marginal land portions flanking a central groove,
said land portions being generally flat for riding on the surface of a body of water,
said land portions facing downwardly in a direction generally normal to the plane of said ski member,
there being a decided change in surface contour at the inner edge of each land portion marking the end of each land portion and the beginning of said groove,
said groove extending from the rear portion of said member forwardly to a point at least one-third of the distance to the front end of said member,
said groove being symmetrically disposed relative to the longitudinal center line of said member,
said groove being defined in part by a bottom surface



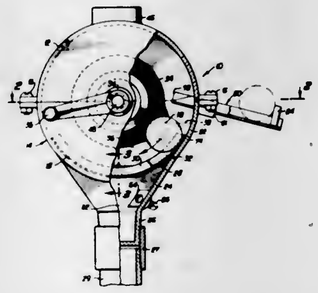
of a width which constitutes at least a major portion of the width of said groove,
said bottom surface being generally parallel to said land portions,
for the major portion of its length, said groove being of substantial width with no greater than a gradual width variation, and with said groove at any place along such major portion being less than twice as wide as at any other place,
for at least the major portion of the length of said groove, the combined widths of said land portions being such as to leave a groove having a width equal to at least a major portion of one-half the width of said member, and such combined widths being equal to at least a major portion of one-half the width of said groove,
for at least a major portion of the length of said groove, the grooving width being a plurality of times greater than the grooving depth,
the latter being less than half the thickness of said member,
the grooving depth at any selected point being no greater than any point rearwardly thereof.

3,099,026
METHOD FOR APPLYING ADHESIVE MATERIALS TO AN INSOLE
John B. Reid, Brighton, and Robert A. Spence, South Lincoln, Mass., assignors to Bain Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Feb. 21, 1962, Ser. No. 174,841
8 Claims. (Cl. 12—142)



1. In the manufacture of footwear, a method of applying double-faced, pressure-sensitive tape to an insole comprising the steps of (1) positioning said insole in fixed relation to receive and retain said tape on the surface of the insole within an area defined by the common outline formed by superimposing upon said insole an opposed image thereof, (2) applying said tape directly to the positioned insole within said area, (3) severing said tape at a predetermined length and (4) releasing the taped insole for subsequent application to a last.

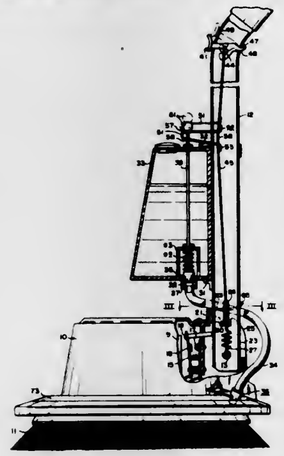
3,099,027
GOLF BALL WASHER
John B. Illo, 4709 Rodeo Lane, Los Angeles 16, Calif.
Filed Jan. 11, 1962, Ser. No. 165,522
14 Claims. (Cl. 15—21)



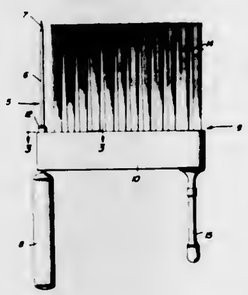
1. A golf ball washer which comprises a generally cylindrical case having a forward and a rear end, said case having a first opening therein adjacent the forward end through which golf balls are introduced into said case, and a second opening adjacent the rear end of said case for recovering the golf balls, a rotatable, generally cylindrical golf ball scrubbing brush axially supported in said case, the inner wall of said case and the periphery of said brush defining a clearance which is less than the diameter of a golf ball, and means in said case for guiding and directing the progress of the golf ball from the forward end of said case toward the rear end, whereby each golf ball introduced into said case is rendered in frictional engagement between said brush and the inner wall of said case resulting in the golf ball rotating in a direction counter to the rotation of the brush when the brush is rotated while simultaneously being rotated about the inner circumference of said case and across the surface of said brush from the forward end of the case to the rear end, said means for guiding and directing the progress of the golf ball being helically inclined in a direction from the forward end toward the rear end, and the inclination being such that the golf ball rotates about the inner circumference of the case a plurality of revolutions while progressing from the forward end of the case to the rear end, and under the influence of said guiding means, the golf ball shifts from a generally circular path of travel to a generally helical path of travel and back to a generally circular path of travel.

3,099,028
SURFACE TREATING APPLIANCE
William A. Ardito, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 1, 1961, Ser. No. 135,500
6 Claims. (Cl. 15—50)

1. In combination in a portable surface treating appliance, a supporting structure, a treating brush carried by said supporting structure, a propelling handle pivotally connected to said supporting structure for pivotal movement from between an upright vertical position above said supporting structure to an inclined position to one side of said supporting structure, latch means operably associated between said handle and said supporting structure for holding said handle in the upright vertical position, a reservoir for containing a treating liquid mounted on said handle, a flexible conduit connected to said reservoir and having a discharge nozzle for directing a treating liquid to a predetermined point relative to said brush for treating operations, valve means between said reservoir and said nozzle for controlling the flow of treating liquid through said conduit and single means on said handle for operating said latch means and for controlling the operation of said valve.

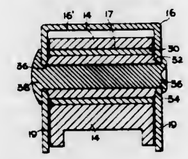


3,099,029
BRUSH
J T. Hanson, 6060 Parkdale St., Dallas, Tex.
Filed Aug. 10, 1960, Ser. No. 48,594
2 Claims. (Cl. 15—160)



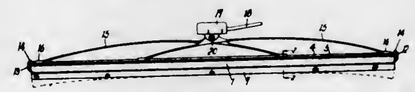
1. A brush comprising an anchoring pivot including an ice pick having an elongated shank comprising a work penetrating point on one end, an elongated handle fixed longitudinally on the other end portion of the shank, a collar fixed on the shank adjacent to but spaced from said handle, a bar having one end portion journaled on the shank between the collar and the handle for swinging movement therearound, a series of equally spaced bristle tufts on the bar paralleling the shank and terminating substantially flush with said point thereof, said bristles comprising broom corn and arranged in a row extending along the entire length of said bar, said bristles being of the same length, and an elongated operating handle near the free end portion of the bar paralleling and substantially the same length as the first named handle and providing means for swinging said bar in a circular path around the pivot, said operating handle being of circular cross-section.

3,099,030
RIVET AND BEARING STRUCTURE
Steve Zury, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed May 12, 1961, Ser. No. 109,741
11 Claims. (Cl. 15—250.35)



10. Structure of the kind described comprising a first elongate section provided with an opening extending transversely therethrough, a second section having side walls straddling said first section and provided with apertures aligned with said opening, an elongate member extending into said opening and having ends provided with means disposed in juxtaposed relation to inner faces of said side walls, and means carried by said member provided with portions forcibly engaging outer faces of said side walls serving to simultaneously effect a fixed interlocking connection between said means on said member and said inner faces and a freely movable pivotal connection between said sections.

3,099,031
WINDSHIELD WIPER
Arthur L. Ludwig, Hastings, Mich., assignor to Hastings Manufacturing Company, Hastings, Mich.
Filed June 20, 1962, Ser. No. 204,306
24 Claims. (Cl. 15—250.42)



13. A windshield wiper assembly comprising a body member of flexibly resilient material having a groove extending longitudinally thereof and opening at its inner edge and having a longitudinally extending rib on its outer edge, a blade member having an enlarged inner portion disposed in said groove and provided with a flexible portion projecting inwardly from said body member, and a pair of outwardly bowed springable support members disposed in crossed relation and pivotally connected to each other and having integral end portions disposed in retaining engagement with said rib on said body member.

3,099,032
COMBINED WASH SPONGE, BACK STRAP AND SOAP HOLDER
Harry Webb, 41 W. 27th St., New York, N.Y.
Filed Sept. 4, 1962, Ser. No. 221,232
6 Claims. (Cl. 15—509)

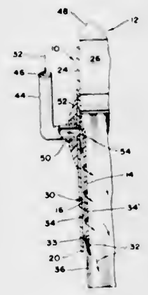


3. A washing and bathing appliance, comprising a porous sponge having a flat side, a flexible sheet secured

to margins of said side leaving a central portion of said sheet unattached to an adjacent central portion of said side, said sheet having a slit therein at the central portion thereof providing an opening for a detergent receiving pocket between the central portions of said sheet and side of the sponge, said sheet having tabs extending beyond said sponge at opposite ends thereof, and mutually engageable fastener members on respective ends of the tabs for forming the tabs into a loop to receive the hand of a person using the appliance, each of the fastener members being a snap fastener element, one of said members having double studs extending in opposite directions, the other of the fastener members having double recesses opening in opposite directions.

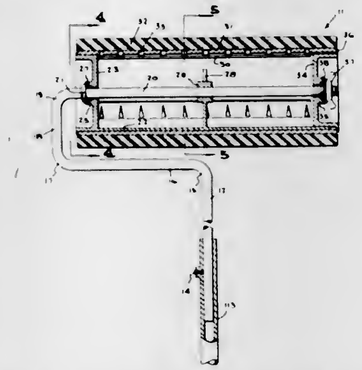
6. A massaging appliance, comprising a long flexible strap, said strap having a pair of fastener members spaced inwardly of opposite ends of the strap, and a flexible strip having further fastener members at opposite ends thereof engaged with the respective fastener members of the strap to juxtapose the strip to the strap at a central portion thereof, said strip having an outer corrugated side for massaging a body part, each of the fastener members on the strap and strip being a snap fastener element, one of the fastener members on the strap and one of the fastener members on the strip each having double studs extending in opposite directions, the other one of the fastener members on the strap and the other one of the fastener members on the strip each having double recesses extending in opposite directions.

3,099,033
PAINT DISTRIBUTOR ATTACHMENT FOR A PAINT BRUSH
James W. Carpenter, 406 Orlando Ave., Akron, Ohio
Filed Dec. 28, 1960, Ser. No. 79,000
5 Claims. (Cl. 15—551)



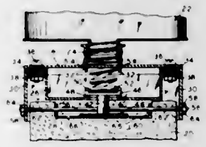
5. A paint distributor attachment for the ferrule portion of a paint brush, comprising, an encircling band adapted to be secured about said ferrule portion, said encircling band having resilient means flexibly attached thereto constituting a flattened pocket which is adapted to lie closely and resiliently against the bristles of a paint brush, said flattened pocket having ingress and egress means, said egress means being located on the side of the pocket which is adapted to lie adjacent the brush bristles, said ingress and egress means being adapted to conduct a controlled flow of paint originating from a remote source into said ingress means and said pocket and out of said egress means for distribution to the adjacent bristles of a paint brush, said egress means being spaced from the outer most edges of said flattened pocket, and said flattened pocket further permitting the formation of a slight meniscus of paint between the egress means of said pocket and the said adjacent bristles.

3,099,034
PAINT ROLLER OF THE FOUNTAIN TYPE
Ragnvald G. Leland, 2334 W. 241st St., Lomita, Calif.
Filed Jan. 29, 1962, Ser. No. 169,688
9 Claims. (Cl. 15—562)



2. A paint roller comprising a handle provided with a shaft, an abutment collar on said shaft, a cylindrical paint container rotatably mounted on said shaft with an end thereof adjacent said collar, said container being formed with at least one slot extending a substantial distance along its length, outwardly projecting abutment means at said end of the container, a paint spreading cylinder concentrically and adjustably mounted on said container with one end engaging said abutment means and having an outer layer of yieldable porous material, said cylinder being formed with apertures registrable with said slot, a circular cover rotatably mounted on said shaft and engaged in the opposite end of said container, said cover having a peripheral flange engageable against the other end of said cylinder, and a nut threaded on the shaft outwardly adjacent the cover and being adapted to exert inward force on the cover, whereby to urge the cylinder against the abutment means and to hold the cylinder in adjusted position relative to the container.

3,099,035
WAX APPLICATOR
Herbert B. Plost, 2223 S. Darlington Place, Tulsa, Okla.
Filed May 15, 1961, Ser. No. 110,023
1 Claim. (Cl. 15—569)



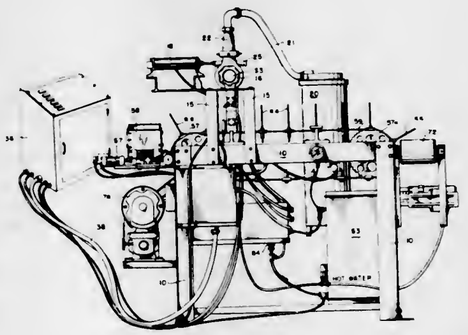
A wax applying device adaptable to receive and support a container of liquid wax and adaptable to receive a handle whereby said applicator may be manipulated about a floor or other flat surface, comprising, in combination;
a rectangular applicator base having an upper substantially flat surface and downwardly extending sides;
a nozzle portion integrally formed in said upper flat surface adaptable to threadably receive said container of liquid wax, said upper flat surface having at least one opening therein communicating with said nozzle portion;
a reservoir sealably supported to the lower side of said upper surface of said applicator base adaptable to receive and contain liquid wax from said openings in said upper flat surface, said reservoir having an opening in the lower portion thereof;
a valve flapper within said reservoir and resiliently biased over said opening to normally close said opening;
a rectangular sponge removably positioned in said applicator base below said reservoir, the upper portion of said sponge encompassed by said downwardly extending sides of said applicator base;
a perforated distribution plate recessed within the top of said sponge to receive and distribute liquid wax over a substantial portion of said upper surface of said sponge;
means connecting said sponge and said distribution plate to said downwardly extending sides of said applicator base, said means allowing said distribution plate and said sponge vertical and horizontal movement with respect to said reservoir;
a valve actuator rod having a flat upper end surface which is normally in contact with the bottom of said normally closed valve flapper, said rod extending downward through said opening and terminating its lower end with a substantially flat base member in contact with the upper side of said distribution plate, said rod and base movable relative to said reservoir within the limitations of said opening whereby said valve can be opened to admit wax from said reservoir unto said distribution plate upon any relatively vertical movement of said distribution plate with respect to said reservoir.

3,099,036
SWIVEL MOUNT FOR WINDOWS
Flemming Bank, Portland, Oreg.
(40 Moss Ave., Oakland, Calif.)
Filed Apr. 12, 1961, Ser. No. 102,529
2 Claims. (Cl. 16—163)



2. In a swivel structure for hinging the central portion of an edge of a window casement to the corresponding portion of an outer window frame to mount the casement for 180° rotation relative to the frame, an outer plate adapted to be secured to the inner edge of such an outer window frame, an inner plate adapted to be secured to the outer edge of such a window casement, a rigid strap-like link, means connecting one end of said link pivotally to said outer plate to mount said link on one side of said outer plate, means connecting the other end of said link pivotally to said inner plate to mount said inner plate on the side of said link opposite to the side of said link adjacent to said outer plate so that said link lies between said plates, first stop means limiting pivotal movement of said link and said outer plate through a first range of substantially 90°, second stop means limiting pivotal movement between said link and said inner plate through a second range of substantially 90°, and means for preventing pivotal movement between said link and said inner plate except when said link is in a position relative to said outer plate at one end of said first range, said link being of such a width and so connected to said plates and said plates being adapted to be so fastened to the window frame and casement that said link lies wholly with the projected area of the casement when the casement is in a closed position relative to the frame.

3,099,037
MOCK CHICKEN LEG MACHINE
Frederick H. Blake, Bellevue, and Frederick M. Thorburn, Redmond, Wash., assignors to Sunnee Brand Meat Company, Inc., Seattle, Wash., a corporation of Washington
Filed July 10, 1961, Ser. No. 122,816
8 Claims. (Cl. 17—1)

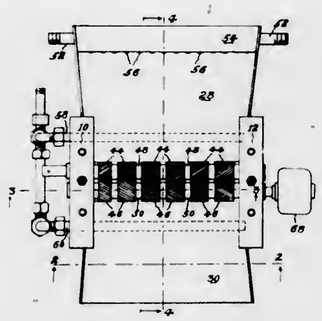


1. A mock chicken leg machine, comprising: a framework for supporting a plurality of transverse shafts; transversely spaced chain sprockets disposed in coacting pairs on said shafts; two spaced apart parallel chains operatively driven and supported by said sprockets and having the upper run of said chains at an easily observable level; an intermittent driving means for said chains arranged to stop said chains in synchronization with other elements of said machine; a plurality of longitudinally spaced carrier bars secured at opposite ends to each of said chains; a stick clutch secured at substantially the midpoint of each of said bars for gripping the lower ends of said sticks and carrying them in a vertical position; a pair of coacting meat compressing cavity mold members with their cavities on the same level as the upper end of sticks carried by said bars; means for supplying ground meat and admixtures under pressure; a metering means for measuring a serving amount of said meat and passing it downwardly in synchronization with the movement of said mold members; a transversely movable knife disposed between said metering means and said mold members to cut off a predetermined amount of meat; fluid operated means for operatively moving said knife; fluid operated means for sequentially closing said mold members for compressing a metered amount of meat on a stick handle; a conveyor belt for carrying the finished meat servings away from the machine; stick ejector means for ejecting the finished stick mounted servings from said carrier bars and power switching means for insuring sequential operation of the said coacting elements of said machine.

3,099,038
POULTRY GIZZARD SKINNER
Ben E. Platt, P.O. Box 494, Gainesville, Ga.
Filed Oct. 26, 1961, Ser. No. 147,959
8 Claims. (Cl. 17—11)

1. In a device of the character described, a supporting framework, blocks anchored to opposite sides thereof, a plurality of spaced shafts rotatably mounted in said blocks, each shaft having thereon a plurality of spaced toothed sections, each of the said toothed sections on one of said shafts intermeshing with a single correspond-

ing toothed section on the other of said shafts, to form a pair of intermeshed toothed sections and each pair of



said intermeshed teeth sections being spaced from the next adjacent pair of intermeshed toothed sections.

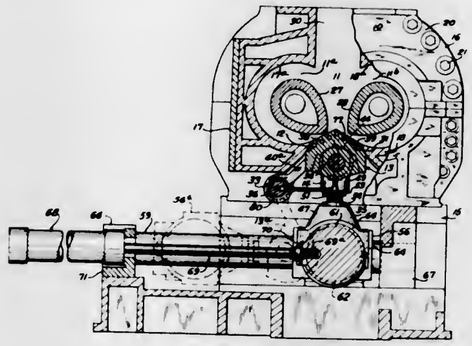
3,099,039
EVISCERATING METHOD
Frank H. Ine, Milwaukee, Wis., assignor to John Mohr & Sons, Chicago, Ill., a corporation of Illinois
Original application Feb. 27, 1958, Ser. No. 717,964, now Patent No. 2,997,736, dated Aug. 29, 1961. Divided and this application June 26, 1961, Ser. No. 128,289
4 Claims. (Cl. 17—45)



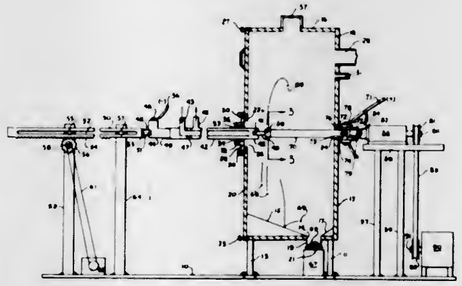
1. A method of removing animal organs, such as poultry kidneys, connected by tissue to a body cavity, the steps of subjecting the tissues connecting the organ to the body cavity to a localized fluid jet stream of sufficient velocity and impinging force to enhance rupturing and loosening of the connecting tissues from the body, and simultaneously subjecting said organ to localized suctional forces adjacent said jet stream tending to withdraw said organ from said cavity.

3,099,040
DISCHARGE DOOR MECHANISM FOR MIXING MACHINE
James T. Matsuoka, Brecksville, Ohio, assignor to Stewart Bolling & Company, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 27, 1961, Ser. No. 141,204
3 Claims. (Cl. 18—2)

1. In a plastic mixing machine, housing means having a mixing chamber provided with a discharge opening, seat means on said housing adjacent said opening, a door engageable with said seat means for closing said opening and disengageable therefrom for uncovering said discharge opening, pivot means on one side of said discharge opening for connecting said door with said housing means and providing for swinging of the door toward and way from said seat means, power means connected with said door at a point of the latter spaced from said pivot means for swinging the door to open and closed positions, and flexible bushing means in said pivot means and providing for a limited self-positioning shifting of said door relative to said discharge opening in response to the power actuation of said door and a misaligned engagement of the door with said seat means.

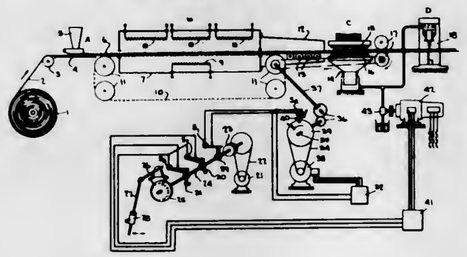


3,099,041
METHOD AND APPARATUS FOR MAKING POWDER
Albert R. Kaufmann, Lexington, Mass., assignor to Nuclear Metals, Inc., Concord, Mass., a corporation of Massachusetts
Filed Mar. 8, 1961, Ser. No. 94,299
8 Claims. (Cl. 18—2.6)



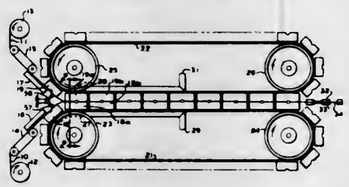
1. Apparatus for making fine powder of uniform character and not exceeding in size 200 microns in diameter comprising a chamber, means for introducing a tubular consumable electrode within said chamber, means for rotating said consumable electrode within said chamber, a conventional electrode operatively mounted within said chamber and in cooperation with said rotating consumable electrode, with the longitudinal axes of said tubular consumable electrode and of said conventional electrode being disposed in a parallel but spaced apart relation, means for maintaining an electric arc between said rotating consumable electrode and said conventional electrode progressively to melt said rotating consumable electrode whereby uniformly shaped portions not exceeding 200 microns in diameter of said rotating tubular consumable electrode are progressively thrown off by centrifugal force from the molten end thereof, and means for collecting said portions.

3,099,042
PROCESS AND APPARATUS FOR PRODUCING A POROUS RESIN PLATE
Richard Rabl, Vienna, Austria, assignor to Varta Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Filed June 24, 1958, Ser. No. 744,284
Claims priority, application Austria June 29, 1957
7 Claims. (Cl. 18—4)



3. An apparatus for producing shaped porous synthetic resin plates, said apparatus comprising a supply of a flexible support band of a non-conductive, readily deformable material, means for depositing a layer of synthetic resin powder on the support band, a heating means for sintering the powder layer, means for moving the support with the powder layer through the heating means, a stationary molding press, means for actuating the press, means for pulling the support band with the sintered powder layer through the molding press, and control means synchronized for alternately actuating the support moving and pulling means to impart an intermittent forward movement to the support band and the press actuating means for actuating the press when the support band stands still between intermittent forward movements.

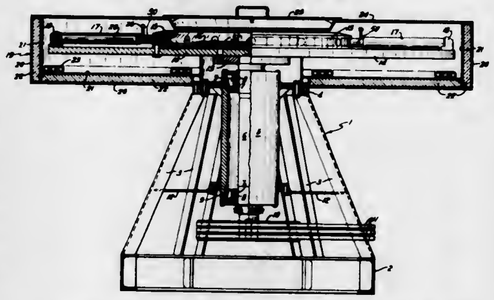
3,099,043
METHOD AND APPARATUS FOR VACUUM FORMING HOLLOW ARTICLES
Edward C. Held, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 27, 1961, Ser. No. 148,144
8 Claims. (Cl. 18—19)



1. A process for simultaneously producing a plurality of hollow articles from thermoplastic material which comprises passing two sheets of thermoplastic material into contact with a softening amount of heat, then into contact with two opposing mold die halves each containing a plurality of matching cavities; exhausting air from beneath each sheet to cause the thermoplastic material to conform to the shape of the mold halves; bringing the edges of the mold halves together to form a plurality of hollow articles; maintaining communication between the atmosphere and the interior of the hollow articles; and separating the mold halves to release a plurality of molded articles.

4. Apparatus for producing simultaneously a plurality of hollow thermoplastic articles comprising a plurality of matching mold shell halves each having contained in and spaced from said shell multiple perforated cavities and a manifold means communicating with an opening in each cavity and with the exterior of the mold; a port means in each of said shells for exhausting air therefrom; means for continuously moving and bringing into juxtaposition successive pairs of mold halves; means for continuously supplying a pair of spaced apart, softened thermoplastic sheets to the mold halves so as to cover the mold cavities as the matching halves are brought into juxtaposition; means to exhaust air from the space within the shell of the mold halves; and means to maintain the manifold in communication with the interior of the hollow article and the atmosphere.

3,099,044
APPARATUS FOR MAKING ARTICLES OF POLYURETHANE PLASTICS
Franz Gottfried Reuter, Lemforde, Hannover, Germany, assignor, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Sept. 10, 1958, Ser. No. 760,215
Claims priority, application Germany Sept. 13, 1957
6 Claims. (Cl. 18—26)



1. An apparatus for centrifugally casting plastic products comprising a mounting plate connected to and rotatably driven by a drive shaft, a mounting wheel detachably connected to said mounting plate, a mold-positioning element detachably connected to said mounting wheel, said mold-positioning element being concentric with said mounting plate and said mounting wheel, a plate member fitting within said mold-positioning element and attached to said mounting plate to direct the flow of plastic material introduced therein, said mold-positioning element having a plurality of bores through the wall thereof, a plurality of molds each of which defines a mold cavity, each of said molds being connected to said mold-positioning element by an insert member, each of said insert members being slidably disposed in one of said bores in said mold-positioning element and movable radially with respect thereto, each of said insert members having a passageway therethrough to convey the plastic material to said mold cavity and a mold securing means on the periphery of said mounting wheel for holding said molds in place.

3,099,045
METHOD AND APPARATUS FOR MOLDING PRE-EXPANDED PLASTIC BEADS
Arvid Honkanen, Belvidere, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed June 1, 1960, Ser. No. 33,328
17 Claims. (Cl. 18—30)

2. A method of pneumatically depositing a full charge of plastic particles in a mold cavity comprising the steps of,

flowing a pressurized gas stream along a main flow path at a high velocity,

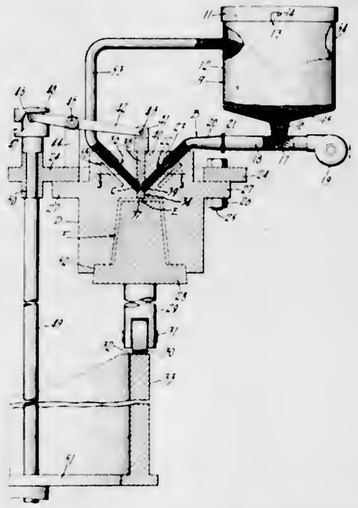
feeding plastic particles from a storage reservoir into said gas stream,

entraining said plastic particles in said gas stream thereby carrying said plastic particles along said main flow path,

joining said main flow path as a common juncture to first and second alternate flow paths leading back to said reservoir and into said mold cavity respectively,

providing a resistance to the flow of said gas stream and entrained particles from said main flow path into said first alternate flow path,

providing a substantially smaller resistance to the flow of said gas stream and entrained particles from said main flow path into said second al ernate flow path as compared to the flow resistance into said first alternate flow path whereby said gas stream and entrained particles automatically flow primarily into said second flow path and into said mold cavity,



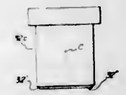
flowing said gas stream through said mold cavity and immediately thereupon venting the gas directly to the atmosphere while retaining and depositing said entrained plastic particles in said mold cavity,

agitating said deposited plastic particles in said mold cavity by said gas stream flowing therethrough to uniformly and completely distribute the particles throughout all portions of said mold cavity until said cavity is uniformly and fully charged with said plastic particles,

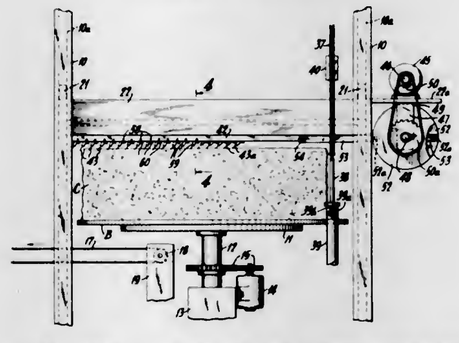
and immediately and automatically thereupon flowing said gas stream and entrained particles into said first flow path to carry said entrained plastic particles back to said reservoir.

3,099,046
MOLD FOR SNAP-IN BUSHING
Ferdinand Klumpp, Jr., Union, and William H. Jemison, Berkeley Heights, N.J., assignors to Heyman Manufacturing Company, Kenilworth, N.J., a corporation of New Jersey
Original application Nov. 13, 1959, Ser. No. 852,689, now Patent No. 3,001,007, dated Sept. 19, 1961. Divided and this application Dec. 31, 1959, Ser. No. 863,370
11 Claims. (Cl. 18—42)

3. A cavity part for a mold of the character described; said cavity part having a longitudinal axis and a work face substantially perpendicular to said axis, said cavity part at said work face thereof having an inside substantially cylindrical surface substantially concentric with respect to said axis, said cavity part being provided in said work face thereof with a slot extending from said inside cylindrical surface substantially radially outwardly with respect to said axis.



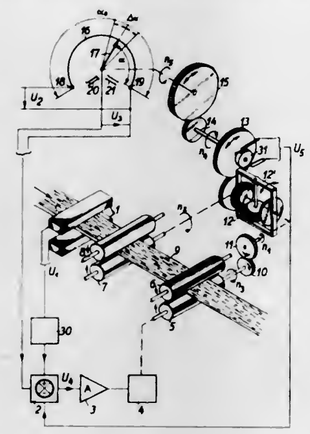
3,099,047
APPARATUS FOR BREAKING FIBROUS MASSES
Frank B. Morrill, North Adams, Mass., assignor, by mesne assignments, to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed July 6, 1961, Ser. No. 122,164
9 Claims. (Cl. 19—81)



1. Apparatus for breaking up a fibrous cheese which comprises a rotary platform member for supporting the fibrous cheese, means for rotating the platform member and the cheese thereon, a spiked member mounted for horizontal movement above the platform member and having a plurality of depending spikes engageable with the top of said cheese, mechanism operatively connected to said spiked member for moving said spikes in a horizontal direction to claw fibers from the rotating cheese and displace the fibers over the periphery of the cheese, whereby a layer of fibers is removed from the rotating cheese, and actuating means for moving one of said members toward the other member in a vertical direction to remove successive layers of fibers from the rotating cheese by said horizontal movement of the spikes.

3,099,048
APPARATUS FOR AUTOMATICALLY CONTROLLING THE DRAFTING OF ELONGATE MATERIALS
Hans Locher, Uster, Switzerland, assignor to Zellweger Ltd., Uster, Switzerland, a Swiss corporation
Filed Jan. 2, 1959, Ser. No. 784,568
Claims priority, application Switzerland Jan. 9, 1958
11 Claims. (Cl. 19—240)

1. Means for controlling material drafting operations between a first pair of drafting rolls and a pair of variable speed drafting rolls, said means comprising: measuring means positioned before said first pair of drafting rolls to detect variations in the material passing thereto; compensating means to which a signal from said measuring means is fed; subtracting means coupled to the drafting rolls providing a signal indicative of the difference in angular speed between that of the first pair of drafting rolls and the variable speed drafting rolls, the difference signal being fed to said compensating means; reducing means interposed between the variable speed drafting rolls and said subtracting means and means directing a control signal from said compensating means to a drive for said variable speed drafting rolls, whereby the long term variations due to disturbing influences on the measuring means are eliminated.

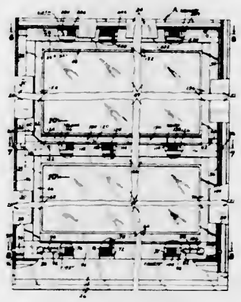


3,099,049
LIFT BEAM ASSEMBLY
Robert L. Webb, Oklahoma City, Okla.
Filed May 3, 1962, Ser. No. 192,102
3 Claims. (Cl. 20—16)



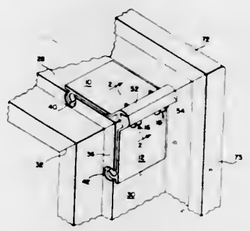
1. A lift assembly for a horizontal door covering a stairwell, comprising: a pair of elongated tubular members joined in telescoping relation; a helical expansion spring surrounding the innermost one of said telescoping members; mounting means pivotally connecting one end of the innermost said member to the upper surface of one step in said stairwell, said mounting means comprising a mounting tube telescopingly received by the depending end portion of said inner tube, said mounting tube having an apertured hemispherical depending end, an anchor pin secured by one end portion within said one step of said stairwell and projecting upwardly into said mounting tube, and a bearing washer interposed between the upper surface of said step and the hemispherical end of said mounting tube; means pivotally connecting the uppermost end of said outer member to the lower surface of said door; and latch means pivotally connected to said outermost member intermediate its ends and releasably engaged with the wall forming one side of the stairwell when the door is in open position.

3,099,050
WINDOW SASH CONSTRUCTION
Frank W. Hetman, Minneapolis, Minn., assignor to De Vac, Inc., Minneapolis, Minn.
Filed Feb. 24, 1960, Ser. No. 10,699
6 Claims. (Cl. 20—52.2)



3. In a sash holder, the combination of a cartridge and a sash rail having recess means for said cartridge, said cartridge being slidably mounted in said rail recess means and having an elongated body member having a recess extending longitudinally therein, said body member having a first slot formed on one side thereof and a second slot on the bottom thereof, a locking pin slidably mounted in said recess of said body member and spring urged outwardly thereof, an actuating pin connected to said locking pin and extending outwardly through said bottom slot of said cartridge and a stop pin connected to said locking pin and extending outwardly through said first side slot of said cartridge.

3,099,051
CORNER REINFORCING AND ADJUSTING MEANS FOR FRAMES
Albert J. Chenoweth, Winslow, Wash., assignor to Case-Jamb, Inc., Bainbridge Island, Wash., a corporation of Washington
Filed May 31, 1960, Ser. No. 32,637
2 Claims. (Cl. 20—92)



1. A corner joint construction comprising, a first frame member and a second frame member, said frame members each having an inner surface, an outer surface and a beveled end surface, said beveled end surfaces meeting in abutting relationship to form a mitre joint, a pair of corner engaging members, each said corner engaging member comprising a straight web portion hav-

ing anchor means adjacent one end thereof remote from said abutting end surfaces securing said corner engaging member to said frame and an outwardly bent portion adjacent the other end of said web, said outwardly bent portions extending away from said frame members in parallel spaced relation at points intermediate said abutting end surfaces and said anchor means providing a space between said outwardly bent portions, one of said outwardly bent portions having a female interlocking member positioned thereon extending into said space and the other of said outwardly bent portions having a male interlocking member positioned thereon received in said female member, one of said straight web portions overlying said outer surface of said first frame member with its anchor means secured to said first frame member, the other of said web portions overlying said outer surface of said second frame member with its anchor means secured to said second frame member, and threaded fastener means passing through said parallel spaced outwardly bent portions inwardly of said interlocking members to resiliently pivot said web portions toward one another.

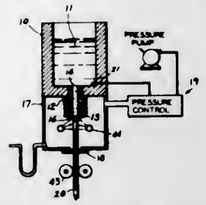
3,099,052
PROCESS AND APPARATUS FOR CASTING UTILIZING GAS STREAM
Kazuro Suzuki, Naruo, Nishinomiya-shi, Hyogo-ken, and Hiroshi Yamaoka, Kadoma-cho, Kitakawachi-gun, Osaka-fu, Japan, assignors to Sumitomo Kinzoku Kogyo Kabushiki Kaisha, Osaka-shi, Japan, a corporation of Japan
Filed Oct. 28, 1959, Ser. No. 849,228
7 Claims. (Cl. 22—73)



1. A process for casting metal which comprises introducing a molten metallic substance into a mold permeable to air through an inlet at the bottom of the mold so that the substance rises in the mold, and blowing a pneumatic medium continuously through an opening at the top of the cavity into the mold in a manner such that said medium runs substantially counter to the rising substance until the mold is filled with said substance, and produces a pneumatic current of a fixed flow rate, which current passes continuously through the mold to carry away gas produced within the mold.

3,099,053
APPARATUS AND PROCESS FOR CONTINUOUS CASTING
Sigdon A. Eliot, North Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Mar. 25, 1959, Ser. No. 801,923
5 Claims. (Cl. 22—200.1)

1. In a method of continuously casting metal in a forming die containing two different melting constituents including feeding said metal in molten condition through an apertured die, cooling the molten metal so as to develop a solidification front within the die, said solidification front characterizing a region in said die within which the molten metal changes to a solid metal, a high melting constituent of said metal freezing first to develop a peripheral skin, said skin connecting said die with completely solidified metal below said region, said skin being susceptible of rupture as a result of a head of said molten metal: the improvement in combination therewith which comprises the step of supporting the skin by means of subjecting said skin to sufficient fluid pressure effective to



counterbalance said head whereby the skin is precluded from rupturing, said degree of support being measured by the head of molten metal above the solid metal.

3,099,054
FLEXIBLE MULTI-PURPOSE CLAMP
Lloyd W. Spiro, Canoga Park, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Apr. 24, 1961, Ser. No. 104,979
1 Claim. (Cl. 24—16)



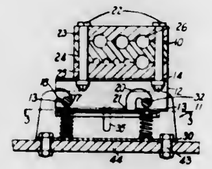
A tubing or wiring supporting clamp comprising, a flexible strap having through perforations along its length and a base integrally attached thereto, said base having opposed upper and lower walls interconnected along their sides to form a through opening or slot having smooth walled surfaces adjacent the junction of the strap and base and adapted to receive the end of said strap, a U-shaped channel at the other end of said base and adjoining said slot, said channel having a through perforation for registry with a selected perforation of said strap, diamond knurled surfaces on the bottom of said channel and on the mating surface of the strap and means including said perforations for holding the knurled surfaces in intimate contact.

3,099,055
STRAP TENSIONING DEVICE
John Richard Huber, Hollcong, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania
Filed July 22, 1960, Ser. No. 44,801
4 Claims. (Cl. 24—68)



1. A strap adjusting and tensioning device having a frame, an anchor fitting located at one end of said frame, strap adjusting and load transfer mechanism attached to said frame, said mechanism including a handle, a pivot attaching said handle to said frame, a strap engaging beam mounted on said pivot and extending transversely with respect to said frame, a second strap engaging beam attached to said handle in offset relation to said first strap engaging beam, said handle being movable to a position closely adjacent said frame, a latch member interengaging said handle and said frame when the handle is in latched position, a strap clamping device movably mounted on said frame in a position offset from the pivotal mounting of said handle, and a strap including a first portion extending into said frame at the end opposite said anchor fitting and engaging both of said beams, said strap also including a second portion extending from said beams outwardly through the end of said frame at which said first strap portion extends into said frame, said clamping device being located between said strap portions, said clamping device incorporating a cam engageable with said first strap portion and an extension arm engageable with said second strap portion.

3,099,056
CLAMP
William Jack Hurcomb, Arnold, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Nov. 2, 1961, Ser. No. 149,544
Claims priority, application Great Britain Nov. 7, 1960
6 Claims. (Cl. 24—84)



1. A clamp comprising a first membed adapted to be secured to a support, and having a forwardly extending planar wall, two spaced pins connected to said wall at forward locations thereof, said pins being spaced along the transverse extent of said wall and projecting at right angles therefrom, a movable plate disposed rearwardly of said pins and adjacent said wall, spring means urging said plate forwardly towards said pins in a direction at right angles to the plane containing said pins, and a second member having two hook portions, each hook portion comprising a shank extending rearwardly of the second member and connected to a forwardly extending toe, said shank and toe defining a hook-eye whose forward side is open and which is adapted to partially embrace a respective one of said pins, said hook-eyes being spaced by a distance equal to the spacing between said two pins and the toes of said hook portions being on corresponding sides of said hook-eyes, whereby said second member may be moved rearwardly towards said first member to cause both hook portions simultaneously to engage and depress said plate, and then transversely and forwardly relative to said first member to cause each of said pins to enter a respective one of said hook-eyes laterally through said forward open side thereof, said plate being movable forwardly to maintain said pins partially embraced within said hook-eye so that said two members are held relatively to one another against transverse and separating movement, said second member having clamp means for clamping at least one object thereto.

3,099,057
SELF-RETAINING FASTENERS
Walter L. Cook, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed July 24, 1961, Ser. No. 126,112
15 Claims. (Cl. 24—141)

3. A fastener comprising elastic thermoplastic-like material adapted for mounting in a structural support having a fastener-receiving hole therein, said fastener having a body insertable through said hole and comprising a tubular portion, with stop means on one end thereof disposable adjacent to one side of said support with such tubular portion projecting beyond the opposite side of said support, said tubular portion having a wall which is weakened by a reduction of thickness in an annularly extending zone longitudinally located inwardly



from the projecting outer end of such tubular portion and outwardly from said opposite side of the support, the outer end of said projecting tubular portion being expandable progressively by externally applied force until such outer end flips over by self-propelled elastic action of the material in a reverse fold of the tubular portion back upon itself about said zone of weakening, whereby elastic tension in such outer end thereafter maintains said reverse fold as a stop on the projecting end of the fastener.

3,099,058
UPHOLSTERY TACKING STRIP
Winslow L. Pettingell, Highland Park, Ill. (% McCloskey & Pettingell Associates, 4122 W. Peterson Ave., Chicago 46, Ill.)
Filed Oct. 20, 1960, Ser. No. 63,926
7 Claims. (Cl. 24—152)



1. A fastening strip for securing upholstery fabric to a surface formed from a single strip of material and adaptable to curvatures in different planes of said surface, comprising: a series of flat clips having a generally U-shaped configuration, one leg of said U provided with at least one prong at the end thereof and the other leg of said U having a channel portion formed by the end thereof extending toward said one leg and open toward said prong, said clips being flexibly joined at the edges of said other leg by an accordion-like pleated portion, having the pleats transverse to the length of the strip whereby said pleated portion is readily flexible and allows said clips to move relative to each other and be formed about sharp radii and curvatures of said surface in different planes; means for fastening said strip to said surface; and means for securing said fabric between said legs and within said channel.

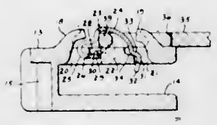
3,099,059
SPRING-LOCKING SLIDER FOR ZIPPER FASTENERS
Otto J. Huelster, Lake Plymouth, Plymouth, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Jan. 5, 1962, Ser. No. 164,452
3 Claims. (Cl. 24—205.14)

1. A three-piece spring-locking slider for zipper fasteners comprising:

(*a*) a slider body having front and back wings joined together at one end by a neck so as to provide a Y-shaped channel between them, said front wing having transversely extending upper and lower spaced openings with a bridge of wing material between them, and front opening recesses extending laterally into the wing material from said upper opening;

(*b*) upstanding upper and lower lugs struck up from the material of said front wing, one on the side of each opening opposite said bridge, said lugs extending also over said openings toward each other;

(*c*) a locking member of spring metal positioned over said bridge and having a central arched portion between said lugs, a U-shaped loop extending under the upper lug with the inner arm of said loop extending into said upper opening, an extension at the



lower end of said arched portion projecting through the lower opening and providing a locking pin movable into and out of the slider channel with a shoulder between said pin and arch, said lower lug extending over said shoulder to limit outward movement of said locking member;

(*d*) laterally extending ears on the inner arm of said U-shaped loop fitting in said lateral recesses;

(*e*) means for anchoring said ears in said lateral recesses; and,

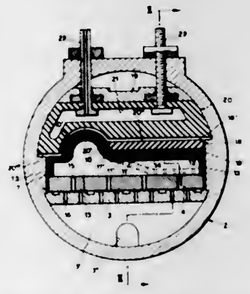
(*f*) a pull tab having a pintle extending under said arch and confined thereby in the space between said arch and said bridge, whereby outward force exerted on the pull tab will move the locking pin out of the slider channel against the spring action of said U-shaped loop.

3,099,060
COUPLING FOR FLANGED PIPE ELEMENTS
Douglas Smith, 30 Highland Ave., Rowayton, Conn.
Filed Nov. 6, 1959, Ser. No. 851,435
2 Claims. (Cl. 24—279)



1. A light weight clamp for connecting flanged pipe elements comprising a band adapted to surround two flanges and lugs along the opposite edges of the band said lugs each having an intermediate portion and having inner and outer faces, the lugs being curled radially inwardly and toward the middle of the band, the outer faces of the curled intermediate portion of the lugs being adapted to contact and press the pipe flanges together, there being a depression on the inner face of the band opposite each lug, the lugs being notched to provide free ends of reduced with substantially the same as the depressions and adapted to seat therein when curled into position against the pipe flanges, the curled intermediate portions of the lugs contacting substantially all the periphery of the flanges they being substantially wider than the ends of the lugs.

3,099,061
APPARATUS FOR SHAPING AND COMPRESSING SHEETS OF ASBESTOS CEMENT INTO PARTICLES OF COMPLEX CONFIGURATION
Giorgio Marchioli, Via G. B. Morgagni 22, and Giuseppe Gremigni, Via Lomellina 52, both of Milan, Italy
Filed July 6, 1961, Ser. No. 122,158
6 Claims. (Cl. 25—43)



1. An apparatus for shaping and compressing sheets of asbestos cement into articles of complex configuration, comprising

A. a horizontal, rigid tubular housing including end walls having substantially centrally located openings therein,

B. a slide having a length at least twice as large as the length of said housing and being slidable through said openings in the end walls of the housing so as to selectively dispose different portions of said slide within said tubular housing,

C. a mould carried by each of said portions of the slide, each mould including

(1) a rigid lower part having an upper surface conforming to the underside of an article to be shaped thereby, and

(2) a removable, elastically yieldable solid upper part extending over at least a section of said lower part to receive a sheet of asbestos cement therebetween when the related portion of said slide is disposed outside of said housing,

(3) said elastically yieldable upper part of the mould having a lower surface conforming to the configuration of the corresponding part of an article to be shaped by the mould,

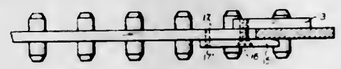
D. an inflatable body fixed within said housing above said slide, and

E. means for supplying fluid under pressure to said body so as to inflate the latter and thereby cause the body to press said elastically yieldable upper part of the mould within said housing against the related rigid lower part for compressing and shaping the sheet of asbestos cement therebetween into the form of a desired article.

3,099,062
MOLD FORM FOR COLUMNS MADE OF CASTING MATERIAL
Charles Bauer, 6 Rue Ovigneur, Lille, Nord, France
Filed Feb. 13, 1957, Ser. No. 640,042
Claims priority, application France Feb. 14, 1956
3 Claims. (Cl. 25—131)

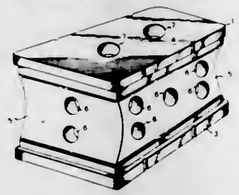
1. A mold form for columns made of casting material comprising four panels disposed relative to each other in such position to define a space to be filled with said casting material, and four connecting elements connecting each pair of said panels disposed adjacent each other,

each pair of said connecting elements connecting each other, each of said connecting elements comprising a stay-plate, a body and an assembly plate, each of said bodies and each of said stay-plates having a plurality of studs disposed longitudinally and equally spaced apart from each other, and each of said assembly plates and each of said panels having a plurality of openings equally spaced apart from each other at the same distance as that of said studs of said bodies and of said stay-plates, so that upon insertion of each of said studs of said con-



necting elements into the corresponding openings of said assembly plates and of said panels, said connecting elements are releasably and mutually connected to each other and to said panels, to form a frame, a latch engaging said stay-plate, and a screw bolt extending through said stay-plate and through said latch to provide a pivot for said latch, so that upon turning the latter for about 90° from inoperative position after providing a second stay-plate adjacent said previously mentioned stay-plate, said second stay-plate is retained between said assembly plate and said latch.

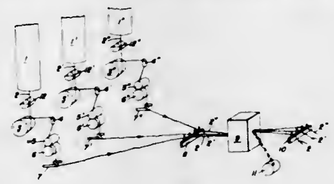
3,099,063
SANITARY WARE SETTER
Leland W. Santhany, Tyler, Tex., assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 18, 1962, Ser. No. 231,343
11 Claims. (Cl. 25—153)



1. A refractory firing pedestal setter for supporting ceramic ware during firing thereof in a kiln, said setter having a generally horizontal base member, a generally horizontal ware bearing member having a ware bearing surface, said ware bearing member disposed above, and in generally parallel spaced relationship to said base, means disposed adjacent the periphery of said base for supporting said ware bearing member in said generally parallel spaced relationship to said base, said ware bearing member having an opening therethrough communicating with said ware bearing surface thereof and with the area between said ware bearing member and said base, a second support means for supporting said ware bearing member in the vicinity of said opening, a third means coacting with said opening and said second support means for permitting movement, by convection, of heat from the aforementioned area between said ware bearing surface and said base, to the area immediately above said ware bearing surface, via said opening.

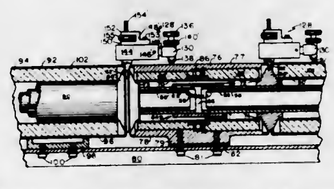
3,099,064
METHOD AND APPARATUS FOR MAKING RUG YARN
Carl J. Haynes, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 13, 1961, Ser. No. 102,880
5 Claims. (Cl. 28—1)

1. The method of continuously processing several ends of multifilament yarn, which yarn ends have low twist if any twist therein, which comprises continuously subjecting the several yarn ends to gas blowing in jets, the rate of withdrawal of the yarn from the jets being not substantially slower than the rate of yarn feed to the jets and in any event not more than 20 percent slower, the gas treat-



ment in said jets being at a gas flow of 5–75 p.s.i., passing at least some of the several ends thus processed in the jets to further yarn treatment which involves compacting the several ends of said processed yarn in close and intimate association, withdrawing said ends from the compacting, and separating at least some of the ends from one another.

3,099,065
YARN HEATER SYSTEM
Cyril G. Evans, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Original application Apr. 11, 1957, Ser. No. 652,153, now Patent No. 3,028,654, dated Apr. 10, 1952. Divided and this application Oct. 31, 1961, Ser. No. 148,895
9 Claims. (Cl. 28—62)



1. In a yarn processing apparatus, the combination which comprises a rotatable shaft, means to heat said shaft, a plurality of roll members carried by said shaft, an annular flange extending from opposed side surfaces of two adjacent roll members, a sleeve member extending between said two adjacent roll members, said sleeve member being supported at either end by said flanges, and a stationary housing circumscribing said sleeve member in spaced relationship therewith.

3,099,066
METALLIZED SYNTHETIC SPUN YARN
Walter G. Scharf, Ridgewood, N.J., assignor to Metal Film Company, Inc., New York, N.Y., a corporation of New York
Filed Sept. 30, 1960, Ser. No. 59,728
11 Claims. (Cl. 28—72)



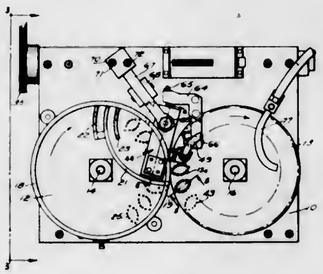
1. The method of fabricating metallized spun yarn comprising the steps of slitting a web of metallized plastic material into tapes having a width equal to the length of staple fibers and having a thickness not in excess of about 2 mils, said web being constituted by a base layer of synthetic material having a metal deposit thereon coated by a plastic film, cutting said tapes transversely at spaced positions into staple fibers of narrow width whose longi-

tudinal edges are serrated to facilitate interlocking of said fibers, and spinning said fibers into yarn.

3,099,067
PLASTIC FIBERS
Charles N. Merriam, Martinsville, and Walter A. Miller, Somerville, N.J., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Original application Sept. 13, 1957, Ser. No. 683,700. Divided and this application Nov. 30, 1959, Ser. No. 855,997
7 Claims. (Cl. 28—82)

1. As an article of manufacture, ultra-fine fibers of a normally solid synthetic thermoplastic resin material, said fibers being molecularly oriented in a longitudinal direction in an amount of between 200 percent and 2000 percent, having average diameters in the range of from 0.5 to 1.0 micron and having uniform substantially circular cross-sectional areas throughout their entire length.

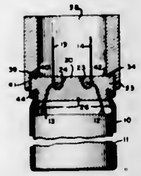
3,099,068
AUTOMATIC FINDING ASSEMBLY MACHINE
Morris Kortick, Cranston, R.I., assignor to Monarch Tool Co., Providence, R.I., a corporation of Rhode Island
Filed July 19, 1960, Ser. No. 43,783
3 Claims. (Cl. 29—10)



1. A machine for setting a plurality of rhinestones simultaneously in a finding having a plurality of settings comprising a base, a hopper mounted on said base for holding a plurality of rhinestones, said hopper having a cylindrical side wall and a rotating bottom, said side wall having an opening, a rotatable plate mounted on said base adjacent said hopper for feeding successive findings to an assembly position, means for intermittently rotating said plate to position successive findings in assembly position on said base, said rotating means including a vertical shaft, said plate being mounted on said shaft, a gear on the lower end of said shaft, and a driving gear meshing with said shaft gear, said driving gear having a two to one ratio to said shaft gear, half the teeth of said driving gear being removed to provide a one to one drive and a hesitation of half a revolution, and suction means mounted on said base for removing a plurality of rhinestones from said hopper through said opening and for placing and locking said rhinestones in said finding in assembly position.

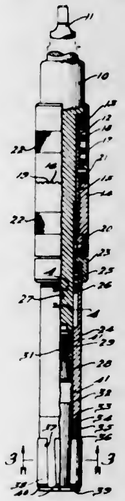
3,099,069
METHOD OF CAPACITOR MANUFACTURE
James O. Pugh and William J. Kirkpatrick, Nashville, Tenn., assignors to Nashville Electronics, Inc., a corporation of Tennessee
Filed Sept. 12, 1960, Ser. No. 55,236
1 Claim. (Cl. 29—25.41)

The method of sealing a capacitor section within a metal sleeve having an open end, said section having lead means extending from an end, comprising molding a relatively hard flowable plastic slug onto the lead means, said slug having a main base at its outer end and a portion of reduced diameter adjacent to said base, positioning said capacitor unit with said slug attached within the can, rolling a bead into the can between the capacitor section and the base portion of the slug, such bead being inclined toward the open end of the can,



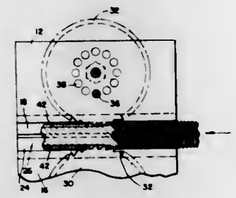
and rolling the end of the can inwardly so that the edge portion extends toward the slug, and crushing the rolled end of the can axially to force the bead to collapse inwardly to engage the reduced portion of the slug and be folded inwardly and upwardly into said slug at the same time that the inwardly turned edge of the can is forced into the outer surface of the slug.

3,099,070
METALWORKING TOOL
Joseph T. Morrison, St. Clair Shores, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich., a corporation of Michigan
Filed Mar. 1, 1961, Ser. No. 92,700
1 Claim. (Cl. 29—90)



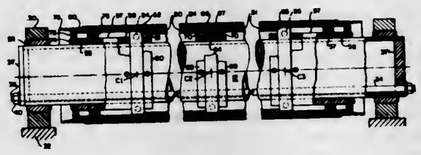
In a metalworking tool, an elongated arbor having drive means on one end, a conical adjusting element on the other end of said arbor, a hollow stem secured at one end on said arbor about said conical adjusting element, said stem having elongated tapered apertures in the other end breaking through the inner, outer and end walls thereof, tapered rollers in said apertures in engagement with said conical adjusting element for radial inward and outward movement, a washer on the end of said stem covering the ends of the apertures for retaining the rollers therewithin, a thread on the outer portion of the arbor, a threaded sleeve on said thread rotatable thereon for adjusting the hollow stem longitudinally of the body, a second sleeve on said arbor between said threaded sleeve and said driving end disposed in engagement with each other, the engaged edges of said sleeves having teeth therein which lock the threaded sleeve against rotation, means for retaining said second sleeve on said arbor for longitudinal movement therealong while being retained against rotational movement, and a spring about said arbor for urging said second sleeve toward said threaded sleeve for retaining said teeth in engaged relation.

3,099,071
TOOL FOR CUTTING GROOVES IN THE FLANKS OF SCREWS
Harrington Moore, East Acton, Mass. (100 Beaver St., Waltham, Mass.)
Filed Jan. 14, 1963, Ser. No. 251,307
3 Claims. (Cl. 29—95.1)



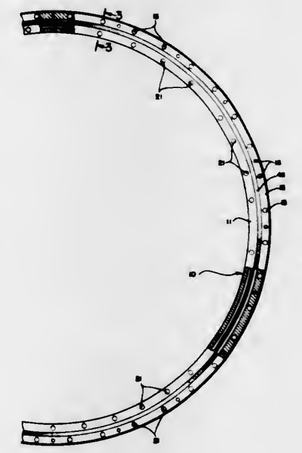
1. A tool for cutting longitudinal grooves in the flanks of headless screws, said tool comprising a body having a bore therethrough with a diameter slightly greater than that of the screws to be operated on, a circular disk firmly but removably mounted in said body in a plane containing the axis of said bore, said disk having teeth all around its periphery, a few of said teeth projecting into said bore, and adjustable means positively preventing rotation of said disk in said body.

3,099,072
TABLE ROLL WITH MEANS FOR REMOVING LONGITUDINAL CURVATURE
John D. Robertson, Taunton, and George P. Knapp, Waban, Mass., assignors to Mount Hope Machinery Company, Taunton, Mass., a corporation of Massachusetts
Filed June 13, 1961, Ser. No. 116,849
4 Claims. (Cl. 29—116)



1. A roll comprising a tubular support having a longitudinally uniform and substantially symmetrical cross-section, means mounting said support horizontally, a pair of axially-spaced annular spools circumferentially spaced about said support, an annular sleeve received about said pair of spools for rotation therewith, first and second bearings each mounting one of said spools on said support, a third bearing supporting the axially-confronting ends of both of said spools on said support, said spools being of continuous and uninterrupted cross section over their full lengths to support said sleeve against transverse sagging intermediate said bearings, said bearings being adapted to mount said spools and said sleeve for rotation about a rectilinear axis, a rod extending longitudinally and interiorly through said support eccentrically of said axis, said support being subject to longitudinal curvature such that the centers of said bearings lie along a curved line in a plane of curvature defined by the centers of said bearings, said rod being positioned in said support to lie along said plane of curvature, the end portions of said support being provided with means for tensioning said rod and applying the compressional reaction eccentrically to said support to align the centers of said bearings on said axis.

3,099,073
METHOD OF MAKING ANTI-FRICTION BEARING ASSEMBLY
Lester A. Olson, Los Angeles, Calif., assignor to Keystone Engineering Company, Los Angeles, Calif., a partnership
Filed Oct. 2, 1961, Ser. No. 142,273
7 Claims. (Cl. 29—148.4)

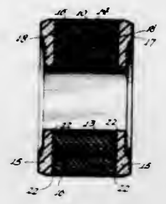


1. That improved mode of fabricating a lightweight composite race ring for use in an anti-friction bearing assembly with the components thereof free of deformation, pressure or stress imposed by the expedients employed to hold the components assembled and which comprises forming a continuous main body ring to size and shape from lightweight non-ferrous material and including an annular channel shaped to receive and snugly seat precision raceway ring means, forming a precision raceway ring means from heat treated ferrous material with a shape adapted to fit snugly within the annular channel in said continuous main body ring, and holding said raceway ring means rigidly in place therein by adhesively bonding the same within said channel between all juxtaposed surfaces with an exposed surface of said raceway ring means positioned to provide a high-precision high-load bearing surface of revolution adapted to support anti-friction bearing elements.

3,099,074
TRANSFORMER COIL CONSTRUCTION
Louis C. Polzella, Arthur E. Snowdon, and William P. Carpenter, all of Bristol, Conn., assignors to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut
Original application Nov. 28, 1955, Ser. No. 549,295, now Patent No. 2,947,959, dated Aug. 2, 1960. Divided and this application Dec. 28, 1959, Ser. No. 862,307
7 Claims. (Cl. 29—155.58)

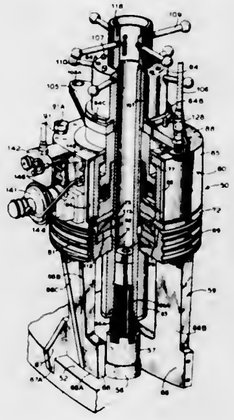
1. The method of forming a coil for a transformer comprising the steps of forming a core of iron; positioning

against opposite sides of the core protective elements having an initial shape substantially that of the sides of the core, each protective element having a heat-activated, dry, substantially thermosetting film positioned against its re-



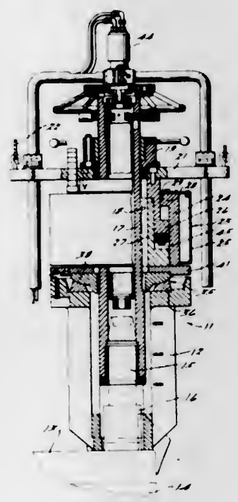
spective side and a backing layer; winding a length of electrical conducting wire about the core and protective elements; and applying heat to the assembly to form in situ a thermoset coating over and bonded to the sides of the core to form a barrier against corrosive elements.

3,099,075
POWER OPERATED STUD TENSIONER
John D. McDaniels, Jr., Lynchburg, Va., and Le Roy S. De Mart, Lancaster, Ohio, assignors, by direct and mesne assignments, to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 23, 1959, Ser. No. 861,675
13 Claims. (Cl. 29—240)



1. A stud tensioner for facilitating assembly and disassembly of parts joined by nut and stud means comprising a pedestal adapted for supporting said tensioner over a stud to be tensioned, a drawbar adapted to extend axially of the stud and having means on one end thereof adapted to connect the end of the stud, a thrust nut connected to the other end of the drawbar, a power pack disposed about said drawbar between the thrust nut and the pedestal for exerting a force in tension which is transmitted through said thrust nut to said drawbar to the stud to effect axial elongation of the stud, said power pack including a cylinder and fluid actuated piston for exerting the force in tension on said thrust nut, means forming a universal joint operatively associated between said power pack and pedestal to permit relative movement between the pedestal of the power pack in the event of misalignment between the stud and the tensioner, and a plurality of flexible links connecting said power pack to said pedestal.

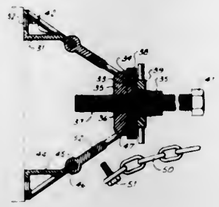
3,099,076
STUD TENSIONER
Le Roy S. De Mart, Lancaster, Ohio, assignor, by mesne assignments, to Babcock & Wilcox Company, a corporation of New Jersey
Filed Oct. 26, 1959, Ser. No. 848,849
4 Claims. (Cl. 29—252)



1. In a stud tensioning device, an elongated drawbar having a stud-engaging portion, bearing means supporting said drawbar for limited rocking movement relative to a stationary support, said bearing means having two annular elements with co-operating surfaces in the form of segments of a sphere, reciprocable motor means comprising piston and cylinder elements, a pedestal between one of said elements and said stationary support, the other element being connected to said drawbar, said stud-engaging portion of the drawbar being disposed within said pedestal, said piston and cylinder elements being disposed vertically of said pedestal, said drawbar being coaxial with said piston and cylinder elements whereby the drawbar may be urged in a direction away from said stud, first radial bearing means disposed between said piston and cylinder elements, and second radial bearing means carried by one of said annular elements and engageable with said drawbar at a location spaced a substantial axial distance from said first radial bearing means.

3,099,077
WHEEL PULLER
Theodore J. Slawin, Rte. 3, Box 203, Tampa, Fla.
Filed Dec. 16, 1958, Ser. No. 780,863
1 Claim. (Cl. 29—261)

A wheel puller of the character set forth, including an internally threaded thrust head defining a plurality of radially projecting retention fingers, a plurality of U-shaped arms having return bent end portions, said return bent portion of each arm being mounted on one of said fingers, a cap engaging said return bent portions for retaining said portions in engagement with said fingers, releasable threaded means on said head for retaining said cap against said return bent portions, means carried by the opposite ends of said arms for engaging wheel stud nuts, said means including pivotally mounted L-shaped extensions of said arms each defining a stud encircling aperture, and a threaded pressure bolt threadedly engaged through the internally threaded thrust head, whereby pressure may be exerted thereby against an axle shaft to outwardly tension said arms for removing a wheel carrying said stud nuts from its axle shaft.



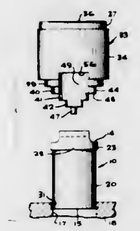
3,099,078
LATCHING DEVICES
Pliny L. Ullom, P.O. Box 218, Sweetwater, Tex.
Filed May 4, 1961, Ser. No. 107,699
9 Claims. (Cl. 29—267)



1. A tool for installing a latch device in a hollow frame member having a transverse opening extending therethrough comprising: a base member; an elongate arm pivotally mounted on said base member and adapted to be telescoped in said frame member; means on said arm for carrying a coil spring; means on said arm for holding said frame member when telescoped on said arm with the transverse opening thereof aligned with the axis of said spring whereby a latch pin may be inserted to extend through the transverse opening of said frame member and the coils of said spring; and means for forming a spur on the shank of said latch pin when said latch pin extends through said transverse opening whereby said latch pin may be positioned on said frame member with one end of said spring in abutting relation with said spur and the other end of said spring in abutting relation with said frame member.

3,099,079
TOOL FOR PLACEMENT OF BUSHINGS IN A DRILL JIG
Philip A. Stein, Los Angeles, Calif., assignor to American Drill Bushing Company, Los Angeles, Calif., a corporation of Maryland
Filed Dec. 12, 1961, Ser. No. 158,803
1 Claim. (Cl. 29—275)

A tool for use in positioning a liner bushing in a jig plate, the liner bushing being of the type having an open-ended bore extending axially therethrough and of a diameter equal to one of a series of selected standard sizes, said bore serving to receive a tool guide bushing of the selected standard size, the liner bushing having an upper annular flat surface defining an end opening of the bore, and having a locking member extending upwardly from the periphery of said flat surface and being of a selected circumferential extent such that it is subtended by an acute central angle of the tool, said tool having a cylindrical shank with a flat strike surface at one end and a series of circular steps at its other end, each step having a cylindrical riser surface and circular tread surface at right angles to each other, the center of each step being on the longitudinal axis of the tool, the steps being progressively smaller in diameter of their riser surfaces as the space between them and said flat strike surface increases, the series of steps being graduated in diameter in increments to correspond to said standard sizes respectively, a central cylindrical pin step of circular cross-section and of smaller diameter than the smallest step of

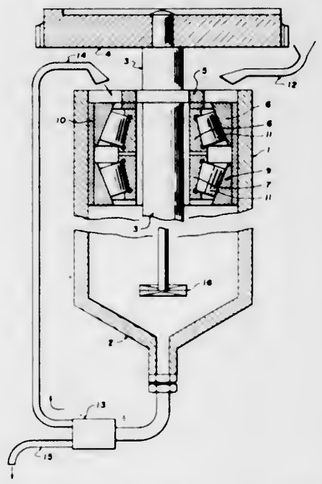


said series of steps and extending axially of said series from the tread surface of said smallest step, and the tool having a cylindrical recess extending longitudinally through the steps of said series and into said shank and being open at the circumferences of the steps of said series, with the inwardmost extent of the recess being along a line extending in an axial plane of the said steps, said line being substantially aligned with that generatrix of the cylindrical surface of the pin step which is disposed in said axial plane, whereby the recess accommodates said locking member when the tool is placed on the liner bushing with that step which corresponds in diameter to said bore extending into the bore and with the tread surface of the next larger step being in flush abutment against said upper annular flat surface of the liner bushing.

3,099,080
METHOD OF CONVERTING METAL POWDER INTO FLAKE
David Kenneth Worn, Solihull, England, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 18, 1958, Ser. No. 742,846
Claims priority, application Great Britain July 1, 1957
1 Claim. (Cl. 29—420)

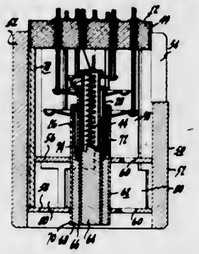
An improved process for producing discrete, flat, flake-like particles having a maximum thickness of about 2 microns which comprises providing a slurry of metal powder in an oily liquid carrier, said powder being of metal selected from the group consisting of iron, nickel and alloys thereof including stainless steel, nickel-chromium alloys and nickel-chromium-iron alloys and comprised of substantially spherical particles having a diameter less than about 50 microns, passing said slurry at least once through a rolling zone having a length of about 200 to about 600 times the maximum diameter of said powder particles and said slurry passing in a direction parallel to the length of said zone, said rolling zone being provided by a plurality of tapered rolls bearing against concentrically disposed races, subjecting said powder to a heavy radial load to accomplish a plurality of flattening operations thereon during a pass through

said rolling zone, and thereafter separating metal from said slurry to recover a powder comprising discrete, flat,



flake-like particles of said metal having a thickness of about 0.5 to about 2 microns.

3,099,081
BRAZING JIG
George A. Lalak, Springfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,820
12 Claims. (Cl. 29—423)



1. The method of making a jig including a tubular portion having a dimension within predetermined limits which comprises drawing a tubulation of a first material having a mandrel in said tubulation of a second material through a die for sizing said tubulation within limits smaller than said predetermined limits, cutting said tubulation and said mandrel therein together to a length suitable for use in said jig, removing said tubulation from said mandrel without permanent change in dimensions of said tubulation, assembling said tubulation as an element of said jig, and adding an oxide layer to said tubulation for centering said dimension within said predetermined limits.

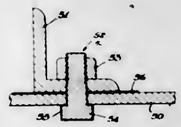
3,099,082
METHOD OF MAKING WRITING TIPS FOR BALL POINT PENS
Ernst Johan Jens Henriksen, 1 Alpenstrasse, Lucerne, Switzerland
Filed Nov. 15, 1960, Ser. No. 69,428
5 Claims. (Cl. 29—523)

1. The method of making a tip element for a ball point pen, comprising the steps of; forming a counterbore in one end of a tubular member to form an annular shoulder therein, forming a generally annular insert, smaller than said counterbore, with an axial bore therein and radial slots at one end thereof communicating with said axial bore, placing said insert in said counterbore, on said



shoulder and with its slotted end outermost, thereafter applying pressure to the outer end of said insert to form a part-spherical seat therein and to radially expand said end to tightly fit said counterbore and terminating said pressure-applying step before said radial slots are completely closed.

3,099,083
METHOD OF SUPPRESSING BIMETALLIC COUPLE CORROSION OF MAGNESIUM METAL ARTICLES
Herbert K. De Long, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 718,027
19 Claims. (Cl. 29—527)



1. An improved method of suppressing galvanic corrosion of a magnesium metal article in a composite metal structure comprising a magnesium metal article and a ferrous metal article on being mechanically and electrically connected and subjected to the electrolytic action of the same environment, which comprises interposing between the articles a continuous layer of a tin metal selected from the group consisting of tin, tin-zinc binary alloys containing at least 40 percent of tin, and tin-cadmium binary alloys containing at least 40 percent of tin, whereby the current generated by the one article acting as an anode to the other passes through the said layer of tin metal and said layer of tin metal presenting an unbonded surface to at least one of said metal articles.

3,099,084
METHOD OF MANUFACTURING BITS FOR SOLDERING IRONS
Marie Charles Alfred Thuillier, Place Danton, Bois d'Arcy, Seine-et-Oise, France
Filed Aug. 25, 1959, Ser. No. 835,956
Claims priority, application France Sept. 4, 1958
5 Claims. (Cl. 29—528)

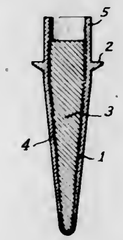
1. A process for the manufacture of bits for use with soldering irons or soft-soldering machines, comprising the steps of

forming an elongated thin-wall, hollow shell of a very hard metal having a relatively high fusion point, said shell having a closed bottom,

introducing into said shell a core of soft, heat conducting metal being in its solid state and having a relatively low fusion point, pressing said core against said bottom,

and then heating said shell to a temperature close to the point of fusion of said hard metal and higher than the point of fusion of said soft metal,

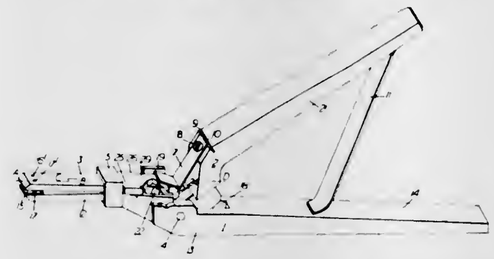
maintaining a pressure on said core of soft, heat conducting metal in order to provide a pressure contact



between said soft metal with said hard metal of said shell to produce a surface alloy between said metals, and

cooling the integral assembly to bring about solidification of said metals.

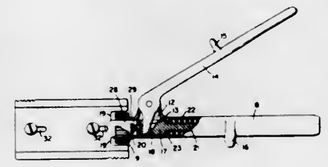
3,099,085
RELAY-CONTACT CUTTING TOOL
Andre Jean Montchausse, Paris, and Robert Pierre Lecomte, Nanterre, France, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 4, 1961, Ser. No. 156,727
Claims priority, application France Dec. 15, 1960
7 Claims. (Cl. 30—124)



1. A cutting tool for removing electrical contacts from contact springs comprising fixed jaw means and movable jaw means, said movable jaw means including apertures at one end thereof for encompassing the contacts to be cut and including shoulder means at the other end, retaining means for maintaining said movable jaw means intermediate its ends to the said fixed jaw means for rotational movement and sliding movement with respect to the fixed jaw means, and actuating means associated with said shoulder means for rotating said movable jaw means into gripping relation with said fixed jaw means and for laterally moving said movable jaw means with respect to said fixed jaw means.

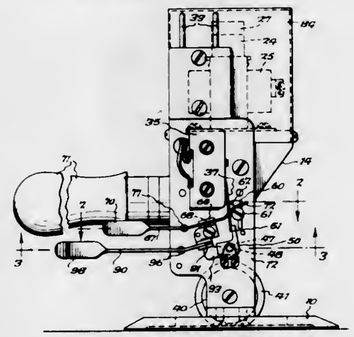
3,099,086
HAIR TAPERING CLIPPERS
Russell W. Anderson, 1110 W. 68th St., Los Angeles, Calif.
Filed Oct. 21, 1960, Ser. No. 64,003
2 Claims. (Cl. 30—212)

1. A hair tapering clipper having a cutter head and a handle assembly, said cutter head comprising a nonreciprocated blade member and a reciprocating blade member positioned and guided in slidable contact on said nonreciprocated blade member, said nonreciprocated blade member having teeth of equal width and spaces of equal width along its axial aligned edges, said reciprocating



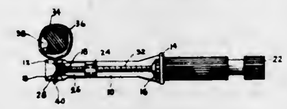
blade member having teeth of miscellaneous widths and spaces of equal width along its axial aligned edges.

3,099,087
PUNCHING MACHINE
Frederick G. Clark, Buffalo, N.Y., assignor to Eastman Machine Company, Buffalo, N.Y.
Filed June 1, 1961, Ser. No. 114,072
6 Claims. (Cl. 30—362)



1. In a punching machine including a punch actuated by a solenoid including a coil and having a wheel rotatable by contact with the work to be punched and having a gear mounted thereon, a toothed segment movable into and out of mesh with said gear, and a switch actuated by the movement of said segment when in mesh with said gear to close a circuit including said solenoid, that improvement which includes a lever having a part engaging said toothed segment for moving the same out of engagement with said gear to avoid actuation of said switch to permit rotation of said wheel without actuating said segment and said switch.

3,099,088
DENTAL MATRIX RETAINER
Chester S. Ivory, Jr., Berwyn, Pa., assignor to J. W. Ivory, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed July 19, 1962, Ser. No. 211,075
1 Claim. (Cl. 32—63)



A dental matrix retainer for use in the treatment of a tooth of the type having opposite side walls which converge from the gum line towards the cutting end of the tooth, said retainer including

a flexible matrix band,

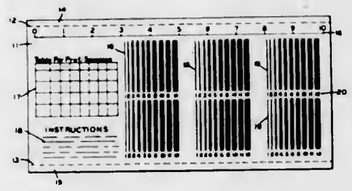
an elongated bracket,

a pair of flat fixed walls carried by the opposite longitudinal edges of said bracket,
there being registering vertical slots in said walls through which said matrix band is threaded,
a cradle slidable on said bracket,
means for clamping the ends of said matrix band to said cradle, and
means for moving said cradle away from said fixed walls to draw said matrix band through said slots,
said fixed walls converging toward the longitudinal median line of said bracket.

3,099,089
TRANSPARENT SHEET PROVIDED WITH CHARACTERS AND INSTRUMENTALITIES FOR USING SUCH CHARACTERS

Elizabeth A. Bond, Easthampton, Howard N. Gold, Florence, and John S. Marran, Leeds, Mass., assignors to Chart-Pak, Incorporated, Leeds, Mass., a corporation of Connecticut

Filed June 16, 1961, Ser. No. 117,688
5 Claims. (Cl. 33—1)



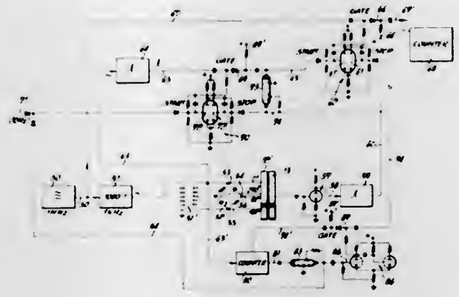
1. A method of providing a lateral grouping of spaced characters using individual characters imprinted on units of transparent, relatively thin and flexible sheet material which material is provided with a pressure sensitive adhesive backing to cause each such unit to adhere to a layout surface by application of pressure, said method comprising the steps of affixing a first unit provided with a character to a substantially transparent layout surface which is positioned above a guide having at least one vertical line adapted to be used for spacing purposes; positioning said layout surface relative to said vertical line such that said line becomes disposed at the trailing edge of said character, and affixing a second character unit to said layout surface in such a position that the leading edge of the second character is separated from the trailing edge of the first character substantially by the width of said line.

3,099,090
METHOD AND APPARATUS FOR DIGITAL INDICATION OF SHAFT POSITION

Eberhard Frisch, Berlin-Waidmannslust, Germany, assignor to Continental Elektroindustrie A.G., Askania-Werke, Berlin-Mariendorf, Germany, a corporation of Germany

Filed June 17, 1960, Ser. No. 36,771
Claims priority, application Germany June 19, 1959
10 Claims. (Cl. 33—46)

1. In a method of periodically producing an indication of the instantaneous value of a phase angle between a reference voltage of fixed phase and a signal voltage of phase and rate of change of phase changing with time, the steps of initiating a series of pulses upon occurrence of a fixed point in each of widely and equally spaced cycles of the reference voltage, terminating each such series of pulses upon the next occurrence of a fixed point of the signal voltage cycle, producing indications of the number of pulses, in each such series, generating, in association with each such series so periodically generated, a second series of pulses of a number at least partially responsive to the phase of the signal voltage at a time differing from the time of initiation of each such first series by an interval much smaller than the interval of such periodicity, and producing indications of the number of pulses in each of said second series of pulses, whereby errors due to change of phase of the signal voltage during each first series of

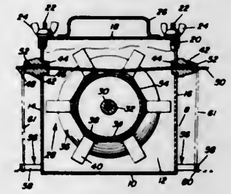


pulses may be corrected to produce a substantially true indication of the relative phase at the time of commencement of such first series despite differences in the rate of change of phase of the signal voltage occurring over said periods.

3,099,091
CHALK LINE IMPREGNATOR

Carey B. Hindall, Ada, Ohio
(2210 Tremont Road, Columbus 21, Ohio)

Filed June 29, 1960, Ser. No. 39,582
5 Claims. (Cl. 33—87)

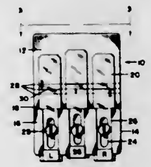


3. For use in impregnating a snap-type chalk line with chalk; a portable box providing a container for the chalk which is used in chalking the line, said box having a flat bottom wall, end walls, front and back walls, being open at the top and provided with a cover, said cover having a handgrip exteriorly located and positioned so that by catching hold of the grip and forcing downwardly on the box the flat bottom wall thereof may be forced into firm contact with a portion of the surface which is adapted to be lined with chalk, a pulley mounted for rotation in the receptacle portion of said container, said pulley having a hub portion encircled by rim flanges and marginal outstanding circumferentially spaced chalk agitating fingers cooperable with said flanges, inlet and outlet guides mounted in axial alignment with each other on the respective end walls, a chalk line having a portion wound several times around the pulley and end portions threaded and slidable through said guides, said guides being mounted on and projecting beyond the respective left and right end walls of said container, and line snubbing and tautening brackets fixed on lower portions of said end walls directly beneath their respective guides, portions of the line being detachably connectible with and tautly drawn about the brackets whereby other individual operators holding remote opposite ends of the line and drawing the overall line tightly not only tensions the line but positions the container, guides, and coacting portions of the line in the exact aligned position needed for accurate use by the user who is handling it, a line storing reel, and means removably mounting said reel on an exterior wall of said container.

3,099,092
GAUGE FOR PRINTED SHEET REGISTER MARKS

Harry W. Crance, Jr., Rochester, N.Y.

Filed May 8, 1961, Ser. No. 108,593
5 Claims. (Cl. 33—174)

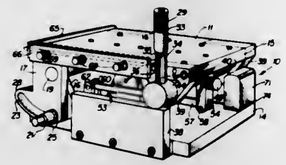


1. A gauge for printed sheet register marks comprising a member having one end portion of plate-like shape adapted to be inserted under the edge of a printed sheet provided with margin width register marks and having another end portion provided with a plurality of parallel guide means and a positioning abutment extending transversely of said guide means, said one end portion being marked with a linear scale of margin widths measured from said abutment and a plurality of relatively spaced, parallel slides of transparent material slidably adjustable in said guide means, respectively above said end portion and each provided with a mark adapted to be positioned in register with a selected indicia of said scale and thereafter applied to register marks respectively of said sheet with an edge of said sheet interposed between said member and said slides and against said abutment, to verify the positions of said register marks on said sheet.

3,099,093
ADJUSTABLE ANGLE DEVICE AND WORK HOLDER

John S. Atols, 5009 W. Armitage Ave., Chicago 39, Ill.

Filed July 27, 1961, Ser. No. 127,279
10 Claims. (Cl. 33—174)

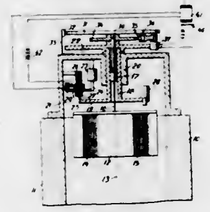


1. An adjustable angle measuring device comprising in combination first and second members pivotally connected to each other for relative angular swinging movement and having respective plane surfaces thereon, means for measuring linear distances, means for pivotally mounting said measuring means on one of said members a predetermined distance from the pivotal connection between said members, a coacting surface on the other of said members parallel to the plane surface thereon for cooperation with said measuring device to measure the distance between said members, and parallel linkage means including a link pivotally interconnected at its respective end portions on axes parallel to the axis of said mounting means to a point on the other of said members and to a point on said mounting means offset from the axis of pivoting of the latter for maintaining the linear axis of said measuring means perpendicular to said coacting surface whereby said measuring means accurately measures the sine function of the angle between said plane surfaces.

3,099,094
MEASURING INSTRUMENT AND METHOD AND MEANS FOR DAMPENING THE OSCILLATION OF A MEASURING MEMBER THEREOF

Hans Ehrich, Schulensee, near Kiel, and Martin Lässig, Kiel-Hasseldieksdamm, Germany, assignors to Anschutz & Co. G.m.b.H., Kiel-Wik, Germany, a limited-liability company of Germany

Filed Jan. 18, 1961, Ser. No. 83,558
Claims priority, application Germany Jan. 20, 1960
18 Claims. (Cl. 33—226)

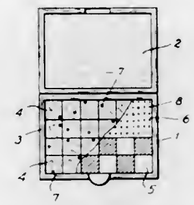


7. Method of opposing and dampening the oscillation about an axis relative to a stationary frame of a measuring member supported by a spring from an anchor mounted on said frame for rotation about said axis, which method comprises imparting to said anchor an intermittent rotary motion of an angular velocity higher than that of said measuring member, said intermittent rotary motion being effected for such periods and in such direction as to cause said anchor to catch up with said measuring member, and arresting said anchor relative to said frame between the periods of said intermittent rotary motion for intervals amounting to a fraction of the period of oscillation of said measuring member, thereby intermittently biasing said spring in a sense opposite to said oscillation.

3,099,095
APPARATUS FOR USE IN TEACHING AND IN CARRYING OUT PSYCHOTECHNICAL EXAMINATIONS

Ernst Gustav Fallingborg, The School of Malling, Malling, Denmark, and Willy Johannes Andersen, The School of Taagelund, Egtved, Denmark

Filed Apr. 17, 1961, Ser. No. 103,582
2 Claims. (Cl. 35—48)



1. Teaching apparatus comprising a set of tablets of the same dimensions, a frame sized and shaped to receive said tablets completely interchangeably in rows and columns, a first removable base plate sized and adapted to be placed in said frame and carrying markings in rows and columns corresponding to the tablet rows and columns and sized for each tablet to be positioned over a respective marking when all of said tablets are in said frame, each of said tablets having a different tablet marking and said first base plate markings being differentiated so as to permit each tablet to be placed over a respective first base plate marking to answer correctly questions respec-

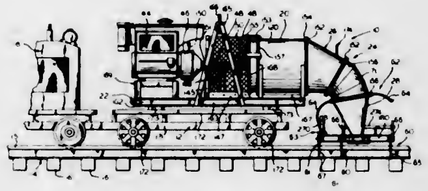
tively corresponding to the respective tablets, each of said tablets having an arbitrarily located through hole of small diameter relative to the size of the tablet, the location of said holes varying for different tablets, and a second removable base plate sized and adapted to be placed in said frame and carrying at least one set of identical dots in rows and columns corresponding to the tablet rows and columns, each tablet being over a respective dot when said second base plate and all of said tablets are in said frame, said dots and holes being of the same diameter, said dots being further positioned to be visible through said holes when tablets are placed in said frame in correct answers to said questions.

3,099,096
SHOE HEEL
Louis Fabian, 33–35 76th St., Jackson Heights 72, N.Y.
Filed Aug. 24, 1961, Ser. No. 135,713
5 Claims. (Cl. 36—24.5)



1. A one-piece shoe heel adapted to nest about the heel portion of the wearer comprising a platform adapted to engage and support the underside of the heel portion of the wearer, a generally upright support portion integral with and extending downwardly from said platform, an upstanding wall portion integral with and extending upwardly from said platform, said wall portion being flush with the side and back of the platform to nest about the heel of said wearer and being flush with the side and the back of said upright support portion to form a smooth continuation of said upright support from the lower edge of said upright support portion to the upper edge of the upstanding wall portion so as to give the appearance of a higher and more graceful heel, said upstanding wall portion being resilient and biased inwardly to grip the heel portion of the wearer.

3,099,097
SNOW BLOWER APPARATUS
Richard G. Simmons, 3009 George St., Franklin Park, Ill.
Filed May 15, 1961, Ser. No. 110,618
10 Claims. (Cl. 37—19)



1. A scarifier assembly adapted for application to the nozzle structure of snow blower apparatus, said assembly comprising frame means defining an open center portion adapted to receive the nozzle structure and pivotally mounting a shaft member across opposing sides of said open center portion, said shaft members extending substantially parallel to each other and each carrying a plurality of spaced resilient depending fingers, means for resiliently biasing said shaft members to position said fingers substantially normally of the plane of said frame means, handle and linkage means operatively associated with said shaft members for pivoting the latter to inoperative positions in substantial alignment with the plane of said frame means, and means for releasably latching said shaft members in their said inoperative positions.

2. Railroad track blower apparatus especially adapted for removing snow from railroad trackage, said apparatus comprising a wheeled vehicle adapted to ride on the rails of a track, air blast means carried by said vehicle for applying a snow disintegrating air blast directly against the trackage, said air blast means comprising a nozzle structure carried by said vehicle and extending downwardly from one end thereof toward the track, said nozzle structure in said downwardly extending portion defining outlet opening means for directing against the track an air flow from said nozzle structure at an angle that is at least 80 degrees with respect to the track, at a rate that is at least 10,000 cubic feet per minute, and that is disposed proximate the track rails, said nozzle structure outlet opening means being proportioned and positioned to extend across and between both rails of the track, said outlet opening means defining an outlet opening area that is approximately one and one-half square feet, said outlet opening means being elongated in configuration and extending transversely of the track, said area having a length transversely of the track that approximates twenty-four times its dimension longitudinally of the track, and blower means carried by said vehicle and connected to said nozzle structure for supplying a sufficient flow of air to said nozzle structure to provide an air flow from said outlet opening means that is at least 10,000 cubic feet per minute.

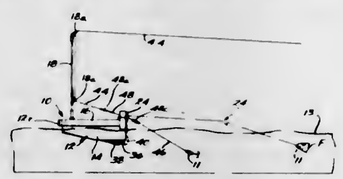
3,099,098
CRAWLER TRENCHER WITH TILTABLE BODY
Charles J. Davis, 22 Colonial, Wichita, Kans.
Filed Nov. 20, 1961, Ser. No. 153,410
6 Claims. (Cl. 37—86)



1. Trencher mechanism including a chassis, a generally fore and aft extending boom, a trencher supported on said boom, traction mechanism on said chassis for propelling the same, a body supported on said chassis for tilting movement about a fore and aft extending horizontal axis, means on the body supporting the boom for up and down movement about a transversely extending horizontal axis, piston and cylinder means for tilting said body and boom on said chassis about said fore and aft axis, piston and cylinder means for pivoting said boom about said transversely extending horizontal axis, drive means comprising a motive fluid pump on said body, fluid controlling valves in the output of said pump, driven means comprising a traction motor on said chassis for operating said traction mechanism, and flexible supply and return hoses connected between said valves in the output of the pump and said traction motor for providing flow of said fluid uninterrupted by tilting action of said body and boom as aforesaid.

3,099,099
FISHING DEVICES
Herman S. Cahen, 2616 University Blvd., University Heights, Ohio, and Frank Lauer, 1639 Larchmont Ave., Lakewood, Ohio
Filed May 29, 1961, Ser. No. 113,416
6 Claims. (Cl. 43—26.2)

1. A fishing device which in use is caused to move over the surface of a body of water, said device comprising a floating body, power means for causing said floating body to move over the surface of said body of water, control means for said power means, and a fishing line provided with a lure for movement in said body of water and which fishing line is operatively connected with said control



means so that when a pull is exerted on said line, such as would be exerted by a caught fish, the control means is operated to cause said power means to discontinue the movement of the floating body over the surface of the body of water.

3,099,100
EASY FISHHOOK REMOVER
Earl R. Wiseman, R.F.D. 4, Box 188, Columbus, Nebr.
Filed Aug. 14, 1961, Ser. No. 131,386
1 Claim. (Cl. 43—53.5)



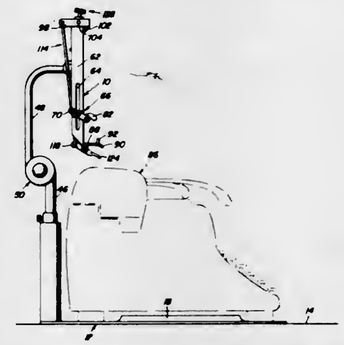
A fishhook extractor comprising in combination:
a wire rod having a straight shank portion at one end thereof bent upon itself to form a hook, the entire remainder of said rod bent in a series of S-curves, said curves and hook disposed in one plane; and
a handle fitted over the end of said rod opposite said hook, whereby one may grasp the handle and place the thumb on a series of said curves adjacent said handle, said thumb placement being at right angles to the plane of said curves.

3,099,101
SUPPORT DEVICE
William M. Burris, N. Main St. Extension, Anderson, S.C.
Filed Apr. 24, 1959, Ser. No. 808,819
5 Claims. (Cl. 45—82)



2. An article display support for detachable connection to a table or the like comprising a wire frame having downwardly converging side arms lying substantially in a plane, an article platform mounted transversely across said arms, said arms being rearwardly bent below said platform to provide parallel substantially horizontal upper socket leg members lying substantially in a plane, a socket bridge rigid with the rear ends of said upper socket leg members, and lower socket leg members extending forwardly from the bridge, said socket being forwardly open to embrace a table edge, the plane of said side arms being inclined upwardly and away from the open end of said socket and said platform being on the forward side of said frame arms.

3,099,102
NOTE AND NOTE BOOK HOLDER
Robert U. Mitsuyasu, 91—710 Makule Road, Ewa Beach, Hawaii
Filed Jan. 23, 1962, Ser. No. 168,096
17 Claims. (Cl. 45—82)



1. A copy holder for an office machine operator comprising a horizontally disposed base portion adapted to be disposed on a generally horizontally disposed supporting surface and to have an office machine positioned thereon for support of said office machine from said supporting surface and securement of said base portion to said supporting surface, an upright support, means securing the lower end of said upright support to the rear of said base portion for vertical positioning relative to said base portion, said upright support including upstanding upper and lower sections, means pivotally securing the lower end of said upper section to the upper end of said lower section for pivotal movement about a horizontally disposed axis extending transversely of said base portion, an inclined copy holding table pivotally secured to the upper portion of said upper section for movement about a horizontally disposed axis extending transversely of said base portion, said copy holding table including means adapted to support copy material in an inclined position facing forwardly of said base portion.

3,099,103
BALL JOINT FEET FOR LADDERS AND THE LIKE
Allen J. Wright, 1229 Latham Square Bldg., Oakland, Calif.
Filed Oct. 31, 1961, Ser. No. 149,491
5 Claims. (Cl. 45—137)

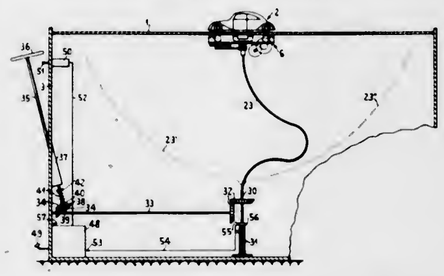


1. A supporting surface comformable foot formed of resilient material and including a base having an upwardly projecting hub, and a ball having a shank,
means for securing the ball in the foot comprising a ball socket formed downwardly in said hub and terminating at the upper end in an opening having a lesser diameter than that of the ball, requiring forced insertion of the ball into the socket and thereby being removable only through forced retraction,
a seat and reinforcement comprising

a sheet of metal having a concavity formed centrally thereof to form the lower end of the socket,

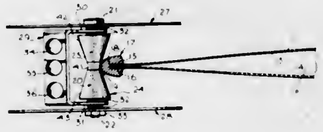
said sheet having a diameter in excess of that of the hub and slightly less than that of the base, and being molded in the base for decreased resiliency.

3,099,104
MECHANICAL TOY
Paul Rudolf, Bremgarten, Aargau, Switzerland, assignor to Gottlieb Stirnemann, Bremgarten, Aargau, Switzerland
Filed Jan. 13, 1961, Ser. No. 82,550
4 Claims. (Cl. 46—240)



1. A toy, comprising a frame, a platform supported on said frame, a vehicle, wheels rotatably mounted on said vehicle for rolling engagement with the top of said platform, means mounting at least one of said vehicle wheels on said vehicle for pivotal movement about an axis transverse to said platform, a carriage, wheels rotatably mounted on said carriage for rolling engagement with the underside of said platform, means mounting at least one of said carriage wheels for pivotal movement about an axis transverse to said platform, first magnet means in said vehicle, second magnet means on said carriage, said first and second magnet means cooperating to maintain said carriage wheels in engagement with the underside of said platform, manually operable steering means mounted in said frame, means including a rotary flexible shaft operatively connecting said steering means with said pivotally mounted carriage wheel and with said pivotally mounted vehicle wheel, a reversible electric motor for driving said carriage, and manually operable actuating means for said electric motor, whereby said carriage is movable forwardly and backwardly at controllable speeds by said drive motor and at the same time steerable along a desired path by said steering means while said vehicle is caused to follow the same path in the same direction at the same speed on the top of said platform.

3,099,105
WHEEL TOY
Fidel Martinez, 13706 Louvre St., Pacoima, Calif.
Filed Aug. 16, 1961, Ser. No. 131,814
3 Claims. (Cl. 46—241)



1. A wheel toy comprising:

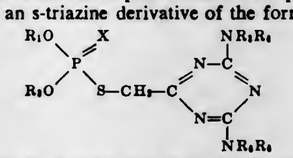
a hoop having a ferrous portion forming a continuous annular rim, and

hoop-driving means including a rotatable drive member adapted for contact with said ferrous rim,

said drive member comprising a plurality of coaxially aligned sections in adjoining abutment, at least one of said sections being a magnet and any section adjoining thereto exhibiting greater magnetic reluctance than said ferrous rim to the magnetic field of said magnet whereby such magnetic field is concentrated through said rim for maximizing the attractive force thereto.

3,099,106
TREATMENT OF POTATOES WITH S-TRIAZINE COMPOUND
Eric Callander Edgar, Bracknell, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Nov. 6, 1961, Ser. No. 150,199
Claims priority, application Great Britain Nov. 11, 1960
13 Claims. (Cl. 47—1)

1. A process in which potato tubers for planting are treated with an s-triazine derivative of the formula:

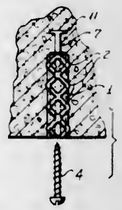


where R_1 and R_2 are selected from the group consisting of methyl and ethyl; R_3, R_4, R_5 and R_6 are selected from the group consisting of hydrogen, methyl, ethyl, propyl and butyl, provided that R_3, R_4, R_5 and R_6 together have a total number of carbon atoms not exceeding six; and X is selected from the group consisting of oxygen and sulphur.

3,099,107
WATER CONSERVATION
Floyd Trimble, Oklahoma City, Okla.
(3324 Homewood Drive, Memphis 28, Tenn.)
No Drawing. Filed Mar. 27, 1961, Ser. No. 98,288
7 Claims. (Cl. 47—58)

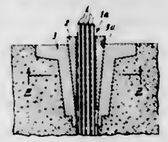
1. A process for treating soil to enhance the water penetration and retention characteristics thereof and to stimulate the growth of vegetation which comprises applying to said soil a detergent, said detergent defined as a coconut fatty acid amine modified with diethanolamine oleate and having an average molecular weight of 331 in an amount varying from 0.075 to 0.50 pound per acre.

3,099,108
ANCHOR FOR SECURING ELECTRICAL FIXTURES AND THE LIKE TO CONCRETE WALLS
William F. Kalkbrenner, Mustato Road, Katonah, N.Y.
Filed Apr. 29, 1959, Ser. No. 809,668
1 Claim. (Cl. 50—71)



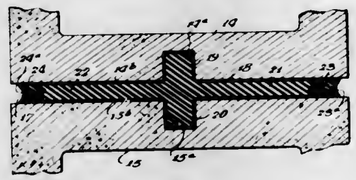
An anchor comprising: an open ended elongated tube one end of which is adapted to be seated on a form, said tube being of exterior shape to preclude its rotation in and withdrawal from concrete in which it is adapted to be embedded and having in its interior inwardly extending bead projections, said tube being of sufficiently soft material to permit the tapping of said projections by a self tapping screw, and a spike having a shank extending through the tube and adapted to be driven into said form, said shank being provided at one end with a non-circular driving head to keep the spike from turning in the concrete and, spaced from said driving head, a radial sealing flange of a diameter greater than the internal cross section of the tube and adapted to seal one end of said tube against the entrance of concrete when said shank is extending through and beyond the other end of the tube, said spike being provided between the sealing flange and its free end with a weakened section and also having near the latter end a portion of non-circular cross section which when rotated after the tube has been embedded in concrete and the form removed will sever that end portion of the spike at said weakened section.

3,099,109
DEVICE FOR ANCHORING TENSIONING ELEMENTS
Volker Hahn, Stuttgart-Degerloch, Germany, assignor to Ed. Zublin A.G., Stuttgart, Germany
Filed May 26, 1958, Ser. No. 737,936
Claims priority, application Germany Mar. 1, 1958
4 Claims. (Cl. 50—128)



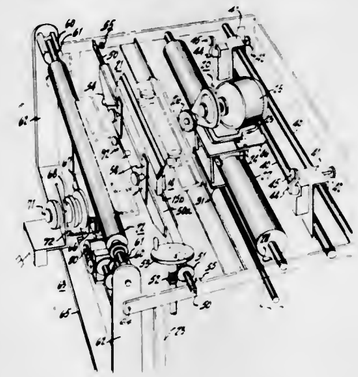
1. In combination: an anchoring body, a plurality of wires at least a portion of each of said wires being provided with a plurality of protruding ribs inclined with regard to the longitudinal direction of said wire and spaced from each other in said longitudinal direction of said wire, said portions of said wires extending into said anchoring body, said spaced ribs of one wire being inclined oppositely to and crossing said spaced ribs of another wire, said ribs resting in each other at said crossing points, wedge means extending into said anchoring body and exerting lateral pressure on said portions of said wires for holding said portions of said wires in their respective position whereby said lateral pressure causes deformation of said ribs at said crossing points and prevents slippage between said portions of said wires.

3,099,110
CONTROL JOINT
Harold L. Spaight, Cedar Rapids, Iowa; Elma Spaight executrix of said Harold L. Spaight, deceased, assignor to Dur-O-wal National, Inc., a corporation of Iowa
Filed Sept. 17, 1957, Ser. No. 684,600
5 Claims. (Cl. 50—346)



1. A control joint for use in a wall of masonry block, comprising a solid strip of resilient material having end extremities defining its length, said strip having a cruciform transverse cross section defined by two pairs of oppositely extending arm portions each terminating at an edge, the dimension of the first pair of arm portions from edge-to-edge being substantially greater than the dimension of the other pair of arm portions from edge-to-edge, said first pair of arm portions having enlarged portions adjacent said edges, said enlarged portions being formed of a material substantially softer than the remainder of the strip, said second pair of arm portions having one extremity disposed inwardly of the corresponding extremity of said first pair of arm portions and the other extremity of said second pair of arm portions being disposed outwardly of the corresponding extremity of said first pair of arm portions whereby the inwardly disposed extremity of one strip is adapted to receive an outwardly disposed extremity of another strip in sealing engagement therewith to form a longitudinally continuous, joint sealing structure.

3,099,111
MACHINE FOR HONING DOCTOR BLADES
Thomas K. Allison, 590 Camden Ave., Moorestown, N.J.
Filed Apr. 12, 1961, Ser. No. 118,478
9 Claims. (Cl. 51—3)

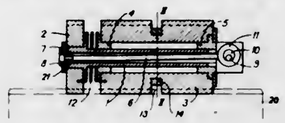


3. A machine for honing doctor blades comprising a mounting for said blade, a grinding wheel carried on said machine for traversing along a line parallel to the axis of a doctor blade when mounted in its said mounting, said grinding wheel being adjustable in position toward or away from said doctor blade, a honing wheel, means for mounting said honing wheel for rotation about an axis parallel to that of said blade when mounted, and means for driving said honing wheel simultaneously for rotation about its axis and for a stroking motion back and forth in a direction parallel to its said axis, said honing wheel mounting means comprising a U-frame, said doctor blade mounting positioning said doctor blade, when mounted, between said honing wheel and said grinding wheel and further including means for presenting the edge of said doctor blade in turn to said grinding wheel and to said honing wheel.

3,099,112
MACHINE FOR HONING THE FLANKS OF GEAR TEETH
Kurt D. Lantz, Nacka, near Stockholm, Sweden, assignor to Turbin Aktiebolaget de Laval-Ljungstrom, Finspong, Sweden
Filed Aug. 11, 1961, Ser. No. 130,824
Claims priority, application Sweden Aug. 13, 1960
4 Claims. (Cl. 51—48)

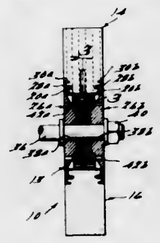
1. A machine for honing the flanks of gear teeth comprising in combination, a shaft, a toothed honing wheel and a toothed guide wheel mounted in axially spaced relation on said shaft for engaging the teeth to be honed, means for causing the toothed wheels to perform rotational and axial movements with relation to each other, means yieldingly interconnecting said toothed wheels for adjusting the contact between the gear teeth undergoing

honing and the teeth of the honing wheel as result of a mutual rotational movement of the toothed wheels, and means for imparting an axial oscillation to the honing



wheel while allowing a common turning of the honing wheel and the guide wheel under the control of a rotary gear engaged thereby.

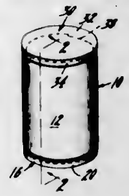
3,099,113
WORK WHEEL
Bernard G. Jeske, Dearborn, Mich., assignor to Formax Manufacturing Corp., Detroit, Mich., a corporation of Michigan
Filed Jan. 18, 1961, Ser. No. 83,487
1 Claim. (Cl. 51—193.5)



A wheel for working a workpiece comprising a pair of annular channel members, a plurality of elongated flaps each having at one end a first pair of oppositely extending tabs disposed in said channel members, said flaps having a second pair of tabs disposed proximate to said first pair of tabs, a pair of annular retainer plate members each having an annular groove for receiving said second tabs and having an annular recess proximate to said first groove for accepting said channel members, means for axially retaining said retainer plates, said flaps having resin applied across the width thereof in the area of said tabs to thereby provide a firm core for further securing said flaps within said annular channel members and to said retainer plate members, said flaps comprised of a plurality of buffing flaps and a plurality of sandpaper-like abrasive flaps interspersed between adjacent ones of said buffing flaps, said buffing flaps having a substantially greater mass than said abrasive flaps.

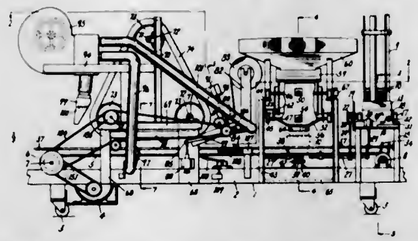
3,099,114
CONTAINER AND METHOD OF HANDLING SAME
Charles Louis Eddy, Florham Park, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 30, 1960, Ser. No. 72,716
6 Claims. (Cl. 53—41)

1. A container comprising a tubular body having a top and a bottom marginal end portion, the diametral dimensions of said bottom marginal end portion being smaller than those of said top marginal end portion, a fibrous bottom slip cover having a peripheral flange which snugly engages around and is permanently secured to said bottom marginal end portion of said body, said flange having external diametral dimensions substantially the same as those of said top marginal end portion, and a fibrous top slip cover with a peripheral flange having its internal diametral dimensions substantially the same as the internal diametral dimensions of both said top marginal end portion and said flange of the bottom slip cover and detachably engageable around the flange of said bottom slip cover to re-



tain said top slip cover in place on the bottom of said container prior to the filling of said container with a product.

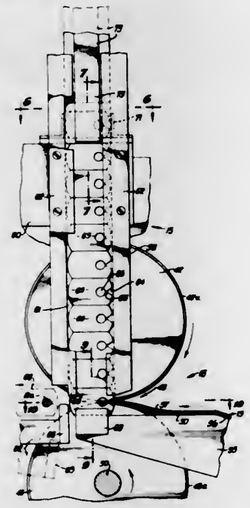
3,099,115
MACHINE FOR PACKAGING LOOSE ARTICLES SUCH AS BLUEBERRIES
Horace E. McKibben, Grand Junction, and Paul F. Jones, Dowagiac, Mich., assignors to Blueberry Equipment, Inc., South Haven, Mich.
Filed Jan. 15, 1962, Ser. No. 166,055
25 Claims. (Cl. 53—67)



22. A packing machine for loose articles comprising,
container filling means arranged to introduce a heaping measure of articles into an open topped container,
means for translating said container from said filling means through a covering station,
means supporting a deformable belt with a bottom reach thereof spaced over said covering station at about the level of the tops of containers advanced therethrough,
means connected to drive said deformable belt at the same speed and direction as said container translating means,
means to feed a film of heat shrinkable material toward said bottom reach of said deformable belt,
and side nozzles directed at the underside of said deformable belt along its bottom reach and connected to deliver heated air thereto, said belt being deformable perpendicular to its thickness completely across its area of contact with said containers and uniformly resilient throughout said area to yield variably throughout the area to varying pressure thereacross.

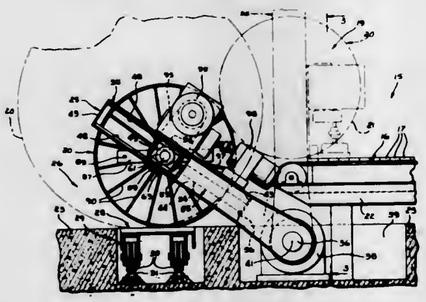
3,099,116
BAG CLOSING APPARATUS
Leland H. Platt, Jr., 4117 Don Ariano Drive, Los Angeles 8, Calif., and John D. Platt, 5912 Condon Ave., Los Angeles 56, Calif.
Filed Feb. 27, 1961, Ser. No. 91,831
7 Claims. (Cl. 53—138)

1. Flexible bag closing apparatus comprising,
(A) means for continuously advancing a succession of bags to a closing station,
(B) means for feeding and advancing to said station a succession of fasteners individually applicable to the bags and apertured to receive the bag necks, each fastener aperture being essentially of slot formation having an enlarged interior and an open mouth so narrow that a gathered bag neck is completely confinable in said interior,



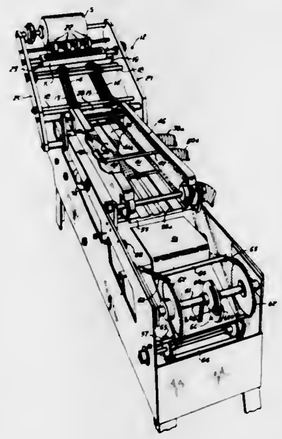
(C) continuously moving power driven means operable at said station for gathering each bag neck into a respective fastener aperture, said gathering means presenting a pair of rotating surfaces positioned so close together as to flatten the bag material and pass it in flattened condition through the narrowed fastener mouth, whereby the bag neck is gathered and retained in said aperture independently of any deformation of the fastener, and
(D) means controlling said feed of the fasteners in timed relation wtih the arrival of the bags at said station.

3,099,117
MECHANISM FOR LIFTING AND ROTATING REELS OF VARIOUS SIZES
Milton J. Christiansen, deceased, late of Brookfield, Ill., by Blanche E. Christiansen, executrix, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 16, 1962, Ser. No. 189,223
7 Claims. (Cl. 53—198)



5. In a lagging apparatus having a base and a conveyor for advancing a row of lags horizontally to a work station above and adjacent to a loading station, the combination therewith of a pair of lifting arms for straddling reels of various sizes, means on said base for supporting said arms at one end thereof for pivotal movement about a horizontal axis disposed below the work station, a carriage supported on said base at said loading station for movement parallel to said axis for supporting the reel thereon, a first arbor, means for securing said first arbor on one of said arms in parallel relation to said axis and for axial adjustment relative to said arm, a second arbor mounted on the other arm in coaxial alignment with said first arbor and for axial movement, means on said other arm for moving said second arbor axially toward said first arbor into engagement with a reel at the loading station to effect the movement of the reel and the carriage toward said first arbor and the clamping of the reel between said arbors, means for turning said arms about said axis to and from said loading station and said work station, means on one of said arbors for effecting a driving engagement with the reel, and means on one of said arms for rotating said arbor with said driving engagement.

3,099,118
MACHINE FOR PACKAGING
Walter R. Stelling, Jr., Milwaukee, Wis., assignor, by mesne assignments, to Applied Developments, Inc., Dallas, Tex., a corporation of Texas
Filed Sept. 9, 1960, Ser. No. 55,073
9 Claims. (Cl. 53—209)

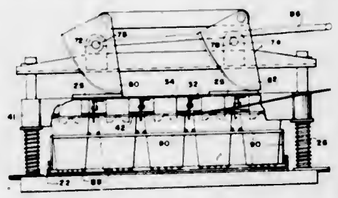


1. A machine for wrapping a moving product comprising, endless belt conveying means for moving the product, means for depositing a wrapper on the top side of said moving product with edges of the wrapper protruding beyond all sides thereof, suction means for pulling opposite side edges downwardly around the product, and tucker means adjacent said conveying means for tucking said opposite edges of said wrapper under said product as the latter moves along.

3,099,119
CUP LID CAPPER AND SEPARATOR
Conrad L. Williams, Atlanta, Ga., assignor, by mesne assignments, to Dye Sheet Metal Products, Inc., Athens, Ga., a corporation of Georgia
Filed July 28, 1961, Ser. No. 127,582
13 Claims. (Cl. 53—296)

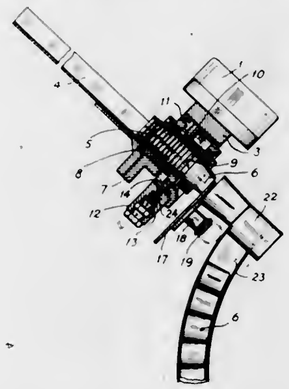
1. An apparatus for applying a plurality of joined covers to an assembly of containers including a base member; guide means on said base to position said assembly of containers with said joined covers in overlying

relation thereto; a movable platen vertically disposed with respect to and spaced from said base member, said



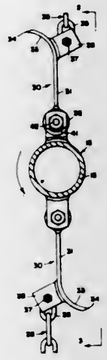
platen including cutter means to separate said joined covers and apply the same to said containers.

3,099,120
APPARATUS FOR THE REMOVAL ONE BY ONE OF BOTTLE-CAPS FROM A STACK AND POSITIONING THEM
Otto Johannes Bruun, Copenhagen, Denmark, assignor to Andersen & Bruun's Fabrikker A/S, Copenhagen, Denmark
Filed Mar. 30, 1961, Ser. No. 99,635
2 Claims. (Cl. 53—313)



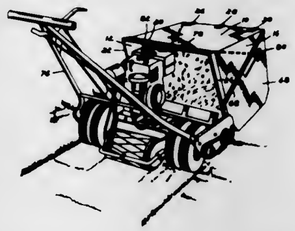
1. Apparatus for the automatic removal, one by one, of conical caps of paper, paper-coated metal foil or thin metal foil from a stack of caps piled together, by the method of blowing the lowermost cap from the stack, which is placed in such a way that the top ends of the caps in the stack are facing in the direction into which the caps are to be blown for being placed one by one over the necks of bottles passing the apparatus, comprising in combination: an inclined stack channel, a cylindrical blower ring having an opening co-axial with the stack channel and provided with blast holes along the inside narrowly surrounding a stack of caps lying in the stack channel and serving to blow the caps one by one from the stack of caps, a rotatably mounted, plane shutter on an axle parallel to the axis of the stack channel and the blower ring, webs on the said shutter adapted to project below the opening in the blower ring and defining openings between the webs to permit the caps to pass from the ring through the shutter, a funnel for catching the blown off caps, a curved guide channel placed in a vertical plane and connected at its top end to said funnel for guiding and turning the caps moving downwards by gravity to a position in which their top ends are rearmost, and a release-mechanism placed at the lower end of the guide channel and consisting of spring loaded stops projecting into the track of the caps in the guide channel and provided with catches projecting into the track of bottles carried past the release mechanism on a conveyor.

3,099,121
ROTARY BEATER WITH SUCTION FLAILS
Jack W. McCollum, Boise, Idaho, assignor of one-half to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 12, 1961, Ser. No. 116,373
4 Claims. (Cl. 56—121.44)



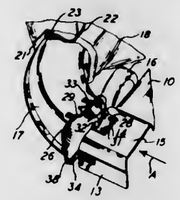
1. A rotary beater for disintegrating the tops of row crop plants and other plant material, comprising a rotatable shaft disposed generally transversely relative to the direction of forward travel, and a plurality of plant-cutting and disintegrating flails swingably connected with said shaft and adapted to extend generally radially outwardly therefrom when said shaft is rotated, each of said flails comprising a bar having inner and outer end portions, the inner end portion being pivoted to said shaft, and the outer end portion of the bar being curved and sharpened to present a cutting edge facing generally in the direction of rotation of said shaft and bar, and a flexible beater element swingably connected with the back of the curved portion of said bar and extending generally radially outwardly of said shaft beyond said bar.

3,099,122
LAWN MOWER CATCHER HOOD
Harumi Sakatani, 4432 N. Center St., Baldwin Park, Calif.
Filed June 19, 1961, Ser. No. 118,029
5 Claims. (Cl. 56—199)



1. A lawn mower catcher hood comprising a substantially horizontally disposed upper panel, retaining means depending from the leading edge of said upper panel and positioned for engagement with a front wall of the grass catcher to retain the hood in operative position upon the grass catcher, side panels depending from side edges of the upper panel, and retaining elements depending from the trailing ends of the respective side panels and positioned for engagement with side walls of a grass catcher to retain the hood in operative position upon the grass catcher, whereby the hood is retained upon the catcher in such manner that it is removable by lifting and is installable by lowering.

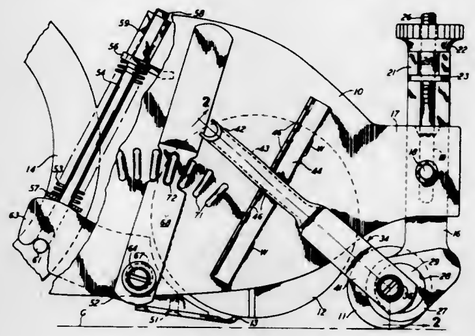
3,099,123
ROTARY LAWN MOWER HINGED GRASS CATCHING CHUTE
Warren H. Price, South Milwaukee, Wis., assignor to Jacobsen Manufacturing Co., Racine, Wis., a corporation of Wisconsin
Filed Apr. 17, 1961, Ser. No. 103,402
1 Claim. (Cl. 56—202)



A grass-catcher chute and bag for attachment to a rotary lawn mower which includes a discharge spout extending laterally of the mower housing, comprising a tubular chute having an inlet end attachable to said spout and in flow registry therewith and having an outlet end disposed axially angled with respect to said inlet end to be directed rearwardly with respect to said mower, a hinge interconnected between said chute at said inlet end thereof and said housing for pivotally attaching said chute to said housing for swinging said chute from a position of registry with said spout to a position out of registry, said hinge being of a hinge pin and hook combination with the cross-sectional dimension of said hinge pin being of a reduced selected dimension in one direction and with said hook having a space therethrough for receiving only said reduced selected dimension for selective removal of said pin from said hook and with said space being smaller than the remaining cross-sectional dimension of said pin for restraining removal of said pin from said hook, and a grass-catcher bag attached at one end to said outlet end of said chute and being in flow registry therewith and said bag being attachable at the other end thereof to said mower.

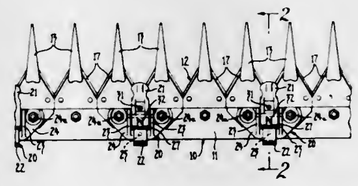
3,099,124
LAWN MOWER ROLLER ADJUSTMENT
Raymond K. Strasel, Winthrop Harbor, Ill., assignor to Jacobsen Manufacturing Co., Racine, Wis., a corporation of Wisconsin
Original application Apr. 17, 1961, Ser. No. 103,381. Divided and this application Apr. 19, 1962, Ser. No. 188,774
5 Claims. (Cl. 56—249)

1. A cutting adjustment for a lawn mower of the type including a cutting reel and a bed knife and a rotatably mounted ground-engaging roller, comprising a standard included in said mower and being uprightly fixedly disposed and having a socket in the lower end thereof, a rotatable member rotatably mounted in said socket, an offset member attached to said rotatable member and constituting a cam with the eccentricity extending in the upright plane for upright displacement of said offset member upon rotation of said rotatable member, means operatively connected with said rotatable member for rotating the latter, said ground-engaging roller being mounted on



said offset member for upright adjustable displacement in response to rotation of said rotatable member.

3,099,125
MOWER BLADE RETAINER
Robert G. Turner, Detroit, Mich., assignor to Massey-Ferguson Inc., Detroit, Mich., a corporation of Maryland
Filed June 8, 1961, Ser. No. 115,666
2 Claims. (Cl. 56—305)

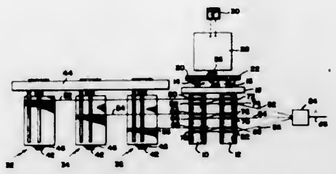


1. In an agricultural mower having an elongated bar with wear plates on which an elongated knife blade is slidably carried, a retainer for holding said blade on said plates, comprising, in combination, a bracket rigidly secured to said bar on the non-cutting side of said blade, a hold-down finger pivoted on said bracket so as to be swingable into contact with said blade, a spring member anchored relative to said bar, said finger having a projection which snaps over said spring member as the finger approaches said blade so that the member urges said finger against the blade, said finger being formed with a relieved portion facing said spring member so that an elongated tool can be inserted within said portion to pry said spring member down and said finger up and thus snap said projection over the spring member.

3,099,126
YARN FEEDING APPARATUS
Remo J. Laureti, Moorestown, N.J., assignor to Wall Rope Works, Inc., Beverly, N.J., a corporation of New Jersey
Filed Oct. 7, 1960, Ser. No. 61,153
8 Claims. (Cl. 57—58.7)

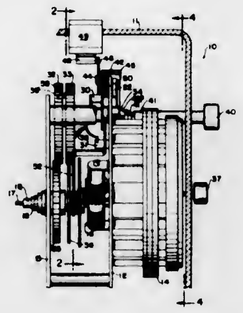
1. In combination, a supply of yarn, apparatus for twisting said yarn including means for whirling said yarn to form a balloon-shaped portion thereof and to apply a tension load thereto, capstan means for feeding said yarn by frictional contact therewith and for applying a restrictive tension thereto in opposition to said tension load

of said twisting apparatus, said yarn passing from said supply to said feeding means and to said twisting apparatus, said yarn passing around said capstan feeding means for frictional contact therewith to increase said frictional



contact and to tend to bind thereon upon the application of a tension load to said yarn by said twisting apparatus, and means for varying the rotative speed of said capstan means to vary said restrictive tension.

3,099,127
REPEAT ALARM DEVICE
Phillip W. King, Meriden, Conn., assignor to The Sessions Clock Company, Forestville, Conn., a corporation of Connecticut
Filed Feb. 8, 1961, Ser. No. 87,824
5 Claims. (Cl. 58—16)



1. In a repeating alarm clock mechanism including a clock supporting structure, an alarm system having alarm-off and alarm-on conditions, a damping arm having a portion movable into and out of an alarm-off position and an alarm-on position, clock gear means continually rotated as a function of time by said clock, an interval lever carried by said damping arm and movable relative thereto, said interval lever adapted to be engaged with said clock gear means when said damping arm is moved into the alarm-off position, and a heavy spring means operative against said damping arm to urge said damping arm into the alarm-on position when said interval lever has become disengaged from said gear means, the improvement wherein said damping arm includes an upper portion and a lower portion, said lower portion includes a first point of pivotal connection to said interval lever, a light overcentering toggle spring connects a second point on said upper portion and a third point on said interval lever, and said first point and said second point define a line of reference, whereby upon displacement of said third point in a first direction through said line of reference, said interval lever is urged by said toggle spring in the direction of said displacement into engagement with said clock gear means and upon displacement of said third point in a second direction through said line of reference said interval lever is urged by said toggle spring in the direction of said displacement out of engagement with said clock gear means.

3,099,128
WATCHWORK MECHANISMS
Reinhard Straumann, Waldenburg, Switzerland, assignor to Institut Dr. Ing. Reinhard Straumann A.G., Waldenburg, Switzerland, a Swiss body corporate
Filed Oct. 3, 1960, Ser. No. 60,131
Claims priority, application Switzerland Sept. 10, 1960
8 Claims. (Cl. 58—59)

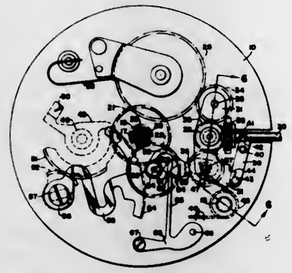


1. In a watchwork mechanism, such as a wrist watch, having a spring barrel and a spring of substantially the maximum energy for the internal diameter of said barrel and a balance including a balance staff mounted in substantially non-resilient bearings and adapted to perform between 17,000 and 22,000 half-oscillations per hour the improvement which comprises that the balance staff consists of an age-hardenable alloy containing a major proportion of a member selected from the group consisting of Fe-Ni, Fe-Co, Fe-W, Fe-Ni-Co and Ni-Co and has a tensile strength exceeding 200 kg./sq. mm. and a Vickers hardness number between 600 and 750, and that the mass of the entire balance does not exceed a maximum value M_m (measured in milligrams) for a given internal barrel diameter D (measured in millimetres) as follows:

D (mm.)	M_m (mg.)	D (mm.)	M_m (mg.)	D (mm.)	M_m (mg.)
6.1	51.0	8.2	62.8	10.4	97.6
6.4	51.7	8.55	68.0	10.7	103.0
6.7	52.8	8.9	73.3	11.0	109.2
7.0	54.0	9.2	77.8	11.3	115.7
7.3	55.5	9.5	82.5	11.6	122.7
7.6	57.4	9.8	87.4	11.9	130.7
7.9	59.7	10.1	92.5	12.2	139.5

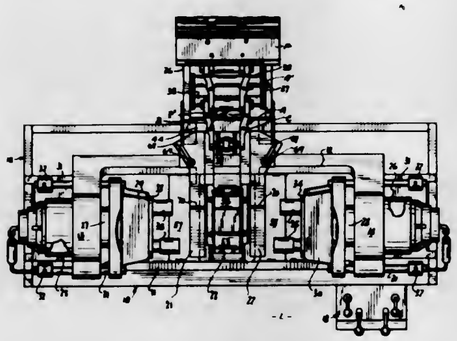
3,099,129
AUTOMATIC REGULATION MECHANISM FOR TIMEPIECES
August L. Spetzler, Peru, Ill., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,701
13 Claims. (Cl. 58—70)

1. In a timepiece, a movement including a frame plate, a rate regulator, hands driven by said movement, a setting stem axially shiftable between a winding and a setting position, a wheel operatively connected to turn said hands, a setting pinion and a rate regulator adjusting segment disposed in a common plane which is parallel to said plate, the setting pinion being translationally movable by said stem in said plane into and out of engagement with said wheel providing respectively a setting and a non-setting position for the setting pinion, a coupling member disposed between said setting pinion and said segment and in co-planar relation thereto, means for supporting said coupling member for pivoting and translation motion in the plane of said segment and setting pinion and biased towards said setting pinion, and a stop for limiting the translation motion of said member away



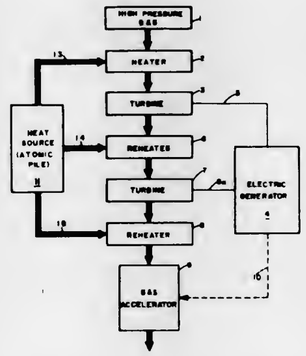
from said segment as said setting pinion is moved to non-setting position so that during said movement said coupling member is disengaged from both the regulating segment and the setting pinion.

3,099,130
TRACK PRESS
James H. Pahl, Excelsior, Minn., assignor to Rodgers Hydraulic Incorporated, Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 22, 1960, Ser. No. 16,740
6 Claims. (Cl. 59—7)



1. In a track press for servicing the sections of a tractor track which has a plurality of such sections pivotally connected at their junctions by cross members and with such sections fitted with removable rectilinear ground engaging shoes having normally overlapping adjacent edges; the combination comprising a frame, means on the frame for supporting adjacent track sections with the shoes on top while one such section is serviced, means on the frame spaced from said supporting means including fluid pressure actuated tools movable crosswise of said supporting means for operatively engaging the track section being serviced, the said supporting means including the combination of a jaw for engaging said cross members and a pair of angularly related supports adjacent said jaw, one such support for the track section being worked upon and the other such support for the next adjacent track section, the angle above said supporting means between said angularly related supports being greater than 180° such that said track sections will be flexed and said overlapping adjacent edges of the shoes on these sections relatively moved to at least partially expose the junction between said sections to view from above, said jaw being positioned in lateral alignment with said one support.

3,099,131
POWER GENERATION SYSTEM FOR PROPULSION AND METHOD OF OPERATING SAME
Richard J. Rosa, Reading, Mass., assignor to AVCO Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Apr. 3, 1958, Ser. No. 726,289
10 Claims. (Cl. 60—35.3)



8. A method of producing propulsive thrust comprising heating electrically conductive propellant under pressure, extending the propellant through a magnetohydrodynamic generator to generate electricity, heating the propellant after its passage through the magnetohydrodynamic generator, and accelerating the propellant to produce thrust by supplying electrical energy to it from the magnetohydrodynamic generator.

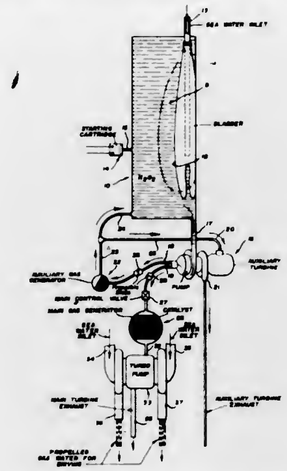
3,099,132
PROPULSION METHOD USING ORGANIC THIOPHOSPHITES WITH HYDROGEN PEROXIDE
Paul C. Condit, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed June 20, 1952, Ser. No. 294,727
1 Claim. (Cl. 60—35.4)

A rocket propulsion method, which method comprises injecting separately and simultaneously into the combustion chamber of a rocket motor a fuel consisting of a trithiophosphite selected from the group consisting of trialkyl trithiophosphites containing from 1 to 4 carbon atoms in each alkyl group and a tri- lower alkenyl trithiophosphite and an oxidizing agent consisting of concentrated hydrogen peroxide, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

3,099,133
WATER JET ENGINE
Dietrich E. Singelmann, Buffalo, N.Y., assignor to Bell Aerospace Corporation
Filed Aug. 29, 1960, Ser. No. 52,378
8 Claims. (Cl. 60—35.5)

1. A propulsion system comprising a source of propellant liquid, an auxiliary pump having an intake connected to said source, an auxiliary gas generator connected to the discharge side of said pump and having a gas outlet connected to said source for pressurizing the same to aid in the expulsion of said propellant to said auxiliary pump, a main gas generator, said auxiliary pump having its discharge side also connected to said main gas

generator, and a turbo-pump for inducting sea water and educting the same in directional fashion to provide a pro-



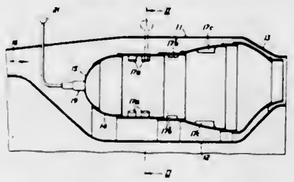
pelling thrust, said main gas generator having a gas outlet leading to said turbo-pump to drive the same.

3,099,134

COMBUSTION CHAMBERS

Peter Henry Calder, London, and Derek John Stansfield Lancaster, Radlett, England, assignors to The De Havilland Engine Company Limited, Leavesden, Hertfordshire, England, a British company

Filed Dec. 27, 1960, Ser. No. 78,352
Claims priority, application Great Britain Dec. 24, 1959
3 Claims. (Cl. 60—39.65)



1. An annular combustion chamber for a gas turbine engine, including air inlet apertures spaced around both the radially inner and radially outer walls defining an annular combustion space, as distinct from the end walls, the air inlet apertures comprising a series of primary air apertures at the upstream end of the combustion chamber and a series of secondary air apertures further downstream of the primary air apertures, the primary air apertures in one of said walls being directed in a plane transverse to the axis of the combustion chamber, but with a substantial circumferential component of direction to establish a rotating burning charge and the primary air apertures in the other of said walls being arranged to direct the air radially rather than with a circumferential component, and fuel nozzles for directing fuel directly into the rotating burning charge in the combustion space.

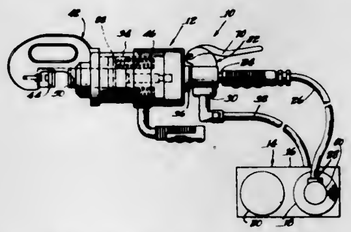
3,099,135

HYDRAULICALLY ACTUATED TOOL

Cyrus Earl Hoadley, Kankakee, Ill., assignor to Manco Mfg. Co., Bradley, Ill., a corporation of Illinois

Filed Feb. 25, 1957, Ser. No. 642,083
7 Claims. (Cl. 60—52)

1. A hydraulic apparatus of the type described comprising a tool including a member adapted to be forced through a workpiece, a hydraulically operated spring returned piston connected with said member for actuating said member and reciprocably disposed in a piston chamber, a remotely located hydraulic fluid reservoir, continuously operable pump means connected with said reservoir for continuously supplying hydraulic fluid under high pressure, valve body means located between said pump means and said piston chamber and substantially at said piston chamber, said valve body means including an inlet port, an outlet port and a third port communicating with said inlet and outlet ports, said outlet port being sufficiently large as compared with said inlet port for providing for substantially free fluid flow from said inlet port through said outlet port, a pair of conduit means respectively connecting said pump to said inlet port and said



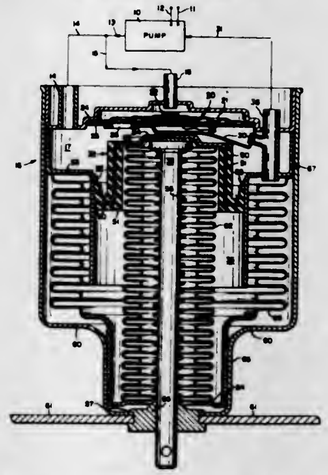
outlet port to said reservoir, the conduit means connecting said pump and said inlet being resiliently expandable under high fluid pressure produced by said pump during actuation of the piston, passageway means extending from said third port to adjacent said piston chamber, restricted orifice means immediately adjacent said piston chamber and connecting said passageway means to said piston chamber and being smaller than said outlet port for preventing sudden surges of hydraulic fluid into said piston chamber, and a normally opened valve member shiftable for closing said outlet port for directing hydraulic fluid under high pressure through said passageway means and said restricted orifice means to said piston chamber for actuating said piston.

3,099,136

FLUID ACTUATOR

William L. Carlson, Jr., Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Original application May 19, 1960, Ser. No. 30,211, now Patent No. 3,008,294, dated Nov. 14, 1961. Divided and this application Nov. 2, 1961, Ser. No. 149,677
6 Claims. (Cl. 60—52)



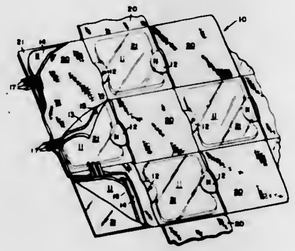
1. An actuating device comprising: a fluid filled chamber having a plurality of fixed rigid walls and a flexible wall; an actuating member movably mounted within said chamber and dividing said chamber into first and second fluid filled areas on opposite sides of said actuating member; means providing fluid communication between said first and second areas; means external of said chamber for causing movement of said actuating member; said actuating member being in operative engagement with one portion of said flexible wall for movement thereof; said flexible wall being deformable upon movement of said one portion thereof to maintain a constant volume in said chamber; and output means external of said chamber and positioned to be movable by movement of said one portion of said flexible wall.

3,099,137

THERMOELECTRIC COOLING DEVICES AND METHOD OF MAKING THE SAME

Ralph Ewing Jamison, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Apr. 18, 1961, Ser. No. 103,751
11 Claims. (Cl. 62—3)



2. A flexible thermoelectric couple for heating or cooling of a desired region comprising a pair of thermoelectric elements of dissimilar thermoelectric material; a relatively thin, flexible, heat conducting metal foil strip connecting said thermoelectric elements and being in heat exchange relation therewith; and reinforcing means having a higher tensile strength than said thin flexible foil strip, secured to said thermoelectric elements and extending therebetween to add tensile strength to said thermoelectric couple.

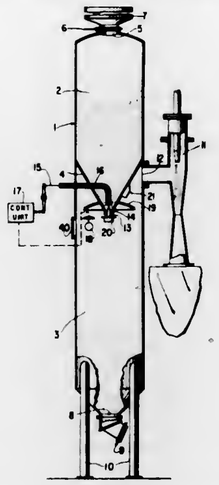
3,099,138

CONTINUOUS COOLING METHOD AND APPARATUS

John R. Hightower, 3881 SW. Bridlemile Lane, Portland, Oreg., and James T. Reynolds, 2274 Woodland Terrace, Scotch Plains, N.J.

Filed Apr. 28, 1961, Ser. No. 106,227
5 Claims. (Cl. 62—63)

5. Apparatus for cooling sand, which comprises a vertical cylindrical shell, at least one inverted conical divider within said shell to form a superimposed storage compartment and at least one lower vacuum chamber, a circular opening in said divider, vibrating means on said divider, throttling valve means to constrict said divider opening, vibrating means on said valve means, means to raise and lower said throttling valve means, means to charge sand into and seal said storage compartment,



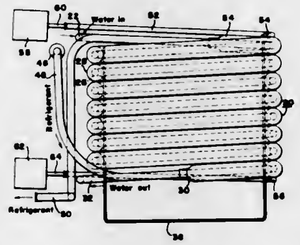
means to remove sand and seal said vacuum chamber, and means to impress a vacuum on said vacuum chamber.

3,099,139

REFRIGERATING APPARATUS

Leonard J. Mann and David O. Stewart, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 16, 1962, Ser. No. 187,535
6 Claims. (Cl. 62—180)



1. In a system for cooling a fluid, a first conduit means for conducting the fluid having an inlet and an outlet, a second conduit means extending in heat transfer relation with said fluid and having an inlet and an outlet, means for circulating a cooling medium through said second conduit means, first thermostatic means substantially responsive to the temperature of the fluid adjacent the inlet of said first conduit means for stopping the circulation of said cooling medium through said second conduit means, and second thermostatic means substantially responsive to the temperature of the fluid adjacent the outlet of said first conduit means for starting the circulation of said cooling medium through said second conduit means.

3,099,140

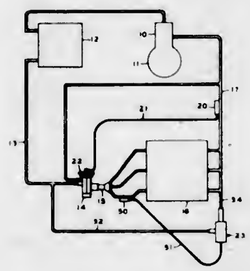
REFRIGERATION SYSTEM AND CONTROL

John G. Leimbach, Crestwood, Mo., assignor to Sporlan Valve Company, St. Louis, Mo., a corporation of Missouri

Filed Feb. 20, 1961, Ser. No. 90,266
9 Claims. (Cl. 62—197)

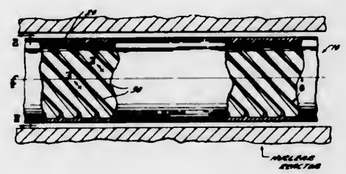
1. In a refrigeration system, a compressor, a condenser connected to said compressor, a liquid line leading from

said condenser, an evaporator, means in said liquid line for delivering expanded refrigerant to said evaporator, a suction line connecting said evaporator to said compressor, a last said means including a bulb located in thermal sensing relation to the suction line at the evaporator outlet for controlling flow to said evaporator, a by-pass line interconnecting the liquid line with the suction line ahead of the last said bulb, a valve in said by-pass line for controlling flow therethrough, and a motor means operatively connected to said valve to control operation of said valve, the motor means including a first



and a second flexible motor element, means subjecting one side of said first and second flexible elements to liquid line pressure, a second sensing bulb charged with an inert gas communicating with the other side of the first flexible element, said second bulb being located in thermal sensing relation to the inlet of said evaporator, means subjecting the other side of the second flexible element to suction line pressure, the first and second flexible motor elements regulating flow through the valve in response to liquid line or suction line pressures so that the power input of the compressor does not exceed a predetermined maximum value.

3,099,141
SHAFT FOR USE IN NUCLEAR RADIATION ENVIRONMENT
Herbert Garten and Robert Herman Schaffer, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 30, 1961, Ser. No. 156,189
8 Claims. (Cl. 64—1)



1. A load transmitting member for use in a nuclear radiation environment wherein the temperature rise in the member is substantially proportional to its mass, said member comprising:

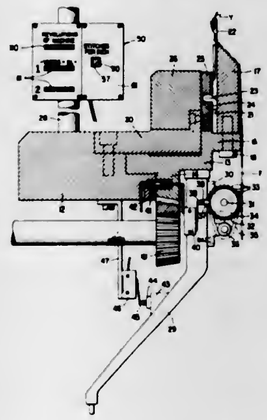
a hollow, cylindrical shell portion, said shell portion transmitting a part of said load and having a total mass M_S;

a fin integral with said shell portion, said fin comprising a helix extending the length of the shell portion and having a total mass M_F,

wherein the ratio of the fin mass to the shell mass—M_F/M_S—is greater than .2 but less than 1.5,

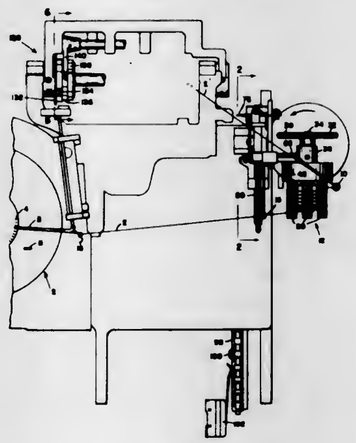
so as to enable said fin to transmit the remaining part of said load at a minimum total weight of said member in said nuclear radiation environment.

3,099,142
FABRIC YIELD COMPUTING DEVICE
Lester Mishcon, Miami, Fla., assignor to Singer-Supreme Co., Inc., Ozone Park, N.Y., a corporation of Delaware
Filed Dec. 19, 1961, Ser. No. 160,439
8 Claims. (Cl. 66—1)



4. In a machine for concatenating fibers to produce a fabric, a first means for measuring the fiber courses being incorporated into said fabric during operation of the machine, a second means for measuring the quantity of fabric produced during the operation of the machine, a computing device operated by said first and second measuring means, indicia associated with said computing device, and means operated by said computing device for displaying indicium representing the yield of the fabric being produced during the operation of the machine.

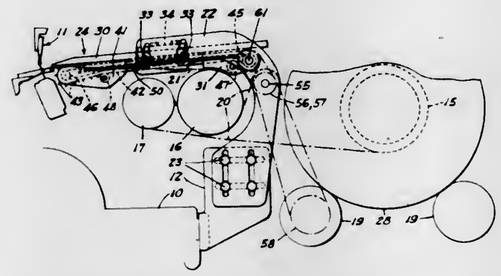
3,099,143
ELASTIC YARN FEEDER FOR KNITTING MACHINES
George E. Sinclair, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed Apr. 13, 1961, Ser. No. 102,728
6 Claims. (Cl. 66—132)



1. In combination with a knitting machine having needles, means for feeding an elastic yarn to the needles,

means for moving said feeding means to insert and withdraw said elastic yarn, and clamping and cutting means for the elastic yarn; a feeder of positive feeding type for supplying yarn at predetermined feed rate to said feeding means and needles during activity of the feeding means and means for increasing the yarn supplying rate of said feeder at the time of withdrawal of said elastic yarn, thereby to decrease the tension of the portion of the yarn between the feeder and said elastic yarn feeding means.

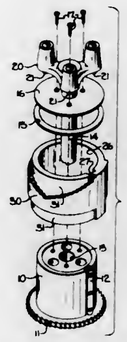
3,099,144
SELVAGE SPREADER
Robert L. Connors, Tonawanda, N.Y., assignor to Van Raalte Company, Inc., North Tonawanda, N.Y.
Filed Dec. 30, 1960, Ser. No. 79,684
6 Claims. (Cl. 66—147)



1. Edge tensioning and guiding means for flat knitting machines comprising a pair of mechanisms disposable adjacent to the side edges of flat knit fabric as the same issues from the knitting mechanism for engaging and guiding such edges, each mechanism comprising a support member disposed along a side edge of the fabric, a pair of pulleys carried by said support member and extending inwardly in overlapping relation with respect to the edge of the fabric, one of said pulleys being adjacent to said knitting mechanism and the other being relatively remote therefrom in the general direction of movement of said fabric from the knitting mechanism, a belt about said pulleys and protruding pin members along said belt for engagement with said fabric to hold the fabric to full width as the same passes from the knitting mechanism and from said adjacent pulley to said remote pulley, said remote pulley being driven at a predetermined speed relative to the speed of the fabric from the knitting mechanism, said remote pulley including a mounting shaft member adapted to pivot said support member to said knitting machine frame, means on said support member remote from said shaft member for preventing pivotal movement, said last mentioned means being releasable to permit said support member to be swung pivotally away from said knitting mechanism to render the latter readily accessible for adjustment and repair.

3,099,145
PATTERN DRUM FOR KNITTING MACHINE
James E. Garrou and Victor H. Garrou, Valdese, N.C., assignors to Waldensian Hosiery Mills, Inc., Valdese, N.C., a corporation of North Carolina
Filed Aug. 9, 1961, Ser. No. 130,361
5 Claims. (Cl. 66—154)

1. In a pattern drum for knitting machines having a cylindrical mandrel and a ratchet wheel secured to one end of the mandrel for imparting step-by-step rotation to the mandrel, the combination therewith of a one-piece pattern sleeve surrounding and supported on said mandrel for rotation therewith, said pattern sleeve being of substantially the same length as said mandrel, and an integral pattern of predetermined configuration on the exterior of



said sleeve, said pattern configuration including raised pattern areas and pattern relief areas.

3,099,146
ROLLER TYPE CONTINUOUS DYEING APPARATUS
Shigeru Yamawaki, Handa-shi, Japan, assignor to Daishin Seiki Kabushiki Kaisha, Handa-shi, Japan, a corporation of Japan
Filed June 15, 1961, Ser. No. 117,419
3 Claims. (Cl. 68—203)

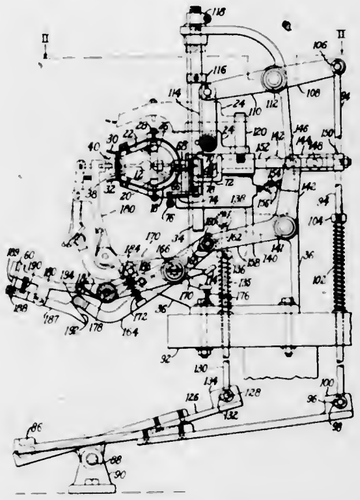


1. A roller for use with textile printing apparatus comprising a tubular rod having a radial passageway for conducting printing stock from within the rod externally thereof, a printing roller rotatably fitted over said tubular rod with an annular clearance provided therebetween, said printing roller including a plurality of raised printing regions each having passageways extending therethrough to provide communication externally and internally of said printing roller, a layer of foraminous resilient material covering the outer periphery of said printing roller, and a network covering the outer periphery of said layer of foraminous resilient material.

3,099,147
APPARATUS FOR PREPARING BASEBALL COVER PIECES FOR SEWING
Joseph Fossa, Hamilton, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Nov. 5, 1959, Ser. No. 851,059
11 Claims. (Cl. 69—8)

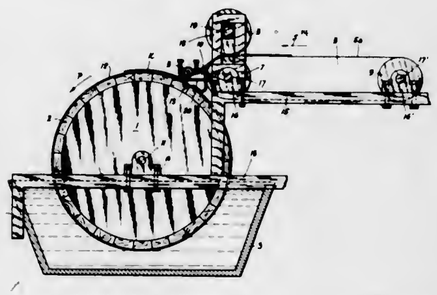
1. Apparatus for operating upon an elongated bilobate cover piece having a sewing margin preparatory to spherifying the cover piece on a ball core, comprising a form having a cover piece engaging surface similar in outline to the cover piece when the cover piece is arched longitudinally, a support for the form, locating means

for receiving the arched cover piece in correspondence with and over the supported form, and an articulated



clamp having a cover-engaging ridge adapted to engage the cover piece inside the margin.

3,099,148
DEVICE FOR COATING ANIMAL HIDES
Josef Strnad, Trutnov, and Jindřich Jakl, Tyniste upon Orlice, Czechoslovakia, assignors to Strojosvit, narodni podnik, Krnov, Czechoslovakia
Filed June 28, 1961, Ser. No. 120,331
Claims priority, application Czechoslovakia July 13, 1960
4 Claims. (Cl. 69—28)



1. A device for coating the skin sides of animal hides with a depilating substance so as to effect removal of hair therefrom, comprising

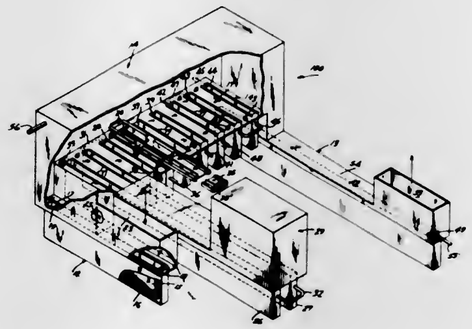
(A) a coating roller driven at a predetermined peripheral speed;

(B) a tank containing a depilating substance and having said coating roller partly immersed therein so that said roller picks-up a layer of said substance on its surface during movement of the latter through the tank;

(C) conveying means including an endless belt having a substantially horizontal operative run extending toward said surface of the coating roller adjacent the top of the latter and adapted to receive the successive hides with the skin sides of the latter facing downwardly thereon, and a drive roller having said belt running therearound at the end of said run closest to said coating roller, with said drive roller being spaced substantially from said coating roller and having a relatively slow peripheral speed substantially less than said predetermined peripheral speed of the coating roller; and

(D) a vertically movable guide roller disposed between, and spaced from drive roller of the conveying means and said coating roller, and spring means yieldably urging said guide roller downwardly toward the surface of the coating roller so that, as each hide is advanced to said surface of the coating roller at said relatively slow speed, the hide is gripped between said coating roller and said guide roller and said spring means acting on the latter produces a pressure for uniformly reducing the thickness of the layer of depilating substance between the coating rolller and hide and which is transferred to the skin side of the hide from the coating roller.

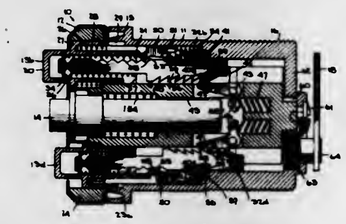
3,099,149
APPARATUS FOR TREATING ANIMAL HIDES
Seymour S. Kremen and Robert Lee Southwood, Cincinnati, Ohio, assignors to Leather Research Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 7, 1961, Ser. No. 129,639
6 Claims. (Cl. 69—32)



1. Apparatus for the treatment of animal hides and skins comprising, in combination, a longitudinally elongated inlet tank containing a body of water therein of a depth such that successive groups of hides, with the hides in each group in side by side relation, can be completely immersed in said body and moved therethrough, said tank comprising an inlet portion communicating with the atmosphere, through which inlet portion the successive groups of hides are introduced into said body of water, a discharge portion and a baffle separating said inlet and discharge portions extending into the upper portion of the body of water to provide a liquid seal between the atmosphere and said discharge portion; a series of longitudinally elongated dehydration tanks arranged in side by side relation and disposed substantially parallel to the discharge portion of the inlet tank, each of said dehydration tanks containing a body of a volatile organic extracting solvent; means for flowing the solvent continuously through said dehydration tanks; a longitudinally elongated impregnation tank disposed substantially parallel to said dehydration tanks, said impregnation tank containing a body of a volatile organic impregnating solvent having therein an impregnant for the hides; a series of longitudinally elongated fixing tanks arranged in side by side relation and disposed substantially parallel to said impregnation tank, each of said fixing tanks containing a body of an aqueous liquid therein; means for flowing

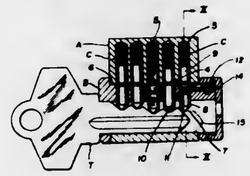
the aqueous liquid continuously through said fixing tanks; a longitudinally elongated outlet tank having a first portion disposed substantially parallel and adjacent to the last of the series of fixing tanks and a discharge portion communicating with the atmosphere, said outlet tank having a body of water therein and a wall section separating said first and discharge portions extending into the upper portion of the body of water to provide a liquid seal between said first portion and the atmosphere; means for lowering successive groups of hides into said inlet tank and moving said groups of hides while immersed in the body of water in said inlet tank along the length of said tank; means for elevating and removing said groups of hides from the discharge portion of said inlet tank, for displacing said groups of hides laterally over the first of said dehydration tanks and for lowering said groups of hides into the body of extracting solvent in the first of said dehydration tanks; means for moving said groups of hides through the dehydration tanks while immersed in the body of liquid therein, for elevating said groups of hides when they reach the discharge end of the dehydration tanks to remove them therefrom, for moving said groups of hides into and out of said impregnation tank and said fixing tanks, for displacing said groups of hides laterally from the impregnation tank over the first of said fixing tanks and from each preceding fixing tank over the next succeeding fixing tank and from the last fixing tank over and into said outlet tank, and for lowering said groups of hides into the respective tanks over which said groups of hides are moved; means for elevating and removing said groups of hides from the discharge portion of said outlet tank to return said groups of hides to the atmosphere; the means for moving the successive groups of hides through said dehydration tanks moving them in a direction countercurrent to the direction of flow of the extracting solvent through said dehydration tanks; and a hood enclosing the upper portion of said dehydration, impregnation and fixing tanks, the discharge portion of said inlet tank and the first portion of said outlet tank.

3,099,150
COMBINATION PUSH BUTTON LOCK
Mathias M. Check, Strafford, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Dec. 19, 1961, Ser. No. 160,556
19 Claims. (Cl. 70—313)



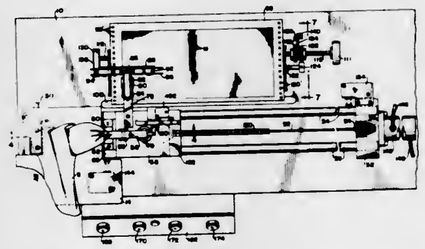
2. In a lock of the class described,
a cylinder,
a plug rotatably mounted in the cylinder,
a series of push buttons mounted on said plug and adapted to be depressed from a normal projected position,
tumblers locking the plug and actuated by the depression of said push buttons to release said plug for rotation,
and means actuated by said push buttons for interlocking the cylinder and plug when a button is depressed, whereby to dog the plug against rotation while said tumblers are being moved by said push buttons.

3,099,151
PIN TUMBLER CYLINDER KEY SYSTEM
Ernest L. Schlage, Hillsborough, Calif., assignor to Schlage Lock Company, a corporation
Filed Jan. 16, 1961, Ser. No. 82,774
1 Claim. (Cl. 70—363)



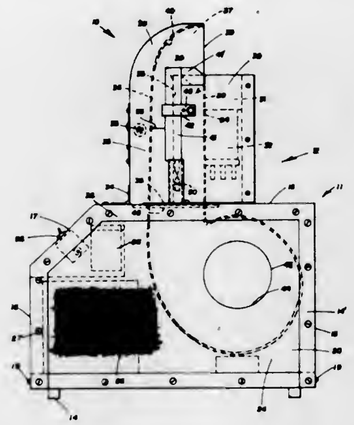
In a pin tumbler cylinder lock having a rotatable plug, and having columns of upper and lower spring actuated freely movable pin tumblers and one held pin tumbler, a groove formed in said held pin tumbler, said groove having a shoulder on one side thereof and a cam face on the other side, a holding pin engaging the shoulder and supporting the held pin tumbler in a position permitting rotation of the plug, said plug being rotatable by a temporary key which lifts the free tumblers in their columns to the shear line, another key for lifting the held pin tumbler to a point where its cam surface engages the holding pin and moves it out of holding position, said key when fully inserted aligning the pin tumblers in all of the columns to permit rotation of the plug, and when withdrawn permitting a tumbler in each column to intersect the shear line thereby rendering the temporary key inoperative.

3,099,152
STOCKING STRETCH MEASURING MACHINE
Stanley E. Krueger, Grenada, Miss., assignor, by mesne assignments, to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,669
4 Claims. (Cl. 73—95)



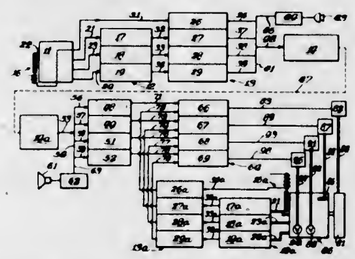
1. In a machine for measuring and recording the stretch in an elastic article in combination, a fixed clamp, a movable clamp including a weight loaded reciprocable carriage support therefor, power operated means including a pusher member for moving said carriage towards said fixed clamp and for moving said pusher member away from said carriage and said fixed clamp and allowing said carriage to recede from said fixed clamp under its weight loading, a chart recorder including a marking device on said carriage, means for controlling the rate of movement of said power operated means, and means actuated by the pusher member for energizing said marking device after the carriage comes to rest with the article stretched by the weight loading thereon and the pusher member has receded from said carriage a predetermined distance.

3,099,153
PAPER STRENGTH TESTER
Wyman C. Rutledge, Chillicothe, Ohio, assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Mar. 31, 1960, Ser. No. 19,039
14 Claims. (Cl. 73—100)



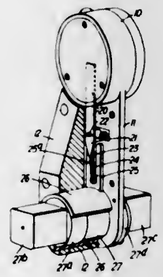
1. A method for testing the fold strength of a paper product comprising the steps of rendering said paper product foldable along a selected line by weakening the same against bending about said line by deformation of said paper product along said line, suspending said paper product in a fluid stream travelling transversely to said line whereby said fluid stream causes said paper product to alternately fold at said line, and measuring the time it takes said fluid stream to break said paper product at said line.

3,099,154
SYSTEM FOR CONTROLLING A STRUCTURE ACCORDING TO A PREDETERMINED PROGRAM OF OPERATION
Vern C. Vanderbilt, Jr., Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana
Filed May 19, 1958, Ser. No. 736,177
33 Claims. (Cl. 73—116)



1. Apparatus for controlling in a subject structure a measurable quality in a predetermined manner, comprising a device for producing and frequency modulating an electrical signal having a range of frequencies representative of the range of variation of said quality, means coupled to said device for recording said signal to provide a reproducing record of said signal, means for reproducing said signal from said record, transducer means adapted to sense the presence and extent of said quality in said structure and for producing a frequency modulated condition indicating signal in accordance therewith, said transducer means and said device being adjusted to the same frequency range with respect to each other, frequency comparator means coupled with said transducer means and said reproducing means for comparing the frequency of said reproduced signal with that of said condition indicating signal, said comparator mens beng operble to sample sad reproduced signal and said condition indicating signal alternately at a predetermined frequency, and means coupled with said comparator means and responsive to the dierence between said compared signals for controlling said subject structure to eliminate said difference.

3,099,155
TORQUE RECORDERS
Reginald I. R. Dean, 14–16 Curzon St., Derby, England
Filed Mar. 7, 1960, Ser. No. 13,289
1 Claim. (Cl. 73—134)



In a torque indicating instrument, a mechanism for transmitting motion engendered by a torque force to an indicator comprising a tubular indicator housing, an elongated planar first support member extending from the tubular wall of said housing in a direction normal to the axis thereof and integrally secured to the housing wall, a second support member fixed to said first support member and extending opposite and parallel to said first support member, said second support member having a recess extending parallel to said first support member, openings in said first and second support members aligned with each other along an axis parallel to the axis of the tubular housing, a relatively short torque pin shorter than said planar support member and having a relatively large cross section mounted in said first and second support members and passing through said aligned openings, each end of the torque pin projecting from the support members, one end of said torque pin being secured to said first support member so as to be held against rotation while a load is applied to the other and freely twistable end, said torque pin being provided with an outwardly extending annular flange intermediate its ends and located within the opening in the second support member, a sleeve surrounding the torque pin for a distance greater than the width of said flange and rigidly attached to said flange and rotatable within the opening in said second support member for turning movement with the twistable free end of the torque pin, a forked member carried by the sleeve and extending parallel to the first support member within said recess in the second support member, said forked member having a slot spaced from the sleeve and extending in the direction of said indicator housing, an indicator lever pivotally mounted on one of said support members and having a short arm and a long arm, the long arm extending into said indicator housing for operation of said indicator, the short arm of the indicator lever having a pin engaging in said slot of the forked member whereby the forked member is enabled to move the lever in response to twisting of the free end of the torque pin.

3,099,156
TEMPERATURE ERROR COMPENSATOR
Joseph A. Perry, Jr., Cedar Rapids, Iowa, assignor to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,275
3 Claims. (Cl. 73—141)

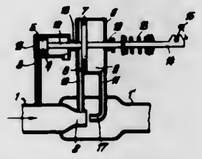


1. A force-measuring device comprising an elastically-deflectable member to which force is applied and which is subject to temperature-induced elasticity and dimensional changes, a differential transformer having an armature component and a coil component connected to said deflectable member to provide for relative movement of said components when said member deflects under applied force thereby producing an output signal, the magnitude of said signal being inversely related to temperature, a primary winding and a secondary winding in said coil component, a source of electrical power connected in circuit with said primary winding, a force indicator connected in circuit with said secondary winding, and a temperature-stable resistance of relatively high value connected in said primary circuit to stabilize temperature-induced changes in said transformer output signal a sufficient amount to nullify substantially the effects of temperature-induced changes in said deflectable member.

ERRATUM

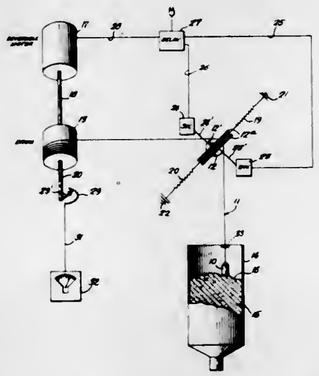
For Class 73—168 see:
Patent No. 3,099,163

3,099,157
FUEL SUPPLY CONTROL FOR ENGINE COMPRESSORS
Ludwig Wagenseil, Munich-Allach, Germany, assignor to Junkers Maschinen- und Metallban G.m.b.H., Munich-Allach, Germany
Filed Dec. 24, 1957, Ser. No. 705,002
Claims priority, application Germany Dec. 24, 1956
14 Claims. (Cl. 73—213)



1. An automatic controlling device of the character described comprising, in combination, a conduit through which compressed gas flows during delivery thereof, said conduit having a reduced portion of lesser cross-section than other portions of said conduit so that the gas flowing through said reduced conduit portion has greater dynamic and lesser static pressure than the gas in other portions of said conduit, said dynamic pressure in said reduced conduit portion increasing and said static pressure decreasing when the rate of delivery of gas through said conduit increases and vice versa; a support; control means mounted on said support for reciprocating movement and having at least a pair of acting faces facing in opposite direction and extending in a direction transverse to the direction of movement of said control means, the total area of one of said acting faces being considerably larger than the total area of the other of said acting faces; means for applying only the static pressure from said reduced portion of lesser cross-section of said conduit to one of said acting faces and the static pressure from one of the other portions of said conduit to the other of said acting faces so that said control means tends to move under the difference of forces acting on said acting faces thereof in one direction, whereby a substantial force difference is obtained with a minimum of static pressure difference in said reduced and said other portions of said conduit so that the reduction of the cross-section in said conduit can be held to a minimum thus avoiding increased flow losses of the gas passing through said reduced cross-section, said control means responding only to the differential between said static pressures; spring means operatively connected to said control means and tending to move the same in a direction opposite to said one direction; and motion transmitting means connecting said control means to a controlling member for moving the latter.

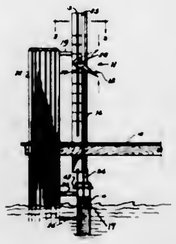
3,099,158
APPARATUS FOR MEASURING LEVELS OF MATERIALS IN CONTAINERS
William E. Barker, Jr., Orlando, Fla., assignor to Poly Tech Research, Inc., Orlando, Fla., a corporation of Florida
Filed Jan. 2, 1962, Ser. No. 164,431
4 Claims. (Cl. 73—321)



2. Apparatus for determining the surface level of flowable material in a container comprising a level sensing weight member adapted to be brought into contact with said surface, a cable for suspending said weight member within said container for vertical movement relative to said surface, a rotatable drum on which said cable is wound and anchored, a reversible motor coupled to said drum for rotating said drum to draw in and pay out said said cable for raising and lowering said weight member relative to said surface, a rotatable pulley over which the cable is trained overlying said container and supporting said weight member and a depending cable portion in suspended relation therefrom, guide means for said pulley restraining the pulley for movement along a rectilinear path inclined to a vertical axis, spring means connected to said pulley and extending in opposite directions therefrom along said path to stationary anchors resiliently supporting said pulley along said path at positions which vary in relation to variations in the tension exerted on the cable by said weight member, a pair of stationary switch members having switch arms disposed to be actuated by said pulley upon movement of the pulley along said path responsive to increase and decrease of cable

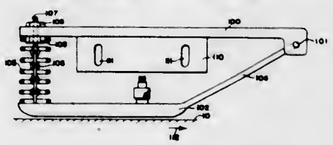
tension from a selected cable tension value, means responsive to actuation of said switch means for reversing the direction of drive of said reversible motor, and indicator means calibrated in container levels continuously responsive to the angular position of said drum to indicate the height of fill in said container.

3,099,159
TIDE INDICATOR
William F. Schroeder, Boca Raton, Fla.
Filed July 13, 1961, Ser. No. 123,729
5 Claims. (Cl. 73—322)



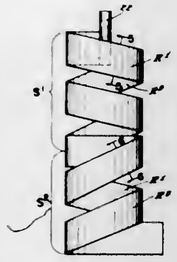
1. In a tidal height and direction of flow indicator, a support, a first member mounted on said support for frictional sliding relatively thereto, a second member carried by said first member for limited movement with respect thereto, a housing fixed with said support in vertically-spaced relation below said members, and having open upper and lower ends, a float positioned within said housing for free vertical guided translation therein, a rod having its lower end fixed to said float and its upper end connected to said second member only, vertical translation of said float in and relatively to said housing first moving said second member relatively to said first member to thereby indicate the direction of tide flow, continued translation of said float in the same direction relatively to said housing moving said members as a unit to thereby indicate instantaneous height of tide.

3,099,160
MOVING SURFACE TEMPERATURE SENSOR
Frank D. Werner, Minneapolis, and Richard V. De Leo, Hopkins, Minn., assignors to Rosemount Engineering Company, Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 3, 1961, Ser. No. 150,620
14 Claims. (Cl. 73—342)



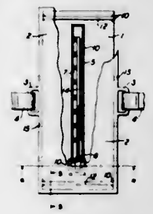
7. A device for measuring the temperature of the surface of material while it is being moved along a prescribed path of motion comprising a wall and means mounting the wall in a position generally paralleling the path of motion of the surface, so as with the surface to form an elongated space through which gaseous fluid may move, the wall being sufficiently long in the direction of movement of the surface while it moves so that with the speed and direction of movement of the strip and under its conditions of operation the fluid between the surface and the wall will be brought to a condition of fully developed flow before reaching the end of the space, a first temperature sensor on the wall for sensing its temperature, a second temperature sensor in the fluid where its flow is fully developed and an indicator connected to said sensors and responsive to the signals generated thereby.

3,099,161
BIMETAL COIL FOR USE IN TEMPERATURE RECORDERS
Joseph E. Gorgens, Easton, and Randall Goff, Weston, Conn., assignors to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Apr. 25, 1961, Ser. No. 105,420
2 Claims. (Cl. 73—363.9)



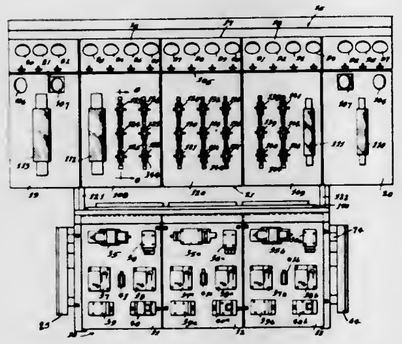
1. In a temperature responsive instrument, a rotatable member, a temperature sensitive coil drivingly connected at one end to said member, and means fixing the other end of said coil, said coil comprising a pair of coaxial sections joined at their next adjacent ends, each coil section consisting of a helically wound untwisted bimetal strip, said sections being helically wound in opposite directions with the side of the bimetal having the higher coefficient of expansion being on the inside of one coil section and on the outside of the other coil section.

3,099,162
PORTABLE TEMPERATURE MEASURING DEVICE
Nicholas J. Imperial, New York, N.Y. (28 Price Drive, Edison, N.J.), and Patrick J. McGannon, 78 Stevens St., Oceanside, N.Y.
Filed Apr. 27, 1959, Ser. No. 809,091
5 Claims. (Cl. 73—376)



1. A portable temperature measuring device comprising an elongated hollow shell of substantially rectangular cross section and comprising one lengthwise wall of high thermal conductivity metal and a shallow cover sealed to said wall, at least two spacers in addition to said shell, said spacers rigidly connected to at least one of said cover and wall near opposite internal ends thereof and arranged within said shell abutting said cover and said wall to positively define the minimum interior spacing between the inner surfaces of said wall and said cover, said cover comprising transparent material at least throughout a portion thereof, a temperature measuring instrument comprising a temperature responsive element and means for translating responses of said element into visual indications of temperature, means for securing said instrument to the inner surface of said wall such that said element is in intimate thermal conductivity with the inner surface of said wall and such that said element is enclosed within the said minimum interior spacing of said shell so as to be out of contact with any other inner surface of said shell and such that said indicating means is visible through said transparent material from outside said shell, and means adapted to attach said shell to a body so that the outer surface of said wall abuts that part of said body whereof the temperature is to be measured.

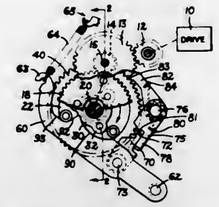
3,099,163
HYDRAULIC FUNCTION ANALYZER
Robert E. Raymond, Zanesville, Ohio, assignor to Racine Hydraulics and Machinery, Inc., a corporation of Wisconsin
Filed May 17, 1960, Ser. No. 29,650
13 Claims. (Cl. 73—168)



1. An hydraulic function analyzer for analyzing characteristics of hydraulic components comprising, a function board having a plurality of function valves, an instrument board having a plurality of instruments, a transfer board having means defining a plurality of distinct fluid flow paths with an on and off valve connected in each of said paths intermediate the ends thereof, a power board having a plurality of internally flow connected fluid ports, and a plurality of manifold blocks located in the same general area removed from said transfer and function boards, there being an individual manifold block for each of said instruments and each of said valves, a flow connection between a block and its respective valve or instrument, and a group of said blocks associated with the transfer board, said group of blocks including blocks connected in said flow paths of the transfer board at either side of said on and off valve, and conduits for selectively and releasably connecting a manifold block to the power board or an element under test and a plurality of manifold blocks together to place the desired valves and instruments in circuit.

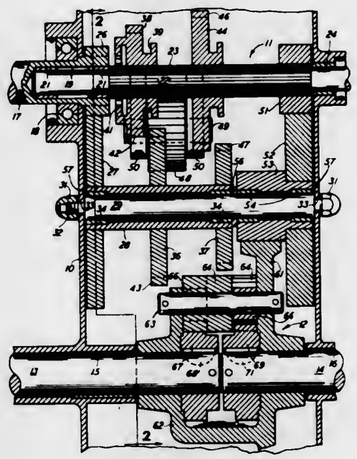
3,099,164
ESCAPEMENT DRIVE
Russell C. Geiger, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Feb. 10, 1961, Ser. No. 88,322
4 Claims. (Cl. 74—125)

1. A ratchet drive particularly adapted for positive advancing of a timer mechanism, comprising a toothed ratchet wheel including an output drive thereon for intermittent rotary driving, means engaged with said wheel and normally preventing rotation of said wheel in one direction, a driving dog engageable with the teeth on said wheel and movable to rotate said wheel in the other direction through a predetermined angular motion, a drive cam arm connected to said driving dog, means mounting said arm for motion in a predetermined path with respect to said wheel to move said driving dog along the teeth on said wheel, a rotatable driving wheel and a plurality of drive rollers mounted thereon for independent free rotation while moving concurrently with said driving wheel to engage said arm and cause oscillating motion thereof, said arm having a cam surface engageble with said rollers and



contoured to be continuously in contact with said rollers in succession during rising and descending motion of said arm relative to said driving wheel producing driving motion of said driving dog with controlled acceleration and deceleration, means connected to rotate said driving wheel, and means maintaining contact between said cam surface and said rollers during relative movement therebetween.

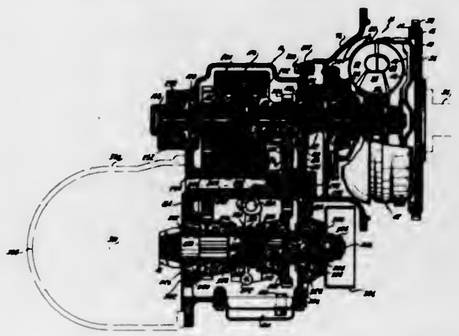
3,099,165
VEHICLE TRANSMISSION
Sherman C. Heth, Sahag C. Akgulian, and Knud H. Hoffmeyer, Racine, Wis., assignors to Jacobsen Manufacturing Co., Racine, Wis., a corporation of Wisconsin
Filed Feb. 27, 1961, Ser. No. 91,978
5 Claims. (Cl. 74—342)



1. A variable speed transmission comprising a housing, a first shaft rotatably mounted in said housing, at least two shift gears axially shiftably mounted on said first shaft and being rotatable therewith, an additional gear mounted on said first shaft and being rotatable therewith, a second shaft nonrotatably mounted in said housing and being rigidly attached to the latter for support, a first gear set of at least two gears rotatably mounted on said second shaft for selective and separate engagement with respective ones of said shift gears, input drive means engaged with said first gear set for rotating the latter on said second shaft, a second gear set rotatably mounted on said second shaft for rotation thereon independent of the rotation of said first gear set and being in constant driving relation with said additional gear on said first

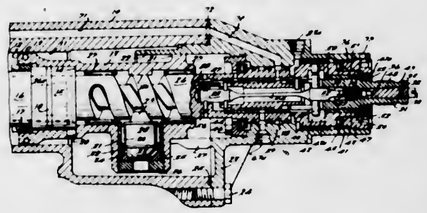
shaft, and an output drive gear being included in said second gear set.

3,099,166
DRIVE MECHANISM
Carl E. Schou, Oshkosh, Wis., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 590,224, June 8, 1956. This application Feb. 9, 1960, Ser. No. 7,726
6 Claims. (Cl. 74—359)



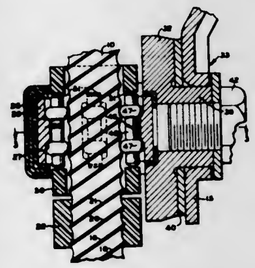
1. In combination, a torque converter, a transmission having a housing, an input shaft and an output shaft journalled in said housing about spaced parallel axes, first and second gear sets extending between said shafts and providing respectively forward and reverse drive to said output shaft from said input shaft, each of said gear sets having at least one gear journalled on said input shaft, a disc type friction clutch mechanism mounted on said input shaft between said gears journalled on said input shaft and selectively operative to connect the gear of said first set or said second gear set which is journalled on said input shaft in drive relation to said input shaft, and means in said housing defining an oil sump, means defining a fluid channel from said oil sump to said converter, means in said input shaft and in said gears journalled on said input shaft providing a fluid communication channel from said torque converter to said friction clutch mechanism and terminating in an outlet opening in each of said gears from which oil is discharged onto the discs of said clutch mechanism, and means for controlling fluid flow in said channel from said torque converter.

3,099,167
POWER STEERING GEAR
Walter E. Folkerts, Hazel Park, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,203
18 Claims. (Cl. 74—388)



4. In a power steering gear for an automotive vehicle, a personally rotatable shaft, a power driven shaft, a lost motion connection between the two shafts enabling limited relative rotational displacement therebetween, torsion means connecting the two shafts, an axially shiftable valve spool connected with said power driven shaft to rotate therewith, cam means carried by said personally rotatable shaft and spool for shifting said spool axially upon rotation of the latter shaft, fluid actuated power means for driving said power driven shaft, and means including portions carried by said spool for selectively directing fluid power to said power means upon axial shifting of said spool.

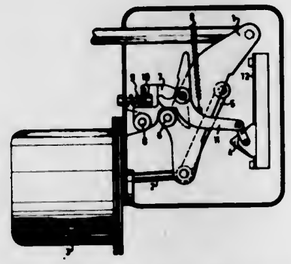
3,099,168
MOTION-TRANSMITTING DEVICE
Jack E. Martens, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Continuation of application Ser. No. 721,493, Mar. 14, 1958. This application July 1, 1960, Ser. No. 40,250
4 Claims. (Cl. 74—459)



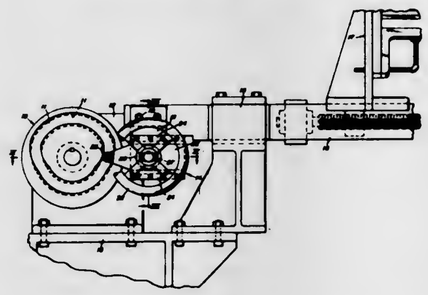
4. In a device of the class described, driving and driven members disposed for relative rotational and longitudinal movement, one of said members having a periphery forming helical threading having appreciable axial lead, the other of said members comprising a housing having an opening therethrough for operatively surrounding the one member, said opening comprising first, second and third axially disposed cylindrical portions, said first and second cylindrical portions lying in adjacent communication with opposite outer extremities of the other member, said third cylindrical portion being of a smaller diameter than the other two cylindrical portions and located therebetween, the juncture between the adjacent cylindrical portions providing shoulder means defining oppositely axially facing annular raceways, a plurality of roller elements having axially spaced-apart radially enlarged bearing surfaces connected by a shank portion, said bearing surfaces straddling the third cylindrical portion and engaging said raceways and the threading of said one member and being freely rotatable relatively thereto about axes substantially parallel to the axis of said one member whereby relative rotational movement between the members produces relative translatory movement therebetween.

3,099,169
BRAKE PISTON STROKE REDUCING MECHANISM IN VEHICLE BRAKES
Ragnar Hjalmar Nilsson, Malmo, Sweden, assignor to Svenska Aktiebolaget Bromsregulator, Malmo, Sweden, a corporation of Sweden
Filed Sept. 18, 1961, Ser. No. 138,821
Claims priority, application Germany Sept. 26, 1960
3 Claims. (Cl. 74—518)

1. In a vehicle brake comprising a brake lever forming part of a brake gear for transmitting brake power from the brake piston of a brake cylinder to brake shoes to be applied against the wheels of the vehicle, the combination comprising means for fulcruming said brake lever at a point which produces a relatively high leverage of the brake lever during the development of brake pressure after the brake shoes have been applied against the wheels of the vehicle on braking, and mechanism comprising an abutment on said brake lever and a supporting abutment with which said brake lever abutment coacts for fulcruming said brake lever at a point which produces a relatively low leverage of the brake lever during that part of the brake piston stroke which is consumed for applying the brake shoes against the wheels of the vehicle, one of said coacting abutments being pivotally mounted and spring-loaded so as to yield to an excessive pressure between said abutments to permit said brake lever to change from turning about the point which produces the relatively low leverage to turning about the point which produces the relatively high leverage on braking, said two coacting abutments having shapes and being positioned so that the pressure between them in their relative position at released brake biases the pivotally mounted and spring-loaded abutment in the same direction in which this abutment is spring-loaded and that the pressure between said coacting abutments during the movement of the brake piston for applying the brake shoes against the wheels of the vehicle on braking begins to counteract the spring load on said pivotally mounted and spring-loaded abutment only after this brake applying movement has started and caused a certain change in the mutual position of said coacting abutments.

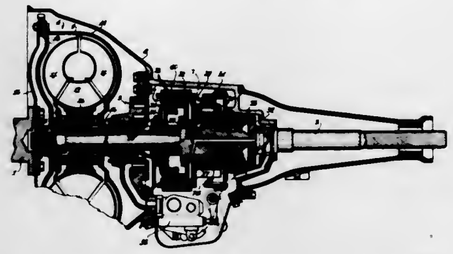


3,099,170
CAM-FOLLOWER SELECTOR DEVICE
Lloyd L. Stevens, Concord, Calif., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 5, 1961, Ser. No. 136,066
4 Claims. (Cl. 74—569)



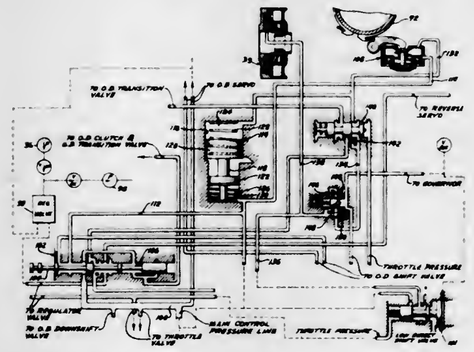
1. Apparatus for selectively rendering effective one of two cam followers engaging respectively two cam grooves of different shapes in opposite faces of a disc, said apparatus comprising a block having ways in opposite faces thereof, said block being disposed adjacent the edge of said disc, a slide reciprocable in each way, each slide having a follower roller thereon cooperating with one of said grooves, and means for selectively clamping one of said slides to said block frictionally and releasing the other for free idling reciprocation in its ways.

3,099,171
AUTOMATIC TRANSMISSION
Peter Ivanchich, 924 N. Rosevere St., Dearborn, Mich.
Filed Nov. 2, 1959, Ser. No. 850,186
4 Claims. (Cl. 74—688)



1. In a transmission, a housing, an input shaft rotatably mounted in said housing, an output shaft rotatably mounted in said housing in aligned relation with said input shaft, a coupling device having at least an impeller and a turbine, means connecting said impeller to said input shaft, a planet gear set embodying an outer ring gear connected to said output shaft, an inner sun gear connected to said input shaft and a plurality of planet gears each having its teeth in mesh with the teeth of said sun and ring gears, a carrier for said planet gears connected to said turbine and driven directly thereby, said connection to the output shaft embodying a second set of planet gears having a sun gear, a ring gear and planet gears, the sun gear of the second set being connected to said input shaft and the carrier thereof connected to the ring gear of the first planet gear set and to the output shaft, and brake means connected to the ring gear of said second planet gear set.

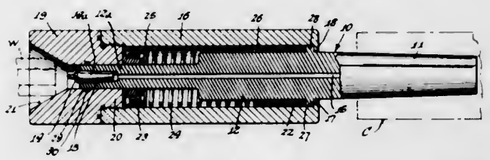
3,099,172
AUTOMATIC TRANSMISSION CONTROL CIRCUIT
Zbigniew J. Jania, Detroit, and Ocie K. Walthall, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Feb. 11, 1957, Ser. No. 639,329
15 Claims. (Cl. 74—751)



1. In an automatic power transmission mechanism having a power input driving portion, a power output driven portion, and a plurality of gear elements interconnecting said driving and driven portions; a gear control means for regulating relative movement between said gear elements to accommodate a delivery of torque therethrough at various torque ratios, said gear control means including a double acting fluid pressure responsive servo adapted to actuate the same, said servo having a servo pressure release chamber and a servo pressure apply

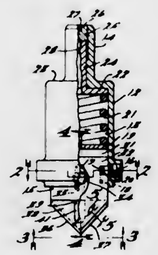
chamber, a fluid pressure source, a control valve circuit including a separate fluid pressure passage interconnecting said fluid pressure source and each of said servo chambers, and an accumulator comprising a fluid chamber, a movable member situated in said chamber defining separate accumulator portions on either side thereof, a first branch passage connecting one accumulator portion with said pressure source to provide direct and continuous fluid communication therebetween and a second branch passage connecting continuously the other accumulator portion with one pressure chamber of said servo, and valve means disposed in and partly defining said second branch passage for distributing pressure selectively to said one pressure chamber.

3,099,173
CENTER HOLE FORMING MEANS
Raymond Paslawsky, 201 Morehouse Highway, and Robert Fensky, 175 Morehouse Highway, both of Fairfield, Conn.
Filed June 7, 1960, Ser. No. 34,455
4 Claims. (Cl. 77—18)



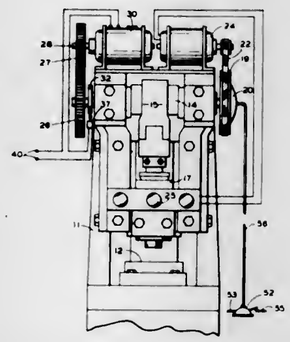
1. A center hole drilling device comprising a center body having a tapered shank at the rear end and a center bore therethrough provided with a tapered portion at the forward end to receive with a force fit the tapered shank of a drill, said body having a cylindrical portion slidably receiving sleeve means surrounding the body and having an end portion provided with a frusto conical centering recess in the end coaxially disposed with respect to said drill whereby the end of a workpiece inserted in said recess is automatically centered with respect to said drill, said sleeve means being rotatably mounted on the cylindrical portion of the body by antifriction bearings and being urged to a projected position by means of a spring, said spring yielding to permit relative axial movement between the sleeve and drill whereby the drill is moved into engagement with the centered workpiece to from the center hole therein.

3,099,174
COUNTERSINKING TOOL
Stuart A. Cogsdill, Orchard Lake, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich., a corporation of Michigan
Filed June 29, 1960, Ser. No. 39,557
12 Claims. (Cl. 77—73.5)



1. In a blade for a cutting tool, a thin flat sheet metal body of rectangular shape, and a cutting edge on one end of the blade formed by a relieved sloping side forming a short and a long side to the blade body, said blade having a finger receiving notch in the body inwardly of the edge of the short side above said cutting edge.

3,099,175
POWER CONTROL FOR PRESSES
Ivar S. Lawson, R.F.D. 2, Ashville, N.Y.
Filed Oct. 12, 1959, Ser. No. 845,906
3 Claims. (Cl. 78—39)



1. In a machine having a crank, a reciprocating ram, a flywheel on one end of said crank, means for continuously rotating said flywheel, a motor directly connected to the other end of said crank, a clutch for coupling said flywheel to said crank, said clutch being capable of slipping in the event of an obstruction in the path of said ram, means to engage said clutch for reciprocating said ram and setting said motor in motion, and means normally operable when the path of said ram is clear to energize said motor at a predetermined point in the reciprocation of said slide and to de-energize said motor at the completion of the work stroke of said slide.

3,099,176
ROLLING SILICON-IRON
Richard C. Hall, Pittsburgh, and Raymond E. Wien, Trafford, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 6, 1957, Ser. No. 694,709
4 Claims. (Cl. 80—60)

1. A method of producing thin gauge silicon-iron sheets of a thickness of the order of from 2 to 1 mils and less, comprising hot rolling an alloy plate consisting essentially of from at least 4.5 weight percent to 7.5 weight percent of silicon and the remainder iron, to a thickness at least as thin as 110 mils, then warm rolling the resulting material at an elevated temperature of above about 275° C. but below 425° C. to effect a reduction of about 80% and the resulting material is at least as thin as about 25 mils to produce an elongated microstructure therein, and then, without annealing, rolling the resulting thin gauge material at about room temperature to effect a reduction of the order of 90 to 95% so that the cold rolled sheets are of the desired final thickness.

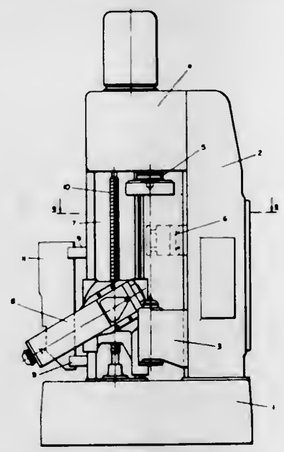
3,099,177
COMBINED RATCHET AND DIRECT DRIVE HAND OPERATED ROTARY TOOLS
Charles Kostka, Bronx, N.Y.
(4 Dock St., Mount Vernon, N.Y.)
Filed Dec. 1, 1960, Ser. No. 73,056
4 Claims. (Cl. 81—63.2)

1. A hand operated rotary tool comprising a handle part, a spindle journalled in said handle part, a ratchet pawl selectively angularly adjustable in said handle part and extending slidably from one end thereof, a ratchet wheel fixed to the spindle and having ratchet teeth on the underside thereof engageable with the ratchet pawl, a cup-shaped clutch part drivingly connected to the spindle and axially displaceable between extended and



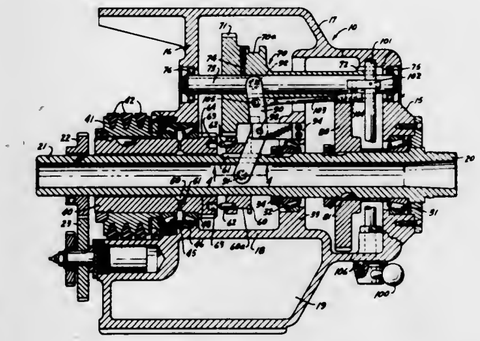
retracted positions, drive pins projecting axially forward from the handle part, the clutch part having openings for receiving the drive pins of the handle part to lock the handle and the cup-shaped clutch parts together with the cup-shaped clutch part in its retracted position, whereby direct drive as well as ratchet drive may be selectively effected between the handle and spindle parts.

3,099,178
LATHE
Lothar Kaiser, Reinach, Aargau, Switzerland, assignor to Maschinenfabrik A.G. Menziken, Menziken, Aargau, Switzerland
Filed July 28, 1959, Ser. No. 829,999
Claims priority, application Switzerland Aug. 12, 1958
6 Claims. (Cl. 82—2)



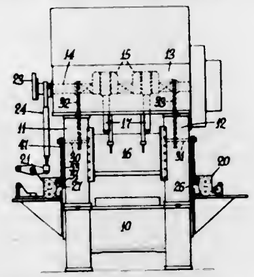
1. A lathe comprising a support; a vertical main column mounted on said support; a tailstock secured to said column; a headstock mounted on said column above said tailstock and having a work spindle for rotation of a workpiece held between said tailstock and said work spindle about a vertically extending axis; a tool holding column upwardly extending from said support, said support, columns, and headstock jointly forming a closed frame structure; and a tool slide movable on said tool holding column in a direction substantially parallel to said axis for machining of said workpiece by a tool held by said slide.

3,099,179
HEADSTOCK FOR LATHE
Howard B. Carroll, Winnetka, Ill., assignor to Sheldon Machine Company, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 8, 1958, Ser. No. 766,102
7 Claims. (Cl. 82—28)



1. In a metal turning lathe a headstock comprising, in combination, a totally enclosed box-like housing having end walls, a spindle journaled in said housing and projecting beyond the end walls at each end, a sheave collar including a belt sheave telescoped over said spindle and journaled in the end wall of the housing at the drive end in a bearing providing cantilever support for said sheave against lateral belt forces, said sheave collar being closely spaced to said spindle and defining a long annular interspace extending substantially the entire length of said sheave collar, said sheave collar being extended a short distance into said housing and having torque coupling means at its inner end for coupling the collar to the spindle while preventing application of lateral forces from the collar to the spindle.

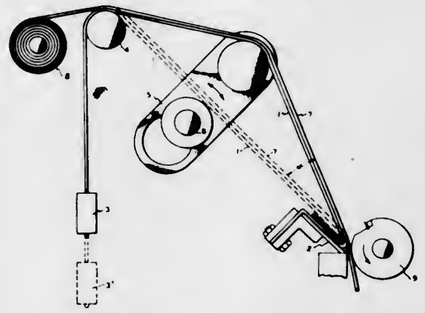
3,099,180
FEED ROLL RELEASE MEANS FOR POWER PRESSES
Frederick E. Munschauer, Jr., and George E. Munschauer, Eggertsville, and Leiv S. Platou, Snyder, N.Y., assignors to Niagara Machine & Tool Works, Buffalo, N.Y.
Filed Aug. 29, 1957, Ser. No. 681,079
11 Claims. (Cl. 83—230)



1. In combination with a power press, feed rolls adapted to feed sheet material thereto, a mechanical drive connection between said power press drive means and said feed rolls for rotating the latter intermittently between material pressing portions of operating cycles, means for adjusting said drive connection to vary said intermittent rotation to adjust the length of material thus fed between each operating cycle, and means operable to release the roll feed from sheet material engagement for predetermined independently adjustable time

periods between feeding cycles comprising a roll release shaft driven from said power press in timed relation with operating cycles thereof, an eccentric on said shaft, and means connecting the same with said release means for operating the latter, said eccentric including means for angularly adjusting the same on said shaft for varying the timing of the release operating means with respect to the press operating cycle, said connecting means including means for adjusting the effective length thereof to vary the relative duration of the release period.

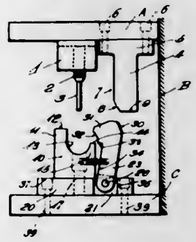
3,099,181
VARIABLE ANGLE FEED MEANS FOR PAPER CUTTERS
Albert R. Hergenhan, River Edge, N.J., assignor to Lowe Paper Company, Ridgefield, N.J., a corporation of New Jersey
Filed Aug. 5, 1959, Ser. No. 831,834
4 Claims. (Cl. 83—349)



1. Guide means for guiding paper sheet material from a roll of paper stock to a paper cutting means comprising a belt means secured at one end thereof near the edge of a stationary knife means and at the other end thereof to a belt tension means, said belt means being slidably supported intermediate its ends by a belt supporting means, means disposed intermediate said belt supporting means and the knife end of said belt for changing the angle formed by said belt and stationary knife means; said angle changing means engaging said belt means and adapted to rotate around a pivot point spaced from its point of engagement with said belt means, whereby the rotation of said angle changing means causes a change in the angle formed by said belt means and said stationary knife means.

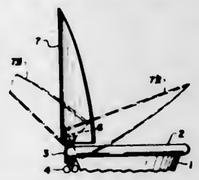
3,099,182
TUBE SUPPORT AND CLAMP FOR PUNCHING MACHINES
Earl E. Alverson, North Birmingham, Ala., assignor to Southeastern Metals Company, North Birmingham, Ala., a corporation of Alabama
Filed Feb. 1, 1961, Ser. No. 86,348
1 Claim. (Cl. 83—383)

A machine for punching holes through tubing comprising a table, an upright base fixedly mounted on said table and having a top end and a straight side, said base top end having a recess extending thereacross with one side of said recess being shorter than the other side giving a J-shaped cross-sectional configuration to said recess for supporting a portion of a tube therein and further having a flat end extending between the shorter side of said recess and said base straight side, said base further having an opening extending from within said recess of said base top end towards said table, a jaw having one end pivotally connected to said base below said base flat end for being pivoted to and from said base side, said jaw having an intermediate portion of a configuration for mating with said base side and flat end when pivoted against said base side and a laterally extending opposite end portion with a side recess positioned for extending contiguous with said base top end recess shorter side when said jaw mates with said base, but spaced from said base top end recess longer side retaining said tube in said top end recess, resilient means extending between said base and said jaw tending to pivot said jaw from said base, said jaw further having a side wall with a cam surface on a side thereof opposite to said side recess, a punch carrying plunger positioned



above said base top and moveable to and from said base for inserting said punch between said base top recess longer side and said jaw side recess into said base opening, means for reciprocating said plunger, a cam carried by said plunger for movement therewith in advance of said punch and positioned for engaging said jaw cam surface for pivoting said jaw into its mating position with said base and said jaw side recess into its tube retaining position whereby said punch can thereafter punch a hole through said tube and enter said base opening and be withdrawn therefrom.

3,099,183
MUTE AND REFLECTOR FOR MUSICAL WIND INSTRUMENTS
Edwin H. Alles, 841 Hober Ave., McKees Rocks, Pa.
Filed June 9, 1960, Ser. No. 34,907
3 Claims. (Cl. 84—400)

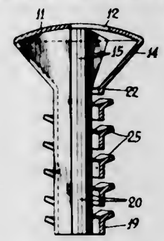


1. In combination with a musical wind instrument having the general shape of a saxophone and including a bell portion, a sound-reflecting shield mounted on the rim of said bell portion farthest from the player, said shield having a straight longitudinal axis, means for adjustably pivoting said shield in a vertical plane toward and away from the player at selective angles whereby sounds emanating from said bell portion may be reflected by selective amounts toward the player.

3,099,184
SHEET METAL SCREW
Herbert J. McCauley, Jr., 731 W. Ferry St., Buffalo, N.Y.
Filed Feb. 27, 1961, Ser. No. 92,041
2 Claims. (Cl. 85—1)

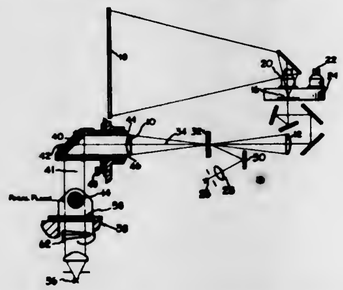
1. A screw formed from sheet metal and having a head portion and a shank portion, said shank portion comprising a plurality of adjacent members of sectoral cross section each having an arcuate portion forming a portion of the periphery of said shank portion and marginal flanges integral with said arcuate portions and extending substantially the full length of the same, said

flanges radiating inwardly toward the axis of said shank portion a distance sufficient to reinforce said arcuate portions and provide a broad abutment area, said flanges abutting corresponding marginal flanges on adjacent sectoral members to insure concentricity of said adjacent members, said shank portion further comprising a portion integral with and joining the outer circumference of said head portion and said sectoral members to form



a hollow head and whereby said sectoral members comprise integral extensions of said head portion, each of said arcuate portions having transverse thread formations comprising elongated oblique flanges struck therefrom, said marginal flanges having enlarged portions adjacent to said head portion conforming generally to the interior configuration of said hollow head to fit therein and internally reinforce the same.

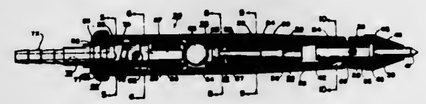
3,099,185
CONTOUR PROJECTOR WITH MEANS FOR ADJUSTING THE VIEWING ANGLE
Robert J. Meltzer, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed May 19, 1960, Ser. No. 30,282
2 Claims. (Cl. 88—24)



1. A contour projector comprising an optical objective having a fixed optical axis, a mirror positioned in front of said objective on said optical axis and inclined relative to said axis, means rotatably supporting said mirror for rotation about said axis and varying the viewing direction of said objective in the object space, illuminating means radiating a luminous flux for illuminating the object space, alignment means deviating the luminous flux for alignment of the flux with the viewing direction as the viewing direction is varied.

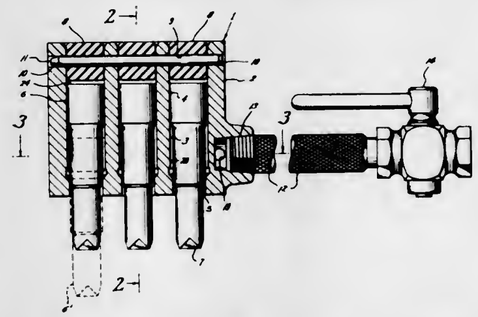
3,099,186
MARKING DEVICE
Clarence J. Ballash, Cleveland, Ohio, assignor, by mesne assignments, to The Cooper-Bessemer Corporation, Euclid, Ohio, a corporation of Ohio
Filed July 21, 1960, Ser. No. 44,463
10 Claims. (Cl. 91—227)

1. A control valve for controlling the passage of a fluid including in combination a pivot member having an axis, first and second spaced sealing ring grooves on the surface of said pivot member and being spaced from each other, an annular control member surrounding and spaced from said pivot member and being rotatable between first and second positions thereabout, said first sealing ring groove being at substantially a right angle with respect to said pivot member axis and said second sealing ring groove being at an acute angle with respect to said pivot member axis, first and second sealing rings residing in said first and second sealing ring grooves, respectively, and making a seal between said pivot member



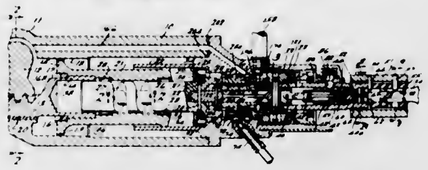
and said annular control member and also defining a chamber, conduit means through one end portion of said pivot member and extending to said chamber for transmitting a fluid thereto, wall means defining an axially extending slot in said annular control member, said slot being located outside the axial extent of said chamber between said first and second sealing rings in said first position of said control member and said slot being at least partially located within the axial extent of said chamber between said first and second sealing rings in said second position of said control member whereby fluid may flow from said chamber.

3,099,187
PNEUMATIC TOOL
Martin D. Hoza, Houston, Tex., assignor to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Feb. 20, 1961, Ser. No. 90,395
6 Claims. (Cl. 91—232)



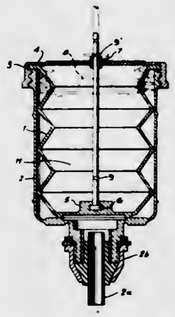
1. An elastic pressure fluid operated percussive tool comprising a body having a plurality of cylinders, each cylinder having a bore of two diameters, a piston in each of said bores having an upper portion fitting the larger portion of said bore and a lower portion fitting the smaller portion of said bore and extending therethrough outwardly from said body and terminating in an end adapted to work on a surface, the said body having passages controlled by said piston for admitting and exhausting pressure fluid to cause the pistons to reciprocate within said cylinders, a synthetic rubber cylinder head in the upper end of each of said larger bore portions to seal the same, each of said resilient cylinder heads having a hole transversely therethrough, the said body having holes therethrough registering with said cylinder head holes, a single pin extending through said holes in said body and cylinder heads, the said pin having a diameter larger than the diameter of said cylinder head holes.

3,099,188
POWER STEERING GEAR
Walter E. Folkerts, Hazel Park, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Dec. 29, 1959, Ser. No. 862,566
20 Claims. (Cl. 91—374)



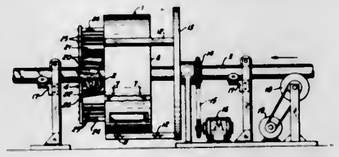
14. In a power steering gear, a personally rotatable tubular first shaft, a power rotatable second shaft, a shiftable valve spool, fluid actuated means including portions carried by said spool for rotating said second shaft upon axial shifting of said spool, a tubular valve actuator within said first shaft, means interconnecting said first shaft and valve actuator to shift the same upon rotation of said first shaft with respect to said second shaft, adjustment means connecting said actuator and valve spool to adjust the axial position of the latter with respect to said actuator, said adjustment means having a portion accessible from one end of said tubular first shaft, and a fluid sealing plug closing said one end of said first shaft, said plug being shiftable axially and rotatable within said one end and having a portion engageable with said adjustment means to actuate the same when said plug is shifted axially toward said first screw and rotated, and means to limit axial endwise shifting of said plug from said one end.

3,099,189
DEFORMABLE DIAPHRAGM APPARATUS
Edgard Blondiau, Ile-St.-Denis, France, assignor to Societe STOP, Saint-Ouen, France, a corporation of France
Filed July 14, 1960, Ser. No. 42,879
Claims priority, application France Sept. 16, 1959
4 Claims. (Cl. 92—23)



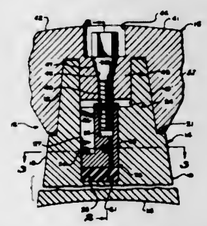
1. Filling and isolating apparatus for a hydraulic system comprising a fluid reservoir vessel having an output port in communication with said hydraulic system, a deformable diaphragm adapted to fit within the body of said vessel and to exert pressure on the fluid in said vessel, a removable cover for the top of said vessel, said cover being provided with a central aperture extending therethrough, said diaphragm comprising a bellows having an open end and a closed end, said open end having an outwardly extending flange adapted to be retained in hermetic sealed relation between the lip of said vessel and the inside of said cover, a rod fastened to the inside of the closed end of said bellows, said rod adapted to extend through the aperture in said cover, a slot in said rod running in a direction normal to the longitudinal axis of said rod, and restraining means adapted to be fitted within said slot after said rod has been partially drawn through said cover in a direction opposite from the interior of said vessel, whereby to temporarily maintain said diaphragm in deformed position against the inside portion of said cover when said cover is removed from said vessel so that the volume of fluid which may be introduced into said vessel is subject to minimum displacement by said diaphragm after such introduction and the replacement of said cover over said vessel.

3,099,190
STRIP WINDING APPARATUS
Chester Allen, Jr., and Freerk Berkloo, Milwaukee, Wis., assignors to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Feb. 1, 1961, Ser. No. 86,426
3 Claims. (Cl. 93—80)



1. An apparatus for winding a woofless web of unidirectional fibers impregnated with a resin in a spiral pattern to form a tubular member, comprising, a mandrel, cylindrical support means for supporting the web in coiled form, and a series of guide members separate from said support means and circumferentially distributed about the mandrel and serving to guide the web from said support means onto the mandrel, the first of said guide members having its axis parallel to the mandrel and successive guide members from said first guide member being tilted about the central incoming tangency point to impart a progressive twist in the same general direction to the web, and said guide members being arranged with the plane defined by the axis of each guide member and the tangency line formed at the discharge line of the guide member being substantially parallel to the plane defined by the axis of the next adjacent roller and the tangency line formed where the web engages such adjacent guide member.

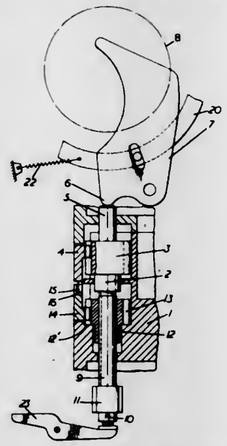
3,099,191
SHEEP FOOT TAMPER
Thomas Perry Averette, 15400 Lemac St., Van Nuys, Calif.
Filed Jan. 25, 1960, Ser. No. 4,467
5 Claims. Cl. 94—48)



1. A sheep foot tamper structure, comprising a metal shank having an inner end adapted for welding to the periphery of a metal roller, said shank having a socket in its outer end, a tamping foot having a stem received in said socket, said shank having a cavity extending toward said inner end from said socket, an internally

threaded retainer in said cavity, a bolt seated against said foot and threadedly mounted in said retainer, and means detachably securing said retainer in said shank, said means including a removable pin extending transversely of said shank and engaging said retainer and a resilient pad between the retainer and the bottom of said cavity serving to yieldably urge said retainer against said pin.

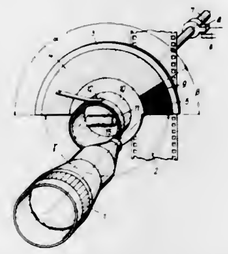
3,099,192
DIFFERENTIAL GEARING FOR SETTING LIGHT VALUES
Werner Hahn and Rolf Noack, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Sept. 16, 1960, Ser. No. 56,571
12 Claims. (Cl. 95—10)



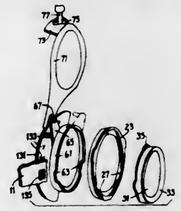
1. A photographic camera having a housing, a diaphragm exposure control means mounted on the housing, a time exposure control means mounted on the housing; the provision of a differential gearing comprising a first toothed setting element for adjusting the time exposure control means and the diaphragm exposure control means at constant light value, a second toothed setting element for independently adjusting one of said exposure control means, a threaded spindle mounted in the housing so as to be rotatable about the axis of said spindle and axially movable in the housing, a first coupling means connecting said spindle with the first setting element, and a second coupling means connecting said spindle with the second setting element, said first coupling means including a threaded bushing into which the spindle is screwed and a pinion on said bushing, said pinion being in engagement with the toothing on the first setting element, and said second coupling means including a pinion fixedly mounted on said spindle which meshes with the toothing of the second setting element.

3,099,193
FILM CAMERA HAVING COMBINED SHUTTER AND PHOTO ELECTRIC CELL
Otto Freudenschuss, Vienna, Austria, assignor to Karl Vochenhuber, Vienna, Austria
Filed Nov. 8, 1960, Ser. No. 68,105
Claims priority, application Austria Nov. 10, 1959
5 Claims. (Cl. 95—10)

1. A film camera including an exposure metering device, comprising an objective, a frame, said frame defining a gate opposite said objective, a periodically moved shutter in order to cover periodically said frame gate, means for locking said shutter in a predetermined position covering said gate in the inoperative position of said camera, a photo-sensitive layer disposed on said shutter opposite said objective, a measuring instrument in electric circuit connection with said photo-sensitive layer to control said measuring instrument, means for reducing the efficiency of the part of said photo-sensitive layer with respect to the efficiency of the remaining parts of said photo-sensitive layer within a range thereof in which a picture is projected thereon through said objective in the inoperative position of said camera, said reduced efficiency being equal to the average value of said efficiency over a full period of the movement of said shutter, and said efficiency being defined as a proportion of delivered electric energy to the light energy incident through said objective.



3,099,194
EXPOSURE REGULATING MEANS FOR CAMERAS
Richard Weiss and Claus Prochnow, Braunschweig, Germany, assignors to Franke & Heidecke, Fabrik Photographischer Prazisions-Apparte, Braunschweig, Germany, a firm of Germany
Filed May 23, 1961, Ser. No. 111,994
Claims priority, application Germany June 1, 1960
12 Claims. (Cl. 95—10)

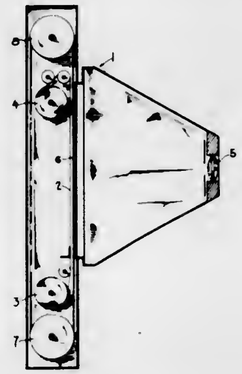


1. A photographic camera of the type having a bayonet mount for detachably receiving a filter mountable on and demountable from the camera by a twisting motion, exposure meter means, and means for introducing a filter factor adjustment into said exposure meter means, characterized by means operated by twisting a filter relative to said bayonet mount for operating said filter factor introducing means.

3,099,195
CAMERA WITH LENTICULATED MASK
Isaac Goodbar, 93—02 211th St., Queens Village 28, N.Y.
Filed Feb. 29, 1960, Ser. No. 11,797
1 Claim. (Cl. 95—37)

An apparatus for photographing a succession of pictures comprising a enclosure having an image aperture positioned therein, an objective lens disposed in a wall of said enclosure and spaced from said image aperture, film spools disposed above and below said image aperture to support a photographic film, means for guiding said film across said image aperture intermediate said spools, an

endless lenticulated scanning mask mounted with a portion of the lenticulated scanning mask passing across said image aperture juxtapositioned adjacent the film on the side toward the lens, said lenticulated mask consisting of a multiplicity of tiny lenses and a means for moving said film and lenticulated scanning mask across said image



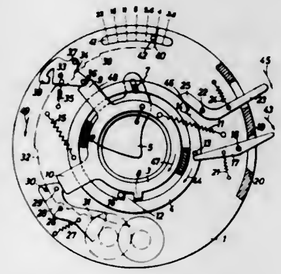
aperture at different relative speeds, the difference in speed between the film and lenticulated scanning mask being s/e where s is the dimension of the image of the objective lens produced on the film by each of the lenses of the lenticulated scanning mask and e is the film exposure time.

3,099,196
SHUTTER WITH RECIPROCATING SHUTTER BLADES FOR PHOTOGRAPHIC CAMERAS
Willy Neubert, 29 Herdweg, Gerlingen, near Stuttgart, Germany
Filed July 9, 1959, Ser. No. 825,923
Claims priority, application Germany July 17, 1958
12 Claims. (Cl. 95—63)



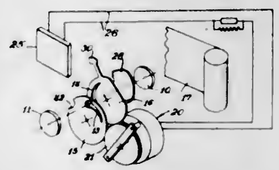
1. A photographic objective shutter comprising an apertured housing, at least one shutter blade mounted on said housing for rotation into aperture opening and closing positions, a first and a second spring connected to said housing and to said shutter blades for biasing the latter to said opening position by said first spring and to said closing position by said second spring, the latter being stronger than said first spring, said first and said second springs being reciprocably tensioned by each other during the respective biasing actions, releasable stored energy means selectively connectable in aiding relationship to said first spring, means to connect said stored energy means to said first spring before the biasing action of the latter so that when aided by said stored energy means said first spring has a greater force than said second spring, and means to disconnect said stored energy means from said first spring before the biasing action of said second spring, said springs and said stored energy means being effective during the entire respective opening and closing movements of said shutter blades.

3,099,197
CENTRAL PHOTOGRAPHIC SHUTTER
Gerd Kiper, Unterhaching, near Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Oct. 11, 1960, Ser. No. 62,021
Claims priority, application Germany Dec. 11, 1959
13 Claims. (Cl. 95—63)



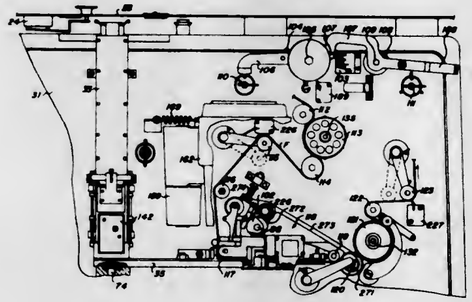
1. A photographic shutter of the central type comprising a pair of rotatably mounted concentric sector-operating rings, a number of shutter sectors, each of said sectors being movably connected to both of said rings to cause them to open and close said sectors when the angular phase between said rings varies from a normal condition and returns to it, driving means connected to each of said rings for imparting separate driving forces to them, tensioning and releasing means connected to said rings for causing said rings to simultaneously commence their driven movement and a retarding device being operatively connected to one of said rings for selectively delaying the speed of its rotation relative to the other for momentarily varying said angular phase to cause said sectors to open and close an amount which is a function of said delay, and a control element operatively engaged with said retarding device to permit the shutter opening time and pattern to be selectively adjusted.

3,099,198
AUTOMATIC EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERAS
Arthur C. Mueller, Maine Township, Cook County, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed June 27, 1958, Ser. No. 744,998
10 Claims. (Cl. 95—64)



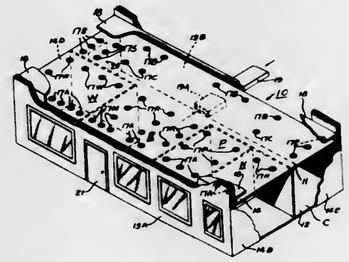
3. A multi-element diaphragm system for photographic cameras comprising a rotational diaphragm member, means on said member causing a static unbalance providing an eccentric center of gravity, a separate rotary counterbalance member interconnected with said diaphragm member for rotation therewith in the same direction at the same angular velocity, said counterbalance having a center of gravity positioned 180° out of phase with the unbalance of said diaphragm member and balancing said system.

3,099,199
APPARATUS FOR REPRODUCING AND RECORDING INFORMATION
William Bornemann, Robert H. Bechtold, and Harlow D. Philips, Rochester, N.Y., and Peter D. J. Freeman, Manhattan Beach, Norman F. Loretz, Pacific Palisades, and George O. Neuman, Sherman Oaks, Calif., assignors, by direct and mesne assignments, to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 9, 1959, Ser. No. 792,177
53 Claims. (Cl. 95—73)



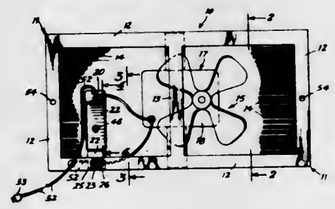
52. In apparatus for manipulating and transporting discrete photographic elements, each element having a code field containing a plurality of columns of coded words, one of which is an identifying coded word, and a sort field, the combination comprising a supply station for said elements, a receiving station for said elements, a reading station arranged between said supply station and said receiving station, drive means, carrier means operatively connected to said drive means for intermittent movement with respect to said stations and provided with a plurality of apertures over which said elements are positioned, an aperture being aligned with each of said stations when said carrier means is stationary, transfer means operatively connected to said drive means and arranged with respect to said carrier means and said supply station and said receiving station for withdrawing said elements individually from said supply station and positioning them on said carrier with respect to said apertures and for removing each element from said carrier means, when positioned with respect to said receiving station, and inserting them into said receiving station, said transfer means being actuated after each movement of said carrier means and during the interval said carrier means is stationary, means for reading said coded words on each element moved into said reading station and deriving a group of electrical signals representative of only said identifying coded word associated with each element, means responsive to said reading means for storing the group of electrical signals and for providing successive groups of output signals representative of each character in the stored identifying coded word, recording means responsive to each group of output signals for converting said output signals into legible representations of the identifying coded word character by character, means operatively connected to said drive means for initiating a cycle of operation with respect to said carrier means, said transfer means, said reading means, said storing means and said recording means, and a programmer means for controlling said cycle of operation and responsive to each last group of output signals released by said storing means for rendering said carrier means operative to move the succeeding element into said reading station and initiating another cycle of operation.

3,099,200
AIR-DISTRIBUTION SYSTEM
Charles E. Harrison, Broadwater Farm, Charlestown, Pa.
Filed July 14, 1960, Ser. No. 42,918
14 Claims. (Cl. 98—40)



1. An air-distribution system for supplying different predetermined quantities of air to different zones of a building space and with predetermined different depths of penetrations into different zones comprising a wall common to said different zones, a plenum chamber substantially coextensive with said wall and continuously supplied with air for maintenance of positive plenum pressure, and a plurality of air-control devices inserted in said wall in a pattern dependent upon the different air-load requirements of different zones and jointly having a discharge area not exceeding about 2% of the area of said wall for substantial uniformity of the plenum pressure at all of said air-control devices, said control devices each comprising a perforated plate structure bridging an opening in the wall and structure, such as a plate, in the plenum chamber and having a surface variably spaced along said perforated lower plate to form a flow passage converging in the direction of flow of air from the plenum through the perforations in said plate and determining the flow resistance of the air-flow paths to said perforations, at least some of said control devices having means for adjusting the interplate spacing.

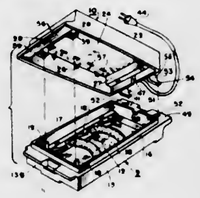
3,099,201
FLOW-BOOSTING REGISTER FOR AIR DUCTS
Leon Gottlieb, 7008 W. Park Drive, Hyattsville, Md.
Filed Mar. 31, 1961, Ser. No. 99,827
4 Claims. (Cl. 98—101)



1. A flow-boosting register for an air duct outlet, comprising: a louvered grill of standard size and shape adapted for interchangeable use in place of a conventional register grill, a fan positioned behind said grill, a motor including a housing therefor and a shaft drivingly connected to and supporting said fan, strap-like means affixed to said housing and to opposite marginal portion of said grill for interconnecting said grill, fan and motor as a unit, and a plurality of control switches in series with said motor and a source of power for controlling the operation of said unit, at least one of said switches being a thermostatic switch for energizing said motor only when preselected temperatures occur in the air in said duct out-

let, another of said switches being a manual switch including a casing positioned behind said grill, a threaded sleeve projecting forwardly through an aperture in said grill, a nut on said sleeve clamping said manual switch to said grill and a switch operator projecting through and forwardly from said sleeve, a further one of said switches being a safety thermostatic switch set to interrupt the motor circuit when abnormally high temperatures occur in said duct outlet, said thermostatic switches being a unitary assemblage mounted within a protective housing.

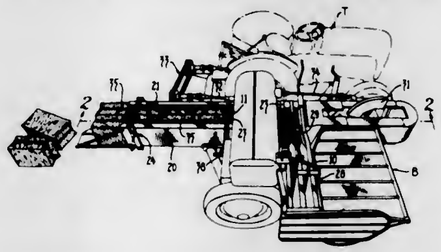
3,099,202
FRANKFURTER COOKER
Reed A. Palmer, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 30, 1959, Ser. No. 810,077
3 Claims. (Cl. 99—337)



1. In a two-part frankfurter cooker, a base including a bottom wall and four side walls defining a cooking well, a pair of electrically conductive bus bars disposed in said well adjacent opposite side walls thereof, a pair of electrical contact fingers having electrical connections with said pair of bus bars and projecting upwardly from the base, a plurality of electrodes carried by each of said bus bars and projecting into said cooking well for reception, on opposed pairs thereof, of the terminal portions of frankfurters to be cooked, a cover for said cooking well, a pair of downwardly opening electrical sockets carried by the cover in alignment with said contact fingers for reception of an electrical contact with the latter when the cover is in closed position, means carried by said cover for providing an electrical circuit between said sockets and an electrical supply source, and hinge means pivotally mounting said cover on the base, said hinge means including a pair of interfitting parts, one of said interfitting parts comprising a flange projecting horizontally from the base and having a pair of spaced openings therethrough, the other of said interfitting parts comprising a pair of spaced lugs projecting from the corresponding side of the cover for reception in said openings of the base flange, said lugs and openings being so shaped and disposed that they mount the cover for pivotal movement relative to the base between a closed position where the lugs are inseparable from the base flange openings and an open position wherein the lugs are readily separable from said openings for ready removal of the cover from the base, whereby said base may be completely immersed for cleaning without electrical shock hazard.

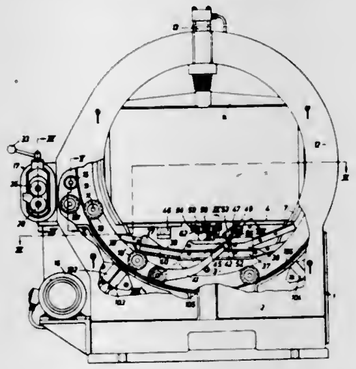
3,099,203
BALING MACHINES
Herman G. Klemm, Birmingham, and William A. Wathen, Detroit, Mich., assignors to Massey-Ferguson Inc., Detroit, Mich., a corporation of Maryland
Filed June 7, 1961, Ser. No. 115,578
2 Claims. (Cl. 100—19)

1. In a baler, in combination, side, top and bottom members defining an elongated chamber of generally rectangular cross section having an inlet opening in one of the walls, means supporting a pair of tying strands across said chamber in spaced parallel relation, means for feeding successive batches of the material to be baled through said inlet opening forwardly of said strands, a plunger reciprocable in said chamber operative in its advance to compress the material into a bale and to gradually push the bale along the chamber as it is formed, said strands being pulled out and laid along the sides of the bale as it moves along the chamber, means including a pair of



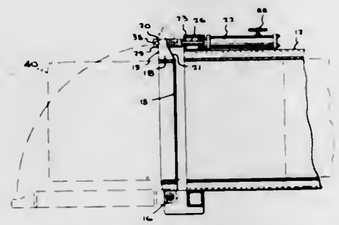
needles operative to wrap the strands around the end of the completed bale and to securely unite the ends of each of the strands, a stationarily supported blade element extending across said chamber substantially midway between said strands, and a blade element carried by said plunger coacting with said stationary blade element to shear the material being pressed into the bale whereby the completed bale is formed in two sections divided in a plane substantially midway between the two tying strands.

3,099,204
BUNDLE BINDING MACHINE
Nils Erik Stromberg, Tivoligatan 20, Sundsvall, Sweden
Filed Mar. 13, 1959, Ser. No. 799,314
Claims priority, application Sweden Aug. 22, 1956
4 Claims. (Cl. 100—28)



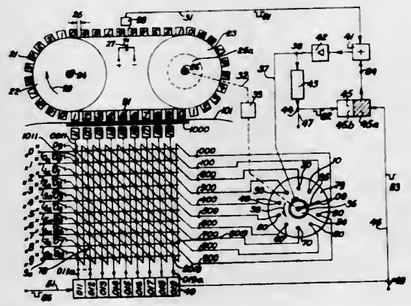
1. A machine of the class specified comprising in combination, a supporting table for an object to be bound with a strand of binding material, a member rotatably surrounding a bundle of paper pulp on said support, means on said rotatable member for placing slightly more than one turn of binding strand around said member during a first cycle of rotation thereof in one direction and for laying said turn of binding strand around said bundle on the support during a following cycle of rotation of the member in the opposite direction, means provided outside said rotatable member for feeding binding strand thereto during said first cycle of rotation, a first gripping means on said rotatable member for holding the free end of the binding strand during said first cycle or rotation, means for actuating said first gripping means, stationary gripping means for holding a cut end of said binding strand during said cycle of rotation in the opposite direction, means for rotating the rotatable member in the opposite directions, means under the control of the rotatable member for imparting a return movement of the binding strand feeding means during said rotation in the opposite direction to take up slack of the binding strand, rotatable means for twisting the binding strand as laid around said bundle at a point where the part of the strand around said bundle overlaps the end of the strand held by the stationary gripping means and means including two cutters slidably mounted on the opposite sides of the twisting means for entering in a given angular position of the rotatable twisting means into between the strand parts projecting therefrom and cut them through by a sliding movement, a gripper arm pivotably mounted on said guiding ring, and having a free end, said first gripping means being mounted at the free end of said gripper arm, guiding tracks positioned under said supporting table and including a stationary portion and a movable portion, said free end of said arm also carrying a roller guided by said guiding tracks, said movable portion constituting means for bringing said first gripping means into alignment with said first gripping means actuating means.

3,099,205
HYDRAULIC DOOR LOCK FOR HORIZONTAL BALER
Louis B. Lovrinch, Hammond, Ind., assignor to Arlo Manufacturing Corp., Hammond, Ind., a corporation of Indiana
Filed Nov. 16, 1962, Ser. No. 238,836
10 Claims. (Cl. 100—255)



1. In a baling apparatus, a horizontal baling chamber including a horizontally movable ram and fluid pressure means to exert inward force on said ram to compress material in said chamber, a door hinged vertically to the end of the chamber, a longitudinally extending fluid pressure cylinder secured horizontally to the side of the chamber opposite the hinged edge of the door, a piston in said cylinder having an externally projecting piston rod, said piston rod having an exposed end, a locking arm pivoted to said exposed end of said piston rod, a locking bracket on the free vertical edge of the door lockingly engageable by said locking arm, a source of fluid pressure, a fluid pressure line connected to said source, a fluid return line, conduit means including a first restriction connecting said fluid pressure line to the end of said cylinder adjacent the door, conduit means including a manually operated valve connecting said fluid pressure line to the opposite end of said cylinder, and conduit means including a second restriction connecting said opposite end of the cylinder to said fluid return line, said restrictions offering equal resistance to flow therethrough in either direction, whereby with said valve open, outward movement of said piston rod will be retarded because of the resistance to return flow of fluid from said cylinder through said first-named conduit means caused by said first restriction, thereby preventing sudden release of said locking arm.

3,099,206
HIGH SPEED PRINTING APPARATUS WITH INPUT CONTROL NETWORK
Theo Hense, Wilhelmshaven, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany
Filed Mar. 1, 1962, Ser. No. 176,542
Claims priority, application Germany Mar. 8, 1961
15 Claims. (Cl. 101—93)

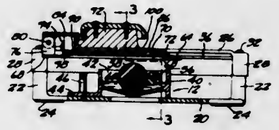


1. In a high speed printing apparatus, the combination comprising: an endless type carrier supporting at least two complete sets of types each set including n types with all sets being disposed on said carrier with similar succession of types and every n succeeding types comprise one set; a plurality of printing hammers; means for moving said carrier in front of said hammers parallel thereto whereby all of said hammers are individually and simultaneously alignable in a printing position with respectively a similar plurality of succeeding types on said carrier for printing so that after passage through n succeeding printing positions a complete set of types has passed in front of any hammers; a pulse generator producing electrical control pulses in synchronism with said moving types; a storage matrix register with storage elements and having line wires corresponding to the type characters, and column wires with each column being associated with a hammer for print control, said storage elements being respectively disposed at the intersection of a line wire and of a column wire; a plurality of read out wires with each wire coupled to those elements, one for each column, pertaining to a succession of lines corresponding to a predetermined combination of type characters as positionable simultaneously in front of said hammers in printing position upon movement of said carrier; associating means connected for enabling said read out wires in synchronism and cyclically with the passage of any complete type set in front of any hammer; and means for passing said control pulses through said last associating means into the respectively activated read out wire.

3,099,207
STENCIL PRINTER
John Chien Kuen Kiang, 918 N. St. Peter St., South Bend 17, Ind.
Filed June 11, 1962, Ser. No. 201,462
11 Claims. (Cl. 101—124)

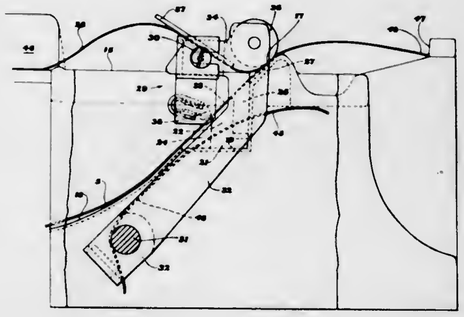
1. A stencil printer comprising a frame,
an inking mechanism carried by said frame and including an inking roller,
a stencil carrier slidable on said frame above said roller,
a card holder pivoted to said stencil carrier for positioning a card to be printed in engagement with a stencil in said carrier, and

resilient means on said frame normally positioning said stencil carrier spaced from said inking roller



and yieldable to engage a stencil in said carrier with said inking roller.

3,099,208
PHOTOGRAPHIC COPIER
Howard T. Hodges, Carter J. Hughey, and Robert J. Ernisse, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 3, 1960, Ser. No. 26,577
8 Claims. (Cl. 101—131)

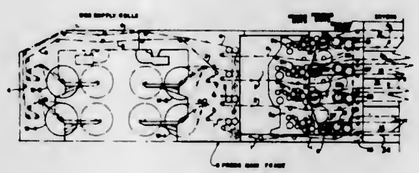


1. In a processing and image-transfer apparatus for developing the latent images of a matrix and transferring the developed image from the matrix onto an image-receiving sheet, the combination comprising: a processing fluid container having an opening through which an exposed matrix having sensitized and unsensitized portions may be inserted for development and withdrawn therefrom; support means on said container adjacent said opening for supporting a portion of said matrix; actuating means pivotally connected to the apparatus including a pressure roller and a squeegee and movable between a normal operative position in which said pressure roller and squeegee press said matrix against said support means, said pressure roller cooperating with said matrix in said operative position to provide a guide for directing an image-receiving sheet into the nip between said pressure roller and said matrix, and an inoperative position in which said pressure roller and squeegee are withdrawn from said support; resilient means for constantly urging said actuating means into said operative position; and stop means for limiting withdrawal of said matrix from said container and positioning said matrix so that said pressure roller in said operative position engages said matrix along a nip line coinciding with the line of separation of said sensitized and unsensitized portions, whereby when the leading edge of an image-receiving sheet of the same size as the said sensitized portion of said matrix is guided into said nip and said matrix is withdrawn from the apparatus, said pressure roller urges said image-receiving sheet and said matrix into intimate face to face contact for pressing the image of the matrix onto the image-receiving sheet whereby said image is transferred to said sheet upon separation of said sheet and matrix.

3,099,209
PROCESS OF TREATING RESIDUAL POSITIVE SILVER HALIDE IMAGES WITH ORGANIC SULFUR TO RENDER SAID IMAGES OLEOPHILIC
Rudolph E. Damschroder and Edward C. Yackel, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Feb. 26, 1960, Ser. No. 11,158
7 Claims. (Cl. 101—149.2)

1. A lithographic printing process which comprises reacting the residual silver halide remaining after formation of a developed silver image in the emulsion layer with an alkaline solution of a thiol selected from the group consisting of p-toluenethiol, potassium n-butyl xanthate, 2-mercapto-5-phenyl-1,3,4-oxadiazole, 2-mercaptobenzothiazole, 2-mercaptobenzimidazole and 2-ethyl-hexanethiol until the surface of the moist emulsion layer in only the region of the undeveloped silver halide has become receptive to greasy inks, acidifying the emulsion layer, inking the moist emulsion layer and printing a lithographic print therefrom.

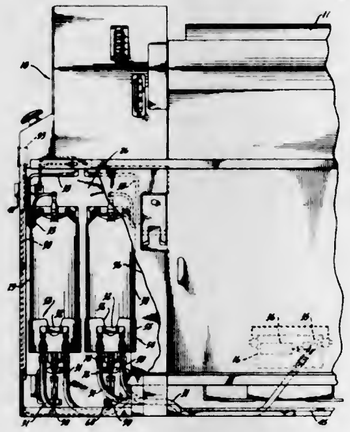
3,099,210
COMBINATION DOUBLE FOUR COLOR WEB PRINTING PRESS
Hans J. Luehrs, Westerly, R.I., assignor to The Cottrell Company, Westerly, R.I., a corporation of Delaware
Filed Sept. 6, 1961, Ser. No. 136,363
3 Claims. (Cl. 101—180)



1. In a combination plate rotary web printing press, a plurality of web supply rolls, a first stack of color printing units, a second stack of color printing units, a stack of single unit dryers located between said stacks of printing units, a single gear connecting coacting color printing units of the same stack with each other, web handling means located beyond the second stack of printing units and web advancing means for forwarding a single web from any supply roll to and through the several units of a stack of printing units, back through a dryer, to and through the several units of the other stack of printing units, back through a dryer and to the web handling means whereby the said web is printed in multi-color on both sides thereof.

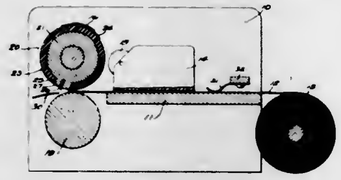
3,099,211
INK SUPPLY SYSTEM FOR PRINTING PRESSES
Vernon J. Hilgoe, Lombard, and Frank J. Doyle, Bellwood, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Jan. 13, 1961, Ser. No. 82,537
8 Claims. (Cl. 101—207)

1. In a printing press having a plurality of ink fountains, an ink supply system comprising, in combination, means defining a cabinet region in said press, a support for a portable tank mounted in said cabinet region, a portable ink tank removably seated on said support, a flexible conduit releasably coupling the lower portion of said tank to one of said fountains, a source of gas under pressure, flexible means releasably coupling said source to the upper



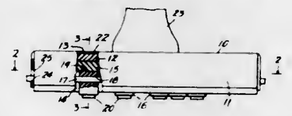
portion of said tank, and a valve for controlling the flow of ink from said tank to said one fountain.

3,099,212
VARIABLE LENGTH PRINTER FOR LABELS AND THE LIKE
Allen O. Sohn, 127 Fairview Drive, Plymouth, Wis.
Filed Aug. 22, 1960, Ser. No. 50,981
2 Claims. (Cl. 101—226)



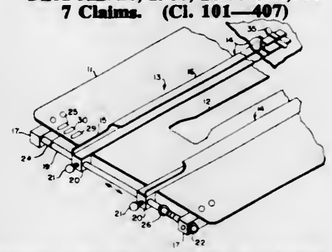
1. An apparatus for producing printed labels from a continuous strip of label stock, said apparatus comprising a printing roll, a platen roll spaced radially from said printing roll at a distance permitting free passage of the strip between said rolls, a cut off knife on the printing roll extending transversely thereof and having sufficient radial extent to coact with the platen roll to cut the strip into discrete portions, and means removably mounted on the printing roll for simultaneously feeding said strip through lengths independent of the length of peripheral travel of said printing roll and for printing on said strip, said printing and feeding means being separate from said knife and comprising a continuous type face having a predetermined length extending circumferentially of said printing roll for a distance less than the entire circumference and a predetermined radial extent projecting beyond said printing roll from one end of said length to the other to press the strip against the platen roll to concurrently feed the strip and print thereon, said type face being the sole means for feeding said strip other than said knife whereby the length of the cut portions of said strip is automatically measured by said length of said type face independently of the length of peripheral travel of said printing roll, and corresponds substantially to the length of the printed impression made by said type face on the strip plus any advance caused by coaction of the knife with the strip.

3,099,213
HAND STAMP AND TYPE THEREFOR
Whitney K. Munson, P.O. Box 312, Red Bank, N.J.
Filed June 6, 1961, Ser. No. 115,212
5 Claims. (Cl. 101—380)



1. A hand stamp comprising a channel body, said body having side walls joined by a crosshead, the outer surface of said crosshead having a recess extending the full length thereof, a handle member directly fixed to the crosshead centrally of said body, a type unit for mounting in the channel of said body, said unit comprising an elongated rod having ends projecting beyond ends of said body, type members spaced longitudinally of the rod, said members having apertures in which the rod is arranged for frictional support of the members on said rod, one outer surface of each member having a printing character thereon, the opposed inner surface of said member having a guidance character thereon, both characters projecting from the surfaces of said member, means mounted in the recess of said crosshead and extending over the ends of said body and engaging said rod ends for yieldably supporting the type unit in the channel of said body, a yieldable backing arranged in said channel, and said guidance characters being normally embedded in said backing in definitely positioning said members in predetermined spaced relationship on said rod.

3,099,214
TICKET GUIDE FOR PRINTERS
Clarence E. Adler and Walter G. Moring, Jr., Toledo, Ohio, assignors to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Jan. 26, 1960, Ser. No. 4,706
7 Claims. (Cl. 101—407)



1. In a printer having a housing enclosing a printing station, a slot in register with the printing station and a ledge extending therefrom, a guide for loading an element to be printed in the printing station comprising, in combination, a pair of spaced guide members on the ledge extending from an accessible location exterior of the housing through the slot into the interior of the housing and defining a path for the element, a guide rod adjacent the ledge mounted to be transversely movable relative to the path and extending transversely to the path, indexing means defining a plurality of selective positions for the guide rod, the guide members being attached to the guide rod, whereby movement of the guide rod into said plurality of positions locates the element in the printing station for multiple position printing on the element, and at least one of the guide members being adjustably attached to the guide rod for movement transverse to the path for accommodating elements of various widths, the space between the guide members being adjusted to the width of the particular element to be printed allowing slight clearance for easy insertion, and stop

means for stopping an inserted element in suitable alignment with the printing station.

3,099,215

PRESSURE RESPONSIVE BOOSTERS

William Raymond Brockway, Thorofare, N.J., and David Linn Coursen, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed June 27, 1961, Ser. No. 120,051
8 Claims. (Cl. 102—16)



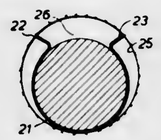
1. An explosive booster assembly for underwater use comprising a tubular container, one section thereof being readily deformable and another section thereof being rigid and resistant to deformation, the readily deformable section being closed at the end most remote from the said rigid section, an extrudable cap-sensitive detonating explosive filling the deformable section, and an initiator disposed within the said rigid section and separated from the deformable section by a distance sufficient that the initiation impulse upon actuation of said initiator will not initiate said explosive contained in said deformable section, the walls of said deformable section being adapted to collapse under pressure to force said extrudable explosive into propagating relationship with said initiator.

3,099,216

METHOD OF EXCAVATING ROCK, ORE AND THE LIKE BY BLASTING AND MEANS FOR USE IN SAID METHOD

Kjell Jakobsen, Kringsjaveien 69, Laksevag, and Tord Kjaerner Semb, 20 Brattlien, both of Bergen, Norway

Filed Nov. 4, 1960, Ser. No. 67,298
Claims priority, application Norway Nov. 19, 1959
2 Claims. (Cl. 102—22)



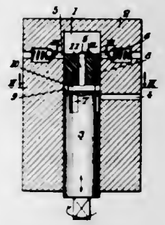
1. A member for holding a plurality of cylindrical explosive charges and maintaining the charges in axially aligned condition and in predetermined axially spaced relationship, said charges being intended for insertion into a bore hole in the material to be excavated, said member comprising a thin-walled cylindrical tube fabricated of material having the resilience characteristics of polyvinyl chloride, said tube having a longitudinal opening smaller in width than the diameter of said tube extending the full length of the tube through which individual explosive charges may be forced into said tube, the smallest internal diameter of said tube normally being at most equal to the diameter of the individual charges which are used with the tube, the longitudinal margins of said tube on either side ot said opening defining outwardly flaring flanges giving said tube the cross-sectional shape of the capital Greek letter "omega," and after the explosive-filled tube has been inserted into the bore hole, said flanges together with a circumferential portion of the body of said tube engaging the walls of the bore hole so as to frictionally maintain said tube at any depth within the bore hole.

3,099,217

FUEL INJECTION PUMPS HAVING DISTRIBUTING PISTONS

Pierre Etienne Bessiere, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France

Filed Nov. 8, 1960, Ser. No. 68,118
Claims priority, application France Nov. 12, 1959
2 Claims. (Cl. 103—2)



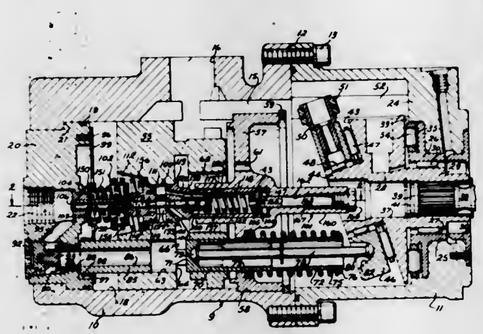
1. A fuel injection pump which comprises, in combination, a cylinder, a cylindrical piston slidably movable in said cylinder and having therein both a reciprocating movement in the direction of its axis and a movement of rotation about said axis, the end face of said piston limiting, together with said cylinder, a working chamber of variable volume the displacements of said piston in said cylinder that reduce the volume of said working chamber being called delivery strokes, and the displacements of said piston that increase said volume being called outward strokes, said cylinder being provided with an inlet conduit, said piston being provided with passages adapted to cooperate with said inlet conduit to place it in communication with said working chamber during the outward strokes of said piston and to cut off said communication, at least mostly, by the effect of the rotation of said piston, before the beginning of every delivery stroke of said piston and during the time when said piston is in its outer dead center position for which the volume of said working chamber is maximum, said cylinder being provided with a plurality of delivery conduits opening into the cylindrical wall of said cylinder at points distributed at regular intervals along its periphery, said piston being provided in its cylindrical wall with a longitudinal groove extending from said piston end face to a distance therefrom so that the delivery conduit located opposite said groove remains in communication with said working chamber during the whole of a delivery stroke of said piston, the outer dead center position of said piston, being positioned so that, when said piston is in this position, the openings of all of said delivery conduits each have a portion thereof in communication with said working chamber, the height, measured in the axial direction, over which said openings then communicate with said working chamber being sufficiently small to prevent any fuel delivery from taking place during the initial portion of the delivery stroke of said piston for which said piston is travelling to close said openings after the closing of said inlet conduit with the exception of that in communication with said groove and spring loaded check valves mounted in said delivery conduits, respectively.

3,099,218

CONSTANT HORSEPOWER PUMP

Tadeusz Budzich, Shaker Heights, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio

Filed May 4, 1962, Ser. No. 192,367
6 Claims. (Cl. 103—37)



1. A variable displacement pump having a pump housing defining a fluid chamber therein, an inlet to said fluid chamber and an outlet on said pump housing, a cylinder block slidably mounted within said fluid chamber for axial reciprocating movement between minimum and maximum displacement positions, a plurality of cylinder bores in said cylinder block, a piston within each of said cylinder bores, drive means to reciprocate said pistons, an inlet port in said cylinder block adapted to admit fluid from said fluid chamber into said cylinder bores, means to connect each of said cylinder bores to said pump outlet, first means biasing said cylinder block toward the minimum displacement position with a force directly proportional to the pressure at said outlet, second means biasing said cylinder block toward the maximum displacement position in opposition to the force of said first means with a force non-linear with respect to the position of said movable member to maintain a constant power level during variations of the pump output displacement and pressure, and pressure responsive control means including a fluid pressure motor operating to oppose said second means to shift said movable member to the minimum displacement position whenever the output pressure of the pump exceeds a predetermined level.

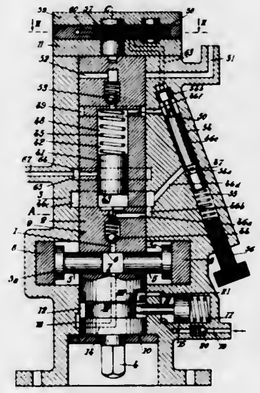
3,099,219

SELF-REGULATING RECIPROCATING PISTON PUMPS, IN PARTICULAR FOR THE INJECTION OF FUEL INTO INTERNAL COMBUSTION ENGINES

Pierre Etienne Bessiere, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France

Continuation of application Ser. No. 811,177, May 5, 1959. This application July 11, 1962, Ser. No. 209,132
Claims priority, application France May 19, 1958
11 Claims. (Cl. 103—41)

1. In combination, a fixed body provided with a housing having a cylindrical inner wall, a member having a cylindrical outer wall fitting slidably against said inner wall, means for rotating said member in said housing, a liquid delivery conduit, said member being provided with a cylindrical recess, a shuttle piston fitting slidably in said cylindrical recess, so as to define therewith a variable volume chamber, said shuttle piston being movable longitudinally in said cylindrical recess in one direction in response to rises of the pressure in said chamber, means for urging said shuttle piston in the direction opposed to that above mentioned, the movements of said shuttle piston in the first mentioned direction being called outward strokes thereof and the movements of said shuttle piston in the second mentioned direction being called return strokes thereof, means responsive to longitudinal reciprocating movement of said shuttle piston in said cylindrical recess for forcing into said delivery conduit, on every reciprocation of said shuttle piston, an amount of liquid the smaller as the amplitude of two consecutive strokes is smaller, liquid pumping means for supplying liquid under pressure to said chamber, said pumping means being controlled by the rotation of said member in said body in such manner as to produce pressure rises in said chamber during only first given portions of every rotation of said member in said body, liquid circuit means in communica-



tion with said chamber for the inflow of liquid under pressure from said pumping means to said chamber during said first portions of the rotation of said member and for the outflow of liquid under pressure from said chamber during the second portions of the rotation of said member in said body, said second portions extending between said first portions of the rotation of said member, said liquid circuit means including a throttled passage, a first part of said liquid circuit means being formed in said rotating member and opening into the cylindrical outer wall of said member, a second part of said liquid circuit means being formed in said fixed body and opening into the cylindrical inner wall thereof, said respective liquid circuit parts being shaped and located so as to communicate with each other during said second portions of the rotation of said member and to be out of communication with each other during said first portions of the rotation of said member.

3,099,220

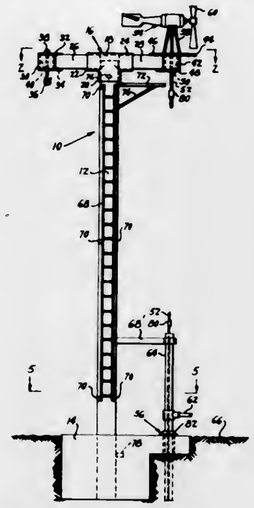
WINDMILL TOWER

Louis S. Butman, Rte. 4, Box 85, Merkel, Tex.

Filed Oct. 30, 1962, Ser. No. 234,022
6 Claims. (Cl. 103—58)

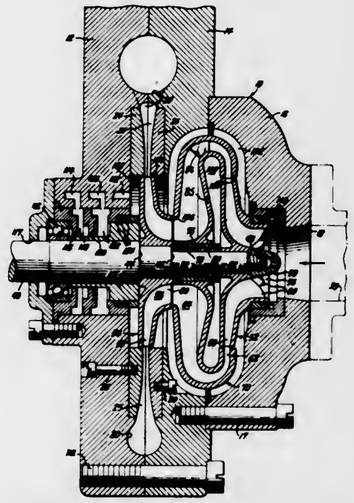
1. A windmill tower for operating and servicing a well having a vertically extending casing and a pump therein for withdrawing water therefrom comprising, in combination, a vertically extending elongated standard having a top and a bottom, means for securing said standard adjacent a bottom, a horizontally extending cross bar having two ends and being rotatably mounted on the top of said standard completely annularly thereabout, a windmill supported by said cross bar upon one end thereof, pump rod means operatively connecting said windmill to

said pump through said one end of said cross bar, means supported by siad cross bar for servicing said well, and



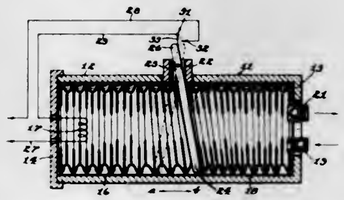
means for vertically aligning said last-mentioned means with said well.

3,099,221
CENTRIFUGAL PUMP
Earl A. Thompson, 1300 Hilton Road, Ferndale, Mich.
Filed Mar. 23, 1960, Ser. No. 17,058
5 Claims. (Cl. 103—108)



1. A multistage centrifugal pump comprising first and second radial flow impellers for generating velocity energy in fluid, power means connected to drive the impellers, wall means forming an essentially open and substantially unobstructed annular interstage return passage for directing fluid from the first to the second impeller, the wall means initially forming a diverging portion of the passage for the fluid leaving the first impeller to diffuse the velocity energy in the fluid and transform it to pressure energy and then forming a generally constant portion of the passage to effectively preserve such pressure energy and direct the fluid radially inwardly to the second impeller, the latter portion of the passage being vaneless to avoid subtracting energy from the fluid therein, and means mounting the wall means for rotation to decrease the relative speed between the wall means and the fluid flowing from the first to the second impeller to reduce skin friction losses in the annular interstage return passage.

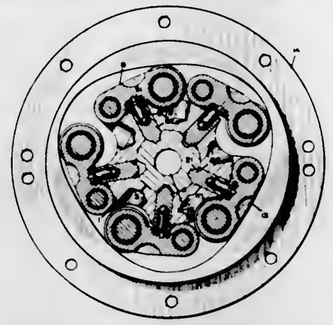
3,099,222
PUMP
Joseph W. Polliseo, Elmira, N.Y., assignor to The Bendix Corporation, Elmira Heights, N.Y., a corporation of Delaware
Filed May 10, 1962, Ser. No. 193,697
18 Claims. (Cl. 103—152)



1. A device of the character described comprising:
a hollow support housing;
a first bellows supported within the housing adapted for expansive and contractive movements;
a second bellows supported within the housing cooperating with said first bellows adapted for expansive and contractive movements, said first bellows adapted to assume a normally expanded condition and said second bellows adapted to be maintained in a normally contracted condition;
valve means in one of said bellows;
thermal actuator means cooperating with the other of said bellows adapted when energized to cause movement of said other bellows and substantially concomitant opposite movement of said one bellows; and
means, including means adapted to sense movements of the bellows, operatively connected to the thermal actuator means for alternately energizing and de-energizing the thermal actuator means responsive to said movements.

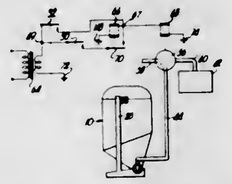
3,099,223
PUMPS, MORE PARTICULARLY VOLUMETRIC PUMPS
Pierre Ernest Mercier, Piscop by Saint Brice, France, assignor to Societe Anonyme Andre Citroen, Paris, France
Filed Aug. 8, 1961, Ser. No. 130,055
1 Claim. (Cl. 103—161)

In a volumetric pump capable of operating as a generator of fluid under pressure or as a motor using the fluid under pressure, the combination comprising a casing, a pump body having a plurality of radial cylinders rotatively mounted on said casing, a distributor mounted coaxially with said body having inlet and discharge orifices communicating with said cylinders, a ring cam having a plurality of hollows and arc portions with a slight curvature continuously alternately connecting said hollows, a reciprocating piston in each cylinder, the number of said pistons not having a common factor with the number of said hollows and said arc portions, a lever cooperating with each of said pistons having at one end thereof an axis of oscillation on said body, a roller on each lever located at the other end of said lever cooperating with said cam and an articulated rod between each piston and its corresponding lever located between the axis of oscillation of a lever and the roller upon such



lever, said rod having a ball contacting said piston at one end and a knife edge at the other end contacting said lever.

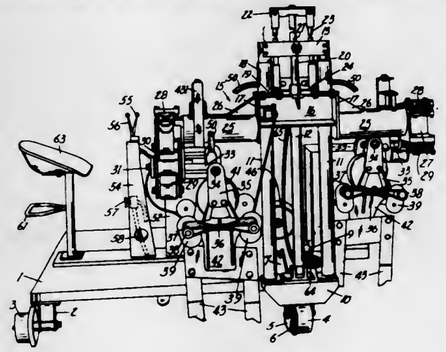
3,099,224
WEIGHING CONTROL FOR LIQUID HANDLING APPARATUS
Frank G. Weis, Kansas City, Mo., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 18, 1961, Ser. No. 103,755
15 Claims. (Cl. 103—243)



1. In a flowable material handling apparatus, the combination comprising: material container means; material conduit means having a torsionally resilient portion adapted to be twisted about its lengthwise axis relative to a remaining portion of said conduit; means for holding said remaining portion stationary; means mounting and disposing said container means on said resilient portion for torsional twisting of said resilient portion from its normal disposition responsive to the weight of material within said container means, means placing said container means in communication with said conduit means for flow of material therebetween; flow governing means for controlling the flow of material between said conduit means and container means; and control means operably coupled with said flow governing means for controlling the latter, said control means including parts mounted fixedly relative to said remaining portion of said conduit means and parts shiftably mounted for movement relative to said fixedly mounted parts when said resilient portion is distorted.

3,099,225
RAILWAY ROADBED TAMPING AND BALLASTING MACHINE
Charles J. Derler, Ludington, Mich., assignor to Jackson Vibrators, Inc., Ludington, Mich.
Filed Aug. 7, 1959, Ser. No. 832,207
4 Claims. (Cl. 104—12)

1. A ballast tamping machine comprising a carriage including a carriage body member and supporting wheels therefor gauged to travel on the rails of a railway track, said body member including a relatively narrow projecting portion disposed above one of the rails on which the carriage is traveling, one of the carriage wheels being disposed under said projecting portion adjacent the outer end thereof, upright ways mounted on said projecting portion of said carriage body member in laterally spaced relation to each other and with one at each side of the vertical plane of said wheel, a crosshead slidably mounted on said ways and having arms projecting oppositely and laterally therefrom and relative to said projecting portion of said carriage body member, means for raising and lowering said crosshead, ballast tamper support members mounted on said crosshead arms to project oppositely therefrom, ballast tamper units including tamper blades mounted on said ballast support members and disposed one at each side of said projecting portion of said body member, said ballast tamper units being independently

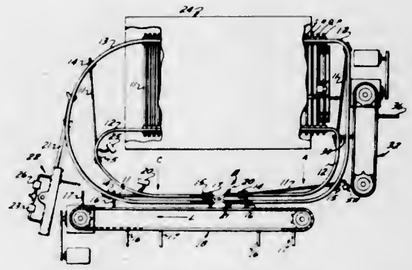


and swingably supported on said support members and including means for vibrating the blades at high frequency, driving means for said carriage, power means for operating said crosshead on said ways, control means for said carriage driving means and for said crosshead operating means, and an operator's seat disposed on said carriage to face transversely of the track on which the carriage is traveling and positioned so that the operator seated thereon may view a portion of the track on which the carriage is traveling and associated ties to facilitate the positioning of the tamper units relative to selected ties and also the tampers to facilitate the positioning and viewing the operation thereof on ballast associated with a selected tie, the tamping unit nearest the operator's seat being disposed forwardly relative to said projecting portion of said carriage body member and the remote tamping unit being disposed at the side thereof opposite the operator's seat.

3,099,226
SKIN DRYING APPARATUS
James N. Kokoras, 3 Wallis Ann Road, Peabody, Mass.
Filed Dec. 19, 1960, Ser. No. 76,780
3 Claims. (Cl. 104—91)

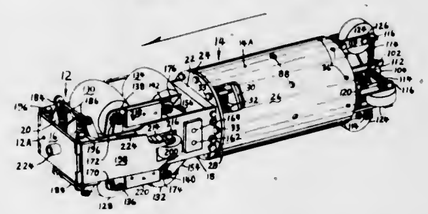
1. In drying apparatus for skins in which drying boards bearing skins to be dried are supported, in a parallel relationship, on a pair of parallel inclined tracks within an oven, holding and release apparatus, comprising:
(*a*) a first and a second holding bar assembly adjacent to the outlet of the oven, one such assembly being affixed to one of the tracks and the other such assembly being affixed to the other track;
(*b*) each of the holding bar assemblies including:
(1) a first and a second holding bar sequentially disposed in the direction of travel of the drying boards, the distance between each first and second holding bar being greater than one half the thickness of a single one of the drying boards but less than the thickness thereof; and

(2) means for alternately moving the first and second holding bar of each holding bar assembly only in a direction normal to the direction of travel of the drying boards; and,



(c) means responsive only to movement of drying boards without the drying oven to actuate the means for alternately moving the first and second holding bar.

3,099,227
PIPELINE VEHICLE GOVERNING DEVICE
Harvard J. Bryan, Dallas, Tex., assignor to Harvest Queen Mill & Elevator Company, Dallas, Tex., a corporation of Texas
Filed Aug. 5, 1960, Ser. No. 47,833
7 Claims. (Cl. 104—139)



1. In a pipeline system wherein a machine travels through the pipeline in response to application of a moving force thereto, the system which comprises rolling means carried by said machine having at least one wheel for engaging the inside cylindrical surface of the pipeline, means for maintaining said wheel in engagement with said surface, a mechanical brake in said machine, and a mechanical linkage coupling said rolling means to said brake including a plurality of weights positionally adjustable within said machine in response to variations in rolling motion of said rolling means for actuating said brake to apply braking forces through said linkage to said surface and by way of said rolling means.

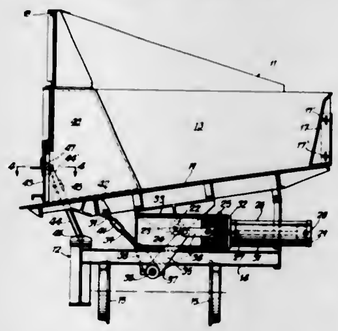
3,099,228
TRANSPORT AND STORAGE ARRANGEMENT FOR CARRIERS
Gerhard Lingg, Waldparkstrasse 36, Mannheim, Germany
Filed Oct. 12, 1961, Ser. No. 147,403
4 Claims. (Cl. 104—172)

1. A conveyor arrangement for carriers, which comprises the combination of a continuously moving conveyor; a track arranged below the conveyor and supporting the carriers for movement therealong in the direction of the moving conveyor; a plurality of drive transmitting units mounted on said conveyor and moving therewith, each of said drive transmitting units including a first latch means pivotal against the said direction between a lower and an upper position, a second pivotal latch means cooperating with the first latch means and defining a space therebetween, positive motion transmitting means arranged between the latch means and positively transmitting pivotal motion from the first to the second latch means; a coupling element projecting upwardly from each of said carriers and into said space between the latch means when the latter are in the lower position; and a



drive transmitting release and carrier arresting device movable into and out of the path of one of said carriers across the track, said device blocking the movement of said one carrier and simultaneously moving said latch means into the upper position, when moved into the path of said one carrier, the latch means in the upper position clearing said coupling element whereby said drive transmitting unit is disengaged from said one carrier.

3,099,229
COKE QUENCHING CARS
Frans Wethly, Manhasset, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Feb. 27, 1961, Ser. No. 91,754
4 Claims. (Cl. 105—254)



1. A coke quenching car comprising, in combination, a substantially rigid frame supported on wheels, a coke basket having a coke receiving floor pivotally mounted on said frame, a pair of discharge gates pivotally mounted adjacent their upper edges along the length of the coke discharge side wall of said basket, a fluid pressure cylinder for each gate fixedly mounted on said frame beneath said floor, a piston in said cylinder having a piston rod, a cross-head actuated by said piston rod, a link attached to said cross-head, a cross-head lever pivotally attached at one end to said link and at the opposite end to a rock shaft, a drive lever having one end on said rock shaft and pivotally connected at its opposite end to a connecting rod pivotally attached to said basket at the underside thereof near the said coke discharge side wall, said link, cross-head lever, rock shaft, drive lever and pivotal connection of the drive lever to the underside of said basket being constructed and arranged so that movement of said drive lever in a downward direction effects the downward tliting of the discharge side of the basket to effect the discharge of the coke therefrom, and a gate opening rod for each gate having one end pivotally attached to said gate and the other end pivoted to said

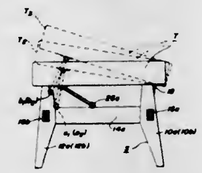
frame at a portion thereof beneath said floor for automatically opening said discharge gate responsive to tilting movement of said basket as said operating cylinder is actuated to tilt said basket, each of said gate opening rods being disposed in a housing at the base of said basket adjacent the coke discharge side thereof, which housing prevents hot coke from contacting the gate opening rods.

3,099,230
COLUMN AND DECK CONSTRUCTION FOR VEHICLE SHIPPING APPARATUS
Frank B. De Podesta, Farmington, Mich., assignor to Paragon Bridge and Steel Company, Novi, Mich., a corporation of Michigan
Filed July 31, 1961, Ser. No. 128,159
6 Claims. (Cl. 105—368)



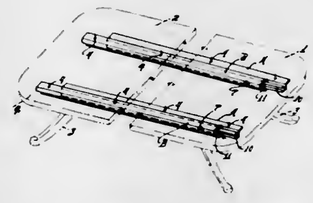
1. In a device for transporting automotive vehicles the combination comprising means forming a lower deck for supporting automotive vehicles, a plurality of upright columns disposed along each side of said lower deck with at least one of said columns on each side of said deck having weight supporting structural portions arranged to form a hollow enclosed portion providing an upright conduit, a generally imperforate upper deck supported on said columns above said lower deck for supporting automotive vehicles, said upper deck having generally right angular curb portions including an upright flange for re-inforcing said deck, said curb portions forming troughs extending along the side edges of said deck adjacent the inner sides of said columns and having outlet openings therein communicating with the interior of said conduit columns at mutually overlapping portions of said curb portions and said columns for conducting rain water and the like collecting on said upper deck downwardly through said columns, said conduit columns having outlet openings therein adjacent the lower ends thereof.

3,099,231
HASSOCKS
Vincent Kenneth Bass, Richmond, Va., assignor to B. T. Crump Company, Inc., Richmond, Va., a corporation of Virginia
Filed June 2, 1961, Ser. No. 114,398
5 Claims. (Cl. 108—9)



1. An inclinable-top hassock for use as a leg recliner comprising, in combination, a top supporting structure including spaced side pairs of front and rear legs connected by side rungs joined to the legs at approximately their midpoints, the upper edges of the side rungs and the approximately vertical forward edges of the rear legs of said pairs thereof defining forwardly facing corners, a top normally resting on the upper ends of said legs and being hingedly connected to the front legs of said leg pairs for movement to inclined position with respect to said supporting structure, and prop means for supporting the top in at least one position of inclination comprising a substantially U-shaped prop member depending therefrom and whose cross part is pivotally connected to the under side of the top for swinging movement about a horizontal axis extending transversely across said top and whose side arms depend therefrom and terminate in offset ends operative in the space defined by said upper edges of the side rungs, said legs of the side pairs and the under face of the top, the length of said side arms being substantially greater than the vertical dimension of said space whereby said offset ends normally rest on said upper edges of the side rungs and the positioning of the axis being close to the rear edge of said top, the construction and arrangement being such that when the top is in its normal horizontal position the arms of the prop depend downwardly-forwardly and their offset ends rest freely on the upper edges of the side rungs whereas when the top is raised and the prop side arms are manually swung rearwardly to opposite inclination the offset ends of the prop arms move into said corners and hold the prop arms substantially vertical, in which position said arms support the top in said one inclined position.

3,099,232
SLIDE ASSEMBLY FOR EXTENSION TABLES
Joseph Cooper, 108—33 67th Ave., Forest Hills, N.Y.
Filed Oct. 23, 1961, Ser. No. 146,740
1 Claim. (Cl. 108—83)

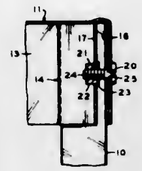


In a table having opposed leaves movable with their supports to provide a gap at the top of the table, the leaves facing the gap being a first and a second leaf, the combination of a pair of spaced slide bars carried by each of said first and second leaves in the normal direction of movement thereof and including means for slidingly interfitting the bars of the first leaf with those of the second leaf, the bars being of such length as to remain interfitted as supporting elements for a third leaf when the first and second leaves are moved apart a substantial distance equivalent to the width of such third leaf, and a roller carried by one slide bar of each of said interfitting spaced sets of slide bars, each roller being positioned perpendicular to the first and second leaves and bodily moving with the slide bar which carries it from under its appropriate first or second leaf to said gap between the leaves and with its top surface substantially level with said leaf.

3,099,233
SUPPORT CONSTRUCTION
William Simpkins, Creve Coeur, Mo., assignor to Tiffany Stand Company, St. Louis, Mo., a corporation of Missouri
Filed Oct. 11, 1961, Ser. No. 144,359
5 Claims. (Cl. 108—156)

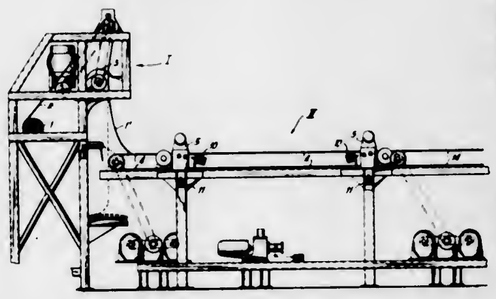
1. A clip comprising a body having an encircling portion terminating in spaced free end portions, said free end portions being provided with aligned apertures, and a nut located within one aperture, said nut being flared

outwardly adjacent one side of its associated free end portion to hold the nut in said one aperture and said nut



being provided with an outwardly divergent bore end adapted to guide an associated bolt.

3,099,234
MANUFACTURE OF BAGLIKE STRUCTURES
Conrad Arbter, Saal an der Saale, Unterfranken, and Paul Schwendinger, Zell im Wiesental, Baden, Germany, assignors to Spinnerei und Webereien Zell-Schonau Aktiengesellschaft, Zell im Wiesental, Baden, Germany, a corporation of Germany
Filed May 2, 1960, Ser. No. 26,367
Claims priority, application Germany May 2, 1959
9 Claims. (Cl. 112—10)



1. A machine for the manufacture of baglike structures from pliable sheet material, closed along three sides, including

(1) means for crosswise cutting a web of the material used, pieces of work obtained by cutting having two crosswise extending cut edges and an end portion along each of said edges, each of said end portions having a marginal part,

(2) means for preparing a hem by making a fold along each of said edges,

(3) means for completing said hems by sewing down the folded edges, and

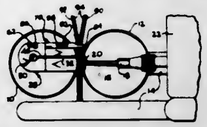
(4) conveying means for intermittently feeding said web to said cutting means, and for intermittently and successively transporting said cut pieces of work to said hem-preparing and hem-completing means, said hem-preparing means including

(*a*) suction means extending above, and across the width of, said end portions,

(*b*) means to raise said end portions from the transporting level to a higher level and against said suction means, and

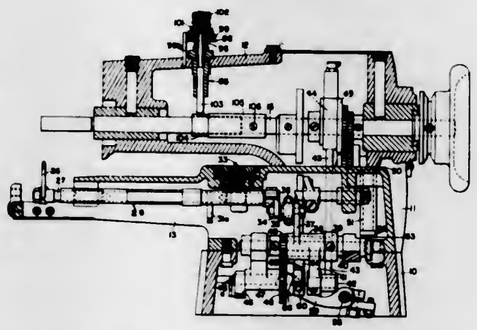
(*c*) flap means mounted on said suction means for swinging movements to act upon the marginal part of each of said edge portions and to fold said marginal parts.

3,099,235
ADJUSTABLE GUIDE PLATE FOR FUR MACHINES
Paul Misove, 9 Lincoln Road, Great Neck, N.Y.
Filed Mar. 27, 1961, Ser. No. 98,367
2 Claims. (Cl. 112—20)



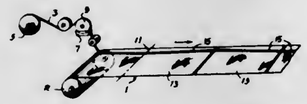
1. In a fur sewing machine including a pair of horizontal idler and feed wheels, and a horizontally arranged threaded needle, a combined needle and skin guide plate assembly mounted above the idler wheel, said plate assembly comprising a main bottom guide plate portion, an auxiliary top guide plate portion, said main guide plate portion having an elongated needle receiving groove in its upper surface, the auxiliary guide plate portion having a needle receiving groove forming a continuation of the groove in the main guide plate portion, said auxiliary guide plate portion having an elongated horizontal slot along one side edge thereof, and having a slot above said horizontal slot communicating with the horizontal slot and opening outwardly of the side edge of the top plate portion, a presser plate slidably mounted in the horizontal slot in said auxiliary guide plate portion, an extension on the presser plate adapted to engage the edge portions of the skins thereby guiding the movement of the skins and preventing irregular stitching, a finger piece on the presser plate protruding through the slot above the horizontal slot for manually sliding the presser plate, and means for guiding the sliding movements of said presser plate.

3,099,236
THREAD CONTROL MECHANISM FOR CHAINSTITCH BLINDSTITCH MACHINES
Thomas D. Taylor, deceased, late of Hermann, Mo., by Georgia Brueggenjohann, executrix, Hermann, Mo., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 21, 1960, Ser. No. 70,861
12 Claims. (Cl. 112—176)



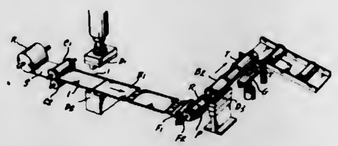
1. In a single thread chainstitch blindstitch sewing machine having a curved thread-carrying needle, means for carrying said needle for movement along an arcuate path at right angles to the line of stitch formation, a reciprocatory and oscillatory looper, a node-former for forming a node in the fabric to be stitched in the region of stitch formation, the oscillation of the looper serving to carry a loop of thread seized from the needle on one side of said node to the opposite side thereof, a top feed dog, and a main drive shaft with connections therefrom for operating said needle, looper, node former and feed dog, the combination which comprises a thread tensioning device including members mounted for movement toward each other between which the thread is passed, a single spring for urging said members together to apply a selected tension to said thread, adjustable means in said device for varying the selected tension normally applied to the thread as it is fed to the needle, and connections from said main drive shaft for completely releasing the tension normally applied by said adjustable means during a portion of each revolution of said drive shaft.

3,099,237
METHOD OF MAKING BAGS
Elbert E. Currin and Paul J. Davidson, Norfolk, Va., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Jan. 19, 1961, Ser. No. 83,648
6 Claims. (Cl. 112—262)



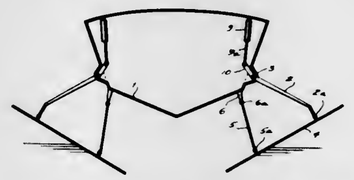
1. The method of making tie top bags comprising lightly adhering a continuous tape to one face of a continuous web of bag material with the tape extending longitudinally of the web adjacent one edge thereof, cutting the material with the tape thereon into bag blanks, folding each blank and the tape adhered thereto in half on a fold line transverse to the tape with the tape on the inside, seaming each folded blank along the side opposite the fold and the end opposite the tape to form it into a bag, and turning each folded and seamed blank inside out to bring the adhered tape to the outside, the adhesive bond being weak enough to permit the tape on each bag to be grasped and pulled away therefrom for use to tie the top of the bag closed.

3,099,238
CAN BODY AND METHOD OF FORMING THE SAME
Lyman L. Jones, Kent, Wash.; Alice J. Barger, executrix of said Lyman L. Jones, deceased
Filed Nov. 23, 1959, Ser. No. 854,866
9 Claims. (Cl. 113—120)



1. A method of forming a tube from a deformable metal strip comprising blanking the strip with a die along two spaced parallel traverse lines thereof to form the tube body blank, said die being constructed to form complemental dovetail projections and dovetail notches along the entire length of each traverse line, abruptly bending each dovetail projection along at least one of the edges of the tube body blank about a bend line extending along substantially the entire length of the longitudinal axis of the dovetail projection intermediate its axially extending edges to draw the edges toward one another and impart a V cross section to the dovetail projection while stretching and spreading the material of which it is made transverse said bend line, rolling the tube body blank into tubular form, interfitting the dovetail projections and dovetail notches on said edges of the tube body blank to form a seam, and flattening the bent and stretched dove-tail projections into the plane of the seam to effect interengagement thereof with the dovetail notches wherein they fit.

3,099,239
RETRACTABLE HYDROFOIL SYSTEM FOR WATER CRAFT
Hanns von Schertel, Hergiswil am See, Switzerland, and Johann Cassens, Bremen-Huchting, Richard Koitzsch, Bremen, and Gerhard Plewa, Grolland, Bremen, Germany, assignors to Supramar Ltd., Lucerne, Switzerland
Filed Jan. 11, 1960, Ser. No. 1,552
10 Claims. (Cl. 114—66.5)



9. A retractable hydrofoil system, comprising, in combination, an elongate hull having a longitudinal axis, lateral wall means, and a bottom wall; link means mounted on said hull for turning movement about pivot axes in the region of the lower part of said lateral wall means and the outer part of said bottom wall and in a plane transverse to the longitudinal axis of said hull between a lower position projecting from said hull and a higher position extending from said pivot axis upwardly along said lateral wall means of said hull; and foil means including two spaced joint means articulated to said link means and moving with the same, said link means and foil means being arranged and constructed in such a manner that said foil means is located lower than said hull when said link means is in said lower position, and is located in a higher position closely adjacent said link means and flatly folded against said lateral wall means and above said bottom wall of said hull when said link means is in said higher position.

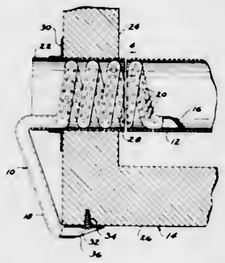
3,099,240
BOAT CONSTRUCTION
Charles A. Montague, Jr., 5269 Pecan Grove Lane, Memphis 17, Tenn.
Filed May 24, 1961, Ser. No. 112,443
13 Claims. (Cl. 114—66.5)



1. A boat comprising a hull, a plurality of spaced propelling units attached to said hull for the propelling thereof, said propelling units including propellers rotatably mounted for rotation about substantially horizontal axes, means for rotatably driving said propellers, a plurality of channel-shaped members, each of said channel-shaped members being of substantially the shape of a portion of a hollow cylinder and having a substantially horizontal axis, said channel-shaped members being respectively mounted substantially below said propellers with the axes thereof being respectively substantially coincident with the axes of rotation of said propellers and with said channel-shaped members extending upwardly on opposite sides of said propellers to places of termination substan-

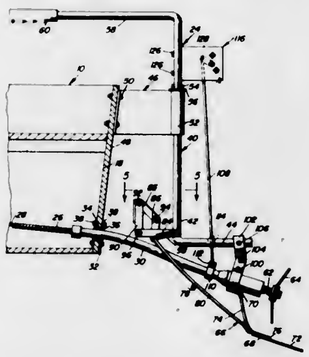
tially at a level with the middle of said propellers so that said channel-shaped members respectively substantially surround the lower halves of the path of rotation of said propellers in closely spaced relationship thereto, whereby the flow of water from said propellers respectively over said channel-shaped members causes an upward lift of said hull, and adjustable vane means supported from said hull and extending therebelow for adjusting the attitude of said boat.

3,099,241
EXHAUST GAS DISSIPATING APPARATUS
Kenneth J. MacFarlin, 8711 Chalfonte, Detroit 28, Mich.
Filed Jan. 22, 1962, Ser. No. 167,566
8 Claims. (Cl. 115—.5)



1. In combination with a boat having an exhaust pipe, a helical tube positioned within the exhaust pipe having a plurality of openings therein through which water may be passed from the tube into the exhaust pipe and means for passing water through the tube and out of the openings into the exhaust pipe whereby the noise and heat of the exhaust gases are dissipated.

3,099,242
FLEXIBLE PROPELLER SHAFT DRIVE
Delbert F. Queen, Richmond Dale, Ohio
Filed Jan. 31, 1962, Ser. No. 170,116
13 Claims. (Cl. 115—42)



1. A flexible propeller shaft drive assembly for outboard drive boats including a hull and having an inboard motor disposed therein, said assembly comprising a flexible outer housing member having a flexible drive core rotatably journalled therein with one end adapted for driving connection with an output shaft of said motor, a generally L-shaped support rod including an upstanding leg and a rearwardly extending horizontally disposed leg, bracket means adapted for securement to said hull and slidably and rotatably receiving said upstanding leg for longitudinal reciprocal and rotational movement thereof about and along its longitudinal axis respectively, means mounting the second end of said housing to the free end portion of said horizontal leg for movement about an axis extending generally at right angles to the plane containing said support rod and transversely of said second end of said housing.

3,099,243
MOVING SIGNAL ACCESSORY FOR BICYCLES
Lester R. Schwartz, 20—39 Seagirt Blvd., Far Rockaway, N.Y., and Webster F. Williams, Jr., 90—20 221st Place, Queens Village, N.Y.
Filed Feb. 28, 1961, Ser. No. 92,214
4 Claims. (Cl. 116—28)



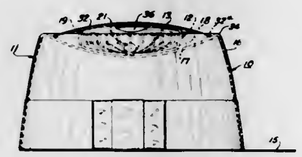
1. In combination with the rear axle, crank and pedal of a bicycle, a block-shaped bearing member having an offset extension pivotally supported on a protruding end of the rear axle, said bearing member having a central passage therethrough, an elongated rectangular-shaped bar extending through said passage and supported by said bearing member, one end of said bar having a round hole therein receiving the crank of the bicycle and being secured on the crank by the pedal of the bicycle, a post extending at right angles to the plane of the bar and secured at one end to the other end of the bar, and a flag secured to the other end of the post, said bar with attached post and flag adapted to move bodily in an elliptical path upon movement of the crank.

3,099,244
ROAD MARKERS
Ralph S. Knapp, Port Washington, Wis., assignor to Tri-Tix, Inc., Port Washington, Wis., a corporation of Illinois
Filed Feb. 16, 1962, Ser. No. 173,779
3 Claims. (Cl. 116—63)



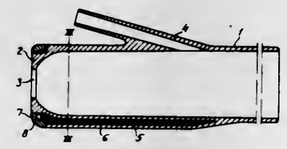
1. A road marker, comprising: a base member formed of a relatively rigid material, said base having an upwardly-tapered opening therethrough; an annular flange formed on said base member and projecting radially into the upper portion of said base member opening; shoulder-forming means on said base member projecting radially into the lower portion of said opening; and an upwardly-tapered conical member mounted in and projecting upwardly from said base member, said conical member being formed of a relatively flexible material, and said conical member having an enlarged lower portion forming an annular shoulder spaced from the lower edge thereof and which enlarged lower portion is of a size and taper to fit closely within said base member opening, the flexible nature of said conical member permitting the temporary deflection of said lower portion whereby the same may be forced upwardly past and seated on said base member shoulder-forming means while the annular shoulder on said conical member abuts the inwardly-projecting base member flange, thus removably securing said conical member within said base.

3,099,245
POSTURE INDICATING DEVICE AND HAT
Leland D. Deaner, 5499 New Milford Road, Ravenna, Ohio
Filed Oct. 2, 1962, Ser. No. 227,821
18 Claims. (Cl. 116—67)



1. A posture indicator comprising a hat or the like adapted to be worn on the human head including wall means defining a raceway lying in a generally horizontal plane; a rollable member in said raceway; station means on said wall means providing a rest position for said rollable member and from which said rollable member is movable in response to tilting of said raceway; and signal producing means associated with said raceway for producing signals in response to rolling of said rollable member therein.

3,099,246
TEAT CUP FOR MILKING MACHINES
Stig Beskow, Bromma, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed May 10, 1961, Ser. No. 109,072
Claims priority, application Sweden May 19, 1960
5 Claims. (Cl. 119—14.49)



1. The combination of a teat cup shell comprising a cylinder having a hollow interior and also having a cylindrical wall defining a cavity extending partly around the cylinder axis and separated from said hollow interior of the cylinder, the cavity also extending along a substantial part of the length of the cylinder, a removable closure for said cavity, and a weight disposed in said cavity.

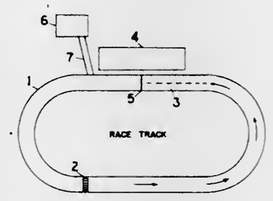
3,099,247
SIMULATED HEDGE FOR TURF RACE TRACK
Philip Bieber, 2915 Segovia St., Coral Gables, Fla.
Filed Feb. 27, 1962, Ser. No. 175,969
4 Claims. (Cl. 119—15.5)

1. A portable simulated hedge for race tracks comprising a plurality of individual self-supporting units, each unit including a pair of vertically extending laterally spaced side members, a pair of horizontally extending members secured to and interconnecting said side members, said vertical and horizontal members being orientated in the same vertical plane, a plurality of elongated flexible simulated branches projecting laterally to one side of the vertical plane of the unit members, means fixing said branches to selected portions of said members, and means for temporarily vertically positioning the unit



with the upper edge thereof at a consistent predetermined height.

3,099,248
METHODS OF TRAINING HORSES
John K. Giles and Elliott W. Michener, Los Angeles, Calif., assignors of one-third to Robert A. Nash, Sierra Madre, Calif.
Filed Jan. 25, 1962, Ser. No. 168,837
2 Claims. (Cl. 119—29)

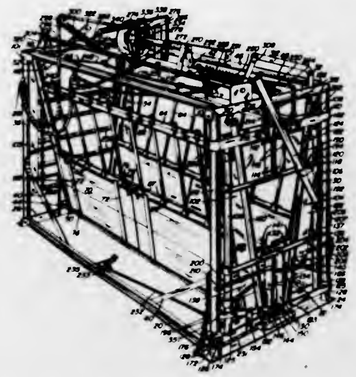


1. In a method of breaking and training horses preparatory to racing, the recording of sounds and noise heard at public race tracks during the running of races thereat and sounds and noise similar thereto and the reproduction of such sounds and noise by mechanical and electrical means positioned within the hearing of race horses within and in the vicinity of fields, enclosures, stables, roadways and riding tracks where the horses are kept and trained, with the loudness of such reproduction gradually varied and increased upon repetition so as not to startle the horses, for the purpose of accustoming them to exciting and alarming sounds associated with racing and hardening them thereto, thereby making the horses less excitable, more tractable and neurally stronger before and during the running of races.

3,099,249
CATTLE HOLDING CHUTE
Marinus Newhouse, Jr., Box 94B, Rte. 1, Terrebonne, Oreg.
Filed Mar. 7, 1960, Ser. No. 13,077
9 Claims. (Cl. 119—99)

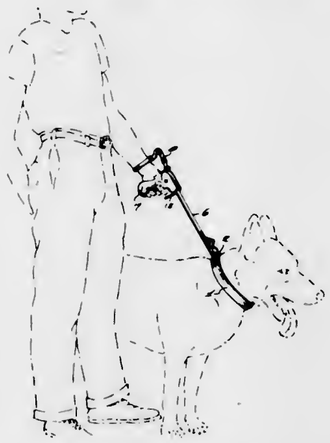
1. A cattle chute comprising a frame, a platform for holding an animal, a pair of side panels mounted in opposite sides of said platform, a pair of discharge gate members pivotally mounted at one end of said platform for movement between closed and open positions, an entrance gate at the other end of said platform having a normally closed position and movable to an open posi-

tion, and manually operable means connected to said discharge gate members and said entrance gate operable first



to swing the former from open to closed position and thereafter to move the latter to open position.

3,099,250
ANIMAL LEASHES
Thomas Doswell Soles, Jr., 916½ W. Franklin St., Richmond, Va.
Filed Feb. 15, 1962, Ser. No. 173,551
4 Claims. (Cl. 119—114)



1. An animal leash comprising an elongated control member in the form of a tube, grip means at one end by which it may be firmly grasped by the handler, means at the other end for connecting it to an animal encircling device, said control member being permanently rigid throughout its length, from said grip means to said animal encircling device, and manually controlled latch means mounted on and operated through said tube from said grip means for releasing said connecting means.

3,099,251
ERASING INSTRUMENT
Michael Hertz, 821 National Press Bldg., Washington 4, D.C.
Filed Jan. 17, 1962, Ser. No. 166,797
1 Claim. (Cl. 120—38)

An eraser instrument comprising a support, a coupling element in the form of a screw threaded into the upper portion of the support, a sleeve having a cylindrical inner surface rotatable about the support and a long cylindrical eraser frictionally fitted within the cylindrical surface of the sleeve, said eraser having a second coupling element in the form of a cap affixed to the eraser, one of said coupling elements having a non-circular pocket and the



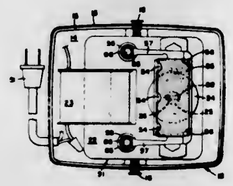
other element having a non-circular projecting portion fitting into the pocket, the two portions constituting the sole means for coupling together the cap and the screw, whereby on rotation of the sleeve with respect to the support, the eraser will move longitudinally of the sleeve, and whereby a spent eraser may be replaced in the sleeve by straight line coupling action.

3,099,252
WRITING INSTRUMENT AND INK THEREFOR
Eugene P. Cofield, Jr., Atlanta, Ga., assignor to Scripto, Inc., a corporation of Georgia
Filed Dec. 22, 1958, Ser. No. 784,835
3 Claims. (Cl. 120—42.4)



1. A pressurized ball point pen, comprising an ink reservoir having one end thereof closed and the other end fitted with a rotatable ball point, a supply of ink contained in said reservoir for feeding to said ball point, and a supply of gaseous-liquid propellant arranged in said reservoir to create a uniform superatmospheric pressure rearwardly of said ink supply for exerting a feeding force thereon greater than the force of gravity, said ink being characterized by a yield value requiring said superatmospheric pressure to effect flow thereof for feeding to said ball point and the yield value of said ink being such that under said superatmospheric pressure the ink will not pass the ball point in the absence of the shearing force applied thereto by rotation of said ball point, said yield value of the ink being produced by the pigment concentration thereof and said pigment concentration being selected to provide a desired opacity in said ink upon being transferred to a writing surface.

3,099,253
LEAD SHARPENING DEVICE
Clarence R. Taylor, Rochester, N.Y. (28 Woodside Drive, Penfield, N.Y.)
Filed May 22, 1961, Ser. No. 111,710
2 Claims. (Cl. 120—94)



1. In a lead sharpening device for a pencil or the like, the combination comprising:

(A) a motor;

(B) a rotatable eccentric pin driven by said motor; and

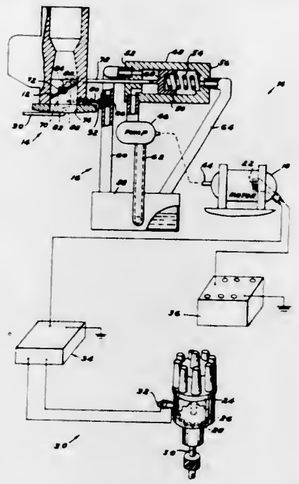
(C) a unitary U-shaped member having

(1) a pair of spaced apart flexible arms extending in one direction and

(2) a rectangular table transverse to said arms and interposed therebetween for releasably holding a piece of sand paper, one end of each of said arms being integral with one end of said table and the opposite end of each arm being pivotally mounted to said device, said table further having an elongated slot for receiving said eccentric whereby said table is reciprocally driven along a predetermined path upon rotation of said eccentric.

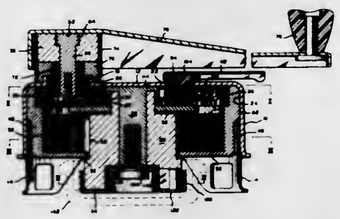
3,099,254
ENGINE SPEED GOVERNOR
Fred S. Kerr, Royal Oak, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Apr. 11, 1960, Ser. No. 21,174
15 Claims. (Cl. 123—102)

9. An engine speed governor for an engine having a throttle valve operable to regulate the speed of the engine comprising, electronic means operable to develop an electric signal proportional to the speed of the engine above a predetermined speed, an electric motor operably associated with said electronic means, the speed of which is controlled in accordance with said electric signal, valve control means including a piston rod positionable to limit movement of said throttle valve in an open direction, and hydraulic means intermediate said electric motor and valve control means, said hydraulic means comprising a hydraulic cylinder, a piston reciprocable therein to which said piston rod is attached, and means for positioning said piston in said cylinder in accordance with the speed of the electric motor, said means for positioning said piston including resilient means biasing said piston toward one end of said cylinder, a hydraulic fluid reservoir, a pair of fluid conduits extending between said one end of said cylinder and the reservoir, one of said fluid conduits having a restriction therein, and a hydraulic fluid pump in the other of said conduits for pumping fluid



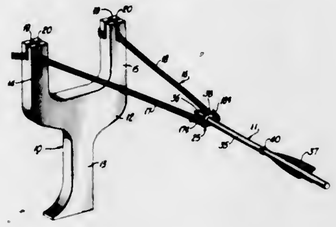
into said cylinder, the speed of operation of the fluid pump being controlled by the electric motor.

3,099,255
SPRING STARTER
Lyle J. Hamman, Eaton Rapids, Mich., assignor to Eaton Stamping Company, a corporation of Michigan
Filed Nov. 30, 1960, Ser. No. 72,698
6 Claims. (Cl. 123—179)



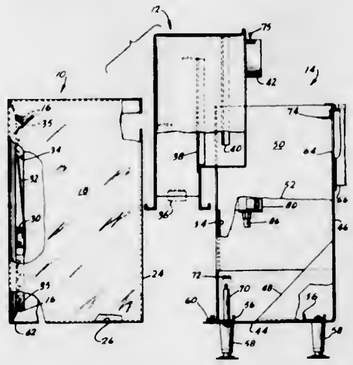
4. A spring starter for internal combustion engines comprising, in combination, a housing, a shaft affixed to said housing, a drive member rotatably supported on said shaft, a spiral spring having inner and outer ends circumscribing said drive member, said inner end being operatively connected to said drive member, a cylindrical spring keeper encompassing the periphery of said spring having the outer spring end attached thereto, means rotatably supporting said keeper within said housing, said means rotatably supporting said keeper comprising an external cylindrical bearing surface defined on said keeper operatively associated with an internal cylindrical bearing surface defined within said housing, said keeper external cylindrical bearing surface having a diameter greater than the diameter of said spring, gear teeth defining a ring gear formed on said keeper, a pinion gear rotatably mounted on said housing in mesh with said ring gear, a crank drivingly associated with said pinion, housing mounted releasable means selectively engageable with said drive member restraining rotation thereof and clutch means mounted upon said drive member.

3,099,256
SLINGSHOT ARRANGEMENT
Emmett H. Halverson, 104 E. Clarendon St., Prospect Heights, Ill.
Filed Aug. 16, 1962, Ser. No. 217,478
3 Claims. (Cl. 124—20)



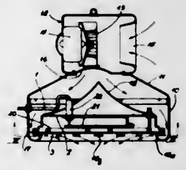
1. A slingshot comprising, a body having a pair of extending arms, an elastic sling comprising a pair of resilient bands, one end of each of said bands being secured to one of said extending arms, a U-shaped clip member, means securing the other ends of said resilient bands to the upstanding arms of said U-shaped member, said arms of said U-shaped member being formed with a reverse bend so that the ends thereof extend downwardly across the bight portion of said U-shaped clip to form an inclined bearing surface which is adapted to receive the collar of an arrow which collar is positioned near the tip of the arrow, said ends of said U-shaped member being spaced from said arms thereof by an amount sufficient to provide clearance between said resilient bands and the collar of an arrow when seated on said bearing surface.

3,099,257
STEEL SPACE HEATER CONSTRUCTION
Homer D. Du Fault, Easthampton, Mass., assignor to Heatbath Manufacturing Company, Inc., Indian Orchard, Mass., a corporation of Massachusetts
Filed July 15, 1960, Ser. No. 43,212
2 Claims. (Cl. 126—90)



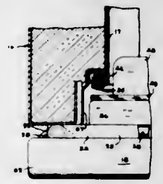
1. A space heater comprising a unitary frame member having rectangular base and back plates, the back plate having an opening adjacent the upper end thereof and a flue box supported on the rear face of the back plate communicating with said opening, an internally baffled sheet metal fire box having a front wall defining in part a bottom opening therefor and an outlet pipe at the upper rear portion thereof, said base plate having upstanding legs adjacent the front thereof, the said outlet pipe of the fire box extending into said back plate opening and detachably secured therein for supporting the rear of the fire box, and the said legs of the base detachably secured to the said front wall of the fire box for supporting the box at the front thereof in an elevated position above the base, and a cabinet having top, front, and side panels with the side panels thereof being slidably supported on said base plate, and fastening means detachably securing the cabinet side panels to the said back plate.

3,099,258
CATALYTIC HEATING APPARATUS
Maurice Charles Kurz, Geneva, Switzerland, assignor to Societe Calinter S.A., Geneva, Switzerland, a Swiss joint-stock company
Filed Oct. 26, 1960, Ser. No. 65,049
4 Claims. (Cl. 126—93)



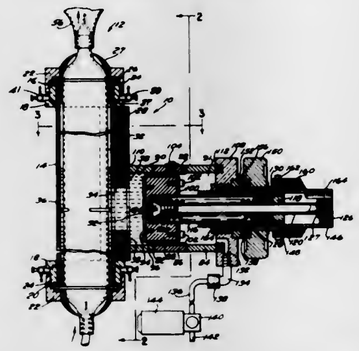
1. A heating apparatus comprising a substantially circular catalytic surface having a rear side and a quite uncovered front side adapted to freely radiate heat into the ambient atmosphere; means to supply a fuel under gaseous form to the rear side of said surface substantially in the absence of air, to cause said fuel to pass through said surface and to catalytically combine with atmospheric oxygen; and means to blow air close to the front side of said surface in substantially parallel relation thereto and inwardly with respect thereto from substantially the whole periphery thereof.

3,099,259
GASKETING ARRANGEMENT FOR OVEN DOOR
James K. Newell, Jr., Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,328
3 Claims. (Cl. 126—190)



1. A domestic oven having a body forming an oven cavity, said body having a vertical wall member that has a door opening therein, a pivoted door member adapted to close said opening, a pair of gasket means arranged between the door and said vertical wall members, means for supporting each gasket means on one of said door and wall members, the first gasket means being a highly resilient elastomeric member circumscribing at least a major portion of three edges of the door opening, the said first gasket means serving also as a bumper member which cushions substantially all of the compressive shock when the door is swung shut, the second gasket means being a fibrous insulation that circumscribes a major portion of the door opening but is spaced from one of said door and wall members when the door is closed so as to be out of sealing engagement therewith, and latch means for latching said door closed thereby reducing the thickness of the first gasket means until the second gasket means is compressed and hence sealed between the door and vertical wall members.

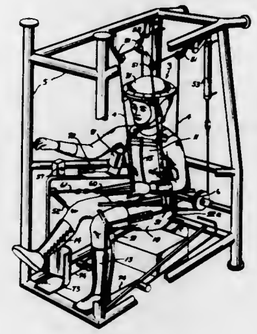
3,099,260
HEART PUMP APPARATUS
William C. Birtwell, North Scituate, R.I., assignor to Davol Rubber Company, Providence, R.I., a corporation of Rhode Island
Filed Feb. 9, 1960, Ser. No. 7,721
7 Claims. (Cl. 128—1)



1. In a pumping system for use in maintaining extracorporeal circulation, a pumping unit including a flexible body having an inlet and outlet communicating with the interior thereof and further communicating with the circulation system of the patient, means for sequentially deforming said flexible body to produce a pumping action therein, said deforming means including an incompressible liquid that is confined within an enclosure and is adapted to contact the exterior surfaces of said body under pressure to cause deformation thereof, and means responsive to the pumping action of the patient's heart for sequentially controlling the operation of said deforming means whereby said pumping unit is caused to produce a pumping action in synchronization with the pumping action of the patient's heart, said controlling means including means for delaying the systolic pulse of the pumping unit behind the systolic pulse of the patient's heart, wherein the systolic pulse of the pump is phased with the systolic pulse of the patient's heart in accordance with the normal time delays existing therebetween.

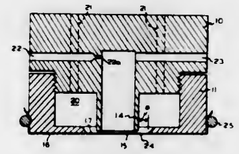
3,099,261
FULL BODY RESTRAINT SYSTEM
Joseph H. Doss, Kirkland, and Gary A. Graham, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,056
16 Claims. (Cl. 128—1)

1. A restraint system for maintaining an astronaut, while subject to high rates of acceleration, in a given attitude, and for allowing him freedom of movement during periods of minor or no acceleration, said restraint system comprising a suit of several body components, which includes at least an upper leg encasing pants section, front and rear vest portions to fit the front and rear, respectively, of the astronaut's torso, above said pants section, and of a length to extend generally between his lumbar region and his shoulders, lower leg elements to encircle at least his ankles, and a helmet, cable means at each side extending continuously lengthwise of each such suit component, cable guide means incorporated with and extending lengthwise along the opposite sides of each such suit component and receiving the cable means for lengthwise movement through said guide means, a plurality of support means separate from the suit and the cable means, supported in the vicinity of the locations to be assumed, when the astronaut is in the given attitude, by his feet, his knees, his hips, and above his head, releasable means for interengaging each cable means with the corresponding support means at each such



location, and means to tension the respective cable means while so engaged, to assume support of the astronaut, or to relax the same.

3,099,262
PHYSIOLOGIC FLUID PRESSURE SENSING HEAD
Robert P. Bigliano, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 21, 1962, Ser. No. 204,244
5 Claims. (Cl. 128—2.05)



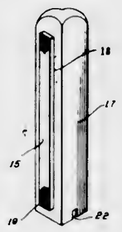
1. A pressure sensing head for the measurement of physiologic fluid pressure existing behind an elastic body membrane comprising, in combination, a rigid apertured elastic body membrane depressor element provided with an elastic body membrane-depressing face having a surface generally conforming to that of the undepressed flesh to which said depressor element is to be applied, and a gas pressure development nozzle fixedly mounted with respect to said depressor element with discharge opening disposed on the rear side of said depressor element from said elastic body membrane-depressing face in a location preserving throttled gas flow out of said discharge opening responsive to said physiologic fluid pressure but clear of contact with said elastic body membrane and any flesh overlying said elastic body membrane as well as any elastomeric diaphragm closing off the aperture in said depressor element and any freely movable rigid structure interposed between said discharge opening and said elastic body membrane together with any said flesh overlying said elastic body membrane during the time said depressor element is made to depress said elastic body membrane without occlusion of passage of physiologic fluid therepast, said gas pressure development nozzle being provided with a first port for introduction therein of gas under pressure at substantially fixed flow rate and a second port for measurement of the gas pressure developed within said nozzle, whereupon said gas pressure developed within said nozzle is a function of said physiologic fluid pressure existing behind said elastic body membrane.

3,099,263
EAR DEWAXER
Girolama Palazzolo, 323 Graham St. SW., Grand Rapids, Mich.
Continuation of application Ser. No. 816,322, May 27, 1959. This application Mar. 22, 1961, Ser. No. 97,988
1 Claim. (Cl. 128—184)



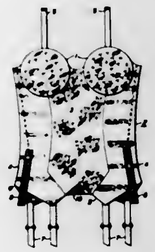
An ear dewaxing device, comprising: a tubular member formed of combustible linen; said tubular member being elongated, one end thereof having a diameter such that it may be inserted into a human ear adjacent the earwax therein; said tubular member impregnated with beeswax whereby said device may be ignited at a point remote from the ear and the resulting smoke within said tubular member engaging the earwax and, thereby aiding in the melting and removal of the wax from the ear.

3,099,264
DISPOSABLE SYRINGE AND COMPRESSION DEVICE THEREFOR
Raymond E. Hubbard, 1212 N. Ballenger Highway, Flint 4, Mich.
Filed July 11, 1962, Ser. No. 209,067
2 Claims. (Cl. 128—215)



1. A compression device for use with a disposable hypodermic syringe having a collapsible medicament containing sac with the hub of a hypodermic needle connected to one end thereof, said device comprising; a pair of similar opposed compression plates which are connected closely together at one end thereof by V-shaped spring means and normally diverge outwardly therefrom to the free ends thereof, a pair of similar compression plate actuators of slightly less width than the width of said compression plates, one of which actuators is secured to the outer side of each of said compression plates, the outer surface of said actuators diverging outwardly from the outer sides of said compression plates as they extend from the free ends of said compression plates toward the connected ends thereof, a tubular housing which is open at one end thereof and is provided with a pair of diametrically opposed elongated slots in the side wall thereof, said compression plates and actuators being mounted in said housing with said actuators extending out through said slots, said compression plates being adapted when in normal divergent position to have said sac inserted therebetween and to be manually pressed through said actuators from divergent position to substantially parallel position to thereby collapse said sac and expel medicament therefrom.

3,099,265
FEMALE GARMENTS
Frances M. Comollo, New York, N.Y., assignor to Queen Size Clothes, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 22, 1960, Ser. No. 71,012
1 Claim. (Cl. 128—454)

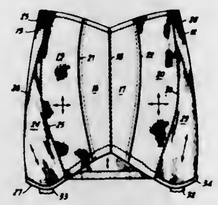


Feminine apparel comprising, in combination, a long line foundation garment including a body encircling bodice bounded by upper and lower circumferential edges and having a front portion and a rear portion joined together and situated between said edges, said bodice being flared outwardly in the region of said lower edge where said front and said rear portions are joined together, a pair of bust supporting cups connected to said upper edge of said front portion, said bust supporting cups being arranged symmetrically with respect to the center line of said front portion, and said upper edge of said rear portion being straight and situated substantially level with and in back of said bust supporting cups, a V-shaped notch located in said lower edge of said front portion, said notch being centered on the center line of said front portion, an arcuate notch located in said lower edge of said rear portion, said arcuate notch being centered on the center line of said rear portion, first pressure sensitive fastening means attached to said lower edge of said front portion of said bodice on each side of said V-shaped notch, a blouse enveloping said foundation garment, said blouse having a front portion and a rear portion, said front and rear portions being joined together and bounded by a bottom circumferential edge which is disposed substantially level with said lower edge of said foundation garment, second pressure sensitive fastening means connected to said front portion of said blouse at said bottom edge, said second pressure sensitive fastening means being connected to each side of the center line of said front portion of said blouse, said second pressure sensitive means being disposed with respect to said first pressure sensitive means such that at least a segment of said first pressure sensitive means bears against at least a segment of said second pressure sensitive means when said blouse is enveloping said foundation garment.

3,099,266
UNDERGARMENT
Anne Spitzer, Bayside, N.Y., assignor to Lily of France, Inc., New York, N.Y.
Filed Sept. 14, 1961, Ser. No. 138,124
6 Claims. (Cl. 128—541)

1. A girdle comprising front and rear portions each of said portions having a pair of longitudinal edges on each side thereof and a falchion-like shaped panel having a longitudinal concave and convex edge interposed between said front and rear portions at the sides and below the hip line area of said girdle; a line of stitching securing said front and rear portions in the hip-line area of said girdle; said front portion along the outer longitudinal edges thereof being secured by stitching to said falchion-like

shaped panels along the concave edges thereof; said rear portion along the outer longitudinal edges thereof being se-



cured by stitching to said falchion-like shaped panels along the convex edges thereof.

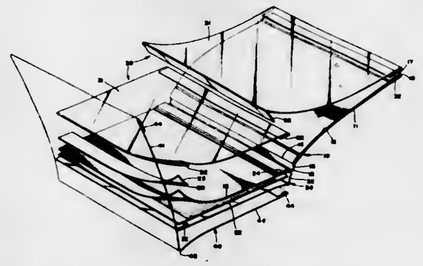
3,099,267
FOOT BALANCING DEVICE
Earl L. Cherniak, 394 W. Broadway, South Boston, Mass.
Filed July 6, 1961, Ser. No. 122,181
1 Claim. (Cl. 128—615)



For providing three-point foot balancing, means comprising a foot support having three pads on one surface thereof, said pads comprising a transversely elongate, uniformly flat member having a transversely curved anterior side, corresponding substantially in contour to the anterior arch, positioned on the support posteriorly of the metatarsal heads so as to bear the body weight uniformly before it is transmitted to the metatarsal heads, and longitudinally disposed, uniformly flat members positioned on the support at opposite sides of the calcaneus and posteriorly of said transversely disposed member, the inwardly located of said longitudinally disposed members extending from adjacent the rear side of the transversely disposed member along the longitudinal arch at the inner side of the foot to and along the inner side of the area of the medial tuberosity of the calcaneus and the outwardly located of said longitudinally disposed members being disposed along the longitudinal arch at the outer side of the foot at a point between the fifth metatarsal head and the cuboid and extending posteriorly along the longitudinal arch at the outer side of the medial tuberosity to about the outer calcaneus, all of said pads being of substantially equal thickness.

3,099,268
PLASTIC PROTECTORS FOR SHEET MATERIAL AND THE LIKE
Gene W. Smith, 5008 La Canada Blvd., La Canada, Calif.
Filed Aug. 1, 1960, Ser. No. 46,586
10 Claims. (Cl. 129—1)

1. A protector for sheet material including sales literature, drawings, brochures and the like large area sheets comprising a sheet of thin flexible plastic material having sufficient rigidity as to retain a fold tenaciously when the fold is formed and takes a set upon cooling after being heated, said protector having a wide area flat central portion coextensive in size with the flat sheet material to be covered and relatively narrow strip portions of its opposite lateral edges being folded over to lie closely against the same face of said protector, the distance between the creases of said folded over strip portions being substantially coextensive with the corresponding dimension of sheet material to be embraced by said protector



with the result that sheet material inserted between said folded over edge portions of said protector is retained therein solely by the gripping action of the lateral edges of the protector with the juxtaposed areas of the sheet material.

3,099,269
FILE FOR NON-PUNCHED PAPERS
Walter Sörensen, Rendsburg, Germany, assignor to Hunke & Jochheim, Iserlohn, Germany, a firm
Filed Nov. 8, 1961, Ser. No. 150,987
6 Claims. (Cl. 129—37)

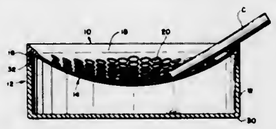


1. A file adapted to hold a plurality of superposed paper sheets without perforating the sheets, comprising, in combination, a reverted sheet-metal clip formed to provide a pair of legs having confronting faces spaced by a resilient bight, one of said legs having a projection on the confronting face thereof adjacent its free end; a file sheet comprised of a back sheet having a first reverted portion extending forwardly thereover, a second reverted portion extending rearwardly toward the fold line of said first reverted portion, and a third reverted portion extending forwardly of said second reverted portion, said third reverted portion forming a stop, said sheet having a longitudinal slot formed along a fold line adjacent its edge, said one of said legs of said clip extending through said slot with the other of said legs positioned exteriorly and rearwardly of said back sheet; said clip sliding transversely of the fold lines of said back sheet with the engagement of said projection and said stop precluding movement of said one leg out of said slot, whereby when the paper sheets are inserted between said back sheet and said first reverted portion with said clip withdrawn from said slot, movement of said clip toward said sheets until said bight engages the edge of said back sheet clamps the sheets between the edge of said back sheet and said first reverted portion.

3,099,270
SMOKER'S ASHTRAY
Stanley P. Garson, 168 Boston St., Seattle, Wash.
Filed Aug. 25, 1961, Ser. No. 134,002
2 Claims. (Cl. 131—240)

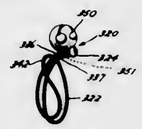
1. An ashtray designed to safely hold a burning cigarette while avoiding condensation of tar on the cigarette comprising: (1) a circular base having a closed bottom and an upstanding cylindrical wall; (2) a circular top removably secured to said upstanding cylindrical wall, said top comprising a concave perforated plate of approximately spherical segment form having a radius of curva-

ture approximately equal to 70% of the diameter of said cylindrical wall, thereby enabling a burning cigarette to



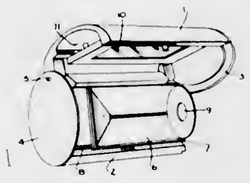
have its coal end supported by one of the perforations in said plate while said cigarette is supported at a total of only two spaced apart points along its length.

3,099,271
HAIR HOLDERS
Morton A. Dubelier, 298 W. 27th St., Port Washington, N.Y.
Filed June 30, 1958, Ser. No. 745,640
1 Claim. (Cl. 132—46)



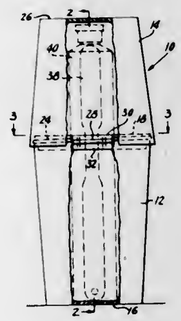
A hair holding device comprising: a band element composed of an elongated elastic member having two free ends; a terminal connector element joining said ends and forming a first enlargement on said band element; a second enlargement disposed on said band element inwardly of said first enlargement; said band element being formable to have a bight portion which is detachably engageable upon said enlargements, which prevent the disengagement of said bight portion and serve as a grasping means for the user.

3,099,272
COSMETIC KIT
Lucien Paradis, Pisa, Italy, assignor to Sopas Profumi S.p.A., Pisa, Italy, a joint-stock company of Italy
Filed Aug. 10, 1960, Ser. No. 48,735
Claims priority, application Italy Aug. 13, 1959
1 Claim. (Cl. 132—79)



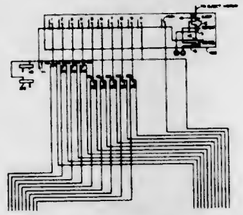
A hand-sized cosmetic kit comprising (1) a curved first wall member, (2) a curved second wall member of substantially the same length as said first wall member hinged to said first wall member in such manner that when said first and second wall members are closed against each other a three-dimensioned region is defined with a concave surface of said first wall member facing a concave surface of said second wall member, (3) a flat top member joined to said first wall member in fixed relation thereto, said top member being of such size and shape as to provide a complete end closure for said three-dimensioned region while conforming substantially to the curvature of both said wall members in closed condition, (4) a flat base member joined to said second wall member in fixed relation thereto, said base member being of such size and shape as to provide a complete end closure for said three-dimensioned region while conforming substantially to the curvature of both said wall members in closed condition, (5) a flat mirror mounted on and within said first wall member so as to define a cavity between the back of said mirror and said concave surface of said first wall member, said cavity being of sufficient size to contain a cosmetic applicator such as a small brush, said cavity having an open base end whereby said applicator may be readily removed from and replaced into said cavity, and (6) a trough structure adapted to hold a tube of cosmetic, this structure being slidably mounted in said second wall member to move in directions between the top and base ends and beyond the top end thereof, and having a length at least somewhat less than the length of said second wall member, and having further a side wall portion at its side located closest to the top end of said second wall member which is characterized by an opening adapted to receive the neck of said tube of cosmetic, and being further of such size and shape as to permit full closing of said wall members around it with said mirror mounted on said first wall member.

3,099,273
CONTAINER FOR TOOTHBRUSHES AND RELATED ITEMS
Naomi P. Reed, R.D. 4, Box 423, Altoona, Pa.
Filed Jan. 16, 1961, Ser. No. 82,822
1 Claim. (Cl. 132—84)



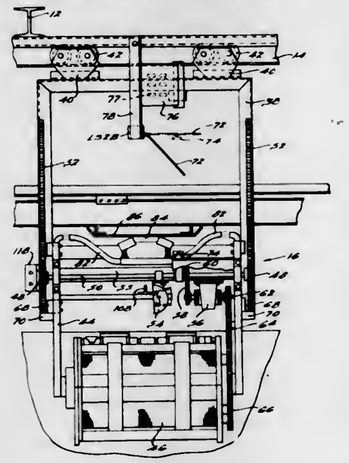
A combination pair of separable, different size drinking vessels and container for toothbrushes and related items comprising a large frusto-conical base portion having an open top and an imperforate bottom with the side wall tapering upwardly and outwardly from bottom to top, constituting one large size drinking vessel, a small frusto-conical cover portion with an open bottom and imperforate top constituting the other small size drinking vessel, the side wall of said cover portion tapering upwardly and inwardly from bottom to top, integral external threads on said base portion adjacent its top, complementary integral internal threads on said cover portion adjacent its bottom, said threads being releasably engageable with each other, internally extending integral threads within said base portion adjacent its top, a separable ring having external peripheral threads complementary to and engageable with said internal threads within said base portion, a hollow circular hub mounted within said ring by oppositely extending radial arms to said ring, and peripherally located circumferentially extending slots within said ring, said hollow circular hub providing means for steadying a toothpaste tube therewithin, each said slot providing means for steadying a toothbrush handle therethrough.

3,099,274
CONTROL CIRCUITS FOR MONEY ISSUING SYSTEM
Alan Rayment FitzSimons, 6650 S. Cicero Ave., Chicago Ridge, Ill.
Filed Sept. 17, 1959, Ser. No. 840,672
13 Claims. (Cl. 133—4)



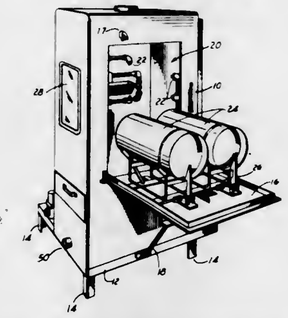
10. A money issuing system for issuing both paper money and coins comprising means including a plurality of registers for storing keyed-in digital information, means comprising an electromechanical stepping switch having a plurality of banks of contacts, means including wiring for interconnecting said registers and each of certain of said banks of contacts, means responsive to operation of said register means for marking said wiring in accordance with said keyed-in information, means whereby each of said certain banks controls the issuing of an individually associated denomniation of monetary units, means including another of said banks coupled to select each of said certain banks in sequence, and means responsive to said last named means whereby said electromechanical switch individually scans each of said certain banks of contacts under control of said other banks of contacts.

3,099,275
DRAIN MECHANISM FOR BARREL TYPE CONVEYING APPARATUS
Leon J. Pianowski, Detroit, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 105,045
11 Claims. (Cl. 134—46)



11. In a work carrier for immersing workpieces in a treating receptacle, the combination comprising a supporting frame, a workpiece container movably and rotatably mounted on said supporting frame for up and down movement thereon, means for moving said container from a raised position above a treating receptacle to a lowered position in a treating receptacle, means for rotating said container while in said lowered position, means for rotating and raising said container from said lowered position to said raised position, means for lowering said container from said raised position to a drain position disposed intermediate of said raised position and said lowered position wherein said container is disposed above the treating receptacle, stop means selectively operable for supporting said container while in said drain position, means for rotating said container in said drain position thereby facilitatng drainage of the treating solution from the workpieces therein, and means for rotating and raising said container from said drain position to said raised position.

3,099,276
CONTAINER WASHING APPARATUS
Raymond L. Bergendahl, Mohawk, N.Y., assignor to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 97,044
1 Claim. (Cl. 134—107)

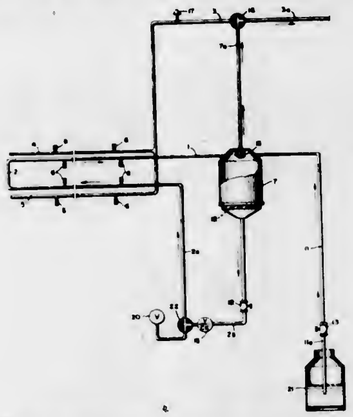


A container washing apparatus comprising an enclosed cabinet having sidewalls defining a washing chamber and a liquid heating chamber beneath said washing chamber, means for positioning the containers to be washed in said washing chamber, a heating compartment in said heating chamber, said compartment being open at the bottom and extending upwardly into a portion of said heating chamber with the sides of said heating compartment spaced from the sides of said heating chamber, a plurality of spaced-apart liquid passageways extending from one side to another through said heating compartment to provide increased heat exchange surface, an exhaust stack connected to a third side of said heating compartment and extending upwardly through said heating chamber and contiguous to the outside of a sidewall of said washing chamber, means for supplying heat to said heating compartment to heat the liquid in said heating chamber, means to circulate the heated liquid from said heating chamber to said washing chamber and to return said liquid to said heating chamber, and at least one liquid passageway extending through the portion of said exhaust stack in said heating chamber to provide additional surface for heating the liquid in said heating chamber.

3,099,277
FLUSHING APPARATUS FOR MILKING SYSTEMS
Wäino Mäehans, Sodertalje, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed Feb. 24, 1960, Ser. No. 10,746
Claims priority, application Sweden Mar. 2, 1959
8 Claims. (Cl. 134—166)

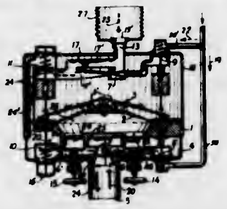
1. In combination with a liquid pipe line having an initial end portion, an intermediate portion adapted for connection to a milking unit and to receive milk there-

from, and a discharge end portion for delivering liquid from said intermediate portion, and a vacuum pipe line adapted for connection to said discharge end portion to maintain it under vacuum, a closed container located in the liquid pipe line and forming a liquid separating device, said intermediate portion of the pipe line leading into the upper part of the container, and said discharge end portion forming an air-tight flow path leading from the lower part of the container, means for connecting the upper part of the container to the vacuum pipe line, an air inlet pulsating valve connected to said initial end portion for



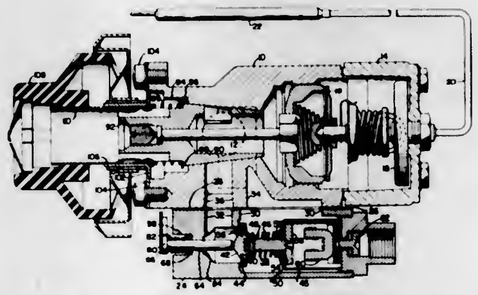
admitting air intermittently into the liquid pipe line, and means including a check valve for connecting said discharge end portion of the liquid pipe line to said initial end portion at a point between said inlet valve and said intermediate portion, the check valve having an air-tight flow connection with said initial end portion and thereby permitting flow only in the direction from the container through said discharge end portion to said initial end portion, whereby washing liquid from said container can be circulated in admixture with air through the intermediate portion of the liquid pipe line and back to the container.

3,099,278
AUTOMATIC RESUSCITATING PRESSURE APPARATUS
Hugo Keszler, Prague, and Jaromir Bernreiter, Beroun, Czechoslovakia, assignors to Chirana Praha, narodni podnik, Prague, Czechoslovakia
Filed Dec. 29, 1960, Ser. No. 90,901
Claims priority, application Czechoslovakia Jan. 28, 1960
4 Claims. (Cl. 137—64)



1. An automatic resuscitating apparatus of the injector type comprising in combination a separable housing spacedly arranged by means of a perforate partition, first and second check valve means in said partition, a first chamber in said housing on one side of said partition and including a passage open at one end into said first chamber and adapted to be connected at the other end to a breathing device, and a second chamber on the opposite side of said partition, said second chamber including a pressure sensitive member adapted to expand and contract in response to variations of gaseous pressure therein, said first check valve means communicating flow from said first chamber to said second chamber and said second check valve means communicating flow from said second chamber to said first chamber, compressed gas inlet means and suction duct means communicable through an ejector means in said first chamber, said ejector means having an exhaust means opening through a wall of said first chamber to atmosphere with said exhaust means having an adjustable closure means to control the output of said ejector means, compressed gas inlet means and atmospheric air inlet means associated with an injector means and communicating with said first chamber, first valve means for controlling compressed gas flow to said injector and ejector means, and second valve means controlling flow from said injector means to said first chamber and third valve means controlling flow from said first chamber to said suction duct means of said ejector means, and trigger means carried by the pressure sensitive means and connected to said first, second and third valve means for alternately controlling the first, second and third valve means to create inspiratory and expiratory pulsations of the resuscitating apparatus.

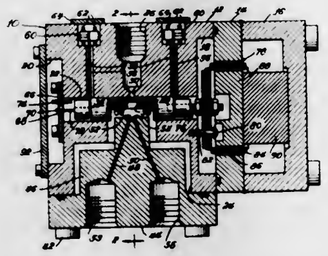
3,099,279
COMBINATION THERMOSTAT AND SAFETY VALVE
James R. Willson, Greensburg, and Robert J. McGivern, Mount Pleasant, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Mar. 4, 1960, Ser. No. 12,813
1 Claim. (Cl. 137—66)



A fuel flow device for controlling the flow of fuel to a main burner and a pilot burner comprising in combination a main casing having a fuel inlet, a main control valve means including a rotatable valve member for controlling the flow of fuel to a main burner and a pilot fuel passage for supplying fuel to a pilot burner; a housing detachably mounted to said main casing, said housing having a first fuel passage with an inlet and outlet adjacent said main casing and a second fuel passage which affords fuel flow between the outlet of said first fuel passage and a second outlet in said housing adjacent said main casing; said main casing having an outlet port affording fuel flow between said fuel inlet and the inlet of said first fuel passage whereby all fuel entering said fuel inlet passes through said first fuel passage, an inlet port affording fuel flow between the outlet of said first fuel passage to said rotatable valve member and said pilot fuel passage communicating with said second outlet for supplying fuel to a pilot burner; a manually operable electromagnetic valve adapted to be energized by a pilot burner and positioned in said first passage having an open and closed position whereby fuel flow through said fuel inlet is controlled by said electromagnetic valve; manually operable

means for positioning said rotatable valve member including an element mounted for reciprocation relative to said rotatable valve member; and lever means operably associated with said reciprocable element for operating said electromagnetic valve to its open position; and interengaging means for actuating said lever means, said interengaging means being operably connected for movement with said manually operable means to position said interengaging means between said reciprocable element and said lever means whereby said lever means is actuated by movement of said reciprocable element to operate said electromagnetic valve to its open position.

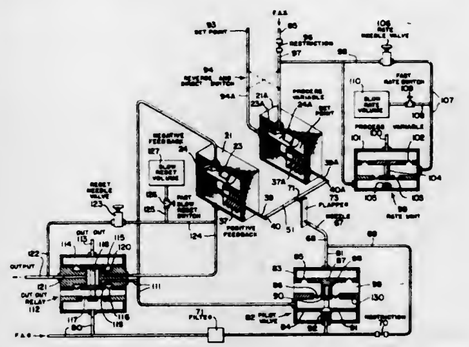
3,099,280
ELECTRO-HYDRAULIC SERVOVALVE
Werner G. Holzbock, Birmingham, Mich., assignor to Vickers Incorporated, Troy, Mich., a corporation of Michigan
Filed Nov. 16, 1960, Ser. No. 69,754
10 Claims. (Cl. 137—83)



9. In an electro-hydraulic servovalve, a housing formed to provide a cavity, a jet nozzle arrangement positioned in said cavity and including, an elongated slidable member formed to provide a uniform diameter opening the axis of which is normal to the longitudinal axis of the slidable member, said opening being arranged to develop a jet stream of pressurized medium as it passes through the slidable member in a unidirectional manner, a jet stream receiver means positioned in said cavity and formed to provide a receiving orifice for receiving the jet stream from the slidable member and a passageway means associated with said receiving orifice for conducting pressurized fluid out of the servovalve, and means to provide movement of said slidable member in response to a control signal fed to the servovalve.

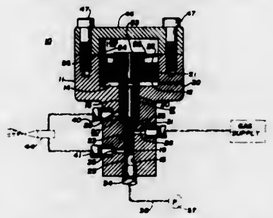
3,099,281
AIR-PRESSURE-OPERATED CONTROLLER
Robert B. Watrous, Philadelphia, and Charles P. Rohmann, Hatboro, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 17, 1961, Ser. No. 124,623
19 Claims. (Cl. 137—86)

4. In an air-pressure-operated controller, a base casting, a pair of air-pressure-tight capsules mounted on said casting, a pair of flexible bellows each mounted in a separate one of said capsules and dividing the interior thereof into two compartments, a pair of beams each pivotly mounted on a separate one of said capsules and projecting through the wall thereof, a pair of connections each located between one of said bellows and the inner end of one of said beams, a drive rod mounted on the outer end of each of said beams and having pivotal connection therewith, a flapper engaging said drive rod for rocking movement about a pivot in response to movements of said drive rod, a nozzle mounted for cooperation with said flapper, and means for moving said flapper lengthwise



of said drive rod for adjusting the proportional band of the controller.

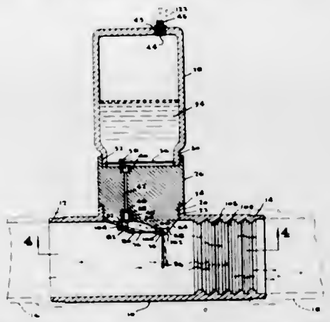
3,099,282
PRESSURE OPERATED VALVE MEANS FOR CONTROLLING FLOW IN A FLOW LINE
William R. Miller, 1289 Genesee St., Cleveland 24, Ohio, and George M. Lance, 1013 Nana Lane, St. Louis 22, Mo.
Filed May 18, 1959, Ser. No. 814,104
16 Claims. (Cl. 137—87)



1. A spray valve comprising a valve body having a chamber at one end portion thereof, a primary bore at the other end portion thereof and a secondary bore therebetween, a piston member including an end portion, residing within said chamber, a spool slidably residing within said primary bore and a stem member slidably residing within said secondary bore, said spool having a reduced portion forming a movable chamber with the side walls of said primary bore, said piston member having first and second faces with a surface on said spool comprising said first face and a surface on said piston head comprising said second face, a gas inlet connected to said movable chamber, a gas outlet connected to said secondary bore, wall means between said primary and said secondary bore forming a valve seat and wall means between said spool and said stem forming closure means, said piston member slidably movable between a first and a second position, said piston member in said first position prohibiting passage of gas from said gas inlet to said gas outlet, a dispensable material inlet connected to said primary bore providing communication with said first face of said piston member, a dispensable material outlet connected to said primary bore, said piston member in said first position prohibiting communication between said dispensable material inlet and said dispensable material outlet, restricted passageway means extending within said piston member and providing communication between said gas outlet and said chamber, a spring member residing within said compression chamber and being operably connected to said

piston member for urging said piston member to said first position, pump means for urging dispensable material into said dispensable material inlet and exerting a force against said first face of said piston member thereby moving said piston member to said second position whereby dispensable material travels through said dispensable material outlet and gas flows from said movable chamber past said seal means to said gas outlet and bleeds through said restricted passageway means to said chamber, deactuation of said pump means causing said force to be removed from said first face of said piston member whereby said gas pressure in said chamber and said spring member move said piston member back to said first position whereby gas is prevented from passing from said gas inlet to said gas outlet.

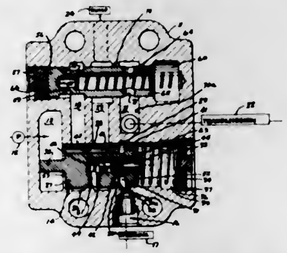
3,099,283
WATER SOFTENER FOR SUPPLY LINES
Eugene J. Holdeman, 1419 Demeter Drive, and Donald A. Burkholder, 57 Elm Court, both of Freeport, Ill.
Filed Jan. 3, 1962, Ser. No. 164,112
6 Claims. (Cl. 137—111)



1. A fluid-conditioning unit for attachment in fluid supply lines, comprising a T fitting having a cross arm adapted for insertion in the line, and constituting a mixing chamber, and a leg extending transversely from said arm, a container for a conditioning agent carried by the outer end of said leg, said leg having a passage communicating between said container and said chamber, said passage having a counterbore adjacent said chamber, a cup threadedly secured in said counterbore, with bottom innermost, and said bottom having an opening with an internal, curved seat, a plunger loosely mounted in said cup, for sliding movement, and having a resilient head adapted to engage said seat, a bell crank lever journalled in said leg, on an axis transverse to the axis of said chamber, and lying within said chamber, one arm of said lever arranged generally transversely of said chamber and having a paddle at its outer end, the other arm of said lever arranged generally longitudinally of said chamber, and having a paddle at its outer end, a link pivoted at one end to said latter paddle, and at the other end to said plunger, spring means on said lever, biasing said plunger to seated position and a cylindrical baffle carried by said leg and extending into said chamber, adjacent said cup, and on the side thereof opposite the axis of swing of said lever.

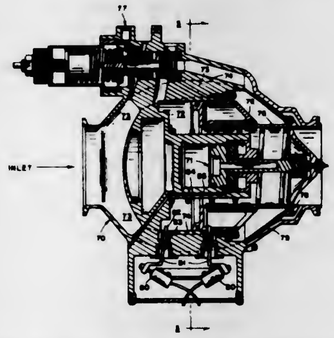
3,099,284
FLOW DIVIDER VALVE
John E. Thrap, Garfield Heights, and Homer D. Farr, Brecksville, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 17, 1959, Ser. No. 827,947
7 Claims. (Cl. 137—117)

1. A flow divider valve comprising in combination a primary supply passage for supplying pressurized fluid, a first valve connected to the primary passage and movable between a first position and a second position, a first passage connected to the first valve and communicating with said primary passage in the first and second positions of the first valve, a second passage connected to the first valve and communicating with said supply passage only in the second position of said first valve, means connected to said first valve for controlling the position thereof and moving the valve toward said second position when an adequate fluid is delivered to said first passage, a second valve movable between a first position and a second position and connected to said second passage, a



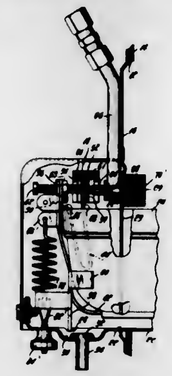
delivery passage leading from said second valve and communicating with said second passage in both of said first and second positions of the second valve, a pressure drop orifice between said second passage and said delivery passage, a return passage connected to said valve communicating with said second passage in positions other than said first position of said valve, said second valve having a variable control orifice between said delivery passage and said second passage, and means responsive to pressure drop across said pressure drop orifice and connected to control said second valve and the size of said variable orifice.

3,099,285
VENT AND RELIEF VALVE
William K. Berg, Thousand Oaks, Robert A. Riddell, Los Angeles, Eugene G. Spencer, Canoga Park, and Lloyd E. Tomlinson, Woodland Hills, Calif., assignors to North American Aviation, Inc.
Filed Sept. 1, 1959, Ser. No. 837,548
7 Claims. (Cl. 137—220)



1. A vent and relief valve comprising the combination of a housing containing an inlet port communicating with an independent fluid supply to be controlled in an outlet port, a poppet mounted within said housing and adapted to normally sealably close said outlet port, actuator means connected to said poppet, said poppet and said actuator means separating said housing into two compartments each normally exposed to supply pressure; and a pilot valve including passage means structurally separate from said actuator means and interconnecting said compartments, means for interrupting said interconnection responsive to an increase of supply pressure, vent means adapted for vent connection with one of said compartments only, whereby when said one compartment is vented said poppet opens to relieve excess pressure in said fluid supply and an override piston separate from and connected to said poppet for positioning said poppet responsive to an independent pressure signal.

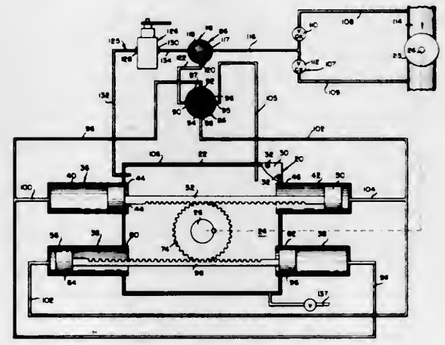
3,099,286
REVERSIBLE VALVE CLOSURE MEMBER
Milton A. Powers, Grosse Pointe Park, Mich., assignor to Skuttle Manufacturing Co., Milford, Mich., a corporation of Michigan
Filed Jan. 22, 1960, Ser. No. 4,126
5 Claims. (Cl. 137—315)



1. A unitary symmetrical reversible valve member integrally made of resilient non-metallic material and comprising a solid imperforate intermediate web section having on opposite sides substantially parallel valve closure surfaces, and means providing inwardly open guide recesses in said member extending for substantial distances around the outer peripheries of corresponding end portions of said surfaces, said recesses being discontinuous at the other ends of said surfaces and adapted to receive a mounting member in reversed positions of said valve member.

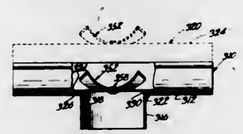
3,099,287
POWER OPERATION FOR VALVES
Paul A. Manor, Pittsburgh, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 27, 1960, Ser. No. 78,376
6 Claims. (Cl. 137—456)

1. In combination:
(*a*) a pipeline conducting gas under pressure;
(*b*) a valve assembly in the pipeline and comprising a casing providing a passage therethrough and a rotatable plug for blocking or permitting flow of gas through said passage;
(*c*) a valve stem connected to said plug and projecting through said casing;
(*d*) an operator assembly mounted on said casing and comprising a housing defining a liquid reservoir chamber;
(*e*) means on said housing providing at least two opposed motors containing movable pressure responsive elements;
(*f*) motion transmitting means in the housing connecting said elements with said valve stem;
(*g*) conduit means connecting said pipeline to said motors and a reversing valve in said conduit means for applying gas pressure from said pipeline to one or the other of said motors for selectively reversibly turning said valve stem;
(*h*) and auxiliary means for turning the valve stem in the event of gas pressure failure in the pipeline



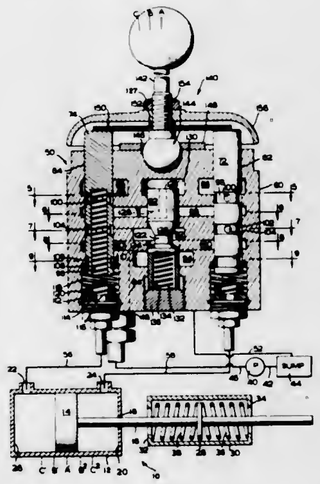
comprising a pump having an inlet connected to said liquid in the reservoir chamber;
(*i*) an outlet conduit for said pump;
(*j*) and a selector valve interposed in said conduit means and connected to said conduit for selectively blocking said conduit and transmitting pipeline gas pressure to said reversing valve or transmitting the liquid outlet pressure of said pump to said reversing valve.

3,099,288
NONCLOGGING CHECK VALVE
Frank G. Weis, Kansas City, Mo., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 11, 1960, Ser. No. 21,465
13 Claims. (Cl. 137—525.3)



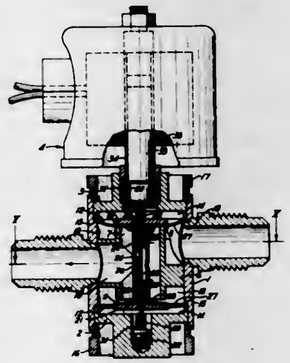
1. In check valve structure for fluids which may contain solid particles, an elongated, transversely arcuate member provided with an opening therein and having opposed, longitudinally extending side margins; a coupling secured to said member on the convex surface thereof, communicating with said opening in the member and adapted to be coupled to a fluid supply conduit; a resilient lining covering at least a part of the inner concave surface of the member opposed to said coupling and having an aperture therein of equal dimensions to and registering with said opening in the member; an elongated, flexible valve element having opposed, longitudinally extending side edges; and means securing said edges of the element to said member substantially along respective side margins of the same with said element being disposed in overlying relationship to said concave surface of the member, said element being of sufficient width and length to complementally engage the concave surface of said resilient lining in full closing relationship to said aperture therein and thereby the opening in said coupling.

3,099,289
PRESSURE FLUID CONTROL SYSTEM AND FLOW CONTROL MEANS THEREFOR
Jay C. Neilson and Frank V. McCay, Jr., Salt Lake City, Utah, assignors to Zeno Hydraulic Corporation, Salt Lake City, Utah, a corporation of Nevada
Filed June 20, 1960, Ser. No. 37,256
7 Claims. (Cl. 137—596)



1. A pressure fluid flow control device including a body, a spool receiving bore in the body, a spool slidably received in said bore in the body, a pressure fluid passage and an exhaust fluid passage communicating with the spool receiving bore in said body, a pressure fluid and exhaust groove in the spool slidably received in the spool receiving bore, a pressure fluid metering chamber in the body communicating with the pressure fluid passage, passage means connecting the chamber to a source of pressure fluid, pressure fluid responsive valve means in the chamber controlling communication between the passage means and the pressure fluid passage, an exhaust fluid bore in the body connecting sump means with the exhaust fluid passage, resilient means urging the spool in a direction to provide communication between the groove on the spool and the exhaust fluid passage in the spool receiving bore, actuator means for selectively moving the spool against the urging of the resilient means in a direction to provide communication between the pressure fluid passage in the spool receiving bore and the groove in the spool, a further pressure fluid groove in the spool slidably received in the spool receiving bore, and a further pressure fluid passage connecting the source of pressure fluid and said spool receiving bore bypassing the pressure fluid metering chamber, said resilient means normally urging said further pressure fluid groove out of communication with said further pressure fluid passage, and said further pressure fluid groove being urged into communication with said further pressure fluid passage by said actuator means, said actuator means for selectively moving the spool against the urging of the resilient means including a control handle, resilient means connecting the control handle and the flow control spool, and rigid means carried by the control handle and adapted to contact the flow control spool through the resilient means when the resilient force of the resilient spool urging means overcomes the resilient force of the resilient means interconnecting the control handle and the flow control spool.

3,099,290
DIVERTING VALVE
George N. Chatham and O O Shurtleff, Austin, Tex., assignors to Chatleff Controls, Inc., Austin, Tex., a corporation of Texas
Filed Jan. 31, 1961, Ser. No. 86,060
1 Claim. (Cl. 137—607)



A diverting valve comprising a housing containing a pair of spaced end chambers connected by a central passage of smaller diameter provided with a lateral outlet port, each end of said passage having a valve seat in the surrounding chamber, fluid pressure responsive means mounted in said chambers for movement toward and away from said seats to close and open the ends of said passage, said means separating the chambers into inner and outer sections and being provided with central openings, tubular means between said pressure responsive means and joined thereto around their central openings, said tubular means opening into said central passage, the valve being provided with by-passes permanently connecting each inner chamber section with the adjoining outer chamber section, said housing having inlet ports opening into said inner chamber sections, movable closure members in said outer chamber sections for the central openings in said pressure responsive means, a rod extending loosely through said central openings and tubular means and spacing said closure members farther apart than said pressure responsive means, at least one of said closure members being slidably mounted on the adjoining end of said rod, control means mounted at only one end of said housing and movable axially of said tubular means for moving the adjoining closure member against and retracting it from the adjacent pressure responsive means, and a spring for moving the other closure member against the adjacent pressure responsive means when said adjoining closure member is retracted, whereby said central openings are closed alternately, said other closure member always engaging said adjacent pressure responsive means while said adjoining closure member is retracted.

3,099,291
ADJUSTABLE NOZZLE
Charles H. Schlecht, Cheltenham, and Francis W. Drobil, Philadelphia, Pa., assignors to National Drying Machine Company
Filed Mar. 22, 1961, Ser. No. 97,635
3 Claims. (Cl. 138—45)

1. Means for adjusting the width of selected portions of an elongated nozzle having two, generally parallel, sides, said means including

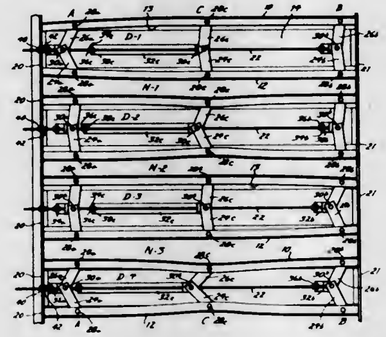
elongated, flexible, generally parallel side walls, one of said walls constituting one of the sides of the nozzle,

an actuating rod extending between said side walls,

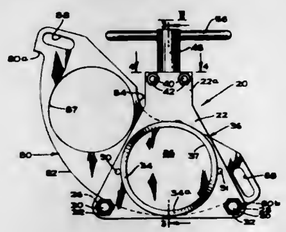
a first toggle connected to said side walls near one end thereof and secured to the adjacent portion of said rod,

a second toggle secured to said side walls near the other end thereof, and

fastening means for detachably securing said second toggle to the adjacent portion of said rod whereby loosening said fastening means and moving said rod longitudinally of said side walls operates said first toggle and the corresponding portion of said one wall transversely of the longitudinal median line of the nozzle without affecting said second toggle and the corresponding portion of said one wall and whereby tightening said fastening means and similarly moving said rod operates both toggles and moves the corresponding portions of said one wall transversely of the longitudinal median line of the nozzle.



3,099,292
LINE BLIND
George P. Ausburn, Los Alamitos, Calif., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed June 15, 1960, Ser. No. 36,340
12 Claims. (Cl. 138—94.3)

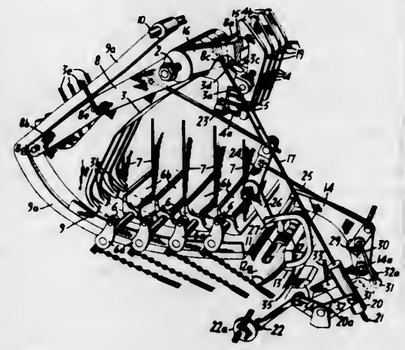


1. A line blind comprising a first pipe section having a flow passage therethrough; a second pipe section spaced from said first section and having a flow passage therethrough aligned with the flow passage in said first pipe section; a plate connected to each of said pipe sections; spacer means connected between said plates for interconnecting said pipe sections in spaced-apart relationship; sealing means on said second pipe section encircling the flow passage therethrough; a wedge member mounted for movement into the space between said pipe sections; projections extending from the plate on said first pipe section for guiding said wedge member; a flat spectacle plate positioned across said flow passage between said wedge member and the annular sealing means on said second pipe section, said spectacle plate being guided for movement in an arcuate path across said passage by said wedge, said sealing means, and said spacer means; shoulders on said spectacle plate for abutting said spacer means for limiting the arcuate movement of said spectacle plate; and means for moving said wedge member with respect to said projections to urge said spectacle plate into sealing engagement with said sealing means.

3,099,293
REINFORCED PLASTIC FROM AN OPEN CURE TECHNIQUE WITH A GRAFT POLYMER
Julian Lakritz, Rahway, and Richard G. Adams, Montclair, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Oct. 28, 1959, Ser. No. 849,145
19 Claims. (Cl. 138—141)

17. A prepreg fibrous reinforced plastic composition comprising reinforcing fibers impregnated with graft polymer prepared from a resinifiable mix comprising an inert solvent solution containing between about 30 and about 60 wt. percent of a monovinyl crosslinking agent, between about 0.5 and about 20 wt. percent of an aryl monomer containing at least two vinyl groups attached to the aryl nucleus, between about 0.5 and about 5.0 wt. percent of a free radical organic peroxide catalyst, and the balance of said mix being a normally liquid polymer of a C_4 to C_6 conjugated diolefin and heating the said mix at a temperature between about 200 and about 300° F. for between about 320 and about 15 minutes to form said graft polymer, air drying said impregnated reinforcing fibers at from room temperature to 325° F. to form a prepreg fibrous reinforced plastic composition.

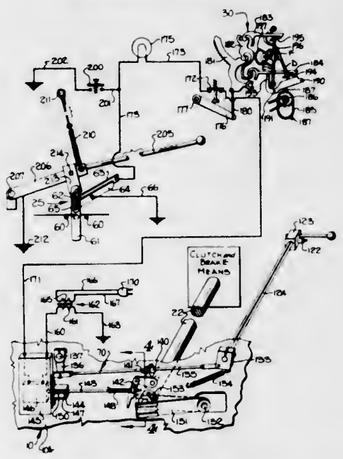
3,099,294
MECHANISM FOR SELECTING AND CHANGING WEFT-BOBBINS IN MULTICOLOR LOOMS
Hans Zollinger, Ruti, Zurich, and Rolf Honegger, Tann-Ruti, Zurich, Switzerland
Filed Sept. 9, 1960, Ser. No. 55,092
Claims priority, application Switzerland Sept. 11, 1959
4 Claims. (Cl. 139—232)



1. In a multicolor automatic weft-replenishing loom having a loom drive, a plurality of shuttles and a transferrer comprising a battery-hammer operable automatically to insert fresh weft bobbins in exhausted shuttles, mechanism for delivering fresh weft-bobbins to a transfer position for insertion by said transferrer into said exhausted shuttles comprising, in combination, a bobbin magazine for holding fresh weft bobbins stacked in separate rows, a transfer channel common to all of said bobbin rows disposed for delivering fresh bobbins from said magazine to said transfer position for insertion by said battery-hammer into respective shuttles, a plurality of means on said bobbin magazine operable individually selectively for releasing bobbins individually from a respective one of said rows and delivering them into said

channel for delivery to said transfer position for insertion into respective shuttles, a plurality of pivotally mounted bobbin-release levers actuatable individually selectively for actuating a corresponding one of said means for releasing bobbins individually from said rows thereby to selectively deliver bobbins individually to said transfer channel, means comprising a plurality of drawhooks for actuating said bobbin-release levers individually, and a bobbin slide lever actuatable by each of the bobbin-release levers individually for positively moving the individual weft-bobbins in said transfer channel to said transfer position in timed relationship with said battery-hammer.

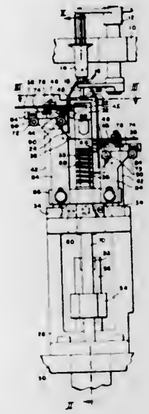
3,099,295
KNOCK-OFF FOR TERRY LOOMS
Ivar O. Moberg, Spray, N.C., assignor to Fieldcrest Mills, Inc., Spray, N.C., a corporation of Delaware
Filed July 6, 1961, Ser. No. 122,145
9 Claims. (Cl. 139—353)



1. In a loom for weaving terry cloth having weaving instrumentalities for forming successive terry cycles each including means for inserting and beating up at least two loose picks in ground and terry warps at a point spaced rearwardly of the fell of the cloth and for inserting a fast pick after said loose picks and for beating up the fast and loose picks against the fell of the cloth to form terry loops from slackened terry warps, said loom including a knock-off mechanism and a stop motion operable upon parting or undue slackening of said ground and terry warps to actuate said knock-off mechanism to stop operation of said loom; in combination therewith, means associated with said stop motion for rendering the same operable only after the insertion of the last loose pick and immediately prior to the insertion of the fast pick in any terry cycle.

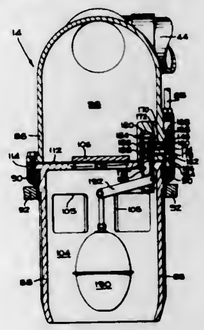
3,099,296
METHOD OF BENDING AND SETTING ELONGATED ARTICLES
Clair M. Rively, Rockaway, and Edward Gorski, Bloomfield, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original application Aug. 11, 1958, Ser. No. 754,490. Divided and this application June 17, 1959, Ser. No. 825,628
2 Claims. (Cl. 140—71.6)

1. The method of forming a permanent bend in a limited portion of an elongated electrical lead-in and filament support wire for an incandescent lamp without subjecting the wire to excessive shearing stresses, which method comprises, initially bending a portion of said lead-in wire through a relatively large radius by applying a bending force between selected points on said lead-in wire which are relatively distant from one another, further bending said lead-in wire while incrementally decreasing the distance between the points on said lead-in wire through which the bending force is applied, continuing to bend said lead-in wire while continuing to incrementally decrease



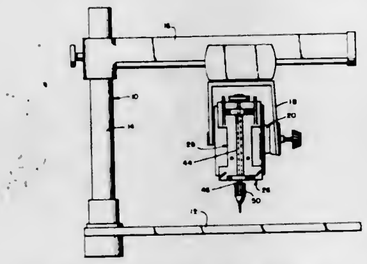
the distance between the points on said lead-in wire through which the bending force is applied until the bending force is applied between points on said lead-in wire which are separated by a distance approaching the thickness of said lead-in wire, and thereafter squeezing said lead-in wire at the bent portion to complete the bend and also to upset the metal at the bend to set the bend against any springback.

3,099,297
FLUID HANDLING APPARATUS
Houston W. Knight, La Mirada, Calif., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 69,844
8 Claims. (Cl. 141—207)



5. Apparatus for conveying fluid from a source toward a receiving vessel, comprising a movably mounted fluid conducting boom, a delivery head mounted on the boom, said boom being movable to place the delivery head in a particular position with relation to the receiving vessel, a self-closing delivery valve connected to the boom for controlling flow therethrough, a movably mounted handle for manually opening said valve, fluid pressure actuated means for releasably connecting said handle to the valve, means for supplying fluid pressure to said connecting means, and means responsive to both the liquid level within the receiving vessel and the position of said delivery head with respect to the receiving vessel for controlling said fluid pressure supplying means.

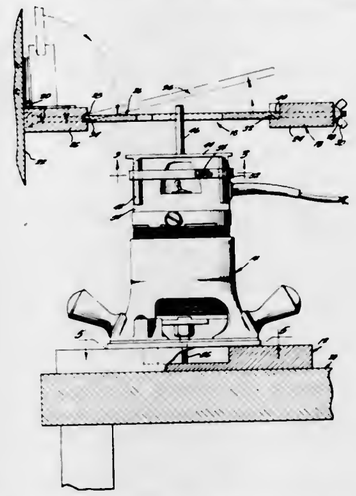
3,099,298
ROUTER ATTACHMENT FOR RADIAL SAW
Robert Bellini, 511 2nd Ave. W., Twin Falls, Idaho
Filed May 16, 1961, Ser. No. 110,396
2 Claims. (Cl. 144—1)



1. A router attachment for a radial saw of the character described, comprising an inverted L-shaped member having a short, basic, horizontally disposed leg member that is U-shaped when viewed from the top, the said leg member being divided into two parallel members each of which has an elongated opening in the outer end thereof for the reception of a wing bolt that extends downward into a second basic member that is also U-shaped when viewed from the top, the second U-shaped member taking place of the saw guard which is removed from the radial saw when said router attachment is secured to the said radial saw, and a shaft journaled in a pair of spaced bearing blocks mounted vertically in the center of the long leg of the said inverted L-shaped member, the said shaft having all but its ends encased in a housing, and a pulley mounted on the upper end of the said shaft which is provided with a tool chuck on its lower end in which is placed a routing tool, and an electric motor vertically mounted beneath the U-shaped members of and secured to, the said router attachment, the said motor being provided with a structure on each side thereof swingably supporting the said motor from and between the two downwardly extending and parallel members of an inverted U-shaped yoke that is a part of the said radial saw frame and manual means of locking the said electric motor and said router attachment to which it is secured at any desired angle to said U-shaped yoke when viewed from the end thereof, and a pulley mounted on the upper end shaft of the said electric motor which rotates the first mentioned pulley by means of a belt adapted to the first mentioned pulley and the pulley on the upper end shaft of the said electric motor.

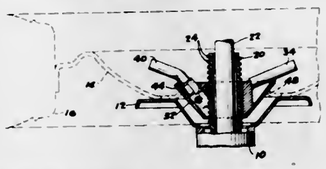
3,099,299
GUIDE ATTACHMENT FOR A ROUTER
Kenneth R. Gilfry, 7431 Artesia St., Buena Park, Calif.
Filed Feb. 28, 1962, Ser. No. 176,296
2 Claims. (Cl. 144—144)

1. The combination with a router having an upright motor housing adapted for horizontal sliding movement over a horizontally disposed work piece, of a pattern assembly comprising a horizontally disposed frame arranged in superimposed spaced relation relative to said router housing, means securing said frame in position relative to said housing, a horizontally disposed pattern element removably supported in said frame, said element having a cutout portion corresponding to the pattern to be routed in said work piece, a base plate, an upright finger rising from said base plate, a plurality of legs depending from said base plate and being spaced about the perimeter thereof, said legs embracingly receiving therebetween the portion of said housing adjacent the upper end, and a clamp ring surrounding said legs and releasably holding



said legs to said housing, said finger extending into said element cutout portion for sliding engagement with the walls of said cutout portion responsive to sliding movement of said housing over said work piece when said frame and said pattern element are in the superimposed relation position with respect to said housing and said housing is in position for sliding movement over said work piece.

3,099,300
WHEEL LOCK FOR TIRE CHANGING APPARATUS
Hershel T. Breazeale, Dearborn, Fred May, Allen Park, and George May, Dearborn, Mich., assignors, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed July 21, 1960, Ser. No. 44,340
6 Claims. (Cl. 144—288)



1. A wheel clamping device for a tire changing and repair apparatus which comprises a vertical supporting column, a horizontal supporting flange on said column at a proper height for wheel location, said flange having a dished central portion extending downwardly, a threaded post above said column centrally of said flange, a hollow, inverted, truncated, conical shell, slidably concentric with said post to engage a wheel supported on said flange, and radially movable means on said conical shell slidable on the inner wall of said conical shell so as to be inclined to said threaded post, said radially movable means being adapted to threadably engage or disengage said thread on said post whereby said shell may be moved rapidly on to said post into contact with said wheel, said radially movable means may be wedged into threadable

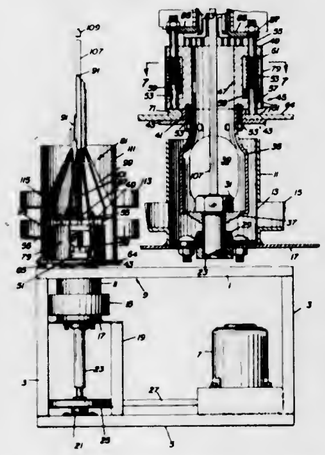
engagement with said threaded post and a slight turn will lock the wheel on the supporting flange.

3,099,301
METHOD OF PEG BUNDLING AND STRAIGHTENING LUMBER
Henry M. Bennett, P.O. Box 107, De Ridder, La.
Filed Aug. 29, 1958, Ser. No. 758,046
1 Claim. (Cl. 144—321)



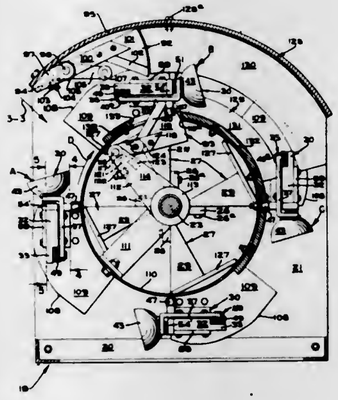
A method of packaging low grade boards for shipment or storage, some of the boards being transversely and/or longitudinally bowed and/or warped, comprising the following steps; positioning said boards in a stack on top of each other with said bowed or warped boards stacked in such a manner that vertically compressing said stack will straighten said bowed or warped boards, vertically aligning said boards, applying pressure to urge the top and bottom boards of said stack toward each other thereby compressing and straightening the warped boards in said stack, forming a plurality of longitudinally spaced bores through the boards of said stack extending from the upper surface to the lower surface thereof, inserting a dowel in each of at least two bores in frictional engagement with each of said boards and extending through each of said boards to retain the boards in substantially flat and straightened condition in a package, and storing said stack in a dry area for sufficient time to effect at least partial drying of said boards before removing individual ones of said boards from said stack.

3,099,302
FRUIT SECTIONIZING APPARATUS
Arthur B. Fain, R.F.D. 1, Sevierville, Tenn.
Filed Jan. 9, 1962, Ser. No. 165,109
8 Claims. (Cl. 146—3)



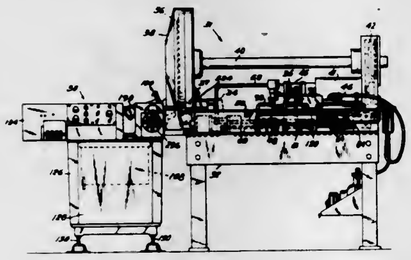
1. A fruit sectionizing apparatus including, in combination, a blade assembly comprising a plurality of individual coring and separating blades and a plurality of push rods, each blade being mounted on and movable with a push rod and each of said push rods being slidably mounted for reciprocation in said blade assembly, means for imparting rotation to said blade assembly, the individual blades of said blade assembly adapted to receive a series of fruit for rotation therewith, the fruit being impaled on the ends of the blades and forced therealong by the impalement of additional fruit on the blade ends, and means in the path of movement of said push rods as they rotate with the blade assembly and engageable by the push rods to cause reciprocation of said push rods and the blades.

3,099,303
FRUIT HALVING APPARATUS
Gerald R. Anderson, Campbell, and John Boyce, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Original application Feb. 3, 1958, Ser. No. 712,841, now Patent No. 3,040,793, dated June 26, 1962. Divided and this application Sept. 29, 1961, Ser. No. 141,728
4 Claims. (Cl. 146—72)



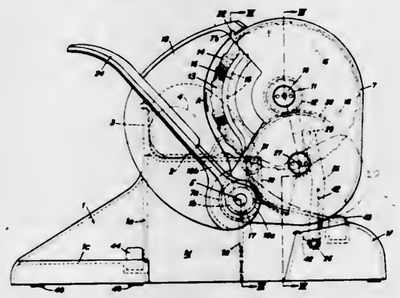
1. In a fruit halving apparatus, an upper knife having a downwardly directed cutting edge, a holder for said upper knife, a first pivotal means for pivotally mounting said upper knife holder, a spring engaging said holder to urge said upper knife downwardly, a lower knife having an upwardly directed cutting edge coplanar with the cutting edge of said upper knife, a holder for said lower knife, a second pivotal means for pivotally mounting said lower knife holder, a spring engaging said lower knife holder to urge said lower knife upwardly, a fruit feeder mechanism, means for advancing said feeder mechanism toward said lower and upper knives, a cam carried by said feeder mechanism having an upper and lower camming surface, a first cam follower mounted on said first pivotal means and pivotable with said upper knife holder, said first cam follower being engageable with said upper camming surface of said cam to raise said upper knife out of the path of the trailing portion of said feeder mechanism after the cutting of the fruit, and a second cam follower mounted on said second pivotal means and pivotable with said lower knife holder, said second cam follower being engaged with said lower camming surface of said cam to lower said lower knife out of the path of the trailing portion of said feeder mechanism after the cutting of the fruit.

3,099,304
APPARATUS FOR STACKING AND WEIGHING SLICED FOOD PRODUCTS
Claude E. Monsees and Henry P. Reinhart, Durham, N.C., assignors, by mesne assignments, to Unexcelled Chemical Corporation, New York, N.Y., a corporation of New York
Filed Mar. 6, 1961, Ser. No. 93,634
16 Claims. (Cl. 146—94)



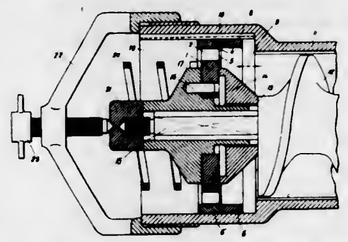
1. For use in combination with a slicing machine having a slicing blade, a reciprocal pusher for feeding a product to be sliced into said blade, and control means for determining the rate of advance of said pusher towards said blade and consequently the slice thickness, apparatus for stacking a preselected number of slices of said product as they are discharged by said slicing machine and then transferring the stacks of sliced product that are of a prescribed weight and rejecting those stacks that are other than such prescribed weight, said apparatus comprising in combination: a stacking means to be located adjacent the discharge end of said slicing machine for receiving the slices discharged therefrom; slice counting means for determining the preselected number of slices discharged from the slicing machine; stacker actuation means coupled with both said stacking means and said slice counting means for actuating said stacking means to transfer the stack of preselected number of slices of said product and ready said stacking means for reception of another stack of slices; conveyor means in stack receiving position adjacent said stacking means and adapted to receive thereon the stacks of sliced product transferred by said stacking means; weighing means operatively connected with said conveying means such that it is adapted to register the weight of the individual stacks conveyed thereon; feedback means operatively connected with said weighing means and adapted to be coupled with said control means of said slicing machine for feeding back signals to such control means corresponding to the weight of the individual stacks over and below said prescribed weight for the preselected number of slices to thereby correct the adjustment of said control means of said slicing machine to respectively decrease and increase the rate of advance of said pusher and consequently decrease and increase respectively the slice thickness; transfer means adjacent said conveyor means for carrying away the stacks of sliced product within said prescribed weight, said transfer means including a reject conveyor adjacent said conveyor means for receiving thereon the stacks of sliced product, and a constantly driven conveyor adjacent the trailing end of said conveyor for receiving and carrying away both correct and overweight stacks of sliced product; and reject means operatively connected with said weighing means for rejecting stacks of sliced product that are underweight.

3,099,305
FOOD SLICER
Karl Zysset, Hauptstrasse 31, Lyss, Switzerland
Filed Sept. 25, 1959, Ser. No. 842,510
Claims priority, application Switzerland Oct. 1, 1958
3 Claims. (Cl. 146—103)



1. In a food slicer, in combination, a stationary supporting frame having a platform having a cutting region for an object to be sliced; a hollow shaft rotatably mounted on said frame; a swing arm fixedly secured to said hollow shaft; a cutting disc turnably mounted on said swing arm; a pin passing through said hollow shaft in coaxial relationship and being turnable and axially shiftable in the same, said pin having one end portion projecting from said hollow shaft in the region of said swing arm; a gauge plate fixedly secured to said projecting portion of said pin; manually operated means mounted on said frame and located at the other end portion of said pin for axially shifting said pin in said hollow shaft for adjusting the distance between said gauge plate and said cutting disc; and connecting means for connecting said gauge plate with said swing arm for turning movement about said axis and for relative movement in axial direction so that the axial spacing between asid disc and said guage plate can be adjusted at a point spaced from said cutting region, said swing arm, and said cutting disk.

3,099,306
MEAT GRINDER HAVING FLOATING CUTTER MEMBER
Bedřich Mládek, Prague, Czechoslovakia, assignor to Zavody potravinarskych a chladicich stroju narodni podnik, Pardubice, Czechoslovakia
Filed Mar. 23, 1961, Ser. No. 97,795
10 Claims. (Cl. 146—182)



1. In a grinder for meat and like material, the combination of
A. a housing formed with an elongated cavity having a longitudinal axis,
B. conveying means for feeding material to be ground through said cavity in the axial direction toward one end portion of the cavity,
C. a non-rotatable cutter assembly movable axially in said end portion of the housing and including a pair

of rigid cylindrical rings and an axially thin, annular cutter mounted between said rings and having an inner edge portion projecting radially inward beyond said rings, said axially thin cutter having spaced apart recesses in said inner edge portion defining teeth therebetween, and

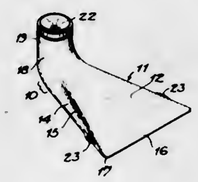
D. a rotary knife assembly mounted concentrically within one of said cylindrical rings at the side of said cutter facing in the direction of movement of material to be ground by said conveying means so that the pressure of the material moved by the conveying means urges said cutter against said knife assembly, said knife assembly including a disc-like body extending radially outward beyond the inner ends of said teeth of the cutter and blades extending from the periphery of said body radially outward beyond said recesses of the cutter and into close proximity to said one ring so as to be guided by the latter.

3,099,307
MEAT SCORING AND TRIMMING KNIFE
Hillen J. Morgan, La Plata, Md.
Filed Mar. 2, 1961, Ser. No. 92,848
2 Claims. (Cl. 146—203)



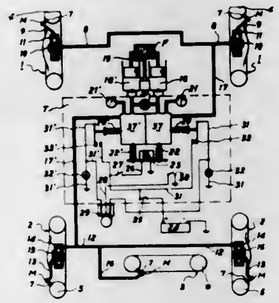
1. A meat trimming and scoring knife comprising, a plurality of spaced, parallel scoring blades joined together at one end and terminating at their opposite ends in blunt guide surfaces, the blades each having a corresponding edge sharpened from the blunt end a determined distance toward the joined end, a handle connected to the joined ends of the scoring blades, and a trimming blade traversing the spaces between the scoring blades and located intermediate the lengths of the sharpened edges of the scoring blades a determined distance from the scoring blade blunt ends, the trimming blade lying parallel to the scoring blade blunt ends and having a sharpened edge intersecting the sharpened edges of the scoring blades.

3,099,308
WATER BAGS
Helmuth R. Rusch, Rte. 2, Reedsville, Wis.
Filed Aug. 17, 1961, Ser. No. 132,120
4 Claims. (Cl. 150—2.1)



1. A liquid container adapted for application to a skin surface for heating or cooling said surface, comprising a flexible bag of liquid-impervious material having a hollow wedge-shaped body portion tapering toward one end to a thin closed flexible edge and merging at its other end into an upwardly projecting hollow elbow portion with a closable filling neck at its upper end, said body portion including opposite side walls diverging with respect to each other at a substantial included angle from said elbow portion toward said closed edge.

3,099,309
APPARATUS AND DEVICES FOR AUTOMATIC CONTROL AND SUPERVISION OF THE PRESSURE OF THE TIRES OF VEHICLE WHEELS
Luis Congost Horta, Iradier 6 bis, and Pedro López García, Llasticbs 13, both of Barcelona, Spain
Filed June 19, 1961, Ser. No. 118,018
Claims priority, application Spain June 20, 1960
7 Claims. (Cl. 152—416)



1. A system for automatic control, regulation and supervision of the pressure within pneumatic tires on vehicle wheels, the tires having conventional valves mounted in inflation stems carried by the tires in a conventional location, the system comprising in combination;

(*a*) a single pipe for each tire in which the pressure is to be controlled, regulated and supervised, the pipe extending adjacent the tire valve, and being capable of containing fluid under pressure,

(*b*) a compressed air supply means communicating with the single pipes and providing compressed air therein permanently, at least while the vehicle is in operation,

(*c*) an actuator for each tire valve on each tire,

(*d*) means for mounting the actuator on the conventional inflation stem to be disposed between the conventional tire valve and the associated single pipe,

(*e*) a differential member within the actuator adapted to be operated by pressure in the single pipe to open the conventional valve and to provide communication between the pipe and the tire,

(*f*) a spring within each actuator acting directly upon the differential member therein so as to render the same inoperative when the pressure in the associated single pipe is below a desired preset limit,

(*g*) controllable discharge means connected to the single pipe and adapted to provide a continuous discharge of the excess compressed air supplied by the compressed air supply when a critical pressure selected by a vehicle operator is reached,

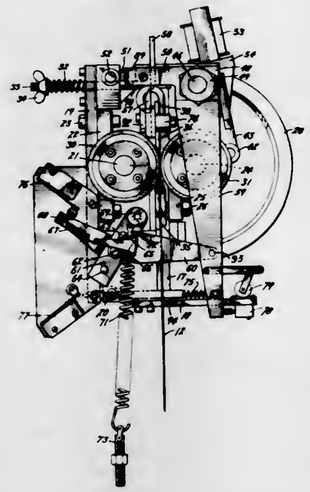
(*h*) indicating means operated by the controllable discharge means,

(*i*) electrically operated valve means for rapid discharge of the single pipes,

(*j*) supervisory means connected to the single pipes and adapted to electrically operate the rapid discharge valve means only when the pressure in the single pipes drops below a predetermined value and not when the pressure rises to such value,

(*k*) electrical connecting means adapted to operate the rapid discharge valve means on switching off the vehicle ignition circuit.

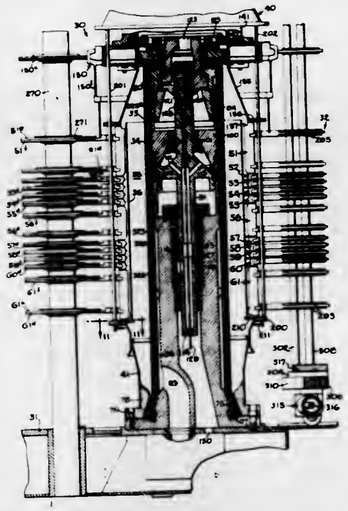
3,099,310
SPRING FORMING DEVICE
John E. Heckethorn and John D. Walters, Dyersburg, Tenn., assignors to Heckethorn Manufacturing & Supply Co., Dyersburg, Tenn., a corporation of Colorado
Filed Sept. 14, 1961, Ser. No. 138,098
5 Claims. (Cl. 153—66)



1. Means for forming elongated cylindrical, helically-coiled, wire springs comprising: a fixed wire gripping roller; a movable wire gripping roller; spring means urging said movable roller towards said fixed roller to grip a spring wire therebetween; a curling tool having a helical conformation conforming to the diameter and pitch of the desired springs; means for driving said rollers to continuously force said wire into said curling tool to form the wire into the form of a rotating, elongated, cylindrical, helical spring as it exits from said curling tool; a movable bearing support for said movable roller; a fixed bearing support for said fixed roller; a cam lever pivotally mounted on said fixed bearing support and positioned to swing against an abutment on said movable support to urge said movable support away from said stationary support at the termination of a formed spring; a fixed shear blade mounted on said fixed bearing support adjacent the exit of the wire from the curling tool; and a movable shear blade mounted on said cam lever in shearing relation to said fixed shear blade so that when said cam lever moves into roller-separating relation with said abutment said wire will be sheared from the formed spring.

3,099,311
PROCEDURE AND APPARATUS FOR MAKING DRUMS AND THE LIKE
Oscar J. van Leer, Barrington, and Christian Ragettli, Chicago, Ill., assignors to Grotnes Machine Works, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 2, 1959, Ser. No. 850,247
27 Claims. (Cl. 153—73)

1. In a drum making machine for forming annular beads in a cylindrical blank, the combination comprising a frame, a plurality of segmented annular dies in said frame, a cylindrical rubber bag centered with respect to said dies, a central post extending the length of the rubber bag for supporting the latter, means for sealing the bag to the post top and bottom, means for applying hydraulic pressure within said bag so that the blank is expanded outwardly to take the form of said dies, said dies being floatingly mounted on said frame so that they are free to axially approach one another for foreshortening of the



blank as the blank is deformed outwardly to form said beads.

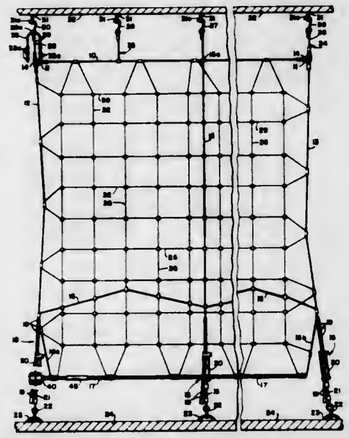
3,099,312
GASEOUS FUEL BURNERS
Stewart Albert Radley, Willesden, London, and Henry Charles Leonard Wolfenden, Bushey, England, assignors to Ascot Gas Water Heaters Limited, London, England
Filed July 6, 1959, Ser. No. 825,058
Claims priority, application Great Britain July 7, 1958
3 Claims. (Cl. 158—106)



1. A gaseous fuel burner having a mixing head comprising in combination an entrance portion having at least two parallel walls, an entrance open to the ambient air and a cross sectional area taken transversely with respect to the length of the burner mixing head which decreases from a maximum at said entrance to a minimum within a junction between said entrance portion and an intermediate portion having a substantially straight longitudinal axis inclined upwardly with respect to the parallel walls of said entrance portion, said intermediate portion comprising spaced walls one of which is bulged outwardly, an exit portion joined to said intermediate portion and having parallel walls lying in planes parallel to but spaced from the planes in which the parallel walls of the entrance portion lie, the cross sectional area of the exit portion taken transversely of the length of the mixing head increasing from a minimum at the junction between the exit and intermediate portions to a maximum at a point adjacent the exit from the exit portion, the width of said intermediate portion in a direction perpendicular to said parallel walls being at least as great as that of said exit portion, while its average cross-sectional area taken transversely of the length of the mixing head

is less than that of either said entrance or exit portion, slots in said parallel walls of said entrance portion, a gas supply pipe positioned in said slots, and, in said gas supply pipe an orifice located within the confines of said entrance.

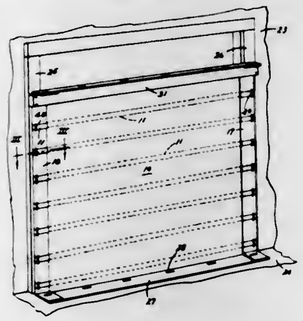
3,099,313
SHORING SYSTEM
Kenneth L. Peck and John M. Di Martino, Sayville, N.Y., assignors to Peck & Hale, Inc., Sayville, Long Island, N.Y., a corporation of New York
Filed Dec. 12, 1961, Ser. No. 158,800
10 Claims. (Cl. 160—243)



1. A net for shoring cargo in a cargo space provided with sets of spaced upper and lower attaching members, which comprises a top frame wire, a roll-up member at the lower end of the net, side frame wires connected to the top frame wire and extending downwardly therefrom and connected to the roll-up member, horizontal mesh wires extending between and connected to the side frame wires, vertical mesh wires extending between and connected to the top frame wire and the roll-up member, upper means connected to the upper ends of the side frame wires for securing them to the upper attaching members, lower means connected to the side frame wires above their lower ends for securing them to the lower attaching members, means at one end of the roll-up member for rotating it on its axis to roll up the net, and means attached to the upper securing means connected to the side frame wire at such end of the roll-up member for engaging the rotating means and preventing its rotation and the unrolling of the rolled up net.

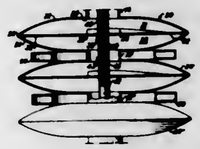
3,099,314
CLOSURE FOR CAR DOORS AND THE LIKE
James E. Talbot, Wynnewood, and David H. Blatt, Melrose Park, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed June 20, 1961, Ser. No. 118,438
1 Claim. (Cl. 160—368)

In a freight vehicle having vertically disposed frame members defining a door opening, a temporary retaining panel abutting said frame members on the inside of the vehicle, said panel being wider than the distance between said frame members, said panel comprising a corrugated inner core having vertically extending flutes, first and second paper liners bonded respectively to opposite sides of said core, said first liner facing the outside of the door opening and said second liner facing the inside of the vehicle, a plurality of horizontally extending flexible non-metallic straps secured to the outer face of said first liner, indicia on the outer face of said second liner aligned with said straps and indicating the location of the straps, said straps being coextensive with the width of said panel, said panel being scored vertically to define fold lines aligned with the frame members, staples extending through said panel in juxtaposition with said fold lines and into the frame members, each of said



staples passing through said indicia and spanning one of said straps, said staples being located toward the center of the door opening from the fold lines, said panel being folded inwardly along said fold lines so as to overlie said staples, and other staples extending through the folded-over portions of said panel and into said frame members, each of said other staples spanning one of said straps.

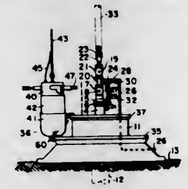
3,099,315
HEAT EXCHANGER
Joseph H. Loehr, 5810 Ellen Ave., Cleveland 2, Ohio
Filed May 27, 1959, Ser. No. 816,252
1 Claim. (Cl. 165—144)



In a heat exchange apparatus, the combination including, a plurality of generally discus-shaped hollow containers arranged in vertically superimposed concentric alignment, each of said containers being provided with concentric openings in their upper and lower walls, conduit means extending between adjacent containers in fluid-tight connection with said openings to establish communication between the interiors of said containers, hollow rod means extending concentrically through said openings and the interiors of said plurality of containers, said rod means being of substantially less diameter than said openings and including a pair of concentric tubes, one of said tubes being slidable with respect to the other tube, the outermost of said pair of tubes having openings in communication with the interior of each container, the inner tube of said pair of tubes in one position having openings in registry with the openings in said one tube, and in another position being out of registry to close the openings, a fixed horizontal baffle plate in each of said containers, said plates extending radially between said hollow rod means and the peripheries of each container and being in fluid-tight engagement with and supported by said hollow rod means and said peripheries to divide each container into upper and lower compartments, and a plurality of curvilinear vanes disposed on the upper side of each baffle plate in close proximity with

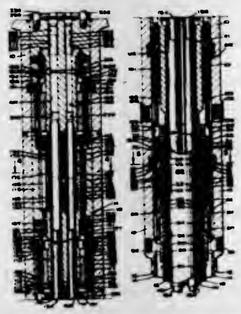
and extending radially outwardly from said hollow rod means and the center of said baffle plate, whereby fluid flowing from one container through said conduit means and about said hollow rod means into another container will strike said vanes on said baffle plates at points near said hollow rod means and be forced outwardly in a spiral fashion toward the periphery of the container, said baffle plates having openings provided therein adjacent the outer extremities of said vanes.

3,099,316
UNDERWATER WELLHEAD APPARATUS AND METHOD
Glenn D. Johnson, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,558
39 Claims. (Cl. 166—46)



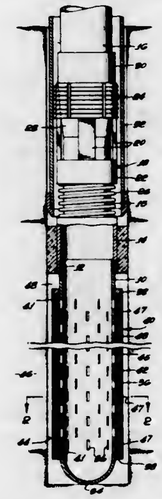
1. An underwater apparatus having components adapted to be remotely manipulated at said underwater apparatus from an operational base positioned above the surface of the water, said apparatus comprising a string of pipe extending into the formations underlying said water, the top of said pipe being above the formation and below the surface of the water, and base means mounted adjacent said pipe, said base means adapted to receive thereon a remotely movable and actuatable manipulator device for manipulating components of said underwater apparatus.

3,099,317
UNDERWATER WELL COMPLETION ASSEMBLY
William L. Todd, Houston, Tex., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Sept. 24, 1959, Ser. No. 842,127
8 Claims. (Cl. 166—66.5)



1. In an underwater well installation, a hanger assembly comprising a substantially cylindrical body member having a longitudinal bore therethrough, said bore having a lower end portion, and said body member having means adjacent to said lower end portion of the bore for providing connection to a well string; a sleeve mounted on said body member in circumscribing relation thereto; a plurality of locking lugs mounted in said sleeve for radial movement with respect thereto between a locking position projected radially outward from said sleeve and an unlocked position withdrawn into said sleeve; cam means mounted for movement in opposite first and second directions axially with respect to said body member, said cam means having a first cam surface that projects said lugs into their locking positions when said cam means is moved in said first direction, said cam means having a second cam surface that retracts said lugs into their unlocked positions when said cam means is moved in said second direction, said first and second cam surfaces being unitarily movable; spring means for moving said cam means in said first direction; and fluid pressure operated means for moving said cam means in said second direction.

3,099,318
WELL SCREENING DEVICE
Montgomery K. Miller, Pasadena, Calif. (2404 W. 7th St., Los Angeles 57, Calif.), and William L. Kumler, 523 W. 6th Ave., Los Angeles 14, Calif.
Filed Jan. 23, 1961, Ser. No. 84,387
18 Claims. (Cl. 166—227)

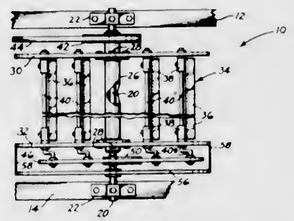


1. A device for insertion in a well bore, which comprises a tube, an expansible screening element mounted on and surrounding said tube, said screening element being formed of a plurality of foraminous components having fluid screening characteristics, one of said components having substantial resiliency, and another of said components having greater fluid screening properties than said first component, and a constricting means maintaining said screening element in compression, said constricting means being removable while said element is in said well bore, said element being expansible radially a relatively substantial amount on removal of said constricting means, and means securely maintaining said screening element on said tube after said constricting mean is removed.

3,099,319
FEATHERED PADDLE MECHANISM WITH ECCENTRIC
Clinton D. Town, 5305 SE. Bush St., Portland, Oreg.
Filed July 5, 1961, Ser. No. 124,294
3 Claims. (Cl. 170—151)

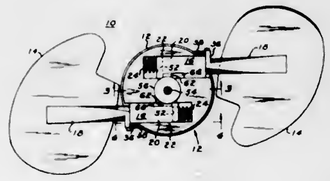
1. In boat propulsion mechanism, an elongated dead axle and means mounting the ends of the axle, sleeve means journaled on said axle, plural paddles circum-

ferentially spaced about said axle and sleeve means, means connecting the paddles and sleeve means with the paddles movable in circular sweeps about the axle, an eccentric bearing member and means mounting it in fixed position on said axle adjacent an end thereof, a regulator



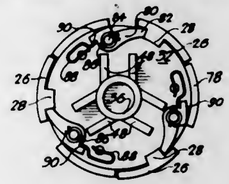
member journaled on said bearing member, and means connecting each paddle and said regulator member with the regulator member and paddles movable together and the regulator member operable to feather the paddles on movement of the paddles.

3,099,320
VARIABLE PITCH BOAT PROPELLER
Herbert H. Simshauser, Box 342, R.D. 2, Ravenna, Ohio
Filed Aug. 1, 1960, Ser. No. 46,655
7 Claims. (Cl. 170—160.13)



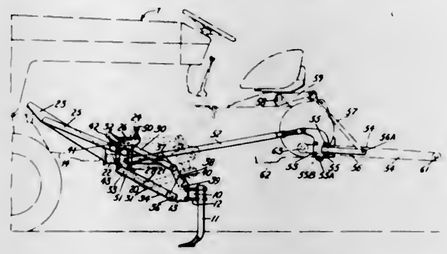
1. A variable pitch propeller comprising, a plurality of propeller blades, a hub, individual mounting means adjustably positionable in said hub for adjustably retaining each of said blades therein, a blade shaft extending longitudinally of each blade and rotatably journalled in said mounting means, actuating means on said blade shaft, means on said hub cooperating with said actuating means for rotating said blade shaft in response to movement of said mounting means, indexing means mounted in said hub in operative driving relationship with said mounting means, whereby upon actuation of said indexing means and the resulting movement of said mounting means to an extreme position in one direction said blades assume a reverse pitch and upon actuation of said indexing means to an extreme position in the other direction said blades assume a minimum forward pitch by the rotation of said blade shafts caused by the cooperation of said actuating means thereon with the said means on said hub for rotating said blade shaft in response to movement of said mounting means, and biasing means between said mounting means and said hub acting to force said mounting means and said blades towards a position corresponding to said minimum forward pitch of said blades, said mounting means and said blade shafts, in the position corresponding to forward blade pitch, being adjustably movable against the action of said biasing means by the thrust delivered by said propeller to automatically and progressively vary the forward pitch of said blades from the minimum pitch to the maximum pitch as said thrust is increased.

3,099,321
AUTOMATIC VARIABLE PITCH PROPELLER
Hoyt W. Watts, 3034 Shallowford Road, Chamblee, Ga.
Filed Aug. 28, 1961, Ser. No. 134,263
8 Claims. (Cl. 170—160.16)



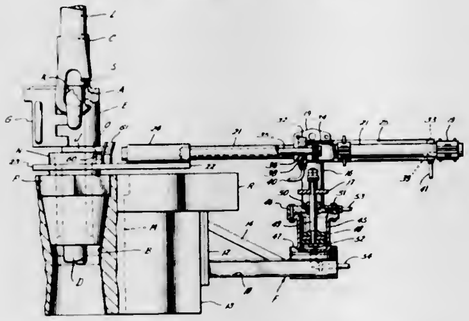
1. In an automatically adjustable variable pitch propeller, an outer housing comprising an outer hub having a plurality of propeller blades movably mounted thereon and being movable for a limited amount to adjust from a low pitch to a high pitch position, an inner member within said outer housing mounted for movement relative thereto, a power shaft connected to said inner member and adapted to provide power thereto, means on said inner member engageable with said outer housing in one position thereof to engage said housing and drive same in a low pitch position to rotate said outer housing with said blades thereon in low pitch position, pitch adjustment means for said blades operated by said inner member and said outer hub rotating relative to one another thereby adjusting said blades from high pitch to low pitch position and vice versa, and means interposed between said pitch adjustment means and said inner member normally biasing same, whereby said propeller in initial position with power on said shaft and with the initial momentum of the weight to be overcome is in a low pitch position to offer more surface engagement with the water; and whereupon, upon increased rotation of said blades and increase in revolutions said blades are automatically moved from a low pitch to a high pitch position.

3,099,322
FOLD-UP MID-MOUNTING FOR AGRICULTURAL IMPLEMENTS
Alan Foulkes Williams, Strathmore, Victoria, Australia, assignor to Massey-Ferguson (Australia) Limited, Sunshine, Victoria, Australia
Filed Feb. 1, 1961, Ser. No. 86,350
2 Claims. (Cl. 172—307)



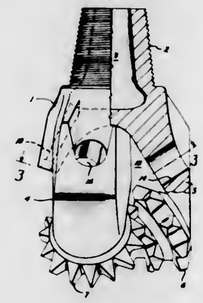
1. A mid-mounting arrangement for supporting an agricultural implement beneath the body of a tractor comprising, in combination, a frame anchored to said tractor body, an arm pivoted about a horizontal axis on said frame and extending downwardly, a carrier rigidly holding said implement, said carrier being pivoted about a horizontal axis at the lower end of said arm, a first link pivoted on said frame and generally paralleling said arm, a second pivoted link interconnecting said first link and said carrier, a stop surface on said carrier for abutting said second link when a parallelogram linkage is formed with said arm and said first link being one pair of parallel links and said frame and said carrier with said second link being the other pair of parallel links, means for urging said link against said stop surface, an actuator for swinging said arm about its frame axis so as to raise and lower said implement through a ground working range without changing its angular disposition with respect to the ground, and a stop for arresting upward movement of said first link at the upper end of said range so that further upward movement of said arm swings said carrier about said second link and disposes the implement in transport position.

3,099,323
TRANSFER PLATFORM FOR DRILL PIPE ELEVATORS
Benjamin F. Kelley, % Ben F. Kelley Co., Inc., 18 S. Madison, Tulsa, Okla.
Filed Aug. 2, 1961, Ser. No. 128,712
9 Claims. (Cl. 175—85)



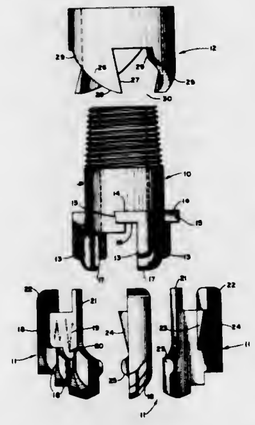
1. A transfer platform for drill pipe elevators, comprising, a base member, a horizontally disposed guide frame above the base member, support means including vertically reciprocable members connecting the guide frame to the base member operable to raise and lower the guide frame, a horizontally disposed table member slidably mounted on the guide frame for movement longitudinally thereof for receiving a pipe elevator, and means for reciprocating said table member.

3,099,324
CIRCULATION PORTS FOR DRILL BIT
Clement M. Kucera and Daniel L. Del'Homme, Houston, Tex., assignors to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed June 2, 1959, Ser. No. 817,570
2 Claims. (Cl. 175—339)



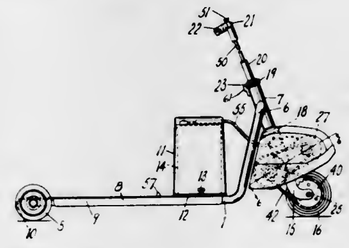
2. A drill bit having a head, said head having a plurality of downwardly extending bearing extensions, a roller cutter mounted on each of the said bearing extensions, at least one of the said bearing extensions having a passageway therethrough adjacent the upper outer portion of the roller cutter mounted thereon, the axis of the said passageway being directed to the forward side of the longitudinal axis of the drill bit with respect to the bit rotation.

3,099,325
DRILL BIT
James A. Purser, Sr., 2213 N. 15th St., Grand Junction, Colo.
Filed Oct. 30, 1961, Ser. No. 148,445
6 Claims. (Cl. 175—412)



1. A drill bit comprising a central body member having means for connecting it to a drill rod and having at least one shoulder projecting radially outward from an adjacent portion of said body member, at least one blade adapted to be demountably received by said body member and having on one of its sides a projection, said last mentioned projection extending approximately transverse to the rest of said blade, said shoulder and said projection each having an inclined face juxtaposed and coplanar with each other, and a sleeve axially slidable on said body member and having locking means including an inclined face adapted to cooperate with said faces in abutting relation for securing said blade to said body.

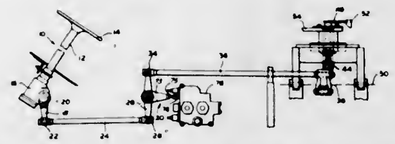
3,099,326
POWERED VEHICLE
Raymond A. Weigel and David R. Ferris, Cadillac, Mich., assignors to Kysor Heater Company, Cadillac, Mich.
Filed July 11, 1961, Ser. No. 123,170
10 Claims. (Cl. 180—26)



1. A motor vehicle comprising a platform adapted to receive an operator in standing position and provided with rear wheels and having upwardly projecting arms at its

front end provided with a rearwardly inclined bearing, a steering and driving wheel yoke rotatably mounted in said bearing, a tubular steering shaft removably connected to said yoke and projecting upwardly from said bearing and provided with a handle at its upper end, a driving and steering wheel mounted on said yoke, a motor mounted on said yoke, speed reducing driving connections for said motor to said steering and driving wheel mounted on said yoke, a battery mounted on said platform, electric connections for said battery to said motor including an automatically opening switch disposed between and supportedly mounted on the arms of said yoke in downwardly spaced relation to their upper ends, a reciprocatingly mounted switch closing rod disposed longitudinally within said steering shaft and provided with a fingerpiece at its upper end disposed adjacent said handle, the lower end of said rod being in alignment with the switch closing member of said switch, a spring supporting bracket mounted on said yoke and through which said rod projects, a rod retracting spring mounted on said bracket, and a housing for said motor, said switch and said rod retracting spring mounted on said yoke.

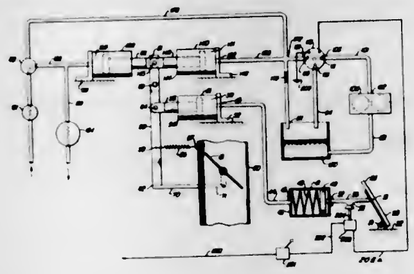
3,099,327
TWO SPEED POWER STEERING
Paul F. McAdams, St. Joseph, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Jan. 24, 1957, Ser. No. 636,017
3 Claims. (Cl. 180—79.2)



1. In a vehicle power steering apparatus, a cylindrical pin member adapted to be non-movably mounted on a vehicle, an annular resilient member positioned around the said pin member, an annular solid member surrounding the said resilient member, a lever member pivotally mounted on the said annular solid member, an actuator operable by movement of the said annular solid member to a non-coaxial position with respect to the said cylindrical pin, and stop means associated with the said annular resilient member to limit the deformation thereof to a predetermined amount.

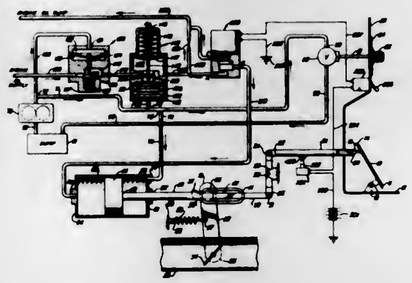
3,099,328
HYDRAULIC SPEED CONTROL DEVICE
Richard E. Von Berg, Anaheim, and Howard Laurent, Corona del Mar, Calif., assignors to Rheem Manufacturing Company, New York, N.Y., a corporation of California
Filed Aug. 25, 1960, Ser. No. 51,824
5 Claims. (Cl. 180—82.1)

1. A hydraulic speed control device for an internal combustion engine which comprises: a hydraulic pump controlled by the speed of an automotive vehicle; a solenoid valve hydraulically connected to said pump so as to block hydraulic pressure when the device is inoperative, and to pass hydraulic pressure when the device is operative; a first hydraulic pressure line connected to said solenoid valve; a first actuator connected to said first hydraulic pressure line so as to be operative when hydraulic pressure passes through said solenoid valve; a throttle having ends, pivotally mounted on a base intermediate the ends of said throttle and having said first actuator pivotally connected to said throttle adjacent one end of said throttle so as to pivotally move said throttle upon actuation of said first actuator; a link mounted on said throttle adjacent the other end of said throttle; a carburetor flow valve operatively connected to said link; a second hydraulic pressure line operatively connected to said first hydraulic pressure line intermediate said solenoid valve and said first actuator; a pressure-operated shut-off valve connected to said second hydraulic pressure line to prevent operation of the device until a predetermined vehicular speed is reached; a third hydraulic pressure line having ends, having one end connected to



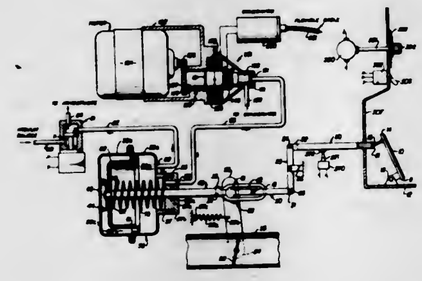
a fluid source and having said shut-off valve connected intermediate said ends, said shut-off valve being disposed so as to open when hydraulic pressure in the second hydraulic pressure line reaches a predetermined pressure controlled by vehicular speed; and a second actuator connected to the other end of said third hydraulic pressure line and pivotally connected to said throttle in opposed relationship to said first actuator so as to be actuated by hydraulic pressure passing through said shut-off valve, and so as to resist pressure exerted by said first actuator.

3,099,329
RECIPROCATING HYDRAULIC SPEED CONTROL DEVICE
Richard E. Von Berg, Anaheim, Howard Laurent, Corona del Mar, and Arthur A. Pfeifer, Whittier, Calif., assignors to Rheem Manufacturing Company, New York, N.Y., a corporation of California
Filed Jan. 19, 1961, Ser. No. 83,827
18 Claims. (Cl. 180—82.1)



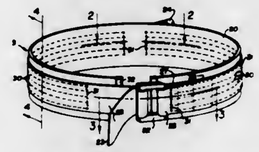
1. A device for adjustable control of the speed of operation of an internal combustion engine which comprises: a first fluid sump; a fixed-volume hydraulic pump controlled by the vehicular speed of an automotive vehicle and operatively connected to said first sump; a hydraulic cylinder having a first and a second end; a first hydraulic fluid line adapted to deliver fluid from said pump to the first end of said cylinder; a second hydraulic fluid line leading from said first fluid line to said first sump; means for introducing hydraulic pressure from said first fluid line to said second fluid line; means for controlling hydraulic pressure in said first fluid line by controlling hydraulic pressure in said second fluid line; a second fluid sump; a third hydraulic fluid line adapted to deliver fluid from said second sump means for introducing hydraulic pressure into said third fluid line; a first pressure regulating valve mounted on said third fluid line; a second pressure regulating valve mounted on said third fluid line downstream of said first pressure regulating valve so that the first pressure regulating valve will prevent passage of fluid under pressure from said third fluid line to said second pressure regulating valve until a predetermined pressure related to vehicular speed is attained in the first fluid line; a fourth hydraulic fluid pressure line leading from said second pressure regulating valve; a by-pass solenoid valve operatively connected to said fourth fluid line; a fifth hydraulic fluid pressure line leading from said solenoid valve to the second end of said cylinder; a hydraulic fluid exhaust line leading from said solenoid valve to said second sump; a reciprocating piston slidably disposed in said cylinder; a piston rod mounted on said piston and protruding from the first end of said cylinder; a carburetor; a flow valve mounted in said carburetor; and means connected to said piston rod and to said flow valve for operating said flow valve upon reciprocal movement of said piston rod and piston.

3,099,330
ELECTRICALLY OPERATED SPEED CONTROL DEVICE
Richard E. Von Berg, Santa Ana, and Arthur A. Pfeifer, Whittier, Calif., assignors to Rheem Manufacturing Company, New York, N.Y., a corporation of California
Filed Jan. 22, 1962, Ser. No. 167,500
22 Claims. (Cl. 180—82.1)



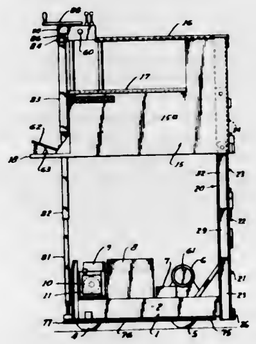
1. An electrically operated device for adjustably controlling the speed of operation of an internal combustion engine which comprises: a generator having its speed controlled by drive means related to the load change factor of an internal combustion engine; an electric motor; a constant slip variable torque electric clutch energized by said generator and operatively connected to said motor; a vacuum chamber connected to said clutch and disposed so as to be rotated by said clutch; an egress port in said vacuum chamber; a bleed-off line disposed so as to be, selectively, in and out of contact with said egress port upon rotation of said vacuum chamber; an actuator chamber; a diaphragm transversely disposed in said actuator chamber so as to be actuated by vacuum in said actuator chamber; means for selectively introducing vacuum into said actuator chamber; a vacuum conduit leading from said actuator chamber to said vacuum chamber; an actuator rod connected to said diaphragm adjacent one end of said rod; a carburetor; a flow valve mounted in said carburetor; and means connected to said actuator rod and to said flow valve for operating said flow valve upon reciprocal movement of said actuator rod.

3,099,331
SAFETY AND SUPPORTING BELT CONSTRUCTIONS
Clarence W. Rose, Denver, Colo., assignor to Rose Manufacturing Company, Denver, Colo., a corporation of Colorado
Filed Apr. 3, 1961, Ser. No. 100,328
3 Claims. (Cl. 182—3)



1. A safety belt adapted to be fastened about the waist of a wearer, of the type having an inner web of comparatively wide, stiff material forming a body pad and an outer web of smaller, flexible material forming a body-circling load-carrying strap, and a buckle adapted to engage the ends of the said body-circling load-carrying strap to form a closed body loop with the body pad being within the loop, wherein said body pad is a web of cotton or like material woven to be resistant to stretching but of limited strength, wherein said load-carrying strap is a web of nylon or like material having high strength, and being more elastic than the body pad and wherein said web and strap are laminated together throughout substantially their entire length by a continuous array of permanent stitching sufficient to combine the web and strap to form a unitary band having the stiffness of the web and the strength of the strap.

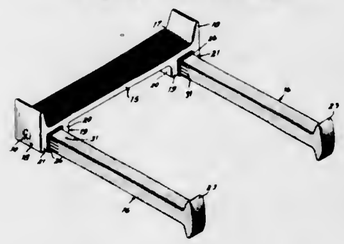
3,099,332
ELEVATING SHELF FOR STOCK BIN SERVICING TRUCK
Robert F. De Marco, Mentor, and Henry W. Hein, Chardon, Ohio, assignors to The Heifred Corporation, Willoughby, Ohio, a corporation of Ohio
Filed May 3, 1961, Ser. No. 107,492
6 Claims. (Cl. 182—14)



1. An elevating shelf servicing truck comprising a self-propelled, steerable, wheeled chassis, an elevator mast at one end thereof, an elevator frame mounted on the mast for movement to raised and lowered positions relative to the chassis, said elevator frame having one of its ends connected to the mast, said elevator frame extending from said mast toward the opposite end of the chassis and terminating at its other end near said opposite end of the chassis, an operator's platform carried by the elevator frame at said other end of the chassis, propelling power means including a prime mover and a power source for propelling the chassis, said propelling power means being disposed on the chassis between the mast

and opposite end of the chassis, lifting power means for raising and lowering the elevator platform, control means including manually operable control elements for controlling the lifting power means and the propelling power means, steering means for steering the chassis, said control elements and steering means being carried by the elevator frame for lifting and lowering therewith in a position accessible to an operator on the platform in raised and lowered positions of the elevator frame, said control elements being operable in said raised and lowered positions of the elevator frame, a service shelf carried by the elevator frame, said shelf being disposed between said mast and platform and being in overlying relation to the propelling power means when the elevator frame is in lowered position, and said operator's platform being offset, endwise of the chassis in a direction away from the mast, from the shelf and propelling power means, and positioned below the upper level of the shelf and propelling power means a distance such that when the elevator frame is in lowered position, the operator's platform is below the level of the top of the propelling power means and near to the ground level.

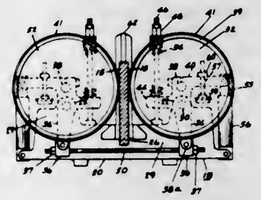
3,099,333
STEP STRUCTURE
Peter R. Hollaender, 2206 Raeburn Drive, Cincinnati 23, Ohio
Filed Aug. 6, 1962, Ser. No. 215,046
3 Claims. (Cl. 182—90)



1. A manhole step comprising a pair of cast aluminum arms and a cast aluminum cross bar, said arms being identical and each being configurated at the inner end thereof to provide a wall anchor, a seat portion at the outer end of each arm defined by spaced peripheral flanges, said seat portion being rectangular in transverse section, a saddle at the underside of each of the ends of said cross bar, said saddle defining a downwardly opening channel which is rectangular in transverse section and of a size to receive a seat portion of an arm in slip fit relation, there being a bore drilled and tapped through the outer side of each of said saddles, and a set screw engageable in each of said bores to lock said saddles in said seats.

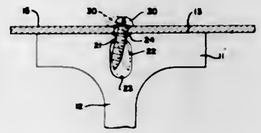
3,099,334
ELEVATOR ROLLER GUIDES
Benjamin Whitehead Tucker, Jr., South Orange, N.J., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed May 15, 1962, Ser. No. 194,806
10 Claims. (Cl. 187—95)

1. In an elevator installation in which a guide rail having a flat guide surface on its face and on each of its opposed two sides is provided for guiding the passage of a car in its hoistway by coaction with a guide element that is carried by the car; said guide element comprising a plurality of pivotally mounted guide rollers, one coacting with each of said guide surfaces, each of said rollers being pivotally mounted on a standard which itself is pivotally mounted, resilient means individual to each standard and acting through its pivot causing the associated roller to exert pressure on its conjugate guide surface at all times, and rigid means adjustable in length interconnecting the standards of the side surface rollers



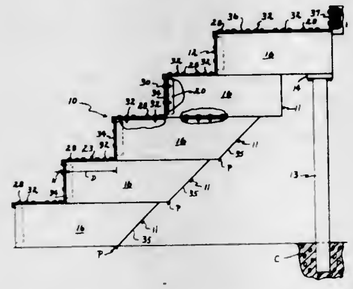
and effective to hold these standards in fixed angular relation to each other and to hold said rollers in fixed separation irrespective of the position of the guide rail with respect to the associate guide element.

3,099,335
STRUCTURAL BEAM
Leo P. Sklar, Detroit, Mich., assignor to Lite-Vent Industries, Inc., Detroit, Mich.
Filed Nov. 15, 1960, Ser. No. 69,306
1 Claim. (Cl. 189—37)



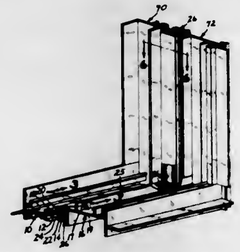
A structural I-beam of solid, uniform cross-section having a pair of spaced apart parallel flanges joined together by a web integral with and normal to the flanges, the flanges and web each being of substantial thickness and being formed of a metal which is substantially rigid and non-resilient but sufficiently soft as to be engaged by a self-tapping type screw fastener; an elongated, uniform cross-section, closed bottom slot formed in one of the flanges, the slot being aligned with the central axis of the web and extending the full length of the beam and opening at the exposed face of the flange, that is, the face opposite to that which the web joins; the mouth of the slot being formed with a continuous, central, narrowed portion of considerably less width than the width of the slot and being of a width to receive and engage with a self-tapping screw of a predetermined diameter, and with the narrowed portion of the mouth extending towards the closed bottom of the slot only a short distance of approximately a few threads of the screw, the slot being of a depth which is approximately twice its width and having its closed bottom located within the web but close to the slotted flange; the opposite side edges defining the mouth at said exposed face being oppositely chamfered, with the depth of the chamfered portion being approximately the same as the depth of the narrowed portion, wherein the mouth at the surface of the exposed face is wider and tapers towards the narrowed mouth portion located closely adjacent to the exposed face; and with the beam solid cross-sectional area which surrounds and defines the slot being of sufficient thickness so that the area defining the narrow mouth portion is rigid and non-resilient; wherein a screw may be tapped into the mouth narrowed portion while being inserted into the slot, with all but a small part of the screw being free of securement to the beam and with the end part of the screw being free to fit within the slot at an acute angle relative to the exposed face.

3,099,336
PREFABRICATED STAIR
Floyd L. Hawkins, Rte. 1, Box 103, Montevallo, Ala.
Filed Nov. 14, 1960, Ser. No. 69,094
5 Claims. (Cl. 189—43)



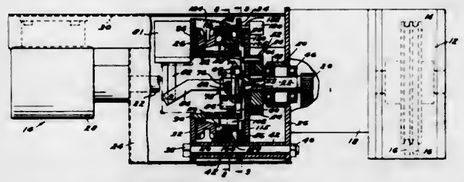
1. A stair comprising a plurality of metal independent step units, each unit comprising a pair of channel shaped stringers spaced from each other and having horizontally extending flanges thereof contacting and overhanging horizontally extending flanges of the stringers of a subjacent unit, the overhanging flanges of the stringers having a plurality of vertically aligned openings therein whereby adjacent stringers may be adjusted relative to each other to vary the amount of overhang between adjacent stringers, and means passing through the aligned openings to secure the units together.

3,099,337
THERMAL BARRIER AND CONNECTOR MEMBER FOR INNER AND OUTER WINDOW FRAMES
Frank W. Hetman, 124 Paisley Lane, Minneapolis, Minn.
Filed July 22, 1960, Ser. No. 44,758
3 Claims. (Cl. 189—75)



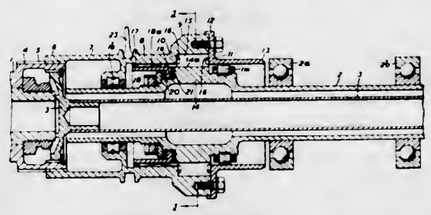
1. In a thermal barrier and connector for inner and outer window frames, a preformed elongated body member having longitudinal rigidity and a fixed longitudinally extending internal recess, said body member having a fixed longitudinally extending opening leading into said internal recess, the width of said longitudinally extending opening being less than the width of said internal recess, the outer wall surfaces of said body member formed with longitudinally extending grooves defining longitudinal outer corner edges, said internal recess adapted to receive an enlarged portion of an extension member of an outer window frame with the extension member extending from the enlarged portion outwardly from the internal recess through the longitudinally extending opening, the width of said longitudinally extending opening being less than the width of the enlarged portion of the extension member, said body member adapted for endwise insertion into an elongated partial box construction of an inner window frame with said outer corner edges of said body member in pressing contact with the internal surface of the partial box construction when the same is inserted therein to thereby connect the frames together with dimensional stability and substantially insulate one from the other.

3,099,338
DOOR OPERATOR
Thornton L. Urquhart, Farmington, Mich., assignor to Byrne Doors, Inc., Ferndale, Mich., a corporation of Michigan
Filed June 16, 1961, Ser. No. 117,640
5 Claims. (Cl. 192—.094)



1. An operator assembly adapted to be operated selectively by power and by hand, comprising a shaft, a manually operable device for driving said shaft including a wheel rotatable relative to said shaft, a first rotatable clutch member having a driving connection with said shaft such that rotation of said first clutch member will effect rotation of said shaft, a fixed brake member, said first clutch member being axially movable toward and away from a normal position in which it engages said brake member to hold said shaft from rotation, means urging said first clutch member toward said normal position, a second clutch member rotatable relative to said shaft, said second clutch member being positioned opposite said first clutch member for axial movement relative thereto, means for axially shifting said second clutch member toward and into driving engagement with said first clutch member in response to initial rotation of said wheel and for thereafter rotating said second clutch member with said wheel, said first clutch member being moved from engagement with said brake member by said second clutch member when engaged thereby, to permit the transmission of the rotation of said wheel to said shaft, power means operative to rotate said shaft, and means for automatically moving said first clutch member from engagement with said brake member when said power means is operated.

3,099,339
UNI-DIRECTIONAL DRIVING DEVICES
Benjamin William Barlow, Wembley, England, assignor to The De Havilland Engine Company Limited, Leavesden, England, a company of Great Britain
Filed Mar. 30, 1961, Ser. No. 99,592
Claims priority, application Great Britain Apr. 1, 1960
5 Claims. (Cl. 192—37)



1. A uni-directional driving device for transmitting rotary motion comprising co-axial driving and driven parts, a series of intermediate members so formed and arranged between the driving and driven parts that they normally operate automatically to permit relative rota-

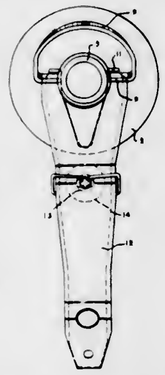
tion between these parts in one direction, but prevent relative rotation between the parts in the opposite direction, and a control member splined to one of the parts, and said control member being formed and arranged so that in one relative axial position it permits the intermediate members to extend between the driving and driven parts so as to be operative to prevent relative rotation in the appropriate direction, and in another relative axial position the control member itself engages the intermediate members and maintains the intermediate members out of engagement with that one of the driving and driven parts with which the control member does not rotate so as to render the intermediate members totally inoperative.

3,099,340

CLUTCH RELEASE MECHANISM

John W. A. Camp, Colchester, England, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Jan. 28, 1960, Ser. No. 5,182
Claims priority, application Great Britain June 5, 1959
2 Claims. (Cl. 192—99)



1. A clutch release mechanism having a pivotally mounted release lever and an axially movable clutch release bearing, said bearing having axially spaced clutch engaging and clutch disengaging positions, a C-shaped sheet metal member operatively interposed between the end of said lever and said bearing, said member having a semi-circular configuration with end portions that are bent inwardly toward the axis of said bearing, one edge of said bent ends engaging said bearing and the opposite edge of said bent ends engaging said lever, said lever being rotatable through an arc to move said bearing from one of said positions to the other of said positions, said member being adapted to transfer force from the arcuate motion of said lever to axial motion of said bearing.

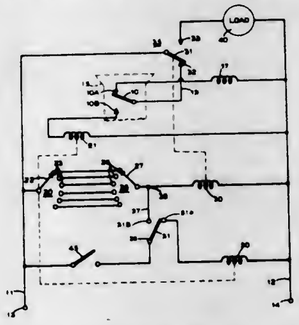
3,099,341

COIN CONTROLLED TIMER SYSTEM

Harry Greenwald, Whitestone, N.Y., assignor to H. Greenwald Co. Inc., Brooklyn, N.Y., a corporation

Filed Mar. 6, 1961, Ser. No. 93,428
7 Claims. (Cl. 194—9)

1. A coin controlled timing system comprising, in combination, a coin guide; coin rejector control means connected to one terminal of a source of potential; a coin switch disposed in the path of coins movable along said coin guide and having a first position, normally connecting said coin rejector control means in series therewith, and a second position; said coin switch being momentarily operated to its second position by each coin movable along the coin guide; a double throw switch connected to the other terminal of said source and having a first position, normally connecting said coin switch to said other terminal, and a second position; a stepping switch having a movable arm, and operating means for said arm connected between the second position of said coin switch and said one terminal of said source, said operating means being impulsed by said coin switch each time the latter is operated to its second position to step said arm to sequentially engage contacts of said stepping switch; a setting switch having contacts each connected to a corresponding contact of said stepping switch and including pre-settable switch means for selectively connecting only a selected one of its contacts to a terminal thereof; second operating means



for said double throw switch effective, when energized, to reverse the position of the latter; a cycle timer load having a first terminal connected to said one terminal of said source and a second terminal connected to the second position of said double throw switch; said double throw switch, in its second position, disconnecting said coin switch from said other terminal and connecting said cycle timer load across said source; and means connecting said stepping switch, said setting switch, and said second operating means in series across said source; whereby, when said coin switch has been operated to its second position a pre-selected number of times, said second operating means will be energized to reverse the position of said double throw switch.

3,099,342

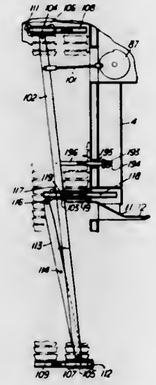
COIN-OPERATED VENDING MACHINES

Michael H. Lewington, Ruislip, and Alan T. Scott, Englefield Green, England, assignors to Fisher & Ludlow Limited, Tipton, England, a British company

Filed Sept. 27, 1960, Ser. No. 58,734
6 Claims. (Cl. 194—10)

1. In a vending machine, in combination:
(*a*) a support;
(*b*) endless conveyor means movable on said support, said conveyor means having two straight vertically extending runs, a top portion, and a bottom portion, said portions connecting said runs, whereby one of said runs ascends and the other descends during movement of said conveyor;
(*c*) a plurality of goods carrying platform means secured to said conveyor means and uniformly spaced thereon in the direction of the movement thereof;
(*d*) discharge chute means arranged on said support adjacent a portion of one of said vertical runs spaced from said top and bottom portions, said portion of said one vertical run and said chute means defining a discharge station;
(*e*) ejector means movable on said support at said station transversely of said one vertical run for ejecting goods from a platform means located at said station into said discharge chute means;

(*f*) two transfer means respectively movable on said support adjacent said top and bottom portions transversely of said runs for transferring goods from a platform means at the top of the ascending run to a platform means at the top of the descending run, and for transferring goods from a platform means at the bottom of the descending run to a platform means at the bottom of the ascending run;



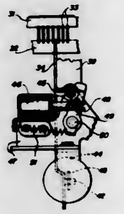
(*g*) motion transmitting means connecting said ejector means and said two transfer means for joint ejecting and transferring movement; and
(*h*) motion initiating means responsive to completion of said joint movement for initiating movement of said conveyor means over a distance corresponding to the spacing of said platform means on said conveyor means.

3,099,343

TABULATING APPARATUS FOR TYPEWRITERS OR LIKE MACHINES

Anthony D'Onofrio, 10 Overhill Road, West Hartford, Conn.

Continuation of application Ser. No. 47,332, Aug. 3, 1960
This application Oct. 2, 1962, Ser. No. 230,026
9 Claims. (Cl. 197—127)



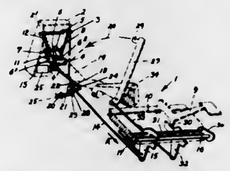
1. A printing machine comprising a frame and a carriage movable relative to said frame for supporting a worksheet for movement past the printing station of said machine, said carriage having tabular stops mounted thereon and adapted to be moved from unset to set positions,
a tabular blade mounted on said frame for movement into engagement with set and unset tabular stops,
means for initiating tabulating movement of said carriage, said worksheet having marks selectively printed thereon for controlling the progress of said carriage tabulating movement,
means for generating signals in response to passage of marks past said printing station,
circuit means responsive to the initiation of tabulating movement and to said signals,
and a tabular blade control solenoid responsive to the output of said circuit means for moving said tabular blade.

3,099,344

LETTERING MACHINE FOR DRAWINGS

Otto Butter, Neckargemund, Walter Irmscher, Mauer, near Heidelberg, and Rolf Kaiser, Heidelberg, Germany, assignors to Gesellschaft für industrielle Technik m.b.H., Heidelberg-Pfaffengrund, Germany, a firm

Filed May 2, 1962, Ser. No. 191,843
6 Claims. (Cl. 197—150)



1. A movable lettering machine for applying printed characters at different points on a fixed flat sheet of drawings, comprising in combination, a frame,
(*a*) key lever means carried by said frame,
(*b*) a linkage cooperating with said key lever means,
(*c*) type bar means including type means and actuatable by said key lever means through the intermediary of said linkage to strike a selected printing point on said sheet,
(*d*) a housing carried by said frame adjacent said printing point,
(*e*) a first axle supported in said housing,
(*f*) a swing arm pivoted on said first axle,
(*g*) a pull rod having one end secured to said linkage and the other end secured to said swing arm,
(*h*) a second axle secured to said swing arm,
(*i*) a bracket pivotally mounted on said second axle,
(*j*) a stop on said swing arm for limiting the pivotal movement of said bracket in one direction, and an inking pad in said housing for limiting the pivotal movement of said bracket in the other direction,
(*k*) a tension spring secured between said first axle and said bracket,
(*l*) an ink roller for inking said type means and carried by said bracket and movable by said linkage and said pull rod into the path of movement of said type bar means under the action of said tension spring when a type bar means is actuated for printing by said linkage, and out of said path of movement by said type bar means against the action of said tension spring by return movement of said pull rod and said linkage,
(*m*) a pin on said frame adjacent said housing,
(*n*) indicating means pivotally mounted on said pin for indicating said printing point, and
(*o*) a torsion spring arranged on said pin to act upon said indicating means, and means on said pull rod for moving said indicating means against the action of said torsion spring out of the position indicating said printing point upon actuation of said type bar means for printing by said linkage and key lever means.

3,099,345

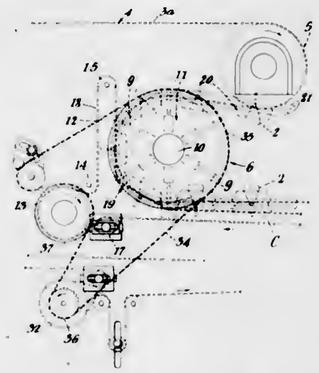
DETINNING BAKERY GOODS

John M. Nuttall, Peterborough, Northampton, England, assignor to Baker Perkins Incorporated, Saginaw, Mich.

Filed Aug. 30, 1960, Ser. No. 52,856
Claims priority, application Great Britain Sept. 7, 1959
7 Claims. (Cl. 198—145)

1. In combination with conveyor means on which is swingably supported at least one open top tray in upright

position: detinning apparatus comprising rotatable drum means providing a turning point and around which said conveyor means is entrained substantially 180° to form two vertically spaced, substantially horizontal runs; tray engaging means supported in the path of movement of said tray at said turning point and operable to prevent swing-



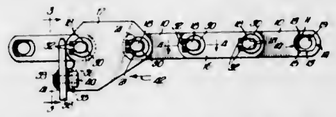
ing movement thereof, whereby said tray moves from said upright position to an inverted position as said conveyor means passes around said drum means; and endless band means supported adjacent said drum means in a position to overlie the open top of said tray as the latter moves to its inverted position so as to receive the contents of said tray.

3,099,346

POWER TRANSMISSION AND CONVEYING CHAIN

Russell B. Maas, Palos Park, Ill., assignor to Screw Conveyor Corporation, Hammond, Ind., a corporation of Illinois

Filed May 11, 1961, Ser. No. 109,293
4 Claims. (Cl. 198—174)



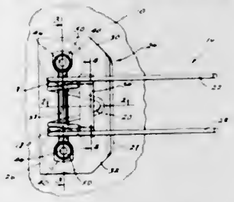
1. A chain comprising a pair of inner links spaced apart laterally by a tubular member fixed against rotation relative to said inner links and exposed outwardly throughout the entire lateral space between said inner links for direct cooperation between said inner links with a sprocket, outer links having opposite ends disposed with their inner surfaces over the outer surfaces of the ends of said inner links and having openings with opposite flat surfaces and arcuate surfaces between said flat surfaces in axial alignment with said tubular member, a pin passing through and rotatable in said tubular member and having ends with corresponding flat surfaces and arcuate surfaces between said flat surfaces passing through the corresponding openings in said outer links and fixed against rotation relative to said outer links, said outer links being fixed at all times against longitudinal movement in a direction across the axis of said pin, means on opposite ends of said pin and coacting with the outer surfaces of said outer links for retaining the outer links in place on the ends of said pin with the ends of their inner surfaces disposed over the ends of the outer surfaces of said inner links, the means at one end at least of said pin for retaining the outer link in place comprising grooves in said arcuate surfaces of said pin, and a split snap ring individual to a single pin and having resilience of a character to self contract inwardly into said grooves in position coacting with the outer surface of the end of the adjacent outer link for retaining said outer link in place on said pin, said snap ring being adapted to be expanded outwardly against its self contracting resilience for removal from and application to the groove in said pin.

3,099,347

MEANS FOR MOUNTING SPRING FINGERS

Robert Lee Dahlquist, Rock Island, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Filed Feb. 23, 1961, Ser. No. 91,227
1 Claim. (Cl. 198—198)



A finger securing means for use on a crop feeding device of the type including a moving apron of thin flexible material comprising; the combination with said apron of a clip body in the form of a unitary substantially flat
plate disposed in face-to-face contact with said apron, a retaining member in the form of an
elongated element spaced from said plate, extending transversely of the direction of movement of said apron,
means for supporting said element in said spaced relation to said plate, a
finger element comprising a pair of substantially parallel spaced teeth and a connecting section including a central
loop and a pair of
spaced coils disposed on a common axis, transverse to said teeth and loosely coiled about said elongated element, said loop portion projecting from the axis of said coils, and lying in contact with said plate within the margins thereof, a
bail element integral with and displaced from the plane of said plate within the margins thereof on the side opposite said apron, said bail element being positioned to contact said loop on the side away from said plate,
means engaged with said plate and said apron, and serving to secure said plate and said elongated element on said apron, whereby said loop, under the reaction of crop material engaging said fingers, will contact said plate or said bail, and not the surface of said apron, and the
trailing edge of said plate, as related to the direction of movement of said apron having an
out-turned portion, whereby the relatively sharp edge resulting from fabrication of the plate is spaced out of contact with the surface of said apron whereby to avoid damage to said apron.

3,099,348

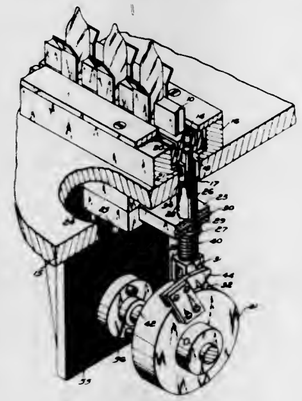
APPARATUS FOR ADVANCING LIKE ELONGATED FINISHING BARS

George E. Algatt, Allentown, and Willard G. Otto, Schnecksville, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed June 2, 1961, Ser. No. 114,440
4 Claims. (Cl. 198—218)

1. An apparatus for advancing a series of elongated article supporting bars longitudinally end to end through

an operating area having spaced operating units therein, the bars having equally spaced article supporting positions and associated apertures disposed longitudinally of the bars, the apparatus comprising a table having spaced elongated apertures therein, an elongated track for the series of bars mounted on the table and having elongated apertures therein disposed in alignment with the apertures of the table, an elongated element disposed beneath the table parallel with the track, means to support the element for



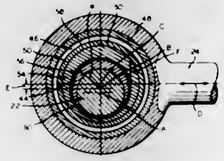
reciprocable movement, a connector for each bar in the series of bars supported by the element for reciprocation laterally therewith, extending through its elongated apertures in the table and track and adapted for longitudinal reciprocation into and out of successive apertures in the bars, a continuously driven cam shaft, and a cam for each connector mounted on the cam shaft and having widths sufficient to maintain operative connection with the connectors during longitudinal reciprocation of the element and lateral reciprocation of the connectors.

3,099,349

ECCENTRIC DRIVE FOR VIBRATING CONVEYOR

Alfred D. Sinden, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a corporation of Illinois

Filed Dec. 6, 1960, Ser. No. 74,061
4 Claims. (Cl. 198—220)



1. In a vibrating tray apparatus of the type wherein a tray element and a balancing element are connected by a parallel linkage and resilient means are interposed between said elements and power means including a rotatable shaft having an eccentric portion and a throw arm journalled thereon and connected to one of said elements is operated to induce vibration of said tray element at a vibration rate on the order of the natural frequency of said resilient means, the combination with said throw arm and shaft eccentric portion of an eccentrically bored sleeve member interposed between said arm and portion, with the ratio of the eccentricity of the sleeve member bore to the radius of the shaft eccentric portion being equal to or less than the coefficient of friction between the sleeve member and the shaft portion.

3,099,350

PACKAGING FILMS AND PACKAGE PRODUCED THEREFROM

John E. Hammond, Rochester, N.Y., assignor to National Distillers and Chemical Corporation, a corporation of Virginia

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,134
9 Claims. (Cl. 206—46)

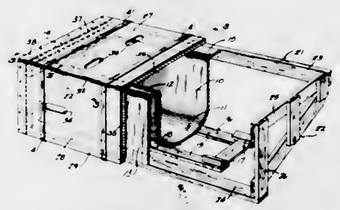
7. A package containing a moisture-emitting material encased in a clear polyolefin film having a coating on the inner surface thereof comprising a water-soluble cellulose ether and a water-soluble inorganic alkali metal salt, whereby any moisture condensed on the inner surface of the film spreads easily over the surface of the film, the amount of said salt ranging from about 1 to about 8 parts per part of said cellulose ether and the thickness of said coating ranging from about 0.02 to about 0.4 micron, said polyolefin being selected from the group consisting of polyethylene, polypropylene, and copolymers thereof.

3,099,351

SHIPPING CRATE

Daniel F. Coffey, Jr., Marinette, Wis., assignor to Marinette and Menominee Box Company, Marinette, Wis., a corporation of Wisconsin

Filed Dec. 12, 1960, Ser. No. 75,423
4 Claims. (Cl. 206—46)



1. A shipping crate for a plumbing fixture having a marrable surface, said crate comprising frame means within which said fixture is housed for shipment, and a cover having a completely removable protective face portion covering the marrable surface of the fixture to protect the same during shipment of the fixture, said frame means comprising end subframes and said cover comprising a continuous sheet having end margins and fastening means connecting said end margins to said end subframes, and means offset inwardly from the fastening means defining lines of severance of the fastened margins of said sheet and along which said face portion of the cover within said lines of severance is completely detached from the frame means, leaving the end margins of the cover attached to the end subframes, prior to plumbing installation of the fixture and pending replacement of the protective face portion of the cover over said marrable surfaces of the fixture after plumbing installation of the fixture to protect said surface until final removal of the protective face portion of the cover.

3,099,352

CALENDAR REMINDER AND DISPENSING DEVICE

Walter Aven, 1624 Pontchartrain Drive, Okemos, Mich.

Filed Sept. 28, 1961, Ser. No. 141,388
1 Claim. (Cl. 206—78)

A calendar-type medication reminding and dispensing device, the combination including:

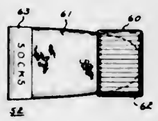
(*a*) a flat base member provided with date-indicating indicia thereon, said indicia pre-printed on said base member for a period of one month; and

(*b*) strip container means having a series of individual compartment sections for receiving individual dosage elements therein, said strip container means being selectively attachable to said base member so that said compartment sections are in masking registry



with predetermined of said date-indicating indicia, each of said individual compartment sections defined by weakened zones whereby said compartment sections are selectively detachable from said strip container means as required by prescription and so as to unmask selected of said date-indicating indicia.

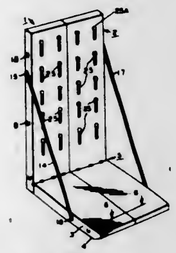
3,099,353
STOCKING PACKAGE AND METHOD
John C. Berry, Durham, N.C., assignor to Berry Brothers Corporation, Greensboro, N.C., a corporation of North Carolina
Filed Nov. 9, 1956, Ser. No. 621,335
3 Claims. (Cl. 206—79)



1. A stocking package comprising a flat, substantially stiff insert of sheet material, said insert having a transversely extending fold line therein, a first sock having a cuff portion therewith in engagement with one face of said insert, a second stocking having a cuff portion therewith enveloping said insert and said first stocking in a flat, slightly tensioned state, said package folded upon itself and the cuff portion reversely folded in encircling relationship about said package to retain same in a folded state.

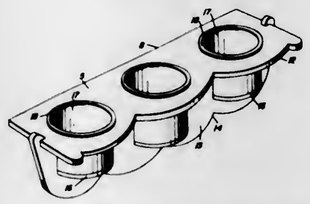
3,099,354
DISPLAY DEVICE
George R. O'Day, Decatur, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed Mar. 22, 1961, Ser. No. 97,580
9 Claims. (Cl. 211—49)

1. A display stand comprising a base having an article supporting surface tilted slightly backwardly, and a back hingedly secured to the back upper edge of said base, the lower extremity of said back being substantially flush with the lower back edge of said base so that the weight of articles stacked on said base exerts a moment tending to rotate said back toward said base about the hinged connection therebetween as a fulcrum thereby to



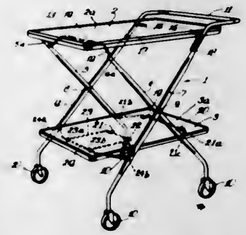
impart stable characteristics to the stand and to the articles displayed thereon.

3,099,355
PLANTER
Gale L. Kane, Bushnell, Ill., assignor of fifty percent to Ehrman P. Huff, Bushnell, Ill.
Filed Mar. 6, 1962, Ser. No. 177,810
8 Claims. (Cl. 211—75)



1. A planter comprising a horizontal panel having a plurality of openings therein, a vertical plate affixed to the underside of the panel and extending beneath the openings therein, said plate having a plurality of recesses in its upper edge vertically aligned with the openings and communicating directly therewith, and removable soil containers mounted in the openings and the recesses.

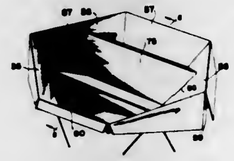
3,099,356
FOLDING SERVING CART
Thomas Hunter Burnett, Elgin, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 27, 1960, Ser. No. 78,429
4 Claims. (Cl. 211—132)



1. A collapsible table comprising, a tray and supporting means for the tray, said supporting means having two pairs of legs pivotally connected in scissors fashion so as to be angularly movable relative to each other between first and second positions, said tray being hinged at one end to a first brace rigidly secured between one pair of said two pairs of legs below said pivot with said first brace

extending outwardly from the plane of the one pair of legs, said tray being hinged toward its other end to the inner end of a link which is hinged at its outer end to a second brace rigidly secured between the other pair of the legs below said pivot with said second brace extending outwardly offset from the plane of the pair of legs, the tray in said first positions of the legs extending horizontally and supported by the legs in the regions where its one end is hinged to the first brace and where the outer end of the link is hinged to the second brace, said link and tray acting as a toggle to cause the legs to move angularly in closing scissor fashion to their second positions upon upward pivotal movement of the tray in the region where its said one end is hinged to said first brace, the length of said link and the positioning of the said hinged connections between the tray, the braces, the two pairs of legs and the link being such that when the tray is moved pivotally upward to a vertical position the two pairs of legs are in parallel alignment with each other.

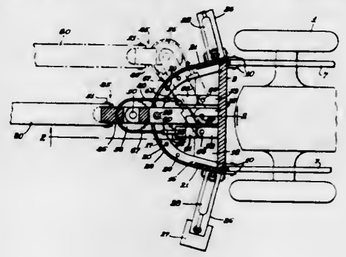
3,099,357
COLLAPSIBLE FLOOR DISPLAY STAND
Robert Woodman Harris, Old Greenwich, Conn., assignor to William Mellish Harris Associates, Greenwich, Conn., a partnership
Filed June 1, 1961, Ser. No. 114,209
3 Claims. (Cl. 211—133)



1. A dump display stand comprising a collapsible stand having a horizontally extending basket supporting ring and collapsible legs, and a basket fitted within said ring, said basket having a hexagonal bottom, each edge of which is hingedly secured to an outwardly inclined side area portion, said side area portions tapering outwardly towards their free ends and connected with each other by outwardly extending integral pleated portions each formed of two triangular sections having their apexes meeting at a point of juncture of two edges of said bottom, and one side of each triangular portion being formed of a common central fold line, said triangular portions being folded outwardly of said basket against each other with the central fold line outermost to provide downwardly tapering outwardly projecting pleats, each pleat having an inclined notch therein, said notches engaging said ring releasably to attach said basket thereto.

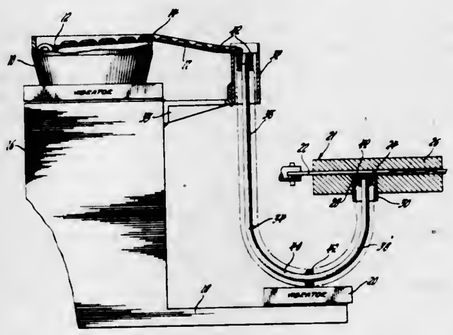
3,099,358
MEANS FOR SHIFTING THE AXIS OF BOOM MEANS OR THE LIKE
John D. Clark, Westmont, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Aug. 1, 1960, Ser. No. 46,498
7 Claims. (Cl. 212—67)

1. A control arrangement for displacing a driven element from an initial position relative to a support structure, said structure defining a reference pivot axis, comprising: a first link member, having a mass small with respect to the mass of said driven element, coupled to said support structure along said reference pivot axis; a second link member, coupled to said driven element, and coupled to said first link member along an intermediate pivot axis displaced from said reference pivot axis; means for effecting relative displacement of said first and second link members; and locking means for selectively restraining said first link member against movement, operable in a first position to translate said relative displacement into



rotation of said driven element, and operable in a second position to translate said relative displacement into transverse displacement of said driven element.

3,099,359
PARTS FEEDING DEVICE
John R. Taylor, Lapeer, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,668
5 Claims. (Cl. 214—8)

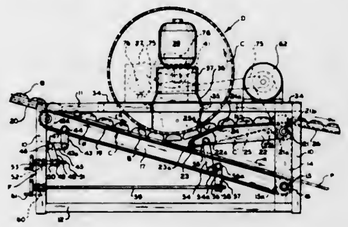


1. Conveyor mechanism in association with a vibratory hopper comprising a floating part-transferring rod, one end of said rod being positioned adjacent an exit port provided on said vibratory hopper, guide means associated with said one end of said rod to position articles discharged from said vibratory hopper on said rod, the other end of said rod being spaced outwardly from said one end of said rod and reversely bent and upwardly extended, an assembly fixture to further position said articles, guide means adjacent said other end of said rod and said assembly fixture to position said articles in prearranged position in said assembly means, and vibratory means operable in combination with said floating rod and located at the bent portion thereof to drive said articles from said vibratory hopper to said assembly means.

3,099,360
DEPANNING APPARATUS
Conrad W. Petersen and Henry A. Heide, Saginaw, Mich., assignors to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
Filed Jan. 26, 1959, Ser. No. 788,848
10 Claims. (Cl. 214—309)

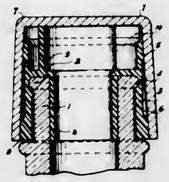
1. In apparatus for depanning buns and like products: downwardly inclined first conveyor means for carrying a pan with buns forwardly; upwardly inclined, diverging

endless conveying means interjacent the ends of said first conveyor means and spaced therefrom sufficiently to permit passage of a pan therebetween on said first conveyor means; a revolvable perforate drum journaled to pass its periphery adjacent both said first conveyor means and endless conveying means; a radially extending tube fixed relative to said drum, but lying within said drum, having an open end of such dimension as to overlie a portion of both said first conveyor means and endless conveying means, said tube terminating adjacent the inner periphery of the drum; means connected with the opposite end of said tube exerting a suction which lifts said buns from the



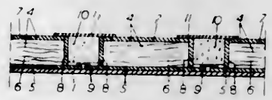
pan to the peripheral surface of said drum; means revolving said drum to carry said buns to the rear side of said tube; said suction arching said endless conveying means toward the surface of said drum at the rear side of said tube so that the said endless conveying means, in retaining said buns between itself and the surface of said drum at substantially the rear side of said tube, removes the buns from the surface of the drum at a predetermined point and carries them away on said endless conveying means; and means driving the adjacent run of said endless conveying means in the same direction as the peripheral surface of the drum moves.

3,099,361
CONTAINER WITH CLOSING DEVICE
Karl Ruetz, Bergstrasse 132, Zurich 7/32, Canton of Zurich, Switzerland
Filed Nov. 28, 1960, Ser. No. 72,039
Claims priority, application Switzerland Nov. 28, 1959
4 Claims. (Cl. 215—73)



1. The combination of a container including a neck having a pouring opening with an external, annular bead extending around said pouring opening; a socket of resilient plastic material including an annular wall fitting onto said neck and having an internal anular groove intermediate the opposite ends of said wall and receiving said bead, the portion of said annular wall below said internal groove being spaced radially from said neck below said bead, said annular wall having a frusto-conical outer surface with upper and lower annular sealing surface portions disposed respectively above and below said groove and with an annular, outwardly opening recess between said sealing surface portions, said recess being opposite said groove and extending above and below the same; and a closing cap removably fitting over said socket and including an annular side wall having a frusto-conical inner surface engaging said sealing surface portions of the socket to urge said wall of the latter radially inward above and below said groove for ensuring sealing engagement of the latter with said bead.

3,099,362
CONTAINER FOR STORING LIQUEFIED GASES AT VERY LOW TEMPERATURES
Etienne M. Schlumberger, London, England, assignor to Conch International Methane Limited, Nassau, Bahamas, a company of the Bahamas
Filed Nov. 24, 1961, Ser. No. 154,521
Claims priority, application Great Britain Feb. 7, 1961
11 Claims. (Cl. 220—9)



1. A container for storing liquefied gases at very low temperatures comprising a rigid shell, internally lined with heat insulating panels, the joints between adjacent panels being provided with gas and liquid impervious resilient sealing means, characterized by the improvement that each panel is provided with a backlayer extending outside the circumference of the panel, each panel being secured with its back-layer adjacent to the inner surface of the shell in such a way that adjacent backlayers contact or almost contact each other at their ends, the joint between adjacent backlayers being provided with a sealing strip, the remaining space between each pair of adjacent panels being provided with a resilient filling piece, sealing the sides of the panels, said space being sealed by a strip of resilient material secured to the inner surfaces of adjacent panels.

3,099,363
SPRING CAN SEALER
Louis G. Callegari, 34—06 45th St., Long Island City, N.Y.
Filed Aug. 16, 1962, Ser. No. 217,484
10 Claims. (Cl. 220—24)

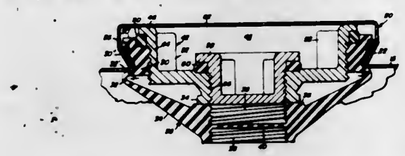


1. A closure device for a generally triangular opening in a flat top of a can with an annular bead, comprising a flat body including an upper rigid layer, a lower resilient layer, and an elastic diaphragm disposed between the upper and lower layers, said layers having aligned openings therein separated by said diaphragm, and a spring having a pair of sectional arms extending through said openings in the layers and through spaced holes in said diaphragm, said arms being biased apart in divergent directions and movable toward each other against bias in said spring, said arms having serrations formed in outer sides for engaging opposing edges of said opening.

3,099,364
CLOSURE FOR SHIPPING CONTAINERS
George W. Todd, 4 Wiltshire Place, Bronxville 8, N.Y.
Filed Oct. 16, 1961, Ser. No. 145,508
11 Claims. (Cl. 220—24.5)

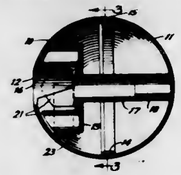
1. A shipping container partly defined by a wall having an opening therein; a resilient, generally cup-shaped sealing element having an interiorly threaded mouth and

comprising a relatively flexible generally vertically directed circular wall and a relatively rigid convex-upward bottom wall, said generally cup-shaped sealing element depending into said opening with its mouth engaging about the margin of said opening; and a plug element exteriorly



threaded and screwingly received into said threaded mouth and adapted, upon being screwed home, to flex said bottom wall into concave disposition thereby propping outward said circular wall beneath said opening to form a seal therewith and to prevent upward displacement of said sealing element.

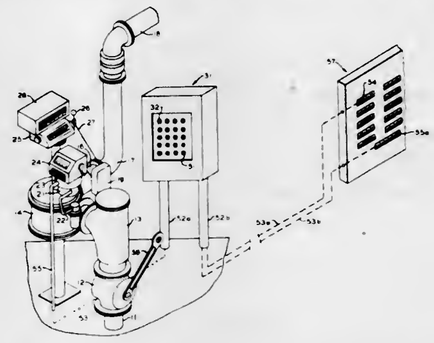
3,099,365
CONTAINER WITH INTERIOR ROTARY DISPENSER
Stanley R. Johnson, 36 N. Madison Ave., La Grange, Ill.
Filed Apr. 3, 1961, Ser. No. 100,278
4 Claims. (Cl. 221—263)



1. A dispenser comprising a hollow container formed with a dispensing opening of a size to pass an article to be dispensed, a shield projecting into the container partially encircling the opening and open at one side for passage of an article to and through the opening, a rotor in the casing rotatable on an axis aligned with the opening and including a plurality of spaced feeder blocks registering with the shield and movable around the shield, the spaces between adjacent feeder blocks each accommodating an article to be dispensed and being open from the outer periphery to the center of the rotor, and means in the container to prevent entry of an article into a space registering with the open side of the shield whereby articles in the container will be dispensed singly as the rotor is turned.

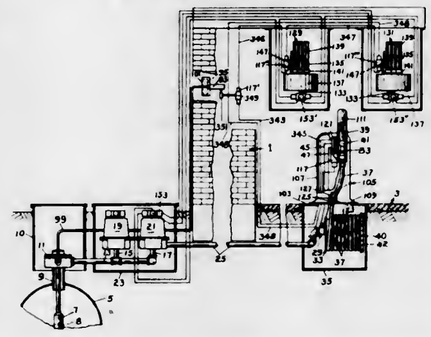
3,099,366
LOADING TERMINAL METERING SYSTEM
Robert C. Reilly, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 19, 1961, Ser. No. 146,260
3 Claims. (Cl. 222—20)

2. In a bulk liquid loading terminal, apparatus for loading and registering the volume of liquid pumped therefrom, and separately registering the volume drawn by a particular recipient, comprising: an inlet conduit for said bulk liquid; a positive displacement meter connected to said inlet conduit; a set-stop valve connected to the outlet end of said meter; an outlet conduit communicating between said valve and a tank loading assembly; a solenoid clutch operatively connected to said set-stop valve a truck grounding circuit incorporating said clutch adapted to energize the latter when said circuit is in the closed position; an electric pulse transmitter operatively connected to the shaft of said meter to transmit a pulse representative of some portion of a revolution of said meter shaft; a plurality of electrical pulse counters adapted to receive said pulses; an automatic temperature compensator connected to said inlet conduit for adjusting the frequency of pulses from said pulse transmitter to compensate for unit volume changes of said liquid due to ambient temperature variations; a gross liquid volume register and delivery ticket printer operatively connected to said meter; a set-stop counter operatively connected to said set-stop valve; lever means to control the operation of said set-stop valve; a register operatively connected to said set-stop counter for indicating the unit liquid volume delivered; control panel and acompanying circuitry having a plurality of individual key switches electrically paired with said pulse counters for actuating



the loading apparatus; each of said key switches further comprising a double-pole switch disposed in a pair of electrical circuits, the first of said circuits having a single relay disposed therein controlling the power input to a liquid loading pump and the operation of said set-stop valve said first relay being common to every pair of said electrical circuits, and the second of said circuits controlling the transmission of the pulses emitted by said transmitter to the pulse counter corresponding to the particular key switch which activates the loading apparatus; and a master pulse counter connected directly to said pulse transmitter and adapted to receive and totalize all of the pulses emitted thereby.

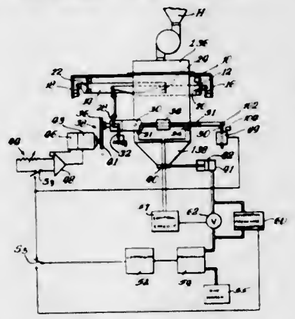
3,099,367
LIQUID DISPENSING SYSTEM
George W. Wright, Yoder, and Robert J. Jauch and Christian W. Kruckeberg, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Sept. 12, 1960, Ser. No. 55,290
27 Claims. (Cl. 222—26)



1. In a liquid dispensing system for an automobile filling station, the combination of a dispensing stand, a dis-

charge conduit, means for supplying liquid under pressure to said conduit, a meter in said conduit for measuring the amount of liquid flowing theerthrough, a valved outlet for said conduit for dispensing measured liquid therefrom, said outlet being disposed at said dispensing stand, computing registering means disposed at a point remote from said meter, hydraulic coupling means, including first liquid displacement means connected to be driven by said meter, additional liquid displacement means connected to drive said registering means, and liquid conduits connecting said respective displacement means, said displacement means being constructed so as to operate in synchronism for driving said registering means in accordance with the amount of liquid flowing through said meter.

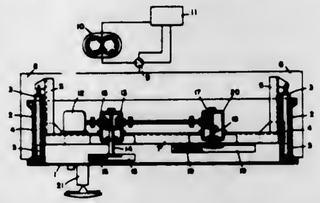
3,099,368
DISPENSING APPARATUS HAVING LOSS OF WEIGHT HOPPER
Russell C. Turner, Abington, and Raymon G. Walker, South Weymouth, Mass., assignors, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 30, 1960, Ser. No. 52,962
14 Claims. (Cl. 222—58)



1. In an apparatus for controlling the flow of material, a weigh arm, flexure plates supporting the weigh arm in equilibrium, a hopper on the arm, a poise movable along the arm to unload it at a predetermined rate, a discharge opening at the bottom of the hopper through which material is adapted to be discharged at a rate proportional to the unloading of the arm, a gate operably controlling the size of the opening, a controller responsive to an error voltage, establishing a signal for controlling said gate, a differential transformer for applying an error voltage according to the direction and magnitude of movement of the arm to the controller, a power relay operable in accordance with the signal from said controller to effect operation of the gate, means for rendering the differential transformer ineffective, when the hopper is substantially empty, means actuated when the hopper is substantially empty for refilling the hopper, and means for establishing a signal from said controller maintaining the gate in a predetermined position during refilling of the hopper.

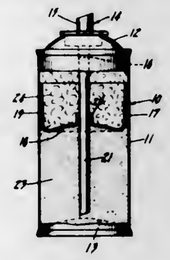
3,099,369
DEVICE FOR TRANSPORTING GRANULAR MATERIAL
Karl Schatz, Kaigasse 37, Salzburg, Austria, and Johann Baxrainer, Salzburg, Austria (Linzer Bundesstrasse 32, Salzburg-Gnigl, Austria)
Filed Oct. 14, 1959, Ser. No. 846,388
Claims priority, application Austria Oct. 14, 1958
1 Claim. (Cl. 222—238)

In a device for dispensing granular material, in combination, an elongated container having an endless side wall and a bottom wall formed adjacent said side wall with a discharge opening through which the granular material falls from the container; an elongated substantially horizontal carrier located over and extending along said bottom wall within said container; guide means cooperating with said carrier for guiding the latter for movement upwardly away from and downwardly toward said bottom wall; a pair of bearing means distributed along and carried by said carrier; a pair of rotary blade means respectively supported for rotation by said pair of bearing means, said pair of blade means respectively sweeping through overlapping areas and including blades located below said carrier between the latter and said bottom wall for engaging the granular material to transport the



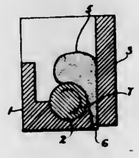
latter to said discharge opening to fall therethrough, the space in said container beneath said blades being completely free and unobstructed and said container defining a single interior space common to and housing said blades; a pair of cylinders carried by the container adjacent opposite ends of said carrier and extending vertically; a pair of pistons respectively slidable in said cylinders in response to the supply of fluid to or from the latter; a pair of piston rods respectively fixed to said pistons and connected with said carrier so that the latter moves up and down in response to movement of said pistons; and drive means operatively connected to said pair of rotary blade means for driving the same, said drive means being carried by said carrier and moving therewith.

3,099,370
DISPENSING CONTAINER FOR VISCOUS PRODUCTS
Matthew Edward Hein, Elgin, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 24, 1958, Ser. No. 782,882
5 Claims. (Cl. 222—386.5)



1. A package comprising a container, a viscous product in the lower portion of said container, and a gaseous propellant having superatmospheric pressure in the upper portion of said container; said container comprising a tubular body having an upper and lower end attached thereto, a dispensing valve mounted on said upper end, a hollow dredge tube within said body having its upper end connected to said valve and its lower end immersed in said viscous product, and a substantially cup-shaped piston within said body separating said product from said propellant; said piston having a centrally apertured face and an upstanding substantially straight imperforate skirt contiguous the side wall of said body and integral with said face, said skirt adjacent said face having the same cross-sectional shape as said body and an outside cross-sectional dimension less than the corresponding inside dimension of said body, said aperture in said piston face being in the form of a sleeve integral with said piston face, said dredge tube extending through said sleeve; a thin film of said product separating said sleeve from said dredge tube and at least the major portion of said skirt from said can body side wall, said films of product adapted to lubricate said piston for easy downward movement thereof and to form a seal between the product and propellant sides of said piston, said gaseous propellant being in contact with said films and being inert to both said container and said product and being insoluble in said product.

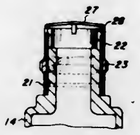
3,099,371
TACKY ADHESIVES SPREADING MACHINE
Donald E. Meader, Danvers, Mass., assignor to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts
Filed Mar. 14, 1960, Ser. No. 14,918
1 Claim. (Cl. 222—414)



Apparatus for coating a surface with tacky adhesive comprising a frame member having a first plane surface adapted to traverse in contiguous relationship the surface to be coated, a metering blade co-operatively engaged with said frame member to establish an adhesive extrusion aperture, said aperture being in part defined by one edge of said first plane surface and the proximate end of said metering blade, said proximate end of said metering blade being offset from the plane of said first plane surface by an amount equal to the desired thickness of adhesive coating, a cylindrical feed member, a convergent channel wherethrough adhesive is delivered to said extrusion aperture, said convergent channel being defined in part by said metering blade, a second plane surface of said frame member, said second plane surface being inclined with respect to said first plane surface and having a common boundary therewith at said extrusion aperture, and said cylindrical feed member, said cylindrical feed member being parallel to said extrusion aperture and in intersecting relationship with said second plane surface, and means for rotating said cylindrical member in a direction adapted to force adhesive residing thereon through said channel.

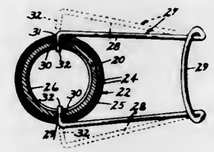
3,099,372
DISPENSING DEVICE HAVING SLITTED TOP PORTION
Clarence R. Taylor, Rochester, N.Y. (28 Woodside Drive, Penfield, N.Y.)
Filed Feb. 9, 1960, Ser. No. 7,717
3 Claims. (Cl. 222—490)

1. In a dispensing device, the combination comprising: a container having a spout, the free end of which has an inner elliptical cam surface; and a substantially cup-shaped cylindrical flexible cap rotatably mounted on said spout and movable between open and closed positions, said cap including a closed off top portion having a slit therethrough and a pair of depending projections on opposite sides of said slit adapted to slidably engage said



cam surface for positively forcing said slit closed upon rotation of said cap to said closed position.

3,099,373
FLEXIBLE FEED TUBE WITH BAIL FASTENING SAID TUBE TO A DISCHARGE SPOUT
Ebenhard S. Gandrud, Owatonna, Minn.
Filed Mar. 13, 1961, Ser. No. 95,108
2 Claims. (Cl. 222—527)

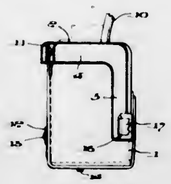


1. In a device for distributing granular material, a dispensing hopper adapted to contain a quantity of said granular material, a generally tubular discharge spout secured in depending relationship to said hopper, said discharge spout defining a pair of generally diametrically aligned and opposed apertures, a flexible tubular feed conduit having its upper end associated with said discharge spout, said conduit defining a pair of generally diametrically aligned and opposed apertures which are also alignable with the apertures defined by said discharge spout, and a flexible and resilient connecting bail for securing the upper end of said conduit to said discharge spout, said bail comprising a pair of spaced and elongated generally parallel side portions, a generally arcuate clip portion integrally connected to each of the lower ends of said side portions, said clip portion of said bail having an inner diameter slightly less than the outer diameter of said conduit and also having a circumferential length of substantially more than 180° but less than 360°, and a pair of ears which extend inwardly toward one another and are one each defined at the upper end of each of said side portions of said bail, said ears being one each received in said aligned apertures of said discharge spout and said tubular conduit, and said clip portion of said bail being adapted to clip on and tightly grip an outer surface portion of said tubular conduit.

3,099,374
CANISTER HARNESS
Robert L. Henke, Pittsburgh, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 29, 1962, Ser. No. 198,596
6 Claims. (Cl. 224—5)

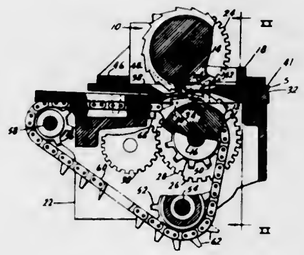
1. A canister harness comprising a cover shaped to fit over the top of a chemical canister and having a top surrounded by a depending flange, the flange at the back of the cover having an integral downward extension, the top of the cover having a central opening therethrough for a canister neck and having slots at opposite sides of said opening adjacent the back of the cover, the central portion of said flange extension being provided with a pair of slots, a carrying strap doubled on itself and having end portions extending down through said top slots and

out through said extension slots in crossed relation and then down below said extension and forward and upward to the front of the cover, and means fastening the



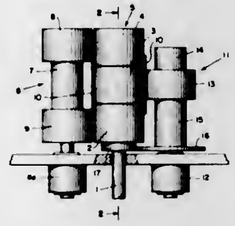
ends of the strap to said flange at the front of the cover, whereby the portions of the strap beneath the cover form loops for supporting a canister in the cover.

3,099,375
GUM BREAKING DEVICE
Lawrence W. Schoppee and Francis Crescenzo, Springfield, Mass., assignors to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts
Filed Oct. 7, 1960, Ser. No. 61,175
2 Claims. (Cl. 225—97)



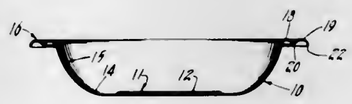
1. A gum breaking device for separating scored slabs of gum into individual sticks, said device comprising an upper and a lower toothed wheel, the pitch of the teeth on the upper wheel being the same as the pitch of the teeth on the lower wheel, and the pitch of the teeth on both wheels being slightly less than the distance between the scores on the slabs, the major diameters of said wheels being the same, means for rotating both of said wheels in opposite directions at the same rate whereby their peripheral rates will be the same, the trailing faces of the teeth on the upper wheel being disposed substantially radially thereof, the leading faces of the teeth on the lower wheel also being disposed substantially radially thereof, said wheels rotating about parallel axes with their teeth in meshing relation, the trailing faces of the upper teeth and the leading faces of the lower teeth being successively brought into closely adjacent relation as the teeth are rotated into said meshing relation, and a platform leading to the infeed bite of said wheels and along which scored slabs of gum are urged with the scores transverse to their path of advance, said lower wheels having circumferential grooves, said platform being substantially at the level of the upper extent of travel of the teeth on the lower wheel and having extensions projecting into said slots to support the leading end of the slab of gum, said extensions terminating short of a vertical plane through the axis of the lower wheel, whereby support of a stick of gum being broken from the slab will be transferred from the platform to a tooth on the lower wheel moving at the same peripheral rate as the slab of gum.

3,099,376
TAPE FEEDING DEVICE
Buford K. Kennedy, Greenbelt, Md., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 8, 1961, Ser. No. 115,641
3 Claims. (Cl. 226—108)



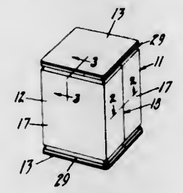
1. A capstan means for driving a tape in a loop comprising a capstan having a driving hub for rotationally driving said capstan, a plurality of similar cylindrical segments concentrically supported by said hub, said segments forming a cylindrical tape-supporting surface, bearing means for supporting one of said segments on said hub as an independently rotatable segment, and means joining the remaining ones of said segments to said hub as fixed segments, a first pinch roller arranged to grip said tape between said roller and said fixed segments, said gripping of said tape being effective to impart a first motion to said tape in said loop, a second pinch roller arranged to grip said tape between said second roller and said rotatable segment to tend to impart a second motion to said tape in said loop, and means for driving said second roller at a different rotational speed from that of said hub whereby said first roller and said second roller are arranged to have different peripheral speeds.

3,099,377
DISH OR THE LIKE
Charles L. Metzler, Palisades Park, N.J., and John D. Wark, Freeport, N.Y., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 17, 1960, Ser. No. 50,123
1 Claim. (Cl. 229—2.5)



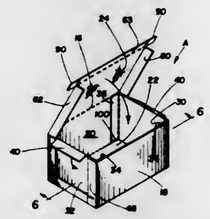
A one-piece fibre dish comprising a central panel forming the bottom of said dish, an upstanding side wall integral with and surrounding said panel, and a peripheral reinforcing rim integral with and extending outwardly of said wall substantially parallel to said panel to impart rigidity to said dish, said rim comprising a pair of continuous, arc-shaped channels interconnected in a V-shaped, continuous rib projecting downwardly, said channels having cross-sections of substantially equal curvature and having their uppermost surfaces lying in a plane parallel to said panel, the innermost of said channels smoothly merging with said wall in an unabrupt juncture, the outermost channel terminating in a peripheral skirt extending downwardly below said V-shaped rib.

3,099,378
CONTAINER
George Oscar Schroeder, Palatine, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 18, 1961, Ser. No. 83,426
13 Claims. (Cl. 229—5.5)



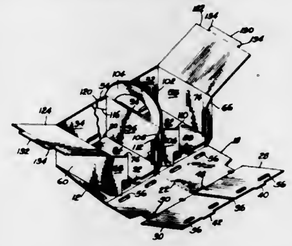
1. A container formed from a fiber sheet material having a liquid impervious layer on at least one surface thereof comprising a tubular body, a longitudinally extending side seam on said body, an end closure and an end seam securing said end closure to said body, said body and said end closure having said liquid impervious layer disposed interiorly of the container, said seams being lap seams formed by two overlapped margins having contiguous surfaces bonded together, the interiorly disposed margin of at least one of said lap seams having a folded edge comprising a marginal portion having the fiber remote from said liquid impervious layer tapered towards a terminal edge and forming substantially a feather edge at said liquid impervious layer, said tapered marginal portion being folded back upon itself with said liquid impervious layer disposed outwardly of the fold, said folded edge having an overall thickness not exceeding the thickness of the adjacent material, the liquid impervious layer of said interiorly disposed margin extending around said folded edge and having a terminal edge interposed between the bonded surfaces of said lap seam whereby the interior surface of said lap seam is free of exposed fiber surfaces.

3,099,379
REINFORCED SHIPPING CARTON
Ralph E. Stease, Cincinnati, Ohio, assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Mar. 18, 1959, Ser. No. 800,339
8 Claims. (Cl. 229—23)



1. A carton comprising: a plurality of side panels each having a pair of opposed vertically disposed edges; a connecting flap extending from each of said edges of all of said side panels; and a plurality of vertically extending metal strip connecting members respectively disposed between all of said connecting flaps and the adjacent side panels to secure said side panels together at adjacent edges thereof, said connecting members each including outwardly extending penetrating tongue portions lockingly embedded in the respective connecting flap and side panel to overlappingly secure said connecting member, connecting flap, and adjacent side panel together, to increase the strength of said corners of said carton against rupture and against deformation by stacking like cartons thereon.

3,099,380
SEPARABLE COMPARTMENTED CONTAINER
Irwin E. Nathan, Lincolnwood, Ill. (1705 S. Ashland Ave., Chicago 8, Ill.)
Filed Nov. 13, 1961, Ser. No. 151,733
7 Claims. (Cl. 229—27)



1. A container formed entirely of sheet material from a single unitary blank comprising an outer bottom wall, a pair of inner bottom walls lying end-to-end and in face-to-face contact with said outer bottom walls, an end wall connected to the outer edge of each of said inner bottom walls, a retaining tab having a retaining finger connected to each of said end walls, a partition panel connected to the inner edge of each of said inner bottom walls and lying in vertical face-to-face contact, a retaining tab having a retaining finger connected to one edge of each of said partition panels, a smaller retaining tab having a retaining finger connected to the opposite edge of each of said partition walls, a handle having a cut-out portion hingedly connected to the top edge of each of said partition panels, a pair of outer side walls connected to opposite edges of said outer bottom wall, an inner side wall connected to the free edge of each of said outer side walls, each of said inner side walls being formed with a slit to afford a pair of inner side walls, said vertical partition panels being accommodated between said slits, one of said outer side walls and associated inner side walls being formed with four retaining notches cooperating with said end wall and partition panel retaining tab fingers for locking and maintaining said container in operationally assembled condition, the other of said outer side walls and associated inner side walls being formed with two retaining sockets cooperating with said smaller retaining tab finger for locking and maintaining said container in operationally assembled condition, a cover panel hingedly connected to each of said end walls, locking means for positively but releasably locking said cover panels in container closing relationship, and means for readily separating said container between said partition panels to afford a pair of individual containers.

3,099,381
EXTRA PANEL CARTONS
Harold S. Meyers, Minneapolis, Minn., assignor to Waldorf Paper Products Company, Ramsey, Minn., a corporation of Minnesota
Filed Apr. 2, 1962, Ser. No. 184,096
8 Claims. (Cl. 229—37)

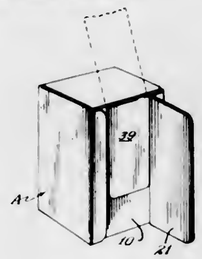
4. A fifth panel carton having a concealed information area including,

rectangularly arranged side and end walls hingedly connected together,

a fifth panel connected to one said end wall along a hinge line and overlying the adjoining side wall and substantially contiguous therewith,

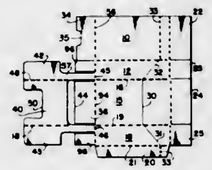
top and bottom end wall closing flaps hinged to the

upper and lower ends of said end wall panels and foldable into a common plane,
a top closure panel hinged to the upper edge of the side wall panel opposite to said adjacent side wall,
a tuck flap on said closure panel foldable between the edges of said top end wall closing flaps and said one side wall,
a bottom closure panel hingedly connected to the lower end of one of said side wall panels,
a tuck flap on said bottom closure panel foldable between the edges of said bottom end wall closure flaps and the other side wall,



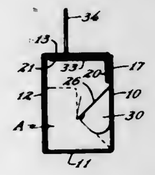
a flap hinged to said adjacent side wall along the upper edge thereof,
said flap being narrower in width than said adjacent wall, and centered with respect thereto,
said flap being folded between said adjacent wall and said fifth panel,
said fifth panel having parallel marginal portions on opposite sides of said flap,
means securing said marginal portions to the edges of said adjacent wall, and
a weakened line of separation extending across said fifth panel substantially coinciding with one edge of said flap which is parallel to said line of hinge.

3,099,382
CARTONS FOR ELONGATED ARTICLES
John E. Talbert, New Canaan, Conn., assignor to American Machine and Foundry Company, a corporation of New Jersey
Filed June 28, 1956, Ser. No. 594,630
7 Claims. (Cl. 229—44)



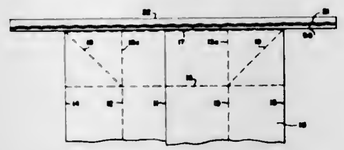
1. A carton blank of the character described comprising an inner member and an outer member, said outer member including outer front, rear and side panels connected side by side in longitudinally aligned relation, flaps on all the bottom edges of said outer panels for forming a bottom wall on the assembled carton, said inner member including inner front and side panels connected side by side in longitudinally aligned relation and said inner side panels being integrally connected to said outer side panels and adapted to be superimposed upon said outer side panels, said superimposed inner and outer members being arranged for folding through a series of four folds into open tubular form, a glue flap on said outer member for retaining said blank in said open tubular form, said outer front and side panels having a continuous transverse slit therein extending through the portions thereof upon which said inner member is superimposed, a score line extending across said outer rear panel below the upper edge thereof and adapted to extend between opposite ends of said slit in the assembled carton, the portions of said outer panels between the upper edges thereof and said score line and said slit providing front, side and rear walls of a reclosable lid in the assembled carton, flaps on the upper edges of said outer panels for forming a top wall on said lid, and portions of said inner panels extending toward the upper edge of said outer member to be positioned in the path of movement of said front wall when the lid of the assembled said carton is swung about said score line.

3,099,383
CARTON
John R. Redpath, Western Springs, and Lawrence S. Wysocki, Chicago, Ill., assignors to Chicago Carton Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 9, 1962, Ser. No. 185,940
4 Claims. (Cl. 229—52)



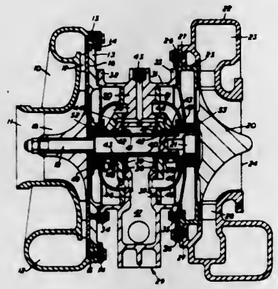
1. A carrier carton including a paperboard body including a bottom wall, and rectangularly arranged side and end walls connected thereto to extend upwardly therefrom, a top panel hinged to one of said side walls and including a tuck flap foldable inwardly of the opposite side wall, flaps foldably connected to said end walls and foldable beneath said top panel, a reinforcing member hingedly connected to said tuck flap along a line of fold parallel to that connecting said tuck flap to said top panel, said reinforcing member including a tuck reinforcing flap and a top reinforcing panel, means connecting said tuck reinforcing flap and top reinforcing panel in face contact with said tuck flap and said top panel to provide a double thickness area, and a handle cut from the upper thickness of the top and foldably connected thereto.

3,099,384
BAG CLOSURE
Robert O. Baxter, Camden, Ark., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed Jan. 23, 1962, Ser. No. 168,047
4 Claims. (Cl. 229—62)



3. In a paperboard bag adapted by means of a release coating on its interior to contain highly viscous products and having a flat bottom defined therein by means of scores, a bottom closure comprising thread stitching means across one end of a flattened bag tube, a metallic wire interlaced with the stitching means, and paper tape reinforcing means disposed between the tube and the wire wherein the stitching means, the wire, and the reinforcing means extend beyond the sides of the tube.

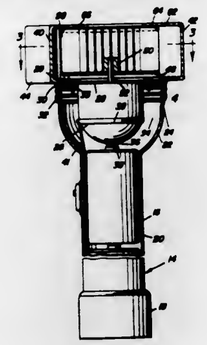
3,099,385
TURBO BLOWERS
Lionel Harvey Elford, Greenford, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain
Filed Mar. 6, 1961, Ser. No. 93,773
Claims priority, application Great Britain Mar. 7, 1960
3 Claims. (Cl. 230—116)



1. A turbo blower comprising a shaft having two ends, a turbine rotor on one end of said shaft, a compressor rotor on the other end of said shaft, a turbine housing, a compressor housing, a central casing disposed between said turbine housing and said compressor housing, means connecting said housings to said central casing, a transverse annular web integral with said central casing and having a central aperture through which said shaft passes, two axially spaced thrust bearing means for said shaft adjacent said transverse annular web on opposite sides thereof between said web and said housings, each of said thrust bearing means comprising a body, an annular plate for transmitting thrust between the annular web and the shaft disposed between said body and said annular web with a portion of said annular plate projecting inwardly of said central aperture of the annular web towards said shaft, and a flange on said shaft in co-operative thrust bearing relation with said projecting portion of said annular plate, and two journal bearings for the shaft from the central casing, each supported axially from one of the bearing means.

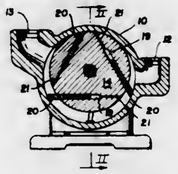
3,099,386
PORTABLE BLOWER
Howard B. Pieper, 1141 Easton Ave., Waterloo, Iowa
Filed Sept. 30, 1960, Ser. No. 59,702
3 Claims. (Cl. 230—117)

1. In combination, an elongated switch-equipped flashlight casing constituting a handle and housing, open at an outer end, dry cell batteries mounted in said casing, an electric motor telescoping removably into the outer end portion of said casing, operable by the switch, and axially aligned with and having a contact at an inner end engaging an adjacent one of said batteries, a motor positioning adapter plate removably seated on said outer end and constituting a closure therefor, said plate also abutting and being separably fastened to the outer end of said motor, said motor having a power shaft extending through and beyond an opening provided therefor in said plate, a bladed impeller embodying an imperforate plate having an axial hub operatively connected to said shaft and spaced from but in parallel relation with said adapter plate, the latter, motor and impeller constituting a readily applicable and removable subassembly, a blower head embodying an in line hollow housing enclosing said impeller and having an inner attachable side provided with a collar encircling and separably joined to the outer end of the casing, provided with means engaging and clamping said plate to said outer end, having an outer side with



a central air inlet aperture aligned with the blades of said impeller, and also having a tangential air discharge nozzle on its body portion extending normal to the axis of the motor and casing.

3,099,387
VACUUM AND AIR PUMPS
Franklin H. Beckfield, % Beckfield Rotary Vacuum Blower Co., 72 1st Ave., Pittsburgh 22, Pa.
Filed July 21, 1960, Ser. No. 44,418
4 Claims. (Cl. 230—152)

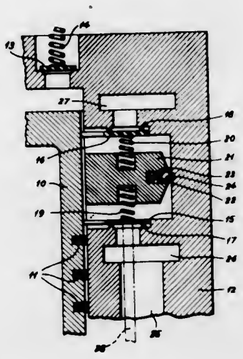


1. In a rotary vane pump having a housing, a cylindrical bore in the housing, inlet and outlet ports communicating with said bore, the improvement comprising a rotor in said bore rotatable on a shaft journaled in the housing and spaced from the parallel to the axis of the bore, said rotor having slots in said rotor transverse to the periphery of the rotor and terminating in said rotor, vanes movable in said slots in contact with the inner periphery of the bore, passages of smaller cross section than said slots lying in the plane of the slots throughout the extent of said passages communicating between the bottom of each slot and the periphery of the rotor adjacent the leading surface of the next following adjacent vane with respect to the direction of rotation of the rotor whereby the area of the slot beneath the vane is open to the bore during the entire period that the said next adjacent blade is moving out of the retracted position and returning to the retracted position, and lubricant reservoir means in the housing delivering lubricant along the shaft to the rotor.

3,099,388
ARRANGEMENT OF THE INLET VALVES IN PISTON COMPRESSORS
Vagn Hovgaard Villadsen, Aarhus, Denmark, assignor to Aktieselskabet Thomas Ths. Sabroe & Co., Aarhus, Denmark, a Danish joint stock company
Filed July 5, 1960, Ser. No. 40,626
4 Claims. (Cl. 230—228)

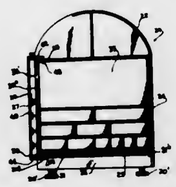
1. A reciprocating piston fluid compressor including a cylinder having inlet and outlet valves for fluid to be

compressed, an inlet valve at one end of said cylinder including a pair of ring valve plates concentric to and lying in planes at a right angle to the axis of said cylinder, the wall of which is arranged to define a cavity for receiving said pair of plates, an auxiliary abutment ring within said



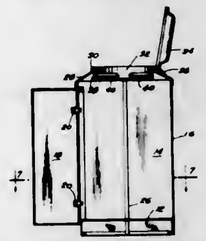
cavity between said pair of valve plates and defining a pair of spaces on opposite sides of said abutment ring facing either of said valve plates, and compression springs on opposite sides of said abutment ring tending to urge said valve plates against their seats and to keep said ring floating intermediate said valve plates.

3,099,389
TOY POST OFFICE
Judith Vadnai, 12 Marshall St., Irvington, N.J.
Filed June 19, 1961, Ser. No. 118,061
1 Claim. (Cl. 232—24)



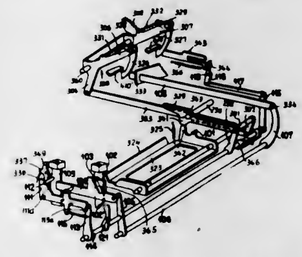
A toy post office box comprising front, rear and side walls, said side walls having semicircular upper portions, a flat top panel extending between the tops of said front and rear walls, and between said side walls below said semicircular portions, a vertical panel extending upwardly from said flat top panel to the tops of said semicircular upper portions, an arcuate hood extending from said rear wall to the top of said vertical panel and conforming to the curvature of said upper portions, said front wall having a large opening therein, a plurality of compartmented drawers slidable into and out of said box through said opening, outwardly projecting knobs on the front of each of said drawers, a bottom panel for said box, a cross bar below said bottom panel adjacent said front wall, said top panel having a slot therein adjacent its forward edge, a closure panel having a flat inner surface engageable with said konbs, an upper flange and a lower flange at the top and bottom of said closure panel and extending at right angles to said flat inner surface, a short top inner flange engageable in said slot in said top panel depending from said upper flange, a long bottom inner flange extending upwardly from said lower flange engaging behind said cross bar, and a knob on the top of said upper flange.

3,099,390
REFUSE RECEPTACLE
Roy R. Dylla, Chicago, Ill.
Filed Apr. 20, 1961, Ser. No. 104,313
3 Claims. (Cl. 232—43.2)



1. A refuse receptacle of the class described comprising a cabinet having side walls and a roof, door means in one of said side walls for affording ready access to the interior of said cabinet, a refuse hatch formed in said roof through which refuse may be deposited into a container positioned in said cabinet, a lid mounted on said roof and adapted to selectively close said hatch, a collar circumscribing said hatch, and retaining means on the inner surface of said collar for releasably retaining a non-rigid container in operational position within said cabinet, said retaining means comprising a plurality of spaced inwardly projecting lugs, said lugs being elongate and conforming to the configuration of the inner surface of said collar, said lugs cooperating with a portion of said non-rigid container to freely suspend said non-rigid container therefrom.

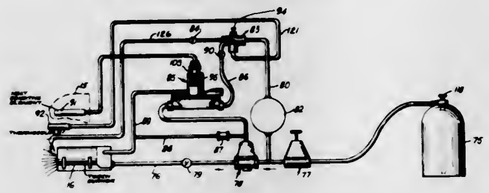
3,099,391
TEN KEY COMPUTING MACHINE
Werner Heinze, Zurich, Switzerland, assignor to Precisa A.G. Rechenmaschinenfabrik, Zurich, Switzerland
Filed Sept. 28, 1960, Ser. No. 59,039
4 Claims. (Cl. 235—60)



1. In a ten key computing machine, a frame structure supporting a ten key keyboard, a slidable setting mechanism, at least one accumulator mechanism, a repeater mechanism, a printing mechanism, transmission means selectively connectible to said mechanisms for operation thereof, a transfer mechanism for transferring numerical values back from the repeater mechanism and the accumulator mechanism to the setting mechanism, a clutch means for coupling the transmission means with the setting mechanism, and means associated with said transfer mechanism for moving the setting mechanism in a two stage switching movement from a first operative position to an inoperative position and from said inoperative position to a second operative position corresponding to the next higher decade position, said means associated with said transfer mechanism including a switch lock adapted to control said stagewise switching movement of the setting mechanism, a repeater key controlling the repeater mechanism, a pawl operatively connected with said repeater key

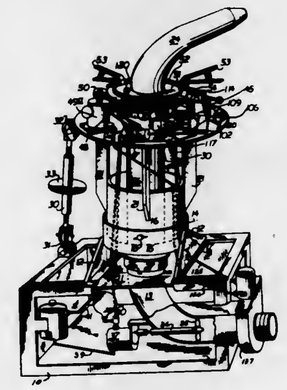
and switch lock and adapted upon actuation by said repeater key to stop the setting mechanism in said inoperative position, and a transfer key in said transfer mechanism adapted to engage said clutch means.

3,099,392
TEMPERATURE CONTROL SYSTEMS
Paul Wollner, North Bergen, and Richard H. Walter, Jr., Ramsay, N.J., assignors to Aeroil Products Company, Inc., South Hackensack, N.J., a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,884
3 Claims. (Cl. 236—21)



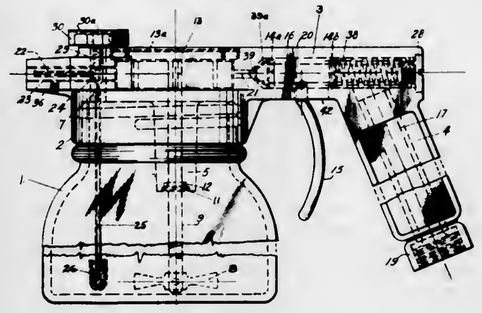
1. A control system for controlling the flow of liquefied petroleum gas in liquid form to the burner of an apparatus for melting material, said system comprising a receptacle for containing liquid fuel under pressure, a fuel supply line connected with said receptacle, a liquid fuel flow control valve interposed in said supply line having a diaphragm and a valve port on one side of said diaphragm and a valve element in operative engagement with said diaphragm for controlling the flow of liquid fuel through said valve, means biasing said valve element to maintain said valve in normally closed relation, a pipe line connected with said flow control valve on the side of said diaphragm opposite said port and connected with the fuel supply line on the inlet side of the flow control valve, a vaporizer arranged in said pipe line providing a relatively large surface area in engagement with the ambient atmosphere and having a relatively large capacity for the liquid fuel whereby the liquid fuel is vaporized therein by heat obtained from the atmosphere surrounding the vaporizer which vapor occupies the space above the liquid fuel in the vaporizer for the flow of the vapor through said pipe line at the pressure of the liquid fuel on the inlet side of said flow control valve, a safety valve arranged in said pipe line having a valve port and a valve element for controlling the flow of vapor through said valve, means biasing the valve element of said safety valve to maintain said valve in normally closed relation, a pilot burner connected by piping with the outlet side of said safety valve for the flow of vapor to said pilot burner for igniting the burner of the apparatus when said safety valve is open, thermocouple means arranged in position to receive heat from said pilot burner and connected with said valve element of said safety control valve for maintaining the valve thereof in open relation when said thermocouple means is heated by a flame from said pilot burner and whereby the valve element is moved to closed relation by the biasing means thereof to shut off the flow of vapor through said valve in the event the flame from the pilot burner is extinguished, a vapor flow control valve arranged in said pipe line between said safety valve and said liquid flow control valve and having a valve element and means biasing said valve element to maintain said valve in normally closed relation, and said vapor flow control valve having heat sensitive thermostatic means subject to the heat of material being heated in said apparatus and functioning to move the valve element thereof to close said valve and thereby eliminate the pressure of the vapor on the diaphragm of said liquid fuel flow control valve in the event that the temperature of said heat sensitive means reaches a predetermined temperature whereby the valve element of said liquid fuel flow control valve is moved by the biasing means thereof to closed relation to thereby shut off the flow of liquid fuel in said liquid fuel supply line.

3,099,393
IRRIGATION UNIT
Ralph C. Lent, Ewa, Hawaii, assignor to Hanawai Manufacturing Company, Limited, Honolulu, Hawaii, a corporation of Hawaii
Filed June 14, 1962, Ser. No. 202,421
15 Claims. (Cl. 239—97)



1. An irrigation device including in combination, a base member, a spray nozzle rotatively mounted on said base member, a water intake adapted for attachment to a source of water and connected to said spray nozzle, driving means connected to said spray nozzle for rotating said nozzle, and control means operatively connected to said nozzle and to said driving means, said control means being preadjustable with respect to prevailing wind direction in order to impart acceleration of movement to said movement of said nozzle whenever said nozzle movement passes into any upwind sector during rotation in whichever direction said nozzle is being motivated.

3,099,394
SPRAYING DEVICES
Alger M. Lynn, Miami, Fla.
(176 Cromwell Road, London SW. 5, England)
Filed Apr. 27, 1961, Ser. No. 106,032
5 Claims. (Cl. 239—142)



1. In a sprayer, a container for receiving a suspension of matter, a cover on said container having a passage-

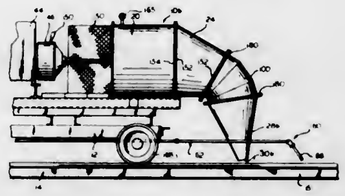
way therethrough terminating at one end in a nozzle for projecting water flowed through the other end, said cover having a chamber intersecting said passageway, a rotor mounted in said chamber for rotation by the flow of water, an agitator positioned within said container and connected to said rotor for imparting a turbulence to the entire suspension in said container, aspirator means within said cover and positioned within said passageway between said chamber and said nozzle, and a tube extending from said aspirator means into said suspension in said container.

3,099,395
IRRIGATION SYSTEMS
Harlie O. Petersen, 4012 C St., Lincoln, Nebr.
Filed Apr. 12, 1962, Ser. No. 186,970
3 Claims. (Cl. 239—562)



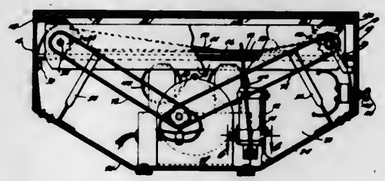
1. An irrigation pipe having an opening therein for permitting the flow of water from the pipe as desired, means for opening and closing the opening in the pipe, including a pad within the pipe, an elongated yoke member outside of the pipe, a plate engaged at one end to the pad within the pipe and having a pair of spaced flanges thereon, one intermediate the length of the plate and another near the free end thereof, and a cross bar on the yoke located to push the intermediate flange of the plate to the right to open the opening in the pipe, and the flange at another portion further positioned from the pad and adapted to engage a second cross bar on the yoke so that movement of the second cross bar to the left will push the plate closed.

3,099,396
SNOW BLOWER APPARATUS
Richard G. Simmons, 3009 George St., Franklin Park, Ill.
Filed Feb. 27, 1961, Ser. No. 91,717
1 Claim. (Cl. 239—590)



A nozzle for railroad track snow blower apparatus, said nozzle comprising a tubular structure formed to define a rounded inlet opening at one end and an elongate outlet opening at the other end thereof having an effective discharge area that is at least on the order of one and one-half square feet, with the long dimension of said outlet opening being on the order of twenty-four times as long as the narrow dimension thereof, said outlet opening thereby being proportioned to permit an air flow therethrough at a rate on the order of 10,000 cubic feet per minute, said outlet opening being proportioned to extend over and between the rails of a track, when the nozzle is positioned above a track with said outlet extending transversely thereof, said inlet opening being proportioned to admit air flow into said nozzle at said rate, said tubular structure including baffle means for symmetrically subdividing the bore of said tubular structure into passages extending longitudinally of said tubular structure, said baffle means comprising spaced imperforate planar members disposed in planes that are perpendicular to the plane that includes both the axis of said bore and the longitudinal axis of said outlet opening and that diverge outwardly of said outlet opening, and a pair of supplemental flow deflecting baffles secured within said tubular structure adjacent said outlet opening, said supplemental baffles being disposed on either side of said bore axis adjacent the ends of said outlet opening longitudinal axis and being respectively secured to an adjacent planar member of said planar members and projecting toward said opening, said supplemental baffles extending substantially parallel to the respective sides of said tubular structure that they are adjacent to.

3,099,397
COLOR ILLUMINATING DEVICE
Louis M. Abbott, 4437 N. Seeley Ave., Chicago 25, Ill.
Filed Apr. 18, 1962, Ser. No. 188,391
1 Claim. (Cl. 240—3.1)



In an illuminating device including a casing, a source of illumination within said casing, a pair of rotatable shafts disposed one on each side of said source, a reversible motor mounted within said casing, a drive shaft projecting from said motor, a single-throw double-pole switch electrically connected to said motor, and an elongated sheet having the portion adjacent one end wound on one of said shafts and having the other end connected to the other shaft for winding thereon responsive to rotation of said other shaft, a sprocket fixedly secured to each of said rotatable shafts, a pair of sprockets arranged in spaced relation and freely rotatable on said drive shaft, a chain drivably connecting each of said rotatable shaft sprockets to one of said drive shaft sprockets, a disc carried by each of said drive shaft sprockets, each of said discs being provided with tangentially facing notches, the notches of one of said discs facing in the opposite direction to the notches of the other of said discs, a U-shaped bracket connected to the portion of said drive shaft between said discs for rotation therewith, a pin extending between the legs of said bracket and carried thereby, a pair of springs each having one end connected to said pin and each having the other end receivably engaged in the notches of the adjacent one of said discs, one of said springs being operable to drive one of said drive shaft sprockets in one direction responsive to rotation of said drive shaft in one direction and the other of said springs being operable to drive the other of said drive shaft sprockets in the other direction responsive to rotation of said drive shaft in the other direction, and means carried on each end of said sheet operatively connected to said switch operable to actuate said switch in one direction responsive to traveling movement of said sheet when wound upon one of said rotatable shafts and operable to actuate said switch in the other direction responsive to winding of said sheet upon the other of said rotatable shafts.

3,099,398
COMBINATION TOOL BOX AND STAND
Lionel Croteau, 629 Mercury St., West Palm Beach, Fla.
Filed Oct. 28, 1960, Ser. No. 65,622
4 Claims. (Cl. 240—4)



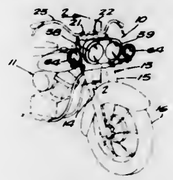
1. For use by a mechanic, particularly a mechanic engaged in vehicle repair work in a service garage; a portable base, said base being in the form of a stool and of hollow construction and providing an enclosed compartment, said base embodying top, bottom, front, rear and end walls defining said compartment, the bottom wall being elevated above lower portions of the encompassing front, back and end walls, said bottom wall being provided on an underneath side thereof with a slidingly mounted tool drawer, said front wall having an unrestricted opening communicating with the compartment, said top wall providing a sturdy standing platform, a cushion normally superimposed upon said top wall and having one lengthwise marginal edge hingedly attached to an upper portion of a cooperating rear wall, said cushion providing a seat and being swingable to an out-of-the-way position against the back wall when not being used, one end wall being provided with a switch and an electric power takeoff receptacle, a socket containing a lamp bulb mounted on the interior of the rear wall within the confines of said compartment, said rear wall having an opening, a hingedly mounted panel normally fitting into and closing said opening, said panel provided with an interiorly disposed cord reeling spool whereby to permit an extension cord to be wound on the spool with the extension cord electrically connected with the socket as well as the aforementioned switch and outlet.

3,099,399
COMBINATION FLASHLIGHT AND KEY HOLDER
Howard Kibby, Box 943, Jal, N. Mex.
Filed July 31, 1962, Ser. No. 213,658
3 Claims. (Cl. 240—6.4)



1. In a combination flashlight and key holder including a casing, a flashlight battery within said casing, said battery having a shell terminal and an end terminal, and a bulb mounted in one end of said casing, said bulb having an end contact electrically in circuit with said battery end terminal, there being a slot in said casing, the improvement consisting in the provision of a stud mounted in said slot for sliding movement therealong and for rotary movement relative to said casing when in the projected position, a slide element within said casing and having a midpart fixedly secured to said stud for sliding and rotary movement with said stud, and means operatively connected to the portion of said stud exteriorly of said casing for securement there.o of a key for sliding and rotary movement with said stud, said slide element having the portions adjacent the ends thereof engaging said battery shell terminal when said stud is in the retracted position, and said slide element having one end portion engaging said shell terminal and the other end portion engaging said bulb shell contact when said stud is in the projected position, said slide element when said stud is in the projected position and rotated a quarter turn having said end portions out of engagement with both said shell contact and said shell terminal.

3,099,400
DUAL HEADLIGHTS FOR MOTORCYCLES
Lucas C. Holmes, 324½ W. 76th St., Los Angeles 3, Calif.
Filed Feb. 19, 1962, Ser. No. 174,135
2 Claims. (Cl. 240—7.55)

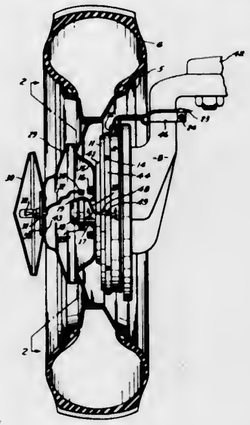


1. A dual headlight assembly for a motorcycle, comprising a horizontally elongated main frame adapted to be supported with its longer dimension extending transversely across the front end of a motorcycle forwardly of the steering column thereof, a pair of sealed beam type lamps mounted in side-by-side relation at the opposite end portions of said main frame, means for detachably securing said lamps in place in said main frame, a combined housing and mounting bracket for said main frame comprising a pair of generally similar shell members adapted to be assembled toward one another over the opposite lateral ends of said main frame and being notched horizontally from their adjacent edges to receive and fit about the legs of the front fork of a motorcycle and arranged to support said main frame and head lamps immediately forwardly of the legs of said fork, the adjacent edges of said shells overlapping one another in the assembled position thereof, means for securing said shells rigidly to a motorcycle front wheel fork, means for securing the overlapping edges of said shells to one another, other means for securing the opposite ends of said main frame for said lamps to adjacent portions of said housing shells, a unitary trim and appearance frame having openings to expose the front face only of said lamps and closely embracing the rims of said lamps with its rear edges positioned to bear against the forward edges of said housing shells, and means for detachably securing said trim and appearance frame to said housing shells and to the main frame for said two lamps.

3,099,401
ILLUMINATION MEANS FOR AUTOMOTIVE WHEELS
Joseph P. Bell, 5256 Philip St., Maple Heights 37, Ohio
Filed Jan. 30, 1961, Ser. No. 85,651
2 Claims. (Cl. 240—8.12)

1. In an illuminating device adapted to be attached to the wheel of a vehicle, a hub cap resiliently mounted on said wheel, means mounted on the outside of said hub cap, said means forming a housing for a source of illumination, a brake drum, a circular metal conductive band fixedly mounted about the periphery of said drum and spaced therefrom throughout its entirety by insulating means, a source of electrical energy and circuit means including brush means secured to a vehicle frame support,

said brush means continuously contacting said conductive band, a cable, a socket mounted within said hub cap, said cable being electrically connected to said band and said socket, a pin plug connector being separably connected to said socket, a second cable, said second cable being electrically connected to said pin plug connector and to said illuminating source whereby the source of electrical energy, said band, and said illumination source are separably connected.



3,099,402
FLASHLIGHT
Josef Speck, St. Georgenstrasse 216a, Sankt Gallen, Switzerland
Filed Mar. 14, 1961, Ser. No. 112,137
Claims priority, application Switzerland Mar. 16, 1960
2 Claims. (Cl. 240—10.66)



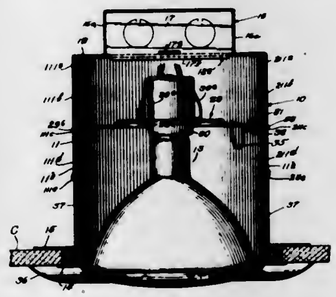
1. An electric flashlight, having a tubular housing and an electric circuit including a dynamo member and a bulb, comprising in combination, two storage means operable independently of each other for storing energy, one of said storage means including a spring motor in driving connection with said dynamo member, and comprising at least two springs for long-time operation of the spring motor, two series-connected casings each housing one of said springs, winding means connected to said spring motor and including a rotor forming a rear cover for said housing and an elongated loop element pivoted to said rotor and having a width at least as large as the width of said housing and being tiltable between a winding position wherein it extends substantially radially of the axis of the housing for manual rotation of said rotor about said axis to wind said spring motor rapidly and, respectively, an inactive position wherein it engages throughout a portion of the loop the tubular surface of the housing, a gear train disposed axially symmetrically of the housing and arranged between said spring motor and said dynamo member, the other storage means including a battery member interconnected in said electric circuit in parallel with said dynamo member and with said bulb, whereby said bulb may be fed from either member.

3,099,403
LIGHT FIXTURE
Raymond L. Strawick, 730 S. Lincoln Place, Spokane 4, Wash.
Filed Dec. 10, 1959, Ser. No. 858,683
15 Claims. (Cl. 240—47)



1. A light fixture including a reflector having a substantially continuous curvate reflecting surface and a surface of substantial curvature, means providing a source of visible and invisible radiant energies, said reflector including a plurality of curvate sections having adjacent edges in substantial abutting relationship, the extent of curvature of said sections being slight so that even deposition of a reflective coating thereon may be obtained, means for holding said sections together, and each section having a transparent carrier and a coating on one surface thereof reflecting substantially all of one of said radiant energies and of transmitting substantially all of the other of said radiant energies.

3,099,404
RECESSED LIGHTING FIXTURES
Jack Kaufman, Chicago, Alvin R. Lund, Carpentersville, and Martin W. Schwartz, Chicago, Ill., assignors to Markstone Manufacturing Company, a corporation of Illinois
Filed Nov. 13, 1961, Ser. No. 151,684
10 Claims. (Cl. 240—78)



1. In a recessed lighting fixture: a top plate having a central aperture; a junction box having a continuous perimetrical wall; means detachably mounting said junction box on the top plate with said perimetrical wall surrounding said aperture; a continuous sidewall secured to the margin of said top plate and extending away from said junction box, said sidewall cooperating with the top plate to define a housing which is of uniform cross section in planes parallel to the top plate; a socket plate carrying a lamp socket; and interengaging means on said sidewall and on said socket plate movably securing said plate substantially normal to said sidewall and selectively at any of a plurality of positions in said housing, said interengaging means including a latch member on the socket plate which is radially movable.

3,099,405
LUMINAIRE
Donald E. Husby, Fairview Park, and Merle E. Keck, Bay Village, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 6, 1961, Ser. No. 81,058
10 Claims. (Cl. 240—106)



1. An illumination refractor for achieving a predetermined pattern of visible radiations, said refractor comprising:

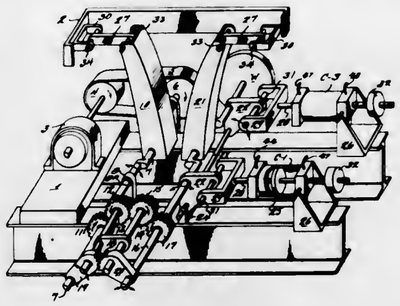
(*a*) a plurality of solid joined curved sections of predetermined limited thickness, each of said sections being substantially similar in size and shape and interchangeable with one another;

(*b*) disengageable light-transmitting interconnecting means forming an integral part of oppositely disposed edge portions of each of said sections and substantially positioned within the predetermined thickness dimension of said joined sections, said interconnecting means being complementally formed and interfittingly engaged and joining together oppositely disposed edge portions of each of said sections to an edge portion of other of said sections to form a single open-ended hollow unitary refractor body, and said interconnecting means forming a part of exposed surface portions of said refractor body; and

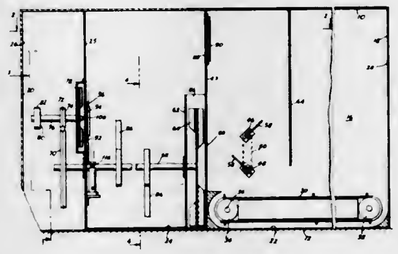
(*c*) each of said sections having predetermined light-refracting properties with respect to light generated within the volume encompassed by said refractor body; whereby a section may be interchanged with another one of said sections to achieve a predetermined light-distribution pattern.

3,099,406
ORE CRUSHER
Harry Paul Kautz, Broomfield, Colo., assignor to Mine and Smelter Supply Co., Denver, Colo., a corporation of Colorado
Filed May 2, 1961, Ser. No. 114,587
11 Claims. (Cl. 241—32)

7. A machine having juxtaposed pressure applying members carried by parallel shafts and arranged in predetermined phased relationship, one of said shafts being a primary shaft mounted in fixed bearings and the other of said shafts being a secondary shaft mounted in displaceable bearings; a gear train interconnecting said shafts for permitting the secondary shaft to move away from the primary shaft without destroying their phased relationship, and a hydraulic overload release mechanism connected to said secondary shaft, the said mechanism including fluid actuated means for phasing said shafts and means maintaining said shafts in their parallel relationship.



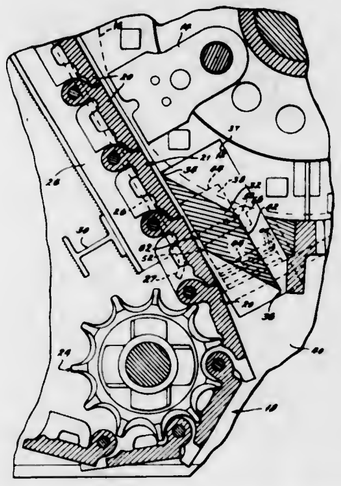
3,099,407
APPARATUS FOR STUFFING DOLLS, OR THE LIKE
Elliott Bavers, Brooklyn, N.Y., assignor to Stuffing Equipment Corp., Brooklyn, N.Y., a corporation of New York
Filed Jan. 31, 1961, Ser. No. 86,089
11 Claims. (Cl. 241—47)



1. Stuffing apparatus of the character described, comprising a housing including a chamber having front, rear, top and end walls, an inlet opening formed in a lower portion of one of said end walls, a blower adjacent said opening, said blower comprising a casing secured on the interior of said chamber over said opening, a rotary shaft extending through said casing and mounting a blower fan within said casing, said shaft journalled in the opposed end wall of said chamber and extending outwardly thereof, beaters mounted on said shaft within said chamber, an electric motor connected in an electric circuit, means operatively connecting said shaft to said electric motor, an opening formed in the opposed of said end walls, a blower disposed over said opening on the exterior of said end wall, said second blower including a casing secured to said wall, a rotary shaft extending through said casing and mounting a second blower fan, means operatively interconnecting said second shaft with said motor, an outlet opening in said second blower casing, a closure for said opening in said second end wall and for said outlet opening of said second blower casing, electrically-actuated means connected in an electric circuit for moving each of said closures in and out of closing position, conveyor means for moving stuffing material to said inlet opening of said chamber, a second motor, said conveyor means operatively connected to said second motor, said second motor connected in the circuit of said closure-moving means, and a switch in the circuit of said closure-moving means and said second motor for simultaneously

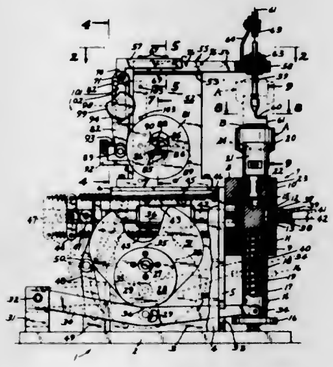
activating and deactivating said motor and said closure-moving means.

3,099,408
HAMMER MILL
Robert M. Williams, Ladue, Mo., assignor to Williams Patent Crusher & Pulverizing Co., Inc., St. Louis, Mo., a corporation of Missouri
Filed Oct. 31, 1960, Ser. No. 66,076
1 Claim. (Cl. 241—187)



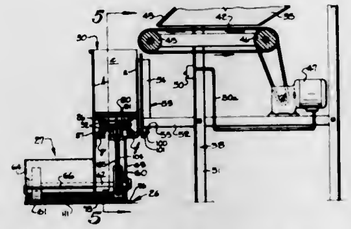
A hammer mill for crushing solid material into particles of a predetermined size comprising a housing, a hammer unit including a rotatable hammer mounted in the housing, said hammer moving along a path defining a hammer circle, a travelling breaker plate structure positioned adjacent to one side of the hammer circle, said structure having a breaker surface adjacent to the hammer circle, and extending substantially tangent to the circle at a point thereon so as to form a pair of substantially V-shaped recesses on opposite sides of the point, a combination breaker and scraper bar having a pair of converging surfaces positioned in one of said V-shaped recesses so that one surface of the bar is parallel to the breaker surface and the other surface of the bar is substantially tangent to said circle, all portions of said bar being rigidly secured together so as to form a rigid unitary structure, said bar surfaces intersecting in a leading edge adjacent to the point of tangency between the breaker surface and the hammer circle, and means mounting end portions of the bar on the housing, said means including a first adjusting means connected to said end portions so as to move said bar in a first direction generally perpendicular to said breaker surface whereby one surface of the bar may be moved by said first adjusting means toward said breaker surface to compensate for wear of said breaker plate structure, and a second adjusting means connected to said end portions so as to move said bar in a direction substantially parallel to said breaker surface whereby the other surface of the bar may be moved by said second adjusting means toward said hammer circle to compensate for wear of said hammer and to regulate the size of the particles crushed by the hammer without effecting the adjustment between the bar and breaker surface, said first and second adjusting means comprising first and second sets of shims having widths substantially greater than their thicknesses, substantially perpendicular shim engaging surfaces on each end portion of the nose bar and a complementary pair of perpendicular surfaces formed on said housing adjacent each end portion, one of said surfaces being parallel to said breaker surface, the width dimensions of the first and second sets of shims being substantially perpendicular to one another and secured between said shim engaging surfaces on the nose bar and the shim engaging surfaces on the housing, aligned apertures formed in each end portion of the bar, said first shim means and a portion of said housing, a bolt extending through said aligned apertures and provided with a threaded adjusting member on one end thereof.

3,099,409
COIL WINDING APPARATUS
Stephen H. Shaw, Hopkins, Minn., assignor to Cedar Engineering Division of Control Data Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 19, 1962, Ser. No. 180,722
6 Claims. (Cl. 242—1.1)



4. In a coil winding machine,
(*a*) a frame structure,
(*b*) means for supporting a generally cylindrical core element of the type having circumferentially spaced axially extending radial pole pieces,
(*c*) means for imparting axial reciprocatory movements and limited oscillating rotary movements to said core element,
(*d*) a wire guide tube extending generally parallel to the direction of reciprocatory movement of said core supporting means and having a wire discharge end portion extending in an angular direction generally radially with respect to a core element carried by said supporting means,
(*e*) said end portion being alternately received between selected circumferentially spaced pole pieces during reciprocatory movement of said supporting means,
(*f*) a support for said guide tube,
(*g*) means mounting and guiding the guide tube support on said frame structure for reciprocatory movements in a direction radially of a core element mounted in said core supporting means,
(*h*) and means for imparting said reciprocatory movements to said guide tube support and comprising,
(*i*) a cam,
(*j*) power operated means for imparting rotary movement to said cam at a predetermined constant slow speed relative to the speed of reciprocatory and oscillatory movements of said core element supporting means, whereby to produce a single movement in one direction of said reciprocatory movement of said guide tube during a plurality of reciprocatory movements of said core supporting means,
(*k*) a rocker arm,
(*l*) a pivot element mounting said rocker arms on said frame structure and adjustably movable longitudinally of said rocker arm to vary the range of reciprocatory movement of said guide tube support, and means for releasably locking said pivot in desired set positions longitudinally of said rocker arm,
(*m*) a cam engaging follower on said rocker arm, and
(*n*) means pivotally securing said rocker arm to said guide tube support in spaced relation to said rocker arm mounting means and said follower, whereby rotation of said cam will impart said reciprocatory movements to said guide tube.

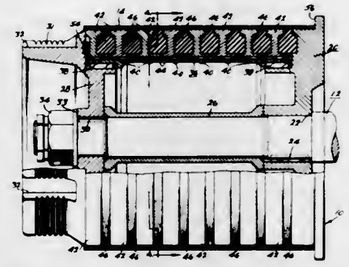
3,099,410
WINDER TENDING APPARATUS
William B. Chambley, Fieldale, Va., assignor to Fieldcrest Mills, Inc., Spray, N.C., a corporation of Delaware
Filed May 28, 1962, Ser. No. 198,198
12 Claims. (Cl. 242—35.5)



1. The combination with a winding machine having an elongate row of winding units thereon of
(*a*) a relatively large storage hopper adapted to contain filled textile bobbins therein and positioned adjacent one end of said winding machine,
(*b*) a movable carriage,
(*c*) an open-topped carriage hopper on said carriage,
(*d*) an upwardly biased movable bottom in said carriage hopper adapted to maintain textile bobbins therein at a convenient level for removal from the carriage hopper,
(*e*) means to guide said carriage in a path substantially parallel to and closely adjacent the winding units and the storage hopper,
(*f*) means for lowering said movable bottom relative to said carriage hopper, and
(*g*) means responsive to movement of said carriage adjacent said storage hopper for actuating said lowering means to move said bottom to a position spaced substantially below the open top of the carriage hopper to facilitate transferring bobbins from said storage hopper into said carriage hopper.

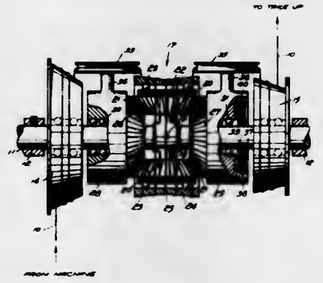
3,099,411
COLLET ASSEMBLY
Cory P. Geen, Philadelphia, Pa., assignor to Industrial Devices, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 3, 1961, Ser. No. 86,994
10 Claims. (Cl. 242—46.5)

1. A collet assembly for winding thread or fiber upon cylindrical tubes and adapted for use with a selectively rotatable drive spindle comprising annular radially expansible drive rings, annular drive ring spacers positioned between said drive rings, mounting means for positioning said drive rings and drive ring spacers on the spindle, said drive rings and spacers collectively providing a cylindrical surface adapted to receive a cylindrical tube, said drive rings and spacers being substantially axially co-extensive with a cylindrical tube upon positioning of a tube over said rings and spacers, rotation of the spindle centrifugally expanding said drive rings thereby gripping



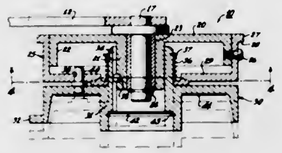
and rotating the tube and effecting and maintaining a true cylindrical tube shape, thus permitting a uniform winding of thread or fiber thereon.

3,099,412
STRAND CONTROL APPARATUS
Axel C. Nystrom, Rutherford, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 2, 1962, Ser. No. 184,143
5 Claims. (Cl. 242—47.01)



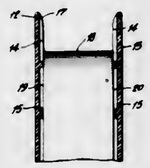
1. A strand control apparatus interposed between a machine to supply a strand and a takeup for the strand comprising:
a rotatable first shive positioned to receive lengths of the strand in turns thereon after the strand leaves the machine,
a rotatable second shive positioned to receive lengths of the strand in turns thereon prior to reaching the takeup,
a control unit interposed between the shives and operable to maintain a predetermined tension in the strand by varying the lengths of the strand in the turns on the shives when the tension in the strand varies from the predetermined tension,
a fixed shaft rotatably supporting the shives,
the control unit including spaced rotatable strand guides disposed adjacent the shives,
supports for the guides rotatable on the shaft,
an intermediate member interposed between the supports and adapted to receive a variable length of the strand in turns thereon, the length of which is controlled by the guides, and
means operatively connecting the supports so that rotation of one of the supports to cause its guide to vary the length of the strand on said first shive will cause rotation of the other support to cause its guide to cause like variation in the length of strand on said second shive.

3,099,413
REEL MOUNTING ASSEMBLY
George H. Kress, Short Hills, and Walter A. Menn, Hillsdale, N.J., assignors to General Precision, Inc., a corporation of Delaware
Filed Nov. 10, 1961, Ser. No. 151,463
4 Claims. (Cl. 242—68.3)



1. A reel hub assembly comprising means for supporting a tape reel including a reel drum and an inner hub sleeve member and having a backing surface, said hub sleeve member defining a groove formed in its surface, a reel retaining member having a reel engaging surface and being mounted to said hub sleeve member, said reel retaining member defining a groove complementary to said hub sleeve member groove, means confined within a portion of each of said grooves for limiting the degree of axial and angular movements of said reel retaining member relative to said hub sleeve member, biasing means urging said reel retaining member toward said backing surface, and means for locating said reel retaining member relative to said hub sleeve member in reel locking and reel unlocking positions.

3,099,414
TAPE REEL HAVING FRICTION REDUCING MEANS
Thomas S. Kulka, 200 Film Bldg., 2108 Payne Ave., Cleveland, Ohio
Filed Feb. 27, 1961, Ser. No. 91,888
1 Claim. (Cl. 242—71.8)



A friction reducing tape reel comprising a hub, parallelly spaced radially extending flanges on said hub, ribs on the inner face of each of said radially extending flanges, the ribs on each of said flanges extending inwardly towards each other in facing relation and generally outwardly from said hub to the periphery of each of said radially extending flanges, the outer end of each of said ribs being curved to gradually reduce its height to zero and gradually merge into the periphery of the flange, said curved rib ends being adapted to provide light contact guidance for the tape during reeling movement thereof relative to the reel under slight misalignment conditions of the reel and tape to minimize objectionable frictional effects.

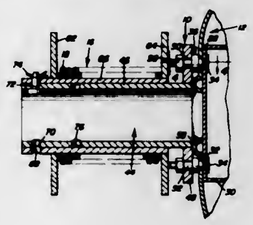
3,099,415
REEL FOR A FILM, TAPE AND THE LIKE
Hiroshi Matsuura, Toshima-cho, Chiyoda-ku, Tokyo, Japan
Filed July 13, 1960, Ser. No. 42,581
Claims priority, application Japan Oct. 31, 1959
2 Claims. (Cl. 242—74.2)

1. A winding reel for a film, tape or the like, comprising a tubular shaft having a pair of circumferentially spaced openings in its tubular wall; a pair of side plates each secured to a respective end of said tubular shaft; an arcuate film clamping plate element curved to conform to the exterior surface of said tubular shaft, said clamping plate element having an end extending through one of said openings and pivoted to said tubular shaft with said end forming a cam extending inwardly from the pivot axis; the free end of said clamping plate element, when the latter is in clamping position, extending over the surface of said shaft beyond the other opening; and a leaf spring



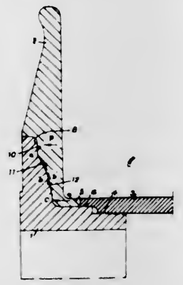
element secured to the tubular wall of said shaft to extend circumferentially of the inner surface of said tubular wall and having a free end engageable with said cam to bias said clamping plate element to firmly engage a film, tape, or the like wound over the outer surface of said shaft to firmly hold the film, tape or the like against said shaft surface; one of said elements having a portion extending through the other opening for clamping engagement with the film, tape or the like to hold the same against the other of said elements through the opening.

3,099,416
REMOVABLE VEHICLE POWERED WINCH OR PULLEY
Newell B. Wright, 498 Aurora Ave., Grants Pass, Oreg.
Filed July 27, 1960, Ser. No. 45,685
8 Claims. (Cl. 242—95)



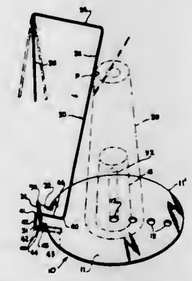
7. In combination with a powered vehicle wheel assembly having a wheel rim adapted to receive a hub cap and a brake drum adapted to be connected to the wheel rim for rotation therewith, tubular mounting means having a mounting flange at one axial end thereof and connecting means at an opposite axial end thereof, spacing lug means connecting said wheel rim to the brake drum in coaxially centered condition and having a projecting portion in contact with the wheel rim extending axially therefrom within the confines of said hub cap when mounted on the wheel rim, means mounting said mounting flange in abutting engagement with said projecting portions of the spacing lug means in axially spaced relation to the wheel rim, and driven rotatable means mounted on said tubular mounting means and disconnectibly secured thereto by the connecting means in axially spaced relation to the mounting flange.

3,099,417
REINFORCED SPOOL
Pierre Portal, Bologne, Haute-Marne, France
Filed Dec. 21, 1960, Ser. No. 77,301
Claims priority, application France July 19, 1960
4 Claims. (Cl. 242—118.62)



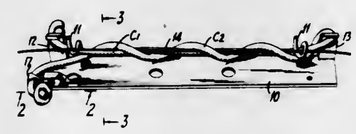
1. A reinforced spool for textile machinery comprising two side plates, a connecting tube, said connecting tube being mounted between said side plates and secured to each of said side plates at its ends, each of said side plates comprising a hub member having a radially outwardly extending rim portion and a rim member having a radially outwardly extending portion of greater diameter than said rim portion disposed between said rim portion and an end of said connecting tube, each rim member also having a central portion abutting against said connecting tube, the modulus of elasticity of the material of said hub member being substantially higher than that of the material of said rim member, each of said rim members having areas of engagement with said hub member adjacent the central portion of said rim member and adjacent the outer periphery of the outwardly extending rim portion of said hub member, each of said rim members and its associated hub member having sligh.ly spaced annular surfaces located radially between said areas of engagement and adapted to be pressed into contact by the forces exerted by windings on said spool.

3,099,418
ANTI-BACKLASH DEVICE FOR KNITTING MACHINES
Robert Schustack, 29 W. 30th St., New York, N.Y.
Filed Feb. 12, 1962, Ser. No. 172,489
9 Claims. (Cl. 242—129.8)



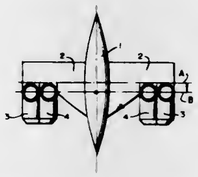
3. In combination with a supporting post, a spool support rotatably mounted on said post, said support including a circular disk having a hole receiving said post, a conical-shaped spool of yarn mounted on said disk over said post, and a wire frame hingedly mounted on the peripheral edge of the disk, said frame having an elongated body portion engaging the top edge of the spool of yarn, said hinged mounting including a reverse bend at the bottom of the body portion constituting a coil, a free end of the coil pivotally secured to the periphery of the disk.

3,099,419
MAGNET WIRE TENSIONING DEVICE
Ronald C. Kerch and George D. Hilker, Fort Wayne, Ind., assignors to Phelps Dodge Copper Products Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1961, Ser. No. 160,551
5 Claims. (Cl. 242—147)



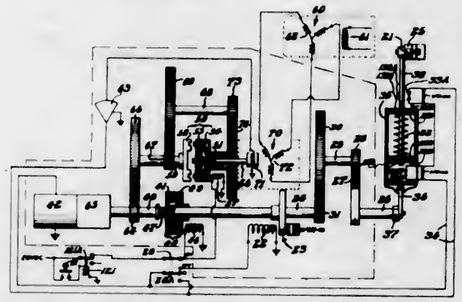
1. The combination of a longitudinally movable magnet wire to be tensioned, a straight cord length parallel and adjacent to the magnet wire, a second cord length wound around both said straight cord length and said magnet wire to hold the straight cord length in engagement with the wire, and stationary means for securing the respective cord lengths at their ends, whereby said cord lengths are operable to impose a drag on the moving wire while removing bends in the wire.

3,099,420
WING-TIP MOUNTED, PIVOTABLE JET POWER UNITS ON AN AIRCRAFT
Willy Messerschmitt and Gero Madelung, Munich, Germany, assignors to Messerschmitt AG., Augsburg, Germany, a company of Germany
Filed Mar. 17, 1961, Ser. No. 96,506
4 Claims. (Cl. 244—12)



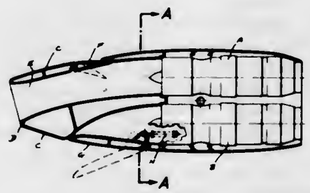
1. In a vertical take-off aircraft comprising a fuselage having wings extending therefrom, means for mounting a plurality of jet power units on the wings of said aircraft, each of said jet power units comprising a plurality of jet engines disposed in closely adjacent side by side relation to one another in a unitary cluster beneath a wing tip of said aircraft, said cluster being located at a predetermined position spaced from said fuselage thereby to leave the area of said wing between the root and tip thereof substantially unobstructed, said mounting means including means for pivoting the clustered engines in each of said jet power units, about an axis of rotation substantially parallel to the transverse axis of said aircraft, from a generally horizontal to a generally vertical orientation for purposes of vertical take-off of said aircraft, said mounting means and pivoting means being adapted to pivot said cluster about said axis from a position beneath the tip of said wing to a position located in front of the leading edge of said wing adjacent said wing tip, whereby said cluster effects a downward thrust at a position forward of the leading edge of said wing during said vertical take-off.

3,099,421
AUTOMATIC TRIM ACTUATOR SYSTEM
Milton I. Gerstine, Ardentown, Del., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Dec. 1, 1961, Ser. No. 156,301
10 Claims. (Cl. 244—17.13)



1. In a helicopter type of aircraft having flight control means; an automatic trim system comprising gyro means for each of the roll, pitch, and yaw axes for developing, for each axis, an error signal corresponding to the extent only of the departure of the craft from its previous position on that axis; an automatic trim actuator for each axis, each actuator comprising stabilizing means and synchronizing means, said stabilizing means including drive means, means electrically coupling said drive means to said error-signal developing means, and means mechanically coupling said drive means to said flight control means, said drive means being responsive to the error signal developed for that particular axis for changing the position of said flight control means in a direction and to an extent tending to return said craft to its previous position, said synchronizing means including said drive means, said means electrically coupling said drive means to said error-signal developing means, and means mechanically coupling said drive means to said error-signal developing means for changing physically the position of said error-signal developing means toward the null position.

3,099,422
TILTABLE POD FOR JET POWER UNITS ON AIRCRAFT
Gero Madelung, Munich, Germany, assignor to Messerschmitt AG, Augsburg, Germany, a company of Germany
Filed Oct. 31, 1960, Ser. No. 66,201
Claims priority, application Germany Oct. 30, 1959
4 Claims. (Cl. 244—23)



1. A tiltable jet power unit for VTOL or STOL aircraft, comprising a pair of superposed engines disposed within a single pod, said pod being pivotally mounted on the aircraft and pivotal between generally vertical and generally horizontal positions, one of said engines being adapted for use primarily during cruising operations of said aircraft and the other of said engines being adapted primarily for use, in cooperation with said one engine, during take-off and landing operations, said other engine being further adapted to be rendered effectively inoperative during normal cruising operations, an external air intake at one end of said pod adapted to provide a volume of air required by said one engine at cruising speed, an internal duct in said pod leading from said intake to said one engine, air intake means in a side wall of said pod communicating with said duct for providing a controllable supplementary air supply to said one engine for take-off and landing operations, and further air intake means in a further side wall of said pod communicating with the other one of said pair of engines for supplying air only to said other engine during said take-off and landing operations, said further air intake means including flap means adapted upon closure to effect an external smooth substantially streamlined shape to said further side wall of said pod while simultaneously preventing any significant flow of air to said other engine when said other engine is rendered effectively inoperative during cruising operations of said aircraft.

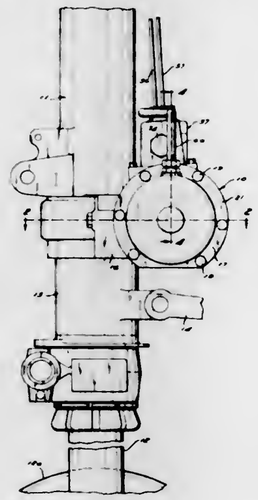
3,099,423
VTOL AIRCRAFT ENGINE INLET STRUCTURE
Geoffrey Light Wilde, Shottlegate, and Frederick Reginald Murray, Newstead Abbey, Linby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Oct. 2, 1961, Ser. No. 142,157
9 Claims. (Cl. 244—23)



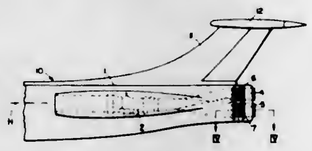
1. In an aircraft adapted for vertical take-off and landing: a lift engine housing, at least one vertical lift engine mounted within the housing, said engine having an air intake, an air inlet for said housing in the external surface of the aircraft, a plurality of guide vanes each separately pivotally mounted in said air inlet and extending transversely of the aircraft across said air inlet and spaced stepwise from one another longitudinally of the aircraft, said guide vanes being pivotable to operative positions in which each guide vane projects away from said external surface further than the preceding guide vane, the guide vanes in said operative positions deflecting air via said air inlet into said engine intake when the aircraft is moving forwardly.

3,099,424
AIRCRAFT STEERING SYSTEM CONTROL
Louis C. Hrusch, Newburgh Heights, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 28, 1961, Ser. No. 127,532
8 Claims. (Cl. 244—50)

6. An aircraft steering system comprising a strut adapted to be mounted on an aircraft, a steerable wheel on said strut, a collar journaled for rotation on said strut connected to steer said wheel, a cylinder mounted on said strut, a piston movable in said cylinder under the influence of fluid under pressure, gearing connecting said piston and collar, a valve on said cylinder having a valving element movable to control fluid under pressure supplied to said cylinder and thereby control movement of said piston, a yoke on said cylinder movable in a direction parallel to the direction of movement of said piston connected to move said valving element, a pulley journaled on said yoke, meshing gear teeth on said pulley assembly and said piston, and control elements connected to said pulley assembly operable to apply torque to said pulley assembly and produce movement of said yoke and valving element.



3,099,425
JET PROPULSION SYSTEM
Wilhelm Fricke, Buchholz-Nordheide, Germany, assignor to Hamburger Flugzeugbau G.m.b.H., Hamburg-Finkenwerder, Germany, a company of Germany
Filed Nov. 29, 1961, Ser. No. 155,776
Claims priority, application Germany Dec. 16, 1960
4 Claims. (Cl. 244—74)



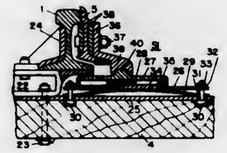
1. In a jet-propelled aircraft having a fuselage and a pair of jet engines symmetrically disposed in a substantially horizontal plane, in combination, a pair of ducts for the exhaust gases of said engines including a pair of tubes extending over the greater part of their length on opposite sides of said fuselage in said substantially horizontal plane, each of said tubes having a rear section with a rearwardly directed outlet, said rear sections being respectively upwardly and downwardly twisted from said horizontal plane and superimposed along the median vertical plane of the aircraft whereby the outlets thereof are vertically aligned in said median plane.

3,099,426
PARACHUTE
Pierre Marcel Lemoigne, 103 Ave. Verdier, Montrouge, Seine, France
Filed Mar. 31, 1961, Ser. No. 99,769
Claims priority, application France Apr. 7, 1960
5 Claims. (Cl. 244—145)

1. In a parachute having a canopy, first air nozzle means formed on one side of the canopy for directing air from the under to the upper surface of the canopy and toward the center of the canopy and further air nozzle means formed on the opposite side of the canopy for directing air from the under to the upper surface of the canopy, and away from the center of the canopy, whereby to impart to the parachute during descent a horizontal component of motion toward said one side.



3,099,427
RAILWAY SWITCH POINT BEARINGS
Ned C. L. Brown, Scottsville, N.Y., assignor to General Signal Corporation, a corporation of New York
Filed Feb. 7, 1958, Ser. No. 713,871
9 Claims. (Cl. 246—435)

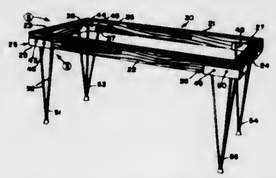


1. In a friction reducing bearing structure for a railroad track switch mounted on ties and having its two switch point rails movable between normal and reverse positions adjacent the stationary stock rails of the track switch, a roller bearing support structure including resilient support means for each movable switch point rail for resiliently supporting its switch point rail above the ties as such rail is moved from one position to the other, a switch rod interconnecting said two switch point rails and having its ends extending beneath said stationary stock rails, and a roller bearing limit structure mounted beneath each stock rail for receiving its respective end of said switch rod and for permitting longitudinal movement of such switch rod with a minimum of friction between it and the associated stationary stock rail due to any upward force exerted by said roller bearing structure in resiliently supporting the respective switch point rail above the ties.

3,099,428
FOLDING TABLE OR LIKE STRUCTURE
Clair B. Heyer, P.O. Box H, Milledgeville, Ill.
Filed Oct. 19, 1961, Ser. No. 146,230
10 Claims. (Cl. 248—166)

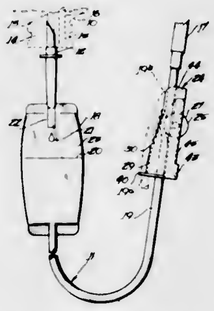
1. A folding table or the like having horizontal rectangular structure including a pair of parallel side members and a pair of parallel cross members affording four

corners, and four leg means, one at each corner, characterized by four connector elements, one at each corner and comprising an upwardly opening channel parallel to and receiving a side member from below at said corner and extending from transverse alinement with the proximate cross member a relatively short distance toward the other cross member, each channel including means connecting same to the proximate cross member so that each cross member cross-connects a pair of channels, means connecting each connector element to its proximate leg means, each channel having a bottom and opposite sides respectively normally engaging the bottom and sides of its side member, pivot means on a transverse



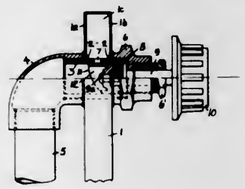
horizontal axis spaced lengthwise of each channel from the proximate cross member, said pivot means for each pair of cross-connected elements being coaxial for pivoting of each pair of cross-connected elements, the proximate cross member and the proximate pair of leg means as a unit between an upright depending supporting position and a folded position beneath said structure, each channel bottom being notched in an area below its pivot means and of a width commensurate with that of its side member to accommodate said side member when said folded position is incurred, and means releasably connecting each channel to its side member for securing said unit in its supporting position.

3,099,429
ROLLER CLAMP FOR PARENTERAL SOLUTION EQUIPMENT
Cyrus R. Broman, Evanston, Ill., assignor to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,234
4 Claims. (Cl. 251—6)



1. A flow control device for use with resilient tubing comprising a unitary body constructed of resilient plastic material, said body having elongated parallel side walls having coplanar top edges and a bottom wall angularly related to the plane of said top edges, fillets provided at the junction of said side and bottom walls and effective to maintain the angle between the side walls and bottom wall against deformation, said body having open ends and an open top, integral struts at each end of said body connecting the top positions of said side walls together, each of said side walls being further equipped with an elongated recess parallel to said plane, said recess projecting outwardly from said side walls and a trunnion-equipped roller member slidably, rotatably mounted in said recesses and operative to compress a resilient tube against said bottom wall and to slightly deform said bottom wall bringing the side walls together at the ends thereof remote from the bottom wall thus creating a pressure upon the trunnioned roller and stabilizing said roller within said body.

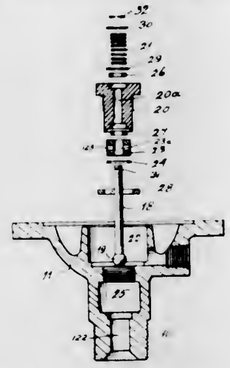
3,099,430
ARRANGEMENT IN REGULATING VALVES FOR HEATING UNITS
Rolf Jacobsen, Vaekerovelen 169c, Oslo, Norway
Filed Jan. 31, 1961, Ser. No. 86,210
Claims priority, application Norway Feb. 3, 1960
5 Claims. (Cl. 251—146)



1. A regulating valve arrangement for a heating unit and the like comprising:
(*a*) two opposite walls defining an intermediate space to receive a heating medium;
(*b*) a sleeve shaped valve housing having a circumferential wall fixedly mounted in respective bores in said opposite walls, said bores having a common axis,
(1) respective end portions of said housing protruding outwardly from said opposite walls in the direction of said axis and being formed with respective external threads,
(2) said circumferential wall being formed with a bore communicating with said intermediate space;
(*c*) supply pipe means for a heating medium,
(1) said pipe means being formed with internal threads engaging the external threads of one of said end portions and axially abutting against one of said opposite walls;
(*d*) a valve body movably mounted in said housing, said body having a closing face limited by a side surface obliquely inclined to the direction of movement of said body;
(*e*) actuating means axially projecting from the other end portion of said housing for transmitting movement to said valve body;
(*f*) a nut member threadedly engaging the external threads on said other end portion and axially abutting against the other one of said opposite walls; and
(*g*) packing means on said nut member for movably sealing said actuating means to said housing.

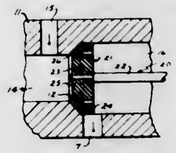
3,099,431
VALVE WITH STEM SEAL
John W. Ritter, Emmaus, and Eduardo L. Cusi, Bethlehem, Pa., assignors to Sarco Company, Inc., New York, N.Y., a corporation of New York
Filed Apr. 7, 1961, Ser. No. 101,513
2 Claims. (Cl. 251—214)

1. A pressure reducing valve having a pilot valve body provided therein with a control chamber and a remotely spaced abutment, a valve seat resting upon said abutment, a pilot valve guide threaded into said valve body coaxially of the seat and having an axial passage extending therethrough from the control chamber to and forming a continuation of a passage through the seat, a valve engaging with said seat and having an attached spindle extending through the seat and passage of the spindle with a bushing embracing the spindle between the seat and the guide to



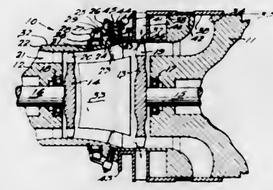
preclude the flow of undesirable fluid through said passage to the control chamber, said spindle guide exerting pressure between itself and said abutment to hold the seat firmly to the latter and maintain the bushing under axial compression.

3,099,432
VALVE CONSTRUCTION OF THE O-RING POPPET TYPE
Edward J. Zeitlin, Applehill, Purdys, N.Y.
Filed July 18, 1960, Ser. No. 43,632
3 Claims. (Cl. 251—324)



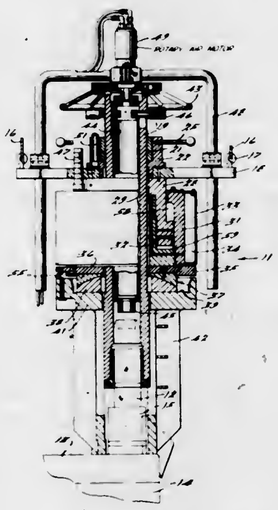
1. A valve comprising a body member having a closed cylindrical bore therein, said bore divided into two cylindrical sections of different diameter, an annular beveled valve seat connecting the two different diameter sections, an inlet port connected to the smaller diameter section and an outlet port connected to the larger diameter section, a reciprocable valve mounted in the larger diameter cylindrical section, said valve comprised of a stem and a valve head, said valve head having an annular face of a size to abut with and co-act with said valve seat, said valve head comprised of a central section provided with a plurality of sides and a surrounding ring section and provided with small apertures between the central and ring sections, said central section provided with an extended portion having a recess to support a sealing ring adjacent to and in front of said annular valve face, an O-type sealing ring of resilient material mounted in said recess, said sealing ring being dimensioned to be normally compressed between the annular face of said valve and the beveled valve seat when the valve is closed to establish a seal between said different diameter bore sections, said O-type sealing ring riding in said valve recess during the reciprocating movement of said valve, said O-type sealing ring positioned in said recess to be adjacent to but not sealing said small apertures through said valve head when said valve is in an open position and said O-type sealing ring moving when compressed into a sealing relation with all of the small apertures in said valve head.

3,099,433
METHOD AND MEANS FOR BRAKING AND REVERSING A GAS TURBINE ROTOR
Charles E. Wagner and Robert A. Mendelsohn, Detroit, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed May 8, 1961, Ser. No. 108,566
11 Claims. (Cl. 253—59)



1. In a gas turbine engine, a rotor having a plurality of circumferentially spaced blades designed to be driven in a forward rotational direction about the axis of rotation of said rotor by axial flow of motive gases past said blades, gas passage means arranged coaxially with said rotor for conducting said motive gases past said blades in driving relationship therewith, adjustable nozzle means in said gas passage means upstream of said blades for selectively varying the angle of attack of said gases against said blades, said nozzle means being adjustable in a reversing direction for directing said motive gases against said blades to impart a reverse thrust to said blades urging the latter in a reverse rotational direction opposite said forward direction, normally closed exhaust port means arranged in said passage means around the periphery of said blades and being openable to exhaust said gases radially from said blades, and means for opening said port means conjointly with adjustment of said nozzle means in said reversing direction.

3,099,434
POWER-OPERATED STUD TENSIONER
Le Roy S. De Mart, Lancaster, Ohio, assignor, by mesne assignments, to Babcock & Wilcox Company, a corporation of New Jersey
Filed Oct. 26, 1959, Ser. No. 848,848
15 Claims. (Cl. 254—29)



1. In a stud tensioning device, a threaded drawbar adapted to be threadably connected to a stud, a reciproca-

ble motor for urging said drawbar in a direction away from said stud, said drawbar and motor being spaced apart in a direction transverse to the drawbar axis whereby said drawbar may move laterally with respect to said motor and spring suspension means between said motor and said drawbar and adapted to support the weight of said drawbar in its unrestrained condition.

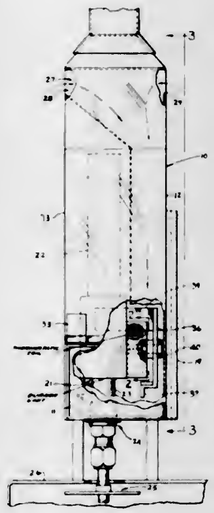
3,099,435
BUMPER JACK PUSHER EXTENSION
Carl C. Nixon, Pontiac, Mich.
(3522 W. Home Ave., Flint 4, Mich.)
Filed June 9, 1961, Ser. No. 116,157
10 Claims. (Cl. 254—35)



1. A bumper jack extension for converting a conventional bumper jack of the type including a base, a jack standard rising from said base and an upwardly opening bumper hook on a lift frame mounted on said standard for movement there along, to an extensible motor having two telescoped sections, said bumper jack extension comprising an upstanding elongated tubular member of a size so as to be telescoped over the upper end of the bumper jack standard remote from the base thereof, the lower end of said tubular member including means for seating in the upwardly opening bumper hook carried by said lift frame, and a reaction thrust member carried by the upper end of said tubular member for engagement with a vehicle bumper whereby said bumper jack standard may be oriented upwardly and in the direction of desired movement of a disabled vehicle with said base engaged with the ground and said reaction thrust member engaged with the bumper of said disabled vehicle said upper end of said tubular member including at least one laterally projecting hook member defining an upwardly opening concave recess.

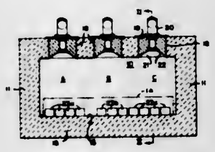
3,099,436
BURNER ASSEMBLY FOR HYDROCARBON FUEL
John K. Siddle and Harold L. Miller, Columbus, Ohio, assignors to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 4, 1960, Ser. No. 6,665
3 Claims. (Cl. 263—19)

3. A burner assembly for liquid hydrocarbon fuel comprising, in combination, a housing, a hot gas vent means leading from said housing, a burner unit having a fuel vaporization chamber and located in said housing for discharging products of combustion into said housing for flow therein and through said vent means, means for introducing liquid hydrocarbon fuel to said vaporization chamber for vaporization therein, an air inlet for said burner unit disposed in heat transfer relationship to the products of combustion flowing in said housing for supplying preheated air to said burner unit at a point that is at least as far upstream of the hot gas vent means as the vaporization chamber, a cold air inlet port means associated with said housing for supplying cold air to said burner unit at a point that is at least as far upstream of the hot gas vent means as the vaporization chamber, means responsive to the temperature in said vaporization chamber, and means



actuated by said temperature responsive means for varying the relative proportion of air admitted through said inlet and said port means for said burner unit to maintain the temperature of the fuel vaporization chamber at a substantially constant value.

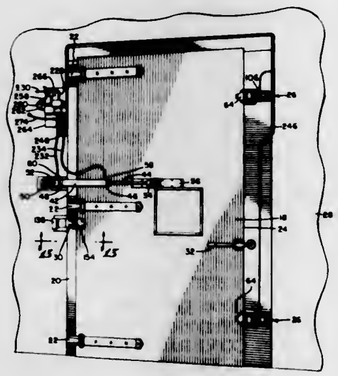
3,099,437
TEMPERATURE CONTROLLED FORGE FURNACE OR THE LIKE AND METHOD OF OPERATING SAME
Frederick S. Bloom, Mount Lebanon Township, Allegheny County, Pa.
Filed Feb. 21, 1961, Ser. No. 90,766
6 Claims. (Cl. 263—43)



1. A temperature controlled forge furnace or the like, comprising, in combination, a common furnace enclosure having a common hearth and an opening for ingress and egress of workpieces placed on and removed from said hearth, a plurality of laterally spaced radiant burners in corresponding heating zones of said hearth principally overlying correspondingly laterally spaced areas of said hearth, laterally adjacent radiant burners regulating laterally adjoining areas of hearth respectively to provide corresponding heating zones of said hearth principally controlled by said burners respectively, each said burner during operation at any level supplying radiant heat with its greatest intensity to its corresponding heating zone, timer mechanism for the radiant burners of said zones respectively to provide a selected period for a higher rate of radiant heating of workpieces on said hearth in each

respective zone to raise the temperature of workpieces therein, and means associated with said timer mechanism for automatically ending said higher rate of radiant heating in a particular zone to maintain the working temperature of such workpieces upon the expiration of said period in that particular zone.

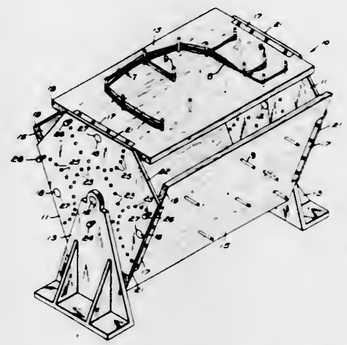
3,099,438
DOOR CONTROL APPARATUS
Rudolph A. Fritz, Cincinnati, Ohio, assignor to Chase Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 28, 1960, Ser. No. 72,032
3 Claims. (Cl. 268—66)



1. Control apparatus for a compartment door hinged for swinging movement relative to a doorway, comprising in combination, a source of compressed air, an elongate air cylinder having a base end and a head end, and a piston rod reciprocable through the head end of the cylinder, means pivoting the cylinder base end and the free end of the piston rod to a support and to the door, respectively, in position to move the door to open and closed positions upon selective application of air pressure to the cylinder ends, pneumatic means including a shiftable valve and tubes interconnecting the valve with opposite ends of the cylinder, whereby shifting of the valve alternatively directs air pressure to opposite ends of the cylinder for moving the door, electrical means for shifting the valve including a plurality of circuit control switches, and means for actuating said switches by the force of air exhausted from one end of the door-operating cylinder while the opposite end is charged with air presure from the compressed air source.

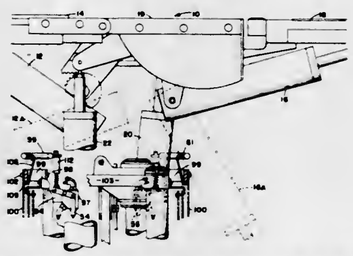
3,099,439
WORK HOLDER APPARATUS
Frank W. Haselton, Raytown, Mo., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Feb. 21, 1961, Ser. No. 90,734
5 Claims. (Cl. 269—40)

1. A cable forming apparatus which comprises a supporting frame, a pair of end members rotatably supported in the frame, at least one end member having a first group of openings and a plurality of series of apertures selectively positioned adjacent to the first group, a first removable pin for insertion through the frame into an opening of the first group for locking the end member in a desired position, a plurality of cable forming boards rotatably supported in the end members forming a horizontally disposed drum, each board having opposing work surfaces and a groove in its lateral surfaces, and a second removable pin for each series of apertures for insertion through an aperture corresponding to the groove of a



forming board for locking each board in a desired work position.

3,099,440
APPARATUS FOR CONTROLLING THE FLOW OF FLUIDS
Karl H. Burzlaff, Fairport, N.Y., assignor to Ritter Company, Inc., Rochester, N.Y., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,242
5 Claims. (Cl. 269—325)



1. In a surgical table having a lower base and a plurality of fluid controlled apparatus including interconnected table top sections, at least a part of said fluid controlled apparatus being articulatable into interference with other parts of said table,

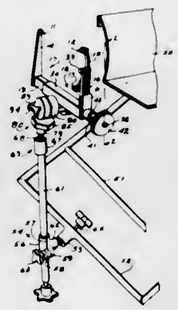
(*a*) sensing lever means defining an interference path intermediate said table top and lower base, and

(*b*) means responsive to said lever means for stopping said fluid controlled apparatus when articulated portions of the table are moved into the interference path.

3,099,441
SURGICAL DEVICE
Elmer Frederick Ries, Cincinnati, Ohio, assignor to The Ries Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 29, 1959, Ser. No. 862,517
10 Claims. (Cl. 269—328)

1. In a surgical device the combination of a pair of clamping mechanisms each including an upstanding clamping arm in opposition to one another, a clamping point at the upper end of the first of said clamping arms, a pair of spaced clamping points carried by the upper end of the second of said clamping arms, means mounting said spaced clamping points on said second clamping arm for unitary oscillatory movement relative to said clamping arm, said clamping points each having its axis angu-

larly of the others and said clamping points bearing a relationship to one another to form between them a three point clamp, and means for actuating the clamping mech-



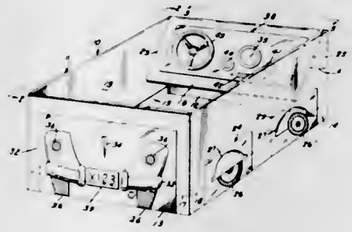
anisms and their clamping points toward and from one another to effect a clamping by the clamping arms clamping points.

3,099,442
METHOD AND APPARATUS FOR FEEDING SHEET MATERIAL
Roland Norbert Wendricks, Barrington, and Robert Miller Weygant, Waukegan, Ill., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 11, 1961, Ser. No. 102,155
17 Claims. (Cl. 271—32)

1. A method of singly feeding the lowermost sheet from a stacked quantity of thin flexible sheets comprising the steps of, placing said stacked sheets on a support surface, said support surface forming transversely divergent passages with the longitudinal edge portions of said lowermost sheet, introducing pressurized air between said support surface and said lowermost sheet, said air flowing at a high velocity towards the longitudinal edges of said sheet thereby creating a pressure differential on the longitudinal edge portions of the lowermost sheet and causing said edge portions to be bent and depressed towards said support surface while simultaneously being spaced therefrom due to the air flowing therebetween, engaging said lowermost sheet at the depressed portions thereof, and advancing said lowermost sheet from beneath said stacked quantity of sheets.

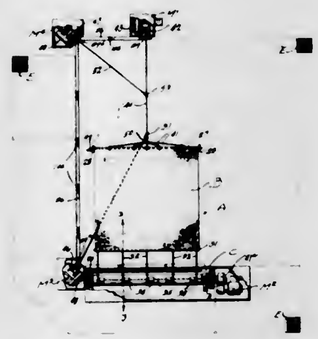
3,099,443
SIMULATED VEHICLE TOY
Edward I. Koch, New York, N.Y.
Filed Mar. 13, 1961, Ser. No. 95,196
3 Claims. (Cl. 272—1)

1. A simulated vehicle toy comprising an open top rectangular carton of a size large enough for a child's body to enter, said carton including a front, rear, first side and second side panels; a first sheet means carrying indicia resembling front portions of a real vehicle, a second sheet means carrying indicia resembling rear portions of the same vehicle, a third sheet means carrying indicia resembling side portions of the same vehicle, and a fourth sheet means also carrying indicia resembling side portions of the same vehicle; cement means securing said first, said second, said third, and said fourth sheet means to said front, said rear, said first side, and



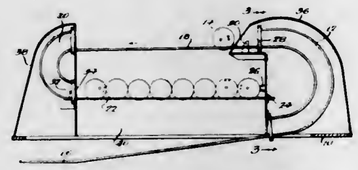
said second side panels, respectively, on the outer surfaces thereof whereby said carton appears as a vehicle; a front flap at the upper edge of said front panel disposed within said carton and positioned at an acute angle with respect to said front panel; a fifth sheet means carrying indicia resembling a control panel of the same vehicle; cement means securing said fifth sheet to the external surface of said flap.

3,099,444
AUTOMATICALLY OPERATED PROTECTIVE SYSTEM FOR COVERING GROUND AREAS
Fred E. Burt, 823 13th St., Alexandria, La.
Filed Oct. 4, 1960, Ser. No. 60,417
6 Claims. (Cl. 273—27)



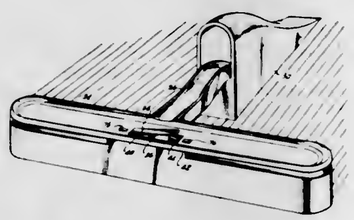
1. In an automatically operated protective system for covering a ground area, the combination of a reel, a flexible tarpaulin connected to the reel windable and unwindable with respect to said reel, electrically actuated motor means connected to the reel for rotating said reel to wind the tarpaulin thereon, electrically actuated motor means connected to the tarpaulin remote from the reel for pulling the tarpaulin from the reel, the last mentioned motor means including a winch and a cable windable upon said winch which cable is connected to the tarpaulin for unwinding it from the reel, retrieving cable means connected to the first mentioned cable, and electrically actuated motor means having winch means thereon having the retrieving cable means connected thereto whereby the first mentioned cable may be retrieved and moved off a ground area after the tarpaulin has been wound completely upon said reel.

3,099,445
BOWLING BALL RETURN
Elgene W. Flood, deceased, late of Chicago, Ill., by Rosalie T. Flood, administratrix, Chicago, Ill., assignor to Rosalie T. Flood
Filed Aug. 3, 1961, Ser. No. 130,230
3 Claims. (Cl. 273—47)



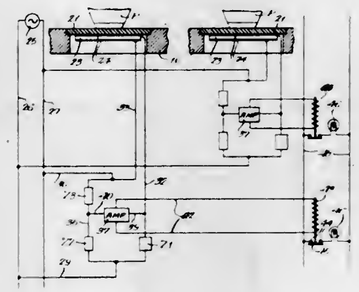
3. A bowling ball return of a width not substantially in excess of the diameter of a bowling ball comprising a pair of longitudinally spaced, inwardly facing upright semi-circular ball guiding loops, one larger than the other, a pair of longitudinally extending ball carrying tracks overlying one another in the space between said loops, the higher level track being connected at its ends to the upper levels of said loops and sloping downwardly at a slight inclination from said one loop to said other loop, the lower level track being connected at one end to the lower end of said o her loop and sloping downwardly at a slight inclination from said other loop to adjacent the intermediate portions of said one loop, and a ball stop on the opposite end of said lower level track, said tracks being spaced vertically from one another and both being readily accessible for removal of balls therefrom.

3,099,446
CONTROL SYSTEM FOR BOWLING BALLS AND THE LIKE
Raymond V. Stegman, Burbank, and William E. Green, San Fernando, Calif., assignors, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 13, 1959, Ser. No. 846,131
21 Claims. (Cl. 273—49)



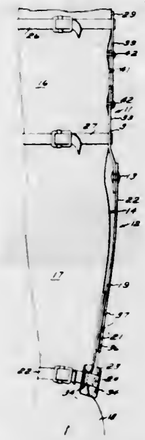
1. A directing system for spherical articles comprising: conveyor means for spherical articles, said conveyor means at one point having different branches for storage along which said spherical articles can move from said conveyor means; means for directing said spherical articles along different paths onto said conveyor means at another point thereon; movable means at said one point adjustable to cause spherical articles arriving at said one point to be directed onto one of said branches; and means coupled to said movable means and selectively responsive in accordance with the specific paths by which said spherical articles pass onto said conveyor means so that, upon each such article reaching said one point, said movable means is positioned to direct it onto a predetermined one of said branches, whereby the branch onto which an article is directed is determined by the path from which it passed onto said conveyor means.

3,099,447
SONIC PIN DETECTION MEANS
Sampson Isenberg, Robert J. Moon, and Albert E. Shaw, Chicago, Ill., assignors, by mesne assignments, to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed June 9, 1960, Ser. No. 35,043
11 Claims. (Cl. 273—52)



8. In combination with a bowling alley, apparatus for detecting the presence or absence of a standing bowling pin on the alley by distinguishing between a first condition represented by the presence of a standing pin and second condition represented by the absence of a standing pin, comprising, an acoustical system including an electromechanical transducer adjacent a pin spot on the alley for producing sound waves, means coupling the transducer to the material of the alley at the pin spot such that vibrations of the transducer are transmitted to the pin spot, said acoustical system being responsive to a bowling pin and having a predetermined acoustical impedance when one of said conditions exists and a different acoustical impedance when the other condition exists, and an electrical system connected for supplying power to the transducer and having an electrical characteristic which is altered by the change in acoustical impedance thereby to provide a signal indicative of the change.

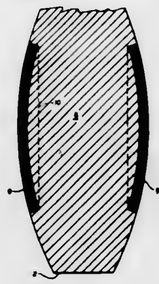
3,099,448
ARM CONTROL APPLIANCE
Raymond C. Salvo, 715 Adams St., Albany, Calif.; Louis Salvo, 546 60th St., Oakland, Calif.; and Norman L. Salvo, 1247 Richmond St., El Cerrito, Calif.
Filed Sept. 18, 1961, Ser. No. 138,914
6 Claims. (Cl. 273—54)



1. A hand control appliance particularly useful in bowling comprising first and second arms pivotally connected

together at one end, said first arm adapted for attachment to the upper arm portion of a user adjacent the interior side thereof with the pivotal connection between the arms adjacent the elbow, said second arm adapted for disposition adjacent the interior side of the forearm and attachment to the wrist, said second arm including means for retaining the hand in a slightly inclined position relative to the planes of the arms at said pivotal connection.

3,099,449
WOODEN BOWLING PINS OF SPHERICAL BELLY TYPE AND PREFABRICATED SEGMENTS THEREFOR
Cornelius D. Dosker, Louisville, Ky., assignor to Gamble Brothers, Inc., Louisville, Ky., a corporation of Kentucky
Filed May 15, 1961, Ser. No. 114,269
17 Claims. (Cl. 273—82)



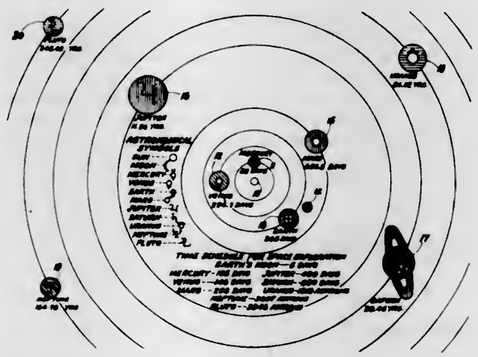
7. A prefabricated segment for a bowling pin of predetermined size and shape, comprising: a unitary segment of a bowling pin wall having a vertical and horizontal curvature corresponding to a portion of the vertical side wall of a bowling pin product and extending not only vertically over a distance at least equal to that of the ball impact zone or belly of said product pin but also horizontally over a distance equal to a predetermined fraction of the circumference of said product pin but not greater than one-half thereof, said horizontal curvature defining in cross section a circular arc not greater than 180 degrees, said segment including a plurality of superposed wood veneer plies bonded together with the outer ply not only being of substantially uniform thickness throughout and providing the entire outer surface of the segment but also being a long grain veneer having its long wood fibers extending parallel to and conforming with said outer surface.

3,099,450
GAME PROJECTILES FOR AERIAL FLIGHT
Brian P. Randall, 5 Kensington Road, Asheville, N.C.
Filed Aug. 7, 1961, Ser. No. 129,847
4 Claims. (Cl. 273—106)



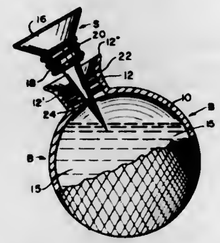
1. An aerodynamic game projectile for stable flight in projection through the atmosphere above the surface of the ground and adapted for use in throwing and batting games; said projectile comprising a solid body of resilient porous material having at one side a flat surface bounded by a circle, and at the other side a continuous smooth convex, curved surface, said curved surface being a surface of revolution formed by revolving about an axis disposed centrally of and perpendicular to said flat surface, a curved line terminating at said axis and at said circle; the diameter of said circle being approximately the maximum diameter of said surface of revolution; and a continuous skin of non-porous material covering both said flat and curved surfaces, said projectile being of a size to be readily gripped by one hand for throwing, with the first finger and thumb of the throwing hand partially encircling the same, and with said flat surface disposed toward and substantially parallel with the ground, whereby, when thrown, the projectile tends to spin and glide, while tending to maintain its original attitude relative to the ground.

3,099,451
SOLAR SPACE GAMES
Elmer M. Newhouse, 2582 Druid Park Drive, Baltimore, Md.
Filed Mar. 1, 1960, Ser. No. 12,126
5 Claims. (Cl. 273—134)



1. Game apparatus comprising a playing board having a representation of the solar system thereon, said representation comprising the sun at the center thereof and the solar system planets represented as being in orbit around the sun, said orbits being spaced radially outwardly according to their position in the solar system; a space station for space travel on the board; said game apparatus including a chance device having associated therewith a plurality of different indicia, and comprising means for selecting by chance one of said indicia, said indicia representing different velocities, some of which are arbitrarily designated as "escape" velocities enabling a player to move his game piece to the space station; said game apparatus also including a member having thereon a schedule in units of time for space exploration setting out the time required to travel from the space station to the various planets, each of a first group of said planets having travel times comprising a first set number of digits, and each of a second group of said planets having travel times comprising a second differing set number of digits; said game apparatus further including a first set of dice having digits therein including those on the time schedule for space exploration whereby a player may leave the space station for space exploration to said first group of planets, the number of dice in said set being equal to the number of digits in said first set of digits; and a second set of dice having digits thereon including those on the time schedule for space exploration whereby a player may leave the space station for space exploration to said second group of planets, the number of dice in said second set being equal to the number of digits in said second set of digits, said first and second sets of dice being differentiated from each other for selection and use in travel to either the first group of planets or the second group of planets.

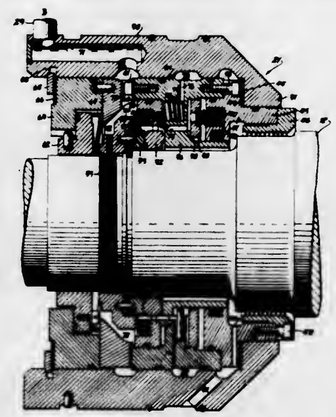
3,099,452
COMBINATION CONTAINER, PRACTICE GOLF BALL AND TEE
John D. Fernicola, 109 Water St., Centreville, Md.
Filed Feb. 28, 1962, Ser. No. 176,356
2 Claims. (Cl. 273—199)



1. An article of manufacture of a combination container and practice golf ball comprising;
(*a*) a spherical hollow body of elastic resinous plastic material including a spherical outer surface,
(*b*) an integral hollow neck portion extending outwardly from a small area of the said body adapted to form an opening from the outside into the hollow interior of the body portion,
(*c*) a stopper having integrally formed an outer portion, an intermediate portion, and an inner end portion,
(*d*) the outer portion of the stopper being larger than the outer edge of the neck and extending outwardly therefrom for manually manipulating the stopper, the intermediate portion being of such dimensions as to engage the inner surface of the neck portion for securing the stopper in the neck, and the inner end portion extending inwardly from the intermediate portion to a point,
(*e*) the outer end surface of the outer portion of the stopper being concaved and adapted to support the body upon its spherical outer surface when the stopper is in reversed position.

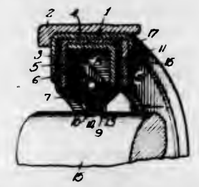
3,099,453
SHAFT SEAL WITH POSITIVE AUTOMATIC SHUT-DOWN FEATURE
Robert Dunn, Olean, and Frederick A. Goerss, Allegany, N.Y., assignors to Dresser Operations, Inc., Whittier, Calif., a corporation of California
Original application Oct. 14, 1959, Ser. No. 846,417, now Patent No. 2,999,702, dated Sept. 12, 1961. Divided and this application Oct. 14, 1960, Ser. No. 67,149
3 Claims. (Cl. 277—27)

1. In a shaft seal, the combination comprising a member surrounding the shaft and rotatable therewith and having an annular surface surrounding the shaft and facing axially thereof, a non-rotative but axially movable piston means surrounding the shaft and including a main seal ring made of a material having self-lubricating properties and having an annular axially-facing surface disposed opposite to said first mentioned surface and spaced therefrom but adapted to engage therewith, an auxiliary flexible seal ring of circular configuration arranged generally concentric with said shaft and carried on said axially-facing surface of said main seal ring and adapted to engage said first mentioned surface before said axially-facing surface of said main seal ring does when said piston means moves toward said member, yielding means urging said piston means toward establishing engagement between said surfaces, means for applying pressurized liquid to said piston means to urge separation of said surfaces against the urging of said yielding means, whereby reduction of the pressure of said liquid below a predetermined value permits said yielding means to urge said auxiliary seal ring into engagement with said first mentioned surface, and stop means engageable by said piston means



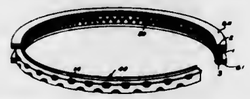
and limiting the advance thereof in the direction urged by said yielding means in the event of wear of said main seal ring resulting from contact with said member.

3,099,454
FLUID SEAL
Edward L. Walinski, Des Plaines, Ill., assignor to Victor Manufacturing & Gasket Company, Chicago, Ill., a corporation of Illinois
Filed May 5, 1961, Ser. No. 108,148
8 Claims. (Cl. 277—47)



1. A fluid sealing device comprising: a casing; elastomer lip means fixed in said casing; garter spring means encircling the lip means and urging the same radially inwardly; and sleeve means fixed in the casing on the side thereof opposite the side on which the lip means is fixed and extending from the casing alongside the lip means and between the lip means and a shaft to form a seal with the shaft and to shield the lip means and the garter spring means from that fluid.

3,099,455
PISTON RING ASSEMBLY
George C. Mayfield, Richmond Heights, Mo., assignor to McQuay-Norris Manufacturing Company, St. Louis, Mo., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 57,040
2 Claims. (Cl. 277—163)



1. In a piston ring assembly, an expansible and contractible piston ring element comprising, an annular strip of spring metal having in part a generally channel cross-section forming a ring element with cylindrical wall portions

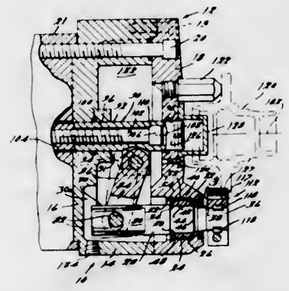
and integral annular flanges, said cylindrical wall portions comprising a web portion defining a sinuous strip of metal of substantially constant cross-section and including a series of spaced apertures adjacent each flange, the edges of the apertures in one series overhanging the edges of apertures in the other series to define a plurality of oppositely inclined spaced webs, the respective webs extending beyond the adjacent apertures whereby to provide a truss-like structure of uniform beam strength in one direction and of uniform flexibility in another direction.

3,099,456
THREAD FORMING SPARKPLUG GASKETS
Harold P. Hopp, 374 Lantana Ave., Englewood, N.J.
Filed Aug. 1, 1960, Ser. No. 46,540
5 Claims. (Cl. 277—166)



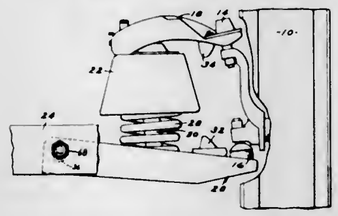
1. In combination, a spark plug having a threaded shank, and a compressible annular gasket having a principal axis of compression; said gasket including a plurality of undulating sealing portions, and an inner flange having at least one radially arranged slot therein forming a segmented inner edge, said inner flange disposed in angular contact relation with respect to said axis of compression, so that opposite sides of said inner flange are in deformable contacting engagement with opposed surfaces, said inner edge having a diameter which is substantially greater than the major diameter of said threaded shank when said gasket is in a relatively uncompressed state, and substantially less than said major diameter when in relatively compressed state; whereby said gasket may be slipped upon said shank of said spark plug with a purely translational motion, and may become threadedly affixed to said shank upon the installation and tightening of said spark plug wherein said gasket is compressed.

3,099,457
CHUCK
George Hohwart, Farmington Township, Oakland County, and Paul Toth, Allen Park, Mich., assignors to N. A. Woodworth Company, Ferndale, Mich., a corporation of Michigan
Filed June 2, 1960, Ser. No. 33,542
11 Claims. (Cl. 279—106)



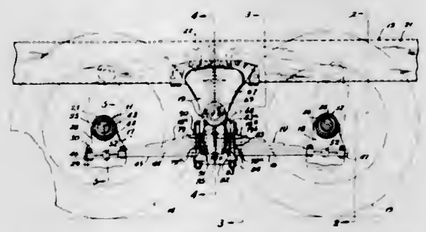
1. In a chuck, a hollow housing, a plurality of rocker arms, a ball and socket joint for each of said rocker arms pivotally mounting said rocker arm intermediate the ends thereof on said housing so that the inner end of the arm is enclosed within said housing, jaw members mounted on the outer ends of said rocker arms in a concentric relation with the chuck axis, and means disposed within said housing and engaged with said rocker arms adjacent the inner ends thereof for concurrently pivoting said rocker arms relative to said housing so that said jaws are moved radially of said axis.

3,099,458
VEHICLE SUSPENSION SYSTEM
Frederick Rosky, Dearborn, and Carl P. Wenzel, Garden City, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 15, 1962, Ser. No. 166,124
7 Claims. (Cl. 280—96.2)



2. A vehicle suspension system having sprung and unsprung components;
suspension means interconnecting said components;
said suspension means including a suspension arm;
a pivotal connection interconnecting said suspension arm and said sprung components;
a crank mechanism pivotally suspending said suspension arm from said sprung components at a position spaced from said pivotal connection;
said crank mechanism having a pair of spaced apart parallel pivot shafts;
one of said pivot shafts being connected to said arm and the other of said pivot shafts being connected to said sprung components.

3,099,459
AXLE MECHANISM
Frank A. Zalar, East Cleveland, and Robert K. Nelson, Shaker Heights, Ohio, assignors to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 8, 1960, Ser. No. 48,233
9 Claims. (Cl. 280—104.5)



1. In suspension mechanism for a vehicle having longitudinal frame means carrying a longitudinally extending lower corner portion on the outboard side thereof, a pair of spaced tandem axles, a longitudinally extending spring spanning the space between said axles and comprising a stack of spring leaves, means connecting the end portions of said spring with said axles, an upper pivot member comprising angularly disposed upper bracket portions adapted to be secured to said frame means in a straddling relation to said lower corner portion and a depending hollow knee portion projecting downwardly and laterally outwardly relative to said corner portion and having pivot elements spaced apart transversely of

the intermediate portion of said spring, a lower pivot member comprising block means seated against the upper side of said intermediate portion and depending cheek means connected with said block means and lying adjacent one upright side of said stack, U-bolt means embracing said stack and connecting said lower pivot member with said intermediate portion, pivot pin means having end portions projecting from said block means and engaged by the pivot elements of said knee portion, a clamp member secured against the underside of said intermediate portion of the spring by said U-bolt means and carrying adjustable thrust means effective against portions of said cheek means, and locating means on said clamp member and engaging the other upright side of said stack and held thereagainst by the action of said thrust means.

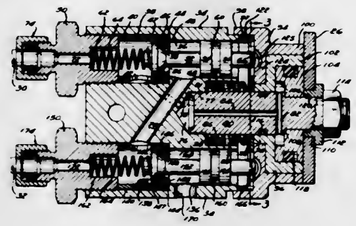
3,099,460
THREE-AXLE VEHICLE SUSPENSION INCLUDING LOAD STABILIZING MEANS
Robert G. Sheehan, 1244 165th Ave. SE., Bellevue, Wash.
Filed Nov. 3, 1960, Ser. No. 67,043
5 Claims. (Cl. 280—104.5)



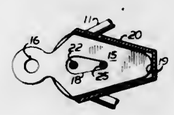
1. A three-axle vehicle comprising two end to end adjoining frame yokes; intermediate axle means transverse to said frame yokes pivotally connecting the adjoining ends of said frame yokes; a load carrying deck positioned in spaced relation above said frame yokes and having downwardly extending side flanges pivotally mounted on said intermediate axle means; two resilient compression units spaced forwardly and rearwardly from said intermediate axle means and interposed between the respective frame yokes and parts of the load carrying deck which overhang said frame yokes; two axles pivotally connected with the outer end portions of said frame yokes for torsional movement about the longitudinal axes of said frame yokes and for steering movement about a vertical axis normal to and intersecting said longitudinal axes, said axles extending in opposite transverse directions from the respective frame yokes; and a wheel on each outer end portion of said intermediate axle means and each outer end portion of each of said axles.

3,099,461
SUSPENSION CONTROL VALVE
James S. Stelzer, Fort Wayne, Ind., assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed July 26, 1957, Ser. No. 674,334
9 Claims. (Cl. 280—124)

1. In a suspension system for supporting a vehicle frame in a predetermined position relative to a vehicle axle comprising an air spring disposed between said frame and axle, a source of air under pressure and a control valve apparatus mounted on said frame, said apparatus including a first valve having a poppet actuable to provide communication between said air source and air spring, a second valve having a poppet actuable to provided communication between said air spring and ambient space, cam means being pivotal in one axial position for selectively actuating said poppets, a spring bearing against said cam means and urging the same away from said poppets, a movable cylinder bearing against said cam means, a fixed piston within said cylinder and an expansion chamber between spaced portions of said cylinder and piston, means providing communication between said expansion chamber and said air source, said cylinder and cam means being movable in response to air pressure in said expansion chamber to facilitate engagement between said poppets and said cam means in response to pivotal motion of said cam means, means pivoting said cam means in response to decreased spacing between said frame and axle, to open said first valve and in response to increased spacing between said frame and axle to open said second valve and means urging said poppets to closed position in the absence of actuation thereof by said cam means.

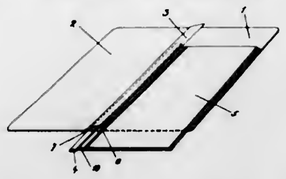


3,099,462
VEHICLE COUPLER OR HITCH
Ralph C. Lent, Ewa, Hawaii, assignor to Hanawai Manufacturing Company, Limited, a corporation of Hawaii
Filed May 17, 1962, Ser. No. 195,541
1 Claim. (Cl. 280—478)



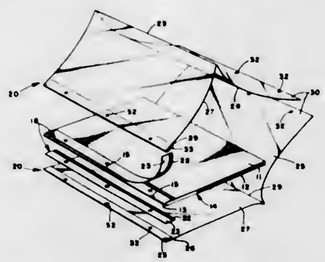
In a coupler device of the type described for attaching one vehicle to another vehicle, a socket member having means for its attachment to one of said vehicles, said socket member having a fully enclosed interior tapering from a relatively small rear portion to a relatively wide mouth, a coupler member having a forward portion supplied with means for its attachment to said other vehicle, said coupler member having a tapered rear portion of dimensions substantially complementary to those of said socket interior, said rear portion of said coupler member being further provided with a single elongated slot extending along part of the central longitudinal axis of said coupler member, connecting means between said coupler member and said socket member comprising a connecting pin secured through at least one wall of said socket member in a position to enter into said elongated slot adjacent the forward end thereof when said tapered portion of said coupler member is fully retracted within said socket member, and a spring urged locking pin likewise secured through at least one wall of said socket member in a position to enter into said elongated slot adjacent the rear end of said slot only when said tapered rear portion of said coupler member is fully retracted within said socket member, deactivation of said locking pin allowing withdrawal of said coupler member from said socket member to the extent permitted by the length of said elongated slot, in said withdrawn position said connecting pin furnishing a pivot in the rear of said slot affording lateral movement of said coupler member to the extent permitted by the walls of said socket member.

3,099,463
ASSEMBLY FOLDER
Walter Lennartz, Krautergarten, Dachau-ost, Germany
Filed Apr. 1, 1959, Ser. No. 803,520
Claims priority, application Germany Apr. 3, 1958
3 Claims. (Cl. 281—19)



1. An assembly folder for storing thin transparent soft foil cases, letterhead sheets and the like comprising a cover of relatively stiff flat sheet material, said cover having a narrow elongated strip integrally formed therewith, folded inwardly from the inner edge of the cover sheet to overlie the same, and extending substantially the full length thereof providing an integral relatively rigid guide, said elongated strip lying in fixed parallel plane relationship with the inner face of the cover sheet, an inwardly folded guide and retaining lip integrally formed on the elongated strip to oppose the integral fold of the elongated strip upon the cover sheet, said guide lip extending parallel to and slightly spaced from the underface of the elongated strip, an elongated track of relatively stiff flat sheet material slidably mounted in the rigid guide and under the guide lip of the elongated strip between the opposing lip and the fold of the narrow elongated strip upon the cover and retained against longitudinal displacement within the rigid guide by the clasping action of the lip, and a holding device carried by said track for releasably securing the thin cases, letterhead sheets and the like to the track.

3,099,464
PLASTIC PROTECTORS FOR SHEET MATERIAL, BOOK AND MAGAZINE COVERS, AND THE LIKE
Gene W. Smith, 5008 La Canada Blvd., La Canada, Calif.
Filed Aug. 1, 1960, Ser. No. 46,666
15 Claims. (Cl. 281—20)



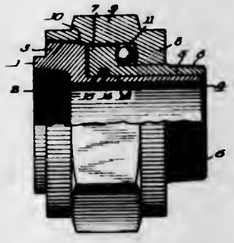
1. A readily removable cover protector for pamphlets, file folders and the like comprising a mounting strip adapted to be secured to the hinged edge of the cover to be protected with the exposed free edge of said strip parallel and closely spaced to said hinged edge, and a one-piece flexible sheet plastic protector having a folded size slightly larger than the cover to be enclosed and protected thereby, said protector being folded back onto itself along one medial axis, one free lateral edge of said protector having a narrow portion thereof folded back on itself to provide a deep groove for receiving the free edge of said mounting strip with the adjacent outer portion of said protector lying flush against the exterior surface of said cover and the inner portion of said protector lying flush against the interior surface of said cover and substantially coextensive therewith.

3,099,465
BINDER BACK
Ernest Hazel, Jr., St. Louis, Mo., assignor to Ernest Hazel, Jr., Inc., St. Louis, Mo., a corporation of Missouri
Filed Feb. 6, 1961, Ser. No. 87,247
2 Claims. (Cl. 281—36)



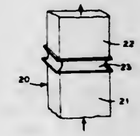
2. A back for loose-leaf binders comprising a rigid plate; a cushioning member overlying one face of said plate and coextensive therewith, said cushioning member being provided with a plurality of longitudinally extending, spaced apart ribs on the surface thereof next adjacent said face whereby to define a plurality of grooves, said ribs and said grooves extending substantially the full length of said plate; and means securing said cushioning member to said plate.

3,099,466
ROTARY PIPE COUPLING
Hans Kreidel, Sr., and Hans Kreidel, Jr., Wiesbaden, Germany, assignors to Inventex A.G., Kusnacht-Zurich, Switzerland, a company of Switzerland
Filed May 31, 1960, Ser. No. 33,012
Claims priority, application Germany June 19, 1959
3 Claims. (Cl. 285—98)



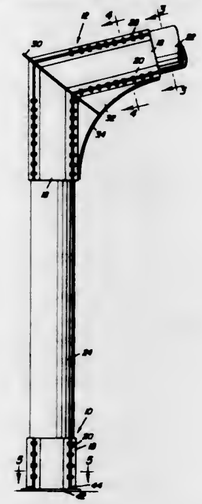
1. A rotary pipe coupling for connecting a pair of conduits in a conduit system conveying a medium under pressure wherein at least one of said conduits is capable of axial movement, comprising a tubular male member having a passage therethrough and means formed thereon for connecting it to a conduit part and having a radially outwardly directed externally threaded enlargement and a tubular guide portion extending axially outwardly therefrom, a tubular female member rotatably journalled upon said tubular guide portion substantially through the length thereof, and having a radially outwardly directed flange-like shoulder disposed in assembled position adjacent to said enlargement and axially spaced therefrom by an axial clearance therebetween and means formed adjacent the outer end thereof for connecting said female member to said axially movable conduit, a sleeve nut threadedly attached to said enlargement of said male member and having a radially inwardly directed flange-like shoulder disposed axially outwardly of and spaced from said flange-like shoulder of said female member, an axial thrust bearing disposed between said flange-like shoulders, said female member being axially movable relative to said male member whereby thrust forces on said thrust bearing may be relieved, said female member having a chamber formed therein interiorly thereof opposite said tubular guide portion along the area of the flange-like shoulder, said tubular guide portion and said female member having an annular gap therebetween communicating with said passage at a point axially outwardly of said chamber, and a packing disposed in said chamber and engaging said tubular guide portion to provide a seal between the male and female members, said packing having an axially outwardly facing surface exposed to the pressure of said medium within said annular gap, said female member being biased axially inwardly away from said thrust bearing to effect a relief of the thrust forces thereon by said pressure acting upon said axially outwardly facing surface.

3,099,467
EXPANSION PIPE JOINT FOR CONVEYING SOLIDS LADEN GAS OR FLUID
Russell L. Godshalk, Akron, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 3, 1959, Ser. No. 796,910
5 Claims. (Cl. 285—114)



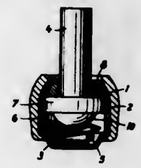
1. In a duct system for a steam generator formed of a number of duct sections for conveying a solids laden heating gas flowing under varying conditions of pressure and temperature, the invention comprising an expansion joint for connecting adjacent axially aligned duct sections, each of said aligned duct sections having the same internal cross-sectional shape and dimensions whereby a smooth uninterrupted flow path is provided, and the accumulation of deposited solids at the joint is kept to a minimum comprising a frame member positioned at each of the adjoining ends of said duct sections connected by an expansion joint, each frame member comprising a plurality of similar L-shaped structural component sections integrally attached together to form a closed area having substantially the same internal cross-sectional area as said duct sections, said L-shaped sections providing the frame member with a pair of angularly disposed legs, each of said frame members integrally attached to one of said duct sections along one of its legs, an expansion joint member comprising a flexible single arcuately-shaped section having a convex face and a concave face and juncture section extending from each end of said arcuately-shaped section, said expansion joint member spanning the space between adjoining duct sections and having substantially all of the arcuately-shaped section thereof extending into the flow path through said duct sections with its convex face exposed to the flow of the solids laden heating gas therethrough, and the juncture sections on said expansion joint member integrally attached to the other legs of said frame members in such manner that a smooth faced substantially pocket-free joint is obtained between the juncture sections and said legs.

3,099,468
STRUCTURAL CONNECTOR
Clarence E. Meyerdick, Fair Oaks, Calif., assignor to Clarence F. Meyerdick, Davis, Calif.
Filed Oct. 17, 1960, Ser. No. 62,935
8 Claims. (Cl. 287—54)



1. A structural connector for structural members comprising a plurality of longitudinally elongated members adapted to engage portions of the periphery of a structural member, longitudinal flanges on each elongated member, clamp bolts interconnecting said longitudinal members substantially throughout the length thereof for clamping the elongated members to the structural member, a shear plate extending transversely of one end of the elongated members and being rigidly affixed to each of said elongated members.

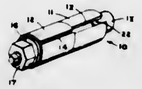
3,099,469
SUSPENSION JOINT
Rudolf Gottschald, Osterrath, Germany, assignor to A. Ehrenreich & Co., Dusseldorf-Oberkassel, Germany, a company of Germany
Filed July 19, 1960, Ser. No. 43,935
Claims priority, application Germany July 22, 1959
5 Claims. (Cl. 287—90)



1. A supporting joint for independent suspension of vehicle wheels comprising a housing, a pivot pin extending from an opening in one end of the housing, said housing having an interior spherical surface adjacent said opening, said pivot pin having a convex spherical surface of the same diameter as said interior spherical surface, said convex spherical surface engaging said interior spherical surface when said pivot pin is untilted with respect to said housing, a flat surface on said pivot pin on at least one side of the equator of said convex spherical surface leaving clear the interior of the housing, a spherical segment having a flat surface slidable radially

and rotatively on the flat surface of said pivot pin, said spherical segment also being tiltable within said housing as said pivot pin tilts.

3,099,470
ADJUSTABLE DOWEL
Peter C. Zumbusch, Upper Montclair, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Feb. 8, 1962, Ser. No. 171,968
5 Claims. (Cl. 287—127)



1. An adjustable dowel for connecting two adjacent members comprising:

(*a*) each member having a bore therein in adjacent relationship to each other,

(*b*) a first split bushing disposed in one bore,

(*c*) a second split bushing disposed in the other bore,

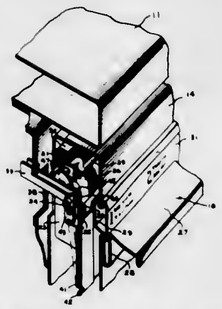
(*d*) each of said bushings having a tapered eccentric hole therethrough,

(*e*) a pin having a tapered section thereon adapted to be engaged in the tapered holes of the bushings,

(*f*) the pin in operative association with each of said bushings and adapted to extend through the eccentric holes thereof on said holes being aligned by rotation of said bushings,

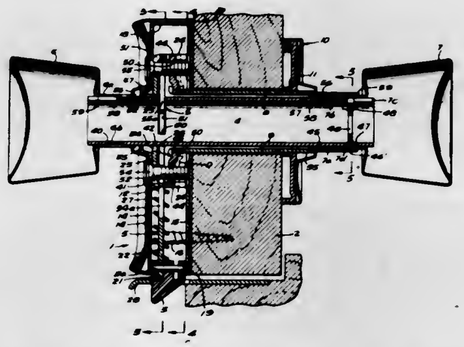
(*g*) locking means operatively associated with the pin to force said pin to expand said split bushings into operative engagement in the bores of said members whereby said members are doweled to each other.

3,099,471
DOOR LATCH
George A. Scott, Jeffersontown, and Milton S. Williams, Jr., Middletown, Ky., assignors to General Electric Company, a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,371
10 Claims. (Cl. 292—7)



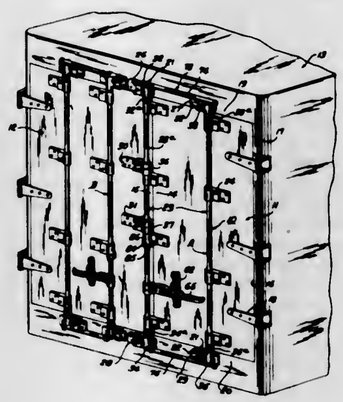
1. A latch mechanism for a pivoted door, there being a door frame element and a door element hinged along one edge to the door frame for gaining access to an opening through the door frame, the latch mechanism being supported on one of the door and door frame elements, keeper means on the opposite element from the latch mechanism, the latch mechanism including an operating handle and at least one pivoted latch member, said latch member being capable of engagement with and disengagement from its respective keeper, said latch member being pivoted on an eccentric crank arm, a fixed stop cooperating with said latch member as a fulcrum until the latch member engages its keeper, then the continued movement of the eccentric crank arm pulls the latch member back so as to pull the door tightly closed, the fixed stop serving to retract the latch member into the supporting elements of the latch member when the latch mechanism is in the unlatched position.

3,099,472
RIM LOCK SET
Arthur F. Kelsen, 11701 Foster Road, Los Alamitos, Calif.
Filed June 13, 1960, Ser. No. 35,615
13 Claims. (Cl. 292—169)



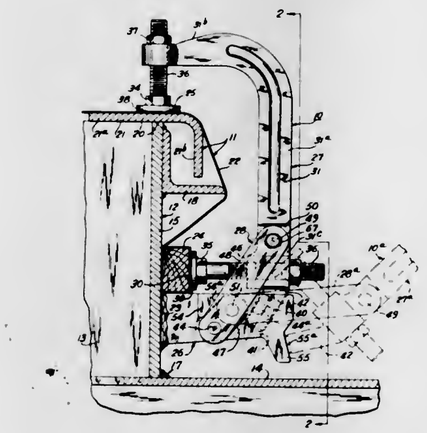
13. A door lock comprising: a case; a bolt projecting from said case; an elongated operating member extending through said case at a right angle to said bolt; means for retracting said bolt upon operation of said operating member; a mounting member extending along said operating member from within said case; means for effecting movement of said mounting member longitudinally of said operating member including a member engaged with said mounting member and supported in the case for axial movement relative thereto; and a retainer releasably connectable to said mounting member in spaced relation to said case.

3,099,473
DOOR CONTROL MECHANISM
John V. Pastva, Jr., Parma Heights, Ohio, assignor to The Eastern Company, Cleveland, Ohio, a corporation of Connecticut
Filed Dec. 5, 1961, Ser. No. 157,148
12 Claims. (Cl. 292—240)



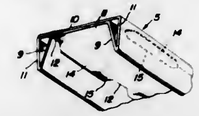
1. In door control mechanism for use with a door and an associated doorframe; means adapted for mounting on said door including a rockable shaft and actuating means effective to rock said shaft; a keeper member adapted for mounting on said doorframe; and a latch member actuatable to and from door-latched engagement with said keeper member by rocking of said shaft; one of said members comprising a stem portion and a transverse portion connected with said stem portion in a transverse relation thereto, and the other of said members having a forked portion engageable beneath said transverse portion in straddling relation to said stem portion; said transverse portion being convexly curved on the side thereof engageable by said forked portion, and said forked portion comprising a pair of arms of a concavely curved shape on the side thereof engageable with said transverse portion; said forked portion having a recess extending longitudinally thereof between said arms, and said stem portion comprising web means elongated in the direction of the longitudinal extent of said recess and of a transverse thickness to be snugly receivable in the recess.

3,099,474
CLAMPING DEVICE
Osborn R. Archer, Cleveland, Ohio, assignor to The American Ship Building Company, Cleveland, Ohio, a corporation of New Jersey
Filed Apr. 6, 1961, Ser. No. 101,227
19 Claims. (Cl. 292—256.5)



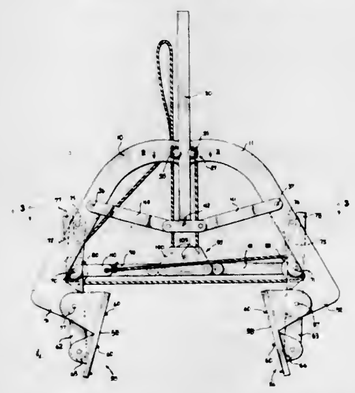
2. A clamping device for clamping a movable cover against a support; comprising a bracket member adapted to be attached to said support; a movable clamp member having thrust means engageable with said cover; one of said members having guide opening means and the other member having guide stem means rigid therewith and receivable in said guide opening means; said guide opening means and guide stem means being co-operably engageable in response to movement of said clamp member relative to said bracket member in a direction to engage said thrust means with said cover; and locking means connecting said clamp member with said bracket member and actuatable from an unlocked condition to a locked condition for retaining said thrust means in clamping engagement with said cover and said guide stem means engaged in said guide opening means; said locking means comprising swingable link means having a first pivotal connection with said bracket member, and connecting link means having second and third pivotal connections with said clamp member and swingable link means for overcenter movement of said second pivotal connection to produce said locked and unlocked conditions.

3,099,475
PACKAGE FORMING MEMBER
Guelfo A. Manizza, Waterford, Conn., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed July 7, 1959, Ser. No. 825,497
5 Claims. (Cl. 294—87.2)



4. A package forming member for engagement with one end only of containers, such as cans, of the type having an outwardly directed rib at one end thereof, said package forming member being of a one-piece construction with the longitudinal edges permanently secured together and comprising inner and outer nested troughs of flexible material, said outer trough including a base and upstanding outer walls, said inner trough being seated in said outer trough and including a floor and upstanding side walls, said side walls only being provided with transversely aligned elongated notches at spaced intervals adjacent the bottom edges thereof for receiving transversely spaced peripheral rib portions of containers, said floor being loosely engaged only with said base, and said inner trough being joined to said outer trough only by connections between the upper edges of said side walls and said outer walls whereby the package forming member can be stored in a flat state.

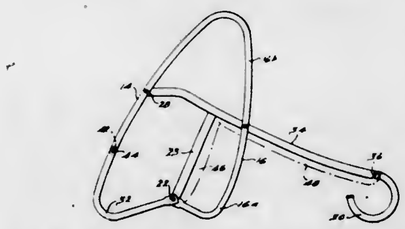
3,099,476
STONE GRAPPLE
Garrett H. Miller, Box 173, Linden, Ind.
Filed May 29, 1961, Ser. No. 113,477
6 Claims. (Cl. 294—112)



1. A grapple comprising a pair of pivotally connected, outwardly and downwardly extending arms, a pair of jaws having mutually facing forward surfaces, each of said jaws pivoted at its upper rearward portion to the lower end of a respective arm, a pair of levers each having a lower end pivoted to the lower rearward portion of a respective jaw and extending upwardly therefrom, a pair of stops each secured to an intermediate portion of a respective arm, a pair of links each pivoted at an upper end to a respective stop and at a lower end to a respective lever at an intermediate portion thereof, means for moving the pivotal connections of said links and levers toward one another, each of said levers having an upwardly extending endward portion adapted to engage a respective stop upon the movement toward one another of said link and lever

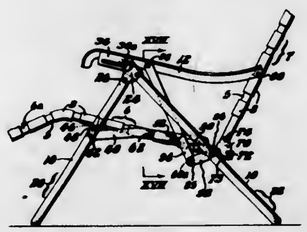
connections for exerting an inward force upon the lower portion of said jaws, and means for separating said arms.

3,099,477
JUVENILE FURNITURE
John E. O'Herron, 6580 Garland Ave., Detroit 13, Mich.
Filed Apr. 12, 1962, Ser. No. 186,917
4 Claims. (Cl. 297—1)



1. A combination chair and slide device comprising, a pair of side frame members matching parts of which are convex throughout a portion thereof to form rockers, the opposite sides of said side frame members being shaped to form an arm portion for the seat and a guard rail portion for the slide, leg members connecting the front ends of said arm and rocker portions and forming nonrocking supports at the juncture of said leg members and rocker portions, a pair of upright frame members connected to said side frame members, a seat forming element connected to said upright frame members and to said side frame members and operable when said device is resting on said rockers, a panel extending between said upright frame members and forming a back rest for the seat forming element and forming a slideway when the device is inverted, the upper ends of said upright frame members being shaped to form laterally extending nonrocking supports to support the end of the slideway in spaced relation to a floor or the like, whereby said device may be substantially inverted to rest on said first and second mentioned nonrocking supports to dispose said slideway in an inclined position.

3,099,478
FOLDING CONTOUR CHAISE
Morton Pearlstine, Cynwyd, Pa., assignor to The Bunting Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 17, 1962, Ser. No. 245,082
4 Claims. (Cl. 297—28)



1. An adjustable folding contour chaise comprising in combination
- a chair having seat and back units pivotally joined,
- a frame structure for supporting the chair having front and rear support members pivotally joined,
- a pair of arm supports pivotally attached to the chair at one end and displaceably mounted on the frame structure at the other end,
- means for supporting the chair unit in a variety of positions in relation to the frame structure having on each side of the chair
  - a main supporting bar attached to a support member at one end and attached to a second bar at the other end, said second bar attached to the other support member,
  - a pivotal connection between the main supporting bar and the seat unit of the chair,
  - an adjustable rear limit bar mounted beneath the chair, said bar positioned by a lever extending from an arm support and a second lever attached to the rear support member, and
  - a front limit bar mounted upon the front support member whereby rotation of the chair in the counter-clockwise direction is limited.

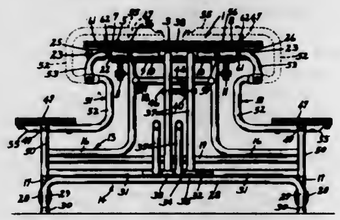
3,099,479
CHAIR STRUCTURE
Henry C. Banke, Chicago, Ill., assignor to Clarin Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1961, Ser. No. 91,695
2 Claims. (Cl. 297—36)



1. In combination with a chair including a chair frame providing a pair of front legs, a pair of rear legs, and a back rest, a tablet arm assembly comprising, a tablet arm, a pivotal connection securing a rearward portion of said tablet arm to said back rest adjacent one side of the chair for relative movement about a pair of transverse axes, and means connecting a forward portion of said tablet arm to said frame comprising a support member carried at its lower end by the frame for swinging movement through a generally vertical plane along said one side of the chair from a generally vertical position and in a direction toward said back rest to a rearwardly inclined position, and a universal connection between the tablet arm and said support member including a bearing means on the underside of said tablet arm, a yoke-like element connected with said bearing means for pivotal movement about an axis disposed at right angles to the plane of said tablet arm, a sleeve element slidably engaging said support member for movement axially thereof and connected with said yoke-like element for relative pivotal movement about an axis transverse to and spaced from the axis of the sleeve and support member, whereby said tablet arm may be rotated about said transverse axis of said universal connection and one of said axes of said rearward pivotal connection to move between a generally horizontal position of use and a generally vertical position along said one side of the chair, and when in said generally vertical position the tablet arm may be moved vertically downward about the other transverse axis of said rearward pivotal connection and said axis of said bearing means to cause said sleeve to slide along said support member and place said tablet arm in its lowered position alongside the chair with said support member disposed in its rearwardly inclined position with respect to its connection

with said frame, and a biasing means in position to urge the adjoining surfaces of said bearing means and yoke-like element together to resist relative rotation therebetween, whereby said tablet arm is maintained in any selected position along said support member when the tablet arm is positioned in said generally vertical position along said one side of the chair.

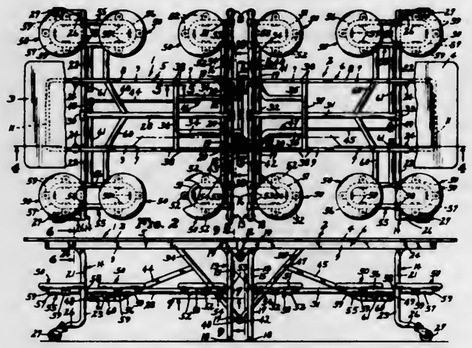
3,099,480
HINGE MEANS FOR FOLDING TABLE AND SEAT STRUCTURE
Kermit H. Wilson, 5215 Eden Ave. S., Minneapolis, Minn.
Filed Apr. 5, 1961, Ser. No. 100,839
2 Claims. (Cl. 297—159)



1. In a table and seat structure, normally horizontally disposed table top means, comprising a flat top element and an underlying supporting frame secured to said top element, leg structure secured to said frame and normally depending therefrom, a normally horizontally disposed seat element, a mounting device mounting said seat element to said frame for swinging movements of said seat element on a horizontal axis and between a horizontal disposed operative position at one side of and below the level of said top element and an inverted inoperative storage position in face-to-face engagement with the top surface of said top element, said mounting device comprising a pair of cooperating hinge elements one of which is secured to said seat element, said frame defining a socket immediately below the bottom surface of said top element and inwardly spaced from the adjacent edge of said top element, the other of said hinge elements having an extended portion receivable in said socket, and means for releasably locking said extended portion in said socket.

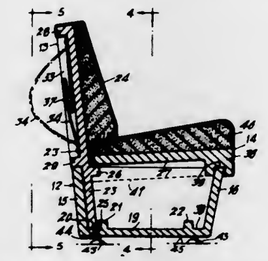
3,099,481
FOLDING TABLE AND SEAT STRUCTURE
Richard C. Bue, Minneapolis, Minn., assignor to Sico Manufacturing Company, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 28, 1961, Ser. No. 106,318
6 Claims. (Cl. 297—159)

1. In a folding table and seat structure, a table top comprising a pair of cooperating top sections, hinge means pivotally connecting said top sections together at their adjacent inner ends for swinging movements between unfolded horizontal positions and generally vertically disposed folded storage positions, supporting means for each of said top sections and including generally vertically disposed inner and outer leg structures pivotally secured to the inner and outer end portions respectively of their respective top sections on axes parallel to the axis of said hinge means, control means normally disposed directly beneath said top sections for maintaining said leg structures vertically disposed during folding and unfolding movements of said top sections, a plurality of normally horizontally disposed individual seat elements arranged in a row adjacent one side of each of said top sections and below the level of said top sections in the unfolded positions thereof, means pivotally connecting some of said seat elements to the inner leg structures of their respective top sections, independent means pivotally connecting others of said seat elements to the outer leg structures of their respective top sections on axes parallel to the axis of said hinge means, and actuator elements operatively connecting said seat elements to said control means for



moving said seat elements between their operative horizontal positions and vertically disposed storage positions responsive to corresponding movements of their respective top sections said seat elements being offset from adjacent portions of their respective leg sections in a direction parallel to the adjacent sides of said top sections.

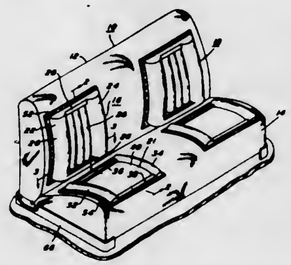
3,099,482
COMBINED ICE CHEST, SEAT, LIFE PRESERVER, AND REVERSIBLE BACK
Ralph S. Woodruff, Sr., Point Pleasant, N.J., assignor to R. S. Woodruff & Co., Point Pleasant, N.J., a corporation of New Jersey
Filed Jan. 30, 1962, Ser. No. 169,825
8 Claims. (Cl. 297—193)



1. A combined ice chest and seat comprising a unitary open-topped box formed as side and end walls upstanding from a bottom wall and made of heat-insulative material, ribs upstanding from the inner surface of said bottom wall, respectively running parallel to and each spaced from but adjacent the inner surface of one of said side walls, a back rest wall made of heat-insulative material, the lower edge of which fits between a selected one of said side walls and the rib adjacent thereto, said back rest wall having a rib extending parallel to its bottom edge, a back rest cushion secured to said back rest wall on the same side but above said rib, reinforcing ribs extending from the other face of said back rest wall and defining an outwardly-opening recess, a seat wall made of heat-insulative material, with a reinforced front edge portion formed with a downwardly-opening groove to telescope over the top edge of a selected one of the box side walls and end flanges to overlap the top edges of the box end walls, the rear edge portion of said seat wall resting on the first-mentioned rib of the positioned back

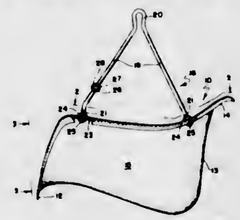
rest wall, and a seat cushion secured to the upper surface of said seat wall.

3,099,483
AUTOMOBILE SEAT COVER
Robert Hofberg, 1802 Fox Chase Road, Philadelphia 16, Pa.
Filed May 16, 1962, Ser. No. 195,206
3 Claims. (Cl. 297—219)



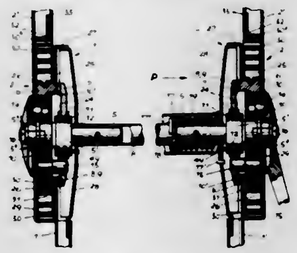
1. An automobile seat cover for covering a bench-type seat having a back and bottom cushion, said automobile seat cover comprising a back cover portion, said back cover portion having an inner surface conforming to said bench back cushion, two back cushion inserts formed on the outer surface of said back cover portion, said back cushion inserts having raised spaced parallel vertical ribs along the outer edges of a depressed central portion, back fabric insert covers overlying said back cushion inserts and securing said back cushion inserts to said back cover portion, a bottom cover portion, said bottom cover portion having an inner surface conforming to said bench bottom cushion, two bottom cushion inserts on the outer surface of said bottom cushion portion, said bottom cushion inserts having raised spaced parallel vertical ribs along the outer edges of a depressed central portion, bottom fabric insert covers overlying said bottom cushion inserts and securing said bottom cushion inserts to said bottom cover portion, each of said bottom cushion inserts being aligned with an associated back cushion insert to form with said back fabric insert covers and said bottom fabric insert covers two spaced parallel bucket seat additions secured to said back and bottom cover portions, the space between the adjacent vertical ribs of said bucket seat additions defining a middle seating area, and means for removably securing said back and bottom cover portions to said back and bottom cushions respectively.

3,099,484
MECHANICAL CONTOURED NURSERY SWING SEAT CONSTRUCTION
Ralph E. Williams and Warren P. Miller, Anderson, Ind., assignors to American Playground Device Co., Anderson, Ind., a corporation of Indiana
Filed June 15, 1960, Ser. No. 36,435
1 Claim. (Cl. 297—280)



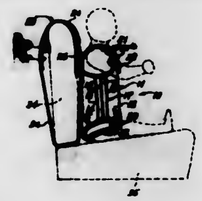
Nursery swing seat construction comprising a contoured swing seat integrally formed of plastic material including a seat portion having a downwardly curved front peripheral flange portion, a back rest portion integrally formed with said seat portion and extending upwardly therefrom and having an outwardly turned peripheral flange portion, side portions extending upwardly from opposite sides of said seat portion and being integrally formed therewith and extending rearwardly and continuously with said back rest portion and being integrally formed therewith, said side portions having outturned peripheral flange portions being continuous with said seat portion flange portion and said back rest flange portion and each of said side portion peripheral flange portions defining arm rests, a pair of spaced apart inverted V-shaped, rigid suspension members being fixedly connected with said arm rests and extending upwardly therefrom and each of said members being adapted to be connected to a swing support for swinging movement relative thereto, and an elongate retaining bar extending between and having its ends slidably mounted on said suspension members for vertical sliding movement relative thereto, and a pair of elongate attachment and reinforcing members disposed along the under side of said arm rests and being connected with said suspension members, said attachment members cooperating with said suspension members and said retaining bar for imparting rigidity to said arm rests throughout their respective lengths and to said side portions.

3,099,485
HINGE UNIT FOR SEAT WITH ADJUSTABLE BACK REST
Walter Beierbach, Stuttgart-Weil im Dorf, Ernst Heinl, Balersdorf, Erlangen, Werner Strien, Stuttgart-Weil im Dorf, and Sylvester von Sass, Pluderhausen, Germany, assignors to Stuttgarter Karosseriewerk Reutter & Co. G.m.b.H., Stuttgart, Germany, a corporation of Germany
Filed Aug. 12, 1960, Ser. No. 49,327
Claims priority, application Germany Aug. 25, 1959
23 Claims. (Cl. 297—373)



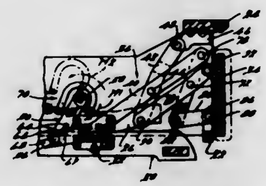
9. A hinge unit for a seat with a pivotably adjustable and lockable back rest having two sides, comprising two sets of hinge members adapted to be secured to the two sides of said seat and of said back rest and forming two parts, a first member of each of said sets being secured to one of said parts and a second member being secured to another of said parts, pivoting means for connecting said two members of each of said sets, so as to be rotatable, but axially immovable relative to each other, said pivoting means of both of said sets extending coaxially relative to each other, a first locking member rigidly secured to one of said hinge members of each of said sets for each side of said seat, a bolt rotatably mounted in the other of said hinge members, so as to be axially immovable thereto and having coarse screw threads, a second locking member threadedly secured to said bolt, means for connecting said second locking member to the other of said hinge members, so as to permit said second locking member to move independently of said other of said hinge members along a plane extending through the common axis of said pivoting means of both of said sets of hinge members, whereby said locking members of each of said sets of hinge members may be engaged with and disengaged from each other respectively, and means for operatively connecting said locking members to each other.

3,099,486
SAFETY CAR SEAT
Edwin Paul Scott, 3610 Lexington Road, St. Matthews, Ky.
Filed Nov. 9, 1959, Ser. No. 851,783
1 Claim. (Cl. 297—389)



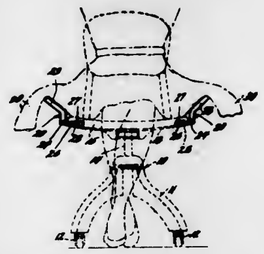
A safety car seat for securely holding a child in normal sitting position upon the seat of a car comprising a sack body of flexible material made in one piece for encasing the child consisting essentially of a chest portion, a back portion, side portions laterally extending from said back portion and a crotch portion interconnecting said chest and back portions, means for adjusting the fit of the sack to the child including a zipper row on each side of the said chest portion and a pair of laterally spaced zipper rows on each of said side portions to adjust in secured relation the perimeter of said chest portion and to secure said side portions and back portion to said chest portion, adjustable and releasable strap means secured to said back portion and extending downwardly therefrom to encircle the back of the seat of the car at a location inaccessible to said child in normal sitting position, means to secure the free end of said strap means to the said back portion at the upper end thereof, a rigid hanger for said sack comprising a pair of arcuate metal straps and a plurality of cross pieces secured thereto adapted to be draped over the back of the car seat, said hanger including securing means for releasably securing the free end of hanger straps carried by said strap means, and means adapted to interconnect said strap means with said hanger positioned on the back of said car seat at a point intermediate the length of said strap means.

3,099,487
LEG REST FIXTURE AND SUPPLEMENTAL HOLDING MECHANISM
Edward M. Knabusch and Edwin J. Shoemaker, Monroe, Mich., assignors to La-Z-Boy Chair Company, Monroe, Mich., a corporation of Michigan
Filed May 21, 1962, Ser. No. 196,059
3 Claims. (Cl. 297—429)



1. In a chair structure, the combination of a seat frame, a leg rest, means including extensible linkage means securing said leg rest to said seat frame for movement between a retracted position and a raised leg-supporting position, means operatively connected to said extensible linkage means for moving said leg rest into its retracted or raised leg-supporting positions including a rotatable transverse shaft adapted to be manually actuated, a first link non-rotatably connected to said shaft, a curved generally sickle shaped link having one end pivotally connected to said first link on one side fore and aft of said shaft and the opposite end disposed on the other side of said shaft when said leg rest is in its retracted position, and resilient means connected to the opposite end of said curved link for moving said leg rest operating means in a direction to cause said extensible linkage means to resiliently hold said leg rest against said seat frame when said leg rest is in its retracted position.

3,099,488
SKIRT GUARDING ATTACHMENT FOR ARMLESS CHAIRS
Kathleen Eckenrod, Marengo, Iowa (Rte. 1, Ionia, Iowa)
Filed Dec. 5, 1960, Ser. No. 73,763
4 Claims. (Cl. 297—463)



1. An attachment for an armless chair of the type used by typists, consisting essentially of a one-piece, generally U-shaped member for detachable engagement with the seat of such a chair, each leg of said U-shaped member comprising a portion extending inwardly with respect to the ends of the bridging portion of said U-shaped member and in a plane extending downwardly at an angle with respect to the plane of said bridging portion of the U-shaped member, the free end of each leg being formed with resilient means for engagement with one of the lateral margins of the chair seat, said portions of the legs being dimensioned and said angle of downward inclination of said portions of the legs being such that said bridging portion will be disposed substantially parallel to and laterally outward with respect to the side edges of the chair seat and in a plane above the plane of the chair seat when said resilient means are engaged with said margin of the seat.

3,099,489
DUMP VEHICLE
Velmo S. Johnson, Augusta, Kans., assignor to Spencer Safford Loadcraft, Inc., Augusta, Kans., a corporation of Kansas
Continuation of abandoned application Ser. No. 176,663, Mar. 1, 1962. This application Nov. 20, 1962, Ser. No. 242,035
6 Claims. (Cl. 298—14)

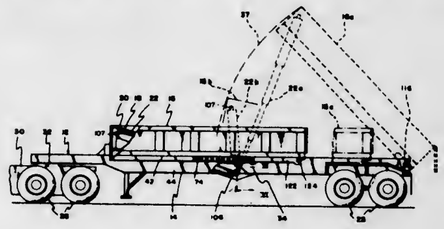
1. A load carrying and dumping vehicle comprising:
an elongated wheel supported chassis;
a load carrying and dumping body which is shorter in length than said chassis;
means mounting the body on the chassis for guided longitudinal movement therealong;
one double acting operator controllable longitudinally extensible and retractable power unit having its aft

end connected to the chassis intermediate its ends on a transverse pivot axis, and having its forward end connected to the forward end of the body on a transverse pivot axis;

and separable cooperating pivot means carried respectively by the aft end of the body and by the aft end of the chassis for automatically establishing a transverse body dumping pivot axis for the aft end of the body when the body is moved rearwardly a sufficient distance along the chassis to bring the cooperating pivot means together,

and for maintaining the pivot axis during the pivotal movement of the body, said pivot means being releasable so that the body may be moved relative to the chassis,

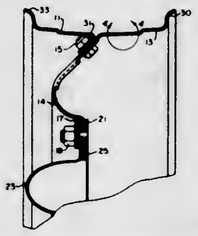
the distance between the body pivot means on the aft end of the chassis and the pivot axis on the chassis



for the aft end of the said power unit being less than the distance between the pivot means carried by the aft end of the body and the pivot axis on the body for the forward end of the said power unit;

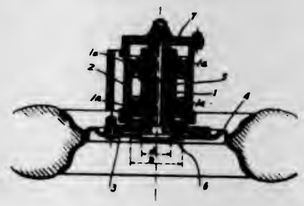
whereby when the body is located in a load carrying intermediate position on the chassis, a first retraction of the power unit will move the body aft to a position in which the body dumping pivot axis is established, a subsequent elongation of the power unit will then raise the forward end of the body above the chassis to dump the load from the aft end thereof, a subsequent second retraction of the power unit will lower the body back to its normal position on the chassis, and upon releasing of the pivot means a subsequent second elongation of the power unit will move the body forward on the chassis to its original load carrying position.

3,099,490
LAMINATED WHEEL
James O. Ellison, Piedmont, Calif., assignor of 2 1/100 to T. B. Griffith, San Carlos, Calif., and 2 1/100 to Ellen Younglove, San Francisco, Calif.
Filed Mar. 2, 1961, Ser. No. 92,924
7 Claims. (Cl. 301—9)



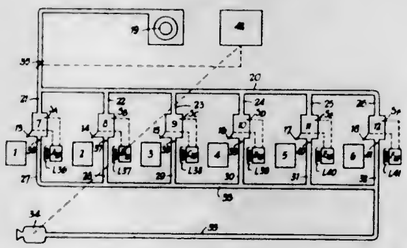
6. A wheel structure comprising a pair of tire bead seats and a web integral with at least one of said bead seats, said bead seats and web being formed of laminated non-ferrous metal sheets, individual laminations of the sheets in the web and integral bead seat being common to both the web and the integral bead seat, a plate formed of a hard material, and an adhesive layer on said web, said plate being joined to the web by said adhesive layer at a location central with respect to said bead seats.

3,099,491
SAFETY DEVICE FOR THE GUIDING WHEEL OF A VEHICLE
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed June 1, 1956, Ser. No. 588,740
Claims priority, application France June 10, 1955
4 Claims. (Cl. 301—126)



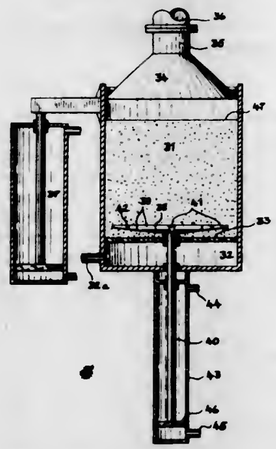
1. In a lateral guiding wheel assembly for railway vehicles and the like having a hollow casing member having an upper end and a lower end and fixed to the frame of the vehicle, an axle disposed on a vertical axis and rotatably journalled in said member, said axle having a body portion formed with an axial bore, and a wheel rotatable in a horizontal plane connected to said axle, in combination, a safety device for preventing loss of the wheel upon breaking of the axle, said safety device comprising a rigid shaft unit secured at a first end to the upper end of said member and extending through said bore independently of said axle, and a supporting element supported from the other end of said shaft unit, said element having portions extending radially from said element beyond the periphery of said axial bore and thereby underlying the axle but being normally out of contact with said axle and with the wheel but being effective to support said axle and said wheel by engagement therewith upon breaking of said axle and dropping of said wheel into engagement with said supporting element, said safety device being free from supporting action with respect to said wheel during the normal operation of said wheel and being free from all forces acting upon and transmitted by said wheel.

3,099,492
APPARATUS FOR FEEDING TOBACCO TO CIGARETTE-MAKING MACHINES
Noel R. F. Mortimer, Guildford, Surrey, England, assignor to Vokes Limited, Guildford, Surrey, England
Filed July 12, 1961, Ser. No. 123,480
7 Claims. (Cl. 302—28)



1. A tobacco feeding apparatus including a bulk storage hopper, a number of tobacco-utilizing machines each having an intermittent demand for tobacco, signaling means associated with each machine for signaling such a demand, a discharger including a hopper associated with each machine, a single mechanical feeder device including at least one conduit connecting said feeder device to said dischargers for drawing tobacco from the bulk hopper, and pneumatic suction means for conveying tobacco through said conduits, in combination with a fully automatic control mechanism comprising scanning means for continuously scanning the demand signaling means by which an immediate demand for feed is signaled from any one tobacco utilizing machine to the feeder device, and feeder control means including a starter for the feeder and feed-diverting means operable upon conclusion of feed to a discharger either to stop the feeder device or to divert its output to another machine signaling a demand.

3,099,493
SUPPORTS FOR AERATING PARTICULATE MATERIALS
Harold De Hart, Clifton, N.J., and Donald Herbert Brooks, Northdene, Transvaal, Republic of South Africa, assignors to Indevco Ltd., Mauren, Liechtenstein, a corporation of Canada
Filed Feb. 2, 1961, Ser. No. 86,657
2 Claims. (Cl. 302—29)



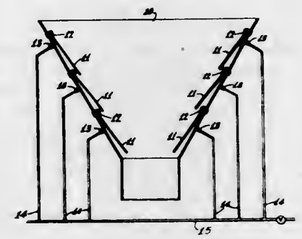
1. Apparatus for aerating particulate material comprising a container having side walls and a bottom wall, the bottom wall being a plate member having a top surface and a bottom surface, a plurality of apertures formed through the plate, each aperture comprising a straight-walled outlet passage through the top surface of the plate and a straight-walled inlet passage through the bottom surface of the plate, a constricted passage between the straight-walled passages and communicating therewith, a gas box encompassing the bottom of the plate in gas communicating relationship with the plate, and inlet means for introducing pressurized gas to the gas box and through said apertures.

3,099,494
FEED DEVICE WITH FLUID ACTIVATED RIPPLING SHEETS
Marvin C. Heinze, Clark, N.J., assignor to FMC Corporation, a corporation of Delaware
Filed June 6, 1961, Ser. No. 115,260
3 Claims. (Cl. 302—31)

1. A feeding device for caking solids comprising a container having

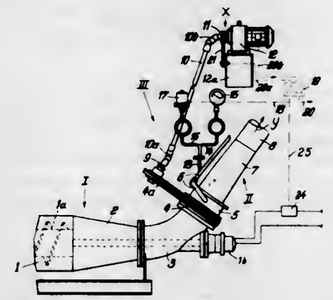
(2) a lower discharge end,

(3) an inner lateral surface having positioned thereon a plurality of thin, flexible sheets substantially parallel, when at rest, to the said lateral surface, and fixed to said lateral surface along one direction thereof and only at the upper edge of each sheet, the remaining edges being unfixed and free to move in such a manner that the entire sheet below the fixed edge can be extended away from said surface, and



(4) a fluid-introducing means, having access through the lateral surface to a point ¼ to ½ of the length of the sheets from their fixed upper edges directly beneath each of said sheets, whereby the introduction of a fluid under pressure causes the free edges of the sheets to extend away from the lateral surface so that only the fixed upper edge is in contact with the lateral surface.

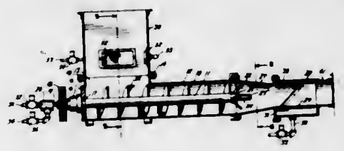
3,099,495
CONVEYING ARRANGEMENT FOR PULPY MATERIALS, SUCH AS DISTILLER'S GRAINS AND THE LIKE
Wilhelm Ponndorf, Kassel, Germany, assignor to Ponndorf Maschinenfabrik K.G., Kassel-Bettenhausen, Germany
Filed Jan. 12, 1961, Ser. No. 82,281
Claims priority, application Germany Jan. 21, 1960
2 Claims. (Cl. 302—50)



1. An arrangement for conveying pulpy material, such as wet distiller's grains and the like, said arrangement comprising, in combination, a worm conveyor for continuously transporting a stream of pulpy material, said worm conveyor comprising a tubular housing having a discharge end, a worm rotatably received in said housing and a motor connected with and adapted to rotate the worm whereby the latter delivers pulpy material toward said discharge end; a pneumatic conveyor comprising an elongated tube having an inlet end connected with the discharge end of said housing, nozzle means at said inlet end for delivering blasts of a compressed gas into and

for advancing the pulpy material through said tube; a control system for automatically sealing said pneumatic conveyor from said worm conveyor in response to a predetermined pressure in said pneumatic conveyor, said control system comprising a casing provided between said discharge end and said inlet end, a plate like control member rotatably received in said casing and formed with aperture means adapted to permit the flow of material from said housing to said tube, pinion means rotatably mounted in said casing and meshing with said control member, said control member rotatable by said pinion means between a first position in which said aperture means permits the flow of material to said tube and a second position in which the control member seals the tube from said housing, drive means for rotating said pinion means in clockwise and anticlockwise directions, said drive means comprising a reversible motor and motion transmitting means coupled with said last mentioned motor and with said pinion means, and pressure responsive means connected with said last mentioned motor and with said nozzle means for operating said last mentioned motor in a first direction to rotate the control member to said first position when the pressure in said nozzle means drops to a predetermined first magnitude and for rotating said last mentioned motor in a second direction to rotate the control member to said second position when the pressure in said nozzle means rises to a predetermined second magnitude; and means operatively connected with said pressure responsive means and with said first mentioned motor means for arresting the latter when the pressure in said nozzle means reaches said second magnitude.

3,099,496
PUMP FOR IMPARTING MOVEMENT TO DRY PULVERULENT MATERIAL
Allan J. Kayser, 712 S. Gilpin St., Denver 9, Colo.
Filed Jan. 22, 1962, Ser. No. 167,745
3 Claims. (Cl. 302—50)



1. A pump for imparting movement to dry pulverulent material comprising:

(*a*) A horizontally elongated conveyor screw cylinder having an open discharge extremity and a closed intake extremity, said cylinder being provided with an intake opening in its top adjacent said intake extremity for receiving said pulverulent material;

(*b*) A conveyor screw mounted on a tubular shaft rotatably journalled in the intake extremity of said cylinder and extending throughout the length of the latter for conveying material longitudinally of said cylinder and discharging same at the open discharge extremity;

(*c*) Means for introducing air under pressure into the intake extremity of said shaft, said air discharging at the discharge extremity of said cylinder;

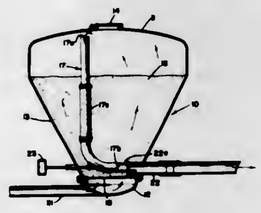
(*d*) A tubular reducer portion mounted on said discharge extremity, said portion gradually decreasing in diameter toward said discharge extremity to apply a compressive bias to the material discharging from said extremity;

(*e*) A feed hopper mounted on said cylinder over said intake opening for directing material through the latter;

(*f*) A porous-walled tube mounted on the discharge extremity for receiving the air discharging from said tubular shaft and distributing said air through the discharging pulverulent material; and

(*g*) Forwardly and outwardly directed jet tubes mounted on the discharge extremity of said shaft and rotatable with the latter to discharge air about the peripheral portions of the stream of discharging pulverulent material.

3,099,497
PNEUMATIC CONVEYOR FOR PULVERANT MATERIALS
Douglas Albert, Oakland, Calif., assignor to Albert Air Conveyor Corp., Oakland, Calif.
Filed May 6, 1959, Ser. No. 811,412
10 Claims. (Cl. 302—52)

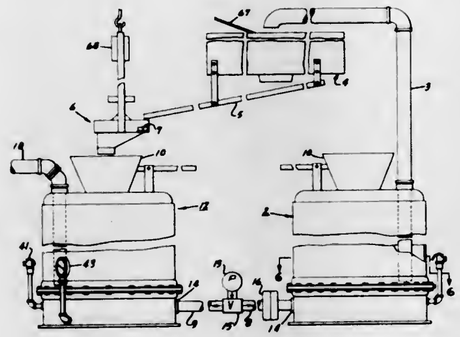


1. In a pneumatic conveying system, the combination comprising a pressure vessel for containing bulk material to be conveyed; said vessel including an air pervious bottom closure adapted to be connected to an air pressure source and through which air can be introduced through the bottom of said vessel to fluidize said bulk material in said vessel; a conveyor conduit for conveying material from interiorly of said vessel and disposed with its inlet opening in said vessel above and adjacent to said pervious bottom closure; and air feed-back pipe in said pressure vessel having its intake end in communication with space within said vessel above the level of material contained therein and disposed with its discharge end adjacent and in substantial air flow registry with the inlet opening of said conveyor conduit; said feed-back pipe including a flexible hose section between said inlet and discharge ends defining a flexible joint about which said discharge end of said pipe may be swung relatively toward and away from said inlet opening; and control means connected to said discharge end and extending externally of said vessel operable to move said discharge end relative to said inlet opening to adjustably enlarge or narrow the space between the discharge end and inlet opening; the space between said discharge end and inlet opening defining a passage by which bulk material in the vessel is introduced into said inlet opening.

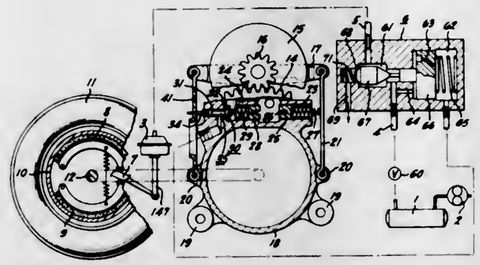
3,099,498
METHOD AND APPARATUS FOR MANUFACTURING RESIN COATED CORE SAND
Earl W. Jahn, Springfield, Mass., assignor to Shell Process Inc., West Springfield, Mass., a corporation of Massachusetts
Filed May 6, 1960, Ser. No. 27,985
2 Claims. (Cl. 302—53)

1. In the manufacture of resin coated sand, apparatus for treating sand comprising a chamber, a gas permeable diaphragm forming the bottom of said chamber, means forcing air upwardly into said chamber through said diaphragm with sufficient energy to maintain the grains of sand in a state of agitation, said diaphragm comprising spaced opposed screens, the space between said screens being filled with a heat-resistant fluent, granular material,

means for increasing the pressure of the gas in said chamber, and a conduit extending from said chamber for conveying the contents of said chamber to any desired location.

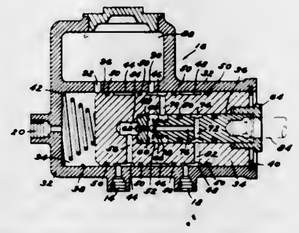


3,099,499
ANTI-SKID DEVICE
Millis V. Parshall, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 18, 1960, Ser. No. 70,310
8 Claims. (Cl. 303—21)



8. Means for sensing a change in angular acceleration relative to linear acceleration of a rotating and linearly moving body, said means comprising: a four-link parallelogram linkage including a first link having said body rotatably mounted thereon and linearly movable therewith, a second link opposite said first link, and third and fourth links pivotally joined to said first and second links, means operatively engaging said first and third and fourth links to bias said second link to a neutral balanced translatory position, an inertia member rotatably mounted on said second link on an axis having arcuate translatory movement with pivotal movement of said second link about the rotational axis of said body on said first link, a driven gear on said body and a driving gear meshing therewith drivingly connecting to rotate said inertia member at a rotational speed directly related to the rotational speed of said body, said inertia member and said driven gear constituting an angular accelerometer having a polar moment of inertia and said inertia member and driven gear and driving gear and second and third and fourth links constituting a linear accelerometer having a mass moment about the body rotational axis, the ratios of said moments being substantially equal to the ratio of angular acceleration of said angular accelerometer to the simultaneous linear acceleration of said body to maintain the normally balanced translatory position of said second link, and means for connecting said parallelogram linkage to a signal output mechanism.

3,099,500
FULL POWER BRAKE VALVE
Vernal A. Anderson, Dearborn, Mich, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 8, 1960, Ser. No. 13,506
5 Claims. (Cl. 303—49)



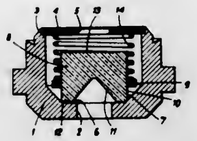
1. A control assembly for a brake system having a cylindrical bore and a piston slideably received within said bore, a chamber between the depth of said bore and the end of said piston, valve means co-axially slideable within said piston, a fluid pressure source communicable with said chamber, said means having a first position preventing flow of pressure fluid from said source to said chamber, actuating means adapted to move said valve means to a second position for controlled fluid flow from said source to said chamber, a high pressure outlet in said chamber, said piston being slideable by said actuating means to force pressure fluid out of said chamber through said high pressure outlet.

3,099,501
SLIDING DRAWER CONSTRUCTION
Frank Hillson, 48 Brentwood Drive, Verona, N.J., and Rubin Krivisky, 4 Sherman Drive, Spring Valley, N.Y.
Filed July 11, 1960, Ser. No. 41,850
5 Claims. (Cl. 308—3.8)



3. A sliding drawer construction comprising a pair of opposed generally parallel guide rails each having a longitudinal channel and being secured to a cabinet frame, means on the guide rails to adjust their length, means on the guide rails to adjust their horizontal inclination, a stationary friction resistant support-guide secured to each guide rail at its front end and adapted to support and guide the bottom and sides of a sliding drawer, a movable support-guide secured to each side of the sliding drawer opposite the guide rails, each movable support-guide being movably positioned within the channel in the guide rail opposite it, means on each movable support-guide to adjust its vertical position, a lip on each guide rail projecting downwardly into the longitudinal channel, an arcuate depression in each channel beneath the said lip, the lip and depression being adapted to cooperatively engage the movable support-guides to permit intentional but prevent accidental withdrawal of the movable-support-guides from the channels in the guide rails.

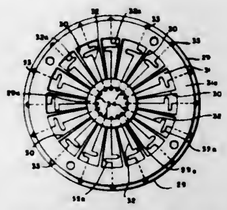
3,099,502
SHOCK-ABSORBING PIVOT BEARING
Pierre-Eugène Bourquin, Les Fretes, Sous Les Brenets, and Charles-Emile Schlatter, Les Brenets, Switzerland, assignors to Seitz & Co., Les Brenets, Switzerland, a joint-stock company
Filed June 9, 1960, Ser. No. 34,987
Claims priority, application France June 11, 1959
7 Claims. (Cl. 308—159)



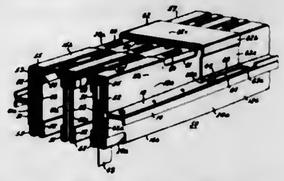
1. In a shock absorbing pivot bearing for precision instruments, measuring apparatus and the like, in combination, a hollow body member having an inner surface comprising, at one end of said body member, a bearing portion and a centering portion located adjacent and around said bearing portion, and, at the other end of said body member, a spring resting portion facing said bearing and said centering portions, a movable pivot bearing unit comprising a spring resting face and a jewel provided with a seating face, said spring resting face and said seating face being directed in opposed directions and said seating face having substantially the same size as said bearing portion and being adapted for lying thereon, said movable pivot bearing unit having a pivot receiving surface disposed thereon substantially at the same level as that of said spring resting face, said seating face being delimited by an edge adapted for cooperation with said centering portion and said unit being located in said body member with the seating face of said jewel lying on said bearing portion, but with the other portions of said unit in spaced relationship to said inner face of the body member to enable free translational and tilting motions of said unit within said body member away from said bearing portion, and a coil spring in said body member extending coaxially thereto and having one end resting on said spring resting portion of the body member and the other end resting on said spring resting face of said movable pivot bearing unit and moving therewith, said spring normally holding the seating face of said jewel lying on said bearing portion of the bearing body member whereby the edge of said seating face adapted for cooperation with said centering portion are the only surfaces in frictional engagement upon said movable pivot bearing unit being radially displaced by a radial force thereon.

3,099,503
MULTI-CIRCUIT ROTARY ELECTRICAL CONNECTOR
Alec C. Scott, New Hyde Park, N.Y., assignor, by mesne assignments, to Aeroflex Laboratories Incorporated, New York, N.Y., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,639
7 Claims. (Cl. 339—2)

1. A unitary multi-circuit rotary electrical connector comprising: a pair of members of insulation material, one of said members being in the form of a disc, one of said members having provisions for supporting the other for relative rotation, and one of said members having a central aperture substantially coaxial with the axis of relative rotation; a plurality of ribs of insulation material disposed on one face of said disc member and extending outwardly from its central aperture and forming a plurality of channels therebetween; and a plurality of flexible electrical conductors each disposed in one of said channels with its outer end anchored to a fixed point on said disc member near its periphery and with its inner end anchored to a fixed point on the other of said members near said axis of rotation, a portion of each of said conductors extending axially through said aperture.

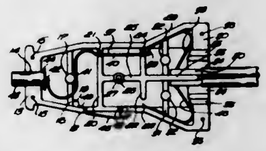


3,099,504
ELECTRICITY DISTRIBUTING CONDUIT APPARATUS
Raymond N. Rowe, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Original application June 13, 1955, Ser. No. 514,926, now Patent No. 3,018,320, dated Jan. 23, 1962. Divided and this application Nov. 29, 1961, Ser. No. 155,562
7 Claims. (Cl. 339—22)



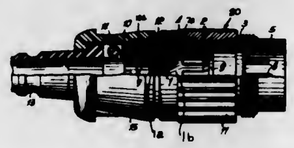
1. Electricity distributing conduit apparatus comprising a housing having a pair of opposed generally parallel walls, a plurality of bus bar assemblies extending in parallel spaced relation within said housing in edgewise relation to said walls, a plurality of flanges integral with said walls and bent inwardly therefrom, said flanges being spaced longitudinally of the housing to form and define a plurality of ventilating slots in said walls, said flanges also defining a plurality of spaced generally parallel channels, and insulation enveloping the longitudinal edges of said bus bar assemblies and seated within said channels whereby said flanges transversely support the bus bar assemblies, said ventilating slots being intermediate said channels and intermediate the bus bar assemblies in communication with the spaces between the bus bar assemblies.

3,099,505
ELECTRICAL CONNECTOR
Frederick W. Schwartz, Providence, R.I., assignor to Cable Electric Products, Inc., Providence, R.I., a corporation of Rhode Island
Filed Aug. 16, 1961, Ser. No. 131,772
1 Claim. (Cl. 339—95)



An electrical connector comprising a generally cylindrical housing including front and rear walls, the rear wall of said housing having a central opening, a central longitudinal wall dividing the rear portion of said housing into two equal chambers, said wall extending into said opening, a pair of tapered portions extending laterally from the rear portion of said housing, said tapered portions being hollow and forming lateral extensions at opposite sides of the rear portion of said housing, and a pair of electrical contact members mounted in said housing, the rear portion of each contact member being bent into a U-shape, each U-shaped portion extending into one of said laterally extending hollow tapered portions of said housing, the free arm of each U-shaped portion extending angularly toward said central wall away from said opening and resiliently contacting said central wall, whereby said free arm will electrically engage a cord lead wire inserted into said opening and lock said wire between the end of said arm and said wall, said rear wall having a spaced opening on each side of said central opening to permit the insertion of a tool to release the electrical cord connection by pushing said free arm away from said wall, said housing being formed of two mating longitudinal portions having a plurality of integral transverse strengthening ribs, said ribs having slots, said contact members extending through said slots.

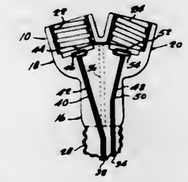
3,099,506
SHIELDED ELECTRICAL COUPLER
Ulrich Tuchel, Neckartalstrasse 51, Heilbronn (Neckar), Germany
Filed Oct. 24, 1961, Ser. No. 147,265
Claims priority, application Germany Oct. 24, 1960
10 Claims. (Cl. 339—143)



1. An electrical coupling comprising a contact connecting body having electrical connecting means at one end and means for connecting cable at its opposite end, a frusto-conical contact end portion formed at one end of said contact connecting body, a crown sleeve member including a narrow dimensioned throat section and a widened portion formed of elastic arms having out-turned ends in engagement with the frusto-conical end portion of said contact connecting body, a first pressure sleeve surrounding said crown sleeve and having an end portion in wedging engagement with the exterior thereof, a second pressure sleeve including a portion extending over said first sleeve and having an interior end portion contacting the edge of said first sleeve, a coupling casing disposed with a portion between said first sleeve and the portion of said second sleeve extending over said first sleeve, said coupling casing extending from said first sleeve beyond said contact connecting body, and a closure ring member imprisoned on and rotatable on said third sleeve and having a threaded portion for connecting the coupling.

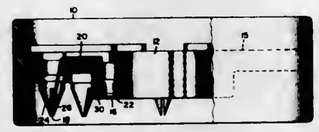
3,099,507
THREE-WAY DOUBLE LIGHT BULB ADAPTER
Leonard M. Tesmer, 1475 Wilks Place, Colorado Springs, Colo.
Filed July 20, 1962, Ser. No. 211,288
8 Claims. (Cl. 339—155)

1. A three-way double light bulb adapter for a three-way lamp socket, comprising a dielectric body having a stem and first and second one-way bulb sockets, said stem having an outer contact adapted to engage the lamp socket, an intermediate contact spaced from the outer contact, and an inner contact spaced from the other contacts, said intermediate and inner contacts being adapted to be severally engaged by contact elements of the lamp socket, a first contact strip extending in the adapter body from the inner contact to the first socket, a second contact strip extending in the body from the intermediate contact



to the second socket, said contact strips having spring contacts centered in the sockets, and a third contact strip extending within the body from the outer contact, said sockets having threaded conductive sleeves with which the third contact strip is connected.

3,099,508
CATHODE RAY TUBE SOCKET
Matthew Schlee, Liverpool, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 29, 1959, Ser. No. 823,380
1 Claim. (Cl. 339—193)



A cathode ray tube socket adapted to receive the terminal pins extending from the base of a cathode ray tube, said socket comprising a one-piece casing of insulating material of general cylindrical shape with a base member therein to provide a seating surface for said base of said cathode ray tube, an inner ring of spaced perforations in said base member, each perforation having a shoulder surface formed therein, said shoulder surface facing said base of said cathode ray tube, and an outer ring of spaced perforations in said base member, a plurality of hollow dip solder terminal members mounted in said outer ring, a plurality of tube pin contact members snugly mounted in said inner ring, each pin contact member having a first edge adjacent said seating surface and a second edge in contact with said shoulder surface, and a tongue portion extending from said second edge, said tongue portions of said tube pin contact members overlying portions of said base member intermediate said inner and outer rings on the side of said base member opposite said seating surface for holding said second edges of said pin contact members against said shoulder surfaces and extending into said hollow dip solder terminal members whereby said tongue portions are soldered in said dip solder terminal members when external electrical leads are soldered therein to provide an electrical connection between the electrical leads and said tube pin contact members.

3,099,509
QUICK CONNECTOR
Kenneth L. Duenke, St. Louis, Mo., assignor to The Clarken Company, St. Louis, Mo., a corporation of Missouri
Filed Aug. 25, 1960, Ser. No. 51,881
7 Claims. (Cl. 339—255)

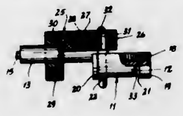
1. A device for connecting an electrical cable to a terminal post, comprising

a hollow sleeve divided lengthwise into first and second opposed parts between which such terminal post is received from one end of the opposed parts, and

clamping means embracing said sleeve parts whereby to secure them in axial registration, thereby to clamp the terminal post,

the first said sleeve parts being electrically conductive and having a terminal-post-grasping inner surface,

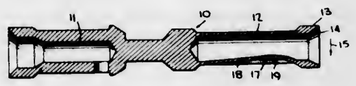
said first part having, at the end opposite to that receiving the terminal post, an axially projecting cable connector portion,



the other sleeve part having at the end opposite that receiving the terminal post a concentric ring portion surrounding and axially slidable relative to said axially projecting cable connector portion,

whereby when the clamp means is released, said other sleeve part may be slid along the terminal post axially out of registration with the first sleeve part to release the terminal post.

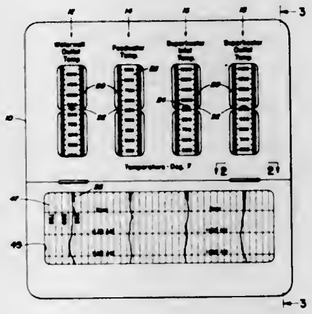
3,099,510
CONNECTOR
Heinz Piorunneck, South Norwalk, Conn., assignor to Gorn Electric Company, Inc., Stamford, Conn., a corporation of Connecticut
Filed Apr. 25, 1960, Ser. No. 24,337
2 Claims. (Cl. 339—256)



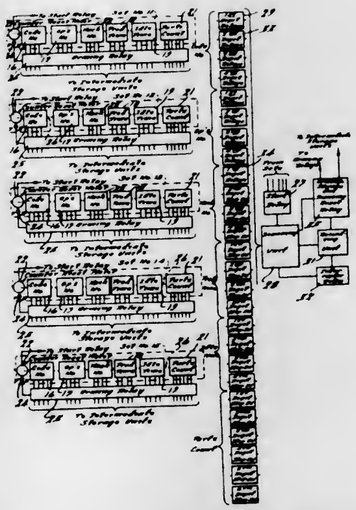
1. An integral solid metal socket contact having a complete integral solid ring defining that end thereof into which a pin contact enters a cylindrical bore of said socket contact, the other end of said bore terminating in a completely solid cylindrical metal structure, a pair of relatively long slots formed in the outer solid wall of said contact defining said bore, and extending through said wall to said cylindrical bore so as to leave a bar-like piece of metal as a part of the surface of said bore integral at its ends with the metal forming said socket contact and adapted to be contacted by a pin contact entering said bore, and said bar being deformed inwardly of said bore adjacent one end thereof, said deformation being such as to present a non-symmetrical conformation that will not take a set as readily as were the said bar to be bent symmetrically while yieldingly resisting more effectively than were said bar bent symmetrically, the entry and removal of a pin from said socket.

3,099,511
INDICATING AND RECORDING INSTRUMENT ORGANIZATION
Walter A. Hickox, Glen Cove, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 15, 1960, Ser. No. 15,241
12 Claims. (Cl. 346—17)

1. A plurality of indicating means to indicate the value of a plurality of different parameters, each such means including a separate movable elongated strip suitably graduated, a bezel index for the strip, means to adjust the strip to read the set point of the parameter at said index, a pointer associated with the strip, means to adjust the pointer relative to the strip to read the value of the parameter, means to properly position the pointer relative to the strip when the set point is changed, said plurality of indicating means being mounted in closely spaced side-by-side relation wtih the bezel indices being aligned.



3,099,512
SYSTEM FOR RECORDING REGISTERED DATA
Charles F. Kohler, Parma, Mich., assignor, by mesne assignments, to Hancock Telecontrol Corporation, Jackson, Mich., a corporation of Ohio
Filed Sept. 19, 1958, Ser. No. 762,165
15 Claims. (Cl. 346—34)



1. In a system for recording information accumulated on a register, means for resetting said register, intermediate storage means responsive to actuation of said register resetting means for storing the information accumulated on said register, a recording unit, and further means responsive to actuation of said register resetting means for causing the information in said intermediate storage means to be recorded in said recording unit.

CHEMICAL

3,099,513
PROCESS FOR THE DYEING OF POLYESTER FIBRE MATERIALS
Günter Gehrke, Cologne-Flittard, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Nov. 1, 1960, Ser. No. 66,420
4 Claims. (Cl. 8—39)

1. In the process for dyeing linear polyester fibre materials, the improvement which comprises applying thereto as dyestuff 1,4-diamino-2-nitroanthraquinone.

3,099,514
COLOR-PRINTED FLOCKED FABRICS
Hyman Haber, New York, N.Y., assignor to Allied Textile Printers, Inc., Paterson, N.J., a corporation of New Jersey
Filed July 13, 1960, Ser. No. 42,616
6 Claims. (Cl. 8—66)

6. A flocked fabric consisting of a cellulosic fabric base having a calender resin finish on the surface thereof, and having rayon flock firmly bonded to said calender resin finish in selected design areas, which rayon flock is printed with a printing paste containing a reactive dye.

3,099,515
SILICON CHLORIDE TREATED POLYOLEFIN ARTICLE AND ITS PRODUCTION
Eric Paul Goodings, William Alexander O'Neill, and George Wright Taylor, all of Harrogate, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed June 27, 1960, Ser. No. 38,706
Claim priority, application Great Britain July 8, 1959
9 Claims. (Cl. 8—82)

1. A process for improving the dye affinity of shaped articles consisting essentially of stereoregular polyolefins which comprises treating said article with a fusable and hydrolysable acid halide of silicon.

3,099,516
METHOD OF MOLDING A FOAM PLASTIC HAVING SKINS ON SELECTED SURFACE PORTIONS
Russell M. Henrickson, Willow Grove, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Aug. 29, 1960, Ser. No. 52,695
4 Claims. (Cl. 18—48)

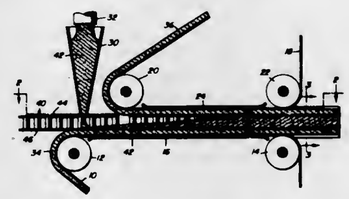


1. In the process of producing a urethane foam structure by reacting an isocyanate with a suitable polyol, the method of producing a dense skin on selected surface portions of said foam which comprises: employing a foaming reagent activatable by the exothermic heat of reaction; and subjecting said selected surface portions of the foam during its synthesis to a temperature below that of the temperature of reaction to provide on said surface portions a self generated skin of desired thickness.

3,099,517
PROCESS OF TREATING WET-SPUN ACRYLONITRILE POLYMER FIBERS
Rupert B. Hurley, Williamsburg, Va., and Paul C. Colodny, Carmichael, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 16, 1960, Ser. No. 76,219
12 Claims. (Cl. 18—48)

1. In the method of wet spinning acrylonitrile polymer fibers which are fabricated from fiber-forming acrylonitrile polymers that contain in the polymer molecule at least about 80 weight percent polymerized acrylonitrile, any balance being another copolymerized ethylenically unsaturated monomer that is polymerizable with acrylonitrile, the improvement which comprises; contacting substantially unstretched acrylonitrile polymer gel fibers with an aqueous medium at from about 50° C. to about 80° C.; setting the gel structure imparted to said acrylonitrile polymer gel fibers by means of cooling said gel fibers to a temperature below the temperature at which said aqueous contacting medium is maintained; and subsequently stretching said gel fibers while they are exposed to a heated medium from about 80° C. to about 110° C.

3,099,518
METHOD OF MAKING AN INNERSPRING FOAM MATTRESS
Justin J. Wetzler, Evanston, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Original application May 28, 1957, Ser. No. 662,085. Divided and this application May 16, 1960, Ser. No. 41,462
5 Claims. (Cl. 18—59)

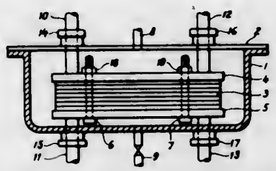


1. A method of making a resilient mattress which comprises providing a plurality of coil springs in a predetermined pattern with spaces therebetween, enclosing each of said coil springs with individual filmy plastic envelopes, and thereafter embedding the coil springs within a pad of resilient cellular material, said last mentioned step including forming portions of the resilient cellular material in said spaces between the springs so that said portions of the resilient cellular material intimately conform to the filmy envelopes enclosing the springs.

3,099,519
METHOD AND APPARATUS FOR STERILIZING HEAT EXCHANGERS
Nils Tore Falkenblad and Bengt Hilding Hallström, Lund, Sweden, assignors to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed May 20, 1960, Ser. No. 30,577
Claims priority, application Sweden May 27, 1959
12 Claims. (Cl. 21—2)

1. In the sterilization of a heat exchanger of the type having heat exchange chambers partly defined by packings under compression between parts of the exchanger, the

method which comprises supplying a sterilizing agent in the form of a free-flowing fluid to a closed chamber surrounding said packings externally of the heat exchange chambers, and maintaining said surrounding chamber substantially filled with said fluid agent.



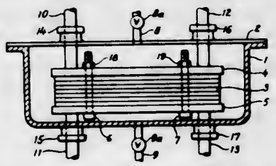
6. A heat exchanger comprising heat exchange elements, packings defining with said elements a plurality of heat exchange chambers, means forming a closed chamber surrounding said packings and adapted to be filled with a sterilizing agent externally of the heat exchange chambers, and a sterilizing agent in the form of a free-flowing fluid substantially filling said surrounding chamber.

3,099,520

METHOD AND APPARATUS FOR PREVENTING INFECTION OF HEAT EXCHANGE CHAMBERS

Bengt Hilding Hallström, Lund, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden

Filed Jan. 30, 1961, Ser. No. 85,656
Claims priority, application Sweden Feb. 10, 1960
5 Claims. (Cl. 21—2)



1. The method of preventing infection of a heat exchanger of the type having a plurality of packings compressed respectively between opposed pairs of a series of heat exchange plates and defining therewith adjacent heat exchange chambers for passage of a heat-emitting medium and a heat-absorbing medium, respectively, said method comprising the steps of evacuating an outer chamber surrounding each packing and heat exchange chamber, and maintaining said outer chamber under vacuum during passage of said media through the respective heat exchange chambers.

3. A heat exchanger comprising a series of heat exchange plates, packings compressed respectively between opposed pairs of said series of plates and defining therewith adjacent heat exchange chambers for passage of a heat-emitting medium and a heat-asborbing medium, respectively, means forming an outer chamber surrounding said packings, said outer chamber being separated by the packings from the heat exchange chambers for the respective heat-emitting and heat-absorbing media, and a vacuum pump connected to said outer chamber for evacuating the same.

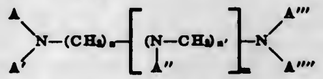
3,099,521

WATER TREATMENT

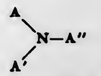
Hans G. Arensberg, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 3, 1960, Ser. No. 59,820
20 Claims. (Cl. 21—2.7)

1. A process of inhibiting the corrosion of metals and scaling in a water system which comprises adding from 5 to 80 parts of a water soluble molecularly dehydrated polyphosphate salt, from 1 to 40 parts of water soluble orthophosphate salt, and from 1 to 50 parts of an organic chelating agent per million parts of water and contacting the metal continuously with the treated water, said organic chelating agent being selected from the group consisting of (1) polyaminocarboxylic acid type compounds having the general formula:



where *n* and *n'* represent an integer selected from the group consisting of 2 and 3; *m* represents a figure selected from the group consisting of zero and integers; and A, A', A'', A''', and A'''' are radicals selected from the group consisting of CH_2COOH, CH_2CH_2OH, and CH_2COOM, where M is an equivalent selected from the group consisting of alkali metals, alkaline earth metals, and ammonium; (2) monoaminocarboxylic acid type compounds having the general formula:



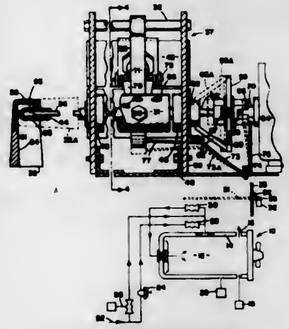
where A, A', and A'' represent radicals set forth above; and (3) hydroxycarboxylic acids of 4 to 7 carbon atoms having the hydroxyl and carboxyl groups on the same or adjacent carbon atoms and the alkaline metal or alkaline earth metal salts thereof.

3,099,522

STERILIZER CONTROL APPARATUS

Norman E. Lauterbach, Pittsford, N.Y., assignor to Wilmot Castle Company, Rochester, N.Y., a corporation of New York

Filed Oct. 28, 1960, Ser. No. 65,743
12 Claims. (Cl. 21—94)



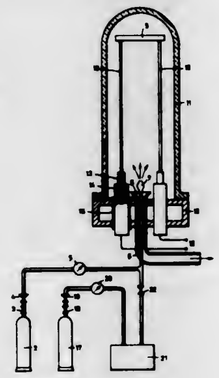
1. Control apparatus in a sterilizer construction having means for continuously supplying fluid from a source under pressure to a sterilizing chamber and means for pulsing fluid from a source into said chamber comprising, in combination, a first means for controlling said pulsing means, a second means for controlling said continuous supply means, a third control means having a sterilize position and being adapted for manual and automatic control, said third control means actuating said first control means when in said sterilize position and being automatically controlled, and said third control means actuating said second control means when in said sterilize position and being manually controlled.

3,099,523

METHOD OF PRODUCING HYPERPURE SILICON, SILICON CARBIDE AND GERMANIUM

Konrad Reuschel, Pretzfeld, and Arno Kersting, Lutzelsdorf, near Pretzfeld, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Filed Dec. 15, 1961, Ser. No. 159,717
Claims priority, application Germany Dec. 17, 1960
2 Claims. (Cl. 23—1)



1. In the process of preparing a semiconductor from the group consisting of silicon, silicon carbide and germanium, in which the semiconductor is precipitated upon a hot carrier rod of the same material, by chemical conversion from a gaseous compound of said semiconductor material with the aid of a carrier gas acting as a reducing agent, within an at least partially transparent vessel at least partially comprised of a material taken from the group consisting of glass and quartz, the improvement which substantially prevents the precipitation of semiconductor material on the inner wall of the reaction vessel, and which comprises the sequential steps of

(*a*) passing a partial current of carrier gas through the reaction vessel prior to initiating the precipitation process.

(*b*) heating the carrier rods to incandescent temperature in the carrier gas current of step (*a*),

(*c*) increasing the carrier gas current to the full amount required for normal precipitation operation,

(*d*) after the inner wall of the reaction vessel has reached a temperature of about 300° C., supplying gaseous semiconductor compound in an amount so that the molar ratio of semiconductor compound to carrier gas is less than about 0.2:1, and

(*e*) commencing and performing the pyrolytic precipitation.

3,099,524

ANTACID COMPOSITIONS

Frederick Grossmith, Pinner, England, assignor to Beecham Research Laboratories Limited, Brentford, Middlesex, England

Filed June 28, 1960, Ser. No. 39,245
Claims priority, application Great Britain July 2, 1959
6 Claims. (Cl. 23—14)

1. A magnesium carbonato hydroxoaluminate compound of the formula:

$$Mg_n[Al_2(OH)_{5+2n}\cdot HCO_3]$$

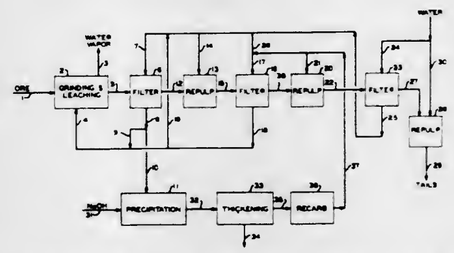
wherein *n* is an integer of 1 to 5.

3,099,525

METHOD OF CARBONATE LEACHING URANIUM ORE

Robert A. Koble and Howard W. Goard, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Sept. 26, 1960, Ser. No. 58,486
15 Claims. (Cl. 23—14.5)



1. In a process of extracting uranium values from a disintegrated uranium-containing ore comprising the steps of contacting said ore with a carbonate leach solution in a contact zone, said carbonate leach solution selected from the group consisting of ammonium and soluble alkaline metal carbonate-bicarbonate solutions, passing the resulting slurry from said contact zone to a first filtration zone, filtering inert solids from the pregnant carbonate leach liquor containing said uranium values in solution, withdrawing a filtrate from said first filtration zone, washing said filtered inert solids with a first wash solution hereinafter described, recycling at least a portion of the combined filtrate and wash solution removed from said first filtration zone to said contact zone, passing said filtered solids from said first filtration zone to a first repulp zone, contacting said solids in said first repulp zone with a first repulp solution, hereinafter described, passing the resulting slurry from said first repulp zone to a second filtration zone, filtering the inert solids from said first repulp solution in said second filtration zone, washing said filtered inert solids with a second wash solution hereinafter described, passing said inert solids from said second filtration zone to a second repulp zone, contacting said inert solids with a second repulp solution hereinafter described, passing the resulting slurry from said second repulp zone to a third filtration zone, filtering the inert solids from said second repulp solution, washing said filtered inert solids with water; an improvement wherein said first wash solution and said first repulp solution are comprised of at least a portion of the combined filtrate and wash solution removed from said third filtration zone and at least a portion of the combined filtrate and wash solution removed from said second filtration zone, said second wash solution and said second repulp solution is comprised of a recarbonated leach solution and at least a portion of said combined filtrate and wash solution removed from said third filtration zone.

3,099,526

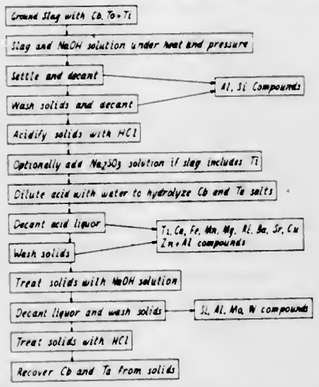
RECOVERY OF EARTH ACIDS FROM SLAG

John C. Li, Glen Cove, and Robert E. Baker, Sea Cliff, N.Y., assignors to Wah Chang Corporation, New York, N.Y., a corporation of New York

Filed Aug. 9, 1961, Ser. No. 130,435
6 Claims. (Cl. 23—18)

1. The method of recovering values from a siliceous slag having: an SiO_2 content in the range of about 10 to 40% by weight; impurities, including water-insoluble calcium-containing compounds; and, at least one of the elements columbium and tantalum, which comprises: grinding the slag to a relatively fine mesh; treating the ground slag with a water solution of at least 10% concentration of an alkali metal hydroxide at elevated temperatures substantially above the atmospheric boiling point of

the alkali hydroxide solution under pressure of at least 35 p.s.i.g. to open the slag and to render more accessible calcium-containing and other impurities contained therein for further treatment for removal of such impurities; separating the alkali metal hydroxide liquor from the slag solids; acidifying the solids with a mineral acid capable of solubilizing metal radicals of the insoluble impurities, including calcium of the calcium-containing impurities, to convert the calcium-containing and other water insolu-



bles to a water-soluble form; the acid being added in an amount sufficient to neutralize the remaining portion of the slag; separating the acid liquor from the slag; washing the solids to remove calcium-containing and other impurities in soluble form therefrom; treating the solids with an alkali metal hydroxide to solubilize silica contained therein; separating the solids from the alkali solution; treating the solids with acid and recovering the columbium and tantalum in their acid form from the residue.

3,099,527

PURIFICATION OF LEACH LIQUOR CONTAINING LITHIUM VALUES

Harold L. Howling, Reading, Mass., assignor, by mesne assignments, to Basic Atomics Incorporated, New York, N.Y., a corporation of Delaware

Filed Apr. 23, 1959, Ser. No. 808,497
5 Claims. (Cl. 23—33)

1. Process for separating lithium values from a sulfuric acid leach slurry, said slurry containing excess sulfuric acid leaching agent, lithium sulfate and residues from the reaction of sulfuric acid with the lithium ores, comprising

adding, in one step, sufficient slaked lime to said leach slurry to raise the pH thereof to at least 10 whereupon the bulk of impurities including aluminum are precipitated,

introducing an oxidizing agent into the thus treated slurry to effect oxidation of iron and other oxidizable impurities thereby precipitating the same,

and only then filtering the resultant slurry to separate the ore residue and the various precipitates from the filtrate which contains the lithium in the form of lithium sulfate dissolved therein.

3,099,528

RECOVERY OF VALUES FROM NATURAL LAKE AND SEA BRINES

Pablo Hadzeriga, Salt Lake City, Utah, assignor, by mesne assignments, to Standard Magnesium Corporation, Inc., Tulsa, Okla., a corporation of New York

Filed Jan. 10, 1962, Ser. No. 165,393
6 Claims. (Cl. 23—89)

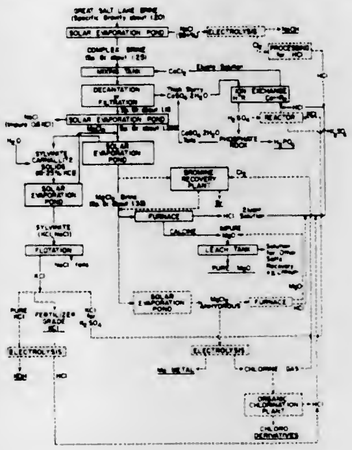
1. A process for recovering values from a brine of the type of natural lake or sea brines, comprising

subjecting a brine of the type concerned to evaporation to yield sodium chloride in substantially pure form and a complex brine;

precipitating calcium sulfate as a slurry from the complex brine by treatment with calcium chloride;

subjecting the residual complex brine to evaporation to precipitate salts and yield an essentially magnesium chloride brine;

contacting a cationic exchange material in its hydrogen form with the precipitated calcium sulfate slurry at



a temperature of at least about 50° C., to yield sulfuric acid;

deriving an aqueous solution of hydrochloric acid from at least one of the chloride salts previously obtained;

eluting said exchange material with the hydrochloric acid solution to yield a calcium chloride eluate solution;

utilizing the eluate solution to precipitate calcium sulfate from an additional quantity of the complex brine resulting from the first step of the process;

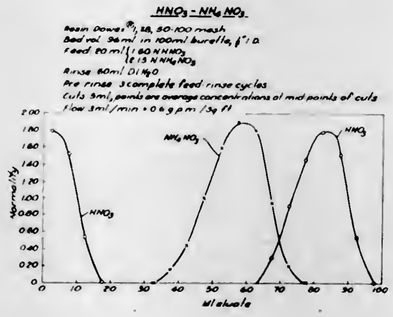
and repeating the processing cycle indefinitely.

3,099,529

SEPARATION OF NITRIC ACID FROM ITS SALTS

Melvin J. Hatch, Midland, and John A. Dillon, Jr., Coleman, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 29, 1960, Ser. No. 5,438
7 Claims. (Cl. 23—102)



1. A method for separating from one another nitric acid and a member of the group consisting of ammonium nitrate, water-soluble metal nitrate salts free from anionic

complexes with nitric acid and mixtures thereof by feeding to a bed of an anion exchange resin in the nitrate form immersed in an aqueous liquid of the group of water and a dilute aqueous solution of nitric acid having an acid concentration less than that in the feed solution, an aqueous solution of said acid and said salt which solution is at least 0.2 normal in nitric acid, thus displacing aqueous liquid from the resin bed, thereafter feeding an aqueous rinsing solution of the group consisting of water and dilute nitric acid having a nitric acid concentration less than that of the feed to the bed to displace a further amount of residual liquid from the bed, and collecting successive fractions of the displaced effluent liquid whereby there is obtained an early fraction of the effluent liquid which contains a higher ratio of said salt to said acid than is in the starting solution and a later fraction of the effluent liquid which contains a higher ratio of said acid to said salt than is in the starting solution.

3,099,530

MANUFACTURE OF DEFLUORINATED PHOSPHATES

John D. Nickerson, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Dec. 8. 1959, Ser. No. 858,061
2 Claims. (Cl. 23—108)

1. A process for the manufacture of defluorinated phosphates which comprises mixing a phosphatic material containing fluorine in an amount which renders it unsuitable for use as an animal feed selected from the group consisting of phosphate rock, superphosphate, triple superphosphate and mixtures thereof, with a silicone containing silicon and an organic group in the molecule in which the siloxane unit, Si—O—Si—, is the continuing framework, said silicone selected from the group consisting of dimethyl silicone, methyl phenyl silicone, methylchlorosilane and mixtures thereof, said silicone used in an amount of at least 0.01% by weight of the phosphatic material, heating the mixture to a temperature above 200° F. and below the fusion point of the phosphatic material to drive off fluorine and recovering a phosphatic material of reduced fluorine content suitable for use as an animal feed.

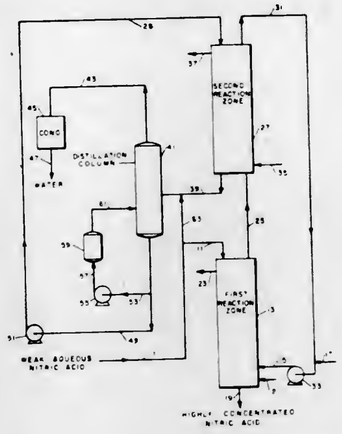
3,099,531

NITRIC ACID MANUFACTURE

Donald E. Boynton, Salt Lake City, Utah, assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 28, 1960, Ser. No. 58,945
6 Claims. (Cl. 23—157)

1. A cyclic process for producing highly concentrated nitric acid which comprises passing a nitrogen oxide reactant consisting essentially of nitrogen dioxide into the lower portion of a first reaction zone maintained at a temperature below about 40° C. in countercurrent flow to aqueous nitric acid containing not more than 68% by weight of HNO_3, the amount of said nitrogen dioxide being at least sufficient to form with said aqueous nitric acid a highly concentrated nitric acid containing more than 68% by weight of HNO_3, recovering the thus formed highly concentrated nitric acid as a bottoms product from the lower portion of the first reaction zone, taking off nitric oxide as an overhead product from the first reaction zone and passing the same into the lower portion of a second reaction zone maintained at a temperature between about 75° C. and about 125° C. in countercurrent flow to a second aqueous nitric acid containing between about 55% and not more than 68% by weight of HNO_3, said second aqueous nitric acid being at least stoichiometrically equivalent in HNO_3 content to said nitric oxide, recovering nitrogen dioxide as an overhead product from the upper portion of the second reaction zone and recycling the recovered nitrogen dioxide into the lower portion of the first reaction zone.



3,099,532

METHOD OF MAKING HIGH PURITY, SUBSTANTIALLY SPHERICAL DISCRETE PARTICLES OF BERYLLIUM HYDROXIDE OR OXIDE

William J. Kirkpatrick, Cincinnati, and Earl S. Funston, Hamilton, Ohio, assignors to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 28, 1961, Ser. No. 134,152
4 Claims. (Cl. 23—183)

1. A method of making high purity, substantially spherical, beryllium hydroxide comprising the steps of: mixing a beryllium basic salt of an organic acid with water; hydrolyzing the aqueous mix to form an aqueous colloidal suspension of micelles of $Be(OH)_2$ and the organic acid; and then removing portions of the organic acid to precipitate substantially spherical, discrete particles of $Be(OH)_2$.

3,099,533

MAGNESIUM OXIDE PELLETS AND PROCESS OF PRODUCING THE SAME FOR BURNING

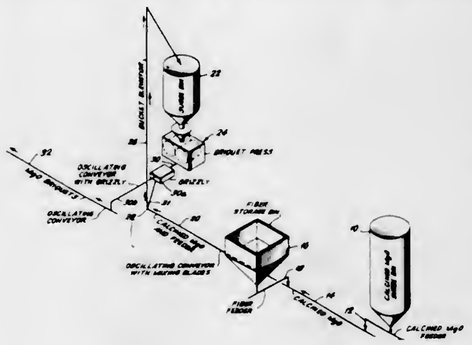
Chester D. Vaughan, Jr., and Richard H. Vetter, Freeport, Tex., assignors to E. J. Lavino and Company, Philadelphia, Pa., a corporation of Delaware

Filed Dec. 6, 1960, Ser. No. 74,021
3 Claims. (Cl. 23—201)

1. A compact dry magnesium oxide pellet containing as a binder approximately 3/1000 percent of relatively fine cellulosic fibers of a length of from about 0.05 to 0.075 millimeter and of a diameter of the order of about 0.0015 millimeter and having a sufficient hardness to resist cracking and decrepitation on introduction into and passage through a shaft kiln.

3. A dry process of producing substantially pure magnesium oxide pellets which consists in mixing dry calcined magnesium oxide with fibers of an organic material of a character to be consumed without appreciable residue when subjected with the magnesium oxide to a temperature of about 3000° F., with the fibers and magnesium oxide powder in the approximate proportions respectively of 5 ozs. to 100 lbs., the fibers being selected to have a length of not more than 0.075 millimeter, and of a diameter of the order of 0.0015 millimeter, maintaining the mixture in dry form and introducing the mixture in such dry form into a briquetting press, subjecting the dry mixture in the press to a pressure to produce

pellets in which the constituents are coherent to a degree to withstand appreciable breakage upon handling, conveying and tumbling, introducing the dry pellets into a suitable kiln and subjecting the pellets to a firing tempera-



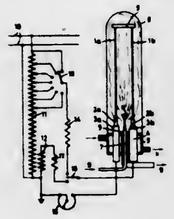
ture of about 3000° F. and thereby removing the fiber material from the pellets by burning and simultaneously effecting shrinkage of the pellet size and densification of the pellets to a high degree of hardness.

3,099,534

METHOD FOR PRODUCTION OF HIGH-PURITY SEMICONDUCTOR MATERIALS FOR ELECTRICAL PURPOSES

Hans Schweickert, Erlangen, and Konrad Reuschel, Pretzfeld, Germany, and Heinrich Gutsche, Danville, Pa., assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Original application June 11, 1957, Ser. No. 665,086, now Patent No. 3,011,877, dated Dec. 5, 1961. Divided and this application Feb. 20, 1961, Ser. No. 90,291
Claims priority, application Germany June 25, 1956
9 Claims. (Cl. 23—208)



3. A process for producing a body of a semiconductor material from the group consisting of silicon and silicon carbide by reaction of a gas mixture of hydrogen and a chlorinated monosilane of the type $SiCl_nR_{4-n}$, where "n" designates an integer number between 1 and 4 and "R" is selected from the group consisting of H and CH_3, in a reaction chamber, comprising heating a member consisting of said semiconductor material in the chamber at least to glowing temperature but below the melting point of said semiconductor material, the hot member effecting the reaction, introducing a high velocity jet of said gas mixture into said chamber to produce a high degree of turbulence to effect efficient reaction into said semiconductor material, the latter forming said body on said member, the molar ratio of the chlorinated monosilane with respect to the hydrogen ranging from 0.01:1 to 0.3:1.

3,099,535

METHOD FOR RECOVERING SULPHUR

Masanori Maezawa, 28 5-chome, Hattorihonmachi, and Taketoshi Kuragano, 703 Hozumi, both of Toyonaka City, Japan

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,515
Claims priority, application Japan Mar. 6, 1957
13 Claims. (Cl. 23—225)

1. In a process of removing the sulphur of hydrogen sulphide from a hydrogen sulphide containing gas by catalytically oxidizing the hydrogen sulphide, the improvement which comprises contacting the gas and an oxygen-containing medium with an aqueous alkaline liquid containing a catalyst compound selected from the group consisting of

$$R\cdot(OH)\cdot(NO_2)_n \text{ and } R\cdot(COOH)\cdot(NO_2)_n$$

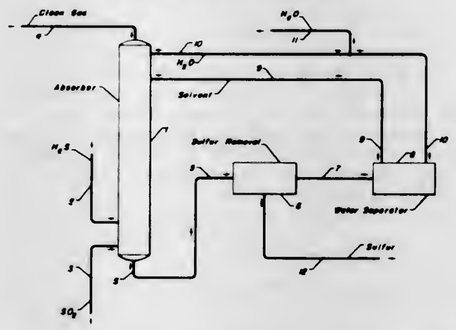
wherein R stands for aryl and n is an integer from 1 to 3 and the alkalimetal salts thereof.

3,099,536

PROCESS FOR THE RECOVERY OF CRYSTALLINE SULFUR

Peter Urban, Northbrook, and Lester G. Massey, Arlington Heights, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed July 5, 1960, Ser. No. 40,841
6 Claims. (Cl. 23—226)



6. A process for the production of sulfur in a readily recoverable crystalline state which comprises absorbing sulfur dioxide and hydrogen sulfide in a solvent consisting essentially of a monohydric alcohol of from 1 to 5 carbon atoms per molecule having from about 10% to about 40% by volume of water dissolved therein, reacting the sulfur dioxide and hydrogen sulfide in contact with said solvent, thereby forming sulfur in a readily recoverable crystalline state, and separating the sulfur from said solvent.

3,099,537

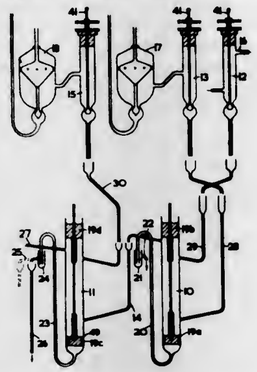
PROCESS FOR THE TREATMENT OF AN ORGANIC SOLVENT CONTAINING URANIUM

Harold Mason, Preston, James Roland Sanderson, Lea, near Preston, and Tony Mason, Blackpool, England, assignors to the United Kingdom Atomic Energy Authority, London, England

Filed Oct. 28, 1958, Ser. No. 770,096
Claims priority, application Great Britain Oct. 31, 1957
7 Claims. (Cl. 23—230)

1. A process for measuring the uranium content of an organic solvent having uranium and other impurities present therein comprising washing the solvent with a solution of a salt of thioglycollic acid to produce a colored complex of uranium thioglycollate and other impurities in said solvent, treating at least a portion of said treated solvent with a material capable of imparting carbonate ions therein to convert only the uranium thioglycollate complex into a colorless state, measuring the difference between color

intensity before and after treatment with said carbonate ion imparting agent by said color differentiation, and



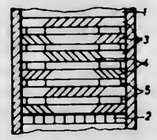
determining the amount of uranium present in said solvent by said color differentiation.

3,099,538

FITTINGS FOR A FLUIDIZED BED REACTOR

Walter Krönig, Leverkusen-Bayerwerk, Walter Bayer and Hans-Joachim Wahl, Dormagen, and Ludwig Bacher, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Jan. 20, 1959, Ser. No. 787,843
Claims priority, application Germany Jan. 24, 1958
8 Claims. (Cl. 23—288)



1. A fluidized reactor bed comprising a chamber having an inlet in its lower end and an outlet in its upper end, a plurality of superposed baffle layers in said chamber, each layer having smooth upper surface baffles inclined with respect to the flow course through the chamber, and each baffle layer covering the entire cross section of said chamber to prevent an unobstructed path through said chamber, each layer of baffles being composed of juxtaposed groups of baffles in which the baffles of each group are disposed substantially parallel to each other and are disposed at an angle with respect to the baffles of the juxtaposed groups, the baffles of adjacent layers in direct overlying relationship having different directions of inclination.

3,099,539

GOLD SILICON ALLOY

Hamburg Tang, New York, N.Y., assignor to Alloys Unlimited Inc., Long Island City, N.Y.

No Drawing. Filed Jan. 11, 1962, Ser. No. 165,679
5 Claims. (Cl. 29—183.5)

1. The foil comprising substantially 5.6% by weight of silicon and remainder of gold.

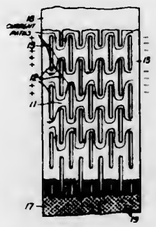
3,099,540

ELECTRIC FOIL RESISTANCE DRIER

Paul Eisler, 57 Exeter Road, London NW. 2, England

Filed Dec. 29, 1958, Ser. No. 783,609
Claims priority, application Great Britain Jan. 7, 1958
9 Claims. (Cl. 34—1)

1. Structure for drying comprising metal resistance foil, an insulating layer coextensive with said foil, said foil being connected across a voltage supply at opposite ends through terminal zones, said insulating layer being perforated with a plurality of rows of bore holes, said foil having parallel rows of perforate slots with the slots of one row in staggered relation to the slots of the next



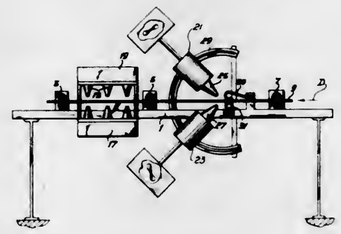
succeeding row to form meandering paths for current, and the bore holes of the perforate insulating layer covering the entire area of the insulating layer so that moisture from the surfaces to be dried being transmitted through the holes and slots away from the drying surface.

3,099,541

TREATING VENEERS

Robert Hildebrand, Nurtinger Str. 68, Oberboihingen, Wurttemberg, Germany

Filed Mar. 24, 1961, Ser. No. 98,203
3 Claims. (Cl. 34—18)



1. A method of treating fresh peeled veneer having a thickness up to about 3 mm. comprising directing a blast of atmospheric air at an acute angle against the surface of the veneer to blow the free water out of the freshly cut open cells in the veneer as a wave of foam over and from said surface in liquid form to reduce the water content of the veneer from about 120 to not more than about 50% by weight of veneer.

3,099,542

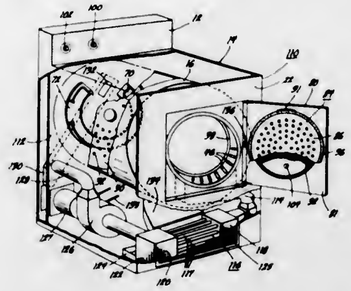
DRYING AIR HEAT CONTROL AND MOISTURE REMOVAL APPARATUS

Howard E. Van Scoyk, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 25, 1960, Ser. No. 24,365
6 Claims. (Cl. 34—48)

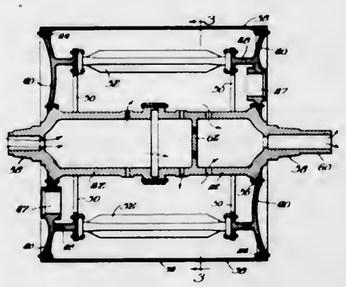
1. In combination, means forming a chamber for tumbling fabric, said forming means having means including a perforated chamber wall for defining an air passage through said chamber, means adjacent the perforations of said chamber wall for heating said chamber, a pivotally mounted door for said chamber, a lint collecting housing on said door, said housing having a perforated housing wall facing said perforated chamber wall through the interior of said chamber and interposed in said air passage when said door is closed, a lint collector in said housing behind the perforations of said housing wall for filtering air from said chamber, temperature responsive

means in said housing adjacent the perforations of said housing wall and behind the lint collector and said housing wall in straight line exposed radiant heat receiving relationship to said heating means through the perforations of said housing wall and said chamber wall for



controlling said heating means, and means for inducing an air flow sequentially into heat receiving relationship with said heating means, into moisture and lint receiving relationship with said fabric, into lint depositing relationship with said lint collector, and into temperature sensing relationship with said temperature responsive means.

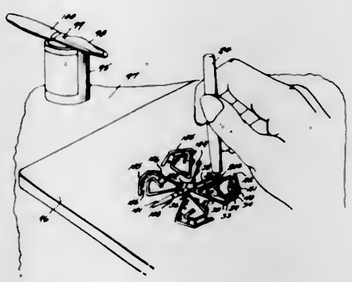
3,099,543
ROTARY PRESSURE VESSEL
Homer E. Malmstrom, Appleton, Wis., and Robert M. Donaldson, Hampton, Va., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Dec. 9, 1955, Ser. No. 552,090
11 Claims. (Cl. 34—124)



7. A drier drum comprising a cylindrical shell, a center shaft coaxial with the shell, head members on said shaft, flexible ring assemblies extending radially from said head members to said shell for simultaneously sealing and supporting the shell to retain steam pressure therein, said assemblies being capable of deflecting under load and preventing the transmission of stresses from the head members to the shell, and support members engaging said flexible assemblies intermediate the shell and head.

3,099,544
METHOD OF DECORATING SURFACES WITH A VISCOUS FLUID
Benford P. Sheesley, Boise, Idaho
Filed Aug. 25, 1960, Ser. No. 51,838
6 Claims. (Cl. 41—26)

1. The process of utilizing an article of manufacture having an elongated handle and a continuous flexible wire bent to form a stem member secured in said handle and a plurality of spaced co-planar elements disposed substantially perpendicularly to said stem member comprising dipping at least a portion of said wire into and out of a supply of a material of a viscosity sufficient to preclude formation of a capillary film of the same between said elements of said wire, some of the material remaining on the individual elements of said portion in clinging relationship, engaging said portion carrying said material against a surface to be decorated, applying light pressure



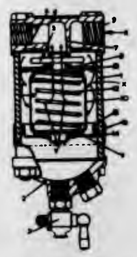
to said portion substantially perpendicularly of the surface to deposit the material on the surface in a pattern substantially corresponding to the configuration of said dipped portion, and removing said portion from the surface, the viscosity of the material also being sufficient to prevent flowing of the same whereby the material projects in raised relationship to the surface to which it has been applied.

3,099,545
BUFFING WHEEL
Richard S. Johnson, 1032 S. 42nd St., Birmingham 5, Ala.
No Drawing. Filed Feb. 1, 1961, Ser. No. 86,319
2 Claims. (Cl. 51—298)

1. As a new article of manufacture, a buffing wheel made of cotton textile fabric that has been treated with a composition comprising 15% of a member selected from the group consisting of pentaerythrital ester of modified rosin, rosin modified phenolic resin, pentaerythrital ester of rosin, and modified rosin, 15% of a member selected from the group consisting of styrenated alkyd resin and styrenated alkyd polymer of oil modified alkyd resin, 60% of a solvent selected from the group consisting of toluene, benzene, and xylene-toluene mixture, and 10% of a plasticizer selected from the group consisting of castor oil, dioctyl phthalate, and tris (2,3 dichloropropyl) orthophosphate and thereafter dried.

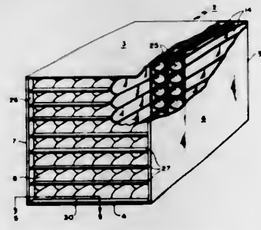
3,099,546
FILTERS FOR FLUIDS
Cosby Donald Philipps Smallpeice, Swanwick Shore, near Southampton, England, assignor of one-half to Nuquip Limited, Surrey, England
Filed Aug. 26, 1960, Ser. No. 52,294
Claims priority, application Great Britain Oct. 12, 1959
5 Claims. (Cl. 55—274)

1. A filter, for cleaning a gas, comprising a container having an inlet and an outlet for the gas to be cleaned and an exchangeable filter positioned within said container, said filter element having a permeable, axially extendible and contractible, tubular wall through the pores of which said gas is passed in its path from said inlet to said outlet, said wall being axially contractible against a bias as a result of a difference in gas pressure upstream and downstream of said wall due to reduction of its permeability by an accretion of filtered residue to give an indication of the reduction of the permeability of said wall, the filter also comprising a valve through which said gas can pass from said container, said valve being opened on said contraction of said wall, and a flow-responsive device capable of giving an audible signal



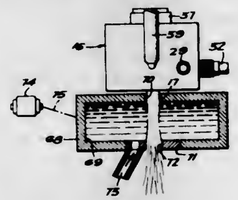
communicating with said valve and operable by said gas flowing therethrough.

3,099,547
POCKET-TYPE FILTERS
Willem J. Hagendoorn and Tom R. Smith, Louisville, Ky., assignors to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,932
16 Claims. (Cl. 55—341)



1. A pocket type fluid filter comprising: a web of flexible filtering material having at least one fold line dividing said web into at least one pair of pleat forming sections, said pleat forming sections of said pair being folded about said fold line to face each other and form a pleat, and a plurality of spaced divider members, each of said divider members having at least one slit snugly engaging said pleat transverse said fold line to hold said pleat forming sections in facing contact along said slit whereby said divider members divide said pleat into a plurality of separate pocket members.

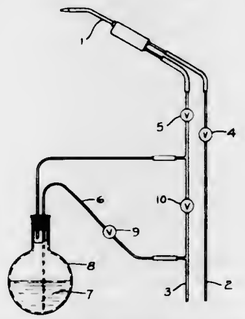
3,099,548
METHOD OF MAKING GLASS FIBERS
Adriano C. Ducati, Newport Beach, Calif., assignor to Plasmadyne Corporation, Santa Ana, Calif., a corporation of California
Continuation of abandoned application Ser. No. 738,887, May 29, 1958. This application Dec. 29, 1961, Ser. No. 163,332
1 Claim. (Cl. 65—5)



A method of manufacturing small-diameter threads or fibers of vitreous material, which comprises providing a

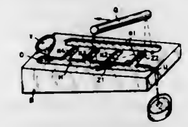
centrifugal vat having inlet and outlet openings in the axis thereof, rotating said vat about said axis, introducing vitreous material into said vat and maintaining the vitreous material in said vat in molten condition whereby a vortex is formed therein along the axis between said inlet and outlet openings, and passing a jet of high-temperature high-velocity electrical plasma axially into said inlet opening and through said vortex in said molten material to thereby cause flow of fibers or filaments out said outlet opening.

3,099,549
METHOD OF JOINING TWO GLASS BODIES
Joseph John Domicone, Elmira, and William C. Smith, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Nov. 14, 1958, Ser. No. 773,927
5 Claims. (Cl. 65—30)



1. In the process of joining two glass bodies comprising heating each glass body to a softened condition in the flame resulting from burning a combustible fuel mixture, and joining the softened glass bodies, the improvement in the heating step which comprises adding to said fuel mixture at least one volatile compound which is thermally decomposed by said flame to a product comprising a glass-network-forming oxide selected from the group consisting of SiO_2 and B_2O_3, and joining the flame softened glass bodies to each other while in the softened condition.

3,099,550
PURIFYING CRYSTALLIZABLE SEMICONDUCTOR MATERIALS BY ZONE MELTING
Heinz Henker, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed Feb. 23, 1960, Ser. No. 10,256
Claims priority, application Germany Feb. 27, 1959
13 Claims. (Cl. 75—10)



1. In the art of purifying crystallizable semiconductor material by applying zone melting to such material contained in a main conduit and in at least one branch channel extending from and communicating with said main conduit at a point spaced from the starting point of said zone melting, said conduit and channel forming part of a purification vessel, a method of effecting said purification, comprising moving through the material contained in said main conduit and past the area at which said branch channel extends from said conduit a first melting

zone which collects contaminants included in the material contained in said main conduit between the starting point of said melting zone and said branch channel, and moving a second melting zone through the material contained in said branch channel in a direction away from said area incident to the motion of said first melting zone past said area while preventing cross flow thereat, said first melting zone transferring the contaminants collected to said second melting zone, both melting zones leaving said area simultaneously.

3,099,551

SNUFFING BLAST FURNACES

Alexander J. Macdonald, Buffalo, N.Y., assignor to National Steel Corporation, a corporation of Delaware

No Drawing. Filed June 24, 1960, Ser. No. 38,427
4 Claims. (Cl. 75—41)

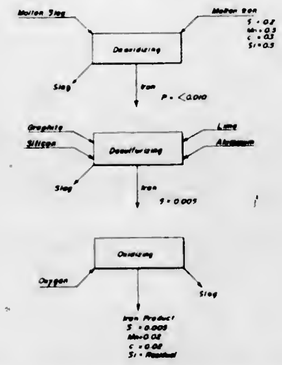
4. Method for snuffing a carbon-lined blast furnace for a mantle-up relining operation comprising the steps of charging a coke blank sufficient to fill the furnace to above its bosh area, terminating hot blast to the furnace when the coke blank reaches the blast furnace tuyere area, introducing blast furnace gas into the blast furnace top with sufficient pressure to force its way down through the coke blank and exit at the tuyere area, analyzing the blast gas introduced at the blast furnace top and gas exiting from the furnace at the tuyere area, terminating introduction of blast furnace gas at the top of the furnace when the blast furnace gas and exiting gas analyses are approximately the same, and thereafter testing natural draft gas exiting from the blast furnace top for carbon monoxide to determine conclusively that the furnace is out.

3,099,552

METHOD OF MAKING LOW SULFUR STEEL

Thomas W. Landig, Glenshaw, Pa., and Allan J. Kiesler, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Oct. 21, 1958, Ser. No. 768,601
2 Claims. (Cl. 75—51)



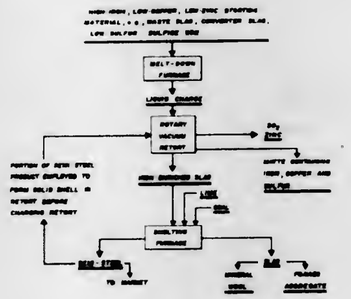
1. The method of producing steel containing less than 0.005% sulfur which comprises the steps of melting down with lime a steel containing more than 0.015% sulfur and amounts of phosphorous, silicon, and manganese greater than desired in the final steel product, separating and removing from the resulting metal melt the resulting slag when the phosphorous content of the metal melt has been reduced to a predetermined level, forming a second slag on the metal melt by adding to the metal melt two parts of lime, one part of Mexican graphite and one part of fine silicon, mixing the second slag with the metal melt, separating and removing the second slag from the metal melt when the sulfur content of the said melt has been redueced to less than 0.005%, and then oxidizing manganese and silicon in the metal melt by blowing the melt with a free oxygen-containing gas, and discontinuing the blowing of the melt when the amounts of manganese and silicon in the metal have been reduced to the desired levels.

3,099,553

METALLIC SHELL ROTARY REDUCTION OF IRON-COPPER-ZINC VALUES FROM SULFIDE ORES AND SLAGS

Olav C. Aamot, Lewiston, N.Y., assignor, by mesne assignments, to Independence Foundation, Philadelphia, Pa., a corporation of Delaware, and Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Filed Oct. 20, 1959, Ser. No. 847,547
12 Claims. (Cl. 75—63)



1. In a method for upgrading a material selected from the group consisting of ores and slags containing a major proportion of iron and minor proportions of zinc and copper, the improvements in combination therewith comprising,

(*a*) reducing and vaporizing said zinc by maintaining a molten body of said material under sub-atmospheric pressure in contact with the interior of a hot, hollow, solid metallic body which contains iron as a predominant metallic constituent and which melts at a temperature above the temperature of said molten body;

(*b*) recovering the zinc so vaporized;

(*c*) reducing said copper by contacting with said hot solid body as in step (*a*);

(*d*) causing said copper to be absorbed into said hot solid body;

(*e*) separating the remaining material of said molten body as a useful product containing a proportion of iron greater than in the starting material; and

(*f*) recovering the material of said solid body as a copper-bearing product.

3,099,554

PROCESS FOR PRODUCING METALS

James H. Downing, Buffalo, and Benjamin J. Wilson, Kenmore, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Feb. 21, 1961, Ser. No. 90,625
2 Claims. (Cl. 75—80)

1. A process for producing at least one of the metals selected from the group consisting of manganese and chromium from solid state borides of said metals comprising charging at least one of said borides of said selected metals in particulate form ranging from about 0.125 to about 0.5 inch in diameter into a vacuum furnace; evacuating substantially all the gas reactive with said boride and said selected metal from said vacuum furnace; heating said boride of said selected metal in vacuo to a temperature sufficiently high to produce metal vapor of said selected metal at least at a vapor pressure in excess of the ambient pressure within said vacuum furnace; maintaining a temperature sufficiently high to maintain a metal vapor of said selected metal at least at a vapor pressure in excess of the ambient pressure within said vacuum furnace while essentally maintaining said boride in said solid state; conducting at least a portion of said metal vapor to a condensing zone and condensing said metal vapor to form at least one of said selected metals in substantially pure metallic form.

3,099,555

REDUCTION OF URANIUM OXIDE

Robert J. Teitel, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 17, 1960, Ser. No. 50,093
5 Claims. (Cl. 75—84.1)

1. In the reduction of uranium oxide by the reaction thereof with molten magnesium whereby a reaction mixture containing uranium and magnesium oxide is formed, the process of separating said uranium from the reaction mixture as uranium-aluminum alloy which comprises: contacting said reaction mixture with molten aluminum whereby said uranium is taken up to form a molten uranium-aluminum alloy, and separating the uranium-aluminum alloy, while it is molten, from said magnesium oxide.

3,099,556

GRAPHITIC STEEL

Chester F. Jatczak, Canton, Ohio, assignor to The Timken Roller Bearing Company, Canton, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 20, 1962, Ser. No. 188,951
4 Claims. (Cl. 75—124)

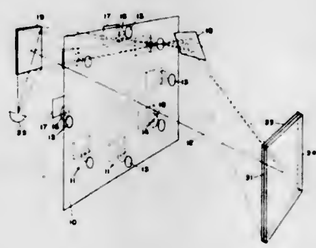
1. A forgeable and graphitizable steel consisting essentially of 1.25 to 1.55 percent of carbon, 0.5 to 0.7 percent of manganese, 0.55 to 0.85 percent of silicon, 0.1 to 0.35 percent of aluminum, and the remainder essentially iron, and characterized in the annealed state by containing up to about 0.7 percent of graphitic carbon.

3,099,557

OPTICAL SYSTEM AND METHOD FOR MAKING CORRECTED COLOR SEPARATIONS

Benjamin L. Sites, Elmhurst, Ill., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware

Filed Feb. 26, 1957, Ser. No. 642,543
3 Claims. (Cl. 96—30)



1. In a method of producing primary color separations corrected for the pigment colors to be used in making printed reproductions of a multi-colored original, the steps which include the illuminating of the multi-colored original, directing the light emitted by said original through N number of spectral filters covering the gamut of the spectrum to create a corresponding number of light images and which are respectively identified with one of the selected spectral color bands, said number N being equal to one plus the number of primary, secondary and tertiary colors used to reproduce the original, optically modulating the overall light intensity of the respective images in accordance with a certain correction factor for each image based on the spectral reflectivity characteristics of the respective pigment colors in each of the several spectral color bands and the spectral sensitivity of the panchromatic emulsion used, some of said factors having a positive sign and others having a negative sign, shutting off those light images whose factors bear a positive sign and then exposing a panchromatic photosensitive element to the combined intensities of those light images remaining and whose factors bear a negative sign, developing said element to create a mask, shutting off those light images whose factors bear a negative sign and then exposing though said mask a second panchromatic sensitive element to the combined intensities of those light images remaining and whose factors bear a positive sign, and finally developing said second photosensitive element to produce a corrected color separation transparency.

3,099,558

PHOTOPOLYMERIZATION OF VINYL MONOMERS BY MEANS OF A RADIATION ABSORBING COMPONENT IN THE PRESENCE OF A DIAZONIUM COMPOUND

Steven Levinos, Vestal, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 26, 1959, Ser. No. 823,005
20 Claims. (Cl. 96—35)

12. A process of producing by photopolymerization a polymeric photographic image which comprises irradiating to electromagnetic radiation having a wave length extending from the ultraviolet through the visible region, a photographic element comprising a support having thereon a radiation sensitive layer comprising a normally liquid to normally solid monomer containing the grouping $CH_2=C<$ attached directly to an electronegative group and a colloid carrier therefor and as the sole catalyst for said photopolymerization a mixture consisting essentially of (1) a light-sensitive aromatic diazonium compound and (2) a dye selected from the class consisting of azo dyes, cyanine dyes, azanol dyes, oxanol dyes, styryl dyes, hemicyanine dyes and merocyanine dyes, thereby polymerizing the monomer in the exposed areas, and then removing the residual monomer in the unexposed areas by washing.

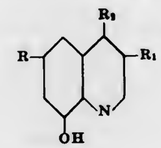
3,099,559

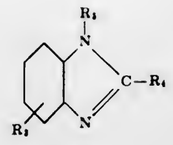
SILVER-FREE COLOR REPRODUCTION PROCESS AND COMPOSITION THEREFOR

Robert F. Coles, North St. Paul, Minn., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

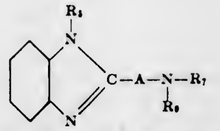
No Drawing. Filed Aug. 31, 1959, Ser. No. 836,883
16 Claims. (Cl. 96—48)

1. A radiation sensitive photographic element comprising a base and a radiation sensitive coating thereon, said coating being free of silver halide and consisting essentially of gelatin and a color coupler selected from those represented by the following general formulae:



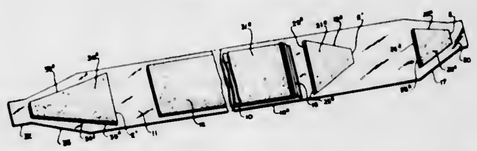


and



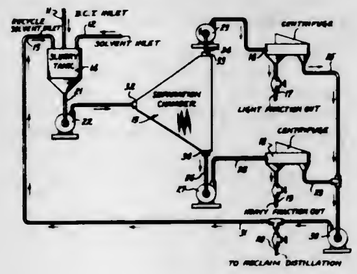
wherein R is a member selected form the class consisting of halogen, nitro, sulfo and arsonic acid radicals, R_1 is a member selected from the class consisting of hydrogen, alkyl and a mononuclear carbocyclic aromatic radical, R_2 is a member selected from the class consisting of H, —COOH and —CONH—R_8 and R_8 is a member selected from the class consisting of sulfonated aliphatic radicals containing at least 10 carbon atoms and sulfonated aromatic radicals substituted by an aliphatic radical containing at least 10 carbon atoms; R_3 is a water solubilizing group, R_4 is an hydroxy aromatic radical, the hydroxy group being nuclearly attached and said radical being linked to the benzimidazole radical in the ortho position to said hydroxy group, R_5 is a long aliphatic chain capable of rendering said compound fast to diffusion in a photographic colloid, R_6 is a member selected from the class consisting of hydrogen and aliphatic acyl radicals, R_7 represents a J-acid radical and —A— is an arylene group selected from the class consisting of a p-phenylene radical and a naphthylene radical.

3,099,560
SELF-SEALING ROLL FILM
Joseph J. Kouri, 314 Highland Ave., Peekskill, N.Y.
Filed Apr. 2, 1962, Ser. No. 184,418
1 Claim. (Cl. 96—78)



An improved photographic film package, comprising an elongated wrapper, said wrapper being made of rollable sheet material, a strip of film on one side of the wrapper, said wrapper having narrow opposite leading and trailing ends for fitting into slots in takeup and supply spools respectively, said film strip having opposite leading and trailing ends spaced from the leading and trailing ends respectively of the wrapper, a first elongated pressure sensitive adhesive seal longitudinally disposed and located near the leading end of the wrapper on said one side thereof, remote from the film strip and remote from the leading end; a second elongated pressure sensitive adhesive seal longitudinally disposed and located on said one side of the wrapper between the first seal and the leading end of the film strip, and a third elongated pressure sensitive adhesive seal longitudinally disposed and located on said one side of the wrapper at the trailing end thereof remote from the film strip and remote from the trailing end, whereby accidental unrolling of the wrapper on the supply spool is prevented by the third seal, each of said seals including a tab secured by a permanent adhesive to the wrapper with pressure sensitive adhesive coats adhering to outer sides of the tabs, each of said tabs being trapezoidal in form, the narrower ends of the first and second seals facing the leading end of the wrapper, the narrower end of the third seal facing the trailing end of the wrapper.

3,099,561
SEPARATION PROCESS
John E. Thompson, 908 Burns Drive, Flossmoor, Ill.
Filed Feb. 12, 1960, Ser. No. 8,324
7 Claims. (Cl. 99—7)



1. A process for the separation of the constituents of solid dry rendered tankage, which comprises; finely dividing said solid material, mixing the same with an organic fat solvent having a density less than the heavy fractions of said material and greater than the lighter fractions of said material, passing said material and solvent through a separating chamber where the lighter solid fractions are allowed to rise and the heavy solid fractions settle, and removing each of these fractions from said chamber, recovering said fractions free from the solvent and removing said solvent and the dissolved fat from said chamber, separating the fat from the solvent and recirculating the said solvent.

3,099,562
PREPARATION OF HEAT-COAGULABLE PROTEIN
William I. Rogers, Carlisle, Mass., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 5, 1962, Ser. No. 164,610
14 Claims. (Cl. 99—18)

1. A process of preparing a heat coagulable protein which comprises subjecting fresh fish containing substantial amounts of fish muscle to mild extraction conditions in the presence of an aqueous extraction liquid at a temperature of 0° to 30° C. to solubilize at least a portion of the heat-coagulable protein content of said fish, and isolating said coagulable protein in solution.

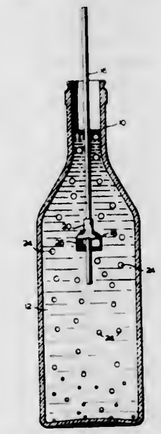
3,099,563
PROCESS FOR PRODUCING FOAM STABILIZER FOR BEER
Paul L. Smith, Winter Park, Fla., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Oct. 25, 1961, Ser. No. 147,437
5 Claims. (Cl. 99—48)

1. A process for producing a foam stabilizer for beer comprising hydrolyzing at least one recovered by-product of beer manufacture selected from the group consisting of spent grains and hop residues at a temperature of at least 212° F. for at least about 5 minutes; freezing water from the resulting hydrolysate so as to increase the concentration thereof and precipitate materials which produce turbidity in beer; and separating the concentrated hydrolysate from the ice and precipitate.

3,099,564
HIGHLY NUTRITIOUS FAT COMPOSITION
Chester M. Gooding, Westfield, N.J., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 29, 1960, Ser. No. 52,351
8 Claims. (Cl. 99—118)

1. A highly nutritious fat compositions consisting essentially of a mixture of about 50 to about 80 parts of cottonseed stearine and about 50 to about 20 parts of an essentially completely hydrogenated interesterified base fat having a solids content index at 50° F. of from about 55 to 70 and at 92° F. of from about 10 to 35, said composition having a Solids Content Index at 50° F. of from about 36 to about 45, at 70° F. of from about 8 to 17, at 80° F. of from about 6 to about 14, and at 92° F. of from about 1.5 to about 4.5.

3,099,565
SELF-ELEVATING DRINKING STRAW
Roy L. Neuhauser, Arlington, Va.
(875 W. Cresta Loma Drive, Tucson, Ariz.)
Filed Feb. 6, 1961, Ser. No. 87,305
5 Claims. (Cl. 99—138)



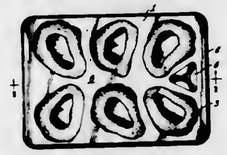
1. A drinking straw for use in containers for effervescent and carbonated beverages comprising an elongated hollow straw member, a bell-shaped element attached to said straw member, said bell-shaped element extending radially outwardly and downwardly from said straw member and disposed near the bottom end thereof to be immersed within the beverage for capturing a portion of the gases liberated from the beverage to thereby effectively raise said straw member into a drinking position.

2. The invention claimed in claim 1 and further a soluble material cast upon a surface of said element.

3,099,566
PROCESS FOR PICKLING MEAT AND PICKLING PREPARATION THEREFOR
Peter Flesch, Mainz-Gonsenheim, and Josef Hader, Koblenz-Lutzel, Germany, assignors to Rhenus Rheinische Getränke-Industrie Bienz & Bienz G.m.b.H., Koblenz-Lutzel, Germany
No Drawing. Filed June 14, 1960, Ser. No. 35,891
Claims priority, application Germany June 23, 1959
9 Claims. (Cl. 99—159)

9. A pickling salt containing in addition to sodium chloride as main ingredient, and sodium nitrite in the amount of 0.1% to 0.2% calculated on sodium chloride, a substance selected from the group consisting of sorbic acid and sodium sorbate in the amount of 0.1% to 0.8% by weight and a substance selected from the group consisting of sodium citrate and sodium succinate in the amount of 0.1% to 2% by weight, the percentages being calculated on the amount of sodium chloride.

3,099,567
COMBINATION FOOD PACKAGE, SHIPPING, DISPLAY AND HEAT EXCHANGE CONTAINER AND SERVING TRAY
David H. Wallace, Annapolis, William E. Valliant and Fletcher Phillips Williamson, Cambridge, and Otto John Munz, Annapolis, Md.; said Wallace, Valliant, and Williamson, assignors to said Munz
Filed June 3, 1959, Ser. No. 817,837
6 Claims. (Cl. 99—171)



1. A container for serving food, comprising a body of sheet material having a planar top and a skirt extending about and depending from the periphery of said top, there being a plurality of concavities in said planar top, each separated from the others by a planar portion of said top, each concavity forming a compartment to hold food, said skirt terminating in a plane to form a support for said container and to provide a space for receiving a heat exchange medium for transfering heat between said food and said heat-exchange medium.

3,099,568
CONFECTION PACKAGE
Ira Brody and Aleta Brody, both of 110—35 72nd Road, Forest Hills, N.Y.
Filed Aug. 5, 1959, Ser. No. 831,847
3 Claims. (Cl. 99—180)



1. A package of confections comprising a bag made of filmy material, and having an outwardly flaring bottom, said bag being partially filled by said confections, a first pliable wire encircling the exterior of the bag and effecting a closure of one end thereof, a second pliable wire extending longitudinally inside of the bag through said one end, one end of said second wire etxending outwardly of the bag, a toy head secured to an outer free end of said second wire, the first wire being twisted around the bag and having its free ends simulating arms of a toy figure, the second wire having an intermediate pliable section at the top end of the bag whereby said toy head can be disposed at a selected angle to the bag, a circular tab bent diametrically and seated on the closed top end of the bag to conceal the said top end, a staple securing said tab to the bag and to the second wire, and a semi-rigid disk disposed at the flaring bottom of the bag in-

side the bag to provide a support for holding the bag in an upright position, said second wire being in hook form to provide a doubled rigid support for said head, said other end of the second wire extending laterally under the bend in said tab to reinforce the same.

3,099,569

SILICONE-COATED FRIT USED IN DECORATING GLASSWARE

Ray Andrews and Francis M. Moore, Washington, Pa., assignors to B. F. Drakenfeld & Company, Inc., Washington, Pa., a corporation of New York

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,918
8 Claims. (Cl. 106—49)

1. In a method of preparing a frit based glass enamel the step comprising coating the frit particles with a minor proportion by weight of a dimethylsilicone fluid and thereby rendering the enamel non-crizzling during firing on a glass base.

3,099,570

FILLER FOR PAPER AND METHOD OF MAKING THE SAME

John G. Leech, Westernport, Md., and Thomas B. Fleischer, Appleton, Wis., assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed July 19, 1961, Ser. No. 127,086
26 Claims. (Cl. 106—288)

5. The method of making, for use in the manufacture of paper, an aluminum silicate filler, which method comprises blending an aluminum salt of a strong, common, mineral acid with water in suitable proportions to form a solution characterized by a pH of less than four, progressively adding a solution of sodium silicate directly to the aluminum salt solution under high shear agitation to form an aluminum silicate precipitate, the sodium silicate being added at a rate sufficiently restricted in relation to the degree of shear agitation maintained to avoid the formation of a lumpy precipitate, and progressively adding sodium hydroxide with a portion at least of the sodium silicate, the total quantity of sodium hydroxide added being sufficiently great to assure the substantially complete reaction of the sodium silicate in the production of the precipitated aluminum silicate but sufficiently restricted to avoid raising the pH over four throughout the precipitation process.

3,099,571

POLYETHYLENE TEREPHTHALATE COATED WITH TRANSFERABLE MINUTE SPECKS OF MAGNETIC INK

Theodore Maierson, Frederick C. Schiller, and Harry N. Vosmer, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed May 5, 1958, Ser. No. 733,141
4 Claims. (Cl. 117—36.1)



1. A transfer backing film of polyethylene terephthalate having a profusion of microscopic substantially isolated, closely spaced stipple specks derived from truncated pyramidal contour deposits of transferrable magnetizable ink which may be transferred to a receiving sheet by a transfer printing operation, the stipple specks of ink transferred to the receiving sheet merging by force of the transfer printing operation to produce a clearly defined character of magnetizable material.

3,099,572

METHOD OF TREATING POLYETHYLENE TO PROMOTE GLUING

James H. Rion, Richard W. Turnage, and Baynard R. Whaley, Hartsville, S.C., assignors to Sonoco Products Company, Hartsville, S.C., a corporation of South Carolina

No Drawing. Filed Nov. 2, 1960, Ser. No. 66,700
9 Claims. (Cl. 117—47)

1. A method of treating a polyethylene surface comprising the steps of, coating the surface to be treated with an aqueous solution of chromic acetate and momentarily applying heat to said coated surface to dry said surface, to soften the polyethylene in said surface and react the chromic acetate with the polyethylene whereby the treated surface may be strongly bonded to other materials with commonly employed adhesives of the hardening type.

3,099,573

AQUEOUS DISPERSION OF PERIODATE OXIDIZED POLYSACCHARIDE-AMINO TRIAZINE REACTION PRODUCT AND PROCESS OF PREPARING SAME

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed June 22, 1960, Ser. No. 37,830
13 Claims. (Cl. 117—62.2)

3. A process for preparing an aqueous dispersion of a reaction product of a periodate oxidized polysaccharide with an amino triazine which comprises mixing a periodate oxidized polysaccharide with an amino triazine in an aqueous dispersion medium therefor at a hydrogen ion concentration in the range of from about pH 5.5 to pH 7.0 and at a temperature of from about 60° C. to 80° C. until complete dispersion of the reaction product thereof.

12. A process for imparting enhanced wet strength characteristics to paper which comprises treating paper with about a 1% to 20% solids containing dispersion of a periodate oxidized polysaccharide-amino triazine resin prepared according to the process of claim 3, acidifying with an aqueous solution of an acidic catalyst and curing at a temperature in the range of from about 80° C. to 100° C. for a period of from about 10 to 30 minutes.

3,099,574

METHOD OF COLORING STONES AND OTHER MINERAL AGGREGATES

Napoleon M. Bernier, Belmont, Mass., assignor to California Stucco Products of N. E., Inc., Cambridge, Mass., a corporation of Massachusetts

No Drawing. Filed June 24, 1959, Ser. No. 822,420
2 Claims. (Cl. 117—100)

1. A process for providing colored aggregates suitable for use in stucco, plaster and asphalt facing and coatings which comprises the steps of mixing a charge of mineral aggregates with a colored fluid resin surface coating composition substantially according to the proportions of the following formula per 100 lbs. of crushed stone:

Approximately 30 ounces of an epoxy resin reaction product of bisphenol A and epichlorohydrin.

25–50% by weight of the epoxy resin of an amine curing agent selected from the group consisting of diethylene diamine and a mixture of approximately one part by weight dimethylamino ethanol and 6 parts by weight triethylene amine; and

an effective amount in the range of approximately 2 to 3 ounces of a coloring pigment

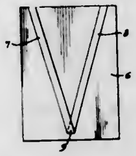
and agitating said aggregates to coat the same and to disperse the aggregates.

3,099,575

THERMOCOUPLE

James S. Hill, Cranford, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed Oct. 20, 1959, Ser. No. 847,608
11 Claims. (Cl. 117—212)



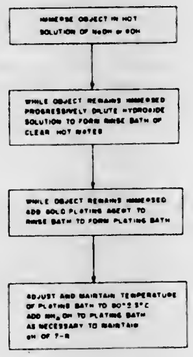
1. The method of bonding a thin film substantially narrow resistance element composed of an alloy of at least two metals selected from the group consisting of platinum, palladium, iridium, rhodium and gold on a refractory support, comprising mixing said metals in finely divided condition with an organic liquid vehicle, applying the resultant mixture on the support in the form of a substantially narrow film, heat treating the support and film at a temperature up to about 800° C. in air until the organic vehicle is substantially completely removed by oxidation, and thereafter further heat treating the support and film at a temperature from about 1000° C. to about 1700° C. and below the melting points of the metals until the mixed metals are completely alloyed by diffusion in situ and firmly bonded to the support.

3,099,576

SELECTIVE GOLD PLATING OF SEMICONDUCTOR CONTACTS

Timothy Mocanu, Quincy, Mass., assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Filed June 24, 1960, Ser. No. 38,631
4 Claims. (Cl. 117—212)



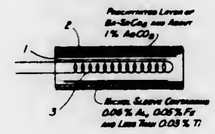
1. A method of selectively gold plating the alloy contacts of a silicon semiconductor device, comprising: soaking the device in a hot solution of an alkali metal hydroxide selected from the group consisting of sodium hydroxide and potassium hydroxide; progressively diluting said solution to substantially clear hot water while said device remains immersed therein; admixing with the resultant rinse water in which the device is immersed, a chemical gold plating agent to produce a plating bath containing potassium gold cyanide, ammonium citrate, and ethylene diamine tetra acetic acid; and adjusting the pH of the plating bath to a value in the range of about 7 to 8.

3,099,577

METHOD OF MANUFACTURING OXIDE CATHODES AND CATHODES MANUFACTURED BY SUCH METHODS

Hendrikus Johannes Lemmens, Albertus Venema, and Pieter Zalm, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 24, 1960, Ser. No. 51,516
5 Claims. (Cl. 117—224)



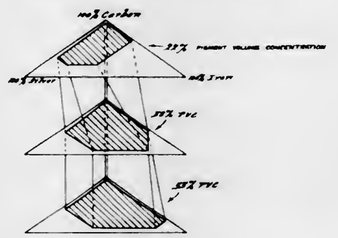
1. A method of manufacturing a cathode for an electron discharge tube comprising the steps, coprecipitating alkaline earth carbonates and silver carbonate to form a layer of said alkaline earth carbonates containing about 1% of silver carbonate on a base constituted of nickel and an active agent selected from the group consisting of Al, Fe, Ti and Mn, and activating the so-coated nickel base in an evacuated discharge tube.

3,099,578

HEAT RESISTANT ELECTRICALLY CONDUCTING COMPOSITIONS, METHOD OF COATING ARTICLES THEREWITH AND ARTICLES PRODUCED THEREBY

Frank M. Hunter, Port Huron, Mich., assignor to Acheson Industries, Inc.

Filed Aug. 19, 1960, Ser. No. 50,637
9 Claims. (Cl. 117—226)



4. A method for forming an electrically conductive coating on a non-conducting surface which comprises the steps of applying to said surface a composition comprising a binder, finely divided carbon and silver and iron in finely divided granular particle form, said binder and said granules being present in proportions within the limits defined by the following reference points in volume percent of total pigment:

at a pigment value concentration of about 22%—
about 93% carbon, about 5% silver, about 2% iron
about 93% carbon, about 2% silver, about 5% iron
about 63% carbon, about 2% silver, about 35% iron
about 20% ctrbon, about 45% silver, about 35% iron
about 20% carbon, about 65% silver, about 15% iron
about 30% carbon, about 65% silver, about 5% iron

at a pigment volume concentration of about 38%—
about 93% carbon, about 5% silver, about 2% iron
about 93% carbon, about 2% silver, about 5% iron
about 40% carbon, about 2% silver, about 58% iron
about 5% carbon, about 20% silver, about 75% iron
about 5% carbon, about 55% silver, about 40% iron
about 40% carbon, about 55% silver, about 5% iron

at a pigment volume concentration of about 53%—
about 93% carbon, about 5% silver, about 2% iron
about 93% carbon, about 2% silver, about 5% iron

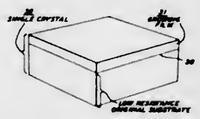
about 18% carbon, about 2 silver, about 80% iron
about 5% carbon, about 15% silver, about 80% iron
about 5% carbon, about 55% silver, about 40% iron
about 40% carbon, about 55% silver, about 5% iron

and by the limits defined by interpolated points at pigment volume concentrations intermediate about 22% and about 53%, and curing said binder to an adherent continuous film containing said particles uniformly distributed therein.

3,099,579
GROWING AND DETERMINING EPITAXIAL LAYER THICKNESS

William G. Spitzer, Plainfield, and Morris Tanenbaum, Madison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 9, 1960, Ser. No. 54,872
9 Claims. (Cl. 117—230)



7. A method for controlling the thickness of an epitaxial film comprising the steps of preparing a substrate of a crystalline semiconductor material, growing on said substrate an epitaxial layer of said semiconductor material having a resistivity different from that of the substrate, the said epitaxial layer being of indeterminate thickness, placing said substrate in a sample mount, irradiating said semiconductor material with a series of monochromatic infrared beams whereby interference fringes will appear due to the establishment of an optical interface between the substrate and the epitaxial layer, calculating the thickness of said film from the equation:

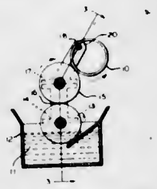
$$t=\frac{\lambda}{2\eta}p$$

where t is the thickness of the epitaxial layer, λ=the wavelength in free space of the infrared radiations, η=the refractive index of the epitaxial layer, and p=an integer, and continuing epitaxial growth until the desired thickness is obtained.

3,099,580
ADHESIVE COATING APPARATUS

Robert L. Dyar, 1825 S. Kinnickinnic Ave., Milwaukee, Wis.

Original application Aug. 13, 1959, Ser. No. 833,445, now Patent No. 3,023,121, dated Feb. 27, 1962. Divided and this application July 13, 1960, Ser. No. 42,600
2 Claims. (Cl. 118—233)

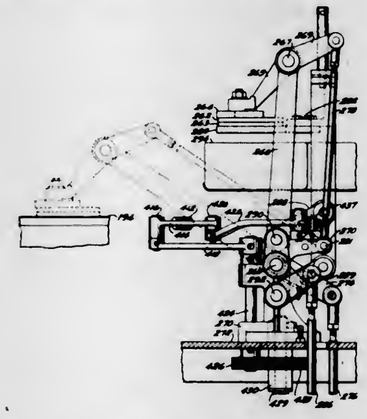


1. Apparatus for applying an adhesive coating to a thin-walled cylinder including a reservoir adapted to contain an adhesive, an adhesive transfer roller, means for transferring adhesive from said reservoir to said adhesive transfer roller, a cylinder-supporting shaft spaced from said transfer roller a distance greater than the wall thickness of said cylinder, positioned above the axis of said transfer roller, and offset laterally from but parallel to the axis of said transfer roller whereby said cylinder, having an external opening greater than the diameter of the shaft and placed upon said shaft will swing by gravity into pressure contact with said transfer roller, and means for rotating said roller and thereby said cylinder carried by said shaft.

3,099,581
CIGAR MACHINE PASTER

Victor George Hanson, West Palm Beach, Fla., assignor to International Cigar Machinery Co., a corporation of New Jersey

Original application May 24, 1956, Ser. No. 587,168, now Patent No. 3,033,210, dated May 8, 1962. Divided and this application July 6, 1961, Ser. No. 122,131
3 Claims. (Cl. 118—243)

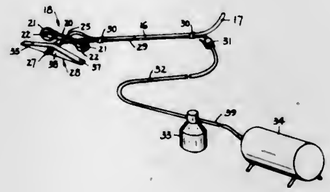


1. A paster for a cigar machine comprising a paste receptacle, a substantially horizontal paste conveyor plate arranged to move substantially vertically and into and out of said receptacle, said plate having perforations to permit excess paste to drain out when said plate is raised out of said receptacle, a paste applier movable from a position to contact said plate to a paste applying position for the wrapper of a cigar, said paste applier being formed of soft resilient material, said paste applier being formed to engage said plate and having coinciding perforations so that a controlled amount of paste may be applied uniformly to said paste applier and then to said wrapper.

3,099,582
PORTABLE ROOFING APPARATUS

Harold Ongstad, Towner, N. Dak., and Wilbur P. Scholl, Rte. 3, Bagley, Minn.

Filed Aug. 8, 1960, Ser. No. 48,121
2 Claims. (Cl. 118—305)



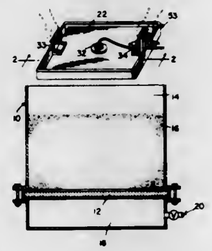
2. A portable apparatus for cementing rows of overlapping shingle tabs together, said apparatus comprising

an elongated frame member, an axle member carried by said frame and extending across the lower end thereof, a roof engaging wheel assembly carried by one end of said axle, a triangular wedge member carried at the other end of said axle and adapted to slidably pass between a row of overlapping shingle tabs to separate the same, nozzle means carried by said wedge and opening outwardly thereof, handle means at the upper end of said frame for driving said apparatus, means for opening and closing said nozzle means, pumping means remotely disposed from said elongated frame member which is responsive to said opening and closing means for pumping adhesive through said nozzle means, and conveying means connecting said nozzle means to said pumping means.

3,099,583
DEVICE FOR MASKING AND SUPPORTING AN ARTICLE

George Stanley McLean, Orange, Calif., assignor to The Polymer Corporation, a corporation of Pennsylvania

Filed Apr. 25, 1960, Ser. No. 24,583
3 Claims. (Cl. 118—5.05)



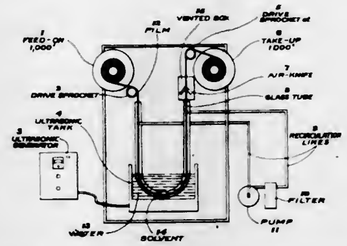
1. A device for masking and supporting an article while a coating is applied to a part thereof, said device comprising a flat, rigid body of a non-metallic fluid impervious material capable of withstanding continuous temperatures in excess of 600° F., a continuous sealing gasket secured to one surface of the body and forming an enclosed area, which area, when the gasket is applied to a surface of an article to be coated, forms with the article a vacuum chamber, the body having an opening therethrough leading into said area from the surface of the body opposite from said area, a valve means supported on the body opposite from said area, and having a finger operated means for opening and closing an air passage therein, having one end connected with said opening at the said surface of the body opposite from said area and having means at its other end for connection with an air pressure reducing means, and a pair of hand grips secured to said body adjacent to opposite side edges thereof and projecting outwardly from the said opposite surface of the body whereby an article held by vacuum to the gasket may be introduced by hand into a bed of coating substance, and said valve means being so positioned relative to one of said hand grips that it may be operated while a hand maintains its grasp on the hand grip.

3,099,584
METHOD FOR THE REMOVAL OF MAGNETIC SOUND TRACK FROM MOVIE FILM

Robert S. Walsh, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Aug. 8, 1960, Ser. No. 48,043
6 Claims. (Cl. 134—1)

5. A method for removing magnetic stripe having a polymeric binder from motion-picture film which comprises immersing the film in an organic liquid agitated with ultrasonic vibrations, which liquid is a solvent for the magnetic stripe and is substantially inert with respect

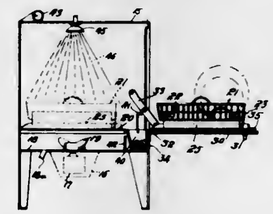


to the film base and the photographic material carried thereon.

3,099,585
DISHWASHING MACHINES AND METHOD

Leo M. Kahn, 305 95th St., Brooklyn 9, N.Y.

Filed Oct. 14, 1958, Ser. No. 767,226
13 Claims. (Cl. 134—6)



13. In a method of cleaning dishes in a washing machine having basket supporting means and having a door, which comprises stacking the dishes in a lattice work basket having a removable tray thereunder and on which said basket is slidable, and while said tray is outside of the machine sliding said basket over said tray and through the doorway on to said basket supporting means while simultaneously scraping any food leavings off said tray by said sliding action, and closing said door for the dishwashing operation.

3,099,586
STORAGE BATTERY ELECTRODES AND METHOD OF MAKING THE SAME

Joseph C. Duddy, Trevose, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey

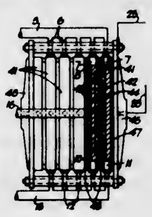
Filed Sept. 19, 1960, Ser. No. 56,751
10 Claims. (Cl. 136—43)

1. A method of producing electrodes which comprises intimately and homogeneously mixing a plasticized first thermoplastic resin, a plasticized second thermoplastic resin in a ratio based upon parts by weight of said first thermoplastic resin of between 1 to 9 and 3 to 1 and an electrochemically battery active material in powdered form to produce a plasticized mass, said second thermoplastic resin being substantially insoluble in said first thermoplastic resin, shaping said mass to produce elements substantially conforming to the active material conductive retaining means, placing said elements into said retaining means, and subjecting said electrode to a solvent in which said second thermoplastic resin is soluble and said first thermoplastic, said active material and said conductive retaining means are substantially insoluble and inert to substantially remove from said electrode said

second thermoplastic resin to render said electrode porous and to swell said matrix formed by said first thermoplastic resin and said active material into intimate contact with said conductive retaining means.



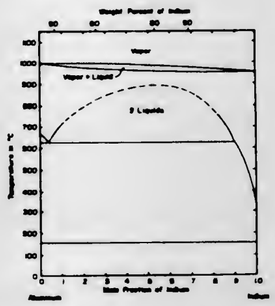
3,099,587
FUEL CELLS
Hubert Harold Chambers, New Malden, and Anthony Desmond Shand Tantram, Dorking, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed Nov. 23, 1959, Ser. No. 854,896
Claims priority, application Great Britain Dec. 17, 1956
10 Claims. (Cl. 136—86)



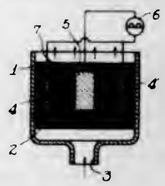
1. A fuel cell in which the electrolyte is composed of the fluoride of at least one metal, said electrolyte being molten at the normal operating temperature of the cell, and said fluoride electrolyte containing when molten at least one ionic metal oxide in solution therein, said metal oxide providing free oxygen ions in the molten electrolyte.

3,099,588
FORMATION OF SEMICONDUCTOR TRANSITION REGIONS BY ALLOY VAPORIZATION AND DEPOSITION
Thorndike C. T. New, Hempfield Township, Westmoreland County, and James Pappas, North Huntingdon Township, Westmoreland County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 11, 1959, Ser. No. 798,648
6 Claims. (Cl. 148—1.5)

1. A process for forming a semiconductor device which comprises vapor depositing a readily solderable homogeneous doping alloy comprised of aluminum and indium from a single homogeneous melt, upon a body of an n-type semiconductive material while maintaining said body of n-type semiconductor material at a temperature below its melting point, below the melting point of the aluminum component of the doping alloy and above the melting point of indium, the aluminum and indium comprising the doping alloy being deposited simultaneously upon the body whereby, an aluminum rich region is formed within the body of semiconductor material, said aluminum rich region converting a portion of the body to a p-type semiconductivity, and a layer of metastable alloy comprised of indium and aluminum is formed on the outer surface of the aluminum rich region.



3,099,589
METHOD OF CEMENTATION IN WHICH FLUIDIZED CARBON POWDER PARTICLES ARE EMPLOYED
Yukio Tanaka, Tokyo, Japan, assignor to To-a Kako Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Filed Jan. 4, 1960, Ser. No. 316
Claims priority, application Japan Sept. 15, 1959
3 Claims. (Cl. 148—20.3)



3. A method of cementation which comprises establishing and maintaining a fluidized bed of finely divided carbon particles by means of a fluidizing gas consisting essentially of a gaseous saturated aliphatic hydrocarbon, in a fluidizing chamber having a micro-porous bottom wall, immersing in said fluidized bed a metal piece to be cemented between electrodes likewise immersed in said fluidized bed passing a pulsating current from said electrodes through the carbon particles to said metal piece to be cemented under conditions such that the carbon particles are at a positive potential while the metal piece is at a negative potential, whereby spark discharges generated on the surface of the metal piece produce nascent carbon and the metal piece is cemented by said nascent carbon.

3,099,590
SOLDER FLUXES
Harry B. Laudenslager, Jr., Jamestown, N.Y., assignor to Blackstone Corporation, a corporation of New York
No Drawing. Filed June 25, 1959, Ser. No. 822,754
4 Claims. (Cl. 148—23)

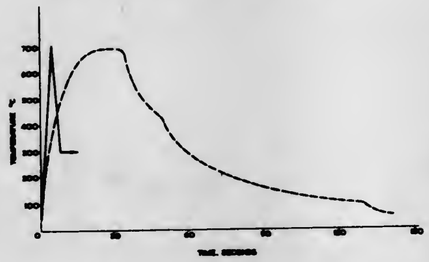
1. A solder flux composition consisting essentially of about 1% to 15% of the reaction product of an organic amine with hydroxyacetic acid, about 1% to 16% ammonium chloride, about 1% to 25% of a water soluble organic acid having less than 10 carbon atoms, about 0.1% to 0.8% of a wetting agent and the balance a carrier vehicle.

3,099,591
SEMICONDUCTIVE DEVICE
William Shockley, 23466 Corta Via, Los Altos, Calif.
Filed Dec. 15, 1958, Ser. No. 780,327
8 Claims. (Cl. 148—33)



1. A semiconductive device including at least first and second layers of opposite conductivity type forming a rectifying junction extending to at least one surface of the device, said device including a first region in which carrier multiplication through avalanche occurs initially and a second region surrounding said first region, one of said layers in said second region having a low concentration of unbalanced charges at the junction and including a region having a high concentration of unbalanced charges spaced from the junction and extending to the surface to reduce channelling through said layer.

3,099,592
PROCESS OF ANNEALING LOW CARBON STEEL
Sidney Garber, Sheffield, England, assignor to The British Iron and Steel Research Association
Filed Jan. 11, 1960, Ser. No. 1,774
6 Claims. (Cl. 148—144)



1. A process for the continuous high speed annealing of cold-reduced low carbon steel strip suitable for the production of tinplate, which process comprises the steps of rapidly heating the steel to a subcritical annealing temperature of about 700° C., whereby recrystallisation of the steel is effected, quenching the steel from the annealing temperature in not more than 5 seconds to a temperature of from 200° to 250° C., coiling the strip at the latter temperature and maintaining the coiled strip within said temperature range for from 30 to 50 minutes.

3,099,593
METHOD OF PACKAGING AND APPLYING WALL TILE AND WALL PANEL ADHESIVE
Felix L. Syracuse, Shaker Heights, Ohio, assignor to The Macco Chemical Company, Wickliffe, Ohio, a corporation of Ohio
Substituted for abandoned application Ser. No. 601,455, Aug. 1, 1956. This application Feb. 9, 1961, Ser. No. 89,095
10 Claims. (Cl. 156—71)

1. A method of packaging, transporting, and applying a definite amount of a viscous adhesive material to a surface without manually contacting said material, which comprises (1) wrapping a prescribed amount of the adhesive material in a continuous plastic film having a thickness of about 0.00025 to 0.01 of an inch and a mechanical strength of about 3,500 p.s.i. to 20,000 p.s.i.; (2) sealing the ends of said plastic film with heat to enclose the material; (3) rupturing the plastic wrapper along predetermined lines to expose a substantial portion of the adhesive material and manually applying the exposed portion to the surface by slapping it against the surface; and (4) removing the plastic wrapper by peeling it away from the adhesive material; said adhesive material having an adhesive force to the surface greater than the forces of adhesion to the plastic wrapper and the force of gravity acting on the adhesive material; thereby permitting the plastic wrapper to be peeled from the adhesive material without breaking the bond between the adhesive material and the surface.



3,099,594
METHOD FOR BLOOMING FILTER TOW
James F. Caines, Richard F. Dyer, and James Knox Pannill, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 5, 1960, Ser. No. 27,091
10 Claims. (Cl. 156—152)



1. In a process of manufacturing filter elements from a bundle of crimped, continuous filaments, the improvement feature which comprises applying an addendum to the filaments, passing the filaments thus treated with addendum through a jet whereby the addendum is distributed over the filaments and the filaments put out of registry and retarding the exit of the filaments from said jet.

3,099,595
METHOD OF MAKING COMPOSITE MUSICAL INSTRUMENT STRINGS
Harold V. Allbaugh, 4814 W. Division St., Chicago, Ill.
Filed Feb. 10, 1958, Ser. No. 714,368
6 Claims. (Cl. 156—172)

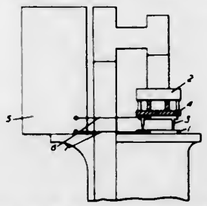


1. The method of making composite musical strings which consists in suspending a metallic wire under tension between the ends thereof to define an innermost core wire, then convoluting insulated metallic wire around said core wire until an outermost convoluted uniform wrapping is formed in relation to said metallic innermost core wire, then solely applying a binder over the outermost convoluted uniform wrapping of insulated wire, and then electrically connecting the ends of the metallic core wire and the convoluted insulated wire to generate heat between the outermost convoluted wrapping and the innermost core wire to diffuse the binder and fill the interstices between the convoluted insulated wire and the core wire to provide a composite musical string after the binder has set.

3,099,596
MACHINERY FOR CUTTING, EMBOSSING OR MARKING MATERIALS

Thomas Benjamin Prew, Stafford, England, assignor to Stafford Tool and Die Company Limited, a company of Great Britain

Filed Apr. 21, 1961, Ser. No. 104,746
Claims priority, application Great Britain Apr. 26, 1960
1 Claim. (Cl. 156—380)



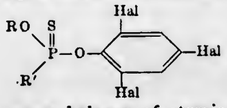
The machine for the simultaneous heat sealing and cutting of laminated sheet materials, at least one of which comprises a layer of leather or like non-thermo-plastic material, another of which comprises a layer of polyvinyl chloride or like thermoplastic material, and wherein there is a thermo-plastic adhesive between the said layers, the machine comprising: a die having edges composed of a hard cutting steel to cut the material including the non-plastic layer, a press tool with work-table and a die-head to which the die is connected, a high-frequency electric heating apparatus, a heat and electric current insulating means to separate the die-head from the die, including a flat element of heat and electrical insulating against which the die is mounted, and spacing rods arranged between the flat element and the die-head to hold the die spaced away from the die-head in fixed relation thereto and to provide only restricted heat paths from the die to the die-head; the work-table being composed of a material of high heat and electrical conductivity; and means to electrically connect the high frequency heating apparatus to the die and the work-table, to heat the cutting edges of the die, to enable the die to seal the layers together and to cut through the materials adjacent the seal, in a single operation.

3,099,597
HALOPHENYL ARYLPHOSPHONOTHIOATES

John P. Chupp, Kirkwood, and Peter E. Newallis, Crestwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 14, 1961, Ser. No. 95,494
14 Claims. (Cl. 167—30)

1. An arylphosphonothioate of the formula



wherein "Hal" means halogen of atomic number in the range of 16 to 36, wherein R is a lower alkyl radical, and wherein R′ is an aromatic hydrocarbon radical of the benzene series containing 6 to 10 carbons atoms selected from the group consisting of phenyl and alkyl substituted phenyl.

3,099,598
WOOD PRESERVATIVE

Lars G. Birkner, Danderyd, and Sten Tycho Henriksson, Skelleftehamn, Sweden, assignors to Bolldens Gruvaktiebolag, Stockholm, Sweden, a joint-stock limited company of Sweden

No Drawing. Filed Sept. 5, 1961, Ser. No. 135,774
Claims priority, application Sweden Sept. 9, 1960
2 Claims. (Cl. 167—38.5)

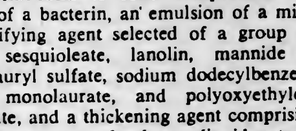
1. A wood impregnation preparation in the form of a concentrated liquid composition which may be diluted with water comprising 23–27% As_2O_5, 18–24% CrO_3, and 8–15% B_2O_3, and the remainder Na_2O and water, including water of crystallization.

3,099,599
METHOD FOR TREATING INFESTATIONS OF NEMATODES

Frederick Charles Copp and Harold Francis Hodson, London, England, assignors to Burroughs Wellcome & Co. (U.S.A.), Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Feb. 14, 1961, Ser. No. 89,125
Claims priority, application Great Britain Mar. 3, 1960
11 Claims. (Cl. 167—53)

1. A method for the treatment of infestations of nematodes which comprises the administration to the infected host of a therapeutically acceptable acid addition salt of a compound of the formula



wherein R^1 is selected from the class consisting of methyl and isopropyl groups; R^2 is selected from the class consisting of hydrogen and chlorine atoms; R^3 and R^4 are each selected from the class consisting of hydrogen atom and methyl group and A is an alkylene chain having from 2 to 3 carbon atoms.

3,099,600
CHROMATOGRAPHIC PURIFICATION OF HEPARIN

Nazzareno Toccacell, Milan, Italy, assignor to Ormonoterapia Richter S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 17, 1961, Ser. No. 103,206
Claims priority, application Italy Jan. 26, 1961
11 Claims. (Cl. 167—74)

1. A method of purifying heparin comprising dissolving heparin in a buffered solution having a pH of about 5.5–8.5; adsorbing said heparin solution on an anion exchange material selected from the group consisting of diethylaminoethyl-cellulose and triethylaminoethyl-cellulose; eluting said anion exchange material and adsorbed heparin with a salt solution of relatively low ionic strength to selectively remove the less active fractions of said heparin and eluting said anion exchange material and adsorbed heparin with a second salt solution of relatively high ionic strength to remove the more active fractions of heparin.

3,099,601
BACTERIN IN AQUEOUS POLYETHYLENE, MINERAL OIL EMULSION

William True Davis, Jr., and Fred M. Murdock, St. Joseph, Mo., assignors to Anchor Serum Company, St. Joseph, Mo., a corporation of Missouri

No Drawing. Filed Oct. 2, 1959, Ser. No. 843,950
2 Claims. (Cl. 167—78)

1. A semi-solid to solid composition consisting essentially of a bacterin, an emulsion of a mineral oil and an emulsifying agent selected of a group consisting of sorbitan sesquioleate, lanolin, mannide monooleate, sodium lauryl sulfate, sodium dodecylbenzene sulfonate, sorbitan monolaurate, and polyoxyethylene sorbitan monooleate, and a thickening agent comprising a mixture of a major amount of a heavy liquid petrolatum and a minor amount of polyethylene.

3,099,602
PROCESS OF PREPARING GUM ACACIA PHARMACEUTICAL VEHICLE

Lawrence A. Anderson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 9, 1961, Ser. No. 108,711
15 Claims. (Cl. 167—81)

1. A process for preparing a dry, finely divided, solid product containing a water-insoluble, water dispersible composition, which comprises: forming in a solution consisting essentially of gum acacia and water a dispersion of said composition, the water concentration of said dispersion being in a range from about 30 to about 60 percent by weight of said dispersion; reducing the water concentration of said dispersion by admixing with said dispersion dry, finely divided gum acacia in sufficient quantity to form a plastic dough; forming said plastic dough into a thin shape; drying said thin shape with air at a temperature in a range from about 100 to about 212° F., whereby dry stock is formed; and comminuting said dry stock.

3,099,603
TWO PHASE FAST BREAKING FOAM PRESSURIZED HAIR WAVING COMPOSITION

Robert D. Banker, Cincinnati, and Preston W. Grounds and Robert A. Cody, Springfield Township, Hamilton County, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed June 13, 1960, Ser. No. 35,393
17 Claims. (Cl. 167—87.1)

1. A two liquid phase pressurized hair waving composition adapted for discharge from its container as a foam, which collapses to a liquid promptly after discharge, consisting essentially of: from about 1% to about 10% of a low molecular weight mercapto-alkanoic acid, an alkalizing agent a substantial part of which is a base with a dissociation constant less than 10^{-5} imparting to the composition a pH above about 7 but below 10; from about 2% to about 20% of a propellant selected from the group consisting of difluoroethane and monochlorodifluoroethane; as a vapor pressure depressant from about 1% to about 20% of an organic compound selected from the group consisting of: dialkyl phthalates, glutarates, adipates and pimelates wherein the alkyl group contains 2 to 12 carbon atoms, alkyl laurates, myristates, and palmitates wherein the alkyl radical contains from 3 to 8 carbon atoms, and mixtures thereof, said organic compound being present at a level such that the vapor pressure of the composition is less than about 135 p.s.i.g. at 130° F., and, when monochlorodifluoroethane is the propellant, such that the density of the propellant phase is substantially equal to the density of the aqueous phase, the two liquid phases thereby being made readily mixable; from about 0.05% to about 2% of a surface active agent selected from the group consisting of nonionic and anionic surface active agents; and the balance substantially water.

3,099,604
METHOD OF PRODUCING L-THREONINE BY FERMENTATION

Shukuo Kinoshita and Hirotoshi Samejima, Tokyo, Chuzo Fujita, Sagamihara-shi, and Takashi Nara, Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed May 25, 1961, Ser. No. 112,543
Claims priority, application Japan May 27, 1960
19 Claims. (Cl. 195—29)

1. A method of producing L-threonine which comprises (*a*) culturing at a temperature from 24° to 37° C. and at a pH from 4 to 7 a microorganism selected from the group consisting of *Brevibacterium linens, Brevibacterium vitarumen, Brevibacterium liticum, Micrococcus rubens, Micrococcus varians, Xanthomonas pruni, Sarcina lutea* and *Corynebacterium rathayi* in culture medium containing carbon source, nitrogen source and inorganic salt, (*b*) introducing L-homoserine into the medium at a proper time within the period from 6 to 48 hours after cultivation commences, and (*c*) accumulating L-threonine in the medium.

3,099,605
DIAGNOSTIC COMPOSITION

Alfred H. Free, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,649
11 Claims. (Cl. 195—103.5)

1. A composition for detecting L-amino acid in an unknown which comprises L-amino oxidase, peroxidase, and an indicator which is oxidized by hydrogen peroxide in the presence of peroxidase and undergoes a color reaction during such oxidation.

3,099,606
PROCESS FOR THE DETERMINATION OF BLOOD GLUCOSE

Joseph D. Teller, Freehold, N.J., assignor to Worthington Biochemical Corporation, Freehold, N.J., a corporation of New Jersey

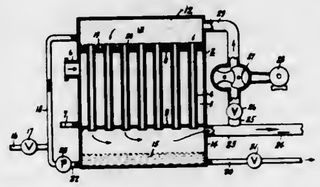
No Drawing. Filed Nov. 7, 1961, Ser. No. 150,636
5 Claims. (Cl. 195—103.5)

1. In a method of determining the glucose content of blood utilizing a chromogenetic enzymatic reagent chromogentically responsive to the presence of glucose, the improvement which comprises mixing a predetermined quantity of blood with a predetermined quantity of protein coagulant of predetermined composition effective to coagulate the protein content of said quantity of blood as a coagulum of coagulated proteinous material dispersed in residual fluid, depositing a predetermined quantity of said coagulum on a piece of absorbent paper, said coagulated proteinous material remaining located at the site of its application and said fluid diffusing laterally by capillary action in said paper away from said coagulated proteinous material in a test area wet with said fluid and freed of said coagulated proteinous material, and contacting said fluid absorbed by said filter paper in said area with said chromogenetic enzymatic reagent.

3,099,607
VAPOR RECIRCULATION DISTILLATION PROCESS AND APPARATUS

Edward L. Lustenader and Dale H. Brown, Scotia, N.Y., assignors to General Electric Company, a corporation of New York

Filed July 20, 1960, Ser. No. 44,146
6 Claims. (Cl. 202—64)



1. In a method for distillation the steps which consist in applying distilland to a stationary heat exchange surface, flowing the distilland over the heat exchange surface, placing the distilland in heat exchange relation with a medium on the opposite side of the heat exchange surface, flowing vapor oevr the distilland at sufficient velocity to create turbulent flow in a substantial portion of the adjacent flowing distilland whereby a sublayer of distilland having laminar flow with a thickness less than approximately one thousandth of an inch is formed between the

heat exchange surface and the distilland in turbulent flow to evaporate a substantial portion of the distilland and recirculating a portion of the vapor formed from the distilland over the flowing distilland on the heat exchange surface to maintain turbulent flow therein.

3,099,608
METHOD OF ELECTROPLATING ON A DIELECTRIC BASE
David A. Radovsky, Poughkeepsie, and Bruno J. Ronkese, Marlboro, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1959, Ser. No. 862,998
9 Claims. (Cl. 204—15)

3. A process of making an additive printed circuit board having circuit formations on both sides thereof and connections therebetween through holes, the process comprising: immersing a dielectric base board having holes therein at desired locations in a liquid suspension of at least semi-colloidal palladium to deposit a thin electrically non-conductive coating of the at least semi-colloidal palladium on the entire surface of the board including the holes, electroplating a flash coating of a conductive metal directly over the thin electrically non-conductive coating of the colloidal metal on the entire surface including the holes, the electroplating being started at a point on said base which is in contact with the electrolytic bath from which said flash coating of conductive metal is plated, outlining the desired circuit pattern on the opposite faces of the board with a resist, building up the circuit pattern by additional electroplating on the areas not covered by the resist and removing the resist together with the flash coating and said thin electrically non-conductive coating thereunder to thereby define a printed circuit conductive pattern on both faces of the dielectric board conductively connected through the desired holes.

3,099,609
METHOD OF ELECTROPLATING ALUMINUM OR ITS ALLOY WITH POROUS HARD CHROMIUM
Kimiyoshi Katayose, 49 Nishidaimachi Shimura, Itabashiku, Tokyo, Japan
No Drawing. Filed Sept. 11, 1961, Ser. No. 137,051
1 Claim. (Cl. 204—33)

A method of electroplating articles of aluminum and its alloys with porous hard chromium comprising cleaning said articles by the mixed solution of hydrochloric acid and hydrofluoric acid, then treating by means of anodic oxidation in a solution containing approximately 100 grams per liter of chromic acid while maintaining the temperature of the solution at approximately 50° C. and while maintaining the anodic current density in the range of from 50 to 70 amperes per square decimeter for from 3 to 10 minutes, and then electroplating with ordinary soft chromium in a chromic acid bath containing sulfuric acid and approximately 400 grams per liter of chromic acid while maintaining the sulfuric acid within a range of a ratio of chromic acid to sulfuric acid of approximately 100 to 1, and while maintaining the temperature of the bath within the range of 25° to 30° C. and while maintaining the current density (cathode) in the range of 35 to 45 amperes per square decimeter and the voltage in the range of 4.5 to 5 volts for 1 hour, and next, electroplating with hard chromium in a chromic acid bath containing sulfuric acid and approximately 200 grams per liter of chromic acid while maintaining the sulfuric acid within a range of a ratio of chromic acid to sulfuric acid of approximately 100 to 1, and while maintaining the temperature of the bath within the range of 30° to 55° C. and while maintaining the current density (cathode) in the range of 50 to 60 amperes per square decimeter and the voltage in the range of 3.8 to 4 volts for 1 hour, and lastly, electroplating with porous hard chromium in a chromic acid bath containing sulfuric acid and approximately 200 grams per liter of chromic acid while maintaining the sulfuric acid within a range of a ratio of chromic acid to sulfuric acid of approximately 100 to 1, and while maintaining the temperature of the bath within the range of 50° to 55° C. and while maintaining the current density (cathode) in the range of 80 to 100 amperes per square decimeter and the voltage in the range of 4 to 4.5 volts for 1 hour.

3,099,610
METHOD OF MULTI-COLORING ANODIZED ALUMINUM
Alexander Cybriwsky and Gerald L. Hager, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed July 29, 1957, Ser. No. 674,833
1 Claim. (Cl. 204—35)

A method of coloring a metal surface comprising: providing a selected area of said surface with an unsealed micro-porous anodic film of modified adsorptive ability and another area of said surface with an unsealed microporous anodic film of relatively unmodified adsorptive ability; dyeing the modified and relatively unmodified areas with a single selected dye in a single step; and sealing said areas; said providing step including a chemical etching treatment in said selected area and a single anodizing treatment for forming said film in both of said areas; said chemical etching treatment being effected by separately etching portions, of said selected area, in different degrees and then rinsing said area in a single rinsing treatment.

3,099,611
POLYETHYLENE IRRADIATION PROCESS
Kenneth Stevens, Wallington, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company
No Drawing. Filed Sept. 29, 1959, Ser. No. 843,064
Claims priority, application Great Britain Oct. 29, 1958
3 Claims. (Cl. 204—154)

1. A process which comprises irradiating linear polyethylene of an average molecular weight greater than 30,000 and a density greater than about 0.94 in contact with vinyl chloride with high energy ionizing radiation to a total dose between about 10^6 rads and 10^7 rads to produce a linear polyethylene material having substantially improved environmental stress-cracking resistance.

3,099,612
CHLORINATION OF NITROALKANES
Louis A. Wilson, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Aug. 31, 1960, Ser. No. 53,030
5 Claims. (Cl. 204—158)

1. In a process for the production of non-geminal chloronitroalkanes, wherein the chlorine substituent is in the one position by the chlorination of nitroalkanes, the improvement which comprises treating the nitroalkane with chlorine in the presence of light having a wave length predominantly of from about 340 to about 480 millimicrons.

3,099,613
RADIOLYTIC OXIDATION OF HYDROCARBONS
William Bartok, Cranford, and Peter J. Lucchesi, Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 21, 1959, Ser. No. 860,723
6 Claims. (Cl. 204—162)

1. Process for partially oxidizing C_8 to C_{18} hydrocarbons which comprises contacting said hydrocarbons

with molecular oxygen in the vapor phase and exposing the resulting mixture to high energy ionizing radiation at tempertaures of from above 120° to 230° C. for 1 minute to several hours and recovering oxygenated organic compounds comprising mainly epoxides, the intensity of said ionizing radiation being sufficient to provide a dose rate of at least 1×10^4 rad/hr.

3,099,614
PROCESS FOR REDUCTION OF MULTIPLE OXIDES
Charles Sheer, Teaneck, N.J., and Samuel Korman, Cedarhurst, N.Y., assignors to Sheer-Korman Associates Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 10, 1958, Ser. No. 779,273
3 Claims. (Cl. 204—164)

1. The process of converting multiple oxides to amenable form which comprises forming an anode of the multiple oxide with sufficient carbon to render the anode conducting, operating a high erosion arc with such anode, projecting a jet of gas containing oxygen into the arc flame to fix the anode carbon and to chill the resultant products below the temperature at which the multiple oxide can form.

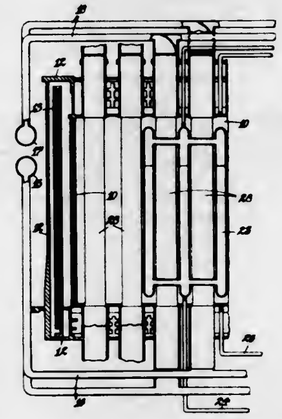
3,099,615
ELECTRODIALYSIS INVOLVING PERIODIC CURRENT REVERSAL
Paul Kollsman, New York, N.Y.
Filed Feb. 13, 1961, Ser. No. 89,051
5 Claims. (Cl. 204—180)



3. The method of demineralizing an ionic solution comprising, the steps of feeding raw solution into the chambers of an electrodialysis apparatus comprising a plurality of spaced membranes of two kinds arranged in alternating sequence between two end electrode compartments, the membranes of one kind being permeable to ions of one polarity and passage resistant to ions of the opposite polarity, the membranes of the other kind being permeable to ions of said opposite polarity, the top portions of adjoining chambers being in hydraulic communication, and the bottom portions of adjoining chambers being in hydraulic communication; passing a direct electric current in series across said chambers and membranes; withdrawing dilute product from each of said chambers from the top portion of the liquid therein; withdrawing concentrate product from said chambers from the bottom portion of the liquid therein; and periodically reversing the direction of the electric current passing from electrode to electrode through said chambers and membranes while maintaining the dilute and concentrate withdrawals unchanged.

3,099,616
STEAM COOLED REACTOR AND FUEL CHANNEL
Stefan George Bauer, Hilton, and Norman Battle, Allestree, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed July 31, 1959, Ser. No. 830,787
Claims priority, application Great Britain Aug. 6, 1958
3 Claims. (Cl. 204—193.2)

1. In a nuclear reactor of the class in which heat is abstracted by use of a steam under high pressure, a tank containing a moderator liquid, a fuel channel extending through the tank, said fuel channel comprising an inner tubular wall of thin metal which is resistant to attack by high pressure steam, said inner tubular wall defining a fuel element receiving space and a flow path for the high pressure steam, means delivering high pressure steam to the flow path through said inner tubular wall at one end and conveying steam away from the opposite end of said inner tubular wall, said fuel channel also comprising an outer tubular wall surrounding the inner tubular wall in radially spaced relation thereto, the outer wall being formed from a metal having a substantially less neutron absorbing capacity than the metal of the inner wall and



being thicker than the inner tubular wall, the space between said inner tubular wall and said outer tubular wall being sealed from said tank and from the flow path through the inner tubular wall, said space between the inner and outer tubular walls containing an inert gas at a pressure substantially equal to the pressure of said steam to support the inner tubular wall against the loads acting thereon due to the high pressure steam, said gas acting also as a heat insulant for the outer tubular wall, and the outer tubular wall being constructed to withstand the loads acting thereon due to the gas under pressure in the space between the inner and outer tubular walls.

3,099,617
PRETREATMENT OF CATALYST EMPLOYED IN THE HYDROCRACKING OF HYDROCARBONS
Anthony J. Tulleners, Fullerton, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Aug. 4, 1960, Ser. No. 47,368
12 Claims. (Cl. 208—109)

7. A process for converting a gas oil feedstock boiling between about 400° and 750° F. to gasoline-boiling-range hydrocarbons, which comprises subjecting said feedstock to catalytic hydrocracking in the presence of added hydrogen and a hydrocracking catalyst and under hydrocracking conditions, said hydrocracking catalyst comprising a minor proportion of a sulfided transitional metal hydrogenating component, and a major proportion of a solid refractory oxide cracking base, said hydrocracking catalyst having been subjected before sulfiding to a hydrogen-reduction treatment, and to a pretreatment contacting with a hydrocarbon pretreatment feedstock containing less than about 0.01% by weight of sulfur, said pretreatment contacting having been carried out under hydrocracking conditions at a temperature between about 500 and 1,000° F. and in the presence of at least about 200 s.c.f. of hydrogen per barrel of pretreatment feed.

3,099,618

HYDROCRACKING PROCESS FOR THE CONVERSION OF HYDROCARBONS UTILIZING A PLATINUM-COBALT-MOLYBDENUM CATALYST COMPOSITE

Lloyd E. Gardner and Robert J. Hogan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,599
8 Claims. (Cl. 208—112)

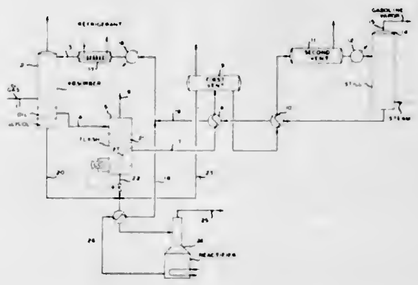
2. A process for the hydrocracking of a high sulfur content hydrocarbon oil which comprises contacting said oil containing about 1 to about 6 weight percent sulfur under hydrocracking conversion conditions including an elevated temperature and pressure with a catalyst composition containing 1–3 weight percent platinum, 1–10 percent cobalt, as metal, 1–20 weight percent molybdenum, as metal, and the balance alumina.

3,099,619

LOW TEMPERATURE ABSORPTION OF GASOLINE CONSTITUENTS FROM NATURAL GAS

Ernest A. Harper, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 7, 1960, Ser. No. 13,249
7 Claims. (Cl. 208—341)



1. A method for the removal of gasoline constituents from a natural gas by contacting the same with a lean oil when water is present during the contacting which comprises adding a glycol to the lean oil before it is used in said contacting, the glycol being of a character and added in an amount such that formation of hydrocarbon hydrates during said contacting is inhibited and said amount being such that after said contacting, phase separation can occur to form a rich oil phase and a glycol-water phase and then contacting said lean oil, thus modified, and said natural gas while said lean oil contains said glycol.

3,099,620

WET BENEFICIATING OF PHOSPHATE ORES

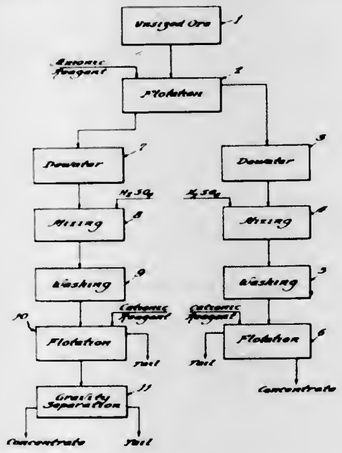
Howard W. Adam, Gouverneur, N.Y., assignor to International Minerals & Chemical Corporation, a corporation of New York

Filed Aug. 31, 1960, Ser. No. 53,133
14 Claims. (Cl. 209—12)

1. The method of beneficiating unsized phosphate ore which comprises:

(1) subjecting an unsized liberated deslimed phosphate ore fraction containing particles of a mesh size of from about 10 mesh to about 200 mesh to froth flotation in the presence of an anionic flotation reagent to provide a phosphate-rich overflow concentrate and an underflow stream;

(2) subjecting the underflow from (1) to froth flotation in the presence of a cationic flotation reagent to provide a phosphate-containing underflow concentrate and an overflow discard tail; and



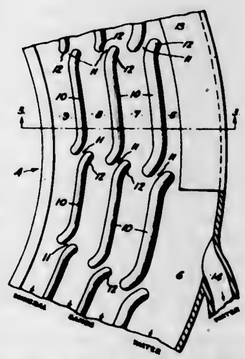
(3) subjecting the underflow concentrate from (2) to gravity separation to provide a phosphate-rich gravity concentrate product.

3,099,621

SPIRAL CONCENTRATORS

Frank Archibald Close, Sydney, New South Wales, Australia, assignor to Wyong Minerals Limited, Sydney, New South Wales, Australia

Filed Aug. 31, 1960, Ser. No. 53,253
5 Claims. (Cl. 209—459)



1. A concentrator for the separation of minerals comprising a spiral channel having its entire outer edge positioned at a level higher than its respective inner edge, said spiral channel having a plurality of parallel launders formed therein throughout the length thereof, said launders progressively decreasing in size from the outer edge to the inner edge of said spiral channel, the wall separating each of said adjacent pairs of launders having a plurality of inwardly directed channels formed therein, the path of flow of said channels being from the larger to the smaller of said pair of launders, said channels being intermittently distributed through the walls separating each pair of launders throughout the length of said spiral channel, whereby when material flows downwardly through said spiral channel, the particles of the material will be separated into particles of varying weight with the particles of heaviest weight in the innermost launder and the particles of lightest weight in the outermost.

3,099,622

PRODUCTION OF CLARIFIED ACIDIC PHOSPHATIC SOLUTIONS

Clarence J. Woerther, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,717
1 Claim. (Cl. 210—49)

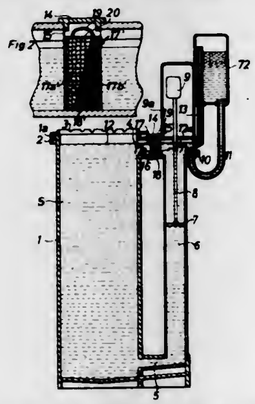
A method for the production of a clarified wet process phosphoric acid exhibiting a reduced amount of post-precipitation of organic phosphates from substantially solids free concentrated wet process phosphoric acid containing at least 45% by weight of P_2O_5 normally exhibiting post-precipitation of organic phosphates which comprises subjecting substantially solids free concentrated wet process phosphoric acid containing at least 45% by weight of P_2O_5 normally exhibiting post-precipitation of organic phosphates to at least 1.0 foot pound of shearing per pound of solution at a temperature within the range of from about 100° F. to about 250° F., thereafter maintaining the sheared solution quiescent to settle at least a substantial portion of solids containing organic phosphates from said solution, and separating the settled solids from the clarified supernatant wet process phosphoric acid solution which may be shipped or stored over an extended time period without appreciable post-precipitation.

3,099,623

PROCESS AND APPARATUS FOR THE SEPARATION OF SOLID PARTICLES FROM DEVELOPING SOLUTIONS FOR EXPOSED FILMS AND THE LIKE

Helmut Käufer, Munich-Grunwald, Germany, assignor to Agfa A.G., Leverkusen, Germany

Filed Aug. 19, 1959, Ser. No. 834,762
Claims priority, application Germany Sept. 22, 1958
13 Claims. (Cl. 210—167)



1. An apparatus for removing solid particles from developing solutions for exposed films and the like which comprises, in combination: a tank having an upper end and a lower end; a supply of developing solution in the tank having an upper level; first and second connecting channel means communicating, respectively, with the upper and lower end of said tank; bypass channel means communicating with the first and second channel means and forming with the latter a passage for the flow of solution from one end of said tank through the channel means and into the other end of said tank; means in one of the channel means for circulating the solution in a direction from the upper end of the tank through said first, bypass and second channel means into the lower end of said tank at a speed of between 0.5–5 cm. per second; and filter means in said first channel means for collecting solids entrained by the circulating solution, the filter means having an upper end aligned with the upper level of solution in said tank whereby the solution overflows the filter means when the latter is clogged by the solids, and the mesh size of said filter means being in the range of between 0.2–5 mm.

3,099,624

OIL BASE DRILLING FLUID AND METHOD OF USE

Doyne L. Wilson, Pasadena, Calif., assignor to Oil Base, Inc., Compton, Calif., a corporation of California

No Drawing. Filed May 17, 1960, Ser. No. 29,566
7 Claims. (Cl. 252—8.5)

1. An oil base drilling fluid containing a weight material supported in said fluid to provide a density of at least about 12 pounds per gallon, blown asphalt and calcium naphthenate in sufficient combined amounts to support said weight material and to emulsify water normally encountered in drilling operations, and an effective thinning amount of an oil soluble anionic surface active agent selected from the group consisting of alkyl aryl sulfonic acid, alkyl aryl sulfonate and mixtures thereof, said agent being effective to maintain the weight material in an oil-wet state under conditions of contamination by material selected from the group consisting of water, water-wet solids and mixtures thereof.

3,099,625

BLEACHING AND DETERGENT COMPOSITION AND PROCESS OF USING SAME

Domenick D. Gagliardi, East Greenwich, R.I., and Mark W. Pollock, Bronx, N.Y., assignors to Argus Chemical Corporation, Brooklyn, N.Y., a corporation of New York

No Drawing. Filed June 23, 1960, Ser. No. 38,117
17 Claims. (Cl. 252—98)

15. A bleaching composition consisting essentially of a hypochlorite bleaching compound, a detergent and an organic nitrogenous material having in the molecule at least one NH group reactive with hypochlorite to form an N—Cl group, in an amount of at least 5% by weight of the bleaching compound sufficient at a bleaching concentration of the hypochlorite bleaching compound to inhibit formation of N—Cl groups on polymer molecules adherent to textile materials bleached with the composition.

3,099,626

SWEETENER FOR DRY CLEANERS' SOLVENTS

Raymond G. Riede, Martinsville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1958, Ser. No. 784,254
9 Claims. (Cl. 252—163)

1. In a process for dry cleaning soiled garments wherein an organic solvent medium is employed to remove soil from the garments, the method of sweetening, the fatty acid soil contaminated solvent medium which comprises controlling and stabilizing the fatty acid content of the solvent medium by preferentially adsorbing fatty acid from the medium with sweetener consisting essentially of particulate hydrated calcium silicate.

3,099,627

CALCIUM PHOSPHATE FOR PHOSPHORS

Richard W. Mooney and Allan J. Comstock, Towanda, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware

No Drawing. Filed July 15, 1959, Ser. No. 827,173
2 Claims. (Cl. 252—301.4)

1. The method of preparing dibasic calcium phosphate which comprises adding an aqueous solution of ammonium

hydrogen phosphate at a concentration between about 0.5 to about 1.5 pounds per gallon to an aqueous solution of calcium chloride at a concentration between about 2 and about 4 pounds per gallon until the pH of the resultant liquor rises to a value of about 5, at a temperature between about 80° C. and about 100° C. to precipitate particles of dibasic calcium phosphate of a narrow range of particle sizes having a sigma value between 1.5 and 2.5.

2. The method of making a calcium phosphate phosphor which comprises supplying the phosphate radical by using in the mixture of ingredients used to form the phosphor a dibasic calcium phosphate of about 5 to 11 grams per cubic inch in bulk density and a median optical diameter of eight to twelve microns and a particle size distribution having a sigma value of about 1.5 to 2.5.

3,099,628
POLYMERIZATION OF EPOXY COMPOUNDS

Charles E. Scott, Drexel Hill, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Original application June 24, 1959, Ser. No. 822,413, now Patent No. 3,016,394, dated Jan. 9, 1962. Divided and this application May 20, 1960, Ser. No. 30,452

3 Claims. (Cl. 260—2)

1. Method of preparing a polymer which comprises contacting an epoxy compound selected from the group consisting of ethylene oxide, propylene oxide, chloropropylene oxide, isobutylene oxide and styrene oxide at a temperature in the range of 0–150° C. with a catalyst consisting essentially of a complex formed by reacting a ferric halide selected from the group consisting of $FeCl_3$ and $FeBr_3$ with cyclododecatriene-1,5,9 and by removing from the product HCl resulting from the reaction.

3,099,629
POLYMERIC SALTS AND PREPARATION THEREOF

Henry Philip Heubusch, Cheektowaga, N.Y., assignor, by mesne assignments, to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 13, 1959, Ser. No. 846,051

14 Claims. (Cl. 260—2)

1. The polymeric salt of polyethylene hydrazine and decaborane.

2. The polymeric salt of hydrazine hydrate, adipic acid and decaborane.

7. The polymeric salt of vinyl hydrazine and decaborane.

14. The polymeric salt of N-aminoethyleneimine and decaborane.

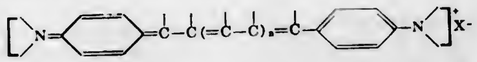
3,099,630
WATER-SOLUBLE POLYMETHINE SALTS

Bernard S. Wildi, Dayton, Ohio, and William B. Tuemmler, Catonsville, Md., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application July 13, 1962, Ser. No. 209,782. Divided and this application Nov. 15, 1955, Ser. No. 547,044

19 Claims. (Cl. 260—2.2)

18. The water-soluble polymethine salts having the structural formula



wherein n is an integer from 0 to 5 and wherein X^- is a sulfonated polystyrene polymer in which not more than about half of the sulfonic acid groups have been neutralized by the polymethine dye base.

3,099,631
NITROGENOUS CONDENSATION POLYMER CONTAINING GRAFTED ACID

David Tanner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 6, 1958, Ser. No. 719,659

20 Claims. (Cl. 260—2.5)

18. A graft copolymer substantially insoluble in water from the class consisting of (*a*) a synthetic high molecular weight substantially linear nitrogenous condensation polymer characterized by recurring



atoms as an integral part of the polymer chain, the said linear nitrogenous condensation polymer bearing at least about 300 titratable acid groups per million grams of polymer, at least about 200 of the said acid groups being chemically bonded by a carbon to carbon linkage to a catenarian carbon of the said nitrogenous condensation polymer and the said acid so linked being at least one carbon atom removed from said catenarian carbon and (*b*) the said nitrogenous condensation polymer as recited above wherein the titratable acid groups are in the form of a salt.

19. A foam of the graft copolymer of claim 18.

3,099,632
ADHESIVE COMPOSITIONS

William M. De Crease, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 2, 1959, Ser. No. 856,648

9 Claims. (Cl. 260—3.3)

1. A time-stable composition of matter adapted for use as an adhesive comprising:

(I) a bonding phase consisting essentially of:
- (*a*) chlorinated natural rubber;
- (*b*) epoxylated novolak;
- (*c*) an epoxy resin curing agent selected from the class consisting of meta-phenylenediamine and methylene bis (orthochloroaniline); and

(II) a mixed solvent system consisting essentially of at least two solvents which:
- (*a*) differ in their respective solubility parameters by at least 0.3 unit;
- (*b*) are selected from at least two of the following three classes:
  - (1) a poorly hydrogen-bonding solvent selected from the class consisting of hydrocarbons, chlorinated hydrocarbons and nitrohydrocarbons;
  - (2) a moderately hydrogen-bonding solvent selected from the class consisting of ketones, esters and ethers, and
  - (3) a strongly hydrogen-bonding solvent selected from the class consisting of primary, secondary and tertiary alcohols.

3,099,633
EXTENDER COMPOSITIONS, ADHESIVE SOLUTIONS CONTAINING SAME AND PROCESS OF PREPARATION

Robert B. Black, Portland, Oreg., assignor to Agrashell, Inc., Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,814

15 Claims. (Cl. 260—17.2)

5. Plywood- and laminating-adhesive solutions comprising a thermosetting aldehydic resin glue selected from the group consisting of phenolic-aldehyde resins and amino-aldehyde resins in aqueous alkaline colloidal solution, a vegetable shell flour extender and minor amounts of extracted lignin and of a lignocellulosic fibrous material, comprising lignin and separated wood fibers, resulting from the drying and grinding of fragmental solids produced by the hydro-thermal degradation of wood under superatmospheric pressure, at least 10% of said lignin being oxidized extracted lignin containing about 1 to 7 mols of added oxygen per mol of lignin.

3,099,634
EPOXY RESIN-AMINE RICE OIL COMPOSITION AND METHOD OF MAKING SAME

Archibald V. Meigs, Houston, Tex., assignor, by mesne assignments, to Ricco Products Corporation, Houston, Tex., a corporation of Texas, and Rice-Chem Soluplug, Inc., Houston, Tex., a corporation of Texas

No Drawing. Filed Sept. 8, 1960, Ser. No. 54,569

6 Claims. (Cl. 260—18)

1. A process for preparing a hard infusible resinous polyepoxide composition from rice oil for coating metal surfaces without reacting the constituents in the rice oil which provide corrosion inhibiting and metal surface penetrating properties, which process comprises the steps, in the order named, of:

(*a*) forming an intermediate product consisting essentially of a polyfunctional amino compound of rice oil and the constituents in the original rice oil which provide corrosion inhibiting and metal surface penetrating properties by:
- (1) gradually heating a mixture of rice oil and a polyfunctional amine in a vessel while stirring to approximately 300° F. in approximately one hour,
- (2) maintaining the temperature of mixture (1) for approximately one hour,
- (3) thereafter gradually raising the temperature of mixture (1) to approximately 400° F. for approximately three hours,
- (4) maintaining the temperature of mixture (1) at the temperature of (3) above,

(*b*) cooling the intermediate product consisting essentially of polyfunctional amino compound of rice oil and said corrosion inhibiting and metal surface penetrating constituents to approximately 80° F.,

(*c*) and then mixing said intermediate product with a polyepoxide resin having at least two reactive epoxy groups in each molecule to form a hard infusible product which when initially applied to a metal surface exhibits the corrosion inhibiting and metal surface penetrating characteristics of said rice oil constituents.

2. The process of claim 1 wherein said rice oil is approximately 20% free fatty acid with an acid number of approximately 38, and said polyfunctional amine reacted with said rice oil is tetraethylene pentamine, and said polyepoxide resin which is reacted with said intermediate product is from bis-phenol A and epichlorohydrin having a melting point of approximately 25° C., and an epoxy value of approximately 0.35.

3,099,635
AMINOPLAST-PIGMENT COMPOSITION AND ITS APPLICATION TO TEXTILES

Küno Wagner, Leverkusen-Bayerwerk, Richard Schwaebel, Leverkusen, Wilhelm Käss, Cologne-Stammheim, Wilhelm Graülich, Leverkusen-Bayerwerk, and Helmut Kleiner, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 27, 1957, Ser. No. 699,181

Claims priority, application Germany Dec. 1, 1956

9 Claims. (Cl. 260—29.4)

1. A composition for the fixation of a pigment on a textile, said composition comprising a pigment and, as binding agent, an emulsion of water insoluble to slightly soluble film forming vinyl polymer together with a soluble polycondensation product containing methylol groups and obtained by basically catalyzed reaction of a high molecular weight N-methylolpolyether containing methylol groups and being selected from the group consisting of trimethylolurea-butanetriol-(1,2,4)-polyether, tetramethylolurea - glycerol - triethyleneglycol - polyether, trimethylolureahexanetriol - butanedihydroxyethylglycol-polyether, trimethylolurea-hexanetriol-polyether and tetramethylolurea - glycerol - diethyleneglycol - polyether, trimethylolurea - tri - (β - hydroxyethoxy - hydroxymethyl)-propane-polyether, trimethylolurea-glycerol-triethyleneglycol-hexanetriol-polyether and trimethylolurea-hexanetriol-pentaerythritol-polyether, with stoichiometric excess of a monomeric poly-N-methylol compound selected from the group consisting of hexamethylol melamine and tetramethylol - dimethyl - acetyleneurea, hexamethylol-adipic acid dihydrazide, tetramethylol-tetramethylenediurethane, polymethylol-dicyandiamide, polymethylol-hexamethylenediurea, tetramethylol-adipic acid-diamide and tetramethylolacetyleneurea.

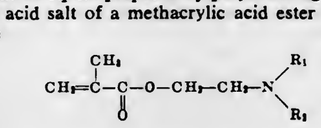
3,099,636
POLYMERIC ACID SALTS OF ALKYLAMINOETHYL METHACRYLATE

Benjamin Franklin Skiles, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 17, 1960, Ser. No. 29,568

3 Claims. (Cl. 260—29.6)

1. A water solution of a polymer, said polymer being characterized by being water soluble to provide a 1% aqueous solution having a viscosity at 25° C. of at least 500 centipoises measured with a Brookfield viscometer rotating at 20 r.p.m. prepared by polymerizing a C_2 to C_5 alkanoic acid salt of a methacrylic acid ester having the structure



wherein R_1 is taken from the group consisting of hydrogen and a C_1 to C_4 alkyl group, and R_2 is a C_1 to C_4 alkyl group at a concentration in water within the range of 30% to 75% and at a temperature between 0° and about 60° C., said water solution, after said monomeric salt has been uniformly mixed therein, being essentially in an unagitated condition throughout subsequent polymerization.

3,099,637
REFLEX-REFLECTORIZING COMPOSITION

Alfred H. Nellessen, Roseville, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Nov. 14, 1958, Ser. No. 773,814

1 Claim. (Cl. 260—40)

A fluidizable transparent varnish composition containing transparent glass microspheres and suitable for spray application upon a reflective base surface to provide upon drying a monolayer of transparent glass microspheres in intimate bonded tangential contact with said reflective surface and embedded in a transparent varnish film conforming to the microspheres to provide an exposed lenticular surface on the side of said monolayer facing outwardly of said reflecting surface, thereby to provide a composite structure exhibiting reflex reflection of incident light striking the same, said composition consisting essentially of a mixture of transparent thixotropic alkyd-base-resin-type varnish vehicle and small transparent glass microspheres having a diameter between approximately 15 and 60 microns and a refractive index of approximately 1.9, said transparent thixotropic varnish vehicle having a non-volatile solids content of between about 5 and 30% by weight and a corresponding volatile content of between

about 95 and 70% by weight, said microspheres being present in an amount sufficient to account for between 65 and 75% of the total volume of the non-volatile constituents of the composition, said composition further being transparent, mobile and exhibiting a viscosity on the order of rich cream upon agitation, with said microspheres being stably suspended and essentially uniformly distributed in said composition for usefully long periods without agitation.

3,099,638

RESINOUS GLYCIDYL POLYETHER COMPOSITIONS

Newton C. Foster, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,028
6 Claims. (Cl. 260—45.5)

1. A completely reactive resinous composition comprising (1) the half ester of one mol of a hydroxyl-containing glycidyl polyether of a dihydric phenol and an ethylenically unsaturated dicarboxylic acid anhydride, said unsaturated dicarboxylic acid anhydride having been present originally in an amount sufficient to provide approximately a stoichiometric number of anhydride groups to react with the epoxy and hydroxyl groups in said glycidyl polyether, (2) at least one liquid unsaturated reactive monomer having the polymerizable group >C=C<, there being employed at least 2 mols of said monomer for each mol of said anhydride, and (3) a tertiary amine.

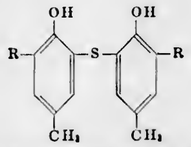
3,099,639

STABILIZATION OF 1-OLEFIN POLYMERS

Raymond L. Cobb and Mario P. Marana, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,628
7 Claims. (Cl. 260—45.95)

1. A polymer composition of increased stability against oxidative degradation consisting essentially of a solid polymer of an aliphatic 1-olefin having from 2 to 8 carbon atoms per molecular containing a stabilizing amount of a substituted thio-bis-p-cresol compound having the structural formula:



wherein R is a hydrocarbon radical selected from the group consisting of alkylarylalkyl and aralkyl radicals having from 6 to 10 carbon atoms.

3,099,640

PROCESS FOR OXIDIZING HYDROGEN SUBSTITUTED ORGANOSILICON COMPOUNDS

Allan S. Hay, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Jan. 11, 1961, Ser. No. 81,925
14 Claims. (Cl. 260—46.5)

1. The process for oxidizing an organosilicon compound containing hydrogen attached directly to silicon wherein the organic groups of the organosilicon compound are attached to silicon by carbon-silicon linkages and are selected from the class consisting of alkyl, aryl, aralkyl, alkaryl, alkenyl, and haloaryl radicals, which process comprises contacting such compound with oxygen in the presence of a tertiary amine and a cuprous salt capable of existing as a stable cupric-amine complex soluble in the reaction medium comprising the aforesaid ingredients.

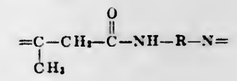
3,099,641

POLYAMIDE-POLYAMINE SYNTHETIC RESINS FROM DIKETENE AND A DIAMINE

John R. Caldwell and James C. Martin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

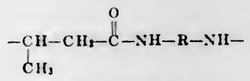
No Drawing. Filed May 15, 1958, Ser. No. 735,359
16 Claims. (Cl. 260—65)

1. A film-forming highly polymeric linear polyamide-polyamine composed solely of regularly recurring units selected from the group consisting of units having the following two formulas:



(Formula A)

and



(Formula B)

where the ends of the polymer molecules have the terminal bonds on the terminal units satisfied by hydrogen atoms and R represents a radical selected from the group consisting of $-(CH_2)_2-NH-(CH_2)_2-$ and a divalent organic hydrocarbon radical containing from 2 to 20 carbon atoms composed of hydrogen and carbon atoms arranged so as to include a sequence of carbon atoms from one end of the R radical to the other end, said sequence containing no interrupting radicals other than radicals selected from the group consisting of —O—, —S—, $-SO_2-$, —NH— and $-N(CH_3)-$ radicals.

3,099,642

RUBBER-LIKE POLYURETHANES AND STORAGE STABLE INTERMEDIATES FOR PRODUCING THE SAME

Hans Holtschmidt, Cologne-Stammheim, and Karl E. Müller, Leverkusen-Bayerwerk, Germany, assignors, by mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Nov. 26, 1954, Ser. No. 471,526
Claims priority, application Germany Nov. 30, 1953
6 Claims. (Cl. 260—75)

1. In the preparation of a storable adduct adapted to be cured to form an elastomeric substantially non-porous polyurethane by reaction thereof with a polyisocyanate by a process which comprises reacting a polyester with an excess of an organic polyisocyanate and then with a compound having amino groups, the improvement which permits incorporation of the polyisocyanate to be used during the subsequent curing process in the adduct at the time the adduct is prepared which comprises (1) reacting a polyester having terminal hydroxyl groups, an hydroxyl number of from about 20 to about 80 and an acid number of about 1 with an excess of an aromatic diisocyanate sufficient to form an adduct having terminal —NCO groups but not more than about 0.25% by weight —NCO groups; said polyester having been selected from the class consisting of polyesters prepared by esterification of a dicarboxylic acid and an aliphatic glycol and a polyester prepared by esterification of a dicarboxylic acid with a mixture of an aliphatic glycol and a hydrogen-containing amine; (2) reacting the said adduct having terminal —NCO groups with an excess of an aromatic diprimary amine to form a product containing free $-NH_2$ groups, and (3) mixing the resulting product with from about 5%

to about 15% by weight of a diisocyanate having a uretidinedione ring connecting two aromatic radicals and prepared by addition of only two mols of monomeric aromatic diisocyanate.

3,099,643

POLYSULFIDE RUBBER AND METHOD OF MAKING THE SAME

Morris B. Berenbaum and Norman A. Rosenthal, Levittown, Pa., and Hans Z. Lecher, Plainfield, N.J., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

No Drawing. Filed Oct. 1, 1959, Ser. No. 843,625
8 Claims. (Cl. 260—79.1)

1. A method of making a polysulfide polymer having improved low temperature properties which comprises reacting at least one dihalide of the formula $C_{12}H_{24}X_2$ wherein X is a halogen atom, with an aqueous alkali metal polysulfide to form a rubbery polymer essentially composed of $C_{12}H_{24}$ groups interconnected by polysulfide linkages, said $C_{12}H_{24}$ groups being ethyl-substituted alkylene groups.

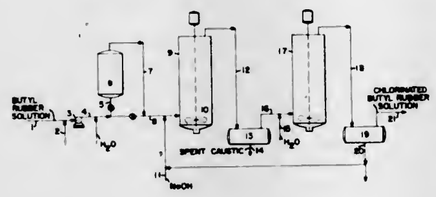
6. A rubbery polysulfide polymer essentially wholly composed of recurring RS_n groups interconnected through their sulfur atoms to form polysulfide linkages, "n" being an integer from 2 to 4 and "R" being an aliphatic hydrocarbon radical having 12 carbon atoms, said hydrocarbon radicals being ethyl-substituted alkylene groups.

3,099,644

CONTINUOUS CHLORINATION AND BROMINATION OF BUTYL RUBBER

Paul Thomas Parker, Baton Rouge, La., John L. Bryan, Jr., Summit, and Augustus B. Small, Westfield, N.J., and Duane Wood Pugh and Fred J. Buchmann, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Oct. 6, 1959, Ser. No. 844,715
7 Claims. (Cl. 260—85.3)



1. A process for the continuous chlorination of a butyl rubber isoolefin-multiolefin copolymer of 85 to 99.5% of a C_4 to C_7 isoolefin and 15 to 0.5% of a C_4 to C_{14} multiolefin containing small amounts of metal soaps which comprises continuously contacting a solution of butyl rubber, having a concentration between about 1 and about 30% by wt. of butyl rubber, with chlorine gas, maintaining the butyl rubber in contact with the chlorine for a period of time of at least 25 minutes whereby chlorinated butyl rubber and hydrogen chloride are formed, said copolymer containing up to 1 atom of chlorine per double bond in the copolymer, followed by continuously neutralizing the hydrogen chloride accompanying the chlorinated butyl rubber and continuously washing, while dispersing the so treated chlorinated butyl rubber, the neutralized hydrogen chloride from the chlorinated butyl rubber with water while maintaining the wash water, after neutralization, at a pH between about 3 and about 4 then continuously settling the solution of chlorinated butyl rubber from the aqueous phase and withdrawing said solution of chlorinated butyl rubber from the system.

3,099,645

POLYMER PROCESS FOR POLYVINYLACETATE WITH ALUMINUM TRIALKYLS AS THE SOLE CATALYST

Herman Wexler, Summit, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,707
6 Claims. (Cl. 260—89.1)

1. The process for preparing linear polyvinyl acetate which comprises homopolymerizing vinyl acetate at a temperature of 0°C. to —100° C. in the absence of air and in contact with about 0.1 to 10% by weight of vinyl acetate of a polymerization initiator consisting solely of a compound selected from the group consisting of a trialkyl aluminum compound and a dialkyl aluminum hydride said alkyl groups containing from 1 to 5 carbon atoms.

3,099,646

PROCESS FOR ETHOXYLATING POLYVINYL ALCOHOL

Frank Scardiglia, Arlington Heights, William O. Ranky, Chicago, and Edward A. Knaggs, Deerfield, Ill., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

No Drawing. Filed Apr. 13, 1961, Ser. No. 102,625
5 Claims. (Cl. 260—91.3)

1. A process of producing ethoxylated polyvinyl alcohol, which comprises reacting at temperatures within the range of 95° to 105° C. and pressures within the range of 45 to 55 pounds per square inch 35 to 40 parts by weight of ethylene oxide with 100 parts by weight of a polyvinyl alcohol having a moisture content of from 0.1 to 5.0 percent by weight while dispersed in from 125 to 175 parts by weight of a substantially C_7 paraffinic hydrocarbon.

3,099,647

PROPYLENE POLYMERIZATION CATALYST CONSISTING OF ALUMINUM SESQUIHALIDE, $TiCl_3$ AND TRIETHYLENE DIAMINE

James L. Jezl, Swarthmore, Habet M. Khelghatian, Springfield, and Louise D. Hague, Villanova, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 4, 1960, Ser. No. 67,180
10 Claims. (Cl. 260—93.7)

1. A process for the polymerization of olefins which comprises contacting, at a temperature of from ambient to 400° F., and at a pressure of from atmospheric to 250 p.s.i.g., a solution, in an inert hydrocarbon solvent, of an alpha-olefin having from 2 to 20 carbon atoms and free of branching at the 2 position with a catalyst consisting essentially of an essentially amorphous titanium trichloride, an aluminum sesquihalide selected from the group consisting of alkyl and phenyl sesquichlorides and sesquibromides, and triethylene diamine, the mol ratio of aluminum sesquihalide to triethylene diamine being from 1.25:1 to 5:1, and the mol ratio of aluminum sesquihalide to titanium trichloride being from 1:5 to 10:1.

3,099,648

ROSIN ACID CATALYST INACTIVATOR

Robert F. Dye, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed July 25, 1960, Ser. No. 45,042
7 Claims. (Cl. 260—94.3)

1. A continuous polymerization process which comprises contacting conjugated diene in liquid diluent with a catalyst which forms on mixing components comprising a compound selected from the group consisting of organometals and metal hydrides of Groups I, II and III metals and a halide of a Group IV metal under conditions to polymerize a portion of said conjugated diene, adding to

the process effluent rosin acid to inactivate said catalyst, thereafter vaporizing a portion of said effluent to form a vapor stream containing diluent and unreacted conjugated diene essentially free of catalyst poison, and returning at least a portion of said stream to the polymerization process.

3,099,649

PROCESS FOR REFINING OF VEGETABLE PROTEIN

Yurio Kawamura, Tokyo, Teikichi Tamuki, Kawasaki-shi, Kanagawa-ken, Aikichi Nagata and Shiro Terashima, Tokyo, Taizi Matsumoto, Kawasaki-shi, Kanagawa-ken, Shoichi Onishi, Tokyo, Shimpachi Konishi, Kawasaki-shi, Kanagawa-ken, Kenkichi Yoshimura, Totsuka-ku, Yokohama-shi, Kanagawa-ken, Hiroshi Yamamoto, Tokyo, and Sabro Ikawa, Yokohama-shi, Kanagawa-ken, Japan, assignors to Ajinomoto Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed June 28, 1960, Ser. No. 39,231
10 Claims. (Cl. 260—123.5)

1. A method comprising removing impurities from oil-free vegetable seeds by subjecting the seeds to extraction in water in the presence of an H-type cation exchange resin whereby the pH in the extraction liquor formed by the water is lowered to minimize the solubility of protein in said liquor, separating the liquor from the resulting residue, and recovering the protein content of said residue.

3,099,650

PROCESS FOR PREPARING LIQUID POLYMERS AND COPOLYMERS WITH REDUCED MODIFIER LEVELS

Thomas W. Boyer, Richard O. Stucker, and Edward L. Ries, Louisville, Ky., assignors to American Synthetic Rubber Corporation, Louisville, Ky., a corporation of Delaware

Filed Oct. 19, 1961, Ser. No. 146,191
9 Claims. (Cl. 260—139)

1. In an emulsion polymerization process for making liquid rubber polymers whereby the modifier requirements are reduced at least 50% over conventional emulsion polymerization processes for making liquid rubber polymers of substantially the same viscosity, the steps comprising forming an aqueous emulsion of butadiene containing a polymerization catalyst, subjecting the emulsion to conditions effecting polymerization and adding a modifier incrementally throughout the polymerization to produce liquid rubber.

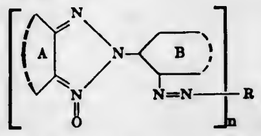
3,099,651

WATER-INSOLUBLE MONO- AND DISAZO-DYES PRODUCED FROM 2-AMINOARYL-BENZTRIAZOLE-1-OXIDE DIAZO COMPONENTS

Richard Gross, Frankfurt am Main, and Hasso Hertel, Werner Kirst, and Reinhard Mohr, Offenbach (Main), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed May 17, 1960, Ser. No. 29,577
Claims priority, application Germany May 20, 1959
6 Claims. (Cl. 260—146)

1. A complex metal compound containing a metal selected from the group consisting of copper, cobalt and nickel, of a water-insoluble azo-dyestuff having the following general formula



wherein A and B represent members selected from the group consisting of radicals of the benzene and naphthalene series, R represents the radical of an arylamide selected from the group consisting of arylamides of the benzene, napthalene, diphenyl and diphenylene oxide series, of an ortho-hydroxycarboxylic acid selected from the group consisting of 2,3-hydroxynaphthoic acid, 2,3-hydroxynaphthoic acid substituted in 6-position by a bromine atom, 2-hydroxy-anthracene-3-carboxylic acid, 3-hydroxy-diphenylene oxide-2-carboxylic acid, 2-hydroxy-carbazole-3-carboxylic acid and 5-hydroxy-1,2,1',2'-benzocarbazole-4-carboxylic acid, and *n* stands for one of the integers 1 and 2.

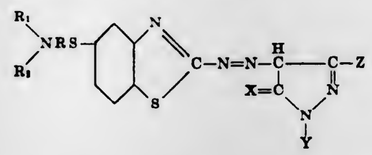
3,099,652

BENZOTHIAZOLEAZOPYRAZOLONE DYE COMPOUNDS

James M. Straley, John G. Fisher, and Raymond C. Harris, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,487
7 Claims. (Cl. 260—147)

1. The azo compounds selected from the group consisting of the monoazo compounds, devoid of a water-solubilizing group, having the formula:



wherein R represents an alkylene radical having 2 to 3 carbon atoms, R_1 and R_2 each represents an alkyl radical having 1 to 4 carbon atoms and wherein



taken together represents a member selected from the group consisting of the morpholinyl and piperidyl radicals, X represents a member selected from the group consisting of an oxygen atom and the imino group, Y represents a member selected from the group consisting of the phenyl, chlorophenyl and tolyl radicals and Z represents a member selected from the group consisting of a methyl group and the amino group and the 1:2 nickel complex thereof.

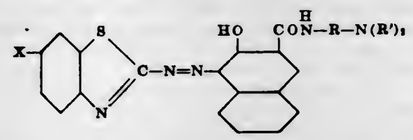
3,099,653

BENZOTHIAZOLE AZO 2,3-HYDROXY-NAPHTHOIC ACID AMIDE DYES

James M. Straley and Raymond C. Harris, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,723
5 Claims. (Cl. 260—158)

1. The monoazo compounds, devoid of a water-solubilizing group, having the formula:



wherein X represents a member selected from the class consisting of a hydrogen atom, lower alkyl, lower alkoxy, nitro and thiocyano radicals, R represents an alkylene radical having 2 to 3 carbon atoms, R' represents an alkyl radical having 1 to 4 carbon atoms and wherein $N(R')_2$ collectively represents a member selected from the group consisting of a morpholinyl radical and a piperidyl radical.

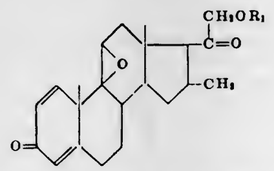
3,099,654

NOVEL 9α-FLUORO-Δ¹-CORTICOSTEROIDS AND PREPARATION THEREOF

Robert Joly, Montmorency, Seine-et-Oise, Julien Warnant, Neuilly-sur-Seine, and Bernard Goffinet, Paris, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed July 10, 1961, Ser. No. 122,665
Claims priority, application France Aug. 17, 1960
16 Claims. (Cl. 260—239.55)

9. A compound having the formula



wherein R_1 is an acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms.

10. 21 - acetoxy - 9β,11β - epoxy - 16α - methyl - $\Delta^{1,4}$-pregnadiene-3,20-dione.

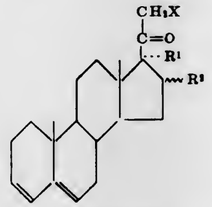
3,099,655

Δ³·⁵-PREGNADIENE DERIVATIVES

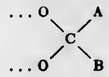
John A. Zderic, Palo Alto, Calif., and Otto Halpern and Jose Iriarte, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Nov. 17, 1961, Ser. No. 153,237
Claims priority, application Mexico July 14, 1961
20 Claims. (Cl. 260—239.55)

7. A compound of the following formula:



wherein X is selected from the group consisting of hydrogen, fluorine, hydroxy and hydrocarbon carboxylic acyloxy of less than 12 carbon atoms; R^1 is selected from the group consisting of hydroxy and hydrocarbon carboxylic acyloxy of less than 12 carbon atoms and R^2 is selected from the group consisting of hydrogen, α-methyl, β-methyl, α-hydroxy and α-hydrocarbon carboxylic acyloxy of less than 12 carbon atoms and R^1 and R^2 together represent the grouping.



wherein A is selected from the group consisting of hydrogen, lower alkyl, aryl and aralkyl containing up to 8 carbon atoms and B is selected from the group consisting of alkyl, aryl and aralkyl containing up to 8 carbon atoms.

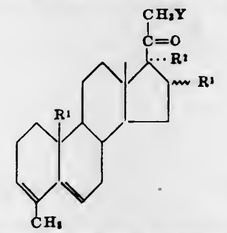
3,099,656

Δ³·⁵-PREGNADIENE DERIVATIVES

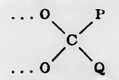
John A. Zderic, Palo Alto, Calif., Otto Halpern, Mexico City, Mexico, and Jose Iriarte, Zurich, Switzerland, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Feb. 26, 1962, Ser. No. 175,810
16 Claims. (Cl. 260—239.55)

1. A compound of the following formula:



wherein Y is selected from the group consisting of hydrogen and fluorine; R^1 is a member of the group consisting of hydrogen and methyl; R^2 is selected from the group consisting of hydroxyl and a hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms; R^3 is a member of the group consisting of hydrogen, α-methyl, β-methyl, α-hydroxyl and an α-hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms, R^2 and R^3 together are in addition the group



wherein P is a lower alkyl group and Q is selected from the group consisting of a lower alkyl, an aryl and an aralkyl group, each containing up to 8 carbon atoms.

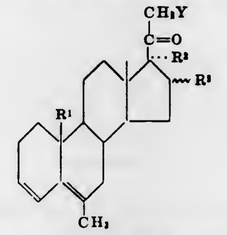
3,099,657

Δ³·⁵-PREGNADIENE DERIVATIVES

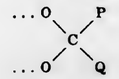
John A. Zderic, Palo Alto, Calif., Otto Halpern, Mexico City, Mexico, and Jose Iriarte, Zurich, Switzerland, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Feb. 26, 1962, Ser. No. 175,811
17 Claims. (Cl. 260—239.55)

1. A compound of the following formula:



wherein Y is selected from the group consisting of hydrogen and fluorine; R^1 is a member of the group consisting of hydrogen and methyl; R^2 is selected from the group consisting of hydroxyl and a hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms; R^3 is a member of the group consisting of hydrogen, α-methyl, β-methyl, α-hydroxyl and an α-hydrocarbon carboxylic acyloxy group of less than 12 carbon atoms; R^2 and R^3 together are in addition, the group



wherein P is a lower alkyl group and Q is selected from

the group consisting of a lower alkyl, an aryl and an aralkyl group, each containing up to 8 carbon atoms.

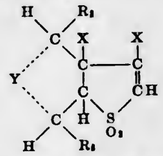
3,099,658

THIANAPHTHENE 1,1-DIOXIDE COMPOUNDS

Henry Bluestone, University Heights, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Feb. 11, 1960, Ser. No. 7,982
6 Claims. (Cl. 260—332.1)

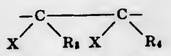
1. The compound having the formula



wherein Y is a bivalent radical selected from the group consisting of



and



R_1, R_2, R_3, R_4, R_5 and R_6 are selected from the group consisting of hydrogen and methyl and X is halogen.

2. 3,3a - dichloro - 3a,4,7,7a -tetrahydrothianaphthene 1,1-dioxide.

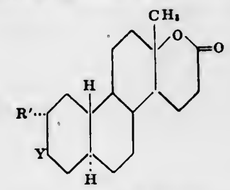
3,099,659

STEROIDAL LACTONES

Fred A. Kincl and Howard J. Ringold, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Mar. 8, 1960, Ser. No. 13,426
23 Claims. (Cl. 260—343.2)

1. A compound of the following formula:



wherein R′ is methyl and Y is selected from the group consisting of keto, α-hydroxy, β-hydroxy, α-hydrocarbon carboxylic acyloxy of up to 12 carbon atoms and β-hydrocarbon carboxylic acyloxy of up to 12 carbon atoms.

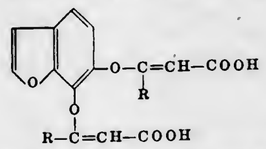
3,099,660

SYNTHESIS OF KHELLIN AND INTERMEDIATES THEREFOR

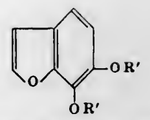
Otto Dann, Meilwaldstrasse 11, Rudelsveiher, Erlangen, Germany

Filed Feb. 14, 1961, Ser. No. 89,220
17 Claims. (Cl. 260—345.2)

1. Method of producing a compound of the formula

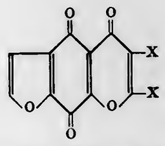


wherein R is selected from the group consisting of hydrogen and lower alkyl radicals, which comprises reacting a benzofuran compound of the formula

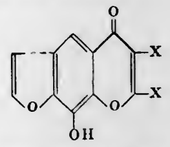


wherein R′ is selected from the group consisting of hydrogen and lower alkanoyl radicals, with lower alkyl ester of β-halo-α,β-unsaturated lower alkenoic acid in the presence of alkali, and separating the ether-acid product thus formed.

7. Method of producing a quinone compound of the formula



wherein X is a member of the group consisting of hydrogen and lower alkyl radicals, which comprises reacting a compound of the formula



with an oxidizing agent selected from the group consisting of alkali metal nitrosodisulfonates, nitric acid and hexavalent chromium compounds, and isolating the quinone compound so formed.

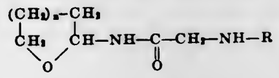
3,099,661

N-(2-TETRAHYDROPYRANYL) AND N-(2-TETRAHYDROFURANYL) 2-AMINOACETAMIDES

Kenneth Wayne Ratts, Overland, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 22, 1961, Ser. No. 154,364
5 Claims. (Cl. 260—345.7)

1. A 2-aminoacetamide of the formula



wherein *n* is a whole number from 1 to 2 and wherein R is selected from the group consisting of hydrogen and lower aliphatic hydrocarbon radicals.

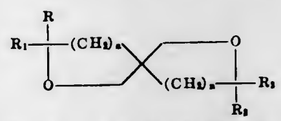
3,099,662

DIOXASPIRO DERIVATIVES

Burton K. Wasson, Valois, Quebec, and John M. Parker, Montreal, Quebec, Canada, assignors to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of Quebec, Canada

No Drawing. Filed May 4, 1962, Ser. No. 192,338
5 Claims. (Cl. 260—345.9)

5.



wherein R, R_1, R_2 and R_3 are selected from the group consisting of hydrogen and lower alkyl radicals having from 1 to 3 carbon atoms, at least one of R, R_1, R_2 and R_3 is alkyl and *n* is a positive integer from 1 to 2.

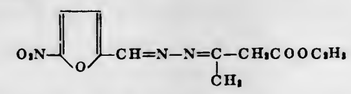
3,099,663

5-NITRO-FURFURAL AZINES

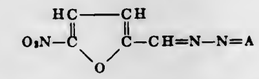
James D. Johnston, New London, Conn., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 1, 1959, Ser. No. 803,376
6 Claims. (Cl. 260—347.5)

1. 1-(5-nitro-2-furfural)-2-(ethyl 3-ketobutyrate) azine of the formula



6. A compound of the formula



wherein A is a substituted methylidene moiety derived from a carbonyl compound selected from the group consisting of keto-alkanoic acid, keto-alkanedioic acid and formylalkanoic acid, each acid containing up to 12 carbon atoms, alkali-metal salts of said acids and esters of said acids wherein the esterifying group is alkyl containing up to 18 carbon atoms.

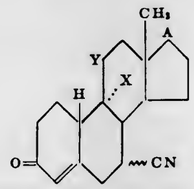
3,099,664

7-CYANO ANDROSTANE COMPOUNDS

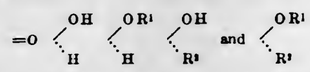
Howard J. Ringold and Albert Bowers, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Jan. 4, 1960, Ser. No. 55
Claims priority, application Mexico Jan. 12, 1959
20 Claims. (Cl. 260—397.3)

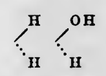
1. A new steroid compound corresponding to the general formula:



in which A is an arrangement selected from the group consisting of



wherein R^1 is an acyl radical derived from a hydrocarbon carboxylic acid having up to 12 carbon atoms and R^2 is an aliphatic hydrocarbon radical selected from the group of lower alkyl, alkenyl and alkynyl radicals; Y is an arrangement selected from the group consisting of



and =O; X is hydrogen when Y is



and is selected from the group consisting of hydrogen and fluorine, when Y is one of the other two members of its group, and ~CN is selected from the group consisting of 7α-cyano and 7β-cyano.

3,099,665

TELOMERIZATION OF ETHYLENE WITH ALKYLENE GLYCOL DIFORMATES

Donald D. Emrick, Shaker Heights, and Samuel M. Darling, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 1, 1960, Ser. No. 66,418
5 Claims. (Cl. 260—410.6)

1. A process for producing ethylene telomers having an alkylene glycol diformate ester unit in the molecule, which comprises telomerizing ethylene with an alkylene glycol diformate having from about six to about sixty-six carbon atoms in the presence of a free radical initiator capable of initiating the telomerization at a temperature at which an evolution of free radicals from the initiator is obtained.

3,099,666

BIMETALLIC CARBONYL HALIDE COMPOSITIONS

Richard D. Gorsich, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 14, 1960, Ser. No. 75,671
18 Claims. (Cl. 260—429)

1. A compound represented by the general formula

$$R_mX_{4-m-p}Sn[Mn(CO)_5]_p$$

wherein R is a hydrocarbon radical containing up to about 18 carbon atoms and is selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl, and alkaryl radicals; X is a halogen; *m* is an integer from 1 to 2, inclusive; and *p* is 1 when *m* is 2 and is an integer from 1 to 2, inclusive, when *m* is 1.

3,099,667

ORGANO GROUP IV–A METAL MANGANESE CARBONYL LIGAND COMPOUNDS AND PROCESSES FOR SAME

Richard D. Gorsich, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 29, 1961, Ser. No. 99,066
18 Claims. (Cl. 260—429)

1. A compound represented by the general formula

$$R_aX_{3-a}M^{IV}Mn(CO)_3L$$

wherein M^{IV} is an element selected from the group consisting of the elements of group IV–A of the periodic system of the elements having atomic numbers from 14 to 82, inclusive, L is a conjugated diene molecular ligand selected from the group consisting of conjugated acyclic diene hydrocarbons containing from 4 to about 6 carbon atoms, of conjugated cyclic diene hydrocarbons containing from 5 to about 8 carbon atoms and of cyclic dienones containing from 4 to about 35 carbon atoms, R is a radical selected from the group consisting of hydrocarbon and oxyhydrocarbon radicals containing up to about 18 carbon atoms, X is a halogen, and *a* is an integer from 0 to 3, inclusive.

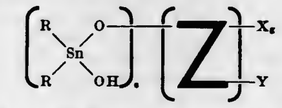
3,099,668

ORGANOTIN HYDROXIDES

Maurice L. Zweigle and Henry Tolkmith, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 8, 1960, Ser. No. 47,933
12 Claims. (Cl. 260—429.7)

1. Compound of the formula



wherein *e* is an integer from 1 to 2, inclusive, each R

independently represents a member of the group consisting of phenyl and an alkyl containing from 1 to 4, inclusive, carbon atoms; Y represents a member of the group consisting of hydrogen and an alkyl radical containing from 1 to 4, inclusive, carbon atoms; X represents a member of the group consisting of chlorine, bromine and nitro, *g* is an integer from 1 to 5, inclusive;

Z represents an aromatic hydrocarbon radical having from 1 to 2 benzene rings and when said aromatic hydrocarbon radical has 2 benzene rings, said rings are connected by



wherein *m* is an integer of from zero to one, inclusive; wherein each R^1 is a member of the group consisting of H, CH_3 and C_2H_5, and wherein there is a total of up to 3 carbon atoms;

and all of the positions on the aromatic hydrocarbon radical which are ortho-, and all positions which are para- to any positions bonded to an organotin hydroxide moiety are substituted with a member of the group consisting of Cl, Br, NO_2, and alkyl.

3,099,669

FERROCENE COMPOUNDS

Thomas Leigh, Macclesfield, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,719
Claims priority, application Great Britain Feb. 9, 1959
2 Claims. (Cl. 260—439)

1. Cyclohexylacetylferrocene.

3,099,670

ADDITION OF SILICON HYDRIDES TO ALIPHATICALLY UNSATURATED ORGANIC COMPOUNDS

Maurice Prober, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 31, 1953, Ser. No. 401,702
15 Claims. (Cl. 260—448.2)

1. The process of adding silicon hydrides to unsaturated organic compounds which comprises effecting reaction between a silicon hydride having the formula:

$$Si(H)_{4-m-n}(X)_n(Z)_m$$

where *n* is an integer equal to from 2 to 3, inclusive, *m* is one of the following: 0, 1; the sum of $m+n$ is at most 3; X is halogen, and Z is an alkyl radical, and a member of the group consisting of acetylenic compounds and olefinic compounds containing an electron-attracting group attached to olefinic carbon in the presence of a member of the class consisting of (1) tertiary amines of the formula:



where K, K′ and K″ are members of the class consisting of alkyl radicals, aryl radicals, cycloalkyl radicals, and mixtures of the aforesaid radicals, and (2) heterocyclic tertiary amines having nitrogen in the heterocyclic ring.

3,099,671

PREPARATION OF ORGANOSILANES

Philip D. George, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 19, 1955, Ser. No. 553,743
5 Claims. (Cl. 260—448.2)

1. The process of simultaneously cleaving, reducing and redistributing methylpolysiloxanes which comprises heating a methylpolysiloxane which contains from 1 to 3, inclusive, methyl groups per silicon atom in the presence of from about 1 to 1.5 molecules an alkali metal hydride per two silicon atoms in said methylpolysiloxane at a temperature of from 200–300° C.

3,099,672

REDUCTION OF HALOGEN-CONTAINING SILICON COMPOUNDS

Glenn D. Cooper and Alfred R. Gilbert, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 19, 1955, Ser. No. 553,744
11 Claims. (Cl. 260—448.2)

1. The process which consists essentially of effecting reaction between (1) a silane having the formula

$$Si(X)_a(R)_{4-a}$$

where X is a member selected from the class consisting of halogen and alkoxy, R is a member selected from the class consisting of hydrogen, alkyl, alkenyl, and aralkyl, and *a* is an integer equal to from 1 to 4, inclusive, and (2) sodium hydride at a temperature of from 175 to 350° C.

3,099,673

PROCESS FOR THE PRODUCTION OF ORGANIC ISOCYANATES

Engelbert Kühle, Cologne-Stammheim, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corportion of Germany

No Drawing. Filed Aug. 10, 1960, Ser. No. 48,574
Claims priority, application Germany Aug. 19, 1959
4 Claims. (Cl. 260—453)

1. A process for the production of an aliphatic isocyanate having the formula

$$R—(NCO)_n$$

which comprises:

reacting a N-aliphatic formamide with a halogen to form said aliphatic isocyanate, said halogen selected from the group consisting of chlorine and bromine, said N-aliphatic formamide having the general formula

$$R—(NH—CHO)_n$$

wherein R has a valence of 1 to 4 and is selected from the group consisting of saturated aliphatic hydrocarbon radicals, ethylenically unsaturated hydrocarbon radicals, halogen substituted saturated aliphatic hydrocarbon radicals, halogen substituted ethylenically unsaturated aliphatic hydrocarbon radicals, nitro substituted saturated aliphatic hydrocarbon radicals, nitro substituted ethylenically unsaturated aliphatic hydrocarbon radicals, alkoxy substituted saturated aliphatic hydrocarbon radicals, alkoxy substituted ethylenically unsaturated aliphatic hydrocarbon radicals, alkyl substituted phenyl radicals, and halogen substituted phenyl radicals, and wherein *n* is an integer equal to the valence of R.

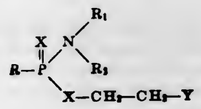
3,099,674

THIOPHOSPHONIC ACID ESTER AMIDES

Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,899
Claims priority, application Germany Apr. 16, 1959
8 Claims. (Cl. 260—461)

6 A thiophosphonic acid ester amide of the general formula



wherein R stands for a member selected from the group consisting of lower alkyl radicals, lower alkenyl radicals and cycloalkyl radicals having up to 8 carbon atoms, R_1 and R_2 each stand for a lower alkyl radical and when taken together with —N< stand for a member selected from the group consisting of piperidino, piperazino, morpholino, thiomorpholino and pyrrolidino; X stands for a member selected from the group consisting of sulfur and oxygen, one X being sulfur, and Y stands for a member selected from the group consisting of lower alkyl mercapto and lower dialkyl amino groups.

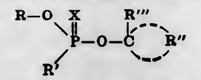
3,099,675

O-ALKYL O-ETHYNYLCYCLOALKYL PHOSPHORAMIDATES AND PHOSPHORAMIDOTHIOATES

Herman O. Senkbeil, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 6, 1961, Ser. No. 122,099
6 Claims. (Cl. 260—461)

1. A compound corresponding to the formula



wherein R represents lower alkyl, R′ represents a member of the group consisting of amido, monolower alkyl amido and dilower alkyl amido, R″ represents a polymethylene radical containing from 4 to 5 carbon atoms, inclusive, R‴ represents a member of the group consisting of ethynyl and 1-propynyl and X represents a member of the group consisting of oxygen and sulfur.

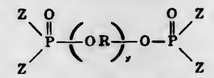
3,099,676

HYDROXYALKYL POLYPHOSPHATES

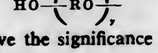
William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 3, 1961, Ser. No. 149,845
8 Claims. (Cl. 260—461)

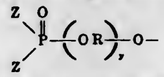
1. A hydroxyalkyl polyphosphate that is represented by the formula



wherein R represents the divalent residue of a vicinal epoxide, wherein *y* represents a number that has a value of at least 1, and wherein each Z individually represents a group selected from the class consisting of



wherein R and *y* have the significance stated above, and



wherein the variables Z, R, and *y* have the significance stated above.

3,099,677

PREPARATION OF METABORATE AND POLYBORATE ESTERS

Don L. Hunter, Long Beach, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Jan. 21, 1959, Ser. No. 788,040
5 Claims. (Cl. 260—462)

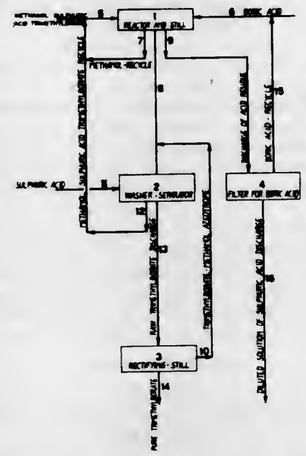
1. The method of producing triphenoxyboroxine which comprises heating at normal atmospheric pressure equimolecular weights of B_2O_3 and triphenyl borate in the presence of from about 0.25% to about 5% of a catalyst, said catalyst selected from the group consisting of primary, secondary and tertiary alcohols having from 1 to 18 carbon atoms, phenol, cresols, glycerol, glycol, erythritol, pentaerythritol, arabitol, mannitol, sorbitol, glucose, fructose and mannose.

3,099,678

PROCESS FOR THE PREPARATION OF TRIMETHYLBORATE

Lodovico Avogadro di Cerrione, Turin, and Carlo Ferraris, Avigliana, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy

Filed Sept. 2, 1960, Ser. No. 53,799
Claims priority, application Italy Sept. 3, 1959
2 Claims. (Cl. 260—462)



1. A process for making trimethylborate, $B(OCH_3)_3$, comprising esterifying boric acid with methanol in the presence of sulphuric acid, to form a methanol-trimethylborate azeotrope, separating said azeotrope from excess methanol, employing the recovered methanol for esterification of boric acid in the presence of sulphuric acid, discharging the aqueous acid residue occurring in the esterification step, separating unreacted boric acid from said residue and employing it for esterification by methanol, washing the azeotrope with concentrated sulphuric acid, separating the resulting mixture into mixture fractions by differential specific gravities, one fraction containing less sulphuric acid than the other, and treating the latter fraction with concentrated sulphuric acid in a second washing stage, and again separating the resulting mixture into fractions by differential specific gravities, one of the latter comprising, substantially, trimethylborate, and utilizing both of the sulphuric acid fractions separated from the washing stages for the esterification of boric acid, with methanol.

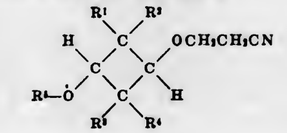
3,099,679

NITRILE DERIVATIVES OF 2,2,4,4-TETRAALKYLCYCLOBUTANE-1,3-DIOLS

Edward U. Elam and James C. Martin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 22, 1960, Ser. No. 57,638
6 Claims. (Cl. 260—464)

1. Cyanoethylethers of the formula:



wherein R^1, R^2, R^3 and R^4 are lower alkyl groups having one to four carbon atoms and R^5 is selected from the group consisting of hydrogen and the radical,

$$—CH_2CH_2CN$$

3,099,680

PROCESS FOR THE MANUFACTURE OF 1,2-DICYANO CYCLOBUTANE

Kurt Sennewald and Armin Götz, Knapsack, near Cologne, and Gottfried Kallrath, Kerpen, near Cologne, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany

No Drawing. Filed Jan. 16, 1961, Ser. No. 82,703
Claims priority, application Germany Jan. 23, 1960
3 Claims. (Cl. 260—464)

1. In the process for the manufacture of 1,2-dicyanocyclobutane by thermal dimerization of acrylonitrile, wherein acrylonitrile is heated for a period of between about 1 to 6 hours under about 10–100 atmospheres pressure of an inert gas selected from the group consisting of nitrogen, hydrogen and argon, at a temperature of between about 180° and 260° C. in the presence of a catalyst in an amount of between about 0.01 and 1.00% by weight, calculated on the acrylonitrile, and the reaction mixture is worked up by distillation, the improvement which comprises carrying out the dimerization in the presence of a catalyst selected from the group consisting of hydrogen sulfide, dodecylmercaptan, β,β'-dicyanodiethylsulfide, NiS, WS_2, CoS, FeS, BaS, ZnS, dimethylsulfide thioacetamide and allyl isothiocyanate.

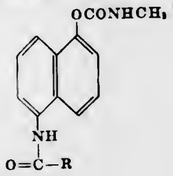
3,099,681

5-LOWER ACYLAMINO 1-NAPHTHYL N-METHYL-CARBAMATES

John R. Kilsheimer, South Charleston, W. Va., and Herbert H. Moorefield, Raleigh, N.C., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,523
3 Claims. (Cl. 260—479)

1. The compounds having the structural formula:



wherein R is a lower alkyl radical.

3,099,682

PREPARATION, TREATMENT AND STORAGE, UNDER A NITROGEN BLANKET, OF THE DIESTERS OF DICARBOXYLIC ACIDS AND OXO ALCOHOLS

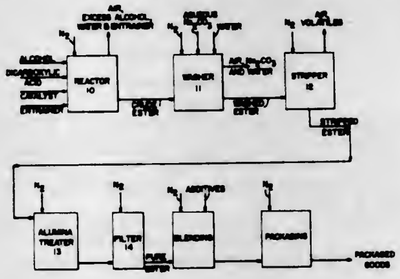
Alexander H. Popkin, Maplewood, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 24, 1959, Ser. No. 861,818
2 Claims. (Cl. 260—485)

1. A method for the preparation of a synthetic diester useful as a lubricating oil and having a high degree of storage stability, wherein said diester has the formula:

$$ROOCR'COOR$$

wherein R' is a C_4 to C_{10} saturated aliphatic hydrocarbon group, and R is a C_8 to C_{12} alkyl radical of a branched chain primary alcohol produced by the reaction of an olefin with carbon monoxide and hydrogen in the presence of a catalyst to form a mixture of aldehydes, which aldehyde mixture is then hydrogenated to form said alcohol, which comprises heating said alcohol and a C_8 to C_{12} dicarboxylic acid in a reactor to esterify and remove the water of condensation until the esterification is substantially complete, admitting nitrogen into the reactor as the reactor contents are cooled in order to restore the reactor to atmospheric pressure and prevent the entrance of air,



neutralizing and water washing the ester product under a nitrogen blanket, heating said ester product in a reactor to strip said product of undesired volatile material, admitting nitrogen into the stripping reactor as the ester product is cooled in order to restore the reactor to atmospheric pressure and prevent the entrance of air, and then storing said ester product under nitrogen, and wherein the contacting of air with said ester product is avoided during said method.

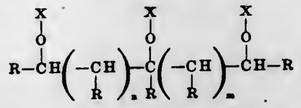
3,099,683

TRIS MALEIC ACID AND FUMARIC ACID HALF-ESTERS OF C_8 TO C_{10} SATURATED TRIOLS

Alfred J. L. Toombs, Berkeley, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 27, 1961, Ser. No. 91,583
7 Claims. (Cl. 260—485)

1. A tri-half ester of a triol of 6 to 10 carbon atoms per molecule and a dicarboxylic acid, said ester having the formula:



wherein X is the acid residue of an acid selected from the group consisting of maleic and fumaric, each R independently is selected from the group consisting of hydrogen atoms and lower alkyl radicals of not more than 3 carbon atoms, n is an integer from zero to one, and m is an integer equal to at least three but not more than seven minus n.

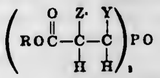
3,099,684

METHOD OF PREPARING TERTIARY PHOSPHINE OXIDES USING ELEMENTAL PHOSPHORUS

Michael M. Rauhut, Norwalk, and Andrew M. Semsel, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 7, 1961, Ser. No. 101,329
10 Claims. (Cl. 260—485)

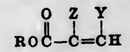
1. A method of preparing a tertiary phosphine oxide of the formula



wherein R is alkyl, branched and straight chain, having from 1 to 12 carbon atoms, Y is selected from the group consisting of hydrogen, lower alkyl and phenyl, and Z is selected from the group consisting of hydrogen, lower alkyl, and $—CH_2CH_2COOR'$, wherein R' is alkyl

$$(C_1–C_{12})$$

which comprises reacting an alkyl acrylate of the formula



wherein R, Z and Y have the meanings given above, with elemental phosphorus, a base, and water, in the presence of an inert solvent, and recovering the corresponding tertiary phosphine oxide.

6. A method of preparing a tertiary phosphine oxide which comprises reacting, in the presence of an inert solvent, elemental phosphorus, a base and water with a member selected from the group consisting of tetrafluoroethylene, chlorotrifluoroethylene, and a vinyl reactant in which the vinyl moiety is substituted with an electronegative substituent having a sigma (para) constant greater than about +0.3, and recovering the corresponding tertiary phosphine oxide.

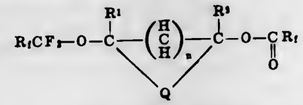
3,099,685

β- AND γ-(POLYFLUOROALKOXY)ALKYL FLUOROACYLATES AND THEIR PREPARATION

William A. Sheppard, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 23, 1961, Ser. No. 147,077
7 Claims. (Cl. 260—487)

1. A fluoroacylate of the formula



wherein: R_f is selected from the group consisting of fluorine, ω-hydroperfluoroalkyl, and perfluoroalkyl; R^1 and R^2 are selected from the group consisting of hydrogen, alkyl, alkenyl, aryl, alkoxy, aryloxy, haloalkyl and haloaryl; Q is selected from the group consisting of one alkylene and two members of the group consisting of hydrogen, alkyl, alkenyl, aryl, alkoxy, aryloxy, haloalkyl and haloaryl; and n is a cardinal number of up to 1.

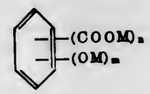
3,099,686

DECARBOXYLATION OF AROMATIC ACIDS

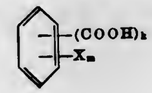
Willis C. Keith, Lansing, Joseph A. Verdol, Dolton, and Robert P. Zmitrovis, Park Forest, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,575
12 Claims. (Cl. 260—521)

1. A method for the production of salts of the formula



where m is a number from 1 to 4, n is a number from 0 to 4 and M is a metal selected from the group consisting of alkali and alkaline earth metals which comprises reacting at a temperature of about 185° C. to 350° C. and in the liquid phase a reaction mixture consisting essentially of an aromatic acid of the formula



where k is a number from 2 to 5 and is at least one more than n and X is selected from the group consisting of halogen and sulfonic acid radicals, at least one of which is ortho or para to a carboxyl radical, water and an inorganic basic compound of said metal in a molar quantity at least about equal to $k+m$.

3,099,687

PREPARATION OF ALPHA,ALPHA-DIALKYL-BRANCHED MONOCARBOXYLIC ACIDS FROM OLEFINS, CARBON MONOXIDE, AND WATER

Gerhard Rohlffs, Kamen, Westphalia, and Stefan Pawlenko, Bochum-Werne, Germany, assignors to Schering A.G., Berlin, Germany

No Drawing. Filed July 5, 1960, Ser. No. 40,543
Claims priority, application Germany July 7, 1959
6 Claims. (Cl. 260—533)

1. In a process for the preparation of alpha,alpha-dialkyl-branched monocarboxylic acids from olefins which are branched at the double bond and selected from the group consisting of iso-butylene, 2-methylpentene-1, 2-methylpentene-2, and 2-ethylhexene, with carbon monoxide and water in the presence of a sulfuric acid containing catalyst, the improvement of carrying out the reaction with a catalyst consisting of 40–45% by weight of BF_3, 23–27% by weight of H_2SO_4 and the balance H_2O, with continuous addition of the olefin, carbon monoxide and water, the water being introduced in an amount corresponding to the amount consumed by the formation of the carboxylic acid, the original proportion of

$$BF_3:H_2SO_4:H_2O$$

being maintained and the reaction being carried out under a carbon monoxide pressure of 50–200 atmospheres in the temperature range of 20°–50° C.

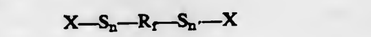
3,099,688

FLUORINATED SULFENYL HALIDES AND DISULFUR HALIDES

Carl G. Krespan, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 24, 1960, Ser. No. 38,415
5 Claims. (Cl. 260—543)

1. A compound of the formula



where X is halogen, R_f is selected from the group consisting of divalent, open chain, saturated, perfluorocarbon groups and divalent, open chain, saturated, fluorothiacarbon groups, and n and n' are positive whole numbers greater than zero and less than 4.

3,099,689

HYDROCARBON METAL CATALYST IN PREPARATION OF FORMAMIDES

Hoyt J. Cragg, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 31, 1961, Ser. No. 113,672
15 Claims. (Cl. 260—561)

15. In the process for the preparation of N,N-di-n-butyl formamide which comprises the reaction of N,N-di-n-butyl amine with carbon monoxide at an elevated temperature of 150–180° C. and at a pressure of 30–60 atmospheres, the improvement which comprises carrying out the said reaction in the presence of bis(methylcyclopentadienyl)-manganese as a catalyst.

3,099,690

PREPARATION OF ORGANIC PHOSPHORUS COMPOUNDS FROM PHOSPHORUS, AN ALKYL HALIDE, AND AN ORGANO-MAGNESIUM HALIDE

Michael M. Rauhut, Norwalk, and Andrew M. Semsel, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 24, 1962, Ser. No. 212,124
3 Claims. (Cl. 260—606.5)

1. A method which comprises (*a*) bringing into reactive contact, in the presence of an inert organic solvent, elemental phosphorus, an alkyl halide and an organomagnesium halide selected from the group consisting of mono-nuclear aryl magnesium halide, di-nuclear aryl magnesium halide, substituted mono-nuclear aryl magnesium halide, substituted di-nuclear aryl magnesium halide, alkyl magnesium halide, and cycloalkyl magnesium halide, said substituents for the mono- and di-nuclear aryl magnesium moieties, alkyl magnesium moieties and cycloalkyl magnesium moieties being selected from the group consisting of halogen and lower alkoxy, and said alkyl moieties of the organomagnesium halide reactants hereinabove having from 1 to 12 carbon atoms, and (*b*) recovering the resulting corresponding organophosphorus compound selected from the group consisting of tertiary arylalkyl phosphine, tertiary alkyl phosphine, and tertiary cycloalkyl phosphine, tetra-substituted phosphonium salts thereof, and tetralkylcyclotetraphosphine.

3,099,691

PREPARATION OF ORGANIC PHOSPHINES FROM PHOSPHORUS, AN ALKYL HALIDE AND AN ORGANIC LITHIUM OR SODIUM COMPOUND

Michael M. Rauhut, Norwalk, and Andrew M. Semsel, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 24, 1962, Ser. No. 212,156
7 Claims. (Cl. 260—606.5)

1. A method of preparing organic phosphines which comprises (*a*) bringing into reactive contact, in the presence of an inert organic solvent, elemental phosphorus, an alkyl halide and an organometallic compound selected from the group consisting of mono-nuclear aryl lithium, mono-nuclear aryl sodium, di-nuclear aryl lithium, di-nuclear aryl sodium, substituted mono-nuclear aryl lithium, substituted mono-nuclear aryl sodium, substituted di-nuclear aryl lithium, substituted di-nuclear aryl sodium, alkyl lithium, alkyl sodium, cycloalkyl lithium and cycloalkyl sodium, said substituents for the mono- and di-nuclear aryl lithium and sodium members, above, being selected from the group consisting of halogen and lower alkoxy, and said alkyl moieties of the members given above having from 1 to 12 carbon atoms and (*b*) recovering the resulting corresponding tertiary organic phosphine.

3,099,692

RECOVERY OF GLYCOLS

Edmund Cecil Owen, Harrogate, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Apr. 11, 1960, Ser. No. 22,079
Claims priority, application Great Britain May 12, 1959
1 Claim. (Cl. 260—637)

A process for the removal of finely dispersed hydrocarbon oil from a glycol which comprises contacting the hydrocarbon oil-containing glycol with molten paraffin wax, cooling the resulting liquid mixture to a temperature of about 20° C., and thereafter filtering the cooled mixture through a bed of filamentary material of not greater than 10 denier.

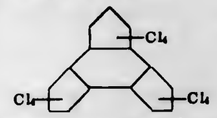
3,099,693

TETRACYCLIC CHLOROCARBONS

Victor Mark, Olivette, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 29, 1960, Ser. No. 79,113
6 Claims. (Cl. 260—648)

1. A chlorocarbon having the empirical formula of $C_{18}Cl_{12}$ and the following structure



in which each five membered ring has two double bonds.

3,099,694

STABLE METHYLCHLOROFORM COMPOSITIONS

George N. Grammer and Percy W. Trotter, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 27, 1960, Ser. No. 32,105
10 Claims. (Cl. 260—652.5)

1. A stable solvent composition for the degreasing of metals, said solvent being composed of 1,1,1-trichloroethane within which is dissolved from about 0.3 to about 15 weight percent of a mixture of stabilizing additives consisting essentially of a dioxolane, a mono-olefin, and an epoxide, sufficient to inhibit the 1,1,1-trichloroethane against decomposition, said dioxolane being a 1,3-dioxolane compound containing up to 2 alkyl substituents each having from 1 to 2 carbon atoms, said mono-olefin being an alkene hydrocarbon having from about 6 to about 8 carbon atoms, and said epoxide being a compound containing from about 3 to about 4 carbon atoms and up to 1 chlorine atom.

3,099,695

VAPOR PHASE FLUORINATION WITH ClF AND ClF_3

Jan Muray, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Aug. 4, 1960, Ser. No. 47,390
9 Claims. (Cl. 260—653.8)

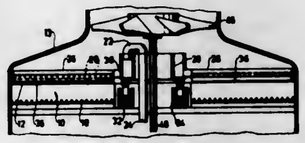
1. A process for the manufacture of organic compounds containing fluorine which comprises bringing into reaction in the vapor phase a compound selected from the group consisting of chlorine trifluoride and chlorine monofluoride with a hydrocarbon containing halogen substituents not all of which are fluorine.

3,099,696

GAS AND LIQUID CONTACT APPARATUS

George W. Meek, Pelham, N.Y., assignor to Lizenzia A.G., Zug, Switzerland, a corporation of Switzerland

Filed June 27, 1960, Ser. No. 38,838
Claims priority, application Sweden July 6, 1959
1 Claim. (Cl. 261—24)



In a spraying device for gas and liquid contact apparatus, a packing composed of a series of spaced water-absorbing wettable members having a series of vertical passages for the gas and liquid, means for causing a flow

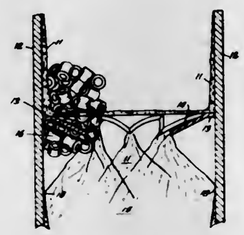
of gas through the vertical passages, a rotatable spraying device provided with a plurality of hollow radial arms operative above the packing for moistening the same, each of the arms being provided with a row of substantially horizontally directed discharge openings operative to project jets of liquid over the upper surface of the packing in a manner to contact the packing in the form of relatively large drops or particles and cause rotation of said arms, each of the arms being provided at one side with a laterally-projecting trailing screen in the form of an imperforate plate, said screen being interposed between the means for causing the gas flow through the packing and being attached at one end to the arm at a point above the row of discharge openings therein and extending angularly downward from said point of attachment and terminating at a point below the bottom of the arm and slightly above the surface of the packing, the screen being provided at its free end with a horizontal extension disposed substantially parallel to the upper surface of the packing and spaced slightly above said surface, said screen being effective to cover the spaced wettable members while the same are being sprayed with liquid, said horizontal extension on each screen being in the form of a flat panel located below the lower surface of said arms on which the screen is carried, each screen and arm forming a downwardly opening, angular groove into which said jets of liquid are discharged, said lower surface of said arms being imperforate and combining with said screen to mask the passages ahead of and behind said jets, said spraying device including an annular hub having an upwardly opening liquid chamber extending vertically above said arms, said arms including inner ends communicating with said liquid chamber, and means for directing a source of liquid axially through said hub and downwardly into said liquid chamber for discharging liquid into said chamber, propelling said spraying device and providing the liquid to be sprayed onto the wettable members.

3,099,697

LIQUID REDISTRIBUTOR FOR TOWERS

Frank Lerman, Cincinnati, Ohio, and John Bohnlofink, Baltimore, Md., assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

Filed Dec. 30, 1958, Ser. No. 783,759
2 Claims. (Cl. 261—97)



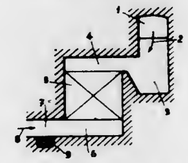
2. A liquid redistribution element for use in towers for absorption, stripping, distillation, extraction and the like, said element having a relatively narrow and substantially horizontally disposed annular section, a plurality of radially and downwardly extending projections having concave side edges extending inwardly from said annular section, a side edge of each projection being coextensive with the side edge of the next adjacent projection in a continuous curve to provide an open space between adjacent projections extending from said annular section, each of said projections tapering sharply to a point at the radial extremity thereof, the construction and arrangement being such that liquid reaching said annular section will not be retained thereupon but will be diverted immediately to a downwardly extending projection and by reason of surface tension will flow down said projection and be discharged at the radial extremity thereof.

3,099,698

METHOD TO INCREASE THE EFFICIENCY OF A FURNACE REGENERATOR, PARTICULARLY FOR OPEN-HEARTH FURNACES, AND TO DECREASE THE PILING TEMPERATURE

Aldo Ramacciotti, Genoa-Pegli, Italy, assignor to Societa Finanziaria Siderurgica Finsider per Azioni-Istituto Siderurgico, Genoa-Cornigliano, Italy

Filed Mar. 27, 1961, Ser. No. 98,354
Claims priority, application Italy Apr. 14, 1960
3 Claims. (Cl. 263—52)



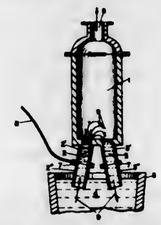
1. A method of increasing the efficiency of a furnace comprising the steps of burning a fuel in a furnace hearth, heating the refractory material of a regenerator by passing the combustion gases in one direction through the regenerator, forcing atmospheric combustion air from a point of entry through said regenerator in the opposite direction after the regenerator is heated, and introducing into the combustion air at a location near said point of entry a fluid at least partially opaque to thermal radiation in the proportion of 5 to 80 grams per normal cubic meter according to the humidity of the atmospheric air.

3,099,699

APPARATUS FOR DEGASSING MOLTEN STEEL

Wilhelm Breuing, Bochum, Ernst Peter Franke, Hattingen (Ruhr), and Rudolf Spolders, Bochum, Germany, assignors to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, and Ruhrstahl AG., Witten-Annen (Ruhr), Germany, both corporations of Germany

Filed Sept. 2, 1960, Ser. No. 53,687
Claims priority, application Germany Sept. 8, 1959
5 Claims. (Cl. 266—34)

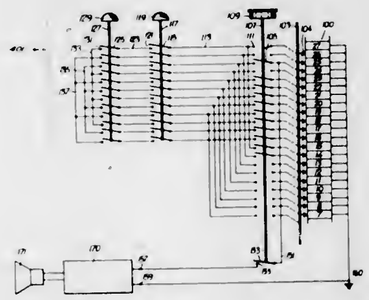


1. In a continuous recycling device for the vacuum degassification of molten metal and having as elements vacuum degassing chamber means, a lower positioned container for holding molten metal, riser conduit means for conveying molten metal from said container to said chamber means, discharge conduit means for discharging molten metal from said chamber means into said container, and means for forcing gas bubbles into and through said riser conduit means, said riser and said discharge conduit means being with their immersion ends arranged in non-concentric separate and spaced relation, the improvement which comprises, in combination with said elements, such discharge and riser conduit means in which the cross-sectional area of said discharge means is appreciably smaller than that of said riser means.

3,099,700
MUSICAL INSTRUMENT

Sune Hearly Bergman, Hagersten, Sweden, assignor to ABO Mustad & Son, Goteborg, Sweden, a corporation of Sweden

Filed Feb. 13, 1958, Ser. No. 715,009
4 Claims. (Cl. 84—1.19)

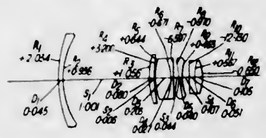


1. An electrical musical instrument comprising a plurality of electrical fundamental tone-frequency generating devices of different frequencies, each of these devices having an output terminal, sound quality reproducing means including an amplifier and a loud speaker, the output terminals of said devices being selectively connectible to the input terminals of the amplifier, conductor means for completing the input circuit to the amplifier through ground, melody-selecting switch means for transmitting a selected fundamental tone frequency to the input circuit of the amplifier, and for blending therewith a plurality of melody selected fundamental tone frequencies; harmony-selecting switch means to which this plurality of melody selected fundamental tone frequencies are transmit.ed as input, the output of said harmony-selecting switch means constituting a chordal group frequency, which is transmitted through the melody-selecting switch means and blended with the said selected fundamental tone frequency, thereby forming the resulting melody-blended frequency which constitutes the input frequency transmitted to the amplifier; said chordal group frequency resulting from selected fundamental tone frequencies derived from the tone-frequency generating devices and blended by the melody-selecting switch means.

3,099,701
OPTICAL OBJECTIVES

Peter Arnold Merigold, Leicester, England, assignor to Rank Precision Industries Limited, trading as Taylor, Taylor & Hobson, Leicester, England, a company of Great Britain

Filed Aug. 10, 1960, Ser. No. 48,602
Claims priority, application Great Britain Aug. 12, 1959
21 Claims. (Cl. 88—57)

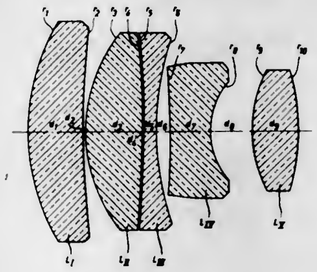


1. An optical objective of the inverted telephoto type corrected for spherical and chromatic aberrations, coma, astigmatism, field curvature and distortion, comprising a divergent front member the numerical value of whose equivalent focal length lies between 2.5F and 5F where F is the equivalent focal length of the complete objective, and a convergent rear member, whose equivalent focal length f_R lies between .8F and 1.4F, separated from the front member by an air space whose axial length lies between .8F and 1.4F, the convergent rear member comprising a simple convergent meniscus first component having its surfaces convex to the front, a convergent doublet second component behind the first component, a simple biconcave divergent third component behind the second component, a convergent doublet fourth component behind the third component, and a diaphragm located between the third and fourth components, the axial air separations between the second and third components and between the third and fourth components of the rear member lying respectively between $.04f_R$ and $.055f_R$ and between $.075f_R$ and $.2f_R$, whilst the radius of curvature of the front surface of the divergent third component of the rear member lies between $.75f_R$ and $1.45f_R$ and is less than one-sixth of that of the rear surface of the doublet second component of the rear member, the mean refractive index of the material of the rear element of the doublet fourth component of the rear member exceeding that of the front element thereof by between .025 and .075.

3,099,702
FIVE LENS OBJECTIVE

Johannes Berger, Heidenheim (Brenz), Wurttemberg, Germany, assignor to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany

Filed Feb. 12, 1962, Ser. No. 172,829
Claims priority, application Germany Oct. 30, 1958
1 Claim. (Cl. 88—57)



A photographic objective consisting of five lenses of which the first is a meniscus-shaped collective lens with its concave surface turned towards the second lens, the said second lens being an asymmetrical collective lens turning its surface of smaller curvature towards the third lens, the said third lens being an asymmetrical dispersive lens turning its surface of stronger curvature towards the fourth lens, the said fourth lens being also an asymmetrical dispersive lens turning its surface of stronger curvature towards the fifth lens, and the said fifth lens being a biconvex collective lens, characterized by the combination of the following features:

(*a*) the sum of the air spaces between the individual lenses is smaller than 30% but greater than 10% of the overall length wherein the overall length itself is greater than 80% of the focal length;

(*b*) $r_3 < r_1 < 2 \cdot r_3$

(*c*) $r_3 < r_6 < 3 \cdot r_3$

(*d*) $0.35 \cdot r_9 < r_8 < 0.70 \cdot r_9$

(*e*) $r_9 < -r_{10} < 2 \cdot r_9$

(*f*) $1.6 < n_{III} < \frac{n_I + n_{II} + n_{IV} + n_V}{4} < 1.8$

and furthermore characterized in that its design data lie so close to the values to be taken from the appended table that none of the axial separations (*d*) differs by more than the values given in parantheses below the respective separation value given in the following table:

Lenses	Radii	Axial separations	n_d	ν_d	$\Delta n/r$
L_I	$r_1 = +0.84527 \cdot f$	$d_1 = 0.21437 \cdot f$ (+0.03) (−0.03)	1.71300	53.89	$+0.843517/f$
	$r_2 = +4.9281 \cdot f$	$d_2 = 0.00394 \cdot f$ (+0.03) (−0.000)			$-0.144680/f$
L_{II}	$r_3 = +0.62932 \cdot f$	$d_3 = 0.22669 \cdot f$ (+0.03) (−0.03)	1.71300	53.89	$+1.132969/f$
	$r_4 = -19.3384 \cdot f$	$d_4 = 0.00000$ (+0.03) (−0.00)			$+0.036870/f$
L_{III}	$r_5 = -19.3384 \cdot f$	$d_5 = 0.04928 \cdot f$ (+0.03) (−0.02)	1.69895	30.05	$-0.036143/f$
	$r_6 = +1.1519 \cdot f$	$d_6 = 0.05322 \cdot f$ (+0.03) (−0.01)			$-0.606780/f$
L_{IV}	$r_7 = -14.2948 \cdot f$	$d_7 = 0.16115 \cdot f$ (+0.03) (−0.03)	1.80518	25.46	$-0.056327/f$
	$r_8 = +0.29781 \cdot f$	$d_8 = 0.16263 \cdot f$ (+0.03) (−0.03)			$-2.703670/f$
L_V	$r_9 = +0.53342 \cdot f$	$d_9 = 0.18234 \cdot f$ (+0.03) (−0.03)	1.74400	44.90	$+1.394773/f$
	$r_{10} = -0.87006 \cdot f$				$+0.855113/f$

NOTE.—$s' = 0.3159 \cdot f$.

wherein are designated
by L, the lenses,
by *r*, the radii,
by *d*, the axial separations,
by n_d, the refractive indices for the *d*-line of the spectrum,
by ν_d, the corresponding Abbé numbers, and
by *s'*, the focal intercept.

3,099,703
COMMUNICATION CABLE HAVING TRANSPOSED CONDUCTORS

Horst-Edgar Martin, Berlin-Charlottenburg, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany, a corporation of Germany

Filed June 25, 1962, Ser. No. 205,022
Claims priority, application Germany June 28, 1961
8 Claims. (Cl. 174—34)

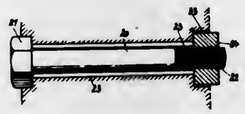
1. A communication cable comprising at least one layer of twisted insulated individual conductors, each layer having an even number of individual conductors which number is divisible by six, an even-numbered conductor always neighboring, in the numerical succession of the conductors of a layer in peripheral direction, on an odd-numbered conductor, said cable being lengthwise subdivided into crossing sections the length of which is small as compared with the fabrication length of the cable, there being provided within each crossing section, lengthwise thereof, uniformly spaced apart crossing points, an even-numbered conductor of a layer being at such crossing point crossed with an odd-numbered conductor neighboring thereon in the succession in the peripheral direction, the next following conductor remaining uncrossed, the number of said crossing points within a crossing section being such that the conductors appear in the same count sequence at the beginning and at the end of each crossing section, each two respectively odd- or even-numbered conductors forming a two-conductor line.



3,099,704
THREADED PLASTIC ROD WITH MOLD BURR FOR LOCKING FUNCTION

Hubert Naimer, Schumanngasse 35, Vienna XVIII, Austria

Filed Apr. 19, 1957, Ser. No. 653,794
Claims priority, application Austria Apr. 23, 1956
1 Claim. (Cl. 174—138)

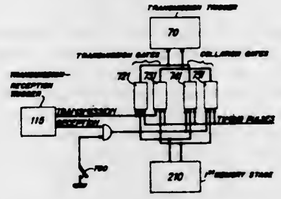


A tension-stressed tie rod interconnecting a plurality of aligned parts of an electrical apparatus, said rod having a length which is a multiple of its diameter and consisting of a thermoplastic resin at least equivalent to polyamide plastics in thermoplastic deformability, tensile strength, electrical insulating power, flexibility and toughness at normal temperatures), said rod being injection molded in a mold having two mold parts with meeting faces and having at least one threaded end portion, and further comprising an axially extending ridge-like burr formed as an integral portion of said threaded end portion at the meeting faces of the mold and extending radially beyond the threaded crest.

3,099,705
ELECTRONIC TELEPRINTER ADAPTED FOR COLLATION

Roger P. Sourgens, 4 Avenue du Marechal Joffre, Bourg-la-Reine, France, and Raymond A. Chollet, Basse-Terre, Gaudeloupe, French West Indies

Filed July 31, 1961, Ser. No. 128,115
2 Claims. (Cl. 178—2)



1. An electronic teleprinter adapted to collate through a transmission channel start and code elements received

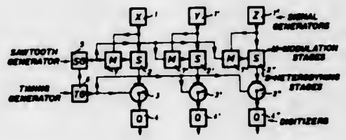
through a reception channel comprising a memory device constituted by at least as many memory triggers as code elements, a reception trigger, a transmission trigger, a time-basis adapted to produce a single series of timing pulses, a transmission-reception trigger having a transmission output and a reception output, a keyboard, a translator-printer, a collation key, a first set of gates inserted between the reception trigger and the memory triggers, controlled both by the time-basis and by the reception output of the transmission-reception trigger and allowing, during reception, the code elements of a received telegraphic character to be serially transferred from the reception trigger to the memory device, a second set of gates inserted between the memory triggers and the translator-printer and controlled by the time-basis, a third set of gates inserted between the keyboard and the memory triggers and controlled by the time-basis and a fourth set of gates inserted between the memory triggers and the transmission trigger, said fourth set of gates comprising two groups of pairs of gates, the pairs of gates of the first group being controlled both by the time-basis and by the transmission output of the transmission-reception trigger and allowing, during transmission, the code elements of a telegraphic character to be transmitted to be serially transferred from the memory device to the transmission trigger and the pairs of gates of the second group being controlled at the same time by the time-basis, by the reception output of the transmission-reception trigger and by the collation key and allowing, during reception with collation, the code elements of a received telegraphic character to be collated to be serially transferred from the memory device to the transmission trigger.

3,099,706

ELECTRONIC COLOR CORRECTION IN COLOR COPY REPRODUCTION

Rudolf Hell, Kiel, Roman Koll, Kiel-Wellingdorf, and Fritz-Otto Zeyen, Heikendorf, near Kiel, Germany, assignors to Dr.-Ing. Rudolf Hell Kommanditgesellschaft, Kiel, Germany, a corporation of Germany

Filed Dec. 30, 1959, Ser. No. 862,871
Claims priority, application Germany Mar. 11, 1959
6 Claims. (Cl. 178—5.2)



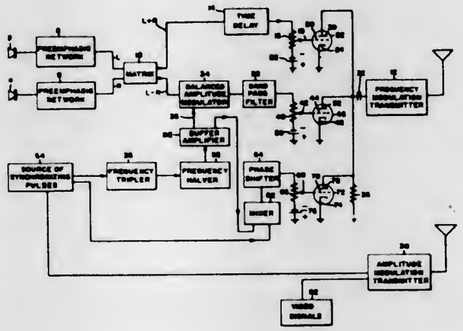
1. Apparatus for effecting electronic color correction in the reproduction of color copies, wherein a color copy or three photographic color separation records prepared therefrom are scanned directly as in facsimile telegraphy and the color measurement values thus obtained are digitized and converted into color dosage values which are likewise digitized comprising three identical electrical channels each including a heterodyning stage for additionally wobbling each of the three respective continuously variable color measurement value voltages with an alternating voltage of the same frequency, said alternating voltage having a frequency of at least twice the highest signal frequency and having an amplitude of at least half a digit stage, means forming a sampler for periodically sampling the wobbled color measurement voltages at a frequency which is a multiple of the wobble frequency, and means for digitizing the wobbled instantaneous signal values.

3,099,707

STEREOPHONIC SYSTEM

Robert B. Dome, Geddes Township, Onondaga County, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 31, 1960, Ser. No. 66,306
6 Claims. (Cl. 178—5.6)



2. In a television system, a means for conveying stereophonic information comprising: a television transmitter including a source of periodic synchronizing signals for the television system, a source of L signals, a source of R signals, matrixing means for deriving from the L and R signals first and second combination signals, means for deriving a subcarrier wave having a frequency differing from the frequency of said periodic synchronizing signals and harmonics thereof and greater than the highest frequency in said first combination signal, means for amplitude modulating the subcarrier wave with said second combination signal so as to produce second combination signal sidebands in such manner that the subcarrier wave is suppressed, means for deriving a pilot carrier wave having a frequency that is greater than the highest frequency produced by said amplitude modulation means and which can be combined with said periodic synchronizing signals or harmonics thereof to produce a wave having the same frequency as the suppressed subcarrier wave, and means for applying said first combination signal, the second combination signal sidebands, said pilot carrier wave, and said synchronizing signals to a single transmission path.

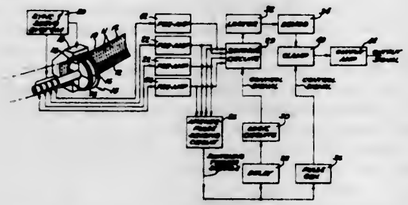
3,099,708

MAGNETIC TAPE REPRODUCING SYSTEM

Stewart L. Smith, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Aug. 22, 1960, Ser. No. 51,058
5 Claims. (Cl. 178—6.6)

1. An electronic information processing system for reproducing information recorded transversely on magnetic tape and including spaced marker pulses comprising a number of transducers for successively scanning the recorded information on the tape, marker pulse sensing means responsive to marker pulses from the transducers, switching means coupled to the transducers and responsive to the sensing means for deriving information signals from the transducers sequentially in accordance with the marker pulses, means for applying a predetermined delay to such derived information signals coupled to said switching means, demodulating means coupled to the switching means, and output clamping means coupled to the demodulator means and to the sensing means for providing



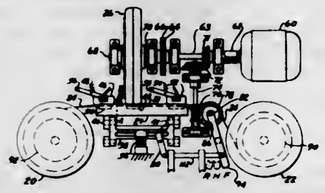
an output signal representative of the reproduced information signals presented by the demodulator means despite the generation of transients by the switching means.

3,099,709

TAPE RECORDER

Leonard Dodge Barry, Detroit, Mich., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Continuation of application Ser. No. 292,013, May 27, 1952. This application Dec. 27, 1960, Ser. No. 78,452
22 Claims. (Cl. 178—6.6)



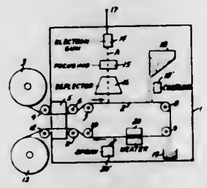
11. A method of magnetic recording and reproducing of video signals which comprises the steps of recording video signals on a magnetic tape in successive parallel transversely extending lines, the end of each line and the beginning of the next line being simultaneously recorded with the same signal and at substantially the same recording strength as used along the central portion of the length of the recorded lines including part of the recorded overlap.

3,099,710

METHOD AND APPARATUS FOR RECORDING AND REPRODUCING ELECTRICAL SIGNALS

Rolf Möller and Werner Tretner, Darmstadt, Germany, assignors to Fernseh G.m.b.H., Darmstadt, Germany

Filed June 26, 1961, Ser. No. 119,629
Claims priority, application Germany June 25, 1960
9 Claims. (Cl. 178—6.6)



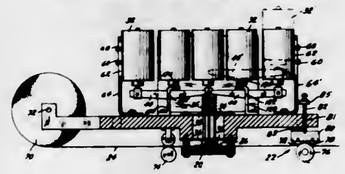
5. A method of reproducing electrical signals from a record carrier comprising a sequential pattern of surface elements carrying, respectively, deposits of material differing from the carrier by its capacity of responding to energy radiation impinging thereon by emitting corresponding amounts of energy, the relative arrangement of said surface elements representing a recorded electrical signal, comprising the steps of: scanning for reproduction the record carrier member by sequentially exposing said material carried on said surface elements to a beam of energy radiation; and deriving an output signal from energy pulses emitted by said pattern of surface elements carrying said material, in response to said beam of energy radiation impinging thereon.

3,099,711

PRINTING DEVICE

Daniel E. Foley, Nutley, N.J., and Alfred Skrobisch, Huntington Station, N.Y., assignors to Data Presentations, Inc., Scarsdale, N.Y., a corporation of New York

Filed June 2, 1961, Ser. No. 123,340
14 Claims. (Cl. 178—30)



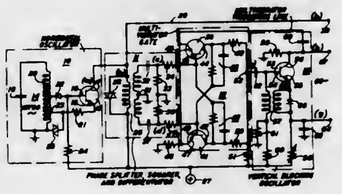
1. A printer comprising a platen at a printing station, means to move paper past the printing station, an ink ribbon at the printing station, an array of independently movable type segments at the printing station, each segment being elongated to print a short line, there being horizontal, vertical, and diagonal segments, said paper and ribbon being disposed between said platen and said type segments, independently operable electromagnetic means connected to each segment to move the same toward the platen to cause printing of the segment on the paper, in order to simultaneously print all those segments which make up a desired alpha-numeric character.

3,099,712

SYNCHRONIZING CIRCUIT

Larned A. Meacham, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 6, 1960, Ser. No. 34,263
8 Claims. (Cl. 178—69.5)

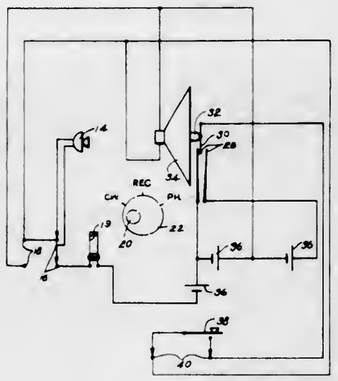


1. A synchronization signal generator for use in television systems comprising a high frequency source of horizontal synchronizing pulses, means for differentiating said horizontal synchronizing pulses, means for shifting the phase of said differentiated horizontal synchronizing pulses by 180 degrees, a low frequency source of vertical synchronizing pulses, means for triggering said low frequency source with the output of said phase shifting means, and means controlled by said low frequency source for disabling alternate phases of said differentiated horizontal synchronizing pulses during alternate cycles of said low frequency source.

3,099,713
ELECTRO MECHANICAL AUDIO TONE GENERATOR

Ruel E. Welch, Salem, Oreg.
(P.O. Box 22, Holt, Mich.)

Filed Feb. 27, 1961, Ser. No. 91,700
3 Claims. (Cl. 179—2)

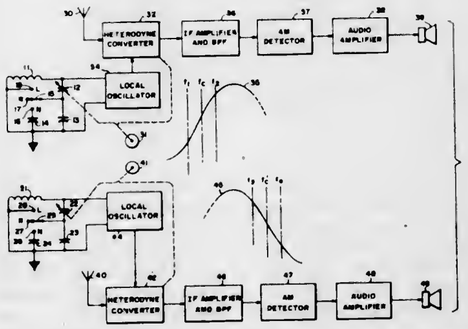


1. An electro mechanical audio tone square wave generator comprising in combination a permanent magnet speaker, an input terminal for said speaker, a variable tone influencing assembly, switch means adjusting the connection of said tone influencing assembly, said permanent magnet speaker including a core and said variable tone influencing assembly acting upon said core of said speaker, said input terminal comprising a variety of microphone line and code key plug receiving jacks, all of said jacks being connected in parallel circuit relationship with said variable tone influencing assemblies, said variable tone influencing assembly comprising a plurality of switch elements acting in conjunction with said core of said speaker and a housing completely enclosing said speaker and said variable tone influencing assembly.

3,099,714
STEREOPHONIC RECEIVING APPARATUS

Joseph W. Percival, Colonia, N.J., and Richard W. Cook, Michigan City, Ind., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 11, 1960, Ser. No. 14,395
2 Claims. (Cl. 179—15)

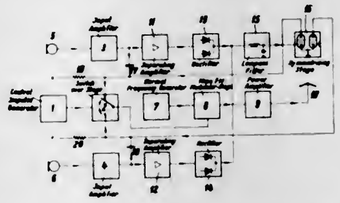


1. In a system for receiving a carrier wave having amplitude modulation and frequency modulation components respectively representative of a first signal $A+B$ and a second signal $A-B$, wherein A and B are signal components respectively corresponding to sound intelligence at first and second locations, first and second heterodyne converters responsive to said carrier wave for respectively producing first and second intermediate frequency carrier signals, each of said converters including a resonant tank circuit having an inductive reactance and a capacitive reactance connected in parallel, first and second intermediate frequency amplifiers coupled respectively to said first and second converters and resonant at a predetermined intermediate frequency, with the frequency response characteristic of said first amplifier having a positively sloping portion extending over a range of frequencies at one side of said predetermined intermediate frequency and the frequency response characteristic of said second amplifier having a negatively sloping portion extending over a range of frequencies at the other side of said predetermined intermediate frequency, first and second tuning means coupled respectively to the tank ciruits of said first and second converters for respectively tuning said first and second IF carrier signals to the maximum response frequencies of said first and second amplifiers; first and second switching devices connected respectively to the tank circuits of said first and second converters for shifting the resonant frequencies of said tank circuits by a predetermined amount, with each of said switching devices being operable to change the effective value of one of said reactances for shifting the resonant frequency of the associated tank circuit by a predetermined amount to respectively reduce the first IF carrier frequency and increase the second IF carrier frequency thereby placing said first and second IF carrier signal respectively on said positively sloping and negatively sloping portions of said frequency response characteristics.

3,099,715
FREQUENCY MODULATION OR AMPLITUDE MODULATION TRANSMITTING SYSTEM

Egon Frank, Berlin-Mariendorf, Germany, assignor to Loewe Opta Aktiengesellschaft, Berlin-Steglitz, Germany, a company of Germany

Filed June 20, 1960, Ser. No. 37,522
Claims priority, application Germany June 26, 1959
4 Claims. (Cl. 179—15)

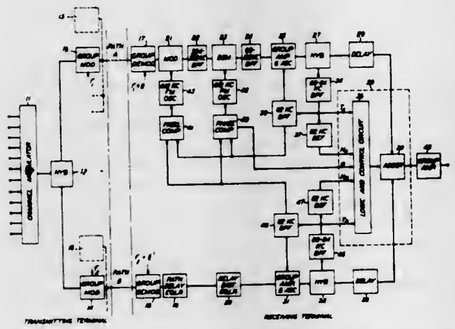


1. A frequency modulation signal transmitting system using two signals modulated on a common high-frequency carrier wave according to the time multiplex system for compatible two-channel stereophonic transmission comprising a control impulse generator, two signal sources for generating two different low-frequency input signals, a pair of input amplifiers for amplifying said input signals, means for producing a positive and a negative D.C.-voltage variably dependent on said low-frequency input signal amplitudes, and for alternate superimposition with said input signals, a switch-over stage, a main high-frequency frequency-modulator stage, a subsequent power stage for amplifying the modulated high-frequency signals to be transmitted, an aerial system, connected to said power stage, said switch-over stage being connected to said control impulse generator as well as to both said input signal sources via said input amplifier stages, said means for producing a positive and a negative D.C.-voltage consisting of a pair of separating amplifier stages, a pair of rectifier stages, a low-pass filter, and a symmetrizing stage, one of said amplifier stages and one of said rectifier stages being each connected in series between the output of one of said input amplifiers and said low-pass filter, the output of which is connected to said symmetrizing stage having two output lines connected for applying two D.C.-voltage components of equal amplitude and of opposite polarity to said switch-over stage, the positive of said D.C.-voltage components being thus superimposed with the one of said input signals, and the negative of said D.C.-voltage components being thus superimposed with the other of said input signals.

3,099,716
DIVERSITY COMMUNICATION SYSTEM

Jean H. Jacquier, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 30, 1961, Ser. No. 121,193
6 Claims. (Cl. 179—15)



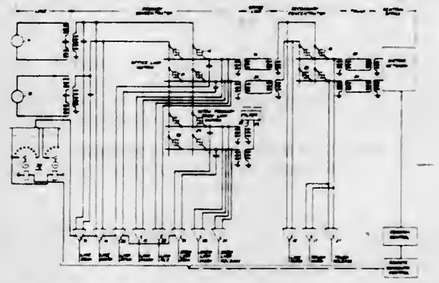
1. In a diversity communication system having transmitting and receiving terminals, said terminals being connected by a plurality of transmission paths, means at said transmitting terminal for transmitting the same signal over each of said paths simultaneously, said signal being comprised of a plurality of information carrying subsignals and a supervisory pilot signal, and means at said receiving terminal for constructively adding like ones of said subsignals which are received on different transmission paths which comprises means for adjusting the phase, amplitude and frequency of the received subsignals such that like subsignals received on different paths are substantially identical, means associated with each of said paths for generating a first electrical quantity whose magnitude is related to the magnitude of noise on that path, means associate with each path for generating a second electrical quantity whose magnitude is directly related to the amplitude of said pilot signal being received on that path, means for forming a sum of like subsignals, means responsive to said first and second electrical quantities for excluding individually from said sum any subsignals being received on a disturbed one of said paths, and means for preventing all of said subsignals from being deleted from said sum simultaneously.

3,099,717
LINE CONCENTRATOR SYSTEM

John A. Harr, Morris Plains, and Terrell N. Lowry, Boonton, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 24, 1959, Ser. No. 861,809
17 Claims. (Cl. 179—18)

1. A telephone line concentrator system including a plurality of lines, a central office, a plurality of office links less in number than said lines extending from said central office, a line concentrator remote from said office for extending calling ones of said lines to said office over said office links under control of said central office, means at said office for interconnecting a calling one of said lines

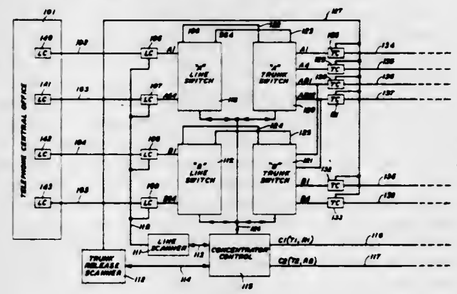


and a called one of said lines over a path through said office including said office links, and a plurality of intraconcentrator links within said concentrator for thereafter interconnecting said lines under control of said central office.

3,099,718
UNIVERSAL LINE CONCENTRATOR

Richard G. Fisher, Birmingham, Mich., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York

Filed May 24, 1960, Ser. No. 31,349
18 Claims. (Cl. 179—18)



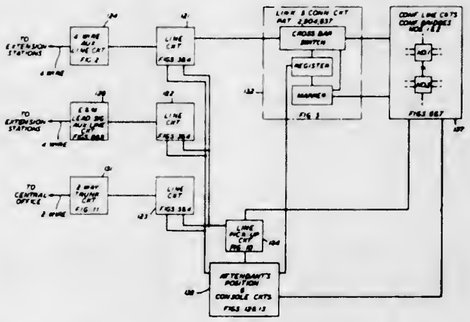
1. In a telephone switching system including a central office having a plurality of subscriber line circuits, the combination comprising a central office concentrating unit; a remote concentrating unit; first and second pluralities of subscriber stations served by and connected to said remote concentrating unit; a source of scanning pulses in said central office unit; first, second, and third pluralities of transmission trunks, together fewer in number than both of said first and second pluralities of subscriber stations interconnecting said central office unit and said remote unit; said first plurality of transmission trunks being connected through said remote unit only to said first plurality of subscriber stations, said second plurality of transmission trunks being connected through said remote unit only to said second plurality of subscriber stations, said third plurality of transmission trunks being connected through said remote unit to both of said first and second plurality of subscriber stations; means interconnecting said central office unit and certain of said subscriber line circuits; scanning means responsive to said scanning pulses for simultaneously determining the supervisory states of said certain subscriber line circuits and first, second, and third pluralities of transmission trunks to said remote unit; and means included in said scanning means for cyclically scanning said first, second,

and third pluralities of transmission trunks a plurality of times for each scanning cycle of said certain subscriber line circuits.

3,099,719
PRIVATE BRANCH EXCHANGE TELEPHONE SYSTEM INCLUDING CONFERENCE FACILITIES

Alexander E. Gerbore, Lynbrook, N.Y., Roger A. Plyer, San Rafael, Calif., and William C. Steger, Jr., Des Plaines, Ill., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 8, 1961, Ser. No. 158,027
8 Claims. (Cl. 179—27.02)



1. In a telephone system, a private branch exchange, an attendant's position at said private branch exchange, a plurality of station lines, a first conference bridge and a second conference bridge, both of said conference bridges being at said same private branch exchange and each of said conference bridges having a plurality of conference lines connected thereto, means under control of said attendant's position for connecting selected ones of said station lines to selected ones of said conference lines connected to said first conference bridge except for an exclusive one of said conference lines and for connecting other selected ones of said station lines to selected ones of said conference lines connected to said second conference bridge except for an exclusive one of said conference lines, and means also under control of said attendant's position for connecting said exclusive ones of said conference lines together to connect said conference bridges in tandem whereby to provide a single conference loop of relatively large capacity.

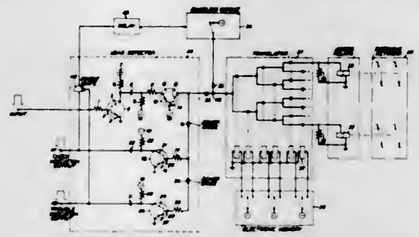
3,099,720
TRANSLATOR CHECKING CIRCUIT FOR TELEPHONE SWITCHING SYSTEM

Manfred R. Gotthardt, Succasunna, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1960, Ser. No. 79,312
12 Claims. (Cl. 179—175.2)

1. A checking circuit for a translator having a common input terminal and a plurality of output terminals with only one of said output terminals connected to said input terminal upon proper operation of said translator comprising load resistance means connected to each of said output terminals, constant current means connected to said input terminal for developing a voltage at said input terminal inversely proportional to the number of said resistance means connected to said input terminal through said translator, first alerting means connected to said input terminal and responsive to said developed voltage at said input terminal exceeding a first predetermined value for indicating the connection of at most one of said output terminals to said input terminal, and second alerting means connected to said input terminal and responsive to said voltage exceeding a second predetermined value for indicating the connection of none of said output terminals to said input terminal.

8. A circuit for checking whether the input resistance between a reference potential and a terminal lies within first and second predetermined values comprising current source means connected between said reference potential and said terminal for controlling a current flow from said source through said resistance to said reference potential, first Zener diode means connected to said terminal and poled to conduct current in the breakdown condition in

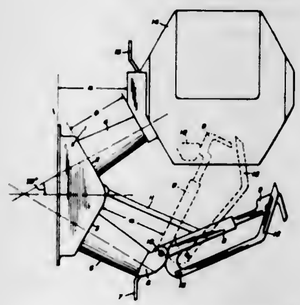


the same direction as current flow from said source responsive to said resistance exceeding said first predetermined value, switching means connected between said reference potential and said first Zener diode means for conducting current responsive to the breakdown of said first Zener diode means, and second Zener diode means connected across said switching means and poled to permit current flow in the same direction as said first Zener diode means, said switching means including means for causing said second Zener diode means to conduct current in the breakdown condition responsive to said resistance exceeding said second predetermined value.

3,099,721
INSULATOR CONSTRUCTION FOR CIRCUIT BREAKERS

Yves Pelenc, La Buisserate-Saint-Martin le-Vinoux, Isere, France

Filed Feb. 24, 1959, Ser. No. 795,122
1 Claim. (Cl. 200—48)



An air break circuit breaker comprising a base housing, a pair of stand-off insulators carried by said housing and extending therefrom in directions inclined respectively above and below the horizontal plane midway between said insulators, the axes of said insulators lying substantially in a common vertical plane; respective fixed and moving cooperating contact elements carried by the outer ends of the respective upwardly and downwardly extending insulators and positioned to define a circuit-breaker region lying vertically between said outer ends; an arc-extinction chamber cantilevered at the outer end of said upwardly extending insulator and surrounding said fixed contact element; the upwardly extending one of said insulators having a terminal face substantially perpendicular to the axis of said insulator; said arc-extinction chamber having at least one corner chamfered to parallel said terminal face, and means connecting said chamfered corner surface to the said terminal face; said one upwardly extending insulator constituting the sole support for said chamber.

3,099,722
FLOATING SUSPENSION INCLUDING SWITCHING MEANS FOR FRICTION ROLLERS

Luis Vila Gracia, 72 Paseo San Juan, Barcelona, Spain

Filed Dec. 19, 1960, Ser. No. 76,728
Claims priority, application Spain Dec. 28, 1959
3 Claims. (Cl. 200—61.41)

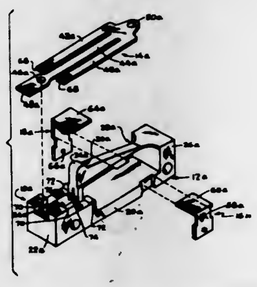


1. In friction rollers comprising a shaft and friction rollers on said shaft, the improvement comprising a floating suspension for one end of said shaft comprising a bearing having a bushing, a support for said bushing, a spiral spring concentric with said bearing whose ends are connected one to said bushing and the other to said support, a first electrical contact ring insulated from and supported by said bushing and a second electrical contact ring insulated from and supported by said support arranged concentrically outside said first ring with an annular space between said two contact rings.

3,099,723
SNAP SWITCH

John O. Roeser, Park Ridge, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Filed Dec. 20, 1961, Ser. No. 160,828
8 Claims. (Cl. 200—67)

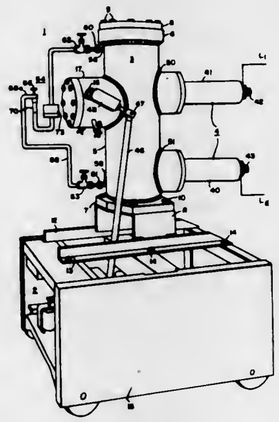


1. A snap switch construction of minimum parts comprising in combination a one piece U-shaped switch body of flexible insulating material having first and second spaced apart substantially parallel portions integrally joined by a bight portion, fixed contact means fixedly mounted on said first portion, integral hinge means formed in said second portion intermediate the free end thereof and said bight portion, and snap action movable contact means having a portion fixed to said first portion of said switch body, means on said second portion of said switch body adjacent the free end and spaced from said hinge means for stressedly mounting another portion of said contact means whereby movement of said free end of said second body portion causes snap action movement of said movable contact means relative to said fixed contact means.

3,099,724
MONITOR SYSTEM FOR CIRCUIT INTERRUPTERS

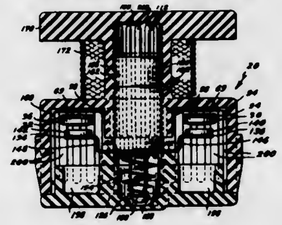
Sheldon D. Silliman, Forest Hills, Pa., and Bernard R. Johnson, Riverdale, N. Dak., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 7, 1960, Ser. No. 74,387
4 Claims. (Cl. 200—81.6)



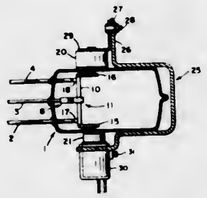
1. In combination, a fluid-flow sulfur-hexafluoride (SF_6) type of circuit interrupter having separable contacts for drawing an arc, and fluid-flow means for extinguishing said arc, and further having the sulfur-hexafluoride (SF_6) fluid in both the liquid and gaseous phases, a liquid-level-detection monitory system having manometric tubing, means for preventing the corrosive effect of the sulfur-hexafluoride (SF_6) fluid upon the manometric tubing including pressure-transmitting insulating control liquid connections to spaced points on said interrupter, said manometric tubing interconnecting said connections, an insulating control liquid within said manometric tubing and connections for transmitting pressure and avoiding contact of the sulfur hexafluoride fluid within such manometric tubing, the control liquid in said liquid connections and tubing being insulating and different from the sulfur-hexafluoride (SF_6) fluid, partition means associated with both said connections for preventing intercommunication between the sulfur-hexafluoride (SF_6) fluid and the insulating control liquid yet transmitting the pressure therebetween, a U-shaped portion of said manometric tubing having mercury therein making contact with the control liquid, an adjustable probe associated with said U-shaped portion, and relay-detection means having said adjustable probe as a portion thereof.

3,099,725
ELECTROMAGNETIC SWITCHING MECHANISM
Aimé J. Grenier, North Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,176
18 Claims. (Cl. 200—87)



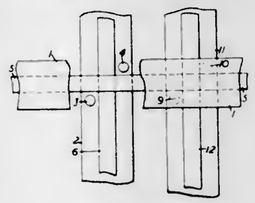
16. An electrical switch comprising a housing having stationary electrical contact means disposed therein; said switch further including an elongated magnetic armature; said switch including means for guiding said magnetic armature for reciprocal movement in said housing; said magnetic armature being interconnected with movable contact means for movement of the latter into and out of engagement with said stationary contact means; a non-magnetic weight member formed separately from and supported on said magnetic armature for movement therewith, said non-magnetic weight member also being movable relative to said armature, said switch further including electromagnetic means for causing movement of said magnetic armature, and said switch including stop means for limiting movement of said non-magnetic weight member relative to said armature.

3,099,726
RELAY
Jo Emmett Jennings, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware
Filed July 15, 1960, Ser. No. 43,081
7 Claims. (Cl. 200—87)



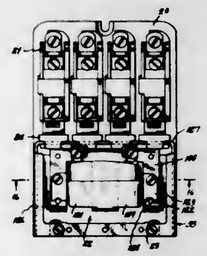
1. In a relay, a rigid switch armature having a longitudinal axis therethrough swingably supported in a free and balanced manner at a point intermediate its ends and connected at said point with an electrical circuit, a first magnet positioned radially outwardly of one end of said armature relative to said point and adapted to attract said one end for urging said armature to swing in one direction about said intermediate point, and a second magnet positioned radially outwardly of the opposite end of said armature relative to said point and adapted to attract said opposite end for urging said armature to swing in the opposite direction, said first and second magnets having their axis therethrough in alignment and lying approximately parallel and adjacent said longitudinal axis through said armature whereby their magnetic field provides a torque action on said armature, a pair of fixed contacts, and a pair of movable contacts respectively mounted on opposite ends of said armature for engagement with said fixed contacts, an evacuated envelope interposed between said magnets and said armature, said armature lying with its longitudinal axis thereof off set to one side of the axis of said first and second magnets and having attached magnetic field responsive members adjacent each end of the armature in a transverse manner to the longitudinal axis of said armature.

3,099,727
MAGNETIC CROSSBAR SWITCH
Svante Lennart Hjertstrand, Hagersten, Sweden, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 22, 1962, Ser. No. 167,506
Claims priority, application Sweden Feb. 1, 1961
8 Claims. (Cl. 200—87)



1. A cross bar switch contact assembly comprising a plurality of flexible contact strips of magnetic material arranged in parallel rows in first and second parallel planes with the contact strips in one plane positioned normal to the strips in the other of said plane, contact means positioned between the contact strips of said planes at each of the crossover points of the contact strips of one plane with the contact strips of the other plane, each of said contact means and adjacent portions of said contact strips defining a separate magnetic circuit, and a selectively energizable operating conductor extending longitudinally of each of said contact strips for generating magnetic flux in the associated contact strip, the generation of magnetic flux in any contact strip in both of said planes energizing the said magnetic circuit at the crossover point thereof to establish electrical connection between the last said contact strips.

3,099,728
ELECTRICAL MULTIPOLE CONTROL RELAYS
John Scheib, Jr., Elmsford, N.Y., assignor to Ward Leonard Electric Co., Mount Vernon, N.Y., a corporation of New York
Filed June 11, 1958, Ser. No. 741,347
12 Claims. (Cl. 200—104)



1. An electrical multipole contact relay comprising an electromagnet having an E-shaped core with two end legs and a center leg, a coil on the center leg, an armature spanning the open end of said legs for actuating a plurality of contacts, a flat steel plate having a generally rectangular shape, two brackets each having a panel extending normal to said plate, pedestals on each bracket

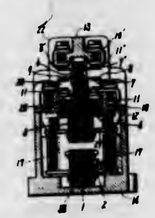
formed as a single piece therewith and having a supporting surface normal to said panels for receiving the E-shaped core for spacing said electromagnet from said plate, said brackets having second surfaces facing one another in spaced relation with said supporting surfaces therebetween, fastening means extending through a respective end leg and a respective pedestal to thread into said plate for securing said core and brackets to said plate.

3,099,729
ELECTRICAL RELAYS
Nick F. Leo, 6058 Mary Ellen, Van Nuys, Calif.
Filed July 26, 1960, Ser. No. 45,471
5 Claims. (Cl. 200—104)



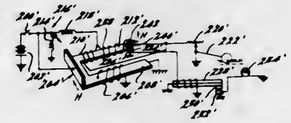
1. An electrical relay comprising a frame, a plurality of electrical switch units mounted side by side on said frame in spaced parallel planes of the frame, an L-shaped switch-operating member having two legs positioned in angularly disposed planes substantially normal to said first-mentioned planes and arranged with one leg opposite one side of said switch units and the other leg opposite another side of the switch units whereby said switch units are positioned between said legs, means pivotally mounting said one leg on the frame for pivoting of the operating member on an axis substantially normal to said first mentioned planes, said other leg comprising approximately parallel, separately bendable switch-operating fingers, each switch unit including a spring-extended button at said other side thereof engaged by the adjacent switch-operating finger, said fingers swinging toward the switch units to depress said buttons against the action of their springs upon pivoting of the operating member in one direction and said fingers swinging away from said switch units to release said buttons for extension by their springs upon pivoting of the operating member in the opposite direction, said fingers being separately bendable toward and away from said switch units to individually adjust the fingers relative to their respective switch buttons, and means for selectively pivoting said operating member to operate said switch units.

3,099,730
MAGNETIC SWITCH
Kazuma Tateishi, 2, 1-chome, Narutaki Harukicho, Ukyoku, Kyoto City, Japan
Filed Oct. 18, 1960, Ser. No. 64,239
3 Claims. (Cl. 200—104)



1. In a magnetic switch, a casing containing an electromagnet, a stationary member attached to and disposed over the casing, a movable member mounted within the stationary member, an upper member mounted above the movable member and fastened to the stationary member, lower stationary contacts mounted on the stationary member, partition walls on said stationary member separating said contacts, said partition walls being provided with vertical grooves at their edges, the stationary member having side walls, one of which is provided with a vertical rib, the movable member carrying movable contacts, partition walls on the movable member separating the movable contacts, the latter walls having vertical grooves in their outer edges, partition walls on the upper member entering the grooves in the partition walls of the stationary and movable members, the upper member having an end wall provided with a vertical rib, and the movable member having end walls provided with vertical grooves which respectively engage with the rib in the end wall of the stationary member and the groove in the end wall of the upper member.

3,099,731
ELECTRICAL CONTROL APPARATUS
Leonard Boddy, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., a corporation of Michigan
Original application Sept. 23, 1955, Ser. No. 536,160. Divided and this application Nov. 3, 1960, Ser. No. 72,265
13 Claims. (Cl. 200—122)



1. An ambient temperature compensated thermally responsive device comprising first and second elongated polymetallic portions, one end of said first portion being joined to one end of said second portion, means fixing the other end of said first portion, said device being characterized in that heat applied to said first portion tends to cause the other end of said second portion to deflect in one direction and heat applied to said second portion tends to cause said other end thereof to deflect in a direction opposite to said one direction, said first and second portions having similar temperature-deflection characteristics so that equal heating of both of said portions will produce substantially no movement of said other end of said second portion, a pair of electrical contacts controlled by said portions, means for initially operating said device and then releasing it and then holding it in a released state comprising first and second separate means for separately heating said first and second portions, one of said separate means initially heating one of said portions faster than the other one of said portions to actuate said electrical contacts, means effective upon actuation of said electrical contacts to deenergize said one of said separate means to deactuate said contacts, and means comprising the other one of said separate means and the other one of said portions for thereafter holding said electrical contacts deactuated in spite of the reenergization of said one of said separate means.

3,099,732
ELECTRICAL CONTROL DEVICE
Frederick G. Perry, Barrington, R.I., and Aimé J. Grenier, North Attleboro, and John J. Wilson III, Attleboro, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed May 31, 1961, Ser. No. 113,847
21 Claims. (Cl. 200—122)

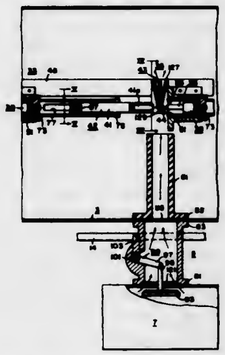
1. A thermostatic switch comprising a base; a first electrically conductive terminal mounted on said base;

said terminal providing a first electrical contact; a second electrically conductive terminal mounted on said base in electrically insulated relation therewith; a composite snap-acting thermally responsive element electrically connected to and cantilever mounted on a portion of said second terminal; said element mounting a movable electrical contact for movement toward and away from engagement with said first contact in response to movement of said thermally responsive element; said element including a non-developable portion responsible for its snap action; manually operable resetting means movably mounted on said base and positioned intermediate said base and element; said resetting means being movable from a contacts-closed position to a resetting position; said



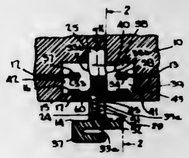
resetting means in the resetting position preventing said movable contact from moving into engagement with said first contact; spring means urging said resetting means for movement from the contacts-closed to the resetting position; said resetting means being inoperative to move to the resetting position until after said movable contact moves out of engagement with said first contact; said second terminal including a member overlying at least a part of said non-developable portion; means on said member engageable with said nondevelopable portion tending to inhibit said thermally responsive element from moving to a contacts-open position prior to the occurrence of snap action; said last-named means also being movable with respect to said non-developable portion to effect calibration of said element.

3,099,733
CIRCUIT INTERRUPTER
James L. Ridings, Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 19, 1959, Ser. No. 854,127
13 Claims. (Cl. 200—145)



1. A fluid-blast circuit interrupter comprising, in combination, an exhaust tank, an elongated arc-extinguishing assemblage supported within said exhaust tank, said arc-extinguishing assemblage including a plurality of serially related arc-extinguishing units, each of said arc-extinguishing units comprising arc-splitter means for breaking up an arc to effect extinction of the arc, means for simultaneously drawing a plurality of serially related arcs along the assemblage one within each arc-extinguishing unit, a source of high-pressure gas, a separate blast valve associated with each arc-extinguishing unit and operable to direct a blast of gas crosswise toward the arc established within that unit to force the arc into the associated arc-splitter means, and means for effecting simultaneous actuation of the blast valves.

3,099,734
ELECTRICAL RELAY
John Scheib, Jr., Elmsford, N.Y., assignor to Ward Leonard Electric Co., Mount Vernon, N.Y., a corporation of New York
Filed Mar. 24, 1960, Ser. No. 49,793
1 Claim. (Cl. 200—166)



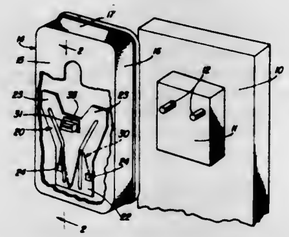
In an electrical switch having two laterally spaced fixed contacts and a movable contact bar having two contacts for engaging a respective fixed contact and transferring current therebetween on engagement, a casing supporting said fixed contacts in laterally spaced relation, a contact carrier mounted in said casing betwen said fixed contacts to move in relation to said fixed contacts and having outer side surfaces, said contact carrier having a slot extending laterally therethrough and extending longitudinally therein to permit longitudinal movement of said bar, resilient means urging said contact bar against the end of said slot, said bar having side edges extending longitudinally to the common center line of said contacts and notches in said edges for engaging said outer side surfaces to laterally position said bar on movement in said slot, said outer side surfaces having portions sloped at an angle to the longitudinal axis of said contact carrier adjacent to a respective slot and only adjacent the end of a respective slot engaged by the movable contact bar on full expansion of said resilient means for engaging said contact bar on movement in a respective slot to move the contact bar transversely to the longitudinal movement to wipe said contact of the movable bar across the fixed contacts on engagement and disengagement of the movable contact bar with the fixed contacts.

3,099,735
ADJUSTABLE SWITCH BLOCK ASSEMBLY
John O. Roeser, 2501 N. Keeler Ave., Park Ridge, Ill.
Filed Dec. 20, 1961, Ser. No. 160,827
8 Claims. (Cl. 200—166)



1. A switch comprising integral body means formed of tough moldable insulating material, said body means having a rigid portion and a relatively flexible portion integral therewith, electrical contact means mounted on said rigid portion of said body means and adapted to be spaced a predetermined distance from an actuator, means for fixedly mounting said flexible portion to a support, and means for adjusting the relative position of said rigid body portions as a unit relative to said support whereby adjustment of said rigid body portion changes the predetermined spacing of said contact means relative to said support.

3,099,736
COVER RESET MECHANISM
Dale F. Willcox, Aurora, Ill., assignor to Furnas Electric Company, Batavia, Ill., a corporation of Delaware
Filed Sept. 24, 1959, Ser. No. 842,026
4 Claims. (Cl. 200—172)



1. In switch resetting mechanism, the combination with a cover for a switch housing and wherein the switch within the housing has a resetting plunger, of a retaining bracket providing a pair of spaced flanges, said bracket being releasably carried by the cover by having the body portion of the bracket in contact with the outside surface of the cover and with the flanges extending through openings in the cover, whereby the flanges project inwardly toward the switch within the housing, a flat plate member supported by the flanges of the retaining bracket in a manner permitting limited pivotal movement of the plate member about an axis transversely of the plate member and adjacent the lower end thereof, an arm provided by the plate member at the upper end thereof and which is aligned with the resetting plunger, resilient spring means releasably fixed to and carried by the said inwardly projecting flanges at locations inwardly beyond the pivot axis, whereby the resilient means applies a resilient compressive force against the plate member to yieldingly hold the plate member in flat contact with the inside surface of the cover, and actuating means extending exteriorly through an opening in the cover for effecting pivotal movement of the plate member whereby to actuate the resetting plunger.

3,099,737
INSTANTANEOUS ELECTRIC WATER HEATERS
Irving Naxon, 3003 W. Jarvis Ave., Chicago 45, Ill.
Filed Mar. 10, 1960, Ser. No. 14,142
2 Claims. (Cl. 219—38)



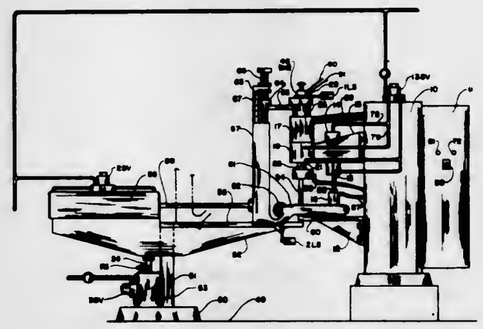
1. In an electric water heater, a water supply source, an electrical supply source, both sources possessing a common electrical ground, a water outlet, a section of water-conveying tubing disposed between said water supply source and outlet for heating the water passing through said section, the latter being made of water-pressure resisting electrical insulating material and threaded at the ends, plugs opposite the latter and formed with water passages, an electric heater in electrical connection with said electrical supply source comprising a twisted spiral ribbon of resistance wire extending lengthwise through the interior of said tubing and in direct contact with the water flowing therethrough and attached endwise to said plugs, and couplings between the section of the tubing and the water supply and outlet respectively, said couplings having inner cup portions seating said plugs and screwed on said ends to fasten the plugs to the same, and outer neck portions receiving said water supply and outlet respectively.

3,099,738
SAW REPAIR APPARATUS
John M. Sadowski, 1119 N. Pulaski Road, Chicago 51, Ill.
Filed Mar. 7, 1961, Ser. No. 93,974
3 Claims. (Cl. 219—85)



1. For use with a band saw welder having a pair of electrode jaws biased toward each other in a substantially horizontal plane, a circular saw repairing fixture comprising an arm supported in a substantially horizontal plane and spaced horizontally away from the jaws in general alignment therewith and having an elongated slot generally parallel to the plane of movement of the jaws, a first electrode connected to one jaw and having an arcuate contour for substantially complementally fitting within a fillet of a tooth to be repaired, a second electrode having a saw tooth-engaging beveled contact edge to engage opposite said first electrode.

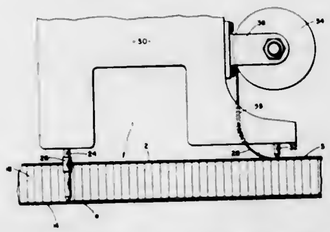
3,099,739
MAGNETIC FORCE WELDERS
Arthur W. Schueler, Cincinnati, Ohio, assignor to Precision Welder and Flexopress Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed May 31, 1961, Ser. No. 126,748
13 Claims. (Cl. 219—86)



1. An electrode positioner and magnetic force producing mechanism for resistance welders, including two cooperating parts, one a support and the other a reciprocable electrode actuating member carried by the support, an electro-magnetic actuating element mounted on one of said parts and an armature element mounted on the other of said parts, said actuating and armature elements being disposed to provide an air gap therebetween, an actuator support, and an actuator on the support, effective to shift one of said elements with respect to its supporting part to determine the amount of said air gap, in which an electrode having a work engaging tip is mounted on the electrode actuating member, and in which there are means

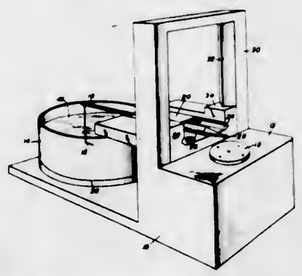
mounting the actuator support for reciprocation in parallelism with the electrode actuating member, and an electrode tip engaging means is coupled with the actuator support, whereby to maintain a constant relationship between the electrode tip and the actuator support irrespective of the over-all length of the electrode.

3,099,740
WELDED JOINT AND METHOD FOR MAKING SAME
Roderick G. Rohrberg, Inglewood, Calif., assignor to North American Aviation, Inc.
Filed Nov. 3, 1961, Ser. No. 150,009
14 Claims. (Cl. 219—125)



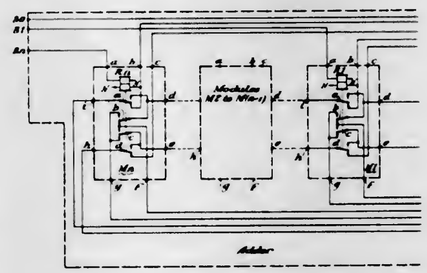
1. A method of applying heat progressively along a desired path at a workpiece location obstructed by a structural surface comprising; providing a relatively small aperture in said surface, extending elongate heating means through said aperture whereby said heating means applies heat to said location when energized, and moving said heating means along said path.

3,099,741
ELECTRICAL ANALOGUE
George B. Bush, Trotter Road, Clarksville, Md., and Lawrence J. Viernstein, 4404 Ambler Drive, Kensington, Md.
Filed Jan. 27, 1959, Ser. No. 789,376
17 Claims. (Cl. 235—61.6)



1. In an electric analogue device, in combination a symmetrical field tank containing electrolyte, a storage array submerged in said electrolyte, a voltage divider having a variable tap intermediate the ends thereof, the ends of said voltage divider being connected one to said storage array and one to the walls of said symmetrical field tank to provide a potential difference between said storage array and said field tank and thereby set up equipotential surfaces in said electrolyte, as a function of said storage array, a servo-amplifier connected at one of its input terminals to said variable tap to provide a reference potential for said amplifier and a voltage sensing means connected to the other input terminal of said amplifier whereby an error signal is generated across said input terminals of said amplifier having a magnitude proportional to the position of said voltage sensing means with respect to the particular equipotential surface defined by a preselected value of said reference potential and a servomotor actuated by the output of said amplifier and mechanically connected to said voltage sensing means to reposition said voltage sensing means and hold it on said particular equipotential surface.

3,099,742
DIGITAL FLOW COMPUTER EMPLOYING A LOGARITHMIC MODE OF COMPUTATION
Joseph F. Byrne, O'Hara Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Mar. 13, 1959, Ser. No. 799,155
27 Claims. (Cl. 235—150)



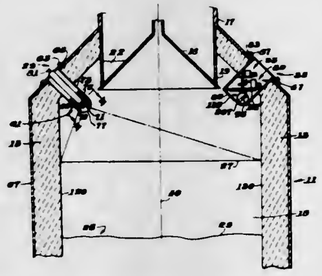
1. A flow computer for computing fluid flow in accordance with the equation $Q=C\sqrt{DS}$, where Q is the rate of flow, D is the differential pressure across an orifice in a conduit in which the fluid is flowing, S is the static pressure in the conduit, and C is an orifice coefficient, comprising, in combination, first, second and third logarithm generators for producing outputs in accordance with the logarithms of an applied input signal, means for applying a signal in accordance with C to said first logarithm generator, means for applying a signal in accordance with D to said second logarithm generator, means for applying a signal in accordance with S to said third logarithm generator, first adder means controlled by the outputs of said second and third logarithm generators for producing an output in accordance with one-half the sum of their outputs, second adder means controlled by said first adder means and said first logarithm generator for producing an output in accordance with the sum of their outputs, an anti-logarithm generator for producing an output in accordance with the anti-logarithm of an applied input, and means connecting the output of said second adder to control said anti-logarithm generator, whereby the output of said anti-logarithm generator varies in accordance with Q.

3,099,743
COMBINED ELECTRON PROBE MICROANALYZER AND X-RAY DIFFRACTION INSTRUMENT
Takeo Ichinokawa, 35—304 Yirgaoka-Danchi, 716 Takaishi, Kawasaki-shi, Kanagawa-ken, Japan
Filed July 5, 1962, Ser. No. 207,558
Claims priority, application Japan July 7, 1961
3 Claims. (Cl. 250—51.5)



1. An electron probe microanalyzer and X-ray diffraction instrument, comprising:
an electron source and lens system for projecting an electron beam onto a specimen for causing the specimen to emit X-rays;
means for detecting the emitted X-rays;
a specimen holder;
a target film capable of emiting X-rays when struck by an electron beam;
means for removably positioning said target film between said lens system and said specimen holder whereby said specimen may selectively be bombarded by X-rays emitted from said target film;
an X-ray photographic film and means for removably positioning said photographic film for receiving back reflected X-rays from said specimen whereby a photograph of the X-ray diffraction pattern of said specimen may be obtained.

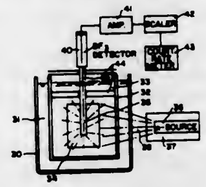
3,099,744
APPARATUS FOR MEASURING THE HEIGHT AND CONTOUR OF MATERIAL
Robert B. Spooner, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 861,019
7 Claims. (Cl. 250—71.5)



1. Apparatus for determining the elevation and contour of the irregular surface of a furnace charge comprising:
(*a*) means position above said surface for irradiating a narrow zone of the surface,
(*b*) rotatably mounted detecting means positioned above said surface for responding to scattered radiation,
(*c*) first means connected to said detecting means for rotating said detecting means in a substantially horizontally plane,
(*d*) second means connected to said detecting means for rotating said detecting means in a substantially vertical plane,
(*e*) control means connected to said second means for maintaining said detecting means directed at said narrow zone during simultaneous rotation of said detecting means by said first means, and
(*f*) means connected to said control means for translating the rotational movements of said first and second means into a measurement of the elevation and profile of said narrow zone.

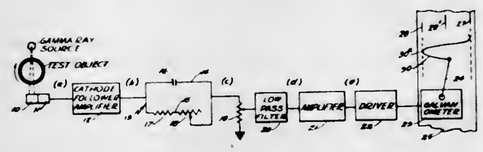
3,099,745
TEMPERATURE MEASURING METHOD AND APPARATUS
Lyle B. Borst, Ossining, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,323
9 Claims. (Cl. 250—83.1)

1. Apparatus for measuring the temperature of a substance, comprising means for generating and introducing neutrons into the substance, said substance having a well in non-registered relation to the introduced neutrons, a narrow collimating system in registration with the well for passing only those neutrons that emerge from deep



within the well and for arresting other neutrons, and means for detecting and determining the energy of those neutrons that traverse the collimating system.

3,099,746
THICKNESS MEASURING APPARATUS UTILIZING GAMMA RADIATION
William T. Walters, Houston, Tex., assignor to Tuboscope Company, Houston, Tex., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 843,004
11 Claims. (Cl. 250—83.3)



1. In a device for determining the wall thickness of a tubular member, the combination of
a penetrating ray source disposed outside said tubular member to direct a penetrating ray diametrically through the tubular member,
detector means disposed on the opposite side from said source in the path of said ray and operative to produce a signal having both A.C. and D.C. components which signal is a function of the strength of the ray,
said source and detector means being disposed for relative rotation with respect to said tubular member about the axis of the tubular member,
circuit means operably connected to said detector means and effective to modify by the factor of three the relative amplitude of the D.C. and the A.C. components in the direction of reduction of the amplitude of the D.C. relative to the A.C., whereby the same amplitude of said D.C. and A.C. components become indicative of the same wall thickness, and
means for indicating the resulting signal derived from said circuit means.

3,099,747
X-RAY APPARATUS WITH AUTOMATIC SHUTTER CONTROL MEANS
Eugene P. Thomas and Robert L. Guentner, Catonsville, and Everett W. Vaughn, Ellicott City, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 7, 1960, Ser. No. 20,711
2 Claims. (Cl. 250—105)

1. X-ray apparatus comprising an X-ray table top for support of an object undergoing X-ray examination, an X-ray source beneath said table top, collimator means adjustable for varying the size of an aperture defining and directing an X-ray beam from said source through said table top, a tower extending above said table top, an image producing member vertically movable along said tower and extending over said table top in the path

of said X-ray beam, an operator's control element mounted adjacent to said image producing member and having positions corresponding to desired dimensions of the X-ray beam as intercepted by said image producing member, a sheathed push-pull wire extending from said operator's control element and along said tower to the vicinity of said adjustable collimator means, automatic control means responsive to vertical movement of said

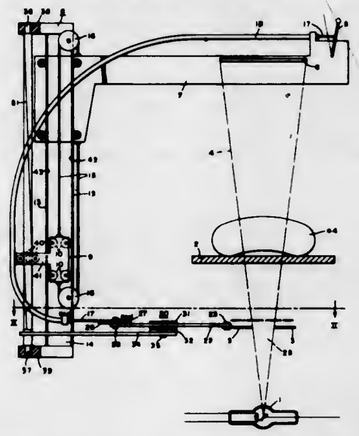
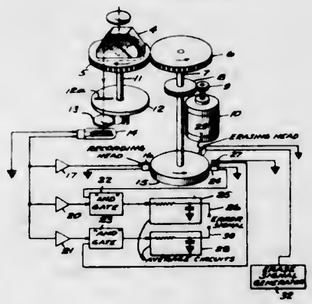


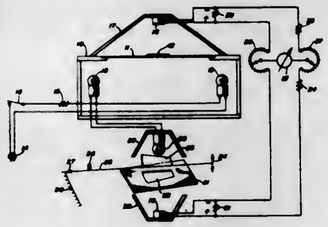
image producing member along said tower, and linkage means operatively connected to said collimator means and operably connected to both said push-pull wire and to said automatic control means to maintain the size of said beam as intercepted by said image producing member constant in accord with preselected positions of said operator's control element irrespective of movement of said image producing member different distances away from said X-ray source.

3,099,748
PHOTOSENSITIVE DEVICE FOR MEASURING ROTATION ABOUT A LINE OF SIGHT TO THE SUN
Marvin Weiss, Pearl River, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed May 23, 1961, Ser. No. 112,094
6 Claims. (Cl. 250—203)



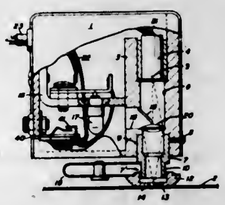
1. A device for measuring the rate of rotation about a line of sight, comprising a circular scanning optical system, a recorder, operative means for synchronously driving together at a preselected relative angular speed of rotation said optical system and said recorder, a single light responsive generating component arranged to receive the optical output of said system, said recorder having a recording head connected to said component, a read-out head in close proximity to said recorder, and means for producing an output voltage whose magnitude is governed by the relative phase of the instantaneous output of said component and the output of said read-out head.

3,099,749
PHOTOELECTRIC DEVICE FOR MEASUREMENT OF AREAS
Alexander T. Williams, 829 Shackamaxon Drive, Westfield, N.J.
Filed July 12, 1961, Ser. No. 123,509
9 Claims. (Cl. 250—210)



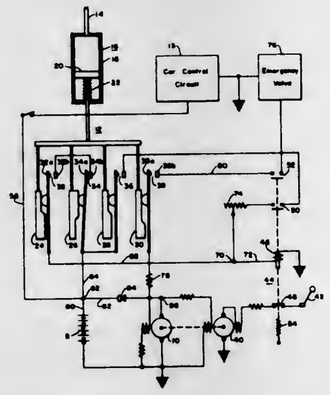
1. A device for measuring the area of an opaque, flat specimen comprising a housing carrying a plurality of lamps spaced from a light-permeable plate which constitutes a support for the specimen; a first self-generating photocell spaced from the center of the plate and illuminated by light rays emerging from the plate; a first resistor connected across the first photocell; a second self-generating photocell spaced from a mask having an aperture formed therein; a second resistor connected across the second photocell; a third and a fourth resistor; circuit elements connecting the said four resistors to form a balanced electrical network; a lamp illuminating the second photocell through the said aperture; means for energizing all of the said lamps from a voltage source having a predetermined voltage; a pivotally-mounted arm having an opaque vane secured thereto, said vane adapted to reduce the effective size of said aperture upon pivotal movement of the said arm; a scale calibrated in units of area and cooperating with the free end of the said arm; and means for balancing the electrical network when the specimen is not positioned on the said plate and the free end of said arm is aligned with the zero mark on the scale.

3,099,750
HOUSING FOR PHOTOELECTRIC SENSING UNIT
Richard J. Swarthout and Ralph E. Klauss, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Aug. 9, 1961, Ser. No. 130,402
4 Claims. (Cl. 250—239)



1. A photoelectric unit for sensing the light reflecting properties of a surface to be inspected comprising a generally light-tight housing, a light source and a photocell mounted within said housing with said photocell shielded from direct light from said source, means including a tubular member providing a passageway for light through one wall of said housing, a presser foot and means resiliently mounting said presser foot adjacent the outer end portion of said tubular member for limited movement axially thereof, said presser foot having a portion loosely telescopically receiving said outer end portion of said tubular member and having an opening through its end wall in substantially axial alignment with said passageway, said presser foot mounting means resiliently biasing said presser foot in an axial outward direction relative to said tubular member and means for directing light from said source outwardly through said passageway and opening onto a surface to be inspected and such of said light as is reflected by said surface back through said opening and said passageway and onto said photocell.

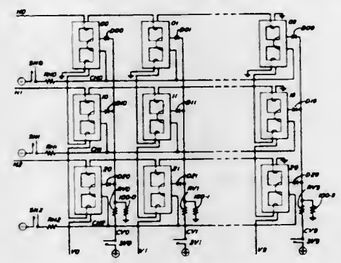
3,099,751
MOTOR GENERATOR SET CONTROL SYSTEM
George R. Purifoy, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1959, Ser. No. 836,978
6 Claims. (Cl. 307—9)



6. A voltage supply system for a vehicle comprising a motor-generator set, a battery in circuit with said generator and charged thereby, an air brake emergency valve connected to the output of said generator, spring closed contact means including coil means for opening said contact means when said coil means is energized, said motor being connected to a power supply through said spring closed contact means, normally open contact means connecting said output to said emergency valve, fluid pressure actuated relay means including cam actuated contacts operable in a predetermined sequence, responsive to an air-brake emergency operation for energizing said coil means to open said spring closed contact means and for closing said normally open contact means, said fluid pressure actuated relay means being responsive to insufficient pressure in the emergency air-brake line to rapidly reopen said normally open contact means and to deenergize said coil means for said spring closed contacts when said battery voltage drops to a value below a preselected value.

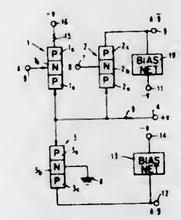
3,099,752
MATRIX SWITCH UTILIZING MAGNETIC STRUCTURES AS CROSSPOINTS
Edward E. Schwenzfeger, Bayside, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 4, 1958, Ser. No. 771,924
9 Claims. (Cl. 307—88)

1. A martix switch having a plurality of crosspoints arranged into columns and rows, each of said crosspoints comprising a magnetic element having a first and a second signal winding which are normally not flux connected, a clamping winding on each crosspoint effective when current flows therethrough to link the two signal windings of its crosspoint fluxwise, means for connecting the first signal windings of all crosspoints common to a row in series between ground and a signal lead individual



to each row, means for connecting the second signal windings of all crosspoints common to a column in series between ground and a signal lead individual to each column, means for effecting a current in only the clamping winding of a selected crosspoint whereby the signal lead for the row in which said selected crosspoint is located is connected signalwise with the signal lead of the column in which said selected crosspoint is located.

3,099,753
THREE LEVEL LOGICAL CIRCUITS
Martin S. Schmookler, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 14, 1960, Ser. No. 22,289
12 Claims. (Cl. 307—88.5)

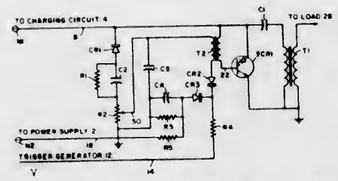


1. A logical block comprising, a constant current source, first, second and third transistors, each having emitter, base, and collector elements, means connecting all of said emitters to said constant current source, means for applying an input signal to the base of said first transistor, said input signal varying between a first voltage level at which said transistor is non-conducting and a second voltage level at which said transistor is conducting, means for applying an input signal to the base of said second transistor, said signal varying between said first voltage level at which said second transistor is cut off and a third voltage level which tends to render said transistor more conductive than said second voltage level, means coupling the base of said third transistor to a fixed voltage level at which said third transistor will be rendered conductive when both said first and second transistors are rendered non-conductive, and means to derive an output from said first and third transistors.

3,099,754
MAGNETIC MODULATOR WITH TIME JITTER COMPENSATION FOR GENERATED PULSES

Martin L. Jones and Jimmy M. Horner, both of Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 31, 1961, Ser. No. 113,711
8 Claims. (Cl. 307—88.5)

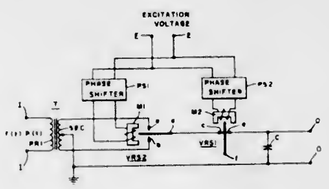


1. In a modulator driven by an energy source and operative to provide output pulses of a constant repetition rate, the combination of: storage means responsive to be charged to an energy level dependent upon the output of said energy source; semiconductor switching means responsive upon receiving a trigger pulse to discharge said storage means, said switching means having the characteristic that its switching time is inversely proportional to the amplitude of said trigger pulse; amplitude control means operative to vary the amplitude of said trigger pulse applied to said switching means in response to variations in the output of said energy source; and utilization means operative to provide a discharge path for said storage means.

3,099,755
MOMENTARY ELECTRICAL CONTACT APPARATUS

Allan I. Bennett, Jr., Franklin Township, Westmoreland County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 7, 1960, Ser. No. 20,713
12 Claims. (Cl. 307—113)

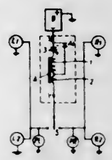


1. In combination, a plurality of vibrating reed type switches each comprising a vibrating reed contact and a set of flexible contacts, means for applying an alternating current signal in series with said flexible contacts, means for magnetically driving each reed contact into vibration at different frequencies, said flexible contacts of each said switch being adjusted to make electrical contact together for a time duration slightly longer than half the time of its associated reed contact vibration period, each said vibrating reed contact altering the continuity of said alternating current signal across is associated set of flexible contacts as the reed contact goes through its neutral position, said plurality of switches effecting short momentary changes in the continuity of said alternating current signal at a frequency equal to the greatest common divisor of the driving frequencies.

3,099,756
CURRENT PULSING CIRCUIT WHICH IS SENSITIVE TO CURRENT CHANGES

Vincent Hamilton Penfold and Reginald Ernest Ireland, Southwick, England, assignors to William Edward O'Shei, Harlington, England

Filed May 6, 1960, Ser. No. 27,323
Claims priority, application Great Britain May 22, 1959
5 Claims. (Cl. 307—132)



1. A pulsing device comprising a relay having a starting winding of low resistance and a delay winding of relatively high resistance and a pair of normally closed relay contacts, a condenser, and two terminals for connecting the device in series with the load to be pulsed, wherein the starting winding is connected in series with the relay contacts to form a starting circuit connected between the two terminals, and the delay winding is connected in series with the condenser to form a delay circuit which is shunted across at least that part of the starting circuit which includes the relay contacts, the two windings being so connected that a current discharge from said condenser through the delay winding, when the armature contacts are closed, causes the delay winding to produce a field in opposition to the field produced by the starting winding by a current in the starting circuit which flows through the relay contacts in the same direction as said discharge current.

3,099,757
RATCHET TYPE SELECTOR SWITCHES

Bloomfield James Warman, London, England, assignor to Associated Electrical Industries Limited, London, England, a British company

Filed Feb. 18, 1960, Ser. No. 9,475
Claims priority, application Great Britain Feb. 26, 1959
2 Claims. (Cl. 307—141.4)

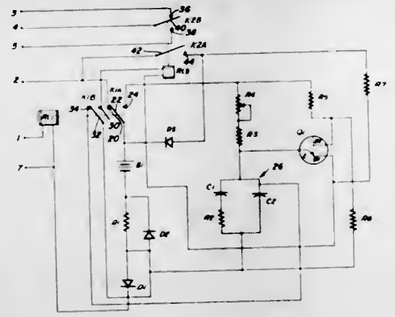


1. In combination:
a source of continuous potential;
a ratchet operated selector switch including a plurality of contact banks each having a first contact and succeeding contacts at least one of which contacts is marked by the absence of said potential, said contact banks having thereon cooperating wipers, said contact banks including a control bank;
a ratchet operating electromagnet for effecting actuation of said wipers, said electromagnet having an energizing coil therefor;
a transistor blocking oscillator constituting a stepping circuit for said wipers and comprising a transistor having a collector-emitter circuit including said energizing coil, a base circuit including regenerative feedback means from said collector-emitter circuit, and a further independent base circuit including a base connection to the wiper of said control bank;
and means for applying to said first contact when initially engaged by the wiper of the respective control bank and to said number of succeeding contacts therein said continuous potential from said source over said wiper and base connection to initiate conduction of the transistor and to effect a resultant sequence of blocking oscillator actions in said transistor blocking oscillator by which the electromagnet energizing coil is repeatedly energized with resultant stepping of the selector switch until the control bank wiper reaches said contact marked by the absence of said potential.

3,099,758
SELF-POWERED INTERVAL TIMER

Joseph W. Pieczynski, Baltimore, Md., assignor to Electronic Products Corp., Baltimore, Md., a corporation

Filed Sept. 16, 1960, Ser. No. 56,487
16 Claims. (Cl. 307—141.8)



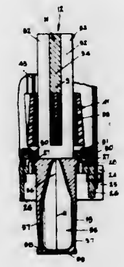
1. In combination with an interval timer circuit, power supply means therefor including a rechargeable battery connected in series with a normally closed first switch section and a rectifier, a pair of external supply terminals, said battery, first switch section and rectifier being connected across said external supply terminals for constantly recharging said battery, and means operatively connected to one of said pair of external supply terminals and responsive to the application of a starting pulse to open said first switch section and close a normally open second switch section connecting said battery across the timer circuit for discharge only during the predetermined timing interval, said starting pulse responsive means including a first relay coil, said first switch section movable to an open position in response to the energization of said first coil for disconnecting said battery from one of said pair of external supply terminals, said second switch section movable to a closed position in response to the energization of said first coil for connecting said battery to the timer circuit.

3,099,759
SONIC TREATING APPARATUS

James W. McAnley, Toledo, Ohio, assignor to Libbey-Owens Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Original application Mar. 18, 1957, Ser. No. 646,691. Divided and this application May 4, 1959, Ser. No. 810,820
10 Claims. (Cl. 310—26)

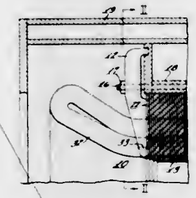
1. In sonic energy generating apparatus comprising a plurality of magnetostrictive transducers arranged in side-by-side relation, each transducer including a core, polarizing means and a metallic acoustical directive member secured to the core and extending therefrom in substantial alignment with the major direction of magnetostrictive movement of the core, a member having high insulation properties provided with an elongated opening for removably receiving the cores of the transducers therein when said transducers are in said side-by-side arrangement, and an inductively wound coil of wire embedded in said member encircling the cores of the several transducers.



3,099,760
STATOR CORE SHIMS ON DYNAMOELECTRIC MACHINES

Jack H. Hoffmann, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Nov. 29, 1961, Ser. No. 155,577
9 Claims. (Cl. 310—217)



1. Shims for a core of a dynamoelectric machine comprising: a flat T-shaped member having a stem and a crossbar, a flat U-shaped member having a pair of spaced apart legs connected at one end, said members being adapted to be positioned adjacent the end of the core with the free ends of said legs of said U-shaped member overlapping said crossbar of said T-shaped member, and with said stem of said T-shaped member fitting intermediate said legs of said U-shaped member.

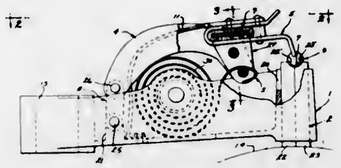
3,099,761
BRUSH HOLDER CONSTRUCTION FOR DYNAMO ELECTRIC MACHINES

Theodor Gutberlet, Giessen, Germany, assignor to Schunk & Ebe G.m.b.H., Giessen, Germany, a corporation of Germany

Filed May 31, 1960, Ser. No. 33,057
9 Claims. (Cl. 310—246)

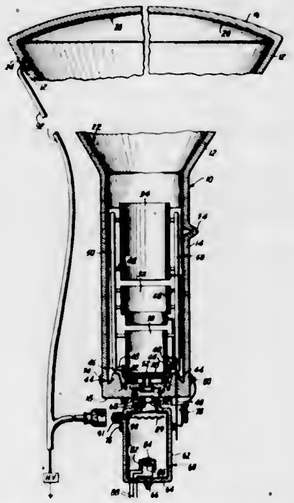
1. A brush construction to urge a brush into engagement with a commutator and the like, and including, a holder to shiftably carry and to guide the brush, a link pivoted on the holder laterally of the brush, a thrust lever pivotally carried on the link and supporting an insulated thrust member mechanically and electrically con-

tacting the brush, bias means acting on the thrust lever and said member to move the brush as it wears, and the



brush current being conducted by an electrical shunt extending from the thrust member.

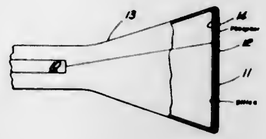
3,099,762
CATHODE RAY TUBE USING REPLACEABLE CATHODE
Michael Hertz, 6726 14th Place NW., Washington 12, D.C.
Filed Jan. 15, 1962, Ser. No. 166,162
5 Claims. (Cl. 313—74)



1. In a cathode ray tube, an evacuated envelope having an electron permeable window, a control grid within the envelope in the path of movement of electrons entering the envelope through the window, beam forming, focusing and electron accelerating electrodes within the envelope, a target supported by the envelope against which the electrons impinge, a cooperating evacuated tube having an electron permeable window and means therein for generating an electron beam and propelling the same through the window, and means detachably coupling the tube to the envelope with the windows in registration with each other.

3,099,763
CATHODE RAY TUBE WITH SILICA COATED PHOSPHOR SCREEN
Charles Harold Raymond Gentry, Carshalton, and Reginald Charles Oldfield, Mitcham, England, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 30, 1956, Ser. No. 562,340
Claims priority, application Great Britain Feb. 1, 1955
2 Claims. (Cl. 313—92)

1. A cathode-ray tube comprising an electron-receiving, phosphor screen, means for producing and directing an electron beam at said phosphor screen to impinge on a surface thereof, and a layer of exposed silica on said surface of the screen and directly impacted by the beam



to enhance the production of secondary electrons, said silica-coated screen having a secondary emission coefficient in excess of unity.

3,099,764
PHOTOMULTIPLIER TUBE
Arthur F. McDonie and Robert M. Matheson, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 5, 1960, Ser. No. 27,066
1 Claim. (Cl. 313—95)

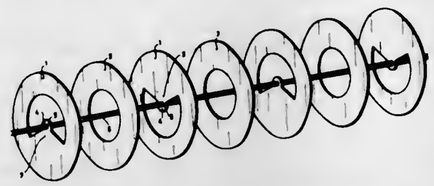


A photomultiplier tube comprising an elongated evacuated envelope, a photoemissive cathode on the inner surface of one end of said envelope, a tubular cup shaped shield spaced from said cathode and having a central aperture in the base thereof, a tubular dish shaped focus ring positioned within said shield and having a central aperture, said central apertures being in alignment, a plurality of elongated electron multipliers being positioned to receive electrons from said cathode through said central apertures, the vertical projection of the aperture in the base of said tubular shield enclosing only the first of said electron multipliers, a pair of electrically insulating support members positioned adjacent to the ends of said electron multipliers, an imperforate multiplier cage shield extending around all of said electron multipliers and between and supported by said support members, said cage shield being spaced from each of said electron multipliers a distance less than the length of the shortest of said multipliers, and said cage shield being connected to said tubular shield.

3,099,765
TRAVELLING WAVE TUBE
Paul Meyerer, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed Sept. 12, 1960, Ser. No. 55,222
Claims priority, application Germany Dec. 3, 1959
2 Claims. (Cl. 315—3.5)

1. A travelling wave tube having a delay line comprising a stacked assembly composed of first disklike plates made of magnetically soft material and having respectively a rotation-symmetrical inner aperture formed therein alternating with second disklike plates made of non-magnetic material and having respectively a rotation-asymmetrical inner aperture formed therein, each

of said second plates having a central opening formed therein, said openings forming in the assembly a centrally



extending bore through which an electron beam is guided in focused manner by a homogeneous magnetic field.

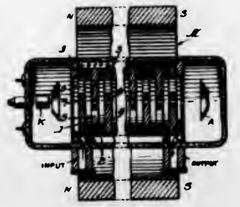
3,099,766
HIGH CAPACITY TRAVELLING WAVE TUBE FOR AMPLIFYING ULTRA HIGH FREQUENCIES
Werner Veith and Paul Meyerer, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed Oct. 30, 1961, Ser. No. 148,656
Claims priority, application Germany Nov. 2, 1960
9 Claims. (Cl. 315—3.5)



1. A high capacity travelling wave tube, especially for amplifying ultra high frequencies, with purely electrostatic focusing of the electron beam, wherein the electron beam which is guided about the tube axis upon a helical path, enters into reciprocal action with an electromagnetic wave propagated along such path, said wave spreading with azimuthal delay upon a helically extending hollow delay line structure provided with periodic breaks formed at least in the wall parts thereof facing the tube axis, in the space between a metallic structure, forming an outer electrode, the latter and the delay line extending helically in mutually parallel relation about the tube axis with the outer electrode electrically separated from the delay line structure and wall parts of the delay line structure, forming an inner electrode, said delay line forming a part of a hollow cylindrical metal structure which, jointly with the delay line structure, surrounds the outer electrode.

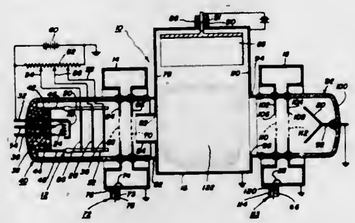
3,099,767
DELAY LINE FOR TRAVELING WAVE TUBES
Franz Gross, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed June 1, 1959, Ser. No. 817,160
Claims priority, application Germany June 3, 1958
12 Claims. (Cl. 315—3.6)

1. A delay line for a traveling wave tube having a wave guide of circular cross sectional configuration, comprising a plurality of transverse webs extending, as viewed in longitudinal direction, alternately to opposite wall portions into the reciprocal space between a wave on the line and an electron beam permeating the delay line and being substantially equally spaced apart, said transverse webs passing electrically conductively into the wave guide wall and respectively occupying an area corresponding substantially to one-half of the aperture cross section of the wave guide, said delay line comprising two types of sheet members, one type forming the cross section of the hollow conductor and the other type forming the cross section and the web, said members being alternately assembled in a stack and secured in position, the members of the second



named type being disposed to alternately angularly displace said transverse webs by 180°, at least one of said types of members being made of non-magnetic material.

3,099,768
LOW NOISE ELECTRON BEAM PLASMA AMPLIFIER
John Melvin Anderson, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 25, 1959, Ser. No. 801,852
3 Claims. (Cl. 315—5.39)

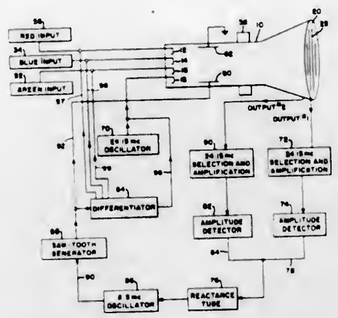


1. An apparatus comprising a chamber filled with an ionizable gas at low pressure, means ionizing a region of said gas extending entirely through said chamber into a condition of negative glow, means establishing a density modulated electron beam through said region, said beam interacting with the said ionized gas in said region of negative glow to accentuate said modulation and amplify the effects of said signal on said beam and means for extracting said signal from said beam subsequent to said interaction.

3,099,769
CATHODE RAY TUBE SYSTEM WITH AN INDEX CONTROL
Edward I. Lynch, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 12, 1960, Ser. No. 55,253
7 Claims. (Cl. 315—22)

1. A cathode ray tube system having a cathode ray tube including a plurality of laterally displaced color triads imprinted on the tube face, each of said triads being separated by a non-light emitting guard band, and an electron gun adapted to generate a beam bundle of parallel beams, one of said beams being an indexing beam, a first indexing comb having the teeth thereof positioned adjacent said guard bands on one side thereof, a second indexing comb having the teeth thereof positioned adjacent said guard bands on the other side thereof, deflection means to cause said beam bundle to jump in a plurality of jumps across the tube face, means to derive a first indexing signal from said first comb upon impingement of said index beam thereon, means to derive a second indexing signal from said second comb upon impinge-

ment of said index beam thereon, and means responsive to said first and second signals to vary the distance of

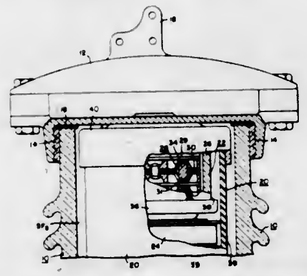


each jump of the bundle until coincidence of the index beam and the guard band is achieved.

3,099,770
LIGHTNING ARRESTERS

Billy B. Sorrow and Ned T. Kunkle, Ellettsville, Ind., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 31, 1961, Ser. No. 113,878
6 Claims. (Cl. 315—36)



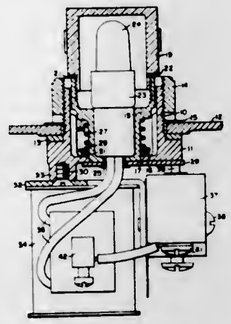
1. A lighting arrester adapted to be connected across points having different electrical potential including an insulating outer housing, the outer surface of the outer housing being subject to adherence of contaminating conductive substances thereby establishing a capacitor effect between the outer surface and internal arrester parts causing sufficient capacitive current flow to initiate corona discharge about said arrester parts resulting in reduction in internal sparkover potential, a sparkgap assembly within said outer housing comprising a plurality of electrodes forming one or more sparkgaps enclosed within a sealed gap assembly housing, a plurality of other arrester elements, said sparkgap assembly and said other arrester elements arranged in one or more columns within said outer housing, and corona suppressing material filling the free space within said outer housing exteriorly of said sealed gap assembly housing.

3,099,771
ELECTRIC SWITCH AND CONTROL SYSTEM

Andrew J. Matiyak, Chippewa Township, Beaver County, John H. Mullen, Brighton Township, Beaver County, and George M. Cametti, Beaver, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 1, 1957, Ser. No. 649,873
13 Claims. (Cl. 315—131)

1. A combined indicating lamp and push-button switch comprising a supporting sleeve having a transverse web with an opening therein, a housing slidably disposed in said opening, a lamp bulb in said housing and movable therewith with respect to the sleeve, a lens removably disposed in the housing over said lamp bulb, a spring for biasing the housing outwardly in the sleeve, an operating member attached to the bottom of the housing to limit

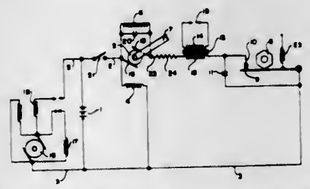


the outward movement of the housing, a unitary spring-return snap-action switch disposed exteriorly of the sleeve and supported by the sleeve, an operating plunger on said switch actuated by said operating member when said lens is depressed, and contact members in said switch for controlling the energization of said lamp.

3,099,772
AUXILIARY DYNAMOTOR FOR THE IGNITION SYSTEM OF AN INTERNAL COMBUSTION ENGINE

Stanley R. McClure, Rowena, Ky.

Continuation of abandoned application Ser. No. 836,299, Aug. 26, 1959. This application Mar. 15, 1963, Ser. No. 266,776
3 Claims. (Cl. 315—218)



1. In an ignition system for use with a variable speed internal combustion engine which includes a battery and three parallel circuits across the terminals of the battery in which:

(*a*) The first circuit contains a generator;

(*b*) The second is an ignition circuit and contains an ignition switch, a spark coil having a primary winding which is electrically interconnected in said circuit and interrupting means for making and breaking the circuit;

(*c*) The third circuit is normally open and contains a starting motor and switch means for closing the circuit when the ignition switch is closed,

means for providing a higher spark voltage upon starting and for increasing sparking efficiency under increased conditions of speed which comprises: an auxiliary dynamo serially installed in the ignition circuit between the battery and the spark coil, said dynamo comprising an engine-driven armature and magnetic means for providing a stable magnetic field for said dynamo, said armature comprising

(*a*) A motor commutator and brushes in which one of said brushes is electrically connected to said third circuit;

(*b*) A core;

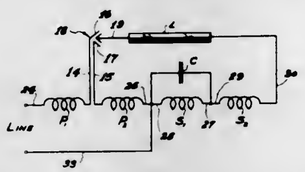
(*c*) A generator commutator and the brushes in which one of said brushes is connected to the primary winding of said spark coil,

in combination with clutch means operatively connected to said armature and connectible to the engine so that said armature is disengaged from the engine and freely rotatable when the engine is not running.

3,099,773
APPARATUS FOR IGNITING AND OPERATING GASEOUS DISCHARGE DEVICES

Albert E. Feinberg, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois

Original application Feb. 26, 1953, Ser. No. 339,103, now Patent No. 2,883,581, dated Apr. 21, 1959. Divided and this application Sept. 18, 1957, Ser. No. 684,739
9 Claims. (Cl. 315—257)



1. Apparatus for igniting and operating a gaseous discharge device from an A.C. source of relatively high voltage which comprises, an iron core transformer including a primary winding having two end terminals connected across the source, at least one secondary winding making connection with one end terminal of the said primary winding, a gaseous discharge device having end terminals and connected to the transformer for energization of the device, the primary having a tap dividing the same into two electrically spaced apart parts, said tap comprising two electrically separated leads connected, respectively, to said last named parts and a shunting socket for said leads adapted to be bridged by an end terminal of said discharge device, and the gaseous discharge device having one terminal connected at the tap and a second terminal connected to a terminal of a secondary winding, the said secondary winding having transformer relationship with the entire primary insofar as voltage developed therein is concerned, but the gaseous discharge device being subjected to voltages determined only by the voltage of the said secondary winding and that developed in that part of the primary winding between the tap and said one end terminal.

3,099,774
STATIC DISCHARGE DEVICE

John J. Crane, 193 Humphrey St., Swampscott, Mass.

Filed Jan. 8, 1960, Ser. No. 1,323
5 Claims. (Cl. 317—2)

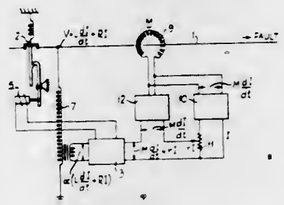


1. A shock eliminator particularly designed for dissipating electrical energy resulting from acquired electrostatic voltages between persons and conductive bodies comprising, a high resistance element, insulative means supporting said resistance element proximate to and electrically insulated from the conductive body, and means operatively connected to said element and mounted by said insulative means for selectively, electrically connecting said element to the body for dissipating said energy across said element, said insulative means including a plurality of flat insulators mounting said elements therebetween, one of said flat insulators provided with an adhesive for securing said shock eliminator to said body, said resistance element being flat and flexible, and aligned apertures are defined in said flat insulators exposing said flexible resistance element for projection therethrough to engage said body.

3,099,775
IMPEDANCE PROTECTIVE SYSTEMS

Joseph Ronald Mortlock, Kenton, and Kenneth James Rawcliffe Wilkinson and Philip Richardson, Rugby, England, assignors to Associated Electrical Industries (Rugby) Limited, a company of Great Britain

Filed Aug. 31, 1959, Ser. No. 837,223
Claims priority, application Great Britain Sept. 3, 1958
7 Claims. (Cl. 317—36)

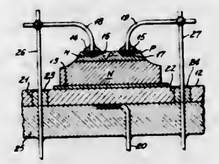


1. An impedance protective arrangement for a circuit connected to a source of alternating current comprising means for producing a first alternating voltage proportional to the voltage in said circuit, a mutual inductance associated with said circuit and having a primary winding carrying the current in said circuit, means for obtaining from the secondary winding of said mutual inductance a second alternating voltage proportional to the current in said circuit, means for obtaining from the secondary winding of said mutual inductance a third alternating voltage proportional to the resistance of said circuit, means for obtaining the vectorial difference between the sum of said second and third voltages and said first voltage, means for comparing in corresponding alternate half-cycles said first voltage with said vectorial difference, a protective device adapted to disconnect said circuit from said source, and means for energizing said protective device when, in successive half-cycles, said vector difference reverses in phase with reference to said first voltage as compared with its phase with reference to said first voltage when said circuit is healthy.

3,099,776
INDIUM ANTIMONIDE TRANSISTOR

Harry L. Henneke, Garland, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

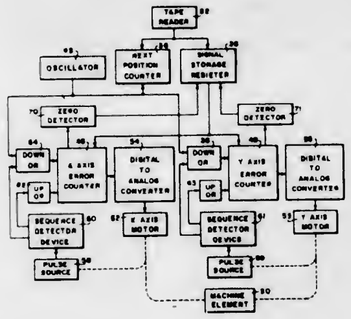
Filed June 10, 1960, Ser. No. 35,311
17 Claims. (Cl. 317—237)



13. A transistor comprising a single crystal of indium antimonide including a region of N-type indium antimonide, a diffused region of P-type indium antimonide contiguous with said N-type region and forming a P-N junction with said N-type region, and a pellet of N-type conductivity alloyed wtih a portion of said P-type region to

form a rectifying junction with said P-type region spaced from said P-N junction.

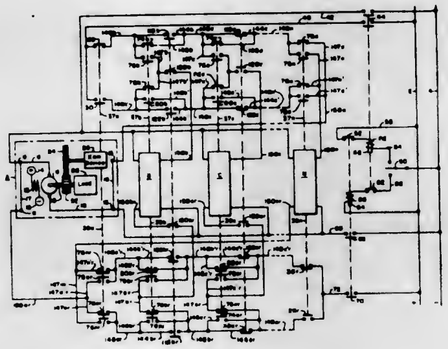
3,099,777
DIGITAL POSITION CONTROL SERVOSYSTEM
Marvin A. Davis, Clarence, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 8, 1960, Ser. No. 41,545
8 Claims. (Cl. 318—28)



1. In position control apparatus for a machine member operative with a desired position signal source, the combination of first signal storage device having a plurality of stages and being operative with said signal source for receiving said desired position signal, a second signal storage device having a like plurality of stages and being cooperative with said first signal storage device and with said signal source for receiving said desired position signal, position feedback signal supply means operative with said machine member for providing a position feedback signal in accordance with the position of said machine member, a third signal storage device operative with one of said first signal storage device and said second signal storage device and operative with said position feedback signal supply means for providing a position difference signal in accordance with a predetermined difference between said desired position signal and the position feedback signal, and a counting signal source operative with said first signal storage device and said third signal storage device for supplying counting signals to said first and third signal storage devices for effecting said position difference signal.

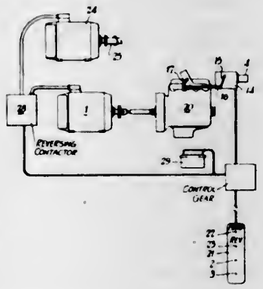
3,099,778
SEQUENTIALLY ENERGIZED PLURAL MOTOR CONTROL SYSTEM
Wilson R. Kennedy, Bethel Park, and Raymond E. Spencer, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 10, 1958, Ser. No. 708,112
14 Claims. (Cl. 318—102)

3. A control means for effecting the automatic operation of a plurality of rotatable electroresponsive devices in a predetermined sequence comprising, a rotating member on each of said devices, at least two interconnected energization circuits for each of the devices for causing operation of said devices in one direction and each circuit having a plurality of contacts therein, each of said devices always having at least one of said two energizing circuits open, cam devices operated by said rotating members, respectively, and each connected to operate a predetermined number of said contacts at a predetermined position during its operation substantially simultaneously to open its closed energizing circuit to deenergize its device and



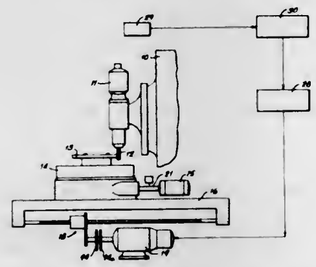
to close one of the energizing circuits of the next succeeding device in said sequence to energize the latter.

3,099,779
REMOTE CONTROL OF WARD LEONARD DRIVE BY GENERATOR SPEED VARIATION
Arnold Hallsworth, Sunderland, England, assignor to Steels Engineering Products Limited, Sunderland, England
Filed June 3, 1960, Ser. No. 33,762
Claims priority, application Great Britain June 5, 1959
1 Claim. (Cl. 318—157)



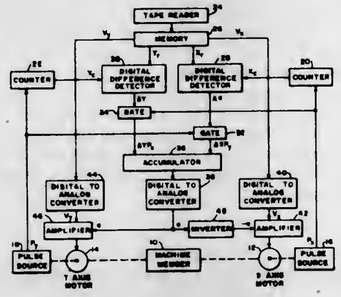
Means for driving and controlling the speed of an output shaft comprising a mainly series wound compound motor in driving connection with the shaft, a variable speed shunt wound generator for supplying power to the compound wound motor, a reversing contactor interposed between the generator and the motor, a prime mover for operating the generator, a control member connected to the speed control of the prime mover, a reversible electric motor operatively connected to the control member, a pair of contactors each controlling the directional supply of current to the reversible electric motor, solenoids operating said contactors, control switches operating the solenoids so that the directional supply of current is controlled to the reversible motors or the current supply is cut off, and in which said switches are so arranged and loaded that when left they automatically close the circuit to the reversible electric motor to effect movement of the prime mover speed control to the minimum position.

3,099,780
CONTROL AND GAUGING SYSTEM FOR MILLING MACHINES
Mark Morgan, Johnson City, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1954, Ser. No. 478,735
1 Claim. (Cl. 318—162)



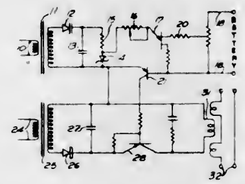
In a system for moving an instrumentality so that the periphery of said instrumentality describes a continuous closed loop in relation to a point removed from said periphery, a first motive means for said instrumentality operable to rotate the same to provide equal increments of arc in equal increments of time, a series of input datum manifestations available at successive periodic intervals of time indicative of the distance n required between said point and the periphery of said instrumentality at each increment of time, a second motive means for moving said instrumentality radially a distance n, speed control means for said second motive means responsive to said input datum manifestation to provide a rate of movement of said instrumentality n/N where N is the maximum distance n which will be traveled between any successive intervals of time whereby the locus of movement of said instrumentality with respect to said point is generated in equal increments of distance in equal increments of time.

3,099,781
DIGITAL CONTROL FOR MACHINE POSITIONING
Louis W. Herchenroeder, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 15, 1961, Ser. No. 152,581
10 Claims. (Cl. 318—162)



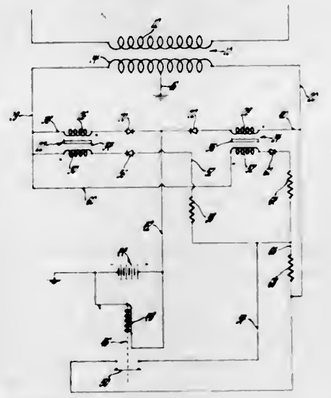
1. Apparatus for positioning a machine member in accordance with at least one of a desired rate input signal and a desired position input signal and comprising in combination, first and second signal producing means operative with said machine member for producing a first actual positioning signal and a second actual positioning signal in accordance with the actual positioning of said machine member, a signal difference device operable with said first actual positioning signal and one of said input signals for providing a positioning difference signal, a signal storage device responsive to said positioning difference signal and at least one of said first and second actual positioning signals for providing a positioning error signal, and machine member driving means responsive to one of said input signals and said positioning error signal for driving said machine member in accordance with at least one of said input signals.

3,099,782
AUTOMATIC BATTERY CHARGING CONTROL WITH UPPER AND LOWER VOLTAGE LIMITS
Charles E. Smith, Jr., North Providence, R.I., assignor to La Marche Mfg. Co., Schiller Park, Ill., a corporation of Illinois
Filed Dec. 15, 1959, Ser. No. 859,671
6 Claims. (Cl. 320—39)



1. A battery charging control comprising a sensing circuit, a control circuit responsive to said sensing circuit, and a switching circuit responsive to said control circuit for controlling the power source to the battery charger, said sensing circuit having a predetermined constant reference voltage, a battery voltage opposed to said reference voltage, and means starting flow of current to said control circuit at a predetermined minimum voltage of said battery and for stopping flow of current at a predetermined maximum voltage of said battery, said reference voltage being maintained at a constant level by a zener diode, and said means comprising a unijunction transistor.

3,099,783
VOLTAGE REGULATING SYSTEM
Cecil Kimbleton, Utica, Mich., assignor to Curtiss-Wright Corporation, Utica, Mich., a corporation of Delaware
Filed Mar. 1, 1962, Ser. No. 176,733
1 Claim. (Cl. 320—40)



A voltage regulating system for storage battery purposes and other concurrent uses, to be connected to an

A.C. power source having an output winding provided with a first and a second end terminal and with a center tap, said system comprising:

(*a*) saturable reactor type magnetic amplifier means having first and second control windings and respectively associated first and second battery-charging-current-carrying gate windings,

(*b*) a voltage sensitive relay having

(*b*1) a relay coil across which the battery is to be shunted, one end of the relay coil being connectable to said center tap, and

(*b*2) a movable contact responsive to said relay coil to open and close,

(*c*) a first and a second charging-current-carrying circuit path, each connectable at one end to the like-numbered one of said tend terminals, the other ends being commoned together and to the remaining end of said relay coil, each circuit path including:

(*c*1) the like-numbered one of said gate windings and

(*c*2) a diode rectifier, the diode rectifiers being poled so that the current flowing to said relay coil is unidirectional,

(*d*) a first and a second control current circuit path connected in shunt with each other, with one set of commoned ends connected to said first end terminal, each such circuit path including:

(*d*1) the like-numbered control winding with winding sense relative to the associated like-numbered gate winding appropriate for battery voltage regulation, and

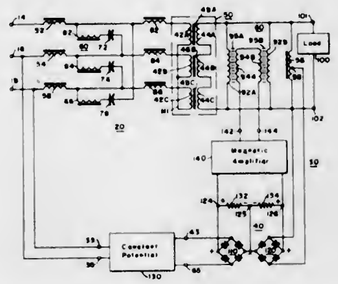
(*d*2) a rectifier diode that is poled opposite to the rectifier diode included in the like-numbered charging-current circuit path, and

(*e*) a resistor shunting said movable contact and interconnecting said second terminal and the remaining set of commoned ends of said control current circuit paths.

3,099,784
FREQUENCY MULTIPLIER

Herbert E. Forsha, Sharon, and Sidney M. Kapell, Prospect Park, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 31, 1959, Ser. No. 863,248
6 Claims. (Cl. 321—7)

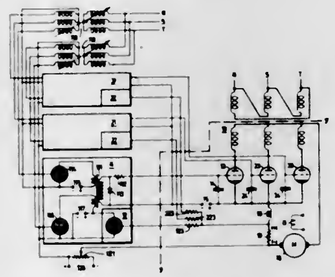


1. A static frequency multiplier for converting alternating current having a predetermined frequency from a three-phase source to single phase alternating current having a frequency three times said predetermined frequency comprising a transformer means having three primary phase windings connected in circuit relation with said source and three secondary phase windings connected in series circuit relation with one another to provide a single phase alternating output current, inductive reactance means associated with and connected in series circuit relation with each of said primary windings between said source and said primary windings for limiting in-rush currents when said primary windings are energized from said source, three-phase circuit means for at least partially compensating for the power factor of said transformer and reactance means, said circuit means being delta connected in phase-to-phase circuit relation between said source and said primary windings, the resonant frequency of said circuit means being slightly less than the fifth harmonic of said predetermined frequency, each phase of said circuit means comprising a capacitor and an inductive reactance connected in series circuit relationship, and reactance means connected in series circuit relation with each of the primary windings between the circuit means and the primary windings.

3,099,785
MEANS FOR CONTROLLING VALVE-ACTION RECTIFIERS

Claus Kessler and Gottfried Möltgen, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin, Germany, a corporation of Germany

Filed Nov. 3, 1959, Ser. No. 850,633
Claims priority, application Germany Nov. 4, 1958
6 Claims. (Cl. 321—18)



1. A rectifier system, comprising an alternating-current feeder circuit, a direct-current load circuit, valve-action rectifier means connecting said feeder circuit with said load circuit and having firing control means for initiating rectifier firing at a point relative to the voltage cycle of the alternating feeder current, first firing-pulse means connected with said feeder circuit to be synchronized therewith for issuing pulses during rectifying operation of said rectifying means, second firing-pulse means connected with said feeder circuit to be synchronized therewith for issuing pulses during inverting operations of said rectifying means, said two firing-pulse means having pulse output leads connected to said firing control means, whereby said two firing-pulse means abruptly switch the firing point between two phase positions in the rectifier cycle ranges, condition-responsive and substantially inertia-free electronic switching means connected to one of said firing-pulse means and responsive to directional reversal of a given operating condition of said load circuit for turning it on and off to thereby regulate said operating condition.

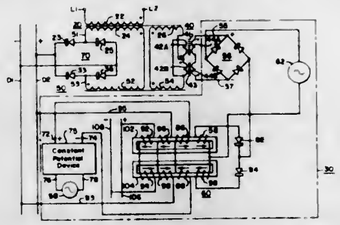
3,099,786
CONTROL FOR AN ELECTRIC POWER TRANSLATION SYSTEM

Kevin F. Friedrich and Francis D. Kaiser, Sharon, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 13, 1959, Ser. No. 805,861
6 Claims. (Cl. 321—20)

1. An electrical control apparatus for varying the output voltage of an electric power translation system including a plurality of asymmetrically-conducting devices,

comprising, alternating current power leads, direct-current power leads, first transformer means having a first winding connected to said alternating current leads and two additional windings disposed in inductive relation with said first winding, second transformer means having a primary winding and a secondary winding, said secondary winding being connected in series circuit relation with the first of said additional windings, said devices being connected between said direct-current leads and the series circuit which includes said first additional winding and said secondary winding, and saturable reactor means having input terminals and a load winding, said reactor

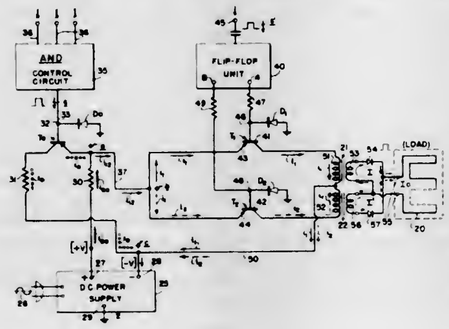


load winding being connected in series circuit relation with the second of said additional windings, said primary winding being connected in series circuit relation with said reactor load winding and said second additional winding to carry all of the current in the load winding and the second additional winding and be directly responsive to the difference between the voltages across said second additional winding and said reactor load winding, the voltage across said saturable reactor load winding varying with a control signal applied to said input terminals to thereby vary the voltage across said secondary winding and the output voltage at said direct-current power leads.

3,099,787
SEQUENTIAL SWITCHING SYSTEM

Alexander Elovic, Elizabeth, N.J., assignor to Indiana General Corporation, Valparaiso, Ind., a corporation of Indiana

Filed May 10, 1961, Ser. No. 119,763
13 Claims. (Cl. 321—45)

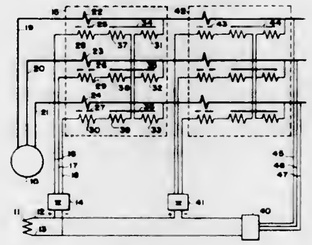


4. An electrical switching system comprising a standby transistor circuit with a load impedance connected to a D.C. power supply source, said transistor circuit being proportioned to normally conduct a predetermined current through said impedance, a pair of control transistors, output transformer means having two primary windings each in circuit with like electrodes of said transistor pair, a second like set of electrodes of said transistor pair being coupled to said impedance for control signal actuation thereby upon current reduction condition of said standby transistor circuit, bistable means coupled to the third electrodes of said transistor pair for alternately switching the capability of current passage through the transistors of said pair, and control means in circuit with said standby transistor for impressing control signals to substantially reduce the standby current therethrough in correspondence therewith and effect redirection of the standby transistor circuit current into said transformer windings through the associated alternately operable transistor of said pair, whereby the transistors of said pair effectively share the load of the output control operation.

3,099,788
MONO- AND POLYPHASE ALTERNATING CURRENT GENERATORS

Paulus Pieter Loesberg, Sassenheim, Netherlands, assignor to N.V. Electrotechnische Industrie voorheen Willem Smit & Co., Gemeente Ridderkerk, Netherlands, a Dutch limited company

Filed Oct. 22, 1959, Ser. No. 848,093
Claims priority, application Netherlands July 17, 1959
6 Claims. (Cl. 322—25)



1. Electrical control apparatus for alternating current generators having an excitation winding, comprising; a first source of direct current including a first rectifier circuit and means for applying to said rectifier circuit an alternating voltage proportional to an output current of said generator and an alternating voltage proportional to an output voltage of said generator; a second source of direct current including a second rectifier circuit and means for applying to said second rectifier circuit an alternating voltage proportional to said output current and an alternating voltage proportional to said output voltage of said generator; said first and second sources of direct current being connected in parallel to said excitation winding; a correction circuit connected in series with said second source of direct current; means for deriving a control voltage which is a measure of the deviation of said generator output voltage and applying same to said correction circuit; said correction circuit controlling the application of said second source of direct current to said excitation winding in response to the magnitude of said control voltage; said correction circuit being adapted to supply continuously a voltage of less than one third of the required voltage and a current less than one half of the required current to said excitation winding at full load under normal circumstances, so that the nominal power of said correction circuit is less than one sixth of the power corresponding to the largest admissible continuous heat generation in the excitation winding.

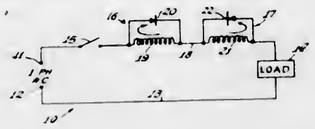
3,099,789
VOLTAGE SURGE PROTECTION NETWORK

Allen R. Perrins, Cheshire, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut

Filed Feb. 26, 1960, Ser. No. 11,374
2 Claims. (Cl. 323—9)

1. In an electric circuit having a pair of input terminals connectible to a source of electrical energy and

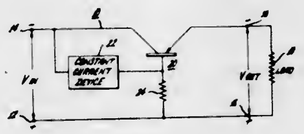
a load energized by a load current from the source, the improvement comprising an inductor and one-way valve means connected in series between the load and the input terminals to provide a path for unidirectional current flowing in the inductor, said inductor and means forming a substantially resistive impedance for values of load current less than the value of current in the inductor and forming a substantially inductive impedance for values of load current at least equal to the value of current in the inductor and in which the load current is alternating current and there are two inductors, each with one-way valve means connected thereacross, said one-way valve means being connected to conduct in opposite directions.



3,099,790
VOLTAGE REGULATORS

Thomas G. Marshall, Jr., Franklin Park, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Mar. 31, 1958, Ser. No. 725,163
11 Claims. (Cl. 323—22)



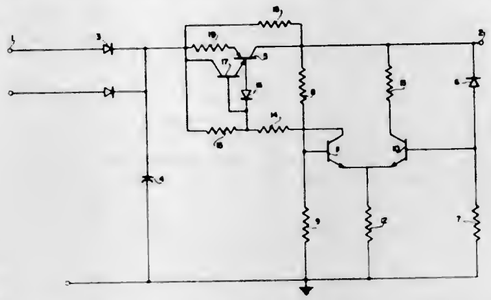
1. A regulating circuit for a source of unidirectional unregulated voltage comprising a transistor having an emitter, a base, and a collector, a pair of input terminals between which said unregulated voltage can be applied, a pair of output terminals for deriving a regulated unidirectional voltage therebetween, means connecting the emitter-collector path of said transistor between one of said input terminals and one of said output terminals, means connecting the other of said input terminals to the other of said output terminals, a constant current device having two terminals only, and means connecting said constant current device directly between said base and said collector.

3,099,791
TRANSISTORIZED VOLTAGE REGULATOR WITH AUTOMATIC COLLECTOR LEAKAGE COMPENSATION MEANS

Loyce A. Turner, Smyrna, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Aug. 22, 1960, Ser. No. 51,208
6 Claims. (Cl. 323—22)

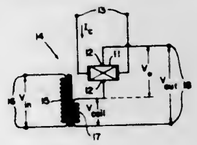
1. A regulator of the voltage or current sensitive type comprising a source of unregulated voltage, a load circuit, a transistor series connected between said source and load to provide a substantially constant current, a driver circuit including an element responsive to said load current and a reference for providing a drive current for said series connected transistor, a load resistor coupled to said driver circuit for providing drive to said series transistor, means responsive to excess leakage current in said series transistor for opening said driver circuit and additional means responsive to excess leakage current in said series transistor for providing a low impedance path for said series transistor base current.



3,099,792
HALL EFFECT ELECTRICAL APPARATUS

Alton Leger, Jr., Hatboro, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 13, 1959, Ser. No. 852,840
3 Claims. (Cl. 323—94)



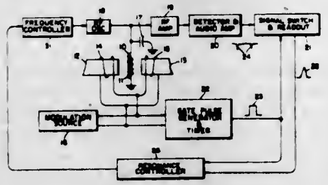
1. A Hall-voltage generator comprising a semiconductor plate means, a first pair of electrodes on said plate means for connection to a constant-current source, said first pair of electrodes defining a current path through said plate means, a second pair of electrodes on said plate means, said second pair of electrodes being spaced on said plate means to define an axis through said plate means transverse to said current path, a magnetic-field producing means, said magnetic-field producing means being arranged to provide a magnetic-field component transverse to said path and to said axis within said plate means, means for connecting said magnetic-field producing means to an input-signal source, a magnetic-field responsive means arranged in a magnetic field associaiton with said field producing means to derive from said magnetic-field producing means a magnetically induced responsive means output signal representative of an input signal applied to said magnetic-field producing means, a pair of output-signal terminals, means connecting said responsive means between one of said output-signal terminals and one of said second pair of electrodes, and means connecting the other of said output-signal terminals with the other one of said second pair of electrodes.

3,099,793
RESONANCE SEEKING CIRCUIT

Clyde W. Pinkley, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed Oct. 3, 1960, Ser. No. 60,039
7 Claims. (Cl. 324—.5)

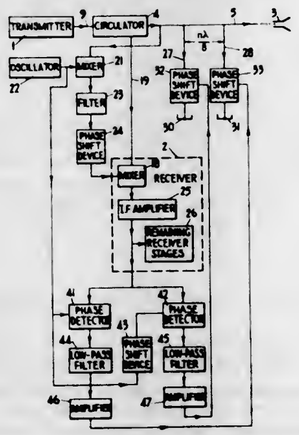
1. In nuclear magnetic resonance measuring apparatus having means generating a radio-frequency field, means generating an otherwise steady magnetic field that is amplitude modulated cyclically by a superimposed magnetic field which reverses from one magnetic polarity to the other by passing through field strength null points so that the condition for nuclear resonance is periodically attained for a sample material under test to generate thereby a periodic resonance absorption pulse signal, and an absorption pulse signal readout circuit that is gated by means generating a periodic gate pulse train whose individual pulses coincide timewise with the field-strength null points of each modulation cycle and in which each gate pulse is of a time duration several times that of each absorption pulse signal, the improvement comprising means determining the time at which resonance occurs by comparing the time relationship of each resonance absorption pulse relative a gate pulse and generating an error signal indicative of a deviation in said time relationship, means responsive to said error signal for varying the frequency of the field generated by said radio-frequency means to cause each resonance absorption pulse and gate pulse in coincidence to assume a predetermined time coincidence relationship relative one another in which the absorption pulse is fixed timewise relative the times of rise and fall for each coinciding gate pulse and means activated by an increase in said error signal exceeding a predetermined maximum value for causing said radio-frequency field generating means to sweep through a frequency range wherein said resonance absorption pulses will coincide timewise with said gate pulses.



3,099,794
NON-RECIPROCAL COUPLING ARRANGEMENTS FOR RADIO FREQUENCY SIGNALS

Roy Essam, Stanmore, Arthur Stephen Walsh, Watford, and Kenneth Brian Whiting, London, England, assignors to The General Electric Company Limited, London, England, a British company

Filed Mar. 1, 1960, Ser. No. 12,496
Claims priority, application Great Britain Mar. 11, 1959
9 Claims. (Cl. 325—24)

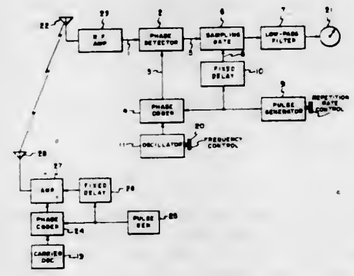


1. A non-reciprocal coupling arrangement for radio frequency signals comprising first, second and third paths for radio frequency signals, a non-reciprocal circulator which is connected to said first, second and third paths and which is arranged to pass signals supplied thereto over the first and second paths mainly to the second and third paths respectively, variable impedance means connected to the second path so as to present a variable impedance to that path, and means automatically to control the variable impedance means in dependence upon the portion of the signal supplied over said first path that breaks through to the third path so as to cause a variable portion of the signal supplied to the second path by the circulator to be reflected back over that path and thereby reduce the amplitude of the breakthrough signal on the third path.

3,099,795
PHASE CODED COMMUNICATION SYSTEM

Robert L. Frank, Great Neck, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Apr. 3, 1957, Ser. No. 650,534
13 Claims. (Cl. 325—30)



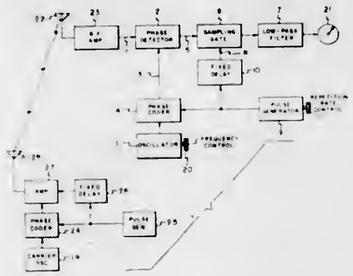
1. A radio communication system including a transmitter for producing carrier phase coded pulsed transmissions and a receiver adapted to receive said transmissions and operative to produce a unique output in response thereto as against all other received signals, said transmitter including a first source of carrier signal, a first source of pulses, a first phase coder connected to both said first sources and adapted to receive said carrier signal and said pulses to produce therefrom N first series of carrier signals, each series being comprised of N phase modulated carrier signals where N is an integer greater than 1, the carrier phase value of each signal of said first series, relative to the phase value of an arbitrary continuous wave signal, being definable in terms of a matrix of N rows and N columns, said matrix defining a total of N^2 phase values over which total the phase values are periodic and wherein the phase values in each column of said matrix follow a distinctive arithmetic progression, each signal represented by said matrix having a basic phase value of $2\pi p/N$ where p is an integer relatively prime to N so that

$$\epsilon^{\frac{i2\pi p}{N}}$$

is a primitive N^{th} root of unity, pulse delay means coupled to the output of said first source of pulses, means coupled to said first phase coder and to said pulse delay means for amplitude modulating the signal output of said first phase coder with the signal output of said pulse delay means, and means connected to the modulating means for transmitting the output of said modulating means; said receiver including a second source of carrier signal, a second source of pulses, a second phase coder connected to both said second sources for producing N second series of phase coded carrier signals having substantially the same carrier phase characteristic as said first

series, a phase detector having first and second inputs, means for receiving said transmitted transmissions, means for applying the received transmissions to said first input, means for applying said second series of signals to said second input, signal utilization means, and a low pass filter connected between said phase detector and said utilization means for coupling the output of said phase detector to said utilization means.

3,099,796
PHASE CODED COMMUNICATION SYSTEM
Solomon Zadoff, Flushing, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Nov. 27, 1957, Ser. No. 699,396
13 Claims. (Cl. 325—30)

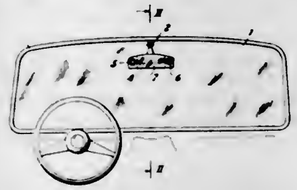


1. A radio communication system including a transmitter for producing phase coded pulsed carrier transmissions and a receiver adapted to receive said transmissions, said transmitter including a first source of carrier signal, a first source of constant repetition rate pulses, a first phase coder connected to both said first sources and adapted to receive said carrier signal and said pulses to produce therefrom a first series of successive phase coded carrier signals, the phase sequence of said first series of said signals being periodic over a number of signals n, which number is an integer greater than zero having an irrational square root, the phase value θ_r of the carrier of the rth signal of said series being related to the phase value θ_1 of the carrier of the first signal of said first series according to the expression

$$\theta_r=\frac{\pi}{n}(r-1)[p(n-1-r)-2m]+\theta_1$$

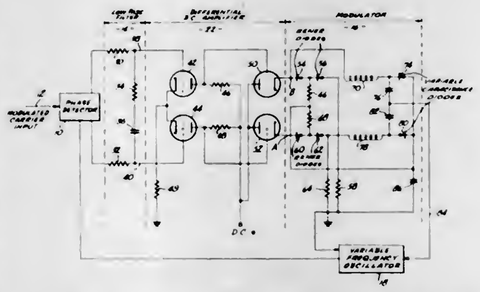
where $1<r\leq n$, p is an integer relatively prime to n and m is an integer such that $0\leq m<n$, pulse delay means coupled to the output of said first source of pulses, means coupled to said first phase coder and to said delay means for amplitude modulating the signal output of said first phase coder with the signal output of said delay means to produce said first series of phase coded pulsed carrier signals having uniform time spacing between pulses, and means connected to the modulating means for transmitting the output of said modulating means; said receiver including a second source of carrier signal, a second source of pulses, a second phase coder connected to both said second sources for producing a second series of phase coded signals having substantially the same phase characteristics as those of said first series, a phase detector having first and second inputs, means for receiving said transmissions, means for applying the received transmissions to said first input, means for applying said second series of signals to said second input, signal utilization means, and a low-pass filter connected between said phase detector and said utilization means for coupling the output of said phase detector to said utilization means.

3,099,797
RADIO RECEIVING SET FOR MOTOR CARS
Arnaldo Piccinini, 396 Via Salaria, Rome, Italy
Filed July 1, 1958, Ser. No. 746,008
Claims priority, application Italy Oct. 15, 1957
4 Claims. (Cl. 325—312)



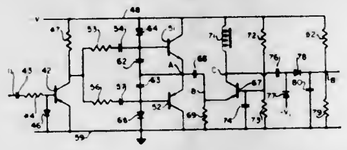
1. In a motor car having a framed windshield, an assembly comprising a rear view mirror, a hollow casing on the back of said mirror and lying entirely within the profile of the mirror as viewed from the reflecting side of the mirror, a radio receiver and amplifier circuit mounted within said casing, a frame-type antenna with a ferrite core connected to said radio receiver and amplifier circuit and mounted entirely within said casing along the portion thereof remote from the side of said casing on which said mirror is positioned, and mounting means on said casing adapted to mount said casing on the frame of the windshield within the car and in a position in which the mirror and casing depends from the frame and with the casing between the mirror and the windshield and the portion of said casing with the antenna therein closely adjacent the windshield, and a loud speaker mounted in said car at a point spaced from said assembly, and wire connecting said receiver and amplifier circuit to said loud speaker, whereby the antenna and receiver and amplifying system is positioned out of the line of vision of the driver of the motor car behind the rear view mirror in the otherwise unused space between the mirror and the windshield, and an antenna on the outside of the motor car and a connecting wire to the radio receiver and amplifier circuit within the car is unnecessary.

3,099,798
STABILIZED PHASE-SENSITIVE SERVO LOOP DEMODULATORS
Glen E. Miller, Kent, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 809,057
8 Claims. (Cl. 329—124)



1. In a phase sensitive servo loop demodulator, including a phase sensitive detector having an input arranged to be impressed with frequency modulated carrier to be demodulated, and having an output, and a frequency modulated variable-frequency oscillator having a modulation input and having an output connected to said phase sensitive detector for combining therein with the modulated carrier, modulator circuit means for applying output from said phase sensitive detector as a reactance modulation signal to the input of said variable-frequency oscillator thereby to vary the frequency of the latter and form a servo loop wherein oscillator frequency tracks the incoming carrier frequency, said modulator circuit means comprising opposing input terminals across which is impressed output signal from said detector, a pair of voltage-controlled variable reactance elements each having anode and cathode terminals, the anode terminal of one such element and the cathode terminal of the other such element being connected to one side of the oscillator input separate connections from the remaining terminals of said elements to the opposite side of the oscillator input, similar constant-reactance elements interposed in the respective connections between the remaining terminals of said variable reactance elements and said remaining side of the oscillator modulation input, and separate circuit means connected between the modulator input terminals and said remaining terminals of the variable reactance elements, respectively, said separate circuit means including means applying across each such variable reactance element a variable voltage component substantially proportional to output from said detector, the modulator circuit means appearing electrically substantially symmetrical both at its input and output.

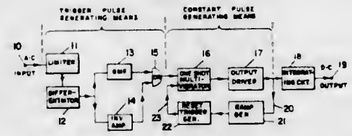
3,099,799
FREQUENCY TO VOLTAGE CONVERTER
George S. Bahrs, 799 Berkeley Ave., Menlo Park, Calif.; Dalton W. Martin, 3200 Louis Road, Palo Alto, Calif.; and Malcolm M. McWhorter, 150 Gabardier Way, Menlo Park, Calif.
Filed Dec. 3, 1958, Ser. No. 777,936
12 Claims. (Cl. 329—126)



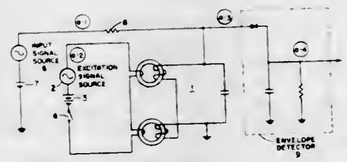
5. A frequency to voltage converter comprising a precision capacitor having first and second terminals, means connected to receive an input signal and to charge and discharge said capacitor in such a manner that the voltage of the first terminal of said capacitor is swung between predetermined limits a fixed number of times for each cycle of the input signal, switching means connected in circuit with the other terminal of said capacitor serving to conduct charging and discharging current therefrom, amplifying means having low input impedance, high output impedance, high voltage gain, and relatively constant current gain connected in circuit with said switching means serving to pass instantaneously at least one of said currents, and means connected to receive the output of said amplifier serving to derive an output signal which is proportional to the average charging current.

3,099,800
FREQUENCY TO VOLTAGE CONVERTING CIRCUIT
Billy H. Vinson, Santa Monica, and Boris Stefanov, Los Angeles, Calif., assignors to Kauke and Company, Inc., a corporation of California
Filed July 11, 1961, Ser. No. 123,163
6 Claims. (Cl. 329—128)

1. A circuit for providing a D.-C. output voltage level proportional to the frequency of an A.-C. input signal, comprising, in combination: means for converting said input signal into a number of constant volt-second area pulses per second proportional to said frequency; means for integrating said pulses to provide said D.-C. output voltage level; means for fixing the amplitude of said constant volt-second area pulses; and means for fixing the time duration of said constant volt-second area pulses, said last-mentioned means being connected to and controlled by said means for fixing the amplitude of said constant volt-second area pulses such that an increase in said amplitude causes a decrease in said time duration and a decrease in said amplitude causes an increase in said time duration whereby the product of said amplitude and time duration is constant.

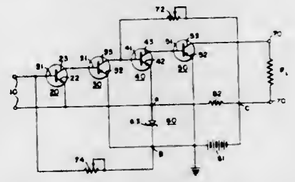


3,099,801
CIRCUITRY UTILIZING PARAMETRICALLY EXCITED HARMONIC OSCILLATORS
Otto A. Jorgensen, Pittsford, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,569
9 Claims. (Cl. 330—10)



1. In combination, a resonant circuit, means for inducing bursts of parametric oscillations in said resonant circuit, a source of variable analog input signals having a frequency lower than the resonant frequency of said resonant circuit, means coupling said source of input signals to said resonant circuit for controlling the amplitudes of said parametric oscillations in said resonant circuit depending upon the strength of said input signals, and a detector coupled to said resonant circuit for recovering the input signals in amplified form.

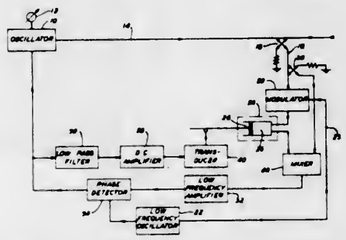
3,099,802
D.C. COUPLED AMPLIFIER USING COMPLEMENTARY TRANSISTORS
John Mattern, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 7, 1959, Ser. No. 857,895
1 Claim. (Cl. 330—17)



A direct coupled amplifier comprising: an input means; a first semiconductor device of one conductivity type operably connected to said input means and having a first

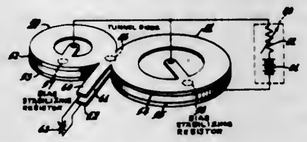
base, a first emitter and a first collector electrode; a second semiconductor device of an opposite conductivity type having a second base, a second emitter and a second collector electrode; a third semiconductor device of said one conductivity type having a third base, a third emitter and a third collector electrode; a fourth semiconductor device of said opposite conductivity type having a fourth base, a fourth emitter and a fourth collector electrode; circuit means for applying a direct current voltage; a series combination of a resistance means and a Zener diode connected across said circuit means for providing a first point of reference potential at the common junction between said resistance means and said Zener diode, a second point of reference potential at the opposite side of said Zener diode, and a third point of reference potential at the opposite side of said resistance means; said first collector electrode being connected to said second base electrode, said second collector electrode being connected to said third base electrode, said third collector electrode being connected to said fourth base electrode, said first and said third emitter electrodes being connected to said first point of reference potential, said second and said fourth emitter electrode being connected to said second of reference potential; output means including a first output terminal connected to said fourth collector electrode and a second output terminal connected to said third point of reference potnetial; a variable resistance connected between said third point of reference potential and said third base electrode; and another variable resistance connected between said second point of reference potential and said first base electrode.

3,099,803
AUTOMATIC FREQUENCY CONTROL FOR TUNABLE OSCILLATORS
Hans-Georg Unger, Lincroft, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 2, 1959, Ser. No. 824,575
6 Claims. (Cl. 331—9)



1. An automatic frequency control system for tunable oscillators comprising in combination with a tunable oscillator having a frequency controlling element and tuning means for slowly varying the output frequency of said tunable oscillator over a range of frequencies, a source of modulated signals, means for modulating a portion of the output from said oscillator with said modulating signal, an adjustable reference frequency element tuned to a particular component of the modulated signal, means for applying the modulated signal to said reference element, means for detecting the phase difference between any signal transmitted from said reference element and said modulating signal and producing a voltage proportionate thereto, means responsive to slow variations in said voltage for varying the resonant frequency of said reference element in accordance with slow variations in the output frequency of said tunable oscillator, and means for applying said voltage to said frequency controlling element of said tunable oscillator to compensate for any rapid variations in the output frequency of said tunable oscillator.

3,099,804
HIGH FREQUENCY NEGATIVE RESISTANCE CIRCUITS
Donald E. Nelson, Elizabeth, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 23, 1960, Ser. No. 51,369
9 Claims. (Cl. 331—107)



1. A high frequency circuit having a predetermined mean operating frequency comprising in combination a resonant reentrant transmission line including a pair of annular conductors, said conductors having a mean circumference which is substantially equal to one wavelength at the said predetermined mean operating frequency, an active element comprising a voltage controlled negative resistance device coupled to said transmission line and a resistor coupled to said transmission line at a spaced arcuate distance from said negative resistance device and adapted for receiving a bias voltage to bias said device to exhibit a negative resistance.

3,099,805
BIDIRECTIONAL COUPLING BETWEEN WAVEGUIDES VIA TWO NONRECIPROCAL GYROMAGNETIC COUPLING RODS
Aristid D. Berk and Eric Strumwasser, Los Angeles, Calif., assignors to Hughes Aircraft Company, a corporation of Delaware
Filed Jan. 9, 1956, Ser. No. 557,917
2 Claims. (Cl. 333—24.1)



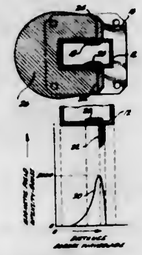
1. An electromagnetic device comprising a main rectangular waveguiding structure for propagating an electromagnetic wave; an auxiliary rectangular waveguiding structure having a broad side disposed adjacent to and at an angle with a broad side of said main waveguiding structure; first and second thin elongated ferrite rods disposed transversely through matching apertures of said adjacent broad sides along a diagonal of the coextensive areas thereof to extend into both of said waveguiding structures, said first and second ferrite rods being spaced on opposite sides of the mid-point of said diagonal; and means for producing parallel magnetic fields in the same direction lengthwise through said first and second ferrite rods, thereby to effect bi-directional coupling between said main and auxiliary waveguides at frequencies corresponding to gyro-resonance in said first and second ferrite rods.

3,099,806
HIGH-POWER RESONANCE ABSORPTION ISOLATOR HAVING FERRITE SLAB OFFSET FROM POLEPIECES SO AS TO BE NON-UNIFORMLY MAGNETIZED
Lawrence A. Blasberg, Moorestown, N.J., and Leon J. Lader, Los Angeles, and Raymond A. Young, Inglewood, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Continuation of application Ser. No. 572,176, Mar. 15, 1956. This application Jan. 16, 1961, Ser. No. 83,107
5 Claims. (Cl. 333—24.2)

1. A unidirectional microwave transmission device comprising:

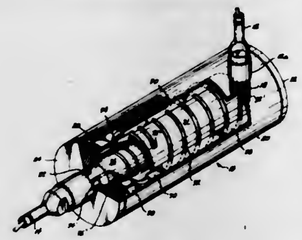
(*a*) a rectangular waveguide including a pair of opposite broad walls and a pair of opposite narrow walls;

(*b*) a magnet having a different pole piece adjacent each broad wall of said waveguide at a location distant from a first narrow wall of said waveguide between the center of the surfaces of the broad walls and a second narrow wall of said waveguide;



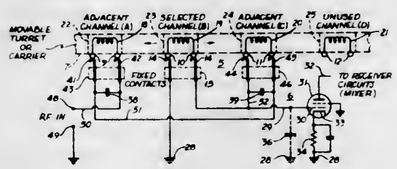
(*c*) and an elongated slab of gyroresonant material disposed longitudinally within said waveguide substantially parallel to said broad walls thereof, said slab having a transverse width greater than the width of the pole pieces adjacent said waveguide, said slab extending transversely across the interior of said waveguide toward said first narrow wall from a position displaced toward said first narrow wall from the edges of the pole pieces closest to said second narrow wall.

3,099,807
HELICAL LINE ROTARY JOINT
Luis L. Oh, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Apr. 2, 1962, Ser. No. 184,050
4 Claims. (Cl. 333—98)



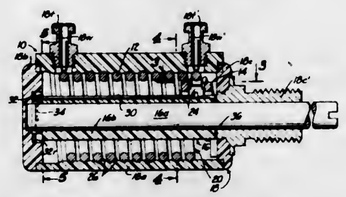
3. A high-frequency rotary joint comprising a cylindrical tubular conductive shell having a central longitudinal axis and comprising two mutually complemental portions interconnected to be relatively rotatable about said axis, two coaxial transmission line fittings, each having an outer conductor joined to one of said portions at a location spaced longitudinally of the shell from the other outer conductor, and each having an inner conductor projecting in insulated relationship into the shell, two helical lines comprising elongated conductive helices of respectively different helix diameters, of substantially equal propagation velocity chracteristics and of relatively opposite pitch, means supporting the helices in mutual longitudinally overlapping relationship and coaxial within the shell, the helix of smallest diameter being insulatively spaced within that of largest diameter and the latter being insulatively spaced within the shell, one end of each helical line being electrically connected to the inwardly projecting end of one line fitting, and the opposite end of each helical line forming substantially an open-circuit termination thereof, said helical lines being physically supported from the respective shell portions.

3,099,808
CHANNEL TUNING SYSTEM FOR SIGNAL RECEIVERS IN WHICH TUNING COMPONENTS ASSIGNED TO UNSELECTED CHANNELS FORM PART OF ADJACENT CHANNEL TRAPS
Peter Hobley, Pointe Claire, Quebec, Canada, assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 24, 1961, Ser. No. 84,669
14 Claims. (Cl. 334—50)



1. A channel tuning system for signal receivers comprising, a plurality of tuning circuit elements, means for selectively connecting each of said circuit elements for effecting individual channel selection in a predetermined frequency range, means for connecting at least one of said circuit elements other than a selected circuit element for adjacent channel rejection with respect to a selected channel.

3,099,809
MULTITURN ROTARY POTENTIOMETER
Victor G. Mathison and Harold L. Kruse, Riverside, Calif., assignors to Bourns, Inc.
Filed Jan. 11, 1963, Ser. No. 250,912
10 Claims. (Cl. 338—143)



1. A variable resistor comprising:

first means, including rotary means comprising an elongate rotor rotatable about a longitudinal axis, said rotor having first and second longitudinally-extending groove guideways therein and said grooves being spaced apart by a longitudinally extending intervening portion; said first means comprising a longitudinally-extending electrical return conductor mounted on said intervening portion of said rotor between said grooves, and terminating in a brush means at one end of the rotor;

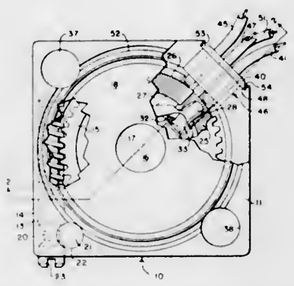
second means, including a helical resistance element the axis of the helix of which is coincident with said longitudinal axis and the next-adjacent convolutions of which are longitudinally spaced apart, and including means supporting said resistance element and said rotor in coaxial relationship;

third means, comprising electrical terminal means for said resistance element and terminal means including a conductive ring around said axis and disposed for contact by said brush means during rotation of said rotor; and

fourth means, comprising a resilient generally arch-shaped slider device disposed between said resistance element and said rotor and having an arch-forming body portion having at least one guide portion extending between adjacent convolutions of said element and formed complementary thereto and said

slider having at least one portion straddling an arcuate portion of said resistance element and said slider device further having first and second generally inwardly directed opposed end portions riding in respective ones of said groove guideways and in the relaxed state of the slider device being closer together than when disposed in said groove guideways, whereby said end portions are caused to compressively press against and embrace said intervening portion of said rotor to eliminate lost motion therebetween, said slider device carrying a contact means thereon having portions disposed to brush on said return conductor and on said resistance element.

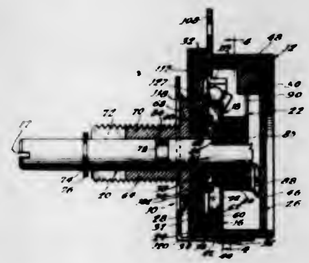
3,099,810
MINIATURE POTENTIOMETER
Hans Habereder, Costa Mesa, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed Mar. 18, 1960, Ser. No. 15,996
12 Claims. (Cl. 338—162)



1. A variable resistance comprising a housing, a resistance element mounted within said housing, a contact member engaging said resistance element, means for rotatably mounting said contact member including a contact mounting gear rotatably mounted with respect to said housing and in fixed relationship with said contact member, a worm gear mounted in said housing in engagement with said gear, said worm gear having an annular groove extending into a cavity formed within said housing, and means formed of a resilient material such as polychlorotrifluoroethylene resin retained in said cavity and deformed by the face of said annular groove for friction loading the worm gear.

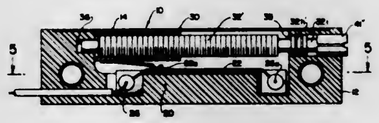
3,099,811
POTENTIOMETER
Michael A. Ayoub, Needham, Mass., assignor to Waters Manufacturing, Inc., Wayland, Mass., a corporation of Massachusetts
Filed Nov. 18, 1960, Ser. No. 70,314
8 Claims. (Cl. 338—174)

1. In a potentiometer, a stationary portion comprising an enclosure containing a resistance element and having front and back walls, and a rotary portion comprising a shaft extending through the front wall of the enclosure, a movable contact, and means for mounting the contact on the shaft, said mounting means including a spring portion urging the contact in a first axial direction to contact with the resistance element, stop means on the shaft and on one of said walls of the enclosure limiting motion of the shaft in said first axial direction, the shaft being free for motion in the opposite axial direction, and spring means of greater force than said spring portion acting between the rotary portion and the stationary portion of the assembly to urge the shaft in said first axial direction, whereby the spring means normally holds the shaft at the limit of the motion fixed by the stop means to exert the full force



of the spring portion of the contact-mounting means on the contact.

3,099,812
VARIABLE RESISTOR DEVICE
Wilbur T. Hardison, 4920 Luther St., Riverside, Calif.
Filed Aug. 24, 1961, Ser. No. 133,656
14 Claims. (Cl. 338—183)

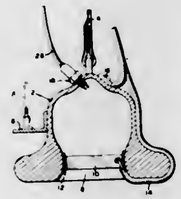


1. A variable resistor comprising:
first means, including a resistance element, and return-conductor means;
second means, including a contact-carrier means and contact-means carried thereby arranged for wiping contact with said resistance element and said return-conductor means;
third means, comprising shafting means, said third means being constructed and arranged for moving said contact-carrier means to traverse said contact-means along said resistance element and in contact with said return-conductor means, said shafting means comprising driving means and driven means, said driven means including a driven head, said driving means comprising a driver including a curve strip of spring material of generally cylindrical configuration frictionally engaging the driven head, to provide a friction-clutch connection between the driver and the driven means;
fourth means, comprising electrical-connection means providing electrical access to end portions of said resistance element and to said return-conductor means;
and fifth means, comprising housing and support means, for housing and supporting said shafting means and said resistance element and said return-conductor means.

3,099,813
ELECTROLYTIC-IGNITION UNDERWATER SOUND SOURCE
Edward P. Anderson, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Apr. 26, 1957, Ser. No. 655,390
1 Claim. (Cl. 340—12)

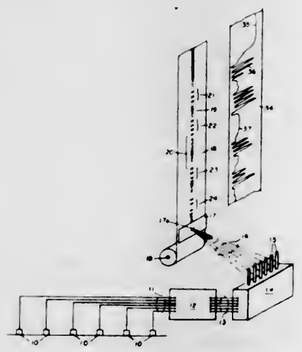
In an underwater sound source, an open-ended chamber, means for supporting said chamber below water with the open end facing downwardly when said chamber is filled with gas, means for electrolytically decomposing water into hydrogen and oxygen to automatically fill a

portion but not all of said chamber with hydrogen and oxygen, said last mentioned means including exposed metal electrodes, at least one of which terminates within said chamber and adjacent the open end of said chamber, whereby the electrolytic decomposition action ceases when said one electrode is exposed to the gases in said chamber and is out of contact with water, an igniter assembly in-



cluding at least one active ignition zone and a water draining area contiguous with said active ignition zone but below said zone, means for supplying current to said electrodes, means for selectively supplying power to said igniter assembly, and means for tilting said chamber to wash out the chamber and completely refill it with water.

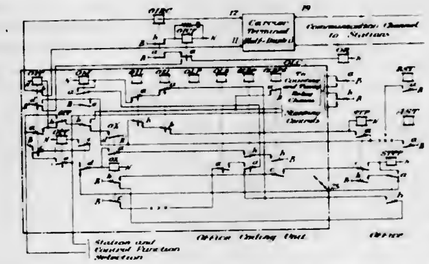
3,099,814
SEISMIC RECORDING TO EMPHASIZE SELECTED CHARACTER
James E. White and Philip L. Lawrence, Dallas, Tex., assignors, by mesne assignments, to Socony-Vacuum Oil Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 22, 1954, Ser. No. 464,018
16 Claims. (Cl. 340—15.5)



1. In seismic exploration where detonation of an explosive charge produces motion of the earth at seismic detecting stations spaced from the point of detonation the method which comprises producing alternating electrical voltages which vary in accordance with said motion at said detecting stations, and recording on a time related scale visual indications of said voltages in correlation with the instant of said detonation and characterized by highly emphasizing zero incidence portions of said voltages relative to other portions thereof.

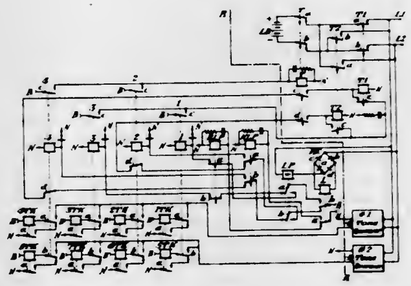
16. A method of obtaining geophysical data comprising the steps of creating seismic waves, detecting and converting said seismic waves into electrical signals, producing secondary signals comprising energy only at the quiescent points on said electrical signals, and recording said secondary signals.

3,099,815
COORDINATION CONTROLS FOR REMOTE CONTROL SYSTEMS
Arthur P. Jackel, Penn Hills Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1958, Ser. No. 778,490
10 Claims. (Cl. 340—163)



1. In a remote control system comprising a control office and a plurality of remote stations connected by a communication channel, a control means at said office operably connected to said channel for transmitting control functions to selected stations which are at times adapted to receive such control functions, an indication transmitting means at each station operably connected to said channel for transmitting indication functions from that station to said office which is adapted to receive such indication functions, said stations being normally conditioned for the immediate transmission of indication functions, synchronizing means at said office having connections to said communication channel and controlled by said control means when the transmission of a control function is actuated for conditioning each station to only receive control functions, said synchronizing means having other connections for delaying the actuated control function transmission until all stations are conditioned only to receive control functions.

3,099,816
REMOTE INDICATION SYSTEMS
Alfred B. Miller, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 18, 1960, Ser. No. 29,906
18 Claims. (Cl. 340—163)

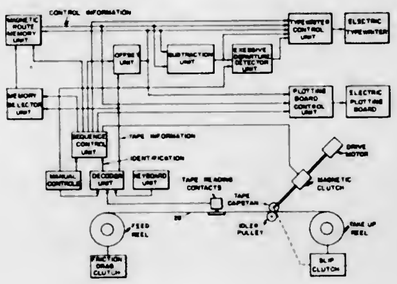


1. A remote indication system, including a control location and at least one remote location connected by a communication channel capable of conducting signals

of various charateristics, comprising, a transmitting means having connections to said channel for transmitting signals alternately of a first and a second characteristic, successive signals being spaced by similar periods of no signal, a first receiving means at said control location and a second receiving means at said remote location, each receiving means having connections to said channel at the corresponding location and responsive to the successive signals transmitted by said transmitting means for cyclically establishing in synchronism a plurality of successive conditions, a plurality of two-position indicators at said remote location one corresponding to each condition of the associated receiving means, a transmitter at said remote location having connections to said channel for transmitting when actuated a signal of a third characteristic, circuit means at said remote location controlled by said second receiving means and by said indicators and having connections for actuating said transmitter during each successive condition of said receiving means when the corresponding indicator occupies a preselected one of its positions, and a recording means at said control location having connections to said channel and controlled by said first receiving means and responsive to signals of said third characteristic for individually recording the positions of said indicators at the remote location in accordance with the signals received from said transmitter.

3,099,817
VEHICLE PERFORMANCE MONITORING SYSTEM

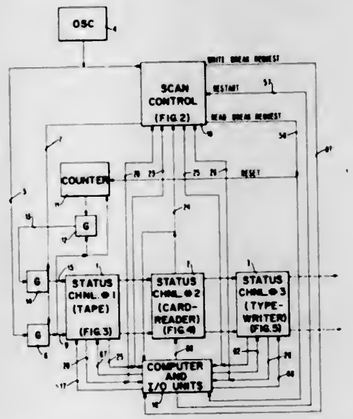
Hugh C. Kendall, Rochester, N.Y., assignor to General Signal Corporation, a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,678
9 Claims. (Cl. 340—172.5)



1. A system for monitoring the operation of a vehicle having an odometer, comprising a recording medium for receiving characteristic data, data producing means effective when operated to record distinctive indications on said recording medium, a plurality of data selection means for selecting the distinctive indications of said data producing means, circuit means electrically connecting each of said plurality of data selection means to said data producing means effective when activated selectively to operate said data producing means to record indications in accordance with a respective one of said data selecting means, first activating means operable to activate momentarily one of said circuit means, a second activating means effective when operated repetitively to activate another of said circuit means at spaced intervals, and means connecting operatively said odometer to said second activating means after the operation of said first activating means to cause the operation of said second activating means upon the initial movement of the vehicle and the repeated operation of said second activating means to correspond to increments of distance traveled by said vehicle.

3,099,818
SCAN ELEMENT FOR COMPUTER

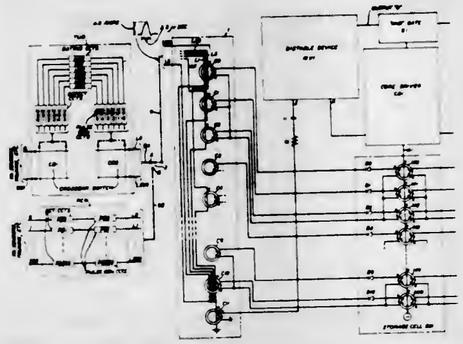
Richard F. Murray, Rhinebeck, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,936
4 Claims. (Cl. 340—172.5)



4. In a data processing device wherein a plurality of input-output units may transfer data to or receive data from a central processor, the data processing device having a scan element disposed between the plurality of input-output units and the central processor, the scan element having at least first, second and third status channels serially connected, a source of oscillator pulses connected to the first status channel, each input-output device having means to supply status signals, means conveying the status signal of each input-output device to a separate status channel with status signals from the fastest input-output unit being connected to the first status channel and the status signals of succeeding slower input-output units being connected to succeeding status channels in the series, a counter, a control circuit connected between said source of oscillator pulses and said serially connected status channels which normally passes oscillator pulses to the status channels and said counter, each status channel having an output conductor connected to said control circuit which conveys a signal to the control circuit which operates the control circuit: (*a*) to inhibit the passage of oscillator pulses, (*b*) to set the counter to a predetermined count, and (*c*) to supply a control signal to the central processor when any one of the status channels is ready to transfer data to or receive data from the central processor, means coupled between the counter and said control circuit which inhibits the occurrence of operative signals on said output conductor of each status channel until said counter reaches a given count which differs from said predetermined count, said central processor including means for supplying a signal to the control circuit which operates the control circuit to pass oscillator pulses when a transfer of data to or from the central processor is completed, whereby the first input-output unit is interrogated first by each oscillator pulse from said control circuit and is given precedence over the second and subsequent input-output units, the second input-output unit is interrogated second by each oscillator pulse from said control circuit and is given precedence over the third and any subsequent input-output units, et cetera, and any input-output unit which is ready to transfer or receive data must wait until said counter reaches said given count.

3,099,819
TRAFFIC MEASUREMENT APPARATUS

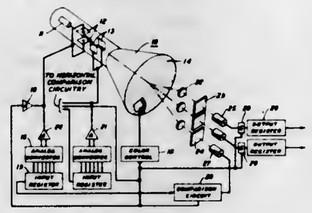
Douglas H. Barnes, Mountainside, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 11, 1960, Ser. No. 1,602
29 Claims. (Cl. 340—172.5)



1. In a traffic measurement apparatus, monitoring means for randomly providing indications peculiarly identified with each of a pluralty of units of equipment to be measured, temporary storage means connected to said monitoring means and operative to receive said indications at a first maximum rate, said storage means comprising a plurality of tandemly arranged storage cells and means for transferring each of said indications so received to the last one of said storage cells, recording means including a serial reader connected to said last one of said storage cells for serially recording each of said indications directed through said storage means, said recording means being operative at a second maximum rate, said second maximum rate being less than said first maximum rate, and means connecting said serial reader to said transferring means for providing that each of said indications is directed to said last storage cell at said second maximum rate.

3,099,820
OPTICAL STORAGE SYSTEM

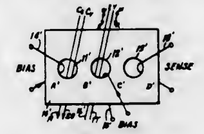
Raymond W. Ketchledge, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 31, 1959, Ser. No. 803,239
7 Claims. (Cl. 340—173)



3. A binary information storage system comprising an electron discharge device including a tricolor luminescent screen, means for projecting an electron beam against said screen, means for deflecting said beam and means for controlling said deflected beam to produce a spot of light on the area of incidence in a selected color, an information storage slide having binary information stored on discrete areas thereof, said discrete areas of said slide being arranged to absorb light of certain colors and to transmit therethrough light of all other colors, a positioning slide, means for focusing light on said slides from said selected color spot on said screen, light responsive devices for generating electrical manifestations of light directed thereto, means for focusing light on said devices from said screen through said slides, and means interconnecting said control means and said light responsive device receiving light through said positioning slide.

3,099,821
MAGNETIC CORE DEVICE

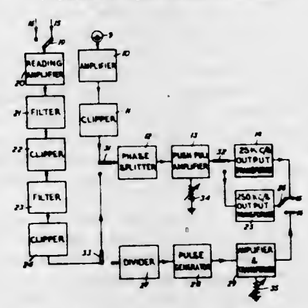
Frederick L. Post, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 22, 1959, Ser. No. 841,487
18 Claims. (Cl. 340—174)



1. A magnetic core device comprising means defining a magnetic circuit having at least a pair of input flux paths, an output flux path and a main flux path coupling said input flux paths to said output flux path; means for magnetically biasing one of said input paths to saturation in a first direction and the other of said input paths to saturation in a second direction; first drive means for selectively driving said one input flux path to saturation in said second direction to thereby establish a flux pattern in the main flux path in said second direction and for driving said other input flux path to saturation in said first direction to thereby establish a flux pattern in the main flux path in said first direction; output means for detecting a change in the flux pattern in said output flux path; and second selectively operable drive means for driving said one input flux path to saturation in said second direction independently of said first drive means, to thereby establish a flux pattern in the main flux path in said second direction.

3,099,822
MAGNETIC DATA STORAGE DEVICES

Emrys John Williams, Stevenage, England, assignor to International Computers and Tabulators Limited., (formerly The British Tabulating Machine Company Limited).
Filed Sept. 22, 1959, Ser. No. 841,496
Claims priority, application Great Britain Oct. 10, 1958
4 Claims. (Cl. 340—174.1)



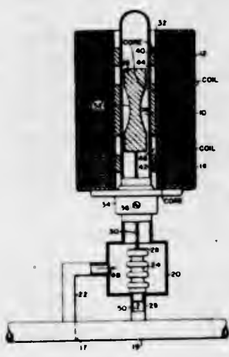
3. Apparatus for recording a predetermined number of synchronising signals on a track of rotor magnetic stor-

age device comprising a disc mounted for rotation in synchronism with the storage device; a series of sensible indicia equal in number to said predetermined number of synchronising signals and spaced at substantially uniform intervals around a circular track of the disc; sensing means responsive to the passage of said indicia past the sensing means during a revolution of the storage device to produce a train of first signals equal in number to said predetermined number; a first track of said storage device; first recording means responsive to said first signals to record said first signals at substantially equal spacing in said first track; driving means operable to rotate the storage device at a constant invariable speed; reading means operative, during rotation of the storage device at said constant speed, in response to said recorded first signals to generate a train of second signals at a substantially constant frequency and equal in number to said predetermined number; a second track on said storage device; second rcording means operatively coupled to said second track; circuit means including a filter network operative to attenuate, relative to signals of said constant frequency, all other signals; and having an input circuit connected to said reading means and an output circuit connected to said second recording means.

3,099,823
NONLINEAR ELECTROMAGNETIC MOTION RESPONSIVE DEVICE

Louis A. Bobula and Kirk A. Oplinger, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 30, 1957, Ser. No. 656,076
10 Claims. (Cl. 340—199)

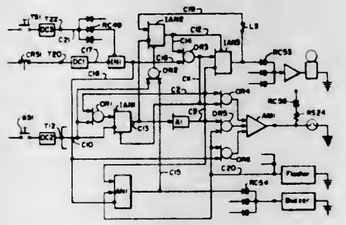


1. An electromagnetic device comprising an annular primary winding, a pair of annular secondary windings, means for mounting said secondary windings adjacent each side, respectively, of said primary winding and coaxially therewith, a hollow cylindrical relatively stationary primary core member, a pair of hollow cylindrical relatively stationary, secondary core members, means for mounting said primary core member and said secondary core members substantially concentrically within said primary and secondary windings, respectively, and for spacing said secondary core members from said primary core member, means for supplying a fluctuating potential to said primary winding, an armature of a length greater than that of said primary core member and less than the distance between said secondary core members, and means for mounting said armature within said primary and secondary core members and for displacing said armature so as to vary the magnetic reluctance between said primary and secondary cores and the magnetic coupling between said primary and secondary windings in response to a varying characteristic.

3,099,824
STATIC LOGIC ANNUNCIATOR

Leonard P. Vitt, Pittsburgh, and Jon J. McNeill, Wilkinsburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 26, 1958, Ser. No. 737,645
14 Claims. (Cl. 340—213)

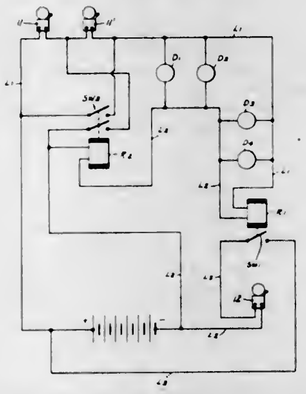


1. An annunciator comprising static element means operating to change a normal indication signal to another indication signal in response to the absence of a signal from a condition-responsive signal means; acknowledge means connected in circuit relation with said static element means for providing an additional signal to said static element means in the absence of a signal from said condition-responsive means, and additional static element means connected in circuit relation with said acknowledge means and said static element means for providing an indication signal different from said normal indication signal and said another indication signal in response to the operation of the acknowledge means following the said operation of the first mentioned static means and to the presence of a signal from said condition-responsive signal means after the operation of the acknowledge means.

3,099,825
CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

Cy Harriman, Westport, Conn.

Filed Sept. 30, 1960, Ser. No. 59,603
8 Claims. (Cl. 340—213)

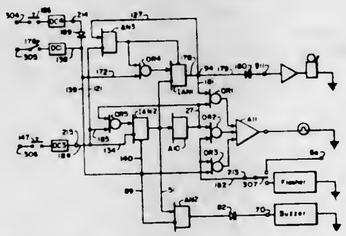


1. An electrically actuated alarm circuit comprising, a plurality of alarm indicating means, said alarm indicating means being normally connected in a series circuit for ease of electrical supervision, and trouble signal means to warn of a fault in said series circuit, detecting means for sensing an alarm, and means responsive to said detecting means for disconnecting said series circuit and connecting said alarm indicating means in parallel when an alarm is sensed.

3,099,826
STATIC LOGIC ANNUNCIATOR

Donald H. Noreen, Pittsburgh, and Walter F. Guenther, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 2, 1958, Ser. No. 706,688
4 Claims. (Cl. 340—226)



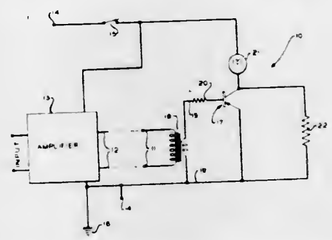
4. In an annunciator: a static INHIBITED AND-NOT element having an output connected to a plurality of inputs including an alarm input, a first input of a three-input AND amplifier, and the AND input of a first static AND-NOT element; said static AND-NOT element having an output connected to the AND input and the INHIBIT input of said INHIBITED AND-NOT element; a second INHIBITED AND-NOT element having an output connected to the NOT input of the first INHIBITED AND-NOT element, the single input of a static AND element, and the AND input of a second static AND-NOT element, said second AND-NOT element having an output connected to a second alarm; said single input AND element having an output connected to the first and second AND inputs of said three-input AND amplifier, and to the AND input of the second INHIBITED AND-NOT element; a flasher having an output connected to second and third AND inputs of said three-input AND amplifier; means for providing an abnormal signal and having an output connected to the AND input of the first INHIBITED AND-NOT element, to the INHIBIT input of the second INHIBITED AND-NOT element, to the NOT input of the second AND-NOT element, and to the third AND input of the three-input AND amplifier; and means for providing an acknowledge signal and having an output connected to the NOT input of the first AND-NOT element, and to the AND input and the NOT input of the second INHIBITED AND-NOT element.

3,099,827
TRANSISTOR INDICATOR CIRCUIT

Bosco Wu, East Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed Apr. 14, 1958, Ser. No. 728,373
2 Claims. (Cl. 340—248)

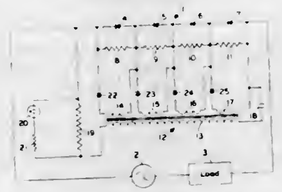
1. A dual function indicator for voice recording equipment operable from a direct current source of current and adapted to provide both a steady state on-off indication and a variable signal-level indication, comprising an electrically operable indicator element responsive in proportion to energizing current within a given current range, an on-off switch, a voltage cut-down resistor, an electrical circuit serially including said on-off switch, indicator element and resistor in the sequence here named for supplying current to said indicator element when said on-off switch is closed, a transistor having emitter, base and collector element connected in class B arrangement to operate as a rectifier, two of said transistor elements being connected across said resistor and providing a fixed impedance thereacross causing said indicator element to be supplied with steady state current at the lower end of said current range when no signal is applied to the third of said transistor elements, and means for feeding alternating current voice-representing signals from said recording equipment across said third transistor element and one of said two elements for providing a varying reduction in said impedance causing a fluctuating higher level current to flow through said indicator element in proportion to fluctuations in the level of the alternating current voice-representing signals in said recording equipment.



3,099,828
PROTECTIVE CIRCUITRY AND INDICATING MEANS FOR RECTIFIER SYSTEMS

Fred W. Kelley, Jr., Lynchburg, Va., assignor to General Electric Company, a corporation of New York

Filed July 17, 1958, Ser. No. 749,176
14 Claims. (Cl. 340—248)



2. In combination with a rectifier leg having a plurality of rectifier cells connected in series, means for detecting the failure of at least one of said rectifier cells comprising: a transformer having a primary winding connected across said rectifier leg and a plurality of secondary windings, said secondary windings each being connected across a corresponding rectifier cell; a blocking rectifier in series with each of said secondary windings; impedance means and impedance means including an indicating device connected in series with said primary winding to form a series circuit across said rectifier leg, said series circuit providing voltage drops across said primary winding and said indicating means having a predetermined ratio during normal operation of the rectifier leg; each of said secondary windings being responsive to the failure of a rectifier cell for changing the ratio of the voltage drops across the said primary winding and said indicating means to activate said indicating means.

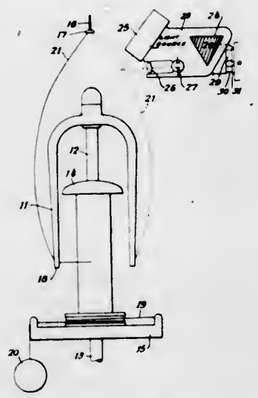
3,099,829
YARN BREAK DETECTOR

Laszlo Namenyi-Katz, 66 Porchester Gate, London W2, England

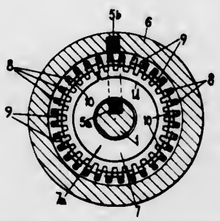
Filed May 23, 1960, Ser. No. 31,138
Claims priority, application Great Britain May 25, 1959
15 Claims. (Cl. 340—259)

1. A yarn break detector comprising a carriage movable to travel along a row of yarns in a textile machine,

means to direct a light beam in turn upon each yarn, light detecting means on the carriage responsive to light reflected from the yarn, an amplifier connected to the detecting means to amplify the signal from the detecting means, a device settable to two states, the first of which will energize an alarm and the second of which will inhibit such energization, automatic means to set the device to its first state as the carriage approaches each yarn, the amplifier output being connected to the device and operable to set the device in said second state, and means conditioned for operation when the carriage is moving away from the yarn and responsive only to the first state of the device to produce an alarm signal.

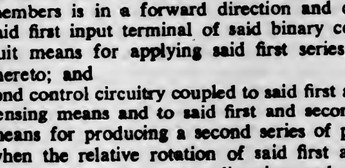


3,099,830
ELECTRICAL APPARATUS FOR PROVIDING AN INDICATION OF THE RELATIVE POSITIONS OF RELATIVELY MOVABLE MEANS
Cecil John Wayman, Stanmore, England, assignor to The General Electric Company Limited, London, England
Filed Apr. 7, 1958, Ser. No. 726,863
Claims priority, application Great Britain Apr. 5, 1957
11 Claims. (Cl. 340—347)



2. Position-encoding apparatus comprising: a ferromagnetic stator having a main body portion and a series of teeth extending from the main body portion; a plurality of first electrical windings each of which embraces successive groups of said teeth in opposite senses in a predetermined pattern, each of which is fixedly mounted with respect to the teeth of said group and each of which is electromagnetically coupled to each of the teeth of such group, the grouping of the teeth by the different first windings being different; a second electrical winding on said stator fixedly mounted with respect to said teeth and electromagnetically coupled to all of said teeth in the same sense thereby to have different portions thereof inductively coupled to said first windings by the different teeth; and a U-shaped ferromagnetic yoke which is mounted for movement selectively to any said tooth, and which includes a first portion lying in close proximity to the selected one of said teeth and a second portion extending from said first portion into correspondingly close proximity with said main body portion of the stator so that said yoke with said main body portion and with the selected tooth forms a substantially closed ferromagnetic circuit enhancing the inductive coupling between the first and second windings at said tooth, said electrical windings having terminal means to provide digital conversion of the position of said yoke.

3,099,831
ANALOGUE TO DIGITAL CONVERTER AND COUNTER
Max Everson Jones, Los Angeles, Calif., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed May 5, 1959, Ser. No. 811,215
5 Claims. (Cl. 340—347)



2. Means for detecting the position of a rotary member comprising:

a first member and a second member mounted to rotate relative to one another in synchronism with said rotary member;

said first member having a plurality of circumferentially equi-spaced indicia, and said second member having a first index and a second index positioned to register with said indicia and being mutually phase-displaced 90° relative to the repetitive spacing of said indicia;

first sensing means coupled to said indicia of said first member and to said first index of said second member for producing a first periodic electrical signal;

first inverter means coupled to said first sensing means for producing a second periodic electrical signal in phase opposition to said first signal;

second sensing means coupled to said indicia of said first member and to said second index of said second member for producing a third periodic electrical signal phase displaced 90° from said first periodic electrical signal;

second inverter means coupled to said second sensing means for producing a fourth periodic electrical signal in phase opposition to said third signal;

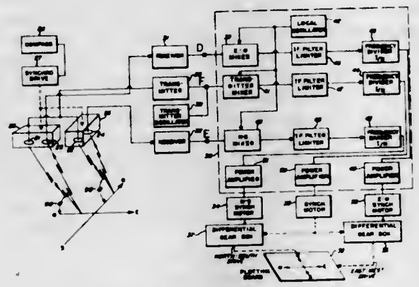
binary counter circuit means having a pair of input terminals, a first for receiving forward counting pulses to cause said counter to count up and a second for receiving reverse counting pulses to cause said counter to count down;

first control circuitry coupled to said first and second sensing means and to said first and second inverter means for producing a first series of pulses only when the relative rotation of said first and second members is in a forward direction and coupled to said first input terminal of said binary counter circuit means for applying said first series of pulses thereto; and

second control circuitry coupled to said first and second sensing means and to said first and second inverter means for producing a second series of pulses only when the relative rotation of said first and second members is in a reverse direction and coupled to said second input terminal of said binary counter

circuit means for applying said second series of pulses thereto.

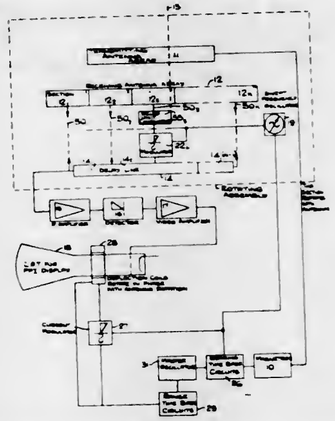
3,099,832
DOPPLER NAVIGATION SYSTEM
Paul D. Frelich, Wellesley, Mass., assignor to Raytheon Company, Waltham, Mass., a corporation of Delaware
Filed Nov. 4, 1959, Ser. No. 850,960
8 Claims. (Cl. 343—8)



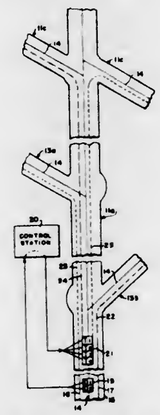
1. A Doppler navigation system for detecting craft velocity relative to a surface comprising means on said craft for directing wave energy in two different directions toward said surface, means for detecting reflection from each of said different directions, a source of wave energy coupled to said energy directing means, receiver means coupled to each of said energy detecting means, first, second and third motor means, means coupling said source of wave energy to said first motor means, means coupling said receiver means to said second and third motor means whereby the rate of said first motor means is representative of the frequency of directed energy and the rate of each of said second and third motor means is representative of the frequency of detected energy from a different of said directions, first and second differential means driven by said first and second and said first and third motor means respectively producing output motions representative of the sign and magnitude of craft velocity in said different directions.

3,099,833
METHOD OF RADIO SCANNING
David Gordon Tucker, Barnt Green, England, and David Evan Naunton Davies, Whitchurch, Cardiff, Wales, assignors to National Research Development Corporation, London, England, a British corporation
Filed Mar. 17, 1959, Ser. No. 799,918
Claims priority, application Great Britain Mar. 17, 1958
23 Claims. (Cl. 343—16)

1. In a radar apparatus including a transmitter for emitting a series of time-spaced radio pulses through a target containing medium, a receiver having a beam-forming antenna array incorporating spaced apart antenna elements connected with respective signal channels, a display device having co-related time base means defining co-ordinates of a sector of the medium to be explored, and amplifier means wherein signals in said channels are combined and fed to said display device; the provision of scanning means for the beam of said receiver antenna array comprising in combination, means for generating a local electrical signal, modulator means in each of said channels connected operatively with said generating means and fed with said local signal to modulate incoming signals in said channels respectively, phase-shift elements operatively connected with said channels and so co-relating the relative phases of the modulated signals therein as to determine the position of the beam of said receiver antenna array in relation to a reference axis thereof, said phase-shift elements being responsive to variation of said local signal, to vary differentially and in co-ordinated relation the respective phase-shifts imparted to said modulated signals and so deflect said beam in relation to said reference axis, and means for repeatedly varying said local signal within a time interval equal to that of said pulses, to cause said beam to scan a sector at least once within said time interval.



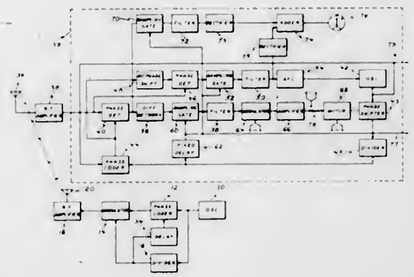
3,099,834
SYSTEM FOR AIRFIELD GROUND TRAFFIC CONTROL
Robert I. Sarbacher, 2424 Massachusetts Ave., Washington, D.C.
Filed Oct. 16, 1956, Ser. No. 616,254
19 Claims. (Cl. 343—101)



1. A system for airfield ground traffic control comprising a plurality of radioactive markers along runways of the airfield for guiding aircraft therealong, radioactivity detecting means positioned along said runways for sensing the movement of aicraft, having radioactivity radiators, over said runways, transmitting means for directing said

aircraft to desired runways, and means for receiving information from said detecting means and transmitting information to said transmitting means, thereby to provide for traffic control of aircraft.

3,099,835
PHASE CODED HYPERBOLIC NAVIGATION SYSTEM
Robert L. Frank, Great Neck, and Solomon Zadoff, Flushing, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed May 31, 1956, Ser. No. 588,570
12 Claims. (Cl. 343—103)



1. A pulsed carrier communication system comprising transmitting means including a source of pulsed electromagnetic energy waves, and phase coding means for shifting by a respective and discrete predetermined amount the phase of each successive pulsed wave; and a receiver including means for receiving the phase shifted waves from the transmitting means, an oscillator having substantially the same output frequency as said electromagnetic energy waves, phase coding means for periodically shifting the phase of the oscillator output in discrete predetermined amounts, said phase coding means introducing phase shifts of the same amount and in the same sequence as the phase shifting means included in the transmitting means, first servo means for synchronizing the output of the phase coding means with the received electromagnetic energy waves including a phase detector coupled respectively to the output of the phase coding means and the received electromagnetic waves, a sampling gate coupled to the output of the phase detector, a low-pass filter coupled to the output of the sampling gate, and means responsive to the output of the filter for controlling the frequency and phase of the oscillator output, whereby the frequency is adjusted to reduce the output of the phase detector to zero, means for generating pulses at substantially the repetition frequency of the received pulses of electromagnetic energy waves, second servo means for synchronizing said pulse generating means with the received pulses of electromagnetic energy waves including a phase detector coupled respectively to the output of the phase coding means and the received electromagnetic waves, means for differentiating the output of the phase detector, a sampling gate coupled to the output of the differentiating means, a low-pass filter coupled to the output of the sampling gate, means responsive to the output of the filter for controlling the phase of the pulse generating means, and means for coupling the output of the pulse generating means to the sampling gates in the first and second servo means, whereby the second servo means controls the pulse generating means to open the gates momentarily at a selected time during the reception of an electromagnetic energy pulse, and means for actuating the phase coding means in response to the output of the pulse generating means to shift the phase of the reference signal applied to the respective phase detectors of the first and second servo means.

3,099,836
V-STRIP ANTENNA WITH ARTIFICIAL DIELECTRIC LENS
John W. Carr, Santa Clara, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 16, 1960, Ser. No. 29,530
7 Claims. (Cl. 343—753)



5. A unidirectional broad band antenna system comprising a generally V-shaped antenna having angularly disposed metal strips as radiating elements, the angle between said metal strips being about 60 degrees, the flat portions of said strips substantially facing one another, the width of said strips being substantially constant throughout their lengths and being sufficient to achieve unidirectional operation, means exciting the V-shaped antenna at its apex so that the currents developed in the metal strips are concentrated on the inside surfaces thereof and phase correction means operatively connected to and disposed between said metal strips.

DESIGNS

JULY 30, 1963

195,756
SIGN
Joseph O. Tally, Jr., Home Federal Bldg., Fayetteville, N.C.
Filed Mar. 1, 1963, Ser. No. 73,782
Term of patent 14 years
(Cl. D1—12)



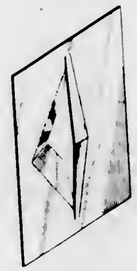
195,757
SHOE SOLE OR SIMILAR ARTICLE
Alan Beverley Lewis, Beaconsfield, Quebec, Canada, assignor to The British Rubber Company Limited, Lachine, Quebec, Canada
Filed Dec. 7, 1962, Ser. No. 72,757
Term of patent 14 years
(Cl. D7—5)



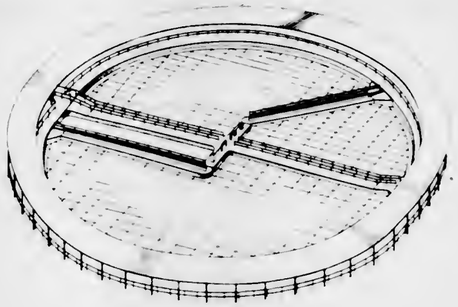
195,758
SHOE
Harry H. Gould, University City, Mo., assignor to Shuko Shoe Corp., Meadville, Pa., a corporation of Pennsylvania
Filed Jan. 16, 1963, Ser. No. 73,205
Term of patent 14 years
(Cl. D7—7)



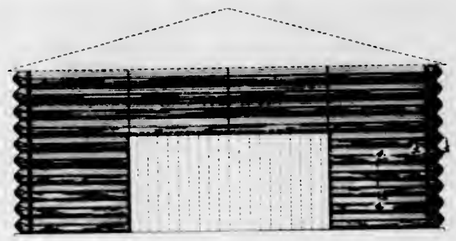
195,759
COMBINED PANEL AND HANDLE FOR A FOOD WARMING CART OR THE LIKE
Delmar D. Rhoads, Fort Wayne, Ind.
Filed Oct. 31, 1960, Ser. No. 62,686
Term of patent 14 years
(Cl. D10—8)



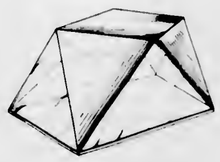
195,760
AMUSEMENT RIDE ARENA
Wilson Martin, Tarzana, Calif., assignor to Wed Enterprises, Inc., Burbank, Calif., a corporation of California
Filed June 29, 1961, Ser. No. 65,760
Term of patent 14 years
(Cl. D13—1)



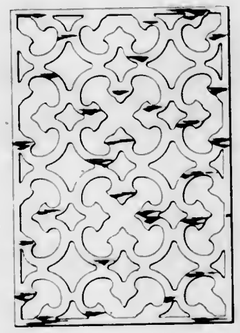
195,761
GRAIN STORAGE BUILDING
Thomas H. McVicar and Harry L. Vardiman, Independence, Mo., assignors to Butler Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Filed Jan. 5, 1962, Ser. No. 68,201
Term of patent 14 years
(Cl. D13—1)



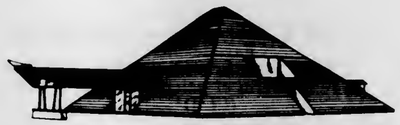
195,762
MODULAR BUILDING
Robert P. Gersin, 28 E. 55th St., New York, N.Y.
Filed Jan. 12, 1962, Ser. No. 68,282
Term of patent 14 years
(Cl. D13—1)



195,763
FILAGREE PANEL
William Levy, 833 Chestnut St., Franklin Square, Long Island, N.Y.
Filed Sept. 12, 1962, Ser. No. 71,661
Term of patent 14 years
(Cl. D13—1)



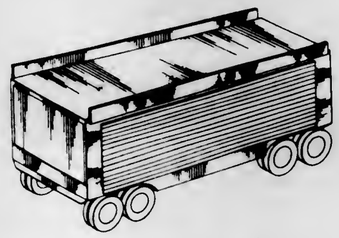
195,764
BUILDING
Virginia Beth, Beaver Dam, Wis., assignor to Richard Beth, Virginia Beth, John Glavich, and Marie Glavich, Beaver Dam, Wis., a partnership
Filed Dec. 6, 1962, Ser. No. 72,745
Term of patent 14 years
(Cl. D13—1)



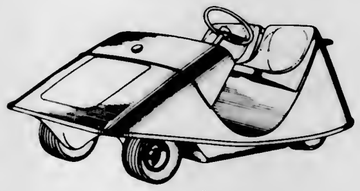
195,765
DRIVE-IN RETAIL BUILDING
Dwight A. Harrison, 1201 Central Ave. E., Hampton, Iowa
Filed Dec. 13, 1962, Ser. No. 72,832
Term of patent 14 years
(Cl. D13—1)



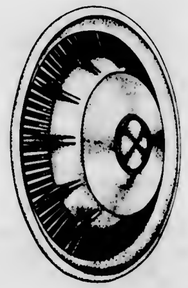
195,766
EXPANSIBLE VEHICLE
Carl W. Sundberg, Bloomfield Hills, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 13, 1962, Ser. No. 69,704
Term of patent 14 years
(Cl. D14—3)



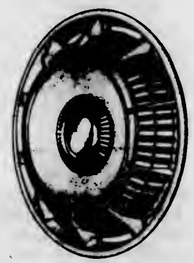
195,767
GOLF CART
Strother C. MacMinn, Los Angeles, Calif., assignor to William H. Joyce, Jr., Santa Barbara, Calif.
Filed Dec. 10, 1962, Ser. No. 72,772
Term of patent 14 years
(Cl. D14—3)



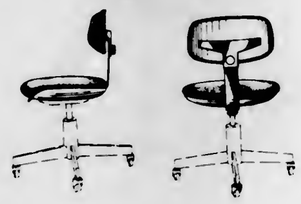
195,768
AUTOMOBILE WHEEL COVER
Eugene Bordinat, Jr., Bloomfield Hills, Mich., assignor to The Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 19, 1961, Ser. No. 67,958
Term of patent 7 years
(Cl. D14—30)



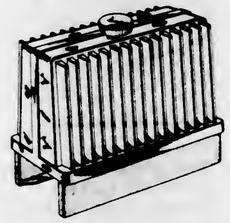
195,769
WHEEL COVER
Roger E. Hughet, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 13, 1962, Ser. No. 68,806
Term of patent 7 years
(Cl. D14—30)



195,770
CHAIR
Richard A. Isola, Royal Oak, Mich., assignor, by mesne assignments, to Steelcase, Inc., Grand Rapids, Mich.
Filed Aug. 27, 1962, Ser. No. 71,465
Term of patent 14 years
(Cl. D15—1)



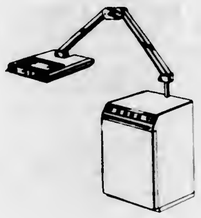
195,771
HOUSEHOLD STILL FOR DRINKING WATER AND THE LIKE
Dimitri Gregory Soussloff, Weston, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Jan. 22, 1962, Ser. No. 68,395
Term of patent 14 years
(Cl. D16—2)



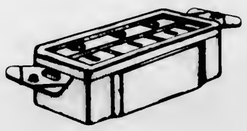
195,772
CARRYING CASE FOR A SHAVER
Norman Thomas Sanders, Mappleborough Green, Studley, England, assignor to Needle Industries Limited, Birmingham, England, a company of Great Britain
Filed July 25, 1962, Ser. No. 71,043
Term of patent 14 years
(Cl. D22—3)



195,773
DENTAL UNIT
Robert V. Turner, 10808 Stanford Ave., Lynwood, Calif.
Filed June 11, 1962, Ser. No. 70,491
Term of patent 14 years
(Cl. D24—1)



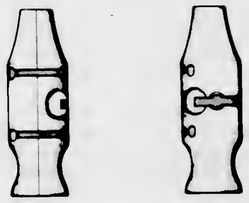
195,774
ELECTRICAL OUTLET RECEPTACLE
Robert E. V. Ramsing, 15283 E. Saneto Drive, Whittier, Calif.
Filed July 2, 1962, Ser. No. 70,746
Term of patent 14 years
(Cl. D26—1)



195,775
CHRISTMAS TREE ORNAMENT OR SIMILAR ARTICLE
Jack Burnbaum, Newton, Mass., assignor, by direct and mesne assignments, to Novelty Co., Inc., Cambridge, Mass., a corporation
Filed Aug. 22, 1961, Ser. No. 66,451
Term of patent 14 years
(Cl. D29—1)



195,776
FISHING FLOAT
Christie L. Hansen, P.O. Box 12, Port Sulphur, La.
Filed Nov. 5, 1962, Ser. No. 72,385
Term of patent 14 years
(Cl. D31—4)



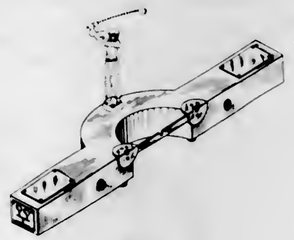
195,777
FISHING LURE
Elmer T. Hajek, 9 S. 731 Brookbank Road, Hinsdale, Ill.
Filed Mar. 11, 1963, Ser. No. 73,904
Term of patent 14 years
(Cl. D31—4)



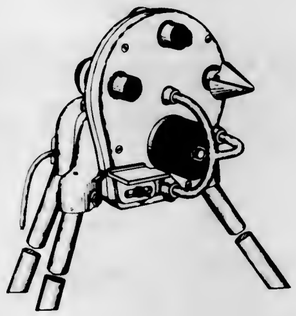
195,778
TOY FISH
Emmett White, Fayetteville, N.C., assignor to Christy Manufacturing Company, Inc., Fayetteville, N.C., a corporation of North Carolina
Filed Dec. 31, 1962, Ser. No. 73,023
Term of patent 3½ years
(Cl. D34—2)



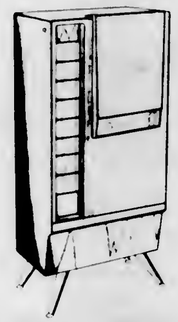
195,779
GOLF PUTTING TARGET TROPHY
Marlin H. Frederick, 14535 Foothill Blvd., and John G. Erickson, 727 Hewitt St., both of San Fernando, Calif.
Filed Oct. 22, 1962, Ser. No. 72,211
Term of patent 14 years
(Cl. D34—5)



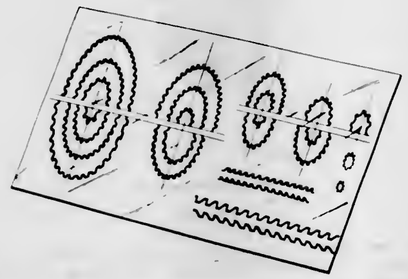
195,780
COMBINED TUBE BRUSHING AND CLEANING MACHINE
Heinrich H. Frank, 508 Debby Lane, Elyria, Ohio
Filed Jan. 30, 1962, Ser. No. 68,574
Term of patent 14 years
(Cl. D37—1)



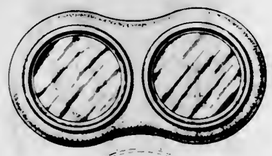
195,781
BOTTLE VENDING MACHINE, OR SIMILAR ARTICLE
Richard T. Cornelius, Minneapolis, and James Robert Reichow, Edina, Minn., assignors to The Cornelius Company, Anoka, Minn., a corporation of Minnesota
Filed May 4, 1962, Ser. No. 69,977
Term of patent 14 years
(Cl. D52—3)



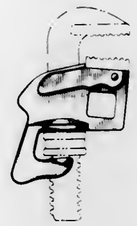
195,782
TEMPLATE
John M. Drinkwater, 45 Marble Hill Ave., Bronx, N.Y., and Norman Blau, 141 E. 33rd St., New York, N.Y.
Filed Dec. 31, 1962, Ser. No. 72,996
Term of patent 14 years
(Cl. D52—6)



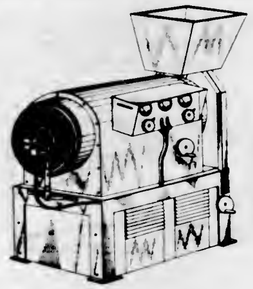
195,783
VEHICLE GAGE UNIT
Charles H. Woods, Jr., Indianapolis, Ind., assignor to Accurate Products, Inc., Indianapolis, Ind., a corporation of Indiana
Filed Dec. 31, 1962, Ser. No. 72,997
Term of patent 7 years
(Cl. D52—6)



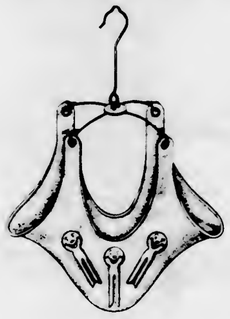
195,784
MONKEY WRENCH
Julian W. McManus, 3733 Delmas Terrace, Los Angeles, Calif.
Filed Dec. 6, 1962, Ser. No. 72,749
Term of patent 14 years
(Cl. D54—16)



195,785
MINERALS CONCENTRATOR
Herbert C. Brauchla, Fremont, and Paul Ruminsky, Amherst, Ohio; said Ruminsky assignor to said Brauchla
Filed Dec. 20, 1961, Ser. No. 67,991
Term of patent 14 years
(Cl. D55—1)



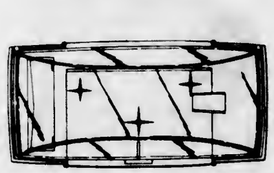
195,786
CLOTHESPIN BAG OR SIMILAR ARTICLE
James F. Foster, 14909 Lanark St., Panorama City, Calif.
Filed Jan. 14, 1963, Ser. No. 73,172
Term of patent 14 years
(Cl. D58—2)



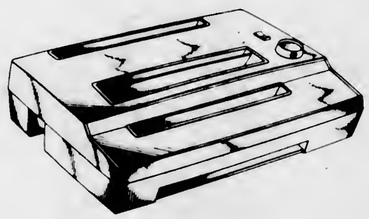
195,787
COMBINED BOTTLE AND CLOSURE
Robert B. Thompson, Overland Park, Kans., assignor to Faultless Starch Company, Kansas City, Mo., a corporation of Missouri
Filed Aug. 20, 1962, Ser. No. 71,372
Term of patent 14 years
(Cl. D58—8)



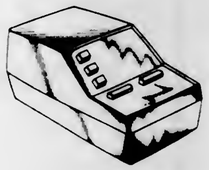
195,788
DISPLAY CASE FOR SAFETY RAZOR AND BLADES
Ralph A. Muscatiello, Norwood, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Dec. 20, 1961, Ser. No. 67,988
Term of patent 14 years
(Cl. D58—12)



195,789
PHOTOCOPY MACHINE
Jean O. Reinecke, Glenview, Raoul E. Rodriquez, Chicago, and Robert P. Meyer, Elmwood Park, Ill., assignors to International Photocopy Corporation, a corporation of Illinois
Filed Sept. 28, 1962, Ser. No. 71,925
Term of patent 14 years
(Cl. D61—1)



195,790
CONTROL CONSOLE FOR A PHOTOCOPY MACHINE OR SIMILAR ARTICLE
Jean O. Reinecke, Glenview, Raoul E. Rodriquez, Chicago, and Robert P. Meyer, Elmwood Park, Ill., assignors to International Photocopy Corporation, a corporation of Illinois
Filed Sept. 28, 1962, Ser. No. 71,926
Term of patent 14 years
(Cl. D61—1)



195,791
PHOTOGRAPHIC FLASH UNIT
Fred Hushla, Williamson, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 5, 1962, Ser. No. 72,000
Term of patent 7 years
(Cl. D61—1)



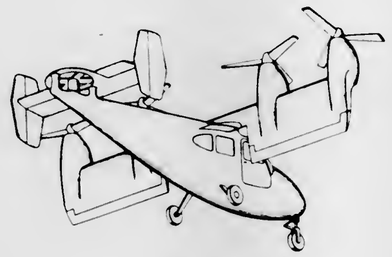
195,792
PUMP UNIT
Carl-Arne Breger, Stockholm, Sweden, assignor to Jonkopings Mekaniska Werkstads Aktiebolag, Jonkoping, Sweden
Filed Jan. 22, 1962, Ser. No. 68,407
Claims priority, application Sweden Sept. 18, 1961
Term of patent 14 years
(Cl. D65—1)



195,793
BLINDSTITCH PRESSER FOOT
Victor J. Sigoda, Great Neck, N.Y., assignor to Man-Sew Corporation, New York, N.Y., a corporation of New York
Filed Sept. 5, 1962, Ser. No. 71,573
Term of patent 14 years
(Cl. D70—2)



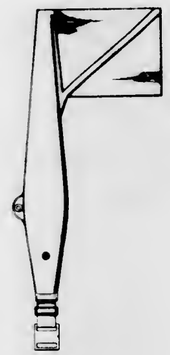
195,794
CONVERTIPLANE
Paul J. Dancik, Broomall, and Wieslaw Z. Stepniewski, Springfield, Pa., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 64,514
Term of patent 14 years
(Cl. D71—1)



195,795
AEROSPACE CRAFT
Lawrence B. Rellis, 9241 N. Olcott, Morton Grove, Ill.
Filed Feb. 16, 1962, Ser. No. 68,853
Term of patent 14 years
(Cl. D71—1)



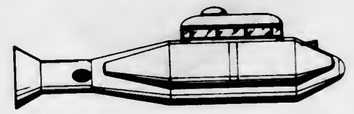
195,796
INFLATABLE FLAG FOR DIVERS OR SIMILAR ARTICLE
James S. Christiansen, Long Beach, Calif., assignor to Healthways, Los Angeles, Calif., a corporation of California
Filed May 7, 1962, Ser. No. 69,996
Term of patent 14 years
(Cl. D71—1)



195,797
OUTBOARD MOTOR
Carl Erik Sixten Andersson-Sason, Solna, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Sept. 28, 1962, Ser. No. 71,919
Claims priority, application Sweden Apr. 13, 1962
Term of patent 14 years
(Cl. D71—1)



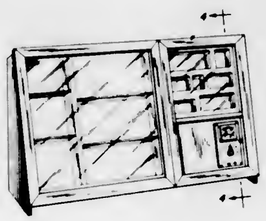
195,798
SUBMARINE
Philip A. Scoma, 6507 Vinevale Ave., Bell, Calif.
Filed Jan. 18, 1963, Ser. No. 73,230
Term of patent 14 years
(Cl. D71—1)



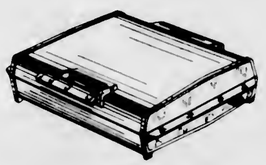
195,799
STAPLING MACHINE
George P. Heilman, Herrin, Ill., assignor to International Staple and Machine Company, Herrin, Ill., a corporation of Pennsylvania
Filed Apr. 14, 1961, Ser. No. 64,740
Term of patent 14 years
(Cl. D74—1)



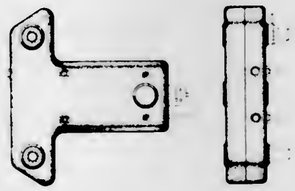
195,800
DISPLAY CASE
John H. Reese, Madison, Wis., assignor to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Apr. 24, 1962, Ser. No. 69,824
Term of patent 14 years
(Cl. D80—11)



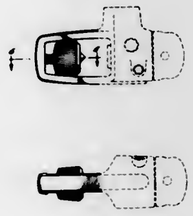
195,801
ELECTRIC GRILL
Herbert R. Carpenter, Chicago, Ill., assignor to Dominion Electric Corporation
Filed June 25, 1962, Ser. No. 70,665
Term of patent 14 years
(Cl. D81—10)



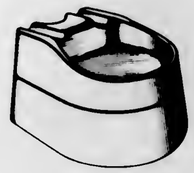
195,802
ELECTRONIC SIGNAL GENERATOR FOR MUSCLE STIMULATION
Logan D. Gilman, St. Paul, Minn., assignor to Theratron Corporation, St. Paul, Minn., a corporation of Minnesota
Filed Sept. 20, 1961, Ser. No. 66,775
Term of patent 14 years
(Cl. D83—1)



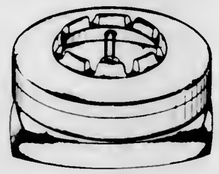
195,803
REGULATOR FOR UNDERWATER BREATHING APPARATUS OR THE LIKE
Robert J. Elder, Sun Valley, Calif., assignor to Healthways, Los Angeles, Calif., a corporation of California
Filed Sept. 17, 1962, Ser. No. 71,725
Term of patent 14 years
(Cl. D83—1)



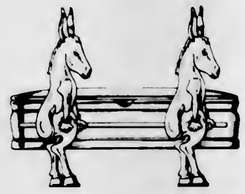
195,804
ASH TRAY
Calvin M. Dahl, 2537 Burr Oak Ave., Blue Island, Ill.
Filed June 18, 1962, Ser. No. 70,575
Term of patent 7 years
(Cl. D85—2)



195,805
COMBINED ASH TRAY AND PIPE REAMER
John Ward Blakely, 3704 Mound View Ave., Studio City, Calif.
Filed Sept. 14, 1962, Ser. No. 71,699
Term of patent 14 years
(Cl. D85—2)



195,806
ASH TRAY
Irvin Pine, 820 University Blvd. E., Silver Spring, Md.
Filed Nov. 23, 1962, Ser. No. 72,581
Term of patent 14 years
(Cl. D85—2)



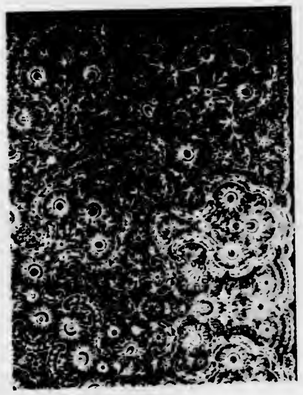
195,807
TOILET TANK BALLCOCK
Charley L. Goldtrap, Evergreen, Colo., assignor to Twentieth Century Products Corporation, Denver, Colo.
Filed Oct. 16, 1961, Ser. No. 67,109
Term of patent 14 years
(Cl. D91—3)



195,808
PLASTIC TABLECLOTH
William Z. Salcer, Rego Park, New York, N.Y., assignor to B. & S. Plastic Art, Inc., Jersey City, N.J., a corporation of New Jersey
Filed Aug. 15, 1962, Ser. No. 71,294
Term of patent 7 years
(Cl. D92—26)



195,809
PLASTIC TABLECLOTH
William Z. Salcer, Rego Park, New York, N.Y., assignor to B. & S. Plastic Art, Inc., Jersey City, N.J., a corporation of New Jersey
Filed Aug. 15, 1962, Ser. No. 71,295
Term of patent 7 years
(Cl. D92—26)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Corox Corp.: *See*—
Manson, Morris. Re. 25,428.

Harkins, Jack, to Professional Golf Co. Steel power-center golf ball. Re. 25,427, 7–30–63, Cl. 373—230.

Manson, Morris, to Corox Corp. Slide brackets. Re. 25,428, 7–30–63, Cl. 312—343.

Professional Golf Co.: *See*—
Harkins, Jack. Re. 25,427.

Scheel Henry A., to A. Wimpfheimer & Bro. Inc. Resin molded fabric. Re. 25,429, 7–30–63, Cl. 28—80.

Schmerling, Louis, to Universal Oil Products Co. Polyhaloctahydroalkanonaphthalenedicarboxylic acids, anhydrides and method of preparation thereof. Re. 25,430, 7–30–63, Cl. 260—346.3.

Universal Oil Products Co.: *See*—
Schmerling, Louis. Re. 25,430.

Wimpfheimer, A., & Bro. Inc.: *See*—
Scheel, Henry A. Re. 25,429.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Chrysanthemum plant. 2,270, 7–30–63, Cl. 81.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 2,270.

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Accurate Products, Inc.: *See*—
Woods, Charles H., Jr. 195,783.

American Machine & Foundry Co.: *See*—
Soussloff, Dimitri G. 195,791.

American Metal Products Co.: *See*—
Sundberg, Carl W. 195,766.

Andersson-Sason, Carl E. S., to Electrolux, Aktiebolaget. Outboard motor. 195,797, 7–30–63, Cl. D71—1.

B. & S. Plastic Art, Inc.: *See*—
Salcer, William Z. 195,808.
Salcer, William Z. 195,809.

Beth, Richard: *See*—
Beth, Virginia. 195,764.

Beth, Virginia, to R. and V. Beth, and J. and M. Glavich. Building. 195,764, 7–30–63, Cl. D13—1.

Blakely, John W. Combined ash tray and pipe reamer. 195,805, 7–30–63, Cl. D85—2.

Blau, Norman: *See*—
Drinkwater, John M., and Blau. 195,782.

Boeing Airplane Co.: *See*—
Dancik, Paul J., and Stepniewski. 195,794.

Bordinat, Eugene, Jr., to Ford Motor Co. Automobile wheel cover. 195,768, 7–30–63, Cl. D14—30.

Brauchia, Herbert C., and P. Ruminsky, said Ruminsky assor. to said Brauchia. Minerals concentrator. 195,785, 7–30–63 Cl. D55—1.

Breger, Carl-Arne, to Jonkopings Mekaniska Werkstads Aktiebolag. Pump unit. 195,792, 7–30–63, Cl. D65—1.

British Rubber Co. Ltd., The: *See*—
Lewis, Alan B. 195,757.

Burnbaum, Jack, to Novelty Co., Inc. Christmas tree ornament, or similar article. 195,775, 7–30–63, Cl. D29—1.

Butler Mfg. Co.: *See*—
McVicar, Thomas H., and Vardiman. 195,761.

Carpenter, Herbert R., to Dominion Electric Corp. Electric grill. 195,801, 7–30–63, Cl. D81—10.

Christiansen, James S., to Healthways. Inflatable flag for divers or similar article. 195,796, 7–30–63, Cl. D71—1.

Christy Mfg. Co., Inc.: *See*—
White Emmett. 195,778.

Cornelius Co., The: *See*—
Cornelius, Richard T., and Reichow. 195,781.

Cornelius, Richard T., and J. R. Reichow, to The Cornelius Co. Bottle vending machine, or similar article. 195,781, 7–30–63, Cl. D52—3.

Dahl, Calvin M. Ash tray. 195,804, 7–30–63, Cl. D85—2.

Dancik, Paul J., and W. Z. Stepniewski, to Boeing Airplane Co. Convertiplane. 195,794, 7–30–63, Cl. D71—1.

Dominion Electric Corp.: *See*—
Carpenter, Herbert R. 195,801.

Drinkwater, John M., and N. Blau. Template. 195,782, 7–30–63, Cl. D52—6.

Eastman Kodak Co.: *See*—
Hushla, Fred. 195,791.

Elder, Robert J., to Healthways. Regulator for underwater breathing apparatus or the like. 195,803, 7–30–63, Cl. D83—1.

Electric Storage Battery Co., The: *See*—
Reese, John H. 195,800.

Electrolux, Aktiebolaget: *See*—
Andersson-Sason, Carl E. S. 195,797.

Erickson, John G.: *See*—
Frederick Marlin H., and Erickson. 195,779.

Faultless Starch Co.: *See*—
Thompson, Robert B. 195,787.

Ford Motor Co.: *See*—
Bordinat, Eugene, Jr. 195,768.

Foster, James F. Clothespin bag or similar article. 195,786, 7–30–63, Cl. D58—2.

Frank, Heinrich H. Combined tube brushing and cleaning machine. 195,780, 7–30–63, Cl. D37—1.

Frederick, Marlin H., and J. G. Erickson. Golf putting target trophy. 195,779, 7–30–63, Cl. D34—5.

General Motors Corp.: *See*—
Hughet, Roger E. 195,769.

Gersin, Robert P. Modular building. 195,762, 7–30–63, Cl. D13—1.

Gillette Co., The: *See*—
Muscatiello, Ralph A. 195,788.

Gilman, Logan D., to Theratron Corp. Electronic signal generator for muscle stimulation. 195,802, 7–30–63, Cl. D83—1.

Glavich, John: *See*—
Beth, Virginia. 195,764.

Glavich, Marie: *See*—
Beth, Virginia. 195,764.

Goldtrap, Charley L., to Twentieth Century Products Corp. Toilet tank ballcock. 195,807, 7–30–63, Cl. D91—3.

Gould, Harry H., to Shuko Shoe Corp. Shoe. 195,758, 7–30–63, Cl. D7—7.

Hajek, Elmer T. Fishing lure. 195,777, 7–30–63, Cl. D31—4.

Hansen, Christie L. Fishing float. 195,776, 7–30–63, Cl. D31—4.

Harrison, Dwight A. Drive-in retail building. 195,765, 7–30–63, Cl. D13—1.

Healthways: *See*—
Christiansen, James S. 195,796.
Elder, Robert J. 195,803.

Heilman, George P., to International Staple and Machine Co. Stapling machine. 195,799, 7–30–63, Cl. D74—1.

Hughet, Roger E., to General Motors Corp. Wheel cover. 195,769, 7–30–63, Cl. D14—30.

Hushla, Fred, to Eastman Kodak Co. Photographic flash unit. 195,791, 7–30–63, Cl. D61—1.

International Photocopy Corp.: *See*—
Reinecke, Jean O., Rodriquez, and Meyer. 195,789.
Reinecke, Jean O., Rodriquez, and Meyer. 195,790.

International Staple and Machine Co.: *See*—
Heilman, George P. 195,799.

Isola, Richard A., to Steelcase, Inc. Chair. 195,770, 7–30–63, Cl. D15—1.

Jonkopings Mekaniska Werkstads Aktiebolag: *See*—
Breger, Carl-Arne. 195,792.

Joyce, William H., Jr.: *See*—
MacMinn, Strother C. 195,767.

Levy, William. Filagree panel. 195,763, 7–30–63, Cl. D13—1.

Lewis, Alan B., to The British Rubber Co. Ltd. Shoe sole or similar article. 195,757, 7–30–63, Cl. D7—5.

MacMinn, Strother C., to W. H. Joyce, Jr. Golf cart. 195,767, 7–30–63, Cl. D14—3.

Man-Sew Corp.: *See*—
Sigoda, Victor J. 195,793.

Martin, Wilson, to Wed Enterprises, Inc. Amusement ride arena. 195,760, 7–30–63, Cl. D13—1.

McManus, Julian W. Monkey wrench. 195,784, 7–30–63, Cl. D54—16.

McVicar, Thomas H., and H. L. Vardiman, to Butler Mfg. Co. Grain storage building. 195,761, 7–30–63, Cl. D13—1.

Meyer, Robert P.: *See*—
Reinecke, Jean O., Rodriquez, and Meyer. 195,789.
Reinecke, Jean O., Rodriquez, and Meyer. 195,790.

Muscatiello, Ralph A., to The Gillette Co. Display case for safety razor and blades. 195,788, 7–30–63, Cl. 158—12.
Needle Industries Ltd.: *See*—
Sanders, Norman T. 195,772.
Novelty Co., Inc.: *See*—
Burnbaum Jack. 195,775.
Pine, Irvin. Ash tray. 195,806, 7–30–63, Cl. D85—2.
Ramsing, Robert E. Y. Electrical outlet receptacle. 195,774, 7–30–63, Cl. D26—1.
Reese, John H., to The Electric Storage Battery Co. Display case. 195,800, 7–30–63, Cl. D80—11.
Reichow, James R.: *See*—
Cornelius, Richard T., and Reichow. 195,781.
Reinecke, Jean O., R. E. Rodriquez, and R. P. Meyer, to International Photocopy Corp. Photocopy machine. 195,789, 7–30–63 Cl. D61—1.
Reinecke, Jean O., R. E. Rodriquez, and R. P. Meyer, to International Photocopy Corp. Control console for a photocopy machine or similar article. 195,790, 7–30–63, Cl. D61—1.
Rellis, Lawrence B. Aerospace craft. 195,795, 7–30–63, Cl. D71—1.
Rhoads, Delmar D. Combined panel and handle for a food warming cart or the like. 195,759, 7–30–63, Cl. D10—8.
Rodriquez, Raoul E.: *See*—
Reinecke, Jean O., Rodriquez, and Meyer. 195,789.
Reinecke, Jean O., Rodriquez, and Meyer. 195,790.
Ruminsky, Paul: *See*—
Brauchle, Herbert C., and Ruminsky. 195,785.
Salcer, William Z., to B. & S. Plastic Art, Inc. Plastic tablecloth. 195,808, 7–30–63, Cl. D92—26.
Salcer, William Z., to B. & S. Plastic Art, Inc. Plastic tablecloth. 195,809, 7–30–63, Cl. D92—26.
Sanders, Norman T., to Needle Industries Ltd. Carrying case for a shaver. 195,772, 7–30–63, Cl. D22—3.
Scoma, Philip A. Submarine. 195,798, 7–30–63, Cl. D71—1.
Shuko Shoe Corp.: *See*—
Gould, Harry H. 195,758.
Sigoda, Victor J., to Man-Sew Corp. Blindstitch presser foot. 195,793, 7–30–63, Cl. D70—2.
Soussloff, Dimitri G., to American Machine & Foundry Co. Household still for drinking water and the like. 195,771, 7–30–63, Cl. D16—2.
Steelcase, Inc.: *See*—
Isola, Richard A. 195,770.
Stepniewski, Wieslaw Z.: *See*—
Dancik, Paul J., and Stepniewski. 195,794.
Sundberg, Carl W., to American Metal Products Co. Expansible vehicle. 195,766, 7–30–63, Cl. D14—3.
Tally, Joseph O., Jr. Sign. 195,756, 7–30–63, Cl. D1—12.
Theratron Corp.: *See*—
Gilman, Logan D. 195,802.
Thompson, Robert B., to Faultless Starch Co. Combined bottle and closure. 195,787, 7–30–63, Cl. D58—8.
Turner, Robert V. Dental unit. 195,773, 7–30–63, Cl. D24—1.
Twentieth Century Products Corp.: *See*
Goldtrap, Charley L. 195,807.
Vardiman, Harry L.: *See*—
McVicar, Thomas H., and Vardiman. 195,761.
Wed Enterprises, Inc.: *See*—
Martin, Wilson. 195,760.
White, Emmett, to Christy Mfg. Co., Inc. Toy fish. 195,778, 7–30–63, Cl. D34—2.
Woods, Charles H., Jr., to Accurate Products, Inc. Vehicle gage unit. 195,783, 7–30–63, Cl. D52—6.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JULY, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Aamot, Olav C., to Independence Foundation, and Koppers Co., Inc. Metallic shell rotary reduction of iron-copper-zinc values from sulfide ores and slags. 3,099,553, 7–30–63, Cl. 75—63.
Abbott, Louis M. Color illuminating device. 3,099,397, 7–30–63, Cl. 240—3.1.
Acheson Industries, Inc.: *See*—
Hunter, Frank M. 3,099,578.
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Burnett, Thomas H. 3,099,356.
Adam, Howard W., to International Minerals & Chemical Corp. Wet beneficiating of phosphate ores. 3,099,620, 7–30–63, Cl. 209—12.
Adams, Richard G.: *See*—
Lakritz, Julian, and Adams. 3,099,293.
Adler, Clarence E., and W. G. Moring, Jr., to Toledo Scale Corp. Ticket guide for printers. 3,099,214, 7–30–63, Cl. 101—407.
Advance Transformer Co.: *See*—
Feinberg, Albert E. 3,099,773.
Aeroflex Laboratories Inc.: *See*—
Scott, Alec C. 3,099,503.
Aeroil Products Co., Inc.: *See*—
Wollner, Paul, and Walter. 3,099,392.
Agfa A.G.: *See*—
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Kiper, Gerd. 3,099,197.
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Wexler, Herman. 3,099,645.
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Albert, Douglas, to Albert Air Conveyor Corp. Pneumatic conveyor for pulverant materials. 3,099,497, 7–30–63, Cl. 302—52.
Algatt, George E., and W. G. Otto, to Western Electric Co., Inc. Apparatus for advancing like elongated finishing bars. 3,099,348, 7–30–63, Cl. 198—218.
Allbaugh, Harold V. Method of making composite musical instrument strings. 3,099,595, 7–30–63, Cl. 156—172.
Allen, Chester, Jr., and F. Berkloo, to A. O. Smith Corp. Strip winding apparatus. 3,099,190, 7–30–63, Cl. 93—80.
Alles, Edwin H. Mute and reflector for musical wind instruments. 3,099,183, 7–30–63, Cl. 84—400.
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Wethly, Frans. 3,099,229.
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Allison, Thomas K. Machine for honing doctor blades. 3,099,111, 7–30–63, Cl. 51—3.
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Alverson, Earl E., to Southeastern Metals Co. Tube support and clamp for punching machines. 3,099,182, 7–30–63, Cl. 83—383.
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Raubut, Michael M., and Semsel. 3,099,691.
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Anderson, Edward P., to Engelhard Industries, Inc. Electrolytic-ignition underwater sound source. 3,099,813, 7–30–63, Cl. 340—12.
Anderson, Gerald R., and J. Boyce, to FMC Corp. Fruit halving apparatus. 3,099,303, 7–30–63, Cl. 146—72.
Anderson, John M., to General Electric Co. Low noise electron beam plasma amplifier. 3,099,768, 7–30–63, Cl. 315—5.39.
Anderson, Lawrence A., to Eastman Kodak Co. Process of preparing gun acacia pharmaceutical vehicle. 3,099,602, 7–30–63, Cl. 167—81.
Anderson, Russell W. Hair tapering clippers. 3,099,086, 7–30–63, Cl. 30—212.
Anderson, Vernal A., to Ford Motor Co. Full power brake valve. 3,099,500, 7–30–63, Cl. 303—49.
Andrews, Ray, and F. M. Moore, to B. F. Drakenfeld & Co., Inc. Silicone-coated frit used in decorating glassware. 3,099,569, 7–30–63, Cl. 106—49.
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Stelling, Walter R., Jr. 3,099,118.
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Archer, Osborn R., to The American Ship Building Co. Clamping device. 3,099,474, 7–30–63, Cl. 292—256.5.
Ardito, William A., to Westinghouse Electric Corp. Surface treating appliance. 3,099,028, 7–30–63, Cl. 15—50.
Arensberg, Hans G., to The Dow Chemical Co. Water treatment. 3,099,521, 7–30–63, Cl. 21—2.7.
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Radley, Stewart A., and Wolfenden. 3,099,312.
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Warman, Bloomfield J. 3,099,757.
Associated Electrical Industries (Ruby) Ltd.: *See*—
Mortlock, Joseph R., Wilkinson, and Richardson. 3,099,775.
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Ausburn, George P., to FMC Corp. Line blind. 3,099,292, 7–30–63, Cl. 138—94.3.
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Aven, Walter. Calendar reminder and dispensing device. 3,099,352, 7–20–63, Cl. 206—78.
Averette, Thomas P. Sheep foot tamper. 3,099,191, 7–30–63, Cl. 94—48.
Ayoub, Michael A., to Waters Mfg., Inc. Potentiometer. 3,099,811, 7–30–63, Cl. 338—174.
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De Mart, Le Roy S. 3,099,076.
De Mart, Le Roy S. 3,099,434.
Godshalk, Russell L. 3,099,467.
McDaniels, John D., Jr., and De Mart. 3,099,075.
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Bahrs, George S., D. W. Martin, and M. M. McWhorter. Frequency to voltage converter. 3,099,799, 7–30–63, Cl. 329—126.
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Petersen, Conrod W., and Heide. 3,099,360.
Nuttall, John M. 3,099,345.
Baker, Robert E.: *See*—
Li, John C., and Baker. 3,099,526.
Ballash, Clarence J., to The Cooper-Bessemer Corp. Marking device. 3,099,186, 7–30–63, Cl. 121—18.
Bank, Flemming. Swivel mount for windows. 3,099,036, 7–30–63, Cl. 16—163.
Banke, Henry C., to Clarin Mfg. Co. Chair structure. 3,099,479, 7–30–63, Cl. 297—36.
Banker, Robert D., P. W. Grounds, and R. A. Cody, to The Procter & Gamble Co. Two phase fast breaking foam pressurized hair waving composition. 3,099,603, 7–30–63, Cl. 167—87.1.

Barger, Alice J.: *See*—
Jones, Lyman L. 3,099,238.
Barker, William E., Jr., to Poly Tech Research, Inc. Apparatus for measuring levels of materials in containers. 3,099,158, 7–30–63, Cl. 73—321.
Barlow, Benjamin W., to The De Havilland Engine Co. Ltd. Uni-directional driving devices. 3,099,339, 7–30–63, Cl. 192—37.
Barnes, Douglas H., to Bell Telephone Laboratories, Inc. Traffic measurement apparatus. 3,099,819, 7–30–63, Cl. 340—172.5.
Barry, Leonard D., to Ampex Corp. Tape recorder. 3,099,709, 7–30–63, Cl. 178—6.6.
Bartok, William, and P. J. Lucchesi, to Esso Research and Engineering Co. Radiolytic oxidation of hydrocarbons. 3,099,613, 7–30–63, Cl. 204—162.
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Howling, Harold L. 3,099,527.
Bass, Vincent K., to B. T. Crump, Inc. Hassocks. 3,099,231, 7–30–63, Cl. 108—9.
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Bauer, Stefan G., and Battle. 3,099,616.
Bauer, Charles. Mold form for columns made of casting material. 3,099,062, 7–30–63, Cl. 25—131.
Bauer, Stefan G., and N. Battle, to Rolls-Royce Ltd. Steam cooled reactor and fuel channel. 3,099,616, 7–30–63, Cl. 204—193.2.
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Belerbach, Walter, E. Heinl, W. Strien, and S. Von Sass, to Stuttgarter Karosseriewerk Reutter & Co. G.m.b.H. Hinge unit for seat with adjustable back rest. 3,099,485, 7–30–63, Cl. 297—373.
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Heubusch, Henry P. 3,099,629.
Singelmann, Dietrich E. 3,099,133.
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Bell, Joseph P. Illumination means for automotive wheels. 3,099,401, 7–30–63, Cl. 240—8.12.
Bell Telephone Laboratories, Inc.: *See*—
Barnes, Douglas H. 3,099,819.
Gerbore, Alexander E., Plyer, and Steger. 3,099,719.
Gotthardt, Manfred R. 3,099,720.
Harr, John A., and Lowry. 3,099,717.
Jacquier, Jean H. 3,099,716.
Ketchledge, Raymond W. 3,099,820.
Meacham Larned A. 3,099,712.
Schwenzfeger, Edward E. 3,099,752.
Spitzer, William G., and Tanenbaum. 3,099,579.
Unger, Hans-Georg. 3,099,803.
Bellini, Robert. Router attachment for radial saw. 3,099,298, 7–30–63, Cl. 144—1.
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Poliseo, Joseph W. 3,099,222.
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Berg, William K., R. A. Riddell, E. G. Spencer, and L. E. Tomlinson, to North American Aviation, Inc. Vent and relief valve. 3,099,285, 7–30–63, Cl. 137—220.
Bergendahl, Raymond L., to Cherry-Burrell Corp. Container washing apparatus. 3,099,276, 7–30–63, Cl. 134—107.
Berger, Johannes, to C. Zeiss. Five lens objective. 3,099,702, 7–30–63, Cl. 88—57.
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Berry, John C., to Berry Bros. Corp. Stocking package and method. 3,099,353, 7–30–63, Cl. 206—79.
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Bessiere, Pierre E. Fuel injection pumps having distribution pistons. 3,099,217, 7–30–63, Cl. 103—2.
Bessiere, Pierre E. Self-regulating reciprocating piston pumps, in particular for the injection of fuel into internal combustion engines. 3,099,219, 7–30–63, Cl. 103—41.
Bieber, Philip. Simulated hedge for turf race track. 3,099,247, 7–30–63, Cl. 119—15.5.
Bigliano, Robert P., to E. I. du Pont de Nemours and Co. Physiologic fluid pressure sensing head. 3,099,262, 7–30–63, Cl. 128—2.05.
Birkner, Lars G., and S. T. Henriksson, to Bolidens Gruvaktiebolag. Wood preservative. 3,099,598, 7–30–63, Cl. 167—33.5.
Birtwell, William C., to Davol Rubber Co. Heart pump apparatus. 3,099,260, 7–30–63, Cl. 128—1.
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Blasberg, Lawrence A., L. J. Lader, and R. A. Young, to Hughes Aircraft Co. High-power resonance absorption isolator having ferrite slab offset from polepieces so as to be non-uniformly magnetized. 3,099,806, 7–30–63, Cl. 333—24.2.
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Blondiau, Edgard, to Societe S T O P. Deformable diaphragm apparatus. 3,099,189, 7–30–63, Cl. 137—784.
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McKibben, Horace E., and Jones. 3,099,115.
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Bobula, Louis A., and K. A. Oplinger, to Westinghouse Electric Corp. Nonlinear electromagnetic motion responsive device. 3,099,823, 7–30–63, Cl. 340—199.
Bobby, Leonard, to King-Seeley Thermos Co. Electrical control apparatus. 3,099,731, 7–30–63, Cl. 200—122.
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Doss, Joseph H., and Graham. 3,099,261.
Miller, Glen E. 3,099,798.
Boeing Co., The: *See*—
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Geratine, Milton I. 3,099,421.
Oh, Luis. 3,099,807.
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Birkner, Lars G., and Henriksson. 3,099,598.
Bond, Elizabeth A., H. N. Gold, and J. S. Marran, to Chart-Pak Inc. Transparent sheet provided with characters and instrumentalities for using such characters. 3,099,089, 7–30–63, Cl. 33—1.
Borchert, Peter J., to Miles Laboratories, Inc. Aqueous dispersion of periodate oxidized polyaccharide-amino triazine reaction product and process of preparing same. 3,099,573, 7–30–63, Cl. 117—62.2.
Bornemann, William, R. H. Bechtold, H. D. Philips, P. D. J. Freeman, N. F. Loretz, and G. O. Neuman, to Eastman Kodak Co. Apparatus for reproducing and recording information. 3,099,199, 7–30–63, Cl. 95—73.
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Boyer, Thomas W., R. O. Stucker, and E. L. Ries, to American Synthetic Rubber Corp. Process for preparing liquid polymers and copolymers with reduced modified levels. 3,099,650, 7–30–63, Cl. 260—139.
Boynton, Donald E., to Hercules Powder Co. Nitric acid manufacture. 3,099,531, 7–30–63, Cl. 23—157.
Breazeale, Hershel T., and F. and G. May, to FMC Corp. Wheel lock for tire changing apparatus. 3,099,300, 7–30–63, Cl. 144—288.
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Garber, Sidney. 3,099,592.
British Tabulating Machine Co. Ltd., The: *See*—
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Brody, Ira and A. Confection package. 3,099,568, 7–30–63, Cl. 99—180.
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Burris, William M. Support device. 3,099,101, 7–30–63, Cl. 45—82.
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Burzlaff, Karl H., to Ritter Co., Inc. Apparatus for controlling the flow of fluids. 3,099,440, 7–30–63, Cl. 269—325.
Bush, George B., and L. J. Viernstein. Electrical analogue. 3,099,741, 7–30–63, Cl. 235—61.6.
Butman, Louis S. Windmill tower. 3,099,220, 7–30–63, Cl. 103—58.
Butter, Otto, W. Irmscher, and R. Kaiser, to Gesellschaft für industrielle Technik m.b.H. Lettering machine for drawings. 3,099,344, 7–30–63, Cl. 197—150.
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Cahen, Herman S., and F. Lauer. Fishing devices. 3,099,099, 7–30–63, Cl. 43—26.2.
Caines, James F., R. F. Dyer, and J. K. Pannill, Jr., to Eastman Kodak Co. Method for blooming filter tow. 3,099,594, 7–30–63, Cl. 156—152.
Calder, Peter H., and D. J. S. Lancaster, to The De Havilland Engine Co. Ltd. Combustion chambers. 3,099,134, 7–30–63, Cl. 60—39.65.
Caldwell, John R., and J. C. Martin, to Eastman Kodak Co. Polyamide-polyamine synthetic resins from diketene and a diamine. 3,099,641, 7–30–63, Cl. 260—65.
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Carlson, William L., Jr., to Minneapolis-Honeywell Regulator Co. Fluid actuator. 3,099,136, 7–30–63, Cl. 60—52.
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Check, Mathias M., to The Yale and Towne Mfg. Co. Combination push button lock. 3,099,150, 7–30–63, Cl. 70—313.
Chenoweth, Albert J., to Case-Jamb, Inc. Corner reinforcing and adjusting means for frames. 3,099,051, 7–30–63, Cl. 20—92.
Cherniak, Earl L. Foot balancing device. 3,099,267, 7–30–63, Cl. 128—615.
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Congost Horta, Luis, and P. Lopez Garcia. Apparatus and devices for automatic control and supervision of the pressure of the tires of vehicle wheels. 3,099,309, 7–30–63, Cl. 152—416.
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Cooper, Joseph. Slide assembly for extension tables. 3,099,232, 7–30–63, Cl. 108—83.

Copp, Frederick C., and H. F. Hodson, to Burroughs Wellcome & Co., (U.S.A.) Inc. Method of treating infestations of nematodes. 3,099,599, 7–30–63, Cl. 167—53.

Corn Products Co.: *See*—
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Crance, Harry W., Jr. Gauge for printed sheet register marks. 3,099,092, 7–30–63, Cl. 33—174.

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Crane, John J. Static discharge device. 3,099,774, 7–30–63, Cl. 317—2.

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Data Presentations, Inc.: *See*—
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Davidson, Paul J.: *See*—
Currin, Elbert E., and Davidson. 3,099,237.

Davies, David E. N.: *See*—
Tucker, David G., and Davies. 3,099,833.

Davis, Charles J. Crawler trencher with tiltable body. 3,099,098, 7–30–63, Cl. 37—86.

Davis, Marvin A., to Westinghouse Electric Corp. Digital position control servosystem. 3,099,777, 7–30–63, Cl. 318—28.

Davis, William P.: *See*—
Garfield, Sidney R., and Davis. 3,099,020.

Davis, William T., Jr., and F. M. Murdock, to Anchor Serum Co. Bacterin in aqueous polyethylene, mineral oil emulsion. 3,099,601, 7–30–63, Cl. 167—78.

Davol Rubber Co.: *See*—
Birtwell, William C. 3,099,260.

Dean, Reginald I. R. Torque recorders. 3,099,155, 7–30–63, Cl. 73—134.

Deaner, Leland D. Posture indicating device and hat. 3,099,245, 7–30–63, Cl. 116—67.

De Crease, William M., to Lord Mfg. Co. Adhesive compositions. 3,099,632, 7–30–63, Cl. 260—3.3

Deere & Co.: *See*—
McCollum, Jack W. 3,099,121.

Deering Milliken Research Corp.: *See*—
Evans, Cyril G. 3,099,065.

De Hart, Harold, and D. H. Brooks, to Indevo Ltd. Supports for aerating particulate materials. 3,099,493, 7–30–63, Cl. 202—29.

De Havilland Engine Co. Ltd., The: *See*—
Barlow, Benjamin W. 3,099,339.
Calder, Peter H., and Lancaster. 3,099,134.

De Leo, Richard V.: *See*—
Werner, Frank D., and De Leo. 3,099,160.

Del'Homme, Daniel L.: *See*—
Kucera, Clement M., and Del'Homme. 3,099,324.

De Long, Herbert K., to The Dow Chemical Co. Method of suppressing bimetallic couple corrosion of magnesium metal articles. 3,099,083, 7–30–63, Cl. 29—527.

De Marco, Robert F., and H. W. Hein, to The Helfred Corp. Elevating shelf for stock bin servicing truck. 3,099,332, 7–30–63, Cl. 182—14.

De Mart, Le Roy S.: *See*—
McDaniels, John D., Jr., and De Mart. 3,099,075.

De Mart, Le Roy S., to The Babcock & Wilcox Co. Stud tensioner. 3,099,076, 7–30–63, Cl. 29—252.

De Mart, Le Roy S., to The Babcock & Wilcox Co. Power-operated stud tensioner. 3,099,434, 7–30–63, Cl. 254—29.

De Podesta, Frank B., to Paragon Bridge and Steel Co. Column and deck construction for vehicle shipping apparatus. 3,099,230, 7–30–63, Cl. 105—368.

Derler, Charles J., to Jackson Vibrators, Inc. Railway roadbed tamping and ballasting machine. 3,099,225, 7–30–63, Cl. 104—12.

De Vac, Inc.: *See*—
Hetman, Frank W. 3,099,050.

Diamond Alkali Co.: *See*—
Bluestone, Henry. 3,099,658.

Di Cerrione, Lodovico A., and C. Ferraris, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Process for the preparation of trimethylborate. 3,099,678, 7–30–63, Cl. 260—462.

Dillon, John A., Jr.: *See*—
Hatch, Melvin J., and Dillon. 3,099,529.

DiMartino, John M.: *See*—
Peck, Kenneth L., and DiMartino. 3,099,313.

Distillers Co. Ltd., The: *See*—
Stevens, Kenneth. 3,099,611.

Dome, Robert B., to General Electric Co. Stereophonic system. 3,099,707, 7–30–63, Cl. 178—5.6.

Domicone, Joseph J., and W. C. Smith, to Corning Glass Works. Method of joining two glass bodies. 3,099,549, 7–30–63, Cl. 65—30.

Donaldson, Robert M.: *See*—
Malmstrom, Homer E., and Donaldson. 3,099,543.

D'Onofrio, Anthony. Tabulating apparatus for typewriters or like machines. 3,099,343, 7–30–63, Cl. 197—127.

Donker, Cornelius D., to Gamble Brothers, Inc. Wooden bowling pins of spherical belly type and prefabricated segments therefor. 3,099,449, 7–30–63, Cl. 273—82.

Doss, Joseph H., and G. A. Graham, to Boeing Airplane Co. Fail body restraint system. 3,099,261, 7–30–63, Cl. 128—1.

Dow Chemical Co., The: *See*—
Arensberg, Hans G. 3,099,521.
De Long, Herbert K. 3,099,083.
Hatch, Melvin J., and Dillon. 3,099,529.
Hurley, Rupert B., and Colodny. 3,099,517.
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Teitel, Robert J. 3,099,555.
Zweigle, Maurice L., and Tolkmith. 3,099,668.

Downing, James H., and B. J. Wilson, to Union Carbide Corp. Process for producing metals. 3,099,554, 7–30–63, Cl. 75—80.

Doyle, Frank J.: *See*—
Hilgoe, Vernon J., and Doyle. 3,099,211.

Drakenfeld, B. F., & Co., Inc.: *See*—
Andrews, Ray, and Moore. 3,099,569.

Dresser Operations, Inc.: *See*—
Dunn, Robert, and Goerss. 3,099,453.

Drobil, Francis W.: *See*—
Schlecht, Charles H., and Drobil. 3,099,291.

Dubelier, Morton A. Hair holders. 3,099,271, 7–30–63, Cl. 132—46.

Ducati, Adriano C., to Plasmadyne Corp. Method of making glass fibers. 3,099,548, 7–30–63, Cl. 65—5.

Duddy, Joseph C., to The Electric Storage Battery Co. Storage battery electrodes and method of making the same. 3,099,586, 7–30–63, Cl. 136—43.

Duenke, Kenneth L., to The Clarken Co. Quick connector. 3,099,509, 7–30–63, Cl. 339—255.

Du Fault, Homer D., to Heathbath Mfg. Co., Inc. Steel space heater construction. 3,099,257, 7–30–63, Cl. 126—90.

Dunn, Robert, and F. A. Goerss, to Dresser Operations, Inc. Shaft seal with positive automatic shut-down feature. 3,099,453, 7–30–63, Cl. 277—27.

Du Pont de Nemours, E. I., and Co.: *See*—
Bigliano, Robert P. 3,099,262.
Brockway, William R., and Coursen. 3,099,215.
Krespan, Carl G. 3,099,688.
Sheppard, William A. 3,099,685.
Skiles, Benjamin F. 3,099,636.
Tanner, David. 3,099,631.

Dur-O-wal National, Inc.: *See*—
Spaight, Harold L. 3,099,110.

Dyar, Robert L. Adhesive coating apparatus. 3,099,580, 7–30–63, Cl. 118—233.

Dye, Robert F., to Phillips Petroleum Co. Rosin acid catalyst inactivator. 3,099,648, 7–30–63, Cl. 260—94.3.

Dye Sheet Metal Products, Inc.: *See*—
Williams, Conrad L. 3,099,119.

Dyer, Richard F.: *See*—
Caines, James F., Dyer, and Pannill. 3,099,594.

Dylla, Roy R. Refuse receptacle. 3,099,390, 7–30–63, Cl. 232—43.2.

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Pastva, John V., Jr. 3,099,473.

Eastern Rotorcraft Corp.: *See*—
Huber, John R. 3,099,055.

Eastman Kodak Co.: *See*—
Anderson, Lawrence A. 3,099,602.
Bornemann, William, Bechtold, Philips, Freeman, Loretz, and Neuman. 3,099,199.
Caines, James F., Dyer, and Pannill. 3,099,594.
Caldwell, John R., and Martin. 3,099,641.
Damschroder, Rudolph E., and Yackel. 3,099,209.
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Haynes, Carl J. 3,099,064.
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Straley, James M., Fisher, and Harris. 3,099,652.
Straley, James M., and Harris. 3,099,653.
Swarthout, Richard J., and Klauss. 3,099,750.
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Eastman Machine Co.: *See*—
Clark, Frederick G. 3,099,087.

Eaton Mfg. Co.: *See*—
Zalar, Frank A., and Nelson. 3,099,459.

Eaton Stamping Co.: *See*—
Hamman, Lyle J. 3,099,255.

Eckenrod, Kathleen. Skirt guarding attachment for armless chairs. 3,099,488, 7–30–63, Cl. 297—463.

Eddy, Charles L., to American Can Co. Container and method of handling same. 3,099,114, 7–30–63, Cl. 53—41.

Edgar, Eric C., to Imperial Chemical Industries Ltd. Treatment of potatoes with S-triazine compound. 3,099,106, 7–30–63, Cl. 47—1.

Edwards, Miles L. Heart valve. 3,099,016, 7–30–63, Cl. 3—1.

Ehrenreich, A., & Co.: *See*—
Gottschald, Rudolf. 3,099,469.

Ehrich, Hans, and M. Lässig, to Anschutz & Co. G.m.b.H. Measuring instrument and method and means for dampening the oscillation of a measuring member thereof. 3,099,094, 7–30–63, Cl. 33—226.

Eisler, Paul. Electric foil resistance drier. 3,099,540, 7–30–63, Cl. 34—1.

Elam, Edward U., and J. C. Martin, to Eastman Kodak Co. Nitrile derivatives of 2,2,4,4-tetraalkylcyclobutane-1,3-diols. 3,099,679, 7–30–63, Cl. 260—464.

Electric Storage Battery Co., The: *See*—
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Electronic Products Corp.: *See*—
Pleczynski, Joseph W. 3,099,758.

Electrotechnische Industrie Voorheen Willem Smit & Co.: *See*—
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Elford, Lionel H., to D. Napier & Son Ltd. Turbo blowers. 3,099,385, 7–30–63, Cl. 230—116.

Eliot, Sigdon A., to Olin Mathieson Chemical Corp. Apparatus and process for continuous casting. 3,099,053, 7–30–63, Cl. 22—200.1.

Ellison, James O., 24/100 to T. B. Griffith, and 24/100 to E. Younglove. Laminated wheel. 3,099,490, 7–30–63, Cl. 301—9.

Elovic, Alexander, to Indiana General Corp. Sequential switching system. 3,099,787, 7–30–63, Cl. 321—45.

Emrick, Donald D., and S. M. Darling, to The Standard Oil Co. Telomerization of ethylene with alkylene glycol diformates. 3,099,665, 7–30–63, Cl. 260—410.6.

Engelhard Industries, Inc.: *See*—
Anderson, Edward P. 3,099,813.
Hill, James S. 3,099,575.

Englander Co., Inc., The: *See*—
Wetzler, Justin J. 3,099,021.
Wetzler, Justin J. 3,099,518.

Ernisse, Robert J.: *See*—
Hodges, Howard T., Hughey, and Ernisse. 3,099,208.

Essam, Roy, A. S. Walsh, and K. B. Whiting, to The General Electric Co. Ltd. Non-reciprocal coupling arrangements for radio frequency signals. 3,099,794, 7–30–63, Cl. 325—24.

Esso Research and Engineering Co.: *See*—
Bartok, William, and Lucchesi. 3,099,613.
Lakritz, Julian, and Adams. 3,099,293.
Parker, Paul T., Bryan, Small, Pugh, and Buchmann. 3,099,644.
Popkin, Alexander H. 3,099,682.

Ethyl Corp.: *See*—
Cragg, Hoyt J. 3,099,689.
Gorsich, Richard D. 3,099,666.
Gorsich, Richard D. 3,099,667.
Graminer, George N., and Trotter. 3,099,694.

Evans, Cyril G., to Deering Milliken Research Corp. Yarn heater system. 3,099,065, 7–30–63, Cl. 28—62.

FMC Corp.: *See*—
Anderson, Gerald R., and Boyce. 3,099,303.
Ausburn, George P. 3,099,292.
Breazeale, Hershel T., and F. and G. May. 3,099,300.
Heinze, Marvin C. 3,099,494.
Knight, Houston W. 3,099,297.
Todd, William L. 3,099,317.

Fabian, Louis. Shoe heel. 3,099,096, 7–30–63, Cl. 36—24.5.

Fain, Arthur B. Fruit sectionizing apparatus. 3,099,302, 7–30–63, Cl. 146—3.

Falkenblad, Nils T., and B. H. Hallstrom, to Separator Aktiebolaget. Method and apparatus for sterilizing heat exchangers. 3,099,549, 7–30–63, Cl. 21—2.

Fallingborg, Ernst G., and W. J. Andersen. Apparatus for use in teaching and in carrying out psychotechnical examinations. 3,099,095, 7–30–63, Cl. 35—48.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Gehrke, Gunter. 3,099,513.
Holtschmidt, Hans, and Müller. 3,099,642.
Kronig, Walter, Bayer, Wahl, and Bacher. 3,099,538.
Kühle, Engelbert. 3,099,673.
Schrader, Gerhard. 3,099,674.
Wagner, Küno, Schwaebel, Kliss, Graülich, and Kleiner. 3,099,635.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Gross, Richard, Hertel, Kirst, and Mohr. 3,099,651.

Farr, Homer D.: *See*—
Thrap, John E., and Farr. 3,099,284.

Fastener Corp.: *See*—
Wandel, Oscar A. 3,099,011.
Wandel, Oscar A. 3,099,012.

Feinberg, Albert E., to Advance Transformer Co. Apparatus for igniting and operating gaseous discharge devices. 3,099,773, 7–30–63, Cl. 315—257.

Fernicola, John D. Combination container, practice golf ball and tee. 3,099,452, 7–30–63, Cl. 273—199.

Fernseh-G.m.b.H.: *See*—
Moller, Rolf, and Tretner. 3,099,710.

Ferraris, Carlo: *See*—
Di Cerrione, Lodovico A., and Ferraris. 3,099,678.

Ferris David R.: *See*—
Weigel, Raymond A., and Ferris. 3,099,326.

Ferro Corp.: *See*—
Santhany, Leland W. 3,099,063.

Fieldcrest Mills, Inc.: *See*—
Chambley, William B. 3,099,410.
Moberg, Ivar O. 3,099,295.

Fisher, John G.: *See*—
Straley, James M., Fisher, and Harris. 3,099,652.

Fisher & Ludlow Ltd.: *See*—
Lewington, Michael H., and Scott. 3,099,342.

Fisher, Richard G., to American Telephone and Telegraph Co. Universal line concentrator. 3,099,718, 7–30–63, Cl. 179—18.

Fitzsimons, Alan R. Control circuits for money issuing system. 3,099,274, 7–30–63, Cl. 133—4.

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Flesch, Peter, and J. Hader, to Rhenus Rheinische Getranke-Industrie Blenz & Blenz G.m.b.H. Process for pickling meat and pickling preparation therefor. 3,099,566, 7–30–63, Cl. 99—159.

Flood, Eugene W., deceased, by R. T. Flood, administratrix, to R. Flood. Bowling ball return. 3,099,445, 7–30–63, Cl. 273—47.

Flood Rosalie: *See*—
Flood, Eugene W. 3,099,445.

Foley, Daniel E., and A. Skrobisch, to Data Presentations, Inc. Printing device. 3,099,711, 7–30–63, Cl. 178—30.

Folkerts, Walter E., to Chrysler Corp. Power steering gear. 3,099,167, 7–30–63, Cl. 74—388.

Folkerts, Walter E., to Chrysler Corp. Power steering gear. 3,099,188, 7–30–63, Cl. 91—374.

Ford Motor Co.: *See*—
Anderson, Vernal A. 3,099,500.
Camp, John W. A. 3,099,340.
Jania, Zbigniew J., and Walthall. 3,099,172.
Rosky, Frederick, and Wenzel. 3,099,458.

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Forsha, Herbert E., and S. M. Kapell, to Westinghouse Electric Corp. Frequency multiplier. 3,099,784, 7–30–63, Cl. 321—7.

Fossa, Joseph, to United Shoe Machinery Corp. Apparatus for preparing baseball cover pieces for sewing. 3,099,147, 7–30–63, Cl. 69—8.

Foster, Newton C., to Westinghouse Electric Corp. Resinous glycidyl polyether compositions. 3,099,638, 7–30–63, Cl. 260—45.5.

Frank, Egon, to Loewe Opta Aktiengesellschaft. Frequency modulation or amplitude modulation transmitting system. 3,099,715, 7–30–63, Cl. 179—15.

Frank, Robert L., to Sperry Rand Corp. Phase coded communication system. 3,099,795, 7–30–63, Cl. 325—30.

Frank, Robert L., and S. Zadoff, to Sperry Rand Corp. Phase coded hyperbolic navigation system. 3,099,835, 7–30–63, Cl. 343—103.

Franke, Ernst P.: *See*—
Breuing, Wilhelm, Franke, and Spolders. 3,099,699.

Franke & Heidecke, Fabrik Photographischer Praxisions Apparte: *See*—
Weiss, Richard, and Prochnow. 3,099,194.

Free, Albert H., to Miles Laboratories, Inc. Diagnostic composition. 3,099,605, 7–30–63, Cl. 195—103.5.

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Bornemann, William, Bechtold, Philips, Freeman, Loretz, and Neumann. 3,099,199.

Frelich, Paul D., to Raytheon Co. Doppler navigation system. 3,099,832, 7–30–63, Cl. 343—8.

Freudenschuss, Otto, to K. Vackenhuber. Film camera having combined shutter and photo electric cell. 3,099,193, 7–30–63, Cl. 95—10.

Fricke, Wilhelm, to Hamburger Flugzeugbau GmbH. Jet propulsion system. 3,099,425, 7–30–63, Cl. 244—74.

Friedrich, Kevin F., and F. D. Kaiser, to Westinghouse Electric Corp. Control for an electric power translation system. 3,099,786, 7–30–63, Cl. 321—20.

Frisch, Eberhard, to Continental Elektroindustrie A.G., Askania-Werke. Method and apparatus for digital indication of shaft position. 3,099,090, 7–30–63, Cl. 33—46.

Fritz, Rudolph A., to Chase Industries, Inc. Door control apparatus. 3,099,438, 7–30–63, Cl. 268—66.

Frost, Charles E., and Co.: *See*—
Wasson, Burton K., and Parker. 3,099,662.

Fujita, Chuzo: *See*—
Kinoshita, Shukuo, Samejima, Fujita, and Nara. 3,099,604.

Funston, Earl S.: *See*—
Kirkpatrick, William J., and Funston. 3,099,532.

Furnas Electric Co.: *See*—
Willcox, Dale F. 3,099,736.

Gagliardi, Domenick D., and M. W. Pollock, to Argus Chemical Corp. Bleaching and detergent composition and process of using same. 3,099,625, 7–30–63, Cl. 252—98.

Gamble Bros., Inc.: *See*—
Donker, Cornelius D. 3,099,449.

Gandrud, Ebenhard S. Flexible feed tube with ball fastening said tube to a discharge spout. 3,099,373, 7–30–63, Cl. 222—527.

Garber, Sidney, to The British Iron and Steel Research Association. Process of annealing low carbon steel. 3,099,592, 7–30–63, Cl. 148—144.

Gardner, Lloyd E., and R. J. Hogan, to Phillips Petroleum Co. Hydrocracking process for the conversion of hydrocarbons utilizing a platinum-cobalt-molybdenum catalyst composite. 3,099,618, 7–30–63, Cl. 208—112.

Garfield, Sidney R., and W. P. Davis. Patient-handling apparatus. 3,099,020, 7–30–63, Cl. 5—81.

Garrou, James E. and V. H., to Waldensian Hosiery Mills, Inc. Pattern drum for knitting machine. 3,099,145, 7–30–63, Cl. 66—154.

Garrou, Victor H.: *See*—
Garrou, James E. and V. H. 3,099,145.

Garson, Stanley P. Smoker's ashtray. 3,099,270, 7–30–63, Cl. 131—240.

Garten, Herbert, and R. H. Schaffer, to General Electric Co. Shaft for use in nuclear radiation environment. 3,099,141, 7–30–63, Cl. 64—1.

Geen, Cory P., to Industrial Devices, Inc. Collet assembly. 3,099,411, 7–30–63, Cl. 242—46.5.

Gehrke, Gunter, to Farbenfabriken Bayer Aktiengesellschaft. Process for the dyeing of polyester fibre materials. 3,099,513, 7–30–63, Cl. 8—39.

Geiger, Russell C., to The Hobart Mfg. Co. Escapement drive. 3,099,164, 7–30–63, Cl. 74—125.

General Aniline & Film Corp.: *See*—
Coles, Robert F. 3,099,559.
Levines, Steven. 3,099,558.

General Dynamics Corp.: *See*—
Jorgensen, Otto A. 3,099,801.

General Electric Co.: *See*—
Anderson, John M. 3,099,768.
Cooper, Glenn D., and Gilbert. 3,099,672.
Dome, Robert B. 3,099,707.
Garten, Herbert, and Schaffer. 3,099,141.
George, Philip D. 3,099,671.
Hay, Allan S. 3,099,640.
Kelley, Fred W., Jr. 3,099,828.
Kirkpatrick, William J., and Funston. 3,099,532.
Landig, Thomas W., and Kiesler. 3,099,552.
Lustenader, Edward L., and Brown. 3,099,607.
Lynch, Edward I. 3,099,769.
Newell, James K., Jr. 3,099,259.
Prober, Maurice. 3,099,670.
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General Electric Co. Ltd., The: *See*—
Essam, Roy, Walsh, and Whiting. 3,099,794.
Wayman, Cecil J. 3,099,830.

General Foods Corp.: *See*—
Rogers, William I. 3,099,562.

General Motors Corp.: *See*—
Mann, Leonard J., and Stewart. 3,099,139.
Parshall, Millis V. 3,099,499.
Taylor, John R. 3,099,359.
Van Scoyk, Howard E. 3,099,542.

General Precision, Inc.: *See*—
Kress, George H., and Menn. 3,099,413.

General Signal Corp.: *See*—
Brown, Ned C. L. 3,099,427.
Kendall, Hugh C. 3,099,817.

General Time Corp.: *See*—
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Gentry, Charles H. R., and R. C. Oldfield, to North American Philips Co., Inc. Cathode ray tube with silica coated phosphor screen. 3,099,763, 7–30–63, Cl. 313—92.

George, Philip D., to General Electric Co. Preparation of organosilanes. 3,099,671, 7–30–63, Cl. 260—448.2.

Gerbore, Alexander E., R. A. Flyer, and W. C. Steger, Jr., to Bell Telephone Laboratories, Inc. Private branch exchange telephone system including conference facilities. 3,099,719, 7–30–63, Cl. 179—27.02.

Gerstine, Milton I., to The Boeing Co. Automatic trim actuator system. 3,099,421, 7–30–63, Cl. 244—17.13.

Geschka, Hugo W., J. L. Gillessen, and A. Heidenreich, to Peter Pfenningsberg Maschinenfabrik, G.m.b.H. Method of operating a washing machine. 3,099,022, 7–30–63, Cl. 8—158.

Gesellschaft für industrielle Technik m.b.H.: *See*—
Butter, Otto, Irmscher, and Kaiser. 3,099,344.

Gilbert, Alfred R.: *See*—
Cooper, Glenn D., and Gilbert. 3,099,672.

Giles, John K., and E. W. Michener, ½ to R. A. Nash. Methods of training horses. 3,099,248, 7–30–63, Cl. 119—29.

Gilfry, Kenneth R. Guide attachment for a router. 3,099,299, 7–30–63, Cl. 144—144.

Gillessen, Josef L.: *See*—
Geschka, Hugo W., Gillessen, and Heidenreich. 3,099,022.

Goard, Howard W.: *See*—
Koble, Robert A., and Goard. 3,099,525.

Godshalk, Russell L., to The Babcock & Wilcox Co. Expansion pipe joint for conveying solids laden gas or fluid. 3,099,467, 7–30–63, Cl. 285—114.

Goerss, Frederick A.: *See*—
Dunn, Robert, and Goerss. 3,099,453.

Goff, Randall: *See*—
Gorgens, Joseph E., and Goff. 3,099,161.

Goffinet, Bernard: *See*—
Joly, Robert, Warnant, and Goffinet. 3,099,654.

Gold, Howard N.: *See*—
Bond, Elizabeth A., Gold, and Marran. 3,099,089.

Goodbar, Isaac. Camera with lenticulated mask. 3,099,195, 7–30–63, Cl. 95—37.

Gooding, Chester M., to Corn Products Co. Highly nutritious fat composition. 3,099,564, 7–30–63, Cl. 99—118.

Goodings, Eric P., W. A. O'Neill, and G. W. Taylor, to Imperial Chemical Industries Ltd. Silican chloride treated polyolefin articles and its production. 3,099,515, 7–30–63, Cl. 8—82.

Gorgens, Joseph E., and R. Goff, to Manning, Maxwell & Moore, Inc. Bimetal coil for use in temperature recorders. 3,099,161, 7–30–63, Cl. 73—363.9.

Gorn Electric Co., Inc.: *See*—
Piorunneck, Heinz. 3,099,510.

Gorsich, Richard D., to Ethyl Corp. Bimetallic carbonyl halide compositions. 3,099,666, 7–30–63, Cl. 260—429.

Gorsich, Richard D., to Ethyl Corp. Organo group IV-A metal manganese carbonyl ligand compounds and process for same. 3,099,667, 7–30–63, Cl. 260—429.

Gorski, Edward: *See*—
Rively, Clair M., and Gorski. 3,099,296.

Gotthardt, Manfred R., to Bell Telephone Laboratories, Inc. Translator checking circuit for telephone switching system. 3,099,720, 7–30–63, Cl. 179—175.2.

Gottlieb, Leon. Flow-boosting register for air ducts. 3,099,201, 7–30–63, Cl. 98—101.

Gottschald, Rudolf, to A. Ehrenreich & Co. Suspension joint. 3,099,469, 7–30–63, Cl. 287—90.

Graham, Gary A.: *See*—
Doss, Joseph H., and Graham. 3,099,261.

Grammer, George N., and P. W. Trotter, to Ethyl Corp. Stable methylchloroform compositions. 3,099,694, 7–30–63, Cl. 260—652.5.

Graülich, Wilhelm: *See*—
Wagner, Küno, Schwaebel, Kiss, Graülich, and Kleiner. 3,099,635.

Greenwald, H., Co., Inc.: *See*—
Greenwald, Harry. 3,099,341.

Greenwald, Harry, to H. Greenwald Co., Inc. Coin controlled timer system. 3,099,341, 7–30–63, Cl. 194—9.

Gremigni, Giuseppe: *See*—
Marchioli, Giorgio, and Gremigni. 3,099,061.

Gren, William E.: *See*—
Stegman, Raymond V., and Gren. 3,099,446.

Grenier, Aime J., to Texas Instruments Inc. Electromagnetic switching mechanism. 3,099,725, 7–30–63, Cl. 200—87.

Grenier, Aime J.: *See*—
Perry, Frederick G., Grenier, and Wilson. 3,099,732.

Griffith, T. B.: *See*—
Ellison, James O. 3,099,490.

Gross, Frans, to Siemens and Halske Aktiengesellschaft. Delay line for traveling wave tubes. 3,099,767, 7–30–63, Cl. 315—3.6.

Gross, Richard, H. Hertel, W. Kirst, and R. Mohr, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Water-insoluble mono- and disago-dyes produced from 2-aminoaryl-benstriazole-1-oxide diazo components. 3,099,651, 7–30–63, Cl. 260—146.

Grossmith, Frederick, to Beecham Research Laboratories Ltd. Antacid compositions. 3,099,524, 7–30–63, Cl. 23—14.

Grotnes Machine Works, Inc.: *See*—
Van Ler, Oscar J., and Ragettli. 3,099,311.

Grounds, Preston W.: *See*—
Banker, Robert D., Grounds, and Cody. 3,099,603.

Guenther, Walter F.: *See*—
Noreen, Donald H., and Guenther. 3,099,826.

Guentner, Robert L.: *See*—
Thomas, Eugene P., Guentner, and Vaughn. 3,099,747.

Gutberlet, Theodor, to Schunk & Ebe G.m.b.H. Brush holder construction for dynamo electric machines. 3,099,761, 7–30–63, Cl. 310—246.

Gutsche, Heinrich: *See*—
Schweickert, Hans, Reuschel, and Gutsche. 3,099,534.

Haber, Hyman, to Allied Textile Printers, Inc. Color-printed flocked fabrics. 3,099,514, 7–30–63, Cl. 8—66.

Habereder, Hans, to Beckman Instruments, Inc. Miniature potentiometer. 3,099,810, 7–30–63, Cl. 338—162.

Hader, Josef: *See*—
Flesch, Peter, and Hader. 3,099,566.

Hadzeriga, Pablo, to Standard Magnesium Corp., Inc. Recovery of values from natural lake and sea brines. 3,099,528, 7–30–63, Cl. 23—89.

Hagendoorn, Willem J., and T. R. Smith, to American Air Filter Co., Inc. Pocket-type filters. 3,099,547, 7–30–63, Cl. 55—341.

Hager, Gerald L.: *See*—
Cybriwsky, Alexander, and Hager. 3,099,610.

Hahn, Werner, and R. Noack, to VEB Kamera- und Kinowerke Dresden. Differential gearing for setting light values. 3,099,192, 7–30–63, Cl. 95—10.

Hahn, Volker, to Ed. Zublin, A.G. Device for anchoring tensioning elements. 3,099,109, 7–30–63, Cl. 50—128.

Hall, Richard C., and R. E. Wien, to Westinghouse Electric Corp. Rolling silicon-iron. 3,099,176, 7–30–63, Cl. 80—60.

Hallstrom, Bengt H.: *See*—
Falkenblad, Nils T., and Hallstrom. 3,099,519.

Hallstrom, Bengt H., to Separator, Aktiebolaget. Method and apparatus for preventing infection of heat exchange chambers. 3,099,520, 7–30–63, Cl. 21—2.

Hallsworth, Arnold, to Steels Engineering Products Ltd. Remote control of Ward Leonard drive by generator speed variation. 3,099,779, 7–30–63, Cl. 318—157.

Halpern, Otto: *See*—
Zderic, John A., Halpern, and Iriarte. 3,099,655–7.

Halverson, Emmett H. Slingshot arrangement. 3,099,256, 7–30–63, Cl. 124—20.

Hamburger Flugzeugbau GmbH: *See*—
Fricke, Wilhelm. 3,099,425.

Hamman, Lyle J., to Eaton Stamping Co. Spring starter. 3,099,255, 7–30–63, Cl. 123—179.

Hammond, John E., to National Distillers and Chemical Corp. Packaging films and package produced therefrom. 3,099,350, 7–30–63, Cl. 206—46.

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Lent, Ralph C. 3,099,462.

Hanson, J. T. Brush. 3,099,029, 7–30–63, Cl. 15—160.

Hanson, Victor G., to International Cigar Machinery Co. Cigar machine paster. 3,099,581, 7–30–63, Cl. 118—243.

Hardison, Wilbur T. Variable resistor device. 3,099,812, 7–30–63, Cl. 338—183.

Harper, Ernest A., to Phillips Petroleum Co. Low temperature absorption of gasoline constituents from natural gas. 3,099,619, 7–30–63, Cl. 208—341.

Harr, John A., and T. N. Lowry, Bell Telephone Laboratories, Inc. Line concentrator system. 3,097,717, 7–30–63, Cl. 179—18.

Harriman, Cy. Control units for fire protective signaling systems. 3,099,825, 7–30–63, Cl. 340—213.

Harris, Raymond C.: *See*—
Straley, James M., Fisher, and Harris. 3,099,652.
Straley, James M., and Harris. 3,099,653.

Harris, Robert W., to William Melish Harris, Associates. Collapsible floor display stand. 3,099,357, 7–30–63, Cl. 211—182.

Harris, William Melish, Associates: *See*—
Harris, Robert W. 3,099,357.

Harrison, Charles E. Air-distribution system. 3,099,200, 7–30–63, Cl. 98—40.

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Ludwig, Arthur L. 3,099,031.

Hatch, Melvin J., and J. A. Dillon, Jr., to The Dow Chemical Co. Separation of nitric acid from its salts. 3,099,529, 7–30–63, Cl. 23—102.

Hawkins, Floyd L. Prefabricated stair. 3,099,336, 7–30–63, Cl. 189—43.

Hay, Allan S., to General Electric Co. Process for oxidising hydrogen substituted organosilicon compounds. 3,099,640, 7–30–63, Cl. 260—46.5.

Haynes, Carl J., to Eastman Kodak Co. Method and apparatus for making rug yarn. 3,099,064, 7–30–63, Cl. 28—1.

Hazel, Ernest, Jr., Inc.: *See*—
Hazel, Ernest, Jr. 3,099,465.

Hazel, Ernest, Jr., to Ernest Hazel, Jr., Inc. Binder back. 3,099,465, 7–30–63, Cl. 281—36.

Heatbath Mfg. Co., Inc.: *See*—
Du Fault, Homer D. 3,099,257.

Heck, Ralph R.: *See*—
Buchhols, Albert E., and Heck. 3,099,023.

Heckethorn, John E., and J. D. Walters, to Heckethorn Mfg. & Supply Co. Spring forming device. 3,099,310, 7–30–63, Cl. 153—66.

Heckathorn Mfg. & Supply Co.: *See*—
Heckethorn, John E., and Walters. 3,099,310.

Heide, Henry A.: *See*—
Petersen, Conrad W., and Heide. 3,099,360.

Heidenreich, Albert: *See*—
Geschka, Hugo W., Gillessen, and Heidenreich. 3,099,022.

Heifred Corp., The: *See*—
De Marco, Robert F., and Hein. 3,099,332.

Hein, Henry W.: *See*—
De Marco, Robert F., and Hein. 3,099,332.

Hein, Matthew E., to American Can Co. Dispensing container for viscous products. 3,099,370, 7–30–63, Cl. 222—386.5.

Heinl, Ernst: *See*—
Beierbach, Walter, Heinl, Strien, and Von Sass. 3,099,485.

Heinze, Marvin C., to FMC Corp. Feed device with fluid activated rippling sheets. 3,099,494, 7–30–63, Cl. 302—31.

Heinze, Werner, to Precisa A.G. Rechenmaschinenfabrik. Ten key computing machine. 3,099,391, 7–30–63, Cl. 235—60.

Held, Edward C., Jr., Phillips Petroleum Co. Method and apparatus for vacuum forming hollow articles. 3,099,043, 7–30–63, Cl. 18—19.

Hell, Dr.-Ing. Rudolf, Kommanditgesellschaft: *See*—
Hell, Rudolf, Koll, and Zeyen. 3,099,706.

Hell, Rudolf, R. Koll, and F.-O. Zeyen, to Dr.-Ing. Rudolf Hell, Kommanditgesellschaft. Electronic color correction in color copy reproduction. 3,099,706, 7–30–63, Cl. 178—5.2.

Henke, Robert L., to Mine Safety Appliances Co. Canister harness. 3,099,374, 7–30–63, Cl. 224—5.

Henker, Heinz, to Siemens & Halske Aktiengesellschaft. Purifying crystallizable semiconductor materials by zone melting. 3,099,550, 7–30–63, Cl. 75—10.

Henneke, Harry L., to Texas Instruments Inc. Indium antimonide transistor. 3,099,776, 7–30–63, Cl. 317—237.

Henrickson, Russell M., to Philco Corp. Method of molding a foam plastic having skins on selected surface portions. 3,099,516, 7–30–63, Cl. 18—46.

Henriksen, Ernst J. J. Method of making writing tips for ball point pens. 3,099,082, 7–30–63, Cl. 29—523.

Henriksson, Sten T.: *See*—
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Hense, Theo, to Olympia Werke AG. High speed printing apparatus with input control network. 3,099,206, 7–30–63, Cl. 101—93.

Heraeus, W. C., G.m.b.H.: *See*—
Breuing, Wilhelm, Franke, and Spoilders. 3,099,699.

Herchenroeder, Louis W., to Westinghouse Electric Corp. Digital control for machine positioning. 3,099,781, 7–30–63, Cl. 318—162.

Hercules Powder Co.: *See*—
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Hergenhan, Albert R., to Lowe Paper Co. Variable angle feed means for paper cutters. 3,099,181, 7–30–63, Cl. 83—349.

Hertel, Hasso: *See*—
Gross, Richard, Hertel, Kirst, and Mohr. 3,099,651.

Herts, Michael. Erasing instrument. 3,099,251, 7–30–63, Cl. 120—38.

Herts, Michael. Cathode ray tube using replaceable cathode. 3,099,762, 7–30–63, Cl. 313—74.

Heth, Sherman C., S. C. Akgulian, and K. H. Hoffmeyer, to Jacobsen Mfg. Co. Vehicle transmission. 3,099,165, 7–30–63, Cl. 74—342.

Hetman, Frank W., to De Vac, Inc. Window sash construction. 3,099,050, 7–30–63, Cl. 20—52.2.

Hetman, Frank W. Thermal barrier and connector member for inner and outer window frames. 3,099,337, 7–30–63, Cl. 189—75.

Heubusch, Henry P., to Bell Aerospace Corp. Polymeric salts and preparation thereof. 3,099,629, 7–30–63, Cl. 260—2.

Heyer, Clair B. Folding table or like structure. 3,099,428, 7–30–63, Cl. 248—166.

Heyman Mfg. Co.: *See*—
Klumpp, Ferdinand, Jr., and Jemison. 3,099,046.

Hickox, Walter A., to Combustion Engineering, Inc. Indicating and recording instrument organization. 3,099,511, 7–30–63, Cl. 346—17.

Hightower, John R., and J. T. Reynolds. Continuous cooling method and apparatus. 3,099,188, 7–30–63, Cl. 62—63.

High Voltage Engineering Corp.: *See*—
Meader, Donald E. 3,099,371.

Hildebrand, Robert. Treating veneers. 3,099,541, 7–30–63, Cl. 34—18.

Hilgoe, Vernon J., and F. J. Doyle, to Miehle-Goss-Dexter, Inc. Ink supply system for printing presses. 3,099,211, 7–30–63, Cl. 101—207.

Hilker, George D.: *See*—
Kerch, Ronald C., and Hilker. 3,099,419.

Hill, James S., to Engelhard Industries, Inc. Thermocouple. 3,099,575, 7–30–63, Cl. 117—212.

Hillson, Frank, and R. Krivisky. Sliding drawer construction. 3,099,501, 7–30–63, Cl. 308—3.8.

Hindall, Carey B. Chalk line impregnator. 3,099,091, 7–30–63, Cl. 33—87.

Hjertstrand, Svante L., to International Standard Electric Corp. Magnetic crossbar switch. 3,099,727, 7–30–63, Cl. 200—87.

Hoadley, Cyrus E., to Manco Mfg. Co. Hydraulically actuated tool. 3,099,185, 7–30–63, Cl. 60—52.

Hobart Mfg. Co., The: *See*—
Geiger, Russell C. 3,099,164.

Hobley, Peter, to Radio Corp. of America. Channel tuning system for signal receivers in which tuning components assigned to unselected channels form part of adjacent channel traps. 3,099,808, 7–30–63, Cl. 334—50.

Hodges, Howard T., C. J. Hughey, and R. J. Erniase, to Eastman Kodak Co. Photographic copier. 3,099,208, 7–30–63, Cl. 101—131.

Hodson, Harold F.: *See*—
Copp, Frederick C., and Hodson. 3,099,599.

Hofberg, Robert. Automobile seat cover. 3,099,483, 7–30–63, Cl. 297—219.

Hoffmann, Jack H., to Allis-Chalmers Mfg. Co. Stator core shims on dynamoelectric machines. 3,099,760, 7–30–63, Cl. 310—217.

Hoffmeyer Knud H.: *See*—
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Hogan, Robert J.: *See*—
Gardner, Lloyd E., and Hogan. 3,099,618.

Hohwart, George, and P. Toth, to N. A. Woodworth Co. Chuck. 3,099,457, 7–30–63, Cl. 279—106.

Holdeman, Eugene J., and D. A. Burkholder. Water softener for supply lines. 3,099,283, 7–30–63, Cl. 137—111.

Hollaender, Peter R. Step structure. 3,099,333, 7–30–63, Cl. 182—90.

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Kerr, Fred S. 3,099,254.

Holmes, Lucas C. Dual headlights for motorcycles. 3,099,400, 7–3–63, Cl. 240—7.55.

Holtschmidt, Hans, and K. E. Müller, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Rubber-like polyurethanes and storage stable intermediates for producing the same. 3,099,642, 7–30–63, Cl. 260—75.

Holzbock, Werner G., to Vickers Inc. Electro-hydraulic servovalve. 3,099,280, 7–30–63, Cl. 137—83.

Honegger, Rolf: *See*—
Zollinger, Hans, and Honegger. 3,099,294.

Honkanen, Arvid, to American Can Co. Method and apparatus for molding pre-expanded plastic beads. 3,099,045, 7–30–63, Cl. 18—30.

Hopp, Harold P. Thread forming sparkplug gaskets. 3,099,456, 7–30–63, Cl. 277—166.

Horner, Jimmy M.: *See*—
Jones, Martin L., and Horner. 3,099,754.

Howling, Harold L., to Basic Atomics Inc. Purification of leach liquor containing lithium values. 3,099,527, 7–30–63, Cl. 23—33.

Hoza, Martin D., to Reed Roller Bit Co. Pneumatic tool. 3,099,187, 7–30–63, Cl. 91—232.

Hrusch, Louis C., to Cleveland Pneumatic Industries, Inc. Aircraft steering system control. 3,099,424, 7–30–63, Cl. 244—50.

Hubbard, Raymond E. Disposable syringe and compression device therefor. 3,099,264, 7–30–63, Cl. 128—215.

Huber, John R., to Eastern Rotocraft Corp. Strap tensioning device. 3,099,055, 7–30–63, Cl. 24—68.

Huelster, Otto J., to Scovill Mfg. Co. Spring-locking slider for zipper fasteners. 3,099,059, 7–30–63, Cl. 24—205.14.

Huff, Ehrman P.: *See*—
Kane, Gale L. 3,099,355.

Hughes Aircraft Co.: *See*—
Berk, Aristid D., and Strumwasser. 3,099,805.
Blasberg, Lawrence A., Lader, and Young. 3,099,806.

Hughey, Carter J.: *See*—
Hodges, Howard T., Hughey, and Erniase. 3,099,208.

Hunke & Jochheim: *See*—
Sorensen, Walter. 3,099,269.

Hunter, Frank M., to Acheson Industries, Inc. Heat resistant electrically conducting compositions, method of coating articles therewith and articles produced thereby. 3,099,578, 7–30–63, Cl. 117—226.

Hunter, Don L., to United States Borax & Chemical Corp. Preparation of metaborate and polyborate esters. 3,099,677, 7–30–63, Cl. 260—462.

Hurcomb, William J., to Rolls-Royce Ltd. Clamp. 3,099,056, 7–30–63, Cl. 24—84.

Hurley, Rupert B., and P. C. Colodny, to The Dow Chemical Co. Process of treating wet-spun acrylonitrile fibers. 3,099,517, 7–30–63, Cl. 18—48.

Husby, Donald E., and M. E. Keck, to Westinghouse Electric Corp. Luminaire. 3,099,405, 7–30–63, Cl. 240—106.

Ichinokawa, Takeo. Combined electron probe microanalyzer and X-ray diffraction instrument. 3,099,743, 7–30–63, Cl. 250—51.5.

Ikawa, Sabro: *See*—
Kawamura, Yurio, Tamuki, Nagata, Terishima, Matsumoto, Onishi, Konishi, Yoshimura, Yamamoto, and Ikawa. 3,099,649.

Illinois Tool Works Inc.: *See*—
Roeser, John O. 3,099,723.

Illo, John B. Golf ball washer. 3,099,027, 7–30–63, Cl 15—21.

Imperial Chemical Industries Ltd.: *See*—
Edgar, Eric C. 3,099,106.
Goodings, Eric P. O'Neill, and Taylor. 3,099,515.
Leigh, Thomas. 3,099,669.
Muray, Jan. 3,099,695.
Owen, Edmund C. 3,099,692.

Imperial, Nicholas J., and P. J. McCannon. Portable temperature measuring device. 3,099,162, 7–30–63, Cl. 73—376.

Independence Foundation: *See*—
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Indevo Ltd.: *See*—
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Indiana General Corp.: *See*—
Elovic, Alexander. 3,099,787.

Industrial Devices, Inc.: *See*—
Geen, Cory P. 3,099,411.

Industrial Nucleonics Corp.: *See*—
Pinkley, Clyde W. 3,099,793.

Ine, Frank H., to John Mohr & Sons. Eviscerating method 3,099,039, 7–30–63, Cl. 17—45.

Institut Dr. Ing. Reinhard Straumann A.G.: *See*—
Straumann, Reinhard. 3,099,128.

International Business Machines Corp.: *See*—
Morgan, Mark. 3 099,780.
Murray, Richard F. 3,099,818.
Post, Frederick L. 3,099,821.
Radovsky, David A., and Ronkese. 3,099,608.
Schmookler, Martin S. 3,099,753.

International Cigar Machinery Co.: *See*—
Hanson, Victor G. 3,099,581.

International Computers and Tabulators Ltd. (formerly The British Tabulating Machine Co., Ltd): *See*—
Williams Emrys J. 3,099,822.

International Harvester Co.: *See*—
Clark, John D. 3,099,358.

International Minerals & Chemical Corp.: *See*—
Adam, Howard W. 3,099,620.
Nickerson, John D. 3,099,530.
Woerther, Clarence J. 3 099,622.

International Nickel Co., Inc., The: *See*—
Worn, David K. 3,099,080.

International Paper Co.: *See*—
Baxter, Robert O. 3,099,384.

International Standard Electric Corp.: *See*—
Hjertstrand, Svante L. 3,099,727.
Montchausse, Andre J., and Lecomte. 3,099,085.

Inventex A.G.: *See*—
Kreidel, Hans, Sr., and H. Kreidel, Jr. 3,099,466.

Ireland, Reginald E.: *See*—
Penfold, Vincent H., and Ireland. 3,099,756.

Iriarte Jose: *See*—
Zderic, John A., Halpern, and Iriarte. 3,099,655.
Zderic, John A., Halpern, and Iriarte. 3,099,656.
Zderic John A., Halpern, and Iriarte. 3,099,657.

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Isenberg, Sampson, R. J. Moon, and A. E. Shaw, to Brunswick Corp. Sonic pin detection means. 3,099,447, 7–30–63, Cl. 273—52.

Ivanchich, Peter. Automatic transmission. 3,099,171, 7–30–63, Cl. 74—688.

Ivory, Chester S., Jr., to J. W. Ivory, Inc. Dental matrix retainer. 3 099,088, 7–30–63, Cl. 32—63.

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Ivory, Chester S., Jr. 3,099,088.

Jackel, Arthur P., to Westinghouse Air Brake Co. Coordination controls for remote control systems. 3,099,815, 7–30–63, Cl. 340—163.

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Derler, Charles J. 3,099,225.

Jacobsen Mfg. Co.: *See*—
Heth, Sherman C., Akgulian, and Hoffmeyer. 3,099,165.
Price, Warren H. 3,099,123.
Strasel, Raymond K. 3,099,124.

Jacobsen, Rolf. Arrangement in regulating valves for heating units. 3 099,430, 7–30–63, Cl. 251—146.

Jacquler, Jean H., to Bell Telephone Laboratories, Inc. Diversity communication system. 3,099,716, 7–30–63, Cl. 179—15.

Jahn, Earl W., to Shell Process Inc. Method and apparatus for manufacturing resin coated core sand. 3,099,498, 7–30–63, Cl. 302—53.

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Jakobsen, Kjell, and T. K. Semb. Method of excavating rock, ore and the like by blasting and means for use in said method. 3,099,216, 7–30–63, Cl. 102—22.

Jamison, Ralph E., to Carrier Corp. Thermoelectric cooling devices and method of making the same. 3,099,137, 7–30–63, Cl. 62—3.

Jania, Zbigniew J., and O. K. Walthall, to Ford Motor Co. Automatic transmission control circuit. 3,099,172, 7–30–63, Cl. 74—751.

Jatczak, Chester F., to The Timken Roller Bearing Co. Graphitic steel. 3,099,556, 7–30–63, Cl. 75—124.

Jauch, Robert J.: *See*—
Wright, George W., Jauch, and Kruckeberg. 3,099,367.

Jemison, William H.: *See*—
Klumpp, Ferdinand, Jr., and Jemison. 3,099,046.

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Jennings Radio Mfg. Corp.: *See*—
Jennings, Jo E. 3,099,726.

Jeske, Bernard G., to Formax Mfg. Corp. Work wheel. 3,099,113, 7–30–63, Cl. 51—193.5.

Jezl, James L., H. M. Khelghatian, and L. D. Hague, to Sun Oil Co. Propylene polymerization catalyst consisting of aluminum sesquihalide, TiCl₃ and triethylene diamine. 3,099,647, 7–30–63, Cl. 260—93.7.

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Johnson, Bernard R.: *See*—
Silliman, Sheldon D., and Johnson. 3,099,724.

Johnson, Glenn D., to Shell Oil Co. Underwater wellhead apparatus and method. 3,099,316, 7–30–63, Cl. 166—46.

Johnson, Richard S. Buffing wheel. 3,099,545, 7–30–63, Cl. 51—298.

Johnson, Stanley R. Container with interior rotary dispenser. 3,099,365, 7–30–63, Cl. 221—263.

Johnson, Velmo S., to Spencer Safford Loadcraft, Inc. Dump vehicle. 3,099,489, 7–30–63, Cl. 298—14.

Johnston, James D., to Chas. Pfizer & Co., Inc. 5-nitro-furfural azines. 3,099,668, 7–30–63, Cl. 260—347.5.

Joly, Robert, J. Warnant, and B. Gomnet, to Roussel-UCLAF, S.A. Novel 9α-fluoro-Δ1-corticosteroids and preparation thereof. 3,099,654, 7–30–63, Cl. 260—239.55.

Jones, Lyman L., deceased; A. J. Barger, executrix. Can body and method of forming the same. 3,099,238, 7–30–63, Cl. 113—120.

Jones, Martin L., and J. M. Horner, to Westinghouse Electric Corp Magnetic modulator with time jitter compensation for generated pulses. 3,099,754, 7–30–63, Cl. 307—88.5.

Jones, Max E., to Crane Co. Analogue to digital converter and counter. 3,099,831, 7–30–63, Cl. 340—347.

Jones, Paul F.: *See*—
McKibben, Horace E., and Jones. 3,099,115.

Jorgensen, Otto A., to General Dynamics Corp. Circuitry utilizing parametrically excited harmonic oscillators. 3,099,801, 7–30–63, Cl. 330—10.

Junkers Maschinen- und Metallbau G.m.b.H.: *See*—
Wagensell, Ludwig. 3,099,157.

Kahn, Leo M. Dishwashing machines and method. 3,099,585, 7–30–63, Cl. 134—6.

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Kalkbrenner, William F. Anchor for securing electrical fixtures and the like to concrete walls. 3,099,108, 7–30–63, Cl. 50—71.

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Wagner, Künzo, Schwaebel, Kiss, Graulich, and Kleiner. 3,099,635.

Katayose, Kimiyoshi. Method of electroplating aluminum or its alloy with porous hard chromium. 3,099,609, 7–30–63, Cl. 204—33.

Käufer, Helmut, to Agfa A.G. Process and apparatus for the separation of solid particles from developing solutions for exposed films and the like. 3,099,623, 7–30–63, Cl. 210—167.

Kaufman, Jack, A. R. Lund, and M. W. Schwartz, to Markstone Mfg. Co. Recessed lighting fixtures. 3,099,404, 7–30–63, Cl. 240—78.

Kaufmann, Albert R., to Nuclear Metals, Inc. Method and apparatus for making powder. 3,099,041, 7–30–63, Cl. 18—2.6

Kauke and Co., Inc.: *See*—
Vinson, Billy H., and Stefanov. 3,099,800.

Kautz, Harry P., to Mine and Smelter Supply Co. Ore crusher. 3,099,406, 7–30–63, Cl. 241—32.

Kawamura, Yurio, T. Tamuki, A. Nagata, S. Terishima, T. Matsumoto, S. Onishi, S. Konishi, K. Yoshimura, H. Yamamoto, and S. Ikawa, to Ajinomoto Kabushiki Kaisha. Process for refining of vegetable protein. 3,099,649, 7–30–63, Cl. 260—123.5.

Kayser, Allan J. Pump for imparting movement to dry pulverulent material. 3,099,496, 7–30–63, Cl. 320—50.

Keith, Willis C., J. A. Verdol, and R. P. Zmitrovis, to Sinclair Research, Inc. Decarboxylation of aromatic acids. 3,099,686, 7–30–63, Cl. 260—521.

Kelley, Benjamin F. Transfer platform for drill pipe elevators. 3,099,323, 7–30–63, Cl. 175—85.

Kelley, Fred W., Jr., to General Electric Co. Protective circuitry and indicating means for rectifier systems. 3,099,828, 7–30–63, Cl. 340—248.

Kelsen, Arthur F. Rim lock set. 3,099,472, 7–30–63, Cl. 292—169.

Kendall, Hugh C., to General Signal Corp. Vehicle performance monitoring system. 3,099,817, 7–30–63, Cl. 340—172.5.

Kennedy, Buford K., to Minneapolis-Honeywell Regulator Co. Tape feeding device. 3,099,376, 7–30–63, Cl. 226—108.

Kennedy, Wilson R., and R. E. Spencer, to Westinghouse Electric Corp. Sequentially energized plural motor control system. 3,099,778, 7–30–63, Cl. 318—102.

Kerch, Ronald C., and G. D. Hilker, to Phelps Dodge Copper Products Corp. Magnet wire tensioning device. 3,099,419, 7–30–63, Cl. 242—147.

Kerr, Fred S., to Holley Carburetor Co. Engine speed governor. 3,099,254, 7–30–63, Cl. 123—102.

Kersting, Arno: *See*—
Reuschel, Konrad, and Kersting. 3,099,523.

Kessler, Claus, and G. Moltgen, to Siemens-Schuckertwerke Aktiengesellschaft. Means for controlling valve-action rectifiers. 3,099,785, 7–30–63, Cl. 321—18.

Kessler, Hugo, and J. Bernreiter, to Chirana Praha, narodni podnik. Automatic resuscitating pressure apparatus. 3,099,278, 7–30–63, Cl. 137—64.

Ketchledge, Raymond W., to Bell Telephone Laboratories, Inc. Optical storage system. 3,099,820, 7–30–63, Cl. 340—173.

Keystone Engineering Co.: *See*—
Olson, Lester A. 3,099,078.

Khelghatian, Habet M.: *See*—
Jezl, James L., Khelghatian, and Hague. 3,099,647.

Kiang, John C. K. Stencil printer. 3,099,207, 7–30–63, Cl. 101—124.

Kibby, Howard. Combination flashlight and key holder. 3,099,399, 7–30–63, Cl. 240—6.4.

Kiesler, Allan J.: *See*—
Landig, Thomas W., and Kiesler. 3,099,552.

Kilsheimer, John R., and H. H. Moorefield, to Union Carbide Corp. 5-lower acylamino 1-naphthyl N-methylcarbamates. 3,099,681, 7–30–63, Cl. 260—479.

Kimberly-Clark Corp.: *See*—
Malmstrom, Homer E., and Donaldson. 3,099,543.

Kimbleton, Cecil, to Curtiss-Wright Corp. Voltage regulating system. 3,099,783, 7–30–63, Cl. 320—40.

Kincl, Fred A., and H. J. Ringold, to Syntex Corp. Steroidol lactones. 3,099,659, 7–30–63, Cl. 260—343.2.

King, Phillip W., to The Sessions Clock Co. Repeat alarm device. 3,099,127, 7–30–63, Cl. 58—16.

King-Seeley Thermos Co.: *See*—
Boddy, Leonard. 3,099,731.

Kinoshita, Shukuo, H. Samejima, C. Fujita, and T. Nara, to Kyowa Hakko Kogyo Co., Ltd. Method of producing L-threonine by fermentation. 3,099,604, 7–30–63, Cl. 195—29.

Kiper, Gerd, to Agfa Aktiengesellschaft. Central photographic shutter. 3,099,197, 7–30–63, Cl. 95—63.

Kirkpatrick, William J.: *See*—
Pugh, James O., and Kirkpatrick. 3,099,069.

Kirkpatrick, William J., and E. S. Funston, to General Electric Co. Method of making high purity, substantially spherical discrete particles of beryllium hydroxide or oxide. 3,099,532, 7–30–63, Cl. 23—183.

Kirst, Werner: *See*—
Gross, Richard, Hertel, Kirst, and Mohr. 3,099,651.

Klauss, Ralph E.: *See*—
Swarthout, Richard J., and Klauss. 3,099,750.

Kleiner, Helmut: *See*—
Wagner, Küno, Schwaebel, Kiss, Graulich, and Kleiner. 3,099,635.

Klemm, Herman G., and W. A. Wethen, to Massey-Ferguson Inc. Baling machines. 3,099,203, 7–30–63, Cl. 100—19.

Klumpp, Ferdinand, Jr., and W. H. Jemison, to Heyman Mfg. Co. Mold for snap-in bushing. 3,099,046, 7–30–63, Cl. 18—42.

Knabusch, Edward M., and E. J. Shoemaker, to La-Z-Boy Chair Co. Leg rest fixture and supplemental holding mechanism. 3,099,487, 7–30–63, Cl. 297—429.

Knaggs, Edward A.: *See*—
Scardiglia, Frank, Ranky, and Knaggs. 3,099,646.

Knapp, George P.: *See*—
Robertson, John D., and Knapp. 3,099,672.

Knapp, Ralph S., to Tri-Tix, Inc. Road markers. 3,099,244, 7–30–63, Cl. 116—63.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Sennewald, Kurt, Armin, and Kallrath. 3,099,680.

Knight, Houston W., to FMC Corp. Fluid handling apparatus. 3,099,297, 7–30–63, Cl. 141—207.

Koble, Robert A., and H. W. Goard, to Phillips Petroleum Co. Method of carbonate leaching uranium ore. 3,099,525, 7–30–63, Cl. 23—14.5.

Koch, Edward I. Simulated vehicle toy. 3,099,443, 7–30–63, Cl. 272—1.

Kohler, Charles F., to Telecontrol Corp. System for recording registered data. 3,099,512, 7–30–63, Cl. 346—34.

Koltzsch, Richard: *See*—
Von Schertel, Cassens, Koltzsch, and Plewa. 3,099,239.

Kokoras, James N. Skin drying apparatus. 3,099,226, 7–30–63, Cl. 104—91.

Koll, Roman: *See*—
Heil, Rudolf, Koll, and Zeyen. 3,099,706.

Kollsman, Paul. Electrodialysis involving periodic current reversal. 3,099,615, 7–30–63, Cl. 204—180.

Konishi, Shimpachi: *See*—
Kawamura, Yurio, Tamuki, Nagata, Terishima, Matsumoto, Onishi, Konishi, Yoshimura, Yamamoto, and Ikawa. 3,099,649.

Koppers Co., Inc.: *See*—
Aamot, Olav C. 3,099,553.
Spooner, Robert B. 3,099,744.

Korman, Samuel: *See*—
Sheer, Charles, and Korman. 3,099,614.

Kortick, Morris, to Monarch Tool Co. Automatic finding assembly machine. 3,099,068, 7–30–63, Cl. 29—10.

Kostka, Charles. Combined ratchet and direct drive hand operated rotary tools. 3,099,177, 7–30–63, Cl. 81—63.2.

Kourl, Joseph J. Self-sealing roll film. 3,099,560, 7–30–63, Cl. 96—78.

Kreidel, Hans, Jr.: *See*—
Kreidel, Hans, Sr., and H. Kreidel, Jr. 3,099,466.

Kreidel, Hans, Sr., and H. Kreidel, Jr., to Inventex A.G. Rotary pipe coupling. 3,099,466, 7–30–63, Cl. 285—98.

Kremen, Seymour S., and R. L. Southwood, to Leather Research Corp. Apparatus for treating animal hides. 3,099,149, 7–30–63, Cl. 69—32.

Krespan, Carl G., to E. I. du Pont de Nemours and Co. Fluorinated sulfenyl halides and disulfur halides. 3,099,688, 7–30–63, Cl. 260—543.

Kress, George H., and W. A. Menn, to General Precision, Inc. Reel mounting assembly. 3,099,413, 7–30–63, Cl. 242—68.3.

Krivisky, Rubin: *See*—
Hillson, Frank, and Krivisky. 3,099,501.

Kronig, Walter, W. Bayer, H.-J. Wahl, and L. Bacher, to Farbenfabriken Bayer Aktiengesellschaft. Fittings for a fluidized bed reactor. 3,099,538, 7–30–63, Cl. 23—288.

Kuckeberg, Christian W.: *See*—
Wright, George W., Jauch, and Kruckeberg. 3,099,367.

Krueger, Stanley E., to U.S. Industries, Inc. Stocking stretch measuring machine. 3,099,152, 7–30–63, Cl. 73—95.

Kruger, Ray H.: *See*—
Merkley, Thurman G., and Kruger. 3,099,025.

Kruse, Harold L.: *See*—
Mathison, Victor G., and Kruse. 3,099,809.

Kucera, Clement M., and D. L. Del'Homme, to Reed Roller Bit Co. Circulation ports for drill bit. 3,099,324, 7–30–63, Cl. 175—339.

Kühle, Engelbert, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of organic isocyanates. 3,099,673, 7–30–63, Cl. 260—453.

Kulka, Thomas S. Tape reel having friction reducing means. 3,099,414, 7–30–63, Cl. 242—71.8.

Kumler, William L.: *See*—
Miller, Montgomery K., and Kumler. 3,099,318.

Kunkle, Ned T.: *See*—
Sorrow, Billy B., and Kunkle. 3,099,770.

Kuragano, Taketoshi: *See*—
Maezawa, Masanori, and Kuragano. 3,099,535.

Kurz, Maurice C., to Societe Callnter S.A. Catalytic heating apparatus. 3,099,258, 7–30–63 ,Cl. 126—93.

Kyowa Hakko Kogyo Co., Ltd.: *See*—
Kinoshita, Shukuo, Samejima, Fujita, and Nara. 3,099,604.

Kysor Heater Co.: *See*—
Weigel, Raymond A., and Ferris. 3,099,326.

Lader, Leon J.: *See*—
Blasberg, Lawrence A., Lader, and Young. 3,099,806.

Lakritz, Julian, and R. G. Adams, to Esso Research and Engineering Co. Reinforced plastic from an open cure technique with a graft polymer. 3,099,293, 7–30–63, Cl. 138—141.

Lalak, George A., to Radio Corp. of America. Brazing jig. 3,099,081, 7–30–63, Cl. 29—423.

La Marche Mfg. Co.: *See*—
Smith, Charles E., Jr. 3,099,782.

Lancaster, Derek J. S.: *See*—
Calder, Peter H., and Lancaster. 3,099,134.

Lance, George M.: *See*—
Miller, William R., and Lance. 3,099,282.

Landig, Thomas W., and A. J. Kiesler, to General Electric Co. Method of making low sulfur steel. 3,099,552, 7–30–63, Cl. 75—51.

Lanham, William M., to Union Carbide Corp. Hydroxyalkyl polyphosphates. 3,099,676, 7–30–63, Cl. 260—461.

Lantz, Kurt D., to Turbin Aktiebolaget de Laval-Lyungstrom. Machine for honing the flanks of gear teeth. 3,099,112, 7–30–63, Cl. 51—48.

Lässig, Martin: *See*—
Ehrich, Hans, and Lässig. 3,099,094.

Laszlo, Tibor: *See*—
Thorpe, Shirley. 3,099,013.

Laudenslager, Harry B., Jr., to Blackstone Corp. Solder fluxes. 3,099,590, 7–30–63, Cl. 148—23.

Lauer, Frank: *See*—
Cahen, Herman S., and Lauer. 3,099,099.

Laurent, Howard: *See*—
Von Berg, Richard E., and Laurent. 3,099,328.
Von Berg, Richard E., Laurent, and Pfeifer. 3,099,329.

Laureti, Renio J., to Wall Rope Works, Inc. Yarn feeding apparatus. 3,099,126, 7–30–63, Cl. 57—58.7.

Lauterbach, Norman E., to Wilmot Castle Co. Sterilizer control apparatus. 3,099,522, 7–30–63, Cl. 21—94.

Lavino, E. J., and Co.: *See*—
Vaughan, Chester D., Jr., and Vetter. 3,099,533.

Lawrence, Philip L.: *See*—
White, James E., and Lawrence. 3,099,814.

Lawson, Ivar S. Power control for presses. 3,099,175, 7–30–63, Cl. 78—39.

La-Z-Boy Chair Co.: *See*—
Knabusch, Edward M., and Shoemaker. 3,099,487.

Leather Research Corp.: *See*—
Kremen, Seymour S., and Southwood. 3,099,149.

Lecher, Hans Z.: *See*—
Berenbaum, Morris B., Rosenthal, and Lecher. 3,099,643.

Lecomte, Robert P.: *See*—
Montchausse, Andre J., and Lecomte. 3,099,085.

Leech, John G., and T. B. Fleischer, to West Virginia Pulp and Paper Co. Filler for paper and method of making the same. 3,099,570, 7–30–63, Cl. 106—288.

Leger, Alton, Jr., to Minneapolis-Honeywell Regulator Co. Hall effect electrical apparatus. 3,099,792, 7–30–63, Cl. 323—94.

Leigh, Thomas, to Imperial Chemical Industries Ltd. Ferrocene compounds. 3,099,669, 7–30–63, Cl. 260—439.

Leimbach, John G., to Sporlan Valve Co. Refrigeration system and control. 3,099,140, 7–30–63, Cl. 62—197.

Leland, Ragnvald G. Paint roller of the fountain type. 3,099,034, 7–30–63, Cl. 15—562.

Lemmens, Hendrikus J., A. Venema, and P. Zalm, to North American Philips Co., Inc. Method of manufacturing oxide cathodes and cathodes manufactured by such methods. 3,099,577, 7-30-63, Cl. 117—224.

Lemoigne, Pierre M. Parachute. 3,099,426, 7-30-63, Cl. 244—145.

Lennartz, Walter. Assembly folder. 3,099,463, 7-30-63, Cl. 281—19.

Lent, Ralph C., to Hanawai Mfg. Co., Ltd. Irrigation unit. 3,099,393, 7-30-63, Cl. 239—97.

Lent, Ralph C., to Hanawai Mfg. Co., Ltd. Vehicle coupler or hitch. 3,099,462, 7-30-63, Cl. 280—478.

Leo, Nick F. Electrical relays. 3,099,729, 7-30-63, Cl. 200—104.

Lerman, Frank, and J. Bohnlofink, to National Distillers and Chemical Corp. Liquid redistributor for towers. 3,099,697, 7-30-63, Cl. 261—97.

Levines, Steven, to General Aniline & Film Corp. Photopolymerization of vinyl monomers by means of a radiation absorbing compouent in the presence of a diazonium compound. 3,099,558, 7-30-63, Cl. 96—35.

Levinos, Steven. Photopolymerization of vinyl monomers by means of a radiation absorbing component in the presence of a diazonium compound. 3,099,558, 7-30-63, Cl. 96—35.

Lewington, Michael H., and A. T. Scott, to Fisher & Ludlow Ltd. Coin-operated vending machines. 3,099,342, 7-30-63, Cl. 194—10.

Lewis, Arnold S. Folding boat. 3,099,024, 7-30-63, Cl. 9—2.

Li, John C., and R. E. Baker, to Wah Chang Corp. Recovery of earth acids from slag. 3,099,526, 7-30-63, Cl. 28—18.

Libbey-Owens-Ford Glass Co.: *See*—
McAuley, James W. 3,099,759.

Lily of France, Inc.: *See*—
Spitzer, Anne. 3,099,266.

Lingg, Gerhard. Transport and storage arrangement for carriers. 3,099,228, 7-30-63, Cl. 104—172.

Lite-Vent Industries, Inc.: *See*—
Sklar, Leo P. 3,099,335.

Lizensia A.G.: *See*—
Meek, George W. 3,099,696.

Locher, Hans, to Zellweger Ltd. Apparatus for automatically controlling the drafting of elongate materials. 3,099,048, 7-30-63, Cl. 19—240.

Lockheed Aircraft Corp.: *See*—
Carr, John W. 3,099,836.
Spiro, Lloyd W. 3,099,054.
Turner, Loyce A. 3,099,791.

Loehr, Joseph H. Heat exchanger. 3,099,315, 7-30-63, Cl. 165—144.

Loesberg, Paulus P., to Electrotechnische Industrie voorheen Willem Smit & Co. Mono- and polyphase alternating current generators. 3,099,788, 7-30-63, Cl. 322—25.

Loewe Opta Aktiengesellschaft: *See*—
Frank, Egon. 3,099,715.

Lopez Garcia, Pedro: *See*—
Congost Horta, Luis, and Lopez Garcia. 3,099,309.

Lord Mfg. Co.: *See*—
De Crease, William M. 3,099,632.

Loretz, Norman F.: *See*—
Bornemann, William, Bechtold, Philips, Freeman, Loretz, and Neumann. 3,099,199.

Lovrinch, Louis B., to Arlo Mfg. Corp. Hydraulic door lock for horizontal baler. 3,099,205, 7-30-63, Cl. 100—255.

Lowe Paper Co.: *See*—
Hergenhan, Albert R. 3,099,181.

Lowry, Terrell N.: *See*—
Harr, John A., and Lowry. 3,099,717.

Lucchesi, Peter J.: *See*—
Bartok, William, and Lucchesi. 3,099,613.

Ludwig, Arthur L., to Hastings Mfg. Co. Windshield wiper. 3,099,031, 7-30-63, Cl. 15—250.42.

Luehrs, Hans J., to The Cottrell Co. Combination double four color web printing press. 3,099,210, 7-30-63, Cl. 101—180.

Lund, Alvin R.: *See*—
Kaufman, Jack, Lund, and Schwartz. 3,099,404.

Lustenader, Edward L., and D. H. Brown, to General Electric Co. Vapor recirculation distillation process and apparatus. 3,099,807, 7-30-63, Cl. 202—64.

Lynch, Edward I., to General Electric Co. Cathode ray tube system with an index control. 3,099,769, 7-30-63, Cl. 315—22.

Lynn, Alger M. Spraying devices. 3,099,394, 7-30-63, Cl. 239—142.

Maas, Russell B., to Screw Conveyor Corp. Power transmission and conveying chain. 3,099,346, 7-30-63, Cl. 198—174.

Macco Chemical Co., The: *See*—
Syracuse, Felix L. 3,099,593.

Macdonald, Alexander J., to National Steel Corp. Snuffing blast furnaces. 3,099,551, 7-30-63, Cl. 75—41.

MacFarlin, Kenneth J. Exhaust gas dissipating apparatus. 3,099,241, 7-30-63, Cl. 115—.5.

Madelung, Gero: *See*—
Messerschmitt, Willy, and Madelung. 3,099,420.

Madelung, Gero, to Messerschmitt A.G. Tiltable pod for jet power units on aircraft. 3,099,422, 7-30-63, Cl. 244—23.

Maehana, Waino, to Aktiebolaget Separator. Flushing apparatus for milking systems. 3,099,277, 7-30-63, Cl. 134—166.

Maezawa, Masanori, and T. Kuragano. Method for recovering sulphur. 3,099,535, 7-30-63, Cl. 23—225.

Malerson, Theodore, F. C. Schiller, and H. N. Vosmer, to The National Cash Register Co. Polyethylene terephthalate coated with transferable minute specks of magnetic ink. 3,099,571, 7-30-63, Cl. 117—36.1.

Malmstrom, Homer E., and R. M. Donaldson, to Kimberly-Clark Corp. Rotary pressure vessel. 3,099,543, 7-30-63, Cl. 34—124.

Manco Mfg. Co.: *See*—
Hoadley, Cyrus E. 3,099,135.

Manizza, Guelfo A., to Continental Can Co., Inc. Package forming member. 3,099,475, 7-30-63, Cl. 294—87.2.

Mann, Leonard J., and D. O. Stewart, to General Motors Corp. Refrigerating apparatus. 3,099,139, 7-30-63, Cl. 62—180.

Manning, Maxwell & Moore, Inc.: *See*—
Gorgens, Joseph E., and Goff. 3,099,161.

Manor, Paul A., to Rockwell Mfg. Co. Power operation for valves. 3,099,287, 7-30-63, Cl. 137—456.

Marana, Mario P.: *See*—
Cobb, Raymond L., and Marana. 3,099,639.

Marchioli, Giorgio, and G. Gremigni. Apparatus for shaping and compressing sheets of asbestos cement into particles of complex configuration. 3,099,061, 7-30-63, Cl. 25—43.

Marinette and Menominee Box Co.: *See*—
Coffey, Daniel F., Jr. 3,099,351.

Mark, Victor, to Monsanto Chemical Co. Tetracyclic chlorocarbons. 3,099,693, 7-30-63, Cl. 260—648.

Markstone Mfg. Co.: *See*—
Kaufman, Jack, Lund, and Schwartz. 3,099,404.

Marran, John S.: *See*—
Bond, Elisabeth A., Gold, and Marran. 3,099,089.

Marshall, Thomas G., Jr., to Radio Corp. of America. Voltage regulators. 3,099,790, 7-30-63, Cl. 323—22.

Martens, Jack E., to The Anderson Co. MION-transmitting device. 3,099,168, 7-30-63, Cl. 74—459.

Martin, Dalton W.: *See*—
Bahrs, George S., Martin, and McWhorter. 3,099,799.

Martin, Horst-Edgar, to Siemens & Halske Aktiengesellschaft. Communication cable having transposed conductors. 3,099,703, 7-30-63, Cl. 174—34.

Martin, James C.: *See*—
Caldwell, John R., and Martin. 3,099,641.
Elam, Edward U., and Martin. 3,099,679.

Martinez, Fidel. Wheel toy. 3,099,105, 7-30-63, Cl. 46—241.

Maschinenfabrik A.G.: *See*—
Kaiser, Lothar. 3,099,178.

Mason, Harold, J. R. Sanderson, and T. Mason, to The United Kingdom Atomic Energy Authority. Process for the treatment of an organic solvent containing uranium. 3,099,537, 7-30-63, Cl. 23—230.

Mason, Tony: *See*—
Mason, Harold, Sanderson, and T. Mason. 3,099,537.

Massey-Ferguson (Australia) Ltd.: *See*—
Williams, Alan F. 3,099,322.

Massey-Ferguson Inc.: *See*—
Klemm, Herman G., and Wathen. 3,099,203.
Turner, Robert G. 3,099,125.

Massey, Lester G.: *See*—
Urban, Peter, and Massey. 3,099,536.

Matheson, Robert M.: *See*—
McDonie, Arthur F., and Matheson. 3,099,764.

Mathison, Victor G., and H. L. Kruse, to Bourns, Inc. Multiturn rotary potentiometer. 3,099,809, 7-30-63, Cl. 338—143.

Matiyak, Andrew J., J. H. Mullen, and G. M. Cametti, to Westinghouse Electric Corp. Electric switch and control system. 3,099,771, 7-30-63, Cl. 315—131.

Matsumoto, Taisi: *See*—
Kawamura, Yurio, Tamuki, Nagata, Terishima, Matsumoto, Onishi, Konishi, Yoshimura, Yamamoto, and Ikawa. 3,099,649.

Matsuoka, James T., to Stewart Bolling & Co., Inc. Discharge door mechanism for mixing machine. 3,099,040, 7-30-63, Cl. 18—2.

Matsuura, Hiroshi. Reel for a film, tape and the like. 3,099,415, 7-30-63, Cl. 242—74.2.

Mattern, John, to Westinghouse Electric Corp. D.C. coupled amplifier using complementary transistors. 3,099,802, 7-30-63, Cl. 330—17.

May, Fred: *See*—
Breazeale, Hershel T., and F. and G. May. 3,099,300.

May, George: *See*—
Breazeale, Hershel T., and F. and G. May. 3,099,300.

Mayfield, George C., to McQuay-Norris Mfg. Co. Piston ring assembly. 3,099,455, 7-30-63, Cl. 277—163.

McAdams, Paul F., to Clark Equipment Co. Two speed power steering. 3,099,327, 7-30-63, Cl. 180—79.2.

McAuley, James W., to Libbey-Owens Ford Glass Co. Sonic treating apparatus. 3,099,759, 7-30-63, Cl. 310—26.

McCauley, Herbert J., Jr. Sheet metal screw. 3,099,184, 7-30-63, Cl. 85—1.

McCay, Frank V., Jr.: *See*—
Neilson, Jay C., and McCay. 3,099,289.

McClure, Stanley R. Auxiliary dynamotor for the ignition system of an internal combustion engine. 3,099,772, 7-30-63, Cl. 315—218.

McCollum, Jack W., ½ to Deere & Co. Rotary beater with suction flails. 3,099,121, 7-30-63, Cl. 56—121.44.

McDaniels, John D., Jr., and L. S. De Mart, to The Babcock & Wilcox Co. Power operated stud tensioner. 3,099,075, 7-30-63, Cl. 29—240.

McDonie, Arthur F., and R. M. Matheson, to Radio Corp. of America. Photomultiplier tube. 3,099,764, 7-30-63, Cl. 313—95.

McGannon, Patrick J.: *See*—
Imperial, Nicholas J., and McGannon. 3,099,162.

McGivern, Robert J.: *See*—
Willson, James R., and McGivern. 3,099,279.

McGraw-Edison Co.: *See*—
Wu, Bosco. 3,099,827.

McKibben, Horace E., and P. F. Jones, to Blueberry Equipment, Inc. Machine for packaging loose articles such as blueberries. 3,099,115, 7-30-63, Cl. 53—67.

McLean, George S., to The Polymer Corp. Device for masking and supporting an article. 3,099,583, 7-30-63, Cl. 118—505.

McNeill, Jon J.: *See*—
Vitt, Leonard P., and McNeill. 3,099,824.

McQuay-Norris Mfg. Co.: *See*—
Mayfield, George C. 3,099,455.

McWhorter, Malcolm M.: *See*—
Bahrs, George S., Martin, and McWhorter. 3,099,799.

Meacham, Larned A., to Bell Telephone Laboratories, Inc. Synchronizing circuit. 3,099,712, 7-30-63, Cl. 178—69.5.

Mead Corp., The: *See*—
O'Day, George R. 3,099,354.
Rutledge, Wyman C. 3,099,153.
Stease, Ralph E. 3,099,379.

Meader, Donald E., to High Voltage Engineering Corp. Tacky adhesives spreading machine. 3,099,371, 7-30-63, Cl. 222—414.

Meek, George W., to Lizensia A.G. Gas and liquid contact apparatus. 3,099,696, 7-30-63, Cl. 261—24.

Meigs, Archibald V., to Ricco Products Corp., and Rice-Chem Soluplug, Inc. Epoxy resin-amine rice oil composition and method of making same. 3,099,634, 7-30-63, Cl. 260—18.

Meltzer, Robert J., to Bausch & Lomb Inc. Contour projector with means for adjusting the viewing angle. 3,099,185, 7-30-63, Cl. 88—24.

Mendelsohn, Robert A.: *See*—
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Mercier, Pierre E., to Andre Citroen Societe Anonyme. Pumps, more particularly volumetric pumps. 3,099,223, 7-30-63, Cl. 103—161.

Merigold, Peter A., to Rank Precision Industries Ltd. Optical objectives. 3,099,701, 7-30-63, Cl. 88—57.

Merkley, Thurman G., and R. H. Kruger. Water ski. 3,099,025, 7-30-63, Cl. 9—310.

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Messerschmitt AG: *See*—
Madelung, Gero. 3,099,422.
Messerschmitt, Willy, and Madelung. 3,099,420.

Messerschmitt, Willy, and G. Madelung, to Messerschmitt AG. Wing-tip mounted, pivotable jet power units on an aircraft. 3,099,420, 7-30-63, Cl. 244—12.

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Metzler, Charles L., and J. D. Wark, to American Can Co. Dish or the like. 3,099,377, 7-30-63, Cl. 229—2.5.

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Veith, Werner, and Meyerer. 3,099,766.

Meyerer, Paul, to Siemens & Halske Aktiengesellschaft. Travelling wave tube. 3,099,765, 7-30-63, Cl. 315—3.5.

Meyers, Harold S., to Waldorf Paper Products Co. Extra panel cartons. 3,099,381, 7-30-63, Cl. 229—37.

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Hilgoe, Vernon J., and Doyle. 3,099,211.
Sites, Benjamin L. 3,099,557.

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Free, Albert H. 3,099,605.
Borchert, Peter J. 3,099,573.

Miller, Alfred B., to Westinghouse Air Brake Co. Remote indication systems. 3,099,816, 7-30-63, Cl. 340—163.

Miller, Garrett H. Stone grapple. 3,099,476, 7-30-63, Cl. 294—112.

Miller, Glen E., to Boeing Airplane Co. Stabilized phase-sensitive servo loop demodulators. 3,099,798, 7-30-63, Cl. 329—124.

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Siddle, John K., and Miller. 3,099,436.

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Williams, Ralph E., and Miller. 3,099,484.

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Kauts, Harry P. 3,099,406.

Minneapolis-Honeywell Regulator Co.: *See*—
Carlson, William L., Jr. 3,099,136.
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Watrous, Robert B., and Rohmann. 3,099,281.

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Mishcon, Lester, to Singer-Supreme Co., Inc. Fabric yield computing device. 3,099,142, 7-30-63, Cl. 66—1.

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Kessler, Claus, and Moltgen. 3,099,785.

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Kortick, Morris. 3,099,068.

Monsanto Chemical Co.: *See*—
Chupp, John P., and Newallis. 3,099,597.
Mark, Victor. 3,099,693.
Ratts, Kenneth W. 3,099,661.
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Monsees, Claude E., and H. P. Reinhart, to Unexcelled Chemical Corp. Apparatus for stacking and weighing sliced food products. 3,099,304, 7-30-63, Cl. 146—94.

Montague, Charles A., Jr. Boat construction. 3,099,240, 7-30-63, Cl. 114—66.5.

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Montchausse, Andre J., and R. P. Lecomte, to International Standard Electric Corp. Relay-contact cutting tool. 3,099,085, 7-30-63, Cl 30—124.

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Morgan, Hillen J. Meat scoring and trimming knife. 3,099,307, 7-30-63, Cl. 146—203.

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Morrison, Joseph T., to Cogsdill Tool Products, Inc. Metalworking tool. 3,099,070, 7-30-63, Cl. 29—90.

Mortimer, Noel R. F., to Vokes Ltd. Apparatus for feeding tobacco to cigarette-making machines. 3,099,492, 7-30-63, Cl. 302—28.

Mortlock, Joseph R., K. J. R. Wilkinson, and P. Richardson, to Associated Electrical Industries (Ruby) Ltd. Impedance protective systems. 3,099,775, 7-30-63, Cl. 317—36.

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Munschauer, Frederick E., Jr., G. E. Munschauer, and Platou. 3,099,180.

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Muray, Jan, to Imperial Chemical Industries Ltd. Vapor phase fluorination with ClF and ClF$_3$. 3,099,695, 7-30-63, Cl. 260—653.8.

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Davis, William T., Jr., and Murdock. 3,099,601.

Murray, Frederick R.: *See*—
Wilde, Geoffrey L., and Murray. 3,099,423.

Murray, Richard F., to International Business Machines Corp. Scan element for computer. 3,099,818, 7-30-63, Cl. 340—172.5.

Mustad, A B O & Son: *See*—
Bergman, Sune H. 3,099,700.

Nagata, Aikichi: *See*—
Kawamura, Yurio, Tamuki, Nagata, Terishima, Matsumoto, Onishi, Konishi, Yoshimura, Yamamoto, and Ikawa. 3,099,649.

Naimer, Hubert. Threaded plastic rod with mold burr for locking function. 3,099,704, 7-30-63, Cl. 174—138.

Namenyi-Katz, Laszlo. Yarn break detector. 3,099,829, 7-30-63, Cl. 340—259.

Napier, D., & Son Ltd.: *See*—
Elford, Lionel H. 3,099,385.

Nara, Takashi: *See*—
Kinoshita, Shukuo, Samejima, Fujita, and Nara. 3,099,604.

Nash, Robert A.: *See*—
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Nathan, Irwin E. Separable compartmented container. 3,099,380, 7-30-63, Cl. 229—27.

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Lerman, Frank, and Bohnlonk. 3,099,697.
National Drying Machine Co.: *See*—
Schlecht, Charles H., and Drobil. 3,099,291.
National Research Development Corp.: *See*—
Chambers, Hubert H., and Tantram. 3,099,587.
Tucker, David G., and Davies. 3,099,833.
National Steel Corp.: *See*—
Macdonald, Alexander J. 3,099,551.
Naxon, Irving. Instantaneous electric water heaters. 3,099,737, 7-30-63, Cl. 219—38.
Neilson, Jay C., and F. V. McCay, Jr., to Zeno Hydraulic Corp. Pressure fluid control system and flow control means therefor. 3,099,289, 7-30-63, Cl. 137—622.
Nellessen, Alfred H., to Minnesota Mining & Mfg. Co. Reflex-reflectorizing composition. 3,099,637, 7-30-63, Cl. 260—40.
Nelson, Donald E., to Radio Corp. of America. High frequency negative resistance circuits. 3,099,804, 7-30-63, Cl. 331—107.
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Neubert, Willy. Shutter with reciprocating shutter blades for photographic cameras. 3,099,196, 7-30-63, Cl. 95—63.
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Newhouse, Elmer M. Solar space games. 3,099,451, 7-30-63, Cl. 273—134.
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Nilsson, Ragnar H., to Svenska Aktiebolaget Bromsregulator. Brake piston stroke reducing mechanism in vehicle brakes. 3,099,189, 7-30-63, Cl. 74—518.
Nixon, Carl C. Bumper jack pusher extension. 3,099,435, 7-30-63, Cl. 254—35.
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Noreen, Donald H., and W. F. Guenther, to Westinghouse Electric Corp. Static logic annunciator. 3,099,826, 7-30-63, Cl. 340—226.
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North American Philips Co., Inc.: *See*—
Borst, Lyle E. 3,099,745.
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Nuquip Ltd.: *See*—
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Nuttall, John M., to Baker Perkins Inc. Detinning bakery goods. 3,099,345, 7-30-63, Cl. 198—145.
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O'Connell, William A. Floating swimming pool. 3,099,018, 7-30-63, Cl. 4—171.
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Oh, Luis, to The Boeing Co. Helical line rotary joint. 3,099,807, 7-30-63, Cl. 333—98.
O'Herron, John E. Juvenile furniture. 3,099,477, 7-30-63, Cl. 297—1.
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Hense, Theo. 3,099,206.
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Ongstad, Harold, and W. P. Scholl. Portable roofing apparatus. 3,099,582, 7-30-63, Cl. 118—305.
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O'Shei, William E.: *See*—
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Algatt, George E., and Otto. 3,099,348.
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Owen, Edmund C., to Imperial Chemical Industries Ltd. Recovery of glycols. 3,099,692, 7-30-63, Cl. 260—637.
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Schoppee, Lawrence W., and Crescenzo. 3,099,375.
Pahl, James H., to Rodgers Hydraulic Inc. Track press. 3,099,130, 7-30-63, Cl. 59—7.
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Caines, James F., Dyer, and Pannill. 3,099,594.
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Parker, Paul T., J. L. Bryan, Jr., A. B. Small, D. W. Pugh, and F. J. Buchmann, to Esso Research and Engineering Co. Continuous chlorination and bromination of butyl rubber. 3,099,644, 7-30-63, Cl. 260—85.3.
Parshall, Millis V., to General Motors Corp. Anti-skid device. 3,099,499, 7-30-63, Cl. 303—21.
Pastva, John V., Jr., to The Eastern Co. Door control mechanism. 3,099,473, 7-30-63, Cl. 292—240.
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Peck, Kenneth L., and Di Martino. 3,099,313.
Peck, Kenneth L., and J. M. Di Martino, to Peck & Hale, Inc. Shoring system. 3,099,313, 7-30-63, Cl. 160—243.
Pelenc, Yves. Insulator construction for circuit breakers. 3,099,721, 7-30-63, Cl. 200—48.
Penfold, Vincent H., and R. E. Ireland, to W. E. O'Shei. Current pulsing circuit which is sensitive to current changes. 3,099,756, 7-30-63, Cl. 307—132.
Peras, Lucien, to Regie Nationale des Usines Renault. Safety device for the guiding wheel of a vehicle. 3,099,491, 7-30-63, Cl. 301—126.
Percival, Joseph W., and R. W. Cook, to Westinghouse Electric Corp. Stereophonic receiving apparatus. 3,099,714, 7-30-63, Cl. 179—15.
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Perrins, Allen R., to The Superior Electric Co. Voltage surge protection network. 3,099,789, 7-30-63, Cl. 323—9.
Perry, Frederick G., A. J. Grenier, and J. J. Wilson, III, to Texas Instruments Inc. Electrical control device. 3,099,732, 7-30-63, Cl. 200—122.
Perry, Joseph A., Jr., to Cherry-Burrell Corp. Temperature error compensator. 3,099,156, 7-30-63, Cl. 73—141.
Petersen, Conrad W., and H. A. Heide, to Baker Perkins Inc. Depanning apparatus. 3,099,360, 7-30-63, Cl. 214—309.
Petersen, Harlie O. Irrigation systems. 3,099,395, 7-30-63, Cl. 239—562.
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Von Berg, Richard E., and Pfeifer. 3,099,330.
Pfenningsberg, Peter, Maschinenfabrik, G.m.b.H.: *See*—
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Bornemann, William, Bechtold, Philips, Freeman, Loretz, and Neuman. 3,099,199.
Phillips Petroleum Co.: *See*—
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Gardner, Lloyd E., and Hogan. 3,099,618.
Harper, Ernest A. 3,099,619.
Held, Edward C., Jr. 3,099,043.
Koble, Robert A., and Goard. 3,099,525.
Reilly, Robert C. 3,099,366.
Pianowski, Leon J., to The Udylite Corp. Drain mechanism for barrel type conveying apparatus. 3,099,275, 7-30-63, Cl. 134—46.
Piccinini, Arnaldo. Radio receiving set for motor cars. 3,099,797, 7-30-63, Cl. 325—312.
Piecyanski, Joseph W., to Electronic Products Corp. Self-powered interval timer. 3,099,758, 7-30-63, Cl. 307—141.8.
Pieper, Howard B. Portable blower. 3,099,386, 7-30-63, Cl. 230—117.
Pinkley, Clyde W., to Industrial Nucleonics Corp. Resonance seeking circuit. 3,099,793, 7-30-63, Cl. 324—.5.
Piorunneck, Heins, to Gorn Electric Co., Inc. Connector. 3,099,510, 7-30-63, Cl. 339—256.
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Ponndorf, Wilhelm, to Ponndorf Maschinenfabrik K.G. Conveying arrangement for pulpy materials, such as distiller's grains and the like. 3,099,495, 7-30-63, Cl. 302—50.
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Portal, Pierre. Reinforced spool. 3,099,417, 7-30-63, Cl. 242—118.62.
Post, Frederick L., to International Business Machines Corp. Magnetic core device. 3,099,821, 7-30-63, Cl. 340—174.
Powers, Milton A. to Skuttle Mfg. Co. Reversible valve closure member. 3,099,286, 7-30-63, Cl. 137—315.
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Precision Welder and Flexopress Corp.: *See*—
Schueler, Arthur W. 3,099,739.
Press Accessories Co.: *See*—
Crance, Harry W., Jr. 3,099,092.
Prew, Thomas B., to Stafford Tool and Die Co. Ltd. Machinery for cutting, embossing or marking materials. 3,099,596, 7-30-63, Cl. 156—380.
Price, Warren H., to Jacobsen Mfg. Co. Rotary lawn mower hinged grass catching chute. 3,099,123, 7-30-63, Cl. 56—202.
Prober, Maurice, to General Electric Co. Addition of silicon hydrides to aliphatically unsaturated organic compounds. 3,099,670, 7-30-63, Cl. 260—448.2.
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Pugh, James O., and W. J. Kirkpatrick, to Nashville Electronics, Inc. Method of capacitor manufacture. 3,099,069, 7-30-63, Cl. 29—25.41.
Purifoy, George R., to Westinghouse Electric Corp. Motor generator set control system. 3,099,751, 7-30-63, Cl. 307—9.
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Queen, Delbert F. Flexible propeller shaft drive. 3,099,242, 7-30-63, Cl. 115—42.
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Comollo, Frances M. 3,099,265.
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Racine Hydraulics and Machinery, Inc.: *See*—
Raymond, Robert E. 3,099,163.
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Hobley, Peter. 3,099,808.
Lalak, George A. 3,099,081.
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McDonle Arthur F., and Matheson. 3,099,764.
Nelson, Donald E. 3,099,804.
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Radovsky, David A., and B. J. Ronkese, to International Business Machines Corp. Method of electroplating on a dielectric base. 3,099,608, 7-30-63, Cl. 204—15.
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Randall, Brian P. Game projectiles for aerial flight. 3,099,450 7-30-63, Cl. 273—106.
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Merigold, Peter A. 3,099,701.
Ranky, William O.: *See*—
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Rauhut, Michael M., and A. M. Semsel, to American Cyanamid Co. Method of preparing tertiary phosphine oxides using elemental phosphours. 3,099,684, 7-30-63, Cl. 260—485.
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Raymond, Robert E., to Racine Hydraulics and Machinery, Inc. Hydraulic function analyzer. 3,099,163, 7-30-63, Cl. 73—168.
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Red, Naomi P. Container for toothbrushes and related items. 3,099,273, 7-30-63, Cl. 132—84.
Redpath, John R., and L. S. Wysocki, to Chicago Carton Co. Carton. 3,099,383, 7-30-63, Cl. 229—52.
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Kucera, Clement M., and Del'Homme. 3,099,324.
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Peras, Lucien. 3,099,491.
Reid, John B., and R. A. Spence, to Bain Corp. Method for applying adhesive materials to an insole. 3,099,026, 7-30-63, Cl. 12—142.
Reilly, Robert C., to Phillips Petroleum Co. Loading terminal metering system. 3,099,366, 7-30-63, Cl. 222—20.
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Reuter, Franz G., to Mobay Chemical Co. Apparatus for making articles of polyurethane plastics. 3,099,044, 7-30-63, Cl. 18—26.
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Von Berg, Richard E., Laurent, and Pfeifer. 3,099,329.
Von Berg, Richard E., and Pfeifer. 3,099,330.
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Ritter, John W., and E. L. Cusi, to Sarco Co., Inc. Valve with stern seal. 3,099,431, 7-30-63, Cl. 251—214.
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Rohlfs, Gerhard, and S. Pawlenko, to Schering A.G. Preparation of alpha, alpha-dialkyl-branched monocarboxylic acids from olefins, carbon monoxide, and water. 3,099,687, 7-30-63, Cl. 260—533.
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Rosky, Frederick, and C. P. Wensel, to Ford Motor Co. Vehicle suspension system. 3,099,458, 7–30–63, Cl. 280—96.2.

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Sakatani, Harumi. Lawn mower catcher hood. 3,099,122, 7–30–63, Cl. 56—199.

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Salvo, Raymond C., L., and N. L. Arm control appliance. 3,099,448, 7–30–63, Cl. 273—54.

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Kinoshita, Shukuo, Samejima, Fujita, and Nara. 3,099,604.

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Santhany, Leland W., to Ferro Corp. Sanitary ware setter, 3,099,063, 7–30–63, Cl. 25—153.

Sarbacher, Robert I. System for airfield ground traffic control. 3,099,834, 7–30–63, Cl. 343—101.

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Scheib, John, Jr., to Ward Leonard Electric Co. Electrical multipole control relays. 3,099,728, 7–30–63, Cl. 200—104.

Scheib, John, Jr., to Ward Leonard Electric Co. Electrical relay. 3,099,734, 7–30–63, Cl. 200—166.

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Schlage Lock Co.: *See*—
Schlage, Ernest L. 3,099,151.

Schlatter, Charles-Emile: *See*—
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Schlecht, Charles H., and F. W. Drobil, to National Drying Machine Co. Adjustable nozzle. 3,099,291, 7–30–63, Cl. 138—45.

Schlee, Matthew, to General Electric Co. Cathode ray tube socket. 3,099,308, 7–30–63, Cl. 339—193.

Schlumberger, Etienne M., to Conch International Methane Ltd. Container for storing liquefield gases at very low temperatures. 3,099,362, 7–30–63, Cl. 220—9.

Schmookler, Martin S., to International Business Machines Corp. Three level logical circuits. 3,099,753, 7–30–63, Cl. 307—88.5.

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Schroeder, George O., to American Can Co. Container. 3,099,378, 7–30–63, Cl. 229—5.5.

Schroeder, William F. Tide indicator. 3,099,169, 7–30–63, Cl. 73—322.

Schueler, Arthur W., to Precision Welder and Flexopress Corp. Magnetic force welders. 3,099,789, 7–30–63, Cl. 219—86.

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Kaufman, Jack, Lund, and Schwartz. 3,099,404.

Schustack, Robert. Anti-backlash device for knitting machines. 3,099,418, 7–30–63, Cl. 242—129.8.

Schwartz, Frederick W., to Cable Electric Products, Inc. Electrical connector. 3,099,505, 7–30–63, Cl. 339—95.

Schwartz, Lester R., and W. F. Williams, Jr. Moving signal accessory for bicycles. 3,099,243, 7–30–63, Cl. 116—28.

Schweickert, Hans, K. Reuschel, and H. Gutsche, to Siemens-Schuckertwerke Aktiengesellschaft. Method for production of high-purity semiconductor materials for electrical purposes. 3,099,534, 7–30–63, Cl. 23—208.

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Scott, Alec C., to Aeroflex Laboratories Inc. Multi-circuit rotary electrical connector. 3,099,503, 7–30–63, Cl. 339—2.

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Scott, Edwin P. Safety car seat. 3,099,486, 7–30–63, Cl. 297—389.

Scott, George A., and M. S. Williams, Jr., to General Electric Co. Door latch. 3,099,471, 7–30–63, Cl. 292—7.

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Cofield, Eugene P., Jr. 3,099,252.

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Rauhut, Michael M., and Semsel. 3,099,691.

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Sennewald, Kurt, G. Armin, and G. Kallrath, to Knapsack-Grieshelm Aktiengesellschaft. Process for the manufacture of 1,2-dicyano cyclobutane. 3,099,680, 7–30–63, Cl. 260—464.

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Shaw, Stephen H., to Cedar Engineering Division of Control Data Corp. Coil winding apparatus. 3,099,409, 7–30–63, Cl. 242—1.1.

Sheehan, Robert G. Three-axle vehicle suspension including load stabilizing means. 3,099,460, 7–30–63, Cl. 280—104.5.

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Sheer-Korman Associates Inc.: *See*—
Sheer, Charles, and Korman. 3,099,614.

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Shell Process Inc.: *See*—
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Shockley, William. Semiconductive device. 3,099,591, 7–30–63, Cl. 148—33.

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Schweickert, Hans, Reuschel, and Gutsche. 3,099,534.

Silliman, Sheldon D., and B. R. Johnson, to Westinghouse Electric Corp. Monitor system for circuit interrupters. 3,099,724, 7–30–63, Cl. 200—81.6.

Simmons, Richard G. Snow blower apparatus. 3,099,396, 7–30–63, Cl. 239—590.

Simmons, Richard G. Snow blower apparatus. 3,099,097, 7–30–63, Cl. 37—19.

Simpkins, William, to Tiffany Stand Co. Support conatruction. 3,099,233, 7–30–63, Cl. 108—156.

Simshauser, Herbert H. Variable pitch boat propeller. 3,099,320, 7–30–63, Cl. 170—160.13.

Sinclair, George E., to Scott & Williams, Inc. Elastic yarn feeder for knitting machines. 3,099,143, 7–30–63, Cl. 66—132.

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Keith, Willis C., Verdol, and Zmitrovis. 3,099,686.

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Singelmann, Dietrich E., to Bell Aerospace Corp. Water jet engine. 3,099,133, 7–30–63, Cl. 60—35.5.

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Skiles, Benjamin F., to E. I. du Pont de Nemours and Co. Polymeric acid salts of alkylaminoethyl methacrylate. 3,099,636, 7–30–63, Cl. 260—29.6.

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Smith, Charles E., Jr., to La Marche Mfg. Co. Automatic battery charging control with upper and lower voltage limits. 3,099,782, 7–30–63, Cl. 320—39.

Smith, Douglas. Coupling for flanged pipe elements. 3,099,060, 7–30–63, Cl. 24—279.

Smith, Florence F. Maternity garment. 3,099,014, 7–30–63, Cl. 2—221.

Smith, Gene W. Plastic protectors for sheet material, book and magazine covers, and the like. 3,099,464, 7–30–63, Cl. 281—20.

Smith, Gene W. Plastic protectors for sheet material and the like. 3,099,268, 7–30–63, Cl. 129—1.

Smith, Paul L., to Union Carbide Corp. Process for producing foam stabilizer for beer. 3,099,563, 7–30–63, Cl. 99—48.

Smith, Stewart L., to Anpex Corp. Magnetic tape reproducing system. 3,099,708, 7–30–63, Cl. 178—6.6.

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Hagendoorn, Willem J., and Smith. 3,099,547.

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Snowdon, Arthur E.: *See*—
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Sohn, Allen O. Variable length printer for labels and the like. 3,099,212, 7–30–63, Cl. 101—226.

Soles, Thomas D., Jr. Animal leashes. 3,099,250, 7–30–63, Cl. 119—114.

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Sorensen, Walter, to Hunke & Jochheim. File for non-punched papers. 3,099,269, 7–30–63, Cl. 129—37.

Sorrow, Billy B., and N. T. Kunkle, to Westinghouse Electric Corp. Lightning arresters. 3,099,770, 7–30–63, Cl. 315—36.

Sourgens, Roger P., and R. A. Chollet. Electronic teleprinter adapted for collation. 3,099,705, 7–30–63, Cl. 178—2.

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Southwood, Robert L.: *See*—
Kremen, Seymour S., and Southwood. 3,099,149.

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Spaight, Harold L., deceased; E. Spaight, executrix, to Dur-O-wal National, Inc. Control joint. 3,099,110, 7–30–63, Cl. 50—346.

Speck, Josef. Flashlight. 3,099,402, 7–30–63, Cl. 240—10.66.

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Spencer, Raymond E.: *See*—
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Sperry Rand Corp.: *See*—
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Spiro, Lloyd W., to Lockheed Aircraft Corp. Flexible multipurpose clamp. 3,099,054, 7–30–63, Cl. 24—16.

Spitzer, Anne, to Lily of France, Inc. Undergarment. 3,099,266, 7–30–63, Cl. 128—541.

Spitzer, William G., and M. Tanenbaum, to Bell Telephone Laboratories, Inc. Growing and determining epitaxial layer thickness. 3,099,579, 7–30–63, Cl. 117—230.

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Spooner, Robert B., to Koppers Co., Inc. Apparatus for measuring the height and contour of material. 3,099,744, 7–30–63, Cl. 250—71.5.

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Standard Oil Co., The: *See*—
Emrick, Donald D., and Darling. 3,099,665.

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Steane, Ralph E., to The Mead Corp. Reinforced shipping carton. 3,099,379, 7–30–63, Cl. 229—23.

Steels Engineering Products Ltd.: *See*—
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Stefanov, Boris: *See*—
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Steger, William C., Jr.: *See*—
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Stegman, Raymond V., and W. E. Gren, to Brunswick Corp. Control system for bowling balls and the like. 3,099,446, 7–30–63, Cl. 273—49.

Stein, Philip A., to American Drill Bushing Co. Tool for placement of bushings in a drill jig. 3,099,079, 7–30–63, Cl. 29—275.

Stelling, Walter R., Jr., to Applied Developments, Inc. Machine for packaging. 3,099,118, 7–30–63, Cl. 53—209.

Stelzer, James S., to The Weatherhead Co. Suspension control valve. 3,099,461, 7–30–63, Cl. 280—124.

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Straley, James M., and R. C. Harris, to Eastman Kodak Co. Benzothiazole azo 2,3-hydroxynaphthoic acid amide dyes. 3,099,653, 7–30–63, Cl. 260—158.

Strasel, Raymond K., to Jacobsen Mfg. Co. Lawn mower roller adjustment. 3,099,124, 7–30–63, Cl. 56—249.

Straumann, Reinhard, to Institut Dr. Ing. Reinhard Straumann A.G. Watchwork mechanisms. 3,099,128, 7–30–63, Cl. 58—59.

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Sullivan, Lawrence J. Disposable, collapsible urinal. 3,099,017, 7–30–63, Cl. 4—110.

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Syracuse, Felix L., to The Macco Chemical Co. Method of packaging and applying wall tile and wall panel adhesive. 3,099,593, 7-30-63, Cl. 156—71.
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Thompson, Earl A. Centrifugal pump. 3,099,221, 7-30-63, Cl. 103—108.
Thompson, John E. Separation process. 3,099,561, 7-30-63, Cl. 99—7.
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Thorburn, Frederick M.: *See*—
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Todd, George W. Closure for shipping containers. 3,099,364, 7-30-63, Cl. 220—24.5.
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Tolkmith, Henry: *See*—
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Tuchel, Ulrich. Shielded electrical coupler. 3,099,506, 7-30-63, Cl. 339—143.
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Turner, Loyce A., to Lockheed Aircraft Corp. Transistorised voltage regulator with automatic collector leakage compensation means. 3,099,791, 7-30-63, Cl. 323—22.
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United States Steel Corp.: *See*—
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Universal Oil Products Co.: *See*—
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Urban, Peter, and L. G. Massey, to Universal Oil Products Co. Process for the recovery of crystalline sulfur. 3,099,536, 7-30-63, Cl. 23—226.
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Van Scoyk, Howard E., to General Motors Corp. Drying air heat control and moisture removal apparatus. 3,099,542, 7-30-63, Cl. 34—48.
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Vaughan, Chester D., Jr., and R. H. Vetter, to E. J. Lavino and Co. Magnesium oxide pellets and process of producing the same for burning. 3,099,533, 7-30-63, Cl. 23—201.
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Vila Gracia L. Floating suspension including switching means for friction rollers. 3,099,722, 7-30-63, Cl. 200—61.41.
Villadsen, Vagn H., to Aktieselskabet Thomas Ths. Sabroe & Co. Arrangement of the inlet valves in piston compressors. 3,099,388 7-30-63, Cl. 230—228.
Vinson, Billy H., and B. Stefanov, to Kauke and Co., Inc. Frequency to voltage converting circuit. 3,099,800, 7-30-63, Cl. 329—128.
Vitt, Leonard P., and J. J. McNeill, to Westinghouse Electric Corp. Static logic annunciator. 3,099,824, 7-30-63, Cl. 340—213.
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Von Berg, Richard E., H. Laurent, and A. A. Pfeifer, to Rheem Mfg. Co. Reciprocating hydraulic speed control device. 3,099 329. 7-30-63, Cl. 180—82.1.
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Von Schertel, Hanns, J. Cassens, R. Koltzsch, and G. Plewa, to Supramar Ltd. Retractable hydrofoil system for water craft. 3,099,259, 7-30-63, Cl. 114—66.5.
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Wagensell, Ludwig, to Junkers Maschinen und Metallbau G.m.b.H. Fuel supply control for engine compressors. 3,099,157, 7-30-63, Cl. 73—213.
Wagner, Charles E., and R. A. Mendelsohn, to Chrysler Corp. Method and means for braking and reversing a gas turbine rotor. 3,099,433, 7-30-63, Cl. 253—59.
Wagner, Kilno, R. Schwaebel, W. Kiss, W. Grallich, and H. Kleiner, to Farbenfabriken Bayer Aktiengesellschaft. Aminoplast-pigment composition and its application to textiles. 3,099,635, 7-30-63, Cl. 260—29.4.
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Watrous, Robert B., and C. P. Rohmann, to Minneapolis-Honeywell Regulator Co. Air-pressure-operated controller. 3,099 281. 7-30-63, Cl. 137—86.
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Webb, Harry. Combined wash sponge, back strap and soap holder. 3,099,032, 7-30-63, Cl. 15—509.
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Weis, Frank G., to Union Tank Car Co. Nonclogging check valve. 3,099,288, 7-30-63, Cl. 137—525.
Weis, Frank G., to Union Tank Car Co. Weighing control for liquid handling apparatus. 3,099,224, 7-30-63, Cl. 103—243.
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Friedrich, Kevin F., and Kaiser. 3,099,786.
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44: 3,099,382
52: 3,099,383
62: 3,099,384
230— 116: 3,099,385
117: 3,099,386
152: 3,099,387
228: 3,099,388
232— 24: 3,099,389
43.2: 3,099,390
235— 60: 3,099,391
61.6: 3,099,741
150: 3,099,742
236— 21: 3,099,392
239— 97: 3,099,393
142: 3,099,394
562: 3,099,395
590: 3,099,396
240— 3.1: 3,099,397
4: 3,099,398
6.4: 3,099,399
7.55: 3,099,400
8.12: 3,099,401
10.66: 3,099,402
47: 3,099,403
78: 3,099,404
106: 3,099,405
241— 32: 3,099,406
47: 3,099,407
187: 3,099,408
242— 1.1: 3,099,409
35.5: 3,099,410
46.5: 3,099,411
47.01: 3,099,412
68.3: 3,099,413
71.8: 3,099,414
74.2: 3,099,415
95: 3,099,416
118.62: 3,099,417
129.8: 3,099,418
147: 3,099,419
244— 12: 3,099,420
17.13: 3,099,421
23: 3,099,422
3,099,423
50: 3,099,424
74: 3,099,425
145: 3,099,426
246— 435: 3,099,427
248— 166: 3,099,428
250— 51.5: 3,099,743
71.5: 3,099,744
83.1: 3,099,745
83.3: 3,099,746

250— 105: 3,099,747	260–239.55: 3,099,656	263— 19: 3,099,436
203: 3,099,748	3,099,657	43: 3,099,437
210: 3,099,749	332.1: 3,099,658	52: 3,099,698
239: 3,099,750	343.2: 3,099,659	266— 34: 3,099,699
251— 6: 3,099,429	345.2: 3,099,660	268— 66: 3,099,438
146: 3,099,430	345.7: 3,099,661	269— 40: 3,099,439
214: 3,099,431	345.9: 3,099,662	325: 3,099,440
324: 3,099,432	346.3: Re.25,430	328: 3,099,441
252— 8.5: 3,099,624	347.5: 3,099,663	271— 32: 3,099,442
98: 3,099,625	397.3: 3,099,664	272— 1: 3,099,443
163: 3,099,626	410.6: 3,099,665	273— 27: 3,099,444
301.4: 3,099,627	429: 3,099,666	47: 3,099,445
253— 59: 3,099,433	3,099,667	49: 3,099,446
254— 29: 3,099,434	429.7: 3,099,668	52: 3,099,447
35: 3,099,435	439: 3,099,669	54: 3,099,448
260— 2: 3,099,628	448.2: 3,099,670	82: 3,099,449
3,099,629	3,099,671	106: 3,099,450
2.2: 3,099,630	3,099,672	134: 3,099,451
2.5: 3,099,631	453: 3,099,673	199: 3,099,452
3.3: 3,099,632	461: 3,099,674	230: Re.25,427
17.2: 3,099,633	3,099,675	277— 27: 3,099,453
18: 3,099,634	3,099,676	47: 3,099,454
29.4: 3,099,635	462: 3,099,677	163: 3,099,455
29.6: 3,099,636	3,099,678	166: 3,099,456
40: 3,099,637	464: 3,099,679	279— 106: 3,099,457
45.5: 3,099,638	3,099,680	280— 96.2: 3,099,458
45.95: 3,099,639	479: 3,099,681	104.5: 3,099,459
46.5: 3,099,640	485: 3,099,682	3,099,460
65: 3,099,641	3,099,683	124: 3,099,461
75: 3,099,642	3,099,684	478: 3,099,462
79.1: 3,099,643	487: 3,099,685	281— 19: 3,099,463
85.3: 3,099,644	521: 3,099,686	20: 3,099,464
89.1: 3,099,645	533: 3,099,687	36: 3,099,465
91.3: 3,099,646	543: 3,099,688	285— 98: 3,099,466
93.7: 3,099,647	561: 3,099,689	144: 3,099,467
94.3: 3,099,648	606.5: 3,099,690	287— 54: 3,099,468
123.5: 3,099,649	3,099,691	90: 3,099,469
139: 3,099,650	637: 3,099,692	127: 3,099,470
146: 3,099,651	648: 3,099,693	292— 7: 3,099,471
147: 3,099,652	652.5: 3,099,694	169: 3,099,472
158: 3,099,653	653.8: 3,099,695	240: 3,099,473
239.55: 3,099,654	261— 24: 3,099,696	256.5: 3,099,474
3,099,655	97: 3,099,697	

294— 87.2: 3,099,475	313— 95: 3,099,764	333— 24.1: 3,099,805
112: 3,099,476	315— 3.5: 3,099,765	24.2: 3,099,806
297— 1: 3,099,477	3,099,766	98: 3,099,807
28: 3,099,478	3.6: 3,099,767	334— 50: 3,099,808
36: 3,099,479	5.39: 3,099,768	338— 143: 3,099,809
159: 3,099,480	22: 3,099,769	162: 3,099,810
3,099,481	36: 3,099,770	174: 3,099,811
193: 3,099,482	131: 3,099,771	183: 3,099,812
219: 3,099,483	218: 3,099,772	339— 2: 3,099,503
280: 3,099,484	257: 3,099,773	22: 3,099,504
373: 3,099,485	317— 2: 3,099,774	95: 3,099,505
389: 3,099,486	36: 3,099,775	143: 3,099,506
429: 3,099,487	237: 3,099,776	155: 3,099,507
463: 3,099,488	318— 28: 3,099,777	193: 3,099,508
298— 14: 3,099,489	102: 3,099,778	255: 3,099,509
301— 9: 3,099,490	157: 3,099,779	256: 3,099,510
126: 3,099,491	162: 3,099,780	340— 12: 3,099,813
302— 28: 3,099,492	3,099,781	15.5: 3,099,814
29: 3,099,493	320— 39: 3,099,782	163: 3,099,815
31: 3,099,494	40: 3,099,783	3,099,816
50: 3,099,495	321— 7: 3,099,784	172.5: 3,099,817
3,099,496	18: 3,099,785	3,099,818
52: 3,099,497	20: 3,099,786	3,099,819
53: 3,099,498	45: 3,099,787	173: 3,099,820
303— 21: 3,099,499	322— 25: 3,099,788	174: 3,099,821
49: 3,099,500	323— 9: 3,099,789	174.1: 3,099,822
307— 9: 3,099,751	22: 3,099,790	199: 3,099,823
88: 3,099,752	3,099,791	213: 3,099,824
88.5: 3,099,753	94: 3,099,792	3,099,825
3,099,754	324— .5: 3,099,793	226: 3,099,826
113: 3,099,755	325— 24: 3,099,794	248: 3,099,827
132: 3,099,756	30: 3,099,795	3,099,828
141.4: 3,099,757	3,099,796	259: 3,099,829
141.8: 3,099,758	312: 3,099,797	347: 3,099,830
308— 3.8: 3,099,501	329— 124: 3,099,798	3,099,831
159: 3,099,502	126: 3,099,799	343— 8: 3,099,832
310— 26: 3,099,759	128: 3,099,800	16: 3,099,833
217: 3,099,760	330— 10: 3,099,801	101: 3,099,834
246: 3,099,761	17: 3,099,802	103: 3,099,835
312— 343: Re.25,428	331— 9: 3,099,803	753: 3,099,836
313— 74: 3,099,762	107: 3,099,804	346— 17: 3,099,511
92: 3,099,763		34: 3,099,512

CLASSIFICATION OF DESIGNS

D 1— 12: 195,756	D13— 1: 195,765	D26— 1: 195,774
D 7— 5: 195,757	D14— 3: 195,766	D29— 1: 195,775
7: 195,758	195,767	D31— 4: 195,776
D10— 8: 195,759	30: 195,768	195,777
D13— 1: 195,760	195,769	D34— 2: 195,778
195,761	D15— 1: 195,770	5: 195,779
195,762	D16— 2: 195,771	D37— 1: 195,780
195,763	D22— 3: 195,772	D52— 3: 195,781
195,764	D24— 1: 195,773	6: 195,782

D52— 6: 195,783	D65— 1: 195,792	D81— 10: 195,801
D54— 16: 195,784	D70— 2: 195,793	D83— 1: 195,802
D55— 1: 195,785	D71— 1: 195,794	195,803
D58— 2: 195,786	195,795	D85— 2: 195,804
8: 195,787	195,796	195,805
12: 195,788	195,797	195,806
D61— 1: 195,789	195,798	D91— 3: 195,807
195,790	D74— 1: 195,799	D92— 26: 195,808
195,791	D80— 11: 195,800	195,809

CLASSIFICATION OF PLANTS

P.— 81: 2,270	

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 30, 1963 Volume 792 Number 5

TRADEMARKS

NOTICES

International Convention for the Protection of Industrial Property

Ratification of the Lisbon 1958 Revision by the Federation of Rhodesia and Nyasaland

The Secretary of State has been notified by the Embassy of Switzerland of the ratification, effective June 16, 1963, by the Federation of Rhodesia and Nyasaland of the International Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

International Convention for the Protection of Industrial Property

Adherence of Tanganyika to the Lisbon 1958 Revision

The Secretary of State has been notified by the Embassy of Switzerland of the adherence, effective June 16, 1963, of the Republic of Tanganyika to the International Convention for the Protection of Industrial Property as revised at Lisbon on October 31, 1958.

(Signed) DAVID L. LADD,
June 19, 1963. *Commissioner of Patents.*

Trademark Classification and Search Division

Permanent wave kits for home use, formerly classified in Class 44, Dental, Medical and Surgical Appliances, have been transferred to Class 51, Cosmetics and Toilet Preparations.

Classes 44 and 51 should be searched until the necessary cross-references can be made.

HORACE B. FAY, Jr.,
July 8, 1963. *Assistant Commissioner of Patents.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 47,470 (ELGIN), Elgin National Watch Co., Watches, filed Apr. 25, 1963, D.C., E.D. Mich. (Detroit), Doc. 23799, *Elgin National Watch Co.* v. *Jack Weinstein Enterprises Co., Inc. et al.*

Reg. No. 161,427 (BURELLA), Burberrys Limited, Cloths of wool, worsted, and hair in the piece, knitted, netted, and textile fabrics, filed Jan. 8, 1963, D.C., S.D.N.Y., Doc. 63/60, *Burberrys Limited* v. *Plymouth Manufacturing Company.* Plaintiff's notice of voluntary dismissal Apr. 25, 1963.

Reg. No. 184,655 (GOLDEN FLAKE), Memphis Potato Chip Company, Potato chips and horseradish, filed Aug. 10, 1961, D.C., N.D. Ala. (Birmingham), Doc. 9978, *Golden Flake, Inc.* v. *American Foods, Inc.* Order enjoining defendants affirmed May 23, 1963.

Reg. No. 187,974 (GARDENER), Morris & Jones Limited, Fresh, canned, preserved, bottled, and dried fruits, including peaches, pears, and apricots, filed Apr. 26, 1963, D.C., N.D. Calif. (San Francisco), Doc. 41448, *Bar-Master, Inc.* v. *General Dispenser Corporation, Inc. et al.*

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,358
Date of oldest new application	Oct. 18, 1962
Date of oldest amended application	Oct. 1, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-18-62	10-1-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-1-62	10-4-62
Renewals (All Classes)	5-9-63	5-25-63
Sec. 12 (c) Publications (All Classes)	5-6-63	5-29-63

Applications filed during the month of May 1963—2,342

Registrations Issued	383—No. 753,514 to No. 753,896
Renewals Issued	65

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C. to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 554,042 (CYNTHIA OF HAYMAKER), David Crystal, Inc., Ladies' dresses, skirts, suits, blouses; **Reg. No. 636,224** (HAY JR.), Haymaker Sports, Inc., Ladies', misses' and juniors' dresses, suits, skirts, blouses, pedalpushers, shorts; **Reg. No. 636,225** (HEY JR.), same **Reg. No. 715,100** (CHARLES OF HAYMAKER), David Crystal, Inc., Ladies' and misses' dresses, skirts, coats, dress and jacket ensembles, suits, blouses, slacks, coveralls, and jumpers; **Reg. No. 715,101** (HAYMAKER in script), Haymaker Sports, Inc., Women's outer shirts, skirts, blouses, outer shorts, jackets, dresses, suits, and slacks; **Reg. No. 715,102** (HAYETTE), same, Junior misses' and women's dresses, filed May 23, 1963, D.C., S.D.N.Y., Doc. 63/1488, *Haymaker Sports, Inc. et ano. v. Serbin, Inc.*

Reg. No. 602,366 (THE COVER BOARD), Spred-All, Inc., Plow attachment; 2,733,647, D. J. Bauer, same, filed Mar. 29, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c543, *Donald J. Bauer v. International Harvester Co.* Stipulation and order dismissing complaint with prejudice; counterclaim dismissed without prejudice Apr. 3, 1963.

Reg. No. 617,131 (VOLKSWAGEN), Volkswagenwerk GmbH, Vehicles—namely, automobiles and trucks, aircraft, boats; and parts of and accessories for automobiles—namely, radiators, direction indicators, etc.; **Reg. No. 631,649** (VW AND DESIGN, same; **Reg. No. 653,695** (VW), same, filed Mar. 29, 1963, D.C., N.D. Calif. (San Francisco), Doc. 41403, *Volkswagenwerk Aktiengesellschaft v. Herbert Ploch, doing business as German Motors.*

Reg. No. 631,649. (See Reg. No. 617,131.)

Reg. No. 636,224. (See Reg. No. 554,042.)

Reg. No. 636,225. (See Reg. No. 554,042.)

Reg. No. 653,695. (See Reg. No. 617,131.)

Reg. No. 661,832 (CORONATION), Coronation, Inc., Finger rings, filed Apr. 26, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c715, *Merchandiser's Catalog Association, Inc. v. J. C. Penney Company.*

Reg. No. 705,917 (WINSTON), E. & L. Manufacturing Co., Baseball gloves, bats and balls, and boxing gloves, badminton sets etc., filed Apr. 29, 1963, D.C., S.D.N.Y., Doc. 63/1223, *Larry Ellenberg v. Winston Sporting Goods Corp. et al.*

Reg. No. 706,153 (FROSTIE JELLS), The P. S. Truesdell Company, Candy, filed Apr. 26, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c726, *The P. S. Truesdell Company v. E. J. Brach & Sons.*

Reg. No. 715,100. (See Reg. No. 554,042.)

Reg. No. 715,101. (See Reg. No. 554,042.)

Reg. No. 715,102. (See Reg. No. 554,042.)

Reg. No. 715,907 (BUDGET RENT-A-CAR), Rent-A-Car Services Corporation, Rental and leasing of motor vehicles, filed June 26, 1963, D.C. Mass. (Boston), Doc. 62–465–W, *Budget Rent-A-Car Corporation of America v. ABC Lease Company, Inc. et al.* Defendants enjoined (notice May 9, 1963).

Reg. No. 716,803 (BETTI BRENT, LTD. AND DESIGN), Betti Brent, Ltd., Ladies' coats and suits, filed June 14, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1195, *Buddy Bate Corp. et al. v. Urbanaire, Inc.* Consent judgment; trademark held valid and infringed; defendant enjoined May 16, 1963.

Reg. No. 721,346 (CUISENAIRE), Cuisenaire Company of America, Inc., Materials for the teaching of mathematics comprising colored rods of various lengths and colored discs sold as a package with one or more of the following printed items: instruction books, wall charts, etc., filed May 8, 1963, D.C., S.D.N.Y., Doc. 63/1338, *Cuisenaire Company of America, Inc. v. American Book Co., Inc. et al.*

Reg. No. 743,830 (DESIGN OF FEMALE), Pantino, Inc., Female wearing apparel, including slacks, shirts, blouses and shorts, filed Jan. 24, 1963, D.C. Mass. (Boston), Doc. 63–45–W, *Pantino, Inc. v. Sandy's Stores, Inc.* Consent judgment; defendants enjoined Feb. 21, 1963.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 127,577. De Kalb Agricultural Association, Inc., De Kalb, Ill. Filed Sept. 11, 1961.

SUDAX

For Sorghum-Sudangrass Hybrid Seed.
First use in September 1958.

SN 147,580. High Temperature Materials, Inc., Brighton, Mass. Filed June 25, 1962.

GRAFOIL

For Graphite in the Form of Flexible Webs, Cloths, Sheets, Strips, Tapes, Ribbons, Strands, and Filaments for General Use in the Industrial Arts.
First use on or about June 14, 1962.

SN 152,852. Vaughan's Seed Company, Chicago, Ill. Filed Sept. 10, 1962.

INSTANT GLAMOUR

For Flower Seeds, Vegetable Seeds, and Bulbs.
First use on or about July 1, 1960.

SN 157,493. Grecny and Lourenco, Downey, Calif. Filed Nov. 19, 1962.

MARBELZENE

For Plastic Materials Used for Panels, Counter Tops, Table Tops, Floor and Wall Tile.
First use Oct. 24, 1962.

SN 157,494. Grecny and Lourenco, Downey, Calif. Filed Nov. 19, 1962.

MARLICA

For Plastic Materials Used for Panels, Counter Tops, Table Tops, Floor and Wall Tile.
First use Oct. 24, 1962.

SN 157,673. Bennett-Ireland, Inc., Norwich, N.Y. Filed Nov. 21, 1962.

TINDER TABS

For Dry Cellulose Material, Impregnated With an Inflammable Substance for Lighting Fires.
First use Nov. 9, 1962.

SN 158,521. Ferro Corporation, Cleveland, Ohio. Filed Dec. 5, 1962.

FERRO

For Glass Fibers in Bulk and Variously Assembled for Use in Fabricating Molded and Other Products Wherein Such Fibers Are Incorporated.
First use in or about June 1953.

SN 159,027. UCB (Union Chimique-Chemische Bedrijven) Societe Anonyme, Saint-Gilles-lez-Brussels, Belgium. Filed Nov. 1, 1962.

ucb

Owner of Belgian Reg. No. 94,054, dated Jan. 12, 1962.
For Resinous and Plastic Materials in Filaments, Sheets, Films, Rolls, Plates, Tubes, and Bars, Either Alone or in Combination With Other Substances.

SN 159,755. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 26, 1962.

spandex

No claims is made to the word "Spandex" apart from the mark as shown. Owner of Reg. Nos. 600,796, 741,667, and others.
For Fiber and Filaments.
First use Nov. 6, 1962.

SN 160,517. Sunbeam Corporation, Chicago, Ill. Filed Jan. 10, 1963.

SUNRON

For High Impact Thermoplastic Material Used in Injection Molded Parts.
First use Oct. 12, 1962.

SN 160,940. Happy Pet Products, Inc., Cassopolis, Mich. Filed Jan. 18, 1963.

SOPHISTICAT

Owner of Reg. No. 646,249.
For Sanitary Cat Box Filler, Consisting of a Ground Clay.
First use Jan. 3, 1963.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 122,719. Poster Brothers, Inc., Chicago, Ill. Filed June 28, 1961.

REVERE

Owner of Reg. No. 513,685.
For Luggage, Carrying Cases, and Briefcases.
First use on or about May 31, 1961.

SN 150,636. SIBS Associates, Red Bank, N.J. Filed Aug. 6, 1962.

SEA-ALL

For Duffel Bags, Tote Bags, Beach Bags.
First use Apr. 27, 1962.

Class 4 — Abrasives and Polishing Materials

SN 149,822. Collins Polish Corp., Brooklyn, N.Y. Filed July 26, 1962.

COLLINS

Owner of Reg. No. 413,746.
For Floor Wax, Floor polish, and Furniture Polish.
First use August 1929.

SN 152,889. Franklin Stores Corp., d.b.a. Barker's, Orange, Conn. Filed Sept. 11, 1962.

BAR-VAL

For Furniture Polish; Polish for Windows, Glass and Metalware; Floor Wax.
First use July 31, 1962.

SN 155,451. Universal Shellac & Supply Co., Brooklyn, N.Y. Filed Oct. 18, 1962.

UNI-SPEED

For Pads Impregnated With a Polishing Agent.
First use at least as early as 1940.

SN 156,047. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Abrasives and Polishing Materials—i.e., Grinding Agents; Waxes; Agents for Polishing and Preserving Leather; Dressing and Polishing Agents.

Class 5 — Adhesives

SN 132,909. A. W. Faber-Castell, Stein, near Nurnberg, Germany, assignee of A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. Filed Nov. 28, 1961.

THE SCALES

Owner of Reg. Nos. 579,161, 582,808, and 588,151.
For Adhesives—Namely, Mucilage, Glue, Rubber Cement, Paste, Adhesive Tape.
First use Nov. 29, 1952; in commerce Nov. 29, 1952.

SN 143,326. International Minerals & Chemical Corporation, Skokie, Ill., assignee of Aristo Corporation, Detroit, Mich. Filed Apr. 30, 1962.

STEELSET

For Resinous Binder for Sand Molds and Cores.
First use Jan. 31, 1962.

SN 143,623. General Aniline & Film Corporation, New York, N.Y. Filed May 2, 1962.

KOLIMA

For Water Sensitive Adhesives.
First use Mar. 29, 1962.

SN 144,871. Mystik Tape, Inc., Chicago, Ill., assignee of Mystik Adhesive Products, Inc., Chicago, Ill. Filed May 17, 1962.

SELF-STIK

For Pressure Sensitive Adhesive Tapes and Rubber and Resin Adhesives.
First use in May 1946.

SN 154,094. Binney & Smith Inc., New York, N.Y. Filed Sept. 28, 1962.

firma-grip

Owner of Reg. No. 296,868.
For Adhesive Paste.
First use Oct. 31, 1955.

SN 154,625. Röhm & Haas G.m.b.H., Darmstadt, Germany. Filed Oct. 5, 1962.

ACRIFIX

Owner of German Reg. No. 641,841, dated July 23, 1953.
For Glues and Adhesives in Powdered or Liquid Form for Fastening Plastic Materials and Glasses.

SN 156,048. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Adhesives.

SN 156,896. Morningstar-Paisley, Inc., New York, N.Y. Filed Nov. 8, 1962.

STAR SEAM

Applicant disclaims the exclusive use of the word "Seam" apart from the mark as shown. Owner of Reg. No. 697,307.
For Back Seam Envelope Gum.
First use Apr. 2, 1962.

SN 157,632. The Macco Chemical Company, Wickliffe, Ohio. Filed Nov. 20, 1962.

Owner of Reg. Nos. 628,501, 646,968, and 742,536.
For Plastic Wall Tile Adhesive, Ceramic Tile Adhesive, Ceramic Wall Tile Adhesive, Resin Base Wall Tile Adhesive, Latex Ceramic Tile Adhesive.
First use Oct. 31, 1962.

Class 6 — Chemicals and Chemical Compositions

SN 126,153. Crown Chemical Corporation, Providence, R.I. Filed Aug. 17, 1961.

PRESS-MAID

Owner of Reg. Nos. 327,765, 748,053, and others.
For Chemical Compound Used on Cloth To Prevent Creasing, Wrinkling, Shrinking and To Durably Enhance the Appearance of the Fabric.
First use July 26, 1961.

SN 135,224. Pennsylvania Refining Company, Cleveland, Ohio. Filed Jan. 4, 1962.

STABA

For Surface Active Agents for Use on Fabrics and Textiles.
First use Feb. 8, 1961.

SN 147,898. R. Thomas Davies, d.b.a. Greentree Enterprises, Santa Ana, Calif. Filed June 28, 1962.

ODOKILL

For Chemical Concentrate for Killing Odor-Producing Bacteria in Organic Waste Materials.
First use Feb. 22, 1962.

SN 148,680. United States Movidyn Corporation, Chicago, Ill. Filed July 9, 1962.

TWINK

For Chemical Composition for Addition to Water in Pools and the Like To Combat Bacteria and Algae.
First use at least as early as Dec. 15, 1961.

SN 151,862. Acme Quality Paints, Inc., Detroit, Mich. Filed Aug. 27, 1962.

PRO-KRIL

For Solvents, Retarders, and Thinners for Acrylic Enamels and Lacquers.
First use Mar. 2, 1961.

SN 152,303. Harwick Standard Chemical Co., Akron, Ohio. Filed Aug. 31, 1962.

For Fatty Acids, Inorganic Acids, Alcohols, Aniline Oils, Anti-Foaming Agents, Antioxidants, Antistatic Agents, Blowing Agents, Calcium Silicate, Casein, Polymerization Catalysts, Colors (Dry Form, Pastes, Rubber and Plastic Master Batches), Dispersing Agents, Ethanolamines, Formaldehyde, Glycerine, Glycols, Hydraulic Fluids, Magnesium Carbonate, Magnesium Oxides, Metallic Soaps, Pigments, Pine Oil, Plasticizers, Peptizers, Rubber-Reclaiming Agents, Solvents, Sulfur, Tackifiers, Triphenylguanidine, Wax, Whiting, and Zinc Oxides.
First use Nov. 30, 1959.

SN 154,090. Amylo Chemie N.V., Koog aan de Zaan, Netherlands. Filed Sept. 28, 1962.

Owner of Dutch Reg. No. 142,463, dated Nov. 13, 1961.
For Starches for Industrial Use.

SN 154,836. Onyx Chemical Corporation, Jersey City, N.J. Filed Oct. 9, 1962.

SILKAND

For Chemical Compound Sold in Bulk, Used as Fiber Lubricant and Sizing Agent and Fiber Lubricant in the Finishing of Blends of Dacron and Cotton Piece Goods.
First use Sept. 25, 1962.

SN 154,940. Spectra Biologicals, Incorporated, East Brunswick, N.J. Filed Oct. 1, 1962.

CONFIRMCELLS

For Diagnostic Blood Reagent for Laboratory Use.
First use Aug. 30, 1962.

SN 154,941. Spectra Biologicals, Incorporated, East Brunswick, N.J. Filed Oct. 1, 1962.

SPECTROGEN

For Diagnostic Blood Reagent for Laboratory Use.
First use Aug. 30, 1962.

SN 157,610. Ferro Corporation, Cleveland, Ohio. Filed Nov. 20, 1962.

PREPAK

For Organic and Inorganic Colorants, Color Concentrates Suspended in Plastic Resin Vehicles, and Pigments, for Use in Plastics.
First use on or about Oct. 31, 1962.

SN 157,870. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Nov. 23, 1962.

TransAc

For Transaminase Reagent System for Diagnostic Use in the Laboratory.
First use Nov. 12, 1962.

SN 158,040. American Cyanamid Company, Wayne, N. J. Filed Nov. 28, 1962.

SONAR

For Insecticide.
First use Nov. 16, 1962.

SN 158,112. Union Carbide Corporation, New York, N.Y. Filed Nov. 28, 1962.

STABILENE

Owner of Reg. No. 207,894.
For Fly Repellent.
First use Nov. 9, 1962.

SN 159,024. UCB (Union Chimique-Chemische Bedrijven) Societe Anonyme, Saint-Gilles-les-Brussels, Belgium. Filed Nov. 1, 1962.

Owner of Belgian Reg. No. 94,054, dated Jan. 12, 1962.
For Chemicals and Chemical Compositions for Use in Industry, Science, Agriculture, and Horticulture.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 164,318. The Central Tobacco Manufacturing Company, Limited, Montreal, Quebec, Canada. Filed Mar. 11, 1963.

CENTURY

For Cigarette Tubes.
First use 1946; in commerce September 1961.

SN 164,496. Achilles Corporation, Atlantic City, N.J. Filed Mar. 13, 1963.

VENTIP

For Cigarette Holders.
First use January 1963.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 122,474. Bernard J. Semel, Washington, D.C. Filed June 20, 1961.

CIVIL WAR

For Fireworks.
First use Mar. 28, 1961.

SN 158,081. P. Lorillard Company, New York, N.Y. Filed Nov. 28, 1962.

KENT

Owner of Reg. Nos. 572,924, 580,875, and others.
For Matches.
First use May 1958.

Class 10 — Fertilizers

SN 154,714. Germain's, Inc., Los Angeles, Calif. Filed Oct. 8, 1962.

PENTREX

For Plant Food With Soil Penetrant.
First use Sept. 16, 1962.

SN 156,051. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Fertilizers.

Class 11 — Inks and Inking Materials

SN 138,887. Reig Duplicator Company, d.b.a. Duplicator Company, Chicago, Ill. Filed Mar. 1, 1962.

VersaPrint

For Stencil Duplicating and Marking Inks.
First use May 15, 1961.

Class 12 — Construction Materials

SN 145,589. Pacific Wood Products Co., Los Angeles, Calif. Filed May 28, 1962.

Applicant hereby disclaims the descriptive words "Philippine Mahogany," and the grade symbol letters "PA."
For Plywood Panels.
First use Nov. 1, 1961.

SN 146,063. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed June 4, 1962.

CORLIX

For Culvert Drain Pipe.
First use on or about Nov. 24, 1961.

SN 155,125. W. M. Arab Limited, Vancouver, British Columbia, Canada. Filed Oct. 15, 1962.

ARABPLY

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 16, 1962; Reg. No. 129,165, dated Dec. 21, 1962.
For Plywood.

SN 156,052. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Artificial Stone, Building Materials.

SN 156,711. Fetter Bros. Aluminum Manufacturing Company, Jeffersonville, Ind. Filed Nov. 6, 1962.

ALUMIFRONT

For Aluminum Door Fronts and Aluminum Curtains for Stores.
First use Oct. 22, 1962.

SN 157,632. The Macco Chemical Company, Wickliffe, Ohio. Filed Nov. 20, 1962.

Owner of Reg. Nos. 628,501, 646,968, and 742,536.
For Building Materials, Particularly Mastic, Grout, Mortar, and Sealing Strip Building Materials, Especially Various Grades of Grout, Mortar Mastics, Thin-Bed Mortar, and Vinyl Plastic Sealing Strips.
First use Oct. 31, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 136,633. Comanche Steel Products, Inc., San Antonio, Tex. Filed Jan. 26, 1962.

For Metal Fencing, Including Gates and Fence Fittings; Tubular Products, Including Pipe, Conduits, and Tubing, Fittings and Couplings Therefor; Garbage Can Holders; and Clothes Poles.
First use Nov. 28, 1951.

SN 141,900. Bell & Gossett Company, Morton Grove, Ill., assignee of Stover Co., Freeport, Ill. Filed Apr. 9, 1962.

The drawing is lined for red, but the color forms no part of the mark.
For Storage Water Heaters, Hot Water Storage, Hydro-Pneumatic Tanks, Compression Tanks, Hot Water Service Tanks, Condensate Receivers, and Pressure Vessels.
First use March 1931.

SN 142,100. Mack Johnston, Inc., Kalispell, Mont. Filed Apr. 12, 1962.

SIMPLE SIPHON

For Devices for Tapping Beer Kegs and the Like.
First use Apr. 14, 1961.

SN 143,756. Perma Vinyl Corp., Miami, Fla. Filed May 3, 1962.

For Insert Pipe Couplings, Insert Male Adapters for Pipes, Insert Elbows for Pipes, and Insert T's for Pipes.
First use Feb. 1, 1962.

SN 144,809. Continental Screw Company, New Bedford, Mass. Filed May 17, 1962.

For Screws.
First use Apr. 19, 1962.

SN 151,098. Swepco Tube Corporation, Clifton, N.J. Filed Aug. 13, 1962.

SYNCRO-WELD

The word "Weld" is disclaimed apart from the mark as a whole.
For Welded Stainless Steel Pipe.
First use Oct. 9, 1961.

SN 151,172. Textron, Inc., Bridgeport, Conn. Filed Aug. 14, 1962.

CONTURA

For Diaphragms for Gas Meters.
First use July 27, 1962.

SN 151,300. Crawford Door Company, Detroit, Mich. Filed Aug. 16, 1962.

MARVEL-MATIC

For Garage Door Operators.
First use Nov. 21, 1961.

SN 151,351. New York Wire Cloth Company, York, Pa. Filed Aug. 16, 1962.

NYCO

For Anodized Door Grilles.
First use Apr. 26, 1962.

SN 151,465. Automotive Spring Corporation, Detroit, Mich. Filed Aug. 20, 1962.

63-100

For High Tensile Hood Hinge Quality Hard Drawn Spring Wire.
First use on or about Aug. 31, 1959.

SN 151,716. Bethlehem Steel Company, Bethlehem, Pa. Filed Aug. 23, 1962.

SILVER STAR

Owner of Reg. No. 325,636.
For Steel Wire and Wire Products.
First use June 17, 1933.

SN 151,728. D & G Valve Mfg. Co., Inc., Stoneham, Mass. Filed Aug. 23, 1962.

GROSE-JET

For Valves and Parts Therefor.
First use Aug. 10, 1962.

SN 151,765. S. H. Leggitt Company, Marshall, Mich. Filed Aug. 23, 1962.

FLEX-EASE

For Flexible Connectors for Connecting Gas Appliances to Gas Supply Lines.
First use in April 1952.

SN 151,876. Unistrut Corporation, Wayne, Mich. Filed Aug. 27, 1962.

BENDLOK

For Structural Fittings and Support Elements—Namely, Hangers for Pipes and the Like.
First use Feb. 20, 1961.

SN 152,073. Kay & Company (Engineers), Limited, Bolton, England. Filed Aug. 28, 1962.

KONKAP

Owner of British Reg. No. 802,451, dated Mar. 1, 1960.
For Pipes and Tubes and Fittings and Couplings for Pipes and Tubes.

SN 152,110. Bimetallic Cylinders, Inc., Bound Brook, N.J. Filed Aug. 29, 1962.



For Metal Conduits.
First use July 30, 1962.

SN 152,306. Independent Nail Corporation, Bridgewater, Mass. Filed Aug. 31, 1962.

PLUS-HED

For Nails, Threaded Nails, and Drive Screws.
First use Nov. 17, 1961.

SN 152,331. Puritan Cordage Mills, Louisville, Ky. Filed Aug. 31, 1962.

ARLINGTON

For Winch Rope Hooks and Cables for Use With Water Skis, Water Ski Belts, and Heavy Duty Boat Fenders.
First use Jan. 11, 1962.

SN 152,461. Talon, Inc., Meadville, Pa. Filed Sept. 4, 1962.
Owner of Reg. Nos. 243,746 and 501,993.

TLN

For Slide Fasteners.
First use on or about Aug. 30, 1962.

SN 156,151. Newman-Green, Inc., Addison, Ill. Filed Oct. 29, 1962.

NEWMAN GREEN

For Valves and Parts of Valves for Pressurized Packages.
First use Feb. 17, 1955.

SN 157,270. Vischer Products Company, Chicago, Ill. Filed Nov. 14, 1962.

VISCHER

For Kitchen Equipment Including Pressure Cookers and Parts Therefor, Steam Generators, Steam Separators, Pans, and Pan Holders.
First use on or about Mar. 11, 1957.

SN 157,389. Montgomery Ward & Co. Incorporated, Chicago, Ill. Filed Nov. 16, 1962.

RIVERSIDE

Owner of Reg. Nos. 400,109 and 607,990.
For Tire Chains.
First use July 15, 1960; Dec. 31, 1912, on pneumatic tires and tubes.

Class 14—Metals and Metal Castings and Forgings

SN 151,707. Specialloy, Inc., Chicago, Ill. Filed Aug. 20, 1962.

MANGANINGOT

For Electrolytic Manganese.
First use July 25, 1962.

SN 155,622. Lukens Steel Company, Coatesville, Pa. Filed Oct. 22, 1962.

LUKENS DURACLAD-500

Owner of Reg. Nos. 605,018 and 683,135.
For Various Steel Products—Namely, Clad Steel, Stainless Clad Steel, Carbon and Alloy Plate, and Steel Plate Shapes.
First use Sept. 29, 1962.

Class 15—Oils and Greases

SN 146,099. The Pure Oil Company, Palatine, Ill. Filed June 4, 1962.

AMSCO SEAL

No claim is made to the word "Seal" apart from its use in combination with the word "Amsco." Owner of Reg. No. 694,444.
For Petroleum Waxes.
First use on or about Apr. 24, 1961.

SN 146,100. The Pure Oil Company, Palatine, Ill. Filed June 4, 1962.

AMSCO SEAL SUPER

No claim is made to the words "Seal Super" apart from their use in combination with the word "Amsco." Owner of Reg. No. 694,444.
For Petroleum Waxes.
First use on or about Apr. 6, 1961.

SN 153,540. The American Oil Company, Chicago, Ill. Filed Sept. 20, 1962.

DOC

For Motor Fuel Additive.
First use Oct. 1, 1961.

SN 154,499. Lubri-Film Products Co., Minneapolis, Minn. Filed Oct. 4, 1962.

LUBRI-FILM

For Motor Oil Additive.
First use on or about Aug. 1, 1958.

SN 156,054. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Oils and Greases—i.e., Illuminants, Industrial Oils and Fats, Lubricants, Petrol.

SN 157,786. Fiske Brothers Refining Co., Newark, N.J. Filed Nov. 23, 1962.

F. Z.

For Ingredient in Motor Oil Consisting of an Anti-Wear Additive.
First use Mar. 20, 1962.

SN 158,365. Northwest Candles, Inc., Portland, Oreg. Filed Dec. 3, 1962.

TWINKLE

For Wax Candles.
First use July 1, 1952.

SN 158,373. Process Engineering Corporation, Crystal Lake, Ill. Filed Dec. 3, 1962.

LUBRIFILM

Owner of Reg. No. 405,267.
For Graphite Sticks.
First use July 31, 1962.

SN 160,849. Conley Corporation, Tulsa, Okla. Filed Jan. 17, 1963.



For Pipe Thread Lubricant and Sealant in Paste Form.
First use Dec. 7, 1962.

SN 160,926. Die Casting "ID" Corporation, Burbank, Calif. Filed Jan. 18, 1963.

FILM X-21

Owner of Reg. No. 743,270.
For Die Releasing Lubricants.
First use Nov. 29, 1957.

SN 160,927. Die Casting "ID" Corporation, Burbank, Calif. Filed Jan. 18, 1963.

FILM X-28DTH

Owner of Reg. No. 743,270.
For Die Releasing Lubricants.
First use Jan. 26, 1960.

SN 161,630. Richfield Oil Corporation, Los Angeles, Calif. Filed Jan. 29, 1963.

CIRCLE C

For Motor Oil, Lubricating Oil, and Other Petroleum Products.
First use July 1949.

SN 161,631. Richfield Oil Corporation, Los Angeles, Calif. Filed Jan. 29, 1963.

SUPER CIRCLE C

For Motor Oil, Lubricating Oil, and Other Petroleum Products.
First use July 1949.

Class 16—Protective and Decorative Coatings

SN 129,304. W. R. Grace & Co., New York, N.Y., assignee of Sun Chemical Corporation, New York, N.Y. Filed Oct. 5, 1961.

VULCAFLEX

For Paints.
First use 1958.

SN 140,776. Talens & Son, Inc., Union, N.J. Filed Mar. 26, 1962.

ETA

For Casein-Emulsion Colors for Interior and Exterior Advertising Painting, Wall and Theater Decoration, Painting and Design.
First use May 3, 1955.

SN 141,622. Kerr Chemicals, Inc., Des Plaines, Ill. Filed Apr. 5, 1962.

KERPAINT

For Protective and Decorative Coatings—Namely, Alkyd Enamels and Cellulose Lacquers Packaged in Aerosol Cans for Touch-Up Painting and Domestic and Industrial Small Projects.
First use Feb. 23, 1962.

SN 146,794. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed June 13, 1962.

WONDER-CITE

For Dripless Paints.
First use April 1962.

SN 151,863. Acme Quality Paints, Inc., Detroit, Mich. Filed Aug. 27, 1962.

PRO-KRIL

For Acrylic Lacquers, Primer Surfacers, Tinting Colors.
First use Mar. 2, 1961.

SN 152,857. Wilhold Glues, Inc., Los Angeles, Calif. Filed Sept. 10, 1962.

HYLAST

For Protective Rubber Coating for General Use.
First use at least as early as March 1962.

SN 156,055. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

HOECHST

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Protective and Decorative Coatings—i.e., Chemically Resistant Synthetic Resin Cements, Synthetic Emulsions for Insulating Intermediate Layers and Protective Coatings in Acid-Proof Construction; Paints, Varnishes and Lacquers for Leather, Wood and Textiles.

Class 17—Tobacco Products

SN 151,578. Carlos Fuente, d.b.a. Arturo Fuente Cigar Factory, Tampa, Fla. Filed Aug. 21, 1962.

Flor de ORLANDO

For Cigars.
First use June 1961.

SN 161,334. Wally Frank, Ltd., New York, N.Y. Filed Jan. 24, 1963.

BRANDY CASK

For Tobacco Products—Namely, Pipe Tobacco.
First use on or about Oct. 1, 1938.

SN 161,335. Wally Frank, Ltd., New York, N.Y. Filed Jan. 24, 1963.

POT LUCK

For Tobacco Products—Namely, Pipe Tobacco.
First use on or about Aug. 1, 1938.

SN 163,951. Liggett & Myers Tobacco Company, New York, N.Y. Filed Mar. 5, 1963.

CYCLE

Owner of Reg. No. 564,870.
For Cigarettes.
First use 1911.

SN 164,198. Tobacco Blending Corporation, Louisville, Ky. Filed Mar. 7, 1963.

MONEY BAG

For Tobacco Products—Namely, Pipe Tobacco.
First use on or about Mar. 29, 1954.

Class 18—Medicines and Pharmaceutical Preparations

SN 118,347. Grove Laboratories Incorporated, St. Louis, Mo. Filed Apr. 21, 1961.

DECONGEL

For Medicinal and Pharmaceutical Preparation—Namely, a Decongestant and Anti-Allergic Gel for Symptomatic Relief of Nasal and Sinus Congestion, Colds and Hay Fever.
First use Feb. 3, 1961.

SN 132,248. Mentos Products, Inc., Philadelphia, Pa. Filed Nov. 17, 1961.

Mentos

For Pharmaceutical Preparation for Treating the Scalp.
First use March 1916.

SN 135,240. Thayer Laboratories, Inc., New York, N.Y. Filed Jan. 4, 1962.

O-MIST

For Antibiotic Spray for Affection of the Throat.
First use Nov. 25, 1961.

SN 136,115. Colgate-Palmolive Company, New York, N.Y. Filed Jan. 19, 1962.

SINUSTRESS

For Analgesic.
First use Nov. 6, 1961.

SN 138,404. Hoffmann-La Roche Inc., Nutley, N.J. Filed Feb. 21, 1962.

TRANIMAL

For Tranquilizer and Growth Stimulant for Animals.
First use Feb. 12, 1962.

SN 139,419. Milton Okin, d.b.a. Nutrition Products Co., Yonkers, N.Y. Filed Mar. 8, 1962.

Curb-wate

WITH CONTROLENE

Owner of Reg. No. 666,123.
For Tablets Effective To Control Appetite in Aid of Weight Reduction.
First use Feb. 26, 1957.

SN 139,639. Keimdiat G.m.b.H., Augsburg, Germany. Filed Mar. 12, 1962.



The drawing is lined for blue, yellow, and red. Owner of German Reg. No. 731,566, dated Dec. 2, 1959.
For Tonics Made From Wheat Germ.

SN 147,907. Encapsulations Inc., Newark, N.J. Filed June 28, 1962.

VIM-AGLOW

For Multiple Vitamin Capsules.
First use May 25, 1962.

SN 148,055. Miles Laboratories, Inc., Elkhart, Ind. Filed June 29, 1962.

Cinteen 4in1

Owner of Reg. Nos. 694,814 and 694,815.
For Topical Germicide, Mouthwash and Gargle.
First use on or before Jan. 8, 1962.

SN 148,420. Ralston Purina Company, St. Louis, Mo. Filed July 5, 1962.

CHEK-PICK

Owner of Reg. Nos. 407,240, 717,443, and others.
For Paste for Controlling Cannibalism and Picking in Poultry.
First use March 1954.

SN 149,241. George C. Hervey, Inc., d.b.a. Vitamin Specialties Co., El Paso, Tex. Filed July 12, 1962.

ANAGEST

For Food Supplement in Tablet Form Used as a Digestive Aid and Containing Amino Acids and Digestive Enzymes.
First use June 1, 1962.

SN 153,705. Dr. A. Wander, S.A., Berne, Switzerland. Filed Sept. 21, 1962.

CYFRENYL

Owner of Swiss Reg. No. 192,235, dated June 12, 1962.
For Pharmaceutical Preparations—Namely, a Cytostatic Product.

SN 154,103. First Texas Pharmaceuticals, Inc., Dallas, Tex. Filed Sept. 28, 1962.

TRI-AZO-MUL

Owner of Reg. No. 440,364.
For Emulsion of Sulfonamides.
First use 1948.

SN 154,600. Gimbel Brothers, Inc., New York, N.Y. Filed Oct. 5, 1962.

GIMBROVITE

For Vitamins.
First use Sept. 4, 1962.

SN 156,056. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

HOECHST

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Pharmaceuticals and Chemical Products for Healing Purposes and for Health-Care and Veterinary Purposes; Pharmaceutical Drugs, Particularly Analgesics, Anesthetics, Antimalarials, Antihistamines, Disinfectants, Sulfa Drugs, Antibiotics, Vaso-Constrictors and Dilators, Heart Stimulants, Hormone Preparations, and Vaccines.

SN 157,676. Carter Products, Inc., New York, N.Y. Filed Nov. 21, 1962.

BANACIDIN

For Pharmaceutical—Namely, a Headache Analgesic.
First use June 4, 1962.

SN 157,677. Carter Products, Inc., New York, N.Y. Filed Nov. 21, 1962.

BAN-ACID-IN

For Pharmaceutical—Namely, a Headache Analgesic.
First use Oct. 5, 1962.

SN 158,436. Mary Frasco, Denver, Colo. Filed Dec. 4, 1962.

FATIMA'S

For Medicinal Salve for Use in Treatment of Hemorrhoids, Cuts, Scratches, Insect Bites, Bruises, and for the Relief of Pain of Rheumatism and Arthritis.
First use Oct. 26, 1962.

SN 158,469. Packaged Products Corp., Brooklyn, N.Y. Filed Dec. 4, 1962.

SOLUVITE

For Multivitamin and Mineral Preparation for Use as a Dietary Supplement.
First use Nov. 21, 1962.

SN 159,025. UCB (Union Chimique-Chemische Bedrijven) Societe Anonyme, Saint-Gilles-lez-Brussels, Belgium. Filed Nov. 1, 1962.

ucb

Owner of Belgian Reg. No. 94,054, dated Jan. 12, 1962.
For Medicines and Pharmaceutical Preparations.

SN 159,029. Alberto-Culver Company, Melrose Park, Ill. Filed Dec. 13, 1962.

VIGIL

For Medicated Room Vaporizer for Relief From Nasal Congestion of Colds, Hay Fever Symptoms, Night Coughing, and Croupy Coughs of Colds.
First use Dec. 3, 1962.

Class 19—Vehicles

SN 122,038. Survival Equipment Corporation, San Francisco, Calif. Filed June 14, 1961.

ELLIOT

For Inflatable Life Saving Equipment—Namely, Marine Rafts, Aircraft Rafts, and Escape Chutes for Escape From Airplanes.
First use in October 1957.

SN 138,036. Lonergan Corporation, Elkhart, Ind. Filed Feb. 15, 1962.

Pleer

For Travel Trailer Version of a House Trailer or Mobile Home.
First use during the first week of January 1962.

SN 161,100. Carlos C. Skinner, Sherbrooke, Quebec, Canada. Filed Jan. 21, 1963.

VANTEL

For Self-Propelled Vehicles That Can Be Used on a Temporary Basis, as Living Quarters.
First use June 15, 1961; in commerce June 15, 1961.

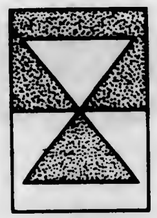
Class 21—Electrical Apparatus, Machines, and Supplies

SN 141,554. Techomatic Industries, Inc., Atlanta, Ga. Filed Apr. 4, 1962.

KUPPAMATIC

For Electrical Unit for Heating and Automatically Dispensing Water Into a Cup Containing Beverage Ingredients.
First use Jan. 4, 1961.

SN 142,054. Raydata Corporation, Worthington, Ohio. Filed Apr. 11, 1962.



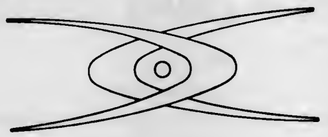
The stippling in the drawing is for shading purposes only, and does not indicate any particular color.
For Periodic Wave Signal Analyzers, Vibration Analyzers, Vibration Transducers, Accelerometer Preamplifiers and Selectors, Low Level Microphone Preamplifiers, Accelerometer Amplifiers, Vibration Limit Alarms, Vibration Limit Monitors, and Low Level Sound Analysis Accessories for Use With Periodic Wave Signal Analyzers.
First use Jan. 26, 1961.

SN 150,165. Fleetwood Corporation, Montreal, Quebec, Canada. Filed July 31, 1962.

Fleetwood

Owner of Canadian Reg. No. 104 NS/26925, dated Feb. 21, 1948.
For Radios, Radio-Phonograph Combinations, Stereo Sets, and Phonographs.
First use Jan. 9, 1946; in commerce Jan. 25, 1962.

SN 150,321. Raychem Corporation, Redwood City, Calif., assignee of Bentley-Harris Manufacturing Company, Conshohocken, Pa. Filed Aug. 2, 1962.



For Electrical Insulation Tubing and Sleeving, and Lacing Tapes.
First use May 15, 1961.

SN 154,586. Fisher Radio Corporation, Long Island City, N.Y. Filed Oct. 5, 1962.

GOLDEN SYNCHRODE

For Radio Receiving and Sound Reproducing Equipment.
First use July 31, 1962.

SN 155,583. Colorsound, Inc., Covina, Calif. Filed Oct. 22, 1962.

Colorsound

For Electronic Apparatus for Converting Variable Frequency Sounds Such as Music Into Correlated Physical Effects.
First use on or about Mar. 2, 1960.

SN 157,435. American Micro Devices, Inc., Phoenix, Ariz. Filed Nov. 19, 1962.



For Semi-Conductor Diodes.
First use Aug. 30, 1962.

SN 157,436. American Micro Devices, Inc., Phoenix, Ariz. Filed Nov. 19, 1962.

AMD

For Semi-Conductor Diodes.
First use Aug. 30, 1962.

SN 160,857. Foley Control Corporation, Portland, Conn. Filed Jan. 17, 1963.



The drawing is lined for the color red, however, applicant disclaims the color red as a material part of its trademark.
For Solenoid Valves.
First use Dec. 6, 1962.

SN 162,977. Pek Labs, Inc., Sunnyvale, Calif. Filed Feb. 18, 1963.

PEK

For Electrical Lamps and Tubes and Parts Therefor—Namely, Mercury Vapor Lamps, Gas-Filled Lamps, Corona Discharge Lamps, X-Ray Tubes, and Lamp and Tube Envelopes.
First use January 1957 on mercury vapor lamps.

SN 165,581. Copymation, Inc., Chicago, Ill. Filed Mar. 28, 1963.

COPYMATION LONG LIFE

Applicant disclaims the words "Long Life" apart from the mark as shown.

For Mercury Vapor Quartz Lamps for Use in Whiteprint and Blueprint Apparatus.

First use on or about Mar. 4, 1963; Dec. 9, 1960, as to "Long Life."

SN 165,595. A.P.M.-Hexseal Corporation, Englewood, N.J. Filed Mar. 28, 1963.

DEFLEX

For Electrical Attachment Plugs of the Grounding Type.
First use Feb. 1, 1963.

SN 165,929. Leecraft Manufacturing Co., Inc., Long Island City, N.Y. Filed Apr. 2, 1963.

TINEON

For Electric Indicator Lights for Pilot and Signal Light Purposes.
First use Mar. 11, 1963.

SN 166,436. Blonder-Tongue Laboratories, Inc., Newark, N.J. Filed Apr. 10, 1963.

Ultraverter

For Radio Frequency Converters Comprising Amplifiers, Tuners, and Associated Electric Circuits.
First use in or about July 1953.

SN 166,569. The Melclip Company, Cincinnati, Ohio. Filed Apr. 11, 1963.

MELCLIP

For Hanger for a String of Lights.
First use June 1, 1962.

SN 166,598. U.S. Engineering Company, Inc., Van Nuys, Calif. Filed Apr. 11, 1963.

POLY WELD

For Electrical Circuit Boards.
First use on or about Jan. 31, 1963.

SN 166,721. Dale M. Irons, d.b.a. Irons Manufacturing, Chicago, Ill. Filed Apr. 15, 1963.

KALEIDOTRON

For Electronically Operated Apparatus for Translating Audible Sounds Into Luminous Effects, More Specifically, Apparatus Adapted for Use With Stereo, Hi-Fi Assemblies To Produce Harmonious, Compatible Three-Dimensional Animated Sound-Induced Color Responses Through an Arrangement of Translucent Screens.
First use Sept. 16, 1960.

SN 166,747. Petersmith Controls, Inc., South San Francisco, Calif. Filed Apr. 15, 1963.

MODU-FLASH

For Printed Circuit Cards.
First use Aug. 31, 1961.

SN 166,754. San Fernando Electric Mfg. Co., San Fernando, Calif. Filed Apr. 15, 1963.

CORDWOOD

For Capacitors.
First use Mar. 8, 1963.

SN 166,823. Marathon Electric Manufacturing Corporation, Wausau, Wis. Filed Apr. 16, 1963.

MARATHON

Owner of Reg. Nos. 247,346 and 528,277.
For Terminal Blocks and Fuse Blocks.
First use Oct. 13, 1962.

SN 166,860. Electric Regulator Corporation, Norwalk, Conn. Filed Apr. 11, 1963.

ACCUTIMER

For Time Delay Relay.
First use Mar. 11, 1963.

SN 166,997. Hermetic Seal Corporation, Belleville, N.J. Filed Apr. 18, 1963.

VAC-TITE

For Electrical Multiterminal Connectors and Headers.
First use June 1946.

Class 22 — Games, Toys, and Sporting Goods

SN 104,901. De Luxe Reading Corporation, Newark, N.J. Filed Sept. 21, 1960.

CUDDLY CATHY

For Dolls.
First use May 9, 1960.

SN 104,908. De Luxe Reading Corporation, Newark, N.J. Filed Sept. 21, 1960.

Little Miss Fashion

For Dolls.
First use May 9, 1960.

SN 123,326. Charles F. Lehmann, Ann Arbor, Mich. Filed July 3, 1961.

HURLY BUB

For Spinning Tops.
First use May 13, 1961.

SN 146,906. Jawk, Inc., Topeka, Kans. Filed June 14, 1962.

JAWK

For Protective Mouthpieces.
First use May 25, 1962.

SN 146,907. Jawk, Inc., Topeka, Kans. Filed June 14, 1962.

Jawk

For Protective Monthpieces.
First use May 25, 1962.

SN 151,796. Amerace Corporation, New York, N.Y. Filed Aug. 24, 1962.

ACE

Jr Star

Owner of Reg. Nos. 694,872 and 735,261.
For Hard Rubber Bowling Balls.
First use Aug. 9, 1962.

SN 151,925. Kellwood Company, Chicago, Ill. Filed Aug. 27, 1962.

KELLWOOD

For Camping and Sporting Equipment—Namely, Tents, Tarps, and Sleeping Bags.
First use June 11, 1962.

SN 152,997. Ideal Toy Corporation, Hollis, N.Y. Filed Sept. 12, 1962.

NIRTZ

For Equipment Sold as a Unit for Playing a Board Game.
First use Jan. 18, 1962.

SN 153,995. Steven Manufacturing Company, St. Louis, Mo. Filed Sept. 26, 1962.

CITADEL

For Equipment Sold as a Unit for Playing a Board Game.
First use Mar. 8, 1962.

SN 154,947. Milton Bradley Company, Springfield, Mass. Filed Oct. 11, 1962.

DOGFIGHT

For Airplane Game.
First use Sept. 3, 1962.

SN 158,050. Rafael D. Bonnelly, d.b.a. Whirlomatic Toy Co., New York, N.Y. Filed Nov. 28, 1962.

WHIRL-O-MATIC

For Whirling Ball Toy.
First use June 4, 1962.

SN 159,119. Sawyer's Inc., Portland, Oreg. Filed Dec. 13, 1962.

SAWYERS

For Toys—Namely, Picture Guns and Toy Projectors.
First use June 20, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 130,811. Société Genevoise d'Instruments de Physique (Société Anonyme), Geneva, Switzerland. Filed Oct. 19, 1961.

HYDRONIC

Priority claimed under Sec. 44(d) on Swiss Reg. No. 186,604, dated Apr. 20, 1961. Owner of U.S. Reg. No. 529,703.

For Precision, Milling, Boring and Drilling Machines Designed for Use on Metals and Other Hard Materials.

SN 150,449. Patents Development Quorum, Inc., Minneapolis, Minn. Filed Aug. 3, 1962.

P.D.Q.

For Stamp Dispensing Machines and Accessories Therefor.
First use at least as early as November 1960.

SN 151,168. The A. J. Sackett & Sons Company, Baltimore, Md. Filed Aug. 14, 1962.

DUSTAREST

For Dust Collector.
First use Apr. 24, 1962.

SN 151,414. Lehigh, Inc., Easton, Pa. Filed Aug. 17, 1962.

LEHIGH

Owner of Reg. No. 642,556.

For Fluid Power Products, Specifically Cylinders, Valves, Hydraulic Checking Units and Boosters, and Other Power Products.

First use June 18, 1962.

SN 151,421. Mason Marking Systems Corporation, Norfolk, Va. Filed Aug. 17, 1962.

CARTOMARKER

For Duplicating Devices.
First use on or about Aug. 14, 1962.

SN 151,429. Nyirem Enterprises, Inc., Spencer, Iowa. Filed Aug. 17, 1962.

SLANTAPER

For Hair Cutting Shears.
First use Jan. 10, 1962.

SN 151,705. Fred H. Schaub Engineering Co., Downers Grove, Ill. Filed Aug. 20, 1962.

DUO-PAK

For Combined Surge and Deaerator Apparatus for Boiler Feed Water Systems.
First use June 23, 1961.

SN 151,849. Thermovac, Stockton, Calif. Filed Aug. 24, 1962.

KEG-MATIC

For Beer Keg Handling and Filling Apparatus—Namely, Depalletizing Conveyors, Pallet Unstackers, Depalletizing Units, Pallet Conveyors, Tap End Sensing Conveyors, Tap End Sensing Units, Debunging Units, Washing Units, Inspection Units, Racker Conveyors, Racker Units, Palletizing Conveyors, Palletizing Units, and Cold Storage Conveyors.
First use Jan. 12, 1961.

SN 152,038. Avery Adhesive Products, Inc., San Marino, Calif. Filed Aug. 28, 1962.

APPLI-MATIC

For Machines and Devices for Dispensing or Other Near-End-Use Processing or Pressure-Sensitive Labels and Webs.
First use Mar. 17, 1961.

SN 152,113. Continental Vending Machine Corp., Westbury, N.Y. Filed Aug. 29, 1962.

AUTOTRONIC

For Coin-Actuated Cigarette, Food and Beverage Vending Machines.
First use May 15, 1962.

SN 152,116. Daigle and Associates, Lake Orion, Mich. Filed Aug. 29, 1962.

MY-T-VEYOR

For Overhead Trolley Conveyors.
First use Aug. 17, 1962.

SN 152,168. The Henry G. Thompson & Son Company, New Haven, Conn. Filed Aug. 29, 1962.

T-T-44

For Band Saw Blade.
First use in or about July 1962.

SN 152,369. American Machine & Foundry Company, New York, N.Y. Filed Sept. 4, 1962.

AMF

Owner of Reg. Nos. 168,740, 628,107, and others.
For Separators, Threshers, Stemmers, Leaf Tobacco Feeders, Cutters; Filter Mouthpiece Cigarette-Making Machines, Steam Cylinders and Conveyors for Processing Tobacco; Automatic Manufacturing Process Machinery; Dough Producing and Developing Machines, Including Continuous Dough Producing Machines; Cutting Machinery for Materials Such as Metals, Plastics and Wood; Cigar-Making, Treating and Handling Machinery; Vises; Wrenches; Floor Sanding and Finishing Machines; Floor Dressing and Conditioning Machines; Ball Drilling Machines; Roll-Making Machines, Proofers, Conveyors and Molders; Work-Holding Fixtures; Welding Machinery; Button Stitching or Attaching Machines; Water Treatment Equipment; and Parts and Accessories for the Machines, Equipment and Apparatus Specified Above.
First use at least as early as July 1, 1946.

SN 155,977. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Oct. 26, 1962.

DARVYL

Owner of Reg. No. 613,345.
For Parts of and Components for Machinery, Tools, and Equipment Which Are Cast From Synthetic Resinous Material.
First use Sept. 27, 1962.

SN 155,983. Graymills Corporation, Chicago, Ill. Filed Oct. 26, 1962.

FLO-BAC

For Parts Washers.
First use Sept. 21, 1962.

SN 156,008. Millers Falls Company, Greenfield, Mass. Filed Oct. 26, 1962.

TUF-FLEX

Owner of Reg. No. 344,436.
For Hack Saw Blades and Band Saw Blades.
First use Sept. 19, 1936, on hack saw blades.

SN 156,419. John M. Macchione and Margaret M. Macchione (joint owners), d.b.a. Lamaco of Florida, Haines City, Fla. Filed Nov. 1, 1962.

LAMATOR

For Machines for Stacking Laminations of Electrical Transformers and the Like.
First use on or about Mar. 20, 1949.

SN 156,651. Punch-Lok Company, Chicago, Ill. Filed Nov. 5, 1962.

TENSION-AIR

For Power-Operated Hose Clamping Machines.
First use Jan. 30, 1958.

SN 157,116. Link-Belt Company, Chicago, Ill. Filed Nov. 13, 1962.

CONTAC-PAC

For Complete Package Plants for the Treatment of Sewage by a Contact Aeration Process.
First use Oct. 29, 1962.

SN 157,132. Pitman Manufacturing Company, Grandview, Mo. Filed Nov. 13, 1962.

HI/LINER

For Derrick.
First use Oct. 25, 1962.

SN 157,199. Cutting Room Appliances Corp., New York, N.Y. Filed Nov. 14, 1962.

PACEMAKER

For Cloth Laying and Spreading Machines.
First use June 15, 1962.

SN 157,272. Wald Industries, Inc., Huntingdon, Pa. Filed Nov. 14, 1962.

ROLLOSCOPE

For Automobile-Mounted Retractible Mechanism for Road Stripe Painting.
First use June 1961.

SN 157,299. Gorham Corporation, Providence, R.I. Filed Nov. 15, 1962.

REGATTA

For Stainless Steel Table Flatware and Table Cutlery.
First use Oct. 22, 1962.

SN 157,375. Ingersoll-Rand Company, New York, N.Y. Filed Nov. 16, 1962.

RAD

For Rotary Air-Operated Drills Which Are Automatically Fed and Accessories Used With Such Drills.
First use about July 16, 1962.

SN 157,447. Borg-Warner Corporation, Chicago, Ill. Filed Nov. 19, 1962.

LONG B-W DIVISION BORG-WARNER

Owner of Reg. Nos. 646,456, 649,611, and 658,803.
For Transmissions, Torque Converters, Clutches and Gears for Industrial Machinery and Vehicles, and Parts Thereof for Replacement and Repair.
First use on or prior to Mar. 21, 1962.

SN 160,971. Redwood Enterprises, Incorporated, Redwood Falls, Minn. Filed Jan. 18, 1963.

ROCKET

For Portable Air Compressors.
First use May 3, 1960.

SN 166,318. Lawrence E. Tate and James B. Perdue (joint owners), d.b.a. Tate-Perdue Enterprises, Browns, Ala. Filed Apr. 8, 1963.

DIRT HOG

For Land Leveler Harrows.
First use Mar. 14, 1963.

SN 166,507. Whitin Machine Works, Whitinsville, Mass. Filed Apr. 10, 1963.

AUDOMAC

For Automatic Doffers and Cleaning Systems for Spinning Frames and Spinning Mills.
First use October 1962.

Class 24 — Laundry Appliances and Machines

SN 154,880. G. A. Braun, Inc., Syracuse, N.Y. Filed Oct. 10, 1962.

BRAUN

For Laundry Appliances, Machines, and Dry Cleaning Equipment—Namely, Clothes Washing Machines, Clothes Dryers, Dry Cleaning Machines and Parts Thereof.
First use September 1955.

SN 158,824. Hoyt Mfg. Corp., Westport, Mass. Filed Dec. 10, 1962.

VENMIST

For Dry Cleaning Vending Machines.
First use Mar. 20, 1962.

Class 26 — Measuring and Scientific Appliances

SN 104,806. Cargocaire Engineering Corporation, New York, N.Y. Filed Sept. 20, 1960.

DEWPOINTAIRE

For Instrument Control Units for Use in Connection With Dehumidifying, Heating and Cooling Apparatus.
First use Dec. 17, 1958.

SN 136,678. Pro-Learn, Inc., Topsfield, Mass. Filed Jan. 26, 1962.

Pro=Learn

For Teaching Machines and Programs for the Same.
First use Jan. 5, 1962.

SN 148,603. Data Dynamics International, Birmingham, Ala. Filed July 9, 1962.

PORT-A-TAPE

For Portable Tape Punching Apparatus for Recording Data.
First use June 1, 1962.

SN 148,604. Data Dynamics International, Birmingham, Ala. Filed July 9, 1962.

DDI

For Portable Tape Punching Apparatus for Recording Data.
First use June 1, 1962.

SN 148,642. Moore Associates, San Carlos, Calif. Filed July 9, 1962.



For Electronic Time Division Multiplex Systems and Components for Remote Control, Monitoring and Data Transmission.
First use June 15, 1962.

SN 153,331. Sigrist-Photometer AG., Zurich, Switzerland. Filed Sept. 17, 1962.



Owner of Swiss Reg. No. 183,926, dated Dec. 13, 1960.
For Photometers, Turbidimeters, Colorimeters, Fluorescence Meters, Reflection Meters, Monochromators, Recorders, Pumps, Potentiometers and Accessories for the Foregoing Instruments.

SN 154,447. Standard Instrument Corporation, New York, N.Y. Filed Oct. 3, 1962.

DATACHRON

For Monitoring Recorder for Business Machines and Factory Machines.
First use Mar. 2, 1962.

SN 154,520. Siemens & Halske Aktiengesellschaft, Munich, Germany. Filed Oct. 4, 1962.

SIEMAT

Owner of German Reg. No. 741,018, dated Oct. 7, 1960; and U.S. Reg. Nos. 599,591 and 621,779.
For Electric Machines and Devices for Data Processing—Namely, Data Memory Devices, Analog-Digital Converters, Computing Devices; Electric Apparatus for Punching and Processing of Punched Cards and Punched Tapes and Appertaining Transmitting, Receiving and Translating Devices; Electrically Operating Sorting and Classifying Machines.

SN 156,057. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



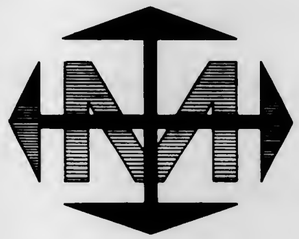
Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Measuring and Scientific Appliances—i.e., Physical, Chemical, Optical and Electrotechnical Apparatus; Surveying, Nautical, Weighing, Signalling, Measuring and Supervising Apparatus.

SN 156,866. John Dusenbery Company, Inc., Clifton, N.J. Filed Nov. 8, 1962.

AUTO-TENSIONEER

For Web Tension Controller.
First use September 1961.

SN 158,262. Mitchell Camera Corporation, Glendale, Calif. Filed Nov. 30, 1962.



The drawing is lined for blue and gold. Owner of Reg. No. 598,735.
For Motion Picture Cameras.
First use on or about Sept. 18, 1962.

SN 160,722. Seloh Corporation, Victoria, Tex. Filed Jan. 15, 1963.

TrigFan

For Natural Trigonometric Function Finders.
First use Oct. 10, 1962.

SN 162,152. Electronics for Education, Inc., Kensington, Md. Filed Feb. 6, 1963.



For Test Paper Grading Apparatus and Accessories.
First use Dec. 28, 1962.

SN 162,434. Freeland Gauge Company, Detroit, Mich. Filed Feb. 11, 1963.

VISUALAIRE

For Air Gauging Apparatus.
First use Sept. 25, 1962.

SN 162,503. Telesight, Inc., Brooklyn, N.Y. Filed Feb. 11, 1963.

Telesight

For Magnifier Attachment for Spectacles.
First use February 1957.

SN 162,602. The Walman Optical Company, Minneapolis, Minn. Filed Feb. 12, 1963.

WALTEX

Owner of Reg. No. 286,716.
For Optical Lenses.
First use Mar. 1, 1931.

SN 162,939. Foster Grant Co., Inc., Leominster, Mass. Filed Feb. 18, 1963.



The word "Lens" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 713,847, 715,424, and others.
For Sunglass Lenses Sold as Component and Integral Parts of Sunglasses.
First use Oct. 1, 1962.

Class 29 — Brooms, Brushes, and Dusters

SN 159,324. American Flange & Manufacturing Co. Inc., New York, N.Y. Filed Dec. 18, 1962.

TRI-SURE

For Paint Brushes and Parts Thereof.
First use Nov. 21, 1962.

Class 31 — Filters and Refrigerators

SN 135,369. Magna-Frame-Filter Corp., Detroit, Mich. Filed Jan. 8, 1962.

MAGNA-FRAME

For Filter for Heating and Air-Conditioning Systems.
First use Oct. 25, 1961.

SN 141,822. The Dow Chemical Company, Midland, Mich. Filed Apr. 9, 1962.

SURFPAC

For Extended Surface Elements Made of Plastic Useful as Contact Media in Apparatus and Installations Such as Biological Oxidation Installations, Fume Scrubbers, Water Degasifiers, and the Like.
First use Feb. 20, 1962.

SN 164,029. McCrory Corporation, New York, N.Y. Filed Mar. 6, 1963.

MONTCLAIR

For Refrigerators and Freezers.
First use Feb. 8, 1963.

Class 32 — Furniture and Upholstery

SN 137,954. The Shaw-Walker Company, Muskegon, Mich. Filed Feb. 14, 1962.

Skyline

For Metal Office Desks, Metal Office Chairs for Use With Office Desks, and Metal Companion Pieces (Tables, Credenzas, and Bookcases) for the Business Office.
First use May 19, 1960.

SN 138,209. Infanseat Company, Eldora, Iowa, assignee of Infanseat Company, Inc., Eldora, Iowa. Filed Feb. 19, 1962.

INFANSEAT

Owner of Reg. No. 629,510.
For Baby Carrier.
First use Mar. 9, 1939.

SN 148,646. No-Sag Spring Company, Detroit, Mich. Filed July 9, 1962.

BUNKIE

For Beds.
First use Sept. 5, 1961.

SN 149,900. Metropolitan Furniture Manufacturing Company, South San Francisco, Calif. Filed July 23, 1962.



The drawing is lined for brown.
For Upholstered Furniture and Occasional Tables.
First use Apr. 21, 1960.

SN 157,439. Barricks Manufacturing Company, Chicago, Ill. Filed Nov. 19, 1962.

PRESS-O-MATIC

For Safety Latch Leg Locks for Folding Tables.
First use Nov. 2, 1962.

SN 159,262. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Dec. 17, 1962.

TINY WORLD

Owner of Reg. No. 732,772.
For Infant and Toddler Merchandise to wit: Cribs, Beds, High Chairs, Play and Feed Tables, Rocking Chairs, Cradles, Play Yards, Cradle Seats, Training Chairs, Training Seats, Mattresses, Nursery Pads, Crib Bumper Pads, Crib and Bed Safety Rails, Dressing Tables, Pillows, Basket Pads, and Mobile Bassinets and Mobile Baby Jumpers.
First use July 15, 1958, on cribs.

SN 164,020. Crawford Mfg. Co., Inc., Richmond, Va. Filed Mar. 6, 1963.

LAZ-E-REST

For Seats for Home, Auto, Boats, Etc., Stools, Chairs, Hassocks, Benches, Floor Cushions, Outdoor Furniture Cushions and Pillows.
First use Mar. 1, 1963, on adjustable hassocks.

Class 33 — Glassware

SN 168,747. Libbey-Owens-Ford Glass Company, Toledo, Ohio. Filed May 13, 1963.

PARALLEL-O-BRONZE

Owner of Reg. Nos. 615,771, 616,209, and 662,579.
For Plate Glass.
First use Apr. 25, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 127,172. A.P.M. Corporation, Englewood, N.J. Filed Sept. 5, 1961.

SILIKROME

For Colored Boots for Use Over Incandescent Miniature Lamps.
First use November 1960.

SN 142,499. Coen Company, San Francisco, Calif. Filed Apr. 18, 1962.

"A.C."

For Steam, Gas or Oil Fuel Control Valves.
First use Mar. 13, 1947.

SN 168,754. Orr & Sembower, Inc., Reading, Pa. Filed May 13, 1963.

YANKEE CLIPPER

For Units for Generating Steam or Hot Water and Component Parts Thereof.
First use Oct. 27, 1954.

Class 36 — Musical Instruments and Supplies

SN 152,531. Schober Organ Corporation, New York, N.Y. Filed Sept. 5, 1962.

REVERBATAPE

For Electrical Apparatus for the Creation of Reverberation Effects in Sound Systems.
First use at least as early as May 1, 1962.

SN 168,659. Aeolian Corporation, East Rochester, N.Y. Filed May 13, 1963.

Duo/Art

For Mechanical Player Pianos and Accessories Thereto.
First use Mar. 26, 1963.

SN 168,770. Thomas H. Smith, Jr., San Francisco, Calif. Filed May 13, 1963.

VIRGO

For Grooved Phonograph Records.
First use Apr. 26, 1963.

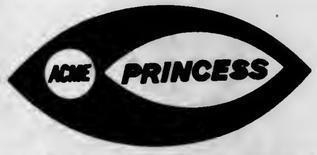
Class 37 — Paper and Stationery

SN 120,974. The Joseph Dixon Crucible Company, d.b.a. The American Crayon Company, Jersey City, N.J. Filed May 29, 1961.

KANTROLL

For Crayons.
First use on or about Aug. 15, 1947.

SN 138,351. Acme Markets, Inc., Philadelphia, Pa., by change of name from American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.



The drawing is lined for red, but no claim is made to color.
Owner of Reg. No. 560,088.
For Napkins, Toilet Tissues, Facial Tissues, Envelopes, Writing Paper and Paper Tablets, Paper Towels, and Waxed Paper.
First use February 1960; as early as July 1938 as to "Princess" on facial tissue.

SN 140,301. Madalyn G. Spencer, Malverne, N.Y. Filed Mar. 20, 1962.

RE-MEM-O

For Calendar Cards and Appointment Cards.
First use Jan. 15, 1961.

SN 156,071. C. L. Barkley & Co., Chicago, Ill. Filed Oct. 29, 1962.

BARKLEY

For File Folders, File Guides, Index Cards, Report Folders, Plastic Tabs, Fasteners, and Metal Tabs.
First use at least 1921.

SN 157,352. Bee Zee Originals, Chesterfield, Mo. Filed Nov. 16, 1962.

CARD-WRITES

For Postal Cards.
First use July 28, 1962.

SN 157,449. W. J. Bradford Paper Company, Holland, Mich. Filed Nov. 19, 1962.

ENSIGN

For File Folders.
First use on or about Sept. 24, 1962.

Class 38 — Prints and Publications

SN 148,774. Thompson-Hayward Chemical Company, Kansas City, Kans. Filed May 8, 1962.

TOM KEM'S AG ADVISOR

For Farm Supply Dealer Bulletin.
First use Mar. 31, 1961.

SN 147,449. David B. Diny, Chicago, Ill. Filed June 22, 1962.

OBSCURITY AND A PENNY

For Intercollegiate Poetry Quarterly.
First use Oct. 20, 1961.

SN 157,613. Richard A. Friend, Rolling Hills, Calif. Filed Nov. 20, 1962.

AUTO I-D

For Expandable Automobile Identification Manual Showing Exterior Views of American and Foreign Made Automobiles and Trucks Plus an Index of Model Names Used by Automobile Manufacturers.
First use Oct. 18, 1962.

SN 158,918. Metropolitan Lithograph & Publishing Company, Everett, Mass. Filed Dec. 11, 1962.

WISHING WELL

Owner of Reg. No. 441,901.
For Greeting Cards.
First use on or about June 20, 1945.

SN 158,996. Norcross, Inc., New York, N.Y. Filed Dec. 12, 1962.

PEACE ROSE

For Greeting Cards and Greeting Card Folders.
First use May 2, 1962.

Class 39 — Clothing

SN 143,191. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 26, 1962.

REVELATION

Owner of Reg. Nos. 575,184 and 705,133.
For Hunting Clothing, Particularly Including Hunting Coats, Hunting Pants, Hunting Caps and Hats, Sleeveless Jackets, Hunting Vests, Insulated Innerwear, Insulated Jackets, and Insulated Underwear.
First use May 15, 1959, on insulated underwear.

SN 145,204. Mr. McIver, Inc., New Bedford, Mass. Filed May 22, 1962.

MR. MCIVER

For Women's Wearing Apparel—Namely, Dresses.
First use January 1962.
Subj. to Intf. with SN 145,525.

SN 145,525. Commonwealth Clothing Company, Boston, Mass. Filed May 28, 1962.

MAC IVOR

For Topcoats, Overcoats, and Suburban Coats.
First use about 1947.
Subj. to Intf. with SN 145,204.

SN 147,028. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.



The drawing is lined for red. Owner of Reg. No. 295,326.
For Wearing Apparel—Namely, Men's Shirts and Trousers, Overalls or One Piece Suits, Coats, Jackets, and Caps.
First use on or about Mar. 1, 1960.

SN 148,964. Eton Sportswear, Inc., New York, N.Y. Filed July 13, 1962.

ETON ROYAL

The word "Eton" is hereby disclaimed apart from the mark as shown.
For Women's Dresses, Skirts, Blouses, Slacks, Jackets, Shirts, Shorts, Jumpers, and Two-Piece Dresses.
First use May 25, 1962.

SN 151,077. Puritan Fashions Corporation, New York, N.Y. Filed Aug. 13, 1962.

PAK-IN-BAG

For Women's and Misses' Wearing Apparel—Namely, Dresses, Blouses, Skirts, Jackets, Coats, Slacks, Slack Suits, Shorts, Robes, Pajamas, and Bathing Suits.
First use July 16, 1962.

SN 152,793. Hymar, Inc., Philadelphia, Pa. Filed Sept. 10, 1962.

LINDA LO

The trademark "Linda Lo" is not the name or pseudonym of a living individual. Owner of Reg. No. 628,763.
For Children's Dresses.
First use Dec. 27, 1946.

SN 153,911. Charles Subin Shoe Corporation, New York, N.Y. Filed Sept. 25, 1962.

Sulino

The mark is fanciful.
For Women's Shoes.
First use July 26, 1962.

SN 156,085. Continental Manufacturing Co., Oskaloosa, Iowa. Filed Oct. 29, 1962.



Applicant disclaims the geographically descriptive words "of Oskaloosa" apart from the mark as shown in the drawing. Owner of Reg. No. 739,784.
For Slacks for Men and Boys Made From Various Fabrics, Including Cotton, Dacron, Rayon, and Acetate.
First use Mar. 23, 1962.

SN 156,087. Continental Manufacturing Co., Oskaloosa, Iowa. Filed Oct. 29, 1962.



Applicant disclaims the geographically descriptive words "of Oskaloosa" apart from the mark as shown in the drawing. Owner of Reg. No. 739,784.
For Slacks for Men and Boys Made From Various Fabrics, Including Cotton, Dacron, Rayon, and Acetate.
First use Mar. 23, 1962.

SN 156,088. Continental Manufacturing Co., Oskaloosa, Iowa. Filed Oct. 29, 1962.



Applicant disclaims the geographically descriptive words "of Oskaloosa" apart from the mark as shown in the drawing. Owner of Reg. No. 739,784.
For Slacks for Men and Boys Made From Various Fabrics, Including Cotton, Dacron, Rayon, and Acetate.
First use Mar. 23, 1962.

SN 156,225. Edmont Inc., Coshocton, Ohio. Filed Oct. 30, 1962.

TOUCH-N-GROW

For Garden Gloves.
First use on or about Sept. 24, 1962.

SN 159,628. Tucker Ties, Inc., Bayside, N.Y. Filed Dec. 21, 1962.



Tucker

For Men's and Boys' Ties and Belts.
First use Nov. 24, 1954.

SN 159,686. J. H. Bonck Company, Inc., New Orleans, La. Filed Dec. 26, 1962.

T.M.T.

For Shirts and Pants.
First use Oct. 3, 1961.

SN 159,800. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

Glenn Ayre

Owner of Reg. No. 651,782.
For Boys' Shirts, Bermuda Shorts, Slacks, Suits, Sport Coats, and Suburban Coats.
First use Feb. 15, 1956, on shirts.

SN 160,489. Kayser-Roth Corporation, New York, N.Y. Filed Jan. 10, 1963.

MAGNATES

For Men's Hosiery.
First use Sept. 11, 1962.

SN 160,680. Vanity Fair Mills, Inc., Reading, Pa. Filed Jan. 14, 1963.

BRADICE

For Women's Lingerie—Namely, Girdles, Pantie Girdles, and Brassieres.
First use Dec. 20, 1962.

SN 160,682. Vanity Fair Mills, Inc., Reading, Pa. Filed Jan. 14, 1963.

FIGMENT

For Women's Lingerie—Namely, Girdles, Pantie Girdles, and Brassieres.
First use Dec. 20, 1962.

SN 160,683. Vanity Fair Mills, Inc., Reading, Pa. Filed Jan. 14, 1963.

PROMPTER

For Women's Lingerie—Namely, Girdles, Pantie Girdles, and Brassieres.
First use Dec. 21, 1962.

SN 160,968. Peter Pan Foundations, Inc., New York, N.Y. Filed Jan. 18, 1963.

CLASSIC TREASURE

Owner of Reg. Nos. 527,906, 670,957, and others.
For Brassieres.
First use Dec. 10, 1962.

SN 161,393. Allied Millinery Company, Inc., New York, N.Y. Filed Jan. 25, 1963.

Jean Guy

The name "Jean Guy" is fanciful.
For Women's and Misses' Hats.
First use Jan. 1, 1963.

Class 40—Fancy Goods, Furnishings, and Notions

SN 146,288. Gold Seal Company, Bismarck, N. Dak. Filed June 6, 1962.

HERBARY GARDENS

For Handkerchief Bags.
First use May 1, 1941.

SN 158,115. Waldes Kohinoor, Inc., Long Island City, N.Y. Filed Nov. 28, 1962.

PERMA-TONE

For Hooks and Eyes and Hook and Eye Tape To Be Sold Exclusively to Garment Manufacturers.
First use Nov. 15, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 122,397. Toyo Rayon Kabushiki Kaisha, d.b.a. Toyo Rayon Co., Ltd., Chuo-ku, Tokyo-to, Japan. Filed June 19, 1961.

PYLEN

Owner of Japanese Reg. Nos. 554,392, dated Aug. 16, 1960, and 559,898, dated Oct. 27, 1960.
For Knitted, Woven and Non-Woven Cloth of Cotton, Wool, Silk, Rayon and Synthetic Fibers, and Combinations Thereof.

SN 142,317. Greenwood Mills, Inc., New York, N.Y. Filed Apr. 16, 1962.

40 AND 8

For Piece Goods of Cotton or of Other Fibers and/or Blends Thereof.
First use Dec. 7, 1961.

SN 151,720. C. G. Trading Corp., New York, N.Y. Filed Aug. 23, 1962.

DURA-MAT

For Textile Fabrics Made of Jute Fibers and Used in Connection With Soil Erosion Control.
First use May 17, 1962.

SN 155,442. Societe Rhodiaceta, Paris, France. Filed Oct. 18, 1962.

DROPNYL

Owner of French Reg. No. 488,385, dated May 25, 1960 (Paris); Natl. Inst. No. 145,162.
For Textile Fabrics Used for Making Dresses, Robes, Suits, Coats, Underwear, Shirts, and the Like, and Bed and Table Covers.

SN 157,970. Cannon Mills Company, Kannapolis, N.C. Filed Nov. 27, 1962.

SATINA

Owner of Reg. No. 744,548.
For Sheets, Spreads, Blankets, Pillow Cases, and Wash Cloths.
First use Oct. 4, 1962.

SN 157,971. Cannon Mills Company, Kannapolis, N.C. Filed Nov. 27, 1962.

GRAND MANNER

Owner of Reg. No. 745,538.
For Sheets, Spreads, Blankets, Pillow Cases, and Wash Cloths.
First use Oct. 4, 1962.

SN 160,558. The Scranton Corporation, Scranton, Pa. Filed Jan. 11, 1963.

LAMI-LACE

For Tablecloths.
First use May 25, 1962.

SN 160,829. Barclay Woolen Corporation, New York, N.Y. Filed Jan. 17, 1963.

ROSEUR

For Woolen Fabrics.
First use January 1963.

SN 160,919. Chicopee Mills, Inc., New York, N.Y. Filed Jan. 18, 1963.

ANNISTON

For Cotton Fabrics.
First use Oct. 26, 1962.

Class 43—Thread and Yarn

SN 143,724. W. R. Grace & Co., New York, N.Y., assignee of Dawbarn Brothers, Incorporated, Waynesboro, Va. Filed May 3, 1962.

BEAMETTE

For Packages of Textile Yarn Having Multiple Parallel Ends Wound Parallel in the Package.
First use Jan. 26, 1961.

SN 156,936. Emile Bernat & Sons Co., Jamaica Plain, Mass. Filed Nov. 9, 1962.

MASTER DYED

Applicant disclaims the word "Dyed" apart from the mark as shown.
For Yarn.
First use about 1947.

SN 159,755. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 26, 1962.

Cspandex

No claim is made to the word "Spandex" apart from the mark as shown. Owner of Reg. Nos. 600,796, 741,667, and others.
For Thread and Yarn Comprised in Whole or in Substantial Part of Spandex.
First use Nov. 6, 1962.

SN 160,794. Midland-Ross Corporation, Cleveland, Ohio. Filed Jan. 16, 1963.

DRAPESPUN

For Viscose Rayon Yarn and Thread.
First use on or about Jan. 4, 1963.

Class 44—Dental, Medical, and Surgical Appliances

SN 104,557. Sananco Products, Inc., Bloomington, Ill., assignee of Buford Smith, Bloomington, Ill. Filed Sept. 15, 1960.

SAN ANN

For Personal Hygiene Devices—Namely, Enema and Douche Bags.
First use Jan. 7, 1960.

SN 140,227. B. Braun, Melsungen, Germany. Filed Mar. 20, 1962.

BRUNAMID

Owner of German Reg. No. 739,318, dated Aug. 17, 1960.
For Material for Surgical Sutures.

SN 157,488. Ganzoni & Cie. A.-G., St. Gallen, Switzerland. Filed Nov. 19, 1962.

SIGVARIS

For Orthopedic and Therapeutic Stockings.
First use Mar. 23, 1961; in commerce Aug. 29, 1962.

SN 163,789. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Mar. 4, 1963.

ACRICAL

For Dental Pulp Dressing Kit.
First use Dec. 13, 1962.

SN 163,813. The H. C. Cook Company, Ansonia, Conn. Filed Mar. 4, 1963.

PEDICLIP

For Toe Nail Clippers.
First use on or before Dec. 15, 1935.

SN 163,904. Union Carbide Corporation, New York, N.Y. Filed Mar. 4, 1963.

UNION CARBIDE

Owner of Reg. No. 690,324.
For Suction and Inhalation Therapy Appliances—Namely, Regulators, Fog Generators, Mobile Suction Units Comprising a Cart, Regulators, Tubing and Bottles; Emergency Oxygen Units Comprising a Cylinder of Oxygen, Regulator, Tubing and Face Mask; and Cryosurgical Apparatus.
First use on or about Dec. 23, 1958.

SN 164,102. AB. Vacuum-Extractor, Gothenburg, Sweden. Filed Mar. 7, 1963.

VUC-INSTRUMENT

No registration rights are claimed herein for the word "Instrument" apart from the mark as shown in the drawing.
For Medical Cannulae.
First use in 1961; in commerce in 1961.

SN 164,117. The Dentists' Supply Company of New York, York, Pa. Filed Mar. 7, 1963.

BIOTONE

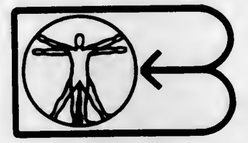
Owner of Reg. No. 374,045.
For Synthetic Resin Material for Use in Preparation of Intra-Oral Custom Dental Restorations.
First use Jan. 24, 1963.

SN 164,330. J. A. Deknatel and Son, Inc., Queens Village, N.Y. Filed Mar. 11, 1963.

TEVDEK

For Surgical Sutures.
First use Feb. 15, 1963.

SN 164,796. Biometrics Instrument Corporation, Dallas, Tex. Filed Mar. 18, 1963.



For Implantable Amplifiers, Transmitters and Power Supplies, Physiological Sensers—Namely, Temperature Sensers, Respiration Sensers for Measuring Depth and Rate of Respiration, Encephalogram Sensers, Electro-Myogram Sensers, Electro-Cardiogram Sensers and Blood Pressure Sensers; Hypodermic Needles Equipped With Physiological Sensers.
First use July 11, 1962.

SN 165,378. Remington Research, Inc., New York, N.Y. Filed Mar. 25, 1963.

LADY CAROLINE

For Hair Driers.
First use Dec. 22, 1962.

SN 165,384. Stephenson Corporation, Red Bank, N.J. Filed Mar. 25, 1963.

SCOUT

For Resuscitators.
First use June 28, 1962.

Class 45—Soft Drinks and Carbonated Waters

SN 151,313. General Foods Corporation, White Plains, N.Y. Filed Aug. 16, 1962.



For Powders for Making Soft Drinks.
First use at least as early as 1956.

SN 153,269. Franklin Beverage Company, Elizabeth, N.J. Filed Sept. 17, 1962.

Mr. JEFF

For Carbonated Soft Drinks.
First use Apr. 6, 1962.

Class 46 — Foods and Ingredients of Foods

SN 85,943. Martin Gillet & Co., Inc., d.b.a. Woods Products Co., Baltimore, Md. Filed Nov. 23, 1959.

TEA BREAK

Applicant claims no exclusive rights in "Tea" as the name of the goods identified herein.

For Tea.

First use Nov. 13, 1959.

Subj. to Intf. with SN 149,083.

SN 104,300. Newport Carriage Trade, Inc., New York, N.Y. Filed Sept. 12, 1960.



For Fancy Groceries—Namely, Syrup Used for Food Purposes, Sugar, Chocolate Candies, Hard Candies, Coconut Candies, Crystallized Licorice, Ginger, Honey, Soups, Rice, Tea, Canned and Jarred Beef and Chicken, Canned Fish, Puddings; Cocktail Specialties—Namely, Shelled Nuts, Bacon Rinds and Potato Chips, Canned and Jarred Baked Beans, Salad Dressings, Ham Glaze, Sauces (Both Meatless and Meat Containing), Vinegar, Mustard, Olives, Canned and Jarred Vegetables; Ice Cream Toppings—Namely, Claret Sauce and Creme de Menthe Sauce; and Pancake Toppings—Namely, Rum and Brandy Sauces.

First use on or about Oct. 8, 1958.

SN 106,856. Table Talk Pastry Company Incorporated, Worcester, Mass. Filed Oct. 20, 1960. CONCURRENT USE to be restricted to Massachusetts, New York, Connecticut, Rhode Island, Maine, New Hampshire, and Vermont. Concurrent use with Reg. No. 621,409.

table talk

For Pies, Cakes, and Pastries.

First use 1929.

SN 120,368. Armour and Company, Chicago, Ill. Filed May 19, 1961.

CONTINENTAL CUISINE

For Frozen Food Products—Namely, Prepared Dishes Containing (Separately) Meat, Poultry and Shellfish; and Cheese Appetizers—Namely, Blends of Bleu, Cheddar, and Swiss With Various Salts and Seasonings.

First use on or about June 25, 1960, on the prepared dishes containing meat, poultry, and shellfish.

SN 126,814. Russell Stover Candies, Inc., Kansas City, Mo. Filed Aug. 28, 1961.

A MINT DREAM

The term "Mint" is disclaimed except as a part of the mark as shown.

For Candy.

First use during 1947.

SN 128,604. Smaks International, Inc., Prairie Village, Kans. Filed Sept. 25, 1961.



For Sandwiches, Milk Shakes, Malted Milk Shakes, French Fries, Coffee, and Fluid Milk.

First use Sept. 8, 1961.

SN 130,740. Stark, Wetzel & Co., Inc., Indianapolis, Ind. Filed Oct. 26, 1961.

MENU MAGIC

For Frozen Egg-and-Ham Omelets; and Dry Mixes for Making Potato Pancakes, Corn Fritters, and Apple Fritters.

First use May 1, 1961.

SN 132,431. Harry Akin, Austin, Tex. Filed Nov. 21, 1961.



The representation of the goods is disclaimed apart from the mark as shown. Owner of Reg. Nos. 394,010 and 541,617.

For Hamburger Sandwiches.

First use Apr. 6, 1934.

SN 135,403. Sunnyland Packing Company, Thomasville, Ga. Filed Jan. 8, 1962.

SUNNYLAND

For Fresh Meat Cuts, Smoked Meats, Bacon, Weiners and Sausages, Lard, Rendered Pork Fat, Cooked Ham, Fresh Dressed Fowl, Cooked Fowl, Frozen Fowl, Frozen Chicken Parts, and Luncheon Meat Preparations in Whole Loaf Form and in Sliced Loaf Form.

First use on or about Nov. 15, 1942, on cooked ham.

SN 137,735. The H. C. Fisher Company, Cleveland, Ohio. Filed Feb. 12, 1962.

FISHER'S FRESH'NER

For Emulsifying Agent as a Component for Bakery Products.

First use 1953.

SN 139,841. Food Technology, Inc., Chicago, Ill. Filed Mar. 14, 1962.

HYDROXY-LAC

For Emulsifier for Use in Making Bakery Products.

First use Jan. 18, 1961.

SN 145,310. Bob White, d.b.a. Bob White Organization, Miami, Fla. Filed May 23, 1962.

HEMANA BRAND

The applicant disclaims the word "Brand" apart from the mark as used. Owner of Reg. Nos. 561,655 and 580,585.

For Frozen Banana Regale, Frozen Banana-Chocolate Coated Regale, Frozen Banana Orange Regale, Frozen Regale-Tropic Fruit Coated, Each in Stick Bar Form; Frozen Mixture of Fruit Salad With Orange Additive, Canned Chowder With Conch (Shellfish) Base, Canned Broth From Cooking Conch, Powdered Chocolate Flavored Mix for Making Frozen Stick Bar Confection, Canned and Cartoned Citrus Fruit Beverage Bases Characterized by Citrus Juices With Added Flavor and Color, Stabilizer for Frozen Stick Confections of High Water Content, and Canned Chili Having Conch as an Ingredient.

First use 1952 on conch chowder.

SN 145,587. Oldenburger Brotfabrik M.u.C. Brokat, Oldenburg, Germany. Filed May 28, 1962.



The wording "Feine Eiersandtorte nur mit Frischen Hühnereiern" (English translation: "Fine egg-containing bakery goods made only with fresh chicken eggs") is disclaimed apart from the mark as shown. Priority claimed under Sec. 44(d) on German application filed Jan. 9, 1962; Reg. No. 758,262, dated Feb. 14, 1962.

For Bakery Goods—Namely, Bread and Cake.

SN 146,519. Siemer Milling Company, Teutopolis, Ill. Filed June 8, 1962.

DARIDINER

For Animal Premix and Feed.

First use during August 1960.

SN 148,536. Safe-T Pacific Company, Redwood City, Calif., by change of name from Safe-T Pacific Baking Company, Redwood City, Calif. Filed July 6, 1962.

CRAZY PACK

Applicant disclaims the word "Pack" except as used in combination with "Crazy." Owner of Reg. No. 680,877.

For Bakery Product—Namely, Ice Cream Cones.

First use June 12, 1957.

SN 149,083. A. Hoolmeijer & Zonen N.V., Barendrecht, Netherlands. Filed July 16, 1962.

TEABREAK

For Egg-Rusks and Toast.

First use 1949; in commerce February 1959.

Subj. to Intf. with S.N. 85,943.

SN 150,853. Codesa, Conservas y Derivados de Productos Agricolas, S.A., Puig, Valencia, Spain. Filed Aug. 9, 1962.



The wording "Conservas y Derivados de Productos Agricolas S.A. Puig (Valencia)" translated is "canned goods and by-products of agricultural products, stock company, Puig (Valencia)," and is disclaimed apart from the mark as shown. Owner of Spanish Reg. Nos. 261,749, dated Dec. 20, 1952, and 261,750, dated May 16, 1953.

For Canned Vegetables, Pure Fruit Pulp, Dried Fruit, Canned Olives, Consommé Cubes (for Soup and Sauces), Saffron and Spices, Marmalades, Preserved Fruit, Preserved Quinces, Sirups, Fruit Juices, and Custards.

SN 152,087. Productos Del Prado, C.A., Turmero, Aragua, Venezuela. Filed Aug. 28, 1962.

SIBONEY

The word "Siboney" is the name of a Cuban Indian tribe wiped out in the 16th century in the Spanish invasion of Cuba.

For Canned Fruit Preserves, Canned Cocoanut Preserve, and Solid Fruit Pastes Sold in Wrapped Blocks in Cartons.

First use 1961; in commerce January 1962.

SN 152,107. Williams & Woods Ltd., Dublin, Ireland. Filed Aug. 28, 1962.



The shading in the drawing does not indicate color. The words "Coffee," "Bar," and "Whiskey Flavoured" are disclaimed apart from the mark as shown. Owner of Reg. No. 730,193.

For Chocolate Bars Flavored With Coffee and Irish Whiskey.

First use Jan. 1, 1960; in commerce September 1960.

SN 152,154. Red Owl Stores, Inc., d.b.a. H. A. Marr Grocery Company, Hopkins, Minn. Filed Aug. 29, 1962.

BRIMFULL

For Canned Asparagus, Green Beans, Peas, Corn, Tomatoes, Spinach, Pineapple, Grapefruit, Boysenberries, Cherries, Applesauce, Grapefruit Juice, Orange Juice, Salmon, Pork and Beans, and Catsup.

First use 1926.

SN 152,970. Bayou Foods, Inc., d.b.a. Nautical Foods Co., Mobile, Ala. Filed Sept. 12, 1962.

CAJUN-JOE'S

Owner of Reg. No. 631,453.

For Frozen Stuffed Crab.

First use March 1960.

SN 153,111. Petitjean, Gay & Cie, Le-Pre-Saint-Gervais, Seine, France. Filed Sept. 13, 1962.



Priority claimed under Sec. 44(d) on French Reg. No. 505,606, dated June 7, 1962 (Paris); Natl. Inst. No. 186,383.
For Infants' and Invalid Foods; Meat, Fish, Poultry, Game; Meat Extracts; Preserved, Dried and Cooked Fruits and Vegetables; Jellies, Jams; Eggs, Milk and Other Dairy Products; Edible Oils and Fats; Preserves, Pickles; Coffee, Tea, Cocoa, Sugar, Rice, Tapioca; Sago, Coffee Substitutes; Flour, and Preparations Made From Cereals; Bread, Biscuits, Cakes, Pastry and Confectionery, Ices; Honey, Treacle; Yeast; Mustard; Pepper, Vinegar, Sauces; and Spices.

SN 153,145. Armour and Company, Chicago, Ill. Filed Sept. 14, 1962.

TEX 425 PLUS

Owner of Reg. No. 523,384.
For Shortening Prepared From Meat and Vegetable Fats.
First use on or about May 1, 1952.

SN 153,549. Comet Rice Mills, Inc., Houston, Tex. Filed Sept. 20, 1962.

COMET QUIK

No registration rights are claimed for the word "Quik" apart from the mark as shown; however, applicant waives none of its common law rights in the mark as shown or any feature thereof. Owner of Reg. Nos. 77,427 and 693,582.
For Rice.
First use July 18, 1962.

SN 153,550. Comet Rice Mills, Inc., Houston, Tex. Filed Sept. 20, 1962.

COMET KWIK

No registration rights are claimed for the word "Kwik" apart from the mark as shown; however, applicant waives none of its common law rights in the mark as shown or any feature thereof. Owner of Reg. Nos. 77,427 and 693,582.
For Rice.
First use July 18, 1962.

SN 153,551. Comet Rice Mills, Inc., Houston, Tex. Filed Sept. 20, 1962.

COMET QUICK

No registration rights are claimed for the word "Quick" apart from the mark as shown; however, applicant waives none of its common law rights in the mark as shown or any feature thereof. Owner of Reg. Nos. 77,427 and 693,582.
For Rice.
First use July 18, 1962.

SN 154,078. Whitley Popcorn Company, d.b.a. Whitley Pop Corn, Trenton, Mo. Filed Sept. 27, 1962.



The drawing is lined for the color red. No claim of exclusive right is made to the words "Pop Corn," as used on the goods claimed.
For Popcorn in Its Natural State.
First use July 16, 1962.

SN 154,597. General Mills, Inc., Minneapolis, Minn. Filed Oct. 5, 1962.

G

For Breakfast Cereals.
First use at least as early as June 15, 1960.

SN 156,061. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.



Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155 and others.
For Food Preserving Agents.

SN 157,886. Coastal Valley Canning Co., Limited, Oxnard, Calif. Filed Nov. 26, 1962.

SNAP-E-TOM

Owner of Reg. Nos. 385,622 and 385,849.
For Canned Tomato Juice Food Drink Comprised of Tomatoes, Green Chiles, and Onions; Canned Tomato-Chile Sauce.
First use Nov. 20, 1930, on canned tomato juice food drink.

SN 161,852. Comet Rice Mills, Inc., Houston, Tex. Filed Feb. 1, 1963.

COMET

Owner of Reg. Nos. 77,427, 693,582, and others.
For Rice, Rice Oil, Rice Flour and By-Products of Rice Milling Sold as Poultry and Animal Feeds and as Ingredients for Poultry and Animal Feeds.
First use Oct. 28, 1909, on rice.

SN 161,890. Leaf Brands, Inc., Chicago, Ill. Filed Feb. 1, 1963.

CHICKEN FEED

For Bubble Gum.
First use Nov. 1, 1962.

SN 161,949. Carnation Company, Los Angeles, Calif. Filed Feb. 4, 1963.

OPTIMIL

For Prepared Modified Infant Formula.
First use Jan. 15, 1963.

SN 161,950. Carnation Company, Los Angeles, Calif. Filed Feb. 4, 1963.

CEREAL-MATE

For Vegetable Fat Emulsion Product.
First use Jan. 15, 1963.

SN 161,951. Carnation Company, Los Angeles, Calif. Filed Feb. 4, 1963.

CHEF-MATE

For Vegetable Fat Emulsion Product.
First use Jan. 15, 1963.

Class 47 — Wines

SN 112,047. Kansas Distributors, Inc., d.b.a. Anzio Wine Co., Kansas City, Kans. Filed Jan. 18, 1961.

ANZIO

For Wines.
First use July 14, 1954.

SN 154,139. Monsieur Henri Wines, Ltd., Brooklyn, N.Y. Filed Sept. 28, 1962.

PIERRE CARTIER

The name "Pierre Cartier" is fanciful and was coined by applicant.
For Bordeaux Wine.
First use Nov. 20, 1953.

Class 49 — Distilled Alcoholic Liquors

SN 131,966. Kabushiki Kaisha Kotobukiya, Higashi-ku, Osaka, Japan. Filed Nov. 14, 1961.



Priority claimed under Sec. 44(d) on Japanese application filed Sept. 16, 1961; Reg. No. 605,985, dated Feb. 23, 1963.
The Japanese characters shown in the drawing constitute the word "Kotobuki" which in English means "congratulations" or "felicitations."
For Whisky.

SN 135,184. Fernando A. De Terry S.A., Puerto de Santa Maria, Spain. Filed Jan. 16, 1963.

FERNANDO A. DE TERRY

"Fernando A. De Terry" is the president of applicant corporation, whose consent to use his name is of record.
For Brandy.
First use June 14, 1911; in commerce Aug. 1, 1941.

SN 161,200. Ed. Phillips & Sons Co., Minneapolis, Minn. Filed Jan. 22, 1963.

de ESPAY frères

The words "de Espay frères" in French mean "from or of Espay Brothers." Owner of Reg. No. 402,038.
For Brandy.
First use Oct. 28, 1941.

SN 161,284. Schenley Distillers, Inc., d.b.a. The Dant Distillery Company, New York, N.Y. Filed Jan. 23, 1963.

JIM DANT

The name "Jim Dant" is not the name of any living individual. Owner of Reg. Nos. 376,057, 320,981, and 606,814.
For Straight Bourbon Whiskey.
First use Oct. 25, 1955.

Class 50 — Merchandise Not Otherwise Classified

SN 130,561. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Oct. 24, 1961.

KIWI
Shoe Server

Applicant disclaims any exclusive rights in the word "Shoe" apart from the mark as shown. Owner of U.S. Reg. Nos. 294,323, 527,754, 723,378, and others.
For Wooden Shoe Groomer Serving as a Shoe Shine Stand and Container for Shoe Polishing Equipment.
First use Aug. 10, 1961; in commerce Aug. 10, 1961.

SN 133,514. The Yarder Manufacturing Co., Toledo, Ohio. Filed Dec. 6, 1961.

SHOWCASE

For Frames for Advertising Signs for Use in Public Transportation Vehicles.
First use July 23, 1959.

SN 137,462. Rhoades Rubber Corporation, Easthampton, Mass. Filed S.R. Feb. 7, 1962; Am. P.R. Nov. 28, 1962.

NEOGRENE

For Synthetic Rubber Laboratory Stoppers.
First use Apr. 15, 1959.

SN 152,880. Elizabeth L. Collins, d.b.a. Collins Constructart Company, Woodland Hills, Calif. Filed Sept. 11, 1962.

CONSTRUCTART

For Picture Kit Containing Colored and Detailed Paper Patterns, Acetate Overlay Sheets, Paper Frame, Foundation Cardboard, Scissors and Glue.
First use Aug. 23, 1962.

SN 156,062. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning, Frankfurt am Main, Germany. Filed Oct. 18, 1962.

HOECHST

Owner of German Reg. No. 633,916, dated Feb. 10, 1953; and U.S. Reg. Nos. 542,319, 746,155, and others.
For Health, Life-Saving and Fire-Extinguishing Apparatus and Instruments—e.g., Syringes, Syringe Stands, Bandages, Surgical Instruments, Surgical Filaments, Life Preservers, Swim Vests, Fire Safety Nets, and Fire Hoses.

Class 51 — Cosmetics and Toilet Preparations

SN 86,419. Richard Hudnut, Morris Plains, N.J. Filed Dec. 1, 1959.

N.L.2

For Nail Hardener.
First use Nov. 10, 1959.

SN 101,217. Elisabeth Ungar-Skin Care, Inc., New York, N.Y. Filed July 20, 1960.

TONATRONE

For Cosmetic Preparations—Namely, Lipsticks, Eye Make-Up, Rouge, Astringents; Skin Creams—Namely, Cold Cream, Foundation and Cleansing Creams, and Skin and Face Lotions and Body and Face Powders.
First use June 20, 1960.

SN 111,332. Richard Hudnut, Morris Plains, N.J. Filed Jan. 5, 1961.

ROYAL RADIANCE

For Face Rouge.
First use Dec. 1, 1960.

SN 132,976. Cerberus, Beechhurst, N.Y. Filed Nov. 29, 1961.

BARNABY'S BITTERS

For Cologne.
First use June 1, 1960.

SN 139,705. Orville J. Vert, d.b.a. Vert Cosmetic Co., Boone, Iowa. Filed Mar. 12, 1962.

TREV

For Hair Oil, Brilliantine, Waveset, Skin Cream, and Brushless Shave Cream.
First use Feb. 4, 1941, on waveset.

SN 144,730. International Equity Corporation, Bala-Cynwyd, Pa. Filed May 16, 1962.

MARK II

For Men's After-Shave Lotion, Cologne, Pre-Electric-Shave Lotion, Deodorant, Face Powder; and Women's Perfume, Cologne, and Bath Oil.
First use Mar. 13, 1957.

SN 146,289. Gold Seal Company, Bismarck, N. Dak. Filed June 6, 1962.

HERBARY GARDENS

For Sachets for Lingerie, Handkerchiefs, Linens, and Other Items of Clothing and Soft Goods.
First use May 1, 1941.

SN 146,457. Block Drug Company, Inc., Jersey City, N.J. Filed June 8, 1962.

NEOSEAL

For Ethylene Oxide Polymer, Incorporated as an Ingredient in a Denture Adhesive.
First use on or about Apr. 1, 1962.

SN 154,410. "42" Products Ltd., Inc., Santa Monica, Calif. Filed Oct. 3, 1962.

42

Owner of Reg. No. 398,161.
For Hair Oil, Hair Pomade, Hair Spray, Henna, and Creme Rinse.
First use Nov. 19, 1935.

Class 52 — Detergents and Soaps

SN 129,307. W. R. Grace & Co., New York, N.Y., assignee of Sun Chemical Corporation, New York, N.Y. Filed Oct. 5, 1961.

MAINTENEX

For Cleaner for Surfaces Such as Floors, Walls, Woodwork and Windows, and as a Wax Stripper.
First use 1939.

SN 144,137. The Bon Ami Company, New York, N.Y. Filed May 9, 1962.

bon ami

Applicant disclaims any extensive rights in the words "A Genuine" and "Product" apart from the mark as shown in the drawing. Owner of Reg. Nos. 50,848, 726,868, and others.
For All-Purpose Cleaner.
First use Apr. 8, 1962.

SN 147,029. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. No. 424,694.
For Glass Cleaner, Tire Cleaner, Cooling System Cleaner, Radiator Flush, and Pre-Wax Cleaner.
First use on or about Aug. 1, 1960.

SN 148,171. Cecil K. Garrison, d.b.a. Garrison Mfg. Co., Longmont, Colo. Filed July 2, 1962.

BLU-GLO

For Defogger and Cleaner for Eye Glasses, Windows, Mirrors, and Windshields.
First use May 1, 1962.

SN 154,409. "42" Products Ltd., Inc., Santa Monica, Calif. Filed Oct. 3, 1962.

42

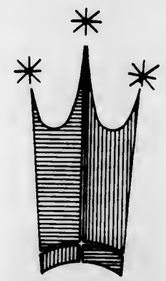
Owner of Reg. No. 398,161.
For Oil Shampoo, Liquid Lotion Shampoo, Creme Shampoo, Dry Hair Shampoo, and Egg Shampoo.
First use Nov. 19, 1935.

SN 157,926. Radiator Specialty Company, Charlotte, N.C. Filed Nov. 26, 1962.

Liquid DRAIN-PEP

No claim is made to the term "Liquid" apart from the mark in its entirety.
For Preparation for Opening and Cleaning Clogged Drains and Grease Traps.
First use Oct. 15, 1962; June 1, 1940, on "Drain Pep."

SN 158,800. The Drackett Company, Cincinnati, Ohio. Filed Dec. 10, 1962.



The drawing is lined for blue and red.
For Toilet Bowl Cleaner for Institutional Use Having Cleansing, Disinfecting, and Deodorizing Properties.
First use July 29, 1957.

SN 158,859. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Dec. 10, 1962.

TURCO-CARB

Owner of Reg. No. 638,177.
For Paint, Carbon, and Soil Remover.
First use on or before Dec. 31, 1955.

SN 159,260. Meat Industry Suppliers, Inc., Northfield, Ill. Filed Dec. 17, 1962.

CHEMTROL

For Disinfectant Detergent.
First use on or about Aug. 31, 1962.

SN 159,971. The Diversey Corporation, Chicago, Ill. Filed Dec. 31, 1962.

PAN-O-MITE

For Granular Bake Pan Cleaner.
First use Dec. 7, 1962.

SN 160,101. Economics Laboratory, Inc., St. Paul, Minn. Filed Jan. 3, 1963.

MIKRO-PHEN

For Compound for Cleaning, Disinfecting, and Deodorizing.
First use Oct. 30, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 122,246. Allstate Enterprises, Inc., Skokie, Ill. Filed June 19, 1961.



Without waiver of applicant's common law rights with respect to the combination of words constituting applicant's service mark, applicant disclaims any right to the words "Motor Club" except as a part of the mark as shown. Applicant's related company owns Reg. Nos. 226,693, 621,917, and 719,067.

For Services to Motorist Members, Including Assistance on Planning Auto Trips, Emergency Road Service Benefits, Legal Service Benefit in Event of Traffic Violation Charges, Accident Insurance, and Arranging for World-Wide Tours.

First use on or about May 18, 1961.

SN 135,428. Cleveland Technical Center, Inc., Cleveland, Ohio. Filed Jan. 9, 1962.



The term "Spectra Checked" is disclaimed apart from the mark as shown.

For Services in Determining Conditions of Engines by Analyses of Wear Metals in Used Lubricants From the Engines or in Exhaust Deposits From the Engines.

First use Mar. 1, 1961.

SN 145,154. Yardley of London, Inc., Totowa, N.J. Filed May 21, 1962.

BEAUTY BRAIN

For Beauty Analysis Service for Giving Individualized Advice to Women on Skin Care and Make-Up Procedure.

First use Feb. 19, 1962.

SN 155,847. Sheraton Corporation of America, Boston, Mass. Filed Oct. 24, 1962.



The drawing is lined for the colors red and blue, but no claim is made to said colors as an essential feature of the mark.

For Hotel and Restaurant Services.

First use Sept. 17, 1962.

Class 101 — Advertising and Business

SN 100,643. The Reply-O Letter Co., New York, N.Y. Filed July 11, 1960.



Owner of Reg. No. 598,216.

For Direct Mail Advertising Services, Including the Preparation of the Text of Advertising Mailed, Schedule of Mailing and Distribution of Mailings to Selected Lists of Customers and Prospective Customers.

First use May 1937.

SN 130,171. Bradfute Corporation, Eastchester, N.Y. Filed Oct. 18, 1961.

FOUR AND EIGHT

For Promoting the Sales of Goods and Services of Others by Means of Games.

First use Sept. 21, 1961.

SN 135,920. Symons Mfg. Company, Des Plaines, Ill. Filed Jan. 16, 1962.



For Engineering Services Pertaining to the Use of Concrete Forming Equipment and Performed for Others.

First use Dec. 22, 1961.

SN 138,586. Coniker Enterprises, Chicago, Ill. Filed Feb. 26, 1962.



For Advertising and Sales Promotion Services.

First use July 1, 1961.

SN 145,701. Mail Enterprises, Incorporated, d.b.a. Virginia Photo, Virginia Dare Photo, The Lane Company, Picture Pal of Atlanta, Ga., and Picture Pal of Boston, Mass., Richmond, Va. Filed May 29, 1962.

STIX-PIX

For Lithographing Reproductions of Photographs of Others on Gummed Paper Stock With Personalized Printing.

First use Mar. 20, 1962.

Class 102 — Insurance and Financial

SN 99,679. Telephone Employees Insurance Company, Baltimore, Md. Filed June 24, 1960.



For Insurance Services, More Especially the Underwriting of Insurance.

First use May 20, 1960.

SN 137,803. Safeco Insurance Company of America, Seattle, Wash. Filed Feb. 12, 1962.



For Underwriting of Insurance.

First use Nov. 19, 1961.

SN 146,937. Archie Slawsby Agency, Inc., d.b.a. Slawsby Insurance, Nashua, N.H. Filed June 14, 1962.



For General Insurance and Bonding Agency Services.

First use Nov. 1, 1959.

SN 148,167. Financial Programs, Inc., Denver, Colo. Filed July 2, 1962.

INVESTANCE

For Investing Funds for Others in a Financial Program Which Embraces Both Life Insurance and Stock Purchases.

First use on or about Oct. 31, 1961.

Class 103 — Construction and Repair

SN 120,285. Arcadia Lumber Company, Arcadia, Calif. Filed May 18, 1961.

CHIP

For Complete Home Improvement Services Including Planning, Architecture, Design, Financing, and Construction.

First use Feb. 15, 1960.

SN 138,753. American Heritage Homes, Inc., Miami Beach, Fla. Filed Feb. 28, 1962.



The word "Homes" is disclaimed apart from the mark as shown.

For Custom Construction of Homes.

First use Aug. 1, 1961.

SN 141,665. Whirlpool Corporation, Benton Harbor, Mich. Filed Apr. 5, 1962.

POLY CLEAN

For Self-Service Laundry and Dry Cleaning Services.

First use Feb. 6, 1962.

SN 142,146. Watson-Rooter Corporation of America, Van Nuys, Calif. Filed Apr. 12, 1962.



The drawing is lined for red.

For Cleaning of, and Removal of Blockage in, Sewer Lines.

First use Mar. 24, 1962.

SN 152,767. Delamater Manufacturing Co., Rockford, Ill. Filed Sept. 10, 1962.



For Power Vacuum, Steam and Other Cleaning Services Rendered to Industrial and Residential Installations.

First use June 15, 1962.

Class 104 — Communication

SN 158,044. American Telephone and Telegraph Company, New York, N.Y. Filed Nov. 28, 1962.

TELSTAR

For Providing Communications Services via Satellite (Pursuant to an Experimental License From the Federal Communications Commission).
First use on or about Oct. 26, 1961.

Class 105 — Transportation and Storage

SN 111,163. Compagnie Nationale Air France, Paris, France. Filed Jan. 3, 1961.

EPICUREAN OF THE ATLANTIC

For Air Transportation of Passengers.
First use Oct. 11, 1960; in commerce Nov. 1, 1960.

SN 111,165. Compagnie Nationale Air France, Paris, France. Filed Jan. 3, 1961.

L'EPICURIEN DE L'ATLANTIQUE

For Air Transportation of Passengers.
First use Oct. 11, 1960; in commerce Nov. 1, 1960.

SN 127,448. Avis, Inc., Boston, Mass. Filed Sept. 7, 1961.

AVIS INTERNATIONAL

Applicant disclaims service mark rights in the word "International" when not associated with the word "Avis." Owner of Reg. Nos. 615,013 and 703,700.
For Travel Services Comprising Arranging Car Rental Reservations, Arranging Purchases of Cars, Procuring Driver's Licenses, and Sponsoring Unescorted Tours.
First use Jan. 29, 1957.

SN 144,178. Norwalk Truck Lines, Inc., Norwalk, Ohio. Filed May 9, 1962.



For Motor Truck Transportation of the Goods of Others.
First use on or about Mar. 31, 1962.

SN 146,620. Gold Bond Stamp Company, Minneapolis, Minn. Filed June 11, 1962.



For Travel Agency Services.
First use May 21, 1962.

Class 106 — Material Treatment

SN 130,246. Schoolfield Finishers, Inc., New York, N.Y. Filed Oct. 18, 1961.

CLARITIZED

For Treating Jute Fabrics in the Piece of Others.
First use July 31, 1961.

Class 107 — Education and Entertainment

SN 129,187. American Library Color Slide Co., Inc., New York, N.Y. Filed Oct. 4, 1961.



For Rental of Slides, Lecture Notes, and Explanatory Materials.
First use Feb. 15, 1961.

SN 139,551. Tuberculosis & Health Association of California, San Francisco, Calif. Filed Mar. 9, 1962.



For Dissemination of Information Regarding the Prevention and Treatment of Tuberculosis.
First use July 12, 1961.

SN 148,172. General Motors Institute, Flint, Mich. Filed July 2, 1962.

GMI

For Educational Services—Namely, Conducting Engineering Courses With Curricula Leading to the Bachelor's Degree, Part-Time Courses in Management Training, Specialized Technical Courses, Adult Educational Courses and Evaluation Services for Executive and Managerial Personnel.
First use Feb. 23, 1962.

SN 152,310. Jewel Box Revue, Inc., New York, N.Y. Filed Aug. 31, 1962.

JEWEL BOX REVUE

For Entertainment Services—Namely, a Revue.
First use in the year 1938.

SN 153,962. John A. Karas, d.b.a. Science House, Manchester, Mass. Filed Sept. 26, 1962.

SCIMANTICS

For Application of Creative Science and Engineering Skill to the Problems of Marketing, Mass Communications and Advertising.
First use on or about Sept. 14, 1962.

SN 157,881. Dick Catan, North Miami Beach, Fla. Filed Nov. 26, 1962.

MIAMI BEACHCOMBERS

For Entertainment Services in the Form of a Musical Quartet.
First use June 1, 1946.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 153,974. The National Headquarters of the National Society of Scabbard and Blade, Inc., West Lafayette, Ind. Filed Sept. 26, 1962.

SCABBARD AND BLADE

For Indicating Membership in the Applicant Society.
First use on or about Jan. 1, 1905.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

753,514. NUT PLUG. Magnet Cove Barium Corporation. SN 132,349. Pub. 5–14–63. Filed 11–20–61.

753,515. AEROTEX. American Cyanamid Company. SN 142,246. Pub. 5–14–63. Filed 4–16–62.

753,516. EASY LIFE. National Tea Co. SN 142,342. Pub. 5–14–63. Filed 4–16–62.

753,517. FIBRO-CIRC. Paul Klatt, assignee of Kraf Manufacturing Company, Inc. SN 143,145. Pub. 5–14–63. Filed 4–26–62.

753,518. TRU-LINE. United Shoe Machinery Corporation, d.b.a. B B. Chemical Co. SN 145,488. Pub. 5–14–63. Filed 5–25–62.

753,519. MICAGLO. The Macallen Company, Inc. SN 145,950. Pub. 5–14–63. Filed 6–1–62.

753,520. SCOPE. S. C. Johnson & Son, Inc. SN 148,196. Pub. 5–14–63. Filed 7–2–62.

753,521. AVORY. American Viscose Corporation. SN 148,702. Pub. 5–14–63. Filed 7–10–62.

753,522. JUMPING. McHutchison & Co. SN 149,309. Pub. 5–14–63. Filed 7–18–62.

753,523. NYKAF. Apex Coated Fabrics Co. Inc. SN 149,436. Pub. 5–14–63. Filed 7–20–62.

753,524. POWER PAK AND DESIGN. Great West Coal Sales Company. SN 149,565. Pub. 5–14–63. Filed 7–23–62.

753,525. FIGURE OF AN INDIAN. Charles O. Howe, d.b.a. Port City Minerals Company. SN 149,650. Pub. 5–14–63. Filed 7–24–62.

753,526. TERRA-GEL. Wyo-Ben Products Company, d.b.a. Wyotana Sales Company. SN 149,990. Pub. 5–14–63. Filed 7–27–62.

753,527. FIRE-DRI. Oil-Dri Corporation of America. SN 153,109. Pub. 5–14–63. Filed 9–13–62.

753,528. DOMINION. Still House Hollow Farm. SN 153,127. Pub. 5–14–63. Filed 9–13–62.

753,529. STERON. The D. S. Brown Company. SN 154,398. Pub. 5–14–63. Filed 10–3–62.

753,530. DOLCE. B. D. Eisendrath Tanning Co. SN 154,578. Pub. 5–14–63. Filed 10–5–62.

753,531. BLACK PANTHER. Black Panther Company, Inc. SN 154,686. Pub. 5–14–63. Filed 10–8–62.

753,532. MATADOR. Armour and Company. SN 158,677. Pub. 5–14–63. Filed 12–7–62.

753,533. BALBOA. Armour and Company. SN 158,678. Pub. 5–14–63. Filed 12–7–62.

753,534. FORTUNA. Armour and Company. SN 158,679. Pub. 5–14–63. Filed 12–7–62.

Class 2 — Receptades

753,535. ENVOPAK AND DESIGN. Envopak Limited. SN 133,239. Pub. 5–14–63. Filed 12–4–61.

753,536. IH. International Harvester Company. SN 142,821. Pub. 5–14–63. Filed 4–23–62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

753,537. BRENT. Montgomery Ward & Co., Incorporated. SN 129,875. Pub. 5–14–63. Filed 10–13–61.

753,538. BEL-AIRE. W. Bell & Company, Inc. SN 137,418. Pub. 5–14–63. Filed 2–7–62.

753,539. SIR ARTHUR ORIGINALS AND DESIGN. Bettina, Inc. SN 149,042. Pub. 5–14–63. Filed 7–16–62.

753,540. CAGE-UM. John A. Wolff. SN 154,315. Pub. 5–14–63. Filed 10–1–62.

Class 4 — Abrasives and Polishing Materials

753,541. TORCH AND OVAL DESIGN. The American Oil Company. SN 141,682. Pub. 5–14–63. Filed 4–6–62.

753,542. TORCH AND OVAL DESIGN. The American Oil Company. SN 142,006. Pub. 5–14–63. Filed 4–6–62.

753,543. KIWI (KEE-WEE) AND PICTURE OF A BIRD. The Kiwi Polish Company Proprietary Limited. SN 142,040. Pub. 5–14–63. Filed 4–11–62.

753,544. "CARRARA STONES." William A. Leavell, Jr., d.b.a. Carrara Stone Company. SN 142,044. Pub. 5–14–63. Filed 4–11–62.

753,545. LENZON. Barton Mines Corporation. SN 144,591. Pub. 5–14–63. Filed 5–15–62.

753,546. CINDERELLA. Cinderella International Company, Inc. SN 148,143. Pub. 5–14–63. Filed 7–2–62.

753,547. PACE. Turtle Wax, Inc. SN 158,876. Pub. 5–14–63. Filed 12–10–62.

Class 5 — Adhesives

753,548. ASTRO. Penick & Ford, Ltd., Incorporated. SN 154,433. Pub. 5–14–63. Filed 10–3–62.

753,549. PAPER ZIPPER. Atlantic Gummed Paper Corporation. SN 154,679. Pub. 5–14–63. Filed 10–8–62.

753,550. MELTITE. Morningstar-Paisley, Inc. SN 155,174. Pub. 5–14–63. Filed 10–15–62.

753,551. TRU-CUT AND DESIGN. Trade Paper Co. Inc. SN 155,669. Pub. 5–14–63. Filed 10–22–62.

Class 6 — Chemicals and Chemical Compositions

753,552. FLUOLITE. Imperial Chemical Industries Limited. SN 115,149. Pub. 5–14–63. Filed 3–8–61.

753,553. BLINK. The Miami Products & Chemical Company. SN 131,594. Pub. 5–14–63. Filed 11–8–61.

753,554. PERMA-GUARD. Phoenix Gems, Inc. SN 131,870. Pub. 5–14–63. Filed 11–13–61.

753,555. DIRTGARD. Faultless Starch Company. SN 141,173. Pub. 5–14–63. Filed 3–30–62.

753,556. TORCH AND OVAL DESIGN. The American Oil Company. SN 141,679. Pub. 5–14–63. Filed 4–6–62.

753,557. TORCH AND OVAL DESIGN. The American Oil Company. SN 141,683. Pub. 5–14–63. Filed 4–6–62.

753,558. KIWI (KEE-WEE) AND PICTURE OF A BIRD. The Kiwi Polish Company Proprietary Limited. SN 142,039. Pub. 5–14–63. Filed 4–11–62.

753,559. FILTROS. Filtered Rosin Products Company. SN 142,086. Pub. 5–14–63. Filed 4–12–62.

753,560. BABY SAFE AND DESIGN. American Antiseptic Co., Inc. SN 142,245. Pub. 5–14–63. Filed 10–23–62.

753,561. TRAV'L-GARD. The Town Hill Company, Inc., assignee of Bernard Triber, d.b.a. The Town Hill Company. SN 143,061. Pub. 5–14–63. Filed 4–25–62.

753,562. MIRA-KIL. Chartres Co., Inc. SN 143,930. Pub. 5–14–63. Filed 5–7–62.

753,563. SHIP BRAND. MacAndrews and Forbes Company. SN 144,621. Pub. 5–14–63. Filed 5–15–62.

753,564. COL-X. United States Borax & Chemical Corporation, assignee of Columbia Wax Company. SN 145,046. Pub. 5–14–63. Filed 5–21–62.

753,565. URI-CEL. Cambridge Chemical Products, Inc. SN 145,325. Pub. 5–14–63. Filed 5–24–62.

753,566. STRIKE AND DESIGN. Agricultural Specialties. SN 145,501. Pub. 5–14–63. Filed 5–28–62.

753,567. GRAND WAY. The Grand Union Company. SN 145,544. Pub. 5–14–63. Filed 5–28–62.

753,568. AIR-CARE. The Drackett Company. SN 148,798. Pub. 5–14–63. Filed 7–11–62.

753,569. NUACTANT. Arkansas Company, Inc. SN 149,246. Pub. 5–14–63. Filed 7–18–62.

753,570. H.D. The C. B. Dolge Company. SN 149,453. Pub. 5–14–63. Filed 7–20–62.

753,571. VIRSET. Virginia Chemicals & Smelting Company. SN 149,502. Pub. 5–14–63. Filed 7–20–62.

753,572. ALDEFORM. Paul J. Mandabach, Inc. SN 149,856. Pub. 5–14–63. Filed 7–26–62.

753,573. AQUAPOOL. Parker Laboratories, Inc. SN 150,593. Pub. 5–14–63. Filed 8–6–62.

753,574. DRY-CAL-SIZE. Caled Products Company, Inc. SN 151,001. Pub. 5–14–63. Filed 8–13–62.

753,575. STALEY AND DESIGN. A. E. Staley Manufacturing Company. SN 151,092. Pub. 5–14–63. Filed 8–13–62.

753,576. STALEY AND DESIGN. A. E. Staley Manufacturing Company. SN 151,093. Pub. 5–14–63. Filed 8–13–62.

753,577. END-DT. Olin Mathieson Chemical Corporation. SN 151,430. Pub. 5–14–63. Filed 8–17–62.

753,578. HAYNIE AND DESIGN. Reedville Oil & Guano Company, Inc. SN 154,925. Pub. 5–14–63. Filed 10–10–62.

753,579. U.S. ROYAL. United States Rubber Company. SN 154,933. Pub. 5–14–63. Filed 10–10–62.

753,580. F AND STAR DESIGN. Faultless Starch Company. SN 155,142. Pub. 5–14–63. Filed 10–15–62.

753,581. UNIFIL. Humble Oil & Refining Company. SN 155,248. Pub. 5–14–63. Filed 10–16–62.

753,582. LOOK. De Mert & Dougherty, Inc. SN 156,479. Pub. 5–14–63. Filed 11–2–62.

753,583. CIBACHROME. Ciba Limited. SN 156,721. Pub. 5–14–63. Filed 11–6–62.

753,584. TRONA. American Potash & Chemical Corporation. SN 156,852. Pub. 5–14–63. Filed 11–8–62.

753,585. MEDALLION. Industrial Soap Company. SN 156,983. Pub. 5–14–63. Filed 11–9–62.

Class 8 — Smokers' Articles, Not Including Tobacco Products

753,586. REPRESENTATION OF A FLAME. Zippo Manufacturing Company. SN 143,780. Pub. 5–14–63. Filed 5–3–62.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

753,587. BO 103 AND DESIGN. Bölkow-Apparatebau GmbH. CONSOLIDATED CERTIFICATE. SN 137,686, pub. 2–26–63, filed 1–31–62, Cl. 9; SN 117,446, pub. 4–30–63, filed 4–10–61, Cl. 19; SN 117,447, pub. 5–7–63, filed 4–10–61, Cl. 26.

753,588. METROC. Atlantic Research Corporation. SN 154,459. Pub. 5–14–63. Filed 10–4–62.

Class 10 — Fertilizers

753,589. CRAB-BANE. Tennessee Corporation. SN 145,302. Pub. 5–14–63. Filed 5–23–62.

753,590. PATCO'S GRASS BILDER. Lee Patten Seed Company. SN 145,726. Pub. 5–14–63. Filed 5–29–62.

753,591. PATCO'S TURFGRO. Lee Patten Seed Company. SN 145,727. Pub. 5–14–63. Filed 5–29–62.

753,592. PATCO'S SOD MAKER. Lee Patten Seed Company. SN 145,728. Pub. 5–14–63. Filed 5–29–62.

753,593. MISS-LOU. Green & Reedy Fertilizer, Inc. SN 151,818. Pub. 5–14–63. Filed 8–24–62.

Class 11 — Inks and Inking Materials

753,594. "CAMEL BACK" AND DESIGN. Embossograph Process Company Incorporated. SN 155,246. Pub. 5–14–63. Filed 10–16–62.

Class 12 — Construction Materials

753,595. DESIGN OF TORCH AND OVAL. The American Oil Company. SN 141,680. Pub. 5–14–63. Filed 4–6–62.

753,596. TORCH AND OVAL DESIGN. The American Oil Company. SN 141,684. Pub. 5–14–63. Filed 4–6–62.

Class 14 — Metals and Metal Castings and Forgings

753,597. STRATEGIC UDY AND DESIGN. Strategic Materials Corporation. SN 128,689. Pub. 5–14–63. Filed 9–26–61.

753,598. CS 2700. R. Lavin & Sons, Inc. SN 142,517. Pub. 5–14–63. Filed 4–18–62.

753,599. 4–E. Crucible Steel Company of America. SN 152,285. Pub. 5–14–63. Filed 8–31–62.

Class 15 — Oils and Greases

753,600. TORCH AND OVAL DESIGN. The American Oil Company. SN 141,681. Pub. 5–14–63. Filed 4–6–62.

753,601. TORCH AND OVAL DESIGN. The American Oil Company. SN 141,685. Pub. 5–14–63. Filed 4–6–62.

Class 16 — Protective and Decorative Coatings

753,602. AMWAY. Amway Sales Corporation. SN 152,371. Pub. 5–14–63. Filed 9–4–62.

753,603. ALMET. Ball Chemical Company. SN 152,670. Pub. 5–14–63. Filed 9–7–62.

753,604. DECOR-EZE. Sears, Roebuck and Co. SN 153,686. Pub. 5–14–63. Filed 9–21–62.

753,605. NEPOLON. Bird & Son, Inc. SN 154,396. Pub. 5–14–63. Filed 10–3–62.

753,606. NASCO AND DESIGN. National Solvent Corporation. SN 155,271. Pub. 5–14–63. Filed 10–16–62.

753,607. WEATHERGARD ETC. AND DESIGN. Macmillan Ring-Free Oil Co., Inc. SN 159,251. Pub. 5–14–63. Filed 12–17–62.

Class 17—Tobacco Products

753,608. SHIP BRAND. MacAndrews and Forbes Company. SN 144,622. Pub. 5–14–63. Filed 5–15–62.

Class 18—Medicines and Pharmaceutical Preparations

753,609. ORASTAT. The Upjohn Company. SN 143,299. Pub. 5–14–63. Filed 4–27–62.

753,610. BADIONAL. Farbenfabriken Bayer Aktiengesellschaft. SN 144,610. Pub. 5–14–63. Filed 5–15–62.

753,611. STALEY AND DESIGN. A. E. Staley Manufacturing Company. SN 151,094. Pub. 5–14–63. Filed 8–13–62.

753,612. EMLYD COMPOUND. J. E. Eichelberger, d.b.a. Home Health Equipment Co. SN 152,055. Pub. 5–14–63. Filed 8–28–62.

753,613. DESIGN OF HUMAN MALE COUGHING. Earl W. Rahn, d.b.a. E. W. Rahn. SN 152,090. Pub. 5–14–63. Filed 8–28–62.

753,614. ANTHRYL. Reed & Carnrick. SN 154,153. Pub. 5–14–63. Filed 9–28–62.

753,615. SORBUTUSS. Dalin Pharmaceuticals, Inc. SN 154,213. Pub. 5–14–63. Filed 10–1–62.

753,616. NORLANTHATE. Parke, Davis & Company. SN 154,279. Pub. 5–14–63. Filed 10–1–62.

753,617. SINGLVAX. Schering Corporation, assignee of American Scientific Laboratories, Inc. SN 154,395. Pub. 5–14–63. Filed 10–3–62.

753,618. MITHRACIN. Chas. Pfizer & Co., Inc. SN 154,434. Pub. 5–14–63. Filed 10–3–62.

753,619. SAVADERM. Savage Laboratories, Inc. SN 154,518. Pub. 5–14–63. Filed 10–4–62.

753,620. FETINIC. Winston Pharmaceuticals, Incorporated. SN 154,659. Pub. 5–14–63. Filed 10–5–62.

753,621. NIALENE. Winston Pharmaceuticals, Incorporated. SN 154,660. Pub. 5–14–63. Filed 10–5–62.

753,622. EXOPIN. Winston Pharmaceuticals, Incorporated. SN 154,661. Pub. 5–14–63. Filed 10–5–62.

753,623. ANATENSOL. Olin Mathieson Chemical Corporation. SN 154,758. Pub. 5–14–63. Filed 10–8–62.

753,624. TYCOLENE. The Pfeiffer Co. SN 154,763. Pub. 5–14–63. Filed 10–8–62.

753,625. MYCRAS. Farbenfabriken Bayer Aktiengesellschaft. SN 154,814. Pub. 5–14–63. Filed 10–9–62.

753,626. ARLEF. Parke, Davis & Company. SN 154,837. Pub. 5–14–63. Filed 10–9–62.

753,627. ACUTUSS. Philips Roxane, Inc. SN 154,923. Pub. 5–14–63. Filed 10–10–62.

753,628. OPALUX. Colorcon, Inc. SN 154,957. Pub. 5–14–63. Filed 10–11–62.

753,629. HEXA-GLO. Chas. Pfizer & Co., Inc. SN 154,991. Pub. 5–14–63. Filed 10–11–62.

753,630. PICK-GLO. Chas. Pfizer & Co., Inc. SN 154,996. Pub. 5–14–63. Filed 10–11–62.

753,631. A-B-C. Chas. Pfizer & Co., Inc. SN 154,999. Pub. 5–14–63, Filed 10–11–62.

753,632. CAL-D-MAG. Chas. Pfizer & Co., Inc. SN 155,000. Pub. 5–14–63. Filed 10–11–62.

753,633. CAMPHOIL. Chas. Pfizer & Co., Inc. SN 155,002. Pub. 5–14–63. Filed 10–11–62.

753,634. GLO-STREP. Chas. Pfizer & Co., Inc. SN 155,006. Pub. 5–14–63. Filed 10–11–62.

753,635. GLO-BESTROL. Chas. Pfizer & Co., Inc. SN 155,008. Pub. 5–14–63. Filed 10–11–62.

753,636. VERAGEN. The Upjohn Company. SN 155,030. Pub. 5–14–63. Filed 10–11–62.

753,637. REDISOL-H. Merck & Co., Inc. SN 155,088. Pub. 5–14–63. Filed 10–12–62.

753,638. NOTOMYCIN. Bristol-Myers Company. SN 155,133. Pub. 5–14–63. Filed 10–15–62.

753,639. ORA-ZONE. Ellison Laboratories, Inc. SN 155,140. Pub. 5–14–63. Filed 10–15–62.

753,640. MAPO. Herald Pharmacal, Inc. SN 155,152. Pub. 5–14–63. Filed 10–15–62.

753,641. ADENOVAX. Merck & Co., Inc. SN 155,170. Pub. 5–14–63. Filed 10–15–62.

753,642. ZOPATE. Unimed, Inc. SN 155,212. Pub. 5–14–63. Filed 10–15–62.

753,643. CHLORASEC. Blessings, Inc. SN 155,230. Pub. 5–14–63. Filed 10–16–62.

753,644. DRICLOR. Blessings, Inc. SN 155,231. Pub. 5–14–63. Filed 10–16–62.

753,645. TIPPIES. Vitamix Pharmaceuticals, Inc. SN 155,458. Pub. 5–14–63. Filed 10–18–62.

753,646. FILGANE. Endo Laboratories Inc. SN 155,593. Pub. 5–14–63. Filed 10–22–62.

753,647. RENELATE. Fellows Medical Mfg. Co., Inc., assignee of Testagar & Co., Inc. SN 155,759. Pub. 5–14–63. Filed 10–23–62.

753,648. CONTRASOR. The Chattanooga Medicine Company, d.b.a. Chattem Laboratories. SN 155,780. Pub. 5–14–63. Filed 10–24–62.

753,649. UNIPEN. American Home Products Corporation. SN 155,876. Pub. 5–14–63. Filed 10–25–62.

753,650. OMNIPEN. American Home Products Corporation. SN 155,877. Pub. 5–14–63. Filed 10–25–62.

753,651. PATHINOX. American Cyanamid Company. SN 155,960. Pub. 5–14–63. Filed 10–26–62.

753,652. PROMONE. The Upjohn Company. SN 156,534. Pub. 5–14–63. Filed 11–2–62.

753,653. LOCORTEN. Ciba Limited. SN 156,722. Pub. 5–14–63. Filed 11–6–62.

753,654. IRCON-PLUS. Lakeside Laboratories, Inc. SN 156,747. Pub. 5–14–63. Filed 11–6–62.

753,655. SPEDA. Byk-Guiden Lomberg Chemische Fabrik GmbH. SN 156,937. Pub. 5–14–63. Filed 11–9–62.

Class 19—Vehicles

753,587. CONSOLIDATED CERTIFICATE. See Class 9.

753,656. GARDNER. The Stewart Coach Industries, Inc. SN 123,044. Pub. 5–14–63. Filed 6–28–61.

753,657. STEWART. The Stewart Coach Industries, Inc. SN 123,395. Pub. 5–14–63. Filed 6–28–61.

753,658. CENTAUR AND DESIGN. American Motor Scooter Corporation. SN 129,447. Pub. 5–14–63. Filed 10–9–61.

753,659. VICTOR. Victor Mobile Homes, Inc. SN 152,178. Pub. 5–14–63. Filed 8–29–62.

Class 20—Linoleum and Oiled Cloth

753,660. CROFTONITE. Crofton Plastics, Inc. SN 144,940. Pub. 5–14–63. Filed 5–18–62.

Class 21—Electrical Apparatus, Machines, and Supplies

753,661. LIP. Lip Societe Anonyme d'Horlogerie. SN 126,459. Pub. 5–14–63. Filed 8–22–61.

753,662. DAYTON. Dayton Electric Manufacturing Company. SN 132,901. Pub. 5–14–63. Filed 11–28–61.

753,663. SA-FUSE. Electric Machinery Mfg. Company. SN 144,155. Pub. 5–14–63. Filed 5–9–62.

753,664. MULTIPLE DIAMOND DESIGN. Allied Research Products Incorporated. SN 148,284. Pub. 5–14–63. Filed 7–3–62.

Class 22—Games, Toys, and Sporting Goods

753,665. LANGCRAFT. Langfelder, Homma & Carroll, Inc. SN 121,107. Pub. 5–14–63. Filed 5–31–61.

753,666. SKILLWAY. George D. Smith. SN 134,280. Pub. 5–14–63. Filed 12–18–61.

753,667. PLAYALONG. Scientific Industries, Inc. SN 137,804. Pub. 5–14–63. Filed 2–12–62.

753,668. FIGURE. St. Lawrence Sales Incorporated. SN 138,233. Pub. 5–14–63. Filed 2–19–62.

753,669. HOBBY HOOP AND DESIGN. James F. Walsh, Jr. SN 139,801. Pub. 5–14–63. Filed 3–13–62.

753,670. BOOB TUBE. Milton Bradley Company. SN 144,043. Pub. 5–14–63. Filed 5–8–62.

753,671. FREEGLIDE. Dimco-Gray Company. SN 144,487. Pub. 5–14–63. Filed 5–14–62.

753,672. WHICH LANE? CHICANE. The A. C. Gilbert Company. SN 145,356. Pub. 5–14–63. Filed 5–24–62.

753,673. AMERICAN FLYER. The A. C. Gilbert Company. SN 145,357. Pub. 5–14–63. Filed 5–24–62.

753,674. FUTURAMA. Richard L. Reinoehl. SN 147,150. Pub. 5–14–63. Filed 6–18–62.

753,675. SHOT MAKER. Wilson Sporting Goods Co. SN 149,234. Pub. 5–14–63. Filed 7–17–62.

753,676. SPACE NEEDLE. Space Needle Corporation. SN 149,882. Pub. 5–14–63. Filed 7–26–62.

753,677. BIG BRUISER. Louis Marx & Co., Inc. SN 149,941. Pub. 5–14–63. Filed 7–27–62.

753,678. CLIMA/GARD. Wilson Sporting Goods Co. SN 150,902. Pub. 5–14–63. Filed 8–9–62.

753,679. ARLINGTON. Puritan Cordage Mills. SN 151,252. Pub. 5–14–63. Filed 8–15–62.

753,680. DINGAROO. Louis Marx & Co., Inc. SN 151,419. Pub. 5–14–63. Filed 8–17–62.

753,681. MATTEL. Mattel, Inc. SN 151,977. Pub. 5–14–63. Filed 8–27–62.

753,682. THE SWAN BY JOHN LETTERS AND DESIGN. John Letters and Company Limited. SN 155,220. Pub. 5–14–63. Filed 12–11–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

753,683. REPRESENTATION OF A WIDE GOLD BAND. Reed Roller Bit Company. SN 114,045. Pub. 5–14–63. Filed 2–20–61.

753,684. LIP. Lip Societe Anonyme d'Horlogerie. SN 126,460. Pub. 5–14–63. Filed 8–22–61.

753,685. SCOP. Hemphill Company. SN 130,457. Pub. 5–14–63. Filed 10–23–61.

753,686. SUGAR BABE. Allis-Chalmers Manufacturing Company. SN 135,949. Pub. 5–14–63. Filed 1–17–62.

753,687. AUBURN. Auburn Machine Works, Inc. SN 137,415. Pub. 5–14–63. Filed 2–7–62.

753,688. MP ETC. AND DESIGN. MP Pumps, Inc. SN 139,311. Pub. 5–14–63. Filed 3–7–62.

753,689. GLACERAM. Hoffman Brothers Drilling Company. SN 148,186. Pub. 5–14–63. Filed 7–2–62.

753,690. METORAM. Hoffman Brothers Drilling Company. SN 148,187. Pub. 5–14–63. Filed 7–2–62.

753,691. REFRACTORAM. Hoffman Brothers Drilling Company. SN 148,188. Pub. 5–14–63. Filed 7–2–62.

753,692. THE PADLOCKER AND DESIGN. Atlantic Gummed Paper Corporation. SN 148,288. Pub. 5–14–63. Filed 7–3–62.

753,693. 43. Swingline Inc. SN 148,433. Pub. 5–14–63. Filed 7–5–62.

753,694. AMWAY. Amway Sales Corporation. SN 152,372. Pub. 5–14–63. Filed 9–4–62.

753,695. CROSS. The Red Cross Manufacturing Corporation. SN 157,927. Pub. 5–14–63. Filed 11–26–62.

Class 24—Laundry Appliances and Machines

753,696. RELY ON GI AND DESIGN. The General Industries Company. SN 152,297. Pub. 5–14–63. Filed 8–31–62.

Class 26—Measuring and Scientific Appliances

753,587. CONSOLIDATED CERTIFICATE. See Class 9.

753,697. APELCO. Raytheon Company. SN 121,432. Pub. 5–14–63. Filed 6–5–61.

753,698. HOUSE-O-PROTECTION. Tom Termohlen. SN 126,273. Pub. 5–14–63. Filed 8–18–61.

753,699. DAYTON. Dayton Electric Manufacturing Company. SN 132,903. Pub. 5–14–63. Filed 11–28–61.

753,700. COMBUSTIMETER. Walter Heath, d.b.a. Walter Heath Company. SN 135,354. Pub. 5–14–63. Filed 1–8–62.

753,701. RIDL AND DESIGN. Radiation Instrument Development Laboratory, Inc. SN 138,259. Pub. 5–14–63. Filed 2–19–62.

753,702. OMNITRONICS. Borg-Warner Corporation. MULTIPLE CLASS (Classes 26 and 36). SN 141,247. Pub. 5–14–63. Filed 4–2–62.

753,703. OMNI-DATA. Borg-Warner Corporation. MULTIPLE CLASS (Classes 26 and 36). SN 141,248. Pub. 5–14–63. Filed 4–2–62.

753,704. DITTO BRAND AND DESIGN. Ditto, Incorporated (Illinois corporation), assignee, by mesne assignment, of Ditto, Incorporated (Delaware corporation). SN 141,504. Pub. 5–14–63. Filed 4–4–62.

753,705. BETASCOPE. Twin City Testing Corp. SN 141,997. Pub. 5–14–63. Filed 4–10–62.

753,706. BLEND-O-MIXER. Continental Sales Co. SN 142,618. Pub. 5–14–63. Filed 4–19–62.

753,707. ACCU-FLOW. B. C. Ames Co. SN 142,994. Pub. 5–14–63. Filed 4–25–62.

753,708. OI AND DESIGN. Oceanic Instruments, Inc. SN 143,753. Pub. 5–14–63. Filed 5–3–62.

753,709. IS IN A FANCIFUL DESIGN. Frank Industries, Inc. SN 148,507. Pub. 5–14–63. Filed 7–6–62.

753,710. MULTI-RANGE RETICLE AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,046. Pub. 5–14–63. Filed 9–12–62.

753,711. EDL. Educational Developmental Laboratories, Inc. SN 153,945. Pub. 5–14–63. Filed 9–26–62.

753,712. MC AND DESIGN. Metetelic Corporation. SN 155,319. Pub. 5–14–63. Filed 10–17–62.

Class 28—Jewelry and Precious-Metal Ware

753,713. CF DESIGN. Charles Frankel, d.b.a. Frankel Company. SN 152,393. Pub. 5–14–63. Filed 9–4–62.

Class 29—Brooms, Brushes, and Dusters

753,714. SENNO. Michael H. Onnes, d.b.a. Fine Foods & Products Company. SN 152,326. Pub. 5–14–63. Filed 8–31–62.

Class 30—Crockery, Earthenware, and Porcelain

753,715. NIKKO FINE CHINA AND DESIGN. Arlen China Company. SN 106,306. Pub. 5–14–63. Filed 10–13–60.

Class 31 — Filters and Refrigerators

753,716. FILTRIX. The Wil-Nes Corporation. SN 127,688. Pub. 5-14-63. Filed 9-11-61.

753,717. FALL-X. Atchison Industrial Corporation. SN 134,180. Pub. 5-14-63. Filed 12-18-61.

Class 32 — Furniture and Upholstery

753,718. DESQUIRE. James Ruben. SN 138,265. Pub. 5-14-63. Filed 2-19-62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

753,719. MODU-FLO. Sunbeam Lighting Co., Inc., assignee, by mesne assignment, of Lighting Dynamics, Inc. SN 133,388. Pub. 5-14-63. Filed 12-5-61.

753,720. KEYLOCK. Ross-Tacony Crucible Company. SN 139,784. Pub. 5-14-63. Filed 3-13-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

753,721. REKSYN. E. F. Houghton & Co. SN 157,504. Pub. 5-14-63. Filed 11-19-62.

753,722. POWER CURVE. The B. F. Goodrich Company. SN 158,529. Pub. 5-14-63. Filed 12-5-62.

Class 36 — Musical Instruments and Supplies

753,723. PLEASANT PEASANT AND DESIGN. Clarence B. Brown, d.b.a. C.B. & Co., and as Lingua-Musica. SN 143,508. Pub. 5-14-63. Filed 5-1-62.

753,724. LODESTAR AND DESIGN. Clarence B. Brown, d.b.a. C.B. & Co., and as Lingua-Musica. SN 143,509. Pub. 5-14-63. Filed 5-1-62.

753,725. BACH AND DESIGN. Vincent Bach Corporation. SN 143,592. Pub. 5-14-63. Filed 5-2-62.

753,726. PRO-MARK. Irvin H. Brockstein. SN 156,715. Pub. 4-30-63. Filed 11-6-62.

753,727. BISMARK. Bismark Records. SN 161,297. Pub. 5-14-63. Filed 1-24-63.

Class 37 — Paper and Stationery

753,728. BEST LICK ON A STICK. The Sweets Company of America, Incorporated, d.b.a. The Sweets Company of America, Inc. SN 100,657. Pub. 5-14-63. Filed 7-11-60.

753,729. WARCO AND DESIGN. Gulf States Paper Corporation. SN 141,435. Pub. 5-14-63. Filed 4-3-62.

753,730. EASY LIFE. National Tea Co. SN 142,341. Pub. 5-14-63. Filed 4-16-62.

753,731. BACKGROUND BEAUTY BY BIRGE AND DESIGN. The Birge Company, Inc. SN 143,098. Pub. 5-14-63. Filed 4-26-62.

753,732. SYMBEX. Industrial Consulting & Design Service. SN 146,025. Pub. 5-14-63. Filed 6-11-62.

753,733. TWINPAKT. Sperry Rand Corporation. SN 148,093. Pub. 5-14-63. Filed 6-29-62.

753,734. THOR COTE. Bergstrom Paper Company. SN 150,508. Pub. 5-14-63. Filed 8-6-62.

753,735. LAWDEX. Ross A. Sussman. SN 151,097. Pub. 5-14-63. Filed 8-13-62.

753,736. POLYPRIME. Ludlow Corporation. SN 153,581. Pub. 5-14-63. Filed 9-20-62.

753,737. NEALAM. Milprint, Inc. SN 153,668. Pub. 5-14-63. Filed 9-21-62.

753,738. BM (DESIGN) T. Kimberly-Clark Corporation. SN 153,770. Pub. 5-14-63. Filed 9-24-62.

Class 38 — Prints and Publications

753,739. SHOW BUSINESS. Leo Shull Publications, Inc. SN 115,264. Pub. 5-14-63. Filed 3-9-61.

753,740. COAST-T-COAST. Alves Photo Service, Inc., d.b.a. Coast-T-Coast Photo. SN 130,164. Pub. 5-14-63. Filed 10-18-61.

753,741. COW PALACE AND DESIGN. No. 1-A District Agricultural Association of the State of California. SN 133,695. Pub. 5-14-63. Filed 12-8-61.

753,742. EXEC-U-SCOPE. Cambridge Associates, Inc. SN 139,035. Pub. 5-14-63. Filed 3-5-62.

753,743. MP. Breskin Publications, Inc. SN 139,820. Pub. 5-14-63. Filed 3-14-62.

753,744. BACK STAGE AND DESIGN. American Liberty Foundation. SN 141,143. Pub. 5-14-63. Filed 3-28-62.

753,745. USA 1. Hartford Publications, Inc., assignee of USA 1 Incorporated. SN 142,665. Pub. 5-14-63. Filed 4-19-62.

753,746. TWIS-CARDS. Gerardine Ogilby Evans, d.b.a. Gae's Originals. SN 148,021. Pub. 5-14-63. Filed 6-29-62.

753,747. BIORAMA. Ward's Natural Science Establishment, Inc. SN 149,028. Pub. 5-14-63. Filed 7-13-62.

753,748. THERAPLAY. Stanley Abramovitz. SN 150,988. Pub. 5-14-63. Filed 8-13-62.

753,749. COLLINS AND DESIGN. Collins Radio Company. SN 155,582. Pub. 5-14-63. Filed 10-22-62.

Class 40 — Fancy Goods, Furnishings, and Notions

753,750. DE LUXE GOLDEN LINE. John Dritz & Sons, Inc. SN 149,924. Pub. 5-14-63. Filed 7-27-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

753,751. ACK-TION. Ack-Ti-Lining, Inc. SN 142,583. Pub. 5-14-63. Filed 4-19-62.

Class 44 — Dental, Medical, and Surgical Appliances

753,752. THERMOCAP AND DESIGN. Kaz Heating Products, Inc. SN 132,924. Pub. 5-14-63. Filed 11-28-61.

753,753. AERO-SPA. Aero Engineering Laboratories, Inc. SN 145,992. Pub. 5-14-63. Filed 6-4-62.

Class 45 — Soft Drinks and Carbonated Waters

753,754. MUG DESIGN. Apollinaris Brunnen A.G. SN 118,124. Pub. 5-14-63. Filed 4-19-61.

753,755. HAPPIFIES THIRST. Bireley's Inc. SN 119,743. Pub. 5-14-63. Filed 5-11-61.

753,756. CARVEL COLA. Thomas Carvel. SN 136,882. Pub. 5-14-63. Filed 1-30-62.

753,757. COTTON CLUB AND DESIGN. The Miller-Becker Company, d.b.a. Cotton Club Bottling Company. SN 142,335. Pub. 5-14-63. Filed 4-16-62.

753,758. PUB WHITE FRESH AND DESIGN. Herschi N.V. SN 142,816. Pub. 5-14-63. Filed 4-23-62.

753,759. CAWY AND DESIGN. Nestor Machado Rovira, d.b.a. Cawy Bottling Co. SN 151,071. Pub. 5-14-63. Filed 8-13-62.

753,760. MONTE CRISTO. Virginia Dare Extract Co. Inc. SN 155,455. Pub. 5-14-63. Filed 10-18-62.

Class 46 — Foods and Ingredients of Foods

753,761. LADY PENN. Penn Dairies, Inc. SN 117,422. Pub. 5-14-63. Filed 4-6-61.

753,762. TENDER GOLD THE "QUEEN" AND DESIGN. Sherman Poultry Industries. SN 122,848. Pub. 5-14-63. Filed 6-26-61.

753,763. PINE-O-CHERI. Cerna Food Products Company. SN 125,005. Pub. 5-14-63. Filed 7-31-61.

753,764. KRIST-O. Stoelting Brothers Company. SN 125,252. Pub. 5-7-63. Filed 8-2-61.

753,765. BONANZA. Crown Imports Co. Inc. SN 135,877. Pub. 5-14-63. Filed 1-16-62.

753,766. AC'CETTE. International Minerals & Chemical Corporation. SN 136,246. Pub. 5-14-63. Filed 1-22-62.

753,767. COPPER KITCHEN. The R. T. French Company. SN 136,365. Pub. 5-14-63. Filed 1-23-62.

753,768. WILLOW BROOK FARMS. Willow Brook Company. SN 137,587. Pub. 5-14-63. Filed 2-8-62.

753,769. FRISCO AND DESIGN. Frisco Foods Corporation. SN 138,090. Pub. 5-14-63. Filed 2-16-62.

753,770. MR. CRISP AND DESIGN. Cal-Zona Company, d.b.a. Cal-Zona, Inc. SN 139,467. Pub. 5-14-63. Filed 3-9-62.

753,771. MISSION VALLEY AND DESIGN. Mission Valley Canning Co., Inc., d.b.a. Mission Valley Canning Co. SN 139,509. Pub. 5-14-63. Filed 3-9-62.

753,772. BISKALETS. Andomia Products Limited. SN 140,220. Pub. 5-14-63. Filed 3-20-62.

753,773. HONE-JEL. British Chemotheutic Products Limited. SN 140,233. Pub. 5-14-63. Filed 3-20-62.

753,774. DELMARK. The Dietene Company. SN 141,271. Pub. 5-14-63. Filed 4-2-62.

753,775. QUIKMIX. Hershey Chocolate Corporation. SN 142,319. Pub. 5-14-63. Filed 4-16-62.

753,776. DUTCH GOLD AND DESIGN. W. Ralph Gamber, d.b.a. Lancaster County Dutch Gold Apiaries. SN 142,433. Pub. 5-14-63. Filed 4-17-62.

753,777. VANITY. Robert H. Zwicky, d.b.a. Canned Foods Forum. SN 143,195. Pub. 5-14-63. Filed 4-26-62.

753,778. TASTY HOUSE. Royalty House Corporation. SN 143,872. Pub. 5-14-63. Filed 5-4-62.

753,779. COFFEE CHUM. Wendt's Cream Top Dairy, Inc. SN 144,119. Pub. 5-14-63. Filed 5-8-62.

753,780. WESTERN ROYAL. Chip Steak Company, d.b.a. Western Royal Co. SN 144,319. Pub. 5-14-63. Filed 5-11-62.

753,781. SHIP BRAND. MacAndrews and Forbes Company. SN 144,623. Pub. 5-14-63. Filed 5-15-62.

753,782. VOGUE. Mission Valley Canning Co. Inc. SN 144,865. Pub. 5-14-63. Filed 5-17-62.

753,783. ACME FARMDALE AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 145,233. Pub. 5-14-63. Filed 5-23-62.

753,784. FLITE. Bowey's, Inc. SN 145,919. Pub. 5-14-63. Filed 6-1-62.

753,785. S-MASH. Frederick Joseph Carten. SN 145,925. Pub. 5-14-63. Filed 6-1-62.

753,786. QUATRO-CAL. Packaged Products Corp. SN 147,016. Pub. 5-14-63. Filed 6-15-62.

753,787. CHUN KING. The Chun King Corporation. SN 148,141. Pub. 5-14-63. Filed 7-2-62.

753,788. TEXTURED EDI-PRO. Ralston Purina Company. SN 148,226. Pub. 5-14-63. Filed 7-2-62.

753,789. TOM TOM. United Marketing Exchange. SN 148,339. Pub. 5-14-63. Filed 7-3-62.

753,790. JONES DAIRY FARM AND DESIGN. Jones Dairy Farm. SN 148,394. Pub. 5-14-63. Filed 7-5-62.

753,791. SMUCKER'S. The J. M. Smucker Company. SN 148,664. Pub. 5-14-63. Filed 7-9-62.

753,792. BEACON AND DESIGN. Textron Inc. SN 148,674. Pub. 5-14-63. Filed 7-9-62.

753,793. REPRESENTATION OF HUMPTY DUMPTY. Humpty Dumpty Potato Chip Co. SN 148,894. Pub. 5-14-63. Filed 7-12-62.

753,794. HUMPTY DUMPTY. Humpty Dumpty Potato Chip Co. SN 148,895. Pub. 5-14-63. Filed 7-12-62.

753,795. GROTESQUE SEA CAPTAIN DESIGN. The Quaker Oats Company. SN 149,321. Pub. 5-14-63. Filed 7-18-62.

753,796. START. General Foods Corporation. SN 149,645. Pub. 5-14-63. Filed 7-24-62.

753,797. TROPHY WINNER. Southern States Cooperative, Incorporated. SN 149,779. Pub. 5-14-63. Filed 7-25-62.

753,798. FIRST PLACE. Southern States Cooperative, Incorporated. SN 149,780. Pub. 5-14-63. Filed 7-25-62.

753,799. SILVER STIRRUP. Southern States Cooperative, Incorporated. SN 149,781. Pub. 5-14-63. Filed 7-25-62.

753,800. C & S. Standard Brands Incorporated. SN 149,970. Pub. 5-14-63. Filed 7-27-62.

753,801. KALNZYME AND DESIGN. Makers of Kal, Inc. SN 150,265. Pub. 5-14-63. Filed 8-1-62.

753,802. MAR TENN COUNTRY HAM AND DESIGN. Chambers-Godfrey Manufacturing Company, d.b.a. Martenn Hams. SN 150,394. Pub. 5-14-63. Filed 8-3-62.

753,803. LA BELLE FRANCE. The Schratter Import Co., Inc. SN 151,086. Pub. 5-14-63. Filed 8-13-62.

753,804. STALEY AND DESIGN. A. E. Staley Manufacturing Company. SN 151,095. Pub. 5-14-63. Filed 8-13-62.

753,805. MANCHESTER. Waterman Fruit Products, Inc. SN 152,106. Pub. 5-14-63. Filed 8-28-62.

753,806. PRINCE ERIC. Jerissa Nut Co., Inc. SN 152,585. Pub. 5-14-63. Filed 9-6-62.

753,807. BURGER-MATE. Bernardo H. Karmen, d.b.a. Food Industry Flavors. SN 152,703. Pub. 5-14-63. Filed 9-7-62.

753,808. WESPAC. Van Camp Sea Food Company, d.b.a. West Coast Packing Corp. SN 152,849. Pub. 5-14-63. Filed 9-10-62.

753,809. ROYAL DISH. Van Camp Sea Food Company, d.b.a. West Coast Packing Corp. SN 152,850. Pub. 5-14-63. Filed 9-10-62.

753,810. NIBLETS. Green Giant Company. SN 154,114. Pub. 5-14-63. Filed 9-28-62.

753,811. MR. DEE-LISH. ABC Vending Corporation, d.b.a. ABC Vending Corp. SN 154,456. Pub. 5-14-63. Filed 10-4-62.

753,812. HAYNIE AND DESIGN. Reedville Oil & Guano Company, Inc. SN 154,514. Pub. 5-14-63. Filed 10-4-62.

753,813. REDWOOD INN. S and W Fine Foods Products Company. SN 154,854. Pub. 5-14-63. Filed 10-9-62.

753,814. FREDDIE THE FOX AND DESIGN. Fox Foods, Inc. SN 154,966. Pub. 5-14-63. Filed 10-11-62.

753,815. KRUG'S. George A. Krug Baking Company, d.b.a. Krug Baking Co. SN 154,978. Pub. 5-14-63. Filed 10-11-62.

753,816. GOLDEN SAFF. General Mills, Inc. SN 155,065. Pub. 5-14-63. Filed 10-12-62.

753,817. "TOPS" AND DESIGN. Summit Marketing Corporation. SN 155,111. Pub. 5-14-63. Filed 10-12-62.

753,818. CONTROL. Foremost Dairies, Inc. SN 155,308. Pub. 5-14-63. Filed 10-17-62.

753,819. RUBI RANCHO. Oregon Nut Shellers, Inc. SN 155,634. Pub. 5-14-63. Filed 10-22-62.

753,820. WISSAHICKON. O. D. Huff, Jr., Groves, Inc. SN 155,801. Pub. 5-14-63. Filed 10-24-62.

753,821. SUZANNE MARIE. Davis Candy Corporation. SN 157,357. Pub. 5-14-63. Filed 11-16-62.

753,822. BAR-B-KRUST. Meat Industry Suppliers, Inc. SN 157,825. Pub. 5-14-63. Filed 11-23-62.

753,823. BEARSKIN NECK. Milton R. Swanson, d.b.a. Wayside Industries. SN 157,862. Pub. 5-14-63. Filed 11-23-62.

Class 47 — Wines

753,824. TERRY. Fernando A. de Terry S.A. SN 135,186. Pub. 5-14-63. Filed 1-4-62.

Class 48 — Malt Beverages and Liquors

753,825. HAMM'S BEER AND DESIGN OF CROWN. Theo. Hamm Brewing Company. SN 148,379. Pub. 5-14-63. Filed 7-5-62.

Class 49 — Distilled Alcoholic Liquors

753,826. TERRY. Fernando A. de Terry S.A. SN 135,187. Pub. 5-14-63. Filed 1-4-62.

753,827. LONE EAGLE. Barton Distilling Company. SN 141,488. Pub. 5-14-63. Filed 4-4-62.

753,828. GRAND SLAM. Barton Distilling Company. SN 141,489. Pub. 5-14-63. Filed 4-4-62.

753,829. MARGATE ABBEY. Barton Distilling Company. SN 141,491. Pub. 5-14-63. Filed 4-4-62.

753,830. CYPRESS GARDENS. Continental Beverages, Inc. SN 148,152. Pub. 5-14-63. Filed 7-2-62.

753,831. SEAGERS LONDON AND DESIGN. Seager, Evans & Co. Ltd. SN 149,881. Pub. 5-14-63. Filed 7-26-62.

753,832. BILL BAILEY. Glenmore Distilleries Company. SN 155,068. Pub. 5-14-63. Filed 10-12-62.

Class 50 — Merchandise Not Otherwise Classified

753,833. MEDITERRANEE FLOWERS. Mediterranee Flowers, Inc. SN 143,650. Pub. 5-14-63. Filed 5-2-62.

753,834. LAZY LODGER. Benson and Hullinger Manufacturing Corporation. SN 149,528. Pub. 5-14-63. Filed 7-23-62.

753,835. DOOR-MATES. Globe Rubber Products Corp. SN 149,736. Pub. 5-14-63. Filed 7-25-62.

753,836. FLAIR. Lee Rowan Company. SN 150,569. Pub. 5-14-63. Filed 8-6-62.

753,837. SKIL-SLIDE. Harcourt, Brace & World, Inc. SN 152,515. Pub. 5-14-63. Filed 9-5-62.

753,838. PENNY PAK. Penny-Pak Inc. SN 153,421. Pub. 5-14-63. Filed 9-18-62.

753,839. POLYGRAIN. Polychrome Corporation. SN 153,890. Pub. 5-14-63. Filed 9-25-62.

Class 51 — Cosmetics and Toilet Preparations

753,840. SMOOTH 'N GLOW. Invincible Products Corporation. SN 140,354. Pub. 5-14-63. Filed 3-21-62.

753,841. TOUCHDOWN. Colgate-Palmolive Company. SN 145,335. Pub. 5-14-63. Filed 5-24-62.

753,842. JUMBO'S. Schratz Products, Inc. SN 148,914. Pub. 5-14-63. Filed 7-12-62.

753,843. RAVAIR. The Mitchum Company. SN 149,864. Pub. 5-14-63. Filed 7-26-62.

753,844. DRY WINE. Dorothy Perkins Cosmetics, Inc. SN 151,516. Pub. 5-14-63. Filed 8-20-62.

753,845. SEA TALK. Dorothy Perkins Cosmetics, Inc. SN 151,521. Pub. 5-14-63. Filed 8-20-62.

753,846. FULL SAIL. Dorothy Perkins Cosmetics, Inc. SN 151,522. Pub. 5-14-63. Filed 8-20-62.

753,847. TROPHI. Paula Payne Products Company. SN 152,912. Pub. 5-14-63. Filed 9-11-62.

753,848. SIGNAL. Lever Brothers Company. SN 154,039. Pub. 5-14-63. Filed 9-27-62.

Class 52 — Detergents and Soaps

753,849. MAINTENOL. The Davies-Young Soap Company. SN 141,265. Pub. 5-14-63. Filed 4-2-62.

753,850. KEE-PHOS. Pennsalt Chemicals Corporation. SN 142,051. Pub. 5-14-63. Filed 4-11-62.

753,851. ELMER'S AND DESIGN OF BULL HEAD. The Borden Company. SN 144,316. Pub. 5-14-63. Filed 5-11-62.

753,852. STAR BRIGHT. Walter M. Elfers, d.b.a. Star Bright Manufacturing Company. SN 144,476. Pub. 5-14-63. Filed 5-14-62.

753,853. COOL-SUDS. Fels and Company. SN 150,543. Pub. 5-14-63. Filed 8-6-62.

753,854. PAINTITE. Purex Corporation, Ltd., d.b.a. Turco Products, Inc. SN 153,320. Pub. 5-14-63. Filed 9-17-62.

753,855. TARN-I-SHIELD. Minnesota Mining and Manufacturing Company. SN 154,270. Pub. 5-14-63. Filed 10-1-62.

753,856. REXONA. Rexona Proprietary Limited. SN 154,850. Pub. 5-14-63. Filed 10-9-62.

753,857. VITA-FLUFF AND DESIGN. Duon Inc. SN 154,890. Pub. 5-14-63. Filed 10-10-62.

753,858. PURGITOL. Harry Miller Corp. SN 155,090. Pub. 5-14-63. Filed 10-12-62.

753,859. GERARDE. Purex Corporation, Ltd. SN 155,194. Pub. 5-14-63. Filed 10-15-62.

Service Marks

Class 100 — Miscellaneous

753,860. LITTLE PIGS OF AMERICA ETC. AND DESIGN. Little Pigs of America, Inc. SN 144,398. Pub. 5-14-63. Filed 5-11-62.

753,861. MULTIPLE DIAMOND DESIGN. Allied Research Products Incorporated. SN 148,285. Pub. 5-14-63. Filed 7-3-62.

753,862. CA DESIGN. Computer Associates, Inc. SN 155,047. Pub. 5-14-63. Filed 10-12-62.

Class 101 — Advertising and Business

753,863. SHOP ACME AND DESIGN. Acme Markets, Inc., by change of name from American Stores Company. SN 142,010. Pub. 5-14-63. Filed 4-11-62.

753,864. AUTOCHARGE. Associated Lerner Shops of America, Inc. SN 142,916. Pub. 5-14-63. Filed 4-24-62.

753,865. JOHN WARD. Melville Shoe Corporation. SN 148,987. Pub. 5-14-63. Filed 7-13-62.

753,866. TREASURE TRADER. Treasure Trader, Inc. SN 149,498. Pub. 5-14-63. Filed 7-20-62.

753,867. ATLAS. Atlas Lift Truck Rentals & Sales, Inc. SN 152,267. Pub. 5-14-63. Filed 8-31-62.

Class 102 — Insurance and Financial

753,868. REPRESENTATION OF A LION. Harris Trust and Savings Bank. SN 115,147. Pub. 5-14-63. Filed 3-8-61.

753,869. HYPERBOLIC PARABOLID SYMBOL. System Development Corporation. SN 129,702. Pub. 5-14-63. Filed 10-11-61.

753,870. 2D. Integrated Data Processing, Inc. SN 133,275. Pub. 5-14-63. Filed 12-4-61.

753,871. PROTECT-U-MATIC. Protective Life Insurance Company. SN 142,857. Pub. 5-14-63. Filed 4-23-62.

753,872. MONY. The Mutual Life Insurance Company of New York. SN 145,110. Pub. 5-14-63. Filed 5-21-62.

753,873. MONY AND DESIGN. The Mutual Life Insurance Company of New York. SN 145,111. Pub. 5-14-63. Filed 5-21-62.

753,874. CREDICARD AND DESIGN. American Health Credit Plan, Inc. SN 147,779. Pub. 5-14-63. Filed 6-27-62.

753,875. HANDI-CHARGE AND DESIGN. Plainfield Trust State National Bank. SN 151,165. Pub. 5-14-63. Filed 8-14-62.

Class 103 — Construction and Repair

753,876. MIDAS BRAKE SHOPS AND DESIGN. Midas, Inc. SN 134,037. Pub. 5-14-63. Filed 12-14-61.

753,877. SUPERWELD. Gervase F. Clifton, d.b.a. Superweld of U.S.A. SN 135,765. Pub. 5-14-63. Filed 1-15-62.

753,878. TIECRAFTERS. Tiecrafters, Inc. SN 136,172. Pub. 5-14-63. Filed 1-19-62.

753,879. JEWELERS BY BIRTH. F. J. Cooper, Inc. SN 143,723. Pub. 5-14-63. Filed 5-3-62.

753,880. DESIGN OF TRIANGLE AND BAR. Kaufman and Broad Building Company, Inc. SN 148,199. Pub. 5-14-63. Filed 7-2-62.

Class 104 — Communication

753,881. TV AND REPRESENTATION OF TELEVISION SCREEN AND KEY. Teleprompter Corporation. SN 144,017. Pub. 5-14-63. Filed 5-7-62.

Class 105 — Transportation and Storage

753,882. NORTH AMERICAN VAN LINES AND DESIGN. North American Van Lines, Inc. SN 115,650. Pub. 5-14-63. Filed 2-24-61.

753,883. TRAVCOA. Travel Corporation of America. SN 154,069. Pub. 5-14-63. Filed 9-27-62.

Class 106 — Material Treatment

753,884. COLORSTAN. Standard Dyeing and Finishing Co. SN 145,218. Pub. 5-14-63. Filed 5-22-62.

753,885. VACUGAS. The Griffith Laboratories, Inc. SN 150,169. Pub. 5-14-63. Filed 7-31-62.

Class 107 — Education and Entertainment

753,886. HYPERBOLIC PARABOLOID SYMBOL. System Development Corporation. SN 129,701. Pub. 5-14-63. Filed 10-11-61.

753,887. HOLLYWOOD MUSEUM ASSOCIATES AND DESIGN. Hollywood Museum Associates. SN 133,560. Pub. 5-14-63. Filed 12-7-61.

753,888. MTI. Massey Technical Institute, Inc. SN 141,968. Pub. 5-14-63. Filed 4-10-62.

753,889. DEMAND RADIO AND DESIGN. Mars Broadcasting, Inc. SN 145,273. Pub. 5-14-63. Filed 5-23-62.

Collective Membership Mark

Class 200

753,890. SHIELD DESIGN. Phi Epsilon Pi Fraternity, Inc. SN 149,202. Pub. 5-14-63. Filed 7-17-62.

Certification Mark

Class A — Goods

753,891. GLOVE WORKERS UNION LABEL OF THE AMALGAMATED CLOTHING WORKERS OF AMERICA. Amalgamated Clothing Workers of America. SN 149,433. Pub. 5-14-63. Filed 7-20-62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 4 — Abrasives and Polishing Materials

753,892. William A. Leavell, Jr., d.b.a. Carrara Stone Company, Belleair, Clearwater, Fla. SN 142,043. Filed P.R. 4-11-62; Am. S.R. 5-22-63.

JUMBO RUBS

For Grinding Stones Used in Grinding Terrazzo Floors and Marble.

First use Feb. 1, 1962.

Class 15 — Oils and Greases

753,893. Bardahl Manufacturing Corporation, Seattle, Wash. SN 135,325. Filed P.R. 1-8-62; Am. S.R. 6-5-63.

SAVOIL

For Oil Additive for Stabilizing Lubricating Oil so as To Reduce Excessive Consumption and for Freeing Sticky Rings, Valves, and Valve Lifters.

First use Nov. 1, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

753,894. Charles W. Saxe, Worcester, Mass. SN 146,109. Filed P.R. 6–4–62; Am. S.R. 5–31–63.

FIREAID

For Blow Tube Used In Connection With a Fire Place.
First use Sept. 3, 1961.

Class 38 — Prints and Publications

753,895. King Publications, San Francisco, Calif. SN 140,459. Filed P.R. 3–22–62; Am. S.R. 4–8–63.

WESTERN MANUFACTURING

For Monthly Trade Magazine.
First use June 1961.

Class 39 — Clothing

753,896. Fern Shoe Company, Los Angeles, Calif. SN 134,966. Filed P.R. 1–2–62; Am. S.R. 5–31–63.

SOFT 'N' SMART

For Ladies' Shoes.
First use Dec. 6, 1961.

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165,832. SODRI. Cl. 37. 3–20–23.
165,951. BREAKFAST BELL. Cl. 46. 3–27–23.
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166,684. FLINT INKS AND DESIGN. Cl. 11. 4–10–23.
166,841. POWER. Cl. 14. 4–17–23.
167,203. KANSAS W AND DESIGN. Cl. 46. 4–24–23.
167,379. ZIN-OX-PADS. Cl. 18. 5–1–23.
167,562. BALSAM-WOOL. Cl. 12. 5–1–23.
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168,189. KOSMIC. Cl. 14. 5–15–23.
169,059. NORRISTOWN DAILY HERALD. Cl. 38. 6–5–23.
169,381. PARIS. Cl. 39. 6–12–23.
169,484. LUXNEW. Cl. 16. 6–19–23.
169,597. BLUE RIBBON. Cl. 48. 6–26–23.
169,671. PENCO. Cl. 42. 6–26–23.
169,873. LUXOLIN. Cl. 16. 7–3–23.
170,476. HERO. Cl. 23. 7–17–23.
170,862. HUM AND DESIGN. Cl. 46. 7–24–23.
171,380. OLD HONESTY AND DESIGN. Cl. 46. 8–7–23.
171,438. THE ECLIPSE BRAND AND DESIGN. Cl. 1. 8–7–23.
171,509. BONDARON. Cl. 35. 8–7–23.
172,462. BANNER AND DESIGN. Cl. 46. 8–28–23.
173,423. LIFETIME. Cl. 37. 9–25–23.
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173,878. GOODNIGHT AND DESIGN. Cl. 32. 10–2–23.
174,207. SOFDOWN AND DESIGN. Cl. 37. 10–9–23.
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175,184. ARGUS. Cl. 39. 10–30–23.
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176,217. PHILLIPS. Cl. 18. 11–20–23.
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401,620. STERNO-CLEANSE. Cl. 18. 5–25–43.
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403,855. MAGNI-FOCUSER AND DESIGN. Cl. 26. 10–19–43.
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403,986. STRONTATE AND DESIGN. Cl. 18. 10–26–43.
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404,290. E & S AND DESIGN. Cl. 46. 11–16–43.
404,296. "SENOR." Cl. 46. 11–16–43.

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646,689. "CHIC MISS." Cl. 3.
646,690. DART. Cl. 4.
646,693. PETAL-TINT AND DESIGN. Cl. 6.
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American Viscose Corp., Philadelphia, Pa. 753,521, pub. 5–14–63. Cl. 1.
Ames, B. C., Co., Waltham, Mass. 753,707, pub. 5–14–63. Cl. 26.
Amway Sales Corp., Ada, Mich. 753,602, pub. 5–14–63. Cl. 16.
Amway Sales Corp., Ada, Mich. 753,694, pub. 5–14–63. Cl. 23.
Andomia Products Ltd., Bradford, England. 753,772, pub. 5–14–63. Cl. 46.
Apex Coated Fabrics Co. Inc., New York, N.Y. 753,523, pub. 5–14–63. Cl. 1.
Apollinaris Brunnen A.G., Bad Neuenahr, Germany. 753,754, pub. 5–14–63. Cl. 45.
Arden, Elizabeth, Sales Corp., New York, N.Y. 646,943, canc. Cl. 51.
Arkansas Co., Inc., Newark, N.J. 753,569, pub. 5–14–63. Cl. 6.
Arlen China Co., New York, N.Y. 753,715, pub. 5–14–63. Cl. 30.
Armour and Co., Chicago, Ill. 753,532–4, pub. 5–14–63. Cl. 1.
Associated Blue Lake Green Bean Canners, Inc., Portland, Oreg. 646,875, canc. Cl. 46.
Associated Lerner Shops of America, Inc., New York, N.Y. 753,864, pub. 5–14–63. Cl. 101.
Associated Merchandising Corp., The : *See*—
Associated Merchandising Corp.
Associated Merchandising Corp., Newark, N.J., and New York, N.Y., to The Associated Merchandising Corp., New York, N.Y. 175,964, ren. 7–30–63. Cl. 39.
Atlantic Chemicals & Metals Co., to Atlantic Chemicals & Metals Co., Chicago, Ill. 403,777, ren. 7–30–63. Cl. 6.
Atlantic Gummed Paper Corp., Brooklyn, N.Y. 753,549, pub. 5–14–63. Cl. 5.
Atlantic Research Corp., Alexandria, Va. 753,588, pub. 5–14–63. Cl. 9.
Atchison Industrial Corp., Fairfax, Va. 753,717, pub. 5–14–63. Cl. 31.
Atlantic Gummed Paper Corp., Brooklyn, N.Y. 753,692, pub. 5–14–63. Cl. 23.
Atlas Lift Truck Rentals & Sales, Inc., Chicago, Ill. 753,867, pub. 5–14–63. Cl. 101.
Aubrundale Co-operative Bank, Aubrundale, Newton, Mass. 646,913, canc. Cl. 102.
Auburn Machine Works, Inc., Auburn, Nebr. 753,687, pub. 5–14–63. Cl. 23.
Autoramic Corp., Lake City, Fla. 646,758, canc. Cl. 19.
B.B. Chemical Co. : *See*—
United Shoe Machinery Corp.
B.B. Pen Co., Inc., Los Angeles, Calif., to Streamer Pen Co., Inc., Culver City, Calif. 646,845, canc. Cl. 37.
Bach, Vincent, Corp., Mount Vernon, N.Y. 753,725, pub 5–14–63. Cl. 36.
Baker Paint & Varnish Co., Jersey City, N.J. 169,484, ren. 7–30–63. Cl. 16.
Baker Paint & Varnish Co., Jersey City, N.J. 169,873, ren. 7–30–63. Cl. 16.
Ball Chemical Co., Glenshaw, Pa. 753,603, pub. 5–14–63. Cl. 16.
Bardahl Mfg. Corp., Seattle, Wash. 753,893. Cl. 15.
Barton Distilling Co., Chicago, Ill. 753,827–9, pub. 5–14–63. Cl. 49.
Barton Mines Corp., North Creek, N.Y. 753,545, pub. 5–14–63. Cl. 4.
Bates, C. J., & Son, to C. J. Bates, & Son, Inc., Chester, Conn. 403,531, ren 7–30–63. Cl. 44.
Bates, C. J., & Son, Inc. : *See*—
Bates, C. J., & Son.
Bayer-Semesan Co., Inc., to E. I. du Pont de Nemours and Co., Wilmington, Del. 404,078, ren. 7–30–63. Cl. 6.
Beecham Products Inc. : *See*—
County Perfumery Co., Inc., The.
Bell, W. & Co. Inc., Washington, D.C. 753,538, pub. 5–14–63. Cl. 3.
Benson and Hullinger Mfg. Corp., Salt Lake City, Utah. 753,834, pub. 5–14–63. Cl. 50.
Berendsen Silk Knitting Co., Bangor, Pa., to Bossong Hosiery Mills, Inc., Asheboro, N.C. 175,796, ren. 7–30–63. Cl. 39.
Bergstrom Paper Co., Neenah, Wis. 753,734, pub. 5–14–63. Cl. 37.
Better Drug Products, Inc., Tulsa, Okla. 646,900, canc. Cl. 51.
Bettina, Inc., Kansas City, Mo. 753,539, pub. 5–14–63. Cl. 3.
Bingham's, Sam'l, Son Mfg. Co., Chicago, Ill. 646,775, canc. Cl. 23.
Bird & Son, Inc., East Walpole, Mass. 753,605, pub. 5–14–63. Cl. 16.
Bireley's Inc., Bensenville, Ill. 753,755, pub. 5–14–63. Cl. 45.
Birge Co., Inc., The, Buffalo, N.Y. 753,731, pub. 5–14–63. Cl. 37.
Birkenwald, S., Co., Portland, Oreg. 646,832, canc. Cl. 32.
Bismark Records, Denton, Tex. 753,727, pub. 5–14–63. Cl. 36.
Black Panther Co., Inc., Sanford, N.C. 753,531, pub. 5–14–63. Cl. 1.
Blessings, Inc., Cleveland, Ohio. 753,643–4, pub. 5–14–63. Cl. 18.
Bolkow-Apparatebau GmbH, Nabern/Teck, near Kircheim, Wurttemburg, Germany. 753,587. Pub. 2–26–63, Cl. 9; pub. 4–30–63, Cl. 19; pub. 5–7–63, Cl. 26. (Consolidated certificate Cls. 9, 19 and 26).
Bond, Charles, Co., Philadelphia, Pa. 171,509, ren. 7–30–63. Cl. 35.
Bond, Charles, Co., Philadelphia, Pa. 173,733, ren. 7–30–63. Cl. 23.
Borden Co., The, New York, N.Y. 753,851, pub. 5–14–63. Cl. 52.
Borg-Warner Corp. : *See*—
York Ice Machinery Corp.
Borg-Warner Corp., Chicago, Ill. 753,702–3, pub. 5–14–63. Cls. 26 and 36.
Bossong Hosiery Mills, Inc. : *See*—
Berendsen Silk Knitting Co.
Bossong, Joseph C.
Bossong, J. C., & Co. : *See*—
Bossong, Joseph C.
Bossong, Joseph C., d.b.a. J. C. Bossong & Co., to Bossong Hosiery Mills, Inc., Asheboro, N.C. 175,184, ren. 7–30–63. Cl. 39.
Botany Industries, Inc. : *See*—
Botany Worsted Mills.
Botany Worsted Mills, Passaic, N.J., to Botany Industries, Inc., New York, N.Y. 404,135, ren. 7–30–63. Cl. 43.
Bowey's, Inc., Chicago, Ill. 753,784, pub. 5–14–63. Cl. 46.
Bowman, Lee, Co., St. Louis, Mo. 753,836, pub. 5–14–63. Cl. 50.
Bradley, Milton, Co., Springfield, Mass. 753,670, pub. 5–14–63. Cl. 22.
Breskin Publications, Inc., New York, N.Y. 753,743, pub. 5–14–63. Cl. 38.

Bristol-Myers Co., New York, N.Y. 753,638, pub. 5–14–63. Cl. 18.
British Chemotheutic Products Ltd., Bradford, England. 753,773, pub. 5–14–63. Cl. 46.
Brockstein, Irvin H., Houston, Tex. 753,726, pub. 4–30–63. Cl. 36.
Brown, Clarence B., d.b.a. C. B. & Co., and as Singua-Musica, Minneapolis, Minn. 753,723–4, pub. 5–14–63. Cl. 36.
Brown, D. S. Co., The, North Baltimore, Ohio. 753,529, pub. 5–14–63. Cl. 1.
Brown, Matthew L., Springfield, Ohio. 646,762, canc. Cl. 21.
Byk-Gulden Lomberg, Chemische Fabrik GmbH., Konstanz, Germany. 753,655, pub. 5–14–63. Cl. 18.
C.B. & Co.: *See*—
Brown, Clarence B.
Caled Products Co., Inc., Brentwood, Md. 753,574, pub. 5–14–63. Cl. 6.
Calumet Tonnage Master, Fabricators, Inc., Chicago, Ill. 646,754, canc. Cl. 19.
Cal-Zona Co., d.b.a. Cal-Zona, Inc., Glendale, Ariz. 753,770, pub. 5–14–63. Cl. 46.
Cal-Zona, Inc.: *See*—
Cal-Zona Co.
Cambridge Associates, Inc., Boston, Mass. 753,742, pub. 5–14–63. Cl. 38
Cambridge Chemical Products, Inc., Dearborn, Mich. 753,565, pub. 5–14–63. Cl. 6.
Capehart Corp.: *See*—
Capehart-Farnsworth Co., a Division of International Telephone and Telegraph Corp.
Canned Foods Forum: *See*—
Zwicky, Robert H.
Capehart-Farnsworth Co., a Division of International Telephone and Telegraph Corp., to Capehart Corp., New York, N.Y. 646,761, canc. Cl 21.
Captay Co., Reno, Nev 646,793, canc. Cl. 26.
Careyn Chemical Co., Riverdale, Md. 646,742, canc. Cl. 16.
Carrara Stone Co: *See*—
Leavell, William A., Jr.
Carten, Frederick Joseph, Westmount, Quebec, Canada. 753,785, pub. 5–14–63. Cl. 46.
Carvel, Thomas, Yonkers, N.Y. 753,756, pub. 5–14–63. Cl. 45.
Castle & Cooke, Ltd., Honolulu, Hawaii. 646,936–7, canc. Cl. 46.
Cawy Bottling Co.: *See*—
Rovira, Nestor Machado.
Cerna Food Products Co., Chicago, Ill. 753,763, pub. 5–14–63. Cl. 46.
Chambers Godfrey Mfg. Co., d.b.a. Martenn Hams, Martin, Tenn. 753,802, pub. 5–14–63. Cl 46.
Chartres Co., Inc., New Orleans, La. 753,562, pub. 5–14–63. Cl. 6.
Chattanooga Medicine Co., The, d.b.a. Chattem Laboratories, Chattanooga, Tenn. 753,648, pub. 5–14–63. Cl. 18.
Chattem Laboratories: *See*—
Chattanooga Medicine Co., The.
Chip Steak Co., d.b.a. Western Royal Co., Oakland, Calif. 753,780, pub. 5–14–63. Cl. 46.
Chun King Corp., The, Duluth, Minn. 753,787, pub. 5–14–63. Cl. 46.
Ciba Ltd., Basel, Switzerland. 753,583, pub. 5–14–63. Cl. 6.
Ciba Ltd., Basel, Switzerland. 753 653, pub. 5–14–63. Cl. 18.
Cinderell International Co., Inc., Chicago, Ill. 753,546, pub. 5–14–63. Cl. 4.
Clay-Adams Inc., New York, N.Y. 646,696, canc. Cl. 6.
Clifton, Gervase F., d.b.a. Superweld of U.S.A., Brownsboro, Tex. 753,877, pub. 5–14–63. Cl. 103.
Coast-T-Coast: *See*—
Alves Photo Service, Inc.
Cold Corp. of America, Chicago, Ill. 646,823, canc. Cl. 31.
Colgate-Palmolive Co., New York, N.Y. 753,841, pub. 5–14–63. Cl. 51.
Collins Radio Co., Cedar Rapids, Iowa. 753,749, pub. 5–14–63. Cl. 38.
Colorcon, Inc., Ambler, Pa. 753,628, pub. 5–14–63. Cl. 18.
Columbia Wax Co.: *See*—
United States Borax & Chemical Corp.
Computer Associates, Inc., Woburn, Mass. 753,862, pub. 5–14–63. Cl. 100.
Consolidated Rendering Co., Boston, Mass. 172,462, ren. 7–30–63. Cl. 46.
Continental Beverages, Inc., Winter Haven, Fla. 753,830, pub. 5–14–63. Cl. 49.
Continental Sales Co., Nevada, Iowa. 753,706, pub. 5–14–63. Cl. 26.
Cooper, F. J., Inc., Philadelphia, Pa. 753,879, pub. 5–14–63. Cl. 103.
Corn Products Co.: *See*—
Corn Products Refining Co.
Corn Products Refining Co., to Corn Products Co., New York, N.Y. 402,418, ren. 7–30–63. Cl. 1.
Cotillion Formals, Inc., New York, N.Y. 646,860, canc. Cl. 39.
Cotton Club Bottling Co.: *See*—
Miller-Becker Co., The.
County Perfumery Co., Inc., The, Bloomfield, to Beecham Products Inc., Clifton, N.J. 402,575, ren. 7–30–63. Cl. 51.
County Perfumery Co., Inc., The, Bloomfield, to Beecham Products Inc., Clifton, N.J. 402,692, ren. 7–30–63. Cl. 52.
Crofton Plastics, Inc., Byron Center, Mich. 753,660, pub. 5–14–63. Cl. 20.
Crown Imports Co. Inc., San Francisco, Calif. 753,765, pub. 5–14–63. Cl. 46.
Crucible Steel Co. of America, Pittsburgh, Pa. 753,599, pub. 5–14–63. Cl. 14.
Curtis, Helene, Industries, Inc., Chicago, Ill. 646,899, canc. Cl. 51.
Dalin Pharmaceuticals, Inc., Bayside, N.Y. 753,615, pub. 5–14–63. Cl. 18.
Dare, Virginia, Extract Co., Inc., Brooklyn, N.Y. 753,760, pub. 5–14–63. Cl. 45.
David, Andre S., New York, N.Y. 646,857, canc. Cl. 39.
Davies Young Soap Co., The, Dayton, Ohio. 753,849, pub. 5–14–63. Cl. 52.
Davis Candy Corp., Long Island City, N.Y. 753,821, pub. 5–14–63. Cl. 46.
Dayton Electric Mfg. Co., Chicago, Ill. 753,662, pub. 5–14–63. Cl. 21.
Dayton Electric Mfg. Co., Chicago, Ill. 753,699, pub. 5–14–63. Cl. 26.
Decatur Brewing Co., Decatur, Ill., to Pabst Brewing Co., Milwaukee, Wis. 169,597, ren. 7–30–63. Cl. 48.
Dee-o Grilles, Inc., Long Beach, N.Y. 646,888, canc. Cl. 50.
DeMert & Dougherty, Inc., Chicago, Ill. 753,582, pub. 5–14–63. Cl. 6.
De Terry, Fernando A., S.A., Puerto de Santa Maria, Spain. 753,824, pub. 5–14–63. Cl. 47.
De Terry, Fernando A., S.A., Puerto de Santa Maria, Spain. 753,826, pub. 5–14–63. Cl. 49.
Dietene Co., The, Minneapolis, Minn. 753,774, pub. 5–14–63. Cl. 46.
Dille, John F., Co., Chicago, Ill. 646,767, canc. Cl. 22.
Dinco-Gray Co., Dayton, Ohio. 753,671, pub. 5–14–63. Cl. 22.
Ditto, Inc., from Ditto, Inc., Chicago, Ill. 753,704, pub. 5–14–63. Cl. 26.
Dodge & Seymour, Ltd.: *See*—
Markt & Hammacher Co.
Dolge, C. B., The, Westport, Conn. 753,570, pub. 5–14–63. Cl. 6.
Domar Buckle Mfg. Corp., New York, N.Y. 646,866, canc. Cl. 40.
Drackett Co., The, Cincinnati, Ohio. 753,568, pub. 5–14–63. Cl. 6.
Dritz, John, & Sons, Inc., Spartanburg, S.C. 753,750, pub. 5–14–63. Cl. 40.
Duon Inc., Coral Gables, Fla. 753,857, pub. 5–14–63. Cl. 52.
Du Pont de Nemours, E. I., and Co.: *See*—
Bayer-Semesan Co., Inc.
Edroy Products Co., to E. J. Herbert, d.b.a. Edroy Products Co., New York, N.Y. 403,855, ren. 7–30–63. Cl. 26.
Educational Developmental Laboratories, Inc., Huntington, N.Y. 753,711, pub. 5–14–63. Cl. 26.
Eichelberger, J. E., d.b.a. Home Health Equipment Co., Pekin, Ill. 753,612, pub. 5–14–63. Cl. 18.
Eisendrath, B. D., Tanning Co., Chicago, Ill. 753,530, pub. 5–14–63. Cl. 1.
Electric Machinery Mfg. Co., Minneapolis, Minn. 753,663, pub. 5–14–63. Cl. 21.
Elfers, Walter M., d.b.a. Star Bright Mfg. Co., Fort Lauderdale, Fla. 753,852, pub. 5–14–63. Cl. 52.
Ellison Laboratories, Inc., Westbury, N.Y. 753,639, pub. 5–14–63. Cl. 18.
Elmore and Stahl, Pharr, Tex, 404,290, ren. 7–30–63. Cl. 46.
Embossograph Process Co. Inc., Brooklyn, N.Y. 753,594, pub. 5–14–63. Cl. 11.
Emerson Electric Mfg. Co., The, St. Louis, Mo. 646,841, canc. Cl. 34.
Endo Laboratories, Inc.: *See*—
Endo Products Inc.
Endo Laboratories, Inc., Richmond Hill, N.Y. 753,646, pub. 5–14–63. Cl. 18.
Endo Products Inc., New York, N.Y., to Endo Laboratories, Inc., Richmond Hill, N.Y. 403 986, ren. 7–30–63. Cl. 18.
Endo Products Inc., New York, N.Y., to Endo Laboratories, Inc., Richmond Hill, N.Y. 404,121, ren. 7–30–63. Cl. 18.
Envopak Ltd., London, England. 753,535, pub. 5–14–63. Cl. 2.
Evans, Geraldine Ogilby, d.b.a. Gae's Originals, Briarcliff Manor, N.Y. 753,746, pub. 5–14–63. Cl. 38.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 753,610, pub. 5–14–63. Cl. 18.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 753,625, pub. 5–14–63. Cl. 18.
Faultless Starch Co., Kansas City, Mo. 753,555, pub. 5–14–63. Cl. 6.
Faultless Starch Co., Kansas City, Mo. 753,580, pub. 5–14–63. Cl. 6.
Fawcett Publications, Inc.: *See*—
McKesson & Robbins, Inc.
Federal Employees' Distributing Co., Los Angeles, Calif. 646,829, canc. Cl. 31.
Fellows Medical Mfg. Co., Inc., from Teetagar & Co., Inc., Detroit, Mich. 753,647, pub. 5–14–63. Cl. 18.
Fels and Co., Philadelphia, Pa. 753,853, pub. 5–14–63. Cl. 52.
Fern Shoe Co., Los Angeles, Calif. 753,896. Cl. 39.
Filtered Rosin Products Co., St. Louis, Mo. 753,559, pub. 5–14–63. Cl. 6.
Fine Foods & Products Co.: *See*—
Onnes, Michael H.
Fischl, Janet W., Plandome Manor, N.Y. 646,819, canc. Cl. 30.
Fisher, George Edward, and William Van Rush, Jr., Little Rock, Ark. 646,919, canc. Cl. 107.
Flint, Howard, Ink. Co., to Flint Ink Corp., Detroit, Mich. 166 684, ren. 7–30–63. Cl. 11.
Flint Ink Corp.: *See*—
Flint, Howard, Ink Co.
Floridin Co., Quincy, Fla. 403,987, ren. 7–30–63. Cl. 6.
Food Industry Flavors: *See*—
Karmen, Bernardo H.
Foremost Dairies, Inc., San Francisco, Calif. 753,818, pub. 5–14–63. Cl. 46.
Fort Howard Paper Co., Green Bay, Wis. 165,832, ren. 7–30–63. Cl. 37.
Fort Pierce Industries, Inc., Fort Pierce, Fla. 646,799, canc. Cl. 26.

Fox Foods, Inc., Queen Anne, Md. 753,814, pub. 5–14–63, Cl. 46.
Frank Industries, Inc., Van Nuys, Calif. 753,709, pub. 5–14–63. Cl. 26.
Frankel, Charles, d.b.a. Frankel Co., Brooklyn, N.Y. 753,718, pub. 5–14–63. Cl. 28.
Frankel Co.: *See*—
Frankel, Charles.
Frisco Foods Corp., Wilmington, Del. 753,769, pub. 5–14–63. Cl. 46.
Fuller, D. B., & Co., Inc., New York, N.Y. 646,871, canc. Cl. 42.
Fuller, D. B., & Co., Inc., New York, N.Y. 646,935, canc. Cl. 42.
Gabriel u Jos. Sedlmayr Spaten-Franziskaner-Leistbrau A.-G. Munchen, Munich, Germany. 342,671, canc. Cl. 48.
Gae's Originals: *See*—
Evans, Gerardine Ogilby.
Gamber, W. Ralph, d.b.a. Lancaster County Dutch Gold Apiaries, Lancaster, Pa. 753,776, pub. 5–14–63. Cl. 46.
Gendia, Inc., New York, N.Y. 646,708, canc. Cl. 8.
General Foods Corp., White Plains, N.Y. 753,796, pub. 5–14–63. Cl. 46.
General Industries Co., The, Elyria, Ohio. 753,696, pub. 5–14–63. Cl. 24.
General Mills, Inc., Minneapolis, Minn. 753,816, pub. 5–14–63. Cl. 46.
General Motors Corp., Detroit, Mich. 646,727, canc. Cl. 14.
Gevaert Photo Producten, Oude-God, near Antwerp, Belgium, to Gevaert Photo-Producten N.V., Mortsel, Belgium. 165,667, ren. 7–30–63. Cl. 26.
Gevaert Photo-Producten N.V.: *See*—
Gevaert Photo Producten.
Gilbert, A. C., Co., The, New Haven, Conn. 753,672–3, pub. 5–14–63. Cl. 22.
Glenmore Distilleries Co., Owensboro, Ky. 753,832, pub. 5–14–63. Cl. 49.
Globe Rubber Products Corp., Philadelphia, Pa. 753,835, pub. 5–14–63. Cl. 50.
Goodrich, B. F., Co., The, Akron, Ohio. 753,722, pub. 5–14–63. Cl. 35.
Gobshops of America, Inc., Pawtucket, R.I. 646,932, canc. Cl. 39.
Grand Union Co., The, East Paterson, N.J. 753,567, pub. 5–14–63. Cl. 6.
Great West Coal Sales Co., New York, N.Y. 753,524, pub. 5–14–63. Cl 1.
Green Giant Co., Le Sueur, Minn. 753,810, pub. 5–14–63. Cl. 46.
Green & Reedy Fertilizer, Inc., Franklinton, La. 753,593, pub. 5–14–63. Cl. 10.
Greensboro Vending Machine Co., Greensboro, N.C. 646,830, canc. Cl. 32.
Griffith Laboratories, Inc., The, Chicago, Ill. 753,885, pub. 5–14–63. Cl. 106.
Grocers Specialty Co. (Proprietary) Ltd., The, Johannesburg, South Africa. 646,697, canc. Cl. 6.
Gaell, R., & Co., Inc., New York, N.Y. 402,778, ren. 7–30–63. Cl. 27.
Gulf States Paper Corp., Tuscaloosa, Ala. 753,729, pub. 5–14–63. Cl. 37.
Hamm, Theo., Brewing Co., St. Paul, Minn. 753,825, pub. 5–14–63 Cl. 48.
Hammond Brass Works, Hammond, Ind. 646,737, canc. Cl. 16.
Harcourt, Brace & World, Inc., New York, N.Y. 753,837, pub. 5–14–63. Cl. 50.
Harris Products Co., Brooklyn, N.Y. 646,765, canc. Cl. 22.
Harris Trust and Savings Bank, Chicago, Ill. 753,868, pub. 5–14–63. Cl. 102.
Hartford Publications, Inc., from USA 1 Inc., New York, N.Y. 753,745, pub. 5–14–63. Cl. 38.
Hartmann Luggage Co., Racine, Wis. 646,689, canc. Cl. 3.
Heath, Walter, d.b.a. Walter Heath Co., Fair Haven, N.J. 753,700, pub. 5–14–63. Cl. 26.
Heath, Walter, Co.: *See*—
Heath, Walter.
Helms Bakeries, Los Angeles, Calif. 646,878, canc. Cl. 46.
Hemphill Co., Hopedale, Mass. 753,685, pub. 5–14–63. Cl. 23.
Herald Pharmacal, Inc., Wake Forest, N.C. 753,640, pub. 5–14–63. Cl. 18.
Herbert, Edward J.: *See*—
Edroy Products Co.
Herschi N.V., Hoensbroek, Netherlands. 753,758, pub. 5–14–63. Cl. 45.
Hershey Chocolate Corp., Hershey, Pa. 753,775, pub. 5–14–63. Cl. 46.
Hesse, Albert R., d.b.a. Square Deal Co., Willmar, Minn. 646,889 canc. Cl. 50.
Hoffman Brothers Drilling Co., Punxsutawney, Pa. 753,689–91, pub. 5–14–63. Cl. 23.
Holland Food Corp., New York, N.Y., to Koninklijke Hollandia Fabrieken Van Melkprodukten en Voedingsmiddelen N.V., Vlaardingen, Netherlands. 170,862, ren. 7–30–63. Cl. 46.
Hollywood Museum Associates, Beverly Hills, Calif. 753,887, pub. 5–14–63. Cl. 107.
Home Health Equipment Co.: *See*—
Eichelberger, J. E.
Hood, H. P., & Sons, Inc.: *See*—
Johnson-Appleby Co.
Houghton, E. F., & Co., Philadelphia, Pa. 753,721, pub. 5–14–63. Cl. 35.
Howe, Charles O., d.b.a. Port City Minerals Co., Chicago, Ill. 753,525, pub. 5–14–63. Cl. 1.
Huff, O. D., Jr., Groves, Inc., McIntosh, Fla. 753,820, pub. 5–14–63. Cl. 46.
Humble Oil & Refining Co., Houston, Tex. 753,581, pub. 5–14–63. Cl. 6.
Humpty Dumpty Potato Chip Co., Scarborough, Maine. 753,793–4, pub. 5–14–63. Cl. 46.
Integrated Data Processing, Inc., Orange, N.J. 753,870, pub. 5–14–63. Cl. 102.
Invincible Products Corp., Chicago, Ill. 753,840, pub. 5–14–63. Cl. 51.
International Minerals & Chemical Corp., Skokie, Ill. 753,766, pub. 5–14–63. Cl. 46.
Industrial Consulting & Design Service, Scotch Plains, N.J. 753,732, pub. 5–14–63. Cl. 37.
Industrial Soap Co., St. Louis, Mo. 753,585, pub. 5–14–63. Cl. 6.
Imperial Chemical Industries Ltd., London, England. 753,552, pub. 5–14–63. Cl. 6.
International Harvester Co., Chicago, Ill. 753,536, pub. 5–14–63. Cl. 2.
Imperial Knife Co., Inc., Providence, R.I. 646,926, canc. Cl. 23.
Insul-Lyte Corp., River Rouge, Mich. 646,836, canc. Cl. 34.
International Housewares, Inc., Fishers, N.Y. 646,716, canc. Cl. 13.
Jerisaa Nut Co., Inc., Brooklyn, N.Y. 753,806, pub. 5–14–63. Cl. 46.
Jones Dairy Farm, Fort Atkinson, Wis. 753,790, pub. 5–14–63. Cl. 46.
Johnson, S. C., & Son, Inc., Racine, Wis. 753,520, pub. 5–14–63. Cl. 1.
Johnson-Appleby Co., to H. P. Hood & Sons, Inc., Boston, Mass. 171,380, ren. 7–30–63. Cl. 46.
Karmen, Bernardo H., d.b.a. Food Industry Flavors, Glendale, Calif. 753,807, pub. 5–14–63. Cl. 46.
Kaufman and Broad Building Co., Inc., Phoenix, Ariz. 753,880, pub. 5–14–63. Cl. 103.
Kaz Heating Products, Inc., New York, N.Y. 753,752, pub. 5–14–63. Cl. 44.
Kimberly-Clark Corp., Neenah, Wis. 753,738, pub. 5–14–63. Cl. 37.
King Publications, San Francisco, Calif. 753,895. Cl. 38.
Kiwi Polish Co. Proprietary Ltd., The, Richmond, near Melbourne, Victoria, Australia. 753,543, pub. 5–14–63. Cl. 4.
Kiwi Polish Co. Proprietary Ltd., The, Richmond, near Melbourne, Victoria, Australia. 753,558, pub. 5–14–63. Cl. 6.
Klatt, Paul, from Kraf Mfg. Co., Inc., Monahans, Tex. 753,517, pub. 5–14–63. Cl. 1.
Knothe Brothers Co., Inc., New York, N.Y. 176,026, ren. 7–30–63. Cl. 39.
Koninklijke Hollandia Fabrieken Van Melkprodukten en Voedingsmiddelen N.V.: *See*—
Holland Food Corp.
Kraf Mfg. Co., Inc.: *See*—
Klatt, Paul.
Kramer, Gerald, d.b.a. Aluminum Awning Co. of America, Pittsburgh, Pa. 646,921, canc. Cl. 12.
Kress, S. H., and Co., New York, N.Y. 646,690, canc. Cl. 4.
Krug Baking Co.: *See*—
Krug, George A., Baking Co.
Krug, George A., Baking Co., d.b.a. Krug Baking Co., Jamaica, N.Y. 753,815, pub. 5–14–63. Cl. 46.
Lakeside Laboratories, Inc., Milwaukee, Wis. 753,654, pub. 5–14–63. Cl. 18.
Lancaster County Dutch Gold Apiaries: *See*—
Gamber, W. Ralph.
Langfelder, Homma & Carroll, Inc., New York, N.Y. 753,665, pub. 5–14–63. Cl. 22.
Lavin, R., & Sons, Inc., Chicago, Ill. 753,598, pub. 5–14–63. Cl. 14.
Leavell, William A., Jr., d.b.a. Carrara Stone Co., Clearwater, Fla. 753,544, pub. 5–14–63. Cl. 4.
Leavell, William A., Jr., d.b.a. Carrara Stone Co., Belleair, Clearwater, Fla. 753,892. Cl. 4.
Letters, John, and Co. Ltd., Glasgow, Scotland. 753,682, pub. 5–14–63. Cl. 22.
Lever Brothers Co., New York, N.Y. 753,848, pub. 5–14–63. Cl. 51.
Lighting Dynamics, Inc.: *See*—
Sunbeam Lighting Co., Inc.
Lip Societe Anonyme d'Horlogerie, Besancon (Doubs), France. 753,661, pub. 5–14–63. Cl. 21.
Lip Societe Anonyme d'Horlogerie, Besancon, Doubs, France. 753,684, pub. 5–14–63. Cl. 23.
Little Pigs of America, Inc., Memphis, Tenn. 753,860, pub. 5–14–63. Cl. 100.
Ludlow Corp., Needham Heights, Mass. 753,736, pub. 5–14–63. Cl. 37.
MP Pumps, Inc., Detroit, Mich. 753,688, pub. 5–14–63. Cl. 23.
MacAndrews and Forbes Co., Camden, N.J. 753,781, pub. 5–14–63. Cl. 46.
MacAndrews and Forbes Co., Camden, N.J. 753,608, pub. 5–14–63. Cl. 17.
MacAndrews and Forbes Co., Camden, N.J. 753,563, pub. 5–14–63. Cl. 6.
MacCallen Co., Inc., The, New Market, N.H. 753,519, pub. 5–14–63 . Cl. 1.
Mackintosh-Hemphill Co., Pittsburgh, Pa. 366,630, canc. Cl. 14.
Mackintosh-Hemphill Co., Pittsburgh, Pa. 366,626, canc. Cl. 14.
MacMillan Ring-Free Oil Co., Inc., New York, N.Y. 753,607, pub. 5–14–63. Cl. 16.
Magnet Cove Barium Corp., Houston, Tex. 753,514, pub. 5–14–63. Cl. 1.
Magnolia Metal Co. Inc.: *See*—
Magnolia Metal Co.
Magnolia Metal Co., New York, N.Y., to Magnolia Metal Co. Inc., Auburn, Nebr. 168,189, ren. 7–30–63. Cl. 14.
Magnolia Metal Co., New York, N.Y., to Magnolia Metal Co., Inc., Auburn, Nebr. 168,189, ren. 7–30–63. Cl. 14.
Makers of Kal, Inc., Los Angeles, Calif. 753,801, pub. 5–14–63. Cl. 46.
Mandabach, Paul J., Inc., Chicago, Ill. 753,572, pub. 5–14–63. Cl. 6.

Markt & Hammacher Co., to Dodge & Seymour, Ltd., New York, N.Y. 170,476, ren. 7–30–63. Cl. 23.
Mars Broadcasting, inc., Stamford, Conn. 753,889, pub. 5–14–63. Cl. 107.
Martenn Hams: *See*—
Chambers-Godfrey Mfg. Co.
Marvin Electric Mfg. Co., Los Angeles, Calif. 646,835, canc. Cl. 34.
Marx, Louis, & Co., Inc., New York, N.Y. 753,680, pub. 5–14–63. Cl. 22.
Marx, Louis, & Co., Inc., New York, N.Y. 753,677, pub. 5–14–63. Cl. 22.
Massey Technical Institute, Inc., Jacksonville, Fla. 753,888, pub. 5–14–63. Cl 107.
Mattel, Inc., Hawthorne, Calif. 753,681, pub. 5–14–63. Cl. 22.
Mayers, L. & C., Co., Inc., New York, N.Y. 646,904, canc. Cl. 101.
McBride and Oxford Mfg. Co., Selma, Ala. 646,768, canc. Cl. 22.
McHutchinson & Co., Ridgefield, N.J. 753,522, pub. 5–14–63. Cl. 1.
McKesson & Robbins, Inc., to Fawcett Publications, Inc., New York, N.Y. 404,137, ren. 7–30–63. Cl. 38.
McMurdo, Hew B., San Francisco, Calif. 646,796, canc. Cl. 26.
Meat Industry Suppliers, Inc., Northfield, Ill. 753,822, pub. 5–14–63. Cl. 46.
Mediterranee Flowers, Inc., Cambria Heights, N.Y. 753,833, pub. 5–14–63. Cl. 50.
Melville Shoe Corp., New York, N.Y. 753,865, pub. 5–14–63. Cl. 101.
Merck & Co., Inc., Rahway, N.J. 753,637, pub. 5–14–63. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 753,641, pub. 5–14–63. Cl. 18.
Metal Cutting Tools Inc., Rockford, Ill. 402,731, ren. 7–30–63. Cl. 23.
Metetelic Corp., Milford, Conn. 753,712, pub. 5–14–63. Cl. 26.
Miami Products & Chemical Co., The, Dayton, Ohio. 753,553, pub. 5–14–63. Cl. 6.
Midas, Inc., Chicago, Ill. 753,876, pub. 5–14–63. Cl. 108.
Miller-Becker Co., The, d.b.a. Cotton Club Bottling Co., Cleveland, Ohio. 753,757, pub. 5–14–63. Cl. 45.
Milprint, Inc., Milwaukee, Wis. 753,737, pub. 5–14–63. Cl. 37.
Miller, Harry, Corp., Philadelphia, Pa. 753,858, pub. 5–14–63. Cl. 52.
Miner, Clement P., Stamford, Conn. 646,764, canc. Cl. 22.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 753,855, pub. 5–14–63. Cl. 52.
Mission Valley Canning Co., Inc., d.b.a. Mission Valley Canning Co., San Jose, Calif. 753,771, pub. 5–14–63. Cl. 46.
Mission Valley Canning Co., Inc., San Jose, Calif. 753,782, pub. 5–14–63. Cl. 46.
Mission Valley Canning Co.: *See*—
Mission Valley Canning Co., Inc.
Mitchum Co., The, Paris, Tenn. 753,843, pub. 5–14–63. Cl. 51.
Mohasco Industries, Inc., Amsterdam, N.Y. 646,870, canc. Cl. 42.
Monsanto Chemical Co., St. Louis, Mo. 646,698, canc. Cl. 6.
Montgomery Ward & Co., Inc., Chicago, Ill. 753,537, pub. 5–14–63. Cl. 3.
Morningstar-Paisley, Inc., New York, N.Y. 753,550, pub. 5–14–63. Cl. 5.
Morris, Layton C., Arvada, Colo. 646,923, canc. Cl. 22.
Mutual Life Insurance Co. of New York, The, New York, N.Y. 753,872–3, pub. 5–14–63. Cl. 102.
National Rural Electric Cooperative Association, Washington, D.C. 646,846, canc. Cl. 38.
National Solvent Corp., Cleveland, Ohio. 753,601, pub. 5–14–63. Cl. 16.
National Tea Co., Chicago, Ill. 753,730, pub. 5–14–63. Cl. 37.
National Tea Co., Chicago, Ill. 753,516, pub. 5–14–63. Cl. 1.
New Jersey Zinc Co., The, New York, N.Y. 174,809, ren. 7–30–63. Cl. 6.
New Zealand Refrigerating Co., Ltd., The, Christchurch, New Zealand. 167,646, ren. 7–30–63. Cl. 4.
New Zealand Refrigerating Co., Ltd., The, Christchurch, New Zealand. 171,438, ren. 7–30–63. Cl. 1.
No. 1–A District Agricultural Association of The State of California, San Francisco, Calif. 753,741, pub. 5–14–63. Cl. 38.
North American Van Lines, Inc., Fort Wayne, Ind. 753,882, pub. 5–14–63. Cl. 105.
Norristown Herald, Inc., Norristown, Pa. 169,059, ren. 7–30–63. Cl. 38.
Oceanic Instruments, Inc., Houghton, Wash. 753,708, pub. 5–14–63. Cl. 26.
Odermatt, Albert C., d.b.a. Odie's Distributing Co., Pittsburgh, Pa.) 646,739, canc. Cl. 16.
Odie's Distributing Co.: *See*—
Odermatt, Albert C.
Oil-Dri Corp. of America, Chicago, Ill. 753,527, pub. 5–14–63. Cl. 1.
Olin Mathieson Chemical Corp., New York, N.Y. 753,577, pub. 5–14–63. Cl. 6.
Olin Mathieson Chemical Corp., New York, N.Y. 753,623, pub. 5–14–63. Cl. 18.
Onnes, Michael H., d.b.a. Fine Foods & Products Co., Burbank, Calif. 753,714, pub. 5–14–63. Cl. 29.
Oregon Nut Shellers, Inc., Hillsboro, Oreg. 753,819, pub. 5–14–63. Cl. 46.
Pabst Brewing Co.: *See*—
Decatur Brewing Co.
Pacific Olive Co., to Pacific Olive Co., Visalia, Calif. 404,296, ren. 7–30–63. Cl. 46.
Packaged Products Corp., Brooklyn, N.Y. 753,786, pub. 5–14–63. Cl. 46.
Parke, Davis & Co., Detroit, Mich. 175,422, ren. 7–30–63. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 753,616, pub. 5–14–63. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 753,626, pub. 5–14–63. Cl. 18.
Park-Elitch Co., Denver, Colo. 646,693, canc. Cl. 6.
Parker Laboratories, Inc., Newark, N.J. 753,573, pub. 5–14–63. Cl. 6.
Parkhurst, Alfred S., d.b.a. Walker Mfg. Co., Portland, Oreg. 646,705, canc. Cl. 8.
Pastene Wine & Spirits Co., Inc., Boston, Mass. 401,969, ren. 7–30–63. Cl. 47.
Pastene Wine & Spirits Co., Inc., Boston, Mass. 400,328, ren. 7–30–63. Cl. 47.
Patten, Lee, Seed Co., Jersey City, N.J. 753,590–2, pub. 5–14–63. Cl. 10.
Payne, Paula, Products Co., Charlotte, N.C. 753,847, pub. 5–14–63. Cl. 51.
Peerless Mfg. Co., The, Norristown, to The Peerless Paper Mills, Inc., Oaks, Pa. 174,207, ren. 7–30–63. Cl. 37.
Peerless Paper Mills, Inc., The: *See*—
Peerless Mfg. Co., The.
Penick & Ford, Ltd., Inc., New York, N.Y. 753,548, pub. 5–14–63. Cl. 5.
Penn Dairies, Inc., Lancaster, Pa. 753,761, pub. 5–14–63. Cl. 46.
Penney, J. C., Co., Salt Lake City, Utah, and New York, N.Y., to J. C. Penney Co., New York, N.Y. 169,671, ren. 7–30–63. Cl. 42.
Pennsalt Chemicals Corp., Philadelphia, Pa. 753,850, pub. 5–14–63. Cl. 52.
Penny-Pak Inc., Danville, Ill. 753,838, pub. 5–14–63. Cl. 50.
Perkins, Dorothy, Cosmetics, Inc., St. Louis, Mo. 753,844–6, pub. 5–14–63. Cl. 51.
Pfeiffer Co., The, St. Louis, Mo. 753,624, pub. 5–14–63. Cl. 18.
Pfizer, Chas., & Co., Inc., New York, N.Y. 753,618, pub. 5–14–63. Cl. 18.
Pfizer, Chas., & Co., Inc., New York, N.Y. 753,629–35, pub. 5–14–63. Cl. 18.
Phi Epsilon Pi Fraternity, Inc., Philadelphia, Pa. 753,890, pub. 5–14–63. Cl. 200.
Phillips, Charles H., Chemical Co., The, Glenbrook, Conn., and New York, N.Y., to Sterling Drug Inc., New York, N.Y. 176,216–17, ren. 7–30–63. Cl. 18.
Phillips-Jones Corp., to Phillips-Van Heusen Corp., New York, N.Y. 166,214, ren. 7–30–63. Cl. 42.
Phillips-Van Heusen Corp.: *See*—
Phillips-Jones Corp.
Phoenix Gems, Inc., Phoenix, Ariz. 753,554, pub. 5–14–63. Cl. 6.
Piedmont Mills, Inc., Lynchburg, Va. 165,951, ren. 7–30–63. Cl. 46.
Plainfield Trust State National Bank, Plainfield, N.J. 753,875, pub. 5–14–63. Cl. 102.
Polychrome Corp., Yonkers, N.Y. 753,839, pub. 5–14–63. Cl. 50.
Port City Minerals Co.: *See*—
Howe, Charles O.
Products of Asia, Inc., New York, N.Y. 646,850, canc. Cl. 39.
Propulsion Engine Corp., South Milwaukee, Wis. 646,776, canc. Cl. 23.
Protective Life Insurance Co., Birmingham, Ala. 753,871, pub. 5–14–63. Cl. 102.
Purex Corp., Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. 753,854, pub. 5–14–63. Cl. 52.
Purex Corp., Ltd., Lakewood, Calif. 753,859, pub. 5–14–63. Cl. 52.
Puritan Cordage Mills, Louisville, Ky. 753,679, pub. 5–14–63. Cl. 22.
Quaker Oats Co., The, Chicago, Ill. 753,795, pub. 5–14–63. Cl. 46.
R. T. French Co., The, Rochester, N.Y. 753,767, pub. 5–14–63. Cl. 46.
Radiation Instrument Development Laboratory, Melrose Park, Ill. 753,701, pub. 5–14–63. Cl. 26.
Rahn, Earl W., d.b.a. E. W. Rahn, Cleveland, Ohio. 753,613, pub. 5–14–63. Cl. 18.
Rahn, E. W.: *See*—
Rahn, Earl W.
Ralston Purina Co., St. Louis, Mo. 753,788, pub. 5–14–63. Cl. 46.
Raytheon Co., Waltham, Mass. 753,697, pub. 5–14–63. Cl. 26.
Red Cross Mfg. Corp., The, Bluffton, Ind. 753,695, pub. 5–14–63. Cl. 23.
Reed & Carnrick, Kenilworth, N.J. 753,614, pub. 5–14–63. Cl. 18.
Reed Roller Bit Co., Houston, Tex. 753,683, pub. 5–14–63. Cl. 23.
Reedville Oil & Guano Co., Inc., Reedville, Va. 753,812, pub. 5–14–63. Cl. 46.
Reedville Oil & Guano Co., Inc., Reedville, Va. 753,578, pub. 5–14–63. Cl. 6.
Reinoehl, Richard L., Shillington, Pa. 753,674, pub. 5–14–63. Cl. 22.
Reliable Luggage, Inc., West Pittsburg, Pa. 646,688, canc. Cl. 3.
Reliable Textile Co., Inc., New York, N.Y. 646,872, canc. Cl. 42.
Remington Rand Inc., Buffalo, N.Y., to Sperry Rand Corp., New York, N.Y. 401,567, ren. 7–30–63. Cl. 37.
Rexona Proprietary Ltd., Sydney, Australia. 753,856, pub. 5–14–63. Cl. 52.
Rovira, Nestor Machado, d.b.a. Cawy Bottling Co., Miami, Fla. 753,759, pub. 5–14–63. Cl. 45.

Ross-Tacony Crucible Co., Philadelphia, Pa. 753,720, pub. 5–14–63. Cl. 34.
Royalty House Corp., Minneapolis, Minn. 753,778, pub. 5–14–63. Cl. 46.
Roxane, Philips, Inc., New York, N.Y. 753,627, pub. 5–14–63. Cl. 18.
Ruben James, Silver Spring, Md. 753,718, pub. 5–14–63. Cl. 32.
Rush, William Van, Jr.: *See*—
Fisher, George Edward, and William Van Rush, Jr.
S and W. Fine Foods Products Co., Redwood City, Calif. 753,813, pub. 5–14–63. Cl. 46.
Savage Laboratories, Inc., Houston, Tex. 753,619, pub. 5–14–63. Cl. 18.
Saxe, Charles W., Worcester, Mass. 753,894. Cl. 34.
Schering Corp., Bloomfield, N.J., from American Scientific Laboratories, Inc., Madison, Wis. 753,617, pub. 5–14–63. Cl. 18.
Scholl Mfg. Co., Inc., The: *See*—
Scholl Mfg. Co., The.
Scholl Mfg. Co., The, to The Scholl Mfg Co., Inc., Chicago, Ill. 187,379, ren. 7–30–63. Cl. 18.
Schratter Import Co., Inc., The, New York, N.Y. 753,803, pub. 5–14–63. Cl. 46.
Schratz Products, Inc., Detroit, Mich. 753,842, pub. 5–14–63. Cl. 51.
Schuler Chocolates, Inc., Winona, Minn. 646,876, canc. Cl. 46.
Schultz & Hirsch Co., to Schultz & Hirsch Co., Chicago, Ill. 173,878, ren. 7–30–63. Cl. 32.
Scientific Industries, Inc., Glendale, Calif. 753,667, pub. 5–14–63. Cl. 22.
Seager, Evans & Co. Ltd., London, England. 753,831, pub. 5–14–63. Cl. 49.
Sears, Roebuck and Co., Chicago, Ill. 753,604, pub. 5–14–63. Cl. 16.
Selberling Rubber Co., Barberton, Ohio. 173,619, ren. 7–30–63. Cl. 39.
Sheaffer, W. A., Pen Co., Fort Madison, Iowa. 173,423, canc. Cl. 37.
Sherman Poultry Industries, Gardena, Calif. 753,762, pub. 5–14–63. Cl. 46.
Shull, Leo, Publications, Inc., New York, N.Y. 753,739, pub. 5–14–63. Cl. 38.
Singua-Musica: *See*—
Brown, Clarence B.
Skyline Plastic Molding, Inc., Titusville, Pa. 646,713, canc. Cl. 12.
Smith, George D., New York, N.Y. 753,666, pub. 5–14–63. Cl. 22.
Smucker, J. M., Co., The, Orrville, Ohio. 753,791, pub. 5–14–63. Cl. 46.
Softy Inc., Summit, Ill. 646,779, canc. Cl. 23.
Soil Builders International Corp., to Aluminum and Chemical Corp., Greenwich, Conn. 646,711, canc. Cl. 10.
Southern States Cooperative, Inc., Richmond, Va. 753,797–9, pub. 5–14–63. Cl. 46.
Space Needle Corp., Seattle, Wash. 753,676, pub. 5–14–63. Cl. 22.
Spanner Boilers Ltd., London, England. 646,843, canc. Cl. 34.
Sperry Rand Corp.: *See*—
Remington Rand Inc.
Sperry Rand Corp., New York, N.Y. 753,733, pub. 5–14–63. Cl. 37.
Square Deal Co.: *See*—
Hesse, Albert R.
Staley, A. E., Mfg. Co., Decatur, Ill. 753,611, pub. 5–14–63. Cl. 18.
Staley, A. E., Mfg. Co., Decatur, Ill. 753,575–6, pub. 5–14–63. Cl. 6.
Standard Brands Inc., New York, N.Y. 753,800, pub. 5–14–63. Cl. 46.
Staley, A. E., Mfg. Co., Decatur, Ill. 753,804, pub. 5–14–63. Cl. 46.
Standard Dyeing and Finishing Co., Paterson, N.J. 753,884, pub. 5–14–63. Cl. 106.
Star Bright Mfg. Co.: *See*—
Elfers, Walter M.
Starr, Allan D., Honolulu, Hawaii. 646,909, canc. Cl. 101.
Stein, A., & Co., Inc.: *See*—
Stein, A., & Co.
Stein, A., & Co., to A. Stein & Co., Inc., Chicago, Ill. 169,881, ren. 7–30–63. Cl. 39.
Steinwender, Stoffregen & Co., Inc., New York, N.Y. 335,857, canc. Cl. 46.
Sterling Drug Inc.: *See*—
Phillips, Charles H., Chemical Co., The.
Sterns, Ltd., London, England. 401,620, ren. 7–30–63. Cl. 18.
Stewart Coach Industries, Inc., The, Bristol, Ind. 753,656–7, pub. 5–14–63. Cl. 19.
Still House Hollow Farm, Hume, Va. 753,528, pub. 5–14–63. Cl. 1.
St. Lawrence Sales Inc., Birmingham, Mich. 753,668, pub. 5–14–63. Cl. 22.
Stock, Roslyn, d.b.a. Tweets Novelty Co., New York, N.Y. 402,095, ren. 7–30–63. Cl. 22.
Stollberg, H. F., G.m.b.H., Oqenbach Main, Germany. 646,924, canc. Cl. 23.
Stoelting Brothers Co., Kiel, Wis. 753,764, pub. 5–7–63. Cl. 46.
Stone, Lyman C., New York, N.Y. 646,848, canc. Cl. 39.
Strategic Materials Corp., New York, N.Y. 753,597, pub. 5–14–63. Cl. 14.
Streamer Pen Co., Inc.: *See*—
B.B. Pen Co., Inc.
Summit Marketing Corp., Holtville, Calif. 753,817, pub. 5–14–63. Cl. 46.
Sunbeam Lighting Co., Inc., Los Angeles, from Lighting Dynamics, Inc., City of Industry, Calif. 753,719, pub. 5–14–63. Cl. 34.
Superweld of U.S.A.: *See*—
Clifton, Gervase F.
Superba Cravats, Inc., Rochester, N.Y. 646,863, canc. Cl. 39.
Supplee-Biddle-Steltz Co., Philadelphia, Pa. 646,773, canc. Cl. 23.
Sussman, Ross A., Minneapolis, Minn. 753,735, pub. 5–14–63. Cl. 37.
Swanson, Milton R., d.b.a. Wayside Industries, Marlboro, Mass. 753,823, pub. 5–14–63. Cl. 46.
Sweets Co. of America, Inc., The, d.b.a. The Sweets Co. of America, Inc., Hoboken, N.J. 753,728, pub. 5–14–63. Cl. 37.
Swingline Inc., Long Island City, N.Y. 753,693, pub. 5–14–63. Cl. 23.
System Development Corp., Santa Monica, Calif. 753,869, pub. 5–14–63. Cl. 102.
System Development Corp., Santa Monica, Calif. 753,886, pub. 5–14–63. Cl. 107.
Teleprompter Corp., New York, N.Y. 753,881, pub. 5–14–63. Cl. 104.
Tennessee Corp., Evendale, Cincinnati, Ohio. 753,589, pub. 5–14–63. Cl. 10.
Termohlen, Tom, Cedar Rapids, Iowa. 753,698, pub. 5–14–63. Cl. 26.
Testagar & Co., Inc.: *See*—
Fellows Medical Mfg. Co., Inc.
Textile Adjuncts Corp., Brooklyn, N.Y. 646,735, canc. Cl. 16.
Textron Inc., Providence, R.I. 753,792, pub 5–14–63. Cl. 46.
Tiecrafters, Inc., Queens Village, N.Y. 753,878, pub. 5–14–63. Cl. 103.
Town Hill Co., Inc., The, from B. Triber, d.b.a. The Town Hill Co., Charlestown, Mass. 753,561, pub. 5–14–63. Cl. 6.
Trade Paper Co., Inc., New York, N.Y. 753,551, pub. 5–14–63. Cl. 5.
Travel Corp. of America, Chicago, Ill. 753,883, pub. 5–14–63. Cl. 105.
Treasure Trader, Inc., St. Petersburg, Fla. 753,866, pub. 5–14–63. Cl. 101.
Triber, Bernard: *See*—
Town Hill Co., Inc., The.
Tru-Kay Mfg. Co., Providence, R.I. 646,805, canc. Cl. 28.
Turco Products, Inc.: *See*—
Purex Corp., Ltd.
Turtle Wax, Inc., Chicago, Ill. 753,547, pub. 5–14–63. Cl. 4.
Tweets Novelty Co.: *See*—
Stock, Roslyn.
Twin City Texting Corp., Tonawanda, N.Y. 753,705, pub. 5–14–63. Cl. 26.
USA 1 Inc.: *See*—
Hartford Publications, Inc.
U.S. Plastics of Florida, Inc., Fort Lauderdale, Fla. 646,753, canc. Cl. 19.
Unimed, Inc., Morristown, N.J. 753,642, pub. 5–14–63. Cl. 18.
United Lace & Braid, Inc.: *See*—
United Lace & Braid Mfg. Co.
United Lace & Braid Mfg. Co., Cranston, to United Lace & Braid, Inc., Providence, R.I. 175,097, ren. 7–30–63. Cl. 40.
United Marketing Exchange, Delta, Colo. 753,789, pub. 5–14–63. Cl. 46.
United Shoe Machinery Corp., d.b.a. B.B. Chemical Co., Boston, Mass. 753,518, pub. 5–14–63. Cl. 1.
United States Department of Agriculture, Washington, D.C. 403,361–2, ren. 7–30–63. Cl. 46.
United States Tackless, Inc., Bronx, N.Y. 646,722, canc. Cl. 18.
United States Borax & Chemical Corp., from Columbia Wax Co., Glendale, Calif. 753,564, pub. 5–14–63. Cl. 6.
United States Rubber Co., New York, N.Y. 753,579, pub. 5–14–63. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 753,609, pub. 5–14–63. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 753,652, pub. 5–14–63. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 753,636, pub. 5–14–63. Cl. 18.
Van Alst Mills, Inc., Long Island City, N.Y. 646,868, canc. Cl. 42.
Van Camp Sea Food Co., d.b.a. West Coast Packing Corp., Long Beach, Calif. 753,808–9, pub. 5–14–63. Cl. 46.
Victor Mobile Homes, Inc., Bonham, Tex. 753,659, pub. 5–14–63. Cl. 19.
Virginia Chemicals & Smelting Co., West Norfolk, Va. 753,571, pub. 5–14–63. Cl. 6.
Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 753,645, pub. 5–14–63. Cl. 18.
Vu-Lighter Corp., Atlanta, Ga. 646,707, canc. Cl. 8.
Walker Mfg. Co.: *See*—
Parkhurst, Alfred S.
Walsh, James F., Jr., Maryd, Pa. 753,669, pub. 5–14–63. Cl. 22.
Waltham Precision Instrument Co., Inc.: *See*—
Waltham Watch Co.
Waltham Watch Co., to Waltham Precision Instrument Co., Inc., Waltham, Mass. 401,524, ren. 7–30–63. Cl. 26.
Ward's Natural Science Establishment, Inc., Rochester, N.Y. 753,747, pub. 5–14–63. Cl. 38.
Waterman Fruit Products, Inc., Ontario Center, N.Y. 753,805, pub. 5–14–63. Cl. 46.
Wayside Industries: *See*—
Swanson, Milton R.
Weaver, W. R., Co.: *See*—
Weaver, William R.
Weaver, William R., d.b.a. W. R. Weaver Co., El Paso, Tex. 753,710, pub. 5–14–63. Cl. 26.

Wendt's Cream Top Dairy, Inc., Niagara Falls, N.Y. 753,779, pub. 5–14–63. Cl. 46.
West Coast Packing Corp.: *See*—
Van Camp Sea Food Co.
Western Royal Co.: *See*—
Chip Steak Co.
Westinghouse Electric Corp.: *See*—
Westinghouse Electric & Mfg. Co.
Westinghouse Electric & Mfg. Co., East Pittsburgh, to Westinghouse Electric Corp., Pittsburgh, Pa. 401,959, ren. 7–30–63. Cl. 21.
Wichita Flour Mills, Inc.: *See*—
Wichita Flour Mills Co.
Wichita Flour Mills Co., The.
Wichita Flour Mills Co., The, to Wichita Flour Mills, Inc., Wichita, Kans. 165,148, ren. 7–30–63. Cl. 46.
Wichita Flour Mills Co., to Wichita Flour Mills, Inc., Wichita, Kans. 167,203 . n. 7–30–63. Cl. 46.
Williamson Co., The, Cincinnati, Ohio. 646,721, canc. Cl. 13.
Willow Brook Co., Catasauqua, Pa. 753,768, pub. 5–14–63. Cl. 46.
Wil-nes Corp., The, New York, N.Y. 753,716, pub. 5–14–63. Cl. 31.
Wilson Sporting Goods Co., River Grove, Ill. 753,675, pub. 5–14–63. Cl. 22.
Wilson Sporting Goods Co., River Grove, Ill. 753,678, pub. 5–14–63. Cl. 22.
Winston Pharmaceuticals, Inc., Winston-Salem, N.C. 753,620–2, pub. 5–14–63. Cl. 18.
Wolff, John A., Minneapolis, Minn. 753,540, pub. 5–14–63. Cl. 3.
Wood Conversion Co., St. Paul, Minn. 167,562, ren. 7–30–63. Cl. 12.
Wyo-Ben Products Co., d.b.a. Wyotana Sales Co., Billings, Mont. 753,526, pub. 5–14–63. Cl. 1.
Wyotana Sales Co.: *See*—
Wyo-Ben Products Co.
York Ice Machinery Corp., York, Pa., to Borg-Warner Corp., Chicago, Ill. 403,923, ren. 7–30–63. Cl. 34.
Young Radiator Co., Racine, Wis. 402,503, ren. 7–30–63. Cl. 34.
Zippo Mfg. Co., Bradford, Pa. 753,586, pub. 5–14–63. Cl. 8.
Zwicky, Robert H., d.b.a. Canned Foods Forum, Waukesha, Wis. 753,777, pub. 5–14–63. Cl. 46.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 6, 1963 Volume 793 Number 1

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of June 1963

Examiner affirmed	305
Examiner affirmed in part	51
Examiner reversed	101
Total	457

ASSISTANT SECRETARY OF COMMERCE FOR SCIENCE AND TECHNOLOGY

Duties and Responsibilities

The following amendment to the order was issued by the Secretary of Commerce on June 21, 1963. The material appearing at 27 F.R. 11244 of November 14, 1962 is amended as follows:

Department Order No. 177 (Revised) of October 25, 1962, is amended to make explicit reference to assignment of the Civilian Industrial Technology Program to the Assistant Secretary of Commerce for Science and Technology.

Section 4 of Department Order No. 177 (Revised) of October 25, 1962 is hereby amended to read as follows:

SEC. 4. *Duties and responsibilities.* The Assistant Secretary of Commerce for Science and Technology shall serve as the principal adviser to the Secretary on all scientific and technological matters of concern to the Department, and shall serve as adviser to all Departmental officials with respect to matters of science and technology, in which capacity he shall have cognizance of the research and development activities carried out in the fields of science and technology by all organization units of the Department. His particular duties and responsibilities shall include:

1. The coordination and evaluation of existing programs of the Department in the fields of science and technology;
2. The expansion of such programs where deemed desirable to meet the national needs;
3. The development and implementation of new research and development programs in furtherance of the Department's objectives;
4. Administering the Civilian Industrial Technology Program;
5. Representing the Department on top policy level scientific committees and groups, including the Federal Council for Science and Technology; and
6. The coordination of the Department's scientific and technological activities with other agencies of Government.

Effective date: June 21, 1963.

HERBERT W. KLOTZ,
Assistant Secretary for Administration.

[F.R. Doc. 63–7106; Filed, July 5, 1963; 8:45 a.m.]

Published in 28 F.R. 6921, July 6, 1963

New Applications Received During June 1963

Patents	6,771
Designs	423
Plant Patents	10
Reissues	30
Total	7,234

Issue

Patents	464	No.	3,099,837	to No.	3,100,300, incl.
Designs	126	No.	195,810	to No.	195,935, incl.
Plant Patents	3	No.	2,271	to No.	2,273, incl.
Reissues	1	No.	25,431		
Total	594				

INTERVIEWS

On July 17, 1963, the memorandum reproduced below was distributed to the Examiners in the Patent Office. It is presented here for the information of all applicants and their representatives.

Optimum Examining Procedure—Memorandum #2
Interviews

This Memorandum #2 of the Optimum Examining Procedure series is devoted entirely to "interviews" and their use to the maximum benefit of better and swifter prosecution. Proper interviews frequently lead to a better and earlier understanding of the issues involved in a particular case, and hence to an earlier conclusion of prosecution.

One of the characteristics of the skilled, mature Examiner is the exercise of proper judgment in borderline situations. Circumstances will frequently arise where waiver of technical requirements by the Primary Examiner, if permissible, will be better than blind adherence to technicalities, particularly where applicants are cooperating fully in moving to conclude prosecution and the Examiner can pass on all remaining issues with no more than nominal reconsideration or search. Subject to this broad policy, the following statements regarding situations which frequently arise specify practice which should be followed throughout the Office in the interest of uniform interview policy.

1. Interviews for the discussion of the patentability of pending applications will not be had before the first official action thereon (Rule 133). Interviews before the first response are discouraged; but interviews after the first response or later which offer hope of substantial progress are encouraged. (See, however, 12 and 13 below.)

2. Arrangements for interviews should be made in advance so that the Examiner can properly prepare for the interview (Rule 133a). The Examiner should prepare for any prearranged interview to the extent that he understands the case, the references applied against it, and the attorney's response. Inpromptu interviews should never be granted unless the Examiner has these details so well in mind that he can discuss the case profitably without further review. Interviews on Fridays will no longer be prohibited as a matter of policy; but all interviews should be set at a time mutually satisfactory to both parties.

3. An appointment for interview once arranged should be kept. Many applicants and attorneys plan trips to Washington in reliance upon such appointments. When, after an appointment has been made, circumstances compel the absence of the Examiner or Examiners necessary to an effective interview, the other party should be notified immediately so that substitute arrangements may be made.

4. An interview should not be granted if it is clear in advance that the requesting party is not properly prepared. If it becomes apparent after the discussion begins that the party is not properly prepared, or that further discussion would be unproductive, the interview should be terminated promptly.

5. Interviews normally should not be granted unless the requesting party has authority to bind the principal concerned.

6. An interview should be conducted only with the applicant or his legal representative of record. An interview with a person not of record, but known to be the local associate of the attorney of record, ordinarily will be permitted hereafter only when a written power authorizing such interview is presented prior thereto. Any exceptions to this procedure must be approved by the Group Supervisor.

7. If, at any time, the Examiner considers an interview would be helpful in disposing of a case, he is authorized to solicit same either by contacting applicant's local representative by phone or, where no such representative is available, by writing to counsel of record, or by collect long distance phone when authorized by the attorney or agent of record.

8. Where the response to a first complete action includes a request for an interview or a telephone consultation to be initiated by the Examiner, or where an out-of-town attorney under similar circumstances requests that the Examiner defer taking any further action on the case until the attorney's next visit to Washington (provided such visit is not beyond the date when the Office action would normally be given), the Examiner, as soon as he has considered the effect of the response, should grant such request if it appears that the interview or consultation would result in expediting the case to a final action.

9. An interview should not be used by either party as an opportunity to "haggle." Once the Examiner clearly understands the applicant's position, the interview should be concluded. Of course, if the Examiner can make a suggestion which will advance the prosecution, he should do so.

10. Where agreement is reached as a result of an interview, applicant's representative should be advised that an amendment pursuant to the agreement should be promptly submitted. If the amendment prepares the case for final action, the Examiner should take the case up as special. If not, the case should await its turn.

11. To insure that any mutually acceptable conclusions reached at an interview are understood by both parties, a memorandum summarizing these conclusions and the significance of any exhibits considered or demonstrations made should be prepared in duplicate and signed by both parties to the interview, and a copy should be retained by each. The copy retained by the Examiner will be kept in the application file until prosecution is completed. Such procedure will not, however, relieve applicant of his responsibility under the second paragraph of Rule 133.

In those cases where an interview is had but no agreement is reached, the Examiner should place an informal memorandum in the file to this effect. The memorandum should be sufficiently complete to make clear to others the issues resolved and/or discussed in the interview.

The memoranda discussed above are not an official part of the record, and should be removed from the file if and when the case is passed to issue.

12. Concerning requests for interviews after Final Action, it is essential that any applicant or his representative be granted an opportunity to present briefly, either orally or in writing, the intended purpose and content of the interview. With the approval of the Primary Examiner, further time may be granted if the Examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations which would require more than nominal reconsideration or new search should be denied.

13. Requests for interviews on cases already passed to issue should be granted only with specific approval of the Supervisor upon a showing in writing of extraordinary circumstances.

H. B. WHITMORE,
July 17, 1965. *Superintendent of the Examining Corps.*

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	10-6-61	9-14-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	2-2-62	2-9-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	12-7-61	11-17-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	6-27-61	7-20-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-1-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	12-4-61
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	11-24-61	10-11-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-11-62	1-25-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-28-61	10-16-61
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	12-1-61	1-3-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-6-61	10-9-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	11-16-61	11-7-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	11-1-61	11-3-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	11-9-61	11-3-61

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1963

Total number of pending applications (excluding Designs)	200, 178
Total number of Design applications pending	6, 195
Total number of applications awaiting action (excluding Designs)	115, 956
Total number of Design applications awaiting action	2. 329
Date of oldest new application awaiting action	June 27, 1961
Date of oldest amended application awaiting action	July 20, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents ..... Numbers 2,402,939 to 2,405,106, inclusive

Plant Patents ..... Numbers 702 to 708 inclusive

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-5-62	2-26-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	12-13-61	12-21-61
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	1-31-62	12-4-61
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	1-16-62	1-15-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	1-12-62	9-29-61
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	2-28-62	3-12-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-5-62	3-5-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	1-17-62	1-8-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	5-25-62	7-2-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-19-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-6-62	2-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-2-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	2-12-62	2-5-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	4-18-62	5-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	1-15-62	12-12-61
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	3-9-62	3-5-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	12-26-62	12-18-62
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting)		
92. GAUSS, H.		
93. PURDY, W. F. (acting), Wire Working	6-8-62	6-1-62
94. BERLOWITZ, W.	8-6-62	10-15-62
95. ANGEL, C. D., (REZNEK, J., acting)		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE JOSEF FRIED

No. 6848. Decided February 13, 1963

[50 CCPA —: 312 F.2d 930; 136 USPQ 429]

1. RES JUDICATA—DIFFERENT ISSUES—CLAIMS DIFFERING IN SCOPE.

"* * * each of appealed claims 2, 6 and 12 are seen to be narrower in scope than claims 15 and 16 of the parent application which were rejected as unsupported by the parent disclosure. The issue here is, therefore, a different issue than that decided by the Examiner. While claims as broad as claims 15 and 16 of the parent application might fail for lack of an adequate disclosure, the parent application might contain disclosures adequate to support the narrower claims of the later filed application. Thus, res judicata cannot properly be applied in this situation to preclude a decision on the merits of the new issue here presented."

2. SAME—COLLATERAL ESTOPPEL—CLAIMED SUBJECT MATTER DIFFERENT.

"Even though the issues are different, any *matters actually litigated* in the first adjudication become binding on the parties in the second adjudication. * * * The Board does not state, and we find no evidence in the record, that the question of support in the parent application for the *specific compounds claimed in appealed claims 2, 6 and 12* was passed upon in the proceedings which led to the rejection of claims 15 and 16 of the parent application. Therefore, we find no collateral estoppel which precludes applicant from securing a decision on the merits of the new issue here raised."

3. APPLICATION—PROSECUTION—APPEAL—CONTINUATION.

"It seems to us the clear intent of 35 U.S.C. 120 and of the present procedures in the Patent Office relative thereto have established a practice under which an applicant may (1) appeal an Examiner's adverse ruling or (2) acquiesce in the ruling and file a continuation application with new claims therein."

4. RES JUDICATA—FINAL REJECTION OF CLAIMS IN PARENT CASE FOR LACK OF SUPPORTING DISCLOSURE—*Lavin* v. *Pierotti* AND *Whittier* v. *Borchardt* OVERRULED WHERE DIFFERENT CLAIMS ARE INVOLVED.

"In support of its decision, the Board and Solicitor rely on the prior decisions of this court in *Lavin* v. *Pierotti*, 29 CCPA 1235, 129 F.2d 883, 54 USPQ 400; and *Whittier* v. *Borchardt*, 33 CCPA 1023, 154 F.2d 522, 69 USPQ 382. To the extent that these decisions may support the proposition for which they are here cited, i.e., that a final rejection of claims in a parent application for lack of supporting disclosure therein is res judicata upon the question of whether *different claims*, rejected on a different basis in a continuation application, are entitled under the conditions specified in 35 U.S.C. 120 to the benefit of the earlier filing date of the parent application, they are expressly overruled."

5. SAME—FINAL REJECTION IN PARENT CASE—*Ex parte Buc et al.* NOT FOLLOWED.

"The Board and Solicitor also cite *Ex parte Buc et al.* (Bd. of Appls.) 114 USPQ 552, to support their position. However, we do not agree with the statement in the *Buc et al.* case that because the rejection of the parent case had become final upon the dismissal of the appeal for appellant's failure to file a brief, the finality and conclusive nature of the Examiner's rejection 'precludes any further consideration' of the issues presented by the appeal from the rejection of the continuation-in-part application and therefore decline to apply it here."

6. PATENTABILITY—ANTEDATING OF REFERENCE—BENEFIT OF EARLIER FILING DATE—35 U.S.C. 120.

"* * * the invention disclosed in the appealed application was not in fact sufficiently disclosed in the parent application 'in the manner provided in the first paragraph of section 112 of this title' to entitle appellant to rely on 35 U.S.C. 120 to antedate the Colton et al. reference. For this reason, *and this reason only*, we affirm the decision of the Board."

APPEAL from the Patent Office. Serial No. 677,763.

AFFIRMED.

Merle J. Smith (*Robert Alpher* and *Lawrence S. Levinson* of counsel) for appellant.

Clarence W. Moore (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

SMITH, *J.*, delivered the opinion of the court.

Appellant has appealed from a decision of the Board of Appeals which affirmed the Examiner's rejection of claims 2, 6 and 12 of appellant's continuation-in-part application, Ser. No. 677,763, filed August 12, 1957, based on a parent application, Ser. No. 576,258, filed April 5, 1956. The claims were rejected as being fully met by the Colton et al. U.S. Patent No. 2,813,109, filed June 4, 1956, which issued November 12, 1957. There is no issue here as to whether the reference anticipates the appealed claims. The sole issue arises from the refusal of the Board to give the appealed claims the benefit of the filing date of the parent application under 35 U.S.C. 120[1] which would antedate the Colton et al. patent as a reference. The Board affirmed the rejection for two reasons: (1) The Examiner's unappealed rejection of claims 15 and 16 as being unsupported by the disclosures in appellant's parent application is res judicata on the issue here, and (2) the appealed claims are not in fact supported by the disclosures in the parent application.

We shall consider the two reasons separately. Before we pass upon the Board's second reason for affirmance, we will consider the first reason since if there is a proper rejection on res judicata the issue on the second reason becomes moot.

(1) *Res Judicata*

While the Board of Appeals affirmed the rejection of the appealed claims on the basis of res judicata, we find no sound basis for this holding. The essential principles of res judicata are stated in *Commissioner of Internal Revenue* v. *Sunnen*, 333 U.S. 591, 597–598 as follows:

> It is first necessary to understand something of the recognized meaning and scope of *res judicata*, a doctrine judicial in origin. The general rule of *res judicata* applies to repetitious suits involving the same cause of action. It rests upon considerations of economy of judicial time and public policy favoring the establishment of certainty in legal relations. The rule provides that when a court of competent jurisdiction has entered a final judgment on the merits of a cause of action, the parties to the suit and their privies are thereafter bound "not only as to every matter which was offered and received to sustain or defeat the claim or demand, but as to any other admissible matter which might have been offered for that purpose." *Cromwell* v. *County of Sac*, 94 U.S. 351, 352. * * *
>
> But where the second action between the same parties is upon a different cause or demand, the principle of *res judicata* is applied much more narrowly. In this situation, the judgment in the prior action operates as an estoppel, not as to matters which might have been litigated and determined, but "only as to those matters in issue or points controverted, upon the determination of which the finding or verdict was rendered." *Cromwell* v. *County of Sac*, supra, 353. * * *

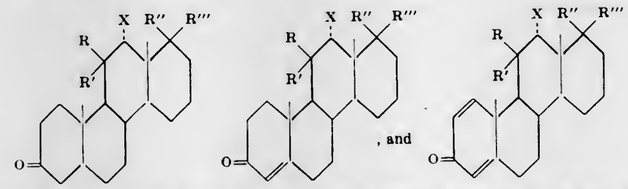
[1] § 120. Benefit of earlier filing date in the United States

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States by the same inventor shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

The issue which requires decision in the present case is whether, under 35 U.S.C. 120, the invention claimed in claims 2, 6 and 12 of the appealed application is disclosed in the earlier filed parent application in the manner provided by the first paragraph of 35 U.S.C. 112. The rejection in the parent case, which the Board found to be res judicata, was that claims 15 and 16 of the parent case were not sufficiently supported by the disclosure. Since different claims are here presented the issues decided in the parent application and those to be here decided are not the same. A comparison of claims 15 and 16 of the parent application shows them to be significantly different in scope from the appealed claims here in issue.

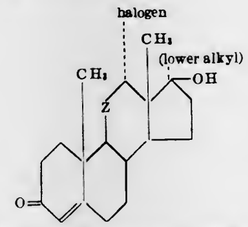
Claims 15 and 16 of the parent application are as follows:

15. A steroid selected from the class consisting of those of the general formulae[2]



wherein R is hydrogen, R′ is β-hydroxy, and together R and R′ is keto, R″ is selected from the group consisting of hydrogen, α-methyl and α-ethyl, R‴ is β-hydroxy, and together R″ and R‴ is keto, and X is an α-halogen of atomic number less than 18.

16. A compound of the structural formula



wherein Z is a member of the class consisting of carbinol and carbonyl groups.

Appealed claims 2, 6 and 12 are as follows:

2. 12α-Halo-17α-methyl-Δ⁴-androstene-11β,17β-diol-3-one.

6. 12α-Halo-17α-methyl-Δ⁴-androstene-17β-ol-3,11-dione.

12. A steroid selected from the group consisting of 12α-halo-17α-methyl-Δ⁴-androstene-11β,17β-diol-3-one and 12α-halo-17α-methyl-Δ⁴-androstene-17β-ol-3,11-dione.

To a person skilled in this art it is readily apparent that claims 15 and 16 of the parent application are broader than the appealed claims. Thus, the appealed claims all define a compound having only a *methyl group* in the 17α position while in claim 15 of the parent application, R″ and R‴ include, in Markush form, constituents from a group consisting of hydrogen, α-methyl, α-ethyl, β-hydroxy and keto while in claim 16 of the parent application *any lower alkyl group* may be attached. In addition, claim 15 is broader than any of the appealed claims since it includes two other formulae which again have the several variations of R″ and R‴ attached at the 17 position. [1] Thus, each of appealed claims 2, 6 and 12 are seen to be narrower in scope than claims 15 and 16 of the parent application which were

[2] Claim 15 is shown as submitted to the Examiner by amendment on August 29, 1957. It would seem, however, that R″ and R‴ should be directly attached to a 5 carbon ring rather than a 6 carbon ring as shown.

rejected as unsupported by the parent disclosure. The issue here is, therefore, a different issue than that decided by the Examiner.[3] While claims as broad as claims 15 and 16 of the parent application might fail for lack of an adequate disclosure, the parent application might contain disclosures adequate to support the narrower claims of the later filed application. Thus, res judicata cannot properly be applied in this situation to preclude a decision on the merits of the new issue here presented.

[2] Even though the issues are different, any *matters actually litigated* in the first adjudication become binding on the parties in the second adjudication. *Commissioner of Internal Revenue* v. *Sunnen*, quoted supra. The Board does not state, and we find no evidence in the record, that the question of support in the parent application for the *specific compounds claimed in appealed claims 2, 6 and 12* was passed upon in the proceedings which led to the rejection of claims 15 and 16 of the parent application. Therefore, we find no collateral estoppel which precludes applicant from securing a decision on the merits of the new issue here raised.

The Solicitor, citing *Overland Motor Co.* v. *Packard Motor Co.*, 274 U.S. 417, asserts that "final rejections may be considered res judicata by the Patent Office at its option." We cannot see that this case supports the application of res judicata to the present appeal. The *Overland* case, decided 37 years ago and 26 years prior to enactment of the 1952 Act, involved the asserted infringement of a claim of a patent which had been granted on a divisional application of an earlier application. This *same claim*, as indicated in the opinion, had been finally rejected and then cancelled from the earlier application. The court stated that the Patent Office, in allowing the claim in the divisional application, had waived any objection on the ground that the allowed claim had been previously rejected. Thus, even if this decision does indicate that a final rejection may be held to be res judicata at the option of the Patent Office, it is not applicable here where, as stated earlier, the appealed claims and claims 15 and 16 of the parent application are not the same. Therefore, res judicata does not properly apply and the Patent Office has no option to apply it.

[3] It seems to us the clear intent of 35 U.S.C. 120 and of the present procedures in the Patent Office relative thereto have established a practice under which an applicant may (1) appeal an Examiner's adverse ruling or (2) acquiesce in the ruling and file a continuation application with new claims therein.

The Manual of Patent Examining Procedure (MPEP), 2nd ed., in pertinent part reads as follows:

201.07 Continuation

A continuation is a second application for the same invention claimed in a prior application and filed before the original becomes abandoned. The applicant in the continuing application must be the same as in the prior application, unless the continuation is a sole converted from a joint application. The disclosure presented in the continuation must be the same as that of the original application, i.e., the continuation should not include anything which would constitute new matter if inserted in the original application.

[3] The present case provides cogent support for the requirement that the issues must be identical before res judicata is applicable. For purposes of illustration, suppose that the parent claim was to "any wheeled vehicle" and was rejected as unsupported by a specification which disclosed only examples of an airplane. Claims in a continuation application, which recite only "an airplane," are then presented. If the sole reason for rejection of the claims in the parent application was that the claim to "any wheeled vehicle" was not supported in the parent, it is clear that the application of res judicata to deny the filing date of the parent to the appealed claim to an "airplane" leads to an incorrect result. Thus, it can be seen that use of res judicata in a situation where the prior adjudication was based on claims in the parent broader than the claims presented in the continuation application may lead to an incorrect and unjust result.

Where an application has been prosecuted to a final rejection an applicant may have recourse to filing a continuation in order to introduce into the case a new set of claims and to establish a right to further examination by the Primary Examiner. [Emphasis added.]

* * * * * * *

This practice is expressly recognized in the following decisions of the Board of Appeals: *Ex parte Davidson*, 58 USPQ 343, *Ex parte Smith*, 88 USPQ 121, and *Ex parte Pfleger*, 131 USPQ 439.

The Patent Office now recognizes the procedure here adopted by appellant as being a proper response to the unfavorable action of the Examiner.[4] Although MPEP, 2nd ed. was in effect at the time of the Examiner's final rejection, it is noted that MPEP, 3rd ed., section 706.03(w) states:

A prior adjudication against the inventor on the same or similar claims constitutes a proper ground of rejection as res judicata. Where a different question of patentability is presented the rejection of res judicata does not apply.

The rejection should only be used when the earlier decision was a final, appellate one, such as a Board of Appeals decision where the time limit for further remedies has expired, or a decision by the Court of Customs and Patent Appeals. But see 201.11, last paragraph, for a special situation. [Emphasis added.] * * *

[4] In support of its decision, the Board and Solicitor rely on the prior decisions of this court in *Lavin* v. *Pierotti*, 29 CCPA 1235, 129 F.2d 883, 54 USPQ 400; and *Whittier* v. *Borchardt*, 33 CCPA 1023, 154 F.2d 522, 69 USPQ 382. To the extent that these decisions may support the proposition for which they are here cited, i.e., that a final rejection of claims in a parent application for lack of supporting disclosure therein is res judicata upon the question of whether *different claims*, rejected on a different basis in a continuation application, are entitled under the conditions specified in 35 U.S.C. 120 to the benefit of the earlier filing date of the parent application, they are expressly overruled.

[5] The Board and Solicitor also cite *Ex parte Buc et al.* (Bd. of Appls.), 114 USPQ 552, to support their position. However, we do not agree with the statement in the *Buc et al.* case that because the rejection of the parent case had become final upon the dismissal of the appeal for appellant's failure to file a brief, the finality and conclusive nature of the Examiner's rejection "precludes any further consideration" of the issues presented by the appeal from the rejection of the continuation-in-part application and therefore decline to apply it here.

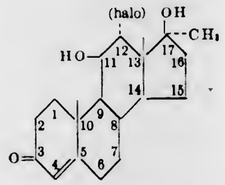
(2) *The Appealed Claims Are Not Supported by the Disclosure in the Patent Case*

Since the Board and the Examiner also acted on the merits of the appeal, in addition to finding the claims barred by res judicata, we now pass to a consideration of whether the Board was correct in affirming the Examiner's decision that appealed claims 2, 6 and 12 are not entitled to the benefit of the filing date of the parent applica-

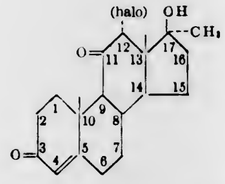
[4] We here observe that the express provisions of MPEP set forth an established Patent Office policy on which applicants for patents are entitled to rely in good faith in the orderly conduct of their business in the Patent Office. To depart from such policy as has been done here would, it seems to us, lead to such uncertainty on the part of applicants that they must necessarily traverse every ground of the Examiner's rejection at each stage of the prosecution and appeal his adverse rulings lest the failure to do so returns in the guise of a binding res judicata which forfeits an applicant's privilege of foregoing his right of appeal and making the permissible corrective changes by filing a continuation application. In addition, it seems to us that such an uncertainty in procedure leaves the Patent Examiner vulnerable to a charge of arbitrariness, bad faith and favoritism when he, as the representative of the Patent Office, exercises the res judicata "option" in one way in one case and in another way in a different case.

tion. It is therefore necessary to determine whether the parent application so disclosed the invention here claimed that the present copending application [5] shall have the same effect, insofar as antedating the Colton et al. reference, as though it had been filed on the date of the parent application.

The invention relates to chemical compounds classified as steroids.[6] The compounds claimed in the appealed claims fall into two related groups. The first group is defined in claim 2 as "12α-halo-17α-methyl-Δ⁴-androstene-11β,17β-diol-3-one" which appellant asserts has the structural formula



The second group is defined in claim 6 as "12α-halo-17α-methyl-Δ⁴-androstene-17β-ol-3,11-dione" which appellant asserts has the structural formula



Claim 12 is in Markush form and includes both the groups claimed in claims 2 and 6.

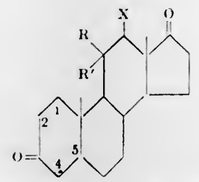
Whether appellant is entitled under 35 U.S.C. 120 to the benefit of the filing date of his parent application to support an allowance of claims 2, 6 and 12 depends upon the sufficiency of disclosures in the parent application.

The parent application states that

> One of the objects of this invention is the provision of an advantageous process of preparing steroids of the androstane (including androstene and etiocholane) series having a 12α-halo substituent and an 11β-hydroxy (or 11-keto) substituent.
>
> Another object of this invention is the provision of certain compounds useful for their own physiological activity.

and further

> Among *the compounds of this invention* are those of the general formula:



> wherein the 1,2 and 4,5-positions are either double-bonded or saturated (preferably the 1,2-position is saturated, and the 4,5-position is double-bonded). R is hydrogen, R' is β-hydroxy, or together R and R' is keto, and X is α-halo. [Emphasis added.]

The above serves as antecedent for the later disclosure:

> Aside from their use as androgens, *the compounds of this invention* are also useful intermediate in the preparation of the 17α-methyl, 17α-ethyl and 17β-hydroxy androstane derivatives. Thus the 12α-halo-17-keto steroids of this invention can be converted to 3-ethylene ketals or enamine derivatives of a secondary base (e.g. pyrrolidine) in the usual manner, and the resulting derivatives, with the 3-keto group protected, can be reacted * * * with a Grignard reagent (e.g. methyl magnesium iodide or ethyl magnesium bromide) to yield the corresponding 17α-substituted-17β-hydroxy (e.g. 17α-methyl-17β-hydroxy and 17α-ethyl-17β-hydroxy). [Emphasis added.]
>
> Both the 17β-hydroxy and the 17α-methyl (or ethyl)-17β-hydroxy derivatives possess high androgenic and anabolic activity. * * *

It is appellant's position that the "compounds of the invention" in the parent case differ from the claimed compounds only in that the former compounds have a 17-keto group while the claimed compounds have substituted therefor 17α-methyl and 17β-hydroxy groups; that the above quoted portion of the parent application states that the 17-keto steroids may be converted to the corresponding 17α-methyl-17β-hydroxy steroids by protecting the 3-keto group as indicated "in the usual manner"; that the resulting derivatives can be reacted with a Grignard reagent; and that this conversion was a known procedure at the time appellant filed his parent application. The articles by Ruzicka et al., Heyl et al. and Dauben et al. and the text by Fieser et al. are relied upon by appellant in support of the argument that such conversion of 17-keto steroids to the corresponding 17α-methyl-17β-hydroxy steroids was a known procedure at the time the parent application was filed.

However, while appellant's parent application indicates that the 17-keto group of the steroid "compounds of the invention" therein may be converted to the corresponding 17α-methyl-17β-hydroxy steroids, it is clear, as pointed out by the Examiner, that there is no disclosure of a specified method of preparation of the specific compounds claimed here and, as pointed out by the Board of Appeals, that there is no disclosure of a specific working example for preparing one compound here claimed. Since compounds here claimed are not named or identified by formula in the parent application, they can find support only as choices are made between the several variables involved.

The Board also indicated, with respect to the above-quoted paragraph from the parent application, that a precise starting material is not identified and noted the Examiner's comment that said paragraph fails to disclose the unsaturation present in the starting material while observing that the appealed claims require a double bond between the 4 and 5 positions. We think the Board was correct in finding a lack of support for the appealed claims in the parent application.

The several articles and the text relied upon by the appellant do not, in our opinion, overcome the insufficiency of the disclosure in the parent case with respect to the foregoing matters.

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[5] We have noted appellant's emphasis on the fact that the appealed application was filed before the parent case was finally rejected. We do not consider this fact to be particularly significant except that it establishes compliance with the portion of 35 U.S.C. 120 which requires that the second application be "filed before the patenting or abandonment or termination of proceedings on the first application."

[6] We have been greatly assisted in securing a better understanding of the claims by the very helpful glossary of terms and symbols contained in appellant's brief and from which we are advised that the terms and symbols used in the claims have the following meanings:

androstene—refers to the basic polynuclear structure of the molecule symbolized by the four fused rings in the formula including one double bond.
halo—refers to one of the four halogen atoms chlorine, bromine, iodine, fluorine.
methyl—a methyl group —CH_3
ol—a hydroxy group —OH
diol—two hydroxy groups
one—a keto group —O=C
dione—two keto groups
1,2,3,4, etc.—designations of the location of carbon atoms in the ring, referred to as "positions."
Δ⁴—designates a double bond linking the carbon atoms in positions 4 and 5.
α,β—designates the spatial position (i.e. below or above the plane of the ring) of the substituent group in the position indicated. In the formula the *alpha* configuration is shown by a single dotted line; the *beta* configuration by a single solid line.

[6] The foregoing considerations lead us to the conclusion that the invention disclosed in the appealed application was not in fact sufficiently disclosed in the parent application "in the manner provided in the first paragraph of section 112 of this title" to entitle appellant to rely on 35 U.S.C. 120 to antedate the Colton et al. reference. For this reason, *and this reason only*, we affirm the decision of the Board.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE LIMESTONE PRODUCTS CORPORATION OF AMERICA

No. 6906. Decided February 13, 1963

[50 CCPA —; 312 F.2d 825; 136 USPQ 468]

1. TRADEMARK—DESCRIPTIVENESS—"CALCITE CRYSTALS."

The decision of the Trademark Trial and Appeal Board, denying registration of "CALCITE CRYSTALS" on the ground it is a common descriptive name for appellant's goods, is affirmed.

APPEAL from the Patent Office. Serial No. 84,543.

AFFIRMED.

Samuel Scrivener, Jr. (*Scrivener and Parker* of counsel) for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, JR., *J.*, delivered the opinion of the court.

This is an appeal by Limestone Products Corporation of America from an adverse decision of the Trademark Trial and Appeal Board, 131 USPQ 393, on appellant's application to register on the Principal Register "CALCITE CRYSTALS" as a trademark for "Ground Limestone for use as a Poultry Feed Ingredient."

The Board, in sustaining the Examiner, denied registration on the ground that the alleged mark is a common descriptive name for appellant's goods.

Appellant, relying on section 2(f) of the Trademark Act of 1946, alleges that the mark has become, through long and extensive use, distinctive of its goods in commerce and that it is not a common descriptive name of its ground limestone product.

We must, therefore, determine whether the alleged mark "CALCITE CRYSTALS" is merely a common descriptive name of appellant's goods or whether it properly serves the function of a trademark to identify the goods and distinguish them from like goods sold by others.

In a well reasoned comprehensive opinion dispositive of the issues, the Board found and held as follows:

> The record shows that applicant has, since 1923, manufactured and sold a poultry feed ingredient made of ground limestone in connection with which it has continuously used the notation "CALCITE CRYSTALS." During the period from September 1923 to May 1960, applicant sold over three hundred thousand tons of poultry feed supplement in containers bearing the notation "CALCITE CRYSTALS," with a total value in excess of two million dollars. During this same period, applicant extensively promoted and advertised "LIME CREST CALCITE CRYSTALS" feed supplement in farm, garden, and other trade journals and by the distribution of booklets, pamphlets, and the like, at a cost in excess of eight hundred thousand dollars.
>
> The Poultry feed ingredient in connection with which applicant uses the notation "CALCITE CRYSTALS" is crushed limestone in crystalline form. Limestone is a well-known mineral identified as and referred to in chemical textbooks as calcium carbonate. According to Webster's New International Dictionary, second edition (1947), "Calcite" is defined as calcium carbonate crystallized in hexagonal form. "Calcite" is described in The Condensed Chemical Dictionary, fifth edition, as:
>
> > "The most common form of natural calcium carbonate. Dogtooth spar, Iceland spar, nailhead spar, and satin spar are varieties of *calcite crystal*. It is the essential ingredient of limestone, marble and chalk." [Emphasis added.]
>
> It is apparent from the foregoing and excerpt from the Industrial Arts Index for the years 1931, 1939, and 1954 such as "Variations in the grating constant of calcite crystals," "Quantitative measurement of the natural rate of growth of calcite crystals in geodes," and "Experimental deformation of calcite crystals," respectively, that the notation "CALCITE CRYSTALS" is not an unusual or merely suggestive term as urged by applicant.

The Board also pointed out that the appellant's containers for the goods bear the notation "100 Lbs. Net Shell-Producer Calcite Crystals" and that in advertising appellant refers to itself as the "World's Largest Producer of Crystalline Calcite Crystals" from which "Lime Crest Calcite Crystals" and "Lime Crest Barn Calcite" are its "two Lime Crest quality products." These facts indicated to the Board that "CALCITE CRYSTALS" is used merely as a name for the goods.

The appellant contends that the name of the goods is "limestone" or "calcium carbonate" and that "CALCITE CRYSTALS" may be exclusively appropriated as a trademark for a poultry feed ingredient since the mark is not descriptive of a poultry feed ingredient. To show that the mark has acquired a secondary meaning, twenty-five affidavits were submitted.

In considering the affidavits, the Board said:

> Applicant has made of record twenty-five substantially identical affidavits from dealers in and users of applicant's poultry feed supplement, wherein each affiant set forth how long he has been buying crushed limestone for use as a poultry feed; that during all this time, applicant has marketed a poultry feed ingredient made of limestone in bags bearing the words "CALCITE CRYSTALS"; that no other company selling crushed limestone, within his knowledge, has used these words on its bags; and concludes that because of this long use he associates the words "CALCITE CRYSTALS," when used in connection with a poultry feed ingredient, only with applicant. While these affiants have asserted that they associate "CALCITE CRYSTALS" with applicant, this cannot overcome the fact that "CALCITE CRYSTALS" is a name for applicant's goods, and that such a name cannot be a trademark.

The Board concluded:

> The record conclusively establishes that "calcite crystals" is calcium carbonate or limestone in crystal form and that this notation is a common descriptive name for ground limestone used as a poultry feed ingredient and is so used by applicant. As such, it falls within the category of words, symbols, and devices which are not subject to exclusive appropriation as trademarks, and hence cannot acquire a secondary meaning.

The record supports these findings of the Board and we agree with the conclusions stated.

In addition to the evidence pointed out by the Board in support of its finding "that Calcite Crystals is calcium carbonate or limestone in crystal form and that this notation is a common descriptive name for ground limestone used as a poultry feed ingredient and is so used" by appellant, the record abounds with other proof of similar purport and effect.

Reference to Addition to Record discloses that appellant describes and refers to the goods under consideration as follows:

> Lime Crest Calcite Crystals are made from Franklin limestone, * * *.
>
> Franklin limestone in the Lime Crest deposit is a coarsely *crystalline* rock and

consists chiefly of calcite, or *crystalline* calcium carbonate. [Emphasis supplied.] * * * calcite from which the Lime Crest Calcite Crystals are made.

The above is but illustrative of repeated references indicative that "Calcite Crystals" is not only descriptive of appellant's products but also is used by appellant as the name for the product itself.

The decisions of this court in *In re The Deister Concentrator Company, Inc.*, 48 CCPA 952, 289 F.2d 496, 129 USPQ 314, and *Weiss Noodle Co. v. Golden Cracknel & Specialty Co.*, 48 CCPA 1004, 290 F.2d 845, 129 USPQ 411, are apposite and controlling here.

[1] The decision of the Trademark Trial and Appeal Board is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,206,771, J. J. Dugas, Jr., Operating valve for vacuum systems for controlling marine clutches; **2,254,144,** A. J. Higgins, Engine control for marine engines; **2,552,001,** J. J. Dugas, Dual control for marine motors, **filed** Apr. 26, 1963, D.C., E.D. La. (New Orleans), Doc. 13399, *Joseph J. Dugas et al. v. Kickhaefer Corporation.*

2,254,144. (See 2,206,771.)

2,489,895, S. M. Kash, Release mechanism for articulated lever wrenches; **2,514,130,** H. T. Jones, Locking wrench and pliers, **filed** Apr. 26, 1963, D.C. Nebr. (Omaha), Doc. 616-L, *Kash Industries, Inc. v. Petersen Manufacturing Co., Inc. et al.* Declaratory judgment holding Patent 2,514,130 invalid (notice Apr. 29, 1963).

2,514,130. (See 2,489,895.)

2,552,001. (See 2,206,771.)

2,560,318. F. J. Wenger, Tool, **filed** Apr. 15, 1963, D.C., N.D. Ind. (Fort Wayne), Doc. 1439, *AMP Incorporated v. Essex Wire Corporation.*

2,563,794, Rickes and Wood, Vitamin B_{12}; **2,703,302,** same, Vitamin B_{12}, active composition and process of preparing same, **filed** Apr. 16, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63-C-417, *Merck & Co., Inc. v. Gotham Pharmaceutical Co., Inc. et al.* **Same, filed** same, Doc.63-C-418, *Merck & Co., Inc. v. Linden Medical Supply, Inc. et al.* **Same, filed** same, D.C., S.D.N.Y., Doc. 63/1088, *Merck & Co., Inc. v. Jerdan Chemical Corp. et al.*

2,566,409, L. M. Greene, Vibratory aircraft alarms of the rotary eccentric weight type; **2,964,744,** L. M. Greene, Warning signal for aircraft, **filed** Apr. 18, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/459-CC, *Safe Flight Corporation v. Lockheed Aircraft Corporation et al.*

2,604,359, F. L. Tybach, Self-propelled sprinkling irrigating apparatus; **2,941,727,** same; **3,001,721,** same, **filed** Apr. 22, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/469-JWC, *Frank L. Tybach et al. v. Layne & Bowler Pump Company.*

2,703,302. (See 2,563,794.)

2,711,193, P. C. Consoletti, Thread cutter for looms; **2,752,955,** same, **filed** Apr. 30, 1963, D.C., W.D.N.C. (Charlotte), Doc. 1776, *Draper Corporation v. Sherrill Manufacturing Company, Inc.*

2,752,955. (See 2,711,193.)

2,798,779, Schwartz and Hamm, Reverse dish action piston ring, **filed** C.C.A., 6th Cir., Doc. 14645, *Muskegon Piston Ring Company v. Ernest R. Olsen et al.* Order granting defendants' motion to dismiss reversed Aug. 17, 1962.

2,846,267, J. W. Fields, Tipping body, **filed** C.C.A. 6th Cir., Doc. 14842, *Anthony Company et al. v. The Perfection Steel Body Company.* Judgment of District Court affirmed Mar. 27, 1963.

2,911,727. (See 2,604,359.)

2,964,744. (See 2,566,409.)

3,001,721. (See 2,604,359.)

3,004,642, E. C. Hallock, Grilles, screens and the like; **Des. 193,210,** same, Grille; **Des. 193,250,** same, Spacing unit for a grill, **filed** Sept. 4, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62-1217-S, *Construction Specialties, Inc. v. Aluminum Skylight & Specialty Corp.* Order restraining defendants; patents held valid and infringed (notice Apr. 9, 1963).

3,004,647, Andrus and Coon, Single stroke control system and fluid control unit therefor, **filed** Apr. 5, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63-234, *Textrol, Inc. v. The D. C. Oriatt Company.*

3,018,363, Gibson and Rhoad, Lighting fixture, **filed** Oct. 4, 1962, D.C. Mass. (Boston), Doc. 62-750-F, *Smithcraft Corporation et al. v. Gibson Manufacturing Co., Inc.* Patent held valid and infringed Apr. 3, 1963.

3,031,668, W. B. Bryson, Dielectric loaded colinear vertical dipole antenna, **filed** Apr. 11, 1963, D.C.N.J. (Trenton), Doc. 290-63, *Phelps Dodge Electronic Products Corporation v. Prodelin, Inc.*

3,032,781, J. A. Constanti, Safety side, **filed** Apr. 2, 1963, D.C., S.D.N.Y., Doc. 63/933, *Lumex, Inc. v. Simmons Company.* Declaratory judgment; patent held valid (notice Apr. 3, 1963).

3,044,233, F. Altman, Jr., Handling of flexible plastic bags, **filed** Apr. 10, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c596 *Eagle-Picher Co. v. Chicago Paper Co.*

3,048,964, A. I. Biorge, Twelve hour scatter corrective mechanism for electric clock systems, **filed** Apr. 3, 1963, D.C. Conn. (New Haven), Doc. 9737, *General Time Corporation v. The Standard Electric Time Company.*

3,050,307, M. I. Glass et al., Game, **filed** Apr. 9, 1963, D.C., S.D.N.Y., Doc. 63/1008, *Hubley Mfg. Co. et ano. v. Standard Toykraft Inc.*

3,053,305, W. R. Lincourt, Automobile frame straightener, **filed** Apr. 2, 1963, D.C.R.I. (Providence), Doc. 3107, *William R. Lincourt v. Frank N. Weelock & Sons, Inc.*

3,063,759, S. C. Moore et al., Drill collar stabilizer, **filed** Mar. 15, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63-306-JWC, *Drilco Oil Tools, Inc. v. Grant Oil Tool Company.*

3,065,449, Matthysse and Raila, Connector; **3,065,503,** Mallory and Brundage, Tire curing press carcass loader, **filed** Apr. 22, 1963, D.C., N.D. Ohio (Cleveland), Doc. C63-287, *National Rubber Machinery Company v. The McNeil Machine & Engineering Company.*

3,065,503. (See 3,065,449.)

3,081,463, R. J. Williams et al., Motor operated hospital bed, **filed** Apr. 5, 1963, D.C., S.D. Ind. (Indianapolis), Doc. IP 63-C-174, *Simmons Co. v. Hill-Rom Company, Inc.*

3,084,512, D. A. Huelskamp, Hydraulic molding machines, **filed** Apr. 9, 1963, D.C., S.D. Ind. (Indianapolis), Doc. 63-c-179, *Kochring Company v. National Automatic Tool Company, Inc.*

Des. 175,628, M. P. Middlemark, Television antenna, **filed** Apr. 3, 1963, D.C., S.D.N.Y., Doc. 63/934, *Rembrandt Electronics, Inc. et al. v. Gimbel Bros. Inc.*

Des. 193,210. (See 3,004,642.)

Des. 193,250. (See 3,004,642.)

REISSUES

AUGUST 6, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,431

CHANGE-COMPUTING CASH REGISTER

Gerhard Becker, Bielefeld, Germany, assignor to Anker-Werke Aktiengesellschaft, Bielefeld, Germany, a corporation of Germany

Original No. 3,066,861, dated Dec. 4, 1962, Ser. No. 86,878, Feb. 3, 1961. Application for reissue Apr. 11, 1963, Ser. No. 272,828

Claims priority, application Germany Feb. 6, 1960

20 Claims. (Cl. 235—2)



1. A change-computing business machine, comprising a keyboard assembly having selectively actuable amount-posting keys and selectively actuable machine-run control keys, said machine-run control keys including keys for entering positive amounts and a payment-received key for entering negative amounts, add-sub totalizer means selectively operable in additive and subtractive sense, differential means operably engageable by said amount-posting keys for actuating said totalizer means and selectively controllable by said control keys for entering respective additive and subtractive amounts posted by said amount-posting keys, said totalizer means comprising change-computing mechanisms for forming the amount of change as the difference between entered additive amounts and an entered subtractive amount, said machine-run control keys including one and the same balance-drawing key for controlling said totalizer means to perform a subtotalizing operation and to perform a change-computing operation respectively, and selecting control means operatively connecting said balance-drawing key with said totalizer means for causing said computer means to selectively effect adding and subtracting runs depending upon previous actuation of a positive-entering and a negative-entering control key respectively.

12. A change-computing business machine, comprising a keyboard assembly having amount-posting keys and selectively actuable mode-of-operation control keys, said control keys comprising one and the same main key for entering posted amounts and for drawing subtotals and ultimate totals, a computer assembly, differential means operatively connected with said amount-posting keys for transferring posted amounts to said totalizer assembly, and sequence control means under control by said control keys and connected with said totalizer assembly for controlling the latter to enter a posted amount and to draw a subtotal and an ultimate total respectively in a given sequence of actuation of said main key.

PLANT PATENTS

GRANTED AUGUST 6, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,271

VERBENA PERUVIANA PLANT

George Kubo, Anaheim, Calif., assignor to Samuel R. Fujimoto and Raymond S. Fujimoto, both of Gardena, Calif.

Filed May 3, 1962, Ser. No. 192,298

1 Claim. (Cl. Plt.—87)

A new and distinct variety of Verbena plant substantially as illustrated and described, characterized by its variegated individual flowers with the outer edge of the corolla approximately Rose Pink, with bright red areas surrounding the center that vary in size from flower to flower, and with a lighter red zone in many of the flowers between the bright red area surrounding the center and the pink-edged corolla, said lighter red zone varying in size from flower to flower, by its clusters of many flowers borne on stiff erect stems, by its thick bright green leaves that are opposite each other on the stems, and by its vigorous growth.

2,272

ILEX (HOLLY) PLANT

Norman H. Cole, Sr., R.R. 2, North Tazewell, Va.

Filed Nov. 20, 1961, Ser. No. 153,769

1 Claim. (Cl. Plt.—65)

A new and distinct variety of Ilex (holly) plant of the evergreen class, substantially as herein shown and described, characterized particularly as to novelty by a naturally broad pyramidal form of the plant which requires little or no trimming to maintain its shape, relatively flat and slightly serrated leaves of deep, rich green color, and exceptionally good resistance to cold and windy weather.

2,273

CHRYSANTHEMUM PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Aug. 9, 1962, Ser. No. 216,007

1 Claim. (Cl. Plt.—82)

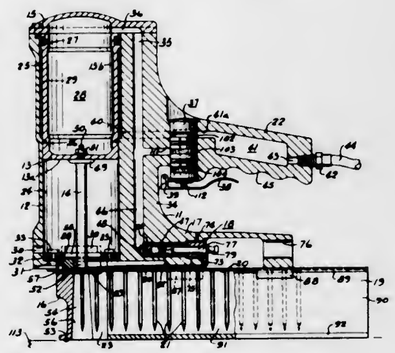
A new and distinct variety of chrysanthemum plant of the incurved class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a strong and vigorous habit of growth, large flower size, an incurved and double form of the flowers, with the tips of the flower petals being slightly notched, and a distinctive and attractive general color tonality of the flowers corresponding to Scarlet-Red, with the edges of the petals lightly overcast with Scarlet.

PATENTS

GRANTED AUGUST 6, 1963

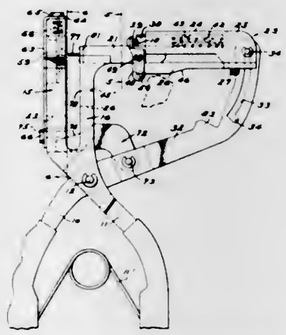
GENERAL AND MECHANICAL

3,099,837
PNEUMATIC DRIVER
George P. Heilman and Vincent A. Zike, Herrin, Ill., assignors to International Staple and Machine Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 17, 1959, Ser. No. 840,613
4 Claims. (Cl. 1—44.4)



1. A pneumatic driver comprising, in combination, a cylinder having a lower bore of one diameter and an upper counterbore of larger diameter, a double acting piston reciprocable in both of said bores, an annular flange extending between said piston and said counterbore, said larger diameter bore defining an annular chamber exteriorly of said piston below said flange, the area of said flange being smaller than the area of said bore, said piston having a cylindrical wall defining an internal recess in the top of said piston with unrestricted access to the top of said cylinder and said counterbore above said flange, said wall separating and preventing communication between said recess and said annular chamber at all times, a feeder mechanism reciprocable substantially at right angles only to the axis of said lower bore, a driving member connected to said piston, said lower bore having means in the lower portion thereof to vent the space below said piston, a port in said cylinder above the uppermost position of said piston, a further port substantially positioned in the lower part of said annular chamber below the lowermost position of said flange, movable means to admit pressure fluid to said first-named port in one position of said means to move said piston in a driving stroke and to exhaust pressure fluid from said annular chamber through said second-named port, means operatively associated with said valve means to move said feeder mechanism in a non-feeding direction during said driving stroke and in a feeding direction upon return of said valve means to a normal return position from said one position, a trigger adapted to be pressed and operatively associated with said valve means to move said valve means to said one position, means for automatically returning said valve means to a normal return position from said one position when said trigger is not pressed, said valve means in normal return position operatively connecting the space above said piston to exhaust and said annular chamber to a source of said pressure fluid.

3,099,838
TOOL FOR FORMING AND CRIMPING AXIAL LEAD COMPONENTS
Derrell A. Drake, 22527 Socia, St. Clair Shores, Mich.
Filed Nov. 9, 1961, Ser. No. 151,388
11 Claims. (Cl. 1—322)



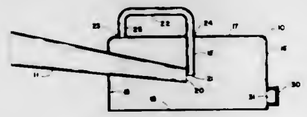
1. A portable tool to form and crimp a lead of an electrical component, comprising a pair of members having means operatively connecting the same for relative movement, one of said members mounting in spaced relation to one another a lead forming device and a lead cut-off and crimping device, the other of said members having an actuator to operate said devices upon relative movement of the members, said lead forming device comprising means on said one of said members operatively connected to the latter and automatically operated by one part of said actuator in response to relative movement of said members to bend a lead relative to said component and position the component and bent lead with the latter extending through a mounting panel between said devices, said lead cut-off and crimping device comprising a blade member mounted on and movable relative to said one member in response to engagement by another part of said actuator, upon said relative movement of the members, to cut off and crimp the lead formed by said first named device on the side of said panel opposite the remainder of the component.

3,099,839
ARTIFICIAL BREAST BRASSIERE
Margaret K. Kester, 3021 E. 51st St., Kansas City, Mo.
Filed May 29, 1961, Ser. No. 113,266
3 Claims. (Cl. 3—36)



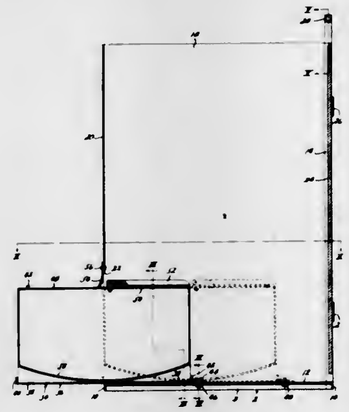
1. In combination with an artificial breast form having a fluid-retaining cell enclosed in a flexible envelope substantially of the size and shape of a human breast to be simulated and having a rear wall of the envelope extending outwardly and defining a flange, a brassiere comprising a body portion and wing portions extending outwardly therefrom and adapted to be secured whereby the brassiere will extend around a person and retained in position thereon, spaced breast sustaining pockets on said body portion extending forwardly therefrom when the body portion is engaged with a person, a fabric member having upper and lower margins secured adjacent upper and lower margins of the body portion in covering relation to said body portion between the pockets thereof, said fabric member having a soft pile rear face for engaging the body of a person with a relatively non-slip engagement, said artificial breast being adapted to be removably positioned in a corresponding pocket with the rear wall toward the person, means securing the flange of the artificial breast to said fabric member.

3,099,840
URINAL
Ernest K. Johnson, Rte. 1, Box 147, Springfield, Oreg.
Filed May 23, 1961, Ser. No. 112,034
5 Claims. (Cl. 4—110)



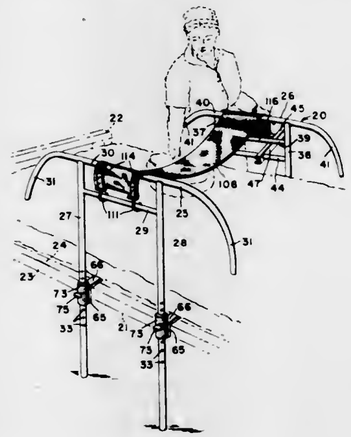
1. A urinal comprising a liquid container, an inlet tube having its inner end at the volumetric center of the container, and a vent tube having an inner end supporting the inner end of said inlet tube and an outer end forming a carrying handle for the urinal.

3,099,841
PORTABLE FIELD TOILET
Jerry L. O'Dell, 3109 Coronado Road, and Jimmy R. O'Dell, 3208 Coronado Road, both of Kansas City, Kans.
Filed Jan. 12, 1961, Ser. No. 82,325
1 Claim. (Cl. 4—116)



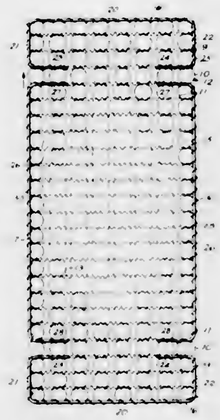
A portable field toilet comprising a booth having a window formed in a wall thereof, a waste tank carried by said booth and movable from a retracted position substantially entirely enclosed within said booth to an extended position in which a portion thereof extends outwardly from said booth through said window, said tank having a seat opening in the top wall thereof and disposed within said booth when said tank is in either position, a carriage carried by said booth and supporting said tank against horizontal movement relative thereto, said carriage being horizontally movable relative to said booth for transporting said tank selectively to its extended or retracted position, and means for securing said carriage selectively in either of two positions representing respectively the extended positions and the retracted position of said tank, said tank being disengageable from said carriage by lifting it vertically upwardly therefrom, the vertical height of said window exceeding the height of said tank by an amount greater than the distance said tank must be lifted to disengage it from said carriage.

3,099,842
PATIENT HOIST
Lee Jensen, 1402 Manufacturers Road, Chattanooga 5, Tenn.
Filed Feb. 5, 1962, Ser. No. 171,175
2 Claims. (Cl. 5—84)



1. A combined side rail and patient hoisting device comprising in combination, a first side rail frame member comprised of a pair of spaced uprights, a top rail extending transversely across the top of said uprights, an intermediate transverse rail extending between said uprights below said top rail, a collar surrounding each upright, means securing each collar in a selected position of vertical adjustment on each upright, a supporting bracket carried by each collar adapted to engage the side rail of a bed, a second side rail frame member comprised of a second pair of spaced uprights, a second transverse top rail extending across the top of said second pair of uprights, a collar surrounding each of said second pair of uprights, means securing each of said last mentioned collars in a selected position of vertical adjustment on its associated upright, a second intermediate rail extending transversely between said second pair of uprights below said second top rail, a pair of spaced side arms pivotally mounted on said second intermediate rail, a pair of spaced cross bars extending transversely between said side arms, said side arms having a plurality of aligned openings in their confronting sides, between said cross bars, a tubular roller having oppositely extending outwardly spring biased pins in its ends, selectively engageable in aligned openings in the opposite side bars, a sling having a looped reverted end surrounding said roller, and hooks at the other end of said sling releasably engaging said first mentioned intermediate rail, said sling extending over both said first mentioned and said second top rails.

3,099,843
DOUBLE HINGED INNER SPRING UNIT
George Simon, Los Angeles, Calif., assignor to Kay Manufacturing Corp., Brooklyn, N.Y., a corporation of New York
Filed Jan. 26, 1961, Ser. No. 85,063
2 Claims. (Cl. 5—351)



1. In a spring unit, a pair of end sections each comprising a multiplicity of rows of upright coil springs having identical top and bottom end coils and a first stiffening border wire on each face of the section extending around one end edge and both side edges of the section and having transversely extending arms on the fourth edge, an intermediate section in spaced relation to and between the end sections and comprising a multiplicity of rows of upright coil springs similar to the firse mentioned coil springs and a second stiffening border wire on each face of the intermediate section extending along each side edge and having transversely extending arms part way along the end edges of the section, and means forming a double hinge connecting the end edges of the intermediate section to the inner end edge of the adjacent end section at both faces of the sections and comprising a connecting row of upright coil springs similar to the aforementioned springs and a pair of transverse helicals for said connecting row at each face of the unit, one of the pair of helicals passing around the arms of the first border wire and around one side of the end coils of the springs of the connecting row and around the end coils of the row of springs adjacent said one side, and the other of the pair of helicals passing around the arms of the second border wire, around the opposite side of the end coils of the row of springs of the connecting row and around the end coils of the springs adjacent said opposite side, each of the four helicals between each end section and the intermediate section constituting a hinge between the sections permitting limited relative movement of said sections.

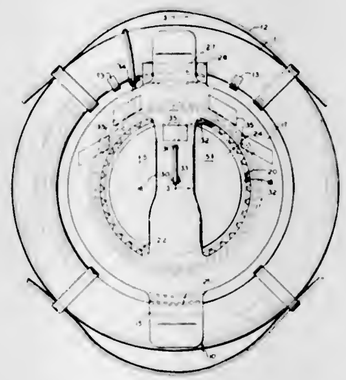
3,099,844
SEAT CONSTRUCTIONS AND PROCESSES OF PRODUCING THE SAME
Richard C. Bolesky, South Bend, Ind., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 4, 1961, Ser. No. 80,594
9 Claims. (Cl. 5—354)

1. A seat construction, comprising a resilient seating pad, a plurality of coil springs arranged in spaced parallel rows, a normally inextensible, flexible insulator sheet having open interstices therein interposed between said pad and said coil springs, said insulator sheet being provided with a plurality of parallel pleats each of which is located between a respective pair of rows of said springs, said pleats being adapted to flatten out and thus to render said insulator sheet extensible under loads applied normally to said pad, whereby upon application of a load to said pad said springs are effectively independent of one another and those remote from the region of application



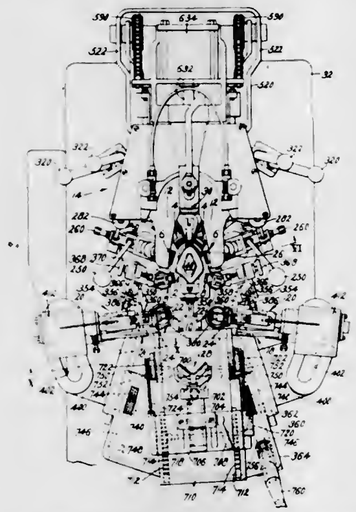
of said load are not deflected laterally toward said region, said pad being formed from an elastomeric foam material with said material extending through said interstices in only the unpleated areas of the insulator sheet and surrounding the adjacent ends of said springs to securely bond the latter, said insulator sheet and said pad to one another.

3,099,845
LINE HOLDER FOR RING BUOY
Clair J. Chamberlain, R.D. 4, Gascon Road, Baldwinsville, N.Y.
Filed Oct. 10, 1961, Ser. No. 144,164
6 Claims. (Cl. 9—313)



1. In combination with a ring buoy adapted to be removably supported on a wall and a retrieval line for said buoy, a line holder comprising: a handle portion extending across the center of the ring and contacting two diametrically opposite portions on the outer side of the ring remote from the wall; support members secured to said handle portion adjacent either end and projecting inwardly of the ring, said members being curved to engage the inner surface of said ring at diametrically opposite sides thereof, at least one member being deformable for easy disengagement from the ring; and a hollow drum secured to said handle portion between the support members, said drum having its axis projecting inward substantially at the center of the ring and having an opening at its outer end affording a hand grip at the center of the handle, the major portion of said line being wound on the exterior surface of the drum and having one end secured to the handle and the other end secured to the ring buoy.

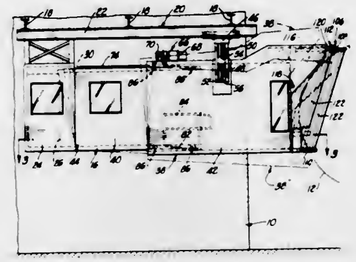
3,099,846
PULLING AND LASTING MACHINES
Harold Lane, John W. Pratt, and Robert C. Quarmby, Leicester, England, assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Mar. 19, 1962, Ser. No. 180,498
Claims priority, application Great Britain Mar. 22, 1961
7 Claims. (Cl. 12—10.1)



3. In a machine for lasting shoes, a pair of lasting units adapted to operate at opposite sides of a shoe at the ball region, each unit including grippers for pulling an upper heightwise of a last at the ball region, a clamp arranged to hold the upper against the last after pulling by said grippers, first and second wipers arranged to wipe the upper inwardly over the edge of the last bottom at the ball region, a block carrying the clamps and wipers, means mounting the block for bodily movement widthwise of the last to an extent determined by engagement of the clamps with the upper pulled by the grippers, and means effective after the clamps are engaged with the upper for moving the wipers relatively to the block to wipe the upper from the edge of the last bottom inwardly over the bottom of the last.

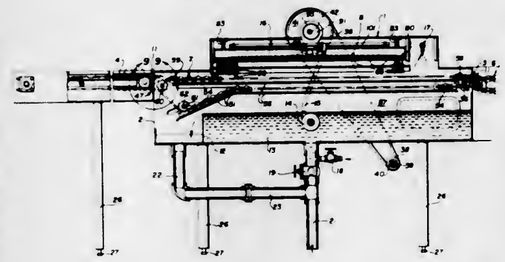
3,099,847
TRACK MOUNTED TELESCOPING LOADING AND UNLOADING RAMP FOR AIRCRAFT
Carl L. Lodjic and Robert D. Lichti, Long Beach, Calif., assignors, by mesne assignments, to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,174
7 Claims. (Cl. 14—71)

2. In a track mounted, telescoping loading and unloading ramp, the combination of: a supporting structure; overhead track means carried by said supporting structure; a passageway suspended from said track means and including a first doorway facing in the direction of said track means, said passageway including a second doorway adapted to register with a doorway in a terminal building, or the like; telescoping ramp means below said track means and including an inner tunnel and an outer tunnel telescoped over said inner tunnel, said inner tunnel having an inner end in register with said first doorway; horizontal pivot means extending transversely of said track means adjacent the bottom of said first doorway and pivotally connecting said inner end of said inner tunnel to said passageway, whereby said ramp means may pivot upwardly and downwardly about the axis of said pivot means; wheeled suspension means for said ramp means engaging and movable along said track means and connected to said outer tunnel; drive means



for telescopically moving said outer tunnel relative to said inner tunnel toward and away from said passageway; and elevating means incorporated in said suspension means for pivoting said ramp means upwardly and downwardly about the axis of said pivot means.

3,099,848
ARTICLE WASHER
Paul A. Mountz, Menlo Park, Calif., assignor to Lathan Manufacturing Company, Redwood City, Calif., a corporation of California
Filed Oct. 27, 1960, Ser. No. 65,396
5 Claims. (Cl. 15—3.14)

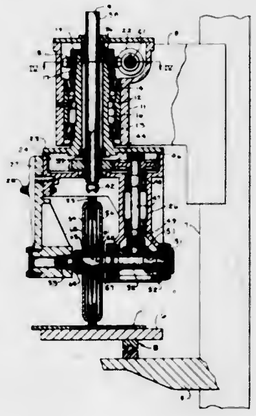


4. In combination with apparatus for handling fragile articles, such as eggs, which comprises first and second conveyor sections for moving rows of said articles in side-by-side spaced relationship through said apparatus, said conveyor sections being spaced from each other whereby a gap exists therebetween, means for supporting simultaneously a row of said articles as the articles are transferred from said first conveyor section to said second conveyor section while maintaining the articles in said row spaced from and out of contact with each other, said means comprising a generally rigid mounting plate traversing the gap between said conveyor sections and extending generally the full width thereof, said mounting plate being located in close proximity to said first conveyor section, and a plurality of generally discrete concavely contoured flexible supporting members arranged side by side and projecting from said mounting plate toward said second conveyor section, each of said members including a projecting end which is free to bend independently of said mounting plate, the projecting end of each of said members being engaged with said second conveyor section and being movable in response to movement thereof as said conveyor sections move relative to each other, said supporting members being flexibly movable independently of each other whereby each of said members is capable of supporting one of said articles of said row and precluding contact of such article with the

other articles of said row as said row of articles is simultaneously transferred onto said second conveyor section, and means adjustably mounting said mounting plate between said conveyor sections.

5. Apparatus for washing easily damaged articles, such as eggs, comprising conveyor means for moving articles to be washed past a washing station in side-by-side rows, and structure at said washing station for scrubbing said articles; said scrubbing structure comprising an elongated carrier mounted for vertical reciprocation above said conveyor means, said carrier comprising plate structure having a multiplicity of apertures extending therethrough above said conveyor means, article scrubbing means depending from the underside of said plate structure of said carrier so that said scrubbing means is repeatedly engaged with said articles on said conveyor means at said station as said carrier reciprocates vertically, means for effecting vertical reciprocation of said carrier, and means for supplying washing fluid to the upperside of said plate structure for application by said depending scrubbing means directly onto articles on said conveyor means beneath said plate structure; said scrubbing means comprising a multiplicity of closely arranged flexible brush bristle tufts depending from said plate structure, said bristle tufts being generally aligned with apertures through said plate structure so that washing fluid supplied to said plate structure may pass through such apertures into contact with said bristle tufts for direct application thereby to the articles being scrubbed, said bristle tufts being arranged in longitudinal series along said plate structure, the tufts in each of said series being of varying lengths and being arranged on said plate structure so that the depending ends of the tufts of each series define a concave configuration which generally conforms to the contour of the articles being scrubbed by said apparatus.

3,099,849
POLISHING AND BUFFING APPARATUS
Ramsay M. Bell, Schoolcraft, Mich., and Ivar Jepson, Oak Park, Ill., assignors to Hammond Machinery Builders, Inc., Kalamazoo, Mich., a corporation of Michigan
Filed Apr. 16, 1962, Ser. No. 187,810
11 Claims. (Cl. 15—21)



1. An apparatus for working a contoured surface on a workpiece comprising, in combination:

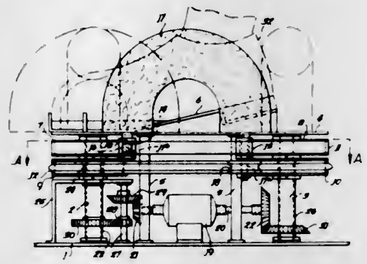
a first shaft and means supporting same for rotation about a spinning axis positioned approximately perpendicular to the general plane of said surface;

a second shaft and means supporting said second shaft from said first shaft for rotation about a cutting axis positioned substantially transversely to said spinning axis;

drive means for effecting rotation of said first and second shafts, respectively;

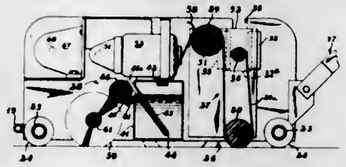
a flexible wheel, said wheel being connected to said second shaft for rotation with said second shaft about the cutting axis and positioned so that said spinning axis extended passes diametrically through said flexible wheel and also through the peripheral portion of said wheel contacting said workpiece, whereby said wheel may be caused to rotate around said cutting axis and simultaneously to rotate around said spinning axis so that said wheel applies to the workpiece a working action in an infinite number of directions through a point therein pierced by said spinning axis.

3,099,850
SHOE POLISHING MACHINE
Mitsugu Tamura, 124 Banchi, Tokumaru-cho, Itabashi-ku, Tokyo, Japan
Filed Sept. 5, 1961, Ser. No. 136,422
3 Claims. (Cl. 15—35)



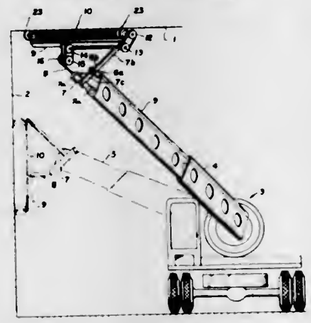
3. In a shoe polishing machine, a frame equipped with upright stanchions at the ends thereof, a pair of vertically spaced-apart endless elements rotatably mounted on said stanchions, an arcuate brush upstanding from the upper of said elements and adapted to revolve planetarily around said stanchions, means on said brush adapted to contact said lower element to rotate said brush, shoe support means on said stanchions, and means for rotating said elements at different speeds.

3,099,851
APPARATUS FOR CLEANING AND APPLYING DRESSING TO BOWLING LANES
Victor Unterbrink, Ottawa, Ohio, assignor to Pines Engineering Co., Inc., Aurora, Ill., a corporation of Illinois
Filed Mar. 21, 1962, Ser. No. 181,254
9 Claims. (Cl. 15—50)



5. Apparatus for cleaning and dressing a floor surface comprising, in combination, a frame structure, a disposable web carried by said frame structure and arranged for wiping engagement with the floor surface over which the frame structure is moved, eccentric means to advance said web step-by-step during operation of the apparatus, a tank for fluid carried by said frame structure, capillary means mounted firmly in said tank and projecting outwardly thereof for receiving fluid from said tank, a rotatable brush for spreading the fluid onto the floor surface over which the frame structure is being moved, and means in contact with said capillary means and brush for conveying fluid from said capillary means to said brush.

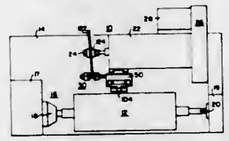
3,099,852
POWER OPERATED BRUSH ATTACHMENT FOR EARTH MOVING MACHINE
Louis A. Grant, 7886 Saltzburg Road, Monroeville, Pa.
Filed Mar. 30, 1962, Ser. No. 183,793
4 Claims. (Cl. 15—50)



1. In combination with an earth moving vehicle having a boom formed of telescoping elements of triangular cross-section extending angularly upwardly from said vehicle, and including means for rotating said boom about its axis through an angle of about 90°; a framework including means for clamping the framework against the end face of the outermost of said telescoping elements and in a plane at right angles to the longitudinal axis of the boom, a cylindrical brush rotatably mounted on said framework in substantially the same plane thereof and disposed at an angle of about 45° with respect to the base of the triangular cross-section of said outermost telescoping element, a hydraulic motor mounted on said framework, control means mounted on said vehicle for controlling operation of said hydraulic motor, sprocket and chain drive means rotatably mounted on said framework in substantially the same plane thereof and coupling said motor to said brush, flexible hoses extending parallel to said boom and carrying hydraulic fluid from said vehicle to said motor, the base of the triangular cross-section of said outermost telescoping element being at a neutral position parallel to the roadway when axially rotated about 45° from either extreme position, said framework being rotatable, by axial rotation of said boom by said means through an angle of about 45° from said neutral position in one direction to position the axis of said brush vertically so as to enable it to wash vertical walls as the vehicle is driven forwardly, said framework being rotatable through an angle of 45° in an opposite direction from said neutral position so that when the boom is tilted upwardly, the axis of said brush will extend horizontally, parallel to the roadway surface so as to enable it to wash ceilings as the vehicle is driven forwardly, and when rotated to intermediate positions, said brush is enabled to wash differently inclined surfaces while said vehicle is driven forwardly.

3,099,853
POLISHING APPARATUS
Floyd T. Bills, Vandergrift, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1962, Ser. No. 172,625
9 Claims. (Cl. 15—97)

1. In a polishing apparatus, the combination comprising, a base, a mounting plate removably secured to said base, a guide bar secured to said mounting plate and having a longitudinal channel portion extending along the length of one side thereof and a tongue portion extending along the length of the opposite side, a reciprocating head disposed in spaced relation over said mounting plate, a substantially T-shaped bearing bar secured to said reciprocating head and a substantially U-shaped bearing channel also secured to said reciprocating head, said T-shaped bearing bar and U-shaped bearing channel being disposed in spaced relation to each other and in registry with said



channel portion and said tongue portion, respectively, of said guide bar for securing said reciprocating head in sliding engagement, a pivot plate pivotally mounted in spring biased spaced relation on said reciprocating head, a retaining plate pivotally secured in spaced relation on said pivot plate, a polishing member removably secured in seating engagement on said retaining plate, and means connected to said reciprocating head for transforming rotary motion to reciprocating motion to effect a movement of said reciprocating head through a predetermined amplitude in a predetermined plane.

3,099,854
MATERIAL ADAPTED FOR ABRASIVE EFFECT IN USE AND SCOURING DEVICES, POT CLEANERS AND THE LIKE PRODUCED THEREFROM
Alfred M. Goodloe, 105A Duncan Hill Apts., Westfield, N.J.
Filed July 25, 1962, Ser. No. 212,225
6 Claims. (Cl. 15—209)



1. Abrasive material from which scouring devices, pot cleaners and the like can be produced, said material comprising thin sheet material composed of a hard relatively rigid substance having rows of separated slits cut therethrough to divide the sheet into a multiplicity of parallel ribbon-like strips having sharp side edges, said strips of alternate rows thereof being bowed respectively upward and downward perpendicularly to the face planes of the sheet to form projecting portions whereby to expose the sharp edges of the strips for cutting and abrasive action in use, and said ribbon-like strips being each provided with a plurality of transversely extending crimps disposed along the lengths thereof, whereby to provide a multiplicity of chisel-like cutting projections along the side edges of said strips.

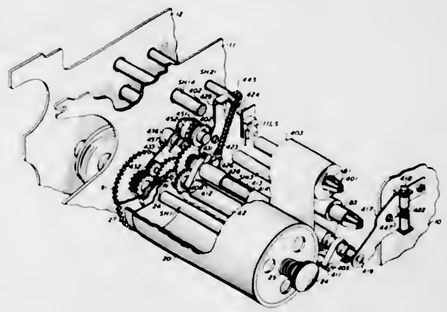
3,099,855
CLEANING IMPLEMENT
Lawrence M. Nash, East Brunswick, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Feb. 1, 1962, Ser. No. 170,345
2 Claims. (Cl. 15—231)

2. A cleaning implement comprising: a flat, elongated head member; an elongated drapeable cleaning fabric wrapped around said flat head member and covering the bottom surface of said flat head member; and fabric-hold-

ing means adjacent the end surfaces of said flat head member for attaching the ends of said drapeable cleaning fabric to the top surface thereto, said top surface of said flat head member having vertically extending openings adjacent the ends thereof and said end surfaces of said flat head member having horizontally extending slots therein intersecting with and passing through said vertically extending openings, said fabric-holding means comprising a relatively thin, flexible plate fitted into each slot formed in said flat head member, each flexible plate having a plurality of slits therein passing through a common point, thereby forming a plurality of resilient, substantially triangular segments having apexes at said common point, said plurality of slits which pass through a common point and the substantially triangular segments formed thereby being located in the opening formed in the flat head member, with the ends of said drapeable cleaning fabric being gripped and held in place on said flat head member by the apexes of the resilient, substantially triangular segments of said fabric-holding means.

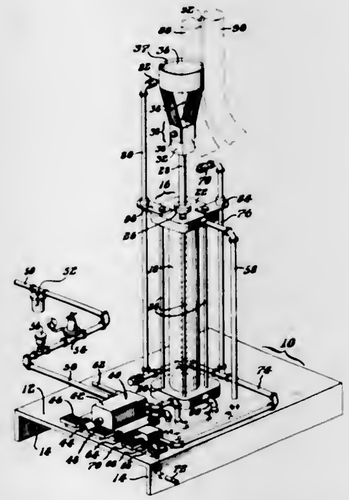


3,099,856
WEB CLEANER APPARATUS
Roger H. Elchorn and John A. Strommer, Webster, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,823
5 Claims. (Cl. 15—256.52)



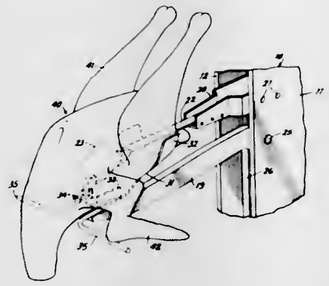
1. In a xerographic reproducing apparatus wherein a xerographic drum is journaled in the frame of the apparatus to be rotated through a series of xerographic processing stations, including a plate cleaning station wherein residual powder remaining on the surface of the xerographic drum is removed;
the improvement including a support secured to said frame;
a torque tube rotatably mounted on said support,
arm means secured to said torque tube for rotation therewith,
roller means rotatably mounted on said arm means,
a supply shaft mounted on said frame,
a take-up shaft journaled in said frame,
said torque tube, said roller means, said supply shaft and said take-up shaft being positioned with their axes substantially parallel to the axis of said xerographic drum,
a first drive means connected to said roller means for rotating said roller means at a predetermined speed relative to the movement of said xerographic drum,
a second drive means connected to said take-up shaft whereby a web of cleaner material which is advanced from said supply shaft by said roller means is rewound on said take-up shaft,
and means connected to said torque tube whereby said roller means is movable from a first position in which it is in pressure contact with said xerographic drum with the web of cleaning material sandwiched therebetween,
to a second position in which said roller means is out of pressure contact with said xerographic drum.

3,099,857
APPARATUS FOR SEPARATING THE WINDPIPE FROM THE ESOPHAGUS OF AN ANIMAL
Elwood E. Milbury, Collingswood, N.J., and Eugene W. Shultz, Philadelphia, Pa., assignors, by mesne assignments, to Humane Slaughtering Device Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 3, 1961, Ser. No. 121,446
3 Claims. (Cl. 17—1)



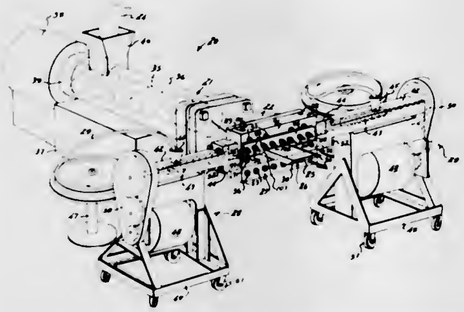
1. Apparatus for separating the esophagus from the windpipe of a slaughtered animal suspended by its hind legs over the apparatus, a rigid base member, a fluid motor including a cylinder affixed to said base member, a piston working in said cylinder, and a piston rod extending through one end of said cylinder, membrane cutting means in the form of a cylindrical part, a pair of arms mounted on diametrically opposite sides of said piston rod and extending outwardly therefrom in laterally spaced relation to each other and in longitudinal continuation of said piston rod to mount said cylindrical part in axially spaced relation to said piston rod for movement therewith, said cylindrical part having an axially tapered membrane cutting edge extending about the outer terminal portion thereof, a fluid pressure system for actuating said piston including a valve mounted upon said base, and foot actuated means controlling the flow of fluid through said valve thereby to deliver fluid pressure selectively to opposite ends of said cylinder for extending and retracting said piston rod, the latter being operable for pushing said cylindrical part outwardly between the esophagus and windpipe with said membrane cutting edge leading.

3,099,858
POULTRY BREAK-APART METHOD
Asa B. Segur, 1185 S. Ridgeland Ave., Oak Park, Ill.
Filed May 5, 1960, Ser. No. 27,093
7 Claims. (Cl. 17—45)



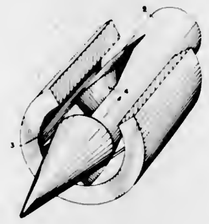
5. A method of dismembering a poultry carcass comprising the steps of supporting said carcass by applying clamping pressure between the interior of said carcass along and to each side of the backbone thereof and the exterior of said carcass along and to each side of said backbone, and then pulling the appendages and breast from the back and vertebral ribs of said carcass.

3,099,859
APPARATUS FOR MAKING COMPOSITE TREAD RUBBER
Jack E. Ellersen, Alameda, Calif., assignor to Oliver Tire & Rubber Company, Oakland, Calif., a corporation of California
Filed June 6, 1961, Ser. No. 115,262
12 Claims. (Cl. 18—12)



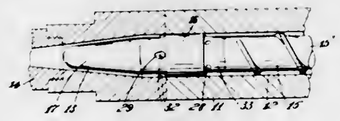
1. An apparatus for forming a solid, composite rubber tire tread having a center portion of one rubber composition and attached side wing portions of a different rubber composition, said apparatus comprising: an adapter die block having front and rear sides and a main, central passage extending inwardly from said rear side into said die block and having converging side walls terminating within said die block at an opening, side passages having inlet openings in the ends of said die block, extending substantially transversely toward and merging with said central passage near its said outlet end and forming a common outlet for said merged passageways along the said front side of said adapter die block; a central tuber means connected to said rear side of said adapter die block for supplying rubber to said central passage to form said center portion of said tire tread; side tuber means connected to each end of said adapter die block for feeding a different rubber material under pressure to said side passageways; a die plate removably attached to said front side of said adapter die and covering said common outlet, said die plate having an extrusion opening on its outer side of substantially the same size and shape as the cross section of said composite tire tread; and a preforming die member on the inner side of said die plate having end portions extending inwardly into said adapter die for merging together and bonding the rubber in said side passages with the rubber from said central passage.

3,099,860
PROCESS AND APPARATUS FOR PRODUCING TUBULAR PRODUCTS FROM PLASTIC MATERIALS
Heinz Schippers, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik A.G., Wuppertal-Oberbarmen, Germany
Filed June 26, 1961, Ser. No. 119,358
Claims priority, application Germany June 28, 1960
8 Claims. (Cl. 18—14)



2. An axial nozzle head for producing tubular structures of thermoplastic material which comprises a mandrel, an annular throughput passage surrounding said mandrel, said passage being defined by said mandrel and the casing of said nozzle head, and radially disposed fins attached to said mandrel and said casing, said fins acting as support members for said mandrel, said fins having the shape of a rhomboid ship's hull whose bow and stern are twisted oppositely with respect to the plane of symmetry of the fin in its longitudinal direction.

3,099,861
INJECTION MOULDING MACHINE
Emeric Gaspar, Michael George Munns, and Richard Austin Butler, London, England, assignors to The Projectile & Engineering Company Limited, London, England, a British company
Filed Nov. 4, 1960, Ser. No. 67,420
Claims priority, application Great Britain Nov. 10, 1959
3 Claims. (Cl. 18—30)



1. Injection moulding mechanism comprising in combination a cylindrical plasticising chamber having an inlet for granular material at one end and an outlet for plasticised material at the other end, a feed screw mounted within the chamber for rotation and reciprocation and having thereon a screw thread which fits the interior of the chamber, a piston head rigid with the feed screw which head is located near the outlet end of the chamber and is a sliding fit in the chamber, the chamber having a tapered portion adjacent its outlet end, and the feed screw between said piston head and the said outlet having a similarly tapered nose, a passage extending through the piston head from an inlet end on one axial side of the

piston head in an inclined tangential direction to an outlet end on the opposite axial side of such piston head and near the base of said tapered portion, and a non-return valve in said passage at the outlet end.

3,099,862
LAST FOR USE IN MAKING PLASTIC FOOTWEAR
George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Filed Feb. 5, 1958, Ser. No. 713,433
7 Claims. (Cl. 18—41)



1. A last for use in the manufacture of an article of footwear such as a boot whose upper, at least, is of a synthetic plastic and which includes a length of textile tape adhesively bonded at the inner surface of the upper, the peripheral surface of the leg portion of the last comprising a cylindrically curved area which, at any transverse section of the last, is rectilinear, said area being of substantially the uniform width of said tape heightwise of the last and of a curvilinear length approximating the length of the tape which is to be adhered to the boot upper, the edges of said area merging smoothly with the adjacent peripheral surface of the last proper at all points heightwise of the last.

3,099,863
COMPOSITE PANEL ASSEMBLY
Gordon J. Pollock, Parma, and Gilbert L. Fowles, Lakewood, Ohio, assignors to The E. F. Hauserman Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 31, 1958, Ser. No. 712,520
5 Claims. (Cl. 20—4)



1. In a composite panel assembly having horizontally spaced vertical posts,

(*a*) a substantially horizontally disposed beam elevated with respect to the lower terminals of and interconnecting said posts,

(*b*) said beam having laterally extending flanges to engage and support a pair of horizontally spaced-apart sets of panel members, said panel members of each set being vertically arranged,

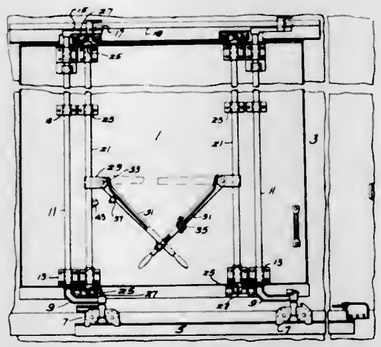
(*c*) each set constituting a side of a partition and being separately and individually uspported with respect to the assembly only at a vertical end thereof and in a manner spaced from the free of any contact with the other set substantially throughout its vertical extent,

(*d*) at least the bottom panel member of each set having side flanges extending inwardly substantially at right angles to the face of the panel member, then converging together, and finally diverging in a direction substantially parallel to the face of said bottom panel member, the lower of such flanges thereby engaging a laterally extending flange of said beam to support that set, and

(*e*) at least one other panel member of each set having side flanges extending inwardly substantially at right angles to the face of said other panel member, then diverging, and finally converging in a direction substantially parallel to the face of said other panel member,

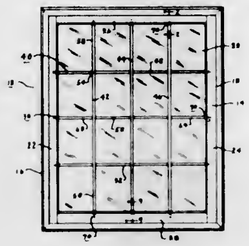
(*f*) the lower flange of said other panel member thereby nesting with the upper flange of said bottom panel member to interengage the panel members.

3,099,864
RAILWAY CAR DOOR OPERATING LEVER SAFETY STRUCTURE
Reuben F. Nelson, Roseville, Calif., assignor, by mesne assignments, to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware
Filed July 1, 1960, Ser. No. 40,335
2 Claims. (Cl. 20—23)



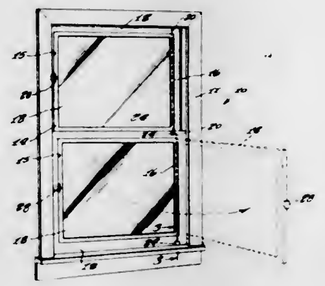
2. In combination, a railway car door, an upright shaft journaled thereon and having a horizontal crank arm at its end provided with a pin substantially parallel to the shaft and arranged to engage a fixed element on a car side to limit movement of the door, a lever including a handle with a horizontal pivot on said shaft and swinging in a vertical plane between positions parallel to the shaft and extending laterally from the shaft respectively but fixed against movement relative to the shaft about the shaft axis, and a securing device consisting of two latch parts mounted on said lever handle and shaft respectively, automatically holding the handle, when dropped to vertical position and irrespective of the angular position of the shaft, against movement upwardly by centrifugal force about its horizontal pivot on the shaft upwardly and outwardly from said parallel position when said crank engages said fixed element.

3,099,865
WINDOW STRUCTURE
Alice W. Burnett, 1340 E. Fairview Ave., South Bend, Ind.
Filed Apr. 10, 1961, Ser. No. 101,891
6 Claims. (Cl. 20—40)



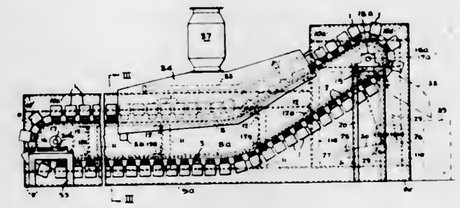
2. A window structure simulating a multi-pane window, comprising a casing, a panel of glass mounted in and spaced inwardly from the interior edge of said casing, a vertical and a horizontal muntin connected rigidly together to form a removable mullion unit, and a fixture at each end of each muntin, each fixture consisting of a permanent magnet part and a part of magnetic attractable material, one of said parts being on the end of a muntin and the other of said parts being in said casing adjacent said one muntin.

3,099,866
WINDOW STRUCTURE
Joseph P. Matranga, P.O. Box 86, Ossining, N.Y.
Filed July 17, 1961, Ser. No. 124,526
1 Claim. (Cl. 20—48)



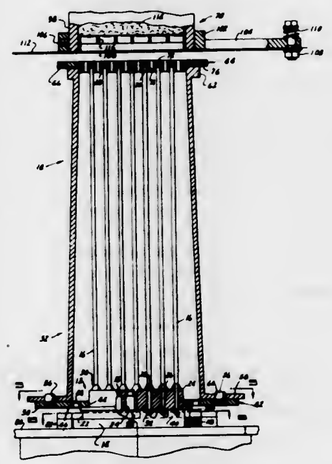
A window assembly comprising, in combination, a frame having a pair of vertically disposed guideways in each side thereof, a pair of rectangular sashes each slidable in one of the guideways, and each defining an opening to be closed by a glass pane and a recess in one face thereof encircling the opening, each sash being larger than one half of the frame to provide overlying ends when the sashes are moved away from each other to fully close such frame, a pair of glass panes, a pair of panel frames each encircling one of the glass panels and supported in one of the recesses, one side of each panel frame forming a hinge, with the adjacent side of the sash supporting such panel frame, latch means releasably connecting the side of each panel opposite the hinge to the adjacent sash side, a pin vertically disposed through each hinge, a fitting disposed in the bottom of each sash and having an opening aligned with the hinge pin thereof, and a pair of members each threaded into the opening of one of the fittings to retain the aligned pin in place.

3,099,867
CASTING MACHINES
Eric James Ponting, Sutton Coldfield, England, assignor to Ingot Casting Machines Limited, Birmingham, England
Filed Aug. 4, 1961, Ser. No. 129,464
Claims priority, application Great Britain Aug. 6, 1960
9 Claims. (Cl. 22—76)



1. A casting machine comprising an endless conveyor arranged with one run disposed above the other and including an endless trackway and endless drive means coextensive with said trackway, a plurality of arms extending transversely of said trackway, roller means journaled on each of said arms and respectively mounted on said trackway, said trackway including concentric runways between which said roller means are trapped to support said arms cantilever fashion, means connecting said endless drive means with said arms for advancing the latter around said trackway on their roller means; a casing enclosing said conveyor and having in one side wall an endless slot coextensive and in registry with said trackway, said arms extending laterally of said trackway through said slot and beyond said casing; and a mold carried by each of said arms exteriorly of said casing, whereby said conveyor is protected from splashing or other misdirection of molten casting metal as it is poured into the molds.

3,099,868
METHOD FOR MANUFACTURING CAST WELDING RODS
Gerald J. Grott, Warren, Mich., assignor, by mesne assignments, to Howe Sound Company, New York, N.Y., a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,548
3 Claims. (Cl. 22—194)



1. In a method of forming a mold for casting elongated rods of small diameter,

the steps of positioning an elongated rod vertically within a downward draft mold box,
in one step, charging sodium silicate coated sand from the top down into the mold and over and around the rod along its entire length to fill the mold and entirely embed the rod,
in one step, compressing the sand from the top down in the filled mold,
forcing carbon dioxide axially from the top through the compressed sand to harden the same,
moving the hardened sand downwardly and out of the mold box while carrying the rod along,
stopping the movement of the hardened sand, and then moving the elongated rod downwardly and out of the hardened sand.

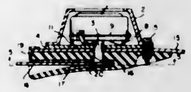
3,099,869
PROCESS OF BONDING METALS
Glenn T. Piper, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Original application Dec. 2, 1953, Ser. No. 395,782. Divided and this application Dec. 19, 1958, Ser. No. 781,531
1 Claim. (Cl. 22—204)



A process of producing a laminated metallic article having a cast aluminum metal body firmly united with a ferrous metal body having high mechanical bond strength and resistance to thermal shock which comprises the steps of grit blasting the surface of the ferrous body to which the cast aluminum metal is to bonded to roughen said surface, spraying a thin film of ductile and corrosion resistant metal selected from the group consisting of aluminum, molybdenum and stainless steel onto the grit blasted surface of the ferrous metal, heating the sprayed film of metal to a temperature below the melting temperature thereof sufficient to allow die cast metal to flow into the interstices of the sprayed metal film before chilling of the die cast metal, casting a body of aluminum metal onto the heated sprayed metal film with sufficient pressure to compact and densify the sprayed metal and to force the same into intimate engagement with the irregularities in the grit blasted surface of the ferrous metal while forcing the cast metal into intimate engagement with the irregular surface of the sprayed metal film, and chilling the composite body below the melting temperature of the aluminum metal before the formation of detectable ferro aluminum alloys.

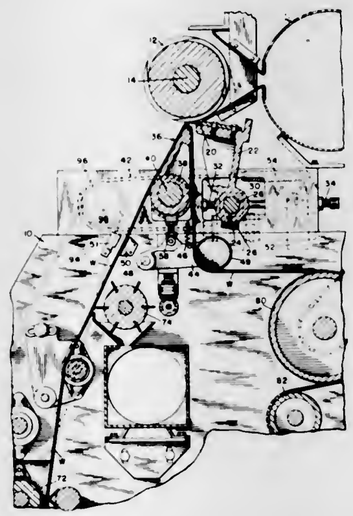
3,099,870
QUICK RELEASE MECHANISM
Henry W. Seeler, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 2, 1961, Ser. No. 142,444
8 Claims. (Cl. 24—230)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A quick release mechanism comprising a push button positioned inwardly of a rigid housing means, a post having a cap portion that is structurally continuously integral with a shaft portion, expansible spring means interposed between the push button and the post cap portion, lever means interposed between the push button and the



post cap portion and actuated by the push button for causing the displacement of the post with respect to the push button, and the housing means protectively substantially inclosing the mechanism.

3,099,871
SEAM JUMPING APPARATUS FOR CLOTH SHEARING MACHINES
Theodore A. Dourdeville, Holden, Mass., assignor to David Gessner Company, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 29, 1961, Ser. No. 99,080
7 Claims. (Cl. 26—17)



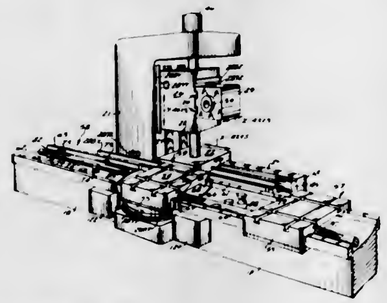
1. Seam jumping mechanism for a cloth shear including a frame, a rotary and ledger blade shearing means on the frame in combination with a cloth rest, means mounting the cloth rest for motion to and from the rotary and ledger blades, and means maintaining the rotary blade and ledger blade in fixed relation to each other and to the frame, means for moving the cloth rest to provide a gap in the shearing action as a seam approaches the shearing area, said means embodying a seam detector positioned adjacent the cloth rest, the mounting means for the cloth rest comprising an eccentric shaft, means to at least partially rotate the same, means actuating said rotating means under the control of the seam detector according to the passage of a seam, the means for at least partially rotating the eccentric shaft including a wrap-around flexible device and means for moving the same selectively in either direction.

3,099,872
METHOD AND APPARATUS FOR HEATING AND DRAWING THREADS
Erhard Siggel, Laudenburg am Main, and Fritz Kleekamm, Oberuburg am Main, Germany, assignors to Vereinigte Glanzstoff-Fabriken AG., Wuppertal-Elberfeld, Germany
Filed Jan. 10, 1961, Ser. No. 87,480
Claims priority, application Germany July 4, 1959
5 Claims. (Cl. 28—71.3)



1. An improved apparatus for heating and drawing threads, which comprises: means to supply thread; means for drawing off said thread at a more rapid rate than the rate at which the thread is supplied by said supply means; and a heating device positioned in the path of said thread between said supply means and said drawing off means, said heating device comprising an at least partially hollow, elongated, heat-conducting tube adapted to receive said thread at one end for thread travel in spiral winding contact along the outer surface of said tube and to discharge said thread at the opposite end, the longitudinal axis of said tube coinciding approximately with the linear direction of said thread path and the annular cross-sectional wall thickness of said tube in the hollow portion thereof diminishing progressively from said discharge end to said receiving end, and means to heat said tube at said discharge end for conductance of heat radially to the outer thread-contacting surface of the tube and longitudinally to said receiving end.

3,099,873
SHUTTLE OPERATED TAPE CONTROLLED MACHINE TOOL
Wallace E. Brainard, Milwaukee, and Kenneth R. Merner, Greendale, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Nov. 28, 1958, Ser. No. 777,122
24 Claims. (Cl. 29—26)



1. In a machine tool;
a power driven tool support and a work support respectively carried for movement in coordinated relationship to each other;
power driven motion translators respectively operative to move said supports;
indicators connected to be activated by said supports and being operative to supply information as to the velocity and position of said supports;
a numerical control system responsive to coded input information and being operative in response thereto to activate said translators for effecting a predetermined program of machining movements of said supports;
feedback control means operative to correct said indicators to said motion translators for modifying the operation of said numerical control system;
a plurality of controllers respectively adapted to provide coded input information activating said numerical control system for effecting a sequential program of machine movements;
a switching mechanism actuatable to connect a selected one of said controllers for actuating said numerical control system to operate said machine through a predetermined program of machine movements;
a plurality of work carrying pallets respectively positionable upon said work support;
a transfer mechanism including moving means and guide means operatively associated with said work support;
power operable means connected to actuate said transfer mechanism for moving one of said pallets into an operative position upon said work support and to move another of said pallets from said work support to an unloading station; and,
selectively operable control means connected to activate said power operable means and said switching mechanism for moving a selected pallet into position upon said work support and simultaneously therewith connecting an appropriate one of said controllers to activate said numerical control system for effecting a predetermined machining program of machine movements.

3,099,874
METHOD OF MANUFACTURING MAGNETIC CORE MATRICES
Sigfrid Schweizerhof, Backnang, Wurttemberg, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
No Drawing. Filed Feb. 2, 1959, Ser. No. 790,383
Claims priority, application Germany Feb. 6, 1958
7 Claims. (Cl. 29—155.5)

1. A method of manufacturing a matrix for the magnetic storage or switching of electrical impulse information, said method comprising the steps: of fabricating a network of insulated signalling or switching wires in the form required by the final matrix, and sputtering from a gaseous phase a coating of magnetic material upon said network for surrounding at least the points of intersection of said wires with said magnetic material, whereby storing or switching elements are obtained at said points of intersection.

3,099,875
COMBINATION DISASSEMBLING, ASSEMBLING AND WORK HOLDING DEVICE FOR MACHINE SHOPS
John Lelis, 231 W. 6750 S., Bountiful, Utah
Filed Dec. 22, 1959, Ser. No. 861,379
2 Claims. (Cl. 29—227)

1. A machine for assembling equipment including a housing and at least one spring disposed therein which must be compressed before the assembling of said equipment can be completed, said machine including, in combination, table means for supporting said housing, said table means having a central rod receiving aperture, a ver-

tically disposed, vertically reciprocable rod centrally passing through said aperture, means affixed to said table means for supporting the same and journaling said rod for solely vertical, reciprocative movement, means connected to said rod and actuatable by foot pressure for depressing said rod selectively, return spring means operatively coupled to said rod for returning said rod to its



uppermost position after selective foot depression thereof, said rod adapted to pass through said housing and said one spring to extend thereabove, and work means releasably affixed to said rod above said one spring for selectively compressing said one spring upon the depression of said rod, preparatory to completing the assembling of said equipment.

3,099,876

TOOL FOR REMOVING SPRING PINS

John W. Lawless, Shelburne Falls, Mass., assignor to Mayhew Steel Products, Inc., Shelburne Falls, Mass., a corporation of Massachusetts

Filed May 17, 1960, Ser. No. 29,760
1 Claim. (Cl. 29—229)



An assembly comprising:

workpiece means having bore means of substantially uniform diameter;

a spring pin comprising a resilient, generally cylindrical member having a longitudinal slot, said spring pin being radially compressed by and positioned within said bore means; and

a spring pin removing tool consisting of a unitary structure comprising:

a smooth surfaced, elongated, metal, and cylindrical shank having a constant diameter substantially equal to the diameter of said bore means and the outer diameter of said compressed spring pin positioned therein,

said shank having a portion extending into said bore means, said shank portion being slideably supported by the wall of said bore means throughout its length whereby said shank is supported by said wall adjacent said spring pin,

one end of said shank being provided with a short pilot projection extending directly into one end of said spring pin, which projection is of a generally tapered configuration, said pilot projection extending coaxially from said one end of the shank and having a maximum diameter substantially less than the diameter of said shank and no greater than, but substantially equal to, the inner clearance diameter of the compressed spring pin, whereby said pilot projection centers said one end of the shank relative to the pin without spreading said pin during its removal,

said one end of the shank further being provided with a continuous, flat, and annular shoulder surrounding said pilot projection at the juncture thereof with the shank and lying in a plane extending at right angles to the shank axis, said flat, annular shoulder being in direct driving engagement with said spring pin,

a chamfered shank portion surrounding said flat, annular shoulder and extending between said shoulder and the cylindrical periphery of said shank, and

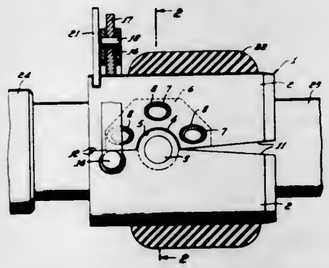
an integral, knurled, and hand engageable gripping portion extending from the other end of the shank, the end of said gripping portion opposite the shank being provided with a surface engageable by an impact tool.

3,099,877

HINGED CASING PROTECTOR TRANSFER SLEEVE

Raymond G. Taylor, Jr., Santa Monica, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Original application Feb. 1, 1957, Ser. No. 637,817, now Patent No. 2,957,233, dated Oct. 25, 1960. Divided and this application Dec. 18, 1959, Ser. No. 860,569
4 Claims. (Cl. 29—236)



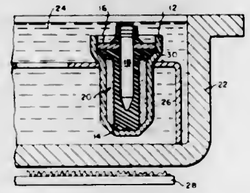
4. A transfer sleeve of the class described for applying resilient protectors to a casing or pipe, comprising an axially extended hollow body, said body being composed of a pair of semi-cylindrical half-sections having adjacent terminal portions, means hingedly interconnecting said terminal portions for pivotal movement of said sections on a diametrical axis across said body, whereby said body assumes a frusto-conical form upon relative pivotal movement of said sections in one direction and assumes a cylindrical form upon relative pivotal movement of said sections in the other direction, and means for releasably retaining said sections in positions with said body in a cylindrical form, said retaining means comprising a yoke having ends pivotally connected to one of said body sections on a transverse axis displaced longitudinally towards an end of said body from the diametrical axis aforesaid and a portion intermediate said ends having a slot therethrough, a latching cam element disposed in said slot, means pivotally mounting said latching cam element for rotation on an axis extending longitudinally of said body, and said cam having an eccentric portion engageable with one of said body sections to hold said body in a cylindrical form.

3,099,878

METHOD OF ASSEMBLY AND CALIBRATION OF THERMAL RESPONSIVE DEVICE

John E. Woods, Cohasset, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware

Filed Oct. 16, 1958, Ser. No. 767,556
4 Claims. (Cl. 29—405)



1. The method of assembling and calibrating a thermal responsive actuator, said actuator comprising a housing, a deformable body within the housing having a recess, a quantity of temperature sensitive expansible-contractible material adjacent said body and an actuator member slidably received in an opening in the housing and extending into said recess, comprising the steps of placing a measured quantity of said material in the housing, immersing the housing in a liquid at a controlled temperature to cause the housing to be filled with said liquid, placing the deformable body within the housing to expel a portion of said liquid and leave a remaining portion thereof within the housing, and forcing said body firmly into the housing with the actuator member inserted in said recess while maintaining the liquid at said controlled temperature, forming a tight mechanical seal for the housing over the deformable body and constraining the actuator member in predetermined relation to the housing, whereby in said last-mentioned step a part of said remaining portion of said liquid is expelled from the housing leaving a further part thereof filling the voids in the housing adjacent said expansible-contractible material.

3,099,879

METHODS OF MANUFACTURING BALL JOINTS AND UNIVERSAL COUPLINGS EMPLOYING SUCH BALL JOINTS

Marcus Horovitz, Leicester, England, assignor to Metalastik Limited, Leicester, England, a British company

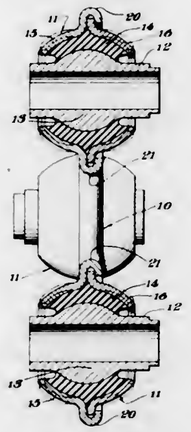
Filed May 1, 1961, Ser. No. 106,919
Claims priority, application Great Britain June 2, 1960
3 Claims. (Cl. 29—436)

1. A method of manufacturing a universal coupling of the kind described comprising the steps of

(*a*) preforming four equally spaced cup-like portions relatively close together in a circle and correspondingly in each of two separate metal discs of appropriately heavy gauge,

(*b*) uniting said discs face to face to constitute the coupling disc member and with corresponding cup-like portions aligned in pairs to constitute four housings,

(*c*) supporting a ball-like part in a required position and orientation within each such housing and spaced all around therefrom,



(*d*) forcing unvulcanised rubber into the space between each housing and ball-like part so as to fill the space,

(*e*) curing the rubber in such spaces so as to cause the moulded rubber layers to become bonded to the housings and the ball-like parts, and

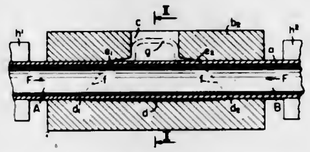
(*f*) reducing the size of the housings by deforming the material of both cup-like portions of each housing to a limited extent just sufficient to relieve the tension in the rubber layers due to the bonding and to give the required precompression in the rubber layers.

3,099,880

PROCESS OF FORMING A BULB ON A STRAIGHT METAL TUBE

André Huet, 48 Ave. du President Wilson, Paris 16, France

Original application June 28, 1956, Ser. No. 594,474, now Patent No. 3,030,902, dated Apr. 24, 1962. Divided and this application Sept. 29, 1961, Ser. No. 141,845
Claims priority, application France Aug. 2, 1955
1 Claim. (Cl. 29—544)



A process of forming a bulb on a straight metal tube which comprises radially confining first axially spaced apart portions of said tube to prevent radial expansion of said portions and freeing at least one surface area of a second portion of said tube intermediate said first space-apart portions from radial confinement to allow radial expansion of said second portion, and applying axial pressure to said tube directed inwardly toward said second portion whereby to form the bulb in said second portion while said first portions of said tube are held against expansion by said pressure, different surface areas of said second portion being freed from said radial

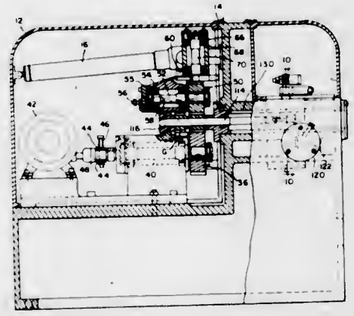
confinement by varying amounts with one surface area being entirely free of radial confinement and the remaining surface areas being sufficiently free to prevent chilling of the tube blank prior to application of said axial pressure, and heating said tube blank between said first portions with a flow of hot gases during application of said axial pressure.

3,099,881
SUNDIAL
Paul E. Snider, 2616 Alanmede Road, and Hearl D. Jones, 114 N. 29th St., both of Louisville, Ky.
Filed Sept. 19, 1960, Ser. No. 57,032
2 Claims. (Cl. 33—62)



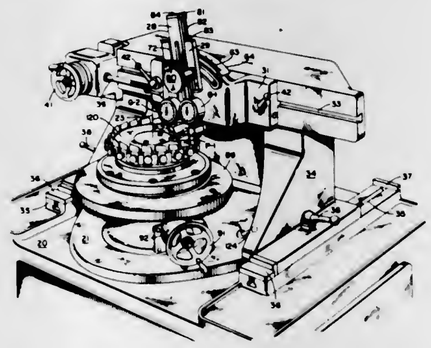
1. A sundial comprising a hollow sphere of a material or surface covering impervious to the passage of sunlight, said sphere perforated with two sun slots, diametrically opposed, in a plane containing the horizontal axis of rotation of said sphere, one slot beginning near one intersection of said axis with said sphere and extending upward well beyond the transverse circumference of said sphere, the other beginning near the other intersection of said axis with said sphere and extending downward well beyond said transverse circumference, a pair of trunnions, one at each of said intersections, and a stand rotatably supporting said sphere upon said trunnions for maintaining the horizontal position of said axis whereon it revolves freely.

3,099,882
AUTOMATIC GEAR GAUGING APPARATUS
Thomas S. Gates, Grosse Pointe Woods, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Feb. 24, 1959, Ser. No. 795,005
4 Claims. (Cl. 33—179.5)



2. An automatic gear checker comprising a chute for advancing work gears, a rotary drive gear below said chute mounted in fixed position to engage in tight mesh with the underside of a work gear, means to rotate said drive gear, a master gear above said chute opposite said drive gear and in position to enter into tight mesh with a work gear, means mounting said master gear for movement toward and away from said drive gear, a retractable stop engageable by a work gear upon movement thereof into position intermediate said drive and master gears and in tight mesh with both of said drive and master gears, an arbor movable axially and transversely of said chute to pick up a work gear engaging said stop, said arbor being located in position such that axial movement thereof into engagement with the work gear moves the work gear from tight mesh into loose mesh with said driving gear, and means for measuring movement of said master gear incident to its rotation by the work gear.

3,099,883
CUTTER CHECKING DEVICE AND METHOD
Werner E. Bergemann, Rochester, and Donald L. Whitmore, Webster, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Filed Dec. 29, 1959, Ser. No. 862,536
14 Claims. (Cl. 33—201)



1. A device for checking face mill gear cutters comprising a frame, a cutter spindle rotatable on the frame, means effective between the cutter spindle and the frame for indexing the cutter spindle completely around its rotation axis relative to the frame through angular increments corresponding to the blade pitch of the cutter being checked to successively bring the several blades of the cutter to gaging position, gage means and a carrier therefor movable in a definite path relative to the frame toward and away from the cutter to carry the gage means into and out of contact with a blade in gaging position, means effective between the carrier and the cutter spindle and operable independently of the indexing means for adjusting the indexed position of the cutter spindle angularly about its rotation axis in respect to the gage means, and stop means effective between the carrier and the frame for limiting movement of the carrier toward such blade, whereby the carrier may be brought to the same position for checking every blade of the cutter and the gage means may be caused to contact each blade at a selected distance back of its cutting edge.

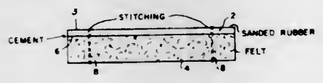
3,099,884
SHOES OR SANDALS
Frank C. Kixmiller and Demetre J. Petro, both of 410 Zorada St., St. Augustine, Fla.
Filed Nov. 16, 1961, Ser. No. 152,889
1 Claim. (Cl. 36—2.5)



A shoe comprising an elongated sole, and a detachable flexible upper, said sole and upper having complementary

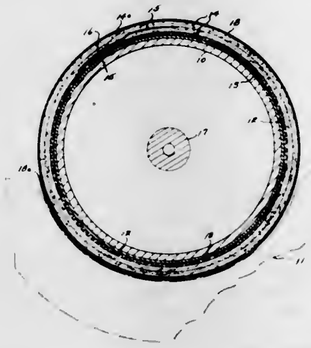
fastener portions mounted thereon, said fastener portions each being of synthetic resin woven material, one of which fastener portions is provided with a plurality of outwardly facing relatively stiff flexible pile hooks and the other fastener portion of which is provided with a plurality of outwardly facing flexible pile loops, said pile hooks and loops being arranged one in the sole and the other on the upper so that the hooks are adapted to detachably and releasably engage in the loops of the other fastener portion when said fastener portions are pressed together to securely but detachably hold the upper on the sole, the fastener portions being of disc-shaped formation with the fastener portion of the sole countersunk in the sole but exposed on the upper surface thereof with said pile surface facing upwardly.

3,099,885
ANTI-SLIP DEVICE FOR BOOTS
Joseph J. Jordan, Box 251, Grant St., and Ralph Palermo, 205 Penn St., both of Point Marion, Pa.
Filed Apr. 9, 1963, Ser. No. 271,617
1 Claim. (Cl. 36—59)



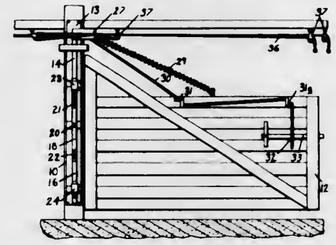
An anti-slip device for permanent attachment to the walking surface of footwear, comprising a relatively thin body of rubber having an untreated flat bottom surface and a sanded upper surface, a layer of felt of a thickness appreciably greater than the thickness of the rubber layer and having a flat upper surface, cementitious means permanently connecting the flat upper surface of the layer of felt to the flat untreated bottom surface of the rubber body in face-to-face relation, the sanded surface of the rubber body being adapted and intended for permanent cementitious attachment to a walking surface of the footwear to provide an anti-slipping walking surface of felt, the two bodies being shaped to conform to a walking surface of the footwear.

3,099,886
FASTENER FOR IRONER ROLL COVER
Bronislaw Warchol, Rochester, N.Y., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed June 19, 1962, Ser. No. 203,560
4 Claims. (Cl. 38—66)



1. In combination, ironing roll cover means and retaining means for the same including a backing member surrounding and fixed to said roll, a padding member superimposed on said backing member, said padding member being provided with an attaching member which overlies said backing member in the direction of the roll axis, and an elongated clip for affixing said attaching member to the backing member, said clip having end portions having a manually operatable interlock with said backing member.

3,099,887
AUTOMATIC GATE
Merle K. Kausche, 10 N. Wilbur, Walla Walla, Wash.
Filed Sept. 25, 1962, Ser. No. 225,997
6 Claims. (Cl. 39—56)



1. A gate operating mechanism comprising:
a gate;
a vertical gate post;
hinge means operatively connected between said gate post and said gate adapted to permit swinging motion of said gate in a horizontal direction;
a first lever pivotally mounted on the face of said gate post carrying said hinge means, said first lever being pivotally mounted about a horizontal axis parallel to the closed position of said gate;
a bracket pivotally connected to said first lever about an axis perpendicular to the pivotal axis of said first lever on said gate post, the bracket being longitudinally spaced along said lever from its pivotal axis on said gate post;
a tension spring connected between said bracket adjacent its connection to said first lever, and said gate and overlapping the outer end of said bracket so as to be abutted thereby;
and fixed means on said post located in the path of movement of said first lever adapted to limit pivotal motion thereof.

3,099,888
ICE FISHING NET
Lawrence J. Jaster, 702 N. 2nd St., Bellevue, Iowa
Filed June 21, 1962, Ser. No. 204,187
3 Claims. (Cl. 43—11)



1. An ice fishing net for fishing through a hole in the ice, comprising an elongated vertically positioned impervious hollow body, having a uniformly curved cross-section to define a substantially semi-cylindrical base portion, said body being open throughout its length on one side and tapering upwardly to define an apex, and a screen

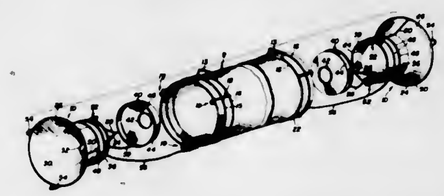
bottom secured to said base portion and having upwardly disposed means disposed at the open side of said body to retain a fish in the net as the net is withdrawn from said hole.

3,099,889
FISHING LINE GUIDE
Pierre J. Verneuil, 10 Carleton Ave., Mount Vernon, N.Y.
Filed Feb. 2, 1960, Ser. No. 6,251
3 Claims. (Cl. 43—24)



1. A fishing rod tip line guide comprising a tip member having a tapered internal self-cutting thread, a closed loop of wire extending forwardly from and to one side of said tip member, and a helix of steep slope of spring wire extending backward from said tip member and adapted to be wrapped about a fishing rod in the same direction as the internal threads in said tip member to lightly grip a rod so that a torque tending to unscrew said tip member from said rod will tighten said helix to grip the rod.

3,099,890
SHRIMP TRAP WITH SNAP-ON FUNNELS
Elmore J. Madere, Rte. 1, Box 1194D, Reserve, La.
Filed Nov. 28, 1961, Ser. No. 155,278
4 Claims. (Cl. 43—100)



1. A shrimp trap comprising an elongated tubular cage made of substantially rigid hardware cloth and open at both ends, a readily applicable and removable closure unit for each end, each unit embodying a truncated conical funnel projecting telescopingly into the trapping space of said cage, a bait holding compartment encircling and attached to a median portion of said funnel, and readily accessible retainer means carried by the end portions of said cage for securing said closure units in operative position, each unit being provided with a second truncated conical funnel shorter than and fitting telescopingly into and within the encompassing confines of the first-named funnel, and the truncated ends of said funnels being cut at an angle oblique to the lengthwise axial center of said funnels, the obliquity of the cut of one funnel being disposed at an angle different from that of the other funnel to minimize the chances of an entrapped shrimp escaping by an exit route via the spaced truncated ends and first and second-named funnels.

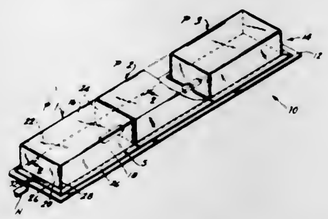
3,099,891
FLOOR PROTECTOR
Milton E. Handler, Evanston, Ill., assignor to S. A. Hirsh Manufacturing Company, Skokie, Ill., a corporation of Illinois
Filed Sept. 30, 1960, Ser. No. 59,538
2 Claims. (Cl. 45—137)

1. A floor protector for attachment to the lower extremity of a supporting member for a shelving unit comprising, a front wall having a central section and two side sections integral with said central section and extending rearwardly therefrom, said front wall being contoured for surface to surface contact with said supporting member, end walls integral with outer extremities of said side sections, each said end wall being curved rearwardly upon itself to form a re-entrant end wall section extending in substantially spaced, parallel relationship to the side section integral with said end wall, a rear wall extending in substantially spaced, parallel relationship to said front wall and having a plurality of spaced retaining means for contact with said supporting member disposed along the inner surface thereof, said rear wall being closely spaced to said front wall and including rearward-



ly extending end sections integral with said re-entrant end wall sections at the outer extremities thereof, said end sections cooperating with said end walls to form enlarged portions at the outer extremities of said protector positioned rearwardly of the central section of said front wall, and a bottom wall bearing surface integral with said front, rear and end walls and extending in a plane substantially perpendicular thereto to form a unitary enclosure, the peripheral configuration of said bottom wall bearing surface being defined by the contour of said front, side, and end walls, thereby providing a bearing surface having enlarged, rearwardly disposed end bearing sections at the outer extremities of an angularly contoured central bearing section.

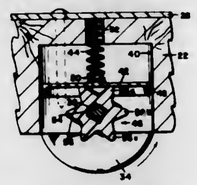
3,099,892
UPHOLSTERY PANEL
Irving Feinerman, San Mateo, Calif., assignor to Jack Feinerman, New London, Conn.
Filed Mar. 29, 1962, Ser. No. 186,584
9 Claims. (Cl. 45—138)



1. A stuffed upholstery panel comprising a backing of relatively stiff material at least as large as said panel, a preformed front panel formed of a relatively flexible material including a series of longitudinally aligned individual pillows, each pillow having a rectangular front face and depending side walls interconnected at their respective adjacent edges, adjacent pillows being interconnected at the lower edge of their respective adjacent side walls, said side walls along the exterior edges of

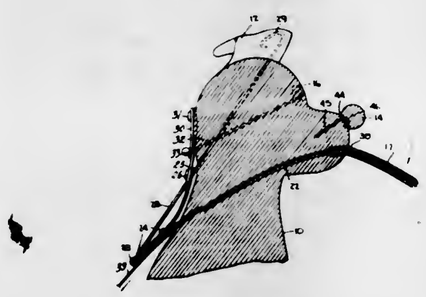
said front panel having mounting borders, said front panel being secured to said backing along said mounting borders, and stuffing material contained within said individual pillows to form a completed upholstery panel of adjacent individual rectangular pillows.

3,099,893
SOUND PRODUCING DEVICE FOR TOY VEHICLE
Walter P. Doe, East Aurora, N.Y., assignor to Fisher-Price Toys, Inc., East Aurora, N.Y., a corporation of New York
Filed Mar. 6, 1961, Ser. No. 93,402
5 Claims. (Cl. 46—111)



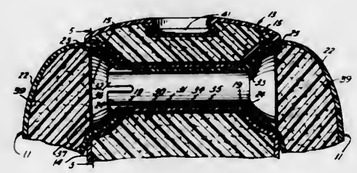
1. An action toy comprising a base having a recess formed therein, a diaphragm member positioned in said recess, means resiliently urging said diaphragm member toward the open end of said recess, shaft means mounted on said base and extending across said recess adjacent the open end thereof, an actuating member mounted on said shaft means overlying said recess and adapted to engage said diaphragm member, said actuating member having a non-circular cross section and being loosely mounted on said shaft means for allowing limited relative rotation between said actuating member and said shaft means, rotation of said shaft means causing said actuating means to rotate therewith and move said diaphragm member against said resilient means and subsequently release said diaphragm means for movement in the opposite direction against said actuating member for producing a sound.

3,099,894
STUFFED ANIMATED TOY ANIMAL
David D. Carroll, P.O. Box 563, Bennettsville, S.C.
Filed Nov. 16, 1960, Ser. No. 69,733
11 Claims. (Cl. 46—135)



1. An animated stuffed toy animal comprising a stuffed body portion including a head affixed thereto, a pair of limp ears depending from said head, a pair of eyes at the face of said head, a pair of eye shafts each fixedly attached to one of said eyes and rotatably housed within said head from front to rear, a crank fixedly attached to the rearmost end of each of said eye shafts, yoke means adjacent the back of said animal and having a pair of legs slidably disposed in said head at either rear side thereof and thence into each of said ears respectively, actuating means disposed adjacent the back of said animal and affixed to said yoke means, the free end of said crank members being pivotally attached to the adjacent end of the spacing bar member of the yoke means, tongue root means slidably contained within said animal's head and affixed at one end to the rearmost portion of said tongue and at the other end to said yoke means, whereby sliding of said yoke means up and down said animal's back raises and lowers said ears and rotates said eyes and expels and retracts said tongue.

3,099,895
ARM AND LEG JOINT CONSTRUCTION FOR TOY FIGURES
Herbert R. Beebe, Richmond Hill, N.Y., assignor to American Doll & Toy Corp., New York, N.Y., a corporation of New York
Filed Dec. 7, 1961, Ser. No. 157,674
3 Claims. (Cl. 46—161)



3. In a toy figure, a body of resilient material having oppositely disposed inwardly directed wall portions of semi-spherical formation providing limb sockets, said inwardly directed wall portions having aligned apertures therein, limb members of resilient material having upper ends of semi-spherical shaped formation in section fittingly engaging said limb sockets respectively and having apertures disposed in registry with the apertures in said inwardly directed wall portions of the body, interfitting first and second hollow parts connecting said limb members together, said first hollow part having a shell portion of semi-spherical shaped formation and a tubular shank connected with said shell portion and provided with circumferentially spaced fingers with outwardly extending enlargements at the ends of said fingers, said second hollow part having a shell portion of semi-spherical shaped formation and a tubular shank connected with said shell portion and which tubular shank is relatively larger in cross sectional formation than the tubular shank of said first hollow part, said hollow parts having the semi-spherical shell portions thereof disposed within the semi-spherical upper ends of the limb members respectively with the tubular shanks thereof protruding through said apertures in the limb members and into the body through said apertures therein to dispose said tubular shanks one within the other within the body and with the enlargements at the ends of the fingers engaged against the end of the surrounding tubular shank for retaining said parts in connected relation and securing the semi-spherical ends of the limb members in said limb sockets of the body for articulation with reference thereto.

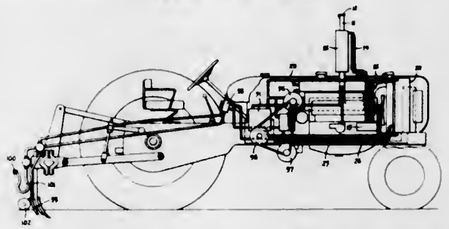
3,099,896
SOIL TREATING COMPOSITION AND METHOD
Herbert Kurth, Oberursel, Taunus, Germany, assignor of one-half to Robert E. Burns, New York, N.Y.
No Drawing. Filed May 9, 1961, Ser. No. 108,734
5 Claims. (Cl. 47—1)

5. The method of conditioning soil for the growth of plant life therein which comprises forming in the soil a supporting layer of an alginate-pentaerythritol-sorbitol-formaldehyde condensate.

3,099,897
PROCESS FOR MULCHING WITH MICA
Henry A. Letteron, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed June 28, 1961, Ser. No. 120,172
2 Claims. (Cl. 47—9)

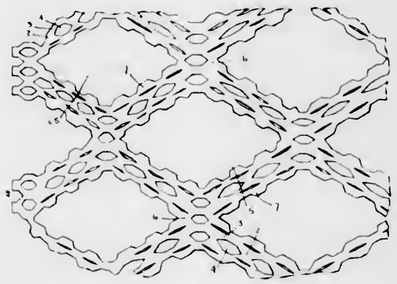
1. The process of mulching plant growth which comprises applying to the soil about said plant growth a slurry of surface-active mica in water, said mica constituting from about 2 to 7 percent, by weight, of said slurry.

3,099,898
AGRICULTURAL PROCESS AND APPARATUS FOR CARRYING OUT THE SAME
Marlin J. Harris, Jr., Mountain Creek, Ala.; Kate T. Harris, administratrix of said Marlin J. Harris, Jr., deceased
Original application Mar. 29, 1955, Ser. No. 497,565, now Patent No. 2,943,419, dated July 5, 1960. Divided and this application May 5, 1960, Ser. No. 27,108
17 Claims. (Cl. 47—58)



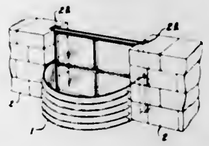
1. The process of aiding growth of plants growing in the open air, said process including the steps of retrieving exhaust gases from the engine of a tractor while said tractor is delivering power for a conventional agricultural use, retrieving such gases being done with holding the back pressure in the engine down substantially to its free exhaust pressure, continuously separating said exhaust gases, as they are produced, into their constituents, and utilizing at least one of such constituents, substantially immediately after its separation, for application to the plants.

3,099,899
EXPANDED METAL
Lutz Horn, Hagen, and Fritz Philipp, Hagen-Haspe, Germany, assignors to Varta Aktiengesellschaft, Hagen, Westphalia, Germany, a company of Germany
Filed Jan. 21, 1960, Ser. No. 3,914
Claims priority, application Germany Jan. 24, 1959
3 Claims. (Cl. 50—500)



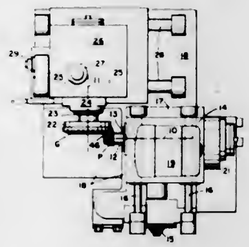
1. A three-dimensional expanded metal sheet consisting of metal strips constituting bonds and strands, the strands interconnecting the bonds and each four adjacent ones of said bonds interconnected by four of said strands defining a mesh opening, the metal strips being slanted transversely in respect of a plane extending centrally within the sheet, and each of said metal strips, in turn, having bonds and strands defining additional and substantially smaller mesh openings therebetween, said latter bonds and strands being slanted transversely in respect of a plane extending centrally within the latter bonds and strands of their respective strip.

3,099,900
METHOD OF INSTALLING AN AREAWAY WALL
Quentin S. Beck, Carnegie, Allegheny County, Pa., assignor of one-tenth to Lloyd F. Engle, Jr., Pittsburgh, Pa.
Filed Feb. 5, 1959, Ser. No. 791,307
4 Claims. (Cl. 50—533)



1. The method of installing an areaway wall in a foundation prior to the erection of structure thereon comprising the steps of providing a recessed vertical keyway in each side of an opening in a foundation wall, providing an arcuate areaway wall having spaced sides substantially the same width as the said opening in the foundation wall and having a laterally outstanding flange on each said side, inserting the said outstanding flanges of the areaway wall into the said opening so that the said outstanding flanges fit into the said vertical keyways, inserting the side flanges of a sash frame into the said keyways and adjacent the said outstanding flanges of the areaway wall, forcing the outstanding flanges of the areaway wall and the side flanges of the sash frame together against the outward side of the recessed keyway, and filling the remaining space of the said keyway with sealing material.

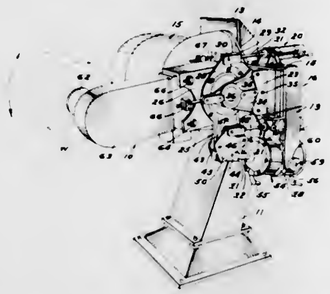
3,099,901
METHOD AND MACHINE FOR FINISHING OR TESTING GEARS
Ernst J. Hunkeler, Rochester, N.Y., assignor to The Gleason Works, Rochester, N.Y., a corporation of New York
Filed Aug. 25, 1961, Ser. No. 134,020
17 Claims. (Cl. 51—26)



8. A machine for running pairs of gears together, comprising a frame supporting housings which journal spindles for the gears, one housing being carried by a plate which is movable on the frame angularly and translationally in a plane parallel to both spindles, two sets of guide and follower elements of which one element of each set in carried by the frame and the other by the plate, said sets

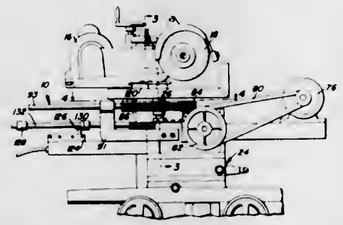
guiding the portions of the plate that are respectively adjacent to them in different directions in said plane to thereby determine a pivot axis about which the plate is movable on the frame, said guides being adjustable angularly to vary the location of said pivot axis relative to the plate and the frame, and means for moving the plate about said pivot axis.

3,099,902
FLUID PRESSURE OPERATED OSCILLATORY BUFFING HEAD
Glen A. Carlson, 1350 Country Club Drive, Bloomfield Hills, Mich.
Filed June 17, 1960, Ser. No. 36,963
5 Claims. (Cl. 51—33)



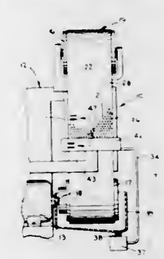
1. An oscillatory polishing or buffing head, comprising a rotary operating tool, a fixed support, a drive motor operatively connected to said tool to drive the same, means mounting said tool to oscillate relative to said support about an axis spaced transversely of said tool, said means extending radially of said axis and said buffing tool being mounted adjacent an outward end thereof for rotation, said mounting means comprising an actuator member pivotally mounted coaxially of said axis of oscillation and connected to said tool for pivotal movement of the latter therewith about said axis, a fluid pressure unit operatively connected to said member to swing the same in one direction of said oscillation, a fluid pressure check unit operatively connected to said member in transversely offset relation to the axis thereof on one side of said axis to oppose said motion of the member, and a further fluid pressure check unit operatively connected to said member in transversely offset relation to said axis of the member on the opposite side of the last named axis, said further unit opposing oscillatory motion of said member and tool in the reverse oscillatory direction.

3,099,903
GRINDER FOR SHEAR BLADE
Vaughn L. Crile, 935 S. Main St., Washington, Pa.
Filed Apr. 4, 1962, Ser. No. 184,966
11 Claims. (Cl. 51—94)



1. A sharpener for shear blades of the type including a cutter blade having in one edge thereof an inwardly extending outwardly divergent V-shaped notch with cutting edges defining the sides of said notch, said sharpener comprising a base having a bed thereon, a carriage, means slidably mounting said carriage on said bed for guided back and forth movement, a power operated rotary cutting element mounted in fixed relation to said bed and in proximity to said carriage during the carriage movement, a holder for supporting a shear blade above said carriage in position for operative engagement by said cutting element, power-operated driving means connected to said carriage for causing said back and forth movement, means journaling said holder upon said carriage for ocsillation about an axis which is perpendicular to the direction of movement of said carriage, means connected to said holder for reversibly oscillating the latter about said axis intermediate each stroke of said back and forth movement of said carriage for alternately positioning said blade cutting edges into position for alternate engagement with said cutting element during said back and forth movement.

3,099,904
MECHANICAL DEVICE
Ramsay M. Bell, Schoolcraft, Mich., assignor to Hammond Machinery Builders, Inc., Kalamazoo, Mich., a corporation of Michigan
Filed Oct. 10, 1960, Ser. No. 61,416
5 Claims. (Cl. 51—141)

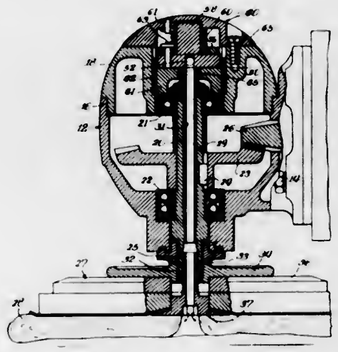


1. A grinding machine comprising: an endless, perforate abrasive belt and pulley means supporting same for movement in a closed path; a stationary, rigid platen having a surface adjacent the inner side of said belt and extending along a portion of said path, said platen having a perforate region between its ends which said belt overlies, said perforate region being of substantial extent and having a multiplicity of perforations which are spaced apart both laterally and lengthwise with respect to the belt; means including said region of said platen defining a chamber communicating with the perforations in said platen; a work support adjacent to the outer side of said belt, said perforate region extending from adjacent said work support to a point spaced a substantial distance therefrom; means for moving a fluid into said chamber under pressure so that said fluid flows through the perforations in said region of said platen and through the perforations in the belt into contact with the work supported on said work support.

3,099,905
PORTABLE TOOL
Peter G. Rebechini and Philip E. Larson, Aurora, Ill., assignors to Thor Power Tool Company, Aurora, Ill., a corporation of Delaware
Filed Dec. 29, 1960, Ser. No. 79,328
5 Claims. (Cl. 51—170)

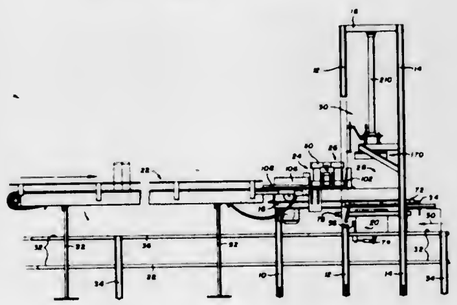
4. In a portable tool provided with a working head having a handle associated with said head for manually positioning said working head and a source of driving power for said working head, said working head having a spindle mounted axially therein and operatively associated with said source of driving power and having a

surface contacting means mounted on one end of said spindle, the improvement comprising; a spindle having an axial passage means therein, a fluid valve assembly disposed within said working head and sealably engaging one end of said axial passage means of said spindle, said valve assembly having two sections in sealing slidable engagement, one of said sections being rotatable with



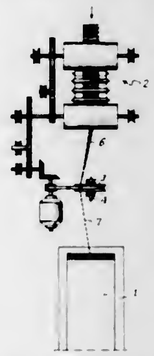
respect to the other of said sections which is connected with a source of fluid for placing said axial passage means in fluid-flow communication with said source of fluid, and actuating means associated with said one of the said sections extending laterally intermediate the ends of said working head and terminating adjacent said handle to facilitate operation of said valve assembly.

3,099,906
CASE FILLING MECHANISM
John B. McCabe, Fort Atkinson, Wis., and Ulrich J. Schmid, Dallas, Tex.; said McCabe assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois, and said Schmid assignor to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York
Filed Feb. 17, 1961, Ser. No. 90,099
5 Claims. (Cl. 53—59)



1. In a case filling machine, a case holding station, means transferring an empty case to said case holding station, a carton assembly station, means forming a layer of cartons at said assembly station, a loading station including a loading elevator and means to remove a layer of cartons from said assembly station, means controlling the operation of said stations whereby the loading elevator deposits said layer of cartons within a case at the holding station, and an indexing mechanism adapted to repeat the operation of said controlling means whereby additional layers of cartons are deposited within said case, said indexing means comprising projecting members of varying length and selectively operable means adapted to bring one of said projecting members at a time into engagement with said loading elevator, the length of said projecting members varying in accordance with the layer depth of cartons to be deposited within the case.

3,099,907
PROCESS FOR OBTAINING TEXTILE END PRODUCTS USING DISCONTINUOUS FIBERS
Michel Masurel, Wasquehal, Gérard Fauquenoi, Tourcoing, and Maurice Vivien, Saint-Maurice-de-Beynost, France, assignors to Industrielle & Commerciale Paris-Nord, Tourcoing, Nord, France
Filed Dec. 4, 1961, Ser. No. 156,577
Claims priority, application Great Britain Dec. 8, 1960
7 Claims. (Cl. 57—156)



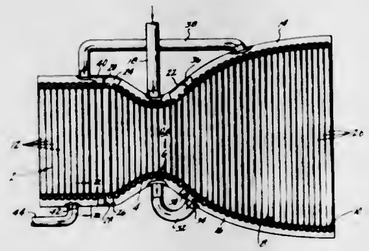
1. A process for manufacturing textile end products in a make-up machine comprising the steps of drawing slivers of discontinuous fibres into threads of the fineness of said end product, imparting a temporary twist to said threads, feeding said temporary twisted threads directly to the make-up machine, forming said threads into said end product in said make-up machine while permitting said temporary twisted threads to untwist, and recovering said end product from said make-up machine.

3,099,908
EXPANSIBLE LINKAGE HAVING CONNECTORS WITH INTEGRAL PRETENSIONING MEANS
Kurt Wolfinger, Schwann, Kries Calw, Germany, assignor to Rodi & Wienenberger Aktiengesellschaft, Pforzheim, Germany
Filed Mar. 17, 1961, Ser. No. 96,516
Claims priority, application Germany Mar. 19, 1960
12 Claims. (Cl. 59—79)



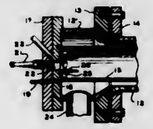
1. An expansion band, comprising, in combination: a plurality of body links arranged to form two layers of sleeves, said links being staggered with respect to each other; a plurality of leaf springs disposed one in each of the sleeves of at least one layer; and a plurality of connecting links in the form of U-shaped clips, said connecting links connecting each said body link to a respective next adjacent body link, each said connecting link having one leg disposed in a sleeve of one layer in one body link and the other leg disposed in an adjacent sleeve of the other layer in an adjacent body link, each of said leaf springs having generally oppositely facing surfaces, a portion of one of said surfaces bearing against its associated body link, said clips each having one leg split longitudinally to form arms disposed one against each of said surfaces of its associated leaf spring, the one of said arms the closest to said surface portion bearing against the other said surface of its associated leaf spring, said arms having an initial stress directed against the leaf spring, whereby the links are biased toward each other.

3,099,909
NOZZLE CONSTRUCTION
Philip P. Newcomb, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,902
7 Claims. (Cl. 60—35.6)



1. A nozzle construction, including a series of circumferentially extending rings each consisting of a hollow tube, the rings varying in diameter and being stacked in sidewise engagement to form the nozzle, a plurality of diametrically spaced longitudinally extending pipes secured externally of the tubes, each pipe forming a manifold intersecting said tubes and communicating with the hollow interior of the tubes for the flow of coolant therethrough, partitions in said manifold forming chambers, and fluid conductive means interconnecting said chambers for the distribution of coolant through said tubes.

3,099,910
APPARATUS FOR BURNING FUEL AT SHEAR INTERFACE BETWEEN COAXIAL STREAMS OF FUEL AND AIR
Robert M. Schirmer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Original application Aug. 11, 1955, Ser. No. 527,839. Divided and this application Apr. 26, 1962, Ser. No. 190,345
11 Claims. (Cl. 60—39.74)



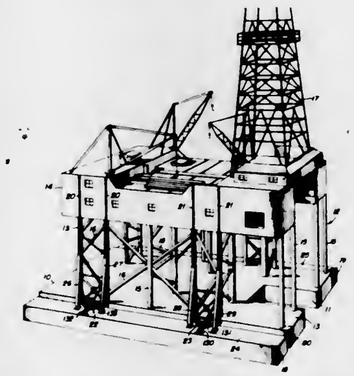
1. An improved combustor comprising: an elongated flame tube open at its downstream end; a plurality of recesses longitudinally disposed in the upstream end portion of the inner wall of said flame tube and sloping inwardly toward the downstream end of said flame tube and toward the surface of said inner wall; annular fuel inlet means adjacent the upstream end of said flame tube, the downstream opening of said fuel inlet means being directed into said recesses for introducing fuel onto said inner wall and passing said fuel as an annulus in a downstream direction along said inner wall; and air inlet means for introducing and passing a swirling vortex of air coaxially through said flame tube within said annulus of fuel to effect the formation of a shear interface between said fuel and said air so that said fuel burns with an annular flame at said shear interface.

3,099,911
MEANS OF GROUTING OR CONCRETING
Lee A. Turzillo, Akron, Ohio (% Lee Turzillo Contracting Co., P.O. Box 2, Brecksville, Ohio)
Filed Oct. 8, 1958, Ser. No. 766,001
4 Claims. (Cl. 61—35)



1. A method of grouting a situs within a soil structure comprising placing a porous, expandible, flexible bag in unexpanded condition at the situs and then injecting a flowable grout under pressure into said bag to expand the bag against soil surrounding the situs and continuing the injection of the flowable grout under pressure until a small fraction only of the flowable grout oozes out through the pores of the bag and the expanded bag conforms itself in shape to the surrounding soil areas contacting the expanded bag according to the strengths, weakness and voids of the surrounding soil structure without the substantial flow of grout from the desired situs into crevices in the soil, and permitting the flowable grout which has oozed through the porous bag and the flowable grout within the bag to solidify in pressure contact with areas of the situs, whereby the solidified grouting possesses a higher skin friction to said surrounding structure by reason of the direct pressure contact of the solidified grout with the surrounding structure.

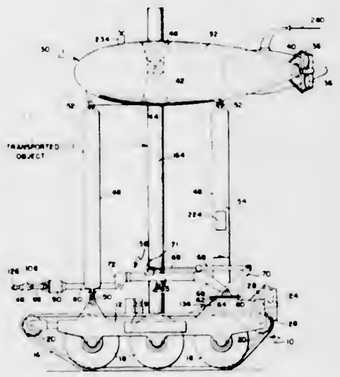
3,099,912
SUBMERSIBLE BARGE FOR SUBMARINE OPERATIONS
Paul A Wolff, Morgan City, La., assignor to Kerr-McGee Oil Industries Inc., a corporation of Delaware
Filed Oct. 21, 1955, Ser. No. 541,998
21 Claims. (Cl. 61—46.5)



1. A submersible barge for submarine operations comprising a main section including a submersible hull and a working platform arranged above the hull; submersible pontoons arranged outboard the main section; means for mounting the pontoons for movement relative to the hull to different positions along predetermined paths, each path including a first position in which the center of displacement of a pontoon is close to the center of displacement of the hull, a second position in which the pontoon is

located above the hull close to the working platform and successive positions between the first and second positions; a plurality of double acting hydraulically actuated rams connected between the hull and each of the pontoons at the fore end and at the aft end of the barge, and means for controlling the rams.

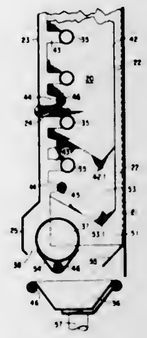
3,099,913
UNDERWATER VEHICLE SYSTEM
Donald F. Melton and Harold E. Froehlich, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed Jan. 20, 1960, Ser. No. 3,664
10 Claims. (Cl. 61—69)



2. Underwater apparatus for performing manipulations at various submerged locations comprising a chassis, means carried by the chassis for advancing said chassis in a generally horizontal direction, a buoying tank, propeller means carried by the tank for advancing said tank in a generally horizontal direction, a plurality of elongated struts, a universal joint at each end of each strut connecting the lower ends of said struts to said chassis and the upper ends of said tank, means for sensing when said struts have deviated a predetermined amount from a vertical relationship, and means responsive to such deviation for operating said respective advancing means in a manner to restore said vertical relationship.

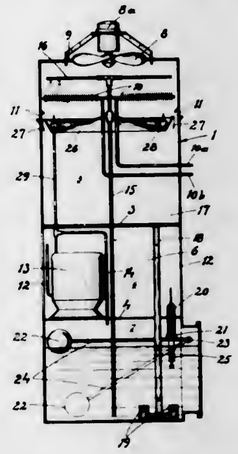
3,099,914
REFRIGERATING APPARATUS
Stuart L. De Witt, Villa Park, and Theodore F. Dymek, Elmhurst, Ill., assignors to General Electric Company, a corporation of New York
Filed Dec. 29, 1961, Ser. No. 163,192
7 Claims. (Cl. 62—276)

6. An evaporator for the freezer compartment of a refrigerator, comprising, in combination:
a plurality of elongated metal fins having a pointed bottom edge,
said fins being disposed in an upright posture within said compartment with the bottom edges thereof facing the bottom of said compartment and the front edges thereof facing the front of said compartment,
the apex of the pointed bottom of each said fin being disposed substantially closer to the rear edge of said fin than to the front edge thereof,
means for supporting the fins in relatively close parallel relation to establish air flow passages therebetween, said fins being arranged with the bottom edge of every other fin extending below the bottom edge of the immediately adjacent fin by an amount substantially equal to the width of the fins,
said supporting means including a plurality of passes of tubing extending transversely through said fins relatively close to the front edge thereof, said passes of tubing being serially interconnected,
means for introducing refrigerant into the lowermost pass of tubing,
a refrigerant accumulator extending transversely of



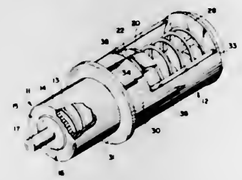
said evaporator below and forwardly of said downwardly extending fin portions,
means for conducting refrigerant from the uppermost pass of tubing into said accumulator,
and means for conducting refrigerant from said accumulator to a refrigerant compression mechanism.

3,099,915
DEVICES FOR COOLING THE CONDENSER OF A COOLING PLANT
Bror Gustav Andersson, 25 Norrgatan, Varberg, Sweden
Filed Dec. 19, 1961, Ser. No. 160,449
2 Claims. (Cl. 62—305)



1. A cooling plant comprising in combination a condenser, a spray header disposed above said condenser, means disposed below said condenser for collecting the water from said header, a pressure chamber disposed below and spaced from said water collecting means, an air compressor disposed in the space between said water collecting means and said pressure chamber and having its pressure side connected to said pressure chamber, a vertically extending pipe having its upper end connected to said spray header and its lower end positioned in the lower portion of said pressure chamber, means for conducting water from said water collecting means to said pressure chamber and including a check valve opening towards said pressure chamber, an air outlet provided in the upper portion of said pressure chamber, a valve connected to said air outlet for controlling the same and adapted to close when the water level in said pressure chamber exceeds an upper limit and to open when the water level falls below a lower limit, a perforated hollow element disposed at the bottom of said water collecting means, and means for supplying air under pressure to said hollow element.

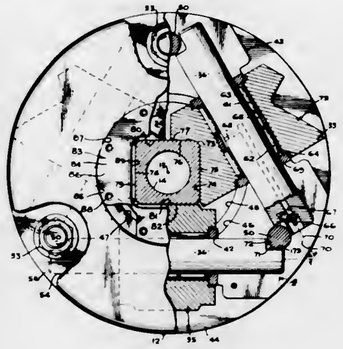
3,099,916
WINDOW SHADE ROLLER
Charles H. Rosenbaum, Baltimore, Md., assignor to Eastern Products Corporation, Baltimore, Md., a corporation of Maryland
Filed July 17, 1962, Ser. No. 210,427
4 Claims. (Cl. 64—5)



1. An adjustable window shade roller, comprising a hollow cylindrical roller open at one end; a generally cylindrical axially extending housing inserted in said open end of said roller and having an outer annular portion at the outer end thereof and a base at the inner end thereof, said outer portion having a central opening confronting said base, said outer portion having a wall extending radially of said opening and axially spaced from said base; an escutcheon pin unit comprising a generally cylindrical hollow body member open at one end and closed at the other end, said body member being inserted in said opening with said open end thereof facing said base, said body member being arranged so that the walls of said opening serve as a guideway for said body member to permit axial sliding of said body member in said opening, a supporting pin projecting axially outwardly of said closed end of said body member, and means projecting radially outwardly from said body member and being arranged to contact said radially extending wall thereby to limit axial motion of said body member outwardly of said opening; and a compression spring having one end thereof acting against said base and the other end thereof extending within said body member and acting against the inner face of said closed end of said body member thereby to urge said body member to slide axially outwardly of said housing.

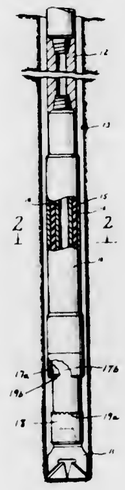
3,099,917
KELLY BUSHING
Willy H. Spiri, Whittier, Calif., assignor to Abegg & Reinhold Co., Los Angeles, Calif., a corporation of California
Filed Oct. 6, 1961, Ser. No. 143,358
13 Claims. (Cl. 64—23.7)

1. A kelly bushing for driving a kelly of generally square cross-section, having four sides meeting essentially at four corners, said bushing including a bushing body structure adapted to be removably mounted to a well drilling rotary table and to be rotatively driven thereby about a predetermined axis, three rollers for engaging and driving said kelly, and means for mounting said rollers to said body structure for rotation relative thereto about three individual axes and at locations spaced circularly about said first mentioned axis, a first of said rollers containing a peripheral recess for receiving a first corner of said kelly and engaging first and second perpendicular sides of the kelly, a second of said rollers containing a peripheral recess for receiving a second



corner of the kelly and engaging said second side thereof and also a third side disposed parallel to said first side, the third roller having a surface for engaging a fourth side of the kelly disposed parallel to said second side which is engaged by both of the first two rollers.

3,099,918
RESILIENT ROTARY DRIVE FLUID CONDUIT
William R. Garrett, Midland, Tex., assignor to Drilco Oil Tools, Inc., a corporation of Texas
Filed Aug. 9, 1961, Ser. No. 130,325
16 Claims. (Cl. 64—27)



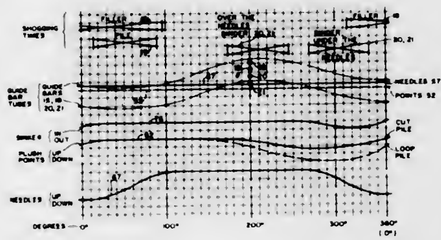
1. A rotary drive fluid conduit connection comprising a pipe,
a rubber sleeve around the outside of the pipe,
a tube around the outside of the sleeve,
said sleeve being bonded to said pipe and tube,
said sleeve having a plurality of axially extending holes therein,
a seal between said pipe and tube, and
clutch means comprising annularly disposed teeth around said pipe and annularly disposed teeth around said tube normally axially spaced apart but engageable by relative axial motion of pipe and

tube after failure of said rubber sleeve to transmit torsional forces between pipe and tube.

3,099,919
KNITTING MACHINE FOR PRODUCING CARPETS AND THE LIKE

Marcel A. Vitek, Hameln (Weser), Germany, assignor to Besmer Teppichfabrik G.m.b.H., Hameln (Weser), Germany

Filed June 20, 1960, Ser. No. 37,455
Claims priority, application Germany July 17, 1959
2 Claims. (Cl. 66—85)

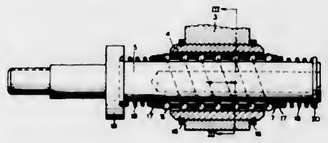


1. In a warp knitting machine including a set of needles, means for moving said needles, a set of plush points, means for moving said plush points, a trick plate interposed between the needles and the plush points, a sinker comb, means for moving said sinker comb, an oscillatably mounted member carrying relatively elongated yarn guide bars having yarn guide tubes mounted thereon, and means operable to withdraw formed fabric over said trick plate; the improvement comprising, in combination, first cam operated means operable to oscillate said member once forwardly and once rearwardly during each loop forming course of the machine; second cam operated driving means operable to shog said guide bars at each end of the oscillatory stroke thereof; means mounting said needles and said plush points so that the center line therebetween forms an acute angle of substantially 40 to 80 degrees with the tangent to the arcuate path of oscillations of said yarn tubes; and means interconnecting said first and second cam operated driving means for synchronous operation; whereby the formed loops will be drawn smothly over said needles and said plush points by said fabric withdrawing means due to such angular relation of the needles and the plush points with the tangent to such arcuate path of oscillation.

3,099,920
BEARINGS FOR AXIALLY MOVABLE PARTS OF TEXTILE MACHINES

Karl Liebrandt, Naila-Oberklingensporn, and Arno Zwingenberger, Marxgrun, Germany; said Zwingenberger assignor to said Liebrandt

Filed Apr. 11, 1960, Ser. No. 21,278
Claims priority, application Germany May 16, 1959
5 Claims. (Cl. 66—86)



1. In a knitting machine having a supporting shaft journaled for rotational oscillation, a guide bar releasably supported by and substantially parallel to said supporting shaft, a plurality of thread holders attached to said guide bar, the latter being adapted axially to reciprocate with respect to and rotationally to oscillate together with said supporting shaft, at least two aligned bar-guiding arms rigidly secured to said supporting shaft, at least one support shaft connected to said guide bar, having a free end traversing said bar-guiding arms and axially reciprocable with respect thereto, the improvement comprising a plurality of rolling members frictionally engaging central portions of said support shafts, guide sleeves loosely surrounding said central portions of the support shafts within said guiding arms and having a plurality of apertures, said rolling members being retained in said apertures, and at least two holding brackets, one for operative connection with each of said guiding arms, said brackets being secured to said guide bar, on the one hand, and to a portion of each of said support shafts opposite said free ends and spaced apart from said central portions, on the other hand, whereby relative axial movement between said guide bar and said guiding arms is assured during the knitting process, in addition to said axial reciprocation with respect to and said rotational oscillation together with said supporting shaft, said support shafts representing releasable connections between said supporting shaft and said guide bar, said support shafts being adapted for sliding withdrawal from within said guiding arms, so that said guide bar may be separated from said supporting shaft together with all of said brackets and said support shafts for repairs or adjustments.

3,099,921
WARP KNITTING MACHINE

Gunnar Liebrandt, Naila-Froschgrun, Bavaria, Germany, assignor to Karl Liebrandt, Naila-Oberklingensporn, Germany

Filed Feb. 1, 1961, Ser. No. 86,363
Claims priority, application Germany Feb. 18, 1960
5 Claims. (Cl. 66—86)



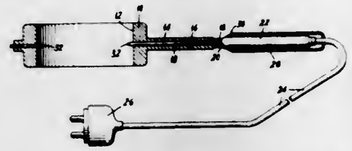
1. A warp knitting machine comprising at least two thread guide bars, each carrying a row of spaced thread guides, a patterning mechanism for reciprocating the thread guides of at least one thread guide bar in the direction of the longitudinal axis of said thread guides, and thread deflecting means secured to the guide bar carrying thread guides not influenced by the patterning mechanism, said thread deflecting means extending alongside and between two of said rows of thread guides and being substantially coextensive and stationary with respect to said non-influenced thread guides.

3,099,922
WAVE RING THERMOCOUPLE

William G. Crocker, San Pedro, Calif., assignor to Union Carbide Corporation, a corporation of New York

Filed Sept. 18, 1959, Ser. No. 840,843
3 Claims. (Cl. 73—341)

1. A device for sensing the temperature of a fluid mass within high pressure apparatus that includes successive inter-communicating pipe sections adapted to be spaced apart by a flanged coupling interposed between adjacent ends of the successive pipe sections as a continuation thereof, said device comprising a flanged coupling having a flange with a radial bore therein and fixed within said bore in contact with the fluid mass a temperature responsive means comprising a sheathed thermocouple fixed firmly enough to resist the pressure within the apparatus

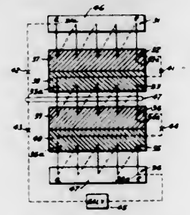


extending into said apparatus a distance equal to 1/16 to 1/2 the inside diameter of said pipe sections.

3,099,923
THERMOPILE SWITCHING SYSTEMS

Theodor H. Benzinger, Holly Oaks, Tilden Lane, Rockville, Md.

Filed Jan. 18, 1960, Ser. No. 3,212
12 Claims. (Cl. 73—341)
(Granted under Title 35, U.S. Code (1952), sec. 266)



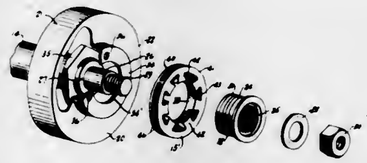
11. In combination a first series of a_n thermojunctions, a second series of b_n thermojunctions, a third series of c_m thermojunctions, a fourth series of d_m thermojunctions, a fifth series of e_n thermojunctions and a sixth series of f_n thermojunctions, means for connecting the individual thermojunctions of these series in the following sequence $a_1, b_1, a_2, b_2 \ldots a_n, b_n, c_1, d_1, c_2, d_2 \ldots c_m, d_m, e_1, f_1, e_2, f_2 \ldots e_n, f_n$, with the voltages developed at successive junctions of said sequence being oppositely polarized, means for maintaining the second series of b_n and the third series of c_m thermojunctions at the same temperature, said means for maintaining the second series of b_n and the third series of c_m thermojunctions at the same temperature comprising first and second members made of a material having a high specific heat, said second series of b_n thermojunctions being in thermal contact with said first member, said third series of c_m thermojunctions being in thermal contact with said second member and means for establishing thermal contact between said first and second members, means for maintaining the fourth series of d_m and the fifth series of e_n thermojunctions at the same temperature, and means for indicating the magnitude of the voltage developed by said sequence of thermojunctions when the first series of a_n thermojunctions is exposed to an unknown temperature and the sixth series of f_n thermojunctions is exposed to a known and constant temperature.

3,099,924
SPROCKET FOR CHAIN SAWS

Charles E. Armstrong, Belgium, Wis., assignor to Marine Associates, Inc., Fort Lauderdale, Fla., a corporation of Florida

Filed Oct. 18, 1961, Ser. No. 146,041
12 Claims. (Cl. 74—243)

5. A driver for a chain of the type having tie straps that embrace and connect links which have spaced drive tangs exposed at the inside of the chain, comprising: a sleeve which provides a hub and has a reduced rear portion providing a rearwardly facing external shoulder on the sleeve; torque receiving means on the sleeve, through which rotation may be imparted to the driver; and a ring nonrotatably seated on the sleeve to form a subassembly therewith, said ring comprising a pair of annular coaxial discs having peripheries of equal diameter and spaced apart flat opposing faces which lie in planes normal to the sleeve axis, the rear disc having a central hole of a size to fit the reduced rear portion of the sleeve and bearing against said shoulder thereon, and the front disc having a hole substantially larger in diameter than that of said front portion of the sleeve and encircling the latter in radially spaced relation thereto, and circumferentially

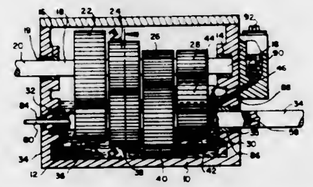


spaced teeth on the ring in the space between said discs, holding the latter in such axially spaced relation that the peripheries of the discs provide endless cylindrical tracks that are adapted to edgewise support the tie straps of a chain trained over the ring while the space between the discs and between adjacent teeth are adapted to receive the drive tangs of the chain, and the spaces between teeth opening radially inwardly to said larger diameter front portion of the sleeve and axially to the front of the ring through the central hole in said front disc, to provide for axial discharge of foreign material introduced into the ring by a chain trained thereover.

3,099,925
VARIABLE SPEED TRANSMISSION

Margaret S. Leonard, 330 W. Medlock Drive, Phoenix, Ariz.

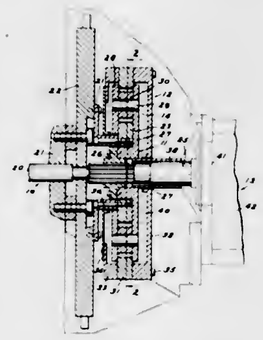
Filed Jan. 14, 1963, Ser. No. 251,428
6 Claims. (Cl. 74—372)



1. In a variable speed transmission, the combination of: a casing; a pair of substantially parallel shafts rotatably mounted in said casing; a plurality of gears fixed to one of said shafts; and a second plurality of gears rotatably mounted on the other of said shafts; gear pump means in each of said second plurality of gears comprising a pump gear fixed to the respective shaft; a second pump gear in mesh with said first mentioned pump gear; and recess structure in a respective one of said gears on said respective shaft; port means communicating with the inlet and outlet of said gear pump means; said respective shafts being hollow and having port means communicating with the inlet and outlet port means of said gear pump means; and a control valve member slidable internally of said respective shaft and disposed to shut off flow of fluid through said pump means to thereby lock the respective gear to the respective shaft and thus drive a respective gear on the other of said shafts; said control valve member movable longitudinally of said shaft to shut off flow of oil through respective gear

pumps in respective external gears to thereby vary the speed ratio between said shafts; a reverse idler disposed between adjacent gears on said shafts and meshing therewith to provide for reverse operation of said shafts with respect to the normal relative rotational directions of said shafts when any pair of the remaining gears are in operative driving relationship.

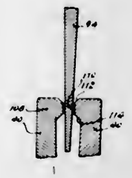
3,099,926
AUTOMATIC TRANSMISSION ASSEMBLY
Walter H. Thorpe, 9403 Somerset Ave., Detroit 24, Mich.
Filed Oct. 24, 1960, Ser. No. 64,359
3 Claims. (Cl. 74—752)



1. A device for automatically gradually transferring drive power from one member to another member comprising driving means, a sun gear driven by said driving means, planet gears meshing with said sun gear, a planet carrier rotatably supporting and positioning said planet gears, driven means connected to said planet carrier, a ring gear surrounding and meshing with said planet gears, chamber forming members on either side of said ring gear extending radially inwardly locating said ring gear and meshing planet gears in the radially outer area of the chamber formed by said members; said ring gear and said chamber forming members being freely rotatably supported relative to said other parts; fluid sealing means between said driving means and one said chamber forming member, sealing means between said driven means and said other chamber forming member; said ring gear and chamber forming members and seals forming a fluid tight chamber enclosing said sun, ring, and planet gears; and plastic fluid in said chamber impeding the free rotation of said gears; said device transmitting drive from said driving to said driven means via said sun gear, planet gears, and planet carrier via ring gear reaction as variably rotatably impeded by said fluid to permit relative rotation between said driving and driven means resulting in gradual application of drive upon initiation and subsequently said fluid preventing gear rotation resulting in direct application of drive by loading said gears in their teeth area via centrifugal force generated by rotation.

3,099,927
INFINITELY VARIABLE TRANSMISSION
Arnold E. Anderson, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 54,980
12 Claims. (Cl. 74—796)

1. A driving disc, a driven disc, and means for rotatably mounting said discs for rotation about parallel axes, the rim portion of one disc being engageable with the lateral surface of the other disc with a film of lubricant therebetween, said rim portion comprising a peripheral friction surface, the radially inward and outward portions of said friction surface being formed with sharp edges to retard



the rate of lubricant film formation in the surface engaging region.

3,099,928
ANTI-SKID CHAIN OPERATING DEVICE
Lewis M. Showers, Jr., Delaware County, Pa.
(104 E. Essex Ave., Lansdowne, Pa.)
Filed Feb. 15, 1962, Ser. No. 173,447
1 Claim. (Cl. 81—15.8)

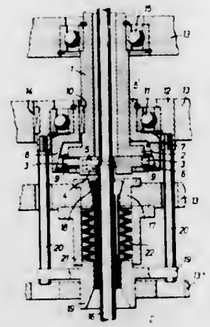


A tire chain tool for connecting the ends of the inner circumferential loop of a tire chain having snap latch interlocking means at said ends and having also tool-engaging tangs at said ends which extend parallel to said chain and rearwardly from the ends thereof; said tool comprising a pair of crossed pivotally and separably interconnected members, each of said members having an arcuate jaw portion at one side of the pivot and a handle portion on the other side, said arcuate jaw portions having their concave sides facing each other and having their end portions provided with opposing tang-receiving sockets, whereby the tangs on the end portions of the inner circumferential loop of a draped tire chain may be inserted into the sockets of the separated tool members in front of the tire, then moved behind the inner side of the tire adjacent the road surface, the tool members may be pivotally interconnected in front of the tire and the handle portions may be actuated in front of the tire to guide the ends of the tire chain on the inner side of the tire into interlocking engagement.

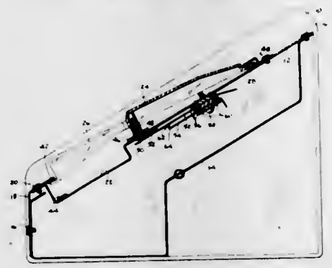
3,099,929
BAR SCALPING MACHINE
Hans Lindemann, Bielefeld, Germany, assignor to Th. Calow & Co., Bielefeld, Germany
Filed Oct. 24, 1960, Ser. No. 64,590
Claims priority, application Germany Oct. 30, 1959
7 Claims. (Cl. 82—20)

1. Workpiece treating apparatus comprising a hollow shaft, a rotatable cutter head mounted at one end of said shaft and including a tool extending radially inwardly, an annular member mounted coaxially about said cutter head and adapted to move axially with respect to said shaft, a crosspiece provided with an aperture in alignment with the axis of said shaft and axially movable with respect to said shaft, gauging means having one end fixedly secured to said crosspiece and having adjacent the other end thereof inclined outer surface portions, relatively stationary means including inclined surface portions complementary to those of said gauging means, means rigidly

interconnecting said crosspiece and said annular member, and means connected to said annular member for varying the radial position of said tool in response to an axial movement of said gauging means.



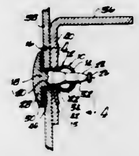
3,099,930
KEYBOARD CONSTRUCTION FOR ELECTRIC MUSICAL INSTRUMENT
Lyman J. Haviland, Mundelein, Ill., assignor to Hammond Organ Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 18, 1960, Ser. No. 9,623
6 Claims. (Cl. 84—433)



1. A keyboard of the piano type comprising, a supporting member, a plurality of playing keys each having a shank at its pivotal end, felt-like means above and below the shanks, clamping means carried on said supporting member and having a portion spaced apart from said supporting member, an irregularity on said portion and on said key shanks with the irregularity on said portion in alignment with the irregularity on one of said key shanks, and a resilient means held under pressure by and between said aligned irregularities whereby said keys are held against movement along the longitudinal axis of said keys while permitting limited pivotal movement of said keys about an axis transverse to said longitudinal axis and passing through said resilient means.

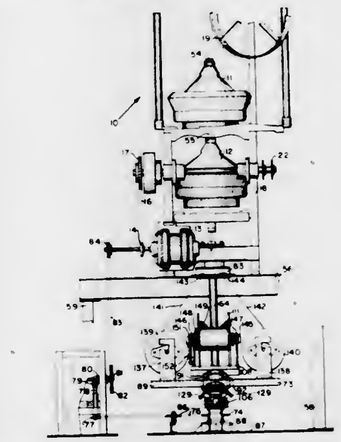
3,099,931
SHELF FASTENER ASSEMBLY
Irwin J. Ferdinand, Glencoe, Ill., assignor to S. A. Hirsh Manufacturing Company, Skokie, Ill., a corporation of Illinois
Filed Aug. 26, 1955, Ser. No. 530,667
3 Claims. (Cl. 85—40)

1. A releasable fastener for use in securing together a pair of elements oriented in facing, contiguous relation and having aligned openings therethrough, comprising a sleeve equipped at one end with a flange defining shoulder and having a plurality of spring fingers extending approximately its full length and terminating in outward offset portions and inwardly directed free ends appreciably closing the end of said sleeve, said spring fingers flexing inwardly to permit insertion of said offset portions through the aligned openings to a position engaging the remote surface of the element remote from said flange when said shoulder abuts the near surface of the other element, and a pin having an elongated shank of substantially greater length than that of said sleeve and extending therethrough, said pin being axially movable relative to said sleeve and having a head defined by a groove at one end thereof passable through said sleeve to a point beyond said free ends to receive the free ends in said groove and



having at the other end thereof an enlarged head impassable through the sleeve so that said sleeve is constrained on said pin for movement between the heads thereof, said shank having a cross section adjacent said enlarged head dimensioned to be snugly received within said sleeve when the enlarged head is in substantial abutment with said flange, said sleeve and pin being insertable and removable through such openings in gripping relationship so as to hold these two parts together when said free ends are located in said groove and said shank engaging and expanding said free ends to maintain and lock said offset portions in engagement with said remote surface when said enlarged head is moved into abutment with said flange.

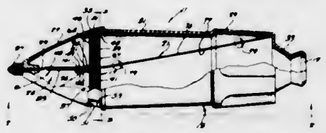
3,099,932
METHOD AND APPARATUS FOR STRANDING AND BRAIDING
Sigmund Ege, Hastings on Hudson, and Martin David Schnur, New York, N.Y., assignors to Anaconda Wire and Cable Company
Filed Dec. 15, 1961, Ser. No. 159,671
6 Claims. (Cl. 87—1)



1. Apparatus for twisting and braiding a fluid-tight cable comprising at least one braider head, means for advancing a pair of insulated conductors and a pair of filler strands through said head, a rotating platform mounted beneath said head, a pair of diametric insulated-conductor supply reels mounted on said platform, means for imparting planetary motion to said reels, a pair of

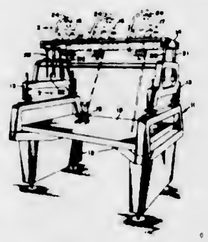
diametric filler-strand supply coils mounted on said platform, a forming die mounted centrally on said apparatus beneath said head, and an extrusion head coaxial with said die between said die and said braiding head.

3,099,933
OPTICAL TOY
Hilman Weiner, Chicago, Ill., assignor to Marvin I. Glass, Chicago, Ill.
Filed May 9, 1960, Ser. No. 27,953
3 Claims. (Cl. 88—15)



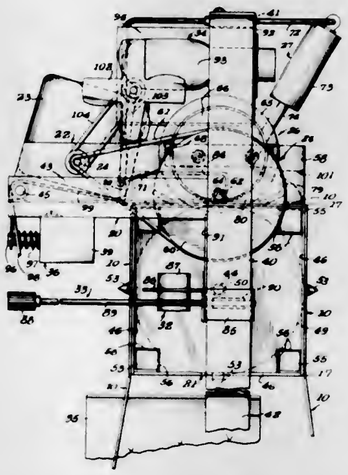
1. A toy viewer comprising an open-ended opaque housing with one end thereof being adapted for viewing within said housing, a light transmitting element rotatably mounted within said housing at the other end thereof, said element including an outer generally circular band, a fixed image member fixedly mounted within the periphery of said band, at least one generally circular chamber adjacent said fixed image member, and a floating image member movably disposed within said chamber, said floating member being proportioned to substantially fill said chamber so as to slowly rotate relative to said fixed image as said element is rotated, said housing also having aperture means formed therein through which said band can be rotated, and a planar reflector located within said housing in transverse relation to the line of sight between said opening and said rotatable element, said reflector having one end terminating in adjacent relation to said rotatable element along a line passing perpendicularly through the rotational axis of said element, whereby various bilaterally symmetrical pictures can be presented to view through said opening incident to rotation of said element.

3,099,934
STABILIZER FOR THE OPTICAL PROJECTOR CARRIAGE OF PHOTOGRAMMETRIC PROJECTION INSTRUMENTS
Wallace Sidney Park, Standiford Field, Louisville 13, Ky.
Filed May 22, 1961, Ser. No. 111,521
4 Claims. (Cl. 88—24)



1. In a photogrammetric projection instrument having a frame structure, an optical projector carriage superposed on the frame structure, a group of three vertical adjusting screws supporting the carriage on the frame, two of said adjusting screws being disposed at one end of the carriage and the third being disposed at the opposite end of the carriage, interconnected members forming an unconstrained linkage, one end of the linkage being connected to the carriage and the other end connected to the frame, said linkage having a ball and socket at either end, a rod connecting the balls, one of the balls being slidably engaged with the rod, and means for releasibly securing the rod to the said ball with which it is slidably engaged.

3,099,935
AUDIO-VISUAL DEVICE-PROJECTING MACHINE
William Wagenseil, 844 Rincon Lane, Palos Verdes Estates, Calif.
Filed Jan. 23, 1961, Ser. No. 84,145
7 Claims. (Cl. 88—28)



1. A machine for successively projecting the image of the transparencies and reproducing the sound of the records of a series of hinge-connected audio-visual elements, said machine comprising, in combination, an index drum having a plurality of flat sides, an axle mounting said drum for free rotation thereof, a hinged member mounted on a pivot at one end thereof and parallel to said axle and having its other end disposed to have flatwise engagement with a face of said drum to rest upon an audio-visual element in operative position on said latter face, said element being provided with the transparency, pickup means carried by said hinged member in reproducing engagement with the record of said element during the mentioned flatwise engagement of said member and drum, means carried by said member to rotate said record, means driven by the record-rotating means and carried by said hinged member to index the drum to move the next audio-visual element of said series to operative position between the drum and the hinged member, and means provided on the drum and engaged by the drum-indexing means to raise said member on its pivot away from the element in operative position during indexing movement of the drum.

3,099,936
SELF-ALIGNING LOADING RAIL
Arthur J. Gaborc, Baldwin, and Mota Teumim, Middletown, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 27, 1961, Ser. No. 92,109
7 Claims. (Cl. 89—1.7)

1. In a launcher for a missile having fore and aft positioned lugs carried thereby, said launcher comprising

at least one arm member having movable rail means

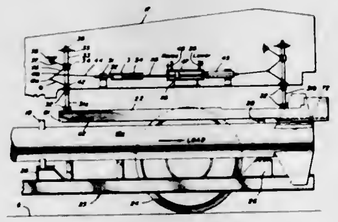
connected thereto, said rail means having fore and aft lugs thereon for receiving and supporting said lugs;

a mechanism operable to move the rail means to a missile loading position and from a missile loading position to a missile launching position thereon, said mechanism including fore and aft lift means operatively connected to the arm member and the rail means and having means operable when the rail means is in said loading position to allow multi-angular and/or lateral movement of the rail means with respect to the longitudinal axis therefor;

linkage means pivotally connected to said lift means and the arm member;

a connecting link pivoted at one end to said linkage means;

slidably mounted compensating means for facilitating disproportionate concurrent movement of both ends of said rail moving mechanism and having the other end of the connecting link pivotally connected thereto;



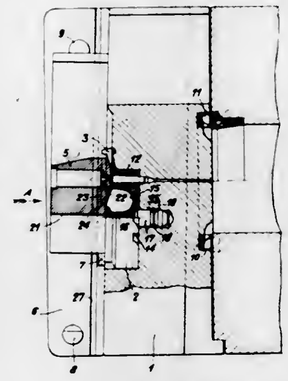
fluid actuated means on the arm member movable in response to a predetermined change in fluid pressure and operably connected to said height compensating means for actuating said lift means through said compensating means, connecting link and the linkage means to move the rail to and from said loading and launching positions according to the movement of the fluid actuated means, said compensating means further including means carried by said fluid actuating means and cooperating with the compensating means for effecting independent movement of either of the lift means thereby to independently move either end of the rail means during missile loading movement; and

spring means carried by the compensating means and cooperating with said means on the fluid actuated means for effecting proportionate movement of said lift means from missile loading to missile launching position as the fluid actuated means is operated by said predetermined change in fluid pressure; and

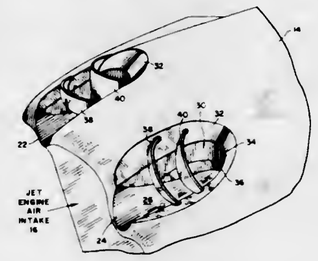
means establishing an external pressure connection to the fluid actuated means.

3,099,937
GUN WITH CARTRIDGE MAGAZINE OR PROPELLANT CHARGE MAGAZINE
Erich Bartels, Ratingen, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed Sept. 26, 1960, Ser. No. 58,439
Claims priority, application Germany Sept. 26, 1959
2 Claims. (Cl. 89—24)

1. A gun with a cartridge magazine comprising a breech block having a recess therein into which the cartridge magazine may be inserted, an end block for the breech block and in which the latter slides, and a slider with a firing mechanism therein and slidably provided in the end block to secure the magazine in place and to resist firing pressure, one end of the slider being provided with a loading cavity into which a projectile is manually inserted when the breech is open and the slider having another cavity at the other end from which spent cartridges are ejected and through which the magazine can be exchanged when the breech is open.

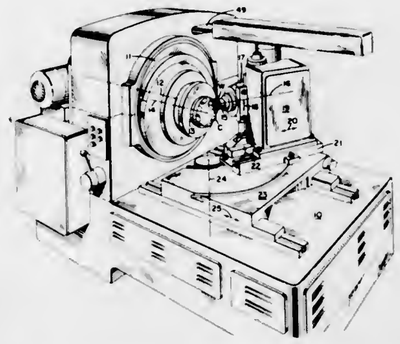


3,099,938
ARMAMENT FOR JET AIRCRAFT
Edmund V. Marshall and Will S. Davies, Dallas, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 30, 1957, Ser. No. 656,170
1 Claim. (Cl. 89—37.5)



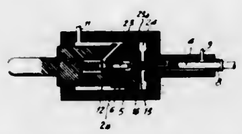
The combination on an aircraft propelled by at least one jet engine: an air intake scoop for said jet engine extending generally longitudinally of said aircraft; at least one remotely-controlled gun enclosed within said air intake scoop; a blast tube for said gun, said blast tube extending generally longitudinally of said aircraft from the muzzle of said gun to a projectile opening in the surface of said air scoop located on, or in close proximity to, the periphery of the jet engine air intake orifice; a generally transverse passage in the body of said scoop extending from the outer surface of the latter to communicate with the said gun blast tube, the rearward wall portion of such transverse passage defining a surface which is generally convex in the direction of aircraft flight; and a pair of baffles lying within said transverse passage and secured to the wall thereof, said baffles each being formed to define a surface which is also generally convex in the direction of aircraft flight, such that a scavenging action is brought about within said transverse passage with respect to the gases emerging from the muzzle of said gun into said blast tube when the former is fired to thereby preclude the emergence of such gases in an appreciable amount from said projectile opening into the vicinity of said jet engine air intake orifice.

3,099,939
GEAR GENERATING MACHINE
Nelson K. Haase and Robert F. Pigage, Rochester, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Filed June 17, 1960, Ser. No. 36,991
18 Claims. (Cl. 90—3)



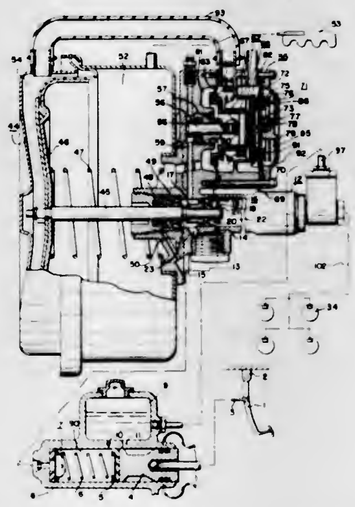
1. An intermittent indexing gear generator having a rotatable cradle, a cutter spindle and a work spindle of which one is carried by the cradle, a generating gear train connecting the cradle and work spindle for simultaneous rotations about their respective axes at predetermined velocity ratio, an indexing drive for said work spindle connectible to said gear train through a differential gear set in said gear train, ratio-of-roll change gears in said generating train between the cradle and said differential gear set, a first reversible motor drive adapted to drive said train at a point therein between the cradle and said change gears, and a second reversible motor drive adapted to drive said train at a point therein between said differential gear set and said change gears.

3,099,940
STABLE HYDRAULIC SERVO DEVICE
René Leduc, 23 Rue Henri Cloppet, Le Vesinet, France
Filed July 26, 1960, Ser. No. 45,369
Claims priority, application France July 27, 1959
14 Claims. (Cl. 91—49)



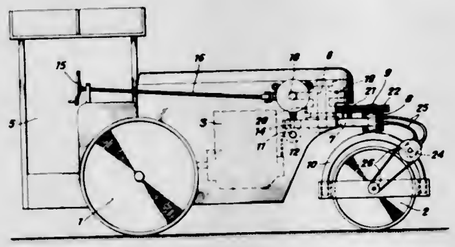
1. For controlling the feeding and exhausting of a hydraulic power-utilising system or device, referred to herein as an "actuator," a valve assembly comprising a body having a pressure feed inlet, a service connection for said actuator, and an exhaust outlet, a passage connecting said inlet to said service connection, a valve adapted to close said passage, a movable control member adapted to actuate said valve, a flow-restrictor downstream of said valve for restricting flow through said service connection, said flow-restrictor comprising at least one passage having a ratio of length to cross-sectional area which is great enough to make flow therethrough laminar, means for so applying the pressure subsisting between said valve and said restrictor to said control member as to oppose movement of the latter in the direction for opening said valve, and valve means actuated by said control member, when so moved as to have brought about closure of said first mentioned valve, for establishing communication between said service connection and said exhaust outlet.

3,099,941
BRAKE BOOSTER UNIT
James O. Helvern, Lewisburg, and Clarence R. Wuellner, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 29, 1960, Ser. No. 46,124
6 Claims. (Cl. 91—434)



1. In a brake booster unit having a power unit and a power operated hydraulic fluid displacement means for brake actuation connected with a power wall in said power unit that divides the interior of said booster unit into a generally constant pressure chamber and a variable pressure chamber and operates said fluid displacement means, said constant pressure chamber having a constant pressure therein and said variable pressure chamber having a variable pressure therein; a control valve for controlling pressure in the variable pressure chamber of the booster unit comprising, a valve housing, a hollow annular subatmospheric pressure control valve operating in said valve housing and supported on its outer periphery by a diaphragm, an annular atmosphere pressure control valve formed on an inner peripheral portion of said valve housing and disposed concentric with said first mentioned annular valve, a valve seat member supported in said housing on a second diaphragm and resiliently biased by resilient means to a contacting position with said atmosphere pressure control valve, resilient means biasing said subatmosphere pressure control valve into spaced relation to said valve seat member to place a subatmosphere chamber in said valve housing formed by a wall of said housing and said first mentioned diaphragm in communication with a variable pressure chamber in said valve housing formed between said first and second mentioned diaphragms and thereby in connection with the said variable pressure chamber in said power unit, manually operated control means moving said subatmosphere pressure control valve to a contacting position with said valve seat member and moving said valve seat member in spaced relation to said atmosphere pressure control valve to connect thereby an atmospheric chamber formed between said inner peripheral projection in said housing and said second mentioned diaphragm with said variable pressure chamber in said valve housing and therethrough with said variable pressure chamber in said booster unit to provide power operation of said booster unit, said variable pressure in said variable pressure chamber in said valve housing acting on said first mentioned diaphragm to effect a reaction force on said subatmosphere pressure control valve transmitted thereby to said manually operated control means.

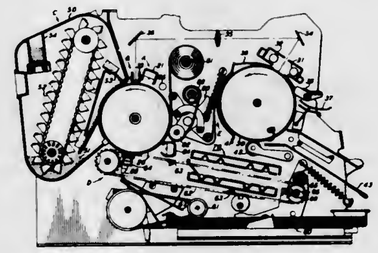
3,099,942
ROLLER FOR ROAD CONSTRUCTION
Gerhard Leister, Silixen, Lippe, Germany, assignor to Firma ABG-Werke Gesellschaft mit beschränkter Haftung, Hameln (Weser), Germany
Filed Apr. 21, 1960, Ser. No. 23,806
Claims priority, application Germany Apr. 25, 1959
1 Claim. (Cl. 94—50)



A three-wheel power roller for street and road work comprising a frame, a pair of rear rollers mounted on the frame, a single front roller which is a steering roller, the width of the steering roller being narrower than the distance between the outer edges of the rear rollers, a steering bracket for the front roller and mounted on a pin, a lever arm connected at one end to said pin so that said bracket will swing with the front roller on the arm, said arm being pivotally supported on a vertical axle in the frame and between the ends of the arm, hydraulic means connected to the other end of the lever arm to swing the latter around its vertical axle and the front roller around its pivotal support as a unit to adjust the front roller laterally to align flush with one of the edges of the rear rollers relative to the direction of movement of the power roller and means are provided connected to the bracket and the vertical axle to maintain the front roller parallel to the rear rollers relative to the rotary axes of the rollers, and means to rotate the steering bracket on its lever arm to steer the front roller relative to the frame, said means connected to the bracket and the vertical axle including a plurality of interconnected gear wheels mounted on the pin, the vertical axle and the lever arm.

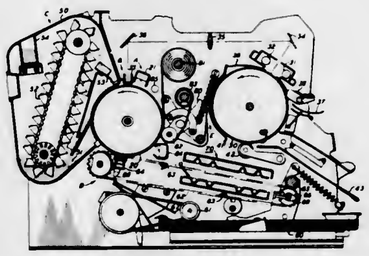
3,099,943
XEROGRAPHIC REPRODUCING APPARATUS
Roger H. Eichorn and Richard W. Morrill, Webster, Karl A. Northrup, Rochester, and Robert F. Osborne, Webster, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,779
5 Claims. (Cl. 95—1.7)

1. In a xerographic reproducing apparatus,
a xerographic drum journaled for rotation,
a copy drum journaled for rotation,
sheet gripper means carried by said copy drum, said sheet gripper means being adapted to cooperate with said copy drum to engage a document to be reproduced,
a projection mechanism positioned adjacent said copy drum to project a radiation image of a document, as it is carried by said copy drum, onto said xerographic drum to form an electrostatic latent image thereon,
an interposer means positioned adjacent said copy drum for movement into a first position to effect operation of said sheet gripper means and to a second position in which it is in an inoperative relation to said sheet gripper means,
sheet conveyor means positioned to advance sheet support material to said xerographic drum,
sheet feed means for seriatim feeding of sheet support material to said sheet conveyor means,
drive means connected to said xerographic drum, said copy drum and said sheet conveyor means to effect synchronized movement of said xerographic drum, said copy drum and said sheet conveyor means, said xerographic drum being rotated at least one revolution to first effect a reproducing cycle and then rotated at least a second revolution to effect a timing out cycle,



driven means connected to said drive means to actuate said sheet feed means during said reproducing cycle,
means connected to said sheet feed means to prevent feeding of sheet support material during said timing out cycle,
document controlled means connected to said drive means to normally initiate operation of said drive means and said driven means to effect a reproducing cycle each time said document controlled means is actuated upon the insertion of a document into said xerographic reproducing apparatus,
and programmer means connected to said interposer means to move said interposer means and to effect repeated rotation of said xerographic drum through said reproducing cycle when making multiple reproductions of a single document inserted into said xerographic reproducing apparatus.

3,099,944
XEROGRAPHIC CONTROL APPARATUS
Roger H. Eichorn and Robert F. Osborne, Webster, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,837
4 Claims. (Cl. 95—1.7)



1. In a xerographic reproducing apparatus having a xerographic drum and a copy drum journaled for rotation, a sheet gripper means carried by said copy drum, said sheet

gripper means being adapted to cooperate with said drum to engage a document to be reproduced, an interposer means positioned adjacent said copy drum for movement into a first position to effect operation of said sheet gripper means and to a second position in which it is in an inoperative relation to said sheet gripper means, drive means connected to said xerographic drum and said copy drum to effect synchronized movement of said xerographic drum and said copy drum, clutch operated control means connected to said drive means to effect operation of said xerographic drum through at least one revolution to first effect a reproducing cycle and then through at least a second revolution to effect a timing out cycle;

the improvement comprising programmer means for effecting operation of said clutch operated control means and for moving said interposer means when a predetermined number of reproductions have been made,

said programmer means including a support,

a spring loaded shaft journaled in said support for both rotational and axial movement therein,

a cam secured to said spring loaded shaft and operatively connected to said interposer means and to said clutch operated control means,

a projection on said shaft,

detent means encircling said spring loaded shaft and connected to said support for engagement with said projection,

said detent means having an enlarged notch thereon to allow said spring loaded shaft to move into a released position when said projection is in line with said enlarged notch,

a ratchet wheel fixed on said shaft and mounted concentrically with said detent means,

means for imparting a step-by-step rotation to said ratchet wheel from the drive means,

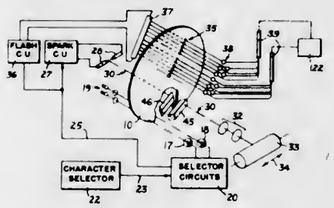
and hand controlled means fixed to said spring loaded shaft for rotating said spring loaded shaft to vary the position of said projection angularly with respect to said detent means so as to vary the number of reproducing cycles affected before said clutch operated control means is actuated to effect a timing out cycle and before said interposer means is positioned in operative relation with said sheet gripper means.

3,099,945

PHOTOGRAPHIC TYPE COMPOSITION

Richard C. O'Brien, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

Filed June 30, 1960, Ser. No. 39,859
9 Claims. (Cl. 95—4.5)



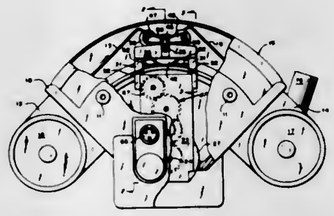
1. High speed font selection apparatus for phototypesetting machines, comprising a character carrier having a plurality of fonts of master characters each arranged with the characters thereof at a common radial distance from an axis of said carrier and with different fonts in separate concentric paths, means connected to rotate said carrier continuously about said axis including a fixed mounting for said carrier maintaining said axis in a stationary position, a light source mounted adjacent said carrier and cooperating with said carrier to illuminate by flash one character at a time and to produce an essentially stationary image of each illuminated character, optical means receiving image bearing light beams from said carrier and directing said beams along a common optical path to focus in a common plane, and font selector means operable on said optical means to move said optical means to direct image bearing light beams from any selected font into said optical means while maintaining constant the optical path in the system.

3,099,946

PANORAMIC CAMERA

John W. Burton, Torrance, Calif., and Donald A. Hoyt, Willow Grove, Pa., assignors to the United States of America as represented by the Secretary of the Navy

Filed July 29, 1960, Ser. No. 46,321
6 Claims. (Cl. 95—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



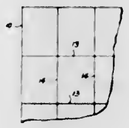
1. A panoramic camera for automatically transporting a metered quantity of photosensitive strip film and exposing the film to an objective image formed of a field of view to be scanned comprising: a camera housing including a film supply and a film receiver, an objective lens system pivotally connected at one end of said housing on an axis intersecting and normal to its optical axis for projecting an objective image into said housing, parallel arcuate guide rails fixed at the other end of said housing to opposite walls thereof in planes normal to said pivotal axis and with their center of curvature on said pivotal axis, a guide roller on the convex surface of each of said guide rails for rolling thereon, a smooth cylindrical film drum journaled at its ends between said guide rollers and with its circumference from end-to-end tangent to the focal plane circumscribed by said lens system for training any film passing over its periphery at the focal plane, said drum and said guide rollers having a common axis of rotation parallel to said pivotal axis and intersecting said optical axis, force-exerting means operatively connected between said lens system and said film drum for urging said guide rollers into pure rolling contact on the convex surfaces of said guide rails, clutch means operatively connected between said film drum and at least one of said guide rollers for positively driving said film drum only when said lens system is pivoted in a scanning direction, first and second cylindrical pad idlers having their end-to-end axes parallel to said film drum axis and rotatably supported by arm means pivotally connected to said lens system, said first idler being positioned on a side of the film drum axis opposite to said second idler, and both of said idlers being further positioned relative to the pivotal axis radially beyond the film drum axis, force-exerting means operatively connected between said lens system and said arm means thereby urging said pad idlers toward said film drum for obtaining a pure rolling contact of said idlers on any film interposed between either of said idlers and said film drum, and clutch means operatively connected between said pad idlers and said arm means for locking said pad idlers against rotation only when said lens system is pivoted in a film transporting direction; whereby, when the film in said film supply is normally threaded around the first idler, around the film drum, and around the second idler to the film receiver, and when said lens system is oscillated about said pivotal axis, the film is alternately transported and exposed.

3,099,947

TYPE FOR COMPOSING FOR LITHOGRAPHING

Kenneth L. Pottle, 19800 Pipeline Road, Renton, Wash.

Filed June 10, 1960, Ser. No. 35,287
2 Claims. (Cl. 95—85)



1. A type font comprising a thin rectangular body of cardboard of uniform thickness with a flat top surface on which characters suitable for photographing are printed in parallel horizontal rows and parallel vertical rows, said rows extending parallel to the edges of the rectangular body of cardboard, said body of cardboard being coated on its undersurface with a tacky wax, a rectangular transparent plastic layer extending over all of the said top surface of the cardboard body and over said characters printed thereon, said plastic layer being thinner than said cardboard body and secure to the entire top surface thereof, said font being provided with a plurality of horizontal scored lines that extend between two side edges of the font and are parallel to the horizontal rows of printed characters and a plurality of vertical rows of scored lines that extend between upper and lower edges of the font and are parallel to the vertical rows of printed characters, the horizontal scored lines being arranged so that one line lies between each adjacent pair of horizontal rows of characters and the vertical scored lines being arranged so that one vertical scored line lies between each pair of adjacent vertical rows of printed characters, said font being easily broken along said horizontal and vertical scored lines whereby a plurality of rectangular type characters may be formed therefrom.

3,099,948

DEVICE FOR CONTACTING SHEETS CARRYING SENSITIVE LAYERS WITH AT LEAST TWO LIQUIDS

Cornelis J. van Leeuwen, 87 Vlamingstraat, Delft, Netherlands

Filed May 18, 1961, Ser. No. 111,100
Claims priority, application Netherlands May 24, 1960
4 Claims. (Cl. 95—94)



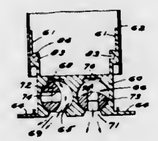
1. In a device for contacting sheets having a sensitive layer with at least two liquids and including two containers for said liquids, a frame, a moistening roll mounted in said frame and adapted to be partially immersed in a moistening liquid when contained in one of said containers for moistening the sensitive layer of a sheet passed over said roll, upper and lower guiding means for said sheets arranged in said frame and defining a passageway therebetween dipping downwardly, passing through and rising out of an impregnating liquid contained in the other of said containers, and means for transporting said sheets through the device by passing said sheets over said moistening roll and through said passageway, the improvements comprising, said upper guiding means including a leading edge positioned over said first container near said moistening roll to engage the upper sides of sheets passing thereover, a substantially straight portion extending from the leading edge downwardly into impregnating liquid in said second container and a curved portion bent downwardly and then upwardly to emerge above said impregnating liquid, said lower guiding means having straight and curved portions similar to those of the upper guiding means, the curved portion of the lower guiding means being spaced a small distance from the curved portion of the upper guiding means to define said narrow passageway, the straight portion of said lower guiding means being substantially shorter than that of the upper guiding means and having a leading edge positioned near the surface of the impregnating liquid in said second container, the straight portion of the upper guiding means being inclined upwardly and away from the straight portion of the lower guiding means to form a mouth communicating with the said narrow passageway, said mouth being of greater height at its entrance than at its exit connected to the narrow passageway, and said mouth being totally unobstructed to receive the leading edge of a sheet from the moistening roll against the upper guiding means only whereby to keep the sensitive underside of said sheet in its path from said moistening roll to the surface of said impregnating liquid clear of any part of the device.

3,099,949

AIR DISTRIBUTOR VALVE

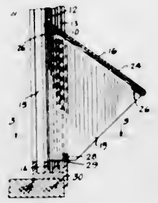
Charles A. Davidson, Mount Clemens, Mich., assignor to Thermotank, Inc., a corporation of Michigan

Filed Feb. 19, 1962, Ser. No. 174,071
14 Claims. (Cl. 98—40)



1. An air distributor valve comprising a housing, a cylindrical chamber formed in said housing, inlet and outlet openings communicating with said chamber, said inlet opening being spaced from said outlet opening by a pair of oppositely facing chamber wall portions, valve means for controlling the direction and volume of air discharged through said outlet opening comprising a valve member including an arcuate side slidably engageable with said chamber wall portions and having an area not in excess of one of said wall portions but sufficient to cover one of said inlet and outlet openings, said valve member further including an oppositely directed air deflecting side extending between the extremities of said arcuate side, the maximum thickness of said valve member across said sides in a direction transversely of said chamber being substantially less than the chamber diameter, and means mounting said valve member for movement on the axis of said chamber whereby said valve member can be selectively moved between positions in which the air deflecting side thereof lies in spaced relation with either of said chamber wall portions and in which the arcuate side thereof covers one of said inlet and outlet openings.

3,099,950
AIR DUCT ACCESSORY FOR HOUSE WINDOWS
Benjamin H. Christian, 355 Norton St., New Haven, Conn.
Filed June 14, 1961, Ser. No. 117,035
3 Claims. (Cl. 98—99.5)



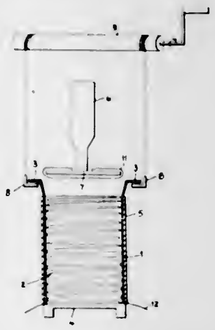
1. For use with a metallic triple-track combination screen and window having a frame with three guide tracks, a vertically adjustable sash in one track, a sash in a second track and a vertically adjustable screen in the third track, an air duct accessory comprising: a plurality of formed sheet material parts in the form of a pair of spaced end sections; means for assembling said end sections as an operational unitary assembly and permitting selective longitudinal extension or contraction to adjust the overall length of the assembly to conform to the width of the frame; each of said end sections comprising a generally triangularly shaped thin flat end member comprising an upright inner edge, an upper edge inclined downwardly and outwardly from the top of said inner edge, and a lower edge extending inwardly from the bottom of said upper edge to the bottom of said inner edge; each of said end sections including flat strip portions extending laterally from said upper edges toward the other end section of a width substantially equal to that of the length of said upper edge; each of said end members having a laterally outwardly extending thin vertical flat flange arranged to be seated in the guide track for the adjustable sash; each of said end members having means for receiving the upper edge of the usual horizontal sill of the frame to aid in positioning and supporting said accessory on said frame; and said strip portions together with said means for assembling said end sections comprising air-deflecting surfaces having top edges that are aligned with each other and arranged to be aligned with the guide track for the adjustable sash whereby the latter may be adjusted to contact said top edges and said air-deflecting surfaces extend downwardly and outwardly relative to said frame when the air duct accessory is operatively mounted in the frame.

3,099,951
COOKING GRILL
Charles H. Tidman, Columbus, Ga., assignor to Columbus Iron Works Company, Columbus, Ga., a corporation of Georgia
Filed June 21, 1961, Ser. No. 118,584
4 Claims. (Cl. 99—446)



1. In a cooking grill on which food is normally placed on the top thereof to be cooked from a fire or heat located therebelow, an integrally cast frame comprising spaced, longitudinal members connected together by transverse bar members rigid'y affixed thereto and integrally formed therewith providing a rigid peripheral framework, there being a plurality of said elongated, transverse bar members extending in spaced relationship transversely across said framework and spaced from one another, all of said longitudinal members and said transverse bar members having the upper surface thereof substantially in alignment with each other and each being of substantially flat formation together forming a substantially even upper surface on which food may be placed, each of the undersides of each of said respective transverse bar members being formed in a tapered relation from the approximate center portion thereof downwardly and outwardly to the outer periphery of said longitudinal framework, whereby the juices, fats, oils, greases and the like produced by cooking food on said grill will be directed to the underside thereof and thence downwardly and outwardly along said sloped bottom by gravity to the outer edge at which point they drip from said grill away from the fire.

3,099,952
COMPRESSION OF MATERIALS
Olaf George Dixon, Leamington Spa, and David Isaac Morgan, Wyken, Coventry, England, assignors to Courtaulds Limited, London, England, a British company
Filed July 19, 1961, Ser. No. 125,213
Claims priority, application Great Britain July 27, 1960
8 Claims. (Cl. 100—3)



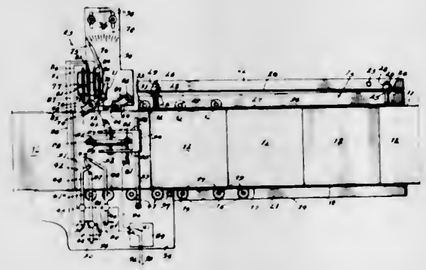
1. A method of compressing material comprising the steps of placing the material to be compressed on a stand and within a bottomless first container also supported on the same stand, enclosing the first container in a rigid second bottomless container having mechanical strength sufficient to withstand lateral forces due to subsequent compression of the material, removing the first container but not the material from the second container, and compressing the material in the second container against the stand to form a bale.

3,099,953
TORQUE TUBE CONTROL DEVICE
Walter Brauer, P.O. Box 727, Ingleside, Tex.
Filed Dec. 21, 1961, Ser. No. 161,059
7 Claims. (Cl. 100—258)



1. In combination with a vertically reciprocal pressure exerting apparatus, a control device comprising torque means secured in juxtaposition to the pressure exerting apparatus, said pressure exerting apparatus being elongated and having means spaced therealong for reciprocation thereof, means connecting the torque means with the pressure exerting apparatus for transmitting slight twisting to the torque means, and counterweight means carried by the torque means so arranged to tend to pull the pressure exerting apparatus upwardly and for cooperating with the twist transmitting means and torque means to maintain a substantially even force for the pressure exerting apparatus throughout the operation thereof.

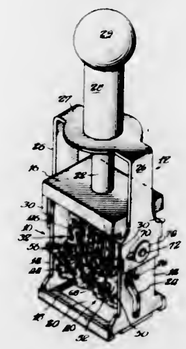
3,099,954
TILE MEASURING MACHINE
Frank M. Folk, New Lexington, Ohio, assignor to Ludowici-Celadon Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 9, 1960, Ser. No. 74,987
6 Claims. (Cl. 101—43)



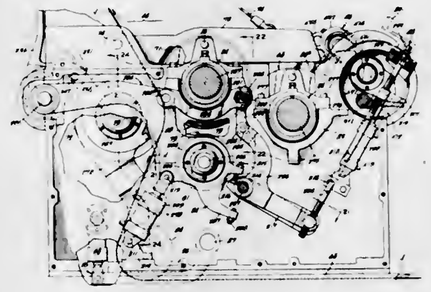
1. A measuring device comprising a belt carrying the articles to be measured, a pair of guide members, and a measuring station subsequent to said guide members and through which said belt passes, said measuring station comprising guide wheels mounted on one side of said belt, a sizing bar pivotally mounted intermediate its ends on the other side of said belt opposite said guide wheels, a spindle wheel mounted adjacent one end of said sizing bar, said sizing bar being spring-biased toward said belt so that the spindle wheel is contacted by said articles, a plurality of switches mounted so that said sizing bar will contact one or more of the switches when it is urged away from the belt by contact with said articles, a plurality of marker arms on the side of the belt opposite said switches, each marker arm terminating in a marker extending over the articles, a coil for each marker arm connected to one of said switches, an arm extending across said belt, a bifurcated member on said arm, a timer wheel supported by said bifurcated member, contact points on said timer wheel, and a breaker switch electrically connected to said sizing bar and adapted to be contacted by said contact points as said timer wheel is turned by movement of said articles on the belt.

3,099,955
TYPE BAND SETTING MEANS IN HAND STAMPS
Harold P. Keck, Crystal Lake, Ill., assignor of one-third to Jack W. Robbins and one-third to Bernard Robbins, both of Chicago, Ill.
Filed May 16, 1961, Ser. No. 110,392
5 Claims. (Cl. 101—105)

1. A printing unit for a hand stamp comprising a printing supporting frame, a plurality of band supporting wheels positioned adjacent one end of said printing frame, a printing band on each of said wheels, a ratchet member fixed to each said wheel, a depressible member engaging each of said ratchet members, said depressible members being supported on the same axis as said ratchet member, said depressible members each including a pawl in engagement with the ratchet member to rotate said wheel and said band when depressed and to override said ratchet member when moved in the opposite direction, said depressible member including a forwardly extending channel-shaped portion, said pawl comprising a spring member secured within said channel-shaped portion and extending downwardly thereof for engagement with said ratchet member.

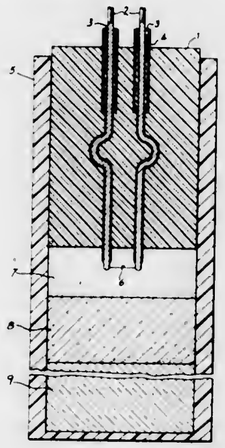


3,099,956
ROTARY OFFSET GRAVURE PRINTING PRESS
Wallace A. Anderson, Wilber C. Brunner, Clarence L. Hornberger, and Edward W. Stanley, Lancaster, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 29, 1961, Ser. No. 134,606
12 Claims. (Cl. 101—154)



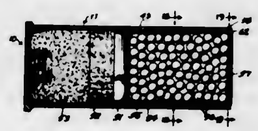
1. In a rotary printing press and system, a printing stand including an engraved cylinder, an impression cylinder spaced therefrom, an offset cylinder interposed between said engraved and impression cylinders, means supporting said offset cylinder which is operable to move only said offset cylinder to selectively break contact with said engraved and impression cylinders or establish contact with them, said offset cylinder having its axis located at an elevation higher than the axes of said engraved and impression cylinders, said means for moving said offset cylinder comprising a lever system positioned below the upper surface of all of said cylinders, mounting means for the shafts of said cylinders, including bearing assemblies therefor removably supported by fixed supports in said press, removable cap members securing said assemblies in said supports, said cylinders being vertically removable from said supports together with said bearing assemblies and cap members.

3,099,957
DETONATOR SEAL
Frederick R. Seavey, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Original application July 2, 1956, Ser. No. 595,120. Divided and this application Aug. 10, 1960, Ser. No. 48,785
1 Claim. (Cl. 102—28)



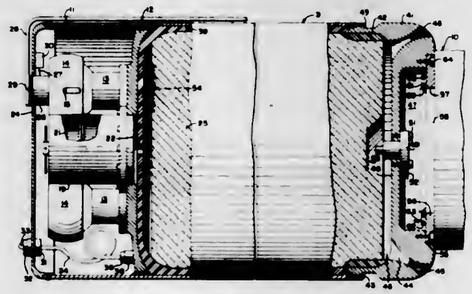
An electric detonator comprising a case containing an explosive train and a thermoplastic bridge plug molded about a pair of lead wires and sealing the mouth of the case, said lead wires extending through said bridge plug into said explosive train, said lead wires being provided with plastic insulation terminating within the bridge plug and a coating consisting of a reversible hydrophilic colloidal material coating the portion of said lead wires and said plastic insulation extending through said bridge plug, said reversible hydrophilic colloidal material being capable of expanding when contacted with water.

3,099,958
FIREARM CARTRIDGES
Benjamin K. Daubenspeck, Stratford, Rex E. Dickey, Shelton, Donald S. Foote, Greens Farms, and Justin H. Whipple, Milford, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Jan. 12, 1960, Ser. No. 1,941
17 Claims. (Cl. 102—42)



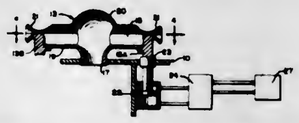
1. In a firearm cartridge, a plastic casing including an annular wall, a rigid head including an extractor rim and a primer positioning battery cup, means fastening said head to said casing, a plastic slot container within said casing, said shot container comprising a transverse base wall, an annular wall integral with said base wall including a circumferentially continuous gas sealing skirt portion extending rearwardly from said transverse wall and an expandible portion extending forwardly therefrom and having a plurality of circumferentially spaced longitudinal slits extending from its forward end into contiguous relation to said transverse wall, shot within said shot container and entirely separated from said annular wall by said container, and releasable closure means normally retaining said shot and said shot container in said casing.

3,099,959
ROCKET ENGINE
Charles F. Bowersett, Burtonsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 7, 1961, Ser. No. 150,843
10 Claims. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)



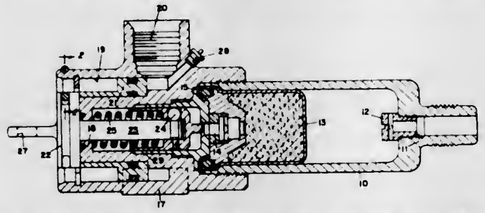
4. A rocket motor for a subaqueously launched missile and having a thin metal cylindrical shell, a bulkhead carrying a plurality of exhaust nozzles and secured to one end of said shell, a plastic liner bonded to the interior of said shell and said bulkhead respectively for reinforcing the shell against pressure externally applied thereto as the missile is launched, a quantity of imperforate end burning propellant explosive snugly fitted in said liner in a manner to form a plenum chamber at one end thereof opposite said nozzles, and a second bulkhead secured to the opposite end of said shell in a manner to form a second plenum chamber between a transverse wall thereof and the opposite end of said propellant explosive, a plurality of thrust reversal nozzles formed within said second bulkhead in communication with said second plenum chamber, and a pyrogen igniter in communication with said second plenum chamber and carried by said second bulkhead for igniting the opposite end of said propellant explosive thereby to apply a reverse thrust to said engine.

3,099,960
METHOD OF THRUST VECTOR CONTROL
George J. Bryan, Cocoa Beach, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 19, 1960, Ser. No. 50,809
5 Claims. (Cl. 102—50)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A missile having a motor section and a control device, said motor section providing the propulsive force to the missile by exhausting high pressure gas through a propulsive nozzle located on one end of said motor section, said control device including a plurality of housing members mounted equi-angularly on the exterior periphery of said one end of said motor section, a pair of normally closed oppositely disposed adjustable venturi nozzles in each of said plurality of housing members, each venturi nozzle having a fixed semi-circular section and a complementary movable semi-circular section, a chamber located in each of said plurality of housing members for interconnecting said pair of adjustable venturi nozzles, connector means for connecting said chamber with the high pressure gas in said motor section, control means for individually controlling the complementary movable semi-circular sections of the adjustable nozzles that vent a portion of the high pressure gas thereby changing the angle of the resultant propulsive force to control the missile in flight.

3,099,961
MULTI-CHOICE FIRING MECHANISM
Albert M. Stott, Clifton Heights, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 13, 1962, Ser. No. 173,079
2 Claims. (Cl. 102—70)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a source of propellant pressure of the type having a housing, a cartridge therein, a firing pin by means of which said cartridge is fired, a lanyard pin, a ball lock connecting said firing pin and lanyard pin, a coil spring surrounding said lanyard pin cooperating at one end with said firing pin and at its opposite end with a member fixed with respect to said housing, and means for releasing said ball lock after a predetermined travel of said firing pin with said lanyard pin whereby upon release of said firing pin from said lanyard pin said spring drives the firing pin to fire said cartridge, said housing being provided with an outlet passageway for propellant gas pressure from said cartridge, the combination therewith of the improvement whereby said firing pin may be actuated by either a lanyard attached to said lanyard pin or by a separate source of gas pressure from that generated by said cartridge, said improvement including a cylindrical member secured to said housing and comprising external and internal radially spaced cylindrical portions, a piston between said spaced cylindrical portions, a control member connecting said piston and lanyard pin longitudinally outside said internal cylindrical portion, said internal cylindrical portion having an internal shoulder closing said cylindrical portion and forming an abutment for an end of said coil spring remote from said firing pin, said external cylindrical portion having an inlet passageway for pas pressure for actuating said piston, and an eye attached to said control member to which a lanyard may be attached for manually firing said cartridge and whereby said cartridge may be fired either by gas pressure or manually.

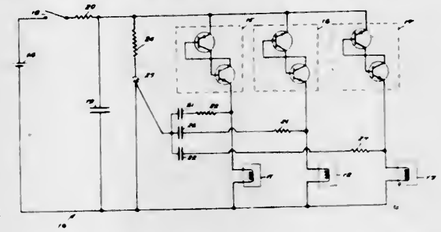
3,099,962
ELECTRIC TIMER AND SEQUENCING SYSTEM FOR PYROTECHNIC FLASH ITEMS
Chester L. Smith, Wharton, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 28, 1961, Ser. No. 120,447
3 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. In combination:

a. An R-C timer circuit comprising a power source, switch, resistor and capacitor;

b. A plurality of squib circuits comprising a diode and squib, said squib circuits being connected in parallel with said R-C timer circuit;

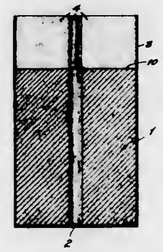
c. A capacitor discharge circuit comprising a resistor and a silicon semiconductor grid-controlled rectifier, said capacitor discharge circuit being connected in



parallel with said R-C timer circuit and said squib circuits; and

d. A plurality of R-C circuits comprising a resistor and capacitor, each of said R-C circuits being connected between each of said squib circuits and said capacitor discharge circuit.

3,099,963
OUTWARD BURNING NEUTRAL GRANULATION FOR CAST PROPELLANTS
Saxe Dobrin, Union, and John F. Kincaid, Moorestown, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Dec. 11, 1950, Ser. No. 200,256
13 Claims. (Cl. 102—98)

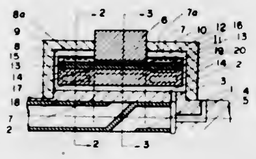


1. An outward burning neutral granulation for cast propellants consisting of a solid cylindrical grain having top and bottom surfaces, a side wall and a length greater than the radius of said grain, said grain also having a longitudinal axis of symmetry and an axial perforation coextensive with said depth, a restrictive coating covering said side wall and said bottom surface, there being a plurality of angularly related slots coextending radially outwardly between said perforation and the outer curved surface of said grain, said slots having an axial dimension smaller than said length and equal approximately to said radius, said slots opening through said top surface.

3,099,964
VANES FOR ROTARY VANE MACHINE SUPPORTED IN BALANCE AND IN STABILITY AND IN LESS FRICTION
Karl Eickmann, Talmuhle, Kreis Calw, Germany
Filed Feb. 9, 1959, Ser. No. 792,001
Claims priority, application Japan Mar. 13, 1958
22 Claims. (Cl. 103—136)

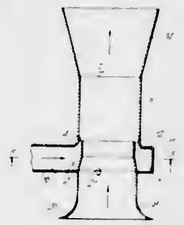
1. A rotary vane type engine comprising a casing having an inner circumferential surface defining a working chamber for receiving and discharging fluids, a rotor in said working chamber having an axis eccentric with re-

spect thereto and provided with radial slots, vanes substantially radially slidable in said rotor slots and forming with said rotor and with said working chamber, expanding and contracting intervane spaces in which said fluid is received, said rotor extending in said casing axially beyond the axial ends of said working chamber and said rotor slots in said rotor extending axially beyond the ends of said working chamber, a slide element rockingly mounted longitudinally on each vane for rocking about a longitudinal axis, said slide element having a radially outer side adjacent yet spaced from the casing inner surface



and opposed edges extending substantially radially outwardly therefrom in said working chamber to said surface and axially to the ends of said working chamber to maintain sealing contact with said surface and to form therewith and with said radially outer side of said slide element a balance chamber for the reception of pressure fluid, and a passage external to said vanes through the portion of the rotor slot extending beyond the ends of the working chamber to provide open communication at all times between such balance chambers and the bottom of said rotor slots for the passage of pressure fluid from the bottom of said rotor slots to said balance chambers.

3,099,965
JET CONVEYORS
Bruno Regenscheit, Aachen, Germany, assignor to Firma H. Krantz, Aachen, Germany
Filed Jan. 2, 1958, Ser. No. 706,665
2 Claims. (Cl. 103—263)



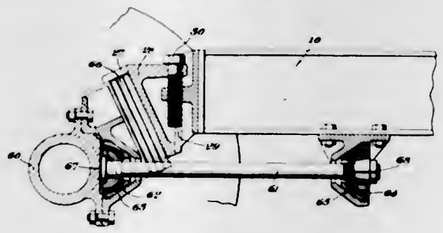
1. A jet conveyor for conveying fluids having an exterior main cylindrical conveying outlet passageway of circular cross section, a central interior concentric inlet passageway positioned inside of and projecting partly into the initial portion of said main circular cross section conveying passageway, the spacing between the end of the interior passageway and the interior of the exterior conveying passageway constituting a circular peripheral outlet slot serving to feed the conveying gas into the outlet passageway around the periphery thereof of the same width throughout over the entire circumference of the concentric exterior passageway and interior inlet passageway and a transverse passageway to feed conveying gas to said circular outlet slot and an encircling communication chamber encircling said concentric passageways and feeding conveying gas from the transverse passageway to the outlet slot having a maximum flow area into the slot at the inlet of the chamber and decreasing to a minimum flow area as it passes around the concentric communication chamber.

3,099,966
ENTRANCE SWITCH MECHANISM FOR OVERHEAD CONVEYOR
Leonard J. Bishop, Birmingham, Paul Klamp, St. Clair Shores, and Robert Krammer, Detroit, Mich., assignors to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Nov. 21, 1960, Ser. No. 70,808
24 Claims. (Cl. 104—96)



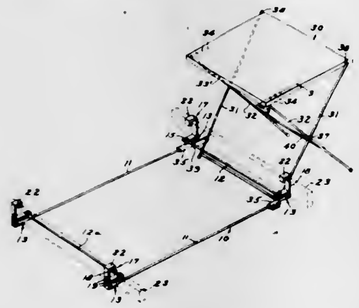
1. A transfer control mechanism for a conveyor system by which trolleys and load members supported thereby are transferred from one track to a further track in convergent relation thereto at a transfer zone, said members having abutment means thereon in predetermined relation thereto and to trolleys supporting the respective members, said mechanism comprising driven conveyors having longitudinally spaced propelling members moving continuously adjacent and along said respective tracks, means to guide said conveyors for movement of the respective propelling members thereof through said transfer zone in position to engage the said propelling members of each thereof with said trolleys in passing through said zone, and control means toward which said trolleys and load members are forwarded by one of said conveyors, said control means acting to control transfer of trolleys and load members from said one track to said further track at said transfer zone, and comprising members engaged and actuated respectively by said trolleys and by the abutment means of the respective load members supported by the trolleys.

3,099,967
VEHICLE WHEEL SUSPENSIONS
Archie John Hirst, Leicester, England, and Glen Liversage, Auckland, Auckland, New Zealand, assignors to Metalastik Limited, Leicester, England, a British company
Filed May 29, 1961, Ser. No. 113,497
Claims priority, application Great Britain June 17, 1960
19 Claims. (Cl. 105—224.1)



1. A vehicle wheel suspension comprising controlling means carrying the wheel and extending on one side of the wheel axle, the controlling means being attached to a frame of the vehicle so as to permit rising and falling movement of the wheel with respect to the frame and transverse movement of the controlling means, said controlling means controlling the position of the wheel longitudinally of the vehicle, and a rubber spring means acting between said controlling means and the frame, which spring means is inclined with respect to the vertical and transverse directions so as to resist, in combined shear and compression in the rubber, both rising movement of the wheel with respect to the frame and transverse movements of the controlling means with respect to the frame.

3,099,968
DESK ATTACHMENT FOR BED
Rita R. Macklin, 3312 Parker Ave., Royal Oak, Mich.
Filed Jan. 25, 1962, Ser. No. 168,694
7 Claims. (Cl. 108—49)



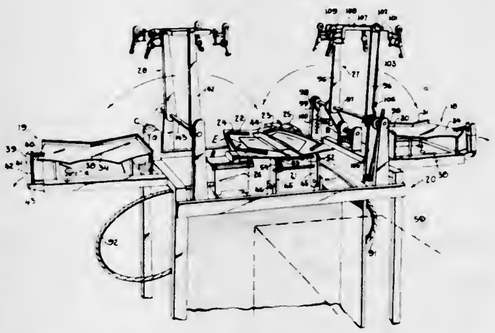
1. A desk attachment for a bed comprising a horizontal supporting frame having a pair of spaced rails extending transversely beneath opposite sideboards of the bed and provided at their opposite ends with flattened open return-bent portions, a pair of connecting rails extending between and secured to the upper portions of the flattened open return-bent portions of said transversely extending rails, means secured to said flattened open return-bent portions for suspending said supporting frame from opposite sideboards of said bed, a collapsible desk at one side of said bed provided with two sets of pivotally connected supporting legs, and a connection between said collapsible desk and said supporting frame including slides pivotally connected to one set of said pivotally connected legs and slidably connected to said transversely extending rails, the desk when collapsed being movable on said slides below one of said connecting rails to a position beneath the bed and then being movable back slightly to enable the free ends of the other set of legs to be positioned upon and supported by the one connecting rail aforesaid.

3.099.969
LOAD BEARING INDUSTRIAL PALLET
Louis Davidson, 24 Waterview Road, Oceanside, N.Y.
Filed Dec. 28, 1959, Ser. No. 862,138
7 Claims. (Cl. 108—56)



1. An industrial pallet comprising a platform, a leg supporting the platform and comprising two panels formed of material of the platform and connected together at their lower ends along a hinge region that forms a bottom portion of the leg for supporting the pallet from an underlying supporting surface, a first panel of the leg being connected at its upper end to the platform along a hinge line about which the leg swings from an undisplaced position into a downwardly extending set-up position, a second of the leg panels having a top edge with at least two longitudinally extending portions of the top edge extending above a lower portion of the top edge between them, one of the longitudinally-extending portions terminating at a distance above the lower portion not greater than the thickness of the platform and the other of said two longitudinally-extending portions being longer than the first one and having a tab bendable into a position parallel to the platform, the first panel of the leg extending downwardly at an obtuse angle to the undisplaced position of the leg, and the leg in set-up position being located entirely under a solid portion of the platform which is on the opposite side of the hinge line from the area of the platform from which the leg was displaced, said portion of the platform having an opening therein extending parallel to the hinge line but substantially shorter than the hinge line and in position to receive one of the longitudinally extending portions of the top edge of the leg, part of the solid portion of the platform beyond the end of the opening and intermediate the end limits of the hinge line being in position to bear on the lower portion of said top edge between said longitudinally extending portions.

3,099,970
GARMENT WORKING APPARATUS
Billy L. Hite, Jackson, Ala., assignor to Vanity Fair Mills, Inc., Reading, Pa., a corporation of Pennsylvania
Filed June 28, 1960, Ser. No. 39,308
13 Claims. (Cl. 112—2)

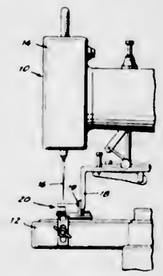


1. A side seaming machine for sewing the opposite side seams of garments comprising a sewing platform, sewing heads positioned for travel relative to said platform to form seams along the edges of a garment on said platform, a pair of supply stations adjacent said platform for retaining supplies of garment sections, transfer means for transporting garment sections from said supply stations to said platform and positioning said garment sections in superimposed relation for sewing, and drive means for said transfer means including cycling control means for effecting the transfer of garment sections in a cycle such that the garment section from a first supply station is on top of the garment section from a second supply station during the sewing of a first garment and below the garment section from said second supply station during the sewing of a second and succeeding garment section.

3,099,971
BUTTON HOLDER FOR SEWING MACHINE
Louis J. Schwartz, R.D. 1, Slatington, Pa.; Charles Cangelosi, Green Pond Road, R.D. 1, Bethlehem, Pa.; and Ignazio Cangelosi, 5201 William Penn Highway, Easton, Pa.
Filed June 1, 1961, Ser. No. 114,096
2 Claims. (Cl. 112—114)

1. A shank button holding attachment for a sewing machine comprising, a base plate, a first vertical plate forming a needle shield rigidly secured to the base plate,

said needle shield having a slot, whereby the button holding attachment may be adjustably mounted on a sewing machine, a second vertical plate forming a needle guide rigidly secured to the base plate and extending upwardly from said base plate perpendicular to the needle shield, the needle guide having an elongated rectangular-shaped aperture communicating with a vertical edge of the guide for receiving the shank of a button, a button retainer, said button retainer including an arm having one end portion pivotally secured to the base plate, the opposite end portion of said arm being in alignment with the



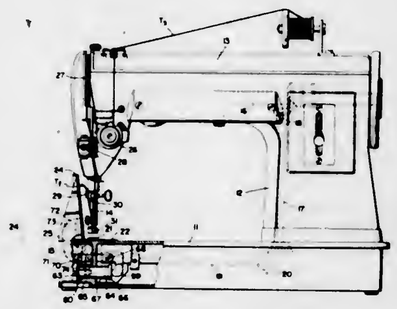
needle guide aperture, said opposite end portion of the arm having an elongated concave surface conforming to the external surface of the head of a shank button, the end of the arm adjacent the concave portion being outwardly curved to form a lip, whereby a button head may be easily inserted between the retainer arm and the needle guide, and a tension spring having one end connected to the base plate and the other end connected to the button retainer arm intermediate the ends thereof, whereby the retainer arm is biased against the needle guide.

3,099,972

BOBBIN THREAD REPLENISHING MECHANISM FOR LOCK STITCH SEWING MACHINE

Ralph E. Johnson, Boonton, and Frank J. Bartosz, Cranford, N.J., assignors to The Singer Company, a corporation of New Jersey

Filed Dec. 11, 1961, Ser. No. 158,451
8 Claims. (Cl. 112—181)



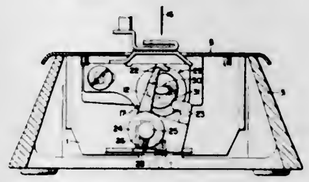
1. In a sewing machine having a work penetrating thread carrying needle, a needle thread take-up member, a rotary hook, a thread engaging beak on said rotary hook, an annular internal raceway formed in said rotary hook, a bobbin case, an annular bearing element on said bobbin case journaled in said rotary hook raceway, means for restraining said bobbin case from rotation with said rotary hook, said rotary hook raceway and said bobbin case bearing element each being formed with a gap, said gaps being disposed in registry in the needle loop seizing position of said thread engaging beak, a thread accommodating bobbin formed with axially spaced flanges and journaled in said bobbin case, and actuating means for operating said needle, rotary hook, and take-up mechanism in timed relation for seizure of loops of needle thread by said beak, manipulation of said seized thread loops through said registering raceway and bearing member gaps and about said bobbin case by said rotary hook, and shedding of said manipulated thread loop from said beak by said take-up member as is required in the formation of lock stitches, means for winding thread carried by said needle onto said bobbin comprising a thread deflecting finger, means supporting said finger on said sewing machine externally of said rotary hook, means for shifting said thread deflecting finger into an effective position extending opposite the space between said flanges of the bobbin journaled in said bobbin case to deflect onto said bobbin thread loops shed from said beak, and means for maintaining said thread deflecting finger in said effective position during a plurality of successive work penetrations of said needle.

3,099,973

LOOPER MECHANISM FOR SEWING MACHINES

Nathaniel P. Lees, Parkhall, Dalmuir, Glasgow, Scotland, assignor to The Singer Company, a corporation of New Jersey

Filed Sept. 19, 1961, Ser. No. 139,096
Claims priority, application Great Britain Aug. 19, 1961
1 Claim. (Cl. 112—199)



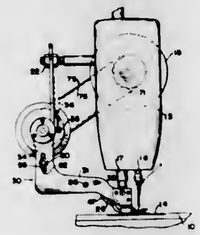
In a sewing machine having a frame including a bed, a bed shaft journaled for rotation in said bed, and stitch forming mechanism comprising a needle bar mounted in said frame and carrying a needle and a nodding type looper cooperating with said needle in the formation of single thread chain stitches, said looper comprising a looper blade and a cam follower arm formed from a single piece of sheet metal, means for mounting said looper in said bed for pivotal movement about an axis parallel to the axis of said bed shaft comprising a fulcrum stud having an exposed end and a hub to which said looper is secured and which is mounted upon the exposed end of said fulcrum stud, and means for imparting oscillation to said looper comprising a cam, said bed shaft having an exposed end, means for securing said cam upon the exposed end of said bed shaft for rotation therewith, said cam having a first cam surface engaged in tracking relation by said looper blade for imparting pivotal movement to said looper in one direction and having a second cam surface disposed axially with respect to said first cam surface and engaged in tracking relation by said cam follower arm for imparting pivotal movement to said looper in the other direction, said cam follower arm being arranged to engage said second cam surface at a point diametrically on the opposite side of said bed shaft from the point of engagement of said looper blade and said first cam surface, said cam surfaces being complemental and providing a positive drive for said looper in each direction of pivotal movement.

3,099,974

FEED MECHANISM FOR SEWING MACHINES

Joseph Chudner, 2907 Brighton Beach 8 St., Brooklyn, N.Y.

Filed Mar. 6, 1961, Ser. No. 94,120
11 Claims. (Cl. 112—207)



1. A sewing machine adapted for feeding and sewing together at least two overlapping pieces of fabric comprising a work support, a movable feed dog operating through said work support, means for effecting a four motion feeding movement of said feed dog for transporting the fabric from front to the rear of the machine, said feed dog engaging from below the lowermost piece of said fabric, and a secondary feed attachment connected to said machine, said attachment including a secondary feed means mounted to overlie said feed dog and to engage the upper piece of said overlying piece of fabric from above, said secondary feed means including a bracket having angularly disposed leg portions, a pair of angularly disposed pivotally jointed lever arms, each of said pivotally jointed arms having an elongated slot formed intermediate the ends thereof, guide means receivable in the respective slots of said arms for slidably connecting each of said pivotally jointed arms to a respective leg portion of said bracket, an overlying feed dog mounted to the free end of one of said pivotally jointed arms, and an eccentric journaled in an opening in the free end of the other of said pivotally jointed arms and means for rotating said eccentric whereby the rotation thereof effects a four-way motion of said overlying feed dog for exerting uniform pull on both the upper and lower overlying pieces of fabric.

3,099,975

BAND RECEIVING DEVICE

Michael Kish, Jr., Hightstown, N.J., assignor to Atlantic Products Corporation, Trenton, N.J., a corporation of New Jersey

Filed Aug. 24, 1961, Ser. No. 133,730
2 Claims. (Cl. 112—262)



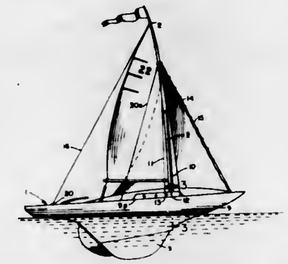
1. In combination; a first material, a second material and a flat elongated stitch protecting strip of flexible material having a constant thickness across the width thereof; the edges of said strip having a normal tendency to curl inwardly; said first material to be sewn to said second material by a stitched line; said first material overlying said second material; said elongated strip lying on top of said first material; a first stitch line and a second stitch line; said first stitch line extending inwardly and along one side of said elongated strip and passing through said elongated strip and at least said first material; said second stitch line extending inwardly and along the other side of said elongated strip and extending through said elongated strip and at least said second material; the sides of said elongated strip curling inwardly to form a protective bead over said first and second stitch lines.

3,099,976

SAIL RIGGING

Fred C. Schwaneke, Chicago, and Edmund J. Sheehan, Wilmette, Ill.; said Sheehan assignor to Watson D. Harbaugh, Evanston, Ill.

Filed Apr. 20, 1960, Ser. No. 23,453
18 Claims. (Cl. 114—91)



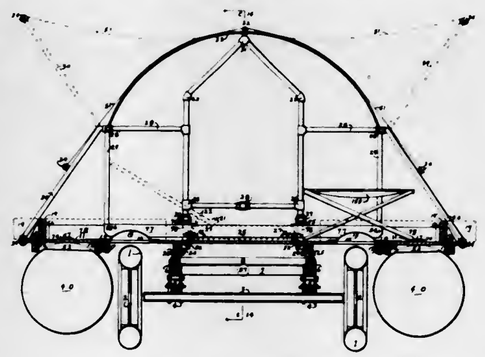
1. In a sailboat having an upright mast movable fore and aft at its top, the combination of a back stay, a jib stay and a jib down haul, strain equalizing means between said jib stay and jib down haul, means for tightening the jib down haul, and means interconnecting the back stay and strain equalizing means including a lever transmitting the strain on the back stay to the equalizing means and means connected to the lever for moving the lever to shift the top of the mast fore and aft through concurrent movement of the stays by the lever.

3,099,977

AMPHIBIOUS VEHICLES

Frank W. McLarty, 1603 Tate St., Dallas 8, Tex.

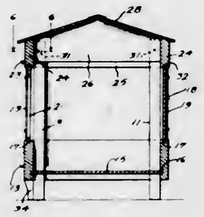
Filed Feb. 21, 1957, Ser. No. 641,729
9 Claims. (Cl. 115—1)



1. A buoyant craft comprising a substantially rectangular and rather pliant *single* deck, parallel pontoons horizontally spaced from each other and hingedly attached by horizontal pivots to the said deck parallel to the sides thereof, multiple transverse frames above the deck each of whose ends extend at least substantially from points directly above the longitudinal axis of one pontoon to points directly above the longitudinal axis of the other pontoon, the rear such transverse frame preferably being a horizontal beam turned up on edge, near the rear end of the deck, on which may be mounted a detachable outboard motor for propelling the craft on water, multiple longitudinal frames beneath the deck and extending at least substantially from the front to the rear of said deck, and suitable means in the midportion of deck whereby the transverse frames are held substantially against the upper surface of the deck and the longitudinal

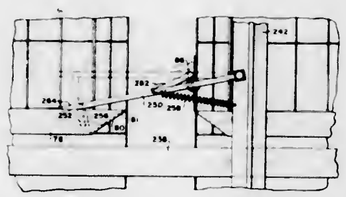
frames are held against the lower surface of the deck, a suitable means for holding such frames against the deck being the equivalent of metallic angle frames bolted and screwed through holes therein to the deck and to the transverse and longitudinal frames above and below the deck.

3,099,978
ANIMAL ENCLOSURE
James W. George, St. Thomas, Pa.
Filed May 4, 1962, Ser. No. 192,439
4 Claims. (Cl. 119—19)



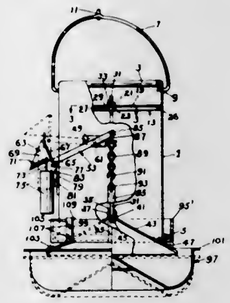
1. An animal enclosure comprising upright corner posts, a rectangular bottom frame disposed around and secured to portions of the corner posts, a floor disposed within and secured to said bottom frame, a rectangular top frame disposed around and supported by upper portions of the corner posts above and spaced from the bottom frame, a roof secured to and disposed over said top frame, and a rectangular intermediate frame section detachably mounted on and supported by said bottom frame and disposed around said corner posts and extending between the bottom frame and top frame.

3,099,979
WATER TROUGH AND CLEANING MEANS
Dennis W. Byrnes, 4565 S. 6th St., Tucson, Ariz.
Original application Jan. 30, 1958, Ser. No. 712,118, now Patent No. 3,045,612, dated July 24, 1962. Divided and this application Sept. 27, 1961, Ser. No. 146,679
8 Claims. (Cl. 119—22)



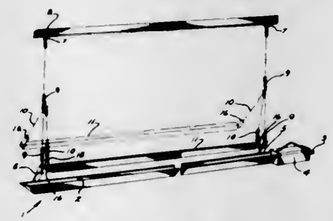
1. Apparatus for animal husbandry comprising: an endless conveyor; a plurality of horizontally-spaced animal cages carried by said endless conveyor in an endless path, each said cage having a water trough mounted on a side thereof, said water troughs being mounted at about the same vertical level; a water trough scraper mounting positioned stationarily adjacent said endless path; a water trough scraper movably mounted on said scraper mounting; means resiliently urging said water trough scraper downwardly to a position occupied by the bottom of said water troughs as said water troughs are carried past said water trough scraper; a lifter mounted on the leading portion of each cage for engaging and lifting said water trough scraper from the preceding trough and maintaining the scraper raised until the next water trough is beneath said scraper.

3,099,980
FEED DISPENSER
Charles Robert Merkle, R.R. 2, Claypool, Ind.
Filed Nov. 30, 1961, Ser. No. 156,038
18 Claims. (Cl. 119—57)



1. A feed dispenser comprising a feed hopper, means for supporting said hopper above a floor, said hopper defining a bottom opening, a feed distributer mounted adjacent said hopper opening, extending downwardly and outwardly, beyond said hopper, and defining therewith a discharge port, a gate, means mounting said gate adjacent said port for movement toward and from engagement with said distributer to close and open said port, a pan, means for mounting said pan to receive feed flowing from said port and distributer and for movement with said gate, a first weight, means connecting said first weight to counteract a second weight comprising mainly the weight of the gate, pan, and contents of the pan, means connecting said first and second weights with said gate to move it in directions to open and close it respectively, said first and second weights being rendered effective to start to open and start to close said gate respectively when the weight of the contents is reduced and increased respectively, to and beyond the point of equilibrium of the first and second weights, and means for increasing the effect of the effective weight relative to that of the other weight, during the movement of the effective weight, to insure continuance of the movement of said gate to completion and to establish a predetermined unbalance in favor of the effective weight, thereby establishing the change in the weight of the contents required to render the other weight effective.

3,099,981
FOWL WATERER
Elmer B. Carpenter, Springdale, Ark., assignor to Automatic Poultry Feeder Company, Zeeland, Mich., a corporation of Michigan
Filed July 19, 1961, Ser. No. 125,130
3 Claims. (Cl. 119—61)



1. A device for watering and feeding poultry comprising: a trough and a support therefor; an anti-perch bar and means suspending said anti-perch bar parallel to and above said trough, said means being freely suspended from above in the manner of a pendulum permitting said bar to swing to either side of said trough when a fowl attempts to alight upon it; said anti-perch bar being rotatably mounted to said means.

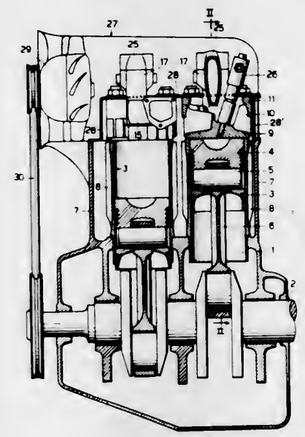
3,099,982
ANIMAL CAPTURING DEVICE
Hugo Arndt, 2123 9th Ave. S., Lethbridge, Alberta, Canada
Filed Nov. 21, 1960, Ser. No. 70,622
3 Claims. (Cl. 119—152)



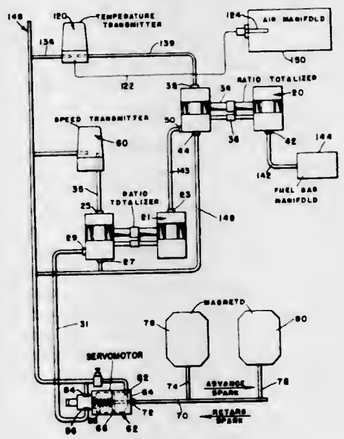
1. A device for catching and holding an animal's leg, comprising in combination a frame comprising a pair of spaced parallel J-shaped side members and a plurality of spaced cross bars rigidly connecting the same together, said side members including relatively long arm portions, relatively short arm portions and connecting bight portions, a handle secured to outer ends of the long arm portions of said side members, a fulcrum pin extending transversely between outer ends of the short arm portions of said side members, a swingable lever mounted intermediate its ends on said fulcrum pin, said lever having first and second limbs and being swingable from an open position wherein the first limb thereof projects substantially longitudinally outwardly from the outer ends of said short arm portions to a closing position wherein said first limb is received in and projects through the space between said long arm portions of the side members, resilient means connected to the second limb of said lever and biasing the same to its open position, and a pair of flexible leg engaging cords secured at one end thereof to the respective long arm portions at points substantially opposite the outer ends of the short arm portions of the side members, the other end portions of said cords being mutually convergent and anchored at a common point to the free end portion of said first limb of said lever, whereby the cords may be wrapped around an animal's leg by swinging of the lever to its closing position against the action of said resilient means.

3,099,983
AIR-COOLED INTERNAL COMBUSTION ENGINE
Luigi Enrico Orlando and Camillo Corradi, Milan, Italy, assignors to Alfa Romeo S.p.A., Milan, Italy, a company of Italy
Filed Mar. 20, 1961, Ser. No. 97,045
Claims priority, application Italy Mar. 24, 1960
8 Claims. (Cl. 123—41.61)

1. Internal combustion engine having at least one cylinder and having suction and exhaust valves and having rocking levers to operate such valves and having air cooling, in which the cooling air under fan pressure is blown parallel to the axis of the cylinder from the head downward, while the axes of the suction and exhaust valves, the rocking levers controlling said valves and the axes of the suction and exhaust valves lie substantially above said cylinder in a common plane parallel to the axis of the cylinder, characterized by a cylinder head including a relatively thin portion closing the cylinder, a generally ring-shaped portion of a diameter substantially the same as the diameter of the cylinder and surrounding said valve axes and lying parallel to and at a distance from said relatively thin portion, a plurality of circumferentially spaced radially extending fins extending from said thin portion to said ring-shaped portion connecting said ring-shaped portion and said thin portion together and to provide cooling air passages through said ring-shaped portion and between said fins, and means securing the cylinder head to said engine.

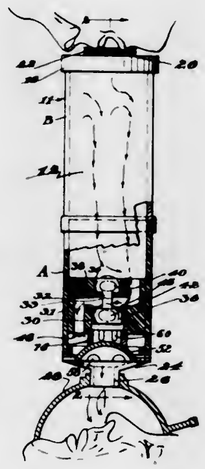


3,099,984
ENGINE CONTROL
William Arthur Perry, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 13, 1960, Ser. No. 21,940
15 Claims. (Cl. 123—148)



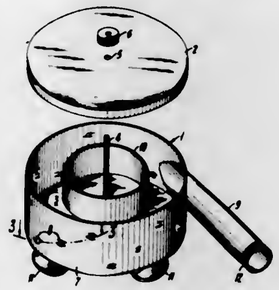
1. A control for a spark ignited engine having a fuel manifold, comprising a pressure actuated servomotor to set the spark for the engine, a source of constant pressure for said servomotor, a speed transmitter for providing a signal representing the speed of the engine, and regulator means connecting said source to said servomotor and being connected to said fuel manifold and transmitter for providing modified constant pressure to actuate said servomotor and set the spark for the engine in accordance with fuel manifold pressure and engine speed.

3,099,985
RESUSCITATOR
Porter C. Wilson, 320 E. Elvira, and Maxwell R. Palmer, 2516 E. 4th St., both of Tucson, Ariz.
Filed Dec. 21, 1960, Ser. No. 72,549
6 Claims. (Cl. 128—29)



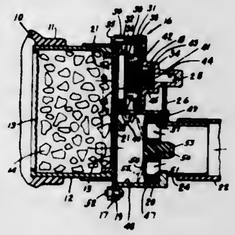
1. A resuscitator for rendering artificial respiration to a victim at the normal breathing rate of an operator comprising: a resuscitator cylinder having a main air exchange chamber of a volume of one tidal breath or approximately 550 cc.; an operator mouthpiece opening into said main air exchange chamber attached to one end of said resuscitator cylinder; a face mask attached to the other end of said resuscitator cylinder and adapted to fit a victim; a victim inhalation passage in said resuscitator cylinder interconnecting said main air exchange chamber and said face mask; a fresh air inlet passage in said resuscitator cylinder opening into said main air exchange chamber and externally of said resuscitator cylinder; a victim exhalation passage extending through said resuscitator cylinder and opening into said face mask and externally of said resuscitator cylinder; a valve chamber formed in said resuscitator cylinder, said valve chamber communicating with said fresh air passage and said victim inhalation and exhalation passages; and a freely mounted, reciprocable slide valve positioned in said valve chamber adapted to be moved by pressure changes in said resuscitator cylinder operating on said slide valve induced by and at the normal rate of said operator breathing into said mouthpiece, whereby upon inhalation of said operator the air pressure in said main air exchange chamber is lowered, causing said slide valve to move and open said fresh air and victim exhalation passages while closing said victim inhalation passage to fill said main air exchange chamber with fresh air, said movement of said slide valve upon inhalation of said operator being assisted by the elasticity of the victim's lungs, and upon exhalation of said operator said air pressure in said main air exchange chamber is increased to move said slide valve and close said fresh air passage and said victim exhalation passage and open said victim inhalation passage, forcing tidal breaths of air from said main air exchange chamber through said victim inhalation passage into said mask at the normal breathing rate of said operator, and stop means for limiting the movement of said slide valve.

3,099,986
PORTABLE WHIRLPOOL DEVICE
James V. Guelfi, 214 91st St., Brooklyn 9, N.Y.
Filed June 19, 1962, Ser. No. 203,590
8 Claims. (Cl. 128—66)



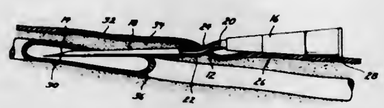
1. A portable hydrotherapeutic device comprising a housing of substantially cylindrical configuration defining a substantially annular passageway for conducting a fluid, a plurality of fluid-ejection orifices distributed along the surface of said housing, said orifices being so oriented as to cause fluid to exit therefrom in a swirling motion around the housing, and an inlet nozzle connected to and merging substantially tangentially with the surface of said housing for projecting fluid within the annular passageway for ejection through said orifices, the width of said inlet nozzle being greater than the width of the annular passageway, said inlet nozzle being adapted to direct fluid along the surface of said housing.

3,099,987
RESPIRATORY APPARATUS
Roscoe G. Bartlett, Jr., Lillian, Ala.
Filed Mar. 7, 1961, Ser. No. 94,090
1 Claim. (Cl. 128—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)



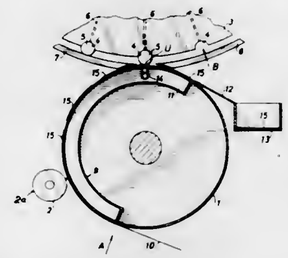
A respiratory apparatus for users of pressurized respirant comprising:
- a face mask adapted to sealingly cover the mouth and nose of the user;
- a first conduit leading from said mask for passing all of the expired and inspired fluids from and to the lungs and respiratory passages of the user;
- a second conduit leading out of said first conduit;
- a third conduit leading out of said first conduit;
- a source of pressurized respirant attached to said third conduit;
- a moisture transfer means wholly contained within said first conduit, said moisture transfer means consisting of a container adapted to be sealingly secured at one end to said face mask and to form said first conduit, a quantity of granular material adapted to collect condensed moisture on the surfaces thereof and to allow said moisture to evaporate therefrom enclosed within said container, a screen at each end of said container for retaining said granular material therein, and a perforated valve plate on the other end of said container, said valve plate affording connection means from said first conduit to said second and third conduits;
- an inspiratory check valve supported by said perforated valve plate in said third conduit for controlling the influx of said respirant to said first conduit and mask; and
- an expiratory check valve supported by said perforated valve plate in said second conduit for allowing the controlled escape of expired fluid to atmosphere, said expiratory check valve consisting of an annular base ring having a circular knife edge extending outwardly therefrom, said base ring forming said second conduit, an annular support member spaced outwardly from said base ring, a plurality of hollow cylindrical distance pieces separating said base ring and said support member, a cap portion mounted concentrically and outwardly of said support member, said base ring, distance pieces, support member and cap portion being secured together with fastening means passing therethrough, a flexible gasket mounted between said support member and said cap portion, a cup shaped valve support member held by said flexible gasket, the cup portion thereof extending inwardly toward said base ring, a valve engaging said base ring knife edge, said valve having an annular ring formed on its outward side, said annular ring fitting telescopically in the cup portion of said valve member whereby said valve is held in sliding juxtaposition to said knife edge, a compression spring mounted between said valve and valve support member for normally pressing said valve adjacent said knife edge, and means for pressurizing the outward side of said flexible gasket from said third conduit whereby the operation of said expiratory valve is controlled by the fluid pressure of said respirant.

3,099,988
HYPODERMIC NEEDLE
Abraham Ginsburg, 4031 Sheffield Ave., Philadelphia 36, Pa.
Filed Dec. 7, 1961, Ser. No. 157,682
6 Claims. (Cl. 128—221)



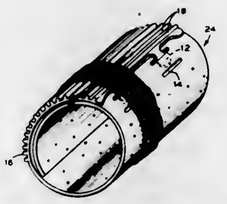
1. A hypodermic needle having an elongated hollow shank terminating in an insertion point at one end and including an adapter at its other end for attachment to a syringe or fluid source and means on said shank to lockingly receive the skin after insertion of the needle point into a vein, said means comprising a constricted portion formed by reducing the outer diameter of said shank at a pretermined location to separate said shank into a first portion leading to said insertion point and a second portion leading to said adapter, said constriction providing a circumferential shoulder substantially normal to the longitudinal axis of said first portion, said second portion curving continuously upwardly from said shoulder and gradually widening in diameter from said shoulder rearwardly whereby the skin will lock around said shoulder and the needle will be restrained by said shoulder and the curvature and widening of said second portion against longitudinal to and from movement.

3,099,989
METHOD FOR SUPPLYING CONNECTOR SHEETS TO GROUPS OF FILTER PLUGS AND CIGARETTES
Willy Rudszinat, Hamburg-Lohbrugge, and Herbert Berlin, Hamburg, Germany, assignors to Hauni-Werke Korber & Co., K.G., Hamburg-Bergedorf, Germany
Filed Dec. 14, 1960, Ser. No. 75,772
Claims priority, application Germany Jan. 2, 1960
2 Claims. (Cl. 131—94)



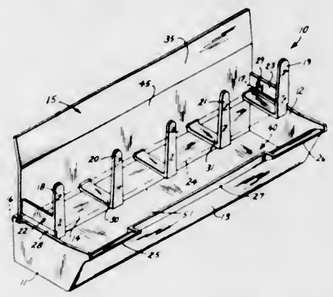
1. A method for handling gummed connector sheets employed for uniting transversely moving groups of axially aligned rod-like articles, such as cigarettes and filter plugs, including the steps of feeding the connector sheets by means of a suction conveyor to a transfer point where they meet said groups moving in a circuitous path, reducing the suction action at said transfer point for facilitating an adherence of said gummed connector sheets to said groups so that said gummed connector sheets continue to move with said groups in said circuitous path, and subjecting those connector sheets which fail to meet a group of axially aligned articles at said transfer point, owing to the absence of said group, to an increased suction action immediately beyond said transfer point so that said last named connector sheets remain temporarily on said conveyor and then are removed from the same.

3,099,990
HAIR CURLER
William L. Chalfin and David Friedwald, Brooklyn, N.Y., assignors to Chalsea Products Co. Inc., a corporation of New York
Filed July 15, 1960, Ser. No. 43,192
6 Claims. (Cl. 132—39)



6. A resilient plastic hair curler adapted for use with a bobby pin, said hair curler comprising a normally flat strip of generally rectangular shape having slots confined to one end thereof, lugs extending out from the other end of and in the plane of said strip and arranged for engagement with the said slots to form a generally cylindrical body portion, and a plurality of elongated continuous ribs extending lengthwise of the body portion and protruding from the surface thereof confined to the other end of the strip thereby to provide channels in whch a bobby pin may be secured, said strip having a plurality of slits between said ribs for flexibility of the curler and to provide access to the hair.

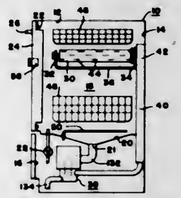
3,099,991
OBJECT SUPPORTING BOX
Arthur L. Plon, New York, and Bronislaw Zapolski, Hastings on Hudson, N.Y.; said Zapolski assignor to said Plon
Filed Nov. 16, 1959, Ser. No. 853,240
3 Claims. (Cl. 134—143)



1. An object supporting box, comprising, in combination, a container having side wall means, a front wall, a rear wall and a bottom wall defining a storage space for holding a liquid in the bottom portion thereof; lid means supported on said wall means for turning movement about a substantially horizontal axis between a closing position closing said storage space and an open position permitting admittance to said storage space; and object supporting means comprising angular bracket means having a first object supporting portion fixedly secured at one end to said lid means for turning movement therewith and extending from the said lid means for a distance substantially equal to the distance between said bottom wall and the said lid means in the said closing position of the said lid means and located substantially horizontally in said open position of said lid means and a second object supporting portion having a free end and extending from the other end of the said first object supporting portion for a distance substantially equal to the distance between said front wall and said rear wall in the said closing position of the said lid means and at such an angle as to be located substantially horizontally in said closed position of said lid means, said second object supporting portion being located in the lower portion of said storage space and immersed in the liquid held therein and said free end being adjacent said front wall of said container when said lid means is in storage space closing position, so that in said closing position of said lid means an object may be supported on said second object supporting portion without slipping from said free end and immersed in the liquid and in said open position of said lid means may be supported on said first object supporting portion and removed from the liquid.

3,099,992
REVERSIBLE PUMP-MOTOR ASSEMBLY FOR A DISHWASHER
Frank E. La Flame, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1961, Ser. No. 155,277
7 Claims. (Cl. 134—182)

3. In combination, means forming a chamber having a sump outlet, means for admitting water to said chamber, means in said chamber for spraying water, and pump means having a pump inlet remote from said sump outlet, conduit means connecting said pump inlet to said sump outlet, a first pump supply outlet connected to said spray means and a second pump supply outlet connected to a drain, said pump means including a pump body having a spray pump volute cavity including said first pump supply outlet, a pump cover fastened to said pump body having a plate portion forming with said spray pump volute cavity a spray water pump compartment and defining a spray water return compartment including said pump inlet, a waste impeller cover adjacent said pump cover, said waste impeller cover having a waste volute cavity facing said spray water return compartment and including said second pump supply outlet, a baffle plate means interposed between said covers and forming with said waste volute cavity a waste water pump compartment, means defining supply passage means in said plate portion and said baffle plate means for placing said spray water return compartment in communication with said



spray water pump compartment and said waste water pump compartment, a reversible rotatable power shaft journaled in said pump body and extending through said spray water pump compartment and terminating in said waste water pump compartment, spray impeller means connected to said power shaft in said spray water pump compartment and having curved spray pump vanes operative to pump through said first pump supply outlet when said power shaft is rotated in one direction, and waste impeller means connected to said shaft in said waste water pump compartment and having curved waste pump vanes operative to pump through said second pump supply outlet when said power shaft is rotated in a reverse direction.

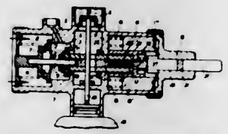
3,099,993
METHOD OF INCREASING THE EFFICIENCY OF FLUID FLOW
Edward H. Smith, Silver Spring, Md., assignor of fifty percent to Gordon B. Hanson
Filed July 22, 1960, Ser. No. 44,641
7 Claims. (Cl. 137—13)



6. The method of reducing the drag force exerted upon the boundary of an object being propelled through a body of fluid, which comprises independently of the propulsion of said body generating an elastic self-propagating travelling wave along said boundary in the direction of fluid flow with respect to said boundary, the amplitude of said wave being very small compared to the half wavelength thereof.

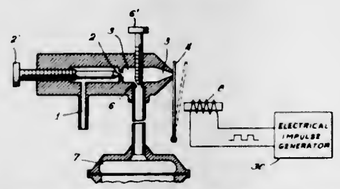
3,099,994
THERMOELECTRIC IGNITION SAFETY DEVICE
Hans Putz, Robert Lehnartz, and Ernst Feldman, Remscheid, Germany, assignors to Joh. Vaillant K.G., Remscheid, Germany
Filed Feb. 10, 1961, Ser. No. 88,566
Claims priority, application Germany Feb. 11, 1960
5 Claims. (Cl. 137—66)

1. In a gas valve including a body having a main gas supply connection, a pilot burner connection and a main burner connection, and including a thermoelectric magnet means, the improvement comprising: a pilot valve including a first closure member in said body between the main connection and the pilot connection; first operating means operatively connected to the closure member and the electromagnet means to hold the closure member open when the magnet means is energized and the pilot valve is otherwise opened, said operating means including a manually operable member to permit the pilot valve to



be manually opened; a main burner valve including a second closure member in said body between the pilot connection and the main burner connection; second operating means operatively connected to the second closure member and including a manually operable member to open the main valve and hold it open; and means interconnecting the first and second operating means to prevent the main valve from being closed and thereafter reopened until after said magnet means has been deenergized.

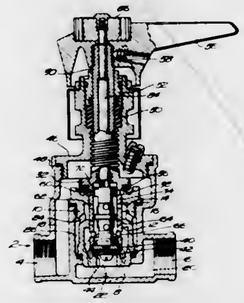
3,099,995
ELECTRO-PNEUMATIC TRANSDUCER
Franz Raufenbarth, Dusseldorf, Germany, assignor to W. H. Joens & Co., G.m.b.H., Dusseldorf, Germany
Filed May 16, 1961, Ser. No. 110,521
Claims priority, application Germany May 19, 1960
12 Claims. (Cl. 137—82)



8. An electro-pneumatic transducer for control and regulating purpose, said transducer including: a working pressure chamber; a throttle connected to said working pressure chamber; and fluid supply means including an electro-magnetic device actuated by electrical impulses having a frequency of more than 10 cycles per second, said means communicating with said throttle to supply fluid under a first pressure to said throttle and thus to said chamber in impulses corresponding to the electrical impulses.

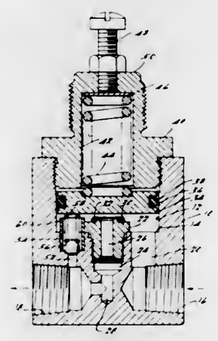
3,099,996
NON-SCALD MIXING VALVE
Paul C. Symmons, 107 Dartmouth St., Newton, Mass.
Filed Dec. 22, 1961, Ser. No. 161,475
6 Claims. (Cl. 137—98)

1. A mixing valve for two fluids under pressure at different temperatures comprising, a main valve having a tubular section with at least one inlet hole and a plurality of outlet holes for each fluid, said inlet holes each having a rectangular configuration with two sides thereof extending circumferentially and two sides thereof extending axially of said tublar section, a pressure equalizing valve reciprocally and rotatably mounted in said tublar section, said pressure equalizing valve having first valve sections for varying the effective axial dimensions of said inlet holes inversely but proportionally for said two fluids as said equalizing valve moves longitudinally in said tubular section, whereby to vary the proportion of fluids flowing through said inlet holes, said equalizing valve also having second valve sections for varying the effective circumferential dimensions of said inlet holes proportionally as said equalizing valve is rotated in said tubular section, whereby to vary the volume of fluids discharged from said outlet holes, said equalizing valve shaped to leave said outlet holes continually unblocked as said equalizer valve is rotated in said tubular section,



means for subjecting the opposite ends of said equalizing valve to the opposing pressures of said fluids whereby changes in fluid pressure will cause it to move longitudinally in a direction and by an amount sufficient to permit said first valve sections to regulate the flow of fluids so as to maintain substantially constant the temperature of a mixture of said discharged fluids, and means for selectively rotating said equalizing valve whereby to control the volume of fluids discharged from said outlet holes.

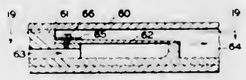
3,099,997
PRESSURE RELIEF VALVE
Kenneth K. Kroffke, Parma, Ohio, assignor to Airmatic Valve, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 5, 1962, Ser. No. 185,344
1 Claim. (Cl. 137—493.8)



A pressure relief valve comprising a valve body having opposed inlet and outlet ports and a bore having an end wall, a valve seat member in said end wall having a passage coaxial with said bore and leading from said bore to said outlet port, a second passage parallel to said first passage but laterally offset therefrom and leading from said inlet port to said bore, an O-ring on said valve seat member around said first passage, a piston reciprocable in and sealingly engaging the wall of said bore and engageable with said O-ring to close communication between said inlet and outlet ports, a spring urging said piston into said engagement with said O-ring, a third passage in

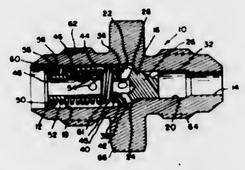
said valve body communicating with said outlet port and opening into said bore in spaced relation to said O-ring to provide for reverse flow from said outlet port to said inlet port when said piston is engaged with said O-ring, a valve seat in said third passage, a ball check valve engageable with said valve seat in said third passage for normally closing said third passage, and a spring confined between said ball check valve and the underside of said piston for urging said check valve into engagement with its valve seat.

3,099,998
FLUID RECTIFIER
John C. Fisher, Cambridge, Mass., assignor to Am Dyne Trust, a trust of Massachusetts
Filed Apr. 11, 1960, Ser. No. 21,412
3 Claims. (Cl. 137—525.3)



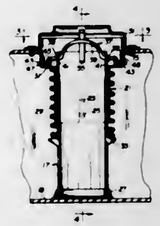
1. In a pumping system of a type providing an alternating fluid flow having a frequency of velocity variation of at least 20 cycles per second, a rectifier valve comprising means providing an opening for fluid flow through the valve, and means for controlling fluid flow through said opening including an elongated cantilever supported reed of resilient material, and means on the reed seated on the downstream side of said opening, the reed having a major and a minor transverse dimension and being tapered in the plane of its minor transverse dimension longitudinally of the reed over its entire free length, the reed having a lowest undamped natural frequency while immersed in the fluid flowing through said valve which is greater than the frequency of velocity variation of said alternating fluid flow.

3,099,999
CHECK VALVE
John F. Vismara, Grosse Pointe Park, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed Mar. 6, 1961, Ser. No. 93,792
2 Claims. (Cl. 137—543.23)



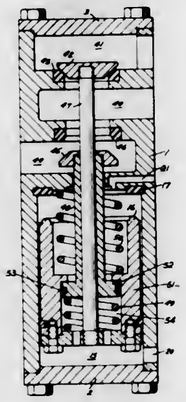
1. A fluid valve comprising a body having a straight-through flow passage therein, an annular valve seat intermediate the ends of said passage, a part of said passage on the downstream side of said valve seat being larger in transverse cross-section than the part of said passage on the upstream side thereof, a valve member movable lengthwise in said passage, said valve member including an intermediate portion, the outer periphery of which is conical and provided with a conical sealing surface which is adapted to seat against said valve seat to terminate flow of fluid in said passage, said intermediate portion being spaced from the wall of said larger part of said passage to provide therebetween an annular fluid pocket on the downstream side of said valve seat, said valve member including upstream and downstream portions on opposite sides of said intermediate portion, said upstream portion including a plurality of equally spaced fluid metering grooves on the periphery thereof, said grooves each having a pair of parallel side walls of gradually increasing height and a bottom wall inclined towards the longitudinal axis of said valve member starting at a point adjacent said intermediate portion and terminating at the upstream end of said valve member, said grooves being separated by arcuate guide surfaces of part-cylindrical configuration which bear against the wall of the smaller part of said passage on the upstream side of said valve seat, said grooves defining with said annular valve seat a metering area which varies with incremental changes in the position of said valve member in said passage, said downstream portion including a complete annular guide surface of cylindrical configuration in surface-to-surface contact with the wall of the larger part of said passage downstream of said valve seat, said valve member having an opening in the downstream end thereof, a plurality of fluid passage means in the intermediate portion of said valve member connecting said annular pocket with said opening in said valve member, said fluid passage means and said opening being in communication with the aforesaid metering area through said pocket to transmit the fluid to the outlet end of said passage, said arcuate and annular guide surfaces being constructed and arranged to be in continuous contact respectively with the smaller and larger parts of the wall of said passage throughout the entire range of movement of the valve member to stabilize the movement of said valve member in said passage.

3,100,000
PROPORTIONAL MEASURING AND MIXING TANK
James A. Cook, 8809 SE. Stephens, Portland 16, Oreg.
Filed Mar. 9, 1961, Ser. No. 94,540
5 Claims. (Cl. 137—571)



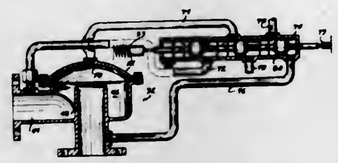
1. A proportional measuring and mixing device comprising;
a tank having an opening in its top surface;
a hollow tube open at both ends movably mounted within said tank in alignment with said opening;
said tube being vertically movable to an upward and a downward position within said tank;
the respective cross-sectional areas of said tube and tank at any height of said tank being of a predetermined constant ratio;
spring means to bias said tube downwardly;
sealing means between the lower edge of said tube and the bottom of said tank whereby liquid will not pass beneath said lower edge when said tube is in its downward position;
lifting means to raise said tube away from the bottom of said tank a sufficient distance to allow liquid to flow freely beneath the lower edge of said tube; and
locking means to cooperate with said lifting means in selectively holding said tube in an upward position.

3,100,001
PNEUMATICALLY OPERATED AIR BLAST VALVE
Haakon Forwald, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Nov. 14, 1961, Ser. No. 152,274
Claims priority, application Sweden Nov. 15, 1960
2 Claims. (Cl. 137—596.1)



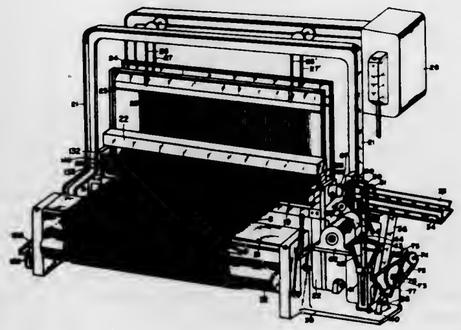
1. A pneumatically operated valve comprising a first valve seat, a first valve head movable between sealed and unsealed positions with respect to said first valve seat, a cylinder, an operating piston movable within said cylinder, said first valve head being slidably mounted with respect to said piston, means operatingly engaging said valve head and piston resiliently urging said first valve head towards a sealed position, a first space within said cylinder limited by one surface of said piston and connected to a high pressure air inlet; a second space within said cylinder limited by the opposite surface of said piston and connected to open air; said second space including a sealing means; said sealing means being engaged by at least a portion of the surface of said piston when said piston completes its travel in one direction within said cylinder to form a seal between said first and second spaces, said first valve head engaging said valve seat in a sealed position when said piston engages said sealing means, a second valve head and a cooperating second valve seat therefor; said second valve head being carried by said piston and being moved out of engagement with said second valve seat when said piston moves said first valve head to a sealed position.

3,100,002
VALVE STRUCTURE
Jesse C. Moore, Box 147, Fort Recovery, Ohio
Filed Sept. 19, 1960, Ser. No. 56,987
1 Claim. (Cl. 137—609)



In a large capacity valve particularly adapted for controlling the application of vacuum; a pan shaped valve body open at the top, a first port of large area opening laterally from said valve body adapted for connection with a source of vacuum, straight conduit means integral with said valve body extending vertically along the central axis thereof and terminating at the top at about the level of the top of the valve body and extending out the bottom of the valve body to define a second port also of large area for connection with a space to be evacuated, the area in said valve body around the conduit means being at least as great as that of said conduit means, a flexible diaphragm extending across the top of the valve body, a cover member deeply concave downwardly fixed to the valve body and sealingly clamping the diaphragm thereto, said diaphragm having a lower position in which it engages the upper end of said conduit means and seals it off from the inside of said valve body and having an upper position spaced from the conduit, in which position there is communication between said conduit means and the valve body, a pilot valve of substantial size, a connection from the pilot valve to the first port, another connection from said pilot valve to the inside of said cover, and another connection from the pilot valve to the atmosphere, and a valve member movable in the pilot valve for controlling said connections for alternately connecting the inside of said cover with the first port or with the atmosphere, there also being a connection from the pilot valve to said conduit means and said pilot valve member being operable simultaneously to connect the inside of the cover and the inside of the conduit means with the atmosphere.

3,100,003
MACHINE FOR WEAVING WEB HAVING RELATIVELY STIFF WEFT
Joseph Feliks, New York, N.Y., assignor to Woven Arts Corp., New York, N.Y., a corporation of New York
Filed June 15, 1959, Ser. No. 820,401
16 Claims. (Cl. 139—128)

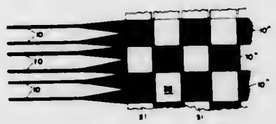


1. In a loom for weaving material having relatively stiff elongate weft elements, said loom having a frame structure, warp supplying means, fabric take-up means rotatably mounted in said frame structure, a plurality of vertically reciprocating harnesses arranged between said warp supplying means and said fabric take-up means and a reciprocating lay mounted in said frame structure; a reed mounted on said lay reciprocating therewith, said reed comprising a plurality of laterally arranged flat plate members having slots which are open at their forward ends, and means maintaining said members in aligned spaced relation whereby warp from said warp supplying means and carried by said harnesses may be guided between said members, said slots being in alignment whereby a transverse passage is provided through said members for receiving and guiding said weft elements when fed therein, and means for feeding said weft elements into said passage.

3,100,004
WOVEN ARTICLE OF MANUFACTURE HAVING RELATIVELY STIFF WEFT AND METHOD OF MAKING SAME

Joseph Felix, New York, and Hugo Davis, Westbury, N.Y., assignors to Woven Arts Corp., New York, N.Y.

Filed Dec. 18, 1961, Ser. No. 159,920
2 Claims. (Cl. 139—420)

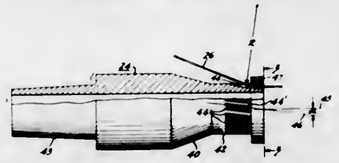


2. New article of manufacture comprising tightly woven material having relatively stiff longitudinal slat members having substantially hard surfaces as weft, and strands composed of flexible, relatively untwisted filaments as warp, the filaments of each of said strands being spread on said surfaces in substantially parallel flat condition and maintained in said condition by virtue of said surfaces, said strands being in side-by-side engagement continuously longitudinally of said slat members and maintaining said slat members in substantially close relationship.

3,100,005
WIRE GUIDE FOR GRID MAKING MACHINE

Otto H. Schade, Sr., West Caldwell, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Oct. 7, 1959, Ser. No. 844,932
3 Claims. (Cl. 140—71.5)



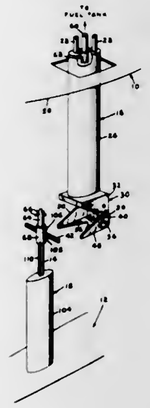
1. A grid winding machine comprising means for supporting an elongated cylindrical mandrel, means for moving said mandrel support means for axially advancing said mandrel, side rod wire guide means having a bore therethrough for receiving said mandrel, said side rod wire guide means including a tubular tip having a plurality of slots therein for feeding side rod wires to said mandrel, said slots being substantially wider than the diameter of said rod wires along the entire length of said slots, and said slots being circumferentially spaced around said tip and extending from the end thereof back along said tip, the axis of each slot being non-parallel and nonintersecting with respect to the axis of said bore therein, means for feeding side rod wires through said slots and along the respective axes of said slots while said wires are in said slots and for pulling said wires along said mandrel in a direction parallel to the mandrel axis after said wires have left said slots, and means for winding a lateral wire around said mandrel and the side rods therealong, whereby said side rod wires extend parallel to each other and to said mandrel.

3,100,006
SUBMERGED FUELING METHODS AND APPARATUS

Herman E. Sheets and James Vincent Harrington, Mystic, Conn., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 3, 1960, Ser. No. 12,601
9 Claims. (Cl. 141—1)

5. A method of transferring fuel between submerged and surface vessels comprising the steps of maneuvering the vessels to position the submerged vessel below the surfaced vessel, extending couplings from the vessels one of which is attached to a hose extending from one of the vessels, engaging and locking the couplings, retracting

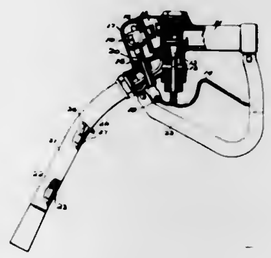


the locked couplings and the hose into the other of the vessels to extend the hose between the vessels, connecting the hose with a fuel system in the other vessel, and pumping fuel through the hose between the submerged and surface vessels.

3,100,007
DUAL LEVEL CONTROLLED AUTOMATIC LIQUID DISPENSING NOZZLE

Charles S. Reasby, Worcester, Mass., assignor to the United States of America as represented by the Secretary of the Army

Filed May 1, 1961, Ser. No. 106,987
6 Claims. (Cl. 141—209)
(Granted under Title 35, U.S. Code (1952), sec. 266)

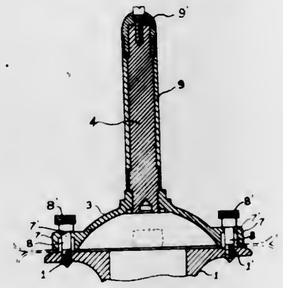


3. A dual level controlled automatic liquid dispensing device including a spout adapted to be inserted into a liquid receptacle, a manually openable valve for delivering liquid to said receptacle through said spout, operating means for closing said valve, a first means on said spout which is adapted to actuate said operating means to close said valve as liquid reaches a first level in said receptacle, a second means on said spout which is adapted to actuate said operating means to close said valve as liquid reaches a second and higher level in said receptacle, and means for selectively activating or deactivating said second means.

3,100,008
AXIALLY EXTENDING TOOL MOUNTING COLUMN FOR DISC WHEELS

Victor Duquesne, 42–44 Rue Quellin, Antwerp, Belgium

Filed Aug. 11, 1960, Ser. No. 49,079
1 Claim. (Cl. 144—288)

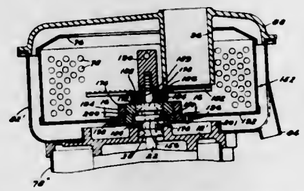


A device for mounting an axially extending tool mounting column upon disc wheels having only bolt holes arranged equidistant apart around the center of the wheel disc comprising a supporting plate supporting the wheel disc and having tapped holes arranged to register with the bolt holes of the wheel disc, a shaft, a bell-shaped member having its convex side axially fixed at the end of said shaft and having its circular edge in a plane at right angles to the axis of said shaft, laterally projecting lugs at the edge of said bell shaped member, the bottom side of said lugs being co-planar with said circular edge, said lugs having holes extending therethrough and located to register with the holes of the wheel disc and headed screws traversing the holes of said lugs for engaging the tapped holes of said supporting plate, the shanks of said screws being of uniform diameter throughout their length and freely passing through the holes of the lugs and the wheel disc whereby to provide a full and continuous contact of said circular edge with the wheel disc.

3,100,009
JUICE EXTRACTOR HAVING OVERRUNNING SPINNER

Richard Edmund Drachenberg, 734 Westchester Road, Grosse Pointe Park, Mich.; Ruth P. Drachenberg, executrix of said Richard Edmund Drachenberg, deceased

Filed Dec. 30, 1960, Ser. No. 79,805
30 Claims. (Cl. 146—76)

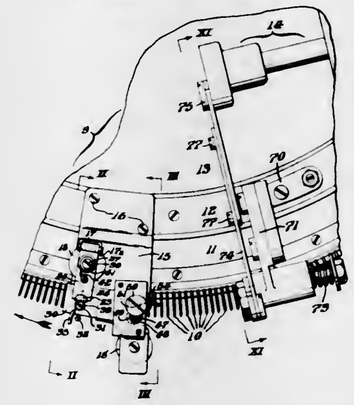


1. A juicer having an upright rotatably driven shaft member, a cutter plate coupled with the shaft member to be rotatably driven positively thereby, a foraminated spinner member surrounding the cutter plate to collect distintegrated material thrown off thereby, and means to releasably couple said spinner member with the shaft member to be rotatably driven thereby positively at a speed no less than that of the shaft member and so coupled therewith as to permit the spinner member to rotatably overrun the shaft member when the rotation of the cutter plate is slowed up below the rotatable momentum of the spinner member.

3,100,010
DEVICE FOR STRAIGHTENING AND ALIGNING THE POINTS OF KNITWEAR LOOPING MACHINES

Walter Ray Sizemore, Winston-Salem, N.C., assignor to Hanes Hosiery Mills Company, Winston-Salem, N.C., a corporation of North Carolina

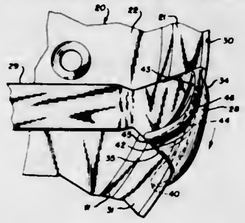
Filed Feb. 17, 1959, Ser. No. 793,722
1 Claim. (Cl. 153—39)



On a dial looping machine having a fixed portion and an annular continuously rotatable dial having projecting normally radially from the periphery thereof a plurality of points which normally lie in the same horizontal plane, the rotation of said dial moving said points along an annular path in said horizontal plane; an attachment for straightening said points vertically and means for spreading said points laterally; said attachment comprising a support mounted on said fixed portion of said looping machine and projecting beyond said annular path, first and second point straightening elements mounted on said support for vertical movement in opposing directions in first and second vertical planes respectively, first and second electrical detecting means mounted on said support for detecting points which lie either above or below said normal horizontal plane of said points as said points move transversely through said first and second vertical planes respectively, and first and second actuator means mounted on said support actuable in response to a signal from the corresponding electrical detecting means for independently vertically moving the corresponding one of said point-straightening elements to contact and straighten a point detected as lying outside of said normal horizontal plane as said point moves transversely through the vertical plane of said point-straightening element, said first and second electrical detecting means including a first electrically conductive element mounted in said suport and adjustably positioned in said first vertical plane just above said normal horizontal plane of said points and a second electrically conductive element mounted in said support and adjustably positioned in said second vertical plane just below said normal horizontal plane of said points, said first and second actuator means for independently vertically moving the corresponding one of said point-straightening elements comprising a first solenoid and a first electronic trigger device in circuit with said first electrically conductive element and a second solenoid and a second electronic trigger device in circuit with said second electrically conductive element, said first and second electronic circuit devices being adapted to be triggered by signals from said first and second electrically conductive elements respectively as a result of said elements making contact with points lying above or below respectively said normal horizontal plane, said first and second solenoids being adapted to be energized by said first and sec-

ond trigger devices respectively to actuate said first and second point-straightening elements, respectively; said means for spreading said points laterally comprising an oscillatable lever supported in fixed non-rotatable position adjacent the points ahead of both of the vertical point-straightening elements, said lever being wedge shaped and adapted to penetrate between adjacent points to straighten points which have been bent toward each other out of their respective radial planes, thereby to straighten the points laterally to assure that as the points move transversely through the vertical planes of the said first and second vertical point-straightening elements each point lies successively entirely within the respective vertical plane.

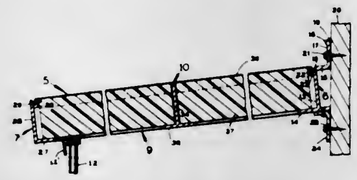
3,100,011
TIRE CHANGING TOOL
John E. Lydle, 455 Delaware Ave., Akron 3, Ohio
Filed Aug. 18, 1960, Ser. No. 50,506
4 Claims. (Cl. 157—1.22)



1. A tire tool as for mounting a pneumatic tire casing on a wheel supported on a relatively fixed supporting device to have at least one outwardly curving peripheral flange of the rim terminating in an axially outwardly presented peripheral edge, comprising a tire bead-engaging element having leading and trailing ends and axially opposed top and bottom sides, said bottom side adapted to be in sliding engagement with said pheripheral edge of the rim, said top side having an axially outwardly presented guide face extending to a radially outwardly presented outer portion which is substantially coextensive with the engaged portion of said peripheral edge of the rim, said element having on the top side thereof a wall providing a radially outwardly presented bead-urging face generally at a dihedral angle to said guide face of said element, said bead-urging face being forwardly divergent with respect to said outer portion from a point adjacent the trailing end of the element to a leading portion of the same of substantial breadth, said element having a downturned angular extension from said outer portion adapted to conform to the radially outwardly presented peripheral portions of the rim flange and tending to limit radially inward movement of the element upon yielding engagement of the tire bead with said bead-urging face, and turning means on said element for sliding the same around said peripheral edge of the rim, said downturned angular extension being concavo-convex with the convex side as a smoothly rounded continuation of said guide face, said concavo-convex extension being adapted to conform radially inwardly to said curving peripheral flange and the extension also including a rounded terminal end presented forwardly of said leading end of the element and to be inturned to a substantial extent with respect to said peripheral edge of the rim flange.

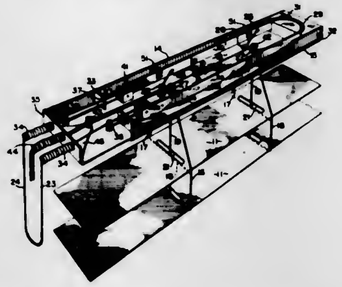
3,100,012
SUPPORT FOR FLEXIBLE AWNING COVER
Harold S. Dunn, 163 Fiesta Way, Fort Lauderdale, Fla.
Filed Apr. 14, 1961, Ser. No. 103,082
5 Claims. (Cl. 160—89)

1. An awning or shelter device of the character described for attachment to an exterior wall of a building to project forward at an incline, comprising a rigid frame that includes an extruded metallic head rail that is fixed to the building, a forward extruded metallic rail and extruded metallic end rails rigidly connecting the head rail and the forward rail, the head rail and the forward rail being also connected by spaced apart parallel rafter-forming rails, the end rails and the forward rail being L-shaped in cross-section and having a vertical web, a lower right angle flange and a thickened head, the head rail having a vertical web, a lower right angle flange and an upper thickened head, and with the last-named head being extended and upwardly flanged that constitutes a mounting plate for connecting the head rail to the building, the rafter rails being of inverted T-shape having oppositely extending lower flanges carried by a vertical web, the rafter rails also having thick-



ened heads, the several rails being co-extensive in height and with the rails defining generally rectangular openings, the several lower flanges extending peripherally of the openings, each of the thickened heads upon their tops being provided with spline grooves, the rails forming peripheral channels for each of the openings, a plurality of expanded polystyrene panels spanning each of the openings and with the panels interlocking into the channels of the end rails and the rafter rails and resting upon the lower flanges of the end rails and the rafter rails, the panels being of such thickness that the upper faces of the panels lie flush with the heads of the several rails and flexible cover strips disposed over the panels and with their marginal edges overlapping the several thickened heads and splined into the several spline grooves.

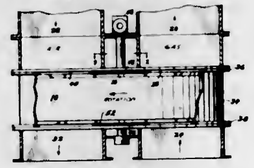
3,100,013
VENETIAN BLIND MECHANISM
Eric E. Randmark, Stockholm, Sweden, assignor to Victor J. Randmark, Rossford, Ohio
Filed Apr. 4, 1961, Ser. No. 100,575
7 Claims. (Cl. 160—168)



1. A blind comprising a plurality of substantially horizontal slats, a substantially horizontal head bar, a pair of slat supports suspended below said head bar, a first and a second flexible side element for each support extending generally vertically along opposite faces of said blind, a plurality of vertically spaced cross supports for each slat support extending between said side elements to support said slats, a flexible tape having a substantially

greater width than thickness, a body secured to said head bar adjacent one end thereof having a slot which is semicircular about a vertical axis and of a vertical depth to accommodate the width of said tape, said tape being trained through said slot and having first and second end portions on opposite sides of said slot which extend along said head bar and are essentially parallel to its longitudinal axis, a connection between each of said first side elements and said first end portion of the tape and between each of said second side elements and said second end portion of the tape, a guide for each side element intermediate said connection and said cross supports and secured to said head bar, a cord connected to each of said end portions of said tape, a stop for engagement with each end portion of said tape to limit its longitudinal movement, a cord guide on each of said stops, a member pivoted on said head bar around a substantially vertical pivot adjacent the end of said bar spaced from said body, a vertical flange on said member adjacent an edge of said head bar, and a plurality of cord guides on said flange, said cords extending from said guides on said stops to said guides on said flange.

3,100,014
RESILIENT SECTOR PLATE FOR ROTARY REGENERATIVE HEAT EXCHANGER
Glenn E. Flurschutz, Wellsville, N.Y., assignor, by mesne assignments, to Combustion Engineering, Inc., a stock corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,732
2 Claims. (Cl. 165—9)



1. Rotary regenerative heat exchange apparatus including a cylindrical rotor having sectorial compartments that carry a mass of heat absorbent material alternately between a heating fluid and a fluid to be heated; a cylindrical housing surrounding the rotor including end plates at opposite ends thereof having apertures between imperforate sector-shaped portions that alternately direct the heating fluid and the fluid to be heated through spaced compartments of the rotor; and a resilient sealing surface suspended from the imperforate portion of each end plate into sealing relation with the adjacent end of the rotor, said resilient surface comprising in combination a series of mutually overlapping radial flanges that extend between inner and outer edges of the rotor compartments; a resilient web fixed to a radial edge of each flange and extending toward said end plate; a second flange fixed to a spaced radial edge of each resilient web and extending therefrom in a plane substantially parallel to the overlapping radial flanges; and means securing each of said second flanges to the end plate to maintain the resilient overlapping flanges in position as a composite sealing plate confronting the adjacent end of the rotor.

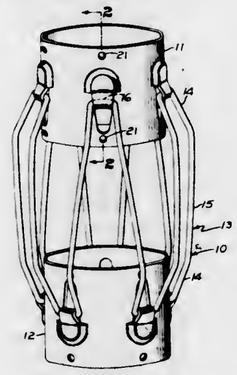
3,100,015
METHOD OF AND APPARATUS FOR RUNNING EQUIPMENT INTO AND OUT OF WELLS
John Regan, Rolling Hills, Calif., assignor to Regan Forge and Engineering Company, San Pedro, Calif., a corporation of California
Filed Oct. 5, 1959, Ser. No. 844,427
10 Claims. (Cl. 166—46)

8. A method of running equipment which varies in weight into or out of a well under pressure, characterized by the use of a supporting means for the equipment, and including the steps of: enclosing a portion of the supporting means and at least a portion of the equipment in an elongated upright chamber which communicates with the well; sealing the upper end of said chamber around said supporting means; raising or lowering the supporting means and the equipment relative to said chamber and



the well; coupling or uncoupling a portion of the equipment carried by the supporting means so as to increase or decrease the weight of the equipment carried thereby; and substituting larger-area or smaller-area supporting means to increase or decrease the cross sectional area of said supporting means with increases or decreases in the weight of the equipment supported by said supporting means.

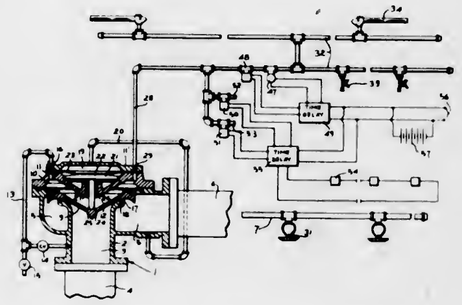
3,100,016
ROD CENTRALIZER
James R. Solum, Los Angeles, and William C. Hempel, Manhattan Beach, Calif., assignors to B & W Incorporated, Torrance, Calif., a corporation of California
Filed Oct. 24, 1960, Ser. No. 64,496
14 Claims. (Cl. 166—241)



1. In a device of the class described, adapted to be mounted on the outer surface of a well pipe, the combination of: a pair of axially aligned and spaced collars, a plurality of generally axially extending and outwardly

bowed rod segments, each said rod segment having angularly offset ends, each rod segment positioned at an angle to each adjacent rod segment, and a plurality of circumferentially spaced means on each said collar securing the ends of said rod segments to said collars.

3,100,017
FIRE SPRINKLER CONTROL SYSTEM
Joseph E. Johnson, Mission Hills, Kans., assignor to Viking Fire Protection Company, Kansas City, Kans., a corporation of Missouri
Filed Sept. 27, 1962, Ser. No. 226,539
9 Claims. (Cl. 169—17)



1. In a fire extinguishing system including a fluid actuated main control valve having a body forming an inlet passageway connected to a source of fluid under pressure and an outlet passageway connected to a sprinkler network and an operating portion, said main control valve being responsive in opening and closing operation to a respective decrease and increase of fluid pressure in said operating portion thereof;

(*a*) means for normally maintaining a pressure in said operating portion sufficient to maintain said main control valve closed,

(*b*) a normally closed release flow line communicating with said operating portion and adapted to reduce the pressure in said operating portion to open said main control valve in the event of flow through said release flow line,

(*c*) single operation heat responsive release means associated with said release flow line for permitting flow through said release flow line,

(*d*) means communicating with said release flow line for sensing a pressure drop signifying the opening of said main control valve,

(*e*) a normally open valve operatively connected in series in said release flow line between said heat responsive release means and said operating portion and adapted while closed to block flow past said normally open valve,

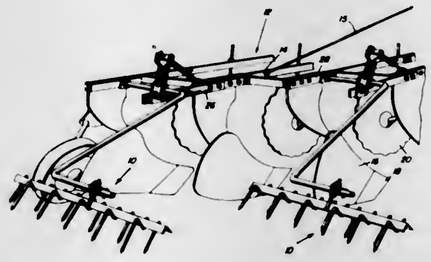
(*f*) means operatively connecting said pressure sensing means and said normally open valve and responsive upon the sensing of a pressure drop by said pressure sensing means to delay for a pre-set time period and then cause the closing of said normally open valve,

(*g*) a normally closed valve operatively connected in parallel to said release flow line between said normally open valve and said operating portion and being adapted while open to permit main control valve opening flow from said release flow line upstream from said normally open valve, and

(*h*) heat sensing means operatively connected to said normally closed valve and adapted to open said normally closed valve above a predetermined temperature and close said normally closed valve below said predetermined temperature,

(*i*) whereby after fire extinguishing flow caused by said heat responsive release means said main control valve is automatically reclosed after a predetermined time period to limit fluid damage unless the temperature remains sufficiently high for actuating said heat sensing means, and said main control valve is automatically reopened after being reclosed in case of a reignition after the temperature has been lowered.

3,100,018
TOOTHED HARROW ATTACHMENT
Henry J. Sokolowski, R.F.D. 1, Pierson, Iowa
Filed Nov. 15, 1960, Ser. No. 69,499
7 Claims. (Cl. 172—160)



1. In combination with a displaceable plow frame having a plow share mounted thereon, a harrow attachment comprising, spaced bracket means defining a rotational axis disposed above the frame and perpendicular to direction of movement of the frame, shaft means rotatably mounted by said spaced bracket means for limited angular displacement about said rotational axis in both directions, said shaft means including a portion projecting laterally of one of said spaced bracket means and depending rearward and downward from the frame, a harrow blade assembly, means adjustably connecting said assembly to a lower end of said portion of the shaft means in laterally adjustable rearwardly spaced relation to the plowshare, an arm fixed to said shaft means adjacent to said one bracket means projecting upwardly and forwardly thereof, lever means pivotally mounted on said one bracket means forwardly of the shaft means and operatively connected to said arm and resilient means mounted on said lever means for biasing the shaft means in one rotational direction for engaging the harrow blade assembly with the ground.

3,100,019
APPARATUS FOR BOTTOM HOLE ORIENTATION
Donald E. Tims, Morris E. Shrader, and Herman G. Livingston, Liberty, Tex., assignors to Morris E. Shrader and Herman G. Livingston, Liberty, Tex.
Filed Aug. 22, 1960, Ser. No. 51,055
6 Claims. (Cl. 175—45)

6. Apparatus for orienting a device in a well bore including,

(*a*) a body of nonmagnetic material for lowering into the well bore,

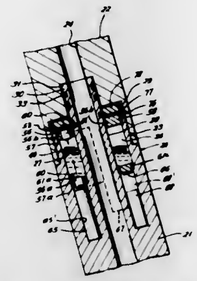
(*b*) there being a longitudinal bore therethrough for circulating through said body,

(*c*) there being a void in said body,

(*d*) a magnetic assembly for floating on a liquid in said void, said assembly including, (1) means movably positioned thereon for indicating on said assembly the direction in which the device is to be oriented,

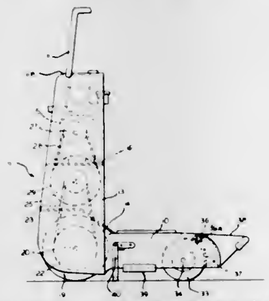
(*e*) means in said body for indicating the initial direction in which the device is oriented when it is lowered into the well bore,

(*f*) and means for creating a signal when said body is rotated to align said means indicating the initial



direction of the device with the direction indicated on said assembly in which the device is to be oriented as an indication that the device is oriented.

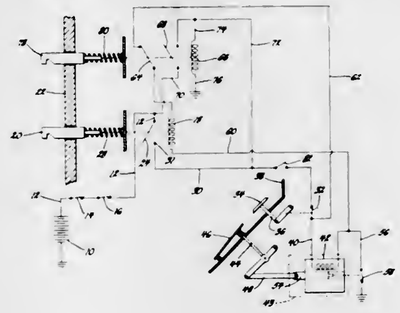
3,100,020
MOTOR SCOOTER HAVING REAR CASTER WHEELS
George E. Sonntag, 10555 E. Spencer Ave, Milwaukee 23, Wis.
Filed Mar. 12, 1962, Ser. No. 179,024
2 Claims. (Cl. 180—25)



1. A vehicle which can be steered by the operator by shifting his weight, comprising: a front wheel rotatively associated with a platform, mechanical means associated with said front wheel for rotatively driving said front wheel, a bearing fixedly attached to the rearward end of said platform and having fingers extending angularly downward therefrom, said fingers being disposed an equal distance on each side from the center of said platform and perpendicularly with relation to an imaginary vertical plane extending through the middle of said platform, said fingers forming a slot therebetween, a yoke having sides that are received by said bearing fingers, said yoke being pivotally mounted on said bearing in an angularly castered fashion, said sides of said yoke being adjacent to said fingers, and an axle fixedly attached to said yoke, said axle having rear wheels rotatively journalled at each end, said axle being disposed perpendicular with respect to said imaginary vertical plane.

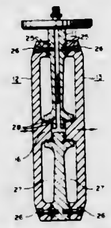
3,100,021
MANUAL-AUTOMATIC CRUISE CONTROL CIRCUIT
Philip W. Maurer, Dearborn, and James Wishart, Jr., St. Clair Shores, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 16, 1962, Ser. No. 180,128
4 Claims. (Cl. 180—82.1)

1. Speed control apparatus comprising an electrical source and a speed maintaining device operatively associated with a vehicle throttle, a first electrical circuit operatively connected to said speed maintaining device, a second electrical circuit operatively connected to said speed maintaining device, manually operable circuit energizing means in each of said circuits movable between circuit energizing and de-energizing positions, a vehicle operating condition actuated switch in said circuits operable to an open circuit de-energizing position during occurrence of the vehicle operating condition, first holding means operably associated with said manual energizing



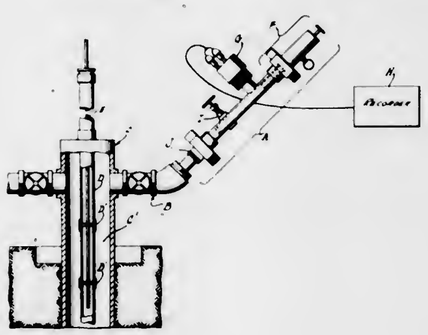
means in said first circuit to maintain said manual means in said circuit energizing position, means actuated by said vehicle operating condition switch to render said first holding means inoperative and thereby permit said manual means in said first circuit to move to said de-energizing position, and a second holding means operably associated with said manual energizing means in said second circuit to maintain said manual energizing means in said energizing position during occurrence of the vehicle operating condition.

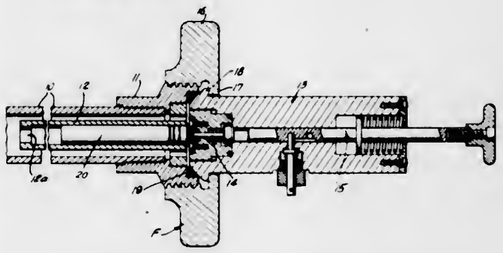
3,100,022
HYDRAULIC UNDERWATER SOUND TRANSDUCER
Chester A. Clark, Waldorf, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 22, 1959, Ser. No. 815,234
3 Claims. (Cl. 181—.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An underwater sound transducer comprising, a substantially disc-shaped body having an axis of circular symmetry, said body including a radial stem attached to the outer edge thereof, first and second substantially disc-shaped diaphragms axially aligned with said disc-shaped body, said body being centered between said diaphragms, said body having a first centrally located axial fluid passageway therein, each of said diaphragms having a centrally located projection extending into and closing opposite ends of said passageway, a second fluid passageway extending through said stem and said body intersecting said first passageway between said projections, and air-tight sealing means joining the peripheries of said diaphragms to said disc-shaped body.

3,100,023
MEANS FOR DETERMINING THE FLUID LEVEL IN A WELL
Roy J. Clements, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 860,870
5 Claims. (Cl. 181—.5)

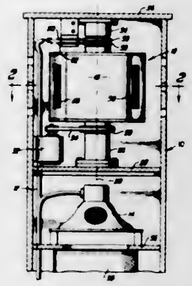




1. In an acoustic apparatus for use in the determination of the depth of the fluid level in a well having tubing and casing therein and so defining an annular space therebetween, the combination of a first means for generating predominantly low frequency sound pulses having communication with said annular space, a second means joined to said first means and receiving reflections from said low frequency sound pulses from said fluid level and converting said reflections into electrical impulses, and having communication with said annular space also, and a third means for recording said electrical impulses joined to said second means and receiving reflections whereby the magnitudes thereof are indicated from which the depth of said fluid level is determined, said first means for generating predominantly low frequency sound pulses comprising a barrel having a cylindrical cross section for receiving a blank cartridge at one end thereof and having a choke at the exit end thereof, said choke comprising an internal annular rim for abruptly reducing the cross sectional area of said barrel, and means for firing a cartridge seated in said barrel joined in operative position thereto.

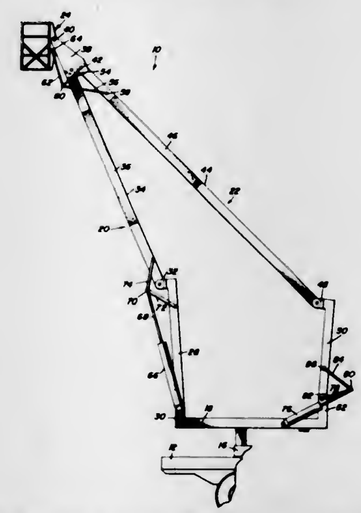
3,100,024
MULTIPLE SOUND CHANNEL TREMOLO DEVICE
Donald J. Leslie, % Electro Music, 313 S. Fair Oak Ave., Pasadena, Calif.
Filed Feb. 16, 1960, Ser. No. 9,128
9 Claims. (Cl. 181—27)

1. In apparatus for producing vibrato: a support; means mounting the support for rotation about an axis; three or more sound channels mounted in spaced relationship about the support for rotation of the sound pattern created by each upon rotation of the support; means operatively associated with the sound channels for acoustically driving each sound channel from a common source so that a sound pattern is created by said channels that recurs a number of times each revolution that is less than the



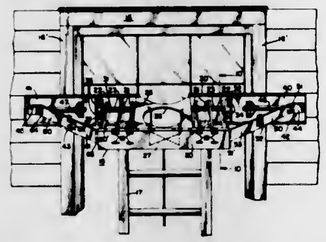
number of channels; and means connected to the support for rotating said support at a rate of about six or seven revolutions per second divided by said first named number.

3,100,025
AERIAL LIFT DEVICE
John L. Shennum, Box 173, Circle, Mont.
Filed Nov. 1, 1961, Ser. No. 149,283
8 Claims. (Cl. 182—2)



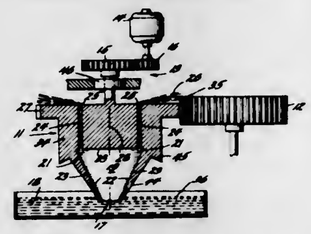
1. A workman's aerial lift device comprising, base means, foldable lifting means movably mounted on said base means, power operated means mounted on said base means and operatively connected to said foldable lifting means for unfolding thereof, platform means movably supported at an end of the foldable lifting means remote from the power operated means, positioning means mounted on the base means in spaced relation to the foldable lifting means and operatively connected to the foldable lifting means and platform means at said remote end of the lifting means for constrained positioning of the platform means in all positions of the foldable lifting means, and separate power means mounted on said base means and operatively connected to the positioning means and operative to assist unfolding of the foldable lifting means, said foldable lifting means comprising, lever means pivotally mounted on the base means for movement from a folded position on the base means adjacent to the positioning means to a vertical unfolded position away therefrom, non-extensible, elongated column means pivotally connected to the lever means for movement from said folded position parallel to the lever means to said unfolded position, and connecting means mounted on the column means at said remote end for pivotal connection thereof to the platform means and positioning means, said power operated means comprising cylinder means pivotally mounted on the base means, piston means actuated by the cylinder means and foldable linkage means operatively connecting the piston means to the lever means and the column means for unfolding of the foldable lifting means.

3,100,026
EXTENDIBLE LADDER TOP SUPPORT
Benjamin Sunshine, 50 Maxwell Ave., Fords, N.J.
Filed June 27, 1960, Ser. No. 38,795
2 Claims. (Cl. 182—214)



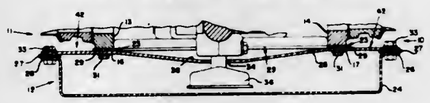
1. A ladder top support comprising a planar frame with single-axis pivot means extending across the frame along one edge region thereof, plate means pivotally mounted with said pivot means along said edge region angularly displaceable solely on the single axis, for coacting with a vertical surface, extension plate means hinged to each side of said plate means and arranged to pivot on the said single axis when extended to coact with the vertical surface to support the frame and an attached ladder across a gap in the vertical surface, an individual foldable bracket connecting said frame and each of said extension plate means for extension and retraction thereof, and slideable pivotal means coupling each of said foldable brackets and its associated extension plate means whereby each extension plate means is angularly adjustable against the vertical surface for effective support action.

3,100,027
ONE-PIECE OIL PUMP
Richard A. Harris, High Point, and Carroll D. Spainhour, Greensboro, N.C., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed Oct. 12, 1960, Ser. No. 62,294
2 Claims. (Cl. 184—6)



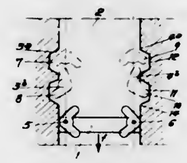
1. In a gear train a first gear, a second gear for driving said first gear, said second gear having a fluid pump formed on and depending from said second gear for lubricating said first and second gears, and means for rotatively driving said second gear and pump, said pump having a body with a cavity with inclined smooth unobstructed walls terminating in an opening in a fluid reservoir at one end, said body forming a wall at the other end of said cavity for entrapping lubricating fluid forced into said cavity through said opening by centrifugal forces imparted to the fluid by rotation of said pump in said reservoir of lubricating fluid, said body having a passageway of sufficiently small diameter for precluding the fluid entrapped in said cavity from freely flowing out the passageway to centrifugally pressurize the entrapped fluid, said passageway interconnecting a discharge opening and said cavity for conducting said pressurized entrapped fluid from said cavity to said discharge opening where rotation of the gear imparts centrifugal forces to the fluid to radially dispense the fluid to lubricate said first and second gears.

3,100,028
LUBRICANT SUMP
Harvey J. Booth, Grosse Ile, Robert P. Ernest, Detroit, and James W. Fostey, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 14, 1961, Ser. No. 95,614
6 Claims. (Cl. 184—106)



1. A lubricant sump for attachment to a mechanism having a horizontally disposed lubricant return opening including, a baffle covering at least a portion of said opening and extending a substantial horizontal distance away from said opening, a lubricant pan enclosing at least the remaining portion of said opening, and means operatively securing said baffle and said lubricant pan to said mechanism whereby a lubricant-tight assembly is provided.

3,100,029
METHOD AND MEANS FOR LOCKING AND RELEASING IN SUCCESSION A LOAD MOVING INSIDE A CHANNEL
Bertrand Leo, Paris, France, assignor to Electricite de France-Service National, Paris, France, a national French organization
Filed Oct. 1, 1957, Ser. No. 687,422
Claims priority, application France Apr. 30, 1957
5 Claims. (Cl. 187—76)



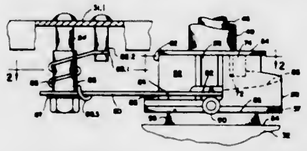
1. In combination with a vertically extending channel through which a load is to be moved, means for alternately locking said load in position in said channel and releasing same, comprising a load carrying support positioned in said channel capable of moving longitudinally thereof and downwardly in said channel under the force of gravity, means for shifting said support upwardly longitudinally of said channel, at least one movable member pivotally connected to said support for freely pivoting about an axis extending transversely to the axis of said channel, said movable member having a plurality of arms extending radially from said member axis, said channel being provided with at least one wall having a plurality of spaced transverse grooves in the

area in which the load is to be retained with each groove of a depth for receiving one of said arms when said member is in a position facing one of said grooves and said movable member being positioned slidably contacting said wall for having said arms enter said grooves as said load support is shifted thereby for alternately locking said load support in position and releasing same.

3,100,030
BRAKE MECHANISM FOR WASHING MACHINE

Stephen L. McMillan, Wheaton, Ill., assignor to General Electric Company, a corporation of New York

Filed Oct. 30, 1961, Ser. No. 148,616
6 Claims. (Cl. 188—68)



1. A brake mechanism for a structure which includes a stationary support and a rotor rotatable adjacent said support, comprising:

a cylindrical brake housing and band circumposed about said rotor,

a latching member pivotally secured to said support and biased toward said rotor in a plane perpendicular to the rotational axis of said rotor whereby said brake housing arrests further pivotal motion of said member and allows rotation of said rotor,

a recess of limited extent in said brake housing adjacent the pivotal plane of said member for receiving said member on pivoting thereof,

a cam surface spiralling about said housing from said recess for conducting said member therealong on rotation of said rotor following receipt of said member,

a contact shoulder spaced angularly and axially about said rotor from said recess,

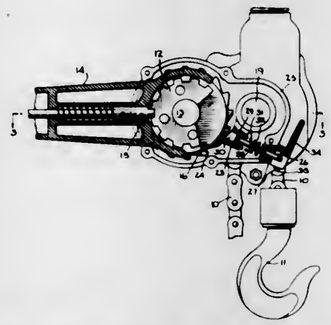
said contact shoulder extending radially from said brake housing at the end of said cam surface for stopping the conducted motion of said member and engaging said member, means on said brake band responsive to said engagement for actuating said brake band and for latching to said member for stopping rotation of said rotor.

3,100,031
PAWL ARRANGEMENT FOR HOIST

Frank J. Lock, Philadelphia, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut

Filed Nov. 2, 1960, Ser. No. 66,796
1 Claim. (Cl. 188—82.7)

In a hoist having a housing, a ratchet mounted for rotation in said housing, a pawl mounted in said housing for movement into and out of engagement with said ratchet, an opening through said housing, a bore extending through said pawl substantially in alignment with said opening through said housing, a pin extending through and freely slidable in said opening, said pin having an outer end portion extending outwardly of said housing and an inner end portion slidable through said bore in said pawl, said inner end portion of said pin having a head of larger diameter than said bore in said pawl and providing a lost motion connection between the inner end of said pin and said pawl so that said pawl while in engagement with said ratchet may move freely relatively to said pin, a toggle lever pivoted to the outer end of said pin for rotation while engaged with the outside of said housing so that pull may be applied to said pin to withdraw said pawl from said ratchet, a spring extending between the inside of said housing surrounding said opening and a shoulder on said pin and acting through the pin to press the toggle lever against the outside of the housing, the spring pressure being effective to hold said lever against rotation on its pivot while the pawl moves freely relatively to the pin, and a second spring about said pin and said

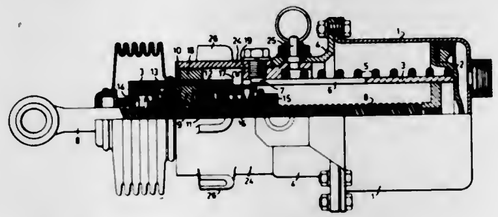


first spring and pressing between the inside surface of said housing surrounding said opening and said pawl to urge said pawl toward the ratchet, the pressure of both said springs opposing movement of the toggle lever to withdraw said pawl and effective upon withdrawal of the pawl for holding said toggle lever against rotation on its pivot.

3,100,032
AIR BRAKE CYLINDER WITH A BUILT-IN AUTOMATIC BRAKE SLACK ADJUSTER

Karl Bertil Larsson, Malmo, Sweden, assignor to Svenska Aktiebolaget Bromsregulator, Malmo, Sweden, a corporation of Sweden

Filed May 7, 1962, Ser. No. 192,687
Claims priority, application Germany May 19, 1961
3 Claims. (Cl. 188—196)



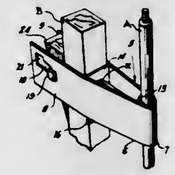
1. An air brake cylinder with a built-in automatic brake slack adjuster, comprising, in combination, a cylinder body, a cylinder front head divided into two parts of which the first is rotatable about the axis of the cylinder in relation to the second which is non-rotatably secured to said cylinder body, a brake piston movable in said cylinder body, a tubular brake piston rod secured to said brake piston and axially guided in said cylinder front head and non-rotatably connected with said rotatable first part of said cylinder front head, a screw-threaded push rod disposed in said tubular brake piston rod in telescoping relation thereto and adapted to be non-rotatably connected with a brake rigging to be operated by the brake cylinder, two nuts provided on said push rod and rotatably engaged with the screw threads thereof, the first of which nuts is housed in said tubular brake piston rod so as to partake in the movements thereof and transmit the brake power from said tubular piston rod onto said push rod at braking, a control member movable along said tubular brake piston rod and abuttable by the

second nut for limiting axial movement thereof in relation to said cylinder front head to a distance equal to a normal brake applying stroke of said brake piston and for limiting return movement of said brake piston in the rear end position thereof at released brake, and an abutment provided in said tubular piston rod in front of said second nut and engageable therewith for locking it on said screw-threaded push rod.

3,100,033
JACK ROD SUPPORT

Donald Hanson, P.O. Box 5083, Tucson, Ariz.

Filed Mar. 4, 1960, Ser. No. 12,741
4 Claims. (Cl. 189—36)

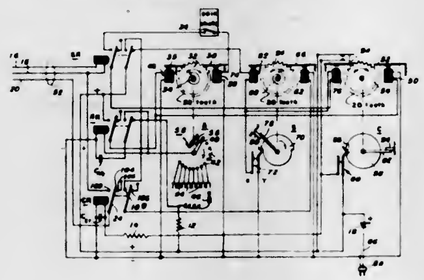


3. In a jack rod support a strap shaped intermediate its ends to engage around a rod and having generally parallel end portions dimensioned to lie on opposite sides of a stud of rectangular cross section and project therefrom in combination with bridging means between said strap projecting portions and spaced from the stud, and a clamping support between the rod and stud including a rod, a base engageable against the stud and a rounded cap engageable against the jack rod, said base having a pair of projections below the strap and extending beyond the position of said strap.

3,100,034
COIN CONTROLLED SERVICE VENDING SYSTEMS

George V. Spohrer, 98 Dogwood Lane, Manhasset, N.Y.

Filed Oct. 10, 1960, Ser. No. 61,573
5 Claims. (Cl. 194—1)

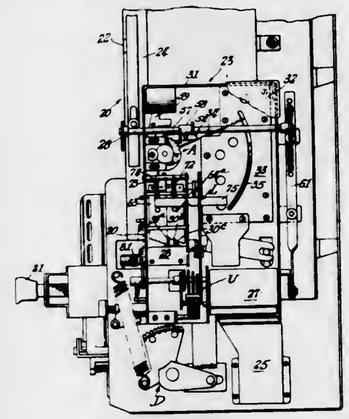


1. In a coin controlled electrical control system for service vending machines, such as automatic pin setting machines, the combination of an accumulator unit for closing a switch in response to the deposit of a sufficient number of coins for one cycle of service operations to be performed by the machine, a cycle register unit operated in response to each closure of said switch to register one cycle of service operations by said machine, a service unit operated in response to the completion of each pin setting operation of said machine to count up to the total number of services constituting one cycle and to then close a cycle switch for operating said cycle unit in reverse direction to register one less cycle credits, and a service switch for turning on the automatic operation of said machine for successive cycles of service operations in response to the registration of one or more cycle credits still remaining in said cycle unit, each of the three units including a toothed wheel and a pair of solenoids, one of said pair of solenoids operating a lever for advancing the corresponding wheel one tooth each time said one solenoid is energized, said accumulator switch being operated by the wheel of the accumulator unit after it is advanced a predetermined number of teeth corresponding to a multiple of a basic value that said sufficient amount is set for, and means for changing said predetermined number in accordance with any desirable change in the price of one cycle of services to be performed by said machine.

3,100,035
CREDIT ACCUMULATOR

Francis T. Murphy, Chicago, Ill., assignor, by mesne assignments, to Rock-Ola Manufacturing Corporation, Chicago, Ill., a corporation of Delaware

Filed Dec. 14, 1960, Ser. No. 75,693
18 Claims. (Cl. 194—48)



2. In a device of the character described, a frame, means for passing coins sequentially past said frame, means rotatably mounted on said frame and responsively driven by said passing coins and effective to assume successive positions of rotation proportional to the accumulated value of the passed coins, rectilinearly movable reciprocating means on said frame having means selectively engageable with plural means selectively presented thereto according to said successive positions of said rotatably mounted means thereby to assume a predetermined linear position corresponding to the rotated position of said rotatably mounted means, and output shaft means carrying plural means each selectively engageable with opposing means on said reciprocating means as determined by the predetermined linear position of said reciprocating means.

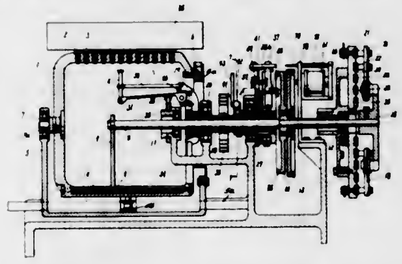
3,100,036
APPARATUS FOR SELECTING AND TYPING THE LETTER IN THE CHINESE LETTER PRINTING TELEGRAPH, ELECTRICAL CHINESE LETTER TYPEWRITER OR THE LIKE MACHINE

Noboru Toriumi, Chiba-shi, and Shimeo Ogawa, Shinji Ogata, and Teiji Yamura, Hanamaki-shi, Japan; said Toriumi, said Ogawa, and said Ogata assignors to said Yamura

Filed Jan 16, 1961, Ser. No. 82,920
7 Claims. (Cl. 197—1)

1. Apparatus for printing, comprising a type wheel having a plurality of type members around the periphery thereof, said type members being mounted in said type wheel for radial sliding movement, a main frame on which

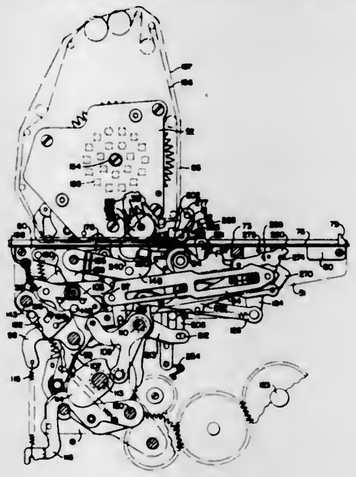
said type wheel is mounted at least for rotation about the axis of said type wheel, a striking hammer assembly having a striking hammer within said type wheel and having means for moving said striking hammer radially for striking one of said type members at a predetermined rotational position, said striking hammer assembly being rotatably mounted on said main frame for rotation around the axis of said type wheel, drive means driving said type wheel at a constant speed, coupling means on said striking hammer assembly for coupling said striking hammer assembly to said drive means and releasing said striking hammer assembly from said drive



means when said striking hammer and type wheel reach said predetermined rotational position, actuating means positioned adjacent said coupling means for actuating said coupling means for coupling said striking hammer assembly to said drive means, and signal converting means coupled to said actuating means for converting a signal from a punched tape and operating said actuating means at a selected time, whereby said striking hammer is caused to rotate in alignment with one of said type members until said predetermined position is reached, at which time the striking hammer strikes the type member and is adapted to cause it to print on a piece of paper at said predetermined position.

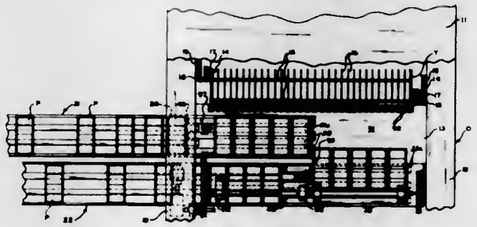
3,100,037
LINE FINDING MECHANISM FOR CASH REGISTERS AND ACCOUNTING MACHINES
Albert J. Green, Harold O. Randall, Paul H. Williams, and Frank R. Werner, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Sept. 1, 1961, Ser. No. 135,532
7 Claims. (Cl. 197—127)

1. In a machine of the class described, capable of performing item-entering operations, in which items are recorded in sequential order on a lined record card, the combination of amount elements to set up the values of items; control elements to initiate item-entering operations; type carriers positionable under control of the amount elements; an item-printing hammer coacting with the type carriers to print items in sequential order on the lines of the record card; means to feed the card first inwardly between the type carriers and the hammer, and then outwardly to align the first line on said card with said type carriers and said hammer; means to form a line-finding tab on the card each time an item is printed thereon; means selectively controlled by the control elements to render the hammer and the tab-forming means effective in item-entering operations to record the item set up on the amount elements on the first line of the record card, and to form a corresponding tab on said card; means including a hook-shaped member movable from a normal ineffective position to an effective position, and return, said member when in effective position engageable by the tab during outward feeding movement of the card in the second item-entering operation to interrupt said outward feeding movement to align the second line on the card with the type carriers and the hammer, whereupon operation of said hammer and the tab-forming means records the second item on the second line of the card and forms a corresponding line-finding tab on said card; and means



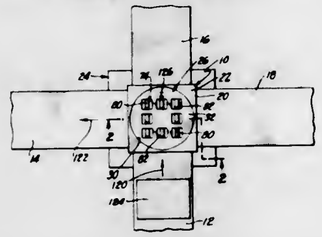
engaging the feeding means responsive to the operation of the hammer and the tab-forming means to impart a slight inward movement to said feeding means and the card to disengage the tab from the hook-shaped member prior to return of said member to ineffective position.

3,100,038
GROUPING AND LOADING APPARATUS FOR BAKERY EQUIPMENT AND THE LIKE
Morris C. Jones, Jr., Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,219
11 Claims. (Cl. 198—30)



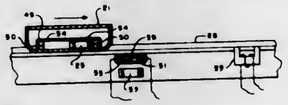
1. Loading apparatus for loading a product to a unit such as a conveying tray in a baking oven comprising; side-by-side, inner and outer longitudinally extending conveyor means leading alongside the unit; pusher means including a first sweep member for one conveyor means and a second sweep member for the other conveyor means longitudinally displaced from said first sweep member; and means for operating said sweep members in unison in a loading stroke toward said unit so that each loads part of the longitudinal length of the tray; said latter means including means for maintaining one of said sweep members in operative withdrawn position while the other is in sweeping position during a portion of the loading stroke to permit it to clear products on the outer conveyor means and permitting its return to operative position during another part of the loading stroke so that it sweeps from only the inner conveyor means.

3,100,039
TURNING APPARATUS FOR CONVEYER SYSTEM
Samuel Oderman, Whittier, and Donald V. Weber, Santa Ana, Calif., assignors to Sta-Hi Corporation, Whittier, Calif., a corporation of California
Filed Sept. 1, 1961, Ser. No. 135,666
4 Claims. (Cl. 198—33)



1. In a turning apparatus, the combination of: a driving platform including coplanar driving rollers, said driving platform being pivotable about an upright axis; means for rotating said driving rollers; means for pivoting said driving platform about said upright axis; a second platform substantially coextensive with said driving platform, one of said platforms being movable relative to the other along said upright axis between a position wherein said driving rollers project above said second platform and a position wherein said driving rollers are below the upper surface of said second platform; and means for moving said one platform along said upright axis from each of said positions to the other.

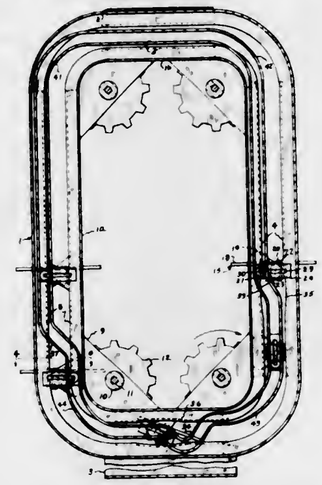
3,100,040
CONVEYOR SORTING
Robert A. Kleist, Sunnyvale, Calif., assignor to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 78,538
11 Claims. (Cl. 198—38)



2. Sorting apparatus comprising a conveyor movable in a forward direction and having a plurality of buckets thereon, an input station for loading the buckets, a plurality of discharge locations along the conveyor, each bucket adapted to receive an article and to discharge the article at a selected one of the discharge locations, each bucket having a memory device for selection of the discharge location, said memory device including a magnetic body shiftable with respect to the bucket along the direction of movement of the conveyor, said input station including a controllable magnetic field generating means positioned adjacent to the conveyor and in spaced relation to the path of the shiftable magnetic body, said magnetic field generating means being operable to selectively hold the magnetic body and to cause said body to shift rearwardly with respect to the conveyor movement.

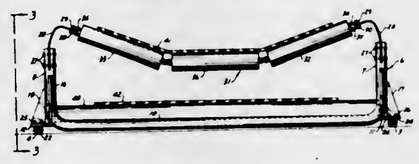
3,100,041
ENDLESS CONVEYORS
Joseph E. Sheehan, Sr., Flint, Mich., assignor to Mary Ann Sheehan, Detroit, Mich.
Filed July 10, 1961, Ser. No. 122,783
10 Claims. (Cl. 198—158)

1. In an endless conveyor, a pair of laterally spaced parallel tracks, one or more carrier units adapted for travel along said tracks and rotatable between alternative carrying and unloading positions about an axis extending through said carrier and substantially transverse to the direction of said travel, said unit including a carrying member, a support member disposed between the tracks and rigidly supporting said carrying member, track-followers mounted on the support member and respectively positioned for travel along the respective tracks, drive means acting on the carrier unit to effect such travel, a



control element mounted on the track follower and actuable to rotate said carrier unit about said axis, said track follower including a plurality of wheels at least two of which roll on a surface of the track, said surface acting on said wheels to resist said rotation of the carrier unit, means effective on said control element to induce desired rotation of the carrier unit about said axis between said positions, and said track being adapted to afford said rotation.

3,100,042
ROPE SUPPORTED RESILIENT SIDEFRAME CONVEYOR
Roy F. Lo Presti, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed May 5, 1960, Ser. No. 27,117
1 Claim. (Cl. 198—192)



A flexible belt conveyor which is easily movable, without disassembly, from place to place and in which, upon slackening or breaking of the belt only, the height may be lowered to ground level to enable passage of ground supported apparatus thereacross,

said conveyor including, in combination, two skid wires,

an intermediate working length of said skid wires being at the level of and in contact with the ground throughout said intermediate working length,

said skid wires being generally parallel to one another throughout said intermediate working length and being tensioned at all times,

a spreader member disposed substantially transversely with respect to the axes of the skid wires,

a pair of upstanding roller assembly supporting members, one from each end of the spreader member,

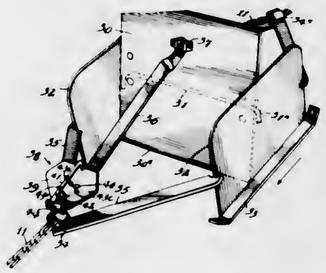
a wire clamping assembly for each skid wire, each wire clamping assembly having a wire engaging portion elongated in the direction of the skid wires for stability,

each wire clamping assembly connecting an associated skid wire to an associated end of the spreader member,

said wire clamping assemblies being secured to and carried by the spreader member and brackets and maintaining the skid wires in skidding contact with the ground,

a roller assembly having its ends mounted from the upper portions of the upstanding roller assembly supporting members and capable of flexing in a direction to vary the spacing between the ends of the roller assembly whereby the downward deflection of the roller assembly absorbs impact without affecting the skid wires.

3,100,043
VARIABLE-DELIVERY BLADE-TYPE CONVEYOR
Nat Cordis, Crown Farms, Silver Lake, Wis.
Filed Apr. 6, 1960, Ser. No. 20,325
10 Claims. (Cl. 198—224)



1. In a scraper conveyor apparatus for use in animal husbandry, which includes scraper blade means hingedly supported within a slidable frame means and a flexible towing means for towing said scraper-conveyor, the improvement which comprises blade-positioning linkage means interposed said flexible towing means and said scraper blade means, said linkage having a successively variable effective length to selectively and step-wise position the said blade relative to said frame means so as to vary the bite which said blade takes in its forward towing and so as to place said blade in a wholly-inoperative position for the rearward towing of said scraper-conveyor apparatus, said blade-positioning linkage comprising a bar hinged at one end to the said blade means, and a progressively rotatable cam pivoted at the other end of said bar and providing a variable extension thereof, said cam taking the thrust of said bar when the blade is towed forwardly.

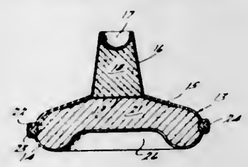
3,100,044
THERMOMETER CARRYING CASE
George R. Gardner, Pittsburgh, Pa., assignor to Bacharach Industrial Instrument Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 29, 1961, Ser. No. 99,111
1 Claim. (Cl. 206—16.5)

In a shock protective industrial thermometer carrying case having a rigid hollow thermometer receiving sheath portion and resilient shock absorbing closures for each end thereof, a rubber-like thermometer receiving and handling member forming one of said end closures and comprising, an elliptical intermediate portion engaging and extending laterally of the adjacent end of the said sheath portion, an inner extension on said intermediate portion freely received within said sheath, tapering projections spaced about the periphery of said inner extension adjacent said intermediate portion providing a wedging fit



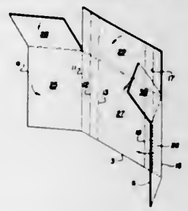
within said sheath portion, said inner extension terminating in an inwardly tapering hollow portion having an internal dimension smaller than the outer diameter of an end of a thermometer to be inserted therein, and an outer extension on said elliptical intermediate portion having a pair of flattened opposite surfaces for ready suspension of the assembled member and thermometer in taking temperature readings.

3,100,045
MIXING CONTAINERS
William F. Via, Jr., 450 Allard Road, Grosse Pointe 36, Mich.
Filed June 12, 1961, Ser. No. 116,333
18 Claims. (Cl. 206—47)



1. A container having a pair of compartments for containing dissimilar materials separated by a rupturable diaphragm, said material requiring a kneading action when mixed together, one of said compartments having a flexible wall to permit the insertion of a rod for breaking the diaphragm and permitting relative movement between the rod and container to produce the complete kneading and mixing of the materials with the container remaining sealed.

3,100,046
PACKAGE AND PACKAGING METHOD
Arthur W. Wetmore, Antioch, and Emil G. Frederich, Concord, Calif., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed July 25, 1960, Ser. No. 45,142
5 Claims. (Cl. 206—60)



1. A palletized package comprising a supporting pallet, a mass which is generally rectangular in horizontal cross-section positioned on and supported by said pallet, protective covering structure surrounding said mass on its four sides and its top, and means maintaining said mass on said pallet and said covering structure around said mass; said covering structure comprising a pair of sheets of bendable material each of which has a plurality of generally parallel preformed fold lines extending between opposite edges thereof, each sheet including a portion of generally U-shape comprising three sections defined by a predetermined pair of said fold lines, two of said sections extending generally normal to the third, each of said sheets including a pair of slits which extend inwardly from one of said edges along said predetermined pair of fold lines a distance determined by the height of said mass, said slits providing three bendable flaps in each sheet adjacent such edge thereof, said sheets being arranged around said mass in partially overlapping telescopic relationship with the respective sections of said sheets engaging and covering the four sides of said mass and with the respective flaps of said sheets overlying and covering the top of said mass.

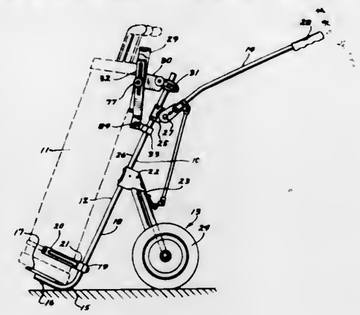
3,100,047
GREETING CARD PACKAGE
Warren D. Wallace, Webster Groves, Mo. (7987 Big Bend Blvd., St. Louis 19, Mo.)
Filed June 8, 1962, Ser. No. 201,121
2 Claims. (Cl. 206—63)



1. A package comprising in combination: a folded greeting card of substantially square configuration including a face panel and an inside panel whereon a certain message appears; an unsealed envelope dimensioned slightly larger than the greeting card for mailing the same; a disposable information card whereon an exact reproduction of said certain message appears and whereon the selling price of said greeting card and mailing envelope also appears, said disposable card being dimensioned correspondingly to said greeting card; and a rectangular sheet of transparent plastic material encasing both said cards and the envelope; the size of said sheet being predicated on the dimensions of said envelope to include a recangular central main body portion and four triangular flap segments integral therewith, each of said flap segments extending outwardly from one of four imaginary fold lines that define the aforesaid central main body portion of the sheet, the face panel of the greeting card being disposed contiguously to said central main body portion of the sheet, the envelope being superimposed on the greeting card, the disposable information card being superimposed on the envelope with the information side thereof uppermost, the four flap segments aforesaid of the transparent plastic sheet being folded over so as to overlie said information card, the resultant contiguously disposed edge portions of the flap segments being secured to one another by sealing means.

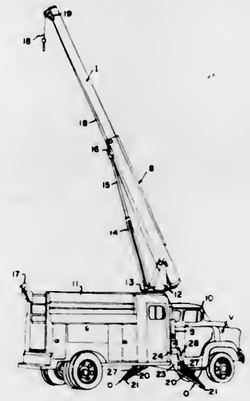
3,100,048
SPORTS EQUIPMENT CARRYING CART
Merlin L. Halverson, P.O. Box 306, Rte. 1, Mound, Minn.
Filed Feb. 27, 1961, Ser. No. 92,005
5 Claims. (Cl. 211—2)

1. An attachment for a conventional golf cart having a standard, said attachment comprising, a securing plate having an upwardly directed free edge adapted for securing an outboard motor thereto, said securing plate also having a rearwardly mounted holding means adapted for securing a golf bag thereto, a support member fixedly secured at one end thereof to the rear of said securing plate and adapted to be pivotally mounted at the other end to the upper end of a golf cart standard, and at least one brace member slidably engaged substantially at one end thereof with the side of said securing plate and adapted to



be also pivotally secured at the other end to said golf cart standard.

3,100,049
OUTRIGGERS FOR VEHICLES
Edward V. Garnett, 3963 Walnut St., Denver, Colo.
Original application Apr. 28, 1958, Ser. No. 731,485, now Patent No. 3,056,510, dated Oct. 2, 1962. Divided and this application Aug. 22, 1961, Ser. No. 133,117
6 Claims. (Cl. 212—145)

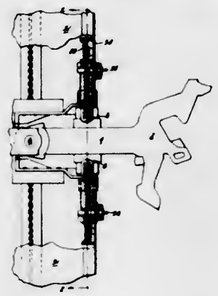


1. An outrigger for use with a vehicle mounted derrick comprising an upper link pivotally connected at one end to said vehicle; a lower link; first pivot means connecting the opposite end of said upper link to one end of said lower link; an arm pivotally connected at its inner end to said vehicle; second pivot means connecting the other end of said lower link to the outer end of said arm; and extensible and retractable hydraulic means operatively connected between said vehicle and said first pivot means, said hydraulic means thereby being adapted to move said links to either raise or lower said arm.

3,100,050
CAR COUPLER
Kenneth L. De Penti, Mayfield Heights, and Donald Willison, Lyndhurst, Ohio, assignors to National Castings Company, a corporation of Ohio
Filed Apr. 26, 1961, Ser. No. 105,667
4 Claims. (Cl. 213—21)

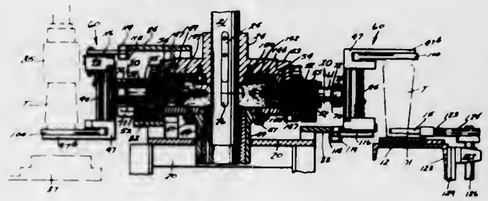
1. A centering mechanism for centering a car coupler relative to an associated railway vehicle, said mechanism comprising two resilient units disposed in opposed relation on opposite sides of said coupler, each of said units

comprising a spacing member and two resilient cushions, a cap member and a bolt member mounted on said spacing member, one of said cushions mounted on said bolt member intermediate said spacing member and said cap



member, movable stop means mounted adjacent said spacing member and engageable therewith, said cap member engageable with said coupler to maintain said coupler in a predetermined position.

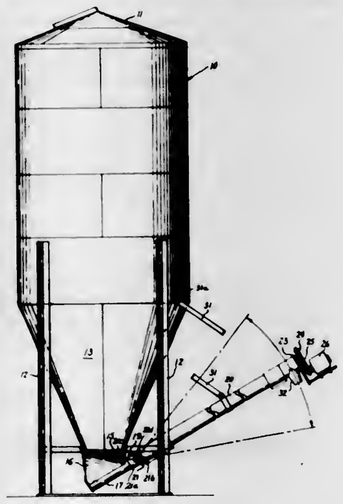
3,100,051
UNIVERSAL AUTOMATIC WARE LOADING MACHINE AND METHOD
Carl W. Schreiber, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Oct. 8, 1959, Ser. No. 845,262
10 Claims. (Cl. 214—1)



1. The method of transferring an article of the class described having an upper, outwardly tapered moil portion and which is traveling in upright position on a horizontal conveyor, comprising moving the article to a ware receiving station along said conveyor, bringing a pair of gripping jaws to the receiving station, closing the jaws in a horizontal plane about the upper axially tapered moil portion of the article to engage the latter, continuing to close the jaws in said plane and in engagement with said tapered portion, whereby the article is moved upwardly with respect to the jaws and thereby elevated free of the conveyor for transfer, moving the article to a remote ware delivery station that is horizontally spaced from said ware receiving station, and opening the jaws at the ware delivery station, thereby releasing the article to a separate carrier for subsequent handling.

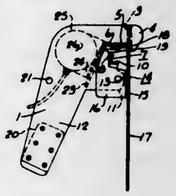
3,100,052
BULK FEED BIN BOTTOM
Howard Speicher Brembeck, 2808 Martin Manor Drive, Goshen, Ind.
Filed Sept. 26, 1961, Ser. No. 140,707
2 Claims. (Cl. 214—17)

1. In a bulk bin having a conical bottom with an outlook therein, a boot depending beneath said outlet, said boot having an upwardly inclined substantially U-shaped bottom, a discharge auger extending along said inclined bottom, an inclined discharge tube for said boot at the uppermost end of said inclined bottom, a discharge extension, a two part collar connecting said discharge tube to said discharge extension, each of said two parts having a flange inclined relative to the longitudinal axis of the collar, whereby rotation of one part relative to the other varies the angular inclination of said discharge extension relative to said discharge tube, bolts extended through



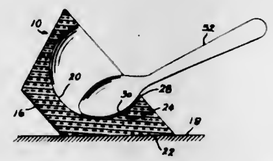
aligned openings in said flanges fixedly securing said parts in a selected position of adjustment, a primary auger in said discharge extension, a universal connection between said discharge auger and said primary auger, and means carried by said discharge extension for rotating said primary and hence said discharge augers.

3,100,053
CAR SHAKER
William V. Spurlin, Indiana, Pa., assignor, by mesne assignments, to Link-Belt Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 26, 1960, Ser. No. 11,246
16 Claims. (Cl. 214—83.3)



1. A car shaker consisting of an inverted L shaped bracket hook carrying a vibratory motor means mounted at the knee of said L shaped bracket hook and having a weighted shank, said hook having a nose and a bight therebetween to hook on the rim of a car, said shank extending downwardly and outwardly from the car rim, an abutment extending inwardly from said shank and closely adjacent to and under said bight to form a lock to prevent the vibrations from accidentally dismounting said L shaped bracket hook from the car rim, a reaction surface on the outer end of said abutment to engage the outer car surface under said bight, said nose and said bight and said abutment shaped to form a recess open through a mouth extending from said abutment reaction surface to said nose, the plane of said mouth sloping upwardly when said L shaped bracket hook is in operating position with the car rim in said recess and said nose engaging the inner surface of the car to provide a hook reaction surface and said bight is resting on the rim of the car and said abutment reaction surface is against the outer car surface, said mouth clearing the car rim when said shank is swung outwardly to permit said L shaped bracket hook to be raised vertically off the rim of a car, said shank being weighted to lock the car shaker against outward movement between said reaction surface and the outer car surface during the operation of said vibratory motor means.

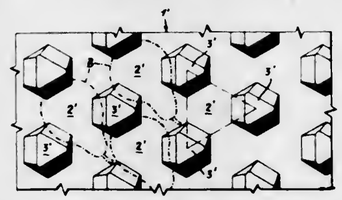
3,100,054
TILTABLE BOWL
George J. Rubens, 6460 Penfield Ave., Woodland Hills, Calif.
Filed Feb. 7, 1961, Ser. No. 87,672
5 Claims. (Cl. 215—1)



1. A self-supportable bowl having a large mouthed cavity from which food is normally dispensed by a spoon, said bowl having a plurality of rigid outer planar support surfaces each of which is adapted to act as a self-supporting base for the bowl, the planes defining said surfaces intersecting whereby said bowl can be self-supported in a plurality of selected positions to the vertical corresponding to said surfaces, one of said outer surfaces representing a primary base for supporting the bowl with the cavity in a normally upright position from which the food can be dispensed by a tip of the food bearing portion of the spoon, and another of said outer surfaces representing a secondary base for supporting the bowl in a stable condition with the cavity in a tilted position offset from the vertical from which a residual portion of the food in the cavity can be dispensed by the spoon, a vertical line passing through the center of gravity of said bowl intersecting the secondary base when the bowl is in a tilted position to enable the bowl to be self-supportable in the tilted position, the surface of the cavity on the same side of the bowl as the secondary base conforming substantially to the longitudinal curved edge of the food bearing portion of the spoon wherein the surface of the cavity is substantially uniformly curved throughout and the amount of the curved surface being substantially hemispherical in extent, whereby the residual portion of any food present in the bowl in the tilted position can be readily removed by scraping the longitudinal edge of the spoon along the corresponding curved surface portion of the cavity.

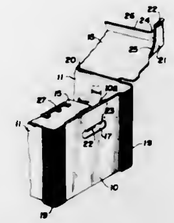
3,100,055
FRUIT-PACKING TRAYS
Guido Martelli, Nerio Martelli, and Francesco Martelli, Bologna, Italy, assignors to Compagnia Italiana Nestpack S.p.A., Bologna, Italy
Original application Oct. 24, 1957, Ser. No. 692,127. Divided and this application Oct. 31, 1960, Ser. No. 36,252
Claims priority, application Italy July 15, 1957
5 Claims. (Cl. 217—26.5)

1. A fruit-packing tray comprising a flat sheet of thermoplastic synthetic resin, a number of regularly spaced fruit seats on said tray defined by walls of hollow frusto-pyramidal posts upstanding from the sheet at the apices of equilateral triangles of equal size lying in the plane of the sheet, the adjacent triangles having a common side whereby each of said posts except those at the margin of the sheet is common to three of said seats, said walls of the posts being provided with parallel



corrugations of gently clamping fruits resting on said seats, and a plurality of substantially flat-topped rest members upstanding from said sheet to a lower height than the posts and disposed between adjacent posts.

3,100,056
REUSABLE BOTTLE CASES
John A. Friday, Jr., Pittsburgh, Pa., assignor to Duquesne Brewing Company of Pittsburgh, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 16, 1960, Ser. No. 36,669
5 Claims. (Cl. 220—1)



1. A reusable case for bottles and the like comprising, in combination, a unitary molded container having side walls, end walls, a bottom wall, and opposed lockably closable top flap elements, all of said elements and walls being integrally formed complete as a single piece of plastic material and a plurality of longitudinal and lateral cell-forming partition members disposed in said container, said end walls having hand openings in the upper central portions thereof, said container having protective bulges formed at its corners in the side and end walls, said top flap elements having hinge means comprising a thinned flexible portion adjacent said side walls and lockable closing means comprising tab members integrally attached and depending from the edges of said top flop elements adjacent and inward of said end walls, said tab members having a catch portion projecting therefrom adapted to engage an end wall in the hand opening thereof, said bottom wall, bulges and top flap elements having roughened outside surfaces whereby horizontal and vertical slippage between stacked cases is lessened.

3,100,057
TOOL OR UTENSIL FASTENING MEANS
Kazuo Tanuma, 236 Takano-machi, Adachi-ku, Tokyo-to, Japan
Filed Jan. 30, 1962, Ser. No. 169,721
1 Claim. (Cl. 220—48)

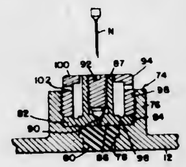
In an opener for cans or the like including a body plate, a cutting blade at one end of said body plate, an engagement jaw on said one end of said body plate laterally spaced from said cutting blade, fastening means on the opposite end of said body plate comprising flanges on opposite side edges of said body plate and perpendicular

thereto, said flanges extending from said body plate in the same direction and being in aligned relation to each other, a holding piece on said opposite end of the body plate extending perpendicular thereto and longitudinally spaced from said flanges, said holding piece extending



from said body plate in the same direction as said flanges and together therewith defining a space to receive a can bead, and a locking protrusion on said holding piece extending into the space defined by the same and said flanges.

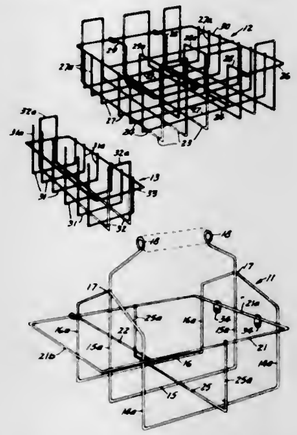
3,100,058
ACCUMULATOR CHARGING STRUCTURE
William Harold Peet, 2115 Devonshire Road, Ann Arbor, Mich.
Filed May 9, 1960, Ser. No. 27,830
15 Claims. (Cl. 220—89)



1. In an accumulator having a casing, means for charging the interior space of said casing comprising a resilient, unapertured, pierceable plug of self-sealing material, said casing having an opening to said space receiving said plug, said plug being adapted to be penetrated by a hypodermic needle or the like for such charging, a removable rigid disc secured to said casing outwardly of and over said plug to hold the latter against outward distortion or displacement under pressure, said disc having an aperture to receive the needle for charging, and a removable closure for said aperture having a part shaped to enter the aperture and engage the plug, the inner surface of said plug being flush with the inner surface of said casing.

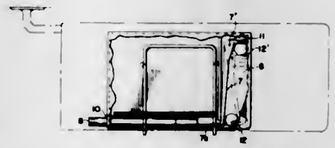
3,100,059
WIREWORK CARRIER
Egner L. Bloomquist, 1070 Pike Lake Road, New Brighton, Minn.
Filed Dec. 27, 1960, Ser. No. 78,425
1 Claim. (Cl. 220—117)

A wirework carrier for milk bottles and the like, comprising a frame structure having a pair of speed and substantially parallel frame rods to lie upon a floor and having upturned ends with upper portions bent diagonally inwardly and upwardly and being formed integrally with each other, a third frame rod lying midway between and parallel to said pair of rods, said several rods defining unobstructed spaces therebetween, said third rod having opposite ends turned upwardly and affixed to the ends of said pair of rods and then being turned back upon itself in a diagonally upward direction, a handle affixed between the terminal ends of said third rod, a wirework open-topped basket affixed on said frame rods and between the upturned ends thereof and maintained in spaced relation above the floor, and a top frame wire extending around and affixed to the upper periphery of the basket and extending across and being affixed to said frame



rods at a position below said upper portions thereof, whereby to confine and protect milk bottles and the like.

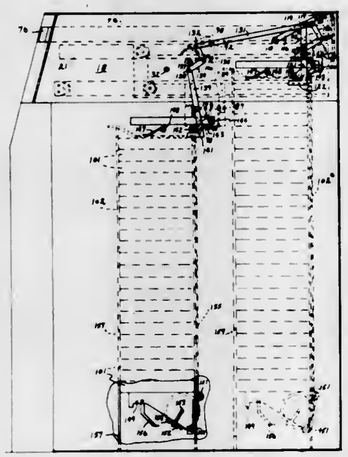
3,100,060
CIGARETTE DISPENSING MEANS
Antonio Calixto, Hempstead, N.N.
(5414 NE. 2nd Ave., Miami 37, Fla.)
Filed Dec. 21, 1961, Ser. No. 160,980
3 Claims. (Cl. 221—116)



1. Cigarette dispensing means comprising
a rotatably mounted case adapted to receive a plurality of cigarettes,
a center partition in said case,
said case having a dispensing aperture on each side of said partition,
a pusher member pivotally mounted in said case at the other end of said cigarettes from said aperture, said pusher member having a first extension at one end adapted to push a cigarette out of one of said apertures, said pusher member having a second extension at its other end adapted to push a cigarette out of the other of said apertures, said pusher member and one side of said case forming a track transverse to the axis of rotation and a ball mounted in said track and adapted to move said pusher to "in" and "out" positions as said case is tilted from the horizontal.

3,100,061
VENDING MACHINE
William W. Carter and Charlie F. Carter, both of Rte. 1, Brundidge, Ala.
Filed Dec. 27, 1960, Ser. No. 78,586
9 Claims. (Cl. 221—131)

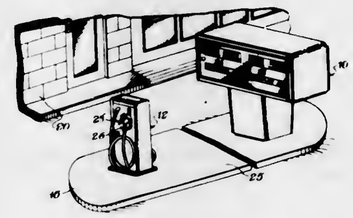
6. Apparatus for dispensing articles from a vending machine comprising:
(*a*) means supporting the articles to be dispensed in a plurality of vertically aligned columns with adjacent articles in superimposed relationship to each other in each column,
(*b*) a reciprocable member adapted for transverse movement above said columns,
(*c*) means to reciprocate said reciprocable member,
(*d*) an article engaging member for each of said columns carried by said reciprocable member and adapted for independent movement selectively from a first position out of contact with the uppermost article in a subjacent column to a second position whereby it contacts said uppermost article upon transverse movement of said reciprocable member,
(*e*) independent controls means operatively connected



to each article engaging member and adapted to move said article engaging member selectively from said first position to said second position whereby the uppermost article in the subjacent column is dispensed upon transverse movement of said reciprocable member with said article engaging member in said second position, and
(*f*) a plurality of latch release members representing the required coins for dispensing an article operatively connected to actuating members which in turn are mounted on individual selector bars whereby predetermined ones of the latch release members are released upon operation of selected ones of said selector bars.

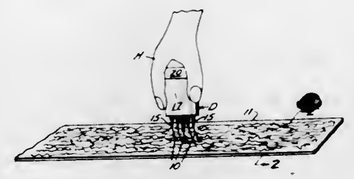
3,100,062
INDICATING APPARATUS FOR DISPENSING SYSTEM
Robert G. Spalding, Bracknell, England, assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Feb. 6, 1962, Ser. No. 171,501
Claims priority, application Great Britain Feb. 8, 1961
8 Claims. (Cl. 222—35)

1. An indicating apparatus for a dispensing system including an indicating unit and a dispensing unit, said apparatus comprising a meter connected to said dispensing unit for providing an output which is a function of the dispensed quantity, a signal generator connected to said meter for providing a transmittable signal, a receiver motor mounted upon said indicating unit, communication means connecting said receiver motor to said signal generator for actuating its operation in accordance with said dispensed quantity, a set of indicating elements movably mounted in said indicating unit for providing a visual indication which is a function of said dispensed quantity, said indicating elements corresponding to lower and higher order number digits of said dispensed quantity, a motorized driving means in said indicating unit, slip clutch means connecting said motorized driving means to each of said indicating elements for energizing their movement, disengageable clutch means connecting said receiver motor to the lowest order of said indicating elements for actuating its movement as a function of said dispensed quantity, said disengageable clutch means being arranged to override said slip clutch means for causing said receiver motor to superintend the movement of said lowest order indicating element, disengageable escapement means connecting said lower order to said higher



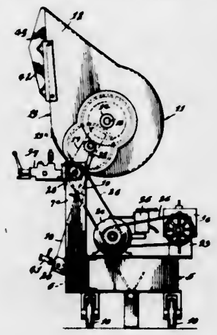
order indicating elements for intermittently allowing said motorized driving means to move said higher order indicating elements to indicate successive digits when said lower order elements respectively are moved throughout their fu'l cycle of movement, disengageable stop means operatively connected to each of said indicating elements for arresting their movement at a zeroizing condition; and reset control means connected to said disengageable clutch, said escapement means and said stop means for disengaging said single clutch and said escapement means from said indicating elements and for engaging said stop means with said indicating elements to permit said driving means to reset all of said indicating elements to said zeroizing conditions prior to a dispensing operation.

3,100,063
APPARATUS FOR ABSTRACT PAINTING
Henry Henriksen, 3136 Pillsbury Ave. S., Minneapolis, Minn.
Filed Feb. 10, 1960, Ser. No. 7,893
2 Claims. (Cl. 222—94)



1. A paint applicator comprising a plurality of compressible nozzled paint tubes grouped together in side-by-side relationship whereby the entire group can be conveniently grasped in the hand of the user for simultaneous squeezing of all of said tubes, means for holding said tubes together in said grouped relationship, the nozzles of each of said tubes extending in the same direction, removable caps for the nozzles of each of said tubes, one of said nozzles extending beyond the rest of said nozzles to enable said applicator to function as a paint pen.

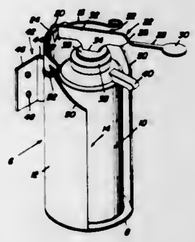
3,100,064
MORTAR-PLASTER MIXER
Jerome Kacena, Berwyn, Ill., assignor to Anchor Manufacturing Co., a corporation of Illinois
Filed June 3, 1960, Ser. No. 33,848
3 Claims. (Cl. 222—166)



1. An apparatus for mixing mortar or plaster having, in combination, a frame including a base member and a pair of laterally spaced support members extending upwardly from said base member and carrying trunnion means, a cylindrical mixing drum having a hopper formed on a portion of its periphery and provided with an opening for loading and discharging the drum and a discharge lip, means affixed to the ends of said drum at the periphery of the drum and engaging said trunnion means to provide a swingable mounting for the drum, permitting it to be swung from a lower position wherein the hopper opening is in a generally horizontal plane to facilitate receiving material, to an upper position wherein the hopper opening is in substantially a vertical plane to facilitate discharging material wtih material discharging therefrom over the discharge lip in moving from the lower position to the upper position with the lip moving over a small arc of movement, a hydraulic piston and cylinder device connected between said frame and said drum for swinging the drum for the lower charge position to the upper discharge position, a control for operating said hydraulic piston and cylinder, a rotary mixing device including mixing blades within said drum and means for continually driving the mixing device in all positions of said drum including a set of meshing gears with a gear movable with the drum revolving about a gear not movable with the drum.

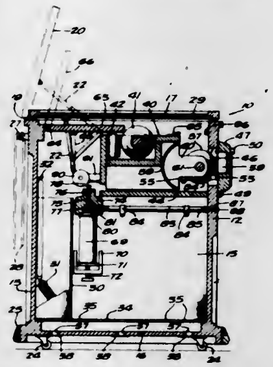
3,100,065
HOLDER FOR PRESSURIZED TOOTHPASTE DISPENSERS
Hilbert W. Gross, 1311 Hamilton St., Allentown, Pa.
Filed Aug. 3, 1960, Ser. No. 47,246
1 Claim. (Cl. 222—180)

In combination, a vertically cylindrical receiver having a flat circular horizontal base portion and a cylindrical vertical wall, said wall having a vertical front slot, a can of pressurized dental cream confined removably in the receiver, said can standing upright on the base portion and being partially encompassed by the wall and exposed to view by way of said slot, said receiver being the only means for maintaining said can in a stationary upright position, and a vertically pivoted lever mounted atop the wall of said receiver, said mounting including a circular opening formed by rearwardly curling the upper edge of said wall, a slot which is perpendicular to said opening to receive the end of said pivoted lever to be mounted, and a pin lodged in said circular opening and passing through said mounted end of the lever for pivotally retaining such end in relation to the receiver, said lever having a handle at its free swingable end and being disposed, when in use, at an upwardly inclined oblique angle, the upper end of said can having a valve tripping button spaced vertically from the plane of said base, and



the medial portion of said lever having a button depresser resting atop the button, an attaching and supporting bracket carried by a rearward upper central portion of said wall, and upper edge portions of said wall curved to form toothbrush holders.

3,100,066
CABINET WITH AEROSOL SPRAYER
Ned Campbell, 1447 E. 18th St., Los Angeles, Calif.
Filed Mar. 22, 1962, Ser. No. 181,628
9 Claims. (Cl. 222—180)

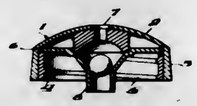


1. A bathroom cabinet comprising a casing adapted to contain various articles useful in a bathroom including a rack for toilet paper and having an opening for access to said rack, a door normally closing said access opening, the casing having an outlet opening for an aerosol, means in said casing for removably supporting an aerosol container, an ejector operatively associated with said container for effecting a discharge from said aerosol container through said outlet opening, and means engageable with the ejector and connected to the door for operating the ejector upon movement of the door.

3,100,067
COMPOSITE CLOSURE
Charles W. Heppenstall, P.O. Box 2325, Delray Beach, Fla.
Filed May 15, 1961, Ser. No. 109,891
2 Claims. (Cl. 222—190)

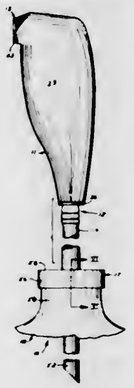
1. A composite closure comprising a thin-walled, metallic, outer shell having a ceiling with a central opening and

an annular wall depending from the ceiling, a liner of resilient preshrunk plastic material engaged within the metal outer shell and having internal threads formed on the inner wall thereof, said liner having an outside diameter in the free state greater than the inside diameter of



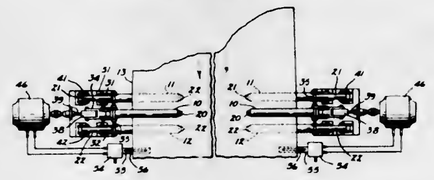
the depending wall of the metal outer shell and being press-fit in said metal outer shell, said inner wall of the liner having an inner annular groove at the top thereof and a dispensing member having a substantially flat peripheral portion and a central opening, the peripheral portion seated in the annular groove of said liner.

3,100,068
DISPENSING DEVICE
Bruno W. Kersten, Philadelphia, Pa., assignor to Marion S. Pump, Kalamazoo, Mich.
Filed Oct. 11, 1960, Ser. No. 61,952
2 Claims. (Cl. 222—207)



1. A device for advancing, and controlling the flow of, a liquid from one point to another, comprising:
an elongated, resilently flexible bulb having end walls and side walls defining an elongated chamber therein, the cross-sectional area of said chamber transverse of its lengthwise extent being substantially smaller near one end than near the other end thereof, the cross-sectional shape of the central portion of said bulb and said chamber transverse of their lengthwise extents being substantially oval, and said central portion of said bulb being comfortably engageable by and receivable within an average, normal adult hand;
means defining an inlet opening through said one end of said bulb communicating with the adjacent one end of said chamber, the central axis of said inlet opening being lengthwise of said bulb;
means defining an outlet opening through a side wall of said bulb adjacent the other end thereof and communicating with said chamber near the other end thereof, the central axis of said outlet opening being substantially parallel with the major axis of said cross-sectional shape and substantially perpendicular to the central axis of said inlet opening;
a first valve means including a first elongated body member having a central opening extending therethrough, said first body member being snugly disposed in said inlet opening, a valve element within said body member and resilient means urging said valve element closed, said first valve means being arranged so that it positively obstructs the flow of liquid through said first body member away from said chamber and yieldably resists the flow of liquid through said first body member toward said chamber; and
a second valve means including a second elongated body member having a central opening extending therethrough, said second body member being snugly disposed in said outlet opening, a valve element disposed within said second body member and resilient means urging said valve element closed, said second valve means being arranged so that it positively obstructs the flow of liquid through said second body member toward said chamber and yieldably resists the flow of liquid through said second body member away from said chamber.

3,100,069
ADJUSTABLE WRAP WEB GUIDING APPARATUS
Howard R. Richards, Lakewood, and Alexander V. Alexeff, Cleveland, Ohio, assignors to Industrial Ovens, Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 20, 1960, Ser. No. 77,041
10 Claims. (Cl. 226—17)

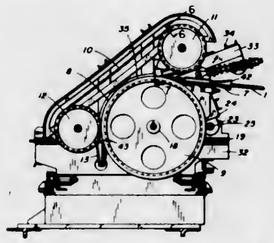


3. Web guiding apparatus comprising first and second roll means for guidingly engaging a web traveling along a given direction and extending under one of said first and second roll means and over the other whereby the degree of interference between the web engaging profiles of said first and second roll means as viewed along said direction of web travel determines the degree of wrap of said web thereon, roll mounting means to progressively adjust the profile relationship of said first and second roll means relative to each other back and forth between a first condition where, as between said first and second roll means, there are relatively low degrees of (1) skewing and (2) profile interference and a second condition where, as between said first and second roll means, there are relatively high degrees of (1) skewing and (2) profile interference, said roll mounting means including means to shift said first and second roll means back and forth together transverse to the direction of web travel incident to said progressive adjustment back and forth between said first and second conditions.

3,100,070
APPARATUS FOR HANDLING HOT METAL RODS
Sheridan Smith, Sault Ste. Marie, Ontario, Canada, assignor, by mesne assignments, to Morgan Construction Company, Worcester, Mass.
Filed Nov. 7, 1960, Ser. No. 67,714
8 Claims. (Cl. 226—171)

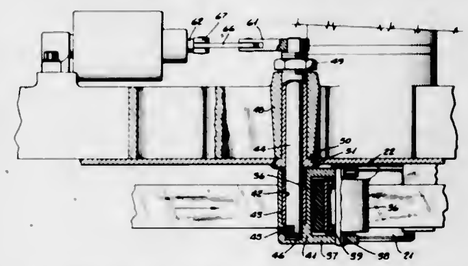
1. An apparatus for effecting a substantial change in the direction of travel of a hot metal rod for delivery thereof to a coiling reel comprising a pair of rotatable pulleys, an endless flexible member passing around said pulleys, a third rotatable pulley intermediate the said first two pulleys with its periphery contacting the exterior side of said flexible member, said periphery having a rod receiving groove therein, the radius of curvature of which

is slightly greater than the radius of the largest diameter rod to be used and the depth of which is slightly less than the diameter of the smallest diameter rod to be used, the three pulleys lying in substantially the same plane, means for directing a rod between the periphery of the third pulley and the exterior side of the flexible



member, adjustable means for controlling the tension of said flexible member and means for rotating at least said third pulley whereby the peripheral speed of any point on the periphery of the third pulley is equal to or slightly greater than the linear speed of the rod to be delivered to the coiling reel.

3,100,071
TAPE CLAMPING ROLLER ASSEMBLY
Joseph J. Neff, Los Altos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Aug. 13, 1959, Ser. No. 833,481
4 Claims. (Cl. 226—176)



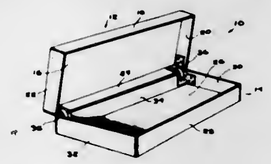
1. A capstan roller assembly comprising: a clamping roller; a yoke rotatably supporting said clamping roller; a pivot shaft extending through said yoke parallel to the axis of said roller and coupled to said yoke for turning said yoke upon turning of said shaft; means for rotating said shaft for clamping and unclamping said roller; and means for adjusting the angular position of said yoke with respect to said pivot shaft.

3,100,072
CORRUGATED PAPER CONTAINER
James J. Mason, 3107 W. 173rd St., Hazel Crest, Ill.
Filed July 31, 1961, Ser. No. 128,050
3 Claims. (Cl. 229—16)



1. In a regular slotted rectangular container of the type having a top, bottom, opposed side walls and opposed end walls, the improvement for increasing the stacking strength of such containers comprising an inverted V-shaped rigidifying scoring in each end wall, said rigidifying scoring being non-folding therealong in normal usage, with the apex of the V at the mid-point of the top edge of the end wall, and with the lower ends of the V-shaped scoring terminating at the lower corners of the end wall.

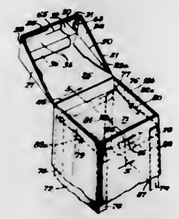
3,100,073
CORNER HINGE CONSTRUCTION
Leo Theodore Roy, South Attleboro, Mass., assignor to Craft, Inc., South Attleboro, Mass., a corporation of Massachusetts
Filed Feb. 2, 1959, Ser. No. 790,634
2 Claims. (Cl. 229—44)



1. In a box constructed of a material having the flexible characteristics of cardboard, a body section, a cover section adapted to overlie said body section, said body and cover sections each having front, rear and side walls, hinge means for hingedly attaching said sections to each other with their walls in substantially edge-to-edge abutting relation, said hinge means including a pair of hinge elements that are positioned at the rear corners of said box, each of said hinge elements including a first and second plate, said plates being hingedly attached to each other and each plate overlying the inner surface of the rear wall of its associated section at the opposite end portion thereof, each of said plates being in engagement with said inner surface of the rear wall of its associated section but otherwise disconnected therefrom, flanges integrally joined to said plates and extending perpendicularly from the sides thereof, each of said flanges engaging the inner surface of the adjacent side wall of the associated section and being in substantially the same plane, the edge of each of said flanges that is adjacent the outer edge of the associated plate being coextensive therewith, the other edge of each of said flanges that is adjacent the hinge axis of said hinge elements being foreshortened with respect to the edge of said plate adjacent thereto, and means for securing each of said flanges to its respective side wall.

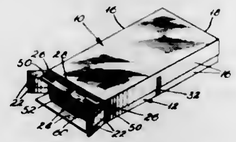
3,100,074
CARTON
Robert B. Beck, Lake Forest, Ill., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Filed Oct. 5, 1962, Ser. No. 228,539
7 Claims. (Cl. 229—44)

7. A carton, readily assemblable from a longitudinally seamed flat sleeve, comprising an interlocking bottom of the snap assembly type, walls upstanding from said bottom constituting the front panel, opposing side panels and the back panel of said carton, at least two of the opposite walls of said carton making internal angles less than 90° with said bottom and a quadrilaterally-shaped cover integrally hinged to said back panel and having a depending skirt on three sides extending to cover edge portions of said front and side panels when said cover is closed, a unitary U-shaped insert positioned within said carton including a flat dispensing platform whose periphery is closely adjacent the carton interior when the platform is in operating position, and a planar support member having a bottom edge contacting said carton bottom and projecting downwardly from each of two opposite sides of said platform, the front and side panels of said



carton having top edges in common with scored edges of tabs which fold inwardly and are held in place by projecting through slits in the edge of said platform.

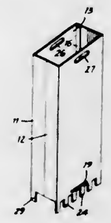
3,100,075
EASY-OPEN TELESCOPING CARTON FOR SAUSAGE CASINGS
Theodore H. Marshall, Oak Lawn, Ill., assignor to Union Carbide Corporation, a corporation of New York
Filed Dec. 17, 1958, Ser. No. 781,080
4 Claims. (Cl. 229—51)



4. A telescoping carton having a base box and a cover box telescoping thereon, both the base box and the cover box portions being formed from blanks having end flaps and side flaps provided with side tabs, each box having one end flap and the side flaps locked in assembled position and the opposite end held in assembled position by external means, the locked ends of each box comprise a portion of the respective end flaps folded over the inturned tabs on the side flaps thereby holding same in position, said folded over portion being held in place by frictional engagement with the upturned side flaps with the locked ends of each box being adjacent one another when the cover box is telescoped over the base box and wherein the external means for holding the opposite end of the cover box in assembled position comprises strips of adhesive material each extending from one side flap to said opposite end flap, the external means for holding the opposite end of the base box in assembled position being the assembled opposite end of the cover box telescoping thereover, and securing means for the carton comprising a plurality of adhesive strips extending from the bottom panel of the base box to the side flaps and end flaps of the cover box.

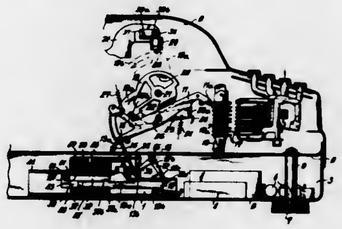
3,100,076
PAPERBOARD SHOPPING BAG
Felix A. Russell, 713 S. Lincoln Ave., Alexandria, Va.
Filed Mar. 17, 1961, Ser. No. 96,520
3 Claims. (Cl. 229—54)

1. A rectangular shopping bag formed from a single blank of paperboard and comprising a front panel, a rear panel, side panels interconnecting adjacent side edges of said front and rear panels, a bottom panel integrally hingedly connected to said lower portion of said rear panel, a series of relatively narrow and widely spaced skid fingers integrally formed on and extending downwardly from the lower edge of said front panel, an integral foot member extending downwardly from each of said side panels at areas adjacent either side of said rear panels, and means for locking the free edge of said bottom panel with said front panel, said skid fingers being of



substantially equal lengths and underlying substantially the entire width of said bag, and the upper portion of said front panel having an integral handle.

3,100,077
MULTIPLE SWITCH DEVICE FOR CONNECTION WITH AN ELECTRICAL BUSINESS MACHINE
Hans Heuer, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Oct. 23, 1959, Ser. No. 848,463
Claims priority, application Germany Oct. 27, 1958
16 Claims. (Cl. 235—60)



1. Signal transmitting means adapted to be mechanically controlled by a calculating machine for producing signals representing digital and/or other data furnished by said calculating machine, the latter having individually movable actuator members respectively associated with said different data, comprising, in combination,

(*a*) multiple switch means comprising

(1) first contact means including a first plate member and a predetermined number of first contact strips extending parallel with each other along one face of said first plate member and an equal number of contact segments respectively connected with said first contact strips and mounted along a circular arc on said first plate member;

(2) second contact means including a second plate member arranged parallel with, and spaced from, said first plate member, and a predetermined number of second contact strips extending in a direction transverse of that of said first contact strips on a face of said second plate member facing said one face of said first plate member, said second plate member being movably and resiliently supported for permitting change of its distance from said first plate member by movement from a normal first position to a second position;

(3) a plurality of elongated interconnecting contact carrier means extending parallel with said first contact strips and respectively associated therewith, said contact carrier means being ar-

ranged between said first contact strips, respectively, and said second contact strips and being individually movable longitudinally along said first contact strips, respectively, between a plurality of selectable positions, each of said contact carrier means being insulated from the other ones thereof and carrying a first contact member in sliding contact with the associated first contact strip, and a second contact member conductively connected with said first contact member and arranged to make contact with any one of said second contact strips depending upon the selected position to which the particular contact carrier means has been moved, provided that said second plate member is moved to said second position thereof;

(*b*) guide means for said interconnecting contact carrier means comprising a box-like structure having top and bottom walls in contact with and slidingly guiding said contact carrier means along said walls, and having side walls spaced from each other a distance substantially equal to the sum of the transverse dimensions of said contact carrier means and just sufficient to permit sliding movement of said contact carrier means relative to each other;

(*c*) electromagnetic means for moving said second plate member from said normal first position in which said second contact strips are out of engagement with said second contact members of said contact carrier means, and said second position in which each of said second contact strips are in engagement with a different one of said second contact members, respectively, irrespective of the actual longitudinal position of the individual contact carrier means;

(*d*) operating means comprising a plurality of operating members for mechanically moving said interconnecting contact means, respectively, individually and selectively from a normal position into any one of said selectable positions, said operating means comprising a plurality of linkage means adapted to connect operatively each of said operating members, respectively, with a different one of the movable actuator members of the calculating machine in such a manner that each of said selectable positions corresponds to a different position of said actuator members, respectively;

(*e*) first control means for actuating said electromagnetic means when said contact carrier means are in said selectable position, respectively;

(*f*) signal transmitting means comprising rotary switch means connected with one terminal of a source of electric energy and arranged to contact sequentially, when rotated, said contact segments of said first plate member;

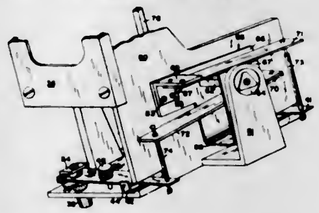
(*g*) drive means for rotating said rotary switch means;

(*h*) second control means cooperating with said first control means for actuating said drive means after said first control means have actuated said electromagnetic means and after said second plate member has been moved to said second position thereof;

(*i*) a plurality of output means connected with said second contact strips, respectively, and adapted to transmit signals depending upon said selected positions of said contact carrier members in the sequence of engagement of said rotary switch means with said contact segments, respectively, to input terminals of electrically operable devices connected at their respective other terminals with the other terminal of said source of energy; and

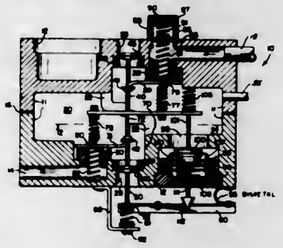
(*k*) comparatively shallow housing means surrounding all of said means and adapted to be attached from underneath to the calculating machine so as to support the latter.

3,100,078
THERMOSTATIC CONTROL MECHANISM
Richard C. Dreibelbis, Fairlawn, N.J., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 5, 1960, Ser. No. 27,007
11 Claims. (Cl. 236—47)



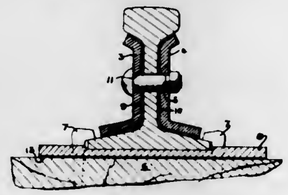
2. A dual-bleed thermostat for use in a control system comprising a frame, a first nozzle on said frame having a planar port, a second nozzle on said frame having a planar port, a bracket pivotally mounted on said frame, a first bimetallic element adjustably secured to said bracket, a second bimetallic element adjustably secured to said bracket, first means operatively connected to said first bimetallic element for closing the first port, second means operatively connected to said second bimetallic element for closing the second port, and means for moving the bracket to simultaneously adjust the first means and the second means.

3,100,079
PNEUMATIC THERMOSTAT WITH PRESSURE COMPENSATED VALVING
Edward P. Stucka, Deerfield, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 7, 1961, Ser. No. 101,456
12 Claims. (Cl. 236—87)



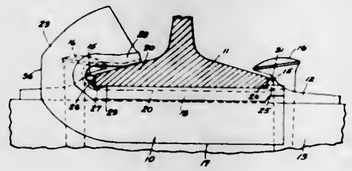
1. A pneumatic non-bleed thermostat comprising: a casing having a pressure chamber therein; inlet, exhaust and branch line passages positioned within said casing; nozzle means positioned in said inlet and exhaust passages adjacent said chamber; flapper means associated with said nozzle means; an operating shaft movably mounted within said chamber of said casing, said shaft engaging said flapper means and adapted to selectively pivot one or the other of the flapper means relative to said nozzle to open and close selectively said inlet and exhaust passages to said chamber; a bimetal mounted on said casing; lever means connected to and movable by said bimetal; means connecting said lever means to said shaft to position said shaft in accordance with movement of said bimetal; bellows feedback means positioned in part in said chamber end engaging said lever means to apply a feedback force to said lever means; second lever means positioned within said chamber and pivotally connected to said casing; biasing means being applied to each of said flapper means to offset the force on said flapper means applied by the pressure of said inlet, exhaust and branch passages to produce a predetermined minimum force difference on said flapper means, said biasing means being connected in part to said second lever means and each of said flapper means; and means connecting said bellows means to said second lever means to vary the loading of said biasing means on said flapper means with a variation in branch line pressure within said chamber to maintain said predetermined force difference on said flapper means.

3,100,080
RAILWAY RAIL JOINT
Rene A. Fiechter, Douglaston, N.Y., assignor, by mesne assignments, to American Railroad Curvelining Corporation, a corporation of New York
Filed May 27, 1957, Ser. No. 661,921
11 Claims. (Cl. 238—151)



1. A railroad rail joint comprising rail end portions and at least one additional metallic element having a surface complementary to at least a substantial proportion of the lateral surfaces of said rail end portions, said end portions and said element being substantially rigidly bonded together by the interposition throughout at least a major proportion of said complementary surfaces of a thermo-setting synthetic resin bonding agent.

3,100,081
RAIL ANCHOR
John J. Gallagher, Denver, Colo., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 17, 1957, Ser. No. 684,542
1 Claim. (Cl. 238—327)



A rail anchor comprising a steel bar having a hook at one end to provide upper and lower jaws adapted to be expanded into gripping engagement with the top and bottom surfaces respectively of a rail base flange at one side of the rail,

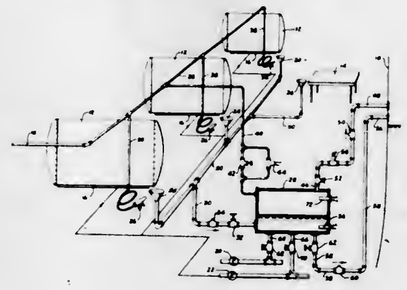
a horizontal body portion for extending across beneath the rail base and having a locking shoulder for engaging an edge of the base flange at the other side of the rail;

the said bar being T-shape in cross-section and having a vertically disposed central rigidifying flange of greater vertical width than the overall transverse width of the bar and extending lengthwise thereof and around said hook with one edge of the central flange being positioned adjacent the rail base but spaced therefrom,

and a pair of diverging lateral flanges united with the last mentioned edge of the central flange and inclined upwardly and outwardly a sufficient distance from their junction with said central flange to facilitate ready flexing thereof relative to the central flange and which terminate in flat marginal portions having frictional gripping engagement at their lateral edges and inwardly therefrom with the top and bottom surfaces of the rail base when the anchor is applied thereto;

the vertical distance between the terminal portion of the hook and said body, when the anchor is free of the rail, being less than the maximum thickness of the portion of the rail base embraced thereby, whereby said inclined lateral flanges are deflected vertically of the rail base to minimize the expansion of said bend of the hook during the application of the anchor to a rail, said locking shoulder also including a pair of diverging flanges which incline upwardly and outwardly from the central rigidifying flange and bear resiliently at their outer edges against the bottom surface of the rail to relieve the bend of the hook of excessive strains during application of the anchor to the rail.

3,100,082
BOILER ROOM FUEL TANK
Glenn L. Mullins, 360 Missouri St., San Francisco, Calif.
Filed Jan. 31, 1962, Ser. No. 170,010
2 Claims. (Cl. 239—278)

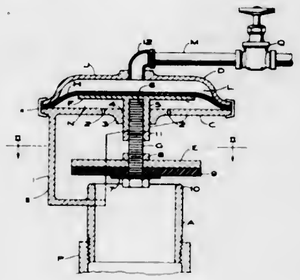


1. In a watercraft having a hull with an engine room area therein and a plurality of groups of liquid fuel burners in said engine room area, where each of said burners has a fuel containing portion mounted therein for periodic removal and cleaning, the means for facilitating periodic cleaning of said burners which comprises a tank mounted in said hull adjacent to said engine room area, liquid fuel receiving means mounted in said engine room area adjacent to each of said groups of burners, conduit means containing valve means and connecting each of said fluid receiving means to said tank for conveying fluid from said receiving means to said tank, a source of compressed air in said engine room area, selectively operable air delivery means connected to said source and mounted adjacent to each of said fuel receiving means for facilitating the transfer of fuel from a burner to said fuel receiving means and exhaust means connected to said tank for periodically emptying said tank comprising fluid discharge means extending from the bottom of said tank to a point outside said hull and conduit means containing a selectively operable valve and connecting said source to said tank.

3,100,083
WATER SPRINKLER VALVE
Willis W. Wardrup, 482 Mariposa Ave., Mountain View, Calif.
Filed May 15, 1961, Ser. No. 125,604
2 Claims. (Cl. 239—452)

1. A device of the type described comprising a vertical fluid conveying outlet pipe communicating with a source of fluid supply under pressure, the outlet end of the pipe lying in a horizontal plane and opening into

the atmosphere; an air-controlled device; a support interconnecting the air-controlled device with the pipe and spacing it above the outlet end of the pipe; said air-controlled device including a compartment for receiving air from a source of air supply under pressure, one wall of the compartment constituting a diaphragm that is flexed according to the air pressure in the compartment; a horizontally disposed disc valve having a central supporting shank mounted for vertical movement in the air control device and along the vertical axis of the pipe; the diameter of the disc valve being larger than that of the pipe so that when the fluid in the pipe lifts the valve from a closed position of contacting with the discharge end of the pipe to an open position, the disc valve will function as a fluid spreader and will cause the fluid to flow in an apron-like stream from the pipe and into the atmosphere; and a valve for controlling the flow of air under pressure into the compartment; whereby when



a flow of air under pressure into the compartment to exert a force on the diaphragm and disc valve to close the valve is greater than the fluid pressure in the pipe to open the valve, the valve will close and will stop the fluid flowing from the pipe; and when a lesser flow of air into the compartment to exert a lesser force on the diaphragm for closing the disc valve than is exerted by said fluid pressure for opening the valve, the valve will open and will act as a fluid spreader for the fluid flowing from the pipe into the atmosphere; and in which the support that interconnects the air-controlled device with the fluid outlet pipe has a vertical portion which is arcuate in horizontal cross section and will extend part way around a circle and will act as a deflector for any fluid striking it and will thus limit the angular spread of the apron-like stream of fluid issuing into the atmosphere from between the discharge end of the outlet pipe and the undersurface of the disc valve.

3,100,084
CONSTANT FLOW RATE FUEL INJECTION NOZZLE
Albert Biber, Penn Hills Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 1, 1961, Ser. No. 128,435
4 Claims. (Cl. 239—463)



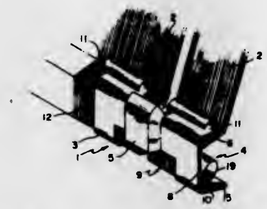
1. In a nozzle having a swirl chamber, said chamber having a longitudinal axis, said chamber being bounded by a wall curved around said longitudinal axis to define a substantially conical swirl chamber surface concentric with respect to said longitudinal axis the wider base of which is rearward in the swirl chamber, liquid passageway opening means in the rear of said chamber in the region of said conical surface and laterally remote from said longitudinal axis adapted to impart a swirling motion to a liquid along said conical surface, said passageway opening means being the only means for supplying pressurized liquid to said swirl chamber, said chamber being free of means tending to substantially disrupt the swirling motion imparted to said liquid, an orifice opening at the front of said chamber concentric with said axis, the improvement comprising at least one exposed indentation in said conical surface bounding said swirl chamber, said indentation being disposed forwardly in said chamber with respect to said passageway opening means, said indentation being spaced apart from said passageway opening means and the region of the wall surface separating said passageway opening means and said indentation being itself free of indentations thereby preventing surface channeling between said passageway opening means and said indentation, said indentation also being spaced apart from said orifice to maintain the periphery of said orifice opening free of indentations, said indentation adapted to render liquid flow rate more independent of viscosity without substantial disruption of the swirling flow pattern of said liquid.

3,100,085
SIGNAL LAMP
Samuel M. Dover, Chicago, Ill., assignor to Doray Lamp Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 15, 1962, Ser. No. 173,565
1 Claim. (Cl. 240—8.3)



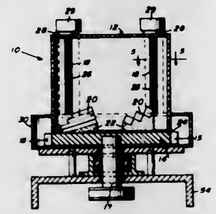
A signal lamp comprising a rubber-like housing having an encompassing side wall which is closed at one end by an integral back wall and is open at the opposite end, a lens closing the open opposite end of the encompassing wall, said encompassing wall having mounting means at said opposite end thereof around the periphery thereof and extending radially outwardly thereof and integral therewith, means forming an integral part of the rubber housing and projecting axially forwardly of the foremost part of the lens and extending around the periphery of the lens and serving as a mechanical shield for the lens, a socket holding and grounding bracket within the housing and secured thereto and having a portion thereof extending along the encompassing wall, a light bulb socket secured at one end to said portion and extending inwardly from the encompassing wall towards the center of the housing and having a light bulb at its other end, said bracket having a portion thereof extending through the encompassing side wall of the housing and bearing against said mounting means, said mounting means having a hole therethrough for receiving a mounting screw therethrough and said bracket projecting part being in a position adjacent said hole for grounding through the action of the screw.

3,100,086
FIXTURE REFLECTOR ALIGNER
Max M. Thomsen, Moundsville, W. Va., and Ernest G. Johnson, St. Clairsville, Ohio, assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 20, 1962, Ser. No. 238,846
6 Claims. (Cl. 240—103)



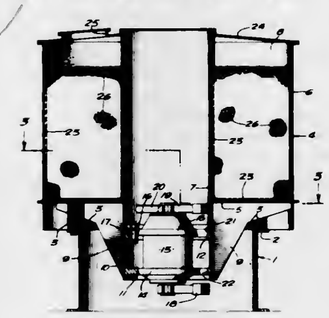
1. An aligner for connecting to one another the lower longitudinal portions of a pair of lighting fixture reflectors arranged end-to-end in close proximity to one another, the lower longitudinal portion of each of said reflectors being characterized by an outwardly extending shelf, an inwardly turned flange and a substantially vertical leg connecting said shelf and said flange, said aligner comprising a blank having a main body portion overlying the vertical leg of said reflector; a pair of upper loops spaced from one another and formed along the upper longitudinal portion of said blank, each of said upper loops being in firm frictional engagement with the outwardly extending shelf of each of said reflectors; and a pair of lower loops spaced from one another and formed along the lower longitudinal portion of said blank, each of said lower loops being in firm frictional engagement with the inside face of the vertical leg of each of said reflectors.

3,100,087
COMMINUTION DEVICE
Lyle C. McDermott, Boise, Idaho, assignor to H. G. Peckham, Boise, Idaho
Filed Mar. 22, 1961, Ser. No. 97,535
5 Claims. (Cl. 241—79)



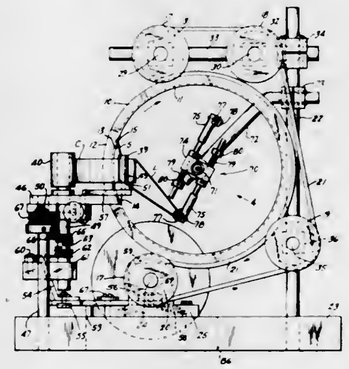
1. A comminution device comprising a stationary substantially inverted cup-shaped hood and a cutter disc disposed proximately under and rotating on an axis coaxial with said cup-shaped hood, said cutter disc having upwardly extending cutter elements projecting inside said hood, said hood having an inlet opening for receiving relatively large ore chunks into a comminuting chamber defined by said hood and said disc, said hood having a receiving chamber at the bottom portion thereof, said hood having in its sidewall at least one slot extending in a direction generally parallel to said axis, a spiral spring mounted along said slot, cover means secured to said sidewall and enclosing said spring, said cover means having an open lower end in communication with said receiving chamber, and means to vary the distance between adjacent convolutions of said spring, whereby comminuted material from said chamber entering said slot is screened by said spring and discharged to said receiving chamber.

3,100,088
VIBRATION MILLS
Henry Leveson Podmore, Wildacres, Consal, near Wetleyrocks, and Denis Fahey, Stoke-on-Trent, England, assignors to W. Podmore and Sons Limited and William Boulton Limited, jointly
Filed Oct. 20, 1961, Ser. No. 146,563
Claims priority, application Great Britain Nov. 19, 1960
11 Claims. (Cl. 241—170)



3. A grinding, deburring and polishing mill or the like, comprising a container adapted to receive material to be ground, a plurality of independent and freely disposed media for grinding, deburring, polishing or burnishing in said container, means resiliently supporting said container, means for imparting high frequency vibration to the container about a substantially vertical axis, said vibration having a vertical component and a rotational component, the interior of said container being defined by a continuous outer wall and a continuous inner wall spaced therefrom to aid in the transfer of vibrational energy to the grinding media.

3,100,089
WINDING APPARATUS AND TENSIONING MEANS THEREFOR
Paul H. Norrholm, 91 Midland Blvd., Lake Ronkonkoma, N.Y.
Filed Feb. 12, 1962, Ser. No. 172,473
6 Claims. (Cl. 242—6)



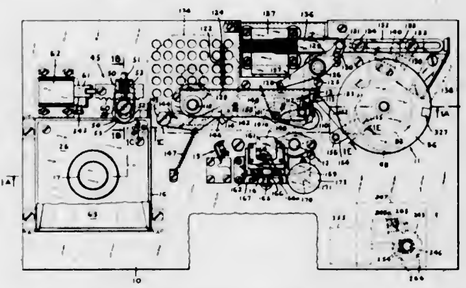
1. In a device of the character described, an annular shuttle adapted to hold a supply of strip material which is fed therefrom through the bottom thereof, a base, means mounting said shuttle on said base for rotation, power means operatively engaging said shuttle for rotating the

same, a support carried by said base for rotatably mounting a coil thereon in a plane in angular relation to the plane of said shuttle and through the axial opening of which coil the shuttle moves in its rotation for winding the strip material in covering relation on the periphery of the coil, a rotatably mounted tensioning means, biasing means exerting a pressure on said tensioning means retaining said tensioning means against too free rotation, said tensioning means including spaced elements mounted thereon for turning movement into and out of the path of movement of said strip material as the same is fed from said shuttle with the rotation thereof to thereby form in said strip material loops extending about said elements respectively between the shuttle and the attachment of said strip material to said coil, means biasing said elements to normally dispose the same in the path of movement of said strip material whereby the loops formed about said elements respectively function to rotate the tensioning means a partial rotation and producing by said biasing of said tensioning means against too free rotation a tautness in the loops as the same are wound on said coil, and whereby each loop rotates the element about which it engages out of the path of movement of said strip material with the movement of said element into adjacent relation with the coil to thereby free the loop therefrom and discontinue turning of said tensioning means until a subsequent loop is formed in the strip material.

3,100,090
MAGNETIC TAPE MAGAZINE CHANGER MECHANISM

John D. Goodell, Greenwich, Barbara Ivins, Milford, John C. Wistrand, Stamford, and Vasil Tasi, Bridgeport, Conn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Sept. 2, 1959, Ser. No. 837,716
13 Claims. (Cl. 242—55.13)



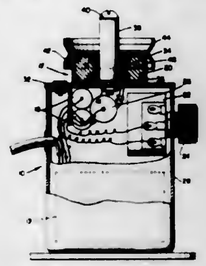
1. In tape recording-reproducing apparatus, the combination of means forming a tape cartridge receiving well capable of containing a stack of tape cartridges therein, platform means slidably mounted in said well and capable of supporting said stack of tape cartridges thereon, means urging said platform means upwardly in said well, and means operable to index tape cartridges in said stack on said platform successively to and out of a reference position, while said tape cartridges remain in said stack.

3,100,091
YARN TENSIONING DEVICE

Daniel J. Mindheim, Glen Cove, and Howard C. Lindemann, Westbury, N.Y., assignors to Lindley & Company, Incorporated, Mineola, N.Y., a corporation of New York

Filed Mar. 20, 1961, Ser. No. 123,914
14 Claims. (Cl. 242—150)

1. A yarn tensioning device comprising a cup-shaped case comprising an outer peripheral wall and bottom wall of magnetic material, an annular electromagnet coil received in said case and having a central hole, a lower disk element overlying said coil and having a central hole, and an upper disk element overlying said lower disk element, said upper disk element having a central stem portion of magnetic material extending down through the central hole of said lower disk element and into said

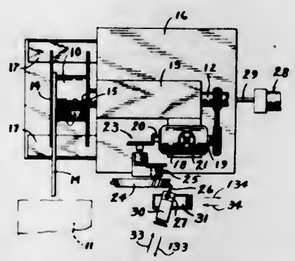


central hole of said coil whereby said upper disk element is drawn magnetically toward said lower disk element when said coil is energized to apply tension to a yarn running between said disk elements, said upper disk element and stem portion comprising a composite structure whereby said upper disk element by said stem portion is kept centered with said lower disk element and moves axially with said stem portion.

3,100,092
WINDING APPARATUS

Richard F. Herr, Cortland, Ohio, assignor, by mesne assignments, to Rio Algom Mines Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed Aug. 18, 1959, Ser. No. 834,560
5 Claims. (Cl. 242—158.4)



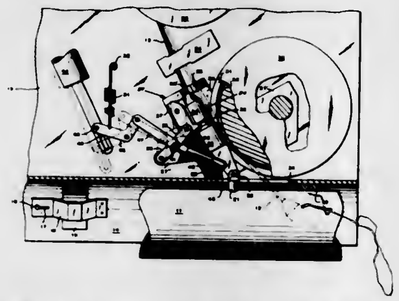
1. For use with apparatus wherein tenuous material is fed longitudinally to a rotating mandrel extending transversely of the material and wherein such material is adapted to be wound upon the mandrel in a predetermined pattern to form a coil, the combination comprising a cam rotatable with the mandrel and providing an elongated continuous cam surface of a predetermined width which is inclined, as respects the cam axis, from side-to-side whereby cam surface portions spaced axially of said cam are of different peripheral lengths, means for varying the relative rotational speeds of said cam and said mandrel, a follower engaged with said cam and adapted to be shifted from a normal position upon cam rotation, a fluid control valve actuated by movement of said follower, and a fluid cylinder connected with said valve and effecting relative movement between said material and said mandrel in a direction axially of the latter upon displacement of said follower from its normal position to thus properly position successive material convolutions longitudinally of said mandrel and substantially simultaneously effecting relative movement between said cam and said follower to

return the latter to its normal position, said follower being adjustable from side-to-side of said cam surface for selective engagement with axially spaced portions thereof to provide for adjustment of the motion imparted to said follower by said rotating cam and thus provide for adjustment of the relative movement between said material and said mandrel.

3,100,093
APPARATUS FOR TOWED AIRCRAFT

Edward J. McQuillen, Huntingdon Valley, and Francis X. Murphy, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Navy

Filed Aug. 28, 1962, Ser. No. 220,099
10 Claims. (Cl. 244—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)

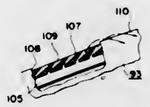


1. A launching, retrieving and securing apparatus for towing an aircraft, comprising: a fairing formed to be fixed to the underside of a towing airplane, motorized reel contained in said fairing adapted to be controlled from a remote station, a towline connected at one end thereof to said reel, swivel means connected to the other end of said towline and formed to be pivotally connected to the normally disposed topside of the towed aircraft, saddle means formed on the bottom of said fairing to nestle the topside of the towed aircraft when in a secured position, a plurality of resilient means secured to the lower surface of said saddle means for providing compliance between said saddle means and the towed aircraft in the secured position, said saddle means forming an opening for admitting said towline and said swivel means into said fairing, a support housing fixed within and to said fairing adjacent to said opening for slidably receiving said swivel means, said support housing being formed therein to constrain said swivel means against forward and lateral motion when in the secured position, sheave means rotatably connected to said support housing having the sheave groove thereof tangentially abutting said swivel means when in the secured position to constrain the latter against aftward motion and to provide rolling contact for said towline during launching and retrieving, a notch formed in said swivel means, pawl means pivotally connected within and to said support housing for normally latching into said notch when said swivel means is in the secured position, toggle means operatively connected between said pawl means and said support housing, cocking plunger means retractably extending into said support housing and pivotally connected at one end to said toggle means for actuation thereof, the other end of said plunger means normally obstructing the admission of said swivel means into said housing, actuating means connected within and to said fairing adapted to be controlled from the remote station, lost-motion means operatively connected between said actuating means and said toggle means, and force-exerting means operatively connected between said fairing and said toggle means for maintaining said pawl means and said plunger means in latching and obstructing positions respectively; whereby positive securement of the towed aircraft can be obtained irrespective of ambient turbulence, airspeed and altitude.

3,100,094
SWEPTWING JET FLOW CONTROL MEANS

Roger W. Griswold II, Old Lyme, Conn.

Filed Nov. 21, 1960, Ser. No. 70,833
5 Claims. (Cl. 244—42)

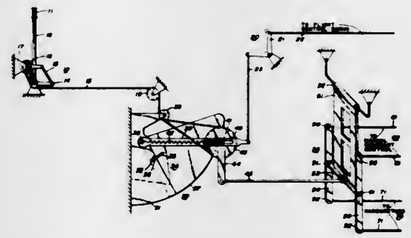


1. An aircraft wing having a sweptback leading edge surface relative to the freestream flow thereover, means defining a series of rearwardly and outwardly directed nozzles adjacently disposed in said surface, power means selectively operable to provide pressurized fluid flow to said nozzles and effective to discharge relatively high velocity blowing jets therefrom flowing in semi-volute streamline paths upwardly and over said surface and remaining effectively attached thereto in general alignment with the contiguous local flow thereover and over said wing, whereby the lift of said wing is increased and the drag thereof concurrently reduced by said blowing jets.

3,100,095
TWIN ENGINE THROTTLE SYNCHRONIZER

Robert H. Jespersen, West Haven, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Oct. 19, 1961, Ser. No. 146,386
4 Claims. (Cl. 244—83)



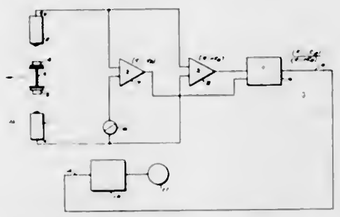
1. A throttle synchronizer for simultaneously controlling at least two engines having carburetor throttle arms comprising: Mixing means for connection to said carburetor throttle arms of said engines, said mixing means having a plurality of pivotal members each connected at a first extremity to a different one of said carburetor throttle arms, a member having two ends hinged at one end for rotation thereabout, said pivotal members being pivotally attached at the midpoints thereof to said second end of said hinge member; first control means pivotally connected to said pivotal members at a second extremity opposite said first pivotal member extremity to control said mixing means by pivoting said pivotal members about their midpoints thereby regulating said carburetor throttle arms connected to said first extremity of said pivotal members; second control means connected to said second end of said hinge member for moving the same about its first end thereby pivoting said pivotal members and synchronously throttling said engines.

3,100,096
STREAMLINED HOUSING FOR AIRCRAFT SAFETY EQUIPMENT
Robert D. Smith, 2742 E. Tremont Ave., Bronx 61, N.Y.
Filed Nov. 14, 1962, Ser. No. 237,631
3 Claims. (Cl. 244—117)



1. In an airplane including a fuselage and airfoils for providing lift, and further including safety equipment requiring a plurality of transverse cords on the underside of said fuselage, the combination of a plurality of parallel transverse cord housings, each of said housings comprising a transverse upward depression, a door, means for movement of said door from a closed position to an open position, said door in a closed position being within said depression and flush with the outer side of said fuselage and said door in an open position being retracted inwardly within said fuselage.

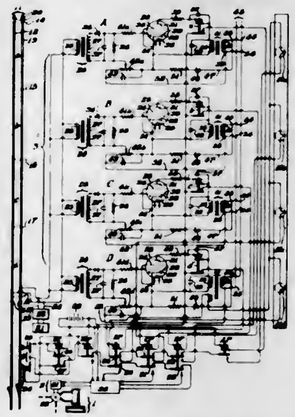
3,100,097
METHOD FOR HOT BOX DETECTION
Friedrich W. Woltersdorf, Braunschweig, Germany, assignor to Siemens & Halske, Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany
Filed Dec. 9, 1959, Ser. No. 858,307
Claims priority, application Germany Dec. 15, 1958
7 Claims. (Cl. 246—169)



5. A hot box detecting system comprising a pair of heat sensor means adapted to be mounted on opposite sides of a railroad track and further adapted to produce first and second electrical signals in response to incident radiant energy emitted by passing journal boxes, electrical difference-determining means coupled to said first and second signals to provide a third signal commensurate with the difference in magnitude between said first and second signals, electrical adding means coupled to said first and second signals to provide a fourth signal commensurate with the sum of said first and second signals, electrical ratio forming means responsive to said third and fourth signals and operative to provide a fifth signal commensurate with the ratio between said third and fourth signals, and means responsive to said fifth signal to provide an output indication whenever the magnitude of said fifth signal exceeds a predetermined threshold magnitude.

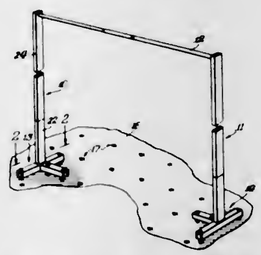
3,100,098
AUTOMATIC RETARDER SYSTEM FOR A RAILROAD CLASSIFICATION YARD
Archibald M. Crawford, 6427 Kentucky Ave., Pittsburgh 6, Pa.; Kenneth M. Lockerby, 1900 Pennsylvania Blvd., Philadelphia 3, Pa.; and Robert H. Brown, 30 Devonwood Road, Wayne, Pa.
Filed July 12, 1962, Ser. No. 212,179
4 Claims. (Cl. 246—182)

1. In a railroad car retarder system having retarder means disposed along a track and adapted to apply different amounts of retarding force to a passing railroad car according to the different control signals applied thereto; voltage generator means connected across the track at a control point located near to said retarder means, said voltage generator means being characterized by having poor voltage regulation; a plurality of voltage-sensitive switching means connected in parallel across said track at said control point for sensing the track voltage at said point; a plurality of time-delay relays, one controlled by each of said voltage-sensitive switching means, each of said time-delay relays being set to operate at the expiration of a different time period following de-



energization, each of said voltage-sensitive switching means being operative to de-energize its associated time-delay relay at the low track-voltage level which exists at said control point when a railroad car shunts the track at said control point, each of said voltage-sensitive switching means being biased differently and operative to re-energize its associated relay at a different track-voltage level at said control point, whereby each time-delay operates only in the event said relay is not re-energized during its time-delay period; and means for applying to said retarder means a control signal controlled by that one of the time-delay relays which has operated and which also has the shortest time delay.

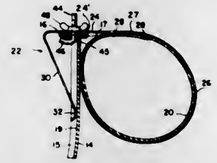
3,100,099
SUPPORT FOR DISPLAY RACK OR THE LIKE
Edward E. Schaefer, 1534 Park Ave., River Forest, Ill.
Filed Dec. 20, 1960, Ser. No. 77,212
4 Claims. (Cl. 248—194)



1. In a support of the character described, the improvement which comprises a rigid base adapted to be supported in generally horizontal relation above a generally horizontal supporting surface such as a floor, said base having three triangularly spaced threaded bores adapted to extend generally vertically relative to the supporting

surface, adjustable screw members threadedly engaged in said bores and projecting downwardly from said base, said screw members having means at the lower ends thereof for self-adjusting substantially rigid engagement with the supporting surface and the upper ends of said screw members being accessible from the upper side of said base and the upper ends of said bores for effecting leveling of the base, and an anchor element extending downwardly and loosely through said base, said anchor element having a threaded lower end portion engageable with a cooperating threaded opening in said surface and an upper end portion engageable in abutting relation with said base and accessible from the upper side of said base, whereby, after leveling of the base has been effected by said adjustable screw members, said anchor element can be tightened for clamping the leveled base to said surface.

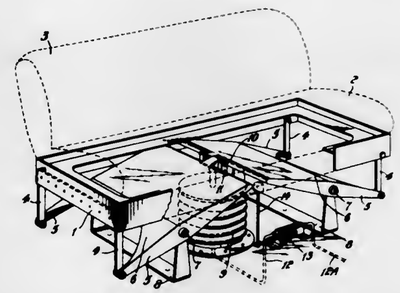
3,100,100
BRACKET FOR AN OUTBOARD STABILIZING ELEMENT FOR A CANOE, ROWBOAT AND THE LIKE
Edward W. Carpenter, 35318 Main St., Wayne, Mich.
Filed Aug. 28, 1961, Ser. No. 134,401
1 Claim. (Cl. 248—214)



The combination with a boat having an upright side wall provided at its upper edge with a longitudinally extending rim, of a bracket having a substantially horizontal base extending across and shiftable transversely upon said rim, said base being provided with a plurality of longitudinally spaced holes, said base also having horizontal endwise extensions respectively projecting laterally inwardly and laterally outwardly relative to said rim, said outwardly projecting extension being provided at its outer end with a downwardly projecting loop-shaped member having an end portion extending outwardly beneath and secured in surface-to-surface relation with said outwardly projecting extension whereby said loop-shaped member may receive and constitute a holder for an inflated outboard stabilizing element, said inwardly projecting extension having at its inner end a downwardly projecting outwardly inclined spring arm engaging the inner surface of the upright side wall of said boat and operable to shift the base of said bracket transversely upon said rim to move said loop-shaped member against the outer surface of the upright side wall of said boat, and means for detachably securing the shiftable base of said bracket to the upper longitudinally extending rim of said boat, said means consisting of a bolt extending upwardly through an opening in said rim and through a selected hole in said base, and a nut above said base and threadedly engaging the upper end of said bolt.

3,100,101
VEHICLE SEAT SUSPENSION MEMBER
Henry William Trevaskis, Point Pleasant, Blackdown, near Leamington Spa, England, assignor to Dunlop Rubber Company Limited, a British company
Filed July 26, 1960, Ser. No. 45,360
Claims priority, application Great Britain Aug. 8, 1959
5 Claims. (Cl. 248—399)

1. A pneumatically supported seat for motor vehicles which comprises a seat element, a supporting element for said seat element comprising a bracket, a variable volume pneumatic member having one end mounted on said supporting element and the opposite end free to move, a lever member pivoted intermediate its ends on said bracket, one end of said lever being connected to the movable end of said pneumatic member and the other end of said lever being connected to said seat element, said pneumatic member being contractible by sub-atmospheric



pressure to draw said free end toward said end mounted on said supporting element and to move said seat element away from said supporting element, a control valve mounted on one of said elements to open said valve to a source of sub-atmospheric pressure when said elements move toward each other and to open said valve to atmospheric pressure when said elements move away from each other.

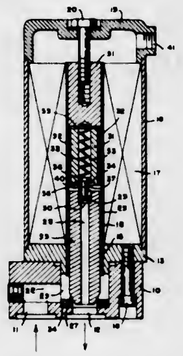
3,100,102
TUBE CLAMP FLOW CONTROL DEVICE
Rufus De Haan, 3110 W. Michigan Ave., Kalamazoo, Mich.
Filed July 19, 1960, Ser. No. 43,901
2 Claims. (Cl. 251—9)



1. A flow control device comprising:
a resilient, compressible tube;
an elongated, tubular handle member through which said tube extends, said handle member having a cut-away portion defining an opening in said handle member;
an elongated, plate-form member extending substantially axially within said handle member and lying adjacent the tube, said plate-form member being mounted adjacent said cut-away portion for movement in a direction transverse to said tube to open and close said tube;
an L-shaped lever pivotally mounted on said handle member adjacent said cut-away portion for movement toward and away from said plate-form member. said lever having first leg means movable through said opening and engageable with said plate-form member for moving same in said direction transverse to said tube, said lever having manually engageable, second leg means;
a slide member slidably mounted on said second leg means and receivable into said opening in said handle member when said first leg means is causing said plate-form member to compress and thereby close said tube, said slide member being slidable along said second leg means between a first position where it can move with said second leg means through said opening and a second position wherein said slide

member extends into the interior of said handle member to a point spaced axially from said opening, said slide member when in said second position being urged against an inner wall of said handle in response to the urging of said first leg by the compressed resilient tube, whereby movement of said slide member out of said handle member is positively opposed.

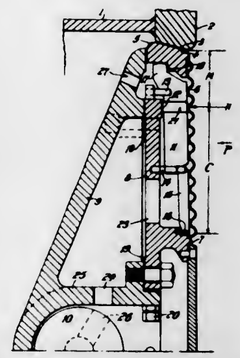
3,100,103
ELECTRO-MAGNETICALLY ACTUATED PILOT AND MAIN VALVE
Robinson D. Bullard, Box 519, Springfield, Vt.
Filed June 19, 1959, Ser. No. 821,499
6 Claims. (Cl. 251—30)



1. A solenoid operated valve comprising in combination, a body; an inlet to said body; an outlet from said body; a valve seat between said inlet and outlet; a reciprocable main closure made from magnetizable material adapted to cooperate with said valve seat to interrupt the flow of fluid through said valve; a solenoid winding surrounding said main closure; means responsive to fluid pressure acting within said inlet for causing said main closure to seat; and means independent of, and separate from said main closure and responsive to the energizing of said solenoid winding for rendering ineffective said pressure responsive means, whereby the flux generated between said coil and said main closure by the energizing of said solenoid winding causes the movement of said main closure away from said valve seat in said body.

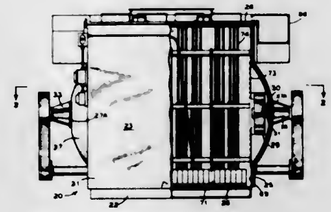
3,100,104
BUTTERFLY VALVE HAVING A SEALING SURFACE MOUNTED FOR AXIAL MOVEMENT
Walter Lancelot Moore, Cerne Abbas, Dorset, England, assignor to Boving and Co. Limited, London, England, a British company
Filed Mar. 30, 1960, Ser. No. 18,716
Claims priority, application Great Britain Apr. 10, 1959
15 Claims. (Cl. 251—175)

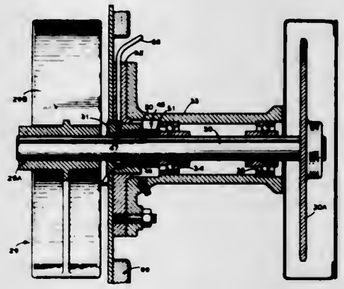
1. A butterfly valve comprising two main parts, namely a cylindrical casing and a circular valve disc pivoted in said casing about an axis transverse to the axis of said casing, means for turning said valve disc about its pivotal axis to closed and open positions respectively in said casing, a first peripheral sealing surface member on said casing, a second peripheral sealing surface member on said valve disc, said sealing surface members being mutually opposed in surface sealing contact in said closed position of said valve disc, a circular flexible diaphragm on one of said main parts and carrying one of said sealing surface members, and means on said one of said main parts supporting said diaphragm intermediately radially across a concentric circular line of rest in deflection of said diaphragm and defining therein a



circular node about which deflection of said diaphragm effects axial movement of the sealing surface member carried by said diaphragm.

3,100,105
DEGREASER
Max Randall, Spring Valley, N.Y., assignor to Ramco Equipment Corp., New York, N.Y., a corporation
Filed Nov. 18, 1959, Ser. No. 853,902
4 Claims. (Cl. 259—103)

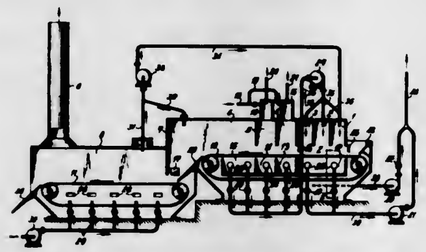




1. For use in a parts cleaning machine comprising a tank adapted to contain a cleaning fluid, said tank having opposed side walls, means for agitating the fluid within said tank during a cleaning operation, said means including an impeller disposed within said tank adjacent each of said side walls, a drive shaft connected to each of the impellers, each of said shafts extending through the adjacent side wall of said tank, a bearing sleeve connected to the outer surface of said side walls, bearing means for rotatably supporting said shafts in said respective bearing sleeve, the improvement of sealing means disposed about each of said shafts between the side wall and bearing means thereof to prevent leakage of fluid from said tank

to said bearing means, each of said sealing means including a mechanical seal on the tank side of said bearing means, means forming an air seal on the tank side of said mechanical seal, and a flexible lip seal disposed about said shaft between said air seal and said mechanical seal, said lip seal functioning as a one way check to prevent the back pressure of said respective air seals from acting against the sealing effect of the mechanical seals and to enhance the operation of said sealing means when the air seals are rendered inoperative, and a second more feathery lip seal disposed about said shaft between the tank and said air seals to effect uniform distribution of air about the entire circumference of said shaft and to prevent the leakage of fluid from said tank to said air seal when the latter are rendered inoperative.

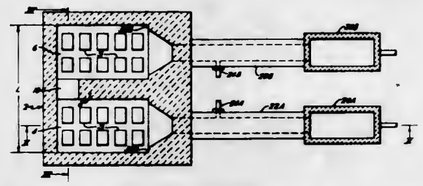
3,100,106
PROCESS AND APPARATUS FOR THE DRYING AND BURNING OF PELLETS
Waldemar Bielenberg, Cologne-Klettenberg, Franz Rodis and Hans Werner Ziegler, Knapsack, Gunter Dronsek, Amberg, Oberpfalz, and Arnulf Hinz, Knapsack, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
Filed Jan. 11, 1961, Ser. No. 82,091
Claims priority, application Germany Jan. 13, 1960
17 Claims. (Cl. 263—8)



12. An apparatus for the continuous drying and burning of mineral pellets which comprises a drying chamber, a following calcining chamber connected to said drying chamber and provided with gas burners, a following sojourn chamber connected with said calcining chamber, a heat compensation chamber connected with said sojourn chamber, a first traveling grate passing through said drying, calcining and sojourn chambers in the order stated, a cooling chamber, said chambers being walled chambers, a second traveling grate running through said cooling chamber at a lower level than said first grate, the individual chambers being provided with gas inlet means and gas outlet means extending through said walls in a manner such that said gas outlet means are disposed below the first traveling grate, cooling gas inlet means are disposed below the second traveling grate, and suction means connected with said gas outlet means.

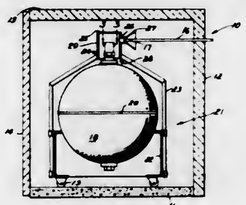
3,100,107
SOAKING PIT
George S. Mican, Pittsburgh, Pa., and Clarence W. Sidwell, Flossmoor, Ill., assignors to United States Steel Corporation, a corporation of New Jersey
Continuation of application Ser. No. 709,675, Jan. 17, 1958. This application Nov. 23, 1960, Ser. No. 71,212
9 Claims. (Cl. 263—15)

1. A soaking pit for heating ingots comprising a heating chamber for receiving ingots, vertical columns spaced apart longitudinally and transversely of said heating chamber, spaced horizontal beams supported by said columns beneath said heating chamber for supporting the heating chamber, the spacing of said columns and the distance between the bottoms of said beams and the bottoms of said columns being such as to permit free circulation of air and ready accessibility to the bottom of said heating chamber, a heat exchanger for heating air, a long generally horizontal flue connecting said heat exchanger to said chamber, means for delivering fuel into said flue at the end adjacent said chamber, and means for supporting said flue with an air space therearound, said last named



means including vertical columns spaced apart longitudinally and transversely of said flue, spaced horizontal beams supported by said last named columns beneath said flue for supporting said flue, the spacing of said last named columns and the distance between the bottoms of said last named beams and the bottoms of said last named columns being such as to permit free circulation of air and ready accessibility to the bottom of said flue.

3,100,108
PURGING APPARATUS
Nathan Selikson, Sunland, Calif., assignor to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed Apr. 26, 1961, Ser. No. 105,597
6 Claims. (Cl. 263—40)

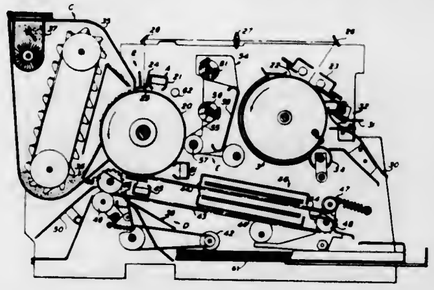


1. Apparatus for preventing the introduction of contaminants into a tank containing an inert gas during heat treatment of said tank in a furnace comprising: a pressure relief valve adapted to be secured to the tank for selectively releasing the gas contained in the tank, an enclosure having openings therein, means supporting the enclosure about the valve, and means for supplying an inert gas to the enclosure under predetermined pressure exceeding the pressure within the furnace to provide a neutral atmosphere about the relief valve.

3,100,109
PAPER GRIPPER MECHANISM
Roger H. Eichorn, Webster, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Dec. 23, 1960, Ser. No. 77,956
8 Claims. (Cl. 270—79)

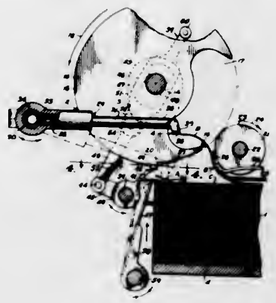
1. In a sheet feeding apparatus having conveyor chains adapted to transport a sheet gripping device from a sheet receiving station to a sheet delivery station, wherein the sheet gripping device includes a gripper bar secured to said conveyor chains transversely therebetween, a sheet gripper jaw portion on said gripper bar serving as a common lower gripper jaw, a plurality of grippers pivotably secured on said gripper bar, each of said grippers being pivotally mounted on said gripper bar, each of said

grippers having jaw portions thereon adapted to cooperate with said sheet gripper jaw portion to grip a sheet therebetween, and cam follower portions on each of said grippers adapted to be actuated by cams located adjacent and between said conveyor chains at said sheet receiv-



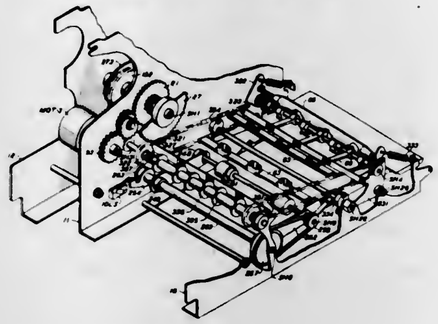
ing station and said sheet delivery station, and springs operatively connected to said gripper bar and to each of said cam follower portions of said grippers to normally bias said jaw portions of said grippers into cooperative engagement with said sheet gripper jaw.

3,100,110
APPARATUS FOR REMOVING BLANKS OR SHEETS FROM THE TOP OF A SUPPLY STACK
Richard Winkler, Rengsdorf, near Neuwied, Rhineland, and Kurt Dünnebier, Wollendorf, near Neuwied, Rhineland, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 21, 1961, Ser. No. 153,864
Claims priority, application Germany Feb. 1, 1961
9 Claims. (Cl. 271—28)



1. In combination with means for removing blanks from the top of a supply stack, elevating means for supporting the supply stack, a first means for holding down a marginal face portion of a topmost blank in the stack, means supporting said holding means for movement out of and into holding contact with the marginal face portion of the topmost blank in the stack, a second holding means, means for supporting the second holding means for movement into and out of holding contact with the marginal face portion of the succeeding blank, means for alternately actuating the respective holding means so that one is bearing upon the marginal face portion of a blank when the other is out of holding position, means for actuating the elevating means, and means responsive to said first holding means for effecting operation of the elevating means after removal of a few of the blanks to maintain the blanks in the stack in position to be removed by said blank removing means.

3,100,111
SHEET FEED MECHANISM
Roger H. Eichorn and John W. Melville, Webster, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Dec. 28, 1961, Ser. No. 162,760
4 Claims. (Cl. 271—36)

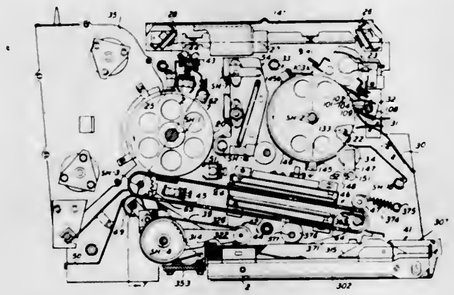


1. In a sheet feeding apparatus,
the combination of a frame,
a supply tray mounted on said frame to support a pile of sheets,
a torque tube journaled in said frame adjacent said supply tray,
arm means mounted on said torque tube so as to move therewith and to extend over said supply tray,
paper feeding means mounted on said arm means adapted by engagement with the top sheet of the pile to move the top sheet edgewise from the pile,
means positioned on said frame and operatively connected to said torque tube to thereby rotate said torque tube from a first position in which said paper feeding means are out of engagement with the top sheet of the pile to a second position in which said paper feeding means are in engagement with the top sheet of the pile,
drive means connected to said paper feeding means to actuate said paper feeding means when in contact with the top sheet of the pile,
and stop means connected to said torque tube for movement therewith, said stop means being adapted to engage said drive means to limit the operation of said paper feeding means in relation to the height of the pile of sheets in said supply tray.

3,100,112
DOCUMENT FEED MECHANISM
Howard C. Davis, Columbus, Ohio, Roger H. Eichorn, Webster, N.Y., Frazer D. Punnett, Worthington, and Harold E. Trumbull, Columbus, Ohio, and John W. Wagner, Penfield, N.Y., assignors, by direct and mesne assignments, to Xerox Corporation, a corporation of New York
Filed Dec. 23, 1960, Ser. No. 77,953
8 Claims. (Cl. 271—53)

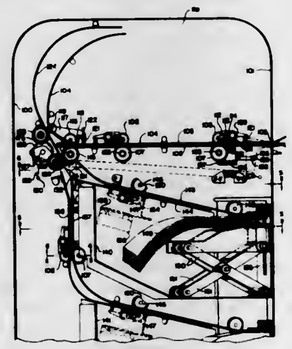
1. A document feed mechanism for conveying a document from a document feeding station through a copying station, the document feed mechanism including
a rotary cylinder,
document gripper means carried by said cylinder, said document gripper means including gripper fingers adapted to cooperate with the peripheral surface of said cylinder to engage the leading edge of a document,
spring means attached to said cylinder and connected to said document sheet gripper means for normally biasing said gripper fingers into cooperating relationship with said cylinder,

means for rotating said cylinder in a path past a document feeding station and then a copying station,
means to hold and align a document tangentially to said cylinder, said means being located at said document feeding station adjacent said cylinder,
said means to hold and align a document including a rod positioned parallel to and adjacent said rotary cylinder supporting retaining means positioned to rest against said cylinder to yieldingly hold a document against said cylinder, and document stops, and biasing means connected to said document stops and



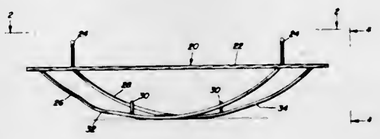
said rod to normally bias said document stops against the peripheral surface of said cylinder;
and interposer means movably positioned adjacent said cylinder for movement from a first position in which said interposer means is in operative relationship to said document gripper means to actuate said document gripper means as it is advanced adjacent said means to hold and align a document during each rotation of said cylinder, and to a second position in which said interposer means is out of operative relation to said sheet gripper means.

3,100,113
CHECK FEEDING AND ALINING MECHANISM
John W. Bennett, Bellbrook, and Franklin W. Perry, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Nov. 1, 1960, Ser. No. 66,599
7 Claims. (Cl. 271—71)



1. In a sheet-feeding mechanism, the combination of a first means for feeding a sheet along a first path;
means located in said first path for deflecting the leading edge of the sheet along a second path;
second feeding means located along said second path and within a sheet length from said first feeding means, said second feeding means feeding the sheet along a third path the direction of which is substantially opposite to the first and second paths;
means located adjacent the first and second paths supporting said first and second feeding means, said means being operable by the engaging of the sheet by said first feeding means for automatically disabling the second feeding means;
and means engaging said supporting means for operating said supporting means whereby said second feeding means engages said sheet for feeding the sheet along said third path upon the disengagement of the sheet from said first feeding means.

3,100,114
TOY ROCKING DEVICE
Bernard Rimland, 5348 W. Falls View, San Diego, Calif.
Filed Apr. 23, 1962, Ser. No. 189,563
2 Claims. (Cl. 272—56)



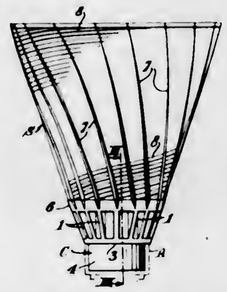
1. A toy rocking device comprising:
(A) A seat;
(B) and two elongated floor engaging rockers supporting the seat, said rockers being laterally spaced from one another,
(*a*) at least part of the floor engageable surface of one of the rockers having a curvature different from that of the curvature of the floor engageable surface of the other rocker at an approximate right angle with respect to a direction which extends lengthwise of the said one rocker.

3,100,115
PORTABLE BACKSTOP FOR ARROWS
James C. Breneman, Charleston Township, Kalamazoo County, Mich. (10571 Miller Drive, Galesburg, Mich.)
Filed May 11, 1961, Ser. No. 109,290
3 Claims. (Cl. 273—102.4)



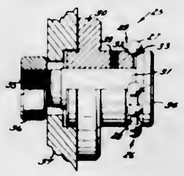
1. A backstop for a target, comprising: a frame structure and means for supporting said frame structure upon a surface adjacent a target; reel means supported upon said frame structure for rotation around a substantially horizontal axis and actuating means for rotating said reel means; a flexible curtain having one edge secured to said reel means and extending lengthwise of the rotational axis thereof, said curtain being capable of extending from said reel to a point below said target; a plurality of elongated elements supported upon said curtain and depending from the lower side thereof when said curtain is extended; and means for holding said curtain at an acute angle with respect to said surface so that said elements depend from said curtain in substantially parallel positions and at angles which are substantially complements of said acute angle.

3,100,116
SHUTTLECOCKS
Brian Edward Fagan, Sandwich, and Cecil Cuthbert, Ramsgate, England, assignors to Nash Plastics Limited, Sandwich, Kent, England, a company of England
Filed Nov. 7, 1960, Ser. No. 67,745
Claims priority, application Great Britain Nov. 13, 1959
6 Claims. (Cl. 273—106)



1. A shuttlecock comprising a skirt which is formed of plastic material, a cap, and rotation producing means between the cap and the skirt, including blades arranged only internally of the outer surface of the rotation producing means, said blades extending axially of the shuttlecock and being offset to the true radius thereof and exposed to air passing thereover when the shuttlecock is in flight to impart rotation to the shuttlecock.

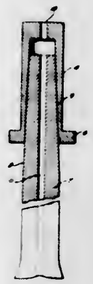
3,100,117
FLOATING ARBOR
John A. Schneider, Lansing, and Theodore Pasch, North Muskegon, Mich., assignors to A. D. Schneider and Company, Lansing, Mich., a partnership
Filed Nov. 30, 1960, Ser. No. 72,643
6 Claims. (Cl. 279—66)



1. An arbor device comprising: a first member; a second member axially moveable in respect to said first member, said first and second members defining therebetween an annular groove and said annular groove having a common axis with said first and second members; a plurality of spaced apart freely rotatable balls retained in said groove and radially moveable in accord with the selective opening and closing of said groove; and means for selectively urging said first and second members toward and away from each other.

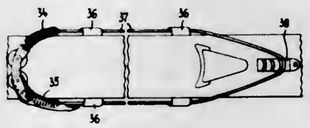
3,100,118
HOLDING SLEEVE FOR A ROCK DRILL
Masahisa Terao, 36 2-chome, Magaike-cho, Showaku, Nagoya, Japan
Filed May 22, 1961, Ser. No. 111,825
2 Claims. (Cl. 279—103)

1. A holding sleeve for a rock drill and hammer, said holding sleeve being relatively short in length and extending into the stock of a drill for about its entire length, flat external faces on said sleeve adapted to fit a flat faced recess in the stock of a drill, said sleeve having an inner tapered seat formed therein, said seat extending from one end of the sleeve and partly through said sleeve, a drill bar, a tapered tip on one end of said drill bar, said tapered



tip fitting into said tapered seat and resting thereon in the assembled position of the parts.

3,100,119
TIGHTENING DEVICE FOR SKI BINDINGS
Hannes Marker, Alpspitzstr. 37, Garmisch-Partenkirchen, Germany
Filed May 4, 1961, Ser. No. 107,739
Claims priority, application Germany May 9, 1960
9 Claims. (Cl. 280—11.35)



1. A tightening device for ski bindings, said device being mountable on a ski and being engageable with the heel of a ski boot, comprising:

two, substantially rectilinear, coil springs arranged to extend along the two longitudinal sides of the heel from the front to the rearward end thereof;

a tightening lever having a long lever arm and a short lever arm, the tightening lever being pivotally movable in a plane which extends lengthwise of the ski, the short lever arm being pivotally connected to the rearward end of one spring;

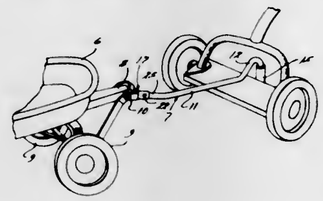
a link pivotally connected at its respective ends to said long lever arm and to the rearward end of the other spring, said link being adapted to be disposed behind the rear end of the heel and extend substantially crosswise thereof;

a first roller connected to the rearward end of said one spring for rotation about an axis perpendicular to the plane of movement of the tightening lever;

a second roller connected to the rearward end of said other spring for rotation about an axis perpendicular to the plane of movement of the tightening lever;

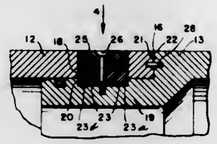
said rollers being disposed between the rearward ends of said springs and being of such size that they extend inwardly a substantial distance beyond the innermost edges of said tightening lever and said link so that the portion of the periphery of said rollers closest to the heel will engage the heel and hold the rearward ends of the springs out of engagement with the heel.

3,100,120
WAGON HANDLE
John R. Cleary, Lathrup Village, Mich., assignor to Cleary Manufacturing Co., Warren, Mich., a corporation of Michigan
Filed Apr. 21, 1961, Ser. No. 104,550
4 Claims. (Cl. 280—87.01)



1. The combination with a wagon having steerable front wheels and a projecting steering mechanism therefor having an aperture, of a handle having a bifurcated end portion containing apertures aligned with the aperture in the steering mechanism, and a bolt for securing said bifurcated end portion to said mechanism for vertical pivotal movement thereon, said handle having a tubular body portion the pulling end of which is of downwardly presenting substantially U-shape located in a plane normal to a plane through the axis of the bolt to form a handgrip which is spaced from but in position to be intersected substantially medially of its ends by an extension of the end of the body portion.

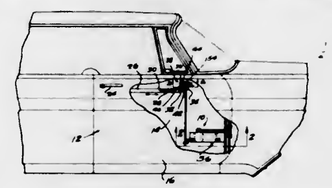
3,100,121
JOINT LOCK RING FOR THIN WALLED CYLINDERS
Willy Hillmer, 405 Alpine St., Pasadena, Calif.
Filed Mar. 26, 1959, Ser. No. 802,272
7 Claims. (Cl. 285—321)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. In a pair of axially aligned cylindrical tubular members adapted to be removably secured together, one of said members having a male end portion adapted to telescope within a female end portion of the other member, the improvements, comprising; an outwardly facing rectangular circumferential groove in said male portion, a like inwardly facing groove in said female portion adapted to be aligned with the first named groove, and a split lock ring disposed in the mating grooves, said lock ring comprising two parts adapted to be rotated relatively in a circumferential direction for varying the combined width of same in a direction longitudinally of the tubular members.

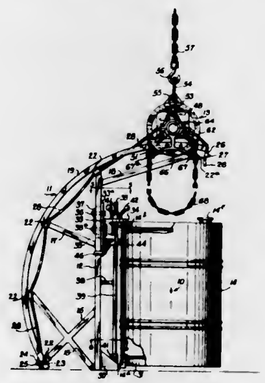
3,100,122
MECHANICAL DOOR STOP MEANS
William F. Knapp, Haughton, La.
(908 Wanda Drive, Bossier City, La.)
Filed Oct. 7, 1960, Ser. No. 61,243
10 Claims. (Cl. 292—266)

7. A door stop comprising an elongated substantially channel-shaped member having a main body portion including a bight from the ends of which project a pair of end walls, said main body portion being mounted on said door with an end wall facing the door jamb from which the door is suspended, a U-shaped guide member having its ends fixedly secured to said end walls and disposed in spaced relation relative to said bight, a bar mounted for reciprocation within said U-shaped guide member, means disposed between said U-shaped member and said bar constantly biasing said bar for movement away from said U-shaped member, lever means pivotally supported on said main body portion and engaging said



bar to effect movement of said bar inwardly of said U-shaped member when said lever means are pivoted in one direction, said bar having teeth formed thereon facing outwardly of said U-shaped member, a substantially rectangular sliding block member slidably mounted on said U-shaped member and engaging around said bar, said block member having teeth formed thereon facing said teeth formed on said bar and adapted to mesh therewith, a lever pivotally connected to said block and said jamb, and means connected with said lever and a door handle for said door to effect disengagement of said teeth formed on said bar and block.

3,100,123
TILTING ARC DEVICE
Edward C. Schmidt, Cleveland, Ohio, assignor to Edward L. Pucel
Filed May 31, 1961, Ser. No. 113,730
1 Claim. (Cl. 294—103)



A tilting arc device comprising an arcuate rail, holding means carried by the arcuate rail for holding a container within the curve of the rail at an angle to the vertical in accordance with the tilt of the rail relative to the vertical, said rail having spaced arcuate portions and interconnecting portions connecting said arcuate portions at intervals therealong and radially inward of the curve of

the arcuate rail, a trolley carrier movable along the arcuate rail and operable to support the same upon suspension of the carrier in a vertical reference line, said carrier having rollers rollingly engaging and supporting the said arcuate portions radially inwardly thereof for providing rolling support thereof, the carrier having a block portion disposed radially outward of the arcuate rail and tongue portions extending therefrom between said arcuate portions of the rail and connected to said rollers for supporting the same, a sprocket wheel journalled on said block portion of the carrier, a sprocket-chain having its ends anchored adjacent the opposite ends of said rail and enmeshed with said sprocket wheel, said chain being disposed to extend between said spaced arcuate portions and limited in radial inward movement by said interconnecting portions, and a rotative member carried by said block portions and operatively engaging said sprocket wheel for rotating said sprocket wheel in selected alternate directions, the rotation of the sprocket wheel pulling on said chain to tilt the arcuate rail and a container held by the holding means relative to the vertical in accordance with the direction of rotation of the sprocket wheel.

3,100,124
DRIVE-AWAY METHOD AND APPARATUS FOR TRANSPORTING AUTOMOTIVE VEHICLES
George Demos, Racine, Wis., assignor to Nicholas Demos, Kenosha, Wis.
Filed July 18, 1961, Ser. No. 124,922
5 Claims. (Cl. 296—1)



1. In a drive-away type automotive vehicle transporting device: a truck having a driver's cab at its front portion, a bodiless chassis portion behind the cab, and bumper attaching means at the extreme front of the chassis; and dismountable superstructure on the front portion of the truck for supporting an automotive vehicle in a transit position over the cab of the truck, said superstructure comprising a pair of longitudinal beams extending rearwardly over and beyond the cab from the extreme front of the truck and spaced laterally from one another a distance to have supporting engagement with the undercarriage of an automotive vehicle on the superstructure, upright front and rear frames detachably connected to and supporting the fore and aft end portions, respectively, of said longitudinal beams and including a lower transverse beam on the front frame detachably connected to said bumper attaching means, a lower transverse beam on the rear frame resting upon and detachably secured to the truck chassis at a location behind the driver's cab, each of said frames further including a pair of upright posts having their lower ends adjacent to the opposite ends of said transverse beam of the frame, an upper transverse beam having its opposite ends projecting beyond the longitudinal beams and adjacent to the tops of said posts, and brackets rigidly joining the adjacent ends of the posts and said transverse beams, each of said brackets comprising a first bracket section shaped to embracingly engage one end portion of one of said transverse beams and to which the latter is detachably connected, and a second bracket section fixed substantially at a right angle to the first bracket section and shaped to embracingly engage an end portion of the adjacent post, and to which the latter is detachably connected.

3,100,125
SAFETY LOCK MECHANISM, NOTABLY FOR CONVERTIBLE SEATS
Henri Crescent, 3 Rte. de Dieppe, Arques-la-Bataille, France
Filed Mar. 14, 1961, Ser. No. 95,676
Claims priority, application France Mar. 14, 1960
3 Claims. (Cl. 297—26)



1. An automatic locking device notably for convertible chairs of the type consisting of a seat, an X-shaped leg system consisting of a pair of front legs and a pair of rear legs pivoted adjacent to their middle, wherein the upper ends of the rear legs are pivoted on the front portion of the seat, and a back solid and co-extensive with the front legs, notches formed on the rear faces of the upper portions of said front legs, and a pair of pins rigid with the rear portion of the seat proper and each adapted to be introduced into one of said notches of one of said front legs according to the desired height and inclination of the chair, said device comprising horizontal trunnions mounted on the rear part of said front legs, pawls pivotally supported by said horizontal trunnions and co-operating with said pins while operating by gravity only, said pawls being dimensioned and positioned for automatically locking said pins of the seat in said notches of said front legs by substantially blocking the passage of said pins through the notch apertures when the chair is in its operative position, that is, when said front legs are inclined backwards, and for automatically unblocking the passage of said pins through said notch apertures to permit the extraction of the pins therefrom when the front legs of said chair are tilted forwardly.

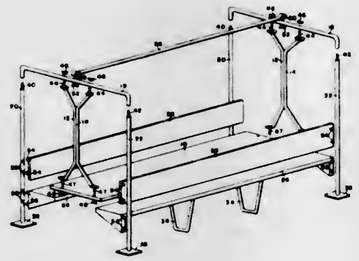
3,100,126
RECLINING CHAIR AND CONTROL ARRANGEMENT
Fridtjof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Nov. 1, 1960, Ser. No. 66,500
4 Claims. (Cl. 297—89)



1. A reclining chair comprising a support, body-supporting means including a seat and back-rest, means mounting said seat and back-rest for inclining and reclining movement respectively, and means for coordinating the inclining movement of said seat and the reclining movement of said back-rest to establish a first movement phase wherein said body-supporting means moves from a sitting position to an intermediate, tilted sitting position

with substantially no angular change between said seat and back-rest and a second movement phase from said intermediate, tilted sitting position to a reclining position wherein the included angle between said seat and back-rest increases, the coordinating means including a carrier member, means pivotally mounting said carrier member on said support at a carrier pivot, a first guiding link, means pivotally mounting said first guiding link on said support at a stationary first pivotal mount, a second guiding link, means pivotally connecting said second guiding link to said carrier member at a second pivotal mount, an intermediate connecting link pivotally connected to said first and second guiding links, connecting means between said back-rest and one of said guiding links, and seat control means operatively connected to said seat and to one of said guiding and intermediate links, said first guiding link, said second guiding link and said intermediate connecting link serving as three movable links of a four-bar linkage during said first movement phase wherein said carrier member remains substantially stationary such that the portion of the chair intermediate said first and second pivotal mounts provides a stationary link for said four-bar linkage, said first guiding link, said second guiding link, said intermediate connecting link and said carrier member serving as four movable links of a five-bar linkage during said second movement phase wherein said carrier member turns about said carrier pivot such that the portion of the chair intermediate said first pivotal mount and said carrier pivot serves as a stationary link of said five-bar linkage.

3,100,127
TABLE AND BENCH ASSEMBLY
Ivan J. Barto, River Road, Madison, Ohio
Filed Sept. 26, 1960, Ser. No. 58,353
1 Claim. (Cl. 297—157)



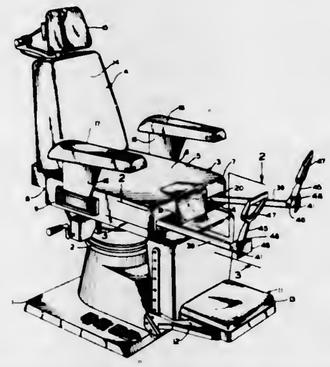
An article of furniture comprising end members of substantially inverted U-shaped configuration, each of said end members including upright members and an overhead member, bench members and back rests removably attached to and extending horizontally between adjacent upright members by easily detachable fastening means, said bench members and back rests respectively being attached to each upright member by at least two of said detachable fastening means, a tie bar extending between and removably attached to said overhead members, supporting dual-bar X members removably attached to and extending downwardly from said overhead members and removably attached at their lower ends to a table member, said table member being positioned between said bench members and being devoid of downwardly extending legs the combination of attachment of the bench member and back rest to each upright member by at least two fastening means respectively together with the dual-bar X members supporting the table member providing a self-supporting, rigid table and bench assembly.

3,100,128
COMBINATION VALET AND SEAT
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Filed Dec. 29, 1961, Ser. No. 163,212
2 Claims. (Cl. 297—190)



1. A combination valet and seat comprising, a supporting frame having a pair of front legs and a pair of rear legs, a seat mounted by said front and rear legs with the rear edge of said seat being horizontally spaced from said rear legs to define a clearance between said seat and said rear legs, said frame also mounting a valet member which includes at the upper part thereof jacket supporting means, said clearance being adapted to receive the lower front part of a jacket supported by said valet member to prevent said jacket from becoming creased, said valet member comprising a pair of uprights in supporting engagement with and extending above said rear legs, respectively, and a continuous formation in supporting engagement with and extending above said uprights, said continuous formation defining said jacket supporting means, said uprights being easily disengageable from said rear legs whereby said frame in combination with said seat defines an ottoman.

3,100,129
SURGICAL FURNITURE
Roy T. Adolphson, Webster Groves, Mo., assignor to Shampaine Industries, Inc., St. Louis, Mo., a corporation of Missouri
Filed Aug. 21, 1961, Ser. No. 132,659
7 Claims. (Cl. 297—430)



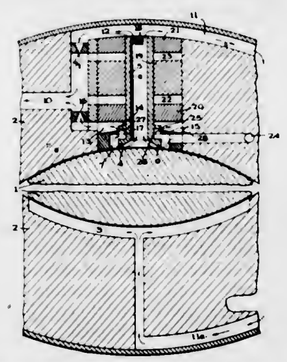
1. A foot-support for physicans' examining chairs, operating tables and the like; said support comprising a base member having an elongated open-ended recess, a central member rotatably mounted within the recess for rotation about an axis which is in substantially perpendicular relation to the longitudinal axis of said recess, said central member having an elongated slot substantially in line with the recess, on elongated support-member shiftably mounted in the slot and projecting outwardly from

the slot at one end, and a stirrup rockably mounted on the projecting end of the support-member.

3,100,130
SELF-ADJUSTING FLUID BEARING

Paul C. F. Deffrenne, Geneva, Switzerland, assignor to Mecanorga S.A., Geneva, Switzerland, a corporation of Switzerland

Filed Dec. 15, 1960, Ser. No. 75,981
6 Claims. (Cl. 308—122)



1. In an automatically self-adjusting fluid bearing, the combination, comprising,

a shaft.

a stationary bearing rotatably supporting said shaft with operating clearance and having a fluid pressure chamber in communication with said clearance by the first leg and the second leg of an arcuate channel,

said bearing further having a fluid inlet passage and a fluid outlet channel in communication with an outer port and an inner port,

rings in said bearing,

a tubular correcting member disposed in said rings to slide radial to the axis of the shaft and located opposite said fluid pressure chamber,

said member having its outer end communicating with the said first leg of the arcuate channel,

a scanning head at the inner end of said member and in communication with said clearance opposite said chamber to regulate variable fluid pressures resulting from displacement of the shaft from its normal position,

an external flange on the correcting member and spaced from said scanning head,

and means forming an annular compartment communicating with said fluid inlet and surrounding said scanning head,

said flange cooperating with said means to serve as a valve establishing communication with a connecting chamber leading to said inner port and fluid inlet while maintaining said member in communication with the first leg of said arcuate channel.

CHEMICAL

3,100,131
PROCESS FOR DYEING FIBERS WITH REACTIVE DYESTUFFS

Harlan B. Freyermuth, Easton, Pa., and Henry R. Mautner, Leonia, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 4, 1960, Ser. No. 67
7 Claims. (Cl. 8—1)

1. A process for dyeing fibers containing a reactive hydrogen atom comprising treating the fibers with an aqueous dispersion of a dyestuff containing two

$$HOCH_2CH_2SO_2CH_2\text{-groups}$$

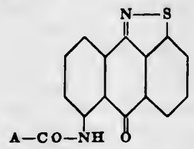
substituted in the same nucleus of the dyestuff molecule, and then drying and heat curing the treated fibers at a temperature of at least about 250° F.

3,100,132
PROCESS FOR DYEING OR PRINTING FIBROUS MATERIALS OF AROMATIC POLYESTERS

Walter Jenny and Robert Wittwer, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Jan. 24, 1961, Ser. No. 84,522
Claims priority, application Switzerland Jan. 27, 1960
9 Claims. (Cl. 8—39)

1. A process of dyeing and printing polyethylene terephthalate which comprises applying to fibrous materials of polyethylene terephthalate an aqueous dispersion containing a 5-acylamino-isothiazole-anthrone of the formula



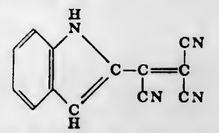
in which A represents a member selected from the group consisting of benzene and pyridine radicals as the essential color imparting substance.

3,100,133
METHOD FOR DYEING POLYPROPYLENE TEXTILE MATERIAL AND PRODUCT

Wolfgang Rösener, Erlenbach am Main, Germany, assignor to Vereinigte Glanzstoff-Fabriken AG., Wuppertal-Elberfeld, Germany

No Drawing. Filed Dec. 30, 1960, Ser. No. 92,728
Claims priority, application Germany Jan. 12, 1960
5 Claims. (Cl. 8—55)

1. A method for dyeing a polypropylene textile material which comprises contacting said material at elevated temperature with an inert organic solvent containing the compound of the formula



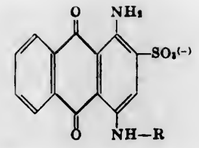
and then applying steam to said material to fix said compound as a dyestuff thereon.

3,100,134
DYEING AND PRINTING OF ARTICLES OF LINEAR POLYAMIDES

Karl Maier and Hans Juergen Nienburg, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 27, 1961, Ser. No. 98,294
Claims priority, application Germany Apr. 5, 1960
10 Claims. (Cl. 8—55)

1. A process for dyeing and printing articles of linear polyamides which comprises applying to said linear polyamide the dyestuff anion of the formula:



in which R represents an alkyl radical containing from 7 to 12 carbon atoms.

3,100,135
METHODS FOR TREATING TEXTILE MATERIALS AND RESULTING PRODUCTS

Fred H. Sexsmith, Highland Park, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,596
16 Claims. (Cl. 8—116)

4. A method of treating textile materials containing cellulosic fibers to render the textile materials dimensionally stable after washing which comprises: applying to said textile materials from about 50% to about 200% wet pick-up weight, based on the dry weight of the textile materials, of an aqueous solution comprising from about 2% to about 25% by weight of a reaction product of chloral, pentaerythritol and formaldehyde wherein the molar proportions of the reactants are in the ratio of from about ¼ to 6 mols of chloral:1 mol of pentaerythritol:about 6 to ¼ mols of formaldehyde; and drying said treated textile materials whereby from about 1% to about 30%, dry weight, based on the dry weight of the textile material, remains thereon.

3,100,136
METHOD OF MAKING POLYETHYLENE-INSULATED POWER CABLES

Ralph Gregory D'Ascoli, Yonkers, and Lawrence Charles Ebel, Hastings on Hudson, N.Y., assignors to Anaconda Wire and Cable Company, a corporation of Delaware

Filed June 18, 1959, Ser. No. 821,074
6 Claims. (Cl. 18—59)



1. A method for forming an intimate bond between an electrostatic shield and polyethylene insulation surrounding an electrical conductor to protect the insulation against the development of focal points at which corona discharge might occur which comprises coating a metallic conductor with a continuous semiconductive film consisting essentially of from 25 to 50 percent by weight of methylated paraffin, from 20 to 60 percent by weight of a polymer selected from the group consisting of polyvinyl acetate and chlorinated paraffins, and from about 10 to 50 percent by weight of carbon-black particles uniformly dispersed throughout the film coating to impart thereto semiconductive properties, extruding molten polyethylene in an amorphous state about the coated conductor at a temperature of at least 250° F. and at a pressure of 200 to 1200 pounds per square inch to force molten polyethylene into all of the surface irregularities in the semiconductive film, thereby intimately bonding said film to the inner face of the polyethylene, and applying an outer layer of the semiconductive film coating to the outer face of the polyethylene while it is still in an amorphous, near-molten state to intimately bond the outer layer of the semiconductive film to the outer face of the polyethylene.

3,100,137
PRODUCTION OF MANGANESE PENTACARBONYL HYDRIDE

Walter Hieber, Munich, and Gerhard Wagner, Burgkirchen (Alz), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 10, 1959, Ser. No. 798,336
Claims priority, application Germany Mar. 13, 1958
5 Claims. (Cl. 23—14)

1. A process for the production of manganese pentacarbonyl hydride which comprises interacting manganese pentacarbonyl in the presence of an inert polar organic solvent with an acid having a dissociation constant greater than 5×10^{-7} and with a metal reducing agent selected from the group consisting of magnesium and aluminum.

3,100,138
PRODUCTION OF HEAVY HYDROGEN

Gustav Schaurer, Assenheim, and Albert Heinzel, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

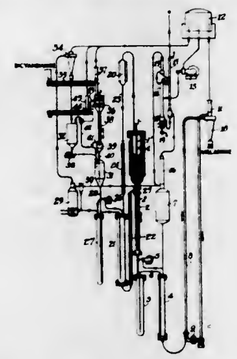
No Drawing. Filed Nov. 15, 1960, Ser. No. 69,267
Claims priority, application Germany Nov. 18, 1959
4 Claims. (Cl. 23—210)

1. A process for the recovery of heavy hydrogen in the synthesis of ammonia from nitrogen and hydrogen gases which comprises reacting in a synthesis zone nitrogen gas and hydrogen gas containing a small amount of heavy hydrogen to form ammonia, separating the ammonia formed from unreacted, residual gases, said residual gases containing most of the heavy hydrogen of said hydrogen gas, replenishing said residual gases with fresh nitrogen and hydrogen gases containing small amounts of heavy hydrogen, feeding said replenished residual gases to an ammonia synthesis zone and reacting the nitrogen gas and the hydrogen gas in said zone to form ammonia, repeating the last two steps until the amount of heavy hydrogen in said residual hydrogen gas is at least about 0.06 volume percent, and thereafter separating heavy hydrogen gas from the remainder of the residual gases.

3,100,139
APPARATUS FOR THE PRODUCTION OF MELAMINE

Rolf Neubner, Berlin-Zehlendorf, and Franz Langehenke, Dortmund, Germany; said Langehenke assignor to said Neubner

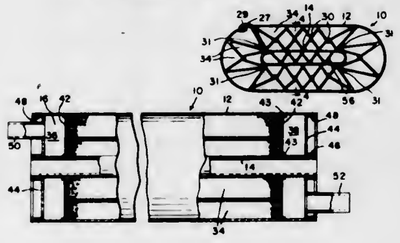
Original application Jan. 16, 1957, Ser. No. 634,454, now Patent No. 2,913,461, dated Nov. 17, 1959. Divided and this application Mar. 17, 1959, Ser. No. 804,058
Claims priority, application Germany Dec. 15, 1956
8 Claims. (Cl. 23—260)



1. An apparatus for the production of melamine comprising, in combination, a vertically supported reactor, re-

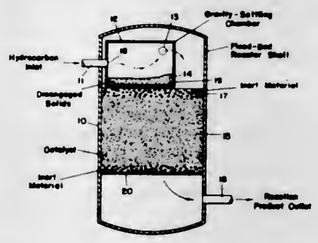
actor feeding means for introducing dicyandiamide and ammonia into said reactor, a vertically supported suspension washing tube connected at the bottom of said vertically supported reactor, stirring means within said reactor and said suspension washing tube, a settling container for the melamine connected below said vertically supported suspension washing tube, a receiving container for receiving the melamine from said settling container through an immersion tube equipped with a shutoff and connecting said receiving container with said settling container, circulating pumping means also connected to said settling container and said melamine receiving container for withdrawing ammonia from said receiving container and relaying it to said settling container to force the melamine from said settling container through said immersion tube and into said receiving container, an ammonia pressure reservoir connected to said melamine receiving container by a feed line equipped with a shutoff, melamine product separation and drying means connected by a conduit with the bottom of said melamine receiving container for receiving the melamine therefrom when ammonia is fed to the receiving container from said ammonia reservoir with the shutoff closed in said immersion tube, an ammonia discharge tube connected to the top of said reactor, condensing means connected in series to said ammonia discharge tube, a manometric tube attached to said condensing means, a subsequent cooler connected to said manometric tube, a dicyandiamide mash receiving container connected to said subsequent cooler, a heated discharge conduit connecting the bottom of said dicyandiamide mash receiving container with said reactor by said reactor feeding means, and means for producing an ammonia-dicyandiamide mash feedably connected to said dicyandiamide receiving container, the resulting melamine product crystals descending through said suspension washing tube to said settling container whereupon ammonia is displaced from said washing tube and flows into the reactor where excess ammonia is evaporated overhead through said ammonia discharge tube into said ammonia condensing means, the resulting liquid being collected in said manometric tube and then passing through said subsequent cooler into said dicyandiamide mash receiving container to displace an equal volume of ammonia-dicyandiamide mash and feed the same through said discharge conduit and reactor feeding means to the reactor.

3,100,140
CATALYTIC AUTOMOTIVE EXHAUST CONVERTER
Paul R. Ashley, Livonia, and David D. Laing, Detroit, Mich., assignors to Calumet & Hecla, Inc., Allen Park, Mich., a corporation of Michigan
Filed May 31, 1960, Ser. No. 32,678
6 Claims. (Cl. 23—288)



1. A catalytic exhaust gas converter comprising a casing having a chamber therein extending longitudinally a substantial distance in a direction from an inlet end to an outlet end, a plurality of superimposed heat conductive sheet layers in said chamber, adjacent layers being corrugated to provide peaked portions which extend longitudinally in the direction of and parallel to said chamber, with the depth of said corrugations being transverse of said direction, said corrugated layers engaging one another to define laterally enclosed rectilinear channels open at opposite ends thereof, each channel being of substantially uniform cross sectional area along the length thereof, granular catalytic material in said channels substantially filling the same as subdivided masses of said material, and foraminated members at said opposite ends of said channels confining said catalytic material therein, said casing having inlet and outlet ports adjacent said inlet and outlet ends which communicate respectively through said foraminated members with said opposite ends of said channels for the passage of exhaust gases through said catalytic material in the channels, said channels being individually in heat conductive and physically supporting relation to the respective subdivided masses of the material in the respective channels.

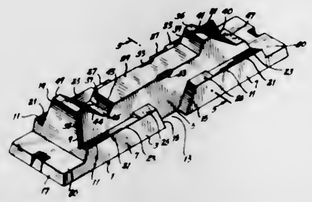
3,100,141
FIXED BED APPARATUS FOR THE CATALYTIC CONVERSION OF HYDROCARBONS
Roy L. Donovan, North Hills, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Oct. 18, 1960, Ser. No. 63,291
2 Claims. (Cl. 23—288)



1. A fixed bed reactor vessel for the catalytic conversion of hydrocarbons containing entrained solid particles which comprises in combination: a normally vertically disposed shell having a reaction zone containing catalyst located therein, inlet means in the upper portion of said shell and above said reaction zone; outlet means for removing the conversion products from said vessel; means for maintaining a fixed bed of catalyst in said reaction zone through which said hydrocarbon stream must pass in flowing from said inlet means to said outlet means; a gravity-settling chamber having an imperforate bottom for the collection of entrained solid particles and a perforate upper portion for releasing cleaned hydrocarbons, said chamber mounted within said reactor shell as a separate and distinct unit therefrom above the reaction zone and connected directly with said inlet means.

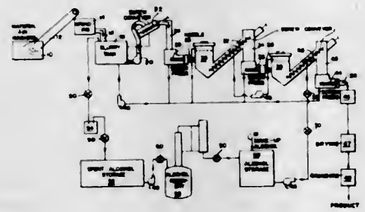
3,100,142
METAL INGOTS
Christopher John English and Stephanus Van Duin, Arvida, Quebec, Canada, assignors to Aluminium Laboratories Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Nov. 5, 1959, Ser. No. 851,107
16 Claims. (Cl. 29—187)

1. An ingot adapted to form a stable bundle with similar ingots stacked in mutually engaging relation, said ingot being defined by opposed outer surfaces extending generally parallel to a given dimension of said ingot and by shoulders disposed at opposite sides of the ingot and extending generally parallel to said given dimension of said ingot, each shoulder being disposed between and transverse to two portions of the adjacent outer surface that are in offset relation to each other transversely of said outer surfaces, at least a given one of said shoulders being formed with a raised portion and a depression dis-



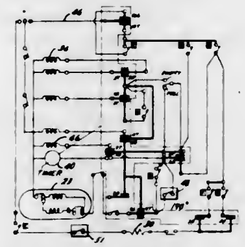
posed along said dimension for engaging respectively a depression and a raised portion of a shoulder of a similar ingot when the ingots are assembled in the bundle in inverted relation one with respect to the other and with the shoulder of one ingot lapped upon the shoulder of the other ingot.

3,100,143
PROCESS OF DRYING MUCILAGINOUS PLANT MATERIALS
Roger H. Doggett, Natick, and Laurence R. B. Hervey, West Concord, Mass., and Charles E. Lanyon, Troy, N.Y., assignors, by direct and mesne assignments, to John A. Manning Paper Company, Inc., Troy, N.Y., a corporation of New York
Original application July 15, 1959, Ser. No. 827,233. Divided and this application Feb. 8, 1961, Ser. No. 87,826
7 Claims. (Cl. 34—9)



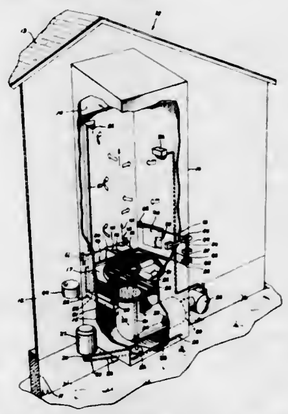
1. Process for rapidly dehydrating a mucilage-bearing plant to preserve the effectiveness of the mucilage-producing content thereof, comprising the steps of macerating said plant and subjecting the resulting macerated material to a plurality of extractions, each of said extractions comprising the steps of compressing said macerated material, introducing said material while in a compressed state into a dehydrating liquid inert to the mucilaginous content of said plant and miscible with water in essentially all proportions whereby said material expands rapidly to imbibe said liquid, removing the resulting dehydrated mucilage-producing material from said liquid, drying said dehydrated mucilage-producing material at a temperature below about 125° F. to remove the residual extraction liquid and the small amount of water remaining, and grinding the resulting dried material at temperatures below about 210° F. to particles ranging in size between about 45 and 75 microns to form a flour-like, stable material capable of being rapidly dispersed in aqueous liquids to impart ropiness to said liquids.

3,100,144
DRYER AND METHOD OF OPERATION
Arthur Berenbaum, Elmer Vanderslice, and Warner T. Yoast, Philadelphia, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,498
6 Claims. (Cl. 34—45)



1. In laundering apparatus the combination comprising: a rotatable, perforate container for receiving material to be dried; air heating means associated with said container; means for rotating said container to tumble material therein; means for causing translation of air heated by said heating means through said container and into contact with materials therein; a timer adapted to provide programmed, intermittent operation of said heating means in accordance with a predetermined operating pattern designed to optimize the drying run for said material; and means responsive to a temperature of the dying air for placing said timer in control of said heating means.

3,100,145
TOBACCO CURING SYSTEM
John F. Moore, 100 Hillsdale Ave. W., Toronto 7, Ontario, Canada
Filed Sept. 12, 1960, Ser. No. 55,277
2 Claims. (Cl. 34—48)



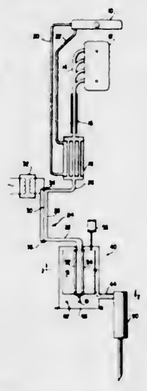
1. In a tobacco curing system a kiln in which tobacco may be hung for curing, an opening adjacent the lower edge of a wall of the kiln, a second opening adjacent the upper edge of said wall, a duct extending between the two openings, and air-conditioning mechanism associated with the duct and located at the lower end thereof, and comprising a wall extending across the duct and having a central circular opening therein, a support member extending diametrically across the said opening and below it, bearings carried by said support member, a shaft journalled in said bearings, and carrying a fan capable of sweeping

substantially the entire opening, means to drive said fan, a secondary duct extending from the exterior of the primary duct across the bottom of the primary duct and bending upwardly to terminate below said fan, a fuel burner in said secondary duct, means to admit combustion air to the interior of said secondary duct, means responsive to the temperature within the kiln to control the fuel burner, means to admit external air to the duct, damper means to exhaust air from the duct and means responsive to the wet-bulb temperature of the air within the kiln to control the damper means.

3,100,146
METHOD AND APPARATUS FOR THE CONDENSATION, AGGLOMERATION, FILTRATION AND ABSORPTION OF THE EXHAUST GASES FROM INTERNAL COMBUSTION ENGINES

Morgan G. Huntington, Salt Lake City, Utah, assignor to Huntington Chemical Corporation

Filed Sept. 20, 1960, Ser. No. 57,258
6 Claims. (Cl. 55—9)



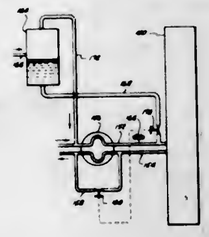
1. A method of cleaning exhaust gases exiting from internal combustion engines that comprises; cooling the exhaust gases to a temperature low enough for condensing most of the unburned fuel and other vapors in the gases, then confusing dispersoids in the exhaust gases by agglomerating them by high potential alternating current electric means without precipitation, passing the confused coalesced and agglomerated dispersoids to a filter means, filtering smog producing dispersoids from the exhaust gases by renewable filter paper, and subsequently absorbing nitrogen oxides by a disposable cartridge containing an absorbent for nitrogen oxides.

3,100,147
APPARATUS AND METHODS FOR TREATMENT OF NATURAL GAS

Raymond James Hull, Orange, Calif., assignor to Gas Processing Inc., Fullerton, Calif., a corporation of California

Filed Aug. 3, 1960, Ser. No. 47,221
3 Claims. (Cl. 62—37)

2. In combination with a refrigerating rectifier for treatment of a stream of natural gas and including a feed gas inlet and a treated gas outlet, a feed gas conduit connecting the feed gas inlet and a source of feed gas, a treated gas conduit connecting the treated gas outlet and a point of distribution, heat exchanging means exterior of the refrigerating rectifier and adapted to the feed gas conduit and the treated gas conduit whereby the feed gas and treated gas flow therethrough in indirect heat transfer relationship, temperature responsive means in the feed gas conduit between the heat exchanging means and the feed gas inlet, a liquid conduit connected to the feed gas conduit between the heat exchanging means and the feed gas inlet and joining the feed gas conduit and a source of liquid hydrocarbons, and flow-control means in the liquid



conduit, the temperature responsive means and flow-control means adapted whereby the amount of liquid passing through the liquid conduit and into the feed gas conduit is responsive to the temperature of the feed gas.

3,100,148
APPARATUS FOR PRODUCING DOUBLE SHEET GLAZING UNITS

Georg Kilian and Franz Mainz, Witten (Ruhr), Germany, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Original application July 27, 1956, Ser. No. 600,533, now Patent No. 2,968,895, dated Jan. 24, 1961. Divided and this application Dec. 15, 1959, Ser. No. 16,622
7 Claims. (Cl. 65—152)



1. Apparatus for manufacturing double sheet glazing units comprising a furnace, upper and lower guide means disposed within said furnace and operable to support two glass sheets in parallelly spaced face-to-face relationship in an upright position for movement through said furnace, first burner means disposed adjacent said guide means to heat the upper and lower edges of the glass sheets, first driven rolling presser means disposed adjacent said first burner means, a second burner means, a second rolling presser means disposed adjacent said second burner means, means mounting said second burner and pressing means for vertical movement between said upper and lower guide means, said first burner and presser means serving to unite the upper and lower edges of the glass sheets, and said second burner and presser means serving to unite the vertical edges of the glass sheets.

3,100,149
COMPOSITION AND PROCESS FOR PROMOTING THE GROWTH OF PLANTS

Ulrich Ruge, Hamburg, Germany, assignor to C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany, a corporation of Germany

No Drawing. Filed June 14, 1960, Ser. No. 35,895
Claims priority, application Germany June 16, 1959
5 Claims. (Cl. 71—2.3)

1. A process of promoting the growth of plants comprising treating plants with the mixture of a gibberellin compound selected from the group consisting of gibberellic acid and its alkali metal salts, and the hydrolytic degradation product of yeast nucleic acid obtained by acid hydrolysis and consisting of a mixture of adenine, guanine, uridine monophosphate, and cytidine monophosphate, said gibberellin compound and said degradation product being present in said mixture in the proportion between about 1:1 and about 1:100.

3,100,150
STENCIL SCREEN COATING COMPRISING POLYVINYL ALCOHOL, POLYVINYL ACETATE, AND A LIGHT SENSITIZING AGENT

Andrew B. Chismar and Elmer W. Kmetz, Streator, Ill., assignors to Owens-Illinois Glass Company, a corporation of Ohio

No Drawing. Filed Nov. 2, 1960, Ser. No. 66,695
11 Claims. (Cl. 96—93)

1. A stencil screen coating for use in filling the voids of a stencil screen and subsequently having portions thereof removed according to photographic methods to form a preselected pattern of voids on said screen, consisting essentially of (*a*) an aqueous solution of a polyvinyl acetate homopolymer wherein from about 86% to 100% of the carboxyl groups are hydrolyzed to OH groups, (*b*) a light-sensitizing agent to permit photographic method production of the desired pattern by rendering water-insoluble that portion of said coating exposed to light and (*c*) an emulsion of an unhydrolyzed homopolymer of polyvinyl acetate as the film forming ingredients, the amount of (*c*) to (*a*) being from 1:1 to 1:1.25 parts by weight.

3,100,151
INSTANT COFFEE AND TEA

Orville N. Brelvik, Westport, Conn., and William R. Johnston, Wayzata, Minn., assignors to Standard Brands Incorporated, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 25, 1962, Ser. No. 226,150
10 Claims. (Cl. 99—71)

1. An instant beverage preparation of the group consisting of instant coffee and instant tea containing a small but effective amount of a monoglyceride of a higher fatty acid to substantially reduce foaming when the instant beverage preparation is dissolved in water.

3,100,152
METHOD FOR MAKING A GROUND MEAT FOOD PRODUCT

Beverly E. Williams, La Grange Park, Ill., assignor to Hodges Research and Development Company, New York, N.Y., a corporation of California

No Drawing. Filed Aug. 16, 1960, Ser. No. 49,825
3 Claims. (Cl. 99—108)

1. In a method for making a ground meat food product the steps of grinding meat, dicing tendered meats selected from the group consisting of muscle and organ meats having approximately the same degree of tenderness as the ground meat and mixing said ground and diced meats with said diced meat being present in amounts of from one-quarter to not more than one-half by weight, the pieces of diced meat ranging in size from approximately one-quarter inch to approximately one inch in any dimension.

3,100,153
PROCESS FOR PREPARING FLAVORING COMPOSITIONS

Stanley G. Knight, Madison, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

No Drawing. Filed Nov. 16, 1960, Ser. No. 69,570
8 Claims. (Cl. 99—116)

1. A process of manufacturing a composition adaptable for use in the flavoring of foodstuffs which comprises fermenting pasteurized, homogenized milk containing milk fat under submerged aerobic conditions with *Penicillium roqueforti*.

3,100,154
COATING COMPOSITION

Takeichi Oshima, 136 Idogaya-Nakamachi, Minami-ku, and Yukichi Uyemura, 420 Otamachi 4-chome, both of Yokohama, Japan

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,518
Claims priority, application Japan Apr. 1, 1959
2 Claims. (Cl. 106—57)

1. A refractory, solvent-proof and anti-corrosive coating composition consisting of 1.5 to 2.5% by weight of a metal salt of a fatty acid dissolved in an aqueous solution of 15% by weight of sodium silicate, 10 to 15% by weight of comminuted zirconium silicate, 5 to 10% by weight of comminuted silica, and 15 to 30% by weight of a metallic oxide admixed therewith.

3,100,155
MINIATURE CERAMIC CRUCIBLES FOR BURNING METAL SAMPLES, AND CERAMIC MATERIAL

Harold C. Wagner, St. Joseph, Mich., assignor to Laboratory Equipment Corporation, St. Joseph, Mich., a corporation of Michigan

Filed Apr. 11, 1960, Ser. No. 21,255
4 Claims. (Cl. 106—62)

1. The method of manufacturing a porous filtering laboratory crucible which comprises providing a mixture consisting essentially of coarse silica of from 60 to 100 mesh in the amount of 50 to 60%, fine silica of under 100 mesh in the amount of 0 to 7%, clay in the amount of 20 to 45%, and bonding agents, the bonding agents being compounds of elements in subgroup A of group I and subgroup A of group II of the periodic table, said compounds supplying .010 to .026 pound moles of oxides of said elements per hundred pounds of total silica and clay, the total of the fine material being insufficient to fill the voids within the coarse material, adding sufficient liquid to the mixture to provide a plastic body, shaping the plastic body to desired crucible form, and drying and firing the article thus produced to substantially cone 16.

3,100,156
THERMAL INSULATING PRODUCT AND METHOD FOR MAKING SAME

George L. Kalousek, Newark, Ohio, and Arthur D. Denny, Erlton, N.J., assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

No Drawing. Filed Nov. 3, 1959, Ser. No. 850,543
9 Claims. (Cl. 106—120)

9. A molded thermal insulating product free of air holes and pouring folds comprising crystalline hydrous calcium silicate made by indurating an aqueous lime-silica slurry having a lime to silica molar ratio within the range of from 0.6 to 1:1 and a water to solids ratio of from 0.75:1 to 9:1, and containing from 0.0075 to 0.075% by dry weight of the solids in said slurry of a sodium salt of an approximately 50:50 mole ratio copolymer of maleic anhydride with diisobutylene.

3,100,157
LIQUID CONDENSATION PRODUCT OF A DRYING OIL, A POLYALKANOL, AND A POLYOXYETHYLENE POLYOL

Herbert M. Schroeder, Williamsville, and Joseph A. Pawlak, Buffalo, N.Y., assignors, by mesne assignments, to Textron Inc., a corporation of Rhode Island

No Drawing. Filed Jan. 10, 1961, Ser. No. 81,694
22 Claims. (Cl. 106—287)

1. A liquid, water-dispersible composition of matter having a viscosity of up to about 100 poises which is a condensate of a mixture consisting essentially of about

75 to 90 percent of a drying oil ester of an unsaturated fatty acid of 14 to 20 carbon atoms and a polyhydric alkanol of 3 to 6 carbon atoms and having 3 to 6 hydroxyl groups, and about 10 to 25 percent of a polyoxyethylene polyol having a molecular weight of about 500 to 2000, said polyol having the formula

$$R-[O(C_2H_4O)_nH]_m$$

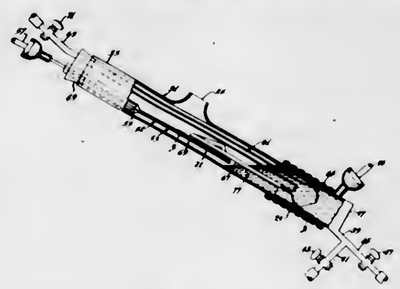
where R is an *m*-valent hydrocarbon radical of 3 to 6 carbon atoms, *n* is 4 to 12, and *m* is 3 to 6.

3,100,158

METHODS FOR OBTAINING FILMS OF MAGNETIC SPINEL CRYSTALS ON SUBSTRATES

Henry P. Lemaire and William J. Croft, Natick, Mass., assignors to Radio Corporation of America, a corporation of Delaware

Filed Nov. 2, 1960, Ser. No. 66,826
12 Claims. (Cl. 117—49)



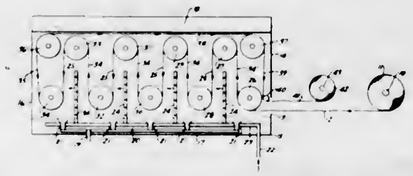
1. A method for preparing a continuous film of crystals having a spinel structure comprising preparing an aqueous suspension containing bivalent ions of at least one bivalent metal, wherein at least a major proportion of said bivalent metal ions are ferrous ions, and a strong base in an amount such that the molar ratio of hydroxyl ions to bivalent metal ions is less than 2 to 1; adjusting the temperature of said suspension to a temperature between about 50° and 100° C., bubbling air through said suspension, and then circulating said suspension into contact with the surface of a smooth, nonporous substrate maintained at a temperature a few degrees centigrade higher than said suspension.

3,100,159

TEXTILE FABRIC PROCESSING

James Ullman, 40 E. 10th St., New York, N.Y.

Filed Jan. 16, 1961, Ser. No. 82,863
8 Claims. (Cl. 117—62)



3. A process of finishing textile knitted and woven resin treated wash and wear clothing fabrics, said resin being of the type of formaldehyde-urea and formaldehyde-melamine resins to remove fishy odors therefrom comprising treating the fabrics with a mixture of gaseous steam and ammonia at a pressure of about 60 to 90 pounds per square inch, the ammonia being used in a percentage of about 1 to 5% of the steam and the steam being in substantially dry condition at a temperature of about 180 to 250° F.

3,100,160

TAPE EMPLOYING AN ADHESIVE COMPRISING AN EPOXY RESIN AND A POLYMER HAVING CARBOXYLIC GROUPS

Ralf Korpman, East Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Apr. 29, 1959, Ser. No. 809,709
6 Claims. (Cl. 117—122)

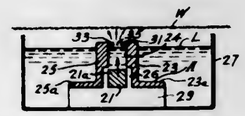
1. A normally tacky and pressure-sensitive adhesive tape comprising a flexible backing having coated on at least one major surface a normally tacky and pressure-sensitive adhesive composition consisting essentially of: (1) a liquid epoxy resin formed by the reaction of a compound selected from the group consisting of a polyhydric alcohol and a polyhydric phenol with a halohydrin, and (2) elastomeric components consisting of: (*a*) a water-insoluble solid elastomeric polymer having carboxylic groups capable of reacting with said liquid epoxy resin, said elastomeric polymer being selected from the group consisting of carboxylic modified diene homopolymer elastomers and carboxylic modified diene copolymer elastomers wherein a diene monomer is the principal component, and (*b*) a modifying elastomer selected from the group consisting of diene homopolymer elastomers and diene copolymer elastomers wherein a diene monomer is the principal component, said modifying elastomer being in an amount of from 0 to 90% by weight of the total elastomeric components, the liquid epoxy resin being in an amount from about 5 to 125 parts per 100 parts of total elastomeric components with the epoxy resin being in an amount up to 20 parts when the elastomeric polymer is other than a diene-nitrile copolymer, and the adhesive composition including a tackifying component which is an agent selected from the group consisting of (1) the aforementioned liquid epoxy resin in an amount of at least 40 parts per 100 parts of total elastomeric components and used as the tackifier for an elastomeric polymer of the diene-nitrile type and (2) a combination of the aforementioned liquid epoxy resin in an amount of at least 5 parts per 100 parts of total elastomeric components and a tackifying resin compatible with the elastomeric polymer in an amount from about 5 to 250 parts per 100 parts of total elastomeric components.

3,100,161

COATING DISPENSER WHICH APPLIES A SHEET-LIKE JET OF COATING MATERIAL

Bruce Arthur Fairbairn and Gerard Joseph Deschambault, Drummondville, Quebec, Canada, assignors to Canadian Celanese Limited, Montreal, Quebec, Canada

Filed Jan. 26, 1961, Ser. No. 85,095
2 Claims. (Cl. 118—325)



1. An apparatus for applying a liquid treating substance to fabric comprising a tank for containing the liquid substance, companion walls forming therebetween an upwardly-extending liquid-containing passage having a lower portion below the liquid level in the tank and an upper portion forming a continuation thereof, the lower portion being wider than the upper portion, the upper portion terminating in a pair of lips one at each side of the passage providing therebetween a dispensing slot, an elongated piston portion in said passage adapted to travel from said lower portion through said upper portion to a point adjacent said lips, said lips being spaced above the normal level of liquid in the tank and means for reciprocating said piston in upward and downward strokes from a position below the upper portion of the passage where it permits liquid to rise from the lower portion to the upper portion thus filling the upper portion to an intermediate position where it blocks the entrance from the lower portion to the upper portion to further positions where it continuously forces liquid from said upper portion through said slot in a sheet-like jet.

3,100,162

ACTIVE MATERIAL FOR STORAGE BATTERIES AND METHOD OF MAKING SAME

Anthony Sabatino, Milwaukee, and Ernest J. Jackson, Racine, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Wisconsin

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,566
13 Claims. (Cl. 136—26)

1. The method of making battery paste comprising the steps of:

mixing a slurry of lead oxide and water with small amounts of a foam producing agent and a water soluble foam stabilizing agent added thereto, said slurry containing not more than about 30% water by weight, less than about 1% foam producing agent by weight, and less than about 1% foam stabilizing agent by weight;

and redistributing the water in said slurry by aeration with a gas, said gas comprising from about 10% to 100% carbon dioxide with any gas used in a mixture with carbon dioxide being substantially inert to said slurry;

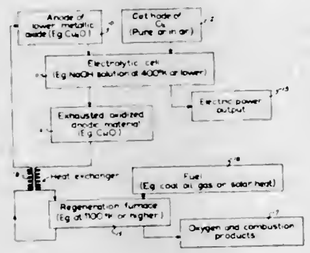
said foam producing agent adapted to depress the surface tension of the water and thus facilitate the formation of gas bubbles in the mixture, said foam stabilizing agent adapted to modify the surfaces of the lead oxide particles and cause them to adhere in a uniform pattern to the gas bubbles in the mixture, said foam stabilizing agent and foam producing agent being compatible with each other and with the sulfuric acid in a finished battery.

3,100,163

ENERGY CONVERSION PROCESS AND APPARATUS

Ernest H. Lyons, Jr., Elsah, Ill.

Filed Sept. 15, 1959, Ser. No. 840,196
19 Claims. (Cl. 136—86)



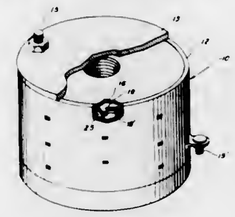
1. An energy conversion process, comprising the steps of heating at a temperature in excess of 800° K., in the absence of substantial amounts of reducing agents, a metallic higher oxide from the group consisting of CuO, Co_3O_4, MnO_2, PbO_2, Pb_3O_4, and Fe_2O_3, and mixtures thereof, to convert it to its related and corresponding lower metallic oxide from the group consisting of Cu_2O, CoO, Mn_3O_4, PbO, and Fe_3O_4 and mixtures thereof, cooling said lower oxide to a temperature below about 400° K., immersing said lower oxide in oxygen-transferring electrolyte and using it as an anode therein in cooperation with an oxygen-supplying cathode to produce electric current with resultant reoxidation to said higher oxide, returning said higher oxide to said heating step, and then repeating the process continuously in cycle, so that the energy used to heat said higher oxide is converted at high efficiency into electrical energy.

3,100,164

DEFERRED-ACTION BATTERY

Frank Solomon, Lake Success, N.Y., and Robert F. Enters, Hackensack, N.J., assignors to Yardney International Corp., New York, N.Y., a corporation of New York

Filed July 13, 1959, Ser. No. 826,589
1 Claim. (Cl. 136—90)



An electrochemical battery of the deferred-action type comprising a housing, a plurality of stacked dry charged bipolar silver-zinc electrodes in series in said housing each separated from an adjacent electrode by an electrolyte absorbing separator, a plurality of vents in said housing disposed adjacent said electrolyte absorbing separator, a centrally disposed feed channel for the admission of liquid electrolyte into electrolyte absorbing separators, said electrolyte absorbent separators terminating at said feed channel and adapted to draw electrolyte from said feed channel, and electrolyte-repelling spacer means bounding said feed channel between said electrolyte absorbing spacers and encompassing said bipolar electrode whereby electrolyte is prevented from electrically connecting the component electrodes of said bipolar electrode, a rupturable liquid electrolyte-containing reservoir disposed adjacent said stack of electrodes, cuting means disposed adjacent said rupturable reservoir and adapted to rupture the same, and means for applying gas pressure to said reservoir to bring the same in cutting contact with said cutting means whereby the electrolyte is released from said reservoir and is forced into said centrally disposed feed channel.

3,100,165

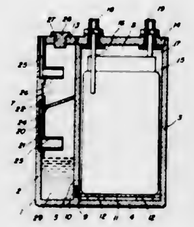
ELECTRIC BATTERIES

Christopher L. C. Chapman, Sutton, England, assignor to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Sept. 27, 1960, Ser. No. 58,807
8 Claims. (Cl. 136—177)

1. An electrochemical cell comprising in combination a casing, said casing divided into a first electrolyte-containing compartment and a second electrolyte-containing compartment, said first compartment being subdivided into upper and lower sections by a transverse member, a trap vent in said lower section opening into a vertically extending channel communicating with said upper section and a trap vent in said upper section, communicating with a second vertical channel opening externally of said casing thereby permitting communication of said first compartment externally of said casing, said second com-

partment communicating with said first compartment through an orifice located at a level below the external opening of said first compartment, an electrode assembly positioned in said second compartment and a sufficient quantity of electrolyte in said first compartment to mask said orifice and thereby provide a liquid seal between said



compartments, said electrolyte in said first compartment being in communication with electrolyte in said second compartment through said orifice and subject to variation in level in response to gas pressure developed in said second compartment whereby there is movement of electrolyte between the two compartments and irrigation of said electrode assembly.

3,100,166

FORMATION OF SEMICONDUCTOR DEVICES

John C. Marinace, Yorktown Heights, and Richard F. Rutz, Fishkill, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 13, 1960, Ser. No. 35,804



A process of fabricating a semiconductor junction device of the type known as an Esaki or tunnel diode by vapor deposition comprising the steps of: decomposing a gaseous semiconductor halide compound of one conductivity type over a substrate of semiconductor material of opposite conductivity type to produce an expitaxial deposition on said substrate; and applying heat to the P-N junction device thus formed for a time period of approximately 20 seconds at a temperature of approximately 665° C., thereby to produce an optimum ratio of capacitance to peak current for said device.

3,100,167

MAGNETIC MATERIAL

Richard B. Falk and George D. Hooper, Greenville, Mich., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Oct. 19, 1960, Ser. No. 63,487
4 Claims. (Cl. 148—31.57)

1. Magnetic material comprising non-elongated fine particles, each of said particles consisting essentially of an alloy of from 5 to 25 percent nickel, the balance substantially all cobalt and impurities, the dimensions of each of said particles being that of a single magnetic domain.

3,100,168

QUARTZ-TO-METAL SEALS

Eric John George Beeson and Horace Edward Stanyon, Leicester, and Leslie John Capp, Daventry, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Jan. 10, 1962, Ser. No. 165,363
Claims priority, application Great Britain Jan. 10, 1961
2 Claims. (Cl. 154—2.4)



1. A quartz-to-metal seal comprising a planar foil of refractory metal, conductors being attached to said foil at diametrically opposite points adjacent to the edge thereof, said foil having a tapered cross-section tapering from a maximum thickness at the center and a thickness of from 0.003" to 0.015", said foil being substantially circular in plan and being provided with an aperture placed symmetrically within its periphery, said foil together with at least each end of the said conductors being embedded in the said quartz so that said quartz extends through said aperture to form a tie-bar between said quartz lying on each side of said foil.

3,100,169

PICKLING OF MAGNESIUM AND MAGNESIUM-BASE ALLOY ARTICLES

Donald Jack Levy, Olivette, Mo., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 4, 1960, Ser. No. 82
3 Claims. (Cl. 156—20)

2. The method of treating a metal article composed by weight of at least 75% magnesium, and less than 0.5% by weight zinc, to improve the corrosion resistance thereof and impart a bright lustrous finish thereto which consists of immersing the article in an aqueous bath of H_2SO_4 having a normality of between 20 and 35 N at a temperature between about room temperature and 220° F. for a period of time between about 0.1 and 20 minutes, removing the article from the solution, and water-rinsing the article thus treated.

3,100,170

PICKLING MAGNESIUM ARTICLES

Donald Jack Levy, Olivette, Mo., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 4, 1960, Ser. No. 83
11 Claims. (Cl. 156—20)

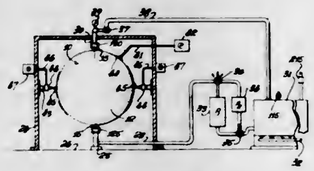
1. The method of pickling a magnesium article containing at least about 75 percent magnesium and not over 2 percent zinc to remove contaminating tarnish and scale therefrom and to improve the corrosion resistance thereof which consists of subjecting the article to the action of an aqueous composition pickle composition consisting essentially of H_2SO_4 having an acid normality of at least 20 but not over 25 and having dissolved therein a compound selected from the class consisting of soluble nitrates, halides, oxyhalides, halogen-substituted organic acids, and mixtures thereof, capable of yielding nitrate and halogen-containing ions in solution, wherein the halogen is chlorine or iodine, in sufficient amount to provide between 5 and 250 grams of the nitrate and halogen fractions of said compounds per liter of said aqueous composition.

3,100,171

METHOD AND APPARATUS FOR FORMING A PRE-STRESSED HOLLOW LINED PRESSURE VESSEL

Ethridge E. Hardesty, Costa Mesa, Calif., assignor of one-half to Ralph E. Lazarus, as trustee, Los Angeles, Calif.

Filed May 29, 1958, Ser. No. 738,878
7 Claims. (Cl. 156—165)



1. The method of forming a pre-stressed hollow lined pressure vessel that comprises applying to the outside of a hollow thin walled fluid impervious metal liner an outer layer of uncured thermosetting resinous plastic material having filament form reinforcing material embedded therein wound for many turns about the liner, heating said resinous plastic material and thereby curing it to a hardened polymerized state, applying to the interior of said liner during said curing a fluid pressure in excess of any external pressure thereon in an amount approaching that which would stress said vessel to its maximum safe value, thereby expanding said liner and said resinous plastic material and said reinforcing material outwardly by said pressure during said curing, and thereby prestressing said filament form reinforcing material by maintaining it under a high expansive force and tension during said curing of the resinous plastic material, and supporting said vessel at spaced points during said curing while permitting unrestrained expansion thereof.

7. Apparatus for heating and pressurizing a hollow pressure vessel comprising: a plurality of support means for engaging and supporting spaced portions of said vessel, said support means engaging only a minor fraction of the surface of said vessel, leaving the remainder thereof free of external restraint; one of said supports defining a conduit for conducting fluid under pressure to the interior of said vessel; means for supplying fluid under pressure to the conduit defined by said support; and indicating means having a motion responsive feeler, engageable with an unrestrained portion of said vessel for indicating the extent of expansion thereof by fluid pressure therein.

3,100,172

PROCESS FOR THE MANUFACTURING OF PLASTIC HOLLOW BODIES

Erich-Arthur Nier, Bleidenstadt, Taunus, Germany, assignor to Firm Hans Gubela, Wuppertal-Barmen, Germany

Filed Sept. 15, 1959, Ser. No. 840,195
Claims priority, application Germany Sept. 16, 1958
5 Claims. (Cl. 156—228)



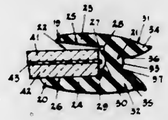
1. A process for the manufacture of a plastic body having a hollow interior, said process comprising the steps of: forming thermoplastic mating sections to define said body with exposed portions of said bodies having faces adapted to be juxtaposed and with a recess extending along the edge of the interior side of the portions; assembling said sections in mating relationship; heating said exposed portions to soften the same and applying pressure thereto in a direction generally normal to said faces to squeeze and flow material from the portions to said interior side to at least substantially fill said recess with the material in the recess bonding the sections, whereby said exposed portions may be removed without destroying the bond between the sections.

3,100,173

APPARATUS FOR PRESSING GLASS-PLASTIC SANDWICHES

James H. Boicey and Frederick E. Henning, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Dec. 13, 1957, Ser. No. 702,707
5 Claims. (Cl. 156—579)



1. An apparatus for pressing together the glass and plastic sheets of glass-plastic sandwiches, comprising an endless ring-type member of resilient material for surrounding a glass-plastic sandwich, said ring-type member having a body portion including a web portion, a pair of substantially parallel legs extending inwardly from said web portion to form a continuous channel for receiving the peripheral margin of a glass-plastic sandwich, a continuous groove recessed into said web portion between said legs and in open communication with said channel, means extending outwardly from said web portion responsive to pressure applied thereon to outwardly distort said legs and open said channel, and means communicating with said groove for evacuating air from the space defined by said groove and the marginal edge of a glass-plastic sandwich when secured in the channel.

3,100,174

PREPARATION OF WETTABLE POWDERS OF 2-HEPTADECYL-2-IMIDAZOLINE

Lewis F. Stevens, Haddonfield, N.J., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed July 29, 1960, Ser. No. 46,047
3 Claims. (Cl. 167—33)

1. A method of forming a stable, finely divided wettable powder of 2-heptadecyl-2-imidazoline, the powder being microground and being adapted to inhibit plant pests when applied to an infected plant, which method comprises blending and microgrinding on a fluid energy vortex mill a mixture of:

(A) 2-heptadecyl-2-imidazoline;

(B) about 3 to about 50 percent by weight based upon the mixture of a pulverulent diluent consisting essentially of a material selected from the class consisting of calcium silicate and magnesium silicate, said pulverulent diluent being of a particle size of about 0.01 to about 2 microns and of a specific surface of about 50 to about 600 square meters per gram; and

(C) about 3 to about 20 percent by weight based upon the mixture of a monoester of the formula:

$$R{-}COO{-}CH_2CH_2{-}\left(OCH_2CH_2\right)_n{-}OCH_2CH_2OH$$

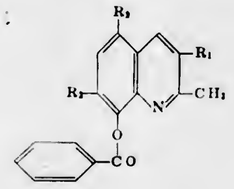
in which R is the hydrocarbon residue of a higher fatty acid and n is a number from about 0 to about 60, the grinding being continued until said microground wettable powder is attained.

3,100,175
ANTISEPTIC COMPOSITION

Jean-Pierre Bourquin, Basel, Arthur Brack, Riehen, Erhard Schenker and Rudolf Griot, Basel, and Walter Steffen, Munchenstein, Basel-Land, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed July 5, 1961, Ser. No. 121,838
Claims priority, application Switzerland July 15, 1960
7 Claims. (Cl. 167—33)

1. An antifungal and antibacterial composition of matter comprising 5,7-dibromo-8-hydroxyquinoline and a quinaldine derivative of the general Formula I as active ingredients,



(I)

wherein R_1 is selected from the group consisting of hydrogen and methyl and each of the two symbols R_2 is selected from the group consisting of chlorine and bromine, there being present from 4 to 9 mols of said quinoline to 1 mol of said quinaldine derivative.

3,100,176
HYGROMYCIN AND METHOD OF PRODUCING SAME

John Ehrlich, Grosse Pointe Park, Quentin R. Bartz, Detro.t, and Mildred Penner Knudsen, Birmingham, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

Filed Sept. 9, 1954, Ser. No. 455,012
8 Claims. (Cl. 167—65)

8. Hygromycin, an antibiotic produced by cultivating under aerobic conditions the Streptomyces strain NRRL 2429 in a culture medium containing mold-assimilable carbon, nitrogen and inorganic salts, until substantial antibiotic activity is produced by said Streptomyces strain in said culture medium, and recovering the hygromycin from said culture medium.

3,100,177
PENICILLIN COMPOSITION FOR PERICARDIAL INTRODUCTION

Larry M. Wheeler, Grosse Pointe Farms, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Jan. 5, 1961, Ser. No. 80,954
8 Claims. (Cl. 167—65)

1. A procaine penicillin composition in dosage form for pericardial introduction which comprises a suspension in a flowable vehicle of procaine penicillin crystals, each dosage unit of said composition containing approximately 2 to 10 grams of procaine penicillin crystals exceeding 420 microns in length.

3,100,178
VACCINE PRODUCTS AND METHOD OF PREPARING SAME

I. William McLean, Jr., Grosse Pointe, Mich., and Frederick W. Trader, Jr., La Jolla, Calif., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Aug. 31, 1961, Ser. No. 135,151
7 Claims. (Cl. 167—78)

5. A biological composition comprising an emulsion of an aqueous, non-viable, immunogenic agent in a mixture of hydrocarbons composed of one substantially chemically pure, branched chain, saturated, non-cyclic hydrocarbon containing 23 to 30 carbon atoms inclusive and one substantialy chemically pure, branched chain, saturated, non-cyclic hydrocarbon containing 16 to 17 carbon atoms inclusive, said mixture of hydrocarbons and said hydrocarbon containing 23 to 30 carbon atoms inclusive both having a melting point not greater than 4° C., a viscosity of not less than 2 and not greater than 30 centipoises at 22 to 24° C. and a guinea pig toxicity index not greater than 0.3 ± 0.2 unit; said emulsion containing from 0.5 to 15% by volume of an antigen-compatible, pharmaceutically-acceptable emulsifier and between 10 and 74.5% by volume of said mixture of hydrocarbons.

3,100,179
NON-ALCOHOLIC AEROSOL FILM FORMING COMPOSITIONS

William M. Perry, Bethlehem, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 18, 1959, Ser. No. 800,097
5 Claims. (Cl. 167—87.1)

1. A non-alcoholic sprayable film forming preparation consisting essentially of a copolymer of 30–70% by weight of N-vinylpyrrolidone and 70–30% by weight of a vinyl ester in solution of trifluorethyl chloride (CF_3CH_2Cl), said ester selected from the class consisting of vinyl acetate, vinyl glycolate, vinyl chloride, vinyl formate, vinyl propionate, vinyl butyrate and vinyl stearate.

3,100,180
DERMAL PROTECTIVE COMPOSITIONS

Gordon R. Smith and Ralph C. Wands, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Dec. 19, 1960, Ser. No. 76,531
14 Claims. (Cl. 167—91)

1. A composition adapted for topical application which consists essentially of a water miscible pharmaceutical extending medium having an aqueous base and containing a dispersed bodying agent and having homogeneously dispersed therein a latex-like dispersion of an oleophobic and hydrophobic physiologically inert stable fluorine-containing elastomeric vinyl polymer in which from 10 to about 75 percent of the hydrogen directly attached to carbon has been replaced by fluorine and which elastomer is characterized by a glass transition temperature below about 40° C., in amount sufficient to provide from about 0.3 to 20% by weight of said elastomer in said composition, said extending medium being compatible with said latex-like dispersion.

3,100,181
PREPARATION OF ORGANOBORANES

John W. Ryznar, La Grange, and John G. Premo, Western Springs, Ill., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Feb. 16, 1961, Ser. No. 89,882
4 Claims. (Cl. 204—59)

1. A process for preparing organoboranes which comprises electrolyzing between a boron anode and a cathode, a substantially anhydrous solution of a Grignard reagent of the formula RMgHalide in a substantially inert solvent for the Grignard reagent, and recovering as an electrolysis product an organoborane of the formula R_3B where R is an organic radical containing as its major components the elements, carbon and hydrogen.

3,100,182
IRRADIATION DESTRUCTION OF COMPLEXES

John G. Erdman, Allison Park, and James H. Wright, Verona, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed July 16, 1956, Ser. No. 597,850
11 Claims. (Cl. 204—154)

1. A process for the destruction of porphyrin metallo complexes in solution which comprises subjecting said complexes to high energy ionizing radiation with a dosage sufficient to destroy said complexes.

3,100,183
FUEL COMPOSITION FOR NUCLEAR REACTORS

James C. Andersen, Niagara Falls, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Feb. 6, 1962, Ser. No. 171,534
10 Claims. (Cl. 204—154.2)

1. As a new composition of matter, a refractory fuel material for nuclear reactors composed of a mixture of from 15 to 25% by weight of uranium trisilicide, nickel aluminide in a quantity to yield a content of about 15% by weight of nickel and from 6 to 10% by weight of aluminum, the balance being silicon carbide, said percentages referring to the amount of silicon carbide.

3,100,184
TRITIUM PRODUCTION BY NEUTRON-IRRADIATION OF ALUMINUM-LITHIUM ALLOYS

Bernard M. Abraham, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 24, 1951, Ser. No. 248,105
12 Claims. (Cl. 204—154.2)

1. A method of preparing tritium in a relatively pure state, which comprises irradiating an aluminum-lithium alloy with neutrons, heating the irradiated alloy whereby the tritium formed is released from the alloy and collecting the tritium emitted.

3,100,185
PROCESS OF IMPROVING THE WEAR PROPERTIES OF A MINERAL AND FATTY OIL LUBRICANT MIXTURE BY RADIATION

Henry A. Ambrose, Penn Hills, and Charles E. Trautman, Cheswick, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,043
3 Claims. (Cl. 204—162)

1. A process of improving the wear characteristics of a lubricating composition consisting essentially of a mixture of about 50 to about 90 percent by volume of a mineral oil and about 10 to about 50 percent by volume of a fatty oil having an iodine value below about 100, which comprises subjecting said mixture to ionizing radiation for a time sufficient for said mixture to absorb at least about 24 megareps of radiation.

3,100,186
METHOD OF MAKING LAMELLAR SHEETS OF FLUORPHLOGOPITE MICA

William McNeill and Joseph E. Chrostowski, Philadelphia, and Thomas J. Mackus, Upper Darby, Pa., assignors to the United States of America as represented by the Secretary of the Army

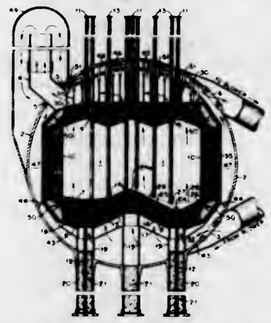
No Drawing. Filed June 24, 1960, Ser. No. 38,673
3 Claims. (Cl. 204—181)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for reconstituting a crystalline, transparent, smooth lamellar fluorphlogopite mica from synthetic fluorphlogopite which comprises the steps of heating the synthetic fluorphlogopite to remove any moisture adsorbed thereon, comminuting the dried synthetic fluorphlogopite with a high speed cutting blade in a liquid medium selected from the group consisting of pure anhydrous n-amyl alcohol, 2 ethyl hexanol, isobutyl alcohol, and isopropyl alcohol, to form a mixture yielding particles substantially all of which are of the order of about 5 to 25 microns in their largest dimension and exhibit smooth surfaces and edges, diluting the comminuted mixture to approximately double its original volume with an additional amount of said liquid medium, forming layers having particles of different size ranges with respect to their largest dimension by allowing the diluted mixture to stand, one of said layers containing said particles in the 5 to 25 micron range, separating said one layer and further diluting same with more of said liquid medium to form a suspension of approximately 10 to 400 grams of fluorphlogopite particles per liter of said liquid medium, pouring said suspension into an electrophoretic deposition cell, immersing a cathode between the parallel surfaces of a U-shaped anode, said anode and cathode being vertically disposed and having opposed parallel flat surfaces, agitating the suspension to provide maximum non-turbulent flow parallel to said flat surfaces, applying a voltage between said cathode and said anode to yield a current density of 0.01 to 3 milliamperes per square inch of cathode surfaces for a period of about 5 seconds to 1 hour until a deposit of fluorphlogopite particles is formed on said flat surfaces of said cathode, slowly air drying said deposit and stripping the dried deposit from said cathode by the application of heat thereto.

3,100,187
REFLECTOR FOR NEUTRONIC REACTORS

Arthur P. Fraas, Knoxville, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed May 3, 1961, Ser. No. 107,603
7 Claims. (Cl. 204—193.2)



1. In a neutronic reactor having a core and a reflector disposed adjacent to said core, the improved reflector which comprises a multiplicity of closely packed graphite rods disposed with their major axes substantially perpendicular to the interface between said core and said reflector, each of said rods being substantially round in transverse cross section at at least its end adjacent to said interface and provided at said end with a coaxial, inwardly tapering hole.

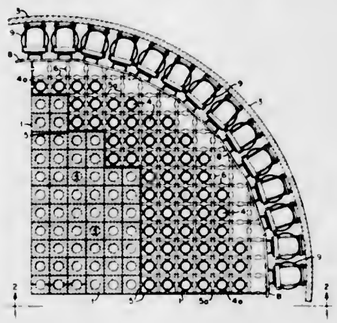
3,100,188
REACTOR MODERATOR STRUCTURE

Arthur P. Fraas, Knoxville, and John J. Tudor, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed May 19, 1961, Ser. No. 111,416
2 Claims. (Cl. 204—193.2)

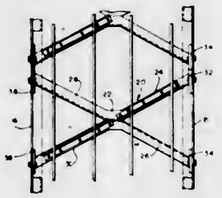
1. In a neutronic reactor comprising a pressure vessel and a moderator structure disposed therein, an improved

moderator structure comprising a multiplicity of moderator blocks arranged in horizontal layers to form a multiplicity of vertically stacked columns of blocks, all of said blocks in each vertical column of blocks being keyed together, a plurality of ceramic grids being disposed between said horizontal layers of moderator blocks, said ceramic grids providing horizontal restraint to said moderator blocks; a multiplicity of pressure plates covering the lateral surface of said moderator structure in abutting relationship with the peripheral terminal lengths of



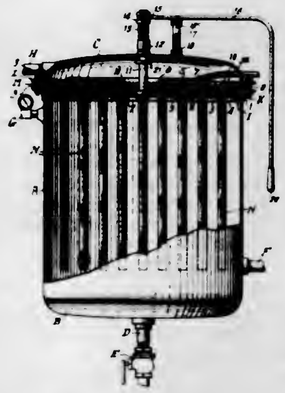
said ceramic grids, tubular springs disposed between said pressure vessel and said pressure plates, said springs having their axes of revolution vertically disposed to facilitate passage of coolant gas through said springs, said springs being spaced apart by a selected distance such that at a preselected point of spring deflection the sides of said springs will contact adjacent springs, thereby causing a large increase in resistance to further deflection of said springs, and means for adjusting the individual spring tension.

3,100,189
X-BRACE SCREEN
Francis B. Olender, Wallington, and Albert Wilson, Garfield, N.J., assignors to Hewitt-Robins Incorporated, Stamford, Conn.
Filed Feb. 1, 1961, Ser. No. 86,347
1 Claim. (Cl. 209—409)



In a vibrating screen, a pair of vertically disposed parallel side plates, brace means interconnecting said plates, said plates being adapted to have a means associated therewith for moving said plates and said brace means in a manner so as to have a selected motion to effect a selected screening operation, which motion has vertical and horizontal components, said brace means comprising a pair of channel-shaped members, the web of each channel-shaped member facing the web of the other member and being in contact with and connected to the web of the other member along a relatively short length of the channel as compared to the total length thereof, the flanges of one of said channel members extending outwardly in opposite direction from the flanges of the other of said channel members, the webs of said channel members being vertically disposed, said channel members forming diverging leg portions extending outwardly from opposite sides of the contacting length of said channel members in a plane transverse to said webs, said leg portions forming substantially an X-shaped brace of said connected channel members, each leg portion of each channel to one side of the connected portions of said webs being substantially in alignment with a leg portion of the other channel on the opposite side of said connected portions of said webs, said X-shaped brace having abutment plates at the ends of said leg portions securing said X-shaped brace to said side plates with one leg portion of each channel member being connected to one of said side plates and the other leg portion being connected to the other of said side plates, said leg portions of at least one of said channel members extending in a horizontal plane in directions which result in transmission of the horizontal component of the forces resulting from the screen motion, along the latter legs, from substantially the center of said screen to said side plates.

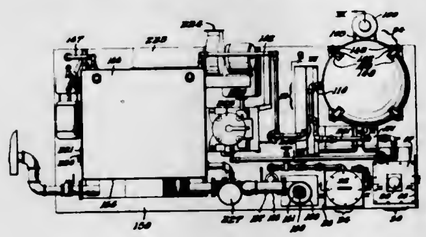
3,100,190
PRESSURE FILTER AND FILTER TUBE THEREFOR
Russell B. Hobson, Jr., Montclair, N.J., assignor to Per Corporation, West Orange, N.J., a corporation of New Jersey
Filed Feb. 1, 1961, Ser. No. 86,447
7 Claims. (Cl. 210—106)



1. A pressure filter comprising a tank having a chamber for the liquid to be filtered, an inlet for supplying to said chamber under pressure a mixture of said liquid and solid particles in suspension, an outlet for the filtrate from said chamber, and a filter unit mounted in said chamber including at least one filter tube having a wall approximately circular in transverse cross-section with a predetermined normal diameter comprising a plurality of interlaced helically disposed non-stretchable and non-contractible but flexible wires providing between them filtering pores through which said liquid must flow from said inlet at one side of said wall to said outlet at the other side of said wall upon production of a pressure differential in the liquid at opposite sides of said wall and during said flow deposit solid particles in said pores and in a layer on the tube wall, certain of said wires running helically of the tube side by side in one direction and other wires running helically of the tube side by side in another direction with the helices disposed at angles to a plane perpendicular to the axis of the tube other than the neutrality angle, the first-mentioned wires crossing and extending under some and over others of the second-mentioned wires, whereby said wires are movable relatively to each other both longitudinally and perimetrally of the tube to expand and contract the tube wall in diameter

and length and at the same time maintain said wall of the same cross-sectional shape in response to variations in said pressure differential and thereby dislodge said layer of solid particles from said pores and said wall, and a member loosely mounted within said tube whose peripheral surface is normally spaced from but is abutted by said wall and thereby limits inward movement or compressibility of the wall under said pressure differential and has passages for flow of liquid through the tube, at least one end of the tube wall being open and there being means mounting said tube in the tank for free flow of the liquid through said open end to and from said outlet and the other end of the tube being formed to provide for the establishment of a pressure differential at opposite sides of the tube wall upon flow of liquid under pressure from one side of the wall to the other, said wires and their helical relation to each other and said member providing for automatic return of the tube to its original condition upon release of the tube wall from said pressure differential.

3,100,191
AUTOMATIC DRY CLEANING MACHINE
Jack C. Smith, Edwin E. Etterman, and Roy T. Romine, Bowling Green, Ky., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Feb. 24, 1960, Ser. No. 10,768
2 Claims. (Cl. 210—138)



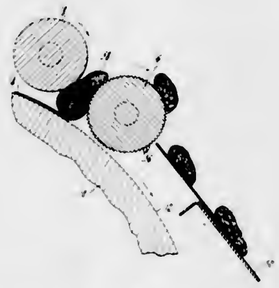
1. An automatic dry-cleaning machine for garments comprising: a supply tank for solvent, said tank also serving as a base for said machine; a tub mounted on said supply tank and having therein a rotatable perforated work basket adapted to hold a batch of soiled garments to be cleaned; a main filter mounted on said supply tank, said filter having tubular septum elements; an automatic filter powder dispenser mounted on said supply tank and having a supply hopper and a motor-driven rotatable feed mechanism adapted to dispense a controlled amount of filter powder from said hopper into said supply tank for each rotation of said mechanism, said automatic filter powder dispenser comprising an elongated cylindrical vertically-disposed walled housing having an upper section and a lower section separated by a slotted plate forming the floor of the upper section for supporting a supply of diatomaceous earth filter powder the particles of which tend to cling together to form a cohesive columnar mass, a rotatable shaft extending axially through said upper section and attached at its lower end to said slotted plate, a pair of opposed upwardly-extending wiper arms secured to said slotted plate and adapted to sweep along the lower wall of said upper section when said shaft is rotated for cutting the lower portion of said columnar mass free of said lower wall, and at least one arm mounted to extend into said lower portion of said columnar mass for breaking up said mass and causing particles thereof to drop through the radial slots of said floor plate and into the lower section of said housing; filter powder feed impulse timer means connected to said filter powder dispenser motor for driving said motor intermittently during wash-cycle periods; a secondary filter comprising a vertically-disposed container having therein a rotatable perforated basket and a filter bag, said secondary filter being adapted to function as a stationary sub-filter and muck storage container and also as a centrifuge extractor, said secondary filter being mounted on said supply tank; a motor connected to said secondary filter for driving said filter rotationally during centrifuge periods; conduit means coupling each of said tub, main filter, and secondary filter to said supply tank and intercoupling said tub to said main filter and said main filter to said secondary filter, said conduit means from said main filter to said secondary filter entering said basket and filter bag upwardly through the bottoms thereof and terminating inside said bag in a perforated piping; pump means for forcing solvent through said conduit means and through said machine; a plurality of valves in said conduit means, including at least one valve in the conduit coupling said supply tank to said tub, at least one valve in the conduit coupling said supply tank to said main filter, at least one valve in the conduit coupling said supply tank to said secondary filter, at least one valve in the conduit coupling said tub to said main filter, and at least one valve in the conduit coupling said main filter to said secondary filter; electrically-operable valve operator means; mechanical linkages connecting said valve operator means to said valves; wash-cycle timer switch means coupled to said valve operator means for operating said valve operator means for placing said valves in such conditions during a period assigned to the wash cycle that said pump forces solvent in a first direction through said tub, work basket, and main filter and then back into said tub, the filter septum elements of said main filter having a total filter area of such size as to adapt said elements to filter out soil from a single batch of garments (but not from a plurality of batches) without appreciably reducing the rate of flow of solvent therethrough; said filter powder feed impulse timer means being adapted during the period of the wash cycle to energize said filter powder dispenser motor intermittently to rotate the feed mechanism of said dispenser intermittently to add filter powder intermittently to the solvent in the supply tank; backwash cycle timer switch means coupled to said valve operator means and effective at the end of each wash-cycle period and during each following period assigned to a backwash cycle for actuating said valve operators for changing said valves to place said valves in such conditions that said pump during each backwash-cycle period pumps solvent in a reverse direction through said main filter to backwash said main filter and to pump the mixture of solvent and soiled filter powder into said secondary filter, a considerable portion of said solvent returning from said secondary filter when stationary through said conduit means to said supply tank; pre-coat-cycle timer means coupled to said pump means and to said motor-driven rotatable filter powder feed mechanism and effective at the end of each backwash-cycle period and during each following period assigned to a pre-coat feed period for shutting off said pump and rotating the feed mechanism of said filter powder dispenser to add a controlled quantity of filter powder to said supply tank following each backwash period according to the duration of said feed period; said wash-cycle timer switch means coupled to said valve operators being effective at the end of each pre-coat-cycle feed period and during each following period assigned to a pre-coat pump cycle for actuating said valve operators for changing said valves so that said pump during said pre-coat pump cycle pumps solvent having the controlled quantity of added filter powder therein from said supply tank through said main filter in said first direction to pre-coat said filter septum elements; said wash-cycle timer switch means coupled to said valve operators being effective at the end of each pre-coat pump cycle for changing said valves to place said valves in conditions corre-

sponding to the wash cycle, thereby to place said machine in condition to repeat its cyclic sequence of operations; motor means connected to the basket of said secondary filter; and control means for said motor means for rotating the basket of said secondary filter at selected intermittent periods to recover the residual solvent from the mixture contained therein and to return said recovered solvent to said supply tank.

3,100,192
GROUNDWOOD DISCHARGER

John P. Rich, Nashua, N.H., assignor to Improved Machinery Inc., Nashua, N.H., a corporation of Maine

Filed Nov. 10, 1958, Ser. No. 772,966
1 Claim. (Cl. 210—386)



Apparatus for discharging filter cake in the form of a layer of wet, cohesive solids, from the drum of a continuous rotary drum filter comprising, in combination with a rotary drum filter, a vaned discharge roll mounted immediately adjacent and parallel to the face of said filter drum on the descending side thereof, means for rotating said discharge roll in the same direction as the rotation of said drum, said discharge roll cooperating with the descending side of said drum to cause said layer of solids to accumulate in a roll between the descending side of said drum and the ascending side of said discharge roll, and means for removing discrete portions of the roll of solids and discharging the same in a direction perpendicular to the axis of rotation of said drum filter over said discharge roll, said means including a smooth surfaced cylinder mounted parallel to and adjacent the descending side of said drum above said discharge roll and extending the length of said drum, said smooth surfaced cylinder having a lower coefficient of friction relative to said solids than said discharge roll and means to drive said smooth surfaced cylinder in the same direction and at substantially the same peripheral speed as said discharge roll, said smooth surfaced cylinder maintaining an accumulation of solids in a roll between said discharge roll and said drum while causing discrete portions thereof to be extruded between said smooth surfaced cylinder and said discharge roll for transfer over said discharge roll to a suitable transport medium.

3,100,193
GREASE COMPOSITION

Reuben A. Swenson and Stephen J. Zajac, Whiting, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,508
4 Claims. (Cl. 252—40.5)

1. A lime soap lubricant grease composition comprising a mineral oil lubricant base, from about one to about twenty percent by weight of a calcium soap of a long chain fatty acid, from about one to about ten percent by weight of a calcium soap of a short chain fatty acid, and a small amount, effective to inhibit age hardening, of a member selected from the group consisting of an acetoxy substituted long chain fatty acid. having from ten to about thirty carbon atoms in the fatty acid chain in free acid form, and triglycerides, methyl and ethyl esters of such acetoxy substituted long chain fatty acids.

3,100,194
FERROMAGNETIC MATERIAL AND METHOD OF MAKING THE SAME

Cornelis Martinus van der Burgt and Elias Put, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,126
Claims priority, application Netherlands Jan. 15, 1958
16 Claims. (Cl. 252—62.5)

1. A ferromagnetic material having piezomagnetic properties and consisting essentially of crystals having a spinel structure and a composition corresponding to about 29 to 47 mol percent of NiO, about 3 to 20 mol percent of CuO, about 0.5 to 2 mol percent CoO, and at least 50 to about 52 mol percent of Fe_2O_3, said material having an electromechanical coupling coefficient substantially exceeding 0.20.

3,100,195
BULK POLYMERIZATION OF STYRENE IN THE PRESENCE OF A SATURATED FATTY ACID AND A MINERAL OIL

Jack Zomlefer, Leominster, Mass., assignor to Solar Chemical Corporation, Leominster, Mass., a corporation of Massachusetts

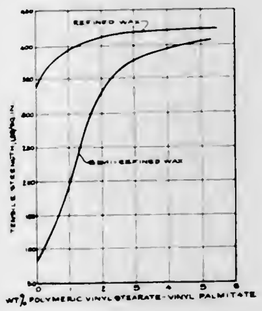
No Drawing. Filed Nov. 25, 1959, Ser. No. 855,264
5 Claims. (Cl. 260—23)

1. A process for the bulk polymerization of monomers consisting of 85 to 100% of styrene and 0 to 15% of an ethylenic monomer co-polymerizable with styrene, comprising heating a mixture of 100 parts of said monomers, catalyst, approximately 0.1 to 4.0 parts of a saturated fatty acid having 12 to 20 carbon atoms and approximately 3.0 to 10 parts of a mineral oil of 40 to 250 centipoises in viscosity.

3,100,196
PETROLEUM WAX-POLYMERIC VINYL ESTER COATING COMPOSITIONS AND METHOD FOR PREPARING SAME

Roy T. Edwards, Cold Spring Harbor, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Jan. 27, 1959, Ser. No. 789,325
3 Claims. (Cl. 260—28.5)



1. A container coating composition of high tensile strength comprising about 80 to about 99.5 percent by weight of a semi-refined wax having a melting point of about 120 to about 150° F. and containing about 0.5–3 percent by weight of entrained petroleum oil, and from about 0.5 to about 5 percent by weight of a solid polymer obtained by polymerizing vinyl esters of fatty acids having between 14 to 20 carbon atoms in the fatty acid chains, said solid polymer being adapted to raise the tensile strength of the semi-refined wax and having an average molecular weight of about five to ninety thousand and said coating composition being characterized by a tensile strength in excess of 200 p.s.i.

3,100,197
MONOOLEFIN POLYMER STABILIZED WITH A COMBINATION OF A PHENOLIC CONDENSATE AND A PHOSPHORUS AMIDE, AND PROCESS FOR PREPARING SAME

Claus Heuck, Hofheim, Taunus, Fritz Rochlitz and Otto Mauz, Frankfurt am Main, Jakob Winter, Hofheim, Taunus, and Felix Schulde, Neuenhain, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 15, 1959, Ser. No. 859,558
Claims priority, application Germany Dec. 20, 1958
9 Claims. (Cl. 260—43)

1. A mono-olefin polymer stabilized by 0.001 to 5% by weight of a stabilizer system consisting essentially of (1) a condensation product of alkyl-phenol and a member of the group consisting of an aldehyde, a ketone, sulfur chloride, and a mixture of at least two of said members and (2) as a co-stabilizer a phosphorus amide containing at least two nitrogen atoms which are bound directly to a phosphorus atom and each of which has at least one hydrogen atom bound thereto, the ratio of (1) to (2) being 1:5–5:1.

3,100,198
BLEND OF AN α-METHYLSTYRENE/ACRYLONITRILE COPOLYMER WITH A COPOLYMER OF α-METHYLSTYRENE AND A DIOLEFIN HAVING STYRENE AND ACRYLONITRILE GRAFTED THEREON

André Fournet and André Rio, Lyon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a body corporate of France

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,602
Claims priority, application France Feb. 20, 1959
8 Claims. (Cl. 260—45.5)

1. Flexible homogeneous thermoplastic compositions which contain, as sole polymeric constituents, a mixture of (*a*) 10 to 50 parts of a resinous copolymer of 90 to 60 parts of α-methylstyrene and 10 to 40 parts of acrylonitrile and (*b*) 90 to 50 parts of a rubbery copolymer of 50 to 90 parts of α-methylstyrene and 50 to 10 parts of a conjugated diolefine, on to which rubbery copolymer there have been grafted by polymerization 5 to 70 parts of mixtures of styrene and acrylonitrile per 100 parts of said copolymer, all the said parts being by weight.

3,100,199
PREPARATION OF POLYACETALS FROM HALOGENATED UNSATURATED CARBOXYLIC ACID ESTERS

James W. L. Fordham and George H. McCain, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Mar. 12, 1958, Ser. No. 720,819
7 Claims. (Cl. 260—73)

1. The method of preparing a polymer which comprises the steps of polymerizing a polymerizable material selected from the group consisting of vinyl chloracetate monomer and vinyl trifluoracetate monomer and mixtures of such monomers with no more than about 10% by weight of vinyl acetate, hydrolyzing the resultant polymer in the presence of a solvent for the polymer inert in basic solutions, the solvent being selected from the group consisting of tetrahydrofuran and dioxane, carrying out the hydrolysis in a refluxing anhydrous alkali metal alcoholate solution, neutralizing the resultant polyvinyl alcohol and reacting it with an aldehyde in a slurry using a solvent in which the desired acetal is insoluble, in the presence of an esterification catalyst soluble in the slurrying, at the reflux temperature of the reaction mixture, using a stoichiometric excess of the aldehyde and about 1%–10% by weight of a catalyst selected from the group consisting of oxalic acid, concentrated sulfuric acid, hydrochloric acid, p-toluene sulfonic acid.

3,100,200
PROCESS FOR POLYMERIZATION OF ACRYLIC ESTERS WITH CATALYSTS COMPRISING METAL HALIDES AND GROUP II METALS

Lon T. Smith, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,581
15 Claims. (Cl. 260—89.5)

1. A process for polymerizing acrylic esters which comprises contacting under anhydrous polymerizing conditions an acrylic ester selected from the group consisting of methyl, ethyl, butyl, hexyl, decyl, and octadecyl acrylates and methacrylates as the sole polymerization material with a catalyst consisting essentially of an inorganic halide of tin, said halide being selected from the group consisting of chloride, iodide, and bromide, and a second member selected from the group consisting of magnesium, zinc, cadmium, and carbonates of these metals at a temperature in the range of 0 to 250° F. for a time in the range of 1 to 500 hours, the mol ratio of tin halide to the second catalyst member being in the range of 0.1 to 5.0, and the total amount of catalyst being in the range of 0.01 to 10 mols per mol of monomer so as to form a solid homopolymer of said ester; and recovering the homopolymer product.

3,100,201
PROCESS FOR PURIFYING PROTEIN HYDROLYSATE SOLUTIONS

William O. Pool, Glendale, Calif., assignor to McGaw Laboratories, Inc., Glendale, Calif., a corporation of Delaware

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,203
6 Claims. (Cl. 260—112)

1. A process for removing sulfate ions from a sulfuric acid hydrolyzed casein solution comprising: neutralizing the sulfuric acid with sodium hydroxide to a pH of about 7.0; then adjusting the volume of the solution whereby the sulfate ion concentration thereof is between about 1 and 20%; then adjusting the solution temperature to between 20° and 30° C. and seeding the solution with a crystal of sodium sulfate decahydrate; then slowly reducing the temperature of the solution to between minus 20° and plus 10° C., whereby large individual crystals of sodium sulfate decahydrate are formed; and removing the supernatant solution of protein hydrolysate from the crystals of sodium sulfate decahydrate.

3,100,202
PROCESS FOR PREPARING AN IRON HYDROXIDE POLYISOMALTOSE COMPLEX AND THE RESULTING PRODUCT

Arthur Müller, St. Georgenstr. 100B, and Theodor Bersin, Ludwigstr. 19, both of Sankt Gallen, Switzerland

No Drawing. Filed June 17, 1960, Ser. No. 36,734
10 Claims. (Cl. 260—209)

1. A process of preparing an iron hydroxide polyisomaltose complex containing about 32% iron by weight comprising heating an acidic aqueous solution of a water-soluble dextran, having an intrinsic viscosity greater than 0.1 at 25° C. and, a water-soluble iron compound in respective amounts of about 48 to about 141 weight parts

of said iron compound per 100 weight parts of dextran until the intrinsic viscosity of said solution is not more than 0.1 at 25° C., reacting the resulting solution with an alkali carbonate at an acid pH whereupon carbon dioxide is evolved, alkalinizing the resulting solution with an alkali metal hydroxide after completion of the carbon dioxide evolution, and thereafter heating the resulting solution to form said complex.

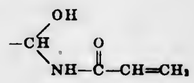
8. An iron hydroxide polyisomaltose complex containing about 32% iron by weight.

3,100,203
DIALDEHYDE POLYSACCHARIDE-ACRYLAMIDE DERIVATIVES

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed May 6, 1960, Ser. No. 27,263
6 Claims. (Cl. 260—211)

1. A dialdehyde polysaccharide derivative wherein at least some of the aldehyde groups of the polymer units of said dialdehyde polysaccharide have been replaced by groups having the formula:



3,100,204
HALOETHISTERONE COMPOUNDS

Arthur E. Oberster, Canton, Ohio, Roger E. Beyler, Carbondale, Ill., and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 20, 1960, Ser. No. 23,393
5 Claims. (Cl. 260—239.55)

1. Process for the preparation of 17α-ethynyl-5-androstene-3β,17β-diol-bis-tetrahydropyranyl ether which comprises reacting 17α-ethynyl-5-androstene-3β,17β-diol with dihydropyran in the presence of an acidic reagent.

2. Process for the preparation of 17α-haloethynyl-5-androstene-3β,17β-diol-bis-tetrahydropyranyl ether which comprises halogenating 17α-ethynyl-5-androstene-3β,17β-diol-bis-tetrahydropyranyl ether.

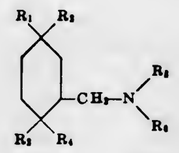
3,100,205
CYCLOHEXANE DERIVATIVES

Karl Schulte, Darmstadt, Heinrich Müller, Pfungstadt, near Darmstadt, and Hans-Günther Kraft, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany, a corporation of Germany

No Drawing. Filed May 11, 1961, Ser. No. 109,255
8 Claims. (Cl. 260—247.2)

4. 2 - morpholinomethyl-4-phenyl-4-carboctoxy-cyclohexanol-1-acetate.

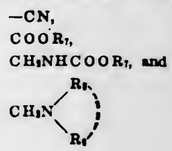
8. A compound selected from the group consisting of:
(1) a compound having the formula



(2) The pharmaceutically acceptable acid addition salts thereof, and
(3) the quaternary ammonium compounds thereof wherein the quaternizing moiety is a member of the group consisting of alkylchloride and alkylbromide each having a maximum of 8 carbon atoms; and wherein:

R_1 designates a member of the group consisting of phenyl, cyclohexyl, cyclohexenyl, and mono- and di-substituted phenyl whereof the substituent is a member of the group consisting of bromine, hydroxyl, alkyl having at most 4 carbon atoms, alkoxy having a maximum of 3 carbon atoms, and methylene dioxy;

R_2 designates a member of the group consisting of



wherein:

R_7 designates an alkyl having a maximum of 8 carbon atoms;

R_8 and R_9 designate a member of the group consisting of hydrogen and alkyl having a maximum of 4 carbon atoms;

R_8 and R_9, when linked together, jointly with the nitrogen atom, form a member selected from the group consisting of piperidino, morpholino, and piperazino;

R_3 designates a member of the group consisting of hydrogen, alkoxy having a maximum of 2 carbon atoms, alkyl having a maximum of 4 carbon atoms, and phenyl;

R_4 designates a member of the group consisting of hydrogen, hydroxyl, alkoxy having a maximum of 4 carbon atoms and alkanoyloxy having a maximum of 10 carbon atoms;

R_3 and R_4 jointly designate a member of the group consisting of =O, =NOH, and ethylenedioxy;

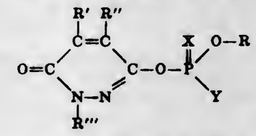
R_5 and R_6 designate a member of the group consisting of hydrogen, alkyl having a maximum of 6 carbon atoms, and hydroxyalkyl having a maximum of 3 carbon atoms; and when linked together, jointly constitute with the nitrogen atom a member of the group consisting of pyrrolidino, piperidino, morpholino, and N'-methyl-piperazino.

3,100,206
O-(1,6-DIHYDRO-6-OXO - 3 - PYRIDAZINYL) O - ALKYL PHOSPHORAMIDATE AND PHOSPHORAMIDOTHIOATE

Raymond H. Rigterink, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 5, 1961, Ser. No. 107,903
7 Claims. (Cl. 260—250)

1. A compound corresponding to the formula



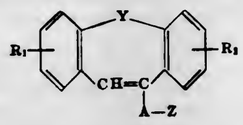
wherein X represents a member of the group consisting of oxygen and sulfur, R represents lower alkyl, Y represents a member of the group consisting of amino and lower alkylamino, R''' represents a member of the group consisting of hydrogen, lower-alkyl, phenyl, bromophenyl, chlorophenyl and nitrophenyl, and R' and R'' each represent a member of the group consisting of hydrogen, methyl, chlorine, bromine and when taken together R' and R'' represent the α,Δ-(1,3-butadienylene) radical.

3,100,207
10-AMINOALKYLBENZO[b,f]THIEPIN AND -DIBENZ[b,f]OXEPIN DERIVATIVES

Charles L. Zirkle, Haddon Heights, N.J., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 8, 1959, Ser. No. 825,670
11 Claims. (Cl. 260—268)

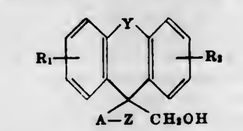
1. A chemical compound of the class consisting of a free base and its nontoxic, pharmaceutically acceptable, acid addition salts, the free base having the structural formula:



in which Y is a member selected from the group consisting of sulfur and oxygen; in which R_1 and R_2 are members selected from the group consisting of hydrogen, halogen having an atomic weight of less than 80, trifluoromethyl, lower alkyl, lower alkoxy and lower alkylthio; A is an alkylene chain having 2 to 4 carbon atoms, and Z is a member selected from the group consisting of di-lower alkylamino, N-pyrrolidinyl, C-(N-lower alkyl) piperidinyl, N-piperidinyl, N-piperazinyl, N'-formyl-N-piperazinyl, N'-methyl-N-piperazinyl, N'-hydroxyethyl-N-piperazinyl, N'-acetoxyethyl-N-piperazinyl and N'-hydroxyethoxyethyl-N-piperazinyl.

6. 10 - [3 - (4'' - methyl - 1'' - piperazinyl)propyl]-dibenzo[b,f]thiepin.

7. A chemical compound of the class consisting of a free base and its nontoxic, pharmaceutically acceptable, acid addition salts, the free base having the structural formula:



in which Y is a member selected from the group consisting of sulfur and oxygen; R_1 and R_2 are members selected from the group consisting of hydrogen, halogen having an atomic weight of less than 80, trifluoromethyl, lower alkyl, lower alkoxy and lower alkylthio; A is an alkylene chain having 2 to 4 carbon atoms, separating the nitrogen atoms to which it is attached by at least 2 carbon atoms; and Z is a member selected from the group consisting of di-lower alkylamino, N-pyrrolidinyl, N-piperidinyl, C-(N-lower alkyl)piperidinyl, N-piperazinyl, N'-formyl-N-piperazinyl, N'-methyl-N-piperazinyl, N'-hydroxy ethyl-N-piperazinyl, N'-acetoxyethyl-N-piperazinyl and N'-hydroxy-ethoxyethyl-N-piperazinyl.

3,100,208
N_1-(p-TOLUENE SULFONYL)-N_2-(α-TETRAHYDROFURYL METHYL) UREA

Erich Haack, Heidelberg, Adolf Hagedorn, Mannheim-Waldhof, Heinrich Ruschig, Bad Soden, Taunus, and Gerhard Korger, Frankfurt am Main Hochst, Germany, assignors to C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany, a corporation of Germany

No Drawing. Original application Nov. 23, 1956, Ser. No. 623,618, now Patent No. 2,964,560, dated Dec. 13, 1960. Divided and this application Dec. 12, 1960, Ser. No. 75,090
Claims priority, application Germany Nov. 28, 1955
1 Claim. (Cl. 260—347.2)

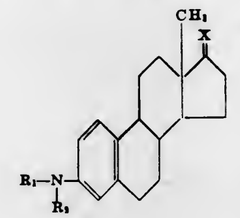
N_1-(p-toluene sulfonyl)-N_2-(α-tetrahydrofuryl methyl) urea.

3,100,209
3-AMINO-1,3,5(10)-ESTRATRIENE-DERIVATIVES AND PROCESS FOR THEIR MANUFACTURE

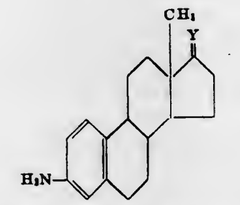
Erwin Schwenk, Shrewsbury, Mass., and Allen M. Gold, New York, N.Y., assignors to The Worcester Foundation for Experimental Biology, Shrewsbury, Mass., a corporation of Massachusetts

No Drawing. Filed Apr. 27, 1960, Ser. No. 24,915
19 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of aminoestratrienes of the following structural formulae:



and



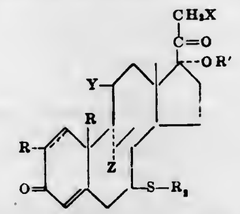
wherein R_1 and R_2 are members selected from the group consisting of lower alkyl, benzyl, and an acid radical of a hydrocarbon carboxylic acid having up to eight carbon atoms; X is a member selected from the group consisting of O. (H, βOZ), (α-methyl, βOZ) and (α-ethinyl, βOZ) wherein Z is a member selected from the group consisting of H and an acid radical of a hydrocarbon carboxylic acid having up to eight carbon atoms; and Y is a member selected from the group consisting of (α-methyl, βOZ) and (α-ethinyl, βOZ), wherein Z is as heretofore defined.

3,100,210
17α-ALKOXY-7α-ACETYLTHIOPROGESTERONES

Burton G. Christensen, Rahway, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 18, 1960, Ser. No. 70,118
18 Claims. (Cl. 260—397.4)

1. A compound of the formula:



wherein the dotted lines between carbon atoms 1 and 2 indicate that a double bond may be present in this position, and where R is selected from the group consisting of hydrogen and methyl, R' stands for a lower alkyl radical, X is selected from the group consisting of hydrogen and halogen, Y is selected from the group consisting of hydrogen, keto and hydroxy, R_2 is an alkanoyl group having from 1 to 8 carbon atoms and Z is selected from the group consisting of hydrogen and halogen.

3,100,211
PROCESS FOR THE PREPARATION OF DIHYDROPENTALENYL MANGANESE TRICARBONYL

Thomas H. Coffield, Heidelberg, Germany, assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,851
5 Claims. (Cl. 260—429)

5. A process for the preparation of dihydropentalenyl manganese tricarbonyl, said process comprising contacting acetylene with dimanganese decacarbonyl in the proportion of from about 8 to about 50 moles of acetylene per mole of manganese decacarbonyl, and conducting the contacting in a non-reactive polar organic solvent at a temperature of from about 115° to about 180° C. and an acetylene pressure sufficient to dissolve the acetylene in the system, and cause it to react with the dimanganese decacarbonyl.

3,100,212
PROCESS OF PREPARING DIHYDROPENTALENYL MANGANESE TRICARBONYL

Thomas H. Coffield, Heidelberg, Germany, assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,852
15 Claims. (Cl. 260—429)

1. Process comprising reacting acetylene with a manganese carbonyl compound having the formula

$$[ZMn(CO)_4]_n$$

wherein n is an integer having a value of one to two and Z is a ligand containing a group VB element, said ligand being selected from the class consisting of trialkyl phosphine, trialkyl arsine, trialkyl stibine and trialkyl bismuthine radicals wherein the alkyl groups have one to six carbon atoms and triphenylphosphine, triphenylarsine, triphenylstibine and triphenylbismuthine radicals; and recovering dihydropentalenyl manganese tricarbonyl from the thereby produced reaction mixture.

3,100,213
HYDROPENTALENYL MANGANESE TRICARBONYL COMPOUNDS AND PROCESSES FOR SAME

Thomas H. Coffield, Heidelberg, Germany, assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,853
10 Claims. (Cl. 260—429)

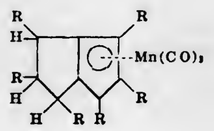
1. Process comprising reacting acetylene with a manganese carbonyl compound having the formula, $ZMn(CO)_5$, in which Z is a monovalent substituent group selected from the class consisting of halides and organic radicals having up to 16 carbon atoms, selected from the class consisting of alkyl, aralkyl, aryl, alkaryl, acyl, cycloalkyl, alkenyl and alkynyl radicals.

3,100,214
PENTALENYL MANGANESE TRICARBONYL AND PROCESSES FOR SAME

Thomas H. Coffield, Heidelberg, Germany, assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,854
9 Claims. (Cl. 260—429)

1. Pentalenyl manganese tricarbonyl compounds having the formula:



in which R is selected from the group consisting of hydrogen and a monovalent hydrocarbon substituent group which contains up to about 10 carbon atoms, and the total number of carbon atoms present in all of the R substituent groups does not exceed 20 carbon atoms.

3,100,215
PROCESS FOR PREPARING LIQUID HEXAALKYL-DISTANNOXANES

Heinz Gelbert, Margarethenberg, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,422
Claims priority, application Germany Aug. 21, 1959
1 Claim. (Cl. 260—429.7)

Process for the manufacture of liquid hexaalkyl-distannoxanes by simultaneously saponifying and dehydrating a liquid trialkyltin-halide which comprises heating a liquid trialkyltin-halide selected from the group consisting of trialkyltin-chlorides, trialkyltin-bromides and trialkyltin-iodides together with a solid alkaline agent selected from the group consisting of sodium hydroxide, potassium hydroxide and calcium hydroxide, in the absence of any organic solvents, distilling off the water from dehydration, and separating the reaction products from the solid alkaline halide formed.

3,100,216
ALKYLATION OF FERROCENE

Norman Alpert, Poughkeepsie, and James M. Caffrey, Jr., Beacon, N.Y., Harold J. Watson, Danville, Va., and Herbert E. Vermillion, Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed July 3, 1958, Ser. No. 746,323
3 Claims. (Cl. 260—439)

1. The process for preparing alkylated ferrocene which comprises reacting ferrocene with an alkyl halide selected from the group consisting of secondary alkyl halides and tertiary alkyl halides containing up to 8 carbon atoms in the liquid phase in the presence of an aluminum halide Friedel-Crafts catalyst at a temperature below 100° C.

3,100,217
NEW VINYL COMPOUNDS AND METHODS FOR THEIR PREPARATION

Bodo K. W. Bartocha, 4567 Main St., Riverside, Calif.

No Drawing. Filed Mar. 31, 1959, Ser. No. 803,333
2 Claims. (Cl. 260—448)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process for preparing vinylaluminum dichloride which comprises reacting one molar equivalent of divinylzinc with one molar equivalent of aluminum trichloride at 0° C. for eight hours.

2. The process for preparing divinylaluminum chloride which comprises reacting one molar equivalent of tetravinyllead with one molar equivalent of aluminum trichloride at 0° C. for eight hours.

3,100,218
PURIFICATION OF DIETHYLALUMINUM CHLORIDE WITH CRYSTALLINE TITANIUM TRICHLORIDE

Paul D. May, Galveston, and Erwin Kohn, Texas City, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 20, 1961, Ser. No. 125,376
3 Claims. (Cl. 260—448)

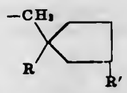
1. A method for the purification of diethylaluminum chloride which comprises intimately contacting said diethylaluminum chloride with crystalline titanium trichloride and filtering the resulting slurry to recover the liquid diethylaluminum chloride.

3,100,219
ORGANO ALUMINUM COMPOUNDS CONTAINING CYCLOALKYL GROUPS OF THE NEOPENTYL TYPE AND PRODUCTION THEREOF

Roland Köster and Wolfgang Larbig, Mulheim (Ruhr), Germany, assignors to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany, a corporation

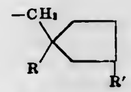
No Drawing. Filed Aug. 3, 1961, Ser. No. 128,957
Claims priority, application Germany Aug. 18, 1960
12 Claims. (Cl. 260—448)

1. Aluminum alkyl compounds of high thermal stability having alkyl radicals of the neopentyl type of the formula



wherein R represents a member selected from the group consisting of methyl and ethyl and R′ represents a member selected from the group consisting of hydrogen, methyl and ethyl.

6. Process for preparing an aluminum-organo compound having alkyl radicals of the neopentyl type of the formula



wherein R represents a member selected from the group consisting of methyl and ethyl and R′ represents a member selected from the group consisting of hydrogen, methyl and ethyl which comprises reacting a 2,5-alkyl substituted hexadiene wherein said alkyl substituents contain 1 to 2 carbon atoms with an aluminum compound selected from the group consisting of aluminum hydride, aluminum trialkyls and aluminum dialkyl hydrides at an elevated temperature and in an inert atmosphere, and recovering the aluminum-organo compound formed.

3,100,220
IMPROVEMENT IN PROCESS FOR MAKING HALOALIPHATIC PHOSPHATE ESTERS

Albert L. Smith, Middleport, Ohio, assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 6, 1961, Ser. No. 136,174
8 Claims. (Cl. 260—461)

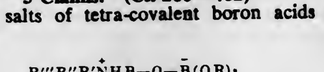
1. In the process of producing a haloaliphatic phosphate by the reaction of an oxirane compound and a phosphoryl halide, the improvement of which comprises carrying out the reaction in the presence of catalytic amounts of titanium tetrachloride and PCl_5.

3,100,221
AMINE SALTS OF BORON ACIDS

Edward L. Kay, Akron, Ohio, and Edwin C. Knowles, Poughkeepsie, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 17, 1961, Ser. No. 83,176
5 Claims. (Cl. 260—462)

1. Amine salts of tetra-covalent boron acids having the formula:



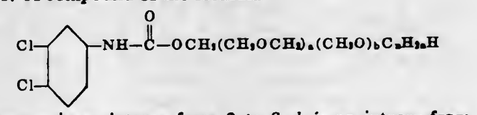
wherein R is a hydrocarbyl radical containing 1 to 24 carbon atoms, R′ is selected from the group consisting of aliphatic hydrocarbyl and hydroxy substituted aliphatic hydrocarbyl radicals containing 1 to 30 carbon atoms and R″ and R‴ are selected from the group consisting of hydrogen, aliphatic hydrocarbyl and halogen substituted aliphatic hydrocarbyl radicals.

3,100,222
ALKOXYALKYL 3,4-DICHLOROCARBANILATES

David J. Beaver, Richmond Heights, and Paul J. Stoffel, St. Louis, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 19, 1958, Ser. No. 781,446
4 Claims. (Cl. 260—471)

1. A compound of the formula



where a is an integer from 2 to 8, b is an integer from 0 to 1, and n is an integer from 0 to 4.

3,100,223
AMMONIUMALIPHATIC ESTERS OF CARBAMIC ACIDS

Thomas Robert Hopkins, Prairie Village, and James H. Rea, Baxter Springs, Kans., and Adolph Peter Rozkowski, Willow Grove, Pa., assignors, by direct and mesne assignments, to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed July 6, 1960, Ser. No. 41,025
12 Claims. (Cl. 260—472)

1. The compound 4-[-(2-chlorophenyl)carbamoyloxy]-2-butynyl trimethylammonium chloride.

7. The compound 1-carbamoyloxy-2-butynyl-4-trimethylammonium chloride.

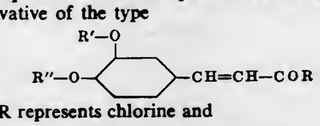
12. The compound 4-[N-(α-naphthyl)carbamoyloxy]-2-butynyltrimethylammonium chloride.

3,100,224
PROCESS FOR MAKING 1,4-DICAFFEYLQUINIC ACID

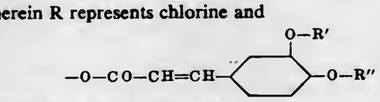
Luigi Panizzi, Rome, and Alberto Vercellone, Milan, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed May 24, 1955, Ser. No. 510,866
Claims priority, application Italy May 28, 1954
4 Claims. (Cl. 260—473)

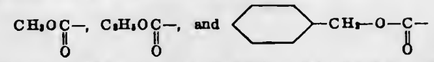
1. The process which comprises condensing a caffeic acid derivative of the type



wherein R represents chlorine and



and R′, R″ individually represent



and jointly represent carbonyl, with quinide and saponifying the condensation product with a 3% barium hydroxide solution in the absence of air and at a temperature from 0 to 30° C., and separating 1,4-dicaffeylquinic acid.

3,100,225
PROCESS FOR THE PRODUCTION OF FLUORINE-CONTAINING ORGANIC COMPOUNDS

Albrecht Zappel, Cologne-Stammheim, and Heinz Jonas, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 19, 1960, Ser. No. 76,493
Claims priority, application Germany Dec. 24, 1959
9 Claims. (Cl. 260—487)

1. A process of preparing an organic fluorine-containing compound selected from the group consisting of esters, ethers, and alkyl fluorides which comprises thermally de-

composing a fluoro-sulfinic acid ester by heating said ester to a temperature of from about 100 to about 300° C. and recovering the organic fluorine-containing compound thereby formed.

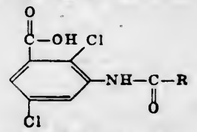
3,100,226

2,5 DICHLORO-3 ACYLAMINOBENZOIC ACIDS

Harvey P. Raman, Philadelphia, and Stanley R. McLane, Prospectville, Pa., assignors to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware

No Drawing. Filed Oct. 16, 1959, Ser. No. 846,816
6 Claims. (Cl. 260—518)

1. A compound having the formula:



wherein R is a member of the class consisting of hydrogen, alkyl, bromo and chloro substituted alkyl groups containing from 1 to 6 total carbon atoms, and phenyl, halogen substituted phenyl, the halogen being selected from the class consisting of bromo and chloro, 2-phenyl ethyl and 2-phenyl ethenyl groups.

3,100,227

PREPARATION OF CHLOROACROLEIN

Keith M. Taylor, Dickinson, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,100
2 Claims. (Cl. 260—601)

1. A process for the preparation of chloroacrolein which comprises reacting acrolein and chlorine in mole proportions from about 1:2 to about 2:1 in a reaction zone heated to a temperature within the range from about 100° C. to about 200° C., said gaseous mixture of acrolein and chlorine being diluted with an inert gas in proportions up to about 50% by volume and the residence time of the reacting gas mixture in the reaction zone being maintained in the range from about 0.1 second to about 3 seconds.

3,100,228

ORGANIC FLUORINE COMPOUNDS

Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., and Francis E. Lawlor, Wilmington, Calif., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 9, 1960, Ser. No. 48,361
4 Claims. (Cl. 260—608)

1. Perfluorochloropolysulfides of the formula:

$$R_fCF_2CFCl—S_x—CFClCF_2R_f$$

where R_f represents a perfluorochloroalkyl radical and where x is an integer ranging from 2 to about 5.

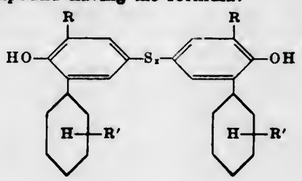
3,100,229

SULFUR BRIDGED CYCLOHEXYL PHENOLS

Harold D. Orloff, Oak Park, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 1, 1960, Ser. No. 19,140
7 Claims. (Cl. 260—609)

1. A compound having the formula:



where R is an organic hydrocarbon radical selected from the group consisting of alkyl, cyclohexyl and aralkyl and having from 1 to about 18 carbon atoms, R′ is selected from the class consisting of hydrogen and an alkyl radical having from 1 to about 9 carbon atoms, and x is an integer and has a value of from 1–3 inclusive.

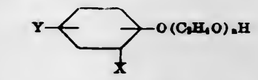
3,100,230

METHOD OF PREPARING DIALKYLPHENOL-ETHYLENE OXIDE ADDUCTS WITH RELATIVELY NARROW MOLECULAR WEIGHT DISTRIBUTION

Richard C. Mansfield, Haddonfield, N.J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

Filed Dec. 15, 1959, Ser. No. 859,812
3 Claims. (Cl. 260—613)

1. The method of preparing a composition consisting of a mixture of compounds each having the general formula



wherein X is an alkyl group having at least three carbon atoms and Y is an alkyl group having at least one carbon atom, the sum of the carbon atoms in X and Y ranging from 4 to 37, and n is an average number ranging from 2 to 25, said method consisting in the steps of reacting a dialkylated phenol with ethylene oxide, the dialkylated phenol having at least one, but no more than one, alkyl group in the ortho-position, the size of the alkyl group being in the range of isopropyl to octadecyl, and the amounts of the dialkylated phenol and ethylene oxide being present in accordance with the above formula, the reaction taking place in the presence of about 10 to about 80 mole percent of a catalyst, based on the alkylated phenol, from the group consisting of the alkali metals and their hydroxides, carbonates and alcoholates at temperatures between about 120° and about 200° C.

3,100,231

PROCESS FOR PRODUCING TELOMER ALCOHOLS

Max E. Rohn and Warren L. Beears, Brecksville, Ohio, assignors to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Mar. 30, 1959, Ser. No. 802,603
11 Claims. (Cl. 260—632)

1. In a method of manufacturing telomer alcohols directly from alpha-olefin by a series of coordinated steps, all of which steps are carried out at substantially atmospheric pressures, the method which comprises (1) bringing mixed alkyl aluminum chlorides of the formula $R_x—Al—Cl_y$, in which R represents an alkyl radical having from 2 to 8 carbon atoms and x and y are numerical values whose sum totals 3, in inert circumambient media, into intimate agitative contact with a gaseous alpha-olefin having from 2 to 4 carbon atoms, at least partly to presaturate the mixed alkyl aluminum chlorides with the alpha-olefin gas; (2) then adding thereto with agitation titanium tetrachloride to produce activated mixed alkyl aluminum chlorides; (3) introducing into reactive contact with said activated mixed alkyl aluminum chlorides a gaseous alpha-olefin having from 2 to 4 carbon atoms to increase by chain growth the number of carbon atoms in the alkyl radicals of the said activated mixed alkyl aluminum chlorides to produce mixed alkyl aluminum chloride telomers; (4) thereafter passing oxygen into intimate contact with the said mixed alkyl aluminum chloride telomers to produce oxidized mixed alkyl aluminum chloride telomers; and (5) finally adding a hydrolyzer selected from the class consisting of water and

a dilute inorganic acid to convert the oxidized mixed alkyl aluminum chloride telomers to telomer alcohols.

3,100,232

PREPARATION OF 2-PHENYL-ALLYL CHLORIDE

Willis C. Keith, Lansing, and Robert P. Zmitrovis, Park Forest, Ill., assignors to Sinclair Research, Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 16, 1961, Ser. No. 145,506
4 Claims. (Cl. 260—650)

1. The method which comprises reacting alpha-methyl-styrene with about 0.1 to 0.8 mole of chlorine per mole of alpha-methyl-styrene in the liquid phase at a temperature of about —50 to 75° C. to obtain a reaction product containing 2-phenyl-allyl-chloride.

3,100,233

PURIFICATION OF ACETYLENE TETRACHLORIDE CONTAINING CHLORINE IMPURITY

David S. Rosenberg, Niagara Falls, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Oct. 5, 1960, Ser. No. 60,565
15 Claims. (Cl. 260—654)

1. The process of reducing the concentration of free chlorine, hydrogen chloride, and iron-containing impurities in impure acetylene tetrachloride, containing between about 0.1 and about 0.4 percent free chlorine, which comprises admixing said impure acetylene tetrachloride with between about 0.1 and about 5.0 percent by weight of an unsaturated chlorinated hydrocarbon selected from the group consisting of trichloroethylene, dichloroethylene, the low boiling fraction produced in the distillation of impure trichloroethylene, and mixtures thereof, whereby said unsaturated chlorinated hydrocarbon reacts with chlorine to yield saturated chlorinated hydrocarbons selected from the group containing acetylene tetrachloride, pentachloroethane, and mixtures thereof, admixing the resulting solution with water whereby hydrogen chloride and iron containing impurities are extracted by the water, and separating the resulting non-aqueous purified acetylene tetrachloride phase from the aqueous phase containing dissolved impurities.

3,100,234

DEHYDROGENATION CATALYST

Emerson H. Lee, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 22, 1961, Ser. No. 111,428
15 Claims. (Cl. 260—669)

1. A process for the dehydrogenation of ethylbenzene which comprises contacting ethylbenzene in the presence of steam under dehydrogenation conditions with a catalyst comprising iron oxide as the active catalytic agent and a composite promoter therefor consisting of a mixture of a compound of potassium and a compound of a metal chosen from the group consisting of sodium, lithium, barium, magnesium, and calcium wherein the amount of said potassium compound in said composite promoter is at least 1% by weight of the total catalyst composition and the weight ratio of said remaining metal compound to said potassium compound is from about 1:1 to about 5:1.

3,100,235

PRESERVATION OF RUBBER LATEX

David J. Graham and Derek H. Taysum, Kuala Lumpur, Federation of Malaya, assignors to The Natural Rubber Producers' Research Association, London, England, a British body corporate

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,197
7 Claims. (Cl. 260—815)

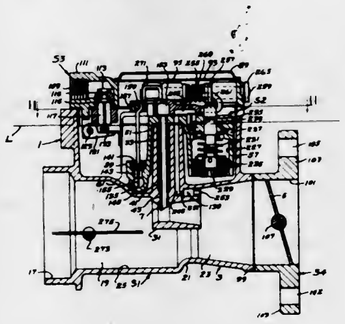
6. A stabilized Hevea latex containing from 0.1% to 0.7% by weight of ammonia and from 0.001% to 0.3% by weight of a phenolic preservative selected from the group consisting of 2,2′-thiobis-(4,6-dichlorophenol) and the ammonium and alkali metal salts thereof.

3,100,236

CARBURETOR

William F. Ott, Affton, John H. Krein, Florissant, Olin J. Eickmann, Normandy, and Harold A. Carlson, Brentwood, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Mar. 24, 1960, Ser. No. 17,383
7 Claims. (Cl. 261—34)



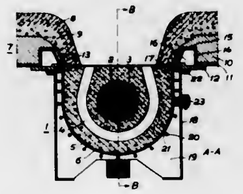
1. A carburetor comprising an integral body casting formed with a fuel and air mixture conduit adapted to be normally positioned horizontally and a fuel bowl positioned above said mixture conduit, a throttle valve movably mounted within said mixture conduit, a stem extending upwardly from the bottom of said fuel bowl and integrally formed with said body casting, a plate fixed over the top of said fuel bowl as a cover therefor, said stem being spaced from the side walls of said fuel bowl and said cover plate, a subassembly structure forming a fuel system for said carburetor fixed to the top of said stem and spaced from said fuel bowl cover plate, said subassembly structure having a plurality of portions thereof depending and spaced from said stem, said subassembly depending portions each having a different terminal end adjacent to and spaced from the bottom of said fuel bowl, said each subassembly depending portion having a different passage therein extending from said terminal end thereof to the top of said stem, said body casting and said stem having a plurality of passages therein with a different one thereof connected to each one of said passages in said subassembly depending portions, said plurality of passages extending through said stem to said mixture conduit.

ELECTRICAL

3,100,237
LOW FREQUENCY INDUCTION FURNACE OF THE MELTING CHANNEL TYPE

Mats Rydinger and Bengt Fredriksson, both of Vasteras, Sweden, assignors to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation

Filed Apr. 28, 1961, Ser. No. 106,356
Claims priority, application Sweden May 21, 1960
5 Claims. (Cl. 13—26)

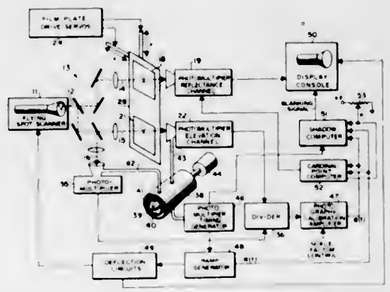


1. Low frequency induction furnace comprising a furnace body for the melt having a metallic casing, a lining of heat resistant material on the inside of the wall of the casing, and at least one inductor unit replaceably attached to the furnace body, said inductor unit comprising a metallic casing, a lining of heat resistant material on the inside of the wall of the inductor unit casing, an electric circuit, and an iron core, the lining of the furnace body comprising at least at and in the vicinity of the joint between the furnace body and the inductor unit an inner sintered layer of heat resistant material and an outer layer of material in non-sintered state, reinforcing means secured in the lining of the furnace body on its side facing the inductor unit for takmg up the pressure force from the inductor unit against the lining of the furnace body, the reinforcing means including cooling channel means engaging the outer face of the non-sintered layer of the furnace body lining, cooling means surrounding at least the upper part of the metallic casing of the inductor unit.

3,100,238
RADAR SIMULATION

Edward E. Gray, Mountain View, and Keith E. McFarland, Palo Alto, Calif., assignors to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware

Filed May 29, 1961, Ser. No. 113,196
8 Claims. (Cl. 35—10.4)



1. A method for simulating a radar display of terrain, said method comprising the steps of: scanning a first map to generate a video signal having radar reflectance information therein; scanning a second map to generate a first analog signal corresponding to the elevation of the terrain; generating a second analog signal which is linear with respect to time for each scan and which corresponds to the horizontal distance from a simulated aircraft position to the terrain area being scanned; establishing a third analog signal corresponding to a simulated altitude of the aircraft; computing the tangent function of an angle between a simulated radar line of sight between the simulated aircraft to the terrain being scanned and the horizontal from the first, second and third analog signals; computing the tangent of an angle between the horizontal and the slope terrain being scanned; computing the cosine function of an angle between the terrain being scanned and a perpendicular to the simulated radar line of sight in accordance with an equation:

$$\cos\gamma=\left(\frac{1}{1+\frac{3}{4}|\tan\lambda|}\right)^{k}\cdot\left(\frac{1}{1+\frac{3}{4}|\tan\beta|}\right)^{k}\cdot(\tan\lambda+\tan\beta)$$

where cos γ represents the cosine of the angle between the terrain being scanned and the perpendicular to the simulated radar line of sight, tan β represents the slope of the terrain being scanned, and tan λ represents the tangent of the angle between the simulated radar line of sight and the horizontal; multiplying the video signal with the cosine function to obtain a modified video signal; and impressing the modified video signal upon a display means for generating the radar display of terrain.

3,100,239
OPTICAL FOCUS AND RESOLUTION TESTING METHODS AND APPARATUS

Jeofry S. Courtney-Pratt, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1960, Ser. No. 79,285
4 Claims. (Cl. 88—56)



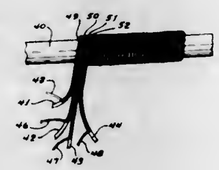
1. The method of testing the focus and resolution of an optical system which comprises, supporting the optical system on a common central axis with a plane test pattern and a plane photographic plate, the test pattern and plate being situated substantially in conjugate planes on opposite sides of the optical system, interposing between the plate and the optical system and closely adjacent to the plate a mask of a material freely transmitting substantially the full frequency spectrum of visible light and having a greater refractive index than that of the surrounding medium, the mask comprising a plurality of sectors of progressively increasing thickness, illuminating the test pattern and exposing the plate to the image of the test pattern formed by the optical system whereby comparison of the sectors of the image corresponding to the sectors of the mask provides an indication of the actual distance from optical system to plate at which the focus and resolution of the optical system are optimum.

3. Apparatus for testing the focus and resolution of an optical system comprising means for supporting the optical system to be tested, means for supporting a plane test pattern at an appropriate distance on one side of the optical system and normal to the central axis of the system, means for illuminating the test pattern, means for supporting a photographic plate on the other side of the optical system substantially at the conjugate plane with respect to the optical system to focus an image of the test pattern on the plate, means for normally excluding light from the plate, a mask of a material freely transmitting substantially the full frequency spectrum of visible light and having a refractive index greater than that of the surrounding medium, the mask having a plurality of sections differing progressively in thickness by discrete steps, the mask being placed between the optical system and the plate and closely adjacent to the plate, and shutter means adapted to appropriately expose the plate to the image of the test pattern produced by the optical system, whereby an image is obtained on the photographic plate having a plurality of sections representing the focus and resolution of the optical system for a like plurality of slightly differing effective distances between the optical system and the photographic plate, respectively, from which the optimum distance for the clearest actual focus and resolution of the optical system can be deduced.

3,100,240
EXTENSIBLE ELECTRIC CONDUIT

Robert W. McKirdy, Scarsdale, N.Y., assignor, by mesne assignments, of one-half to John W. Schmidt, Woodhaven, N.Y., and one-half to Robert W. McKirdy and Elizabeth C. McKirdy, Scarsdale, N.Y., as joint tenants

Filed July 17, 1956, Ser. No. 598,395
1 Claim. (Cl. 174—69)



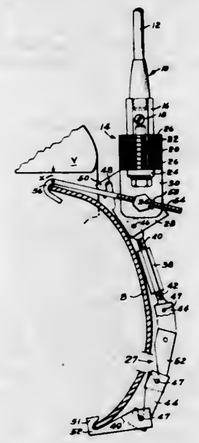
An extensible electric cable comprising a cylindrical elastic core, a plurality of smaller elastic cores all arranged as interspersed and parallel helices on the first said core, and a helix of conductive material on each of said smaller cores, said smaller cores all being in concentric relation and having a common diameter in both the normal and stretched conditions of said cable, all of the helices of conductive material having a common direction of turn which is opposite to that of said smaller cores.

3,100,241
VEHICULAR ANTENNA BUMPER MOUNT

Samuel E. Goldstein, 4125 W. Jefferson Blvd., Los Angeles 16, Calif.

Filed Aug. 17, 1960, Ser. No. 50,124
5 Claims. (Cl. 174—138)

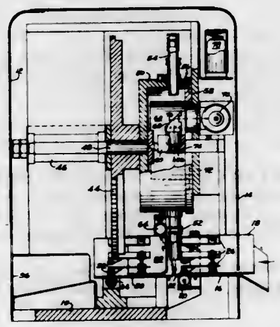
4. A universal bumper mounting for a vehicu'ar radio antenna of the vertical mast type, comprising a U-shaped mast supporting bracket, axle means pivoted in both side flanges of said bracket, spaced chain terminal connecting means pivoted on said axle means, a bumper edge clasp, chain means connecting said clasp to said terminal connecting means, a second bumper edge clasp pivoted on said axle means, and means for adjusting the effective distance between the clasping part of said second clasp and the position of said axle means.



3,100,242
MULTIPLE LENS FACSIMILE SCANNER

Roland E. Herbert, Westlake, Ohio, assignor to Newspaper Enterprise Association Inc., a corporation of Delaware

Filed Apr. 25, 1960, Ser. No. 24,480
4 Claims. (Cl. 178—7.1)

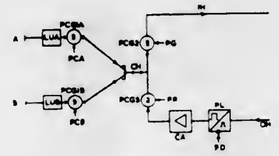


1. A facsimile transmitter scanner comprising means for advancing cylindrically bowed copy in a direction parallel to its cylindrical axis, a rotary scanner head comprising a plurality of scanner tubes mounted at equally spaced radial positions to swing across successive transverse elements of such copy and about said cylindrical axis, a linear light source located adjacent the copy and extending transversely thereof to illuminate a complete transversely-extending region of such copy, means defining a fixed aperture stop located near said cylindrical axis and aligned with the central position of each such tube relative to the scanned elements of the copy during scanning traverses, and a single optical deflecting element disposed fixedly beyond said stop defining means for directing light flux passing through said stop from all of said tubes in succession into a photoelectric sensor.

3,100,243
TIME DIVISION MULTIPLEX COMMUNICATION SYSTEMS

James Alfred Thomas French, Kenton, England, assignor to Her Majesty's Postmaster General, London, England

Filed July 18, 1960, Ser. No. 43,461
Claims priority, application Great Britain July 24, 1959
5 Claims. (Cl. 179—15)

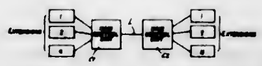


1. In a time division multiplex communication system, a plurality of lines, individual terminal equipments for lines, a two-wire highway common to the plurality of lines, individual two-way pulse gates connected to one end of the common two-wire highway for selectively establishing communication between said terminal equipments and the common two-wire highway, means for allotting each two-way pulse gate an individual time position within a recurring cycle of time positions, a source of channel pulses for supplying enabling channel pulses to respective two-way pulse gates during their allotted time positions, each channel pulse having a relatively short initial portion and a relatively long subsequent portion, an incoming two-wire highway connected to the other end of the common two-wire highway, an outgoing two-wire highway, first one-way pulse gating means connecting the said other end of the common two-wire highway and the outgoing two-wire highway, a source of first gating pulses connected to the first one-way gating means, the first gating pulses timed to coincide with the said initial portions of respective channel pulses, voltage amplifying pulse lengthening means connected between the incoming highway and the said other end of the common two-wire highway, the pulse lengthening means providing a delay at least equal to the duration of the said initial portion of a channel pulse.

3,100,244
INTER-COMMUNICATION SYSTEMS

Daniel Lawrence King, London, and Eric Gibbon Hitch, Enfield, England, assignors to Associated Electrical Industries Limited, London, England, a British company

Filed Nov. 17, 1960, Ser. No. 72,542
Claims priority, application Great Britain Nov. 26, 1959
7 Claims. (Cl. 179—17)



1. For an intercommunication system permitting any one of a number of extensions at one end of a communication path to obtain access over said path to any one of a number of extensions at the other end, apparatus for one end of said path comprising in combination:

a plurality of first switching means pertaining to each of the extensions at said end and each operable for affording access of its extension to the communication path to the exclusion of all other extensions at the same end;

pulse generating means operable to apply a pulse train to the communication path consequent upon operation of a first switching means pertaining to a calling extension at this end;

a plurality of second switching means pertaining one to each extension at the other end of the path;

calling means at each extension for contemporaneously operating the first switching means pertaining to that extension when calling and the particular second switching means which pertains to the extension at the other end which is being called;

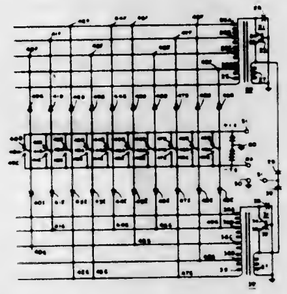
pulse determining means controlled by an operated second switching means for determining, according to the particular called extension to which it relates, the number of pulses in a pulse train applied to the communication path by the pulse generating means;

and selecting means for causing selective operation of a particular first switching means independently of said calling means in response to a pulse train received over the communication path from the other end, the number of pulses in such received pulse train identifying a particular extension that is being called by a calling extension at the other end, and the particular first switching means which is caused to be operated by the selecting means being that which pertains to the extension thus identified.

3,100,245
KEYSENDER FREQUENCY SELECTOR

Nathan W. Feldman, Long Branch, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Nov. 3, 1960, Ser. No. 67,144
4 Claims. (Cl. 179—90)
(Granted under Title 35, U.S. Code (1952), sec. 266)



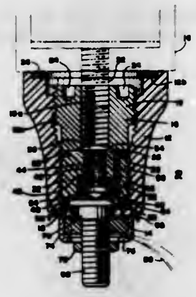
1. A keysending, frequency selecting system comprising; a plurality of keys, a plurality of switching arms actuated by said keys, each of said switching arms making contact with a first electrical contact in a first position, each of said switching arms making contact with a second electrical contact in a second position, a source of voltage of one polarity with respect to ground connected to each of said first electrical contacts, a source of voltage of the other polarity with respect to ground connected to each of said second electrical contacts, a plurality of sources of oscillating electrical energy of different frequencies, means for coupling said sources of oscillating electrical energy to a common line, a plurality of diodes, each connecting one of said switching arms to one of said sources of oscillating electrical energy which is actuated when said switching arm is in said second position.

3,100,246
DISCONNECTOR

William F. Riley, Berwyn, Ill., assignor to Joslyn Mfg. and Supply Co., Chicago, Ill., a corporation of Illinois

Filed Feb. 20, 1961, Ser. No. 90,325
7 Claims. (Cl. 200—115)

1. In a disconnector adapted for use with a lightning arrester, an insulating shell having a portion with a relatively thin wall section, first terminal means within said shell adapted to be connected to said arrester, second terminal means extending into said shell and adapted to be connected to a ground lead, an insulating spacer within said shell and disposed between said first and second terminal means, said first terminal means including a portion extending through said spacer and separated from said second terminal means to form a spark gap, explosive means contained in one of said terminal means

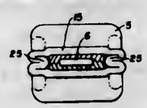


for rupturing said shell along said thin wall section and for thus expelling said second terminal means upon an abnormal flow of current across said spark gap for a predetermined time, and said first and second terminal means including members interlocked with said spacer to join said spacer and both terminal members to form a unitary torque transmitting assembly for transmitting torque between the two terminal members independently of the thin wall section of the shell.

3,100,247
IMPROVEMENT IN THERMOSTAT CASING

George Franklin Dales, 253 Castle Blvd., Akron, Ohio

Filed Mar. 26, 1962, Ser. No. 182,383
2 Claims. (Cl. 200—138)



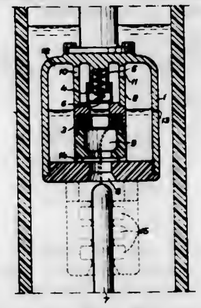
1. In a thermostat having an elongated casing of bendable material with an electrode protruding through one end of the casing, said end being staked laterally and the casing being flattened at that end, the improvement in which opposite edges of said flattened end of the casing are tucked in so that each end is reversely folded with the inner edge of the reverse fold alongside of and in contact with the contents of the casing whereby lateral displacement of the electrode within the casing is prevented and the tucked-in edges of the casing reduce the extent to which the lateral edges of the casing beyond the stake are flattened about the contents of the casing.

3,100,248
OIL CIRCUIT BREAKER

Haakon Forwald, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation

Filed Sept. 6, 1960, Ser. No. 54,107
Claims priority, application Sweden Sept. 9, 1959
3 Claims. (Cl. 200—150)

1. Oil circuit breaker comprising means forming an extinguishing chamber immersed in oil, said chamber having an upper wall, a tubular housing projecting downwardly from said upper wall, an oil level channel which connects the extinguishing chamber with the surrounding oil at a point below the said upper wall so that the extinguishing chamber and a part of said housing in the extinguishing chamber above the oil level form an annular gas-filled pressure accumulating chamber; an opening in the housing at a point above said oil level channel, a stationary nozzle contact in said housing; said extinguishing chamber having a bottom wall and an opening therein, a pressure-generating chamber in the lower part of the housing, a pin-shaped contact movable through such opening in the bottom of the extinguishing chamber and such pressure generating chamber to engage said stationary



contact; means including said nozzle contact and said housing opening connecting said pressure generating chamber, when said contacts are disengaged, with the annular pressure accumulating chamber, a back valve in said connecting means allowing a flow of fluid only in a direction away from said pressure-generating chamber, and a slot around the path of the movable pin-shaped contact, said slot being located between the lower part of the housing and the bottom wall of the extinguishing chamber and communicating with the oil in the lower part of the annular pressure accumulating chamber.

3,100,249
OIL CIRCUIT BREAKER COMPRISING AN EXTINGUISHING CHAMBER FOR HIGH VOLTAGES

Walter Pucher, Ekvagen 3, Ludvika, Sweden

Filed Dec. 1, 1960, Ser. No. 73,128
Claims priority, application Sweden Dec. 16, 1959
2 Claims. (Cl. 200—150)



1. Oil circuit breaker comprising an extinguishing chamber for high voltages immersed in oil and having an inner arcing chamber, said arcing chamber forming a channel through said extinguishing chamber, a stationary contact arranged in one end of said arcing chamber and a movable contact arranged to pass into the channel at its other end to engage said stationary contact, means dividing said extinguishing chamber into at least two constant volume pressure accumulating chambers arranged successively along the arcing chamber, said pressure accumulating chambers each having an oil opening therein so positioned that said chambers are filled with oil only to a predetermined level thus providing a gas-filled and closed space above said oil level, a connecting channel providing communication between each accumulating chamber and

the arcing channel, said arcing chamber having an opening therein and at least one outlet channel connecting said opening in the arcing chamber with the oil outside the extinguishing chamber, said opening being uncovered by the movable contact when the contacts separate, said outlet channel being located between two adjacent accumulating chambers.

3,100,250
ZONE MELTING APPARATUS

Andrew Herczog, Painted Post, N.Y., and Rolf R. Haberecht, Indianapolis, Ind., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Apr. 7, 1961, Ser. No. 101,605
2 Claims. (Cl. 219—10.49)

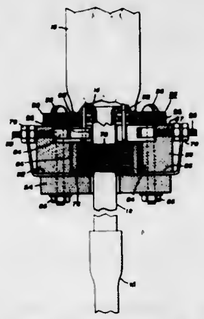


1. In combination, an induction heating coil capable of generating a concentrated field within said coil, and a container of a size to allow it to pass through said coil, said container comprising a pair of telescoped elongated arcuate walls in intimate contact with each other, and plates at the ends of said inner wall and said outer wall of said telescoped walls, said inner wall and end plates being of a material not amenable to induction heating and said outer wall and end plates being of a material amenable to induction heating, the thickness of said outer wall being less than twice the skin depth of the current induced in the outer wall of said telescoped walls.

3,100,251
TIP-OFF OVEN

Frederic R. Johnson, Chittenango, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 24, 1960, Ser. No. 64,559
10 Claims. (Cl. 219—19)

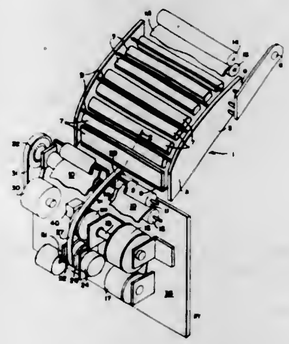


1. An electronic tube tubulation tip-off oven comprising a body having a central chamber through which the exhaust tubulation of a tube is adapted to extend, a heating element of annular coil form situated within said chamber and dimensioned to surround an exhaust tubulation extending therethrough, a removable and replaceable heating element support situated between the heating element and the wall of said chamber, said support having on the interior surface thereof a plurality of electrically insulative outstanding portions respectively engaging and continuously supporting in non-short-circuiting relationship respective successive increments of said heating element, and retaining means at least partially closing the bottom of said chamber for releasably securing said heating element support in said chamber to permit said support, upon release, to fall freely from said chamber.

3,100,252
RECORDER DRYING MECHANISM

David Shaler, Waldwick, N.J., and Donald F. Cleary, West Islip, and William L. Kacin, Beth Page, N.Y., assignors to Hogan Faximile Corporation, New York, N.Y.

Filed Dec. 16, 1960, Ser. No. 76,301
5 Claims. (Cl. 219—19)

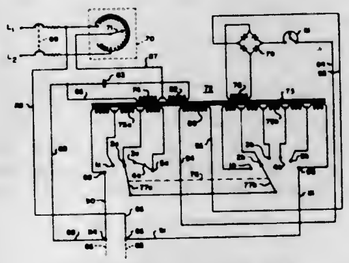


1. A drying mechanism for a facsimile recorder using an electrolytic recording medium, the drying mechanism comprising a frame, pivotable mounting means for the frame, counterbalancing means for the weight of the frame including a negator spring, heater means carried by the frame, means to swing the frame about its mounting, and means to urge the heater means into contact and away from contact with the recording medium.

3,100,253
TEMPERATURE CONTROL SYSTEM FOR SPECIMEN TESTING

Walter J. O'Connor, Grove City, Pa., assignor to Satec Corporation, a corporation of Pennsylvania

Filed Oct. 7, 1958, Ser. No. 765,861
4 Claims. (Cl. 219—20)

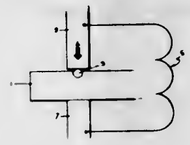


1. In a temperature control system for specimen testing, apparatus comprising, in combination, a voltage selector, a transformer circuit having a primary winding connected to said selector and a secondary winding in said transformer, a flux path in said transformer, an electrically conductive specimen connected in the circuit across both said windings, and means to vary the permeability of said flux path to control the current passing through said specimen.

3,100,254
WIRE FASTENING METHOD

Richard E. Perkins, Ipswich, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Mar. 27, 1961, Ser. No. 98,371
3 Claims. (Cl. 219—58)

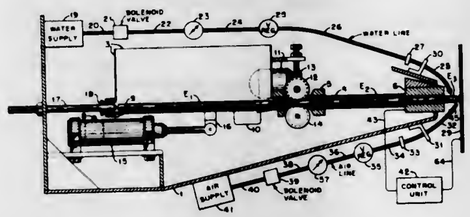


1. The method of fastening to one another two symmetrical metal members having different melting temperatures, said method comprising: placing said members in engagement with one another; heating said member having the lower melting temperature sufficiently to effect a softening thereof; and effecting relative movement between said engaged members toward one another whereby said member having the higher melting temperature is embedded in said softened member having the lower melting temperature without substantial distortion of said member having the higher melting temperature.

3,100,255
METHOD FOR AIR CARBON-ARC CUTTING OR GOUGING

Jack Miller, Clinton, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 9, 1961, Ser. No. 143,985
3 Claims. (Cl. 219—70)

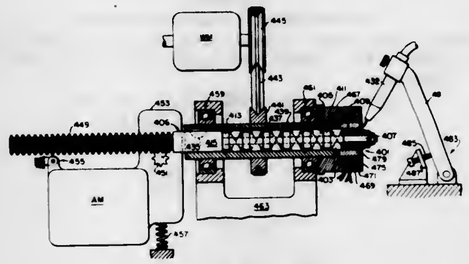


1. A device for the air carbon-arc cutting of a movable metallic workpiece comprising a consumable carbon electrode, means for establishing and maintaining a carbon arc discharge between said electrode and said workpiece during a cutting operation, said discharge forming a molten metal puddle at the point on said workpiece where said discharge is formed, means for continuously moving said electrode toward said workpiece at a controlled speed as a function of the rate said electrode is consumed during said cutting operation, a source of air, a first nozzle, means for feeding air from said air source through said nozzle at a first controlled rate, said nozzle being directed toward said molten metal puddle to facilitate removal thereof, a source of water, a second nozzle, means for feeding water from said water source through said second nozzle in the form of a jet spray and at a second controlled rate onto said electrode at a point close to the tip of said electrode such that said jet spray of water is completely vaporized by said electrode, said vaporized water extending to said tip of said electrode, said vaporized water serving as a means for substantially completely eliminating the carbon dust, gases and fumes formed by said consumable electrode during said cutting operation.

3,100,256
AUTOMATIC WELDING APPARATUS

Sune Edward Borg, Westwood, Mass., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California

Filed Mar. 16, 1961, Ser. No. 96,167
17 Claims. (Cl. 219—124)

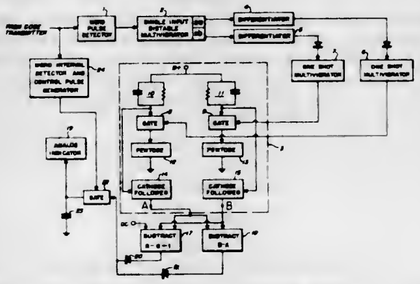


1. Automatic apparatus for welding a circular seam formed at the junction of two confronting elements, comprising, in combination, welding means, advancing means operable when actuated to move one of a succession of pairs of confronting elements into a welding position in which a portion of the seam at the junction of the elements is in welding proximity to the welding means, clamping means engaging each pair of elements in welding position about their entire peripheries to hold the seam in a fixed plane during welding, means for actuating the welding means to weld the seam, and means controlled by said actuating means after completion of each welding to actuate said advancing means to move the welded elements out of welding position and to move the next succeeding pair into welding position.

3,100,257
DECODERS

Marcel E. Mussard, Geneva, Switzerland, assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Nov. 18, 1959, Ser. No. 853,821
7 Claims. (Cl. 235—154)



1. A device for decoding time-multiplexed cyclically permutated digital code to yield encoded information comprising means for detecting pulses with means coupled thereto for separating said pulses into different groups of

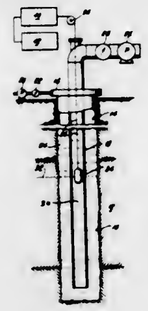
alternate pulses, means coupled to said separating means for storing signals representative of the sum binary values of pulses in each of said groups with subtracting means coupled thereto and means coupled to said subtracting means for indicating an analog value representative of said encoded information.

3,100,258

SUBSURFACE EXPLORATION

Karl C. ten Brink, Houston, and Richard H. Widmyer, Bellaire, Tex., assignors to Texaco Inc., a corporation of Delaware

Filed July 21, 1958, Ser. No. 749,928
2 Claims. (Cl. 250—43.5)



1. In a process of obtaining a permeability log of a subsurface formation traversed by a borehole, wherein a first hydrocarbon oil is introduced into the borehole above said formation, a second hydrocarbon oil is simultaneously introduced into said borehole at a point below said formation to establish an interface between said first and second hydrocarbon oils in said borehole in the vicinity of said formation, one of said oils containing a small amount of a radioactive substance, the depth in the borehole of said interface is determined by measuring the radioactivity in the borehole in the vicinity of said formation, the amounts of the two oils are varied so as to move the interface to a new location while the sum of the two oils is maintained constant, the depth of the interface is again determined by measuring the radioactivity in the vicinity of the formation, and these operations are repeated while noting the ratios of the two oils being introduced for each measured depth of the interface in the borehole, the method which comprises incorporating as the radioactive substance in said one of said hydrocarbon oils a radioactive organic compound which is soluble in said hydrocarbon oil, substantially insoluble in water, and non-polar, and which does not seek an oil-water interface, and flushing said formation with a hydrocarbon oil free from said radioactive substance, followed by making another radiation log in said borehole within less than the half life of the said radioactive organic compound employed.

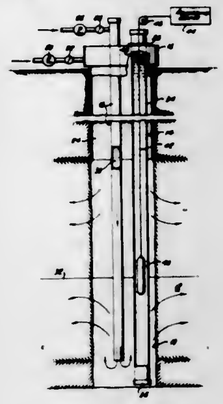
3,100,259

RADIOACTIVE WELL LOGGING

Joseph C. Allen, Bellaire, and Hugh E. Hall, Jr., Houston, Tex., assignors to Texaco Inc., a corporation of Delaware

Filed May 7, 1959, Ser. No. 811,727
12 Claims. (Cl. 250—43.5)

1. Apparatus for logging a zone of interest in a high pressure well comprising means for providing a low pressure passageway from the mouth of the well through a high pressure seal at the well head to a point below the zone of interest, a logging unit, means for moving the



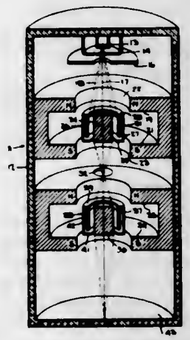
logging unit through said passageway means and means for recording signals derived from said logging unit.

3,100,260

ELECTRON LENS FOR REDUCTION OF SPHERICAL ABERRATION

Alvar P. Wilska, Tucson, Ariz., assignor to Philips Electronics and Pharmaceutical Industries Corp., New York, N.Y., a corporation of Maryland

Filed Nov. 15, 1961, Ser. No. 152,531
15 Claims. (Cl. 250—49.5)



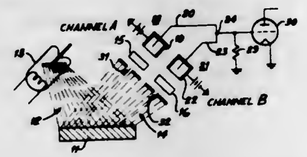
3. In an electron beam device in which the electron beam travels along a beam axis, an electron lens on said axis comprising: means for forming a substantially rotationally symmetric magnetic field on said axis; a cylindrical central electrode within said field and coaxial with said beam axis; a first annular electrode concentrically spaced from said central electrode and coaxial therewith and negatively electrically polarized with respect to said central electrode; and a second annular electrode comprising a first annular portion axially spaced from said first annular electrode in one direction along said beam axis and a second annular portion axially spaced from said first annular electrode in the opposite direction along said beam axis, said second annular electrode having substantially the same electrical potential as said central electrode and being coaxial therewith.

3,100,261

X-RAY ANALYZING APPARATUS WHEREIN TWO COMPARATIVE DETECTOR CHANNELS HAVE DIFFERENT ABSORPTION VERSUS FREQUENCY CHARACTERISTICS

John Edward Bigelow, Milwaukee, Wis., assignor to General Electric Company, a corporation of New York

Filed July 29, 1960, Ser. No. 46,277
19 Claims. (Cl. 250—51.5)



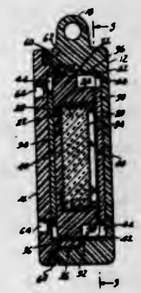
1. X-ray analyzing apparatus comprising: a source of polychromatic X-radiation; a sample to be analyzed disposed in the path of said polychromatic X-radiation; first and second X-radiation transmission channels each disposed to receive characteristic fluorescent radiation from said sample; said first and second channels each including an X-ray filter and an ion chamber disposed in sequence; said filters having different transmission vs. frequency characteristics from each other; said ion chambers having different absorption vs. frequency characteristics from each other; and means for combining the outputs of said ion chambers.

3,100,262

DOSIMETER OF THE RADIO PHOTOLUMINESCENT GLASS TYPE

Benjamin Shenker, Brooklyn, and Burton P. Fabricand, Dobbs Ferry, N.Y., assignors to Industrial Electronic Hardware Corp., New York, N.Y., a corporation of New York

Filed July 19, 1961, Ser. No. 125,168
10 Claims. (Cl. 250—83)



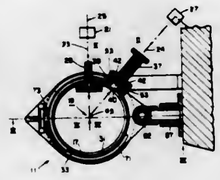
1. A dosimeter comprising an inner assembly and an outer case therearound, said inner assembly including a radio photoluminescent glass, said outer case comprising a generally cylindrical body and a cover secured thereto, each of said parts being lined with a single integral dished lead shield providing face and edge walls, said shields being substantially larger in diameter than the glass, said edge walls being notched, said face walls having a central aperture, and said face walls also being cut away adjacent the corner and outside the glass for almost the entire periphery of the dished shield.

3,100,263

CONTINUOUS ROTATION SCATTERING CHAMBER

John W. Verba and Roman A. Hawrylak, Rochester, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Feb. 21, 1962, Ser. No. 174,926
9 Claims. (Cl. 250—83)



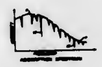
1. A scattering chamber for observing horizontal nuclear reaction products produced therein by a horizontal nuclear beam, comprising an evacuated first cylinder having a fixed input tube for introducing said nuclear beam into said cylinder, said first cylinder also having a target therein against which said beam is adapted to be directed through said input tube to produce said reaction products, said first cylinder also forming a horizontal slot transverse to the axis of said first cylinder in the plane of said input tube for removing said reaction products from said first cylinder, a concentric second cylinder around said first cylinder having a helical second slot in which said input tube is adapted to be translated, said second cylinder also having a longitudinally extending third vertical slot which overlaps said horizontal slot at right angles thereto, a cover movable in said second cylinder over said third slot and having an output tube therethrough which communicates with said horizontal slot, sealing means between said first and second cylinders and around said second and third slots for preventing the flow of air from the atmosphere into said first cylinder through said horizontal slot, said second cylinder being adapted to be rotated relative to said first cylinder and the rotation of said second cylinder adapted selectively to guide said output tube easily in line with said target over a broad range of angles to said input tube in a horizontal plane.

3,100,264

STAR ENERGY IDENTIFICATION SYSTEM FOR SPACE NAVIGATION

David Lawrence Jaffe, Great Neck, and Alan Ross and Abraham Sonnenschein, Bayside, N.Y., assignors to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York

Filed Jan. 28, 1960, Ser. No. 5,271
17 Claims. (Cl. 250—203)



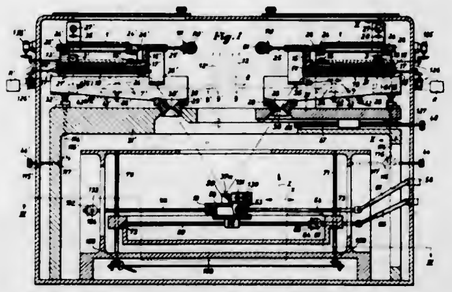
1. A system for the navigation of a vehicle in space comprising means on said vehicle for receiving the energies radiated by stars in space, means responsive to said received radiated energies for identifying various stars, and means responsive to the identification of various stars to navigate said vehicle in a desired manner.

3,100,265

STEREOSCOPIC MAP PLOTTING DEVICE FOR TRANSFORMING A PHYSICAL THREE-DIMENSIONAL MOVEMENT INTO TWO TWO-DIMENSIONAL MOVEMENTS

Kurt Penning and Martin Ahrend, Aalen, Wurttemberg, Germany, assignors to Carl Zeiss, Optische Werke, Oberkochen, Wurttemberg, Germany

Filed Jan. 25, 1960, Ser. No. 4,281
Claims priority, application Germany Jan. 31, 1959
6 Claims. (Cl. 250—220)



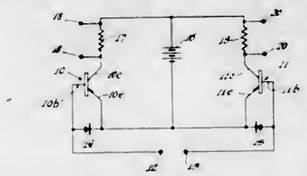
1. A photogrammetric stereoscopic map plotting device comprising a stereoscopic optical system having two ray paths, two aerial photographs and two reference marks; one control system for each ray path, each of said control systems having two carriages, said carriages carrying said reference marks; driving spindles, said driving spindles being operatively connected with said carriages for adjusting said carriages in two directions perpendicular to each other in one plane; two diaphragms, said diaphragms being arranged in the projection centers of the map plotting device; a spotlight source, said spotlight source being arranged on a spatially adjustable carriage below said diaphragms; photoelectric elements rigidly connected with said carriages carrying said reference marks and arranged above said diaphragms; two relays and four servo-motors connected with said photoelectric elements and the driving spindles of said carriages carrying said reference marks.

3,100,266

TRANSISTOR DISCRIMINATING CIRCUIT WITH DIODE BYPASS MEANS FOR THE EMITTER-BASE CIRCUIT OF EACH TRANSISTOR

Owen J. McCabe, Bristol, Conn., assignor to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut

Filed Feb. 11, 1957, Ser. No. 639,317
5 Claims. (Cl. 307—88.5)



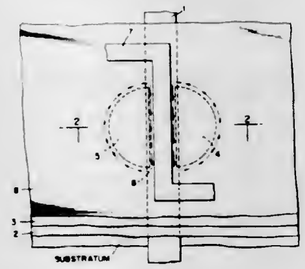
1. A discriminating circuit comprising a pair of similar transistors having their emitters connected in series and normally being of the same state of conduction in their emitter-collector circuit; a pair of input signal terminals, one connected to the base of each transistor; bypass means permitting a signal of one polority to flow through the emitter-base circuit of one transistor to change its state of conduction and bypass the emitter-base circuit of the other transistor to maintain its same state of conduction and a signal of the reverse polarity to flow through the emitter-base circuit of the other transistor to change its state of conduction and bypass the emitter-base circuit of the first transistor to maintain its same state of conduction; a collector and emitter circuit for each transistor; a source of electrical energy for the collector and emitter circuits; and output means in each collector-emitter circuit.

3,100,267

SUPERCONDUCTIVE GATING DEVICES

James W. Crowe, Red Hook, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 680,456, Aug. 27, 1957. This application Oct. 26, 1959, Ser. No. 848,870
9 Claims. (Cl. 307—88.5)



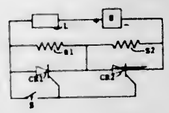
8. A superconductive device comprising a first superconductive strip deposited upon an insulated, self-supporting substratum, a first heat-conductive, electrically insulated layer super-imposed upon said first superconductive strip, a second superconductive strip deposited upon said first insulated layer, an aperture in said second strip, said aperture being a complete aperture save for a narrow portion of said second superconductive strip which forms a diameter of said aperture, said narrow portion lying in heat-transferral relationship with said first strip, a second electrically insulated layer superimposed upon said second superconductive strip, and a third superconductive strip superimposed upon said second insulated layer, said third superconductive strip being magnetically coupled to said superconductive narrow portion of the second layer.

3,100,268

SYMPATHETIC SILICON CONTROLLED RECTIFIER CIRCUIT

Lawrence R. Foote, Roanoke, Va., assignor to General Electric Company, a corporation of New York

Filed Aug. 23, 1960, Ser. No. 51,401
10 Claims. (Cl. 307—88.5)



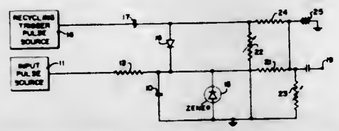
1. A switching circuit for connecting a load to a potential source comprising two or more series connected solid state rectifiers, each rectifier being provided with a gate for initiating conduction thereof, means for supplying a triggering potential simultaneously to each said gate to initiate conduction, and a voltage divider across said source arranged to apply a proportionate amount of potential across each said rectifier whereby any rectifier of the series upon becoming conductive is maintained conducting until all said rectifiers become conductive.

3,100,269

QUICK ACTING GATE FOR VOLTAGE OR CURRENT DISCHARGE

David T. Barry, Dallas, Tex., assignor to the United States of America as represented by the Secretary of the Navy

Filed May 25, 1961, Ser. No. 112,737
3 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



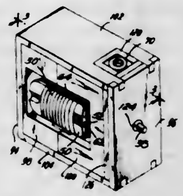
1. A circuit for recycling of an integrating element comprising a Zener diode connected in parallel with the integrating element, a source of signal pulses connected to said integrating element, bias means biasing said Zener diode to non-conduction during the integrating period, a trigger pulse source applying a pulse of voltage to said Zener diode to cause breakdown thereof in the reverse direction, whereby the integrator is short circuited by the low reverse impedance of said Zener diode and rapid discharge results from the avalanche characteristics of said Zener diode, and means connecting said integrating element to an output terminal.

3,100,270

SUBMINIATURE ELECTRIC MOTOR

Noel L. Case and Willis E. Rexford, Girard, Pa., assignors to Louis Marx & Co., Inc., New York, N.Y., a corporation of New York

Original application Nov. 6, 1961, Ser. No. 150,375. Divided and this application Nov. 20, 1962, Ser. No. 239,126
19 Claims. (Cl. 310—154)



1. A motor comprising an armature and commutator rotatable in a permanent magnet field, and brush assemblies, each brush assembly including a brush, a tubular metal brush holder having a diameter substantially larger than that of the brush, a helical pull spring having a diameter intermediate that of the brush and brush holder, said spring being housed within the brush holder and around the brush with the outer end of the spring bearing against the outer end of the brush and its inner end bearing against the inner end of the tubular holder, and insulation means surrounding and holding the metal brush holder.

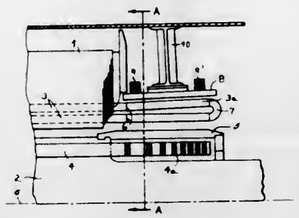
3,100,271

ALTERNATING CURRENT MACHINE WITH MAGNETIC SHIELD ENCLOSING END TURNS OF STATOR WINDING

Georges Darrieus, Houilles, France, and Friedrich Müllner, Mannheim, Germany, assignors to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint stock company

Filed Apr. 27, 1961, Ser. No. 124,744
Claims priority, application Switzerland May 20, 1960
4 Claims. (Cl. 310—256)

1. In an alternating current machine the combination comprising a rotor element and a stator element surrounding said rotor element, said stator and rotor elements being provided with coils thereon having straight conductor portions extending axially of the machine and end turns projecting beyond the ends of said straight conductor portions, the end turns of said stator element and of said rotor element being arranged in essentially cylindrical arrays of conductor portions, a first essentially cylindrical magnetic shield surrounding said essentially cylindrical array of conductor portions forming the end turns of said stator element, said shield being constituted by closely adjacent laminations extending longitudinally of the machine axis and being arranged in essentially radial planes passing through the machine axis, and a second magnetic shield constituted by closely adjacent annular laminations surrounding said first magnetic shield, the laminations of said second shield being disposed in planes transverse to the machine axis.

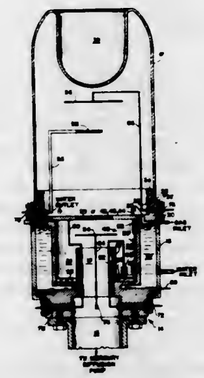


3,100,272

LOW PRESSURE MERCURY PLASMA DISCHARGE TUBE

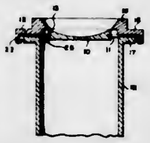
Gottfried K. Wehner, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

Filed Apr. 14, 1961, Ser. No. 103,056
12 Claims. (Cl. 313—7)



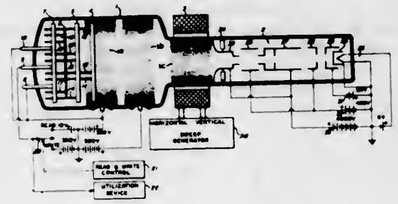
1. A low pressure plasma tube comprising a tank assembly, an envelope, and a plurality of electrodes, said tank assembly including a mercury pool reservoir, said reservoir being adapted to be connected to a vacuum pump, said envelope being firmly and releasably positioned on said tank assembly, said plurality of electrodes including an anode, a target electrode, a grid, an auxiliary anode, and an igniter, said anode and target electrodes being positioned in said envelope, and individual electric leads extending from said electrodes to the outside of said tube through said tank assembly so said envelope can be separated from said assembly without disturbing said leads

3,100,273
CATHODE SUPPORT
Mason W. Huse, Sudbury, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,646
9 Claims. (Cl. 313—82)



1. A cathode assembly comprising a support cup, a focusing electrode fixedly secured to said support cup in substantially concentric alignment therewith, an electrically conductive support disc secured between said support cup and said focusing electrode and having an interior peripheral edge of an undulating contour, and a cathode element supported by three spaced portions of said interior peripheral edge of said support disc in axial alignment with said support cup and said electrode.

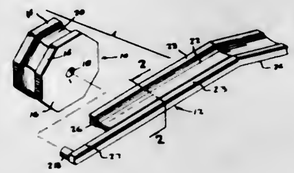
3,100,274
ELECTRON TUBE WITH ELECTRODE HAVING TITANIUM SURFACE SERVING AS GETTER
Alvin S. Luftman, Natick, and Carleton E. Sawyer, Acton, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Dec. 17, 1959, Ser. No. 860,252
7 Claims. (Cl. 313—178)



1. In an electron storage device including an electron gun, a decelerating electrode and a storage electrode within a glass envelope, anode means disposed to collect electron flow modulated by said storage electrode during a read cycle producing an output signal and also serving to capture gas ions within the envelope, said anode means being composed of titanium and means coupled to said anode means and said electrodes for applying voltages during said read cycle suitable for accelerating said gas ions to a velocity such that upon striking said anode means, said gas ions are absorbed.

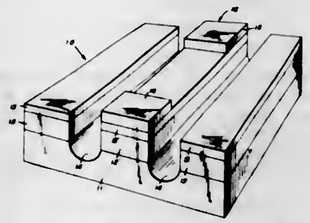
3,100,275
MAGNETIC TOOL HOLDER
Emmett J. Gantz, 1007 S. 14th St., Burlington, Iowa
Filed Dec. 8, 1961, Ser. No. 157,928
3 Claims. (Cl. 317—159)

1. A magnetic, holding device comprising a block of magnetic material having parallel end faces, and a polygonal cross section with side faces perpendicular to said end faces, said side faces having communicating central grooves, and said block having a central bore, perpendicular to said end faces, and an elongate, flat slab of magnetic material, having an oblong, generally rectangular cross section and having a section adjacent one end bent away from the plane of the slab, said slab having central, longitudinally disposed channels in its opposite faces, bordered by marginal strips, one of said strips extending beyond the other end of said slab opposite said bent-



away end section, and having a transversely extending pin removably engaged in the bore in said block.

3,100,276
SEMICONDUCTOR SOLID CIRCUITS
Owen L. Meyer, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 18, 1960, Ser. No. 23,106
1 Claim. (Cl. 317—234)
(Granted under Title 35, U.S. Code (1952), sec. 266)

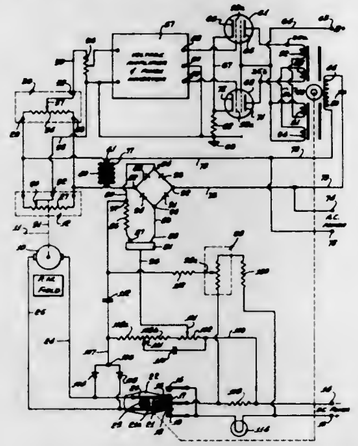


A solid circuit comprising a continuous semiconductor substrate layer of a first conductivity type, an inner semiconductor layer of a second conductivity type on said substrate layer, an outer semiconductor layer of said first conductivity type on said inner layer, a plurality of grooves originating in said outer layer arranged so that said grooves isolate a discrete portion of said outer layer, said grooves extending into and terminating within said substrate layer and electrical contact means affixed to said discrete portion for utilizing said discrete portion as a circuit component in said solid circuit.

3,100,277
SWITCHING SERVO SYSTEM WITH ANTI-HUNT FEEDBACK
Stuart N. McCullough, 18098 Karen Ave., Encino, Calif.
Filed Sept. 8, 1958, Ser. No. 759,629
12 Claims. (Cl. 318—28)

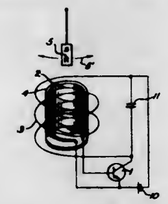
1. In a closed loop system for positioning a movable instrumentality to correct an error of departure from a desired condition, said error being an input to a suitable error sensing element which has as an output an electrical signal indicative of such error, said signal increasing in magnitude with increase in said error, a circuit connecting said output of said sensing element to an input to an on-off power controlling device, said power controlling device operating in response to said signal to effect on-off energization and deenergization of an input of an actuator with power derived from a power-source of suitable characteristics, said actuator being adapted to operate as a result of such energization to position said movable instrumentality and thereby cause a reduction of said error, the improvement comprising: means operable upon energization of said actuator input for effecting, substantially throughout the acceleration transient of the actuator, and

as a function of time of continued energization of said actuator, continuously diminishing gain of that portion of the system serving to transmit the error and signal



indicative of it from the instrumentality to the power controlling device, restoration of gain being postponed until the actuator is de-energized or starts to decelerate.

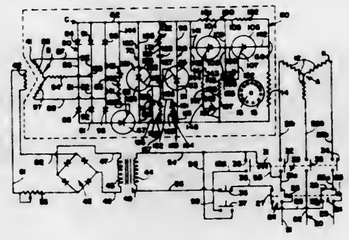
3,100,278
ELECTROMAGNETIC PENDULUM DRIVE
Robert Walter Reich, Rotackerstrasse 2, Freiburg im Breisgau, Germany
Filed Jan. 6, 1959, Ser. No. 785,197
Claims priority, application Germany Jan. 10, 1958
9 Claims. (Cl. 318—128)



1. Impelling system for a clock comprising in combination: a transistor oscillator including two coils disposed for mutual inductive coupling; stationary means disposed between said two coils for decoupling them; and a mechanical oscillator including a permanent magnet with one pole thereof oscillating in the vicinity of said coils so as to temporarily couple them thus overriding the effect of said decoupling means.

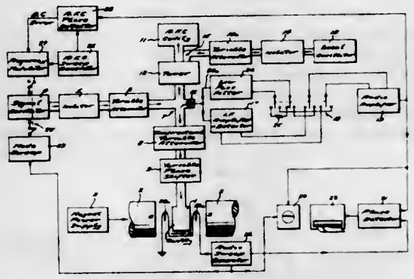
3,100,279
CONTROL SYSTEM FOR CONTROLLING THE OPERATION OF SYNCHRONOUS MOTORS
Thomas G. Rohner, Minneapolis, Minn., assignor to Electric Machinery Mfg. Company, Minneapolis, Minn., a corporation of Minnesota
Filed Jan. 8, 1962, Ser. No. 164,674
13 Claims. (Cl. 318—167)

4. A control device for synchronous motors having a field-winding discharge circuit and a field-winding excitation circuit, said control device including a semiconductor in said excitation circuit and normally inoperative to maintain said excitation circuit open, said field-winding discharge circuit including a branch for discharging positive pulses of the slip-frequency current and another branch for discharging the negative pulses of the slip-frequency current, a second semiconductor in one of said branches conducting the positive pulses, a third semiconductor in the other path and conducting the negative pulses and



means associated with said third semiconductor and dependent upon the slip frequency of said current for causing said third semiconductor to actuate said first semiconductor and to open said discharge circuit when the slip frequency reaches a predetermined low value.

3,100,280
GYROMAGNETIC RESONANCE METHODS AND APPARATUS
James S. Hyde, Menlo Park, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Oct. 25, 1960, Ser. No. 64,940
2 Claims. (Cl. 324—.5)



2. A gyromagnetic resonance spectrometer apparatus including: a microwave bridge network; said bridge network including a measuring arm having a cavity resonator disposed therein for containing therewithin a sample of matter under investigation, a power arm for supplying wave energy to said bridge network including a signal oscillator for supplying high frequency wave energy, a reference arm adapted to aid in controlling the frequency of said signal oscillator, means for selectively introducing or not high frequency wave energy local oscillator power into said bridge, said wave energy from said local oscillator being displaced an intermediate frequency away from the frequency of said signal oscillator, a detecting arm including a crystal detector means for detecting unbalance of said bridge network and for deriving an intermediate frequency signal in variable accordance with unbalance of said bridge; means connected to said crystal detector means for amplifying the detected intermediate frequency signal; second detector means connected to said intermediate frequency signal amplifying means for deriving a low frequency signal in variable accordance with the unbalance of said bridge; means for amplifying and indicating said low frequency signal; and switching means for connecting said amplifying and indicating means to said crystal detector means for homodyne detection of gyromagnetic resonance signals when no local

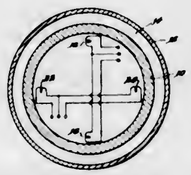
oscillator power is introduced into said bridge network and for connecting said amplifying and indicating means to said second detecting means for superheterodyne detection of gyromagnetic resonance signals when local oscillator power is introduced into said bridge network.

3,100,281

APPARATUS FOR MEASURING ANNULAR OFFSET BETWEEN A FIRST METAL TUBE AND A SECOND METAL TUBE SPATIALLY DISPOSED WITHIN THE FIRST TUBE

Jack C. Spanner, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 28, 1961, Ser. No. 141,552
7 Claims. (Cl. 324—40)



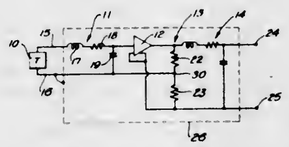
1. An apparatus for measuring the amount of offset from concentricity between a first metal tube mounted within a second metal tube comprising a plurality of sensing coils disposed within said first tube adjacent the interior surface thereof, means for applying an A.-C. signal having a predetermined frequency to said sensing coils, the frequency of said A.-C. signal being such that the resultant electromagnetic energy from said sensing coils passes through said first tube and is at least partially attenuated by said second tube, and means for differentially measuring the effective impedances of said sensing coils, which differential measurements are a function of the amount of offset between said first and second tubes.

3,100,282

SHIELDING AMPLIFIER CIRCUIT

Taylor C. Fletcher, Fullerton, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Oct. 29, 1958, Ser. No. 770,386
6 Claims. (Cl. 330—68)



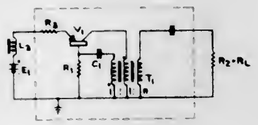
1. In a floating system for measuring direct current voltages, the combination of: an ungrounded transducer having signal leads; said transducer producing input signals; a feedback amplifier having an input and an output; a filter network connected to the input of said feedback amplifier for attenuating A.C. input signals; a voltage dividing network connected to the output of said feedback amplifier for producing a feedback signal; means connecting said transducer to said filter and to said voltage dividing network for providing a feedback loop, whereby the feedback signal and transducer signal are combined to form error voltages; an ungrounded shielding means for shielding said amplifier from the influence of external electrostatic and electromagnetic fields; and a lead electrically connecting said shielding means to one of the signal leads of said transducer.

3,100,283

PULSE GROUP GENERATING AND SHAPING CIRCUIT

David Mark Makow, P.O. Box 458, R.R. 1, Ottawa, Ontario, Canada

Filed Oct. 2, 1959, Ser. No. 843,991
Claims priority, application Canada Nov. 22, 1958
8 Claims. (Cl. 331—47)



1. A self-quenching, self-triggering blocking oscillator for providing spaced trains of pulses of at least two pulses each to be applied to a user circuit having a principally resistive, and short time constant, input impedance comprising:

(i) a blocking oscillator transformer having:
- (*a*) an input winding,
- (*b*) a feedback winding, and
- (*c*) an output winding adapted to feed said user circuit, each of said windings having first and second ends, the said second ends being joined together,

(ii) a transistor having;
- (*a*) an emitter electrode,
- (*b*) a collector electrode, and
- (*c*) a base electrode, said collector electrode being connected to the said first end of the said input winding,

(iii) a blocking capacitor connected to said first end of said feedback winding and to said base electrode,

(iv) a first discharge resistor connected to said base electrode and to said second ends of the said transformer windings,

(v) a pulse-shaping capacitor connected in series with the first end of the said output winding and the said input impedance of the user circuit,

(vi) a second discharge resistor having one end thereof connected to the junction of said input impedance and said pulse-shaping capacitor and the other end thereof connected in a manner to discharge said pulse-shaping capacitor rapidly when discharging current flows into said user circuit,

(vii) a voltage source, one pole of which is connected to the said second ends of said transformer windings, and

(viii) a resistance choke connected between said transistor emitter electrode and the other pole of said voltage source,

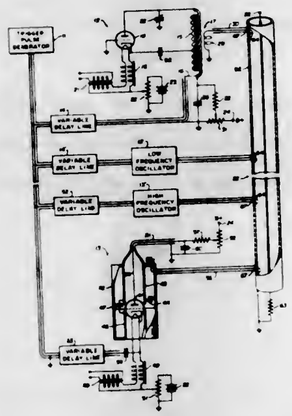
said blocking capacitor being such as to cause said oscillator to block after generating a pulse train due to the accumulated charge on said blocking capacitor; said first discharge resistor being such as to provide a discharge path for said blocking capacitor when said oscillator is blocked by said accumulated charge, the values of said blocking capacitor and said discharge resistor being such that the time constant of said discharge path is long compared to the time constant of the charging path of said blocking capacitor when receiving said charge; said pulse-shaping capacitor having such a value as to cause said pulse-shaping capacitor to charge rapidly when a charging current flows into said user circuit; said second discharge resistor being such as to discharge said pulse-shaping capacitor rapidly when discharging current flows into said user circuit.

3,100,284

PULSE SYNTHESIZING GENERATOR

Quentin A. Kerns, Orinda, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 31, 1960, Ser. No. 53,320
5 Claims. (Cl. 331—55)



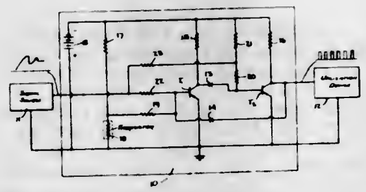
1. In a signal generating circuit, the combination comprising a plurality of oscillators each resonant at harmonically related frequencies and each having a control electrode, an amplitude control in each of said oscillators, a phase control in each of said oscillators, a bias means selectively connectable with said control electrodes of each of said oscillators for holding said oscillators in an initially non-resonant state, a triggering means selectively connectable with said control electrodes of each of said oscillators for initiating oscillation in said oscillators with precise synchronization, and a mixer having a composite signal output terminal and having a plurality of inputs each receiving the output of a separate one of said oscillators.

3,100,285

LINEAR PULSE FREQUENCY MODULATOR

Manfred E. Clynes, Orangeburg, N.Y., assignor to Mnemotron Corporation, a corporation of New York

Filed Nov. 28, 1960, Ser. No. 72,171
3 Claims. (Cl. 332—14)



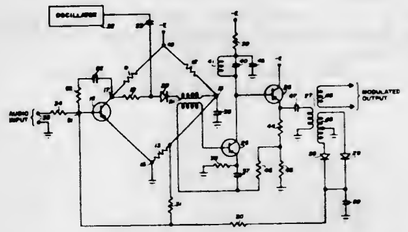
1. A linear pulse frequency modulator comprising a free-running astable multivibrator provided with a pair of transistors having base electrodes and circuits therefor, first and second capacitors cross-coupling said transistors and having relative reactive values causing said multivibrator to operate asymmetrically to produce a train of pulses, and means to apply a modulating signal simultaneously to the base circuits of both transistors to vary the repetition rate of said pulses as a linear function of the amplitude of said signal.

3,100,286

BRIDGE FEEDBACK MODULATOR

Clarence S. Jones, Los Altos, Calif., assignor to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware

Filed Oct. 18, 1961, Ser. No. 145,881
5 Claims. (Cl. 332—37)



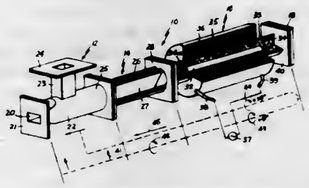
1. A modulation system comprising a bridge network having four impedance legs, one of said impedance legs including a transistor for receiving audio input signals, an impedance branch coupled across the bridge including a unidirectional conduction device, a means for generating a carrier signal coupled to the unidirectional conduction device, a means for passing a modulated carrier signal from the unidirectional conduction device, an output circuit coupled to said means for passing the modulated carrier signal, a de-modulation means coupled to the output circuit, and a negative feedback path for passing audio signals from de-modulation means to the transistor.

3,100,287

PHASE SHIFTER UTILIZING VARIABLE DELAY IMPARTED TO CIRCULARLY POLARIZED ELECTRIC WAVES BY VARIABLY MAGNETIZED FERRITE MATERIAL

Howard Scharfman, Lexington, and Francis J. O'Hara, Belmont, Mass., assignors to Raytheon Company, Lexington, Mass., a corporation of Delaware

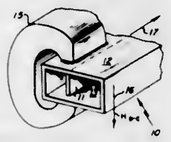
Filed May 31, 1957, Ser. No. 662,843
9 Claims. (Cl. 333—24.1)

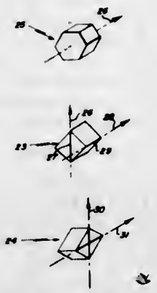


1. A phase-shifting system for producing a phase shift in substantially all of the electromagnetic wave energy traveling through a waveguide transmission line comprising a waveguide circular polarizer means for converting linearly-polarized wave energy to circularly-polarized wave energy, means for producing a predetermined phase shift in said circularly-polarized wave energy passing through said phase-shifting means in a first direction, means reflecting substantially all said wave energy backward through said magnetic-field phase-shifting means in a direction opposite to said first direction, whereby an additional phase shift is introduced in said wave energy, means directing said phase-shifted magnetic wave energy through said first recited waveguide means, thereby polarizing said phase-shifted wave energy in an orthogonal direction with respect to said wave energy traveling in said first direction, and polarization-selective means in the form of an orthogonal mode transducer for extract-

ing substantially all of said orthogonally-polarized wave energy from said system.

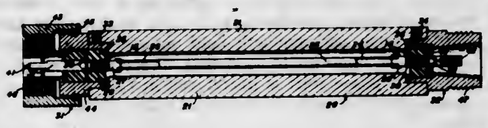
3,100,288
FERRITE ISOLATOR UTILIZING ALIGNED CRYSTALS WITH A SPECIFIC ANISOTROPY CONSTANT
Ernst F. R. A. Schloemann, Weston, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed Jan. 5, 1961, Ser. No. 80,920
2 Claims. (Cl. 333—24.2)





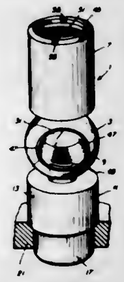
1. In combination, a rectangular waveguide for propagating energy in a direction along the longitudinal axis of said waveguide, a ferrite material positioned within said waveguide, means for applying a D.-C. magnetic field in a selected direction perpendicular to the direction of propagation, said material comprising a plurality of cubic crystals having a positive anisotropy constant, the axes of said crystals being substantially aligned with each other within said material, said crystals being oriented within said waveguide so that a [110] direction of said crystals is substantially parallel to the direction of said applied magnetic field and a [100] direction of said crystals is substantially parallel to the direction of the longitudinal axis of said waveguide.

3,100,289
MICROWAVE ATTENUATORS WITH LOW D.C. RESISTANCE SHUNT PATH
Joseph Lorch, Albany, N.Y., assignor to Empire Devices Products Corp., Amsterdam, N.Y.
Filed May 3, 1960, Ser. No. 26,653
9 Claims. (Cl. 333—81)



1. A microwave attenuator having a cylindrical conductive sleeve, a tubular conductive end connector secured to each sleeve end and respectively containing an axial conductive terminal, a tubular resistive unit concentrically arranged within said sleeve, each end of said unit being in engagement with a respective terminal for exterior electrical connection, said resistive unit being proportioned to establish a predetermined impedance between each terminal and said sleeve in the operating frequency range, and an inductance coil connected between one terminal and its connector, said coil presenting an impedance substantially higher than said predetermined impedance in said frequency range and a low resistance to direct current flow thereacross.

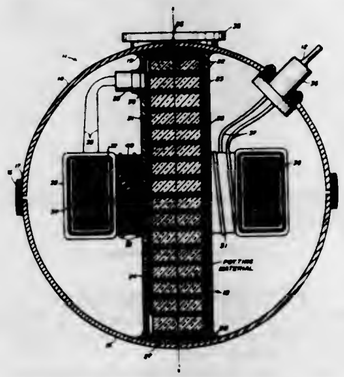
3,100,290
COLUMNAR STRESS SENSING MEMBER
Eric Propper, Wallingford, Conn., assignor to Revere Corporation of America, Wallingford, Conn., a corporation of New Jersey
Filed Jan. 4, 1961, Ser. No. 80,685
9 Claims. (Cl. 338—5)



1. A stress sensing member for a stress measuring device which comprises a strain element capable of resiliently developing strain therein under stress applied thereto, means for supporting said strain element to receive the stress acting along a given line and for transmitting the stress through said strain element concomitantly with developing the strain therein, said strain element providing an exterior spherical surface and being disposed with the center of the spherical contour positioned substantially on said line of action of the stress, said strain element being further defined by a cylindrical surface of less diameter than the diameter of the sphere and disposed within the spherical contour and extending about a cylindrical space with the axis of the cylinder substantially extending through the center of the sphere and transversely of said line of action of the stress.

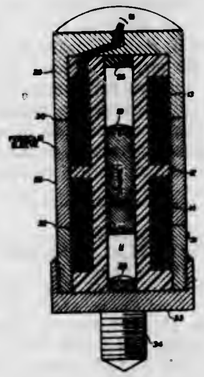
3,100,291
UNDERWATER LOUDSPEAKER
Frank R. Abbott, 3953 Wildwood, San Diego, Calif.
Filed Oct. 25, 1960, Ser. No. 64,971
13 Claims. (Cl. 340—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

7. Means for broadcasting and receiving pressure energy while being submerged within water comprising in combination, a pair of hollow hemispherical shells each of which is spatially disposed from the other along an axis of geometrical revolution, a resilient means connected to each of said shells in such manner as to allow relative movement therebetween along said axis of geometrical revolution, a plurality of polarized piezoelectric discs having silver electrodes attached to the faces thereof, said discs being stacked along said axis of geometrical revolution for contact of the adjacent silver electrodes attached thereto, conductor means coupled to said silver electrodes for effectively connecting said piezoelectric discs in electrical parallel, means encapsulating said piezoelectric discs, silver electrodes, and conductors for supporting same as an insulated unitary elongatable column, means connected between the ends of said column and the aforesaid hemispherical shells respectively for mounting same therein, a toroidal transformer surrounding said column, sponge rubber means interconnecting said column and said transformer for resiliently supporting same, means interconnecting said transformer



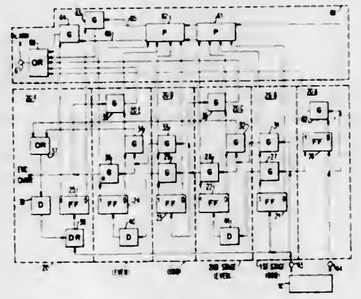
and the aforesaid silver electrodes for supplying electrical excitation power thereto, and means connected to said transformer adapted for supplying electrical excitation power thereto from a source external of said hemispherical shells while same is insulatedly submerged within said water.

3,100,292
VIBRATION PICKUP
Thomas C. Warner, Jr., West Haven, and John E. Judd, Hamden, Conn., assignors to Textron Electronics, Inc., Providence, R.I., a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 1,370
10 Claims. (Cl. 340—17)



1. A vibration pickup comprising a cylindrical coil form with an axial bore, a pickup coil wound on said coil form, a sleeve of paramagnetic material surrounding said pickup coil and centered between the ends thereof, a bar magnet of lesser length than said coil form disposed in said bore so as to be spring-coupled magnetically to said sleeve with no structural connection therebetween for axial movement within said bore, means for establishing electrical connection to said pickup coil, and means for coupling said coil form to a vibrating object, said pickup coil being arranged to generate a signal voltage within given limits of frequency and displacement which is directly proportional to the velocity of movement of the object.

3,100,293
SIGNALING SYSTEM
Renato A. D'Antonio, Kingston, and Fred Gerrand, Red Hook, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 16, 1959, Ser. No. 853,400
11 Claims. (Cl. 340—146.1)

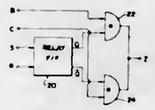


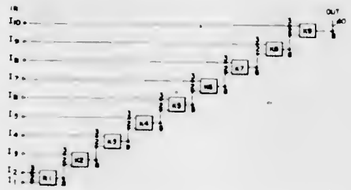
1. In a counter for registering the number of impulses produced by a source, a series of groups of stages, each of counting said groups consisting of a first stage and a second stage, each of said stages having a bistable element and an input comprising the complement input of said bistable element, first carry means including a gate selectively conditioned by said first stage bistable element operable for passing carry impulses from said first stage input to said second stage input, second carry means including another gate conditioned in parallel with said first means gate and a gate selectively conditioned in accordance with the condition in which said second stage bistable element has been placed for passing carry impulses from said first stage input to said input of said first stage within the next successive one of said groups of stages.

3,100,294
TIME-DIVISION MULTIPLEXER
Hugh L. Dryden, deputy administrator of the National Aeronautics and Space Administration, with respect to an invention of John F. Meyer
Filed Sept. 29, 1961, Ser. No. 180,380
7 Claims. (Cl. 340—147)

1. Apparatus for sequentially connecting a plurality of signal source terminals to a single output terminal, said apparatus comprising a plurality of latching relays, said latching relays being arranged in a sequence, each said latching relay having a first and second signal input terminal and a signal output terminal, first coil means, excitation of which connects only said first input terminal to said signal output terminal, and second coil means, excitation of which connects only said second signal input terminal to said signal output terminal, means connecting the first and second signal input terminals of a first of said sequence of latching relays to a first and second of said plurality of signal source terminals, means respectively connecting a different one of said remaining signal source terminals to the second signal input terminal of a different one of said sequence of latching relays, means for connecting the output terminal of each one of said relays in said sequence to the first input terminal of a succeeding relay in said sequence, means connecting the output terminal of the last latching relay in said sequence to said single output terminal, and means for applying excitation suc-

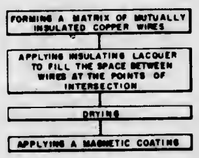
cessively to said sequence of latching relays first to a second coil means of one of said latching relays, then to a second coil means of the next latching relay in said se-





quence, then to the first coil means of said one of said latching relays to thereby sequentially connect each of said plurality of signal source terminals to said single output terminal.

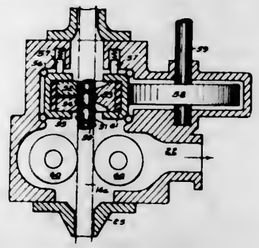
3,100,295
METHOD OF MAKING MAGNETIC MATRICES AND RESULTING ARTICLE
Sigfrid Schweizerhof, Backnang, Wurttemberg, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Jan. 25, 1960, Ser. No. 4,194
12 Claims. (Cl. 340—174)



11. A magnetic storage or switching matrix comprising a network of mutually insulated wires having at least at the storing or switching points of intersection of the wires a magnetic coating of a thickness of between 0.05 and 1.0 micron.

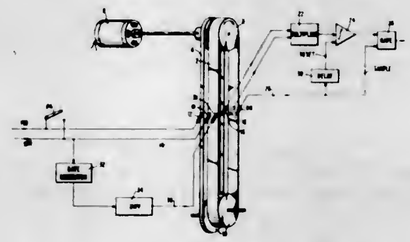
3,100,296
SUPERIMPOSABLE CARD SEARCH AND DATA STORAGE SYSTEM
Frederick Jonker, 3939 Legation St. NW., Washington, D.C.
Filed Aug. 19, 1960, Ser. No. 57,079
6 Claims. (Cl. 340—174.1)

1. A random access information storage and retrieval apparatus comprising a plurality of compartments, an elongated rod-like record member in each of said compartments, each of said rods capable of storing information thereon along its length, each of said rod-like members mounted for movement out of and into its compartment, a readout means including a movable head outside said compartments, means for moving said head to a position adjacent one end of any chosen one of said compartments, said head including suction means for initially withdrawing the elongated rod-like member from a chosen compartment, further means for moving said elongated rod-like member past said readout means as it is being withdrawn



from its compartment, and means for thereafter returning said rod-like member into its compartment.

3,100,297
FUNCTION GENERATORS
Jose Reines, Crompond, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 28, 1961, Ser. No. 120,310
7 Claims. (Cl. 340—174.1)

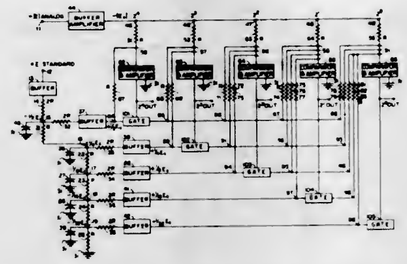


1. An apparatus comprising, in combination: a plurality of cyclically-movable records where the length of at least one record is different from the length of at least one other record; read in means for storing data on the records; read out means for sensing the data stored on the records; and means for continuously moving the records at the same linear speed to cyclically present the records to the read out means such that corresponding areas on the records are presented to the read out means at different relative times during successive cycles.

3,100,298
ANALOG-TO-DIGITAL INSTANTANEOUS CONVERTER
Frederick R. Fluhr, 7234 E. Fort Foote Terrace, Fort Foote, Md.
Filed Feb. 27, 1959, Ser. No. 796,185
4 Claims. (Cl. 340—347)
(Granted under Title 35, U.S. Code (1952), sec. 266)

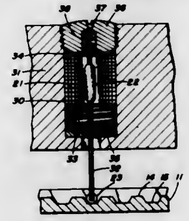
4. In an open ended analog to digital converter,
means for providing an analog input signal of selected polarity,
a standard voltage source of polarity opposed to that of the input signal,
reference means for providing a plurality of graduated magnitude fractions of the standard voltage each being one half of the preceding,
a plurality of impedance devices of standard magnitude,
a plurality of common junctions, one for each fraction of the standard voltage, the one for each fraction being connected in that fraction source and individually to each preceding fraction source through separate impedance devices.

a plurality of comparators, one for each junction operative to provide an indentifiable signal when the potential of that junction attains a selected level,
and a plurality of gate means, one for each comparator preceding the comparator for the minimum fraction of standard voltage, each connected to the



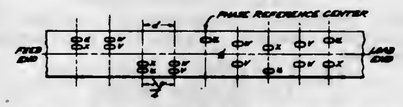
corresponding comparator and to the corresponding fraction of the standard voltage to block the application of that fraction of the standard voltage to the succeeding common junctions except during the identifiable signal from the corresponding comparator.

3,100,299
ANALOG TO DIGITAL CODE CONVERTER
Theodore W. Congdon, Pittsfield, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 19, 1961, Ser. No. 118,206
4 Claims. (Cl. 340—347)



4. An analog to digital code converter comprising a rotatable shaft, a coded disc attached to said rotatable shaft, said coded disc having a plurality of code tracks of hills and valleys, each of said code tracks being operably connected to a separate differential transformer, adjustable support means for said differential transformers, said differential transformers including a reference input voltage, output terminals, windings having an electrical centerline, and a variable core means, said adjustable support means including a support bracket having at least one aperture therethrough, said aperture including a first portion having a smaller diameter than a second portion, said second portion having a threaded portion at the surface opening of said second portion, said adjustable support means further including a guide bearing at the base of said second portion having an outer diameter smaller than said second portion and an internal diameter smaller than said first portion for the reciprocation of said variable core means, a first compressible spring between said first guide bearing and said threaded portion, differential transformer windings between said first compressible spring and said threaded portion, a second guide bearing between said differential transformer windings and said threaded portion for guiding the reciprocation of said variable core means, and an adjusting screw threaded into said threaded portion for adjusting the position of said differential transformer against said first compressible spring, said variable core means including an iron slug, a first shaft portion connected at one end to one side of said iron slug and at its other end to a second compressible spring, a cavity internal of said adjusting screw for holding said second compressible spring, a second shaft portion connected at one end to a second side of said iron slug and at its other end to a wheel held under pressure of said second compressible spring in one of said rotating code tracks for travel over said hills and valleys of said code tracks whereby said first shaft portion reciprocates through said second guide bearing and said second shaft portion reciprocates through said first guide bearing to thereby reciprocate said iron slug over said electrical centerline and derive an output at said output terminals representative of a digital code.

3,100,300
ANTENNA ARRAY SYNTHESIS METHOD
Carlyle J. Sletten, Acton, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 10, 1956, Ser. No. 615,208
1 Claim. (Cl. 343—771)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A method of controlling the radiation pattern established by an antenna array which comprises the steps of choosing a radiation pattern corresponding to a Fourier series of odd and even functions, and causing radiation to occur along said array at positions such that the energy amplitude at each position conforms to an element of said Fourier series in such manner as to provide a pattern summation corresponding to the quarter wavelength summation value of said series.

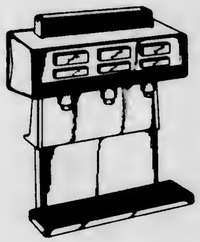
DESIGNS

AUGUST 6, 1963

195,810
BEVERAGE DISPENSER
Clare E. Hodgman, Mamaroneck, N.Y., assignor to The Coca-Cola Company, Atlanta, Ga., a corporation of Delaware
Filed Sept. 4, 1962, Ser. No. 71,557
Term of patent 14 years
(Cl. D2—3)



195,811
BEVERAGE DISPENSER
Clare E. Hodgman, Mamaroneck, N.Y., assignor to The Coca-Cola Company, Atlanta, Ga., a corporation of Delaware
Filed Sept. 4, 1962, Ser. No. 71,558
Term of patent 14 years
(Cl. D2—3)



195,812
SHOULDER STRAP
Melvin R. James, 2647 S. Dalton Ave., Los Angeles, Calif.
Filed July 27, 1961, Ser. No. 66,090
Term of patent 14 years
(Cl. D3—10)



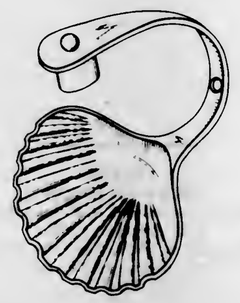
195,813
NOVELTY HAT
John E. Briese, Monterey Park, Calif.
Filed July 16, 1962, Ser. No. 70,940
Term of patent 14 years
(Cl. D3—13)



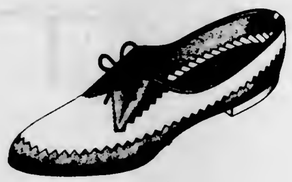
195,814
CHILD'S HAT
William Baltaks and Julius C. Baltaks, both of 110 Chatham Lane, Point Pleasant, N.J.
Filed Dec. 28, 1962, Ser. No. 72,979
Term of patent 3½ years
(Cl. D3—13)



195,815
SOAP HOLDER
John Louis Jaffe, Vincent Rodin, and Mort L. Rothenberg, all of 255 5th Ave., New York, N.Y.
Filed Feb. 16, 1962, Ser. No. 68,862
Term of patent 3½ years
(Cl. D4—3)



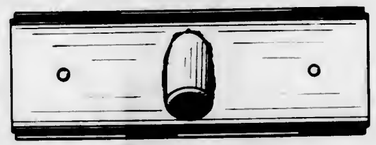
195,816
SHOE
Basil Huff and Paul S. Birnbaum, Wilkes Barre, Pa., assignors to Faith Shoe Company, Wilkes Barre, Pa., a corporation of Pennsylvania
Filed July 25, 1962, Ser. No. 71,055
Term of patent 7 years
(Cl. D7—7)



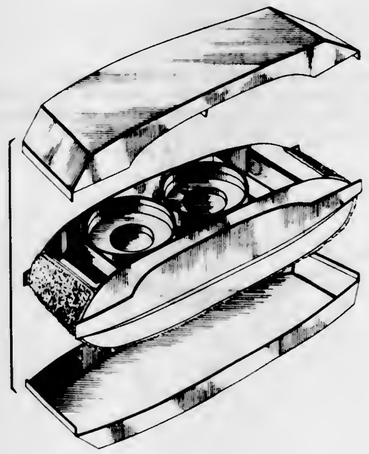
195,817
SAFETY SHOE
Roger Tronche, Coutras, France, assignor to Baudou S.A.R.L., Les Eglisottes, France
Filed Apr. 15, 1963, Ser. No. 74,446
Claims priority, application France Oct. 18, 1962
Term of patent 14 years
(Cl. D7—7)



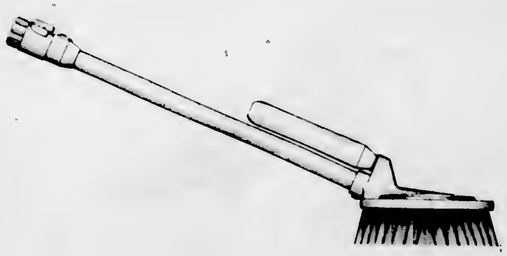
195,818
WAX APPLICATOR
Moe Herman, 310 Beverly Road, Brooklyn, N.Y., and Sam Herman, 41 Vista Road, Roslyn, N.Y.
Filed July 11, 1962, Ser. No. 70,873
Term of patent 3½ years
(Cl. D9—2)



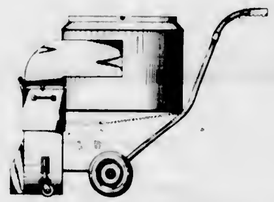
195,819
SHOE POLISH KIT
Robert V. Mathison, Box 730, Asheville, N.C.
Filed Sept. 21, 1962, Ser. No. 71,794
Term of patent 3½ years
(Cl. D9—2)



195,820
COMBINATION DETERGENT DISPENSER AND CLEANING BRUSH
Walter O. Williams, 15740 Ashton Road, Detroit, Mich.
Filed Oct. 11, 1962, Ser. No. 72,070
Term of patent 14 years
(Cl. D9—2)

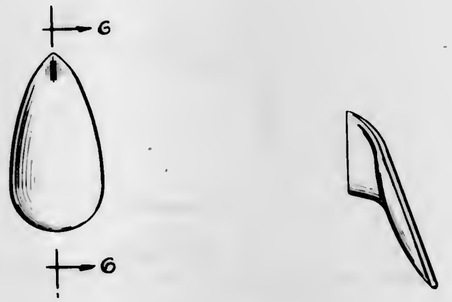


195,821
VACUUM CLEANER FOR PARKING LOTS OR THE LIKE
Roy Charles Rush, 6129 NE. Skidmore St., Portland, Oreg.
Filed Jan. 16, 1962, Ser. No. 68,332
Term of patent 14 years
(Cl. D9—2)



195,822
FURNITURE PULL OR THE LIKE
Nolan Kent Rhoades, Beloit, Wis., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Feb. 16, 1962, Ser. No. 68,865
Term of patent 14 years
(Cl. D10—8)

195,823
PULL FOR CABINET DOORS, DRAWERS AND THE LIKE
La Verne E. Clayton, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed May 16, 1962, Ser. No. 70,156
Term of patent 14 years
(Cl. D10—8)

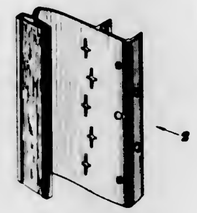


195,824
DRAWER KNOB
Norman D. Louis, 136 S. Poinsettia Place, Los Angeles, Calif.
Filed Sept. 4, 1962, Ser. No. 71,546
Term of patent 14 years
(Cl. D10—8)

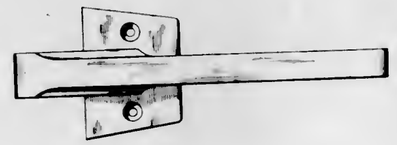




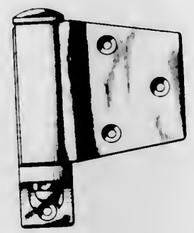
195,825
HANDLE FOR SLIDING OR ROLLING WINDOWS, DOORS, AND THE LIKE
Harry M. Riegelman, Rolling Hills, Calif., assignor to Security Aluminum Corporation, Compton, Calif., a corporation of California
Filed Sept. 10, 1962, Ser. No. 71,607
Term of patent 14 years
(Cl. D10—8)



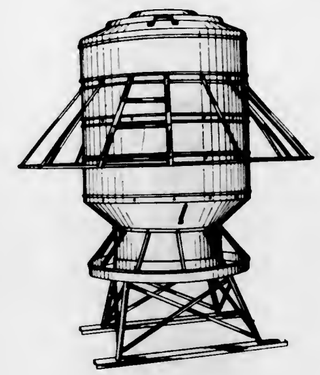
195,826
DOOR HANDLE
George W. Melcher, Bally, Pa., assignor to Bally Case and Cooler, Inc., Bally, Pa.
Filed Dec. 14, 1962, Ser. No. 72,864
Term of patent 14 years
(Cl. D10—8)



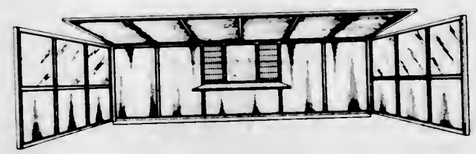
195,827
CLOSURE HINGE
George W. Melcher, Bally, Pa., assignor to Bally Case and Cooler, Inc., Bally, Pa.
Filed Dec. 14, 1962, Ser. No. 72,863
Term of patent 14 years
(Cl. D10—9)



195,828
CATTLE FEEDER
Mathew H. Stapleton, National Ave., Jefferson, Iowa
Filed July 6, 1962, Ser. No. 70,825
Term of patent 14 years
(Cl. D12—2)



195,829
PORTABLE FOLDING SHELTER FOR USE AS A CHAPEL OR THE LIKE
Irving D. Paster, 86 9th St., Providence, R.I.
Filed Dec. 11, 1961, Ser. No. 67,855
Term of patent 7 years
(Cl. D13—1)



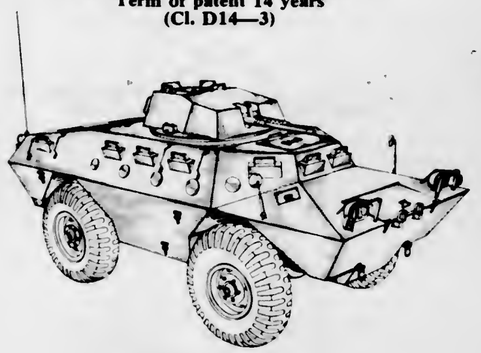
195,830
BUILDING
Pearl L. Schluttig, P.O. Box 7544, Washington, D.C.
Filed Nov. 5, 1962, Ser. No. 72,390
Term of patent 14 years
(Cl. D13—1)



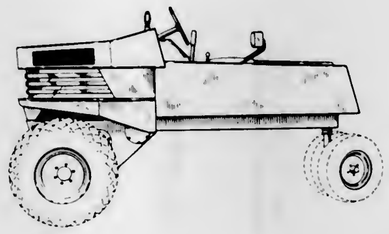
195,831
EXPANSION POST
Morton Waldman, 2550 Kemper Road, Cleveland, Ohio
Filed Apr. 23, 1962, Ser. No. 69,812
Term of patent 3½ years
(Cl. D13—4)



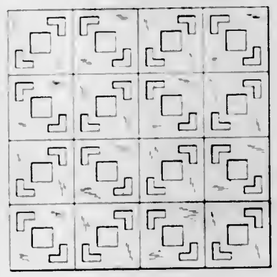
195,832
AMPHIBIOUS ARMORED VEHICLE
Russell E. Bauer, Grosse Pointe Shores, and Gerald M. Larson, St. Clair Shores, Mich., assignors to Cadillac Gage Company, Roseville, Mich.
Filed Sept. 10, 1962, Ser. No. 71,641
Term of patent 14 years
(Cl. D14—3)



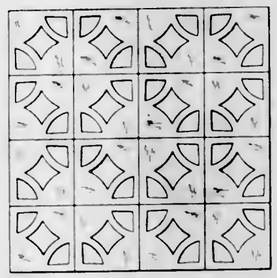
195,833
TRACTOR
Robert L. Shelton, Hesston, and Richard E. Ten Eyck, Wichita, Kans., assignors to Hesston Manufacturing Co., Inc., Hesston, Kans., a corporation of Kansas
Filed Oct. 22, 1962, Ser. No. 72,203
Term of patent 14 years
(Cl. D14—3)



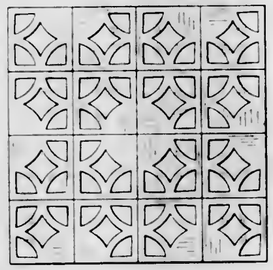
195,834
BUILDING SCREEN WALL
Gordon J. Clauss, 2705 Katherine St., Fort Myers, Fla.
Filed Feb. 11, 1963, Ser. No. 73,513
Term of patent 14 years
(Cl. D18—2)



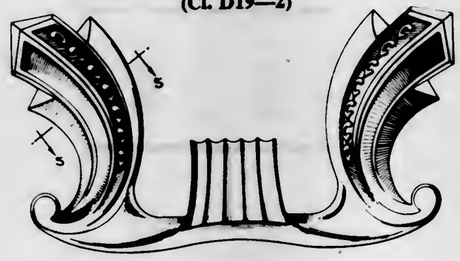
195,835
BUILDING SCREEN WALL
Gordon J. Clauss, 2705 Katherine St., Fort Myers, Fla.
Original design application Oct. 27, 1961, Ser. No. 67,290, now design Patent No. 194,599, dated Feb. 19, 1963. Divided and this application Feb. 11, 1963, Ser. No. 73,533
Term of patent 14 years
(Cl. D18—2)



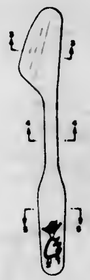
195,836
BUILDING SCREEN WALL
Gordon J. Clauss, 2705 Katherine St., Fort Myers, Fla.
Original design application Oct. 27, 1961, Ser. No. 67,290, now design Patent No. 194,599, dated Feb. 19, 1963. Divided and this application Feb. 11, 1963, Ser. No. 73,623
Term of patent 14 years
(Cl. D18—2)



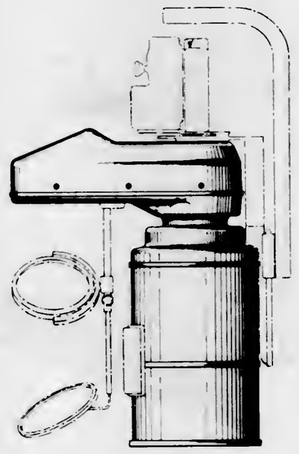
195,837
CASKET HANDLE BRACKET
Herman E. Moore, % Parsons Casket Hardware Company, Belvidere, Ill.
Filed Aug. 20, 1962, Ser. No. 71,352
Term of patent 14 years
(Cl. D19—2)



195,838
KNIFE
Marianne Denzel, Berndorf, Lower Austria, Austria, assignor to Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn-Ranshofen, Upper Austria, Austria, a corporation of Austria
Filed Oct. 23, 1961, Ser. No. 67,201
Claims priority, application Austria Apr. 22, 1961
Term of patent 3½ years
(Cl. D22—3)



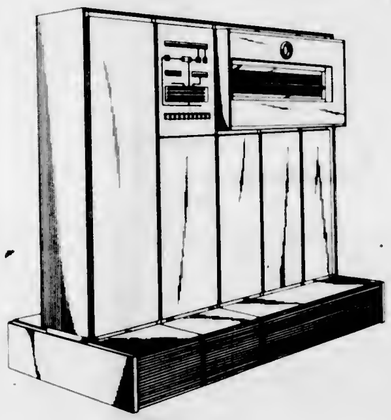
195,839
X-RAY IMAGE INTENSIFIER
Robert A. Arrison, Jr., Wellesley, and Cornelius G. J. M. Van der Velden, Framingham, Mass., assignors, by mesne assignments, to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Apr. 10, 1961, Ser. No. 64,692
Term of patent 14 years
(Cl. D26—5)



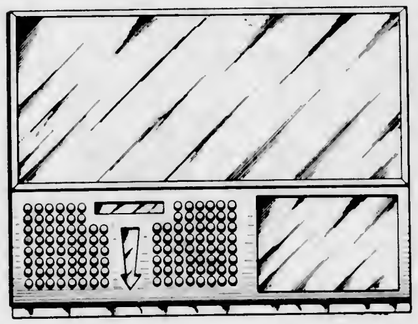
195,840
ELECTRONIC CABINET
Lawrence J. Fay, Elgin, Ill., assignor to Equipto Electronics Corporation, Naperville, Ill., a corporation of Illinois
Filed Aug. 11, 1961, Ser. No. 66,313
Term of patent 7 years
(Cl. D26—5)



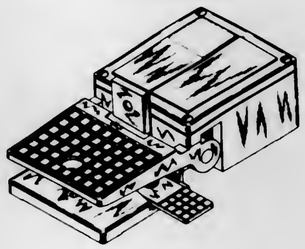
195,841
CABINET FOR ELECTRONIC EQUIPMENT
William F. Dalton, Hopewell Junction, and Arnold M. Davis, Walter F. Kraus, and Clarence F. Graser, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 10, 1961, Ser. No. 67,034
Term of patent 14 years
(Cl. D26—5)



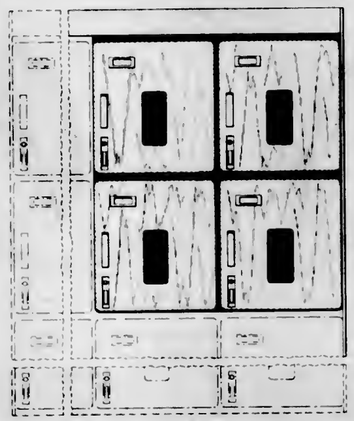
195,842
INFORMATION PRINTER AND DISPENSER
Max M. Tamir, New York, N.Y., assignor to Directomat, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 14, 1963, Ser. No. 73,976
Term of patent 14 years
(Cl. D26—5)



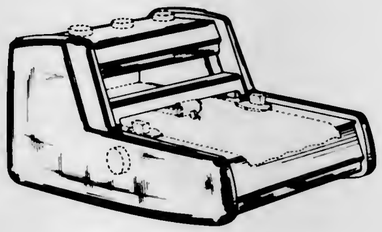
195,843
FOOT OPERATED ELECTRIC SWITCH UNIT
Harry J. Collins, Jr., Bayside, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed July 19, 1961, Ser. No. 65,982
Term of patent 14 years
(Cl. D26—13)



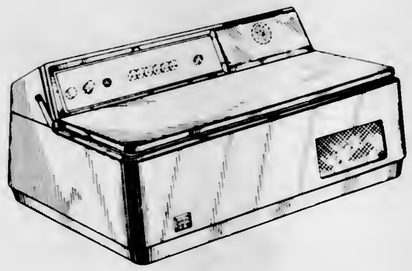
195,844
FACADE OF A COMPARTMENTALIZED HOUSING FOR ELECTRIC DEVICES
Ernest M. Bevilacqua, Springdale, and Andrew T. Kostanecki and Eliot Noyes, New Canaan, Conn., assignors to General Electric Company, a corporation of New York
Filed Nov. 2, 1961, Ser. No. 67,354
Term of patent 14 years
(Cl. D26—13)



195,845
GRAPHIC RECORDER
Edward W. Vopat, Redwood City, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Sept. 13, 1961, Ser. No. 66,706
Term of patent 3½ years
(Cl. D26—14)



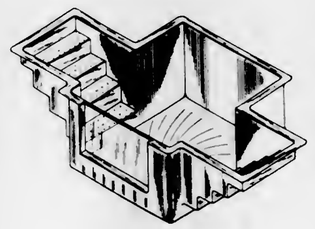
195,846
TELEPHONE ANSWERING AND MESSAGE RECORDING MACHINE
William B. Winterbottom, Palatine, Ill., assignor, by mesne assignments, to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Continuation of design application Ser. No. 62,578, Oct. 24, 1960. This application Sept. 19, 1962, Ser. No. 72,042
Term of patent 14 years
(Cl. D26—14)



195,847
ARTIFICIAL CHRISTMAS TREE
Olga M. Greiser, 502 1st Ave. NE., Aberdeen, S. Dak.
Filed Feb. 17, 1961, Ser. No. 63,980
Term of patent 14 years
(Cl. D29—1)



195,848
BAPTISTRY
Martin F. Wiedemann, Jr., Box 776, Muscatine, Iowa
Filed Mar. 5, 1962, Ser. No. 69,093
Term of patent 14 years
(Cl. D29—23)



195,849
PRISMATIC RELIGIOUS DECORATION
Alex Sanchez, 9020 Diana Drive, El Paso, Tex.
Filed June 13, 1962, Ser. No. 70,529
Term of patent 14 years
(Cl. D29—23)



195,850
AMMUNITION BELT
Leslie Contardi, 4346 N. 19th Place, Milwaukee, Wis.
Filed June 15, 1962, Ser. No. 70,563
Term of patent 14 years
(Cl. D30—1)



195,851
ADJUSTABLE FURNITURE LEG OR SIMILAR ARTICLE
Louis Maslow, Huntsville Road, Dallas, Pa.
Filed Nov. 15, 1961, Ser. No. 67,523
Term of patent 14 years
(Cl. D33—1)



195,852
COMBINED FERRULE AND FOOT FOR FURNITURE
Bruce R. Ogden, Marrickville, near Sydney, New South Wales, Australia, assignor to Claude R. Ogden & Co. Pty. Limited, Marrickville, near Sydney, New South Wales, Australia, a company of New South Wales, Australia
Filed Aug. 20, 1962, Ser. No. 71,375
Claims priority, application Australia Feb. 20, 1962
Term of patent 14 years
(Cl. D33—1)



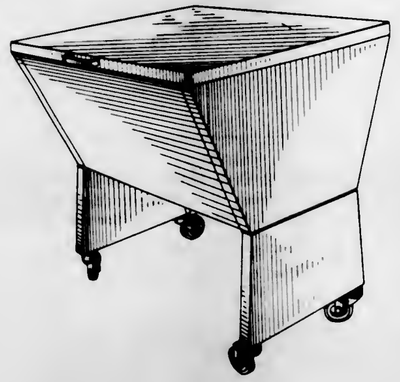
195,853
COMBINED FERRULE AND FOOT FOR FURNITURE
Bruce R. Ogden, Marrickville, near Sydney, New South Wales, Australia, assignor to Claude R. Ogden & Co. Pty. Limited, Marrickville, near Sydney, New South Wales, Australia, a company of New South Wales, Australia
Filed Aug. 20, 1962, Ser. No. 71,376
Claims priority, application Australia Feb. 20, 1962
Term of patent 14 years
(Cl. D33—1)



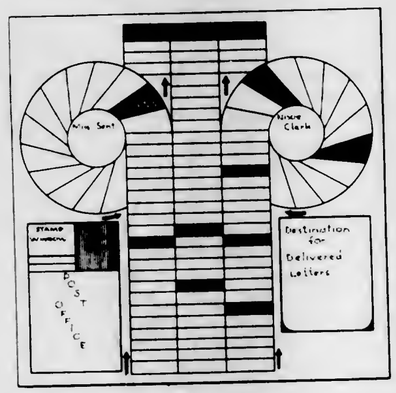
195,854
TABLE LEG
Richard Schwarz, Livingston, N.J., assignor to Bro-Dart Industries, Inc., Newark, N.J., a corporation of New York
Filed Oct. 10, 1962, Ser. No. 72,062
Term of patent 14 years
(Cl. D33—14)



195,855
RECORD FILING CABINET
Leonard S. Schmitz, Crozet, Va., assignor to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware
Filed Sept. 1, 1961, Ser. No. 66,588
Term of patent 14 years
(Cl. D33—19)



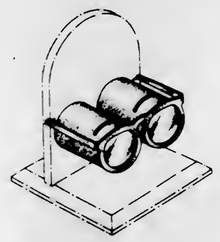
195,856
GAME BOARD
Prosper J. Keagle, 1040 NE. 134th St., Miami, Fla.
Filed Aug. 31, 1962, Ser. No. 71,515
Term of patent 3½ years
(Cl. D34—5)



195,857
GAME PIECE
Alan H. Ferber, 2264 La Granada, Hollywood, Calif.
Filed Feb. 5, 1963, Ser. No. 73,446
Term of patent 14 years
(Cl. D34—5)



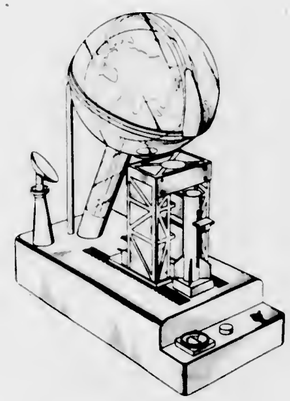
195,858
COIN BANK
Marvin Hoffman, 22900 Recreation, St. Clair Shores, Mich.
Filed June 18, 1962, Ser. No. 70,588
Term of patent 14 years
(Cl. D34—11)



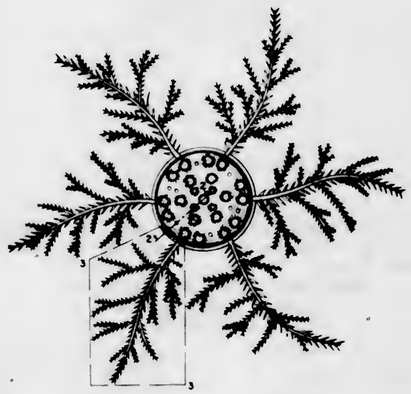
195,859
TOY TRAIN
Robert G. Johnson, 22109 110th Ave. W., Edmonds, Wash., and Truxton Bee Troxell, 108 N. 155th St., Seattle, Wash.
Filed Aug. 1, 1961, Ser. No. 66,153
Term of patent 14 years
(Cl. D34—15)



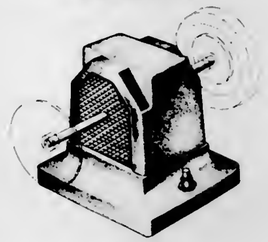
195,860
SATELLITE LAUNCHING TOY
Dean R. Thorson, Broderick, Calif., assignor of one-fourth to Ambrose M. Bertsch, and one-fourth to Everett W. Sharp, both of Broderick, Calif.
Filed Feb. 18, 1963, Ser. No. 73,598
Term of patent 14 years
(Cl. D34—15)



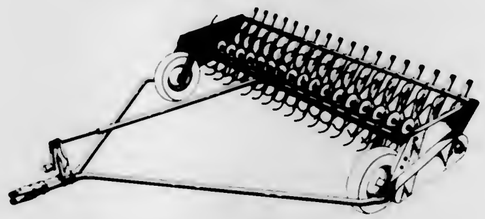
195,861
FLOWER HOLDER
George M. Frybergh, New York, N.Y., assignor to Prime Premiums, Inc., New York, N.Y., a corporation of New York
Filed Feb. 23, 1962, Ser. No. 68,937
Term of patent 7 years
(Cl. D35—3)



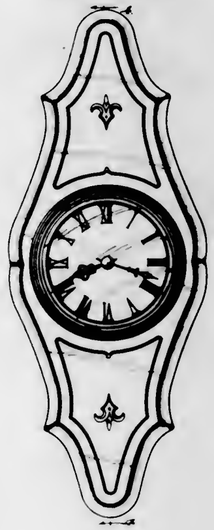
195,862
COMBINATION GRINDING AND POLISHING MACHINE
John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Feb. 23, 1962, Ser. No. 68,951
Term of patent 14 years
(Cl. D37—1)



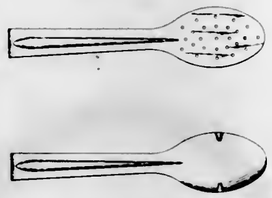
195,863
SWATH FLUFFER FOR HAY AND LIKE CROPS
Arie E. Breed and Blaine W. Gustafson, Ottumwa, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Mar. 4, 1963, Ser. No. 73,811
Term of patent 14 years
(Cl. D40—1)



195,864
CLOCK
Gordon Florian, Fairfield, Conn., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1963, Ser. No. 73,370
Term of patent 14 years
(Cl. D42—7)



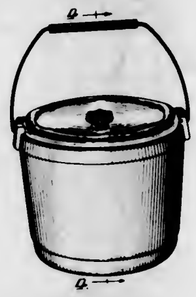
195,865
TEA BAG TONG
Arvid M. Sundquist, 617 N. State St., Elgin, Ill.
Filed Feb. 26, 1963, Ser. No. 73,721
Term of patent 7 years
(Cl. D44—4)



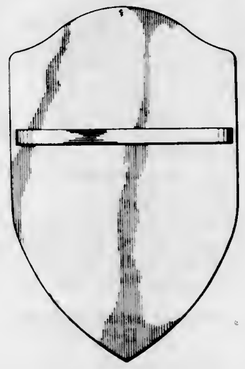
195,866
PLATTER OR SIMILAR ARTICLE
Toni Olga Muench, East Liverpool, Ohio, assignor to Fisher, Bruce & Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 3, 1963, Ser. No. 74,272
Term of patent 7 years
(Cl. D44—10)



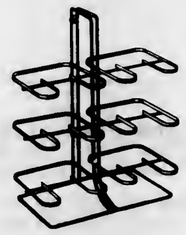
195,867
ICE BUCKET
William S. Miller, Ottawa, James O. Plankenhorn, Utica, and Frank Borkowsky, Ottawa, Ill., assignors to The J. E. Porter Corporation, Chicago, Ill., a corporation of Delaware
Filed May 1, 1961, Ser. No. 64,982
Term of patent 14 years
(Cl. D44—15)



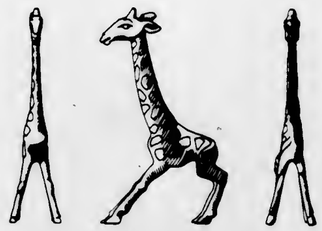
195,868
CUTLERY CABINET OR THE LIKE
James G. Hicks, 2230 Hobart St., Indianapolis, Ind.
Filed Dec. 28, 1962, Ser. No. 72,975
Term of patent 14 years
(Cl. D44—29)



195,869
CANISTER STAND
Sidney Silverstein, Flushing, and Harry Schwartz, Brooklyn, N.Y., assignors to Lincoln Metal Products Corporation, Brooklyn, N.Y., a corporation
Filed Feb. 12, 1963, Ser. No. 73,521
Term of patent 14 years
(Cl. D44—29)



195,870
HOLDER FOR COCKTAIL OLIVES AND THE LIKE
James H. Ogg, North Hollywood, Calif., assignor to Zoo-Piks, North Hollywood, Calif., a partnership
Filed Apr. 9, 1963, Ser. No. 74,361
Term of patent 14 years
(Cl. D44—29)



195,871
SET OF ORNAMENTAL INITIALS FOR JEWELRY
Felix P. Kinsley, 407 N. 8th St., St. Louis, Mo.
Continuation of design application Ser. No. 62,316, Sept. 30, 1960. This application June 29, 1961, Ser. No. 65,762
Term of patent 14 years
(Cl. D45—1)



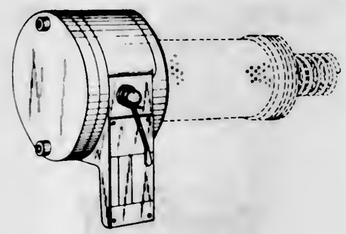
195,872
LINK CHAIN FOR A BRACELET OR THE LIKE
Emil Rodriguez, New York, N.Y., assignor to Jacoby-Bender, Inc., Woodside, N.Y., a corporation of New York
Filed Jan. 29, 1962, Ser. No. 68,561
Term of patent 7 years
(Cl. D45—4)



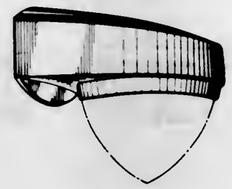
195,873
JEWELED NECKLACE
Marianne Ostier, 40 Central Park S., New York, N.Y.
Filed Mar. 28, 1962, Ser. No. 69,473
Term of patent 14 years
(Cl. D45—16)



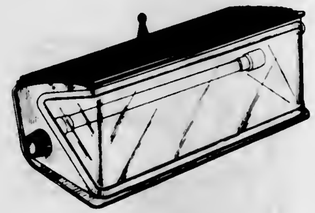
195,874
FLUID FILTER OR THE LIKE
Nils O. Rosaen, Detroit, Mich., assignor to The Rosaen Filter Company, Hazel Park, Mich., a corporation of Michigan
Filed Mar. 13, 1961, Ser. No. 64,243
Term of patent 14 years
(Cl. D46—1)



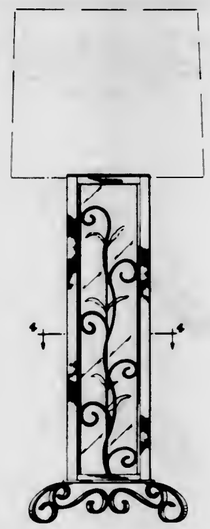
195,875
LIGHTING FIXTURE
Dominic A. Saporito, Birmingham, and Norbert T. Kuypers, Warren, Mich., assignors to Wakefield Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 29, 1962, Ser. No. 71,485
Term of patent 14 years
(Cl. D48—4)



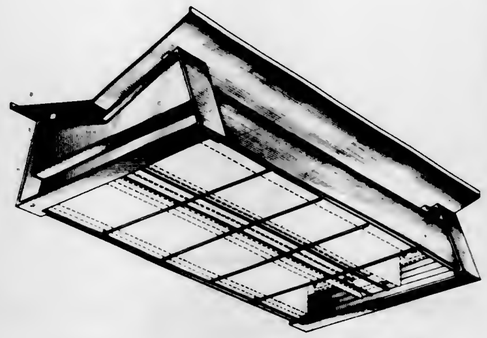
195,876
FLOODLIGHT
Leonard Atkin, Springfield, and Richard Sangiamo, Roselle Park, N.J., assignors, by mesne assignments, to Stonco Electric Products Company, Kenilworth, N.J., a corporation of New Jersey
Filed Apr. 4, 1962, Ser. No. 69,680
Term of patent 14 years
(D48—20)



195,877
LAMP BASE OR SIMILAR ARTICLE
Alice Welpley, Leland C. Welpley, and Bruce W. Welpley, all of 1310 Whitnall Highway, Burbank, Calif.
Filed June 21, 1962, Ser. No. 70,639
Term of patent 14 years
(Cl. D48—20)



195,878
COMBINED LIGHTING AND HEATING FIXTURE
Edward C. Zimmerman, 2228 Central St., Evanston, Ill.
Filed Dec. 26, 1962, Ser. No. 72,942
Term of patent 14 years
(Cl. D48—23)



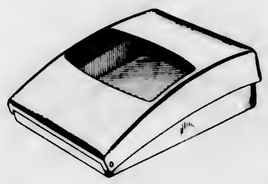
195,879
LATCH HANDLE OR SIMILAR ARTICLE
Peter P. Klepa, Los Angeles, Calif., assignor to Electronic Enclosures, Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 25, 1962, Ser. No. 72,264
Term of patent 14 years
(Cl. D50—5)



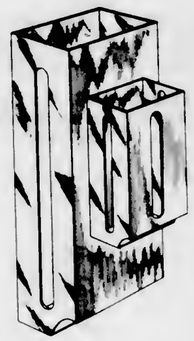
195,880
ROUTE INDICATOR
John E. Gallman, 3927 Sheridan Drive, Charlotte, N.C.
Filed July 12, 1962, Ser. No. 70,904
Term of patent 3½ years
(Cl. D52—1)



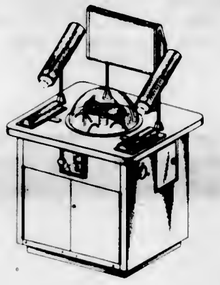
195,881
NAPKIN DISPENSER
Henry Albert Holzwarth, Bayside, N.Y., Charles Lewis Metsler, Alpine, N.J., and John Duncan Wark, Freeport, N.Y., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 8, 1961, Ser. No. 67,843
Term of patent 14 years
(Cl. D52—2)



195,882
COMBINED CIGARETTE PACKAGE AND MATCH BOOK DISPENSER
William H. Penney, 15 Putnam St., Revere, Mass.
Filed Feb. 1, 1962, Ser. No. 68,608
Term of patent 14 years
(Cl. D52—2)



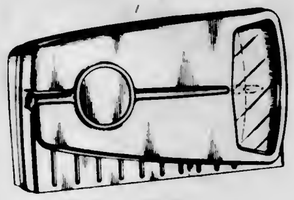
195,883
PEANUT BUTTER DISPENSER
Saul R. Rosenberg, Los Angeles, Calif., assignor to Food Corporation of America, Los Angeles, Calif., a corporation of California
Filed Oct. 3, 1961, Ser. No. 66,955
Term of patent 3½ years
(Cl. D52—3)



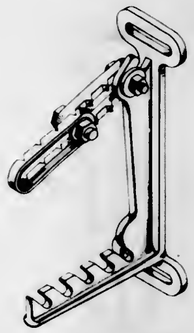
195,884
FLIGHT CONTROLLER PANEL
Robert E. Clark, Minneapolis, and Earl R. Stenagaard, Stillwater, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 8, 1961, Ser. No. 66,259
Term of patent 14 years
(Cl. D52—6)



195,885
BALANCE INDICATOR FOR A WEIGHING MACHINE OR THE LIKE
Jean P. Marzendorfer, Rutland, Vt., assignor to Howe Richardson Scale Company, a corporation of Delaware
Filed May 16, 1960, Ser. No. 60,608
Term of patent 14 years
(Cl. D52—10)



195,886
ADJUSTABLE MOUNTING BRACKET FOR A WALL-MOUNTED HEATER, AIR CONDITIONER, OR THE LIKE
John Maynard Morrison, Carss Park, near Sydney, New South Wales, Australia, assignor to Centriflo Pty. Limited, Brighton-le-Sands, near Sydney, New South Wales, Australia
Filed Dec. 13, 1961, Ser. No. 67,900
Claims priority, application Australia Aug. 3, 1961
Term of patent 14 years
(Cl. D54—1)



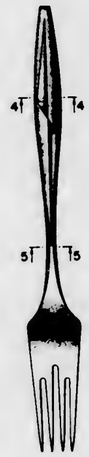
195,887
SPOON
Marianne Denzel, Berndorf, Lower Austria, Austria, assignor to Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn-Ranshofen, Upper Austria, Austria, a corporation of Austria
Filed Oct. 23, 1961, Ser. No. 67,202
Claims priority, application Austria Apr. 22, 1961
Term of patent 3½ years
(Cl. D54—12)



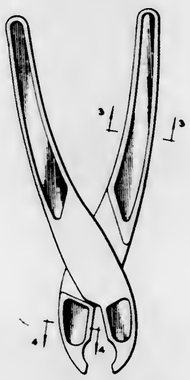
195,888
FORK
Marianne Denzel, Berndorf, Lower Austria, Austria, assignor to Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn-Ranshofen, Upper Austria, Austria, a corporation of Austria
Filed Oct. 23, 1961, Ser. No. 67,203
Claims priority, application Austria Apr. 22, 1961
Term of patent 3½ years
(Cl. D54—12)



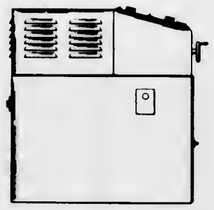
195,889
FORK OR SIMILAR ARTICLE OF FLATWARE
Milton Gonshorek, Meriden, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut
Filed Jan. 16, 1963, Ser. No. 73,191
Term of patent 14 years
(Cl. D54—12)



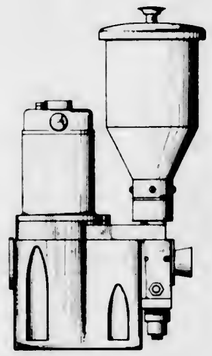
195,890
COMBINED ELECTRICAL FUSE PULLER AND INSERTER
Douglas E. Maiden, 1206 78th St., Newport News, Va., and Wayland H. Dickerman, 5241 W. Fond Du Lac Ave., Milwaukee, Wis.
Filed May 11, 1962, Ser. No. 70,082
Term of patent 14 years
(Cl. D54—13)



195,891
MACHINE FOR FLAME-HARDENING TRACTOR ROLLER FLANGES
Clady J. Royer, 2645 NW. 26th St., Oklahoma City, Okla.
Filed Mar. 23, 1962, Ser. No. 69,397
Term of patent 14 years
(Cl. D55—1)



195,892
POWDER FEEDER FOR A FLAME SPRAY GUN
Walter A. Siebein, Smithtown, N.Y., assignor to Metco, Inc., Long Island, N.Y., a corporation of New Jersey
Filed Mar. 28, 1962, Ser. No. 69,463
Term of patent 14 years
(Cl. D55—1)



195,893
SPECTACLE FRAME
Edith J. Pitts, Attleboro, Mass., assignor to Universal Optical Company, Inc., Providence, R.I., a corporation of Rhode Island
Filed July 25, 1961, Ser. No. 66,056
Term of patent 14 years
(Cl. D57—1)



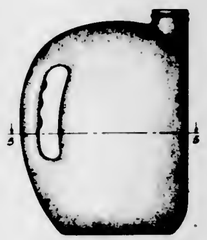
195,894
SUNGLASS FRAME OR THE LIKE
Albert C. Petitto, Hudson, and Vitalino Marchi, Concord, Mass., assignors to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Filed Dec. 15, 1961, Ser. No. 67,918
Term of patent 14 years
(Cl. D57—1)



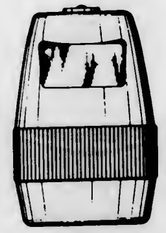
195,895
TRANSPARENT CASE FOR A FLAG OR THE LIKE
Wilmer E. Ehle, 609 E. Main St., Stoughton, Wis.
Filed May 14, 1962, Ser. No. 70,114
Term of patent 14 years
(Cl. D58—2)



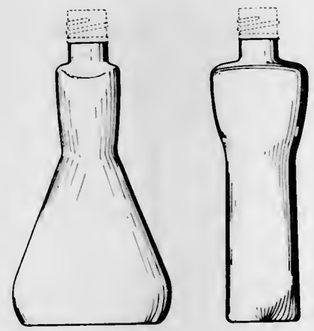
195,896
JUG
Leo J. Garvey, 301 W. Pasadena, Phoenix, Ariz.
Filed Apr. 23, 1962, Ser. No. 69,810
Term of patent 14 years
(Cl. D58—5)



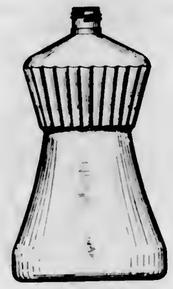
195,897
BOTTLE
Donald M. Kitterman, Kansas City, Kans., assignor, by mesne assignments, to Pacific Industries, Inc., San Francisco, Calif., a corporation of California
Filed Oct. 8, 1962, Ser. No. 72,019
Term of patent 14 years
(Cl. D58—6)



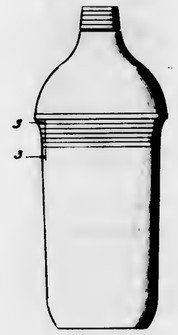
195,898
BOTTLE
Bruce L. Roberts, Rossford, Ohio, assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Nov. 14, 1962, Ser. No. 72,494
Term of patent 14 years
(Cl. D58—6)



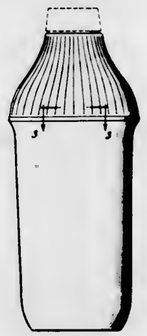
195,899
BOTTLE OR SIMILAR ARTICLE
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Feb. 5, 1962, Ser. No. 68,636
Term of patent 14 years
(Cl. D58—8)



195,900
BOTTLE OR SIMILAR ARTICLE
Alfred D. Sterges, Los Angeles, Calif., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Aug. 20, 1962, Ser. No. 71,343
Term of patent 14 years
(Cl. D58—8)



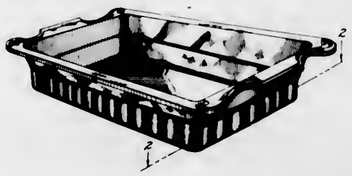
195,901
BOTTLE OR SIMILAR ARTICLE
Alfred D. Sterges, Los Angeles, Calif., assignor to Purex Corporation, Ltd., Lakewood, Calif., a corporation of California
Filed Aug. 20, 1962, Ser. No. 71,344
Term of patent 14 years
(Cl. D58—8)



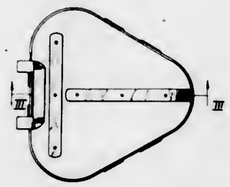
195,902
BOTTLE
Albert J. Kocab, Fort Lauderdale, Fla., assignor to Mai Kai, Inc., Fort Lauderdale, Fla., a corporation of Florida
Filed Sept. 24, 1962, Ser. No. 71,821
Term of patent 14 years
(Cl. D58—9)

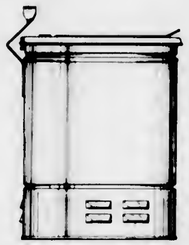


195,903
ICE CREAM CARTON HOLDER
Robert E. Bogart, Toledo, Ohio, assignor, by mesne assignments, to Roll Dippers, Inc., Maumee, Ohio, a corporation of Ohio
Filed June 19, 1961, Ser. No. 65,639
Term of patent 14 years
(Cl. D58—12)



195,904
WASTE CAN
Adj F. Fervier, Wellsburg, W. Va., assignor to Eagle Manufacturing Company, Wellsburg, W. Va., a corporation of West Virginia
Filed June 5, 1961, Ser. No. 65,447
Term of patent 14 years
(Cl. D58—17)





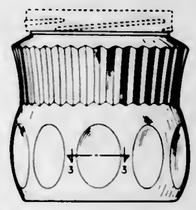
195,905
PACKAGING CONTAINER FOR FOOD OR THE LIKE
Herbert Jourdan Wanderer, 606 Cedar Ave., Elmhurst, Ill.,
Filed Feb. 20, 1962, Ser. No. 68,900
Term of patent 14 years
(Cl. D58—17)



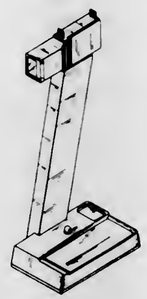
195,906
COMBINED ADVERTISING DISPLAY AND TRASH RECEPTACLE
Alva J. Hickerson, 354 Petroleum Bldg., Denver, Colo.
Filed June 11, 1962, Ser. No. 70,493
Term of patent 14 years
(Cl. D58—17)



195,907
JAR
Bruce L. Roberts, Rossford, Ohio, assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Oct. 25, 1962, Ser. No. 72,256
Term of patent 14 years
(Cl. D58—25)



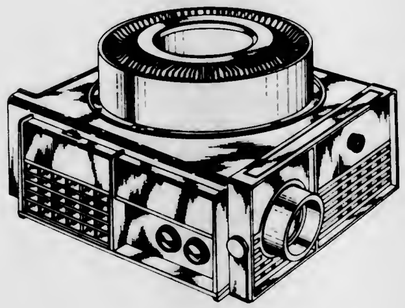
195,908
CAMERA FOR USE WITH CHECK CASHING OPERATION
David Sigmond, 13—11 Brightwater Ave., Brooklyn, N.Y.
Filed Nov. 24, 1961, Ser. No. 67,683
Term of patent 14 years
(Cl. D61—1)



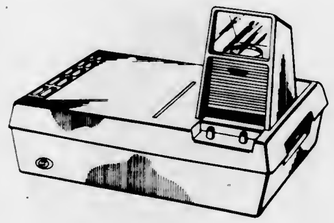
195,909
REEL COVERING RING OR SIMILAR ARTICLE
Eugene Martinez, Irvington, and Marvin Kapilow, Rye, N. Y., assignors, by direct and mesne assignments, to Reelco Inc., Irvington, N.Y., a corporation of New York
Filed Dec. 18, 1961, Ser. No. 67,951
Term of patent 14 years
(Cl. D61—1)



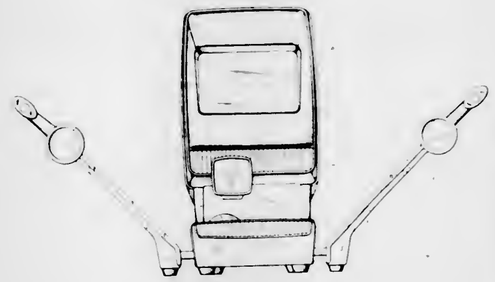
195,910
COMBINED SLIDE PROJECTOR AND SLIDE TRAY
Richard J. Olson, Lima, and Frank A. Zagara, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.N.Y., a corporation of New Jersey
Filed Dec. 22, 1961, Ser. No. 68,028
Term of patent 14 years
(Cl. D61—1)



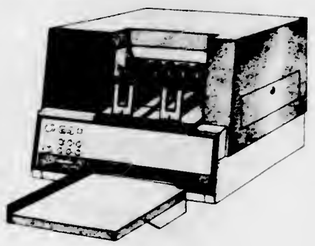
195,911
OVERHEAD PROJECTOR
Joel W. Bravo, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 22, 1962, Ser. No. 69,383
Term of patent 14 years
(Cl. D61—1)



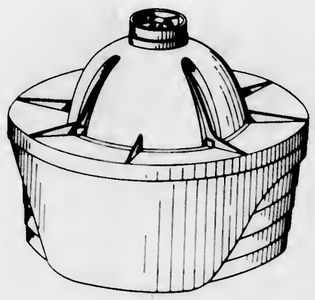
195,912
MOTION PICTURE FILM EDITOR OR SIMILAR ARTICLE
Eugene Martinez, Irvington, N.Y., assignor of one-third to Marvin Kapilow, Croton-on-Hudson, N.Y., and one-third to Robert A. Reibel, Croton-on-Hudson, N.Y.
Filed Apr. 24, 1962, Ser. No. 69,829
Term of patent 14 years
(Cl. D61—1)



195,913
ROTARY MICROFILM CAMERA
Carl W. Sundberg, Bloomfield Hills, and Montgomery Ferar, Huntington Woods, Mich., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed July 24, 1962, Ser. No. 71,036
Term of patent 14 years
(Cl. D61—1)



195,914
HUMIDIFIER
Eugene R. Luedtke, Reedsburg, Wis., assignor to Hankscraft Company, Reedsburg, Wis., a corporation of Wisconsin
Filed Apr. 16, 1962, Ser. No. 69,730
Term of patent 14 years
(Cl. D62—2)



195,915
VENTILATOR COVER OR SIMILAR ARTICLE
Kenneth E. Moore, Pasadena, Calif., assignor to Williams-Bermuda Corporation, Pasadena, Calif., a corporation of California
Filed Nov. 21, 1960, Ser. No. 63,077
Term of patent 14 years
(Cl. D62—3)



195,916
CALCULATOR
Carl W. Sundberg, Bloomfield Hills, and Montgomery Ferar, Huntington Woods, Mich., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed July 17, 1962, Ser. No. 70,962
Term of patent 14 years
(Cl. D64—11)



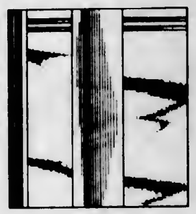
195,917
TYPEWRITER
Carl W. Sundberg, Bloomfield Hills, and Montgomery Ferar, Huntington Woods, Mich., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Continuation of design applications Ser. No. 65,240, May 19, 1961 and Ser. No. 65,249, May 19, 1961. This application Dec. 3, 1962, Ser. No. 72,740
Term of patent 14 years
(Cl. D64—11)



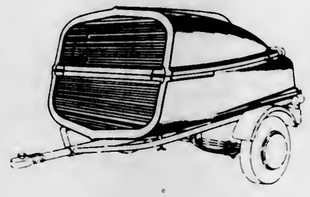
195,918
DOOR OPERATING FOOT PEDAL
George W. Melcher, Bally, Pa., assignor to Bally Case and Cooler, Inc., Bally, Pa.
Filed Dec. 14, 1962, Ser. No. 72,865
Term of patent 14 years
(Cl. D67—3)



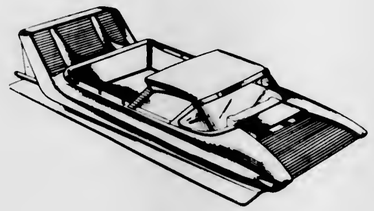
195,919
ROOFING TILE
Arthur Harold Harris, East Grinstead, Sussex, and Alan Harper Watson, Putney, London, England, assignors to Redland Tiles Limited, Surrey, England, a British company
Filed May 7, 1962, Ser. No. 70,063
Term of patent 14 years
(Cl. D68—1)



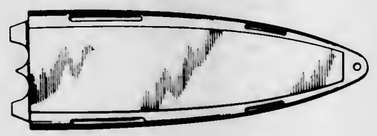
195,920
COMBINATION LUGGAGE CARRIER AND FOLDING BOAT
Charles L. Rough, 3511 Burritt Way, La Cresenta, Calif.
Filed Oct. 4, 1960, Ser. No. 62,375
Term of patent 14 years
(Cl. D71—1)



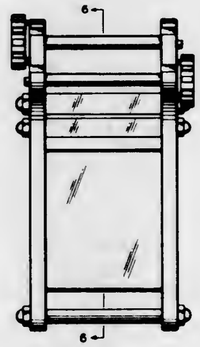
195,921
AIR CUSHION BOAT
Harold Branch, Laurel, and Richard H. Horton, Severna Park, Md., assignors, by mesne assignments, to National Research Associates, Inc., Laurel, Md., a corporation of Maryland
Filed Nov. 28, 1961, Ser. No. 67,728
Term of patent 14 years
(Cl. D71—1)



195,922
WATER SLED
Charles F. Boucher, 1761 12th St., Santa Monica, Calif.
Filed Feb. 26, 1962, Ser. No. 68,973
Term of patent 14 years
(Cl. D71—1)



195,923
MEMO PAD HOLDER
George J. Puent, 9415 Reavis Barracks Road, Affton, Mo.
Filed Apr. 9, 1962, Ser. No. 69,641
Term of patent 14 years
(Cl. D74—1)



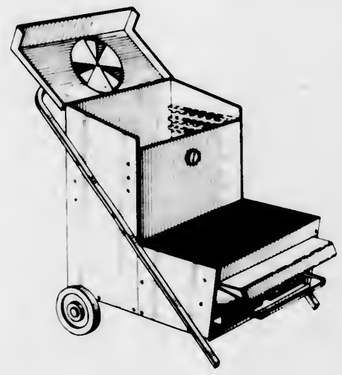
195,924
BALL-POINT PEN OR SIMILAR ARTICLE
Robert Perlmutter, 147—29 77th Road, Kew Gardens Hills, N.Y.
Filed Dec. 7, 1961, Ser. No. 67,831
Term of patent 14 years
(Cl. D74—17)



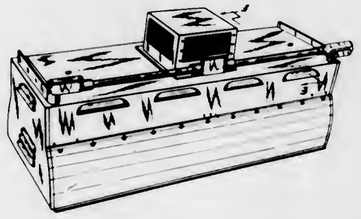
195,925
DISPLAY STAND
William E. Stumpf, Ross Township, Allegheny County, Pa., assignor to The Alan I W Frank Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 14, 1962, Ser. No. 71,700
Term of patent 14 years
(Cl. D80—11)



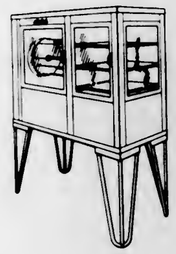
195,926
COMBINED OVEN AND GRILL FOR OUTDOOR USE
Edward J. Petrick, 1104 Aldine, Park Ridge, Ill.
Filed Apr. 4, 1961, Ser. No. 64,611
Term of patent 14 years
(Cl. D81—10)



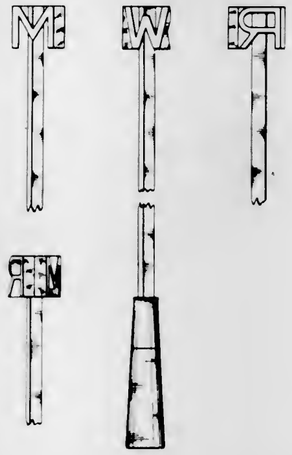
195,927
SPACE HEATER
John J. Fannon, Jr., Grosse Pointe Park, and Charles W. Sawyer, Ann Arbor, Mich., assignors to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Dec. 29, 1961, Ser. No. 68,118
Term of patent 7 years
(Cl. D81—10)



195,928
COMBINED ROTISSERIE OVEN AND FOOD WARMING CABINET
Robert G. Wilson, 643 E. Faris Foad, Greeneville, S.C.
Filed Apr. 2, 1962, Ser. No. 69,527
Term of patent 14 years
(Cl. D81—10)



195,929
BRANDING IRON
Raphael Lyman, Nursery St., Norwalk, Conn.
Filed Dec. 27, 1962, Ser. No. 72,969
Term of patent 14 years
(Cl. D81—10)



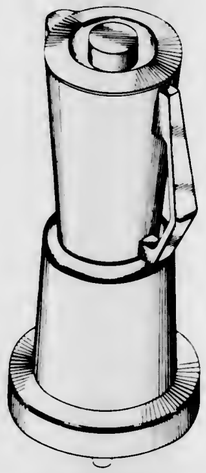
195,930
ADULT URINE SPECIMEN COLLECTOR
Edward J. Hill, Bloomfield Hills, Mich., assignor of one-half to E. Doris Ansteth, Birmingham, Mich.
Filed May 11, 1962, Ser. No. 70,095
Term of patent 14 years
(Cl. D83—1)



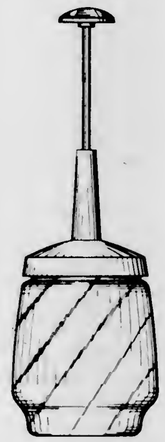
195,931
SURGICAL FORCEPS FOR ARTERIES, VEINS, AND THE LIKE
Merrill S. Chernov, 71 Farragut Ave., Providence, R.I.
Filed Mar. 16, 1962, Ser. No. 69,306
Term of patent 14 years
(Cl. D83—12)



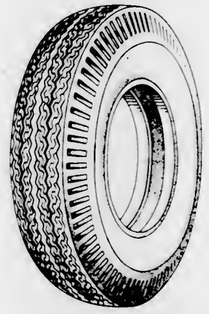
195,932
FOOD AND DRINK BLENDER
George H. Frost, Ashland, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Dec. 27, 1962, Ser. No. 72,970
Term of patent 14 years
(Cl. D89—1)



195,933
FOOD CHOPPER FOR ONIONS OR THE LIKE
Efrem M. Ostrowsky, Highland Park, Ill., assignor to Nibot Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 16, 1963, Ser. No. 73,195
Term of patent 14 years
(Cl. D89—1)



195,934
VEHICLE TIRE
Charles G. Wyman, Devon, and William B. Dunlap, Jr., Blue Bell, Pa., assignors to Lee Rubber & Tire Corporation, Conshohocken, Pa., a corporation of New York
Filed Sept. 10, 1962, Ser. No. 71,634
Term of patent 14 years
(Cl. D90—20)



195,935
WATER CONDITIONER
Donald J. Dicktel, Brookfield, Wis., assignor to Bruner Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 18, 1963, Ser. No. 73,591
Term of patent 14 years
(Cl. D91—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 6TH DAY OF AUGUST, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Cole, Norman H., Sr. Ilex (holly) plant. 2,272, 8–6–63, Cl. 65.

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Frijimoto, Samuel R.: *See*—
Kubo, George. 2,271.

Jackson & Perkins Co.: *See*—
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American Can Co.: *See*—
Holzwarth, Henry A., Metsler, and Wark. 195,881.

American Optical Co.: *See*—
Armbruster, John T. 195,862.

Amerock Corp.: *See*—
Clayton La Verne E. 195,823.

Ansteth, Doris E.: *See*—
Hill, Edward J. 195,930.

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Briese, John E. Novelty hat. 195,813, 8–6–63, Cl. D3—13.

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Clauss, Gordon J. Building screen wall. 195,835, 8–6–63, Cl. D18—2.

Clauss, Gordon J. Building screen wall. 195,836, 8–6–63, Cl. D18—2.

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Royer, Clady J. Machine for flame-hardening tractor roller flanges. 195,891, 8–6–63, Cl. D55—1.

Rush, Roy C. Vacuum cleaner for parking lots or the like. 195,821, 8–6–63, Cl. D9—2.

Sanchez, Alex. Prismatic religious decoration. 195,849, 8–6–63, Cl. D29—23.

Sangiamo, Richard: *See*—
Atkin, Leonard, and Sangiamo. 195,876.

Saporito, Dominic A., and N. T. Kuypers, to Wakefield Corp. Lighting fixture. 195,875, 8–6–63, Cl. D48—4.

Sawyer, Charles W.: *See*—
Fannon, John J., Jr., and Sawyer. 195,927.

Schluttig, Pearl L. Building. 195,830, 8–6–63, Cl. D13—1.

Schmitz, Leonard S., to Acme Visible Records, Inc. Record filing cabinet. 195,855, 8–6–63, Cl. D33—19.

Schwartz, Harry: *See*—
Silverstein, Sidney, and Schwartz. 195,869.

Schwarz, Richard, to Bro-Dart Industries, Inc. Table leg. 195,854, 8–6–63, Cl. D33—14.

Security Aluminum Corp.: *See*—
Riegelman, Harry M. 195,825.

Sharp, Everett W.: *See*—
Thorson, Dean R. 195,860.

Shelton, Robert L., and R. E. Ten Eyck, to Hesston Mfg. Co., Inc. Tractor. 195,833, 8–6–63, Cl. D14—3.

Siebein, Walter A., to Metco, Inc. Powder feeder for a flame spray gun. 195,892, 8–6–63, Cl. D55—1.

Sigmond, David. Camera for use with check cashing operation. 195,908, 8–6–63, Cl. D61—1.

Silverstein, Sidney, and H. Schwartz, to Lincoln Metal Products Corp. Canister stand. 195,869, 8–6–63, Cl. D44—29.

Sperry Rand Corp.: *See*—
Sundberg, Carl W., and Ferar. 195,913.
Sundberg, Carl W., and Ferar. 195,916.
Sundberg, Carl W., and Ferar. 195,917.

Stapleton, Mathew H. Cattle feeder. 195,828, 8–6–63, Cl. D12—2.

Stensgaard, Earl R.: *See*—
Clark, Robert E., and Stensgaard. 195,884.

Sterges, Alfred D., to Purex Corp., Ltd. Bottle or similar article. 195,900. 8–6–63, Cl. D58—8.

Sterges, Alfred D., to Purex Corp., Ltd. Bottle or similar article. 195,901. 8–6–63, Cl. D58—8.

Stonco Electric Products Co.: *See*—
Atkin, Leonard, and Sangiamo. 195,876.

Stumpf, William E., to The Alan I W Frank Corp. Display stand. 195,925. 8–6–63, Cl. D80—11.

Sunbeam Corp.: *See*—
Florian, Gordon. 195,864.

Sundberg, Carl W., and M. Ferar, to Sperry Rand Corp. Rotary microfilm camera. 195,913, 8–6–63, Cl. D61—1.

Sundberg, Carl W., and M. Ferar, to Sperry Rand Corp. Calculator. 195,916, 8–6–63, Cl. D64—11.

Sundberg, Carl W., and M. Ferar, to Sperry Rand Corp. Typewriter. 195,917, 8–6–63, Cl. D64—11.

Sundquist, Arvid M. Tea bag tong. 195,865, 8–6–63, Cl. D44—4.

Tamir, Max M., to Directomat, Inc. Information printer and dispenser. 195,842, 8–6–63, Cl. D26—5.

Ten Eyck, Richard E.: *See*—
Shelton, Robert L., and Ten Eyck. 195,833.

Thorson, Dean R., ¼ to A. M. Bertsch and ¼ to E. W. Sharp. Satellite launching toy. 195,860, 8–6–63, Cl. D34—15.

Tronche, Roger, to Baudou S.A.R.L. Safety shoe. 195,817, 8–6–63, Cl. D7—7.

Troxell, Truxton B.: *See*—
Johnson, Robert G., and Troxell. 195,859.

Universal Optical Co., Inc.: *See*—
Pitts, Edith J. 195,893.

Van der Velden, Cornelius G. J. M.: *See*—
Arrison, Robert A., Jr., and van der Velden. 195,839.

Varian Associates: *See*—
Vopat, Edward W. 195,845.

Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft: *See*—
Denzel, Marianne. 195 838.
Denzel, Marianne. 195,887.
Denzel, Marianne. 195,888.

Vopat, Edward W., to Varian Associates. Graphic recorder. 195,845, 8–6–63, Cl. D26—14.

Wakefield Corp.: *See*—
Saporito, Dominic A., and Kuypers. 195,875.

Waldman, Morton. Expansion post. 195,831, 8–6–63, Cl. D13—4.

Wanderer, Herbert J. Packaging container for food or the like. 195,905, 8–6–63, Cl. D58—17.

Wark, John D.: *See*—
Holzwarth, Henry A., Metsler, and Wark. 195,881.

Watson, Alan H.: *See*—
Harris, Arthur H., and Watson. 195,919.

Welpley, Alice, L. C., and B. W. Lamp base or similar article. 195,877, 8–6–63, Cl. D48—20.

Welpley, Bruce W.: *See*—
Welpley Alice, L. C., and B. W. 195,877.

Welpley, Leland C.: *See*—
Welpley, Alice, L. C., and B. W. 195,877.

Westinghouse Electric Corp.: *See*—
Frost, George H. 195,932.

Wiedemann, Martin F., Jr. Baptistry. 195,848, 8–6–63, Cl. D29—23.

Williams-Bermuda Corp.: *See*—
Moore, Kenneth E. 195,915.

Williams, Walter O. Combination detergent dispenser and cleaning brush. 195,820, 8–6–63, Cl. D9—2.

Wilson, Robert G. Combined rotisserie oven and food warming cabinet. 195,928. 8–6–63, Cl. D81—10.

Winterbottom, William B., to Automatic Electric Laboratories Inc. Telephone answering and message recording machine 195,846. 8–6–63, Cl. D26—14.

Wyman, Charles G., and W. B. Dunlap, Jr., to Lee Rubber & Tire Corp. Vehicle tire. 195,934, 8–6–63, Cl. D90—20.

Zagara, Frank A.: *See*—
Olson, Richard J., and Zagara. 195,910.

Zimmerman, Edward C. Combined lighting and heating fixture. 195,878, 8–6–63, Cl. D48—23.

Zoo-Piks: *See*—
Ogg, James H. 195,870.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 6TH DAY OF AUGUST, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ABG-Werke Gesellschaft mit beschrankter Haftung, Firma: *See*—
Leister, Gerhard. 3,099,942.

ACF Industries, Inc.: *See*—
Ott, William F., Krein, Eickmann, and Carlson. 3,100,-236.

Abbott, Frank R. Underwater loudspeaker. 3,100,291, 8–6–63, Cl. 340—10.

Abegg & Reinhold Co.: *See*—
Spiri, Willy H. 3,099,917.

Abraham, Bernard M., to United States of America, Atomic Energy Commission. Tritium production by neutron-irradiation of aluminum-lithium alloys. 3,100,184, 8–6–63, Cl. 204—154.2.

Adolphson, Roy T., to Shampaine Industries, Inc. Surgical furniture. 3,100,129, 8–6–63, Cl. 297—430.

Ahrend, Martin: *See*—
Penning, Kurt, and Ahrend. 3,100,265.

Airmatic valve, Inc.: *See*—
Kroffke, Kenneth K. 3,099,997.

Alexeff, Alexander V.: *See*—
Richards, Howard R., and Alexeff. 3,100,069.

Allegheny Ludlum Steel Corp.: *See*—
Bills, Floyd T. 3,099,853.

Allen, Joseph C., and H. E. Hall, Jr., to The Texas Co. Radioactive well logging. 3,100,259, 8–6–63, Cl. 250—43.5.

Allmanna Svenska Elektriska Aktienbolaget: *See*—
Forwald, Haakon. 3,100,001.
Forwald, Haakon. 3,100,248.
Rydinger, Mats, and Fredriksson. 3,100,237.

Alpert, Norman, J. M. Caffrey, Jr., H. J. Watson, and H. E. Vermillion, to Texaco Inc. Alkylation of ferrocene. 3,100,-216, 8–6–63, Cl. 260—439.

Aluminum Laboratories, Ltd.: *See*—
English, Christopher J., and Van Duin. 3,100,142.

Ambrose, Henry A., and C. E. Trautman, to Gulf Research & Development Co. Process of improving the wear properties of a mineral and fatty oil lubricant mixture by radiation. 3,100,185, 8–6–63, Cl. 204—162.

Amchem Products, Inc.: *See*—
Raman, Harvey P., and McLane. 3,100,226.

Am Dyne Trust: *See*—
Fisher, John C. 3,099,998.

American Doll & Toy Corp.: *See*—
Beebe, Herbert R. 3,099,895.

American Railroad Curvelining Corp.: *See*—
Fiechter, Rene A. 3,100,080.

American Seal Kap Corp. of Delaware: *See*—
Nelson, Reuben F. 3,099,864.

Ampex Corp.: *See*—
Neff Joseph J. 3,100,071.

Anaconda Wire and Cable Co.: *See*—
D'Ascoli, Ralph G., and Ebel. 3,100,136.
Ege, Sigmund, and Schnur. 3,099,932.

Anchor Mfg. Co.: *See*—
Kacena, Jerome. 3,100,064.

Andersen, James C., to United States of America, Atomic Energy Commission. Fuel composition for nuclear reactors. 3,100,183 8–6–63. Cl. 204—154.2.

Anderson, Arnold E., to Ford Motor Co. Infinitely variable transmission 3,099,927, 8–6–63, Cl. 74—796.

Anderson, Wallace A., W. C. Brunner, C. L. Hornberger, and E. W. Stanley, to Armstrong Cork Co. Rotary offset gravure printing press. 3,099,956, 8–6–63, Cl. 101—154.

Andersson Bror G. Devices for cooling the condenser of a cooling plant. 3,099,915, 8–6–63, Cl. 62—305.

Armstrong, Charles E., to Marine Associates, Inc. Sprocket for chain saws 3,099,924, 8–6–63, Cl. 74—243.

Armstrong Cork Co.: *See*—
Anderson, Wallace A., Brunner, Hornberger, and Stanley. 3,099,956.

Arndt, Hugo. Animal capturing device. 3,099,982, 8–6–63, Cl. 119—152.

Ashley, Paul R., and D. D. Laing, to Calumet & Hecla, Inc. Catalytic automotive exhaust converter. 3,100,140, 8–6–63, Cl. 23—288.

Associated Electrical Industries Ltd.: *See*—
Beeson Eric J. G., Stanyon, and Capp. 3,100,168.
King, Daniel L., and Hitch. 3,100,244.

Atlantic Products Corp.: *See*—
Kish, Michael, Jr. 3,099,975.

Automatic Poultry Feeder Co.: *See*—
Carpenter, Elmer B. 3,099,981.

B & W Inc.: *See*—
Solum, James R., and Hempel. 3,100,016.

Bacharach Industrial Instrument Co.: *See*—
Gardner, George R. 3,100,044.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Hiebar, Walter, and Wagner. 3,100,137.
Maier, Karl, and Nienburg. 3,100,134.
Schaurer, Gustav, and Heinzel. 3,100,138.

Baker Perkins Inc.: *See*—
Jones, Morris C., Jr. 3,100,038.

Barmer Maschinenfabrik AG: *See*—
Schippers, Heins. 3,099,860.

Barry, David T., to United States of America, Navy. Quick acting gate for voltage or current discharge. 3,100,269, 8–6–63, Cl. 307—88.5.

Bartels, Erich, to Rheinmetall, G.m.b.H., Firma. Gun with cartridge magazine or propellant charge magazine. 3,099,-937, 8–6–63, Cl. 89—24.

Bartlett, Roscoe G., Jr. Respiratory apparatus. 3,099,987, 8–6–63, Cl. 128—142.

Barto, Ivan J. Table and bench assembly. 3,100,127, 8–6–63, Cl. 297—157.

Bartoha, Bodo K. W. New vinyl compounds and methods for their preparation. 3,100,217, 8–6–63, Cl. 260—448.

Bartoss, Frank J.: *See*—
Johnson, Ralph E., and Bartoss. 3,099,972.

Barts, Quentin R.: *See*—
Ehrlich, John, Barts, and Knudsen. 3,100,176.

Beaver, David J., and P. J. Stoffel, to Monsanto Chemical Co. Alkoxyalkyl 3,4-dichlorocarbanilates. 3,100,222, 8–6–63, Cl. 260—471.

Beck, Quentin S., ½ to L. F. Engle, Jr. Method of installing an areaway wall. 3,099,900, 8–6–63, Cl. 50—533.

Beck, Robert B., to The Kendall Co. Carton. 3,100,074, 8–6–63, Cl. 229—44.

Beckman Instruments, Inc.: *See*—
Fletcher, Taylor C. 3,100,282.

Beears, Warren L.: *See*—
Roha, Max E., and Beears. 3,100,231.

Beebe, Herbert R., to American Doll & Toy Corp. Arm and leg joint construction for toy figures. 3,099,895, 8–6–63, Cl. 46—161.

Beeson, Eric J. G., H. E. Stanyon, and L. J. Capp, to Associated Electrical Industries Ltd. Quarts-to-metal seals. 3,100,168, 8–6–63, Cl. 154—2.4.

Bell, Ramsay M., to Hammond Machinery Builders, Inc. Mechanical device. 3,099,904, 8–6–63, Cl. 51—141.

Bell, Ramsay M., and I. Jepson, to Hammond Machinery Builders, Inc. Polishing and buffing apparatus. 3,099,849, 8–6–63, Cl. 15—21.

Bell Telephone Laboratories, Inc.: *See*—
Courtney-Pratt, Jeofry S. 3,100,239.

Bennett, John W., and F. W. Perry, to The National Cash Register Co. Check feeding and aligning mechanism. 3,100,-113, 8–6–63, Cl. 271—71.

Benzinger, Theodor H. Thermopile switching systems. 3,099,-923, 8–6–63, Cl. 73—341.

Berenbaum, Arthur, E. Vanderslice, and W. T. Yoast, to Philco Corp. Dryer and method of operation. 3,100,144, 8–6–63, Cl. 34—45.

Bergemann, Werner E., and D. L. Whitmore, to The Gleason Works. Cutter checking device and method. 3,099,883, 8–6–63, Cl. 33—201.

Berkley Machine Co.: *See*—
Winkler, Richard, and Dunnebier. 3,100,110.

Berlin, Herbert: *See*—
Rudszinat, Willy, and Berlin. 3,099,989.

Bersin, Theodor: *See*—
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Besmer Teppichfabrik G.m.b.H.: *See*—
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Beyler, Roger E.: *See*—
Oberster, Arthur E., Beyler, and Sarett. 3,100,204.

Biber, Albert, to Gulf Research & Development Co. Constant viscosity fuel injection nozzle. 3,100,084, 8–6–63, Cl. 239—463.

Bielenberg, Waldemar, F. Rodis, H. W. Ziegler, G. Dronsek, and A. Hinz, to Knapsack-Griesheim Aktiengesellschaft. Process and apparatus for the drying and burning of pellets. 3,100,106, 8–6–63, Cl. 263—8.

Bigelow, John E., to General Electric Co. X-ray analyzing apparatus wherein two comparative detector channels have different absorption versus frequency characteristics. 3,100,-261, 8–6–63, Cl. 250—51.5.

Bills, Floyd T., to Allegheny Ludlum Steel Corp. Polishing apparatus. 3,099,853, 8–6–63, Cl. 15—97.

Bingham, George H., Jr., to Cambridge Rubber Co. Last for use in making plastic footwear. 3,099,862, 8–6–63, Cl. 18—41.

Bishop, Leonard J., P. Klamp, and R. Krammer, to Mechanical Handling Systems, Inc. Entrance switch mechanism for overhead convevor. 3,099,966, 8–6–63, Cl. 104—96.

Bloomquist, Egner L. Wirework carrier. 3,100,059, 8–6–63, Cl. 220—117.

Boehringer, C. F., & Soehne G.m.b.H.: *See*—
Haack, Erich, Hagedorn, Ruschig, and Korger. 3,100,208.
Ruge, Ulrich. 3,100,149.

Boicey, James H., and F. E. Henning, to Libbey-Owens-Ford Glass Co. Apparatus for pressing glass-plastic sandwiches. 3,100,173, 8–6–63, Cl. 156—579.

Bolesky, Richard C., to United States Rubber Co. Seat constructions and processes of producing the same. 3,099,844, 8–6–63, Cl. 5—354.

Booth, Harvey J., R. P. Ernest, and J. W. Fostey, to Ford Motor Co. Lubricant sump. 3,100,028, 8–6–63, Cl. 184—106.

Borchert, Peter J., to Miles Laboratories, Inc. Dialdehyde polysaccharide-acrylamide derivatives. 3,100,203, 8–6–63, Cl. 260—211.

Borg, S. Edward, to Northrop Corp. Automatic welding apparatus. 3,100,256, 8–6–63, Cl. 219—124.

Borg-Warner Corp.: *See*—
Taylor, Raymond G., Jr. 3,099,877.

Boulton, William, Ltd.: *See*—
Podmore, Henry L., and Fahey. 3,100,088.

Bourquin, Jean-Pierre, A. Brack, E. Schenker, R. Griot, and W. Steffen, to Sandoz Ltd. Antiseptic composition. 3,100,-175, 8–6–63, Cl. 167—33.

Boving and Co. Ltd.: *See*—
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Bowersett, Charles F., to United States of America, Navy. Rocket engine. 3,099,959, 8–6–63, Cl. 102—49.

Brack, Arthur: *See*—
Bourquin, Jean-Pierre, Brack, Schenker, Griot, and Steffen. 3,100,175.

Braid, Milton: *See*—
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Brainard, Wallace E., and K. R. Merner, to Kearney & Trecker Corp. Shuttle operated tape controlled machine tool. 3,099,873, 8–6–63, Cl. 29—26.

Brauer, Walter. Torque tube control device. 3,099,953, 8–6–63, Cl. 100—258.

Breivik, Orville N., and W. R. Johnston, to Standard Brands Inc. Instant coffee and tea. 3,099,151, 8–6–63, Cl. 99—71.

Brembeck, Howard S. Bulk feed bin bottom. 3,100,052, 8–6–63, Cl. 214—17.

Breneman, James C. Portable backstop for arrows. 3,100,-115, 8–6–63, Cl. 273—102.4.

Brown, Boveri & Cie, Aktiengesellschaft: *See*—
Darrieus, Georges, and Müllner. 3,100,271.

Brown, Robert H.: *See*—
Crawford, Archibald M., Lockerby, and Brown. 3,100,098.

Brunner, Wilber C.: *See*—
Anderson, Wallace A., Brunner, Hornberger, and Stanley. 3,099,956.

Bryan, George J., to United States of America, Navy. Method of thrust vector control. 3,099,960, 8–6–63, Cl. 102—50.

Bullard, Robinson D. Electro-magnetically actuated pilot and main valve. 3,100,103, 8–6–63, Cl. 251—30.

Burnett, Alice W. Window structure. 3,099,865, 8–6–63, Cl. 20—40.

Burns, Robert E.: *See*—
Kurth, Herbert. 3,099,896.

Burton, John W., and D. A. Hoyt, to United States of America, Navy. Panoramic camera. 3,099,946, 8–6–63, Cl. 95—16.

Butler, Richard A.: *See*—
Gasper, Emeric, Munns, and Butler. 3,099,861.

Byrnes, Dennis W. Water trough and cleaning means. 3,099,979, 8–6–63, Cl. 119—22.

Caffrey, James M., Jr.: *See*—
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Calixto, Antonio. Cigarette dispensing means. 3,100,060, 8–6–63, Cl. 221—116.

Calow, Th., & Co.: *See*—
Lindemann, Hans. 3,099,929.

Calumet & Hecla, Inc.: *See*—.
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Cambridge Rubber Co.: *See*—
Bingham, George H., Jr. 3,099,862.

Campbell, Ned. Cabinet with aerosol sprayer. 3,100,066, 8–6–63, Cl. 222—180.

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Fairbairn, Bruce H., and Deschambault. 3,100,161.

Cangelosi, Charles: *See*—
Schwartz, Louis J., and C. and I. Cangelosi. 3,099,971.

Cangelosi, Ignazio: *See*—
Schwartz, Louis J., and C. and I. Cangelosi. 3,099,971.

Capp, Leslie J.: *See*—
Beeson, Eric J G., Stanyon, and Capp. 3,100,168.

Carlson, Glen A. Fluid pressure operated oscillatory buffing head. 3,099,902, 8–6–63, Cl. 51—33.

Carlson, Harold A.: *See*—
Ott, William F., Krein, Eickmann, and Carlson. 3,100,-236.

Carpenter, Edward W. Bracket for an outboard stabilizing element for a canoe, rowboat and the like. 3,100,100, 8–6–63, Cl. 248—214.

Carpenter, Elmer B., to Automatic Poultry Feeder Co. Fowl waterer. 3,099,981, 8–6–63, Cl. 119—81.

Carrier Corp.: *See*—
Dreibelbis, Richard C. 3,100,078.

Carroll, David D. Stuffed animated toy animal. 3,099,894, 8–6–63, Cl. 46—135.

Carter, Charlie F.: *See*—
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Carter, William W. and C. F. Vending machine. 3,100,061, 8–6–63, Cl. 221—131.

Case, Noel L., and W. E. Rexford, to Louis Marx & Co., Inc. Subminiature electric motor. 3,100,270, 8–6–63, Cl. 310—154.

Celanese Corp. of America: *See*—
Smith, Albert L. 3,100 220.

Chalfin, William L., and D. Friedwald, to Chalsea Products Co. Inc. Hair curler. 3,099,990, 8–6–63, Cl. 132—39.

Chalsea Products Co. Inc.: *See*—
Chalfin, William L., and Friedwald. 3,099,990.

Chamberlain, Clair J. Line holder for ring buoy. 3,099,845, 8–6–63, Cl. 9—313.

Chapman, Christopher L. C., to Yardney International Corp. Electric batteries. 3,100,165, 8–6–63, Cl. 136—177.

Chimiques Rhone-Poulenc, Societe des Usines: *See*—
Fournet, Andre, and Rio. 3,100,198.

Chismar, Andrew B., and E. W. Kmetz, to Owens-Illinois Glass Co. Stencil screen coating comprising polyvinyl alcohol, polyvinyl acetate and a light sensitizing agent. 3,100,150, 8–6–63, Cl. 96—93.

Christensen, Burton G., to Merck & Co., Inc. 17α-alkoxy-7α-acetylthioprogesterones. 3,100,210, 8–6–63, Cl. 260—397.4.

Christian, Benjamin H. Air duct accessory for house windows. 3,099,950, 8–6–63, Cl. 98—99.5.

Chrostowski, Joseph E.: *See*—
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Chudner, Joseph. Feed mechanism for sewing machines. 3,099,974, 8–6–63, Cl. 112—207.

Ciba Ltd.: *See*—
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Clark, Chester A., to United States of America, Navy. Hydraulic underwater sound transducer. 3,100,022, 8–6–63, Cl. 181—.5.

Cleary, Donald F.: *See*—
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Cleary, John R., to Cleary Mfg. Co. Wagon handle. 3,100,-120, 8–6–63, Cl. 280—87.01.

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Clements, Roy J., to Texaco Inc. Means for determining the fluid level in a well. 3,100,023, 8–6–63, Cl. 181—.5.

Clynes, Manfred E., to Muemotron Corp. Linear pulse frequency modulator. 3,100,285, 8–6–63, Cl. 332—14.

Cofield, Thomas H., to Ethyl Corp. Process for the preparation of dihydropentalenyl manganese tricarbonyl. 3,100,-211, 8–6–63, Cl. 260—429.

Cofield, Thomas H., to Ethyl Corp. Process of preparing dihydropentalenyl manganese tricarbonyl. 3,100,212, 8–6–63, Cl. 260—429.

Cofield, Thomas H., to Ethyl Corp. Hydropentalenyl manganese tricarbonyl compounds and processes for same. 3,100,213, 8–6–63, Cl. 260—429.

Cofield, Thomas H., to Ethyl Corp. Pentalenyl manganese tricarbonyl and processes for same. 3,100,214, 8–6–63, Cl. 260—429.

Columbus Iron Works Co.: *See*—
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Combustion Engineering, Inc.: *See*—
Flurschutz, Glenn E. 3,100,014.

Compagnia Italiana Nestpack S.p.A.: *See*—
Martelli, Guido, N., and F. 3,100,055.

Congdon, Theodore W., to United States of America, Navy. Analog to digital code converter. 3,100,299, 8–6–63, Cl. 340—347.

Cook, James A. Proportional measuring and mixing tank. 3,100,000, 8–6–63, Cl. 137—571.

Cordis, Nat. Variable-delivery blade-type conveyor. 3,100,-043, 8–6–63, Cl. 198—224.

Courtaulds Ltd.: *See*—
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Courtney-Pratt, Jeofry S., to Bell Telephone Laboratories, Inc. Optical focus and resolution testing methods and apparatus. 3,100,239, 8–6–63, Cl. 88—56.

Craft, Inc.: *See*—
Roy, Leo T. 3,100,073.

Crawford, Archibald M., K. M. Lockerby, and R. H. Brown. Automatic retarder system for a railroad classification yard. 3,100,098, 8–6–63, Cl. 246—182.

Creamery Package Mfg. Co., The: *See*—
McCabe, John B., and Schmid. 3,099,906.

Crescent, Henri. Safety lock mechanism, notably for convertible seats. 3,100,125, 8–6–63, Cl. 297—26.

Crile, Vaughn L. Grinder for shear blade. 3,099,903, 8–6–63, Cl. 51—94.

Crocker, William G., to Union Carbide Corp. Wave ring thermocouple. 3,099,922, 8–6–63, Cl. 373—341.

Croft, William J.: *See*—
Lemaire, Henry P., and Croft. 3,100,158.

Crowe, James W., to International Business Machines Corp. Superconductive gating devices. 3,100,267, 8–6–63, Cl. 307—88.5.

Crown Zellerbach Corp.: *See*—
Wetmore, Arthur W., and Frederich. 3,100,046.

Cuthbert, Cecil: *See*—
Fagan, Brian E., and Cuthbert. 3.100,116.

Dales, George F. Improvement in thermostat casing. 3,100,-247, 8–6–63, Cl. 200—138.

D'Antonio, Renato A., and F. Gerrand, to International Business Machines Corp. Signaling system. 3,100,293, 8–6–63, Cl. 340—146.1.

Darrieus, Georges, and F. Müllner, to Brown, Boveri & Cie, Aktiengesellschaft. Alternating current machine with magnetic shield enclosing end tube of stator winds. 3,100,271, 8–6–63, Cl. 310—256.

D'Ascoli, Ralph G., and L. C. Ebel, to Anaconda Wire and Cable Co. Method of making polyethylene-insulated power cables. 3,100,136, 8–6–63, Cl. 18—59.

Daubenspeck, Benjamin K., R. E. Dickey, D. S. Foote, and J. H. Whipple, to Remington Arms Co., Inc. Firearm cartridges. 3,099,958, 8–6–63, Cl. 102—42.

Davidson, Charles A., to Thermotank, Inc. Air distributor valve. 3,099,949, 8–6–63, Cl. 98—40.

Davidson, Louis. Load bearing industrial pallet. 3,099,969, 8–6–63, Cl. 108—56.

Davies, Will S.: *See*—
Marshall, Edmund V., and Davies. 3,099,938.

Davis, Howard C., R. H. Eichorn, F. D. Punnett, H. E. Trumbull, and J. W. Wagner, to Xerox Corp. Document feed mechanism. 3,100,112, 8–6–63, Cl. 271—53.

Davis, Hugo: *See*—
Felix, Joseph, and Davis. 3,100,004.

Deffrenne, Paul C. F., to Mecanorga S.A. Self-adjusting fluid bearing. 3,100,130, 8–6–63, Cl. 308—122.

De Haan, Rufus. Tube clamp flow control device. 3,100,-102, 8–6–63, Cl. 251—9.
Demos, George to N. Demos. Drive-away method and apparatus for transporting automotive vehicles. 3,100,124, 8–6–63, Cl. 296—1.
Demos, Nicholas: *See*—
Demos, George. 3,100,124.
Denny, Arthur D.: *See*—
Kalousek, George L., and Denny. 3,100,156.
De Pentl, Kenneth L., and D. Willison, to National Castings Co. Car coupler. 3,100,050, 8–6–63, Cl. 213—21.
Deschambault, Gerard J.: *See*—
Fairbairn, Bruce A., and Deschambault. 3,100,161.
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Smith, Jack C., Etterman, and Romine. 3,100,191.
De Witt, Stuart L., and T. F. Dymek, to General Electric Co. Refrigerating apparatus. 3,099,914, 8–6–63, Cl. 62—276.
Diamond Alkali Co.: *See*—
Fordham, James W. L., and McCain. 3,100,199.
Dickey, Rex E.: *See*—
Daubenspeck, Benjamin K., Dickey, Foote, and Whipple. 3,099,958.
Dixon, Olaf G., and D. I. Morgan, to Courtaulds Ltd. Compression of materials. 3,099,952, 8–6–63, Cl. 100—3.
Dobrin, Saxe, and J. F. Kincaid, to United States of America, Army. Outward burning neutral granulation for cast propellants. 3,099,963, 8–6–63, Cl. 102—98.
Doe, Walter P., to Fisher-Price Toys, Inc. Sound producing device for toy vehicle. 3,099,893, 8–6–63, Cl. 46—111.
Doggett, Roger H., L. R. B. Hervey, and C. E. Lanyon, to John A. Manning Paper Co., Inc. Process of drying mucilaginous plant materials. 3,100,143, 8–6–63, Cl. 34—9.
Donovan, Roy L., to Sun Oil Co. Fixed bed apparatus for the catalytic conversion of hydrocarbons. 3,100,141, 8–6–63, Cl. 23—288.
Doray Lamp Co., Inc.: *See*—
Dover, Samuel M. 3,100,085.
Dourdeville, Theodore A., to David Gessner Co. Seam jumping apparatus for cloth shearing machines. 3,099,871, 8–6–63, Cl. 26—17.
Dover, Samuel M., to Doray Lamp Co., Inc. Signal lamp. 3,100,085, 8–6–63, Cl. 240—8.3.
Dow Chemical Co., The: *See*—
Levy, Donald J. 3,100,169.
Levy, Donald J. 3,100,170.
Rigterink, Raymond H. 3,100,206.
Drachenberg, Richard E., deceased; R. P. Drachenberg, executrix of said R. E. Drachenberg. Juice extractor having overrunning spinner. 3,100,009, 8–6–63, Cl. 146—76.
Drachenberg, Ruth P.: *See*—
Drachenberg, Richard E. 3,100,009.
Drake, Derrell A. Tool for forming and crimping axial lead components. 3,099,838, 8–6–63, Cl. 1—322.
Dreibelbis, Richard C., to Carrier Corp. Thermostatic control mechanism. 3,100,078, 8–6–63, Cl. 236—47.
Drilco Oil Tools, Inc.: *See*—
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Dronsek, Gunter: *See*—
Bielenberg, Waldemar, Rodis, Ziegler, Dronsek, and Hinz. 3,100,106.
Dryden, Hugh L., Deputy Administrator to the National Aeronautics and Space Administration, with respect to the invention of J. F. Meyer. Time-division multiplexer. 3,100,294, 8–6–63, Cl. 340—147.
Dunlop Rubber Co. Ltd.: *See*—
Trevaskis, Henry W. 3,100,101.
Dunn, Harold S. Support for flexible awning cover. 3,100,-012, 8–6–63, Cl. 160—89.
Dunnebier, Kurt: *See*—
Winkler, Richard, and Dunnebier. 3,100,110.
Duquesne Brewing Co. of Pittsburgh: *See*—
Friday, John A., Jr. 3,100,056.
Duquesne, Victor. Axially extending tool mounting column for disc wheels. 3,100,008, 8–6–63, Cl. 144—288.
Dymek, Theodore F.: *See*—
De Witt, Stuart L., and Dymek. 3,099,914.
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Rosenbaum, Charles H. 3,099,916.
Ebel, Lawrence C.: *See*—
D'Ascoli, Ralph G., and Ebel. 3,100,136.
Edwards, Roy T., to Socony Mobil Oil Co., Inc. Petroleum wax-polymeric vinyl ester coating compositions and method for preparing same. 3,100,196, 8–6–63, Cl. 260—28.5.
Ege, Sigmund, and M. D. Schnur, to Anaconda Wire and Cable Co. Method and apparatus for stranding and braiding. 3,099,932, 8–6–63 Cl. 87—1.
Ehrlich, John, Q. R. Bartz, and M. P. Knudsen, to Parke, Davis & Co. Hygromycin and method of producing same. 3,100,176 8–6–63, Cl. 167—65.
Eichorn, Roger H., to Xerox Corp. Paper gripper mechanism. 3,100,109, 8–6–63, Cl. 70—79.
Eichorn, Roger H.: *See*—
Davis, Howard C., Eichorn, Punnett, Trumbull, and Wagner. 3,100,112.
Eichorn, Roger H., and J. W. Melville, to Xerox Corp. Sheet feed mechanism. 3,100,111, 8–6–63, Cl. 271—36.
Eichorn Robert H., R. W. Morrill, K. A. Northrup, and R. F. Osborne, to Xerox Corp. Xerographic reproducing apparatus. 3,099,943, 8–6–63, Cl. 95—1.7.
Eichorn, Roger H., and R. F. Osborne, to Xerox Corp. Xerographic control apparatus. 3,099,944, 8–6–63, Cl. 95—1.7.
Eichorn, Roger H., and J. A. Strommer, to Xerox Corp. Web cleaner apparatus. 3,099,856, 8–6–63, Cl. 15—256.52.
Eichmann, Karl. Vanes for rotary vane machine supported in balance and in stability and in less friction. 3,099,964, 8–6–63, Cl. 103—136.
Eickmann, Ollin J.: *See*—
Ott, William F., Krein, Eickmann, and Carlson. 3,100,-236.
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Electric Machinery Mfg. Co.: *See*—
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Electricite de France-Service National: *See*—
Leo, Bertrand. 3,100,029.
Empire Devices Products Corp.: *See*—
Lorch, Joseph. 3,100,289.
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Beck, Quentin S. 3,099,900.
English, Christopher J., and S. Van Duin, to Aluminum Laboratories, Ltd. Metal ingots. 3,100,142, 8–6–63, Cl. 29—187.
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Erdman, John G., and J. H. Wright, to Gulf Research & Development Co. Irradiation destruction of complexes. 3,100,182, 8–6–63, Cl. 204—154.
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Coffield, Thomas H. 3,100,212.
Coffield, Thomas H. 3,100,213.
Coffield, Thomas H. 3,100,214.
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Falk, Richard B., and G. D. Hooper, to General Electric Co. Magnetic material. 3,100,167, 8–6–63, Cl. 148—31.57.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Zappel, Albrecht, and Jonas. 3,100,225.
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Maaurel, Michel, Fauquenoi, and Vivien. 3,099,907.
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Feinerman, Jack: *See*—
Feinerman, Irving. 3,099,892.
Feldman, Ernst: *See*—
Putz, Hans, Lebnartz, and Feldman. 3,099,994.
Feldman, Nathan W., to United States of America, Army. Keysender frequency selector. 3,100,245, 8–6–63, Cl. 179—90.
Feliks, Joseph, to Woven Arts Corp. Machine for weaving web having relatively stiff weft. 3,100,003, 8–6–63, Cl. 139—128.
Feliz, Joseph, and H. Davis, to Woven Arts Corp. Woven article of manufacture having relatively stiff weft and method of making same. 3,100,004, 8–6–63, Cl. 139—420.
Ferdinand, Irwin J., to S. A. Hirsh Mfg. Co. Shelf fastener assembly. 3,099,931, 8–6–63, Cl. 85—40.
Flechter, Rene A, to American Railroad Curvelining Corp. Railway rail joint. 3,100,080, 8–6–63, Cl. 238—151.
Fisher, John C., to Am Dyne Trust. Fluid rectifier. 3,099,-998, 8–6–63, Cl. 137—525.3.
Fisher-Price Toys, Inc.: *See*—
Doe, Walter P. 3,099,893.
Fletcher, Taylor C., to Beckman Instruments, Inc. Shielding amplifier circuit. 3,100,282, 8–6–63, Cl. 330—68.
Fluhr, Frederick R. Analog-to-digital instantaneous converter. 3,100,298, 8–6–63, Cl. 340—347.
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Foote, Lawrence R., to General Electric Co. Sympathetic silicon controlled rectifier circuit. 3,100,268, 8–6–63, Cl. 307—88.5.
Fordham, James W. L., and G. H. McCain, to Diamond Alkali Co. Preparation of polyacetals from halogenated unsaturated carboxylic acid esters. 3,100,199, 8–6–63, Cl. 260—73.
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Foremost Dairies, Inc.: *See*—
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Forwald, Haakon, to Allmanna Svenska Elektriska Aktiebolaget. Pneumatically operated air blast valve. 3,100,001, 8–6–63, Cl. 137—596.1.
Forwald, Haakon, to Allmanna Svenska Elektriska Aktiebolaget. Oil circuit breaker. 3,100,248, 8–6–63, Cl. 200—150.
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Booth, Harvey J., Ernest, and Fostey. 3,100,028.
Fournet, Andre, and A. Rio, to Chimiques Rhone-Poulenc, Societe des Usines. Blend of an α-methyl styrene/acrylonitrile copolymer with a copolymer of α-methyl styrene and a diolefin having a styrene and acrylonitrile grafted thereon. 3,100,198, 8–6–63, Cl. 260—45.5.

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Fraas, Arthur P., to United States of America, Atomic Energy Commission. Reflector for neutronic reactors. 3,100,187, 8–6–63, Cl. 204—193.2.
Fraas, Arthur P., and J. J. Tudor, to United States of America, Atomic Energy Commission. Reactor moderator structure. 3,100,188, 8–6–63, Cl. 204—193.2.
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Freyermuth, Harlan B., and H. R. Mautner, to General Aniline & Film Corp. Process for dyeing fibers with reactive dyestuffs. 3,100,131, 8–6–63, Cl. 8—1.
Friday, John A., Jr., to Duquesne Brewing Co. of Pittsburgh. Reusable bottle cases. 3,100,056, 8–6–63, Cl. 220—1.
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Gaborc, Arthur J., and M. Teumim, to United States of America, Navy. Self-aligning loading rail. 3,099,936, 8–6–63, Cl. 89—1.7.
Gallagher, John J., to Poor & Co. Rail anchor. 3,100,081, 8–6–63, Cl. 238—327.
Gantz, Emmett J. Magnetic tool holder. 3,100,275, 8–6–63, Cl. 317—159.
Gardner, George R., to Bacharach Industrial Instrument Co. Thermometer carrying case. 3,100,044, 8–6–63, Cl. 206—16.5.
Garnett, Edward V. Outriggers for vehicles. 3,100,049, 8–6–63, Cl. 212—145.
Garrett, William R., to Drilco Oil Tools, Inc. Resilient rotary drive fluid conduit. 3,099,918, 8–6–63, Cl. 64—27.
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Gasper, Emeric, M. G. Munns, and R. A. Butler, to The Projectile & Engineering Co Ltd. Injection moulding machine. 3,099,861, 8–6–63, Cl. 18—30.
Gates, Thomas S., to National Broach & Machine Co. Automatic gear gauging apparatus. 3,099,882, 8–6–63, Cl. 33—179.5.
Gelbert, Heinz, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for preparing liquid hexaalkyl-distannoxanes. 3,100,215, 8–6–63, Cl. 260—429.7.
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General Motors Corp.: *See*—
Helvern, James O., and Wuellner. 3,099,941.
La Flame, Frank E. 3,099,992.
Maurer, Philip W., and Wishart. 3,100,021.
General Precision, Inc.: *See*—
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George, James W. Animal enclosure. 3,099,978, 8–6–63, Cl. 119—19.
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Gleitsman, Harold, and C. Fuerst, to Gleitsman's, Inc. Combination valet and seat. 3,100,128, 8–6–63, Cl. 297—190.
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Sabatino, Anthony, and Jackson. 3,100,162.
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Goldstein, Samuel E. Vehicular antenna bumper mount. 3,100,241, 8–6–63 Cl. 174—138.
Goodell, John D., B. Ivins, J. C. Wistrand, and V. Tasi, to Minnesota Mining & Mfg. Co. Magnetic tape magazine changer mechanism. 3,100,090, 8–6–63, Cl. 242—55.13.
Goodloe, Alfred M. Material adapted for abrasive effect in use and scouring devices, pot cleaners and the like produced therefrom. 3,099,854, 8–6–63, Cl. 15—209.
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Grant, Louis A. Power operated brush attachment for earth moving machine. 3,099,852, 8–6–63, Cl. 15—50.
Gray, Edward E., and K. E. McFarland, to General Precision, Inc. Radar simulation. 3,100,238, 8–6–63, Cl. 35—10.4.
Green, Albert J., H. O. Randall, P. H. Williams, and F. R. Werner, to The National Cash Register Co. Line finding mechanism for cash registers and accounting machines. 3,100,037, 8–6–63, Cl. 197—127.
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Erdman, John G., and Wright. 3,100,182.
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Haack, Erich, Hagedorn, Ruschig, and Korger. 3,100,208.
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Bell, Ramsay M., and Jepson. 3,099,849.
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Hanson, Donald. Jack rod support. 3,100,033, 8–6–63, Cl. 189—36.
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Harbaugh, Watson D.: *See*—
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Hardesty, Ethridge E., ¼ to R. E. Lazarus, as trustee. Method and apparatus for forming a pre-stressed hollow lined pressure vessel. 3,100,171, 8–6–63, Cl. 156—165.
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O'Brien, Richard C. 3,099,945.
Harris, Kate T.: *See*—
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Harris, Marlin J., Jr., deceased; K. T. Harris, administratrix. Agricultural process and apparatus for carrying out the same. 3,099,898. 8–6–63, Cl. 47—58.
Harris, Richard A., and C. D. Spainhour, to Western Electric Co., Inc. One-piece oil pump. 3,100,027, 8–6–63, Cl. 184—6.
Hauni-Werke Korber & Co. K.G.: *See*—
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Hauptschein, Murray, M. Braid, and F. E. Lawlor, to Pennsalt Chemicals Corp. Organic fluorine compounds. 3,100,-228, 8–6–63, Cl. 260—608.
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Henriksen, Henry. Apparatus for abstract painting. 3,100,-063 8–6–63, Cl. 222—94.
Heppenstall, Charles W. Composite closure. 3,100,067, 8–6–63, Cl. 222—190.
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Herczog, Andrew, and R. R. Haberecht, to United States of America, Air Force. Zone melting apparatus. 3,100,250, 8–6–63, Cl. 219—10.49.
Herr, Richard F., to Rio Algom Mines Ltd. Winding apparatus. 3,100,092, 8–6–63, Cl. 242—158.4.

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Heuck, Claus, F. Rochlitz, O. Mauz, J. Winter, and F. Schulde, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Monoolefin polymer stabilized with combination of a phenolic condensate and a phosphorous amid, and process for preparing the same. 3,100,197, 8–6–63, Cl. 260—43.

Heuer, Hans, to Olympia Werke A.G. Multiple switch device for connection with an electrical business machine. 3,100,077, 8–6–63, Cl. 235—60.

Hewitt-Robins Inc.: *See*—
Olender, Francis B., and Wilson. 3,100,189.

Hiebar, Walter, and G. Wagner, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of manganese pentacarbonyl hydride. 3,100,137, 8–6–63, Cl. 23—14.

Hillmer, Willy. Joint lock ring for thin walled cylinders. 3,100,121, 8–6–63, Cl. 285—321.

Hinz, Arnulf: *See*—
Bierenberg, Waldemar, Rodis, Ziegler, Dronsek, and Hinz. 3,100,106.

Hirsh, S. A., Mfg. Co.: *See*—
Ferdinand, Irwin J. 3,099,931.
Handler, Milton E. 3,099,891.

Hirst, Archie J., and G. Liversage, to Metalastik Ltd. Vehicle wheel suspensions. 3,099,967, 8–6–63, Cl. 105—224.1.

Hitch, Eric G.: *See*—
King, Daniel L., and Hitch. 3,100,244.

Hite, Billy L., to Vanity Fair Mills, Inc. Garment working apparatus. 3,099,970, 8–6–63, Cl. 112—2.

Hobson, Russell B., Jr., to Per Corp. Pressure filter and niter tube therefor. 3,100,190, 8–6–63, Cl. 210—106.

Hodges Research and Development Co.: *See*—
Williams, Beverly E. 3,100,152.

Hogan Faximile Corp.: *See*—
Shaler, David, Cleary, and Kacin. 3,100,252.

Holley Carburetor Co.: *See*—
Vismara, John F. 3,099,999.

Hooker Chemical Corp.: *See*—
Rosenberg, David S. 3,100,233.

Hooper, George D.: *See*—
Falk, Richard B., and Hooper. 3,100,167.

Hoover Co., The: *See*—
Piper, Glenn T. 3,099,869.

Hopkins, Thomas R., J. H. Rea, and A. P. Roszkowski, to Spencer Chemical Co. Ammoniumaliphatic esters of carbamic acids. 3,100,223, 8–6–63, Cl. 260—472.

Horn, Lutz, and F. Philipp, to Varta Aktiengesellschaft. Expanded metal. 3,099,899, 8–6–63, Cl. 50—500.

Horovitz, Marcus, to Metalastik Ltd. Methods of manufacturing ball joints and universal couplings employing such ball joints. 3,099,879, 8–6–63, Cl. 29—436.

Howe Sound Co.: *See*—
Grott, Gerald J. 3,099,868.

Hoyt, Donald A.: *See*—
Burton, John W., and Hoyt. 3,099,946.

Huet, Andre. Process of forming a bulb on a straight metal tube. 3,099,880, 8–6–63, Cl. 29—544.

Hull, Raymond J., to Gas Processing Inc. Apparatus and methods for treatment of natural gas. 3,100,147, 8–6–63, Cl. 62—37.

Humane Slaughtering Device Corp.: *See*—
Milbury, Elwood E., and Shults. 3,099,857.

Hunkeler, Ernst J., to The Gleason Works. Method and machine for finishing or testing gears. 3,099,901, 8–6–63, Cl. 51—26.

Huntington Chemical Corp.: *See*—
Huntington, Morgan G. 3,100,146.

Huntington, Morgan G., to Huntington Chemical Corp. Method and apparatus for the condensation, agglomeration, filtration and absorption of the exhaust gases from internal combustion engines. 3,100,146, 8–6–63, Cl. 55—9.

Huse, Mason W., to Raytheon Co. Cathode support. 3,100,273, 8–6–63, Cl. 313—82.

Hyde, James S., to Varian Associates. Gyromagnetic resonance methods and apparatus. 3,100,280, 8–6–63, Cl. 324—.5.

Improved Machinery Inc.: *See*—
Rich, John P. 3,100,192.

Industrial Electronic Hardware Corp.: *See*—
Shenker, Benjamin, and Fabricand. 3,100,262.

Industrial Ovens, Inc.: *See*—
Richards, Howard R., and Alexeff. 3,100,069.

Industrielle & Commerciale Paris-Nord: *See*—
Masurel, Michel, Fauquenoi, and Vivien. 3,099,907.

Ingersoll-Rand Co.: *See*—
Perry, William A. 3,099,984.

Ingot Casting Machines Ltd.: *See*—
Ponting, Eric J. 3,099,867.

International Business Machines Corp.: *See*—
Crowe, James W. 3,100,267.
D'Antonio, Renato A., and Gerrand. 3,100,293.
Marinace, John C., and Rutz. 3,100,166.
Reines, Jose. 3,100,297.

International Staple and Machine Co.: *See*—
Heilman, George P. and Zike. 3,099,837.

Ivins, Barbara: *See*—
Goodell, John D., Ivins, Wistrand, and Tasi. 3,100,090.

Jackson, Ernest J.: *See*—
Sabatino, Anthony, and Jackson. 3,100,162.

Jaffe, David L., A. Ross, and A. Sonnenschein, to Polarad Electronics Corp. Star energy identification system for space navigation. 3,100,264, 8–6–63, Cl. 250—203.

Jaster, Lawrence J. Ice fishing net. 3,099,888, 8–6–63, Cl. 43—11.

Jenny, Walter, and R. Wittwer, to Ciba Ltd. Process for dyeing or printing fibrous materials of aromatic polyesters. 3,100,132, 8–6–63, Cl. 8—39.

Jensen, Lee. Patient hoist. 3,099,842, 8–6–63, Cl. 5—84.

Jepson, Ivar: *See*—
Beil, Ramsay M., and Jepson. 3,099,849.

Jespersen, Robert H., to United States of America, Navy. Twin engine throttle synchronizer. 3,100,095, 8–6–63, Cl. 244—83.

Joens, W. H., & Co., G.m.b.H.: *See*—
Haufenbarth, Frans. 3,099,995.

Johnson, Ernest G.: *See*—
Thomsen, Max M., and Johnson. 3,100,086.

Johnson, Ernest K. Urinal. 3,099,840, 8–6–63, Cl. 4—110.

Johnson, Frederic R., to General Electric Co. Tip-off oven. 3,100,251, 8–6–63, Cl. 219—19.

Johnson & Johnson: *See*—
Korpman, Ralf. 3,100,160.
Nash, Lawrence M. 3,099,855.
Sexsmith, Fred H. 3,100,135.

Johnson, Joseph E., to Viking Fire Protection Co. Fire sprinkler control system. 3,100,017, 8–6–63, Cl. 169—17.

Johnson, Ralph E., and F. J. Bartosz, to The Singer Co. Bobbin thread replenishing mechanism for lock stitch sewing machine. 3,099,972, 8–6–63, Cl. 112—181.

Johnston, William R.: *See*—
Breivik, Orville N., and Johnston. 3,099,151.

Jonas, Heinz: *See*—
Zappel, Albrecht, and Jonas. 3,100,225.

Jones, Clarence S., to General Precision, Inc. Bridge feedback modulator. 3,100,286, 8–6–63, Cl. 332—37.

Jones, Morris C., Jr., to Baker Perkins Inc. Grouping and loading apparatus for bakery equipment and the like. 3,100,038, 8–6–63, Cl. 198—30.

Jonker, Frederick. Superimposable card search and data storage system 3,100,296, 8–6–63, Cl. 340—174.1.

Jordan, Joseph J., and R. Palermo. Anti-slip device for boots. 3,099,885, 8–6–63, Cl. 36—59.

Joslyn Mfg. and Supply Co.: *See*—
Riley, William F. 3,100,246.

Judd, John E.: *See*—
Warner, Thomas C., Jr., and Judd. 3,100,292.

Kacena, Jerome, to Anchor Mfg. Co. Mortar-plaster mixer. 3,100,064, 8–6–63, Cl. 222—166.

Kacin, William L.: *See*—
Shaler, David, Cleary, and Kacin. 3,100,252.

Kalousek, George L., and A. D. Denny, to Owens-Corning Fiberglas Corp. Thermal insulating product and method for making same. 3,100,156, 8–6–63, Cl. 106—120.

Kausche, Merle K. Automatic gate. 3,099,887, 8–6–63, Cl. 39—56.

Kay, Edward L., and E. C. Knowles, to Texaco Inc. Amine salts of boron acids. 3,100,221, 8–6–63, Cl. 260—462.

Kay Mfg. Corp.: *See*—
Simon, George. 3,099,843.

Kearney & Trecker Corp.: *See*—
Brainard, Wallace E., and Merner. 3,099,873.

Keck, Harold P., ⅓ to J. W. Robbins, and ⅓ to B. Robbins. Type band setting means in hand stamps. 3,099,955, 8–6–63, Cl. 101—105.

Keith, Willis C., and R. P. Zmitrovis, to Sinclair Research, Inc. Preparation of 2-phenyl-allyl chloride. 3,100,232, 8–6–63, Cl. 260—650.

Kendall Co., The: *See*—
Beck, Robert B. 3,100,074.

Kerns, Quentin A., to United States of America, Atomic Energy Commission. Pulse synthesizing generator. 3,100,284, 8–6–63, Cl. 331—55.

Kerr-McGee Oil Industries Inc.: *See*—
Wolff, Paul A. 3,099,912.

Kersten, Bruno W., to M. S. Pump. Dispensing device. 3,100,068, 8–6–63, Cl. 222—207.

Kester, Margaret K. Artificial breast brassiere. 3,099,839, 8–6–63, Cl. 3—36.

Kilian, Georg, and F. Mains, to Libbey-Owens-Ford Glass Co. Apparatus for producing double sheet glazing units. 3,100,148, 8–6–63, Cl. 65—152.

Kincaid, John F.: *See*—
Dobrin, Saxe, and Kincaid. 3,099,963.

King, Daniel L., and E. G. Hitch, to Associated Electrical Industries Ltd. Inter-communication systems. 3,100,244, 8–6–63, Cl. 179—17.

Kish, Michael, Jr., to Atlantic Products Corp. Band receiving device. 3,099,975, 8–6–63, Cl. 112—262.

Kizmiller, Frank C., and D. J. Petro. Shoes or sandals. 3,099,884, 8–6–63, Cl. 36—2.5.

Klamp, Paul: *See*—
Bishop, Leonard J., Klamp, and Krammer. 3,099,966.

Kleekamm, Fritz: *See*—
Siggel, Erhard, and Kleekamm. 3,099,872.

Kleist, Robert A., to General Precision, Inc. Conveyor sorting. 3,100,040, 8–6–63, Cl. 198—38.

Kmetz, Elmer W.: *See*—
Chismar, Andrew B., and Kmetz. 3,100,150.

Knapp, William F. Mechanical door stop means. 3,100,122, 8–6–63, Cl. 292—266.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Bielenberg, Waldemar, Rodis, Ziegler, Dronsek, and Hinz. 3,100,106.

Knight, Stanley G., to Wisconsin Alumni Research Foundation. Process for preparing flavoring compositions. 3,100,153, 8–6–63, Cl. 99—116.

Knowles, Edwin C.: *See*—
Kay, Edward L., and Knowles. 3,100,221.

Knudsen, Mildred P.: *See*—
Ehrlich, John, Barts, and Knudsen. 3,100,176.

Kohn, Erwin: *See*—
May, Paul D., and Kohn. 3,100,218.

Korger, Gerhard: *See*—
Haack, Erich, Hagedorn, Adolf, Ruschig, and Korger. 3,100,208.

Korpman, Ralf, to Johnson & Johnson. Tape employing an adhesive comprising an epoxy resin and a polymer having carboxylic groups. 3,100,160, 8–6–63, Cl. 117—122.

Koster, Roland, and W. Larbig, to Studiengesellschaft Kohle m.b.H. Organo aluminum compounds containing cycloalkyl groups of the neopentyl type and production thereof. 3,100,219. 8–6–63, Cl. 260—448.

Kraft, Hans-Gunther: *See*—
Schulte, Karl, Muller, and Kraft. 3,100,205.

Krammer, Robert: *See*—
Bishop, Leonard J., Klamp, and Krammer. 3,099,966.

Kranty, H., Firma: *See*—
Regenscheit, Bruno. 3,099,965.

Krein, John H.: *See*—
Ott, William F., Krein, Eickmann, and Carlson. 3,100,236.

Kroffke, Kenneth K., to Airmatic valve, Inc. Pressure relief valve. 3,099,997, 8–6–63, Cl. 137—493.8.

Kurth, Herbert, ½ to R. E. Burns. Soil treating composition and method. 3 099,896, 8–6–63, Cl. 47—1.

Laboratory Equipment Corp.: *See*—
Wagner, Harold C. 3,100,155.

La Flame, Frank E., to General Motors Corp. Reversible pump-motor assembly for a dishwasher. 3,099,992, 8–6–63, Cl. 134—182.

Laing, David D.: *See*—
Ashley, Paul R., and Laing. 3,100,140.

Lane, Harold, J. W. Pratt, and R. C. Quarmby, to United Shoe Machinery Corp. Pulling and lasting machines. 3,099,846, 8–6–63, Cl. 12—10.1.

Langehenke, Franz: *See*—
Neubner, Rolf, and Langehenke. 3,100,139.

Lanyon, Charles E.: *See*—
Doggett, Roger H., Hervey, and Lanyon. 3,100,143.

Larbig, Wolfgang: *See*—
Köster, Roland, and Larbig. 3,100,219.

Larson, Philip E.: *See*—
Rebechini, Peter G., and Larson. 3,099,905.

Larsson, Karl B., to Svenska Aktiebolaget Bromsregulator. Air brake cylinder with a built-in automatic brake slack adjuster. 3,100,032, 8–6–63, Cl. 188—196.

Latham Mfg. Co.: *See*—
Mounts, Paul A. 3,099,848.

Lawless, John W., to Mayhew Steel Products, Inc. Tool for removing spring pins. 3,099,876, 8–6–63, Cl. 29—229.

Lawlor, Francis E.: *See*—
Hauptschein, Murphy, Braid, and Lawlor. 3,100,228.

Lazarus, Ralph E.: *See*—
Hardesty, Ethridge E. 3,100,171.

Leduc, René. Stable hydraulic servo device. 3,099,940, 8–6–63, Cl. 91—49.

Lee, Emerson H., to Monsanto Chemical Co. Dehydrogenation catalyst. 3,100,234, 8–6–63, Cl. 260—669.

Lees, Nathaniel P., to The Singer Co. Looper mechanism for sewing machines. 3,099,973, 8–6–63, Cl. 112—199.

Lehnartz, Robert: *See*—
Putz, Hans, Lehnartz, and Feldman. 3,099,994.

Leister, Gerhard, to ABG-Werke Gesellschaft mit beschrankter Haftung, Firma. Roller for road construction. 3,099,942, 8–6–63, Cl. 94—50.

Lelis, John. Combination disassembling, assembling and work holding device for machine shops. 3,099 875, 8–6–63, Cl. 29—227.

Lemaire, Henry P., and W. J. Croft, to Radio Corp. of America. Methods for obtaining films of magnetic spinel crystals on substrates. 3,100,158, 8–6–63, Cl. 117—49.

Leo, Bertrand, to Electricite de France-Service National. Method and means for locking and releasing in succession a load moving inside a channel. 3,100,029, 8–6–63, Cl. 187—76.

Leonard, Margaret S. Variable speed transmission. 3 099,925, 8–6–63, Cl. 74—372.

Leslie, Donald J. Multiple sound channel tremolo device. 3,100,024, 8–6–63, Cl. 181—27.

Letteron, Henry A., to General Electric Co. Process for mulching with mica. 3,099,897, 8–6–63, Cl. 47—9.

Levy, Donald J., to The Dow Chemical Co. Pickling of magnesium and magnesium-base alloy articles. 3,100,169, 8–6–63, Cl. 156—20.

Levy, Donald J., to The Dow Chemical Co. Pickling magnesium articles. 3,100,170, 8–6–63, Cl. 156—20.

Libbey-Owens-Ford Glass Co.: *See*—
Boicey, James H., and Henning. 3,100,173.
Kilian, Georg, and Mains. 3,100,148.

Lichti, Robert D.: *See*—
Lodjic, Carl L., and Lichti. 3,099,847.

Liebrandt, Gunnar, to K. Liebrandt. Warp knitting machine. 3,099,921, 8–6–63, Cl. 66—86.

Liebrandt, Karl: *See*—
Liebrandt, Gunnar. 3,099,921.

Liebrandt, Karl, and A. Zwingenberger; said Zwingenberger assor. to said Liebrandt. Bearings for axially movable parts of textile machines. 3,099 920, 8–6–63, Cl. 66—86.

Lindemann, Hans, to Th. Calow, & Co. Bar scalping machine. 3,099,929, 8–6–63, Cl. 82—20.

Lindemann, Howard C.: *See*—
Mindheim, Daniel J., and Lindemann. 3,100,091.

Lindley & Co., Inc.: *See*—
Mindheim, Daniel J., and Lindemann. 3,100,091.

Link-Belt Co.: *See*—
Spurlin, William V. 3,100,053.

Liversage, Glen: *See*—
Hirst, Archie J., and Liversage. 3,099,967.

Livingston, Herman G.: *See*—
Tims, Donald E., Shrader, and Livingston. 3,100,019.

Lock, Frank J., to The Yale and Towne Mfg. Co. Pawl arrangement for hoist. 3,100,031, 8–6–63, Cl. 188—82.7.

Lockerby, Kenneth M.: *See*—
Crawford, Archibald M., Lockerby, and Brown. 3,100,098.

Lodjic, Carl L., and R. D. Lichti, to Stanray Corp. Track mounted telescoping loading and unloading ramp for aircraft. 3,099,847, 8–6–63, Cl. 14—71.

Lo Presti, Roy F., to Goodman Mfg. Co. Rope supported resilient sideframe conveyor. 3,100,042, 8–6–63, Cl. 198—192.

Lorch, Joseph, to Empire Devices Products Corp. Microwave attenuators with low D.C. resistance shunt path. 3,100,289, 8–6–63, Cl. 333—81.

Lorenz, Anton: *See*—
Schliephacke, Fridtjof F. 3,100,126.

Ludowici-Celadon Co.: *See*—
Folk, Frank M. 3,099,954.

Luftman, Alvin S., and C. E. Sawyer, to Raytheon Co. Electron tube with electrode having titanium surface serving as getter. 3,100,274, 8–6–63, Cl. 313—178.

Lydle, John E. Tire changing tool. 3,100,011, 8–6–63, Cl. 157—1.22.

Lyons, Ernest H., Jr. Energy conversion process and apparatus. 3,100,163, 8–6–63, Cl. 136—86.

Macklin, Rita R. Desk attachment for bed. 3,099,968, 8–6–63, Cl. 108—49.

Mackus, Thomas J.: *See*—
McNeill, William, Chrostowski, and Mackus. 3,100,186.

Madere, Elmore J. Shrimp trap with snap-on funnels. 3,099,890, 8–6–63, Cl. 43—100.

Maier, Karl, and H. J. Nienburg, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Dyeing and printing of articles of linear polyamides. 3,100,134, 8–6–63, Cl. 8—55.

Mainz, Franz: *See*—
Kilian, Georg, and Mainz. 3,100,148.

Makow, David M. Pulse group generating and shaping circuit. 3,100,283, 8–6–63, Cl. 331—47.

Manning, John A. Paper Co., Inc.: *See*—
Doggett, Roger H., Hervey, and Lanyon. 3,100,143.

Mansfield, Richard C., to Rohm & Haas Co. Method of preparing dialkylphenol-ethylene oxide adducts with relatively narrow molecular weight distribution. 3,100,230, 8–6–63, Cl. 260—613.

Marinace, John C., and R. F. Rutz, to International Business Machines Corp. Formation of semiconductor devices. 3,100,166, 8–6–63, Cl. 148—1.5.

Marine Associates, Inc.: *See*—
Armstrong, Charles E. 3,099,924.

Marker, Hannes. Tightening device for ski bindings. 3,100,119, 8–6–63, Cl. 280—11.35.

Marshall, Edmund V., and W. S. Davies, to United States of America, Navy. Armament for jet aircraft. 3,099,938, 8–6–63, Cl. 89—37.5.

Marshall, Theodore H., to Union Carbide Corp. Easy-open telescoping carton for sausage casings. 3,100,075, 8–6–63, Cl. 229—51.

Martelli, Francesco: *See*—
Martelli, Guido, N., and F. 3,100 055.

Martelli, Guido, N., and F., to Compagnia Italiana Nestpack S.p.A. Fruit-packing trays. 3,100,055, 8–6–63, Cl. 217—26.5.

Martelli, Nerio: *See*—
Martelli, Guido, N., and F. 3,100,055.

Marx, Louis, & Co., Inc.: *See*—
Case, Noel L., and Rexford. 3,100,270.

Mason, James J. Corrugated paper container. 3,100,072, 8–6–63, Cl. 229—16.

Masurel, Michel, G. Fauquenoi, and M. Vivien, to Industrielle & Commerciale Paris-Nord. Process for obtaining textile end products using discontinuous fibers. 3,099,907, 8–6–63, Cl. 57—156.

Matranga, Joseph P. Window structure. 3,099,866, 8–6–63, Cl. 20—48.

Maurer, Philip W., and J. Wishart, Jr., to General Motors Corp. Manual-automatic cruise control circuit. 3,100,021, 8–6–63, Cl. 180—82.1.

Mautner, Henry R.: *See*—
Freyermuth, Harlan B., and Mautner. 3,100,131.

Mauz, Otto: *See*—
Heuck, Claus, Rochlitz, Mauz, Winter, and Schulde. 3,100,197.

May, Paul D., and E. Kohn, to Monsanto Chemical Co. Purification of diethylaluminum chloride with crystalline titanium trichloride. 3,100,218, 8–6–63, Cl. 260—448.

Mayhew Steel Products, Inc.: *See*—
Lawless, John W. 3,099,876.

McCabe, John B., and U. J. Schmid; said McCabe assor. to The Creamery Package Mfg. Co., and said Schmid, assor. to Foremost Dairies, Inc. Case filling mechanism. 3,099,906, 8–6–63, Cl. 53—59.

McCabe, Owen J., to The Superior Electric Co. Transistor discriminating circuit with diode bypass means for the emitter-base circuit of each transistor. 3,100,266, 8–6–63, Cl. 307—88.5.

McCain, George H.: *See*—
Fordham, James W. L., and McCain. 3,100,199.

McCullough, Stuart N. Switching servo system with anti-hunt feedback. 3,100,277, 8–6–63, Cl. 318—28.

McDermott, Lyle C., to H. G. Peckham. Comminution device. 3,100,087, 8–663, Cl. 241—79.

McFarland, Keith E.: *See*—
Gray, Edward E., and McFarland. 3,100,238.

McGaw Laboratories, Inc.: *See*—
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McGraw-Edison Co.: *See*—
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McKirdy, Robert W. 3,100,240.

McKirdy, Robert W., ½ to J. W. Schmidt, ½ to R. W. McKirdy, and E. C. McKirdy, as joint tenants. Extensible electric conduit. 3,100,240, 86–63, Cl. 174—69.

McLane, Stanley R.: *See*—
Raman, Harvey P., and McLane. 3,100,226.

McLarty, Frank W. Amphibious vehicles. 3,099,977, 8–6–63, Cl. 115—1.

McLean, William, Jr., and F. W. Trader, Jr., to Parke, Davis & Co. Vaccine products and method of preparing same. 3,100,178, 8–6–63, Cl. 167—78.

McMillan, Stephen L., to General Electric Co. Brake mechanism for washing machine. 3,100,030, 8–6–63, Cl. 188—68.

McNelll, William, J. E. Chrostowski, and T. J. Mackus, to United States of America, Army. Method of making lamellar sheets of fluorphlogopite mica. 3,100,186, 8–6–63, Cl. 204—181.

McQuillen, Edward J., and F. X. Murphy, to United States of America, Navy. Apparatus for towed aircraft. 3,100,093, 8–6–63, Cl. 244—3.

Mecanorga S.A.: *See*—
Deffrenne, Paul C. F. 3,100,130.

Mechanical Handling Systems, Inc.: *See*—
Bishop, Leonard J., Klamp, and Krammer. 3,099,966.

Melton, Donald F., and H. E. Froehlich, to General Mills, Inc. Underwater vehicle system. 3,099,913, 8–6–63, Cl. 61—69.

Melville, John W.: *See*—
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Menasco Mfg. Co.: *See*—
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Merck & Co., Inc.: *See*—
Christensen, Burton G. 3,100,210.
Obersier, Arthur E., Beyler, and Sarett. 3,100,204.

Merck, E., Aktiengesellschaft: *See*—
Schulte, Karl, Müller, and Kraft. 3,100,205.

Merkle, Charles R. Feed dispenser. 3,099,980, 8–6–63, Cl. 119—57.

Merner, Kenneth R.: *See*—
Brainard, Wallace E., and Merner. 3,099,873.

Metalastik Ltd.: *See*—
Hirst, Archie J., and Liversage. 3,099,967.
Horovitz, Marcus. 3,099,879.

Meyer, John F.: *See*—
Dryden, Hugh L. 3,100,294.

Meyer, Owen L., to United States of America, Army. Semiconductor solid circuits. 3,100,276, 8–6–63, Cl. 317—234.

Mican, George S., and C. W. Sidwell, to United States Steel Corp. Soaking pit. 3,100,107, 8–6–63, Cl. 263—15.

Milbury, Elwood E., and E. W. Shultz, to Humane Slaughtering Device Corp. Apparatus for separating the windpipe from the esophagus of an animal. 3,099,857, 8–6–63, Cl. 17—1.

Miles Laboratories, Inc.: *See*—
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Miller, Jack, to United States of America, Atomic Energy Commission. Method for air carbon-arc cutting or gouging. 3,100,255, 8–6–63, Cl. 219—70.

Mindheim, Daniel J., and H. C. Lindemann, to Lindley & Co., Inc. Yarn tensioning device. 3,100,091, 8–6–63, Cl. 242—150.

Minneapolis-Honeywell Regulator Co.: *See*—
Stucka, Edward P. 3,100,079.

Minnesota Mining & Mfg. Co.: *See*—
Goodell, John D., Ivins, Wistrand, and Tasi. 3,100,090.
Smith, Gordon R., and Wands. 3,100,180.

Mnemotron Corp.: *See*—
Clynes, Manfred E. 3,100,285.

Monsanto Chemical Co.: *See*—
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Lee, Emerson H. 3,100,234.
May, Paul D., and Kohn. 3,100,218.
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Moore, Jesse C. Valve structure. 3,100,002, 8–6–63, Cl. 137—609.

Moore, John F. Tobacco curing system. 3,100,145, 8–6–63, Cl. 34—48.

Moore, Walter L., to Boving and Co. Ltd. Butterfly valve having a sealing surface mounted for axial movement. 3,100,104, 8–6–63, Cl. 251—175.

Morgan Construction Co.: *See*—
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Morgan, David I.: *See*—
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Morrill, Richard W.: *See*—
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Mountz, Paul A., to Latham Mfg. Co. Article washer. 3,099,848, 8–6–63, Cl. 15—3.14.

Muller, Arthur, and T. Bersin. Process for preparing an iron hydroxide polyisomaltose complex and the resulting product. 3,100,202, 8–6–63, Cl. 260—209.

Müller, Heinrich: *See*—
Schulte, Karl, Müller, and Kraft. 3,100,205.

Mullins, Glenn L. Boiler room fuel tank. 3,100,082, 8–6–63, Cl. 239—278.

Müllner, Friedrich: *See*—
Darrieus, Georges, and Müllner. 3,100,271.

Munns, Michael G.: *See*—
Gasper, Emeric, Munns, and Butler. 3,099,861.

Murphy, Francis T., to Rock-Ola Mfg. Corp. Credit accumulator. 3,100,035, 8–6–63, Cl. 194—48.

Murphy, Francis X.: *See*—
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National Aeronautics and Space Administration: *See*—
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National Broach & Machine Co.: *See*—
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National Cash Register Co., The: *See*—
Bennett, John W., and Perry. 3,100,113.
Green, Albert J., Randall, Williams, and Werner. 3,100,037.

National Castings Co.: *See*—
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Neff, Joseph J., to Ampex Corp. Tape clamping roller assembly. 3,100,071, 8–6–63, Cl. 226—176.

Nelson, Reuben F., to American Seal-Kap Corp. of Delaware. Railway car door operating lever safety structure. 3,099,804, 8–6–63, Cl. 20—23.

Neubner, Rolf, and F. Langehenke; said Langenhenke assor. to said Neubner. Apparatus for the production of melamine. 3,100,139, 8–6–63, Cl. 23—260.

Newcomb, Philip P., to United Aircraft Corp. Nozzle construction. 3,099,909, 8–6–63, Cl. 60—35.6.

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Nier, Erich-Arthur, to H. Gubela. Process for the manufacturing of plastic hollow bodies. 3,100,172, 8–6–63, Cl. 156—228.

Norrholm, Paul H. Winding apparatus and tensioning means therefor. 3,100,089, 8–6–63, Cl. 242—6.

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Northrop Corp.: *See*—
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Northrup, Karl A.: *See*—
Eichorn, Roger H., Morrill, Northrup, and Osborne. 3,099,943.

Oberster, Arthur E., R. E. Beyler, and L. H. Sarett, to Merck & Co., Inc. Haloethisterone compounds. 3,100,204, 8–6–63, Cl. 260—239.55.

O'Brien, Richard C., to Harris-Intertype Corp. Photographic type composition. 3,099,945, 8–6–63, Cl. 95—4.5.

O'Connor, Walter J., to Satec Corp. Temperature control system for specimen testing. 3,100 253, 8–6–63, Cl. 219—20.

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O'Dell, Jerry L. and J. R. 3,099,841.

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Ogata, Shinji: *See*—
Toriumi, Noboru, Ogawa, Ogata, and Yamura. 3,100,036.

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Orlando, Luigi E., and C. Corradi, to Alfa Romeo, S.p.A. Air-cooled internal combustion engine. 3,099,983, 8–6–63, Cl. 123—41.61.

Orloff, Harold D., to Ethyl Corp. Sulfur bridged cyclohexyl phenols. 3,100,229, 8–6–63, Cl. 260—609.

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Eichorn, Roger H., and Osborne. 3,099,944.

Oshima, Takeichi, and Y. Uyemura. Coating composition. 3,100,154, 8–6–63, Cl. 106—57.

Ott, William F., J. H. Krein, O. J. Eickmann, and H. A. Carlson, to ACF Industries, Inc. Carburetor. 3,100,236, 8–6–63, Cl. 261—34.

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Panizzi, Luigi, and A. Vercellone, to Societa Farmaceutici Italia. Process for making 1,4-dicaffeylquinic acid. 3,100,224, 8–6–63, Cl. 260—473.

Park, Wallace S. Stabiliser for the optical projector carriage of photogrammetric projection instruments. 3,099,934, 8–6–63, Cl. 88—24.

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Perry, William M., to General Aniline & Film Corp. Non-alcoholic aerosol film forming compositions. 3,100,179, 8–6–63, Cl. 167—87.1.

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Philco Corp.: *See*—
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Philips Electronics and Pharmaceutical Industries Corp.: *See*—
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Phillips Petroleum Co.: *See*—
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Smith, Lon T. 3,100,200.

Pigage, Robert F.: *See*—
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Pines Engineering Co., Inc.: *See*—
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Podmore, Henry L., and Fahey. 3,100,088.

Polarad Electronics Corp.: *See*—
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Pollock, Gordon J., and G. L. Fowles, to The E. F. Hauserman Co. Composite panel assembly. 3,099,863, 8–6–63, Cl. 20—4.

Ponting, Eric J., to Ingot Casting Machines Ltd. Casting machines. 3,099,867, 8–6–63, Cl. 22—76.

Pool, William O., to McGaw Laboratories, Inc. Process for purifying protein hydrolysate solutions. 3,100,201, 8–6–63, Cl. 260—112.

Poor & Co.: *See*—
Gallagher, John J. 3,100,081.

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French, James A. T. 3,100,243.

Pottle, Kenneth L. Type for composing for lithographing. 3,099,947, 8–6–63, Cl. 95—85.

Pratt, John W.: *See*—
Lane, Harold, Pratt, and Quarmby. 3,099,846.

Premo, John G.: *See*—
Ryznar, John W., and Premo. 3,100,181.

Projectile & Engineering Co. Ltd., The: *See*—
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Pucher, Walter. Oil circuit breaker comprising an extinguishing chamber for high voltages. 3,100,249, 8–6–63, Cl. 200—150.

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Punnett, Frazer D.: *See*—
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Put, Elias: *See*—
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Puts, Hans, R. Lehnarts, and E. Feldman, to Joh. Vaillant K.G. Thermoelectric ignition safety device. 3,099,994, 8–6–63, Cl. 137—66.

Quarmby, Robert C.: *See*—
Lane, Harold, Pratt, and Quarmby. 3,099,846.

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Schade, Otto H., Sr. 3,100,005.

Raman, Harvey P., and S. R. McLane, to Amchem Products, Inc. 2,5 dichloro-3 acylamino-bensoic acids. 3,100,226, 8–6–63, Cl. 260—518.

Ramco Equipment Corp.: *See*—
Randall, Max. 3,100,105.

Randall, Harold O.: *See*—
Green, Albert J., Randall, Williams, and Werner. 3,100,037.

Randall, Max, to Ramco Equipment Corp. Degreaser. 3,100,105, 8–6–63, Cl. 259—103.

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Raufenbarth, Frans, to W. H. Joens & Co., G.m.b.H. Electropneumatic transducer. 3,099,995, 8–6–63, Cl. 137—82.

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Luftman, Alvin S., and Sawyer. 3,100,274.
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Regan Forge and Engineering Co.: *See*—
Regan, John. 3,100,015.

Regan, John, to Regan Forge and Engineering Co. Method of and apparatus for running equipment into and out of wells. 3,100,015, 8–6–63, Cl. 166—46.

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Reich, Robert W. Electromagnetic pendulum drive. 3,100,278, 8–6–63, Cl. 318—128.

Reines, Jose, to International Business Machines Corp. Function generators. 3,100,297, 8–6–63, Cl. 340—174.1.

Remington Arms Co., Inc.: *See*—
Daubenspeck, Benjamin K., Dickey, Foote, and Whipple. 3,099,958.

Revere Corp. of America: *See*—
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Case, Noel L., and Rexford. 3,100,270.

Rheinmetall, G.m.b.H., Firma: *See*—
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Rich, John P., to Improved Machinery Inc. Groundwood discharger. 3,100,192, 8–6–63, Cl. 210—386.

Richards, Howard R., and A. V. Alexeff, to Industrial Ovens, Inc. Adjustable wrap web guiding apparatus. 3,100,069, 8–6–63, Cl. 226—17.

Rigterink, Raymond H., to The Dow Chemical Co. O-(1,6-dihydro-6-oxo-3-pyridazinyl) O-alkyl phosphoramidate and phosphoramidothioate. 3,100,206, 8–6–63, Cl. 260—250.

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Rimland, Bernard. Toy rocking device. 3,100,114, 8–6–63, Cl. 272—56.

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Robbins, Jack W.: *See*—
Keck, Harold P. 3,099,955.

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Romeo, Alfa, S.p.A.: *See*—
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Rosenbaum, Charles H., to Eastern Products Corp. Window shade roller. 3,099,916, 8–6–63, Cl. 64—5.

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Rösener, Wolfgang, t. Vereinigte Glanzstoff-Fabriken AG. Method for dyeing polypropylene textile material and product. 3,100,133, 8–6–63, Cl. 8—55.

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Rubens, George J. Tiltable bowl. 3,100,054, 8–6–63, Cl. 215—1.

Rudszinat, Willy, and H. Berlin, to Hauni-Werke Korber & Co. K.G. Method for supplying connector sheets to groups of filter plugs and cigarettes. 3,099,989, 8–6–63, Cl. 131—94.

Ruge, Ulrich, to C. F. Boehringer & Soehne G.m.b.H. Composition and process for promoting the growth of plants. 3,100,149, 8–6–63, Cl. 71—2.3.

Ruschig, Heinrich: *See*—
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Ryznar, John W., and J. G. Premo, to Nalco Chemical Co. Preparation of organoboranes. 3,100,181, 8–6–63, Cl. 204—59.

Sabatino, Anthony, and E. J. Jackson, to Globe-Union Inc. Active material for storage batteries and method of making same. 3,100,162, 8–6–63, Cl. 136—26.

Sandoz Ltd.: *See*—
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Sarett, Lewis H.: *See*—
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Sawyer, Carleton E.: *See*—
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Schade, Otto H., Sr., to Radio Corp. of America. Wire guide for grid making machine. 3,100,005, 8–6–63, Cl. 140—71.5.

Schaefer, Edward E. Support for display rack or the like. 3,100,099, 8–6–63, Cl. 248—194.

Scharfman, Howard, and F. J. O'Hara, to Raytheon Co. Electrical shifters utilizing variable delay imparted to circularly polarized electric waves by variably magnetized ferrite material. 3,100,287, 8–6–63, Cl. 333—24.1.

Schaurer, Gustav, and A. Heinzel, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of heavy hydrogen. 3,100,188, 8–6–63, Cl. 23—210.

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Schliephacke, Fridtjof F., to A. Lorenz. Reclining chair and control arrangement. 3,100,126, 8–6–63, Cl. 297—89.

Schloemann, Ernst F. R. A., to Raytheon Co. Ferrite isolator utilizing aligned crystals with a specific anisotropy constant. 3,100,288, 8–6–63, Cl. 333—24.2.

Schmid, Ulrich J.: *See*—
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Schneider, John A., and Pasch. 3,100,117.

Schneider, John A., and T. Pasch, to A. D. Schneider and Co. Floating arbor. 3,100,117, 8–6–63, Cl. 279—66.

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Schreiber, Carl W., to Owens-Illinois Glass Co. Universal automatic ware loading machine and method. 3,100,051, 8–6–63, Cl. 214—1.

Schroeder, Herbert M., and J. A. Pawlak, to Textron Inc. Liquid condensation product of a drying oil, a polyalkandi, and a polyoxyethylene polyol. 3,100,157, 8–6–63, Cl. 106—287.

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Schulte, Karl, H. Müller, and H.-G. Kraft, to E. Merck Aktiengesellschaft. Cyclohexane derivatives. 3,100,205, 8–6–63, Cl. 260—247.2.

Schwaneke, Fred C., and E. J. Sheehan; said Sheehan assor. to W. D. Harbaugh. Sail rigging. 3,099,976, 8–6–63, Cl. 114—91.

Schwartz, Louis J., C. and I. Cangelosi. Button holder for sewing machine. 3,099,971, 8–6–63, Cl. 112—114.

Schweizerhof, Sigfrid, to Telefunken G.m.b.H. Method of manufacturing magnetic core matrices. 3,099,874, 8–6–63, Cl. 29—155.5.

Schweizerhof, Sigfrid, to Telefunken G.m.b.H. Method of making magnetic matrices and resulting article. 3,100,295, 8–6–63, Cl. 340—174.

Schwenk, Erwin, and A. M. Gold, to The Worcester Foundation for Experimental Biology. 3-amino-1,3,5(10)-estratriene-derivatives and process for their manufacture. 3,100,209, 8–6–63, Cl. 260—397.3.

Seavey, Frederick R., to Olin Mathieson Chemical Corp. Detonator seal. 3,099,957, 8–6–63, Cl. 102—28.

Seeler, Henry W., to United States of America, Air Force. Quick release mechanism. 3,099,870, 8–6–63 Cl 24—280.

Segur, Asa B. Poultry break-apart method. 3,099,858, 8–6–63, Cl. 17—45.

Selikson, Nathan, to Menasco Mfg. Co. Purging apparatus. 3,100 108, 8–6–63, Cl. 263—40.

Sexsmith, Fred H., to Johnson & Johnson. Methods for treating textile materials and resulting products. 3,100,185, 8–6–63, Cl. 8—116.

Shaler, David, D. F. Cleary, and W. L. Kacin, to Hogan Faximile Corp. Recorder drying mechanism. 3,100,252, 8–6–63, Cl. 219—19.

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Sheehan, Joseph E., Sr. 3,100,041.

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Shenker, Benjamin, and B. P. Fabricand, to Industrial Electronic Hardware Corp. Dosimeter of the radio photoluminescent glass type. 3,100 262, 8–6–63, Cl 250—83.

Shennum, John L. Aerial lift device. 3,100,025, 8–6–63, Cl. 182—2.

Showers, Lewis M., Jr. Anti-skid chain operating device. 3,099,928, 8–6–63, Cl. 81—15.8.

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Tims, Donald E., Shrader, and Livingston. 3,100,019.

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Mican, George S., and Sidwell. 3,100,107.

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Siggel, Erhard, and F. Kleekamm, to Vereinigte Glanzstoff-Fabriken A.G. Method and apparatus for heating and drawing threads. 3,099,872, 8–6–63, Cl. 28—71.3.

Simon, George, to Kay Mfg. Corp. Double hinged inner spring unit. 3,099,843, 8–6–63, Cl. 5—351.

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Sizemore, Walter R., to Hanes Hosiery Mills Co. Device for straightening and aligning the points of knitwear looping machines. 3,100,010, 8–6–63, Cl. 153—39.

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331— 47: 3,100,283
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CLASSIFICATION OF DESIGNS

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CLASSIFICATION OF PLANTS

P.—	65: 2,272	P.—	82: 2,273	P.—	87: 2,271

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
August 6, 1963 Volume 793 Number 1

TRADEMARKS
NOTICES

Trademark Classification and Search Division

Permanent wave kits for home use, formerly classified in Class 44, Dental, Medical and Surgical Appliances, have been transferred to Class 51, Cosmetics and Toilet Preparations.

Classes 44 and 51 should be searched until the necessary cross-references can be made.

HORACE B. FAY, JR.,
Assistant Commissioner of Patents.

July 3, 1963.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 339,329 (DO-ALL), Continental Machine Specialties, Inc., Combination band sawing and filing machine; **Reg. No. 390,078** (DO ALL), The DoAll Company, Grinders of the machine tool type suitable for precision surface grinding and machine tool cutter grinding, etc.: **Reg. No. 394,883**, same, Files, file segments, file bands, saws and saw bands; **Reg. No. 424,899** (DOALLOY), same, metal working and forming dies, molding dies for molding powdered metal, etc.; **Reg. No. 429,124** same, Powdered metal, carbonides, and unfinished and partly finished parts made of or with said materials; **Reg. No. 585,424** (DO ALL AND DESIGN), same, Steel ink, etc., lubricant, etc., electrical apparatus, etc., machine tools, etc., gaging instruments and attachments therefor, etc.: **Reg. No. 600,333** same, Desk type staplers, pocket knives; **Reg. No. 610,668** same, Saw pitching gages used for gaging the pitch of saw teeth, and steel rules; **Reg. No. 679,956** (DO ALL), same, Taps, reamers, end mills, cutters, counter bores, tool bits, and slicing and dicing machines; **Reg. No. 679,957** (DO ALL AND DESIGN), same, Tool bits and lathe centers, slicing and dicing machines, and precision lapping machines, **filed** Apr. 15, 1963, D.C., N.D. Ohio (Toledo), Doc. C–63–60, *The DoAll Company* v. *Do-All Appliance Service Co.*

Reg. No. 390,078. (See Reg. No. 339,329.)

Reg. No. 394,883. (See Reg. No. 339,329.)

Reg. No. 424,899. (See Reg. No. 339,329.)

Reg. No. 429,124. (See Reg. No. 339,329.)

Reg. No. 585,424. (See Reg. No. 339,329.)

Reg. No. 600,018 (PLAYBOY), HMH Publishing Co., Inc., Monthly magazine; **Reg. No. 643,926** (DESIGN OF RAB-

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	17,022
Date of oldest new application	Oct. 22, 1962
Date of oldest amended application	Oct. 16, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10–22–62	10–16–62
(II) H. E KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	12–3–62	11–13–62
Renewals (All Classes)	6–3–63	6–26–63
Sec. 12 (c) Publications (All Classes)	6–12–63	5–29–63

Applications filed during the month of June 1963—2,026

Registrations Issued	481—No. 753,897 to No. 754,377
Renewals Issued	60

For the quarter—April 1, 1963 through June 30, 1963

Applications filed	6535
Registrations issued	4446
Renewals issued	718
Cancellations under Section 8	1210

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

BIT'S HEAD), same, filed Nov. 28, 1962, D.C., E.D. Wash. (Spokane), Doc. 2323, *HMH Publishing Co., Inc. et al.* v. *Robert Shaw et al.* Decree and injunction entered enjoining defendant Vern E. Lambert Apr. 5, 1963. Order of dismissal entered dismissing without prejudice defendants Robert Shaw and Joe Close Apr. 12, 1963.

Reg. No. 600,333. (See Reg. No. 339,329.)

Reg. No. 610,668. (See Reg. No. 339,329.)

Reg. No. 643,926. (See Reg. No. 600,018.)

Reg. No. 648,083 (TRANS-CURE), Kapro Corporation, Automotive transmission fluid additive; **Reg. No. 746,118** (MOTOR CURE), same, filed Jan. 7, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c39, *Yale Engineering Co.* v. *Kapro Corporation.* Trademarks held valid and infringed by plaintiff; complaint dismissed with prejudice May 9, 1963.

Reg. No. 650,035 (PLAY-DOH), Rainbow Crafts, Inc., Plastic type modeling compound for children's use, filed Feb. 8, 1961, D.C., E.D. Missouri (St. Louis), Doc. 61c55(3), *Rainbow Crafts, Inc.* v. *Absorene Manufacturing Company, Inc.* Stipulation filed and approved; cause dismissed with prejudice.

Reg. No. 679,956. (See Reg. No. 339,329.)

Reg. No. 679,957. (See Reg. No. 339,329.)

Reg. No. 710,670 (31 AND DESIGN), Huntington Ice Cream Co., doing business as Baskin-Robbins Ice Cream, Ice cream; **Reg. No. 712,570** same, Confections—namely, ice cream, filed Apr. 23, 1963, D.C., N.D. Ill (Chicago), Doc. 63c667, *Baskin-Robbins, Inc. et al.* v. *Bresler Ice Cream Co.*

Reg. No. 712,115 (LIGHTOMATIC), Camera Specialty Company, Inc., Cameras, filed June 4, 1963, D.C., S.D.N.Y., Doc. 63/1638, *Camera Specialty Company, Inc.* v. *Kine Camera Company, Inc.*

Reg. No. 712,570. (See Reg. No. 710,670.)

Reg. No. 716,983 (501 CARPET NYLON AND DESIGN), E. I. du Pont de Nemours and Company, Carpeting, filed June 5, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 33595, *E. I. du Pont de Nemours and Company* v. *Albert A. Curringa.*

Reg. No. 746,118. (See Reg. No. 648,083.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 147,019. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. No. 579,894.
For Synthetic Rubber.
First use on or about Oct. 1, 1959.

SN 153,077. Ernst Benary Samensucht GmbH, Hannoversch-Munden, Germany. Filed Sept. 13, 1962.

TAUSENDSCHOEN

"Tausendschoen" is a German word meaning "thousand wonders."
For Flower Seeds.
First use December 1958; in commerce 1954.

SN 155,145. Four Winds Growers, Mission San Jose, Calif. Filed Oct. 15, 1962.

SEVEN SEAS

For Growing Trees and Shrubs.
First use Apr. 27, 1962.

SN 155,146. Four Winds Growers, Mission San Jose, Calif. Filed Oct. 15, 1962.

TRADE WINDS

For Growing Trees and Shrubs.
First use July 10, 1962.

SN 156,639. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.

C NYLON

No claim is made to the word "Nylon" apart from the mark as shown. Owner of Reg. Nos. 139,470, 731,683, and others.
For Fiber and Filaments.
First use Oct. 17, 1962.

SN 156,640. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.

C NYLON CHEMSTRAND

No claim is made to the word "Nylon" apart from the mark as shown. Owner of Reg. Nos. 600,796, 735,517, and others.
For Fiber and Filaments.
First use Oct. 17, 1962.

SN 156,641. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.

C POLYESTER

No claim is made to the word "Polyester" apart from the mark as shown. Owner of Reg. Nos. 600,796, 731,605, and 731,683.
For Fiber and Filaments.
First use Oct. 15, 1962.

SN 157,148. Fred Rueping Leather Company, Fond du Lac, Wis. Filed Nov. 13, 1962.

GLUVO

Owner of Reg. No. 745,010.
For Leathers.
First use Oct. 19, 1962.

SN 158,423. Barrett & Company, Inc., Newark, N.J. Filed Dec. 4, 1962.

ANGORA CALF

The word "Calf" is disclaimed apart from the mark as shown.
For Bulk Leather for Shoes.
First use Aug. 16, 1955.

SN 160,591. American Cyanamid Company, Wayne, N.J. Filed Jan. 14, 1963.

CRESLOFT

Owner of Reg. Nos. 559,401 and 652,884.
For Synthetic Fiber.
First use Dec. 21, 1962.

SN 161,033. Fiberfil, Inc., Warsaw, Ind. Filed Jan. 21, 1963.

NYLAGLAS

For Reinforced Synthetic Resinous Injection-Molding Materials in Pellet or Granular Form.
First use on or about Nov. 2, 1962.

SN 163,238. M. Milton Hoffman, d.b.a. The Hoffman Seed & Grain Co., Muncy, Pa. Filed Feb. 21, 1963.

QUIC-KROP

For Seed Corn and Field Seeds.
First use at least as early as Apr. 24, 1961.

SN 164,637. Lynk Bros. & Baird, Marshalltown, Iowa. Filed Mar. 14, 1963.

LYNKS'

MIRACLE.GENE

For Corn Seeds.
First use about Jan 15, 1956.

SN 164,934. Edgewood Farms, Inc., Marysville, Ohio. Filed Mar. 18, 1963.

HIGHLANDER

For Grass Seed.
First use January 1942.

Class 2 — Receptacles

SN 135,093. Cantop Incorporated, Bala-Cynwyd, Pa., by merger from Can-Top Machinery Corporation, Bala-Cynwyd, Pa. Filed Jan. 3, 1962.

CANTOP

For Easy Opening Cans.
First use May 1959.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 160,070. Paxton Originals, Ltd., Brooklyn, N.Y. Filed Jan. 2, 1963.

RACQUET CLUB

For Leather Wallets and Billfolds.
First use Mar. 1, 1962.

Class 4 — Abrasives and Polishing Materials

SN 124,415. Cardinal Engineering Corporation, Philadelphia, Pa. Filed July 21, 1961.

NON-BRAK

For Abrasive Cutting Wheels or Blades.
First use Apr. 6, 1953.

SN 125,359. Coated Abrasives, Inc., Detroit, Mich. Filed Aug. 4, 1961.

CA

For Abrasives and Polishing Materials and Abrasive Articles—Namely, Abrasive Coated Paper and Cloth for Grinding and Finishing Operations.
First use Feb. 13, 1961.

SN 147,021. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. Nos. 308,989 and 424,694.
For Combination Auto Cleaner and Polish, Auto Polish, Combination Cleaner and Wax (Liquid and Paste), Combination Metal Cleaner and Polish.
First use on or about Aug. 1, 1960.

SN 156,015. Nu Foam of Nevada, Ltd., North Las Vegas, Nev. Filed Oct. 26, 1962.

TALLY

For Scouring Pad.
First use Oct. 2, 1962.

SN 158,384. Romeo Packing Company, Half Moon Bay, Calif. Filed Dec. 3, 1962.

ROMEO

For Glass Cleaner and Polish.
First use Sept. 1, 1962.

SN 161,438. Colgate-Palmolive Company, New York, N.Y. Filed Jan. 25, 1963.

SPREE

Owner of Reg. Nos. 389,695 and 681,255.
For Furniture Wax.
First use Sept. 13, 1962.

SN 164,504. Cabot Corporation, Boston, Mass. Filed Mar. 13, 1963.

CAB-O-BRADE

For Garnet Material in Granular Form for Use in Abrasive and Skid Resistant Applications.
First use Jan. 24, 1963.

SN 164,846. Industrial Finishing Products, Inc., Brooklyn, N.Y. Filed Mar. 18, 1963.

DULL-GUARD

For Furniture Polish.
First use Nov. 10, 1962.

Class 5 — Adhesives

SN 131,651. Bloomingdale Rubber Company, Aberdeen, Md. Filed Nov. 9, 1961.

FM

For Adhesives of the Type Including Synthetic Resin Adhesives, Rubber Based Adhesives and Vinyl Adhesives in Liquid, Powdered and Adhesive Film (and/or Sheet) Form.
First use Jan. 30, 1948.

SN 139,687. Standard Chemical Products, Inc., Hoboken, N.J. Filed Mar. 12, 1962.

STANFIX

For Synthetic Resin Adhesives.
First use Feb. 2, 1962.

SN 140,215. Adhesion Engineering Co., Inc., Bridgeville, Pa. Filed Mar. 20, 1962.

AD-E-BOND

For Adhesives and Diluents Therefor for Use in Contact Bonding of Most Materials Including Wood, Metal, Plastic, Canvas, Rubber, Glass, Paper, Cardboard.
First use on or about Feb. 5, 1962.

SN 144,579. Wilhold Glues, Inc., Los Angeles, Calif. Filed May 14, 1962.

Candle-Stixs

For Adhesive for Use in Holding Candles, Artificial Flowers, Ornaments, and for Similar Uses.
First use Nov. 1, 1961.

SN 145,023. Arno Adhesive Tapes, Inc., Michigan City, Ind. Filed May 21, 1962.



For Adhesive Coated Tapes Including Paper Masking Tape, Plastic Tape, Strapping Tape, Double-Faced Tape, Sealing Tape, Cloth Tape, Coated Cloth Tape, Pipe-Wrap Tape, and Adhesive Compounds of Elastomer-Based Dry Materials of the Character Commonly Referred to as Caulking Compound.
First use May 1957.

SN 145,054. The Commercial Paste Company, Columbus, Ohio. Filed May 21, 1962.

QUICK STICK

Owner of Reg. No. 155,184.
For Wall Size and Cold Water Paste Powder.
First use Jan. 1, 1912.

SN 146,695. The Western Management Corporation, d.b.a. Northwest Processing Company, Tacoma, Wash. Filed June 11, 1962.

NORPROFIL

For Extender for Adhesives.
First use Nov. 10, 1961.

SN 147,022. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. No. 676,545.
For Friction Tape and Boot Cement.
First use on or about Jan. 7, 1961.

Class 6 — Chemicals and Chemical Compositions

SN 103,068. Charles C. Whitmer, Cleveland, Ohio. Filed Aug. 19, 1960.

CHEM FLOC

For Swimming Pool Water Flocculant or Coagulant.
First use Feb. 15, 1959.

SN 111,749. Nalco Chemical Company, Chicago, Ill. Filed Jan. 12, 1961.

918

For Preparation of Polyphosphates Used for Water Treating.
First use about Jan. 6, 1942.

SN 147,023. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. Nos. 423,203 and 529,105.
For Radiator Stop Leak, Brake Fluid, Lighter Fluid, Antifreeze, Insecticides, Hydrocarbons, Such as Methane, Ethane, Butane, Ethylene, Etc., Mercaptans, Sulfides, Natural Gas, and Solvents.
First use on or about Aug. 1, 1960.

SN 147,922. Gold Seal Company, Bismarck, N. Dak. Filed June 28, 1962.

HERBARY GARDENS

For Aerosol Room Spray.
First use May 1, 1941.

SN 149,296. Ketona Chemical Corporation, Birmingham, Ala. Filed July 18, 1962.

KETONA

For Anhydrous Ammonia.
First use Mar. 2, 1956.

SN 155,203. Spectra Biologicals, Incorporated, East Brunswick, N.J. Filed Oct. 15, 1962.

SPECTRAZYME

For Proteolytic Enzyme Product for Laboratory Use.
First use Oct. 2, 1962.

SN 161,491. Fulbright Laboratories, Inc., Charlotte, N.C. Filed Jan. 28, 1963.

FUL-O-GARD

For Chemical Preparation for Preventing the Formation of Algae in Water Systems and for Control of Mineral Deposits or Scale.
First use Oct. 10, 1962.

SN 161,604. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 29, 1963.

Curax

For Accelerators for the Vulcanization of Rubber.
First use Dec. 14, 1962.

SN 161,834. Universal Oil Products Company, Des Plaines, Ill. Filed Jan. 31, 1963.

UNICAT

For Solid Catalyst.
First use Oct. 24, 1962.

SN 161,960. Continental Oil Company, Ponca City, Okla. Filed Feb. 4, 1963.

CONOCO H-25

Owner of Reg. Nos. 682,730, 698,370, and 743,991.
For Plasticizer.
First use Feb. 20, 1962.

SN 162,063. American Cyanamid Company, Wayne, N.J. Filed Feb. 5, 1963.

NEDAC

For Accelerator for the Vulcanization of Rubber.
First use Oct. 25, 1962.

SN 162,121. Trojan Powder Company, Allentown, Pa. Filed Feb. 5, 1963.

DMPA

For Dimethylol Propionic Acid.
First use Sept. 11, 1962.

SN 162,157. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 6, 1963.

OMNEX

For Chemical Compound Used as an Ingredient of Insecticides.
First use Dec. 3, 1962.

Class 7 — Cordage

SN 149,215. Schermerhorn Bros., Inc., Portland, Oreg. Filed July 17, 1962.

CONTINENTAL

For Cordage and Twine Including Baler Twine.
First use April 1962.

SN 160,653. New England Yarn & Textile Company, Pawtucket, R.I. Filed Jan. 14, 1963.

tie it

For Twine.
First use Dec. 26, 1962.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 158,546. L. W. Loyd Company, Inc., South Pittsburg, Tenn. Filed Dec. 5, 1962.

Black Bat

For Firecrackers.
First use Aug. 26, 1962.
Subj. to Intf. with SN 158,634.

SN 158,634. Li & Fung Ltd., Hong Kong. Filed Dec. 6, 1962.

Black Cat

For Firecrackers and Fireworks.
First use Feb. 23, 1952; in commerce Feb. 23, 1952.
Subj. to Intf. with SN 158,546.

Class 10 — Fertilizers

SN 147,024. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. Nos. 568,987 and 618,062.
For Fertilizer.
First use February 1960.

SN 150,918. The Bennett Chemical Company, Denver, Colo. Filed Aug. 10, 1962.

Mult-El-izer

For Fertilizer.
First use Feb. 12, 1962.

SN 155,862. Virginia-Carolina Chemical Corporation, Richmond, Va. Filed Oct. 24, 1962.

V-C VIGILANTE

Owner of Reg. Nos. 235,994, 347,634, and others.
For Fertilizers.
First use Mar. 2, 1961.

SN 155,863. Virginia-Carolina Chemical Corporation, Richmond, Va. Filed Oct. 24, 1962.

V-C VITANITE

Owner of Reg. Nos. 235,994, 347,634, and others.
For Organic Nitrogen Fertilizer.
First use Feb. 12, 1962.

SN 159,588. International Minerals & Chemical Corporation, Skokie, Ill. Filed Dec. 21, 1962.

SUPER Q

For Fertilizer.
First use Nov. 8, 1962.

Class 11 — Inks and Inking Materials

SN 150,175. Lawter Chemicals, Inc., Chicago, Ill. Filed July 31, 1962.

TRIONOL

For Oleoresinous Vehicle for Printing Inks.
First use November 1961.

Class 12 — Construction Materials

SN 133,392. Modular Molding Corporation, West Trenton, N.J. Filed Dec. 5, 1961.

MODULITE

For Fiber Glass Embedment Panels Which Are Used for Electronic Instrument Control Panels, Vending Machine Faces, Schematic Diagrams, Decorative Product Components and, Exterior and Interior Marker Designs.
First use Oct. 20, 1958.

SN 135,690. The Maco Corporation, Huntington, Ind. Filed Jan. 12, 1962.

FACIA-WAL

For Decorative Grid System for Covering or Facing Buildings.
First use Nov. 22, 1961.

SN 147,417. Wall Tile Corp., New York, N.Y. Filed June 21, 1962.

ADD·A·MIRROR

For Mirrored Glass Squares and Panels for Covering Walls and Ceilings.
First use June 12, 1962.

SN 147,571. Götaverkens Fönster AB, Kallered, near Gothenburg, Sweden. Filed June 25, 1962.

SIMO

Owner of Swedish Reg. No. 75,985, dated May 14, 1954.
For Construction Elements for Shipbuilding and House Building Made of Metal, Wood, Stone, Cement, Concrete, Gypsum, Fiber, Chip, Straw, and Glass Comprising Construction Details for the Goods Mentioned—Namely, Windows, Doors, Prefabricated Ceiling Panels and Wall Partition Panels and Prefabricated Houses.

SN 157,088. Elgin Glass and Mirrior Company, Elgin, Ill. Filed Nov. 13, 1962.

COUNTRY SQUIRE

For Doors and Windows Made of Metal, Wood and/or Plastic for the Home.
First use Oct. 10, 1962.

SN 158,624. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Dec. 6, 1962.

H-W HARMIX AL

The letters "AL" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 310,762, 707,973, and others.
For Unconsolidated Refractory Mixes.
First use May 3, 1962.

SN 161,117. Unistrut Corporation, Wayne, Mich. Filed Jan. 21, 1963.

UNISPAR

For Metallic Construction Members, Telescoping and Perforated Tubing, and Fittings and Connections Therefor, Adapted To Serve as Framing and Supporting Means for Temporary and Permanent Construction of Buildings and Other Structures—Namely, Ceiling, Wall and Roofing Panels, Racks, Scaffolding, Ladders, Rails, Shelving, Benches, Signs, and Billboards, Awnings, Fences and the Like.
First use Jan. 8, 1963.

SN 161,118. Unistrut Corporation, Wayne, Mich. Filed Jan. 21, 1963.

PERFOSPAR

For Metallic Construction Members, Telescoping and Perforated Tubing, and Fittings and Connections Therefor, Adapted To Serve as Framing and Supporting Means for Temporary and Permanent Construction of Buildings and Other Structures—Namely, Ceiling, Wall and Roofing Panels, Racks, Scaffolding, Ladders, Rails, Shelving, Benches, Signs, and Billboards, Awnings, Fences and the Like.
First use Jan. 8, 1963.

SN 161,628. Pascagoula Veneer Company, Pascagoula, Miss. Filed Jan. 29, 1963.

PAVCO

For Wood Paneling and Plywood.
First use May 1, 1961.

SN 161,759. Alum-A-Fold Corporation, Rockford, Ill. Filed Jan. 31, 1963.

ALUM-A-FOLD

For Metal Awnings.
First use on or about Apr. 15, 1958.

SN 162,180. Moloney Products, Inc., Albia, Iowa. Filed Feb. 6, 1963.

PICTURE-VUE

For Sliding Glass Doors.
First use at least as early as the spring of 1957.

SN 162,268. E. J. Lavino and Company, Philadelphia, Pa. Filed Feb. 7, 1963.

OLIKROM

Owner of Reg. No. 398,636.
For Refractory Shapes or Bricks.
First use Dec. 17, 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 132,600. Sidney A. Wharram, Jr., d.b.a. Spring-Tite Pole Retainer Manufacturing Co., Flint, Mich. Filed Nov. 22, 1961.

SPRING-TITE

For Structural Members in the Nature of Sleeves Adapted To Retain a Pole-Like Supporting Structure Between Two Spaced Surfaces.
First use June 28, 1961.

SN 141,813. Carpenter Valves Corporation, Cleveland, Ohio. Filed Apr. 9, 1962.

CARPENTER

For Various Plumbing Articles Including Ball Valves, Needle Valves, Check Valves, Hydraulic Pumps and Hydraulic Accumulators.
First use on or about Sept. 1, 1945.

SN 142,055. P. L. Robertson Mfg. Co. Limited, Milton, Ontario, Canada. Filed Apr. 11, 1962.

KWIXIN

Owner of Canadian Reg. No. N.S. 175-44,605, dated Feb. 7, 1953.
For Double Thread Screws.

SN 143,906. Stephen A. Young Corporation, Flora, Ind. Filed May 4, 1962.

STOP-N-FLOW

For Faucets, Valves and Parts Thereof.
First use in or about January 1962.

SN 150,485. The William L. Bonnell Company, Inc., Newnan, Ga. Filed July 30, 1962.

HANG'N HOOKS

For Slidable-Hook Hanger Assemblies.
First use June 25, 1962.

SN 150,511. Ogden W. Boden, d.b.a. Progresco Co., Altadena, Calif. Filed Aug. 6, 1962.

B-LOK

For Fastening Devices for Clothing.
First use Mar. 19, 1962.

SN 150,524. Coats & Clark Inc., New York, N.Y. Filed Aug. 6, 1962.



For Separable Slide Fasteners Known as Zippers.
First use on or about Nov. 29, 1960.

SN 150,547. Fold-A-Fence Corp., Lake Grove, Oreg. Filed Aug. 6, 1962.

SNAPPY

For Ornamental Wire Lawn Fences.
First use Dec. 16, 1960.

SN 150,752. Bradley Washfountain Co., Milwaukee, Wis. Filed Aug. 8, 1962.

WALL SAVER

For Showers.
First use July 2, 1962.

SN 150,825. Van Huffel Tube Corporation, Warren, Ohio. Filed Aug. 8, 1962.

WHERE IDEAS TAKE SHAPE

For Metal Tubing.
First use in or about November 1952.

SN 151,544. B. C. Ventilating Ltd., Vancouver, British Columbia, Canada. Filed Aug. 20, 1962.

SPIR-L-OK

For Ventilation, Culvert and Drainage Pipe; and Machines for Making This Pipe.
First use November 1960; in commerce Dec. 20, 1960.

SN 151,801. Besly-Welles Corporation, South Beloit, Ill. Filed Aug. 24, 1962.

X-PRESS

Owner of Reg. No. 650,878.
For Self-Tapping Screws.
First use Aug. 15, 1962.

SN 151,847. Standard Elsmere Granite Company, Chicago, Ill. Filed Aug. 24, 1962.

MOPCEPTOR

For Terrazzo Mop Service Basins.
First use July 14, 1962.

SN 151,888. Consolidated Pipe Company of America, Stow, Ohio. Filed Aug. 27, 1962.

CON-COR

For Plastic Pipe and Plastic Fittings for the Same.
First use Oct. 25, 1961.

SN 153,098. Mobile Pipe Corporation, San Francisco, Calif. Filed Sept. 13, 1962.

MP

For Welded Pipe.
First use Dec. 6, 1961.

SN 156,285. Engineer's Investment Company, Inc., Kansas City, Mo. Filed Oct. 31, 1962.

SHEWER TAP

For Pipe Couplings, and Apparatus for Making Circular Holes in Pipe.
First use October 1960 on pipe couplings.

SN 156,291. The B. F. Goodrich Company, Akron, Ohio. Filed Oct. 31, 1962.

SHELTERSEAL

For Inflatable Bags for Temporarily Closing Pipes.
First use Aug. 6, 1962.

SN 156,362. Bateson's, Inc., Wilmington, Del. Filed Nov. 1, 1962.

SNO-DRIVES

For Vehicle Traction Devices.
First use November 1961.

SN 156,371. Cas de Leon, Inc., University City, Mo. Filed Nov. 1, 1962.

MELANIE MAID

For Zippers.
First use Oct. 16, 1961.

SN 156,690. United States Steel Corporation, Pittsburgh, Pa. Filed Nov. 5, 1962.

AMBRIDGE

Owner of Reg. Nos. 620,660, 711,711, and 711,723.
For Metal Pipe.
First use Apr. 17, 1961.

SN 157,513. Jaybee Manufacturing Corporation, Los Angeles, Calif. Filed Nov. 19, 1962.

EYE-N-BUY

For Carded Hardware, Such as for Buildings and Remodelers.
First use December 1961.

SN 157,751. Ball-Hed Marine Products Co., Inc., Glen Mar Park, Md. Filed Nov. 7, 1962.

BALL-HED

For Marine Toilets.
First use July 2, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 129,203. Electrolytic Zinc Company of Australasia Limited, Melbourne, Victoria, Australia. Filed Jan. 14, 1963.

ELECTROLYTIC ZINC CO A-Z OF AUSTRALASIA LTD

Owner of Australian Reg. No. A22,738, dated Feb. 27, 1918.
For Zinc Ingots.
First use 1918; in commerce June 30, 1953.

SN 136,748. The Dow Chemical Company, Midland, Mich. Filed Jan. 29, 1962.

DOW

Owner of Reg. Nos. 140,588, 722,373, and others.
For Metals, Especially Aluminum and Magnesium, and Their Alloys, in the Form of Ingots, Billets, Pigs, Sticks, Turnings, Filings, Shavings, Pellets, Powder and Atomized Particles; Metal Castings; Wrought Metals; Metal Extrusions, Such as Slabs, Rods, Bars, Tubes, Wire, Pipe Brazing Filler Metal, Welding Rods and Electrodes, and Structural and Special Shapes; Rolled Metal Products, Such as Plate, Flat Sheet, Coiled Sheet, Circles, and Special Rolled Products Including Residential Siding Sheet, Tooling Plate, Tread Plate, Foundry Pattern Plate, Phototemplates and Layout Sheet, Special Bending Sheet, Electrochemical Sheet, Mechanical Engraving Plate, Mill Primed Panel Stock, and Photoengraving Sheet and Plate; and Semi-Fabricated, and Drawn Metal Products for a Wide Variety of Non-Associated Uses Such as in Aircraft, Missiles, Electronics, Graphic Arts, Materials Handling Equipment, Business Machines, and Transportation Equipment.
First use at least as early as June 1, 1929.

SN 139,638. Globe Mining Company, Montreal, Quebec, Canada. Filed Mar. 12, 1962.

ORTAN

Owner of Canadian Reg. No. 122,310, dated May 26, 1961.
For Ferric-Titanium Metal.

SN 145,688. Fujikoshi Kozai Kogyo Kabushiki Kaisha, d.b.a. Fujikoshi Steel Industry Co. Ltd., Toyama-shi, Japan. Filed May 29, 1962.

NACHI

Owner of U.S. Reg. Nos. 706,944, 721,859, and 724,185.
For Special Steels, Special Steel Coils, Drill Rods, Steel for Cutting Tools, Special Steel Plates, and Iron and Steel Castings.
First use Dec. 10, 1928; in commerce Mar. 20, 1953.

SN 158,487. United States Steel Corporation, Pittsburgh, Pa. Filed Dec. 4, 1962.

PERFECTION

Owner of Reg. Nos. 130,456 and 651,375.
For Spring Wire.
First use Aug. 10, 1962.

SN 159,375. Ziv Steel & Wire Co., Chicago, Ill. Filed Dec. 18, 1962.

MAXTUFF S-1

For Bar Steel.
First use June 18, 1962.

Class 15—Oils and Greases

SN 151,852. United States Aviex Company, Niles, Mich. Filed Aug. 24, 1962.

Owner of Reg. No. 360,760.
For Lubricating Oil, Tune-Up Oil, Crankcase Oil Additive, Detergent Oil Supplement, Oil Viscosity Improver, Starting Fluid for Engines, Penetrating Oil, Carburetor Control Cleaner, and Windshield Ice Remover.
First use Apr. 20, 1936.

SN 158,186. The Standard Oil Company, Cleveland, Ohio. Filed Nov. 29, 1962.

PARAFILM

For Paraffin Wax Containing a Minor Proportion of Synthetic Polymers and Which is Suitable for Coating Paper and Laminating Paper and Other Sheet Material.
First use Oct. 16, 1962.

SN 158,280. Southwest Products Corp., Phoenix, Ariz. Filed Nov. 30, 1962.

PER-MO-PLATE

For Film Forming Metallic Lubricant.
First use May 20, 1958.

SN 160,191. Herbert Kates, d.b.a. Kaco Tool Company, and Kaco Tool Co., Philadelphia, Pa. Filed Jan. 4, 1963.

KAKUT No. 7

For Metal Working Lubricant.
First use on or about Nov. 14, 1960.

SN 160,934. Gilhanco Lubricants Company, Inc., Grand Rapids, Minn. Filed Jan. 18, 1963.

ITASCA

For Lubricants, Especially for Chain and Guide Bars of Chain Saws.
First use Nov. 20, 1962.

SN 161,443. Imperial Auto-Craft Products, Inc., Chicago, Ill. Filed Jan. 25, 1963.

LIQUID GOLD

For Motor Oil Additive.
First use September 1962.

Class 16—Protective and Decorative Coatings

SN 149,447. Bro-Dart Industries, Inc., d.b.a. Bro-Dart Industries, Newark, N.J. Filed July 20, 1962.

PLASTI-LAC

For Solution of Resinous Material To Be Sprayed onto Books, Art Work, Posters, Maps, and Other Articles, To Form a Transparent Flexible Protective Coating Thereon.
First use 1950.

SN 155,964. Behr Process Corporation, d.b.a. Paul Bunyan Paint Co., Santa Ana, Calif. Filed Oct. 26, 1962.

PAUL BUNYAN

"Paul Bunyan" refers to the legendary character.
For Stain for Redwood and Cedar.
First use Apr. 18, 1958.

SN 156,776. The Tremco Manufacturing Company, Cleveland, Ohio. Filed Nov. 6, 1962.

TREMSHIELD

For Protective Liquid Coating for Concrete.
First use Aug. 22, 1962.

SN 157,326. Reliance Varnish Company, Louisville, Ky. Filed Nov. 15, 1962.

REL-PLAZ

For Industrial Paints for Wood, Paper Board and Fiber Board.
First use Nov. 8, 1962.

Class 17—Tobacco Products

SN 152,304. John C. Herman & Co., New Cumberland, Pa. Filed Aug. 31, 1962.

JACO

Owner of Reg. No. 394,828.
For Chewing and Smoking Tobacco.
First use February 1943.

SN 155,941. Robertson-Nettles Tobacco Co., Wakefield, Va. Filed Oct. 25, 1962.

DATE

For Cigarettes.
First use Sept. 24, 1962.

SN 156,861. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Nov. 8, 1962.

VALIANT

For Cigarettes.
First use July 20, 1961.

SN 158,463. Mutual Merchandising Cooperative, Inc., New York, N.Y. Filed Dec. 4, 1962. COLLECTIVE MARK.

Mac

For Cigars.
First use Nov. 21, 1962.

SN 158,464. Mutual Merchandising Cooperative, Inc., New York, N.Y. Filed Dec. 4, 1962. COLLECTIVE MARK.

Mac

For Cigars.
First use Nov. 21, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 119,271. Edward W. Clasen, d.b.a. Clasen Pharmacal Co., St. Louis, Mo. Filed May 4, 1961.

CETODYNE

For Gargle and Mouthwash Preparation.
First use January 1961.

SN 146,885. The Emenel Company, Loma Linda, Calif. Filed June 14, 1962.

AIDIGEST

For Pharmaceutical Preparation in Tablet Form for Treatment of Indigestion and Assist Digestion.
First use May 15, 1959.

SN 146,898. Hammer Bros., Fostoria, Ohio. Filed June 14, 1962.

OLD DADS

For Salve for the Treatment of Acne, Boils, Ringworm and Other Skin Irregularities.
First use May 31, 1962.

SN 149,375. El-Ar Enterprises, Inc., New York, N.Y. Filed July 19, 1962.

MUVEZE

For Medicinal Preparation Used as a Laxative.
First use July 9, 1962.

SN 149,475. Kaz Manufacturing Co., Inc., New York, N.Y. Filed July 20, 1962.

kazMist

The term "Mist" is disclaimed apart from the mark as shown. Owner of Reg. No. 431,009.
For Aerosol Inhalant for Relief of Symptoms of Nasal Congestion and the Like.
First use May 29, 1962.

SN 155,536. United Whelan Corporation, Brooklyn, N.Y. Filed Oct. 19, 1962.

tab-AWAK'N

For Caffeine-Containing Stimulant in Tablet Form.
First use Oct. 1, 1962.

SN 156,729. Dr. Madaus & Co., Cologne-Merheim, Germany. Filed Nov. 6, 1962.

REPARIL

Owner of German Reg. No. 503,768, dated July 12, 1938.
For Medicines and Pharmaceutical Preparations—Namely, Preparations for the Treatment of Brain Oedema, Glaucoma, Local Oedema.

SN 159,317. The Warren-Teed Products Company, Columbus, Ohio. Filed Dec. 17, 1962.

pHola

For Medicines and Pharmaceuticals—Namely, a Drug Product for Antacid Dietary Supplement.
First use Nov. 15, 1962.

SN 159,512. Merck & Co., Inc., Rahway, N.J. Filed Dec. 20, 1962.

FLUAD

For Antigenic Preparation for Use as an Immunologic Agent.
First use Nov. 3, 1962.

SN 159,595. Merck & Co., Inc., Rahway, N.J. Filed Dec. 21, 1962.

TRIAVIL

For Medicinal Preparation for Use as a Psychotherapeutic Agent.
First use Dec. 10, 1962.

SN 159,596. Merck & Co., Inc., Rahway, N.J. Filed Dec. 21, 1962.

INDOCIN

For Analgesic and Anti-Inflammatory Agent.
First use Dec. 6, 1962.

SN 159,842. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Dec. 27, 1962.

VETURETIC

For Veterinary Diuretic Preparations.
First use July 26, 1962.

SN 160,307. Mead Johnson & Company, Evansville, Ind. Filed Jan. 7, 1963.

VI-SOL

Owner of Reg. Nos. 531,808, 737,627, and others.
For Vitamins.
First use Feb. 28, 1958.

SN 161,065. Key Pharmaceuticals, Inc., Miami, Fla. Filed Jan. 21, 1963.

FORMULA NO. 313

Applicant makes no claim to exclusive right to use the notation "Formula No.," apart from the mark as shown.
For Multi-Vitamin and Mineral Dietary Supplement.
First use Jan. 15, 1963.

SN 162,229. Colgate-Palmolive Company, New York, N.Y. Filed Feb. 7, 1963.

ANTIGUE

For Dietary Supplement Containing Vitamins and Minerals.
First use Aug. 16, 1962.

SN 163,481. Herald Pharmacal, Inc., Wake Forest, N.C. Filed Feb. 26, 1963.

ĀNSEL

For Antiseborrheic Lotion for the Treatment of Dandruff and Other Seborrheic Conditions.
First use Feb. 9, 1963.

SN 163,597. Atomic Basic Chemicals Corporation, Pittsburgh, Pa. Filed Feb. 28, 1963.

FEEN-ITE

Owner of Reg. No. 650,009.
For Anthelmintic for Removing Internal Parasites From Cattle and Sheep Comprising Flavored Phenothiazine.
First use Nov. 7, 1962.

SN 165,481. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 27, 1963.

DIRECT

For Preparation for the Relief of Headaches, Colds and Minor Pains and Neuralgia.
First use Mar. 6, 1963.

Class 19—Vehides

SN 132,318. European Motor Products, Inc., Riverside, Calif. Filed Nov. 20, 1961.

EMPI

For Stabilizer-Bar Assemblies for the Rear Wheels of Swing-Axle Automobiles, Anti-Sway Bars for the Front Wheels of Automobiles, Bumper Stiffeners, Accessories in the Nature of Removable Running Boards or Steps, Rear-View Mirrors, Arm Rests, Floor Mats, Oil Radiators, Sun Visors, Parcel Trays, Handle Shields, Door Pulls, Ventilator Apparatus for Vehicle Passenger Compartments, Safety Belts, Fan Belts, and Speedometer Cables.
First use October 1956.

SN 160,019. Three G Corporation, Akron, Ohio. Filed Dec. 31, 1962.

3G

For Safety Belts and Parts Thereof.
First use Nov. 25, 1962.

SN 164,296. Adam Opel Aktiengesellschaft, Russelsheim am Main, Germany. Filed Mar. 11, 1963.

KADETT

For Passenger Automobiles.
First use 1936; in commerce on or before July 30, 1962.

SN 164,340. Francis Metal Products Corporation, Palmyra, N.Y. Filed Mar. 11, 1963.

AUTOCADDIE

For Golf Carts.
First use May 1961.

Class 20—Linoleum and Oiled Cloth

SN 148,331. Sandura Company, Jenkintown, Pa. Filed July 3, 1962.

SANTONA

Owner of Reg. Nos. 191,145, 439,993, and 534,334.
For Flexible Hard Surface Wall, Floor and Table Top Covering.
First use June 14, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 72,054. Fred Meyer, Inc., Portland, Oreg. Filed Apr. 22, 1959.

CERTIFIED

Applicant claims use for the territory comprising the States of Oregon, Washington, Hawaii and Alaska.
For Electric Blankets.
First use in July 1954.
Subj. to concurrent use proceeding with Northern Electric Company.

SN 141,819. Cory Corporation, Chicago, Ill. Filed Apr. 9, 1962.

MITCHELL

Owner of Reg. Nos. 586,838, 639,277, and 701,821.
For Electric Room Heaters.
First use January 1961.

SN 146,424. Signetics Corporation, Sunnyvale, Calif. Filed June 7, 1962.



For Integrated Solid State Microcircuits—Namely, Integrated Solid State Logic Elements.
First use May 4, 1962.

SN 146,823. International Electronics Corporation, New York, N.Y. Filed June 13, 1962.

IEC

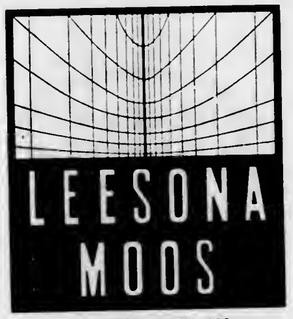
For Electron Tubes.
First use Oct. 1, 1955.

SN 147,025. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.



The drawing is lined for red. Owner of Reg. No. 424,841.
For Storage Batteries, Battery Cables, Battery Holddown Clamps, Booster Cables, Battery Chargers.
First use on or about July 1, 1960.

SN 147,831. Leesona Corporation, Warwick, R.I. Filed June 27, 1962.



Owner of Reg. Nos. 138,885 and 724,460.
For Electrical Devices—Namely, Nuclear Batteries and Electrical Timing Switches.
First use Oct. 3, 1961, on electrical devices.

SN 151,411. J. & S. Engineers Limited, Crayford, Kent, England. Filed Aug. 17, 1962.

JASTAC

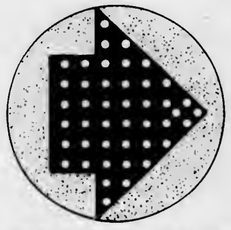
Owner of British Reg. No. 813,669, dated Nov. 22, 1960.
For Electrical Connections Contact and Inserts for Use in Electric Circuits, and Especially in Printed Circuits.

SN 155,930. Maschinenfabrik Uerkheim AG., Uerkheim, Switzerland. Filed Oct. 25, 1962.

Contelyt

For Machine Tools for Working Metals by Electrolytic Processes; Grinding Spindles and Grinding Wheels, All Being Part of Such Machine Tools; and Direct Current Power Supply Units.
First use 1961; in commerce May 1962.

SN 156,180. Superior Outdoor Display, Inc., Long Beach, Calif. Filed Oct. 29, 1962.



For Outdoor Displays—Namely, Signs Incorporating Electrical Lights.
First use Jan. 1, 1960.

SN 158,613. The Euclid Electric & Manufacturing Company, Madison, Ohio. Filed Dec. 6, 1962.

GROUNDSAFE

For Electrical Fused and Non-Fused Plugs, Receptacles, Receptacle Covers, and Connectors.
First use November 1928.

SN 159,864. Automatic Electric Company, Northlake, Ill. Filed Dec. 28, 1962.

E-A-X

For Communication Switching Equipment.
First use Oct. 22, 1962.

SN 160,192. Kenbert Arpag Company, Bronx, N.Y. Filed Jan. 4, 1963.



The term "Co." and the representation of the goods are disclaimed apart from the mark as shown.
For Fluorescent Lighting Fixtures.
First use Aug. 9, 1958.

SN 163,936. Energy Conversion Systems Corporation, Grafton, Wis. Filed Mar. 5, 1963.

ENERCON

For Oscillatory Electric Motors.
First use Nov. 25, 1962.

SN 165,225. General Battery and Ceramic Corp., Reading, Pa. Filed Mar. 22, 1963.

TITAN

For Spark Plugs.
First use Mar. 14, 1963.

SN 166,805. ITA Electronics Corporation, Lansdowne, Pa. Filed Apr. 16, 1963.

ITA

Owner of Reg. No. 728,210.
For Antennas, Radio Transmitters, Exciters, Generators, Mixers, Mutes, Amplifiers, Radio Receivers, Filters and Components Thereof.
First use May 1, 1957.

Class 22—Games, Toys, and Sporting Goods

SN 141,734. Lakeside Toys, Inc., Minneapolis, Minn. Filed Apr. 6, 1962.

SKY SWEEPER

For Kite Kit.
First use Dec. 22, 1961.

SN 141,829. Raymond L. Eddy, Muncie, Ind. Filed Apr. 9, 1962.

Tiddly Links

For Equipment Sold as a Unit for Playing a Table-Golf Game.
First use Nov. 25, 1961.
Subj. to Intf. with SN 146,182.

SN 146,182. Halsam Products Company, Chicago, Ill. Filed June 5, 1962.

TIDDLY LINKS

For Playing Equipment, Sold as a Unit, for Playing a Golf-Type Board Game.
First use Mar. 2, 1962.
Subj. to Intf. with SN 141,829.

SN 149,319. Plas-Steel Products, Inc., Walkerton, Ind. Filed July 18, 1962.

HEX-LOCK

For Line Guides for Fishing Rods.
First use July 11, 1962.

SN 149,420. Beulah Harris Stolpen, d.b.a. The Rolling Reader Co., Westport, Conn. Filed July 19, 1962.

ROLLING PHONICS

For Equipment Sold as Units for Playing Educational Word Games.
First use May 17, 1960.

SN 149,669. Paragon Art and Linen Co. Incorporated, New York, N.Y. Filed July 24, 1962.

PARAGON

For Needlecraft Toys.
First use Jan. 10, 1955.

SN 150,505. Beh Housewares Corp., New York, N.Y. Filed Aug. 6, 1962.

CIRCUS CYCLE

Applicant disclaims the term "Cycle" apart from the mark as shown.
For Pedal Toy Having a Crankshaft Operable by a Standing Occupant.
First use Oct. 11, 1961.

SN 151,420. Louis Marx and Co. Inc., New York, N.Y. Filed Aug. 17, 1962.

MARX MASTERBUILDER KIT

Without waiving its common law rights herein, no claim is made to the word "Kit" apart from the mark as shown. Owner of Reg. Nos. 366,664, 703,193, and 706,930.
For Toy Construction Sets and Kits.
First use July 16, 1962.

SN 155,075. Ideal Toy Corporation, Hollis, N.Y. Filed Oct. 12, 1962.

BOP THE BEETLE

No claim of exclusive right is made to the word "Beetle" for the goods recited, apart from the mark as shown.
For Mechanical Action Toy.
First use June 29, 1962.

SN 156,070. Bachmann Bros., Inc., Philadelphia, Pa. Filed Oct. 29, 1962.

KIDDYPLIANCE

For Plastic Toys.
First use Oct. 16, 1962.

SN 159,063. Hassenfeld Bros., Inc., Central Falls, R.I. Filed Dec. 13, 1962.

INVENTOR CLASSICS

For Toy Kit, the Contents of Which When Assembled Provide Working Model of a Well-Known Invention.
First use on or about Apr. 30, 1962.

SN 159,701. Diamond King Inc., El Segundo, Calif. Filed Dec. 28, 1962.

FIREBALL

For Baseball Pitching and Fielding Practice Machine.
First use Feb. 7, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 131,410. Jackson C. Sheridan, d.b.a. S.J. Tool & Machine Co., Whittier, Calif. Filed Nov. 6, 1961.

DIAMACRON

For Abrading Tools.
First use September 1961.

SN 132,318. European Motor Products, Inc., Riverside, Calif. Filed Nov. 20, 1961.

EMPI

For Valves and Guides and Springs Therefor, Tool Kits for Installing Valve Guides, Crank Shafts, Cylinders, Pistons, Cylinder Heads, Tap and Die Sets for Auotomotive Repair, Clutches, Sound-Proofing Kits for Vehicle Engines, Drill Jig Kits for Flywheels, and Camshafts.
First use October 1956.

SN 132,749. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 24, 1961.

CENTURION

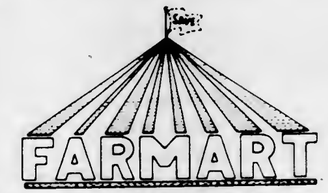
For Typewriters.
First use on or about Dec. 21, 1960.

SN 132,828. Garrett Enumclaw Co., Enumclaw, Wash. Filed Nov. 27, 1961.

YARD BIRD

For Mobile Cranes.
First use on or about Sept. 1, 1961.

SN 137,515. Farm Mart, Inc., East Peoria, Ill. Filed Feb. 8, 1962.



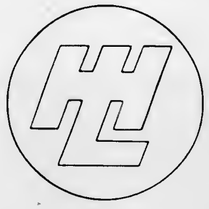
For Parts for Mowing and Harvesting Machinery—Namely, Sickle Bar Cutters, Mower Knives, Guards, Guard Plates, Knife Clips, Knive Guides, Shoes, Pitmans, Grass Boards and the Like.
First use Dec. 29, 1961.

SN 137,516. Farm Mart, Inc., East Peoria, Ill. Filed Feb. 8, 1962.

FARMART

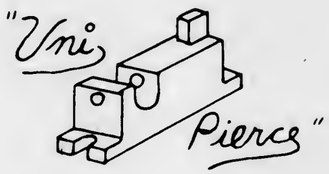
For Parts for Mowing and Harvesting Machinery—Namely, Sickle Bar Cutters, Mower Knives, Guards, Guard Plates, Knife Clips, Knive Guides, Shoes, Pitmans, Grass Boards and the Like.
First use Dec. 29, 1961.

SN 141,085. Hans Liebherr, d.b.a. Firma Hans Liebherr Maschinenfabrik, Biberach an der Riss, Germany. Filed Mar. 29, 1962.



Owner of German Reg. No. 744,996, dated Jan. 24, 1961.
For Heavy Industrial Machinery—Namely, Cranes, Excavators, Concrete Mixers, Concrete Mixing Towers, Mixing and Distributing Apparatus and Gear-Generating Machines.

SN 141,423. Faull & Son, Tool and Die Company, Niles, Ohio. Filed Apr. 3, 1962.



The design of a tool is disclaimed apart from the mark as shown on the drawing.
For Machine Tools for Producing Holes in Tubing.
First use Jan. 11, 1960.

SN 141,479. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 3, 1962.

REVELATION

Owner of Reg. Nos. 575,184 and 705,133.
For Razor Blades.
First use Sept. 25, 1961.

SN 141,555. Thomas Collator Europe, Societe Anonyme, Brussels, Belgium. Filed Apr. 4, 1962.

CARBOMATIC

Priority claimed under Sec. 44(d) on Belgian Reg. No. 95,184, dated Mar. 22, 1962.
For Apparatus for Interleaving Stationery and Carbon Sheets To Be Used in Typewriters.

SN 141,701. The Broyhill Company, Dakota City, Nebr. Filed Apr. 6, 1962.



The drawing is lined for red.
For Spray Equipment and Wagon Hoists.
First use Oct. 1, 1956.

SN 142,306. L. S. Farner & Co., New Kensington, Pa. Filed Apr. 16, 1962.

FARNCO

For Conveyors and Belt Stretchers and Bottle Breakers.
First use Feb. 1, 1947.

SN 142,756. Waterous Company, St. Paul, Minn. Filed Apr. 20, 1962.

WATEROUS
Electro-Matic

Owner of Reg. Nos. 629,897 and 629,898.
For Fire Pumps and Fire Pump Accessories.
First use Apr. 15, 1955.

SN 142,763. Etudes Nouvelles S.A., Geneva, Switzerland. Filed Mar. 5, 1962.

ROTOPARK

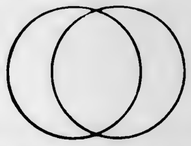
Priority claimed under Sec. 44(d) on Swiss Reg. No. 188,262, dated Sept. 14, 1961.
For Mechanized Garage Apparatus.

SN 143,950. Galland-Henning Manufacturing Company, Milwaukee, Wis. Filed May 7, 1962.

PANLTROL

For Appliance Having a Pre-Arranged Sequence of Pilot Valves Actuated in Order and in a Prescribed Time To Give a Required Movement to Cylinders or Other Fluid Operated Devices.
First use Apr. 16, 1962.

SN 143,991. C. O. Oberg & Co:s Aktiebolag, Eskilstuna, Sweden. Filed May 7, 1962.



Owner of Swedish Reg. No. 49,131, dated Nov. 15, 1937.
For Files and Rasps of All Types, Including Rotary Files and Rasps.

SN 144,379. The Harriman Manufacturing Company, Chattanooga, Tenn. Filed May 11, 1962.



For Agricultural Implements—Namely, Cultivators, Plows, Plow Repair Parts, Plow Stocks, Plow and Cultivator Handles, Fertilizer Distributors, Harrows, Trees and Plow Shares.
First use during 1917.

SN 144,380. The Harriman Manufacturing Company, Chattanooga, Tenn. Filed May 11, 1962.

CHATTANOOGA

For Seed Bed Preparation Devices Embodying a Plurality of Ground Engaging Components Pivotably Supported Upon a Wheel-Transported Frame, Spring Tooth Harrows, Disc Harrows, Levee Harrows, Pulverizers, Seeders, Rotary Hoes, Disc Tillers, Gang Discs, Rotary Cultivators, Plows, Planters, Cultivators, Stalk Cutters, and Spring Tooth Cultivators.
First use Sept. 15, 1941.

SN 144,751. Miehle-Goss-Dexter, Incorporated, Chicago, Ill. Filed May 16, 1962.

MERCURY

For Machinery and More Particularly Rotogravure Printing Presses, Flexographic Printing Presses, Cutting and Creasing Machinery, Stripping and Delivery Devices, Laminating Apparatus, Web Roll Feeding Devices and Web Roll Rewinding Devices.
First use Jan. 1, 1947.

SN 146,916. Mighty Mite Inc., Colorado Springs, Colo. Filed June 14, 1962.

MIGHTY-MITE

For Hydraulic Hoist.
First use February 1957.

SN 147,026. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.



The drawing is lined for red.
For Tubeless Tire Vulcanizing Clamp, Tubeless Tire Filler Gun.
First use in or about March 1961.

SN 148,587. Cannon Electric Company, Los Angeles, Calif. Filed July 9, 1962.

CAN-NU-MATIC

For Pneumatically Operated Crimping Tool.
First use May 21, 1962.

SN 148,588. Cannon Electric Company, Los Angeles, Calif. Filed July 9, 1962.

CRIMP-O-MATIC

For Hand Crimping Tool.
First use May 21, 1962.

SN 148,955. Christensen Diamond Products Company, Salt Lake City, Utah. Filed July 13, 1962.



For Drilling and Cutting Equipment—Namely, Drill Bits, Core Bits, Core Barrels, Reamers and Washover Shoes, Used in Subsurface Mining and Well Drilling Operations, Concrete and Masonry Cutting Saws and Bits, Bit Sharpening Apparatus, Parts Thereof, and Accessories Therefor.
First use in or about June 1947.

SN 150,407. Fairview Pipe & Supply, Inc., Fairview, Okla. Filed Aug. 3, 1962.



For Truck Beds, Double Implement Drawbars, Bulldozers, Pickup Tables, Pickup Stock Racks, Truck Stock Racks, Hay and Grain Feeders, Creep Feeders and Self Feeders.
First use June 1, 1962, on truck beds.

SN 150,450. Peppy Industries, Inc., Beverly Hills, Calif. Filed Aug. 3, 1962.

PEPPY

For Hand Marking Device.
First use Nov. 8, 1959.

SN 150,484. West Chemical Products, Inc., Long Island City, N.Y. Filed Aug. 3, 1962.

ASTROJET

For Insecticide Sprayers.
First use July 10, 1962.

SN 150,562. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed Aug. 6, 1962.

PROFI-MATIC

Owner of Reg. Nos. 602,823, 651,948, and 706,406.
For Gutter Cleaners for Dairy Barns.
First use May 31, 1962.

SN 150,579. McKee Bros. Limited, Elmira, Ontario, Canada. Filed Aug. 6, 1962.

SNOLANDER

Owner of Canadian Reg. No. 127,058, dated June 29, 1962.
For Snow Blowers.

SN 150,615. Red Devil Tools, Union, N.J. Filed Aug. 6, 1962.

LI'L JIMMIE

For Molding Chisel and Pry Bar.
First use in April 1956.

SN 150,730. Trabon Engineering Corporation, Solon, Ohio. Filed Aug. 7, 1962.

METERFLO

Owner of Reg. No. 617,007.
For Oil Circulating Systems.
First use Mar. 4, 1953.

SN 150,731. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Aug. 7, 1962.

RANDOMATIC

For Carton Closing and Sealing Machine.
First use Nov. 1, 1959.

SN 150,766. E & M Industries, Inc., Matthews, N.C. Filed Aug. 8, 1962.

MOR-EZE

For Can Openers.
First use June 26, 1962.

SN 150,808. Multi-Purpose Drum Company, Detroit, Mich. Filed Aug. 8, 1962.

MULTI

For Brake Drums.
First use Apr. 17, 1962.

SN 150,821. Starkey Machinery, Inc., Galion, Ohio. Filed Aug. 8, 1962.

PULSI-PUSH

For Pug Mills, Pug Mill Conversion Attachments and Controls, and Parts Therefor.
First use Dec. 4, 1961.

SN 150,922. Coates Smith (Zurich) AG, Zurich, Switzerland. Filed Aug. 10, 1962.

DOWN-STREAM

Priority claimed under Sec. 44(d) on Swiss Reg. No. 191,925, dated May 21, 1962.
For Textile Machines for the Hosiery Industry.

SN 151,089. Selectivend Corporation, Kansas City, Kans. Filed Aug. 13, 1962.



For Coin Operated Vending Machines.
First use January 1959.

SN 151,170. Sprague & Henwood, Inc., Scranton, Pa. Filed Aug. 14, 1962.



For Diamond Core Bits.
First use Mar. 12, 1940.

SN 151,535. Sperry Rand Corporation, New York, N.Y. Filed Aug. 20, 1962.

LEKTRAFILE

For Mechanized Filing Units.
First use Aug. 2, 1961.

SN 151,545. Viber Company, Burbank, Calif. Filed Aug. 20, 1962.

VIBERAIR

Owner of Reg. Nos. 297,997, 717,851, and others.
For Unbalanced Weight Vibratory Machines for Insertion in Unset Concrete.
First use on or about June 1, 1962.

SN 151,678. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed Aug. 22, 1962.

RANGER

Owner of Reg. No. 586,036.
For Portable Sprayers for Use in Extinguishing Fires and for Spraying Pesticides, Insecticides and Other Liquids.
First use June 1, 1932.

SN 152,697. R. Hoe & Co. Inc., New York, N.Y. Filed Sept. 7, 1962.

CARB-LOCK

For Metal Cutting Carbide Saws.
First use May 2, 1962.

SN 152,712. F. S. Payne Co., Cambridge, Mass. Filed Sept. 7, 1962.

PAYNE

For Electric Elevators and Controls Therefor.
First use by at least the year 1929.

SN 153,340. Turner Corporation, Sycamore, Ill. Filed Sept. 17, 1962.

QUICK-START

Owner of Reg. Nos. 648,701 and 707,702.
For Internal Combustion Engine Starting Aids.
First use Dec. 23, 1955.

SN 153,429. Studebaker Corporation, South Bend, Ind. Filed Sept. 18, 1962.

GRAVELY

For Tractors and Parts Thereof and Tractor Attachments Including Lawn Mowers.
First use 1922.

SN 153,895. Royal McBee Corporation, New York, N.Y. Filed Sept. 25, 1962.

LARK

For Typewriting Machines and Parts Thereof.
First use Sept. 13, 1962.

SN 154,005. Ace Fastener Corporation, Chicago, Ill. Filed Sept. 27, 1962.

CADET

For Devices for Application of Strapping to Packages.
First use Jan. 16, 1934, on stapling machines.

SN 156,358. Balderson Inc., Wamego, Kans. Filed Nov. 1, 1962.

DIG'R-DOZER

For Earthmoving Equipment.
First use July 1, 1961.

SN 157,016. SCM Corporation, New York, N.Y., by change of name from Smith-Corona Marchant Inc., New York, N.Y. Filed Nov. 9, 1962.

CORSAIR

For Typewriters.
First use Sept. 5, 1962.

SN 159,703. Dille & McGuire Manufacturing Company, Richmond, Ind. Filed Dec. 26, 1962.



Owner of Reg. Nos. 373,680 and 601,850.
For Garden Tillers, Snow Throwers, Power Trimmers and Edgers.
First use Nov. 9, 1960, on garden tillers.

SN 159,872. Cherry-Burrell Corporation, Cedar Rapids, Iowa. Filed Dec. 28, 1962.

STELLAR-FLO

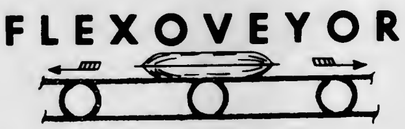
For Sanitary High Pressure Pumps.
First use Sept. 14, 1956.

SN 159,951. Borg-Warner Corporation, Chicago, Ill. Filed Dec. 31, 1962.

TIMBER CHIEF

For Saw Chains, Parts Thereof and Accessories.
First use May 26, 1962.

SN 159,981. Flexoveyor Manufacturing Company, Denver, Colo. Filed Dec. 31, 1962.



For Flexible, Spring Belt Conveyors.
First use Nov. 10, 1941.

SN 160,010. Royal McBee Corporation, New York, N.Y. Filed Dec. 31, 1962.

ELECTRESS

For Typewriting Machines and Parts Thereof.
First use Oct. 3, 1962.

SN 160,035. Frank C. Austin, d.b.a. Miniature Drill Machine Company, Beverly Farms, Mass. Filed Jan. 2, 1963.

MICROHOLES

For Precision Drilling Machines.
First use May 1, 1961.

SN 160,211. Oneida Ltd., Oneida, N.Y. Filed Jan. 4, 1963.

MIDSUMMER

For Stainless Steel Flat Tableware.
First use Nov. 30, 1962.

Class 24 — Laundry Appliances and Machines

SN 158,516. Duro Tech Mfg. Corp., Newark, N.J. Filed Dec. 5, 1962.

GASMASTER

For Heat Regenerating System for Clothes Dryers.
First use July 14, 1962.

Class 25 — Locks and Safes

SN 159,034. The American Hardware Corporation, New Britain, Conn. Filed Dec. 13, 1962.

PROTECTOKEY

For Locksets, Lock Cylinders and Keys Therefor.
First use Nov. 27, 1962.

Class 26 — Measuring and Scientific Appliances

SN 110,076. Nordberg Manufacturing Company, Milwaukee, Wis. Filed Dec. 12, 1960.

NORDTRONICS

For Temperature and Pressure Monitoring and Speed and Power Control Systems for Engines and Their Driven Equipment, Specifically Engines Used for Electric Power Generation, Pumping and Pipeline Installations and Oil Installations.
First use Nov. 15, 1960.

SN 132,318. European Motor Products, Inc., Riverside, Calif. Filed Nov. 20, 1961.

EMPI

For Temperature Gauges, Tachometers, and Fuel Gauges.
First use October 1956.

SN 134,195. Cooke Engineering Company, Alexandria, Va. Filed Dec. 18, 1961.

CECO

For Titration Apparatus for Virological, Serological, and Immunological Laboratory and Field Use, Components Thereof, and Accessories Thereto.
First use Aug. 17, 1961.

SN 150,667. American Machine & Foundry Company, New York, N.Y. Filed Aug. 7, 1962.

MINI MANIP

For Master Slave Manipulator for Handling Items at a Position Remote From the Operator and Through the Intermediary of the Manipulator.
First use Apr. 16, 1962.

SN 153,750. Fabrique de Machines Mikron S.A., Bienne, Switzerland. Filed Sept. 24, 1962.

Goulder Mikron

Priority claimed under Sec. 44(d) on Swiss Reg. No. 192,788, dated July 5, 1962. Owner of U.S. Reg. No. 102,397.
For Measuring and Checking Instruments for Gears and Toothed Wheels of Any Kind.

Class 30 — Crockery, Earthenware, and Porcelain

SN 117,755. Kabushiki Kaisha Matsuzakaya, Naka-ku, Nagoya, Japan. Filed Apr. 5, 1961.



The mark consists of a device usually called "Igeta" in Japanese used to express the letter "I," and a Chinese character called "Kanji" pronounced "To." When combined, as in the subject mark, the characters express the family name "Ito," the founder of applicant company. The present president of applicant company is the descendant of the founder "Ito." The mark also contains a circle device, usually called "Maru" which serves as a border surrounding the mark. Owner of Japanese Reg. No. 172,333, dated June 22, 1925.
For Ceramic Tableware and Dinnerwear; and Ceramic Vases and Figures.

SN 145,765. Castleton China, Inc., New Castle, Pa. Filed May 31, 1962.

DAUPHINE

For China Dinnerware.
First use May 11, 1962.

SN 145,766. Castleton China, Inc., New Castle, Pa. Filed May 31, 1962.

SCANDIA

For China Dinnerware.
First use May 11, 1962.

SN 145,768. Castleton China, Inc., New Castle, Pa. Filed May 31, 1962.

GOLDEN MEDALLION

Owner of Reg. No. 637,159.
For China Dinnerware.
First use May 11, 1962.

SN 145,769. Castleton China, Inc., New Castle, Pa. Filed May 31, 1962.

NANTUCKET

For China Dinnerware.
First use Feb. 12, 1962.

Class 31 — Filters and Refrigerators

SN 132,318. European Motor Products, Inc., Riverside, Calif. Filed Nov. 20, 1961.

EMPI

For Fuel Filters and Oil Filters.
First use October 1956.

SN 143,537. Jet Spray Cooler, Inc., Waltham, Mass. Filed May 1, 1962.

JET-CARBO-SPRAY

Owner of Reg. No. 622,708.
For Refrigerated Beverage Dispensers.
First use Apr. 12, 1962.

Class 32 — Furniture and Upholstery

SN 140,862. Frank E. Potts and Theodore Sobel (joint owners), Akron, Ohio. Filed Mar. 27, 1962.

CENAK

For Book Storage Racks Used in Combination With a Quick Visual Inventory System for the Books in the Racks.
First use Nov. 1, 1961.

SN 146,316. Podiatry Specialties, Incorporated, New York, N.Y. Filed June 6, 1962.

PLASTEX

For Podiatric Plastic Foam Cushion.
First use Apr. 25, 1961.

SN 147,020. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.



The drawing is lined for red.
For Display and Storage Racks and Cabinets for Batteries, Tires, Oil Cans, Etc.
First use on or about Oct. 1, 1959.

SN 147,724. Fisher Products Company, Chester, Pa. Filed June 26, 1962.

DURATEX

For Cushioning Pads for Use in Making Mattresses.
First use Feb. 23, 1962.

SN 151,158. Novo Industrial Corporation, New York, N.Y. Filed Aug. 14, 1962.

SWING-N-STEP

For Combination Chair and Stepstool.
First use Dec. 27, 1961.

SN 152,348. The Sterlingworth Corporation, Jamestown, N.Y. Filed Aug. 31, 1962.



The words "Maple & Cherry Collections" are disclaimed apart from the mark as shown in the drawing.
For Dining Room and Bedroom Furniture.
First use April 1962.

SN 152,349. The Sterlingworth Corporation, Jamestown, N.Y. Filed Aug. 31, 1962.

STERLING HOUSE

For Dining Room and Bedroom Furniture.
First use May 28, 1952.

SN 152,762. Century Industries, Inc., Chicago, Ill. Filed Sept. 10, 1962.



For Mirrors.
First use Oct. 1, 1961.

SN 155,731. Luxco Company, Muscatine, Iowa. Filed Oct. 23, 1962.

LUXCO

For Office Furniture and Equipment—Namely, Desks, Chairs, Filing Cabinets, Stools, Stands and Stand Accessories.
First use on or about Nov. 3, 1952.

SN 158,002. The Lane Company, Inc., Altavista, Va. Filed Nov. 27, 1962.

COMPONENTS

For Dining Room, Living Room, and Bedroom Furniture—Namely, Buffets, Tables, Hutches, China Closets, Chairs, Bar-Carts, Bookcases, Desks, Chests, Dressers, Mirrors, Beds, and Night Stands.
First use May 1962.

SN 164,268. St. Charles Manufacturing Co., St. Charles, Ill. Filed Mar. 8, 1963.

St. Charles

For Kitchen Cabinet Assemblies, Including Cabinet Tops; Commercial and Institutional Storage Cabinets, Dressers, Wardrobes, Laboratory Casework, and Furniture; School Storage Furniture for Laboratory Uses With Foods, Clothing, Science, and Arts and Crafts; and, Dormitory Storage Furniture.
First use 1939.

Class 33 — Glassware

SN 145,300. Technicolor, Inc., Hollywood, Calif. Filed May 23, 1962.

GAY NINETIES

For Table and Beverage Glassware.
First use Feb. 19, 1962.

SN 145,301. Technicolor, Inc., Hollywood, Calif. Filed May 23, 1962.

BLUE SPRUCE

For Table and Beverage Glassware.
First use Feb. 19, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 110,111. Thomas Industries Inc., Louisville, Ky. Filed Dec. 12, 1960.

MOE

Owner of Reg. Nos. 517,557, 748,883, and others.
For Lighting Equipment, Particularly, Troffers, Reflectors, Baffles, Lenses, Louvers, Diffusers, Housings, Mounting Brackets and Hangers, Shades, Lampholders, Guards, and Parts Thereof.
First use on or about July 7, 1947.

SN 150,105. Robertshaw-Fulton Controls Company, Richmond, Va. Filed July 30, 1962.

CINTARG

For Gaseous Fuel Pilot Burner.
First use Apr. 12, 1961.

SN 151,795. John Zink Company, Tulsa, Okla. Filed Aug. 23, 1962.

JOHN ZINK

The mark is the name of the president of the applicant corporation and he consents to the use of the mark and the registration of his name as a trademark.
For Gaseous Fuel Burners and Liquid Fuel Burners and Associated Parts and Component Parts of Such Burners.
First use 1929

SN 152,578. Hall-Neal Furnace Co., Indianapolis, Ind. Filed Sept. 6, 1962.

Dowagiac

The drawing is lined for blue but no claim is made to color.
For Warm Air Furnaces and Parts Thereof Including Air Conditioning Units, Air Circulating and Humidity Controls.
First use on or about Sept. 1, 1927.

SN 152,579. Hall-Neal Furnace Co., Indianapolis, Ind. Filed Sept. 6, 1962.

KALAMAZOO

The drawing is lined for red but no claim is made to color.
For Warm Air Furnaces and Parts Thereof Including Air Conditioning Units, Air Circulating and Humidity Controls.
First use on or about Jan. 1, 1901.

SN 156,809. Flamegas Detroit Corporation, Detroit, Mich. Filed Nov. 7, 1962.

"Sal-A-Matic"

For Portable Heating Units and Controls Therefor.
First use Aug. 15, 1962.

SN 158,339. Hammon Precision Equipment Company, Oakland, Calif. Filed Dec. 3, 1962.

HAMMON

For Gas Pressure Regulators and Cutting and Welding Torches.
First use Mar. 19, 1962, on cutting and welding torches.

SN 158,425. Bernz O Matic Corporation, Rochester, N.Y. Filed Dec. 4, 1962.

GOLD CREST

For Gas Torches.
First use Nov. 9, 1962.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 147,027. Phillips Petroleum Company, Bartlesville, Okla. Filed June 15, 1962.

PHILLIPS 66

The drawing is lined for red. Owner of Reg. No. 427,059.
For Repair Kits for Tires and Tubes, Vulcanizing Patches, and Self-Vulcanizing Tire Repair Unit.
First use on or about Aug. 1, 1960.

SN 156,368. Buxbaum Products Company, Canton, Ohio. Filed Nov. 1, 1962.

MR. OUTSIDE-IN
MR. INSIDE-OUT

For Tubeless Tire Repair Kit and Tire Repair Plugs.
First use Sept. 20, 1962.

SN 163,775. United States Rubber Company New York, N.Y. Filed Mar. 1, 1963.

POWERGRIP

Owner of Reg. No. 742,232.
For Toothed Transmission Belts and Pulleys Therefor.
First use 1954 or earlier on belts.

SN 163,963. Geo. Rahmann & Co., Inc., New York, N.Y. Filed Mar. 5, 1963.

RAHMBELT

For Industrial Belting.
First use Feb. 15, 1963.

SN 164,037. The General Tire & Rubber Company, Akron, Ohio. Filed Mar. 6, 1963.

JET CARGO

Owner of Reg. Nos. 715,078 and 728,321.
For Pneumatic Tires.
First use Feb. 12, 1963.

SN 164,038. The General Tire & Rubber Company, Akron, Ohio. Filed Mar. 6, 1963.

DUAL G SUPER

Owner of Reg. No. 644,474.
For Pneumatic Tires.
First use Feb. 12, 1963.

Class 36 — Musical Instruments and Supplies

SN 111,484. Continental Merchandise Co., Inc., New York, N.Y. Filed Jan. 9, 1961.

CONTINENTAL

Owner of Reg. No. 576,616.
For Transistor Operated Magnetic Tape Recorders.
First use June 1960.

SN 145,307. Webcor, Inc., Chicago, Ill. Filed May 23, 1962.

SIERRA

For Phonographs.
First use Apr. 10, 1962.

Class 37 — Paper and Stationery

SN 146,165. Cartier, Inc., New York, N.Y. Filed June 5, 1962.

CARTIER

Owner of Reg. No. 414,604.
For Lead-Pencils, Magazine Lead-Pencils and Pen-Holders.
First use 1859.

SN 156,417. Kimberly-Clark Corporation, Neenah, Wis. Filed Nov. 1, 1962.

MARVALINER

Owner of Reg. Nos. 444,050 and 673,537.
For Plastic Coated Paper Suitable for Shelves, Drawer Liners, and Decorative Purposes.
First use Sept. 13, 1962.

SN 156,818. The Martin Cantine Company, Saugerties, N.Y. Filed Nov. 7, 1962.

THERMOCOTE

For Letterpress Paper.
First use May 8, 1962.

SN 157,444. Binney & Smith Inc., New York, N.Y. Filed Nov. 19, 1962.

CRAYOLA

Owner of Reg. Nos. 248,611, 650,515, and others.
For Paper Used in Connection With Finger Painting.
First use Nov. 13, 1956.

SN 166,853. Sture Cederroth, d.b.a. Cederroths Tekniska Fabrik AB, Stockholm-Vallingby, Sweden. Filed Nov. 16, 1962.

SAVETT

Owner of Swedish Reg. No. 90,653, dated Oct. 28, 1960.
For Wash-and-Dry Paper Cloth for Toilet Use.

Class 38 — Prints and Publications

SN 147,542. Bell Aerospace Corporation, Wheatfield, N.Y. Filed June 25, 1962.

rendezvous

For Company Publication.
First use on or about Apr. 18, 1962.

SN 158,638. G. & C. Merriam Company, Springfield, Mass. Filed Dec. 6, 1962.

WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY

Applicant makes no claim to exclusive use of the word "Dictionary" apart from the complete mark shown in the drawing. Owner of Reg. Nos. 26,273, 401,785, and others.
For Dictionaries.
First use Aug. 31, 1961.

SN 159,205. Carey Publications, Inc., New York, N.Y. Filed Dec. 17, 1962.

THE SEVENTH ART

For Periodical Magazine.
First use Nov. 7, 1962.

Class 39 — Clothing

SN 100,592. Freeman Shoe Corporation, Beloit, Wis. Filed July 11, 1960.

CONTOUR CUSHION

For Men's and Boys' Shoes.
First use Mar. 4, 1960.

SN 128,103. Joseph Stafford, d.b.a. Curtis Eddy-Form Co., New York, N.Y. Filed Sept. 18, 1961.

SEA JETS

Owner of Reg. No. 539,529.
For Swim Suits.
First use Jan. 15, 1961.

SN 130,108. Reidboard Company, Pittsburgh, Pa. Filed Oct. 17, 1961.

AQUEDUCT

For Clothing, Particularly Men's Trousers.
First use Oct. 2, 1961.

SN 140,528. Robert E. Berns, Mahopac, N.Y. Filed Mar. 23, 1962.

The ETON Britisher

For Blazer Jackets for All Sexes.
First use Sept. 22, 1941.

SN 141,192. Lambert Hosiery Mills, Inc., New York, N.Y. Filed Mar. 30, 1962.

MARY LEE

Owner of Reg. No. 682,952.
For Women's Hosiery and Lingerie.
First use Sept. 2, 1949.

SN 143,807. Desdee Corporation, Los Angeles, Calif. Filed May 4, 1962.

TOPSY TURBAN

Applicant disclaims the word "Turban" apart from the mark as shown.
For Hair Covering Cap.
First use Sept. 9, 1961.

SN 144,997. Societe Parisienne des Applications Modernes de la Maille, Paris, France. Filed May 18, 1962.

Mohalyss

For Ladies', Men's and Children's Clothing—Namely, Jumpers, Sweaters, Dresses, Skirts, Slacks, Suits and Coats.
First use since 1956; in commerce June 25, 1960.

SN 145,578. John Meyer of Norwich, Inc., Norwich, Conn. Filed May 28, 1962.

JOHN MEYER of NORWICH

The drawing is lined for gold and blue. The words "of Norwich" are disclaimed apart from the mark as shown.
For Ladies' Slacks, Skirts, Walk Shorts, Dressmaker Suits, Raincoats and Car Coats; Men's Slacks, Walk Shorts, Raincoats and Car Coats.
First use March 1960.

SN 146,543. Aris Gloves, Inc., New York, N.Y. Filed May 21, 1962.

ZEFAIR

For Ladies' Gloves Made of Leather or Fabric.
First use Apr. 3, 1962.

SN 147,079. Blue Bell, Inc., Greensboro, N.C. Filed June 18, 1962.

Jeanie

Owner of Reg. Nos. 544,681, 548,417, 548,418, and others.
For Rainwear, Skirts and Sweaters.
First use September 1960.

SN 148,726. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed July 10, 1962.

VULCABOND

For Soles and Heels.
First use May 1, 1962.

SN 151,872. Aris Gloves, Inc., New York, N.Y. Filed Aug. 27, 1962.

SIL-SUEDE

For Ladies' Gloves Made of Leather or Fabric.
First use Aug. 7, 1962.

SN 151,927. Kellwood Company, Chicago, Ill. Filed Aug. 27, 1962.

KELLWOOD

For Wearing Apparel—Namely, Children's Coats, Snow Suits, and Jackets; Insulated Underwear; Women's and Girls' Coats, Jackets and Sweaters; Women's Dresses, Blouses, Skirts, Slacks, and Robes; Hosiery and Leotards; Girls' and Women's Lingerie, Bras and Corsetry; Men's and Boys' Surcoats, Sweaters and Jackets; Men's Work Pants and Sport Shirts and Swim Wear; and Boys' Pants and Shorts.
First use June 12, 1962.

SN 152,673. Block-Southland Sportswear, Inc., Wilmington, N.C. Filed Sept. 7, 1962.

CHAPEL HILL

For Men's, Women's, Boys', Girls' and Children's Outer Shirts, Pajamas, Undershirts, Undershorts, Jackets, Slacks, Night Shirts, Sport Shirts, Dress Shirts, Sweaters, Knit Shirts and Bathrobes.
First use July 1, 1962.

SN 153,025. Societe Rhodiaceta, Paris, France. Filed Sept. 12, 1962.

ERTEL

Owner of French Reg. No. 498,204, dated Aug. 3, 1961 (Paris); Natl. Inst. No. 169,194.
For Clothing for Men, Women and Children—Namely, Dresses, Robes, Two-Piece Suits, Coats, Underwear, Hosiery, Cardigans, Shirts, Vests and Waist-Coats, Boots, Shoes and Slippers.

SN 153,845. Wembley, Inc., New Orleans, La. Filed Sept. 24, 1962.

RESILIO
THE RESILIENT CRAVAT

Without waiving any rights based on secondary meaning the words "The Resilient Cravat" are disclaimed apart from the mark as shown. Owner of Reg. No. 163,575.
For Necktles.
First use in 1923.

SN 155,664. John B. Stetson Company, Philadelphia, Pa. Filed Oct. 22, 1962.

The STETSON Falcon

Owner of Reg. No. 51,990.
For Men's and Boys' Hats and Caps.
First use Sept. 11, 1962.

SN 156,224. Edmont Inc., Coshocton, Ohio. Filed Oct. 30, 1962.

PETAL PUSHERS

For Garden Gloves.
First use on or about Sept. 24, 1962.

SN 156,283. Eloesser-Heynemann Company, San Francisco, Calif. Filed Oct. 31, 1962.

CACTUS darts

Owner of Reg. Nos. 706,040 and 706,052.
For Jeans and Utility Trousers.
First use Aug. 8, 1961.

SN 159,797. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

LADY Archdale

Owner of Reg. Nos. 379,734, 679,328, and others.
For Ladies' Blouses.
First use Mar. 25, 1960.

SN 159,801. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

Dixie Lad

Owner of Reg. Nos. 624,092 and 706,056.
For Boys' Wear—Namely, Polo Shirts, Trousers, Sweaters, Suits, Socks, Underwear, Dress Shirts, Sport Coats, Ties, Pajamas, Sport Shirts, Jackets and Shirt and Slack Sets.
First use Oct. 21, 1949, on polo shirts, trousers, sweaters, and suits.

SN 159,805. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

Reigning Beauty

Owner of Reg. No. 640,736.
For Ladies' Hosiery, Slips, Panties, Pajamas, Gowns and Dusters.
First use Apr. 2, 1935, on ladies' hosiery.

SN 159,808. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

Heiress

Owner of Reg. Nos. 360,131 and 675,617.
For Ladies' Hosiery, Slips, Gloves, Robes, Dusters, Panties, Gowns, Pajamas, Footlets, Casual Shoes, Bed Jackets and Bouffants.
First use Sept. 27, 1937, on ladies' hosiery.

SN 159,809. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 27, 1962.

MANSTYLE

Owner of Reg. No. 540,580.
For Men's Suits, Topcoats, Leather and Cotton Jackets, Coats, Sweaters, Lounging and Bath Robes, Trousers, Hats, Walk Shorts, Caps, Raincoats; and Ladies' Raincoats.
First ues Apr. 12, 1947, on men's suits, topcoats, leather and cotton jackets, coats, sweaters, lounging and bath robes, and trousers.

SN 160,361. Burlington Industries, Inc., New York, N.Y. Filed Jan. 8, 1963.

ADLER SC

Owner of Reg. No. 443,210 and 506,143.
For Men's, Women's, and Children's Socks.
First use Dec. 20, 1946.

SN 160,511. S. & J. Pajama Corp., New York, N.Y. Filed Jan. 10, 1963.

RABHOR

For Men's and Boys' Bath Robes, Dressing Robes, Lounging Robes, Cabana and Beach Jackets.
First use on or about July 1, 1922.

SN 160,661. Raleigh Haberdasher, Inc., Washington, D.C. Filed Jan. 14, 1963.

RALEIGH

Owner of Reg. Nos. 209,332, 641,423, and others.
For Men's Apparel—Namely, Dress Shirts, Undershirts, Night Shirts, Leather and Fabric Gloves, Hats, Caps, Shoes, Woven and Knit Sport Shirts, Suits, Coats, Sport Coats, Slacks, Belts, Suspenders, Suburban Coats, Outer Jackets, Robes, Smoking Jackets, Rainwear, Sweaters, Pajamas, Neckwear, Under Shorts, and Bermuda Shorts; Ladies' Apparel—Namely, Dresses, Evening Dresses, Junior Dresses, Sweaters, Slacks, Bermuda Shorts, Coats, Suits, Belts, Leather and Fabric Gloves, Raincoats, Suburban Coats, Sport Shirts, Beachwear, Hosiery, Panties, Slips, Gowns, and Robes.
First use in or about the year 1912.

SN 160,684. B. H. Wragge, Inc., New York, N.Y. Filed Jan. 14, 1963.

SUNHOPPER

For Women's Dresses,
First use Nov. 7, 1962.

SN 161,164. Exquisite Form Industries, Inc., New York, N.Y. Filed Jan. 22, 1963.

PRETTY UP

For Brassieres.
First use Jan. 10, 1963.

SN 161,345. Jayvee Brand, Inc., Lake Oswego, Oreg. Filed Jan. 24, 1963.

kiddie kover

Owner of Reg. No. 703,578.
For Infants' Bibs and Pants.
First use 1959.

SN 161,400. Eagle Knitting Mills, Inc., Milwaukee, Wis. Filed Jan. 25, 1963.

TRIPLE HEADER

For Hats and Caps for Men, Women and Children.
First use Dec. 18, 1962.

SN 161,679. Catalina, Inc., Los Angeles, Calif. Filed Jan. 30, 1963.

SURFERS

Owner of Reg. No. 647,901.
For Men's, Women's, and Children's Swimsuits.
First use Nov. 1, 1962.

SN 161,831. Tex Manufacturing Co., Inc., El Paso, Tex. Filed Jan. 31, 1963.

CUT OFFS

For Trousers.
First use on or about Oct. 1, 1962.

Class 40—Fancy Goods, Furnishings, and Notions

SN 159,184. Advance Brands, Inc., Chicago, Ill. Filed Dec. 17, 1962.

HOT ROD

For Hair Rollers.
First use Dec. 10, 1962.

SN 159,752. Merriwig International, Inc., Miami Beach, Fla. Filed Dec. 26, 1962.



For Wigs and Wig Blocks.
First use Aug. 24, 1962, on wig blocks.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 141,755. Rosewood Fabrics, Inc., New York, N.Y. Filed Apr. 6, 1962.

"THE FABRIC THAT PRESSES ITSELF"

Owner of Reg. No. 638,219.
For Woven Piece Goods of One or More Synthetic Fibers With or Without Vegetable Fibers Such as Cotton, and Animal Fibers Such as Mohair.
First use June 6, 1955.

SN 152,765. Crown Tuft, Incorporated, Dalton, Ga. Filed Sept. 10, 1962.

Crown Tuft, Inc.

For Textile Carpeting.
First use Aug. 1, 1961.

SN 153,024. Societe Rhodiaceta, Paris, France. Filed Sept. 12, 1962.

ERTEL

Owner of French Reg. No. 498,204, dated Aug. 3, 1961 (Paris); Natl. Inst. No. 169,194.
For Synthetic Textile Fabrics for Making Into Bed, Table and Wall Covers, Slipcovers, Draperies, Rugs and Carpets and Articles of Haberdashery.

SN 156,766. Raxon Fabrics Corp., New York, N.Y. Filed Nov. 6, 1962.

PERMA-SOFT

For Synthetic Neckwear Fabrics.
First use Sept. 24, 1962.

SN 160,956. M. Lowenstein & Sons, Inc., New York, N.Y. Filed Jan. 18, 1963.

LUSTERLUXE

For Blankets.
First use Apr. 10, 1962.

SN 161,158. Collins & Aikman Corporation, New York, N.Y. Filed Jan. 22, 1963.

CLOUD POUFF

For Acrylic Fabric for Robes.
First use Feb. 15, 1962.

SN 161,233. Cabin Crafts, Inc., Dalton, Ga. Filed Jan. 23, 1963.

CABIN CRAFTS CARPET

The word "Carpet" is disclaimed apart from the mark as shown. Owner of Reg. No. 396,158.
For Rugs and Carpets.
First use Jan. 4, 1963.

SN 161,240. Crompton Company, New York, N.Y. Filed Jan. 23, 1963.

FLYING CLOUD

For Textile Fabrics in the Piece Composed of Cotton and Synthetic Fabrics.
First use June 28, 1962.

SN 161,241. Crompton Company, New York, N.Y. Filed Jan. 23, 1963.

X-15

For Textile Fabrics in the Piece Composed of Cotton and Synthetic Fabrics.
First use June 26, 1962.

SN 161,243. Crompton Company, New York, N.Y. Filed Jan. 23, 1963.

CHINA CLIPPER

For Textile Fabrics in the Piece Composed of Cotton and Synthetic Fabrics.
First use June 29, 1962.

SN 161,248. Fabrics by Joyce, Inc., New York, N.Y. Filed Jan. 23, 1963.

Suroya

For Synthetic Fabrics.
First use June 1, 1961.

SN 161,366. Normandie Bedspread Co., New York, N.Y. Filed Jan. 24, 1963.

MONA LISA

For Bedspreads.
First use Jan. 18, 1963.

SN 161,466. Best Coat & Apron Mfg. Co. Inc., New York, N.Y. Filed Jan. 28, 1963.



For Linens—Namely, Sheets, Pillow Cases, Bath Towels, Face Towels, Hand Towels, Dish Towels, Bath Mats, Wash Cloths, Bedspreads, Blankets, and Aprons.
First use Sept. 25, 1962.

Class 43—Thread and Yarn

SN 153,026. Societe Rhodiaceta, Paris, France. Filed Sept. 12, 1962.

ERTEL

Owner of French Reg. No. 498,204, dated Aug. 3, 1961 (Paris); Natl. Inst. No. 169,194.
For Threads and Yarns of Synthetic Fibres.

SN 153,627. Courtaulds, Limited, London, England. Filed Sept. 21, 1962.

COVELLE

Priority claimed under Sec. 44(d) on British Reg. No. B832,607, dated Mar. 28, 1962.
For Yarns and Threads.

SN 156,639. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.



No claim is made to the word "Nylon" apart from the mark as shown. Owner of Reg. Nos. 189,470, 731,683, and others.
For Thread and Yarn Comprised in Whole or in Substantial Part of Nylon.
First use Oct. 17, 1962.

SN 156,640. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.

NYLON C

CHEMSTRAND

No claim is made to the word "Nylon" apart from the mark as shown. Owner of Reg. Nos. 600,796, 735,517, and others.

For Thread and Yarn Comprised in Whole or in Substantial Part of Nylon.

First use Oct. 17, 1962.

SN 156,641. Monsanto Chemical Company, St. Louis, Mo. Filed Nov. 5, 1962.

POLYESTER C

No claim is made to the word "Polyester" apart from the mark as shown. Owner of Reg. Nos. 600,796, 731,605, and 731,683.

For Thread and Yarn Comprised in Whole or in Substantial Part of Polyester.

First use Oct. 15, 1962.

SN 160,500. National Spinning Co., Inc., New York, N.Y. Filed Jan. 10, 1963.

SPUN DOLA

For Yarns of Synthetic Fibers.

First use Dec. 21, 1962.

Class 44—Dental, Medical, and Surgical Appliances

SN 143,251. Mays Equipment Development Corporation, Philadelphia, Pa. Filed Apr. 27, 1962.

MAYSCO

For Medical and Surgical Equipment—Namely, Charting Desks, Anesthesia Gas Exhaust Unit, Sterile-Tread Unit, Overhead Recovery Room Unit, Linen Inspection Unit, Gliding Door Unit, Overhead Cardiovascular Operating Room Unit.

First use Mar. 27, 1961.

SN 145,704. Mercury Manufacturing Company, Pittsburg, Calif. Filed May 29, 1962.

SANI-TOUCH

For Disposable Plastic Gloves for Sanitary, Hospital, or Therapeutic Use.

First use Jan. 2, 1959.

SN 150,339. Hemathermatrol Corporation, Indianapolis, Ind. Filed Aug. 2, 1962.

THEMTROL

For Console Type Medical Apparatus Used in Connection With the Human Body for Controlling the Temperature of the Muman Blood Stream.

First use Mar. 27, 1962.

SN 153,773. Kimberly-Clark Corporation, Neenah, Wis. Filed Sept. 24, 1962.

LONGLINE

For Sanitary Napkins, Sanitary Tampons, and Holders for Sanitary Napkins.

First use Aug. 14, 1962.

SN 155,626. Alexander Kelly Miller and Modrell Beaty Howard, d.b.a. Milhow, Lubbock, Tex. Filed Oct. 22, 1962.

OFFICE AID

For Box-Shaped Packages of Aspirin, Ointment, Bandaging Materials, Spirits of Ammonia and Related Items.

First use Sept. 6, 1962.

SN 164,466. Revlon, Inc., New York, N.Y. Filed Mar. 12, 1963.

SCIZ-TWIZ

For Manicure Implements, Specifically Tweezers.

First use Feb. 26, 1963.

SN 164,901. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 18, 1963.

SCOTTORAMIC

For Face Masks for Breathing Equipment.

First use in or about October 1957.

Class 46—Foods and Ingredients of Foods

SN 136,271. Nodaway Valley Foods, Inc., Corning, Iowa. Filed Jan. 22, 1962.

NUTRA-GOLD

For Fruit Flavored Food Beverages and Dairy Products—Namely, Egg Nog, Chocolate Dairy Drink, Cream, Concentrated Milk, Evaporated Milk, and Flavored Milk and Skim Milk Drinks in Canned, Sterilized Form.

First use Dec. 8, 1961.

SN 141,967. Maryland and Virginia Milk Producers Association, Inc., Arlington, Va. Filed Apr. 10, 1962.

MARVA MAID

For Homogenized Fluid Milk, Fluid Buttermilk, Fluid Cream, Fluid Chocolate Milk Product, Cottage Cheese, Butter and Powdered Milk.

First use Apr. 21, 1961.

SN 142,432. Kay's Ice Cream, Inc., Chattanooga, Tenn. Filed Apr. 17, 1962.

PIC-A-PAK-O-PINTS

For Ice Cream.

First use Feb. 20, 1962.

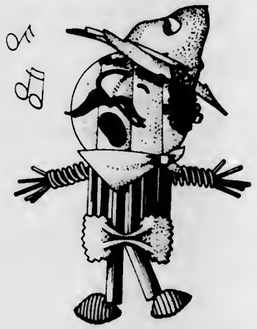
SN 149,258. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 18, 1962.



For Soy Protein, Soy Flour, and Soy Grits.

First use July 2, 1962.

SN 149,259. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 18, 1962.



For Soy Protein, Soy Flour, and Lecithin for Food Purposes.

First use July 2, 1962.

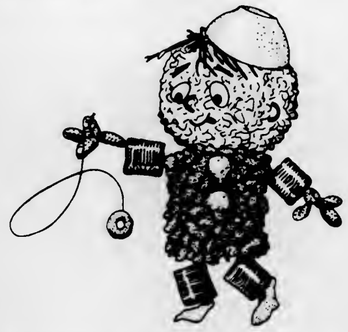
SN 149,260. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 18, 1962.



For Soy Protein, Soy Flour, and Lecithin for Food Purposes.

First use July 2, 1962.

SN 149,261. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 18, 1962.



For Soy Protein, Soy Flour, and Lecithin for Food Purposes.

First use July 2, 1962.

SN 149,262. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 18, 1962.



For Soy Protein, Soy Flour, and Lecithin for Food Purposes.

First use July 2, 1962.

SN 149,263. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 18, 1962.



For Soy Protein, Soy Flour, and Lecithin for Food Purposes.

First use July 2, 1962.

SN 149,689. Western Growers Distributors, Inc., Phoenix, Ariz. Filed July 24, 1962.



For Fresh Fruits and Vegetables.
First use June 16, 1962.

SN 150,153. Bordo Products Company, Chicago, Ill. Filed July 31, 1962.

TEXAS GOLD

For Orange Juice, Grapefruit Juice, Combination of Orange and Grapefruit Juices, Orange Sections, Grapefruit Sections and Combination of Orange and Grapefruit Sections, All Sold in Cans, and Packaged Dates.
First use May 18, 1962, on orange juice.

SN 150,514. The Broaster Co., Rockton, Ill. Filed Aug. 6, 1962.

BROAST-AIRE

For Food Seasoning of a Spice Nature.
First use July 24, 1961.

SN 150,828. Wilson & Co., Inc., Chicago, Ill. Filed Aug. 8, 1962.

PRO-WHIP

For Gelatin Whipping Agent for Candy and Cake Icings.
First use July 23, 1962.

SN 151,219. Flavor Corporation of America, Chicago, Ill. Filed Aug. 15, 1962.

AROX

For Flavored Preservative for Fats and Fatty Components of Animal Feeds.
First use Sept. 26, 1956.

SN 156,132. Eli Lilly and Company, Indianapolis, Ind. Filed Oct. 29, 1962.

TECTA

For Tylosin Lactate for Use as a Food Processing Adjuvant for the Control of Microbial Population in Foods.
First use Sept. 26, 1962.

SN 156,526. Paula Schrag, d.b.a. Paula's Pantry, Heber Springs, Ark. Filed Nov. 2, 1962.

PACHETTI

For Frozen Precooked Alimentary Paste Food Preparation Consisting of Chicken, Spaghetti and Dressing.
First use on or about Dec. 1, 1961.

SN 156,593. Giumarra Farms, Inc., Bakersfield, Calif. Filed Nov. 5, 1962.

GRAPE KING

Applicant claims no exclusive rights in "Grape" as the name of the goods identified herein.
For Table Grapes.
First use July 7, 1962.

SN 156,822. Nalley's, Inc., Tacoma, Wash. Filed Nov. 7, 1962.

SPUD POPS

Applicant disclaims the exclusive right to the word "Spud" except when used as part of the mark.
For Potato Flakes Used as a Snack Item.
First use during May 1962.

SN 156,914. Valle's Steak House, Portland, Maine. Filed Nov. 8, 1962.

VALLE'S
STEAK HOUSE

Owner of Reg. No. 649,480.
For Food Products—Namely, French Dressing, Thousand Island Dressing, Roquefort Dressing, Russian Dressing, and Seafood Cocktail Sauce.
First use Nov. 15, 1955.

SN 157,200. Douglas Food Corporation, Chicago, Ill. Filed Nov. 14, 1962.

FLAVOR GEM

For Beef, Onion, Mushroom, Tomato and Chicken Instant Mixes, Used for Seasoning Soups and Flavoring Foods.
First use Oct. 31, 1962.

SN 160,924. Corn Products Company, New York, N.Y. Filed Jan. 18, 1963.

DOUBLE GOLD

For Margarine.
First use at least as early as Oct. 3, 1962.

SN 161,114. Thornton Canning Company, d.b.a. Thornton Canning Co., Lodi, Calif. Filed Jan. 21, 1963.

THORNTON

For Canned Fruits and Canned Vegetables.
First use Jan. 18, 1954.

SN 161,178. Growers Exchange, Inc., Salinas, Calif. Filed Jan. 22, 1963.

KING CITY

For Fresh Vegetables.
First use Jan. 12, 1963.

SN 161,367. Great Northern Juice Corp., Grand Island, N.Y. Filed Jan. 24, 1963.

ISLE DEW

For Fresh Orange Juice.
First use Aug. 22, 1962.

SN 161,697. The Frank Tea & Spice Company, Cincinnati, Ohio. Filed Jan. 30, 1963.



No claim of exclusive right is made to "Mustard," as used on the goods claimed. Owner of Reg. Nos. 392,973, 696,520, and others.
For Prepared Mustard.
First use Nov. 19, 1962; Dec. 28, 1941, as to "Mister Mustard."

SN 161,829. Sterling Drug Inc., New York, N.Y. Filed Jan. 31, 1963.

PLUSH

For Bird Foods.
First use Oct. 5, 1962.

SN 162,163. Robert A. Johnston Company, Milwaukee, Wis. Filed Feb. 6, 1963.

MOOKAY

For Chocolate Flavored Dairy Drink.
First use Jan. 8, 1963.

SN 162,648. Marschall Dairy Laboratory, Inc., Madison, Wis. Filed Feb. 13, 1963.

RENZYME

For Additive for Curdling Milk for Cheese Making.
First use Nov. 21, 1962.

SN 162,750. Halben Food Manufacturing Co., Inc., St. Louis, Mo. Filed Feb. 14, 1963.

TEMTOR

Owner of Reg. No. 172,258.
For Barbecue Sauce, Roasted and Salted Nut Meats, Maraschino Cherries, and Fruit Jellies and Preserves.
First use Aug. 28, 1928, on fruit jellies and preserves.

Class 47 — Wines

SN 137,384. H. Sichel Sons, Inc., New York, N.Y., assignee of H. Sichel & Sons, Ltd., London, England. Filed Feb. 6, 1962.

BONNE TERRE

The translation of the French phrase "Bonne Terre" is "good earth."
For Wines.
First use Nov. 7, 1934; in commerce Nov. 7, 1934.

SN 156,671. Societe St. Raphaël, Société Anonyme, Paris, France. Filed Nov. 5, 1962.



Priority claimed under Sec. 44(d) on French Reg. No. 504,675, dated May 4, 1962 (Paris); Natl. Inst. No. 184,100. Owner of U.S. Reg. No. 365,074. The drawing is lined for red and this coloring is an essential feature of the mark.
For Aperitif Wines.
First use January 1962; in commerce Aug. 1, 1962.

SN 157,084. Di Giorgio Fruit Corporation, d.b.a. Di Giorgio Wine Company, San Francisco, Calif. Filed Nov. 13, 1962.

Jacques Bonet & Cie

The name "Jacques Bonet" is fictitious.
For Wines.
First use Apr. 4, 1956.

Class 49 — Distilled Alcoholic Liquors

SN 136,293. T. W. Samuels Distillery, Inc., Deatsville, Ky. Filed Jan. 22, 1962.

FOUR GENERATIONS

For Kentucky Straight Bourbon Whiskey.
First use July 7, 1961.

SN 148,727. Wm. Greer & Co. Limited, Glasgow, Scotland. Filed July 10, 1962.

WILLIAM GREER'S

For Scotch Whisky.
First use Apr. 3, 1962; in commerce Apr. 3, 1962.

SN 153,649. John Gross & Co., Baltimore, Md. Filed Sept. 21, 1962.

ROYAL MAC

For Scotch Whisky.
First use Aug. 15, 1949.

SN 153,650. John Gross & Company, d.b.a. The Carlton Company, Baltimore, Md. Filed Sept. 21, 1962.

BANBURY

For Scotch Whisky.
First use Nov. 15, 1960.

Class 50—Merchandise Not Otherwise Classified

SN 148,537. "Safe-T Pacific Company," Redwood City, Calif., by change of name from Safe-T Pacific Baking Company, Redwood City, Calif. Filed July 6, 1962.

SCOOPY'S

Owner of Reg. No. 686,443.
For Drinking Straws.
First use Feb. 4, 1957.

Class 51—Cosmetics and Toilet Preparations

SN 110,365. Helena Rubinstein, Inc., New York, N.Y. Filed Dec. 16, 1960.

BODY SMOOTH

For Hand and Body Lotion.
First use Nov. 1, 1950.

SN 151,515. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

RAIN DROPS

For Foundation Cream.
First use Aug. 3, 1962.

SN 151,517. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

PATIO

For Cologne.
First use Aug. 3, 1962.

SN 151,518. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

CURTSY

For Cologne.
First use Aug. 3, 1962.

SN 151,519. Dorothy Perkins Cosmetics, Inc., St. Louis, Mo. Filed Aug. 20, 1962.

IDENTITY

For Cologne.
First use Aug. 3, 1962.

SN 154,602. L. & C. Hardtmuth, Inc., Bloomsbury, N.J. Filed Oct. 5, 1962.

DREAM

For Cosmetic Pencils.
First use Sept. 19, 1962.

SN 157,218. Helen of Hollywood, Inc., Los Angeles, Calif. Filed Nov. 14, 1962.

Smart Shave

The word "Shave" is disclaimed apart from the mark as shown.
For Shaving Cream.
First use Feb. 9, 1962.

SN 157,787. Robert Alan Franklyn, d.b.a. Robaire Alain, Los Angeles, Calif. Filed Nov. 23, 1962.

COTE D'OR

The English translation of "Cote d'Or" is "gold coast."
For Perfume and Toilet Water.
First use Nov. 1, 1962.

SN 159,388. Lilly Dache Cosmetics Incorporated, Union, N.J. Filed Dec. 19, 1962.

DACHELLE

For Perfume.
First use Nov. 14, 1962.

SN 159,409. Maradel Products, Inc., New York, N.Y. Filed Dec. 19, 1962.

DOUBLE TAKE

For Eye Pencils.
First use Apr. 30, 1962.

SN 159,462. Basics for Beauty, Inc., Birmingham, Mich. Filed Dec. 20, 1962.

QTICLE TIME

For Cuticle Softener and Remover.
First use Nov. 27, 1962.

SN 159,829. Lander Co. Inc., d.b.a. Lander, New York, N.Y. Filed Dec. 27, 1962.

BLACK PANTHER

For Perfume, Toilet Water, Skin Lotions.
First use 1942.

SN 160,004. David O. Pollock, Rockhill Furnace, Pa. Filed Dec. 31, 1962.

RUTHI

For Lotion for the Relief of Oily Skin.
First use May 31, 1962.

SN 160,318. Purex Corporation, Ltd., Lakewood, Calif. Filed Jan. 7, 1963.

HOB NAIL

For Bubble Bath and Cologne.
First use August 1937.

SN 162,170. Maradel Products, Inc., New York, N.Y. Filed Feb. 6, 1963.

VELVET GLOVES

For Hand Lotion.
First use Jan. 17, 1963.

Class 52—Detergents and Soaps

SN 145,507. Amodex Products Inc., Bridgeport, Conn. Filed May 28, 1962.

AMODEX

For Hand Cleaner, Particularly Adapted To Remove Ink and Dye Stains From Hands.
First use Mar. 5, 1958.

SN 156,247. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Oct. 30, 1962.

ACRYL

Owner of Reg. No. 401,314.
For Ingredient Used as an Inhibitor in Acid Solutions in Metal Pickling and Hard Water Scale Removal Operations.
First use on or about Apr. 28, 1937.

SN 156,740. R. O. Hull & Company, Inc., Cleveland, Ohio. Filed Nov. 6, 1962.

ROKLEEN

For Industrial Metal Cleaning Compositions.
First use Aug. 1, 1962.

SN 156,882. Ipco Hospital Supply Corporation, New York, N.Y. Filed Nov. 8, 1962.

DetergiClene

For Concentrated Hospital Detergent and Rinsing Agent.
First use Aug. 17, 1962.

SN 157,141. Quality Chemists, Inc., St. Louis, Mo. Filed Nov. 13, 1962.

DOUBLE BATH

No claim is made to the word "Bath" apart from the mark as shown.
For Bubble Bath Oil.
First use Oct. 31, 1962.

SN 160,371. Economics Laboratory, Inc., St. Paul, Minn. Filed Jan. 8, 1963.

WARHEAD

For Compound for Industrial Machine Washing.
First use Aug. 22, 1962.

SN 160,498. John N. McMath, d.b.a. John N. McMath Co., Larchmont, N.Y. Filed Jan. 10, 1963.

HOUSE OF LORDS

Owner of Reg. No. 733,528.
For Soaps, Shampoos, Shaving Cream and Soaps, Liquid and Powdered Soaps.
First use Dec. 10, 1960.

SN 160,553. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Jan. 11, 1963.

SUPER-CARB

For Two-Layer Paint, Carbon and Soil Remover.
First use on or before Dec. 31, 1953.

SN 160,572. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

SUBDUE

For Medicated Dandruff Shampoo.
First use Aug. 3, 1962.

SN 161,669. Acme Chemical Company, Milwaukee, Wis. Filed Jan. 30, 1963.

ACCO-TERGE

Owner of Reg. Nos. 411,032 and 412,305.
For Liquid Dishwashing Compound.
First use Jan. 23, 1953.

SN 161,670. Acme Chemical Company, Milwaukee, Wis. Filed Jan. 30, 1963.

ACME

For Rust and Scale Removing Compound for Heating, Cooling and Processing Equipment.
First use Sept. 28, 1954.

SERVICE MARKS

Class 100 — Miscellaneous

SN 150,313. The Associated General Contractors of America, Inc., Washington, D.C. Filed Aug. 2, 1962.

PLAN BULLDOZER

Applicant disclaims the descriptive word "Plan."
For Aiding Construction Contractors in Making Their Equipment and Personnel Available to the Government for Disaster Relief.
First use May 1959.

SN 156,212. Arkansas Louisiana Gas Company, Shreveport, La. Filed Oct. 30, 1962.

ARKLA

Owner of Reg. Nos. 705,460, 749,913, and others.
For Retail Distribution of Natural Gas.
First use Aug. 1, 1960.

Class 102 — Insurance and Financial

SN 151,117. American Manufacturers Mutual Insurance Company, Chicago, Ill. Filed Aug. 14, 1962.

AMERICAN MANUFACTURERS MUTUAL INSURANCE COMPANY

For Underwriting of Insurance and Fidelity and Surety Bonds.
First use July 1, 1952.

Class 103 — Construction and Repair

SN 148,929. Wander & Co. Inc., New York, N.Y. Filed July 12, 1962.

CORALIFE

For Service of Refinishing, Cleaning and Polishing Jewelry, Especially Coral Jewelry.
First use October 1961.

Class 105 — Transportation and Storage

SN 159,448. Withers Van Lines of Miami, Inc., Miami, Fla. Filed Dec. 19, 1962.

WITHERS

For Moving, Trucking and Hauling Household Goods and Personal Effects.
First use in 1909.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

753,897. PYROFOAM. High Temperature Materials, Inc. SN 147,579. Pub. 5–21–63. Filed 6–25–62.

Class 2 — Receptades

753,898. DESIGN OF THREE TRIANGLES. Aerojet-General Corporation. SN 121,780. Pub. 5–21–63. Filed 6–12–61.

753,899. SHOE SHAGS. CVT. SN 136,108. Pub. 5–21–63. Filed 1–19–62.

753,900. BEAUTY-BIN. Lincoln Metal Products Corp. SN 139,643. Pub. 5–21–63. Filed 3–12–62.

753,901. LITTERETTE. D. J. Alexander Corporation. SN 139,722. Pub. 5–21–63. Filed 3–13–62.

753,902. TREETAINER. Nursery Metal Pots, Inc. SN 140,171. Pub. 5–21–63. Filed 3–19–62.

753,903. STERI-CANTEEN. David Harold Quinn. SN 142,861. Pub. 5–21–63. Filed 4–23–62.

753,904. SUPERMARKET. Consumer Bag and Packaging Corporation. SN 143,105. Pub. 5–21–63. Filed 4–26–62.

753,905. SERVICE. Consumer Bag and Packaging Corporation. SN 143,107. Pub. 5–21–63. Filed 4–26–62.

753,906. ACCESSORIES AMERICANA AND DESIGN. Burn-Strauss, Inc., d.b.a. Woodpecker Woodware. SN 147,051. Pub. 5–21–63. Filed 6–15–62.

753,907. SPIRO-PAC. Sonoco Products Company. SN 149,219. Pub. 5–21–63. Filed 7–17–62.

753,908. CUTLASS. Brookpark, Inc. SN 149,359. Pub. 5–21–63. Filed 7–19–62.

753,909. PAPERCAN. West Virginia Pulp and Paper Company. SN 150,901. Pub. 5–21–63. Filed 8–9–62.

753,910. FLORAFOAM. George Koch Sons, Inc. SN 151,142. Pub. 5–21–63. Filed 8–14–62.

753,911. PORTA-TUBS. Geo. J. Ball, Inc. SN 152,039. Pub. 5–21–63. Filed 8–28–62.

753,912. OVAL-TAINER. Diamond National Corporation. SN 152,053. Pub. 5–21–63. Filed 8–28–62.

753,913. SUN VALLEY. Stetson Corporation. SN 152,098. Pub. 5–21–63. Filed 8–28–62.

753,914. PIERCENE. Franklin P. Winesett, d.b.a. Winesett Bag Company. SN 152,259. Pub. 5–21–63. Filed 8–30–62.

753,915. KEN-RIP AND DESIGN. Kennedy Car Liner and Bag Company, Incorporated. SN 152,312. Pub. 5–21–63. Filed 8–31–62.

753,916. BABYLON GARDEN. Edward E. Pauer, d.b.a. Babylon Products Company. SN 152,328. Pub. 5–21–63. Filed 8–31–62.

753,917. DIXIE. American Can Company. SN 152,556. Pub. 5–21–63. Filed 9–6–62.

753,918. MIRA-GLAZE. American Can Company. SN 152,557. Pub. 5–21–63. Filed 9–6–62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

753,919. BAG-O-TRICKS. Gutman-Lann Glove Company, Inc. SN 147,198. Pub. 5–21–63. Filed 6–19–62.

Class 4 — Abrasives and Polishing Materials

753,920. WOOD CREAM. Gold Seal Company. SN 116,123. Pub. 4–10–62. Filed 3–21–61.

753,921. BAL-FOIL. Bausch & Lomb Incorporated. SN 156,263. Pub. 5–21–63. Filed 10–31–62.

753,922. MEDALLION. Industrial Soap Company. SN 156,984. Pub. 5–21–63. Filed 11–9–62.

753,923. DIPLOMAT. Industrial Soap Company. SN 156,986. Pub. 5–21–63. Filed 11–9–62.

Class 6 — Chemicals and Chemical Compositions

753,924. PURETTE. Luther B. Arnold, Jr., d.b.a. Vikon Chemical Company. SN 118,639. Pub. 3–13–62. Filed 4–26–61.

753,925. KEPHOS. Imperial Chemical Industries Limited. SN 127,112. Pub. 7–24–62. Filed 9–1–61.

753,926. WATER BUOY. Chemico Corporation. SN 146,360. Pub. 5–21–63. Filed 6–7–62.

753,927. D.E.H. The Dow Chemical Company. SN 146,595. Pub. 5–21–63. Filed 6–11–62.

753,928. GENCLOR. Imperial Chemical Industries Limited. SN 146,820. Pub. 5–21–63. Filed 6–13–62.

753,929. KEMEX. Chem Lab Products, Incorporated. SN 146,978. Pub. 5–21–63. Filed 6–15–62.

753,930. CASORON. N.V. Philips-Duphar. SN 155,734. Pub. 5–21–63. Filed 10–23–62.

753,931. FLEXIMET. Swift & Company. SN 155,947. Pub. 5–21–63. Filed 10–25–62.

753,932. CONTROL E-B. Mud Control Laboratories, Inc. SN 156,139. Pub. 5–21–63. Filed 10–29–62.

753,933. ETCHON. Hercules Packing Corporation. SN 156,602. Pub. 5–21–63. Filed 11–5–62.

753,934. DIPLOMAT. Industrial Soap Company. SN 156,987. Pub. 5–21–63. Filed 11–9–62.

Class 8 — Smokers' Articles, Not Including Tobacco Products

753,935. FEUDOR. Etablissements Genoud & Cie. SN 148,963. Pub. 5–21–63. Filed 7–13–62.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

753,936. WEAVER CHOKE AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,043. Pub. 5–21–63. Filed 9–12–62.

Class 10 — Fertilizers

753,937. SOHIO AND DESIGN. The Standard Oil Company. SN 145,000. Pub. 4–9–63. Filed 5–18–62.

Class 11 — Inks and Inking Materials

753,938. FIVE O'CLOCK. The Carter's Ink Company. SN 156,370. Pub. 5–21–63. Filed 11–1–62.

753,939. ELECTRIQUEST. Quest Manufacturing Company. SN 156,656. Pub. 5–21–63. Filed 11–5–62.

Class 12 — Construction Materials

753,940. TRI-STEEL. Inland Steel Company. SN 140,455. Pub. 5–21–63. Filed 3–22–62.

753,941. SUNPRUF AND DESIGN. Spurlock and Carter Company, Inc. SN 145,416. Pub. 5–21–63. Filed 5–24–62.

753,942. CHORE-EASE. Farwell, Ozmun, Kirk & Company. SN 148,166. Pub. 5–21–63. Filed 7–2–62.

753,943. HILITE AND DESIGN. Security Aluminum Corporation. SN 150,629. Pub. 5–21–63. Filed 8–6–62.

753,944. GA AND FIGURE OF A WORKMAN. General Aluminum Corporation. SN 151,581. Pub. 5–21–63. Filed 8–21–62.

753,945. NEWCO PIVOT CONTROL. Newco Aluminum Products Co., Inc. SN 156,431. Pub. 5–21–63. Filed 11–1–62.

753,946. TRADE WINDS. United States Plywood Corporation. SN 156,841. Pub. 5–21–63. Filed 11–7–62.

753,947. OCT-O-QUAD. McGraw-Edison Company, d.b.a. Airectic Division. SN 156,999. Pub. 5–21–63. Filed 11–9–62.

753,948. TWINKLEBORD. Edward Hines Lumber Co. SN 157,221. Pub. 5–21–63. Filed 11–14–62.

753,949. BITUMAGIC. Koppers Company, Inc. SN 157,225. Pub. 5–21–63. Filed 11–14–62.

753,950. SAFETONE. The Celotex Corporation. SN 157,458. Pub. 5–21–63. Filed 11–19–62.

753,951. VENTSULATION. Johns-Manville Corporation. SN 157,705. Pub. 5–21–63. Filed 11–21–62.

753,952. ALMACO. Aluminum Manufacturing Corporation. SN 157,876. Pub. 5–21–63. Filed 11–26–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

753,953. INSUL-SHIELD. Insul-Coustic Corporation. SN 110,614. Pub. 8–8–61. Filed 12–21–60.

753,954. SPLIT-LESS. W. H. Maze Company. SN 134,655. Pub. 5–21–63. Filed 12–26–61.

753,955. G. Grinnell Corporation. SN 137,625. Pub. 5–21–63. Filed 2–9–62.

753,956. PORTOMODE. Calco Products, Inc. SN 145,324. Pub. 5–21–63. Filed 5–24–62.

753,957. BRU-CEX. Bruner Corporation. SN 147,999. Pub. 5–21–63. Filed 6–29–62.

753,958. SCHLAGE AND CROWN DESIGN. Schlage Lock Company. SN 149,602. Pub. 5–21–63. Filed 7–23–62.

753,959. COUSINE CONSOLE. Elkay Manufacturing Company. SN 150,034. Pub. 5–21–63. Filed 7–30–62.

753,960. COUSINE CONSOLE AND DESIGN. Elkay Manufacturing Company. SN 150,035. Pub. 5–21–63. Filed 7–30–62.

753,961. SUPERING. The W. L. Jenkins Company. SN 151,059. Pub. 5–21–63. Filed 8–13–62.

753,962. REITONE. The W. L. Jenkins Company. SN 151,060. Pub. 5–21–63. Filed 8–13–62.

Class 14 — Metals and Metal Castings and Forgings

753,963. HUNTER ALUMINUM AND DESIGN. American Metal Climax, Inc., assignee of Hunter Engineering Co. SN 146,052. Pub. 5–21–63. Filed 6–4–62.

753,964. ECONO-FLEX. Continental Steel Corporation. SN 152,377. Pub. 5–21–63. Filed 9–4–62.

753,965. VL 55. Metallgesellschaft Aktiengesellschaft. SN 152,546. Pub. 5–21–63. Filed 9–5–62.

Class 15 — Oils and Greases

753,966. MICHELDYNE. The Alben Daniel Chemical Corporation. SN 143,498. Pub. 5–21–63. Filed 5–1–62.

753,967. ROCKWELL. Rockwell Manufacturing Company. SN 147,313. Pub. 5–21–63. Filed 6–20–62.

Class 17 — Tobacco Products

753,968. WINDSOR PALMAS AND DESIGN. W. H. Snyder and Sons, Incorporated. SN 118,109. Pub. 5–21–63. Filed 4–18–61.

753,969. BEAUMONT. Philip Morris Incorporated. SN 140,971. Pub. 5–21–63. Filed 3–28–62.

753,970. TOPIC. Regina Cigar Company, Inc. SN 143,268. Pub. 5–21–63. Filed 4–27–62.

753,971. ARIEL. Cope & Lloyd (Overseas) Limited. SN 150,678. Pub. 5–21–63. Filed 8–7–62.

753,972. CHESTER. Liggett & Myers Tobacco Company. SN 154,608. Pub. 5–21–63. Filed 10–5–62.

753,973. TRIDENT. The Universal Tobacco Company Limited. SN 156,779. Pub. 5–21–63. Filed 11–6–62.

753,974. DANBURY. R. J. Reynolds Tobacco Company. SN 158,566. Pub. 5–21–63. Filed 12–5–62.

Class 18 — Medicines and Pharmaceutical Preparations

753,975. RP AND DESIGN. Societe des Usines Chimiques Rhone-Poulenc. SN 109,527. Pub. 6–19–62. Filed 12–2–60.

753,976. DAB. McKesson & Robbins, Incorporated, d.b.a. Norcliff Laboratories. SN 141,196. Pub. 8–21–62. Filed 3–30–62.

753,977. CANEX. The Dow Chemical Company. SN 146,596. Pub. 5–21–63. Filed 6–11–62.

753,978. LONAVAR. G. D. Searle & Co. SN 152,342. Pub. 4–9–63. Filed 8–31–62.

753,979. PRO SUPERIMPOSED OVER THE WORD PENSTREP. Merck & Co. Inc. SN 155,426. Pub. 5–21–63. Filed 10–18–62.

753,980. TROLPAYN. Vitamix Pharmaceuticals, Inc. SN 155,457. Pub. 5–21–63. Filed 10–18–62.

753,981. ISATASE. Lakeside Laboratories, Inc. SN 155,726. Pub. 5–21–63. Filed 10–23–62.

753,982. FEVOKINE. The Wellcome Foundation, Ltd. SN 155,764. Pub. 5–21–63. Filed 10–23–62.

753,983. DESIGN OF DOG PAW PRINT. Husky Laboratory, Inc. SN 155,921. Pub. 5–21–63. Filed 10–25–62.

753,984. RHULITOL. American Cyanamid Company. SN 156,257. Pub. 5–21–63. Filed 10–31–62.

753,985. ACUTUSS-AS. Philips Roxane, Inc. SN 157,400. Pub. 5–21–63. Filed 11–16–62.

Class 19 — Vehicles

753,986. KITTY KAT. Flote-Aire Marine Corporation. SN 119,199. Pub. 5–21–63. Filed 5–3–61.

753,987. ROOSTER AND DESIGN. Keystone Railway Equipment Co. SN 121,831. Pub. 5–21–63. Filed 6–12–61.

753,988. ATLAS. Arlo Industries, Inc. SN 133,355. Pub. 5–21–63. Filed 12–5–61.

753,989. TULARELOFT. Tulareloft, Inc. SN 133,719. Pub. 5–21–63. Filed 12–8–61.

753,990. HORIZON. Sud-Aviation Societe National de Constructions Aeronautiques. SN 137,670. Pub. 5–21–63. Filed 2–9–62.

753,991. BILT-RITE AND DESIGN. Bilt-Rite Baby Carriage Co., Inc. SN 141,244. Pub. 5–21–63. Filed 4–2–62.

753,992. REMBRANDT. Rembrandt Mobile Homes, Inc. SN 152,155. Pub. 5–21–63. Filed 8–29–62.

753,993. 76. Union Oil Company of California. SN 153,436. Pub. 5–21–63. Filed 9–18–62.

753,994. GOAT. Craig Systems, Inc. SN 154,333. Pub. 5–21–63. Filed 10–2–62.

753,995. PERM-A-JUST. Vander Wilt Manufacturing Company. SN 158,585. Pub. 5–21–63. Filed 12–5–62.

753,996. GOTE. Bonham Corporation. SN 158,781. Pub. 5–21–63. Filed 12–10–62.

753,997. LOAD-ADJUSTERS. Armstrong Hydraulics, Inc. SN 159,190. Pub. 5–21–63. Filed 12–17–62.

753,998. JIFF-LIFT CADDY. Grand Specialties Company. SN 159,579. Pub. 5–21–63. Filed 12–21–62.

753,999. COMMANDER. Pioneer Aerodynamic Systems, Inc. SN 159,605. Pub. 5–21–63. Filed 12–21–62.

754,000. PARA-COMMANDER. Pioneer Aerodynamic Systems, Inc. SN 159,606. Pub. 5–21–63. Filed 12–21–62.

Class 20 — Linoleum and Oiled Cloth

754,001. SABRINA. Armstrong Cork Company. SN 158,127. Pub. 5–21–63. Filed 11–29–62.

Class 21 — Electrical Apparatus, Machines, and Supplies

754,002. NATIONAL AND DESIGN. Matsushita Electric Industrial Co., Ltd. SN 93,697. Pub. 7–31–62. Filed 3–25–60.

754,003. SELECTRON. Noble Company. SN 98,810. Pub. 3–21–61. Filed 6–10–60.

754,004. ATI. Applied Technology, Inc. SN 123,262. Pub. 7–31–62. Filed 7–3–61.

754,005. ATI AND DESIGN. Applied Technology, Inc. SN 123,263. Pub. 7–31–62. Filed 7–3–61.

754,006. RANDOMATIC. Minneapolis-Honeywell Regulator Company. SN 132,698. Pub. 5–21–63. Filed 11–24–61.

754,007. FLEX-HEAT. Process Heating Company. SN 135,859. Pub. 5–21–63. Filed 1–15–62.

754,008. STATESMAN. Fisher Radio Corporation. SN 137,061. Pub. 10–9–62. Filed 2–1–62.

754,009. ANDY AND DESIGN. Anderson Electric Corporation. SN 138,456. Pub. 11–13–62. Filed 2–23–62.

754,010. SHOVELITE. Rambusch Decorating Company, Inc. SN 143,267. Pub. 5–21–63. Filed 4–27–62.

754,011. E-Z-HOOK. Robert N. Youger, d.b.a. E-Z-Hook Test Products. SN 144,032. Pub. 5–21–63. Filed 5–7–62.

754,012. TANN AND DESIGN. The Tann Corporation. SN 144,425. Pub. 5–21–63. Filed 5–11–62.

754,013. NOR/MATIC. Square D Company. SN 144,775. Pub. 5–21–63. Filed 5–16–62.

754,014. AMC AND DESIGN. The Associated Merchandising Corporation. SN 145,024. Pub. 5–21–63. Filed 5–21–62.

754,015. PARKMASTER. The Pyle-National Company. SN 145,155. Pub. 5–21–63. Filed 5–21–62.

754,016. ELIRATOR. AEG-Elotherm G.m.b.H. SN 147,174. Pub. 5–21–63. Filed 6–19–62.

754,017. REPRESENTATION OF CROWN. Brunswick Corporation. SN 147,436. Pub. 5–21–63. Filed 6–22–62.

754,018. WM ETC. AND DESIGN. Waukesha Motor Company. SN 148,112. Pub. 5–21–63. Filed 6–29–62.

754,019. MUSIC-FLAME AND DESIGN. Lowell Manufacturing Company. SN 149,101. Pub. 5–21–63. Filed 7–16–62.

754,020. 2 IN TRIANGLE. Sprague Electric Company. SN 150,112. Pub. 5–21–63. Filed 7–30–62.

754,021. HOLIDAY. The Emerson Electric Manufacturing Company, assignee of Day-Brite Lighting, Inc. SN 150,533. Pub. 5–21–63. Filed 8–6–62.

754,022. EI AND DESIGN. Elasco, Incorporated. SN 151,216. Pub. 5–21–63. Filed 8–15–62.

754,023. DRAGSPARK. Precision Specialties, Inc. SN 153,115. Pub. 5–21–63. Filed 9–13–62.

754,024. NORBATROL. Norbatrol Electronics Corporation. SN 153,590. Pub. 5–21–63. Filed 9–20–62.

754,025. MOTOMOUNT. The Emerson Electric Manufacturing Company. SN 157,202. Pub. 5–21–63. Filed 11–14–62.

754,026. TRI 55 CLAD INTERNATIONAL AND DESIGN. General Electric Company. SN 157,614. Pub. 5–21–63. Filed 11–20–62.

754,027. WESTAR. Litton Systems, Inc. SN 157,629. Pub. 5–21–63. Filed 11–20–62.

754,028. ELECTRONIC SERVANT. John R. Wiegand, d.b.a. Wiegand Mfg. Co. SN 158,488. Pub. 5–21–63. Filed 12–4–62.

754,029. WELLSTAR. Wells Television, Inc. SN 158,755. Pub. 5–21–63. Filed 12–7–62.

754,030. KURVABOLIC. Hawley Products Company. SN 159,064. Pub. 5–21–63. Filed 12–13–62.

754,031. FULL FORCE. Parisian Novelty Company. SN 159,112. Pub. 5–21–63. Filed 12–13–62.

754,032. PYGMY SEACEL. Yardney Electric Corporation. SN 159,181. Pub. 5–21–63. Filed 12–14–62.

754,033. ALWAYS BEAUTY CLEAN. Interstate Engineering Corporation. SN 159,241. Pub. 5–21–63. Filed 12–17–62.

Class 22 — Games, Toys, and Sporting Goods

754,034. REVELATION AND DESIGN. Wallace N. Lee, d.b.a. Master Toy Company. SN 110,690. Pub. 2–13–62. Filed 12–22–60.

754,035. BILT-RITE AND DESIGN. Bilt-Rite Baby Carriage Co., Inc. SN 141,245. Pub. 5–21–63. Filed 4–2–62.

754,036. STYROBIRD. Styro Toy Corporation. SN 146,523. Pub. 5–21–63. Filed 6–8–62.

754,037. TWIST-MASTER. Seneca Tackle Co., Inc. SN 146,670. Pub. 5–21–63. Filed 6–11–62.

754,038. BEN SOAKER. Horace Benton. SN 146,966. Pub. 5–21–63. Filed 6–15–62.

754,039. C DESIGN. The Emporium Capwell Company. SN 155,902. Pub. 5–21–63. Filed 10–25–62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

754,040. ZILK-FLOMATIC. Carl S. Zilk, d.b.a. Carbonic Beverage Equipment Co. SN 100,205. Pub. 4–25–61. Filed 7–1–60.

754,041. ST AND DESIGN. Service Tool Die & Mfg. Co. SN 106,348. Pub. 5–21–63. Filed 10–13–60.

754,042. UNICHECK. Deschner Co. SN 114,940. Pub. 9–26–61. Filed 3–6–61.

754,043. GREENWOOD. Samuel M. Langston Co., Inc., assignee of Greenwood Engineering Company, Inc. SN 129,145. Pub. 5–21–63. Filed 10–3–61.

754,044. PALLET MULE AND DESIGN. Atlanta Equipment Manufacturing Company. SN 134,782. Pub. 5–21–63. Filed 12–28–61.

754,045. BRUSHOMATIC. The Grover Company. SN 136,760. Pub. 5–21–63. Filed 1–29–62.

754,046. MAGNEMATIC. The Grover Company. SN 136,761. Pub. 5–21–63. Filed 1–29–62.

754,047. DIALAMATIC. The Grover Company. SN 136,762. Pub. 5–21–63. Filed 1–29–62.

754,048. LINGK ETC. AND DESIGN. Lingk Water Conditioning Equipment, Inc. SN 136,782. Pub. 5–21–63. Filed 1–29–62.

754,049. FULLER'S. Fuller Tool Company, Inc. SN 138,491. Pub. 2–5–63. Filed 2–23–62.

754,050. ACCENT. Sunbeam Corporation. SN 138,897. Pub. 5–21–63. Filed 3–1–62.

754,051. SWECO. Stanley Goldwyn Siddall, d.b.a. Siddall's Welding and Equipment Co. SN 138,987. Pub. 11–27–62. Filed 3–2–62.

754,052. VUELINE. Canada Stamp and Stencil Company Limited, d.b.a. Vueline Marking Products. SN 140,635. Pub. 5–21–63. Filed 3–26–62.

754,053. SUPER-CUT. American Saw & Mfg. Company. SN 142,399. Pub. 5–21–63. Filed 4–17–62.

754,054. FLO-LIFT. Stokvis Multiton Corp. SN 142,659. Pub. 11–27–62. Filed 4–19–62.

754,055. J.W. & S. J. Wiss & Sons Co. SN 143,075. Pub. 5–21–63. Filed 4–25–62.

754,056. FESTO. Gottlieb Theodor Stoll, d.b.a. Festo-Maschinenfabrik. SN 144,895. Pub. 5–21–63. Filed 4–17–62.

754,057. DESIGN OF CIRCULAR ARROW AND TRIANGLE. Anderson Corporation. SN 144,919. Pub. 5–21–63. Filed 5–18–62.

754,058. VAN GARD. Cobe Sales, Inc., d.b.a. Van Gard. SN 145,445. Pub. 5–21–63. Filed 5–25–62.

754,059. WASA. C. O. Oberg & Co:s Aktiebolag. SN 148,069. Pub. 5–21–63. Filed 6–29–62.

754,060. WM ETC. AND DESIGN. Waukesha Motor Company. SN 148,113. Pub. 5–21–63. Filed 6–29–62.

754,061. SHAW-LINE AND DESIGN. The H. C. Shaw Company. SN 148,660. Pub. 5–21–63. Filed 7–9–62.

754,062. "DUO-LIFE." Jas. H. Matthews & Co. SN 148,826. Pub. 5–21–63. Filed 7–11–62.

754,063. ISO-AIR. Savair Products Company. SN 149,133. Pub. 5–21–63. Filed 7–16–62.

754,064. RE-CARB. ACF Industries, Incorporated. SN 149,801. Pub. 5–21–63. Filed 7–26–62.

754,065. WEB FORM. Midwest Foil & Packaging, Inc. SN 150,584. Pub. 5–21–63. Filed 8–6–62.

754,066. MOUNT HOPE AND DESIGN. Mount Hope Machinery Company. SN 150,589. Pub. 5–21–63. Filed 8–6–62.

754,067. DISPENS-O-PUNCH. Mask-O-Matic, Inc. SN 150,704. Pub. 5–21–63. Filed 8–7–62.

754,068. VALOR. Goerlich's, Inc. SN 150,867. Pub. 5–21–63. Filed 8–9–62.

754,069. ROYALETTE. United States Rubber Company. SN 150,984. Pub. 5–21–63. Filed 8–10–62.

754,070. MARGE'S. Marge's Mufflers, Inc. SN 151,145. Pub. 5–21–63. Filed 8–14–62.

754,071. ADSERT. Midland-Ross Corporation. SN 151,246. Pub. 5–21–63. Filed 8–15–62.

754,072. TURN-NADO AND DESIGN. South Bend Lathe, Inc. SN 151,268. Pub. 5–21–63. Filed 8–15–62.

754,073. DURA-FLUTE. Borg-Warner Corporation. SN 152,561. Pub. 5–21–63. Filed 9–6–62.

754,074. ABBEY-MATIC AND DESIGN. Abbey Automation Systems, Inc. SN 153,364. Pub. 5–21–63. Filed 9–18–62.

754,075. GRAPHALLAST AND DESIGN. Graphite Metallizing Corporation. SN 156,404. Pub. 5–21–63. Filed 11–1–62.

754,076. K-MILL. The Servco Company. SN 157,412. Pub. 5–21–63. Filed 11–16–62.

754,077. DYMO. Dymo Industries, Inc. SN 157,890. Pub. 5–21–63. Filed 11–26–62.

754,078. MEDART. Blaw-Knox Company. SN 158,049. Pub. 5–21–63. Filed 11–28–62.

754,079. TROJAN. Parker Manufacturing Company. SN 158,366. Pub. 5–21–63. Filed 12–3–62.

Class 24 — Laundry Appliances and Machines

754,080. ADJUSTA-FORM. Wichita Precision Tool Company. SN 152,481. Pub. 5–21–63. Filed 9–4–62.

754,081. BARONET. Detrex Chemical Industries, Inc. SN 152,568. Pub. 5–21–63. Filed 9–6–62.

Class 26 — Measuring and Scientific Appliances

754,082. CONTAREX. Zeiss Ikon A.G. SN 40,640. Pub. 8–19–58. Filed 11–13–57.

754,083. D-PAK. Daystrom, Incorporated (Texas corporation), assignee of Daystrom, Incorporated (New Jersey corporation). SN 83,207. Pub. 5–21–63. Filed 10–14–59.

754,084. PENTAMATIC. Kabushiki Kaisha Yashica. SN 90,843. Pub. 4–2–63. Filed 2–12–60.

754,085. AUTOPENTA. Kabushiki Kaisha Yashica. SN 90,844. Pub. 4–2–63. Filed 2–12–60.

754,086. GOSSEN AND DESIGN. Photoptic Import Corp., assignee of P. Gossen & Co. Gesellschaft mit beschraenkter Haftung. SN 111,098. Pub. 5–21–63. Filed 12–30–60.

754,087. MICROTITER. Cooke Engineering Company. SN 128,338. Pub. 5–21–63. Filed 9–21–61.

754,088. THERMO-REF. Genistron, Incorporated. SN 130,064. Pub. 5–21–63. Filed 10–17–61.

754,089. MARKER MAKER. Automatic Marker Photo Corp. SN 133,200. Pub. 5–21–63. Filed 12–4–61.

754,090. SKIL-SCORER. Electromation Co. SN 134,959. Pub. 5–21–63. Filed 1–2–62.

754,091. SPRITE. Robertson Photo-Mechanix, Inc. SN 135,230. Pub. 5–21–63. Filed 1–4–62.

754,092. SWEEP-SYNC. Chadwick-Helmuth Company. SN 136,345. Pub. 5–21–63. Filed 1–23–62.

754,093. ASTRA AND DESIGN. Debs Company. SN 140,651. Pub. 5–21–63. Filed 3–26–62.

754,094. SOLID-TROL. Deady Chemical Company. SN 140,927. Pub. 5–21–63. Filed 3–28–62.

754,095. THERMOTRAC. Beckman Instruments, Inc. SN 141,153. Pub. 5–21–63. Filed 3–30–62.

754,096. TOUCH-O-MATIC. Value Devices Company. SN 141,232. Pub. 5–21–63. Filed 3–30–62.

754,097. INTERTECH. Intertech, Inc. SN 141,728. Pub. 5–21–63. Filed 4–6–62.

754,098. B AND DESIGN. Burmac Electronics Co., Inc. SN 141,810. Pub. 5–21–63. Filed 4–9–62.

754,099. ACCOUNT-O-PUNCH. Clary Corporation. SN 142,017. Pub. 5–21–63. Filed 4–11–62.

754,100. G/C. Grass Instrument Company. SN 142,186. Pub. 5–21–63. Filed 4–13–62.

754,101. S AND DESIGN. Drexel Enterprises, Inc. SN 143,812. Pub. 5–21–63. Filed 5–4–62.

754,102. SAFETY ISLAND. The Gabriel Company. SN 143,818. Pub. 5–21–63. Filed 5–4–62.

754,103. FORMAGAGE. Monroe L. Wexler, d.b.a. Penn Industries. SN 144,788. Pub. 5–21–63. Filed 5–16–62.

754,104. GEOMETRIC DESIGN. N.V. Optische Industrie "De Oude Delft." SN 145,206. Pub. 5–21–63. Filed 5–22–62.

754,105. OLD DELFT AND DESIGN. N.V. Optische Industrie "De Oude Delft." SN 145,207. Pub. 5–21–63. Filed 5–22–62.

754,106. GALA. Botany Industries, Inc., d.b.a. Renauld of France. SN 145,441. Pub. 5–21–63. Filed 5–25–62.

754,107. OHIO AND DESIGN. The Ohio Thermometer Company. SN 145,586. Pub. 5–21–63. Filed 5–28–62.

754,108. ESM WITH MANDREL SUPERIMPOSED. Mandrel Industries, Inc. SN 146,083. Pub. 5–21–63. Filed 6–4–62.

754,109. ART FLEX. Art Craft Optical Company, Inc. SN 147,678. Pub. 5–21–63. Filed 6–26–62.

754,110. HALLEFEX. Beckman Instruments, Inc. SN 148,852. Pub. 5–21–63. Filed 7–5–62.

754,111. MIX-N-STOR. Rexall Drug and Chemical Company, d.b.a. Tupperware. SN 151,258. Pub. 5–21–63. Filed 8–15–62.

754,112. AQUA-CAM. Einar E. Petersen. SN 151,998. Pub. 5–21–63. Filed 8–27–62.

754,113. WEAVER AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,037. Pub. 5–21–63. Filed 9–12–62.

754,114. WEAVER SCOPE AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,038. Pub. 5–21–63. Filed 9–12–62.

754,115. WEAVER PIVOT MOUNT AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,041. Pub. 5–21–63. Filed 9–12–62.

754,116. TIP-OFF IN OVAL DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,042. Pub. 5–21–63. Filed 9–12–62.

754,117. V8. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,044. Pub. 5–21–63. Filed 9–12–62.

754,118. V8 AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,045. Pub. 5–21–63. Filed 9–12–62.

754,119. RANGE FINDER RETICULE AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,047. Pub. 5–21–63. Filed 9–12–62.

754,120. SPECTACULARS. Botany Industries, Inc., d.b.a. Renauld of France. SN 153,378. Pub. 5–21–63. Filed 9–18–62.

754,121. VARIOMATOR. Agfa Aktiengesellschaft. SN 153,442. Pub. 5–21–63. Filed 9–19–62.

754,122. TUNE-A-LINE. Lee Hunter, d.b.a. Hunter Engineering Company. SN 153,658. Pub. 5–21–63. Filed 9–21–62.

754,123. IQ–218. Monroe Calculating Machine Company. SN 154,984. Pub. 5–21–63. Filed 10–11–62.

754,124. FIGURE OF A MAN. Mitchell Industries, Inc. SN 155,627. Pub. 5–21–63. Filed 10–22–62.

754,125. T. Tokheim Corporation. SN 155,668. Pub. 5–21–63. Filed 10–22–62.

754,126. COMET. Justus Roe & Sons, Inc. SN 155,843. Pub. 5–21–63. Filed 10–24–62.

754,127. AQUA SET. General Aniline & Film Corporation. SN 155,913. Pub. 5–21–63. Filed 10–25–62.

Class 27 — Horological Instruments

754,128. ORLAINE. Benrus Watch Company, Inc. SN 111,474. Pub. 7–11–61. Filed 1–9–61.

754,129. BIGGS HAMILTON. Hamilton Watch Company. SN 128,035. Pub. 5–21–63. Filed 9–18–61.

754,130. JPE AND DESIGN. Pe Jay Jewelers, Inc. SN 146,747. Pub. 5–21–63. Filed 6–12–62.

Class 28 — Jewelry and Precious-Metal Ware

754,131. ETERNAL TROTH. Kay Jewelry Stores, Inc., assignee of Sidney Graboyes. SN 122,526. Pub. 1–9–62. Filed 6–21–61.

754,132. CK. Charles Koppel Ring Co. Inc. SN 135,446. Pub. 9–25–62. Filed 1–9–62.

754,133. WONDER-LOK. Kurt Wayne, Inc. SN 139,250. Pub. 5–21–63. Filed 3–6–62.

754,134. P IN DIAMOND DESIGN. Bracelets by Princess, Inc. SN 139,819. Pub. 5–21–63. Filed 3–14–62.

754,135. ROBBINS. The Robbins Company. SN 142,454. Pub. 5–21–63. Filed 4–17–62.

754,136. B & L AND DESIGN. Beckerman & Lerner, Inc. SN 143,922. Pub. 5–21–63. Filed 5–7–62.

754,137. SC & L CO. Shreve, Crump and Low Company. SN 147,964. Pub. 5–21–63. Filed 6–28–62.

754,138. F.L. Frank Levy. SN 148,316. Pub. 5–21–63. Filed 7–3–62.

754,139. MISCELLANEOUS DESIGN. Max Kraft. SN 151,493. Pub. 5–21–63. Filed 8–20–62.

Class 29 — Brooms, Brushes, and Dusters

754,140. FACUTE. Horst Associates, Inc. SN 135,976. Pub. 5–21–63. Filed 1–17–62.

754,141. PRO-MITT. E Z Paintr Corporation. SN 152,388. Pub. 5–21–63. Filed 9–4–62.

754,142. BRUSH-EEZ. Sea-Wide Industries, Inc. SN 152,447. Pub. 5–21–63. Filed 9–4–62.

754,143. DENTALUX. The Standard Oil Company, assignee of Pro-phy-lac-tic Brush Company. SN 154,057. Pub. 5–21–63. Filed 9–27–62.

Class 30 — Crockery, Earthenware, and Porcelain

754,144. JOAN OF ARC. Ben S. Loeb, Inc. SN 152,808. Pub. 5–21–63. Filed 9–10–62.

Class 31 — Filters and Refrigerators

754,145. ELECTRO-PAK. American Air Filter Company, Inc. SN 141,566. Pub. 5–21–63. Filed 4–5–62.

754,146. HYDRO-SUL. Kisco Boiler & Engineering Co. SN 149,573. Pub. 5–21–63. Filed 7–23–62.

754,147. REPRESENTATION OF MERCURY. Hummel Technical Products, Inc. SN 151,056. Pub. 5–21–63. Filed 8–13–62.

Class 32 — Furniture and Upholstery

754,148. HALO-CEILING. Blair Displays, Incorporated. SN 128,952. Pub. 5–21–63. Filed 10–2–61.

754,149. SQUEAKPROOF. Kay Manufacturing Corp. SN 139,862. Pub. 5–21–63. Filed 3–14–62.

754,150. BILT-RITE AND DESIGN. Bilt-Rite Baby Carriage Co., Inc. SN 141,246. Pub. 5–21–63. Filed 4–2–62.

754,151. PUN'KIN-SEAT. Welsh Co. SN 143,190. Pub. 5–21–63. Filed 4–26–62.

754,152. MERIT FRAMES AND DESIGN. Cecil G. Allen. SN 144,433. Pub. 5–21–63. Filed 5–14–62.

754,153. STOCK-CRAFT. Rand Associates Inc. SN 145,213. Pub. 5–21–63. Filed 5–22–62.

754,154. CONTOURA. Contour Chair-Lounge Co., Inc. SN 150,854. Pub. 5–21–63. Filed 8–9–62.

754,155. STOWAWAY. Novo Industrial Corporation. SN 155,095. Pub. 5–21–63. Filed 10–12–62.

754,156. DESIGN FOR LIVING. Drexel Enterprises, Inc. SN 155,896. Pub. 5–21–63. Filed 10–25–62.

754,157. C DESIGN. The Emporium Capwell Company. SN 155,903. Pub. 5–21–63. Filed 10–25–62.

754,158. AETNASTAK. Aetna Steel Products Corporation. SN 155,958. Pub. 5–21–63. Filed 10–26–62.

754,159. WOODCARV. Woodcarv, Inc. SN 157,181. Pub. 5–21–63. Filed 11–13–62.

Class 33 — Glassware

754,160. SOLARBRONZE. Pittsburgh Plate Glass Company. SN 163,489. Pub. 5–21–63. Filed 2–26–63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

754,161. DAYTON. Dayton Electric Manufacturing Company. SN 132,904. Pub. 5–21–63. Filed 11–28–61.

754,162. SANI DUR. John Wood Company. SN 136,412. Pub. 5–21–63. Filed 1–23–62.

754,163. SANI SUR. John Wood Company. SN 136,413. Pub. 5–21–63. Filed 1–25–62.

754,164. WABASH POWER AND DESIGN. Wabash Power Equipment Co. SN 136,854. Pub. 5–21–63. Filed 1–29–62.

754,165. TIN-A-LUM. Vsevold Michael Fredericksz. SN 144,211. Pub. 5–21–63. Filed 5–9–62.

754,166. ARC AND DESIGN. Chemetron Corporation. SN 144,688. Pub. 5–21–63. Filed 5–16–62.

754,167. HI-VIS. Arcos Corporation. SN 144,920. Pub. 5–21–63. Filed 5–18–62.

754,168. ARVIN. Arvin Industries, Inc. SN 145,437. Pub. 5–21–63. Filed 5–25–62.

754,169. CU-VERLAY. Specialloy, Inc. SN 146,116. Pub. 5–21–63. Filed 6–4–62.

754,170. ELIRATOR. AEG-Elotherm G.m.b.H. SN 147,173. Pub. 5–21–63. Filed 6–19–62.

754,171. VARIMATIC. Ruud Manufacturing Company. SN 149,410. Pub. 5–21–63. Filed 7–19–62.

754,172. HYDROSHADE. General Hydronics Corporation. SN 149,562. Pub. 5–21–63. Filed 7–23–62.

754,173. MISTER SMOKESTACK. Goodwin, Dannenbaum, Littman & Wingfield Incorporated. SN 149,738. Pub. 5–21–63. Filed 7–25–62.

754,174. A AND DESIGN. Arrow Louver and Damper Corp. SN 149,752. Pub. 5–21–63. Filed 7–25–62.

754,175. NEW-VENT. Dover Corporation. SN 149,923. Pub. 5–21–63. Filed 7–27–62.

754,176. HI-FIRE. Walter Vallett Company. SN 149,974. Pub. 5–21–63. Filed 7–27–62.

754,177. TEM-TROL. Geo. D. Roper Corporation. SN 150,186. Pub. 5–21–63. Filed 7–31–62.

754,178. FABULOUS 400. The Tappan Company. SN 150,467. Pub. 5–21–63. Filed 8–3–62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

754,179. DURALON. Mid-States Distributing Company, Inc. SN 136,473. Pub. 5–21–63. Filed 1–24–62.

754,180. USFLEX AND DESIGN. United States Rubber Company. SN 141,134. Pub. 12–18–62. Filed 3–29–62.

754,181. DURA-DRY. The Albany Felt Company. SN 146,444. Pub. 5–21–63. Filed 6–8–62.

754,182. SINBAD. Johns-Manville Corporation. SN 154,035. Pub. 5–21–63. Filed 9–27–62.

754,183. LOSANT. Thor Power Tool Company. SN 154,178. Pub. 5–21–63. Filed 9–28–62.

754,184. FOREMOST. J. C. Penney Company. SN 158,855. Pub. 5–21–63. Filed 12–10–62.

Class 36 — Musical Instruments and Supplies

754,185. AUDIO Rx WITHIN AN OVAL. Winea J. Simpson. SN 117,141. Pub. 10–2–62. Filed 4–4–61.

754,186. TRIUMPH RECORDS AND DESIGN. Warren E. Taylor, d.b.a. Triumph Records. SN 136,085. Pub. 5–21–63. Filed 1–18–62.

754,187. RADIOETTES. Namrah Records, Inc. SN 142,961. Pub. 5–21–63. Filed 4–24–62.

754,188. TAPETTE. Sarkes Tarzian, Inc. SN 143,764. Pub. 5–21–63. Filed 5–3–62.

754,189. KAREN. EBS Record Corporation. SN 146,715. Pub. 5–21–63. Filed 6–12–62.

754,190. TAHITI AND DESIGN. Tahiti Musique. SN 150,980. Pub. 5–21–63. Filed 8–10–62.

754,191. FAR-GO AND DESIGN. Rue G. Barclay, d.b.a. Rue Publishing. SN 157,046. Pub. 5–21–63. Filed 11–13–62.

754,192. R REXFORD RECORDS AND DESIGN. Gus Kahn Music Company, d.b.a. Rexford Records. SN 160,190. Pub. 5–21–63. Filed 1–4–63.

754,193. GARD-A-MATIC. Shure Brothers Incorporated. SN 160,670. Pub. 5–21–63. Filed 1–14–63.

754,194. SILVER PLATTER SERVICE. Capitol Records, Inc. SN 162,385. Pub. 5–21–63. Filed 2–8–63.

754,195. SHADOWEIGHT. V-M Corporation. SN 162,508. Pub. 5–21–63. Filed 2–11–63.

754,196. CONSOLETTE. The Seeburg Corporation. SN 162,592. Pub. 5–21–63. Filed 2–12–63.

754,197. IMF. Lectronics of City Line Center, Inc. SN 162,647. Pub. 5–21–63. Filed 2–18–63.

754,198. SILHOUETTE OF MAN BLOWING A HORN. United Artists Records, Inc. SN 163,186. Pub. 5–21–63. Filed 2–20–63.

754,199. DACOTAH VOICES. South Dakota Alumnae Chapter of Zeta Phi Eta. SN 163,886. Pub. 5–21–63. Filed 3–4–63.

Class 37 — Paper and Stationery

754,200. GROTESQUE BIRD DESIGN. Whiting-Plover Paper Company. SN 146,697. Pub. 5–21–63. Filed 6–11–62.

Class 38 — Prints and Publications

754,201. NATIONAL FARM STORE MERCHANDISING DEALER PANEL AND DESIGN. The Miller Publishing Company. SN 147,387. Pub. 5–21–63. Filed 6–21–62.

754,202. TELEFICTION AND DESIGN. Hugo Gernsback. SN 147,731. Pub. 5–21–63. Filed 6–26–62.

754,203. SPORTS ILLUSTRATED. Time, Incorporated. SN 156,341. Pub. 5–21–63. Filed 10–31–62.

Class 39 — Clothing

754,204. SUN VALLEY. Sun Valley Manufacturing Co. SN 39,916. Pub. 3–31–59. Filed 10–31–57.

754,205. DRIZZLE BONNET. Principle Plastics, Inc. SN 63,964. Pub. 5–21–63. Filed 12–9–58.

754,206. HAGUE SUEDE. Marshall Ray Corporation. SN 100,033. Pub. 2–28–61. Filed 6–30–60.

754,207. JAG-KNIT. Kayser-Roth Corporation. SN 107,130. Pub. 8–22–61. Filed 10–25–60.

754,208. WINKY JRS. AND DESIGN. Winky Jrs., Inc. SN 113,464. Pub. 5–21–63. Filed 2–10–61.

754,209. GLENEAGLES GOLF MASTERS. Saxone, Lilley & Skinner (Holdings) Limited, assignee of Saxone Shoe Company Limited. SN 118,105. Pub. 2–13–62. Filed 4–18–61.

754,210. STOCKTON. Stockton Manufacturing Company, Inc. SN 123,045. Pub. 5–21–63. Filed 6–28–61.

754,211. SNOOPY JUNIORS. Gertrude M. Dreyfus. SN 125,017. Pub. 5–21–63. Filed 7–31–61.

754,212. FAMOUS MILLS BRAND. I. C. Herman & Company, Inc. SN 125,596. Pub. 5–21–63. Filed 8–8–61.

754,213. ABBY MICHAEL LTD. Bobbie Brooks, Incorporated, assignee of Abby Michael, Ltd. SN 125,994. Pub. 5–21–63. Filed 8–15–61.

754,214. ANKLE ACTION. Moran Shoe Company. SN 127,346. Pub. 5–21–63. Filed 9–6–61.

754,215. HABANERA. Maidenform, Inc. SN 129,954. Pub. 5–21–63. Filed 10–16–61.

754,216. STRICTLY JR. AND DESIGN. College-Town of Boston. SN 130,045. Pub. 5–21–63. Filed 10–17–61.

754,217. ASTROLYTE. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes. SN 130,453. Pub. 7–31–62. Filed 10–23–61.

754,218. STRATO-LITE. Modern Shoe Company. SN 133,294. Pub. 7–31–62. Filed 12–4–61.

754,219. GOVERNOR. Kayser-Roth Corporation. SN 133,677. Pub. 7–17–62. Filed 12–8–61.

754,220. DOOZIES. Liberty Hosiery Mills, Inc. SN 134,393. Pub. 7–17–62. Filed 12–20–61.

754,221. MISSY ARNOLD. Mr. Arnold, Inc., assignee of Mr. Arnold Actualite, Inc. SN 137,355. Pub. 5–21–63. Filed 2–6–62.

754,222. DELORES. Ross of Florida, Inc. SN 138,231. Pub. 5–21–63. Filed 2–19–62.

754,223. TRIDENT. W. W. Haffenden Ltd. SN 139,212. Pub. 5–21–63. Filed 3–6–62.

754,224. SLIMFIT. B. Altman & Co. SN 140,898. Pub. 5–21–63. Filed 3–28–62.

754,225. WONDER S-P-A-N. Sears, Roebuck and Co. SN 140,992. Pub. 5–21–63. Filed 3–28–62.

754,226. MR. H. ESQ. Huntingdon Mills, Inc. SN 141,181. Pub. 5–21–63. Filed 3–30–62.

754,227. SHEERLOC. Hanes Hosiery Mills Company. SN 141,616. Pub. 5–21–63. Filed 4–5–62.

754,228. SPANTROL. The Crown Corset Company. SN 142,282. Pub. 5–21–63. Filed 4–16–62.

754,229. STAND MOLD. Henry B. Harrison. SN 142,635. Pub. 5–21–63. Filed 4–19–62.

754,230. BARNSVILLE U.S.A. AND DESIGN. Puritan Fashions Corporation. SN 142,965. Pub. 5–21–63. Filed 4–24–62.

754,231. SO BIG AND DESIGN. Danny Dare, Inc. SN 143,353. Pub. 5–21–63. Filed 4–30–62.

754,232. EVEREADY. Savada Bros., Inc. SN 144,193. Pub. 5–21–63. Filed 5–9–62.

754,233. FOXCROFT ETC. AND DESIGN. The Enro Shirt Company, Inc. SN 145,646. Pub. 5–21–63. Filed 5–14–62.

754,234. PIMA SUPREME AND DESIGN. Silver Knit Hosiery Mills, Inc. SN 145,737. Pub. 5–21–63. Filed 5–29–62.

754,235. RIB-EYE. P. H. Hanes Knitting Company. SN 146,186. Pub. 5–21–63. Filed 6–5–62.

754,236. NANA. North American Nutria Associates. SN 146,207. COLLECTIVE MARK. Pub. 5–21–63. Filed 6–5–62.

754,237. POZZATTI KNIT. Harry S. Epstein, Inc. SN 146,603. Pub. 5–21–63. Filed 6–11–62.

754,238. LEE. John B. Stetson Company. SN 147,238. Pub. 5–21–63. Filed 6–19–62.

754,239. TOTE COTE. Climatic Inc. SN 147,354. Pub. 5–21–63. Filed 6–21–62.

754,240. TRUELOC. Acme-McCrary Corporation. SN 148,117. Pub. 5–21–63. Filed 7–2–62.

754,241. PONTI ROMA. Ponti Roma, Inc. SN 148,650. Pub. 5–21–63. Filed 7–9–62.

754,242. PRESENTATIONS. Edison Brothers Stores, Inc. SN 149,062. Pub. 5–21–63. Filed 7–16–62.

754,243. PREDICTIONS. Edison Brothers Stores, Inc. SN 149,063. Pub. 5–21–63. Filed 7–16–62.

754,244. THREADLOCK. Bear Brand Hosiery Co. SN 149,356. Pub. 5–21–63. Filed 7–19–62.

754,245. VOLK'S COMMODORE AND DESIGN. Volk Bros. Company. SN 149,896. Pub. 5–21–63. Filed 7–26–62.

754,246. SWAN STRETCH. White Swan Uniforms, Inc. SN 151,451. Pub. 5–21–63. Filed 8–17–62.

754,247. JEAN. S. S. Kresge Company. SN 153,571. Pub. 5–21–63. Filed 9–20–62.

754,248. AQUALURA. The Puritan Sportswear Corp. SN 153,812. Pub. 5–21–63. Filed 9–24–62.

754,249. VALSHIRE. O'Shaughnessy, Dewes & Klein, Inc. SN 154,052. Pub. 5–21–63. Filed 9–27–62.

754,250. CABAS. CBS Imports Corp. SN 154,556. Pub. 5–21–63. Filed 10–5–62.

754,251. DOLLENET. Dolly Voice. SN 154,785. Pub. 5–21–63. Filed 10–8–62.

754,252. SMITTEN. Florida Atlas Corporation. SN 155,057. Pub. 5–21–63. Filed 10–12–62.

754,253. MILL OF THE WEST. The Parsons & Baker Co. SN 155,098. Pub. 5–21–63. Filed 10–12–62.

754,254. DROPNYL. Societe Rhodiaceta. SN 155,441. Pub. 5–21–63. Filed 10–18–62.

754,255. DROPGAL. Societe Rhodiaceta. SN 155,444. Pub. 5–21–63. Filed 10–18–62.

754,256. RANDSHEEN. Rand Rubber Company, Inc. SN 155,649. Pub. 5–21–63. Filed 10–22–62.

754,257. C DESIGN. The Emporium Capwell Company. SN 155,904. Pub. 5–21–63. Filed 10–25–62.

754,258. TRAVELQUEEN. Stephen-Rajki, Inc. SN 155,945. Pub. 5–21–63. Filed 10–25–62.

Class 40 — Fancy Goods, Furnishings, and Notions

754,259. C DESIGN. The Emporium Capwell Company. SN 155,905. Pub. 5–21–63. Filed 10–25–62.

Class 41 — Canes, Parasols, and Umbrellas

754,260. SUN 'N SURF. Louis Weiss Umbrellas Inc. SN 150,659. Pub. 5–21–63. Filed 8–6–62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

754,261. TRAFALGAR TWIST. Howse, Mead & Sons, Inc. SN 127,479. Pub. 5–21–63. Filed 9–8–61.

754,262. MARION MFG. Co. Marion Manufacturing Company. SN 131,970. Pub. 5–21–63. Filed 11–14–61.

754,263. BALMORAL. Broadloom Imports, Inc. SN 138,153. Pub. 5–21–63. Filed 2–19–62.

754,264. FABRIC WITH THE CHARACTER OF QUALITY BY GREENWOOD AND DESIGN. Greenwood Mills, Inc. SN 143,954. Pub. 5–21–63. Filed 5–7–62.

754,265. TEB-X-CEL. Tootal Broadhurst Lee Company Limited. SN 149,680. Pub. 5–21–63. Filed 7–24–62.

754,266. DROPSAN. Societe Rhodiaceta. SN 148,762. Pub. 5–21–63. Filed 7–10–62.

754,267. LINTON TWEEDS. Linton Tweeds Limited. SN 151,345. Pub. 5–21–63. Filed 8–16–62.

754,268. DURASEAL. The B. F. Goodrich Company. SN 153,646. Pub. 5–21–63. Filed 9–21–62.

754,269. IMPERIAL COLLECTION. Fieldcrest Mills, Inc. SN 154,020. Pub. 5–21–63. Filed 9–27–62.

754,270. LANCELOT. Golding Bros. Company, Inc. SN 154,492. Pub. 5–21–63. Filed 10–4–62.

754,271. STRONG-HEWAT. Strong Hewat & Co., Inc. SN 154,646. Pub. 5–21–63. Filed 10–5–62.

754,272. TILOWEB. Mosse, Incorporated. SN 154,743. Pub. 5–21–63. Filed 10–8–62.

754,273. STEVETEX. J. P. Stevens & Co., Inc. SN 154,864. Pub. 5–21–63. Filed 10–9–62.

754,274. TOPSAIL. Wellington Sears Company. SN 154,935. Pub. 5–21–63. Filed 10–10–62.

754,275. THUNDERCORD. Graniteville Company. SN 155,607. Pub. 5–21–63. Filed 10–22–62.

754,276. LEAN ON KLOPMAN. Klopman Mills, Inc. SN 155,618. Pub. 5–21–63. Filed 10–22–62.

754,277. RANDSHEEN. Rand Rubber Company, Inc. SN 155,650. Pub. 5–21–63. Filed 10–22–62.

754,278. PIMALON. United Merchants and Manufacturers, Inc. SN 155,670. Pub. 5–21–63. Filed 10–22–62.

754,279. C DESIGN. The Emporium Capwell Company. SN 155,906. Pub. 5–21–63. Filed 10–25–62.

Class 43 — Thread and Yarn

754,280. N. National Plastic Products Company, Inc. SN 146,308. Pub. 5–21–63. Filed 6–6–62.

754,281. BEL-WAXED. Belding Heminway Company, Inc. SN 151,192. Pub. 5–21–63. Filed 8–15–62.

754,282. DROPNYL. Societe Rhodiaceta. SN 155,443. Pub. 5–21–63. Filed 10–18–62.

754,283. DROPGAL. Societe Rhodiaceta. SN 155,446. Pub. 5–21–63. Filed 10–18–62.

754,284. FLAMED. Carlton Yarn Mills, Incorporated. SN 155,686. Pub. 5–21–63. Filed 10–23–62.

Class 44 — Dental, Medical, and Surgical Appliances

754,285. A. The Akwell Corporation. SN 139,002. Pub. 5–21–63. Filed 3–5–62.

754,286. ELECTRODYNE. Electrodyne Company, Inc. SN 139,052. Pub. 5–21–63. Filed 3–5–62.

754,287. CURVLITE. Curvlite Surgical Products. SN 139,388. Pub. 5–21–63. Filed 3–8–62.

754,288. EXHILARATOR. Continental Research, Inc., d.b.a. Diatomic Oxygen Research. SN 139,599. Pub. 5–21–63. Filed 3–12–62.

754,289. UNIMED. Unimed, Inc., by assignment and change of name from United Medical Products Company, Incorporated. SN 139,698. Pub. 5–21–63. Filed 3–12–62.

754,290. SLUMBER TONE. Unimed, Inc., by assignment and change of name from United Medical Products Company, Incorporated. SN 139,699. Pub. 5–21–63. Filed 3–12–62.

754,291. NUSAUNA. Battle Creek Equipment Co. SN 144,444. Pub. 5–21–63. Filed 5–14–62.

754,292. 4 POINT STAR WITHIN DOUBLE CIRCLE. Beavers Dental Products Limited. SN 149,251. Pub. 5–21–63. Filed 7–18–62.

754,293. WISS AND DESIGN. J. Wiss & Sons Co. SN 149,795. Pub. 5–21–63. Filed 7–25–62.

754,294. WISS. J. Wiss & Sons Co. SN 149,797. Pub. 5–21–63. Filed 7–25–62.

754,295. THE PRINCESS. Revlon, Inc. SN 152,251. Pub. 5–21–63. Filed 8–30–62.

Class 45 — Soft Drinks and Carbonated Waters

754,296. RIO RICKEY. Robert D. Pike, Jr. SN 147,305. Pub. 5–21–63. Filed 6–20–62.

Class 46 — Foods and Ingredients of Foods

754,297. MENU MAGIC. Stark, Wetzel & Co. Inc. SN 116,931. Pub. 3–26–63. Filed 3–31–61.

754,298. JOLLY ROGER. Jolly Roger Dairy Products, Inc. SN 120,804. Pub. 5–21–63. Filed 5–25–61.

754,299. GOLD CREST. Brundidge Foods, Inc. SN 132,444. Pub. 3–12–63. Filed 11–21–61.

754,300. GOULD'S VITA-RICH. Gould Novelties, Inc. SN 147,000. Pub. 5–21–63. Filed 6–15–62.

754,301. COUNTRY KITCHEN. Robert A. Johnston Company. SN 147,829. Pub. 5–21–63. Filed 6–27–62.

754,302. 43 BEANS IN EVERY CUP. The Nestlé Company, Inc. SN 147,843. Pub. 5–21–63. Filed 6–27–62.

754,303. FIGURE OF GIANT. Green Giant Company. SN 154,112. Pub. 5–21–63. Filed 9–28–62.

754,304. COLOSSUS. Nebraska Consolidated Mills Company. SN 155,432. Pub. 5–21–63. Filed 10–18–62.

754,305. FELINE FANCY. Peter Pan Seafoods, Inc. SN 155,434. Pub. 5–21–63. Filed 10–18–62.

754,306. HY-TOP. Red & White Corporation, d.b.a. Hy-Top Products, Inc. SN 155,436. Pub. 5–21–63. Filed 10–18–62.

754,307. REGIMENTAL. Spice Islands Company. SN 155,527. Pub. 5–21–63. Filed 10–19–62.

754,308. INDIA BRIGADE. Spice Islands Company. SN 155,528. Pub. 5–21–63. Filed 10–19–62.

754,309. SEVEN UP. The Seven-Up Company. SN 155,943. Pub. 5–21–63. Filed 10–25–62.

754,310. GOLDEN-Y. Ventura Processors. SN 156,199. Pub. 5–21–63. Filed 10–29–62.

754,311. DAIRY BROOK. Cooperative Quality Marketing, Inc. SN 156,477. COLLECTIVE MARK. Pub. 5–21–63. Filed 11–2–62.

754,312. LIQUASORB. Meat Industry Suppliers, Inc. SN 156,508. Pub. 5–21–63. Filed 11–2–62.

754,313. MR. DEE-LISH ABC AND REPRESENTATION OF AN USHER HOLDING A PIECE OF POPCORN. ABC Vending Corporation, d.b.a. ABC Vending Corp. SN 156,705. Pub. 5–21–63. Filed 11–6–62.

754,314. MR. DEE-LISH. ABC Vending Corporation, d.b.a. ABC Vending Corp. SN 156,706. Pub. 5–21–63. Filed 11–6–62.

754,315. FANCIFUL REPRESENTATION OF A STANDING USHER WEARING A FANCIFUL CAP WITH LETTERS ABC. ABC Vending Corporation, d.b.a. ABC Vending Corp. SN 156,707. Pub. 5–21–63. Filed 11–6–62.

Class 50 — Merchandise Not Otherwise Classified

754,316. ATLAS AND DESIGN. The Atlas Ladder and Supply Co., Inc. SN 146,157. Pub. 5–21–63. Filed 6–5–62.

754,317. MAGNA-MASTER. Christensen & Cook. SN 147,550. Pub. 5–21–63. Filed 6–25–62.

Class 51 — Cosmetics and Toilet Preparations

754,318. GOODY. H. Goodman & Sons, Inc. SN 146,043. Pub. 5–21–63. Filed 6–4–62.

754,319. ROYAL CROWN PERSONALITY LIPSTICK AND DESIGN. J. Strickland & Co. SN 146,826. Pub. 5–21–63. Filed 6–6–62.

754,320. COMBO. Bristol-Myers Company. SN 151,565. Pub. 4–16–63. Filed 8–21–62.

Class 52 — Detergents and Soaps

754,321. SUNIL. Lever Brothers, Port Sunlight, Limited. SN 104,284. Pub. 8–15–61. Filed 9–12–60.

754,322. SCRUBBY. Scrubbee Products Corp., assignee of Positive Products Laboratories, Inc. SN 115,623. Pub. 9–11–62. Filed 3–14–61.

754,323. "GLO-ALL." Gloria Allen, Inc. SN 133,117. Pub. 10–9–62. Filed 12–1–61.

754,324. GOODY. H. Goodman & Sons, Inc. SN 146,044. Pub. 5–21–63. Filed 6–4–62.

754,325. VIV. Gabe B. Weil. SN 148,344. Pub. 1–29–63. Filed 7–3–62.

754,326. MEDALLION. Industrial Soap Company. SN 156,985. Pub. 5–21–63. Filed 11–9–62.

Service Marks

Class 100 — Miscellaneous

754,327. CRIB. Crib, Tidy Di-Dy Diaper Service, Inc. SN 146,470. Pub. 5–21–63. Filed 6–8–62.

Class 101 — Advertising and Business

754,328. PDT. TAB Engineers, Inc. SN 147,241. Pub. 5–21–63. Filed 6–19–62.

Class 102 — Insurance and Financial

754,329. B AND DESIGN. Brink's, Incorporated. SN 147,083. Pub. 5–21–63. Filed 6–18–62.

Class 105 — Transportation and Storage

754,330. NATIONALEASE. National Truck Leasing Association. SN 134,504. COLLECTIVE MARK. Pub. 9–25–62. Filed 12–18–61.

754,331. N, NATIONALEASE AND DESIGN. National Truck Leasing Association. SN 134,505. COLLECTIVE MARK. Pub. 9–25–62. Filed 12–18–61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 4 — Abrasives and Polishing Materials

754,332. The Bon Ami Company, New York, N.Y. SN 140,910. Filed P.R. 3–28–62; Am. S.R. 5–15–63.

DUST 'N WAX

For Furniture Polish.
First use June 17, 1959.

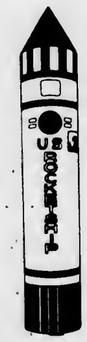
754,333. The Bon Ami Company, New York, N.Y. SN 142,266. Filed P.R. 4–16–62; Am. S.R. 5–23–63.



The representation of the lady on the mark is a photograph of a model, Penny D. Peterson, whose consent is of record.
For Furniture Polish.
First use Mar. 9, 1962.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

754,334. Bernard J. Semel, Washington, D.C. SN 122,476. Filed P.R. 6–20–61; Am. S.R. 3–27–63.



For Packaged Fireworks.
First use May 18, 1961.

Class 11 — Inks and Inking Materials

754,335. Eaton Allen Corp., Brooklyn, N.Y. SN 126,155. Filed P.R. 8–17–61; Am. S.R. 5–7–63.



For Paper Containing a Coating of White Transfer or Similar Transfer Substance, for Use in Masking Erroneously Typed Impressions so as To Prepare the Paper for Receiving a Different Impression.
First use Apr. 6, 1961.

Class 12 — Construction Materials

754,336. Flakebord Corporation, Falconer, N.Y. SN 138,953. Filed P.R. 3-2-62; Am. S.R. 5-29-63.

FLAKEBORD

For Mat-Formed Wood Particleboard for Interior Use.
First use Feb. 2, 1962.

754,337. Old Colony Paint & Chemical Co., Los Angeles, Calif. SN 140,858. Filed P.R. 3-27-62; Am. S.R. 1-2-63.

PAVE COAT

For Coating for Use in Protecting and Beautifying Asphalt Black Top and Concrete Surfaces, Including Driveways, Badminton Courts, Parking Areas, and the Like.
First use Oct. 3, 1957.

754,338. Steel-N-Foam Docks, Inc., Kansas City, Kans. SN 160,901. Filed 1-17-63.

STEEL-N-FOAM

For Boat Docks.
First use June 1961.

Class 16 — Protective and Decorative Coatings

754,339. Speed-O-Laq Products Co., Inc., St. Paul, Minn. SN 148,092. Filed P.R. 6-29-62; Am. S.R. 5-29-63.

SPARKLE-BRITE

For Epoxy Polyamide Type Protective Coating for Application by Brush, Roller or as a Spray on Wood, Metal, Tile, Concrete, Brick and Masonry Surfaces Such as Walls, Counters, Laundry Tubs, Shower Stalls, Ceramic Wash Basins, Washing Machines, Dishwashers, Refrigerators, Etc.
First use Apr. 25, 1962.

Class 18 — Medicines and Pharmaceutical Preparations

754,340. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. SN 112,095. Filed P.R. 1-18-61; Am. S.R. 6-6-63.

ACNE-MASQUE

For Preparation for the Relief of Acne.
First use Dec. 22, 1960.

754,341. Clyserol Laboratories, Inc., Oklahoma City, Okla. SN 118,415. Filed 4-24-61.



The mark consists of the design of a container.
For Enema Solution.
First use during August 1952.

754,342. Junior Prescriptions, Inc., Los Angeles, Calif., assignee of Jay D. Wiener, d.b.a. Junior Prescriptions, Los Angeles, Calif. SN 122,407. Filed P.R. 6-19-61; Am. S.R. 10-24-62.

JR℞

The prescription symbol ℞ is disclaimed apart from the mark as shown.

For Special Pharmaceutical and Nutritive Preparations, viz., Vitamins, Minerals, Cod Liver Oil, Primary Dried Yeast and Combinations of the Same; Preparations Which Include Specially Prepared Milk, Skim Milk and Milk Formulas Providing a Diet or Formula, for the Prevention or Management of Intestinal Disturbances, for Infants, Children, Invalids or Young Adults; Special Nutrients, Protein Derivatives and Other Products Designed for Dietary Treatment of Physical and Mental Deficiencies and Disorders, and for the Replacement of Fluid Electrolytes, and for Weight Control; Hypoallergenic Products; Preparations for the Prevention, Treatment and Management of Constipation; Laxatives; Stool Softeners; Gastro-Intestinal Absorbents, and Adsorbents; Adrenergics; Allergens; Alteratives and Tonics; Analeptics; Analgesics (Aspirin, Etc.); Antacids; Antheimintics; Anti-Allergens; Anti-Anemia Preparations; Anti-Arthritics; Antibacterials; Antibiotics; Anticholinergice; Anticoagulants; Antidepressants; Anticonvulsants; Antidiabetes Agents; Antiduretics; Antidiarrheals; Antidotes; Antigens; Antihemorrhagics; Antihistamines; Antihypoprothrombinemics; Anti-Inflammatory Agents; Antihypertensives; Antileukemics; Antiluetics; Antimalarials; Antimycotics; Antinauseants; Antineoplastic Drugs; Antioxidants; Antiparasympathomimetics; Antipruritics; Antipyretics; Antirachitics; Antirhus Poisonings; Antiseptics; Antisera; Antisialogogues; Anti-Snake-Bite Serum; Antispasmodics; Antisympathomimetics; Antithrombins; Antithyroids; Antitoxins; Antituberculosis Preparations; Antitussives; Antixerotics; Appetite Depressants; Appetite Stimulants; Astringents; Ataraxics; Carminatives; Cardiotonics; Cathartics; Cell Proliferants; Cholagogues; Choleretics; Cholinergic Drugs; Coronary Vasodilators; Creams; Cycloplegic Drugs; Decongestants; Debriding Agents; Demulcents; Dietary Supplements; Digestants; Disinfectants; Diuretics; Douches; Ear Drops; Electrolytic Replacements; Emollients; Enemas; Enzymes; Estrogenic Preparations; Eye Drops; Eye Lotions; Fat Digestants; Fungicides; Fungistatics; Ganglion Blocking Agents; Gargles; Germicides; Growth Stimulants; Hematinics; Hemostatics; Hydrocholeretics; Hypnotics; Hypoglycemic Agents; Hormones; Hypotensives; Immunizing Agents; Intravenous Feedings; Keratolytics; Laxatives; Liniments; Lipotropic Agents; Lotions; Lubricants; Mineral Nutrients; Mineral Oil; Miotics; Mouthwashes; Mucolytic Agents; Muscle Relaxants; Narcotics; Narcotic Antagonists; Nasal Sprays; Jellies and Drops; Oxytocics; Parasiticides; Parasympatholytics; Parasympathomimetics; Pediculicides; Peristaltic Inhibitors or Restoratives; Plasmas; Pressor Drugs; Protein Preparations; Proteolytic Preparations; Rubefacients; Scabicides; Sclerosing Agents; Sedatives; Serums; Shampoos; Sitosterols; Soporifics; Sterilizing Agents; Stimulants; Sulfonamides; Sympathomimetics; Sun Protectant Agents; Tonics; Toxins; Toxoids; Vaccines; Vaginal Creams; Jellies and Ointments; Vaginal PH Stabilizers; Vaginal Powders, Solutions, Suppositories and Tablets; Vasoconstrictors; Vasodilators; Vasopressors; Vehicles; Vermifuges; Vesicants; Wound Irrigations.
First use Apr. 12, 1961, on flavored aspirin.

754,343. Grove Laboratories Incorporated, St. Louis, Mo. SN 130,283. Filed P.R. 10-19-61; Am. S.R. 5-29-63.

NO-NAP

For Stay Awake Tablets.
First use Aug. 1, 1960.

Class 19 — Vehicles

754,344. Applied Power Industries, Inc., West Allis, Wis. SN 144,224. Filed P.R. 5-10-62; Am. S.R. 5-15-63.

FASTER-FIT

For Vehicle Body Repair and Replacement Parts.
First use May 1, 1962, on vehicle body repair panels.

754,345. Service Spring Company, Indianapolis, Ind. SN 147,153. Filed P.R. 6-18-62; Am. S.R. 6-10-63.

MORE BOUND TO THE POUND WITH GENUINE SERVICE SPRINGS

For Springs and Spring Components.
First use May 15, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

754,346. F. R. Hannon & Sons, Inc., Canton, Ohio. SN 123,541. Filed P.R. 7-7-61; Am. S.R. 6-7-63.

FLUX POWER

For Electrically Heated Screen Power Supply and Supporting Equipment.
First use Jan. 9, 1961.

Class 22 — Games, Toys, and Sporting Goods

754,347. Brunswick Corporation, Chicago, Ill. SN 119,269. Filed P.R. 5-4-61; Am. S.R. 6-4-63.

SWIM-N-SKI

For Buoyant Water Sports Safety Device To Be Worn by Men, Women, and Children.
First use in September 1956.

754,348. Milton Bradley Company, Springfield, Mass. SN 147,433. Filed 6-22-62.

U-STIKUM

For Paper Cut-Outs for Making Composite Pictures.
First use Mar. 10, 1941.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

754,349. Mason Envelope Co. Inc., New York, N.Y. SN 145,274. Filed P.R. 5-23-62; Am. S.R. 5-31-63.

SECURESTACK

For Device for Stacking Flat Polyethylene Bags for Successive Removal of the Bags One by One for Insertion of Articles Such as Men's Shirts in the Bags for Packaging.
First use about Apr. 2, 1962.

Class 32 — Furniture and Upholstery

754,350. Kenlin Enterprises, Inc., Highland Park, Ill. SN 128,565. Filed P.R. 9-25-61; Am. S.R. 5-23-63.

NO-SLAT

For Brackets for Adjustably Interconnecting Bed Rails With Bed Head and Foot Boards.
First use Sept. 15, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

754,351. Adelta Manufacturing Co. Inc., Philadelphia, Pa. SN 146,864. Filed P.R. 6-14-62; Am. S.R. 5-13-63.

Lock Seal

For Takeoff Connections for Sheet Metal Ducts.
First use Apr. 20, 1962.

Class 37 — Paper and Stationery

754,352. Tru-Mark Paper Corporation, Long Island City, N.Y. SN 134,907. Filed P.R. 12-29-61; Am. S.R. 5-27-63.

TMCK MARK

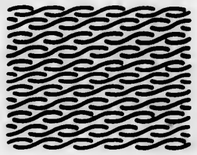
For Pattern Marking Paper.
First use Dec. 11, 1961.

754,353. Curtis 1000, Incorporated, West Hartford, Conn. SN 143,940. Filed P.R. 5-7-62; Am. S.R. 5-24-63.

KOR-O-GATED MAILERS

For Mailing Envelopes of Paper.
First use Feb. 19, 1957.

754,354. Hammermill Paper Company, Erie, Pa. SN 145,359. Filed P.R. 5–24–62; Am. S.R. 5–23–63.



For Safety Paper for Business Forms Such as Checks, Tickets, Certificates, and the Like.
First use 1914.

Class 38 — Prints and Publications

754,355. Bowling America, Inc., Chicago, Ill., assignee of Jack Glasser, Chicago, Ill. SN 127,220. Filed P.R. 9–5–61; Am. S.R. 9–25–62.

tenpin BOWLING AMERICA

For Magazine.
First use February 1961.

754,356. M.B.C. Publications, Inc., Bronxville, N.Y. SN 135,209. Filed P.R. 1–4–62; Am. S.R. 5–22–63.

THE WANT AD PRESS

For Weekly Newspaper Devoted Solely to Advertisements.
First use Aug. 26, 1961.

754,357. Editions Culturelles Europeennes, Le Havre (Seine-Maritime), France. SN 144,702. Filed P.R. 5–16–62; Am. S.R. 1–4–63.

EUROPEA

Priority claimed under Sec. 44(d) on French Reg. No. 7,145, dated Dec. 6, 1961 (Le Havre); Natl. Inst. No. 175,904.
For Method Adapted to the Teaching or Study of Living Languages; Material for the Instruction or Teaching of Languages (to the Exclusion of Furniture); Educational Publications, Educational Newspapers, Educational Magazines, Educational Periodicals, Educational Books; Films, Records and Toys of Educational Nature; Scientific and Teaching Instruments and Apparatus.

754,358. G. & C. Merriam Company, Springfield, Mass. SN 158,637. Filed 12–6–62.



For Dictionaries.
First use Aug. 31, 1961.

Class 39 — Clothing

754,359. Exquisite Form Industries, Inc., New York, N.Y. SN 141,600. Filed P.R. 4–5–62; Am. S.R. 6–11–63.

OH-SO-BRIEF

For Girdles.
First use May 1961.

754,360. Superba Cravats, Inc., Rochester, N.Y. SN 146,426. Filed P.R. 6–7–62; Am. S.R. 5–27–63.

NEAT 'N SLIM

For Neckwear and More Specifically, Neckties.
First use May 21, 1962.

Class 46 — Foods and Ingredients of Foods

754,361. The Isaly Dairy Company, d.b.a. Isaly's, Youngstown, Ohio. SN 103,789. Filed P.R. 9–1–60; Am. S.R. 5–20–63.

ISALY'S CHIPPED CHOPPED

For Thin, Sliced Ready-To-Serve, Pressed Ham.
First use Dec. 16, 1946.

754,362. Pursweet, Inc., St. Louis, Mo. SN 132,723. Filed P.R. 11–24–61; Am. S.R. 5–23–63.

PURSWEET

For Saccharin Type Sweetener.
First use Nov. 10, 1961.

754,363. Alfredo Di Lelio, d.b.a. Alfredo Di Lelio "Ristorante Alfredo," Rome, Italy. SN 142,020. Filed P.R. 4–11–62; Am. S.R. 5–17–63.



The English translation of applicant's mark is "the original Alfredo, near Augusteo, the king of noodles, Alfredo, Jr., manager." Owner of Italian Reg. No. 148,646, dated Apr. 21, 1960.
For Seasoned and Non-Seasoned, Dry and Uncooked and Cooked Noodles and Spaghetti.

754,364. Jim Smith, Columbus, Ohio. SN 153,900. Filed P.R. 9–25–62; Am. S.R. 6–7–63.

"My Syrup So Good"

For Table Syrup.
First use at least as early as July 22, 1957.

Class 49 — Distilled Alcoholic Liquors

754,365. Marie Brizard et Roger, Bordeaux, Gironde, France. SN 128,707. Filed P.R. 9–27–61; Am. S.R. 7–31–63.

BRIZARD

Owner of French Reg. No. 51,222, dated Mar. 20, 1961 (Bordeaux); Natl. Inst. No. 162,668 and U.S. Reg. Nos. 541,931, 697,175, and others.
For Liqueurs and Brandies.

754,366. Medley Distilling Company, Owensboro, Ky. SN 139,769. Filed P.R. 3–13–62; Am. S.R. 5–21–63.

BOURBON USA

For Kentucky Straight Bourbon Whiskey.
First use Feb. 1, 1962.

754,367. Findlater, Mackie, Todd & Co. Limited, London, England. SN 148,377. Filed 7–5–62.



Owner of British Reg. No. 806,378, dated May 25, 1960.
For Scotch Whisky.

754,368. John Walker & Sons, Limited, London, England. SN 155,865. Filed P.R. 10–24–62; Am. S.R. 6–4–63.



Owner of British Reg. No. 829,756, dated Jan. 19, 1962, and U.S. Reg. Nos. 255,416 and 329,525.
For Scotch Whisky.

754,369. John Walker & Sons Limited, London, England. SN 155,866. Filed P.R. 10–24–62; Am. S.R. 6–4–63.



Owner of British Reg. No. 829,755, dated Jan. 19, 1962, and U.S. Reg. Nos. 255,415 and 329,524.
For Scotch Whisky.

Class 52 — Detergents and Soaps

754,370. Warren F. Emerson, d.b.a. Emerson Enterprises, Daly City, Calif. SN 126,324. Filed P.R. 8–21–61; Am. S.R. 6–3–63.

GUM-GONE

For Compound for Removing Gum and Other Materials From Automobile Carburetors, Fuel and Lubricating Systems.
First use December 1950.

754,371. Elmer H. Sosine, d.b.a. E. H. Sosine Company, Seattle, Wash. SN 126,959. Filed P.R. 8–30–61; Am. S.R. 6–11–63.

CRYSTAL CLEAR

For Eyeglass Cleaner.
First use on or about July 15, 1961.

754,372. The Bon Ami Company, New York, N.Y. SN 141,803. Filed P.R. 4–9–62; Am. S.R. 3–21–63



The representation of the lady on the mark is a photograph of a model, "Penny D. Peterson," whose consent is of record.
For Household Cleaner.
First use Mar. 14, 1962.

754,373. The Bon Ami Company, New York, N.Y. SN 144,134. Filed P.R. 5–9–62; Am. S.R. 5–23–63.



The representation of the woman on the mark is a photograph of a model, Penny D. Peterson, whose consent is of record.
For Household Germicidal Cleanser.
First use Apr. 3, 1962.

Service Marks

Class 100 — Miscellaneous

754,374. Cleveland Technical Center, Inc., Cleveland, Ohio. SN 125,006. Filed P.R. 7–31–61; Am. S.R. 6–4–63.

SPECTRA CHECKED

For Services in Determining Conditions of Engines by Analyses of Wear Metals in Used Lubricants From the Engines or in Exhaust Deposits From the Engines.
First use Mar. 1, 1961.

754,375. Cleveland Technical Center, Inc., Cleveland, Ohio. SN 134,722. Filed P.R. 12–27–61; Am. S.R. 6–4–63.

SPECTRA-CHECK

For Services in Determining Conditions of Engines by Analyses of Wear Metals in Used Lubricants From the Engines or in Exhaust Deposits From the Engines.
First use Aug. 7, 1961.

Class 103 — Construction and Repair

754,376. Elster's, Los Angeles, Calif. SN 141,279. Filed P.R. 4–2–62; Am. S.R. 5–20–63.

ELSTER'S

For Building, Installing, and Remodeling Food Service Equipment for Restaurants, Cafeterias, Food Markets, Liquor Stores, Industrial, Retailing, or Other Commercial Installations.
First use 1920.

Class 105 — Transportation and Storage

754,377. Fort Worth Warehouse & Storage Co., Incorporated, Fort Worth, Tex. SN 138,088. Filed P.R. 2–16–62; Am. S.R. 6–3–63.

Without a Scratch

For Transporting Property by Truck as a Carrier.
First use during the year 1920.

TRADEMARK REGISTRATIONS RENEWED

166,677. OILEX. Cl. 15. 4–10–23.
169,173. 1776 BROADCLOTH AND DESIGN. Cl. 39. 6–12–23.
169,364. REPRESENTATION OF MAN AND DRAGON. Cl. 37. 6–12–23.
169,665. GROSSMITHS OLD COTTAGE AND DESIGN. Cl. 51. 6–26–23.
169,966. WESIX. Cl. 21. 7–10–23.
170,220. OLD DUTCH MILL AND DESIGN. Cl. 46. 7–10–23.
170,461. SOLITE. Cl. 15. 7–17–23.
170,784. AMERICO. Cl. 16. 7–24–23.
170,792. OLD DUTCH MILL. Cl. 46. 7–24–23.
171,164. NATIONAL CUP. Cl. 46. 7–31–23.
171,186. UTAH VALLEY. Cl. 46. 7–31–23.
171,359. GLASEPTIC. Cl. 44. 8–7–23.
171,487. PERKO AND DESIGN. Cl. 34. 8–7–23.
172,051. CREAM OF VEGETABLE OIL. Cl. 46. 8–21–23.
172,092. THE NORRISTOWN TIMES. Cl. 38. 8–21–23.
172,228. BOROL. Cl. 18. 8–28–23.

172,348. ACE AND DESIGN. Cl. 40. 8–28–23.
172,534. E-Z AND DESIGN. Cl. 46. 9–4–23.
175,372. SANKA. Cl. 46. 11–6–23.
176,115. SUNSIDE. Cl. 46. 11–20–23.
176,274. NATURAL BRIDGE ARCH-SAVER AND DESIGN. Cl. 39. 11–20–23.
176,435. SNOWFLAKE WADDING. Cl. 37. 11–27–23.
400,853. DEMING. Cl. 23. 4–6–43.
401,037. AIRLOC. Cl. 13. 4–20–43.
401,359. E-TOPLEX. Cl. 18. 5–11–43.
401,738. ADAM. Cl. 23. 6–8–43.
401,813. VEGEMATO. Cl. 46. 6–8–43.
401,872. DESIGN HAND HOLDING PAPER. Cl. 37. 6–15–43.
401,906. STRONGHOLD. Cl. 28. 6–15–43.
402,028. HY-JUMP. Cl. 46. 6–22–43.
402,318. ISODRAULIC AND DESIGN. Cl. 13. 7–13–43.
402,427. COLONY CRYSTAL AND DESIGN. Cl. 33. 7–20–43.
402,563. WAXINE. Cl. 6. 8–3–43.
402,576. BURROUGHS WELLCOME & CO. (U.S.A.) INC. Cl. 18. 8–3–43.
402,839. 'WELLCOME.' Cl. 18. 8–17–43.
402,854. TRANSPORT. Cl. 37. 8–17–43.
402,962. COUGH MASTER AND DESIGN. Cl. 18. 8–24–43.
403,307. RIO RICCO. Cl. 46. 9–14–43.
403,406. MISSION. Cl. 45. 9–21–43.
403,650. CLEARTEX. Cl. 15. 10–5–43.
403,726. ARCHITEXTS. Cl. 38. 10–19–43.
403,727. MADAM BELVA'S HAIR—REPRESENTATION. Cl. 51. 10–19–43.
403,954. PEPSAMAR. Cl. 18. 10–26–43.
403,955. REPODRAL. Cl. 18. 10–26–43.
403,956. RICOLON. Cl. 18. 10–26–43.
403,959. SOUTH SEAS. Cl. 16. 10–26–43.
404,151. "CHUBBIES." Cl. 46. 11–2–43.
404,261. TITAN. Cl. 21. 11–16–43.
404,277. GALE. Cl. 39. 11–16–43.
404,312. NUBBINS. Cl. 46. 11–16–43.
404,369. PAL-O-PAK. Cl. 12. 11–23–43.
404,408. TETLEY. Cl. 46. 11–23–43.
404,422. CORTULINA. Cl. 18. 11–23–43.
404,423. METOQUINA. Cl. 18. 11–23–43.
404,425. NOSYLAN. Cl. 18. 11–23–43.
404,426. SUPACIDYL. Cl. 18. 11–23–43.
404,435. SYNEPHRICOL. Cl. 18. 11–23–43.
404,447. EMBASSY. Cl. 39. 11–23–43.
404,457. HEADLINE RED. Cl. 51. 11–23–43.
404,462. ANTIPHLOGISTINE. Cl. 6. 11–23–43.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

687,806. BREEZE. Cl. 17. 11–10–59.
690,790. DOVER. Cl. 17. 1–5–60.

Section 8

344,050. PENGUIN. Cl. 39. 8–9–37.
348,963. WHITE CROSS INC. AND DESIGN. Cl. 32. 8–17–37.

The following registrations issued June 18, 1957

646,946. DURA-IZED. Cl. 1.
646,949. MOLAN. Cl. 1.
646,962. THERMA-A-KOOLER. Cl. 2.
646,963. POC-O-MOR. Cl. 2.
646,966. DESIGN OF MOUNTAIN GOAT. Cl. 4.
646,972. EASTONAIR AND DESIGN. Cl. 6.
646,973. CWA AND DESIGN. Cl. 6.
646,978. CACTUS CARBINE. Cl. 9.
646,983. GRAN-FORM. Cl. 10.
646,989. SWIVELSEAL. Cl. 12.
646,992. HKP LACLEDE CHRISTY CO. AND DESIGN. Cl. 12.
646,998. CSP. Cl. 14.
647,012. AGRICASTROL. Cl. 15.
647,020. STENDROGEN. Cl. 18.
647,024. LIVAGAN. Cl. 18.
647,025. NEBU-CILLIN. Cl. 18.
647,026. NEBU-MYCIN. Cl. 18.
647,027. NEBU-EPHRIN. Cl. 18.
647,032. CUSHION-EZE. Cl. 20.
647,035. ELECTRONICAM. Cl. 21.
647,038. THE FRED GOAT CO., INC., 1893 AND DESIGN. Cl. 21.
647,042. CABLE THEATRE. Cl. 21.
647,044. EVANS AND DESIGN. Cl. 21.
647,046. TINT-M-TOTS AND DESIGN. Cl. 22.
647,047. THE SURPRISE DOLL ETC. Cl. 22.
647,053. BRAHMA AND DESIGN. Cl. 22.
647,054. INVISO-CAST. Cl. 22.
647,060. "BIG NICK." Cl. 23.
647,065. DESIGN OF BURNER AND LIGHTNING FLASH. Cl. 26.
647,072. KOKURA WARE AND TTK WITHIN DESIGN. Cl. 30.
647,073. SERVETTE. Cl. 32.
647,074. DUROLIFE VITAL THIRD. Cl. 32.
647,076. CARNIVALE. Cl. 32.
647,077. SEWING MATE. Cl. 32.
647,081. WESTAIRE. Cl. 34.
647,082. CLIMAX. Cl. 34.
647,084. "BIG NICK." Cl. 34.
647,090. QD DIARY. Cl. 37.
647,094. FOTO-FINDER. Cl. 37.
647,100. TILT-O-MATIC. Cl. 37.
647,104. TABVELOPE. Cl. 37.
647,107. EASTERN AUTO ADS. Cl. 38.
647,110. THE SIGN OF SINCERITY S AND DESIGN. Cl. 38.
647,111. HOLIDAY. Cl. 38.
647,120. SHAMPOO SUEDE. Cl. 39.
647,122. THE BUTTONETTE." Cl. 39.
647,128. WOODLANDER. Cl. 39.
647,133. CHICHI. Cl. 39.
647,134. WADEHAM ETC. AND DESIGN. Cl. 39.
647,139. PARAKEE TONES. Cl. 39.
647,142. GLENROY. Cl. 39.
647,143. NILE. Cl. 39.
647,145. FETHRKORK. Cl. 39.
647,147. STORY BOOK. Cl. 39.
647,150. THE STRAW LOOK. Cl. 39.
647,151. PENNY POCKET AND GLOVE AND DESIGN. Cl. 39.
647,152. STRYDE-AROUND. Cl. 39.
647,159. ROBINTEX AND DESIGN. Cl. 42.
647,166. DAN RIVER TWIN WONDER. Cl. 42.
647,170. VERSIL. Cl. 42.
647,171. VERSKIN. Cl. 42.
647,173. LITTLE BROWN JUG AND DESIGN. Cl. 45.
647,178. ETHANITE. Cl. 46.
647,188. HILLCREST. Cl. 46.
647,197. FRENCH LICK. Cl. 46.
647,198. DESIGN OF GROTESQUE FISH. Cl. 46.
647,203. SAY-BON. Cl. 46.
647,207. PINTAIL AND DESIGN. Cl. 47.
647,208. T-V. Cl. 48.
647,212. KUSTOM-KWIK. Cl. 50.
647,219. ERMA'S. Cl. 51.
647,227. RIP VAN WINKLE'S ETC. AND DESIGN. Cl. 100.
647,228. COFFEE-ETTE OF AMERICA INC. AND DESIGN. Cl. 100.
647,230. MAGNELOG. Cl. 100.
647,233. LET'S MEET OUR TOWN AND DESIGN. Cl. 101.
647,251. FULVUE. Cl. 12.
647,253. PRESSURE-LINE. Cl. 13.
647,258. DRI-WALL. Cl. 23.
647,261. FIX O FLAT AND DESIGN. Cl. 35.
647,265. HELLI BELS. Cl. 46.
647,266. PEEBLES' SWINEBLOC. Cl. 46.
647,267. "TRU-SOUR." Cl. 46.
647,268. PEEBLES' HOGBLOC AND DESIGN. Cl. 46.
647,269. "THE GREEN PEA THAT STAYS FRESH ALL HIS LIFE" AND DESIGN. Cl. 46.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

135,920. BOSTITCH. Cl. 23. 10–26–20. Boston Wire Stitcher Company. Bostitch, Inc., East Greenwich, R.I. Amended to appear:

BOSTITCH

159,264. FRE-FLO AND DESIGN. Cl. 14. 9–26–22. The Atlas Foundry Company. Atlas Foundry, Inc., Cleveland, Ohio. Amended to appear:

FRE-FLO

712,226. FISHER'S. Cl. 46. 3–7–61. Fisher Flouring Mills Company, Seattle, Wash. Corrected: In the statement, column 2, line 1, after "flours", *as follows: plain and enriched wheat flours for bakery and home use and including cracker, cake, and pastry flours and export flour; dark flours—namely, whole wheat flour, graham flour, entire wheat flour, rye flour, and wheat flour fortified with wheat germ; prepared flours—namely, pancake flour, biscuit mix, muffin mix, scone mix and self-rising flour; and specialty flour—namely, dusting flour; for cereals, as follows: farina, cracked wheat, whole wheat, ground wheat, instant cooking flaked cereal, and wheat germ; for grain products, as follows: white and yellow cornmeal, buckwheat flour; partially prepared wheat products—namely, bulgur wheat; for poultry feeds, as follows: chicken feeds—namely, starting feeds, developer feeds, finisher feeds, egg feeds, breeder feeds, and scratch feeds in mash, pellet and/or crumble form, and cracked, ground and whole grains; turkey feeds—namely, breeder feeds, starter feeds, developer feeds, finisher feeds, and scratch feeds, in mash, pellet and/or crumble form; and for livestock feeds, as follows: dairy feeds—namely, calf meals, dairy mash feeds, dairy pellet feeds, wheat mixed feeds, ground grains, and bran, shorts, middlings, and wheat red dog; and mixed feeds—namely, rabbit, hog, horse, mink, and dog feeds* should be inserted.

743,757. SNIFF-O-MISER. Cl. 24. 1–15–63. Hoyt Mfg. Corp., Westport, Mass. Corrected: In the statement, column 2, line 1, "absorber" should be deleted and *absorber* should be inserted.

747,563. HALCO. Cl. 23. 4–2–63. Halifax Tool Company Limited, Southowram, Halifax, England. Corrected: In the statement, column 1, line 1, "company" second occurrence should be deleted and *corporation* should be inserted.

748,575. HANES AND DESIGN. Cl. 39. 4–23–63. Hanes Hosiery Mills Company, Winston-Salem, N.C. Corrected: In the statement, column 2, line 3 should be deleted and *The stippling effect shown in the drawing represents shading only. The trademark comprises a rectangular label shaded as indicated in the drawing, with the word "Hanes" in script form printed diagonally of the lower right hand corner,* should be inserted.

748,739. FLAVOR CHEF. Cl. 23. 4–30–63. Quality Manufacturers, Inc., Waco, Tex. Corrected: In the statement, column 1, line 1, "Manufacturing" should be deleted and *Manufacturers* should be inserted.

750,038. NORLESTRIN. Cl. 18. 5–28–63. Parke, Davis & Company, Detroit, Mich. Corrected: In the statement, column 2, line 1, "esterogenic" should be deleted and *estrogenic* should be inserted.

750,681. MANNEQUIN. Cl. 51. 6–4–63. The Medco Company, Inc., doing business as Mannequin Beauty Aids, New Orleans, La. Corrected In the statement, column 1, line 1, "Medico" should be deleted and *Medco* should be inserted.

751,066. MTS ETC. AND DESIGN. Cl B. 6–11–63. Motor Travel Services, Inc., Minneapolis, Minn. Corrected: In the statement, column 1, line 1, "Massachusetts" should be deleted and *Minnesota* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 1—Raw or Partly Prepared Materials

346,103. May 18, 1937. Shawinigan Products Corporation, New York, N.Y. Pub. by Shawinigan Resins Corporation, Springfield, Mass.

FORMVAR

For Synthetic Resinous Material.

Class 4—Abrasives and Polishing Materials

168,938. May 29, 1923. Brillo Manufacturing Company, Inc., Brooklyn, N.Y. Pub. by registrant.

BRICO

For Steel Wool for Cleansing and Polishing Purposes.

Class 6—Chemicals and Chemical Compositions

391,149. Oct. 28, 1941. Dr. C. Schleussner, d.b.a. Dr. C. Schleussner Fotowerke G.m.b.H., Frankfort-on-the-Main, Germany. Pub. by Adox Photowerke, Dr. C. Schleussner, G.m.b.H., Frankfurt am Main, Germany.

Adox

For Chemical Products for Photographic Purposes, Equalizing Developers, and Chemical Developers for X-Ray Pictures.

402,628. Aug. 3, 1943. Warwick Chemical Company, West Warwick, R.I. Pub. by Sun Chemical Corporation, New York, N.Y.

WARCOPEL

For Water Repellent Compounds for Textiles and Other Fibrous Materials.

Class 12—Construction Materials

46,947. Oct. 17, 1905. Warren Brothers Company, Cambridge, Mass. Pub. by registrant.

BITULITHIC

For Bituminous Cement or Cement Composition.

47,476. Nov. 7, 1905. Warren Brothers Company, Cambridge, Mass. Pub. by registrant.

BITULITHIC

For Bituminous Pavements.

78,559. June 21, 1910. Warren Brothers Company, Cambridge, Mass. Pub. by registrant.

WARRENITE

For Pavements and Paving Material Containing Bituminous Matter.

400,932. Apr. 13, 1943. The Flintkote Company, New York, N.Y. Pub. by registrant.

COL-PLY

For Bituminous Roofing Cement.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

438,622. May 4, 1948. Wireway Looms Company, Charles River, Mass. Pub. by Bradford C. Riley, d.b.a. Wireway Company, Falmouth, Mass.

WIREWAY

For Woven Metal Ornamental Grille Work and Wire Cloth Netting.

Class 22—Games, Toys, and Sporting Goods

171,121. July 31, 1923. The Bevin-Wilcox Line Company, East Hampton, Conn. Pub. by registrant.

PILOT

For Fish Lines.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

401,893. June 15, 1943. Edward Weck & Company, Inc., Long Island City, N.Y. Pub. by registrant.

WECK

For Cutlery—Namely, Pocket Knives, Kitchen Knives, Table Knives of Base Metal, Scissors, Razors, and Razor Blades.

Class 26—Measuring and Scientific Appliances

400,534. Mar. 16, 1943. Fisher Scientific Company, Pittsburgh, Pa. Pub. by registrant.

ISOTEMP

For Electrically Operated Laboratory Oven.

Class 30—Crockery, Earthenware, and Porcelain

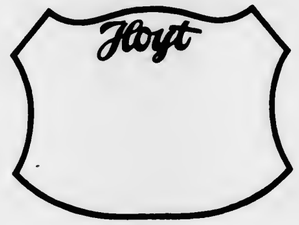
402,600. Aug. 3, 1943. Ignaz Strauss Co., Inc., New York, N.Y. Pub. by registrant.

ISCO

For Pottery Candy Boxes, Pottery Fern Dishes, Pottery Flower Bowls, Pottery Flower Holders, and Pottery Flower Pots, Pottery Cookie Jars, Pottery Vases, Pottery Ginger Jars, and Pottery Bowls.

Class 34—Heating, Lighting, and Ventilating Apparatus

192,859. Dec. 16, 1924. Hoyt Heater Company, Orange, Calif. Pub. by registrant.



For Water Heaters.

402,276. July 13, 1943. General Properties Company, Inc., Toledo, Ohio. Pub. by Midland-Ross Corporation, Toledo, Ohio.

RX

For Atmosphere Correcting Gas Converters for Heat Treating Furnaces.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

400,372. Mar. 2, 1943. J. B. Kennington, d.b.a. Textile Apron Company, Inc., East Point, Ga. Pub. by Textile Apron Company, Inc., East Point, Ga.

KENTEX

APRON

For Long Draft Leather Aprons Used in Textile Machinery.

Class 37—Paper and Stationery

167,088. Apr. 24, 1923. Aktiebolaget Galco, Stockholm, Sweden. Pub. by registrant.



For Loose-Leaf Binders, Punches, Letter Books, Blank Books, Loose-Leaf Sheets, Indexes, Notebooks, Envelopes, Box Files, Card Cabinets, Folders, Guide Cards and Fasteners.

Class 39—Clothing

163,903. Feb. 6, 1923. Bernhard Ulmann Co., Inc., New York, N.Y. Pub. by Indian Head Mills, Inc., New York, N.Y.

BEAR

For Bootees, Dresses, Suits, Coats and Hats for Females, Sweaters, Wraps, Jackets, Shawls, Scarfs and Mufflers, All of the Above Either Completed or Partly Completed, Stamped, Cut, or Otherwise Prepared for Completion by the Customer.

173,495. Sept. 25, 1923. United States Rubber Company, New York, N.Y. Pub. by registrant.

Warmster

For Coats.

Class 43—Thread and Yarn

401,201. Apr. 27, 1943. Bernhard Ulmann Co. Inc., New York, N.Y. Pub. by Indian Head Mills, Inc., New York, N.Y.

CASA-LAINE

For Art Needlework Yarn Made of Wool.

Class 46—Foods and Ingredients of Foods

146,733. Sept. 20, 1921. Escoffier Limited, London, England. Pub. by registrant.

ESCOFFIER

For Table Sauces, Essence for Flavoring Food, Canned Meats, Potted Meats—Chicken, Turkey, Wild Duck, Ham, Tongue, Fish, Lobster, Piccalilli, Canned or Bottled Fruits and Vegetables, Pickles and Tomato Catsup.

372,072. Oct. 24, 1939. The Quaker Oats Company, Chicago, Ill. Pub. by registrant.

LIFE

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Class 47—Wines

300,796. Feb. 7, 1933. John Harvey & Sons, Limited, Bristol, England. Pub. by registrant.

BRISTOL CREAM

For Sherry Wine.

Class 51—Cosmetics and Toilet Preparations

165,008. Feb. 27, 1923. Plough Chemical Company, d.b.a. Pluko Manufacturing Company, Memphis, Tenn. Pub. by Plough, Inc., Memphis, Tenn.

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Fisher Flouring Mills Co., Seattle, Wash. 712,226, cor. Cl. 46.
Fisher Radio Corp., Long Island City, N.Y. 754,008, pub. 10–9–62. Cl. 21.
Fisher Scientific Co., Pittsburgh, Pa. 400,534, 12(c) pub. 8–6–63. Cl. 26.
Flakebord Corp., Falconer, N.Y. 754,336. Cl. 12.
Flintkote Co., The, New York, N.Y. 400,932, 12(c) pub. 8–6–63. Cl. 12.
Florida Atlas Corp., Windermere, Fla. 754,252, pub. 5–21–63. Cl. 39.
Flote-Aire Marine Corp., Middlebury, Ind. 753,986, pub. 5–21–63. Cl. 19.
Foremost Dairies, Inc., San Francisco, Calif. 647,266, canc. Cl. 46.
Foremost Dairies, Inc., San Francisco, Calif. 647,268, canc. Cl. 46.
Fort Worth Warehouse & Storage Co., Inc., Fort Worth, Tex. 754,377. Cl. 105.
Fuller Tool Co., Inc., Whitestone, N.Y. 754,049, pub. 2–5–63. Cl. 23.
Gabriel Co., The, Cleveland, Ohio. 754,102, pub. 5–21–63. Cl. 26.
Gault, Sayri S., Highland Park, Ill. 647,076, canc. Cl. 32.
General Aluminum Corp., Carrollton, Tex. 753,944, pub. 5–21–63. Cl. 12.
General Aniline & Film Corp., New York, N.Y. 754,127, pub. 5–21–63. Cl. 26.
General Electric Co., Schenectady, N.Y. 754,026, pub. 5–21–63. Cl. 21.
General Foods Corp.: *See*—
Societe Anonyme Fabriques de Produits de Chimie Organique de Laire.
General Hydronics Corp., Oakland, Calif. 754,172, pub. 5–21–63. Cl. 34.
General Lead Batteries Co., Reading, Pa. 404,261, ren. 8–6–63. Cl. 21.
General Metals Corp.: *See*—
Adel Precision Products Corp.
General Properties Co., Inc., by Midland-Ross Corp., Toledo Ohio. 402,276, 12(c) pub. 8–6–63. Cl. 34.
Genistron, Inc., Los Angeles, Calif. 754,088, pub. 5–21–63. Cl. 26.
Gernsback, Hugo, New York, N.Y. 754,202, pub. 5–21–63. Cl. 38.
Goodman, H., & Sons, Inc., New York, N.Y. 754,324, pub. 5–21–63. Cl. 52.
Goodman, H., & Sons, Inc., New York, N.Y. 754,318, pub. 5–21–63. Cl. 51.
Gossen, P., & Co. Gesellschaft mit beschraenkter Haftung: *See*—
Photoptic Import Corp.
Gould Novelties, Inc., Elmont, N.Y. 754,300, pub. 5–21–63. Cl. 46.
Glasser, Jack: *See*—
Bowling America, Inc.
Glosag, Matthew, & Son Ltd., Perth, Scotland. 647,207, canc. Cl. 47.
Goat, Fred, Co., Inc., Brooklyn, N.Y. 647,038, canc. Cl. 21.
Goerlich's, Inc., Toledo, Ohio. 754,068, pub. 5–21–63. Cl. 23.
Golding Bros. Co., Inc., New York, N.Y. 754,270, pub. 5–21–63. Cl. 42.
Gold Seal Co., Bismarck, N. Dak. 753,920, pub. 4–10–62. Cl. 4.
Goodrich, B. F., Co., The, Akron, Ohio. 754,268, pub. 5–21–63. Cl. 42.
Goodwin, Dannenbaum, Littman & Wingfield Inc., Houston, Tex. 754,173, pub. 5–21–63. Cl. 34.
Graboyes, Sidney: *See*—
Kay Jewelry Stores, Inc.
Grand Specialties Co., Chicago, Ill. 753,998, pub. 5–21–63. Cl. 19.
Graniteville Co., Graniteville, S.C. 754,275, pub. 5–21–63. Cl. 42.
Graphite Metallizing Corp., Yonkers, N.Y. 754,075, pub. 5–21–63. Cl. 23.
Grass Instrument Co., Quincy, Mass. 754,100, pub. 5–21–63. Cl. 26.
Green Giant Co., Le Sueur, Minn. 754,303, pub. 5–21–63. Cl. 46.
Greenwood Engineering Co., Inc.: *See*—
Langston, Samuel M., Co., Inc.
Greenwood Mills, Inc., New York, N.Y. 754,264, pub. 5–21–63. Cl. 42.
Gro-cord Rubber Co., Lima, Ohio. 647,145, canc. Cl. 39.
Grinnell Corp., Providence, R.I. 753,955, pub. 5–21–63. Cl. 13.
Grossmith, J., & Son, Ltd., London, England. 169,665, ren. 8–6–63. Cl. 51.
Grove Laboratories Inc., St. Louis, Mo. 754,343. Cl. 18.
Grover Co., The, Detroit, Mich. 754,045–7, pub. 5–21–63. Cl. 23.
Gutman-Lann Glove Co., Inc., New York, N.Y. 753,919, pub. 5–21–63. Cl. 3.
Haffenden, W. W., Ltd., Sandwich, England. 754,223, pub. 5–21–63. Cl. 39.
Halifax Tool Co. Ltd., Southowram, Halifax, England. 747,563, cor. Cl. 23.
Hall, Robert, Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. 754,217, pub. 7–31–62. Cl. 39.
Hall, Robert, Clothes: *See*—
Hall, Robert, Clothes, Inc.
Hamilton Watch Co., Lancaster, Pa. 754,129, pub. 5–21–63. Cl. 27.
Hammermill Paper Co., Erie, Pa. 401,872, ren. 8–6–63. Cl. 37.
Hammermill Paper Co., Erie, Pa. 754,354. Cl. 37.
Hanes Hosiery Mills Co., Winston-Salem, N.C. 748,575, cor. Cl. 39.
Hanes Hosiery Mills Co., Winston-Salem, N.C. 754,227, pub. 5–21–63. Cl. 39.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 754,235, pub. 5–21–63. Cl. 39.
Hannon, F. R., & Sons, Inc., Canton, Ohio. 754,346. Cl. 21.
Hanson, J. L., Co., The, Chicago, Ill. 647,094, canc. Cl. 37.
Harman, Ervin G., Jr., d.b.a. Brahma Bow Co., Elkins, W. Va. 647,053, canc. Cl. 22.
Harrison, Henry B., Brooklyn, N.Y. 754,229, pub. 5–21–63. Cl. 39.
Harvey, John, & Sons, Ltd., Bristol, England. 300,796, 12(c) pub. 8–6–63. Cl. 47.
Hawley Products Co., St. Charles, Ill. 754,030, pub. 5–21–63. Cl. 21.
Hercules Packing Corp., Alden, N.Y. 753,933, pub. 5–21–63. Cl. 6.
Herman, I. C., & Co., Inc., New York, N.Y. 754,212, pub. 5–21–63. Cl. 39.
Hicks, W. Wesley, to Wesix Electric Heater Co., San Francisco, Calif. 169,966, ren. 8–6–63. Cl. 21.
Higgins, Warren W., Havertown, Pa. 647,107, canc. Cl. 38.
High Temperature Materials, Inc., Boston, Mass. 753,897, pub. 5–21–63. Cl. 1.
Hines, Edward, Lumber Co., Chicago, Ill. 753,948, pub. 5–21–63. Cl. 12.
Holiday Slides, Inc., New York, N.Y. 647,111, canc. Cl. 38.
Holophane Co., Inc., New York, N.Y. 403,726, ren. 8–6–63. Cl. 38.
Horst Associates, Inc., Miami, Fla. 754,140, pub. 5–21–63. Cl. 29.
Howse, Mead & Sons, Inc., New York, N.Y. 754,261, pub. 5–21–63. Cl. 42.
Hoyt Heater Co., Vernon, Calif., by Hoyt Heater Co., Orange, Calif. 192 859, 12(c) pub. 8–6–63. Cl. 34.
Hoyt Mfg. Corp., Westport, Mass. 743,757, cor. Cl. 24.
Hulro Laboratories, Austin, Tex. 646,973, canc. Cl. 6.
Humble Oil & Refining Co.: *See*—
Standard Oil Co. (Inc. in New Jersey).
Hummel Technical Products, Inc., New York, N.Y. 754,147, pub. 5–21–63. Cl. 31.
Hunter Engineering Co.: *See*—
American Metal Climax, Inc.
Hunter, Lee.
Hunter, Lee, d.b.a. Hunter Engineering Co., St. Louis, Mo. 754,122, pub. 5–21–63. Cl. 26.
Huntingdon Mills, Inc., Philadelphia, Pa. 754,226, pub. 5–21–63. Cl. 39.
Husky Laboratory, Inc., Pullman, Wash. 753,983, pub. 5–21–63. Cl. 18.
Hy-Top Products, Inc.: *See*—
Red & White Corp.
Imperial Chemical Industries Ltd., Millbank, London, England. 753,928, pub. 5–21–63. Cl. 6.
Imperial Chemical Industries Ltd., Millbank, London, England. 753,925, pub. 7–24–62. Cl. 6.
Indian Head Mills, Inc.: *See*—
Ulmann, Bernhard, Co., Inc.
Industrial Soap Co., St. Louis, Mo. 754,326, pub. 5–21–63. Cl. 52.
Industrial Soap Co., St. Louis, Mo. 753,922–3, pub. 5–21–63. Cl. 4.
Industrial Soap Co., St. Louis, Mo. 753,934, pub. 5–21–63. Cl. 6.
Inland Steel Co., Chicago, Ill. 753,940, pub. 5–21–63. Cl. 12.
Insul-Coustic Corp., Maspeth, N.Y. 753,953, pub. 8–8–61. Cl. 13.
International Milling Co., Minneapolis, Minn. 402,028, ren. 8–6–63. Cl. 46.
Interstate Engineering Corp., Anaheim, Calif. 754,033, pub. 5–21–63. Cl. 21.
Intertech, Inc., North Haven, Conn. 754,097, pub. 5–21–63. Cl 26.
Iowa Canning Co., Vinton, Iowa, to Tendersweet Sales Corp., Cedar Rapids, Iowa. 404,151, ren. 8–6–63. Cl. 46.
Isaly Dairy Co., The, d.b.a. Isaly's, Youngstown, Ohio. 754,361. Cl. 46.

Isaly's: *See*—
Isaly Dairy Co., The.
Jenkins, W. L., Co., The, Canton, Ohio. 753,961-2, pub. 5–21–63. Cl. 13.
Jerrold Electronics Corp., Philadelphia, Pa. 647,042, canc. Cl. 21.
Johns-Manville Corp., New York, N.Y. 753,951, pub. 5–21–63. Cl. 12.
Johns-Manville Corp., New York, N.Y. 754,182, pub. 5–21–63. Cl. 35.
Johnston, Robert A., Co., Milwaukee, Wis. 754,301, pub. 5–21–63. Cl. 46.
Jolly Roger Dairy Products, Inc., Johnsville, Pa. 754,298, pub. 5–21–63. Cl. 46.
Junior Prescriptions, Inc., from Jay D. Wiener, d.b.a. Junior Prescriptions, Los Angeles, Calif. 754,342. Cl. 18.
Junior Prescriptions: *See*—
Junior Prescriptions, Inc.
Kabushiki Kaisha Yashica, Chuo-ku, Tokyo, Japan. 754,-084–5, pub. 4–2–63. Cl. 26.
Kahn, Gus, Music Co., d.b.a. Rexford Records, Los Angeles, Calif. 754,192, pub. 5–21–63. Cl. 36.
Kay Jewelry Stores, Inc., Washington, D.C., from Sidney Graboyes, Philadelphia, Pa. 754,131, pub. 1–9–62. Cl. 28.
Kay Mfg. Corp., Brooklyn, N.Y. 754,149, pub. 5–21–63. Cl. 32.
Kayser-Roth Corp., New York, N.Y. 754,207, pub. 8–22–61. Cl. 39.
Kayser-Roth Corp., New York, N.Y. 754,219, pub. 7–17–62. Cl. 39.
Kenlin Enterprises, Inc., Highland Park, Ill. 754,350. Cl. 32.
Kennedy Car Liner and Bag Co., Shelbyville, Ind. 753,915, pub. 5–21–63. Cl. 2.
Kennington, J. B., d.b.a. Textile Apron Co., by Textile Apron Co., Inc., East Point, Ga. 400,372, 12(c) pub. 8–6–63. Cl. 35.
Keystone Railway Equipment Co., Chicago, Ill. 753,987, pub. 5–21–63. Cl. 19.
Kisco Boiler & Engineering Co., St. Louis, Mo. 754,146, pub. 5–21–63. Cl. 31.
Klopman Mills, Inc., New York, N.Y. 754,276, pub. 5–21–63. Cl. 42.
Knapp-Monarch Co., St. Louis, Mo. 646,962, canc. Cl. 2.
Knickerbocker Products Co.: *See*—
Master Vibrator Co.
Koch, George, Sons, Inc., Evansville, Ind. 753,910, pub. 5–21–63. Cl. 2.
Koppel, Charles, Ring Co. Inc., New York, N.Y. 754,132, pub. 9–25–62. Cl. 28.
Koppers Co., Inc., Pittsburgh, Pa. 753,949, pub. 5–21–63. Cl. 12.
Kraft, Max., Brooklyn, N.Y. 754,139, pub. 5–21–63. Cl. 28.
Kresge, S. S., Co., Detroit, Mich. 754,247, pub. 5–21–63. Cl. 39.
Kretchman Materials Co.: *See*—
Kretchman, Stanley A.
Kretchman, Stanley A., d.b.a. Kretchman Materials Co., Chicago, Ill. 647,267, canc. Cl. 46.
Kyle, Mabel H., d.b.a. Poc-O-Mor, Berkeley, Calif. 646,963, canc. Cl. 2.
La Choy Food Products, Inc., Archbold, Ohio, to College Inn Food Products Corp., Chicago, Ill. 401,813, ren. 8–6–63. Cl. 46.
Laciede-Christy Co., St. Louis, Mo. 646,992, canc. Cl. 12.
Lakeside Laboratories, Inc., Milwaukee, Wis. 753,981, pub. 5–21–63. Cl. 18.
Lancaster Colony Corp.: *See*—
Pitman-Dreitzer and Co., Inc.
Lane-Wells Co., Los Angeles, Calif. 647,230, canc. Cl. 100.
Langston, Samuel M., Co., Inc., Camden, N.J., from Greenwood Engineering Co., Inc., Baltimore, Md. 754,043, pub. 5–21–63. Cl. 23.
Lebow, Harvey J., North Andover, Mass. 647,046, canc. Cl. 22.
Lectronics of City Line Center, Inc., Philadelphia, Pa. 754,197, pub. 5–21–63. Cl. 36.
Lee, Wallace N., d.b.a. Master Toy Co., Bloomington, Minn. 754,034, pub. 2–13–62. Cl. 22.
Lehn & Fink Products Corp., Bloomfield, N.J. 404,457, ren. 8–6–63. Cl. 51.
Lever Brothers, Port Sunlight, Ltd., Port Sunlight, Cheshire, England. 754,321, pub. 8–15–61. Cl. 52.
Levy, Frank, New York, N.Y. 754,138, pub. 5–21–63. Cl. 28.
Liberty Hosiery Mills, Inc., Gibsonville, N.C. 754,220, pub. 7–17–62. Cl. 39.
Lifetime Products: *See*—
De Pietro, Ida M.
Liggett & Myers Tobacco Co., New York, N.Y. 753,972, pub. 5–21–63. Cl. 17.
Lincoln Metal Products Corp., Brooklyn, N.Y. 753,900, pub. 5–21–63. Cl. 2.
Lingk Water Conditioning Equipment, Inc., north of Libertyville, Ill. 754,048, pub. 5–21–63. Cl. 23.
Linton Tweeds Ltd., Carlisle, Cumberland, England. 754,267, pub. 5–21–63. Cl. 42.
Litton Systems, Inc., Beverly Hills, Calif. 754,027, pub. 5–21–63. Cl. 21.
Lever Brothers Co.: *See*—
N.K. Fairbank Co., The.
Loeb, Ben S., Inc., New York, N.Y. 754,144, pub. 5–21–63. Cl. 30.
Lowell Mfg. Co., St. Louis, Mo. 754,019, pub. 5–21–63. Cl. 21.
M.B.C. Publications, Inc., Bronxville, N.Y. 754,356. Cl. 38.
Maidenform, Inc., New York, N.Y. 754,215, pub. 5–21–63. Cl. 39.
Mandrel Industries, Inc., Houston, Tex. 754,108, pub. 5–21–63. Cl. 26.
Mannequin Beauty Aids: *See*—
Medco Co., Inc., The.
Marge's Mufflers, Inc., Omaha, Nebr. 754,070, pub. 5–21–63. Cl. 23.
Marion Mfg. Co., Marion, N.C. 754,262, pub. 5–21–63. Cl. 42.
Mask-O-Matic, Inc., Hawthorne, N.J. 754,067, pub. 5–21–63. Cl. 23.
Mason Envelope Co. Inc., New York, N.Y. 754,349. Cl. 23.
Master Toy Co.: *See*—
Lee, Wallace N.
Master Vibrator Co., d.b.a. Knickerbocker Products Co., Dayton, Ohio. 647,084, canc. Cl. 34.
Master Vibrator Co., d.b.a. Knickerbocker Products Co., Dayton, Ohio. 647,060, canc. Cl. 23.
Matsushita Electric Industrial Co., Ltd., Kadomacho, Kitakawachi-gun, Osaka, Japan. 754,002, pub. 7–31–62. Cl. 21.
Matthews, Jas. H., & Co., Pittsburgh, Pa. 754,062, pub. 5–21–63. Cl. 23.
Maze, W. H., Co., Peru, Ill. 753,954, pub. 5–21–63. Cl. 13.
McGregor-Doniger, Inc.: *See*—
Doniger, David D., & Co. Inc.
McGraw-Edison Co., d.b.a. Airectic Division, Elgin, Ill. 753,947, pub. 5–21–63. Cl. 12.
McKesson & Robbins, Inc., d.b.a. Norcliff Laboratories, New York, N.Y. 753,976, pub. 8–21–62. Cl. 18.
Meat Industry Supplies, Inc., Northfield, Ill. 754,312, pub. 5–21–63. Cl. 46.
Medco Co., Inc., The, d.b.a. Mannequin Beauty Aids, New Orleans, La. 750,681, cor. Cl. 51.
Medley Distilling Co., Owensboro, Ky. 754,366. Cl. 49.
Merck & Co. Inc., Rahway, N.J. 753,979, pub. 5–21–63. Cl. 18.
Merriam, G. & C., Co., Springfield, Mass. 754,358. Cl. 38.
Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany. 753,965, pub. 5–21–63. Cl. 14.
Midland-Ross Corp.: *See*—
General Properties Co., Inc.
Midland-Ross Corp., Cleveland, Ohio. 754,071, pub. 5–21–63. Cl. 23.
Mid-States Distributing Co., Inc., St. Paul, Minn. 754,179, pub. 5–21–63. Cl. 35.
Michael, Abby, Ltd.: *See*—
Brooks, Bobbie, Inc.
Midwest Foil & Packaging, Inc., St. Paul, Minn. 754,065, pub. 5–21–63. Cl. 23.
Miller Publishing Co., The, Minneapolis, Minn. 754,201, pub. 5–21–63. Cl. 38.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 754,006, pub. 5–21–63. Cl. 21.
Mission Dry Corp., Los Angeles, Calif., to Mission of California, Inc., New Haven, Conn. 403,406, ren. 8–6–63. Cl. 45.
Mission of California, Inc.: *See*—
Mission Dry Corp.
Mitchell Industries, Inc., Mineral Wells, Tex. 754,124, pub. 5–21–63. Cl. 26.
Modern Shoe Co., St. Louis, Mo. 754,218, pub. 7–31–62. Cl. 39.
Monroe Calculating Machine Co., Orange, N.J. 754,123, pub. 5–21–63. Cl. 26.
Moran Shoe Co., Carlyle, Ill. 754,214, pub. 5–21–63. Cl. 39.
Morganton Full Fashioned Hosiery Co., Morganton, N.C. 647,147, canc. Cl. 39.
Morris, Philip, Inc., New York, N.Y. 753,969, pub. 5–21–63. Cl. 17.
Mouse, Inc., New York, N.Y. 754,272, pub. 5–21–63. Cl. 42.
Motor Travel Services, Inc., Minneapolis, Minn. 751,066, cor. Cl. B.
Mount Hope Machinery Co., Taunton, Mass. 754,066, pub. 5–21–63. Cl. 23.
Mr. Arnold Actualite, Inc.: *See*—
Mr. Arnold, Inc.
Mr. Arnold, Inc., from Mr. Arnold Actualite, Inc., New York, N.Y. 754,221, pub. 5–21–63. Cl. 39.
Mud Control Laboratories, Inc., Oklahoma City, Okla. 753,-932, pub. 5–21–63. Cl. 6.
N. K. Fairbank Co., The, to The American Cotton Oil Co., of Union Township, near Guttenberg, N.J., to Lever Brothers Co., New York, N.Y. 172,051, ren. 8–6–63. Cl. 46.
N.V. Optische Industrie "De Oude Delft," Delft, Netherlands. 754,104–5, pub. 5–21–63. Cl. 26.
National Truck Leasing Association, Chicago, Ill. 754,330–1, pub. 9–25–62. Cl. 105.
Nebraska Consolidated Mills Co., Omaha, Nebr. 754,304, pub. 5–21–63. Cl. 46.
Nestle Co., Inc., The, White Plains, N.Y. 754,302, pub. 5–21–63. Cl. 46.
Norcliff Laboratories: *See*—
McKesson & Robbins, Inc.
Novo Industrial Corp., New York, N.Y. 754,155, pub. 5–21–63. Cl. 32.
Namrah Records, Inc., Evanston, Ill. 754,187, pub. 5–21–63. Cl. 36.
National Plastic Products Co., Inc., Odenton, Md. 754,280, pub. 5–21–63. Cl. 43.
Nepera Chemical Co., Inc., Nepera Park, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 647,020, canc. Cl. 18.
Newco Aluminum Products Co., Inc., Malden, Mass. 753,945, pub. 5–21–63. Cl. 12.
Noble Co., Oakland, Calif. 754,003, pub. 3–21–61. Cl. 21.
Norbatrol Electronics Corp., Pittsburgh, Pa. 754,024, pub. 5–21–63. Cl. 21.
Norristown Herald, Inc., Norristown, Pa. 172,092, ren. 8–6–63. Cl. 88.
North American Nutria Associates, Atlanta, Tex. 754,236, pub. 5–21–63. Cl. 39.

Nursery Metal Posts, Inc., San Francisco, Calif. 753,902, pub. 5–21–63. Cl. 2.
Obert, C. O., & Co.: Aktiebolag, Eskilstuna, Sweden. 754,-059, pub. 5–21–63. Cl. 23.
Ohio Thermometer Co., The, Springfield, Ohio. 754,107, pub. 5–21–63. Cl. 26.
Old Colony Paint & Chemical Co., Los Angeles, Calif. 754,337. Cl. 12.
Old Dutch Mills, Inc., New York, N.Y., to S. A. Schonbrunn & Co. Inc., Palisades Park, N.J. 170,220, ren. 8–6–63. Cl. 46.
Old Dutch Mills, Inc., New York, N.Y., to S. A. Schonbrunn & Co. Inc., Palisades Park, N.J. 170,792, ren. 8–6–63. Cl. 46.
Old Reading Brewery, Inc., The, Reading, Pa. 647,208, canc. Cl. 48.
O'Shaughnessy, Dewes & Klein, Inc., New York, N.Y. 254,249, pub. 5–21–63. Cl. 39.
Overby, Erma D., Philadelphia, Pa. 647,219, canc. Cl. 51.
Palm Beach Co., Portland, Maine. 647,150, canc. Cl. 39.
Pal-O-Pak Insulation Co., Inc., Hartland, Wis. 404,369, ren. 8–6–63. Cl. 12.
Parisian Novelty Co., Chicago, Ill. 754,031, pub. 5–21–63. Cl. 21.
Parke, Davis & Co., Detroit, Mich. 171,359, ren. 8–6–63. Cl. 44.
Parke, Davis & Co., Detroit, Mich. 172,228, ren. 8–6–63. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 750,038, cor. Cl. 18.
Parker Mfg. Co., Worcester, Mass. 754,079, pub. 5–21–63. Cl. 23.
Parsons & Baker Co., The, Phoenixville, Pa. 754,253, pub. 5–21–63. Cl. 39.
Pauer, Edward E., d.b.a. Babylon Products Co., Waukesha, Wis. 753,916, pub. 5–21–63. Cl. 2.
Pe Jay Jewelers, Inc., New York, N.Y. 754,130, pub. 5–21–63. Cl. 27.
Penney, J. C., Co., New York, N.Y. 754,184, pub. 5–21–63. Cl. 35.
Pennsylvania Salt Mfg. Co., The, Philadelphia, Pa. 646,983, canc. Cl. 10.
Perkins Marine Lamp Corp., New York and Brooklyn, N.Y., to Perkins Marine Lamp & Hardware Corp., Miami, Fla. 171,487, ren. 8–6–63. Cl. 34.
Perkins Marine Lamp & Hardware Corp.: *See*—
Perkins Marine Lamp Corp.
Peter Pan Seafoods, Inc., Seattle, Wash. 754,305, pub. 5–21–63. Cl. 46.
Petersen, Einar E., Long Beach, Calif. 754,112, pub. 5–21–63. Cl. 26.
Philips-Duphar, N.V., Amsterdam, Netherlands. 753,930, pub. 5–21–63. Cl. 6.
Phillips-Jones Corp., to Phillips-Van Heusen Corp., New York, N.Y. 169,173, ren. 8–6–63. Cl. 39.
Phillips-Van Heusen Corp.: *See*—
Phillips-Jones Corp.
Photoptic Import Corp., New York, N.Y., from P. Gossen & Co. Gesellschaft mit beschraenkter Haftung, Erlangen, Bayern, Germany. 754,086, pub. 5–21–63. Cl. 26.
Pike, Robert D., Jr., Sierra Madre, Calif. 754,296, pub. 5–21–63. Cl. 45.
Pioneer Aerodynamic Systems, Inc., Manchester, Conn. 753,-999–4 000, pub. 5–21–63. Cl. 19.
Pitman-Dreitzer and Co., Inc., New York, N.Y., to Lancaster Colony Corp., Columbus, Ohio. 402,427, ren. 8–6–63. Cl. 33.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 754,160, pub. 5–21–63. Cl. 33.
Pleasant Grove Canning Co., Pleasant Grove, Utah, to Utah Packers, Inc., Ogden, Utah. 171,186, ren. 8–6–63. Cl. 46.
Plough Chemical Co., d.b.a. Pluko Mfg. Co., by Plough, Inc., Memphis, Tenn. 165,008, 12(c) pub. 8–6–63. Cl. 51.
Plough, Inc.: *See*—
Plough Chemical Co.
Pluko Mfg. Co.: *See*—
Plough Chemical Co.
Poc-O-Mor: *See*—
Kyle, Mabel H.
Ponti Roma, Inc., New York, N.Y. 754,241, pub. 5–21–63. Cl. 39.
Positive Products Laboratories, Inc.: *See*—
Scrubbee Products Corp.
Precision Specialties, Inc., Pitman, N.J. 754,023, pub. 5–21–63. Cl. 21.
Preston Rider Packing Co., Inc., Campbellsburg, Ind. 647,197, canc. Cl. 46.
Principle Plastics, Inc., Gardena, Calif. 754,205, pub. 5–21–63. Cl. 39.
Process Heating Co., Seattle, Wash. 754,007, pub. 5–21–63. Cl. 21.
Pro-phy-lac-tic Brush Co.: *See*—
Standard Oil Co., The.
Puritan Fashions Corp., New York, N.Y. 754,230, pub. 5–21–63. Cl 39.
Puritan Sportswear Corp., The, Altoona, Pa. 754,248, pub. 5–21–63. Cl. 39.
Pursweet, Inc., St. Louis, Mo. 754,362. Cl. 46.
Pyle-National Co., The, Chicago, Ill. 754,015, pub. 5–21–63. Cl. 21.
Quaker Oats Co., The, Chicago, Ill. 372,072, 12(c) pub. 8–6–63. Cl. 46.
Quaker Stretcher Co., Kenosha, Wis. 647,073, canc. Cl. 32.
Quality Mfgrs., Inc., Waco, Tex. 748,739, cor. Cl. 23.
Quest Mfg. Co., Chicago, Ill. 753,939, pub. 5–21–63. Cl. 11.
Quinn, David H., Washington, D.C. 753,903, pub. 5–21–63. Cl. 2.
Rambusch Decorating Co., Inc., New York, N.Y. 754,010, pub. 5–21–63. Cl. 21.
Rand Associates Inc., Boston, Mass. 754,153, pub. 5–21–63. Cl. 32.
Rand Rubber Co., Inc., Brooklyn, N.Y. 754,256, pub. 5–21–63. Cl. 39.
Rand Rubber Co., Inc., Brooklyn, N.Y. 754,277, pub. 5–21–63. Cl. 42.
Ray, Marshall, Corp., Troy, N.Y. 754,206, pub. 2–28–61. Cl. 39.
Red & White Corp., d.b.a. Hy-Top Products, Inc., Chicago, Ill. 754,306, pub. 5–21–63. Cl. 46.
Regina Cigar Co., Inc., Philadelphia, Pa. 753,970, pub. 5–21–63. Cl. 17.
Rembrandt Mobile Homes, Inc., Chambersburg, Pa. 753,992, pub. 5–21–63. Cl. 19.
Renauld of France: *See*—
Botany Industries, Inc.
Revlon, Inc., New York, N.Y. 754,295, pub. 5–21–63. Cl. 44.
Rexall Drug and Chemical Co., d.b.a. Tupperware, Los Angeles, Calif. 754,111, pub. 5–21–63. Cl. 26.
Rexford Records: *See*—
Kahn, Gus, Music Co.
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Riley, Bradford C.: *See*—
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Rip Van Winkle: *See*—
Ripley, Glenn Q., Jr.
Ripley, Glenn Q., Jr., d.b.a. Rip Van Winkle, East Springfield, Pa. 647,227, canc. Cl. 100.
Robbins Co., The, Attleboro, Mass. 754,135, pub. 5–21–63. Cl. 28.
Robertson Photo-Mechanix, Inc., Chicago, Ill. 754,091, pub. 5–21–63. Cl. 26.
Robinson, Charles E., Westmount, Quebec, Canada. 647,159, canc. Cl. 42.
Rockwell Mfg. Co., Pittsburgh, Pa. 753,967, pub. 5–21–63. Cl. 15.
Roe, Justus, & Sons, Inc., Patchogue, N.Y. 754,126, pub. 5–21–63. Cl. 26.
Roman Benech Matilla, Valencia, Spain. 647,133, canc. Cl. 39.
Roper, Geo. D., Corp., Kanakakee, Ill. 754,177, pub. 5–21–63. Cl. 34.
Ross of Florida, Inc., Lakeland, Fla. 754,222, pub. 5–21–63. Cl. 39.
Roxane, Philips, Inc., New York, N.Y. 753,985, pub. 5–21–63. Cl. 18.
Rue Publishing: *See*—
Barclay, Rue G.
Russell, F. C., Co., The, Cleveland, Ohio. 647,251, canc. Cl. 12.
Ruud Mfg. Co., Kalamazoo, Mich. 754,171, pub. 5–21–63. Cl. 34.
Santa Paula Citrus Fruit Association, Santa Paula, Calif. 176,115, ren. 8–6–63. Cl. 46.
Sarkes Tarzian, Inc., Bloomington, Ind. 754,188, pub. 5–21–63. Cl. 36.
Savada Bros., Inc., New York, N.Y. 754,232, pub. 5–21–63. Cl. 39.
Savair Products Co., Warren, Mich. 754,063, pub. 5–21–63. Cl. 23.
Saxone, Lilley & Skinner (Holdings) Ltd., from Saxone Shoe Co. Ltd., Kilmarnock, Scotland. 754,209, pub. 2–13–62. Cl. 39.
Saxone Shoe Co. Ltd.: *See*—
Saxone, Lilley & Skinner (Holdings) Ltd.
Schlage Lock Co., San Francisco, Calif. 753,958, pub. 5–21–63. Cl. 13.
Schleussner, Dr. C., d.b.a. Dr. C. Schleussner Fotowerke G.m.b.H., by Dr. C. Schleussner Adox Photowerke G.m.b.H., Frankfurt am Main, Germany. 391,149, 12(c) pub. 8–6–63. Cl. 6.
Schleussner, Dr. C., Fotowerke G.m.b.H.: *See*—
Schleussner, Dr. C.
Schonbrunn, S. A., & Co. Inc.: *See*—
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Sealy, Inc., Chicago, Ill. 647,074, canc. Cl. 32.
Searle, G. D., & Co., Skokie, Ill. 753,978, pub 4–9–63. Cl. 18.
Sears, Roebuck and Co., Chicago, Ill. 404,277, ren. 8–6–63. Cl. 39.
Sears, Roebuck and Co., Chicago, Ill. 646,978, canc. Cl. 9.
Sears, Roebuck and Co., Chicago, Ill. 754,225, pub. 5–21–63. Cl. 39.
Sea-Wide Industries, Inc., Philadelphia, Pa. 754,142, pub. 5–21–63. Cl. 29.
Security Aluminum Corp., Compton, Calif. 753,943, pub. 5–21–63. Cl. 12.
Seeburg Corp., The, Chicago, Ill. 754,196, pub. 5–21–63. Cl. 36.
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Seneca Tackle Co., Inc., New York, N.Y. 754,037, pub. 5–21–63. Cl. 22.
Serveo Co., The, Long Beach, Calif. 754,076, pub. 5–21–63. Cl. 23.
Service Spring Co., Indianapolis, Ind. 754,345. Cl. 19.
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Seven-Up Co., The, St. Louis, Mo. 754,309, pub. 5–21–63. Cl. 46.
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Sheaffer W. A., Pen Co., Fort Madison, Iowa. 402,854, ren. 8–6–63. Cl. 37.

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Siddall, Stanley G., d.b.a. Siddall's Welding and Equipment Co., Orangeville, Ontario, Canada. 754,051, pub. 11–27–62. Cl. 23.
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Siddall, Stanley G.
Silver Knit Hosiery Mills, Inc., High Point, N.C. 754,234, pub. 5–21–63. Cl. 39.
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Sosine, Elmer H., d.b.a. E. H. Sosine Co., Seattle, Wash. 754,371. Cl. 52.
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United States Rubber Products, Inc., New York, N.Y. 344,050, canc. Cl. 39.
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Volk Bros. Co., Dallas, Tex. 754,245, pub. 5–21–63. Cl. 39.
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Warwick Chemical Co., West Warwick, R.I., by Sun Chemical Corp., New York, N.Y. 402,628, 12(c) pub. 8–6–63. Cl. 6.
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Weck, Edward, & Co., Inc., Brooklyn, N.Y., by Edward Weck & Co., Inc., Long Island City, N.Y. 401,893, 12(c) pub. 8–6–63. Cl. 23.
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Winthrop Products Inc., New York, N.Y. 404,425–6, ren. 8–6–63. Cl. 18.
Winthrop Products Inc., to Sterling Drug Inc., New York, N.Y. 403,954, ren. 8–6–63. Cl. 18.
Wireway Co.: *See*—
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Wireway Looms Co., Charles River, Mass., by Bradford C. Riley, d.b.a. Wireway Co., Falmouth, Mass. 438,622, 12(c) pub. 8–6–63. Cl. 13.
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Zeiss, Ikon, A.G., Stuttgart S., Germany. 754,082, pub. 8–19–58. Cl. 26.
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Zuercher, C. E., & Co., to C. E. Zuercher & Co. Inc., Chicago, Ill. 172,534, ren. 8–6–63. Cl. 46.
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U.S. GOVERNMENT PRINTING OFFICE: O—1963

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
August 13, 1963 Volume 793 Number 2

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of June 1963

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ASSISTANT SECRETARY OF COMMERCE FOR SCIENCE AND TECHNOLOGY

Duties and Responsibilities

The following amendment to the order was issued by the Secretary of Commerce on June 21, 1963. The material appearing at 27 F.R. 11244 of November 14, 1962 is amended as follows:

Department Order No. 177 (Revised) of October 25, 1962, is amended to make explicit reference to assignment of the Civilian Industrial Technology Program to the Assistant Secretary of Commerce for Science and Technology.

Section 4 of Department Order No. 177 (Revised) of October 25, 1962 is hereby amended to read as follows:

SEC. 4. *Duties and responsibilities.* The Assistant Secretary of Commerce for Science and Technology shall serve as the principal adviser to the Secretary on all scientific and technological matters of concern to the Department, and shall serve as adviser to all Departmental officials with respect to matters of science and technology, in which capacity he shall have cognizance of the research and development activities carried out in the fields of science and technology by all organization units of the Department. His particular duties and responsibilities shall include:

1. The coordination and evaluation of existing programs of the Department in the fields of science and technology;
2. The expansion of such programs where deemed desirable to meet the national needs;
3. The development and implementation of new research and development programs in furtherance of the Department's objectives;
4. Administering the Civilian Industrial Technology Program;
5. Representing the Department on top policy level scientific committees and groups, including the Federal Council for Science and Technology; and
6. The coordination of the Department's scientific and technological activities with other agencies of Government.

Effective date: June 21, 1963.

HERBERT W. KLOTZ,
Assistant Secretary for Administration.

[F.R. Doc. 63-7106; Filed, July 5, 1963; 8:45 a.m.]

Published in 28 F.R. 6921, July 6, 1963

Errata

In the "Index of Patents," vol. 1962, p. 180, under "Chemetals Corp." strike out "Baer, Robert A., Slattery, and Tripp. 3,030,494." and "Bevarly, Henry W. 3,019,110.," and insert the same under "Chemetron Corp.," same p. 180. This erratum will also appear in the "Index of Patents" for 1963.

In the "Index of Patents," vol. 1962, p. 784, under "P-M Associates" strike out "Castel, Jacques H., and Edwards. 3,068,400.," and "Janssen, Hermann. 3,068,401." and insert the same under "PGAC Development Co.," same p. 784. This erratum will also appear in the "Index of Patents" for 1963.

Disclaimers

2,934,610.—*Norman H. Dieter, Jr.*, Pleasantville, N.Y. SOUND-RECORD TRANSDUCING DEVICE FOR STEREOPHONIC AND LIKE RECORDING SYSTEMS. Patent dated Apr. 26, 1960. Disclaimer filed May 17, 1963, by the assignee, *Sonotone Corporation*.

Hereby enters this disclaimer to claims 1, 2, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 27 of said patent.

2,943,248.—*Orral W. Ritchey*, Seattle, Wash. DIGITAL TO ANALOGUE SERVOSYSTEM. Patent dated June 28, 1960. Disclaimer filed May 9, 1963, by the inventor, the assignee *The Boeing Company* assenting.

Hereby enter this disclaimer to claims 1, 2 and 3 of said patent.

Patents Available for Licensing or Sale

2,791,960. Design Cookie Making Appliance. Anna M. De Carlo Pietropinto, 15 Sheridan Square, New York 14, N.Y.

3,057,401. Combination Screen and Pliable Film Closure. Nanette A. Gomory and Paul L. Gomory, Jr., 5609 Ogden Road, Bethesda, Md.

3,085,258. Holder for Invalid Walker. Max A. Wolferts, 2710 Lincoln St., Hollywood, Fla.

3,089,869. Organic Acid Esters of Adenosine Phosphates. Roland Yves Mauvernay, Riom, France. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

General Electric Company is prepared to grant non-exclusive licenses under the following 12 patents upon reasonable terms to domestic manufacturers.

Applications for licenses under the following 8 patents may be addressed to: General Electric Company, Patent Counsel,

New Applications Received During June 1963

Patents	6,771
Designs	423
Plant Patents	10
Reissues	30
Total	7,234

Issue

Patents	595	No. 3,100,301	to No.	3,100,895, incl.
Designs	96	No. 195,936	to No.	196,031, incl.
Plant Patents	1	No. 2,274		
Reissues	4	No. 25,432	to No.	25,435, incl.
Total	696			

Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,843,615. Organophosphorus-Silicon Compositions.

2,979,479. Silicone Rubber of Improved Tear Strength.

2,985,544. Method of Rendering Cellulosic Material Non-Adherent and Article Produced Thereby.

2,985,545. Method of Rendering Cellulosic Material Non-Adherent and Article Produced Thereby.

2,985,546. Method of Rendering Cellulosic Material Non-Adherent and Article Produced Thereby.

3,024,146. Silicone Rubber Adhesive Containing Treated Filler.

3,069,378. Covulcanizate of Fluorinated Polyacrylate Elastomer and Organopolysiloxane Gum.

3,082,181. Organopolysiloxane Elastomers Containing a Filler and a Carboxylic Acid Salt of Iron or Manganese.

Applications for licenses under the following 3 patents may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind. Attn: Patent Counsel.

2,968,860. Method of Obtaining Selective Directional Critical Elongation in Sheet Magnetic Material.

3,074,149. Method of Making a Hermetically Sealed Cable Entry.

3,079,814. Self Regulating Gear Reduction Mechanism.

Application for licenses under the following patent may be addressed to: Patent Counsel, Chemical & Metallurgical Division, General Electric Company, 1285 Boston Ave., Bridgeport 2, Conn.

3,005,179. Multiple Electrical Outlet.

DEPARTMENT OF COMMERCE—PATENT OFFICE

Rules of Practice in Patent Cases

[37 CFR Part 1]

Furnishing by Applicant of Information Pertinent to Claimed Invention

Notice is hereby given that the United States Patent Office proposes to amend one of its rules relating to patents. The amendment is proposed pursuant to the authority contained in Title 35 U.S.C. section 6.

All persons who desire to present their views, objections, recommendations or suggestions in connection with the proposed amendment are invited to do so on or before October 1, 1963, on which day a hearing will be held at 10:00 a.m., in Room 3886B of the Department of Commerce Building. All persons wishing to be heard orally are requested to notify the Commissioner of Patents of their intended appearance.

The proposed amendment will permit the Office to require of applicants for patent the furnishing of information concerning the published art, known to them and believed by them to be significantly pertinent to their inventions. The purpose is to make available to examiners in the Patent Office the results of a search made by applicant or his representative, if such search was made. It is believed that the examiner's job of making an investigation of the available prior art can be more thorough if such information is available. It is also believed that the presumption of validity attaching to patents will be more meaningful and stronger.

The text of the proposed amendment is as follows—

Section 1.104 (Patent Rule 104) is proposed to be amended by adding the paragraph (c) to read as follows:

§ 1.104 *Nature of examination; examiner's action.*

* * * * * * *

(c) The applicant must list in a separate statement accompanying the application, the published art (including patents, foreign and domestic) known to him at the time of the application, and believed by the applicant to be significantly pertinent to the claimed invention. If no such art is known to the applicant, this should be expressly asserted. This statement shall not be considered to be a representation that a search has been made, or that no better art than that listed exists. The applicant may at his option, state whether or not a search has been made. If such statement does not accompany the application, the examiner may require the filing of such statement before action is made.

The time and manner of taking effect is as follows: The amendment shall take effect thirty days after publication in the Federal Register, and shall apply only to applications filed after that date. In all other applications pending on the effective date, a similar statement may be placed in the record, at the applicant's option.

Dated: July 11, 1963.

[SEAL] DAVID L. LADD,
Commissioner of Patents.

Approved:

J. HERBERT HOLLOMON,
Assistant Secretary of Commerce for Science and Technology.

[F.R. Doc. 63-7773; Filed, July 23, 1963; 8:52 a.m.]

Published in 28 F.R. 7513, July 24, 1963

INTERVIEWS

On July 17, 1963, the memorandum reproduced below was distributed to the Examiners in the Patent Office. It is presented here for the information of all applicants and their representatives.

Optimum Examining Procedure—Memorandum #2 Interviews

This Memorandum #2 of the Optimum Examining Procedure series is devoted entirely to "interviews" and their use to the maximum benefit of better and swifter prosecution. Proper interviews frequently lead to a better and earlier understanding of the issues involved in a particular case, and hence to an earlier conclusion of prosecution.

One of the characteristics of the skilled, mature Examiner is the exercise of proper judgment in borderline situations. Circumstances will frequently arise where waiver of technical requirements by the Primary Examiner, if permissible, will be better than blind adherence to technicalities, particularly where applicants are cooperating fully in moving to conclude prosecution and the Examiner can pass on all remaining issues with no more than nominal reconsideration or search. Subject to this broad policy, the following statements regarding situations which frequently arise specify practice which should be followed throughout the Office in the interest of uniform interview policy.

1. Interviews for the discussion of the patentability of pending applications will not be had before the first official action thereon (Rule 133). Interviews before the first response are discouraged; but interviews after the first response or later which offer hope of substantial progress are encouraged. (See however, 12 and 13 below.)

2. Arrangements for interviews should be made in advance so that the Examiner can properly prepare for the interview (Rule 133a). The Examiner should prepare for any prearranged interview to the extent that he understands the case, the references applied against it, and the attorney's response. Impromptu interviews should never be granted unless the Examiner has these details so well in mind that he can discuss the case profitably without further review. Interviews on Fridays will no longer be prohibited as a matter of policy; but all interviews should be set at a time mutually satisfactory to both parties.

3. An appointment for interview once arranged should be kept. Many applicants and attorneys plan trips to Washington in reliance upon such appointments. When, after an appointment has been made, circumstances compel the absence of the Examiner or Examiners necessary to an effective interview, the other party should be notified immediately so that substitute arrangements may be made.

4. An interview should not be granted if it is clear in advance that the requesting party is not properly prepared. If it becomes apparent after the discussion begins that the party is not properly prepared, or that further discussion would be unproductive, the interview should be terminated promptly.

5. Interviews normally should not be granted unless the requesting party has authority to bind the principal concerned.

6. An interview should be conducted only with the applicant or his legal representative of record. An interview with a person not of record, but known to be the local associate of the attorney of record, ordinarily will be permitted hereafter only when a written power authorizing such interview is presented prior thereto. Any exceptions to this procedure must be approved by the Group Supervisor.

7. If, at any time, the Examiner considers an interview would be helpful in disposing of a case, he is authorized to solicit same either by contacting applicant's local representative by phone or, where no such representative is available, by writing to counsel of record, or by collect long distance phone when authorized by the attorney or agent of record.

8. Where the response to a first complete action includes a request for an interview or a telephone consultation to be initiated by the Examiner, or where an out-of-town attorney under similar circumstances requests that the Examiner defer taking any further action on the case until the attorney's next visit to Washington (provided such visit is not beyond the date when the Office action would normally be given), the Examiner, as soon as he has considered the effect of the response, should grant such request if it appears that the interview or consultation would result in expediting the case to a final action.

9. An interview should not be used by either party as an opportunity to "haggle." Once the Examiner clearly understands the applicant's position, the interview should be concluded. Of course, if the Examiner can make a suggestion which will advance the prosecution, he should do so.

10. Where agreement is reached as a result of an interview, applicant's representative should be advised that an amendment pursuant to the agreement should be promptly submitted. If the amendment prepares the case for final action, the Examiner should take the case up as special. If not, the case should await its turn.

11. To insure that any mutually acceptable conclusions reached at an interview are understood by both parties, a memorandum summarizing these conclusions and the significance of any exhibits considered or demonstrations made should be prepared in duplicate and signed by both parties to the interview, and a copy should be retained by each. The copy retained by the Examiner will be kept in the application file until prosecution is completed. Such procedure will not, however, relieve applicant of his responsibility under the second paragraph of Rule 133.

In those cases where an interview is had but no agreement is reached, the Examiner should place an informal memorandum in the file to this effect. The memorandum should be sufficiently complete to make clear to others the issues resolved and/or discussed in the interview.

The memoranda discussed above are not an official part of the record, and should be removed from the file if and when the case is passed to issue.

12. Concerning requests for interviews after Final Action, it is essential that any applicant or his representative be granted an opportunity to present briefly, either orally or in writing, the intended purpose and content of the interview. With the approval of the Primary Examiner, further time may be granted if the Examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations which would require more than nominal reconsideration or new search should be denied.

13. Requests for interviews on cases already passed to issue should be granted only with specific approval of the Supervisor upon a showing in writing of extraordinary circumstances.

H. B. WHITMORE,
July 17, 1965. *Superintendent of the Examining Corps.*

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	11-17-61	11-13-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	3-12-62	3-8-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	2-13-62	10-2-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	7-14-61	7-21-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-18-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	1-2-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	12-12-61	10-20-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-12-62	1-12-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-29-61	1-3-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	1-2-62	1-10-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-24-61	10-26-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	12-11-61	12-18-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	11-21-61	11-6-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	11-29-61	11-14-61

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1963

Total number of pending applications (excluding Designs)	201, 171
Total number of Design applications pending	6, 105
Total number of applications awaiting action (excluding Designs)	117, 610
Total number of Design applications awaiting action	2. 336
Date of oldest new application awaiting action	July 14, 1961
Date of oldest amended application awaiting action	July 21, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,405,107 to 2,406,732, inclusive
Plant Patent	Number 709

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-15-62	3-13-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	1-24-62	1-29-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	3-15-62	2-15-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	2-7-62	2-7-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	2-9-62	2-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner..... Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	3-15-62	4-2-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner..... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-23-62	4-13-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner..... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	2-9-62	1-17-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner..... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	6-14-62	7-13-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner..... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-12-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	3-7-62	3-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner..... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-23-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner..... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	4-2-62	4-11-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner..... Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	6-1-62	6-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner..... Printing; Typewriters; Stationery; Material Treatment.	4-2-62	4-4-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner..... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	4-3-62	4-17-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner..... Industrial Arts; Household, Personal and Fine Arts.	2-5-63	2-1-63

(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....		
93. PURDY, W. F. (acting).....	7-2-62	6-1-62
94. BERLOWITZ, W.....	8-8-62	10-15-62
95. ANGEL, C. D., (REZNEK, J., acting).....		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ALEXANDER WEBER

No. 6859. Decided February 13, 1963

[50 CCPA —; 312 F.2d 810; 136 USPQ 442]

1. PATENTABILITY—CLAIMS—CONSTRUCTION OF CLAIMS—WORDS AND PHRASES—"BLIND" AND "FIRE SHIELD."

"The limitation that the claimed slat member is 'for use in a blind,' making no reference to a 'window' blind, does not, in our judgment, exclude the fire shield of Moore. The Moore shield is a *cover* or *screen* * * *. *Webster's New International Dictionary, second edition, Unabridged*, defines blind as: '1. Something to hinder sight or keep out light; a screen; a cover.' It would therefore seem that the term 'blind' including screen or cover would serve synonymously with Moore's fire shield."

2. SAME—SAME—SAME—"THIN, ELASTICALLY RESILIENT MATERIAL."

"Appellant, placing emphasis upon the limitation 'thin, elastically resilient material,' contends that Moore's plates are devoid of such material. Moore does not refer to the material composition of his 'sheet-metal plates.' It may be safely assumed that the plates are composed of a commonly used material. Sheet-metal structures are commonly composed of sheet steel reduced to elastic resiliency. We agree with the Board that a sheet-metal plate is an elastically resilient material as well as being thin and that the adjective 'thin' is of relative import lacking the basis for patentable distinction."

3. SAME—OBVIOUSNESS—REVERSAL OF PARTS.

"We agree with the Board that, where desired, conversion of overlap from opposite sides of the plate to the same side would be a simple expedient of choice. This would be no more than an obvious reversal of arrangement and not patentable."

4. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—HOLDING OF EXAMINER NOT REVERSED BY BOARD.

Where the Examiner ruled that "to substitute the McLennan slat members would be obvious in the light of Moore's teaching" of a sectional slat structure, and the Board, in affirming the Examiner's rejection, "made specific reference only to McLennan's teaching of swivel connected members with the suggestion of obviousness to substitute the connecting means of Moore for the swivel connection of McLennan," *Held* that this "apparent divergence of views * * * poses no problem to * * * consideration of McLennan's disclosure of a one-piece s'at member," in view of the fact that the "decision of the Board gave no indication of error in the Examiner's broader holding."

5. PATENTABILITY—ANALOGOUS ARTS.

In finding unpersuasive appellant's argument that his art of blinds is foreign to the reference art of fire shields "to the extent that one working in the field of blinds would not look to the field of fire shields," *Held* that "We are here concerned with vertically suspended slat members and not novelty in the blind per se"; that the "art involved is not that of the composite structure but the art of an essential component means, i.e., vertically suspended slat members"; and that the "claimed slat members are not patentably distinct whether they are used in a blind or a fire shield."

6. SAME—PARTICULAR SUBJECT MATTER—VENETIAN BLIND.

The decision of the Board of Appeals, refusing certain claims in an application on a Venetian blind as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 466,389.

AFFIRMED.

Michael S. Striker for appellant.

Clarence W. Moore (*Joseph F. Nakamura* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

ALMOND, Jr., *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Board of Appeals rejecting claims 20 through 23 and 25 of appellant's patent application Ser. No. 466,389, filed November 2, 1954.

The application discloses a Venetian blind having vertical slats suspended at their upper ends from runner elements slidable in a horizontal track. Swivel connections are interposed between the upper ends of the slats and the runner elements to permit each slat to turn on its vertical axis in unison by pulling a draw cord to change the angle that the slats make with the plane of the window. The slats are made in sections connected together with overlapping ends on the same side thereof.

The use of multiple sections for each slat allows easy adjustment as to length of a slat using standard parts. In addition, the connected slat sections may slightly tilt with respect to each other about an axis defined by a line connecting the hooks attaching adjacent sections to permit self-alignment in a vertical plane. It is also stated that multiple sections provide "a distinct vibration damping both as to sound and movement."

The sections of the slat members are rectangular pieces with each section having a pair of oval openings in one end with a pair of hooks at the other end for connecting the slats together.

The connecting means may be modified by providing a pair of keyhole slots in one end of the slat section and a pair of stud-like elements on the other end. Sheet metal is preferred as the material used for the slat sections.

The Board affirmed the Examiner's final rejection of claims 20 to 23 as unpatentable over Moore and claim 25 as unpatentable over McLennan taken in view of Moore.

The references relied on are:

Moore, 162,250, April 20, 1875.
McLennan, 2,188,575, January 30, 1940.

The Moore patent discloses a fire shield designed to suspend from the roof of a building to provide heat protection against adjacent burning buildings. The shield comprises a plurality of vertical rows of rectangular sheet-metal plates. The connecting means are formed by bending each end of the plate, thus providing a channel and a lip at opposite ends of the plate. Each lip portion is provided with a lug to protrude through a square opening of the adjoining plate. The ends of each plate are overlapped on opposite sides. Moore also shows a modified form of connection means comprising a pair of laterally spaced hooks on one end of the plate and a pair of laterally spaced holes on the other end.

The McLennan patent discloses a Venetian-type blind of the vertical slat type with slats suspended by their upper ends from runner elements which are slidable in a horizontal track. Swivel connections are interposed between the upper ends of the slats and the runner elements to permit each slat to turn about its vertical axis, to change the angle that the slats make with the plane of the window. The slat members may be made in one piece or in sections connected by means of a swivel pin which permits turning of the respective sections independently to be set at different angles. The lower slat sections, similar to the upper slat sections, are linked together by chains.

Claims 20 through 23 are directed to the sectional slat. Claim 25 is directed to a blind having an elongated horizontal guide with the sectional slat members being slidably suspended from the guide. Claim 24 was allowed.

We quote claims 20 and 25 as representative of the appealed claims:

20. For use in a blind, in combination, a plurality of slat sections made from thin, elastically resilient material and being arranged in a row extending in one direction and substantially in one plane; connecting means connecting said sections to each other tiltable about respective axes located in said plane and substantially normal to said direction so that said connected slat sections form an elongated slat member; and suspension means for suspending said slat member at the upper end thereof so that said sections align each other in a vertical plane under the action of the force of gravity.

25. A blind comprising, in combination, elongated horizontal guide means; a plurality of elongated slat members, each of the slat members comprising a plurality of slat sections made from thin, elastically resilient material and being arranged in a row extending in one direction and substantially in one plane, and connecting means connecting said sections to each other tiltable about respective axes located in said plane and substantially normal to said direction; suspension means slidably arranged in said guide means and attached to the upper ends of said slat members, respectively; and moving means connected to said suspension means for moving said plurality of elongated slat members between a first position in which they are aligned adjacent to each other in a vertical plane extending in longitudinal direction of said guide means and a second position in which said slat members are arranged in substantially parallel vertical planes inclined to the longitudinal direction of said guide means.

Claim 21, like claim 20, is drawn to the sectional slat, but in addition it recites that the sections overlap, with the overlap of each section with its adjacent sections being on the same side thereof.

Claim 22 further defines the sectional slat by reciting that the connecting means comprises "a pair of engaging members" which are received in "a pair of cutouts."

Claim 23, in a recitation similar to that of claim 22, discloses the connecting means as comprised of "a pair of hook members" which are received in "a pair of cutouts."

It is apparent that claims 20 through 23 specify a slat member with a plurality of slat sections connected together forming a row of plates extending vertically in one plane. Novelty of this general structure is dispelled by the Moore patent disclosing, as it does, a plurality of sheet-metal plates connected together to form a row of plates extending vertically in one plane.

The question for resolution is whether the instant claims patentably distinguish over the references.

[1] The limitation that the claimed slat member is "for use in a blind," making no reference to a "window" blind, does not, in our judgment, exclude the fire shield of Moore. The Moore shield is a *cover* or *screen* designed for the purposes indicated. Webster's New International Dictionary, second edition, unabridged, defines blind as: "1. Something to hinder sight or keep out light; a screen; a cover." It would therefore seem that the term "blind" including screen or cover would serve synonymously with Moore's fire shield.

Appellant contends that Moore discloses nothing even in vague resemblance to a slat as that word is commonly understood and as defined in Webster, supra. The argument is advanced on the basis of the relative dimensions of the slat and Moore's sheet-metal plates. Appellant's quotation from Webster attributes to slat as meaning a "thin, narrow bar especially of wood or metal." Referring again to Webster,[1] supra, the definition clearly depicts the relativity of the

[1] thin, *adj.* * * * 1. Having, or being of relatively little depth or extent from one surface to its opposite; not thick; of a solid body of three dimensions, measuring little in the third dimension; of little thickness; as, *thin* paper.
narrow, *adj.* * * * 1. Of little breadth, esp. in comparison with the length; not wide or broad; as, a *narrow* board.

adjactives "thin" and "narrow." This renders apt and logical the consideration of the length and width of a vertical row of Moore's plates. It seems obvious that size does not impress itself as a characteristic of slats. The requirements of varying situations of adaptation would have essential impact on the matter of size relating to Venetian blind slats.

[2] Appellant, placing emphasis upon the limitation "thin, elastically resilient material," contends that Moore's plates are devoid of such material. Moore does not refer to the material composition of his "sheet-metal plates." It may be safely assumed that the plates are composed of a commonly used material. Sheet-metal structures are commonly composed of sheet steel reduced to elastic resiliency. We agree with the Board that a sheet-metal plate is an elastically resilient material as well as being thin and that the adjective "thin" is of relative import lacking the basis for patentable distinction. *In re Lechene*, 47 CCPA 923, 277 F.2d 173, 125 USPQ 396; *In re Fahrni*, 41 CCPA 768, 210 F.2d 302, 100 USPQ 388.

It is pointed out that Moore shows a plurality of slat sections with hooks for connecting the sections to each other tiltable about respective axes located in the plane of the slats in the same manner as claimed by appellant.

As heretofore pointed out, claims 21 through 23 add to claim 20 certain structural features not found in Moore. We must therefore determine whether these features would have been obvious to one having ordinary skill in the art.

Claim 21 adds to claim 20 the feature of end overlaps on the same side of the slat sections and thus distinguishes over Moore's plate overlaps on opposite sides.

[3] We agree with the Board that, where desired, conversion of overlap from opposite sides of the plate to the same side would be a simple expedient of choice. This would be no more than an obvious reversal of arrangement and not patentable. *In re Gazda*, 42 CCPA 770, 219 F.2d 449, 104 USPQ 400.

In disposing of the limitation which claim 22 adds to claim 21 relating to a pair of engaging members and a pair of cutouts as the connecting means, the Board agreed with the Examiner, as we do, that this does not distinguish over the hooks and receiving openings shown in Moore, stating further with respect to claims 22 and 23:

*** * * the two fastening means at the ends of each section shown in the modification of FIG. 5 of that patent would suggest to one skilled in the art as an obvious expedient to duplicate the single fastening means at each end in the modification of FIGS. 3 and 4 of the same patent.**

We now focus our attention on claim 25, which stands rejected as unpatentable over McLennan in view of Moore. This claim defines a blind with elongated horizontal guide means, a plurality of elongated slat members, suspension means and moving means for turning the slat members in unison. All of these elements are disclosed by McLennan. Claim 25, however, distinguishes structurally over McLennan in specifying slat members comprising a plurality of sections connected to each other by means permitting them to tilt about axes in the plane of the slat member and normal to its longitudinal axis. Moore teaches a sectional slat structure. The Examiner held that to substitute the McLennan slat members would be obvious in the light of Moore's teaching. The Board of Appeals affirmed the Examiner's rejection of this claim but in so doing made specific reference only to McLennan's teaching of swivel connected members with the suggestion of obviousness to substitute the connecting means of Moore for the swivel connection of McLennan.

[4] This apparent divergence of views between the Board and the Examiner poses no problem to our consideration of McLennan's disclosure of a one-piece slat member. The decision of the Board gave no indication of error in the Examiner's broader holding. *In re Launder et al.*, 42 CCPA 886, 222 F.2d 371, 105 USPQ 446; *In re Hall*, 41 CCPA 759, 208 F.2d 370, 100 USPQ 46; *In re Lloyd*, 36 CCPA 817, 172 F.2d 583, 80 USPQ 499.

In contesting the rejection of claim 25 appellant asserts that "the Moore patent does not disclose a blind composed of large metal sheet plates" consequently representing nonanalogous art. Broadly, appellant's position is that the art of blinds is foreign to the art of fire shields to the extent that one working in the field of blinds would not look to the field of fire shields.

[5] Appellant's argument is unpersuasive. We are here concerned with vertically suspended slat members and not novelty in the blind per se. The art involved is not that of the composite structure but the art of an essential component means, i.e., vertically suspended slat members. The claimed slat members are not patentably distinct whether they are used in a blind or a fire shield. It is obvious that one seeking to effect improvement in the vertically suspended slat members of McLennan would find suggestion for such improvement in Moore whether it to be to damp swinging motion or alignment in a vertical plane. If a sectional slat member were desired to dampen swinging with more facility than a one-piece member, McLennan affords the suggestion to use a multiple-piece member.

We do not find sufficient substance in the appealed claims to render them patentable over the prior art.

[6] We affirm the decision of the Board of Appeals.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

REPUBLIC STEEL CORPORATION *v.* M.P.H. MANUFACTURING CORPORATION, INC.

No. 6869. Decided February 13, 1963

[50 CCPA —; 312 F.2d 940; 136 USPQ 447]

1. TRADEMARK—OPPOSITION—EVIDENCE—DOCUMENTS ATTACHED TO NOTICE OF OPPOSITION—RULE 2.126.

   "* * * appellant-opposer seeks to rely on certain documentary material attached to the notice of opposition. The Trademark Trial and Appeal Board, invoking Rule 2.126 which provides that '* * * exhibits attached to pleadings * * * [are not] considered as evidence * * * unless identified and introduced in evidence as other exhibits,' declined to consider the documentary material. Accordingly, we will not consider these exhibits."

2. SAME—CONFUSING SIMILARITY—"TRUSS-SKIN" AND "TRUSCON."

   "Appellant contends that the marks 'TRUSCON' and 'TRUSS-SKIN' are confusingly similar in sound, appearance, and meaning. Both marks have in common 'TRUS' and 'TRUSS,' but we cannot conclude that this resemblance is determinative of the issue here. Looking at the marks in their entirety, as we must do, they are strikingly dissimilar in appearance. They simply do not look alike. 'TRUSCON' is one word, while 'TRUSS-SKIN' consists of two hyphenated words conveying an impressionable distinction in appearance. 'TRUSS' and 'SKIN' are commonly used words of the English language with definite meanings. 'TRUSCON' is not identified with the English language and is devoid of meaning. It would strain credulity to endeavor to merge the two marks together in sound. It appears to us that normal or casual pronunciation would distinctly emphasize a difference in sound."

3. SAME—SAME—SAME.

"In our opinion the marks 'TRUSS-SKIN' and 'TRUSCON' are readily distinguishable by reason of their dissimilarity in appearance, sound, meaning and connotation. It is our judgment that the concurrent use of the marks on the products with which they are identified would not be likely to cause confusion or mistake or to deceive purchasers as to the source or origin of the goods."

APPEAL from the Patent Office. Opposition No. 39,080.

AFFIRMED.

Emory L. Groff, *Emory L. Groff, Jr.*, for appellant.

Marzall, Johnston, Cook & Root, *Lloyd C. Root* for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

ALMOND, Jr., *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Trademark Trial and Appeal Board (130 USPQ 360), dismissing appellant's opposition to an application for registration of the trademark "TRUSS-SKIN," for sheet metal structural members for prefabricated buildings. Appellant took no testimony, relying only upon its Registration No. 557,946, granted April 22, 1952, to its predecessor Truscon Steel Company for the trade mark "TRUSCON." Appellee took testimony [1] In this connection we point out, however, that appellant-opposer seeks to rely on certain documentary material attached to the notice of opposition. The Trademark Trial and Appeal Board, invoking Rule 2.126 which provides that "* * * exhibits attached to pleadings * * * [are not] considered as evidence * * * unless identified and introduced in evidence as other exhibits," declined to consider the documentary material. Accordingly, we will not consider these exhibits.

The record discloses that appellee's mark "TRUSS-SKIN" is applied to elongated metal members which are deep-troughed and arched longitudinally. The elements may be joined together to form an arch to provide a building or roof system of any desired length. The arches are self-supporting and their use displaces the function of internal braces, trusses, or posts. These members are the only items to which the mark is applied.

Appellant's trademark "TRUSCON," registered April 22, 1952, is applied to products made of steel and other materials, described by the Board as including:

* * * plain deformed and sheared steel bars as reinforcing elements for concrete; sheet steel forms of longitudinally arched formation to be laid side by side to provide continuous long span construction and individual units of both longitudinally and transversely arched formation to be used as elements of concrete floor construction; column-hooping for reinforcing concrete columns; pressed-steel beams, joists, studs, plates, and channels for use in walls, ceilings, or floors of all types of building; windows and parts thereof; doors, panels, and partitions; joist and wall hangers; trusses; columns, and girders; steel roofing and steel flooring; panels of insulation externally covered by steel sheets for use in walls, ceilings and roofs; and stairs and treads.

There is no issue of prior use. Appellant's use of "TRUSCON" antedates appellee's use of "TRUSS-SKIN" by many years.

The basic issue is: Whether the concurrent use by appellee of its mark on the goods described, would be likely to cause confusion or mistake or to deceive purchasers in view of the use by appellant of its mark on the products listed in its registration.

In dismissing the opposition, the Board found and held that:

Applicant's "TRUSS-SKIN" arched metal panels and the various steel products identified in opposer's registration ordinarily would be promoted and advertised to architects, builders, contractors, and other members of the construction industry; applicant's panels and many of opposer's "TRUSCON" steel products are competitive in character to the extent that the use of applicant's product would eliminate the need for such products as steel trusses; columns and girders; steel roofing; steel joists and wall hangers; and panels of insulation externally covered by steel sheets for use in walls, ceilings, and roofs; and applicant's panels and opposer's "TRUSCON" windows, doors, partitions, reinforcing rods, and like goods could be used in the same structure. Under these circumstances, applicant's panels and opposer's steel products are likely to be attributed to a common source if they were to be sold under the same or similar marks.

"TRUSS-SKIN" and "TRUSCON," however, do not look alike, and while they are somewhat similar in sound, they are readily distinguishable in this respect. Moreover, if any suggested meaning could be attributed to each of these marks, it is apparent that one would not suggest the other. Considering, therefore, the differences between the marks "TRUSS-SKIN" and "TRUSCON" and that goods of the type marketed thereunder usually are purchased with care and by technically trained and/or informed persons, it is concluded that confusion, mistake or deception of purchasers is not reasonably likely to occur.

[2] Appellant contends that the marks "TRUSCON" and "TRUSS-SKIN" are confusingly similar in sound, appearance, and meaning. Both marks have in common "TRUS" and "TRUSS," but we cannot conclude that this resemblance is determinative of the issue here. Looking at the marks in their entirety, as we must do, they are strikingly dissimilar in appearance. They simply do not look alike. "TRUSCON" is one word, while "TRUSS-SKIN" consists of two hyphenated words conveying an impressionable distinction in appearance. "TRUSS" and "SKIN" are commonly used words of the English language with definite meanings. "TRUSCON" is not identified with the English language and is devoid of meaning. It would strain credulity to endeavor to merge the two marks together in sound. It appears to us that normal or casual pronunciation would distinctly emphasize a difference in sound.

Appellant urges that when the two marks are applied to competitive goods in the field of construction materials, they convey similar mental and commercial impressions of a trussed construction.

It is our view that "TRUSCON" of itself carries no connotation so as to stimulate any image or suggestion when looked upon by the average viewer. Appellee's goods are advertised as being "trussless" since they are self-supporting arched structural members. Appellee produced testimony of record that "the actual derivation of the expression originally came from the field, exactly where I don't know, but it was around the time of one of our first roof systems and in the expression itself, 'TRUSS-SKIN,' we connote a skin with a truss built in." It would be difficult, indeed, to conclude that a member advertised as trussless would convey an impression, even to the most unwary, of a trussed construction. If, as appellant contends, "TRUSCON" conveys an impression of a trussed construction, both the record and logic negates such an attribute to "TRUSS-SKIN."

The decision of this court in *Goodall-Sanford, Inc.* v. *Tropical Garment Manufacturing Co.*, 47 CCPA 821, 275 F.2d 736, 125 USPQ 189, carries much persuasion. The court said:

* * * "ROYAL PALM" does not look or sound like "PALM BEACH"; and the two marks do not stimulate similar associations. These facts lead to a conclusion that there is no likelihood of confusion or mistake of purchasers.

The use of the mark on appellee's goods began in January 1957. Appellee's trade in goods bearing the mark has been nationwide with considerable foreign distribution aggregating a value in excess of a

million dollars annually. Advertising costs have exceeded two-hundred thousand dollars. The record discloses that no instance of actual confusion among purchasers as to the sources of the goods bearing their respective marks has ever come to the attention of the appellee. In addition to this circumstance, the goods are of a character usually purchased with care and discernment by technically trained persons.

Appellant urges that all doubts should be resolved in its favor on the theory of prior use and the good will which attaches to "TRUSCON," citing the case of *Skelly Oil Co.* v. *The Powerine Co.*, 24 CCPA 790, 86 F.2d 752, 32 USPQ 51. As we have pointed out, we perceive no doubt that the two marks are distinctively different in spelling and appearance as well as in sound of pronunciation. Dissimilarity is again punctuated in consideration of the origin and connotation of appellee's mark when compared with the absence of connotation of appellant's mark.

Appellant cites *Bordo Products Co.* v. *B. A. Railton Co.*, 36 CCPA 1059, 173 F.2d 981, 81 USPQ 378, and *Wincharger Corp.* v. *Rinco, Inc.*, 49 CCPA 849, 297 F.2d 261, 132 USPQ 289. An examination of these cases discloses that they are not in point when measured in the light of the facts and circumstances of the instant case. *Bordo* presents an obvious distinction as to the class of purchasers. In the *Wincharger Corp.* case the marks "WINCO" and "RINCO" are so similar in appearance, spelling and sound as to smother distinction when pronounced. When two marks are so nearly identical, they might well produce confusion even among a discriminating group of purchasers.

We agree with the Board that the goods of the type to which the marks "TRUSS-SKIN" and "TRUSCON" attach are usually purchased with care by technically trained and/or informed persons; even though they are competitive in character to the extent that the use of appellee's product would eliminate the need for some of the products of the appellant and appellee's panels and some of the appellant's goods could be used in the same structure.

[3] In our opinion the marks "TRUSS-SKIN" and "TRUSCON" are readily distinguishable by reason of their dissimilarity in appearance, sound, meaning and connotation. It is our judgment that the concurrent use of the marks on the products with which they are identified would not be likely to cause confusion or mistake or to deceive purchasers as to the source or origin of the goods.

We therefore affirm the decision of the Trademark Trial and Appeal Board.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

THE WELLA CORPORATION *v.* LA MAUR, INC.

No. 6884. Decided February 15, 1963

[50 CCPA —; 312 F.2d 831; 136 USPQ 453]

1. TRADEMARK—CONFUSING SIMILARITY—"STYLE-TEX" AND "STYLE" FOR HAIR SETTING LOTION.

Upon review of the decision of the Trademark Trial and Appeal Board in a proceeding in which the appellee, La Maur, sought cancellation of appellant's, Wella's, trademark "Style-Tex" for use on a hair setting lotion, alleging prior and continuous use of "Style" on similar goods, hair setting and holding spray products, *Held* that "It is clear, as the Board observed in sustaining La Maur's petition, that 'Style' is the whole of La Maur's mark and the prominent, if not the dominant, feature of Wella's mark"; and that "We think it equally clear that when those marks are used on the instant products, confusion, mistake or deception of purchasers would be quite likely to occur."

2. SAME—SAME—SAME—EVIDENCE—THIRD PARTY REGISTRATIONS.

In connection with the citation by Wella of eleven third party registrations, designed to prove that La Maur's mark is so descriptive or suggestive of La Maur's product as to preclude cancellation of Wella's mark, *Held* that "Style" cannot fairly be considered descriptive of La Maur's product; that "While it may be suggestive in a sense, we do not think it sufficiently so, under the facts here, to negate the likelihood of confusion contemplated by Section 2(d)"; and that "After all, the contest here is between 'Style' and 'Style-Tex' on similar products—not between those marks and others which have been, whether properly or improperly, registered by others not parties to this suit."

APPEAL from the Patent Office. Cancellation No. 7,266.

AFFIRMED.

Eric Y. Munson for appellant.

Arthur S. Caine, Whiteley and Caine for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

La Maur seeks cancellation of Wella's trademark "Style-Tex" for use on a hair setting lotion, alleging prior and continuous use of "Style" on similar goods.

La Maur submitted various documents, testimony of two of its officers, and that of three wholesale beauty supply concerns. Wella took no testimony, relying on its own registration and eleven third party registrations which contain the word "Style" in various forms.

It is not disputed that La Maur has used the word "Style" since 1945 as its trademark on hair setting and holding spray products, marketed in substantial volume throughout the country to beauty salons and the general public.

Since La Maur's priority of use is not questioned, and the goods are similar, the sole issue is one of likelihood of confusion within the meaning of Section 2(d) of the Lanham Act.

[1] It is clear, as the Board observed in sustaining La Maur's petition, that "Style" is the whole of La Maur's mark and the prominent, if not the dominant, feature of Wella's mark. We think it equally clear that when those marks are used on the instant products, confusion, mistake or deception of puchasers would be quite likely to occur.

Appellant attempts to bolster its arguments that the Board committed reversible error by citing prior decisions and eleven third party registrations, the latter designed to prove that La Maur's mark is so descriptive or suggestive of La Maur's product as to preclude cancellation of Wella's mark.

[2] We find nothing in the decisions cited to support a reversal of the Board's holding, nor do we think "Style" can fairly be considered descriptive of La Maur's product. While it may be suggestive in a sense, we do not think it sufficiently so, under the facts here, to negate the likelihood of confusion contemplated by Section 2(d). After all, the contest here is between "Style" and "Style-Tex" on similar products—not between those marks and others which have been, whether properly or improperly, registered by others not parties to this suit.

The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE RALPH W. YOCUM

No. 6867. Decided March 13, 1963

[50 CCPA —; 314 F.2d 548; 136 USPQ 641]

1. CLAIMS—CONSTRUCTION OF CLAIMS—EFFECT OF USE OF TERM IN SPECIFICATION—WORDS AND PHRASES—"STUD."

"Appellant directs attention to definitions found in several technical dictionaries and handbooks in support of the contention that term 'stud' has a definite and fixed meaning which he sets out as a 'headless threaded solid cylinder.' He also refers to the fact that the specification uses the word 'stud' approximately fifty times without a single reference to a screw, bolt, or other fastener. The definitions indicate clearly that the art recognizes a definition of 'stud' which does not include the headed screw of Flogaus. It seems to us that the word is used in that restricted sense in the application and we think it should be so interpreted in the claims."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—"TAPERED END STUD."

Certain claims in an application entitled "Tapered End Stud" *Held* unpatentable over the prior art; but certain other claims *Held* patentable.

APPEAL from the Patent Office. Serial No. 456,570.

MODIFIED.

Chas. M. Fryer, *James W. Dent* and *Donald J. Rich* for appellant.

Clarence W. Moore (*Jere W. Sears* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the Primary Examiner's rejection of claims 1 through 10, all of the claims in appellant's application for a patent for Tapered End Stud.[1]

Claims 1 and 8 are representative and read:

1. A straight-threaded stud having uninterrupted threads for use in a tapped hole in which the innermost threads are formed by a tap with a tapered lead end, said stud having its end threads tapered to mate with said innermost threads.

8. The combination which comprises a member of solid substantially non-expandable structure having a tapped hole therein, a second member to be secured to the first member and having a plain through hole for alignment with said tapped hole, a solid stud-like member threaded on both ends with the threads on a first end being uninterrupted and fitting said tapped hole, a nut to fit the opposite end of said stud-like member to secure the second member tightly against the first member, the threads in said tapped hole being straight throughout the greater part of the length and tapered only adjacent its inner end where the roots of the threads follow the contour of a truncated cone, the stud-like member having straight threads throughout most of its length on its said first end and being tapered only adjacent its end providing the crests of the threads with a complementary frusto-conical contour, and the angle of said tapers being such as to provide a wedging action which limits the depth to which the stud-like member can be threaded into the tapped hole.

The references of record are:

Thatcher et al., 2,021,704, November 19, 1935.
Janata, 2,094,491, September 28, 1937.
Batchelder, 2,421,181, May 27, 1947.
Flogaus, 2,470,924, May 24, 1949.

The claims relate to a threaded stud having a tapered lead end, and to the combination of the stud, defined as having a nut on the other end, with two members, one of which has a tapped hole, secured together thereby.

[1] Serial No. 456,570, filed September 16, 1954.

Appellant states that commercially available taps used in tapping or threading holes are provided with a conventional chamfer or taper at the lead or entry end. That construction results in the bottom of the tapped hole having imperfect threads which correspond to the taper of the tap. According to his invention, the lead end of the stud to be threaded into the tapped hole is provided with a taper, formed either before or after the threads are formed. The taper on the stud has the same angle as the taper of the tap, resulting in the incomplete threads on the stud mating with the flat root portions of the threads at the inner portion of the tapped hole when the stud is fully seated to provide a wedging action. Such construction is said to result in high torque being required to break the fully seated stud loose from the tapered portion of the tapped hole while little turning effort is subsequently required to complete removal of the stud.

Appellant discloses an assembly wherein the stud extends through an oversized unthreaded hole in a second member into the tapped first or base member and has a nut threaded on its projecting untapered end to secure the two members together.

The Flogaus patent discloses a construction wherein a metallic anchor nut is embedded in a hole in a panel of wood, soft metal member or the like. The nut is adapted to receive an expander screw or bolt which is passed through an oversize hole in a second member to secure the two members together. The screw, which has an integral head at one end, has straight uniform threads along the shaft except at its lead end where the threads are flattened to produce a tapered extremity. The anchor nut is in the form of an internally threaded shank of soft metal slotted at the inner or lead end to provide expansible prongs having external barbs. The tapered end of the expander screw has a shape similar to that of the lead end of the tap used for cutting the internal threads on the anchor nut. The threads on the screw are designed to match the internal threads of the anchor nut. When the screw is threaded into fully seated position in the anchor nut, the final turns force the end of the screw into a tapered and unthreaded inner portion of the nut, cutting threads therethrough, as well as causing the external barbs on the nut to bite into the panel member, thereby securing the nut in place. The screw is held against dislodgment due to vibration by reason of the engagement resulting between the threaded lead end of the expander screw and the surrounding imperfect threads. However, the screw may be "withdrawn and re-applied to the anchor nut repeatedly without impairing its effectiveness."

The Batchelder patent discloses a stud bolt which has tapered threads on its stud end. The tapered end is received in a similarly shaped and threaded recess in a stud receiving element. An assembly is shown wherein the stud bolt passes through an oversized hole in a second element and a nut serves to secure the two elements together.

The Janata patent relates to screw threaded joints for pipes and rods. One disclosed structure includes a male member having a straight thread portion extending to the end of the structure at which location that portion is tapered. Threads on the opposite side of the straight portion from the end depart from a regular straight thread construction.

The Thatcher et al. patent discloses a self-tapping screw which cuts its own threads in unthreaded holes in sheet metal and like materials. Each of approximately three threads at the lead end are flattened at an acute angle to the axis of the screw but each of the threads is of

the same size as the other two. The end thus is of reduced diameter relative to the main threads but is not itself tapered.

The Examiner rejected all claims as unpatentable over Flogaus, holding that the term "stud" does not distinguish patentably over that reference for two reasons. First, he concluded, on the basis of a dictionary definition,[2] that the term "stud" is not limited to a headless member having threads on both ends and that the screw in Flogaus "could be used in a manner to be termed a 'stud.'" Additionally, he took the position that forming the screw in Flogaus as a headless member and applying a nut thereto would involve merely a standard mechanical organization. Other limitations in the claims were not regarded by the Examiner as defining over Flogaus.

The Examiner also rejected claims 1 through 10 on Batchelder in view of Flogaus or Janata, and claims 7 through 10 on Thatcher et al.

In affirming the Examiner's action, the Board specifically discussed only the rejections on Flogaus and on Batchelder in view of Flogaus.

With reference to claims 1 through 7, the Board regarded the term "stud" as broader than "stud bolt" and as applicable to the bolt or screw of Flogaus. It noted that claims 8 through 10 specify that a separate nut is threaded on the end of the stud but took the position that use of a separate end nut, as shown in Batchelder, instead of the bolt head of Flogaus, amounts only to a matter of unpatentable choice. In connection with the rejection on Batchelder in view of Flogaus, the Board held it would be obvious to one skilled in the art to replace the tapered threads on one end of the stud bolt of Batchelder with the tapered threads used on the screw of Flogaus, observing that the threads on the stud receiving element would necessarily be modified to accommodate the modified threads.

[1] Appellant directs attention to definitions found in several technical dictionaries and handbooks in support of the contention that the term "stud" has a definite and fixed meaning which he sets out as a "headless threaded solid cylinder." He also refers to the fact that the specification uses the word "stud" approximately fifty times without a single reference to a screw, bolt, or other fastener. The definitions indicate clearly that the art recognizes a definition of "stud" which does not include the headed screw of Flogaus. It seems to us that the word is used in that restricted sense in the application and we think it should be so interpreted in the claims.

However, the rejection on Flogaus is not disposed of by acceptance of appellant's definition of "stud." There still remains the question whether it would be obvious to a person of ordinary skill in the art to eliminate the head of the Flogaus screw and substitute therefor a threaded end and a nut.

Appellant takes the position that Flogaus does not provide the results attained by the recited structure, urging that the reference structure fails to provide "a wedging action which gives rise to a high quality force fit." According to appellant, the effectiveness of the Flogaus construction is dependent on the existence of the screw head.

We are unable to agree with appellant that the modification in question is unobvious. Although threads are cut in the anchor nut of Flogaus when the screw is first threaded to its fully seated position, that reference discloses that the prongs of the nut exert a force which,

[2] Webster's New International Dictionary, Second Edition, includes the following definitions of the noun "stud."
2. A projecting knob, rod, pin or the like; esp., a kind of a nail with a large head * * *.
11. Mach. a. A short rod or pin, fixed in and projecting from something, and sometimes forming a journal; also, a short live spindle or mandrel, as in the change gear for a screw cutting lathe. b. A stud bolt.

together with the engagement provided between the screw and the surrounding imperfect threads, causes the screw to be gripped firmly as it is threaded into the anchor nut. It is further disclosed that the screw "is thus held against dislogment due to vibration, but it may nevertheless be withdrawn and reapplied to the anchor nut repeatedly without impairing its effectiveness." Thus, Flogaus does not indicate that engagement of the screw head with the held member is necessary for retention of his screw. The description fully supports the conclusion reached by the Board that, upon reapplication of the screw after withdrawal, there will be a wedging action between the mated tapered thread portions. Under the circumstances, we are convinced that it would be obvious to a mechanic of ordinary skill to employ a nut and threaded extension on the Flogaus screw for the purpose of utilizing the well-known inherent advantage of being able to adjust the position of the nut independently of the threads that engage the base member. Such feature would obviously be desirable to permit obtaining a tight assembly where the thickness of members which it is desired to secure to tapped base members might be subject to variation in the thickness or where it might become necessary to replace the held plate with a replacement of slightly different thickness. Since we think claims 1 through 7 and 10 would cover the Flogaus structure modified in that obvious manner, the rejection of those claims on Flogaus will be sustained.

Another issue arises with respect to claims 8 and 9, however. Both define the member having the tapped hole as of "solid substantially non-expandable structure." We are unable to agree with the Board that the quoted term "has fair response in" the panel and anchor nut of Flogaus when the nut is in seated position. The prongs of the anchor nut are designated as "expansible" and the screw is referred to as an "expander" for that nut. Even though the Flogaus drawing shows the barbs on the outer side of the prongs embedded deeply in the surrounding panel portion after the screw is seated, there is no assurance that the structure even then is "substantially non-expandable." Although the tapered positions of the male and female threads provide a wedging action in Flogaus, it seems to us that Flogaus does not suggest that use of a non-expandable female member with his thread configuration will result in the superior holding properties attained by appellant. The rejection of claims 8 and 9 on Flogaus will, therefore, not be sustained.

We also consider the rejection of claims 8 and 9 on Batchelder in view of Flogaus or Janata to be in error. Batchelder uses full tapered threads on the mating surfaces rather than straight threads with the crests tapered. We find no suggestion in Flogaus of any reason why the thread structure which he employs with an expandable anchor nut assembly might be substituted in the Batchelder assembly with its tapped hole formed in non-expandable material. Further, it is not seen that Janata, which relates to the solution of a problem associated with pipe or rod joints and includes a thread portion which is not straight, would provide any suggestion that Batchelder be modified to provide the claimed structure.

The rejection of claims 8 and 9 on Thatcher et al. likewise cannot be sustained. As pointed out by appellant, the self-tapping screw of that patent includes straight end threads as a major feature. Although the patent shows the end threads, approximately three in number, to be of smaller diameter than the remainder of the screw, those

threads are all of the same diameter with the result that the frusto-conical contour recited in the claims is lacking. Further, there is no indication that the hole to which the screw is applied will have the same configuration as the end of the screw.

[2] For the reasons given, the decision of the Board is affirmed as to claims 1 through 7 and 10, but reversed as to claims 8 and 9.

MODIFIED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,457,097, T. A. TeGrotenhuis, Polymeric composition and method of making same, **filed** Apr. 18, 1963, D.C., N.D. Ohio (Cleveland), Doc. C-63/266, *Heterochemical Corporation* v. *The B. F. Goodrich Company*. **Same, filed** same, Doc. C-63/267, *Heterochemical Corporation* v. *H. Muehlstein & Co., Inc.* **Same, filed** same, Doc. C-63/268, *Heterochemical Corporation* v. *The Firestone Tire & Rubber Company*. **Same, filed** same, Doc. C-63/269, *Heterochemical Corporation* v. *Goodrich Gulf Chemicals, Inc.* **Same, filed** same, Doc. C-63/270, *Heterochemical Corporation* v. *The B. F. Goodrich Chemical Company*. **Same, filed** same, Doc. 63/271, *Heterochemical Corporation* v. *The Goodyear Tire & Rubber Company*. **Same, filed** same, Doc. C-63/272, *Heterochemical Corporation* v. *Phillips Chemical Company*. **Same, filed** same, Doc. C-63/273, *Heterochemical Corporation* v. *Shell Chemical, Inc.*

2,467,094, D. T. Peden, Abrasive article; **2,952,952**, R. C. Stanhope, Abrasive element, **filed** Apr. 16, 1963, D.C., E.D. Mich. (Detroit), Doc. 5, *Micromatic Hone Corporation* v. *Midwest Abrasive Company*.

2,501,789, Bankauf and Harrington, Hopper car discharge apparatus, **filed** July 20, 1962, D.C., N.D. Ohio (Toledo), Doc. C-62/148, *Hewitt-Robins Incorporated* v. *Webster Manufacturing, Inc.* Consent decree; patent held valid and infringed (notice Apr. 22, 1963).

2,540,497, A. Stiegler, Continuous extruding and vulcanizing apparatus, **filed** May 10, 1963, D.C., M.D. Fla. (Jacksonville), Doc. 4694, *Turner Hall Corporation* v. *Stylon's, Inc.* Stipulation and order of dismissal without prejudice Apr. 18, 1963.

2,543,143, C. H. Wells et al., Truck partition, Suit for Declaratory Judgment **filed** Apr. 17, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/453-CC, *Preco Incorporated* v. *Evans Products Company*.

2,567,245, N. Sperber et al., Oryl-(2-pyridyl)-amino alkanes and their production, **filed** Apr. 24, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63-C-448, *Schering Corporation* v. *Henry Interdonati, Inc.*

2,633,808, J. C. Webber, Well swab, **filed** Mar. 10, 1955, D.C., S.D. Tex. (Houston), Doc. 8809, *Jack C. Webber et al.* v. *The Guiberson Corporation*. Judgment for plaintiffs Apr. 19, 1963.

2,634,120, Lohr and Carver, Ball control game apparatus, **filed** Apr. 23, 1963, D.C., S.D.N.Y., Doc. 63/1169, *Louis Marx & Co., Inc.* v. *Hassenfeld Brothers, Inc.*

2,670,569, W. M. Heina, Eye for mannequins and dolls, **filed** Nov. 6, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1427/61, *William M. Heina* v. *Pensick & Gordon et al.* Dismissed by stipulation with prejudice as to all parties Apr. 5, 1963.

2,689,450, K. E. Stiegele, Expansible bracelet, **filed** July 24, 1962, D.C., S.D.N.Y., Doc. 62/2585, *Karl E. Stiegele et al.* v. *Jacques Kreisler Manufacturing Corporation*. Consent judgment; defendants enjoined Apr. 26, 1963.

2,711,315, C. H. Mosebach, Spring suspension and shock absorbing devices for automobiles, **filed** Sept. 19, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30254, *Carl H. Mosebach* v. *City of Philadelphia*. Order dismissing case with prejudice Apr. 3, 1963.

2,720,309, F. H. Kimball, Twine package, **filed** Apr. 22, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 33302, *Shuford Mills, Inc.* v. *Walter Guthrie et al.*

2,725,314, L. E. Lancy, In line treatment of toxic carry-over of work pieces, **filed** Apr. 17, 1963, D.C., E.D. Pa. (Philadelphia), Doc. 33281, *Lancy Laboratories, Inc.* v. *Keystone Lamp Manufacturing Corporation*.

2,790,718, A. L. Nugey, Process of manufacturing fermented beverages, **filed** Apr. 16, 1963, D.C., N.D. Ga. (Atlanta), Doc. 8349, *Patents Management Corporation* v. *Charles Pfizer & Co., Inc.*

2,797,461, B. B. Osher, Clip device; **2,828,790**, same, Wing assembly for wallets, pass cases and the like; **2,926,714**, same, Wing assembly for wallets, pass cases and the like; **2,926,741**, same, Wing assembly for billfolds, wallets, pass cases and the like, **filed** Dec. 11, 1961, D.C., S.D.N.Y., Doc. 61/4390, *American Kleer-Vu Plastics, Inc.* v. *Skyview Plastics, Inc.* Order dismissing action for lack of prosecution Apr. 23, 1963.

2,806,245, A. F. A. Bartels, Device for skinning fish fillets, **filed** Oct. 5, 1962, D.C. Mass. (Boston), Doc. 62/754-J, *Nordischer Maschinenbau Rud. Baader et al., Inc.* v. *General Fish Scalings Machine Co., Inc. et al.*

2,815,846, C. H. Stevenson III, Feeding and orienting device, **filed** Nov. 5, 1958, D.C., N.D. Calif. (San Francisco), Doc. 37800, *Clarence H. Stevenson III et al.* v. *Lamson Corporation et al.* Judgment entered; patent held infringed; injunction granted Apr. 12, 1963.

2,828,194, Hopkins and Easley, Etching, **filed** Apr. 18, 1963, D.C.N.J. (Newark), Doc. 298/63, *The Dow Chemical Company* v. *Bill Photo Engraving Company*.

2,828,790. (See 2,797,461.)

2,863,522, J. B. Smith, Oil and gas treater, **filed** Apr. 23, 1963, D.C.N.M. (Albuquerque), Doc. 5322, *Olman Heath Company* v. *James Bernard Smith*.

2,888,797, J. A. Van Horn et al., Electric watch; **2,954,664**, Blemiller and Reese, Magnetic circuit for an electric wrist watch; **2,972,745**, same, Electric wrist watch, **filed** Apr. 17, 1963, D.C. Md. (Baltimore), Doc. 14586, *Hamilton Watch Company* v. *The Read Drug & Chemical Company of Baltimore City*.

2,893,149, Reece and Paul, Artificial tree; **3,003,623**, same, Artificial tree package, **filed** Oct. 13, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40253, *Mard Continental, Inc.* v. *Peerlite Manufacturing & Supply Co.* Dismissed without prejudice Jan. 25, 1962.

2,926,714. (See 2,797,461.)

2,952,952. (See 2,467,094.)

2,954,664. (See 2,888,797.)

2,962,348, Seglin and Winnicke, Method for preparing dense sodium carbonate from crude trona, **filed** Apr. 18, 1963, D.C. Del. (Wilmington), Doc. 2656, *Stauffer Chemical Company* v. *F.M.C. Corporation*. **Same, filed** same, D.C. Wyo. (Cheyenne), Doc. 4704, *F.M.C. Corporation* v. *Stauffer Chemical Company et al.* **Same, filed** Apr. 19, 1963, D.C. Del. (Wilmington), Doc. 2659, *Stauffer Chemical Company et al.* v. *FMC Corporation*.

2,972,745. (See 2,888,797.)

2,973,156, W. Draheim, Tape recorder, **filed** Oct. 23, 1961, D.C., S.D.N.Y., Doc. 61/3768, *Dr. Werner Windhaus* v. *Roger Douglas Associates, Inc.* Order of dismissal for lack of prosecution Apr. 23, 1963.

2,981,086, S. Ludwig, Shaped knitted collars and methods of manufacture thereof, **filed** June 15, 1962, D.C., E.D. Pa. (Philadelphia), Doc. 31584, *Colnet, Inc.* v. *Clas Trims, Inc.* Stipulation of discontinuance Apr. 23, 1963.

2,984,036, J. I. Adler, Garland construction, **filed** Oct. 17, 1963, D.C., N.D. Ill. (Chicago), Doc. 61c1744, *Adler Enterprises, Inc.* v. *Carson Pirie Scott & Co.* Patent held valid and infringed; defendant enjoined Apr. 17, 1963. **Same,** Doc. 61c1745, *Adler Enterprises, Inc.* v. *National Potteries*. Decree as above.

2,985,874, G. I. Williams, Self-contained panel signal and control, **filed** Apr. 18, 1963, D.C. Mass. (Boston), Doc. 63-361-F, *Transistor Electronics Corporation* v. *C & K Components, Inc. et al.*

2,995,236, J. P. Berger, Lumber elevator, **filed** Aug. 16, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62-1142-K, *Berger's Portable Lumber Elevator* v. *Mike Boyd*. Patent held infringed; defendant enjoined (notice Apr. 1, 1963.)

2,997,820, H. O. Skoog, Organic bond abrasive wheel, **filed** Apr. 23, 1963, D.C. Mass. (Boston), Doc. 63-375-J, *American Emery Wheel Works* v. *Bay State Abrasive Products Company*.

3,003,623. (See 2,893,149.)

3,011,174, T. H. Schaerer, Pre-set pleating strip and method of pleating, **filed** Apr. 17, 1963, D.C., S.D.N.Y., Doc. 63/1094, *John Dritz & Sons, Inc.* v. *E-Z Buckle, Inc.*

3,078,365, Atkins and Holmgreen, Continuous combustion signal lamp, **filed** Mar. 4, 1963, D.C., N.D. Tex. (San Antonio), Doc. 3252, *Warning Lites Company, Inc.* v. *S. H. Leggitt et al.* Consent decree and judgment; injunction granted Apr. 24, 1963.

Re. 24,954, H. Church, Apparatus for filtering solids from gas-solids suspensions, **filed** Jan. 18, 1963, D.C. Md. (Baltimore), Doc. 14355, *The Slick Corporation* v. *United States Gypsum Company*.

Des. 182,759, B. Berger, Bathroom cabinet, **filed** Dec. 14, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1991, *National Steel Cabinet Co.* v. *General Bathroom Products Corp.* Dismissed without prejudice Apr. 15, 1963. **Same, filed** Apr. 11, 1963, same, Doc. 63c606, *National Steel Cabinet Co.* v. *General Bathroom Products Corp.*

Des. 190,789 I. I. Levis, Hand mirror, **filed** Oct. 4, 1962, D.C., E.D. Mo. (St. Louis), Doc. 62c348(2), *Irene I. Levis* v. *Saks Fifth Avenue*. Cause dismissed with prejudice (notice April 1963).

REISSUES

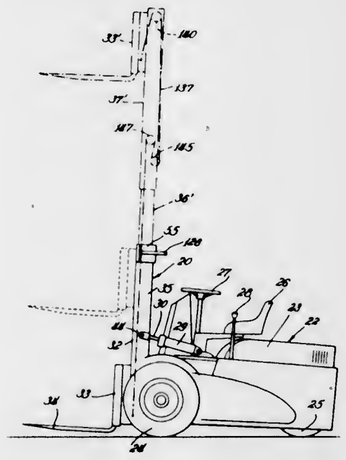
AUGUST 13, 1963

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,432
LIFT TRUCK

Brown E. Barnes, Portland, Oreg., assignor to Hyster Company, a corporation of Nevada

Original No. 2,595,120, dated Apr. 29, 1952, Ser. No. 177,942, Aug. 5, 1950. Application for reissue Nov. 14, 1961, Ser. No. 152,973
20 Claims. (Cl. 187—9)

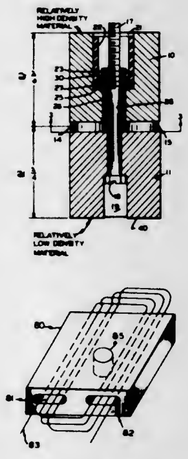


1. In a lift truck, a load hoisting mechanism comprising, in combination, a load lifting frame having stationary and movable sections with parallel sides in telescopic engagement with one another, the stationary frame section being anchored to the lift truck and supported in an upright position, said sections being normally nested together to determine the minimum height of the frame, and one of said movable sections of the frame having a cross-piece secured thereto at the top, an hydraulic hoist of a normal height less than the minimum height of the frame and having its lower end anchored to the lift truck at a position such that it extends upwardly between said parallel sides of the frame, a guide bar secured to said cross-piece at the top of the frame and having a sliding connection to the hoist for guiding the hoist during movements to and from engagement with said cross-piece, a load lifting apron movable along the sections of the lifting frame as they are extended upwardly by the hoist, the hoist and *one of* the movable sections of said frame having sheaves thereon, a chain having one end anchored to the lift truck and the other end connected to said apron, said chain normally being taut and extending in a sinuous path over *certain of* said sheaves *and under at least one of said sheaves*, whereby *during* movement of the hoist *from its retracted position to a position* into contact with said cross-piece *the hoist* lifts the apron along the stationary frame section and continued movement of the hoist moves the apron and movable frame sections.

25,433
ELECTROMECHANICAL TRANSDUCER SYSTEM

Stanley R. Rich, West Hartford, Conn., assignor, by mesne assignments, to Acoustica Associates, Inc., Beverly Hills, Calif., a corporation of New York

Original No. 2,947,889, dated Aug. 2, 1960, Ser. No. 606,478, Aug. 27, 1956. Application for reissue May 28, 1962, Ser. No. 204,027
17 Claims. (Cl. 310—26)



18. An electromechanical transducer system comprising electromechanical transducer means sandwiched between two pieces of solid material which have relatively dissimilar densities and constituting with said pieces a mechanical vibrator, said system being dimensioned to vibrate as a half-wave vibrator in the direction of a line through said pieces and said transducer means, the piece having the greater density also being of such greater mass than the piece of lesser density that the ratio of the mass of the piece of greater density with respect to the mass of the piece of lesser density is not less than 3, said pieces being dimensioned along said line so as each to have at vibration the same number of approximately quarter-wave lengths along said line.

25,434
ABRASIVE CUTTING DEVICES

Frank L. Christensen, Salt Lake City, Utah, assignor to Christensen Diamond Products Company, Salt Lake City, Utah, a corporation of Utah

Original No. 3,049,843, dated Aug. 21, 1962, Ser. No. 807,669, Apr. 20, 1959. Application for reissue Oct. 8, 1962, Ser. No. 230,789
29 Claims. (Cl. 51—206)



27. In an abrasive cutting device: a preformed metallic supporting disc having recesses in its opposite parallel

sides at its peripheral portion; diamond abrasive members of finite form in said recesses bonded to all of the walls of said recesses and extending radially of said disc at least to its periphery; the outer side surfaces of said members on opposite sides of said disc being parallel to each other.

25,435
LINT TYPE PARTICLE ADHESIVE REMOVAL DEVICE

Frances P. Norman, 104 N. Virgil Ave., Los Angeles 4, Calif.

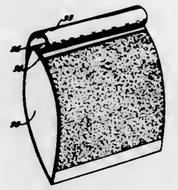
Original No. 3,029,453, dated Apr. 17, 1962, Ser. No. 768,168, Oct. 20, 1958. Application for reissue Apr. 3, 1963, Ser. No. 270,482
2 Claims. (Cl. 15—104)

2. A device for picking up lint, hair, dust and other small particles from a surface to which they may be lightly adhered, said device comprising

a first flexible sheet, said sheet having two sides, one side of which is coated with a tacky composition and the other side of which is tacky-free, said composition being of such character that when the said coated side is placed in contact with said surface, the said particles on the latter are transferred to the said coated side of the sheet; and

a covering sheet, said covering sheet being placed releasably upon said tacky-coated side of the first sheet so as to be peelable therefrom, and being adapted to be so peeled therefrom without destroying the tacky character of said side of the first flexible sheet;

said covering sheet being secured to the tacky side of said first flexible sheet by adhering a narrow strip adjacent one edge of said covering sheet to an



exposed edge of said tacky side of said first flexible sheet, said covering sheet being doubled back over its said adhered strip and laid upon the remaining exposed area of said tacky side of said first flexible sheet, thereby to prevent said covering sheet from being completely peeled off by peeling in a direction terminating at said one adhered strip of said covering sheet.

PLANT PATENTS

GRANTED AUGUST 13, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,274
CHRYSANTHEMUM PLANT

Orville O. Dunham, Niles, Mich., assignor to George J. Ball, Inc., West Chicago, Ill., a corporation of Illinois

Filed Apr. 2, 1962, Ser. No. 184,616
1 Claim. (Cl. Plt.—78)

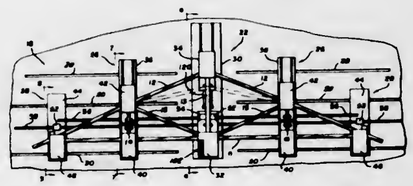
A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by strong greenish yellow to brilliant greenish yellow color of its blooms, the large very double in-curved form thereof, the upright tall wide-spread shape of the plant, the strong stiff stems, and its better foliage and habit with continuous bloom.

PATENTS

GRANTED AUGUST 13, 1963

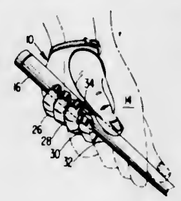
GENERAL AND MECHANICAL

3,100,301
METHOD AND APPARATUS FOR PREFABRICATING PRESTRESSED MONOPLANAR TRUSSES
William H. Black, 468 Dublin Ave., Columbus 15, Ohio
Filed Sept. 12, 1960, Ser. No. 55,446
8 Claims. (Cl. 1—60)



5. The method of prefabricating wooden trusses which comprises first arranging framing members so as to form upper and lower chords and struts extending between the chords, rigidly positioning the lower chord members, uniformly and simultaneously urging the upper chord members toward the lower chord members to engage and position the upper chord members relative to each other and to the lower chord members and to prestress the chords and struts interconnecting the chords, and joining the chords and struts at all points of engagement between the chords and the struts while the truss assembly is prestressed as aforesaid.

3,100,302
GOLF GLOVE
Parnell Samuel Billings, 74 W. Plymouth St., North Long Beach, Calif.
Filed Dec. 6, 1961, Ser. No. 157,335
6 Claims. (Cl. 2—160)



1. In a glove to be worn on the player's hand for aiding in the proper gripping of a golf club handle and including finger portions therein, the combination of a band of elastic material secured at one end to the finger portion for the middle finger and at the other end to the finger portion for the little finger, and being freely disposed substantially along the base of said finger portions on the palm side of the glove, with said band so attached at the ends to lie flat against the base of said finger portions and forming a loop at the base of the said finger portions so that insertion of a club handle under said band and the assumption of a grip on the club handle will cause twisting of said band to encourage pressure on said handle by the last three fingers of the player's hand.

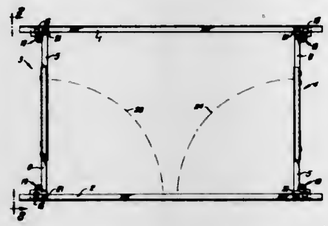
3,100,303
MULTI-PURPOSE BED PAN CUSHION
Anne M. Coulter, Denver, Colo.
Filed Sept. 19, 1961, Ser. No. 139,143
3 Claims. (Cl. 4—113)



3. A readily applicable and removable sanitary waterproof washable cushion for use in conjunction with a conventional-type bed pan having the usual type overhanging turned-in marginal rim comprising a body substantially crescent-shaped in plan embodying opposed upper and lower walls having inner and outer lengthwise longitudinally curved marginal edges thereof joined together and sealed, a complemental crescent-shaped cushion-positioning and retaining flap designed and adapted to assume a cooperating body retaining position and having a curvate lengthwise marginal edge overlapping the curvate cooperating marginal edge of said body and integrally joined and sealed thereto, said flap also having an outwardly disposed curvate lengthwise edge which is free of attachment to said body, said flap being hollow and of a cross-sectional dimension less than the corresponding cross-sectional dimension of said body and conformingly underlying the overlying portion of the bottom of said body and defining and providing a limited space for reception and retention of the intended lip portion of said rim, the walls of said body and also of said flap being made of clavable soap resistant material, and reinforcing, shaping and shape-sustaining means confined in the hollow portion of said flap and imparting the desired crescent-shape to said flap, said means comprising a longitudinally bowed plastic tube which functions to distend and also urge said flap toward the lower wall of the body in a manner to assist in retaining same and said flap in position atop said rim, said tube being of a length commensurate with the length of the flap, of a curvature corresponding to the normal operating and cushion-retaining curvature of said flap, said tube being longitudinally bowed, of a cross-section less than the cross-section of the flap and the inherent resiliency of said tube functioning to not only seat but to maintain the tube in its intended seated and flap-shaping position.

3,100,304
ADJUSTABLE AND FOLDABLE BED FRAME
John M. Brandlin, La Canada, Nicola Inquinta, Montebello, and Joseph F. Inco, La Canada, Calif., assignors to The Inco Company, Los Angeles, Calif., a copartnership
Filed Feb. 7, 1961, Ser. No. 87,703
1 Claim. (Cl. 5—202)

In a bed frame: a pair of side rails, each having a horizontal flange; a pair of spaced transverse rests detachably joining the said side rails; each rest comprising a pair of support members respectively carried by the rails, the support members of each rest being separable from each other; a pivotal connection between each support member and the horizontal flange of a corresponding rail to permit folding angular movement between the rail and its two associated members; and a leg structure carried by each support member; said leg structure having a socket forming means and a horizontal projection through which the pivotal connection extends, said socket forming means being integral with the projection; said



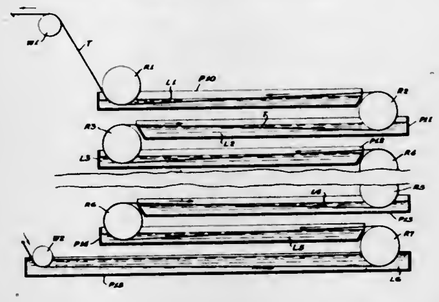
projection extending lengthwise of the support member when the support member is in operative position, said projection extending beyond said support member and having a portion located between the top surface of the support member and the bottom surface of the rail flange; said projection having a struck-up portion spaced from the pivotal connection and extending over the rail flange; said leg structure also having a vertical portion attached to the support member.

3,100,305
MATTRESS
Michael C. Kaye, Portland, Oreg., assignor to Freightliner Corporation, Portland, Oreg., a corporation of Delaware
Filed June 9, 1961, Ser. No. 116,195
1 Claim. (Cl. 5—345)



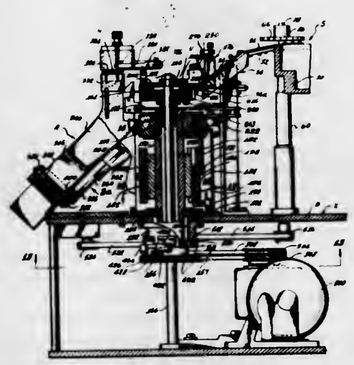
A mattress comprising a relatively flat elongated body portion having upper and lower spaced surfaces and longitudinal side edges, an elongated wedge-shaped portion extending along the entire length of each of said side edges, the edge of said wedge extending upwardly with one surface of the wedge merging with the upper surface of the body to define therewith a continuous upper surface, and a cover loosely cooperating with the upper surface of said mattress and extending over the edge of said wedge, said cover forming a membrane which is supported by the continuous upper surface and the edge of the wedge, when said cover is deflected by an object disposed on the same, the edge of said wedge cooperates with the cover to provide a restraining force which is less than the force which would exist in the absence of wedges cooperating with the cover.

3,100,306
LIQUID APPLICATION TO RUNNING LENGTHS OF FIBERS IN SUPERIMPOSED BATHS
Charles F. Oldershaw, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,547
6 Claims. (Cl. 8—151.2)



1. In a process wherein a continuous, flat, ribbon-like sheet of flexible material is treated with a beneficial treating liquid in a sequential series of at least two superimposed liquid treating baths and said material is sequentially passed out of and into the treating liquids in sequential treating baths, the improvement in the art for handling said material which comprises transferring said material between sequential superimposed stages out of and into the sequential liquid treating baths in said stages by means of and while said material is supported on a single, circumferential rotating surface which is in contact with the flat side of said material in said lower stage while being partially immersed therein and whose uppermost peripheral portion is about equal with the liquid level in a next adjacent uppermost stage, said material being transferred from stage to stage without substantial unsupported free passage through the air.

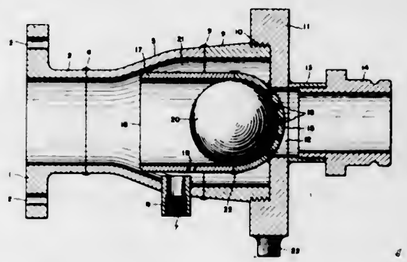
3,100,307
SCREW AND WASHER ASSEMBLING MACHINE
George A. Hatherell, Sunland, and Charles F. Leslie, Burbank, Calif., assignors to The National Screw & Manufacturing Co., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 7, 1959, Ser. No. 857,768
34 Claims. (Cl. 10—155)



1. In an assembling machine for automatically disposing a washer or the like upon the shank of a screw or the like, the combination of: a frame; a horizontally extending washer transfer disc rotatably mounted upon said

frame; a horizontally extending washer pick-up disc rotatably mounted on said frame, with a portion of said washer pick-up disc overlying said transfer disc and the periphery of said pick-up disc being formed with a plurality of washer-receiving elements; means on said frame defining a passageway overlying the upper surface of said transfer disc whereby said washers are directed into said washer-receiving elements; a spindle rotatably mounted on said frame on the axis of rotation of said pick-up disc; power-operated means on said frame for rotating said discs and spindle; a plurality of vertically movable transport plungers on said spindle, with each of said plungers being in vertical alignment with one of said washer-receiving elements so as to receive a washer therefrom adjacent the periphery of said pick-up disc; means interposed between said transport plungers and said frame to control the elevation of said plungers said means moving said plungers upwardly after they have received a washer; means on said spindle for aligning said screws with the upper end of said transport plungers after said plungers have received a washer whereby a washer received by a plunger will thereafter be urged upwardly upon the shank of a screw by the upward movement of said plunger; and parts stripping means on said frame disposed in the path of said transport plungers between said last-mentioned means and said transfer disc to strip the assembled washers and screws from said transport plungers.

3,100,308
COMBINATION FLEXIBLE HOSE CONNECTION AND BALL PIG LAUNCHER-RECEIVER
Vincent A. De Sena, Fanwood, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed July 17, 1962, Ser. No. 210,413
3 Claims. (Cl. 15—104.06)



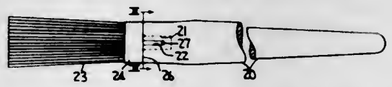
2. A device for launching a ball pig into a pipeline and receiving a ball pig passed through a pipeline by propelling fluid, comprising a bell-shaped housing having a relatively narrow hollow cylindrical neck portion wall at an end that removably attaches to the open end of a pipeline and flared outer wall containing a fluid outlet tube, and which removably attaches at the wider end of the housing to a base plate having a central hole inlet for the propelling fluid, secured to said base plate is a bowl-shaped part having an inner concave wall side into which the ball pig fits with spaced holes through said wall to an outer convex side over said central hole so that fluid passed through said central hole passes in separate streams through the spaced holes, a cylindrical sleeve extending from said bowl-shaped part and having a side vent hole, said cylindrical sleeve being spaced concentrically from flared outer wall of the housing and positioned to guide a ball pig moved by propelling fluid into the open end of the pipeline when the base plate is attached to the wider end of the housing.

3,100,309
TOOTHBRUSH
James C. Gambino, 89—25 Elmhurst Ave., Elmhurst, N.Y.
Filed Aug. 27, 1959, Ser. No. 836,535
5 Claims. (Cl. 15—167)



1. A toothbrush particularly adapted for brushing the teeth in vertical strokes, comprising: a substantially rectangular-shaped base having a face and a back, said face carrying tufts arranged in three longitudinal parallel rows of tufts having their inner ends thereof secured in said base and extending outwardly from said face; the outer ends of said tufts in the outer of said parallel rows being bent inwardly toward the inner parallel row of tufts with the tips of said parallel outer rows of bent tufts being spaced apart; the tufts in the inner of said parallel rows being straight and extending normal to said face; and a handle extending outwardly from one side of said base normal to said three parallel rows of tufts and being bent at an acute angle to the plane of said base in a direction away from that of said tufts, said tips of said outer rows of bent tufts providing a massaging action on the gums and a scraping action on the teeth.

3,100,310
SIMPLIFIED BRUSH CONSTRUCTION
James K. Polk, Linthicum Heights, and Carroll L. Woody, Baltimore, Md., assignors to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Filed Oct. 26, 1959, Ser. No. 848,608
5 Claims. (Cl. 15—193)

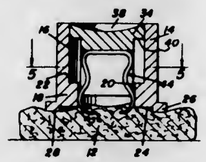


5. A brush comprising a knot of bristles and a handle, the butt portion of the knot and the distal end of the handle being of substantially the same sectional dimensions, and the distal end of the handle being axially bored and being provided with a diametrically transversely disposed slot wherein the side walls are parallel to each other and are parallel to the axis of the brush, the butt portions of the bristles in the knot being embedded in cement, the cement further adhering directly to the distal end of the handle and filling and adhering to the sides of the bore and the slot to provide an integral stem portion having fins projecting into the slot whereby firmly to anchor the knot on the handle, the butt portions of the bristles being in substantial contact with the distal end of the handle.

3,100,311
CLEANING PAD HOLDER
Dominick J. Tutino, 26 Kaywin Ave., Hawthorne, N.J.
Filed Sept. 25, 1962, Ser. No. 226,073
8 Claims. (Cl. 15—209)

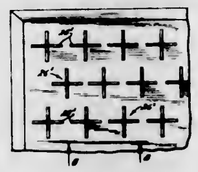
1. A cleaning pad holder comprising a generally cylindrical body having an axial bore therein open at its bottom end, a plunger slidable in said bore and having a lower end projectable from said open end, guide means cooperating with said body and plunger and restraining the latter to rectilinear travel in said bore, said lower end having a transversely extending slot therein, a resilient hook mounted in said slot and having opposed terminal

claws projecting laterally from and retrievable into said plunger and slot and extending axially beyond said lower end, actuating means engageable with said hook upon retractive movement of said plunger into said body for effecting movement of said claws towards each other whereby they may be embedded and retained in a cleaning pad for securing the latter to the bottom end of said body, said bore having an annular radially inwardly projecting



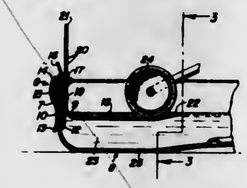
rib thereon, said plunger having its lower portion guidably and slidably received in said rib and having an annular flange on its upper portion slidable in said bore and engageable with said rib for limiting downward sliding of said plunger in said bore, said actuating means comprising a cam surface on said rib engaging said terminal portions and resiliently and radially compressing the latter into said slot upon upward movement of said plunger into said bore.

3,100,312
CLEAT CLEANER
William H. Williams, 704 Hobbs Drive, Silver Spring, Md.
Filed Mar. 23, 1962, Ser. No. 182,066
2 Claims. (Cl. 15—215)



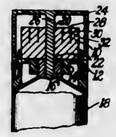
1. A cleat cleaner comprising a mat having an upper and a lower surface, a plurality of projections fixed to said upper surface, each projection having a central axis, a top in a plane remote from said mat and a bottom adjacent the upper seurface of said mat, said projections being spaced on said mat in staggered relationship to each other, the central axis of each projection being perpendicular to said mat and each of said projections having a plurality of outwardly directed flexible vane members evenly spaced around said central axis.

3,100,313
PAINT ROLLER GAUGE
John J. Ernst, P.O. Box 72, Agra, Okla.
Filed Apr. 19, 1961, Ser. No. 104,118
4 Claims. (Cl. 15—257.06)



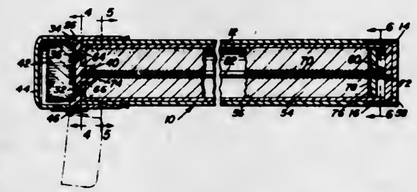
1. A paint roller gauge comprising an elongated horizontal roller-receiving and supporting platform adapted to be mounted in a paint pan adjacent to but below the surface of paint therein, said platform including an upstanding member on one end having vertically spaced slots therein, said platform further including an upwardly bent free end portion providing a depth indicating gauge for said platform, a clip adapted to be removably mounted astraddle a wall of the pan, and a member on the clip selectively engageable in the slots for vertically adjustably supporting the platform in the pan.

3,100,314
APPLICATOR FOR PASTY MATERIAL
Gösta Smith, Halsingborg, Sweden, assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed May 8, 1961, Ser. No. 108,599
Claims priority, application Sweden Aug. 9, 1960
4 Claims. (Cl. 15—511)



1. A spreader for pasty materials including a volatile solvent comprising a resilient closed cell cellular pad of rubbery material formed with a centrally disposed supply passage for pasty material extending completely through said pad for communication with an opening of a container for said pasty material, said cellular pad having a distributing end surface formed with incisions extending into said pad and subdividing said pad into separate resiliently flexible elements, said elements forming a plurality of contiguous rows on the surface of said pad, the surface areas of the incision-formed walls of said elements constituting a major portion of the total side wall area of said elements and constituting the entire side wall area of at least one of said elements, said separate elements when subjected to wiping pressure bending to expose said incision-formed walls of said elements to provide spreading surfaces and enabling said applicator surface to adapt itself to a surface to be treated, and said elements resiliently returning to their initial relation with the incision-formed walls of adjacent elements in close engagement when said pressure is released.

3,100,315
POWDER BRUSH
Joyce N. Laxalt, 650 Cardinal Way, Reno, Nev.
Filed Mar. 9, 1962, Ser. No. 178,657
3 Claims. (Cl. 15—558)



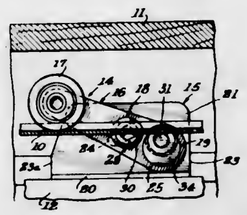
1. A powder applying means comprising an elongated hollow cylindrical container, a tubular means, a transverse plate in said tubular means dividing it into forwardly and rearwardly opening sections, the rearwardly opening section formed so as to telescopically and rotatably receive a first end of said container, said first end being open, applicator means positioned within the for-

ward section, means for selectively positioning said tubular means relative to said container in a plurality of rotated positions, an annular series of openings through said transverse plate, an internally threaded rearwardly opening socket projecting rearwardly from said transverse plate centrally thereof, said means for selectively positioning the tubular means relative to the container consists of a plurality of circumferentially spaced outwardly opening recesses formed in said first end of the container and a plurality of mating inwardly extending projections formed in the rear section of the tubular means, an annular groove formed about said first end of the container and a mating annular rib formed in the rear section of the tubular means so as to retain said tubular means on said cylindrical container and guide said tubular means during the rotation thereof, a removable closure sealing the second end of said container, a removable cap enclosing said applicator means when not in use, a removable powder containing cartridge located within said container, a bottom wall secured to and sealing the rear end of said cartridge, a top wall secured to the forward end of said cartridge, an annular series of holes through said top wall, said holes being located so as to correspond to the location of the openings in the transverse plate of the tubular means, said openings simultaneously being rotatable into and out of alignment with said holes upon a rotation of the tubular means, an elongated threaded rod extending longitudinally through said cartridge, the rear end of said rod being rotatably mounted in said bottom wall, the forward end of said rod being threaded within the rearwardly opening socket for rotation with said tubular means, the top wall at the forward end of the cartridge being provided with a centrally located aperture therethrough of a size so as to receive the projecting socket for engagement with the forward end of the rod, and a circular plate threaded on said rod within said cartridge for longitudinal movement upon a rotation of said rod so as to effect a forward movement of the powder within the cartridge while simultaneously bringing the openings and holes in alignment so as to enable the passage of the powder therethrough and into the applicator means.

3,100,316
ADJUSTABLE DOOR HANGER

Rudolph Reu Boiu, Glendora, Calif.
(339 S. Irwindale Ave., Azusa, Calif.)

Filed Feb. 10, 1961, Ser. No. 88,379
6 Claims. (Cl. 16—105)

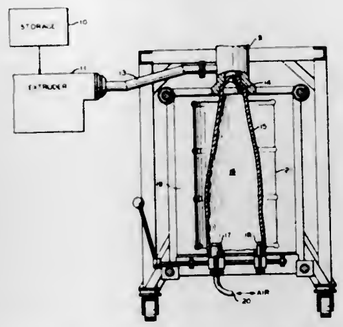


1. An adjustable door hanger comprising a bracket adapted to be affixed to a sliding door, an arm, a friction pivot connecting an intermediate point of said arm to the bracket, said pivot embodying a slot therein whereby the arm is adapted to move longitudinally during pivotal movement thereof with respect to said bracket, a roller carried by one end of said arm and adapted to be mounted to support the door for sliding movement, and eccentric cam means adjustably carried by the bracket and engaged with the other end of the arm to move the latter around its pivot to, thereby, adjust the spaced relationship of the door and the roller by movement of said friction pivot in said slot in response to adjustment of said eccentric cam.

3,100,317
METHOD AND APPARATUS FOR MOLDING HOLLOW PLASTIC ARTICLES

Dan E. Perry, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Jan. 22, 1962, Ser. No. 167,684
6 Claims. (Cl. 18—5)



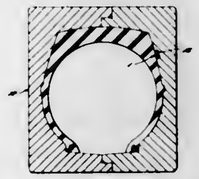
1. A method for forming hollow plastic articles having a multiplicity of openings therein which comprises downwardly extruding a tubular body into the confines of an open mold, raising and horizontally extending within said tubular body first and second core members so as to extend said tubular body at its lower end, closing the mold around said extended tubular body and core members, thereby closing both upper and lower ends of the tubular body and forming its lower end around said core members, blowing the tubular body to the shape of the mold, cooling the blown article, opening the mold and removing the cooled formed article from same.

4. Apparatus for forming hollow plastic articles having a plurality of openings in same comprising, in combination, parison extrusion means, an article mold formed of two separable halves, means for moving said two article mold halves together into a closed position in face-to-face engagement, opening forming means having a plurality of core members, gear means to move said core members so as to raise and lower same, means to actuate said gear means, means to move said core members horizontally so as to position same in said mold at a point where said openings are to be formed, and blowing means to introduce blowing pressure into the parison.

3,100,318
MOLD IDENTIFICATION PLUG

Harold W. Knox, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Apr. 7, 1959, Ser. No. 804,636
1 Claim. (Cl. 18—44)

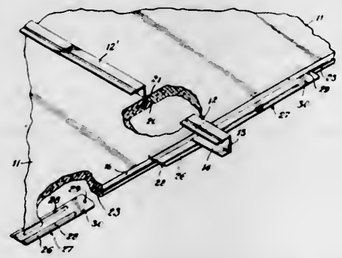


In a molding device, the combination of a mold having a surface forming a cavity for shaping a moldable article and an indicia-bearing plug for providing a marking on said article, said mold having a shallow recess in a wall of said mold cavity surface providing a chamber in said surface to receive said plug, said plug being of such size and configuration as to mate with the walls of said recess with a light press fit, depending, substantial, rigid, spaced apart portions of said plug bottoming in said recess, an outer wall portion of said plug having an indicia-bearing surface complementary to said mold surface connecting said depending portions and thereby forming a hollow space in communication with said chamber, said outer wall portion being between said depending portions relatively thin and of a material easily penetrable by a prying instrument but substantially undeformable by molding forces, whereby said prying instrument may be forced through said outer wall into said hollow space and pivoted to remove said plug from said chamber.

3,100,319
CEILING STRUCTURE AND TILE THEREFOR

Lorien A. Carlson, Cloquet, Minn., assignor to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware

Filed May 16, 1960, Ser. No. 29,535
10 Claims. (Cl. 20—4)



1. A rectangular ceiling tile to be hung on horizontal runners in an assembly of a plurality of such tiles, said tile having a kerf lying in a first plane in a first edge and having a kerf in each of the two adjacent edges and in a common second plane, said planes being parallel to that face of the tile to be exposed when mounted in a ceiling, each of said kerfs in said second plane having at least a portion thereof located between the kerf in said first plane and said exposable ceiling face of the tile.

3,100,320
INTERIOR TRIM FOR WINDOWS

Albert W. Frederick, % The Lumberman's Door & Trim Co., P.O. Box 107, Bedford, Ohio

Filed Mar. 20, 1961, Ser. No. 96,916
2 Claims. (Cl. 20—11)

1. One-piece window interior trim for a window frame having a sill extending outwardly downwardly at a given slope with respect to a horizontal plane normal to the face plane of the wall through which said window opens, said one-piece interior trim comprising facing trim members including two jamb members joined at their tops by a lintel member and at their bottoms by an apron, the reverse sides of said facing trim members lying in a plane which in the mounted condition is the face plane of the mounting wall, each of said facing trim members having its own stop member, each of said stop members extending along the reverse side of its associated facing trim member adjacent the inner edge thereof, the stop member associated with said apron comprising a stool having a bottom face which lies in a plane which inclines downwardly from the lower front edge to the lower rear edge of said stool at a slope which, with respect to a horizontal plane normal to the face plane of the mounting wall, is slightly greater than said given slope, the top face of the stop member associated with said lintel member and the outer side faces of the stop members associated with said jamb members lying in planes normal to said

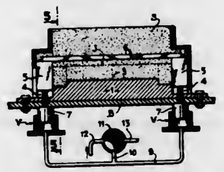


face plane, a saw-cut extending partly into said bottom face between said lower front edge and said lower rear edge and extending along the length of said stool, and weatherstrip received in said saw-cut and protruding below said bottom face.

3,100,321
PROCESS AND DEVICE FOR PRODUCING FOUNDRY CORES

Jean-Jacques Gerardin, Clos-Jean, Pont-a-Mousson, France, assignor to Compagnie de Pont-a-Mousson, Nancy, Meurthe-et-Moselle, France, a corporation of France

Filed Nov. 20, 1961, Ser. No. 153,588
Claims priority, application France Dec. 3, 1960
2 Claims. (Cl. 22—10)



1. Process of producing a foundry core which has at least one reinforcement comprising the steps of placing the reinforcement in the core-box on top of support means combined with the core-box but movable relative to the latter, filling the core-box with the sand intended to constitute the core. moving said support means relative to the core-box and from under the reinforcement without removing the reinforcement from the core-box and thereafter compressing said sand in the core-box.

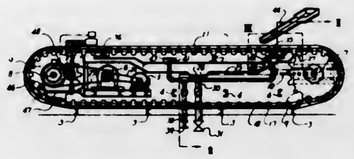
3,100,322
MACHINE FOR AND METHOD OF CASTING INGOT

Koichi Watanabe, Okitsu-machi, Ihara-gun, Shizuoka-ken, and Kosuke Asano and Shuichiro Hara, Niigata-shi, Japan, assignors to Nippon Light Metal Co., Ltd., Tokyo, Japan, a company of Japan

Filed Sept. 4, 1958, Ser. No. 758,939
Claims priority, application Japan Oct. 7, 1957
4 Claims. (Cl. 22—62)

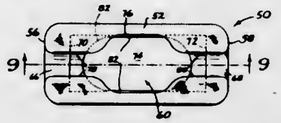
1. The method of casting ingots comprising the steps of continuously moving ingot molds along a horizontal

path of movement, continuously passing the bottom and side portions of the molds into, through and out of a coolant bath without deviating from their horizontal path of movement, filling the continuously moving molds while continuously traveling in the coolant bath, con-



tinuously flowing the coolant past and in uniform contact with the bottom and sides of the molds entering and leaving the bath to cool the same, traveling the mold with the poured ingot therein to an inverted position to dump the molds, and returning the molds in their undeviating horizontal path into the bath.

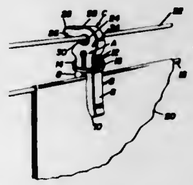
3,100,323
CABLE COUPLER
Charles J. Baker, Dallas, Oreg., assignor to The Skookum Company, Inc., Portland, Oreg., a corporation of Oregon
Filed Apr. 18, 1961, Ser. No. 103,834
3 Claims. (Cl. 24—123)



1. A coupler for joining ferruled cable ends which comprises an elongated body having a central longitudinal chamber therein and opposite longitudinal end openings communicating therewith, the central chamber being dimensioned to receive two ferruled cable ends arranged end to end, the end openings being dimensioned to receive the cables but not the ferruled ends thereof, the ends of the chamber forming abutments for the cable ferrules, the body having a pair of diametrically opposed transverse slots therein forming a central transverse opening through the body communicating with the chamber and a pair of transverse end openings one communicating with each of the longitudinal end openings, the central transverse opening being dimensioned to pass the cable ferrules therethrough and to terminate at its longitudinal ends inward of the abutment ends of the chamber, the transverse end openings being dimensioned to pass the cables therethrough but not the ferruled ends thereof and to terminate inward of the abutment ends of the chamber, whereby the outer end portions of the chamber form sockets which confine the corresponding end portions of the cable ferrules substantially throughout their circumferential dimensions.

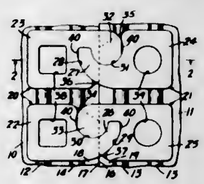
3,100,324
CLOTHESPIN WITH IMPROVED SELF-STORING MEANS
Dominick J. Tutino and Anita L. Tutino, both of 26 Kaywin Ave., Hawthorne, N.J.
Filed Dec. 13, 1961, Ser. No. 159,120
12 Claims. (Cl. 24—137)

1. A clothespin comprising a vertically elongated body consisting of a one-piece unitary element having a solid central part together with a lower resilient bifurcated clothesline gripping portion and an upper slotted selfstoring portion, said lower portion comprising a pair of legs defining at their inner sides a downwardly divergent and smooth-surfaced opening slot therebetween, said legs being sufficiently spaced and having sufficient inherent resiliency for wedgingly and yieldingly clamping a clothesline therebetween, a resiliency regulating member embracing the upper portion of said leg and limiting outward flexing of the leg upper portions, means retaining said member in movably adjusted positions upon said leg upper portion for varying the limits of outward flexing of said leg upper portions



and thereby varying the resilient gripping action of said legs, said upper portion comprising a pair of jaws defining an opening at their inward extremities for loosely receiving and retaining a second clothesline therein, said jaws having smooth-surfaced inner sides which extend from said opening to the outside of said body and are outwardly divergent to provide a guide passage for movement of a clothesline into and out of said opening.

3,100,325
ONE-SIDED SEPARABLE FASTENER
Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)
Filed Apr. 21, 1961, Ser. No. 104,739
12 Claims. (Cl. 24—205.1)



1. A one-sided separable fastener comprising a pair of stringer tapes, each stringer having bead means projecting on one surface thereof, scoops fixed to said surface of the stringers, the scoop of one stringer having a projecting coupling end portion including a hook-shaped coupling member, scoops of a companion stringer having at its coupling end portion a socket generally conforming to the contour of and adapted to receive the hook-shaped coupling member of scoops on said first named stringer, the bead means of said stringers being disposed inwardly of adjacent edges of coupled stringers to form on the tapes of the stringers projecting shelves, over which the coupling end portions of the scoops of both stringers overlie when said stringers are coupled together, and the coupling end portions of the scoops of both stringers also overlie part of the bead means on opposed stringers.

3,100,326
POSITIVE RELEASE FILM CLIP
Arthur W. Back, 8709 Xograph Ave., St. Louis, Mo.
Filed Aug. 30, 1960, Ser. No. 52,862
1 Claim. (Cl. 24—252)

A positive release film clip comprising a substantially flat thin generally rectangular base member having side flanges intermediate the ends of said base member extending upwardly from opposite side edges thereof and defining a channel therebetween, each of said flanges

comprising a main section integral with said base member and a forwardly extending projecting finger having a lower surface tapered downwardly in the direction of said main section, said lower surfaces extending vertically parallel to and in spaced relation above said opposite side edges respectively, an elongated generally rectangular clip member, said clip member having flanges extending downwardly from opposite side edges thereof and disposed in juxtaposition to said side flanges on said base member, a pivot pin extending through aligned apertures in all said flanges to pivotally mount said clip member in the channel between said side flanges on said base member, said clip member having a rearwardly extending finger engaging portion and a forwardly extending portion terminating in a downwardly extending film engaging jaw, a downwardly extending film piercing prong



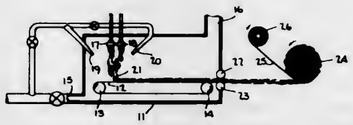
integrally fixed on said jaw, said base member having an aperture for receiving said prong when said clip member is in film clamping position, said base member and said clip member having lengths substantially exceeding their widths, spring means disposed between said clip member and said base member for urging said jaw toward said base member, said lower surface of each of said fingers being aligned with the lower surface of the other of said fingers to provide aligned tapered throats extending under said clip member on opposite sides of said base member whereby upon operation of said clip member to move said jaw away from said base member, said lower surfaces will engage film within said throats and strip the same from said prong, the forward end of said base member extending forwardly past said film engaging jaw and being curved away from said clip member immediately in advance of the forward end of said throats to provide a guide into said throats.

3,100,327
ADJUSTABLE CLAMP
Morris Spector, Highland Park, Ill., assignor to Sterling Automotive Manufacturing Co., Elk Grove Village, Ill., a corporation of Illinois
Filed Sept. 12, 1960, Ser. No. 55,382
2 Claims. (Cl. 24—274)



1. An adjustable hose clamp comprising a band having a plurality of longitudinally spaced slots adjacent to one end thereof, an integral housing mounted on the band adjacent to the other end thereof having a body substantially longitudinally aligned with the longitudinal axis of the end of the band to which the housing is mounted, said housing having also an entirely open end and an opposite distendable end wall extending transversely to the longitudinal axis of the body and having a screw tip receiving opening therein, and a screw in the housing having a head, a threaded shank in the housing and a screw tip opposite said head mounted for rotation in the walled end of the housing, said screw tip having a pair of shoulders defining an annular groove, said housing also having an open bottom including a first bottom part open in a direction radially toward the band and between the end of the housing adjacent to the screw head and the place of securement of the housing to the band and a second bottom part open in a direction radially toward the band between the walled end thereof and the place of securement of the housing to the band, said screw being insertable in the housing after mounting of said housing to said band by insertion of the tip end of the screw through the open end of the housing and axial movement of the screw within the housing to cause the tip of the screw to distend said distendable end wall of the housing within elastic limits and thereby increase the width of the opening in said distendable end wall an amount sufficient to permit the tip of the screw to pass through said distendable end wall of the housing and thereafter allow said distendable end wall to contact to substantially its initial position and lie within said annular groove defined by said pair of shoulders formed in the tip of the screw to prevent retraction of the screw from the housing, said walled end being the only support for the screw in the housing, said screw head being outward of said housing adjacent the open end of the housing, said walled end and the shoulder of said groove, located in the housing, cooperating with the screw head and open end of said housing to limit axial thrust of said screw in said housing during rotation of said screw thereby to distribute said thrust to said housing, and said housing being sized to receive said slotted end of the band and to permit said slotted end to project through said housing in overlapped relation with said other end of said band and with threads on said shank projecting into said slots.

3,100,328
BULKED NON-WOVENS
William T. Allman, Jr., Charles W. Joseph, and Ralph G. Higgins, Jr., Rock Hill, S.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Dec. 4, 1958, Ser. No. 778,248
10 Claims. (Cl. 28—76)

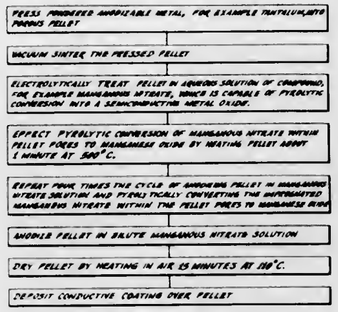


6. The process which comprises moving substantially continuous cellulose acetate filaments while they are in adhesive condition to cause them to become substantially randomly directed and bonded to one another at spaced points so as to form a non-woven sheet-like article, and contacting said article with steam at a temperature ranging from about 95 to 180° C. for at least about one minute.

3,100,329
SOLID CAPACITORS
Edward J. Sherman, Somerville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 24, 1960, Ser. No. 17,321
4 Claims. (Cl. 29—25.31)

1. The method of forming a solid electroyltic capacitor comprising the following steps: pressing a powdered anodizable metal into a porous pellet; vacuum sintering said pellet; electrolytically treating said pellet in a concentrated aqueous solution of a compound capable of pyrolytic conversion into a semiconductive metal oxide so as to simultaneously anodize said pellet and impregnate the pellet pores with said compound; heating said wafer

so as to convert said compound, which has been thus electrolytically introduced, in said pellet pores into a semiconductive metal oxide; repeating at least once the



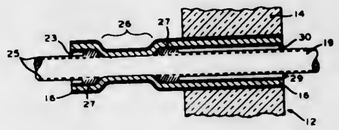
steps of anodizing said pellet and pyrolytically converting the impregnated compound within said pores into said semiconductive metal oxide; and depositing a conductive coating upon said pellet.

3,100,330
CAPACITOR SEALING METHOD

Livingston L. Rice, Williamstown, and Walter J. Rohane, Adams, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Original application Jan. 12, 1959, Ser. No. 786,277. Divided and this application Nov. 21, 1960, Ser. No. 70,588

2 Claims. (Cl. 29—155.55)



1. The method of sealing an electrical component casing, said method comprising compressing a portion of a close-fitting tinned tubulation of an end seal onto a tinned lead-wire extending from an encased electrical component through the tubulation, heating said tubulation and said lead-wire at the compressed portion to melt the tinned coats, displacing said tinned coats by further compression of said portion of the tubulation to produce a base-metal-to-base-metal contact between the tubulation and the lead-wire by squeezing the tinned coats out of the base-metal-to-base-metal contact.

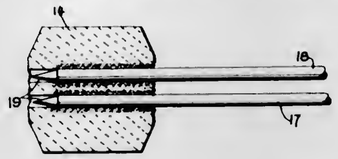
3,100,331
METHOD OF MAKING ARTICLES COMPOSED OF RESISTANCE MATERIAL

John C. Zenobia, Jr., Belleville, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey

Filed Feb. 1, 1960, Ser. No. 5,750

4 Claims. (Cl. 29—155.71)

1. The method of making electrical resistors having a resistance value responsive to a condition from a string of bead-like bodies partially connected to each other and formed of a heat shrinkable and bondable composition including resistance material, the bodies being extruded onto spaced apart parallel ductile metallic wires and being in at least a partially dried and hardened state and adhered to the wires, which method comprises stretching the wires to reduce the diameter thereof along their length to thereby release the bodies therefrom, disconnecting at least certain of adjacent bodies from each other and sliding the bodies past the ends of the wires to remove the bodies therefrom, separating the disconnected bodies, inserting terminal wires into the holes of each body formed by the wires from which the bodies have been removed, the terminal wires having substantially the same diameter as the first mentioned wires before reduction in diameter, and firing the bodies to shrink and bond the same onto the terminal wires, said method steps being carried out in the sequence set forth herein.

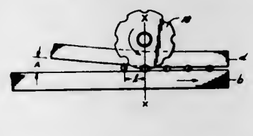


3,100,332
METHOD OF MAKING A HEAT EXCHANGER CROSS TIED PIN ASSEMBLY

John R. Gier, Jr., Hines Hill Road, Hudson, Ohio

Filed Feb. 23, 1960, Ser. No. 10,462

4 Claims. (Cl. 29—157.3)



1. The method of making pin fin mats including the steps of forming an assemblage of pins by welding a plurality of relatively rigid pins in parallel closely spaced side by side relation to each other in a row to a first cross tie member at one face of the row near one edge of the row and extending lengthwise of the row and outwardly from the plane of said one face, the spacing of the pins and cross section of the cross tie member being preselected so that the cross tie member is highly resistant to flexure about axes parallel to the axes of the pins when it is welded to the pins, supporting a second cross tie member into position for resistance welding to the pins of the assemblage, disposing the assemblage with its other face toward the second cross tie member, with the first cross tie member extending generally parallel to the second cross tie member, and with its pins free near their free ends and in position for welding to the second cross tie member, effecting relative passage of the assemblage and cross tie members concurrently endwise of the row of pins through a resistance welding station and, at said station, applying welding current to the pins and the second cross tie member and pressing the pins progressively, successively along the row as they pass said station, toward and embedding them near their free ends into the second cross tie members, causing accompanying torsional flexure of the first cross tie member, at that portion at and adjacent the welding station, about its longitudinal axis relative to that portion which has not yet reached the welding station until the surface of the assemblage facing toward the second cross tie member is generally parallel to the plane of the surface defined by the pins which have already been welded to both of the cross tie members.

3,100,333
METHOD OF MAKING COMPOUND GEAR

Lindsay C. Friend, Baltimore, Md., assignor to The Bendix Corporation, a corporation of Delaware

Filed Apr. 22, 1959, Ser. No. 808,229

1 Claim. (Cl. 29—159.2)



The method of fabricating a compound gear assembly which consists in performing the following operations:

forming a first gear body with substantially axial teeth and an axial diametrically reduced projection at one end thereof;

forming a second gear body with a smooth axial bore, the diameter of which is substantially equal to the diameter of said projection and the axial dimension of which is substantially greater than the axial dimension of said projection;

forming an annular recess at the base of said projection where the teeth of said first gear terminate, leaving an annular guide portion at the outer end of said projection;

and joining said gear bodies one to the other by inserting the axial projection of said first gear into the bore of the second gear and applying sufficient axially-directed pressure to cause the teeth of said first gear to cut a splineway in the metal surrounding the bore of said second gear and at the same time displace metal which in part passes into the said recess and in part substantially merges with the teeth which have been driven into the second gear, said pressure being maintained until the outer end surface of said projection moves into substantially flush relation to the outer surface of said spur gear.

3,100,334
DEVICE FOR SEPARATING AND APPLYING STACKED TRAVELLERS IN SPINNING AND TWISTING MACHINES

Paul Ramseier, Pfaffikon, Zurich, Switzerland, assignor to Bracker A.G., Pfaffikon, Switzerland

Filed Feb. 8, 1961, Ser. No. 87,825

Claims priority, application Germany Feb. 13, 1960

7 Claims. (Cl. 29—207)



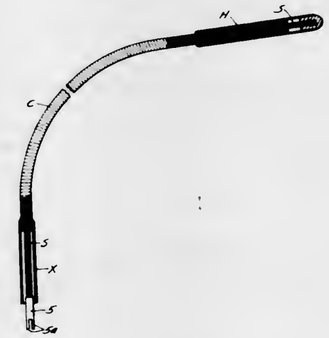
1. In a device for individually separating stacked travellers and for applying the separated travellers onto a traveller ring of spinning machines and the like; the combination of a housing, a pair of plate members carried by said housing and having free end portions normally spaced from one another to define a slot adapted to clampingly engage at least one traveller, lever means mounted for pivotable movement within said slot, said lever means being provided with a recess defined by wall portions contoured to grip a traveller from between said plate members and adapted to apply such traveller onto a traveller ring, actuating means cooperable with said lever means to cause pivoting movement of said lever means to advance the latter through said slot for engagement by said recess with a traveller, said plate members serving to guide said traveller during movement through said slot.

3,100,335
TIRE VALVE REMOVING TOOL

Stanley T. Lea, Milan, Minn.

Filed Mar. 20, 1961, Ser. No. 96,861

3 Claims. (Cl. 29—221.5)



1. A valve-core-removing tool having in combination an elongate flexible shaft,

a flexible tubular casing coaxially surrounding said shaft and being operatively interrelated therewith to permit relative rotative and longitudinal movement of said shaft with respect to said casing,

a slide handle member affixed to the outer end of said shaft and mounted on the outer portion of said casing for longitudinal and rotative movement relative thereto,

a forked valve-core-engaging member affixed to the working end of said shaft for snug engagement with the upstanding lug provided by a conventional tire-valve-core whereby said casing and shaft may be appropriately curved to effect substantial axial disposition of said forked engaging member with said valve core,

a rigid sleeve member affixed to the outer end of said flexible conduit and being of a size for loosely sliding over the valve stem of a tire, said flexible shaft being extensible through said sleeve,

said sleeve member having an internal diameter and having a length substantially greater than the cross-sectional area and length of said valve-core-gripping member to thereby permit retractable and extensible movement of said valve-core-engaging member into and out of said sleeve member whereby said sleeve member provides a means for finger-wise aligning the working end of the tool with the stem of a tire valve.

3,100,336
DENT REPAIR METHOD FOR AUTOMOBILE BODIES

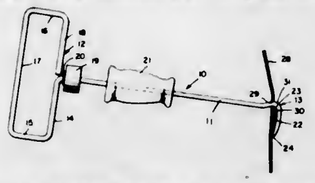
John D. Fannin, Mare Creek, Ky. (P.O. Box 185, North Manchester, Ind.)

Continuation of application Ser. No. 661,100, May 23, 1957. This application Mar. 4, 1960, Ser. No. 12,648

3 Claims. (Cl. 29—401)

1. The method of repairing damaged areas in automobile body panels which comprises forming a series of openings in the panel within the confines of the damaged area thereof, utilizing said openings to permit access

to the inner surface of the panel within the confines of the damaged area thereof and progressively inwardly



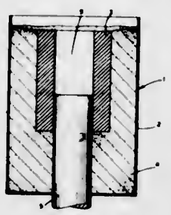
lifting out the damaged areas of the panel inwardly from the marginal edges thereof.

3,100,337
SPLICING ALUMINUM FOIL
James A. Dunbar, Lower Burrell, and Selmer G. Von Stocker, Pittsburgh, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 12, 1960, Ser. No. 42,420
7 Claims. (Cl. 29—470.9)



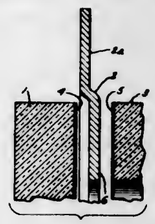
1. A method of ultrasonic weld-splicing ends of webs of aluminum foil in pack relationship consisting of first and second superposed webs, to obtain both webs in continuous and co-extensive lengths, comprising lapping two ends of the first web to be spliced, subjecting at least a portion of the resulting lapped zone to ultrasonic welding energy to effect a welded splice, placing a strip-like stop-off material over said spliced first web, lapping the ends of the second web to be spliced in such a manner as to interpose said stop-off material between said first spliced web and at least a portion of the lapped ends of said second web, and subjecting at least a portion of the resulting lapped zone of said second web over said stop-off material to ultrasonic welding energy to effect a welded splice, said stop-off material permitting welding of said second web splice without effecting a weld between the two said spliced webs.

3,100,338
METHOD OF JOINING
Jack L. Henry, Los Altos, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,621
20 Claims. (Cl. 29—473.1)



1. A method of obtaining a joint between a refractory hard metal member and an aluminum member comprising the steps of cleaning the portion of the surface of said hard metal refractory member where the joint is to be made, preheating said refractory hard metal member to a temperature above the melting point of aluminum, contacting the surface of said hard metal refractory member while at said preheating temperature with a molten flux consisting essentially of the fluorides of sodium, aluminum and lithium and sodium chloride, contacting said refractory hard metal member with molten aluminum, and then cooling said refractory hard metal member and molten aluminum, thereby forming a joint.

3,100,339
METHOD OF MAKING COMPOSITE BODIES
Ralph J. Bondley, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 11, 1958, Ser. No. 741,713
6 Claims. (Cl. 29—473.1)

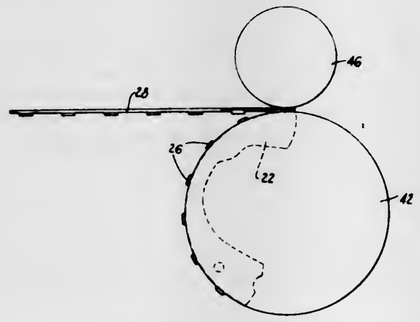


1. The method of forming a hermetic bond capable of withstanding high temperatures between a quartz member and a metal member which comprises applying a thin layer of a powdered metal hydride and a low-melting-point ductile solder to the surface of the quartz member to be bonded, the metal of the hydride being selected from the group consisting of zirconium, titanium and mixtures thereof, the low melting point ductile solder being selected from the group consisting of indium, thallium, tin, cadmium, zinc and gallium and the metal member being selected from the group consisting of silver, gold and copper, the combinations of thallium with gold and copper and cadmium with copper being excluded, heating the coated member in a nonreactive atmosphere to dissociate the hydride and alloy the liberated metal of the hydride and the solder and bond the coating to the quartz member, placing the quartz member with the coated area in juxtaposition to the metal member, heating the members to alloy the structural member with low-melting-point ductile solder, limiting the thickness of the ductible solder sufficiently to provide only a small amount of free ductile solder relative to the structural member available for alloying therewith to insure the formation during the second heating step of only an alpha-phase alloy to provide a bond capable of withstanding temperatures substantially higher than the melting point of the ductile solder.

3,100,340
BRAKE SHOE AND METHOD OF MAKING SAME
Rudolph A. Goepfrich, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Application July 10, 1958, Ser. No. 748,565, now Patent No. 2,964,142, dated Dec. 13, 1960, which is a continuation of Ser. No. 197,933, Nov. 28, 1950. Divided and this application Feb. 15, 1960, Ser. No. 8,599
8 Claims. (Cl. 29—520)

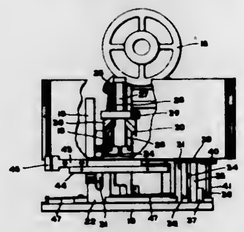
1. The method of manufacturing a brake shoe which comprises: providing a web having an arcuate outer edge from which a plurality of projections extend; providing a flat rim having a plurality of depressions so located as to align themselves with the web projections after the rim has been formed to an arcuate shape, each of said depressions having a slot therein, the sides of which are substantially perpendicular to the flat surfaces of the rim;

mounting the web on a first roller; feeding the rim between the first roller and a second roller to bring the first web projection into engagement with the first rim slot, with the depressed edges of the sides of the rim slot in engagement with the first roller; and rolling the rim and



web between the first and second rollers to simultaneously form the rim to arcuate shape and press the body of the rim against the first roller, thereby substantially realigning the depressed portions with the surfaces of the rim and forcing them into tight engagement with the sides of the web projection.

3,100,341
AUTOMATIC PUNCH CAN OPENER
Robert J. Schussler, 42 Amherst Ave., Colonia, N.J.
Filed May 1, 1962, Ser. No. 191,479
2 Claims. (Cl. 30—4)



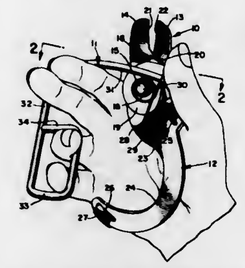
1. In an automatic punch can opener of the character described, a source of rotary power, means for reducing the speed of said rotary power said means terminating in a double ended rotary shaft, a cam attached to one end of said rotary shaft, a drive rod connected at one end through intermediate linkage to said cam for vertical reciprocating movement and connected at the other end to a punch holder carrying punches, said punch holder held from horizontal movement by a guide slot, a second cam attached to the opposite end of said rotary shaft, a feed carriage attached to and operated by linkage means, said linkage means being in engagement with said second named cam to convert the rotary movement to a horizontal movement of the arm of said feed carriage toward said punches and feed gripping means mounted on said feed carriage, the cam surface on said second named cam which causes the horizontal movement of said feed carriage toward said punches being axially aligned with the cam surface on said first named cam which causes the upward movement of said punches whereby a can placed in front of said feed gripping means is moved to a position under said punches when said punches are at the top of their vertical movement.

3,100,342
HAIR CLIPPER
Reiner König, Solingen, Rhineland, Germany, assignor to Gerhard Schmidt, Solingen, Rhineland, Germany
Filed Oct. 13, 1960, Ser. No. 62,469
11 Claims. (Cl. 30—200)



1. In a hair clipper, in combination, lower comb means and upper cutter means adapted to slidably reciprocate with respect to said lower comb means, both of said means having front edge portions formed with teeth, the teeth of said cutter means being adapted to reciprocate with respect to the teeth of said comb means for cutting hair located in the gaps between the teeth thereof, said lower comb means having at its front edge portion a plurality of projections respectively extending downwardly from free end portions of said teeth at said front edge portion of said lower means, at least the free ends of said projections being located beneath said comb means.

3,100,343
FRUIT CLIPPERS
John H. Wessel, 3679 Fairview Drive, Vista, Calif.
Filed Sept. 25, 1961, Ser. No. 140,485
10 Claims. (Cl. 30—232)

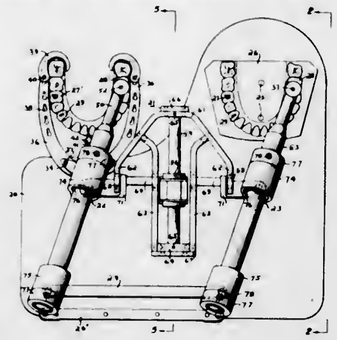


1. A hand held device for clipping fruit comprising a pair of pivotal members and a pair of cutting blades extending therefrom at an angle to said members, one of said members having a portion for engagement by the palm of the hand, the other of said members having a descending portion and means connected to said descending portion for engagement by the fourth and fifth fingers, the thumb and the index finger thus being free to grasp the fruit while clipping the stem thereof.

3,100,344
CONTOUR DUPLICATING APPARATUS
Martin Sharp, 7906 Chandler Road, Philadelphia, Pa.
Filed Feb. 8, 1960, Ser. No. 7,370
10 Claims. (Cl. 32—67)

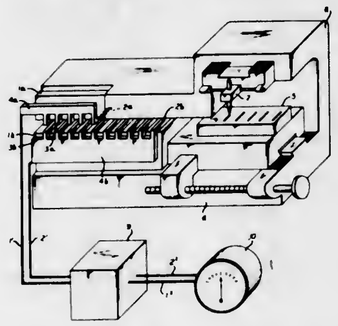
1. Contour duplicating apparatus comprising a stand, a carriage mounted on said stand and translationally shiftable relative to the latter, a pantograph having arms pivotally mounted to said carriage for translation therewith and rotation relative thereto, a cutting tool, a sensing element, first means carried by said pantograph arms rotatably securing thereto said cutting tool and said sensing element in spaced relationship, and second means so inter-

coupling the cutting tool and sensing element that rotational motions of the sensing element relative to said



pantograph produce corresponding rotational motions of the cutting tool.

3,100,345
DEVICES FOR ADJUSTING AND MEASURING LENGTHS AND ANGLES
Horst Burkhardt, Altenmarkt, near Traunstein, Upper Bavaria, Germany, assignor to Fa. Wenczler & Heidenhain, Traunreut, near Traunstein, Upper Bavaria, Germany, a corporation of Germany
Filed Nov. 12, 1958, Ser. No. 773,365
18 Claims. (Cl. 33—1)



1. A device for the adjustment and measuring of lengths, comprising two scale bodies, each of said bodies having a scale consisting of a plurality of scale indications at substantially constant intervals from each other, each of said scale indications of one of said scale bodies co-operating with one of said scale indications of the other of said scale bodies, said scale indictions of one of said scale bodies having a periodically repeating error curve and the other of said scale bodies having a plurality of scale indications identical in number with that of each period of said one of said scale bodies, and means determining the average value of the squares of the deviations of the individual opposite pairs of corresponding scale indications from the error-free positions.

3,100,346
SCRIBE
Robert K. Cannon, 2115 Sycamore St. SW., Huntsville, Ala.
Filed Mar. 4, 1959, Ser. No. 797,315
1 Claim. (Cl. 33—21)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A scribe comprising in combination:

(*a*) a straight circular column;

(*b*) a base perpendicularly secured to one end of said column;

(*c*) a cylindrical support mounted on said column and being axially and rotatably adjustable with respect to said column;

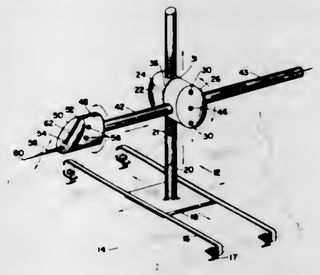
(*d*) a cylindrical mount having the same outer diameter as said support and having one end rotatably adjustable upon and coaxially secured to one end of said support the longitudinal axis of said support being normal to the longitudinal axis of said column;

(*e*) a circular rod carried by said mount and extending therethrough and having a longitudinal axis perpendicular to the longitudinal axis of said mount;

(*f*) said rod being rotatably and axially adjustable with respect to said mount;

(*g*) a cylindrical head rigidly secured over one end of said rod;

(*h*) a style slidably engaged with said head so that the longitudinal axis of said style and said rod maintain a parallel relationship with respect to each other when said rod is rotated about its longitudinal axis;



(*i*) said support having a cylindrical opening extending therethrough for engagement with said column;

(*j*) a set screw extending from the other end of said support to said column to provide adjustable locking engagement with said column;

(*k*) said mount having a pair of openings parallel to the longitudinal axis of said mount and radially displaced therefrom;

(*l*) a circular T-slot radially disposed about said one-end of said support;

(*m*) a pair of T-bolts mounted within said pair of openings and adapted for engagement with said circular T-slot of said support for securing said support to said mount;

(*n*) a bolt and spring extending from the other end of said mount to said rod to provide adjustable locking engagement with said rod;

(*o*) said head having its outer face inclined at an acute angle with respect to the longitudinal axis of said rod;

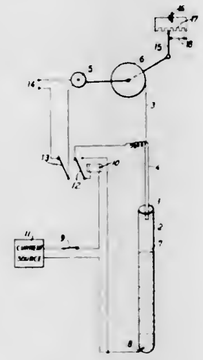
(*p*) said outer face having a recess extending along its major diameter; and

(*q*) a slide secured to said style and disposed for slidable engagement within said recess.

3,100,347
MEANS FOR INDICATING OR RECORDING THE LIQUID LEVEL IN NARROW, LONG MEASURING VESSELS
Ulrich Fritze, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Dec. 23, 1959, Ser. No. 861,593
Claims priority, application Germany Dec. 27, 1958
1 Claim. (Cl. 33—126.6)

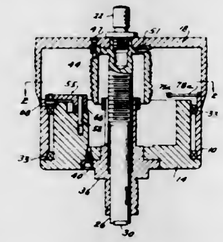
A liquid level indicator for measuring vessels comprising an electric conductor element insertable into such

measuring vessel above the liquid level, an electric servo-motor to lower said element to contact the upper surface of such liquid, a relay, an electric circuit including a source of current and said element, the liquid and said relay, a time switch in said circuit adapted to interrupt



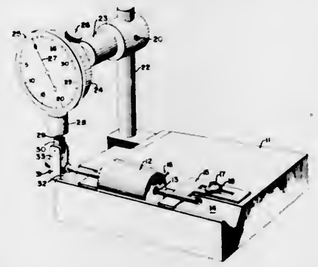
said circuit periodically, said relay having a shunt circuit about said element and liquid to maintain normally energized the servo-motor circuit control of said relay, and means operable by said servo-motor to indicate the position of said conductor element.

3,100,348
COMPENSATED MICROMETER HEAD
Henry O. Egli, Riverside Drive, Sidney, N.Y.
Filed Apr. 11, 1960, Ser. No. 21,218
9 Claims. (Cl. 33—164)



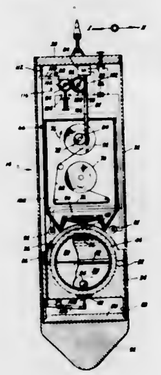
1. In a micrometer, a head mechanism comprising a body member and a spindle having a threaded connection therewith and having rotative and reciprocal movement with respect thereto, an anvil actuated by said spindle and positioned by movement of said spindle, a scale carrying element carried by said body member and being mounted for relative rotative movement with respect to said spindle and said body member, said scale being calibrated to indicate traverse of said anvil, a drum cam having a cam surface and being integrally secured to said spindle and movable rotatively and reciprocally therewith, said cam surface comprising a continuous thread, a cam follower means disposed and arranged to engage said cam surface and connected with said scale carrying element for effecting movement of said element corresponding to rise and fall of said cam surface as said spindle is rotated, said cam surface having varying rise and fall to compensate for inaccuracies of the thread connection intermediate said spindle and said body member whereby to compensatingly position said scale carrying element so as to minimize error.

3,100,349
BORE MEASURING DEVICE
Richard H. F. Stresau, Lake Zurich, Ill., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 23, 1961, Ser. No. 91,287
9 Claims. (Cl. 33—178)
(Granted under Title 35, U.S. Code (1952), sec. 266)



9. An indicating device for use in determining whether or not the diameter of a bore in an object is within the maximum and minimum permissible values which comprises; an elongated rod member having an enlarged portion of known diameter and length inserted in the bore and having an end portion extending beyond one end of the bore, said end portion having a groove formed therein at a known distance from the center of said enlarged portion, movement indicating means having a knife edge adapted to seat within said groove at a selected point and means to retain said knife edge within said groove, whereby, upon rocking movement of said enlarged portion within the bore, the amount of linear movement of said selected point is indicated by the indicating means thereby indicating whether or not the diameter of the bore is within the permissible maximum and minimum values.

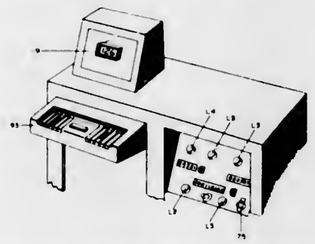
3,100,350
MAGNETIC DIRECTION AND INCLINATION INDICATING DEVICE
Clifford K. Brown, Rte. 6, Box 241, Duluth 4, Minn.
Filed July 18, 1960, Ser. No. 43,482
18 Claims. (Cl. 33—205.5)



1. A magnetic indicating device comprising a spherical shell of transparent material having a smooth interior, a magnet fixedly disposed within said shell, gravity responsive means also within said shell and freely movable relative to said magnet, and means for buoyingly supporting said shell in a liquid medium so that said shell

can orient itself in accordance with the field forces to which said magnet is subjected.

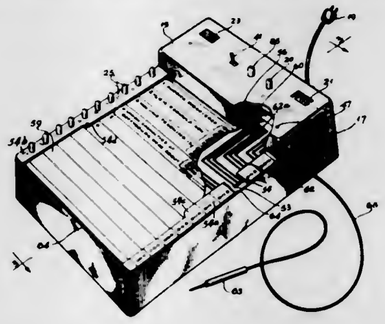
3,100,351
KEYBOARD TRAINING DEVICE
Voldemars Priednieks and Kurt Werner, Detroit, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 7, 1960, Ser. No. 13,320
6 Claims. (Cl. 35—6)



4. An operator training device comprising a training film with a plurality of frames, each frame including an image and a plural code representation equivalent to said image, means for step-wise moving each frame into a sensing position for a predetermined time period, comparator means for receiving a first and a second signal pattern, said comparator means including a first and a second bank of relay means whose contacts provide a completed electrical path or an open circuited electrical path depending upon the results of such comparison, a timing control circuit having means for initially clearing said comparator means and for sensing during the terminal portion of each said period the equality or inequality of respective signal patterns applied to said comparator means by virtue of said completed or said open circuited electrical path, circuit means responsive to said plural coded values on each said frame to provide a first a signal pattern, keyboard means for providing a second signal pattern, said keyboard entered pattern being provided by an operator who indexes plural keys corresponding to said first signal pattern within each said predetermined time period, both said first and said second signal patterns providing respective energizations to said first and second banks of relay means, and a first indicator means enabled at the terminal portion of each said respective time period to permit a determination to be made regarding the equality or inequality of said keyboard entered pattern.

3,100,352
EDUCATIONAL DEVICE
Matthijs G. J. Boissevain, North Stonington, Conn., assignor to Astra Corporation, New London, Conn., a corporation of Connecticut
Filed Sept. 27, 1960, Ser. No. 58,721
8 Claims. (Cl. 35—9)

1. An educational device comprising a plurality of groups of electric circuit terminals in a housing, a movable probe adapted to be conductively connected to selected ones of said terminals to complete electrical circuits therethrough, a teaching card formed with switch operating portions, the card being removably positioned in the housing with one side substantially exposed to view and displaying a plurality of discrete problems each of which is associated with one of the groups of terminals, correct answer circuits including operating means and correct sequential switch means to connect the groups of terminals successively to the operating means, incorrect answer circuits including a wrong answer indicator and incorrect sequential switch means to connect the groups of terminals successively to the wrong answer indicator, card operated switch means in the housing associated with each group of terminals, the switch operating portions of the teaching card being correlated with the problems on the card to operate selectively the switch means to connect each of the terminals associated with the displayed problems to a preselected one of the correct and incorrect sequential switch means, means to apply a potential between the probe and the correct and incorrect answer circuits, means to connect the probe conductively



to a selected one of the terminals in answer to the associated problem to close and energize one of the correct and incorrect answer circuits, the selected terminal being in the particular group of terminals then connected by the correct and incorrect sequential switch means to the operating means and the wrong answer indicator, respectively, and the operating means being responsive to energization by the probe to advance the correct and incorrect sequential switch means to connect the group of terminals associated with the next problem to the operating means and the wrong answer indicator.

3,100,353
GLOBE SUPPORT AND MEASURING DEVICE
Wellman Chamberlin, Waterford, Va., assignor to National Geographic Society, Washington, D.C., a corporation of the District of Columbia
Filed Mar. 17, 1961, Ser. No. 96,442
5 Claims. (Cl. 35—46)



1. An educational globe assembly comprising, a globe having a map of the earth on its surface, a support for said globe having a projection adapted to engage and freely rotatably support said globe in removable relation, and a measuring device formed as a spherical segment

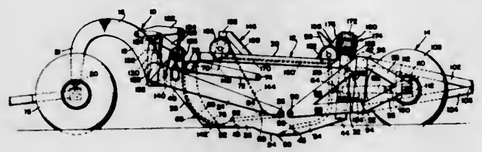
not greater than a hemisphere of transparent sheet material having a radius of curvature for its inner surface substantially the same as the radius of curvature of said globe whereby said device may be removably positioned over a desired area of the globe's surface with a selected portion of the earth's map visible therethrough, said device having a sighting aperture for aligning the device in predetermined relation to the selected portion of the map on the globe's surface, said aperture being adapted to receive said projection whereby said device may be stored in nested relation between said support and said globe.

3,100,354
RESILIENT SHOE SOLE
Herman Lombard, 1272 Bellmore Road, and Justin H. Strawgate, 2552 Towne House Circle, both of North Bellmore, N.Y.
Filed Dec. 13, 1962, Ser. No. 244,426
4 Claims. (Cl. 36—25)



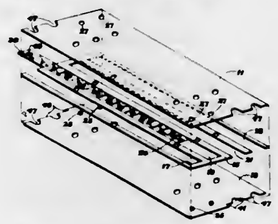
1. A shoe sole having a heel section and a toe section, and comprising opposed side rims connected by a central floor section, the upper surfaces of said side rims and floor section being at substantially the same level, the floor section being about one third the thickness of said side rims and having its underside elevated relative to the underside of said side rims so as to form with said side rims an elongated longitudinal bottom channel along the bottom surface of said sole which is defined at the sides by said side rims, said channel extending without interruption from at least the heel section up to and completely through the toe section.

3,100,355
EARTH SCRAPING AND MOVING MACHINE
James H. Hope, Oakland, Calif., assignor of forty percent to Theodore S. Kinney, Seattle, Wash.
Filed Mar. 26, 1962, Ser. No. 182,390
24 Claims. (Cl. 37—126)



2. An earth scraping and moving machine, comprising:
(*a*) a bowl structure having forward supporting frame means adapted to be hitched to a prime mover and having rear supporting frame means including wheels, said forward frame means including first control means for raising and lowering the front of said bowl and said rear frame means including second control means for raising and lowering the rear of said bowl;
(*b*) a pair of scraper blade means located at the bottom of said bowl for directing earth material into said bowl, said pair of scraper blade means being spaced from each other and positioned transversely of the direction of movement of said bowl;
(*c*) ejector means located between and hingedly secured in close proximity to the forwardmost of said pair of scraper blade means; and
(*d*) means for discharging earth material collected in said bowl.

3,100,356
STRIP STORAGE ENVELOPE
Glen W. Offensend and Walter D. Vogt, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 10, 1961, Ser. No. 94,926
4 Claims. (Cl. 40—17)



1. A device for slidably receiving and storing a plurality of discrete strips, each having an opening which is spaced from the edges of the strip adjacent to one end thereof, comprising:
(*a*) a member having a plurality of channels for receiving said plurality of strips respectively therein, said member being formed of three laminated plies;
(1) the inner one of which is provided with said plurality of channels which are open on at least one end to receive said strips, and
(2) the outer plies substantially enclosing said channels to protect the strips when positioned for storage in the channels, and
(*b*) a plurality of detents formed in at least one of the outer plies to extend into the plurality of channels respectively, said detents being disposed adjacent to the end of said channels which is remote from said one open end and having an elevation sufficient to extend through the openings in said strips, when positioned for storage in said channels, to thereby prevent accidental sliding displacement of the strips from such position.

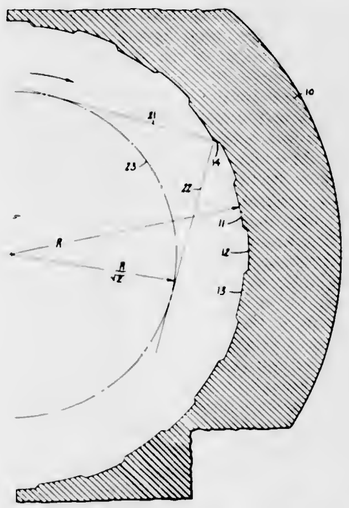
3,100,357
FOLDABLE BUTT FOR PORTABLE SMALL ARMS
Paul Tellie, Saint-Etienne, France, assignor to Manufacture Nationale d'Armes de Saint-Etienne, Saint-Etienne, France, a corporation of France
Filed May 12, 1961, Ser. No. 109,532
Claims priority, application France July 20, 1960
3 Claims. (Cl. 42—72)



1. In combination with the body of a portable small-arm, a receiver having in opposite sides of the rear end

thereof an elongated V-shaped longitudinal groove and a frusto-conical recess respectively, an elongated butt including at the front end thereof a head for engaging snugly said V-shaped groove, a nut for engaging snugly said frusto-conical recess and a screw threadedly engaging said nut, said screw including a head for engaging the surface of said butt remote from said V-shaped groove to hold selectively the head of said butt in said V-shaped groove with the butt directed away from and substantially parallel to the small-arm body and in a released condition in which said butt is collapsible over the small-arm body.

3,100,358
RIFLED GUN BARREL
Thomas R. Robinson, Jr., New Haven, Conn., assignor to The Marlin Firearms Company, New Haven, Conn., a corporation of Connecticut
Continuation of application Ser. No. 354,712, May 13, 1953. This application Nov. 27, 1959, Ser. No. 856,331
2 Claims. (Cl. 42—78)



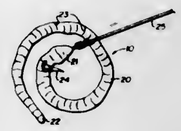
1. A gun barrel provided with a plurality of helically disposed rifling grooves in the bore thereof with lands between the grooves, there being at least 5 of such grooves for every $\frac{1}{10}$ inch of bore diameter, and the driving side of each of said lands being disposed substantially tangentially to a circle having a center at the bore axis and a radius equal to the radius of gyration of a cylindrical section of the bore.

3,100,359
EXPANDABLE MULTIPLE HOOK ASSEMBLY FOR FISHING LURES
George Laba, 1370 King St. W., Toronto, Ontario, Canada
Filed Feb. 5, 1960, Ser. No. 7,030
1 Claim. (Cl. 43—35)



A fishing lure assembly having a generally fish shaped support body and comprising in combination: a cylindrical piston of length substantially greater than the width thereof; a plurality of hook members having bights and elongate inherently springable shank portions; the ends of said shank portions being rigidly secured to said piston to dispose said shank portions in outwardly flared relation thereto; a tube located within said support body having an open end substantially co-terminus with the trailing end of said body to retain said piston in slidable relation therewithin and said shank portions in biased mutual proximity; a bait gripping spur disposed inwardly from each said bight for co-operative bait gripping action with corresponding spurs on adjacent bights when said shanks are retracted within said tube; and an inwardly turned flange portion on the open end of said tube to arrest the movement of said piston and said shank portions and retain said piston and the ends of said shank portions within said tube; said piston and said shank portions being reciprocably movable outwardly relative to said tube and support body by the pull of a striking fish and said hooks being expandable outwardly when said shank portions are extended through the flanged end of said tube and said spurs releasing the bait when said hooks are so expanded outwardly.

3,100,360
PRECOILED ARTIFICIAL LURE
Michael M. Creme, 1219 Big Falls Ave., Akron, Ohio
Filed Aug. 2, 1962, Ser. No. 214,399
4 Claims. (Cl. 43—42.02)



1. An artificial lure of the character described, comprising;

(A) a solid, flexible, elongate body of rubbery material,

(1) having a modicum of rigidity and normally assuming the position of an earthworm that is positioned in coiled position on a flat surface;

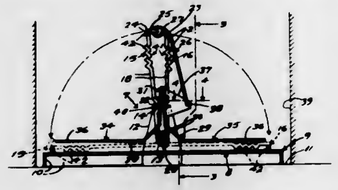
(2) having an innermost coiled end and an outermost coiled end that overlaps said innermost end to define a complete coil;

(3) one said coiled end portion being adapted to be secured to a fishing line;

(4) said lure rotating, in spiral-like fashion, around an axis that is generally coextensive with the axis of the connecting end of said fishing line during movement of said lure and said line through the water, and with the coiled configuration of said lure being extended along said axis during movement of said lure and said line through the water.

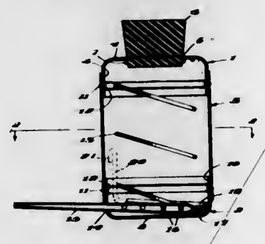
3,100,361
ANIMAL TRAP
Earl S. Wanless and Garnet C. Wanless, both of 247 5th Ave., Viroqua, Wis.
Filed Oct. 30, 1961, Ser. No. 148,447
2 Claims. (Cl. 43—81)

1. An animal trap comprising an elongated base, a pair of jaws, means pivotally mounting said jaws about an axis spaced from the ends of the base, located crosswise of the base and disposed thereabove, spring means engaging said jaws and urging the jaws to swing downwardly and outwardly away from one another and against the upper side of the base, a pan having end portions disposed above and adjacent the ends of the base and an upstanding intermediate portion, means engaged by said intermediate portion for supporting and pivotally mounting the pan about an axis disposed substantially above and substantially parallel to the means pivotally mounting said jaws, a trigger member having one end pivotally connected to one of said jaws, said pan having a detent carried by and spaced from the intermediate portion of the pan and engaging the other free end of said trigger



for holding the trap set with the jaws in substantially upright positions with said trigger engaging across a part of the other jaw, and said jaws having portions straddling and bearing against the means supporting the pan, in a set position of the trap, to prevent swaying of the jaws.

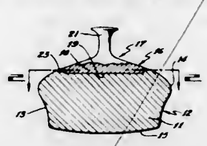
3,100,362
POWDER DISTRIBUTORS
Chester W. Robinette, St. Louis County, Mo., assignor to Getz Exterminators, Inc., St. Louis, Mo., a corporation of Missouri
Filed July 7, 1961, Ser. No. 122,530
3 Claims. (Cl. 43—146)



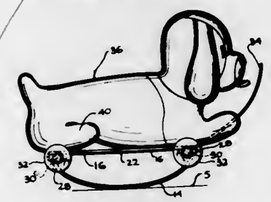
1. A distributor of the character described comprising top and bottom members each having an inturned sleeve section thereon, a collapsible wall member telescoped with the sleeve sections and connected thereto, a discharge spout extending radially outward from the bottom member with its inner end projecting substantially diametrically across the latter and having a discharge opening therein, a hook-shaped handle connected with the bottom member and extending laterally therefrom, said handle including an inner portion overlapping the inner end of the discharge spout and secured to the bottom member, and an outer portion turned upward along the outer surface of the distributor and outwardly spaced therefrom and forming an outwardly projecting hook for suspending the distributor.

3,100,363
CAKE OF MATERIAL AND HANDLE
Robert B. Staver, 583 Salvatierra, Stanford, Calif.
Filed Apr. 6, 1959, Ser. No. 804,283
16 Claims. (Cl. 45—28)

1. In combination, a body of erodable material of a size to be grasped in a hand and manipulated thereby, said body having an upper surface portion; and holding means having a horizontally extending base portion and attached to said upper surface portion, a slender substantially symmetrical stem extending upwardly from said base portion, said stem being sufficiently slender to be positioned in any orientation in the crotch of adjacent fingers of a hand without spreading said fingers to an uncomfortable degree and a head carried by the upper end of said stem.

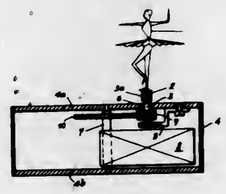


3,100,364
CONVERTIBLE PULL AND ROCKING TOY BASE
Alex May, 176—10 69th Ave., Flushing, N.Y.
Filed Mar. 27, 1961, Ser. No. 98,462
1 Claim. (Cl. 46—103)



In combination, a rollable and rockable chassis, a toy figure, means for releasably fastening the toy figure on the chassis, said chassis comprising a rectangular skeleton frame, axles supported on the sides of the frame adjacent the ends of the frame, the ends of the axles protruding outwardly of the frame, wheels on the protruding ends of the axles adapted to engage a supporting surface for rolling the frame over the surface, the sides of the frame being curved and extending beyond the peripheries of the wheels thereby constituting rockers for engaging a supporting surface for rocking the frame upon inversion of the frame, a pair of bars crisscrossed between the sides and ends of the frame and fastened at their ends to the ends of the frame for bracing the frame, said bars being countersunk at their point of crossing, and an elongated flat tape attached at one end to one end of the frame for rolling the chassis over a supporting surface, the means for fastening the toy figure on the chassis including short tapes secured to the toy figure midway the ends thereof, the remainder of the tapes being unattached, the unattached portions encircling the axles, a female snap button on one end of each tape and a male snap button on the other end of each tape for fastening the ends of the tapes to each other.

3,100,365
MOVABLE FIGURE TOY
Jakob Stalder, Bergstrasse 110, Geroldswil, Switzerland
Filed Aug. 8, 1961, Ser. No. 130,132
8 Claims. (Cl. 46—140)



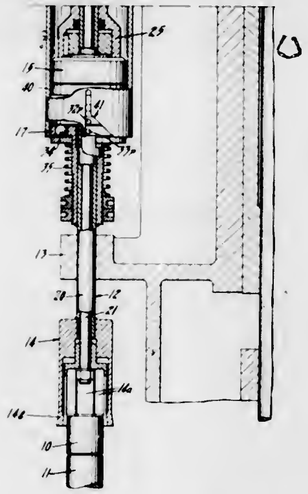
7. A toy comprising a housing, a fulcrum pin journaled in a wall of the housing, a figure body secured to

the fulcrum pin exteriorly of the housing, a fulcrum member journaled in the housing, a drive connection between the fulcrum member and fulcrum pin, a swing body of elongated form attached at one end to the fulcrum member and adapted when the housing is tilted to swing around the fulcrum member and by such movements constitute the sole power source for operating the figure body.

3,100,366
SCREW CAP ASSEMBLING HEAD

James Henry Gordon, West Orange, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed June 16, 1961, Ser. No. 117,729
5 Claims. (Cl. 53—317)



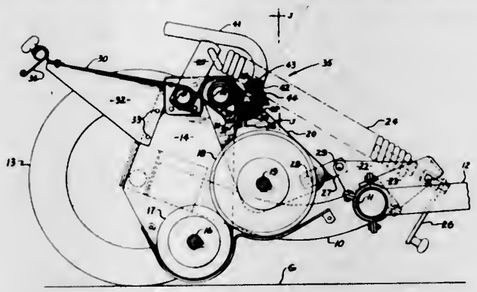
1. A device for applying and tightening screw caps on containers, said device comprising rotatable cap gripping means, driving means for rotating said gripping means, clutch means interposed between said gripping means and said driving means for disconnecting said driving and gripping means, said clutch means including a drive clutch having a trip pin extending axially from a drive element thereof, a control clutch driven by said drive clutch and having a second pin extending axially from a control element thereof and disposed in the path of said trip pin, said control clutch being adapted to slip when said cap gripping means is subjected to a predetermined torque whereupon said control element is stopped and said second pin thereon stops said trip pin and its drive element to disconnect said driving means from said gripping means, and means for resetting said control element whereby said pins are again separated and said driving and gripping means are reconnected so that said drive means, operating through said clutch means, again rotates said cap gripping means.

3,100,367
HAY CONDITIONER

Lawrence M. Halls, New Holland, and Leonard M. Bumm, Blue Ball, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Aug. 30, 1960, Ser. No. 52,969
5 Claims. (Cl. 56—1)

1. A hay conditioner comprising a mobile frame adapted to be towed over the ground in a forward direction, a pair of laterally spaced roll supports mounted on said frame, a transversely disposed crop treating roll journalled in said roll supports and extending therebetween, a crop deflecting shield mounted on said frame rearwardly of said roll and having a forward edge spaced from and extending parallel to said roll, a blade supporting member extending transversely between said roll supports and having its ends journalled thereon, a scraping blade disposed in the space between said roll and the forward edge of said shield and extending parallel to said roll and the forward edge of said shield, means resiliently

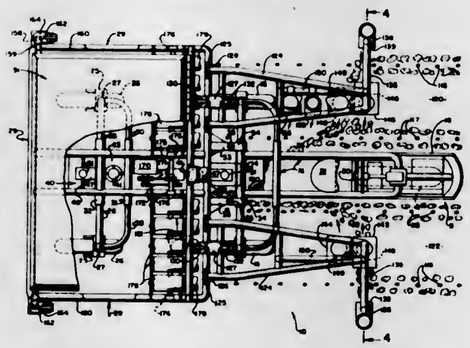


mounting said blade on said blade supporting member, a handle on said blade supporting member whereby said member may be pivoted from a first position wherein said blade is in scraping engagement with said roll to a second position wherein said blade is clear of said roll and in engagement with the forward edge of said shield, and latch means carried by said handle and engageable with one of said roll supports to lock said member selectively in said first or second position.

3,100,368
APPARATUS FOR RECOVERING COTTON FROM THE GROUND

Robert D. Logan, Rte. 1, Box 49, Blythe, Calif.

Filed May 3, 1961, Ser. No. 107,573
27 Claims. (Cl. 56—12)

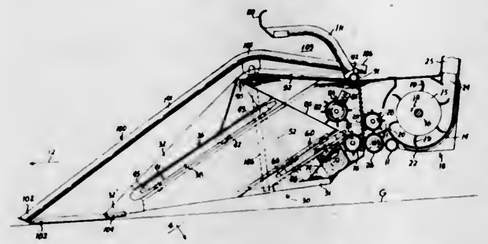


1. Apparatus for gathering cotton bolls from the ground comprising a main frame adapted to be moved over the ground parallel to rows of cotton plants, power-driven means carried thereon for picking up cotton bolls from the ground including air flow producing means for sweeping the ground substantially clear of loose cotton from at least two adjacent rows thereof and for elevating the same off the ground, said power-driven means including separator means for separating cotton from leaves, stems, and debris, and means for transferring substantially clean cotton bolls into a storage bin therefor, and means for discharging separated stems and debris to a place other than said cotton storage bin.

3,100,369
FORAGE HARVESTER

Edward C. Procter, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed May 24, 1961, Ser. No. 112,256
7 Claims. (Cl. 56—16)

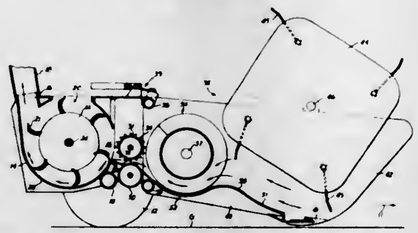


1. A row crop harvester comprising, in combination, a frame adapted to travel forwardly, a pair of dividers mounted on said frame in laterally spaced relation and defining an inlet passage for standing crop material such as corn, endless gathering means on said dividers, crop severing means supported on said frame and extending across a lower portion of said inlet passage, an infeed roll on said frame extending across said inlet passage and having a transverse axis spaced vertically and rearwardly from said severing means, said gathering means being operative to engage and convey crop material rearwardly and beneath said infeed roll, means rotating said infeed roll to feed said crop material downwardly and into said harvester, a U-shaped guide mounted on said frame above said infeed roll, said guide having a transverse bight extending in a horizontal plane and located rearwardly of a portion at least of said infeed roll and a pair of legs extending forwardly from said bight portion, one leg over each divider, said inlet passage directly in front of said infeed roll being unobstructed except for said gathering means and the portion of the inlet passage directly in front of said bight portion of said U-shaped guide and in said horizontal plane being wholly unobstructed to facilitate movement of crop material to and beneath said infeed roll.

3,100,370
FORAGE HARVESTER

Allison W. Blanshine, Lititz, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed July 25, 1961, Ser. No. 126,722
3 Claims. (Cl. 56—21)

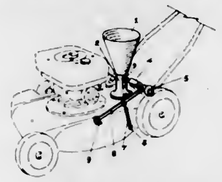


1. A low-line forage harvester comprising, in combination, a frame adapted to travel forwardly, a housing mounted on said frame and having a forwardly directed feed opening, a shear bar mounted across a lower portion of said opening, a chopper rotatable in said housing and having a plurality of knives successively cooperative with said shear bar to sever material fed through said opening, a pair of infeed rolls mounted one above the other directly in front of said opening and cooperative to feed material rearwardly and over said shear bar, a cutter mounted on said frame adjacent the ground and spaced forwardly of said infeed rolls, a support traversing said space and inclined downwardly and forwardly from said infeed rolls to said cutter and over which crop material may slide rearwardly, rotatable auger means mounted over a rearward portion of said support in front of said infeed rolls and rearwardly of said cutter for consolidating and rearwardly discharging material directly to the infeed rolls, and a reel mounted on said frame directly over said cutter and operable to sweep cut material directly to said rotatable auger means and over a forward portion of said support, said support rearward portion being arcuate and generally concentric to said auger means, and said forward portion of said support being arcuate and generally concentric to said reel.

3,100,371
DISPENSER FOR LAWN TREATING MATERIALS

Paul C. Redmon, Oklahoma City, Okla., assignor of two-thirds to Novel Ideas Incorporated, a corporation of Oklahoma

Filed Feb. 12, 1962, Ser. No. 172,396
2 Claims. (Cl. 56—25.4)



1. In combination with a conventional lawn mower having a cutting blade and supporting wheels, the invention comprising,

(1) a body member mounted on said mower over said cutting blade,

(2) a hopper member mounted on said body member,

(3) said body member having a passageway extending therethrough in communication at one end with said hopper member,

(4) a shaft extending through at least one wall of said body member and rotatable therein,

(5) a disc-like feeder member located within said body and mounted on said shaft,

(6) said feeder member having at least one notch formed in the periphery thereof,

(7) a baffle plate extending across said passageway and surrounding a portion of said feeder member thereby preventing the upward movement of materials thereby while permitting rotation of said feeder member,

(8) a flexible coupling member mounted on one end portion of said shaft,

(9) a drive shaft member connected to said flexible coupling member,

(10) a wheel mounted on the other end of said drive shaft member, and

(11) resilient means adapted to maintain said wheel in frictional engagement with one of said mower supporting wheels.

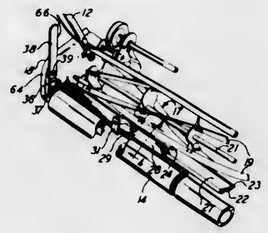
3,100,372
REEL TYPE LAWN MOWER WITH CATCHER

John W. Barth, Cudahy, Wis., assignor to Jacobsen Manufacturing Co., Racine, Wis., a corporation of Wisconsin

Original application June 12, 1961, Ser. No. 116,458. Divided and this application May 16, 1962, Ser. No. 195,228
6 Claims. (Cl. 56—199)

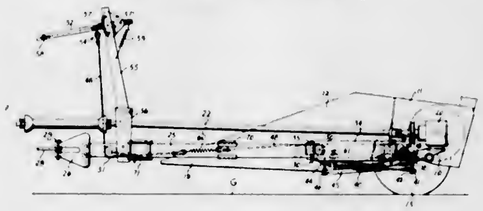
1. In a reel type lawn mower including a rotatable reel and a bed plate disposed in cutting relation with said reel,

said bed plate being provided with a first top surface disposed at one angle to said mower, with respect to the horizontal, at only one end of said bed plate and with a



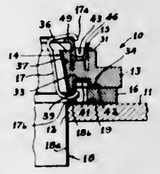
second top surface disposed at a second angle to said mower at only the other end of said bed plate and with said second angle being with respect to the horizontal and different from said one angle.

3,100,373
CONTROL DEVICE FOR ADJUSTING A HARVESTER PLATFORM
Allison W. Blanshine, Lititz, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed May 15, 1961, Ser. No. 109,899
5 Claims. (Cl. 56—214)



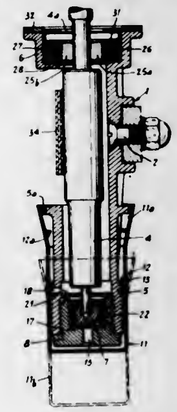
1. A device for adjusting a ground engageable implement relative to a wheel supported frame on which it is mounted and about a transverse axis relative to the direction of travel of the frame whereby a forward portion of the implement may be raised and lowered relative to the ground and relative to a forward projecting tongue of the frame, comprising a transverse rock-shaft on said frame to which said implement is fixedly connected whereby when the rock-shaft is pivoted in one direction said implement forward end is raised and when pivoted in an opposite direction the implement forward end is lowered, a counterbalance spring connected between said frame and rock-shaft and operating to assist pivotal movement of the rock-shaft in said one direction, a lever having one end fixedly connected to said shaft and extending forwardly thereof alongside said tongue to an opposite end, a support pulley on said tongue and above said lever opposite end, a flexible control element connected to said lever and extending upwardly therefrom, over said pulley member and then forwardly, mechanism on said tongue to operate said control element, means connecting said mechanism to said control element including a tension spring, said control element being adapted to be pulled forwardly through said tension spring to lift said lever and thereby pivot said rock-shaft in said one direction and released to allow the rock-shaft to pivot in the opposite direction, and a stop carried on said frame and engageable with said lever to limit upward movement of the lever and thus pivotal movement of said rock-shaft in said one direction.

3,100,374
TRAVELER RING ASSEMBLIES
Arthur E. Backus, 1023 Thorndale Ave., Chicago, Ill.
Filed July 11, 1962, Ser. No. 209,010
16 Claims. (Cl. 57—122)



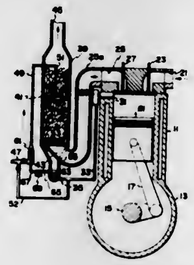
1. A traveler ring assembly comprising a base ring, means securing said ring to a rail frame, a plurality of circumferentially disposed upwardly inclined cam surfaces on a top surface of said base ring, a lower traveler guiding ring clamped between the rail frame and the base ring and overlying the inner peripheral wall of said base ring, an upper traveler guiding ring seated on said base ring, a plurality of circumferentially disposed upwardly inclined cam surfaces on the bottom surface of the upper traveler guiding ring, said upper traveler guiding ring cam surfaces seating on the base ring cam surfaces and being rotatable relative to the base ring to vary the effective highth of the upper traveler guiding ring, and means to lock the upper traveler ring in positions of relative adjustment.

3,100,375
SPINDLE-HOLDER
Pierre Bourgeas, 110 Ave. Maurice Faure, Valence, France
Filed Sept. 18, 1962, Ser. No. 224,428
Claims priority, application Luxembourg Sept. 23, 1961
8 Claims. (Cl. 57—134)



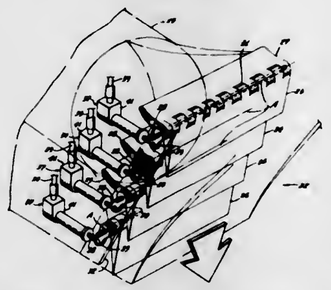
1. A spindle-holder for supporting a rotatable spindle which terminates in a pivot at its lower end, the spindle-holder comprising: a foot at its lower end, closed at the bottom, the foot being formed with a concentric cavity in its upper portion and with a axial duct communicating with this cavity, a bush lodged in this cavity and serving as a foot-step bearing in which the pivot of the spindle revolves and is supported, a washer interposed between the under side of the bush and the bottom of the cavity in the foot, and a cup adapted to contain lubricating oil, enclosing the lower end of the spindle-holder, the washer being formed with a radial slit and the spindle-holder being formed with at least one radial duct in the region of the pivot but above the level of the bush, so that when the spindle is revolving, oil will flow outwards through the radial duct in the spindle-holder down between the foot of the spindle-holder and the sides of the cup, and up again from the bottom of the cup through the axial duct in the foot, the slit in the washer, and the clearance space between the bush and the sides of the cavity in the foot.

3,100,376
METHOD OF CLEANING ENGINE EXHAUST GASES
Barrie V. Potter, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 10, 1960, Ser. No. 61,591
5 Claims. (Cl. 60—30)



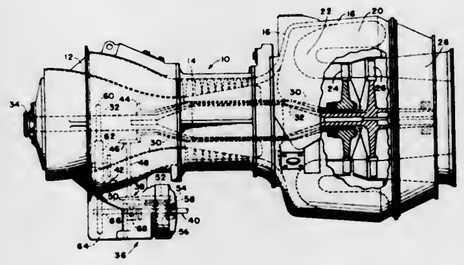
1. The method of removing incompletely burned elements from exhaust gases of an internal combustion engine which comprises subdividing a liquid hydrocarbon fuel of diesel type into small particles to increase its surface area, sweeping said exhaust gases with said subdivided fuel to pick up said elements, collecting said subdivided fuel and said elements, and feeding said fuel and elements to said engine whereby the energy values in said fuel are more fully utilized.

3,100,377
DEFLECTING MEANS FOR JET AIRCRAFT AND THE LIKE
Ruediger E. Kosin, Palos Verdes Estates, and Don M. Heinze, Los Angeles, Calif., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Nov. 14, 1960, Ser. No. 69,211
2 Claims. (Cl. 60—35.54)



1. A deflector assembly for controlling and deflecting the exhaust gases from an aircraft jet engine comprising: an elongated duct adapted to convey the exhaust gases from said engine; said duct having fore and aft ends providing means for the ingress and egress, respectively, of the exhaust gases and an axis extending parallel to the longitudinal extent of said duct; a plurality of fixed vanes that are generally wedge-shaped in cross-section; said fixed vanes being mounted as a cascade in horizontal and vertical spaced relation at the aft end of said duct with the blunt edges thereof having a downstream relation with respect to exhaust gases flowing through said duct; a plurality of individual movable vanes; said movable vanes being wedge-shaped in cross-section; a movable vane being attached to each of said fixed vanes with the blunt edges of said movable vanes being in contacting relation with the blunt edges of said fixed vanes; and means adapted to simultaneously pivotally move said movable vanes in the same direction at differential speeds through an angular range between initial and final positions in which the latter vanes cooperate with said fixed vanes to define convergent-divergent nozzles at such time as said movable vanes are located in said initial and final positions and positions immediately adjacent thereto and convergent nozzles at such time as said movable vanes are located in other positions throughout said angular range.

3,100,378
AUXILIARY POWER DRIVE MECHANISM FOR A GAS TURBINE ENGINE
Kenneth A. Austin, Bridgeport, and William O'Connor, Westport, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 69,063
4 Claims. (Cl. 60—39.16)



1. In an accessory drive for a gas turbine engine of the type employing a power turbine and a gas producer turbine mounted for rotation independently of each other with a power turbine shaft driven by said power turbine and a separate gas producer turbine shaft driven by said gas producer turbine,

gas directing means for impelling said turbines and affording a range of rotative speeds at varying power outputs downward from a design maximum rotative speed for each of said turbines,

the combination therewith of an accessory drive means comprising:

an accessory drive shaft;

a first rotatable connection from said power turbine shaft to said accessory drive shaft, including a first rotative speed reducing gear train and a first one-way drive connection;

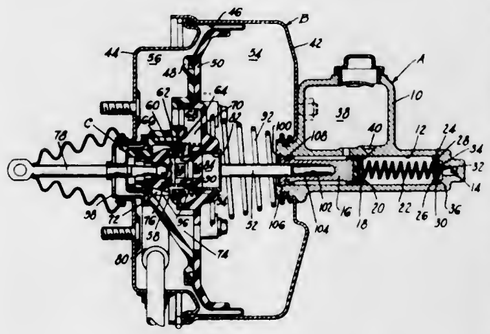
a second rotatable drive connection from said gas producer turbine shaft also to said accessory drive shaft and including a second rotative speed reducing gear train, and a second one-way drive connection between said second gear train and said accessory drive shaft;

each of said first and second one-way drive connections being positioned between its respective gear train and said accessory drive shaft, whereby the greater speed of rotation imposed on said accessory shaft by either said first or second one-way drive connection will impart rotation to said accessory shaft;

said first gear train and second gear train having designed relative speed reducing ratios producing substantially greater speed of rotation at said first one-day drive connection over said second one-way drive connection when said power turbine and said gas producer turbine are rotating at their said respective maximum designed speeds of rotation;

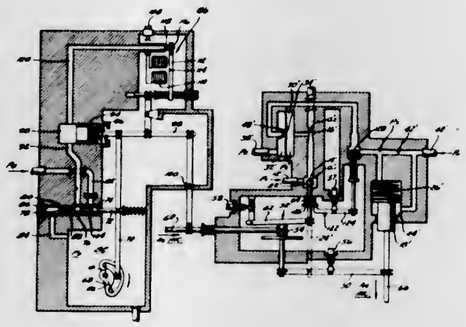
thereby to assure drive of said accessory shaft by said power turbine when said power turbine speed exceeds the speed of said gas producer by a predetermined amount and only shifting drive to said gas producer turbine when speed of rotation of said power turbine is reduced below said predetermined amount relative to the speed of rotation of said gas producer turbine and shifting said drive to said gas producer turbine in the lower portion of the speed range of said power turbine when speed of rotation of said power turbine is not substantially higher than that of said gas producer turbine.

3,100,379
POWER ACTUATED MASTER CYLINDER
Earl R. Price, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Oct. 24, 1960, Ser. No. 64,459
2 Claims. (Cl. 60—54.6)



1. A power operated master cylinder construction comprising: a master cylinder housing having an axially extending fluid pressurizing chamber opening into an outer end surface of said housing, a longitudinally extending piston positioned in said chamber, said piston having peripheral surfaces adjacent its opposite ends which slidingly abut the sidewalls of said chamber, said piston also having an axially extending opening communicating with the outer end of said piston and the sidewalls of said opening being cylindrical adjacent the outer end of said opening, a servomotor having a housing which is axially aligned and fastened to said outer end of said master cylinder housing, a force transmitting rod having an inner end in abutment with the inner end of said opening in said piston and a spaced cylindrical peripheral surface engaging said cylindrical surface of said opening adjacent said outer end of said opening, and a flexible movable wall in said servomotor supported relative to said fluid pressure motor housing by said force transmitting rod, whereby said fluid pressure motor can be removed from said master cylinder housing without breaking the seal of said piston in said fluid pressurizing chamber.

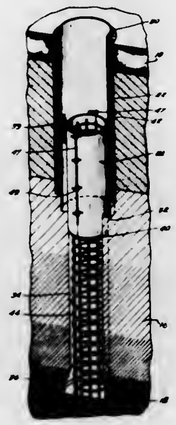
3,100,380
DUAL INPUT DIVIDER CONTROLLER WITH LIMITER UTILIZING A SERVO ACTUATED PRESSURE RATIO SENSOR
Thomas P. Farkas, Bloomfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Continuation of application Ser. No. 663,491, June 4, 1957. This application Nov. 16, 1960, Ser. No. 70,103
2 Claims. (Cl. 60—97)



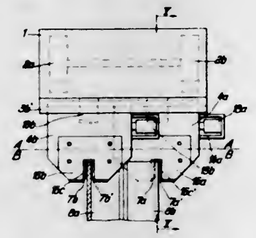
2. A control system comprising a first means including a duct defining a gas passage, a fixed area restriction in said gas passage, a variable area restriction in said gas passage and located upstream of said fixed area restriction, means to pass gas through said duct thereby establishing a first pressure upstream of said restrictions and a reference pressure which is a function of said first pressure between said restrictions and to establish choked flow through said fixed area restriction, a double-chamber diaphragm unit comprising a first chamber communicating with said reference pressure, a second pneumatic pressure in communication with a second chamber of said diaphragm unit which second chamber is independent of said duct and coacting with said reference pressure to position said diaphragm as a function of the pressure ratio between said first and second pressures, and servo means responsive to diaphragm movement to produce a first linear parameter output proportional to said pressure ratio, a second servo actuated means to produce a second linear parameter output, and means including a divider to combine said first and second outputs proportionately and position said first means variable area restriction to maintain a selected proportion between said first and second outputs proportional to said pressure ratio, and means to maintain said proportion above a preselected limit.

3,100,381
METHODS OF PRODUCING CAISSONS
Stanford E. Case, Glen Ellyn, and James P. Walton, Bartlett, Ill., assignors to Case Foundation Company, Roselle, Ill., a corporation of California
Filed Mar. 22, 1960, Ser. No. 16,722
12 Claims. (Cl. 61—35)

1. The method of producing a caisson comprising the steps of mixing a column of earth in situ and in the presence of water, adding thixotropic compound to the mixed earth and water to produce a suspension that will remain in suspension a substantial periord of time and which is of sufficient density to support surrounding earth, said suspension being extended to impervious material, placing a casing into the suspension to the impervious material, removing the suspension from within the casing, digging a shaft downwardly in the impervious material below the casing to bearing earth material, placing a form in said casing extending to said shaft, and placing concrete in said shaft and form.

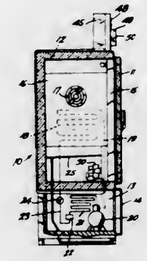


3,100,382
COUPLER FOR COUPLING A PILE MEMBER TO A PILE DRIVER
Ludwig Müller, Heinrich-Heine-Strasse 41, Marburg (Lahn), Germany
Filed Mar. 23, 1960, Ser. No. 17,087
Claims priority, application Germany Mar. 26, 1959
9 Claims. (Cl. 61—53.5)



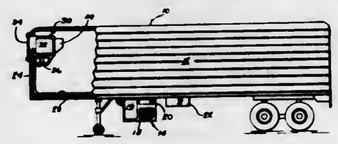
1. A driving device for driving and lifting respectively a pile member, said driving device comprising an oscillatory driving means for applying a longitudinally directed force to said pile member, and a releasable coupling device including a support means movable into and out of pressure engagement with the driving means for transmission of the oscillations thereof to the support means, a pair of coacting clamping jaws mounted on said support means and displaceable relative to each other and to the support means between a clamping position clamping said pile member and a release position releasing said pile member, spring means biasing the clamping jaws toward the release position, and an actuating means extending between said jaws and said support means movable in reference to the jaws and the support means and being operable for simultaneously moving said jaws into and out of clamping engagement with the pile member, into and out of pressure engagement with the support means and said support means into and out of pressure engagement with said driving means.

3,100,383
CONTROL FOR REFRIGERATORS INCLUDING ALARM MEANS
Lawrence H. Foster, Scarsdale, and Harold E. Bush, Hudson, N.Y., assignors to Foster Refrigerator Corp., Hudson, N.Y., a corporation of New York
Filed May 23, 1961, Ser. No. 112,005
5 Claims. (Cl. 62—126)



1. In a refrigerator of the type having a mechanically operated refrigeration system for cooling the refrigerator, a control for indicating operating conditions in the refrigerator comprising, a body in the refrigerator having a specific heat substantially greater than air to generally simulate a temperature trend of a composite of materials to be refrigerated, at least one thermostatically operated switch in thermal contact with said body and operable in response to a particular temperature of said body, a source of electric current comprising a power line, a main electric circuit connected across said electric power line and having a signaling device in the form of a lamp, said thermostatically operated switch connecting the lamp to the electric power line, an auxiliary circuit having a battery, an audible alarm and a relay switch for connecting the audible alarm to the battery, a relay coil in said main circuit for closing the relay switch in the auxiliary circuit for initiating operation of the alarm, and a manually operable switch in the auxiliary circuit to shut off the alarm.

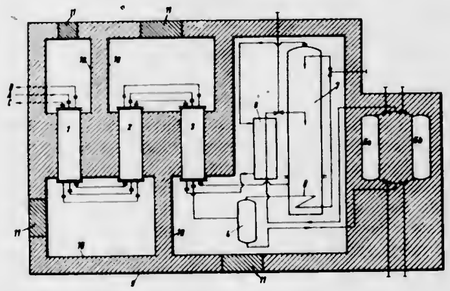
3,100,384
TRAILER REFRIGERATION APPARATUS
Ralph S. Lowensohn, Indianapolis, Ind., assignor to Flexteemp Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Nov. 30, 1960, Ser. No. 72,664
12 Claims. (Cl. 62—156)



11. Temperature-conditioning apparatus for a semi-trailer or the like, having a walled body, comprising an evaporator unit having a frame adapted to be inserted through a close-fitting opening in a wall of said body and to be secured therein in a position projecting inwardly of the wall, means closing the sides of said unit and defining a discharge opening and a blower opening, a blower assembly including means removably mounted in said blower opening from inside said frame to close said blower opening and including blower means projecting outward from said evaporator unit into the body space, said blower assembly comprising a blower and blower motor for blowing air from outside said unit through the

same and out the discharge opening thereof, heat exchange means in the path of air through the heat exchange unit, and a power unit adapted to be carried by the semi-trailer for energizing said heat exchange means and motor.

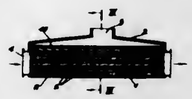
3,100,385
LOW TEMPERATURE UNITS WITH STOPPER INSULATION
Rudolf Becker, Munich-Solln, and Ernst Wittmann, Ludwigshafen (Rhine), Germany, assignors to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company
Filed July 25, 1960, Ser. No. 45,028
Claims priority, application Germany Mar. 31, 1960
1 Claim. (Cl. 62—447)



A system for separating gas mixtures by cooling and fractionation at low temperatures, which consists of a cold box comprising heat exchangers, separators, counter-flow subcoolers, adsorbers and rectifying columns, said cold box having a plurality of chambers individually insulated, which insulation consists of an outer jacket surrounding all parts of the system which have a temperature of below about 230° K. to 273° K., which further consists of separate inner jackets, each of said inner jackets surrounding parts of the system which must be accessible for repair purposes and which have between each other a maximum temperature difference of no more than about 50° C.; one of said inner jackets surrounding the warm end of the first heat exchanger, further inner jackets surrounding the cold end of each heat exchanger together with the warm end of each following heat exchanger, a further inner jacket surrounding the cold end of the last heat exchanger, a separator, a counter-flow subcooler and a rectifying column; in which the space between the outer jacket and said inner jackets is filled with bulk insulating material thereby embedding the heat exchangers which have between their warm and cold ends a considerable temperature difference particularly a temperature difference of more than 50° C. and further embedding the adsorbers which are inaccessible.

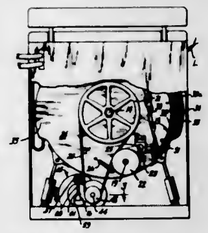
3,100,386
EVAPORATION HEAT EXCHANGER
André Chausson, Asnieres, France, assignor to Societe Anonyme des Usines Chausson, Asnieres, France, a company of France
Filed July 28, 1960, Ser. No. 45,961
Claims priority, application France June 29, 1959
5 Claims. (Cl. 62—467)

4. An evaporation heat exchanger comprising a first casing of impervious material, a nozzle in said casing in communication with the atmosphere surrounding the casing, a second casing of porous but rigid material located inside said first casing, members interposed between said first and second casings to define a narrow peripheral recess completely about said second casing, a nest of tubes extending through said first and second casings for circulating a fluid to be cooled, at least one charge of absorbent material embedding said nest of



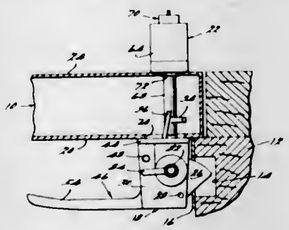
tubes and within said second casing, said absorbent material extending in directions to compel a volatile liquid impregnating said charge toward said tubes for heating exchange with the fluid to be cooled.

3,100,387
LAUNDRY APPARATUS HAVING AUTOMATIC CLUTCH CONTROL
James R. Hubbard and Stanley V. Horecky, Moorestown, N.J., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 10, 1958, Ser. No. 779,351
7 Claims. (Cl. 68—12)



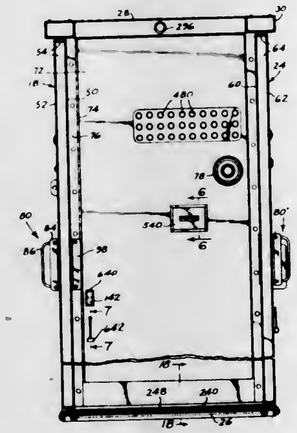
2. In laundry apparatus of the type including a rotatable clothes basket, a motor, a driving connection between said basket and said motor including clutch means operative selectively to engage and disengage said connection, and means for operating said clutch means alternately to engage and disengage the same in correspondence with rotational speeds of said basket.

3,100,388
DOOR LATCH AND LOCK
George Wartian, East Detroit, Mich. (% Wartian Lock Co., 20525 E. Nine Mile Road, St. Clair Shores, Mich.)
Filed June 12, 1961, Ser. No. 116,480
1 Claim. (Cl. 70—150)



A door latch comprising a casing adapted to be mounted on one side of a door, a latch bolt pivoted in said casing and adapted to swing into and out of said casing between latched and unlatched positions, said latch bolt having an integral lug on one face thereof and a cam surface on said lug, an actuating lever pivoted in said casing on an axis parallel to the pivotal axis of said latch bolt, said lever having a handle portion projecting from said casing and an inner end portion engageable with said cam surface on said lug for rotating said latch bolt to unlatched position, spring means reacting between said casing and said latch bolt and urging the latter toward its latched position, a manually depressible plunger adapted to be slidably mounted on the opposite side of the door and engageable with said inner end of said lever for rotating said lever in a direction to cause the latter to rotate said latch bolt to unlatched position, an integral locking projection formed on the opposite face of said latch bolt, a locking element pivotally mounted on said casing and having an operating member accessible from the exterior of said casing, said locking element having a first lug movable into and out of the path of movement of said locking projection on said latch bolt and a locking lug movable into and out of the path of movement of said lever, when said latch bolt is in its latched position, said lever having a part thereof engaging said locking lug on said locking element when the latter is in its locking position to prevent engagement of said latch bolt by said lever, said locking element being pivotable from its locking to its unlocking position through the engagement of said locking projection and said first lug by a force applied to said latch bolt tending to move the later to its unlatched position.

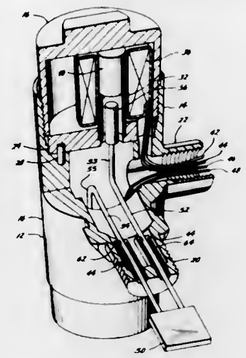
3,100,389
SECURITY BOOTH
Maurice J. Noregaard, Los Angeles, Calif., assignor to Card Key System, Inc., Burbank, Calif., a corporation of California
Filed June 30, 1960, Ser. No. 39,931
17 Claims. (Cl. 70—278)



1. In combination with lock means movable between locking and unlocking positions, electrical actuator means for said lock means, and electrical operating means for the actuator means and having an electric circuit including adjustable code setting switch means and code matching switch means, the operating means being operable upon matching of the said code setting and matching switch means to complete the electric circuit, whereby to effect actuation of the lock means to unlocking position.

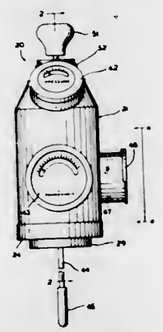
3,100,390
METHOD OF AND APPARATUS FOR DETERMINING PHYSICAL PROPERTIES OF MATERIALS
William B. Banks, Houston, Tex., assignor to Automation Products, Inc., Houston, Tex., a corporation of Texas
Filed Dec. 26, 1957, Ser. No. 705,417
15 Claims. (Cl. 73—32)

1. An apparatus for determining physical properties of materials in an enclosure comprising, a housing adapted to be connected to the enclosure, vibratory means, said means including two flexible rods, said rods supported by the housing intermediate the ends of said rods, a single paddle secured to one end of each of said



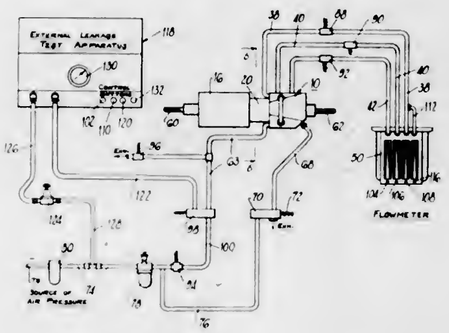
flexible rods and positioned for contact with the material, means in the housing for transversely vibrating one of said rods thereby vibrating the paddle and the second rod, and means in the housing for measuring the amplitude of vibration of the second rod.

3,100,391
AUTOMOTIVE COOLING SYSTEM TESTER
Ralph Mansfield, Chicago, Ill., assignor to Auto-Test, Incorporated, Chicago, Ill., a corporation of Illinois
Filed Dec. 26, 1957, Ser. No. 705,436
9 Claims. (Cl. 73—40)



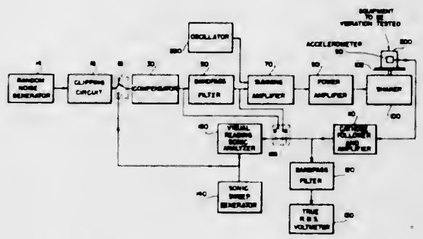
9. In a cooling system tester for an internal combustion engine employing liquid coolant and having a radiator and a thermostat, a housing having a chamber therein, said chamber having an opening therefrom, said housing including means at said opening for securing said housing to the filler neck of the radiator of said engine, a second opening therefrom, said housing including means at said second opening for securing the usual radiator cap for said radiator at said second opening, means operatively connected to said chamber for measuring the pressure within said chamber and said cooling system, and means operatively connected to said chamber for measuring the temperature of the coolant at said filler neck including a vapor bulb extending in the coolant at said filler neck, said radiator cap being adapted to be secured to said second opening when the dynamic condition of said radiator cap, said radiator, and said thermostat are being tested and said housing is secured to said filler neck at its said first opening.

3,100,392
VALVE TESTING APPARATUS
Robert L. Skinner, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,014
3 Claims. (Cl. 73—46)



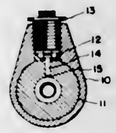
1. A valve testing apparatus comprising, in combination, a housing unit adapted to house a valve to be tested, said valve having a plurality of ports in its casing, said ports including first and second inlet ports, first and second outlet ports in series flow relationship with said first and second inlet ports, respectively, and an exhaust port adapted to communicate with said first and second outlet ports, a plurality of conduits adapted to be connected to said ports, power operated means including a plurality of single acting pressure differential operated motors for coupling the conduits to the valve ports, first manually operated means for locking a valve in place in the housing, second manually operated means for bodily moving the valve to any one of its operative positions when positioned in the housing unit, said single acting pressure differential operated motors being simultaneously operated independently of said second manually operated means, a fluid pressure indicator unit connected with the conduits and operative, during a test of the valve, to indicate the pressure exerted by a power fluid flowing within one or more of the conduits; together with a source of fluid pressure operably connected with one of said conduits, said conduit being connected to the said first and second intake ports of the valve being tested.

3,100,393
RANDOM VIBRATION TESTING SYSTEM
Raymond Mack Bell, Sunnyvale, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 4, 1960, Ser. No. 148
5 Claims. (Cl. 73—71.6)



1. A vibration testing system comprising in combination: a shaker, means on said shaker to which a test specimen can be mounted for vibration, energizing means for said shaker constructed and arranged so as to permit an adjustment of the overall frequency response of a signal applied thereto and the frequency response of the applied signal in each of a plurality of frequency bands, an accelerometer mounted so as to provide a signal corresponding to the acceleration produced by said shaker, amplification means connected to said accelerometer, a visual reading sonic analyzer to which the output of said amplification means is fed, means for periodically sweeping said sonic analyzer through a band of sonic frequencies at a rate sufficient to provide a continuous visible display thereon, a signal source having a predetermined power spectral density, and means for selectively applying the output of said means for sweeping and the output of said signal source to said energization means.

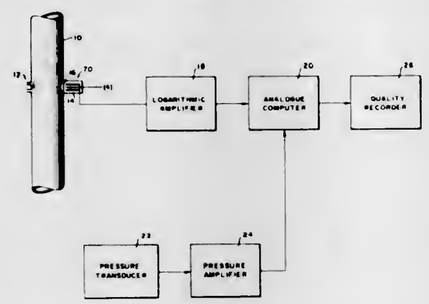
3,100,394
PIEZOELECTRIC GAGE MOUNT
C Walton Musser, Beverly, Mass., and Matthew Moldofsky, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 4, 1960, Ser. No. 12,881
1 Claim. (Cl. 73—167)
(Granted under Title 35, U.S. Code (1952), sec. 266)



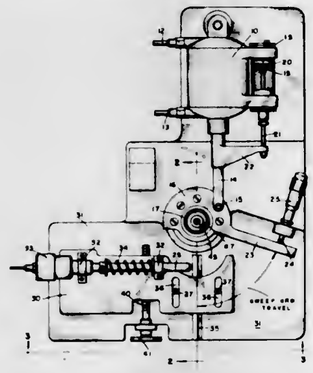
A gun barrel having a bore and having in combination therewith a mount for a piezoelectric gage, said mount comprising a pear shaped yoke having substantially uniform thickness for over half its extent and provided with a threaded opening through the neck of the pear shaped yoke, said neck being thicker than the yoke portion which is opposite thereto, a piezoelectric gage being threaded into said neck, said yoke fitting around said barrel and having its threaded opening aligned with a barrel opening normal to the bore, a piston in said barrel opening which is normal to said bore and extending into said yoke opening in contact with said gauge, a flat portion on said barrel concentric with said openings and piston, a retainer threaded into the threaded yoke neck opening and bearing tightly against said flat portion on the barrel to initially preload said yoke in tension and to assure concentricity of the piston with said yoke and its opening, whereby said yoke may be preloaded in the direction of pressure application to the barrel and yoke to reduce the effects of mount vibration, and means including a synthetic rubber wafer at an inner end of said piston within the barrel opening which is normal to the bore for reducing erosion at an inner end of said piston due to hot gases.

3,100,395
STEAM QUALITY INDICATOR
Thomas J. Morley, 12710 Turkey Branch Parkway, Rockville, Md.
Filed Feb. 25, 1959, Ser. No. 795,567
13 Claims. (Cl. 73—192)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A steam condition indicator comprising radiation transmitting means and receiving means responsive to said radiation for measuring the density of a given volume of steam, pressure transducing means for measuring the pressure of said steam, and computing means connected to said pressure transducing means and to said receiving means for calculating the steam quality.

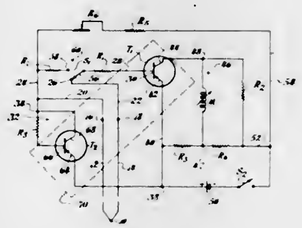


3,100,396
LIQUID VOLUME COMPENSATOR
Norman A. Nelson, South Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 16, 1959, Ser. No. 859,966
1 Claim. (Cl. 73—223)



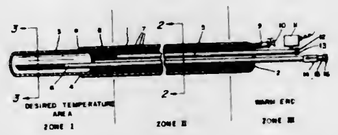
Apparatus for correcting the volume of liquid measured in a metering tank to compensate for volume differences of the liquid resulting from changes in factors that affect measurement of the liquid comprising:
- a rotatable shaft;
- a plate arranged on said shaft for rotation therewith;
- a sweep arm connected to said plate;
- a linearly movable arm connected to said plate adapted to rotate said plate;
- first stop means adapted to prevent movement of said sweep arm upon movement of said sweep arm a selected distance in one circumferential direction;
- second stop means adapted to prevent further movement of said sweep arm upon movement of said sweep arm a sufficient distance in an opposite circumferential direction;
- means responsive to changes in one of said factors adapted to move said first stop means to increase or decrease travel of said sweep arm;
- means responsive to changes in another factor adapted to move said second stop means to increase or decrease travel of said sweep arm;
- a rotation counter adapted to measure the amount of rotation of said shaft between said first and second stop means;
- a cylinder;
- a piston arranged to reciprocate in said cylinder and connected to said linearly movable arm;
- a source of fluid pressure;
- means connecting said source of fluid pressure to said cylinder to effect reciprocation of said piston and said linearly movable arm;
- means releasably engaging said rotation counter and said shaft; and
- means connected to said shaft adapted to move said shaft into and out of engagement with said counter.

3,100,397
PYROMETER APPARATUS
Veikko K. Peltola, Chicago, Ill., assignor to Illinois Testing Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 5, 1958, Ser. No. 719,247
16 Claims. (Cl. 73—359)



15. A pyrometer apparatus comprising a thermocouple of low impedance, a moving coil galvanometer having a high critical damping resistance, and an active semiconductor device acting as an impedance converter and amplifier connected between the thermocouple and galvanometer, the input circuit of the semi-conductor device having a resistance element and said thermocouple connected in series therein, with the resistance element having an impedance substantially higher than the impedance of the thermocouple whereby changes in the impedance of the input circuit will have negligible effect upon the response of the galvanometer.

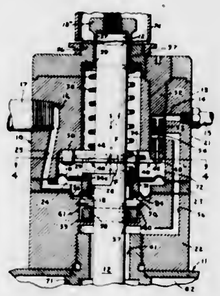
3,100,398
DEVICE FOR THE REMOTE RECORDING OF CRYOGENIC TEMPERATURES
Werner R. Munk, 630 W. Ranch Drive, Chesterland, Ohio
Filed Oct. 27, 1960, Ser. No. 65,312
10 Claims. (Cl. 73—368.4)

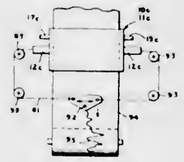


1. In a device of the character described, an elongated tubular housing, a metallic bulb mounted in one end of said housing in sealed relation to said housing, a sensing conduit extending from said bulb and through said housing, a second conduit extending through said housing in spaced substantially parallel relation with said first conduit for introducing a gas under pressure

into said bulb, the space between said conduits and the walls of said housing being evacuated.

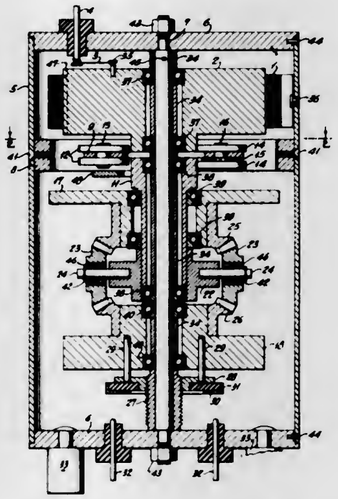
3,100,399
PNEUMATIC SERVO-POSITIONER UNIT
John W. Robins, Westwood, Mass., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed July 21, 1961, Ser. No. 125,859
23 Claims. (Cl. 73—391)





16. In a pneumatically-powered recorder system; a marker supported and disposed for movement in either of two substantially opposite directions, means for having recorded thereon by said marker a graph and supported and disposed for movement in a direction angular with respect to the direction of said movement of said marker, and a pneumatic actuator and servo-positioner unit for imparting said movement to said marker and provided end-to-end thereof with an opening; said unit comprising an element disposed in said opening for movement in either direction along its axis to any given axial position and so disposed with its said axis substantially coaxial with respect to said opening, a diaphragm fixed with respect to said element, differential-pressure means responsive to input-signal pressure applied to said unit, valve means engaged with respect to and controlled by said differential-pressure means and as so controlled functional to derive from substantially constant positioner-supply pressure applied to said unit derivative values of such pressure, said unit being provided with a passage for the application to said diaphragm of said derivative values of said positioner-supply pressure, and a coil spring disposed about said element between said diaphragm and said differential-pressure means; and means connecting said element and said marker for said movement of the latter in a direction and to an extent corresponding to the direction and extent of movement of said element, said spring being compressed between said diaphragm and said differential-pressure means and functional in accordance with the extent of its compression to give to said unit a servo-positioning characteristic with respect to said element thus to hold the latter and said marker in repose at their respective given positions for the particular derivative value of positioner-supply pressure being supplied to said diaphragm.

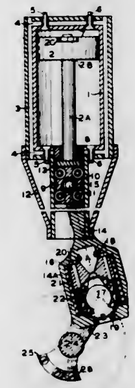
3,100,400
DOUBLY INTEGRATING ACCELEROMETER
Nathaniel B. Wales, Jr., Sharon, Conn., assignor to The Metrodynamics Corporation, a corporation of New Jersey
Filed Aug. 11, 1961, Ser. No. 130,849
7 Claims. (Cl. 73—490)



7. In an integrating accelerometer, the combination comprising: an integrating flywheel; a mass pendulous about an axis; a torque source rotor; a torquing rotor member; differential gear means to distribute the torques applied to said torquing member between said integrating flywheel and said pendulous mass; modulatable torque coupling means for applying torque from said torque source rotor to said torquing member; means responsive to the angular displacement of said pendulous mass about its axis to modulate said coupling means in a direction tending to angulate said pendulous means toward a predetermined angular position; said torque source rotor being a fuse restrained energy storage flywheel, and said means to rotate said torque source being a spring.

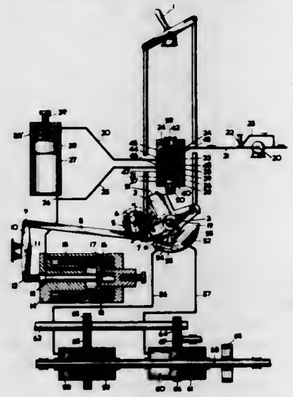
3,100,401
PRESSURE RETAINING MEANS FOR DOUBLE-ACTING PISTON ENGINES
Alfred M. Caddell, 1318 W. Hunting Park Ave., Philadelphia 40, Pa.
Filed May 2, 1960, Ser. No. 26,212
3 Claims. (Cl. 74—36)

1. The combination with a rotatable crank assembly and a reciprocating crosshead, of a rod and associated construction movably connecting said crosshead with the crank assembly for permitting halts for a period of time in the movements of said crosshead, said assembly establishing a first and a second crankthrow cycle having a top and a bottom center respectively, said crank assembly including a crankpin having a center and a rounded surface and a cam having a base and an apex projecting radially therefrom, a cam follower mounted in the rod at the end opposite said crosshead and having an apex for normally contacting said rounded surface, an enveloping structure forming part of said construction mounted on said crankpin and carrying radial bearings positioned on each side of the crankpin cam for permitting, relative to said structure, uninterrupted rotation of the crankpin, said rod terminating in an appendage having sides and a base and carrying bearings for permitting simultaneously with said rotation reciprocal movement of said structure, a second cam follower mounted in the base of said appendage, said second cam follower having an apex for normally contacting the rounded surface of said crankpin, the base of said crankpin cam during the first crankthrow cycle contacting the apex of the rod cam follower at said top center and subsequently lending its radial length thereto for halting said crosshead at said top center until the apex of said crankpin cam passes the apex of said rod cam follower at



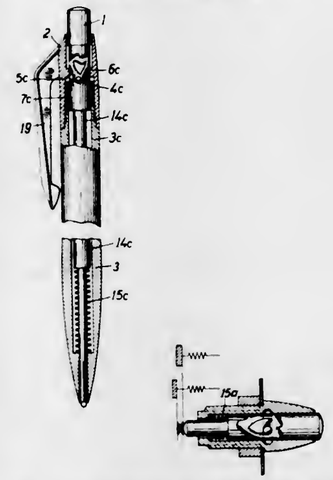
a location in the cycle past top center, the base of said crankpin cam during said second cycle thereafter contacting the apex of said second follower cam follower at bottom center and subsequently lending its radial length thereto for halting the crosshead at said bottom center until the apex of said crankpin cam passes the apex of said second follower at a location in the cycle past bottom center.

3,100,402
PRESSURE FLUID CONTROL DEVICE FOR A PROPULSION PLANT, PARTICULARLY FOR MARINE PROPULSION
Marius Cornelis Pieterse, 126 Rijndijk, Voorschoten, Netherlands
Filed Nov. 21, 1960, Ser. No. 70,866
6 Claims. (Cl. 74—472)



1. A pressure fluid control device for a propulsion plant, comprising in combination:
(*a*) a hydraulically operated control member for an energy supply;
(*b*) a hydraulically operated control member for reversible movement transmitting means;
(*c*) an actuating member common to both control members and mechanically coupled to said transmitting means control member;
(*d*) a source of pressure fluid;
(*e*) valve means including drain means and in communication with said pressure fluid source and having a number of control positions, one position directing pressure fluid to said energy supply control member and another position shutting off this flow, said valve means being connected to said actuating member and being positively closed thereby with respect to said pressure fluid source during the time said transmitting means are reversing and being open during the time the energy supply is being controlled;
(*f*) variable volume hydraulic retarding means having a displacement member movable therein between extreme positions, a variable volume chamber defined on each side of said displacement member, one chamber being connected to the valve means portion for actuating said energy supply control member, the other chamber being connected to said valve means; and
(*g*) said drain means being connected to said other chamber and disconnected from said one chamber when the valve means supply pressure fluid to said energy supply control member, and connected to said one chamber and disconnected from said other chamber when the valve means prevent supply of pressure fluid to said energy supply control member.

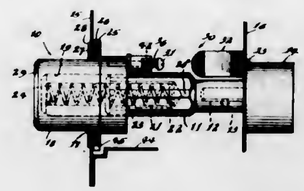
3,100,403
PUSH-BUTTON MECHANISMS
Alfred Döttlinger, Kirchdorf an der Krems, Austria, assignor to Jacob Ritter K.G., Brensbach, Odenwald, Germany, a firm of Germany
Filed June 16, 1959, Ser. No. 820,764
Claims priority, application Germany June 26, 1958
3 Claims. (Cl. 74—503)



1. A push-button mechanism comprising: a stationary sleeve means for enclosing and supporting the rest of the mechanism; a one piece push-button means longitudinally slidable in said sleeve means between axially spaced positions for alternating actuation therebetween; opposing control grooves defined on said sleeve and push-button means, said grooves being shaped and positioned relative to each other to cross in an intersection that moves repetitively in a closed cycle as said push-button means

is slidably actuated in said sleeve means between said axially spaced positions; a ball means adapted to fit between said opposing control grooves in said intersection and carried therein as said intersection moves in said closed cycle, said control grooves defining lock positions for said ball means corresponding to said axially spaced positions, and said ball means cooperating with said grooves for restricting said longitudinally slidable push-button means to alternate actuation between said locking positions; and a ball-means insertion groove for initially inserting said ball means in the intersection of said two control grooves, said insertion groove being defined and extending axially in said push-button means, said insertion groove having two oppositely disposed ends, one said end opening axially outwardly and there forming with said control groove of the sleeve means an intersection into which said ball is initially placed, and the other said end tapering radially outward to form a constricted inner end opening into the control groove on said push-button, said constriction requiring an application of axially directed force to said ball means to push it past said constriction and into the intersection of said control grooves, said axially directed force being applied by the initial actuation of said push-button means.

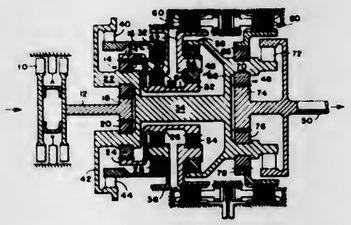
3,100,404
RETRACTABLE KNOB DEVICE
William T. Boeddeker, Cincinnati, and Harold L. Frick, Hamilton, Ohio, assignors to Whirlpool Corporation, a corporation of Delaware
Filed July 13, 1961, Ser. No. 123,681
7 Claims. (Cl. 74—553)



1. A retractable device for selectively rotating a rotatable member comprising: a connector shaft; means for securing said shaft to said rotatable member; a knob; means connecting said shaft and knob for non-rotative, axial movement therebetween; means urging said knob axially to an extended position; means for releasably securing said knob in an axially retracted position; and means effectively covering said securing means as a result of movement of said knob to a release position beyond said retracted position and permitting movement of said knob by said urging means from said release position to said extended position.

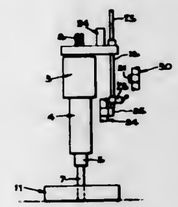
3,100,405
MULTI-SPEED SPLIT-POWER REDUCTION GEAR
Edward A. Brass, Norwalk, Conn., assignor to Avco Corporation, Stratford, Conn., a corporation of Delaware
Filed Apr. 23, 1962, Ser. No. 189,638
3 Claims. (Cl. 74—764)

1. In combination with a split-power gear set reduction between an input and output shaft of the type employing a primary and a secondary gear set stage each with a central gear, intermediate gears, a carrier, and a ring gear, the primary gear set carrier being planetary and rotating with the output shaft and the secondary gear set stage having a fixed carrier, such two gear set stage split-power arrangement employing a drive connection between the input shaft and the primary stage central gear, and a second drive connection between the primary stage ring gear and the secondary stage central gear, and a rotative connection between the secondary stage ring gear and the output low speed shaft, the combination therewith of:
at least one additional gear set stage in axial alignment with said input and output shaft and with said primary and secondary gear set stages, said additional gear set stage comprising a central gear intermediate gears, and a ring gear;
with a carrier for said intermediate gears;
a positive connection between said second stage central gear and said additional stage central gear;



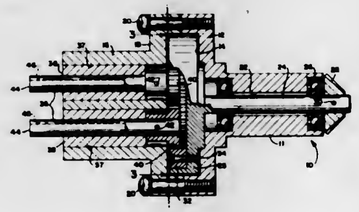
and a positive connection between said output low speed shaft and said additional stage ring gear;
a brake selectively actuable to hold said additional gear set stage carrier from rotation or to allow free rotation thereof;
said rotative connection comprising a one-way drive connection between said second stage ring gear and said first stage carrier effecting rotative connection of said second stage ring gear to said first stage carrier and said output shaft only when drive is in direction effected when said additional gear set carrier is allowed freedom of rotation.

3,100,406
AUTOMATIC CONTROL APPARATUS FOR SPINDLES
Robert N. Knoop, Ludlow, Ky., and Donald L. Gecks, Cincinnati, Ohio, assignors to The Foodick Machine Tool Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 22, 1960, Ser. No. 51,023
14 Claims. (Cl. 77—4)



1. A control apparatus for regulating the axial motion of a tool spindle, said spindle having power means for advancing and retracting the same axially, said control apparatus comprising, a group of shiftable gauging elements adapted to control the extent of spindle motion from a retracted position, means for shifting said gauging elements to a selected spindle measuring position, a control element connected to said spindle and movable axially in unison therewith relative to said gauging elements, said control element adapted to translate the gauging elements upon axial advancement of the spindle to an extent determined by said gauging elements, said control element adapted to delay the operation of said spindle power means upon translating said gauging elements, thereby to stop the spindle at a predetermined axial position, tool length compensating means interconnecting the spindle with said control element, and power means connected to the tool length compensating means for shifting said control element axially relative to the spindle in an automatic manner, said compensating means adapted to vary the position at which the spindle is stopped by operation of the gauging elements in accordance with the length of the tool which is carried by the spindle.

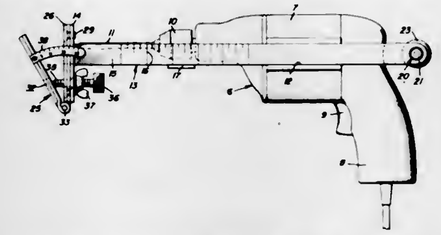
3,100,407
MULTIPLE SPINDLE ATTACHMENT
Michael Cherundolo and John B. Wandel, Scranton, Pa., assignors to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas
Filed Mar. 30, 1962, Ser. No. 183,896
2 Claims. (Cl. 77—22)



1. A machine tool attachment comprising:
a hollow, cylindrical-shaped shank having a major axis, one end of said shank having an enlarged, cup-shaped flange,
a drive spindle rotatably mounted in the hollow shank and having an enlarged cup-shaped flange at one end adapted to seat in the cup-shaped flange of said shank,
an internal ring gear fixedly mounted in the cup-shaped flange of said drive spindle,
drive connecting means mounted on the other end of said drive spindle opposite said one end,
a cylindrical-shaped spindle housing having an enlarged flange at one end, said spindle housing being concentrically attached to said shank flanges,
at least a first and a second spindle each rotatably mounted in a bore in said spindle housing and being adapted to carry an operating tool,
on each of said first and second spindles having a spur gear rigidly mounted on one end so as to mesh with said internal ring gear, whereby torque transmitted to said drive spindle is simultaneously transmitted to each of said first and second spindles.

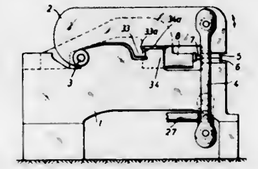
3,100,408
PORTABLE ELECTRIC DRILL PRESS
Julius P. Pufahl, 654 Webster St., Ottawa, Ill.
Filed June 15, 1962, Ser. No. 202,767
9 Claims. (Cl. 77—55)

8. A portable electric drill attachment comprising elongated guide means adapted to have an electric drill guidingly mounted thereon for movement longitudinally of said guide means and with the axis of rotation of the chuck of the drill generally paralleling said guide means, a transversely extending mounting plate secured to one end of said guide means, a workpiece-contacting plate hingedly mounted from and for swinging movement relative to said mounting plate, and adjustable means supported from one of said plates and engaged with the other plate and operative to positively adjust the position



to which said workpiece-contacting plate may be swung relative to said mounting plate.

3,100,409
FORGING AND UPSETTING MACHINES WITH IMPROVED CLAMPING JAWS
Heinrich Esser and Werner Strotmann, both of Leverkusen, Germany, assignors to Eumuco Aktiengesellschaft für Maschinenbau, Leverkusen, Germany, a firm
Filed Aug. 10, 1961, Ser. No. 130,540
Claims priority, application Germany Aug. 12, 1960
7 Claims. (Cl. 78—17)

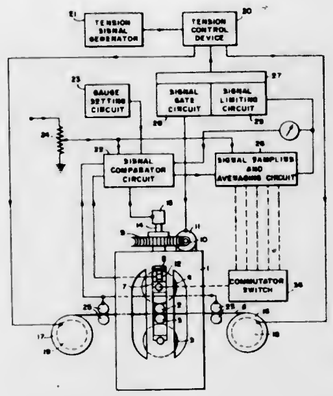


1. A forging and upsetting machine comprising a machine bed, a jaw-yoke having pivot means pivotally connecting the same to said machine bed, divided clamping dies carried by said machine bed and said jaw-yoke, an upsetting punch positioned between said jaw-yoke and said machine bed for cooperation with said clamping dies, drive means connected to said upsetting punch and said jaw-yoke for reciprocating said upsetting punch and opening and closing said clamping dies in timed relation, and means for locking said jaw-yoke to said machine bed intermediate said clamping dies and said jaw-yoke pivot means against movement in the direction of movement of said upsetting punch to thereby shorten the length of said jaw-yoke subject to elongation by the force exerted thereon through the associated one of said clamping dies during the operation of said upsetting punch.

3,100,410
CONTROL SYSTEMS
Leonard R. Hulls, Fort Washington, Pa., and Bjarne P. Jacobsen, Westport, Conn., assignors to Canadian Westinghouse Company, Limited, Hamilton, Ontario, Canada
Filed June 23, 1960, Ser. No. 38,357
Claims priority, application Canada June 27, 1959
7 Claims. (Cl. 80—56)

1. In apparatus for controlling the operation of a machine device, the combination of error signal means operative with said machine device for producing an error signal containing a periodic disturbance in accordance with the operation of said machine device, signal sampling means operative with said error signal means for sampling said error signal at predetermined periods of time, signal averaging means operative with said signal sampling means to average each sample of said error signal for deriving from each of the latter samples a control signal substan-

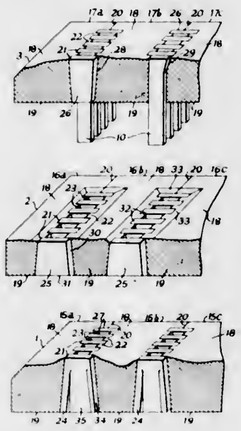
tially free of said periodic disturbance, and a control member operative with said machine device and responsive



to said control signal for controlling the operation of said machine device.

3,100,411
PRESS TOOLS

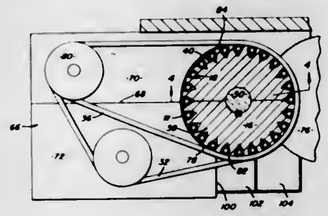
John Airlie, Glasgow, Scotland, assignor to Carrick Precision Tools Limited, a company of Great Britain
Filed Feb. 8, 1960, Ser. No. 7,419
Claims priority, application Great Britain Apr. 22, 1959
9 Claims. (Cl. 83—138)



1. For a press tool capable of forming in a component a plurality of apertures arranged generally in at least one row a part comprising first and second body portions, upper, lower and side faces on each body portion, the said body portions being arranged with their side faces registering with one another, means to maintain said side faces in opposed relationship, a corresponding series of grooves formed in the side face of each body portion from the upper to the lower faces thereof, a base for each groove, ribs separating the grooves, outer end faces of the ribs and a plurality of accurately formed spacer elements each extending between the bases of corresponding grooves on each body portion to define with the outer end faces of said ribs a plurality of slots extending through said press tool part from the top to the bottom thereof.

3,100,412
VERTICAL FEED CUT-OFF SAW

Robert J. Myotte, Euclid, Ohio, assignor to National Copper and Smelting Company, Cleveland, Ohio, a corporation of Ohio
Filed July 8, 1959, Ser. No. 825,730
6 Claims. (Cl. 83—163)

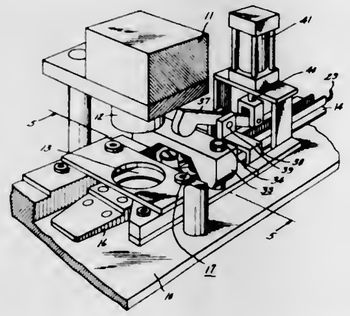


2. In a gravity feed cut-off saw for tube and bar stock having a stock indexing drum rotatable substantially about a vertical axis, and saw means to cut stock into predetermined lengths, the improvement comprising: upper and lower belt means circumferentially engaging said drum, said lower belt means coming into engagement with said drum at a circumferential position beyond said position at which said upper belt means makes engagement; gravity feed slots longitudinally aligned about the periphery of said drum; a stock supporting platform beneath said drum and overlapped by that drum portion not belt engaged; and said saw means including a saw blade vertically positioned between said platform and said lower belt and overlapped by the belt engaged portion of said drum; an elongated cylindrical stock supporting rack secured to the top side of said drum in axial alignment therewith; and adapted to support a substantial length of stock; said rack having a plurality of radially projecting partitions spaced about its periphery to define stock receiving compartments in communication with said drum and gravity feed slots; said drum and rack being inclined to the vertical sufficiently to maintain stock in top side compartments; and belt means in circumferential engagement with all but said top side compartments including a pair of pulleys positioned on opposite sides of said top side compartments and a belt threaded on said pulleys to pass from one pulley around the underside of said rack, around the other pulley and returned to said first mentioned pulley, said belt and said rack moving in unison to retain workstock therein whereby said top side compartments are freely accessible for side loading of stock in said rack, and whereby stock placed in said top side compartments is gravity fed into said drum slots onto said platform when said stock is indexed to the belt free portion of said drum, said stock thereafter being indexed between said belts and said drum into engagement with said saw blade, the random length tail ends of said stock, of lengths equal to or less than the distance of said platform to the lower edge of said upper belt, dropping free from said drum between said drum engaging positions of said upper and lower belt means.

3,100,413
DUCT-PIERCING MACHINE

Joseph J. Varga, Fairfield, Conn., assignor to General Electric Company, a corporation of New York
Filed July 29, 1959, Ser. No. 830,336
4 Claims. (Cl. 83—180)

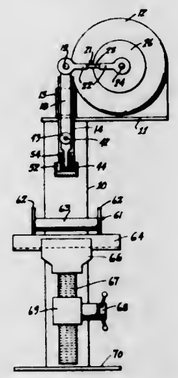
1. A duct-piercing machine comprising a base, a punch mounted on said base, said punch having reciprocating movement with respect to said base, an elongated duct-mounting arm having a movable end positioned between said base and said punch and an anchored end extending away from said punch, a die positioned to make matching engagement with said punch mounted on the movable end of said arm, a clamp mounted on said base, a portion of said clamp having reciprocal movement parallel to the reciprocal movement of said punch, said portion being spring biased to a release position and having beveled undersurfaces spaced with respect to said punch



for making contact with a duct to center a section of duct with respect to said punch, and a die-positioning device mounted on said arm near said die, said die-positioning device being adapted to fit inside a duct and having controllable expansion elements adapted to engage the sides of the interior surface of a duct to position said die with respect to said duct and align said die with said punch.

3,100,414
OSCILLATING WIRE CUTTER

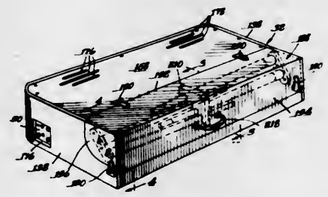
Ellwood Watkins, Randall Stanley Watkins, and John Halden Watkins, all of Glen Road, Sandy Hook, Conn.
Filed June 26, 1961, Ser. No. 119,729
8 Claims. (Cl. 83—437)



1. In a machine for removing wire from a spool having end flanges, a motor and support therefor, a back plate extending from said support, lever arm means pivoted to said plate, means for swinging said lever arm means back and forth including an eccentric rod means connected to said lever arm means and driven by said motor, wire shearing cutter means on said back plate including a fixed blade having vertical side edges and a movable blade both blades having parallel horizontally disposed serrated matched cutting edges, slide means operated by said lever arm means for oscillating said movable blade in a straight line, means for applying pressure to said lever arm means for urging the latter toward said back plate, bearing pin and ball means on said lever arm means for applying pressure to said movable blade, means for adjusting the tension of said pressure applying means, a spool support aligned with said cutter means for mounting the spool for vertical and horizontal movement relatively to said cutter means, said support including a rack, means for raising and lowering the rack to vertically move the spool support relatively to the cutter to effect severing of the work and a holder mounted on the rack and shaped to center said spool laterally with respect to the cutter and longitudinally of which holder said spool may be manually adjusted lengthwise relatively to the cutter means, and said rack means being vertically aligned with the cutter means.

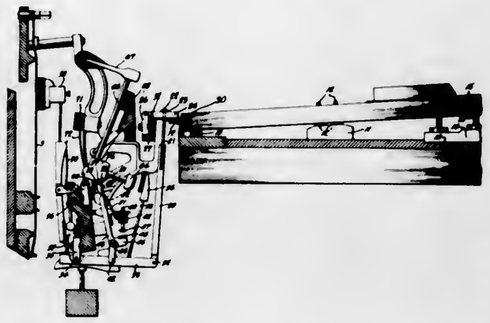
3,100,415
PIANO CASE

Clifford W. Andersen, De Kalb, Ill., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Original application Oct. 14, 1955, Ser. No. 540,530. Divided and this application Sept. 27, 1960, Ser. No. 58,662
6 Claims. (Cl. 84—177)



1. In a portable piano, the combination comprising: a piano case of suitcase-like configuration having a keyboard and having a fall cover movable relative to the remainder of said case, said case including said fall cover being relatively wide and deep side-to-side and front-to-back and relatively low from top to bottom when in horizontal playing position, said case comprising similar substantially rectangular top and bottom walls having a major dimension along the width of said case and a minor dimension from front-to-back of said case, said case further having a peripheral wall having a predetermined height less than either dimension of the top and bottom walls; said fall cover covering said keyboard with the upper portion of said fall cover substantially coplanar with the top surface of the remainder of the case and with the under surface of said upper portions spaced above said keyboard, said fall cover including a top panel forming a part of said top wall, a front panel forming a part of said peripheral wall, and a pair of opposite end panels interconnecting said top and front panels and forming parts of said peripheral wall; fastener means detachably securing said fall cover to the remainder of said case; a plurality of legs the axial dimension of which is less than the major dimension of said fall cover; threaded fastening means at one end of each of said legs; complementary threaded fastening means on said case bottom wall for detachably mounting said legs in depending relationship to said case for supporting said case; threaded fastening means at opposite ends of said fall cover on the inside of said end panels for securing some of said legs at one end of said fall cover and the remainder of said legs at the other end of said fall cover in partially overlapping relationship with the first mentioned legs; means intermediate the ends of said fall cover for securing the overlapping portions of said legs; and a handle secured to said peripheral wall and of a size to be grasped by the hand for carrying of said case in depending position from said handle.

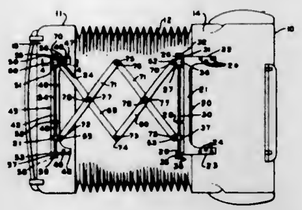
3,100,416
PIANO ACTION
Phillip J. Roehrig, De Kalb, Ill., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Apr. 18, 1960, Ser. No. 22,919
12 Claims. (Cl. 84—240)



1. An action for a piano with strings disposed substantially vertically; and comprising a key having inner and outer ends, a depending sticker disposed inwardly of the inner end of the key, an auxiliary whip, fixed frame means, means pivotally mounting said auxiliary whip on said fixed frame means at a position spaced inwardly from the inner end of the key with said auxiliary whip extending toward said inner end of said key, said auxiliary whip supporting the upper end of said sticker with the outer end of said auxiliary whip disposed closely adjacent the inner end of said key, mutually interengaging means on the auxiliary whip and key for actuating the sticker in response to key depression, a main whip pivotally mounted on a fixed frame member and pivotally connected to the lower end of said sticker, a pivoted hammer and arm assembly including a knuckle, a jack pivotally connected to said whip and engageable with said knuckle for impelling the hammer toward striking position, jack spring means mounted on said fixed frame means and bearing on said jack above its pivotal connection with said main whip for positioning the jack for engagement with the knuckle during return of the action toward a position of rest, a depending stop button carried by said fixed frame means and engageable with an abutment portion on said jack for disengaging the free end of the jack from said knuckle and against the action of said jack spring means during movement of the action towards striking position, a catcher associated with the hammer and arm assembly, a backcheck carried by said whip for cooperation with said catcher, and hammer spring means urging the pivoted hammer and arm assembly toward a position of rest.

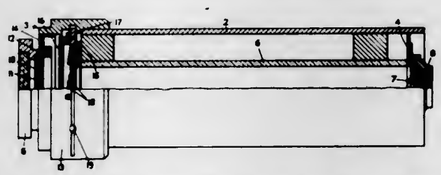
3,100,417
ACCORDIONS
Anthony De John, 1314 S. 13th St., Philadelphia 47, Pa.
Filed June 6, 1961, Ser. No. 115,121
5 Claims. (Cl. 84—376)

1. In combination with a portable accordion having two reed carrying heads and an interposed bellows, one of said heads having the rear thereof for engagement with the body of the player during playing of the accordion and the other head being movable with respect to said one head, apparatus for controlling the relative movement of said other head with respect to said one head comprising a first vertically elongated unitary bracket member mounted on the rear of said one of said heads; said first bracket member having a plate portion disposed at an angle to the rear of said one of said heads to space the bellows from the body of the player, a second vertically elongated unitary bracket member mounted on the rear of said other of said heads, a vertical rod carried by each of said bracket members, and a plurality of pivotally connected links having portions pivotally connected to said rods and portions slidably and pivotally connected to said



rods and providing a parallel motion connection between said heads retaining the heads at the same level and permitting relative movement of said heads toward and away from each other and swinging of said other head about the vertical pivotal axis provided by the vertical rod of its bracket member.

3,100,418
OPTICAL APPARATUS FOR PRODUCING CHANGING DESIGNS
Woolf Posner, 27 Buckingham Palace Mansions, Buckingham Palace Road, London SW. 1, England
Filed Apr. 20, 1959, Ser. No. 807,397
4 Claims. (Cl. 88—15)

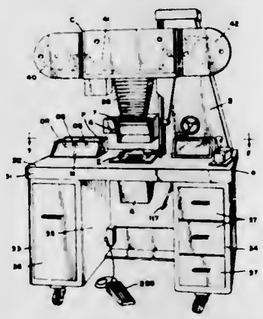


2. An optical apparatus for producing ever changing designs comprising a body in the form of a hollow tube of uniform circular cross-section to provide a light path, an inlet end of the body through which light rays may enter the body, an outlet end of the body through which light rays may leave the body, a rotatably mounted pattern producing cell adjacent the inlet end of the body, light polarizing discs in the cell through which light rays may be passed, loose pieces of interleaving material in random arrangement within the cell arranged so that they can slide over one another as the cell is rotated, a multi-vision lens with an irregular surface adjacent to the outlet end of the body, and elongated mirrors arranged within the tube to form a light passage of triangular cross-section extending along the length of the body from the pattern producing cell to the multi-vision lens whereby designs giving a three-dimensional effect including partly superimposed elements may be produced.

3,100,419
PHOTOGRAPHIC PRINTER
Roy A. Clapp, Minneapolis, Minn., assignor to Pako Corporation, Minneapolis, Minn., a corporation of Delaware
Filed Jan. 30, 1959, Ser. No. 790,226
11 Claims. (Cl. 88—24)

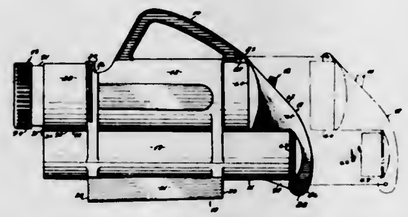
1. A photographic printer for color printing comprising a holder for an image bearing support, means for supporting multiple sensitized photographic material in spaced relation to said support, illuminating means forming a composite light stream containing a plurality of

light-components of different wave lengths for illuminating said support, an objective lens system gathering light from said support and focusing the same to form a printing beam and transmitting the said beam to the sensitized material to form a projected image thereon, a single photo cell, a beam splitter disposed in the path of the projected light stream and diverting a sample beam of the same to said photo cell, a plurality of analyzing filters supported for successive movement into and out of the path of said sample beam, individual cut-off means for individually cutting off each of said light-components, a shutter disposed between said beam splitter and said image bearing



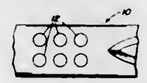
support, means for opening said shutter to start a printing cycle, switches corresponding with said analyzing filters and functioning while said filters are in the path of said sample beam, a plurality of photo cell circuits each connected to one of said switches and receiving signals from said photo cell, summing means connected to said photo cell circuits and storing the energy derived therefrom, separate trigger circuits individually actuated by the energy from said summing means and each actuating one of said cut-off means, and shutter operating means operable upon the operation of all of said cut-off means and closing said shutter.

3,100,420
TOY SLIDE PROJECTOR
James O. Kuhn, Cincinnati, Ohio, assignor, by mesne assignments, to Kenner Products Company, a corporation of Delaware
Filed Apr. 3, 1961, Ser. No. 100,424
4 Claims. (Cl. 88—26)



1. A toy projector comprising a molded plastic body member configurated to form a tubular projection chamber including a slide receiving slot and a tubular battery chamber, said projection chamber being superposed upon said battery chamber, a first Z-shaped conductive strip including an arm depending into said battery chamber at one end thereof and another arm extending upwardly into said projection chamber, an electric lamp bulb, means mounting said electric lamp bulb within said projection chamber in contact with the upwardly extending arm of said first Z-shaped conductor, a lens unit, means telescopically mounting said lens unit at the forward end of said projection chamber, an end member engaging the opposite end of said projection chamber from said lens unit and the adjacent end of said battery chamber, a second Z-shaped conductor carried by said end member, said second Z-shaped conductor having a depending arm extending across the opposite end of said battery chamber from said first Z-shaped member, and an upstanding arm disposed for engagement with the end of said bulb.

3,100,421
POST-LAUNCH FLOODING CONTROL APPARATUS
Tsoy K. Moy, Santa Clara, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 8, 1962, Ser. No. 165,050
2 Claims. (Cl. 89—1.7)

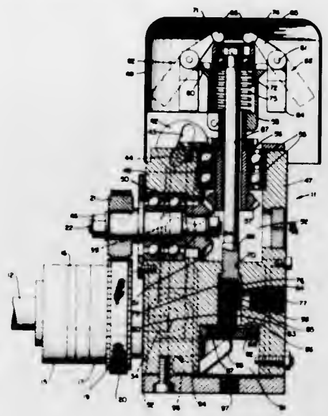


1. A submergible missile launching system comprising in combination
a vertically oriented missile launching tube, and
a post launch flooding control valve assembly comprising annular abutment means secured in said tube adjacent the top thereof and disposed in the path of travel of said valve assembly,
partitioning means slidably mounted in said tube and normally reciprocable between the bottom of said tube and said abutment means, said partitioning means having a fluid inlet opening therein, a fluid actuated check valve normally sealing said opening slidably mounted within said partitioning means for controlling the flow of fluid through the opening according to the position of the partitioning means in the tube and the position of the check valve in the partitioning means, a plurality of stud bolts carried by and disposed within the partitioning means for slidably mounting the check valve, sealing means carried by said bolts, seat means carried by the check valve and cooperating with said sealing means on the bolts for providing a fluid tight connection therebetween, stop devices carried by said stud bolts at one end thereof and normally spaced from the check valve for controlling the movement of the check valve as said opening is unsealed,
a plurality of circumferentially and longitudinally spaced one-way locking devices carried by said tube to permit upward movement of said partitioning means as a missile is being launched and selectively operable between effective and ineffective conditions wherein downward return movement of said partitioning means is prevented and permitted respectively whereby the amount of inundation of said tube by ambient water after missile launching may be controlled, and annular flange means on the partitioning means engageable with said abutment means for limiting the upward movement of the partitioning means.

3,100,422
HYDRAULIC ENGINE GOVERNOR
Richard B. Clark and Helmut P. Meyer, Sidney, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed July 17, 1959, Ser. No. 827,822
7 Claims. (Cl. 91—19)

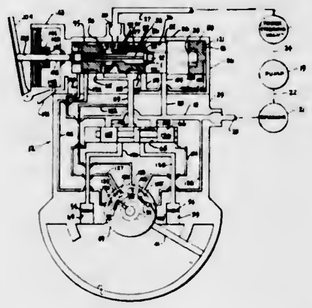
1. In apparatus including a controllable prime mover and a servo-mechanism for controlling the prime mover, the improved servo-mechanism comprising a casing having

a bore therein, a valve including a valve element reciprocable in said bore, means responsive to the speed of the prime mover for shifting the valve element, an inlet port in said casing adapted to be connected to a source of fluid pressure, the inlet port being opened to



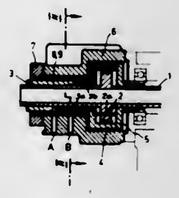
varying degrees in accordance with the position of the valve element, a piston in a bore in the casing, one side of the piston being subjected to the fluid admitted through the valve, a leakage port of a predetermined effective area through the piston, and means adapted to connect the piston to a controllable element of the prime mover.

3,100,423
WINDSHIELD WIPER
Anthony R. D'Alba, Williamsville, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Mar. 23, 1961, Ser. No. 97,838
8 Claims. (Cl. 91—283)



1. An hydraulic windshield wiper motor comprising a housing, a piston mounted for reversible movement in said housing, said piston dividing a portion of said housing into first and second chambers, first conductor means in communication with said first chamber and second conduit means in communication with said second chamber, a fluid inlet conduit in said housing, a shuttle valve for alternately placing said first and second chambers in communication with said fluid inlet conduit through said first and second conduit means, respectively, while permitting the fluid in the other of said chambers to be exhausted, pilot valve means operable in synchronism with movement of said piston for causing said shuttle valve to move back and forth to effect said alternate communication of said fluid inlet conduit with said first and second chambers, control means for setting the speed of said motor, and variable pressure regulating means responsive to said control means and to excessive motor pressure for causing the magnitude of the hydraulic pressure in said fluid inlet conduit to vary directly with the speed setting of said motor.

3,100,424
FLUID CONNECTION FOR A ROTATING CYLINDER HYDRAULIC MOTOR
André Paul Musy, Couvet, Neuchatel, Switzerland, assignor to Edouard Dubied et Cie (Societe Anonyme), Couvet, Neuchatel, Switzerland
Filed Sept. 7, 1960, Ser. No. 54,395
Claims priority, application Switzerland Sept. 10, 1959
2 Claims. (Cl. 92—106)

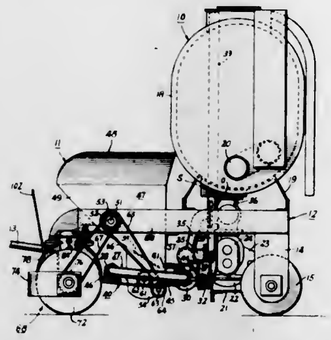


1. A rotary fluid coupling device comprising a rotatable hollow shaft having a pair of fluid conduits extending longitudinally thereof, a cylinder integral with said shaft into which said conduits open at different locations, a supporting bush for said shaft having a bore through which said shaft passes, a casing surrounding said bush, ring-like spacing elements mounted securely in said bore about the outer surface of said shaft, said spacing elements having lateral portions extending parallel with the axis of said bush and serving to position the elements securely in said bore, and said spacing elements having radially directed portions extending from said lateral portions toward said shaft, groups of ring-like sealing elements mounted with play on said shaft and disposed generally to lie concentrically within the lateral portions of a corresponding group of spacing elements, a spacing element between each group of said spacing elements in which a ring-like sealing element lies having a fluid passage in its lateral portion, said casing and said bush having aligned fluid conduits respectively communicating with each said fluid passage and through which hydraulic fluid under pressure may be introduced into annular passages defined by the respective last-named lateral portions of said last-named spacing elements and the outermost surface of said shaft and which annular passageways also communicate respectively with the fluid conduits in said hollow shaft, said ring-like sealing elements being movable axially on said shaft whereby under action of fluid under pressure introduced into said annular passages, lateral surfaces of said sealing rings are movable into sealing positions adjacent adjoining surfaces of radially directed portions of the spacing elements in which they lie.

3,100,425
ROAD MAINTENANCE DEVICE
Horace A. Cartwright, Lexington, Ky.
(4106 S. Rockford, Tulsa 9, Okla.)
Filed Dec. 11, 1959, Ser. No. 858,913
15 Claims. (Cl. 94—44)

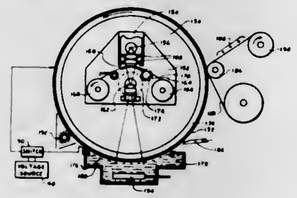
3. A roadway surfacing and aggregate distributing apparatus adapted to be hauled by truck, said apparatus comprising, in combination, a wheeled supporting frame, a bitumen spraying assembly carried thereon, an aggregate material spreading assembly on the frame adjacent to the spraying assembly, means operatively connected with said spraying assembly for effecting the distribution of bitumen over an underlying surface, means operatively

connected with the aggregate assembly for effecting the distribution of material from the aggregate spreading assembly onto the sprayed bitumen, mechanism common to said assemblies and operatively connected thereto for controlling the operation thereof and the distribution of



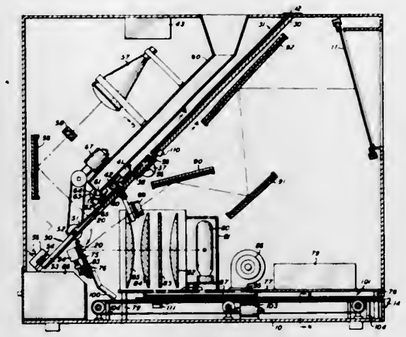
material therefrom, and means carried on said wheeled supporting frame for movement relative to and into and out of operative engagement with an underlying roadway and operatively coupled with said mechanism for alternatively putting the said means of said assemblies into and out of operation.

3,100,426
ELECTROPHOTOGRAPHIC PRINTERS
Edward K. Kaprelian, Red Bank, N.J.
(Rte. 3, Box 14, Joppa, Md.)
Filed Apr. 26, 1960, Ser. No. 24,804
8 Claims. (Cl. 95—1.7)



1. A device for producing color electrophotographs comprising a first non-photoconductive electrode transparent to the colors of the visible spectrum, a second non-photoconductive electrode parallel to, spaced apart from and coextensive with said first electrode, said second electrode being provided with perforations over its entire extent and being electrically insulated from said first electrode, said two electrodes forming therebetween a development chamber, a developer housing terminating at the face of said second electrode opposite from that adjacent said first electrode, means for projecting through said first electrode and into the space between said first electrode and said second electrode a colored light-image, means for establishing a potential difference between said first and second electrode, motion imparting means within said developer housing for passing fluid suspended photoconductive developer particles through said second electrode into said development chamber, whereby selected developer particles migrate onto the surface of said first electrode to form thereon a pattern corresponding to the projected image, a web of black colored image receiving material and means for transferring said pattern of particles to said receiving material.

3,100,427
PROJECTION DEVICE
Ernest Henry Lehmann and Augustus W. Griswold, Rochester, N.Y., assignors to Xerox Corporation, a corporation of New York
Filed Nov. 3, 1960, Ser. No. 67,049
7 Claims. (Cl. 95—1.7)

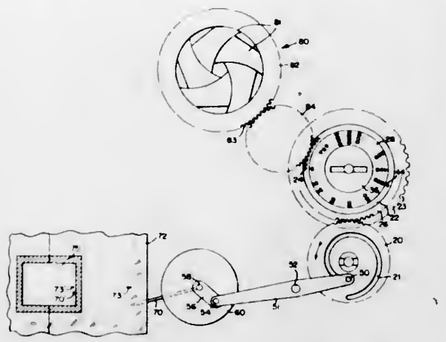


1. Apparatus to process and project individual flat xerographic plates comprising, in combination, a cabinet to support and enclose elements of the apparatus, a vertically inclined chute adapted to retain a plurality of flat xerographic plates gravitationally descended one behind the other, an escapement mechanism supported below said chute adapted to arrest the lowermost of the plates on said chute and release one plate at a time therefrom, first drive means adapted to receive a plate released by said escapement mechanism and to advance the plate at a uniform speed for a predetermined distance and thereafter release the plate, a stationary corona discharge electrode supported overlying the plate path effected by said first drive means and adapted to electrostatically charge a plate surface while being advanced by said drive means, rotatable first plate support means adapted to receive and retain a plate released by said drive means, exposure means positioned and adapted to expose a pattern of light and shadow to a plate on said support means, developing means disposed above said support means and adapted to flow electroscopic developer powder over a plate on said support means, second plate support means vertically inclined and arranged in the rotatable path of said first recited support means, means operable to rotate said first support means whereby a plate after development thereof descends gravitationally from said first support means to said second support means, projection means positioned to project the developed image from a plate supported on said second support means onto a receiving member, means associated with said second support means to arrest a plate descending thereon at its projection position and operative after projection to permit the plate to descend therefrom, and conveying means disposed beneath said second support means to discharge from said apparatus a plate descended from said second support means.

3,100,428
KNOB FOR SETTING DIAPHRAGM APERTURE ON CAMERA EQUIPPED WITH EXPOSURE METER
Johannes G. Padelt, Rochester, N.Y., assignor to Graflex, Inc., Rochester, N.Y., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 69,071
9 Claims. (Cl. 95—10)

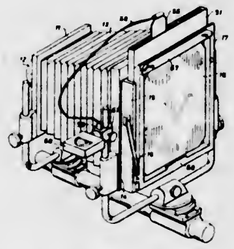
1. In a camera having an exposure meter and a diaphragm, said exposure meter including a rotatable galvanometer and a pointer for indicating the galvanometer reading, a manually-rotatable setting knob, means connecting said knob with the diaphragm to adjust the dia-

phragm aperture upon rotation of said knob, means for rotating said galvanometer to bring the pointer into a predetermined position, means coupling the last-named means with said knob to rotate said galvanometer upon rotation of said knob, and means for disconnecting said



coupling means to permit said last-named means to be actuated independently of said knob to change the relative positions of the exposure meter and said knob to compensate for change in speed of the photosensitive medium used in the camera.

3,100,429
PHOTOELECTRIC EXPOSURE METERING DEVICE FOR PHOTOGRAPHIC DARKSLIDE CAMERAS
Carl Koch, Vordersteig 2, Schaffhausen, Switzerland
Filed July 19, 1961, Ser. No. 126,851
Claims priority, application Austria July 29, 1960
3 Claims. (Cl. 95—10)



1. Photoelectric exposure metering device for darkslide cameras adapted for controlling the image by means of a groundglass plate, comprising at least one light protecting slide to prevent light from entering the back of the camera, a photoelectric cell arranged adjacent and behind the slide, an indicating instrument connected to the cell, and a housing for the cell and slide as a structural unit to be applied to the camera.

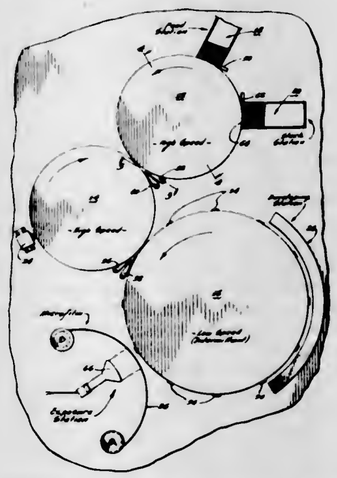
3,100,430
PHOTOGRAPHIC DEVICE
Jules Louis Eugène Morelle, Paris, France, assignor to Optique & Precision de Levallois, Seine, France, a company of France
Filed Sept. 3, 1959, Ser. No. 837,833
Claims priority, application France Sept. 9, 1958
4 Claims. (Cl. 95—42)

1. In a photographic device, in combination, an objective for directing to a focal plane an image of a subject to be photographed; a semi-transparent reflector located between said objective and focal plane and crossing the optical axis of said objective for directing an image of the subject to one side of the optical axis; reflecting means located at said one side of said optical axis for receiving the image from said semi-transparent reflector and for directing the image back through said semi-transparent reflector across the optical axis to the other side thereof; and means located at said other side of said optical axis for rendering the image visible to the operator, said reflecting means including a concave reflecting surface directed toward said semi-transparent reflector, and a transparent window surrounded by said concave reflecting surface, and a separate reflector located behind said window and extending angularly with respect to said con-



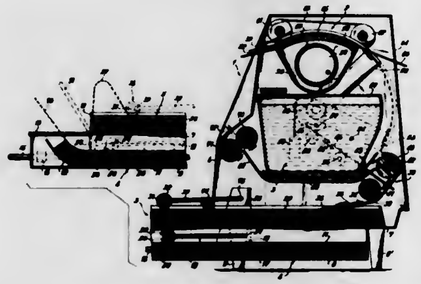
cave reflecting surface so that said separate reflector and concave reflecting surface will provide different image portions whose position with respect to each other will change during focusing of the objective to indicate to the operator that the objective is properly focused when said image portions are aligned, said reflecting means including a plano-convex lens having a plane surface directed toward said semi-transparent reflector and having a convex surface carrying a metallic coating which forms said concave reflecting surface, said metallic surface surrounding a portion of the convex surface of the lens which is not covered with said coating so as to form said window.

3,100,431
CARD PROCESSING APPARATUS
Robert M. Hayes, Sherman Oaks, and Alfred M. Nelson, Redondo Beach, Calif., assignors to Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,214
26 Claims. (Cl. 95—73)



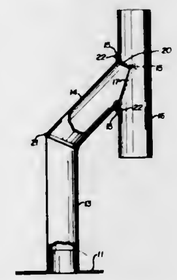
1. Apparatus for processing information storage cards having identifying data to transfer photographic images from a medium to the cards in accordance with the identifying data, said apparatus including in combination, an exposure station for photographically transferring document images from the medium to different ones of the information storage cards, a first relatively low speed rotatable transport drum constructed to carry the cards past the exposure station, means disposed relative to the drum for providing an intermittent movement of the cards to arrest the cards for a particular interval at the exposure station, a feed station disposed relative to the drum for holding the information storage cards in a stacked condition, means including a second continuously driven relatively high speed rotatable transport drum positioned relative to said first drum for receiving cards in succession from the feed station, means operative upon the cards on the first drum for transferring cards from the second drum to the first drum, said first drum having a plurality of axial ribs spaced about the periphery thereof for individually receiving each card transferred from the second drum and to hold such card against the rotation of the second drum until the transfer of the card to the first drum is completed, means at the exposure station for exposing respective ones of the document images from the first-named medium on respective ones of the cards when the same are arrested at the exposure station, a stack station disposed relative to the second drum for holding the processed information cards in a stacked condition, and means operative upon the cards on the second drum for obtaining a sequential transfer of cards from the second drum to the stack station upon the exposure of the photographic images on the cards.

3,100,432
APPARATUS FOR MAKING COPIES
Walter Limberger, Hamburg-Poppenbuttel, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany
Filed Nov. 7, 1960, Ser. No. 67,831
Claims priority, application Germany Nov. 13, 1959
10 Claims. (Cl. 95—75)



1. An apparatus for making copies by using a first and a second sheet of copying paper, said first sheet of copying paper being initially passed through first processing means and then together with the other sheet of copying paper through second processing means, said apparatus comprising a housing, first processing means arranged within said housing, first inlet means within said housing through which said first copying paper together with an original to be copied are fed to the inlet of said first processing means, first outlet means arranged on said housing through which said original after having passed said first processing means is moved out of said housing, a second processing means arranged within said housing, first guide means extending from said first processing means to said second processing means for passing said first copy paper from said first processing means to said inlet means of said second processing means, second outlet means arranged within said housing for moving said first and said second copy papers out of said housing, a first sheet dispensing means arranged on said housing adapted to receive a stack of said second sheets of copy paper, second guide means extending between said first sheet dispensing means and said inlet to said second processing means for guiding one of said second sheets of copy paper dispensed by said first sheet dispensing means to said inlet of said second processing means, second sheet dispensing means arranged on said housing adapted to receive a stack of said first sheets of copy paper, first feed means for removing one of said first sheets of copy paper out of said second sheet dispensing means, second feed means arranged within said first sheet dispensing means for feeding one of said second sheets of copy paper to said second guide means, said first and said second feed means being drivingly interconnected so that upon removal of one of said first sheets of copy paper out of said second sheet dispensing means one of said second sheets of copy paper will be removed out of said first sheet dispensing means and fed to said second guide means, common actuating means for said first and second feed means extending out of said housing, and guide means in one of said sheet dispensing means for guiding said actuating means for reciprocating movement.

3,100,433
SMOKE PIPE TOP
Edward Francis Woodland, 26 Steel St., Youngstown, Ohio
Filed Jan. 12, 1961, Ser. No. 82,217
2 Claims. (Cl. 98—76)

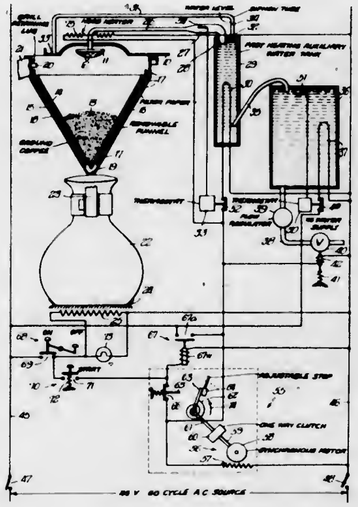


1. A smoke pipe top comprising a vertically positioned first pipe having the upper end thereof cut diagonally thereacross and a second pipe of the same diameter as said first pipe attached thereto at its lowermost end and extending therefrom at an angle thereto and communicating therewith, the upper end of said second pipe defining a vertically disposed curved opening, a vertically positioned third pipe having an opening in one side midway between its ends, attached to said second pipe with said opening in registry with said upper end of said second pipe, said third pipe of the same diameter as said first pipe having an inturned flange across the upper portion of said opening intermediate the ends thereof, said second pipe having integral outturned tabs on its upper end radially spaced thereabout and fasteners positioned through said tabs engaging said third pipe, said first pipe being adapted to receive products of combustion at its lowermost end and said third pipe adapted to vent said products of combustion at its uppermost end.

3,100,434
COFFEE MAKING MACHINE
George R. Bunn, 927 E. Adams St., Springfield, Ill.
Filed Jan. 8, 1960, Ser. No. 1,200
9 Claims. (Cl. 99—282)

1. A coffee making machine comprising, in combination, a main water tank, a supply valve, means connecting said main water tank through said supply valve to a source of water under pressure, means for continuously heating water in said main tank to maintain it

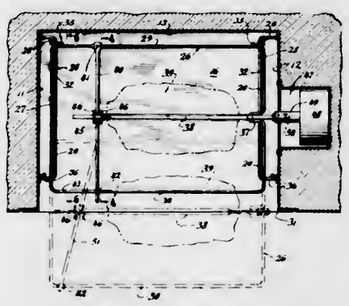
at a relatively low temperature above normal room temperature, an auxiliary water tank connected in fluid tight relation to said main water tank, means for selectively heating water in said auxiliary tank to a relatively high temperature below 212° F., ground coffee receiving means, means placing said ground coffee receiving means in communication with said auxiliary tank whereby hot water therefrom flows through ground coffee in said receiving means, means for receiving liquid coffee from said ground coffee receiving means, and means for simultaneously opening said supply valve to cause water to flow through said main and auxiliary tanks and for energizing said heating means in said auxiliary tank whereby water at a relatively high temperature below 212° F. flows through said ground coffee and hot liquid coffee flows into said liquid coffee receiving means.



3,100,435
ROTISSERIE RACK HAVING MEANS FOR DISENGAGING THE DRIVE MOTOR

Ray Alven Mobley, Jr., Hamilton, Ohio, assignor to Whirlpool Corporation, a corporation of Delaware

Filed Mar. 8, 1961, Ser. No. 94,321
8 Claims. (Cl. 99—421)

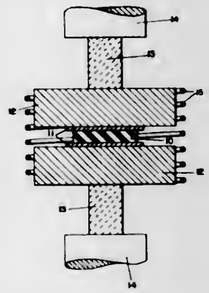


1. Food supporting apparatus for cooking, comprising: means defining a chamber having an access opening for insertion and withdrawal of food relative to the chamber; a frame in said chamber; a rotatable food engaging member supported on said frame; driving means normally adjacent said frame for rotating said food engaging member, the food engaging member being movable relative to said frame into and out of engagement with said driving means; and movable means mounted on said frame for movement transversely to said opening and engaging said food engaging member for moving said food engaging member into and out of engagement with said driving means upon movement of said movable means, said movable means having an operating portion accessible at said opening.

3,100,436
MEANS FOR REDUCING THERMAL GRADIENTS IN THE HOT-PRESSING OF SYNTHETIC MICA

William McNeill, and Joseph E. Chrostowski, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed May 5, 1961, Ser. No. 108,206
1 Claim. (Cl. 100—93)
(Granted under Title 35, U.S. Code (1952), sec. 266)

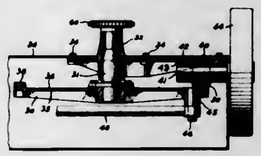


Apparatus for use in inductively hot-pressing a lamellar polycrystalline sheet of synthetic mica comprising a pair of discs made of a metal selected from the group consisting of molybdenum, platinum and palladium for receiving said mica therebetween, a graphite block disposed vertically outwardly of each disc and axially aligned therewith, said graphite blocks being of sufficient dimensions to overlap said mica therearound by at least about 1 inch, inductor coils surrounding said graphite blocks, and means to transmit pressure to the mica to be pressed.

3,100,437
HAY BALER

Edwin B. Nolt and James W. McDuffie, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Original application Oct. 29, 1958, Ser. No. 770,409, now Patent No. 3,040,508, dated June 26, 1962. Divided and this application Oct. 31, 1960, Ser. No. 66,288
3 Claims. (Cl. 100—179)



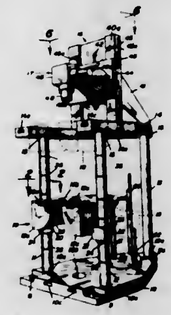
1. In a hay baler, a bale case having a forward end and a rear end, a plunger reciprocable in said bale case toward and away from said rear end, and means mounted on said forward end for reciprocating said plunger, said reciprocating means comprising, in combination, a first rotatable shaft having an axis transverse to said bale case, a gear mounted on said shaft extending in a plane perpendicular to the axis of said shaft and parallel to

the reciprocations of said plunger, said gear having an inner face and an outer face spaced axially, a connecting rod, means pivotally connecting one end of said rod to said plunger, means pivotally connecting an opposite end of said rod to said inner face and radially spaced from said transverse axis whereby when said gear is rotated said rod is reciprocated, a second rotatable shaft having an axis extending normal to said transverse axis, a pinion mounted on said second shaft, said gear having angularly spaced gear teeth on said inner face and said pinion having peripheral teeth meshing therewith, said gear and pinion teeth being elongated and located in a common plane parallel to said axis of said second shaft whereby the pinion may be in various axial positions without changing the radial mesh of the pinion teeth with the gear teeth.

3,100,438
UNIVERSAL PRESS

Alfred H. Merker, 978 Acalances Road, Lafayette, Calif.

Filed Jan. 30, 1961, Ser. No. 85,761
17 Claims. (Cl. 100—214)



1. In a drill or arbor press for machine shops, the combination of a base member and a top member, a base member-provided supporting means spacing the top member above said base member, an intermediate vertically slidable work-supporting member between said base and top members and carried by said top member-supporting means, adjustable means supporting said intermediate member in predetermined positions between said base and top members, said top and intermediate members having aligned openings therein, a carrier for a work engaging element supported by said top member and providing a bearing for a vertically shiftable work-engaging member, said bearing being alignable with said top and intermediate member-provided openings, and said intermediate member being movable into said top member opening to cooperate with the top member in the provision of a work table.

3,100,439
EMBOSSING APPARATUS AND METHOD FOR ADJUSTING THE LENGTH OF AN EMBOSSING ROLL

Sam L. Leach, Owensboro, Ky., assignor to PID Corporation, Beverly Hills, Calif., a corporation of California

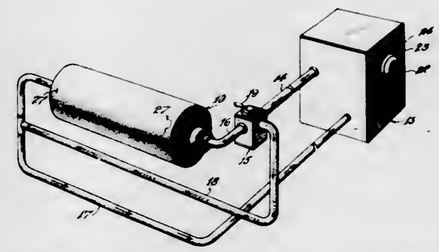
Filed Apr. 3, 1961, Ser. No. 100,351
5 Claims. (Cl. 101—32)

1. A method of adjusting the length of an embossing roll, having a known coefficient of thermal expansion, to provide aligned registration between the embossing face of said roll and an image carried on an embossable sheet structure to be embossed thereby, said method comprising the steps of:

(*a*) providing first spaced marginal indices on at least a portion of said sheet structure;

(*b*) providing spaced embossing indices on said embossing roll corresponding to said first spaced indices and registrable therewith when there is proper aligned registration between said first indices on said sheet structure and said embossing indices;

(*c*) embossing a test portion of said sheet structure having at least two of said first indices thereon with said embossing roll to provide on said test portion of said sheet structure as embossed, second spaced indices formed by and corresponding to said embossing indices;



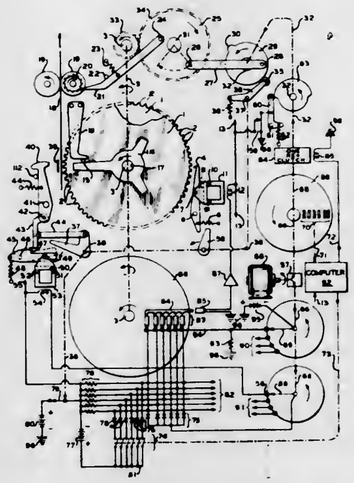
(*d*) measuring the displacement between corresponding of said first and second indices on said test portion of said sheet structure as embossed; and

(*e*) adjusting the temperature of said embossing roll in accordance with the measured displacement between corresponding of said first and second indices to change the length of said embossing roll by an amount sufficient to cause exact aligned registration between corresponding of said first and embossing indices on other portions of said sheet structure.

3,100,440
LINE PRINTER

Nathaniel B. Wales, Jr., Sharon, Conn., assignor to The Metrodynamics Corporation, a corporation of New Jersey

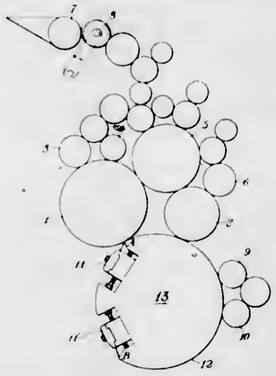
Filed Apr. 7, 1961, Ser. No. 126,358
10 Claims. (Cl. 101—93)



1. In a line printer, the combination comprising: a plurality of parallel coaxial rotors bearing type faces on their peripheries; torque means to urge said rotors onto angular rotation about said axis in a character selective direction; a character scanning rotor; means to return said rotors to a home position; at least one decoding disk;

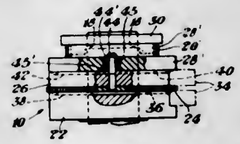
means to rotate each said decoding disk in synchronization with said character scanning rotor during its selective direction of rotation; at least one arcuate binary decoding channel on each said decoding disk, each said channel having alternate window sectors and opaque sectors; a group of gas discharge tubes corresponding to each of said type face rotors, each tube being located adjacent to a code channel in said decoding disk; means to electrically ignite selected ones of said gas discharge tube groups in accordance with a coded line of character information to be printed; means to sustain the discharge of said tubes after said coded ignition whereby to maintain a corresponding pattern of light signals from each of said groups of tubes during selective rotation of said character scanning rotor; a photoelectric cell corresponding to each said group of gas discharge tubes; optical means to convey the light passing from any discharge tube within a group through a window in said decoding disk channel to the photocell corresponding to the said group; a separate electromechanical means to stop the selective rotational advance of each rotor in response to an electric stop signal; and means corresponding to each said photocell responsive to the intervention of an opaque sector of said decoding channel between each energized tube within the corresponding group and said corresponding photocell for generating an electric stop signal whereby to actuate said electromechanical stop means.

3,100,441
INK DISTRIBUTING DEVICE OF OFFSET PRINTING PRESS
Katsuji Akiyama, 996 Nishiarai, Adachi-ku, Tokyo, Japan
Filed Jan. 31, 1961, Ser. No. 86,020
2 Claims. (Cl. 101—350)



1. In a printing press having a plate cylinder for mounting a printing plate thereon, the improvement which comprises, means for inking said printing plate comprising two inking rolls for inking said plate and disposed radially of said plate cylinder in contact therewith and extending parallel thereto, one of said inking rolls being larger in diameter than the other of said inking rolls and having a circumference of sufficient length to completely ink said plate during one revolution of said one inking roll, said inking roll having a larger diameter comprising a resilient inking roll and being disposed to ink said plate after the other inking roll has made contact therewith, two longitudinally reciprocably driven metal rolls for transferring ink to said inking rolls while rotating and reciprocably driven, one of said reciprocably driven metal rolls being disposed in contact with and parallel to said inking rolls, the other of said reciprocably driven metal rolls being disposed parallel to the inking roller having a lesser diameter and in contact therewith two other metal rolls disposed parallel to said inking roller having the larger diameter and in contact therewith, and other rolls disposed for supplying and transferring ink to said reciprocably driven metal rolls, and to said other two metal rolls.

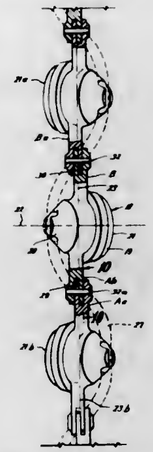
3,100,442
ROTARY TYPE HOLDER
Joseph C. Lang, Pittsburgh, Pa., assignor to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1961, Ser. No. 143,631
8 Claims. (Cl. 101—377)



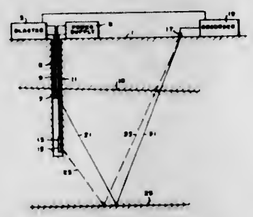
1. A rotary type holder for segmental type having bead-receiving notches in the sides thereof comprising an end ring having an annular bead on one face thereof, a type holder disc of the shape of a segmented annulus of more than 180° with spaced ends, said type holder disc being in face-to-face contact with said one face of the end ring and having a groove in the ring-confronting face thereof into which the bead of the end ring is received, the space between the ends of the holder disc forming a type-receiving space, the bead on the ring being received into the notches of type inserted in the space, a locking ring confined against the other face of the type holder disc and supported for relative concentric rotation thereagainst, the locking ring being segmented for alignment of an opening with the type-receiving space of the holder disc when rotated whereby type may be freed from the bead of the end ring, means confining the locking ring against endwise movement relative to the type holder disc, and an end member on the end ring having a hub portion with radially-movable locating keys therein for removably positioning the holder on a shaft.

3,100,443
SHAPED CHARGE APPARATUS
Eugene M. Pohöriles, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed June 3, 1960, Ser. No. 33,820
12 Claims. (Cl. 102—20)

1. A perforating assembly for use in a cased well bore including: a plurality of shaped charge capsules wherein each capsule has oppositely disposed first and second, longitudinally extending connecting portions, said first connecting portion of each capsule having a bifurcated end thereby forming a first slot defined by surfaces between lug portions, said second connecting portion of each capsule having a bifurcated end thereby forming a second slot defined by surfaces between lug portions, said first and second connecting portions of each capsule being disposed relative to a first longitudinal plane passing therethrough so that said first and second slots lie to either side of said first plane with a surface of each slot substantially coextensive with said first plane, said slots being sized relative to lug portions of said connecting portions for close fitting coupling of connecting portions of said capsules to maintain alignment of said slot surfaces; and means pivotally coupling connecting portions of said capsules to one another for forming an articulated assembly of interconnected capsules; and magnetic orienting apparatus coupled to said articulated assembly and having a resultant force of magnetic attraction along a second plane extending lengthwise of said assembly, said second plane having a fixed alignment relative to said first plane so that said articulated assembly may be oriented in a cased well bore.

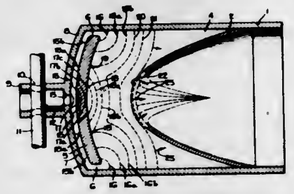


3,100,444
DETONATION OF SEISMIC CHARGES
John D. Ball, Charles J. Charake, and Whitman D. Mounce, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 4, 1959, Ser. No. 857,454
9 Claims. (Cl. 102—21.6)



1. Apparatus for energizing an electrically actuable firing cap positioned at a given depth in a borehole responsive to detection thereby of acoustic waves of predetermined minimum amplitude generated by detonating an explosive charge in the borehole above said given depth, comprising: first and second terminals at substantially said given depth in the borehole to which said firing cap is to be connected, and a third terminal; a storage capacitor in the borehole; means connecting said storage capacitor between said first and third terminals so that said storage capacitor can be electrically charged through the cap by an electrical source at the earth's surface connected to said first and third terminals through electrical leads severable by said explosive charge positioned above said given depth; monostable multivibrator means including a normally conductive input stage and a normally nonconductive output stage adapted to switch conduction states when an actuating signal is applied to said input stage, said output stage being in circuit relationship with said storage capacitor and said first and second terminals so as to effectively connect said storage capacitor directly across said first and second terminals when an actuating signal is applied to said input stage; said monostable multivibrator means including a high impedance discharge path for slowly discharging said capacitor after disconnection of said capacitor from the electrical source; and means, including electroacoustic transducer means at substantially said given depth in the borehole, electrically coupled to said input stage to supply an actuating signal to said input stage responsive to detection of acoustic waves of predetermined minimum amplitude by said electroacoustic transducer means.

3,100,445
SHAPED CHARGE AND METHOD OF FIRING THE SAME
Thomas C. Poulter, Palo Alto, Calif., assignor of one-half to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois, and one-half to Halliburton Company, a corporation of Delaware
Filed Jan. 14, 1959, Ser. No. 786,888
16 Claims. (Cl. 102—24)

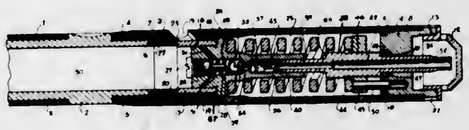


1. A shaped explosive charge device comprising: a charge of detonating explosive material capable of sustaining high-order detonation and low-order detonation therein, said charge having a front end and a rear end opposite said front end and being symmetrical about a longitudinal axis extending between said ends, said charge providing a cavity in its front end symmetrical about said axis, said cavity having sidewalls converging to the rear; a liner of inert material lining said cavity; means for initiating high-order detonation in said charge at the rear end thereof and symmetrically of said axis; and a barrier symmetrical about said axis embedded in said charge, all portions of said barrier being positioned rearwardly of said cavity and spaced forwardly from said initiating means and inwardly from the outer surface of said charge, said barrier having a substantially greater width than its axial thickness and having the characteristics throughout at least an axially symmetrical central portion of substantial lateral extent of blocking transmission of high-order detonation-initiating energy forwardly therethrough and transmitting low-order detonation-initiating energy forwardly therethrough to initiate a low-order detonation in the explosive material on the forward side of said barrier in response to high-order detonation of the explosive material at the rear of said barrier, said low-order detonation and the high-order detonation that travels forwardly around the periphery of said barrier merging in the explosive material between said barrier and the rear end of said liner to form a composite detonation wave that attacks said liner.

3,100,446
GAS OPERATED DEVICES
Harry Clark Foster, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Dec. 9, 1960, Ser. No. 75,033
10 Claims. (Cl. 102—25)

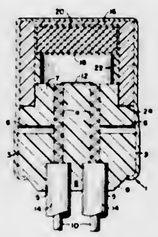
5. A gas operated device comprising a cartridge having a main chamber and a secondary control chamber, gas inlet means at one end of the main chamber and lateral discharge outlets in the side walls of the main chamber, said control chamber positioned adjacent the other end of said main chamber, a main valve slidably mounted in the

cartridge between the main and secondary chambers and normally positioned to span and seal said discharge outlets, the end of the main valve remote from the gas inlet means having a greater cross sectional area exposed to the pressure in the chambers than the opposite end of said valve, this differential area being effective to urge the main valve into sealing engagement with the discharge outlets during charging of the cartridge, a pressure equalizing vent extending from the main chamber to the control chamber, a pressure responsive control piston slidably mounted in the control chamber, the end of the control piston adjacent the main valve having a greater cross sectional area exposed to the pressure in the chamber than the cross sectional area at the opposite end of said



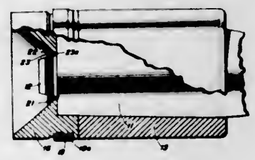
piston exposed to the same pressure, this differential area being effective to move the piston in a direction away from the main valve during charging of the cylinder, a spring positioned in the secondary chamber and urging the piston toward the main valve, means defining a passageway from said control chamber to the outside of said cartridge, a vent in said piston opening at one end to the control chamber and at the other end opening to said passageway, a ball valve and valve seat positioned in said passageway, spring means urging said ball valve onto the valve seat and sealing said passageway, and means positioned in the control chamber adapted to unseat the ball valve upon a predetermined movement of the piston in the control chamber and vent said control chamber to the outside.

3,100,447
IGNITER SQUIB
Robert E. Betts, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed Aug. 31, 1960, Ser. No. 53,314
10 Claims. (Cl. 102—28)
(Granted under Title 35, U.S. Code (1952), sec. 266)



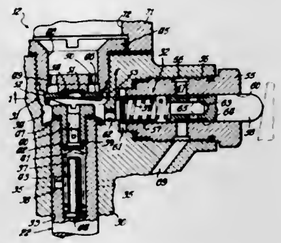
1. An igniter squib comprising: a housing; a pyrotechnic material disposed in said housing; a sealed metal container completely enclosing said pyrotechnic material for shielding said material from static charges; a bridge plug partially enclosed by said housing and spaced from said metal container; a non-explosive dielectric between said plug and said metal container; a firing circuit disposed within said housing and extending outwardly thereof through said bridge plug, said firing circuit provided with a bridge wire disposed in said dielectric; means for permitting the discharge of static electricity, between said firing circuit and said housing, inside said housing without danger of igniting said pyrotechnic material.

3,100,448
SABOT RETAINER
Charles E. Hablutzel, Albuquerque, N. Mex., assignor to the United States of America as represented by the Secretary of the Navy
Original application May 7, 1953, Ser. No. 353,462, now Patent No. 2,998,778, dated Sept. 5, 1961. Divided and this application June 26, 1956, Ser. No. 596,380
1 Claim. (Cl. 102—93)



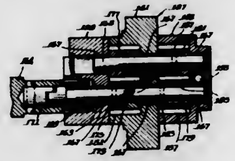
In a projectile having a sub-caliber core and a sabot thereon having a taper on the rearward surface thereof, a threaded appendage on said projectile extending loosely through said sabot and a collar threaded upon said appendage adapted to cooperate with said taper on said rearward sabot surface to fix said sabot to said projectile, said collar being composed of a fusible material and adapted to melt upon contact with the powder gases formed in firing said projectile, whereby said sabot is released from said core.

3,100,449
FUEL INJECTION PUMP
Einar S. Dahl, Decatur, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 4, 1959, Ser. No. 791,081
5 Claims. (Cl. 103—2)



1. In a fuel injection pump for an internal combustion engine, the combination of a casing formed with a longitudinal bore and a plurality of fuel delivery ports opening into said bore, a combined pumping and distributing plunger disposed within said bore, fill valve means for supplying fuel to said bore, means for reciprocating said plunger to compress fuel within said bore and rotating said plunger to distribute fuel through said ports, metering means comprising a spring loaded piston in direct communication with said bore and adapted to be displaced a limited amount by fluid pressure developed in said bore with each stroke of said plunger and including control means for limiting the stroke of said piston in accordance with engine demand, whereby metered charges of fuel are formed and distributed by said plunger through each of said ports.

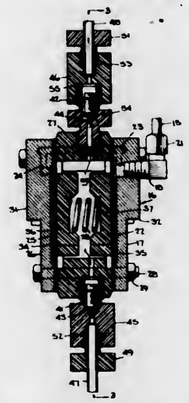
3,100,450
HYDRAULICALLY ACTUATED MACHINE TOOL
Ernest J. Svenson, Rockford, Ill., assignor, by mesne assignments, of one-half to Odin Corporation, Rockford, Ill., a corporation of Illinois, and one-half to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois
Original application June 16, 1954, Ser. No. 437,067, now Patent No. 2,921,437, dated Jan. 19, 1960. Divided and this application Mar. 19, 1959, Ser. No. 800,426
1 Claim. (Cl. 103—4)



Pumping means comprising a pump body formed in three pancake sections separably secured together; said sections including an inner section, an outer section, and an intervening section; said intervening section of the pump body defining a mounting surface adapted to fit against supporting structure therefor, said intervening pump body section defining a cavity therein confronting said inner body section and coacting with said inner body section to define therewith a first pumping chamber, said outer body section defining a cavity therein confronting said intervening body section and coacting therewith to define a second pumping chamber alined with said first pumping chamber, a drive shaft extending into both said chambers, bearing means journalling said drive shaft in each of said body sections, a second shaft extending into both said chambers, bearing means journalling said second shaft in each of said body sections, first and second pairs of pumping gears disposed within said respective pumping chambers, the gears of each pair being supported on said respective shafts for rotation by power from said drive shaft, means forming a non-rotatable driving connection between said drive shaft and each of said gears supported thereon, means forming between one of the two gears supported on said second shaft a non-rotatable driving connection, the other of the two gears supported on said second shaft being rotatable with respect to said second shaft, said intervening body section defining internal passages communicating with the inlet and outlet sides of said pumping chambers and opening through said mounting surface, said outer body section defining an internal pressure relief passage extending between the inlet and outlet of said second pumping chamber and including a bore, said bore being counterbored from the pump chamber inlet end thereof to define a valve seat exposed toward the pump chamber inlet end of said pressure relief passage, a movable valve member disposed in said counterbore in confronting relation to said valve seat and being slidably supported by the body structure defining said counterbore for movement toward and away from said seat, a spring urging said valve member against said seat to sustain a predetermined differential pressure on said valve member urging the valve member away from said seat, and said drive shaft having one end thereof projecting from said body and defining a shaft driving connection.

3,100,451
PROPORTIONING PUMP
Alexander S. Limpert and Robin J. Limpert, both of 121 S. Clinton Ave., Bay Shore, N.Y.
Filed Jan. 24, 1961, Ser. No. 84,735
4 Claims. (Cl. 103—150)

1. In a feeder pump for hydraulic pulsing, an apertured cylindrical body of relatively rigid material having a hydraulic passageway therethrough, flexible diaphragms covering the ends of said body and having openings aligned with said passageway, rigid cover plates covering the ends of said body and the said diaphragms and having recessed portions on the interior faces thereof communicating with said passageway and having at least one exterior opening for energization, through bolts passing between said cover plates and through said body and



said diaphragms for securing them rigidly together, an inlet and an outlet valve chamber, located one in each of said apertures, a valve freely movable in each said valve chamber, and a toroidal washer of resilient material on each said valve, and resilient compressible means located between said diaphragms for applying dilating pressure thereto and comprising a pair of recessed cylindrical and diaphragm contacting cheek pieces and a compression spring located therebetween and in the recesses.

3,100,452
WELL TOOLS
George G. Grimmer, Dallas, Tex., and Harry B. Schramm, deceased, late of Dallas, Tex., by Josephine Schramm, executrix, Dallas, Tex., assignors, by mesne assignments, to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,646
20 Claims. (Cl. 103—232)



1. A well tool including: a landing nipple provided with a lateral port; a gas lift valve removably installed

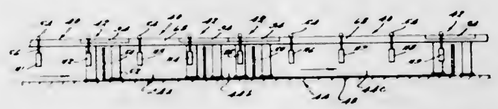
in said nipple, said gas lift valve having a flow passage therethrough with a lateral opening intermediate the ends of said valve, and external seal means thereon spaced longitudinally on opposite sides of said lateral opening, said seal means being disposed to engage said landing nipple; and means on said housing and said gas lift valve co-engageable to position said gas lift valve in said nipple at a first position in which said seal means on said gas lift valve are positioned on opposite sides of said port in said nipple for directing flow from said port into said nipple through said valve, and a second position in which said seal means are disposed on the same side of said port in said nipple opening said port to permit flow of fluids directly into said nipple without passing through said flow passage of said valve.

3,100,453

FRAMELESS TRACK AUTOMATIC CONVEYING APPARATUS

John V. Davis, Grosse Pointe, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 12, 1960, Ser. No. 75,377
28 Claims. (Cl. 104—128)



1. In a conveying machine for conveying workpieces through a series of treating stations, the combination comprising an elongated frame extending along the treating stations, track means on said frame for supporting a work carrier movably mounted thereon, a section of said track means movable to and from a lowered position in alignment with said track means and a raised position above said track means for raising and lowering a work carrier thereon, lift means for moving said section to and from said lowered position and said raised position, a first pusher means disposed below said track means for advancing the work carrier along said track means, and a second pusher means on said section below said track means thereon for advancing the work carrier along said section when in said raised position.

3,100,454

HIGH SPEED GROUND TRANSPORTATION SYSTEM

David H. Dennis, 3 Thackeray Drive, Short Hills, N.J.

Filed Sept. 27, 1961, Ser. No. 143,005
18 Claims. (Cl. 104—138)



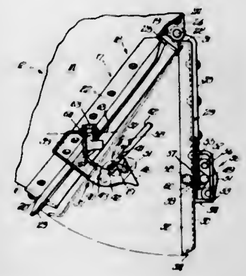
1. An aerodynamic transport system comprising, in combination, continuous guidance and supporting track means defined by walls having horizontal and vertical components, a vehicle for operation on the track, means to propel the vehicle on the track axially thereof, and airfoil means carried by the vehicle and disposed, in operation, proximate the horizontal and vertical wall components but spaced therefrom, said airfoil means and walls generating, cooperatively, ground effect lift forces with vertical and horizontal components derived from the vehicle motion through the air mass, thereby to support the moving vehicle aerodynamically on the track in spaced relation thereto and to impart guidance forces to the vehicle.

3,100,455

LATCHING DEVICE FOR RAILWAY HOPPER CAR DOORS

George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Filed Apr. 22, 1959, Ser. No. 808,126
2 Claims. (Cl. 105—253)



1. In combination, a hopper having a discharge opening and a door for closing the opening,

(*a*) said door being pivotally mounted on said hopper adjacent one side of the opening to assume an open pendant position and swingable to an inclined closed position;

(*b*) means for retaining the door in partially closed position and in fully closed position and including:

(*c*) a keeper carried by the hopper having stepped shoulders including a primary shoulder for holding the door in partially closed position and a secondary shoulder for holding the door in fully closed position, and

(*d*) a latch element on the door adjacent said keeper and movable to and away from the pivotal axis of the door and biased away from said pivotal axis and toward the distal end of said door to normally gravitate to a biased latching position; and

(*e*) means for automatically displacing the latch element from its biased latching position including:

(*f*) an inclined runway on said keeper leading to the primary shoulder adapted to engage with the latch element and displace the said element from its biased latching position by movement of the door toward closed position, and

(*g*) a locking dog pivotally mounted on the hopper and in locking engagement with the latch element only when the said element is in engagement with the secondary shoulder.

3,100,456

HOPPER DISCHARGE OUTLET SEALING SLIDING CLOSURE ASSEMBLY

George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Original application Nov. 10, 1958, Ser. No. 772,837. Divided and this application June 20, 1962, Ser. No. 203,769
8 Claims. (Cl. 105—253)

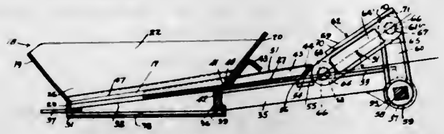
1. In combination,

(*a*) a four-sided hopper including wall means defining a discharge opening,

(*b*) a gate movable on said hopper between two of said wall means for closing said discharge opening,

(*c*) said gate having the trailing end extending beyond another of the walls and including upstanding flange walls at each side thereof extending in the general direction of movement of the gate, and

(*d*) hood means extending inwardly from said hopper wall means forming chambers overlying the side flanges of the gate,



(*e*) said side flanges of the gate tapering in depth from the trailing end of the gate and said chambers having corresponding inclined roof portions presenting undersurfaces adapted to register therealong with the upper edges of the side flanges in wedging relation when the gate is in closed position.

3,100,457

SLIDING CLOSURE HOPPER CLOSURE OUTLET ASSEMBLY

George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Filed Mar. 16, 1961, Ser. No. 96,244
6 Claims. (Cl. 105—282)



1. In combination:

(*a*) an outlet assembly for a hopper having a discharge opening and a movable gate for said opening,

(*b*) means mounting said gate on said outlet assembly for translatory movement from and to closed position,

(*c*) means for moving said gate in a closing direction and an opening direction including a shaft rotatably mounted on said outlet assembly in lateral spaced relation to said gate when closed and below its path of movement and having radially extending arm means and linkage pivotally connected at one end to said arm means and at the opposite end to said gate,

(*d*) said linkage being foldable to seat on said shaft and rotatable therewith to lift the end connected to said gate over and beyond said shaft upon rotation of said shaft to open said gate, and

(*e*) means for retaining said linkage in folded relation on said shaft during rotation of said shaft to move said gate from open position toward closed position comprising trackway means on said outlet assembly concentrically disposed with respect to the axis of rotation of said shaft for reacting against said linkage at the end of said gate to which said linkage is connected.

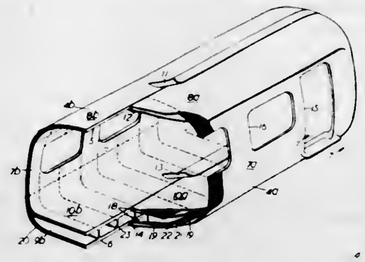
3,100,458

MOLDED RAILWAY VEHICLE BODIES

William Andrew Baker, Alan William Thompson, Francis Murray Lane, and Jack Poslett, Bristol, England, assignors, by mesne assignments, to Bristol Aeroplane Plastics Limited, Bristol, England

Filed Dec. 29, 1958, Ser. No. 783,346
Claims priority, application Great Britain Jan. 3, 1958
4 Claims. (Cl. 105—397)

1. A chassisless railway vehicle comprising a shell, two bogies near opposite ends of the said shell, and means for applying force to the shell near each end, the said shell being composed of two trough-shaped mouldings constituting the parts of the said shell lying on opposite sides of a longitudinal plane and joined to one another along both pairs of adjacent longitudinal edges at the said longitudinal plane, each of the said two mouldings



comprising inner and outer skins of resin-bonded fibrous material connected by rigid cell-forming membranes, the said mouldings having separate metal reinforcement embedded in them near the ends of the shell, the vehicle having fastenings near each end passing through the said metal reinforcement and securing to the shell the means for applying force to the shell.

3,100,459

NESTED TRAY STAND

Jules Liss, Queens, and Martin Liss, Brooklyn, N.Y. (Both of 1671 McDonald St., Brooklyn, N.Y.)

Filed Aug. 2, 1962, Ser. No. 214,307
4 Claims. (Cl. 108—91)



1. A stackable tray stand unit comprising:

a stand portion and a tray portion;

said stand portion comprising a plurality of ground-engaging leg members mounted upon a central support member, said leg members each having a radially extending horizontal portion proximate to said central member and a downwardly and outwardly extending portion adapted to engage the ground at the terminal portion of said members;

said tray portion comprising an integrally molded plastic member having an upper surface and a bottom surface;

said bottom surface having formed thereon a first plurality of downwardly depending spacing members adapted to register with said horizontal portion of each of said leg members respectively, said first spacing members being disposed on either side of each of said horizontal portions in the assembled condition to prevent angular displacement of said tray relative to said stand;

said bottom surface having formed thereon a second plurality of downwardly depending spacing members adapted to register with said horizontal portion of said leg members, said second set of spacing members adapted to abut and rest upon said horizontal portions of said leg members to thereby maintain

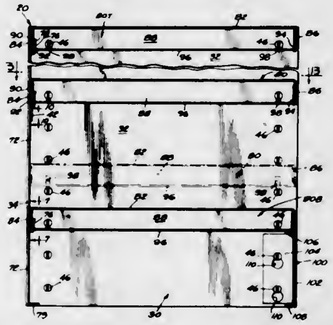
said tray in a plane generally normal to the axis of said stand portion;

an axial bore formed in said central support member of said stand portion, and a downwardly depending hollow cylinder formed axially on the said bottom surface of said tray portion;

a tapered screw adapted to be introduced into the bottom opening of said axial bore and to register with the bore of said hollow cylinder and said tray portion in the assembled relation and to threadedly engage said cylinder to thereby urge said tray portion and said stand portion in close abutment, whereby said tray portion is maintained in spaced relationship to said stand portion by means of said first and said second set of spacing members; and

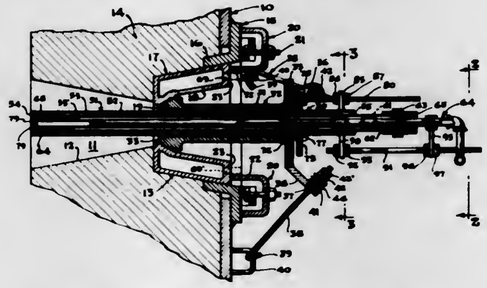
a plurality of radially extending slots formed on said tray portion equal in number to and substantially parallel with the horizontal portion of said leg members respectively, in the assembled condition, whereby a plurality of said tray stand units are adapted to be vertically stacked together with the downward extending portion of said leg member of one unit adapted to register with and pass through one of said slots of a tray stand unit disposed directly underneath, in stacking relationship.

3,100,460
SHELVING STRUCTURE
Robert H. McElroy, Aurora, Ill., assignor to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois
Filed Nov. 17, 1960, Ser. No. 70,055
7 Claims. (Cl. 108—109)



1. A shelving construction comprising an upstanding enclosing back member, an upstanding enclosing side member disposed at each of the opposite ends of said back member, said side members extending in the same direction from said back member and substantially parallel to each other, said back member having at least one elongated opening therein adjacent to each side edge thereof, at least one tongue integral on each of said side members, said tongues being disposed in said openings for interconnecting said back member and said side members, said tongues each including abutting means engaging said back member for preventing separation between said side members and said back members in a direction perpendicular to said back member, a shelf member extending between said side members and having downturned side flanges thereon, and at least one tang integral on each of said side members intermediate the vertical edges thereof and extending outwardly therefrom toward the other of said side members, said downturned side flanges each having a slot in each end thereof and receiving one of said tangs therein for supporting said shelf member on said side members and for preventing movement of said side members away from each other and for fixing the angular relation between said back member and said side members whereby said integral tongues and openings and said integral tangs and slots serve rigidly to interconnect said back member and said side members and said shelf member and serve firmly to mount said shelf member on said side members all without the use of additional detachable fasteners and the like.

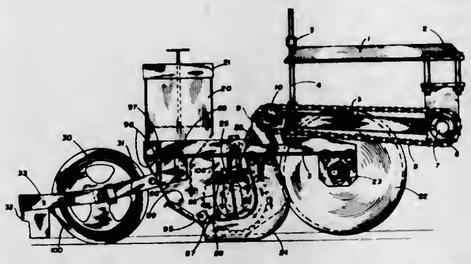
3,100,461
ADJUSTABLE MOUNTING FOR ADJUSTABLE POWDERED FUEL BURNER
Tage Werner, Cleveland, Ohio, assignor, by mesne assignments, to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 26, 1960, Ser. No. 24,822
7 Claims. (Cl. 110—28)



6. A furnace chamber having a wall with an opening therein, a supporting structure for adjustably mounting a burner in said wall opening comprising an elongated tubular support member having at one end thereof a substantially spherical bearing portion, a complementary seat for said bearing portion on said furnace wall and having an axial passage extending therethrough in registry with said furnace wall opening, said bearing portion of said tubular support member being in angularly and sealably adjustable engagement with said complementary seat, flange means adjacent the other end of said support member extending radially from said support member and having a diameter at least equal to said bearing portion, said flange means having connected therewith at least three substantially equally spaced, elongated ties adapted for detachable interconnection with spaced retainer means fixed to said wall, and adjustment means on said ties for varying the effective lengths of said ties, and said flange means interposed between said support member and said adjustment means to prevent radiant heating of said adjustment means; whereby an angular position of said support member relative to its seat can be readily adjusted.

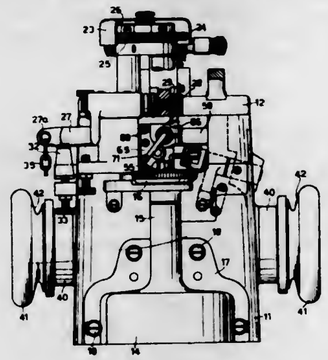
3,100,462
SEED PLANTING APPARATUS
Clarence R. Steele and Frank B. Price, Denver, Colo., assignors to Silver Corporation, Denver, Colo., a corporation of Colorado
Filed Mar. 11, 1959, Ser. No. 798,658
8 Claims. (Cl. 111—77)

1. In a mobile seed planter for row planting, the combination of an upper source of seed supply, a lower seed discharge mechanism and an intermediate seed transport system, a suction pickup member having a series of outwardly extending pneumatic pickup nozzles spaced at uniform intervals and movable through a passage in the seed supply, each nozzle having a tapering end and a passage therein of less diameter than a single seed, whereby only a single seed is attached during movement through said seed supply, means for moving said nozzles at a uniform rate through the seed supply passage and intermediate system for discharge in the row at approximately ground level, said intermediate transport system including shielding means forwardly of and at the sides of said nozzles, with the nozzles extending close to the bottom of the shielding means for preventing wind scattering of attached



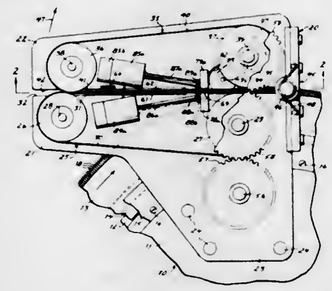
and discharging seeds, and a discharge control associated with said nozzles for terminating suction and directing discharge forces through each nozzle at its nearest point to ground contact, whereby the released seeds are discharged vertically and deposited singly at uniform intervals in the row.

3,100,463
SEWING MACHINE FOR EFFECTING THE TWO-THREAD CHAIN STITCH
Nerino Marforio, Milan, Italy, assignor to S.p.A. Virginio Rimoldi & C., Milan, Italy, a company of Italy
Filed Nov. 14, 1960, Ser. No. 68,781
3 Claims. (Cl. 112—16)



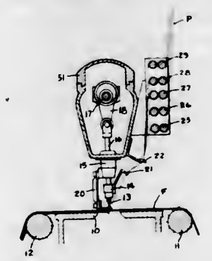
1. In a sewing machine for effecting a two-thread chain stitch and having a machine, the combination comprising, a pair of feed cups counter-rotatable and between which the work is clamped for forward feed, a needle bar for carrying a needle and slidably mounted in the machine frame for reciprocating said needle over a path extending through the axes of the cups and perpendicular thereto, means for reciprocating said needle bar, a shaft oscillatable about an axis arranged above said needle bar, a thread-carrying looper clamped to an end of said shaft lying above the needle, said thread-carrying looper having a hole for the thread which together with the needle thread forms a stitch, a cross-head for rotatably supporting said shaft, said cross-head being angularly adjustable about an axis perpendicular to the longitudinal axis of said shaft, means for angularly adjusting and securing the angular position of said cross-head with respect to the machine frame, means for oscillating said shaft carrying the looper about its own axis, another shaft having its axis arranged in a plane perpendicular to said needle bar and said first mentioned shaft and inclined to the vertical plane containing said first mentioned shaft, a spreader secured to said shaft, and means for oscillating said other shaft.

3,100,464
AUTOMATIC LOOPER OPERATOR AND METHOD
Edward J. Wick and Harry W. Day, Philadelphia, Pa., assignors to Fillmore C. Rosen, Levittown, Pa., trading as Ardmore Hosiery Mills
Filed Feb. 27, 1961, Ser. No. 91,759
6 Claims. (Cl. 112—27)



1. Apparatus for applying a pair of facing layers of fabric to a rotary-looper-machine dial having radial points with the points engaged in a loose course of each fabric layer, said apparatus comprising conveyor means for conveying a pair of facing fabric layers in the direction tangential to said dial with said loose courses on a line in alignment with said points for engagement thereon, a pair of sensing elements on the nonfacing side of each fabric layer spaced apart in the direction normal to and on opposite sides of said line for detecting movement of the adjacent loose course from between said sensing elements, and positioning means engageable with respective layers of fabric and responsive to said sensing elements to move the fabric layers in said normal direction for proper positioning with respect to said points.

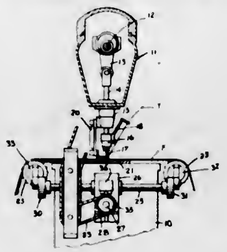
3,100,465
APPARATUS FOR THE PRODUCTION OF WAVE LINE CONSTANT HEIGHT ROWS OF TUFTS
Ed B. Broadrick, Tiger, Ga., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed Mar. 27, 1961, Ser. No. 98,364
7 Claims. (Cl. 112—79)



1. A pile fabric tufting machine comprising a throat plate, a series of vertically oscillating needles for introducing pile yarns into and through a backing fabric carried over the throat plate, means for transversely shifting the backing fabric across the throat plate, and means for selectively accelerating and decelerating the rate of feed

of pile yarns to the needles in timed relation with the shifting means.

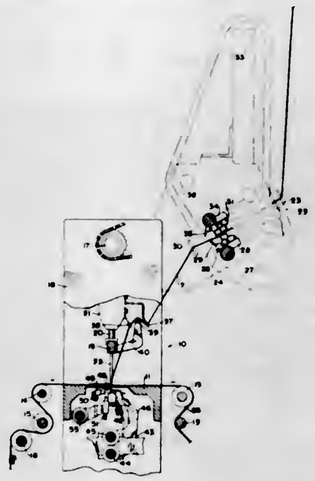
3,100,466
CONTROL MEANS FOR THE BACKING FABRIC FEED IN A PILE TUFTING MACHINE
Glenn J. Ledford, Clayton, and Herbert S. McDowell, Mountain City, Ga., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed Apr. 18, 1961, Ser. No. 103,875
4 Claims. (Cl. 112—79)



1. In a pile fabric tufting machine having a housing, a vertically reciprocating needle bar mounted in said housing, a throat defining a tufting zone over which a backing fabric is fed underneath the needle bar, a pin feed roll for the backing fabric, a pin take-up roll for the backing fabric, a shaft journaled on the tufting machine at right angles to the said rolls, a pair of cranks on said shaft, a connecting rod between one of said cranks and the pin feed roll, a connecting rod between the other of said cranks and the pin take-up roll, drive means for the shaft, a secondary shaft in said drive means, a high speed clutch on said secondary shaft, a low speed clutch on said secondary shaft, and pattern means for selectively actuating each of said clutches in accordance with a pre-determined pattern to intermingle a fast lateral oscillation of the backing fabric across the throat, a slow lateral oscillation of the backing fabric across the throat, and a straight travel of backing fabric across the throat.

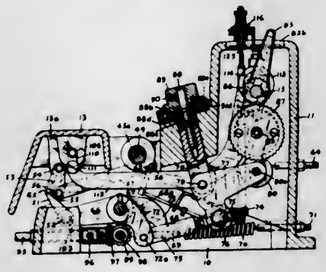
3,100,467
MACHINE FOR MAKING TUFTED FABRIC WITH CUT AND UNCUT PILE LOOPS
Walter A. Rice, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Filed May 19, 1961, Ser. No. 111,272
2 Claims. (Cl. 112—79)

1. In a machine having means for advancing a backing sheet over a support, a plurality of vertically reciprocable needles disposed in a row extending transversely of the direction of movement of the sheet and operable to insert successive rows of loops of pile yarns through the sheet, the loops being of uniform height, a row of loopers beneath the support movable in the direction of advance of the backing sheet to enter and retain the inserted loops when the needles are rising and retractable to release the loops, and means for withdrawing yarn from last-inserted loops selected in accordance with a pattern to shorten such loops, the combination of a plurality of stationary cutting elements aligned with respective needles below the level of the support and having pointed ends adapted to enter loops of more than a selected height only, the ends of the elements being spaced from their associated needles in the direction of movement of the backing sheet a distance at least equal to the spacing between adjacent transverse rows of loops, a plurality of movable cutting elements co-operating with respective stationary elements to sever loops entered by the pointed ends of the latter, a pusher plate extending the length of the row of needles, a mounting for the plate movable to cause the plate to travel bodily along a path which lies between the upper ends of the loopers and the under side of the support and extends along the line of travel of the backing sheet from one side of the plane of movement of the needles to the other, and means



independent of the needles for reciprocating the mounting to cause the plate to move beneath the rising needles and engage inserted loops and move with them as the backing sheet advances to prevent the loops from twisting and to move back from beneath the needles to avoid contact therewith as they descend.

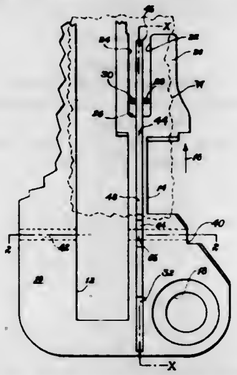
3,100,468
BLINDSTITCH SEWING MACHINE WITH ECCENTRIC MOUNTING FOR WORK SUPPORT
Thomas D. Taylor, deceased, late of Hermann, Mo., by Georgia Brueggenjohann, executrix, Hermann, Mo., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 13, 1961, Ser. No. 95,441
17 Claims. (Cl. 112—178)



1. In a blindstitch sewing machine having a frame, a rotary drive shaft journaled in said frame, and means for advancing work from the front toward the rear of said frame, the combination which comprises a work supporting member along which the work to be stitched is advanced, said work support being pivotally connected with said frame for rocking movements about an axis extending transversely of the direction of feed of the work, said axis being disposed adjacent the rearward end of said work support as viewed in the direction of feed of the

work, cylindrical means cooperating with said work support to provide said axis, pivot means on said frame of the machine cooperating with said cylindrical means eccentrically of said axis, a node former rockably mounted on an axis which is in fixed relation to said work support and positioned forwardly of the axis about which said work support is rocked, connections from said drive shaft to said work support for rocking the latter about said first-mentioned axis to produce skip stitches and a single means operable at will for turning said cylindrical means about said pivot means to cause lowering of said first mentioned axis and for rocking said work support about said first mentioned axis to thereby facilitate the introduction and removal of work.

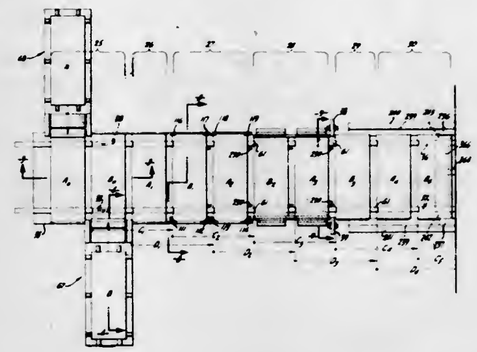
3,100,469
THROAT PLATE FOR OVEREDGE SEWING MACHINE
John M. Washburn, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a corporation of Connecticut
Filed Sept. 6, 1961, Ser. No. 136,265
5 Claims. (Cl. 112—260)



1. For use in an overedge sewing machine; a throat plate having a first stitch finger thereon defining an elongate needle receiving slot having spaced longitudinal side edges and a transverse edge defining the inner end of said slot, said plate having an upwardly opening groove therein extending from said transverse edge across the upper side of said plate, an elongate plate-like second stitch finger member having a stitch finger portion at one end and an elongate tang, said tang being adapted to be received within said groove with the opposed sides of said tang engaged with the side surfaces of said groove to locate said finger portion in a central longitudinally extending position within said slot, the lower surface of said groove having an intermediate portion thereof depressed relative to the opposed lower surface of said tang, a shoulder on said member engageable with said transverse edge, and wedge means engageable between said plate and the upper surface of said tang at a location above said depressed portion of said groove for flexing said tang portion downwardly within said groove to resiliently lock said second stitch finger member to said plate.

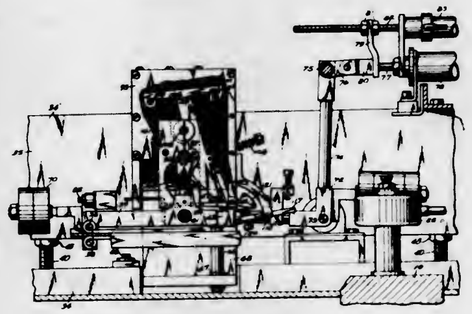
3,100,470
CAN BODY MAKING MACHINE
Wayne F. Wolfe, Castro Valley, Calif., assignor to United Can and Glass Company, Hayward, Calif., a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,227
8 Claims. (Cl. 113—11)

1. In a can body making machine; a frame having a flat upper surface; a reciprocating feed mechanism for moving spaced can body blanks longitudinally along said said flat upper surface from the rear end toward the front end thereof; a cylindrical forming horn connected to the front end of said frame and extending forwardly therefrom; a pair of frame extensions extending parallel to the axis of said forming horn adjacent the upper surface thereof; a first pair of stop members fixed one to each of said frame extension members and extending inwardly thereof, the forward edge of the forwardmost body blank being adapted to strike said stop members and be arrested there-



by on a forward stroke of said feed mechanism; a second pair of stop members one pivotally mounted on each said frame extension members, said second stop members being spring biased to a position out of line with the line of movement by said feed mechanism of said body blanks; and cam means on said feed mechanism for moving said second stop members into said line of movement after the forwardmost blank has moved therepast whereby said second stop members will be struck by the forward edge of the next adjacent blank to arrest the forward movement thereof.

3,100,471
MASS STREAM SOLDERING MACHINE
Ernst A. Gutbier, Danvers, Mass., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 1, 1959, Ser. No. 824,326
7 Claims. (Cl. 113—126)



1. In a solder coating apparatus,
a cradle having means for holding an article to be solder coated,
a channel for receiving a flow of molten solder,
means for moving the cradle toward and away from said container to solder coat the article,
adjustable means for supporting the cradle and channel at a predetermined angle which may be varied

to vary the flow of solder through the channel while maintaining constant the path of movement of the cradle with respect to the channel,

a cam follower mounted on said cradle,

a pair of cams for engaging said cam follower to guide the movement of the cradle,

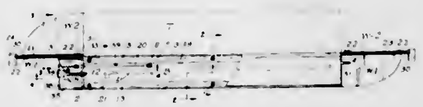
means for pivotally mounting a first of said cams,

means for latching the first cam in a position remote from said follower whereupon advance of the follower and cradle is controlled by the second cam,

means operated by the advance of the cradle to position the article in the solder for releasing said latch, and

means for pivoting said released first cam into position to engage the cam follower during movement of the cradle away from the solder.

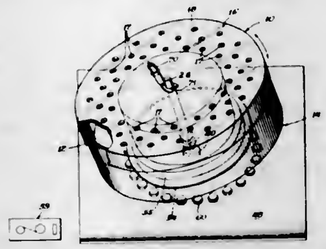
3,100,472
ATHLETIC FOUL AUTOMATIC INDICATOR
Earl R. Jackson, 1851 Lomita Ave., Stockton, Calif.
Filed Aug. 28, 1961, Ser. No. 134,807
10 Claims. (Cl. 116—114)



1. An automatic foul line indicator for designating the violation of a foul line comprising a take-off board having an upper surface and having an edge substantially coincident with said foul line, a foul board having two ends, an upper surface, a lower surface and an edge substantially flush with said edge of said take-off board, means normally urging said foul board in an upward direction to raise said upper surface of said foul board slightly above said upper surface of said take-off board, a pair of indicator wings fixed at right angles to each other adjacent at least one end of said foul board, rod and sleeve means pivotally supporting said pair of wings about the vertex of said right angle, trigger means normally maintaining one of said indicator wings in a substantially horizontal plane while the other of said wings extends upwardly in a substantially vertical plane coincident with said foul line, lever means responsive to a depression of said foul board to release said trigger means and spring-tensioned means to pivot said indicator wings about said rod and sleeve means when said trigger means is released so that said other wing is in a substantially horizontal plane and said one wing extends upwardly in a substantially vertical plane.

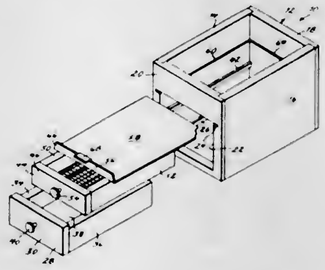
3,100,473
APPARATUS FOR MEASURING ANIMAL ACTIVITY
John W. Kissel, Evansville, Ind., assignor to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana
Filed Jan. 30, 1961, Ser. No. 85,523
5 Claims. (Cl. 119—1)

1. In an apparatus for measuring animal activity, the combination of a circular member connected to a central generally vertical support shaft, said shaft being universally tiltably movable; support means disposed beneath an outer peripheral portion of said circular member, said outer peripheral portion rotatably engaging said support means in the normal course of shaft tilting movement; animal-confining, closed-circuit passageway cage means disposed concentrically with said circular member and including a floor supported on said shaft; and means operably associated with said circular member and said support means and sensitive to engagement therebetween for recording the extent of such engagement, said cage means being of such configuration and dimensions relative to an



animal to be confined therein that such animal is unable to see the extent of the limits thereof and is unable to proceed in a path other than substantially normal to radii extending from the extended central axis of said circular member.

3,100,474
COMMODE FOR PETS
Leonard Gabriel Schneider, 532 Bethlehem Pike, Whitemarsh, Pa.
Filed Sept. 27, 1961, Ser. No. 141,191
4 Claims. (Cl. 119—1)

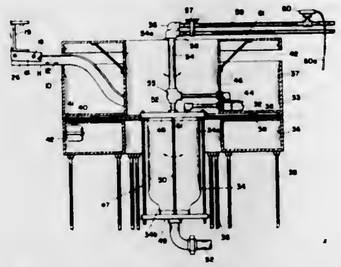


1. A commode for pets comprising an enclosure having an open top and upstanding sides, one of said sides having an opening therein, said one side having a horizontal slot therein of a length greater than the width of said opening extending across and defining an upper edge of said opening, a slideable imperforate plate removably mounted in said slot and having a top surface in scraping contact with said upper edge of said opening, a screening member removably mounted in said opening and spaced below said plate, said screening member having holes therein permitting litter to pass therethrough, and a tray movably mounted below said screening member for receiving litter which passes through said screen.

3,100,475
ADAPTERS FOR MILKING SYSTEMS
Thomas B. Edge, Evansville, Wis.
(7483 N. 107th St., Milwaukee, Wis.)
Filed Oct. 5, 1961, Ser. No. 143,083
14 Claims. (Cl. 119—14.11)

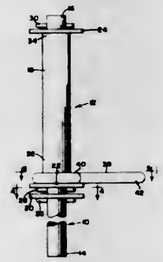
1. An adapter for a liquid distribution system comprising in combination, an adapter hose having an extension end and an outlet end, said hose having a transmission section and a yoke section extending the length of said hose and being adapted to support said hose, a track adapted to support said yoke section in slidable relation,

reel means engaging said adapter hose outlet end in windable relation such that as said adapter hose is wound on



said reel means said yoke section is pulled along said track.

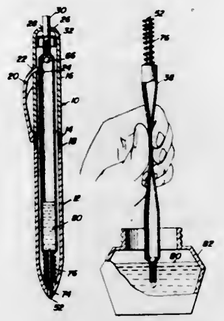
3,100,476
ANIMAL TIE-OUT STAKE
Betsey A. Peak, 540 E. Chestnut, Geneseo, Ill.
Filed Mar. 16, 1962, Ser. No. 180,220
1 Claim. (Cl. 119—121)



An animal tie-out stake, comprising: a rod having a lower ground-penetrating end and an upper end adapted to project above the ground; a stop washer on the rod in downwardly spaced relation to said upper end for engagement with the ground to limit ground penetration of said rod; upper and lower stop pins carried by the rod respectively closely above and below the stop washer to confine said washer against shifting lengthwise of the rod; a bearing washer on the rod next above and resting on the upper stop pin; a sleeve coaxially loosely received on the rod for turning thereon and having a lower end bearing on the bearing washer and an upper end terminating axially short of the upper end of the rod, said sleeve having an outside diameter less than that of said bearing washer; a top washer on the rod and engageable with the upper end of the sleeve and having a diameter greater than the outside diameter of the sleeve; a lock pin carried by the rod above and engageable with the top washer; and means on the sleeve for connection to an animal-restraining element, including the hook having an eye embracing the sleeve between the top and bearing washers and confined by said washers against axial removal from said sleeve, and said lock pin being removable from the rod to enable removal of said top washer.

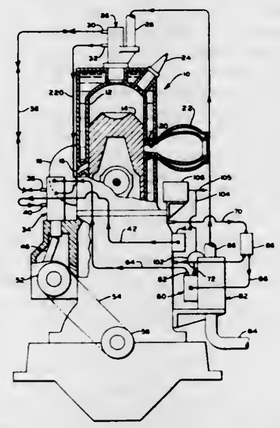
3,100,477
FOUNTAIN PEN FILLER CONSTRUCTION
Thomas M. Ermel, Kingston, Pa.
(44 Virginia Terrace, Forty Fort, Pa.)
Filed June 13, 1961, Ser. No. 116,838
5 Claims. (Cl. 120—42.4)

1. A fountain pen comprising a barrel having openings in its ends, a tubular liquid ink cartridge mounted for reciprocation in the barrel, a writing point on one end of the cartridge slidable in the corresponding opening, a filler neck on the other end of the cartridge, a plunger mounted for sliding adjustment in the other opening, resilient means in the barrel for sliding the cartridge toward the plunger, and a control valve for the filler neck mounted therein and engageable with the plunger for actuation thereby to closed position in response to actuation of the



cartridge by said resilient means, said valve including a bar operable longitudinally in the filler neck, and balls of a diameter exceeding that of the filler neck, fixed on the ends of said bar, one of said balls being seatable in the outer end portion of the filler neck for closing same, together with means in the cartridge for preventing the other ball from seating in the inner end portion of the filler neck.

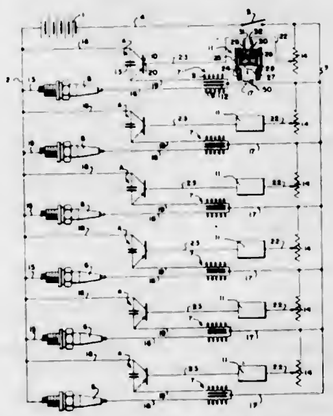
3,100,478
FUEL CONTROL SYSTEM FOR INTERNAL COMBUSTION ENGINES
William R. Crooks, Mount Vernon, Ohio, assignor to The Cooper-Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio
Filed Oct. 27, 1961, Ser. No. 148,187
10 Claims. (Cl. 123—21)



1. In an internal combustion engine having a plurality of cylinders in which fuel is burned, a piston for each cylinder, a crankshaft to which the pistons are rotatably connected, a fuel line for each cylinder to supply fuel thereto, a fuel valve in each of said fuel lines for controlling the flow of fuel therethrough, the improvement comprising a fuel control system for reducing fuel consumption when the engine is operating at less than full load, said system including control valve means for each of said fuel valves for opening said fuel

valves, said control valve means including push rod means synchronized with movement of its corresponding piston, means having a first position responsive to said push rod means and a second position independent of said push rod means, means for opening the fuel valve when said two-position means is in the second position and the piston is in a predetermined position, and means responsive to fuel flow to said cylinders for moving said two-position means from its first position to its second position when the fuel flow exceeds a predetermined amount.

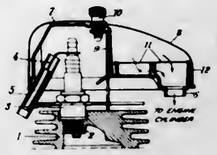
3,100,479
IGNITION SYSTEM FOR INTERNAL COMBUSTION ENGINE
Carl L. Wood, Los Altos, Calif., assignor to Henry J. Kaiser Company, Oakland, Calif., a corporation of Nevada
Filed Aug. 9, 1960, Ser. No. 48,450
14 Claims. (Cl. 123—148)



1. An ignition system for an internal combustion engine having at least one cylinder, said system comprising a source of potential, a spark plug for said cylinder, means including an electronic valve and a transformer for supplying a high potential to said spark plug, the secondary winding of said transformer being directly connected to said spark plug and the primary winding of said transformer being directly connected to said electronic valve, pressure sensitive means electrically connected to said source of potential and electrically connected directly to said electronic valve for controlling said electronic valve, and engine operated means for transmitting pressure to said pressure sensitive means so as to actuate said electronic valve and produce a flow of current in the secondary winding of the transformer and a high potential to said spark plug, said pressure sensitive means being the only engine operated means employed to actuate said electronic valve.

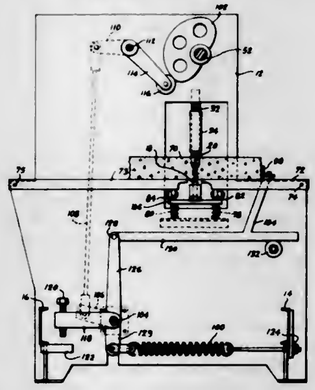
3,100,480
INTERNAL COMBUSTION ENGINES PROTECTED AGAINST TRANSMISSION OF RADIO INTERFERENCES, IN PARTICULAR FOR LIGHT WEIGHT VEHICLES
Bernard René Mennesson, Neuilly-sur-Seine, France, assignor to Societe d'Appareils de Controle et d'Equipement des Moteurs (S.A.C.E.M.), Neuilly-sur-Seine, France, a society of France
Filed Oct. 2, 1961, Ser. No. 142,115
Claims priority, application France Nov. 10, 1960
2 Claims. (Cl. 123—148)

1. An internal combustion engine which comprises, in combination, a cylinder head, a spark plug mounted in said cylinder head, said spark plug having a portion thereof projecting to the outside of said cylinder head, an air filter comprising a metallic casing formed by the combination of a bell-shaped member having a flat flange at its base and a cover member detachably fixed to the outer edge of said flange, said two members defining a filter chamber between them, said members being provided with at least one inlet and at least one outlet hole for



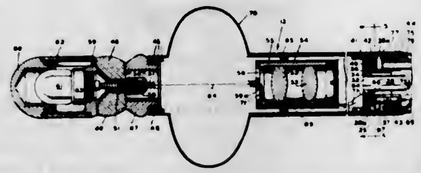
the flow of air through said chamber connected to the engine cylinder, and filtering means carried by at least one of said members across the path of travel of air from said inlet to said outlet hole, said members surrounding said spark plug portion so as to form a shield around it, a metal element rigid with said cylinder head, and means securing said two members to said metal element for grounding said two members.

3,100,481
STONE CUTTER
William F. Stefanick, Kennedy Road, R.R. 1, Milliken, Ontario, Canada
Filed Aug. 8, 1960, Ser. No. 48,046
4 Claims. (Cl. 125—23)



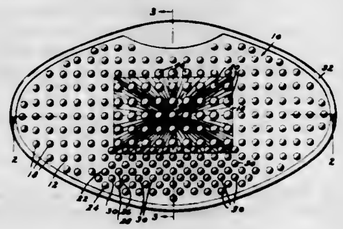
1. In a device for splitting stone a frame, a lower splitting blade housing, a lower splitting blade in said lower splitting blade housing, an upper splitting blade housing, an upper splitting blade in said upper splitting blade housing, said lower splitting blade housing being mounted in said frame, means for reciprocating said upper splitting blade housing within said frame to carry said upper splitting blade into splitting co-operation with said lower splitting blade, a feed table for advancing stone between said blades, said feed table having a forward edge in close parallel relationship to said lower splitting blade, said feed table being movable in said frame between a first normal position in which at least the forward edges thereof are at a higher level than said lower blade to a second position in which the forward edge of said feed table is lower than said lower blade, and means responsive to the reciprocation of said upper blade housing as said upper blade housing is moved toward said lower blade for lowering said feed table from said first position to said second position to permit a piece of stone to engage with said lower blade prior to engagement therewith of said movable blade in use, said feed table being spring urged to said first position, and said means for cyclically lowering said table from said first position to said second position being carried by said upper splitting blade housing.

3,100,482
FLEXIBLE OPTICAL SURGICAL INSTRUMENT
John H. Hett, Cresskill, N.J., assignor to American Cystoscope Makers, Inc., Pelham Manor, N.Y., a corporation of New York
Filed Apr. 14, 1961, Ser. No. 103,003
3 Claims. (Cl. 128—6)



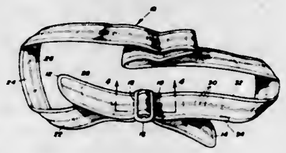
3. A flexible optical instrument particularly for insertion into and for examining the entire interior of the large intestine in the body of a patient, comprising elongated flexible means including an elongated flexible bundle of a very large number of extremely fine light conducting fibers mutually oriented at the opposite end faces of said bundle so that an image presented to the distal end of said bundle is conducted to the proximal end face thereof, objective lens means including a lens means and an objective lens for forming an image of a field and focusing the same on the distal end face of said bundle, means including a lamp mounted on the distal side of said lens means for illuminating the field presented to said lens means, elongated resilient means connected at one end thereof to the distal end of said flexible means and connected at its opposite end to said lens means, said elongated resilient means being adapted to pass the left and right colic flexures, inflatable means surrounding said resilient means, means supporting said objective lens within said resilient means intermediate said lens means and the distal end of said bundle, means extending along said flexible means and communicating with said inflatable means for inflating the latter, and means connected to the flexible means for viewing an image of said field on the proximal end of said bundle.

3,100,483
FOOT EXERCISER MAT
Edward G. Altmeyer and Donald C. Andreasson, both of 7364 W. Grand River, Brighton, Mich.
Filed Apr. 27, 1962, Ser. No. 190,662
5 Claims. (Cl. 128—25)



1. A mat for relaxing and massaging of the feet comprising:
(*a*) a base of flexible material,
(*b*) a plurality of upstanding protuberances arranged on said mat, said protuberances being spaced and aligned longitudinally, laterally and diagonally,
(*c*) said mat having a thickened central portion raised above the remainder of the mat and blending gradually into the surface of the remainder of the mat, and
(*d*) there being provided along one side of the mat between one edge and the raised central portion, double the number of protuberances as elsewhere on the mat, the added protuberances being aligned longitudinally, laterally and diagonally and interspaced with the other protuberances.

3,100,484
QUICK, DETACHABLE SAFETY SUPPORT OR BELT
John E. Berl, 5312 Kenilworth Ave., Baltimore, Md.
Continuation of application Ser. No. 28,962, May 13, 1960. This application July 27, 1962, Ser. No. 214,790
1 Claim. (Cl. 128—134)

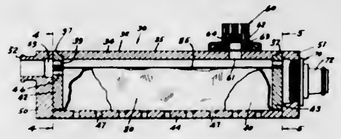


A hospital retaining belt, comprising, a support strap consisting of an inner layer of woven cotton flannel, an outer layer of soft fabric material arranged on each side of said inner layer coextensive therewith, said inner layer and each said outer layer being elongated shaped and having coextensively arranged with each other a pair of ends and substantially parallel longitudinal edges, said inner layer and each said outer layer being secured to each other to form an assembly of layers by a plurality of spaced rows of stitching arranged transversely of said strap and a plurality of spaced rows of stitching arranged centered and lengthwise of said strap, the woven cotton flannel of said inner layer having its strong warp threads arranged lengthwise of said strap and its relatively weaker woof threads arranged transversely of said strap, and rough twill binding tape arranged along the ends and edges of said assembly of layers and folded onto each side thereof, said binding tape being stitched to said assembly of layers adjacent the ends and edges thereof, thereby securing the ends and edges of said assembly of layers together and forming said strap, and a friction buckle consisting of a pair of parallel spaced side legs and an intermediate leg located therebetween and arranged parallel therewith but displaced laterally from the common plane of said side legs, the ends of said strap being inserted oppositely between said side legs and the intermediate leg of said buckle, said rough twill binding tape being in frictional engagement with said legs of said buckle and itself at the overlay of said strap within said buckle to obtain a locking effect between said strap and said buckle for any desired adjustment of said strap, whereby rotational movement by a patient retained by said belt is permitted to avoid bed sores and yet to maintain a safety support for said patient, said ends of said strap being free of engagement with said friction buckle, whereby said friction buckle is removable to enable said support strap to be laundered therewithout.

3,100,485
RESPIRATORY APPARATUS
Roscoe G. Bartlett, Jr., Lillian, Ala.
Filed Mar. 7, 1961, Ser. No. 94,091
5 Claims. (Cl. 128—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A respiratory apparatus for users of pressurized respirant comprising:

a valveless mask adapted to hermetically cover the mouth and nose of a user;
a first flexible tubular connection leading outwardly from said mask, said first connection constituting an added anatomical dead space and a moisture collector from the expired breath of said user;
a source of dry pressurized respirant;
a second flexible tubular connection leading from said source of dry pressurized respirant;
a respiratory member interposed between said first and second connections and connected thereto, said respiratory member defining a first chamber open only to said first connection for the trapping of the first portion of the expired breath and the collection of



moisture therefrom, and a second chamber open to both first and second connections, said second chamber having an expiratory check valve leading to ambient atmosphere and an inspiratory check valve between said second chamber and said second connection to said source of respirant, said second chamber constituting a channel for conducting a portion of said expired breath to atmosphere and for conducting said dry pressurized respirant to said first connection incident to the controlled opening of said valves, and said respiratory member having a moisture transfer membrane separating said first and second chambers whereby the miosture collected in said first chamber is transferred to the dry respirant passing through said second chamber.

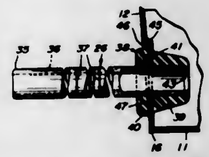
3,100,486
PARENTERAL SET ASSEMBLY AND CLAMP FOR USE THEREIN
John R. Nehring, Linden, N.J., assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Filed Aug. 22, 1960, Ser. No. 51,113
2 Claims. (Cl. 128—214)



1. In a parenteral set in combination a flexible tube and sleeve, the latter having a single bore open at both ends and formed with an opening through its side wall at a point intermediate its ends, said opening presenting an area substantially equal to the diameter of said tube, said tube extending through one end of the sleeve bore and such opening and being axially shiftable with respect to said sleeve.

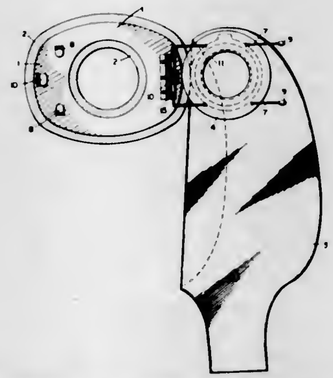
3,100,487
APPARATUS FOR ADMINISTERING LIQUIDS
Louis N. Bathish, Glendale, Calif., assignor to Pharmaseal Laboratories, Glendale, Calif., a corporation of California
Filed Oct. 17, 1960, Ser. No. 62,989
5 Claims. (Cl. 128—227)

4. An apparatus for administering liquids comprising: a molded plastic container having a rigid side wall, an open end and a closed end; an opening passing through and defined by said side wall; a flexible, deformable connector passing through said opening and having a flexible body and a flange, said body being located on the inside of the container, said flange being located outside of the container and having a larger diameter than said body; an annular, inwardly extending, connector groove between the body and the flange; an annular portion of the rigid container wall around the opening extending into the connector groove; a longitudinal passage through the connector body and flange; a flexible administration



tube, an end portion of which telescopes into at least a portion of the passage through the connector body and is attached to said body, and a portion of the administration tube adjacent said end portion telescoped through the connector flange, but being free of attachment to said flange, whereby pulling on the administration tube expands the flexible connector body against the inner surface of the rigid container wall.

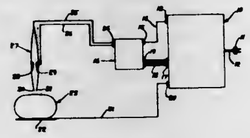
3,100,488
ENTEROSTOMY APPLIANCE
Egon Orowan, 44 Payson Terrace, Belmont, Mass.
Filed Dec. 1, 1959, Ser. No. 856,446
15 Claims. (Cl. 128—283)



1. An appliance for ileostomy, ureterostomy, colostomy and other fistulas, comprising a disc with an opening for the stoma, a receptacle with a stiffening ring around its receiving orifice, and means releasably locking the stiffening ring to the disc, said means incorporating a springy component elastically yieldably pressing the stiffening ring to the face of the disc, thereby establishing a seal between the disc and the receptacle.

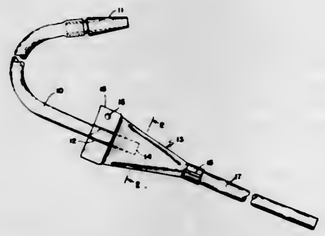
3,100,489
CAUTERY DEVICE
Russell W. Bagley, Minneapolis, Minn., assignor to Medtronic, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Sept. 30, 1957, Ser. No. 687,150
6 Claims. (Cl. 128—303.17)

1. A control unit for a radio frequency cautery instrument, said control unit comprising a forceps comprising a pair of opposed elongated forceps arms secured together at one end and adapted to be brought together at their free ends by slight pressure on the opposite arms, a pair of electrical switch contact elements positioned on the respective inside surfaces of said forceps arms intermediate of their free and secured ends, said switch elements being positioned to come into contact with each other upon application of pressure to the outside surfaces of said forceps arms, one of said switch contact elements being in direct electrical contact with the body of said forceps, the second of said switch contacts being electrically insulated from said forceps body, a first electrical conductor secured in electrical contact with said forceps body and first switch contact element, a second electrical conductor secured in electrical contact with said second switch contact element but electrically insulated from said forceps body and an insulating coating covering all of said forceps except the free end tips and said switch contact elements, means for connecting the first conductor secured in electrical contact with said forceps



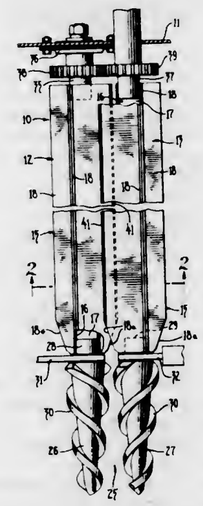
body and first switch contact element to the radio frequency output terminal of said cautery instrument, a relay having an operating coil and cooperating movable and fixed contacts, said contacts being normally disengaged when said coil is deenergized and normally engaging one another when said coil is energized, means for connecting said relay contacts in the operating circuit of said cautery instrument to govern the operation thereof, a transformer having a primary and secondary, a power circuit adapted for connection to an alternating current power supply and including said primary, the secondary being connected in series with one of said forceps conductors and the operating coil of said relay, the operating coil of the relay also being connected to the other of said forceps conductors, and a low pass filter unit in the circuit between said forceps conductors and said relay.

3,100,490
SURGICAL DRAINAGE TUBE
Robert Eugene Desautels, Needham, Mass., assignor, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Nov. 1, 1960, Ser. No. 66,566
2 Claims. (Cl. 128—350)



1. In a surgical drainage system for conducting fluids from the body of a patient to a collection receptacle which system comprises a catheter, a surgical drainage tube communicating with said catheter, and a fluid collection vessel, the improved surgical drainage tube which comprises a length of flexible resilient tubing having a catheter adapter at one end, means for interrupting the fluid path of liquids passing through said tubing, said means comprising a transparent chamber positioned intermediate the length of said tubing, said chamber having an inlet and an outlet communicating with said tubing, the inlet being provided with an inlet tube which is connected to and communicates with the resilient flexible tubing, said inlet tube projecting partially into and terminating within said chamber, said chamber being so constructed that a sufficiently large internal diameter is formed and maintained within said chamber at the point at which the inlet tube terminates so that the inlet tube does not contact the sides of said chamber, and means associated with said chamber for suspending and fastening said chamber in a substantially vertical position.

3,100,491
SNAPPING ROLLS FOR CORN PICKING APPARATUS
Robert M. Dillon, Cooksville, Ontario, Canada, assignor to Massey-Ferguson Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed Sept. 22, 1961, Ser. No. 140,076
3 Claims. (Cl. 130—5)

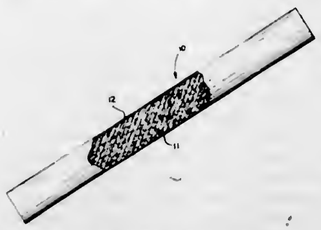


1. For use in a corn picking apparatus, the combination comprising a pair of adjacent snapping rolls journalled for rotation, each of said rolls including substantially rigid, elongated plates bent longitudinally into substantially L-shaped cross section and disposed with their outer surfaces in abutment to define a hollow body with spaced longitudinal flanges constituting peripheral extensions of the sides of said body, means coupling said rolls for uniform and opposite rotation, said rolls being phased so that said flanges on the rolls are received within the inner surfaces of the plates forming the opposite roll as the rolls are rotated.

3,100,492
CORNCOB MATERIAL CIGARETTE
William C. Schmidt, Quarters 1040C, Fort Benjamin Harrison, Indianapolis, Ind.
Filed Apr. 23, 1962, Ser. No. 189,553
12 Claims. (Cl. 131—2)

1. A cigarette comprising corncob, and a combustible

sheet of material surrounding said corncob, said corncob being the material that is smoked.



3,100,493
COMBINATION CIGARETTE MOUTHPIECE AND SHIELD

George W. Rundle, 14603 S. Vermont Ave., Gardena, Calif.

Filed Oct. 26, 1961, Ser. No. 147,813
1 Claim. (Cl. 131—175)



The combination with a cigarette mouthpiece having an outer end terminating in a tubular cigarette receiving and holding extension, said mouthpiece having a draft passage leading longitudinally therethrough opening at said outer end interiorly of said extension, of

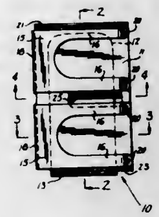
a tubular shield having
a cylindrical side wall with
an inner end and an outer end and
having a passage extending longitudinally therethrough,
said shield being adapted to encompass a cigarette held in said extension and projecting from outer end of said mouthpiece,
a reticulated wall on the outer end of said shield extending over the passage therein,
the side wall of said shield comprising a pair of spaced concentric cylindrical walls having a continuous air space therebetween extending substantially throughout the length of said shield,
a wall on the outer end of said shield closing the outer end of said air space,
said mouthpiece having a radially extending flange on its outer end against which the inner end of said shield abuts, said flange having openings extending therethrough leading to said air space for the passage of atmosphere to and from said air space to effect a cooling action on said shield when heated by the burning of a cigarette surrounded by said shield, and
a plurality of studs projecting from the outer end of said mouthpiece, the inner wall of said shield slidably engaging said studs and the outer surface of said tubular extension.

3,100,494
COMBINATION MONEY CLIP AND CHANGE HOLDER

William Israel Littman, MD 14, New Windsor, Newburgh, N.Y.

Filed Oct. 3, 1961, Ser. No. 142,568
1 Claim. (Cl. 133—6)

A combination money clip and change holder comprised of a single blank of resilient material comprising a base, a spring tongue extending from one end of said base and reverted to overlie said base to form a money clip and a pair of extensions disposed at right angles to said tongue and folded over the opposite side of said clip, said extensions being bifurcated to provide spring holders for coins with the space between the bifurcations permitting removal of the coin by finger pressure, and a plate struck from said base and positioned between said

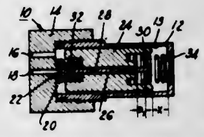


extensions forming a divider, the attached end of said tongue being offset to underlie the end opening of one of said extensions, a flange formed on the end of said base overlying and closing the end opening of the other of said extensions, and spring indentations formed at the end of said bifurcations to prevent accidental removal of coins from the open side of said extension.

3,100,495
VIBRATION RESISTANT ACCELERATION ACTIVATED VALVE

Leonard J. Boler and Howard L. McClelland, Mishawaka, Ind., assignors to The Bendix Corporation, Mishawaka, Ind., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,774
4 Claims. (Cl. 137—38)



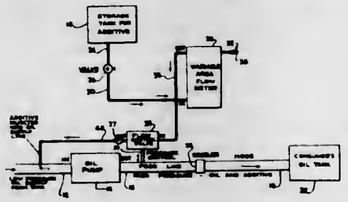
1. A vibration resistant acceleration activated valve comprising a housing having a bore therein, first and second passages communicating with said bore, one of said passages communicating with a high pressure source and the other of said passages communicating with a low pressure source, a valve seat formed at one end of one of said passages, a valve member seatable on said valve seat and having a rod extending therefrom with a stop at the end thereof, means for urging said valve member against said valve seat, an acceleration weight operatively connected to said valve member and movable in said bore for unseating said valve member from said valve seat after contacting said stop to thereby permit communication between said first and second passages, said acceleration weight being positioned so that contact with said stop will occur only after predetermined sustained acceleration forces cause said weight to move a predetermined distance, and means for resisting movement of said weight.

3,100,496
METERING CONTROL DEVICE FOR SUPPLYING ADDITIVES TO FLUIDS

Sidney J. Reiser, 61—45 98th St., Rego Park, N.Y.

Filed Nov. 14, 1961, Ser. No. 152,282
1 Claim. (Cl. 137—111)

A fluid distribution system, comprising a main oil supply line, a pump having a low pressure inlet and a high pressure outlet, said main oil supply line being connected to the low pressure inlet, an oil feed line connected to the high pressure outlet, a control valve having an inlet at one end, an outlet at the other end, and a passage between the valve inlet and outlet, fluid pressure responsive control means in said valve normally closing the passage between the valve inlet and valve outlet, a fluid additive feed line section connected to the valve inlet, and another fluid additive feed line section connected between the valve outlet and said main oil supply line at said low pressure inlet, said fluid pressure responsive control means being connected to said feed line at the high pressure outlet, said fluid pressure control means including a flexible diaphragm isolating said passage from the feed line, and a piston in said passage connected to the diaphragm and movable thereby against spring bias to open said passage, a storage tank containing said fluid additive, a variable area, fluid flow regulating device having an inlet and an

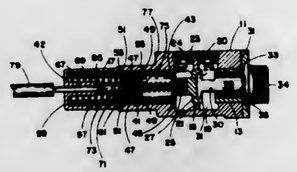


outlet, the first-named additive feed line section being connected between the outlet of said device and the inlet of said valve, and a third additive feed line section connected between said storage tank and the inlet of said device, said device including a rectangular transparent block having a conical bore, said block being disposed with said bore axially vertical with the wider end of the bore uppermost and the narrower end of the bore downward, the inlet of the device being located at the narrow end of the bore and the outlet of the device being located at the wider end of the bore, said block having a calibrated temperature scale on at least one side thereof, and a tapered flow constrictor element movably mounted in the bore to control flow of fluid additive through the bore at a predetermined rate coordinated with locations of graduations of said scale.

3,100,497
TWO-WAY VALVE

Frank Woodruff, Utica, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Mar. 28, 1960, Ser. No. 17,927
8 Claims. (Cl. 137—119)

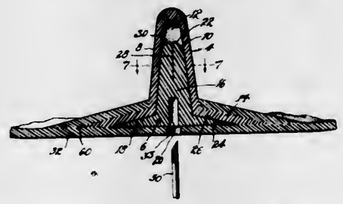


1. A two-way valve comprised of a cup-like valve element; said valve element having a transverse wall and a tubular side wall extending from said transverse wall; valve body means providing successively in axial alignment an inlet passage connected to the interior of said valve element, a guide bore receiving the end of said tubular wall, and first and second chambers surrounding the tubular wall of said valve element; a wall separating said chambers and having a guide opening slidably receiving said valve element; the side wall of said valve element having ports connecting the interior thereof to said first chamber; a neck extending axially from the transverse wall of said valve element; an axially-movable latch device connected to said neck for positioning said valve element; lock means arranged to lock and to release said latch device; said valve element being movable by pressurized fluid when said latch device is released so that said latch device is unlatched and said ports connect to said second chamber and said side wall blocks flow to said first chamber.

3,100,498
VALVE MEANS FOR INFLATABLE ARTICLES

James E. Gibson, Jr., 1005 Emery Road, High Point, N.C.

Filed Dec. 9, 1960, Ser. No. 74,932
5 Claims. (Cl. 137—223)



1. A valve means for inflatable articles comprising a valve casing having an elastomeric tubular body portion with a hollow generally frustro-conical chamber therein closed at the smaller end, and an integral base portion extending laterally of said body portion, the upper face of said base portion contiguous with said body portion being tapered outwardly and away from said body portion, said base portion having an aperture contiguous with the larger end of said chamber, the lower face of said base portion having a recess tapered inwardly toward said aperture; and a valve member comprising an elastomeric body section adapted to be snugly received inside said tubular body portion of said casing, and a valve base section extending laterally of said valve body section, the upper surface of said valve base section contiguous with said valve body section being tapered outwardly and away from said body section, said upper surface of said valve base section mating with said recess in said lower face of said casing base portion, said body section of said valve member normally having outward dimensions slightly greater than the corresponding inner dimensions of said chamber, said valve member having a bore therein extending from the lower face thereof to a point within said body section spaced from the end of said body section nearest the closed end of said chamber, whereby a needle can be substantially freely inserted in said recess and then pressed through said valve member and the closed end of said casing and thereafter removed from said valve means, and whereby when the needle is removed from said valve means, said body portion of said casing presses on said valve member body section to close the opening therein made by the needle.

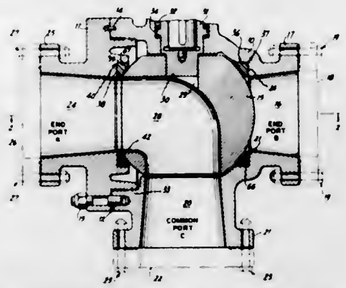
3,100,499
VALVE

Harold E. Bass, Gales Ferry, Ledyard, Conn., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed July 21, 1961, Ser. No. 125,833
9 Claims. (Cl. 137—246.22)

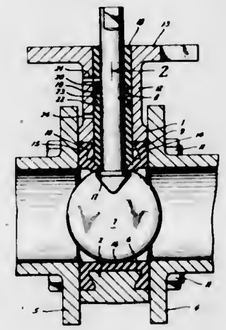
1. A valve, comprising a valve housing having first and second ports; a rotatable ball disposed in the space within said housing and having a fluid passage arranged in one rotational position of said ball to provide communication between said ports, said ball, in another rotational position thereof, being arranged to prevent communication between said ports, said passage having a circular mouth

with a rounded edge forming a ball nose, said mouth being in axial alignment with said first port when said ball is turned to fully open said first port; said housing having a valve seat adjacent and concentric with said first port; and a flexible annular seat seal ring disposed in said seat and having a rear face arranged to contact said seat and a front face arranged to contact said ball, said front face having first and second radially and axially spaced annular load bearing areas each arranged to contact said ball under predetermined load conditions, the radially inner one of said load bearing areas being arranged to be in fluid-tight sealing contact with said ball when said ball is in



said other rotational position thereof, said front face having a pair of circumferentially spaced pads each forming a part of said radially outer load bearing area and each providing said radially outer load bearing area with a substantially greater radial length in the region of said pads than in the remainder of said radially outer load bearing area, the circumferential location of said pads and the circumferential length thereof corresponding to the respective circumferential portions of said radially inner load bearing area located adjacent said ball nose as said ball is rotated through an arc in which said first port is partially open to said passage.

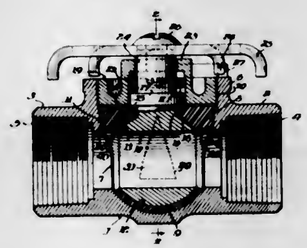
3,100,500
DISC VALVE WITH REMOVABLE SEAT AND UNITARY STEM AND DISC, AND SEAT AND STEM BUSHING UNIT THEREFOR
Crawford K. Stillwagon, 5325 Kirby Drive, Houston 5, Tex.
Filed Oct. 1, 1958, Ser. No. 764,621
12 Claims. (137—375)



F-2

1. In a disc valve of the type having a tubular body with annular undercut surfaces about its inner periphery at its ends, flange members having engagement with the ends of the body and providing fittings for securing the valve within a conduit, means of securing the flange members in engagement with the body ends, a disc valve member rotatably mounted within the body for controlling flow therethrough, and an annular resilient seat having end portions disposed between said undercut surfaces and said flange members and being so proportioned as to be under compression between the undercut surfaces and the flange members, respectively, and between the body and disc when the disc is in closed position, and having a circular stem-opening through one wall on an axis transverse to the axis of said annular seat and of a diameter smaller than the inner diameter of said annular seat, the improvement which comprises a stem integrally joined to said disc to form a unit and having its axis in substantially the central plane of the disc and extending laterally from one edge of the disc along an extended diameter thereof and extending radially through said stem-opening in said seat and body and rotatably mounted in said body for supporting and rotating said disc, said disc and stem unit having a continuous outer surface free from cracks and crevices within the body, said seat being sufficiently flexible to clear the portion of the disc valve member opposite the stem when the seat is out of the body and permit the integral stem and disc valve member to be inserted into and removed from the seat, and said body being in two parts separably joined together along a surface coincident with the axis of a tubular portion of said seat whereby said body may be placed around and removed from said seat while said disc valve member and stem are in place therein.

3,100,501
REMOVABLE HEAD AND SEAT BALL VALVE CONSTRUCTION
George E. Hansen, Elmwood Park, and Carl R. Stone, Lombard, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 23, 1960, Ser. No. 77,901
5 Claims. (Cl. 137—454.6)



1. A valve comprising a casing with an inlet and outlet and a substantially frusto-conical valve chamber therebetween having inner end surface limit defined by a curved surface of spheroidal configuration;

(*a*) a one-piece hollow flexible ported frusto-conical seat member with an inner rounded imperforate wall portion of the same configuration as the said valve chamber inner surface limit and being non-rotatably mounted in said casing to substantially cover the wall surfaces defining the said valve chamber;

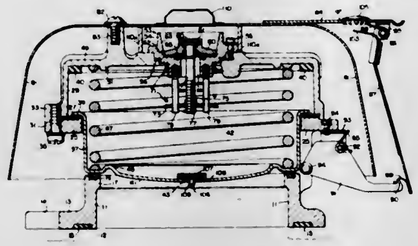
(*b*) a spheroidal ported valve closure member fitted closely within said seat member and being rotatable thereto in opening and closing the valve;

(*c*) the said imperforated wall portion being of uniform thickness to fill a uniform space between the said spheroidal closure member and the curved surface end portion of the valve chamber whereby to effect uniform distribution of the compression load between the curved surface end limit of the casing chamber and the said spheroidal closure member;

(*d*) and means cooperating with an upper portion of the casing to bear against an upper outer surface portion of the said flexible seat member to effect increased compression load by the said seat member applied respectively between the said closure member;

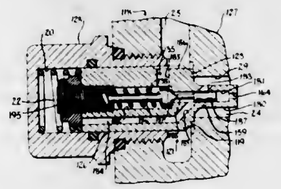
(*e*) the inner rounded imperforate wall portion of the said seat member and the said frusto-conical wall surfaces defining the said valve chamber.

3,100,502
PRESSURE RELIEF VALVE
George E. Ford, Rochester, and Charles R. King, East Rochester, N.Y., assignors to Qualitrol Corporation, East Rochester, N.Y., a corporation of New York
Filed Jan. 29, 1959, Ser. No. 789,947
4 Claims. (Cl. 137—491)



1. A pressure relief valve for relief of gas fluid pressure slowly rising to a first predetermined value and for relief of gas fluid pressure rapidly rising to a second predetermined value substantially lower than said first predetermined value, said relief valve comprising a tubular valve body having a substantially greater internal diameter than its axial length and an inlet orifice of large area at a first end and having a lateral escape orifice of large area throughout the major part of the circumference of said tubular body intermediate said first end and a second end, a first valve seat in surrounding relation to said inlet orifice and located between said escape orifice and the first end of said tubular body, a second valve seat surrounding a larger area than said first valve seat and located in sealed relation to side walls of said tubular valve body in a position between said escape orifice and said second end of said valve body, a relatively light low-inertia cup-shaped movable valve member of sheet metal of uniform thickness having a bottom wall normally resting upon and making sealing contact with said first valve seat and having a side wall rising axially from said bottom wall and having an outwardly extending marginal flange extending from said side wall into normally sealing contact with said second valve seat, a restricted bleed port extending through said bottom wall of said valve member, said valve member when in its normal sealing position serving to subdivide the space within said tubular valve body into a first portion communicating freely with said inlet orifice and sealed to the outside atmosphere and a second portion constituting a chamber sealed from said first portion except through said bleed port, so that during slow rise of fluid pressure at said inlet orifice, pressure within said chamber will rise correspondingly and will act on said valve member at the diameter of said second valve seat to tend to keep said valve member in closed and sealed position, a light spring also tending to hold said valve member in closed and sealed position, said valve member being relatively thin and light so as to have relatively low inertia so that a rapid rise in pressure at said inlet orifice can readily move said valve member away from said first and second valve seats to enable escape of pressure through said escape orifice, and means for lowering pressure in said chamber upon slow rise thereof to a predetermined value, to create a pressure differential on opposite sides of said valve member so that such pressure differential may move said valve member away from said first and second valve seats, the construction further including a first resilient gasket at said first valve seat and a second resilient gasket at said second valve seat, and said cup-shaped valve member being of such size that upon movement of said valve member in an opening direction against the force of said spring, the seal between said valve member and said second gasket will crack open before the seal between said valve member and said first gasket opens, thus allowing fast escape of gas pressure from said second portion of the space within said valve body through a large escape area around the circumference of said second valve seat, thereby quickly lowering the pressure within said second portion of said space and accelerating the movement of said valve member to fully open position.

3,100,503
PILOT OPERATED PRESSURE AND VACUUM RELIEF VALVE
Francis H. Tennis, Milwaukee, Wis., assignor to Hydraulic Unit Specialties Company, Pewaukee, Wis., a corporation of Wisconsin
Filed Nov. 17, 1961, Ser. No. 153,415
24 Claims. (Cl. 137—491)



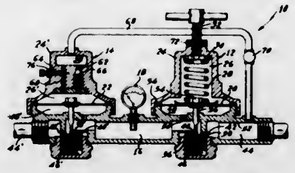
23. In a relief valve of the type having a body and normally closed poppet mechanism having a front portion which is adapted to block transfer of pressure fluid between a high pressure fluid supply line and a low pressure fluid return line in said normally closed position thereof, and wherein pressure fluid at supply line pressure is normally maintained in a chamber in the body, into which the poppet mechanism projects, so that such pressure fluid normally exerts force on a rear portion of the poppet mechanism to hold the same in said closed position thereof, said relief valve being characterized by:

(A) means defining a pair of passages connecting with said chamber and through either of which fluid in the chamber may be substantially freely exhausted to allow the poppet mechanism to be opened under fluid pressure forces exerted upon its front portion, one of said passages providing a control passage that is communicable with the fluid supply line and through which supply line fluid normally flows into said chamber;

(B) a pilot poppet in the body biased to a closed position blocking the other of said passages but movable to a chamber exhausting position in consequence of the force which supply line fluid exerts thereon at times when its pressure rises to a predetermined relief value;

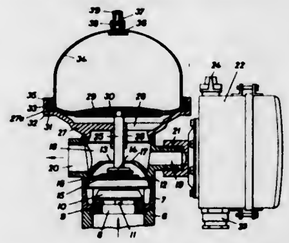
(C) and means providing a throttling valve for said control passage, that is ineffective as long as the pilot poppet is closed, but is rendered operative to substantially restrict the control passage in response to the drop in pressure that takes place in the chamber at times when the pilot poppet opens.

3,100,504
VALVED APPARATUS OF THE FLUID-PRESSURE RESPONSIVE TYPE
George C. Kauer, Jr., Springfield, N.J., assignor to Jelrus Technical Products Corporation, New Hyde Park, N.Y., a corporation of New York
Filed Sept. 28, 1961, Ser. No. 141,438
5 Claims. (Cl. 137—494)



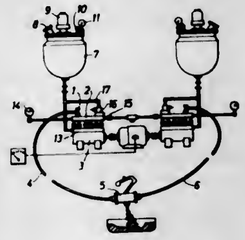
1. Valved apparatus of the fluid-pressure responsive type, comprising:
(a) a valve having an inlet and pressure responsive means for controlling the opening and closing of said inlet,
(b) another valve having an outlet and pressure responsive means for controlling the opening and closing of said outlet,
(c) means interconnecting said pressure responsive means of said valves in fluid flow communication with each other so that operation of said pressure responsive means of said other valve for opening said outlet results in a reduction of pressure on said pressure responsive means of said first mentioned valve and the opening of said inlet,
(d) means interconnecting said pressure responsive means of said other valve with said inlet in fluid flow communication with each other for equalizing the pressure therebetween to close said outlet, and
(e) means for delaying the equalization of said pressure to delay the closing of said outlet.

3,100,505
WATER SUPPLY SYSTEM PUMP AND PRESSURE CONTROL MEANS
Odd Fredheim Johnsen, Reinhardts Verft, Kristiansand S., Norway
Filed May 14, 1959, Ser. No. 813,129
Claims priority, application Norway Feb. 25, 1959
1 Claim. (Cl. 137—565)



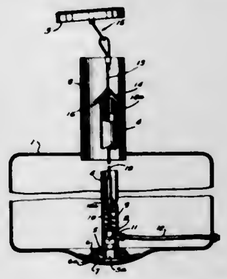
A water supply system comprising a motor pump and having a discharge line connected to a non-return valve provided in the feed line from said motor pump, said system including a relatively small pressure bell and a pressure operated switch for the motor of said motor pump actuated by the water pressure in said discharge line, a regulating valve intermediate said feed line and said discharge line for regulating the water supply from said pump, said regulating valve having a valve stem, and said bell having a diaphragm operatively connected to said stem, a by-pass around said regulating valve between said feed line and said discharge line and a counter-balancing spring arranged intermediate said non-return valve and said regulating valve and acting on said regulating valve, said stem and said diaphragm, and biasing said regulating valve in closed direction and said stem against said diaphragm, said non-return valve being independent of said regulating valve so that both said valves may be in closed position at the same time.

3,100,506
APPARATUS FOR THE MANUFACTURE OF PLASTICS
Karl Breer, Cologne-Flittard, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Jan. 23, 1962, Ser. No. 168,191
Claims priority, application Germany Feb. 3, 1961
1 Claim. (Cl. 137—567)



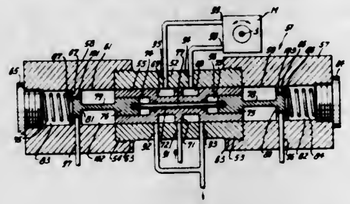
Apparatus for the manufacture of plastics, e.g. of foam substances containing urethane groups, from separate components, which comprises high pressure pumps connected through conveyor pipes to injection nozzles opening into a common mixing chamber wherein, to at least one pipe 4 there is connected a liquid reservoir which consists of a piston 21 arranged to be freely movable in the bore of a housing and which has a spring attached at one end, and wherein a stop bolt 24 is provided in the longitudinal axis of said piston at the end near the spring 23 and disposed at some ditsance from the end of the piston.

3,100,507
COMBINED VENT AND DRAIN ASSEMBLY
Martin A. Price, Redondo Beach, Calif., assignor to the United States of America as represented by the Secretary of the Army
Filed July 23, 1962, Ser. No. 211,923
4 Claims. (Cl. 137—588)



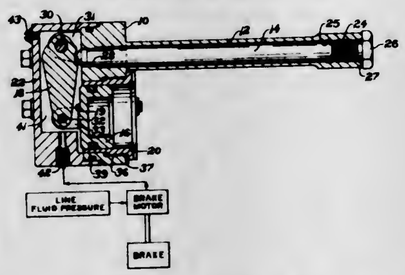
1. A combined vent and drain assembly comprising a liquid holding tank, a substantially vertical vent pipe, open at both ends, extending from a point within said tank near the bottom of said tank to a point within said tank above the maximum level to which the tank is normally filled; a drain tube communicating with said vent pipe near the bottom thereof; a valve received in said vent pipe for longitudinal movement therein between a first normal position below the juncture of said vent pipe and said drain tube and a second position above that juncture; operating means for selectively moving said valve to said first and second positions.

3,100,508
CONTROL VALVES
Jean Mercier, 1185 Park Ave., New York, N.Y.
Filed May 31, 1961, Ser. No. 113,833
10 Claims. (Cl. 137—625.66)



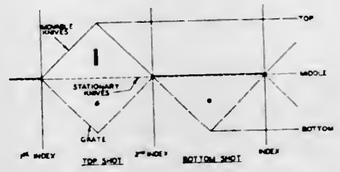
1. A valve comprising a casing having pressure inlet, pressure control and pilot passageways, a main piston slidably mounted in said casing and controlling said pressure inlet and control passageways, said main piston being movable between a first position in which communication is cut off between said pressure inlet and control passageways and a second position in which communication is afforded between said pressure inlet and control passageways, a valve head slidably mounted in said casing on one side of said piston, resilient means normally retaining said valve head in position to define a restricted passageway in said casing in communication with said pilot passageway, said casing having a chamber in communication with said restricted passageway, said valve head and said main piston being operatively exposed in said chamber for movement thereof when fluid under pressure flows into said chamber through said pilot passageway thereby respectively to increase the size of said restricted passageway and to provide communication between said pressure inlet and control passageways.

3,100,509
ACCUMULATOR FOR FLUID POWER SYSTEMS
Ludwik Seweryn Bialkowski, Troy, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Mar. 30, 1962, Ser. No. 183,794
4 Claims. (Cl. 138—31)



1. Mechanism for regulating fluid power systems to compensate for pressure variations in the system fluid caused by thermal expansion of the fluid, said mechanism comprising a body having a tubular casing projecting from the body, a compensating rod in said casing, said rod being fastened to a portion of the casing remote from the body and said rod being of a material which has a coefficient of linear expansion different from that of the material of said tubular casing, a chamber in the body open to said casing, means for communicating operating fluid of a fluid power system into said chamber and into said casing so that said fluid contacts said rod, a movable member mounted in said body for movement into and out of said chamber to vary the volume of fluid within said chamber, and a lever in said chamber pivotally connected to said movable volume-varying member and also pivotally connected to said body and engageable with said rod, said lever being movable pivotally in response to a relative lengthwise displacement of said rod in said casing commensurately with a temperature change of said fluid communicated to said rod to effect a corresponding displacement of said movable member and thereby minimize pressure variations of said fluid resulting from thermal expansion of said fluid.

3,100,510
METHOD OF WEAVING JACQUARD PILE FABRIC
Thomas T. Janney, Buena Vista, Va., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed June 3, 1960, Ser. No. 33,759
14 Claims. (Cl. 139—39)

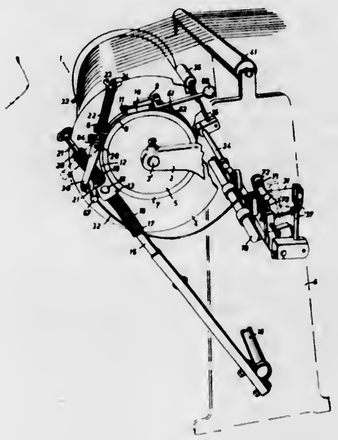


1. The method of weaving on a two index per weaving cycle jacquard loom, a Wilton fabric having ground warps, filling shots, and a series of pile yarns which comprises the steps of selecting each pile yarn to one of three shed positions on the first jacquard index, inserting a filling shot, selecting each of said pile yarns to one of two positions on the second jacquard index, and inserting a filling shot.

3,100,511
SPEED REGULATED LET-OFF
Willy Grob, Burstwiesenstrasse 45, Zurich 55, Switzerland
Filed Nov. 23, 1960, Ser. No. 71,290
Claims priority, application Switzerland Nov. 24, 1959
2 Claims. (Cl. 139—107)

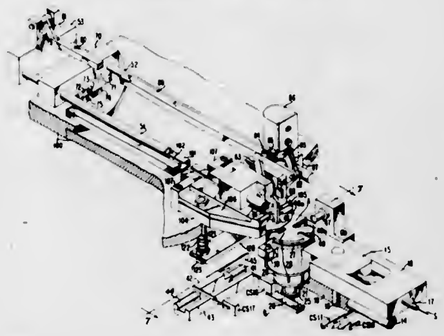
1. In a loom, in combination, a rotary warp beam for supporting and for paying out a supply of convoluted warp yarns; at least one brake drum coaxially fixed to and rotatable with said warp beam; a brake band at least partially surrounding said drum and having a first end portion and a spaced second end portion; first and second holding means respectively connected with the first and second end portions of said brake band, said holding means and said brake band being angularly movable about said brake drum in clockwise and anticlockwise directions; first and second resilient means operatively connected with said first holding means for respectively resisting clockwise and anticlockwise angular movements of said holding means and of said brake band; third resilient means for biasing said first and second holding means toward each other and for thereby pressing the brake band against said brake drum; and means for regulating the bias of said third resilient means, said regulating means comprising movable feeler means engaging the convoluted warp yarns on said warp beam, motion transmitting means movably supporting said feeler means so that the latter may change its position to remain in engagement with the

warp yarns when the warp yarns are paid out and the diameter of the supply of convoluted yarns on said warp beam decreases, and a Bowden wire including a tubular outer casing having a fixed first end and a second end connected with one of said holding means, and an inner



cable slidable in said casing, said inner cable having a first end operatively connected with said motion transmitting means and a second end operatively connected with said third resilient means for changing the bias of said third resilient means proportionally with changes in the diameter of the supply of warp yarns on said warp beam.

3,100,512
LOOPING DEVICE
Richard N. Sage, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 28, 1958, Ser. No. 738,473
7 Claims. (Cl. 140—102)



1. A device for forming an extended loop from a source of a long or continuous strand or filament, comprising:

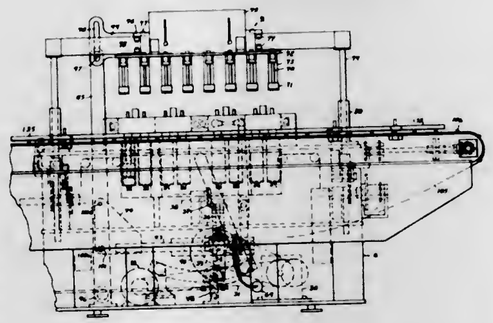
looping means including movable gripping means for gripping the end of said strand and means for moving said gripping means to bend an end portion of said strand back upon itself;

movable loop pulling means adapted to engage said strand;

means for causing said loop pulling means to engage said bent portion of said strand; and

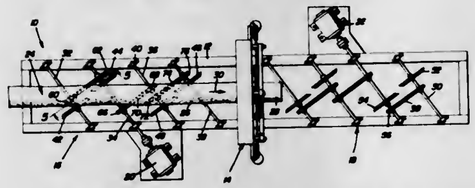
means for moving said loop pulling means in a direction parallel to the portion of strand extending from the source to said looping means, said means for moving said loop pulling means thereby exerting a pulling force on said strand while said end of said strand remains gripped, so as to pull said bent back portion of said strand into an extended loop.

3,100,513
MULTIPLE LINE-FILLER
Joseph M. Cozzoli, North Plainfield, and Harold F. Scribner, Westfield, N.J., assignors to Cozzoli Machine Company, Plainfield, N.J., a corporation of New Jersey
Filed July 25, 1960, Ser. No. 45,089
8 Claims. (Cl. 141—102)



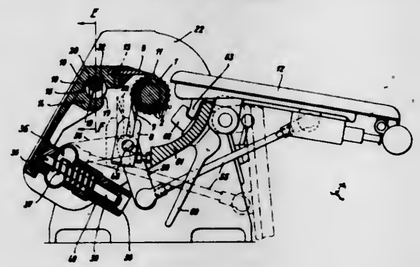
1. A filling machine comprising a main frame, a conveyor structure means mounted to one side of the frame for supporting containers arranged in a file for filling and for moving them in the direction of the file during the filling operation, a plurality of filling units mounted to the frame opposite the conveyor, each of said filling units comprising a piston and a relatively reciprocable cooperating cylinder and valve means operative to direct fluid to be dispensed alternately to and from the cylinder, a series of filling needles mounted in single file spaced relation over the conveyor for movement vertically and laterally in relation to the conveyor, flexible tubing connections between the valve means of the filling units and the needles of a length sufficient to permit the needles to move laterally and vertically on each operating cycle, means for actuating each of said filling units to cause a measured quantity of liquid medium to be dispensed on each operating cycle, means for driving the conveyor continuously at a rate such that it travels a constant unit distance during each operating cycle of the filling units, and means for moving the filling needles vertically and laterally in a rectangular path in time with the movement of the conveyor and in time with the operation of the filling units so as to cause the filling needles to descend and move laterally with the conveyor for a fraction of the unit distance the conveyor travels per filling cycle so that containers are filled as they move in the direction of the file and to elevate and retract to their starting point during the remaining fraction of said unit distance that the conveyor travels per filling cycle, the relative distances that the filling needles move forward and the conveyor travels per filling cycle being on the order of 2 to 3, respectively, so that the filling needles will have returned to their starting points in time for a repeat filling cycle on a next succeeding group of containers carried on the conveyor.

3,100,514
LOG DEBARKER FEED APPARATUS
Edward Dechau, Jr., Waynesboro, Ga. (Box 102, Midville, Ga.)
Filed Jan. 24, 1961, Ser. No. 84,540
10 Claims. (Cl. 144—208)



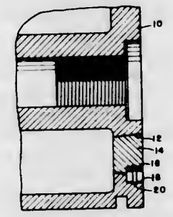
1. A log debarking machine comprising frame means, rossing means operatively mounted upon the frame means centrally thereof for engagement with a log at circumferentially spaced locations thereabout to remove bark therefrom as the log passes therethrough, infeed means and outfeed means mounted on the frame means forwardly of and rearwardly of the rossing means respectively for engaging, guiding and propelling logs forwardly to and from the rossing means in response to drive of the infeed and outfeed means, and drive means drivingly connected to the infeed and outfeed means and operative to drive portions of the infeed means at different speeds simultaneously to thereby loosen bark from logs fed therethrough toward the rossing means and uniformly drive the outfeed means for delivery of debarked logs.

3,100,515
MACHINE FOR SKINNING AND CUTTING MEAT AND BACON SIDES
Hermann Schill, Goldscheuer, near Offenburg, Baden, Germany
Filed Sept. 2, 1959, Ser. No. 837,736
Claims priority, application Germany Sept. 3, 1958
17 Claims. (Cl. 146—130)



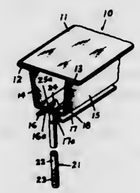
1. A machine for skinning and cutting meat and bacon sides, comprising a rotatable feed roller provided on its surface with a plurality of teeth engaging in the rind or skin of the object to be skinned carried along by the engagement of the teeth, a skinning blade with a cutting edge arranged to point toward the apex of the feed roller, a holder carrying the skinning blade and having bores, said skinning blade together with its holder being arranged so as to be releasable from the machine, means for adjusting the skinning blade together with its holder toward or away from the feed roller, said means comprising an adjusting lever, a supporting shaft connected to said lever, and a hollow shaft mounted in said bores of said holder and having an eccentric bearing bore receiving said supporting shaft and having a radial slot for detachment of said hollow shaft from said supporting shaft, said adjusting lever being movable through an adjustment path serving to adjust the position of the cutting edge of the skinning blade in a plane substantially tangential to the periphery of said feed roller, and having a further position where the skinning blade together with its holder is released to be withdrawn from the machine.

3,100,516
THREADED MEMBERS LOCKED BY EXPANDED TUBULAR LOCKING PIN
Julius Naab, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Feb. 6, 1959, Ser. No. 791,755
2 Claims. (Cl. 151—8)



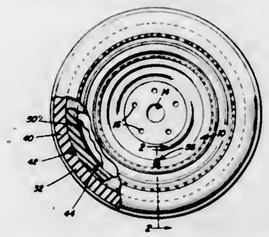
1. In combination with a member having a threaded opening and a plug disposed in the opening threadedly engaging said member, locking means comprising a wall defining a cylindrical opening partly in said member and partly in said plug, said wall having an annular groove partly in said plug and partly in said member, and a thin walled tube disposed in said cylindrical opening having an annular portion intermediate its ends radially expanded into said annular groove for fixing said tube in said cylindrical opening thereby locking said plug in said member.

3,100,517
FASTENING DEVICES FOR SECURING ACCESSORIES TO CONCRETE AND THE LIKE
George T. Phillips, Box 283, Bedford, N.Y.
Original application Jan. 13, 1956, Ser. No. 565,005, now Patent No. 2,909,054, dated Oct. 20, 1959. Divided and this application July 14, 1959, Ser. No. 827,112
3 Claims. (Cl. 151—68)



1. A fastening device for securing accessories to a building structure comprising a member having an elongated shank and a head at one end thereof, said head being shaped substantially like a wedge of greater length than and a width substantially the same as the greatest cross-sectional dimension of said shank and having long head surfaces inclined and meeting to form a straight sharp edge substantially at right angles to the shank axis, the ends of said edge and head extending laterally on opposite sides of said shank, said shank having means thereon for connecting it to said accessory and a neck portion of rectangular cross section adjacent to said head and within the periphery of said shank, said neck portion being of smaller cross section than the portions of said head and said shank adjacent thereto.

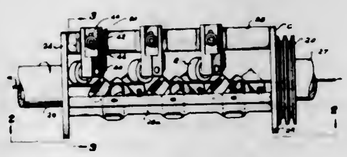
3,100,518
PNEUMATIC SAFETY TIRE CONSTRUCTION
Richard Dresser, P.O. Box 245, Moran, Tex.
Filed Feb. 7, 1962, Ser. No. 171,631
3 Claims. (Cl. 152—347)



1. In combination with a wheel assembly having an outer rim portion defining a pair of interconnected axially spaced cylindrical tire seating flanges terminating at their remote ends in a pair of radially outwardly directed annular abutment flanges, a pneumatic tire construction comprising a tire casing including a pair of laterally spaced generally annular side wall portions interconnected at their outer marginal edge portions by means of an integral crown tread portion, the inner marginal edge portions of said sidewall portions including annular seating bead portions removably positionable for seated engagement with said seating and abutment flanges, an annular inner tire substantially U-shaped in cross-section, constructed of foam-like elastic and deformable material and including a pair of annular sides interconnected at their outer ends by means of a circumferentially extending bight portion, said sides being tapered and gradually increasing in thickness from their inner marginal edge portions toward the bight portion at which point the sides and bight portion are on the order of two to three inches thick, said bight portion being considerably thicker than the crown tread portion, said inner tire being removably disposed within and including outer surfaces conforming to the inner surfaces of said casing and disposed in surface to surface contacting relation with said inner surfaces, the inner marginal edge portions of said inner tire sides being tapered toward their edges and terminating adjacent the innermost portions of said side wall portions, and a flexible inner annular shield tube substantially U-shaped in cross-section and removably disposed within said inner tire, said shield tube including a pair of spaced annular leg portions interconnected at their outer marginal edge portions by means of an integral bight, the inner marginal edge portions of said leg portions including laterally and oppositely directed cylindrical flanges which terminate outwardly in anular abutment flanges, said shield tube cylindrical and abutment flanges being disposed between said annular seating bead portions and said wheel assembly abutment and seating flanges whereby pressure within said tire construction will urge said bead portions outwardly to clampingly engage said abutment flanges of said shield tube between said bead portions and said wheel assembly abutment flanges and thereby seal said shield tube cylindrical and abutment flanges with said cylindrical and abutment flanges of said rim portion and corresponding portions of said casing annular seating bead portions.

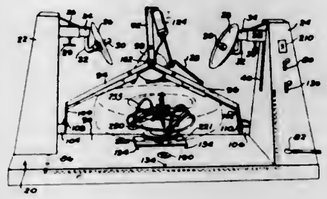
3,100,519
WIRE STRAIGHTENING APPARATUS
Archibald P. Johnston, 1845 E. 57th St., Los Angeles 5, Calif.
Filed June 23, 1958, Ser. No. 743,799
8 Claims. (Cl. 153—94)

1. Wire straightening apparatus, comprising: a cage rotatable about its longitudinal axis with a wire to be straightened extending through said cage in a direction substantially corresponding to the axis of rotation of said cage; a plurality of wire-engaging and deflecting members in said cage; a minimum of three sets of carrying members for said wire-engaging and deflecting members each displaced circumferentially 120 degrees, each set including a plurality of longitudinally aligned and spaced elements secured to said cage; means connecting each of said carrying members with one of said wire-engaging and deflecting members whereby the latter are displaced circumferentially



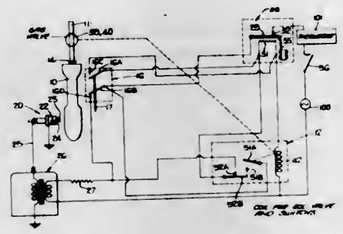
and longitudinally consecutively relative to the axis of rotation of said cage and define a spiral path about said axis, the radially inner extremities of said wire-engaging and deflecting members exerting compressive pressure upon said wire so as to deflect said wire out of a line corresponding to the axis of rotation of said cage as such cage is rotated; and adjustment means interposed between each of said wire-engaging and deflecting members and said cage to adjust the distance between the wire-engaging surfaces of said members and the axis of rotation of said cage along a radially extending path relative to said cage.

3,100,520
TIRE CHANGING MACHINE
Fred May and George May, Wyandotte, Mich., assignors, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,558
3 Claims. (Cl. 157—1.24)



1. In a tire removing and replacing device of the type utilizing opposed discs to act on the side walls of a tire and the flange of a rim, vertical columns for supporting said discs, brackets vertically slidable in said columns, means in said columns for slidably mounting said brackets, power means for forcing said brackets downwardly in said columns and return means for moving said brackets upwardly, said brackets each having a horizontal passage therein extending to its respective column, disc supporting means comprising a horizontal bar slidable in said passage and adjustable for various positions therein, an L-shaped disc support rod comprising a vertical portion mounted in and extending downwardly from said bar and a means extending upwardly at an angle from the bottom of said downwardly extending portion having a bearing area, and a disc on said bearing area rotatable and slidable thereon.

3,100,521
COMBINED VALVE AND RELAY STRUCTURE IN BURNER CONTROL SYSTEM
Justin A. Deubel, Milwaukee, Wis., assignor to General Controls Co., Glendale, Calif., a corporation of California
Filed Feb. 3, 1958, Ser. No. 712,853
7 Claims. (Cl. 158—125)



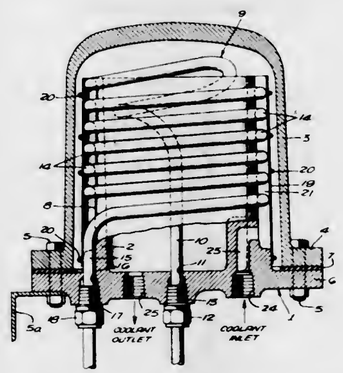
1. A control system for a gas-burning appliance, a main burner, a spark igniter for the main burner, a valve controlling the flow of gas to said burner, an electromagnetically operated switching mechanism and an electromagnetic operator which operates said valve and said switching mechanism, a flame responsive switch mechanism having a first switch closed only in the absence of flame at said burner and a second switch closed only on the presence of flame at said burner, a safety switch having a thermal operator adapted to move said safety switch from closed to open position a predetermined time after energization of the thermal operator, a circuit network comprising said safety switch and said first switch connected in series with each other and with two parallel circuit branches, one of said branches connecting in series the thermal operator for said safety switch and the operator for said valve, the other branch including said spark igniter, control switch means connecting said circuit network across a source of power, said second switch serving to deenergize said thermal operator when a flame appears at the burner before said predetermined time has elapsed, said network being adapted upon closure of said control switch to initially energize said valve operator, the spark igniter, and said safety switch operator and, upon the appearance of flame at said burner, to deenergize said igniter and to retain said valve operator energized, and circuit means including said first switch for preventing said main valve from re-opening upon momentary de-energization of said valve operator while said flame responsive switching mechanism remains in hot condition, said circuit means including a normally closed switch of said electromagnetically operated switching mechanism which controls energization of said valve operator and a normally open switch of said electromagnetically operated switch mechanism shunting said first switch and said last named normally closed switch.

3,100,522
RUG HOLDER
Alva B. McIntyre, P.O. Box 735, Evanston, Ill.
Filed Dec. 22, 1960, Ser. No. 77,600
2 Claims. (Cl. 160—90)



1. A unitary floor covering comprising a continuous closed margin of rigid material, a flat, rigid rug supporting element, a rug on top of said rug supporting element and in contact with it, a first recess in said margin having the edge of said rug supporting element embraced within it, a second recess of smaller perimeter having the edge of said rug embraced within it, said second recess being defined by the upper surface of said rug supporting element and an upper element of said closed margin, and fastening means passing through the lowest element of said margin upwardly through said first recess to engage said rug supporting element whereby a unitary movable floor covering with invisible fastening means is formed.

3,100,523
HEAT EXCHANGER
Fernando G. Marrujo, Montebello, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 29, 1959, Ser. No. 816,909
5 Claims. (Cl. 165—160)



1. A heat exchanger comprising: a base, a housing removably disposed upon said base, said base having a tubular support extending into said housing, a heat exchanger coil having a section extending through said base within said tubular support, a plurality of coils disposed about the tubular support in engagement with said support and a section extending through said base externally of said tubular support, a sleeve surrounding said coils in engagement therewith so as to form with said tubular support a helical cooling fluid flow path leading between said coils, said base having an inlet leading to the space between said tubular support and said sleeve, and an outlet leading from said housing.

3,100,524
RECOVERY OF OIL FROM PARTIALLY DEPLETED RESERVOIRS
Donald M. Beeson, Garwood, N.J., assignor to Jersey Production Research Company, a corporation of Delaware
No Drawing. Filed Sept. 9, 1959, Ser. No. 838,828
6 Claims. (Cl. 166—9)

1. A process for recovering crude oil from a water-wet oil-bearing reservoir penetrated by an injection well and a production well which comprises:

(*a*) establishing a bank of aqueous solution in said reservoir about said injection well, said aqueous solution containing a surface active agent which will readily be absorbed on subsurface strata in said

reservoir and will transform said reservoir from a water-wet to an oil-wet state;

(*b*) displacing said bank of aqueous solution containing said surface active agent from about said injection well by introducing a bank of low molecular weight liquefied, normally gaseous hydrocarbons into said reservoir through said injection well;

(*c*) displacing said bank of liquefied hydrocarbons from about said injection well by introducing a non-condensing gas into said reservoir through said injection well; and

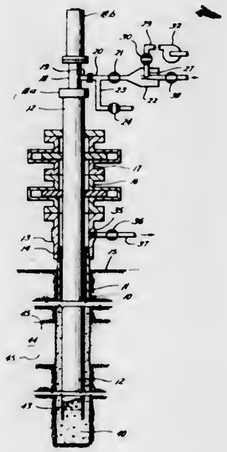
(*d*) recovering crude oil displaced by said aqueous solution and said liquefied hydrocarbons from said reservoir through said production well.

3,100,525

CEMENTING

Arthur W. Smith and Ray A. Plummer, Houston, Tex., assignors, by mesne assignments, to Big Three Welding Equipment Company, Houston, Tex., a corporation of Texas

Filed Feb. 6, 1961, Ser. No. 87,208
7 Claims. (Cl. 166—21)



1. Method for cementing in wells wherein the zone of the well to be cemented is filled with a weighted fluid, comprising, at the well site, pumping a stream of liquified inert gas to increase its pressure, heating the pumped liquified gas to vaporize the gas to form high pressure inert gas, gasifying a stream of said weighted fluid drawn from a supply thereof at the surface with said high pressure inert gas prepared at the well site, circulating the gasified fluid into the well to displace said weighted fluid therefrom, circulating a volume of cement slurry into the well to the zone of the well to be cemented, and permitting the cement slurry to set in the well.

3,100,526

METHOD OF CEMENTING WELLS

Robert C. Martin, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,606
6 Claims. (Cl. 166—31)

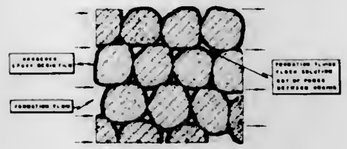
1. The method of cementing a well which comprises emplacing in the well an aqueous composition consisting of 100 parts of an hydraulic cement selected from the class consisting of aluminous, Portland, and pozzolanic cements, between 0.025 and 1.0 part of a polyhydroxy aliphatic compound selected from the class consisting of glucoheptonic acid and soluble salts thereof, and sufficient water to make a pumpable slurry which sets to a high strength monolithic solid in situ.

3,100,527

SAND CONSOLIDATION

Albert R. Hilton, Jr., Richardson, and Horace H. Spain, Houston, Tex., assignors to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Aug. 22, 1960, Ser. No. 51,033
5 Claims. (Cl. 166—33)



1. A method of consolidating loose or unconsolidated sand particles in an earth formation penetrated by a borehole, comprising: pumping through the borehole into the earth formation a first solution having a viscosity greater than 3 centipoises and comprising a bisphenol "A" type epoxy resin in a solvent therefor in the range of 50 to 100 percent by volume of epoxy resin, said solvent comprising between 60 to 90 percent by volume of denatured ethyl alcohol and between 40 and 10 percent by volume of kerosene containing aromatic hydrocarbons sufficient in amount to give a clear homogenous solution; displacing said first solution with a second solution immiscible with said first solution and comprising a hardening and curing agent for said epoxy resin in an aromatic-free and olefin-free aliphatic hydrocarbon solvent, at least the portion of said second solution in contact with said first solution being of substantially equal or greater viscosity than said first solution; the percentage of resin in said solvent therefor being sufficient to permit the resin to extract hardening and curing agent from said second solution; leaving said second solution in said earth formation for an interval sufficient for the portion of said epoxy resin adhering to the sand particles to extract at least a portion of said hardening and curing agent from said second solution, and to harden; and producing connate earth fluids from said earth formation to remove the liquid portions of said first and second solutions remaining therein.

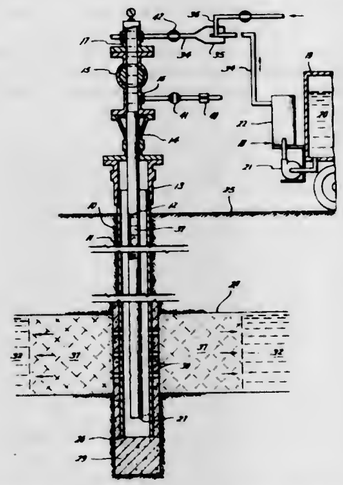
3,100,528

METHODS FOR USING INERT GAS

Ray A. Plummer and Arthur W. Smith, Houston, Tex., assignors, by mesne assignments, to Big Three Welding Equipment Company, Houston, Tex., a corporation of Texas

Filed Feb. 6, 1961, Ser. No. 87,291
16 Claims. (Cl. 166—42)

1. Method for performing well operations, comprising at the well site, pumping a stream of liquified inert gas to increase its pressure, heating the pumped liquified gas to vaporize the gas to form high pressure inert gas, gasifying a reagent in liquid form with said high pressure inert gas prepared at the well site, passing the gasified reagent into the well under pressure to contact desired portions of the well and formations through which the well extends therewith, maintaining said contact under said pressure for a desired period of time, and venting said pressure to cause return of spent gasified reagent from the well.

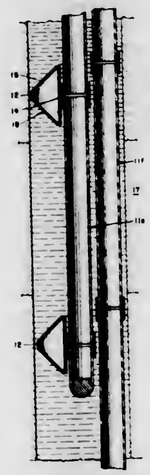


3,100,529

APPARATUS FOR POSITIONING WELL PIPE

Peter R. McStravick, Tomball, and William C. Lindsey and Garland C. Terrel, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed June 6, 1960, Ser. No. 34,170
2 Claims. (Cl. 166—52)



1. Multiple well completion apparatus adapted to space a plurality of pipe strings in a well bore to insure that the pipe strings through which subsurface hydrocarbon-containing formations are produced may be perforated without damage to other pipe strings arranged in said well bore comprising:

a plurality of vertically spaced-apart, vertically aligned spacer means connected to one of said pipe strings and positioned relative to at least two other of said pipe strings in a manner such that angular clearance relative to said two other pipe strings is provided;

each of said spacer means having a selected cross section, the extent of which determines a degree of angular clearance provided by said spacer means; and

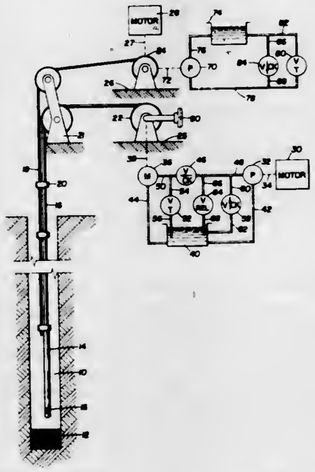
each of said spacer means being of circular configuration and being tapered on the upper side downwardly away from said one pipe string to which it is attached and on the underside upwardly away from said one pipe string to which it is attached.

3,100,530

APPARATUS FOR TREATING OR SERVICING A WELL

Joe D. Coleman, Bartlesville, and Charles L. Boyd, Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,441
12 Claims. (Cl. 166—53)



8. Apparatus for treating or servicing a well, comprising in combination: a flexible conduit spooled upon a first reel and having a portion extending into the well, a flexible cable spooled upon a second reel and having a portion extending into the well, clamp means spaced at intervals along said portions of the conduit and the cable within the well and connecting the conduit and the cable for movement as a unit within the well, means whereby material may be introduced into the well through said first reel and said flexible conduit, and means for effecting controlled turning movement of said reels.

3,100,531

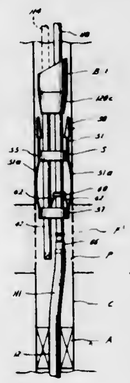
WELL APPARATUS AND METHODS OF RUNNING A PLURALITY OF TUBING STRINGS IN A WELL BORE OR PIPE

Cicero C. Brown, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas

Filed June 29, 1955, Ser. No. 518,725
3 Claims. (Cl. 166—114)

1. In combination with a well packer disposed within a well bore in a set position to separate two producing zones wherein said packer has a passage extending therethrough, a tubing string support assembly including, a body having a pair of passages extending therethrough, a first tubing string extending entirely through one of the passages and connected to the body, the lower portion of said first tubing string projecting downwardly from the body and having its lower end extending through the passage

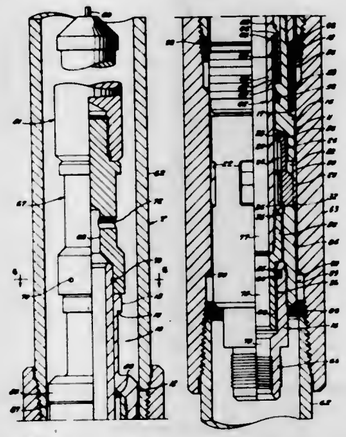
in the well packer to communicate with the producing zone below said packer, a gripping slip assembly including gripping slips slidably mounted on the downwardly projecting portion of the tubing string whereby when the assembly moves upwardly relative to the body the slips encircle said body, expander means on the body to co-act with said slips for expanding the slips into gripping position when the slip assembly and the body are moved relative to each other, said slips supporting said body when the slips are in expanded position, co-acting latching means on the downwardly extending portion of said first tubing string and on said gripping slip assembly for latch-



ing said assembly against relative movement with respect to the body, means on said first tubing string engageable with a portion of the latching means for releasing said latching means upon reciprocating movement of the first tubing string relative to the assembly, whereby after release of said latching means the body secured to said first tubing string and having the expander means thereon may be moved in a direction relative to the assembly to expand the gripping slips, and a second tubing string having its lower portion landed in the second passage in the body and having its lower end terminating above the well packer to communicate with the zone above said packer.

3,100,532
WELL TOOLS FOR PLUGGING A WELL FLOW CONDUCTOR
Jack W. Tamplen, Celina, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Aug. 19, 1959, Ser. No. 834,829
12 Claims. (Cl. 166—125)

1. A well tool for use in a well flow conductor having a plurality of longitudinally spaced annular recesses each providing an upper downwardly facing shoulder and a lower upwardly facing shoulder including: a main tubular mandrel having means for securing a well device which is to be supported by the well tool in a well flow conductor; locking means carried by said main mandrel and movable relative to said main mandrel between a retracted position wherein said locking means does not prevent longitudinal movement of the main mandrel through the well flow conductor and an expanded position wherein said locking means extends into a recess of the well flow conductor to prevent longitudinal movement of the main mandrel in the well flow conductor; an inner mandrel mounted in said main mandrel for limited longitudinal movement relative thereto between an upper position and a lower position, said well tool being lowerable through a well flow conductor by means detachably securable to said inner mandrel; coengageable means on said inner mandrel and said locking means for moving said locking means to said expanded position upon upward movement of said inner mandrel from said lower position toward said upper position, said means on said inner mandrel moving upwardly with said inner mandrel as said inner mandrel moves from said lower position toward said upper position; and means on said inner mandrel movable with said inner mandrel and engageable with said lock-



ing means for holding said locking means in expanded position when said inner mandrel is in said upper position, said locking means having means engageable with an upwardly facing shoulder of a well flow conductor at each recess for moving said locking means to retracted position upon downward longitudinal movement of the main mandrel in the well flow conductor when said inner mandrel is in said lower position.

3,100,533
ANCHORING AND SEALING DEVICE
John V. Fredd, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,512
21 Claims. (Cl. 166—125)



1. An anchoring and sealing device for use in a well flow conductor having an internal recess including: a tubular mandrel; anchoring means mounted on the mandrel and movable outwardly to expanded position in the internal recess of the well flow conductor, said anchoring means being mounted on the mandrel for limited longitudinal movement thereon; lock means mounted on the mandrel for limited longitudinal movement thereon and movable with the mandrel upon upward movement of the mandrel relative to the anchoring means into locking engagement with the anchoring means when the anchoring means is in its expanded position to lock the anchoring means in the internal recess of the well flow conductor; a control member mounted in the mandrel for limited longitudinal movement relative to the mandrel extending longitudinally of the mandrel and having an upper end portion engageable by running and pulling tools whereby longitudinal movement may be imparted to the control member relative to the anchoring means when the anchoring means is received in the annular recess of the well flow conductor; seal means carried by the mandrel for sealing between the mandrel and the well flow conductor; expander means carried by the control member and movable into engagement with the seal means to expand the seal means into sealing engagement with the well flow conductor after the anchoring means has been locked into expanded position, said control member being movable by the application of a continuous constant upward force thereto to move the mandrel and the control member upwardly relative to the anchoring means to cause the lock means to move into engagement with the anchoring means to lock the anchoring means in its expanded position and subsequently to move the control member upwardly to move the expander means into engagement with the seal means, said mandrel and said control member having cooperable pin and slot means operatively connecting said mandrel and said control member for limited movement relative to each other longitudinally and rotatively about their longitudinal axes, said pin and slot means having means thereon coacting to position said mandrel and said control member in a plurality of predetermined longitudinally spaced and rotatively displaced positions with respect to each other; means biasing said mandrel and said control member for rotatable movement about their longitudinal axes relative to each other; said cooperable pin and slot means being engageable upon rotation of the control member in one direction through a predetermined angle relative to the mandrel to prevent downward movement of the control member and the expander means relative to the seal means after the expander means has moved the seal means into expanded sealing positions, the mandrel, the control member end the expander means having a flow passage affording communication with the well flow conductor above and below the sealing means; and plug means for closing said passage when the expander means is in seal expanding position, the control member being operatively connected to the plug means for moving the plug means upwardly to open position upon upward movement being imparted to the control member after the expander means has been moved to its seal expanding position whereby the pressure above and below the seal means may be equalized.

3,100,534
PLUG FOR USE IN CONDUITS
Luther J. Herndon, Jr., George W. Evans, and John R. Land, Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,657
4 Claims. (Cl. 166—153)

1. A plug for use in segregating adjacent bodies of fluids in a conduit, said plug comprising an elongate resilient body having:

a guide portion;

a seal portion axially spaced from said guide portion and adapted to be positioned above said guide portion when said plug is positioned within a conduit; and a connecting portion disposed intermediate of and joining said guide and seal portions;

said guide portion including continuous, cylindrically configured, peripheral surface means coaxial with the axis of said plug and having a diameter adapted to provide an interference fit with interior wall means of said conduit;

said seal portion including a substantially spherical segment coaxial with said plug axis and defining a closed end of said plug, said spherical segment being

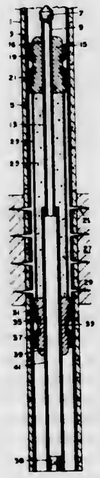


of substantially greater diameter than the diameter of said conduit interior wall, and peripherally engageable with said wall;

said spherical segment being axially elongatable whereby, in being radially constricted by peripheral engagement with said conduit interior wall means, said segment may resiliently expand axially of said plug;

and said connecting portion being resilient, coaxial with said plug axis, integral with said seal and guide portions, and of less width than the diameter of said spherical segment.

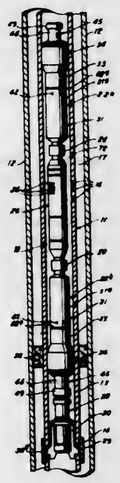
3,100,535
WIRE LINE CEMENTING TOOL
Walter J. Bielstein, Corpus Christi, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 5, 1960, Ser. No. 73,819
5 Claims. (Cl. 166—162)



1. Apparatus for squeeze cementing in a well including a production pipe string cemented to the sides of a borehole and perforated to open up fluid communication with a productive earth formation, said apparatus comprising: a tubular mandrel; first and second packer means connected to said mandrel and longitudinally spaced apart

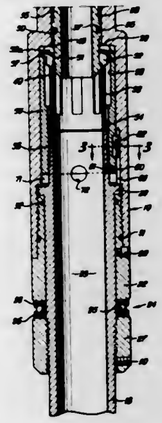
thereon, adapted to seal against the inner wall of the pipe string, said first and second packer means and the mandrel being connected together to permit movement of one of the packer means toward the other packer means to a close-spaced position thereof; means, including a frangible annular member, connected between said first and second packer means and surrounding said mandrel to define with said mandrel a closed container for a cementitious fluid, said frangible member being adapted to be shattered when said packer means are moved toward each other; and means connected to said mandrel, adapted to connect said mandrel to a wire line for lowering said mandrel to the depth of the perforations of the pipe string; the distance between said first and second packer means being greater than the total interval perforated in the pipe string so that said first and second packer means and said mandrel straddle the perforated interval when the packers are in the close-spaced position thereof.

3,100,536
ANCHORING AND SEALING DEVICE
Jack W. Tamplen, Celina, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Apr. 6, 1960, Ser. No. 20,480
12 Claims. (Cl. 166—185)



1. A well tool assembly positionable in a well flow conductor having a lateral port, including: a well tool; and a pair of anchoring and sealing devices connected to said well tool at opposite ends of said well tool, said well tool assembly being positionable in the well flow conductor with said anchoring and sealing devices disposed on opposite sides of said lateral port, each of said anchoring and sealing devices having a tubular expandable means and an expander telescopable inwardly relative to the expandable means and engageable therewith for expanding said expandable means into anchoring and sealing engagement with the well flow conductor, said expanders of said anchoring and sealing devices being longitudinally movable in opposite directions toward expanding engagement with their associated expandable means; and fluid pressure piston and cylinder means on said anchoring and sealing devices and having communication with the exterior of said devices for conducting fluid pressure to said piston and cylinder means for moving said expanders longitudinally into expanding engagement with their associated expandable means.

3,100,537
FORMATION TESTING APPARATUS
Talmadge L. Crowe, Zulia, Venezuela, assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 1, 1960, Ser. No. 53,470
13 Claims. (Cl. 166—226)



1. In a tester valve adapted to be disposed in a well bore on a tubular spring: relatively rotatable inner and outer tubular members haivng a passage therethrough, one of said members being connectible to the tubular string; barrier means in at least a first of said members closing said passage and proportioned to be movable out of said first member; releasable holding means releasably engageable with said barrier means and retaining said barrier means in said first member; and means responsive to relative rotation between said tubular members for releasing said holding means from said barrier means, whereby said barrier means can move upwardly out of said first member and upwardly through the tubular string.

3,100,538
TUBING ROTARY SWIVEL ASSEMBLY
Wilfred E. Sanders, Houston, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Filed Dec. 12, 1961, Ser. No. 158,677
3 Claims. (Cl. 166—237)

1. In a well tubing in a well bore in which the upper end of the tubing is adapted to be rotated and the lower end of the tubing is adapted to be threadably secured in the well bore, the improvement in a rotary swivel joint comprising,

first and second pipe joints axially aligned, the first of which is secured to the lower end of the tubing and the second of which is secured to the upper end of the tubing,

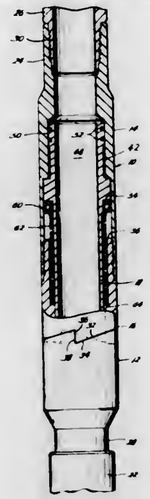
clutch means connected to adjacent ends of said pipe joints and adapted to transmit rotational movement between said joints in a direction to release the lower end of the well tubing,

said joints having an annular recess at said adjacent ends,

a tubular mandrel positioned in said annular recess and having an internal diameter no greater than the internal diameter of the tubing thereby providing unrestricted flow through the interior of said joints,

said mandrel being attached to the first of said joints and longitudinally and rotatably slidable with respect to the second joint,

a stop shoulder on each of said mandrel and second joint adapted to coact thereby preventing disconnection of said mandrel from the second joint,



sealing means between said mandrel and the second joint for providing a fluid tight joint, and

spring means between said mandrel and said second joint yieldably urging said clutch means into engagement.

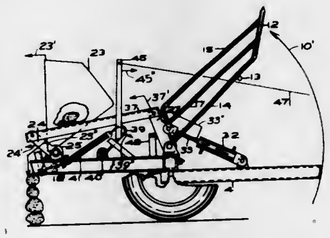
3,100,539
HELICOPTER ROTOR BLADE
John K. Hulbert, Grand Island, N.Y., assignor to Bell Aerospace Corporation, Wheatfield, N.Y.
Filed Aug. 14, 1961, Ser. No. 131,340
3 Claims. (Cl. 170—172)



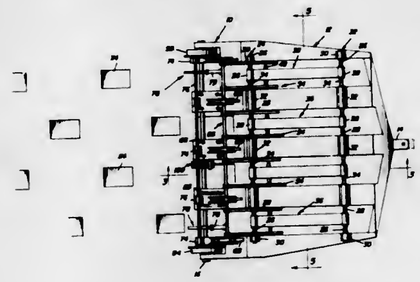
1. In a helicopter, an elongate rotor blade having an outer skin of airfoil section presenting a hollow member along its length, said blade being adapted for rotation about a transverse axis adjacent the inner end thereof and being closed adjacent such end while being open at its opposite, outer end, whereby rotation of the blade as aforesaid will create a negative pressure gradient from its inner to its outer end, and said skin having openings therein increasing the available lift of said blade to permit increase in forward flight speed of a craft with which it is associated and to minimize retreating blade buffeting, said skin openings being of decreasing total area from the outer end of the blade toward said inner end thereof.

3,100,540
STONE PICKING IMPLEMENT
Lloyd Calvin Deaver and Charles George Deaver, both of Kenaston, Saskatchewan, Canada
Filed Oct. 9, 1961, Ser. No. 143,698
2 Claims. (Cl. 171—63)

1. In a stone picking machine including a wheel supported frame and a stone gathering fork and a hydraulic element anchored in the frame and connected for raising and lowering the fork between stone gathering and dumping positions, and further including a bucket pivotally mounted in the frame to tilt rearward for dumping stones from the bucket, the improvement which consists in having forward and rear shafts transversely mounted to turn axially in the frame and to which the fork and bucket are respectively fixed to be moved thereby between stone receiving and dumping positions, and means by which the bucket mounting shaft may be connected to the fork mounting shaft for dumping the bucket, said means comprising a link fixed to the fork mounting shaft, a lever arm fixed to the bucket mounting shaft, a dump bar pivotally attached at one end to the lever arm, and means pivotally attaching the other end of the dump bar to the link on the fork mounting shaft detachable therefrom.



3,100,541
PIT PLOW
Ferdinand P. King, Rte. C, Box 180, Lamesa, Tex.
Filed May 12, 1961, Ser. No. 109,538
6 Claims. (Cl. 172—86)



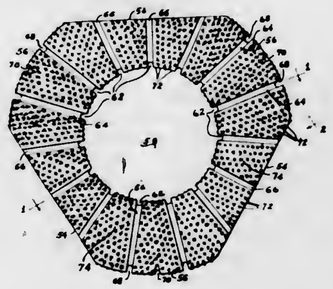
1. A pit plow comprising a longitudinally extending frame, ground-engaging wheels, means on said frame journaling said wheels for rotation about axes extending transversely of said frame, at least one pair of transversely spaced digging means, mounting means carried by said frame mounting said digging means for movement between raised retracted positions and lowered ground-engaging positions relative to said frame, said mounting means including means connecting one of said digging means to the other for inverse movement relative thereto, and lock means movably mounted on said frame for movement between extended and retracted positions in response to rotation of said ground engaging wheels and into and out of positions respectively engageable with portions of said mounting means for automatically alternately retaining said digging means stationary in the lowered ground-engaging positions, manually releasable means connecting said journaling means and said lock means for varying the timed sequence of retention of said digging means in lowered ground-engaging positions independently of rotation of said wheels.

3,100,542
JET SHOT HOLE DEVICE
William J. Stark, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,455
9 Claims. (Cl. 175—1)



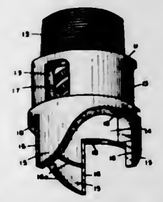
1. An apparatus for use in drilling or cleaning seismic shot holes in the earth's surface, which comprises: a flexible conduit; concentric cylinders with an annular space formed between the inner wall of the outer cylinder and the outer wall of the inner cylinder; cap means closing the upper ends of said inner cylinder and at least partially closing the upper end of the annular space formed between the inner wall of the outer cylinder and the outer wall of the inner cylinder and attachable to said conduit, said cap means having a passage means establishing fluid communication between the interior of said conduit and said annular space; an annular plate enclosing the lower end of said annular space; downwardly projecting jet nozzles on the bottom side of said annular plate, said nozzles being in fluid communication with said annular space.

3,100,543
DRILL BIT FOR CUTTING CORES
Lot William Short, Dallas, Tex., assignor to Tri-Dia, Inc., a corporation of Texas
Original application Mar. 8, 1957, Ser. No. 644,893. Divided and this application Oct. 31, 1960, Ser. No. 66,312
3 Claims. (Cl. 175—330)



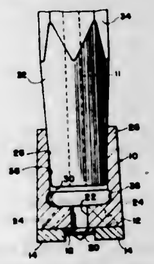
1. A core bit adapted to be attached to a drill stem for the cutting of cores in earth formations, said core bit comprising
a hollow shank,
an annular body carried by said shank and having in bottom plan view a generally triangular outer configuration defined by three coaxial segmental substantially cylindrical lateral reaming faces and by three non-reaming facets,
each of said facets being of greater circumferential extent than any of said faces with one such facet between and joining successive ones of said reaming faces and lying wholly within the cylindrical surface generated by said reaming faces,
said body having a coaxial core-receiving opening in communication with the hollow of said shank, and
abrading elements set in said reaming faces and in the inner, lower and outer surfaces of said annular body.

3,100,544
DRILLING DEVICE
Charles R. Overly, New Orleans, La., and George E. Cannon, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Original application May 31, 1960, Ser. No. 32,815, now Patent No. 3,075,592, dated Jan. 29, 1963. Divided and this application Feb. 2, 1962, Ser. No. 170,628
7 Claims. (Cl. 175—333)



1. A drill bit which comprises a hollow body member provided with a plurality of separate, circumferential peripherally spaced-apart blades on a free end and adapted to be connected to a hollow drill string on its other end, each of said blades having a flat leading face and a trailing edge defining a curvilinear surface extending from said face to said body member ahead of the next following blade, conical drilling means attached within said hollow body member for rotation relative thereto, means adapted to deliver drilling fluid separately to each of said blades ahead of its leading face and to a point above said drilling means, said hollow body member forming a shroud enclosing said drilling means and having a window in its wall adjacent said drilling means for discharge of cuttings from said drilling means to the outside of said shroud.

3,100,545
DRILL BIT
Robert D. Zimmerman, Andover, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 11, 1961, Ser. No. 102,164
6 Claims. (Cl. 175—419)

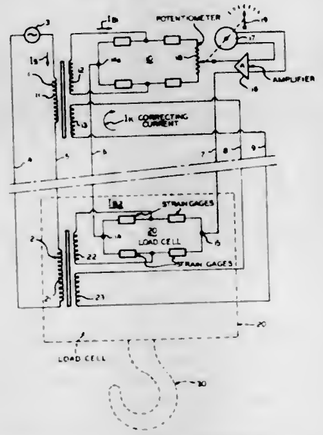


1. A detachable drill bit comprising a body with a forward end having cutting edges, a hollow rearward drill steel receiving socket of decreasing cross-sectional area in the direction of the cutting edges, for at least part of its leng.h and stress distributing means disposed at the one end of said drill steel receiving socket for distributing the stress on said drill bit, said stress distributing means being an undercut groove.

ERRATUM

For Class 177—37 see:
Patent No. 3,100,720

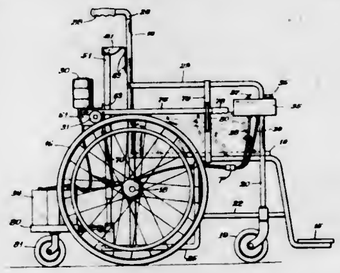
3,100,546
CIRCUIT WITH COMPENSATED TRANSFORMER
Johannes F. Cramwinckel, Voorburg, Netherlands, assignor to Maatschappij van Berkel's Patent N.V., Rotterdam, Netherlands, a company of the Netherlands
Filed July 17, 1961, Ser. No. 124,436
Claims priority, application Germany July 15, 1960
3 Claims. (Cl. 177—211)



3. A measuring device comprising a load cell and a compensation bridge connected in series, a pair of transformers, one with the load cell and the other with the compensaton bridge, each transformer having primary, secondary and tertiary coils, means supplying a constant current to the primary coils of said transformers, means connecting said tertiary coils in parallel, means connecting said secondary coils to said load cell and compensation bridge respectively, means for balancing said compensation bridge, means reading the weight applied to said load cell, and means connecting said load cell and compensation bridge in series to said reading means.

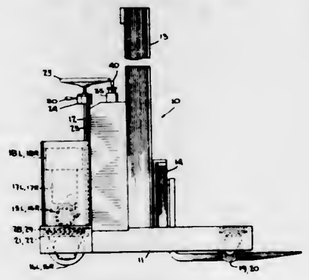
3,100,547
ELECTRIC DRIVING APPARATUS FOR A WHEEL CHAIR
Harry Rosenthal, 6540 N. Campbell Ave., Chicago, Ill.
Filed June 30, 1960, Ser. No. 40,074
10 Claims. (Cl. 180—6.5)

1. Electrical driving apparatus for a wheel chair of the type having a frame structure for supporting a person, a plurality of wheels at least two of which are disposed on opposite sides of the frame to constitute driving wheels, and control means including a joy-stick type control member for actuating leaf switches which are connected to the electrical driving apparatus to control both the driving and steering of the wheel chair by the relative rotation of the driving wheels, the electrical driving apparatus for such a chair including in combination, a pair of reversible electric motor means each having an associated drive drum rotatable thereby, first and second support means adapted to individually carry said pair of motor means and associated driving drums thereon, an adjustable frame assembly having first and second pairs of adjustable frame members, said first pair of adjustable frame members being adapted to mountably receive said first support means on one member thereof and to mountably receive said second support means on the other member thereof, said first pair of frame members when attached to said wheel chair being disposed within the space defined by the planes of rotation of said wheels and adjacent thereto to place said drive drums in these planes of rotation for engagement with the driving wheels, said second pair of adjustable frame members being disposed across said first pair of members and being connected thereto to serve as



crossbar means for adjustably spacing said first pair of members one from another, said second pair of frame members being in turn adjustably spaced one from another by said first pair of frame members, bracket means mounted on the rear of the wheel chair frame structure to receive said frame assembly thereon, fastening means to provide removable attachment of said frame assembly to said bracket means, battery means for supplying current to said motors, and trailer means adjustably attached to said frame assembly for carrying said battery means whereby said electrical driving apparatus may be removably mounted in a predetermined spatial relationship on the rear of wheel chairs.

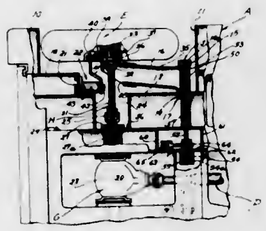
3,100,548
STEERING CONTROLLER FOR INDUSTRIAL TRUCK
Bronislaus I. Ulinski, Flossmoor, Ill., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed July 11, 1960, Ser. No. 41,923
4 Claims. (Cl. 180—6.5)



1. In a truck of the class having a pair of motorized steering and traction units each equipped with a traction motor and a traction wheel driven by the motor, and a controller equipped with a universal handle which, when moved to the right or left from a central position, excites opposed directional circuits for both said motors, and which when moved forwardly excites forward directional circuits for both motors and when moved rear-

wardly excites rearward directional circuits for both motors, that improvement for ensuring simultaneous excitation of both of the motor circuits for forward directional motion when said universally movable handle is moved substantially forwardly, comprising a first contact actuated by the handle for each forward directional motor circuit, a second contact for each forward directional circuit against which its first contact is moved when actuated by said universal controller handle, means electrically connecting said second contacts, and a third contact for each forward directional circuit connected to a source of power and against which each second contact is moved by continued forward motion of said universal handle, whereby the engagement of but one second contact of one forward circuit with its third contact will actuate both motors in the event the first and second contacts of both forward circuits have been brought into engagement by said universal handle.

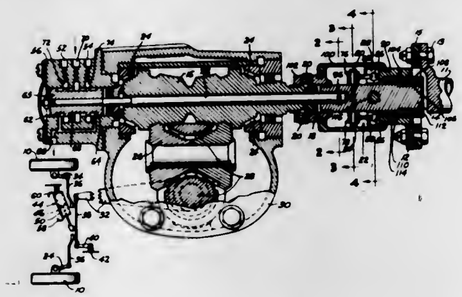
3,100,549
VEHICLE WHEEL SUSPENSION AND DRIVE
Louis Demas, Oak Park, Mich., assignor to American Motors Corporation, Kenosha, Wis., a corporation of Maryland
Filed Feb. 21, 1962, Ser. No. 174,750
6 Claims. (Cl. 180—73)



6. In a suspension system for a vehicle: a vehicle body having a floor panel and a hollow beam rigid therewith and projecting upwardly therefrom and extending longitudinally thereof; said body also having a side wall disposed outwardly from the beam and projecting upwardly from the floor panel to provide a pocket area in the body; aligned bearing members in the beam and side wall; an arm having one end rotatively carried by some of the bearing members; a wheel carrying backing plate anchored to the arm at the end remote from the end carried by the bearing members; a wheel rotatively carried on the wheel carrying backing plate; a torsion bar extending through the side wall and through the beam and having one of its ends non-rotatively connected to the arm and its other end rotatively supported by one of the bearing members in the beam; said floor panel having an opening therein and forming in conjunction with the hollow beam a second pocket area; means in the second pocket area and having connection to the torsion bar for rotating same to adjust the height of the vehicle body relative to the wheel; a driven shaft spaced from the torsion bar and extending through the beam in the interior of the vehicle body and being drivingly connected to the wheel; drive mechanism carried on the vehicle body for driving the driven shaft.

3,100,550
POWER STEERING MECHANISM
Farlow B. Burt and James L. Vickers, South Bend, Ind., assignors to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Dec. 13, 1960, Ser. No. 75,626
3 Claims. (Cl. 180—79.2)

1. In a power steering mechanism having steering means, a power cylinder connected to said steering means, and a valve for controlling the operation of said power cylinder, a valve actuating mechanism comprising a steering shaft, a driven shaft coaxial with said steering shaft and operatively connected to said steering means, means for permitting limited relative rotary motion between said shafts, a member axially movable with respect to said shafts, said member being operatively connected to one of said shafts and to said valve for actuation thereof, a steering collar concentric with said driven shaft and operatively connected to said steering shaft, a bell crank lever for causing axial movement of said member in one direction upon clockwise rotation of said steering shaft and in the opposite direction upon counterclockwise rotation of said steering shaft, said bell crank lever being pivotally connected to said driven shaft and having two arms extending from said pivotal connection, one of said arms being operatively connected to said member and



the other of said arms being operatively connected to said steering collar, a tubular member enveloping said bell crank lever and fixedly connected to said steering collar, and first and second resilient bushings for torsionally opposing relative rotation between said steering and driven shafts and for withstanding axial and radial bearing loads, said first bushing being located above said bell crank lever and including a first sleeve fixedly connected to said steering collar, a second sleeve fixedly connected to said driven shaft and a rubber-like material located between and bonded to said sleeves so as to be in tension under all steering conditions, said second bushing being located below said bell crank lever and including a first sleeve fixedly connected to said tubular member, a second sleeve fixedly connected to said driven shaft, and a rubber-like material located between and bonded to said sleeves so as to be in tension under all steering conditions.

3,100,551
POWER STEERING APPARATUS
James R. Van Dien, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,966
5 Claims. (Cl. 180—79.2)



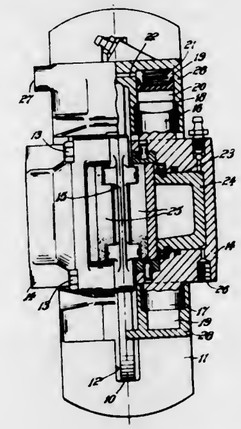
1. In a power steering apparatus for a vehicle provided with steering means, steered means, and two tie rods having spaced inner ends and having outer ends respectively connected to said steered means, the combination of: a cross link extending between and pivotally connected to said inner ends of said tie rods, a fluid pressure source, motor means operable by fluid pressure transmitted from said source and operatively connected to said steered means and a fixed part of said vehicle for moving said steered means, means for transmitting said fluid pressure from said source to said motor means, a pitman arm operatively connected to said steering means, said pitman arm having a substantially tubular member integrally formed on the end thereof, valve means carried by said pitman arm and located in said means for transmitting fluid pressure from said source to said motor means, said valve means including a two part housing and a spool valve element movable relative to each other, said tubular member having an opening therein and serving as one part of said two part housing, a ball stud operatively connected to said cross link and to said spool valve element for causing relative movement between said spool valve element and said housing in response to movement of said pitman arm and tubular member, said ball stud extending through the opening in said tubular member and being arranged so that the walls surrounding said opening will contact said ball stud and cause movement of said ball stud, cross link and steered means when the tubular member has been shifted to the limit of its movement.

3,100,552
CONVERTIBLE LADDER
Henry Hopfeld, 732 A St., San Rafael, Calif.
Filed Feb. 21, 1961, Ser. No. 90,690
2 Claims. (Cl. 182—22)



1. In a convertible ladder structure
(*a*) a lower individual ladder,
(*b*) an upper individual ladder,
(*c*) the rails of the upper ladder slidably fitting between and along the respective rails of the lower ladder,
(*d*) and separate connecting means on said individual ladders to connect said ladders selectively in step-ladder attitude and extension-ladder attitude comprising
(*e*) a bracket on the top of each rail of said lower ladder, each bracket including
(*f*) a base plate secured to a face of the adjacent rail,
(*g*) an end of said bracket projecting toward the upper ladder and beyond the edge of the adjacent rail and being formed into a retainer guide conforming to the contour of the adjacent rail of the upper ladder so as to embrace the latter in said extension-ladder attitude,
(*h*) a rest flange extended from said base plate spaced from said guide at an incline corresponding to the relative incline of said upper ladder in said step-ladder attitude and at such a distance from the lower edge of said retainer guide that the upper edge of the rail of said upper ladder engages the lower edge of said retainer guide when the lower edge of said rail of said upper ladder rests on said rest flange,
(*i*) a first abutment projecting from the lower edge of the rail of said upper ladder,
(*j*) and a second abutment projecting from the upper edge of the rail of said upper ladder,
(*k*) said abutments being spaced longitudinally of said rail of said upper ladder at a distance equal to the distance between the upper edge of said rest flange and the lower edge of said retainer guide so as to fix said upper rail against longitudinal movement relatively to said retainer guide in said step-ladder attitude,
(*l*) the thickness of each abutment together with the width of its rail being less than the distance between the lower edge of said inclined rest flange and the lower edge of said guide to that the upper end portion of said rail of said upper ladder is movable between said guide and said flange in either direction respectively for extension and separation of said ladders when said ladders are in substantially parallel position and the rails of said upper ladder ride on the rungs of the lower ladder,
(*m*) and releasable means to hold said ladders together in selected extended relation.

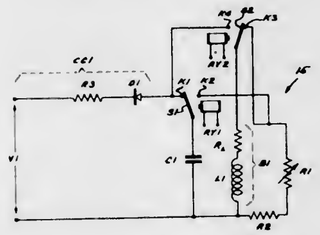
3,100,553
DISC BRAKES FOR VEHICLES
Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, a British company
Filed Mar. 2, 1961, Ser. No. 92,880
Claims priority, application Great Britain Mar. 5, 1960
6 Claims. (Cl. 188—73)



6. A disc brake comprising a rotatable disc, housings, one on each side of said disc, friction pads, one between each said housing and the adjacent side of said disc, fluid operated means in each said housing to move said friction pads into frictional engagement with said disc, means on each side of said disc to support said housings slidably to move under the frictional drag of said rotating disc chordwise of said disc, and means actuated

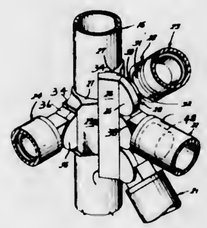
by said sliding housings to pressurize a brake fluid when said housings are displaced by said drag of said disc.

3,100,554
DECELERATING CIRCUIT
Edward R. Doubek, Jr., Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 22, 1961, Ser. No. 140,097
4 Claims. (Cl. 188—161)



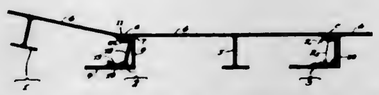
3. A decelerating circuit for operating a brake which comprises a brake winding for operating the brake when energized; decelerating means for energizing the brake winding for a prescribed period of time; means for conditioning the decelerating means for a decelerating operation; means for selectively associating the decelerating means with either the brake winding or the conditioning means; and stopping means for energizing the brake winding for an indefinite period of time through continuous association with the conditioning means.

3,100,555
PLASTIC TOWER
Albert A. Ashton, Dallas, Tex., assignor to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a corporation of Ohio
Filed Oct. 16, 1961, Ser. No. 145,337
7 Claims. (Cl. 189—19)



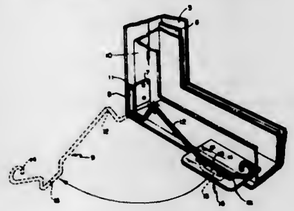
1. A plastic tower comprising, a plurality of upwardly converging plastic legs, a plurality of plastic leg connectors glued to said legs at spaced points therealong, each leg connector having at least one section projecting substantially transversely of the leg to which it is attached, a plurality of plastic braces extending between said leg connectors, plastic end fittings on said braces, said leg connector sections and end fittings having mating parts provided by a pin on one of said leg connector sections and end fittings and a socket on the other of said leg connector sections and end fittings, the central axis of each pair of said mating pin and socket extending perpendicular to the longitudinal axis of the brace on which the end fitting is carried, and an adhesive between said pins and sockets integrally connecting them together.

3,100,556
INTERLOCKING METALLIC STRUCTURAL MEMBERS
Ernst J. De Ridder, Richmond, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed July 30, 1959, Ser. No. 830,586
21 Claims. (Cl. 189—34)



1. A set comprising at least two panel-like extruded metal sections adapted to be assembled into snug interlocking engagement along their side edges to form at least a portion of a floor, a wall, or the like, a first of said sections having along one side edge an integral rib projecting from one face of said section, a lip along said edge overhanging the outer side of said rib and having a curved inner surface, a flange-like extension along the free edge of said rib at the outer side of the latter and having a curved inner surface opposed to said lip inner surface, said inner surfaces having a substantially common center of curvature, a second of said sections having along one side edge an integral rib provided with a pair of curved surfaces facing oppositely and outwardly of the two faces of said second section, one adjacent the base of said last-mentioned rib, and one adjacent its free edge, said pair of curved surfaces being complementary and conforming respectively to said curved inner surfaces on said first section for snug interfitting engagement therewith when said sections are interlocked, the arrangement being such that one of said outwardly-facing curved surfaces on said second section can be partially engaged with its complementary inner curved surface on said first section with said sections tilted relative to each other, and then said sections relatively rotated about the engaged surfaces into the same planar disposition to assemble said sections into interlocking engagement with all of said conforming surfaces in snug engagement.

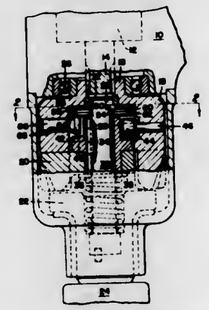
3,100,557
AIR FILTER LATCH ARRANGEMENT
Allan R. Getzin, Jeffersontown, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Nov. 30, 1961, Ser. No. 156,047
4 Claims. (Cl. 189—35)



1. In an open-ended unit filter cell support frame having a marginal sealing flange disposed therein:
(*a*) an improved latching arrangement for releasably retaining a unit filter cell within said support frame and against said marginal sealing flange comprising:
(*b*) a longitudinally extending latch member pivotally mounted in cantilever fashion at one end to said support frame;
(*c*) said latch member including along its length bearing means, tongue means and grip means; and,

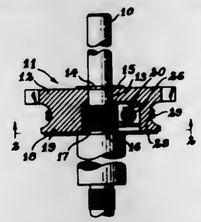
(*d*) keeper means associated with said support frame to receive said tongue means of said latch member;
(*e*) said bearing means of said latch member being offset from said tongue means to engage firmly against a filter cell disposed within said support frame when said tongue means is inserted into said keeper means.

3,100,558
IMPACT TOOL
Hanns Hornschuch, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed June 22, 1961, Ser. No. 118,891
10 Claims. (Cl. 192—30.5)



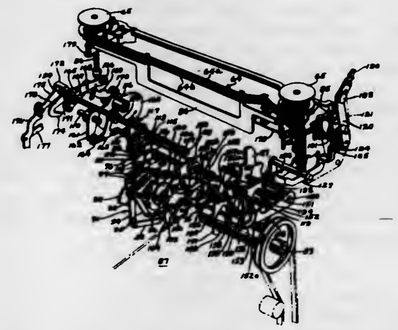
1. An impact wrench comprising a rotatable hammer, dogs carried by said hammer, an anvil adapted to receive a working tool, a stem carried by said anvil, a member periodically engaged by said hammer and keyed to said stem to actuate said dogs to impact said anvil, and centrifugal means cooperative with said stem and said hammer to inter-engage said hammer and stem frictionally immediately prior to each impact of said dogs with said anvil and to release said stem and hammer from frictional engagement immediately after each of said impacts.

3,100,559
ONE WAY CLUTCH
Alfred W. Gardes, Wilmette, and Joseph F. Gluth, Chicago, Ill., assignors to International Register Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 19, 1961, Ser. No. 139,290
5 Claims. (Cl. 192—43.2)



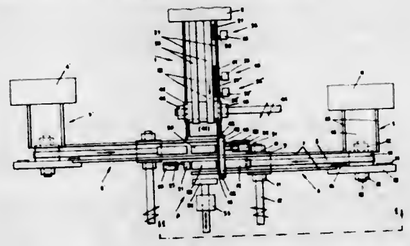
1. A one way clutch mechanism comprising, in combination, a shaft having a longitudinally knurled section, a member having a first portion freely rotatably mounted on said shaft and a second portion overlying said knurled section, said second portion having a transversely extending slot opening laterally away from said first portion, said slot having one flat side extending generally tangentially to said knurled section and another flat side spaced radially outwardly from said one flat side; a pawl having a rectangular cross section slidable in said slot and an edge portion engageable with the ridges of said knurled section one by one, adapted to react against said other flat side on rotation of said shaft in one direction relative to said member to prevent further rotation in the same direction, and adapted to ratchet past said ridges on rotation of said shaft in the opposite direction relative to said member; said second portion having an annular slot communicating with said transversely extending slot, and spring means in said annular slot biasing said pawl endwise of said transversely extending slot and said edge portion of said pawl into operative engagement with a ridge of said knurled section.

3,100,560
INK-RIBBON CONTROL MECHANISM
Nicholas Kondur, Jr., Garden City, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 18, 1960, Ser. No. 50,348
15 Claims. (Cl. 197—157)



1. In a cyclically operable typewriter having a bichrome inking ribbon and a frame supporting said ribbon and being shiftable to two color positions, operating means coupled to said frame, drive means actuated during each cycle of operation of said typewriter operable to actuate said operating means, manipulative means movable between two positions for selecting a color position, and means mounted on said drive means for coupling said drive means to said operating means to transmit additional movement thereto, said manipulative means being operable to disable said coupling means in one color selective position and to enable said coupling means in its other color selective position.

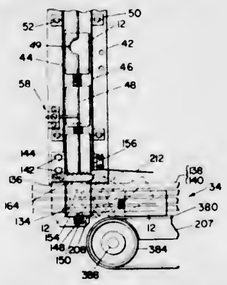
3,100,561
METHOD FOR FEEDING INTO A MACHINE ARTICLES DELIVERED BY MORE MACHINES
Ariosto Seragnoli, Via Pomponia 10, Bologna, Italy
Filed Nov. 27, 1959, Ser. No. 855,718
Claims priority, application Italy Dec. 3, 1958
1 Claim. (Cl. 198—21)



A mechanism for feeding articles from a first and a second machine to a third machine comprising common transfer station means, first and second conveyor means

connecting said first and said second machines to said transfer station means, and additional conveyor means connecting said third machine to said transfer station means, said transfer station means comprising a pair of elevators normally positioned below said additional conveyor means in a position to receive articles from said first and said second conveyor means, means for rhythmically reciprocating said elevators to a position adjacent said additional conveyor means, pusher means and means for reciprocating said pusher means in phase with said elevators whereby said pusher means pushes said articles from said elevators to said additional conveyor means, said first and said second conveyor means each comprising a continuous belt-type conveyor mounted on two pulleys located at the inlet and outlet ends thereof, respectively, the pulley located at said inlet end having a lug wheel integrally mounted thereon for pushing said articles onto said continuous belt-type conveyor, the axis of rotation of said lug wheel being parallel to the plane of said conveyor, said additional conveyor means including speed control means connected to said third machine and positioned in the path of articles moving on said additional conveyor means to reduce the speed of said third machine when there are no articles adjacent said speed control means, said additional conveyor means including further control means adjacent said additional conveyor means and said transfer station means, said further control means being connected to said speed control means to deactivate said speed control means when articles are adjacent said further control means.

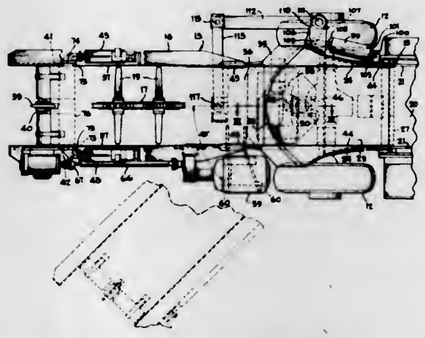
3,100,562
CONTAINER HANDLING APPARATUS
James P. Whelan, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Filed Oct. 26, 1960, Ser. No. 65,191
20 Claims. (Cl. 198—33)



1. Article handling apparatus comprising means for guiding articles longitudinally end to end with their ends facing indiscriminately in either a leading or a trailing direction, means for medially gripping and laterally withdrawing successive articles from said guide means to present the articles in longitudinal alignment with their corresponding ends all facing in the same direction.

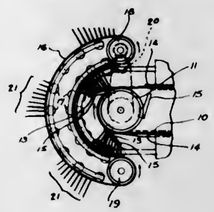
3,100,563
ARTICULATED CONVEYOR
Anthony R. Bledess, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Original application Mar. 21, 1959, Ser. No. 803,134, now Patent No. 3,008,566, dated Nov. 14, 1961. Divided and this application Oct. 6, 1961, Ser. No. 143,376
7 Claims. (Cl. 198—124)

2. In an articulated conveyor,
(1) two aligned trough sections, one of which is laterally swingable with respect to the other,
(2) an endless chain and flight conveyor movable along said trough sections,
(3) mounting means for the laterally swingable trough section maintaining the length of travel of said endless chain and flight conveyor uniform during lateral swinging movement of the laterally swingable trough section,
(4) and means cooperating with said mounting means for laterally moving the laterally swingable trough section comprising,
(*a*) a single hydraulic actuator vertically pivoted to the stationary of said trough sections to one side thereof,
(*b*) a rocking member pivoted for movement



about a vertical axis spaced to one side of the stationary of said trough sections and adjacent said hydraulic actuator,
(*c*) a lever arm extending inwardly of said rocking member and pivotally connected with said hydraulic actuator,
(*d*) a second lever arm extending from said rocking member along the laterally swingable trough section a substantial distance rearwardly of the mounting means for said laterally swingable trough section,
(*e*) and a drive link connecting said second lever arm with the laterally swingable trough section adjacent the longitudinal center thereof.

3,100,564
CONVEYORS
Maurice M. Levy, 208 Clemow Ave., Ottawa, Ontario, Canada
Filed Nov. 17, 1961, Ser. No. 153,127
3 Claims. (Cl. 198—165)



1. The combination of
(*a*) a main conveyor for flat articles, said conveyor having a portion at which the direction of travel of the conveyor is turned through a semi-circular arc, and said conveyor having means for conveying said articles in such a manner that said articles project

tangentially from the convex side of said conveyor while travelling around said portion,
(*b*) and an auxiliary conveyor having a substantially semi-circularly extending span described about a common centre with the arcuate portion of the main conveyor, whereby to extend adjacent to and equidistant from said portion on the convex side thereof, said auxiliary conveyor including
(i) a plurality of sets of article-supporting fingers projecting from the surface of said auxiliary conveyor into engagement with a said article on the main conveyor to support the same against displacement due to centrifugal forces, the fingers of each said set being graded in length in the longitudinal direction of the auxiliary conveyor so as to supply substantially equal support over the length of a said article while projecting tangentially as aforesaid,
(ii) and means for coordinating the travel of said conveyors to bring a said set of fingers into supporting engagement with an article as it enters the arcuate portion and to cause said set to travel synchronously with said article throughout the full extent of said portion.

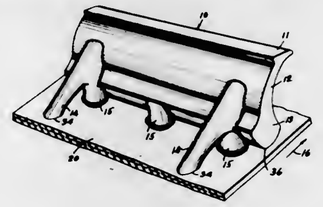
3,100,565
ENDLESS BELT FOR A CONVEYOR-BELT TURN
Charles L. Fry, 3933 Adams St., Denver, Colo.
Filed Oct. 5, 1959, Ser. No. 844,263
4 Claims. (Cl. 198—182)



1. An endless belt for a conveyor belt-turn formed as an arcuate sector when lying flat and comprising at least three substantially uniform layers formed of threads, all layers formed of threads and within said belt being of at least substantially uniform cloth-like material and being bonded together as a pliable, flexible non-resilient unit, each of said layers being shaped as said arcuate sector with at least one of said layers comprising a plurality of sections shaped as partial arcuate sectors, said sections abutting end to end to compositely form the shape of said arcuate sector, the threads constituting the warp and woof of the abutting sections shaped as partial arcuate sectors being substantially in common respective directions, the warp and woof of the cloth-like material in each layer being angularly offset with respect to the warp and woof of the cloth-like material in each layer adjacent thereto.

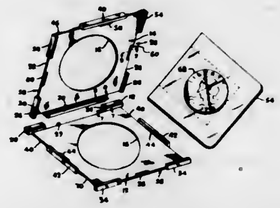
3,100,566
CONVEYOR BELT CLEATS
Theodore H. Hinchcliffe, Pasadena, Calif.; Emily Hinchcliffe, administratrix of said Theodore H. Hinchcliffe, deceased
Filed Sept. 27, 1960, Ser. No. 58,684
3 Claims. (Cl. 198—199)

1. A detachable elevator cleat of resilient material for conveyor belts comprising, in combination:
a horizontal base portion adapted for installation adjacent the surface of said belt, said base portion having a lower part in the form of an inverted ogive with its apex adjacent to but separated from the surface of the conveyor belt to which the cleat is detachably secured;
an upwardly extending curved rib portion formed integrally with said base portion, said curved rib portion having a concavely curved front face in the direction of motion of said belt, and a convexly curved rear face, substantially parallel to said front face;
a T-shaped horizontal rib extending parallel to said base portion across the top of said upwardly extending rib portion, said horizontal rib portion being formed integrally with said upwardly extending curved rib whereby said curved rib is strengthened in the horizontal plane and the forward portion of the T-shaped rib extending in the direction of motion of said conveyor belt beyond the concave face of said curved rib functions as a lip to prevent articles being conveyed from falling off said cleat;
support means depending angularly downwardly from



said rear face to the surface of said belt in the rear of said cleat for maintaining said cleat substantially perpendicular to the surface of said belt under load conditions, said support means comprising a plurality of cleat material projections integrally formed with said curved rib portion, at least two of said projections being disposed near the ends of said cleat;
vertical abutment means formed in said base portion, said abutment means extending downwardly from said base portion;
a belt surface gripping base on the bottom of each of said abutment means adapted to grip the upper surface of said belt and form a seal therewith; and
means associated with said abutment means and said belt for removably securing said cleat to the upper surface of said belt.

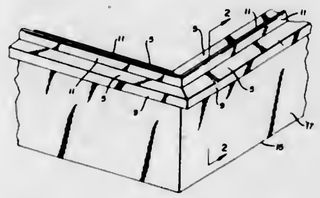
3,100,567
COIN HOLDERS
Milton Levy, 664 Zola St., Woodmere, N.Y.
Filed Mar. 22, 1962, Ser. No. 181,574
1 Claim. (Cl. 206—.82)



A coin holder comprising a pair of complementary substantially square-shaped plastic plates hingedly connected to each other, said plates having aligned central circular windows, said plates when closed providing a space therebetween, a transparent envelope in said space, the transparent envelope containing a coin for exhibition through the windows, coacting ridges and notches on the plates

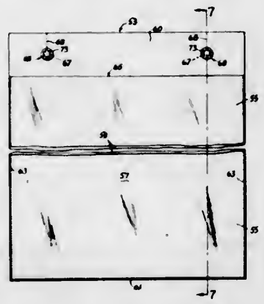
for interlocking with each other to hold the plates juxtaposed, and inwardly extending opposed flanges on the side edges of the plates, mounting said ridges, for centering the envelope betwen the plates whereby the coin contained in the envelope is exposed through the windows, said plates having fingernail depressions on the outer surfaces thereof on the sides thereof opposite the hinged sides, said depressions facilitating separation of the plates, said hinge connection including ball and socket joints between the plates on one side thereof adjacent the perpendicularly disposed sides thereof.

3,100,568
PROTECTIVE COVER
Allen A. Harkins, Akron, Ohio, assignor to The United States Stoneware Company, Tallmadge, Ohio, a corporation of Ohio
Filed Apr. 19, 1962, Ser. No. 188,637
6 Claims. (Cl. 206—2)



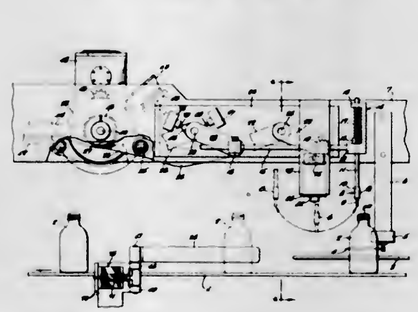
1. In combination with a tank with a vertical wall having a horizontal channel supported at substantially its middle on the wall with each edge of the channel provided with a downwardly pointed projection, an extruded plastic protective cover on each side of the wall, each cover with an upper and lower expanse against the upper and lower surfaces of the channel extending in opposite directions from the wall, the upper expanse of the cover extended outwardly beyond its lower expanse with the outer edges thereof connected respectively to the upper ends of a V which covers said projection at that edge of the channel, and each with a downwardly directed flange at the inner edge of its lower expanse adhered to the wall, with flanges on the inner edges of the upper expanses adhered to one another.

3,100,569
BAG PACKAGE
James White, Fremont, Calif., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Aug. 12, 1960, Ser. No. 49,188
1 Claim. (Cl. 206—57)



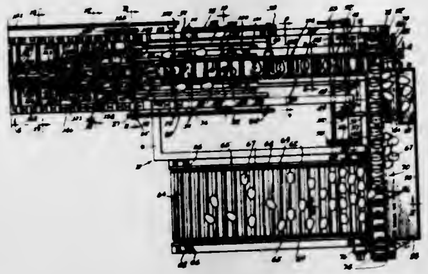
A packet comprising a stack of open-mouth plastic bags, each bag having a front wall and a back wall, the back wall of each bag having an upper end portion extending beyond the front wall at the mouth of the bag, said upper end portion of the back wall having an upper edge extending straight across the bag and the front wall of each bag having an upper edge extending straight across the bag for the full width of the bag below and parallel to the upper edge of said upper end portion of the back wall, each bag having a pair of openings in said upper end portion of its back wall adjacent the upper corners thereof and above the upper edge of the front wall, said bags being stacked with their edges substantially in register and with said openings substantially in register, a relatively rigid backing member backing the back wall of the last bag of the stack and having a width greater than the distance between said openings, a pair of fasteners extending from said backing member through said openings and having heads at their forward ends larger than said openings for holding the bags in packeted assembly on said fasteners and on the backing member, the front wall of each bag being free of the fasteners and each bag in the packet being free of the other bags in the packet apart from said fasteners, and each bag having lines of weakness between the openings in its back wall and the upper edge of said upper end portion of its back wall.

3,100,570
APPARATUS FOR GAUGING CONTAINER OPENINGS
Joseph C. White, 317 5th Ave., Royersford, Pa.
Filed May 22, 1961, Ser. No. 111,624
11 Claims. (Cl. 209—82)



1. Apparatus for gauging the neck opening of a container moving continuously in a predetermined path, comprising a gauge element having axially aligned gauge portions of different diameter corresponding respectively to the minimum and maximum diameters specified for the container opening, actuating mechanism operable to cause the gauge element to traverse a predetermined arcuate path from a retracted position through a lower gauging zone and return, said gauge element in the lower gauging zone thereof being disposed for insertion into the neck opening of the moving container, means biasing the gauge element to a lower limit position with respect to said actuating mechanism and yieldingly mounting said element for displacement upwardly by the container to an upper position in the event that the smaller diameter portion of the gauge element fails to enter the neck opening and to an intermediate position in the event that said smaller diameter portion only enters the neck opening, and detector means actuatable by the container operable to effect operation of said actuating mechanism in timed relation with said moving container for gauging said container by the gauge element.

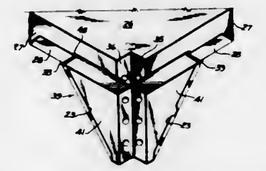
3,100,571
FEEDING, ARRANGING AND GRADING APPARATUS FOR EGGS
Herbert J. Reck and Hilbert W. Reck, both of 567 River Road, Elgin, Ill.
Filed Jan. 4, 1960, Ser. No. 327
16 Claims. (Cl. 209—121)



1. A feeding, arranging and candling apparatus for eggs comprising a plurality of rollers arranged adjacent each other with their axes parallel, means for advancing the rollers along a path and rotating the same, feeding means for feeding eggs onto the advancing and rotating rollers, said eggs being advanced by the rollers and spun thereby about their long axes substantially parallel to the axes of the rollers and being discharged small ends first off of the ends of the rollers toward which the small ends of the eggs are pointing, conveyor means on each side of the advancing path of the rollers and movable parallel thereto and in the same direction for receiving and conveying the eggs discharged from the ends of the rollers, said conveyor means receiving and turning the eggs small end forwardly as they are discharged thereon, a single conveyor beyond the advancing path of the rollers and between said pair of conveyor means, means for transferring the eggs from the conveyor means onto the single conveyor in single file and small end forwardly to be conveyed thereby, a plurality of spools arranged adjacent each other with their axes parallel, means for advancing the spools along a path and rotating the same, means for transferring the eggs from the single conveyor onto the advancing and rotating spools and including means for turning the eggs to cause their long axes to be parallel to the axes of the spools and their small ends extending in the same direction, said eggs being advanced and spun about their long axes by the spools, candling means arranged adjacent to the advancing path of the spools, and means for tilting the spools as they pass the candling means to cause the advancing and spinning eggs to be tilted large end upwardly as they pass the candling means.

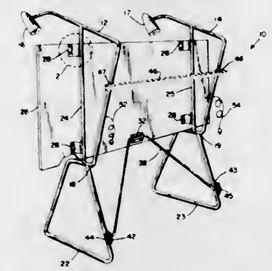
3,100,572
ADJUSTABLE SUPPORTING SURFACES
Carl E. Gingher and Carl E. Gingher, Jr., both of 312–324 Depot St., Scranton 9, Pa.
Filed Oct. 14, 1960, Ser. No. 62,765
3 Claims. (Cl. 211—153)

1. In a supporting shelf structure, a rectangular shelf with corner sections, said shelf comprising edge portions which extend downwardly and inwardly forming a channel with turned-under lip portions, a V-shaped notch in each of said corner sections, a corner bracket shaped to fit snugly in said V-shaped notch and secured to said shelf, said bracket comprising a pair of arms which are of substantially the same width as said shelf edge portions and extend outwardly in engagement with said shelf edge portions, each of said bracket arms having a flange which is secured to the shelf at said under-lip portion and uniting the end of said lip portion and bracket together for reinforcing the shelf, and a partial corner bracket having a central groove portion shaped to fit contiguous with and form a continuation of said V-shaped notch and



which is secured to said shelf beneath said first-mentioned corner bracket, said partial corner bracket comprising a top flange having an integral upturned flange which is adapted to be bent over and secured in fixed engagement with said turned-under lip portions of said shelf.

3,100,573
EXHIBIT STAND
George R. Cox, Bellport, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 24, 1961, Ser. No. 112,477
4 Claims. (Cl. 211—177)

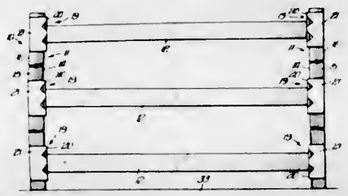


1. A portable exhibit stand comprising, in combination, a pair of spaced upright units, each of said units consisting of a relatively thin, structurally strong continuous element bent substantially in a flat plane to form a lower portion, an intermediate display portion, and an upper, forwardly extending light supporting portion, strut means in the display portion of each unit attached at the ends thereof to said unit, display board means extending between said units supported by said strut means and having at least one forwardly extending display surface and a back surface, and brace means pivoted on said back surface having a pair of arms extending out each for lockable engagement with one of said upright units for forming therewith a rigid, display structure and for swinging flat against said back surface for convenient storage when said stand is disassembled.

3,100,574
RACK
William R. Buechler, Birmingham, Mich., assignor to Thompson Industries, Inc., Indianapolis, Ind., a corporation of Massachusetts
Filed Aug. 22, 1961, Ser. No. 133,162
6 Claims. (Cl. 211—177)

3. A demountable rack comprising, in combination, a pair of horizontally spaced support members having facing flanges and coplanar flanges extending therefrom, a transverse member extending between said support members and having at its ends angle shaped members the

flanges of which overlie the flanges of said support members, each angle member having a support section extending laterally and downwardly from each flange thereof, each facing flange of each support member having a downwardly inclined slot extending from its junction with its coplanar flange, each coplanar flange having a



clearance slot extending from the respective junction and defining with the respective slot an upstanding nose portion having downwardly inclined sides for receiving said support sections on said angle members whereby said transverse member is detachably mounted at its ends on said support members.

3,100,575
CRANE BOOM LIFE GUARD
Stuart A. Coffey, 1006 Main St., Little Rock, Ark.
Filed Sept. 5, 1962, Ser. No. 221,532
1 Claim. (Cl. 212—1)



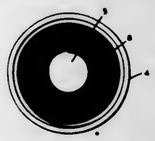
A crane boom guard of the character described, comprising a plurality of longitudinally disposed heavy steel tubes in parallel spaced relation to each other and a plurality of inverted U-shaped members of heavy steel tubes at right angle to the first mentioned heavy steel tubes, the lowermost ends of that inverted U-shaped member that forms the left end member of the said crane boom guard having their ends terminate in an upturned hook and a third upturned hook centrally located laterally on the uppermost portion of the said left end member, the said third upturned hook facing frontward and the front end of the upper two of the said longitudinally disposed steel tubes being curved downward and backward and having their ends terminate in a frontwardly facing hook, the lower portion of each one of the last mentioned steel tubes being braced by a diagonally disposed heavy steel brace tube that has its rear end secured to the lowermost portion of the front intermediate member that is elliptical when viewed from the front and a second pair of diagonal brace members of heavy steel tubing, each one of which extends from the intersection of the last mentioned heavy steel brace tubes with the lower portion of downwardly and backwardly curved portions of the two said longitudinally disposed tubes of heavy steel and the last mentioned hook shaped ends of the same heavy steel tubes, and a pair of porcelain insulators having insulating top supports, the said pair of porcelain insulators being hung vertically in parallel spaced relation to each other from a laterally disposed cross tube secured within one of the said inverted U-shaped members of heavy steel tubing, and a Micarta sheave rotatably mounted to the lowermost end of each of the said porcelain insulators and a pair of porcelain insulators horizontally mounted in parallel spaced relation to each other, and in the front end of the said crane boom guard each one of the last mentioned porcelain insulators having a rubber shock absorbing mount at each end thereof the said porcelain insulators providing means of mounting the said crane boom guard on the uppermost end of a crane boom.

3,100,576
CONVERTIBLE CONTAINER
Robert E. Frank, 1360 Dennis Place, Des Plaines, Ill.
Filed Aug. 16, 1962, Ser. No. 217,411
4 Claims. (Cl. 215—1)



1. A convertible container of readily cuttable plastic material initially in the form of a bottle and comprising a bottom, sidewalls extending circumferentially up from said bottom and terminating in an inwardly tapering, converging upper portion, circumferential ribs means on said side walls immediately beneath said tapering upper portion serving as a cutting guide for cutting said sidewalls, and also as reinforcement means for said sidewalls, a bail, and means for pivotally attaching said bail to said sidewalls immediately below and closely adjacent said rib means, said bail attaching means being closely adjacent to and only a little above the longitudinal center of the container.

3,100,577
LINERLESS VENTING CLOSURE
Charles M. Miller, Jr., East Lampeter Township, Lancaster County, and Gerald L. Roy, Lancaster Township, Lancaster County, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 14, 1962, Ser. No. 179,671
3 Claims. (Cl. 215—56)

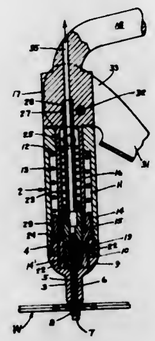


1. In a package comprising a container and cap in liquid-tight sealing relationship, the elements comprising a resilient plastic container having a flat sealing surface on a plane substantially normal to the longitudinal axis of the container, a cap adapted to fit in sealing relationship with said container, said cap being provided with a spiral groove on the underside in the area lying in juxtaposition to said sealing surface of the container, said spiral groove being of a pitch to provide at least one full 360° turn in engagement with the sealing surface of the container.

3,100,578
RIVET GUNS
Milton A. Halverson, 1947 Flandrau, and Glenn V. Olson, 1220 Bradley, both of St. Paul Minn.
Filed Apr. 24, 1961, Ser. No. 104,880
5 Claims. (Cl. 218—42)

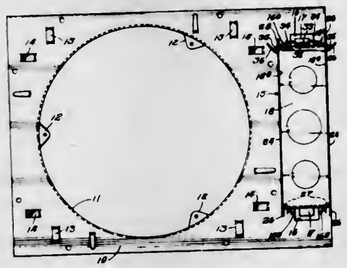
1. In a tool of the class described, a hollow body having an enlarged bore therein, a nozzle secured to one end

of said bore and having a restricted bore axially aligned with said enlarged bore, said restricted bore being adapted to receive the headless end of a mandrel having an enlarged head at its opposite end for engaging the headless end of a hollow rivet supported on said mandrel, means in the enlarged bore in said body for gripping the mandrel, a handle member having a tubular extension extending into said enlarged bore and engaged with said mandrel gripping means, and a second handle member pivoted to said first handle member, and a cam element on said second handle member engageable with said hollow body for causing relative axial movement of said tubular element



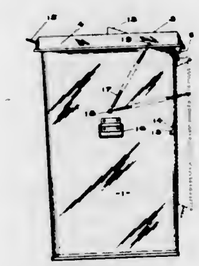
in said enlarged bore, when said handle members are actuated, thereby to draw the mandrel into the nozzle to cause the head on said mandrel to expand the walls of the hollow rivet into firm engagement with a workpiece and continued operation of the handle members when the rivet has been completely expanded and upset will cause the head of the mandrel to be snapped off, thereby to free the tool from the work, and a longitudinal channel through said hollow body and within said tubular extension through which the headless portion of the mandrel may pass to the atmosphere upon completion of the riveting cycle.

3,100,579
RECESSED LIGHTING FIXTURE SUPPORT WITH ATTACHED JUNCTION BOX
Jack Kaufman, Chicago, and Alvin Lund, Carpentersville, Ill., assignors to Markstone Manufacturing Company, a corporation of Illinois
Filed Nov. 13, 1961, Ser. No. 151,692
7 Claims. (Cl. 220—3.94)



1. Apparatus of the character described, comprising: a mounting base plate of substantial area having an opening surrounded by a depending flange; means associated with said opening to secure a recessed lighting fixture in the opening; a one-piece metal strap the ends of which are fixedly secured to the base plate, said strap cooperating with said base plate to completely enclose the perimeter of the box and having generally parallel opposite edges; a first metal face plate having an edge seated on the base plate and having a peripheral portion continuously abutting one of the edges of the strap to close a side of the box; means securing said first face plate to the strap; a second metal face plate having an edge seated upon the base plate and having a peripheral portion continuously abutting the other edge of the strap to close the other side of the box; and means detachably securing both ends of said second face plate to opposite portions of the strap, said means including spring clip means at one of said ends, whereby said one of said face plates is quickly removable for ready access to the interior of the box.

3,100,580
REFUSE RECEPTACLE
William R. Smith, Baltimore, Md.
Filed Sept. 27, 1961, Ser. No. 141,052
2 Claims. (Cl. 220—34)

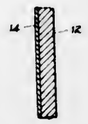


1. A waste can and cover therefor having an outwardly flaring depending skirt overlapping the can sides, hinge means connected to the can and cover and on which the cover may be swung to the top of the can to can closed position and against the back of the can to can open position, the hinge means including an angled link of a length corresponding substantially to the depth of the cover skirt and providing at one end a fulcrum spaced from the can back and being there connected to the edge of the cover overlapping skirt, stop means on the hinge means to limit pivotal movement of the angled link to substantially a right angle in relation to the can back, to position the top of the cover flush against the can back when the cover is swung open, tension springs on opposite sides of the can and cover affixed at one end to the sides of the can spaced from the top thereof, and at the other end to the edges of the cover, spaced from the hinge means thereon, the line of action of the springs under tension retaining the cover when on the top of the can, and also retaining the cover, when swung open on its hinge means, against the back of the can.

3,100,581
DUPLEX ALUMINOUS METAL ARTICLE
David G. Vandenburgh, Lower Burrell, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 21, 1959, Ser. No. 807,893
6 Claims. (Cl. 220—64)

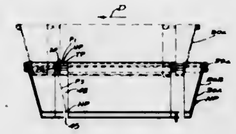
5. An aluminous metal hot water tank, the walls of which are composed of a duplex metal product comprising a base portion composed of an alloy consisting essentially of aluminum, 2 to 4% magnesium and 0.5 to 1% manganese, and a coating bonded to said base portion on the side forming the inner surface of the tank wall, said coating providing electrolytic protection to the said base portion in the presence of hot water and consisting of an

alloy of aluminum, 1 to 4% magnesium, 0.5 to 2% zinc and containing not more than 0.15% of all impurities,



said tank wall being characterized by a resistance to corrosion by the hot water contents in said tank.

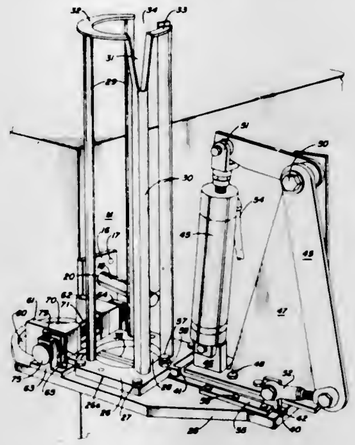
3,100,582
TIERABLE AND NESTABLE RECEPTACLE
Warren H. Lockwood, Downey, Calif.
(1329 Granvia Altamira, Palos Verdes Estates, Calif.)
Filed Jan. 4, 1960, Ser. No. 365
8 Claims. (Cl. 220—97)



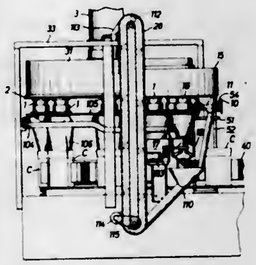
1. A receptacle adapted for tiering and nesting with other like receptacles and having a bottom portion, means defining upper edges lying generally in a plane parallel to and spaced above said bottom portion, side wall portions rigidly connecting said bottom portion and upper edge defining means, a plurality of upper tiering support portions rigid with said upper edge defining means and extending inwardly from said edge defining means, said upper edge defining means being dimensioned to permit the passing of the bottom portion of a like receptacle downwardly therethrough in vertical alignment save for interference of said upper tiering support portions, there being recesses in said bottom portion out of vertical line beneath said upper tiering support portions of a width and length to pass said upper tiering support portions when the bottom portion of an upper receptacle is moved out of vertical alignment over a lower like receptacle while maintaining the bottom portion of the upper receptacle parallel to the bottom portion of the lower receptacle, there being clearways to so pass the bottom of an upper receptacle down to a nesting position in a lower like receptacle with shifting of said two receptacles into vertical alignment, said side wall portions being so constructed and arranged that two like receptacles will nest one within another, and the above named parts permitting nesting and tiering of two like receptacles with their like parts in vertical registration one above the other.

3,100,583
LID-DISPENSER
Leonard A. Erickson, Columbus, Ohio, assignor to Big Drum, Inc., Columbus, Ohio, a corporation of Ohio
Filed Aug. 2, 1962, Ser. No. 214,365
10 Claims. (Cl. 221—36)

1. A lid-dispenser comprising a magazine in which a stack of the lids are disposed, a stripper for feeding the lowermost lid horizontally from the magazine to a selected location, a pair of jaws at the selected location between which the lid is fed, said jaws having horizontal, lid-edge receiving slots into which the lid is fed, the outer walls of said slots converging relatively so that as the lid is moved therebetween, it is gripped at diametrically opposed points and is bowed into concavo-convex form, said outer walls of said slots angling upwardly outwardly so that the edge of the lid will move upwardly thereon to cause the lower surface of the lid to be convex and the upper surface thereof to be concave.

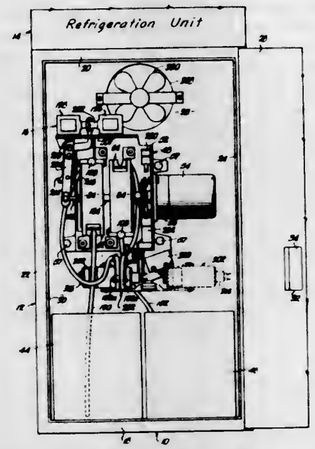


3,100,584
DISPENSING MACHINE OPERATING ON VOLUMETRIC PRINCIPLE
Ulrich Bauder, Stuttgart-West, Germany, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Oct. 7, 1960, Ser. No. 61,131
Claims priority, application Germany Oct. 7, 1959
13 Claims. (Cl. 222—55)



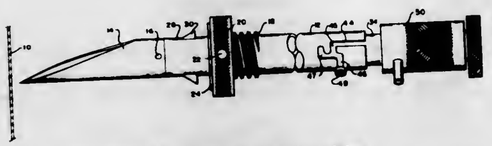
1. A dispensing machine operating on volumetric principle and having measuring chambers being adapted to be adjusted automatically by a control measuring device in accordance with the varying poured weight of filling material passing into said machine, and distributor plate means supplying said measuring chambers with said filling material, said control measuring device being separate from but arranged in the plane of said distributor plate means beyond the periphery thereof and comprising an adjustable control measuring chamber, an associated signal-emitting weigher, and a conveyor device taking said filling material from said distributor plate and filling it into said control measuring chamber.

3,100,585
CREAM DISPENSING APPARATUS FOR COFFEE VENDING MACHINE
Billie G. Nail, Kansas City, Mo., and Eugene R. Sabin, Prairie Village, Kans., assignors to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Filed Oct. 28, 1960, Ser. No. 65,649
18 Claims. (Cl. 222—63)



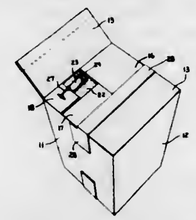
1. In liquid dispensing mechanism, a plurality of sources of liquid to be dispensed; liquid conveying means extending from each of said sources to a delivery station, each of said liquid conveying means having a portion capable of transmitting light energy therethrough; independently operable pump means in each of said liquid conveying means for causing liquid to be drawn from a respective source and directed to said delivery station through a corresponding conveying means upon actuation of a selected pump means; means operably connected to each of said pump means for selectively actuating the latter; light source means adapted to be disposed adjacent said portion of one of the conveying means for directing light rays therethrough; light sensing means adapted to be positioned adjacent said light source means for sensing passage of light through said portion of the respective conveying means and thereby sense cessation of passage of liquid therethrough upon depletion of the liquid at a corresponding source; and means responsive to said sensing means for deactivating said selected pump means connected to said depleted source and for activating another one of said pump means.

3,100,586
VALVED OPENER FOR SEALED CONTAINERS
John R. Haynes and James W. Haynes, Tulsa, Okla.; said James W. Haynes assignor to said John R. Haynes
Filed Mar. 14, 1960, Ser. No. 14,834
1 Claim. (Cl. 222—90)



A valved opener for containers comprising,
an open ended outer tubular mandrel having a forward end to receive a cutting blade and a rearward end having first and second position peripheral slots adjacent thereto;
a threaded sealing nut coaxially positioned on the exterior of said outer mandrel intermediate said ends;
locking dogs between said cutting blade and said nut mounted interiorly of said outer mandrel and adapted for movement from the interior to the exterior of said outer mandrel, said dogs having a diagonal taper portion facing said forward end and a portion substantially perpendicular to the axis of said outer mandrel facing said rearward end;
a U-shaped spring positioned interiorly of said outer mandrel to normally bias said dogs exteriorly, the closed portion of said spring positioned rearwardly of said dogs;
a tubular inner mandrel telescopically movable interiorly of said outer mandrel, said tubular inner mandrel having interior surfaces contiguous to said spring, said tubular mandrel having means to cooperate with said peripheral slots to retract said dogs interiorly in said one position and to permit said bias in said second position;
sealing means between said inner and outer tubular mandrels; and
means forming a part of said inner mandrel to control the flow of fluids from said container.

3,100,587
POURING TYPE FLUID CONTAINER
Herbert F. Cox, Jr., Syracuse, N.Y., assignor to Inland Container Corporation, Indianapolis, Ind., a corporation
Filed May 19, 1960, Ser. No. 30,341
9 Claims. (Cl. 222—105)



1. A container for storage or transport of fluid and adapted to have fluid poured therefrom, said container comprising a relatively rigid, tubular outer shell, said shell being generally rectangular in cross-section and having end flaps and longitudinal side flaps at its upper end for closing thereof, a fluid-tight plastic bag accommodated within said shell and sized so as to be supported by the walls of said shell when filled with fluid, a semi-rigid pouring tube extending from said bag at one corner thereof, a wire binding the tube-bag junction and having a portion extending outwardly therefrom, the shell end flap adjacent said tube being slit to provide two parallel flap sections, one flap section being foreshortened and apertured to receive the extending portion of said binding wire to retain the tube-bag junction at said flap section although a portion of the bag contents has been emptied therefrom, said apertured flap section when moved to extend exteriorly of the container serving to position said bag-tube junction and tube so as to facilitate pouring of the bag contents.

3,100,588
TOY LIQUID DISPENSING DEVICE
Charles Pearson, Jr., 396 Huntington Lane, Elmhurst, Ill.
Filed Sept. 19, 1960, Ser. No. 56,777
2 Claims. (Cl. 222—156)

1. A portable toy of the character described including a base, an upright support on said base, said upright sup-

port forming a central housing with said housing positioned adjacent the rear of said base, a container supported on said upright support, said container having a transparent portion, a pump supported below the bottom of said container and within said housing, a tubular member extending upwardly into said container and communicating with said pump, said tubular member extending a substantial portion of the height of said container with the top of said tubular member being visible exteriorly of said container, a motor for operating said pump, said motor being secured in said housing, a dry cell battery secured in said housing and electrically con-



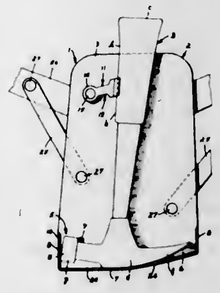
nected to said motor, a switch member pivotally supported by said base and extending forwardly of said base for manual engagement, said switch member connected in circuit with said motor and battery, said container having a discharge outlet forwardly of said upright and means for opening and closing said discharge outlet, said discharge outlet comprising a depending funnel shaped member having a reduced neck, a tubular shaped outlet rotatably supported on said reduced neck and having a handle with said handle extending forwardly thereof for rotating same, and a pair of horizontal walls, one of said walls being secured to said reduced neck and the other to said rotatable member with openings in each said wall.

3,100,589
CONTAINER CLOSURE AND DISPENSER
William D. Love, Jr., Orinda, Calif. (2002 Davis St., San Leandro, Calif.)
Filed Mar. 17, 1960, Ser. No. 15,621
2 Claims. (Cl. 222—480)



1. A closure and selectable dispenser for a container comprising, a closure member formed for sealed engagement in a container opening and having a circular depression defined by a base wall and a surrounding angularly disposed side wall, said base wall being formed to provide an eccentric discharge opening for the contents of said container, a rotor mounted for rotation in said depression and having a base wall and a surrounding angularly disposed side wall formed and dimensioned for full fitted engagement with said depression base and side wall, said rotor base wall having circumferentially spaced solid and open portions selectively movable into positions covering and registering with said discharge opening, said depression and rotor base walls being provided with a center pivotal connection, said base walls being formed to provide full annular matched bearing surfaces retained in full and continuous engagement upon movement of said rotor to and between all said positions, said side walls having a plurality of equally circumferentially spaced interfitting projection and recess portions simultaneously indexing said positions to provide a plurality of indexed rotor positions and maintaining radially balanced forces on said pivotal connection during movement of said rotor between said positions, and said rotor side wall being formed as an upstanding wall of resiliently flexible material and with the upstanding end thereof laterally unsupported in an inward direction permitting inward flexing of said rotor side wall, the latter thereby functioning to resiliently distort upon rotational movement of said rotor between said positions and to provide snap action internesting of said projection and recess portions at said positions.

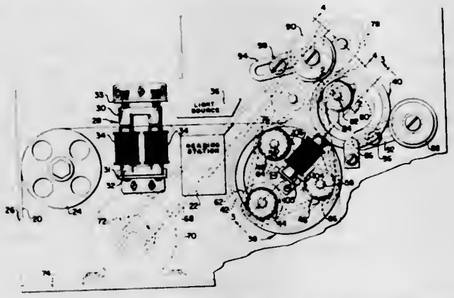
3,100,590
HAMMER HOLSTER
Albert J. Bohlsen, 2017 S. Alboin, Fairmont, Minn.
Filed Aug. 16, 1960, Ser. No. 49,938
5 Claims. (Cl. 224—5)



1. A hammer holster for carrying a hammer with its handle in an upstanding position with relation to the head thereof, said holster comprising a generally vertically disposed back plate having front and rear faces, an upwardly opening elongated pocket secured to the front face of the lower portion of said back plate, said pocket being of a length generally approximating the length of said hammer head and adapted to receive the head of said hammer so that the handle thereof is disposed adjacent said back plate, hammer head retaining means at one end of said pocket adapted to retain one end of said hammer head and limiting upward movement thereof, and hammer handle retaining means connected to said back plate and adapted to limit transverse movement of said hammer handle when said hammer head is received within said pocket, said hammer handle retaining means comprising a lug secured to said backing plate and mounted for pivotal movements into and out of engagement with the hammer handle when the hammer is carried by said holster.

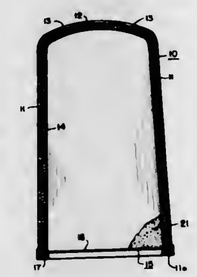
3,100,591
RECORD MEDIA HANDLING APPARATUS
Cebern B. Trimble, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Jan. 19, 1961, Ser. No. 83,812
15 Claims. (Cl. 226—39)

9. In a record media handling apparatus for controlling the movement of record media, the combination comprising first continuously operating driving means normally engaging one side of the record media; second continuously operating driving means engageable with the other side of the record media and including an element permanently magnetized in a given polarity; and control means adjacent the first continuously operating driving means and selectively magnetizable in either of two polarities to attract or repel said second driving means, whereby said control means is effective to terminate driving of the record media when said control means is magnetized in one polarity, and whereby said control means is effective to initiate driving of the record media when said control means is magnetized in a second polarity.



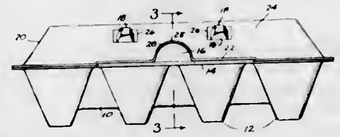
10. In a record media handling apparatus for controlling the movement of record media, the combination comprising magnetic breaking means including a flexibly mounted armature permanently magnetized in a first polarity, said armature having a surface engageable with one side of said record media, said magnetic braking means also including a complementary element positioned adjacent said armature, and spaced therefrom sufficiently to permit the record media to pass between said armature and said element, said element having a surface engageable with the other side of said record media; brake control means associated with said armature and selectively magnetizable in a first or second polarity to repel or attract the armature; and operating means for selectively reversing the polarity of the brake control means to shift the armature of the magnetic braking means between a first position in which it is effective to halt movement of the record media and a second position in which it is ineffective to halt such movement.

3,100,592
DISPENSING CONTAINER
John B. Orr, R.F.D. 3, Great Barrington, Mass.
Filed June 18, 1959, Ser. No. 821,299
2 Claims. (Cl. 229—2.5)



1. In a dispensing container of expanded resin bead material that is suitable for storing and dispensing a powdered material, a unitary self-supporting lightweight resilient body of somewhat bell-shape that can be dropped on the floor with the powdered material therein without cracking, said body having continuous side and top walls defining a chamber for receiving therein the powdered material to be dispensed and having an open bottom end portion defined by a continuous lip edge about the side wall, said walls and said lip edge having a thickness of about 3/16 of an inch and having a density of less than about 3 pounds per cubic foot, said body being directly steam expansion-formed from expanded polystyrene beads in a mold; a flexible disc-shaped bottom closure member having a circumferential edge wall thereabout, the inside of said side wall having a circumferential groove portion extending inwardly along said side wall from said lip edge to a position adjacent thereto, said circumferential edge wall of said lid having a secure indented-latching engagement within and pressure fit with said groove portion that provides a vapor-tight pressure seal with the side wall to retain the powdered material within the chamber of said body, and said top wall of said body being of outwardly-rounded shape and constructed for dispensing the powdered material from the chamber thereof.

3,100,593
EGG CARTON WITH PRESSURE RELEASE LOCKING FLAP
Eugene M. Alsman, 5104 SE. Long St., Portland, Oreg.
Filed Sept. 5, 1961, Ser. No. 136,112
1 Claim. (Cl. 229—2.5)

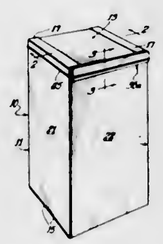


An egg carton comprising a bottom section provided with egg cups and with an upstanding locking flap hinged to its front edge, the locking flap bieng provided with at least one outwardly projecting locking tab, a dished top section hinged along its back edge to the back edge of the bottom section for opening and closing on the bottom section, the top section including a front panel adapted to overlie the locking flap in adjacent relation in the closed position of the top section, the front panel being provided with one tab-receiving opening for each locking tab, and with a digit opening extending inward from the edge thereof and dimensioned to expose the locking flap to the external application of digital pressure for rotating the locking flap away from the overlying front panel when in closed position for releasing the tabs from locking engagement with the tab-receiving opening in the front panel of the cover, the bottom section and cover section each having a flange extending outward from the peripheral edge thereof, the flange on the cover section extending around the edge of the digit opening for engagement by a digit for moving the cover section to open position, the locking tab having a surface facing the flanged edge of the cover section when in closed position, which surface extends angularly outward away from said flanged edge of the cover section, whereby digital pressure applied under the flange around the digit opening in the opening direction of the cover section effects withdrawal of the locking tab from its tab-receiving opening.

3,100,594
SHIPPING CARTON
William B. Gile, Marion, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 16, 1961, Ser. No. 83,034
2 Claims. (Cl. 229—16)

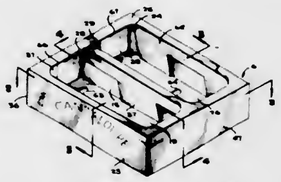
1. A shipping container for appliances and the like comprising a tubular portion of corrugated board and hav-

ing a substantially rectangular cross section; closure means at one end of said tube and adapted to form the bottom thereof, said closure means comprising bottom flaps formed from said corrugated board folded inwardly in overlapping relation and secured each to the other whereby to seal the bottom of said tube, a base frame of reinforced wooden boards joined to form a rectangular base adapted to fit within the closure formed by the tube and base of the container, said base frame having positioning recesses adapted to receive and position the feet of an appliance and having holes adapted to receive the securing means retaining said appliances to said base frame, corner braces in each corner of the tubular means extending longitudinally of the tube member and adapted to furnish vertical support and reinforcement thereto and position the ap-



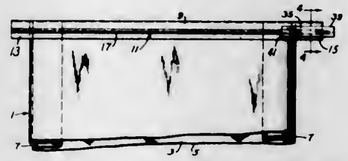
pliance and base means within the said container; a closure member laterally positioned adjacent the top end of said tube, a first and second pair of opposed foldable tube flaps extending from said top end of said tube and a first and second pair of foldable closure flaps extending laterally from opposite sides of said closures, said first pair of said closure flaps being adapted to be secured to the inside of said tube respectively adjacent flaps of said first pair of said tube flaps, said first pair of tube flaps being adapted to be folded and secured to the outside of said closure member, said second pair of foldable closure flaps extending laterally from opposite sides of said closure member and adapted to fold around respective flaps of said second pair of tube flaps for securing the closure member to said tube to seal the other end of said tube end to provide an external strengthening member.

3,100,595
CANTALOUPE CONTAINERS
Floyd P. Curtiss, Temple City, and Edward F. Reith, Downey, Calif., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 27, 1961, Ser. No. 91,867
8 Claims. (Cl. 229—27)



1. A one-piece container for cantaloupe and the like comprising a pair of container sections disposed in side-by-side relation, each container section including a bottom wall, an inner side wall, an outer side wall, and flaps connected to opposite ends of each side wall, a full width end flap secured to each end of each of said bottom walls, each inner side wall being formed from abutting free end panels and having adjacent upper free edges, a cover panel overlying said container sections at said upper free edges and being integrally connected to upper edges of said outer side walls, and end flaps at opposite ends of said cover panel and extending the full width thereof, said cover panel end flaps, said side wall end flaps and said bottom wall end flaps being permanently secured together, the container being a combined shipping and display container, and said cover panel having a pair of article passing openings with each of said openings being aligned with a respective one of said container sections, each article passing opening being of an extent corresponding to a major portion of the area of the respective container section and being of a width less than the respective container section with each opening having side edges spaced from said inner and outer side walls of the respective container section, and each article passing opening resulting in the formation of two depending panels extending generally the full length of the respective article passing opening with said depending panels being wider than the heights of said inner and outer side walls and sloping into abutting contact with corners defined by respective ones of said bottom wall and said inner and outer side walls to provide resilient cushions for cantaloupe and the like contained in said container.

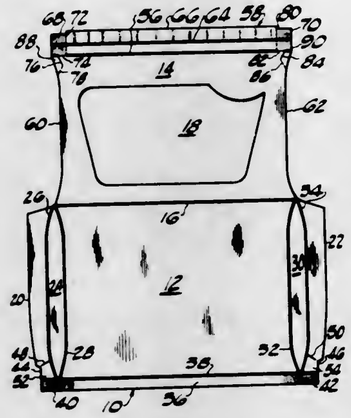
3,100,596
BAGS
Russell J. Williams, Clayton, and August F. Ottinger, St. Louis, Mo., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed July 10, 1961, Ser. No. 122,821
8 Claims. (Cl. 229—66)



1. A multiwall paper bag having at least one end closure constituted by a paper tape folded around the respective end of the bag, a line of stitching driven through the tape and through the walls of the bag and securing together the walls adjacent said end of the bag, the length of said tape being greater than the width of the bag and end portions of the tape extending past the side edges of the bag, the stitching extending completely throughout the length of the tape, the stitching being of a single thread readily unravelable chain stitch type which has loops extending from one side of the tape through needle holes to the other side of the tape, each loop being laid over on the said other side of the tape, said thread being readily unravelable by pulling one end of the thread from one end of the tape, a tab releasably secured to said one side of the tape over said one end of the thread by adhesive and adapted to be grasped and pulled away from the tape, said adhesive also anchoring the thread against unraveling until it is desired to open the bag and securing the thread to the tab at a point from which unraveling of the thread may be started, whereby, upon grasping and pulling the tab away from the said one end of the tape, the thread is pulled away with the tab and unraveled, and a localized application of adhesive applied over the loops of the thread on the other side of the tape at said one end of the tape, said localized application of adhesive securing the loops of the thread at said one end of the tape against coming loose due to rubbing, while permitting the loops of the thread at said one end of the tape readily

to come loose when the thread is deliberately pulled to unravel it.

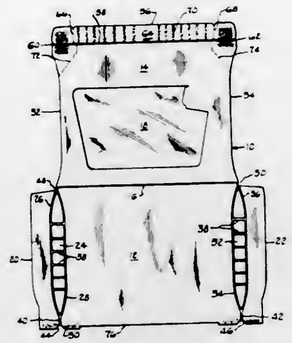
3,100,597
BACON CARTON
William R. Saidel and Joseph M. Heigl, Park Forest, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed June 25, 1958, Ser. No. 744,440
7 Claims. (Cl. 229—87)



6. A paperboard package blank for wrapping sliced and shingled food material, said blank being scored transversely to form a bottom portion and a top portion adapted to be folded thereacross, one of said portions having a closure margin adapted to be folded about an edge of said opposite portion, a thermo-responsive adhesive disposed across at least part of the surface of said margin and the opposing surface of said other portion when folded thereabout, for initially sealing said package, a relatively thin coating of wax covering all surfaces of said blank, said coating being of substantially less thickness across the surfaces to which said adhesive has been applied whereby to permit bonding between said surfaces and said adhesive, and separate reclosure means forming parts of said top portion and said bottom portion for releasably securing said package blank in the closed position with said top folded across said bottom after the adhesive bond has been broken.

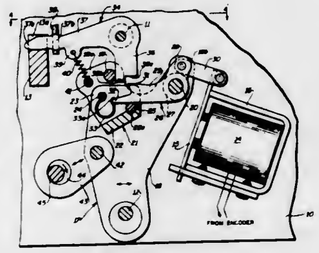
3,100,598
BACON CARTON
William R. Saidel, Park Forest, and Joseph M. Heigl, Glen Ellyn, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 9, 1959, Ser. No. 851,602
11 Claims. (Cl. 229—87)

1. An improved package blank cut and scored from relatively stiff packaging material for enwrapping sliced and shingled food product, said blank comprising: a bottom panel; a top panel divided from said bottom panel by a score line; a closure margin extending across said top panel oppositely disposed from said bottom panel, said closure margin being adapted to be folded under an edge of said bottom panel opposite said score line; a pair of detachable corners included in said top panel, said corners including the ends of said closure margin; a refoldable flap comprising the remainder of said margin between said detachable corners; and an engaging member connected to said bottom panel at said edge thereof, said engaging member adapted to overlie the opposite ends of said refoldable flap to resecure said refoldable flap when folded about said edge subsequent



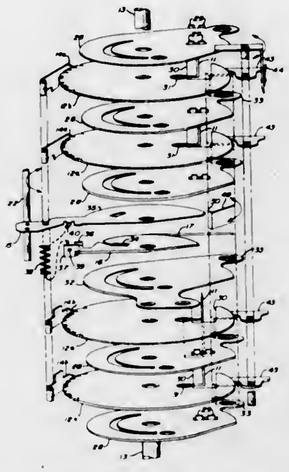
to detachment of said corners at the initial opening of a package formed from said blank.

3,100,599
DATA PROCESSING EQUIPMENT
Donald G. Hebert, South Windsor, Conn., assignor to Royal McBee Corporation, New York, N.Y., a corporation of New York
Filed Mar. 9, 1962, Ser. No. 178,779
2 Claims. (Cl. 234—115)



1. In a punch unit for a data processing machine, the combination of,
drive means,
means for oscillating said drive means between predetermined limits,
a pawl rotatably mounted on said drive means and rockable between rest and driving positions,
means including an overcentering spring normally holding said pawl in rest position,
control means operative at one limit of motion of said drive means to rotate said pawl against the bias of said spring as said drive means moves toward its other limit of motion thereby causing said spring to overcenter and continue the rotation of said pawl and hold it in driving position,
and punch means associated with said pawl, said punch means being engageable with said pawl and responsive to the motion of said drive means for perforating a record.

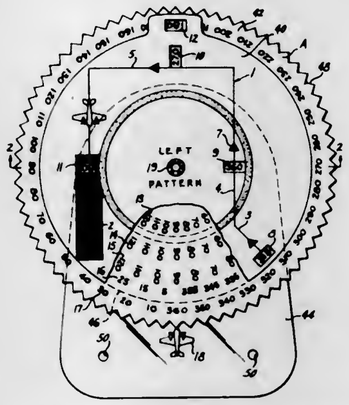
3,100,600
CHART READING MECHANISM
Lawrence S. Williams, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Continuation of application Ser. No. 616,517, Oct. 17, 1956. This application Nov. 21, 1961, Ser. No. 155,239
6 Claims. (Cl. 235—1)



1. A chart reading device comprising, in combination, a positionable chart having raised surfaces representing coded indicia, a plurality of sensing pins adapted to sense the chart, a plurality of movable permutation members individually connected to the pins, each of the members having a smooth peripheral section and a first and second notch spaced in the direction of movement of the member, a frame movable along the periphery of the members, friction means individually connecting each member to the frame whereby movement of the frame in a first direction moves the pins toward the chart, a pawl operatively connected to the frame and adapted to engage the notches to oppose movement of the members in a direction to engage the pins with the chart, and means for moving the frame in said first direction until the pawl is disengaged from the notches and engaged with the smooth peripheral section of at least one member as its pin engages the chart indicia and arrests the movement of the member and for moving the frame in a return direction during which the pawl leaves the smooth section and selectively engages the notches according to the arrested position of the respective members to move the members to retracted positions that vary according to the arrested positions.

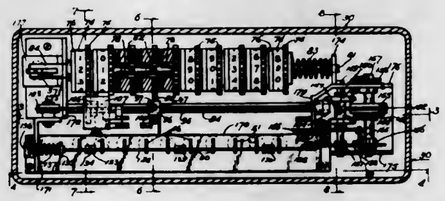
4. A chart reading device comprising, in combination, a positionable coded indicia-bearing chart, four sensing pins adapted to engage the indicia, a first and second pair of positionable permutation members individually connected to the pins, the first pair having a series of notches according to a first pattern and the second pair having a series of notches according to a second and different pattern, means for driving the members to positions fixed by engagement of the pins with the chart, whereby each of the permutation members occupies one of two positions, said means retracting the permutation members without disturbing their positions relative to each other, and pawl means for scanning the relative positions of the retracted permutation members, said pawl means including a pair of fingers offset from each other along the periphery of the permutation members and each finger being arranged to cooperate respectively with the notches of the pair of members of the first pattern and with the notches of the pair of members of the second pattern.

3,100,601
AIRCRAFT TRAFFIC PATTERN AND RUNWAY COMPUTER
Herman G. Shapiro, 721 Fenmere Ave., Interlaken, N.J.
Filed Dec. 21, 1960, Ser. No. 77,325
5 Claims. (Cl. 235—61)



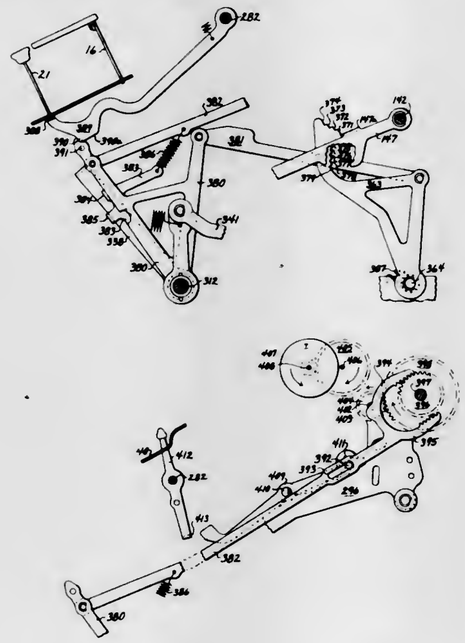
5. A computer for providing flight path magnetic landing courses for aircraft and the like comprising: a pair of concentrically rotatable opaque discs, the first disc including: first 360° scale means concentrically disposed thereon for indicating runways, a plurality of additional concentric 360° scale means for indicating courses for an aircraft to be flown in preparation for landing; the second disc including alignment indicia, lines on said second disc designating flight path landing course legs, and a plurality of cooperatively positioned windows through said second disc along said lines and corresponding to said additional scale means to provide a view of those portions of said additional scale means designating landing pattern courses for the aircraft to be flown for landing the aircraft on the selected runway on said first scale means aligned with said alignment indicia.

3,100,602
CALCULATING MACHINE
Shu K. Lear Voo, 298 Lakewood Blvd., Park Forest, Ill.
Filed Feb. 4, 1960, Ser. No. 6,758
5 Claims. (Cl. 235—63)



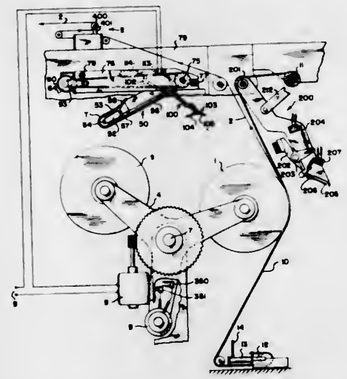
1. In a ten-key keyboard calculating machine having a register comprising a plurality of demonstrational orders of numeral wheels and a keyboard of ten selectively depressible keys, each identifiable from the other by an indicium thereon of one of a sequence of ten digits of from zero to nine, both inclusive, in combination, a rotary shaft means, a principal actuator mounted on the shaft for movement thereon and to rotate therewith, detachable coupling means to couple said principal actuator selectively to said numeral wheels for actuation thereof; a transporter means for transporting said principal actuator from the one position thereof in engagement with one of said numeral wheels axially to another position in engagement with a succeeding numeral wheel of next lower denominational order in succession in descending denominational order; spring means responsive to motion of the principal actuator in the descending direction to store energy; release means to be engaged by the principal actuator after actuation of the last numeral wheel to release said spring means for transporting said principal actuator from the position in engagement with the numeral wheel of the lowest denominational order back to its starting position; a member actuatable by said keys and movable by the respective keys in differing amounts; and motion modifying means to convert movement of the member in the one direction into a rotary motion of said rotary shaft means.

3,100,603
MULTIPLIER-QUOTIENT REGISTER CONTROL MECHANISMS
William S. Gubelmann, deceased, late of Convent, N.J., by Walter S. Gubelmann, executor, Oyster Bay, N.Y., assignor to Realty & Industrial Corporation, Morristown, N.J., a corporation of Delaware
Original application Nov. 6, 1950, Ser. No. 194,273, now Patent No. 2,969,177, dated Jan. 24, 1961. Divided and this application Dec. 20, 1960, Ser. No. 77,245
11 Claims. (Cl. 235—63)



1. A register operating mechanism for a numeral wheel of a register of a cylically operable computing machine, comprising a motivating member pivoted for a fixed extent of angular movement from rest position to operated position and back again to rest position during each cycle of operations of said computing machine, a differential actuator means normally engaging said motivating member and being resiliently biased to move followingly together with said motivating member from rest position different extents corresponding to different numbers for rotating said numeral wheel accordingly, said actuator means comprising first and second levers mounted coaxially with said motivating member, said actuator means comprising wheel rotating means connected to and movable by said first lever and engageable with said numeral wheel for effecting said rotation of said numeral wheel upon movement of said first lever from rest position and differential stop means connected to said first lever for movement therewith and for differentially limiting the movement of said first lever in accordance with different related number values and under control of said computing machine, said second lever comprising lug means movable therewith and extending into the paths of said first lever and said motivating member for normally followingly contacting said first lever and said motivating member as said motivating member moves to operated position, a first spring connected with said first and second levers for biasing said second lever to rotate together with said first lever from rest position, and an anchored second spring connected with said first lever for moving said first and second levers followingly together with said motivating member when said motivating member is rotated to operated position, whereby breakage is substantially minimized by said second spring, when said motivating member is rotated to operated position, and by said first spring when said motivating member is rotated back to rest position.

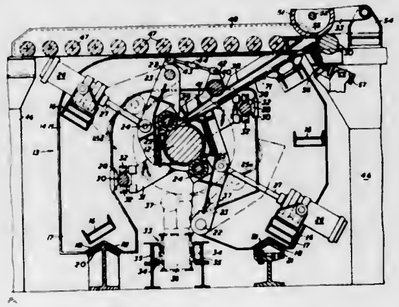
3,100,604
WEB SPLICING APPARATUS
Anthony C. Degutis, Basking Ridge, and Albert L. Peterson, Westfield, N.J., assignors to Wood Newspaper Machinery Corporation, Plainfield, N.J., a corporation of Virginia
Filed June 29, 1959, Ser. No. 823,555
11 Claims. (Cl. 242—58.3)



1. A web splicing apparatus for splicing a web from a web reserve roll onto a moving web running from a web supply roll comprising a movable support for rotatably supporting a web supply roll and a web reserve roll; support driving means for moving said support; a roll accelerating arm pivotally supported above the path of movement of said roll support; a paster arm pivotally supported above said web supply roll; a paster brush mounted on said paster arm for pasting said moving web running from said web supply roll onto the web of said web reserve roll; a severing knife mounted on said paster arm for severing the web from said web supply roll after said moving web has been pasted to the web of said web reserve roll; pneumatic roll braking means for maintaining substantially constant tension on said moving web running from said web supply roll comprising a floating roller contacting said moving web; a tension belt contacting said web supply roll, a pneumatically operated tension piston for controlling tension in said tension belt and a variable pressure control valve connected to a source of pneumatic pressure and operated by movement of said

floating roller for controlling pneumatic pressure exerted on said piston; a roll accelerating belt mounted on said roll accelerating arm adapted to engage a substantial portion of the outer periphery of said reserve roll; roll accelerating belt drive means for driving said belt; pneumatic drive brake means connected to said roll accelerating belt drive means; splicing valve means for connecting said pneumatic drive brake means to said variable pressure control valve after said web has been severed by said severing knife; shutte valve means for connecting said pneumatic operated tension piston direct to said source of pneumatic pressure after said web has been severed by said severing knife; support positioning means contacting said web reserve roll to position the outer periphery of said web reserve roll at a predetermined distance from said paster brush regardless of the diameter of said web reserve roll; and severing timer means responsive to the speed of the moving web controlling movement of said severing knife to maintain a constant length of web from the point the web is severed to the point where said moving web running from said web supply roll is pasted to the web of said web reserve roll.

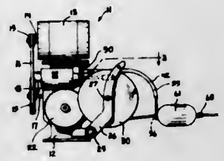
3,100,605
STRIP COILER
Harry Laurence Fred Bond, Hathersage, Sheffield, England, assignor to Davy and United Engineering Company Limited, Sheffield, England
Filed Oct. 18, 1960, Ser. No. 63,436
Claims priority, application Great Britain Oct. 20, 1959
14 Claims. (Cl. 242—80)



1. A coiler for metal strip comprising a mandrel about which the strip may be coiled, a wrapper assembly for inducing wrapping of the leading end of the strip about the mandrel, a roller table passing over the mandrel to a further coiler position, and a gate for optionally directing strip on the roller table to the coiler or to the further coiler, the wrapper assembly being mounted independently of said mandrel and the roller table and removable relative to both said mandrel and said roller table in the direction of the axis of said mandrel.

3,100,606
WATER SKI ROPE REEL
Clifton L. Nicholson, R.R. 4, Scottsburg, Ind.
Filed Jan. 5, 1961, Ser. No. 80,945
4 Claims. (Cl. 242—86.5)

3. A water skiing arrangement comprising a base, a plurality of reel mounting elements mounted on said base, a plurality of reels rotatably mounted on said reel mounting elements, drive means mounted on said base for rotating said reels, means for selectively connecting any number of said reels to said drive means, a rope connected to each of said reels, said selective connecting means providing rotation of particular reels so said ropes may be unwound to unequal lengths thereby providing means for accomplishing criss-cross water skiing, an enlarged member secured to each rope adjacent its distal end, and means for automatically disconnecting said selec-



tive connecting means, said disconnecting means being operated when engaged by said enlarged member upon winding a particular rope.

3,100,607
BARBED WIRE REEL HOLDER
Barney F. Wiggins, Rte. 1, Box 174, Livingston, Tex.
Filed Aug. 12, 1959, Ser. No. 833,343
1 Claim. (Cl. 242—86.64)



A barbed wire reel holder including a pair of wheels each having an opening therethrough, a continuous axle extending through the opening in each of said wheels, the diameter of the openings in said wheels being larger than the external diameter of said axle, the external diameter of said axle being smaller than the internal diameter of the reel of barbed wire whereby the reel may be received thereon, adjustable means on said axle for retaining said wheels on said axle and for varying the distance between said wheels thereby permitting said reel holder to receive reels of various widths, a handle releasably connected to said axle for moving the holder and barbed wire reel supported thereon, said releasable connection including means on said handle for connecting said handle to said axle, a rod extending longitudinally on said handle, brackets on said handle for supporting said rod whereby said rod may be moved longitudinally along said handle, said rod having a tapered end thereon whereby said tapered end may be engaged with the barbed wire of the barbed wire reel to inhibit rotation of the reel on said axle, a rest arm attached to said handle for supporting said handle at a predetermined height, said rest arm being hingedly connected to the underside of said handle and positioned nonperpendicularly with the ground when in use, and clamp means for locking said rest arm adjacent said handle when not in use.

3,100,608
BUCKLE KEY CHAIN
Adolph E. Goldfarb, 7427 Varna St., North Hollywood, Calif.
Filed July 24, 1961, Ser. No. 126,311
1 Claim. (Cl. 242—96)

In combination, means comprising a belt buckle of a generally rectangular shape and having a circular housing formed therein spaced from the ends of the buckle and from the plane of the rear thereof; a rotatable reel mounted in said housing, spring means for rotating the reel in one direction, a cord mounted on the reel and having an end extending from the housing through an aperture therein and having a key ring attached thereto whereby the cord may be withdrawn from the housing by rotating the said reel in a manner to wind up the said spring, pawl and ratchet means including a manually actuated pawl for stopping the winding up operation of said reel in any desired position, and said manually actuated pawl having a lever part mounted on the lower part



of said buckle adjacent to the position in which the said cord extends from the housing, said housing presenting a circular conformation at the front of the buckle adapted to receive a circular cover.

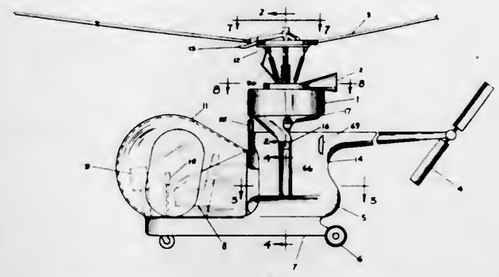
3,100,609
SAFETY HARNESS DEVICE
Robert J. Wrighton, Newport Beach, Calif., assignor to Pacific Scientific Company, San Francisco, Calif., a corporation of California
Filed Nov. 23, 1959, Ser. No. 854,869
5 Claims. (Cl. 242—107.4)



1. An inertia-operated safety device for mounting in a vehicle to restrain the movement of a body within the vehicle when the body is subjected to accelerated movements relative to the vehicle comprising a tension member for coupling to the body, a reel on which said tension member is wound, yieldable resilient means coupled to said reel tensioned so as to urge said reel in the direction to wind up said tension member thereon, said reel being rotatable against the tension of the resilient means in a direction to unwind the tension member from the reel responsive to movements of the body, a flywheel rotatably mounted in axial alignment with said reel, yieldable means coupling said flywheel to said reel to rotate said flywheel in unison with said reel during rotation thereof in the unwind direction below a certain acceleration, said yieldable means yielding during rotation of said reel at said certain acceleration whereby said reel rotates relative to said flywheel, locking means operated in response to the yielding of said yieldable means for locking said reel against further rotation in the unwind direction, said locking means having a normal position it assumes when the reel is in an unlocked condition and a lock position when the reel has been locked against further unwind of the tension member, manually operated means for moving said locking means from said lock position to said normal position, and means operating to prevent relative rotation between said flywheel and said reel during that short period of time when said locking means is first moved from its lock position and being returned to its normal position.

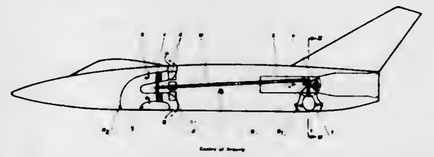
3,100,610
STABILIZING SYSTEM FOR A HELICOPTER
Victor O. Armstrong, 13303 Debell St., Pacoima, Calif.
Filed Apr. 3, 1962, Ser. No. 184,842
13 Claims. (Cl. 244—17.25)

1. A helicopter comprising:
(*a*) a fuselage;
(*b*) a rotor rotatably supported on and above said fuselage;
(*c*) a power plant disposed between said rotor and said fuselage for driving said rotor; and



(*d*) means for universally mounting said power plant to said rotor and to said fuselage to permit relative displacement of said fuselage with respect to said rotor.

3,100,611
AIRCRAFT PROPULSION SYSTEM
Gero Madelung, Munich, Germany, assignor to Messerschmitt A.G., a corporation of Germany
Filed Mar. 17, 1961, Ser. No. 96,527
7 Claims. (Cl. 244—23)



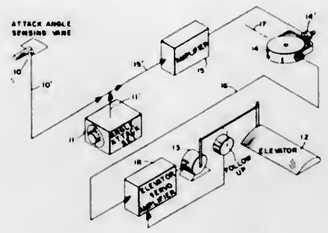
4. An aircraft having a jet propulsion system mounted in the tail of the fuselage thereof, said jet propulsion system including means operative to produce a jet thrust directed rearwardly of the aircraft for normal flight and means adapted for deflection of at least some of said thrust in a downward direction to produce a downward thrust for use during take-off and landing operations, a turbine mounted rearwardly of the aircraft center of gravity within the aircraft fuselage and disposed in the path of the downwardly deflected thrust, a lift fan mounted towards the front of the aircraft fuselage and disposed within said fuselage forwardly of the centre of gravity of the aircraft, a positive drive connection between said turbine and said lift fan, said drive connection being located within said aircraft fuselage, fuel injection nozzles on the output side of the lift fan, and fuel ignition means adjacent said nozzles.

3,100,612
ANGLE OF ATTACK CONTROL
John C. Owen, Grand Rapids, Mich., assignor, by mesne assignments, to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Original application July 24, 1957, Ser. No. 673,808, now Patent No. 2,967,679. Divided and this application June 28, 1960, Ser. No. 66,393
6 Claims. (Cl. 244—77)

1. In an angle of attack control system for aircraft having an elevator and a signal operated actuator therefor, the combination comprising:
a desired absolute angle of attack electrical signal setting means for providing a desired absolute angle of attack signal,

a sensor responsive to instantaneous airflow changes in advance of the aircraft and providing an instantaneously changeable sensor signal,

means merging said signals into an angle of attack error signal,



a pitch gyroscope having a pitch axis and a pitch axis torquer biased by said modified angle of attack signal to precess said gyroscope about said pitch axis, said gyroscope providing a control signal dependent upon the precessing of said pitch gyroscope and thereby controlling said actuator to obtain said absolute angle of attack.

3,100,613
AIRCRAFT RESTRAINING DEVICE
Per Borje Fonden, Gotgatan 23, and Karl Ove Torgny Walander, Vasavagen 49, both of Linkoping, Sweden
Filed Dec. 12, 1960, Ser. No. 75,149
11 Claims. (Cl. 244—110)



1. An apparatus for raising and lowering the masts of an aircraft-restraining device comprising, a mast to which aircraft-restraining wires are connected, the mast having a pivot at its lower end, a stay having its upper end attached to the mast and having a pivot at its lower end, the pivot at the lower end of the mast being capable of bodily movement in a direction substantially parallel to the surface of the ground on which the structure is mounted said pivot being movable in a direction away from the restraining wires upon the descending movement of the mast.

3,100,614
INFLIGHT REFUELING SYSTEM
David Morrow, Silver Spring, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 14, 1962, Ser. No. 202,636
8 Claims. (Cl. 244—135)



1. In a system for transferring fuel from a supply aircraft to a receiving aircraft, the combination comprising:

a receiving tank located on the receiving aircraft for receiving fuel from the supply aircraft;

fuel transferring means connected to said supply aircraft for transferring fuel from a tank on said supply aircraft to said receiving tank on said receiving aircraft, said fuel transferring means having a hose with a nozzle, a stabilizer and a connecting means to connect said hose and nozzle to said stabilizer;

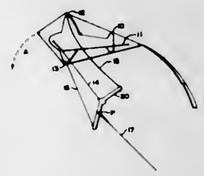
receiving means connected to said receiving tank for transferring fuel from said fuel transferring means to said receiving tank, said receiving means having a coupler movably attached to said receiving aircraft and a grapnel extendable from said coupler engageable with the hose and nozzle and connecting the nozzle to the coupler in a fluid tight relationship whereby fuel is transferred from the supply aircraft to the receiving aircraft; and

extension means connected to said grapnel for raising and lowering the grapnel so that the grapnel may be lowered to engage the connecting means and raised to make a fluid tight connection with the coupler.

ERRATUM

For Class 244—153 see:
Patent No. 3,100,895

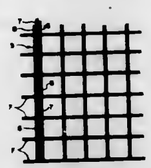
3,100,615
KITE CONTROL
Henry J. Durick, 238 Evan Ave., Sunset Valley, Irwin, Pa.
Filed July 10, 1962, Ser. No. 208,771
9 Claims. (Cl. 244—155)



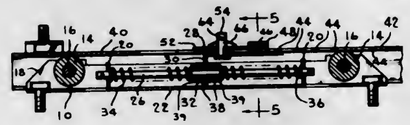
1. In kite apparatus including a kite that has a bridle and is flown by a single ground line, a flight control system comprising: an elongated yoke member having a pair of rearwardly-inclined outwardly-extending arms that provide a longitudinally-extending surface portion, said surface portion including a centrally-located socket portion, control line means connecting opposed ends of said yoke member respectively to laterally-spaced points on the kite, riser line means connecting a central portion of said yoke member with the bridle, a selectively-positionable lever having an enlarged end portion for engaging said surface portion in a force transmitting relationship therewith, resilient means connected to said yoke member and said enlarged end portion of said lever for resiliently urging the enlarged end portion away from said surface portion, and rearwardly-outwardly-facing inclined-surface means positioned adjacent a central portion of said yoke member for aiding in the selective-positioning of said lever.

3,100,616
WIRE CLOTH
James William De Poy, Oakland, Calif., assignor to The Colorado Fuel and Iron Corporation, Denver, Colo., a corporation of Colorado
Filed May 12, 1959, Ser. No. 812,759
1 Claim. (Cl. 245—10)

An improved wire cloth formed of round warp wires and round fill wires which comprises a selvage formed of three warp wires and the fill wires, the two innermost warp wires being interwoven with the fill wires and the outer warp wire being under the fill wires, said warp wires which form the selvage being welded to the fill wires and the warp wires and fill wires being flattened at the points where the wires are welded together, said fill wires being sheared off at the edge of the outside selvage warp wire.

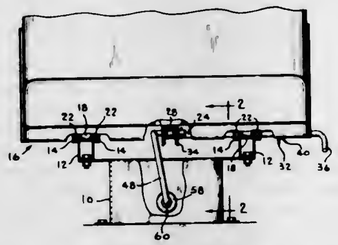


3,100,617
VEHICLE SEAT FORE AND AFT SHOCK ISOLATOR
Arthur O. Radke, Wauwatosa, and Harvey N. Tengler, West Allis, Wis., assignors to Bostrom Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed July 22, 1960, Ser. No. 44,791
7 Claims. (Cl. 248—430)



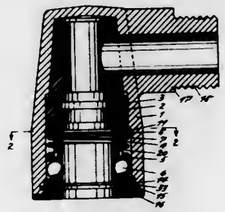
1. A vehicle seat support comprising a lower rail adapted for connection to a vehicle, an upper rail slidably mounted with respect to the lower rail and defining a central space between the upper and lower rails, load bearing anti-friction means between the upper and lower rails located in said central space, resilient means in the space between the rails for yieldably resisting relative longitudinal movement between the rails, and adjusting means for selectively positioning the upper rail longitudinally with respect to the lower rail without affecting the resilient means.

3,100,618
FORE AND AFT SHOCK ABSORBER
Harvey N. Tengler, West Allis, and Arthur O. Radke, Wauwatosa, Wis., assignors to Bostrom Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 2, 1960, Ser. No. 46,987
2 Claims. (Cl. 248—430)



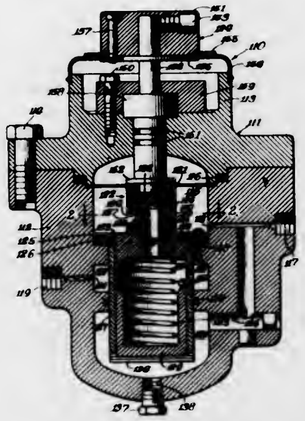
1. A vehicle seat support comprising, a stationary member fixed to the vehicle, a carriage member mounted on the stationary member and movable longitudinally with respect to the stationary member, anti-friction means between the stationary member and carriage member, a shock absorber including a rod having a transversely extending end and a longitudinally extending end, the transversely extending end being pivotally connected to one of the members, the longitudinally extending end being pivotally connected to the other member through yieldable resilient means.

3,100,619
GAS CONNECTION TAP WITH HOSE CONNECTION PART
Hans Berghöfer, Alte Landstrasse 274, Hamburg-Poppenbuttel, Germany, and Herbert Griebel, Eilbeker Weg 79a, Hamburg-Eilbek, Germany
Filed May 13, 1960, Ser. No. 28,931
Claims priority, application Germany Jan. 2, 1960
3 Claims. (Cl. 251—149.9)



1. Combined hose coupling and cock operating mechanism comprising, in combination, a housing formed with an axial bore having an open and a closed end and a transverse bore communicating with said axial bore adjacent said closed end thereof, said housing being also formed in the region of said open end of said axial bore with at least one axial groove; a cock member fitted in said axial bore of said housing and being formed with a first passage therethrough coaxial with said axial bore and a second passage communicating with the first passage, said cock member being turnable in said housing about the axis of said axial bore between a closed position, an intermediate coupling position and an open position and said second passage communicating with the transverse bore only in said open position of said cock member; hose means having an attaching end insertable through said open end of said axial bore of said housing in said first passage of said cock member when the latter is in said closed position; first coupling means in said open end of said axial bore of said housing and connected to said cock member for rotation therewith, said first coupling means including a ball cage connected to said cock for rotation therewith and at least one ball held in said ball cage for rotation therewith and movable in radial direotion between a coupling position in which a portion of said ball protrudes beyond an inner surface of said ball cage and an uncoupling position, said ball cage being connected to said cock so that said ball is aligned with said axial groove when said cock is in said closed position thereof permitting said ball to move radially outwardly to said uncoupling position thereof; and second coupling means fixed to said attaching end of said hose means and cooperating with said first coupling means upon insertion of said attaching end of said hose means into said cock for connecting said cock to said hose means for turning movement therewith, said second coupling means being formed with a cavity aligned with said ball when said attaching end of said hose means is inserted into said cock, whereby upon turning of said cock member by said hose means from said closed to said coupling position said ball will be moved out of said groove to the coupling position thereof into said cavity of said second coupling means so as to prevent separation of said hose means from said cock member upon turning of said cock by said hose means from said closed to and beyond said coupling position.

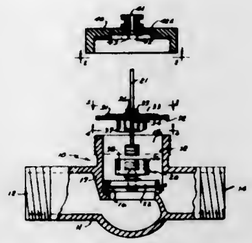
3,100,620
ADJUSTABLE ORIFICE FOR USE IN DIFFERENTIAL PRESSURE APPARATUS
Willard A. Kates, Deerfield, Ill., assignor to The W. A. Kates Company, a corporation of Illinois
Filed Aug. 3, 1960, Ser. No. 47,327
5 Claims. (Cl. 251—208)



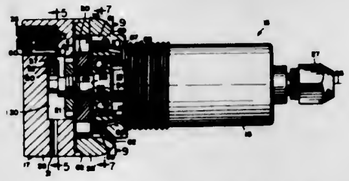
1. In a differential pressure apparatus, means defining an adjustable orifice comprising: a cylindrical member having an axial flow passage opening through an end portion thereof, and an arcuate slot extending circumferentially approximately 160° about said cylindrical member and communicating inwardly with said flow passage; an assembly including a first annular member rotatable coaxially about said cylindrical member and having a planar transaxial end surface aligned with said slot, a second annular member rotatable coaxially about said cylindrical member and having a planar transaxial end surface juxtaposed to and confronting said first annular member end surface, an arcuate, flat spacer between said surfaces extending circumferentially approximately 200° and having an accurately predetermined axial width, and means retaining said annular member end surfaces in engagement with the opposite surfaces of said spacer to define between said end surfaces an arcuate slit extending approximately 160° from the opposite ends of the arcuate spacer in alignment with said cylindrical member slot; and means for rotatably adjusting said assembly relative to said cylindrical member to vary the amount of circumferential alignment of said slit with said slot.

3,100,621
VALVE WITH PARTICULARLY PACKED VALVE STEM
Edward J. Zeitlin, Purdy, N.Y., assignor to Heat Timer Corporation, New York, N.Y.
Filed Jan. 15, 1962, Ser. No. 166,253
1 Claim. (Cl. 251—214)

In a valve, the combination of a valve body having a valve seat, a valve arranged within said body, a stem for actuating said valve, a bonnet through which said stem projects, said bonnet having an annular groove on its lower surface, and a first O ring seal mounted in said groove and surrounding said stem, said bonnet cutout on its lower surface to form a chamber, said stem having an annular collar to abut with said first O ring, a second O ring arranged to surround said stem and abut said collar on the opposite side of said collar, a diaphragm engaging said second O ring, and an annular disc mounted about said stem, the periphery of said disc being arranged between said body and bonnet and said disc supporting said diaphragm providing means for maintaining said second O ring in engagement with said annular collar and said stem.

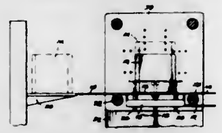


3,100,622
TURBINE GOVERNOR
John Pedersen, Chicago, Ill., assignor to Onsrud Machine Works, Inc., Niles, Ill.
Filed Apr. 7, 1959, Ser. No. 804,673
7 Claims. (Cl. 253—59)



1. A turbine having a housing and a rotor, said rotor having V-shaped impeller blades radially disposed in the peripheral portion thereof, a source of fluid under pressure and return means therefor, a jet in said housing positioned to direct said source of fluid under pressure to impinge the blades on the upper side of said rotor and discharged therethrough to the lower side thereof, valve means disposed in said housing operable to regulate the flow of fluid under pressure from said source to said jet, an actuator member disposed adjacent the lower side of said rotor, said actuator member being positioned and pivotally supported on one side by said housing for free swinging arcuate movement transversely with respect to the axis of said rotor, said member having a first projection positioned to urge transverse movement thereof in one direction responsive to impingment of said discharge fluid moving substantially in the direction of said rotor, said actuator member having a second projection positioned to urge transverse movement thereof in the other direction responsive to impingement of said discharge fluid moving substantially opposite to the direction of said rotor, an arm pivotally mounted on one end portion thereof to said housing and positioned for arcuate movement transversely with respect to the axis of said rotor, means mounted on said actuator member for operatively engaging the other end portion of said arm for moving said arm concurrently with movement of said actuator member, said valve means being positioned in operative relation with said arm for closing said valve means when said actuator member is moved in one direction responsive to impingement of discharge fluid moving in substantially the same direction of said rotor and alternately opening said valve means when said actuator member is moved in the other direction responsive to impingement of discharge fluid moving in the said substantially opposite direction thereby governing the flow of fluid under pressure in said jet.

3,100,623
MOLD POSITIONING JACK FOR HORIZONTAL INJECTION MOLDING MACHINE
Clarence S. Pedersen, Trumbull, Conn., assignor to Duraplastics, Inc., Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 4, 1961, Ser. No. 100,647
3 Claims. (Cl. 254—98)



1. A mold positioning jack, for removable assembly with a horizontal injection molding machine or the like, having longitudinally spaced transversely disposed vertical plates for the mounting of a mold thereon, and a pair of transversely spaced horizontal tie-rods extending longitudinally across the space between said plates, said jack comprising:

(*a*) a frame including

(*a*–1) a horizontal transfer platform at one end for transverse engagement with the upper side of one tie-rod and of a length to extend transversely outwardly therefrom,

(*a*–2) a horizontal top wall at the other end for transverse engagement with the upper side of the other tie-rod,

(*a*–3) a first end wall joined to and extending downwardly from the inner end of said transfer platform for disposition inwardly adjacent said one tie-rod,

(*a*–4) a second end wall joined to and extending downwardly from the inner end of said top wall for disposition inwardly adjacent said other tie-rod,

(*a*–5) a base wall joined to and extending between said end walls in downwardly offset relation to said transfer platform, and

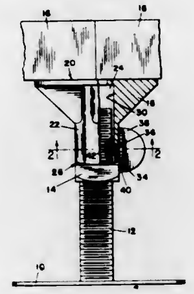
(*a*–6) a bottom wall for disposition at the lower side of said other tie-rod joined to and extending outwardly from said second end wall in vertically opposed spaced relation to said top wall and defining therewith a tie-rod receiving space open at its outer end for the passage of said other tie-rod into and out of said space;

(*b*) a horizontal elevating platform disposed between said end walls in vertically opposed relation to said base wall and normally horizontally aligned with said transfer platform for receiving a mold from said transfer platform and supporting it between said plates; and

(*c*) elevating means carried by said base wall and engaged with said elevating platform for vertically raising and lowering said elevating platform relatively to its said position of horizontal alignment with said transfer platform to bring a mold supported thereon to selected positions of vertical adjustment in the space between said plates.

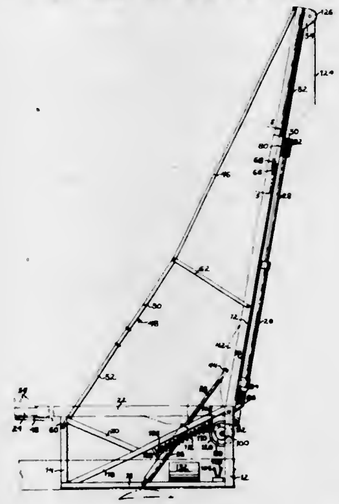
3,100,624
ADJUSTABLE PEDESTAL FOR ELEVATED SECTIONAL FLOORS
Joseph W. Spiselman, Brooklyn, N.Y., assignor to Floating Floors Inc., New York, N.Y., a corporation of New York
Filed Oct. 18, 1960, Ser. No. 63,406
3 Claims. (Cl. 254—101)

1. An adjustable pedestal for elevated flooring, said pedestal comprising a base member, an upright pedestal member mounted thereon, said upright member having a threaded portion, a nut threaded on said pedestal member, a pedestal head, said head adapted to contact and support the flooring and having a recess opening downwardly to receive the portion of said pedestal member above said nut, the lower end of said pedestal head being curved and in contact with said nut so that said head can be in inclined relationship relative to the axis of said pedestal member,



said recess having an elongate shape in transverse cross section, with the surface at one end being similar in size and contour to a corresponding portion of said pedestal member above said nut, said surface extending substantially over the length of said recess, and means for urging at least part of the corresponding portion of said pedestal member against at least part of said surface to hold said pedestal member and said pedestal head in fixed relationship.

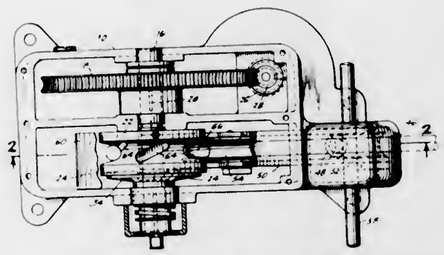
3,100,625
EXTENSIBLE MAST DERRICK
Carl F. Back, R.R. 1, Somerville, Ohio
Filed Apr. 28, 1961, Ser. No. 106,311
4 Claims. (Cl. 254—143)



1. A hoist apparatus comprising a telescopic mast having an upper and a lower section, means to support said mast in an upright position, a linear actuator device mounted on said lower section and engageable with said upper section to elevate said upper section, means to latch said upper section in an elevated position, said actuator device being thereby free to operate independently, a pulley supported on said upper section, a cable drum fixedly attached with respect to said support means, cable

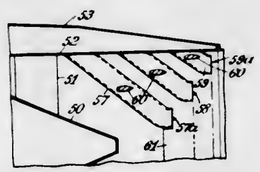
means wrapped on said drum and passing over said pulley for engaging a load, and means responsive to said actuator device to rotate said drum.

3,100,626
WINDLASS
Fred C. Good, 521 W. Glenwood Ave., Philadelphia 40, Pa.
Filed Oct. 27, 1960, Ser. No. 65,490
8 Claims. (Cl. 254—175.5)



1. An anchor line windlass, comprising in combination: a housing; means defining line entry and exit ports in said housing; a shaft within said housing; a winding drum; means mounting said drum on said shaft, permitting rotation on said shaft in a first direction only; a clutch member mounted on said shaft for positive rotation therewith and for axial movement with respect thereto between predetermined limits; clutch means on said drum for engagement by said clutch member only when said member is at one end of its axial movement; means carried by said clutch and housing members causing said clutch member to move to clutch engaging position when said shaft is rotated counter to said first direction and for disengaging said clutch when said shaft is rotated in said first direction; and means affording connection of a positive drive to said shaft.

3,100,627
BY-PASS GAS-TURBINE ENGINE
Geoffrey Light Wilde, Shottlegate, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Mar. 31, 1958, Ser. No. 725,326
Claims priority, application Great Britain Apr. 3, 1957
6 Claims. (Cl. 259—4)



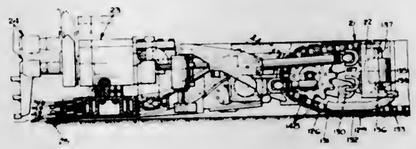
1. Apparatus to admix compressed air with exhaust gases comprising a tubular wall defining a duct having an upstream end disposed to receive the exhaust gases, a series of angularly-spaced hollow struts projecting radially inwards from the tubular wall into the said duct, the hollow spaces of said struts being opened at their radially outer ends to receive said compressed air and having at least at their inner ends outlets opening into the said duct so that the compressed air flowing into the hollow struts is delivered into said duct and mixed with the exhaust gases passing through the same, each strut comprising a bank of axially spaced delivery tubes, projecting radially into the duct, each said tube having a radially outer end and a radially inner end, the delivery tubes receiving at their radially outer ends said compressed air and having outlets at their radially inner ends, the tubes in the bank projecting into the duct to different radial extents.

3,100,628
DISPERSING APPARATUS
Robert W. Norris, Jr., Salem, Oreg.
Filed Mar. 5, 1962, Ser. No. 177,437
3 Claims. (Cl. 259—107)



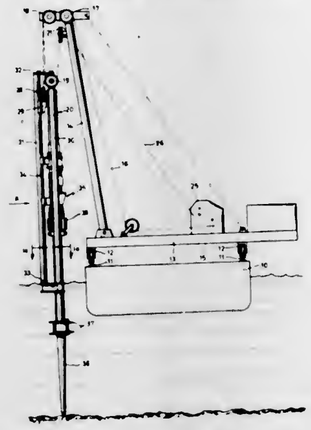
1. An apparatus for disseminating solid material in a liquid comprising a chamber, a rotatable impeller in said chamber having a pair of annular planar surfaces located on opposite sides of the impeller in the center thereof and a plurality of alternating ridges and open grooves in each of the opposing sides of the impeller, each of said open grooves having an inlet end located at the outer edge of the adjacent annular planar surface and an outlet end located at the outer edge of the impeller, said grooves becoming progressively narrower as they approach the peripheral edge of the impeller, the total area of the surfaces of said ridges being greater than the total area of the surfaces of said grooves.

3,100,629
CONTINUOUS MINING MACHINE HAVING LATERAL LEVELLING MEANS
Sterling C. Moon, deceased, late of Dublin, Ohio, by Katharyne M. Moon, administratrix, Dublin, Ohio, assignor, by mesne assignments, to Jeffrey Galion Manufacturing Company, a corporation of Ohio
Original application June 13, 1957, Ser. No. 665,379, now Patent No. 3,074,701, dated Jan. 22, 1963. Divided and this application July 28, 1961, Ser. No. 130,221
1 Claim. (Cl. 262—9)



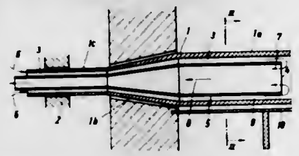
In a continuous mining machine having a mining mechanism for removing material from the face of a mine and means for propelling the mining machine, said propelling means comprising an endless traction tread disposed at each side of the mcahine and supporting the machine on the mine floor, a sprocket in driving engagement with the traction tread, said traction tread being trained about the sprocket, a shoe disposed at the inner side of the traction tread adjacent the sprocket with a floor engaging portion of the traction tread bearing against the shoe, pivot means adjacent the sprocket pivotally supporting the shoe, said shoe extending away from the sprocket and the pivot means and terminating in a heel portion normally spaced from the traction tread, means for individually adjusting said shoe on the pivot means to bring the heel portion of the shoe into engagement with the traction tread to depress the traction tread on one side of the mining machine to laterally adjust the mining mechanism.

3,100,630
IMPACT TYPE ROCK BREAKER
Fritz Kümmel, Esslingen, Germany, assignor to Deimag-Maschinenfabrik Reinhold Dornfeld, Esslingen (Neckar), Germany
Filed Dec. 9, 1960, Ser. No. 74,870
Claims priority, application Germany Dec. 24, 1959
3 Claims. (Cl. 262—15)



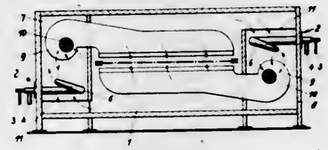
1. In a rock breaker: a frame, rock breaking chisel means reciprocably supported by said frame, ram means likewise supported by said frame and operable to exert an impact upon said chisel means, first guiding means mounted on said frame for guiding said chisel means, said guiding means including a bushing guidingly surrounding a portion of said chisel means, and laterally resilient means interposed between said bushing and the adjacent portion of said frame and resilient in a direction transverse to the longitudinal axis of said bushing, and second guiding means supported by said frame but separate from said first guiding means for guiding said ram means independently of said chisel means.

3,100,631
COOLED FURNACE TRANSPORT ROLLERS
Theodor Schmidt, Essen, Germany, assignor to Firma Indugas, Gesellschaft für Industrielle Gasverwendung m.b.H., Essen, Germany, a corporation of Germany
Filed Oct. 4, 1960, Ser. No. 60,394
Claims priority, application Germany Oct. 5, 1959
2 Claims. (Cl. 263—6)



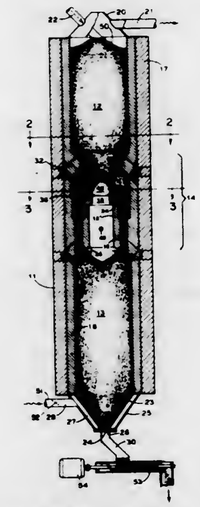
1. A furnace roller comprising a generally cylindrical tubular body having a central load-supporting portion, and two bearing extremities on opposite ends thereof, at least one cooling-fluid conduit extending into body at said one extremity thereof and opening into said body at substantially the center of said load-supporting portion while terminating at a lateral location substantially at the midpoint between the ends of the external periphery of said central load-supporting portion, said conduit being spaced with substantially all-around clearance from said body, said clearance communicating at said one extremity with a source of cooling fluid to be drawn from said source through said clearance into said load-supporting portion and ejected outwardly therefrom via said conduit, thereby cooling substantially half of said body, and an imperforate elongated heat shield substantially extending coaxially along said body and spacedly surrounding a lower part of said load-supporting portion.

3,100,632
ARRANGEMENT FOR HEATING MACHINES FOR THE DRYING AND HEAT TREATMENT OF TEXTILES AND THE LIKE
Gustav Möhring, Stuttgart, Germany, assignor to Famatex G.m.b.H., Stuttgart-Kornwestheim, Germany, a firm
Filed May 11, 1960, Ser. No. 28,277
Claims priority, application Germany May 16, 1959
9 Claims. (Cl. 263—19)



1. In a drying and heat treatment machine for textiles and the like, a treatment chamber, a separate blower chamber adjacent to and communicating with said treatment chamber, blower means extending between said chambers including means for conducting hot gases from said blower chamber to said treatment chamber downstream of the communication between said chambers, at least one pressure-fed fuel burner within said blower chamber upstream of said blower means, said fuel burner having a burner jet nozzle with a flame tube adapted for fully enclosing the flame in said burner, said flame tube being in the form of a heating coil with at least one winding extending substantially transversely of the blower chamber upstream of said blower means.

3,100,633
SHAFT KILN
Charles L. Norton, Jr., New York, N.Y., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Feb. 5, 1959, Ser. No. 791,399
13 Claims. (Cl. 263—29)



1. Apparatus for the heat treatment of a fluent mass of solid material comprising walls defining an elongated

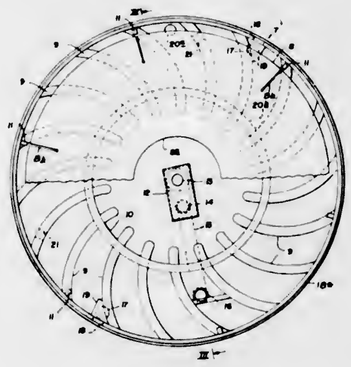
shaft kiln having an upper heating chamber and a lower cooling chamber with a cross-sectional flow area at least equal to the upper chamber, said shaft kiln having an upper inlet and a lower outlet for said fluent solid material and having a spent heating gas outlet in the upper portion thereof, means for causing a substantially continuous movement of said material through said kiln, walls defining a combustion chamber positioned within said kiln and between said heating and cooling chambers, said combustion chamber walls forming a tube open at the top and bottom and having a cross-sectional area less than the adjacent portion of said shaft kiln, means for passing said solid material downwardly through restricted flow paths between said kiln walls and the walls of said combustion chamber into said cooling chamber, and means for introducing combustion constituents into said combustion chamber to produce high temperature heating gases for passage upwardly from said combustion chamber and through said heating chamber to heat treat the solid materials therein including means for introducing a fluid combustion constituent into the lower part of said cooling chamber.

3,100,634

COIL SUPPORT FOR ANNEALING FURNACE

Charles J. Rubrecht, Allison Park, and Albert J. Minnotte, Pittsburgh, Pa., assignors to Metaline Corporation, Bridgeville, Pa.

Filed Sept. 23, 1960, Ser. No. 58,002
2 Claims. (Cl. 263—47)



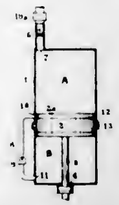
1. A support and diffuser for supporting coils to be annealed in a bell-type furnace, comprising a base plate having a central opening adapted to accommodate a fan portion, a plurality of substantially radially extending, spaced metal ribs supported on and welded to said base plate, the inner end portions of said ribs having transversely extending slots formed only in the upper surface portions of said ribs, said slots defining a circular path, a metal ring supported in said slots and integrally welded to the top end portions of said ribs so as to tie the ribs together, the top surface of said ring being flush with the top surfaces of said ribs, an outer ring engaging the outer ends of said ribs, and a top plate of smaller diameter than said outer ring and directly supported on said ribs and said inner ring to form a platform for supporting the coils to be annealed, said top plate having a central opening, whereby an air space is provided between the perimeter of said top plate and the inner surface of said outer ring to allow air flowing between said ribs to communicate with the space exterior of the outer periphery of said coils.

3,100,635

PNEUMATIC DEVICE CONSTITUTING SUSPENSION AND DAMPING MEANS

Arthur Bougeard, 25 Boulevard Pierre Landais, Vitre, France

Continuation of application Ser. No. 666,711, June 19, 1957. This application Jan. 30, 1961, Ser. No. 85,760
Claims priority, application France June 27, 1956
5 Claims. (Cl. 267—65)



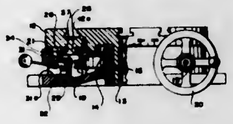
1. A pneumatic shock absorbing device adapted to interconnect a pair of members movable with respect to each other, comprising, in combination, a working cylinder adapted to be connected to one of said members and having a cylindrical wall with closed ends; a one-way air supply connection for supplying compressed air from its source to the interior of the cylinder in the region of one end thereof while preventing reverse flow therefrom; a one-way flow bypass means for said cylinder having one end portion communicating with an intermediate portion of the interior of the cylinder spaced from both ends thereof and another opposite end portion communicating with said interior in the region of the opposite end of the cylinder permitting compressed air to bypass from said one end portion to said another opposite end portion of the bypass means only; vent opening means arranged in said cylindrical wall, between the end portions of the by-pass means, for venting compressed air from said intermediate portion of said cylinder; and a working piston reciprocable in said cylinder and having a piston rod adapted to be connected to the other of said members and extending through one end of the cylinder in sealing relationship therewith.

3,100,636

TABLE LOCKING CONSTRUCTION FOR A MACHINE TOOL

Bernard F. Froehlich, Colerain Township, Hamilton County, Ohio (% Troyke Mfg. Co., 11294 Orchard St., Sharonville, Ohio)

Filed Mar. 12, 1962, Ser. No. 178,859
3 Claims. (Cl. 269—83)



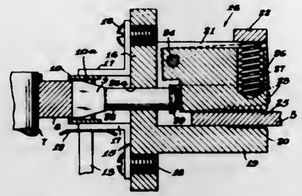
1. A rotary work table which comprises a base, a table member rotatably mounted on the base, there being a circular flange on the table, there being a cylindrical opening in the base adjacent the table flange and extending parallel to the axis of rotation of the table member, a lock member having a shank received in said cylindrical opening, and a head at one end of the shank having a head flange overlying the flange of the table, there being a stop portion on the base, there being a stop shoulder on the head engageable with the stop portion of the base to limit swinging of the lock member about its axis, resilient means urging the lock member in a direction to cause the stop shoulder to engage the stop portion of the base, the shank having a threaded portion remote from the head, a nut mounted on the threaded portion of the shank and engageable with the base, and means for turning the nut to draw the head flange of the lock member against the circular flange of the table to lock the table in selected position.

3,100,637

SHEET CONVEYING MECHANISM

Gaylord W. Brown, Beaverton, Mich., assignor to Brown Machine Co., Beaverton, Mich., a corporation of Michigan

Filed June 26, 1961, Ser. No. 119,545
5 Claims. (Cl. 271—79)



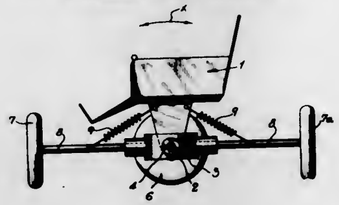
1. Conveying mechanism comprising an endless driven member having an opening therein; a driving member around which said driven member is trained, said driving member including a part adapted to extend therefrom through said opening; a body mounted on said driven member adjacent said opening; a pair of jaws mounted on said body for relative movement toward and away from one another; yieldable means urging said jaws toward one another; and actuating means adjacent said opening engageable with said part of said driving means incorporated with at least one of said jaws for effecting relative movement of said jaws away from one another upon engagement of said part and said actuating means.

3,100,638

BABY ROCKER

Dietmar M. Schoeffel, 355 Hillsdale Ave., Hillsdale, N.J.

Filed Mar. 20, 1961, Ser. No. 96,992
4 Claims. (Cl. 272—33)



1. A baby chair for operation in a circular path under force provided by an operator comprising

(*a*) a frame,

(*b*) an uninterrupted axle mounted within said frame and freely rotatable with respect thereto,

(*c*) an axle interrupted in the center thereof mounted to said frame,

(*d*) a first pair of wheels mounted at the ends of said interrupted axle,

(*e*) a seat mounted on said uninterrupted axle so as to be pivotally movable in a direction transverse to that of said uninterrupted axle and so as to apply rotational force thereto,

(*f*) a second pair of wheels mounted at the ends of said uninterrupted axle,

(*g*) rotation control means mounted between each of said second pair of wheels and said uninterrupted axle such that the rotation of said second pair of wheels is unidirectional regardless of the direction of the rotational force applied to said uninterrupted axle,

(*h*) means for limiting the pivotal movement of said seat.

3,100,639

EXERCISER

Everett D. Bonewitz, 416 S. Davista Drive, Whittier, Calif.

Filed Apr. 26, 1961, Ser. No. 105,581
2 Claims. (Cl. 272—57)



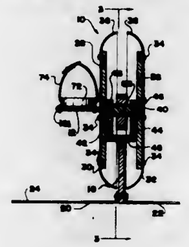
1. In an exerciser for twisting the spine and loosening the joints between adjacent vertebrae, the combination of: a horizontal platform of appropriate size to allow a person to stand uprightly thereon; base means for pivotally supporting said platform for free rotation of the latter about a centrally located vertical axis; a diametral bar secured to the upper face of said platform, said bar being provided with tapped holes at varying distances from said axis of rotation of said platform; a pair of weights; and screw means adapted to engage said tapped holes to secure said weights to said bar with the centers of mass of said weights located at varying radii from said axis of rotation.

3,100,640

ROTARY EXERCISER APPARATUS

John P. Weltzel, 3310 W. Central, Wichita, Kans.

Filed Oct. 30, 1961, Ser. No. 148,627
1 Claim. (Cl. 272—73)



A limb exerciser comprising:

a stand which includes a flat base secured to an upwardly projecting base supported member which is generally planar and is held by the base in a plane normal thereto;

a bearing support rigidly secured to the upper end of the base supported member, said support having a pair of laterally spaced upwardly projecting arms provided with transversely aligned bearing receiving apertures;

transversely aligned bearings, one in the aperture in each of said arms;

a stub shaft having an enlarged diameter portion intermediate its ends, the ends of said shaft being

journaled in said aligned bearings with the enlarged diameter portion of the shaft located between the bearings;

a one piece brake block split centrally from one end to a point adjacent its other end and encompassing and frictionally engaging the enlarged diameter portion of said stub shaft between the bearings journaling it, said block being supported by said stub shaft independent of any connection to the bearing support or base supported member;

a threaded laterally disposed aperture in one free end of the split brake block, and an aligned larger diameter laterally disposed aperture in the other free end thereof;

an eongated brake adjusting rod having a threaded end freely rotatable in the larger diameter aperture in the said other free end of the brake block, and threadedly engaged in the threaded aperture in the brake block, the other end of the brake adjusting rod extending outward from the brake block adjacent the base supported member;

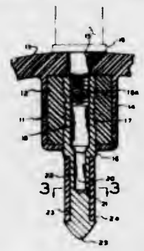
means fixed to the base supported member journaling the brake adjusting rod near its outer end;

a reaction member fixed on said rod adjacent the brake block to cooperate with the threadedly engaged end of the rod to force the two free ends of the brake block toward each other to apply increased frictional pressure against the stub shaft when the rod is rotated in one direction;

a pair of hollow dished wheels, one secured non-rotatably on each end of said stub shaft, the two wheels cooperating to complementally house the stub shaft, its bearing support, the brake block, and major portions of the base supported member and the brake adjusting rod, in their concavities;

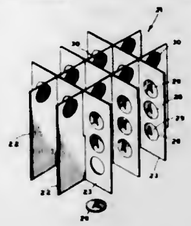
and a pair of pedal journaling pins, one projecting laterally outward from and carried by each of said wheels and located 180° from each other about the axis of the stub shaft.

3,100,641
INFLATABLE ARTICLE AND METHOD OF MAKING
Bryan F. Nicholls, Northampton, England, and Lloyd R. Whittington, Ashland, Ohio
Filed July 11, 1958, Ser. No. 748,066
9 Claims. (Cl. 273—65)



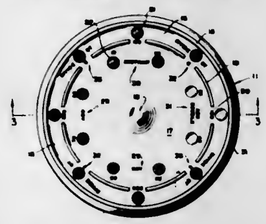
1. A hollow inflatable article of flexible elastic material having integrally affixed to the wall thereof an inwardly presented, body of elastic plastic material provided with an inflation passage inwardly therethrough, and an elongated rigid closure member received in said passage, the contacting surfaces of the body passage and said closure member having the structural characteristics resulting from the closure member having been inserted in the body passage while the body was in a heat-softened condition and the body having been subsequently cooled and contracted about the closure member to seal the passage against escape of inflation medium between the closure member and the body.

3,100,642
MULTI-PURPOSE CARTON AND GAME
Daniel Goldstein, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,680
15 Claims. (Cl. 273—105)



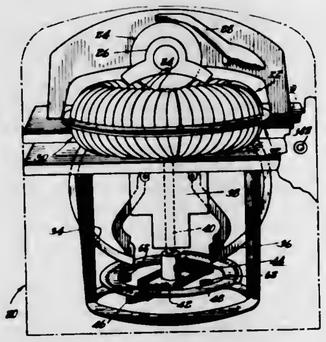
3. An improved dual-purpose carton and game comprising an outer casing having a top opening formed therein, a plurality of substantially vertical longitudinally and transversely extending partitions removably located in said casing and dividing said casing into a plurality of open topped longitudinally and transversely spaced compartments, at least one of said partitions having lines of weakness formed therein delineating game-forming disc shaped projectiles separable from said partition, and sized for entry through the open tops of said compartments, and score designating indicia being in registry with at least one of said longitudinally and transversely spaced compartments.

3,100,643
EDUCATIONAL GAME APPARATUS
George Almashy, Brighton, Mich.
Filed July 28, 1961, Ser. No. 127,602
2 Claims. (Cl. 273—119)



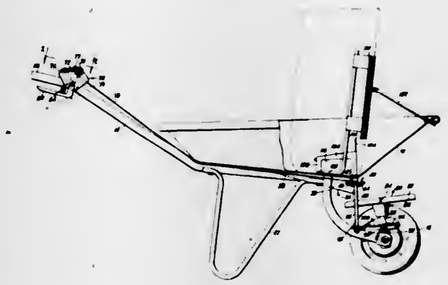
1. A game comprising a plurality of identical size balls; a circular, horizontally arranged base having an upstanding continuous annular rim along its upper peripheral edge to form a circular, continuous outer wall; the upper surface of the base forming a playing surface which is uniformly sloped upwardly in all radial directions from its center up to the outer wall; a circular inner wall formed on and extending upwardly from the playing surface and arranged within the circumference of and parallel to the outer wall and being uniformly spaced from the outer wall a distance which is only slightly greater than the diameter of a ball so that a ball may roll between the walls on a circumferential path relative to the center of the base and will come to rest in one of the depressions in its rolling path; an outer series of equally spaced apart hemispherically shaped depressions formed in the playing surface, each depression being equally spaced between the two walls, the depressions together forming a complete circle composed of regularly radially spaced apart receptacles for receiving balls; an inner series of hemispherically shaped depressions formed in the playing surface closely adjacent to but within the circumference of the inner wall and together forming a complete circle of regularly radially spaced apart ball receiving receptacles parallel to the outer series circle and the inner wall, with each of the depressions of the inner series being located on a radius which is equidistantly spaced between the two radii on which are located two adjacent depressions of the outer series depressions, there being the same number of depressions in each series; the inner wall being formed with radially directed gaps forming openings which extend upwardly from the plane of the playing surface to the upper edge of the inner wall, each gap being radially aligned with an outer series depression and being of a width which is only slightly greater than the diameter of a ball so that a radially directed ball may roll therethrough; a manually rotatable spinner, having a series of spaced upright edges, arranged for manually actuated rotation at the depressed center of the playing surface for striking the balls and directing them to roll into various of the depressions, there being less balls than there are depressions; identification means identifying the depressions into groups, and including indicia indicating a mathematical value and mathematical function for each of the depressions in each group, for computing the mathematical values of the depressions which receive a ball in any one game into a game score.

3,100,644
BACKGROUND MUSIC PHONOGRAPH
Fred H. Osborne, Snyder, and Robert S. Tuttle, Eggertsville, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed June 29, 1960, Ser. No. 39,649
10 Claims. (Cl. 274—10)



1. For supplying different programs of background music selectively from records, an automatic phonograph comprising, in combination, means for holding a plurality of records in different program categories, rotary record selecting means for selecting records for playing from said record holding means in accordance with the rotary position of the record selecting means, rotatable stepping means coacting with said record selecting means to determine a continuous series of record selecting positions of said record selecting means corresponding to a category of records in said record holding means, program selecting means for locating said stepping means selectively in any one of a plurality of programming positions rotatably spaced from each other and corresponding respectively to different categories of records in said holding means, said program selecting means including an arm assembly swingable between a retracted program selecting position in which said stepping means is free to rotate between different program positions and an extended program determining position in which the arm assembly coacts with said stepping means to hold the latter in a selected program position, means for locking said arm assembly automatically in the extended program determining position thereof, a program selecting solenoid connected with said locking means and said arm to unlock said arm and swing the latter to the retracted position thereof, and means for moving said arm to the extended locked position thereof.

3,100,645
SPREADER FOR FERTILIZER AND THE LIKE
Anthony Mascaro, Gem's Grasslan Farms, West Point, Pa.
Filed May 23, 1961, Ser. No. 112,080
9 Claims. (Cl. 275—8)

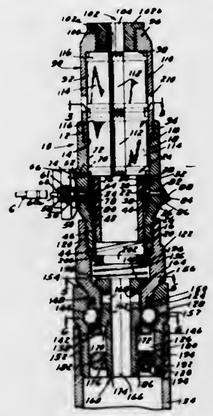


1. A mobile spreading unit comprising a receptacle for granular, pulverulent material, at least one wheel supporting the receptacle, means defining a discharge outlet in said receptacle including a valve element for selectively varying flow of material through said discharge outlet, said valve element actuatable between a first limit position affording flow of material through said discharge outlet and a second limit position closing said discharge outlet, a spreader element underlying said discharge outlet operable to disperse said granular material, actuation of said valve element between said limit positions operable to vary the size of said discharge outlet and maintain the center of said discharge outlet in a substantially fixed position relative to said spreader element thereby to provide a uniform spreading pattern throughout the range of adjustment of the size of said discharge outlet, means mounting said spreader element for rotation in an operative position to be driven concurrently with the wheel upon advance of said unit to disperse said material and a non-rotatable inoperative position independent of the wheel and a common operator for said valve and spreader elements for positioning said spreader element in said operative position when said valve element is in said first position for selectively actuating said valve element to provide a discharge outlet of predetermined size and for positioning said spreader element in said inoperative position when said valve element is in said second position.

3,100,646
WIRE LINE STRIPPING APPARATUS
Edward C. Saunders, 8229 S. California, Whittier, Calif.
Filed June 23, 1960, Ser. No. 38,184
4 Claims. (Cl. 277—27)

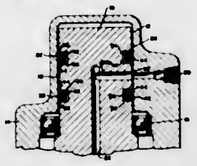
2. In line stripping apparatus: housing means having a passage therethrough, an upper portion of said passage being cylindrical; a tubular piston operably disposed in the cylindrical portion of said passage; upper and lower resilient cylindrical sealing means in said upper portion of

the housing, each sealing means comprising a pair of sealing elements semi-cylindrical in shape, each sealing means having an axial opening from top to bottom thereof round in cross section; caps on the ends of said sealing elements, said caps being formed to provide fluid flow passages at the abutting ends of sealing elements for fluid flow between said elements from the axial openings to the outer sides thereof; internal shoulder means at the upper end of the housing passage against which the upper caps of the upper sealing means abuts, said housing means having fluid escape openings in the side walls thereof at the abutting ends of the sealing means; means for applying pressure fluid to said piston; and a valve having open and closed



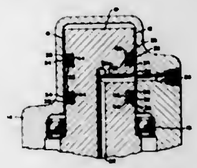
positions included in said fluid pressure applying means, pressure being transmitted to said piston when said valve is in closed position; fixture means having a check-valve, connected with said valve and adapted to have fluid pressure producing means connected thereto, pressure fluid applied to said piston forcing said piston against one end of one of said sealing means to longitudinally compress both said sealing means and reduce the diameter of the axial openings therethrough for stripping engagement with a line extending through said openings and for engagement with the adjacent walls of said housing, pressure fluid acting on said piston being released when said valve is opened.

3,100,647
FLUID SEAL
Arthur L. Lee and Arthur B. Coval, Columbus, Ohio, assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 17, 1960, Ser. No. 70,021
6 Claims. (Cl. 277—59)



1. A rotary fluid seal for impeding the passage of fluid between first and second relatively rotatable members, said first member having a cylindrical external surface and being positioned coaxially within a cylindrical internal surface formed in said second member, said seal comprising an annular recess formed in said first member cylindrical external surface, said annular recess having a planar end wall, a seal ring having a cylindrical external surface, an internal surface, a planar sealing surface extending radially between said ring external and internal surfaces and a planar fluid contacting surface, said seal ring being positioned within said first member annular recess with said ring cylindrical external surface in frictional, nonrotating and sealing engagement with said second member cylindrical internal surface, said ring sealing surface being in sliding sealing relation with said second member annular recess planar end wall, and means including radial recesses in said planar fluid contacting surface to admit fluid for lubrication to said ring sealing surface from said ring cylindrical external surface.

3,100,648
FLUID SEAL
Arthur L. Lee and Arthur B. Coval, Columbus, Ohio, assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 17, 1960, Ser. No. 70,022
5 Claims. (Cl. 277—59)



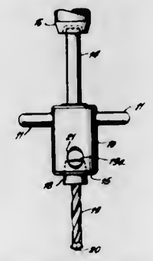
1. A rotary fluid seal for preventing the passage of fluid between first and second relatively rotatable members and to conduct fluid under pressure from a passage formed in said first member to a passage formed in said second member without substantial loss of fluid pressure therebetween, said first member having an external surface with said first member passage communicating therewith, said first member being positioned coaxially within a cylindrical internal surface formed in said second member, said second member passage communicating with said second member cylindrical surface and said first member passage, said seal comprising a pair of annular radially extending planar sealing surfaces on said first member, said planar sealing surfaces each positioned axially outwardly from said first member passage, first and second deformable ring members each having a cylindrical external surface, a radially extending planar sealing surface, a radially extending planar fluid engaging surface disposed in parallel spaced relation to said sealing surface, and an internal surface formed with an annular recess therein so that said ring member has a substantially U shaped radial cross section, first and second radially expandable rings positioned respectively within said first and second deformable ring member annular recess, said first and second deformable ring members and said first and second radially expandable rings being positioned within said first member first and second annular recesses respectively with said deformable ring member cylindrical external surfaces in frictional, nonrotating and sealing engagement with said second member cylindrical internal surface, said first and second radially expandable rings tending to expand radially outwardly to maintain said respective first and second deformable ring members in engagement with said second member cylindrical internal surface, said first and second deformable ring members being urged axially away from each other by fluid pressure between said first and second members so that said first and second deformable ring member planar sealing surfaces are in sliding sealing relation with said first member first and second recess sealing surfaces respectively.

3,100,649
MANDREL FOR CUTTING METAL SHADE ROLLERS
Albert K. Gast, Jr., St. Joseph, Mich., assignor to Star Shade Cutter Company, St. Joseph, Mich., a partnership
Filed Mar. 30, 1962, Ser. No. 183,814
10 Claims. (Cl. 279—1)



1. A mandrel for use in the cutting of tubular members wherein the tubular members are mounted in a rotatably driven chuck and a cutting element is positioned adjacent the chuck and adapted to swing against a tubular member held thereby, said mandrel comprising a backup member adapted to be arranged within said tubular member and aligned with said chuck, a roller adapted to be arranged within said tubular member and aligned with said cutting element, and means for inserting and removing the backup member and roller, from said tubular member.

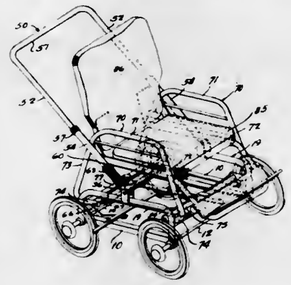
3,100,650
PERCUSSION DRILL CHUCK
Walter Bell, Monroe, N.Y., assignor to Star Expansion Industries Corporation, Mountainville, N.Y., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,507
2 Claims. (Cl. 279—103)



1. A percussion drill securing means comprising a percussion drill, a chuck provided with an axial member engageable with an impact tool to receive an axial impact therefrom, an aperture within said chuck in aligned position with respect to said axial member, the said axial impact being transmitted to said percussion drill when it is disposed within said aperture, the said chuck being provided with pivotable means for rotating said drill during its receipt of said axial impact, the said pivotable means comprising a pair of arms swingably receivable within a pair of oppositely disposed apertures formed in the said chuck, the said arms being received in an elongated handle, the said chuck being rotatable upon rotation of the handle with respect to the axis of said chuck, said chuck being axially imperforate between said oppositely disposed apertures and said first-mentioned aperture.

3,100,651
STROLLER CHASSIS CHILD'S SUPPORT STRUCTURE
Frank P. Reese, Salt Lake City, Utah, assignor of one-half to George Lynn Garff, Salt Lake City, Utah
Filed Sept. 29, 1961, Ser. No. 141,749
5 Claims. (Cl. 280—30)

1. In a child's convertible article of manufacture, a stroller-type chassis comprising a pair of laterally-spaced side frame members, a front axle extending transversely through and supported in the side frame members inwardly of and adjacent the forward ends of the side frame members and having an end portion projecting outwardly of each of the side frame members, a rear axle extending transversely through and supported in the side frame members inwardly of and adjacent the rearward ends of the side frame members and having an end portion projecting outwardly of each of the side frame members, a front ground-engaging wheel rotatably mounted on each of the projecting end portions of said front axle, a rear ground-engaging wheel rotatably mounted on each of the projecting end portions of said rear axle, a pair of inverted U-shaped supports each including a bight and a pair of legs projecting from the bight, each support being disposed so that it extends from each of the end portions of the front axle to each of the end portions of the rear axle with the bight parallel to and on the outer side of the adjacent side frame member and having the legs connected to the adjacent end portions of the front and rear axles, a forward crossbar spaced above and extending along said front axle and having its ends attached to the adjacent legs of said support intermediate their ends thereof, a rearward crossbar spaced above and extending along said rear axle and having its ends attached to the

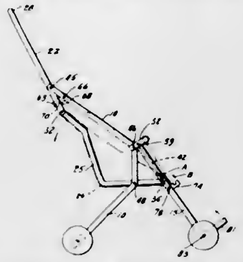


adjacent legs of said support intermediate their ends thereof, a bed frame fixedly supported upon said forward and rearward crossbars, said bed frame including a pair of side pieces extending from said forward crossbar to said rearward crossbar and having their ends secured to said crossbars, and a forward and a rearward crosspiece inwardly of and adjacent the forward and rearward crossbars and attached to said side pieces, and a releasable latch means operatively connected to the forward and rearward crosspieces of said bed frame for releasably holding the support structure of a child's convertible furniture article when mounted on said bed, said latch means including an elongated bar having a tongue inwardly of and adjacent the front end thereof and having an arcuately-shaped finger at the rear end, the tongue and finger facing in the same direction, said bar being disposed so that it extends between the side pieces of said bed frame with the tongue at the inner side of the forward crosspiece and the finger at the outer side of the rearward crosspiece, and means connecting said bar to said forward and rearward crosspieces for limited movement of the finger and tongue toward and away from said rearward and forward crosspieces respectively.

3,100,652
FOLDABLE BABY STROLLER
Libby Schenkman, 2426 9th Ave., Greeley, Colo.
Filed Dec. 21, 1960, Ser. No. 77,383
6 Claims. (Cl. 280—41)

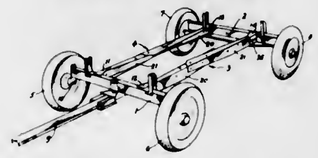
1. A foldable stroller comprising a seat frame, a forwardly extended leg frame and a rearwardly extended leg frame, said leg frames being pivoted to each other, one leg frame being pivoted to said seat frame at a re atively fixed pivot, and said other leg frame being pivoted to said seat frame by a slidable pivot, said frames being

dimensioned so as to be relatively nestable and being foldable by pivoting and sliding said forwardly extended leg frame with respect to said seat frame, including a handle frame pivotally connected to said seat frame; bar



means pivotally connected between said handle frame and said rearwardly extended leg frame and pivotal link means connected between the upper ends of said leg frames.

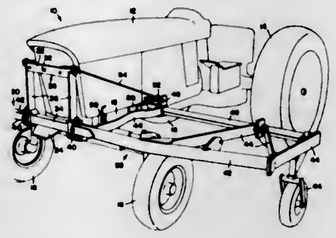
3,100,653
RUNNING GEAR
Harry C. Ibaugh, Honey Brook, Bruce D. Schwalm, Leola, and Robert E. Wallin, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed July 22, 1960, Ser. No. 44,771
5 Claims. (Cl. 280—106)



1. In a vehicle running gear, a front axle, a rear axle, a first sill member and a second sill member, means connecting one end of each sill member to one of said axles respectively, the other ends of said sill members being overlapped at a point intermediate said front and rear axles, and means interconnecting said other ends of said sill members, each sill member comprising a vertical web portion having top and bottom flanges thereon, said flanges being of substantially the same width at said one end of the members, one of said flanges becoming progressively wider along the length of the member, the other flange becoming progressively narrower along the length of the member and terminating at a point intermediate the ends thereof whereby said one end of each of said sill members is channel-shaped in cross section and said other end is generally L-shaped in cross section.

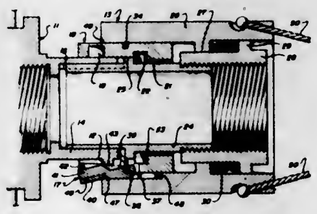
3,100,654
TRACTOR CULTIVATOR MOUNTING
George D. Hunter, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Mar. 19, 1962, Ser. No. 180,454
5 Claims. (Cl. 280—412)

1. In the combination of a tractor and implement normally mounted on the side of the tractor, and adaptable to swing about a vertically disposed axis from a working position sideward of the tractor to a transport position forwardly of the tractor, the improvement of means to hold the implement in its working position comprising: first and second coupling members, one of said coupling members being secured to the tractor and the other of said coupling members being secured to the implement, the first coupling member including a horizontally disposed cylindrical element, the second coupling member including front and rear U-shaped channel members having upper and lower leg portion projecting toward the first coupling member, a locking strap secured adjacent



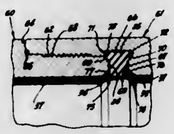
the U-shaped channel members to hold the first coupling member within the U-shaped channel members, and threaded means for releasably securing one end of the locking strap to said second coupling member.

3,100,655
BAYONET TYPE COUPLING WITH PIVOTED SEGMENT RELEASE MEANS
Ralph O. Work, Albuquerque, N. Mex., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 17, 1961, Ser. No. 96,626
4 Claims. (Cl. 285—33)



1. A device of the character described comprising the combination of first mating means including a pair of coaxially arranged and relatively movable annular portions, means for normally yieldably maintaining said portions in predetermined reationship with respect to each other, a member intermediate said pair of portions including a sloping projection-receiving-and-guiding groove extending from a position adjacent one end of the member to a location removed therefrom and including an axially extending projection-discharging slot having a depth at least equal to said groove providing open communication between the said one end and the groove adjacent said removed location thereof, latching means swingably mounted adjacent one end thereof on said member and having a section with an inwardly disposed camming surface thereon communicating with and normally extending into the axial slot and normally retained therein by one of said pair of portions, and second mating means including a projection extending therefrom for reception in said groove and retention in abutting and operative relationship with said camming surface, said one of said pair of portions being axially movable with respect to the other of said pair of portions and with respect to said member for compressing said yieldable means to release the retention of said latching means and cause the projection to exert a repeling force upon the said inwardly disposed camming surface of said section to swing the latter outwardly and facilitate unrestricted axial passage of said projection through the axial slot.

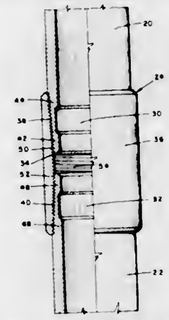
3,100,656
SYNTHETIC RESIN SEAL RING IN TUBING JOINT FOR PLASTIC COATED TUBING
Melvin D. MacArthur, Glendale, Calif., assignor to Hydril Company, Los Angeles, Calif., a corporation of Ohio
Filed May 11, 1959, Ser. No. 812,238
7 Claims. (Cl. 285—55)



1. A joint interconnecting a pair of pipes, comprising coaxial pin and box members respectively including interengaged external and internal threads holding the pipes against separation, said pin member being screwed about said axis longitudinally forwardly into said box member, said box member having an annular recess opening radially inwardly and extending about the free terminal forward end of said pin member, and said box member having an annular shoulder at the forward end of the recess and spaced forwardly of and facing said forward end of the pin member, and an annularly continuous ring having substantially the physical characteristics of tetrafluoroethylene received in the recess and in the space between the forward end of the pin member and said box shoulder, said ring being compressed by and between said pin forward end and the box shoulder, the forwardmost extent of the pin member penetrating the body of the ring material to anchor the ring in active sealing position against displacement therefrom by application of fluid pressure, said pin and box members having interengaged stop shoulders limiting penetration of said pin member into said ring, the recess being axially longer than the axial dimensions of the ring and the rearwardmost portion of the recess being hollow, said seal ring being in radially compressed condition before and after the pin member is in compressive engagement therewith, the compressed outer portion of the ring being stressed and extruded over the pin member and into said hollow when the stop shoulders interengage, whereby writhing of the ring during penetration of the pin member into the ring is prevented, the locus of said ring radial compression being generally outward and forward of the locus of the pin member forwardmost extent when the joint is fully made up, and the box recess having an interior wall against which the radially compressed ring outer periphery forcibly seals.

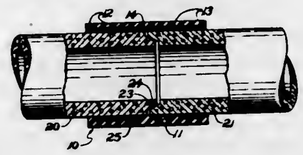
3,100,657
PIPE COUPLING HAVING HOLDING MEANS RESPONSIVE TO HIGH INTERNAL FLUID PRESSURE
Harry Pistole, Houston, and Peter D. Welner, College Station, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,230
1 Claim. (Cl. 285—107)

For use in tubing to be placed in a borehole and subjected to high internal pressure; a pair of spaced apart tubular members coaxially arranged in tandem, each tubular member being provided with external threads adjacent its extremity and having an internal circular groove formed therein spaced from the extremity facing the other tubular member to provide a portion of reduced thickness, said internal circular grooves having been formed without any corresponding increases in the external diameters of the tubular members, said circular grooves having a greater length than depth, and spaced the proper distance from the extremity facing the other tubular member to provide portions of greater thickness on both sides of said portion of reduced thickness, and a one-piece cylindrical outside coupling joining the tubular members and being sufficiently long to encompass both circular grooves, said one-piece cylindrical outside coupling tending to bow



outwardly when subjected to high internal pressure, and said grooves in said spaced apart tubular members having length-to-depth ratios such that the portions of greater thickness remain relatively rigid and the portion of reduced thickness bows outwardly when the cylindrical outside coupling bows outwardly so that the tubular members maintain a tight seal with the cylindrical outside coupling.

3,100,658
PIPE JOINT SEALING WRAPPER
H Paul Miller, Manton, Mich., and William A. Soper, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Jan. 27, 1958, Ser. No. 711,358
4 Claims. (Cl. 285—230)



1. A pipe joint wrapper for buried pipes, said wrapper being entirely of flexible elastic rubber-like material and including a body in the form of a strip adapted to circumferentially embrace both opposing pipe ends of the joint with the ends of the strip overlapping one another, said body having on the pipe-embracing side thereof a pair of laterally spaced ridges along each circumferential margin of the body, and at least one intra-marginal ridge between said pairs of marginal ridges, a mastic sealing composition covering the pipe-embracing side of said body between said ridges, said ridges being adapted to circumferentially engage the pipe ends resiliently and defining with the body portion a series of annular channels for circumferentially encircling the pipe ends to contain mastic sealing material about said pipe ends against flow axially of the pipe.

3,100,659
HEAVY DUTY DISCHARGE HOSE SPLICE
Godfrey J. Rittenhouse, Feasterville, Pa., assignor to H. K. Porter Company, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Nov. 13, 1961, Ser. No. 151,721
3 Claims. (Cl. 285—260)

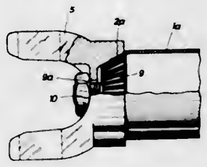
1. A spliced discharge hose comprising spaced axially aligned tubular portions each having an elastomeric

cover, an inner tube and between the tube and cover internal reinforcements including a plurality of plies of elastomer impregnated fabric in opposed relation, the ends of the plies in each portion being spaced axially from the ends of the corresponding ones in the other portion at distances increasing progressively from ply to ply as the outer surface of the hose is approached, a mass of unreinforced elastomeric material overlying the ends



of all said plies and continuous with the inner tubes and covers and a plurality of superposed elastomer impregnated fabric strips embedded in and enclosed by said mass, one of said strips substantially overlying and spaced from the opposed ends of the plies in the tubular portions and the other strips extending progressively shorter distances axially of the hose, said strips and said mass substantially filling the space between said portions.

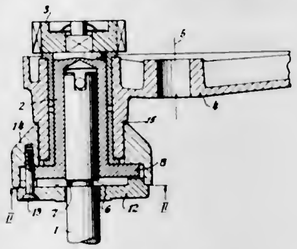
3,100,660
PIPE CONNECTION, ESPECIALLY FOR UNIVERSAL JOINT SHAFTS AND THE LIKE
Willi Kempf, Essen, Germany, assignor to Gelenkwellenbau G.m.b.H., Essen, Germany
Filed Jan. 25, 1960, Ser. No. 4,265
Claims priority, application Germany Jan. 27, 1959
2 Claims. (Cl. 287—53)



1. In combination with a universal joint fork having a flange: a tubular shaft having a conically shaped end tapered toward said universal joint fork, said universal joint fork being provided with a conical recess for receiving said conically shaped end, a pressure member having a conical portion engaging the inside of said conically shaped end and being provided with a threaded stud extending through the flange of said universal joint fork, and nut means engaging said threaded stud from that side of the flange of said universal joint fork which is remote from said conical recess for firmly securing said tubular shaft to said universal joint fork.

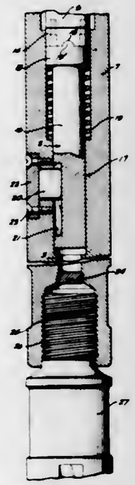
3,100,661
QUICK RELEASE CATCHES
Peter David Knight, Woking, England, assignor to Kenwood Manufacturing (Woking) Limited, Woking, England
Filed Dec. 19, 1960, Ser. No. 76,887
Claims priority, application Great Britain Dec. 29, 1959
4 Claims. (Cl. 287—119)

1. In a drive coupling having two coupling members rotatable about a common axis, a quick release catch comprising means defining an annular groove on one of said members, a fulcrum pin carried by said other member, a length of spring wire looped around said fulcrum pin and having a free end and anchored at a position remote from said free end on the other of said members so that such free end is pivotally movable about said fulcrum pin in a plane perpendicular to said common axis and passing through said annular groove, said spring wire normally engaging in said annular groove to prevent relative axial movement of said members; a release ring mounted coaxially with said members so as to be rotatable about said common axis, and means on said release ring engage-



able with said spring catch and acting to disengage said spring wire from said annular groove on rotation of said release ring to permit relative axial separation of said members.

3,100,662
SUCKER ROD SAFETY JOINT
Robert G. Howard, 16288 Hunter St., Fontana, Calif.
Filed Apr. 3, 1961, Ser. No. 100,184
8 Claims. (Cl. 287—119)



1. A sucker rod safety joint adapted to be mounted between a sucker rod and the reciprocating element of a pump, comprising a head, said head having a threaded box in one end thereof to receive the threaded pin of a sucker rod, a threaded shaft depending from said head, a sleeve, said sleeve having a bore extending longitudinally therethrough, said bore being threaded to receive the threaded shaft, a threaded box in one end of said sleeve to receive the threaded end of a reciprocating element of a pump, a piston rod reciprocally and nonrotatably mounted in the bore of the sleeve, said shaft having a recess in the bottom thereof, and a key on the piston rod fitting into said recess in one position of the parts.

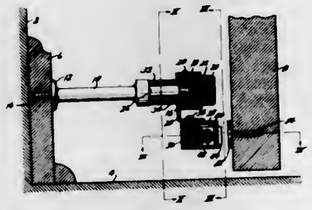
3,100,663
MAGNETIC CATCHES
Morris Loeb, 697 West End Ave., New York, N.Y.
Filed Mar. 28, 1962, Ser. No. 183,089
5 Claims. (Cl. 292—251.5)

1. In a magnetic catch, the combination of a housing having outwardly extending flanges with openings therein to receive fastening means, a U-shaped intermediate section, and outwardly flaring sides between said intermediate section and said flanges having faces to serve as cams and spacing legs, a magnet unit including two pole plates and a magnet disposed between said plates, said U-shaped section having an upper intermediate portion, said pole plates having central indentations forming inwardly extending projecting portions, said magnet having a central opening



to receive the projecting portions of the indentations of said pole plates, there being openings in the side walls of said U-shaped intermediate section, and second projections at the ends of said pole plates fitting into the openings in said side walls to cooperate with said indentations and said projecting portions to anchor said pole plates and magnet in place.

3,100,664
COMBINED DOOR STOP AND HOLDER
Jules L. Duval, 5248 N. Flora, Kansas City 18, Mo.
Filed June 13, 1962, Ser. No. 202,136
5 Claims. (Cl. 292—251.5)



1. A combined door stop and holder comprising:
(*a*) a shank adapted to be affixed to a building structure adjacent a door,
(*b*) a bumper affixed to the outer end of said shank so as to be engaged by said door as said door reaches its open position,
(*c*) a magnet carrier mounted on said shank for movement longitudinally with respect thereto,
(*d*) a magnet mounted in said carrier and adapted by said movement of said carrier to be moved from a normal position disposed outwardly from said bumper so as to be engaged by said door before said door engages said bumper to a retracted position disposed inwardly from said bumper, and
(*e*) a ferrous metal plate adapted to be affixed to said door to engage said magnet.

3,100,665
SOIL-WORKING IMPLEMENT
Karl August Düppengiesser, Unter der Charlottenburg 1, Gera-Langenberg, Thuringia, Germany
Filed Mar. 9, 1960, Ser. No. 13,943
11 Claims. (Cl. 294—57)

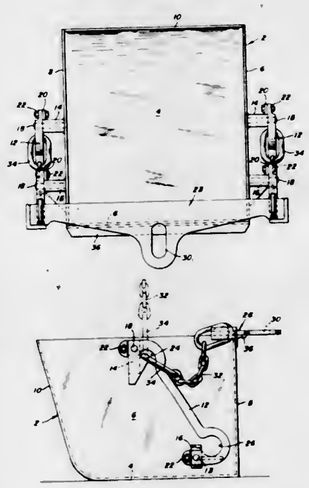
1. A soil-working implement comprising a blade, a socket rigid with said blade, a handle received in said socket, and a retaining member secured to said handle, said socket being provided with a slot extending in longitudinal direction of the handle, said slot being formed along its major sides with pairs of aligned recesses engaged by said retaining member in a plurality of axially shifted relative positions of said handle and said socket,

the sides of said slot and said retaining member being relatively yieldable in a resilient manner and to a sufficent



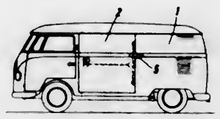
extent to permit axial displacement of said retaining member along said slot in response to impact.

3,100,666
SELF-DUMPING BOX
Norman R. Henne, Mount Oliver Borough, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 27, 1962, Ser. No. 226,550
3 Claims. (Cl. 294—73)



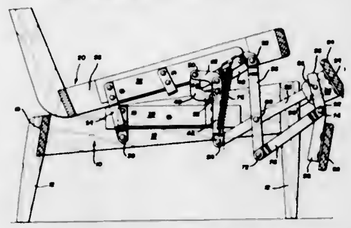
1. Material handling appartus comprising a box having vertical side walls and end walls, a horizontal bottom, and an open top, a lift bar affixed diagonally on the outer surface of each of said side walls in spaced relation thereto, each of said bars having an upper end disposed subjacent the top longitudinal edge of its respective side wall intermediate the ends thereof and a lower end disposed on its respective side wall adjacent the lower end of one of said end walls, each of said lift bars having a recess therein adjacent its upper end and a recess therein adjacent its lower end, elongated flexible suspension means loosely attached by one end to each of said bars, said one end of each of said suspension means being adapted to be selectively engaged in the recesses of said bars, and common hoisting means attached to the other ends of said suspension means.

3,100,667
SLIDING DOOR FOR MOTOR VEHICLES
Kurt Schwenk, Wolfsburg, Hannover, Germany, assignor to Volkswagenwerk AG., Wolfsburg, Hannover, Germany, a German company
Filed Jan. 24, 1961, Ser. No. 84,966
Claims priority, application Germany Jan. 26, 1960
5 Claims. (Cl. 296—47)



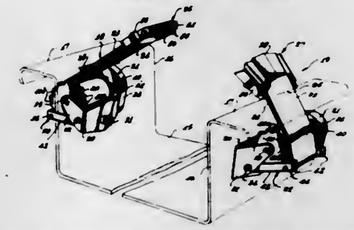
1. In a vehicle having a wall with an opening closed by a sliding door, the improvement comprising a pair of rails mounted on said wall above and below said opening respectively in parallel relationship to one another, rollers pivotally mounted to the front end of the door at the top and bottom to run on said rails, a third rail parallel to the pair of rails and extending in said vehicle wall to one side of said opening in sunk-in relationship, carriage means having rollers mounted thereon for movement along said third rail, U-shaped link means having vertical legs secured to the door at its rear end and to said carriage, respectively, for pivotal movement about vertical axes formed by said legs to permit the door to swing flush with the vehicle wall when the door is closed, and upon opening of the door to effect a swinging of the rear end of the door out of alignment with the vehicle wall, protecting strips mounted on said door to cover said carriage, the rail for said carriage, and the shank of said U-shaped link means, and means for manipulating the door to open and close it.

3,100,668
RECLINING CHAIR
Walter Clark Rogers and Ned W. Mizelle, High Point, N.C., assignors, by mesne assignments, to General Steel Products, Inc., High Point, N.C., a corporation of North Carolina
Filed Feb. 17, 1960, Ser. No. 9,277
5 Claims. (Cl. 297—89)



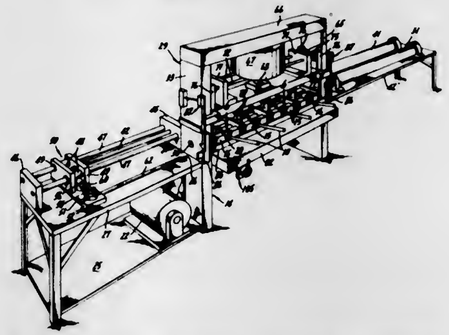
1. In a reclining chair having a seat mounted for reclining movement on a base, a footrest fixture comprising a linkage including a first pair of links pivotally mounted at longitudinally spaced points on said seat, an actuating link connected between said base and one of said first pair of links for manipulating said linkage between a retracted position and an extended position upon movement of said seat relative to said base, a footrest, a second pair of links of said linkage being connected at spaced points to said footrest and to said first pair of links to manipulate said footrest between a downwardly facing retracted position beneath said base and an upwardly facing extended position forwardly of said seat, and a tension spring coupled between said seat and one of said first pair of links at a location wherein said spring is shifted across the point of pivotal support of said one of said links upon movement of said linkage between said retracted position and said extended position to thereby resiliently resist movement of said linkage from either of said retracted or extended positions.

3,100,669
RETRACTABLE BELT
Benjamin F. Monroe, 1734 Benedict, Canyon Drive, Beverly Hills, Calif.
Filed Sept. 25, 1961, Ser. No. 140,600
17 Claims. (Cl. 297—388)



2. A retractable belt comprising, a reel, inner and outer straps coiled on said reel, locking means mounted adjacent said reel for movement into locking engagement with said reel to prevent rotation of said reel, and a member carried by said locking means and over which said outer strap is trained to move said locking means into engagement with said reel in response to tension on said outer strap.

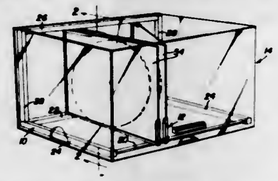
3,100,670
MOP MAKING APPARATUS
Earnest L. Bennett and Donald F. Burns, Indianapolis, Ind., assignors to J. I. Holcomb Manufacturing Company, Inc., Indianapolis, Ind., a corporation of Indiana
Filed Sept. 21, 1961, Ser. No. 139,763
9 Claims. (Cl. 300—16)



8. Swab making apparatus comprising a plurality of cutters, a plurality of handle receiving seats each positioned between a pair of said cutters, a yarn supply located adjacent one end of said plurality of seats, means for drawing yarn from said supply through said seats, means for ejecting handles from said seats, and control means for actuating in order for sequential operation said yarn drawing means, said cutters and said handle ejecting means.

3,100,671
RECORD STORAGE HOLDER AND RACK
Joseph C. Atkins, 407 Blackman Road, Nashville, Tenn.
Filed May 22, 1961, Ser. No. 111,833
5 Claims. (Cl. 312—14)

1. A record storage device comprising a rack embodying a support including a base frame having parallel front and rear cross members and a back frame for said base frame including a top cross member parallel to and spaced above said rear cross member in fixed relation, a plurality of holders each comprising a frame for receiving a record therein, pivot means on each frame pivotally connected to said top and rear cross members and supporting said record holders in side-by-side position in vertical planes for horizontally swinging each about a vertical axis through its pivot means whereby to afford access to each side of a record jacket when held in its holder, each frame



embodying a vertical back wall, a bottom wall and a front wall, said walls being U-shaped in cross-section and thus adapted to embrace the edges of a record jacket therein, said bottom wall being rigidly connected at its opposite ends to said back and front walls, said front wall being shorter vertically than the back wall in a manner to increase visibility of a record jacket in said holder and to facilitate its passage into and out of said holder.

3,100,672
CABLE ACCESSORIES
Robert R. Myers, Port Vue, McKeesport, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 26, 1957, Ser. No. 642,547
5 Claims. (Cl. 339—265)

3. A cable accessory for clamping attachment in surface engagement with a deformable cable, said accessory comprising a cable-receiving member and a pusher member, said cable-receiving member having a symmetrical axially coextensive groove sunk into the same from a surface defining the entrance plane to the groove, the transverse surface of the groove being defined throughout its length by a bottom arc and lateral side arcs smoothly blended therewith to provide a concave curvilinear cable-engaging surface, the bottom arc being struck from a radius centered on the axis of symmetry of the groove below the plane of entrance thereto and each lateral side arc being struck from a radius centered on a side of the axis of symmetry of the groove remote to the arcuate surface defined thereby, said groove having a maximum



transverse dimension in the plane of entrance thereto and the depth of the groove from its plane of entrance being less than its maximum transverse entrance dimension, the pusher member having a transverse concave curvilinear cable-engaging surface in oppositely disposed relationship to the concave curvilinear cable-engaging surface of the groove in the cable-receiving member, the transverse width of the concave curvilinear cable-engaging surface of the pusher member being less than the transverse entrance dimension to the groove in the cable-receiving member, and means associated with the cable-receiving and pusher members for adjustably moving said members relatively to each other.

CHEMICAL

3,100,673
DYEINGS AND PRINTS POSSESSING FASTNESS TO WET PROCESSING AND THEIR MANUFACTURE ON CELLULOSE MATERIALS AND PROTEIN FIBERS
Hans Ulmer, Paul Karácsonyi, Kurt Schimmelschmidt, and Edwin Baier, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed July 26, 1960, Ser. No. 45,272
Claims priority, application Germany Aug. 8, 1959
9 Claims. (Cl. 8—22)

1. A process for producing wet-fast dyeings and prints on shaped articles of a material selected from the group consisting of cellulose, wool, half-wool and silk which comprises treating said shaped articles with a sulfur-containing compound selected from the group consisting of thioacetamide, alkali-alkyl-xanthogenates, thiourea, N-monoalkyl- and N,N'-dialkyl thioureas, the alkyl groups of which contain from one to six carbon atoms, 2-mercapto-benzthiazole, the zinc salt of 2-mercapto-benzthiazole, N-cyclohexylethyl ammonium cyclohexyl ethyl dithiocarbamate and dialkyl diphenyl thiuram disulfides, and a water soluble organic dyestuff of the group consisting of phthalocyanine dyes, copper phthalocyanine dyes, nickel phthalocyanine dyes, pyrazolone dyes and azo dyes, which contain at least one thiosulfuric acid group bound to a carbon atom of an aromatic nucleus of said dyestuffs through a member of the group consisting of $—CH_2—$, $—SO_2—$NH-lower alkylene and

$$—SO_2—\underset{\text{lower alkyl}}{\text{N-lower alkylene}}$$

and permanently fixing the resulting dyeings and prints at an elevated temperature.

3,100,674
PROCESS FOR SHRINK-PROOFING PROTEINACEOUS TEXTILE MATERIALS AND THE PRODUCT THEREFROM
Fred H. Steiger, Philadelphia, and Hugo A. Alps, Huntingdon Valley, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Dec. 8, 1959, Ser. No. 858,028
5 Claims. (Cl. 8—127.6)

5. A process for treating proteinaceous woven and knitted textile materials to reduce the shrinkage thereof comprising treating such a material with an aqueous dispersion of a water-insoluble linear addition polymer exclusively of monoethylenically unsaturated molecules comprising from 1 to 20% by weight of a water-insoluble linear addition copolymer of 0.5 to 6% by weight of an N-methylolamide of an acid of the formula

$$H_2C=\underset{\text{COOH}}{\underset{|}{C}}—(CH_2)_{n-1}H$$

and at least one ester of the formula

$$H_2C=\underset{\text{COOR}}{\underset{|}{C}}—(CH_2)_{n-1}H$$

in which formulas n is an integer having a value of 1 to 2, and R is an alkyl group having 1 to 18 carbon atoms when n is 1 and 4 to 18 carbon atoms when n is 2, and then drying and heating the textile at a temperature of at least 212° F.

3,100,675
PROCESS FOR MELT SPINNING POLYETHYLENE TEREPHTHALATE

Eggo Westerhuis, Arnhem, and Karel Herman Kok, Doesburg, Netherlands, assignors, by mesne assignments, to N. V. Onderzoekingsinstituut Research, Arnhem, Netherlands, a corporation of the Netherlands

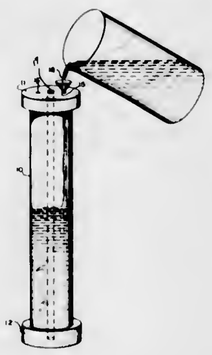
Filed June 21, 1960, Ser. No. 37,714
Claims priority, application Netherlands July 28, 1959
3 Claims. (Cl. 18—54)

1. A process for the production of polyethylene terephthalate filamentary material comprising the steps of extruding molten solvent free polyethylene terephthalate at a temperature of at least 268° C. through a spinning plate containing a plurality of orifices, said spinning plate being maintained at a temperature of at least 268° C., forming said molten polyethylene terephthalate into a plurality of filaments, arranging said filaments in a plurality of parallel rows wherein the distances between orifices in one row are about 5.5 to 10 mm., said filaments within each row being equally spaced, said rows being so spaced that the distance between each row is less than the distance between said equally spaced filaments, insulating said filaments from the ambient atmosphere for a distance of from 7 to 14 centimeters and thereafter passing a cooling gaseous medium transversely across said filaments, said medium having a velocity of at least 25 centimeters per second and being directed parallel to said plurality of parallel rows of filaments.

3,100,676
METHOD FOR MANUFACTURING A PRINTING ROLL

Clowes M. Christie, Rolling Hills, Calif., assignor to American Latex Products Corporation, Hawthorne, Calif., a corporation of California

Filed Aug. 26, 1957, Ser. No. 680,201
1 Claim. (Cl. 18—58)



The method of making a printing roll having a shaft with an elastomeric material molded thereon which presents an outer highly regular and smooth cylindrical surface and which utilizes as a mold a frangible glass tube with a highly regular and smooth internal surface and a wall capable of withstanding the molding operation and capable of being cleanly shattered without blemishing the desired cylindrical surface of the roll, comprising the steps of positioning the frangible glass tube between a pair of end members, positioning the shaft centrally and axially within said tube, introducing a reactive polyurethane resin mixture into the tube to surround said shaft, solidifying the polyurethane resin mixture within the tube, and removing the glass tube from the surface of the solidified resin mixture by breaking it into pieces to uncover the desired highly regular and smooth cylindrical surface.

3,100,677
METHOD OF MAKING REFRACTORY BRICK

Joseph M. Frank, Neil E. Boyer, and James A. Crookston, Mexico, Mo., assignors to A. P. Green Fire Brick Company, Mexico, Mo., a corporation of Missouri

Filed July 24, 1959, Ser. No. 829,342
5 Claims. (Cl. 18—59)



1. A method of making a metal cased refractory brick adapted to resist the destructive effects of heat consisting of the steps of forming a tubular geometrical shape having a single longitudinal seam, open ends, continuous sides and an established perimeter from a flat sheet of oxidizable metal, temporarily closing one end of the tubular shape to effectively prevent loss of refractory material during the subsequent filling operation, filling the tubular geometrical shape with a basic refractory mix through an open end thereof, vibrating said metal shape along its length to partially compact the refractory mix within the shape to a sufficient extent to cause it to be self-supporting therein, placing the filled tube into a mold housing side and end walls of the final desired form and in a single compression step applying pressure to the outer surface of said metal shape along its length in a direction perpendicular to the direction of vibration and forming the refractory filled geometrical shape into a metal cased refractory brick having only one fabrication seam in the casing and having uncased ends, said brick being of susbtantially the same perimeter as and of a smaller cross-sectional area and smaller volume than the original geometric shape, said refractory brick having uncased ends and a tightly packed body with a smooth continuous metal casing integrally associated therewith.

3,100,678
METHODS OF MAKING LIGHTWEIGHT HEELS

Edgar E. Joiner, Andover, and John P. Szumski, Marblehead, Mass., assignors to Fred W. Mears Heel Company, Inc., Lawrence, Mass., a corporation of Massachusetts

Filed Jan. 10, 1961, Ser. No. 81,801
4 Claims. (Cl. 18—59)

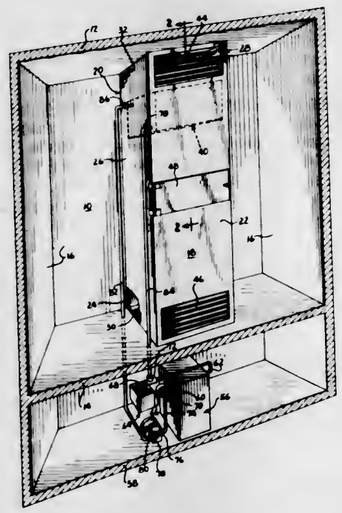


1. The method of making a heel for a shoe comprising the steps of molding a hollow shell of thin, tough flexible thermoplastic resin sheet material to present an exterior surface in the shape of a heel, supporting the flexible walls of said shell to prevent distortion of the shell, depositing in said supported shell a quantity of a fluid resin mixture comprising a liquid thermosetting resin and particles of a thermoplastic resin expandable to cellular form, said mixture being adhesive in expanded form to the walls of said shell, disposing a molding surface on the top of said shell to define with said shell a closed chamber including edge portions of thin cross section into which expanded thermoplastic particles cannot penetrate, increasing the temperature to cause said resin mixture to increase in volume and cure to form a mass of cellular bodies surrounded by and embedded in cured thermosetting resin, the expansion of said thermoplastic particles pushing the mixture outward to fill the shell completely to conform and adhere to the walls of the shell, said expansion squeezing said thermosetting resin into thin cross sections which the expanded thermoplastic particles cannot penetrate, the portions of said mass in thin cross sections of said heel shell comprising cured thermosetting resin substantially free from said cellular bodies.

3,100,679
APPARATUS FOR PURIFYING AIR IN INHABITABLE OR PRODUCT-CONFINING ENCLOSURES

Richard W. Kritzer, 1355 N. Astor St., Chicago 10, Ill.

Filed Jan. 24, 1961, Ser. No. 84,554
1 Claim. (Cl. 21—74)

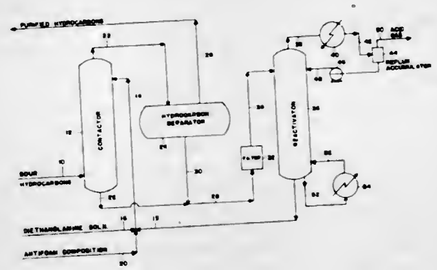


In an air purification and conditioning system of the character described, the combination with an enclosure having a floor, a ceiling, and vertical side walls, a vertically extending, duct-forming air purification conduit having its upper end in fluid communication with the enclosure adjacent to said ceiling and having its lower end in fluid communication with the enclosure adjacent to said floor, said duct being generally rectangular in horizontal cross section and having four vertical side walls, a heat exchange device within the duct, a germicidal lamp within the duct at a region spaced from and below said heat exchange device, said lamp being of elongated design and extending horizontally across the duct in close proximity to and in substantially coextensive relation with one of said side walls and positioned to radiate a curtain of ultraviolet rays substantially completely across the duct transversely thereof in all directions, a reflector having a polished surface positioned on the wall which opposes said one wall and disposed at the level of and in coextensive register with the curtain of ultraviolet rays radiated by said lamp and means for selectively supplying a heating and a cooling medium to said heat exchange device.

3,100,680
METHOD OF INHIBITING FOAMING OF DIETHANOLAMINE SOLUTIONS IN TREATING GASES

John R. Shaw and Henry L. Vornkahl, Port Arthur, Tex., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 27, 1960, Ser. No. 78,729
8 Claims. (Cl. 23—3)

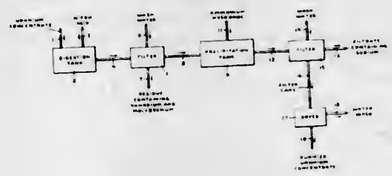


1. In a process for separating acidic gases from a mixture of acidic gases and hydrocarbons by contacting said mixture with an aqueous diethanolamine solution under contacting conditions normally tending to induce foaming, the improvement which comprises contacting said mixture of acidic gases and hydrocarbons with an aqueous diethanolamine solution containing a small amount, sufficient to inhibit the normal foaming tendency, of an antifoam composition comprising about 20 to about 90 percent by weight of a light mineral oil having a viscosity of about 30 to about 50 SSU at 100° F. and about 80 to about 10 percent by weight of cottonseed oil.

3,100,681
PURIFICATION OF URANIUM ORE CONCENTRATES

Robert V. Townend, Morris Township, Morris County, N.J., Horace Q. Trout, Brooklyn, N.Y., and John E. Wilkalis, Newark, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Feb. 10, 1960, Ser. No. 7,918
8 Claims. (Cl. 23—14.5)



1. In a process for recovering uranium values from pulverulent uranium ore concentrates which have been prepared by soda leaching of uranium ore and contain undesired vanadium, the steps comprising adding to the concentrate an aqueous nitric acid solution in sufficient amount to maintain the resulting slurry at its initial minimum pH up to about 0.5 pH unit thereabove, thereby dissolving uranium and leaving a residue containing vanadium, and separating said residue from the uranium-containing solution.

3,100,682
PRODUCTION OF LOW SULFATE URANIUM OXIDE

Andrew D. Kelmers, Warwick, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 15, 1960, Ser. No. 22,408
2 Claims. (Cl. 23—14.5)

1. In the proces of producing oxides of uranium from uranium ore comprising leaching uranium values from ore to form a pregnant leach liquor, contacting said leach liquor with a solvent extractant to transfer said uranium values from said pregnant leach liquor to said solvent extractant thereby forming a loaded solvent extractant, removing said loaded solvent extractant from contact with said leach liquor, contacting said loaded solvent extractant with a sodium carbonate stripping solution thereby causing the uranium values to transfer from said loaded solvent extractant to said sodium carbonate stripping solution to form a sodium carbonate secondary liquor, adding sulfuric acid to said sodium carbonate secondary liquor until said sodium carbonate secondary liquor is converted to an acidic secondary sulphate liquor having a pH of about 2, heating said acidic secondary sulphate liquor to a temperature sufficient to decompose the carbonate component and maintaining said temperature until said carbonate component is substantially decomposed, and adding an ammonia compound to said acidic secondary sulphate liquor until said acidic secondary sulphate liquor has been converted to a basic secondary sulphate liquor having a pH of about 7 to 8 and thereby causing precipitation of the uranium values from the basic secondary sulphate liquor as an oxidic uranium precipitate, the improvement comprising removing said precipitate from said basic secondary sulphate liquor before said precipitate has been in contact with said basic secondary sulphate liquor for a period of greater than about 1 hour; and washing said precipitate to form a final oxide of uranium containing less than about 1.0 weight percent sulphate.

3,100,683
ADSORPTION OF CERIUM VALUES FROM AQUEOUS SOLUTIONS

Francis P. Roberts, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed July 18, 1962, Ser. No. 210,864
5 Claims. (Cl. 23—23)

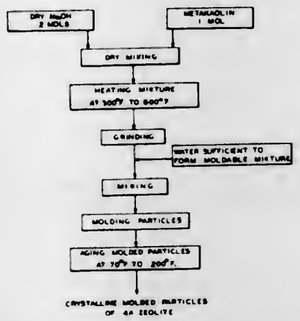
1. A process of recovering cerium values from an aqueous solution, comprising mixing from 10 to 200 grams of lead peroxide with each liter of a strong-base anion exchange resin; passing an about 8 M nitric acid over said resin to convert the latter to the nitrate form; providing a nitric acid concentration of between 2 and 13 M in a cerium (III)-containing feed solution, whereby a cerium-nitrate complex is formed; contacting the resin with said feed solution whereby the cerium values are preferentially taken up by said resin; separating the resin from the cerium-depleted aqueous solution; and eluting the cerium values from the resin with mineral acid selected from the group consisting of 3 to 5 M hydrochloric acid and 0.5 to 1.5 M nitric acid.

3,100,684
METHOD FOR PRODUCING SYNTHETIC CRYSTALLINE ZEOLITE AGGREGATES

Walter L. Haden, Jr., Metuchen, and Frank J. Dzierzanowski, Bound Brook, N.J., assignors to Minerals & Chemicals Philipp Corporation, Menlo Park, N.J., a corporation of Maryland

Filed Dec. 16, 1960, Ser. No. 76,146
10 Claims. (Cl. 23—112)

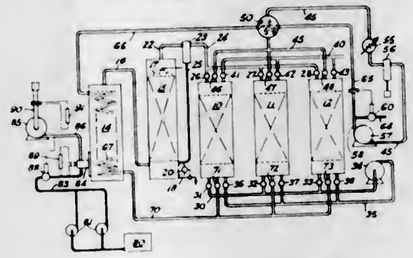
1. A method for forming a synthetic crystalline zeolite which comprises forming a substantially dry apparently homogeneous mixture of metakaolin and NaOH, heating said mixture at a temperature of from about 300° F. to 800° F. for a time sufficient to react said metakaolin with said NaOH, mixing a small amount of water with the reaction product to form a mixture of moldable consistency, molding said mixture into particles, and aging said molded particles without dissolving constituents thereof under at least autogenous pressure, so as to prevent dehydration of said particles, until said particles crystallize.



3,100,685
METHOD OF RECOVERING CARBON DIOXIDE

Joseph G. Duffey, Tonawanda, N.Y., assignor to Arnold Equipment Corporation, Buffalo, N.Y.

Filed Oct. 30, 1959, Ser. No. 849,805
10 Claims. (Cl. 23—150)



1. A method of recovering substantially pure CO_2 which comprises burning a hydrocarbon fuel, cooling the combustion gases produced thereby to about 100° F., passing the same through a body of synthetic zeolite capable of adsorbing CO_2 and passing unadsorbed components, and subsequently desorbing the CO_2 from said body and passing the same from one end of said body by diverting a portion thereof for delivery from the system, passing the remainder in heat exchange relation with the combustion gases prior to cooling of the latter to heat such remainder to substantially above 600° F., and directing the same back to the other end of said body to flow therethrough and heat the same to about 600° F. and thus promote desorption and maintain a flow from said body of CO_2 desorbed by the heating.

3,100,686
METHOD FOR PREPARATION OF SINTERABLE BERYLLIUM OXIDE

Bernard J. Sturm, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Apr. 13, 1962, Ser. No. 187,440
4 Claims. (Cl. 23—183)

1. The method of separating impurity values in the group consisting of silicon, magnesium, calcium, aluminum and iron values from beryllium values in an aqueous beryllium oxalate solution containing the same which comprises heating said solution to a temperature of about 70° C., whereby a silicon-enriched precipitate is formed, separating said precipitate from said solution at a temperature of at least about 70° C., boiling said solution, whereby beryllium oxalate monohydrate is precipitated, and separating the resulting precipitate from the remaining mother liquor at a temperature of at least 50° C.

3,100,687
PREPARATION OF CARBONYLS OF GROUP VIb METALS

John H. Wotiz, Mentor, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,103
17 Claims. (Cl. 23—203)

1. A process for preparing a carbonyl of a metal selected from the group consisting of chromium, tungsten and molybdenum which comprises introducing into a pressure reactor a metal source selected from the group consisting of the metal per se, trivalent chromium compounds, divalent chromium compounds, tungsten hexachloride, and molybdenum pentachloride; a substance selected from the group consisting of iodine and iodine containing compounds; and a nitrile of the formula $R(CN)_n$, wherein n is a number from 1 to 2, inclusive, and R is selected from the group consisting of lower alkyl, phenyl and lower alkylene; in the absence of any reducing metal; pressurizing the reactor with carbon monoxide to a pressure in the range of about 1000 to 10,000 p.s.i.g.; the ratios of reactants being at least 0.1 mole of iodine, 3 moles of nitrile and 6 moles of carbon monoxide per mole of metal source; heating the reactor to a temperature of about 150° to 325° C. and maintaining the temperature until the reaction is completed as evidenced by a pressure drop corresponding to the utilization of carbon monoxide; and separating the thus formed carbonyl of said selected metal by filtration and steam distillation.

3,100,688
FOAMED SILICON CARBIDE

Howard M. Dess, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 4, 1961, Ser. No. 142,779
2 Claims. (Cl. 23—208)

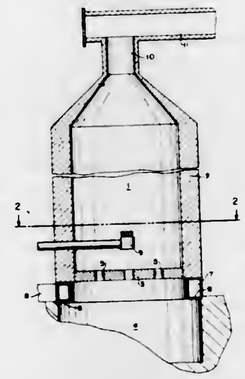
1. A process for the production of foamed silicon carbide which comprises providing a finely divided mixture of carbon and elemental silicon powder; intimately contacting said mixture with aqueous hydrofluoric acid to form a stable foam said hydrofluoric acid being in an amount substantially less than stoichiometric for reaction with the silicon in the mixture; drying said foam; heating said foam in a non-oxidizing atmosphere to initiate the silicon carbide-forming reaction without substantial melting of unreacted silicon and continuing heating said foam until substantial completion of the carbiding reaction.

3,100,689
CARBON BLACK MANUFACTURE

James Lawrence Mason, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

Filed Aug. 21, 1958, Ser. No. 756,450
7 Claims. (Cl. 23—209.6)

1. In the process for producing furnace carbon blacks by the partial combustion of hydrocarbon oils whereby a gently-flowing, relatively uniform current of air is passed upwardly through the lower portion of an unobstructed, vertically-elongated furnace chamber and the hydrocarbon oil is injected upwardly into the chamber as a high velocity gas-atomized spray initiated in the lower end of the chamber, whereby a portion of the hydrocarbon is burned in the lower portion of the chamber and there is established in the furnace chamber above said zone of combustion a lazy, substantially non-oxidizing, upwardly rising atmosphere of hot furnace gases at a temperature above the decomposition temperature of the remaining hydrocarbons, the improvement which comprises injecting the oil into the furnace chamber as a cluster of closely spaced, gas-atomized spray streams having substantially parallel axes of symmetry arranged about a central zone substantially coaxially with the vertical axis of the furnace chamber, the number of the spray streams in the cluster being in excess of three, the spray streams being sufficiently close to form a protective barrier to the entrance of air laterally into said central zone, and shielding said central zone against passage of air upwardly thereinto.



3,100,690
STABILIZED LIQUID OZONE

James S. Logan, Niagara Falls, and Arthur Roaldi, Lancaster, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

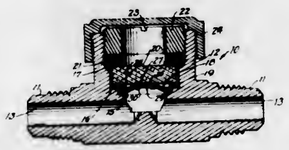
No Drawing. Filed Jan. 30, 1958, Ser. No. 712,278
2 Claims. (Cl. 23—222)

1. A liquid ozone composition consisting of liquid ozone and about 0.5 to 25 weight percent based on the ozone of hydrochloric acid.

3,100,691
LIQUID INDICATOR WITH MOISTURE INDICATION MEANS

Evan Jones, Evanston, Ill., assignor to Henry Valve Company, Melrose Park, Ill., a corporation of Illinois

Filed Mar. 12, 1959, Ser. No. 798,981
7 Claims. (Cl. 23—253)



1. In a liquid indicator for use in refrigerant flow lines, said indicator including a tubular transparent window portion which is radially offset relative to an axially extending liquid refrigerant flow passage and in communication therewith, the provision of refrigerant moisture indication means in said tubular portion and comprising a retainer having a material carrying portion held in observ-

able association with the inner surface of a removable window member mounted in said tubular portion, said retainer comprising a generally flat central portion supported by leg means formed from resilient material and engaged with an annular support surface forming a part of said tubular portion, said leg means being integrally formed with said central portion and being radially directed therefrom and in tension to hold the outer surface of said central portion in engagement with the inner surface of said window member, said central portion having mounted thereon superimposed layers of moisture sensitive material and moisture insensitive material, the outermost of said layers having formed therein in stencil-like manner a word instruction which is observable based on the moisture content of the liquid refrigerant in contact with said layer of moisture sensitive material, said layer of moisture insensitive material being of a fixed color while said layer of moisture sensitive material is of changeable color to provide for instruction appearance upon the attaining of a predetermined moisture content in said refrigerant, said central portion of said retainer being apertured for liquid refrigerant contact with said layers, said retainer being resiliently held between said window member and said annular support surface by said leg means and fully contained in said tubular portion for ready removal therefrom upon removal of said window member.

3,100,692
DETECTOR TUBE
Karl-August Wächter, Lubeck, Germany, assignor to Otto Heinrich Drager, Lubeck, Germany
Filed Feb. 16, 1961, Ser. No. 89,743
5 Claims. (Cl. 23—254)



1. A detector tube for testing gases comprising an open ended middle section adapted to hold reagent material, a pair of tip end sections each having a closed tip end and an open end, the open end of each tip end section being joined, respectively, to the open end of said middle section, knob means formed in one piece with the closed end of each tip end section for twisting and breaking off the closed tips, and each section being composed of a synthetic plastic material.

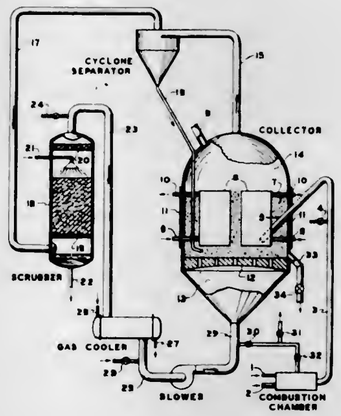
3,100,693
APPARATUS FOR PROCESSING PHOSPHORIC ACID ANHYDRIDE
George I. Klein, Park Forest, Ralph E. Newby, Steger, and Leo B. Post, Chicago, Ill., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,846
4 Claims. (Cl. 23—262)

1. An apparatus for condensing gaseous phosphoric acid anhydride which comprises in combination:

(A) A vessel divided into upper and lower compartments by a horizontal gas distributing partition, said upper compartment serving to house a dense fluidized bed of cooled P_2O_5 particles and said lower compartment serving as the fluidization windbox;

(B) Conduit means for furnishing a gaseous feed of P_2O_5 directly to the dense fluidized bed and connected through the wall of said vessel below the upper level of said dense fluidized bed and at a position where said gaseous feed will enter said dense fluidized bed at least six inches above the horizontal gas distributing partition;

(C) Valved conduit means for discharging condensed particles of P_2O_5 under fluostatic pressure from said dense fluidized bed and connected through the wall of said vessel at a position within said upper compartment below the upper level of said dense fluidized bed;



(D) A recirculating and conditioning system for exhausted gases from said dense fluidized bed comprising conduit means connected to said vessel near the top and bottom thereof furnishing an endless flow path outside of said vessel in which a sufficient quantity of said exhausted gases to support fluidization may be recycled from said dense fluidized bed to said windbox, and dust separating means comprising a wet scrubber for separating suspended particles of P_2O_5 contained in said exhausted gases positioned within said endless flow path;

(E) Heat transfer means for removing heat from said dense fluidized bed of P_2O_5 particles to maintain the required condensing temperature therein and positioned within said upper compartment with substantially all of the heat transfer surfaces below the upper level of said dense fluidized bed; and

(F) Valved conduit means for bleeding off excess gases from said apparatus.

3,100,694
TREATMENT OF SOLIDS WITH LIQUIDS
Franz Schaub, Oberhausen-Holten, Helmut Kolling, Duisburg-Hamborn, Theodor Notthoff and Ewald Stiebling, Oberhausen-Sterkrade, and Heinz Rudolf Ruggeberg, Oberhausen-Holten, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany
Filed July 13, 1956, Ser. No. 597,656
Claims priority, application Germany July 28, 1955
3 Claims. (Cl. 23—270)

1. A device for the single-step treatment with liquids of comminuted and powdered solids of substantially uniform specific gravity which is lower than that of said liquids, which comprises, in combination, a substantially horizontal treating chamber, an inlet for said liquids on the top of one end of said chamber, an outlet in the form of a syphon for the removal of liquid at the opposing end of said chamber, said syphon being disposed in a manner as to produce a drop in the level from said inlet toward said outlet, an inlet for said solids on the top of



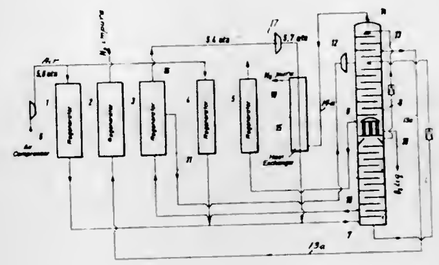
the end where said outlet for said liquids is situated, agitator paddles disposed in said chamber and adapted for adjustable inclination with respect to the longitudinal axis of said chamber and moving said solids countercurrently to said liquids, an outlet for said solids at the end of said chamber where said inlet for said liquids is located, and discharge blades disposed in said outlet to remove said solids after treatment.

3,100,695
MIDDLE DISTILLATE POUR POINT DEPRESSANTS
Roman S. Slysh, Scotch Plains, and William C. Holliday, Jr., Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Oct. 18, 1960, Ser. No. 63,245
6 Claims. (Cl. 44—62)

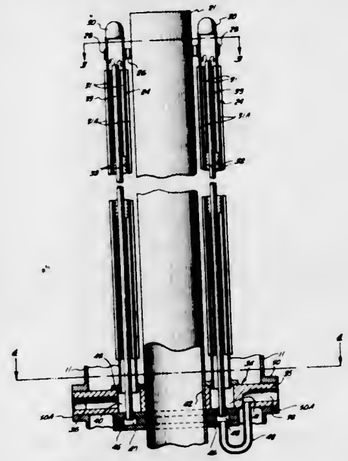
1. A petroleum distillate fuel composition having an improved pour which consists essentially of a petroleum distillate fuel boiling in the range between about 250° F. and about 750° F. which has been improved with respect to pour point by the incorporation therein of a pour depressing effective amount in the range from about .001 to .5% by weight of a pour depressant selected from the class consisting of alkylated polystyrenes and copolymers of ethylene and vinyl acetate in combination with a surface active agent present in a concentration in the range from about .005 to .25% by weight selected from the class consisting of petroleum sulfonic acids and salts of petroleum sulfonic acids, said copolymer being characterized by having a molecular weight in the range from about 1,000 to 3,000 and being further characterized by containing from about 1% to 40% by weight of vinyl acetate in the copolymer, said alkylated polystyrene being characterized by having a molecular weight in the range from about 700 to 3,000 and being further characterized by having about one alkyl group containing from about 14 to 18 carbon atoms per ring.

3,100,696
METHOD AND APPARATUS FOR SEPARATING GASES
Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Munich, Germany, a company of Germany
Filed June 8, 1959, Ser. No. 818,806
Claims priority, application Germany June 11, 1958
21 Claims. (Cl. 62—13)

3. In a process for the separation of a gas mixture into a higher boiling point fraction and at least one fraction of lower boiling point, the method which comprises compressing the gas mixture, cooling and purifying the compressed gas mixture in at least one regenerator of a reversing regenerator system, feeding a first part of the cooled compressed gas mixture into a rectifying device, passing a second part of the cooled compressed gas mixture in the opposite direction through a second regenerator, warming this second part thereby at least partially to ambient temperature, cooling said warmed second part of the gas mixture by heat exchange with at least part of a separation product withdrawn from the rectifying device, warming said separation product thereby to ambient temperature, passing said second part of the gas mixture into the rectifying device, withdrawing other separation products from the rectifying device and warming them in further reversing regenerators.



3,100,697
APPARATUS FOR TREATMENT OF NATURAL GAS
Raymond James Hull, Orange, Calif., assignor to Gas Processing Inc., Fullerton, Calif., a corporation of California
Filed Aug. 1, 1960, Ser. No. 46,816
5 Claims. (Cl. 62—42)



5. In a rectifier for treating natural gas to remove condensable components, the rectifier having an elongated vertical shell including at least two tubular sections joined together at flanged ends to form a fluid-tight enclosure, a refrigerating unit comprising a first plurality of vertically disposed outer heat exchanger tubes, a second plurality of inner heat exchanger tubes, each of the inner tubes being concentrically disposed within an outer tube, means closing one end of the outer tubes, the end of the inner tubes adjacent thereto being open, a refrigerating fluid distribu-

tion header having an outer annular portion sealably supported between the flanged ends of the two tubular sections of the shell and including both an intake chamber with which the other end of one plurality of tubes is in flow communication and a discharge chamber with which the other end of the other plurality of tubes is in flow communication, said other ends being sealed from each other, means connecting the intake chamber and a source of refrigerating fluid, and means connected to the discharge chamber for removing refrigerating fluid.

3,100,698
UREA-SULFUR FERTILIZER COMPOSITION AND METHOD FOR ITS PRODUCTION

Franz A. Horsley, Danville, and Paul A. Gray, Jr., Corte Madera, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Sept. 23, 1960, Ser. No. 58,074
8 Claims. (Cl. 71—28)

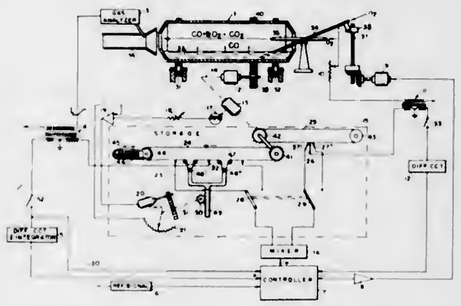
1. A fertilizer composition consisting essentially of co-melted and prilled urea and elemental sulfur.

5. Process for the manufacture of a fertilizer composition comprising separately melting urea and elemental sulfur, mixing the melted urea with the melted sulfur, and solidifying the resulting product into discrete particles.

3,100,699
CONTROL SYSTEM AND PROCESS FOR REFINING METALS

Ludwig von Bogdandy, Essen-Frintrop, and Heinz-Dieter Pantke, Oberhausen, Rhineland, Germany, assignors to Huttenwerk Oberhausen AG., Oberhausen, Rhineland, Germany, a corporation of Germany

Filed Sept. 12, 1960, Ser. No. 55,347
Claims priority, application Germany Sept. 11, 1959
13 Claims. (Cl. 75—59)



4. A method of operating a rotary refining furnace comprising the steps of introducing a gas below the level of a melt in said furnace to produce an exhaust gas of a composition which constitutes an output variable subject to periodic fluctuations, said output variable responding with a predetermined time lag to changes in an input variable defining the depth at which said gas is introduced into said melt, measuring said output variable during a first fluctuation period with said input variable maintained constant, storing the so measured values of said output variable for an interval equal to one whole fluctuation period less than a time equal to said lag, producing at the end of said interval a delayed control signal from the values so stored, changing said input variable in step with said control signal and in a sense counteracting said fluctuations during a second fluctuation period, storing during said second period a feedback signal representative of the changed values of said input variable while continuing to measure said output variable, storing the values thereof for said interval and producing the delayed control signal therefrom, combining during a third fluctuation period the delayed control signal with the feedback signal stored for a whole period, changing said input variable during said third period in step with the combined signals and concurrently storing the changed values of said input variable for another whole period, continuing during said third period to measure said output variable, storing the values thereof for said interval and producing the delayed control signal therefrom, and proceeding in like manner during subsequent periods, thereby eliminating the effect of said lag.

3,100,700
RECOVERY OF NICKEL AND COBALT BY REDUCTION AND LEACHING

Robert C. Hills, New York, N.Y., assignor to Freeport Sulphur Company, New York, N.Y., a corporation of Delaware

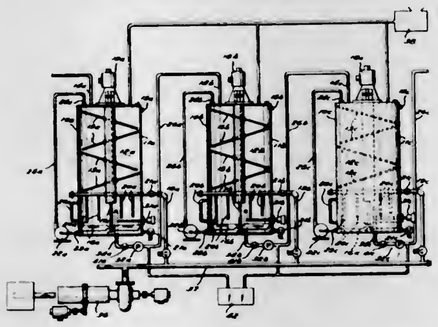
No Drawing. Filed Apr. 25, 1960, Ser. No. 24,240
5 Claims. (Cl. 75—63)

1. A process for the recovery of nickel and cobalt from iron-bearing cobalt-containing nickeliferous oxygenated ores and concentrated ores derived therefrom which comprises, mixing with the ore in finely divided form a hydrocarbon which is a liquid at some temperature below about 600° F. and does not volatilize appreciably below this temperature, heating the resulting mixture in a non-oxidizing atmosphere to a temperature above 600° F. thereby liquefying said hydrocarbon and reducing the nickel and cobalt to a form selectively leachable from the iron content in the solvent to be subsequently employed, the amount of hydrocarbon employed being sufficient to reduce the nickel content and any cobalt present but not the iron to said leachable form, cooling the still finely divided ore and selectively leaching the reduced nickel and any cobalt present, in a substantially iron-free condition, from the cooled ore.

3,100,701
CONTINUOUS PROCESS MINERAL SEPARATION

Laurance W. Huntington, Groveport, Ohio, assignor to Reno Engineering & Mining Co., a corporation of Nevada

Filed Aug. 11, 1960, Ser. No. 48,872
3 Claims. (Cl. 75—101)



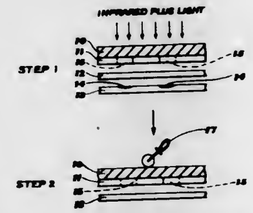
3. A continuous process of treating material containing metallic components with sulphur dioxide gas preparatory to subsequent further treatment, comprising the steps of, providing a plurality of deep reaction chambers having agitation means therein supplying a flowable form of material to be treated to one said chamber, applying sulphur dioxide gas into said one chamber below the surface of the material to be treated and causing an agitation of said material as the gas is supplied, monitoring said contents to determine the pH value at all times and altering the rate of sulphur dioxide flow to maintain a

controlled pH condition selected to dissolve part of the metallic components in said material, transferring some of the material from the said one chamber to the next chamber and continuously replacing the amount removed with fresh source material, recirculating the material from the bottom to the top of the chamber as well as agitating and circulating the material at the bottom of the chamber, and treating the material transferred with gas in like manner to the treatment in the prior chamber while monitoring to prevent an acidic condition.

3,100,702
DRY PROCESSED PHOTOTHERMOGRAPHIC PRINTING PLATE AND PROCESS

Frederick J. Rauner, Isadore F. Rosati, and Earl M. Robertson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 30, 1960, Ser. No. 18,745
20 Claims. (Cl. 96—33)



12. A method of preparing a copy of a graphic original comprising exposing a heat-sensitive, light-sensitive, infra-red transparent, matrix sheet to said graphic original by means of actinic radiation, said matrix sheet comprising a light-sensitive polyvinyl resin containing at least one of the following: (*a*) aromatic azide groups and (*b*) α,β-unsaturated carboxylic acid ester groups, said α,β-unsaturated carboxylic ester groups being directly attached to the polyvinyl chain of said polyvinyl light-sensitive resin through the

$$-\overset{O}{\overset{\|}{C}}-O-$$

radical of said α,β-unsaturated carboxylic acid, and a waxy polyethylene glycol compound having a melting point between about 60° C. and 250° C. and being selected from those represented by the following general formula:

$$R—OCH_2CH_2O(CH_2CH_2O)_nCH_2CH_2OR_1$$

wherein R and R_1 each represents a member selected from the class consisting of a hydrogen atom, an alkyl radical and a carboxylic acyl radical and *n* represents a positive integer of at least 7, thereby causing hardening of said light-sensitive resin in the exposed areas, heating said matrix sheet to a temperature sufficient to cause softening of said light-sensitive resin in the unexposed areas, but substantially no softening in the actinic light-exposed areas, and transferring said softened resin to a receiving sheet.

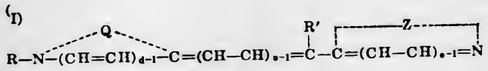
3,100,703
PHOTOGRAPHIC PROCESS UTILIZING CYANINE DYE BASES

Robert H. Sprague, Chagrin Falls, Harry L. Fichter, Jr., Lakewood, and William P. Hamilton, Cleveland, Ohio, assignors to Horizons Incorporated, a corporation of New Jersey

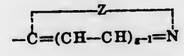
No Drawing. Filed Mar. 13, 1961, Ser. No. 95,031
15 Claims. (Cl. 96—33)

1. A non-silver photosensitive composition which prints out a visible image directly and solely as a result of exposure to suitable radiation, said composition consisting essentially of: a photolytically active organic halogen containing compound selected from the group consisting of alkyl and aralykyl compounds in which at least three halogen atoms are attached to a single carbon atom, said halogens being selected from the group consisting of Cl, Br, and I; and a cyanine dye base selected from the group represented by general Formulas I, II, and III below,

(I)

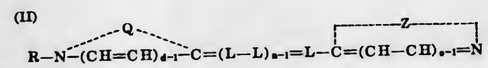


wherein *d* and *e* each represents a positive integer of from 1 to 2; *n* represents a positive integer of from 1 to 4; R represents an organic radical selected from the group consisting of alkyl, aralkyl and aryl groups; R′ represents a member selected from the group consisting of hydrogen, —CN and a radical characterized by the general formula,



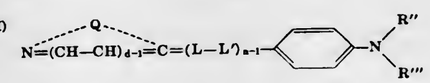
and *g* is a positive integer from 1 to 2, Q, Z and Z′ each represents the nonmetallic atoms selected from the group consisting of C, S, Se, O and N necessary to complete a heterocyclic organic nucleus containing from 5 to 6 atoms in the ring;

(II)



wherein *d*, *e*, *n*, R, R′, Q and Z each has the same meaning as in general Formula I above, and each L represents a member selected from the group consisting of CH and N and may be the same or different, at least one L being a nitrogen atom;

(III)



wherein R″ and R‴ represent alkyl or benzyl and may be the same or different from one another, *d* represents either 1 or 2, *n* represents a positive integer from 1 to 4, L and L′ each represents a member selected from the group consisting of —CH=,

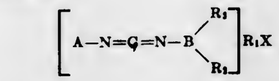


and —N= and at least one of L and L′ being a nitrogen atom, and Q represents the nonmetallic atoms necessary to complete a heterocyclic nucleus containing from 5 to 6 atoms in the ring said halogen containing compound being present in an amount sufficient to sensitize said dye base.

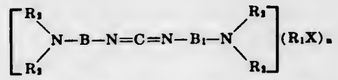
15. A process for producing a litho master, comprising preparing the composition of claim 1; coating a casein-filled paper therewith; exposing the composition to light through a suitable negative, thereby producing a positive image in color; swabbing the exposed sheet with water to render the background ink-repellent, the image area then being ink-receptive.

3,100,704
PHOTOGRAPHIC MATERIALS CONTAINING CARBODIIMIDES
Robert F. Coles, North St. Paul, Minn., and Harold Levine, Vestal, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 24, 1958, Ser. No. 750,590
17 Claims. (Cl. 96—111)

1. A silver halide emulsion adapted to form a hardened layer comprising a gelatin silver halide photographic emulsion containing (*a*) a member selected from the group consisting of:



and



wherein A represents members selected from the group consisting of methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, tert.-butyl, allyl, crotyl, betahydroxyethyl, methoxymethyl-beta-bromoallyl, phenyl, tolyl, xylyl, naphthyl, chlorophenyl, bromophenyl, iodophenyl, cyclohexyl, bornyl, menthyl, pyridyl and quinolyl; R_1 and R_2 represent lower alkyls; B and B_1 represent members selected from the group consisting of propylene, phenylene, tolylene and propylphenylene, X is an anion selected from the group consisting of chloride, bromide, iodide, methosulfate, ethosulfate, p-toluene sulfonate and *n* is a positive integer not greater than 2, and (*b*) an organic hardener selected from the group consisting of formaldehyde, glyoxal, glycol aldehydes, diketones, mucochloric acid, mucobromic acid, formylacrylic acid, glyoxylic acid, chloroacetone, dichloroacetone, dibromoacetone, dihydroxyacetone, amino aldehydes, nitro aldehydes and nitro alcohols.

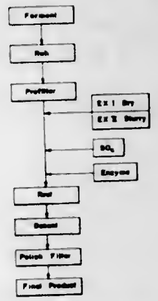
3,100,705
HONEY BEVERAGE AND PROCESS FOR MAKING IT
Stuart L. Adams, Anchorage, and George V. Niesen, Louisville, Ky., assignors to Joseph E. Seagram & Sons, Inc., New York, N.Y., a corporation of Indiana
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,795
10 Claims. (Cl. 99—29)

1. The process of producing a potable alcoholic beverage which comprises diluting natural honey with water to form a solution containing about 12 to 18 percent sugar, adding to said solution an amount of corn distiller's dried solubles equal to about 3 to 5 percent by weight of the honey before dilution with water, adding yeast to the mixture, holding the mixture for not more than about 10 days until fermentation of the sugar to alcohol is substantially complete, distilling the resulting fermented natural honey liquor, and collecting the distillate for use as a beverage.

3,100,706
BEVERAGE FROM HONEY AND PROCESS FOR MAKING IT
Stuart L. Adams, Anchorage, and George V. Niesen, Louisville, Ky., assignors to Joseph E. Seagram & Sons, Inc., New York, N.Y., a corporation of Indiana
No Drawing. Filed Oct. 3, 1960, Ser. No. 59,796
5 Claims. (Cl. 99—29)

1. The process of producing a potable alcoholic beverage which comprises adding water to natural honey to form a solution of about 12 to 18 percent sugar in water, adding yeast cells and yeast nutrient to the solution, non-vigorously agitating the resulting mixture sufficient to maintain the yeast cells in suspension throughout until fermentation of the sugar to alcohol is substantially complete, distilling the resulting fermented natural honey liquor, and collecting the distillate for use as a beverage.

3,100,707
ADDITION OF DRY HECTORITE TO BEER
Richard G. Shaler and Raymond L. McAdam, San Anselmo, and Richard G. Shaler, Jr., San Rafael, Calif., assignors to American Tansul Company, San Francisco, Calif., a corporation of California
Filed Mar. 21, 1961, Ser. No. 97,254
7 Claims. (Cl. 99—48)



1. In the method of treating beer after fermentation the improvement which comprises contacting the beer with about 120–500 parts per million of a swelling gelling clay in substantially dry form, and then completion of processing.

3,100,708
METHOD OF PROCESSING WHEAT TO PROVIDE A STABILIZED WHOLE WHEAT FLOUR
Alfred Emerson, Jr., 355 E. 72nd St., New York 21, N.Y.
No Drawing. Filed Dec. 5, 1961, Ser. No. 157,256
2 Claims. (Cl. 99—94)

1. The method of making a prepared whole wheat flour mix which comprises:
(*a*) milling the wheat and immediately separating the wheat germ and bran therefrom;
(*b*) packing and freezing the removed wheat germ and bran separately from the residue of the wheat flour;
(*c*) adding sugar, leavening and flavorings to the residue of the wheat flour to form a dry admixture;
(*d*) blending the dry admixture into a prepared flour mix;
(*e*) packaging the prepared flour mix separately from the packaged frozen wheat germ and bran; and
(*f*) maintaining said separately packaged wheat germ and bran under refrigeration until ready for incorporation into a dough formula with said prepared flour mix.

3,100,709
PROCESS FOR IMPROVING PARTICLES OF PROTEIN CONTAINING VEGETABLE PRODUCTS AND PRODUCTS THEREOF
Twila M. Paulsen, Minneapolis, Minn., assignor to Archer-Daniels-Midland Company, Minneapolis, Minn., a corporation of Delaware
No Drawing. Filed Dec. 15, 1960, Ser. No. 75,923
10 Claims. (Cl. 99—98)

1. The process of removing soybean odor and soybean taste from particulates of soybean material containing protein and carbohydrate constituents comprising the steps of chemically treating particulate soybean material with chemical materials selected from the group consisting of water soluble ionizable protonic acids, the water soluble mono- and polyvalent ionizable metal salts of such acids, and mixtures of the same; and hydrogen peroxide, each in water solution providing concentrations of about 0.5 part to about 5 parts based on 100 parts of the particulates of soybean material, maintaining the particulates of soybean material at a high solids level of about 75% to about 90% while in contact with a said chemical material and the hydrogen peroxide until the particulates are relatively thoroughly wetted thereby, and drying the particulates of soybean material.

3,100,710
MEAT PRODUCT AND METHOD FOR PRODUCING SAID PRODUCT
George T. Carlin, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Sept. 8, 1958, Ser. No. 759,419
9 Claims. (Cl. 99—107)

1. A meat product formed of at least two portions of meat pieced together and bonded at the point of union with wheat gluten, said meat product remaining intact during further processing thereof, including cooking, and remaining intact when sliced while hot or cold.

3,100,711
FOOD PACKAGE
Paul Eisler, 57 Exeter Road, London NW. 2, England
Filed July 18, 1958, Ser. No. 749,554
Claims priority, application Great Britain July 24, 1957
14 Claims. (Cl. 99—171)



1. A food package comprising a dispensable container having outer walls and with a foodstuff therein, a separate dispensable electrical heating film at least having the major part of its suface within the outer walls of the container and at least one electrically and thermally insulating layer between the film and the outer wall of the container, said heating film including terminal areas accessible without removing the foodstuff from the container, and said heating film also including an electrical conductive pattern of metal foil providing at least one meander path between said terminal areas and presenting a value of resistance between said terminal areas which when connected by said terminal areas to a low voltage source heat is developed at a rate adequate to heat the foodstuff in the container, said film being thin and of large heat transferring surface area and positioned in the container so that its surface temperature during the heating period does not reach a value which would damage the foodstuff.

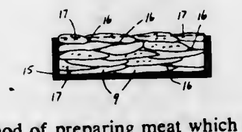
3,100,712
PROCESS AND APPARATUS FOR MAKING AND SHIPPING CHEESE
Jess Meeker and William H. Tate, Clinton, Mo., assignors to Clearfield Cheese Company, Inc., Clinton, Mo., a corporation of Pennsylvania
Filed Mar. 20, 1962, Ser. No. 181,119
15 Claims. (Cl. 99—178)

1. A method of preparing and handling cheese for shipping purposes comprising the steps of: pouring fresh cheese curd into a cloth bag fitted within a rigid cylindrical mold; completely enclosing the cheese curd by said bag; applying continuous axial pressure to the bag and molded cheese in a stationary position between smooth flat surfaces for a prolonged period of time for reducing the volume of the molded cheese; draining cheese whey from the molded cheese while in said stationary position during said prolonged period of time for removal of moisture therefrom; inverting the cylindrical mold and opening said bag for removal of said molded



cheese; encasing said cheese within an air and moisture-proof plastic liner; enclosing said cheese and liner within a cardboard shipping box; and pivotally displacing said shipping box for sealing opposite ends immediately after receiving said molded cheese.

3,100,713
METHOD OF PREPARING MEAT
Maro E. Grant, R.R. 17, Box 574, Indianapolis, Ind.
Filed Nov. 16, 1959, Ser. No. 853,093
3 Claims. (Cl. 99—194)



1. A method of preparing meat which comprises penetrating the meat at a plurality of points in order to tenderize the meat, then placing the meat within a rigid mold, then closing the mold with a rigid cover in such a manner as to provide a constant volume container for the meat, and then freezing the meat to expand it against the walls of the mold to smooth the outward surfaces of the meat.

3,100,714
OPTICAL CROWN GLASSES
Heinz Brömer and Norbert Meinert, Wetzlar (Lahn), Germany, assignors to Ernst Leitz, G.m.b.H., Wetzlar (Lahn), Germany
Filed Oct. 3, 1961, Ser. No. 142,551
Claims priority, application Germany Nov. 5, 1960
7 Claims. (Cl. 106—54)

1. Optical glass having an index of refraction n_e above 1.61 and an Abbé number ν_e above 48.2 and consisting essentially of, (1) 35 to 47 percent by weight of silica, boric oxide and phosphoric oxide of which the silica content lies between 5.5 and 20 percent by weight, the boric oxide between 10.0 and 31.5 percent by weight and the phosphoric oxide between 10 and 16 percent by weight and (2) the balance of 65 to 53 percent consists essentially of oxides selected from the group consisting of magnesium oxide, calcium oxide, strontium oxide and barium oxide of which balance calcium oxide is present in amount equal to at least 5 percent by weight of the glass composition and barium oxide is present in amount equal to at least 20 percent by weight of the glass composition.

3,100,715
PATCHING PLASTER COMPOSITIONS
Richard J. Leonard, 400 51st St., Des Moines 12, Iowa
No Drawing. Filed Nov. 12, 1958, Ser. No. 773,187
11 Claims. (Cl. 106—110)

1. A patching plaster dry mix consisting essentially in the combination of small particle size expanded perlite

and commercial calcined gypsum, said expanded perlite characterized by a particle size range such that 100% by volume passes through a number 30 standard sieve; 70% by volume passes through a number 50 sieve; 40% by volume passes through a number 100 sieve, said commercial gypsum being plaster of Paris with added retarder; the quantity of said expanded perlite is in the range of 2.0 to 4.0 cu. ft. for each 100 lbs. of said gypsum.

3,100,716

ULTRAVIOLET LIGHT STABILIZED CELLULOSE ESTER PLASTIC COMPOSITION

Charles J. Kibler and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey.

No Drawing. Filed Aug. 1, 1961, Ser. No. 128,380
3 Claims. (Cl. 106—187)

2. A cellulose ester plastic composition consisting essentially of (1) a cellulose organic acid ester selected from the group consisting of cellulose acetate, cellulose propionate, cellulose butyrate, cellulose acetate-propionate, and cellulose acetate-butyrate. and (2) an ultraviolet light stabilizing quantity of the manganous complex of a 2-hydroxybenzophenone selected from the group consisting of 2-hydroxybenzophenone, 2,4-dihydroxybenzophenone, 2,2'-dihydroxybenzophenone, 2,4'-dihydroxybenzophenone, 2,2',4-trihydroxybenzophenone and 2,2',4,4'-tetrahydroxybenzophenone.

3,100,717

ULTRAVIOLET LIGHT STABILIZED CELLULOSE ESTER PLASTIC COMPOSITION

Selma H. Long and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 1, 1961, Ser. No. 128,379
3 Claims. (Cl. 106—194)

1. A cellulose ester plastic composition consisting essentially of (1) a cellulose organic acid ester selected from the group consisting of cellulose acetate, cellulose propionate, cellulose butyrate, cellulose acetate-propionate and cellulose acetate-butyrate, and (2) manganous salicylate at an ultraviolet light stabilizing concentration.

3,100,718

COPPER BORATE ANTIFOULING PIGMENT

Edward J. Dunn, Jr., Port Washington, and Martin Kushner, Long Island City, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 30, 1961, Ser. No. 120,934
4 Claims. (Cl. 106—308)

1. A composite pigment particle consisting essentially of a silica core and a coating of copper borate, said silica analytically present within the range of from 25% to 75%.

3,100,719

ANTIFOULING PIGMENT

Edward J. Dunn, Jr., Port Washington, and Martin Kushner, Long Island City, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 30, 1961, Ser. No. 120,935
7 Claims. (Cl. 106—308)

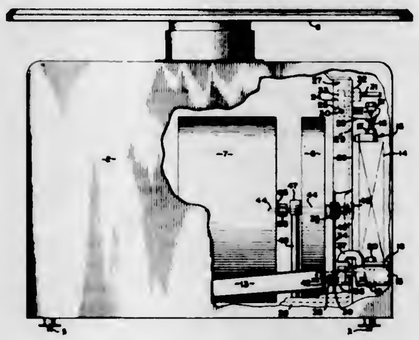
1. A composite pigment particle consisting essentially of a silica core and a coating of copper oxide, said silica analytically present within the range of from 25% to 75%.

3,100,720

WEIGHING SCALE

Frederick C. Carroll, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio

Filed Oct. 4, 1961, Ser. No. 142,844
6 Claims. (Cl. 177—37)



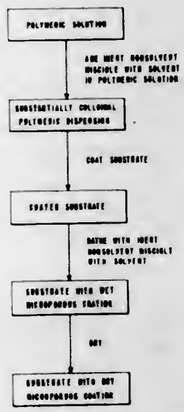
1. A weighing scale comprising, in combination, load measuring means, indicating means having a portion operatively connected to the load measuring means, the indicating means including a first part for indicating load measured by the load measuring means and a second part, separable from the first part and readily replaceable in the scale, for indicating values computed in accordance with load measured by the load measuring means and predetermined factors, and means for so adjusting the scale relative to said first part that the scale weighs correctly.

3,100,721

PROCESS FOR PRODUCING MICROPOROUS FILMS AND COATINGS

Ellsworth Kissam Holden, Newburgh, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 21, 1961, Ser. No. 90,815
9 Claims. (Cl. 117—135.5)



1. An improved process for porducing microporous films and coatings which comprises

(1) forming a polymeric solution having as essential constituents a polymeric component and solvent for said polymeric component, said polymeric component having a maximum elastic deformation strength, under the drying conditions of step (5) below, of at least 100;

(2) adding to said polymeric solution, at a temperature at which a colloidal dispersion will form, an inert liquid, which is a non-solvent for said polymer but which is miscible with said solvent, until about the point at which a substantially co'loidal polymeric dispersion is formed, said substantially colloidal dispersion having a viscosity greater than about 1 poise and a polymer concentration of greater than about 7% by weight;

(3) coating said dispersion onto a substrate;

(4) directly bathing the resultant coating, at about the temperature at which the colloidal dispersion was formed, with a liquid which is a non-solvent for said polymeric component and miscible with said solvent to remove the solvent; and

(5) drying the resulting product.

3,100,722

LINEAR POLYESTER FILMS HAVING SURFACES SUITABLE FOR WRITING THEREON

Otto Herrmann and Hermann Müller, Wiesbaden, and Markus Seibel, Mainz, Germany, assignors, by mesne assignments, to Kenffel & Esser Co., Hoboken, N.J.

No Drawing. Filed Mar. 1, 1960, Ser. No. 1,957
Claims priority, application Germany Mar. 3, 1959
11 Claims. (Cl. 117—138.8)

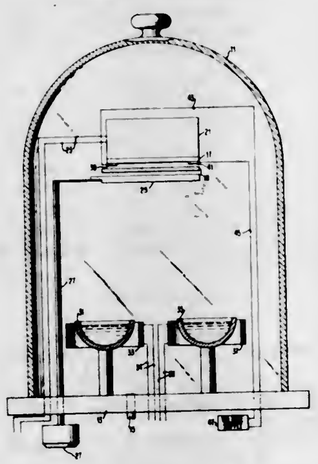
9. The process of making a surface of a biaxially stretched and heat-set film of polyethylene terephthalate receptive to pencil-markings which process comprises: coating said surface with a solution of a polyester made by esterification and polycondensation of a mixture of terephthalic acid, a dicarboxylic acid, and a dihydroxy alcohol having up to 10 carbon atoms, in an organic solvent, and drying said coating, said solution having suspended in itself an inorganic abrasive material including essentially such substance selected from the group consisting of silicon dioxide, aluminum oxide, titanium oxide, silicon carbide, talcum, chalk and glass, said abrasive material having an average particle size below 30 μ.

3,100,723

PROCESS OF MAKING MULTI-LAYER DEVICES

Donald S. Weed, Hurley, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 29, 1960, Ser. No. 52,452
3 Claims. (Cl. 117—217)



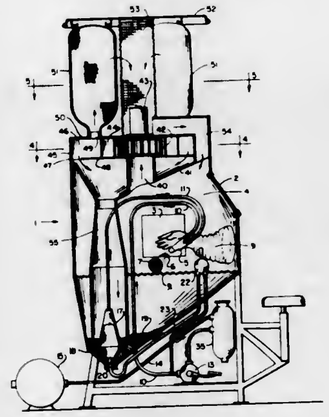
1. A process of producing thin film electrical device which comprises the steps of depositing a first electrically conductive thin film onto a substrate, depositing an insulative thin film over said first thin film, depositing a second electrically conductive thin film over said insulative film, and applying a potential between said first and said second electrically conductive thin films during the deposition of said second electrically conductive thin film.

3,100,724

DEVICE FOR TREATING THE SURFACE OF A WORKPIECE

Charles F. Rocheville, Torrance, Calif., assignor to Microseal Products, Inc.

Filed Sept. 22, 1958, Ser. No. 762,481
9 Claims. (Cl. 118—308)



6. A device for treating the surface of a workpiece comprising a nozzle, said nozzle having a convergent-divergent contour terminating in an open exit aperture for discharging directly therefrom against an adjacent object, means for supporting a workpiece adjacent said exit aperture of said nozzle, a source of compressed air, conduit means connecting said source of compressed air to said nozzle for discharge from said nozzle, said air being under pressure sufficient to create a supersonic velocity upon such discharge, a source of air and finely divided coating material, said last-mentioned source of air being at a relatively lower pressure than said first-mentioned source of air, said source of air and coating material being connected to said nozzle for mixing therein with said first-mentioned source of air, whereby when said nozzle exit aperture is directed toward the surface of a workpiece, said finely divided coating material is caused to strike said workpiece at a supersonic velocity and a quantity of said material adheres to said surface and forms a coating thereon.

3,100,725

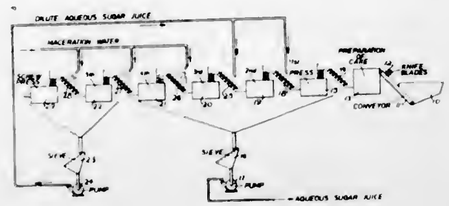
EXTRACTION OF SUGAR JUICE WITH SCREW PRESS

Stanley Gordon Smart, London, England, assignor to Rose, Downs & Thompson, Limited, Hull, Yorkshire, England

Filed Oct. 13, 1959, Ser. No. 846,117
Claims priority, application Great Britain Oct. 15, 1958
5 Claims. (Cl. 127—43)

1. A process for the extraction of sugar juice from sugar cane comprising, cutting the sugar cane into appropriate lengths, crushing the cut lengths of cane to rup-

ture a substantial proportion of the cells containing sugar and, passing the prepared cane through at least one screw



press whereby to extract sugar juice from the crushed cane.

3,100,726

PROCESS FOR THE REMOVAL OF UNFIXED DEVELOPER POWDER FROM POWDERED ELECTRO-PHOTOGRAPHIC REPRODUCTION COATINGS

Martha Tomanek and Wilhelm Neugebauer, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed June 16, 1960, Ser. No. 36,688
2 Claims. (Cl. 134—7)

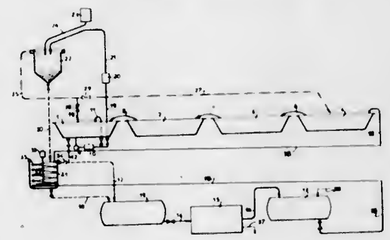
1. A process for the removal of unfixed powder developer from powdered electrophotographic reproduction coatings which comprises treating the coating with a mixture of finely divided kieselguhr and finely divided etherified cellulose.

3,100,727

METHOD AND APPARATUS OF AUTOMATICALLY CONTROLLING A SULFURIC ACID TREATMENT PLANT FOR FERROUS MATERIALS

Jean Louis Albert Labergère, Montreuil-sous-Bois, France, assignor to Societe O'Fakler & Cie, Montreuil-sous-Bois, France, a company of France

Filed June 24, 1960, Ser. No. 38,611
Claims priority, application France June 26, 1959
11 Claims. (Cl. 134—13)



1. Method of controlling a sulfuric acid treatment plant for ferrous materials, which comprises passing said ferrous materials through a bath of sulfuric acid solution, withdrawing a portion of said solution, and precipitating ferrous sulfate monohydrate therefrom, separating the monohydrate precipitate and recycling the clarified solution into said bath, withdrawing a further portion of the solution from said bath and dissolving at least part of the separated monohydrate therein to increase the ferrous content of said further portion of the solution, thereby generating heat, exposing said further portion of the solution to crystallizing conditions for precipitating iron sulfate heptahydrate therefrom, separating said heptahydrate to provide a regenerated solution, reheating said regenerated solution, and recycling the reheated regenerated solution into said bath.

3,100,728

PROCESS AND COMPOSITION FOR PHOSPHATIZING METALS

William J. Vullo, Tonawanda, N.Y., and Donald H. Campbell, Niagara-on-the-Lake, Ontario, Canada, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,126
20 Claims. (Cl. 148—6.15)

1. A substantially water-free composition of matter suitable for phosphatizing metals consisting essentially of a chlorinated hydrocarbon containing a minor proportion of a monohydroxy alcohol selected from the group consisting of aliphatic monohydroxy alcohols, alicyclic monohydroxy alcohols, and mixtures thereof, a phosphatizing proportion of orthophosphoric acid, and an inhibiting proportion of glacial acetic acid equivalent to between about 0.1 and about 0.5 percent by weight of said composition.

3,100,729

STAINLESS STEEL PRODUCT AND METHOD

George N. Goller, Towson, Md., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 27, 1961, Ser. No. 105,878
15 Claims. (Cl. 148—12.3)

1. In the production of stainless steel of good fatigue resistance, the art which comprises providing steel not exceeding ½" thickness and essentially consisting of about 16% to 26% chromium, about 6% to 22% nickel, carbon up to about .25% maximum, with remainder substantially all iron; cold-reducing the same, without benefit of intermediate anneal in an amount exceeding about 80% and giving a tensile strength of about 250,000 p.s.i. or more; and then tempering the same at a temperature of about 1200° F. to 1750° F. for about 1/10 to 30 minutes to give an elongation of about 20% to 40% with a tensile strength of about 110,000 to 140,000 p.s.i. and fine equi-axed grain structure.

3,100,730

METHOD FOR REDUCING THE IMPURITY RESISTIVITY OF SODIUM

Richard F. Post, Walnut Creek, and Clyde E. Taylor, Livermore, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Dec. 29, 1960, Ser. No. 79,477
3 Claims. (Cl. 148—13)

3. A method for enhancing the conductivity of sodium comprising placing said sodium in a heat bath, maintaining said heat bath at a controlled temperature slightly below the melting point of sodium, maintaining the sodium within said bath for a period of at least two days, cooling said sodium to temperatures approaching 0° K., and passing an electric current through said sodium to realize said enhanced conductivity.

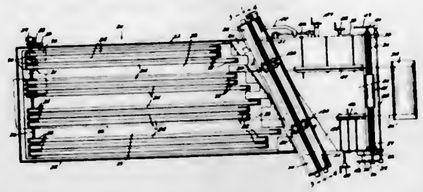
3,100,731

METHOD AND APPARATUS FOR JOINING SHEET MATERIAL

Wilhelm Brey, Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Mar. 15, 1957, Ser. No. 646,459
26 Claims. (Cl. 156—157)

14. The method of butt splicing the edges of two lengths of rubberized fabric comprising, positively clamping one edge along spaced segments, positively clamping the other along spaced segments, and bringing the two edges, while thus clamped, forcibly together with the positively clamped segments of one edge engaging the unclamped segments of the other edge.



3,100,732

PROCESS OF BLEACHING WOOD PULP BY COMBINED TREATMENT WITH PEROXIDE AND AN ALKALI METAL BOROHYDRIDE

George E. Smedberg, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,182
6 Claims. (Cl. 162—78)

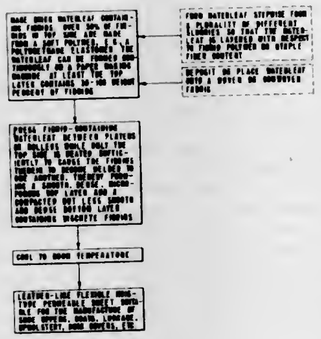
1. A method of bleaching wood pulp comprising subjecting the pulp to the combined and simultaneous action of peroxide and an alkali metal borohydride.

3,100,733

POLYMERIC SHEET MATERIAL AND METHOD OF MAKING SAME

Robert Wendel Bundy, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,537
10 Claims. (Cl. 162—108)



1. A leather-like, flexible, moisture-permeable polymeric sheet material comprising

(*a*) a layer which contains fibrids in intimately interlaced matted form, said layer having a fibrid content of 50–100 weight percent and a complementary non-adhesive staple fiber content of up to about 50 weight percent;

(*b*) an exposed surface of said layer being microporous and relatively smooth and dense, the fibrids therein being integrally joined to one another, and at least 51 weight percent of the fibrids therein being composed of a polymer having an initial modulus below 0.9 gram per denier;

(*c*) the other surface of said layer being substantially less smooth and dense than said exposed surface, and the fibrids therein being substantially discrete.

3,100,734

FURNACE COMBUSTION CHAMBER

John P. Rex, Jr., Birmingham, Thomas B. Arrington, Detroit, and Donald J. Pellegrino, Royal Oak, Mich., assignors to Rex Roto Corporation, Walled Lake, Mich., a corporation of Michigan

Filed Sept. 23, 1960, Ser. No. 58,087
4 Claims. (Cl. 162—152)



1. A combination chamber, said chamber comprising a fibrous refractory material, said material being formed into an enclosure, said enclosure having a substantially uniform wall thickness, said wall thickness being a fractional part of an inch, said enclosure having a burner opening, said enclosure having a burned gas outlet, said fibrous material as formed into said enclosure being held in a stable self supporting structural furnace combustion chamber form by an inorganic refractory colloidal binder.

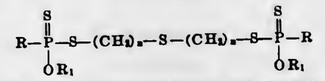
3,100,735

BISORGANOPHOSPHORUS ESTERS AND THEIR PREPARATION

Karoly Szabo, Yonkers, N.Y., and John G. Brady, Campbell, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 7, 1961, Ser. No. 150,625
8 Claims. (Cl. 167—22)

5. A method of killing pests which comprises applying to a pest habitat a small but effective amount of a bisorganophosphorus ester having the following general formula:



wherein R and R_1 represent lower alkyl radicals and *n* is an integer of from 1 to 2.

3,100,736

METHOD FOR THE PRODUCTION OF HIGHLY PURIFIED CALLICREIN PREPARATIONS

Eugen Werle and Ivar Trautschold, Munich, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,087
Claims priority, application Germany Mar. 25, 1960
3 Claims. (Cl. 167—74)

1. Method for the production of highly purified callicrein preparations characterized by adsorbing callicrein from its solutions on a basically substituted cellulose selected from the group consisting of diethyl aminoethyl cellulose, triethyl aminoethyl cellulose, and p-aminobenzyl cellulose, washing the adsorbate with a highly dilute buffered electrolyte solution wherein said electrolyte is selected from the group consisting of sodium chloride, potassium chloride and ammonium chloride until a nearly protein-free filtrate is obtained extracting the active substance from the adsorbate with a buffered solution containing at least 1% of a member selected from the group consisting of sodium chloride, potassium chloride and ammonium chloride electrolyte.

3,100,737
METHOD OF PREPARING A PLASMA PROTEIN SOLUTION FREE OF ACTIVE HEPATITIS VIRUS AND PRODUCT PRODUCED THEREBY

Wilhelm Auerswald, Wachringerstrasse 22, Vienna IX, Austria, and Johann Eibl, Webilebengasse 1, Vienna IV, Austria

Filed Nov. 2, 1961, Ser. No. 149,663
Claims priority, application Austria Feb. 5, 1958
5 Claims. (Cl. 167—74)

1. A method of preparing a heat-stable plasma protein solution free of active hepatitis virus from human plasma comprising adding to the plasma a soluble inorganic neutral salt and a monobasic fatty acid selected from fatty acids having 12 to 18 carbon atoms, heating the mixture to a temperature of about 55° C. at a pH value of about 5.2, precipitating thereby all protein fractions being unstable at said temperature, removing the precipitate, separating the heat-stable proteins from the inorganic neutral salt contained in the remaining solution, treating the separated heat-stable proteins to obtain a solution having a content of 2 to 10 percent of proteins, adjusting the pH value of this solution to 7.0 to 7.2, and treating the heat-stable protein fractions contained in the resulting solution in the presence of a stabilizer at a temperature of about 60° C. during a period of about 10 hours.

3,100,738
UNIFORM RELEASE PROCESS

Chester John Cavallito, Decatur, Ill., assignor to Neisler Laboratories, Inc., Decatur, Ill., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 396,751, Dec. 7, 1953. This application Aug. 9, 1961, Ser. No. 130,261
1 Claim. (Cl. 167—82)

The process which comprises: orally administering a therapeutically active agent in the form of a tannic acid salt thereof in combination with a non-toxic, polyanionic, high-molecular-weight, polycarboxylic acid-containing material of which the carboxylic acid radicals compete with the materials of the gastrointestinal tract for the active ingredient, whereby a substantially uniform release-rate of the active ingredient into the system is achieved.

3,100,739
PROCESS FOR DYEING HUMAN HAIR WITH WATER SOLUBLE, QUATERNARY AMMONIUM CONTAINING DYES

Wilhelm Jakob Kaiser and Peter Berth, Dusseldorf-Holthausen, Germany, assignors to Therachemie chemisch therapeutische Gesellschaft m.b.H., Dusseldorf, Germany

No Drawing. Filed Feb. 18, 1959, Ser. No. 793,986
Claims priority, application Germany Feb. 25, 1958
1 Claim. (Cl. 167—88)

A process for the dyeing of human hair, which comprises applying to said hair for approximately 15 to 30 minutes at a temperature of substantially 35° C. an aqueous solution of water-soluble dyestuffs containing quaternary ammonium groups, being free from acidic groups and having a cation which imparts dyestuff characteristics; said quaternary ammonium groups containing a homocyclic aromatic radical, an amino group thereon, in orthoposition to said amino group a nitro group, and in paraposition to said amino group the quaternary radical which is bound to said aromatic radical by a member selected from the group consisting of $-NH-CO(CH_2)_n$ and $-NH-CH_2(CH_2)_n$, wherein n denotes a whole number ranging from 1 to 20; said dyestuffs being selected from the group consisting of monoazo dyes, thiazine dyes, and dyes derived from nitrophenylene diamine.

3,100,740
INTERRUPTED STARCH HYDROLYSIS

Robert W. Bond, Darien, Conn., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware

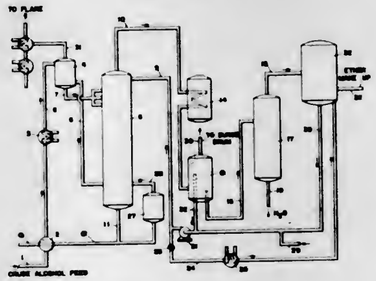
No Drawing. Filed July 17, 1961, Ser. No. 124,345
1 Claim. (Cl. 195—31)

A process for preparing dextrose liquors high in dextrose content which comprises mixing an enzyme preparation having glucamylase activity and a starch hydrolyzate having a density within the range of 39° to about 45.5° Baumé and a D.E. value within the range of about 9 to about 70%, whereby the enzyme remains in a substantially dormant state; and thereafter, when it is desired to use the mixture, diluting said mixture to a concentration substantially less than 39° Baumé and allowing the enzyme to convert the high molecular weight material present in said hydrolyzate to dextrose.

3,100,741
ALCOHOL DEHYDRATION PROCESS

Archie Edward Rogillio, Baker, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 7, 1957, Ser. No. 676,790
5 Claims. (Cl. 202—42)

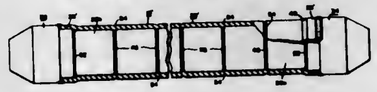


1. In a method for dehydrating isopropanol wherein crude aqueous isopropanol is fractionally distilled in a fractionation zone at elevated temperatures and pressures and in the presence of large amounts of ether and wherein a gaseous ether-water mixture is recovered overhead, condensed and separated into ether and aqueous phases and wherein the ether phase is separated in a separation zone from said aqueous phase and recycled to the fractionation zone as either reflux, the improvement which comprises adding to said ether reflux anhydrous ether, said anhydrous ether being in addition to said recycled ether phase and constituting an amount of from 0.05 to 5.0 volume percent based on said recycled ether phase to permit a substantially constant high crude isopropanol feed rate.

3,100,742
FUEL ELEMENT FOR A NEUTRONIC REACTOR

Robert K. McGeary and Fitz R. Winslow, Pittsburgh, Pa., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 17, 1958, Ser. No. 721,776
1 Claim. (Cl. 204—154.2)



A method for producing a fuel element for a neutronic reactor, said method comprising the steps of inserting a plurality of UO_2 fuel pellets within an elongated stainless steel cladding tube, attaching an end plug to each end of said tube, the length of said tube and the manner of attaching said end plugs being such that no void space appears between either of said end plugs and its adjacent fuel pellet nor between adjacent fuel pellets, longitudinally stretching said cladding tube by pulling in opposite directions on each end plug to separate each of said end plugs from its adjacent fuel pellet and each of said fuel pellets from adjacent fuel pellets, further stretching the wall of said cladding tube to cause necking of the cladding tube so that the localized necking portion of the wall of the cladding tube engages each of said fuel pellets independently to maintain said separation, and continuing said stretching until said separation is equivalent to the amount of differential thermal expansion between said fuel pellets and said cladding tube at the temperature of operation of said fuel element.

3,100,743
SYSTEM FOR SUPPORTING NUCLEAR FUEL IN ATOMIC REACTORS

Michel Aubert, Paris, Sebastien Foglia, Verrieres-le-Buisson, and Roland Roche, Clamart, France, assignors to Commissariat a l'Energie Atomique, Paris, France

Filed Nov. 19, 1959, Ser. No. 854,155
Claims priority, application France Nov. 22, 1958
5 Claims. (Cl. 204—193.2)



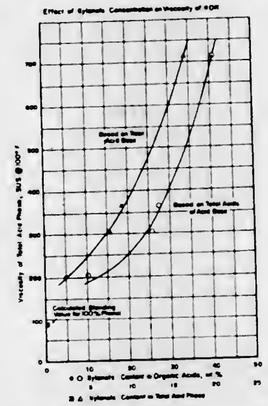
1. In a support for fuel elements in a heterogeneous atomic pile having a solid moderator structure with vertical ducts therein, a hollow tubular armature section within a duct, a fissionable fuel element spaced from and within said armature section, a cylindrical piece within and spaced from said armature section adjacent the lower end thereof, wire elements extending from said piece to said armature section, said fuel element resting on said piece, said flexible wire elements being the sole support for the weight of said fuel elements and of said piece, and means for centering said fuel element in said armature section.

3,100,744
MAINTAINING THE VISCOSITY OF SOLUTIZER SALT SOLUTIONS

Bruce C. Phenix, Jr., Dorriss H. Merchant, and Owen R. Mitchell, Beaumont, Tex., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed June 2, 1961, Ser. No. 114,493
7 Claims. (Cl. 208—234)

1. In the treatment of hydrocarbon mixtures containing mercaptans wherein a hydrocarbon mixture containing mercaptans is contacted with a treating agent having the capabilities of extracting mercaptans and comprising a cresylate phase having a viscosity at 100° F. of about 300 to about 400 SUS to obtain a fouled treating agent, regenerating said cresylate phase by steam distillation, and extracting mercaptans from hydrocarbon mixture, and wherein the viscosity at 100° F. of said cresylate phase after aging by use increases to greater than about 700 SUS at 100° F. and the xylenol concentration in the neutralizable organic material in the aged cresylate phase increases to more than 15 percent by weight, the improvement which comprises diluting said cresylate phase with

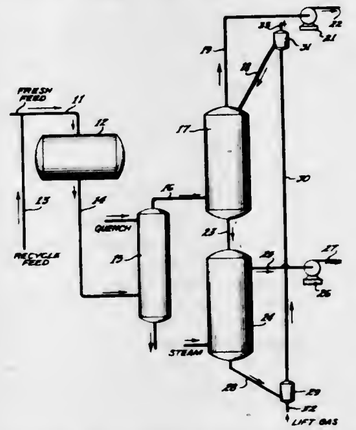


at least one phenol having a concentration of xylenols less than that of the aforesaid aged cresylate phase to provide a modified treating agent the cresylate phase of which has a viscosity at 100° F. not greater than about 600 SUS when in equilibrium with 50° Baumé alkali metal hydroxide and a xylenol content not in excess of 15 percent by weight of the neutralizable organic material.

3,100,745
TREATMENT OF DEHYDROGENATION VAPOR EFFLUENT

Bent Busch-Petersen, Secane, Pa., and Robert G. Craig, Wilmington, Del., assignors to Air Products and Chemicals, Inc., a corporation of Delaware

Filed Sept. 2, 1959, Ser. No. 837,750
8 Claims. (Cl. 208—310)



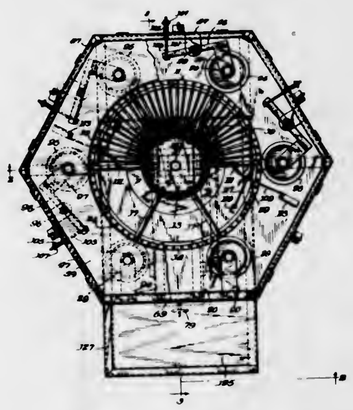
1. The method of recovering unsaturated C_3–C_5 hydrocarbons from a dehydrogenator vapor effluent having a low discharge pressure, below about 20 p.s.i.g., and consisting predominantly of a mixture of saturated and unsaturated C_3–C_5 hydrocarbons contaminated by relatively small amounts of hydrogen and C_1–C_2 hydrocarbons,

which method comprises the steps of: quenching said vapor effluent to a temperature in the range of about 100–500° F.; contacting said quenched vapor effluent with a compact mass of granular adsorbent material to thereby selectively adsorb a fraction of said effluent containing the substantial major portion of said unsaturated hydrocarbons as well as some of said saturated hydrocarbons, said quenching and adsorbing treatments being carried out at pressures slightly below said discharge pressure and without intermediate pressuring; withdrawing from said mass of adsorbent material the unadsorbed fraction of said effluent, comprising a fuel gas mixture consisting predominantly of said hydrogen and C_1–C_2 hydrocarbons together with the remaining saturated hydrocarbons; compressing said unadsorbed fraction to the extent necessary to render it available as fuel gas; passing a hot inert gaseous material through said compact mass to strip said granular material of the selectively adsorbed hydrocarbons; withdrawing the total vapor effluent of said stripping step and separately compressing the same to a pressure above about 65 p.s.i.g. sufficient to condense the heavier hydrocarbon components; and recovering the desired unsaturated C_3–C_5 hydrocarbons from the liquefied product of such condensation.

3,100,746
SCREENING APPARATUS

Michael O. Holowaty, Gary, Ind., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware

Filed Apr. 20, 1960, Ser. No. 23,467
18 Claims. (Cl. 209—304)

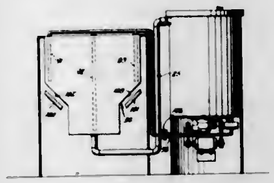


1. Centrifugal screening apparatus comprising an inverted frusto-conical rotatable basket having a lower article support surface, an upper ring-like member having rod-locating and guiding means circumferentially spaced thereon at substantially uniform circumferential distances, said lower article support surface having a plurality of circularly located and substantially uniformly spaced rod-receiving recesses, a plurality of spaced support rods each anchored at one end in said recesses and at the other end to said ring-like member for maintaining fixed spacing between said lower article support surface and said ring-like member, said article support surface also having additional rod-receiving recesses substantially uniformly spaced and each located along a circular path thereon, a screening rod loosely supported at one end in each of the last-named rod-receiving recesses and at the other end in the ring-like member so as to be freely movable therein for each of lateral, radial, and longitudinal movement, a central support for said lower article support surface, said central support being adapted to be turned for rotating said basket whereby due to centrifugal force material loaded within the basket with its rotation is moved outwardly and through the space between adjacent rods with the removed particle size increasing as articles are ejected between the rods in a direction toward the ring-like member.

3,100,747
FILTERING SYSTEMS

William R. Hall, 2416 Colcord St., Waco, Tex.

Filed Jan. 6, 1958, Ser. No. 707,178
8 Claims. (Cl. 210—167)



2. A filter system for a frying kettle comprising: a closed chamber having an inlet at its upper end and an outlet at its lower end; means for connecting the inlet to the lower portion of the kettle, said inlet being disposed above the upper level of the liquid in the kettle; pump means connected to the outlet of the chamber for reducing the pressure within the container whereby liquid may be drawn from the kettle through the inlet into the chamber, said pump means being adapted to discharge fluids from the chamber back into the kettle; filter means in the chamber interposed between the inlet and the outlet; a receptacle disposed in said container; and means in said chamber below said inlet and between said inlet and said filter means for separating large particles of foreign matter from the liquids drawn through the inlet and depositing said foreign matter in said receptacle out of contact with liquids being circulated through the container from the inlet to the outlet thereof, said separating means including a perforate receiving plate on which the fluids from the inlet are discharged and a wiper blade movable over said receiving plate to brush the particles of foreign matter into the receptacle, said receiving plate being perforated and having outer edges extending over said receptacle, said liquids draining through said perforations, said food particles dropping over the edge of the receiving plate into the receptacle.

3,100,748
LUBRICATING COMPOSITIONS

Harry F. Richards, Concord, and Stephen A. Herbert, Jr., Martinez, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Nov. 10, 1959, Ser. No. 851,978
7 Claims. (Cl. 252—46.7)

1. An improved mineral oil composition comprising a major amount of mineral oil and from about 0.1% to 10% by weight of a copolymer of an acrylate ester of an acrylic acid and a C_{8-18} alkanol and a sulfur-containing acrylate ester having the formula

$$CH_2{=}C(R''')-COOR'-S-R''-Y$$

wherein R′ and R″ are C_{2-18} alkyl radicals, R‴ is selected from the group consisting of hydrogen and a methyl radical and Y is selected from the group consisting of —OH, —COOH, —C≡N and —SH radicals, in the mol ratio of from 1:10 to 10:1 respectively, said copolymer having a molecular weight of from about 5000 to about 1,000,000.

3,100,749
LUBRICATING COMPOSITIONS

Eugene Wittner, Florissant, Mo., and Irving Rozalsky, East Alton, Ill., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 16, 1960, Ser. No. 29,127
8 Claims. (Cl. 252—49.9)

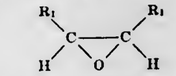
1. An improved corrosion resistant and detergent hydrocarbon lubricating oil composition comprising a major amount of hydrocarbon lubricating oil and from 2% to 10% by weight total of a copolymer mixture of (A) and (B) of which copolymer (A) comprises 10–25% by weight and copolymer (B) comprises 90–75% by weight of the total polymer mixture and copolymer (A) is a copolymer of a mixture of 20–30% by weight of a vinylpyridine and 80–70% by weight of a C_{10-20} alkyl methacrylate having a molecular weight of 50,000 to 300,000 and a nitrogen content of from 2.5% to 3.5% and (B) is a copolymer of a vinylpyridine and a mixture of two dissimilar acrylates one being a C_{10-20} alkyl methacrylate and the other being a C_{1-4} alkyl methacrylate which constitutes 10–30% by weight of the total acrylate mixture, the copolymer having a molecular weight of from 400,000 to 800,000 and a nitrogen content of from 0.3 to 1%.

3,100,750
PROCESS FOR POLYMERIZATION OF VICINAL EPOXIDES

Frederick E. Bailey, Jr., Charleston, Fred N. Hill, South Charleston, and John T. Fitzpatrick, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 26, 1958, Ser. No. 776,408
15 Claims. (Cl. 260—2)

1. A process which comprises contacting a 1,2-alkylene oxide having the following formula:



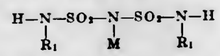
wherein each R_1, individually, is selected from the group consisting of hydrogen, haloaryl, a hydrocarbon radical free from ethylenic and acetylenic unsaturation, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms including both epoxy carbon atoms shown in the above formula; with from 0.01 to 5 weight percent, based on the weight of 1,2-alkylene oxide, of a catalyst selected from the group consisting of metal alcoholates and metal phenolates, the metal portion of both being of the group consisting of calcium, strontium, and barium; at a temperature in the range of from about 70° to 150° C.; and for a period of time sufficient to produce a polymer.

3,100,751
POLYMERS FROM CONDENSATIONS OF FORMALDEHYDE WITH SULFAMIDES

Herbert Q. Smith, Trenton, N.J., and Francis L. Scott, Elkins Park, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

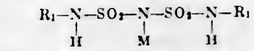
No Drawing. Filed Feb. 10, 1960, Ser. No. 7,750
19 Claims. (Cl. 260—2.2)

1. A polymer obtained by refluxing at a pH between about pH 7 and pH 11 an aqueous solution comprising at least a stoichiometric amount of formaldehyde with an imidodisulfamide having the structure

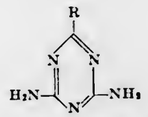


where R_1 is a radical selected from the group of (*a*) hydrogen and (*b*) primary and secondary alkyl radicals containing from one to eighteen carbon atoms and M is selected from the group consisting of hydrogen and an alkali metal.

12. The process of making novel polymers which comprises refluxing in aqueous solution and at a pH between about 7.0 and about 11, a mixture of formaldehyde, an imidodisulfamide of structure



where R_1 is a member selected from the group of hydrogen, lower primary alkyl and lower secondary alkyl radicals and M is an alkali metal, and a 1,3,5-triazine of structure



wherein R is selected from the group of lower alkyl, aryl, and



radicals, R′ and R″ are selected from the group of hydrogen and lower alkyl radicals, the amount of formaldehyde taken being between 2 and 25 moles per mole of triazine.

3,100,752
FLEXIBLE URETHANE FOAMS AND A PROCESS FOR PRODUCING SAME

Bernard A. Dombrow, Teaneck, N.J., assignor to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 26, 1957, Ser. No. 698,936
23 Claims. (Cl. 260—2.5)

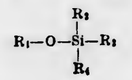
1. A flexible urethane foam produced by mixing a polyester prepolymer with water and an activator therefor in the presence of from about 0.1% to about 3.0% based upon the weight of said prepolymer, of at least one compound selected from the group consisting of trialkyl phosphates, trialkyl borates, and trialkyl phosphites in which said alkyl substituent contains from about 2 to 12 carbon atoms, said polyester prepolymer being the reaction product of an organic polyisocyanate and a polyester which is the reaction product of a mixture of at least one dihydric alcohol, at least one dicarboxylic acid and up to minor quantities of at least one polyhydric alcohol containing at least three hydroxyl groups, said polyester having a hydroxyl number between about 40 to 80 and a relatively low acid number, said polyisocyanate and polyester being present in such quantities to provide the polyisocyanate-polyester reaction product with a ratio of isocyanate groups to hydroxyl groups of 1.05 (NCO):1(OH) to 6(NCO):1(OH).

3,100,753
COMPOSITION COMPRISING A MIXTURE OF POLYETHYLENE AND AN ALKYLALKOXYSILANE

Framroze J. Spencer, Dickinson, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 21, 1958, Ser. No. 756,290
8 Claims. (Cl. 260—29.1)

1. A plastic composition comprising polyethylene and from about 0.05% to about 5% by weight of said polyethylene of a silane of the formula



wherein R_1 and R_2 are alkyl radicals containing from 1 to 8 carbon atoms and R_3 and R_4 are chosen from the group consisting of alkyl and alkoxy radicals containing from 1 to 8 carbon atoms.

3,100,754

POTENTIALLY REACTIVE UREA-FORMALDEHYDE ADHESIVE SYSTEM

Clifford C. Booth and Robert B. Dean, Bainbridge, N.Y., assignors to The Borden Company, a corporation of New Jersey

No Drawing. Filed May 23, 1958, Ser. No. 737,224
2 Claims. (Cl. 260—29.4)

1. An adhesive composition for bonding wood under heat and pressure comprising a thermosetting water soluble aminoplast resin, which is a condensation product of 1.6–2.5 moles of formaldehyde with a material selected from the group consisting of (1) 1 mole of urea, (2) 0.1 mole of melamine, and (3) mixtures thereof, a hardener therefor in the proportion of about 7–23 parts for 100 parts dry weight of the resin, the hardener consisting essentially of approximately 10%–50% of urea, 2.5%–11% of ammonia in aqueous solution and ammonium nitrate in amount to make the total 100%, and water, the total water content being adequate to dissolve the said resin and hardener.

3,100,755

COATING COMPOSITION COMPRISING A VINYL ACETATE UNSATURATED CARBOXYLIC ACID COPOLYMER AND AN ORGANIC BASE DISSOLVED IN AN ORGANIC SOLVENT AND ARTICLE THEREWITH

Joseph R. Ehrlich, 1793 Riverside Drive, New York, N.Y.

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,703
23 Claims. (Cl. 260—29.6)

13. A liquid coating composition which is a lacquer characterized in that the film provided thereby upon evaporation of the solvent thereof is insoluble in water and after contact with water is strippable by mechanical action from a surface protected thereby, said composition comprising, as the lacquer solvent, a volatile organic solvent containing less than 5% water, a resin dissolved in said solvent and an organic nitrogen base dissolved in said solvent, said resin being a co-polymer of vinylacetate and an unsaturated carboxylic acid containing a total of four carbon atoms and selected from the group consisting of maleic, fumaric, crotonic, and isocrotonic acid, and being non-hydrolyzable in water, said resin containing from 95% to 99.5% vinylacetate groups and from 0.5 to 5% of the carboxylic acid groups, said nitrogen base being 0.5 part to 10 parts by weight to 100 parts by weight of said co-polymer, said organic nitrogen base being substantially non-volatile at 20° C. to 30° C. under normal atmospheric pressure of 760 millimeters of mercury, and being soluble in said solvent in amount of at least 1 part of nitrogen base in 100 parts of solvent.

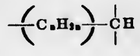
3,100,756

COMPOSITION CONSISTING ESSENTIALLY OF A POLYGLYCIDYL ETHER AND A LIQUID DIEPOXIDE AND CURED PRODUCT

John S. Fry, Wayne, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 15, 1958, Ser. No. 728,509
17 Claims. (Cl. 260—30.4)

1. A composition consisting essentially of a polyglycidyl ether of a polyphenylol, said phenylol having $2x+1$ polyphenylol groups in its molecule which are linked together by x number of unsaturated aldehyde residues having the general formula



wherein n is a number from 2 to 6 and x is a number from 1 to 3, and said polyglycidyl ether having an epoxy equivalency of greater than 2; and a liquid diepoxide having a viscosity not exceeding about 10,000 centipoises at 25° C., said liquid diepoxide being present in an amount of about 12 percent by weight to about 50 percent by weight, based on the weight of the said polyglycidyl ether.

3,100,757

POLYMERIZATION OF ALIPHATIC MONOMERS IN PRESENCE OF AROMATIC-OLEFIN COPOLYMER AND RESULTING PRODUCT

William H. Smyers, 229 Sylvania Place, Westfield, N.J., and David W. Young, 18508 Clyde Ave., Homewood, Ill.

No Drawing. Continuation of application Ser. No. 309,378, Sept. 12, 1952. This application June 3, 1959, Ser. No. 817,729
13 Claims. (Cl. 260—45.5)

5. Process which comprises dissolving about 5 to 50% by weight of a copolymer of about 10–60% by weight of a polymerizable mono-olefinic aromatic compound selected from the group consisting of hydrocarbons and chlorostyrenes, and about 90–40% of a mono-olefin of 2 to 8 carbon atoms, having an intrinsic viscosity above 0.5 and having an iodine number less than 10, in 50 to 95% by weight of a compatible heat polymerizable monomer comprising at least 74% by weight of an unsaturated aliphatic compound selected from the group consisting then heating the resultant mixture at about 20°–125° C. to effect polymerization of said heat-polymerizable monomer in situ in the presence of said aromatic-olefin copolymer.

3,100,758

VINYL HALIDE COPOLYMERS WITH OXIRANE-CONTAINING SIDE GROUPS HAVING IMPROVED HEAT STABILITY

Abraham Ravve, Chicago, and Joseph T. Khamis, Brookfield, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,099
16 Claims. (Cl. 260—45.5)

1. The method of forming vinyl halide copolymers with oxirane-containing side groups which comprises heating an organic solvent solution containing a vinyl halide polymer, an oxirane-containing component selected from the class consisting of glycidyl acrylate, glycidyl methacrylate, glycidyl vinyl ether, butadiene monoxide, and dipentene monoxide, and a free radical polymerization catalyst, at a temperature of 60 to 100 degrees C., thereby effecting bonding of the said component as grafted branches upon the vinyl halide polymer as a backbone, and effecting polymerization of the said component in extension of the grafted branches.

3,100,759

METHODS OF PREPARING ELASTOMERS OF THE POLYURETHANE TYPE

Gabriel Xavier Roger Boussu, Chamalleres, and Louis Pierre Francois Andre Neuville and Jean-Marie Massoubre, Clermont-Ferrand, France, assignors to Michelin & Cie, Clermont-Ferrand, France

No Drawing. Filed June 23, 1960, Ser. No. 38,128
Claims priority, application France June 26, 1959
10 Claims. (Cl. 260—77.5)

1. The process for the preparation of a stable di-terminally unsaturated branched chain polyurethane elastomer which comprises the steps of (1) mixing and heating at a temperature from about 70° C. to about 90° C. for from about 10 to about 60 minutes (*a*) a saturated polymeric dihydroxy compound having a molecular weight of 750 to 10,000, (*b*) an organic diisocyanate, and (*c*) a

saturated bifunctional compound having a molecular weight below about 250 selected from the group consisting of water, diols, diamines, amino-alcohols and dicarboxylic acids thereby forming a homogenized liquid mixture of (*a*), (*b*) and (*c*) and further heating said homogenized liquid mixture at a temperature of about 120° C. for from about 5 to about 10 hours thereby forming (*d*) a branched chain polyurethane elastomer having from 1 to 17 branched chains and having at substantially all terminal portions thereof free isocyanate groups, and (2) reacting by thoroughly mixing at a temperature from about 50° C. to about 60° C. said (*d*) branched chain polyurethane elastomer with an equivalent amount of (*e*) a di-ethylenically unsaturated compound which is monofunctional with respect to isocyanate having the formula



where Q is a saturated trivalent radical having the single terminal hydrogen atom H reactive with isocyanate and Z_1 and Z_2 are monovalent mono-ethylenically unsaturated aliphatic hydrocarbon radicals having up to 10 carbon atoms with the unsaturation being furnished by groups selected from the group consisting of vinyl and allyl to block the free isocyanate groups and thereby form (*f*) a stable di-terminal unsaturated branched chain polyurethane elastomer.

3,100,760

POLYMERIC ADHESIVES AND METHOD OF PREPARATION

Harold P. Brown, Maxie R. Walters, and John F. Anderson, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,393
15 Claims. (Cl. 260—86.1)

1. The adhesive composition which is a copolymer formed by polymerizing a monomeric mixture composed of two esters of acrylic acid, said monomeric mixture selected from the group consisting of:

(*a*) 40 to 60 weight percent of n-butyl acrylate and 40 to 60 weight percent of t-butyl acrylate,
(*b*) 20 to 50 weight percent of n-butyl acrylate and 50 to 80 weight percent of t-amyl acrylate,
(*c*) 70 to 80 weight percent of n-butyl acrylate and 20 to 30 weight percent of alpha-naphthyl acrylate.
(*d*) 70 to 80 weight percent of n-butyl acrylate and 20 to 30 weight percent of beta-naphthyl acrylate,
(*e*) 50 to 60 weight percent of n-butyl acrylate and 40 to 50 weight percent of phenyl acrylate, and
(*f*) 30 to 50 weight percent of 2-ethylhexyl acrylate and 50 to 70 weight percent of t-butyl acrylate.

3,100,761

POLYMERIZATION PROCESS WITH A CATALYST SYSTEM OF METAL HALIDE AND ORGANO-MAGNESIUM COMPOUND

Robert P. Fellman, Levittown, William E. Goode, Yardley, and Frederick H. Owens, Croydon, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 24, 1958, Ser. No. 750,563
15 Claims. (Cl. 260—88.7)

1. A process for preparing a polymer from at least one monomer from the class consisting of acrylonitrile, methacrylonitrile, and esters of acrylic acid and of methacrylic acid and an alcohol, the non-hydroxyl portion of which is free of groups having reactive hydrogen as determined by the Zerewitinoff test, which comprises first mixing together under substantially anhydrous conditions and before organo-magnesium compound is introduced a said monomer and a member of the class consisting of boron trifluoride, beryllium chloride, beryllium bromide, beryllium iodide, magnesium chloride, magnesium bromide, magnesium iodide, calcium chloride, calcium bromide, calcium iodide, strontium chloride, strontium bromide, strontium iodide, barium chloride, barium bromide, barium iodide, zinc chloride, zinc bromide, zinc iodide, cadmium chloride, cadmium bromide, cadmium iodide, aluminum chloride, aluminum bromide, and aluminum iodide, the said member being mixed in a proportion of 0.5 to 2.0 moles thereof per mole of said monomer, whereby a preformed complex is formed from said member in said monomer, and then bringing together under substantially anhydrous and anaerobic conditions at a temperature from −90° C. to 50° C. and in admixture with an organic solvent inert to organo-magnesium compounds the monomer containing said preformed complex and 0.001 to 0.1 mole of an organo-magnesium compound per mole of said monomer, said organo-magnesium compound being of the formula

$$R—Mg—Y$$

wherein R is one of the class consisting of alkyl, cycloalkyl, aralkyl, aryl, alkoxyaryl, alkenyl, aralkenyl, and alkynyl groups of at least two carbon atoms and Y is a member of the class consisting of chlorine, bromine, iodine, and a substituent defined by R, whereby monomer is converted to polymer.

3,100,762

POST-HALOGENATION OF HALOGEN CONTAINING RESINS

Joseph C. Shockney, Cleveland, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 10, 1961, Ser. No. 101,654
9 Claims. (Cl. 260—92.8)

1. A non-catalytic process for producing chlorinated polyvinyl chloride resin having a density within the range of from about 1.43 to 1.65 grams/cc. at 25° C. comprising passing chlorine gas into an agitated suspension of a minor proportion of a macro-granular polyvinyl chloride resin having substantially all its particles above 10 microns in diameter, said particles containing between about 5 and about 50% by volume of pore space, in a major proportion of an aqueous medium containing about 5% to about 25% by volume, based on the total liquid content of said medium, of a chloromethane as a swelling agent while maintaining said suspension at a temperature of from 60 to 100° C. and a pressure of from 20 to 80 p.s.i.g. in the substantial absence of oxygen and photo-illumination, said polyvinyl chloride resin having a molecular weight at least equivalent to that of a polyvinyl chloride of specific viscosity 0.40, separating the solid, macro-granular product from said suspension and neutralizing said solid product, said product characterized by having a heat distortion temperature measured by ASTM Test Method D648 which is at least 20° C. higher than that of the unchlorinated polyvinyl chloride resin.

3,100,763

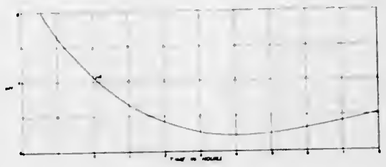
CONTROLLED SUSPENSION POLYMERIZATION

Paul D. Meek, Joseph R. Snyder, Birt Allison, and George Grimes, Big Spring, Tex., assignors to Cosden Petroleum Corporation, Big Spring, Tex., a corporation of Delaware

Filed Aug. 3, 1959, Ser. No. 831,269
3 Claims. (Cl. 260—93.5)

1. In the suspension polymerization of styrene monomer catalyzed with a peroxy catalyst by agitation of a suspension of the styrene catalyzed monomer in water to form an agitated suspension of small liquid droplets which sometimes tend to coalesce into a large partially polymerized mass at an intermediate stage of the suspension polymerization, said tendency to coalesce being indicated

further by an abnormal rise in pH of the suspension polymerization system, the step of adjusting the pH of the suspension system to a condition approximately normal for this suspension polymerization system when compared to an average pH-time profile curve having the



form illustrated in FIG. 1, said adjustment of the pH being effected by adding to the suspension system a quantity sufficient to effect the necessary pH reduction of a substance selected from the group consisting of an acid, a peroxy catalyst and both an acid and a peroxy catalyst.

3,100,764
CONTROL OF PENTANE-SOLUBLE POLYMERS IN THE POLYMERIZATION OF PROPYLENE

James L. Jezl, Swarthmore, Habet M. Khelghatian, Springfield, and Louise D. Hague, Villanova, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Aug. 4, 1960, Ser. No. 47,353
10 Claims. (Cl. 260—93.7)

6. A process for polymerizing propylene which comprises contacting propylene at a temperature of from 30° C. to 200° C. with a catalyst system consisting essentially of a halide selected from the group consisting of titanium trichloride and titanium tetrachloride, an organoaluminum compound selected from the group consisting of aluminum alkyls and aluminum alkyl halides, and an N-substituted pyrrolidone, the substituent being selected from the group consisting of alkyls and alkenyl radicals, wherein the atomic ratio of aluminum to titanium is from 1:1 to 10:1, and the atomic ratio of aluminum to pyrrolidone is from 30:1 to 3:2, and recovering a solid, predominantly isotactic, polymer of propylene.

3,100,765
REACTION PRODUCTS OF A SULFUR CHLORIDE AND N,N'-DIALKYLPHENYLENEDIAMINES

Harry E. Albert, Lafayette Hill, Pa., assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 16, 1959, Ser. No. 840,224
1 Claim. (Cl. 260—132)

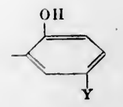
The reaction product of 0.5 to 2.0 moles of a sulfur chloride from the class consisting of sulfur monochloride and sulfur dichloride and 1.0 mole of a para-N,N'-dialkylphenylenediamine in which each alkyl group contains 1 to 12 carbon atoms, said reactants being reacted at substantially atmospheric pressure without substantial external heating, in the presence of an inert solvent with substantially simultaneous neutralization of the hydrogen chloride formed.

3,100,766
METALLIZED AZO DYES FROM 2-AMINO-PYRIDINE-1-OXIDE

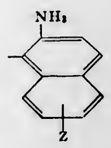
Charles E. Lewis, Somerville, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 19, 1961, Ser. No. 111,134
3 Claims. (Cl. 260—146)

1. A metal complex of a 2-(R-azo)-monazine-N-oxide wherein the monazine radical contains less than three six-membered rings and R is a radical selected from the group consisting of



and



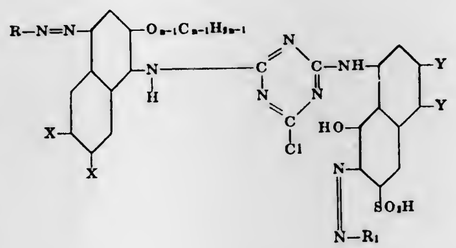
wherein Y is a member selected from the group consisting of hydrogen and lower alkyl; Z is a member selected from the group consisting of hydrogen, sulfamyl, sulfo, halo and lower alkyl; and the metal has an atomic number greater than 23 and less than 30.

3,100,767
WATER-SOLUBLE DISAZO DYESTUFFS

Raymond Gunst, Binningen, Switzerland, assignor to Ciba Company, Inc., Fair Lawn, N.J.

No Drawing. Filed Aug. 7, 1959, Ser. No. 832,167
Claims priority, application Switzerland Aug. 11, 1958
5 Claims. (Cl. 260—153)

1. Water-soluble disazo-dyestuffs of the formula



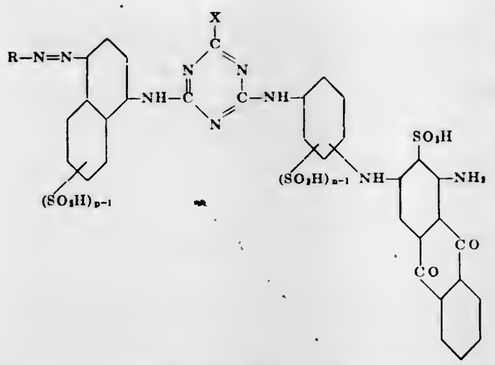
wherein R is a member selected from the group consisting of monosulfophenyl, disulfophenyl, monosulfonaphthyl and disulfonaphthyl; *n* is a positive whole number of at most 2; R_1 is ortho-sulfophenyl; and one of the X's and one of the Y's each represents a sulfonic acid group, the other X and the other Y being a hydrogen atom.

3,100,768
AZO DYESTUFFS

Raymond Gunst, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed July 17, 1961, Ser. No. 124,361
Claims priority, application Switzerland July 17, 1959
7 Claims. (Cl. 260—153)

1. A watersoluble monoazo dyestuff which corresponds to the formula



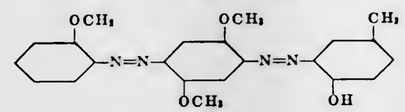
wherein *n* and *p* each is a whole positive number up to 2 and R represents a member selected from the group consisting of the sulfobenzene and sulfonaphthalene radicals and X a member selected from the group consisting of a bromine and a chlorine atom.

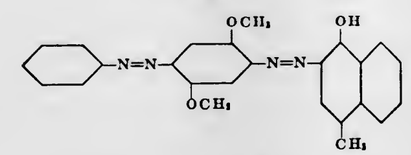
3,100,769
DISAZO DYES

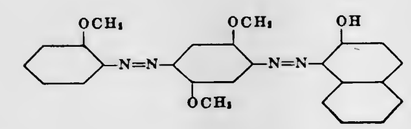
Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini ACNA S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,125
Claims priority, application Italy Dec. 15, 1959
5 Claims. (Cl. 260—186)

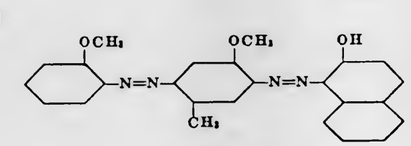
1. A disazo dye, insoluble in water, selected from the group consisting of dyes of the formulae:







and



3,100,770
5-PYRIDYL-1,4-BENZODIAZEPINE COMPOUNDS

Rodney Ian Fryer, West Orange, Robert August Schmidt, Wallington, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 11, 1961, Ser. No. 130,757
8 Claims. (Cl. 260—239.3)

1. A compound selected from the group consisting of 7-R_4-5-pyridyl-1-R_1-3-R_3-3H-1,4-benzodiazepin-2(1H)-one, medicinally acceptable acid-addition salts thereof, 7-R_4-5-pyridyl-1-R_1-3-R_3-3H-1,4-benzodiazepin-2(1H)-one 4-oxide, and medicinally acceptable acid-addition salts thereof, wherein R_1, R_2 and R_3 are selected from the group consisting of hydrogen and lower alkyl; and R_4 is selected from the group consisting of hydrogen, halogen, and nitro.

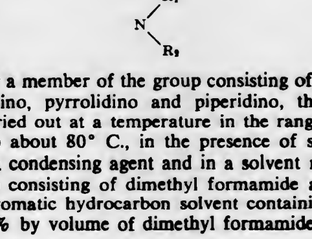
4. 7-bromo-5-(4-pyridyl)-3H-1,4-benzodiazepin-2(1H)-one.

3,100,771
ANDROSTANO[3,2-c]-5'-HYDROXY-$\Delta^{2'}$-ISOXAZOLINES AND THE PREPARATION THEREOF

Andrew John Manson, North Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 10, 1962, Ser. No. 216,076
6 Claims. (Cl. 260—239.55)

1. A compound of the formula



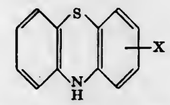
wherein R and R'' are selected from the group consisting of hydrogen and carboxylic acyl radicals having from one to ten carbon atoms and a molecular weight less than 200; and R' is selected from the group consisting of hydrogen, lower-alkyl and lower-alkynyl.

3,100,772
METHOD FOR PREPARING PHENOTHIAZINE DERIVATIVES

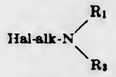
Martin L. Kantor, Downingtown, and Samuel Tubis, Oreland, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 28, 1956, Ser. No. 612,881
8 Claims. (Cl. 260—243)

1. The process comprising reacting a phenothiazine compound having the formula



where X stands for a member of the group consisting of hydrogen, halogen, lower alkyl, —O·lower alkyl and —CO·lower alkyl with a halogenated alkylamine having the formula



wherein "Hal" stands for a halogen atom of the group consisting of chlorine and bromine, "alk" represents a divalent lower alkylene radical having 2 to 4 carbon atoms and



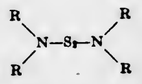
stands for a member of the group consisting of di-(lower-alkyl)-amino, pyrrolidino and piperidino, the reaction being carried out at a temperature in the range of about 25° C. to about 80° C., in the presence of sodium hydride as a condensing agent and in a solvent medium of the group consisting of dimethyl formamide and a low-boiling aromatic hydrocarbon solvent containing at least about 10% by volume of dimethyl formamide.

3,100,773
METHOD OF PREPARING AMINOAZOLEDISULFIDES

George D. Louth, Doylestown, and Marlyn J. Brock, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed May 20, 1959, Ser. No. 814,389
8 Claims. (Cl. 260—247.1)

1. The method of preparing an amino azole disulfide which comprises reacting (*a*) an amine disulfide of the general formula:



in which the nitrogen substituents, R's, are selected from the class consisting of aliphatic radicals, cycloaliphatic radicals, aralkyl radicals and cycloaliphatic rings formed by the joining together of the pair of R's on a nitrogen atom with (*b*) a mercapto azole selected from the class consisting of mercaptothiazoles, mercaptoimidazoles, and mercaptooxazoles, said amine sulfide being reacted in the ratio of one mole of said amine sulfide to from one to two moles of said mercapto azole.

5. The method of preparing 2-(4-morpholinyldithio) benzothiazole which comprises reacting N,N'-dithio-bismorpholine with 2-mercaptobenzothiazole.

3,100,774
PHOSPHORUS BORON COMPOUNDS

Theodor Reetz, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

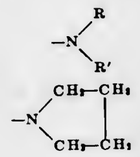
No Drawing. Filed July 29, 1959, Ser. No. 830,197
20 Claims. (Cl. 260—293)

18. N,N',N''-(pentamethylene) phosphorous triamide borane.

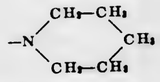
19. A compound of the formula



where X, X' and X'' each represent a member of the group consisting of



and



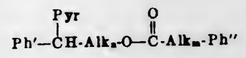
wherein R and R' are each selected from the group consisting of hydrogen, alkyl and mono and dihaloalkyl of from 1 to 12 carbon atoms, cycloalkyl and mono and dihalocycloalkyl of from 5 to 6 carbon atoms, monocyclic aromatic hydrocarbon of up to 8 carbon atoms and mono and dihalomonocyclic aromatic hydrocarbon of up to 8 carbon atoms, benzyl and mono and diahalobenzyl and naphthyl and mono and dihalonaphthyl, the halogen atoms of said mono and dihalo groups being selected from the group consisting of chlorine and bromine, provided that at least one of R and R' must be other than hydrogen.

3,100,775
α-PHENYL(PYRIDYL OR PIPERIDYL)ALKYL ESTERS OF (CHLORO OR LOWER ALKOXY)-BENZOIC ACIDS AND CONGENERS

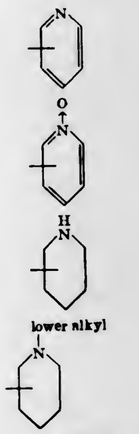
Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

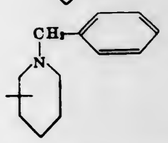
No Drawing. Filed Apr. 1, 1959, Ser. No. 803,371
16 Claims. (Cl. 260—295)

1. A compound of the formula

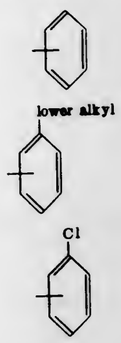


wherein Pyr is selected from the group consisting of radicals of the formulas





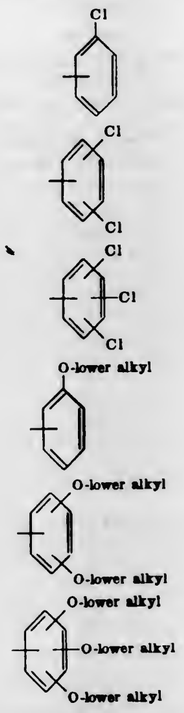
Ph' is selected from the group consisting of radicals of the formulas



Alk$_n$ and Alk$_m$ are each selected from the group consisting of radicals of the formulas

—CH=CH— —C_xH_{2x}—

separating the radicals attached thereto by fewer than 5 carbon atoms, *x* being representative of a positive integer less than 6; *n* and *m* are selected from the group consisting of 0 and the positive integer 1; and Ph'' is selected from the group consisting of radicals of the formulas



3,100,776
NOVEL 2-R$_3$-3a,4,7,7a-TETRAHYDRO-4,7-(R$_1$,R$_2$-Y)-R$_4$-ISOINDOLINES AND THE CORRESPONDING 3a,4,5,6,7,7a-HEXAHYDRO COMPOUNDS

George Ireland Poos, Ambler, Pa., assignor to McNeil Laboratories, Incorporated, a corporation of Pennsylvania

No Drawing. Filed June 2, 1961, Ser. No. 114,287
12 Claims. (Cl. 260—296)

1. A member selected from the group consisting of 2 - R$_3$a,4,7,7a-tetrahydro-4,7-(R$_1$,R$_2$-Y)-R$_4$ - isoindolines, the corresponding 3a,4,5,6,7,7a-hexahydro compounds, their N-oxides, therapeutically active acid addition salts and quaternary ammonium compounds selected from the group consisting of lower alkyl halides, lower alkenyl halides, di-lower alkyl sulfates, lower alkyl to'yl sulfonates and the corresponding hydroxides, wherein each of R$_1$, R$_2$, R$_3$ and R$_4$ is, interchangeably, a member selected from the group consisting of unsubstituted phenyl, tolyl and naphthyl and substituted with a member of the group consisting of hydroxy, lower alkyl, lower alkoxy, lower alkenyloxy, oxa-lower-alkoxy, halo, di-lower alkylamino and amino-lower alkoxy; lower alkyl; hydroxy lower alkyl, amino-lower alkyl; pyrrolidyl; piperidyl; morpholyl; thiamorpholyl; pyridyl; thienyl; furyl; piperazinyl; benzyl; phenethyl; each of R$_3$ and R$_4$ is further, interchangeably, a member of the group consisting of hydrogen, carboxamide and styryl; R$_4$ is further, a member of the group consisting of hydroxy, amino and an oxygen atom joined through single bonds to each of two adjacent carbon atoms; Y is a member of the group consisting of hydroxy lower alkyl and epoxy lower alkyl chain from two to seven carbon atoms attached to the isoindoline nucleus at the 4,7-positions through a single carbon atom.

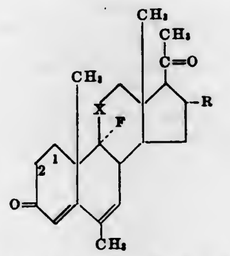
7. 8-phenyl pyridylmethylene-2-lower alkyl-3a,4,7,7a-tetrahydro-4,7-lower alkanoisoindoline.

3,100,777
6-METHYL-9α-FLUORO-11β-HYDROXY - 4,6 - PREGNADIENE-3,20-DIONE AND THE 11-KETO ANALOGUE THEREOF, THEIR CORRESPONDING 16α-METHYL DERIVATIVES AND THE 1-DEHYDRO COUNTERPARTS OF THE FOREGOING

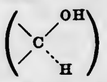
George B. Spero, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed May 31, 1962, Ser. No. 198,748
9 Claims. (Cl. 260—397.3)

1. A 6-methyl-9α-fluoro-11-oxygenated compound of the formula



wherein X is selected from the group consisting of the β-hydroxymethylene radical



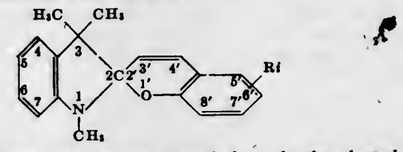
and the carbonyl radical (>C=O), R is selected from the group consisting of hydrogen and methyl and the linkage between carbon atoms 1 and 2 is selected from those consisting of single and double bonds.

3,100,778
DERIVATIVES OF 1,3,3 TRIMETHYL-SPIRO (2'H-1'-BENZOPYRAN-2,2'-INDOLENE)

Elliot Berman, East Braintree, Mass., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

No Drawing. Filed May 9, 1961, Ser. No. 108,710
6 Claims. (Cl. 260—319)

1. A compound of the formula



wherein R*i* is at least two members independently selected from the class consisting of —NO_2, —OCH_3, —Cl, —Br, —I, and —F; said independently selected members consisting of:

(*a*) at least one but no more than two —NO_2 groups and,

(*b*) at least one member from said class other than the —NO_2 group,

said members being so selected that the compound, when dissolved in ethanol, satisfies the expression:

$$3.10992 \leq 3.41 \sum_{5' \leq q \leq 8'} \sigma(Ri, q) \leq 5.19343$$

wherein R*i* represents the selected class members, *q* stands for the ring positions to which such members are attached, and

$$\sum_{5' \leq q \leq 8'} \sigma(Ri, q)$$

represents the sum of the substituent constant sigma values of said selected members when attached at independently

selected 5', 6', 7', and 8' ring positions, and wherein said values are as follows:

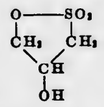
R1	8'	5':7'	6'
$-NO_2$	+0.80	+0.662	+0.777
$-OCH_3$	−0.39	−0.0465	−0.764
$-Cl$	+0.20	+0.373	+0.112
$-Br$	+0.21	+0.391	+0.148
$-I$	+0.21	+0.352	+0.132
$-F$	+0.24	+0.337	−0.0714

3,100,779
NOVEL PRODUCTS AND METHODS FOR PREPARING THEM

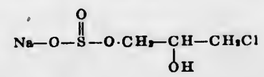
Hans S. Mannheimer, 23 Haines Cove Drive, Toms River, N.J.

No Drawing. Filed June 30, 1961, Ser. No. 120,921
3 Claims. (Cl. 260—327)

1. A compound of the following formula:



3. The method comprising maintaining in the state of boiling an aqueous solution of



for a period in the range of about ½ to 3 hours thereby to produce a yield at least 50% of theoretical of a compound of the formula set forth in claim 1.

3,100,780
PROCESS FOR PREPARING CYCLIC LOWER ALKYLENE SULFATES

Donald L. Klass, Barrington, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Oct. 27, 1961, Ser. No. 148,022
13 Claims. (Cl. 260—327)

1. A method of preparing cyclic lower alkylene sulfates which comprises reacting C_2–C_6 cyclic alkylene oxides with sulfur trioxide in the gas phase while maintaining the gaseous reaction mixture at a temperature not in excess of 140° C.

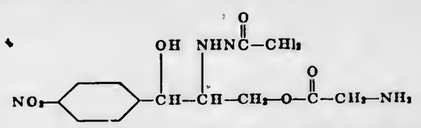
10. A method of preparing ethylene sulfate which comprises reacting ethylene oxide with sulfur trioxide in the gas phase in admixture with sufficient inert diluent gas to maintain the reaction mixture at a temperature not in excess of 140° C.

3,100,781
CHLORAMPHENICOL GLYCINATE AND THE PRODUCTION THEREOF

Carlo T. Concilio and Antonio Tezza, Milan, Italy, assignors to Zambon S.p.A., a company of Italy

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,235
Claims priority, application Germany Nov. 20, 1957
12 Claims. (Cl. 260—343.7)

1. A member of the group consisting of a D-threo amino acid ester of the following formula



and water-soluble, non-toxic, acid addition salts thereof.

6. D - (—) - threo - 1 - (p-nitrophenyl) - 2 - dichloroacetamido-3-aminoacetoxy-1-propanol ascorbate.

3,100,782
PROCESS FOR PREPARING 3-METHYLCHROMONE

Robert Joly, Montmorency, and Robert Bucourt, Villiers-le-Bel, France, assignors to Roussel-UCLAF, Societe Anonyme, Paris, France, a corporation of France

No Drawing. Filed Sept. 21, 1961, Ser. No. 139,606
Claims priority, application France June 5, 1959
5 Claims. (Cl. 260—345.2)

1. In the process of preparing 3-methylchromone by the condensation of ethyl formate with o-hydroxypropiophenone in the presence of an organozinc compound, the improvement which comprises condensing said ethyl formate with said o-hydroxypropiophenone in the presence of an excess a stable solution of an organozinc compound having the formula R_1ZnY, in an N,N-dialkylamide having the formula



wherein R_1 and R_2 represent lower alkyl, R_3 is a member selected from the group consisting of hydrogen, methyl and ethyl, and Y is a member selected from the group consisting of lower alkyl, halogen, methosulfate and ethosulfate said condensation being conducted at a temperature between about 20° to 100° C.

3,100,783
METHOD OF STABILIZING CRYSTALLINE COMPOUNDS AGAINST OXIDATION

Pieter Cornelis de Wilde and Menso Pieter Rappoldt, Weesp, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 22, 1959, Ser. No. 821,693
Claims priority, application Netherlands June 26, 1958
5 Claims. (Cl. 260—397.2)

1. A method of stabilizing crystalline compounds having carbon-carbon conjugated double bonds selected from the group consisting of vitamin A, vitamin D_2, vitamin D_3, provitamin D_2, provitamin D_3, esters of said vitamins and provitamins, tachysterol-2 and tachysterol-3, comprising the steps of applying to the surface of crystals of said compounds a solution of at least one solid antioxidant, in an amount sufficient only to coat the surface of said crystals with the antioxidant, and then drying said crystals thereby leaving the crystals coated only with the antioxidant.

3,100,784
METHOD OF PRODUCING POLYMERS OF LINOLENIC ACID

Charles G. Goebel, Cincinnati, Ohio, assignor to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed June 25, 1962, Ser. No. 205,080
3 Claims. (Cl. 260—407)

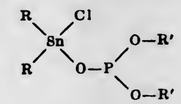
1. A process for polymerizing fatty acid mixtures containing at least 25% linolenic acid, which comprises first subjecting said mixture to a thermal polymerization treatment at temperatures of from about 260 to 340° C. at steam pressures above 40 p.s.i. until substantial polymerization is obtained, and then subjecting the intermediate reaction product so produced to a catalytic polymerization treatment conducted in the continuing presence of water and a crystalline clay mineral at temperatures of from about 180 to 260° C. for at least ½ hour.

3,100,785
DIALKYL TIN CHLORIDE DIALKYLPHOSPHITE

Joseph E. Dunbar, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 29, 1962, Ser. No. 233,903
8 Claims. (Cl. 260—429.7)

1. A compound having the formula



wherein R and R' each represent lower alkyl.

3,100,786
ACTIVATION OF ALUMINUM AND PREPARATION OF ALUMINUM HYDROCARBYLS THEREWITH

Herbert B. Fernald, Pittsburgh, Pa., assignor to Goodrich-Gulf Chemicals, Inc., Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Sept. 26, 1956, Ser. No. 612,117
21 Claims. (Cl. 260—448)

1. A process for the preparation of aluminum hydrocarbyls which comprises contacting aluminum with an activating amount of a material selected from the class consisting of the alkali metals and the alkaline earth metals and reacting the aluminum with an olefinic hydrocarbon and hydrogen to obtain an aluminum hydrocarbyl.

21. A process for the activation of aluminum, comprising contacting hydrogen with aluminum suspended in a compound having the formula R_2AlY, in which Y is chosen from the class consisting of alkyl radicals and R is chosen from the class consisting of hydrogen and alkyl radicals and in the presence of a promoter chosen from the class consisting of a metal selected from the group consisting of alkali metals and alkaline earth metals.

3,100,787
BASIC ALUMINUM SALTS OF ACETYLSALICYLATE ACID AND A NON-TOXIC WATER SOLUBLE ACID

Ludwig Adolph Stalb, Jr., Campus Drive, Snyder 26, N.Y.

No Drawing. Filed May 10, 1960, Ser. No. 28,018
12 Claims. (Cl. 260—448)

1. An aluminum aspirin composition represented by the average formula $Al(R_1)_x(R_2)_y(R_3)_z$, wherein R_1 represents an equivalent of non-toxic, water-soluble acid anion, derived from an acid characterized by a dissociation constant of at least about 10^{-5}, R_2 represents the anion of acetylsalicylic acid, and R_3 represents hydroxyl groups, the subscript x is at least about 0.1, the subscript y is at least about 0.5 and the subscript z equals $3-(x+y)$ and is at least about 0.1.

12. The method of producing an aluminum aspirin composition substantially free of unreacted acetylsalicylic acid which comprises admixing in a substantially water-free inert organic solvent an aluminum alcoholate with a material selected from the group consisting of water-soluble non-toxic acids characterized by dissociation constants of at least about 10^{-5} and the aluminum salts thereof; adding acetylsalicylic acid to the mixture and thereafter adding water to the mixture and heating at a temperature below about 60° C. to hydrolyze any unreacted alcoholate groups.

3,100,788
PREPARATION OF SILICON-HYDROGEN COMPOUNDS

Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie A.G., Hannover, Germany

No Drawing. Filed Oct. 30, 1956, Ser. No. 619,120
Claims priority, application Germany Nov. 2, 1955
3 Claims. (Cl. 260—448.2)

1. A method of preparing silicon-hydrogen compounds, comprising reacting a compound selected from the class consisting of

$$R_xSiHal_y$$

and

$$Si_nR_{(2n+2)}O_{n-1}$$

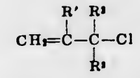
wherein R is a member of the group consisting of alkyl, aryl, aralkyl, alkoxy, Hal is halogen, $x+y=4$, x is an integer between 1 and 3, $n \geqq 2$, with hydrogen in the presence of sodium metal at temperatures of about 50° to 400° C. and pressures of about 1 to 350 atm.

3,100,789
PROCESS FOR MAKING A β-AMINO ALKYL SULFATE ESTER

Gilbert Gavlin, Lincolnwood, and Kiyoshi Hattori, Chicago, Ill., assignors to The Richardson Company, Melrose Park, Ill., a corporation of Ohio

No Drawing. Filed May 11, 1959, Ser. No. 812,110
3 Claims. (Cl. 260—458)

1. A process for making a β-amino alkyl sulfate ester which comprises reacting a chlorinated olefin having the formula



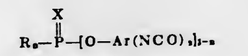
with a nitrile having the formula R^4CN, wherein R', R^2, R^3 and R^4 are selected from the class consisting of hydrogen, methyl, ethyl, propyl and phenyl radicals, in the presence of a catalyst selected from the group consisting of sulfuric acid, hydrogen fluoride, phosphoric acid, boron trifluoride, trifluoroacetic acid, aluminum trifluoride and toluene sulfonic acid, hydrolyzing the reaction product, and esterifying the hydrolyzed reaction product with sulfuric acid.

3,100,790
ISOCYANOARYL ESTERS OF PHOSPHONIC, PHOSPHINIC, THIOPHOSPHONIC, AND THIOPHOSPHINIC ACIDS

Günter Oertel, Cologne-Flittard, and Hans Holtschmidt, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 8, 1961, Ser. No. 94,140
Claims priority, application Germany Mar. 12, 1960
7 Claims. (Cl. 260—461)

1. Isocyanato phosphorous compounds having the formula



wherein X is selected from the group consisting of oxygen and sulfur, R is an organic radical, Ar is an aromatic radical free of secondary amino groups, n is an integer of 1 to 2 and z is an integer of from 1 to 3.

3,100,791

2-BORABENZOXAZOLOBORAZINES AND A METHOD FOR THEIR PREPARATION

Bernard Rudner, Pittsburgh, and James J. Harris, Oakmont, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Dec. 17, 1959, Ser. No. 860,072
7 Claims. (Cl. 260—462)

1. 3,5-di-(2-anisyl) - 4,6 - dichloro-1-2-(2-borabenzoxazolo-[3,2-a]-)borazine.

3. Method of making a borazine having from one to three aroxazolo ring systems fused to the borazine nucleus comprising reacting at a temperature between 25° C. and the boiling point of the reaction mixture a compound of the formula:

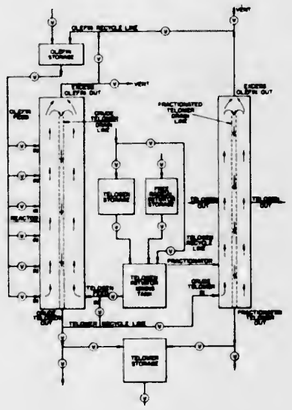
wherein R is lower alkyl, Ar is an aryl nucleus selected from the group consisting of benzene and naphthalene, Y is a substituent selected from the group consisting of hydrogen, halo, nitro, cyano, lower alkanoylamino sulfo, phenylazo, lower alkyl, and lower alkoxy, and *n* is an integer having a value of no greater than 4, the remaining substitutable positions on the aryl nucleus being occupied by hydrogen atoms when Y is other than hydrogen and *n* is less than 4, with a boron halide and recovering said borazine from the reaction mixture.

3,100,792

PROCESS FOR PREPARING HIGHER HOMOLOGUES OF ORGANIC COMPOUNDS HAVING A LABILE HYDROGEN ATOM

Donald D. Emrick, Shaker Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

Filed May 4, 1960, Ser. No. 26,775
17 Claims. (Cl. 260—462)



1. A process for producing higher homologues of organic telogens containing only atoms selected from the group consisting of carbon, hydrogen, boron, halogen and oxygen and having a labile hydrogen atom, which comprises addition-telomerizing the telogen with from about one to about two moles per mole of an unsatured taxogen having the formula $CR_1R_2{=}CH_2$, wherein R_1 and R_2 are selected from the group consisting of hydrogen, and aliphatic, aromatic, and cycloaliphatic radicals having from about one to about sixteen carbon atoms in a molar proportion of organic telogen:taxogen of from about 100:1 to about 1000:1 in the presence of a free radical initiator capable of initiating the telomerization at a temperature below the boiling point of the telogen and at which an evolution of free radicals from the initiator is obtained.

3,100,793

STABILIZED CYANOETHOXY ALCOHOLS

Robert E. Leech and William F. Goldsmith, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,857
8 Claims. (Cl. 260—465.6)

1. A composition consisting essentially of phenothiazine and a reaction mixture containing an alcohol selected from the group consisting of a cyanoethoxy alkanol and a cyanoethoxy oxyalkanol, each of said alkanols containing from 5 to about 15 carbon atoms, said phenothiazine being present in an amount of at least 10 parts per million parts of said alcohol; and said reaction mixture having a pH adjusted to within the range of about 6 to 11 prior to addition of said phenothiazine.

5. In a process for the production of an alcohol selected from the group consisting of cyanoethoxy alkanol and cyanoethoxy oxyalkanol, each of said alkanols containing from 5 to about 15 carbon atoms and prepared by the reaction of an α,β-olefinically unsaturated nitrile and a member selected from the group consisting of an alkylene glycol and a oxyalkylene glycol respectively in the presence of an alkaline catalyst; the steps of adjusting the pH of the reaction mixture wherein said alcohol is formed to within the range of from 6 to 11 and thereafter incorporating in said reaction mixture, phenothiazine in an amount by weight of at least 10 parts thereof per million parts of said alcohol.

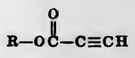
3,100,794

ESTERS OF ACETYLENIC ACIDS

Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 5, 1961, Ser. No. 100,813
6 Claims. (Cl. 260—486)

1. A compound having the formula



wherein R is an alkyl radical having from 8 to 30 carbon atoms.

3,100,795

PREPARATION OF METHYL METHACRYLATE

Russell K. Frantz, Gillette, and James F. Vitcha, New Providence, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 26, 1961, Ser. No. 162,225
9 Claims. (Cl. 260—486)

1. A process which comprises preparing a vapor phase mixture of methanol, propionic acid, and formaldehyde; passing said vapor phase mixture over a catalyst selected from the group consisting of alkali metal aluminosilicates, alkaline earth metal aluminosilicates, alkali metal hydroxides on aluminosilicates, alkaline earth metal hydroxides on aluminosilicates, alkali metal hydroxides on silica gel, alkaline earth metal hydroxides on silica gel, sodium silicate on silica gel, potassium silicate on silica gel, molybdenum oxide on silica gel, manganese aluminosilicate, cobalt aluminosilicate, and zinc aluminosilicate; and recovering methyl methacrylate from the reaction products.

3,100,796

METHOD FOR MAKING AR-POLY(HYDROXYMETHYL)DIPHENYL ETHERS

Walter B. Trapp and James D. Doedens, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,507
5 Claims. (Cl. 260—488)

2. Method for making ar-poly(hydroxymethyl)diphenyl ethers having up to 4 hydroxymethyl groups per mole by hydrolysis at a temperature between about 75° and 110° C. of ar-poly(acetoxymethyl)diphenyl ethers having up to 4 acetoxy groups per mole, up to 2 of which are on one benzene nucleus with a stoichiometric excess of an alkali metal hydroxide for a time sufficient to displace acetoxymethyl groups and to replace them with hydroxyl groups and separating the ar-poly(hydroxymethyl)diphenyl ether product from the reaction medium.

3,100,797

PRODUCTION AND CRYSTALLIZATION OF 3,5-DINITRO-o-TOLUIC ACID FROM NITRIC AND SULFURIC ACID

Guy Hendrickson Harris, Concord, and Bryant Charles Fischback, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 23, 1958, Ser. No. 710,614
6 Claims. (Cl. 260—515)

1. The process for producing 3,5-dinitro-o-toluic acid consisting essentially of reacting by contacting o-toluic acid with a mixture of about 2 to 2.5 moles of nitric acid and about 10 to 25 moles of sulfuric acid per mole of o-toluic acid at a temperature of about 25 to 110° C., said nitric and sulfuric acids being of such concentrations that the mixture thereof contains not more than about 15% by weight of water, until substantial reaction has occurred, adjusting the temperature of the reaction mixture to about 0 to 30° C. and separating from the mixture the thus formed crystals of 3,5-dinitro-o-toluic acid.

3,100,798

PROCESS FOR PREPARATION OF SUCCINIC ACID

Milton S. Konecky, South Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,259
4 Claims. (Cl. 260—530)

1. The process for preparing succinic acid which comprises reacting 3,4-dihydro-1,2-pyran-2-carboxaldehyde with a strong oxidizing agent chosen from the group consisting of 20 to 70 wt. percent aqueous nitric acid, 2 to 10 wt. percent aqueous potassium permanganate and chromic acid at temperatures in the range of 0 to 150° C., the amount of oxidizing agent expressed as weight ratio of the nitric acid, potassium permanganate, and chromic acid to 3,4-dihydro-1,2-pyran-2-carboxaldehyde being 2/1 to 15/1, 5/1 to 10/1, and 3/1 to 5/1, respectively.

3,100,799

PROCESS FOR PREPARING 1-HYDROXYALKYLPHOSPHINE OXIDES

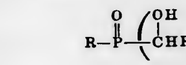
Michael M. Rauhut, Norwalk, and Andrew M. Semsel, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed July 20, 1962, Ser. No. 211,411
2 Claims. (Cl. 260—606.5)

1. A method which comprises bringing into reactive contact, in the presence of an inert organic solvent, elemental phosphorus and an organometallic compound of the formula

$$RMX_n$$

reacting the resulting reaction product with an aldehyde of the formula R'CHO, and hydrolyzing the reaction product of the second step, thus producing alpha-hydroxy-substituted tertiary phosphine oxide of the formula



R in the above formulae representing a member selected from the group consisting of alkyl having from 1 to 12 carbon atoms, fluoro-substituted alkyl having from 1 to 12 carbon atoms, cycloalkyl, aryl, and substituted aryl, said substituents for aryl being selected from the group consisting of trifluoromethyl, fluoro, chloro, lower alkyl, and lower alkoxy; R' is a member selected from the group consisting of phenyl, substituted phenyl, and alkyl having from 1 to 11 carbon atoms, said substituents for phenyl being selected from the group consisting of halogen and lower alkoxy; M represents a member selected from the group consisting of lithium, magnesium and sodium; X is halogen; and *n* is selected from 0 and 1.

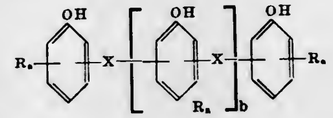
3,100,800

IMPROVED CALCIUM SALTS OF BRIDGED PHENOL SULFIDES AND METHOD OF PREPARING SAME

Elmer B. Cyphers, Cranford, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Feb. 12, 1962, Ser. No. 172,760
7 Claims. (Cl. 260—609)

5. The method of reducing the corrosivity of a calcium salt of a bridged pmhenol toward metals, including silver and copper, which consists in contacting said calcium salt with from 0.25 to 12.5 weight percent of PbO for from 0.1 to 10 hours at a temperature in the range of 300° to 500° F., said bridged phenol being defined as a compound having the approximate formula:



where R is a monovalent substituent selected from the group consisting of halogen atoms and hydrocarbon groups having from 1 to 30 carbon atoms, *a* is a digit from 0 to 2, *b* is an integer from 0 to 10, and X is a divalent bridging group having at least one sulfur atom.

7. The product obtained by the process of claim 5.

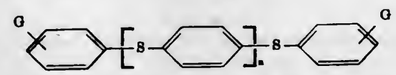
3,100,801

α,Ω-HALOPOLYTHIOETHERS

Walter Reifschneider, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 27, 1962, Ser. No. 205,499
6 Claims. (Cl. 260—609)

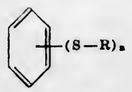
1. A compound corresponding to the formula



wherein *n* represents an integer from 1 to 7, inclusive, and G is a halogen of atomic weight from 10 to 100, inclusive.

3,100,802
ARALKYL POLYTHIOETHERS
Walter Reifschneider, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 27, 1962, Ser. No. 205,518
4 Claims. (Cl. 260—609)

1. A compound corresponding to the formula



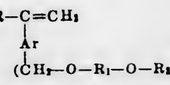
wherein R represents an alkyl group containing from 1 to 5, inclusive, carbon atoms and *n* is an integer from 3 to 6, inclusive.

3,100,803
PREPARATION OF PERFLUORODIMETHYL PEROXIDE
Roger S. Porter, Orinda, Calif., and George H. Cady, Seattle, Wash., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Sept. 8, 1959, Ser. No. 838,389
1 Claim. (Cl. 260—610)

A process for producing perfluorodimethyl peroxide which comprises contacting carbonyl fluoride and trifluoromethyl hypofluorite within the temperature range 225° C. to 325° C.

3,100,804
VINYL AROMATIC OXYMETHYL OXY COMPOUNDS
John G. Abramo, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 11, 1958, Ser. No. 747,832
7 Claims. (Cl. 260—611)

1. A class of vinyl aromatic oxymethyl compounds having the structure:



wherein Ar is an aromatic hydrocarbon radical selected from the group consisting of benzene, naphthalene and anthracene radicals, R is selected from the class consisting of hydrogen and alkyl radicals, R_1 is selected from the class consisting of alkylene and oxyalkylene radicals, R_2 is selected from the class consisting of hydrogen, alkyl and aryl radicals and *n* is an integer of 1–3.

3,100,805
PROCESS FOR MAKING NITROCYCLOPROPANE
Paul G. Bay, Skokie, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed June 4, 1962, Ser. No. 199,661
5 Claims. (Cl. 260—644)

1. The process of preparing nitrocyclopropane consisting essentially in

reacting a 1-halo-3-nitropropane which comprises a major proportion of 1-iodo-3-nitropropane with an alkali metal amide in liquid ammonia.

3,100,806
PROCESS FOR MAKING NITROCYCLOPROPANE
Paul G. Bay, Skokie, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed June 4, 1962, Ser. No. 199,662
8 Claims. (Cl. 260—644)

1. The process of preparing nitrocyclopropane consisting essentially in

reacting a 1-halo-3-nitropropane which comprises a major proportion of 1-iodo-3-nitropropane with an inorganic compound selected from the group consisting of alkali metal hydroxides, carbonates and bicarbonates at a temperature between 100° and 150° C. in a reaction medium selected from the group consisting of water and an inert hydrocarbon solvent boiling above 80° C.

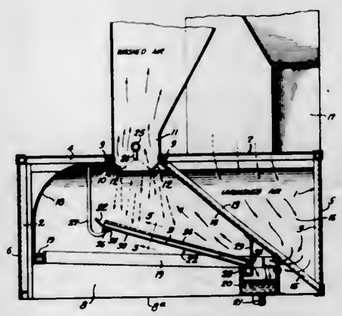
3,100,807
DEHYDROGENATION OF ALKYLATED AROMATIC HYDROCARBONS
Carroll G. Hatfield and Gordon H. Lovett, Texas City, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Feb. 18, 1960, Ser. No. 9,445
5 Claims. (Cl. 260—669)

1. In the dehydrogenation of an alkylated aromatic hydrocarbon wherein the alkylated aromatic hydrocarbon and steam mixture is passed through a dehydrogenation catalyst bed at a temperature in the range of about 500° C. to about 700° C., the improvement comprising addition of heat energy to said mixture by indirect heat transfer means into the said catalyst bed to continuously raise the temperature of the alkylated aromatic hydrocarbon and steam mixture from about 10° C. to about 100° C. throughout the time the mixture passes through said catalyst bed.

3,100,808
HYDROGENATION OF SATURATED ISOBUTYLENE POLYMER
Robert H. Dyer, Big Spring, Tex., assignor to Cosden Petroleum Corporation, Big Spring, Tex., a corporation of Delaware
No Drawing. Filed Aug. 18, 1961, Ser. No. 132,297
5 Claims. (Cl. 260—683.9)

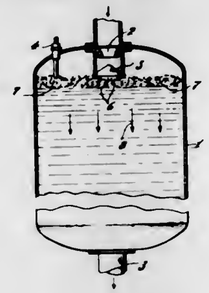
1. A method of purifying a substantially saturated liquid polyisobutylene polymer having a bromine number between about 2 and 30, said polymer being unstable in storage and tending to discolor and develop a pungent odor, said polymer having a molecular weight in the range of about 400 to about 20,000 and an SSU viscosity at 210° C. above 200 to convert the same to a water white substantially odorless liquid polymer, comprising lightly hydrogenating the polymer under catalytic hydrogenating conditions.

3,100,809
EXHAUST HOOD
Isaac M. Baker, Jr., 1323 Windsor Point Road, Norfolk, Va.
Filed Aug. 22, 1961, Ser. No. 133,102
3 Claims. (Cl. 261—16)



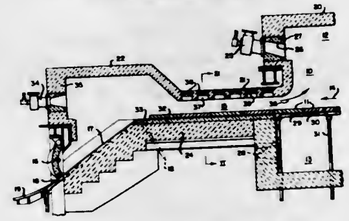
1. An exhaust hood comprising an enclosure having an open bottom and a bottom edge, a stack having an elongated opening communicating with the interior of said enclosure through the top thereof, a liquid spray pipe in the stack adjacent the juncture of the enclosure and the stack, a trough supported on the enclosure spaced adjacent to a portion of the bottom edge, a plurality of removably mounted collection pans disposed in side by side relation supported on the enclosure directly beneath the stack opening along the length thereof and above the level of said trough, said pans each having a length at least equal to the width of said stack opening to catch the liquid discharged from the spray pipe, said pans declining toward the trough and having their lower edges overlying at least a portion of said trough to permit the pans to drain into the trough and a liquid drain line from the trough.

3,100,810
DISSOLVING GAS IN LIQUID
Fritz O. W. G. Meyer, Stockholm, Sweden, assignor to E. D. Jones Corporation, Pittsfield, Mass., a corporation of Delaware
Filed July 29, 1960, Ser. No. 46,282
2 Claims. (Cl. 261—115)



1. For continuously dissolving gas in a liquid, apparatus comprising a tank having a substantially vertical axis, the tank having an inlet at the top, means for introducing liquid through the inlet at a high velocity and a restricted outlet at the bottom so that liquid may be fed continuously through the tank at a rate to maintain a body of liquid at a predetermined level in the tank and a space above the body, means for introducing a gas above the body and a conical baffle disposed between said inlet and said body substantially coaxially with the inlet and spaced from the inlet a distance at least as great as one-half the diameter of the inlet, the apex of the baffle being directed toward said inlet and the base of the baffle being disposed just above said level with the line of projection of the baffle surface meeting the level of the liquid beyond the area of the lower end of the baffle and inwardly of the walls of the tank so that the incoming liquid strikes the baffle and then the surface of said body obliquely along a circle around said base, whereby a toroid of swirls approximately concentric with said axis is created by introducing liquid through said inlet at high velocity.

3,100,811
METAL HEATING FURNACE
Frederick S. Bloom, Mount Lebanon Township, Allegheny County, Pa. (% Bloom Engineering Co. Inc., 857 W. North Ave., N.S., Pittsburgh 33, Pa.)
Filed May 31, 1960, Ser. No. 32,934
3 Claims. (Cl. 266—5)

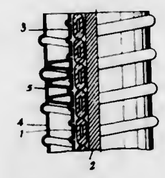


1. In a direct-fired metal heating furnace, apparatus comprising, in combination, a heating section having longitudinally extending parallel cooled skid rail supports therein, a soaking section following said heating section, a refractory hearth in said soaking section, a roof in said section substantially parallel to said hearth and relatively close thereto, a plurality of direct firing radiant burners in said roof with circular flaring port block radiant heating surfaces having axes normal to said hearth, said burners being arranged in longitudinal columns with one such column being in alignment with but longitudinally displaced relation to each said skid rail support respectively, said axes in each column being in a vertical plane passing through its respective skid rail support, said burners further being arranged in longitudinally successive transverse rows, said radiant burner being operable at selective thermal input levels to provide heating to a material extent by radiation in and adjacent their respective planes, whereby heating by said burners in said columns in alignment with said skid rail supports supplies radiant heat downwardly and more intensively in longitudinal stripes to remove skid marks directly under said stripes on the underside of workpieces on said hearth by conduction through said workpieces, and, said transverse rows of burner supply heat in cross alignment further to provide a selected input for workpieces exposed to said rows respectively for temperature control of said workpieces in said soaking section.

ELECTRICAL

3,100,812
COAXIAL CABLE AND TEMPORARY TENSILE MEMBER THEREFOR
Raymond C. Mildner, 3703 Hillgrove Court, Midland, Mich.
Filed Sept. 5, 1961, Ser. No. 135,950
8 Claims. (Cl. 174—10)

1. A method of manufacturing a coaxial cable capable of transmitting frequencies of at least about 100 kilocycles per second, comprising the steps of providing a hollow inner conductor, providing inside the hollow inner conductor a tensile element of substantial strength together with means for temporarily locking the said element to the inner surface of said inner conductor, temporarily locking the said element to the surface of said inner conductor, providing a hollow outer conductor coaxial with said inner conductor, providing at least one electrically insulating member holding said inner and

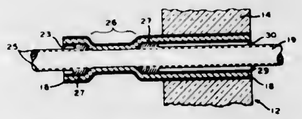


outer conductors in spaced coaxial relationship, thereby to form the finished coaxial cable unlocking said element

from the inner surface of the inner conductor, and removing said temporary locking means.

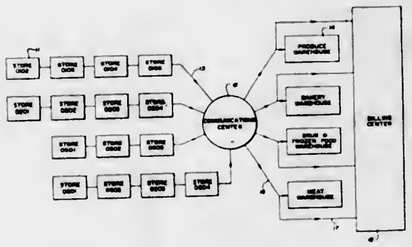
7. A coaxial cable capable of transmitting frequencies of at least about 100 kilocycles per second, comprising a hollow inner conductor in the form of a thin walled tube having helical corrugations, a hollow outer conductor, at least one member of electrically insulating material holding the inner and outer conductors in spaced coaxial relationship, a tensile element of substantial strength within the inner hollow conductor, and locking means located be.ween the tensile element and the interior of the inner hollow conductor, temporarily locking the tensile element to the interior hollow conductor.

3,100,813
CAPACITOR SEALING MEANS
Livingston L. Rice, Williamstown, and Walter J. Rohane, Adams, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Jan. 12, 1959, Ser. No. 786,277
2 Claims. (Cl. 174—52)



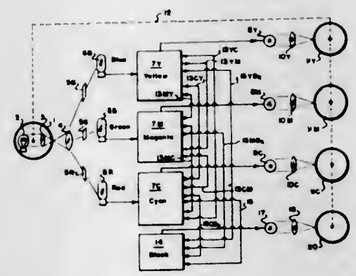
1. An electrical device comprising a container, an end-plug closing said container, said end-plug having a metal tubulation extending therethrough and being provided throughout with a tinned inner surface, an electrical component having a lead-wire tin coated throughout the length thereof extending therefrom, said component being positioned within said container with said lead-wire extending through said tubulation, a substantial portion of said tubulation being deformed into intimate contact with said lead-wire such that the base-metal of said tubulation is in metal-to-metal contact with the base metal of said lead-wire whereby the tin of said tinned inner surface and the tin coat of said lead-wire are displaced from said substantial portion.

3,100,814
STORE ORDERING SYSTEM AND APPARATUS
Robert Goldwater, Oakland, and Frank B. Calhoun, Fremont, Calif., assignors to Safeway Stores, Incorporated, Oakland, Calif., a corporation of Maryland
Original application Apr. 19, 1957, Ser. No. 653,898, now Patent No. 2,980,758, dated Apr. 18, 1961. Divided and this application Feb. 20, 1961, Ser. No. 90,507
2 Claims. (Cl. 178—3)



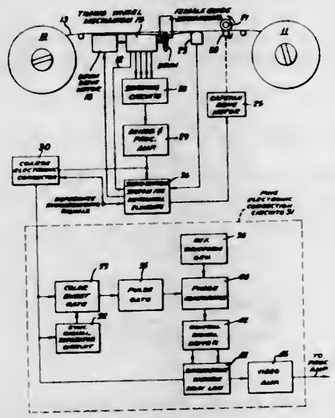
1. In a store ordering system, a plurality of stores, a communications center, electrical circuit means connecting each of said stores to said communications center, a plurality of warehouses, electrical circuit means connecting each of said warehouses to said communications center, commodity ordering means in each of said stores for producing an order on a punched tape identifying each commodity ordered and the quantity thereof desired, means in each of said stores for receiving the punched tape and converting the information contained thereon into electrical pulses and transmitting the same over said first named electrical circuit means to the communications center, means at the communications center for receiving the pulses and converting them into a punched tape, means at the communications center for receiving the punched tape and converting the information on the punched tape into electrical pulses, means at the communications center for selecting predetermined warehouses and transmitting the last named electrical pulses over the second named electrical circuit means to selected warehouses, and means at each of the warehouses for receiving the pulses sent to each warehouse and for producing a typed list of the commodities ordered with the quantity desired of each commodity.

3,100,815
APPARATUS FOR PRODUCING COLOR SEPARATION NEGATIVES AND THE LIKE
Herbert E. Drake, Willowick, and Leonard Kral, Columbia Station, Ohio, assignors to Newspaper Enterprise Association, Inc., Cleveland, Ohio, a corporation of Delaware
Filed Apr. 29, 1959, Ser. No. 809,817
8 Claims. (Cl. 178—5.2)



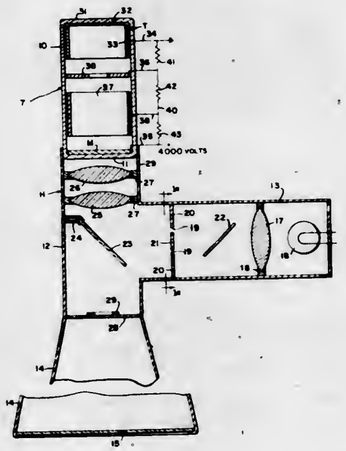
1. Apparatus for resolution of an original multicolored image into a plurality of corresponding monocolor photographic images, each of said monocolor images being representative of the distribution of one complementary color required to produce in combination with the other monocolor images the multicolors of the original image, which apparatus comprises means for illuminating and optically scanning an original multicolored image element by element and for resolving the light received from the original image into the primary colors of which each element of the original image is composed, photoelectric means for developing a separate signal potential proportional to the intensity of each of the primary colors into which the light from each element of the original image is resolved, which photoelectric means for each color comprises a photoelectron multiplier tube having a light sensitive photo-cathode, a plurality of electron emitting dynodes and an anode, a source of reference potential, means for energizing said photo-cathode at a negative potential with respect to said reference potential, means for energizing said anode at a positive potential with respect to the potential of said photo-cathode, means for energizing said dynodes at progressively greater potentials within the range between the potential of said photo-cathode and the reference potential, said dynodes being arranged such that that dynode at the lowest potential receives electrons emitted by said photo-cathode and emits one or more secondary electrons in response to the received electron and, further, such that a dynode at a higher potential receives electrons emitted by the dynode at the next lower potential and emits at least one secondary electron in response to each received electron, an individual computing channel for the signal potential developed by each of said photoelectric means, each of said channels further comprising means responsive to the signal potential developed by the photoelectric means, which responsive means comprises a vacuum tube having an anode, a grid and a cathode, said cathode being connected to said source of reference potential, said anode being energized at a potential positive with respect to said reference potential, and said grid being connected to one of said dynodes having a potential such that the cathode-grid current of said vacuum tube is logarithmically proportional to the potential of the dynode connected to the grid of the vacuum tube, means for developing a signal potential inversely related to the signal potential proportional to optical density of said original image, an electro-luminescent transducer energized by said signal potential inversely related to optical density, means for directing along a predetermined path the light emanating from the electro-luminescent means of each channel, and means for mounting a photosensitive surface such that there is relative motion, synchronized with said image scanning means, between said surface and the light emanating from said electro-luminescent means, whereby the plate-cathode current in said vacuum tube is logarithmically proportional to said signal potential and is therefore directly proportional to optical density of the primary color of the original image to which the photoelectric means associated with the particular channel is responsive.

3,100,816
TIMING CONTROL FOR SIGNAL REPRODUCING SYSTEMS
Charles H. Coleman, Jr., Belmont, and Peter W. Jensen, Fremont, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Jan. 2, 1962, Ser. No. 163,817
8 Claims. (Cl. 178—5.4)



1. In a signal reproducing system providing a complex signal containing phase-related components of a subcarrier having a selected nominal frequency, a system for limiting the phase deviation of the complex signal including means responsive to the subcarrier for providing phase-representative pulses, means providing a stable reference signal at the selected nominal frequency, means responsive to the reference signal for providing a time-varying reference wave having a period twice that of the reference signal, switching means responsive to the reference signal for selecting alternate ones of the phase-representative pulses as sampling pulses, and means for comparing the phase relation of the reference wave and the sampling pulses to generate an error signal, and means for adjusting the phase of the complex signal in response to the error signal.

3,100,817
IMAGE CONVERTER AND AMPLIFIER
Gottfried R. Rosendahl, Boulder, Colo., assignor to Ball Brothers Research Corporation, Boulder, Colo., a corporation of Colorado
Filed June 9, 1960, Ser. No. 35,079
14 Claims. (Cl. 178—7.87)

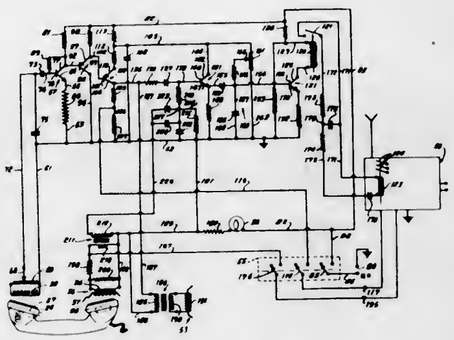


1. An image converter and amplifier comprising an electroelastic membrane adapted to form a relief corresponding to an excitation image; means for directing an image producing beam against one side of said membrane to form a corresponding relief thereon; a screen; a source of light rays; means for splitting said light rays and directing one portion of said light rays against the opposite side of said membrane, where said one portion is reflected, and directing another portion against said screen; means for directing said reflected portion against said screen; and means for combining said portions at said screen so that said relief causes interference between said portions to produce an amplitude modulated image on said screen.

3,100,818
COMMUNICATION SYSTEMS
Thomas F. Carter, 6762 Greenville Ave., Dallas, Tex.
Filed Nov. 6, 1959, Ser. No. 851,367
1 Claim. (Cl. 179—1)

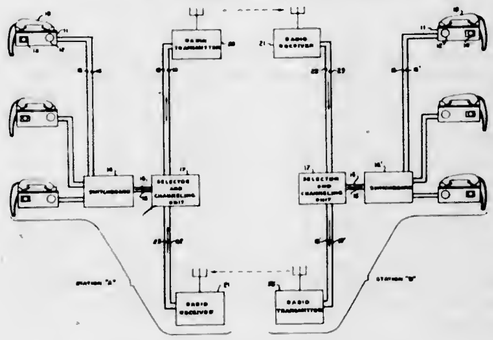
An interconnecting device including: a pickup coil disposable adjacent a speaker coil energized by an audio modulated current, the audio modulated current of the speaker coil producing a potential in said pickup coil which varies in accordance with said audio modulated current; first means for amplifying the potential produced in said pickup coil and transmitting it to a transmitter for broadcast thereby; and means responsive to the output of said amplifying means for placing said transmitter on the air, said last mentioned means comprising a second amplifier means connected to said first amplifier means, relay means, switch means for energizing said relay means to place said transmitter on the air, said switch means being energized by said second amplifier means; and time delay means connected be-

tween said second amplifier means and said switch means to permit energization of said switch means only after the



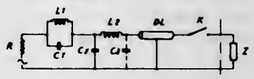
voltage produced in said pick-up coil persists for a predetermined period of time.

3,100,819
ELECTRONIC SELECTING SYSTEMS
Searcy F. Griffin, Garland, and Samuel D. Turner, Jr., Dallas, Tex., assignors to Varo, Inc., a Texas corporation
Filed Aug. 5, 1957, Ser. No. 676,091
6 Claims. (Cl. 179—15)



2. In a device of the type described: a transmitting means; a receiving means; a termination means; and a selecting and channeling means operably connected to said transmitting means, said receiving means and said termination means, said selecting and channeling means comprising an electric valve means, said electric valve means having an anode circuit connected through a coupling transformer to the transmitting means, a suppressor grid circuit and a control grid circuit operably connected to the receiving means, a screen grid circuit connected by means of a coupling transformer to a termination means and a cathode circuit connected through a coupling transformer to a termination means, said transformers being reversely connected so that signals received through the receiver and applied to said control grid and said suppressor grid circuits cancel out in the anode circuit and will be transmitted through said cathode and screen grid circuits and the reversely connected transformers in phase to the termination means, and whereby a signal applied at the termination means is transmitted through the anode circuit and to the transmitter means.

3,100,820
LOW-PASS FILTER FOR PULSE AMPLITUDE MODULATED SIGNAL TRANSMISSION SYSTEMS
Carl Gunnar Svala and Enn Äro, Alvsjo, and Göran Lennart Kjellberg, Johanneshov, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed June 15, 1959, Ser. No. 820,383
Claims priority, application Sweden June 18, 1958
2 Claims. (Cl. 179—15)



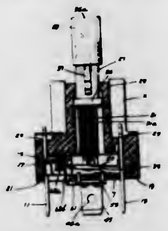
1. A terminal circuit system for a pulse communication system of the kind in which intelligence signals are transmitted in the form of modulated pulses from one station to another by means of a common transmission medium, each station being connected to the common transmission medium through a terminal circuit system, said terminal circuit system comprising a periodically closing switch contact means for connecting each station to said transmission medium, a delay line having a delay time substantially equal to half the closing time of said switch contact means, and a low pass filter network having a cutoff frequency of less than half the frequency of said pulses, the switch contact means, the delay line and the filter network being connected in series, said filter network including a linking network connected to said delay line and formed by a series inductance and a capacitance means, the latter being shunted across said delay line by shunt branches on each side of said series inductance, said linking network having a resonance frequency of less than half the pulse frequency, the capacitance of one of said shunt branches being formed at least partly by the capacitance of the delay line, and said filter network further including a series branch connected between the delay line and the respective station and including a resonance network formed by an inductance and a capacitance connected in parallel, said series branch having a resonance frequency equal to half the pulse frequency.

3,100,821
HIGH SENSITIVITY PIEZOELECTRIC MICROPHONE
Frank Swinehart and Robert James Dobias, Cedar Rapids, Iowa, assignors to The Turner Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Mar. 6, 1961, Ser. No. 93,754
1 Claim. (Cl. 179—110)



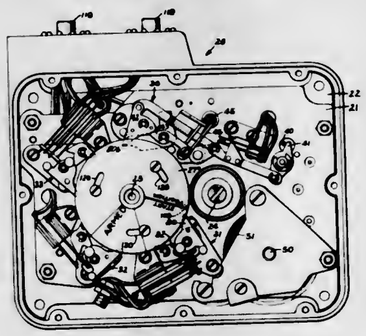
A piezoelectric type microphone comprising a housing, a support means in said housing, said support means including a recess on one surface thereof, a diaphragm closing one end of said housing, an elongated piezoelectric element having one end portion snugly received within said recess and its opposite end portion coupled to said diaphragm, a grommet extending through said support means and securing said support means within said housing, a pressure applying arm engaging the end portion of said piezoelectric element which is received in said recess, a bolt arranged to apply clamping pressure to said arm and extending through said grommet, and a nut threaded on said bolt to provide an adjustable pressure on said arm.

3,100,822
PUSHBUTTON SWITCH WITH DOUBLE THROW ACTION
William Vermeulen, Fairfield, Conn., assignor to General Electric Company, a corporation of New York
Filed Dec. 10, 1959, Ser. No. 858,677
6 Claims. (Cl. 200—5)



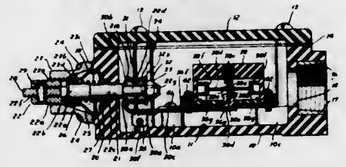
1. A bushbutton switch comprising a hollow insulating base having at least one open side, actuating means for said switch an insulating cover for closing said open side of said base, at least one fixed contact mounted within said base, at least one movable contact mounted within said base between said fixed contact and said cover thereby to provide a first pair of cooperating contacts for said switch, and a flexible contact one end of which is attached to said cover, a portion adjacent the other end of said flexible contact being arranged for engagement by said movable contact thereby to provide a second pair of cooperating contacts for said switch, and means including the cover and said flexible contact for limiting the movement of said flexible contact toward said movable contact to maintain a predetermined distance between said flexible contact and said movable contact when said first pair of contacts are in the closed position.

3,100,823
TIMING DEVICE
Karl T. Wagner, Thomaston, Conn., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 15, 1953, Ser. No. 398,342
8 Claims. (Cl. 200—39)



1. In a timing device, the combination comprising a plurality of electric switches, each having operating means and cocking means for releasably holding the switch in one position and each having a trigger element for tripping said cocking means to cause operation of said switch to a second position, a spring driven timing mechanism having an escapement and having means for winding the spring, said timing mechanism having means for operating the switch-cocking means during winding of the spring and for opearting the trigger elements after successive intervals timed by said escapement, said last means being adjustable for simultaneously changing the time of operation of each of said switches.

3,100,824
LIMIT SWITCH
Allan P. Charbonneau, Wauwatosa, and Roy A. Mukal, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,989
9 Claims. (Cl. 200—47)

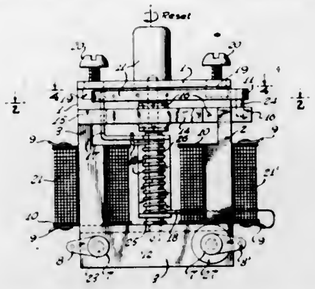


1. A limit switch comprising a housing having a cavity therein, a reciprocably movable operating plunger extending through an opening in a wall of said housing into said cavity, means biasing said plunger to an outer extreme position, a self-contained electric switch mounted in the cavity of said housing, said switch having an actuator extending through its casing and a snap action operating mechanism biased to one operating condition when the force applied on its actuator is less than a given amount and operable to another operating condition when such force exceeds said given amount, a bell crank lever pivotally mounted in said cavity and comprising one arm in engagement with the actuator of said switch and another arm disposed in the path of said plunger, and means mounted on said plunger providing a resilient driving connection between the latter and said other arm of said lever to progressively increase the force applied on said lever as said plunger moves toward its outer extreme position to pivot said lever to operate said switch to said other operating condition, said last mentioned means upon movement of said plunger inwardly of said housing progressively decreasing the force applied to said other arm of said lever and permitting unrestricted pivotal movement of said lever under the bias exerted through the actuator of said switch.

3,100,825
MAGNETIC RELEASE STRUCTURE
Nathaniel B. Wales, Jr., Sharon, Conn., assignor to The Metrodynamics Corporation, a corporation of New Jersey
Filed Nov. 1, 1960, Ser. No. 66,462
3 Claims. (Cl. 200—93)

1. In a circuit breaker for protecting an electrical load from its power source the combination comprising a moveable armature having a first pole and a second pole, a first source of magnetomotive force acting in said armature, a magnetic shunt across said armature, a first stationary pole, a second stationary pole, means to electrically insulate said first armature pole from said first stationary pole when they are not in physical contact, a stationary magnetic circuit coupling said first stationary pole to said second stationary pole, means for urging the first pole of said armature to move away from the said first stationary pole, restoring means to bring the poles of said armature into magnetic holding relation to said stationary poles and to bring said first armature pole into electrical contact with said first stationary pole, circuit means for connecting said electrical load, the said power source for said load and the switch formed by said first armature

pole and said first stationary pole in series relation, and means responsive to the magnitude of electrical current

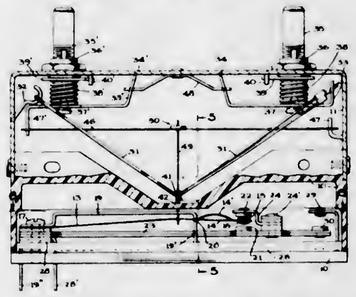


flowing in said circuit means for generating a second magnetomotive force opposing said stationary magnetic circuit.

3,100,826
SNAP SWITCH HAVING PRESETTING MEANS RESPONSIVE TO CURRENT FLOW

Thomas K. Kjellman, Timonium, Md., assignor to The Bendix Corporation, a corporation of Delaware

Filed Apr. 11, 1960, Ser. No. 21,334
9 Claims. (Cl. 200—113)



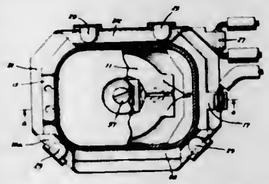
8. In a switch for controlling an electrical circuit as a function of changes in the condition of the ambient air, a housing, a pair of spaced contacts supported by said housing, a resilient switch blade anchored at its one extremity to said housing and having a pair of contacts on its opposite extremity interposed between and coacting with said spaced contacts, said blade being formed with an integral prestressed bowed spring tongue having one end projecting free, an abutment member coacting with said tongue and providing a fixed thrust point for the free end of the latter approximately on the dead-center throw line of the blade to bias the contact extremity of the blade toward one or the other of its alternate contact positions, an actuator having its one extremity connected directed to an intermediate portion of said blade between said thrust point and the anchored extremity of the blade, an elongated flexible humidity-responsive element supported at its opposite extremities from said housing and at an intermediate point having a connection with the opposite extremity of said actuator, and means accessible exteriorly of said housing for adjusting the tension of said humidity element.

3,100,827
THERMALLY RESPONSIVE SWITCH

Charles Grimshaw, Fulton, Ill., assignor to General Electric Company, a corporation of New York

Filed June 3, 1960, Ser. No. 33,817
3 Claims. (Cl. 200—113)

1. A thermally responsive snap acting electric switch comprising a housing of wafer-like configuration formed by a pair of relatively thin conductive strips, said strips each having a recess therein thereby to form a switch cavity, fixed contact means positioned on the inner surface of one of said strips within said cavity, a support secured to said housing betwween said strips and extending into said switch cavity, a snap acting disc supported in cantilever fashion by said support between a free inner end of said support and said housing and disposed in said cavity, said disc having a substantially annular configuration and constructed of bimetallic material, a movable contact means positioned on a free peripheral portion of said annular bimetal disc for cooperation with said fixed contact means, a screw in threaded engagement with one of said strips, extending through said annular disc, and acting upon the free inner end of said support for selectively varying a predeterminable temperature at which said disc will actuate said switch contacts, first

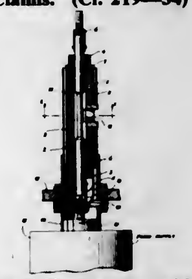


insulating means electrically separating said strips from each other, said first insulating means comprising a thin layer of bendable insulating material, a plurality of clamping tabs formed on the outer periphery of one of said strips, the other strip having a generally uninterrupted flange formed on the outer periphery thereof, said clamping tabs of the one strip being folded over against the flange of the other strip with doubled over folds of the bendable insulating material interposed between and clamped by the tabs of the one strip and the flange of the other strip, said strips being securely sandwiched together about said insulating layer by engagement of said tabs of said one strip with said flange of said other strip, thereby to form a wafer-thin switch of compact configuration, low thermal mass, and high thermal conductivity, and a second insulating means substantially surrounding the switch housing to insulate the switch from its external environment.

3,100,828
SOURCE OF RADIATION FOR INFRARED SPECTROPHOTOMETERS

Gerhard Jacobs, 37 Friedhofstrasse, Ueberlingen (Bodensee), Germany, and Albert Melcher, 4 Goldbach, uber Ueberlingen (Bodensee), Germany

Filed Sept. 7, 1960, Ser. No. 54,539
Claims priority, application Germany Sept. 8, 1959
6 Claims. (Cl. 219—34)

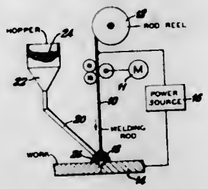


1. An infrared radiation source which comprises a heated electrical conductor; a radiation impermeable casing surrounding said conductor, said casing defining an opening for the passage therethrough of radiation from said conductor and a conduit for the passage of a cooling gas along said casing; and means for injecting a cooling gas into said conduit.

3,100,829
SUBMERGED-MELT WELDING AND COMPOSITION THEREFOR

Robert A. Kubli, Scotch Plains, and William B. Sharav, Short Hills, N.J., assignors to Union Carbide Corporation, a corporation of New York

Filed Jan. 3, 1961, Ser. No. 80,221
7 Claims. (Cl. 219—73)

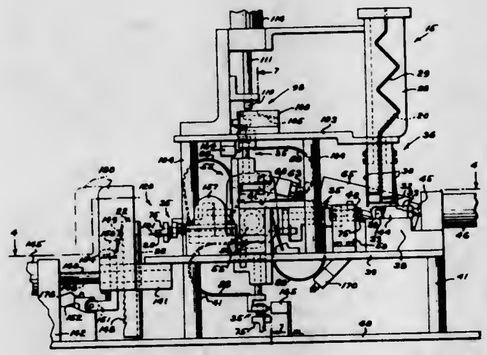


1. A fused submerged-melt welding composition for submerged-arc welding high-impact steels to produce high impact low temperature welds; said composition being composed mainly of CaO, SiO_2, with lesser amounts of MnO; 2%–8% fluoride; and a trace to 10% TiO_2; said CaO ranging between 33% and 55%, the SiO_2 between 30% and 45% and the MnO between 2% and 6%.

3,100,830
APPARATUS FOR PERCUSSIVELY WELDING ELECTRICAL COMPONENTS TO CIRCUIT BOARDS

Lawrence R. Hagner, Cicero, Ill., assignor to Western Electric Company, Incorporated, a corporation of New York

Filed Nov. 10, 1961, Ser. No. 151,577
5 Claims. (Cl. 219—79)

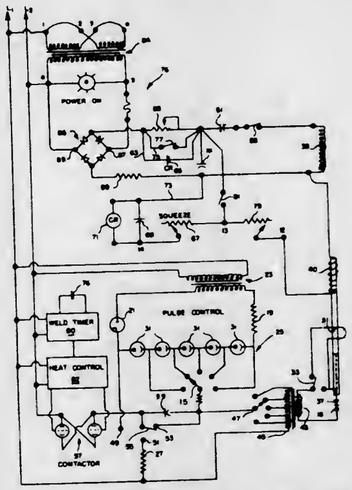


1. In a welding apparatus, a carrier mounted for rotation about an axis, a plurality of electrodes electrically connected individually to a source of welding potential for releasably supporting electrical components, means for mounting said electrodes on said carrier for rotary movement therewith and for movement relative thereto to and from retracted and advanced positions, resilient means on said carrier for moving said electrodes to said advanced positions, means for indexing said carrier to successively advance the electrodes to a plurality of stations, means at a first station for loading components onto said electrodes, means at a second station for moving said electrodes to the retracted positions, latch means on said carrier for releasably retaining said electrodes in the retracted positions, means at a welding station electrically connected to the source of potential for supporting an article in the path of movement of said component, and means at said welding station for releasing said latching means to effect the movement of said electrodes from the retracted position toward the advanced position and the welding of the component to the article.

3,100,831
MAGNETIC FORCE WELDER

William M. Wakeley, Milwaukee, Wis., assignor to Acro Welder Mfg. Co., Milwaukee, Wis., a corporation of Wisconsin

Filed Mar. 22, 1961, Ser. No. 97,582
28 Claims. (Cl. 219—86)

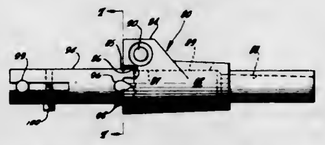


1. A welding machine comprising, a frame including a stationary electrode, a spindle mounted in the frame for movement toward and away from the stationary electrode, an electrode carrier positioned at one end of the spindle for supporting a movable electrode, electromagnetic means supported by the frame for biasing the spindle toward the stationary electrode with a predetermined pressure to clamp a workpiece therebetween, and means for passing an electrode current through the electrodes after a predetermined pressure has been established on the electrodes, said electromagnetic means including means for exerting a lifting force on the spindle after the welding operation to release the workpiece from between the electrodes.

3,100,832
WELDING

John R. Sosoka, Glendora, and Joseph V. Robinson, Arcadia, Calif., assignors to Unitek Corporation, Monrovia, Calif., a corporation of California

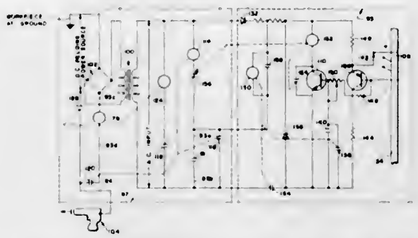
Filed Feb. 13, 1962, Ser. No. 172,992
2 Claims. (Cl. 219—86)



1. A self-aligning assembly for spot welder electrodes, the assembly comprising a body having a portion adapt-

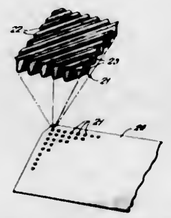
ed to be secured to an arm of a spot welder, a holder adapted to fit with the body, first aligning means on the body, second aligning means on the holder, so when the body and holder are fitted together they are located in a fixed position with respect to each other, and an electrode tip secured to the holder.

3,100,833
STUD WELDING DEVICES
Ralph K. Ritter, Moorestown, and Lawrence P. English, Haddon Heights, N.J., assignors to SKSM Products, Inc., Moorestown, N.J., a corporation of New Jersey
Filed Jan. 3, 1961, Ser. No. 80,084
6 Claims. (Cl. 219—98)



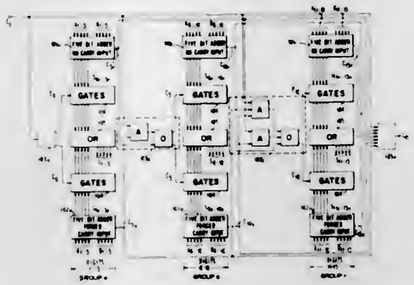
2. Welding apparatus comprising first means for separating two parts to be welded with respect to each other, second means for generating a direct current electrical arc between said two parts, said second means including a conductor for supplying direct current flow to said arc, third means for shunting a portion of said conductor to provide an electrical voltage representing said current flow, fourth means responsive to said electical voltage to indicate the time at which the quantity of energy transferred by said direct current flow has reached a predetermined value, said fourth means including a resistor-capacitor network across which a predetermined charge is generated within said time by said voltage, fifth means including a switch in series with said conductor responsive to said fourth means for interrupting said current flow substantially at the end of said time, and sixth means for resiliently directing said parts into contact with each other substantially at the end of said time.

3,100,834
MAGNETIC DATA PROCESSING
Frederick M. Demer, Johnson City, and Martin J. Kelly, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,903
12 Claims. (Cl. 235—61.12)



1. The method of making a statistical record card which comprises preparing on the surface of a unit of card stock a matrix of sensible discrete spots, covering said unit with a master record having means to mask selected ones of said spots in accordance with a data-representing code pattern, and exposing said unit through said master record to a distributed field of force capable of rendering the unmasked spots non-sensible.

3,100,835
SELECTING ADDER
Orest J. Bedrij, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 6, 1960, Ser. No. 839
4 Claims. (Cl. 235—175)



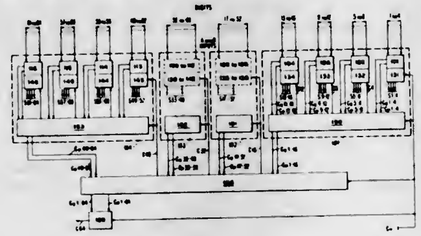
1. In a logical adder the combination of input means for supplying voltage signals representative of augend and addend digits, output means the voltage states of which represent sum digits, said input and output means being divided into a plurality of first level groups, each of said first level groups in turn being divided into a plurality of second level groups, each of the second level groups thereby having input means for supplying voltage signals representative of a subaugend and a corresponding subaddend, and output means the voltage state of which represents true subsum digits; first means associated with each of said second level groups responsive to said subaugend and subaddend input means for producing voltage signals representative of a first subsum and a first group carry output, said first group carry output being generated simultaneously for all groups; second means associated with each of said second level groups responsive to said subaugend and subaddend input means for producing simultaneously with said first means voltage signals representative of a second subsum higher by one than said first subsum and for producing voltage signals representative of a second group carry output, said second group carry output being generated simultaneously for all groups; means associated with each of said first level groups responsive to the group carry output signals from second level groups having digital positions of lower digital order for producing a respective carry input signal into each first level digital group; and means within each of said first level groups respectively responsive to said carry input signals and to the group carry outputs from second level groups within the respective first level group which have digital positions of lower digital order to select the subsum for each second level group corresponding to the true subsum.

3,100,836
ADD ONE ADDER
Gerard T. Paul and Orest J. Bedrij, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 24, 1960, Ser. No. 10,615
5 Claims. (Cl. 235—175)

2. An adder wherein the digital positions of the augend, addend and sum are successively subdivided a plurality of times thereby forming groups within groups in a plurality of size levels, the groups of all but the lowest size level having a relationship of higher level in respect to groups of next lower level, each group of digital positions thereby

having a subaugend, a subaddend, and true subsum, comprising in combination; digital input means in each of the lowest level groups for supplying signals coded to represent the respective subaugend and subaddend, carry input means for the least significant digital position of each of said lowest level groups, carry propagate means in each of said lowest level groups, responsive to the respective digit input means for producing a carry propagate signal when the subaugend and subaddend values are such that during their addition a carry into the carry input means of the least significant digital position of said lowest level group would propagate through the entire respective group of digital positions, carry generate means in each of said lowest level groups, responsive to the respective digit input means for producing a carry generate signal when the respective subaugend and subaddend values are such that during their addition a carry would propagate out of the respective group of digital positions irrespective of whether there was a carry into the respective group, higher level group carry propagate means within each higher level group adapted to be rendered operative when each lower level group within said higher level group produces a carry propagate signal, higher level group carry generate means within each higher level group adapted to be rendered operative in response to any of the following conditions:

(1) a carry generate signal from the lowest order, lower level group within said higher level group plus a carry propagate signal from each next higher order group of said lower level groups,



(2) a carry generate signal from the next to lowest order group of said lower level groups plus a carry propagate signal from each next higher order group of said lower level groups,

(3) a carry generate signal from the next to highest order group of said lower level groups plus a carry propagate signal from the highest order group of said lower level groups, or

(4) a carry generate signal from the highest order group of said lower level groups,

group carry input means within each higher level group for supplying carry signals to

(1) the least significant position of the lowest order group within the next higher order group of said higher level groups,

(2) the group carry propagate means of the next higher order, higher level group, and

(3) the group carry generate means of the next higher order, higher level group,

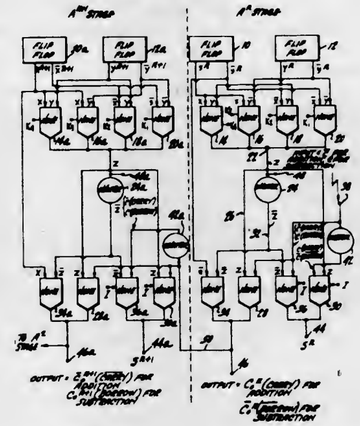
said group carry input means adapted to be rendered operative in response to any of the following conditions:

(1) a carry generate signal from the carry generate means within said higher level group, or

(2) a carry propagate signal from the carry propagate means within said higher level group plus a carry signal from the next lower order group of said higher level groups,

summing means in each of the smallest groups responsive to said digital input means for generating signals representing a provisional subsum of the respective subaugend and subaddend, said means respectively responsive to the respective subaugend input means and to the respective subaddend input means, and add one adder means in each of the smallest groups, responsive to the summing means and to the respective group carry input means for producing signals coded to represent the true subsums of the respective groups.

3,100,837
ADDER-SUBTRACTER
William J. Gesek, Jr., Linden, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 22, 1960, Ser. No. 50,945
9 Claims. (Cl. 235—175)

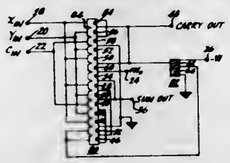


2. A binary adder-subtracter comprising, a flexible logic network made up of four "none" gates for deriving from input signals indicative of binary digits X, $\overline{X}$, Y and $\overline{Y}$ a signal indicative of the binary digit Z in response to certain control voltages applied to said network and a signal indicative of the binary digit $\overline{Z}$ in response to other control voltages applied to the network, where Z is defined by the Boolean equation $Z=XY+\overline{X}\overline{Y}$; and a network receptive of the Z signal and a carry signal $\overline{C}$ for deriving therefrom sum S and carry C_o output signals defined by the Boolean equations

$$S=ZC+\overline{Z}\overline{C} \text{ and } C_o=XZ+C\overline{Z}$$

and receptive of the $\overline{Z}$ signal and a borrow signal C for deriving therefrom difference S and borrow $\overline{C}_o$ output signals defined by the Boolean equations $S=\overline{Z}\overline{C}+ZC$ and $\overline{C}_o=Z\overline{C}+\overline{X}Z$.

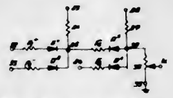
3,100,838
BINARY FULL ADDER UTILIZING INTEGRATED UNIPOLAR TRANSISTORS
Michael E. Szekely, Belle Mead, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 22, 1960, Ser. No. 37,940
14 Claims. (Cl. 235—176)



1. In combination, a first terminal to which an operating voltage may be applied and a second terminal at a point of reference potential; a first circuit extending between said terminals comprising first, second and third unipolar transistors connected in series source electrode to drain

electrode, each said transistor having a gate electrode to which a control signal may be applied, and said second and third transistor receiving the same control signal; a second circuit extending between said terminals comprising said first unipolar transistor and fourth and fifth unipolar transistors connected in series source electrode to drain electrode, each said first fourth and fifth transistor each having a gate electrode to which a different control may be applied; and a third circuit extending between said terminals comprising sixth and seventh unipolar transistors in parallel and said third unipolar transistor in series with the parallel combination, the drain electrode of said third unipolar transistor being connected to the common source electrode connection of said parallel connected transistors, said sixth and seventh unipolar transistors each having a gate electrode to which a different control signal may be applied whereby an output signal appears at said first terminal when said first and second and third unipolar transistors conduct, or when first, third and fourth unipolar transistors conduct, or when said fifth or sixth and seventh unipolar transistors conduct.

3,100,839
GENERAL PURPOSE COMPENSATED DIODE FUNCTION GENERATOR
Amos Nathan, Haifa, and Jacob Katzenelson, Tel-Aviv, Israel, assignors to Technion Research and Development Foundation Ltd., Haifa, Israel
Filed Sept. 2, 1959, Ser. No. 837,614
12 Claims. (Cl. 235—197)



1. A generator for the production of a compensated triangle function $\Delta(x-x_1)$, approximating the triangle function

$$\Delta'(x-x_1)=\text{Min}\{\text{Max}[x-x_1-\Delta x, -(x-x_1)-\Delta x], 0\}$$

for the instantaneous value of x, where Δx is a suitable constant, comprising first and second input means for generating first and second output signals which are suitable linear functions of x; first and second diode means with a first common output connection responsive to said first and second signals for producing therefrom a third signal; constant signal means; third and fourth diode means with common output connection responsive to said third signal and said suitable constant signal to produce a fourth signal; and a plurality of suitable compensating resistance means connected in series with said diode means, for compensating the rounding off of the apex and the corners of said compensated triangle function such as to improve the approximation of

$$\Delta'(x-x_{1-1})+\Delta'(x-x_1)+\Delta'(x-x_{1+1})$$

to a constant in the interval

$$x_{1-1}<x<x_{1+1}$$

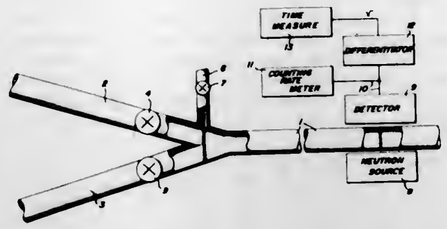
where

$$x_1=x_0+i\Delta x$$

and x_0 and Δx are suitable constants.

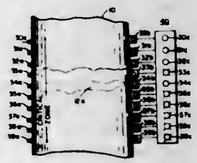
3,100,840
METHODS AND APPARATUS FOR MEASURING AND TESTING
Kennard H. Morganstern, Flower Hill, Roslyn, N.Y., assignor to Nuclear Corporation of America, Inc., Denville, N.J., a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,202
11 Claims. (Cl. 250—43.5)

1. A method of locating a particular area in a material having a relatively low thermal neutron absorption cross-section comprising, mixing with the material only in the particular area to be subsequently located, a small amount of a substance having a high thermal neutron absorption cross-section to confine said substance to said area, passing



the material and substance between a source of thermal neutrons and a detector of sub-atomic radiation and detecting changes in the rate at which sub-atomic particles fall upon the detector.

3,100,841
RADIOACTIVE MEASURING SYSTEM FOR BLAST FURNACE CHARGE LOCATION
James E. Reider, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Sept. 25, 1959, Ser. No. 842,494
7 Claims. (Cl. 250—43.5)

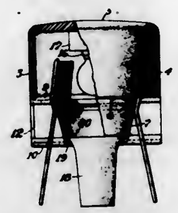


1. Apparatus for locating the charge in a blast furnace comprising means for directing a horizontal beam of radiation into said blast furnace at each of a plurality of downwardly spiraling points located at different levels above the base of said furnace, means for quantitatively detecting the amount of radiation transmitted through said furnace at each of said different levels, and means for registering an indication whenever said detected radiation at any of said levels exceeds a predetermined value.

3,100,842
TOOTH BRUSH HOLDER AND STERILIZER
Walter Goodwin Tellefsen, Passaic, N.J., assignor of one-fourth to Gerald Leon Ritter, Bergenfield, N.J., one-fourth to John Charles Kopf, Brooklyn, N.Y., and one-fourth to Pasquale Carmine Trotta, Nutley, N.J.
Filed June 15, 1961, Ser. No. 117,374
11 Claims. (Cl. 250—51)

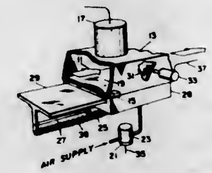
1. A tooth brush holder comprising a housing open at the bottom, a member open at the top and having an upper edge with the same configuration as the lower edge of said housing, and means for supporting said member

below said housing, the overall width of the upper edge of said member being less than the overall width of the lower edge of said housing, such that the horizontal component of the distance between the two edges at all points is less than the overall dimension of the toothbrush at the bristle end, measured lengthwise of the bristles, while the space between the edges is greater



than the width of said toothbrush at the bristle end, measured transversely of the bristles, so that the space between said edges is sufficient to permit the insertion of the bristle end of said tooth brush, whereby said tooth brush may be inserted into said space between said member and said housing and suspended so that the bristles of said brush rest upon the edge of said member.

3,100,843
RADIATION DOSAGE LIMITER
George B. Foster, Worthington, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Nov. 23, 1959, Ser. No. 854,622
11 Claims. (Cl. 250—52)



1. The method of limiting the radiation dosage received by material moving through a field of radiation of known intensity comprising the steps of establishing an excessive value for said radiation dosage, measuring the rate of said material movement through said field, computing the integrated dosage received by said material in accordance with said rate measurement relative to said field intensity, comparing said computed dosage with said excessive value, and substantially reducing the intensity of said radiation field whenever said computed dosage exceeds said excessive value.

3,100,844
FLUID FLOW INDICATING PROCESS
Marcel J. Vogel, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 23, 1960, Ser. No. 77,832
5 Claims. (Cl. 250—71)

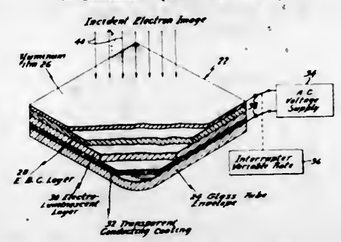
5. A process for measuring the frictional forces arising from the impact of a fluid stream striking a light transmitting surface, comprising:

incorporating triboluminescent particles in the fluid;

causing the fluid stream with the particles incorporated therein to strike the surface, thereby inducing light emission from the triboluminescent particles; and

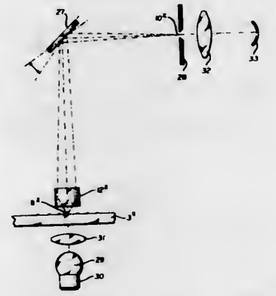
recording the emitted light patterns through the light transmitting surface.

3,100,845
IMAGE INTENSIFICATION TUBE SYSTEM
Nathan Sclar, Glen Rock, N.J., assignor, by mesne assignments, to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed June 10, 1960, Ser. No. 35,253
2 Claims. (Cl. 250—213)



1. A system for intensifying an image of incident radiation including in combination photo-emissive means responsive to said incident radiation for producing electrons, an assembly comprising a layer of electro-luminescent material and a layer of electron bombardment conductive material over said layer of electro-luminescent material, means for applying a voltage across said assembly and means for accelerating said electrons and for directing said electrons onto the surface of said layer of electron bombardment conductive material.

3,100,846
PHOTOELECTRIC PROCESS FOR MEASURING AND ADJUSTING THE POSITION OF OBJECTS, PARTICULARLY OF SCALE LINES
Horst Burkhardt, Altenmarket, near Traunstein, Upper Bavaria, Germany, assignor to Fa. Wenczler & Heidenhain, Traunreut, near Traunstein, Upper Bavaria, Germany, a corporation of Germany
Filed Nov. 12, 1958, Ser. No. 773,431
6 Claims. (Cl. 250—219)



1. A photoelectric process for measuring and adjusting the position of objects, particularly of scale lines by means of symmetry adjustments, wherein a scale line or an image thereof oscillates about a zero position relative to a diaphragm, to an image of the latter or to a light source, the latter emanating a light beam through the diaphragm onto a photoelectric cell, comprising the steps of

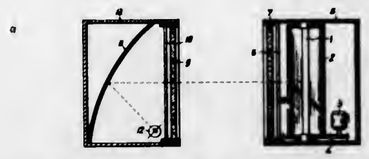
oscillating said scale line and an image of the latter, respectively, about a symmetry line by means of a light beam to form shading areas for an amplitude such that at the greatest oscillation said shading areas amounts to a fraction of the maximum possible shading by said oscillation, during an oscillation disposed symmetrically to said scale line and an image of the latter, respectively, and

measuring the amplitude deviations of said light beam impinging on said photoelectric cell.

3,100,847
LIGHT CURTAIN APPARATUS FOR PHOTOSENSITIVE DETECTOR

Gerhard von Hacht, Frankfurt am Main, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany

Filed Jan. 18, 1961, Ser. No. 83,397
Claims priority, application Germany Jan. 19, 1960
6 Claims. (Cl. 250—237)

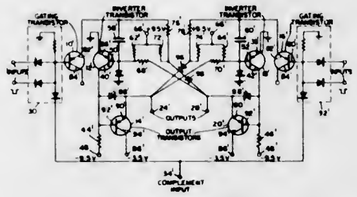


1. An arrangement for producing a protective light curtain, the combination comprising: a first casing having a straight slot; a cylindrical lens in front of said slot; a second cylindrical casing inside said first casing and having at least one helical shaped slot; an elongated light source axially and centrally disposed in said second casing and aligned with said cylinder lens and said straight slot and defining therewith the plane of extension of the light curtain; means for rotating said second casing; a third casing disposed spatially apart from said first casing and having a straight slot aligned with said curtain; a photoelectric receiver in said third casing; an optical system in said third casing optically aligned with the slot thereof and including a cylindrical lens and a collimator mirror curved in two planes and reflecting any light beam entering said third casing from said light source onto said photoelectric receiver.

3,100,848
HIGH SPEED MULTIVIBRATOR HAVING CROSS COUPLING CIRCUITRY

John W. Skerritt, Kingston, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 25, 1959, Ser. No. 822,793
6 Claims. (Cl. 307—88.5)

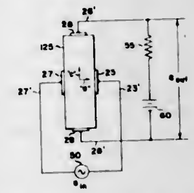


1. A high-speed bistable multivibrator comprising two similar circuits each including an input terminal, an output terminal and an amplifying device having a substantially conducting condition and a substantially nonconducting condition, said multivibrator having two stable states with one of said devices being in conducting condition in one of said stable states and the second device being in conducting condition in the other of said stable states, means for applying an input signal to one of said input terminals for switching said multivibrator from one stable state to the other and cross-coupling means connected between the input terminal of each circuit and the output terminal of the other circuit, each said cross-coupling means including a signal source connected to said input terminal so that a junction is defined therebetween, a control device having asymmetric characteristics connected between the coupled output terminal and said junction for applying a clamp signal as a function of the signal at the coupled output terminal to said junction, said control device isolating the effect of the coupled output terminal from said input signal when that signal is being applied to the coupled input terminal for changing the conducting condition of the associated amplifying device but permitting a resulting signal transition at the coupled output terminal to produce a corresponding signal transition at said junction for changing the conducting condition of the associated amplifying device.

3,100,849
ACTIVE SOLID-STATE DEVICES USING ANISOTROPIC SINGLE CRYSTAL RUTILE

Lewis E. Hollander, Jr., Los Altos Hills, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed June 29, 1960, Ser. No. 39,584
15 Claims. (Cl. 307—88.5)

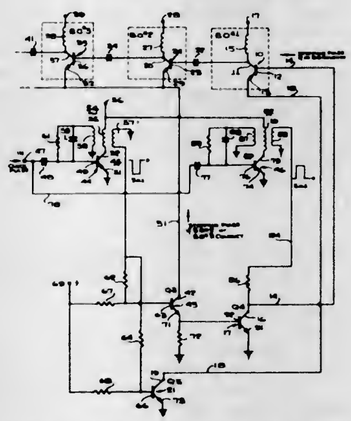


5. A solid-state electronic device comprising an element of single crystal rutile having an oxygen vacancy density chosen so that an anisotropy in conduction exists in at least two different mutually perpendicular directions in said element, means adapted to act on said element so as to perturb the conduction in said element in a predetermined direction, and means connected to said element for obtaining an electrical signal corresponding to the perturbance in conductance occurring in said element in said predetermined direction.

3,100,850
BROKEN RING COUNTER CIRCUIT WITH INTERNAL PULSE RESET MEANS

Lonnie S. McMillian, Jr., and William T. Eddins, Melbourne, Fla., assignors to Radiation Incorporated, Melbourne, Fla., a corporation of Florida

Filed Oct. 25, 1960, Ser. No. 64,921
14 Claims. (Cl. 307—88.5)

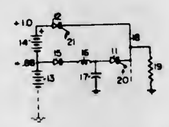


1. A broken ring counter comprising a plurality of counter stages connected in cascade, an input circuit adapted to receive input pulses, means responsive to discontinuance of energization of a preceding stage for energizing the next succeeding stage of the second through last stages of the counter, and means responsive to an input pulse and lack of energization of all of the second through last stages of the counter for energizing the first stage of the counter.

3,100,851
HIGH POWER SYNTHETIC WAVEFORM GENERATOR

James A. Ross, Orange, and Joseph W. Harter 3rd, Venice, Calif., assignors to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware

Filed Nov. 3, 1959, Ser. No. 850,595
24 Claims. (Cl. 307—107)

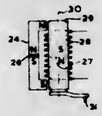


1. A static device for forming alternating electrical energy from a source of series-connected elements adapted to simultaneously and continuously supply electrical energy at a plurality of fixed specific voltages comprising a controlled rectifier connected to one said voltage supply of said source, and to an output circuit, another controlled rectifier connected from a lower voltage supply of said source to said output circuit, pulse means to selectively initiate conduction of said controlled rectifiers, and inductive means to terminate said conduction by providing a voltage increment to back bias the controlled rectifier connected to the higher of the voltage supplies of said source.

3,100,852
VARIABLE RELUCTANCE MAGNETIC CIRCUIT

Johannes Josephus Alphonsus Peek, Herre Rinia, and Simon Duinker, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 24, 1957, Ser. No. 667,619
Claims priority, application Netherlands July 28, 1956
10 Claims. (Cl. 310—15)



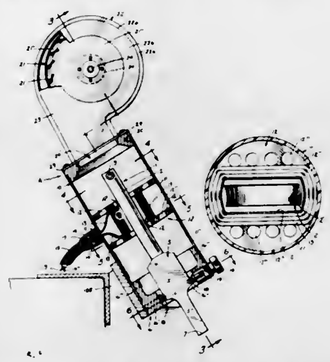
5. An electromechanical transducer comprising a plurality of magnetic circuits, means for establishing flux flow in said circuits, and common to said plurality of circuits a rotatable magnetic member having a magnetic portion constituted substantially of soft magnetic material and possessing substantially different magnetic permeabilities, at right angles to its axis of rotation, in mutually-perpendicular directions.

3,100,853
MAGNETOSTRICTIVE VIBRATORY APPARATUS

Claus Kleesattel, Forest Hills, Lewis Balamuth, New York, and Arthur Kuris, Riverdale, N.Y., assignors to Cavitron Ultrasonics Inc., a corporation of New York

Original application Nov. 2, 1959, Ser. No. 850,406, now Patent No. 3,056,698, dated Oct. 2, 1962. Divided and this application Aug. 15, 1961, Ser. No. 131,667
10 Claims. (Cl. 310—26)

1. A vibrator unit having a magnetostrictive transducer section designed to be longitudinally vibrated when energized by a surrounding high frequency alternating magnetic field, said transducer section being composed of a multiplicity of similar magnetostrictive laminates of uniform width, length and thickness and which are compactly stacked in internesting relationship; each of said similar laminates having a concavo-convex cross-section whose curvature is not more than sixty degrees and whereby compact internesting of adjacent stacked laminates can be achieved with substantially no gap between the adjacent surfaces of the stacked laminates; the dimensional thickness of each laminate being sufficiently thin to insure penetration of the magnetic flux, as generated by the surrounding high frequency alternating magnetic field,

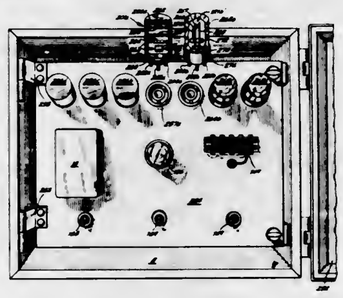


through a major part of the thickness of the laminate; said stacked concavo-convex laminates having a length which corresponds to one-half wavelength of sound or an integral multiple number thereof traveling longitudinally through the stacked laminates at the frequency of vibration induced by the surrounding alternating magnetic field; and a connecting body composed of vibration transmitting material having one end face thereof rigidly bonded to one of the respective adjacent ends of each of said stacked concavo-convex laminates.

3,100,854
REPEATING CIRCUIT INTERRUPTER

Richard E. Riebs, Hales Corners, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Sept. 6, 1961, Ser. No. 136,352
12 Claims. (Cl. 317—22)



2. A repeating circuit interrupter including main switch means in circuit with an electrical system, operating means for selectively performing switch opening and switch reclosing operations, control means for said operating means including mounting means, overload sensing means operable upon the occurrence of an overload in said system to actuate operating means in the execution of a series of switch opening and reclosing operations, a plurality of time delay circuit means for delaying certain of said operations and each being secured to individual base means, a

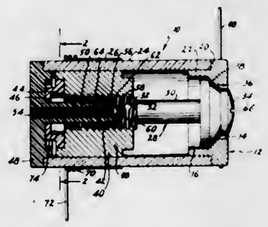
plurality of socket means in said mounting means, disconnect plug means secured to each of said base means and engageable with one of said socket means for supporting each of said time delay means on said mounting means and electrically connecting the same to said control means, means operable after each opening operation of said main switch means to couple one of said plurality of time delay means to said operating means so that the time delay of each succeeding delayed operation may be controlled, said disconnect plug means allowing said time delay means to be selectively removed from said circuit interrupter and replaced by time delay circuit means having different time delay characteristics.

3,100,855
TRIMMING CAPACITOR
Harry Hotelling, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1958, Ser. No. 775,828
4 Claims. (Cl. 317—249)



1. In combination, a support and a plurality of capacitors, said support comprising a flat plate like member, integral hub members formed on each side of said plate like member, said support and said hub members being made of dielectric material, each said hub member on one side of said support being disposed opposite a said hub member on the opposite side of said support, a hole through each said hub member concentric thereto and extending through a said hub member on the opposite side thereof, a first electrode on each said hub member on one side of said support, a second electrode on each said hub member on the opposite side of said support, and a metallic member extending through each said hole and electrically connected to one said electrode and movable toward another said electrode with the dielectric material of said hub member between said metallic member and one said electrode to vary the capacitance thereof.

3,100,856
VARIABLE ELECTRICAL TRIMMER CAPACITOR
Llewellyn T. Barnes, 155 Atlantic Ave., Freeport, N.Y.
Filed Mar. 13, 1961, Ser. No. 95,191
5 Claims. (Cl. 317—249)



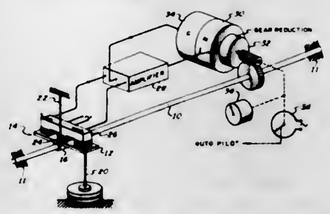
1. A trimmer capacitor comprising a hollow cylinder formed of a material having a high dielectric constant, an adjusting member rotatably mounted in said cylinder and including a shank extending axially into the interior of said cylinder, an externally-threaded terminal portion at the end of said shank and having a slot therein for deformation of the external threading thereof, a piston electrode slidable in said cylinder, said piston electrode having an internally-threaded, longitudinal through bore receiving the threaded terminal portion of said shank, means for preventing rotation of said piston electrode within said cylinder so that said piston electrode is moved longitudinally through said cylinder when said shank is rotated, and adjustable means carried by said means for preventing rotation of said piston electrode extending longitudinally through the bore of said piston electrode and engaging said terminal portion of said shank for deforming said terminal portion of said shank so that said terminal portion of said shank is maintained in tight frictional engagement with said piston electrode in said internally-threaded bore.

3,100,857
CAPACITOR TERMINAL CONNECTION
Livingston L. Rice, Williamstown, and Donato F. Dagnoli, North Adams, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed July 22, 1958, Ser. No. 750,139
2 Claims. (Cl. 317—260)



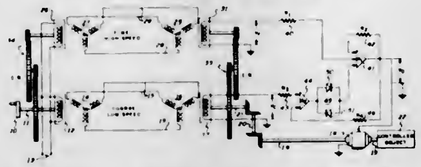
1. A capacitor comprising a convolute winding of a plurality of electrodes with dielectric material therebetween, a lateral edge of one electrode of said plurality extending beyond an end of said winding, a lead-wire having a first end and a second end and an intermediate portion formed into a loop substantially normal to said first end, said lead-wire secured to said winding with said first end within said dielectric material and with said loop in electrical contact with said extending edge, whereby a force applied to said second end will uncoil said loop before disengaging said lead-wire from said winding.

3,100,858
PRESSURE REBALANCING AND MEASURING SERVOSYSTEM
William J. Topazio, Levittown, and John D. Weir, Huntington, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,365
11 Claims. (Cl. 318—28)



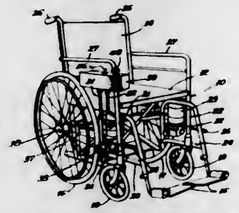
10. Apparatus responsive to variations in pressure comprising a torsion bar, a barometric device movable in response to pressure changes, support means connected to said torsion bar, means rotatable about the longitudinal axis of said torsion bar, pick-off means having a stationary and movable member producing a signal proportional to the angular misalignment between its members, said movable member being connected to said support means and said means rotatable about the longitudinal axis of said torsion bar, means responsive to temperature changes to rotate said rotatable means relative to said support means, means maintained under tension connecting said barometric device to said support means applying a torque about the longitudinal axis of said torsion bar to rotate said pick-off means movable member, said rotatable means, and said support means about said torsion bar longitudinal axis when said barometric device moves, said means under tension being stiff to longitudinal forces and resilient to bending forces, and means responsive to said pick-off means signal operable with said torsion bar to apply a torque to the bar and thereby cancel substantially any angular misalignment between the pick-off means members.

3,100,859
FINE AND COARSE SIGNAL MIXING CIRCUIT
Jerome Bentkowsky, Charlottesville, Va., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed May 29, 1961, Ser. No. 113,418
5 Claims. (Cl. 318—30)



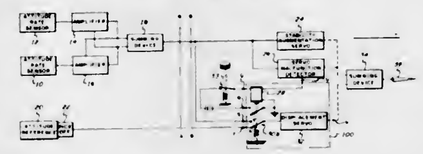
1. In a control system having a controlled object and a controlling object, high speed and low speed transmitters operated from said controlling object, high speed and low speed receivers electrically connected to said high and low speed transmitters respectively and mechanically connected to said controlled object for providing high and low speed signals respectively, a first circuit responsive to said low speed signal, said first circuit including blocking means for blocking the voltage supplied thereto below a predetermined value, and a second circuit responsive to said high speed signal, said first circuit forming a feedback loop of said second circuit when said low speed signal is above said predetermined value whereby for low speed signals below said predetermined value said blocking means is effectively an open circuit and for low speed signals above said predetermined value said blocking circuit is effectively closed, in the latter case said high speed signal is effectively attenuated due to the high gain of said low speed signal in the feedback path of the high speed signal circuit and thus the transition from one speed signal to another is accomplished smoothly.

3,100,860
MOTOR DRIVE CONTROL FOR WHEELCHAIR
Harry Rosenthal, 6540 N. Campbell Ave., Chicago, Ill.
Filed Oct. 9, 1958, Ser. No. 766,294
4 Claims. (Cl. 318—55)



1. Electrical control means for a vehicle having on each of two sides thereof a supporting wheel and a reversible electric motor for driving the same, with the wheel and motor on one side operating independently of the wheel and motor on the other side, said control means including in combination, first and second circuits individually connected to the motors for energizing the same, a pair of leaf switches electrically connected in each circuit, the first switch of each pair having a plurality of flexible leaves including an intermediate leaf with one leaf on one side thereof and at least two leaves on the other side thereof, with the leaves being engaged in sequence by movement of said intermediate leaf thereof to cause current flow in the associated circuit in one direction to provide rotation of the corresponding motor and wheel in the forward direction, the second switch of each pair also having a plurality of flexible leaves with an intermediate leaf being movable to cause current flow in the associated circuit in the opposite direction to provide rotation of the corresponding motor and wheel in the reverse direction, said first switches of said pairs being oppositely disposed from said second switches thereof, and said switches of one pair being positioned at right angles with respect to said switches of the other pair, a joy-stick control member pivotally mounted intermediate said first and second switches of both pairs for selectively moving said intermediate leaves thereof to operate said switches, whereby only one switch of each pair may be operated at a given time, and resistor means connected to said leaves on said other side of each of said first switches to introduce resistance into said circuit in one position of said first switches to control the current flow in said circuits and thereby control the forward speed of the motors.

3,100,861
FAIL-SAFE CONTROL SYSTEMS FOR AIRCRAFT
Stephen S. Osder, Phoenix, Ariz., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Dec. 23, 1960, Ser. No. 77,939
8 Claims. (Cl. 318—489)

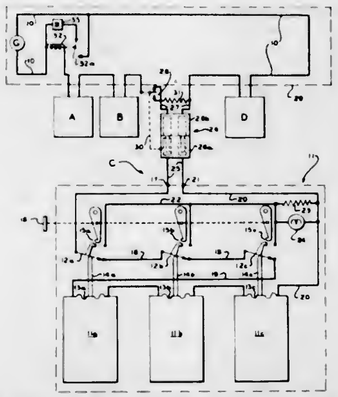


1. Apparatus for controlling the attitude of an aircraft comprising means producing a signal representing the craft displacement from a reference attitude, means producing a signal representing the rate that said craft changes its attitude, first and second servo means adapted to receive respectively said displacement and attitude rate signals, means connected to both said servo means responsive to vary a control member on said craft in accordance with the sum of the respective outputs of said servo means, and means responsive to malfunctions of said second servo means to apply said attitude rate signal to said first servo means instead of said displacement signal.

3,100,862
SEALED STORAGE CELLS AND CHARGING CIRCUITS THEREFOR
Donald W. Collier, Pines Lake, Wayne, N.J., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Nov. 23, 1959, Ser. No. 854,718
6 Claims. (Cl. 320—46)

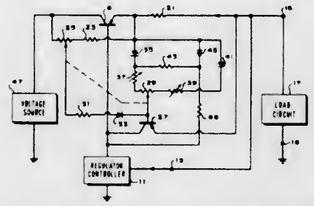
3. A storage battery including a plurality of separate hermetically sealed cells of the type which evolves a gas when overcharged and overdischarged; a pressure switch mounted on each of said cells and operable by internal cell pressure from a normal position when the internal pressure rises to an above normal value; a latch associated with each of said pressure switches for latching the switch when the same is operated from normal position; a pair of terminals for said battery connected to said cells through said pressure switches

only when the switches are in said normal position; and a single reset control on said battery operatively



coupled to each of said latches for releasing the latches when the reset control is operated.

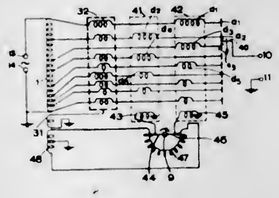
3,100,863
CURRENT LIMITED TRANSISTOR VOLTAGE REGULATOR
William R. McCullough, Menlo Park, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Aug. 3, 1961, Ser. No. 129,096
7 Claims. (Cl. 323—22)



1. In a power supply having a series regulator which is responsive to the voltage appearing across a load circuit, a resistor in series with said load circuit to produce a first voltage that is related to the current in said load circuit, means connected to said regulator for producing a second voltage that is related to the voltage appearing across said series regulator, a gain element connected to control the impedance of said regulator and connected to receive the first voltage, said gain element becoming effective to increase continually the impedance of said regulator when the first voltage exceeds a predetermined value, and normally non-conductive means connected to said gain element for applying thereto said second voltage, said non-conductive means becoming conductive for rendering said gain element effective further to increase continually the impedance of said regulator when the second voltage exceeds a predetermined value.

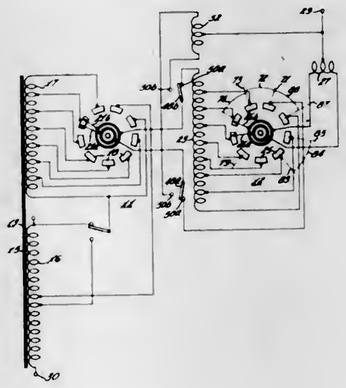
3,100,864
INTERPOLATING DEVICES, ESPECIALLY FOR THE CONTROL OF AUTOMATIC MACHINE TOOLS
Rolf Edmund Spencer, West Ealing, London, and Geoffrey Huson Stephenson, Ealing, London, England, assignors to Electric & Musical Industries Limited, Middlesex, England, a company of Great Britain
Filed Jan. 26, 1955, Ser. No. 484,202
Claims priority, application Great Britain Jan. 27, 1954
14 Claims. (Cl. 323—43.5)

1. An interpolating device comprising a signal source having a series of reference points from which alternating voltages can be derived representing values of a function for a series of equi-spaced values of a variable of said function, a series of contacts respectively representing said spaced values of the variable and connected to the respective reference points, a selector movable to derive voltage selectively from said contacts, means for deriving a further voltage variable in proportion to a variable



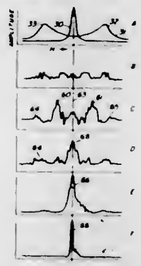
fraction of the difference between equi-spaced values of the variable, and means for injecting an incremental voltage, responsive to said variable voltage, at a point prior to a selected contact to increment the voltage derived from said selected contact, to produce interpolation between the function values which can be derived from said reference points.

3,100,865
CONTROL SYSTEM FOR TAP CHANGING REGULATOR
Charles W. Nielsen, Eagle, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 17, 1960, Ser. No. 69,984
8 Claims. (Cl. 323—43.5)



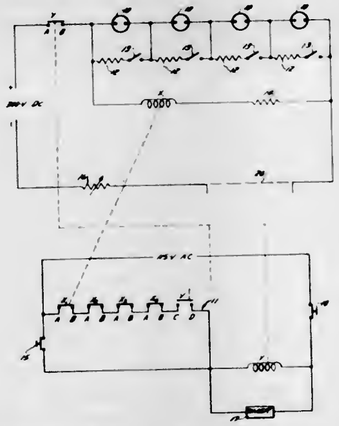
1. A wide range fine step voltage regulator comprising a coarse step tap changing unit and a fine step tap changing unit mechanically independent of each other, each said unit having a winding with a plurality of taps with circular arranged stationary contacts connected thereto and a pair of movable contacts driven by a motor for successively engaging said stationary contacts, said movable contacts of said coarse unit being connected to the tapped winding of said fine unit, and an electrical control system for synchronizing each said motor and said movable contacts in each said unit comprising current limiting means responsive to the positions of said movable contacts relative to their respective stationary contacts whereby load current in said regulator is maintained throughout cycling of said movable contacts by each said motor.

3,100,866
NUCLEAR MAGNETIC RESONANCE IN THIN FILMS
John R. Zimmerman, Jr., Dallas, Tex., and Irving Weinberg, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 27, 1959, Ser. No. 829,927
7 Claims. (Cl. 324—.5)



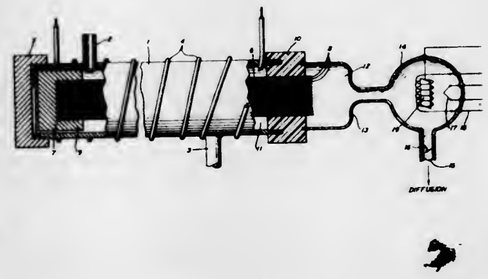
1. A nuclear magnetic resonance system comprising means for establishing a substantially uniform polarizing magnetic field, inner and outer capillaries supported in said magnetic field with the axes thereof perpendicular to the direction of said magnetic field and adapted to receive test materials in a first zone inside the inner capillary and in zones formed by the annulus between said inner and outer capillaries, means for applying a moving magnetic field perpendicular to said polarizing magnetic field in the region of said capillaries, and means for detecting signals produced in at least one of said zones formed by said annulus.

3,100,867
GAS TUBE LIFE TESTER
Stephen A. Myslinski, Reading, Pa., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed May 4, 1961, Ser. No. 107,717
4 Claims. (Cl. 324—24)



1. An arrangement for testing the lifetime of a gas tube wherein the tube passes from an arc to a glow condition which comprises a test circuit having a power supply, a group of tube sockets connected in series in said circuit for receiving tubes therein, a resistor connected across each tube socket, a switch for removing each resistor from the series circuit upon the insertion of a tube into its corresponding socket, a holding circuit, a relay in said holding circuit, means for energizing the holding circuit relay to permit the passage of a first predetermined power from the power supply to the tubes to place the tubes in the arc condition, a relay having contacts in the holding circuit and connected in series with the power supply and in parallel with the tube group, said tube group relay operable upon a voltage in excess of the voltage across the tubes when all the tubes are in an arc condition to indicate a tube has passed from the arc to the glow condition, and means responsive to the operation of said tube group relay for de-energizing the holding circuit relay to cut off the power supply to the testing circuit.

3,100,868
LIGHT GAS DETECTOR USING THIN WALLED GLASS TUBES FOR DIFFUSION
Kenneth B. McAfee, Jr., Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 20, 1958, Ser. No. 756,115
6 Claims. (Cl. 324—33)

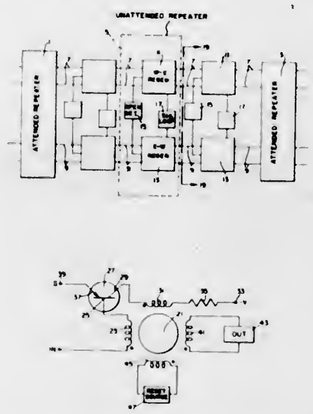


1. A gas detecting device comprising a sensing element having a multiplicity of thin walled glass tubes having an outside diameter varying from one mil to fifty mils and a wall thickness varying from 0.2 mil to ten mils through which a gas to be detected diffuses and a detecting element sensitive to the gas diffusing through the glass tubes.

3,100,869
PULSE REGENERATOR SYSTEM WITH FAULT LOCATION FACILITIES
Stanley B. Disson, Broomall, Albert J. Meyerhoff, Wynnewood, and Paul Winsor III, Paoli, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 3, 1961, Ser. No. 149,898
16 Claims. (Cl. 325—38)

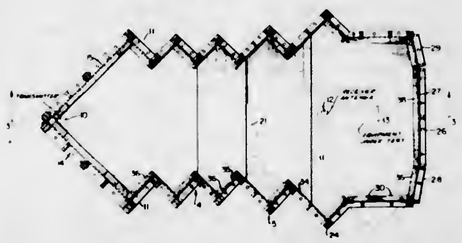
1. In a cable system for communication by trains of "on" and "off" pulses,
(*a*) a west-to-east repeater for reshaping incoming pulses comprising a pulse quantizer including
(*b*) a magnetic core having a set and a reset stable condition,
(*c*) an input, load, and reset winding coupled to said core,
(*d*) an output circuit coupled to said quantizer,
(*e*) a transistor having an emitter, collector and base electrode,
(*f*) first means connecting said load winding in the emitter-collector circuit of said transistor,

(*g*) second means connecting said input winding in the base circuit of said transistor,
(*h*) an input line and an output line,
(*i*) coupling means for providing an input signal pattern of "on" and "off" pulses to the base electrode of said transistor causing said transistor to saturate and by virtue of a regeneration between said load



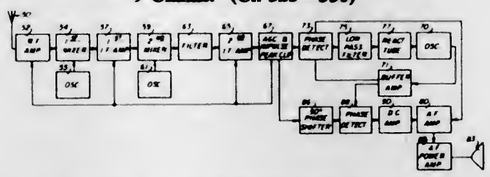
and input windings to cause said core to change to its set condition in response to "on" pulses,
(*j*) reset circuit means connected to said reset winding causing said core to reset intermediate the pulses of said signal pattern whereby a regenerated signal pattern is developed along said output circuit to said output line.

3,100,870
ROOMS FOR TESTING ELECTRONIC EQUIPMENT
Chester L. Smith, Bedford, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,604
5 Claims. (Cl. 325—67)



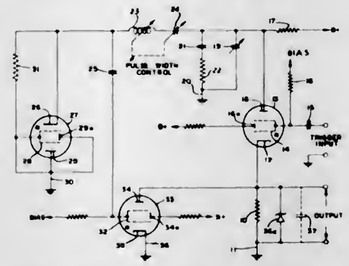
1. A microwave darkroom for testing electronic equipment by the transmission of radiant energy between transmitting and receiving antennae spaced apart in said room which comprises, a pair of toothed side wall surfaces spaced equally to either side of a line between the transmitting and receiving antenna, ceiling and floor surfaces having spaced, facing inwardly, offset sections located at a predetermined position intermediate the spacing between the transmitting and receiving antennae, and front and rear wall surfaces for said room, all said room defining surfaces being so geometrically arranged relative to the transmitting antenna as to reflect any energy received from the transmitting antenna away from the receiving antenna and toward another room surface located on a different wall.

3,100,871
SINGLE SIDEBAND RECEIVER HAVING SQUELCH AND PHASE-LOCKED DETECTION MEANS
Roy A. Richardson, Skokie, and Orville M. Enes, Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 3, 1961, Ser. No. 80,493
9 Claims. (Cl. 325—330)



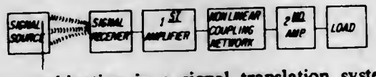
1. A detector for an incoming signal having a carrier of given frequency, including in combination, input circuit means for translating the incoming signal, a first phase detector coupled to said input circuit means, a low pass sub-audio frequency filter connected to said first phase detector, reactance control means coupled to said low pass filter, oscillator circuit means including a first oscillator adapted to be controlled by said reactance control means, a second oscillator, and mixing means connected to said first and second oscillators to produce a reference signal of the given frequency, circuit means for applying the reference signal to said first phase detector for comparison therein with the carrier of the incoming signal and for locking the reference signal and the carrier in 90° phase relation, a second phase detector coupled to said input circuit means and to said oscillator circuit means for comparison of the carrier and the reference signal, and output circuit means connected to said second phase detector and adapted to derive therefrom information of the incoming signal.

3,100,872
PULSE FORMER WITH CAPACITOR DISCHARGING PROVIDING RAPID RISE-TIME AND THYRATRON SHORTING OUTPUT PROVIDING RAPID FALL-TIME
John J. Hickey and George L. Clark, Hawthorne, Calif., assignors to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Aug. 21, 1961, Ser. No. 132,795
13 Claims. (Cl. 328—67)



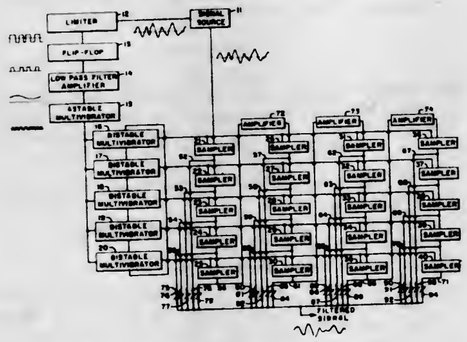
1. A pulse generating circuit comprising a first low impedance switching means connected in series with a voltage clipping means, said first switching means being triggered by an input signal, said clipping means clipping said output signal to a desired voltage level, a first energy storage means having a substantially short time constant and connected in circuit with said first switching means for sustaining a first portion of said output signal at said clipped value, a second energy storage means having a substantially long time constant and connected in circuit with said first switching means for sustaining a second portion of said output signal at said clipped value, a delay generator connected in circuit with said first switching means for determining the pulse length of said clipped output signal, said delay generator comprising energy storage means for sustaining said output signal, and a second low impedance switching circuit connected in circuit with said delay generator for short-circuiting said clipping means thereby terminating said output signal.

3,100,873
CIRCUIT FOR AUTOMATICALLY MAINTAINING THE AMPLITUDE VARYING PEAKS WITHIN OPERATING RANGE OF A SIGNAL OF A VACUUM TUBE
Meyer Marks, Clarendon Hills, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed June 1, 1959, Ser. No. 817,410
3 Claims. (Cl. 328—165)



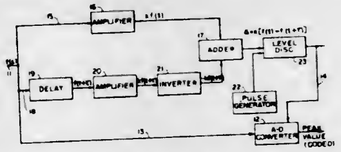
1. In combination in a signal translation system for translating periodic alternating current control signals of varying amplitude, means responsive to magnitude variations in the periodic peaks of said control signals for controlling the amplitude of said translation system output comprising; an electron valve having an input circuit; a coupling network including an input terminal and first and second coupling means connected thereto; means for applying said signals to said input terminal; said first coupling means including a first capacitor and a diode serially connected across said input circuit; a resistor connected across said input circuit; a connection from the junction of said first capacitor and said diode to a point on said resistor, said first capacitor, said diode and said resistor coacting to provide a time constant less than the period of said signal for signal excursions of one polarity and a time constant greater than the period of said signal for signal excursions of the opposite polarity; said second coupling means including a second capacitor connected between said input terminal and a different point on said resistor, said different point being selected such that the discharge path of said second capacitor includes substantially all of said resistor, whereby the discharge rate of said second capacitor is dependent upon the state of charge of said first capacitor.

3,100,874
AUTOMATIC FREQUENCY-TRACKING FILTER
Duane E. Soland, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed July 1, 1959, Ser. No. 824,386
10 Claims. (Cl. 328—165)



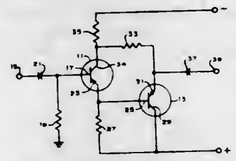
1. Apparatus for tracking and filtering the dominant frequency in a complex electrical signal which comprises in combination means for generating control pulses at a frequency proportional to but at least twice as high as the dominant frequency in said complex signal; a plurality of sampling devices sequentially responsive to said control pulses, each of sampling devices including means for holding each voltage sample until the next succeeding voltage sample is taken; means for passing said complex signal through said sampling devices in sequence; means for recovering output signals from said sampling devices; means for weighting said output signals in accordance with a predetermined filter network response; and means for mixing said weighted output signals.

3,100,875
TIME BASE A.M. DETECTOR
Herbert L. Peterson, 5521 24th Ave., Hillcrest Heights, Md.
Filed Apr. 27, 1960, Ser. No. 25,182
3 Claims. (Cl. 329—145)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An envelope detector for amplitude modulated carrier waves comprising an analog-to-digital converter with an analog input for said carrier waves and an external sampling signal input, a direct path and a delay path each having an input connected to said analog input, said delay path including means to delay and invert signals passing therethrough, adder means to combine the output signals from said direct and said delay paths, a source of clock pulses, a level discriminating means connected to said adder means and said source of clock pulses for emitting a sampling pulse in response to at least the first clock pulse following a sign change in the combined signal from said adder means the output of said level discriminating means being connected to said external sampling signal input.

3,100,876
TRANSISTOR AMPLIFIER HAVING LOW OUTPUT NOISE
Donald F. Schulz, Santa Clara, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Apr. 28, 1960, Ser. No. 25,284
1 Claim. (Cl. 330—17)



An amplifier circuit comprising:
a first transistor of one conductivity type connected in the emitter follower configuration with a pair of resistors serially connected to the emitter;
a second transistor of opposite conductivity type having its collector connected to the common terminal of said serially connected resistors and being connected in the emitter follower configuration;
one of said pair of resistors being connected between the collector of the second transistor and the emitter of the first transistor in which the value thereof is

smaller than the value of the other of said pair of resistors;

means for supplying collector current to said transistors, the collector current in the first transistor being higher than the collector current in the second transistor;

means connected to the base of said second transistor for conducting base current therein and for applying input signal thereto;

means connecting the emitter of the second transistor and the base of the first transistor; and

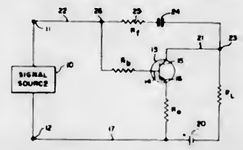
means connected to the emitter of the first transistor for providing an output signal from the signal appearing thereon.

3,100,877

TRANSISTOR AMPLIFIER WITH CONSTANT INPUT IMPEDANCE

Joseph T. Maupin, Deephaven, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 27, 1960, Ser. No. 78,368
5 Claims. (Cl. 330—28)



1. An amplifier circuit having a constant input impedance comprising: a transistor having a semiconductive body and a plurality of electrodes including a base electrode, an emitter electrode and a collector electrode, said base electrode having an internal resistance r_b and said emitter electrode having an internal resistance r_e; an emitter resistor R_e connecting said emitter electrode to a reference potential point; a base resistor R_b connecting said base electrode to a source of signal to be amplified; impedance load means R_L; a source of potential, said load means connecting said source of potential to said collector electrode; a feedback resistor R_f connected between said collector electrode and said base resistor; said components being proportioned in accordance with the equation

$$R_L(r_b+R_b)=R_f(R_e+r_e)$$

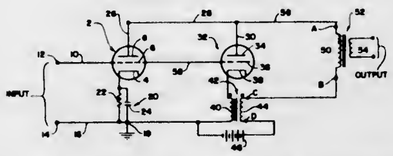
to cause the input impedance of the amplifier to be a constant value.

3,100,878

BOOT STRAP ELECTRONIC AMPLIFIER HAVING IN-PHASE GRIDS

William F. Griffith, 120 W. Seminary Ave., Lutherville, Md.

Filed Dec. 9, 1959, Ser. No. 858,384
10 Claims. (Cl. 330—81)



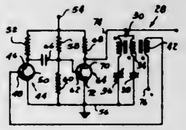
1. An electronic amplifying circuit comprising the combination of a first electronic valve having at least a first anode, a first cathode, and a first control grid; a second electronic valve having at least a second anode, a second cathode, and a second control grid; means coupling an input signal source between said first control grid and said first cathode; means coupling said first cathode to a reference point; means for placing an input signal on said second control grid; a load having at least two terminals; means coupling the first and second anodes together and to one terminal of said load, the potentials with respect to said reference point of said first and second anodes and said one terminal of said load being at least substantially equal to one another, whereby said valves supply signal currents through said load in the same direction when the input signals to said first and second grids are of the same polarity with respect to said first and second cathodes respectively; and impedance means electrically coupled to said reference point and electrically coupling said second cathode with the other terminal of said load to maintain the A.C. signal voltage between said second cathode and said reference point correlated in magnitude and at least substantially equal in phase to the A.C. signal voltage between said other terminal of said load and said reference point, said circuit including an impedance between said first and second cathodes.

3,100,879

CAPACITANCE SENSING CIRCUIT

Orville V. Greunke, Westport, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed May 8, 1959, Ser. No. 811,859
1 Claim. (Cl. 331—135)



A capacitance sensing circuit including in combination a first capacitor having a first nominal capacitance value, a second capacitor having a second nominal capacitance value, at least one of the capacitors being variable from its nominal capacitance value, an amplifier having an input and providing an output, a transformer having a primary winding and a secondary winding, the primary winding having a first and a second terminal and a tap somewhere intermediate said terminals, means connecting the output of the amplifier to the tap, a source of fixed potential, means connecting the first capacitor between the first terminal and the source, means connecting the second capacitor between the second terminal and the source, and means connecting the secondary winding between the input of the amplifier and the source, the capacitors having such nominal capacitance values that the voltages at the primary winding terminals are equal and the secondary winding voltage is zero irrespective of the output voltage of the amplifier.

3,100,880

TRANSISTORIZED PLATE MODULATOR SYSTEM

La Verne Winkle, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Dec. 4, 1961, Ser. No. 156,716
11 Claims. (Cl. 332—22)

1. In a signal sensitive modulator system, the combination comprising:

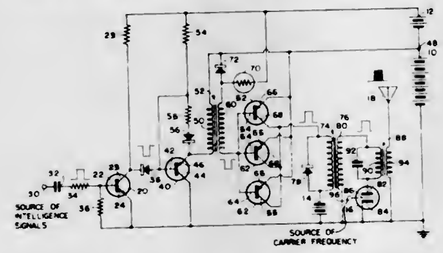
a high power current-flow control device;

a direct current source of energy;

a source of intelligence signals;

means responsive to said intelligence signals for gating the energy from said direct current source through said device for periods when said signals exceed a predetermined level, said means including a plurality of parallel-connected transistors each having a base electrode, an emitter electrode, and a collector electrode, said collector electrodes being reversed biased and said emitter electrodes being forward biased from said direct current source;

a source of base-biasing potential for back-biasing said transistors beyond cut-off, said source of base-biasing potential including a second direct current source, first and second impedances connected across said source, each of said bases being connected to the junction of said impedances, at least one of said impedances having impedance characteristics which vary with applied currents;



means coupling said intelligence signals to said bases, whereby said back bias on said bases is opposed and current flows through said emitter and collector junction when said back bias is overcome;

means responsive to said flow of current for generating a voltage;

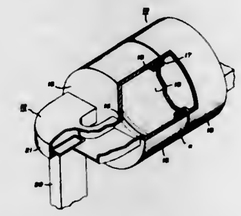
and means coupling said voltage across said device to produce conduction through said device.

3,100,881

WAVEGUIDE SYSTEM HAVING MODE CONVERTER FOR CHANGING RECTANGULAR TE_{10} MODE INTO CIRCULAR TE_{01} AT LOCUS OF WAVEGUIDE WINDOW

William A. Edson, Los Altos, Calif., assignor to General Electric Company, a corporation of New York

Filed Oct. 19, 1960, Ser. No. 63,552
3 Claims. (Cl. 333—21)



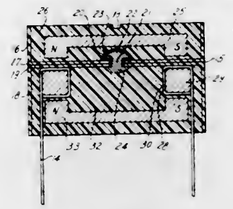
1. A waveguide window section including in combination a window supporting section and a mode launching means connected to said window supporting section; said window supporting section including a cylindrical waveguide of circular cross section and a dielectric barrier supported within said window supporting section and sealed therein to provide a vacuum tight barrier, and circular conductive end closing members for closing the opposite ends of said cylindrical waveguide, each of said end closing members being provided with a pair of rectangular apertures symmetrically disposed on opposite sides of the center thereof with their major axes on a common diameter, said mode launching means comprising waveguides of rectangular cross section defining a folded E plane T with the ends of the rectangular waveguide which forms the cross bar of the T inserted in the rectangular apertures of one conductive end plate thereby to launch the circular TE_{01} mode in said window supporting section.

3,100,882

ENCAPSULATED VARIABLE INDUCTOR

Norman Burnell, Scarsdale, N.Y., assignor to Burnell & Co., Inc., Pelham Manor, N.Y., a corporation of New York

Filed Feb. 26, 1960, Ser. No. 11,323
2 Claims. (Cl. 336—96)



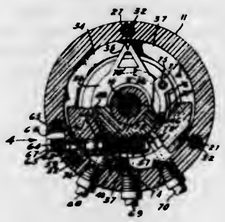
1. A variable toroidal coil inductor consisting essentially of a first housing having side walls and a base, a magnet centrally positioned in said housing, extending substantially across the width thereof, a potting compound encapsulating said magnet and filling said housing and thus maintaining said magnet centrally positioned relative to said housing and hermetically sealed within said housing, a double headed rivet having one head centrally disposed relative to said base, extending through an opening in said base and positioned in the portion of said potting compound adjacent said base for pivotal movement of said first housing relative to said rivet, a second housing having side walls and a top immediately adjacent the first housing, with the said top positioned contiguous to the said base and held in said position by the other head of said double headed rivet, which rivet passes through a central opening in said top and has the other head thereof positioned to securely hold the said top and said base in substantially abutting relationship, a toroidal coil disposed in said second housing immediately adjacent said top, a second magnet positioned adjacent said toroidal coil and extending substantially across the width of said second housing, potting compound in said second housing encapsulating the second-mentioned magnet, said toroidal coil and said second-mentioned magnet being hermetically sealed within said second housing by the potting compound therein, and lead wires from said coil extending through the potting compound in said second housing externally of said second housing.

3,100,883

PHASABLE GANGED POTENTIOMETER

Elias Blanco, Los Angeles, Calif., assignor, by mesne assignments, to Daystrom Incorporated, Murray Hill, N.J., a corporation of Texas

Filed Nov. 21, 1960, Ser. No. 70,844
3 Claims. (Cl. 338—148)



1. A potentiometer comprising,

a casing having an opening therein,

a ring-shaped resistance element in said casing,

a rotatable shaft in said casing extending axially of said resistance element,

a two-part support carried by said shaft including a first part affixed to the shaft rotation therewith, and a second part movably supported on said first part for angularly variable positions of adjustment about the shaft axis,

said second part including a rack gear,

a slider contact carried by said second part and movable therewith over said resistance element,

and a rotatable member including a pinion drive gear having a central axis which intersects the central axis of said resistance element removably insertable through said casing opening,

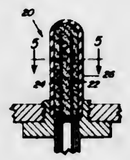
said pinion drive gear having teeth adapted to mesh with the teeth of said rack gear, whereby the relative position of said slider contact on said resistance element may be adjusted independently of its movement through rotation of said shaft.

3,100,884

HIGH TEMPERATURE PRESSURE SENSITIVE SOLID STATE MATERIAL AND DEVICE

James W. Ballard, Dayton, Ohio, assignor to Systems Research Laboratories, Inc., Dayton, Ohio, a corporation of Ohio

Filed Dec. 20, 1960, Ser. No. 77,131
1 Claim. (Cl. 338—224)



A pressure and temperature sensing transducer device comprising spaced electrode means, flexible envelop means defining an enclosed space within which said electrode means are disposed and a dry, solid state resistant material combined within said envelop means having variable electrical resistivity values which are predictable functions of temperature and pressure to which the material is exposed, said material consisting of a heat treated, non-sintered powder mixture of a relatively non-conductive component and a conductive component, said components having compatible thermal coefficients of linear expansion and wherein the mixture exhibits electrical resistivity properties which are a substantially reproducible function of pressure applied thereto, the non-conductive component being approximately 70% powdered alumina and the conductive component being approximately 30% powdered molybdenum.

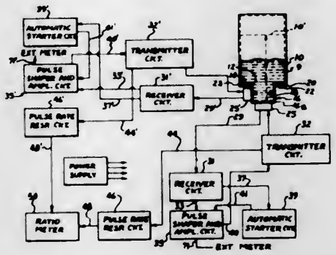
3,100,885

ULTRASONIC LIQUID LEVEL GAUGE

Walter Welkowitz, Nixon, N.J., and Hugo E. Dahlke, Jenkintown, Pa., assignors to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey

Filed Aug. 14, 1961, Ser. No. 131,261
8 Claims. (Cl. 340—3)

1. An ultrasonic measuring system for measuring a variable in a medium which is to be independent of the density thereof, said system including an information measuring section including first ultrasonic wave transmitting and receiving means which provide an information signal which is a measure of said variable and the density of said medium, and a correction measuring section including second ultrasonic wave transmitting and receiving means which provide a correction signal of the same kind as said information signal and which is substantially independent of said variable but dependent on said medium density, and means for indicating the value of said variable comprising divider means responsive to said informa-



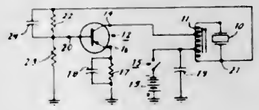
tion and correction signals for providing an indication of the ratio of the magnitudes of said signals.

3,100,886

COMPRESSIONAL WAVE TRANSMITTER

Meyer Marks, Clarendon Hills, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,052
3 Claims. (Cl. 340—15)



1. A portable transmitter for generating and transmitting ultrasonic compressional waves of predetermined frequency comprising; a transistor having a base, an emitter and a collector; a tank circuit coupled in the emitter-collector circuit of said transistor, said tank circuit being resonant at said predetermined frequency and including an inductive element and a capactive piezoelectric transducer element; a battery source for said transistor; a voltage divider; means, including a portion of said inductor for coupling said voltage divider to said battery source so as to supply voltage to said divider and to the collector-emitter circuit of said transistor; said base being connected to a point on said voltage divider, and being supplied both a direct current potential from said battery source and a feedback potential from said tank circuit, whereby said transistor oscillates at the frequency of resonance of said tank circuit and said piezoelectric transducer element transmits said ultrasonic compressional waves.

3,100,887

FERROELECTRIC SHIFT REGISTER

Robert M. Wolfe, Colonia, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 4, 1960, Ser. No. 19,640
14 Claims. (Cl. 340—173.2)



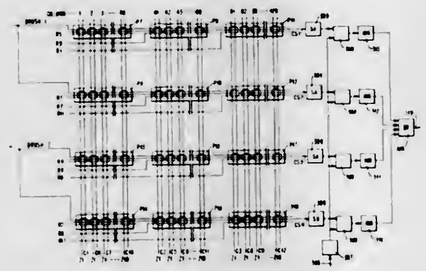
1. A shift register circuit comprising a plurality of normal ferroelectric capacitors connected directly to each other in a continuous series circuit, means for initially polarizing adjacent ones of said capacitors in opposite directions of polarization, means for introducing binary information into said register comprising means for polarizing a pair of adjacent ones of said capacitors in the same direction of polarization, and means for shifting said information along said register, said last-named means comprising means for reversing the direction of polarization of said pair of capacitors and means for successively reversing the direction of polarization of each succeeding two adjacent capacitors of said serially connected capacitors in succession where each said succeeding two adjacent capacitors includes one capacitor of the immediately preceding pair.

3,100,888

CHECKING SYSTEM

Robert E. Oleksiak, Brookline, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 13, 1960, Ser. No. 75,560
1 Claim. (Cl. 340—174)



A device for verifying the operation of a plurality of first write drivers, a plurality of second write drivers, a plurality of first read drivers and a plurality of second read drivers, said drivers being associated with a coincident-current magnetic core memory and operating in a two-part cycle, the first part of said cycle including the coincident activation of all of said first and said second write drivers to write information into said memory, said first write drivers being concurrently pulsed as said second write drivers are sequentially pulsed, the second part of said cycle including the coincident activation of all of said first and said second read drivers to read information out of said memory, different combinations of said read drivers being sequentially pulsed, each of said combinations being made up of one of said first read drivers and one of said second read drivers, said device comprising:

a plurality of first drive lines connected at least two each to the different first write drivers, each of said drive lines being energized with a current pulse upon activation of its associated driver;

a plurality of second drive pulse lines connected one each to the different second write drivers, each of said second drive lines being energized with a current pulse upon activation of its associated driver;

a plurality of third drive lines connected one each to the different first read drivers, each of said third drive lines being energized with a current pulse upon activation of its associated driver;

a plurality of fourth drive lines connected one each to the different second read drivers, each of said fourth drive lines being energized with a current pulse upon activation of its associated driver;

a plurality of bistable magnetic cores, each of said cores being linked by one of said first, second, third, and fourth drive lines, each of said cores being adapted to switch to a first magnetic state in response to current pulses appearing coincidently on the respective first and second drive lines linking it and further being adapted to switch to a second magnetic state in response to current pulses appearing coincidently on the respective third and fourth drive lines linking it, said cores being arranged in a plurality of groups, said groups in turn being arranged in a plurality of sets, the number of groups being equal to the number of first drive lines, each group being linked by a different one of said first drive lines and each set being linked by a different one of said second drive lines, whereby execution of the first part of said cycle of operation of said drivers switches, progressively by sets, all of said cores to said first magnetic state; the number of cores in each group of cores being equal to the total number of different combinations of two of said third and said fourth drive lines, each of said combinations being made up of one of said third drive lines and one of said fourth drive lines, each core in a group of cores being linked by a different one of said combinations, corresponding cores in different groups being linked by the same combination, whereby execution of said second part of said cycle of operation of said drivers switches all of said cores to said second magnetic state;

a plurality of sense lines equal in number to the number of said groups of cores, each of said sense lines linking a different one of said groups and being adapted to conduct an output current pulse in response to the switching from said first to said second magnetic state of one of the cores associated with it so that each sense line conducts an output pulse each time a different combination of read drivers is activated; and,

a detecting device connected to each of said sense lines, each of said detecting devices being adapted to produce a signal in response to the absence of an output pulse on the associated sense line, thereby giving an indication of incorrect driver operation and identifying, by virtue of the number of said devices producing said signals, a particular class of driver as the one which produced said incorrect operation.

3,100,889

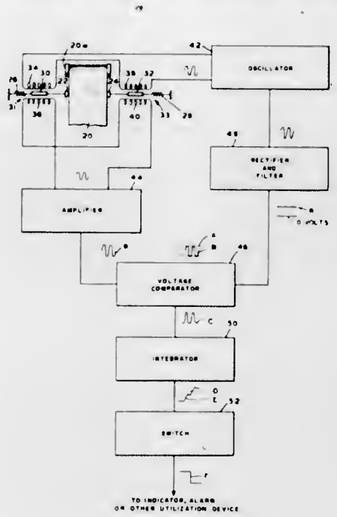
APPARATUS FOR SENSING VARIATIONS

Maxwell R. Cannon, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 17, 1958, Ser. No. 729,148
3 Claims. (Cl. 340—259)

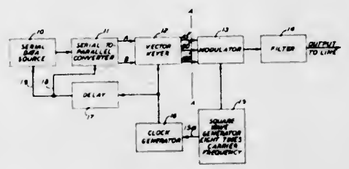
1. In a web width sensing system, in combination, a source of alternating waves, a pair of differentially connected linearly variable differential transformers connected to said source, each said transformer having a movable magnetic core normally located in a null position such that no output is produced by either transformer while the cores are in the null positions, bearing members rigidly attached respectively to said movable cores, means for passing a moving web between said bearing members, means supporting said bearing members with said bearing members free to follow the edges of said web, means for deriving an output from said transformers having an amplitude which is a function of a change in the width of said web from a predetermined value with said output substantially independent of lateral motion of said web, means coupled to said source for providing a steady reference voltage, means for comparing said output and said reference voltage and for providing therefrom periodic pulses rep-

resentative only of any excess of said output over said reference voltage, means for integrating groups of said



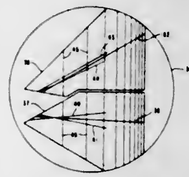
pulses, means for establishing a reference level, and means for producing an indication when the integrated value of said pulses exceeds said reference level.

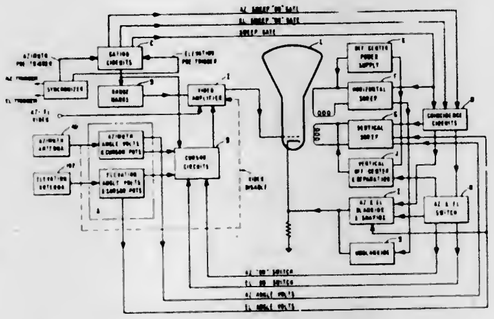
3,100,890
DATA TRANSMISSION
Harley A. Henning, Short Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 11, 1960, Ser. No. 61,862
10 Claims. (Cl. 340—345)



2. A transmitter for a communication system in which pairs of successive binary digital signals are encoded on a phase-shifted carrier wave of a single frequency as one of eight preselected relative phases comprising a serial data source, means for converting the output of said data source into two-bit parallel form, a clock generator for synchronizing the operations of said transmitter and for determining the interval of time during which each successive digit pair is transmitted, decisional logic means under the control of said clock generator for sampling the output of said converter and for computing the amount of phase shift necessary to transmit each particular digit pair according to a predetermined code, a master oscillator for generating a wave in fixed relation with the frequency of said carrier wave, modulator means responsive to the output of said logic means for imparting to the output of said master oscillator the phase shift determined by said logic means.

3,100,891
GROUND CONTROLLED APPROACH INDICATOR SYSTEM
Arthur L. Brockway, Jr., Baltimore County, Md., assignor to The Bendix Corporation, a corporation of Delaware
Original application Oct. 26, 1954, Ser. No. 464,825. Divided and this application Mar. 17, 1959, Ser. No. 800,011
7 Claims. (Cl. 343—11)



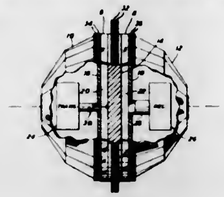


1. Means for generating on the screen of a cathode ray tube a display representative of a region in space scanned by a beam of energy emitted by a radio pulse echo system, including a representation of a line lying within said region of space, said means comprising: means deriving from the scan of said beam an angle voltage the instantaneous magnitude of which is representative of the orientation of said beam within its scanning pattern, means causing the cathode beam of said tube to sweep repetitively across said screen in synchronism with the transmission of the pulses of said system, said sweeps having an orientation with respect to a reference point on said screen which is representative of the scan of said beam, means deriving from the scan of said beam a second angle voltage whose amplitude varies inversely as the scan angle from a reference position, said voltage being proportioned to the distance to said line in space, means generating a train of pulses whose time delays from respective output pulses of energy emitted by said pulse echo system vary directly with the amplitude of said second angle voltage, means applying said train of pulses to intensity modulate the cathode ray tube and thereby produce on said display a true representation of said line lying within said region of space.

3,100,892
ANTENNA FOR ACTIVE SATELLITE REPEATERS
Cassius C. Cutler, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 73,121
8 Claims. (Cl. 343—100)

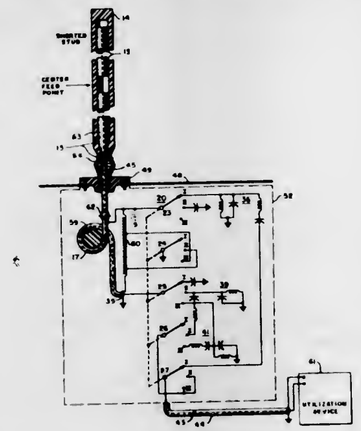
2. A satellite vehicle for use as an active repeater in a long distance communication system comprising a substantially spherical body adapted to be launched spinning in orbit, a pair of parallel-plate radiating regions located within said body and intersecting the surface thereof in

parallel substantially equatorial slots, and transmitting and receiving means within said body associated respectively



with the first and second of said radiating regions and coupled therewith for transmission of radio wave energy in opposite polarizations.

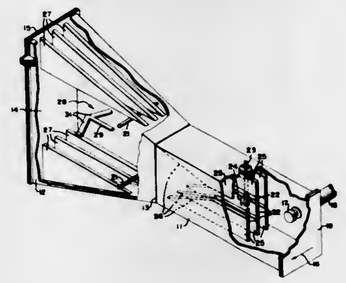
3,100,893
BROAD BAND VERTICAL ANTENNA WITH ADJUSTABLE IMPEDANCE MATCHING NETWORK
Helmut Brueckmann, Little Silver, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 30, 1960, Ser. No. 72,816
10 Claims. (Cl. 343—713)
(Granted under Title 35, U.S. Code (1952), sec. 266)



6. An antenna system for vehicular use comprising: an antenna insulated from and projecting outwardly from the structure of the vehicle so as to be electrically exposed to space, said antenna having upper and lower sections; an insulating jacket encasing said antenna; a ferrite core; a cable choke wound around said ferrite core and connected to the lower extremity of said lower section; a tapped shunt coil having a plurality of taps and its extremities connected in parallel with said cable choke; a plurality of impedance matching networks; a switching means for interconnecting said impedance matching networks to said antenna and for changing the tap connections on said tapped shunt coil.

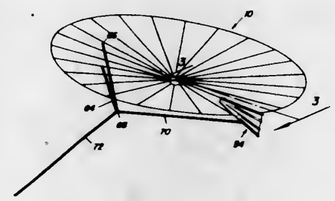
3,100,894
DUAL FREQUENCY FEED HORN
Morris Giller, Baltimore County, and John G. Neuberth, Timonium, Md., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,783
5 Claims. (Cl. 343—756)

1. A dual frequency antenna comprising a rectangular waveguide, a rectangular horn coupled to said waveguide and having at least two opposite side walls diverging, a set of spaced parallel conductive plates projecting inwardly from each divergent wall of said horn, said plates being wedge-shaped and positioned in planes parallel to the axis of propagation of said horn with the wide end of said wedges adjacent the aperture of said horn, a second set of spaced parallel conductive plates projecting inwardly from the walls of said waveguide and positioned in planes parallel with the planes of said plates



in said horn, the plates of said second set being tapered to diverge at the end adjacent the junction of said waveguide and said horn with the angle of taper being approximately equal to the angle of divergence of said horn, means for coupling electromagnetic energy of a first frequency to said waveguide in the TE_{01} mode with the electric vector normal to said plates, and means for coupling electromagnetic energy of a second frequency higher than said first frequency to said waveguide in the TE_{01} mode orthogonal to said mode of said first frequency.

3,100,895
FOLDING KITE
Arthur Resnick, 4702 S. 12th Ave., Tucson, Ariz.
Filed July 14, 1961, Ser. No. 124,152
7 Claims. (Cl. 244—153)

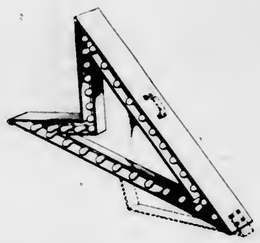


1. A kite comprising a plurality of radially diverging ribs, a center post, means pivotally connecting the inner ends of the ribs to said post adjacent one end thereof, means limiting movement of said ribs between a first position extending substantially parallel to said post and a second position substantially perpendicular to said post, means releasably maintaining said ribs in said second position, a one-piece flexible covering secured to and extending between said ribs, and a tail secured to the kite and extending radially inwardly from the periphery of the kite to a point spaced outwardly from the center post, said tail being orientated entirely beneath the plane of said kite and substantially perpendicular thereto when said ribs are in said second position.

DESIGNS

AUGUST 13, 1963

195,936
ILLUMINABLE DISPLAY SIGN
Conrad J. Escalante, Los Alamitos, Calif. (1251 W. Gaylord St., Long Beach 13, Calif.)
Filed Oct. 29, 1962, Ser. No. 72,302
Term of patent 14 years
(Cl. D1—12)



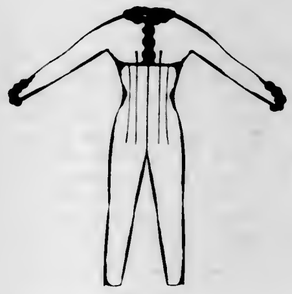
195,937
HAIR DRYER BONNET OR SIMILAR ARTICLE
Sally J. Victor, New York, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 2, 1962, Ser. No. 71,154
Term of patent 14 years
(Cl. D3—13)



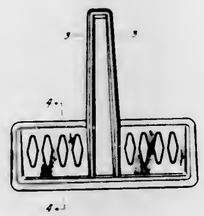
195,938
NECKTIE
Tsuneo Horii, 1081 8-chome, Koyama, Shinagawa-ku, Tokyo, Japan
Filed May 15, 1962, Ser. No. 70,146
Claims priority, application Japan Feb. 24, 1962
Term of patent 14 years
(Cl. D3—16)



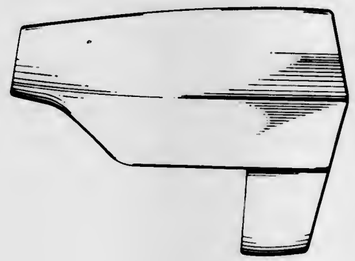
195,939
LADY'S ONE PIECE GARMENT
Darlene M. Bartholomew, 5731 Karen Ave., Cypress, Calif.
Filed Jan. 4, 1963, Ser. No. 73,049
Term of patent 14 years
(Cl. D3—17)



195,940
MOP SQUEEZER PLATE
Norman B. Woleen, Parma Heights, Ohio, assignor to Erie Mop and Wringer Company, Girard, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1961, Ser. No. 67,458
Term of patent 14 years
(Cl. D9—2)



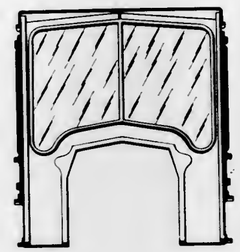
195,941
ELECTRIC SHOE POLISHER CASE
William C. Badnaruk, Elverson, Pa., and Ira W. Schwartz, Great Neck, N.Y., assignors to Schick Incorporated, Lancaster, Pa., a corporation of Delaware
Filed July 2, 1962, Ser. No. 70,749
Term of patent 14 years
(Cl. D9—2)



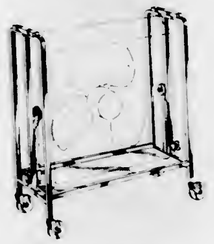
195,942
PANELLING MATERIAL OR THE LIKE
Colman Zola, 58 Tamarack Way, Pleasantville, N.Y.
Filed May 7, 1962, Ser. No. 69,997
Term of patent 7 years
(Cl. D13—1)



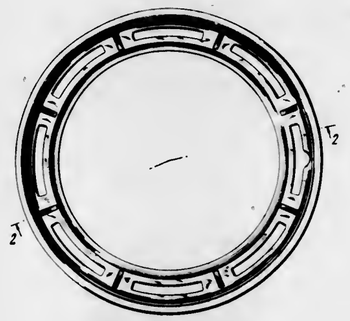
195,943
TRACTOR CAB
Robert W. Dodge, 40 Pleasant St., Wenham, Mass.
Filed Mar. 22, 1962, Ser. No. 69,374
Term of patent 14 years
(Cl. D14—3)



195,944
MOBILE ADJUSTABLE STAND FOR FANS
Viktor Schreckengost, Cleveland Heights, Ohio, assignor to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Filed Mar. 28, 1962, Ser. No. 69,471
Term of patent 14 years
(Cl. D14—3)



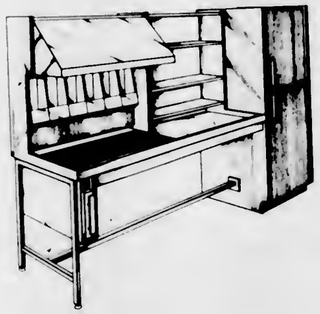
195,945
TRIM RING FOR AUTOMOBILE WHEEL OR SIMILAR ARTICLE
Herbert Buerger, Walton, N.Y.
Filed Apr. 27, 1962, Ser. No. 69,872
Term of patent 14 years
(Cl. D14—30)



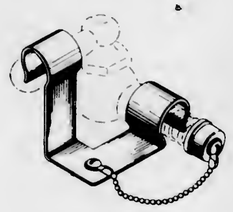
195,946
SWIVEL CHAIR
Henry Kronhaus, % State Pipe & Nipple Corp., 81 N. 4th St., Brooklyn, N.Y.
Filed Nov. 1, 1962, Ser. No. 72,336
Term of patent 14 years
(Cl. D15—1)



195,947
COMBINED CABINET AND WORK TABLE FOR PACKAGING SURGICAL GLOVES
William J. Hannon, Jr., Dorchester, Mass., assignor to The Macbick Company, Cambridge, Mass., a corporation of Massachusetts
Filed July 23, 1962, Ser. No. 71,018
Term of patent 14 years
(Cl. D16—2)



195,948
COMBINED SAFETY CLAMP AND CAP FOR GAS JETS AND THE LIKE
Norman A. Rosentreter, 1415 Federal Road, Houston, Tex.
Filed Sept. 25, 1962, Ser. No. 71,841
Term of patent 14 years
(Cl. D16—2)



195,949
HOLDER FOR A GOLF BALL MARKER
Morris Kortick, Cranston, R.I., assignor to Troy, Inc., Providence, R.I., a corporation of Rhode Island
Filed Oct. 17, 1962, Ser. No. 72,147
Term of patent 3½ years
(Cl. D17—3)



195,950
WALL BLOCK
Philip E. Kopp, Minerva, Ohio, assignor to Malvern Flue Lining, Inc., Malvern, Ohio, a corporation of Ohio
Filed May 6, 1960, Ser. No. 60,485
Term of patent 14 years
(Cl. D18—2)



195,951
KNIFE OR SIMILAR ARTICLE
Leo F. Wildgen, Minneapolis, Minn., assignor to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 20, 1962, Ser. No. 68,905
Term of patent 14 years
(Cl. D22—3)





195,952
SHAVER
Norman Thomas Sanders, Mappleborough Green, Studley, England, assignor to Needle Industries Limited, Birmingham, England, a British company
Filed July 25, 1962, Ser. No. 71,042
Term of patent 14 years
(Cl. D22—3)



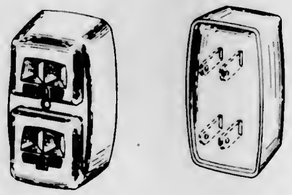
195,953
ELECTRIC SHAVER
Melvin H. Boldt, Glenview, Ill., assignor to Schick Incorporated, Lancaster, Pa., a corporation of Delaware
Filed Mar. 27, 1963, Ser. No. 74,155
Term of patent 14 years
(Cl. D22—3)



195,954
HAIR TRIMMER
Norman V. Christensen, 325¼ S. New Hampshire Ave., Los Angeles, Calif.
Filed Aug. 28, 1961, Ser. No. 66,512
Term of patent 14 years
(Cl. D22—5)



195,955
DUPLEX ELECTRICAL ADAPTER
Ernest R. Carlson, Fairfield, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Aug. 21, 1962, Ser. No. 71,400
Term of patent 14 years
(Cl. D26—1)



195,956
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,294
Term of patent 7 years
(Cl. D26—14)



195,957
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,295
Term of patent 7 years
(Cl. D26—14)



195,958
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,296
Term of patent 7 years
(Cl. D26—14)



195,959
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,297
Term of patent 7 years
(Cl. D26—14)



195,960
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,298
Term of patent 7 years
(Cl. D26—14)



195,961
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,299
Term of patent 7 years
(Cl. D26—14)

195,962
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,300
Term of patent 7 years
(Cl. D26—14)



195,963
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,301
Term of patent 7 years
(Cl. D26—14)



195,964
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,302
Term of patent 7 years
(Cl. D26—14)



195,965
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,303
Term of patent 7 years
(Cl. D26—14)



195,966
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed May 28, 1962, Ser. No. 70,304
Term of patent 7 years
(Cl. D26—14)



195,967
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,442
Term of patent 7 years
(Cl. D26—14)



195,968
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,444
Term of patent 7 years
(Cl. D26—14)



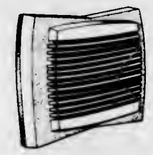
195,969
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,447
Term of patent 7 years
(Cl. D26—14)



195,970
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,448
Term of patent 7 years
(Cl. D26—14)



195,971
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,449
Term of patent 7 years
(Cl. D26—14)



195,972
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,450
Term of patent 7 years
(Cl. D26—14)



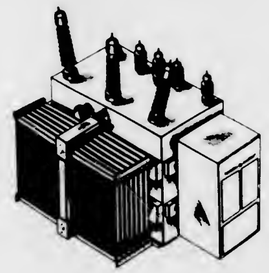
195,973
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,451
Term of patent 7 years
(Cl. D26—14)



195,974
MICROPHONE
Raymond Spilman, Darien, Conn., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed June 6, 1962, Ser. No. 70,452
Term of patent 7 years
(Cl. D26—14)



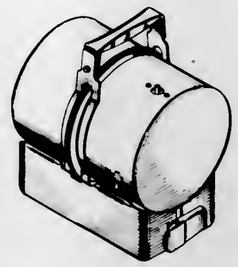
195,975
ELECTRICAL TRANSFORMER
Ernest E. Bianco, North Adams, Mass., and Leon C. Leoni, deceased, late of Pittsfield, Mass., by Beverly B. Leoni, executrix, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Aug. 30, 1961, Ser. No. 66,556
Term of patent 14 years
(Cl. D26—15)



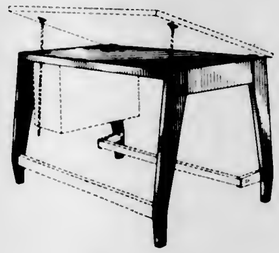
195,976
CHRISTMAS TREE ORNAMENT OR SIMILAR ARTICLE
Arnold Janowitz, New York, N.Y., assignor to Allied Display Materials, Inc., New York, N.Y.
Filed July 20, 1962, Ser. No. 70,993
Term of patent 7 years
(Cl. D29—1)



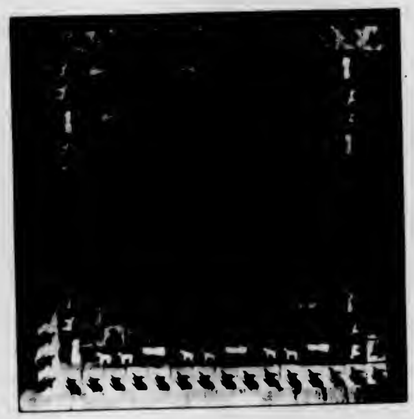
195,977
SPRAYER FOR INSECTICIDES OR THE LIKE
Samuel A. Halaby, Rochester, N.Y., assignor to Samuel Halaby, Inc., Rochester, N.Y.
Filed Apr. 16, 1962, Ser. No. 69,718
Term of patent 14 years
(Cl. D31—3)



195,978
DRAFTING TABLE
James D. Floria, New Canaan, Conn., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Filed Jan. 2, 1962, Ser. No. 68,136
Term of patent 3½ years
(Cl. D33—14)



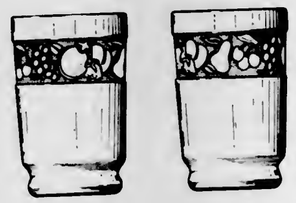
195,979
GAME BOARD
Edward T. McNaney, 101 S. Hilltop Road, Catonsville, Md.
Filed May 16, 1962, Ser. No. 70,163
Term of patent 14 years
(Cl. D34—5)



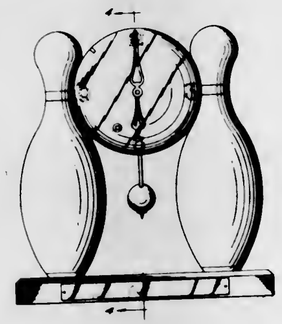
195,980
TOY RAILROAD STATION
Robert I. Genin, New Rochelle, and Leon S. Wirch, Forest Hills, N.Y., assignors to Child Guidance Toy, Inc., Bronx, N.Y., a corporation of New York
Filed Mar. 9, 1962, Ser. No. 69,171
Term of patent 7 years
(Cl. D34—15)



195,981
TUMBLER
Arnold I. Lorenzen, Toledo, Ohio, assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Apr. 5, 1963, Ser. No. 74,312
Term of patent 14 years
(Cl. D36—8)



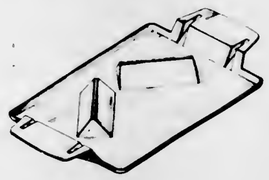
195,982
COMBINED TROPHY AND CLOCK
Brice G. Hadley, 262 Newton St., Denver, Colo.
Filed Apr. 6, 1962, Ser. No. 69,608
Term of patent 3½ years
(Cl. D42—7)



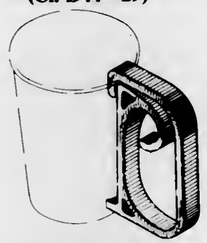
195,983
FRY PAN COVER
Leo J. Cooper, 151 Josiah St., San Francisco, Calif.
Filed Mar. 8, 1963, Ser. No. 73,881
Term of patent 14 years
(Cl. D44—1)



195,984
TRAY
William L. White, Jr., 525 West End Ave., New York, N.Y.
Filed Oct. 23, 1962, Ser. No. 72,239
Term of patent 3½ years
(Cl. D44—10)



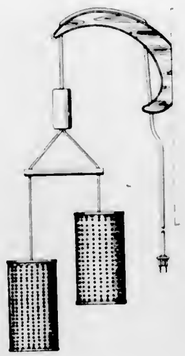
195,985
DETACHABLE HANDLE FOR DRINKING CUPS OR THE LIKE
Kenneth W. Scherrer and Roy A. Scherrer, both of 321 Rother Ave., Buffalo, N.Y.
Filed Oct. 9, 1962, Ser. No. 72,047
Term of patent 3½ years
(Cl. D44—29)



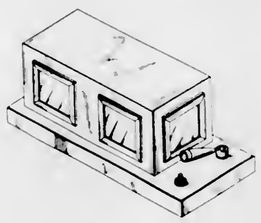
195,986
STIRRING ROD
James H. Ogg, North Hollywood, Calif., assignor to Zoo-Piks, North Hollywood, Calif., a partnership
Filed Apr. 30, 1963, Ser. No. 74,681
Term of patent 14 years
(Cl. D44—29)



195,987
WALL HANGING LAMP
Philip D. Hoffmann and Barbara J. Hoffmann, both of 11335 Sunset, Livonia, Mich.
Filed Sept. 14, 1962, Ser. No. 71,702
Term of patent 7 years
(Cl. D48—4)



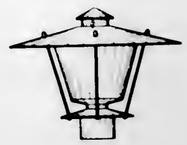
195,988
COMBINED DESK LAMP AND PEN HOLDER BASE
Robert James Cooke, 50—27 213th St., Bayside, N.Y.
Filed Jan. 18, 1963, Ser. No. 73,226
Term of patent 14 years
(Cl. D48—20)



195,989
LUMINAIRE
Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Feb. 5, 1962, Ser. No. 68,638
Term of patent 14 years
(Cl. D48—31)



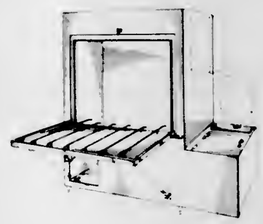
195,990
LUMINAIRE
Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Apr. 20, 1962, Ser. No. 69,781
Term of patent 14 years
(Cl. D48—31)



195,991
LUMINAIRE
Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Apr. 20, 1962, Ser. No. 69,798
Term of patent 14 years
(Cl. D48—31)



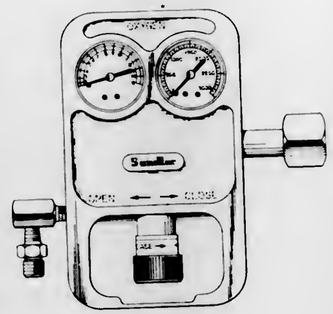
195,992
PAN AND UTENSIL WASHER
Robert K. Nolte, Chatham, N.J., assignor to Metalwash Machinery Company, Elizabeth, N.J., a copartnership
Filed June 8, 1962, Ser. No. 70,480
Term of patent 14 years
(Cl. D49—1)



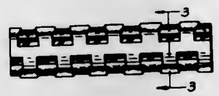
195,993
LUGGAGE LOCK OR SIMILAR ARTICLE
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed Jan. 21, 1963, Ser. No. 73,246
Term of patent 14 years
(Cl. D50—7)



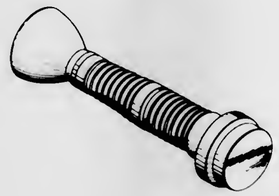
195,994
GAUGE UNIT FOR MEASURING AND REGULATING GASES UNDER HIGH PRESSURE OR SIMILAR ARTICLE
William Sandler, 63—33 98th Ave., Forest Hills, N.Y.
Filed July 27, 1959, Ser. No. 56,940
Term of patent 14 years
(Cl. D52—6)



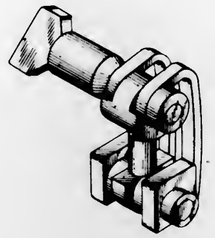
195,995
KNURLED WIRE
Isin Ivanier, Montreal, Quebec, Canada, assignor to Sivaco Wire and Nail Company, Marieville, Quebec, Canada
Filed July 24, 1961, Ser. No. 66,035
Claims priority, application Canada May 11, 1961
Term of patent 14 years
(Cl. D54—2)



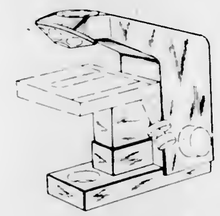
195,996
TOOL FOR REPLACING AUTOMOBILE HUB CAPS
Carl F. Caramelli, 905 Superba Ave., Venice, Calif.
Filed Nov. 6, 1962, Ser. No. 72,401
Term of patent 14 years
(Cl. D54—13)



195,997
CLAMP FOR THE FLANGES OF MICROWAVE PLUMBING
Alex Reithoffer, 7106 Tunney Ave., Reseda, Calif.
Filed Dec. 10, 1962, Ser. No. 72,780
Term of patent 14 years
(Cl. D54—13)



195,998
MICROSCOPE STAND
Karl Auböck, Vienna, Austria, assignor to C. Reichert Optische Werke Aktiengesellschaft, Vienna, Austria
Filed Dec. 26, 1961, Ser. No. 68,077
Term of patent 14 years
(Cl. D57—1)



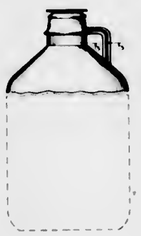
195,999
EXTENSION VIEWFINDER EYEPIECE
Walter H. Bach, Los Angeles, Calif., assignor to Bach Auricon, Inc., Los Angeles, Calif., a corporation of California
Filed Apr. 26, 1962, Ser. No. 69,862
Term of patent 14 years
(Cl. D57—1)



196,000
PAIR OF SPECTACLES
Albert G. McNeill, Maple Glen, Pa., assignor to Bachmann Bros., Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 17, 1962, Ser. No. 72,151
Term of patent 14 years
(Cl. D57—1)



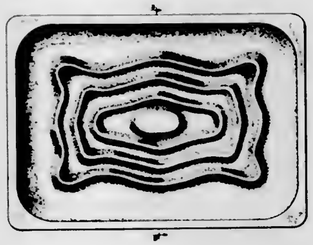
196,001
JUG
Walter Zaleski, Freehold, N.J., assignor to Hyspec Container Corporation, Keyport, N.J., a corporation of New Jersey
Filed Aug. 17, 1962, Ser. No. 71,338
Term of patent 14 years
(Cl. D58—5)



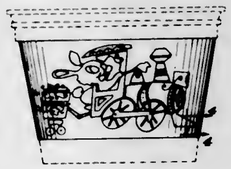
196,002
JUG OR SIMILAR ARTICLE
Victor Koenigsberg, Franklin Square, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Original design application Apr. 2, 1962, Ser. No. 69,802. Divided and this application Oct. 15, 1962, Ser. No. 72,121
Term of patent 14 years
(Cl. D58—5)



196,003
A PACKAGING TRAY FOR FOOD PRODUCTS
William M. Miller, Jr., and Benton Neal Harris, Baltimore, Md., assignors to Gulf States Paper Corporation, Tuscaloosa, Ala., a corporation of Delaware
Filed Mar. 7, 1963, Ser. No. 73,877
Term of patent 14 years
(Cl. D58—12.6)



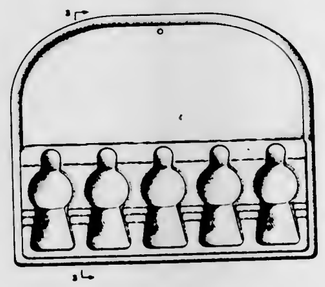
196,004
CONTAINER FOR DAIRY PRODUCTS OR THE LIKE
Clara Virginia Eicholtz, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Sept. 19, 1962, Ser. No. 71,777
Term of patent 14 years
(Cl. D58—17)



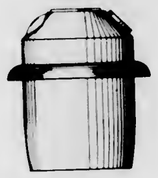
196,005
DISPENSING TUBE
Samuel A. Stone, 25 Mumford Road, New Haven, Conn.
Filed Dec. 10, 1962, Ser. No. 72,802
Term of patent 14 years
(Cl. D58—17)



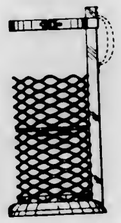
196,006
COMBINED SHOE POLISH BOTTLE HOLDER AND TRAY
Irving J. Bottner, New York, N.Y., assignor to Knomark, Inc., Brooklyn, N.Y., a corporation of New York
Filed July 28, 1960, Ser. No. 61,551
Term of patent 7 years
(Cl. D58—26)



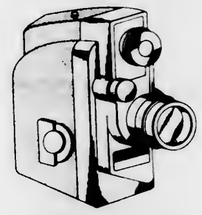
196,007
PRESSURIZED SPRAY DISPENSER HEAD
James M. Berry, 202 Fisher Park Circle, Greensboro, N.C.
Filed Jan. 19, 1962, Ser. No. 68,376
Term of patent 14 years
(Cl. D58—26)



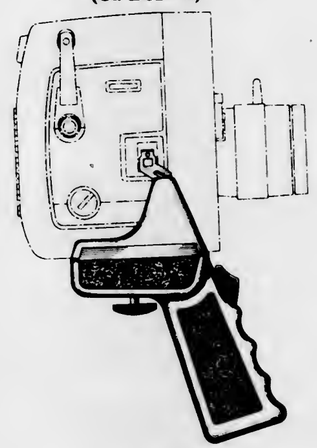
196,008
CYLINDER CARRIER OR SIMILAR ARTICLE
Richard M. Peters, Cloquet, and Richard T. Wipson, Duluth, Minn., assignors to Dix, Inc., Cloquet, Minn., a corporation of Minnesota
Filed Dec. 11, 1961, Ser. No. 67,851
Term of patent 14 years
(Cl. D58—26)



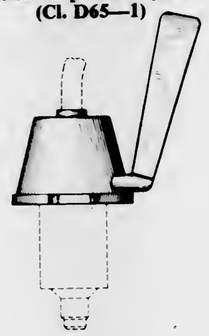
196,009
MOTION PICTURE CAMERA
Clare E. Hodgman, Mamaroneck, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed May 5, 1961, Ser. No. 65,033
Term of patent 14 years
(Cl. D61—1)



196,010
HAND GRIP FOR A MOTION PICTURE CAMERA OR SIMILAR ARTICLE
Norman R. Kubnick, Wheeling, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 20, 1961, Ser. No. 67,183
Term of patent 14 years
(Cl. D61—1)



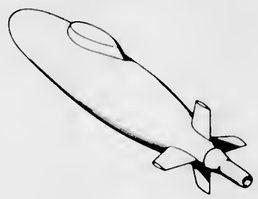
196,011
ROCKER PUMP
Henry de Forrest, 3604 Sunsweep Drive, Studio City, Calif.
Filed Mar. 13, 1961, Ser. No. 64,240
Term of patent 7 years
(Cl. D65—1)



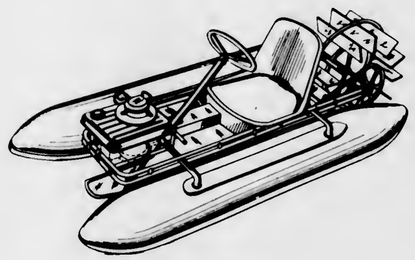
196,012
RAILWAY FREIGHT CAR BODY
Franklin P. Adler, Michigan City, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Sept. 5, 1961, Ser. No. 66,721
Term of patent 14 years
(Cl. D66—1)



196,013
SUBMARINE
Thomas P. Higgins, Jr., Northridge, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 29, 1961, Ser. No. 65,381
Term of patent 14 years
(Cl. D71—1)



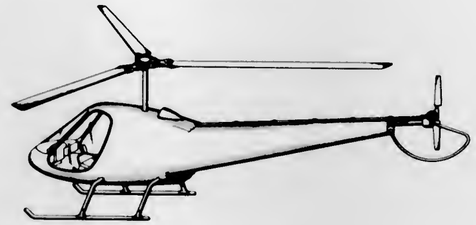
196,014
PADDLE WHEEL BOAT
Willis L. Wells, 4375 Duncan Ave., St. Louis, Mo.
Filed Dec. 21, 1961, Ser. No. 68,005
Term of patent 14 years
(Cl. D71—1)



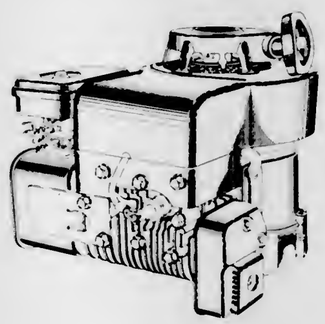
196,015
HYDROAEROPLANE
Robert W. Jenny, 10441 SE. 24th Place, and Robert O. Lewis, Jr., 6007 Hazelwood Lane, both of Bellevue, Wash.
Filed Mar. 7, 1962, Ser. No. 69,136
Term of patent 14 years
(Cl. D71—1)



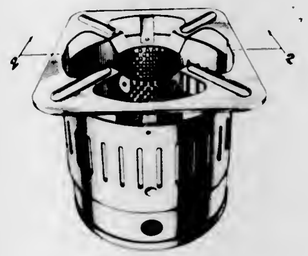
196,016
HELICOPTER
Alb C. Ballauer and Paul L. Shultz, Menominee, Mich., assignors to R. J. Enstrom Corporation, Menominee, Mich., a corporation of Michigan
Filed Mar. 16, 1962, Ser. No. 69,296
Term of patent 14 years
Cl. D71—1)



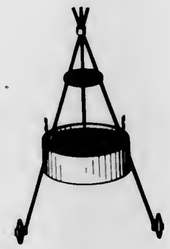
196,017
INTERNAL COMBUSTION ENGINE
Leo J. Lechtenberg, Elm Grove, Wis., assignor to Briggs Stratton Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed June 4, 1962, Ser. No. 70,409
Term of patent 14 years
(Cl. D77—1)



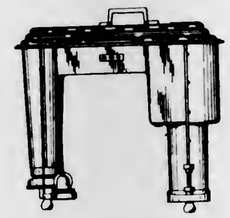
196,018
PORTABLE STOVE
Landon L. Palmer and Stephen Morgenstern, Toledo, Ohio; said Morgenstern assignor to said Palmer
Filed Oct. 1, 1962, Ser. No. 71,929
Term of patent 14 years
(Cl. D81—10)



196,019
BARBECUE GRILL
Alan H. Mayer, 86 Indian Tree, Highland Park, Ill.
Filed Oct. 1, 1962, Ser. No. 71,932
Term of patent 14 years
(Cl. D81—10)



196,020
HYDROTHERAPY BATH UNIT
Morgan K. Wilson, 1020 N. Broadway, Muncie, Ind.
Filed Oct. 27, 1961, Ser. No. 67,285
Term of patent 3½ years
(Cl. D83—1)





196,021
EPILATOR
Robert Tapper, 7621 Hampton Ave., Los Angeles, Calif.
Filed Mar. 19, 1962, Ser. No. 69,318
Term of patent 14 years
(Cl. D83—12)



196,022
NAIL POLISH APPLICATOR
Vernon D. Griffith, 1639 Lexington, Wichita, Kans.
Filed Aug. 27, 1962, Ser. No. 71,453
Term of patent 14 years
(Cl. D86—10)



196,023
COIN HOLDER OR SIMILAR ARTICLE
Albert Rothgart, Brooklyn, and Theodore Mehrer, Scarsdale, N.Y., assignors to Visionade Manufacturing Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed May 18, 1962, Ser. No. 70,188
Term of patent 7 years
(Cl. D87—3)



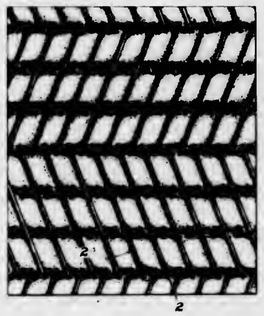
196,024
POLE HOLDER
Julian W. McManus, 3733 Delmas Terrace, Los Angeles, Calif.
Filed May 14, 1962, Ser. No. 70,100
Term of patent 14 years
(Cl. D88—3)



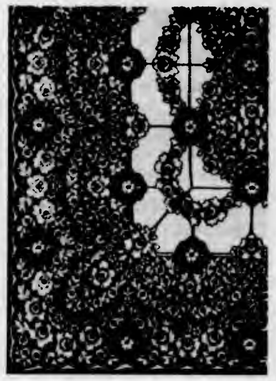
196,025
LAWN SPRINKLER
Charles H. Miner, Denver, Colo., assignor of one-fourth to Edwin L. Spangler, Jr., Denver, Colo.
Filed Mar. 8, 1962, Ser. No. 69,153
Term of patent 7 years
(Cl. D91—1)



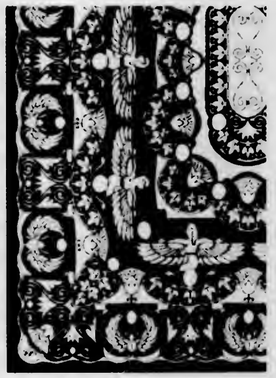
196,026
CARPET UNDERLAY
Donald G. Rowland, Woodbridge, and William F. Conway, Huntington, Conn., assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed June 27, 1961, Ser. No. 65,726
Term of patent 14 years
(Cl. D92—4)



196,027
TABLECLOTH
Richard A. Fees, Ardsley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 26, 1963, Ser. No. 73,717
Term of patent 14 years
(Cl. D92—26)



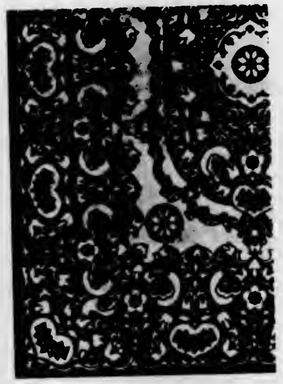
196,028
TABLECLOTH
Richard A. Fees, Ardsley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Filed Apr. 5, 1963, Ser. No. 74,308
Term of patent 7 years
(Cl. D92—26)



196,029
TABLECLOTH
Richard A. Fees, Ardsley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Filed Apr. 5, 1963, Ser. No. 74,309
Term of patent 7 years
(Cl. D92—26)



196,030
TABLECLOTH
Richard A. Fees, Ardsley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Filed Apr. 5, 1963, Ser. No. 74,310
Term of patent 7 years
(Cl. D92—26)



196,031
TABLECLOTH
Richard A. Fees, Ardsley, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Filed Apr. 5, 1963, Ser. No. 74,316
Term of patent 7 years
(Cl. D92—26)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 13TH DAY OF AUGUST, 1963

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Norman, Frances P. Lint type particle adhesive removal device. Re. 25,435, 8–13–63, Cl. 15—104.

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Spilman, Raymond. 195,968.
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TO WHOM

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Norton, Charles L., Jr. 3,100,633.
Back, Carl F. Extensible mast derrick. 3,100,625, 8–13–63, Cl. 254—143.
Backus, Arthur E. Traveler ring assemblies. 3,100,374, 8–13–63, Cl. 57—122.
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Ulmer, Hans, Karacxonyi, Schimmelschmidt, and Baier. 3,100,673.
Bailey, Frederick E., Jr., F. N. Hill, and J. T. Fitzpatrick, to Union Carbide Corp. Process for polymerization of vicinal epoxides. 3,100,750, 8–13–63, Cl. 260—2.
Baker, Charles J., to The Skookum Co., Inc. Cable coupler. 3,100,323, 8–13–63, Cl. 24—123.
Baker, Isaac M., Jr. Exhaust hood. 3,100,809, 8–13–63, Cl. 261—16.
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Crowe, Talmadge L. 3,100,537.
Baker, William A., A. W. Thompson, F. M. Lane, and J. Poslett, to Bristol Aeroplane Plastics Ltd. Molded railway vehicle bodies. 3,100,458, 8–13–63, Cl. 105—397.
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Rosendahl, Gottfried R. 3,100,817.
Ball, John D., C. J. Charske, and W. D. Mounce, to Jersey Production Research Co. Detonation of seismic charges. 3,100,444, 8–13–63, Cl. 102—21.6.
Ballard, James W., to Systems Research Laboratories, Inc. High temperature pressure sensitive solid state material and device. 3,100,884, 8–13–63, Cl. 338—224.
Banks, William B., to Automation Products, Inc. Method of and apparatus for determining physical properties of materials. 3,100,390, 8–13–63, Cl. 73—32.
Barnes, Llewellyn T. Variable electrical trimmer capacitor. 3,100,856, 8–13–63, Cl. 317—249.
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Svenson, Ernest J. 3,100,450.
Barth, John W., to Jacobsen Mfg. Co. Reel type lawn mower with catcher. 3,100,372, 8–13–63, Cl. 56—199.
Bartlett, Roscoe G., Jr. Respiratory apparatus. 3,100,485, 8–13–63, Cl. 128—142.
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Bathish, Louis N., to Pharmaseal Laboratories. Apparatus for administering liquids. 3,100,487, 8–13–63, Cl. 128—227.
Bauder, Ulrich, to Firma Hesser Fr. Maschinenfabrik-Aktiengesellschaft. Dispensing machine operating on volumetric principle. 3,100,584, 8–13–63, Cl. 222—55.
Baxter Laboratories, Inc.: *See*—
Desautels, Robert E. 3,100,490.
Bay, Paul G., to Abbott Laboratories. Process for making nitrocyclopropane. 3,100,805, 8–13–63, Cl. 260—644.
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Becton, Dickinson and Co.: *See*—
Nehring, John R. 3,100,486.
Bedrij, Orest J.: *See*—
Paul, Gerard T., and Bedrij. 3,100,836.
Bedrij, Orest J., to International Business Machines Corp. Selecting adder. 3,100,835, 8–13–63, Cl. 235—175.

Beeson, Donald M., to Jersey Production Research Co. Recovery of oil from partially deleted reservoirs. 3,100,524, 8–13–63, Cl. 166—9.

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Bell, Raymond M., to Lockheed Aircraft Corp. Random vibration testing system. 3,100,393, 8–13–63, Cl. 73—71.6.

Bell Telephone Laboratories, Inc.: *See*—
Cutler, Cassius C. 3,100,892.
Henning, Harley A. 3,100,890.
McAfee, Kenneth B. Jr. 3,100,868.
Wolfe, Robert M. 3,100,887.

Bell, Walter, to Star Expansion Industries Corp. Percussion drill chuck. 3,100,650, 8–13–63, Cl. 279—103.

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Williams, Russell J., and Ottinger. 3,100,596.

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Brockway, Arthur L., Jr. 3,100,891.
Burt, Farlow B., and Vickers. 3,100,550.
Clark, Richard B., and Meyer. 3,100,422.
Friend, Lindsay C. 3,100,333.
Giller, Morris, and Neuberth. 3,100,894.
Goepfrich, Rudolph A. 3,100,340.
Kjellman, Thomas K. 3,100,826.
Price, Earl R. 3,100,379.
Skinner, Robert L. 3,100,392.
Van Dlen, James R. 3,100,551.
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Bennett, Earnest L., and D. F. Burns, to J. I. Holcomb Mfg. Co., Inc. Mop making apparatus. 3,100,670, 8–13–63, Cl. 300—16.

Bentkowsky, Jerome, to Sperry Rand Corp. Fine and coarse signal mixing circuit. 3,100,859, 8–13–63, Cl. 318—30.

Berghöfer, Hans, and H. Griebel. Gas connection tap with hose connection part. 3,100,619, 8–13–63, Cl. 251—149.9.

Berl, John T. Quick, detachable safety support or belt. 3,100 484. 8–13–63, Cl. 128—134.

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Biedess, Anthony R., to Goodman Mfg. Co. Articulated conveyor. 3,100,563, 8–13–63, Cl. 198—124.

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Smith, Arthur W., and Plummer. 3,100,525.

Billings, Parnell S. Golf glove. 3,100,302, 8–13–63, Cl. 2—160.

Black, William H. Method and apparatus for prefabricating prestressed monoplanar trusses. 3,100,301, 8–13–63, Cl. 1—160.

Blanco, Elias, to Daystrom Inc. Phasable ganged potentiometer. 3,100,883, 8–13–63, Cl. 338—148.

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Blanshine, Allison W., to Sperry Rand Corp. Control device for adjusting a harvester platform. 3,100,373, 8–13–63, Cl. 56—214.

Bloom, Frederick S. Metal heating furnace. 3,100,811, 8–13–63, Cl. 266—5.

Boeddeker, William T., and H. L. Frick, to Whirlpool Corp. Retractable knob device. 3,100,404, 8–13–63, Cl. 74—553.

Bohlsen, Albert J. Hammer holster. 3,100,590, 8–13–63, Cl. 224—5.

Boissevain, Matthijs G. J., to Astra Corp. Educational device. 3,100,352, 8–13–63, Cl. 35—9.

Bolu, Rudolph R. Adjustable door hanger. 3,100,316, 8–13–63, Cl. 16—105.

Boler, Leonard J., and H. L. McClelland, to The Bendix Corp. Vibration resistant acceleration activated valve. 3,100,495, 8–13–63, Cl. 137—38.

Bond, Harry L. F., to Davy and United Engineering Co. Ltd. Strip coiler. 3,100,605, 8–13–63, Cl. 242—80.

Bond, Robert W., to Corn Products Co. Interrupted starch hydrolysis. 3,100,740, 8–13–63, Cl. 195—31.

Bondley, Ralph J., to General Electric Co. Method of making composite bodies. 3,100,339, 8–13–63, Cl. 29—473.1.

Bonewitz, Everett D. Exerciser. 3,100,639, 8–13–63, Cl. 273—57.

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Booth, Clifford C., and Dean. 3,100,754.

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Gile, William B. 3,100,594.
Marrujo, Fernando G. 3,100,523.
Poulter, Thomas C. 3,100,445.

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Tengler, Harvey N., and Radke. 3,100,618.

Bougeard, Arthur. Pneumatic device constituting suspension and damping means. 3,100,635, 8–13–63, Cl. 267—65.

Bourgeas, Pierre. Spindle-holder. 3,100,373, 8–13–63, Cl. 57—134.

Boussu, Gabriel X. R., L. P. F. A. Neuville, and J.-M. C. Massoubre, to Michelin & Cie. Methods of preparing elastomers of the polyurethane type. 3,100,759, 8–13–63, Cl. 260—77.5.

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Coleman, Joe D., and Boyd. 3,100,530.

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Bracker A. G.: *See*—
Ramseier, Paul. 3,100,334.

Brady, John G.: *See*—
Szabo, Karoly, and Brady. 3,100,735.

Brandlin, John M., N. Iaquinta, and J. F. Inco, to The Inco Co. Adjustable and foldable bed frame. 3,100,304, 8–13–63, Cl. 5—202.

Brass, Edward A., to Avco Corp. Multi-speed split-power reduction gear. 3,100,405, 8–13–63, Cl. 74—764.

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Brey, Wilhelm, to The Firestone Tire & Rubber Co. Method and apparatus for joining sheet material. 3,100,731, 8–13–63, Cl. 156—157.

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Broadrick, Ed B., to James Lees, and Sons Co. Apparatus for the production of wave line constant height rows of tufts. 3,100,465, 8–13–63, Cl. 112—79.

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Brown, Cicero C., to Brown Oil Tools, Inc. Well apparatus and methods of running a plurality of tubing strings in a well bore or pipe. 3,100,531, 8–13–63, Cl. 166—114.

Brown, Clifford K. Magnetic direction and inclination indicating device. 3,100,350, 8–13–63, Cl. 33—205.5.

Brown, Gaylord W., to Brown Machine Co. Sheet conveying mechanism. 3,100,637, 8–13–63, Cl. 271—79.

Brown, Harold P., M. R. Walters, and J. F. Anderson, to The B. F. Goodrich Co. Polymeric adhesives and method of preparation. 3,100,760, 8–13–63, Cl. 260—86.1.

Brown Machine Co.: *See*—
Brown, Gaylord W. 3,100,637.

Brown Oil Tools, Inc.: *See*—
Brown, Cicero C. 3,100,531.

Brueckmann, Helmut, to United States of America, Army. Broad band vertical antenna with adjustable impedance matching network. 3,100,893, 8–13–63, Cl. 343—713.

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Taylor, Thomas D. 3,100,468.

Buck, Arthur W. Positive release film clip. 3,100,326, 8–13–63, Cl. 24—252.

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Joly, Robert, and Bucourt. 3,100,782.

Buechler, William R., to Thompson Industries, Inc. Rack. 3,100,574, 8–13–63, Cl. 211—177.

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Bundy, Robert W., to E. I. du Pont de Nemours and Co. Polymeric sheet material and method of making same. 3,100,733, 8–13–63, Cl. 162—108.

Bunn, George R. Coffee making machine. 3,100,434, 8–13–63, Cl. 99—282.

Burkhardt, Horst, to Fa. Wenczler & Heidenhain. Devices for adjusting and measuring lengths and angles. 3,100,345, 8–13–63, Cl. 33—1.

Burkhardt, Horst, to Fa. Wenczler & Heidenhain. Photoelectric process for measuring and adjusting the position of objects, particularly of scale lines. 3,100,846, 8–13–63, Cl. 250—219.

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Burnell, Norman. 3,100,882.

Burnell, Norman, to Burnell & Co., Inc. Encapsulated variable inductor. 3,100,882, 8–13–63, Cl. 336—96.

Burns, Donald F.: *See*—
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Dission, Stanley B., Meyerhoff, and Winsor. 3,100,869.
Kondur, Nicholas, Jr. 3,100,560.
Priendnieks, Voldemars, and Werner. 3,100,351.

Burt, Farlow B., and J. L. Vickers, to The Bendix Corp. Power steering mechanism. 3,100,550, 8–13–63, Cl. 180—79.2.

Busch-Petersen, Bent, and R. G. Craig, to Air Products and Chemicals, Inc. Treatment of dehydrogenation vapor effluent. 3,100,745, 8–13–63, Cl. 208—310.

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Caddell, Alfred M. Pressure retaining means for double-acting piston engines. 3,100,401, 8–13–63, Cl. 74—36.

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Porter, Roger S., and Cady. 3,100,803.

Calhoun, Frank B.: *See*—
Goldwater, Robert, and Calhoun. 3,100,814.

Campbell, Donald H.: *See*—
Vullo, William J., and Campbell. 3,100,728.

Canadian Westinghouse Co., Ltd.: *See*—
Hulls, Leonard R., and Jacobsen. 3,100,410.

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Overly, Charles R., and Cannon. 3,100,544.

Cannon, Maxwell R., to International Business Machines Corp. Apparatus for sensing variations. 3,100,889, 8–13–63, Cl. 340—259.

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Cartwright, Horace A. Road maintenance device. 3,100,425, 8–13–63, Cl. 94—44.

Case Foundation Co.: *See*—
Case, Stanford E., and Walton. 3,100,381.

Case, Stanford E., and J. P. Walton, to Case Foundation Co. Methods of producing caissons. 3,100,381, 8–13–63, Cl. 61—35.

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Celanese Corp. of America: *See*—
Allman, William T., Jr., Joseph, and Higgins. 3,100,328.

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Charbonneau, Allan P., and R. A. Mukai, to Cutler-Hammer, Inc. Limit switch. 3,100,824, 8–13–63, Cl. 200—47.

Chausson, Andre, to Societe Anonyme des Usines Chausson. Evaporation heat exchanger. 3,100,386, 8–13–63, Cl. 62—467.

Cherundolo, Michael, and J. B. Wandel, to Daystrom, Inc. Multiple spindle attachment. 3,100,407, 8–13–63, Cl. 77—22.

Christie, Clowes M., to American Latex Products Corp. Method for manufacturing a printing roll. 3,100,676, 8–13–63, Cl. 18—58.

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Ciba Co., Inc.: *See*—
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Ciba Ltd.: *See*—
Gunst, Raymond. 3,100,768.

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Clark, Richard B., and H. P. Meyer, to The Bendix Corp. Hydraulic engine governor. 3,100,422, 8–13–63, Cl. 121—42.

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Coleman, Charles H., Jr., and P. W. Jensen, to Ampex Corp. Timing control for signal reproducing systems. 3,100,816, 8–13–63, Cl. 178—5.4.

Coleman, Joe D., and C. L. Boyd, to Halliburton Co. Apparatus for treating or servicing a well. 3,100,530, 8–13–63, Cl. 166—53.

Coles, Robert F., and H. Levine, to General Aniline & Film Corp. Photogranhic materials containing carbodlimides. 3,100,704, 8–13–63, Cl. 96—111.

Collier, Donald W., to The Electric Storage Battery Co. Sealed storage cells and charging circuits therefor. 3,100,862, 8–13–63, Cl. 320—46.

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Commissariat a l'Energie Atomique: *See*—
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Concilio, Carlo T., and A. Tezza, to Zambon S.p.A. Chloramphenicol glycinate and the production thereof. 3,100,781, 8–13–63, Cl. 260—343.7.

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Lee, Arthur L., and Coval. 3,100,648.

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Ravve, Abraham, and Khamis. 3,100,758.

Cooper-Bessemer Corp., The: *See*—
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Corn Products Co.: *See*—
Bond, Robert W. 3,100,740.

Cosden Petroleum Corp.: *See*—
Dyer, Robert H. 3,100,808.
Meek, Paul D., Snyder, Allison, and Grimes. 3,100,763.

Coulter, Anne M. Multi-purpose bed pan cushion. 3,100,303, 8–13–63, Cl. 4—113.

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Lee, Arthur L., and Coval. 3,100,648.

Cox, George R., to United States of America, Atomic Energy Commission. Exhibit stand. 3,100,573, 8–13–63, Cl. 211—177.

Cox, Herbert F., Jr., to Inland Container Corp. Pouring type fluid container. 3,100,587, 8–13–63, Cl. 222—105.

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Creme, Michael M. Precoiled artificial lure. 3,100,360, 8–13–63, Cl. 43—42.02.

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Frank, Joseph M., Boyer, and Crookston. 3,100,677.

Crowe, Talmadge L., to Baker Oil Tools, Inc. Formation testing apparatus. 3,100,537, 8–13–63, Cl. 166—226.

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Cutler, Cassius C., to Bell Telephone Laboratories, Inc. Antenna for active satellite repeaters. 3,100,892, 8–13–63, Cl. 343—100.

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Cyphers, Elmer B., to Esso Research and Eng neering Co. Improved calcium salts of bridged phenol sulfides and method of preparing same. 3,100,800, 8–13–63, Cl. 260—609.

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Day, Harry W.: *See*—
Wick, Edward J., and Day. 3,100,464.

Daystrom Inc.: *See*—
Blanco, Elias. 3,100,883.
Cherundolo, Michael, and Wandel. 3,100,407.

Dean, Robert B.: *See*—
Booth, Clifford C., and Dean. 3,100,754.

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Deaver, Lloyd C. and C. G. 3,100,540.

Deaver, Lloyd C. and C. G. Stone picking implement. 3,100,540, 8–13–63, Cl. 171—63.

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Degutis, Anthony C., and A. L. Peterson, to Wood Newspaper Machinery Corp. Web splicing apparatus. 3,100,604, 8–13–63, Cl. 242—58.3.

De John, Anthony. Accordions. 3,100,417, 8–13–63, Cl. 84—376.

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Demas, Louis, to American Motors Corp. Vehicle wheel suspension and drive. 3,100,549, 8–13–63, Cl. 180—73.

Demer, Frederick M., and M. J. Kelly, to International Business Machines Corp. Magnetic data processing. 3,100,834, 8–13–63, Cl. 235—61.12.

Dennis, David H. High speed ground transportation system. 3,100,454, 8–13–63, Cl. 104—138.

De Poy, James W., to The Colorado Fuel and Iron Corp. Wire cloth. 3,100,616, 8–13–63, Cl. 245—10.

De Ridder, Ernst J., to Reynolds Metals Co. Interlocking metallic structural members. 3,100,556, 8–13–63, Cl. 189—34.

Desautels, Robert E., to Baxter Laboratories, Inc. Surgical drainage tube. 3,100,490, 8–13–63, Cl. 128—350.

De Sena, Vincent A., to Esso Research and Engineering Co. Combination flexible hose connection and ball pig launcher-receiver. 3,100,308, 8–13–63, Cl. 15—104.06.

Dess, Howard M., to Union Carbide Corp. Foamed silicon carbide. 3,100,688, 8–13–63, Cl. 23—208.

Deubel, Justin A., to General Controls Co. Combined valve and relay structure in burner control system. 3,100,521, 8–13–63, Cl. 158—125.

De Wilde, Pieter C., and M. P. Rappoldt, to North American Philips Co, Inc. Method of stabilizing crystalline compounds against oxidation. 3,100,783, 8–13–63, Cl. 260—397.2.

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Swinehart, Frank, and Dobias. 3,100,821.

Doedens, James D.: *See*—
Trapp, Walter B., and Doedens. 3,100,796.

Dombrow, Bernard A., to Nopco Chemical Co. Flexible urethane foams and a process for producing same. 3,100,752, 8–13–63 Cl. 260—2.5.

Dorey, George B., to Enterprise Railway Equipment Co. Latching device for railway hopper car doors. 3,100,455, 8–13–63, Cl. 105—253.

Dorey, George B., to Enterprise Railway Equipment Co. Hopper discharge outlet sealing sliding closure assembly. 3,100,456, 8–13–63, Cl. 105—253.

Dorey, George B., to Enterprise Railway Equipment Co. Sliding closure hopper closure outlet assembly. 3,100,457, 8–13–63, Cl. 105—282.

Dottlinger, Alfred, to Jacob Ritter KG. Push-button mechanisms. 3,100,403, 8–13–63, Cl. 74—503.

Doubek, Edward R., Jr., to Western Electric Co., Inc. Decelerating circuit. 3,100,554, 8–13–63, Cl. 188—161.

Dow Chemical Co., The: *See*—
Dunbar, Joseph E. 3,100,785.
Harris, Guy H., and Fischback. 3,100,797.
Martin, Robert C. 3,100,526.
Oldershaw, Charles F. 3,100,306.
Reifschneider, Walter. 3,100,801.
Reifschneider, Walter. 3,100,802.
Trapp, Walter B., and Doedens. 3,100,796.

Drager, Otto H.: *See*—
Wächter, Karl-August. 3,100,692.

Drake, Herbert E., and L. Kral, to Newspaper Enterprise Association, Inc. Apparatus for producing color separation negatives and the like. 3,100,815, 8–13–63, Cl. 178—5.2.

Dresser, Richard. Pneumatic safety tire construction. 3,100,518, 8–13–63, Cl. 152—347.

Dubied, Edouard, et Cie (Societe Anonyme): *See*—
Muay, Andre P. 3,100,424.

Duffey, Joseph G., to Arnold Equipment Corp. Method of recovering carbon dioxide. 3,100,685, 8–13–63, Cl. 23—150.

Duinker, Simon: *See*—
Peck, Johannes J. A., Rinia, and Duinker. 3,100,852.

Dunbar, James A., and S. G. Von Stocker, to Aluminum Co. of America. Splicing aluminum foil. 3,100,337, 8–13–63, Cl. 29—470.9.

Dunbar, Joseph E., to The Dow Chemical Co. Dialkyl tin chloride dialkylphosphite. 3,100,785, 8–13–63, Cl. 260—429.7.

Dunlop Rubber Co. Ltd.: *See*—
Butler, Henry J. 3,100,553.

Dunn, Edward J., Jr., and M. Kushner, to National Lead Co. Copper borate antifouling pigment. 3,100,718, 8–13–63, Cl. 106—308.

Dunn, Edward J., Jr., and M. Kushner, to National Lead Co. Antifouling pigment. 3,100,719, 8–13–63, Cl. 106—308.

Du Pont de Nemours, E. I., and Co.: *See*—
Bundy, Robert W. 3,100,733.
Holden, Edsworth K. 3,100,721.
Smedberg, George E. 3,100,732.

Duppenglesser, Karl A. Soil-working implement. 3,100,665, 8–13–63, Cl. 294—57.

Durasplastics, Inc.: *See*—
Pedersen, Clarence S. 3,100,623.

Durick, Henry J. Kite control. 3,100,615, 8–13–63, Cl. 244—155.

Duval, Jules L. Combined door stop and holder. 3,100,664, 8–13–63, Cl. 292—251.5.

Dyer, Robert H., to Cosden Petroleum Corp. Hydrogenation of saturated isobutylene polymer. 3,100,808, 8–13–63, Cl. 260—683.9.

Dzierzanowski, Frank J.: *See*—
Haden, Walter L., Jr., and Dzierzanowski. 3,100,684.

Eastman Kodak Co.: *See*—
Kibler, Charles J., and Tamblyn. 3,100,716.
Long, Selma H., and Tamblyn. 3,100,717.
Offensend, Glen W., and Vogt. 3,100,356.
Rauner, Frederick J., Rosati, and Robertson. 3,100,702.

Eddins, William T.: *See*—
McMillian, Lonnie S., Jr., and Eddins. 3,100,850.

Edge, Thomas B. Adapters for milking systems. 3,100,475, 8–13–63, Cl. 119—14.11.

Edson, William A., to General Electric Co. Waveguide system having mode converter for changing rectangular TE_{10} mode into circular TE₁₁ at locus of waveguide window. 3,100,881, 8–13–63, Cl. 333—21.

Egli, Henry O. Compensated micrometer head. 3,100,348, 8–13–63, Cl. 33—164.

Ehrlich, Joseph R. Coating composition comprising a vinyl acetate unsaturated carboxylic acid copolymer and an organic base dissolved in an organic solvent and article therewith. 3,100,755, 8–13–63, Cl. 260—29.6.

Eibl, Johann: *See*—
Auerswald, Wilhelm, and Eibl. 3,100,737.

Eisler, Paul. Food package. 3,100,711, 8–13–63, Cl. 99—171.

Electric & Musical Industries Ltd.: *See*—
Spencer, Rolf E., and Stephenson. 3,100,864.

Electric Storage Battery Co., The: *See*—
Collier, Donald W. 3,100,862.

Emerson, Alfred, Jr. Method of processing wheat to provide a stabilized whole wheat flour. 3,100,708, 8–13–63, Cl. 99—94.

Emery Industries, Inc.: *See*—
Goebel, Charles G. 3,100,784.

Emrick, Donald D., to The Standard Oil Co. Process for preparing higher homologues of organic compounds having a labile hydrogen atom. 3,100,792, 8–13–63, Cl. 260—462.

Eness, Orville M.: *See*—
Richardson, Roy A., and Eness. 3,100,871.

English, Lawrence P.: *See*—
Ritter, Ralph K., and English. 3,100,833.

Enterprise Railway Equipment Co.: *See*—
Dorey, George B. 3,100,455.
Dorey, George B. 3,100,456.
Dorey, George B. 3,100,457.

Erickson, Leonard A., to Big Drum, Inc. Lid-dispenser. 3,100,583. 8–13–63, Cl. 221—36.

Erie Resistor Corp.: *See*—
Hotelling, Harry. 3,100,855.

Ermel, Thomas M. Fountain pen filler construction. 3,100,477, 8–13–63, Cl. 120—42.4.

Ernst, John J. Paint roller gauge. 3,100,313, 8–13–63, Cl. 15—257.06.

Esser, Heinrich, and W. Strotmann, to Eumuco Aktiengesellschaft fur Maschinenbau. Forging and upsetting machines with improved clamping jaws. 3,100,409, 8–13–63, Cl. 78—17.

Esso Research and Engineering Co.: *See*—
Cyphers, Elmer B. 3,100,800.

Esso Research and Engineering Co.: *See*—
De Sena, Vincent A. 3,100,308.
Konecky, Milton S. 3,100,798.
Potter, Barrie V. 3,100,376.
Rogillio, Archie E. 3,100,741.
Slysh, Roman S., and Holliyday. 3,100,695.

Eumuco Aktiengesellschaft fur Maschinenbau: *See*—
Esser, Heinrich, and Strotmann. 3,100,409.

Evans, George W.: *See*—
Herndon, Luther J., Jr., Evans, and Land. 3,100,534.

FMC Corp.: *See*—
May, Fred and G. 3,100,520.

Fairchild Camera and Instrument Corp.: *See*—
Sclar, Nathan. 3,100,845.

Fanatex G.m.b.H.: *See*—
Möhring, Gustav. 3,100,632.

Fannin, John D. Dent repair method for automobile bodies. 3,100,336, 8–13–63, Cl. 29—401.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Breer, Karl. 3,100,506.
Fritze, Ulrich. 3,100,347.
Oertel, Gunter, and Holtschmidt. 3,100,790.
Werle, Eugen, and Trautschold. 3,100,736.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Ulmer, Hans, Karaczonyi, Schimmelschmidt, and Baier. 3,100,673.

Farkas, Thomas P., to United Aircraft Corp. Dual input divider controller with limiter utilizing servo actuated pressure ratio sensor. 3,100,380, 8–13–63, Cl. 60—97.

Fellman, Robert P., W. E. Goode, and F. H. Owens, to Rohm & Haas Co. Polymerization process with a catalyst system of metal halide and organo-magnesium compound. 3,100,761, 8–13–63, Cl. 260—88.7.

Fernald, Herbert B., to Goodrich-Gulf Chemicals, Inc. Activation of aluminum and preparation of aluminum hydrocarbyls therewith. 3,100,786, 8–13–63, Cl. 260—448.

Fichter, Harry L., Jr.: *See*—
Sprague, Robert H., Fichter, and Hamilton. 3,100,703.

Firestone Tire & Rubber Co., The: *See*—
Albert, Harry E. 3,100,765.
Brey, Wilhelm. 3,100,731.
Knox, Harold W. 3,100,318.
Louth, George D., and Brock. 3,100,773.

Fischback, Bryant C.: *See*—
Harris, Guy H., and Fischback. 3,100,797.

Fitzpatrick, John T.: *See*—
Bailey, Frederick E., Jr., Hill, and Fitzpatrick. 3,100,750.

Flextemp Corp.: *See*—
Lowensohn, Ralph S. 3,100,384.

Floating Floors Inc.: *See*—
Spiselman, Joseph W. 3,100,624.

Foglia, Sebastien: *See*—
Aubert, Michel, Foglia, and Roche. 3,100,743.

Fonden, Per B., and K. O. T. Walander. Aircraft restraining device. 3,100,613, 8–13–63, Cl. 244—110.

Ford, George E., and C. R. King, to Qualitrol Corp. Pressure relief valve. 3,100,502, 8–13–63, Cl. 137—491.

Fondick Machine Tool Co., The: *See*—
Knosp, Robert N., and Gecks. 3,100,406.

Foster, George B., to Industrial Nucleonics Corp. Radiation dosage limiter. 3,100,843, 8–13–63, Cl. 250—52.

Foster, Harry C., to Olin Mathieson Chemical Corp. Gas operated devices. 3,100,446, 8–13–63, Cl. 102—25.

Foster, Lawrence H., and H. E. Bush, to Foster Refrigerator Corp. Control for refrigerators including alarm means. 3,100,383, 8–13–63, Cl. 62—126.

Foster Refrigerator Corp.: *See*—
Foster, Lawrence H., and Bush. 3,100,383.

Frank, Joseph M., N. E. Boyer, and J. A. Crookston, to A. P. Green Fire Brick Co. Method of making refractory brick. 3,100,677, 8–13–63, Cl. 18—59.

Frank, Robert E. Convertible container. 3,100,576, 8–13–63, Cl. 215—1.

Frantz, Russell K., and J. F. Vitcha, to Air Reduction Co., Inc. Preparation of methyl methacrylate. 3,100,795, 8–13–63, Cl. 260—486.

Fredd, John V., to Otis Engineering Corp. Anchoring and sealing device. 3,100,533, 8–13–63, Cl. 166—125.

Frederick, Albert W. Interior trim for windows. 3,100,320, 8–13–63, Cl. 20—11.

Freeport Sulphur Co.: *See*—
Hills, Robert C. 3,100,700.

Freightliner Corp.: *See*—
Kaye, Michael C. 3,100,305.

Frick, Harold L.: *See*—
Boeddeker, William T., and Frick. 3,100,404.

Friend, Lindsay C., to The Bendix Corp. Method of making compound gear. 3,100,333, 8–13–63, Cl. 29—159.2.

Fritze, Ulrich, to Farbenfabriken Bayer Aktiengesellschaft. Means for indicating or recording the liquid level in narrow, long measuring vessels. 3,100,347, 8–13–63, Cl. 33—126.6.

Froehlich, Bernard F. Table locking construction for a machine tool. 3,100,636, 8–13–63, Cl. 269—83.

Fry, Charles L. Endless belt for a conveyor-belt turn. 3,100,565, 8–13–63, Cl. 198—182.

Fry, John S., to Union Carbide Corp. Composition consisting essentially of a polyglycidyl ether and a liquid diepoxide and cured product. 3,100,756, 8–13–63, Cl. 260—30.4.

Fryer, Rodney I., R. A. Schmidt, and L. H. Sternbach, to Hoffmann-La Roche Inc. 5-pyridyl-1,4-benzodiasepine compounds. 3,100,770, 8–13–63, Cl. 260—239.3.

Gaetani, Ermanno, to Aziende Colori Nazionali Affini Acna S.p.A. Disazo dyes. 3,100,769, 8–13–63, Cl. 260—186.

Gambino, James C. Toothbrush. 3,100,309, 8–13–63, Cl. 15—167.

Gardes, Alfred W., and J. F. Gluth, to International Register Co. One way clutch. 3,100,559, 8–13–63, Cl. 192—43.2.

Garff, George L.: *See*—
Reese, Frank P. 3,100,651.

Gas Processing Inc.: *See*—
Hull, Raymond J. 3,100,607.

Gast, Albert K., Jr., to Star Shade Cutter Co. Mandrel for cutting metal shade rollers. 3,100,649, 8–13–63, Cl. 279—1.

Gavlin, Gilbert, and K. Hattori, to The Richardson Co. Process for making β-amino alkyl sulfate ester. 3,100,789, 8–13–63, Cl. 260—458.

Gecks, Donald L.: *See*—
Knosp, Robert N., and Gecks. 3,100,406.

Gelenkwellenbau G.m.b.H.: *See*—
Kempf, Willi. 3,100,660.

General Aniline & Film Corp.: *See*—
Coles, Robert F., and Levine. 3,100,704.

General Controls Co.: *See*—
Deubel, Justin A. 3,100,521.

General Dynamics Corp.: *See*—
Bass, Harold E. 3,100,499.

General Electric Co.: *See*—
Bondley, Ralph J. 3,100,339.
Edson, William A. 3,100,881.
Grimshaw, Charles. 3,100,827.
Varga, Joseph J. 3,100,413.
Vermeulen, William. 3,100,822.

General Steel Products, Inc.: *See*—
Rogers, Walter C., and Mizelle. 3,100,668.

General Time Corp.: *See*—
Wagner, Karl T. 3,100,823.

Gerardin, Jean-Jacques, to Compagnie de Pont-A-Mousson. Process and device for producing foundry cores. 3,100,321, 8–13–63, Cl. 22—10.

Gesek, William J., Jr., to Radio Corp. of America. Adder-subtractor. 3,100,837, 8–13–63, Cl. 235—175.

Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft: *See*—
Becker, Rudolf. 3,100,696.
Becker, Rudolf, and Wittmann. 3,100,385.

Gets Exterminators, Inc.: *See*—
Robinette, Chester W. 3,100 362.

Getzin, Allan R., to American Air Filter Co., Inc. Air filter latch arrangement. 3,100,557, 8–13–63, Cl. 189—35.

Gibson, James E., Jr. Valve means for inflatable articles. 3,100 498, 8–13–63. Cl. 137—223.

Gier, John R., Jr. Method of making a heat exchanger cross tied pin assembly. 3,100,332, 8–13–63, Cl. 29—157.3.

Gile, William B., to Borg-Warner Corp. Shipping carton. 3,100,504, 8–13–63 Cl. 229—16.

Giller, Morris, and J. G. Neuberth, to The Bendix Corp. Dual frequency feed horn. 3,100,894, 8–13–63, Cl. 343—756.

Gingher, Carl E., Jr.: *See*—
Gingher, Carl E., and C. E Gingher, Jr. 3,100,572.

Gingher, Carl E., and C E. Gingher, Jr. Adjustable supporting surfaces. 3,100,572, 8–13–63, Cl. 211—153.

Gluth, Joseph F.: *See*—
Gardes, Alfred W., and Gluth. 3,100,559.

Goebel, Charles G., to Emery Industries, Inc. Method of producing polymers of linolenic acid. 3,100,784, 8–13–63, Cl. 260—407.

Goepfrich, Rudolph A., to The Bendix Corp. Brake shoe and method of making same. 3,100,340, 8–13–63, Cl. 29—520.

Goldfarb, Adolph E. Buckle key chain. 3,100,608, 8–13–63, Cl. 242—96.

Goldsmith, William F.: *See*—
Leech, Robert E, and Goldsmith. 3 100,793.

Goldstein, Daniel, to Schenley Industries, Inc. Multi-purpose carton and game. 3,100,642, 8–13–63, Cl. 273—105.

Goldwater, Robert, and F. B. Calhoun, to Safeway Stores, Inc. Store ordering system and apparatus. 3,100,814, 8–13–63, Cl. 178—3.

Goller, George N., to Armco Steel Corp. Stainless steel product and method. 3,100,729, 8–13–63 Cl. 148—12.3.

Good, Fred C. Windlass. 3,100,626, 8–13–63, Cl. 254—175.5.

Goode, William E.: *See*—
Fellman, Robert P., Goode, and Owens. 3,100,761.

Goodman Mfg. Co.: *See*—
Biedess, Anthony R. 3,100,563.

Goodrich, B. F., Co., The: *See*—
Bialkowski, Ludwik S. 3,100,509.
Brown, Harold P., Walters, and Anderson. 3,100,760.
Miller, H. Paul, and Soper. 3,100,658.
Shockney, Joseph C. 3,100,762.

Goodrich-Gulf Chemicals, Inc.: *See*—
Fernald, Herbert B. 3,100,786.

Gordon, James H., to American Can Co. Screw cap assembling head. 3,100,366, 8–13–63, Cl. 53—317.

Graflex, Inc.: *See*—
Padelt, Johannes G. 3,100,428.

Grant, Maro E. Method of preparing meat. 3,100,713, 8–13–63, Cl. 99—194.

Gray, Paul A., Jr.: *See*—
Horsley, Franz A., and Gray. 3,100,698.

Green, A. P., Fire Brick Co.: *See*—
Frank, Joseph M., Boyer, and Crookston. 3,100,677.

Greunke, Orville V., to United Aircraft Corp. Capacitance sensing circuit. 3,100,879, 8–13–63, Cl. 331—135.

Griebel, Herbert: *See*—
Berghöfer, Hans, and Griebel. 3,100,619.

Griffin, Searcy F., and S. D. Turner, Jr., to Varo, Inc. Electronic selecting systems. 3,100,819, 8–13–63, Cl. 179—15.

Griffith, William F. Boot strap electronic amplifier having in-phase grids. 3,100,878, 8–13–63, Cl. 330—81.

Grimes, George: *See*—
Meek, Paul D., Snyder, Allison, and Grimes. 3,100,768.

Grimmer, George G., and H. B. Schramm, deceased (by J. Schramm, executrix), to Otis Engineering Corp. Well tools. 3,100,452, 8–13–63, Cl. 103—232.

Grimshaw, Charles, to General Electric Co. Thermally responsive switch. 3,100,827, 8–13–63, Cl. 200—113.

Griswold, Augustus W.: *See*—
Lehmann, Ernest H., and Griswold. 3,100,427.

Grob, Willy. Speed regulated let-off. 3,100,511, 8–13–63, Cl. 139—107.

Gubelmann, Walter S.: *See*—
Gubelmann, William S. 3,100,603.

Gubelmann, William S., deceased, by Walter S. Gubelmann, executor, to Realty & Industrial Corp. Multiplier-quotient register control mechanisms. 3,100,603, 8–13–63, Cl. 235—63.

Gulf Oil Corp.: *See*—
Shaw, John R., and Vornkahl. 3,100,680.

Gulton Industries, Inc.: *See*—
Welkowitz, Walter, and Dahlke. 3,100,885.

Gunst, Raymond, to Ciba Co., Inc. Water-soluble disazo dyestuffs. 3,100,767, 8–13–63, Cl. 260—153.

Gunst, Raymond, to Ciba Ltd. Azo dyestuffs. 3,100,768, 8–13–63, Cl. 260—153.

Gutbier, Ernst A., to Western Electric Co., Inc. Mass stream soldering machine. 3,100,471, 8–13–63, Cl. 113—126.

Hablutzel, Charles E., to United States of America, Navy. Sabot retainer. 3,100,448, 8–13–63, Cl. 102—93.

Haden, Walter L., Jr., and F. J. Dzierzanowski, to Minerals & Chemicals Philipp Corp. Method for producing synthetic crystalline zeolite aggregates. 3,100,684, 8–13–63, Cl. 23—112.

Hagner, Lawrence R., to Western Electric Co., Inc. Apparatus for percussively welding electrical components to circuit boards. 3,100,830, 8–13–63, Cl. 219—79.

Hague, Louise D.: *See*—
Jezl, James L., Khelghatian, and Hague. 3,100,764.

Hall, William R. Filtering systems. 3,100,747, 8–13–63, Cl. 210—167.

Halliburton Co.: *See*—
Poulter, Thomas C. 3,100,445.
Coleman, Joe D., and Boyd. 3,100,530.
Herndon, Luther J., Jr., Evans, and Land. 3,100,534.

Halls, Lawrence M., and L. M. Bumm, to Sperry Rand Corp. Hay conditioner. 3,100,367, 8–13–63, Cl. 56—1.

Halverson, Milton A., and G. V. Olson. Rivet guns. 3,100,578, 8–13–63, Cl. 218—42.

Hamilton, William P.: *See*—
Sprague, Robert H., Fichter, and Hamilton. 3,100,703.

Hansen, George E., and C. R. Stone, to Crane Co. Removable head and seat ball valve construction. 3,100,501, 8–13–63, Cl. 137—454.6.

Hara, Shuichiro: *See*—
Watanabe, Koichi, Asano, and Hara. 3,100,322.

Harkins, Allen A., to The United States Stoneware Co. Protective cover. 3,100,568, 8–13–63, Cl. 206—2.

Harris, Guy H., and E. C. Fischback, to The Dow Chemical Co. Production and crystallization of 3,5-dinitro-O-toluic acid from nitric and sulfuric acid. 3,100,797, 8–13–63, Cl. 260—515.

Harris, James J.: *See*—
Rudner, Bernard, and Harris. 3,100,791.

Harter, Joseph W., 3rd: *See*—
Ross, James A., and Harter. 3,100,851.

Hatfield, Carroll G., and G. H. Lovett, to Monsanto Chemical Co. Dehydrogenation of alkylated aromatic hydrocarbons. 3,100,807, 8–13–63, Cl. 260—669.

Hatherell, George A., and C. F. Lealle, to The National Screw & Mfg. Co. Screw and washer assembling machine. 3,100,307, 8–13–63, Cl. 10—155.

Hattori, Kiyoshi: *See*—
Gavlin, Gilbert, and Hattori. 3,100,789.

Hayes, Robert M., and A. M. Nelson, to Magnavox Co. Card processing apparatus. 3,100,431, 8–13–63, Cl. 95—78.

Haynes, James W.: *See*—
Haynes, John R. and J. W. 3,100,586.

Haynes, John R. and J. W.; said James assor. to said John. Valved opener for sealed containers. 3,100,586, 8–13–63, Cl. 222—90.

Heat Timer Corp.: *See*—
Zeitlin, Edward J. 3,100,621.

Hebert, Donald G., to Royal McBee Corp. Data processing equipment. 3,100,599, 8–13–63, Cl. 234—115.

Heigl, Joseph M.: *See*—
Saidel, William R., and Heigl. 3,100,597.
Saidel, William R., and Heigl. 3,100,598.

Heinze, Don M.: *See*—
Kosin, Ruediger E., and Heinze. 3,100,377.

Henne, Norman R., to United States Steel Corp. Self-dumping box. 3,100,666, 8–13–63, Cl. 294—78.

Henning, Harley A., to Bell Telephone Laboratories, Inc. Data transmission. 3,100,890, 8–13–63, Cl. 340—345.

Henry, Jack L., to Kaiser Aluminum & Chemical Corp. Method of joining. 3,100,338, 8–13–63, Cl. 29—473.1.

Henry Valve Co.: *See*—
Jones, Evan. 3,100,691.

Herbert, Stephen A., Jr.: *See*—
Richards, Harry F., and Herbert. 3,100,748.

Herndon, Luther J., Jr., G. W. Evans, and J. R. Land, to Halliburton Co. Plug for use in conduits. 3,100,534, 8–13–63, Cl. 166—153.

Herrmann, Otto, H. Müller, and M. Seibel, to Keuffel & Esser Co. Linear polyester films having surfaces suitable for writing thereon. 3,100,722, 8–13–63, Cl. 117—138.8.

Hesser, Fr., Maschinenfabrik-Aktiengeseilschaft, Firma: *See*—
Bauder, Ulrich. 3,100,584.

Hett, John H., to American Cystoscope Makers, Inc. Flexible optical surgical instrument. 3,100,482, 8–13–63, Cl. 128—6.

Hewlett-Packard Co.: *See*—
McCullough, William R. 3,100,863.
Schulz, Donald F. 3,100,876.

Hickey, John J., and G. L. Clark, to Space Technology Laboratories, Inc. Pulse former capacitor discharging providing rapid rise-time and thyratron shorting output providing rapid fall-time. 3,100,872, 8–13–63, Cl. 328—67.

Higgins, Ralph G., Jr.: *See*—
Allman, William T., Jr., Joseph, and Higgins. 3,100,-328.

Hill, Fred N.: *See*—
Bailey, Frederick E., Jr., Hill, and Fitzpatrick. 3,100,-750.

Hills, Robert C., to Freeport Sulphur Co. Recovery of nickel and cobalt by reduction and leaching. 3,100,700, 8–13–63, Cl. 75—63.

Hilton, Albert R., Jr., and H. H. Spain, to Jersey Production Research Co. Sand consolidation. 3,100,527, 8–13–63, Cl. 166—33.

Hinchliffe, Emily: *See*—
Hinchcliffe, Theodore H. 3,100,566.

Hinchcliffe, Theodore H., deceased; E. Hinchcliffe, administratrix. Conveyor belt cleats. 3,100,566, 8–13–63, Cl. 198—199.

Hoffmann-La Roche Inc.: *See*—
Fryer, Rodney I., Schmidt, and Sternbach. 3,100,770.

Holcomb, J. I., Mfg. Co., Inc.: *See*—
Bennett, Earnest L., and Burns. 3,100,670.

Holden, Ellsworth K., to E. I. du Pont de Nemours and Co. Process for producing microporous films and coatings. 3,100,721, 8–13–63, Cl. 117—135.5.

Hollander, Lewis E., Jr., to Lockheed Aircraft Corp. Active solid-state devices using anisotropic single crystal rutile. 3,100,849 8–13–63, Cl. 307—88.5.

Hollyday, William C. Jr.: *See*—
Slysh, Roman S., and Hollyday. 3,100,695.

Holowaty, Michael O., to Inland Steel Co. Screening apparatus. 3,100,746, 8–13–63, Cl. 209—304.

Holtschmidt, Hans: *See*—
Oertel, Günter, and Holtschmidt. 3,100,790.

Hooker Chemical Corp.: *See*—
Vullo, William J., and Campbell. 3,100,728.

Hope, James H., 40% to T. S. Kinney. Earth scraping and moving machine. 3,100,355, 8–13–63, Cl. 37—126.

Hopfeld, Henry. Convertible ladder. 3,100,552, 8–13–63, Cl. 182—22.

Horecky, Stanley V.: *See*—
Hubbard, James R., and Horecky. 3,100,387.

Horizons Inc.: *See*—
Sprague, Robert H., Fichter, and Hamilton. 3,100,703.

Hornschuch, Hanns, to Ingersoll-Rand Co. Impact tool. 3,100,558, 8–13–63, Cl. 192—30.5.

Horsley, Franz A., and P. A. Gray, Jr., to Shell Oil Co. Urea-sulfur fertilizer composition and method for its production. 3,100,698, 8–13–63, Cl. 71—28.

Hotelling, Harry, to Erie Resistor Corp. Trimming capacitor. 3,100,855, 8–13–63, Cl. 317—249.

Houston Oil Field Material Co., Inc.: *See*—
Sanders, Wilfred E. 3,100,538.

Howard, Robert G. Sucker rod safety joint. 3,100,662, 8–13–63, Cl. 287—119.

Hubbard, James R., and S. V. Horecky, to Philco Corp. Laundry apparatus having automatic clutch control. 3,100 387, 8–13–63, Cl. 68—12.

Hulbert, John K., to Bell Aerospace Corp. Helicopter rotor blade. 3,100,539, 8–13–63, Cl. 170—172.

Hull, Raymond J., to Gas Processing Inc. Apparatus for treatment of natural gas. 3,100 697, 8–13–63, Cl. 62—42.

Hulls, Leonard R., and B. P. Jacobsen, to Canadian Westinghouse Co., Ltd. Control systems. 3,100,410, 8–13–63, Cl. 80—56.

Hunter, George D. to Deere & Co. Tractor cultivator mounting. 3,100,654, 8–13–63, Cl. 280—412.

Huntington, Laurance W., to Reno Engineering & Mining Co. Continuous process mineral separation. 3,100,701, 8–13–63 Cl. 75—101.

Huttenwerk Oberhausen AG: *See*—
Von Bogdandy, Luwdig, and Pantke. 3,100,699.

Hydraulic Unit Specialties Co.: *See*—
Tennis, Francis H. 3,100,503.

Hydril Co.: *See*—
MacArthur, Melvin D. 3,100,656.

Iaquinta Nicola: *See*—
Brandlin, John M., Iaquinta, and Inco. 3,100,304.

Ibaugh, Harry C., B. D. Schwalm, and R. E. Wallin, to Sperry Rand Corp. Running gear. 3,100.653, 8–13–63, Cl. 280—106.

Illinois Testing Laboratories, Inc.: *See*—
Peltola, Veikko K. 3,100,397.

Inco Co., The: *See*—
Brandlin, John M., Iaquinta, and Inco. 3,100 304.

Indugas, Gesellschaft fur Industrielle Gasverwendung m.b.H., Firma: *See*—
Schmidt, Theodor. 3,100,631.

Industrial Nucleonics Corp.: *See*—
Foster, George B. 3,100,843.
Reider, James E. 3,100,841.

Ingersoll-Rand Co.: *See*—
Hornschuch, Hanns. 3,100,558.
Naab, Julius. 3,100,516.
Zimmerman, Robert D. 3,100,545.

Inland Container Corp.: *See*—
Cox, Herbert F., Jr. 3,100,587.

Inland Steel Co.: *See*—
Holowaty Michael O. 3,100,746.
Werner, Tage. 3,100,461.

International Business Machines Corp.: *See*—
Bedrij, Orest J. 3,100,835.
Cannon, Maxwell R 3,100,889.
Demer, Frederick M., and Kelly. 3,100,834.

International Business Machines Corp.: *See*—
Oleksiak, Robert E. 3,100,888.
Paul, Gerard T., and Bedrij. 3,100,835.
Sage, Richard N. 3,100,512.
Skerritt, John W. 3,100,848.
Vogel, Marcel J. 3,100 844.
Weed, Donald S. 3,100,723.

International Register Co.: *See*—
Gardes, Alfred W., and Gluth. 3,100,559.

Jackson, Earl R. Athletic foul automatic indicator. 3,100,-472, 8–13–63, Cl. 116—114.

Jacobs, Gerhard, and A. Melcher. Source of radiation for infrared spectrophotometers. 3,100,828, 8–13–63, Cl. 219—34.

Jacobsen, Bjarne P.: *See*—
Hulls, Leonard R., and Jacobsen. 3,100,410.

Jacobsen Mfg. Co.: *See*—
Barth, John W. 3,100,372.

Janney, Thomas T., to James Lees and Sons Co. Method of weaving jacquard pile fabric. 3,100,510, 8–13–63, Cl. 139—39.

Jeffrey Gallon Mfg. Co., The: *See*—
Moon, Sterling C. 3,100,629.

Jeirus Technical Products Corp.: *See*—
Kauer, George C., Jr. 3,100,504.

Jenkner, Herbert, to Kali-Chemie A.G. Preparation of silicon-hydrogen compounds. 3,100,788, 8–13–63, Cl. 260—448.2.

Jensen, Peter W.: *See*—
Coleman, Charles H., Jr., and Jensen. 3,100,816.

Jersey Production Research Co.: *See*—
Ball, John D., Charske, and Mounce. 3,100,444.
Beeson, Donald M. 3,100,524.
Bielstein, Walter J. 3,100,535.
Hilton, Albert R., Jr., and Spain. 3,100,527.
McStravick, Peter R., Lindsey, and Terrel. 3,100,529.
Nelson, Norman A. 3,100,396.
Overly, Charles R., and Cannon. 3,100,544.
Pistole, Harry, and Weiner. 3,100,657.
Soland, Duane E. 3,100,874.
Stark, William J. 3,100,542.

Jezl, James L., H. M. Khelghatian, and L. D. Hague, to Sun Oil Co. Control of pentane-soluble polymers in the polymerization of propylene. 3,100,764, 8–13–63, Cl. 260—93.7.

John Co.: *See*—
Svenson, Ernest J. 3,100,450.

Johnsen, Odd F. Water supply system pump and pressure control means. 3,100,505, 8–13–63, Cl. 137—565.

Johnston, Archibald P. Wire straightening apparatus. 3,100,519, 8–13–63, Cl. 153—94.

Joiner, Edgar E., and J. P. Szumski, to Fred W. Mears Heel Co., Inc. Methods of making lightweight heels. 3,100,678, 8–13–63, Cl. 18—59.

Joly, Robert, and R. Bucourt, to Roussel-UCLAF, Societe Anonyme. Process for preparing 3-methylchromone. 3,100,782, 8–13–63, Cl. 260—345.2.

Jones, E. D., Corp.: *See*—
Meyer, Fritz O. W. G. 3,100,810.

Jones, Evan, to Henry Valve Co. Liquid indicator with moisture indication means. 3,100,691, 8–13–63, Cl. 23—253.

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Allman, William T., Jr., Joseph, and Higgins. 3,100,328.

Kaiser Aluminum & Chemical Corp.: *See*—
Henry, Jack L. 3,100,338.

Kaiser, Henry J., Co.: *See*—
Wood, Carl L. 3,100,479.

Kaiser, Wilhelm J., and P. Berth, to Therachemie Chemisch Therapeutische Gesellschaft m.b.H. Process for dyeing human hair with water soluble quaternary ammonium containing dyes. 3,100,739, 8–13–63, Cl. 167—88.

Kali-Chemie A.G.: *See*—
Jenkner, Herbert. 3,100,788.

Kantor, Martin L., and S. Tubis, to American Home Products Corp. Method for preparing phenothiazine derivatives. 3,100,772, 8–13–63, Cl. 260—243.

Kaprelian, Edward K. Electrophotographic printers. 3,100,-426, 8–13–63, Cl. 95—1.7.

Karaczonyi, Paul: *See*—
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Kate, Willard A., to The W. A. Kates Co. Adjustable orifice for use in differential pressure apparatus. 3,100,620, 8–13–63, Cl. 251—208.

Kates, W. A., Co., The: *See*—
Kate, Willard A. 3,100,620.

Katzenelson, Jacob: *See*—
Nathan Amos, and Katzenelson. 3,100,839.

Kauer, George C., Jr., to Jeirus Technical Products Corp. Valved apparatus of the fluid-pressure responsive type. 3,100,504, 8–13–63, Cl. 137—494.

Kaufman, Jack, and A. Lund, to Markstone Mfg. Co. Recessed lighting fixture support with attached junction box. 3,100,579, 8–13–63, Cl. 220—3.94.

Kaye, Michael C., to Freightliner Corp. Mattress. 3,100,305, 8–13–63, Cl. 5—345.

Kelmers, Andrew D., to Union Carbide Corp. Production of low sulfate uranium oxide. 3,100,682, 8–13–63, Cl. 23—14.5.

Kelly, Martin J.: *See*—
Demer, Frederick M., and Kelly. 3,100,834.

Kempf, Willi, to Gelenkwellenbau G.m.b.H. Pipe connection, especially for universal joint shafts and the like. 3,100,660, 8–13–63, Cl. 287—53.

Kenner Products Co.: *See*—
Kuhn, James O. 3,100,420.

Kenwood Mfg. (Woking) Ltd.: *See*—
Knight, Peter D. 3,100,661.

Keuffel & Esser Co.: *See*—
Herrmann, Otto, Müller, and Seibel. 3,100,722.

Khamis, Noseph T.: *See*—
Ravve, Abraham, and Khamis. 3,100,758.

Khelghatian, Habet M.: *See*—
Jezl, James L., Khelghatian, and Hague. 3,100,764.

Kibler, Charles J., and J. W. Tamblyn, to Eastman Kodak Co. Ultraviolet light stabilized cellulose ester plastic composition. 3,100,716, 8–13–63, Cl. 106—187.

King, Charles R.: *See*—
Ford, George E., and King. 3,100,502.

King, Ferdinand P. Pit plow. 3,100,541, 8–13–63, Cl. 172—86.

Kinney, Theodore S.: *See*—
Hope, James H. 3,100,355.

Kissel, John W., to Mead Johnson & Co. Apparatus for measuring animal activity. 3,100,473, 8–13–63, Cl. 119—1.

Kjellberg, Göran: *See*—
Svala, Carl G., Aro, and Kjellberg. 3,100,820.

Kjellman, Thomas K., to The Bendix Corp. Snap switch having presetting means responsive to current flow. 3,100,-826, 8–13–63, Cl. 200—113.

Klass, Donald L., to The Pure Oil Co. Process for preparing cyclic lower alkylene sulfates. 3,100,780. 8–13–63, Cl. 260—327.

Kleesattel, Claus, L. Balamuth, and A. Kuris, to Cavitron Ultrasonics Inc. Magnetostrictive vibratory apparatus. 3,100,853, 8–13–63, Cl. 310—26.

Klein, George I., R. E. Newby, and L. B. Post, to Stauffer Chemical Co. Apparatus for processing phosphoric acid anhydride. 3,100,603, 8–13–63, Cl. 23—262.

Knight, Peter D., to Kenwood Mfg. (Woking) Ltd. Quick release catches. 3,100,661, 8–13–63, Cl. 287—119.

Knosp, Robert N., and D. L. Gecks, to The Fosdick Machine Tool Co. Automatic control apparatus for spindles. 3,100,-406, 8–13–63, Cl. 77—4.

Knox, Harold W., to The Firestone Tire & Rubber Co. Mold identification plug. 3,100,318, 8–13–63, Cl. 18—44.

Koch, Carl. Photoelectric exposure metering device for photographic darkslide cameras. 3,100,429, 8–13–63, Cl. 95—10.

Kok, Karel H.: *See*—
Westerhuis, Eggo, and Kok. 3,100 675.

Kolling, Helmut: *See*—
Schaub, Franz, Kolling, Notthoff, Stiebling, and Ruggeberg. 3,100,694.

Kondur, Nicholas, Jr., to Burroughs Corp. Ink-ribbon control mechanism. 3,100,560, 8–13–63, Cl. 197—157.

Konecky, Milton S., to Esso Research and Engineering Co. Process for preparation of succinic acid. 3,100,798, 8–13–63, Cl. 260—530.

Konig, Reiner, to G. Schmidt. Hair clipper. 3,100,342. 8–13–63, Cl. 30—200.

Kopf, John C.: *See*—
Tellefsen, Walter G. 3,100,842.

Koppers Co., Inc.: *See*—
Rudner, Bernard, and Harris. 3,100,791.

Kosin, Ruediger, E., and D. M. Heinze, to Northrop Corp. Deflecting means for jet aircraft and the like. 3,100,377, 8–13–63, Cl. 60—35.54.

Kral, Leonard: *See*—
Drake, Herbert E., and Kral. 3,100,815.

Kritzer, Richard W. Apparatus for purifying air in inhabitable or product-confining enclosures. 3,100,679, 8–13–63, Cl. 21—74.

Kubli, Robert A., and W. B. Sharav, to Union Carbide Corp. Submerged-melt welding and composition therefor. 3,100,-829, 8–13–63, Cl. 219—73.

Kuhn, James O., to Kenner Products Co. Toy slide projector. 3,100,420, 8–13–63, Cl. 88—26.

Kummel, Fritz, to Delmag-Maschinenfabrik Reinhold Darnfeld. Impact type rock breaker. 3,100,630, 8–13–63, Cl. 262—15.

Kuris, Arthur: *See*—
Kleesattel, Claus, Balamuth, and Kuris. 3,100,853.

Kushner, Martin: *See*—
Dunn, Edward J., Jr., and Kushner. 3,100,718.
Dunn, Edward J., Jr., and Kushner. 3,100,719.

Laba, George. Expandable multiple hook assembly for fishing lures. 3,100,359, 8–13–63 Cl 43—35.

Labergere, Jean L. A., to Societe O'Fakler & Cie. Method and apparatus for automatically controlling a sulfuric acid treatment plant for ferrous materials. 3,100,727, 8–13–63, Cl. 134—13.

Land, John R.: *See*—
Herndon, Luther J., Jr., Evans, and Land. 3,100,534.

Land, Francis M.: *See*—
Baker, William A., Thompson, Lane, and Posiett. 3,100,-458.

Lang, Joseph C., to Jas. H. Matthews & Co. Rotary type holder 3,100,442 8–13–63, Cl. 101—377.

Laxalt, Joyce N. Powder brush. 3,100,315, 8–13–63, Cl. 15—558.

Lea, Stanley T. Tire valve removing tool. 3,100,335, 8–13–63, Cl. 29—221.5.

Leach, Sam L., to Pid Corp. Embossing apparatus and method for adjusting the length of an embossing roll. 3,100,439, 8–13–63, Cl. 101—32.

Lear Siegler, Inc.: *See*—
Owen, John C. 3,100,612.

Ledford, Glenn J., and H. S. McDowell, to James Lees and Sons Co. Control means for the backing fabric feed in a pile tufting machine. 3,100,466, 8–13–63, Cl. 112—79.

Lee, Arthur L., and A. B. Coval, to Consolidation Coal Co. Fluid seal. 3,100,647, 8–13–63, Cl. 277—59.

Lee, Arthur L., and A. B. Coval, to Consolidation Coal Co. Fluid seal. 3,100,648, 8–13–63, Cl. 277—59.

Leech, Robert E., and W. F. Goldsmith, to Union Carbide Corp. Stabilized cyanoethoxy alcohols. 3,100,793, 8–13–63, Cl. 260—465.6.

Lees, James, and Sons Co.: *See*—
Broadrick, Ed B. 3,100,465.
Janney, Thomas T. 3,100 510.
Ledford, Glenn J., and McDowell. 3,100,466.

Lehmann, Ernest H., and A. W. Griswold, to Xerox Corp. Projection device. 3,100,427, 8–13–63, Cl. 95—1.7.

Leitz, Ernst, G.m.b.H.: *See*—
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Leonard, Richard J. Patching plaster compositions. 3,100,-715, 8–13–63, Cl. 106—110.

Leslie, Charles F.: *See*—
Hatherell, George A., and Leslie. 3,100,307.

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Coles, Robert F., and Levine. 3,100,704.

Levy, Maurice M. Conveyors. 3,100,564, 8–13–63, Cl. 198—185.

Levy, Milton. Coin holders. 3,100,567, 8–13–63, Cl. 206—82.

Lewis, Charles E., to American Cyanamid Co. Metallized azo dyes from 2-aminopyridine-1-oxide. 3,100,766, 8–13–63, Cl. 260—146.

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Von Hacht, Gerhard. 3,100,847.

Limberger, Walter, to Lumoprint Zindler KG. Apparatus for making copies. 3,100,432, 8–13–63, Cl. 95—75.

Limpert, Alexander S. and R. J. Proportioning pump. 3,100,451, 8–13–63, Cl. 103—150.

Limpert, Robin J.: *See*—
Limpert, Alexander S. and R. J. 3,100,451.

Lindsey, William C.: *See*—
McStravick, Peter R., Lindsey, and Terrel. 3,100,529.

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Ross, James A., and Harter. 3,100,851.

Liss, Jules and M. Nested tray stand. 3,100,459. 8–13–63. Cl. 108—91.

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Liss, Jules and M. 3,100,459.

Littman, William I. Combination money clip and change holder. 3,100,494, 8–13–63, Cl. 133—6.

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Hollander, Lewis E., Jr. 3,100,849.

Lockwood, Warren H. Tierable and nestable receptable. 3 100 582. 8–13–63, Cl. 220—97.

Loeb, Morris. Magnetic catches. 3,100,663, 8–13–63, Cl. 292—251.5.

Logan, James S., and A. Roaldi, to Olin Mathieson Chemical Corp. Stabilized liquid ozone. 3,100,690, 8–13–63, Cl. 23—222.

Logan, Robert D. Apparatus for recovering cotton from the ground. 3,100 368, 8–13–63, Cl. 56—12.

Lombard, Herman, and J. H. Strawgate. Resilient shoe sole. 3,100,354, 8–13–63, Cl. 36—25.

Long, Selma H., and J. W. Tamblyn, to Eastman Kodak Co. Ultraviolet light stabilized cellulose ester plastic composition. 3,100,717, 8–13–63, Cl. 106—194.

Louth, George D., and M. J. Brock, to The Firestone Tire & Rubber Co. Method of preparing aminoazoledisulfides. 3,100 773, 8–13–63, Cl. 260—247.1.

Love, William D., Jr. Container closure and dispenser. 3,100,589, 8–13–63, Cl. 222—480.

Lovett, Gordon H.: *See*—
Hatfield, Carroll G., and Lovett. 3,100,807.

Lowensohn, Ralph S., to Flextemp Corp. Trailer refrigeration apparatus. 3,100,384, 8–13–63, Cl. 62—156.

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MacArthur, Melvin D., to Hydril Co. Synthetic resin seal ring in tubing joint for plastic coated tubing. 3,100,656. 8–13–63, Cl. 285—55.

Madelung, Gero, to Messerschmitt S.G. Aircraft propulsion system. 3,100,611, 8–13–63, Cl. 244—23.

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Hayes, Robert M., and Nelson. 3,100,431.

Mannheimer, Hans S. Novel products and methods for preparing them. 3,100,779, 8–13–63, Cl. 260—327.

Mansfield, Ralph, to Auto-Test, Inc. Automotive cooling system tester. 3,100,391, 8–13–63, Cl. 73—40.

Manson, Andrew J., to Sterling Drug Inc. Androstane [3,2 - C]-5′ - hydroxy - Δ^5 - isoxazolines and the preparation thereof. 3,100,771, 8–13–63, Cl. 260—239.55.

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Marforio, Nerino, to Virginio Rimoldi & C., S.p.A. Sewing machine for effecting the two-thread chain stitch. 3,100,-463, 8–13–63, Cl. 112—16.

Marks, Meyer, to Admiral Corp. Circuit for automatically maintaining the amplitude varying peaks within operating range of a signal of a vacuum tube. 3,100,873, 8–13–63, Cl. 328—165.

Marks, Meyer, to Admiral Corp. Compressional wave transmitter. 3,100,886, 8–13–63, Cl. 340—15.

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Marrujo, Fernando G., to Borg-Warner Corp. Heat exchanger. 3,100,523, 8–13–63, Cl. 165—160.

Martin, Robert C., to The Dow Chemical Co. Method of cementing wells. 3,100,526, 8–13–63, Cl. 166—31.

Mascaro, Anthony. Spreader for fertilizer and the like. 3,100,645, 8–13–63, Cl. 275—8.

Mason, James L., Jr., to Columbian Carbon Co. Carbon black manufacture. 3,100,689, 8–13–63, Cl. 23—209.6.

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Dillon, Robert M. 3,100,491.

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Maupin, Joseph T., to Minneapolis-Honeywell Regulator Co. Transistor amplifier with constant input impedance. 3,100,877, 8–13–63, Cl. 330—28.

May, Alex. Convertible pull and rocking toy base. 3,100,364. 8–13–63, Cl. 46—103.

May, Fred, and G., to FMC Corp. Tire changing machine. 3,100,520, 8–13–63, Cl. 157—1.24.

May, George: *See*—
May, Fred, and G. 3,100,520.

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Shaler, Richard G., McAdam, and R. G. Shaler, Jr. 3,100,707.

McAfee, Kenneth B., Jr., to Bell Telephone Laboratories, Inc. Light gas detector using thin walled glass tubes for diffusion. 3,100,868, 8–13–63, Cl. 324—33.

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Boler, Leonard J., and McClelland. 3,100,495.

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McDowell, Herbert S.: *See*—
Ledford, Glenn J., and McDowell. 3,100,466.

McDuffie, James W.: *See*—
Nolt, Edwin B., and McDuffie. 3,100,437.

McElroy, Robert H., to Lyon Metal Products, Inc. Shelving structure. 3,100,460, 8–13–63, Cl. 108—109.

McGeary, Robert K., and F. R. Winslow, to United States of America Atomic Energy Commission. Fuel element for a neutronic reactor. 3,100,742, 8–13–63, Cl. 204—154.2.

McGraw-Edison Co.: *See*—
Riebs, Richard E. 3,100,854.

McIntyre, Alva B. Rug holder. 3,100,522, 8–13–63, Cl. 160—90.

McMillian, Lonnie S., Jr., and W. T. Eddins, to Radiation Inc. Broken ring counter circuit with internal pulse reset means. 3,100,850, 8–13–63, Cl. 307—88.5.

McNeil Laboratories, Inc.: *See*—
Poos, George I. 3,100,776.

McNeill, William, and J. E. Chrostowski, to United States of America, Army. Means for reducing thermal gradients in the hot-pressing of synthetic mica. 3,100,436, 8–13–63, Cl. 100—93

McStravick, Peter R., W. C. Lindsey, and G. C. Terrel, to Jersey Production Research Co. Apparatus for positioning well pipe. 3,100,529, 8–13–63, Cl. 166—52.

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Kissel, John W. 3,100,473.

Mears, Fred W., Heel Co., Inc.: *See*—
Joiner, Edgar E., and Szumski. 3,100,678.

Medtronic, Inc.: *See*—
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Meek, Paul D., J. R. Snyder, B. Allison, and G. Grimes, to Cosden Petroleum Corp. Controlled suspension polymerization. 3,100,763, 8–13–63, Cl. 260—93.5.

Meeker, Jess, and W. H. Tate, to Clearfield Cheese Co., Inc. Process and apparatus for making and shipping cheese. 3,100,712, 8–13–63, Cl. 99—178.

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Bromer, Heinz, and Meinert. 3,100,714.

Melcher, Albert: *See*—
Jacobs, Gerhard, and Melcher. 3,100,828.

Mennesson, Bernard R., to The Societe d'Appareils de Controle et d'Equipment des Moteurs (S.A.C.E.M.). Internal combustion engines protected against transmission of radio interferences, in particular for lightweight vehicles. 3,100,480, 8–13–63, Cl. 123—148.

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Phenix, Bruce C., Jr., Merchant, and Mitchell. 3,100,744.

Mercier, Jean. Control valves. 3,100,508, 8–13–63, Cl. 137—625.66.

Merker, Alfred H. Universal press. 3,100,438, 8–13–63, Cl. 100—214.

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Messerschmitt S. G.: *See*—
Madelung, Gero. 3,100,611.

Metaline Corp.: *See*—
Rubrecht, Charles J., and Minnotte. 3,100,634.

Metrodynamics Corp., The: *See*—
Wales, Nathaniel B., Jr. 3,100,400.
Wales, Nathaniel B., Jr. 3,100,440.
Wales, Nathaniel B., Jr. 3,100,825.

Meyer, Fritz O. W. G., to E. D. Jones Corp. Dissolving gas in liquid. 3,100,810, 8–13–63, Cl. 261—115.

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Clark, Richard B., and Meyer. 3,100,422.

Meyerhoff, Albert J.: *See*—
Disson, Stanley B., Meyerhoff, and Winsor. 3,100,869.

Michelin & Cie: *See*—
Boussu, Gabriel X. R., Neuville, and Massoubre. 3,100,759.

Microseal Products, Inc.: *See*—
Rocheville, Charles F. 3,100,724.

Mildner, Raymond C. Coaxial cable and temporary tensile member therefor. 3,100,812, 8–13–63, Cl. 174—10.

Miller, Charles M., Jr., and G. L. Roy, to Armstrong Cork Co. Linerless venting closure. 3,100,577, 8–13–63, Cl. 215—56.

Miller, H. Paul, and W. A. Soper, to The B. F. Goodrich Co. Pipe joint sealing wrapper. 3,100,658, 8–13–63, Cl. 255—230.

Miller, Lee A., to Monsanto Chemical Co. Esters of acetylenic acids. 3,100,794, 8–13–63, Cl. 260—486.

Minerals & Chemicals Philipp Corp.: *See*—
Haden, Walter L., Jr., and Dzierzanowski. 3,100,684.

Minneapolis-Honeywell Regulator Co.: *See*—
Maupin, Joseph T. 3,100,877.

Minnotte, Albert J.: *See*—
Rubrecht, Charles J., and Minnotte. 3,100,634.

Mitchell, Owen R.: *See*—
Phenix, Bruce C., Jr., Merchant, and Mitchell. 3,100,744.

Mizelle, Ned W.: *See*—
Rogers, Walter C., and Mizelle. 3,100,668.

Mobley, Ray A., Jr., to Whirlpool Corp. Rotisserie rack having means for disengaging the drive motor. 3,100,435, 8–13–63, Cl. 99—421.

Mohasco Industries, Inc.: *See*—
Rice, Walter A. 3,100,467.

Möhring, Gustav, to Famatex G.m.b.H. Arrangement for heating machines for the drying and heat treatment of textiles and the like. 3,100,632, 8–13–63, Cl. 263—19.

Moldofsky, Matthew: *See*—
Musser, C Walton, and Moldofsky. 3,100,394.

Monroe, Benjamin F. Retractable belt. 3,100,669, 8–13–63, Cl. 297—388.

Monsanto Chemical Co.: *See*—
Abramo, John G. 3,100,804.
Hatfield, Carrol G., and Lovett. 3,100,807.

Monsanto Chemical Co.: *See*—
Miller, Lee A. 3,100,794.
Reetz, Theodor. 3,100,774.
Spencer, Framroze J. 3,100,753.

Moon, Katharyne M.: *See*—
Moon, Sterling C. 3,100,629.

Moon, Sterling C., deceased, by K. M. Moon, administratrix, to The Jeffrey Gallon Mfg. Co. Continuous mining machine having lateral levelling means. 3,100,629, 8–13–63, Cl. 262—9.

Morelle, Jules L. E., to Optique & Precision de Levallois. Photographic device. 3,100,430, 8–13–63, Cl. 95—42.

Morganstern, Kennard H., to Nuclear Corp. of America, Inc. Methods and apparatus for measuring and testing. 3,100,840, 8–13–63, Cl. 250—43.5.

Morin, Louis H. One-sided separable fastener. 3,100,325, 8–13–63, Cl. 24—205.1.

Morley, Thomas J. Steam quality indicator. 3,100,395, 8–13–63, Cl. 73—192.

Morrow, David, to United States of America, Navy. Inflight refueling system. 3,100,614, 8–13–63, Cl. 244—135.

Motorola, Inc.: *See*—
Richardson, Roy A., and Eness. 3,100,871.

Mounce, Whitman D.: *See*—
Ball, John D., Charske, and Mounce. 3,100,444.

Moy, Tsoy K., to United States of America, Navy. Post-launch flooding control apparatus. 3,100,421, 8–13–63, Cl. 89—1.7.

Mukai, Roy A.: *See*—
Charbonneau, Allan P., and Mukai. 3,100,824.

Müller, Hermann: *See*—
Herrmann, Otto, Müller, and Seibel. 3,100,722.

Muller, Ludwig. Coupler for coupling a pile member to a pile driver. 3,100,382, 8–13–63, Cl. 61—53.5.

Munk, Werner R. Device for the remote recording of cryogenic temperatures. 3,100,398, 8–13–63, Cl. 73—368.4.

Musser, C Walton, and M. Moldofsky, to United States of America, Army. Piezoelectric gage mount. 3,100,394, 8–13–63, Cl. 73—167.

Musy, Andre P., to Edouard Dubied et Cie (Societe Anonyme). Fluid connection for a rotating cylinder hydraulic motor. 3,100,424, 8–13–63, Cl. 92—106.

Myers, Robert R., to Aluminum Co. of America. Cable accessories. 3,100,672, 8–13–63, Cl. 339—265.

Myotte, Robert J., to National Copper and Smelting Co. Vertical feed cut-off saw. 3,100,412, 8–13–63, Cl. 83—163.

Mysliwski, Stephen A., to Western Electric Co., Inc. Gas tube life tester. 3,100,867, 8–13–63, Cl. 324—24.

Naab, Julius, to Ingersoll-Rand Co. Threaded members locked by expanded tubular locking pin. 3,100,516, 8–13–63, Cl. 151—8.

Nail, Billie G., and E. R. Sabin, to The Vendo Co. Cream dispensing apparatus for coffee vending machine. 3,100,585, 8–13–63, Cl. 222—63.

Nathan, Amos, and J. Katzenelson, to Technion Research and Development Foundation Ltd. General purpose compensated diode function generator. 3,100,839, 8–13–63, Cl. 235—197.

National Cash Register Co., The: *See*—
Berman, Elliot. 3,100,778.
Trimble, Cebern B. 3,100,591.

National Copper and Smelting Co.: *See*—
Myotte, Robert J. 3,100,412.

National Geographic Society: *See*—
Chamberlin, Wellman. 3,100,353.

National Lead Co.: *See*—
Dunn, Edward J., Jr., and Kushner. 3,100,718.
Dunn, Edward J., Jr., and Kushner. 3,100,719.

National Screw & Mfg. Co., The: *See*—
Hatherell, George A., and Leslie. 3,100,307.

Nehring, John R., to Becton, Dickinson and Co. Parenteral set assembly and clamp for use therein. 3,100,486, 8–13–63, Cl. 128—214.

Neisler Laboratories, Inc.: *See*—
Cavallito, Chester J. 3,100,738.

Nelson, Alfred M.: *See*—
Hayes, Robert M., and Nelson. 3,100,431.

Nelson, Norman A., to Jersey Production Research Co. Liquid volume compensator. 3,100,396, 8–13–63, Cl. 73—223.

Neuberth, John G.: *See*—
Giller, Morris, and Neuberth. 3,100,894.

Neugebauer, Wilhelm: *See*—
Tomanek, Martha, and Neugebauer. 3,100,726.

Neuville, Louis P. F. A.: *See*—
Boussu, Gabriel X. R., Neuville, and Massoubre. 3,100,759.

Newby, Ralph E.: *See*—
Klein, George I., Newby, and Post. 3,100,693.

Newspaper Enterprise Association, Inc.: *See*—
Drake, Herbert E., and Kral. 3,100,815.

Nicholls, Bryan F., and L. R. Whittington. Inflatable article and method of making. 3,100,641, 8–13–63, Cl. 273—65.

Nicholson, Clifton L. Water ski rope reel. 3,100,606, 8–13–63, Cl. 242—86.5.

Nielsen, Charles W., to Allis-Chalmers Mfg. Co. Control system for tap changing regulator. 3,100,865, 8–13–63, Cl. 323—43.5.

Niesen, George V.: *See*—
Adams, Stuart L., and Niesen. 3,100,705.
Adams, Stuart L., and Niesen. 3,100,706.

Nippon Light Metal Co., Ltd.: *See*—
Watanabe, Koichi, Asano, and Hara. 3,100,322.

Nolt, Edwin B., and J. W. McDuffie, to Sperry Rand Corp. Hay baler. 3,100,437, 8–13–63, Cl. 100—179.

Nopco Chemical Co.: *See*—
Dombrow, Bernard A. 3,100,752.

Noregaard, Maurice J., to Card Key System, Inc. Security booth. 3,100,389, 8–13–63, Cl. 70—278.

Norris, Robert W., Jr. Dispersing apparatus. 3,100,628, 8–13–63, Cl. 259—107.

North American Philips Co. Inc.: *See*—
De Wilde, Pieter C., and Rappoldt. 3,100,783.
Peek, Johannes J. A., Rinia, and Duinker. 3,100,852.

Northrop Corp.: *See*—
Kosin, Ruediger E., and Heinze. 3,100,377.

Norton, Charles L., Jr., to The Babcock & Wilcox Co. Shaft kiln. 3,100,633, 8–13–63, Cl. 263—29.

Notthoff, Theodor: *See*—
Schaub, Franz, Kolling, Notthoff, Stiebling, and Ruggeberg. 3,100,694.

Novel Ideas Inc.: *See*—
Redmon, Paul C. 3,100,371.

Nuclear Corp. of America, Inc.: *See*—
Morganstern, Kennard H. 3,100,840.

O'Connor, William: *See*—
Austin, Kenneth A., and O'Connor. 3,100,378.

Odin Corp.: *See*—
Svenson, Ernest J. 3,100,450.

Oertel, Gunter, and H. Holtschmidt, to Farbenfabriken Bayer Aktiengesellschaft. Isocyanoaryl esters of phosphonic, phosphinic, thiophosphonic, and thiophosphinic acids. 3,100,490, 8–13–63, Cl. 260—461.

Offensend, Glen W., and W. D. Vogt, to Eastman Kodak Co. Strip storage envelope. 3,100,356, 8–13–63, Cl. 40—17.

Oldershaw, Charles F., to The Dow Chemical Co. Liquid application to running lengths of fibres in superimposed baths. 3,100,306, 8–13–63, Cl. 8—151.2.

Oleksiak, Robert E., to International Business Machines Corp. Checking system. 3,100,888, 8–13–63, Cl. 340—174.

Olin Mathieson Chemical Corp.: *See*—
Foster, Harry C. 3,100,446.
Logan, James S., and Roaldi. 3,100,690.

Olson, Glenn V.: *See*—
Halverson, Milton A., and Olson. 3,100,578.

Onderzoekingsinstituut Research, N.V.: *See*—
Westerhuis, Eggo, and Kok. 3,100,675.

Onsrud Machine Works, Inc.: *See*—
Pedersen, John. 3,100,622.

Optique & Precision de Levallois: *See*—
Morelle, Jules L. E. 3,100,430.

Orowan, Egon. Enterostomy appliance. 3,100,488, 8–13–63, Cl. 128—283

Orr, John B. Dispensing container. 3,100,592, 8–13–63, Cl. 229—2.5.

Osborne, Fred H., and R. S. Tuttle, to The Wurlitzer Co. Background music phonograph. 3,100,644, 8–13–63, Cl. 274—10.

Oader, Stephen S., to Sperry Rand Corp. Fail-safe control systems for aircraft. 3,100,861, 8–13–63, Cl. 318—489.

Otis Engineering Corp.: *See*—
Fredd, John V. 3,100,533.
Grimmer, George G., and Schramm. 3,100,452.
Tamplen, Jack W. 3,100,532.
Tamplen, Jack W. 3,100,536.

Ottinger, August F.: *See*—
Williams, Russell J., and Ottinger. 3,100,596.

Overly, Charles R., and G. E. Cannon, to Jersey Production Research Co. Drilling device. 3,100,544, 8–13–63, Cl. 175—333.

Owen John C., to Lear Siegler, Inc. Angle of attack control. 3,100,612, 8–13–63, Cl. 244—77.

Owens, Frederick H.: *See*—
Fellman, Robert P., Goode, and Owens. 3,100,761.

Pacific Scientific Co.: *See*—
Wrighton, Robert J. 3,100,609.

Padelt, Johannes G., to Graflex, Inc. Knob for setting diaphragm aperture on camera equipped with exposure meter. 3,100,428, 8–13–63, Cl. 95—10.

Pako Corp.: *See*—
Clapp, Roy A. 3,100,419.

Pantke, Heins-Dieter: *See*—
Von Bogdandy, Ludwig, and Pantke. 3,100,699.

Paul, Gerard T., and O. J. Bedrij, to International Business Machines Corp. Add one adder. 3,100,836, 8–13–63, Cl. 235—175.

Paulsen, Twila M., to Archer-Daniels-Midland Co. Process for improving particles of protein containing vegetable products and products thereof. 3,100,709, 8–13–63, Cl. 99—98.

Peak, Betsey A. Animal tie-out stake. 3,100,476, 8–13–63, Cl. 119—121.

Pearson, Charles, Jr. Toy liquid dispensing device. 3,100,588, 8–13–63, Cl. 222—156.

Pedersen, Clarence S., to Duraplastics, Inc. Mold positioning jack for horizontal injection molding machine. 3,100,623, 8–13–63, Cl. 254—98.

Pedersen, John, to Onsrud Machine Works, Inc. Turbine governor. 3,100,622, 8–13–63, Cl. 253—59.

Peek, Johannes J. A., H. Rinia, and S. Duinker, to North American Philips Co., Inc. Variable reluctance magnetic circuit. 3,100,852, 8–13–63, Cl. 310—15.

Pellegrino, Donald J.: *See*—
Rex, John P., Jr., Arrington, and Pellegrino. 3,100,734.

Peltola, Veikko K., to Illinois Testing Laboratories, Inc. Pyrometer apparatus. 3,100,397, 8–13–63, Cl. 73—359.

Pennsalt Chemicals Corp.: *See*—
Smith, Herbert Q., and Scott. 3,100,751.

Perry, Dan E., to Phillips Petroleum Co. Method and apparatus for molding hollow plastic articles. 3,100,317, 8–13–63, Cl. 18—5.

Peterson, Albert L.: *See*—
Degutis, Anthony C., and Peterson. 3,100,604.

Peterson, Herbert L. Time base A.M. detector. 3,100,876, 8–13–63, Cl. 329—145.

Pharmaseal Laboratories: *See*—
Bathish, Louis N. 3,100,487.

Phenix, Bruce C., Jr., D. H. Merchant, and O. R. Mitchell, to Socony Mobil Oil Co., Inc. Maintaining the viscosity of solutizer salt solutions. 3,100,744, 8–13–63, Cl. 208—234.

Philco Corp.: *See*—
Hubbard, James R., and Horecky. 3,100,387.

Phillips, George T. Fastening devices for securing accessories to concrete and the like. 3,100,517, 8–13–63, Cl. 151—68.

Phillips Petroleum Co.: *See*—
Perry, Dan E. 3,100,317.

Pid Corp.: *See*—
Leach, Sam L. 3,100,439.

Pieterse, Marius C. Pressure fluid control device for a propulsion plant, particularly for marine propulsion. 3,100,402, 8–13–63, Cl. 74—472.

Pistole, Harry, and P. D. Weiner, to Jersey Production Research Co. Pipe coupling having holding means responsive to high internal fluid pressure. 3,100,657, 8–13–63, Cl. 285—107.

Pittsburgh Plate Glass Co.: *See*—
Polk, James K., and Woody. 3,100,310.

Plummer, Ray A.: *See*—
Smith, Arthur W., and Plummer. 3,100,525.

Plummer, Ray A., and A. W. Smith, to Big Three Welding Equipment Co. Methods for using inert gas. 3,100,528, 8–13–63, Cl. 166—42.

Pneumatic Scale Corp.: *See*—
Whelan, James P. 3,100,562.

Pohorilles, Eugene M., to Schlumberger Well Surveying Corp. Shaped charge apparatus. 3,100,443, 8–13–63, Cl. 102—20.

Polk, James K., and C. L. Woody, to Pittsburgh Plate Glass Co. Simplified brush construction. 3,100,310, 8–13–63, Cl. 15—193.

Pont-A-Mousson, Compagnie de: *See*—
Gerardin, Jean-Jacques. 3,100,321.

Poos, George I., to McNeil Laboratories, Inc. 2-R-3a,4,7,7a-tetrahydro-4,7-(R_1,R_2-Y)-R_3-isoindolines and the corresponding 3a,4,5,6,7,7a-hexahydro compounds. 3,100,776, 8–13–63, Cl. 260—296.

Porter, H. K., Co., Inc.: *See*—
Rittenhouse, Godfrey J. 3,100,659.

Porter, Roger S., and G. H. Cady, to United States of America, Navy. Preparation of perfluorodimethyl peroxide. 3,100,803, 8–13–63, Cl. 260—610.

Poslett, Jack: *See*—
Baker, William A., Thompson, Lane, and Poslett. 3,100,458.

Posner, Woolf. Optical apparatus for producing changing designs. 3,100,418, 8–13–63, Cl. 88—15.

Post, Leo B.: *See*—
Klein, George I., Newby, and Klein. 3,100,693.

Post, Richard F., and C. E. Taylor, to United States of America, Atomic Energy Commission. Method for reducing the impurity resistivity of sodium. 3,100,730, 8–13–63, Cl. 148—13.

Potter, Barrie V., to Esso Research and Engineering Co. Method of cleaning engine exhaust gases. 3,100,376, 8–13–63, Cl. 60—30.

Poulter, Thomas C., ½ to Borg-Warner Corp., and ½ to Halliburton Co. Shaped charge and method of firing the same. 3,100,445, 8–13–63, Cl. 102—24.

Price, Earl R., to The Bendix Corp. Power actuated master cylinder. 3,100,379, 8–13–63, Cl. 60—54.6.

Price, Frank B.: *See*—
Steele, Clarence R., and Price. 3,100,462.

Price, Martin A., to United States of America, Army. Combined vent and drain assembly. 3,100,507, 8–13–63, Cl. 137—588.

Priendnieks, Voldemars, and K. Werner, to Burroughs Corp. Keyboard training device. 3,100,351, 8–13–63, Cl. 35—6.

Procter, Edward C., to Sperry Rand Corp. Forage harvester. 3,100,369, 8–13–63, Cl. 56—16.

Pufahl, Julius P. Portable electric drill press. 3,100,408, 8–13–63, Cl. 77—55.

Pure Oil Co., The: *See*—
Klass, Donald L. 3,100,780.

Qualitrol Corp.: *See*—
Ford, George E., and King. 3,100,502.

Radiation Inc.: *See*—
McMillian, Lonnie S., Jr., and Eddins. 3,100,850.

Radio Corp. of America: *See*—
Gesek, William J., Jr. 3,100,837.
Sherman, Edward J. 3,100,329.
Szekely, Michael E. 3,100,838.

Radke, Arthur O.: *See*—
Tengler, Harvey N., and Radke. 3,100,618.

Radke, Arthur O., and H. N. Tengler, to Bostrom Mfg. Co. Vehicle seat fore and aft shock isolator. 3,100,617, 8–13–63, Cl. 248—430.

Ramseier, Paul, to Bracker A.G. Device for separating and applying stacked travellers in spinning and twisting machines. 3,100,334, 8–13–63, Cl. 29—207.

Rappoldt, Menso P.: *See*—
De Wilde, Pieter C., and Rappoldt. 3,100,783.

Rauhut Michael M., and A. M. Semsel, to American Cyanamid Co. Process for preparing 1-hydroxyalkylphosphine oxides. 3,100,799, 8–13–63, Cl. 260—606.5.

Rauner, Frederick J., I. F. Rosati, and E. M. Robertson, to Eastman Kodak Co. Dry processed photothermographic printing plate and process. 3,100 702, 8–13–63, Cl. 96—33.

Ravve, Abraham, and N. T. Khamis, to Continental Can Co., Inc. Vinyl halide copolymers with oxirane-containing side groups having improved heat stability. 3,100,758, 8–13–63, Cl. 260—45.5.

Raytheon Co.: *See*—
Smith Chester L. 3,100,870.

Realty & Industrial Corp.: *See*—
Gubelmann, William S. 3,100,603.

Reck, Herbert J. and H. W. Feeding, arranging and grading apparatus for eggs. 3,100,571, 8–13–63, Cl. 209—121.

Reck, Hilbert W.: *See*—
Reck, Herbert J. and H. W. 3,100,571.

Redmon, Paul C., 66⅔ to Novel Ideas Inc. Dispenser for lawn treating materials. 3,100,371, 8–13–63, Cl. 56—25.4.

Reese, Frank P., ½ to G. L. Garff. Stroller chassis child's support structure. 3,100,651, 8–13–63, Cl. 280—30.

Reetz, Theodor, to Monsanto Chemical Co. Phosphorus boron compounds. 3,100,774, 8–13–63, Cl. 260—293.

Reider, James E., to Industrial Nucleonics Corp. Radioactive measuring system for blast furnace charge location. 3,100,841, 8–13–63, Cl. 250—43.5.

Reifschneider, Walter, to The Dow Chemical Co. α,Ω-halopolythioethers. 3,100,801, 8–13–63, Cl. 260—609.

Reifschneider, Walter, to The Dow Chemical Co. Aralkyl polythioethers. 3,100,802, 8–13–63 Cl. 260—609.

Reiser, Sidney J. Metering control device for supplying additives to fluids. 3,100,496, 8–13–63, Cl. 137—111.

Reith, Edward F.: *See*—
Curtiss, Floyd P., and Reith. 3,100,595.

Reno Engineering & Mining Co.: *See*—
Huntington, Laurance W. 3,100,701.

Resnick, Arthur. Folding kite. 3,100,895, 8–13–63, Cl. 244—153.

Rex, John P. Jr., T. B. Arrington, and D. J. Pellegrino, to Rex Roto Corp. Furnace combustion chamber. 3,100,734, 8–13–63, Cl. 162—152.

Rex Roto Corp.: *See*—
Rex, John P., Jr., Arrington, and Pellegrino. 3,100,734.

Reynolds Metals Co.: *See*—
De Ridder, Ernst J. 3,100,556.

Richardson Co. The: *See*—
Gavlin, Gilbert, and Hattori. 3,100,789.

Rice, Livingston L., and W. J. Rohane, to Sprague Electric Co. Capacitor sealing method. 3,100,330, 8–13–63, Cl. 29—155.55.

Rice, Livingston L., and W. J. Rohane, to Sprague Electric Co. Capacitor sealing means. 3,100,813, 8–13–63, Cl. 174—52.

Rice, Livingston L., and D. F. Dagnoli, to Sprague Electric Co. Capacitor terminal connection. 3,100 857, 8–13–63, Cl. 317—260.

Rice, Walter A., to Mohasco Industries, Inc. Machine for making tufted fabric with cut and uncut pile loops. 3,100,467, 8–13–63, Cl. 112—79.

Richards, Harry F., and S. A. Herbert, Jr., to Shell Oil Co. Lubricating compositions. 3,100,748, 8–13–63, Cl. 252—46.7.

Richardson, Roy A., and O. M. Eness, to Motorola, Inc. Single sideband receiver having squelch and phase-locked detection means. 3 100,871, 8–13–63, Cl. 325—330.

Riebs, Richard E., to McGraw-Edison Co. Reseating circuit interrupter. 3,100,854, 8–13–63, Cl. 317—22.

Rinia, Herre: *See*—
Peek, Johannes J. A., Rinia, and Duinker. 3,100,852.

Rittenhouse, Godfrey J., to H. K. Porter Co., Inc. Heavy duty discharge hose splice. 3,100,659, 8–13–63, Cl. 285—260.

Ritter Gerald L.: *See*—
Tellefsen, Walter G. 3,100,842.

Ritter, Jacob KG.: *See*—
Dottlinger, Alfred. 3,100,403.

Ritter, Ralph K., and L. P. English to SKSM Products, Inc. Stud welding devices. 3,100,833, 8–13–63, Cl. 219—98.

Roaldi, Arthur: *See*—
Logan, James S., and Roaldi. 3 100,690.

Roberts, Francis P., to United States of America, Atomic Energy Commission. Adsorption of cerium values from aqueous solutions. 3,100,683, 8–13–63, Cl. 23—23.

Robertson Earl M.: *See*—
Rauner, Frederick J., Rosati, and Robertson. 3,100,702.

Robinette, Chester W., to Getz Exterminators, Inc. Powder distributors. 3,100,362, 8–13–63, Cl. 43—146.

Robins, John W., to Worthington Corp. Pneumatic servo-positioner unit. 3,100,399, 8–13–63, Cl. 73—391.

Robinson, Joseph V.: *See*—
Sosoka, John R., and Robinson. 3,100,832.

Robinson, Thomas R., Jr., to The Marlin Firearms Co. Rifled gun barrel. 3,100,358, 8–13–63, Cl. 42—78.

Roche, Roland: *See*—
Aubert, Michel, Foglia, and Roche. 3,100,743.

Rocheville, Charles F., to Microseal Products, Inc. Device for treating the surface of a workpiece. 3,100,724, 8–13–63, Cl. 118—308.

Roehrig, Phillip J., to The Wurlitzer Co. Piano action. 3,100,416, 8–13–63, Cl. 84—240.

Rogers, Walter C., and N. W. Mizelle, to General Steel Products, Inc. Reclining chair. 3,100,668, 8–13–63, Cl. 297—89.

Rogillio, Archie E., to Esso Research and Engineering Co. Alcohol dehydration process. 3,100,741, 8–13–63, Cl. 202—42.

Rohane, Walter J.: *See*—
Rice, Livingston L., and Rohane. 3,100,330.
Rice, Livingston L., and Rohane. 3,100,813.

Rohm & Haas Co.: *See*—
Fellman, Robert P., Goode, and Owens. 3,100,761.
Steiger, Fred H., and Alps. 3,100,674.

Rolls-Royce Ltd.: *See*—
Wilde, Geoffrey L. 3,100,627.

Rorig, Kurt J., to G. D. Searle & Co. α-phenyl(pyridyl or piperidyl) alkyl esters of (chloro or lower alkoxy)-benzoic acids and congeners. 3,100,775, 8–13–63, Cl. 260—295.

Rosati, Isadore F.: *See*—
Rauner, Frederick J., Rosati, and Robertson. 3,100,702.

Rose, Downs & Thompson, Ltd.: *See*—
Smart, Stanley G. 3,100,725.

Rosen, Fillmore C.: *See*—
Wick, Edward J., and Day. 3,100,464.

Rosendahl, Gottfried R., to Ball Bros. Research Corp. Image converter and amplifier. 3,100,817, 8–13–63, Cl. 178—7.87.

Rosenthal, Harry. Electric driving apparatus for a wheel chair. 3,100,547, 8–13–63, Cl. 180—6.5.

Rosenthal, Harry. Motor drive control for wheelchair. 3,100,860, 8–13–63, Cl. 318—55.

Ross, James A., and J. W. Harter III, to Ling-Temco-Vought, Inc. High power synthetic waveform generator. 3,100,851, 8–13–63, Cl. 307—107.

Roussel-UCLAF, Societe Anonyme: *See*—
Joly, Robert, and Bucourt. 3,100,782.

Roy, Gerald L.: *See*—
Miller, Charles M., Jr., and Roy. 3,100,577.

Royal McBee Corp.: *See*—
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Rozalsky, Irving: *See*—
Wittner, Eugene, and Rozalsky. 3,100,749.

Rubrecht, Charles J., and A. J. Minnotte, to Metaline Corp. Coil support for annealing furnace. 3,100,634, 8–13–63, Cl. 263—47.

Rudner, Bernard, and J. J. Harris, to Koppers Co., Inc. 2-borabenzoxazoloboralines and a method for their preparation. 3,100,791, 8–13–63, Cl. 260—462.

Ruggeberg, Heinz R.: *See*—
Schaub, Franz, Kolling, Notthoff, Stiebling, and Ruggeberg. 3,100,694.

Ruhrchemie Aktiengesellschaft: *See*—
Schaub, Franz, Kolling, Notthoff, Stiebling, and Ruggeberg. 3,100,694.

Rundle, George W. Combination cigarette mouthpiece and shield. 3,100,493, 8–13–63, Cl. 131—175.

SKSM Products, Inc.: *See*—
Ritter, Ralph K., and English. 3,100,833.

Sabin, Eugene R.: *See*—
Nail, Billie G., and Sabin. 3,100,585.

Safeway Stores, Inc.: *See*—
Goldwater, Robert, and Calhoun. 3,100,814.

Sage, Richard N., to International Business Machines Corp. Looping device. 3 100,512, 8–13–63, Cl. 140—102.

Saidel, William R., and J. M. Heigl, to Swift & Co. Bacon carton. 3,100,597, 8–13–63, Cl. 229—87.

Saidel, William R., and J. M. Heigl. Bacon carton. 3,100,598, 8–13–63, Cl. 229—87.

Sanders, Wilfred E., to Houston Oil Field Material Co., Inc. Tubing rotary swivel assembly. 3,100,538, 8–13–63, Cl. 166—237.

Saunders, Edward C. Wire line stripping apparatus. 3,100,646, 8–13–63, Cl. 277—27.

Schaub, Franz, H. Kolling, T. Notthoff, E. Stiebling, and H. R. Ruggeberg, to Ruhrchemie Aktiengesellschaft. Treatment of solids with liquids. 3,100,694, 8–13–63, Cl. 23—270.

Schenkman, Libby. Foldable baby stroller. 3,100,652, 8–13–63, Cl. 280—41.

Schenley Industries, Inc.: *See*—
Goldstein, Daniel. 3,100,642.

Schill, Hermann. Machine for skinning and cutting meat and bacon sides. 3,100,515, 8–13–63, Cl. 146—130.

Schimmelschmidt, Kurt: *See*—
Ulmer, Hans, Karaczonyi, Schimmelschmidt, and Baier. 3,100,673.

Schlumberger Well Surveying Corp.: *See*—
Pohorilles, Eugene M. 3,100,443.

Schmidt, Gerhard: *See*—
Konig, Reiner. 3,100,342.

Schmidt, Robert A.: *See*—
Fryer, Rodney I., Schmidt, and Sternbach. 3,100,770.

Schmidt, Theodor, to Indugas, Gesellschaft fur Industrielle Gasverwendung m.b.H., Firma. Cooled furnace transport rollers. 3,100,631, 8–13–63, Cl. 263—6.

Schmidt, William C. Corncob material cigarette. 3,100,492, 8–13–63, Cl. 131—2.

Schneider, Leonard G. Commode for pets. 3,100,474, 8–13–63, Cl. 119—1.

Schoeffel, Dietmar M. Baby rocker. 3,100,638, 8–13–63, Cl. 272—33.

Schramm, Harry R.: *See*—
Grimmer, George G., and Schramm. 3,100,452.

Schulz, Donald F., to Hewlett-Packard Co. Transistor amplifier having low output noise. 3,100,876, 8–13–63, Cl. 330—17.

Schussler, Robert J. Automatic punch can opener. 3,100,341, 8–13–63, Cl. 30—4.

Schwalm, Bruce D.: *See*—
Ibaugh, Harry C., Schwalm, and Wallin. 3,100,653.

Schwenk, Kurt, to Volkswagenwerk AG. Sliding door for motor vehicles. 3,100,667, 8–13–63, Cl. 296—47.

Sclar, Nathan, to Fairchild Camera and Instrument Corp. Image intensification tube system. 3,100,845, 8–13–63, Cl. 250—213.

Scott, Francis L.: *See*—
Smith, Herbert Q., and Scott. 3,100,751.

Scribner, Harold F.: *See*—
Cozzoli, Joseph M., and Scribner. 3,100,513.

Seagram, Joseph E., & Sons, Inc.: *See*—
Adams, Stuart L., and Niesen. 3,100,705.
Adams, Stuart L., and Niesen. 3,100,706.

Searle, G. D., & Co.: *See*—
Rorig, Kurt J. 3,100,775.

Seibel, Markus: *See*—
Herrmann, Otto, Muller, and Seibel. 3,100,722.

Semsel, Andrew M.: *See*—
Rauhut, Michael M., and Semsel. 3,100,799.

Seragnoli, Ariosto. Method for feeding into a machine articles delivered by more machines. 3,100,561, 8–13–63, Cl. 198—21.

Shaler, Richard G., Jr.: *See*—
Shaler, Richard G., McAdam, and R. G. Shaler, Jr. 3,100,707.

Shaler, Richard G., R. L. McAdam, and R. G. Shaler, Jr., to American Tansul Co. Addition of dry hectorite to beer. 3,100,707, 8–13–63, Cl. 99—48.

Shapiro, Herman G. Aircraft traffic pattern and runway computer. 3,100,601, 8–13–63, Cl. 235—61.

Sharav, William B.: *See*—
Kubil, Robert A., and Sharav. 3,100,829.

Sharp, Martin. Contour duplicating apparatus. 3,100,344, 8–13–63, Cl. 32—67.

Shaw, John R., and H. L. Vornkahl, to Gulf Oil Corp. Method of inhibiting foaming of diethanolamine solutions in treating gases. 3,100,680, 8–13–63, Cl. 23—3.

Shell Oil Co.: *See*—
Horsley, Franz A., and Gray. 3,100,698.
Richards, Harry F., and Herbert. 3,100,748.
Wittner, Eugene, and Rozalsky. 3,100,749.

Sherman, Edward J., to Radio Corp. of America. Solid capacitors. 3,100,329, 8–13–63, Cl. 29—25.31.

Shockney, Joseph C., to The B. F. Goodrich Co. Post-halogenation of halogen containing resins. 3,100,762, 8–13–63, Cl. 260—92.8.

Short, Lot W., to Tri-Dia, Inc. Drill bit for cutting cores. 3,100,543, 8–13–63, Cl. 175—330.

Silver Corp.: *See*—
Steele, Clarence R., and Price. 3,100,462.

Skookum Co., Inc., The: *See*—
Baker, Charles J. 3,100,323.

Slysh, Roman S., W. C. Hollyday, Jr., to Esso Research and Engineering Co. Middle distillate pour point depressants. 3,100,695, 8–13–63, Cl. 44—62.

Stiebling, Ewald: *See*—
Schaub, Franz, Kolling, Notthoff, Stiebling, and Ruggeberg. 3,100,694.

Skerritt, John W., to International Business Machines Corp. High speed multivibrator having cross coupling circuitry. 3,100,848, 8–13–63, Cl. 307—88.5.

Skinner, Robert L., to The Bendix Corp. Valve testing apparatus. 3,100,392, 8–13–63, Cl. 73—46.

Smart, Stanley G., to Rose, Downs & Thompson, Ltd. Extraction of sugar juice with screw press. 3,100,725, 8–13–63, Cl. 127—43.

Smedberg, George E., to E. I. du Pont de Nemours and Co. Process of bleaching wood pulp by combined treatment with peroxide and an alkali metal borohydride. 3,100,732, 8–13–63, Cl. 162—78.

Smith, Arthur W.: *See*—
Plummer, Ray A., and Smith. 3,100,528.

Smith, Arthur W., and R. A. Plummer, to Big Three Welding Equipment Co. Cementing. 3,100,525, 8–13–63, Cl. 166—21.

Smith, Chester L., to Raytheon Co. Rooms for testing electronic equipment. 3,100,870, 8–13–63, Cl. 325—67.

Smith, Gosta, to United Shoe Machinery Corp. Applicator for pasty material. 3,100,314, 8–13–63, Cl. 15—511.

Smith, Herbert Q., and F. L. Scott, to Pennsalt Chemicals Corp. Polymers from condensations of formaldehyde with sulfamides. 3,100,751, 8–13–63, Cl. 260—2.2.

Smith, William R. Refuse receptacle. 3,100,580, 8–13–63, Cl. 220—34.

Smyers, William H., and D. W. Young. Polymerization of aliphatic monomers in presence of aromatic-olefin copolymer and resulting product. 3,100,757, 8–13–63, Cl. 260—45.5.

Snyder, Joseph R.: *See*—
Meek, Paul D., Snyder, Allison, and Grimes. 3,100,763.

Societe d'Appareils de Controle et d'Equipment des Moteurs (S.A.C.E.M.), The: *See*—
Meunesson, Bernard R. 3,100,480.

Societe O'Fakler & Cie: *See*—
Labergere Jean L. A. 3,100,727.

Socony Mobil Oil Co., Inc.: *See*—
Phenix, Bruce C., Jr., Merchant, and Mitchell. 3,100,744.
Zimmerman, John R., Jr., and Weinberg. 3,100,866.

Soland, Duane E., to Jersey Production Research Co. Automatic frequency-tracking filter. 3,100,874, 8–13–63, Cl. 328—165.

Soper, William A.: *See*—
Miller, H. Paul, and Soper. 3,100,658.

Sosoka, John R., and J. V. Robinson, to Unitek Corp. Welding. 3,100,832, 8–13–63, Cl. 219—86.

Space Technology Laboratories, Inc.: *See*—
Hickey, John J., and Clark. 3,100,872.

Spain, Horace H.: *See*—
Hilton, Albert R., Jr., and Spain. 3,100,527.

Specialties Development Corp.: *See*—
Zenobia, John C., Jr. 3,100,331.

Spector, Morris, to Sterling Automotive Mfg. Co. Adjustable clamp. 3,100,327, 8–13–63, Cl. 24—274.

Spencer, Framroze J., to Monsanto Chemical Co. Composition comprising a mixture of polyethylene and an alkylalkoxysilane. 3,100,753, 8–13–63, Cl. 260—29.1.

Spencer, Rolf E., and G. H. Stephenson, to Electric & Musical Industries Ltd. Interpolating devices, especially for the control of automatic machine tools. 3,100,864, 8–13–63, Cl. 323—43.5.

Spero, George B., to The Upjohn Co. 6-methyl-9α fluoro-11β-hydroxy-4-6-pregnadiene-3,20-dione and the 11-keto analogue thereof, their corresponding 16α-methyl derivatives and 1-dehydro counterparts of the foregoing. 3,100,777, 8–13–63, Cl. 260—397.3.

Sperry Rand Corp.: *See*—
Bentkowsky, Jerome. 3,100,859.
Blanshine, Allison W. 3,100,370.
Blanshine, Allison W. 3,100,373.
Halls, Lawrence M., and Bumm. 3,100,367.
Ibaugh, Harry C., Schwalm, and Wallin. 3,100,653.
Nolt, Edwin B., and McDuffie. 3,100,437.
Osder, Stephen S. 3,100,861.
Procter, Edward C. 3,100,369.
Topazio, William J., and Weir. 3,100,858.

Spiselman, Joseph W., to Floating Floors Inc. Adjustable pedestal for elevated sectional floors. 3,100,624, 8–13–63, Cl. 254—101.

Sprague Electric Co.: *See*—
Rice, Livingston L., and Rohane. 3,100,330.
Rice, Livingston L., and Rohane. 3,100,813.
Rice, Livingston L., and Dagnoli. 3,100,857.

Sprague, Robert H., H. L. Fichter, Jr., and W. P. Hamilton, to Horizons Inc. Photographic process utilizing cyanine dye bases. 3,100,703, 8–13–63, Cl. 96—33.

Staib, Ludwig A., Jr. Basic aluminum salts of acetylsalicylate acid and a non-toxic water soluble acid. 3,100,787, 8–13–63, Cl. 260—448.

Stalder, Jakob. Movable figure toy. 3,100,365, 8–13–63, Cl. 46—140.

Standard Oil Co. (Ohio), The: *See*—
Emrick, Donald D. 3,100,792.

Star Expansion Industries Corp.: *See*—
Bell, Walter. 3,100,650.

Star Shade Cutter Co.: *See*—
Gast, Albert K., Jr. 3,100,649.

Stark, William J., to Jersey Production Research Co. Jet shot hole device. 3,100,542, 8–13–63, Cl. 175—1.

Stauffer Chemical Co.: *See*—
Klein, George I., Newby, and Post. 3,100,693.
Szabo, Karoly, and Brady. 3,100,735.

Staver, Robert B. Cake of material and handle. 3,100,363, 8–13–63, Cl. 45—28.

Steele, Clarence R., and F. B. Price, to Silver Corp. Seed planting apparatus. 3,100,462, 8–13–63, Cl. 111—77.

Stefanick, William F. Stone cutter. 3,100,481, 8–13–63, Cl. 125—23.

Steiger, Fred H., and H. A. Alps, to Rohm & Haas Co. Process for shrink-proofing proteinaceous textile materials and the product therefrom. 3,100,674, 8–13–63, Cl. 8—127.6.

Stephenson, Geoffrey H.: *See*—
Spencer, Rolf E., and Stephenson. 3,100,864.

Sterling Automotive Mfg. Co.: *See*—
Spector, Morris. 3,100,327.

Sterling Drug Inc.: *See*—
Manson, Andrew J. 3,100,771.

Sternbach, Leo H.: *See*—
Fryer, Rodney I., Schmidt, and Sternbach. 3,100,770.

Stiebling, Ewald: *See*—
Schaub, Franz, Kolling, Notthoff, Stiebling, and Ruggeberg. 3,100,694.

Stillwagon, Crawford K. Disc valve with removable seat and unitary stem and disc, and seat and stem bushing unit therefor. 3,100,500, 8–13–63, Cl. 137—375.

Stone, Carl R.: *See*—
Hansen, George E., and Stone. 3,100,501.

Strawgate, Justin H.: *See*—
Lombard, Herman, and Strawgate. 3,100,354.

Stresau, Richard H. F., to United States of America, Navy. Bore measuring device. 3,100,349, 8–13–63, Cl. 33—178.

Strotmann, Werner: *See*—
Esser, Heinrich, and Strotmann. 3,100,409.

Sturm, Bernard J., to United States of America, Atomic Energy Commission. Method for preparation of sinterable beryllium oxide. 3,100,686, 8–13–63, Cl. 23—183.

Sun Oil Co.: *See*—
Jezl, James L., Kheighatian, and Hague. 3,100,764.

Svala, Carl G., E. Äro, and G. L. Kjellberg, to Telefonaktiebolaget L M Ericsson. Low-pass filter for pulse amplitude modulated signal transmission systems. 3,100,820, 8–13–63, Cl. 179—15.

Svenson, Ernest J., ½ to Odin Corp. and ½ to W. F. and John Barnes Co. Hydraulically actuated machine tool. 3,100,450, 8–13–63, Cl. 103—4.

Swift & Co.: *See*—
Carlin, George T. 3,100 710.
Saidel, William R., and Heigl. 3,100,597.

Swinehart, Frank, and R. J. Dobias, to The Turner Co. High sensitivity piezoelectric microphone. 3,100,821, 8–13–63, Cl. 179—110.

Systems Research Laboratories, Inc.: *See*—
Ballard, James W. 3,100,884.

Szabo, Karoly, and J. G. Brady, to Stauffer Chemical Co. Bisorganophosphorus esters and their preparation. 3,100,735, 8–13–63, Cl. 167—22.

Szekely, Michael E., to Radio Corp. of America. Binary full adder utilizing integrated unipolar transistors. 3,100,838, 8–13–63, Cl. 235—176.

Szumski, John P.: *See*—
Joiner, Edgar E., and Szumski. 3,100,678.

Tamblyn, John W.: *See*—
Kibler, Charles J., and Tamblyn. 3,100,716.
Long, Selma H., and Tamblyn. 3,100,717.

Tamplen, Jack W., to Otis Engineering Corp. Well tools for plugging a well flow conductor. 3,100,532, 8–13–63, Cl. 166—125.

Tamplen, Jack W., to Otis Engineering Corp. Anchoring and sealing device. 3,100,536, 8–13–63, Cl. 166—185.

Tate, William H.: *See*—
Meeker, Jess, and Tate. 3,100,712.

Taylor, Clyde E.: *See*—
Post, Richard F., and Taylor. 3,100,730.

Taylor, Thomas D., deceased, by G. Brueggenjohann, executrix, to Union Special Machine Co. Blindstitch sewing machine with eccentric mounting for work support. 3,100,468, 8–13–63, Cl. 112—178.

Technion Research and Development Foundation Ltd.: *See*—
Nathan, Amos, and Katzenelson. 3,100,839.

Telefonaktiebolaget L M Ericsson: *See*—
Svala, Carl G., Äro, and Kjellberg. 3,100,820.

Tellefsen, Walter G., ¼ to G. L. Ritter, ¼ to J. C. Kopf, and ¼ to P. C. Trotta. Tooth brush holder and sterilizer. 3,100 842, 8–13–63, Cl. 250—51.

Tellie, Paul, to Manufacture Nationale d'Armes de Saint-Etienne. Foldable butt for portable small arms. 3,100,357, 8–13–63, Cl. 42—72.

Tengler, Harvey N.: *See*—
Radke, Arthur O., and Tengler. 3,100,617.

Tengler, Harvey N., and A. O. Radke, to Bostrom Mfg. Co. Fore and aft shock absorber. 3,100,618, 8–13–63, Cl. 248—430.

Tennis, Francis H., to Hydraulic Unit Specialties Co. Pilot operated pressure and vacuum relief valve. 3,100,503, 8–13–63, Cl. 137—491.

Terrel, Garland C.: *See*—
McStravick, Peter R., Lindsey, and Terrel. 3,100,529.

Tezza, Antonio: *See*—
Concilio, Carlo T., and Tezza. 3,100,781.

Therachemie Chemisch Therapeutische Gesellschaft m.b.H.: *See*—
Kaiser, Wilhelm J., and Berth. 3,100,739.

Thompson, Alan W.: *See*—
Baker, William A., Thompson, Lane, and Poslett. 3,100,458.

Thompson Industries, Inc.: *See*—
Buechler, William R. 3,100,574.

Toledo Scale Corp.: *See*—
Carroll, Frederick C. 3,100,720.
Williams, Lawrence S. 3,100,600.

Tomanek, Martha, and W. Neugebauer, to Azoplate Corp. Process for the removal of unfixed developer powder from powdered electro-photographic reproduction coatings. 3,100,726, 8–13–63, Cl. 134—7.

Topazio, William J., and J. D. Weir, to Sperry Rand Corp. Pressure rebalancing and measuring servosystem. 3,100,858, 8–13–63, Cl. 318—28.

Townend, Robert V., H. Q. Trout, and J. E. Wilkalis, to Allied Chemical Corp. Purification of uranium ore concentrates. 3,100,681, 8–13–63, Cl. 23—14.5.

Trapp, Walter B., and J. D. Doedens, to The Dow Chemical Co. Method for making ar-poly(hydroxymethyl) diphenyl ethers. 3,100,796, 8–13–63, Cl. 260—488.

Trautschold, Ivar: *See*—
Werle, Eugen, and Trautschold. 3,100,736.

Trico Products Corp.: *See*—
D'Alba, Anthony R. 3,100,423.

Tri-Dia, Inc.: *See*—
Short, Lot W. 3,100,543.

Trimble, Cebern B., to The National Cash Register Co. Record media handling apparatus. 3,100,591, 8–13–63, Cl. 226—39.

Trotta, Pasquale C.: *See*—
Tellefsen, Walter G. 3,100,842.

Trout, Horace Q.: *See*—
Townend, Robert V., Trout, and Wilkalis. 3,100,681.

Tubis, Samuel: *See*—
Kantor, Martin L., and Tubis. 3,100,772.

Turner Co., The: *See*—
Swinehart, Frank, and Dobias. 3,100,821.

Turner, Samuel D., Jr.: *See*—
Griffin, Searcy F., and Turner. 3,100,819.

Tutino, Anita L.: *See*—
Tutino, Dominick J., and A. L. 3,100,324.

Tutino, Dominick J. Cleaning pad holder. 3,100,311, 8–13–63, Cl. 15—209.

Tutino, Dominick J., and A. L. Clothespin with improved self-storing means. 3,100,324, 8–13–63, Cl. 24—137.

Tuttle, Robert S.: *See*—
Osborne, Fred H., and Tuttle. 3,100,644.

Udylite Corp., The: *See*—
Davis, John V. 3,100,453.

Ulinski, Bronislaus I., to The Yale & Towne Mfg. Co. Steering controller for industrial truck. 3,100,548, 8–13–63, Cl. 180—6.5.

Ulmer, Hans, P. Karaczonyi, K. Schimmelschmidt, and E. Baier, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Dyeings and prints possessing fastness to wet processing and their manufacture on cellulose materials and protein fibers. 3,100,673, 8–13–63, Cl. 8—22.

Union Carbide Corp.: *See*—
Bailey, Frederick E., Jr., Hill, and Fitzpatrick. 3,100,750.
Dess, Howard M. 3,100,688.
Fry, John S. 3,100,756.
Kelmers, Andrew D. 3,100,682.
Kubli, Robert A., and Sharav. 3,100,829.
Leech, Robert E., and Goldsmith. 3,100,793.

Union Special Machine Co.: *See*—
Taylor, Thomas D. 3,100,468.

United Aircraft Corp.: *See*—
Farkas, Thomas P. 3,100,380.
Greunke, Orville V. 3,100,879.

United Can and Glass Co.: *See*—
Wolfe, Wayne F. 3,100,470.

United Shoe Machinery Corp.: *See*—
Smith, Gosta. 3,100,314.

United States of America
Army: *See*—
Betts, Robert E. 3,100,447.
Brueckmann, Helmut. 3,100,893.
McNeill, William, and Chrostowski. 3,100,436.
Musser, C Walton, and Moldofsky. 3,100,394.
Price, Martin A. 3,100,507.
Atomic Energy Commission: *See*—
Cox, George R. 3,100,573.
McGeary, Robert K., and Winslow. 3,100,742.
Post, Richard F., and Taylor. 3,100,730.
Roberts, Francis P. 3,100,683.
Sturm, Bernard J. 3,100,686.
Work, Ralph O. 3,100,655.
Navy: *See*—
Hablutzel, Charles E. 3,100,448.
Morrow, David. 3,100,614.
Moy, Tsoy K. 3,100,421.
Porter, Roger S., and Cady. 3,100,803.
Stresau, Richard H. F. 3,100,349.

United States Steel Corp.: *See*—
Henne, Norman R. 3,100,666.

United States Stoneware Co., The: *See*—
Harkins, Allen A. 3,100,568.

Unitek Corp.: *See*—
Sosoka, John R., and Robinson. 3,100,832.

Upjohn Co., The: *See*—
Spero, George B. 3,100,777.

Usines Chausson, Societe Anonyme des: *See*—
Chausson, Andre. 3,100,386.

Vandenburgh, David G., to Aluminum Co. of America. Duplex aluminous metal article. 3,100,581, 8–13–63, Cl. 220—64.

Van Dien, James R., to The Bendix Corp. Power steering apparatus. 3,100,551, 8–13–63, Cl. 180—79.2.

Varga, Joseph J., to General Electric Co. Duct-piercing machine. 3,100,413, 8–13–63, Cl. 83—180.

Varo, Inc.: *See*—
Griffin, Searcy F., and Turner. 3,100,819.

Vendo Co., The: *See*—
Nall, Billie G., and Sabin. 3,100,585.

Vermeulen, William, to General Electric Co. Pushbutton switch with double throw action. 3,100,822, 8–13–63, Cl. 200—5.

Vickers, James L.: *See*—
Burt, Farlow B., and Vickers. 3,100,550.

Virginio Rimoldi & C., S.p.A.: *See*—
Marforio, Nerino. 3,100,463.

Vitcha, James F.: *See*—
Frantz, Russell K., and Vitcha. 3,100,795.

Vogel, Marcel J., to International Business Machines Corp. Fluid flow indicating process. 3,100,844, 8–13–63, Cl. 250—71.

Vogt, Walter D.: *See*—
Offensend, Glen W., and Vogt. 3,100,356.

Volkswagenwerk AG.: *See*—
Schwenk, Kurt. 3,100,667.

Von Bogdandy, Ludwig, and H.-D. Pantke, to Huttenwerk Oberhausen AG. Control system and process for refining metals. 3,100,699, 8–13–63, Cl. 75—59.

Von Hacht, Gerhard, to Licentia Patent-Verwaltungs-G.m.b.H. Light curtain apparatus for photosensitive detector. 3,100,847, 8–13–63, Cl. 250—237.

Von Stocker, Selmer G.: *See*—
Dunbar, James A., and Von Stocker. 3,100,337.

Voo, Shu K. L. Calculating machine. 3,100,602, 8–13–63, Cl. 235—63.

Vornkahl, Henry L.: *See*—
Shaw, John R., and Vornkahl. 3,100,680.

Vullo, William J., and D. H. Campbell, to Hooker Chemical Corp. Process and composition for phosphatizing metals. 3,100,728, 8–13–63, Cl. 148—6.15.

Wächter, Karl-August, to O. H. Drager. Detector tube. 3,100,692, 8–13–63, Cl. 23—254.

Wagner, Karl T., to General Time Corp. Timing device. 3,100,823, 8–13–63, Cl. 200—39.

Wakeley, William M., to Aero Welder Mfg. Co. Magnetic force welder. 3,100,831, 8–13–63, Cl. 219—86.

Wallander, Karl O. T.: *See*—
Fonden, Per B., and Wallander. 3,100,613.

Wales, Nathaniel B., Jr., to The Metrodynamics Corp. Doubly integrating accelerometer. 3,100,400, 8–13–63, Cl. 73—490.

Wales, Nathaniel B., Jr., to The Metrodynamics Corp. Line printer. 3,100,440, 8–13–63, Cl. 101—93.

Wales, Nathaniel B., Jr., to The Metrodynamics Corp. Magnetic release structure. 3,100,825, 8–13–63, Cl. 200—93.

Wallin, Robert E.: *See*—
Ibaugh, Harry C., Schwalm, and Wallin. 3,100,653.

Walters, Maxie R.: *See*—
Brown, Harold P., Walters, and Anderson. 3,100,760.

Walton, James P.: *See*—
Case, Stanford E., and Walton. 3,100,381.

Wandel, John B.: *See*—
Cherundolo, Michael, and Wandel. 3,100,407.

Wanless, Earl S. and G. C. Animal trap. 3,100,361, 8–13–63, Cl. 43—81.

Wanless, Garnet C.: *See*—
Wanless, Earl S. and G. C. 3,100,361.

Wartian, George. Door latch and lock. 3,100,388, 8–13–63, Cl. 70—150.

Washburn, John M., to The Merrow Machine Co. Throat plate for overedge sewing machine. 3,100,469, 8–13–63, Cl. 112—260.

Watanabe, Koichi, K. Asano, and S. Hara, to Nippon Light Metal Co., Ltd. Machine for and method of casting ingot. 3,100,322, 8–13–63, Cl. 22—62.

Watkins, Ellwood, R. S. and J. H. Oscillating wire cutter. 3,100,414, 8–13–63, Cl. 83—437.

Watkins, John H.: *See*—
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Weitzel, John P. Rotary exerciser apparatus. 3,100,640, 8–13–63, Cl. 272—73.

Welkowitz, Walter, and H. E. Dahlke, to Gulton Industries, Inc. Ultrasonic liquid level gauge. 3,100,885, 8–13–63, Cl. 340—3.

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Wiggins, Barney F. Barbed wire reel holder. 3,100,607, 8–13–63, Cl. 242—86.64.

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Wolfe, Wayne F., to United Can and Glass Co. Can body making machine. 3,100,470, 8–13–63, Cl. 113—11.

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Woodland, Edward. Smoke pipe top. 3,100,433, 8–13–63, Cl. 98—76.

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Zimmerman, John R., Jr., and I. Weinberg, to Socony Mobil Oil Co. Nuclear magnetic resonance in thin films. 3,100,866, 8–13–63, Cl. 324—.5.

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D 9— 2: 195,940
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D13— 1: 195,942
D14— 3: 195,943
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30: 195,945
D15— 1: 195,946
D16— 2: 195,947
195,948
D17— 3: 195,949
D18— 2: 195,950
D22— 3: 195,951
D22— 3: 195,952
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5: 195,954
D26— 1: 195,955
14: 195,956
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D26— 14: 195,968
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D34— 5: 195,979
15: 195,980
D36— 8: 195,981
D42— 7: 195,982
D44— 1: 195,983
D44— 10: 195,984
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D48— 4: 195,987
20: 195,988
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195,991
D49— 1: 195,992
D50— 7: 195,993
D52— 6: 195,994
D54— 2: 195,995
13: 195,996
195,997
D57— 1: 195,998
195,999
D57— 1: 196,000
D58— 5: 196,001
196,002
12.6: 196,003
17: 196,004
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D61— 1: 196,009
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D65— 1: 196,011
D66— 1: 196,012
D71— 1: 196,013
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D71— 1: 196,016
D77— 1: 196,017
D81— 10: 196,018
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D83— 1: 196,020
12: 196,021
D86— 10: 196,022
D87— 3: 196,023
D88— 3: 196,024
D91— 1: 196,025
D92— 4: 196,026
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CLASSIFICATION OF PLANTS

P.— 78: 2,274

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 13, 1963 Volume 793 Number 2

TRADEMARKS

NOTICES

Trademark Classification and Search Division

Permanent wave kits for home use, formerly classified in Class 44, Dental, Medical and Surgical Appliances, have been transferred to Class 51, Cosmetics and Toilet Preparations.

Classes 44 and 51 should be searched until the necessary cross-references can be made.

HORACE B. FAY, JR.,
Assistant Commissioner of Patents.

July 8, 1963.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 354,287 (CHEVRON), Standard Oil Company of California, Cleaning solvents for general, household, professional and commercial cleaning; **Reg. No. 364,683**, same, Lubricating oils, flushing oils; **Reg. No. 416,133**, same, Fuels for use in internal combustion engines; **Reg. No. 521,798**, same, Insecticides, etc.; **Reg. No. 533,796** (CHEVRON DESIGN), same, Services rendered at automotive service stations generally; **Reg. No. 640,311**, same, Garden hose sprayers for applications of insecticides, fungicides, etc.; fertilizer spreaders, etc.; **Reg. No. 640,519**, same, Small boxes for holding invoices; metal containers for chemical compounds of high volatility and fiberboard cartons; **Reg. No. 640,522**, same, Floor waxes; **Reg. No. 640,526**, same, Adhesive binders used in the manufacture of paper and fiberboard products; **Reg. No. 640,575**, same, Asphaltic roofing compositions; roofing oils and stains; floor oils, etc.; **Reg. No. 640,661**, same, Embossing and printing machines, etc.; **Reg. No. 640,678**, same, Instrument for measuring odor in gas; **Reg. No. 640,883**, same, Chemicals and chemical intermediates for general use in the industrial arts—namely, naphthenic acids and their derivatives, etc.; **Reg. No. 640,933**, same, Chemical preparation for use as an antiseptic and germicide; **Reg. No. 641,234**, same, Chemicals used to prevent the freezing of moisture in storage tanks and fuel systems of heating units and internal combustion engines, etc.; **Reg. No. 641,243**, same, Fertilizers, soil conditioners, soil amendments and soil correctives; **Reg. No. 641,258**, same, Bituminous construction and surfacing compositions, asphalt, etc.; **Reg. No. 641,270**, same, Petroleum waxes and petrolatums, kerosenes, fuel and heating oils; internal combustion engine fuels; lubricating oils and greases; **Reg. No. 641,295**, same, Waterproofing and protective coatings for concrete, steel, wood, plaster, masonry and surfaces in general, and paint driers; **Reg. No. 641,421**, same, Periodic publications; **Reg. No. 641,536**, same, Cleaning compounds for general, household, professional, industrial and commercial cleaning; **Reg. No. 642,226**, same, Chemical preparations and compounds used in the manufacture of lubricating oil additives, etc.; **Reg. No. 642,431**, same, Detergents; **Reg. No. 642,817**, same, Rust preventing and filter coating petroleum compounds applied as films on metal and other surfaces; **Reg. No. 656,650** (CHEVRON), same, Floor waxes; **Reg. No.**

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	17,022
Date of oldest new application	Oct. 22 1962
Date of oldest amended application	Oct. 16, 1962

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-22-62	10-16-63
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	12-3-62	11-13-63
Renewals (All Classes)	6-3-63	6-26-63
Sec. 12 (c) Publications (All Classes)	6-12-63	5-29-63

Applications filed during the month of June 1963—2,026

Registrations Issued 436—No. 754,378 to No. 754,813
Renewals Issued 62

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C. to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

658,429, same, Ink oils for use as carrying agent for pigment and wax used in the manufacture of inks and carbon paper: **Reg. No. 658,620**, same, Cleaning compounds for general, household, professional, industrial and commercial cleaning, flushing oils and detergents; **Reg. No. 658,682**, same, Petroleum waxes, white greases, etc.; **Reg. No. 659,689**, same, Insecticides, herbicides, fungicides, etc.; **Reg. No. 660,010**, same, Rust preventing and filter coating petroleum compounds applied as films on metal and other surfaces, wax for coating containers, etc.; **Reg. No. 661,819**, same, Bituminous construction and surfacing composition—namely, asphalt mastic roof surfacing and underlayment compositions; **Reg. No. 687,775**, same, Asphaltic construction and surfacing compositions; **Reg. No. 695,148**, same, Fertilizers; **Reg. No. 701,175**, same, Chemicals and chemical intermediates for general use in the industrial arts and in agriculture, etc., **filed** May 17, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63/565–WM, *Standard Oil Company of California* v. *Chevron Truck Company.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 132,234. General Aniline & Film Corporation, New York, N.Y. Filed Nov. 17, 1961.

DUOX

For Reactive Diluent Incorporated as an Ingredient in the Manufacture of Epoxy Resins.
First use Nov. 9, 1961.

SN 144,638. Pellon Corporation, New York, N.Y. Filed May 15, 1962.

PELLONAIRE

Owner of Reg. Nos. 592,888, 594,573, and 599,211.
For Raw or Partly Finished Materials for Insertion in, Laminating With, Strengthening, Supporting, Lining or the Like of Other Materials Including Textiles, Upholstery, Leather, Plastics and Similar Materials and Made by Bonding a Mixture of Natural Fiber Staples, or a Mixture of Synthetic Fiber Staples, or a Mixture of Natural and Synthetic Fiber Staples.
First use Dec. 15, 1961.

SN 151,644. American Enka Corporation, Enka, N.C. Filed Aug. 22, 1962.

FIBER H M

No claim is made for the word "Fiber" apart from the mark as shown.
For Regenerated Cellulose Staple Fiber.
First use Apr. 27, 1962.

SN 155,598. Ferro Corporation, Cleveland, Ohio. Filed Oct. 22, 1962.

UNISTRAND

Owner of Reg. Nos. 584,184, 729,007, and others.
For Glass Fiber Rovings.
First use on or about Sept. 14, 1961.

SN 158,447. Hercules Powder Company, Wilmington, Del. Filed Dec. 4, 1962.



For Polypropylene Olefin Fibers.
First use Oct. 23, 1962.

SN 159,754. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 26, 1962.

spandex

CHEMSTRAND

No claim is made to the word "Spandex" apart from the mark as shown. Owner of Reg. Nos. 600,796, 741,667, and others.
For Fiber and Filaments Comprised in Whole or in Substantial Part of Spandex.
First use Nov. 6, 1962.

SN 161,288. Sommers Plastic Products Co., Inc., New York, N.Y. Filed Jan. 23, 1963.

"HYKAF"

For Vinyl Plastic Piece Goods Sold in Rolls and Used in Making Handbags, Wallets, Portfolios, Belts, and the Like.
First use Jan. 2, 1963.

SN 161,318. Fiberfil, Inc., Warsaw, Ind. Filed Jan. 24, 1963.

FORMALDAGLAS

For Reinforced Synthetic Resinous Injection-Molding Materials in Pellet or Granular Form.
First use on or about Jan. 11, 1963.

SN 161,319. Fiberfil, Inc., Warsaw, Ind. Filed Jan. 24, 1963.

ACRYLAGLAS

For Reinforced Synthetic Resinous Injection-Molding Materials in Pellet or Granular Form.
First use Jan. 15, 1963.

SN 161,339. Gravette Shelling Company, Inc., Gravette, Ark. Filed Jan. 24, 1963.

PRECISION-PROP

For Rounded Black Walnut Shells Used in Oil Well Fracturing.
First use Dec. 28, 1961.

SN 161,369. Out Door Products, Inc., Clearfield, Pa. Filed Jan. 24, 1963.

HANDI HEAT

For Self-Igniting Fire Kindlers.
First use May 21, 1962.

SN 161,430. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Jan. 25, 1963.

VANYL

For Vinyl Foam.
First use Jan. 8, 1963.

SN 161,458. The J. E. Baker Company, York, Pa. Filed Jan. 28, 1963.

JEBCOLITE

For Dead Burned Dolomite Used To Make a Refractory Liner for Metal Smelting Furnaces.
First use on or about Apr. 12, 1958.

Class 2 — Receptacles

SN 152,332. Rexall Drug and Chemical Company, d.b.a. Tupperware, Los Angeles, Calif. Filed Aug. 31, 1962.

FLORALIER

For Flower Container With Reticulated Lids in Which Flowers Are Arranged in a Symmetrical Distribution.
First use July 9, 1962.

SN 157,619. Greater New York Box Company Inc., Clifton, N.J. Filed Nov. 20, 1962.

TUK-LOK

For Corrugated Cardboard Containers.
First use Oct. 25, 1962.

SN 158,023. Riegel Paper Corporation, New York, N.Y. Filed Nov. 27, 1962.

TRU-SHADE

For Package for Hosiery.
First use Oct. 26, 1962.

SN 158,024. Riegel Paper Corporation, New York, N.Y. Filed Nov. 27, 1962.

PROFIT-PAK

For Package for Hosiery.
First use Oct. 26, 1962.

SN 158,069. Harleyarts, New York, N.Y. Filed Nov. 28, 1962.

GLORION

For Paper Cartons, Boxes and Like Containers.
First use Oct. 15, 1962.

SN 158,094. Packaging Frontiers, Inc., Waltham, Mass. Filed Nov. 28, 1962.



For Flexible Containers for Liquids, Powders, or Other Fluent Substances.
First use August 1961.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 145,031. Brecher Brothers, Inc., d.b.a. Shamrock, New York, N.Y. Filed May 21, 1962.

HYDETEX

For Vinyl Coated Composition Manufactured Into Goods, Such as Luggage, Brief-Bags, Portfolios, Ring Binders, Sample Cases, Utility Kits, Kits, Card Cases, Bowling Bags, Club Bags, Business Cases, Handbags, Attaché Cases, Dressing Cases, Fitted Cases, Liquor Cases, Game Sets, Etc.
First use about May 1961.

SN 146,166. Cartier, Inc., New York, N.Y. Filed June 5, 1962.

CARTIER

Owner of Reg. Nos. 413,802 and 414,435.
For Purses and Pocketbooks.
First use in 1859.

SN 147,494. Palizzio, Inc., New York, N.Y. Filed June 22, 1962.

Yvette

For Hand Bags.
First use July 24, 1961.

SN 160,723. Louis P. Shannon, d.b.a. Script-Master, Newark, Del. Filed Jan. 15, 1963.

SCRIPT-MASTER

For Speech Portfolios.
First use as early as Aug. 30, 1962.

Class 4 — Abrasives and Polishing Materials

SN 161,527. Lee Drug Co., d.b.a. Tendene Division, Lee Drug Co., Omaha, Nebr. Filed Jan. 28, 1963.

LEATHER-ENE-

For Foam Leather Cleaner and Polish.
First use on or about Dec. 7, 1962.

SN 161,641. Leon M. Walker, d.b.a. Walker Pump Company, Brooklyn, N.Y. Filed Jan. 29, 1963.

PEENIMPAC

For Cleaning or Abrasive Medium Used for So-Called "Sand Blasting" Purposes, and Comprising Small Steel Shot and Grit, or Mixtures Thereof.
First use on or about Oct. 11, 1956; on or about May 25, 1954, in another display.

Class 6 — Chemicals and Chemical Compositions

SN 121,391. Humble Oil & Refining Company, Houston, Tex. Filed June 5, 1961.

ESCANE

For Alkylates for Use in the Manufacture of Surface-Active Agents.
First use Mar. 3, 1961.

SN 127,949. Parachlor Chemical Corporation, Long Island City, N.Y. Filed Sept. 15, 1961.

SANI-MAT
BACTOL SPRAY

Applicant does not claim a trademark upon the word "Spray" apart from the use of the word in the entire mark, "Sani-Mat Bactol Spray" and in its distinctive design.
For Chemical Preparation in Liquid Form for Use as a Sanitizing and Deodorant Spray, Containing a Combination of Bactericidal and Bacteriostatic Agents.
First use on or about Feb. 21, 1961.

SN 131,630. Stauffer Chemical Company, New York, N.Y. Filed Nov. 8, 1961.

IMIDAN

For Insecticide-Miticide.
First use Oct. 20, 1961.

SN 133,176. Stearns' Electric Paste Co., Chicago, Ill. Filed Dec. 1, 1961.

STEARNS' ELECTRIC BRAND

Applicant disclaims exclusive right to the word "Brand" apart from the mark as shown. Owner of Reg. Nos. 60,395, 144,063, and 304,350.
For Rat and Roach Paste.
First use 1893.

SN 142,954. Henry P. Korn, New York, N.Y. Filed Apr. 24, 1962.

NUTRAN

For Chemical Preparations for Preparing and/or Retouching Printing Plates.
First use June 6, 1940.

SN 154,380. Standard Chemical Products, Inc., Hoboken, N.J. Filed Oct. 2, 1962.

STANDAPON

Owner of Reg. Nos. 400,110 and 553,979.
For Softeners, Dyeing Assistants, Dispersing Agents, Wetting Agents, and Scouring Agents.
First use Jan. 7, 1954.

SN 154,856. Sandura Company, Jenkintown, Pa. Filed Oct. 9, 1962.

VINYLWELD

For Solvent for Fusing the Seams and Repairing the Surface of Vinyl Wall, Floor and Table Top Covering Material.
First use Sept. 25, 1962.

SN 157,080. Crystal Research Laboratories, Inc., Hartford, Conn. Filed Nov. 13, 1962.

CRYSTAL-AIRE

For Odor Absorbers.
First use July 31, 1962.

SN 157,990. Firmenich Incorporated, New York, N.Y. Filed Nov. 27, 1962.

INVARIA

For Essential Oils.
First use Jan. 20, 1928.

SN 157,991. Firmenich Incorporated, New York, N.Y. Filed Nov. 27, 1962.

POLYONE

For Essential Oils.
First use Jan. 20, 1928.

SN 158,471. Lee Patten Seed Company, Jersey City, N.J. Filed Dec. 4, 1962.

PATCO'S
LAWN MEDIC

Owner of Reg. Nos. 680,987, 736,220, and 748,936.
For Lawn Fungicide.
First use Sept. 19, 1962.

SN 158,875. Thuron Industries, Inc., Dallas, Tex. Filed Dec. 10, 1962.

THURON

For Insecticides.
First use Nov. 28, 1962.

SN 161,840. Spectra Biologicals, Incorporated, East Brunswick, N.J. Filed Jan. 29, 1963.

COATAGEN

For Diagnostic Blood Reagent for Laboratory Use.
First use Jan. 21, 1963.

SN 162,005. Mineral Industries, Inc., Chicago, Ill. Filed Feb. 4, 1963.

PEAK

Owner of Reg. Nos. 389,040, 665,242, and others.
For Anti-Freeze Solutions.
First use Jan. 15, 1941.

SN 162,398. American Cyanamid Company, Wayne, N.J. Filed Feb. 11, 1963.

CYANALOC

Owner of Reg. Nos. 587,090, 679,831, and others.
For Chemical Grout.
First use Oct. 1, 1962.

SN 162,688. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 4, 1963.

TINOXON

Owner of Reg. Nos. 401,597 and 451,874.
For Antioxidant.
First use Jan. 9, 1963.

SN 162,913. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories, Stamford, Conn. Filed Feb. 18, 1963.

UCG-TEST

For Diagnostic Reagent for Laboratory Use.
First use Oct. 10, 1962.

SN 164,244. Hercules Powder Company, Wilmington, Del. Filed Mar. 8, 1963.

HERBAN

For Herbicides.
First use Feb. 28, 1963.

Class 10 — Fertilizers

SN 133,157. Walter Jost, Metalldünger G.m.b.H., Iserlohn, Germany. Filed Dec. 1, 1961.



The word "Metallegierungsdünger" is hereby disclaimed apart from the mark as shown. The translation of "Metallegierungsdünger" is "metal alloy fertilizer." Owner of German Reg. No. 753,870, dated Oct. 18, 1961.
For Metal Alloy Fertilizer.

Class 11 — Inks and Inking Materials

SN 158,661. Kyros Corporation, Madison, Wis. Filed Sept. 20, 1962.

KY-READ

For Liquid Ink for Marking Message Areas of Recording Media.
First use Aug. 18, 1962.

Class 12 — Construction Materials

SN 118,047. Bolidens Gruvaktiebolag, Stockholm, Sweden. Filed Apr. 18, 1961.

BOLIDENTREATED

For Wood and Wood Products Which Have Been Treated With Wood Preservatives, Insecticides, and Fungicides.
First use 1948; in commerce Dec. 15, 1948.

SN 141,492. Big Horn Gypsum Company, Salt Lake City, Utah. Filed Apr. 4, 1962.

"CUSHION EDGE"

For Gypsum Wallboard Having Beveled Edges.
First use Feb. 12, 1962.

SN 147,477. Lewis Manufacturing Company, Bay City, Mich. Filed June 22, 1962.

LIBERTY

Owner of Reg. No. 218,081.
For Manufactured Homes and Buildings.
First use on July 8, 1924.

SN 157,025. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Nov. 9, 1962.

OCTA-VOID

union camp

Owner of Reg. Nos. 659,563 and 659,564.
For Corrugated Paperboard Forms for Creating Voids in Precast Concrete Beams and Slabs for Construction of Bridges, Buildings and Like Structures.
First use Apr. 28, 1962.

SN 157,026. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Nov. 9, 1962.

OCTA-VOID

For Corrugated Paperboard Forms for Creating Voids in Precast Concrete Beams and Slabs for Construction of Bridges, Buildings and Like Structures.
First use Apr. 28, 1962.

SN 162,516. Werner A. Wulf, d.b.a. Cranco Industries, Detroit, Mich. Filed Feb. 11, 1963.

BRAK-BOND

For Building Materials—Namely, Masonry Control Joint Elements, Relieving Joint Elements, Weatherproof Expansion-Contraction Seals and Gaskets, Made From Compressible Materials Such as Corrugated Paper Sections Adapted for Insertion Between Rigid Structural Members and Between Such Materials and Mortar Keys.
First use Oct. 10, 1958.

SN 162,517. Werner A. Wulf, d.b.a. Cranco Industries, Detroit, Mich. Filed Feb. 11, 1963.

CORRU-CELL

For Building Materials—Namely, Masonry Control Joint Elements, Relieving Joint Elements, Weatherproof Expansion-Contraction Seals and Gaskets, Made From Compressible Materials Such as Corrugated Paper Sections Adapted for Insertion Between Rigid Structural Members and Between Such Materials and Mortar Keys.
First use Aug. 19, 1960.

SN 162,556. Jamison Cold Storage Door Company, Hagerstown, Md. Filed Feb. 12, 1963.

MANUAL MARK II

For Cold Storage Doors.
First use Nov. 1, 1962.

SN 162,654. Overhead Door Corporation, Hartford City, Ind. Filed Feb. 13, 1963.

TODCO

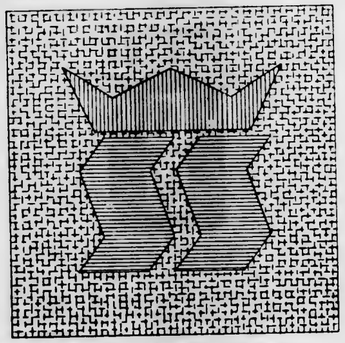
For Upward-Acting Doors and Door Sections, Hardware Fixtures, Parts, Mechanisms and Equipment for Embodiment in Such Doors or Use in Connection Therewith, Including Electrical and Other Automatic Devices (Known as Door Operators) for Operating Such Doors.
First use Sept. 21, 1962.

SN 162,664. Richmond Screw Anchor Co., Inc., Brooklyn, N.Y. Filed Feb. 13, 1963.

Richmond
SCREW ANCHOR CO., INC.
INSIST ON RICHMOND
...AND BE SURE!

Owner of Reg. Nos. 594,423 and 371,282.
For Engineered Tying Devices, Anchorages, Inserts, Accessories and Supports for Concrete Constructions.
First use on or about Jan. 13, 1954.

SN 162,794. Superior Sales Co., Fort Worth, Tex. Filed Feb. 14, 1963.



The drawing is lined for red, blue, and gold.
For Tier Windows and Doors Having Metal Frames Including Windows and Doors Having Metal Frames for House Trailers.
First use in June 1957.

SN 163,133. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 20, 1963.

Coronado

For Swimming Pools.
First use Feb. 1, 1962.

SN 163,134. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 20, 1963.

Aqualine

For Swimming Pools.
First use Aug. 2, 1961.

SN 163,135. Doughboy Industries, Inc., New Richmond, Wis. Filed Feb. 20, 1963.

Royal Coronado

For Swimming Pools.
First use Feb. 1, 1962.

SN 163,480. Hasche Engineering Company, Johnson City, Tenn. Filed Feb. 26, 1963.

HASCHE

Owner of Reg. Nos. 608,497 and 643,403.
For Heat Regenerative Tiles or Bricks.
First use July 20, 1955.

SN 163,531. Clopay Corporation, Cincinnati, Ohio. Filed Feb. 27, 1963.

CLOPAY PVC PANEL

For Plastic Building Panels.
First use Mar. 1, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 138,519. Mid-American, Inc., Minneapolis, Minn. Filed Feb. 23, 1962.

SEALETTE

For Frying Pans, Sauce Pans, Roasters, Steamer Double-Boiler Units, Cake Pans, Pie Pans, Mixing Bowls, Cookie Sheets.
First use June 15, 1961.

SN 140,032. Mirra-Cote, Inc., El Segundo, Calif. Filed Mar. 16, 1962.

MIRRA-COTE

For Cabinet and Bathroom Hardware and Fixtures.
First use on or about Sept. 15, 1951.

SN 142,561. Rubbermaid Incorporated, Wooster, Ohio. Filed Apr. 18, 1962.



Owner of Reg. Nos. 726,892 and 735,033.
For Kitchen and Household Articles Made of Rubber Composition, Rubber-Like Composition, Plastic Composition or Such Compositions Combined With Metal—Namely, Mats and Pads, Trays, Shelf Coverings, Sink Racks and Glass and China Handling Racks, Dish Pans, Sink Stoppers, Pet Feeding Dishes, Sink Strainers, Plate and Bowl Scrapers, Dust Pans, Soap Dishes, Butter Dishes, Salad Molds, Silverware Cups and Drainers, Silverware Baskets, Dishwasher Baskets, Covered Containers, Mixing Bowls, Tissue Dispensers, Drawer Dividers, Cutlery Trays, Baby Baths, Dish Drainers, Desk Trays.
First use Oct. 26, 1960.

SN 142,881. Western Brass Works, Los Angeles, Calif. Filed Apr. 23, 1962.

RAIN TROL

For Agricultural Irrigators or Sprinklers.
First use on or about May 25, 1955.

SN 146,538. United Co-Operatives, Inc., Alliance, Ohio. Filed June 6, 1962.

CASCADE

For Animal Water Bowls for Attaching to a Water Line.
First use at least as early as on or about Nov. 28, 1960.

SN 146,624. Donald A. Henrikson, d.b.a. Beeco Products, Warren, Mich. Filed June 11, 1962.

BEECO

For Hangers for Tools and the Like.
First use July 6, 1961.

SN 148,198. Johnstone & Associates, Inc., Kalamazoo, Mich. Filed July 2, 1962.

WONDERSPAN

For Arched Supports Anchored at Each End for Display Advertising.
First use on or about Apr. 6, 1960.

SN 151,635. Stephen A. Young Corporation, Flora, Ind. Filed Aug. 21, 1962.

LEO-LINE

For Plumbing Fixtures—Namely, Tub Fillers Including Valve Body Units, Handles, Escutcheons, Spouts, Diverter Bath and Shower Valves, Diverter Tub and Shower Spouts, Shower Heads, Over-Rim Spouts, Plain Shower Valves, Sink Faucets, Lavatory Drains, Lavatory Faucets, Bath Faucets, Trip-Lever Drains, Bibbs and Stops, and Parts Therefor—Namely, Handles, Flanges, Stems, Bonnets, Renewable Seats, Nipples, Lift Rods, Waste T's, Slip Nuts, Canoples, Shower Arms and Sink Faucet Spouts.
First use in or about August 1962.

SN 153,774. Kimbro Manufacturing Corporation, South San Gabriel, Calif. Filed Sept. 24, 1962.

FAUCET-MASTER

For Self Adjusting Faucet Stems and Faucet Seating Tools.
First use Aug. 31, 1962.

SN 154,201. Bernz O Matic Corporation, Rochester, N.Y. Filed Oct. 1, 1962.

BERNZ O MATIC

Owner of Reg. Nos. 587,281 and 593,884.
For Lawn Sprinklers.
First use November 1951.

SN 156,112. General Panel Corporation, Fort Myers, Fla. Filed Oct. 29, 1962.

KLEEN-JON

For Portable Cabana Toilets.
First use Oct. 1, 1962.

SN 156,830. Speakman Company, Wilmington, Del. Filed Nov. 7, 1962.

SHOWERPAC

For Unitary Shower Installation Including Soap Dish, Mixing Valve and Showerhead, and a Unitary Shower Installation Including Mixing Valve and Shower Head.
First use prior to Oct. 4, 1962.

SN 156,867. Eaton Manufacturing Company, Cleveland, Ohio. Filed Nov. 8, 1962.

TORQTITE

For Fasteners.
First use May 9, 1962.

SN 156,903. Rud-Kettenfabrik Rieger & Dietz, Unterkochen, Wuerttemberg, Germany. Filed Nov. 8, 1962.

RUD

For Chains, Especially Nonskid Chains, Including Caterpillar Chains, Conveyer Chains, Towing Chains, Scaffolding Chains, Block Chains, and Anchor Chains; Parts of Metal Molds, Chain Hooks, Shortening Claws, Chain Tensioning Devices, Chain Locks, and Chain Couplings, Threaded Spindle Tensioning Devices, Yokes and Ropes for Attaching Nonskid Chains, Sprockets for Chain Drives; Proof-Coil Chains, A-Link Chains.
First use in or about March 1943; in commerce in or about December 1955.

SN 156,930. American Brake Shoe Company, New York, N.Y. Filed Nov. 9, 1962.

Jet-Pipe

For Valves.
First use May 25, 1962.

SN 157,140. Punch-Lok Company, Chicago, Ill. Filed Nov. 13, 1962.

4 O

For Clamps for Air-Brake and Air-Signal Hoses.
First use Mar. 16, 1955.

SN 157,214. General Pump Corporation, Miami, Fla. Filed Nov. 14, 1962.

RESITONE

For Water Pumps and Water Pump Fittings.
First use Sept. 12, 1962.

SN 157,293. Leonard Di Napoli, New Hyde Park, N.Y. Filed Nov. 15, 1962.

"STOPPO"

For Emergency Stopper for Showers and Faucets.
First use August 1956.

SN 157,398. National Manufacturing Co., Sterling, Ill. Filed Nov. 16, 1962.

National OF STERLING ILLINOIS

Owner of Reg. Nos. 315,086, 318,727, and 318,728.
For Builders' Hardware—Namely, Shelf Standards and Sliding Door Hardware Sets.
First use Nov. 7, 1962.

SN 157,754. The American Well Works, Aurora, Ill. Filed Nov. 23, 1962.

MULTI-FLO

For Sewage Discharge Nozzles.
First use December 1961.

SN 158,756. Western Newell Mfg. Co., Freeport, Ill. Filed Dec. 7, 1962.

Anco

For Wall Screw Anchors, Sheet Metal Screws, and Drapery Hardware and Accessories—Namely, Pole Rings, Clip Rings, Cord Pulleys, and Drapery Hooks.
First use in or about September 1961.

SN 158,761. Adams Pipe Repair Products, South El Monte, Calif. Filed Dec. 10, 1962.

FULL SEAL

For Pipe Clamps.
First use November 1958.

SN 158,836. M. & J. Valve Company, Houston, Tex. Filed Dec. 10, 1962.

SNAP-IN-SEAL

For Valves for Gases and Liquids and Parts Thereof.
First use Oct. 19, 1962.

SN 158,885. E. B. Wiggins Oil Tool Company, Inc., Los Angeles, Calif. Filed Dec. 10, 1962.

DL

For Tubing Connectors.
First use Apr. 20, 1962.

SN 158,939. Seaton-Wilson Manufacturing Company, Burbank, Calif. Filed Dec. 11, 1962.

ZERO-AIRE

For Couplings for Fluid Lines.
First use in June 1959.

Class 15—Oils and Greases

SN 135,872. California Texas Oil Corporation, New York, N.Y., assignee of Caltex Oil Products Company, Dover, Del. Filed Jan. 16, 1962.

CALTEX

The drawing is lined for red. Owner of Reg. No. 389,374.
For Jet Fuel, Gasoline, Diesel Fuel, and Fuel Oil.
First use at least as early as June 21, 1948.

SN 135,873. California Texas Oil Corporation, New York, N.Y., assignee of Caltex Oil Products Company, Dover, Del. Filed Jan. 16, 1962.

CALTEX

Owner of Reg. No. 389,374.
For Jet Fuel, Gasoline, Diesel Fuel, and Fuel Oil.
First use at least as early as June 21, 1948.

Class 16—Protective and Decorative Coatings

SN 114,057. George E. Fines, Inc., Detroit, Mich. Filed Mar. 1, 1961.

EPO LIQUID

The color lining is to indicate shading and does not appear for the purpose of indicating color. The word "Liquid" is disclaimed apart from the mark as shown.
For Multi-Purpose, Corrosion Resistant, Protective and Decorative Coatings for Concrete, Metallic, Masonry, Wood, and Other Surfaces.
First use Sept. 14, 1960.

SN 120,144. Robert Mathew Stephenson, d.b.a. Stephenson Air Brush Paint Co., Oakland, Calif. Filed May 16, 1961.

DECO SHIELD

For Liquefiable Waterproof Coatings for Spraying on Surfaces.
First use August 1959.

SN 138,855. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 1, 1962.

BUXI

For Paint.
First use Nov. 15, 1961.

SN 140,429. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed Mar. 22, 1962.

DRIVEWAY MAGIC

The word "Driveway" is disclaimed apart from the mark as shown.
For Plastic Liquid Coating for Outdoor Asphalt Surfaces.
First use March 1961.

SN 147,553. Con-Lux Paint Corporation, Metuchen, N.J. Filed June 25, 1962.

CON-LUX

For Paint, Enamel, and Varnish for Industrial Maintenance Purposes.
First use Dec. 1, 1947, on paint.

SN 154,613. Lewis M. McGlincy, Lancaster, Pa. Filed Oct. 5, 1962.

LEWMAC

For Finishes for Wood and Metal—Namely, Paints, Varnishes, and Lacquers.
First use Apr. 20, 1960.

Class 17—Tobacco Products

SN 148,563. Petri Cigar Company, Clarksville, Tenn., assignee, by mesne assignments, of Altamore Brothers, Inc., Long Island City, N.Y. Filed July 9, 1962.

ASTORIA

For Cigars.
First use October 1946.

SN 148,564. Petri Cigar Company, Clarksville, Tenn., assignee, by mesne assignments, of Altamore Brothers, Inc., Long Island City, N.Y. Filed July 9, 1962.



The English translation of "Vittoria" is "victory."
For Cigars.
First use January 1930.

SN 153,489. Kristinus Kommanditgesellschaft, Munich, Germany. Filed Sept. 19, 1962.

KRISTINUS GLORIA

Owner of German Reg. No. 748,655, dated May 12, 1961; and U.S. Reg. Nos. 730,958 and 730,959.
For Raw Tobacco, Smoking Tobacco, Cigarettes, Cigarillos, Cigars, and Cigarette Paper.

SN 161,544. Philip Morris Incorporated, New York, N.Y. Filed Jan. 28, 1963.

CHARCRON

For Filters for Cigarettes Sold Incorporated as Part of the Cigarettes.
First use Jan. 23, 1963.

Class 18—Medicines and Pharmaceutical Preparations

SN 134,467. La Lanne Incorporated, Hollywood, Calif. Filed Dec. 21, 1961.



Applicant disclaims the phrase "Symbol of Quality" apart from the trademark "La Lanne." Owner of Reg. Nos. 704,521, 740,993, and others.
For Food Supplement Products—Namely, a Mineral and Vitamin Food Supplement, a Liver, Iron and Vitamin B_{12} Supplement, Protein Wafers, High Protein Food Supplement, Vitamin C Tablets, and a Food Supplement Sold in the Form of Desiccated and De-Fatted Whole Liver Tablets.
First use on about Apr. 10, 1961.

SN 137,476. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Feb. 7, 1962.

TGTR

For Thromboplastin Generation Test Reagents.
First use May 1958.

SN 138,110. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Feb. 16, 1962.

SEREQUIN

For Psycho-Therapeutic Agent.
First use Nov. 2, 1961.

SN 141,326. Manna Vita Food Products Corp., Sherman Oaks, Calif. Filed Apr. 2, 1962.

Manna Vita

For Dietary Food Supplements—Namely, Vitamins and Minerals.
First use Jan. 27, 1962.
Subj. to Intf. with SN 157,246.

SN 145,192. Kleen Chemical Manufacturing Company, Chicago, Ill. Filed May 22, 1962.

HAZEL*ICE

For Jelled Medicated Skin Lotion.
First use Dec. 15, 1961.

SN 151,125. Clay-Adams, Inc., New York, N.Y. Filed Aug. 14, 1962.



For Bacteriostatic, Silicone Spray Ointment Used To Protect, Soothe, and Lubricate the Skin.
First use on or about Aug. 10, 1962.

SN 153,977. Ormonoterapia Richter S.p.A., Milan, Italy. Filed Sept. 26, 1962.

AMBEZIM

Owner of Italian Reg. No. 133,948, dated Dec. 7, 1957.
For Medical Preparations for Internal Use, Containing Trypsin or Chymotrypsin.

SN 155,326. Palmedico, Inc., Columbia, S.C. Filed Oct. 17, 1962.

MEDITUSSIN

For Antitussive Antihistaminic Expectorant.
First use Sept. 4, 1959.

SN 155,808. Kellogg Company, Battle Creek, Mich. Filed Oct. 24, 1962.

KEL-AID

For Medicated Feed Supplement for the Prevention and Control of Bacterial Diarrheas and Enteritis in Fur Bearing Animals.
First use July 31, 1962.

SN 156,697. The Warren-Teed Products Company, Columbus, Ohio. Filed Nov. 5, 1962.

GASTONASE

For Preparation for Human Use To Combat Excess Gas.
First use Oct. 22, 1962.

SN 156,974. The G. F. Harvey Company, Inc., Yonkers, N.Y. Filed Nov. 9, 1962.

OZETTES

For Pharmaceutical Preparation for Vaginal Use.
First use June 10, 1941.

SN 157,775. Helene Curtis Industries, Inc., d.b.a. Curtis Pharmacals, Chicago, Ill. Filed Nov. 23, 1962.

ENZIT

For Tablet Containing Acid Neutralizing and Enzyme Ingredients Relieving Indigestion.
First use on or about Oct. 18, 1962.

SN 157,904. Hefa G.m.b.H., Chemisch-Pharmazeutische Fabrik, Werne an der Lippe, Germany. Filed Nov. 26, 1962.

HEPADERM

Owner of German Reg. No. 757,372, dated Jan. 23, 1962.
For Medicine—Namely, Dermatologic Preparations for Skin and Wound Treatment.

SN 160,036. Bates Laboratories, Inc., Chicago, Ill. Filed Jan. 2, 1963.

OSKI

For Pharmaceutical and Vitamin Preparations.
First use on or about Aug. 2, 1962.

SN 160,037. Bates Laboratories, Inc., Chicago, Ill. Filed Jan. 2, 1963.

JARUS

For Pharmaceutical and Vitamin Preparations.
First use July 1956.

SN 160,109. Geigy Chemical Corporation, Ardsley, N.Y. Filed Jan. 3, 1963.

SEFLENYL

For Hypnotic.
First use Dec. 17, 1962.

SN 160,110. Geigy Chemical Corporation, Ardsley, N.Y. Filed Jan. 3, 1963.

GISPITOL

For Antidepressant Preparation.
First use Dec. 17, 1962.

SN 160,208. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 4, 1963.

NITREDIXIN

For Cardiovascular Antihypertensive.
First use Dec. 17, 1962.

SN 160,277. Drug Development Corporation, Brooklyn, N.Y. Filed Jan. 7, 1963.

COUGH-EX

For Cough Medicine.
First use Apr. 1, 1955.

SN 160,309. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 7, 1963.



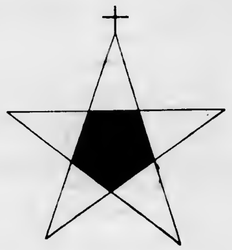
Owner of Reg. Nos. 129,544, 732,890, and others.
For Drugs, Medicinal and Pharmaceutical Preparations for Human and Veterinary Use.
First use as early as August 1961.

SN 160,815. Provident Pharmaceuticals, Incorporated, Chattanooga, Tenn. Filed Jan. 7, 1963.

NAUTROL

For Ethical Pharmaceutical Preparation in Rectal Insert Form Combining Antihistaminic and Sedative Action for Prevention and Control of Nausea and/or Vomiting.
First use Nov. 27, 1962.

SN 160,331. Samuel Skory, Fort Wayne, Ind. Filed Jan. 7, 1963.



For Salve for Relief of Pain of Arthritis and Rheumatism.
First use Apr. 3, 1962.

SN 160,481. Manos Pharmaceuticals, Inc., d.b.a. Manos Pharmaceuticals, Seattle, Wash. Filed Jan. 9, 1963.

TRILAK

For Medical Preparation—Namely, Antacid Tablets.
First use Aug. 21, 1962.

SN 160,573. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

MIST AWAY

For Medicated Room Vaporizer.
First use Dec. 18, 1962.

SN 160,577. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

R. D.-1

For Medicated Room Vaporizer.
First use Dec. 18, 1962.

SN 160,579. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

M.D.-12

For Medicated Room Vaporizer.
First use Dec. 18, 1962.

SN 160,814. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 16, 1963.

MEDROLATE

Owner of Reg. Nos. 657,022, 707,725, and 739,932.
For Tranquilizer-Steroid Compound To Reduce Inflammation and To Relax the Muscles at the Site of the Inflammation.
First use Nov. 15, 1962.

SN 160,969. The Purdue Frederick Company, New York, N.Y. Filed Jan. 18, 1963.

GLYCYL

For Anti-Inflammatory Pharmaceutical Preparation.
First use Dec. 17, 1962.

SN 161,064. Key Pharmaceuticals, Inc., Miami, Fla. Filed Jan. 21, 1963.

KEOXIN

For Cardiotonic Agent—Namely, Digoxin Tablets.
First use December 1962.

SN 162,065. American Cyanamid Company, Wayne, N.J. Filed Feb. 5, 1963.

MELMYCIN

For Antibiotic.
First use Jan. 22, 1963.

SN 162,612. American Druggists Syndicate, Inc., Elizabeth, N.J. Filed Feb. 13, 1963.

DENT-EZE

For Teething and Toothache Ointment.
First use 1954.

SN 163,008. Wayne-Ferrell Pharmaceuticals, Inc., Iowa City, Iowa. Filed Feb. 18, 1963.

SIL-OPHTHO

For Special Viscosity Sterile Silicone Oil Used as a Lubricant for Prosthesis.
First use Jan. 10, 1961.

SN 163,263. Pharmex Incorporated, Chicago, Ill. Filed Feb. 21, 1963.

BEFOR

For Digestive Enzyme Tablets.
First use Feb. 12, 1963.

SN 163,375. Lambert-Kay, Incorporated, Los Angeles, Calif. Filed Feb. 25, 1963.

CORTISYNTH

For Cortisone Ointment for Animal Skin Problems for Dogs and Cats.
First use May 18, 1962.

SN 163,487. Novocol Chemical Mfg. Co., Inc., Brooklyn, N.Y. Filed Feb. 26, 1963.

MICRO-CIDE

For Bacteriocide for Use in Dental Root Canal Therapy and Periodontal Disease.
First use Mar. 26, 1959.

SN 164,543. Merck & Co., Inc., Rahway, N.J. Filed Mar. 13, 1963.

COSMEGEN

Owner of Reg. No. 604,749.
For Medicinal Preparation for Use as an Antineoplastic Agent.
First use Feb. 20, 1963.

SN 164,815. Helene Curtis Industries, Inc., d.b.a. Curtis Pharmacals, Chicago, Ill. Filed Mar. 18, 1963.

REGS

For Laxative Preparation for Relief of Constipation.
First use on or about Jan. 23, 1963.

Class 19—Vehicles

SN 120,011. The Ryan Aeronautical Co., San Diego, Calif. Filed May 15, 1961.

RYAN FLEX WING

Exclusive property in the words "Flex" and "Wing," apart from the mark, is disclaimed. Owner of Reg. No. 568,415.
For Aircraft, Particularly Flight Vehicles With Wing Structure Combining Parachute and Glider Characteristics.
First use on or about Feb. 10, 1961.

SN 126,075. Berg Mfg. & Sales Co., Chicago, Ill. Filed Aug. 16, 1961.

YOUR ASSURANCE OF THE BEST IS BERG

For Equipment for the Transportation Industry—Namely, Automotive Brake Operating Cylinders, Automotive Brake Controls, Automotive Brake Pressure Systems and Parts and Accessories Therefor, Such as Pressure Conduits, Conduit Supports, Clamps, Valves, Reservoirs, Brake Slack Adjusters, and Control Levers.
First use 1947.

SN 138,482. Fairchild Stratos Corporation, Hagerstown, Md. Filed Feb. 23, 1962.

FAIRCHILD STRATOS

Owner of Reg. Nos. 265,501, 624,419, and 682,249.
For Aircraft and Parts Therefor.
First use Nov. 4, 1961, on aircraft.

SN 149,279. General Motors Corporation, Detroit, Mich. Filed July 18, 1962.

HOVAIR

For Air Support Devices for Wheelless Transportation.
First use Jan. 8, 1962.

SN 164,558. Piasecki Aircraft Corporation, Philadelphia, Pa. Filed Mar. 13, 1963.

RING-TAIL

For Aircraft.
First use Mar. 1, 1962.

SN 164,582. United States Steel Corporation, Pittsburgh, Pa. Filed Mar. 13, 1963.

THERM-O-TEMP

For Railway Tank Cars.
First use Feb. 14, 1963.

SN 164,610. Frederick D. Culp, d.b.a. Gregory Manufacturing Company, Fort Worth, Tex. Filed Mar. 14, 1963.

AIR-FLO

For Pick-Up Coaches, Travel Trailers, and Mobile Homes.
First use during April 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 106,259. Hogan Faximile Corporation, New York, N.Y. Filed Oct. 12, 1960.



Owner of Reg. No. 702, 390.
For Visual Read Out Recorders and Accessory Apparatus Therefor—Namely, Facsimile Transmitters and Recorders, Graphic Recording Instruments Actuated by an Electric Input Signal, Densitometers as for Rapidly Scanning Microfilm for Determining the Absolute Density of Both Background and Fine Lines, and Recording Paper To Be Used With Said Recorders.
First use in December 1959.

SN 118,631. Torei Kogyo Co. Ltd., Ohta-Ward, Tokyo, Japan. Filed Apr. 4, 1961.

PIXY

Priority claimed under Sec. 44(d) on Japanese application filed Oct. 18, 1960, Reg. No. 591,114, dated June 28, 1962.
For Electrically Driven Beverage Shaker.

SN 118,796. Mallory Electric Corporation, Detroit, Mich. Filed Apr. 27, 1961.



For Ignition Coils for Internal Combustion Engines.
First use Mar. 22, 1961.

SN 119,149. Radio Shack Corporation, Boston, Mass. Filed May 2, 1961.

ELECTROSTAT

Owner of Reg. Nos. 700,068 and 700,069.
For Loud Speakers, Particularly for Hi-Fi Sets.
First use Aug. 1, 1958.

SN 121,449. Wabash Magnetics, Inc., Wabash, Ind. Filed June 5, 1961.



For Electrical Coils.
First use May 5, 1961.

SN 125,075. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed July 31, 1961.

SIGNATURE

For Electrical Appliances, to wit: Coffeemakers, Toasters, Mixers, Blenders, Grills, Waffle Irons, Fryers, Rotisseries, Corn Poppers, Broilers, Floor Polishers, Frying and Cooking Pans, Irons, Dishwashers and Dishdriers.
First use Jan. 1, 1958, on electric coffeemakers.

SN 131,325. Allied Precision Industries, Inc., Geneva, Ill. Filed Nov. 6, 1961.



For Electric Room Heaters of the Baseboard Type, Electric Room Heaters of the Wall Mounted Type, and Electric Room Heaters Utilizing Glass Heat Radiating Panels.
First use Oct. 25, 1961; 1949 as to the letters API.

SN 139,647. Marconi's Wireless Telegraph Company Limited, London, England. Filed Mar. 12, 1962.

MARCONI

Owner of Reg. Nos. 626,852 and 665,325.
For Television Receivers, Radio Broadcast Receivers, Combination Radio Receivers-Record Players, Combination Radio Receivers-Television Receivers-Record Players, and Parts of the Aforesaid Goods.
First use July 14, 1961; in commerce July 14, 1961.

SN 143,777. Vitalic Battery Company, Inc., Dallas, Tex. Filed May 8, 1962.

POCKET PLATE

The word "Plate" is disclaimed apart from the mark.
For Storage Batteries.
First use Apr. 17, 1962.

SN 144,314. Berko Electric Manufacturing Corp., Jamaica, N.Y. Filed May 11, 1962.

JAMAICA

For Electric Heating Devices—Namely, Strips, Heat Bands, Cables, Grids and the Like.
First use August 1961.

SN 145,369. JFD Electronics Corporation, Brooklyn, N.Y. Filed May 24, 1962.

AAA+ GOLD BOND

No claim is made to the notation "AAA+" apart from the mark as shown.
For Television Antennas.
First use May 7, 1962.

SN 147,194. Elox Corporation of Michigan, Troy, Mich. Filed June 19, 1962.

ECON-O-TRONIC

For Machine Tools for Machining Conductive Metal Workpieces by the Process of Spark Erosion.
First use on or about Jan. 17, 1962.

SN 147,247. Elizabeth Wendt, d.b.a. Robotronic Research and Development Company, Los Angeles, Calif. Filed June 19, 1962.

ROBOTROL

For Electrically Operated Traffic Signals.
First use Sept. 18, 1961.

SN 147,867. Texas Instruments Incorporated, Dallas, Tex. Filed June 27, 1962.



No registration rights are claimed for the word "Line" apart from the mark as shown.
For Thermostatic Electrical Switches, Electrical Switches for Motor Protection, and Kits for Thermostatic Electrical Switches and for Electrical Switches for Motor Protection.
First use on or before May 1, 1962.

SN 150,566. Knapp Monarch Co., St. Louis, Mo. Filed Aug. 6, 1962.

VOLTRONIC

For Electronic Air Purifiers.
First use Aug. 1, 1961.

SN 151,075. Phelps Dodge Copper Products Corporation, New York, N.Y. Filed Aug. 13, 1962.

TITEBILT

For Electric Wire and Cable.
First use June 11, 1940.

SN 152,374. California Magnetic Control Corporation, North Hollywood, Calif. Filed Sept. 4, 1962.

CALMAG

For Components of Electrical and Electronic Systems—Namely, Transformers, Reactors, Magnetic Amplifiers, Power Supplies, Discriminators, and Filters.
First use Oct. 16, 1952.

SN 153,015. Numerical Control Corporation, San Diego, Calif. Filed Sept. 12, 1962.



The drawing is lined for red.
For Industrial Power Electric Switch.
First use Jan. 23, 1962.

SN 154,683. Basic Products Corporation, Milwaukee, Wis. Filed Oct. 8, 1962.

SOLATRON

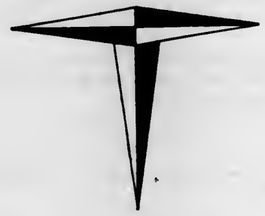
Owner of Reg. Nos. 547,029 and 728,209.
For Electric Line Voltage Regulators.
First use Apr. 26, 1962.

SN 155,500. Gro-Wel Fish-Ade Co., Inc., New York, N.Y. Filed Oct. 19, 1962.

SWIRL-AWAY

For Electrical Vacuum Aquarium Cleaners and Disposable Filter Bags Therefor.
First use Oct. 4, 1962.

SN 167,426. Trygon Electronics, Inc., Roosevelt, N.Y. Filed Apr. 23, 1963.



Owner of Reg. No. 745,094.
For Electrical Equipment—Namely, Power Supplies.
First use on or about Mar. 15, 1963.

Class 22 — Games, Toys, and Sporting Goods

SN 132,628. Berkley & Company, Inc., Spirit Lake, Iowa. Filed Nov. 24, 1961.



For Monofilament Nylon Line.
First use November 1960.

SN 135,541. J. Swedlin, Inc., d.b.a. Gund Mfg. Co., New York, N.Y. Filed Jan. 10, 1962.



Owner of Reg. Nos. 392,882 and 441,879.
For Stuffed Toys in Simulation of Animals.
First use Dec. 5, 1957.

SN 135,542. J. Swedlin, Inc., d.b.a. Gund Mfg. Co., New York, N.Y. Filed Jan. 10, 1962.



Owner of Reg. Nos. 392,882 and 441,879.
For Stuffed Toys in Simulation of Animals.
First use Feb. 18, 1957.

SN 139,686. Erwin J. Schosser and Diana May Schosser, d.b.a. Diana Import Co. and also d.b.a. Diana of San Francisco, San Francisco, Calif. Filed Mar. 12, 1962.



DIANA

For Doll Furniture, Miniature Equipment for Doll Houses, and Doll Houses.
First use Nov. 16, 1960.

SN 140,273. Mag-Powr Games, Inc., Sausalito, Calif. Filed Mar. 20, 1962.

CATTLE ROUND UP

For Game Board With Magnetic Player Pieces and Control Wands.
First use Feb. 28, 1962.

SN 141,725. Grayle Howlett, d.b.a. Grayand Sports Enterprises, Cleveland, Ohio. Filed Apr. 6, 1962.

PREDICT-A-PLAY

For Equipment Sold as a Unit for Playing Baseball and/or Football Games Along With Actual Games Broadcast on Television and Radio.
First use Apr. 3, 1962.

SN 144,877. Pescador, Inc., Miami, Fla. Filed May 17, 1962.

TROL-A-WAY

For Outrigger Fishing Float.
First use May 4, 1962.

SN 152,987. The Dayton Company, Minneapolis, Minn. Filed Sept. 12, 1962.

GOPHER

For Outdoor Sleeping Bags.
First use June 27, 1954.

SN 155,120. Horrocks-Ibbotson Company, Utica, N.Y. Filed Sept. 18, 1962.



The representation of the male figure is fanciful. Owner of Reg. No. 438,913.

For Fishing Rods and Poles, Fishing Reels, Fishing Lines, Hooks, Sinkers, Artificial Fish Bait, Floats, Flies, Bait Boxes, Leaders, Fish Nets, Spinners, Fishing Spears, and Fishing Flies.
First use Jan. 1, 1945.

SN 156,267. Cadaco-Ellis, Inc., Chicago, Ill. Filed Oct. 31, 1962.

MA-FU

Cadaco

Owner of Reg. No. 716,799.
For Apparatus for Playing Parlor Games.
First use Oct. 15, 1962.

SN 157,642. Playtime Products, Inc., Warsaw, Ind. Filed Nov. 20, 1962.

PLAYTIME

Owner of Reg. No. 723,535.
For Tents.
First use Nov. 1, 1962.

SN 159,132. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed Dec. 13, 1962.

YUMMY-KISS

For Dolls.
First use in March 1962.

SN 159,297. George Arthur Strader, d.b.a. Dreamart, Sacramento, Calif. Filed Dec. 17, 1962.

DREAMART

For Picture Painting Kits and Replacement Parts, Such as Cans of Paint and Sheets of Paper.
First use Nov. 19, 1962.

SN 160,069. Parway Mfg. Co., Inc., Chicago, Ill. Filed Jan. 2, 1963.

PAR·PAK

For Golf Equipment, to-wit, Accessory Holder for Attachment to a Golf Cart Handle for Holding Golf Balls, Tees, Score Card, Pencil, and Cigarettes.
First use Feb. 21, 1955.

SN 160,250. Sears, Roebuck and Co., Chicago, Ill. Filed Dec. 10, 1962.

SPORTFLITE

For Water Skis.
First use Dec. 5, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 133,765. Clark Equipment Company, Buchanan, Mich. Filed Dec. 11, 1961.

LOAD GLIDE

For Air Film Material Handling Apparatus.
First use Nov. 8, 1961.

SN 137,633. J. & O. Industries, Berkeley, Calif. Filed Feb. 9, 1962.

AGRIHOE

For Hydraulically Operated Back-Hoe Attachment for Crawler Type Tractors.
First use Feb. 14, 1955.

SN 138,007. Ruben Farro, d.b.a. Diamond Art, New York, N.Y. Filed Feb. 15, 1962.

DIAMOND ART

No claim is made to the word "Diamond" apart from the mark as shown.
For Hobby Diamond Engraving Tool.
First use Jan. 29, 1962.

SN 138,461. The Bruning Company, Lincoln, Nebr. Filed Feb. 23, 1962.

BRUNING

Owner of Reg. Nos. 561,716 and 598,149.
For Hydraulic and Pneumatic Valves, Cylinders and Quick-Disconnect Couplers.
First use July 8, 1958; Feb. 3, 1948, in another display.

SN 138,511. Lilliston Implement Company, Albany, Ga. Filed Feb. 23, 1962.

flyin' CLIPPER LILLISTON

Owner of Reg. No. 528,653.
For Rotary Cutters.
First use on or about Dec. 12, 1961.

SN 141,974. Norton Company, Worcester, Mass. Filed Apr. 10, 1962.

HOBLIQUE

For Gear Hobbing Machines.
First use Sept. 6, 1955.

SN 142,227. Sprayon Products, Inc., Bedford Heights, Ohio. Filed Apr. 13, 1962.

SPRAYON

For Liquid Spraying Devices.
First use Mar. 13, 1959.

SN 143,296. John W. Thompson, d.b.a. Thompson Equipment Machine Company, York, Pa. Filed Apr. 27, 1962.

TEMCO-VEYOR

For Conveyors.
First use Oct. 30, 1961.

SN 143,362. Henry Field Seed and Nursery Company, Shenandoah, Iowa. Filed Apr. 30, 1962.

POSY LANE

For Garden Tools Including Rakes, Hoes, Trowels, Shears and Cutters, Manually-Operated Garden Sprayers, Spray Guns and Attachments and Diggers.
First use Mar. 15, 1962, on trowels and cutters.

SN 143,418. Miracle Engineering & Mfg., Inc., Denver, Colo. Filed Apr. 30, 1962.

Miracle Aire

For Built-In Vacuum Cleaning Systems.
First use on or about Jan. 1, 1956.

SN 144,502. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed May 14, 1962.

AMERICAN LOOK

For Stainless Steel Flatware, Tableware, and Kitchen Cutlery, Utensils, and Tools.
First use May 2, 1962.

SN 148,789. Howard J. Blonde, d.b.a. Con-De Manufacturing Company, Sturgis, Mich. Filed July 11, 1962.

CON-DE

For Device for Repairing a Seal, Such as a Crankshaft Seal, in an Automotive Engine.
First use Apr. 12, 1961.

SN 148,800. E-Z Rake, Inc., Acton, Ind. Filed July 11, 1962.

E-Z RAKE

The word "Rake" is disclaimed apart from the mark as shown.
For Power Rake for Lawn Use.
First use May 8, 1962.

SN 148,809. Graymills Corporation, Chicago, Ill. Filed July 11, 1962.

CLEAN-O-MATIC

For Parts Washers.
First use Sept. 1, 1957.

SN 149,142. United Conveyor Corporation, Chicago, Ill. Filed July 16, 1962.

NUVA FEEDER

No claim is made to the use of the word "Feeder" alone. Owner of Reg. Nos. 408,161, 738,218, and others.
For Air Lock for Pneumatic Systems To Handle Comminuted Materials.
First use Oct. 23, 1959.

SN 150,444. Outboard Marine Corporation, Waukegan, Ill. Filed Aug. 3, 1962.

MAGNALITE

For Material Made Into Lawn Mower Housings.
First use Aug. 31, 1961.

SN 152,281. Chemetron Corporation, Chicago, Ill. Filed Aug. 31, 1962.

VOTATOR

Owner of Reg. No. 266,936.
For Machinery for Processing and Handling Materials in Fluid, Plastic, or Particulate Form Including Food Products Such as Ice Cream and Ices; Vegetable-Oil Compounds and Lard Substitutes; Manufacturing of Oleomargarine; Freezing of Fruit Juices and Purees; Heating and/or Cooling of Cheese Products, Starches, Eggs, Marshmallow, Meat Products, Peanut Butter, Pie Fillings, Soups, Strained Foods, Syrups, Condensed Milk Products, Wines and Vinegars; and Also Including the Crystallizing, Polymerizing, Heating and/or Cooling of Chemical and Industrial Products Such as Cosmetics, Drying Oils, Gelatins and Glues, Starches, Pastries, Greases, Paper Coatings, Printing Inks, Resins, Shaving Creams, Soaps, Gums, and Waxes; Conducting Chemical Reactions, Generally; Deodorizing, Bleaching, Hydrogenating, Winterizing and Refining Oils; and Further Including Pumping, Filling, Capping, Molding and Wrapping Equipment for the Previously Referred to Products.
First use June 14, 1929.

SN 152,581. Hugh Howard, Jr., d.b.a. Jet-Air Sprayers, Inc., Oklahoma City, Okla. Filed Sept. 6, 1962.

JET-AIR

For Pressure Operated Spraying Apparatus.
First use Apr. 15, 1962.

SN 152,637. Standard Precision Division of A-A Engineering Corp., South Gate, Calif. Filed Sept. 6, 1962.

ACCURIDE

For Precision Ball Bearing Slides.
First use July 19, 1962.

SN 153,263. Essick Manufacturing Company, Los Angeles, Calif. Filed Sept. 17, 1962.

ESSICK

Owner of Reg. No. 528,557.
For Concrete Mixers, Mortar and Plaster Mixers, Road Rollers, Vibrating Rollers, Portable and Stationary Air Compressors, Material Spreaders, Self-Priming Centrifugal Pumps, Weed and Pest Control Spray Units, Emulsion Sprayers, Hoists, Plaster Pumps, Cement Finishers, Asphalt Surface Heaters and Dredge Pumps.
First use Aug. 15, 1962; 1922 as to "Essick."

SN 153,302. Miehle-Goss-Dexter, Incorporated, Chicago, Ill. Filed Sept. 17, 1962.

GOSS Urbanite

Owner of Reg. No. 708,719.
For Printing Presses and Parts Thereof.
First use July 5, 1962.

SN 153,950. Gebr. Claas, Harsewinkel, Westphalia, Germany. Filed Sept. 26, 1962.



Owner of German Reg. No. 600,841, dated Aug. 23, 1950.
For Agricultural Machinery—Namely, Binders; Presses; Fertilizer Spreaders; Reapers; Threshers; Combines; Sowing Machines; and Parts of Said Machinery.

SN 154,201. Berns O Matic Corporation, Rochester, N.Y. Filed Oct. 1, 1962.

BERNZ O MATIC

Owner of Reg. Nos. 587,281 and 593,884.
For Tool Kits Containing Torches and Hand Tools Such as Tube Cutters and Scrapers.
First use November 1951.

SN 156,605. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Nov. 5, 1962.

OLD KENTUCKY HOME

For Stainless Steel Flatware, Tableware and Kitchen Cutlery, Utensils and Tools.
First use Oct. 8, 1962.

SN 156,814. Hyde Manufacturing Company, Southbridge, Mass. Filed Nov. 7, 1962.



For Putty Knives, Joint Knives, and Scrapers.
First use Aug. 1, 1962.

SN 156,880. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Nov. 8, 1962.

KENTUCKY MANSION

For Stainless Steel Flatware, Tableware and Kitchen Cutlery, Utensils and Tools.
First use Oct. 8, 1962.

SN 156,888. Kovostav Narodni Podnik, Usti nad Orlici, Czechoslovakia. Filed Nov. 8, 1962.

ARACHNE

Owner of Czechoslovakian Reg. No. 153,282, dated Jan. 31, 1958.
For Textile Machinery Including Knitting Machines and Parts Thereof.

SN 157,154. Selbsttätige Feuerlöschanlagen Gesellschaft Rud. Otto Meyer, Hamburg-Wandsbek, Germany. Filed Nov. 13, 1962.

S F H-DECOR

Owner of German Reg. No. 765,858, dated Sept. 13, 1962.
For Mouth-Pieces for the Extinguishing Substance of Automatic Fire Extinguishing Installations, Nozzles for Sprinklers, and Spray Flow Installations.

SN 157,280. J. Brooksbank Limited, Skipton, Yorkshire, England. Filed Nov. 15, 1962.

TWINCHECK

For Check Straps of Leather or Other Suitable Materials in Single or Laminated Form for Looms for Weaving, and Pieces or Sheets of Material for Fabricating Into Said Check Straps.
First use Sept. 26, 1962; in commerce Oct. 1, 1962.

SN 157,328. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed Nov. 15, 1962.

UNIGUARD

For Guards for Machine Tools and Parts Thereof.
First use May 18, 1962.

SN 157,950. Voith Getriebe K.G., Heidenheim (Brenz), Germany. Filed Nov. 26, 1962.

DIWAMATIC

Owner of German Reg. No. 751,029, dated July 19, 1961.
For Transmissions, Especially Fluid Flow Transmissions and Hydromechanical Compound Transmissions.

SN 157,951. Voith Getriebe K.G., Heidenheim (Brenz), Germany. Filed Nov. 26, 1962.

DIWABUS

Owner of German Reg. No. 627,309, dated Sept. 27, 1952.
For Power Transmissions—Namely, Motor Vehicle Transmissions; Fluid Flow Power Transmissions—Namely, Fluid Flow Transmissions, Hydromechanical Compound Transmissions.

SN 158,150. Jessie Edith Foley, d.b.a. The Amsbary Company, Aiken, S.C. Filed Nov. 29, 1962.

Skweezie

For Lemon Slice Squeezer.
First use Oct. 15, 1962.

SN 158,888. Western Machinery Company, San Francisco, Calif. Filed Dec. 10, 1962.

AGG-PREP

For Scrubbing and Washing Units.
First use Feb. 6, 1962.

SN 160,257. American Machine & Foundry Company, New York, N.Y. Filed Jan. 7, 1963.

AMF ICM

Owner of Reg. No. 707,997.
For Cigar Making and Handling Machinery and Accessories Therefor.
First use at least as early as Oct. 19, 1962.

SN 165,925. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Apr. 2, 1963.

STAGLON

For Pocket Knives and Hunting Knives.
First use April 1961.

Class 26—Measuring and Scientific Appliances

SN 122,017. Multimatic Machines, Inc., La Jolla, Calif. Filed June 14, 1961.

TUTOR-MATIC

For Teaching Machines Wherein Specific Problems Displayed by the Machine Are Solved, the Machine Indicating and Recording the Results.
First use June 8, 1961.

SN 132,219. Burrell Corporation, Pittsburgh, Pa. Filed Nov. 17, 1961.

THERMO-BATH

The drawing is lined for red.
For Vessels or Pots Having a Well for Containing a Liquid Such as Water, Oil or Liquid Salts in Which a Test Tube Containing a Plastic Liquid Is Inserted and Held at a Constant Temperature To Measure the Time of Set.
First use July 19, 1961.

SN 139,461. Bell & Howell Company, Chicago, Ill. Filed Mar. 9, 1962.

TEMPO

For Photographic Film.
First use Feb. 14, 1962.

SN 147,722. Federal Pacific Electric Company, Newark, N.J. Filed June 26, 1962.

PISTOLMETER

For Portable Electrical Measuring and Testing Apparatus—Namely, Clamp-On Alternating-Current Ammeters Having Means for Other Electrical Measurements.
First use July 28, 1961.

SN 153,150. Berns O Matic Corporation, Rochester, N.Y., by change of name from Otto Berns Company, Inc., Rochester, N.Y. Filed Sept. 14, 1962.

BERNZOMATIC

Owner of Reg. Nos. 587,281 and 593,884.
For Leak Detectors.
First use June 1962; Nov. 7, 1951, in a different display.

SN 157,343. Warner Instrument and Sales Co., Chicago, Ill. Filed Nov. 15, 1962.

WARNER

For Navigational Plotters, Plotter-Computers, and Computers.
First use February 1942.

SN 158,920. Willett C. Munsil, Phoenix, Ariz. Filed Dec. 11, 1962.

PERSPECTO-BOARD

For Drawing Board.
First use July 30, 1962.

SN 159,143. Allstar Automotive Corporation, New Hyde Park, N.Y. Filed Dec. 14, 1962.



The drawing is lined for red.
For Automobile Engine Heat Indicator Gauges and Component Parts Thereof.
First use June 14, 1961.

SN 160,843. Clay-Adams, Inc., New York, N.Y. Filed Jan. 17, 1963.



Owner of Reg. Nos. 632,280 and 667,724.
For Line of Laboratory and Diagnostic Instruments and Products.
First use on or about Nov. 27, 1957.

Class 27 — Horological Instruments

SN 146,163. Cartier, Inc., New York, N.Y. Filed June 5, 1962.

CARTIER

Owner of Reg. No. 411,975.
For Watches and Clocks.
First use in 1859.

Class 28 — Jewelry and Precious-Metal Ware

SN 146,164. Cartier, Inc., New York, N.Y. Filed June 5, 1962.

CARTIER

Owner of Reg. No. 411,240.
For Articles of Jewelry for Personal Wear, not Including Watches; and the Following Goods of Solid or Plated Silverware—Namely, Table Flatware and Hollowware, Toilet Articles, Candelabra, Bonbon-Cases, Jewelry Cases, Crosses, Rosaries, and Buckles.
First use in 1859.

SN 154,722. Edwin A. Hoover, Ardmore, Pa. Filed Oct. 8, 1962.

EAH

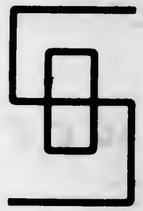
For Jewelry.
First use July 30, 1962.

SN 157,548. Pinta Products, Inc., Johnston, R.I. Filed Nov. 19, 1962.



For Jewelry.
First use on or about Oct. 24, 1962.

SN 157,749. Oscar Sherer, New York, N.Y. Filed Nov. 5, 1962.



For Jewelry (Like Bracelets, Pins, Earrings, Rings, Etc.).
First use Oct. 20, 1962.

SN 158,348. Harry Klitzner Co., Inc., Providence, R.I. Filed Dec. 3, 1962.



For Jewelry.
First use on or about July 2, 1962.

SN 162,258. HMH Publishing Co., Inc., Chicago, Ill. Filed Feb. 7, 1963.



Owner of Reg. Nos. 648,926 and 747,259.
For Cuff Links, Tie Tacks, Earrings, Necklaces, Key Chains, Bracelets, and Pins.
First use in October 1955 on cuff links.

Class 29 — Brooms, Brushes, and Dusters

SN 162,351. E Z Paintr Corporation, Milwaukee, Wis. Filed Feb. 8, 1963.

MR. PAINTR

For Paint Roller Covers.
First use Nov. 4, 1960.
Subj. to Intf. with SN 139,656.

Class 31 — Filters and Refrigerators

SN 144,530. Peterson Filters & Engineering Company, Salt Lake City, Utah. Filed May 14, 1962.



No claim is made to "Filters" apart from its use in the present mark.
For Filters.
First use on or about Apr. 12, 1954.

SN 157,108. Henry Valve Company, Melrose Park, Ill. Filed Nov. 13, 1962.

JET-FLO

For Refrigerant Filter-Driers.
First use Feb. 12, 1962.

Class 32 — Furniture and Upholstery

SN 105,481. Futorian-Stratford Furniture Company, Chicago, Ill. Filed Sept. 29, 1960.

RELAX-a-LOUNGER

Owner of Reg. Nos. 710,895 and 714,146.
For Reclining Chairs.
First use July 15, 1960.

SN 157,875. Airflow Mattress, Inc., Brooklyn, N.Y. Filed Nov. 26, 1962.

AIRFLOW

For Mattresses.
First use June 1929.

SN 159,170. Nurserytyme Products, Inc., Brooklyn, N.Y. Filed Dec. 14, 1962.

Suntyme

For Furniture Pads.
First use Mar. 10, 1961.

SN 161,463. Bankers Box Company, Franklin Park, Ill. Filed Jan. 28, 1963.

SYSTEMATIC

For Cardboard and Corrugated-Board Storage Filing Boxes.
First use Jan. 10, 1963.

SN 164,512. Dura Corporation, Oak Park, Mich. Filed Mar. 13, 1963.

DC

For Beds and Lounges Having Electrically Operated Means for Adjusting the Position Thereof.
First use Feb. 1, 1961.

SN 165,145. Loma Industries, Fort Worth, Tex. Filed Mar. 21, 1963.

LOMA-LON

For Metal and Plastic Juvenile Furniture.
First use on or about Jan. 2, 1963.

SN 165,158. Restonic Corporation, Chicago, Ill. Filed Mar. 21, 1963.

MR. SLEEP

For Mattresses and Box Springs.
First use Mar. 5, 1963.

SN 165,340. Lu Van, Inc., Belding, Mich. Filed Mar. 25, 1963.

HUE VIEW

For Furniture, Particularly Storage Stands and Cabinets.
First use Jan. 8, 1962.

SN 165,375. Quaker Industries, Inc., Antioch, Ill. Filed Mar. 25, 1963.

CONVERTA-CART

For Tray Tables and Combined Serving Cart and Storage Rack Therefor.
First use July 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 135,536. Spencer C. Schantz, Glassboro, N.J. Filed Jan. 10, 1962.

SNUFF A QUE

For Device—Namely, a Fire Snuffer for Outdoor Grills.
First use Dec. 18, 1961.

SN 141,378. Spunstrand, Inc., Seattle, Wash. Filed Apr. 2, 1962.

SPUNSTRAND

For Fiberglass-Reinforced Plastic Duct for Heating, Lighting, and Ventilating Systems.
First use May 9, 1961.

SN 153,150. Bernz O Matic Corporation, Rochester, N.Y., by change of name from Otto Bernz Company, Inc., Rochester, N.Y. Filed Sept. 14, 1962.



Owner of Reg. Nos. 587,281 and 593,884.
For Devices Which Operate by Burning Liquefied Propane—Namely, Torches, Heaters, Stoves and Grilling Devices, Lanterns, and Refrigerators.
First use June 1962; Nov. 7, 1951, in a different display.

SN 154,201. Bernz O Matic Corporation, Rochester, N.Y. Filed Oct. 1, 1962.

BERNZ O MATIC

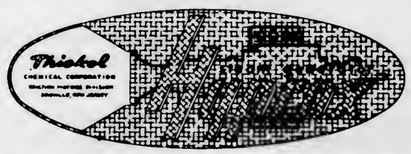
Owner of Reg. Nos. 587,281 and 593,884.
For Plumbers' Fire-Pots, Soldering Tips for Torches, Spark Ignitors for Gas Appliances, Stoves, Lanterns, and Grills.
First use November 1951.

SN 158,004. The Lincoln Electric Company, Cleveland, Ohio. Filed Nov. 27, 1962.

MANGJET

Owner of Reg. Nos. 298,762 and 590,581.
For Welding Electrodes.
First use in October 1958.

SN 164,755. Thiokol Chemical Corporation, Bristol, Pa. Filed Mar. 15, 1963.



The words "Steam Generator" apart from the mark are disclaimed. The drawing is lined for the colors yellow and orange.
For Steam Generators.
First use Oct. 26, 1962.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 145,899. United States Rubber Company, New York, N.Y. Filed May 31, 1962.

OZEX

For Hose Covers Sold as a Component of Hose Used for Transmitting Air Under Pressure and the Like.
First use Feb. 16, 1962.

SN 156,892. Maine Industrial Rubber Products Co., Westbrook, Maine. Filed Nov. 8, 1962.

CHALLENGER

For Solid Rubber Industrial Tires.
First use Aug. 3, 1962.

SN 164,135. Hercules Tool Company, Tulsa, Okla. Filed Mar. 7, 1963.

CONE-PAK

For Packing Rings for Stuffing Boxes and the Like in Oil Field Production Equipment.
First use Oct. 1, 1938.

SN 164,905. W. S. Shamban & Co., Culver City, Calif. Filed Mar. 18, 1963.

DOUBLE DELTA

For Fluid Sealing Elements in the Form of Annular Members of Moldable or Machinable Resins.
First use Jan. 8, 1963.

Class 36—Musical Instruments and Supplies

SN 139,647. Marconi's Wireless Telegraph Company Limited, London, England. Filed Mar. 12, 1962.

MARCONI

Owner of Reg. Nos. 626,852 and 665,825.
For Portable Phonographs and Parts Thereof.
First use July 14, 1961; in commerce July 14, 1961.

SN 139,776. Ormston Burns Limited, Buckhurst Hill, Essex, England. Filed Mar. 13, 1962.

BLACK BISON

Owner of British Reg. No. 824,526, dated Aug. 23, 1961.
For Guitars, Electric Guitars, and Amplifiers Therefor.

SN 147,946. Elise Ruth Moennig, d.b.a. Moennig Music Company, Temple City, Calif. Filed June 28, 1962.

MARCEL DELEAU

"Marcel Deleau" is a fictitious name, and does not represent any known person living or dead.
For Woodwind Instruments.
First use at least as early as Dec. 31, 1930.

SN 150,957. Don Kunka, Dayton, Ohio. Filed Aug. 10, 1962.

STARBURST

For Phonograph Records.
First use Jan. 11, 1962.

SN 163,999. Victor Company of Japan, Limited, Kanagawa-ku, Yokohama City, Japan. Filed Mar. 4, 1963.



For Magnetic Tape Recorder-Reproducers, Video Tape Recorder-Reproducers, Magnetic Disc and Rolled-Sheet Recorder-Reproducers, Magnetic Tapes, Electric Phonographs, Stereo Electric Phonographs, Phonograph Records, Phonograph-Needles, Record-Players, Pick-Ups, Stringed Musical Instruments, Wood Wind and Metal Wind Instruments With or Without Reeds, Organs, All Types of Accessory Orchestral and Band Instruments—Namely, Percussion Instruments, Xylophones, All Electric and Electronic Musical Instruments for the Foregoing and Parts for All the Foregoing and Accessories—Namely, Stringed Instrument Bows, Picks, Musical Stands, Pitch Pipes, Tuning Forks, Megaphones.
First use in or about February 1959; in commerce in or about December 1959.

Class 37—Paper and Stationery

SN 69,729. Dri Mark Products Inc., Mount Vernon, N.Y. Filed Mar. 17, 1959.

DRI MARK

For Felt Tip Markers.
First use Dec. 15, 1958.

SN 90,045. Fawn Products Corporation, New York, N.Y. Filed Feb. 1, 1960.



For Toilet Tissues and Cleansing Tissues; Shelf and Lining Papers and Christmas and Other Gift Wrapping Papers.
First use July 30, 1941.

SN 112,647. Spalding Publishers, Inc., Chicago, Ill. Filed Jan. 27, 1961.



Without waiver of its common law rights, applicant makes no claim to exclusive right to use the words "The Do-It-Yourself Notepaper" apart from the mark as shown.
For Novelty Note Sheets and Envelopes That Are Adaptable as a Party Game.
First use Jan. 18, 1961.

SN 140,425. Champion Papers Inc., Hamilton, Ohio. Filed Mar. 22, 1962.

M-100

For Special Check Paper.
First use at least as early as Mar. 5, 1962.

SN 145,381. Lindy Pen Co., Inc., Culver City, Calif. Filed May 24, 1962.

TANKFUL OF INK

For Ball Point Pen Refills.
First use Mar. 31, 1961.

SN 150,998. Bradfute Corporation, Eastchester, N.Y. Filed Aug. 13, 1962.

MAGIC TICKET

No claim of exclusive right is made to "Ticket" for printed contest cards.
For Printed Contest Cards for Promotional Use by Others To Encourage, Facilitate, and Stimulate the Sale of Their Goods.
First use July 12, 1962.

SN 153,857. Binney & Smith Inc., New York, N.Y. Filed Sept. 25, 1962.

BINNEY & SMITH BRAND

No claim is made to the exclusive right to the word "Brand" apart from the mark as shown. Owner of Reg. Nos. 643,831, 645,768, and 650,515.
For Chalk.
First use Sept. 1, 1957.

SN 154,548. American Thermoform Corporation, Los Angeles, Calif. Filed Oct. 5, 1962.

BRAILON

For Paperlike Plastic Sheet Material Used for Reproducing and Embossing Braille, Maps, Math Diagrams, and Other Illustrations.
First use June 4, 1962.

SN 154,615. Minnesota and Ontario Paper Company, Minneapolis, Minn. Filed Oct. 5, 1962.

WEB-SET

For Printing Paper.
First use June 1958.

SN 156,073. C. L. Barkley & Co., Chicago, Ill. Filed Oct. 29, 1962.

FINDIT

For Combination Guides and File Folders With Tabs.
First use at least 1948.

SN 157,543. The Parker Pen Company, Janesville, Wis. Filed Nov. 19, 1962.

VP

For Fountain Pens and Mechanical Pencils.
First use Sept. 29, 1960.

SN 157,738. Sterling Pulp & Paper Company, Eau Claire, Wis. Filed Nov. 21, 1962.

GAYETY

For Paper Towels, Paper Napkins, and Paper Toilet Tissue.
First use Nov. 8, 1962.

SN 163,072. The Parker Pen Company, Janesville, Wis. Filed Feb. 19, 1963.



For Fountain Pens, Mechanical Pencils, Ballpoint Pens and Refills Therefor, and Desk Sets.
First use Sept. 28, 1956.

Class 38 — Prints and Publications

SN 104,256. Warner Press, Inc., Anderson, Ind., by change of name from Gospel Trumpet Company, Anderson, Ind. Filed Sept. 12, 1960.

"CHRISTIAN WITNESS"

For Bible Verse Stamps in Book Form.
First use Jan. 15, 1941.

SN 122,783. The Reuben H. Donnelley Corporation (Delaware corporation), Chicago, Ill., assignee of The Reuben H. Donnelley Corporation (Illinois corporation), New York, N.Y. Filed June 26, 1961.

MODERN DRUG ENCYCLOPEDIA AND THERAPEUTIC INDEX

For Reference Guide.
First use Jan. 15, 1934.

SN 122,784. The Reuben H. Donnelley Corporation (Delaware corporation), Chicago, Ill., assignee of The Reuben H. Donnelley Corporation (Illinois corporation), New York, N.Y. Filed June 26, 1961.

VETERINARY DRUG ENCYCLOPEDIA AND THERAPEUTIC INDEX

For Reference Guide.
First use June 15, 1943.

SN 139,563. The Reuben H. Donnelley Corporation, New York, N.Y., assignee of American Aviation Publications, Inc., Washington, D.C. Filed Mar. 12, 1962.

QUICK REFERENCE EDITION

Official Airline Guide

The words "Quick Reference Edition" are disclaimed apart from the mark as shown.
For Periodical Publication Containing Information Regarding Airline Schedules.
First use Feb. 20, 1958.

SN 142,792. Clio Press, Santa Barbara, Calif. Filed Apr. 23, 1962.



For Books and Periodical Publications Such as Bibliographies, Abstracts, and Bulletins.
First use July 20, 1961.

SN 146,167. Ceramic Publications, Inc., Cleveland, Ohio. Filed June 5, 1962.

CERAMIC AGE

For Publication Published From Time to Time.
First use in or about May 1956.

SN 148,043. International Paper Company, New York, N.Y. Filed June 29, 1962.

POCKET PAL

For Booklet Published From Time to Time Containing Information for Use in the Printing Trade.
First use October 1934.

SN 148,783. American Artists Group, Inc., New York, N.Y. Filed July 11, 1962.

PAGEANTRY

For Greeting Cards, Christmas Cards, and Greeting and Christmas Card Box Assortments.
First use Mar. 1, 1960.

SN 153,274. The Reuben H. Donnelley Corporation, New York, N.Y., assignee of The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Sept. 17, 1962.

Business PROGRESS

For Trade Magazines.
First use Mar. 29, 1961.

SN 154,357. The Law List Publishing Company, Inc., New York, N.Y. Filed Oct. 2, 1962.

The LAWYERS' LIST

For Directory of Lawyers Published Annually.
First use Apr. 1, 1904.

SN 158,062. The Rochester Visitor, Rochester, Minn. Filed Nov. 28, 1962.

THE ROCHESTER VISITOR
THIS WEEK IN ROCHESTER

For Weekly Magazine.
First use July 29, 1940.

Class 39 — Clothing

SN 97,075. Oxford Industries, Inc., Atlanta, Ga., assignee of Marcus Loeb & Company, Inc., Atlanta, Ga. Filed May 13, 1960.

SUNSET

For Men's and Boys' Slacks and Sport Shirts.
First use on or about Oct. 15, 1939.

SN 129,679. Interstate Mfg. Co., Inc., Hudson, Mass. Filed Oct. 11, 1961.

SNOW-DRY

For Children's Snow Pants.
First use on or about Sept. 22, 1961.

SN 130,227. Mr. John, Inc., New York, N.Y. Filed Oct. 18, 1961.

Mr. John CLASSIC

"Mr. John" is the name of a well known designer whose consent is of record. Applicant disclaims "Classic" apart from the mark as shown. Owner of Reg. Nos. 549,819, 673,564, and others.
For Women's Hats.
First use September 1961.

SN 130,228. Mr. John, Inc., New York, N.Y. Filed Oct. 18, 1961.

Mr. John BOUTIQUE

"Mr. John" is the name of a well known designer whose consent is of record. Applicant disclaims "Boutique" apart from the mark as shown. Owner of Reg. Nos. 549,819, 673,564, and others.
For Women's Hats.
First use June 1956.

SN 130,229. Mr. John, Inc., New York, N.Y. Filed Oct. 18, 1961.

Mr. John SOPHISTICATE

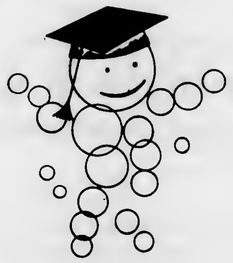
"Mr. John" is the name of a well known designer whose consent is of record. Owner of Reg. Nos. 549,819, 632,315, 673,564, and others.
For Women's Hats.
First use September 1961.

SN 130,572. Mr. John, Inc., New York, N.Y. Filed Oct. 24, 1961.



"Mr. John" is the name of a well known designer whose consent is of record. Applicant disclaims "Emperor of Fashion" and "New York-Paris," apart from the mark as shown. Owner of Reg. Nos. 549,819, 673,564, and others.
For Women's Hats.
First use Sept. 1, 1961.

SN 134,255. Walter W. Moyer Company, Inc., Ephrata, Pa. Filed Dec. 18, 1961.



For Men's, Women's, Children's, and Infants' Undergarments—Namely, Men's and Boys' Undershirts and Shorts, Women's and Girls' Panties, and Infants' Shirts.
First use Dec. 5, 1961.

SN 141,692. Amour Fashions, Inc., New York, N.Y. Filed Apr. 6, 1962.

Junior News

For Dresses for Women and Girls.
First use Mar. 6, 1962.

SN 142,966. Regulated Cottons Inc., d.b.a. Zecron International, New York, N.Y. Filed Apr. 24, 1962.

ZECRON

For Men's and Boys' Raincoats and Overcoats.
First use July 1961.

SN 142,967. Reliance Manufacturing Company, New York, N.Y. Filed Apr. 24, 1962.

Domani Knits

No claim is made to the word "Knits" except as part of the mark as shown. The Italian word "Domani" translated means "tomorrow." It is not the name, surname or pseudonym of any person or designer, living or dead. Owner of Reg. No. 703,996.
For Men's, Women's, and Children's Clothing—Namely, Dresses, Suits, Skirts, Blouses, Slacks, Sweaters, Jackets, Pants, and Bowling Costumes Consisting of Sport Shirts and Blouses With Matching Slacks, Shirts, and Shorts.
First use on and prior to Sept. 6, 1960.

SN 143,342. Calzaturificio Di Varese S.p.A., Varese, Italy. Filed Apr. 30, 1962.

IL VARESE

For Shoes.
First use 1899; in commerce January 1958.

SN 143,822. The Grove Company, St. Louis, Mo. Filed May 4, 1962.

TUMBLE BUMS

For Outer Garments and Particularly Women's Knitted Cotton Flannel Shirts.
First use Apr. 13, 1962.

SN 143,830. Arnav Shoe Corporation, Little Ferry, N.J., by change of name from Intercontinental Development Corporation, Little Ferry, N.J. Filed May 4, 1962.

ARNAVITE

For Shoe Soles.
First use Apr. 13, 1962.

SN 144,264. Miss L.A. of California, Los Angeles, Calif. Filed May 10, 1962.

Miss LA OF CALIFORNIA

The words "of California" are disclaimed apart from the mark as shown.
For Ladies' Dresses.
First use Apr. 3, 1962.

SN 155,611. Joseph W. Henschel, d.b.a. Henschel Manufacturing Company, St. Louis, Mo. Filed Oct. 22, 1962.

Course Aire

For Men's and Boys' Hats and Caps.
First use Oct. 5, 1962.

SN 157,252. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 14, 1962.

LI'L JEEPS

Owner of Reg. No. 380,848.
For Children's Footwear.
First use on or about Mar. 29, 1962.

SN 161,311. David Crystal, Inc., New York, N.Y. Filed Jan. 24, 1963.

611

For Ladies' and Misses' Dresses and Dress Ensembles, Consisting of a Dress and Coat, Blouses, Suits, Coats, Slacks, and Playsuits.
First use Sept. 15, 1942.

SN 162,106. Lisle Mills, Inc., Allentown, Pa. Filed Feb. 5, 1963.

GRO-TARDS

For Leotards and Tights.
First use on or about Jan. 30, 1963.

Class 40—Fancy Goods, Furnishings, and Notions

SN 151,696. Tapemaker, Inc., Peoria, Ill. Filed Aug. 22, 1962.

DANSKA INVISIBLE

No claim is made to the exclusive right to the use of the word "Invisible," separate and apart from the mark as shown.
For Venetian Blind Tape.
First use July 19, 1962.

SN 152,454. Walter Sporn Co., Inc., Chicago, Ill. Filed Sept. 4, 1962.

SPORNETTE

Owner of Reg. No. 664,404.
For Combs.
First use on or about June 15, 1958.

SN 154,033. Jiffy Enterprises Inc., Harrisonville, Mo. Filed Sept. 27, 1962.

IRON POCKET

Applicant disclaims the word "Pocket" apart from the mark as shown.
For Heat Bondable Pocket Repair Patching Material.
First use on or about June 22, 1962.

SN 154,034. Jiffy Enterprises Inc., Harrisonville, Mo. Filed Sept. 27, 1962.

IRON PATCH

Applicant disclaims the word "Patch" apart from the mark as shown.
For Heat Bondable Repair Components for Fabrics.
First use on or about June 22, 1962.

SN 154,042. Lord and Lady Windsor Inc., New York, N.Y. Filed Sept. 27, 1962.

Lady WINDSOR

Owner of Reg. Nos. 734,975 and 734,976.
For Wigs, Chignons, and Hairpieces.
First use Sept. 5, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 138,353. Acme Markets, Inc., Philadelphia, Pa., by change of name from American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

PRINCESS

For Pot Holders, Dish Cloths, and All-Purpose Cloths.
First use February 1960.

SN 145,200. J. B. Martin Company, Norwich, Conn. Filed May 22, 1962.

BAGATELLE

For Fabrics in the Piece Made of Velvet.
First use January 1954.

SN 145,201. J. B. Martin Company, Norwich, Conn. Filed May 22, 1962.

PRELUDE

For Fabrics in the Piece Made of Velvet.
First use January 1954.

SN 153,779. Linens By Vera, Inc., New York, N.Y. Filed Sept. 24, 1962.

VERAMAT

For Place Mats and Napkins Made of Linen and Other Textile Fabrics.
First use June 1, 1960.

SN 161,384. Staron Inc., New York, N.Y. Filed Jan. 24, 1963.

MACHICOULIS

For Piece Goods of Wool, Cotton, Silk, Synthetic Fabrics and Combinations Thereof.
First use Sept. 17, 1962.

SN 161,567. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 28, 1963.

MALAMUTE

For Cotton Piece Goods.
First use Oct. 26, 1962.

SN 161,634. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 29, 1963.

HOPE

Owner of Reg. Nos. 86,061, 89,753, and 162,777.
For Sheets and Pillow Cases.
First use January 1958.

SN 161,691. Fieldcrest Mills, Inc., Spray, N.C. Filed Jan. 30, 1963.

Rouleau

For Textile Rugs and Carpeting.
First use Jan. 3, 1963.

SN 161,693. Fieldcrest Mills, Inc., Spray, N.C. Filed Jan. 30, 1963.

ALEXEI

For Textile Rugs and Carpeting.
First use Jan. 7, 1963.

SN 161,877. Fieldcrest Mills, Inc., Spray, N.C. Filed Feb. 1, 1963.

ASHLEY GROVE

For Textile Rugs and Carpeting.
First use Jan. 17, 1963.

SN 161,923. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Feb. 1, 1963.

"FASHIONS FOR FOREVER"

For Bedspreads, Draperies, and Pillows.
First use on or about Jan. 11, 1963.

Class 43 — Thread and Yarn

SN 152,619. National Plastic Products Company, Inc., Odenton, Md. Filed Sept. 6, 1962.



For Synthetic Polymeric Yarn for Use in the Manufacture of Textiles, Webbing, Rope, Carpets and the Like.
First use July 30, 1962.

SN 159,754. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 26, 1962.



No claim is made to the word "Spandex" apart from the mark as shown. Owner of Reg. Nos. 600,796, 741,667, and others.
For Thread and Yarn Comprised in Whole or in Substantial Part of Spandex.
First use Nov. 6, 1962.

SN 161,449. Synthetic Thread Company, Inc., Bethlehem, Pa. Filed Jan. 25, 1963.

SEW KLEER

For Translucent Sewing Thread.
First use Jan. 7, 1963.

SN 162,177. Melrose Yarn Co., Inc., Brooklyn, N.Y. Filed Feb. 6, 1963.

MELROSE

For Wool Yarn.
First use Mar. 10, 1945.

Class 44 — Dental, Medical, and Surgical Appliances

SN 119,948. Espe Fabrik Pharmazeutischer Präparate G.m.b.H., Seefeld, Upper Bavaria, Germany. Filed May 15, 1961.

E S P E

Owner of German Reg. No. 642,977, dated Aug. 21, 1953.
For Insulating Material for Plaster Casts and Material for Dental Impressions and Provisional Dental Filling Material.

SN 149,140. Travenol Laboratories, Inc., Morton Grove, Ill. Filed July 16, 1962.

MEASUR-GARD

For Protector Cover for the Tip of Tubing That Is Used in Association With the Disposable Plastic Pharmaceutical Containers for Use in the Storing and Dispensing of Fluids.
First use June 7, 1962.

SN 152,612. Fred M. Medwedeff & William H. Knox, d.b.a. Precision X-Ray Company, Nashville, Tenn. Filed Sept. 6, 1962.

PRECISION

For Dental X-Ray Film Holding and Shield Instruments.
First use May 1, 1962.

SN 158,890. Allied Latex Sales Co., Inc., New York, N.Y. Filed Nov. 26, 1962.

GENTRY

For Prophylactic Rubber Articles for the Prevention of Contagious Diseases.
First use Oct. 16, 1962.

SN 160,915. Bowen & Company, Inc., Rockville, Md. Filed Jan. 18, 1963.

TURBO-JET

Owner of Reg. No. 639,070.
For Water Operated Dental Drill Unit.
First use September 1957.

Class 46 — Foods and Ingredients of Foods

SN 103,387. Filler Products, Inc., Atlanta, Ga., assignee of Bacon Products Corporation, Addison, Ill. Filed Aug. 25, 1960.

BAKON FRY

Owner of Reg. Nos. 584,235, 719,724, and others.
For Shortening for Cooking, of Animal and Vegetable Origin.
First use July 9, 1960.

SN 118,494. S.p.A. Pastificio F.O.F.lli Bertagni, Bologna, Italy. Filed Apr. 24, 1961.



TRE PUNTE

Priority claimed under Sec. 44(d) on Italian application filed Feb. 8, 1961; Reg. No. 154,830, dated May 12, 1961. No claim of exclusive right is made to the design feature of the mark as a showing of the shape of the goods herein. The words "Tre Punte" may be translated as "three peaks."
For Stuffed Alimentary Paste.

SN 118,881. General Grocer Company, Brentwood, Mo. Filed Apr. 28, 1961.



Applicant makes no claim to the words "Triple Checked," apart from the mark as shown. Owner of Reg. No. 672,633.
For Fresh Meats.
First use Mar. 17, 1960.

SN 130,340. M. H. Greenebaum, Inc., New York, N.Y. Filed Oct. 20, 1961.

GREEN TREE

Owner of Reg. Nos. 251,436 and 372,748.
For Canned, Fresh, Smoked and Prepared Meats, Canned Fowl, Cheese, Animal-Derived Lard, and Vegetable-Derived Shortenings.
First use in January 1923.

SN 133,654. Florida Seed and Feed Company, Inc., Ocala, Fla. Filed Dec. 8, 1961.



The drawing is lined for the colors red and green, but no claim is made to the colors so named. The map representation of the Southeastern United States is disclaimed apart from the mark as shown.
For Wild Bird Seed, Parakeet Seed, Sunflower Seed for Birds.
First use Oct. 2, 1956.

SN 136,540. Continental Baking Company, Rye, N.Y. Filed Jan. 25, 1962.

SOFT WHIRLED

For Bread.
First use Jan. 2, 1962.

SN 138,411. Michigan Bakeries, Inc., Grand Rapids, Mich. Filed Feb. 21, 1962.

PECAN SWIRLS

The word "Pecan" is disclaimed apart from the mark shown.
For Frozen Baked Goods—Namely, Sweet Rolls.
First use on or about Mar. 3, 1960.
Subj. to Intf. with SN 151,288.

SN 144,454. Cafes Solubles Monterrey, S.A., Monterrey, Mexico. Filed May 14, 1962.



The drawing is lined for the color gold.
For Instant Coffee.
First use Nov. 14, 1961; in commerce Nov. 14, 1961.

SN 145,911. Riva Distributing Company, San Francisco, Calif. Filed May 31, 1962.

VIVA RIVA!

The words "Viva Riva" mean "long live the river" or "hurrah for the river." Owner of Reg. No. 689,605.
For Concentrated Fruit Bases, and Nonalcoholic Egg Nog Mix and Nonalcoholic Tom and Jerry and Rum Butter Beverage Mixes.
First use in or about October 1959.

SN 146,412. Pikle-Rite Company, Inc., Pulaski, Wis. Filed June 7, 1962.

NA-ZDROWIE

The words "Na-Zdrowie" translated means "for your health."
For Pickles.
First use Apr. 2, 1961.

SN 147,284. International Minerals & Chemical Corporation, d.b.a. Ac'cent International, Skokie, Ill. Filed June 20, 1962.

Indesa

For Dehydrated Vegetables.
First use May 16, 1962.

SN 147,285. International Minerals & Chemical Corporation, d.b.a. Ac'cent International, Skokie, Ill. Filed June 20, 1962.

INDESA-INTERNACIONAL

For Dehydrated Vegetables.
First use May 16, 1962.

SN 148,246. Tillie Lewis Foods, Inc., Stockton, Calif. Filed July 2, 1962.



The picture and name "Tillie Lewis" is that of Mrs. L. Lewis, an officer in applicant corporation, whose consent is of record. Owner of Reg. Nos. 607,456, 617,561, and others.

For Dietetic Food Products—Namely, Fruit Jelly, Preserves and Jam; an Artificially Sweetened Maple Flavored Preparation in the Nature of a Syrup for Use on Pancakes and Waffles; Salad Dressings; Fruit and Otherwise Flavored Preparations in the Nature of Syrups for Use as Dessert Toppings; Canned Fruit Juices; Canned Fruits; Canned Vegetables; Liquid Sweetener; Gelatin Desserts; Pudding Desserts; Pudding and Pie Fillings.

First use Mar. 10, 1954; Mar. 6, 1952, as to "Tasti-Diet."

SN 148,247. Tillie Lewis Foods, Inc., Stockton, Calif. Filed July 2, 1962.



"Tillie Lewis" and picture identify Mrs. Meyer L. Lewis, whose consent is of record. Applicant disclaims the word "Brand." Owner of Reg. Nos. 583,478, 612,268, and 617,561.

For Dietetic Food Products—Namely, Fruit Jellies, Preserves and Jam; Pudding Desserts; Pudding and Pie Fillings; Gelatin Desserts; Fruit and Otherwise Flavored Preparations in the Nature of Syrups for Use as Dessert Toppings; Salad Dressings; Canned Fruit Juices; Canned Fruits; Canned Vegetables; an Artificially Sweetened Maple Flavored Preparation in the Nature of a Syrup for Use on Pancakes and Waffles; Liquid Sweetener; Salt Substitute; Sugar Substitute.

First use Mar. 10, 1954.

SN 148,248. Tillie Lewis Foods, Inc., Stockton, Calif. Filed July 2, 1962.

TILLIE LEWIS

"Tillie Lewis" identifies Mrs. Meyer L. Lewis, whose consent is of record. Owner of Reg. Nos. 583,478, 612,268, and 617,561.

For Dietetic Food Products—Namely, Fruit Jellies, Preserves and Jam; Pudding Desserts; Pudding and Pie Fillings; Gelatin Desserts; Fruit and Otherwise Flavored Preparations in the Nature of Syrups for Use as Dessert Toppings; Salad Dressings; Canned Fruit Juices; Canned Fruits; Canned Vegetables; an Artificially Sweetened Maple Flavored Preparation in the Nature of a Syrup for Use on Pancakes and Waffles; Liquid Sweetener; Salt Substitute; Sugar Substitute.

First use Mar. 10, 1954.

SN 148,479. Comet Rice Mills, Inc., Houston, Tex. Filed July 6, 1962.

COMET GIANT GRAIN

No registration rights are claimed for the words "Giant Grain" apart from the mark as shown. Applicant waives none of its common law rights in the mark as shown or any feature thereof. Owner of Reg. Nos. 77,427 and 685,241.

For Rice.

First use Jan. 25, 1962.

SN 149,601. Saffacol, Inc., Northfield, Ill. Filed July 23, 1962.

SAFFIZ

For Safflower Seed Oil.

First use Apr. 6, 1962.

SN 150,072. King Kullen Grocery Co. Inc., Westbury, N.Y. Filed July 30, 1962.



Owner of Reg. Nos. 686,547 and 742,863.

For Alimentary Pastes.

First use October 1960.

SN 151,288. Aunt Fanny's Baking Co., Atlanta, Ga. Filed Aug. 16, 1962.

PECAN TWIRLS

No claim is made to the word "Pecan" apart from the mark.

For Sweet Rolls, Either Frozen or Unfrozen.

First use on or about Dec. 20, 1959.

Subj. to Intf. with SN 138,411.

SN 151,560. Bear Brand Confectionery Limited, Leicester, England. Filed Aug. 21, 1962.

BEAR BRAND

The word "Brand" is disclaimed apart from the mark as shown. Owner of British Reg. No. 713,888, dated Dec. 22, 1952.

For Sugar Candies and Eating Chocolate.

SN 153,448. Barricini, Inc., Long Island City, N.Y. Filed Sept. 19, 1962.

JEANNE LORRAINE

The name "Jeanne Lorraine" is fanciful.

For Candy.

First use Sept. 11, 1962.

SN 154,008. Armour and Company, Chicago, Ill. Filed Sept. 27, 1962.

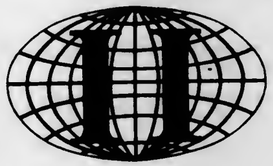
SAINT PAUL CAPITAL CUT

Applicant disclaims exclusive use of the word "Cut," separate and apart from the mark as shown on the drawing. Owner of Reg. No. 557,800.

For Fresh or Frozen Beef Steak.

First use Sept. 22, 1961.

SN 154,972. Indiran, Inc., Parsippany, N.J. Filed Oct. 11, 1962.



For Unshelled Pistacchio Nuts.

First use Mar. 20, 1962.

SN 155,408. General Mills, Inc., Minneapolis, Minn. Filed Oct. 18, 1962.

LUCKY CHARMS

For Breakfast Cereals.

First use Sept. 17, 1962.

SN 155,409. General Mills, Inc., Minneapolis, Minn. Filed Oct. 18, 1962.

LUCKY BITS

The word "Bits" is disclaimed apart from the mark as shown.

For Breakfast Cereals.

First use Sept. 17, 1962.

SN 155,470. Beatrice Foods Co., Chicago, Ill. Filed Oct. 15, 1962.

PLAID

For Caramel Candies.

First use Mar. 23, 1962.

SN 155,647. Pulaski Canning Co., Pulaski, Wis. Filed Oct. 22, 1962.



Applicant disclaims any exclusive rights in the word "Wisconsin" apart from the mark as shown in the drawing.

For Canned Vegetables.

First use Aug. 23, 1962.

SN 155,763. Vita-Pakt Citrus Products Co., Covina, Calif. Filed Oct. 23, 1962.



For Fresh Orange, Lemon, and Grapefruit Juice, Fruit Juice Concentrates, and Frozen Fruit Juice Bars.

First use July 15, 1959.

SN 155,940. Louis Rich Foods, Inc., West Liberty, Iowa. Filed Oct. 25, 1962.

RICHBROOK

Owner of Reg. Nos. 656,556 and 656,557.

For Frozen Dressed Turkeys.

First use June 1959.

SN 156,179. Sun-Ray Feed Mills, Inc., Lexington, Ky. Filed Oct. 29, 1962.

STAMM

For Nutritional Food Supplements for Horse Feeds.

First use Feb. 19, 1954.

SN 156,871. Frozen Potato Products, Inc., Grand Forks, N. Dak. Filed Nov. 8, 1962.

TATERLAN

For Frozen Processed Potatoes.

First use Aug. 14, 1962.

SN 157,004. Prudence Foods, Inc., Everett, Mass. Filed Nov. 9, 1962.



Owner of Reg. No. 650,190.

For Canned Corned Beef Hash, Canned Roast Beef Hash, Canned Bacon Hash, and Canned Pepper Beef Hash.

First use Apr. 9, 1920, on corned beef hash and roast beef hash.

SN 157,122. Manna Vita Food Products Corp., Sherman Oaks, Calif. Filed Nov. 13, 1962.

Manna Vita

For Concentrated Protein Products for Use as a Dietary Food Supplement and Consisting of Soya Proteins, Milk Proteins, Casein, Lactalbumin, B-Lactoglobulin Fusion, Soya Lecithin, Defatted Wheat Germ, Vanilla and Vanillin Flavoring, and Calcium Cyclamate as a Sweetener.

First use Jan. 27, 1962.

Subj. to Intf. with SN 157,246.

SN 157,134. Popped-Right Corn Company, Marion, Ohio. Filed Nov. 13, 1962.

POW-WOW

Owner of Reg. No. 657,218.

For Popped and Unpopped Popcorn.

First use on or about May 23, 1956.

SN 157,426. Ziel & Co. Inc., San Francisco, Calif. Filed Nov. 16, 1962.

FIDELITY

For Canned Fruits.
First use 1958.

SN 157,860. F. M. Stamper Company, d.b.a. Banquet Canning Company, St. Louis, Mo. Filed Nov. 23, 1962.

Thank Goodness for Banquet!

Owner of Reg. Nos. 411,202, 680,882, and 691,375.
For Dressed and Frozen Poultry, Canned Poultry Products—Namely, Chicken and Turkey and Parts Thereof and Chicken Fricassee; Frozen Prepared Food Products—Namely, Dinners Containing as Their Main Ingredient Chicken or Turkey or Beef or Fish in Combination With a Vegetable, Chicken and Turkey Pies and Beef Pies; Frozen Prepared Boil-in-the-Bag Products—Namely, Sliced Turkey, Sliced Beef, Chicken and Noodles, and Beef Stew, Frozen Turkey Sandwiches, and Frozen Dessert Pies.
First use in July 1960.

SN 158,022. Louis Rich Foods, Inc., Rock Island, Ill. Filed Nov. 27, 1962.

CLEAN AS A WHISTLE!

Owner of Reg. No. 654,584.
For Frozen Dressed Poultry.
First use September 1954.

SN 159,207. Joe W. Chapman, d.b.a. Chapman Products Co., La Habra, Calif. Filed Dec. 17, 1962.

PEP-E-MARY

For Tomato Drink Cocktail.
First use June 18, 1962.
Subj. to Intf. with SN 161,145.

SN 159,284. Rod's Food Products, Inc., Los Angeles, Calif. Filed Dec. 17, 1962.

ROD'S

Owner of Reg. Nos. 646,185, 671,027, and 687,306.
For Vegetable Derived Aerated Topping Used for Decorating or Topping Desserts.
First use Sept. 19, 1962.

SN 161,145. Bercut-Richards Packing Co., Sacramento, Calif. Filed Jan. 22, 1963.

Peppy

The portrait design is fanciful and is not intended to represent any actual individual.
For Canned Tomato Juice Cocktail.
First use November 1961.
Subj. to Intf. with SN 159,207.

SN 161,373. Redlum Research Corporation, Redlands, Calif. Filed Jan. 24, 1963.

REDLUM

For Protein Supplement for Animal and Poultry Feed.
First use Dec. 14, 1960.

SN 162,366. The Supreme Rice Mill, Inc., Crowley, La. Filed Feb. 8, 1963.

CHINESE CHEF

For Rice.
First use on or about Aug. 15, 1958.

SN 162,950. Geo. A. Hormel & Company, Austin, Minn. Filed Feb. 18, 1963.

BRAM

For Chopped, Cured, Cooked Ham Strips.
First use Jan. 24, 1963.

SN 163,007. Ventura Processors, Ventura, Calif. Filed Feb. 18, 1963.

GOLDEN-Y

Owner of Reg. No. 650,992.
For Fresh Grapefruit.
First use on or about Nov. 1, 1959.

SN 163,083. Ross Industries, Inc., Wichita, Kans. Filed Feb. 19, 1963.

SEA HORSE

For Flour.
First use Apr. 15, 1961.

SN 163,273. Pleasant Valley Vegetable Cooperative, d.b.a. Pleasant Valley Veg. Co-Op., Oxnard, Calif. Filed Feb. 21, 1963.

P V

For Fresh Vegetables.
First use Feb. 5, 1962.

Class 47 — Wines

SN 111,434. H. Sichel Sons, Inc., New York, N.Y., assignee of Sichel & Fils Frères, Stuttenberg, Bordeaux, France. Filed Jan. 6, 1961.



For Wines.
First use June 30, 1928; in commerce July 31, 1934.

SN 137,383. H. Sichel Sons, Inc., New York, N.Y., assignee of H. Sichel & Sons, Ltd., London, England. Filed Feb. 6, 1962.

GRANDE TERRASSE

The translation of the French phrase "Grande Terrasse" is "big terrace."
For Wines.
First use Nov. 7, 1934; in commerce Nov. 7, 1934.

Class 49 — Distilled Alcoholic Liquors

SN 86,247. Ricard, Marseille-Sainte-Marthe, Bouches du Rhone, France, by change of name from Ricard S.A.F., Marseille-Sainte-Marthe, Bouches du Rhone, France. Filed Apr. 16, 1963.

RICARD

Owner of French Reg. No. 44,187, dated June 24, 1959 (Marseille); Natl. Inst. No. 129,222.
For Distilled Anise Aperitif.
First use 1932; in commerce Sept. 2, 1954.

Class 50 — Merchandise Not Otherwise Classified

SN 131,325. Allied Precision Industries, Inc., Geneva, Ill. Filed Nov. 6, 1961.

api

For Decorative Metal Trim for Household Appliances.
First use Oct. 25, 1961; 1949 as to the letters API.

SN 134,653. Pacific Resins & Chemicals, Inc., Seattle, Wash., assignee of Martin Marietta Corporation, Seattle, Wash. Filed Dec. 26, 1961.

LITE-LANE

For Traffic Guide System, Consisting of the Following Components To Permit Complete Installation of Said System Sold as a Unit: Traffic Markers, Heating Units To Preheat the Highway Surface, Heating Units To Preheat the Traffic Markers, Heating Fluid, Adhesive and Adhesive Catalyst To Bind the Markers to the Highway Surface, Mixing Units To Prepare the Adhesive, and Cleaning Solvent.
First use on or about June 9, 1961.

SN 134,654. Pacific Resins & Chemicals, Inc., Seattle, Wash., assignee of Martin Marietta Corporation, Seattle, Wash. Filed Dec. 26, 1961.

Lite-lane

For Traffic Guide System, Consisting of the Following Components To Permit Complete Installation of Said System Sold as a Unit: Traffic Markers, Heating Units To Preheat the Highway Surface, Heating Units To Preheat the Traffic Markers, Heating Fluid, Adhesive and Adhesive Catalyst To Bind the Markers to the Highway Surface, Mixing Units To Prepare the Adhesive, and Cleaning Solvent.
First use on or about June 9, 1961.

SN 140,369. Magellan Sounds Corporation, New York, N.Y. Filed Mar. 21, 1962.

WINDOW OF KNOWLEDGE

For Educational Mits Comprising Recordings, Audio-Visual Aids, Visual Aids, and Instructional Material.
First use Dec. 27, 1961.

SN 142,167. Joseph M. Auricchio, Farmingdale, N.Y. Filed Apr. 13, 1962.

GEM ROCK

The word "Rock" is disclaimed apart from the mark as shown.
For Monuments and Memorials.
First use Nov. 19, 1961.

SN 142,562. Rubbermaid Incorporated, Wooster, Ohio. Filed Apr. 18, 1962.



Owner of Reg. Nos. 726,892 and 735,033.
For Articles Made of Rubber Composition or Plastic Composition—Namely, Floor, Automobile and Marine Mats and Pads, Marine Engine Battery Box Holders, and Marine Gas Tank Anchor Straps.
First use Oct. 26, 1960.

SN 142,734. Hugh C. Pryor, d.b.a. Hugh Pryor Products, Los Angeles, Calif. Filed Apr. 20, 1962.



For Decorative Table Accessories—Namely, Scales, Candle Holders, Compotes, Candy Dishes, Centerpieces, and Bowls, and Decorative Items To Be Mounted on a Wall.
First use July 6, 1961.

SN 146,659. Ray's N Kane Enterprise, Muskegon Heights, Mich. Filed June 11, 1962.

I DON'T KNOW

For Novelty Items of the Trinket and Souvenir Type.
First use Mar. 12, 1958.

SN 148,078. Quad Decor, Inc., Ardmore, Okla. Filed June 29, 1962.

SPRINGLES

For Christmas Tree Ornaments.
First use Feb. 9, 1960.

SN 158,181. Sales Promotion Products,. Inc., Cleveland, Ohio. Filed Nov. 29, 1962.



For Advertising Banners.
First use Mar. 9, 1960.

Class 51 — Cosmetics and Toilet Preparations

SN 113,888. Associated Brands, Inc., Brooklyn, N.Y. Filed Feb. 17, 1961.

SET 'N TREAT

For Hair Waving Preparation.
First use Feb. 1, 1961.

SN 121,184. Lucienne Felix born Lafitte, d.b.a. Laboratoires Lucienne Merle, Paris (Seine), France. Filed June 1, 1961.



The word "Cream" is disclaimed apart from the mark as shown in the drawing. The mark comprises the letter "F" and "Cream 001." The drawing is lined for red and stippled for gold.
For Beauty Cream.
First use Feb. 15, 1961; in commerce Feb. 15, 1961.

SN 130,353. House of Lacan N.V., Willemstad, Curacao, Netherlands Antilles. Filed Oct. 20, 1961.

BEAUTEE BLUE

No claim is made for the word "Blue" apart from the mark as shown.
For Hand and Body Lotion.
First use November 1958; in commerce November 1958.

SN 138,865. House of Westmore, Inc., New York, N.Y. Filed Mar. 1, 1962.

CLEO'S KISS

For Lipsticks.
First use Feb. 23, 1962.
Subj. to Intf. with SN 145,746.

SN 142,892. De Mert & Dougherty, Inc., Chicago, Ill. Filed Apr. 23, 1962.

Beauté

The word "Beauté" means "beauty" in the French language.
For Pressurized Hair Spray.
First use on or about Mar. 12, 1962.

SN 152,334. Sales Plus Inc., d.b.a. Charles R. Co., Millbrae, Calif. Filed Aug. 31, 1962.

PRO-TAN 3

For Suntan Lotion.
First use July 18, 1962.

SN 157,285. Philip Morris Incorporated, New York, N.Y. Filed Nov. 14, 1962.

EVER-READY

Owner of Reg. Nos. 130,008, 539,032, and others.
For Shave Lather, After Shave Lotion, and Waterless Skin Cleanser.
First use Oct. 5, 1955.

SN 160,575. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

EDIT

For Anti-Perspirant and Deodorant.
First use Dec. 18, 1962.

SN 160,576. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

ALLY

For Antiperspirant and Deodorant.
First use Dec. 18, 1962.

SN 160,578. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

RESERVE

For Antiperspirant and Deodorant.
First use Dec. 18, 1962.

SN 160,691. Hattie Carnegie, Inc., d.b.a. Hattie Carnegie, New York, N.Y. Filed Jan. 15, 1963.

Advance Showing

For Cosmetics—Namely, Lipsticks, Rouge, Face Powder, Eyelash and Eyebrow Mascara, and Creams for the Hands and Face, Hair Setting Lotions, Hair Sprays, Permanent Wave Solutions, Hair Conditioning Creams and Lotions, Creams and Lotions, Finger Enamel and Preparation—Namely, Base and Top Coatings, Cuticle Softening Preparations, Perfumes, Toilet Water, and Astringents.
First use Apr. 1, 1962.

SN 160,769. Robert Alan Franklyn, d.b.a. Robaire Alain, Los Angeles, Calif. Filed Jan. 16, 1963.

POUPEE DE PARIS

A translation of the mark is "doll of Paris" or "Paris doll."
For Bath Oil.
First use Dec. 1, 1962.

Class 52 — Detergents and Soaps

SN 153,321. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Division, Wilmington, Calif. Filed Sept. 17, 1962.

TRANSPO

For Engine and Motor Parts Cleaner.
First use Feb. 18, 1947.

SN 154,288. The Procter & Gamble Company, Cincinnati, Ohio. Filed Oct. 1, 1962.

BIG MIKE

For All Purpose Liquid Detergent Intended Primarily for Household Use.
First use Aug. 30, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 116,236. Jahn's Since 1897, Inc., Brooklyn, N.Y. Filed Mar. 22, 1961.



Owner of Reg. No. 642,154.
For Restaurant Services.
First use 1897.

SN 122,247. Allstate Enterprises, Inc., Skokie, Ill. Filed June 19, 1961.

ALLSTATE MOTOR CLUB

Without waiver of applicant's common law rights with respect to the combination of words constituting applicant's service mark, applicant disclaims any right to the words "Motor Club," except as a part of the mark as shown.
For Services to Motorist Members, Including Assistance on Planning Auto Trips, Emergency Road Service Benefits, Legal Service Benefit in Event of Traffic Violation Charges, Accident Insurance, and Arranging for World-Wide Tours.
First use on or about May 18, 1961.

SN 142,711. Hotel Corporation of America, Boston, Mass. Filed Apr. 20, 1962.

HOTEL CORPORATION OF AMERICA

For Hotel, Motor Hotel, Restaurant and Bar Services.
First use Feb. 21, 1956.

SN 150,364. Reminder Service, Inc., Medina, Ohio. Filed Aug. 2, 1962.

Forget-Me-Not



For Reminding Subscribers of Significant Dates and Occasions.
First use June 13, 1962.

SN 158,867. Stanley Engineering Company, Muscatine, Iowa. Filed Dec. 10, 1962.

STANLEY

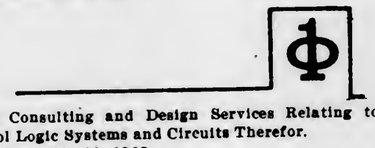
For Engineering and Architectural Services.
First use Sept. 1, 1962.

SN 159,473. Diginamics Corporation, Minneapolis, Minn. Filed Dec. 20, 1962.

DIGINAMICS

For Consulting and Design Services Relating to Digital Control Logic Systems and Circuits Therefor.
First use Dec. 8, 1961.

SN 159,474. Diginamics Corporation, Minneapolis, Minn. Filed Dec. 20, 1962.



For Consulting and Design Services Relating to Digital Control Logic Systems and Circuits Therefor.
First use Feb. 23, 1962.

SN 159,704. Dresser Industries, Inc., Dallas, Tex. Filed Dec. 26, 1962.

MINIFOCUSEDLOG

For Electrical Logging of Earth Boreholes and in the Supplying of Logs so Produced.
First use on or about Feb. 15, 1960.

Class 101 — Advertising and Business

SN 142,320. International Beauty Congress, Inc., Long Beach, Calif. Filed Apr. 16, 1962.



Owner of Reg. No. 727,336.
For Promoting the Sale of Goods and Services of Others Through the Medium of a Beauty Contest Conducted on an International and National Basis.
First use on or about Nov. 15, 1961.

SN 144,240. Shepard W. Davis, d.b.a. Publications Unlimited, Coral Gables, Fla. Filed May 10, 1962.

PUBLICATIONS UNLIMITED

For Service Consisting of the Solicitation of Subscriptions for Magazines Published by Others.
First use June 15, 1960.

SN 149,632. Nancy R. Barrett, d.b.a. Barrett Office Personnel Service, Baltimore, Md. Filed July 24, 1962.



The "World Globe" is disclaimed apart from the mark as shown in the drawing.
For Services of Providing Temporary Office Personnel.
First use 1951.

SN 150,556. Guest Pac Corporation, New York, N.Y. Filed Aug. 6, 1962.

SUPER PAC

For Advertising and Promotion of Goods of Others Through the Packaging, Imprinting and Distribution of Various Manufacturers' Samples Enclosed in a Single Package.
First use Nov. 10, 1960.

Class 102 — Insurance and Financial

SN 125,796. The Bank for Savings in the City of New York, New York, N.Y. Filed Aug. 11, 1961.



The words "The Bank for Savings" are disclaimed apart from the mark as shown.
For Savings Account Services.
First use June 17, 1960.

SN 141,236. Airway Underwriters, Ann Arbor, Mich. Filed Apr. 2, 1962.



For Underwriting of General Liability Insurance in the Field of Aviation.
First use Nov. 11, 1961.

SN 148,968. Data Service Corporation, Seattle, Wash. Filed July 12, 1962.

Preferred Check System

The words "Check System" are disclaimed apart from the mark as shown.
For Investigating and Establishing Credit Ratings, Guaranteeing Checks, and Furnishing Protection Against Losses Due to Bad Checks.
First use on or about Jan. 16, 1961.
Subj. to Intf. with SN 138,411.

SN 151,187. Akron-Dime Bank, Akron, Ohio. Filed Aug. 15, 1962.



For Financial and Banking Services.
First use Oct. 6, 1960.

SN 158,765. American Republic Insurance Company, Des Moines, Iowa. Filed Dec. 10, 1962.

TAILORED

Owner of Reg. No. 733,562.
For Underwriting and Writing Hospital, Surgical, Medical, and Life Insurance.
First use during December 1960.

SN 159,676. Allstate Insurance Company, Skokie, Ill. Filed Dec. 26, 1962.



Without waiver of applicant's common law rights, applicant disclaims any right to the words "Sick Pay" except as a part of the mark as shown.
For Insurance Underwriting.
First use on or about Dec. 17, 1962.

Class 103 — Construction and Repair

SN 138,934. Bendix Field Engineering Corporation, Owings Mills, Md. Filed Mar. 2, 1962.



For Furnishing Engineering Service and Maintenance for Satellite Stations.
First use Jan. 17, 1962.

SN 145,581. Nyloncraft, Inc., Mishawaka, Ind. Filed May 28, 1962.



The drawing is lined for red. Owner of Reg. Nos. 712,465 and 730,355.
For Custom Casting and Molding of Plastic Industrial Parts.
First use October 1956.

SN 149,060. The Dow Chemical Company, Midland, Mich. Filed July 16, 1962.

MELOGRAF

For Hydrostatic Pressure Testing Services.
First use Apr. 6, 1962.

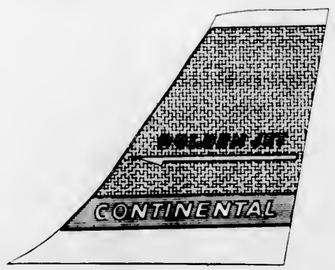
Class 105 — Transportation and Storage

SN 110,001. Transcontinental Bus System, Inc., Dallas, Tex. Filed Dec. 9, 1960.



Applicant disclaims the words "Package Express" apart from the mark. The drawing is lined to show the color red, but color is not claimed as a feature of the mark.
For Transportation of Parcels, Packets and the Like by Motor Vehicles.
First use on or about July 1960.

SN 121,273. Continental Air Lines, Inc., Denver, Colo. Filed June 2, 1961.



No claim is made to "Jet" apart from its use in the present mark and no claim is made to the representation of an airplane wingtip. The drawing is lined for gold and blue. Owner of Reg. Nos. 691,817, 562,047, and 553,242.

For Air Transportation of Persons, Goods, Mail, and Freight.

First use on or about Apr. 1, 1959.

SN 157,385. Mail Delivery Service Co., Inc., San Francisco, Calif. Filed Nov. 16, 1962.



For Mail Delivery Service.

First use August 1958.

SN 158,498. Allstate Enterprises, Inc., Skokie, Ill. Filed Dec. 5, 1962.



Without waiver of applicant's common law rights with respect to the combination of words constituting applicant's service mark, applicant disclaims any right to the word "Tours," except as a part of the mark as shown. Owner of Reg. No. 226,693.

For Travel Agency Services.

First use on or about Jan. 1, 1962.

SN 158,499. Allstate Enterprises, Inc., Skokie, Ill. Filed Dec. 5, 1962.

ALLSTATE TOURS

Without waiver of applicant's common law rights with respect to the combination of words constituting applicant's service mark, applicant disclaims any right to the word "Tours," except as a part of the mark as shown. Owner of Reg. No. 226,693.

For Travel Agency Services.

First use on or about Jan. 1, 1962.

SN 158,972. Hertz System, Inc., New York, N.Y. Filed Dec. 12, 1962.

HERTZ PUTS YOU IN THE DRIVER'S SEAT

Owner of Reg. Nos. 614,123, 714,254, and others.

For Rental of Automobiles.

First use Sept. 2, 1959.

SN 158,973. Hertz System, Inc., New York, N.Y. Filed Dec. 12, 1962.

HIGHWAY HOLIDAYS

Owner of Reg. Nos. 614,123, 714,254, and others.

For Rental of Automobiles.

First use Mar. 1, 1962.

SN 158,975. Hertz System, Inc., New York, N.Y. Filed Dec. 12, 1962.

LET HERTZ PUT YOU IN THE DRIVER'S SEAT

Owner of Reg. Nos. 614,123, 714,254, and others.

For Rental of Automobiles.

First use Oct. 16, 1959.

Class 106 — Material Treatment

SN 155,489. Chromium Corporation of America, Waterbury, Conn. Filed Oct. 19, 1962.

OPTICHROME

For Chromium Plating of Metallic Articles Furnished by Others.

First use Mar. 1, 1962.

Class 107 — Education and Entertainment

SN 156,014. Northwestern College, Minneapolis, Minn. Filed Oct. 26, 1962.

MID-AMERICA'S INSPIRATIONAL NETWORK

For Radio Broadcasting Services.

First use Apr. 1, 1959.

SN 157,955. The American Public Health Association, Inc., New York, N.Y. Filed Nov. 8, 1962.

WELLBEE

For Educational Services in the Form of a Program To Develop Awareness of Personal Health Problems Among the General Public.

First use Sept. 14, 1962.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 106,728. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Oct. 19, 1960.



The Greek words on the emblem or medallion mean "Naught Without Labor."

For Identification of Members of the Lambda Chi Alpha Fraternity Who Have Distinguished Themselves by Outstanding Success in the Fields of Business, Industry, the Arts, Science or the Professions and Thereby Have Brought Honor and Respect to the Fraternity.

First use Aug. 22, 1960.

SN 154,674. American Massage and Therapy Association, Wilmington, Del. Filed Oct. 8, 1962.



For Indicating Membership in Applicant Association.

First use on or about Aug. 12, 1958.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

754,378. DESIGNED FOR THE ENGINEER ENGINEERED FOR THE DESIGNER. Celanese Corporation of America. SN 120,774. Pub. 5–28–63. Filed 5–25–61.

754,379. CAMEL-BLACK. Harry T. Campbell Sons' Corporation. SN 146,358. Pub. 5–28–63. Filed 6–7–62.

754,380. PINPOLY. International Foam Corporation. SN 147,283. Pub. 5–28–63. Filed 6–20–62.

754,381. AQUA POL. Consolidated Thermoplastics Company. SN 147,443. Pub. 5–28–63. Filed 6–22–62.

754,382. CERCOR. Corning Glass Works. SN 151,201. Pub. 5–28–63. Filed 8–15–62.

754,383. GENFLO. The General Tire & Rubber Company. SN 153,169. Pub. 5–28–63. Filed 9–14–62.

754,384. MAC-PAK. McHutchison & Co. SN 153,498. Pub. 5–28–63. Filed 9–19–62.

754,385. LEXEL. The Dow Chemical Company. SN 154,959. Pub. 5–28–63. Filed 10–11–62.

754,386. SHAWVAN'S. Gerald W. Epstein, d.b.a. John W. Shawvan Co. SN 155,306. Pub. 5–28–63. Filed 10–17–62.

754,387. UP-GRADE. The Charles C. Hart Seed Company. SN 157,500. Pub. 5–28–63. Filed 11–19–62.

Class 2 — Receptacles

754,388. COGEGAL. Compagnie Generale dos Gaz Liquefies Cogegal. SN 125,971. Pub. 5–28–63. Filed 8–14–61.

754,389. ZIP'ER-'N-DIPPER. Dairypak Inc. SN 150,399. Pub. 4–30–63. Filed 8–3–62.

754,390. BARZAN AND DESIGN. The C. W. Zumbiel Company. SN 152,027. Pub. 5–28–63. Filed 8–27–62.

754,391. COCKTAIL TIME. American Can Company. SN 152,555. Pub. 5–28–63. Filed 9–6–62.

754,392. COMMANDO. Weyerhaeuser Company. SN 152,856. Pub. 5–28–63. Filed 9–10–62.

754,393. VELVET. Sonoco Products Company. SN 153,428. Pub. 5–28–63. Filed 9–18–62.

754,394. AQUAMATIC. Premiums Infinite, Incorporated, d.b.a. Rutland Nurseries. SN 153,512. Pub. 5–28–63. Filed 9–19–62.

754,395. TITEN. Tee-Pak, Inc. SN 153,523. Pub. 5–28–63. Filed 9–19–62.

754,396. ALUMACASK. American Can Company. SN 153,539. Pub. 5–28–63. Filed 9–20–62.

754,397. DELCAN. Delaware Barrel and Drum Company, Inc. SN 153,630. Pub. 5–28–63. Filed 9–21–62.

754,398. SOPHISTIGIFT. Harry and David. SN 153,878. Pub. 5–28–63. Filed 9–25–62.

754,399. ARGOS. Argos Products Company. SN 153,923. Pub. 5–28–63. Filed 9–26–62.

754,400. DEAL-AR-PAK. Mallinckrodt Chemical Works. SN 153,966. Pub. 5–28–63. Filed 9–26–62.

Class 4 — Abrasives and Polishing Materials

754,401. VELVET. The Bell Company, d.b.a. Westley Industries. SN 120,947. Pub. 5–28–63. Filed 5–29–61.

754,402. CORDOBA. Solitaire & Saponite Reunis. SN 137,390. Pub. 5–28–63. Filed 2–6–62.

754,403. STAMPEDE. Texize Chemicals, Inc. SN 142,142. Pub. 5–28–63. Filed 4–12–62.

754,404. TROFFY AND DESIGN. United States Pumice Supply Co. SN 145,637. Pub. 5–28–63. Filed 5–28–62.

754,405. SHOE COSMETIC. Cameo Inc. SN 151,004. Pub. 5–28–63. Filed 8–13–62.

754,406. CARNAUBRITE. United States Borax & Chemical Corporation, assignee of Columbia Wax Company. SN 151,887. Pub. 5–28–63. Filed 8–27–62.

Class 5 — Adhesives

754,407. AHS AND DESIGN. American Heat-Seal, Inc. SN 119,911. Pub. 5–28–63. Filed 5–15–61.

754,408. LADCO. L. A. Dreyfus Company. SN 125,815. Pub. 5–28–63. Filed 8–11–61.

Class 6 — Chemicals and Chemical Compositions

754,409. SANTOSET. Monsanto Chemical Company. SN 128,076. Pub. 5–28–63. Filed 9–18–61.

754,410. SAN O PIL. Allied Block Chemical Co. SN 128,239. Pub. 5–28–63. Filed 9–20–61.

754,411. COLMAT. Fritz Schenker-Winkler, d.b.a. Kaspar Winkler & Co. SN 135,461. Pub. 5–28–63. Filed 1–9–62.

754,412. FABRI-DYE. Meyer Magid, d.b.a. The Magi-Dyes Co. SN 142,835. Pub. 5–28–63. Filed 4–23–62.

754,413. HEMOTROL AND DESIGN. Innovators, Inc., d.b.a. Clinton Laboratories. SN 143,630. Pub. 5–28–63. Filed 5–2–62.

754,414. TOUCH-N-TRIM. Robert S. Wise Company, Inc. SN 145,905. Pub. 5–28–63. Filed 5–31–62.

754,415. SOL-U-COP. Tennessee Corporation. SN 146,529. Pub. 5–28–63. Filed 6–8–62.

754,416. MAYSPERSE. Otto B. May, Inc. SN 147,752. Pub. 12–4–62. Filed 6–26–62.

754,417. MANOX. Hardman & Holden Limited. SN 149,081. Pub. 5–28–63. Filed 7–16–62.

754,418. U-D-TEK. Robert Graham Carson. SN 152,279. Pub. 5–28–63. Filed 8–31–62.

754,419. LANOFLO AND DESIGN. Royal Bond, Inc. SN 152,441. Pub. 5–28–63. Filed 9–4–62.

754,420. 76. Union Oil Company of California. SN 153,435. Pub. 5–28–63. Filed 9–18–62.

754,421. MIAVAL. Societe des Usines Chimiques Rhone-Poulenc. SN 153,519. Pub. 5–28–63. Filed 9–19–62.

754,422. GELTROL. The B. F. Goodrich Company. SN 157,490. Pub. 5–28–63. Filed 11–19–62.

Class 8 — Smokers' Artides, Not Including Tobacco Products

754,423. STA-PUT. Park Sherman Inc. SN 157,571. Pub. 5–28–63. Filed 11–19–62.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

754,424. DESIGN MYTHOLOGICAL FIGURE. Hercules Powder Company. SN 158,449. Pub. 5–28–63. Filed 12–4–62.

Class 10 — Fertilizers

754,425. GREEN GARDE. Nelsen Steel and Wire Co. SN 153,107. Pub. 5–28–63. Filed 9–13–62.

754,426. AGRI-VITA. The American Agricultural Chemical Company. SN 155,551. Pub. 5–28–63. Filed 10–22–62.

Class 11 — Inks and Inking Materials

754,427. FR-CARBON PAPER-(FULL RELEASE). Bell Intercontinental Corporation. SN 143,366. Pub. 5–28–63. Filed 4–30–62.

Class 12 — Construction Materials

754,428. SLOPE BEAM AND DESIGN. Inland Steel Products Company. SN 109,330. Pub. 5–28–63. Filed 11–30–60.

754,429. HILINEWALL. Elwin G. Smith & Co., Inc. SN 128,859. Pub. 4–9–63. Filed 9–28–61.

754,430. ALUMA-FORM. Utility Products Manufacturing Company. SN 132,403. Pub. 5–28–63. Filed 11–20–61.

754,431. CIRCLE SQUARE. The Ohio Clay Company. SN 147,952. Pub. 5–28–63. Filed 6–28–62.

754,432. TYSULITE. Tyler Refrigeration Corporation. SN 151,542. Pub. 5–28–63. Filed 8–20–62.

754,433. CCM AND CROWN DESIGN. Crown Chemicals of Michigan. SN 151,636. Pub. 5–28–63. Filed 8–2–62.

754,434. "CROWN-O-LASTIC." Crown Chemicals of Michigan. SN 151,727. Pub. 5–28–63. Filed 8–23–62.

754,435. "MULT-I-SEAL." Crown Chemicals of Michigan. SN 152,115. Pub. 5–28–63. Filed 8–29–62.

754,436. ECON-A-FRAME. Automatic Poultry Feeder Company, d.b.a. Big Dutchman. SN 152,968. Pub. 5–28–63. Filed 9–12–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

754,437. ELECTRO QUEEN. Electro-Way Corporation. SN 137,056. Pub. 5–28–63. Filed 2–1–62.

754,438. PENBERTHY AND DESIGN. Buffalo Eclipse Corporation. CONSOLIDATED CERTIFICATE. SN 138,279, pub. 5–21–63, filed 2–20–62, Cl. 13; SN 138,280, pub. 5–21–63, filed 2–20–62, Cl. 23; SN 138,281, pub. 5–21–63, filed 2–20–62, Cl. 26.

754,439. BAKENAMEL. National Manufacturing Co. SN 140,578. Pub. 5–28–63. Filed 3–23–62.

754,440. DESIGN OF HOUSE, ETC. IN SQUARE. Owens-Corning Fiberglas Corporation. SN 142,349. Pub. 5–28–63. Filed 4–16–62.

754,441. SNAP-FAST. Elkay Manufacturing Company. SN 150,036. Pub. 5–28–63. Filed 7–30–62.

754,442. FED. Federal Chain Company. SN 150,040. Pub. 5–28–63. Filed 7–30–62.

754,443. HIJOHN. Finlof Bros. SN 151,218. Pub. 5–28–63. Filed 8–15–62.

754,444. WEAR-EVER PREFERRED. Wear-Ever Aluminum, Inc. SN 153,137. Pub. 5–28–63. Filed 9–13–62.

754,445. ROTO-BALL. Hoke Incorporated. SN 153,172. Pub. 5–28–63. Filed 9–14–62.

754,446. FLO-MITE. Hoke Incorporated. SN 153,173. Pub. 5–28–63. Filed 9–14–62.

754,447. GEOMETRIC DESIGN. Link-Age Corporation. SN 153,780. Pub. 5–28–63. Filed 9–24–62.

754,448. SANI-LAV. Carpenter-Hetzler Co. SN 153,936. Pub. 5–28–63. Filed 9–26–62.

754,449. CHEMEX. Chemex Corporation. SN 164,492. Pub. 5–28–63. Filed 3–13–63.

Class 14 — Metals and Metal Castings and Forgings

754,450. UNIONCLAD. Henry Racamier. SN 129,040. Pub. 5–28–63. Filed 10–2–61.

754,451. C-SENTRY AND DESIGN. Consolidated Zinc Corporation (Sales) Limited. SN 133,934. Pub. 5–28–63. Filed 12–13–61.

754,452. LAKE COPPER AND DESIGN. Copper Range Company. SN 135,490. Pub. 5–28–63. Filed 1–10–62.

754,453. PRESTEEL. Worcester Pressed Steel Company. SN 137,831. Pub. 5–28–63. Filed 2–12–62.

754,454. LENOX MASTER DRILL. American Saw & Mfg. Company. SN 142,397. Pub. 5–28–63. Filed 4–17–62.

754,455. QUEEN BRAND AND DESIGN. The Titan Industrial Corporation. SN 149,493. Pub. 5–28–63. Filed 7–20–62.

754,456. MXI. United States Steel Corporation. SN 149,501. Pub. 5–28–63. Filed 7–20–62.

754,457. SAVOMATIC. Jones & Laughlin Steel Corporation. SN 152,702. Pub. 5–28–63. Filed 9–7–62.

754,458. VIKING. Cerro Corporation. SN 153,621. Pub. 5–28–63. Filed 9–21–62.

754,459. AUDIOLOY. Crucible Steel Company of America. SN 153,743. Pub. 5–28–63. Filed 9–24–62.

754,460. FLEXOMATIC. Keystone Steel & Wire Company. SN 153,769. Pub. 5–28–63. Filed 9–24–62.

754,461. CORROSTAN. National-Standard Company. SN 153,975. Pub. 5–28–63. Filed 9–26–62.

Class 15 — Oils and Greases

754,462. TENNECON. Tenneco Corporation, assignee of Tenneco Oil Company. SN 137,671. Pub. 5–28–63. Filed 2–9–62.

754,463. INSULUBE. Archie W. Knudson, d.b.a. Insulube Products. SN 140,732. Pub. 5–28–63. Filed 3–26–62.

754,464. DURASUN. Sun Oil Company. SN 142,370. Pub. 5–28–63. Filed 4–16–62.

754,465. ECONODYNE. The Alben Daniel Chemical Corporation. SN 143,497. Pub. 5–28–63. Filed 5–1–62.

754,466. FUEL-MATE. Dearborn Chemical Company. SN 153,259. Pub. 5–28–63. Filed 9–17–62.

754,467. TOPPER. Imperial Refineries Corporation. SN 154,250. Pub. 5–28–63. Filed 10–1–62.

Class 16 — Protective and Decorative Coatings

754,468. PUMP LIFE. Hanson Equipment Company. SN 152,514. Pub. 5–28–63. Filed 9–5–62.

754,469. VIT-GRIT. International Minerals & Chemical Corporation. SN 152,700. Pub. 5–28–63. Filed 9–7–62.

754,470. VIT-GOBE. International Minerals & Chemical Corporation. SN 153,484. Pub. 5–28–63. Filed 9–19–62.

754,471. WEATHER-CHEK. Monsey Products Co. SN 154,274. Pub. 5–28–63. Filed 10–1–62.

754,472. REALCOAT. Interstate Enamel and Varnish Company. SN 154,900. Pub. 5–28–63. Filed 10–10–62.

Class 17 — Tobacco Products

754,473. YORK. P. Lorillard Company. SN 125,231. Pub. 5–28–63. Filed 8–2–61.

754,474. YORK AND DESIGN. P. Lorillard Company. SN 126,241. Pub. 5–28–63. Filed 8–18–61.

754,475. LA PRIMADORA FALCON. La Primadora Cigar Corporation. SN 129,506. Pub. 5–28–63. Filed 10–9–61.

754,476. EL TRELLES. DWG Cigar Corporation. SN 139,045. Pub. 5–28–63. Filed 3–5–62.

754,477. SCHERMERHORN'S FLAKE MIXTURE AND DESIGN. Schermerhorn Cigar Stores, Inc. SN 144,986. Pub. 5-28-63. Filed 5-18-62.

754,478. SCHERMERHORN'S AND DESIGN. Schermerhorn Cigar Stores, Inc. SN 144,987. Pub. 5-28-63. Filed 5-18-62.

754,479. SCHERMERHORN'S. Schermerhorn Cigar Stores, Inc. SN 144,988. Pub. 5-28-63. Filed 5-18-62.

754,480. A DOG-GONE GOOD CHEW. Brown & Williamson Tobacco Corporation. SN 148,358. Pub. 5-28-63. Filed 7-5-62.

754,481. VELASQUES. Velasques Nederland N.V. SN 149,425. Pub. 5-28-63. Filed 7-19-62.

754,482. PIPE MAJOR. Brown & Williamson Tobacco Corporation. SN 156,556. Pub. 5-28-63. Filed 11-5-62.

754,483. DESIGN OF A POST-HORN WITH CROWN. N.V. Koninklijke Tabakfabriek, Koffiebranderij en Theehandel J. & A. C. Van Rossem. SN 156,751. Pub. 5-28-63. Filed 11-6-62.

Class 18 — Medicines and Pharmaceutical Preparations

754,484. TRAN-Q. Chas. Pfizer & Co., Inc. SN 49,512. Pub. 3-29-60. Filed 4-11-58.

754,485. ALLPYRAL. Miles Laboratories, Inc., assignee of Margaret B. Strauss. SN 111,932. Pub. 5-28-63. Filed 1-16-61.

754,486. B FAMILY AND DESIGN. Modern Products, Inc. SN 122,344. Pub. 5-28-63. Filed 6-19-61.

754,487. AQUA SOLVA. Peter Hand Brewery Company. SN 151,050. Pub. 5-28-63. Filed 8-13-62.

754,488. CARI-TAB. Atlas Chemical Industries, Inc. SN 151,118. Pub. 5-28-63. Filed 8-14-62.

754,489. ARROW DESIGN. American Home Products Corporation. SN 151,645. Pub. 5-28-63. Filed 8-22-62.

754,490. SERVAL AND DESIGN. Serval Pharmaceuticals, Inc. SN 152,006. Pub. 5-28-63. Filed 8-27-62.

754,491. ALNORE. Ali Debeh, d.b.a. Fourche Valley Clinic. SN 152,382. Pub. 5-28-63. Filed 9-4-62.

754,492. B-NUTRON. Nion Corporation. SN 154,794. Pub. 5-28-63. Filed 8-28-62.

754,493. RED COMB AND DESIGN. Hales & Hunter Co. SN 155,501. Pub. 5-28-63. Filed 10-19-62.

Class 19 — Vehicles

754,494. PICNIC. General Boats Corporation. SN 124,352. Pub. 5-28-63. Filed 7-20-61.

754,495. POINTER. Parma Motors, Inc. SN 151,251. Pub. 5-28-63. Filed 8-15-62.

Class 20 — Linoleum and Oiled Cloth

754,496. POLY-FLOR. Carthage Mills Incorporated. SN 157,602. Pub. 5-28-63. Filed 11-20-62.

754,497. VISTELLE. Armstrong Cork Company. SN 158,128. Pub. 5-28-63. Filed 11-29-62.

754,498. ROCHELLE. Armstrong Cork Company. SN 158,129. Pub. 5-28-63. Filed 11-29-62.

754,499. ROBBINETTE. Robbins Floor Products, Inc. SN 158,380. Pub. 5-28-63. Filed 12-3-62.

754,500. ESTEEM. Congoleum-Nairn Inc. SN 159,960. Pub. 5-28-63. Filed 12-31-62.

754,501. AMTICO PROMENADE AND DESIGN. American Biltrite Rubber Co., Inc. SN 161,137. Pub. 5-28-63. Filed 1-22-63.

754,502. AMTICO CARTOON AND DESIGN. American Biltrite Rubber Co., Inc. SN 161,140. Pub. 5-28-63. Filed 1-22-63.

754,503. RUBEROID. The Ruberoid Co. SN 162,292. Pub. 5-28-63. Filed 2-7-63.

754,504. ADORN. Stix Products, Inc. SN 162,501. Pub. 5-28-63. Filed 2-11-63.

754,505. VINYLBEST. Congoleum-Nairn Inc. SN 163,323. Pub. 5-28-63. Filed 2-25-63.

Class 21 — Electrical Apparatus, Machines, and Supplies

754,506. 4J. James Myron Fulkerson, d.b.a. Fourjay Industries. SN 92,246. Pub. 5-28-63. Filed 3-7-60.

754,507. INTENSO QUARTZLITE 500. Appleton Electric Company. SN 99,271. Pub. 5-28-63. Filed 6-20-60.

754,508. MEDALLION. Arvin Industries, Inc. SN 107,903. Pub. 5-28-63. Filed 11-7-60.

754,509. GLIDE AWAY. Rheinstahl Hamburg Stahlbau Eggers & Friedrich Kehrhahn G.m.b.H. SN 118,927. Pub. 5-28-63. Filed 4-28-61.

754,510. SPRAY-A-MATIC SYSTEM. Universal Research Corporation. SN 122,575. Pub. 5-28-63. Filed 6-21-61.

754,511. PRODUCTOGRAPH. Siemens & Halske Aktiengesellschaft. SN 126,538. Pub. 5-28-63. Filed 8-23-61.

754,512. JEWEL. Manley, Inc. SN 132,848. Pub. 5-28-63. Filed 11-27-61.

754,513. STEAMSTIR. Steamstir Corp. SN 134,409. Pub. 5-28-63. Filed 12-20-61.

754,514. STEAMSTIR DESIGN. Steamstir Corp. SN 134,410. Pub. 5-28-63. Filed 12-20-61.

754,515. BRIMAR. Thorn-AEI Radio Valves and Tubes Limited. SN 134,578. Pub. 5-28-63. Filed 12-22-61.

754,516. GOLDPOINT ETC. AND DESIGN. Goldpoint Industries, Inc. SN 134,883. Pub. 5-28-63. Filed 12-29-61.

754,517. THERMASOL AND DESIGN. Thermasol Ltd. SN 136,843. Pub. 5-28-63. Filed 1-29-62.

754,518. WELDBLOC. General Precision, Inc. SN 139,291. Pub. 5-28-63. Filed 3-7-62.

754,519. MODUVAC. The Gamewell Company. SN 143,820. Pub. 5-28-63. Filed 5-4-62.

754,520. FANCIFUL LETTER T. Teletype Corporation. SN 146,328. Pub. 5-28-63. Filed 6-6-62.

754,521. ALPARTS. Wonstop Automotive Warehouse Co. SN 147,169. Pub. 5-28-63. Filed 6-18-62.

754,522. IF IRVAN AND DESIGN. Irvan Ferromagnetics Corporation. SN 150,563. Pub. 5-28-63. Filed 8-6-62.

754,523. LEC ON A GLOBAL DESIGN WITH LIGHTNING BOLT. Logan Electronic Corporation. SN 151,416. Pub. 5-28-63. Filed 8-17-62.

754,524. VANGUARD. Ling-Temco-Vought, Inc. SN 151,766. Pub. 5-28-63. Filed 8-23-62.

754,525. SNAPLITE AND DESIGN. Leecraft Manufacturing Co., Inc. SN 153,413. Pub. 5-28-63. Filed 9-18-62.

754,526. VAPOR. Vapor Corporation. MULTIPLE CLASS (Classes 21 and 23). SN 153,533. Pub. 5-28-63. Filed 9-19-62.

754,527. ELECTRA-CURL. Standard Products Corporation. SN 154,644. Pub. 5-28-63. Filed 10-5-62.

754,528. HUSTLER. New-Tronics Corporation. SN 160,438. Pub. 5-28-63. Filed 1-9-63.

754,529. HALF-PINT. Hi-G Incorporated. SN 160,486. Pub. 5-28-63. Filed 1-10-63.

754,530. VACULATOR. Hill-Shaw Company. SN 160,639. Pub. 5-28-63. Filed 1-14-63.

754,531. DESIGN MONOGRAM. The Mercoid Corporation. SN 161,351. Pub. 5-28-63. Filed 1-24-63.

Class 22 — Games, Toys, and Sporting Goods

754,532. WOB-L-RITE. Seneca Tackle Co., Inc. SN 121,327. Pub. 5-28-63. Filed 6-2-61.

754,533. BENDY AND DESIGN. Newfeld Limited. SN 127,869. Pub. 5-28-63. Filed 9-14-61.

754,534. LADY BELL. Joseph R. Loprinzi, d.b.a. Joe Lo Prinzi Enterprises. SN 151,601. Pub. 5-28-63. Filed 8-21-62.

754,535. ACE AND DESIGN. Amerace Corporation. SN 151,797. Pub. 5-28-63. Filed 8-24-62.

754,536. HAUNTED HOUSE. Ideal Toy Corporation. SN 152,065. Pub. 5-28-63. Filed 8-28-62.

754,537. SPRING-GO. Spring-Go, Inc. SN 152,841. Pub. 5-28-63. Filed 9-10-62.

754,538. OPERATION MOON BASE. Louis Marx & Co., Inc. SN 152,903. Pub. 5-28-63. Filed 9-11-62.

754,539. HOPKINS' NO-EQL LURES AND DESIGN. Tirzah U. Hopkins, d.b.a. Hopkins Fishing Company. SN 152,995. Pub. 5-28-63. Filed 9-12-62.

754,540. EP. Evans Products Company. SN 153,393. Pub. 5-28-63. Filed 9-18-62.

754,541. TRACERS. Bervil E. Morris. SN 153,419. Pub. 5-28-63. Filed 9-18-62.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

754,438. CONSOLIDATED CERTIFICATE. See Class 13.

754,542. MARSHALL & HUSCHART MACHINERY CO. ETC. AND DESIGN. Marshall & Huschart Machinery Co. SN 125,677. Pub. 5-28-63. Filed 8-9-61.

754,543. LINCOLN LOGOS AND DESIGN PENNANT WITH LETTER L. Millard B. Beaver, d.b.a. Lincoln Logotype Company. SN 130,411. Pub. 5-28-63. Filed 10-23-61.

754,544. UNICASTER. The United Steel Companies Limited. SN 132,401. Pub. 5-28-63. Filed 11-20-61.

754,545. FLEX-SET. The Navarre Corporation. SN 133,302. Pub. 5-28-63. Filed 12-4-61.

754,546. SELECTOMATIC. The Grover Company. SN 136,651. Pub. 5-28-63. Filed 1-26-62.

754,547. CATERPULLER. Entwistle Manufacturing Corporation. SN 137,219. Pub. 5-28-63. Filed 2-5-62.

754,548. SATELLITE. J. E. Bowden, d.b.a. Hobbs Automatic Tool Co. SN 138,939. Pub. 5-28-63. Filed 3-2-62.

754,549. TOPS POWER AND DESIGN. Power Tools Inc. SN 139,674. Pub. 5-28-63. Filed 3-12-62.

754,550. RETRACTO-GLIDE. Power Tools Inc. SN 139,675. Pub. 5-28-63. Filed 3-12-62.

754,551. MORATRONIK. Franz Morat G.m.b.H. SN 140,159. Pub. 5-28-63. Filed 3-19-62.

754,552. A GOOD NAME IN INDUSTRY. The Falk Corporation. SN 142,937. Pub. 5-28-63. Filed 4-24-62.

754,553. LANCASTER. Lancaster Machine Knife Works, Inc. SN 145,569. Pub. 4-2-63. Filed 5-28-62.

754,554. MOORE. Worthington Corporation. SN 146,343. Pub. 5-28-63. Filed 6-6-62.

754,555. 2 C.A. Empire Tool Company. SN 146,368. Pub. 5-28-63. Filed 6-7-62.

754,556. E.V. Empire Tool Company. SN 146,369. Pub. 5-28-63. Filed 6-7-62.

754,557. PNEUMAFILTER. Pneumafil Corporation. SN 149,203. Pub. 5-28-63. Filed 7-17-62.

754,558. FASTROL. Bakrank, Inc. SN 149,355. Pub. 5-28-63. Filed 7-19-62.

754,559. KEW AND DESIGN. Korody Marine Corporation. SN 149,477. Pub. 5-28-63. Filed 7-20-62.

754,560. SYNCRO/LOC. Hurst-Campbell, Inc. SN 149,743. Pub. 5-28-63. Filed 7-25-62.

754,561. HAM-WHIRL-SEAT. Ted J. Hamilton. SN 150,052. Pub. 5-28-63. Filed 7-30-62.

754,562. IMPERIAL TRIPLE CROWN. Imperial Knife Associated Companies, Inc. SN 150,061. Pub. 5-28-63. Filed 7-30-62.

754,563. 3 CROWN DESIGN. Imperial Knife Associated Companies, Inc. SN 150,062. Pub. 5-28-63. Filed 7-30-62.

754,564. AUTO-CYCLE. Binks Manufacturing Company. SN 150,149. Pub. 5-28-63. Filed 7-31-62.

754,565. TIP-O-MATIC. Southern Machinery Company. SN 150,193. Pub. 5-28-63. Filed 7-31-62.

754,566. REPCO. United Shoe Repairing Machine Company. SN 150,202. Pub. 5-28-63. Filed 7-31-62.

754,567. 23. Swingline Inc. SN 150,290. Pub. 5-28-63. Filed 8-1-62.

754,568. TRIM-A-WATE. Lee Hunter, d.b.a. Hunter Engineering Company. SN 150,343. Pub. 5-28-63. Filed 8-2-62.

754,569. MIKE MICROBE AND DESIGN. Union Tank Car Company. SN 150,652. Pub. 5-28-63. Filed 8-6-62.

754,570. AIM AND DESIGN. AIM Pump Corporation. SN 151,865. Pub. 5-28-63. Filed 8-27-62.

754,571. POWERSTAGE. American Powerstage Company. SN 151,869. Pub. 5-28-63. Filed 8-27-62.

754,572. RAPIDRESS. B & E Tooling & Machining Company. SN 151,877. Pub. 5-28-63. Filed 8-27-62.

754,573. THERMOCON-DEVELVO. Chris-Craft Corporation. SN 151,884. Pub. 5-28-63. Filed 8-27-62.

754,574. HAWK BILT. Hawk Bilt Mfg. Corp. SN 151,909. Pub. 5-28-63. Filed 8-27-62.

754,575. HERCO. Hercules Powder Company. SN 151,912. Pub. 5-28-63. Filed 8-27-62.

754,576. SWEET MAK'R. Joe Lowe Corporation. SN 152,319. Pub. 5-28-63. Filed 8-31-62.

754,577. CHAIN-A-MATIC. Morse Chain Company. SN 152,817. Pub. 5-28-63. Filed 9-10-62.

754,578. ESCAL-AIRE. Otis Elevator Company. SN 152,910. Pub. 5-28-63. Filed 9-11-62.

754,579. WEDGEBAK. Page Engineering Company. SN 152,911. Pub. 5-28-63. Filed 9-11-62.

754,580. ELECTRO-MAGIC. Electronics Incorporated. SN 153,075. Pub. 5-28-63. Filed 9-13-62.

754,581. J.C.I. Jorgensen Conveyors, Inc. SN 153,087. Pub. 5-28-63. Filed 9-13-62.

754,582. CENTRI-LIFT. Schmieg Industries, Inc. SN 153,122. Pub. 5-28-63. Filed 9-13-62.

754,583. HYDRA-VIBE. Casalbi Company. SN 153,154. Pub. 5-28-63. Filed 9-14-62.

754,584. PAYLOSTATIC. The Frank G. Hough Co. SN 153,174. Pub. 5-28-63. Filed 9-14-62.

754,585. STATIONAIRE. The Conway Clutch Company. SN 153,741. Pub. 5-28-63. Filed 9-24-62.

754,586. DOUBLELIFE. Philip Morris Incorporated. SN 158,088. Pub. 5-28-63. Filed 11-28-62.

Class 24 — Laundry Appliances and Machines

754,587. NATIONAL AND DESIGN. Matsushita Electric Industrial Co., Ltd. SN 140,704. Pub. 5-28-63. Filed 3-26-62.

754,588. UTILATWIN. E. L. Mustee & Sons, Inc. SN 149,948. Pub. 5-28-63. Filed 7-27-62.

754,589. ACE-O-TRONIC. McGraw-Edison Company. SN 153,497. Pub. 5-28-63. Filed 9-19-62.

Class 26 — Measuring and Scientific Appliances

754,438. CONSOLIDATED CERTIFICATE. See Class 13.

754,590. FISKE. Fiske Associates, Inc. SN 116,011. Pub. 5-28-63. Filed 3-20-61.

754,591. DUAL STAT. Montgomery Ward & Co., Incorporated. SN 130,817. Pub. 5-28-63. Filed 10-27-61.

754,592. NUCERITE. Pfaudler Permutit Inc. SN 137,939. Pub. 5-28-63. Filed 2-14-62.

754,593. FP. Fischer & Porter Company. SN 153,168. Pub. 4-23-63. Filed 9-14-62.

754,594. METRAMATIC. Scale Specialties Inc. SN 154,296. Pub. 5-28-63. Filed 10-1-62.

754,595. MEDIA. The Magnavox Company. SN 154,737. Pub. 5-28-63. Filed 10-8-62.

754,596. GRAPHICORDER. Lab-Line Instruments, Inc. SN 154,825. Pub. 5-28-63. Filed 10-9-62.

754,597. DOCUMAT. Documat, Inc. SN 155,395. Pub. 5-28-63. Filed 10-18-62.

754,598. PLASTUF. Ametek, Inc. SN 155,961. Pub. 5-28-63. Filed 10-26-62.

Class 27 — Horological Instruments

754,599. NATIONAL AND DESIGN. Matsushita Electric Industrial Co. Ltd. SN 140,706. Pub. 5-28-63. Filed 3-26-62.

Class 28 — Jewelry and Precious-Metal Ware

754,600. FB14K. Ferrara Bros. SN 151,088. Pub. 5-28-63. Filed 8-13-62.

754,601. EH. Egon Holzman, d.b.a. Holzman & Bradford. SN 151,491. Pub. 5-28-63. Filed 8-20-62.

754,602. 4-A AND DESIGN. Four Aces Jewelry Corp. SN 151,746. Pub. 5-28-63. Filed 8-23-62.

754,603. D.14KT. Duet Jewelry Co. Inc. SN 152,569. Pub. 5-28-63. Filed 9-6-62.

754,604. M-J-B. M. Blau. SN 153,930. Pub. 5-28-63. Filed 9-26-62.

754,605. WK AND DESIGN. Wladek Klang. SN 154,037. Pub. 5-28-63. Filed 9-27-62.

Class 30 — Crockery, Earthenware, and Porcelain

754,606. BLUE RIDGE CHINA U.S.A. AND DESIGN. Technical Porcelain and Chinaware Co. SN 161,216. Pub. 5-28-63. Filed 1-22-63.

Class 31 — Filters and Refrigerators

754,607. JET CO₂LD SHOT. General Dynamics Corporation. SN 135,791. Pub. 5-28-63. Filed 1-15-62.

754,608. CERCOR. Corning Glass Works. SN 151,204. Pub. 5-28-63. Filed 8-15-62.

754,609. ICE-A-CUP. Rudd-Melikian, Inc. SN 151,616. Pub. 5-28-63. Filed 8-21-62.

754,610. CHEMEX. Chemex Corporation. SN 164,493. Pub. 5-28-63. Filed 3-13-41.

Class 32 — Furniture and Upholstery

754,611. DELUXE AND DESIGN. Royalmetal Corporation, assignee of Deluxe Metal Products Company. SN 99,847. Pub. 5-28-63. Filed 6-28-60.

754,612. COLONIAL CHARM. Schnadig Corporation. SN 113,947. Pub. 5-28-63. Filed 2-17-61.

754,613. ULTRA REST. Illinois Upholsterer's Supply Company, Inc., d.b.a. Bur-Lar Mfg. Co. SN 132,556. Pub. 5-28-63. Filed 11-22-61.

754,614. CRIB-A-LOUNGE. The Babee-Tenda Corporation. SN 141,242. Pub. 5-28-63. Filed 4-2-62.

754,615. DOCTOR JACK'S HAPPY BACK. BRS Products Company. SN 142,073. Pub. 5-28-63. Filed 4-12-62.

754,616. TRENDAIRE. Wayniine, Inc. SN 142,907. Pub. 5-28-63. Filed 4-5-62.

754,617. DESIGN GUILD AND DESIGN. Globe-Wernicke Industries, Inc., assignee of The Globe-Wernicke Company. SN 147,103. Pub. 5-28-63. Filed 6-18-62.

754,618. AEROFORM. Eastern Steel Rack Co. SN 153,633. Pub. 5-28-63. Filed 9-21-62.

754,619. AMANA. Amana Society. SN 156,209. Pub. 5-28-63. Filed 10-30-62.

Class 34 — Heating, Lighting, and Ventilating Apparatus

754,620. COGEGAL. Compagnie Generale dos Gaz Liquefies Cogegal. SN 125,978. Pub. 5-28-63. Filed 8-14-61.

754,621. COMMANDO. Rheem Manufacturing Company. SN 138,116. Pub. 5-28-63. Filed 2-16-62.

754,622. TECTROL. Whirlpool Corporation. SN 149,346. Pub. 5-28-63. Filed 7-18-62.

754,623. CIRC-U-LATIC AND DESIGN. Vapor Corporation. SN 151,106. Pub. 5-28-63. Filed 8-13-62.

754,624. DEMAND-O-MATIC. Rheem Manufacturing Company. SN 151,366. Pub. 5-28-63. Filed 8-16-62.

754,625. STOW-PAC. Stewart-Warner Corporation. SN 151,439. Pub. 5-28-63. Filed 8-17-62.

754,626. SLYDE-OUT. Ametek, Inc. SN 151,647. Pub. 5-28-63. Filed 8-22-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

754,627. SUPER MILEAGE. The B. F. Goodrich Company. SN 121,559. Pub. 5-28-63. Filed 6-7-61.

754,628. JETREAD THE PENN-CRAFT SYSTEM P AND DESIGN KEYSTONE. The Mansfield Tire & Rubber Company, assignee of Pennsylvania Tire Company. SN 122,215. Pub. 5-28-63. Filed 6-16-61.

754,629. 76. Union Oil Company of California. SN 153,484. Pub. 5-28-63. Filed 9-18-62.

754,630. ZEPHYR. Carlisle Corporation. SN 159,871. Pub. 5-28-63. Filed 12-28-62.

Class 36 — Musical Instruments and Supplies

754,631. MEGMB. MEGMB Hope Recordings. SN 123,667. Pub. 5-28-63. Filed 7-10-61.

754,632. BRIMAR. Thorn-AEI Radio Valves and Tubes Limited. SN 134,577. Pub. 5-28-63. Filed 12-22-61.

754,633. DAWN. Dawn Records, Inc. SN 138,590. Pub. 5-28-63. Filed 2-26-62.

754,634. PLATTER-PAK AND DESIGN. Amberg File and Index Company. SN 162,221. Pub. 5-28-63. Filed 2-7-63.

754,635. SELF MOTIVATION. Frank V. Mavec, d.b.a. Stanford Institute. SN 162,849. Pub. 5-28-63. Filed 2-15-63.

754,636. CENTURY 21 BY ESTEEM. Esteem Associates Incorporated. SN 163,345. Pub. 5-28-63. Filed 2-25-63.

754,637. DYNAGROOVE. Radio Corporation of America. SN 163,491. Pub. 5-28-63. Filed 2-26-63.

754,638. CAPRI. Sonola Accordion Company, Inc. SN 164,568. Pub. 5-28-63. Filed 3-13-63.

Class 37 — Paper and Stationery

754,639. AUTOGRAPHIC BUSINESS FORMS. Autographic Business Forms, Inc. SN 120,611. Pub. 5-28-63. Filed 5-23-61.

754,640. QUICK. The Birge Company, Inc. SN 124,798. Pub. 5-28-63. Filed 7-27-61.

754,641. PETL-PAC. Davee Company. SN 141,820. Pub. 5-28-63. Filed 4-9-62.

754,642. SKYTEX. Lindenmeyr Paper Corporation. SN 146,494. Pub. 5-28-63. Filed 6-8-62.

754,643. DUPLI-NOTES. Joan W. Frank. SN 151,135. Pub. 5-28-63. Filed 8-14-62.

754,644. ST. JOSEPH. Plough, Inc., d.b.a. St. Joseph Pencil Co. SN 153,889. Pub. 5-28-63. Filed 9-25-62.

Class 38 — Prints and Publications

754,645. THE NEW WONDER WORLD ENCYCLOPEDIA. The Parents' Magazine's Education Press, Inc. SN 99,464. Pub. 5-28-63. Filed 6-21-60.

754,646. VIDEOTRONICS. Norwood Studios, Inc. SN 122,636. Pub. 12-12-61. Filed 6-22-61.

754,647. DU BARRY BEAUTY PLAN. Richard Hudnut. SN 128,276. Pub. 5-28-63. Filed 9-20-61.

754,648. DAWN OF AGES. Vernal M. Elliott, d.b.a. Peerless Tombs of America. SN 129,080. Pub. 5-28-63. Filed 9-27-61.

754,649. THE OFFICIAL GUIDE. National Railway Publication Company. SN 129,689. Pub. 5-28-63. Filed 10-11-61.

754,650. OFFICIAL RAILWAY GUIDE. National Railway Publication Company. SN 129,690. Pub. 5-28-63. Filed 10-11-61.

754,651. THE OFFICIAL GUIDE OF THE RAILWAYS ETC. AND DESIGN. National Railway Publication Company. SN 130,294. Pub. 5-28-63. Filed 10-19-61.

754,652. THE OFFICIAL GUIDE OF THE RAILWAYS. National Railway Publication Company. SN 130,295. Pub. 5-28-63. Filed 10-19-61.

754,653. THE CHEMICAL RECORD AND DESIGN. Columbus Section of the American Chemical Society. SN 138,946. Pub. 5-28-63. Filed 3-2-62.

754,654. WFR AND DESIGN. Washington Financial Reports, Inc. SN 151,182. Pub. 5-28-63. Filed 8-14-62.

754,655. THE GUIDER. The Guider, Inc. SN 154,493. Pub. 5-28-63. Filed 10-4-62.

754,656. BETTER HOMES AND GARDENS. Meredith Publishing Company. SN 154,742. Pub. 5-28-63. Filed 10-8-62.

754,657. METRO MONITOR. Metro-Monitor, Inc. SN 155,089. Pub. 5-28-63. Filed 10-12-62.

754,658. PADDY O'MALLARD. Kent Norman Olson. SN 155,179. Pub. 5-28-63. Filed 10-15-62.

754,659. VISTAS OF SCIENCE. National Science Teachers Association, Inc. SN 155,429. Pub. 5-28-63. Filed 10-18-62.

754,660. ILFOCOLOR. Ilford, Limited. SN 155,721. Pub. 5-28-63. Filed 10-23-62.

754,661. DESIGN CONSISTING OF JESTER'S HEAD ATOP A PENCIL. Fun Books, Inc. SN 155,798. Pub. 5-28-63. Filed 10-24-62.

754,662. KOMPAK. Howard E. Hall, d.b.a. Hall and Mailing. SN 155,800. Pub. 5-28-63. Filed 10-24-62.

754,663. PENETRATION. The Klein Institute for Aptitude Testing, Inc. SN 155,809. Pub. 5-28-63. Filed 10-24-62.

754,664. SPORT MAGAZINE LIBRARY AND DESIGN. Macfadden-Bartell Corporation. SN 155,814. Pub. 5-28-63. Filed 10-24-62.

Class 39 — Clothing

754,665. ALPINE-PRIMA. St. Lawrence Sales Incorporated. SN 105,771. Pub. 1-29-63. Filed 10-4-60.

754,666. SNUG-LINED. Essex Master Mold Company, Inc. SN 130,194. Pub. 5-28-63. Filed 10-18-61.

754,667. WESTERFIELD. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes. SN 130,551. Pub. 5-28-63. Filed 10-24-61.

754,668. MERRIMISS. P. H. Hanes Knitting Company. SN 135,351. Pub. 4-2-63. Filed 1-8-62.

754,669. JERKS I.D. SOCKS. Jerks Socks, Inc. SN 137,138. Pub. 5-28-63. Filed 2-2-62.

754,670. QUEEN CASUALS AND DESIGN. Queen Knitting Mills, Inc. SN 138,320. Pub. 5-28-63. Filed 2-20-62.

754,671. PATTY PETITE. Patty Petite Inc. SN 139,129. Pub. 5-28-63. Filed 3-5-62.

754,672. PLEETWAY. Stadium Manufacturing Co., Inc. SN 140,772. Pub. 5-28-63. Filed 3-26-62.

754,673. TINY TREASURES. E-Z Mills, Inc. SN 144,947. Pub. 5-28-63. Filed 5-18-62.

754,674. RUN AWAY. Kayser-Roth Corporation. SN 149,294. Pub. 5-28-63. Filed 7-18-62.

754,675. CHARLEVOIX. Bear Brand Hosiery Co. SN 149,357. Pub. 5-28-63. Filed 7-19-62.

754,676. BITEXA. Nino Gesellschaft mit beschrankter Haftung & Co. SN 149,403. Pub. 5-28-63. Filed 7-19-62.

754,677. LONGLASTIC. Exquisite Form Industries, Inc. SN 149,550. Pub. 5-28-63. Filed 7-23-62.

754,678. MAGIQUE. Munsingwear, Inc. SN 149,583. Pub. 5-28-63. Filed 7-23-62.

754,679. LORD NEWTON. Jack Schultz, Inc. SN 150,625. Pub. 5-28-63. Filed 8-6-62.

754,680. UNALITE. Admiral Shoe Corporation, d.b.a. Mutual Shoe Sales Co. SN 150,742. Pub. 5-28-63. Filed 8-8-62.

754,681. SHIRTMASTER BY SIRO. Siro Fashions, Inc. SN 151,369. Pub. 5-28-63. Filed 8-16-62.

754,682. AIR-SWING. Blue Bell, Inc. SN 151,392. Pub. 5-28-63. Filed 8-17-62.

754,683. CASINO. Sunshine Originals of Miami, Inc. SN 151,538. Pub. 5-28-63. Filed 8-20-62.

754,684. LOUNGE-ALIKES. The House of Perfection, Inc. SN 151,588. Pub. 5-28-63. Filed 8-21-62.

754,685. THE SHOW-OFF. Beldoch-Popper, Inc. SN 151,651. Pub. 5-28-63. Filed 8-22-62.

754,686. SECRET HELPER. Blair Fashions, Inc. SN 151,653. Pub. 5-28-63. Filed 8-22-62.

754,687. STOWAWAY. Blair Fashions, Inc. SN 151,655. Pub. 5-28-63. Filed 8-22-62.

754,688. REPRESENTATION OF THE HEAD OF A LITTLE GIRL. Republic Mills Corporation. SN 151,778. Pub. 5-28-63. Filed 8-23-62.

754,689. SHEASE BY RUTH WALTER. Puritan Fashions Corporation. SN 152,089. Pub. 5-28-63. Filed 8-28-62.

754,690. TOP DOLLAR STORES AND DESIGN. Walker Dry Goods Company, Inc. SN 152,256. Pub. 5-28-63. Filed 8-30-62.

754,691. BARRTON HALL. The May Department Stores Company. SN 152,812. Pub. 5-28-63. Filed 9-10-62.

754,692. SNIP. Melville Shoe Corporation. SN 152,904. Pub. 5-28-63. Filed 9-11-62.

754,693. TENDER CARE. Ortho-Vent Shoe Company, Inc. SN 152,909. Pub. 5-28-63. Filed 9-11-62.

754,694. MILES CENTURY PUMP. Melville Shoe Corporation. SN 153,583. Pub. 5-28-63. Filed 9-20-62.

754,695. TOPKICK. Hayes Garment Company. SN 153,953. Pub. 5-28-63. Filed 9-26-62.

754,696. MODENA AND DESIGN. Natric Sales Co., Inc. SN 154,049. Pub. 5-28-63. Filed 9-27-62.

754,697. THOROBBED. Cooper's Incorporated. SN 154,401. Pub. 5-28-63. Filed 10-3-62.

754,698. INTERVALE AND DESIGN. Franconia Ski Wear, Inc. SN 154,490. Pub. 5-28-63. Filed 10-4-62.

754,699. TOWN DOLLS. The Bossong Hosiery Mills, Inc. SN 154,879. Pub. 5-28-63. Filed 10-10-62.

754,700. TRICODA. The Lackawanna Pants Mfg. Company. SN 154,903. Pub. 5-28-63. Filed 10-10-62.

754,701. THE DRUMMOND. John B. Stetson Company. SN 155,946. Pub. 5-28-63. Filed 10-25-62.

754,702. AMWAY. Amway Sales Corporation. SN 156,547. Pub. 5–28–63. Filed 11–5–62.

Class 40 — Fancy Goods, Furnishings, and Notions

754,703. HIDE-A-CURL. O & V Associates. SN 138,042. Pub. 5–28–63. Filed 2–15–62.

754,704. WRIST WAND. Paul T. Collins. SN 145,524. Pub. 5–28–63. Filed 5–28–62.

754,705. BEAN BAG MENAGERIE. Allied Felt Corporation. SN 148,936. Pub. 5–28–63. Filed 7–13–62.

754,706. CHERUBOOTIES. Allied Felt Corporation. SN 148,937. Pub. 5–28–63. Filed 7–13–62.

754,707. LES PARISIENNES. R & R Import Company. SN 153,021. Pub. 5–28–63. Filed 9–12–62.

754,708. DON-EX. Omas Co., Inc. SN 153,312. Pub. 5–28–63. Filed 9–17–62.

754,709. DURLON. Vulcanized Rubber and Plastics Company, Incorporated. SN 153,438. Pub. 5–28–63. Filed 9–18–62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

754,710. ILLUSION. Collins & Aikman Corporation. SN 138,389. Pub. 5–28–63. Filed 2–21–62.

754,711. CORDTEX. Dominion Trading Limited. SN 146,174. Pub. 5–28–63. Filed 6–5–62.

754,712. BITEXA. Nino Gesellschaft mit beschrankter Haftung & Co. SN 149,404. Pub. 5–28–63. Filed 7–19–62.

754,713. VYNDURA. Durawall, Inc. SN 151,027. Pub. 5–28–63. Filed 8–13–62.

754,714. KELLWOOD AND DESIGN. Kellwood Company. SN 151,926. Pub. 5–28–63. Filed 8–27–62.

754,715. BALLERINA BATISTE. Levine & Co. Inc. SN 151,933. Pub. 5–28–63. Filed 8–27–62.

754,716. FABRICLASS. Curtain Corporation of America. SN 152,051. Pub. 5–28–63. Filed 8–28–62.

754,717. FOREVER FABRICS. Tower Fabrics Company, Inc. SN 152,466. Pub. 5–28–63. Filed 9–4–62.

754,718. AMANA. Amana Society. SN 156,210. Pub. 5–28–63. Filed 10–30–62.

754,719. PLASTI-TICK. Will Ross, Inc. SN 156,250. Pub. 5–28–63. Filed 10–30–62.

754,720. SPAN SEAS'N. Concord Textile Co., Inc. SN 156,273. Pub. 5–28–63. Filed 10–31–62.

Class 43 — Thread and Yarn

754,721. SPINLON. Roselon Yarns, Inc. SN 147,228. Pub. 5–28–63. Filed 6–19–62.

754,722. CARLSPUN. Carlton Yarn Mills, Incorporated. SN 155,685. Pub. 5–28–63. Filed 10–23–62.

754,723. FLAMESPUN. Carlton Yarn Mills, Incorporated. SN 155,687. Pub. 5–28–63. Filed 10–23–62.

754,724. KLEENSPUN. Carlton Yarn Mills, Incorporated. SN 155,688. Pub. 5–28–63. Filed 10–23–62.

754,725. CARO-VEL. Caron Spinning Company. SN 156,369. Pub. 5–28–63. Filed 11–1–62.

Class 44 — Dental, Medical, and Surgical Appliances

754,726. NATIONAL AND DESIGN. Matsushita Electric Industrial Co., Ltd. SN 140,709. Pub. 5–28–63. Filed 3–26–62.

754,727. GRIPTIGHT. Lewis Woolf Griptight Limited. SN 147,878. Pub. 5–28–63. Filed 6–27–62.

754,728. CERCOR. Corning Glass Works. SN 151,206. Pub. 5–28–63. Filed 8–15–62.

754,729. HYDRO-CAST. Kay-See Dental Manufacturing Company. SN 152,799. Pub. 5–28–63. Filed 9–10–62.

754,730. PAN-AID. The R. D. Grant Company. SN 157,793. Pub. 5–28–63. Filed 11–23–62.

754,731. DENTAFIL. Rower Dental Mfg. Corp. SN 157,848. Pub. 5–28–63. Filed 11–23–62.

754,732. TEMPOFIL. Rower Dental Mfg. Corp. SN 157,849. Pub. 5–28–63. Filed 11–23–62.

754,733. TEMPODENT. Rower Dental Mfg. Corp. SN 157,850. Pub. 5–28–63. Filed 11–23–62.

754,734. POWERCLAVE. Wilmot Castle Company. SN 157,872. Pub. 5–28–63. Filed 11–23–62.

754,735. RTA. Bard-Parker Company, Inc. SN 157,878. Pub. 5–28–63. Filed 11–26–62.

754,736. GENT-L-PULSE. Rotary Hospital Equipment Corporation. SN 157,929. Pub. 5–28–63. Filed 11–26–62.

754,737. BALL-O-FOOT. The Scholl Mfg. Co., Inc. SN 158,102. Pub. 5–28–63. Filed 11–28–62.

754,738. IMPACT AND DESIGN. Acralite Co., Inc. SN 158,207. Pub. 5–28–63. Filed 11–30–62.

754,739. PEROCATH. Abbott Laboratories. SN 158,298. Pub. 5–28–63. Filed 12–3–62.

754,740. AEROTROL. Abbott Laboratories. SN 158,299. Pub. 5–28–63. Filed 12–3–62.

754,741. PEROSET. Abbott Laboratories. SN 158,300. Pub. 5–28–63. Filed 12–3–62.

754,742. AT AND DESIGN. Amelia Trznadel, d.b.a. A-T Surgical Co. SN 158,401. Pub. 5–28–63. Filed 12–3–62.

Class 46 — Foods and Ingredients of Foods

754,743. MAMA BURGER. Burger Family, Inc. SN 99,488. Pub. 5–28–63. Filed 6–22–60.

754,744. PAPA BURGER. Burger Family, Inc. SN 99,489. Pub. 5–28–63. Filed 6–22–60.

754,745. BABY BURGER. Burger Family, Inc. SN 99,490. Pub. 5–28–63. Filed 6–22–60.

754,746. DELSEA. Suzy Bell Canning Co., Inc. SN 102,806. Pub. 5–28–63. Filed 8–16–60.

754,747. CALORA. Fairfield Laboratories, Inc., assignee of Rawson Drug & Sundry Company, Inc., d.b.a. Raphil Co. SN 111,551. Pub. 5–28–63. Filed 1–9–61.

754,748. ALL-PURPOSE. All-Purpose Gelatin Products. SN 111,952. Pub. 5–28–63. Filed 1–17–61.

754,749. TAC. Mallinckrodt Chemical Works. SN 112,283. Pub. 5–28–63. Filed 1–23–61.

754,750. PAPAYOLA. Barth Levitt Products, Inc., d.b.a. Barth Levitt Products. SN 114,010. Pub. 5–28–63. Filed 2–20–61.

754,751. E AND DESIGN. Ralph Ettlinger, d.b.a. Ralph Ettlinger & Sons. SN 115,595. Pub. 5–28–63. Filed 3–14–61.

754,752. PANTRY PRIDE. The Robb-Ross Company. SN 127,268. Pub. 5–28–63. Filed 9–5–61.

754,753. RED BALLOON. John R. Thompson Co., d.b.a. The Red Balloon Coffee House. SN 130,313. Pub. 5–28–63. Filed 10–19–61.

754,754. CLASSIQUE. M. H. Greenebaum, Inc. SN 130,341. Pub. 5–28–63. Filed 10–20–61.

754,755. KIRBY AND DESIGN. Kirby Foods, Inc. SN 131,140. Pub. 5–28–63. Filed 11–1–61.

754,756. LECITREME. Beatrice Foods Co. SN 139,568. Pub. 5–28–63. Filed 3–12–62.

754,757. HI-TRATE. C. J. Martin & Sons, Inc. SN 143,248. Pub. 5–28–63. Filed 4–27–62.

754,758. SNOBOY AND DESIGN. Fine Foods, Inc. SN 143,816. Pub. 5–28–63. Filed 5–4–62.

754,759. HEEBEECHET. Frederick Joseph Carten. SN 150,393. Pub. 5–28–63. Filed 8–3–62.

754,760. WHIP DEELITE. Hanan Products Co., Inc. SN 152,892. Pub. 5–28–63. Filed 9–11–62.

754,761. WHEAT KRISPIES. Kellogg Company. SN 153,003. Pub. 5–28–63. Filed 9–12–62.

754,762. KAL KAN BURGER ROUNDS. Kal Kan Foods, Inc. SN 153,179. Pub. 5–28–63. Filed 9–14–62.

754,763. POUR-PAK. General Foods Corporation. SN 153,477. Pub. 5–28–63. Filed 9–19–62.

754,764. EL SOBRANTE. Victoria Avenue Citrus Association. SN 153,843. Pub. 5–28–63. Filed 9–24–62.

754,765. JBO. Duncan Coffee Company, assignee of J. B. Osgood Coffee Company, d.b.a. Osgood Coffee Company. SN 154,507. Pub. 5–28–63. Filed 10–4–62.

754,766. RED COMB AND DESIGN. Hales & Hunter Co. SN 155,502. Pub. 5–28–63. Filed 10–19–62.

754,767. LUCKY AND DESIGN. Hales & Hunter Co. SN 155,505. Pub. 5–28–63. Filed 10–19–62.

754,768. DESIGN OF RED IMP. Paul F. Beich Co. SN 155,556. Pub. 5–28–63. Filed 10–22–62.

754,769. AMANA. Amana Society. SN 156,211. Pub. 5–28–63. Filed 10–30–62.

754,770. HOLIDAY AND DESIGN. Holiday Foods, Inc. SN 158,342. Pub. 5–28–63. Filed 12–3–62.

754,771. DESIGN MYTHOLOGICAL FIGURE. Hercules Powder Company. SN 158,452. Pub. 5–28–63. Filed 12–4–62.

Class 48 — Malt Beverages and Liquors

754,772. HORNELL. Hornell Brewing Co., Inc. SN 143,025. Pub. 5–28–63. Filed 4–25–62.

Class 49 — Distilled Alcoholic Liquors

754,773. GOLDEN STILL. Mr. Boston Distiller Inc. SN 144,081. Pub. 5–28–63. Filed 5–8–62.

Class 50 — Merchandise Not Otherwise Classified

754,774. PLAN-IT-KIT AND DESIGN. Plan-It-Kit Company. SN 122,556. Pub. 5–28–63. Filed 6–21–61.

754,775. KORKER. Gasket Engineering Co., Inc. SN 136,225. Pub. 5–28–63. Filed 1–22–62.

754,776. FIBER KING. Koffler Sales Corp. SN 151,061. Pub. 5–28–63. Filed 8–13–62.

754,777. V.I.P. Braco Engraving Company. SN 153,151. Pub. 5–28–63. Filed 9–14–62.

Class 51 — Cosmetics and Toilet Preparations

754,778. JENESEE THE BIRTH OF BEAUTY. Jenesee, Inc. SN 87,764. Pub. 1–23–62. Filed 11–27–59.

754,779. ICILMA. Icilma Company Limited. SN 149,291. Pub. 5–28–63. Filed 7–18–62.

754,780. SUN/STOP. Shulton, Inc. SN 153,599. Pub. 5–28–63. Filed 9–20–62.

754,781. TEA FOR TWO. Funel Société Anonyme. SN 153,875. Pub. 5–28–63. Filed 9–25–62.

754,782. B POSITIVE. Columbia Research Corp. SN 154,013. Pub. 5–28–63. Filed 9–27–62.

754,783. WHITE PEARLS. Merle Norman Cosmetics, Inc. SN 154,755. Pub. 5–28–63. Filed 10–8–62.

754,784. BRIGHT IDEA. Helene Curtis Industries, Inc. SN 154,569. Pub. 5–28–63. Filed 10–5–62.

Class 52 — Detergents and Soaps

754,785. PINK PEARLS. Merle Norman Cosmetics, Inc. SN 154,748. Pub. 5–28–63. Filed 10–8–62.

Service Marks

Class 100 — Miscellaneous

754,786. FRIENDSHIP HOMES, INC. AND DESIGN. Friendship Homes, Inc. SN 89,150. Pub. 5–28–63. Filed 1–18–60.

754,787. MEDIAMETRICS. C-E-I-R, Inc. SN 114,429. Pub. 5–28–63. Filed 2–27–61.

754,788. NATIONAL. Thomas Earl Allgood, d.b.a. National Honor System. SN 126,553. Pub. 5–28–63. Filed 8–24–61.

754,789. UNI-LAB SYSTEM. Universal Medical Laboratory Service, Inc. SN 133,428. Pub. 5–28–63. Filed 12–5–61.

Class 101 — Advertising and Business

754,790. S.T.T. AND DESIGN. Independent Retailers Syndicate, Inc. SN 62,931. Pub. 5–28–63. Filed 11–21–58.

754,791. NORSTAN. Norstan Research & Development Company. SN 122,105. Pub. 5–28–63. Filed 6–15–61.

754,792. COW PALACE WITHIN OVAL DESIGN. No. 1–A District Agricultural Association of the State of California. SN 130,099. Pub. 5–28–63. Filed 10–17–61.

754,793. TOP DOG. Tele-Sound Productions, Inc. SN 131,775. Pub. 5–28–63. Filed 11–10–61.

754,794. OM OPTICS AND METROLOGY AND DESIGN. Keuffel & Esser Company. SN 142,103. Pub. 5–28–63. Filed 4–12–62.

754,795. MANPLAN. George S. Swope, d.b.a. MPA Manplan Associates. SN 144,558. Pub. 5–28–63. Filed 5–14–62.

754,796. JEWEL FOOD STORES AND DESIGN. Jewel Tea Co., Inc. SN 151,331. Pub. 5–28–63. Filed 8–16–62.

Class 102 — Insurance and Financial

754,797. TOWER INSURANCE AND DESIGN REPRESENTATION OF TOWER BUILDING. Wolverine Insurance Company, Federal Life and Casualty Company, Secured Insurance Company, and Riverside Insurance Company of America, d.b.a. Tower Group. SN 122,409. Pub. 5–28–63. Filed 6–19–61.

754,798. THRIFTY MCBIP. Hoosier Farm Bureau Life Insurance Company, d.b.a. Farm Bureau Insurance. SN 125,919. Pub. 5–28–63. Filed 8–14–61.

754,799. INSUROTRONIC AND DESIGN. The United States Life Insurance Company in the City of New York. SN 153,531. Pub. 5–28–63. Filed 9–19–62.

754,800. MUTUAL INSURANCE COMPANY OF BURLINGTON AND DESIGN. Mutual Insurance Company of Burlington. SN 153,972. Pub. 5–14–63. Filed 9–28–62.

Class 105 — Transportation and Storage

754,801. THE ROUTE OF THE RED RUANAS. Aerovias Nacionales de Colombia. SN 115,283. Pub. 5–28–63. Filed 3–10–61.

754,802. DOUBLE CIRCLE DESIGN. Texas Eastern Transmission Corporation. SN 121,681. Pub. 5–28–63. Filed 6–8–61.

Class 107 — Education and Entertainment

754,803. REPRESENTATION OF A TROPHY CUP. The Professional Golfers' Association of America. SN 87,907. Pub. 5–28–63. Filed 12–28–59.

754,804. THE VIVA TONES. Steven Lawrence Mallen, d.b.a. The Viva Tones. SN 114,976. Pub. 5–28–63. Filed 3–6–61.

Certification Mark

Class B — Services

754,805. PROFESSIONAL INSURANCE BROKERS REPRESENT YOU AND DESIGN. The National Association of Insurance Brokers, Inc. SN 152,617. Pub. 5–28–63. Filed 9–6–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 12 — Construction Materials

754,806. Edward Hines Lumber Co., Chicago, Ill. SN 140,690. Filed P.R. 3–26–62; Am. S.R. 5–16–63.

LOUVERBOARD

For Hardboard.
First use Sept. 16, 1959.

754,807. Edward Hines Lumber Co., Chicago, Ill. SN 140,691. Filed P.R. 3–26–62; Am. S.R. 5–16–63.

WICKERBORD

For Hardboard.
First use Jan. 19, 1961.

Class 19 — Vehicles

754,808. Airheart Products, Inc., Van Nuys, Calif. SN 147,529. Filed P.R. 6–25–62; Am. S.R. 6–13–63.

AIRHEART

For Fluid Actuated Brake Units and Parts Therefor.
First use May 21, 1959.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

754,809. McCulloch Corporation, Minneapolis, Minn. SN 132,175. Filed P.R. 11–16–61; Am. S.R. 12–4–62.

SHALLOWATER DRIVE

For Tilt Locking Mechanism for Outboard Motors.
First use Sept. 29, 1961.

754,810. Dwight J. Coldwell, d.b.a. Coldwell Carbide Company, Salem, N.Y. SN 146,980. Filed P.R. 6–15–62; Am. S.R. 6–6–63.

COLDWELL SALEM N.Y.

For Swiss Automatic Guide Bushings, Tools and Accessories.
First use Mar. 1, 1955.

Class 26 — Measuring and Scientific Appliances

754,811. Dansen Company, Inc., St. Cloud, Minn. SN 147,446. Filed P.R. 6–22–62; Am. S.R. 6–13–63.



For Teaching Aids.
First use Aug. 30, 1961.

Class 32 — Furniture and Upholstery

754,812. The Bunting Company, Inc., Philadelphia, Pa. SN 158,514. Filed P.R. 12–5–62; Am. S.R. 6–10–63.



For Porch Furniture Including Settee, Chair and Swing.
First use November 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

754,813. Airfloor Company of California, Inc., Santa Fe Springs, Calif. SN 144,033. Filed P.R. 5–7–62; Am. S.R. 5–7–63.



For Lightweight Sheet Metal Forms Used To Define Hot Air and Cool Air Ducts in Poured Concrete Floors.
First use June 29, 1960.

TRADEMARK REGISTRATIONS RENEWED

23,873. WHITE ROCK AND DESIGN. Cl. 45. 11–28–1893.
165,824. MESSENGER BOYS AND DESIGN. Cl. 46. 3–20–23.
166,452. LA NAPOLETANA. Cl. 46. 4–3–23.
166,858. JONES. Cl. 23. 4–17–23.
167,529. DESIGN RED COLORED CONTROL WHEEL FOR A STOVE. Cl. 34. 5–1–23.
167,615. DORIS BLAKE. Cl. 38. 5–1–23.
168,137. SEALOL. Cl. 6. 5–15–23.
168,690. SOUTHERN STAR AND DESIGN. Cl. 1. 5–29–23.
169,299. VISKALT. Cl. 12. 6–12–23.
169,480. FIFI. Cl. 52. 6–19–23.
170,208. IDEAL. Cl. 23. 7–10–23.
170,806. JOSIE. Cl. 46. 7–24–23.
172,012. TRAFICON. Cl. 21. 8–21–23.
173,016. B&M. Cl. 46. 9–11–23.
173,862. GARDAN. Cl. 18. 10–2–23.
174,211. UNCLE FULLER. Cl. 39. 10–9–23.
174,352. GLEN-SPRAY. Cl. 39. 10–16–23.
174,521. SIREN. Cl. 46. 10–16–23.
174,599. CRL AND DESIGN. Cl. 21. 10–23–23.
175,063. DEFIANCE. Cl. 26. 10–30–23.
175,095. BUTESIN. Cl. 18. 10–30–23.
175,826. MEMOKRAFT. Cl. 50. 11–13–23.
175,912. SEALDSWEET. Cl. 46. 11–13–23.
176,327. GALVANNEALED. Cl. 13. 11–20–23.
176,329. GALVANNEALED. Cl. 14. 11–20–23.
176,447. DESIGN REPRESENTATION OF TRIANGLE AND SCROLL. Cl. 46. 11–27–23.
176,452. TIDEWATER. Cl. 46. 11–27–23.
176,469. GOLDEN ROD. Cl. 23. 11–27–23.
176,608. NUJOY. Cl. 46. 11–27–23.
176,674. HUMPHREY. Cl. 23. 11–27–23.
176,681. WHITE BEAUTY AND DESIGN. Cl. 46. 11–27–23.
176,732. RED BALL. Cl. 46. 11–27–23.
400,877. FOUNDRITE. Cl. 50. 4–6–43.
401,714. COLONIAL. Cl. 15. 6–1–43.
401,856. CRISP-AIR. Cl. 42. 6–15–43.
401,862. OCTAGON DESIGN. Cl. 21. 6–15–43.
401,876. SUN-RIPE COLORS. Cl. 42. 6–15–43.
401,878. RANGER. Cl. 51. 6–15–43.
401,889. AMERI-CRAFT. Cl. 42. 6–15–43.
401,970. DESIGN OF DIAMOND. Cl. 52. 6–22–43.
402,088. BASE BALL AND DESIGN. Cl. 19. 6–29–43.
402,346. CURVIC. Cl. 23. 7–13–43.
402,350. DIAMOND DESIGN. Cl. 52. 7–13–43.
402,475. AA AND DESIGN. Cl. 46. 7–27–43.
402,552. SULFLUID AND DESIGN. Cl. 18. 8–3–43.
402,581. HERITAGE AND DESIGN. Cl. 30. 8–3–43.
402,612. SORBETTA. Cl. 46. 8–3–43.
402,897. MIST-KIST. Cl. 46. 8–24–43.
403,051. XLO AND DESIGN. Cl. 13. 8–31–43.
403,057. DESIGN WITCH ON BROOM. Cl. 6. 8–31–43.
403,066. INSULATION. Cl. 18. 8–31–43.
403,380. LAMINEX ARCH SUPPORTS. Cl. 44. 9–21–43.
403,400. ROYAL GARDEN. Cl. 47. 9–21–43.
403,497. SAY-LAC. Cl. 46. 9–28–43.
403,839. PYCAL. Cl. 6. 10–19–43.
403,922. LADY IN WHITE BY SANDLER. Cl. 39. 10–26–43.
403,951. NEO-SINEFRINA. Cl. 18. 10–26–43.
404,104. ANCHOR. Cl. 43. 11–2–43.
404,385. NEO-SYNEPHRINE SULFATHIAZOLATE. Cl. 18. 11–23–43.
404,420. MEDIGUM. Cl. 18. 11–23–43.
404,460. SUN CROWN. Cl. 46. 11–23–43.
404,490. SKY-BOUND. Cl. 37. 11–30–43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

341,377. MICAMAB. Cl. 21. 12–8–36.
347,158. MOVIE STICKS. Cl. 22. 6–15–37.
351,452. VISION CONTROL AND DESIGN. Cl. 19. 11–2–37.
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626,005. DEB. Cl. 52. 4–24–56.
683,575. MAGNATONE AND DESIGN. Cl. 21. 8–18–59.

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647,277. PANDORA'S BOX. Cl. 2.
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647,283. ROWAG. Cl. 6.
647,302. CHOICE CHOKE AND DESIGN. Cl. 9.
647,303. TIP TOP. Cl. 10.
647,310. STEPHEN LAURIE PRODUCTS AND DESIGN. Cl. 12.
647,311. TILT-CRETE. Cl. 12.
647,318. DOUGLAS MILLION DOLLAR BONDED HOMES. Cl. 12.
647,320. DESIGN OF TWO GOLD STRIPES. Cl. 12.
647,325. PORCELO. Cl. 12.
647,326. CORSON AIRCRAFT DESIGN. Cl. 12.
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647,364. MOTION-AID. Cl. 18.
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647,387. ELECTRO-QUEEN. Cl. 21.
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647,417. HYDRA-CYCLE. Cl. 23.
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647,434. CRIBBEN AND DESIGN. Cl. 24.
647,443. LOCKAY. Cl. 25.
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647,631. STOR-IN-VAULT. Cl. 105.

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242,106. NATIONAL. Cl. 21. 5–15–28. National Lead Battery Co. Gould-National Batteries, Inc., St. Paul, Minn. Amended to appear:

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376,676. LIFT. Cl. 45. 4–2–40. The W. T. Wagner's Sons Company, Cincinnati, Ohio. Amended to appear:

Lift

562,583. JACK RABBIT AND DESIGN. Cl. 39. 8–5–52. The L. C. King Manufacturing Co., Bristol, Tenn. Amended to appear:



741,521. LA SALLE. Cl. 17. 12–4–62. Martin Brinkmann, Bremen, Germany. Amended: In the statement, column 2, lines 2 and 3, "cigars, cigarellos, Swiss cigars without wrappers," is deleted.

750,437. MPE. Cl. 21. 6–4–63. Midwest Pole & Equipment Corp., Chicago, Ill. Corrected: In the statement, column 2, line 2, "elecric" should be deleted and *electric* should be inserted.

750,917. GARRISON. Cl. 39. 6–11–63. Garrison Sportswear, Inc., New York, N.Y. Corrected: In the statement, column 1, line 1, "Sports Wear" should be deleted and *Sportswear* should be inserted.

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Farrington Mfg. Co., Needham Heights, Mass. 647,482, canc. Cl. 32.
Fear, Ernest D., to De-Raef Corp., Kansas City, Mo. 402,612, ren. 8–13–63. Cl. 46.
Fear, Ernest D., to De-Raef Corp., Kansas City, Mo. 403,497, ren. 8–13–63. Cl. 46.
Federal Chain Co., Providence, R.I. 754,442, pub. 5–28–63. Cl. 13.
Federal Life and Casualty Co.: *See*—
Wolverine Insurance Co.
Ferrara Bros., New York, N.Y. 754,600, pub. 5–28–63. Cl. 28.
Fine Foods, Inc., Seattle, Wash. 754,758, pub. 5–28–63. Cl. 46.
Finlof Bros., Burlingame, Calif. 754,443, pub. 5–28–63. Cl. 13.
Fischer & Porter Co., Warminster, Pa. 754,593, pub. 4–23–63. Cl. 26.
Fiske Associates, Inc., Bethel, Conn. 754,590, pub. 5–28–63. Cl. 26.
Flintkote Co., The: *See*—
Richardson Co., The.
Florida Citrus Exchange, Tampa, Fla. 175,912, ren. 8–13–63. Cl. 46.
Ford Motor Co., Dearborn, Mich. 647,366, canc. Cl. 19.
Four Aces Jewelry Corp., New York, N.Y. 754,602, pub. 5–28–63. Cl. 28.
Fourche Valley Clinic: *See*—
Debeh, Ali.
Franconia Ski Wear, Inc., Boston, Mass. 754,698, pub. 5–28–63. Cl. 39.
Frank, Joan W., Chicago, Ill. 754,643, pub. 5–28–63. Cl. 37.
Frank Tea & Spice Co., The, Cincinnati, Ohio. 647,585, canc. Cl. 46.
Frans Morat G.m.b.H., Stuttgart-Vaihingen, Germany. 754,551, pub. 5–28–63. Cl. 23.
Friendship Homes, Inc., National City, Calif. 754,786, pub. 5–28–63. Cl. 100.
Fulkerson, James M., d.b.a. Fourjay Industries, Dayton, Ohio. 754,506, pub. 5–28–63. Cl. 21.
Fuller, D. B., & Co., Inc., New York, N.Y. 647,529, canc. Cl. 42.
Fuller, D. B., & Co., Inc. 647,531, canc. Cl. 42.
Fun Books, Inc., New York, N.Y. 754,661, pub. 5–28–63. Cl. 38.
Funel Societe Anonyme, Le Gannet, Alpes-Maritimes, France. 754,781, pub. 5–28–63. Cl. 51.
Gamewell Co., The, Newton Upper Falls, Mass. 754,519, pub. 5–28–63. Cl. 21.
Garden Vineyards Winery & Distillery Co., Fowler, Calif., to Schenley Industries, Inc., New York, N.Y. 403,400, ren. 8–13–63. Cl. 47.
Garrison Sportswear, Inc., New York, N.Y. 750,917, cor. Cl. 39.

Gasket Engineering Co., Inc., Kansas City, Mo. 754,775, pub. 5–28–63. Cl. 50.
General Boats Corp., Irvington, N.Y. 754,494, pub. 5–28–63. Cl. 19.
General Dynamics Corp., Chicago, Ill. 754,607, pub. 5–28–63. Cl. 31.
General Foods Corp., White Plains, N.Y. 754,763, pub. 5–28–63. Cl. 46.
General Precision, Inc., Little Falls, N.J. 754,518, pub. 5–28–63. Cl. 21.
General Textile Mills, Inc., to Gentex Corp., New York, N.Y. 402,088, ren. 8–13–63. Cl. 19.
General Tire & Rubber Co., The, Akron, Ohio. 754,383, pub. 5–28–63. Cl. 1.
Gentex Corp.: *See*—
General Textile Mills, Inc.
Gleason Works, The, Rochester, N.Y. 402,346, ren. 8–13–63. Cl. 23.
Globe-Union Inc.: *See*—
Central Radio Laboratories.
Globe-Wernicke Co., The: *See*—
Globe-Wernicke Industries, Inc.
Globe-Wernicke Industries, Inc., Toledo, Ohio, from The Globe-Wernicke Co., Cincinnati, Ohio. 754,617, pub. 5–28–63. Cl. 32.
Goldpoint Industries, Inc., New York, N.Y. 754,516, pub. 5–28–63. Cl. 21.
Good-All Electric Mfg. Co., Ogallala, Nebr. 647,385, canc. Cl. 21.
Goodrich, B. F., Co., The, Akron, Ohio. 754,422, pub. 5–28–63. Cl. 6.
Goodrich, B. F., Co., The, Akron, Ohio. 754,627, pub. 5–28–63. Cl. 35.
Gould-National Batteries: *See*—
National Lead Battery Co.
Grant, R. D., Co., The, Cleveland, Ohio. 754,730, pub. 5–28–63. Cl. 44.
Grayland Cranberry Growers Association, Inc., Grayland, Wash., to Ocean Spray Cranberries, Inc., Hanson, Mass. 402,897, ren. 8–13–63. Cl. 46.
Green, Monroe D., San Francisco, Calif., to Comet Rice Mills, Inc., Houston, Tex 402,475, ren. 8–13–63. Cl. 46.
Greenebaum, M. H., Inc., New York, N.Y. 754,754, pub. 5–28–63. Cl. 46.
Greyshaw of Georgia, Inc., Atlanta, Ga. 647,519, canc. Cl. 39.
Grimm, C. L., Co., Sonoma, Calif. 647,371, canc. Cl. 19.
Gross, Floyd H., Richmond, Ind. 647,568, canc. Cl. 46.
Grover Co., The, Detroit, Mich. 754,546, pub. 5–28–63. Cl. 23.
Guider, Inc., The, Albany, N.Y. 754,655, pub. 5–28–63. Cl. 38.
Gump, B. F., Co., to B. F. Gump Co., Chicago, Ill. 170,208, ren. 8–13–63. Cl. 23.
H and L Venetian Blind Service Co., Inc., St. Louis, Mo. 647,474, canc. Cl. 32.
Hales & Hunter Co., Chicago, Ill. 754,493, pub. 5–28–63. Cl. 18.
Hales & Hunter Co., Chicago, Ill. 754,766–7, pub. 5–28–63. Cl. 46.
Hall, Howard E., d.b.a. Hall and Malling, Grand Rapids, Mich. 754,662, pub. 5–28–63. Cl. 38.
Hall and Malling: *See*—
Hall, Howard E.
Hamilton, Ted J., Van Nuys, Calif. 754,561, pub. 5–28–63. Cl. 28.
Hanan Products Co., Inc., Hicksville, N.Y. 754,760, pub. 5–28–63. Cl. 46.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 754,668, pub. 4–2–63. Cl. 39.
Hanson Equipment Co., South Beloit, Ill. 754,468, pub. 5–28–63. Cl. 16.
Hardman & Holden Ltd., Manchester, England. 754,417, pub. 5–28–63. Cl. 6.
Harry and Davie, Medford, Oreg. 754,398, pub. 5–28–63. Cl. 2.
Hart, Charles C., Seed Co., The, Wethersfield, Conn. 754,387, pub. 5–28–63. Cl. 1.
Hawk Bilt Mfg. Corp., Vinton, Iowa. 754,574, pub. 5–28–63. Cl. 23.
Hayes Garment Co., Nashville, Tenn. 754,695, pub. 5–28–63. Cl. 39.
Hercules Powder Co., Wilmington, Del. 754,424, pub. 5–28–63. Cl. 9.
Hercules Powder Co., Wilmington, Del. 754,575, pub. 5–28–63. Cl. 23.
Hercules Powder Co., Wilmington, Del. 754,771, pub. 5–28–63. Cl. 46.
Hickey-Freeman Co., Rochester, N.Y. 174,352, ren. 8–13–63. Cl. 39.
Hi-G Inc., Windsor Locks, Conn. 754,529, pub. 5–28–63. Cl. 21.
Hill-Shaw Co., Chicago, Ill. 754,530, pub. 5–28–63. Cl. 21.
Hines, Edward, Lumber Co., Chicago, Ill. 754,806–7. Cl. 12.
Hobbs Automatic Tool Co.: *See*—
Bowden, J. E.
Hodge, Sophie, Inc., Sarasota, Fla. 647,511, canc. Cl. 39.
Hoke Inc., Cresskill, N.J. 754,445–6, pub. 5–28–63. Cl. 18.
Holiday Foods, Inc., Waterloo, Iowa. 754,770, pub. 5–28–63. Cl. 46.
Holophane Co., Inc.: *See*—
Traffic Control, Inc.
Holsman & Bradford: *See*—
Holsman, Egon.
Holsman, Egon, d.b.a. Holsman & Bradford, New York, N.Y. 754,601, pub. 5–28–63. Cl. 28.
Hoosier Farm Bureau Life Insurance Co., d.b.a. Farm Bureau Insurance, Indianapolis, Ind. 754,798, pub. 5–28–63. Cl. 102.
Hopkins Fishing Co.: *See*—
Hopkins, Tirzah U.
Hopkins, Tirzah U., d.b.a. Hopkins Fishing Co., Norfolk, Va. 754,539, pub. 5–28–63. Cl. 22.
Hopp Press Inc., New York, N.Y. 403,051, ren. 8–13–63. Cl. 13.
Hornell Brewing Co., Inc., Hornell, N.Y. 754,772, pub. 5–28–63. Cl. 48.
Houdaille Industries, Inc.: *See*—
Jones, S. M., Co., The.
Hough, Frank G., Co., The, Libertyville, Ill. 754,584, pub. 5–28–63. Cl. 23.
House of Perfection, Inc., The, New York, N.Y. 754,684, pub. 5–28–63. Cl. 39.
Hudnut, Richard, New York, N.Y. 403,066, ren. 8–13–63. Cl. 18.
Hudnut, Richard, Morris Plains, N.J. 754,647, pub. 5–28–63. Cl. 38.
Humble Oil & Refining Co.: *See*—
Standard Oil Co., Inc. in New Jersey.
Colonial Beacon Oil Co.
Humphrey Elevator Co., Fairbault, Minn. 176,674, ren. 8–13–63. Cl. 23.
Hunter Engineering Co.: *See*—
Hunter, Lee.
Hunter, Lee, d.b.a. Hunter Engineering Co., St. Louis, Mo. 754,568, pub. 5–28–63. Cl. 23.
Hurst-Campbell, Inc., Glenside, Pa. 754,560, pub. 5–28–63. Cl. 23.
Icilma Co. Ltd., London, England. 754,779, pub. 5–28–63. Cl. 51.
Ideal Toy Corp., Hollis, N.Y. 754,536, pub. 5–28–63. Cl. 22.
Ilford, Ltd, Ilford, England. 754,660, pub. 5–28–63. Cl. 38.
Illinois Upholsterer's Supply Co., Inc., Chicago, Ill. 754,613, pub. 5–28–63. Cl. 32.
Imperial Knife Associated Companies, Inc., Providence, R.I. 754,562–3, pub. 5–28–63. Cl. 23.
Imperial Refineries Corp., St. Louis, Mo. 754,467, pub. 5–28–63. Cl. 15.
Independent Retailers Syndicate, Inc., New York, N.Y. 754,790, pub. 5–28–63. Cl. 101.
Inland Steel Products Co., Chicago, Ill. 754,428, pub. 5–28–63. Cl. 12.
Innovators, Inc., d.b.a. Clinton Laboratories, Los Angeles, Calif. 754,413, pub. 5–28–63. Cl. 6.
Insulube Products: *See*—
Knudson, Archie W.
International Foam Corp., Chicago, Ill. 754,380, pub. 5–28–63. Cl. 1.
International Milling Co.: *See*—
Wabasha Roller Mill Co.
International Minerals & Chemical Corp., Skokie, Ill. 754-469–70, pub. 5–28–63. Cl. 16.
Interstate Enamel and Varnish Co., Indianapolis, Ind. 754,472, pub. 5–28–63. Cl. 16.
Irvan Ferromagnetics Corp., Van Nuys, Calif. 754,522, pub. 5–28–63. Cl. 21.
Jaden, F., Mfg. Co.: *See*—
Jaden, Fred I.
Jaden, Fred I., d.b.a. F. Jaden Mfg. Co., to Dutton-Lainson Co., Hastings, Nebr. 176,469, ren. 8–13–63. Cl. 23.
Jenesee, Inc., Glen Ridge, N.J. 754,778, pub. 1–23–62. Cl. 51.
Jerks Socks, Inc., Cincinnati, Ohio. 754,669, pub. 5–28–63. Cl. 39.
Jewel Tea Co., Inc., Melrose Park, Ill. 754,796, pub. 5–28–63. Cl. 101.
Johns-Manville Corp., New York, N.Y. 400,877, ren. 8–13–63. Cl. 50.
Jones & Laughlin Steel Corp., Pittsburgh, Pa. 754,457, pub. 5–28–63. Cl. 14.
Jones, S. M., Co., The, Toledo, Ohio, to Houdaille Industries, Inc., Buffalo, N.Y. 166,858, ren. 8–13–63. Cl. 23.
Jorgensen Conveyors, Inc., Milwaukee, Wis. 754,581, pub. 5–28–63. Cl. 23.
Kal Kan Foods, Inc., Los Angeles, Calif. 754,762, pub. 5–28–63. Cl. 46.
Kalamazoo Furniture Co.: *See*—
Kalamazoo Sled Co.
Kalamazoo Sled Co., also d.b.a. Kalamazoo Furniture Co., E. Kalamazoo, Mich. 647,328, canc. Cl. 13.
Kay-See Dental Mfg. Co., Kansas City, Mo. 754,729, pub. 5–28–63. Cl. 44.
Kayser-Roth Corp., New York, N.Y. 754,674, pub. 5–28–63. Cl. 39.
Kaysons International Corp., New York, N.Y. 647,443, canc. Cl. 25.
Kelley, Henry, Importing & Distributing Co. Inc., New York, N.Y. 647,605, canc. Cl. 49.
Kellogg Co., Battle Creek, Mich. 754,761, pub. 5–28–63. Cl. 46.
Kellwood Co., Chicago, Ill. 754,714, pub. 5–28–63. Cl. 42.
Keuffel & Esser Co., Hoboken, N.J. 754,794, pub. 5–28–63. Cl. 101.
Keystone Steel & Wire Co., Bartonville, Peoria, Ill., to Keystone Steel & Wire Co., Peoria, Ill. 176,327, ren. 8–13–63. Cl. 13.
Keystone Steel & Wire Co., Bartonville, Peoria, Ill., to Keystone Steel & Wire Co., Peoria, Ill. 176,829, ren. 8–13–63. Cl. 14.
Keystone Steel & Wire Co., Peoria, Ill. 754,460, pub. 5–28–63. Cl. 14.
Kirby Foods, Inc., Miami, Fla. 754,755, pub. 5–28–63. Cl. 46.
Kling, L. C., Mfg. Co., The, Bristol, Tenn. 562,583. Am. 7(d). Cl. 39.
Kish Industries, Inc., Lansing, Mich. 647,342, canc. Cl. 16.
Klang, Wladek, New York, N.Y. 754,605, pub. 5–28–63. Cl. 28.
Klein Institute for Aptitude Testing, Inc., New York, N.Y. 754,663, pub. 5–28–63. Cl. 38.

Knudson, Archie W., d.b.a. Insulube Products, Minneapolis, Minn. 754,463, pub. 5–28–63. Cl. 15.
Koffler Sales Corp., Chicago, Ill. 754,776, pub. 5–28–63. Cl. 50.
Kohnstam, J., Ltd., London, England. 647,403, canc. Cl. 22.
Kohorn, Henry V., New York, N.Y. 647,559, canc. Cl. 46.
Kordy Marine Corp., Nawthorne, Calif. 754,559, pub. 5–28–63. Cl. 23.
Kotkins, Henry L., Seattle, Wash. 647,278, canc. Cl. 3.
La Primadora Cigar Corp., New York, N.Y. 754,475, pub. 5–28–63. Cl. 17.
Lab-Line Instruments, Inc., Chicago, Ill. 754,596, pub. 5–28–63. Cl. 26.
Lackawanna Pants Mfg. Co., The, Scranton, Pa. 754,700, pub. 5–28–63. Cl. 39.
Lancaster Machine Knife Works, Inc., Lancaster, N.Y. 754,553, pub. 4–2–63. Cl. 23.
Laurie, Stephen, Mfg. Corp., Philadelphia, Pa. 647,310, canc. Cl. 12.
Leecraft Mfg. Co., Inc., Long Island City, N. Y. 754,525, pub. 5–28–63. Cl. 21.
Levine & Co. Inc., New York, N.Y. 754,715, pub. 5–28–63. Cl. 42.
Levitt, Barth, Products: *See*— Levitt, Barth, Products, Inc.
Levitt, Barth, Products, Inc., d.b.a. Barth Levitt Products, Valley Stream, N.Y. 754,750, pub. 5–28–63. Cl. 46.
Lincoln Logotype Co.: *See*— Beaver, Millard B.
Lindenmeyr Paper Corp., Long Island City, N.Y. 754,642, pub. 5–28–63. Cl. 37.
Ling-Temco-Vought, Inc., Garland, Tex. 754,524, pub. 5–28–63. Cl. 21.
Link-Age Corp., West Nyack, N.Y. 754,447, pub. 5–28–63. Cl. 15.
Logan Electronic Corp., Boston, Mass. 754,523, pub. 5–28–63. Cl. 21.
Longmont Farmers Milling & Elevator Co., The, Longmont, Colo., to Dixie Portland Flour Mills, Inc., Memphis, Tenn. 176,681, ren. 8–13–63. Cl. 46.
Loprinzi, Joe, Enterprises: *See*— Loprinzi, Joseph R.
Loprinzi, Joseph R., d.b.a. Joe Lo Prinzi Enterprises, Portland, Oreg. 754,534, pub. 5–28–63. Cl. 22.
Lorillard, P., Co., New York, N.Y. 754,473–4, pub. 5–28–63. Cl. 17.
Lowe, Joe, Corp., New York, N.Y. 754,576, pub. 5–28–63. Cl. 23.
MPA Manplan Associates: *See*— Swope, George S.
Macladden-Bartell Corp., New York, N.Y. 754,664, pub. 5–28–63. Cl. 38.
Magic Chef, Inc.: *See*— American Stove Co.
Magi-Dyes Co., The: *See*— Meyer Magid.
Magna Electronics Co., Inc.: *See*— Magna Electronics, Inc.
Magna Electronics, Inc., from Magna Electronics Co., Inc., Inglewood, Calif. 683,575, canc. Cl. 21.
Magnavox Co., The, Fort Wayne, Ind. 754,595, pub. 5–28–63. Cl. 26.
Mallen, Steven L., d.b.a. The Viva Tones, Chattanooga, Tenn. 754,804, pub. 5–28–63. Cl. 107.
Mallinckrodt Chemical Works, St. Louis, Mo. 754,400, pub. 5–28–63. Cl. 2.
Mallinckrodt Chemical Works, St. Louis, Mo. 754,749, pub. 5–28–63. Cl. 46.
Manhattan Soap Co., Inc., New York, N.Y. 430,787, canc. Cl. 4.
Manley, Inc., Kansas City, Mo. 754,512, pub. 5–28–63. Cl. 21.
Mansfield Tire & Rubber Co., The, from Pennsylvania Tire Co., Mansfield, Ohio. 754,628, pub. 5–28–63. Cl. 35.
Mariolle, Gaston L., Lafayette, Calif. 647,502, canc. Cl. 38.
Markel Electric Products, Inc., Buffalo N.Y. 647,384, canc. Cl. 21.
Marshall & Huschart Machinery Co., Chicago, Ill. 754,542, pub. 5–28–63. Cl. 23.
Martin, C. J., & Sons, Inc., Austin, Tex. 754,757, pub. 5–28–63. Cl. 46.
Marx, Louis, & Co., Inc., New York, N.Y. 754,538, pub. 5–28–63. Cl. 22
Matsushita Electric Industrial Co., Ltd., Kitakawachi-gun, Osaka, Japan. 754,587, pub. 5–28–63. Cl. 24.
Matsushita Electric Industrial Co., Ltd., Kitakawachi-gun, Osaka, Japan. 754,599, pub. 5–28–63. Cl. 27.
Matsushita Electric Industrial Co., Ltd., Kitakawachi-gun, Osaka, Japan. 754,726, pub. 5–28–63. Cl. 44.
Mavec, Frank V., d.b.a. Stanford Institute, Cleveland, Ohio. 754,635, pub. 5–28–63. Cl. 36.
May Department Stores Co., The, St. Louis, Mo. 754,691, pub. 5–28–63. Cl. 39.
May, Otto B., Inc., Newark, N.J. 754,416, pub. 12–4–62. Cl. 6.
McCall Corp., New York, N.Y. 647,506, canc. Cl. 38.
McCulloch Corp., Minneapolis, Minn. 754,809. Cl. 23.
McDougall-Butler Co., Inc., Buffalo, N.Y. 647,337, canc. Cl. 16.
McGraw-Edison Co., Elgin, Ill. 754,589, pub. 5–28–63. Cl. 24.
McHutchison & Co., Ridgefield, N.J. 754,384, pub. 5–28–63. Cl. 1.
McKelvy, Alfred D., Co., to Chesebrough-Pond's Inc., New York, N.Y. 401,878, ren. 8–13–63. Cl. 51.
MEGMB Hope Recordings, Altoona, Pa. 754,631, pub. 5–28–63. Cl. 36
Melville Shoe Corp., New York, N.Y. 754,692, pub. 5–28–63. Cl. 39.
Melville Shoe Corp., New York, N.Y. 754,694, pub. 5–28–63. Cl. 39.
Merck & Co., Inc., Rahway, N.J. 647,357, canc. Cl. 18.
Mercoid Corp., The, Chicago, Ill. 754,531, pub. 5–28–63. Cl. 21.
Meredith Publishing Co., Des Moines, Iowa. 754,656, pub. 5–28–63. Cl. 38.
Metro-Monitor, Inc., Port Washington, N.Y. 754,657, pub. 5–28–63. Cl. 38.
Meyer Magid, d.b.a. The Magi-Dyes Co., Palo Alto, Calif. 754,412, pub. 5–28–63. Cl. 6.
Micalac Co., The: *See*— Miller, Norman.
Midwest Pole & Equipment Corp., Chicago, Ill. 750,437, cor. Cl. 21.
Miles Laboratories, Inc., Elkhart, Ind., from Margaret B. Strauss, New York, N.Y. 754,485, pub. 5–28–63. Cl. 18.
Miller, Norman, d.b.a. The Micalac Co., Newcastle-upon-Tyne, England. 341,377, canc. Cl. 21.
Mino Gesellschaft mit Beschrankter Haftung & Co., Nordhorn, Germany. 754,712, pub. 5–28–63. Cl. 42.
Mr. Boston Distiller Inc., Boston, Mass. 754,773, pub. 5–28–63. Cl. 49
Mitchell-Bradford Chemical Co., Bridgeport, Conn., to The Mitchell-Bradford Chemical Co., Milford, Conn. 403,057, ren. 8–13–63. Cl. 6.
Mitchell-Bradford Chemical Co., The: *See*— Mitchell-Bradford Chemical Co.
Modern Products, Inc., Milwaukee, Wis. 754,486, pub. 5–28–63. Cl. 18.
Monsanto Chemical Co., St. Louis, Mo. 754,409, pub. 5–28–63. Cl. 6.
Monsey Products Co., Philadelphia, Pa. 754,471, pub. 5–28–63. Cl. 16.
Montgomery Ward & Co., Inc., Chicago, Ill. 754,591, pub. 5–28–63. Cl. 23.
Morris, Bervil E., Fresno, Calif. 754,541, pub. 5–28–63. Cl. 22.
Morris, Philip, Inc., New York, N.Y. 754,586, pub. 5–28–63. Cl. 23.
Morse Chain Co., Ithaca, N.Y. 754,577, pub. 5–28–63. Cl. 23.
Mosier Research Products, Inc.: *See*— Duplex Electric Co., Inc.
Munsey Trust Co., The, Washington, D.C. 647,617, canc. Cl. 102.
Munsingwear, Inc., Minneapolis, Minn. 754,678, pub. 5–28–63. Cl. 39.
Musichron Corp., Chicago, Ill. 647,397, canc. Cl. 21.
Mustee, E. L., & Sons, Inc., Cleveland, Ohio. 754,588, pub. 5–28–63. Cl. 24.
Mutual Insurance Co. of Burlington, South Burlington, Vt. 754,800, pub. 5–14–63. Cl. 102.
Mutual Shoe Sales Co.: *See*— Admiral Shoe Corp.
N.V. Biscuit-en Chocoladefabriek "Victoria," Dordrecht, Netherlands. 647,564, canc. Cl. 46.
N.V. Koninklijke Tabakfabriek, Koffiebranderij en Theehandel J. & A. C. Van Rossem, Rotterdam, Netherlands. 754,483, pub. 5–28–63. Cl. 17.
National Association of Insurance Brokers, Inc., The, New York, N.Y. 754,805, pub. 5–28–63. Cl. B.
National Gypsum Co., Buffalo, N.Y. 647,320, canc. Cl. 12.
National Honor System: *See*— Allgood, Thomas E.
National Lead Battery Co. Gould-National Batteries Inc., St. Paul, Minn. 242,106. Am. 7(d). Cl. 21.
National Mfg. Co., Sterling, Ill. 754,439, pub. 5–28–63. Cl. 13.
National Railway Publication Co., New York, N.Y. 754,649–52, pub. 5–28–63. Cl. 38.
National Science Teachers Association, Inc., Washington, D.C. 754,659, pub. 5–28–63. Cl. 38.
National-Standard Co., Niles, Mich. 754,461, pub. 5–28–63. Cl. 14.
Natric Sales Co., Inc., New York, N.Y. 754,696, pub. 5–28–63. Cl. 39.
Navarre Corp., The, Chattanooga, Tenn. 754,545, pub. 5–28–63. Cl. 25.
Nelson Steel and Wire Co., Franklin Park, Ill. 754,425, pub. 5–28–63. Cl. 10.
Nestle Co., Inc., The: *See*— Siren Mills Corp.
Newfield Ltd., Ashford, Middlesex, England. 754,533, pub. 5–28–63. Cl. 22.
New-Tronics Corp., Cleveland, Ohio. 754,528, pub. 5–28–63. Cl. 21.
Nino Gesellschaft mit beschrankter Haftung & Co., Nordhorn, Germany. 754,676, pub. 5–28–63. Cl. 39.
Ninon Corp., Los Angeles, Calif. 754,492, pub. 5–28–63. Cl. 18.
"Nordsee" Deutsche Hochseefischerei Aktiengesellschaft, Bremerhaven-G, Germany. 647,565, canc. Cl. 46.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 754,783, pub. 5–28–63. Cl. 51.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 754,785, pub. 5–28–63. Cl. 52.
Norstan Research & Development Co., Minneapolis, Minn. 754,791, pub. 5–28–63. Cl. 101.
Norwood Studios, Inc., Washington, D.C. 754,646, pub. 12–12–61. Cl. 38.
No. 1-A District Agricultural Association of The State of California, San Fancisco, Calif. 754,792, pub. 5–28–63. Cl. 101.
O & V Associates, Toledo, Ohio. 754,703, pub. 5–28–63. Cl. 40.
Oberfell, George G., Bartlesville, Okla. 647,302, canc. Cl. 9.
Ocean Spray Cranberries, Inc.: *See*— Grayland Cranberry Growers Association, Inc.

Ohio Clay Co., The, Cleveland, Ohio. 754,431, pub. 5–28–63. Cl. 12.
Oil Heat Institute of Washington, The, Seattle, Wash. 647,628, canc. Cl. 103.
Olson, Kent N., Miller, S. Dak. 754,658, pub. 5–28–63. Cl. 38.
Omas Co., Inc., Milwaukee, Wis. 754,708, pub. 5–28–63. Cl. 40.
Orradio Industries, Inc., Opelika, Ala. 647,400, canc. Cl. 21.
Ortho-Vent Shoe Co., Inc., Salem, Va. 754,693, pub. 5–28–63. Cl. 39.
Osgood, J. B., Coffee Co.: *See*— Duncan Coffee Co.
Otis Elevator Co., New York, N.Y. 754,578, pub. 5–28–63. Cl. 23.
Owens-Corning Fiberglas Corp., Toledo, Ohio. 754,440, pub. 5–28–63. Cl. 13.
PM Industries, Inc., Stamford, Conn. 647,379. Cl. 21.
Page Engineering Co., Chicago, Ill. 754,579, pub. 5–28–63. Cl. 23.
Parents' Magazine's Education Press, Inc., The, New York, N.Y. 754,645, pub. 5–28–63. Cl. 38.
Parker Brothers, Inc., Salem, Mass., and Portland, Maine. 347,158, canc. Cl. 22.
Parma Motors, Inc., Parma, Ohio. 754,495, pub. 5–28–63. Cl. 19.
Pastene & Co., Inc.: *See*— Pastene, P., & Co. Inc.
Pastene, P., & Co. Inc., Boston, Mass., to Pastene & Co., Inc., New York, N.Y. 166,452, ren. 8–13–63. Cl. 46.
Patty Petite Inc., New York, N.Y. 754,671, pub. 5–28–63. Cl. 39.
Peerless Tombs of America: *See*— Elliott, Vernal M.
Pennsylvania Salt Mfg. Co., The, Philadelphia, Pa. 647,303, canc. Cl. 10.
Pennsylvania Tire Co.: *See*— Mansfield Tire & Rubber Co., The.
Pet Milk Co.: *See*— Whitman, Stephen F., & Son, Inc.
Peter Hand Brewery Co., Chicago, Ill. 754,487, pub. 5–28–63. Cl. 18.
Pfandler Permutit Inc., Rochester, N.Y. 754,592, pub. 5–28–63. Cl. 26.
Pfizer, Chas. & Co., Inc., Brooklyn, N.Y. 754,484, pub. 3–29–60. Cl. 18.
Pharmaco, Inc.: *See*— White Laboratories, Inc.
Phillips & Slack, Inc., to Rock of Ages Corp., Barre, Vt. 175,826, ren. 8–13–63. Cl. 50.
Pioneer Mfg. Co., Los Angeles, Calif. 647,484, canc. Cl. 34.
Plan-it-kit Co., Westport, Conn. 754,774, pub. 5–28–63. Cl. 50.
Plough, Inc., d.b.a. St. Joseph Pencil Co., Memphis, Tenn. 754,644, pub. 5–28–63. Cl. 37.
Pneumafil Corp., Charlotte, N.C. 754,557, pub. 5–28–63. Cl. 23.
Pollack, Sigmund, New York, N.Y. 402,552, ren. 8–13–63. Cl. 18.
Power Tools Inc., Chicago, Ill. 754,549–50, pub. 5–28–63. Cl. 23.
Premiums Infinite, Inc., d.b.a. Rutland Nurseries, Rutland, Vt. 754,394, pub. 5–28–63. Cl. 2.
Pretz-L Products Corp., Reading, Pa. 647,578, canc. Cl. 46.
Professional Golfers' Association of America, Dunedin, Fla. 754,803, pub. 5–28–63. Cl. 107.
Prudential Paper Products Co., to Prudential Paper Products Co., Inc., New York, N.Y. 404,490, ren. 8–13–63. Cl. 37.
Prudential Paper Products Co., Inc.: *See*— Prudential Paper Products Co.
Puritan Fashions Corp., New York, N.Y. 754,689, pub. 5–28–63. Cl. 39.
Queen Knitting Mills, Inc., Philadelphia, Pa. 754,670, pub. 5–28–63. Cl. 39.
Quincy Syrian Baking Co., Inc., Quincy, Mass. 647,580, canc. Cl. 46.
R & R Import Co., Elmira, N.Y. 754,707, pub. 5–28–63. Cl. 40.
Racamier, Henry, Paris, France. 754,450, pub. 5–28–63. Cl. 14.
Radio Corp. of America, New York, N.Y. 754,637, pub. 5–28–63. Cl. 86.
Radio Steel & Mfg. Co., Chicago, Ill. 647,402, canc. Cl. 22.
Raphil Co.: *See*— Fairfield Laboratories, Inc.
Ravin and Ravin, Denver, Colo. 647,364, canc. Cl. 18.
Rawson Drug & Sundry Co., Inc.: *See*— Fairfield Laboratories, Inc.
Red Balloon Coffee House, The: *See*— Thompson, John R., Co.
Reddi-Wip, Inc., Los Angeles, Calif. 647,420, canc. Cl. 23.
Reevesound Co., Inc., Long Island City, N.Y. 647,399, canc. Cl. 21.
Republic Mills Corp., New York, N.Y. 754,688, pub. 5–28–63. Cl. 39.
Rheem Mfg. Co., New York, N.Y. 754,621, pub. 5–28–63. Cl. 34.
Rheem Mfg. Co., New York, N.Y. 754,624, pub. 5–28–63. Cl. 34.
Rheinstahl Hamburg Stahlbau Eggers & Friedrich Kehrahn G.m.b.H., Hamburg, Germany. 754,509, pub. 5–28–63. Cl. 21.
Richardson Co., The, Lockland, Ohio, to The Flintkote Co., New York, N.Y. 169,299, ren. 8–13–63. Cl. 12.
Riddle Springs Poultry Farm: *See*— Silberberg, Jacob.
Riverside Insurance Co. of America: *See*— Wolverine Insurance Co.
Robbins Floor Products, Inc., Tuscumbia, Ala. 754,499, pub. 5–28–63. Cl. 20.
Robb-Ross Co., The, Sioux City, Iowa. 754,752, pub. 5–28–63. Cl. 46.
Robert Hall Clothes: *See*— Robert Hall Clothes, Inc.
Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. 754,667, pub. 5–28–63. Cl. 39.
Robins, Samuel, d.b.a. Cavell Candy Co., Detroit, Mich. 647,590, canc. Cl. 46.
Robinson-Wagner Co., Inc., New York, N.Y. 647,283, canc. Cl. 6.
Rock of Ages Corp.: *See*— Phillips & Slack, Inc.
Romig, Burger Jim: *See*— Romig, James.
Romig, James, d.b.a. Burger Jim Romig, Centralia, Wash. 647,589, canc. Cl. 46.
Roselon Yarns, Inc., Philadelphia, Pa. 754,721, pub. 5–28–63. Cl. 42.
Ross, Will, Inc., Milwaukee, Wis. 754,719, pub. 5–28–63. Cl. 42.
Rotary Hospital Equipment Corp., Buffalo, N.Y. 754,736, pub. 5–28–63. Cl. 44.
Rower Dental Mfg. Corp., Boston, Mass. 754,731–3, pub. 5–28–63. Cl. 44.
Royal Bond, Inc., St. Louis, Mo. 754,419, pub. 5–28–63. Cl. 6.
Royalmetal Corp., New York, N.Y., from Deluxe Metal Products Co., Warren, Pa. 754,611, pub. 5–28–63. Cl. 32.
Ruberoid Co., New York, N.Y. 754,503, pub. 5–28–63. Cl. 20.
Rudd-Melikian, Inc., Hatboro, Pa. 754,609, pub. 5–28–63. Cl. 31.
Rutland Nurseries: *See*— Premiums Infinite, Inc.
Sagner's, A., Son, Baltimore, Md. 647,514, canc. Cl. 39.
St. Joseph Pencil Co.: *See*— Plough, Inc.
St. Lawrence Sales Inc., Birmingham, Mich. 754,665, pub. 1–29–63. Cl. 39.
Sandler, A., Co., Needham Heights, Mass. 403,922, ren. 8–13–63. Cl. 39.
Scale Specialties, Inc., Boonton, N.J. 754,594, pub. 5–28–63. Cl. 26.
Schenker-Winkler, Frits, d.b.a. Kasper Winkler & Co. 754,411, pub. 5–28–63. Cl. 6.
Schenley Industries, Inc.: *See*— Garden Vineyards Winery & Distillery Co.
Schenley Industries, Inc., New York, N.Y. 647,277, canc. Cl. 2.
Scherk, Walter, Neuilly-sur-Seine, France. 647,606, canc. Cl. 51.
Schermerhorn Cigar Stores, Inc., Chicago, Ill. 754,477–9, pub. 5–28–63. Cl. 17.
Schlieper, Carl, Tanbenstrasse, Remacheid-Hasten, Germany. 647,405, canc. Cl. 23.
Schmieg Industries, Inc., Detroit, Mich. 754,582, pub. 5–28–63. Cl. 23.
Schnadig Corp., Chicago, Ill. 754,612, pub 5–28–63. Cl. 32.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 403,380, ren. 8–13–63. Cl 44.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 754,737, pub. 5–28–63. Cl. 44.
Schultz, Jack, Inc., St. Louis, Mo. 754,679, pub. 5–28–63. Cl. 39.
Secured Insurance Co.: *See*— Wolverine Insurance Co.
Seneca Tackle Co., Inc., New York, N.Y. 754,532, pub. 5–28–63. Cl. 22.
Sepraton (New Jersey), Inc., New York, N.Y. 647,406, canc. Cl. 23.
Serval Pharmaceuticals, Inc., Fort Worth, Tex. 754,490, pub. 5–28–63. Cl. 18.
Shawvan, John W., Co.: *See*— Epstein, Gerald W.
Sherman, Park, Inc., Roseland, N.J. 754,423, pub. 5–28–63. Cl. 8.
Shulton, Inc., Clifton, N.J. 754,780, pub. 5–28–63. Cl. 51.
Siemens & Halske Aktiengesellschaft, Munich, Germany. 754,511, pub. 5–28–63. Cl. 21.
Silberberg, Jacob, d.b.a. Riddle Springs Poultry Farm, Manchester, N.H. 647,595, canc. Cl. 46.
Siren Mills Corp., Chicago, Ill., to The Nestlé Co., Inc., White Plains, N.Y. 174,521, ren. 8–13–63. Cl. 46.
Siro Fashions, Inc., New York, N.Y. 754,681, pub. 5–28–63. Cl. 39.
Smith, Elwin G., & Co., Inc., Pittsburgh, Pa. 754,429, pub. 4–9–63. Cl. 12.
Societe Civile d'Etude des Motocycles Valmobile, Paris, France. 647,367, canc. Cl. 19.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 754,421, pub. 5–28–63. Cl. 6.
Solitaire & Saponite Reunis, Levallois-Perret (Seine), France. 754,402, pub. 5–28–63. Cl. 4.
Sonoco Products Co., Hartsville, S.C. 754,383, pub. 5–28–63. Cl. 2.
Sonola Accordion Co., Inc., Hoboken, N.J. 754,638, pub. 5–28–63. Cl. 36.
Southern Coal & Coke Co. Inc.: *See*— Southern Coal & Coke Co., The.
Southern Coal & Coke Co., The, Cincinnati, Ohio, to Southern Coal & Coke Co. Inc., Tazewell, Va. 168,690, ren. 8–13–63. Cl. 1.
Southern Machinery Co., Greer, S.C. 754,565, pub. 5–28–63. Cl. 23.
Spring-Go., Inc., Roseburg, Oreg. 754,537, pub. 5–28–63. Cl. 22.
Stadium Mfg. Co., Inc., New York, N.Y. 754,672, pub. 5–28–63. Cl. 39.
Standard Candy Co., Nashville, Tenn. 176,608, ren. 8–13–63. Cl. 46.

Standard Oil Co., Inc., in New Jersey, to Humble Oil & Refining Co., Houston, Tex. 168,137, ren. 8–13–63. Cl. 6.
Standard Products Corp., Brockton, Mass. 754,527, pub. 5–28–63. Cl. 21.
Stanford Institute: *See*—
Mavec, Frank V.
Stanley Works, The, New Britain, Conn. 175,063, ren. 8–13–63. Cl. 26.
Steamstir Corp., San Mateo, Calif. 754,513–14, pub. 5–28–63. Cl. 21.
Stearns, Frederick, & Co., Detroit, Mich., to Sterling Drug Inc., New York, N.Y. 403,951, ren. 8–13–63. Cl. 18.
Stearns, Frederick, & Co., Detroit, Mich., to Sterling Drug Inc., New York, N.Y. 404,385, ren. 8–13–63. Cl. 18.
Sterling Brass Co., The, Cleveland, Ohio. 647,331, canc. Cl. 13.
Sterling Drug Inc.: *See*—
Stearns, Frederick, & Co.
Stern, Samuel C., Dallas, Tex. 647,553, canc. Cl. 44.
Stetson China Co., Lincoln, Ill. 402,581, ren. 8–13–63. Cl. 30.
Stetson, John B., Co., Philadelphia, Pa. 754,701, pub. 5–28–63. Cl. 39.
Stewart-Warner Corp., Chicago, Ill. 754,625, 5–28–63. Cl. 34.
Stix Products, Inc., New York, N.Y. 754,504, pub. 5–28–63. Cl. 20.
Strauss, Margaret B.: *See*—
Miles Laboratories, Inc.
Sun Crown Food Corp.: *See*—
Escalon Packing Corp.
Sun Oil Co., Philadelphia, Pa. 754,464, pub. 5–28–63. Cl. 15.
Sunkist Growers, Inc.: *See*—
California Fruit Growers Exchange.
Sunshine Originals of Miami, Inc., Miami, Fla. 754,683, pub. 5–28–63. Cl. 39.
Susy Bell Canning Co., Inc., Port Elizabeth, N.J. 754,746, pub. 5–28–63. Cl. 46.
Swingline Inc., Long Island City, N.Y. 754,567, pub. 5–28–63. Cl. 23.
Swope, George S., d.b.a. MPA Manplan Associates, Chicago, Ill. 754,795, pub. 5–28–63. Cl. 101.
Taylor & Siedd Inc., Richmond, Va. 176,447, ren. 8–13–63. Cl. 46.
Taylor & Siedd Inc., Richmond, Va. 176,452, ren. 8–13–63. Cl. 46.
Techkote Co. Inc., Inglewood, Calif. 647,311, canc. Cl. 12.
Technical Porcelain and Chinaware Co., El Cerrito, Calif. 754,606, pub. 5–28–63. Cl. 30.
Tee-Pak, Inc., Chicago, Ill. 754,395, pub. 5–28–63. Cl. 2.
Tele-Sound Productions, Inc., Washington, D.C. 754,793, pub. 5–28–63. Cl. 101.
Teletype Corp., Skokie, Ill. 754,520, pub. 5–28–63. Cl. 21.
Tenneco Corp., from Tenneco Oil Co., Houston, Tex. 754,462, pub. 5–28–63. Cl. 15.
Tennessee Corp., New York, N.Y. 754,415, pub. 5–28–63. Cl. 6.
Texas Eastern Transmission Corp., Shreveport, La. 754,802, pub. 5–28–63. Cl. 105.
Texize Chemicals, Inc., Greenville, S.C. 754,403, pub. 5–28–63. Cl. 4.
Thermasol Ltd., New York, N.Y. 754,517, pub. 5–28–63. Cl. 21.
Thompson, John R., Co., d.b.a. The Red Balloon Coffee House, Chicago, Ill. 754,753, pub. 5–28–63. Cl. 46.
Thorn-A.E.I. Radio Valves and Tubes Ltd., London, England. 754,535, pub. 5–28–63. Cl. 21.
Thorn-A.E.I. Radio Valves and Tubes Ltd., London, England. 754,632, pub. 5–28–63. Cl. 36.
Titan Industrial Corp., The, New York, N.Y. 754,455, pub. 5–28–63. Cl. 14.
Tower Fabrics Co., Inc., New York, N.Y. 754,717, pub. 5–28–63. Cl. 42.
Tower Group: *See*—
Wolverine Insurance Co.
Traffic Control, Inc., Milwaukee, Wis., to Holophane Co., Inc., New York, N.Y. 172,012, ren. 8–13–63. Cl. 21.
Trans-American Management Co., Inc., New York, N.Y. 647,504, canc. Cl. 38.
Tribolet Bros.: *See*—
Tribolet, Edward, Jr.
Tribolet, Edward, Jr., d.b.a. Tribolet Bros., Los Angeles, Calif. 647,596, canc. Cl. 46.
Tribune Co., The, Chicago, Ill. 167,615, ren. 8–13–63. Cl. 38.
Trznadel, Amelia, d.b.a. A-T Surgical Co., Holyoke, Mass. 754,742, pub. 5–28–63. Cl. 44.
Tupper Corp., North Smithfield, R.I. 647,276, canc. Cl. 2.
Tyler Refrigeration Corp., Niles, Mich. 754,432, pub. 5–28–63. Cl. 12.
Union Oil Co. of California, Los Angeles, Calif. 754,420, pub. 5–28–63. Cl. 6.
Union Oil Co. of California, Los Angeles, Calif. 754,629, pub. 5–28–63. Cl. 35.
Union Tank Car Co., Chicago, Ill. 754,569, pub. 5–28–63. Cl. 23.
United Merchants and Manufacturers, Inc.: *See*—
Cohn-Hall-Marx Co.
United Shoe Repairing Machine Co., Boston, Mass. 754,566, pub. 5–28–63. Cl. 23.
United States Borax & Chemical Corp., Los Angeles, Calif., from Columbia Wax Co., Glendale, Calif. 754,406, pub. 5–28–63. Cl. 4.
United States Life Insurance Co. in The City of New York, The, New York, N.Y. 754,799, pub. 5–28–63. Cl. 102.
United States Pumice Supply Co., Los Angeles, Calif. 754,404, pub. 5–28–63. Cl. 4.
United States Steel Corp., Pittsburgh, Pa. 754,456, pub. 5–28–63. Cl. 14.
United Steel Companies Ltd., The, The Mount, Broomhill, Sheffield, England. 754,544, pub. 5–28–63. Cl. 23.
Universal Medical Laboratory Service, Inc., Chicago, Ill. 754,789, pub. 5–28–63. Cl. 100.
Universal Research Corp., Philadelphia, Pa. 754,510, pub. 5–28–63. Cl. 21.
Utility Products Mfg. Co., Memphis, Tenn. 754,480, pub. 5–28–63. Cl. 12.
Vapor Corp., Chicago, Ill. 754,526, pub. 5–28–63. Classes 23 and 21.
Vapor Corp., Chicago, Ill. 754,623, pub. 5–28–63. Cl. 34.
Velasquez Nederland N.V. Meerveldhoven, Veldhoven, Netherlands. 754,481, pub. 5–28–63. Cl. 17.
Victoria Avenue Citrus Association, Riverside, Calif. 754,764, pub. 5–28–63. Cl. 46.
Viva Tones, The: *See*—
Mallen Steven L.
Vulcanized Rubber and Plastics Co., Inc., Morrisville, Pa. 754,709, pub. 5–28–63. Cl. 40.
Wabasha Roller Mill Co., Wabasha, Minn., to International Milling Co., Minneapolis, Minn. 170,806, ren. 8–13–63. Cl. 46.
Wallins, Inc., Dayton, Ohio. 647,557, canc. Cl. 46.
Wagner's, W. T., Sons Co., The, Cincinnati, Ohio. 376,676. Am. 7(d). Cl. 45.
Walker Dry Goods Co., Inc., Jasper, Ala. 754,690, pub. 5–28–63. Cl. 39.
Wallace Silversmiths, Inc., Wallingford, Conn. 647,415, canc. Cl. 23.
Warner Brothers Co., The, Bridgeport, Conn. 647,520, canc. Cl. 40.
Washington Financial Reports, Inc., Washington, D.C. 754,654, pub. 5–28–63. Cl. 38.
Washington Mfg. Co., Nashville, Tenn. 174,211, ren. 8–13–63. Cl. 39.
Wawak Co. Inc., Chicago, Ill. 401,856, ren. 8–13–63. Cl. 42.
Waynline, Inc., Chicopee Falls, Mass. 754,616, pub. 5–28–63. Cl. 32.
Wear-Ever Aluminum, Inc., New Kensington, Pa. 754,444, pub. 5–28–63. Cl. 13.
Westley Industries: *See*—
Bell Co., The.
Weyerhaeuser Co., Tacoma, Wash. 754,892, pub. 5–28–63. Cl. 2.
Whirlpool Corp., St. Joseph, Mich. 754,622, pub. 5–28–63. Cl. 34.
White Laboratories, Inc., Newark, N.J., to Pharmaco, Inc., Kenilworth, N.J. 404,420, ren. 8–13–63. Cl. 18.
White Rock Corp.: *See*—
White Rock Mineral Spring Co.
White Rock Mineral Spring Co., Waukesha, Wis., to White Rock Corp., Brooklyn, N.Y. 23,873, ren. 8–13–63. Cl. 45.
Whitman, Stephen F., & Son, Inc., Philadelphia, Pa., to Pet Milk Co., St. Louis, Mo. 165,824, ren. 8–13–63. Cl. 46.
Wilmot Castle Co., Rochester, N.Y. 754,784, pub. 5–28–63. Cl. 44.
Winkler, Kaspar, & Co.: *See*—
Schenker-Winkler, Frits.
Winthrop Products Inc.: *See*—
Farbwerke vorm. Meister Lucius & Bruning.
Wise, Robert S., Co., Inc., Wichita, Kans. 754,414, pub. 5–28–63. Cl. 6.
Wolverine Insurance Co., Federal Life and Casualty Co., Secured Insurance Co., Riverside Insurance Co. of America, d.b.a. Tower Group, Battle Creek, Mich. 754,797, pub. 5–28–63. Cl. 102.
Wonstop Automotive Warehouse Co., Denver, Colo. 754,521, pub. 5–28–63. Cl. 21.
Woolf, Lewis, Griptight Ltd., Birmingham, England. 754,727, pub. 5–28–63. Cl. 44.
Worcester Pressed Steel Co., Worcester, Mass. 754,458, pub. 5–28–63. Cl. 14.
Worthington Corp., Harrison, N.J. 754,554, pub. 5–28–63. Cl. 23.
Zumbiel, C. W., Co., The, Cincinnati, Ohio. 754,390, pub. 5–28–63. Cl. 2.

U.S. GOVERNMENT PRINTING OFFICE: 0— 1963

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

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NOTICES

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Examiner affirmed	344
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DEPARTMENT OF COMMERCE—PATENT OFFICE

Rules of Practice in Patent Cases

[37 CFR Part 1]

Furnishing by Applicant of Information Pertinent to Claimed Invention

Notice is hereby given that the United States Patent Office proposes to amend one of its rules relating to patents. The amendment is proposed pursuant to the authority contained in Title 35 U.S.C. section 6.

All persons who desire to present their views, objections, recommendations or suggestions in connection with the proposed amendment are invited to do so on or before October 1, 1963, on which day a hearing will be held at 10:00 a.m., in Room 3886B of the Department of Commerce Building. All persons wishing to be heard orally are requested to notify the Commissioner of Patents of their intended appearance.

The proposed amendment will permit the Office to require of applicants for patent the furnishing of information concerning the published art, known to them and believed by them to be significantly pertinent to their inventions. The purpose is to make available to examiners in the Patent Office the results of a search made by applicant or his representative, if such search was made. It is believed that the examiner's job of making an investigation of the available prior art can be more thorough if such information is available. It is also believed that the presumption of validity attaching to patents will be more meaningful and stronger.

The text of the proposed amendment is as follows—

Section 1.104 (Patent Rule 104) is proposed to be amended by adding the paragraph (c) to read as follows:

§ 1.104 *Nature of examination; examiner's action.*

* * * * * * *

(c) The applicant must list in a separate statement accompanying the application, the published art (including patents, foreign and domestic) known to him at the time of the application, and believed by the applicant to be significantly pertinent to the claimed invention. If no such art is known to the applicant, this should be expressly asserted. This statement shall not be considered to be a representation that a search has been made, or that no better art than that listed exists. The applicant may at his option, state whether or not a search has been made. If such statement does not accompany the application, the examiner may require the filing of such statement before action is made.

The time and manner of taking effect is as follows: The amendment shall take effect thirty days after publication in the Federal Register, and shall apply only to applications filed after that date. In all other applications pending on the effective date, a similar statement may be placed in the record, at the applicant's option.

Dated: July 11, 1963.

[SEAL] DAVID L. LADD,
Commissioner of Patents.

Approved:
J. HERBERT HOLLOMON,
Assistant Secretary of Commerce for Science and Technology.

[F.R. Doc. 63–7773; Filed, July 23, 1963; 8:52 a.m.]

Published in 28 F.R. 7513, July 24, 1963

DEPARTMENT OF COMMERCE—PATENT OFFICE

Rules of Practice in Patent Cases

[37 CFR Part 1]

Furnishing by Applicant of Information as to Assistance Received in Preparation and/or Prosecution of Application, When no Attorney or Agent is of Record

Notice is hereby given that the United States Patent Office proposes to amend one of its rules relating to patents. The amendments are proposed pursuant to the authority contained in Title 35 U.S.C. section 6.

All persons who desire to submit written data, views, arguments or suggestions for consideration in connection with the proposed amendment, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C. on or before October 15, 1963. An oral hearing will not be scheduled.

The purpose of the amendment to § 1.33 (Rule 33) is to aid the Commissioner in performing the duty, inherent in the authority granted by 35 U.S.C. 31, of ensuring that applicants have proper assistance in the preparation and prosecution of their applications. Experience has shown that applicants often seek assistance from persons who are not registered to practice before the Patent Office, without knowing that such person cannot sign amendments or other papers to be presented to the Office during the prosecution of the application. Frequently abandonment of the application has resulted because of the time lag involved in having papers prepared by such persons for the applicant's signature, both because the applicant does not always understand the absolute necessity for prompt action, and because he may be unavailable at that time. Hence, it seems desirable for

New Applications Received During June 1963

Patents	6,771
Designs	423
Plant Patents	10
Reissues	80
Total	7,284

Issue

Patents	580	No. 3,100,896 to No. 3,101,475, incl.
Designs	64	No. 196,032 to No. 196,095, incl.
Total	644	

the protection of those applicants who may have been induced to employ non-registered persons to require disclosure of that information, so that they may be advised of the risks involved and of the possible loss of valuable rights.

The text of the proposed amendment is as follows:

Section 1.33 of Title 37 CFR (Patent Rule 33) is amended by designating the present paragraph as paragraph (a) and by adding thereto the following new paragraph (b):

§ 1.33 *Correspondence when no attorney or agent.*

* * * * * * *

(b) An applicant who is not represented by a registered attorney or agent may be required to state whether he received assistance in the preparation or prosecution of his application, for which any compensation or consideration was given, and if so, to disclose the name or names of the person or persons providing assistance.

[SEAL] DAVID L. LADD,
Commissioner of Patents.

Approved: July 25, 1963.

J. H. HOLLOMON,
Assistant Secretary of Commerce for Science and Technology.

[F.R. Doc. 63-8041; Filed, July 30, 1963; 8:58 a.m.]
Published at 28 F.R. 7788, July 31, 1963

Patent Office Academy

The Patent Office Academy is now ready to accept applications from non-government employees for training at the next session, which will begin on or about January 1, 1964. The curriculum comprises about 100 hours of lecture time and about 250 hours of seminar-type classroom work. The lectures and classroom work together provide comprehensive coverage of examining practice and procedure. Applications should be submitted not later than 60 days prior to January 1, 1964.

The following schedule of fees for the training course has been established.

	Non-Patent Office Government Employees	Non-Government Employees
(1) Lectures only	$100.00	$125.00
(2) Lectures plus classroom instruction	$350.00	$425.00

EDWIN L. REYNOLDS,
First Assistant Commissioner.

Disclaimer

2,825,046.—*John M. Herbert*, Horton, and *Anthony W. Simpson*, Radcliffe-on-Trent, England. PRODUCTION OF MAGNETIC MATERIAL FOR USE IN COMPUTERS OR MAGNETIC MEMORY SYSTEMS. Patent dated Feb. 25, 1958. Disclaimer filed July 1, 1963, by the assignee, *The Plessey Company Limited.*

Hereby enters this disclaimer to claim 1 of said patent.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 2,900,402, W. K. Johnson, Preparation of aluminum alkyls, decided Sept. 5, 1961, Interference No. 90,915, claims 2, 3, 4, 5, 6, 7 and 8.

Patent No. 2,900,577, A. E. Feinberg, Ballast and lighting system for fluorescent lamps, decided Apr. 29, 1963, Interference No. 91,562, claims 1, 2 and 3.

Patent No. 2,903,787, J. B. Brennan, Method of producing strip materials, decided June 12, 1963, Interference No. 91,294, claims 1 and 9.

Patent No. 2,925,532, S. Larach, Polychromatic electroluminescent means, decided Sept. 27, 1962, Interference No. 91,320, claims 4, 6 and 7.

Patent No. 2,926,543, J. W. Holdeman and S. Dabich, Transmission controls, decided June 5, 1963, Interference No. 91,916, claims 1, 2 and 6.

Patent No. 2,932,450, L. Knight and A. Trussell, Electronic calculating apparatus, decided Apr. 29, 1963, Interference No. 91,992, claims 7 and 8.

Patent No. 2,939,922, R. Görike, Directional microphone having a low susceptibility to shock and wind, decided Feb. 27, 1963, Interference No. 91,824, claims 1, 3, 4, 5, 9 and 10.

Patent No. 2,959,591, T. Petrzilka, A. Frey, A. Hofmann, H. Otto, H. Schenk and F. Troxler, Reserpine-like esters of pivalic acid, decided Apr. 12, 1963, Interference No. 91,636, claim 2.

Patent No. 3,035,000, R. W. Fulmer, Condensation products of an epoxidized fatty oil and an alkylene polyamine, decided Apr. 25, 1963, Interference No. 93,204, claims 1, 2, 3, 4 and 6.

Patents Available for Licensing or Sale

General Electric Company is prepared to grant non-exclusive licenses under the following 43 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 43 patents may be addressed to: Patent Counsel, Lamp Division, General Electric Company, Nela Park, Cleveland 12, Ohio.

2,667,595. Ribbon Lead Construction.
2,670,640. Apparatus for Foliating Wire Ribbon Leads.
2,748,937. Tube and Rod Gauging Apparatus.
2,813,227. Apparatus for and Method of Forming and Mounting Supports on Coiled Filaments.
2,813,993. Electric Lamp or Similar Device.
2,830,217. Filament Connection for Electric Lamps.
2,832,661. Method and Apparatus for Treating Lamp Filaments.
2,841,690. Contact Pin and Method for Fluorescent Lamps.
2,845,557. Arc Tube Mounting.
2,849,632. Arc Tube Seal and Mount.
2,849,656. Switch-Start Discharge Lamp Circuit.
2,853,653. Sequence Boost Circuit for Discharge Lamps.
2,855,265. Lamp Sealing Method and Apparatus.
2,864,025. Infrared Ray Generating Device.
2,868,609. Method of Sealing and Gas Filling Electric Lamps.
2,888,585. Arc Tube Mount.
2,888,592. Cathode Structure.
2,892,440. Fluorescent Lamp Coating Machine.
2,892,923. Lamp Base Terminal Welding.
2,900,771. Electric Lamp Gas Filling and Sealing Method and Apparatus.
2,901,375. Fluorescent Lamp Coating Process.
2,901,648. Reflector Mercury Lamp.
2,904,710. Reflector Mercury Lamp Mount.
2,904,715. Modulable Discharge Lamp.
2,910,605. Radiant Energy Device.
2,924,748. Lighting Unit.
2,945,978. Tubular Incandescent Lamp Device.
2,950,417. Series Electric Lamp.
2,961,564. Pulsating Electric Discharge.
2,971,083. Low Brightness Louver.
2,971,166. Transistor Power Inverter.
2,997,616. Multiple Filament Incandescent Lamp.
2,997,617. Electric Incandescent Lamp.
3,001,096. Terminal Structure for Double-Ended Lamps.
3,001,097. Lamp Base and Terminal Structure.
3,016,654. Scoring and Breaking Apparatus for Vitreous Tubing.
3,024,905. Tube End Inspection Apparatus.
3,028,712. Apparatus for Gas Filling Electric Lamps.
3,034,015. Controlled Rectifier Inverter Circuit.
3,047,765. Base Assembly for Electric Lamps.
3,054,018. Light Sources.
3,073,986. Electric Incandescent Lamp.
3,080,497. Bent End Incandescent Lamp.

INTERVIEWS

On July 17, 1963, the memorandum reproduced below was distributed to the Examiners in the Patent Office. It is presented here for the information of all applicants and their representatives.

Optimum Examining Procedure—Memorandum #2 Interviews

This Memorandum #2 of the Optimum Examining Procedure series is devoted entirely to "interviews" and their use to the maximum benefit of better and swifter prosecution. Proper interviews frequently lead to a better and earlier understanding of the issues involved in a particular case, and hence to an earlier conclusion of prosecution.

One of the characteristics of the skilled, mature Examiner is the exercise of proper judgment in borderline situations. Circumstances will frequently arise where waiver of technical requirements by the Primary Examiner, if permissible, will be better than blind adherence to technicalities, particularly where applicants are cooperating fully in moving to conclude prosecution and the Examiner can pass on all remaining issues with no more than nominal reconsideration or search. Subject to this broad policy, the following statements regarding situations which frequently arise specify practice which should be followed throughout the Office in the interest of uniform interview policy.

1. Interviews for the discussion of the patentability of pending applications will not be had before the first official action thereon (Rule 133). Interviews before the first response are discouraged; but interviews after the first response or later which offer hope of substantial progress are encouraged. (See, however, 12 and 13 below.)

2. Arrangements for interviews should be made in advance so that the Examiner can properly prepare for the interview (Rule 133a). The Examiner should prepare for any prearranged interview to the extent that he understands the case, the references applied against it, and the attorney's response. Impromptu interviews should never be granted unless the Examiner has these details so well in mind that he can discuss the case profitably without further review. Interviews on Fridays will no longer be prohibited as a matter of policy; but all interviews should be set at a time mutually satisfactory to both parties.

3. An appointment for interview once arranged should be kept. Many applicants and attorneys plan trips to Washington in reliance upon such appointments. When, after an appointment has been made, circumstances compel the absence of the Examiner or Examiners necessary to an effective interview, the other party should be notified immediately so that substitute arrangements may be made.

4. An interview should not be granted if it is clear in advance that the requesting party is not properly prepared. If it becomes apparent after the discussion begins that the party is not properly prepared, or that further discussion would be unproductive, the interview should be terminated promptly.

5. Interviews normally should not be granted unless the requesting party has authority to bind the principal concerned.

6. An interview should be conducted only with the applicant or his legal representative of record. An interview with a person not of record, but known to be the local associate of the attorney of record, ordinarily will be permitted hereafter only when a written power authorizing such interview is presented prior thereto. Any exceptions to this procedure must be approved by the Group Supervisor.

7. If, at any time, the Examiner considers an interview would be helpful in disposing of a case, he is authorized to solicit same either by contacting applicant's local representative by phone or, where no such representative is available, by writing to counsel of record, or by collect long distance phone when authorized by the attorney or agent of record.

8. Where the response to a first complete action includes a request for an interview or a telephone consultation to be initiated by the Examiner, or where an out-of-town attorney under similar circumstances requests that the Examiner defer taking any further action on the case until the attorney's next visit to Washington (provided such visit is not beyond the date when the Office action would normally be given), the Examiner, as soon as he has considered the effect of the response, should grant such request if it appears that the interview or consultation would result in expediting the case to a final action.

9. An interview should not be used by either party as an opportunity to "haggle." Once the Examiner clearly understands the applicant's position, the interview should be concluded. Of course, if the Examiner can make a suggestion which will advance the prosecution, he should do so.

10. Where agreement is reached as a result of an interview, applicant's representative should be advised that an amendment pursuant to the agreement should be promptly submitted. If the amendment prepares the case for final action, the Examiner should take the case up as special. If not, the case should await its turn.

11. To insure that any mutually acceptable conclusions reached at an interview are understood by both parties, a memorandum summarizing these conclusions and the significance of any exhibits considered or demonstrations made should be prepared in duplicate and signed by both parties to the interview, and a copy should be retained by each. The copy retained by the Examiner will be kept in the application file until prosecution is completed. Such procedure will not, however, relieve applicant of his responsibility under the second paragraph of Rule 133.

In those cases where an interview is had but no agreement is reached, the Examiner should place an informal memorandum in the file to this effect. The memorandum should be sufficiently complete to make clear to others the issues resolved and/or discussed in the interview.

The memoranda discussed above are not an official part of the record, and should be removed from the file if and when the case is passed to issue.

12. Concerning requests for interviews after Final Action, it is essential that any applicant or his representative be granted an opportunity to present briefly, either orally or in writing, the intended purpose and content of the interview. With the approval of the Primary Examiner, further time may be granted if the Examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations which would require more than nominal reconsideration or new search should be denied.

13. Requests for interviews on cases already passed to issue should be granted only with specific approval of the Supervisor upon a showing in writing of extraordinary circumstances.

H. B. WHITMORE,
July 17, 1963. *Superintendent of the Examining Corps.*

PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES [1]

In accordance with paragraph 3 of the Procedure for the Selection of Recommended International Non-Proprietary Names for Pharmaceutical Preparations,[2] notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Non-Proprietary Names.

Comments on, or formal objections to the proposed names may be forwarded by any person to the Pharmaceuticals Unit of the World Health Organization within four months of the date of their publication in *WHO Chronicle*.

The inclusion of a name in the lists of proposed international non-proprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
aceclidinum aceclidine	3-quinuclidinol acetate
acetiaminum acetiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl) formamide *O,S*-diacetate
acetryptinum acetryptine	3-(2-aminoethyl)indol-5-yl methyl ketone
acetylcysteinum acetylcysteine	*N*-acetylcysteine
acidum clofenamicum clofenamic acid	*N*-(2,3-dichlorophenyl)anthranilic acid
acidum flufenamicum flufenamic acid	*N*-(α,α,α-trifluoro-*m*-tolyl)anthranilic acid
acidum fusidicum fusidic acid	an antibiotic substance obtained from cultures of *fusidium*, or the same substance produced by any other means
acidum fyticum fytic acid	phytic acid
acidum iotalamicum iotalamic acid	5-acetamido-2,4,6-triiodo-*N*-methylisophthalamic acid
acidum kainicum kainic acid	2-carboxy-4-isopropenyl-3-pyrrolidineacetic acid
acidum mefenamicum mefenamic acid	*N*-2,3-xylylanthranilic acid
acidum nalidixicum nalidixic acid	1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid
acrisorcinum acrisorcin	9-aminoacridine compound with 4-hexylresorcinol
alazani triclofenas alazanine triclofenate	3-ethyl-2-[3-(3-ethyl-2-benzothiazolinylidene)propenyl]benzothiazolium 2,4,5-trichlorophenoxide compound with 2,4,5-trichlorophenol
albutoinum albutoin	3-allyl-5-isobutyl-2-thiohydantoin
aloxiprinum aloxiprin	basic aluminium acetylsalicylate complex
altizidum altizide	3-[(allylthio)methyl]-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine - 7 - sulfonamide, 1,1-dioxide
ambomycinum ambomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
amfepramonum amfepramone	2-(diethylamino)propiophenone
ampicillinum ampicillin	(−)-6-(2 - amino - 2 - phenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
ampyriminum ampyrimine	2,4,7-triamino-5-phenylpyrimido[4,5-*d*]pyrimidine
anazolenum natricum sodium anazolene	4-[(4-anilino-5-sulfo-1-naphthyl)azo]-5-hydroxy-2,7-naphthalenedisulfonic acid, trisodium salt
anilamatum anilamate	methylcarbamate of salicylanilide
argipressinum argipressin	8-argininevasopressin
argiprestocinum argiprestocin	8-argininеoxytocin
azotomycinum azotomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
batiolum batiol	3-(octadecyloxy)-1,2-propanediol
benfotiaminum benfotiamine	*N*-[(r-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl)formamide *S*-benzoate *O*-phosphate
bentiaminum bentiamine	*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto-1-methyl-1-butenyl)formamide *O,S*-dibenzoate
benzaronum benzarone	2-ethyl-3-benzofuranyl *p*-hydroxyphenyl ketone
benzbromaronum benzbromarone	3,5-dibromo-4-hydroxyphenyl-2-ethyl-3-benzofuranyl ketone
benziloni bromidum benziloni bromide	1,1-diethyl-3-hydroxypyrrolidinium bromide benzilate
benzodepum benzodepa	benzyl[bis(1-aziridinyl)phosphinyl]carbamate
benzquinamidum benzquinamide	*N,N*-diethyl-1,3,4,6,7,11b - hexahydro-2-hydroxy - 9,10 - dimethoxy-2*H*-benzo[*a*]quinolizine-3-carboxamide acetate
betahistinum betahistine	2-[(2-methylamino)ethyl]pyridine

[1] Other lists of proposed international non-proprietary names can be found in *Chron. Wld Hlth Org.* 1953, *7*, 299; 1954, *8*, 216, 313; 1956, *10*, 28; 1957, *11*, 231; 1958, *12*, 102; 1959, *13*, 105, 152; 1960, *14*, 168, 244; 1961, *15*, 314, 320; 1962, *16*, 385.

Lists of recommended international non-proprietary names were published in *Chron. Wld Hlth Org.* 1955, *9*, 185; 1959, *13*, 106; 1962, *16*, 101, 111.

[2] *Off. Rec. Wld Hlth Org. 60*, 8 and 55 (resolution EB15.R7).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
betanidinum betanidine	1-benzyl-2,3-dimethylguanidine
betoxycainum betoxycaine	2-[2-(diethylamino)ethoxy]ethyl 3-amino-4-butoxybenzoate
bisacodylum bisacodyl	4,4′-(2-pyridylmethylene)diphenol diacetate
bisbentiaminum bisbentiamine	*N,N′*-[dithiobis[2-(2-hydroxyethyl) - 1 - methylvinylene]]bis[*N*[(4-amino-2-methyl-5-pyrimidinyl)methyl]formamide]
bolasteronum bolasterone	7*a*,17-dimethyltestosterone
bromacrylidum bromacrylide	*N*[(3-bromopropionamido)methyl]acrylamide
bufenadrinum bufenadrine	2-(o-tert-butyl-*a*-phenylbenzyloxy)-*N,N*-dimethylethylamine
butaperazinum butaperazine	1-[10-[3-(4-methyl-1-piperazinyl)propyl]phenothiazin-2-yl]-1-butanone
butaverinum butaverine	butyl 3-(3-phenyl-1-piperidyl)propionate
butizidum butizide	3-isobutyl-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide
butopiprinum butopiprine	2-butoxyethyl-*a*-phenyl-2-piperidineacetate
carbazocronii natricum sulfonas carbazocrome sodium sulfonate	sodium 5,6-dihydro-1-methyl-5,6-dioxoindoline-3-sulfonate-5-semicarbazone
carsalamum carsalam	2*H*-1,3-benzoxazine-2,4(3*H*)-dione
clefamidum clefamide	2,2-dichloro-*N*-2-hydroxyethyl-*N*-[*p*-(*p*-nitrophenoxy)benzyl]acetamide
clobenztropinum clobenztropine	3-(*p*-chloro-*a*-phenylbenzyloxy)-tropane
clodacainum clodacaine	2′-chloro-2-[(2-diethylaminoethyl)ethylamino]acetanilid
clodantoinum clodantoin	5-(1-ethylpentyl)-3-(trichloromethylthio)hydantoin
clofenamidum clofenamide	4-chloro-*m*-benzenedisulfonamide
clofibratum clofibrate	ethyl 2-(*p*-chlorophenoxy)-2-methylpropionate
clopamidum clopamide	4-chloro-*N*-(*cis*-2,6-dimethylpiperidino)-3-sulfamoylbenzamide
cloralum betainum cloral betaine	chloral hydrate compound with betaine
clonitratum clonitrate	3-chloro-1,2-propanediol dinitrate
cloramfenicoli pantotenas cloramfenicol pantotenate	chloramphenicol complex with calcium pantothenate
clorindionum clorindione	2-(*p*-chlorophenyl)1,3-indandione
cloxacillinum cloxacillin	6-[3-(*o*-chlorophenyl)-5-methyl-4-isoxazolecarboxamido]-3,3-dimethyl - 7 - oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
colecalciferolum colecalciferol	cholecalciferol
coumetarolum coumetarol	4,4′-dihydroxy-3,3′-(2-methoxyethylidene) dicoumarin
cyamemazinum cyamemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine-2-carbonitrile
cyclarbamatum cyclarbamate	1,1-cyclopentanedimethanol dicarbanilate
cycloguanili embonas cycloguanil embonate	4,6-diamino-1-(*p*-chlorophenyl)-1,2-dihydro - 2,2 - dimethyl-*s*-triazine compound (2:1) with 4,4′-methylenebis[3-hydroxy-2-naphthoic acid]
cyclomenolum cyclomenol	2-cyclohexyl-3,5-xylenol
cyclovalonum cyclovalone	2,6-divanillylidenecyclohexanone
desipraminum desipramine	10,11-dihydro-5-(3-methylaminopropyl)-5*H*-dibenz[*b,f*]axepine
dexoxadrolum dexoxadrol	(+)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
diclofenamidum diclofenamide	4,5-dichloro-*m*-benzenedisulfonamide
dietroxinum dietroxine	5,5-diethyldihydro-2*H*-1,3-oxazine-2,4(3*H*)-dione
difenidolum difenidol	*a,a*-diphenyl-1-piperidinebutanol
dimefadanum dimefadane	*N,N*-dimethyl-3-phenyl-1-indanamine
dimetindenum dimetindene	2-(1-[2-(2-dimethylaminoethyl)inden-3-yl]ethyl)pyridine
dioxadrolum dioxadrol	2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
dipyridamolum dipyridamole	2,2′,2″,2‴-[(4,8 - dipiperidinopyrimido[5,4-*d*]pyrimidine - 2,6 - diyl)dinitrilo]tetraethanol
doxapramum doxapram	1-ethyl-4-(2-morpholinoethyl)-3,3-diphenyl-2-pyrrolidinone
drostanolonum drostanolone	17*β*-hydroxy-2*a*-methyl-5*a*-androstan-3-one
duazomycinum duazomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
efloxatum efloxate	ethyl[(4-oxo-2-phenyl-4*H*-1-benzopyran-7-yl)oxy]acetate
epitizidum epitizide	6-chloro-3,4-dihydro-3-[[(2,2,2 - trifluoroethyl)thio]methyl]-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
ethylestrenolum ethylestrenol	17*a*-ethyl-19-nor-pregn-4-en-17-ol
eritrityli tetranitras erithrityl tetranitrate	erythritol tetranitrate
etoxazenum etoxazene	4-[(p-ethoxyphenyl)azo]-*m*-phenylenediamine
etymemazinum etymemazine	10-(3-dimethylamino-2-methylpropyl)-2-ethylphenothiazine
etynodioli acetas etynodiol acetate	19 nor-17*a*-pregn-4-en-20-yne-3*β*,17-diol, diacetate
felypressinum felypressin	2-(phenylalanine)-8-lysinevasopressin
fenbenicillinum fenbenicillin	3,3-dimethyl-7-oxo-6-(2-phenoxy-2-phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
fencarbamidum fencarbamide	*S*-2-diethylaminoethyl diphenylthiocarbamate
fenyripolum fenyripol	*a*-(2-pyrimidinylaminomethyl)benzyl alcohol
fluanisonum fluanisone	4′-fluoro-4-[4-(*o*-methoxyphenyl)-1-piperazinyl]butyrophenone
flumetasonum flumetasone	6*a*,9-difluoro-11*β*,17,21-trihydroxy-16*a*-methylpregna-1,4-diene-3,20-dione
fluorouracilum fluorouracil	5-fluorouracil
fluperolonum fluperolone	9-fluoro-11*β*,17,21-trihydroxy-21-methylpregna-1,4-diene-3,20-dione 21 acetate
fluprednisolonum fluprednisolone	6*a*-fluoro-11*β*,17,21-trihydroxypregna-1,4-diene-3,20-dione
flurotylum flurotyl	bis(2,2,2-trifluoroethyl) ether
furalazinum furalazine	3-amino-6-[2(5-nitro-2-furyl)vinyl]-*as*-triazine
furazolidonum furazolidone	3[(5-nitrofurfurylidene)amino]-2-oxazolidinone
galantaminum galantamine	1,2,3,4,6,7,7a,11c-octahydro-9-methoxy-2-methylbenzofuro[4,3,2-*efg*][2]benzazocin-6-ol
glucaloxum glucalox	glycerol complex with aluminium hydroxide
glypinamidum glypinamide	1-(p-chlorophenylsulfonyl)-3-(hexahydro-1*H*-azepin-1-yl)urea
hexadilinum hexadiline	2-(2,2-dicyclohexyl vinyl)piperidine
hexamidinum hexamidine	4,4′-(hexamethylenedioxy)dibenzamidine
hexopyrronii bromidum hexopyrronium bromide	1,1-dimethylpyrrolidinium bromide-*a*-phenylcyclohexane glycolate
indometacinum indometacin	1-(p-chlorobenzoyl)-5-methoxy-2-methylindole-3-acetic acid
iprocloxidum iprocloxide	*p*-chlorophenoxyacetic acid 2-isopropylhydrazide
isoetarinum isoetarine	*a*-(1-isopropylaminopropyl)protocatechuyl alcohol
itramini tosylas [2] itramin tosylate	2-aminoethanol nitrate(ester)*p*-toluenesulfonate
lelopyrrolum lelopyrrole	1-[o-[2-(diethylamino)ethoxy]phenyl]-2-methyl-5-phenylpyrrole
levoglutamidum levoglutamide	glutamine
levoxadrolum levoxadrol	(−)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
lincomycinum lincomycin	an antibiotic substance obtained from cultures of *streptomyces lincolnensis*, or the same substance produced by any other means
lucimycinum lucimycin	an antibiotic substance obtained from cultures of *streptomyces lucensis*, or the same substance produced by any other means
lynestrenolum lynestrenol	19-nor-17*a*-pregn-4-en-20-yn-17-ol
lypressinum lypressin	8-lysinevasopressin
mecloxaminum mecloxamine	2-[(p-chloro-*a*-methyl-*a*-phenylbenzyl)oxy]-*N,N*-dimethylpropylamine
mecysteinum mecysteine	cysteine, methyl ester
megestrolum megestrol	17-hydroxy-6-methylpregna-4,6-diene-3,20-dione
melengestrolum melengestrol	17-hydroxy-6-methyl-16-methylenepregna-4,6-diene-3,20-dione
menotrophinum menotrophin	human menopausal gonadotrophin
meraleinum natricum sodium meralein	o-[6-hydroxy-5-(hydroxymercuri)-2,7-diiodo-3-oxo-3*H*-xanthen - 9 - yl]benzenesulfonic acid, sodium salt
metacyclinum metacycline	4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a - pentahydroxy-6-methylene-1,11-dioxo-2-naphthacenecarboxamide
meturedepum meturedepa	[bis(2,2-dimethyl-1-aziridinyl)phosphinyl]carbamic acid ethyl ester
metyraponum metyrapone	2-methyl-1,2-di-3-pyridyl-1-propanone
molinazonum molinazone	3-morpholino-1,2,3-benzotriazin-4(3*H*)-one

[2] Itramin is the proposed International Non-proprietary Name for the substance having the chemical name "aminoethyl nitrate" (prop. I.N.N. list 1).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
morinamidum morinamide	N-(morpholinomethyl)pyrazinecarboxamide
nafcillinum nafcillin	6-(2-ethoxy-1-naphthamido)-3,3-dimethyl-7-oxo-4-thia - 1 - azabicyclo[3.2.0]heptane-2-carboxylic acid
naloxonum naloxone	12-allyl-7,7a,8,9 - tetrahydro-3,7a-dihydroxy-4a*H*-8,9c-iminoethanophenanthro[4,5-bcd]furan-5(6*H*)-one
natrii bitionolas sodium bitionolate	disodium 2,2′-thiobis(4,6-dichlorophenoxide)
natrii estasulfas sodium etasulfate	2-ethylhexyl sodium sulfate
natrii metrizoas sodium metrizoate	sodium 3-acetamido-2,4,6-triiodo-5-*N*-methylacetamidobenzoate
natrii radio-iodidum (^{131}I) sodium radio-iodide (^{131}I)	
natrii timerfonas sodium timerfonate	ethyl[(*p*-sulfophenyl)thio]mercury, sodium salt
niclosamidum niclosamide	2′,5-dichloro-4′-nitrosalicylanilide
nonapyriminum nonapyrimine	4-nonylamino-7*H*-pyrrolo[2,3-d]pyrimidine
noretynodrelum noretynodrel	17-hydroxy-17α-pregn-5(10)-en-20-yn-3-one
octotiaminum octotiamine	8-[[2-[*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]formamido]-1-(2-hydroxyethyl)propenyl]dithio]-6-mercaptooctanoic acid, methyl ester acetate
ortetaminum ortetamine	o,α-dimethylphenethylamine
oxazepamum oxazepam	7-chloro-1,3-dihydro-3-hydroxy-5-phenyl-2*H*-1,4-benzodiazepin-2-one
oxetacainum oxetacaine	2,2′-(2-hydroxyethylimino)bis[*N*-(α,α-dimethylphenethyl)-*N*-methylacetamide]
oxomemazinum oxomemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine,5,5-dioxide
oxonazinum oxonazine	N^1,N^2-diallylmelamine N^2-oxide
oxybutyninum oxybutynin	4-diethylamino-2-butynyl α-phenylcyclohexaneglycolate
oxyclipinum oxyclipine	1-methyl-3-piperidyl α-phenylcyclohexaneglycolate
oxyfenamatum oxyfenamate	β-ethyl-β-hydroxyphenethyl carbamate
oxymetazolinum oxymetazoline	6-*tert*-butyl-3-(2-imidazolin-2-ylmethyl)-2,4-dimethylphenol
oxypendylum oxypendyl	4-[3-(10*H*-pyrido[3,2-b][1,4]benzothiazin-10-yl)propyl]-1-piperazineethanol
oxypyronii bromidum oxypyronium bromide	2-(2-hydroxyethyl)-1,1-dimethylpyrrolidinium bromide α-phenylcyclohexaneglycolate
oxytocinum oxytocin	oxytocin
pargylinum pargyline	*N*-methyl-*N*-2-propynylbenzylamine
paxamatum paxamate	4-biphenylyl methylcarbamate
pentabamatum pentabamate	3-methyl-2,4-pentanediol dicarbamate
pentalamidum pentalamide	o-(pentyloxy)benzamide
periciazinum periciazine	10-[3-(4-hydroxypiperidino) propyl] phenothiazine-2-carbonitrile
picloxydinum picloxydine	1,1′-[1,4-piperazinediylbis(imidocarbonyl)]bis[3-(*p*-chlorophenyl)guanidine]
pimetinum pimetine	4-benzyl-1-(2-dimethylaminoethyl)piperidine
poldini methylsulfas poldine methylsulfate	1-methyl-2-pyrrolidinemethanol benzilate
prednisolamatum prednisolamate	11β,17,21-trihydroxypregna-1,4-diene-3,20-dione 21-*N*,*N*-diethylglycine ester
prednylidenum prednylidene	11β,17,21-trihydroxy-16-methylenepregna-1,4-diene-3,20-dione
propetandrolum propetandrol	19-nor-17α-pregn-4-ene-3β,17-diol 3-propionate
propicillinum propicillin	3,3-dimethyl-7-oxo - 6 - (2 - phenoxybutyramido) -4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
prosultiaminum prosultiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-[4-hydroxy-1-methyl-2-(propyldithio)-1-butenyl]formamide
pyrrocainum pyrrocaine	1-pyrrolidineacetanilide
quingestronum quingestrone	3-(cyclopentyloxy)pregna-3,5-dien-20-one
radio-aurum (^{198}Au)-colloidale radio-gold (^{198}Au) colloidal	
radiocyanocobalaminum (^{60}Co) radiocyanocobalamin (^{60}Co)	
radiotolpovidonum radiotolpovidone	ω-(*p*-iodo-^{131}I-benzyl)-2-(2-oxo-1-pyrrolidinyl)ethamer
renytolinum renytoline	α-fluoren-9-ylidene-*p*-toluamidine
rifamycinum rifamycin	antibiotic substane obtained from cultures of *streptomyces mediterranei* or the same substance produced by any other means
sparsomycinum sparsomycin	an antibiotic substance obtained from cultures of *streptomyces sparsogenes*, or the same substance produced by any other means
sparteinum sparteine	sparteine

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
spectinomycinum spectinomycin	an antibiotic substance obtained from cultures of *streptomyces spectabilis*, or the same substance produced by any other means
stilbazil iodidum stilbazium iodide	1-ethyl-2,6-bis(*p*-1-pyrrolidinylstyryl)pyridinium iodide
streptoniazidum streptoniazid	isonicotinic acid hydrazide, hydrazone with streptomycin
sucraloxum sucralox	sucrose complex with aluminium hydroxide
sultiamum sultiame	benzenesulfonamide,*p*-(tetrahydro-2*H*-1,2-thiazin-2yl)-*S*,*S*-dioxide
teclozanum teclozan	*N*,*N*′-(*p*-phenylenedimethylene)bis[2,2-dichloro-*N*-(2-ethoxyethyl)acetamide]
tiabendazolum tiabendazole	2-(4-thiazolyl)benzimidazole
tiemondii iodidum tiemonium iodide	4-[3-hydroxy-3-phenyl-3-(2-thienyl)propyl]-4-methylmorpholinium iodide
tifenamilum tifenamil	*S*-(2-diethylamino)ethyl diphenylthioacetate
tolpropaminum tolpropamine	*N*,*N*-dimethyl-3-phenyl-3-(*p*-tolyl)propylamine
tolpyrramidum tolpyrramide	*N*-*p*-tolylsulfonyl-1-pyrrolidinecarboxamide
triclofosum triclofos	2,2,2-trichloroethyl dihydrogen phosphate
trimetamidum trimetamide	*N*-(2-amino-6-methyl-3-pyridylmethyl)-3,4,5-trimethoxybenzamide
trimipraminum trimipramine	10,11-dihydro-5-(3-dimethylamino-2-methylpropyl)-SH-dibenz[*b*,*f*]azepine
trometamolum trometamol	2-amino-2-(hydroxymethyl)-1,3-propanediol
troxonii tosylas troxonium tosylate	triethyl(2-hydroxyethyl)ammonium *p*-toluenesulfonate 3,4,5-trimethoxybenzoate
troxypyrrolii tosylas troxypyrrolium tosylate	1-ethyl-1-(2-hydroxyethyl)pyrrolidinium *p*-toluenesulfonate 3,4,5-trimethoxybenzoate
tyloxapolum tyloxapol	polymer of *p*-(1,1,3,3-tetramethylbutyl)phenol with ethylene glycol and formaldehyde
uramustinum uramustine	5-[bis(2-chloroethyl)amino]uracil
uredepum uredepa	ethyl[bis(1-aziridinyl)phosphinyl]carbamate
vincristinum vincristine	an alkaloid obtained from *vinca rosea*
vinleurosinum vinleurosine	an alkaloid obtained from *vinca rosea*
vinrosidinum vinrosidine	an alkaloid obtained from *vinca rosea*
virgimycinum virgimycin	an antibiotic substance obtained from cultures of *streptomyces virginiae*, or the same substance produced by any other means
NOTE: aminophenazonum aminophenazone	amidopyrinum replaces amidopyrine (*Chron. Wld Hlth Org.* 1956, *10*, 28)
ergocalciferolum ergocalciferol	calciferolum replaces calciferol (*Chron. Wld Hlth Org.* 1956, *10*, 28)

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	11-17-61	11-13-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	3-12-62	3-8-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner. Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	2-13-62	10-2-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	7-14-61	7-21-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner. Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-18-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner. Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	1-2-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner. Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	12-12-61	10-20-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner. Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-12-62	1-12-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner. Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-29-61	1-3-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner. Communications; Multiplexing Techniques; Facsimile and Related Art.	1-2-62	1-10-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner. Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-24-61	10-26-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	12-11-61	12-18-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner. Optics; Radiant Energy; Measuring.	11-21-61	11-6-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner. Conductors; Switches; Miscellaneous.	11-29-61	11-14-61

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1963

Total number of pending applications (excluding Designs)	201, 171
Total number of Design applications pending	6, 105
Total number of applications awaiting action (excluding Designs)	117, 610
Total number of Design applications awaiting action	2. 336
Date of oldest new application awaiting action	July 14, 1961
Date of oldest amended application awaiting action	July 21, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1963, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,405,107 to 2,406,732, inclusive
Plant Patent	Number 709

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-15-62	3-13-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	1-24-62	1-29-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	3-15-62	2-15-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	2-7-62	2-7-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	2-9-62	2-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	3-15-62	4-2-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-23-62	4-13-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	2-9-62	1-17-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	6-14-62	7-13-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-12-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	3-7-62	3-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-23-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	4-2-62	4-11-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	6-1-62	6-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner Printing; Typewriters; Stationery; Material Treatment.	4-2-62	4-4-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	4-3-62	4-17-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner Industrial Arts; Household, Personal and Fine Arts.	2-5-63	2-1-63
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting)		
92. GAUSS, H.		
93. PURDY, W. F. (acting)	7-2-62	6-1-62
94. BERLOWITZ, W., Motors, Fluid	8-8-62	10-15-62
95. ANGEL, C. D. (REZNEK, J., acting)		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

COOPERATIVE QUALITY MARKETING, INC. *v.* DEAN MILK COMPANY

No. 6910. Decided March 13, 1963

[50 CCPA —; 314 F.2d 552; 136 USPQ 644]

1. TRADEMARK—DISTINCTIVENESS—EVIDENCE—THIRD PARTY REGISTRATIONS—"COUNTRY CHARM."

"* * * it would appear that the mark 'COUNTRY CHARM,' per se, is weak. A third party, Fisher Dairy and Cheese Company, is the owner of Registration No. 526,942 for 'COUNTRY CHARM' for Cheddar Cheese Food. This registration was introduced by appellant along with 16 other third party registrations for 'CHARM,' or some variation thereof, for food products. The Board found that the registrations were 'insufficient to prove that that term is suggestive of dairy products.' While the registrations alone may not prove suggestiveness as to any specific food products, we feel that the registrations are some evidence entitled to consideration that 'COUNTRY CHARM' is a weak mark."

2. SAME—SAME—SAME—SAME—DOMINANT PORTION.

"Appellee's argument that 'CHARM' is the dominant portion of the marks of both appellant and appellee is not persuasive in view of the fact that the same word is used in at least eight of the third party registrations for food products."

3. SAME—REGISTRABILITY—TOTAL MARK.

"Whether or not appellant is entitled to register 'DAIRY CHARM' by itself is a question not before us. A composite mark consisting of the head of a cow in an inverted triangle, a representation of city buildings, and a slogan, as well as the words 'DAIRY CHARM,' is sought to be registered. * * * It would seem that the total appearance of the mark, including the design features, would be relied on in purchasing butter, the goods for which registration is sought."

4. SAME—CONFUSING SIMILARITY.

In comparing the composite mark of appellant, consisting of "DAIRY CHARM" in association with an illustration of a head of a cow imposed upon an inverted triangle, a representation of city buildings, and the slogan "DAIRY CHARM FROM FARMER TO CONSUMER," with the mark "COUNTRY CHARM" of appellee, *Held* that "the conclusion seems inescapable that the marks are not likely to cause confusion or mistake or to deceive purchasers."

APPEAL from the Patent Office. Opposition No. 39,637.

REVERSED.

M. R. Garstang for appellant.

Carl S. Lloyd for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

ALMOND, JR., *J.*, delivered the opinion of the court.

Appellant, Cooperative Quality Marketing, Inc., filed application[1] to register "DAIRY CHARM" in association with an illustration of a head of a cow imposed upon an inverted triangle, a representation of city buildings, and a slogan "DAIRY CHARM FROM FARMER TO CONSUMER," as a collective mark for butter. Use since May 20, 1959, is asserted, with first use in connection with the sale of butter and subsequent and present use embracing butter, fluid milk, and ice cream. Appellant is a central cooperative organization whose member-users are farmers' cooperative dairies.

[1] Ser. No. 78,431, filed Sept. 28, 1959.

Dean Milk Company, appellee-opposer, filed Notice of Opposition alleging prior and continuous use of "COUNTRY CHARM" as a trademark for its dairy products; and projecting the issue that appellant's mark so resembles the mark of appellee as to be likely, when applied to the goods of appellant, to cause confusion or mistake or to deceive the purchasing public as to the origin of appellant's products.

The Trademark Trial and Appeal Board refused registration and sustained the opposition [2] on the grounds that appellant's mark so resembles opposer's mark "COUNTRY CHARM," as to be likely to cause confusion or mistake or deceive purchasers when applied to the goods in connection with which appellant's mark is used.

The parties have stipulated the testimony.

Appellee's business is that of marketing a wide variety of dairy products including milk, buttermilk, ice cream and ice milk. Its area of service embraces eight States with its products disseminated through local and interstate commerce. Since at least as early as 1950, it has marketed its dairy products in cartons bearing the designation "COUNTRY CHARM" advertised extensively through all available media at an annual cost in excess of $1,000,000.

Appellee's mark "COUNTRY CHARM" is currently registered in eleven States, such registration having been obtained prior to appellant's date of first use. However, the mark is not registered to appellee in the U.S. Patent Office. The Fisher Dairy and Cheese Company, a third party, is registrant of the mark "COUNTRY CHARM" for cheddar cheese food. According to appellant's unchallenged statement, appellee's registered trademark for the goods in question consists of a bird on a mail box.

Appellant's composite mark is currently registered in five States and has been publicized in the trade and in a number of publications.

The products of both parties are sold at retail on delivery routes and through stores to consumers as well as at wholesale to stores and restaurants.

While the goods designated in appellant's application are limited to butter, the record discloses that appellant's mark is also used on a line of dairy products. There is no issue relating to prior use, nor is there any doubt that the products of the respective parties are substantially the same and that they are distributed to the same classes of purchasers through similar means. The sole issue is whether the appellant's mark so resembles that of appellee when applied to dairy products as to be likely to cause confusion or mistake or to deceive purchasers.

Appellant properly argues that the marks should be considered in their entireties. The mark applied for, it is urged, is a composite mark consisting of the words "DAIRY CHARM" in combination with a design and a slogan. It is stated that no reqeust has been made to register the words alone and no claim is made to the words as a trademark separate from the design and slogan.

Appellee's opposition is based on an alleged use of "COUNTRY CHARM" as a trademark, and that "DAIRY CHARM" is substantially similar to "COUNTRY CHARM" since the word "CHARM," common to both marks, is the dominant portion of the marks.

The Board was of the opinion that "COUNTRY CHARM," per se, was used by the opposer as a trademark. It said:

[2] 132 USPQ 214.

The containers for opposer's products do show that opposer uses the three elements "DEAN'S" within an oval, a bird on a mailbox and "COUNTRY CHARM" but they do not show that all three elements are always used as a single integrated mark. Opposer's containers show use of "DEAN'S," not in an oval, separable from the other matter and on some sides of the containers the term "COUNTRY CHARM" does not appear or even the word "DEAN'S." Certainly, in the sale of ice milk, opposer has used "COUNTRY CHARM" separably from the other two elements. Opposer, in its advertising, identifies its products as "COUNTRY CHARM DAIRY PRODUCTS" and in other ways emphasizes the term "COUNTRY CHARM." It is so well established, as not to require citation of precedents, that two or more marks may be used on the same goods and it is concluded that opposer uses "COUNTRY CHARM," per se, as a trademark.

It should be pointed out that the term "COUNTRY CHARM" is used "separably from the other two elements" in the ice milk carton only when the carton is unfolded and lying flat. In use, the two end flaps, one bearing the word "DEAN'S" and the registered trademark of a bird on a mailbox, and the other flap bearing the words "COUNTRY CHARM" are joined together to form the end of the carton. Thus, all three elements appear together on each end and on each side of the ice milk carton. In no instance are the words "COUNTRY CHARM" used separately as a trademark on the cartons.

[1] Aside from this factual misconception, it would appear that the mark "COUNTRY CHARM," per se, is weak. A third party, Fisher Dairy and Cheese Company, is the owner of Registration No. 526,942 for "COUNTRY CHARM" for Cheddar Cheese Food. [3] This registration was introduced by appellant along with 16 other third party registrations for "CHARM," or some variation thereof, for food products. The Board found that the registrations were "insufficient to prove that that term is suggestive of dairy products." While the registrations alone may not prove suggestiveness as to any specific food products, we feel that the registrations are some evidence entitled to consideration that "COUNTRY CHARM" is a weak mark. *Shoe Corporation of America* v. *The Juvenile Shoe Corporation of America*, 46 CCPA 868, 266 F.2d 793, 121 USPQ 510.

[2] Appellee's argument that "CHARM" is the dominant portion of the marks of both appellant and appellee is not persuasive in view of the fact that the same word is used in at least eight of the third party registrations for food products. That only two of the registrations are for dairy products is a factor to be weighed in appellee's behalf. Nevertheless, the word "CHARM" for condensed milk and evaporated milk is also registered to a third party.[4] The facts here are analogous to those presented in *Goodall-Sanford, Inc.* v. *Tropical Garment Manufacturing Co.*, 47 CCPA 821, 275 F.2d 736, 125 USPQ 189, where it was found:

*** * * that the word "palm" is lacking in distinctiveness as a part of trademarks in the textile field and as such has only weak trademark significance. This is shown in the record here by 10 registrations of third parties in which the word "palm" appears as a part of these marks for clothing and related goods.**

[3] The Board appeared to be influenced by the fact that appellant refers to its products as "DAIRY CHARM." Whether or not appellant is entitled to register "DAIRY CHARM" by itself is a question not before us. A composite mark consisting of the head of a cow in an inverted triangle, a representation of city buildings, and a slogan, as well as the words "DAIRY CHARM," is sought to be registered.

[3] June 27, 1950, Sec. 8 and 15 affidavits accepted July 5, 1955.
[4] Reg. No. 335,015 to Franklin McVeagh and Co.

It is axiomatic that a trademark is to be considered in its entirety in determining the question of confusing similarity. It would seem that the total appearance of the mark, including the design features, would be relied on in purchasing butter, the goods for which registration is sought.

[4] In comparing the composite mark of the application with the mark "COUNTRY CHARM" of appellee, the conclusion seems inescapable that the marks are not likely to cause confusion or mistake or to deceive purchasers.

For the foregoing reasons the decision of the Trademark Trial and Appeal Board is reversed.

REVERSED.

WORLEY, *Chief Judge*, concurs in result only.

U.S. Court of Customs and Patent Appeals

IN RE GUNTHER WILKE AND WERNER PROHL

No. 6854. Decided February 13, 1963. Decision corrected March 19, 1963

[50 CCPA —; 314 F.2d 558; 136 USPQ 435]

1. REJECTION—GROUNDS—35 U.S.C. 132.

Held "to be the clear intent of 35 U.S.C. 132 that the Examiner should so state the rejection that there is no ambiguity as to the grounds therefor."

2. APPLICATION—DISCLOSURE—UTILITY—PROCESS AND PRODUCT—35 U.S.C. 112.

"35 U.S.C. 112 requires that the specification shall contain not only a written description of 'the invention' but also 'of the manner and process of making and using it.' This requires appellants, because their invention relates to *both* process *and* product, to describe in writing not only the manner of using the process but also to disclose the manner of using the product before the statutory prerequisites to patentability are met. That is to say, where 'the invention' claimed is a *process*, the requirements of 35 U.S.C. 112 may be met by a written description of the manner of using the claimed *process*. However, such a description of the manner of using the process may not be a sufficient compliance with 35 U.S.C. 112 where 'the invention' claimed is a *product*."

3. SAME—SAME—SAME—PRODUCT—MARKUSH GROUP.

On consideration of product claim 36, directed to "a member" selected from a Markush group of four separate structural formulae, *Held* that "we must look to the specification to determine whether or not it contains the written description required by 35 U.S.C. 112 with regard to the product defined *by each member* of the group called for by the claim."

4. SAME—SAME—SAME—SAME—SAME.

"* * * we are unable to find *any* description of *how to use* two of the four addition products grouped in claim 36. We therefore affirm the rejection of claim 36 under 35 U.S.C. 112 as being based on an insufficient description of how to use the claimed products."

5. SAME—SAME—SAME—PROCESS—35 U.S.C. 112—*In re Bremner et al.*

Held that the standard of 35 U.S.C. 112, as interpreted in *In re John A. Nelson and Anthony C. Shabica*, 47 CCPA 1033, 1045 and 1048–49, with reference to *In re Bremner et al.*, 37 CCPA 1032, "is a factual standard and as such requires us to consider what may be the expected knowledge of a person skilled in the pertinent art at the time the invention was made"; that "This necessarily requires us to consider the constantly increasing body of technical and scientific knowledge which such a person may be expected to have"; and that "Thus, this standard now may well be different from that applied by this court in 1950, the date of the *Bremner* decision."

6. SAME—SAME—SAME—SAME—SAME—SAME.

"It is our opinion, * * *, that claims 18–27, inclusive, define the steps of the process disclosed in the specification and that such steps are disclosed in the specification sufficiently to teach one of ordinary skill in this art how to carry out *the claimed process*. This is a sufficient compliance with 35 U.S.C. 112. We decline to apply to these process claims the statement in the *Bremner* case from which the Patent Office has extracted the so-called 'rule of Bremner,' i.e., that the specification must teach a use for the product of a claimed process. Had this been the intent of Congress, we are certain that it would have been so stated in 35 U.S.C. 112. Instead, the language of 35 U.S.C. 112 where applied to a *process* requires no more than has been here disclosed."

APPEAL from the Patent Office. Serial No. 780,921.

MODIFIED.

Burgess, Dinklage & Sprung (*Arnold Sprung* of counsel) for appellants.

Clarence W. Moore (*Joseph Schimmel* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and *Associate Judge* JOSEPH R. JACKSON, Retired

SMITH, *J.*, delivered the opinion of the court.

The Patent Office Board of Appeals affirmed the Examiner's rejection of twelve claims, numbered 18 through 27, inclusive, 36 and 37,[1] of appellants' patent application[2] entitled "Carboxylic Acid Anhydrides, Carboxylic Acids and Carboxylic Acid Esters of the Cyclododecane Series, and A Process For Their Production."

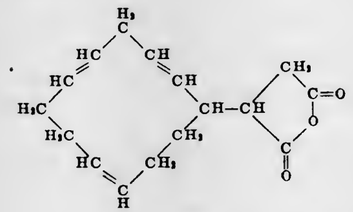
Of the remaining claims on appeal, the invention is claimed in claims numbered 18 through 27, inclusive, in terms of a process for producing novel reaction products from maleic acid anhydride and the specified cyclohydrocarbon. Claim 18, considered illustrative by the Board, is the generic claim upon which the other claims in this series depend. Claim 36 claims the invention in terms of a product embodying any one of four carboxylic acid anhydrides defined by structural formulae which are placed in a Markush group.

Appealed claims 18 and 36 are as follows:

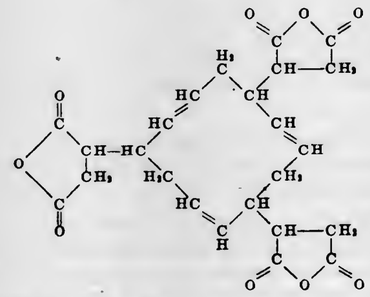
18. A process comprising reacting at an elevated temperature from 1–4 molecules of maleic acid anhydride with one molecule of a triolefine which is a member selected from the group consisting of cyclododeca-tri-(1,5,9)-ene and trivinyl cyclohexane and recovering the reaction product thereby formed.

36. A member selected from the group of carboxylic acid anhydrides having the following general formulae:

(1)



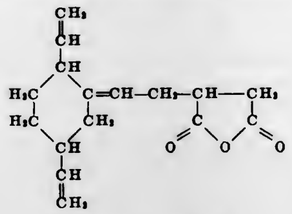
(2)



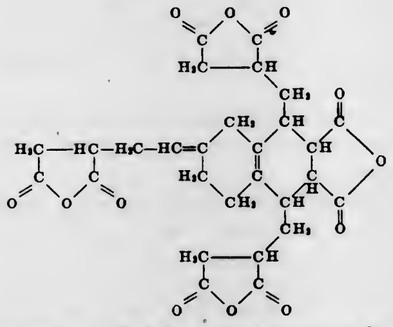
[1] Appellants' attorney stated at oral argument that no appeal was taken from the rejection of claim 37.

[2] Serial No. 780,921, filed December 17, 1958.

(3)



and (4)



The specification states that the novel compounds, carboxylic acid anhydrides, carboxylic acids and the carboxylic acid esters of the cyclododecane series (whose structure is not known with certainty), are obtained when a cyclododecatri-(1,5,9)-ene or a trivinyl cyclohexane are reacted with maleic acid anhydride. The reaction products so obtained are in the form of the anhydrides which are convertible into carboxylic acids by saponification, or into esters by esterification. The properties of the products are said to depend upon the number of acid groups present, which can vary from 2 to 6 or 8 and on the constitution of the alcohols used for esterification. As indicated by claim 36, the reaction products can vary from a 1:1 addition product to a 1:4 addition product of a cyclododecatri-(1,5,9)-ene or a trivinyl cyclohexane and a maleic acid anhydride.

In carrying out the disclosed process for making such a product, temperatures of from 150° C. to 250° C. may be used, with or without an inert solvent. Variation in reaction time produces different reaction products. Seven specific examples are described, in which the reaction products are said to be resinous or viscous liquids. Despite this fact, appellants here claim the invention in terms of both product and process.

The issue here has been unnecessarily confused by the statement of the grounds of rejection in the Examiner's answer and the affirmance of this rejection by the Board without clarification as to the precise reason for the rejection. The rejection as stated in the Examiner's answer is as follows:

> All of the claims stand finally rejected as being based on an *insufficient disclosure with respect to utility and failing to comply with 35 U.S.C. 112.* [Emphasis added.]

The Board in its opinion treats the rejection:

> * * * as based upon an insufficient disclosure of utility, i.e., a disclosure of how to use the products as required by 35 U.S.C. 112.

Appellants, in their brief, apparently agree with the Board that:

> The claims before this Court were finally rejected by the Primary Examiner as being based upon an insufficient disclosure of utility, i.e. a disclosure of how to use the products as required by 35 U.S.C. 112 and this rejection was affirmed by the Board of Appeals. * * *

> The sole issue involved herein is, therefore, whether the specification as filed contains a written description indicating a use for the invention sufficient to meet the requirements of 35 U.S.C. 112.

The solicitor, however, here takes a different view as to the meaning of the Examiner's rejection and the issues presented by it. This view as stated in the solicitor's brief is as follows:

> Though the decision of the Board of Appeals paraphrases this rejection as one based upon an insufficient "disclosure of how to use the products as required by 35 U.S.C. 112" * * *, it is implicit in the Board's affirmance of the decision of the Examiner and the reliance upon the quotation from *In re Bremner et al.*, 37 CCPA 1062, 182 F.2d 216 * * *, that the Examiner's rejection raises a question involving 35 U.S.C. 101 as well as 35 U.S.C. 112. Hence, appellants' statement that "no rejection under 35 U.S.C. 101 has been entered so that there is no question of usefulness involved herein" * * * is believed to be incorrect. It is submitted that the reasonable construction of the sentence quoted above from the Examiner's answer is that the use of the conjunction "and" between the phrases "an insufficient disclosure with respect to utility" and "failing to comply with 35 U.S.C. 112" is that two distinct reasons are set forth, *one being based upon section 101 (by implication) and the other, upon section 112 (expressly)*. * * * [Emphasis added.]

A reasonable compliance with 35 U.S.C. 132 and Patent Office Rule 104 should have resulted in such a statement of the ground of rejection that no basis could here exist for such a divergence of views. This divergence presents a separate ancillary issue which requires us to initially interpret the rejection before determining the principal issue presented for decision. [1] We do this despite what seems to us to be the clear intent of 35 U.S.C. 132 that the Examiner should so state the rejection that there is no ambiguity as to the grounds therefor. Confusion as to the precise statutory ground of rejection such as is here present was also present in *In re John A. Nelson and Anthony C. Shabica*, 47 CCPA 1033, 280 F.2d 172, 126 USPQ 242. Here, as there, the confusion appears to have arisen from a failure of the Examiner to separate the so-called "utility" requirement of 35 U.S.C. 101 from the "how to use" requirement of 35 U.S.C. 112. Despite the present effort of the solicitor to bring 35 U.S.C. 101 into this appeal, we agree with the Board that the rejection of the appealed claims is based solely on appellants' failure to disclose their invention as required by 35 U.S.C. 112.

Before a determination can be made as to the sufficiency of a disclosure under 35 U.S.C. 112, it is necessary to determine what is claimed as the invention in the rejected claims.

As previously stated, the rejected claims are of two types. Claim 36 is directed to allegedly novel products while claims 18–27, inclusive, are drawn to "a process." [2] 35 U.S.C. 112 requires that the specification shall contain not only a written description of "the invention" but also "of the manner and process of making and using it." This requires appellants, because their invention relates to *both* process *and* product, to describe in writing not only the manner of using the process but also to disclose the manner of using the product before the statutory prerequisites to patentability are met. That is to say, where "the invention" claimed is a *process*, the requirements of 35 U.S.C. 112 may be met by a written description of the manner of using the claimed *process*. However, such a description of the manner of using the process may not be a sufficient compliance with 35 U.S.C. 112 where "the invention" claimed is a *product*.

We shall now proceed to a consideration of the written description found in appellants' specification, and analyze the appealed claims to

determine, in the light of the foregoing observations, to what extent appellants have complied with 35 U.S.C. 112.

Appellants rely upon two statements in their specification to provide the disclosures required by 35 U.S.C. 112. These statements are as follows:

> * * * The addition products with more than 1 molecule of maleic acid anhydride, and more especially those with 3 molecules of maleic acid anhydride, have an interesting spider-like structure and, on esterification, give polycarboxylic acid esters which have very valuable properties as plasticisers. * * *
>
> * * * This can be particularly advantageous if the products produced according to the process of the invention are reacted with other suitable substances, for example for the purpose of manufacturing synthetic resins, because in that event additional opportunities for varying the properties of the synthetic resin arise from the presence of the double bonds. * * *

In determining the sufficiency of these disclosures, we shall take up and discuss separately (1) the product claim, 36, and (2) the process claims 18–27, inclusive.

(1) *Product Claim 36*

We observe that this claim is directed to a Markush grouping of four carboxylic acid anhydrides, each of which is represented by a structural formula. The claim appears to set out "the subject matter which the applicant regards as his invention" as required by the second paragraph of 35 U.S.C. 112. The issue presented, however, is whether the claim as drawn is supported by a "written description of the invention," which tells the "manner and process of * * * using it" and which sets forth "the best mode contemplated by the inventor of carrying out his invention." Appellants to support their position have pointed to portions of the specification which disclose reactions to produce "synthetic resins" as well as use of the reaction products in the formation of "plasticizers." They point particularly to Example 7 in the specification which discloses how to esterify the triple addition product of maleic acid anhydride with cyclododecatri-(1,5,9)-ene.

Appellants' position as to the written description of their invention to support claim 36 is not sound upon analysis. The claim presents four structural formulae, numbered 1 to 4, inclusive. The claim is directed to "a member" selected from this group of four separate structural formulae. [3] Under these circumstances, we must look to the specification to determine whether or not it contains the written description required by 35 U.S.C. 112 with regard to the product defined *by each member* of the group called for by the claim. Appellants, in urging the sufficiency of their specification under 35 U.S.C. 112, have directed our attention to the above-quoted portions of the specification wherein it is asserted that the art is taught "how to use" the products covered by claim 36.

As above indicated, one reference in the specification concerns use of these products in reactions for the production of "synthetic resins." The specification states further in this connection:

> As has already been stated above, all products obtained by the process still contain double bonds as well as the acid anhydride groupings. This can be particularly advantageous if the products produced according to the process of the invention are reacted with other suitable substances, for example for the purpose of manufacturing synthetic resins, because in that event additional opportunities for varying the properties of the synthetic resin arise from the presence of the double bonds. The double bonds can of course also be hydrogenated, and in this case saturated dicarboxylic or higher polycarboxylic acid anhydrides are obtained, and there [sic] may be hydrolysed to the corresponding dicarboxylic or higher polycarboxylic acids, which anhydrides and acids are distinguished by a particularly high resistance to secondary modifications, such as oxidation, because of the absence of the double bonds.

This description does not constitute a compliance with 35 U.S.C. 112 for it fails entirely to set forth a manner and process of using the product for manufacturing synthetic resins or of reacting the product for other purposes with "suitable substances." We do not think any person skilled in the arts encompassed by the foregoing quoted portion of the specification would be enabled by such a description to use all the products falling within claim 36. The broad description of the product as containing "double bonds as well as the acid anhydride groupings" does not supply such information that any person skilled in this art would be able from such a description in the specification to carry out the general uses of the claimed product within the broad language of the above-quoted portion of the specification.

The other description in the specification, which appellants assert constitutes a teaching of how to use the product is again quoted:

> * * * *The addition products with more than 1 molecule of maleic acid anhydride*, and more especially those with 3 molecules of maleic acid anhydrides, have an interesting spider-like structure and, on esterification, give polycarboxylic acid esters which have very valuable properties as plasticisers. * * * [Emphasis added.]

Example 7 in the specification teaches how to esterify certain of the claimed products to form the polycarboxylic acid esters which are said to "have very valuable properties as plasticisers."

It is to be noted, however, that this description is limited to the esterification of addition products of *more than 1 molecule* of maleic acid anhydride and that Example 7 specifically discloses the use of a product falling within the second structural formula contained in claim 36. This formula shows *3 molecules* of maleic acid anhydride. The specific limitation to addition products of *more than 1 molecule* of maleic acid anhydride in the above-quoted portion of the specification at the most would teach a person skilled in this art that the addition products of structural Formulae 2 and 4 of claim 36 would on esterification give polycarboxylic acid esters for which utility is asserted by reason of their alleged "very valuable properties as plasticizers." To the extent that any person skilled in this art is taught how to use the products of claim 36, as required by 35 U.S.C. 112, the actual description in Example 7 of how to esterify the addition products is limited to products falling within the second structural formula of claim 36.

We have been unable to find any description in the specification of how to use the addition products of structural Formulae 1 and 3 of claim 36, having but 1 molecule of maleic acid anhydride, to form the esters which are asserted to have "valuable properties as plasticizers." In fact, it seems to us that the effect of the limitations stated with respect to the addition compounds which are to be so esterified would be interpreted by a person skilled in this art as limiting this description of how to use the product to the addition products of Formulae 2 and 4 of claim 36. We think a person skilled in this art would be aware of important differences as well as the similarities of the addition products having the structural formulae of claim 36. This awareness of the differences when combined with the specific limitations in appellants' description as to which of the products may be esterified to form plasticizers would in our opinion

indicate to a person skilled in this art that he should not attempt esterification of the products of Formulae 1 and 3 of claim 36 to form plasticizers.

[4] Thus, we are unable to find *any* description of *how to use* two of the four addition products grouped in claim 36. We therefore affirm the rejection of claim 36 under 35 U.S.C. 112 as being based on an insufficient description of how to use the claimed products.

(2) *Process Claims 18–27*

In its affirmance of the rejection of the process claims, the Board relied upon *In re Bremner et al.*, 37 CCPA 1032, 182 F.2d 216, 86 USPQ 74, wherein the court stated:

> It was never intended that a patent be granted upon a product, *or a process of producing a product*, unless such product be useful. [Emphasis added.]

As we stated in *In re John A. Nelson and Anthony C. Shabica*, supra:

> The descriptions in patents are not addressed to the public generally, to lawyers or to judges, but, as section 112 says, to those skilled in the art to which the invention pertains or with which it is most nearly connected. The sufficiency of a specification must be tested in the light of this fact and judged by what it conveys to those who *are* skilled in the art. The judge's task is to decide whether from the disclosure the man skilled in the art can make the invention and use it. If he can, this part of the statute is complied with, subject to the one further requirement that the inventor describe the best mode contemplated by him of carrying out his invention. (47 CCPA at 1045).

Later in adhering to *In re Bremner et al.*, supra, we stated:

> • • • In adhering to the Bremner rule we wish to make it clear, however, that the test is what the application as a whole *communicates* to one skilled in the art. In some cases an applicant may, merely by naming his new instrument or material, indicate what its use is, as, for example, by saying he has invented a "match," "hammer," "paint," "adhesive," or "detergent." He may or may not have to go further in order to *enable* others to use the invention, depending on its nature and on how much those of ordinary skill in the art know. In other words, compliance with the law does not necessarily require specific *recitations* of use but may be inherent in description or may result from disclosure of a sufficient number of properties to make a use obvious; and where those of ordinary skill in the art will know *how* to use, the applicant has a right to rely on such knowledge. If it will not be sufficient to enable them to use his invention, he must supply the know-how. As this court has often said before, each case must be judged on its own facts. (47 CCPA at 1048–49).

[5] We here add to this observation, that the standard of 35 U.S.C. 112 when so interpreted is a factual standard and as such requires us to consider what may be the expected knowledge of a person skilled in the pertinent art at the time the invention was made. This necessarily requires us to consider the constantly increasing body of technical and scientific knowledge which such a person may be expected to have. Thus, this standard now may well be different from that applied by this court in 1950, the date of the *Bremner* decision.

We pass now to an analysis of process claims 18–27, inclusive, to ascertain whether they are in fact directed to an invention which is adequately supported in the specification to meet the requirements of 35 U.S.C. 112. These claims are each *process claims* directed to certain process steps disclosed in the specification to produce the products disclosed therein. Accordingly what we are here concerned with is whether the claims are adequately supported by disclosures meeting the specific requirement of 35 U.S.C. 112 that the inventor shall include in his specification "a written description of the invention, and of the manner and process of making and using it" which also set forth "the best mode contemplated by the inventor of carrying out his invention."

When so considered, we find that claims 18–27, inclusive, are sufficiently supported by the specification. Referring to these claims it will be seen claim 18 recites the conditions for a process which involves a reaction using from "1–4 molecules of maleic acid anhydride." The process produces a product which is described as being an intermediate in the production of a plasticizer. Claims 19 and 20, both dependent upon claim 18, specify preferred reaction temperatures and are similarly supported. Claims 21, 22 and 23 specify various inert solvents to be used in the process of claim 18 and are similarly supported.

Claim 24 specifies a process in which the reaction product is a product in which one molecule of maleic acid anhydride has been added to one molecule of triolefine. It differs from claim 18 and the other claims in employing an excess of the triolefine in order to produce a product having a particular chemical configuration. Claim 25 is dependent on claim 18 but specifies that the reaction is so conducted that the product shall be a product in which three molecules of maleic acid anhydride have been added to one molecule of triolefine. Claim 26 adds to the process of claim 18 the step of hydrolizing the intermediate products of claim 18 to form the corresponding carboxylic acid. Claim 27 adds to the process of claim 18 the step of esterifying the products formed therein.

[6] It is our opinion, therefore, that claims 18–27, inclusive, define the steps of the process disclosed in the specification and that such steps are disclosed in the specification sufficiently to teach one of ordinary skill in this art how to carry out *the claimed process*. This is a sufficient compliance with 35 U.S.C. 112. We decline to apply to these process claims the statement in the *Bremner* case from which the Patent Office has extracted the so-called "rule of Bremner," i.e., that the specification must teach a use for the product of a claimed process. Had this been the intent of Congress, we are certain that it would have been so stated in 35 U.S.C. 112. Instead, the language of 35 U.S.C. 112 where applied to a *process* requires no more than has been here disclosed.

For the above reasons, we affirm the rejection of claim 36 but reverse the rejection of claims 18–27, inclusive.

MODIFIED.

WORLEY, *Chief Judge* (dissenting):

It seems to me that the reasons and conclusion of the Examiner and the Board are sound, consistent with precedents laid down by this court, and should, therefore, be affirmed.

U.S. Court of Customs and Patent Appeals

TIMOTHY G. MEULENBERG AND ROBERT L. REDMOND *v.* ROBERT E. SCOTT

No. 6832. Decided March 13, 1963

[50 CCPA —; 314 F.2d 538; 136 USPQ 633]

1. INTERFERENCE—CONSTRUCTION OF COUNT—MEANING OF "SURROUND."

> "We do not think that the verb 'surround,' in its normal usage, requires that the surrounded object be enclosed in all planes as required by the Board. In interpreting this count as broadly as its language will reasonably permit • • • we think a reasonable interpretation of the verb 'surround' here is that of encompassing the resilient body within a given plane, in the same sense Custer

was 'surrounded' by Indians or that a moat 'surrounds' a castle. While we agree with the Board that express limitations in the counts cannot be ignored, we think that the Board has unduly limited the common meaning of the verb 'surround.'"

2. SAME—EVIDENCE—DATE ESTABLISHED.

"We * * * conclude that the Board was correct * * * in finding that the junior party's proofs do establish, by a preponderance of the evidence, a reduction to practice of the clip (Meulenberg and Redmond's Exhibits 1 and 4), prior to the senior party's filing date. We think such a clip meets the requirements of count 5. While it may be argued that the 'winter in 1949' does not necessarily include March of 1950, we think the Board correctly found that a reduction to practice did occur sometime in March 1950. We hold, therefore, that the legal effect of the testimony is to establish a reduction to practice as of March 31, 1950 of a clip satisfying count 5. Cf. *Connor* v. *Williams*, 1878 C.D. 137."

3. SAME—REDUCTION TO PRACTICE—ACTUAL.

"* * * count 5 defines the rubber base as 'a resilient body of soft deformable material.' While it may be said any rubber is a 'soft deformable material' relative to metal, it is common knowledge that rubber has many degrees of hardness and thus many different degrees of resistance to deformation. We think, therefore, that in order to establish satisfactorily an actual reduction to practice of a clip satisfying the requirements of count 5, this requirement means that the rubber must not only be sufficiently soft and deformable to enter the hole but that it must also be capable of maintaining *sealing engagement* with 'the marginal edges of the opening through which the shank is adapted to project.'"

4. SAME—PRIORITY.

"In summary, we find and hold that counts 1 to 4 do not read upon Meulenberg and Redmond's Exhibits 1 and 4 and affirm the Board in awarding priority of these counts to the senior party Scott. We find and hold that count 5 reads upon Meulenberg and Redmond Exhibits 1 and 4 and therefore reverse the Board in holding that it does not. We find further that the junior party's proofs establish a reduction to practice as of March 31, 1950 of a device meeting the terms of count 5 and that the senior party has failed to establish an actual reduction to practice of the invention claimed in count 5 prior to March 31, 1950. We therefore reverse the Board in its award of priority of count 5 to Scott."

APPEAL from the Patent Office. Interference No. 88,641.

MODIFIED.

Barnes, Kissell, Raisch & Choate (*John M. Kissell* and *Basil C. Foussianes* of counsel) for appellants.

Strauch, Nolan & Neale (*James E. Nolan* of counsel) for appellee.

Before WORLEY, *Chief Judge*, and RICH, and SMITH, *Associate Judges*, and *Associate Judge* JOSEPH R. JACKSON, Retired, and *Judge* WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania.*

SMITH, *J.*, delivered the opinion of the court.

Appellants, the junior party, have appealed from a decision of the Board of Patent Interferences, adhered to on reconsideration, which awarded priority of invention to the senior party, Scott, on all five counts in interference. Appellants' application [1] for patent was declared to be in interference with a Scott patent [2] from which appellants had copied the claims which became counts 1–4 of this interference. Later the interference was reformed to include Scott's application [3] for reissue of his patent and a claim which became count 5, was copied from the application for reissue, and added to the interference.

[1] Ser. No. 185,258, filed Sept. 16, 1950.
[2] No. 2,643,433, issued June 30, 1953.
[3] Ser. No. 515,570, filed June 14, 1955.

The invention in issue relates to improvements in snap fasteners which are used, inter alia, to detachably secure trim strips to automobile bodies. In this use, the projecting resilient legs of the fastener project through holes provided in a portion of the automobile body and exert a clamping action between the trim strip, which is engaged by the head portion of the fastener, and the contacting surfaces of the automobile body and the trim strip. The particular improvement here in issue relates to a resilient sealing element on the snap fastener which is effective to provide a water tight plug in the holes in the automobile body when the fastener legs are inserted therein.

Count 1 describes the subject matter of the interference as follows:

1. A fastening device for removably attaching members together, comprising a snap fastener having a head shaped to provide an open border frame engageable with one member and having a shank joined to and projecting transversely from said head, said shank being positioned substantially centrally of the head for projection through an opening in another member, a resilient body of thermoplastic material having a base surrounded and confined in its entirety by the inner side of said border frame and having the outer side of said base bonded to the inner side of the border frame, said border frame having exposed surfaces projecting laterally outwardly beyond said base for direct engagement with said one member to securely clamp the latter to the other member, said body of thermoplastic material having a portion projecting from said base in the direction of said shank for sealing engagement with the marginal edges of the opening through which the shank is adapted to project, and said portion completely enclosing and bonded to the portion of the shank joined to said head.

The invention, as indicated by the above-quoted count, requires that the snap fastener have a head shaped to provide an open border frame engageable with a first member (the trim strip, for example) to be fastened to a second member (the automobile body in the example described) and a flexible shank joined to and projecting transversely from the head (the resilient legs) for projection through an opening formed in said second member. The resilient sealing member as called for by count 1, comprises a resilient body of thermoplastic material which has a base surrounded and confined in its entirety by the inner side of the border frame and has, in addition, a portion which encloses and is bonded to the portion of the shank where it joins the head. The resilient sealing member projects from the base in the direction of the shank to provide a portion which enters into and plugs the opening in the said second member through which the shank projects.

The fastener, without the sealing material, was admittedly known before either party claims to have conceived the invention covered by the counts of the interference. It is therefore the resilient sealing element or plug which is the particular feature of the device here in issue. The problem which the device sought to solve is that of the water leakage through the holes in the automobile body which caused rust and corrosion to form rapidly at and adjacent to the fastening holes and permitted water seepage inside the body panels. One attempted prior solution was to have a sealing compound ("dumdum") placed on the spring clips by the production line assemblers before insertion of the clip into the retaining hole. This and other attempted solutions were not satisfactory due to the difficulties in assuring proper application of the sealing material under conditions which prevail on the automobile body assembly lines. The invention defined by the counts herein proposes the use of a preformed thermoplastic body which is bonded to the clip so that it could simply and effectively plug the body holes to effect a water-tight

seal and thus obviate the unreliable "dumdum" application on the assembly line.

Three issues are presented to us by this appeal:

(1) Was the Board correct in holding that none of the counts read on Meulenberg and Redmond's Exhibits 1 and 4?

(2) If we find that any of the five counts do read upon these Exhibits 1 and 4, was the Board correct in holding that the junior party's testimony established a reduction to practice prior to the senior party's filing date?

(3) If the second issue is answered affirmatively, was the Board correct in its decision on reconsideration that the senior party's proofs failed to show a reduction to practice of a clip satisfying the counts prior to its filing date, or prior to the junior party's proven reduction to practice?

Both parties took testimony. The testimony on behalf of the junior party, Meulenberg and Redmond, chiefly concerned the development of a satisfactory clip having a soft rubber base. The various witnesses testified that a molding clip of the type shown in FIG. 6 of the junior party's application was successfully produced "in the winter of 1949." These witnesses specifically referred to a clip identical to Meulenberg and Redmond's Exhibits 1 and 4. Exhibit 1 was a sample clip and Exhibit 4, a production drawing, was related to Exhibit 1 by witness Donald Koza as follows:

Q42. How does Exhibit 1 compare with the drawing, Exhibit 4? A. Well, to my knowledge, I would say this is the 5050 part number, but now without mic-ing [sic] or laying it out, I would say it is the style of button and it is the style of clip that was set up, in my opinion, as this 5050 clip, and the sponge pad, or sponge button is identical with this drawing (indicating).

A major difficulty to overcome in perfecting the resilient base of thermoplastic material was to develop a sponge rubber of such properties that it would effectively seal the hole in the fender and at the same time not interfere with the gripping action of the prongs. This problem was described by witness Paul Funkhouser who testified for the junior party as follows:

Q25. Speaking of the harder rubber, you say you made tests on this harder rubber.

A. Yes.

Q26. And it did not work.

A. No, it wasn't satisfactory from the standpoint that in some cases the rubber would not seal the hole, and in other cases it held the molding away from the body.

Q27. Were those tests on the harder rubber quite extensive?

A. I would say so, yes. They submitted samples I would say weekly reducing the hardness of the rubber, and we also were experimenting with some sort of sponge rubber that could be applied.

The Board of Patent Interferences held that although the testimony of the junior party was sufficient to show by a preponderance of evidence that it had successfully reduced to practice a clip of the type of Exhibits 1 and 4 prior to the senior party Scott's filing date, the Board was of the opinion that none of the five counts was readable on a clip of this type and therefore it awarded priority to the senior party Scott. In its decision, the Board stated:

We are of the opinion that the testimony of Funkhouser and Koza prove conception and reduction to practice of the clip of Meulenberg et al. Exhibits 1 and 4 in the winter of 1949 which period the witnesses intended to include March 1950. However, we are of the view that none of the counts of the interference is readable on said Meulenberg et al. Exhibits 1 and 4. These exhibits do not satisfy "the language of the counts" quoted hereinabove from the Examiner's decision on the motions with respect to counts 1 to 4, and count 5 which is the broadest of the five counts, is not satisfied, because these exhibits do not satisfy the limitation of the count "having a base *surrounded* by said border frame." To surround, requires enclosing completely, encircling, or encompassing. Partially doing so is not "surrounding."

In its decision on reconsideration, the Board adhered to its decision and also stated that it was of the opinion that the testimony of the senior party Scott did not establish a reduction to practice of a clip satisfying the counts prior to his own constructive reduction to practice, the filing date of April 13, 1950.

With the foregoing as background, we shall now consider separately each of the three issues here presented in the order previously stated.

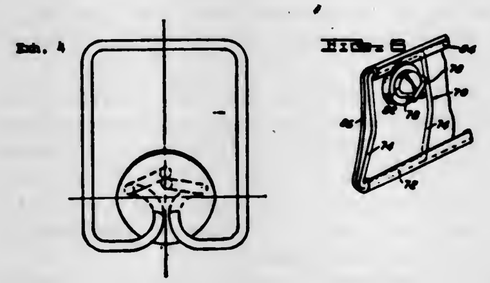
(1) *Was the Board Correct in Holding That None of the Counts Read on Meulenberg and Redmond's Exhibits 1 and 4?*

The Board held that the counts were not readable on Meulenberg and Redmond's Exhibits 1 and 4 as follows:

• • • These exhibits do not satisfy "the language of the counts" quoted hereinabove from the Examiner's decision on the motions with respect to counts 1 to 4, and count 5 which is the broadest of the five counts, is not satisfied, because these exhibits do not satisfy the limitation of the count "having a base *surrounded* by said border frame." To surround, requires enclosing completely, encircling, or encompassing. Partially doing so is not "surrounding."

The Primary Examiner's decision on the motions referred to by the Board was a decision denying a motion *by the junior party* to dissolve the interference on the grounds that counts 1 to 4 did not read on the junior party's disclosure.

Exhibit 4, which is a production drawing of the sample clip of Exhibit 1, shows three views of a clip similar to that shown in FIG. 6 of Meulenberg and Redmond's application. The plan view from Exhibit 4 and FIG. 6 of the application are reproduced below.



The portions of counts 1 through 4 which seem to be the most pertinent to a determination of this issue, and count 5 in its entirety are as follows:

Counts 1 and 2:

• • • a resilient body of thermoplastic material having a base surrounded and confined in its entirety by the inner side of said border frame *and having the outer side of said base bonded to the inner side of the border frame*, • • • [Emphasis added.]

Count 3:

• • • a body of resilient material having a base and a portion projecting from the central portion of the base in the direction of said shank, said base being surrounded and confined in its entirety by the inner side of said border frame *and having the outer side of said base bonded to the inner side of the border frame*, • • • [Emphasis added.]

Count 4:

* * * a body of resilient material having a base confined between the inner sides of said frame parts *and having the outer sides of said base bonded to the inner sides of said frame parts*, * * * [Emphasis added.]

Count 5:

A fastening device for removably attaching members together comprising a snap fastener having a head shaped to provide an open border frame engageable with one member and having a shank joined to and projecting transversely from said head, said shank being positioned for projection through an opening in another member, *a resilient body of soft deformable plastic material having a base surrounded by said border frame*, said border frame having exposed surfaces laterally outwardly of said base for direct engagement with said one member to securely clamp the latter to the other member, said body of plastic material having a portion projecting from said base in the direction of said shank for sealing engagement with the marginal edges of the opening through which the shank is adapted to project, and said portion completely enclosing and bonded to the portion of the shank joined to said head. [Emphasis added.]

We think the Board was correct in holding that counts 1 through 4 do not claim a clip of the type illustrated and shown by Exhibits 1 and 4. Each of the four counts requires the outer side of the base of the body of resilient material (i.e., the base of the sponge rubber plug), to be "bonded to the inner side of the border frame." As is apparent from the above-reproduced drawings, it cannot be reasonably said that the outer side of base 82 is bonded to the inner side of the frame 70 in FIG. 6 of the application. The outer side of the base touches the inner side of the border frame at only two points. There is no "bond" specifically at these points since the base of the resilient member is molded around the bent up portions 78, 78 of the border frame and is not bonded to the inner sides of the border frame. The language of the counts, reasonably interpreted, requires that the outer side of the base be bonded to the inner side of the border frame throughout or substantially throughout its periphery, not just touching at two points. We hold, therefore, that counts 1 through 4 are not supported by Meulenberg and Redmond's exhibits 1 and 4.[4]

The Board correctly held that the evidence of the junior party did not establish a reduction to practice of a clip of the type of Meulenberg and Redmond's Exhibit 10, which type of clip would meet the limitations of counts 1–4, inclusive, as well as the broader count 5.

Count 5 is the broadest of the counts and has no such limitation as we have found in counts 1 to 4, inclusive. However, in its decision on reconsideration, the Board said:

* * * In count 5, it is recited that the base is "surrounded by the border frame." This may be said to be substantially true of a structure such as Meulenberg et al. Exhibit 10, wherein the border and the base are in substantially the same plane, but it is not true of a structure such as Meulenberg et al. Exhibits 1 and 4 wherein the base and the border have only a portion thereof in the same plane and wherein on one side the base extends substantially beyond the "border" and the opposite side of the border is substantially above the base (when the fastening device shank is held vertically and projecting downwardly). As a result only about half of the base is enclosed by the border. We do not believe that this satisfies the requirement of the verb "surround," which we believe requires to encircle, enclose around, encompass, or shut in on all sides.

It is the position of the Board, therefore, that the frame must "surround" the base in all planes, as a sphere surrounds its center. We do not agree with this interpretation. As shown in the plan view

[4] In the decision of the Primary Examiner on the motion to dissolve, the Examiner stated that the clip shown in FIG. 7 of the Meulenberg and Redmond application satisfies the limitations of the counts. Since the embodiment of FIG. 7 is unlike that of Exhibits 1 and 4 in that the base of the former contacts its frame at four points, our decision is not inconsistent with that of the Primary Examiner.

of Exhibit 4 reproduced above, the round base lies entirely[5] inside the border frame in the plane of this page. [1] We do not think that the verb "surround," in its normal usage,[6] requires that the surrounded object be enclosed in all planes as required by the Board. In interpreting this count as broadly as its language will reasonably permit, *In re Hollman*, 41 CCPA 937, 213 F.2d 323, 102 USPQ 87, we think a reasonable interpretation of the verb "surround" here is that of encompassing the resilient body within a given plane,[7] in the same sense Custer was "surrounded" by Indians or that a moat "surrounds" a castle. While we agree with the Board that express limitations in the counts cannot be ignored, we think that the Board has unduly limited the common meaning of the verb "surround." We hold, therefore, that count 5, construed as broadly as the language therein will reasonably permit is supported by Exhibits 1 and 4 of Meulenberg and Redmond.

(2) *Does the Testimony of Meulenberg and Redmond Establish a Reduction to Practice of a Device Defined by Count 5 Prior to Scott's Filing Date of April 13, 1950?*

The junior party's evidence consists of the testimony of six witnesses and a number of documentary exhibits. All the testimony, with the exception of rebuttal testimony, concerned proof of a reduction to practice of a clip of the type of Exhibits 1 and 4.

The evidence purporting to show a reduction to practice of a clip of the type of Exhibits 1 and 4 indicates that the major problem in developing a satisfactory clip was to develop a rubber member having certain required properties. The testimony of all witnesses indicates that a number of varieties of rubber were used which were unsatisfactory before a satisfactory sponge rubber member was developed. The Board, after detailed analysis of the testimony, stated:

We are of the opinion that the testimony establishes that the clip of the type represented by Meulenberg et al. Exhibits 1 and 4 was conceived and was found to be satisfactory enough, so that the Automotive Rubber Co. assisted by Chrysler felt justified in spending time and money for the development of an automatic machine to make this clip. This happened in the winter of 1949, at the time of the Chrysler strike, which started in January 1950 and lasted 106 or 108 days. The strike was still going on in March 1950. The events testified to, took place in Detroit. We take judicial notice of the fact that in Detroit it is still wintry in March. * * *

and the Board held:

We are of the opinion that the testimony of Funkhouser and Koza prove conception and reduction to practice of the clip of Meulenberg et al. Exhibits 1 and 4 in the winter of 1949 which period the witnesses intended to include March 1950. * * *

This holding was adhered to without further comment on reconsideration.

[2] We have carefully studied the evidence presented by the junior party and conclude that the Board was correct, for the reasons stated in its opinion, in finding that the junior party's proofs do establish,

[5] A small bottom portion of the base protrudes slightly below the frame members as they turn inwardly. The Board did not regard this protrusion as significant and we do not so regard it. A line extended along the straight sides of the bottom of the border frame in the plan view of Exhibit 4 above would complete the "surrounding" of this small portion.

[6] *Surround:* 1. To enclose on all sides; encompass. 2. To encircle; as, a wall *surrounds* the city. 3. *Mil.* To enclose as a body of troops, so as to cut off communication or retreat; to invest, as a city. (Webster's New Collegiate Dictionary, 1961, p. 855.)

[7] Count 2 requires the body of thermoplastic material to lie "substantially in the plane of the border frame." Count 5 is broader and does not mention the plane of the border frame. We do not think, as did the Board, that "surround" requires this limitation of count 2 to be read into count 5.

by a preponderance of the evidence, a reduction to practice of the clip (Meulenberg and Redmond's Exhibits 1 and 4), prior to the senior party's filing date. We think such a clip meets the requirements of count 5. While it may be argued that the "winter in 1949" does not necessarily include March of 1950, we think the Board correctly found that a reduction to practice did occur sometime in March 1950. We hold, therefore, that the legal effect of the testimony is to establish a reduction to practice as of March 31, 1950 of a clip satisfying count 5. Cf. *Connor* v. *Williams*, 1878 C.D. 137.

(3) Does the Testimony of Scott Establish a Reduction to Practice of a Clip Satisfying the Requirements of Count 5 Prior to March 31, 1950?

In its decision on reconsideration, the Board found that Scott's testimony did not prove a reduction to practice prior to his filing date of April 13, 1950. Since diligence is not here an issue, the sole question on this issue is whether the proofs on behalf of Scott satisfactorily establish a reduction to practice prior to March 31, 1950, the effective date of reduction to practice for the junior party.

The testimony on behalf of the senior party indicates that Scott, a Product Engineer for the Gagnier Products Company, conceived the invention at least as early as February 1950. An experimental mold, Scott Exhibit A, was made by the Detroit Development Company for Scott prior to February 1950. This mold, a "test pan" (Scott Exhibit C) and a molded clip (Scott Exhibit CA) were given to personnel at the Armada Rubber Company who were to give Gagnier Products Company an estimate for molding rubber on a Gagnier clip #994 using the mold, Scott Exhibit A. The testimony of witnesses Weymouth and Konyha indicates that the clips and the mold were received from Scott prior to February 1950. Konyha testified that he actually molded rubber on a Gagnier clip as follows:

Q25. Did you personally make any clips with sealing bodies attached to them in that particular mold of Exhibit A? A. Yes, I did.

Q26. Do you recall about what time you did that? A. In January of 1950. I don't recall the exact date.

Scott's Exhibit D is a letter from the Armada Rubber Co. to Scott, dated February 2, 1950, giving a quotation for production costs of producing a molded clip. Witness Weymouth stated that the work referred to in this letter would produce clips similar to the clip of Scott Exhibit CA. This testimony was as follows:

Q23. Now, I show you a device marked for purposes of identification Scott Exhibit C. Could you tell me where that came from? A. Well, Mr. Scott gave it to me, and, of course, to show me what he was attempting to do and what it was for.

* * * * * * *

Q28. I show you a letter marked for purposes of identification Scott Exhibit D. Could you identify that letter? A. Yes. It has my signature on it, and, of course, was the quotation which I gave Mr. Scott, following some of this preliminary work, on producing actual production parts of the same nature.

Q29. What is the date of that letter? A. February 2, 1950.

* * * * * * *

Q32. Would that be the manner in which the rubber is molded as shown in Exhibit C?[*] A. Yes, it would be.

It is the senior party's position that this molded clip of Exhibit CA, made by Scott and given to Armada Rubber Company personnel

[*] At an early stage on the Scott testimony, Exhibit C consisted of a test pan and a molded clip inserted in a hole in the pan. This clip was later removed from the pan and separately designated as Scott Exhibit CA.

prior to February 2, 1950, is a reduction to practice of a clip satisfying the requirements of count 5. This position is stated in Scott's brief as follows:

This sealing fastener of Exhibit CA is a clear reduction to practice of the invention which was made by Scott prior to January, 1950 as corroborated by both Weymouth and Konya, [sic] and which has been out of the possession of Scott in storage at Armada Rubber Company at least since January, 1950.

* * * * * * *

Armada furnished their samples of the complete clip and seal assembly to Scott * * *, and these were satisfactory for the purpose * * *, which is why the quotation of Exhibit D was made, and which is proof of reduction to practice of the fastener of Exhibit CA.

The Board, in its opinion on reconsideration, stated that the molded clip of Exhibit CA was not a satisfactory reduction to practice since there was no proof offered by the party Scott that this molded clip was ever satisfactorily water tested in the test pan, Exhibit C. The testimony of Scott and Konyha concerning the water tests is as follows:

Q21. Did you ever test any of the fasteners with the attached sealing bodies made in this mold? A. Oh, yes. Yes, we tested any number of them.

Q22. What kind of tests would you do? A. Well, that was something that was left more or less to us, in that we were the originator of the seal, and the test, to our satisfaction, at least, in our plant involved the making of test plates and test pans which would simulate the use of the fastener within the scope of industry.

* * * * * * *

Q24. Do you recall the approximate dates of these tests which you made on devices made with this mold?

* * * * * * *

A. Well, they would have to fall between December of 1948 and March of 1949. It continued on actually as a demonstration to an indefinite period thereafter.

* * * * * * *

XQ41. Did you ever personally see any water put in the pan, Exhibit C? A. Yes, I did.

XQ42. In what way? A. The metal clip was placed in the hole, water was placed in there, and then it was checked on the opposite side to see if any could leak through.

XQ43. You would have two metal clips, I presume? A. Yes, that's right.

XQ44. And the only pressure would be the pressure of the water in the pan? A. That is correct.

The Board noted that neither witness was asked on direct or cross-examination about the results of the water test. Witness Weymouth testified about these tests as follows:

XQ81. You yourself never inserted any of these clips into a hole like shown in Exhibit C? A. Oh, I probably put it in and out several times, yes, but I mean that wasn't my job.

XQ82. When you did put them in and out several times, did you notice whether or not the clip was always flush with the surface of the metal? A. No, I couldn't say whether I——. As a molding, they would have to be flush with the top of the metal in the particular molds.

XQ83. Did you yourself make any tests in any way similar to Exhibit C to see about the leakage? A. No. We might have put them in that particular piece of metal and tried them out, but I mean it wasn't our job, as such.

It is to be particularly noted the above-quoted testimony of three witnesses for Scott gives us no indication of the results of the water tests applied to Scott's molded clip Exhibit CA. This omission becomes of critical significance in view of the junior party's rebuttal testimony which seems to indicate clearly that the clip CA having a sealing portion of relatively hard rubber was not satisfactory.

Witness Sturtevant, a "body engineer" with the Chrysler Corporation, testified as follows:

Q18. Would you say Exhibit CA would be satisfactory and soft enough to use as a molding clip? A. No, sir, it would not. I am certain it would never function properly. It looks like it has been installed and removed.

Witness Brauburger, another Chrysler engineer, testified as follows:

Q18. Have you tested clips of the type Exhibit 10 and Exhibit CA of a hard rubber? A. Yes.

Q19. And what results did you find? A. They didn't seal. They are too hard.

Q20. How did you know they didn't seal? A. Well, the way we tested them, we put them in the molding, put the molding on the body of the car, then get inside the car and put the car in the water test and sit in there with a flashlight and watch for leaks, and that was the method.

Q21. Then would you say whether or not Exhibits CA or 10 were soft enough to act as a satisfactory molding clip? A. In my opinion, they would not be.

In view of the above-quoted testimony, it seems clear to us that the Board was correct in its conclusion that a mold clip of rubber with specifications of "506 AP," which the testimony indicates is considerably harder than sponge rubber, is not a satisfactory clip from the standpoint of completely sealing the holes through which the clip legs are inserted. As noted above, the proofs of Scott are silent on this matter of water tests while the rebuttal testimony of Meulenberg and Redmond quoted above indicates to us that the hard rubber clip of Scott Exhibit CA was not satisfactory. The only refutation of this rebuttal testimony is found in counsel's argument in his brief on behalf of Scott that:

Exhibit CA satisfies every element of count 5 herein, and there is no doubt that the rubber body molded to the juncture of the shank and the head of the Gagnier #994 fastener here is soft and deformable enough for sealing. The unit is now at least ten years old and in spite of some possible hardening by aging it is almost as soft to the touch as the Meulenberg et al. Exhibit 1. The pan of Exhibit C with fastener CA in place will hold water today. This is the type of exhibit that needs no exhaustive tests to prove a reduction to practice. It either seals the hole or it does not, and this can be ascertained by inspection of the test pan. * * *

Such an argument of counsel is not sufficient to overcome the testimony given by the two Chrysler engineers nor to explain away the unsatisfactory water test results to which they referred in their testimony.

[3] We note that count 5 defines the rubber base as "a resilient body of soft deformable material." While it may be said any rubber is a "soft deformable material" relative to metal, it is common knowledge that rubber has many degrees of hardness and thus many different degrees of resistance to deformation. We think, therefore, that in order to establish satisfactorily an actual reduction to practice of a clip satisfying the requirements of count 5, this requirement means that the rubber must not only be sufficiently soft and deformable to enter the hole but that it must also be capable of maintaining *sealing engagement* with "the marginal edges of the opening through which the shank is adapted to project." The importance of providing a leakproof sealing engagement is stressed in the specification of Scott's patent as follows:

In this connection, however, a severe problem has been encountered in that a bad leak is created by the presence of the hole whereby water can reach interior appointments as well as interior metal surfaces which have not been protected against external corrosive influence. Attempts have been made to stop such leaks by the use of soft rubber gaskets, but difficulty has been experienced in fitting gaskets properly to the odd shapes which are characteristic of this type of fastener. * * *

It is therefore an object of this invention to provide a fastener of the type described which has the inherent characteristic of preventing leaks at points where it is installed.

It seems strange in view of the rebuttal testimony for Meulenberg and Redmond and with the knowledge of the sealing requirements that the testimony on behalf of Scott indicates no more than that the rubber used in Scott's clip of Exhibit CA permitted insertion of the clip in the test pan. Beyond that we are left entirely to conjecture as to whether the rubber in Exhibit CA was sufficiently soft and deformable to make a satisfactory seal as required by count 5. We find, therefore, that the Board was correct in finding that the testimony on behalf of Scott does not prove a reduction to practice of the clip satisfying count 5 prior to his filing date.

[4] In summary, we find and hold that counts 1 to 4 do not read upon Meulenberg and Redmond's Exhibits 1 and 4 and affirm the Board in awarding priority of these counts to the senior party Scott. We find and hold that count 5 reads upon Meulenberg and Redmond Exhibits 1 and 4 and therefore reverse the Board in holding that it does not. We find further that the junior party's proofs establish a reduction to practice as of March 31, 1950 of a device meeting the terms of count 5 and that the senior party has failed to establish an actual reduction to practice of the invention claimed in count 5 prior to March 31, 1950. We therefore reverse the Board in its award of priority of count 5 to Scott.

We find that the additional matter certified to the court as part of the record by appellee was necessary to a proper determination of this appeal. Therefore, the costs of printing this material are taxed against appellant.

MODIFIED.

MARTIN, *J.*, did not sit or participate in decision.

WORLEY, *Chief Judge* (dissenting):

I agree with the majority regarding counts 1 through 4, but do not agree that count 5 reads on the Meulenberg and Redmond Exhibits 1 and 4.

Count 5 requires "* * * a resilient body of soft deformable plastic material having a base *surrounded* by said border frame * * *." (Italics supplied.)

The Board interpreted that language as follows:

* * * These exhibits do not satisfy "the language of the counts" * * * because these exhibits do not satisfy the limitation of the count "having a base *surrounded* by said border frame." To surround, requires enclosing completely, encircling, or encompassing. Partially doing so is not "surrounding."

I can find no error in that reasoning or conclusion.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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nickel plating and bath therefor; **2,658,842**, Gutzeit and Ramirez, same; 2,694,017, Reschan and Krieg, Process of nickel plating of aluminum and its alloys and baths therefor; 2,694,019, G. Gutzeit, Processes of nickel plating and baths therefor; 2,717,218, Talmey and Crehan, Chemical nickel plating methods and apparatus; 2,762,723, Talmey and Gutzeit, Processes of chemical nickel plating and baths therefor; 2,766,138, P. Talmey, Processes of chemical nickel plating; 2,819,187, G. Gutzeit et al., Chemical nickel plating processes and baths therefor; 2,822,293, same; 2,822,294, same; 2,837,445, Talmey and Metheny, Continuous processes of chemical nickel plating; 2,847,327, Talmey and Gutzeit, Processes of chemical nickel plating and baths therefor; 2,872,353, D. E. Metheny, processes of continuous chemical nickel plating; 2,872,354, W. G. Lee, same; 2,874,073, Metheny and Browar, Methods of chemical nickel plating; 2,935,425, G. Gutzeit et al., Chemical nickel plating and baths therefor; 2,999,770, G. Gutzeit, Processes of chemical nickel plating and baths therefor, filed Apr. 24, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–483WB, *Chemplate Corporation et al.* v. *Morrell's Electro-Plating, Inc. et al.*

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2,658,842. (See 2,658,839.)

2,694,017. (See 2,658,839.)

2,694,019. (See 2,658,839.)

2,711,084. (See 2,308,361.)

2,717,218. (See 2,658,839.)

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2,766,138. (See 2,658,839.)

2,819,076. (See 2,308,361.)

2,814,671. Adler and Marks, Noise pulse interruption of synchronizing signal separator; 2,817,025, R. Adler, Control system; 2,821,954, same, Ultrasonic transmitter; 2,821,955, Ehlers and Wandrey, same; 2,821,956, O. E. Wold, deceased, by L. R. Wold, Ultrasonic generator, filed Apr. 15, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c597, *Zenith Radio Corporation* v. *Motorola, Inc.* Order dismissing complaint and counterclaim without prejudice May 13, 1963.

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2,821,955. (See 2,814,671.)

2,821,956. (See 2,814,671.)

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2,999,275. W. S. Blume, Jr., Mechanical orientation of magnetically anisotropic particles, filed Apr. 18, 1963, D.C., W.D. Ohio (Cincinnati), Doc. 5321, *Leyman Corporation* v. *The B. F. Goodrich Company.*

2,999,770. (See 2,658,839.)

3,058,666. O. B. Harmes et al., Cleaning apparatus, filed Apr. 26, 1963, D.C. Minn. (Minneapolis), Doc. 4–63/176, *Britt Tech Corporation* v. *L & A Products, Inc. et al.*

PATENTS

GRANTED AUGUST 20, 1963

GENERAL AND MECHANICAL

3,100,896
HOOD OVER-ALL
Harry N. Khanbegian, Boston, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed July 18, 1961, Ser. No. 125,017
1 Claim. (Cl. 2—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



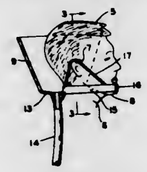
The combination with a protective helmet including a helmet shell having a headband therein in radially inwardly spaced relation thereto to provide a substantially annular air space therebetween; of a protective hood for said helmet, said hood comprising a portion adapted to engage the outer surface of a helmet shell engaging portion, a flexible curtain depending therefrom below said shell, said curtain having a lower edge normally disposed in the region of a wearer's shoulders, an annular adjustable means encircling said curtain immediately below said shell to provide a close fit with a wearer's head whereby to close said annular air space between said headband and shell, a face opening in said curtain between said annular adjustable means and said lower edge, said face opening including an upper edge defined by a portion of said annular adjustable means, said face opening having opposed side edges connected by a lower edge to provide a substantially U-shaped edge, a substantially U-shaped adjustable means included in said U-shaped edge to provide a close fit with the face of a wearer, curtain straps secured to said annular adjustable means inwardly thereof, said curtain straps being adapted to extend upwardly within said helmet and over a wearer's head for supporting said hood thereon, said curtain straps being operative to draw said annular adjustable means into engagement with a wearer's head just below said headband.

3,100,897
COVERALL
Sol Langer, Westfield, N.J.
Filed Nov. 21, 1962, Ser. No. 239,170
4 Claims. (Cl. 2—80)



1. A waterproof and windproof coverall for use over children's outerwear comprising a first body panel, a second body panel, a first sleeve panel, a second sleeve panel and a hood panel, each of said panels being fabricated of a waterproof synthetic material, said body panels each including front and rear sections folded about an outer edge and disposed in superposed relation and having coextensive inner edges, each of said inner edges including a leg segment and a body segment, the portion of each of said sections between the leg segment and the coextensive portion of the outer edge being wider than the portion of each of said sections between the body segment and the coextensive portion of the outer edge, stitching joining the respective leg segments of the inner edges of the front and rear sections of said first body panel to each other to form a first leg for said coverall having a leg opening, stitching joining the respective leg segments of the inner edges of the front and rear sections of said second body panel to each other to form a second leg for said coverall having a leg opening, stitching joining the body segment of the inner edge of the rear section of said first body panel to the body segment of the inner edge of one rear section of said second body panel to form a back for said coverall, separable fastening means releasably joining the body segment of the inner edge of the front section of said first body panel to the body segment of the inner edge of the front section of said second body panel to complete the body for said coverall, said body having opposed sleeve opening and a neck opening, means for forming the respective sleeve panels into first and second sleeves each terminating at one end in an armpit opening and at the other end in a hand opening, stitching bounding each of said armpit openings and an adjacent sleeve opening for joining the respective sleeves to said body, means for forming said hood panel into a hood having a face opening, and stitching for joining said hood to said body at said neck opening.

3,100,898
SHAMPOO APPARATUS
Edsel F. Wade, Atlanta, Ga.
(1909 Manville Drive NE., Chamblee, Ga.)
Filed Dec. 11, 1961, Ser. No. 158,258
3 Claims. (Cl. 4—159)



1. A barber shop shampoo apparatus for mounting about the neck and head whilst in an erect position, and comprising, a semi-circular conical wall adapted to extend in a spaced manner about the rear of the head, a ring shaped base secured to the lower edge of the wall, end walls extending radially inwardly towards each other from the conical wall ends and terminating with a water proofing sleeve for abutment with opposite sides of the head, said conical wall combining with the end walls and the base to provide a container to collect water running from the head during a shampoo, a pipe communicating through the base for conveying liquids from the con-

tainer and a neck band upstanding about the inner edge of the base and extending therebeyond to terminate with a fastener for engaging about the chin.

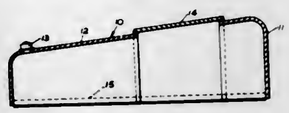
3,100,899
HOSPITAL BEDRAIL COUNTERBALANCE UNIT
Frederick D. Wright, 1229 Maddox St., Long Beach 10, Calif.
Filed Nov. 17, 1961, Ser. No. 152,988
8 Claims. (Cl. 5—92)



1. A counterbalance unit for balancing the weight of a bedrail pivotally supported in a longitudinally extending position along one side of a hospital bed and extending between the headboard and footboard thereof, said bedrail including at least one longitudinally extending rigid member and being capable of occupying a first upwardly extending protective position and in any one of a number of second non-protective positions in which it is disposed outwardly from said bed a greater distance than when in said first position, said unit comprising: a rigid arm having first and second end portions; means for pivotally connecting said first end portion of said arm to said rigid member; means for removably holding said bedrail in said first position; a housing; means for supporting said housing from said headboard; an elongate cam member having first and second end portions and a bore formed therein that extends transversely through said cam member adjacent said second end portion; a shaft supported from said housing that extends through said transverse bore and pivotally supports said cam member; means supporting said second end portion of said arm from a side of said cam member and normal to said shaft; a cable having first and second end portions; means for affixing said first end portion of said cable to said cam member, with a part of said cable adjacent said first end portion extending over said first end portion of said cam, with said first end portion of said cam being upwardly disposed when said bedrail is in said first position; and spring means in said housing connected to said second end portion of said cable for exerting a force of constantly increasing magnitude on said cable as said cam member pivots due to movement of said bedrail from said first to one of said second positions, with said cam being of such shape that as it pivots to increase said force on said spring only that portion of said force required to counterbalance said bedrail in the particular one of said second positions in which said bedrail may be disposed is transferred to said arm.

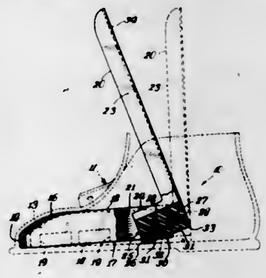
3,100,900
BEDS
Ernest William Sidebotham, 42 Boardman St., Eccles, Manchester, England
Filed Apr. 30, 1962, Ser. No. 190,947
Claims priority, application Great Britain May 2, 1961
1 Claim. (Cl. 5—284)

A bed structure comprising, a bed frame, an apertured canopy fitting over said bed frame and defining thereover a sleeping space for accommodating a recumbent person, a thermally insulating lining to said canopy, an aperture in said canopy, and a unitary air-conditioning unit removably fitting in the aperture of said canopy to supply conditioned air directly into the sleeping space, said air-conditioning unit including an air duct and a variable opening into said air duct and heating elements



arranged in said air duct and impeller means for drawing air into said air duct and displacing it over said heating elements and into the sleeping space.

3,100,901
INFANT'S SHOE TREE
James R. Moore, P.O. Box 384, Manitowoc, Wis.
Filed Dec. 5, 1960, Ser. No. 73,852
5 Claims. (Cl. 12—114.2)



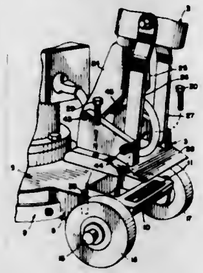
1. A shoe tree adapted for use with an infant's shoe comprising a toe-piece generally shaped to fit the interior of the toe portion of the shoe, and an elongated member pivotally secured to said toe-piece, said member normally disposed in upright position and having a sole engaging portion for shifting said toe-piece into and out of interfitting engagement with said toe portion upon pivotal movement of said member in an appropriate direction, said sole engaging portion being located to engage the inner sole of the shoe at a point spaced from the toe and from the heel of the shoe, said toe-piece having an exterior surface tending to grip the shoe to maintain the toe-piece in an engaged position in said toe portion.

3,100,902
MANUFACTURING PREFORMED COUNTERS
Henry G. Scammon, Auburn, Maine, assignor to Gould & Scammon, Inc., Auburn, Maine, a corporation of Maine
Filed Oct. 6, 1961, Ser. No. 143,480
5 Claims. (Cl. 12—146)



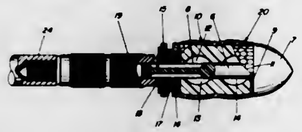
1. The method of making a formed counter having a smooth convex shoulder at the junction of its wall with the heel seat flange comprising, subjecting a preformed counter having an abrupt shoulder at the junction of its wall with the heel seat flange to reforming by impact applied to the outer side of the shoulder while the inner side is rigidly backed by a surface of the desired contour.

3,100,903
FLOOR MACHINES
Dewey I. Doyle, Sr., Grand Rapids, Mich., assignor to Doyle Vacuum Cleaner Company, Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 6, 1961, Ser. No. 93,431
4 Claims. (Cl. 15—49)



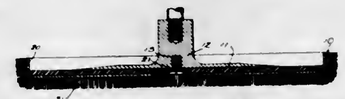
1. A floor machine comprising a body portion having a outwardly projecting platform thereon, and including a floor working member, a shaft extending through said platform, and a pair of wheels mounted on said shaft in position to support said body portion, said platform having an opening therethrough inwardly of said shaft and of such size as to receive the fingers of a human hand therethrough in position to afford a handle for carrying said body portion, an elongated handle, a mounting member attached to one end of said elongated handle, said mounting member being disposed on said platform in covering relation to said opening, and means releasably attaching said mounting member to said body portion.

3,100,904
GUN BARREL CLEANING DEVICE
Hobart L. Stocking, Deephaven, Minn., assignor to Minnesota Rubber Company, Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 24, 1961, Ser. No. 105,042
5 Claims. (Cl. 15—104.19)



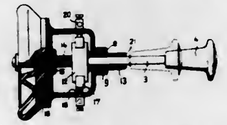
1. A gun cleaning device comprising an elongated compression member having a threaded end portion, a head element carried by said member at its opposite end portion, a tubular member made of rubber having at least one hemispherically shaped recess formed therein, said tubular member being mounted on said compression member in surrounding relation and having one end portion transmitting pressure against said head element, a rotatable member threadedly connected to said threaded end portion of said compression member and abutting against and adapted to apply pressure against the opposite end portion of said tubular member when turned relative to said compression member in a predetermined direction to cause said compression member to expand generally in a circumferentially manner but produce a more pronounced expansion about said hemispherically shaped recess, and a circumferentially elastic metal sleeve having opposite open ends and being formed of a plurality of interwoven loops formed from strands of metal softer than steel and being removably mounted on said tubular member in snug encircling relation whereby said sleeve will become firmly affixed to said tubular member when the latter is expanded circumferentially as a result of longitudinal compression applied to the opposite ends thereof by said rod member and said compression members.

3,100,905
POLISHING DISC AND METHOD OF MAKING SAME
Ralph A. Salick, Rte. 1, Box 264, Merton, Wis.
Filed Apr. 4, 1960, Ser. No. 19,902
6 Claims. (Cl. 15—235)



2. A buffing pad for a mop head comprising a fabric of predetermined shape, and a crease line spaced from one or more edges of said fabric serving to create a permanent transversely disposed fold of fabric designed to provide a bumper edge face operative while the mop head is in use to fully engage objects and prevent damage thereto.

3,100,906
WINDSHIELD WASHING PUMP WITH SWITCH FOR WINDSHIELD WIPER MOTOR FOR MOTOR VEHICLES
Willy Bock and Erich Mutschler, Bietigheim, Wurttemberg, and Franz Schreiber, Kirchheim (Neckar), Wurttemberg, Germany, assignors to SWF-Spezialfabrik für Autozubehör Gustav Rau G.m.b.H., Bietigheim, Wurttemberg, Germany
Filed June 29, 1959, Ser. No. 823,604
Claims priority, application Germany June 27, 1958
6 Claims. (Cl. 15—250.02)



1. In the combination of the pump for the windshield washing apparatus of a motor vehicle and an electric switch means for controlling the operation of the windshield wiping motor of said vehicle, said pump and said switch means being combined to form a single unit, the improvement comprising common means for operating said pump and said switch independently of each other as well as simultaneously with each other, said common means comprising a housing secured to said pump, a control rod with a control knob thereon for operating said pump rotatably and slideably supported by said housing, at least one contact secured to said control rod within said housing, and at least one contact bar extending parallel to said control rod within said housing, said contact on said control rod engaging with said contact bar when said control knob and the control rod thereon are rotated to one position and disengaging from said contact bar when said control knob and the control rod thereon are rotated to another position, said contact on said control rod when in said first position being arranged so as to remain in engagement with said contact bar in any axially shifted position of said control rod and be disengaged from said contact bar by rotation of said control knob in any axially shifted position of said control rod.

3,100,907
SCRAPING AND POLISHING APPARATUS
Otto Schwertl, Pechdellerstrasse 11, Munich, Germany
Filed Sept. 26, 1960, Ser. No. 58,278
Claims priority, application Germany Sept. 25, 1959
7 Claims. (Cl. 15—377)

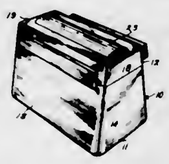
1. A surface treating apparatus comprising, in combination, supporting means adapted for manual guidance

over a surface to be treated and including a housing; drive means mounted on said supporting means; a rotary member operatively connected to said drive means to be rotated by the same and being mounted on said housing, said rotary member having a face portion adapted to treat a surface; a pair of covering means pivotally mounted on said supporting means and located on opposite sides of said rotary member, said pair of covering means having bottom edges; spacing means associated with said pair of covering means so as to prevent said bottom edges of said covering means from moving into contact with each other when said surface treating ap-



paratus is lifted entirely off the surface to be treated, said spacing means being adapted to engage the surface to be treated and space the axis of said rotary member therefrom at a distance corresponding in a limited range to the angular position of said pair of pivotally mounted covering means; and adjustable limiting means between said pair of covering means for limiting pivotal movement thereof in said range and determining the extent of contact of said face portion of said rotary member with said surface to be treated, said bottom edges of said covering means being located in any position of said limiting means adjacent to the surface to be treated.

3,100,908
CONTAINER COVER WITH A ROLLER APPLICATOR
Paul Engle, R.D. 1, Clarendon, Warren County, Pa.
Filed Apr. 3, 1961, Ser. No. 100,360
2 Claims. (Cl. 15—574)

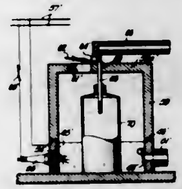


2. A cover for a receptacle adapted to contain a dispensable fluid, said cover including integral side and top walls, the top wall having an elongated opening therein of prescribed dimensions, a roller in said cover projecting into said opening from the cover interior, said roller being proportioned to be movable into fluid sealing engagement with the interior surfaces of the walls of said opening, a member extending transversely beneath said roller and supporting it in said opening, said member being resilient, the ends of said member being supported by opposite sides of said cover in a manner to permit slight median distortion, at least one depressed area in said member between said ends serving to cradle said roller in position of alignment with said opening, and means accessible from the exterior of said cover manually operable to selectively actuate said member to effect engagement or withdrawal of said roller with respect to the interior surfaces of the walls of said opening.

3,100,909
AGGLOMERATED FOOD PRODUCT AND METHOD FOR MAKING THE SAME
Abraham Schapiro, Kentfield, Calif., assignor, by mesne assignments, to Roto-Dry Corporation, a corporation of California
No Drawing. Filed Jan. 30, 1961, Ser. No. 85,512
17 Claims. (Cl. 99—78)

1. The process of preparing a composite food product which is characterized by being granular, dry-surfaced, friable, readily re-dispersible in water, and non-hygroscopic, which comprises the steps of blending together (1) a substantial proportion of a normally dry food powder which is characterized by becoming a thickening adhesive agent when moistened; (2) a substantial proportion of a different food material which is liquid dispersible; and (3) a dispersing liquid for said different liquid-dispersible food material; the weight ratio of solids in ingredients (1) plus (2) to the liquid ingredient (3) being selected in the range from 24:1 to 1:1 to produce when blended together a mass of granules and agglomerated particles having surface moisture; and subjecting the moist surfaces of said granules and agglomerated particles to radiant heat while continuously tumbling and breaking up the mass and removing the water vapor until the said surfaces become non-tacky, the total moisture content of the mass is reduced to a value not in excess of about 10 percent based upon the whole weight of the mass, the temperature of the product during the drying being limited to the range from 75° to 180° F.

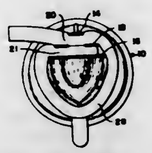
3,100,910
APPARATUS FOR THE EXPLOSION TREATMENT OF A PLASTIC CONTAINER
Lawrence L. Martin, Kansas City, Mo., assignor to Consolidated Thermoplastics Company, Stamford, Conn., a corporation of Delaware
Filed Apr. 10, 1958, Ser. No. 727,693
2 Claims. (Cl. 18—1)



1. Apparatus for the simultaneous explosion treatment of the internal and external surfaces of a container comprising means for at least partly and relatively closely confining the exterior surface of the container, means for providing an explosive acetylene containing mixture of gases in the container, means for providing an explosive mixture of gases in the confining means external of the container and means for detonating at least one of said explosive mixtures.

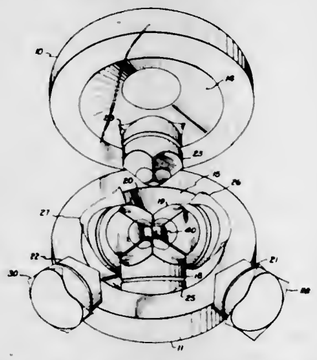
3,100,911
MODEL MAKING DEVICE
Niels M. Stilling, 595 E. 62nd Ave., Vancouver 15, British Columbia, Canada
Filed Feb. 27, 1962, Ser. No. 176,002
5 Claims. (Cl. 18—5.7)

1. A model making device comprising a base adapted to support an object to be modelled, spaced uprights on the base, said uprights defining a first groove and a second groove, a strip of soft, resilient material, one end of said strip being insertable into the first groove to be clamped between some of the uprights, said strip encircling the



object on the base and being insertable into the second groove to be clamped by other of the uprights.

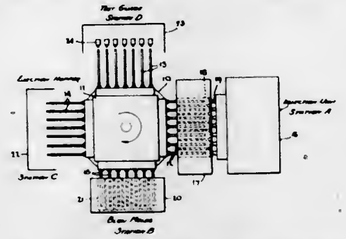
3,100,912
DUAL-WEDGE HIGH-PRESSURE APPARATUS
Edward C. Lloyd, Hyattsville, Daniel P. Johnson, Silver Spring, and Ulric O. Hutton, Brinklow, Md., assignors to the United States of America as represented by the Secretary of Commerce
Filed Sept. 29, 1961, Ser. No. 143,015
4 Claims. (Cl. 18—16)



1. In a press for a three-dimensional charge, a first and second ring, each having at least one inner, conically-tapered surface, a first group of anvils, each having a conical end located on the surface of said first ring, a second group of anvils, each having a conical end located on the surface of said second ring, each anvil of said first and second group presenting its contact face toward said charge, said first and second ring being positioned so that when urged together said first and second group of anvils tend to slide downward along the surface of said first and second ring, respectively, and means for urging said first and second ring together.

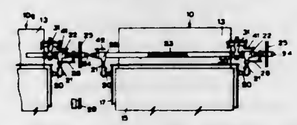
3,100,913
MULTIPLE INJECTION MOLDING APPARATUS
Adolph J. De Matteo, Berkeley Heights, N.J., assignor to Farrel-Birmingham Company, Inc., Ansonia, Conn., a corporation of Connecticut
Filed Mar. 13, 1957, Ser. No. 645,745
6 Claims. (Cl. 18—20)

1. An injection molding machine for automatically forming hollow articles of plastic material comprising a turntable provided with a turret from which project distinct sets of parison pins, said turret having separate air ducts formed therein communicating with respective sets of said pins, operating stations surrounding said turntable, means to index said turntable to cause each set of pins to occupy successive stations, means at one station to mold parisons on said pins, means at a second station to blow up said parisons to a desired shape, means at a third station to eject the finished parisons, means at a fourth station to test said pins for the presence of articles prior to the re-introduction thereof into said first station, and selective valve means cooperating with said turntable



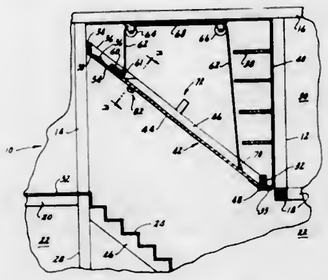
to supply air solely to those sets of pins stationed at said blow-up, ejection stations and testing stations.

3,100,914
PNEUMATIC STRIPPING OF CARDING ENGINES
Alfred Hallett Milnes, Buildwas, near Ironbridge, England, assignor to Cooke & Company, Manchester, Limited, Manchester, Lancashire, England
Filed Dec. 5, 1960, Ser. No. 73,622
Claims priority, application Great Britain Dec. 12, 1959
4 Claims. (Cl. 19—109)



4. A textile carding installation having a bank of carding engines, each engine comprising a carding cylinder and a doffing cylinder and pneumatic card stripping apparatus including a suction nozzle arrangement traversable over its respective carding and doffing cylinders to apply suction thereto, a respective suction nozzle for each of said cylinders, a rotatable double helical screw for each carding engine, said screw, on rotation, causing its respective nozzle arrangement to traverse its respective carding and doffing cylinders, a solenoid operated dog clutch, said screw being rotated through said solenoid operated dog clutch from the drive of its respective carding cylinder, there being control means for controlling the traverse of each of said suction nozzle arrangements and the application of suction to the respective carding and doffing cylinders, a common vacuum pipe, said control means including a respective two position valve for connecting each of said nozzle arrangements to said common vacuum pipe, said valves each being mounted for traverse with its respective nozzle arrangement, an abutment at each end of traverse of each respective valve, each of said valves being actuated on contact with its respective abutments, an energizing circuit, contact of each of said valves with a respective abutment at the end of its traverse in one direction serving to complete said circuit to energize said dog clutch solenoid of the next of said carding engines to initiate the traverse of the nozzle arrangement thereof, said control means operating in such manner that each suction nozzle arrangement, in turn, applies suction to its respective carding and doffing cylinders only in one direction of the traverse of said nozzle arrangement, so that the stripping of the carding and doffing cylinders is effected evenly and a substantially constant output of sliver is obtained from the bank carding engines, and a respective piecing-up device for each of said carding engines, each of said devices comprising a nozzle arranged to blow compressed air at a web of carded fibers as said web leaves the doffing cylinder so as to piece-up said web broken because of the stripping of the respective cylinders.

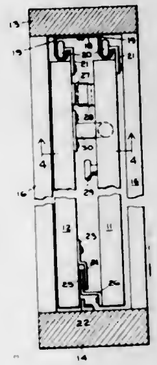
3,100,915
WALK-IN STAIRWELL CLOSET
Kermit M. Pennington, 5811 Luce Road, and Robert D. Swanson, 313 Maple, both of Alma, Mich.
Filed Sept. 29, 1960, Ser. No. 59,379
5 Claims. (Cl. 20—.5)



1. In a building construction including upper and lower levels with a floor on each of the levels,
a ceiling structure over the upper level,
an opening in the floor of the upper level,
a stairway connected at its top end to the floor of the upper level at one end of the opening,
the stairway extending down through the opening to the floor of the lower level,
a short vertical wall extending down from the ceiling structure directly above the top end of the stairway, the short vertical wall terminating at its lower end a substantial distance above the top end of the stairway,
a long vertical wall extending between the ceiling structure and the floor of the upper level directly above the bottom end of the stairway,
an inclined panel secured to the lower ends of the vertical walls and being generally parallel to the stairway and positioned directly above the stairway,
vertical sidewalls above the sides of the stairway and extending downwardly from the ceiling structure at least to the inclined panel,
the vertical walls, inclined panel and that portion of the ceiling structure within the vertical walls defining an enclosed space,
the improvement of,
a rectangular opening in the inclined panel with the lower ends of the inclined edges of said rectangular opening terminating at the lower end of the long vertical wall,
said inclined edges being substantially as long as the horizontal distance between the short and long vertical walls,
a ramp in said opening,
said ramp having the lower end hinged to the lower end of the long vertical wall,
releasable latch means holding said ramp in said opening,
and said ramp being adapted to pivot from a position within said opening to a horizontal position wherein the upper end of said ramp engages the top end of the stairway and provides walk-in access from the floor of the upper level to the enclosed space.

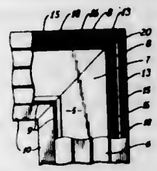
3,100,916
COMBINATION WALL STORAGE SLIDING DOORS AND FRAME
Michael J. McKinney, 14635 NE. 5th Ave., North Miami, Fla.
Filed July 5, 1962, Ser. No. 207,526
3 Claims. (Cl. 20—19)

1. A combination wall storage sliding doors and frame comprising a frame having a header, a sill and a pocket at one end, a pair of tracks mounted in parallel relation on the lower surface of said header, a pair of doors, rollers mounted on said doors and extending above said doors, said rollers of each of said doors rotatably positioned in said tracks placing one door behind the other, a door knob mounted on said one door adjacent to an edge portion furthest removed from said pocket and said frame, an elongated bracket mounted on the inner surface adjacent to a bottom edge of said other door, said elongated bracket having a flange portion positioned in spaced relation to the surface of said other door, a bracket mounted on said one door adjacent said other edge portion, said bracket having a finger portion engaging said flange portion for permitting relative slidable movement of said doors, stop members mounted on



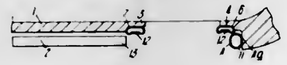
an upper portion of each of said sliding doors in alignment with each other, one stop member being mounted at said other edge of said one door while said other stop member being mounted at an edge portion furthest removed from said pocket whereby upon the engagement of said stop members, sliding movement of said one sliding door in one direction will cause a sliding movement of said other of said doors, and a bumper member mounted on the upper portion of the other of said sliding doors for engagement by said one of said sliding doors whereby upon the sliding of said one of said sliding doors in the opposite of said one direction, said bumper becomes engaged by said one of said sliding doors then said other of said sliding doors is made to slide in the direction of said pocket.

3,100,917
PLASTIC FRAME CONSTRUCTION
Robert C. Wagner, R.R. 4, Bellevue, Ohio
Filed May 9, 1961, Ser. No. 108,871
2 Claims. (Cl. 20—16)



1. A frame structure comprising a unitary main frame, complete in and of itself, of extruded tubular side, top, and bottom frame members of identical cross section throughout their lengths and of set organic plastic material having mitered joints fusion bonded together in fixed position relative to each other at the corners, respectively, of the frame, each of said main frame members having at its outer edge a pair of integral flanges in spaced face to face relation to each other and extending lengthwise of said outer edge the full length thereof and defining with said outer edge a channel which opens outwardly edgewise of the main frame, the channels of said members defining a continuous channel extending completely about the outer peripheral edge of the main frame and opening outwardly edgewise of the main frame, a reinforcing frame complete in and of itself of stiff metal side, top, and bottom reinforcing members, respectively, said reinforcing frame being disposed in said channel and juxtaposed against the edges of the main frame therebetween and filling the space between the flanges and having mitered joints at the corners, respectively, the corners of the reinforcing frame being disposed for access exteriorly of the main frame for connection of the reinforcing members together at the corners in firm embracing relation to the main frame, connecting means at the corners of the reinforcing frame, respectively, each of said connecting means including at least one screw assembly, at its associated corner, for operation from the exterior of the reinforcing frame, each connecting means securing its associated reinforcing members together at the associated mitered corner of the reinforcing frame independently of the main frame and holding the mitered surfaces of the associated reinforcing members in firm stressed juxtaposition with each other under pressure applied by the screw.

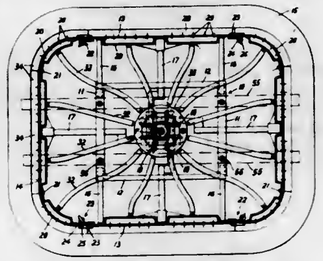
3,100,918
SEAL FOR SLIDING DOOR
Harold E. Coverley, Redbourne, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 21, 1961, Ser. No. 125,768
Claims priority, application Great Britain Aug. 16, 1960
1 Claim. (Cl. 20—19)



The combination comprising, a door frame having an opening therein and an abutting surface located generally normal to the plane of said opening, a door movable between opened and closed positions with respect to said opening in a plane located generally parallel to the plane of said opening and intersecting said abutting surface, a hollow tubular sealing strip mounted on said door frame adjacent said opening and located intermediate the plane of said opening and the plane of door movement and completely surrounding said opening, said door being located in overlapping relationship to said opening in the closed position thereof, an elongated hollow fluid containing compressible reservoir mounted on said abutting surface and including means engaged by the leading edge portion of said door upon movement thereof to said closed position, and means communicating said reservoir with said strip, engagement of the leading edge portion of said door with said reservoir compressing said reservoir and forcing the fluid contained therein into said strip to expand said strip transversely of the plane of said opening and into engagement with a portion of said door overlapping said opening to provide a seal between said door frame and said door.

3,100,919
PERMANENT MOULDS
Alexandre Vayda, Paris, France, assignor to Fonderite Societe a Responsabilite Limitee, Paris, France
Filed July 6, 1960, Ser. No. 41,102
Claims priority, application France July 7, 1959
2 Claims. (Cl. 22—9)

1. A form for providing the interior of a permanent steel casting mould with an exothermic lining, comprising a central farme, a plurality of wall elements which together form a continuous wall inside the permanent mould supported by said central frame, sealing means at the lower edge of the wall elements of the form including a flange projecting outwardly towards the mould wall, arms supported by the mould and supporting said central frame thereby suspending the form in the permanent mould, an admission system for supplying a hardening medium through the wall elements of the form to the exothermic lining, one supporting bar for each wall element movably connected to said frame and rigidly carrying the wall element, the bars being disposed at an angle to the respec-



tive mould walls and operable to position said wall elements for the lining operation and, respectively, to retract them for withdrawing the form from the set lining, control means connected to said frame and operable for moving said supporting bars to position and to retract the wall elements, said admission system comprising said wall elements defining adjacent the wall chambers having perforations, a central pipe operative to be connected to a source of carbon dioxide, and branch pipes extending from the central pipe to the several chambers of the wall elements for supplying carbon dioxide to the chambers to be expelled through the perforations thereof.

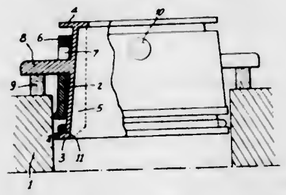
3,100,920
MACHINE FOR HANDLING FOUNDRY MOULDS
Jean-Jacques Gerardin, Clos-Jean, Pont-a-Mousson, France, assignor to Compagnie De Pont-a-Mousson, Nancy, Meurthe-et-Moselle, France, a corporation of France
Filed Nov. 20, 1961, Ser. No. 153,587
Claims priority, application France, Nov. 22, 1960
4 Claims. (Cl. 22—10)



1. A machine for handling metal moulds in two halves separable along a vertical joint plane, said machine comprising in combination: a stand; on said stand, a rotatable pivot adapted to stop at each one of a series of stations; a plurality of mould support means carried by said pivot, for suspending the mould halves on said pivot, the number of said support means being equal to the number of said stations; hooking means provided on each mould for hookingly engaging the support means corresponding to the mould whereby the latter is supported by the support means; a mould opening and closing mechanism mounted on said stand and disposed at a fixed station and having two devices adapted to firmly grab respectively said mould halves, each device comprising a transverse element located above the corresponding portion of the mould and mounted on said stand; a stirrup member disposed astride said transverse element and movable relative to the transverse element; each mould half having lugs and each stirrup member having hooks capable of engaging under said layer; and a double-acting jack con-

necting the transverse element to said stirrup member to shift the stirrup member vertically relative to said transverse element, whereby the stirrup member, in rising, applies the hooks thereof under the lugs of the corresponding portion of the mould and applies said portion against the under face of the corresponding transverse element and, in descending, returns said corresponding portion of the mould to the position in which the hooking elements are hooked on the corresponding mould support means; and reciprocating means connected to one of said devices for selectively moving the last-named device away from and toward the other of said devices for opening and closing said moulds.

3,100,921
HOT TOPS FOR INGOT MOLDS
Claude Marie and René Thierry, Corbeil-Essonnes, France, assignors to Societe a Responsabilite Limitee Doittau Produits Metallurgie, Corbeil-Essonnes, France, a corporation of France
Filed Mar. 3, 1961, Ser. No. 93,102
Claims priority, application France Mar. 7, 1960
3 Claims. (Cl. 22—147)



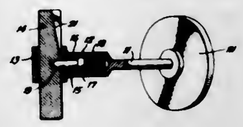
1. A hot top for operation with an ingot mold, comprising a metal frame provided with an outer peripheral flange at its lower end, the cross-section of which corresponds with a clearance to the size required for it to engage the opening of the ingot mold, a hoop surrounding the frame and shiftable vertically over the latter down to a position leaving a small gap between its lower edge and the flange on the frame, and a bead in the gap between said lower edge of the hoop and the flange and adapted to be crushed and driven outwardly by the lowering of said hoop over the frame to form a packing between the latter and the opening of the ingot mold.

3,100,922
UNITARY SHEET METAL TIE-CLIP
Raymond J. Burniston, Madison Township, Old Bridge, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 14, 1961, Ser. No. 102,978
2 Claims. (Cl. 24—73)



1. A unitary tie-clip comprising a sheet metal blank in strip form bent upon itself centrally of its length forming superposed half-end portions, said end-portions being each reversely bent upon itself adjacent said first named bend, said reverse bends each terminating in an arcuate outward bend extending said half-end portions in opposite directions at an angle less than at right angles to said bent portions of said strip, the said bent portions of said strip forming superposed anchoring elements adapted to be partially separated angularly in opposite directions in response to movement of said half-end portions toward each other to partially closed position, said half-end portions adjacent said arcuate bends being each provided with a transverse bend at an acute angle to the axis of the bends forming said anchoring elements whereby said half-end portions are adapted to be bent toward each other in angularly off-set, by-passing relation to form a closed loop, and a uniform coating of a flexible plastic insulating compound on said tie-clip.

3,100,923
CUFF LINK
Stephen R. Loughman, % Nicoud Mfg. Co., 3220 W. Grand Ave., Chicago, Ill.
Filed Feb. 20, 1961, Ser. No. 90,372
2 Claims. (Cl. 24—100.5)



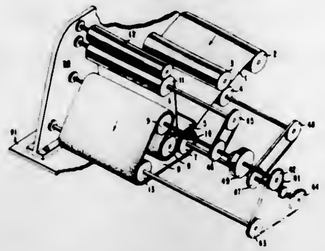
2. A cuff link comprising a head, a shank projecting from the head, a collar at the end of the shank extending transversely thereto symmetrically across the end of the shank and of a length substantially equal to its diameter, a retainer bar slidable through the collar, a spring pressed locking pin slidable in the shank and resiliently urged radially into the collar, the retainer bar having a transverse groove defined by substantially square sides across one side only thereof to receive the end of the locking pin thereby to lock the bar in the collar, one end of the retainer bar having a longitudinally tapered wedging surface leading from the end of the bar to the groove to slide over the locking pin and cam it out of the collar when the retainer bar is slid into the collar, the side portions of the groove camming the locking pin from the groove when the retainer bar is turned about its axis so that the retainer bar can slide out of the collar.

3,100,924
WIRE ROPE FITTINGS
Raymond T. Trier and Charles J. Mathey, Canton, Ohio, assignors, by mesne assignments, to The Union Metal Manufacturing Company, Canton, Ohio, a corporation of Ohio
Filed Jan. 19, 1961, Ser. No. 83,702
1 Claim. (Cl. 24—122.6)



A wire rope fitting of the character described comprising a socket member having an internally threaded bore open through one end thereof and terminating in a conical end wall spaced from the other end thereof, an externally threaded sleeve for screwing into said bore, said sleeve having a bore tapered from its inner end toward its outer end for insertion of a wire rope with the strands thereof separated and fanned out through its inner end, and a tapered plug for insertion between the separated strands of the wire rope, the larger end of said tapered plug being completely conical and of a greater taper than said conical end wall of the bore in the socket member so that it is adapted to have only point contact with the conical end wall of the bore in the socket member for driving the plug into the separated fanned-out strands of the wire rope and clamping them within the tapered bore of the sleeve by the screwing action.

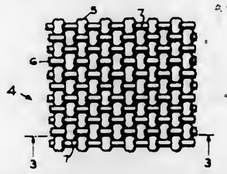
3,100,925
APPARATUS FOR COMPRESSIONAL FINISHING OF FABRICS
Lester Hubert Messinger, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 2, 1960, Ser. No. 73,433
3 Claims. (Cl. 26—18.6)



1. An improved apparatus for treatment of a fabric to increase its resistance to shrinkage, its cover, and its fullness, comprising in combination, a first means for continuously moving a fabric having a given width and a given thickness from a first location to a second location, a second means positioned between the first and second locations engaging the fabric evenly throughout its thickness at a substantially uniformly distributed plurality of points in a first zone, a third means cooperating with said second means to apply a sufficient force through said second means to said fabric at each of said points in said first zone and evenly throughout the thickness of the fabric in a direction in the plane of the fabric such that the spacing between said points is reduced and the thickness of the fabric is increased without pleating to produce a compression and compaction of the fabric in at least one direction, a fourth means for maintaining elevated conditions of temperature and humidity in said zone during application of said force to said fabric, a fifth means cooperating with said third means to terminate application of said force to said fabric, a sixth means for releasing engagement of said second means with said fabric, in which said second means comprises an endless belt, said belt provided with an operative surface in which are secured a plurality of evenly distributed flexibly-mounted projecting fabric-penetrating elements, each having a fabric penetrating end and supported to move in a path which converges with the path of movement of said fabric in said first zone and causes engagement of said elements with said fabric at said plurality of points, in which said third means comprises an element with a cylindrical surface in engagement with said endless belt to change the direction of movement thereof in a curved path such that the flexibly-mounted elements converge to move the fabric-penetrating ends towards each other and compress the fabric surrounding said flexibly-mounted elements, in which said fourth means comprises a steam chamber located in said element with the cylindrical surface and a plurality of steam escape passages connecting said chamber with said cylindrical surface.

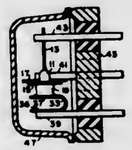
3,100,926
METHOD OF PRODUCING EXPANDED FABRIC-LIKE MATERIAL
Earl B. Richmond, West Covina, Calif., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Original application Apr. 3, 1958, Ser. No. 726,190. Divided and this application June 28, 1960, Ser. No. 39,364
10 Claims. (Cl. 28—75)

1. The method of producing a fabric-like material incorporating expansible thread material, wherein the thread material comprises a mixture of thermoplastic resin and a thermally activatable blowing agent, said blowing agent requiring heating to a temperature above the minimum softening temperature of the resin for activation, said method comprising the steps of: forming said thread material in unexpanded condition into a fabric having contact-



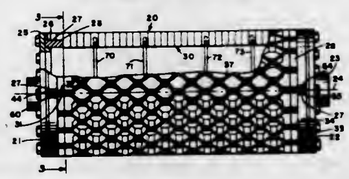
ing thread junctures; and subsequently heating said fabric to activating temperature of the blowing agent, thereby softening said resin while the blowing agent expands the same and increases contact pressure at said junctures and said thread material form welded areas along contacting surfaces at said junctures.

3,100,927
SEMICONDUCTOR DEVICE
John P. Stelmak, Greensburg, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 30, 1957, Ser. No. 706,039
5 Claims. (Cl. 29—25.3)



1. In a method of making a semiconductor device, the steps of: placing a connector member of a metallic material in the form of a flat ribbon having a surface of large area in contact with a fused alloy on a semiconductor member by slightly deflecting said connector member so that said connector member is under stress and a portion of said large area surface exerts pressure against said fused alloy; applying heat to said fused alloy so that said fused alloy wets at least said portion of the large area surface of said connector member; and cooling said fused alloy so that said connector member is joined to said fused alloy.

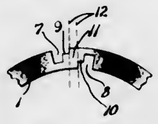
3,100,928
HONEYCOMB OPENWORK
Edward T. Bryand, South Portland, Maine, assignor to Metal-Tech, Inc., South Windham, Maine, a corporation of Maine
Filed Sept. 15, 1960, Ser. No. 56,192
11 Claims. (Cl. 29—121)



1. An elongated, cylindrical roll for paper making machines, said roll comprising a pair of oppositely disposed, longitudinally spaced, circular heads, each head having a plurality of spaced, longitudinally extending, radial slots in the peripheral portion thereof; a hollow cylindrical

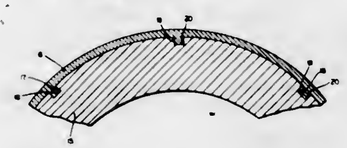
honeycomb type, openwork extending longitudinally between said heads, said openwork including a plurality of pairs of longitudinally extending strips of thin, wide, flexible material angularly bent, full width, into alternate flat faced ridges and hollows, the strips of each pair being back to back and forming radially extending conduits of hexagonal outline; the longitudinally extending flat, meeting faces of all of said strips being secured flatwise to each other and certain of said pairs of strips being of greater length than the adjacent strips with the opposite ends thereof adhesively anchored in the radial slots of said roll heads for supporting said covering therein.

3,100,929
LOCK JOINT SEALING RING
Kenneth J. Nisper, Muskegon, Mich., assignor to Muskegon Piston Ring Company, Muskegon, Mich., a corporation of Michigan
Original application July 3, 1957, Ser. No. 669,893. Divided and this application May 1, 1959, Ser. No. 810,511
2 Claims. (Cl. 29—156.6)



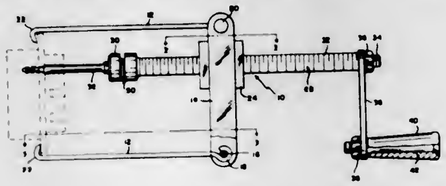
1. In the method of making a parted locking sealing ring, the steps which include: providing an annular blank; cutting said blank in an axial direction to form a first recess extending from one side face to the other and opening through the inner radial face of the blank, said recess extending axially of said blank; at a point circumferentially spaced from said first recess cutting said blank in an axial direction to form a second recess extending from one side face to the other and opening through the outer radial face of said blank, removing the portion of said blank between said recesses to space the ends of said sealing ring from each other.

3,100,930
HEAT EXCHANGER TUBING MANUFACTURE
Arvid C. K. Nihlen and Robert M. Wallace, Massillon, Ohio, assignors, by mesne assignments, to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Original application Dec. 30, 1959, Ser. No. 862,997. Divided and this application Nov. 30, 1960, Ser. No. 72,599
5 Claims. (Cl. 29—157.3)



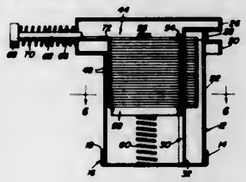
1. The method of forming sheathed tubing including the steps of forming groove means in a surface of a first metal tube with said groove means extending inwardly of the tube metal from said tube surface and opening outwardly at said tube surface, extruding a substantially continuous metal sheathing tube telescoped with the first tube surface with said sheathing tube tightly abutting the first tube surface, and during the extruding of the sheathing tube telescoped with the first tube surface forming and embedding portions of the sheathing tube inwardly into and interlocking the sheathing metal with the first tube groove means thereby providing an interlocking metal-to-metal heat transfer bond between said tubes for maintaining the tubes in intimate heat transfer contact under varying temperature conditions.

3,100,931
REMOVAL TOOL-PIN AND SOCKET ELECTRICAL CONNECTORS
La Mar P. Barnes, Box 309, R.F.D. 4, Ogden, Utah
Filed June 27, 1961, Ser. No. 120,095
1 Claim. (Cl. 29—203)
(Granted under Title 35, U.S. Code (1952), sec. 266)



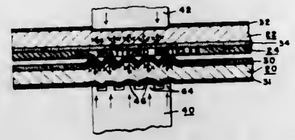
A tool for removing pins and sockets from electrical connector plugs and the like comprising; a pair of holding jaws pivotally mounted between link rails, threaded sliding means guided between and supported by said link rails, threaded actuating screw engaging said threaded sliding means and terminating in turning means on one end and a collet at the other end, said collet being bored to receive the heads of interchangeable punches fitting various size pins and sockets, said punches being retained in said collet by locking means.

3,100,932
PAPER CLIP DISPENSER
Royace Hal Pipkin, 2123 Woodview Drive, Raleigh, N.C.
Filed Nov. 14, 1961, Ser. No. 152,251
8 Claims. (Cl. 29—212)



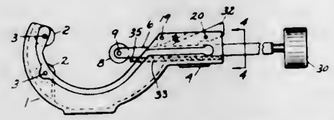
7. A paper clip dispenser for elongated paper clips having a rear inner and a forward outer loop, said loop opening rearwardly, said dispenser comprising a housing for receiving a stack of said clips, said housing including abutment means adapted for engagement with one of the endmost clips of said stack, means adapted to normally resiliently urge said stack toward said abutment means, a discharge opening in said housing opening along a plane aligned with said abutment means, ejecting means carried by said housing and mounted for movement in through a path adapted to engage said one clip and longitudinally slide the latter forwardly and laterally of said stack outwardly of said opening, standard means disposed in said housing adapted to have said clips stacked thereabout with said standard received in said forward loops just forwardly of said rear loops and to retain all of said clips except said one clip in stacked relation against rotation about their longitudinal axes, said standard having a cross-sectional shape adapted to conform to the plan shape of the forward end of said rear loops, said standard means having a slot formed therein disposed in said plane and adapted to receive therethrough the inner loop of the clip being dispensed, said slot opening laterally outwardly of one side of said standard.

3,100,933
METHOD OF COLD WELDING ALUMINUM MEMBERS
James L. Hancock, Fairborn, and Lee J. Lakes, Middletown, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 15, 1956, Ser. No. 615,968
3 Claims. (Cl. 29—470.1)



3. In cold pressure welding of a first and second aluminum member to one another wherein each member has a coextensive, extremely thin, natural aluminum oxide film on the surfaces thereof, the art which includes forming a friable, adherent, oxide film superimposed upon said thin natural oxide film on one of said members, superimposing said members with the friable, adherent oxide film on said one member in face-to-face contact with the natural oxide film on the other member, and then cold forming said members by applying pressure across said members and films until shattering of said films occurs and plastic flow and bonding of the adjacent portions of said members is promoted.

3,100,934
PIPE CUTTER
Axel V. Jonasson, Erie, Pa., assignor to Reed Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed July 3, 1962, Ser. No. 207,222
8 Claims. (Cl. 30—102)



1. A pipe cutter having a frame with means for guiding the cutter for relative rotation with respect to the pipe in a plane perpendicular to the longitudinal axis of the pipe, a wheel having a cutting edge in said plane, a slide guided in said frame for movement toward and away from the pipe and carrying the wheel on the end adjacent the pipe, a pressure screw journaled in and in thrust relation to said slide, a pawl, a pivot for the pawl on the frame on an axis intermediate the ends of the pressure screw and crosswise of the pressure screw, said pawl having a threaded end extending forward of its pivot, said slide having a longitudinal slot receiving the threaded end of the pawl and exposing a segment of the thread of the pressure screw, means urging the threaded end of the pawl into engagement with the pressure screw, and provisions for pivoting the threaded end of the pawl away from the pressure screw.

3,100,935
TOOL FOR THE RIPPING OF SEAMS AND LIKE PURPOSES
Percy Seymour Hargrave Leafe, Ealing, England, assignor to Needle Industries Limited, Studley, England, a company of Great Britain
Filed June 27, 1962, Ser. No. 205,731
1 Claim. (Cl. 30—294)

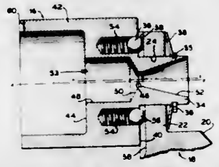
A ripping tool for ripping seams in garments comprising:

(*a*) a handle of elongated form,
(*b*) a shank carried by said handle and extending longitudinally and forwardly from one end of said handle and terminating in a point at its forward end.
(*c*) a spur on said shank extending rearwardly from said point and obliquely towards said handle, and defining in combination with said shank a rearwardly presented crook-shaped boundry at its inner side,



(*d*) a concave sharp cutting edge formed on said shank in the vicinity of said point and extending along that side of said shank remote from said spur,
(*e*) a sharp ripping edge formed partly on said shank and partly on said spur along said crook-shaped boundary,
(*f*) said spur at its outer side having a blunt edge face terminating in a blunt point at the rearward end of said spur.

3,100,936
ECCENTRIC EYEPIECE FOR A FIREARM REAR SIGHT
Nicholas J. Angelica, Thompsonville, Conn., assignor to the United States of America as represented by the Secretary of the Army
Filed May 23, 1961, Ser. No. 112,126
1 Claim. (Cl. 33—58)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a rear sight for a firearm with a receiver, the combination comprising an aperture member disposed for elevational displacement and including an arcuate rack and a lug extending upwardly from one end thereof, a shaft extending through the receiver and journaled therein for rotation, a pinion fixed to said shaft for meshing engagement with said rack for elevational actuation thereof, an adjustment knob mounted on said shaft outside of the receiver to provide manual means for rotating said shaft, a detent disposed on said adjustment knob for resilient engagement with one of a plurality of grooves formed in the receiver around said shaft, said grooves being spaced and the radius of said aperture member being designed so that said lug is displaced elevationally a predetermined unit of elevational displacement when said adjustment knob is rotated to move said detent from one of said grooves to an adjacent one thereof, an eyepiece journaled in said lug for rotation around the longitudinal axis of said eyepiece, said eyepiece including a sighting tube located therein so that the longitudinal axis of said sighting tube is spaced from the longitudinal axis of the eyepiece a distance which is one-fourth the predetermined unit of elevational displacement, a sighting aperture located concentrically in said sighting tube and intermediate the ends thereof, a hood formed on the rear end of said eyepiece to shade the rear end of said sighting tube, and means for indexing said eyepiece in two sighting positions 180° apart so that said sighting aperture is selectively positionable above and below the longitudinal axis of said eyepiece for changing the elevation of said sight-

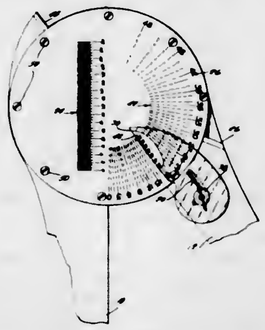
ing aperture one-half the predetermined unit of elevational displacement when said eyepiece is rotated 180°.

3,100,937
TAPE MEASURE
Archie E. Burch, 1428 Park St., Alameda, Calif.
Filed Aug. 8, 1961, Ser. No. 130,128
1 Claim. (Cl. 33—137)



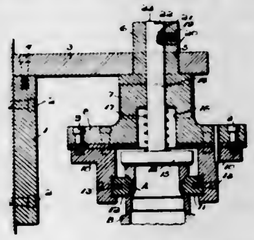
In a device of the character described, a case including a magnetically attractive end wall provide with a slot therein, a calibrated tape arranged for extensile and retractile movement through said slot and said tape having a portion thereof coiled inside of said case, a support unit having a lip affixed to said tape, and said support unit further including spaced apart magnetized shoulders arranged on opposite sides of said lips and engageable with the portions of said wall on opposite sides of said slot when said tape is in the retracted position, a magnetic horseshoe shaped body member having a portion thereof swivelly connected to said support unit, said body member including legs, and projections on the free ends of said legs, said projections facing toward said case and being spaced from the adjacent one of said shoulders so as to magnetically engage the portion of said end wall at a point spaced from said one shoulder when said tape is in retracted position, the space between said projections and said one shoulder providing an access opening for the fingers of a hand of the user.

3,100,938
CALCULATING DIVIDER
William Meyer, 640 Washington St., Daytona Beach, Fla.
Filed May 24, 1962, Ser. No. 197,347
1 Claim. (Cl. 33—149)



In a calculating divider including a pair of legs each terminating at one end in a flat head, said heads being arranged in face to face relation and being connected together for movement of said legs toward and away from each other, and a pointer extension member arranged in end to end angular relation with respect to the free end of each leg, each of said members being detachably secured to the adjacent leg, the head of one of said legs being provided with scale means, a pin projecting from the other of said legs adjacent to and spaced from the head thereof, and a straight edge element having a slot therethrough adjustably mounted on said other leg with said pin received in said slot, a portion of said element overlying said scale means, said slot being of a length to permit shifting of said element relative to said scale means a distance at least equal to the overall thickness of said pointer member free ends.

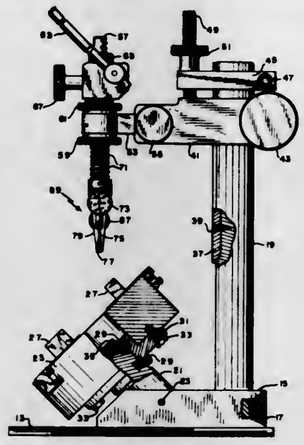
3,100,939
GAGE FOR COUPLING MEMBERS
William John Blaiklock, Tuckaway, N.Y., and Charles S. Reasby, Worcester, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 6, 1961, Ser. No. 108,973
3 Claims. (Cl. 33—174)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a gage for gaging the diameter of a circumferential groove in a workpiece and the axial position of the groove in relation to one end surface of the workpiece, a body member, a pair of go-no-go anvils rigidly supported by the body in opposed fixed positions to operatively receive the grooved portion of the workpiece between them for gaging the diameter of the groove in the workpiece, a second gage movably supported by the body in spaced relation to the anvils to engage an end surface of the workpiece when such workpiece is disposed in gaging position between the anvils, said second gage being movable in the direction of the axis of the workpiece and the axis of symmetry of the fixed anvils, and resilient means urging the second gage toward the fixed anvils to maintain the second gage in contact with the end of the workpiece while the workpiece is restrained against axial movement by engagement of the fixed anvils with the walls of the groove in the workpiece.

3,100,940
GEAR TOOTH GAUGING APPARATUS
Rudolph Vynes, Ogden, Utah, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 21, 1959, Ser. No. 835,378
1 Claim. (Cl. 33—179.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

Apparatus for gauging gear teeth and the like comprising a base plate, a base block attached to said base plate, a main support column extending vertically upward from said base block, a carriage slidably attached to said main support column, said carriage having a horizontal opening in the forward end thereof, a shank member adapted to slide in the opening in said carriage, said shank member having a vertically oriented aperture in the forward portion thereof, a hub member juxtapositioned beneath said shank member and having a threaded extension passing through the vertically oriented aperture therein, said hub member being provided with an inside clearance hole, an indicator shaft dimensioned to slide vertically in the clearance hole in said hub member, a nut member engaging the threaded extension of said hub member above said shank member, the tightening of said nut member operating to lock said indicator shaft in a predetermined angular position, and measuring means attached to the lower end of said indicator shaft including a dial indicator having a contact arm extending therefrom to engage a first



work surface, and a pivotally mounted finger member in lateral spaced relation to said contact arm for engaging a corresponding second work surface, the reading on said dial indicator being the distance between said first and second work surfaces.

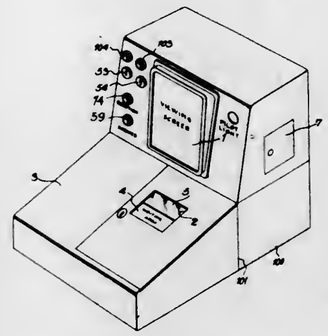
3,100,941
MEASURING TAPE TENSION HOLDER
Don A. Taylor, 216 Mill St., Box 4, Wadsworth, Ohio
Filed July 28, 1961, Ser. No. 127,550
11 Claims. (Cl. 33—189)



1. An attachment for a measuring tape of the type including a casing and a spring returned coiled spring steel measuring tape therein and adapted to be drawn endwise out of an opening in the casing, said attachment comprising a tape securing device, and attaching means for detachably mounting the device on the exterior of the casing at one edge face of the casing and adjacent the tape opening for movement along said edge to and from operating position, and said device, when moved to operating position, releasably being operative to, frictionally engaging the lateral edges of the tape exteriorly of the casing with force capable of securing the device in fixed relation to the tape and to hold the tape in selected extended positions.

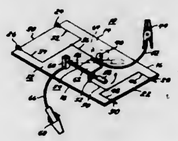
3,100,942
TEACHING MACHINE
Charles A. Godcharles, John W. Blyth, and John H. Jacobson, Jr., Clinton, and George H. Gabrielson, New Hartford, N.Y., assignors to Hamilton Research Associates, Inc., a corporation of New York
Filed June 27, 1960, Ser. No. 38,872
5 Claims. (Cl. 35—8)

5. In a visual teaching system designed to present data of an interrogative nature so that a response can be made thereto, and to then present a correct response to said data, the structure comprising a transparent, laminated card including a microfilm strip, said microfilm strip having a series of frames arranged in a plurality of rows, each of said frames having a portion containing interrogative data and another portion containing a correct response thereto, an optical system for projecting said frames of said microfilm strip, means for moving said card so that the frames in one row are sequentially scanned in



the path of said optical system and then shifting said card so that the frames in an adjacent row can be scanned in the same manner, a shutter for obscuring from view the response on the exposed frame, and means for retracting said shutter to bring the response into view before said moving means is actuated to expose another frame.

3,100,943
COMPUTING DEVICE
Glenn W. Preston, Oreland, Pa., assignor to General Atronics Corporation, Bala-Cynwyd, Pa., a corporation of Pennsylvania
Filed Oct. 28, 1958, Ser. No. 770,051
17 Claims. (Cl. 35—30)

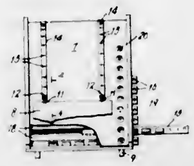


1. A computing device comprising a signal input terminal and a signal output terminal, a manual switching means having an open position and a closed position for controlling the delivery of a signal to said output terminal, a light bulb for indicating the presence of a signal at said input terminal, said light bulb being connected to said input terminal by permanent electrical connections devoid of switching means, and means inhibiting the radiation of light from said bulb only when said manual switching means is in its said open position.

3,100,944
RACK FOR DISPLAYING SAMPLES OF CARPET AND THE COLORS IN WHICH CARPETS REPRESENTED BY THE SAMPLE ARE AVAILABLE
Edward Lieberman, 109—22 71st Road, Forest Hills 75, N.Y.
Filed May 11, 1961, Ser. No. 109,422
4 Claims. (Cl. 35—49)

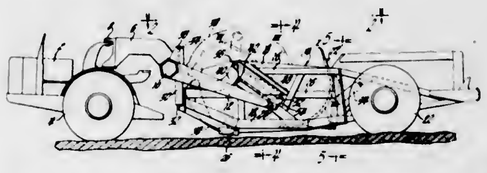
1. A holder for exhibiting samples of carpets and the colors in which the carpets represented by the samples are available, comprising the combination of a stand having means for supporting carpet samples in overlapping relation exposing a width of each sample, slides

mounted on said stand in back of the overlapping samples and in line with the exposed widths of said samples and



color swatches on said slides, said slides being shiftable to expose the different color swatches thereon.

3,100,945
SCRAPER BOWL
Ralph J. Bernotas, South Euclid, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Sept. 14, 1959, Ser. No. 839,820, now Patent No. 3,073,044, dated Jan. 15, 1963. Divided and this application Aug. 27, 1962, Ser. No. 219,510
6 Claims. (Cl. 37—129)



4. A scraper bowl comprising a transportable bowl frame including transversely spaced longitudinally extending side walls, a cutting edge extending transversely between lower floor portions of said side walls to form a bowl mouth, a drawbar including pull arms pivotally connected to said bowl frame, bowl control means mounted on said drawbar and connected to said bowl frame to control pivotal movemnet of the latter about said pull arms between a lowered digging position and a raised load-carrying position, an apron pivotally connected to said bowl frame for adjustment between a lowered positon closing said bowl mouth and a raised position, and a fluid-operated extensible and contractable apron jack operatively pivotally connected between a pull arm and said apron, said jack being operable to pivot said apron in closing and raising directions independently of operation of said bowl control means and, when extended to a fixed length to dispose said apron in said raised position while said bowl means disposes said bowl frame in its digging position, being automatically operable to pivot said apron to its lowered position closing said bowl mouth in response to operation of said bowl control means to raise said bowl from said digging position.

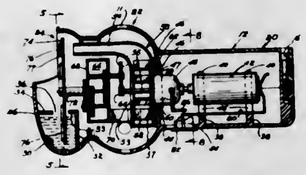
3,100,946
TUMBLING DEVICE
Harry W. Swanberg and Edward W. Swanberg, Denver, Colo.; said Edward W. Swanberg assignor of one-fourth to Charles B. Messenger, Edgewater, Colo.
Filed Sept. 21, 1959, Ser. No. 841,225
10 Claims. (Cl. 46—1)

1. A tumbling device useful on an inclined surface to simulate erratic walking movements comprising a generally hollow structure, a downwardly depending skirt element on said structure having a lower terminal edge substantially defining a plane, and a pivot element disposed within the confines of said skirt element in position spaced from and independent of said skirt element for relative movement with respect thereto and depending slightly past the plane of the terminal edge of said skirt element, said pivot element being a rod member



having a free and unsupported lower end of length at least ten times longer than the diameter thereof.

3,100,947
TOY FOR FORMING A CONTINUOUS STREAM OF BUBBLES
Werner F. Hellman, 4417 N. Malden Ave., Chicago, Ill.
Filed Dec. 29, 1960, Ser. No. 79,345
1 Claim. (Cl. 46—8)

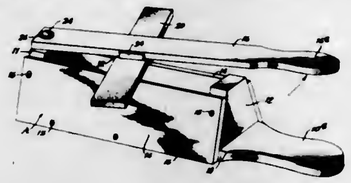


A portable toy bubble forming device comprising a housing having a cylindrical shaped handle portion at the rear and an enlarged portion forwardly of said handle portion, said handle portion having a diameter as to be grasped and held by the hand of a child, a blower and a rotatable bubble forming member supported within said enlarged portion of said housing with said rotatable bubble forming member positioned forwardly of said blower and in line with the discharge of air from said blower, a dry cell battery positioned within the handle portion of said casing, a small battery operated motor positioned in said housing between said blower and said battery, means forwardly of said motor and operated by said motor for rotating said rotatable bubble forming member, said blower adapted to be operated by said motor, a switch supported by said housing and in electrical circuit with said motor and battery so that when the circuit is closed by said switch the motor will operate said blower and simultaneously operate said means to rotate said rotatable bubble forming member and cause a stream of air to be ejected from said blower against said rotatable bubble forming member, means for containing a bubble forming solution inside said enlarged portion of the housing and in the path of said rotatable bubble forming member so that said rotatable bubble forming member picks up the bubble forming solution and moves it in the path of the discharged air so that a continuous stream of bubbles is produced and ejected from said toy.

3,100,948
WILD FOWL CALL
Edward J. Tax, 4525 Simpson St., Skokie, Ill.
Filed Aug. 21, 1961, Ser. No. 132,774
1 Claim. (Cl. 46—189)

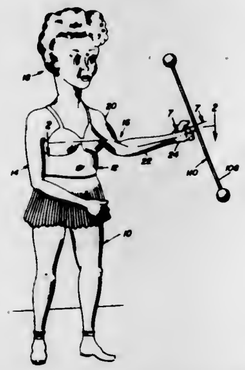
A fowl call comprising an upwardly open, elongated sound box having a pair of side walls, an elongated actuator arm pivotally mounted at one end on top of the rear end wall of the box, said arm being swingable about its pivot over the upper edges of said side walls of the box, and an elongated bar of slate carried on the under side of and disposed transversely of said arm and seated directly upon the upper marginal edges of the side walls of

the box, and means for adjustably securing said bar of slate along the length of the actuator arm, said means comprising a resilient clip formed with a pair of opposite,



depending flanges for frictionally embracing the side edges of the bar of slate and a second pair of upwardly extending flanges for frictionally embracing the opposite edges of the actuator arm.

3,100,949
ANIMATED FIGURE TOY
Clifford D. Brenneman, Box 93, Graegle, Calif.
Filed Oct. 6, 1961, Ser. No. 143,365
6 Claims. (Cl. 46—241)



1. An animated figure toy comprising a body constructed to represent a given figure and having a hollow chamber and at least one limb with a free terminal end portion provided with bearing means, a prime mover fixed and confined in said chamber, a flexible motion transmitting shaft operatively connected at one end with said prime mover, a movable attention-attracting object adapted to move relative to said limb, the end of said shaft opposite said one end embodying a driven socket member of magnetizable metal, said object comprising a baton, said baton embodying a handling staff provided intermediate its ends with a laterally projecting permanent magnet constituting a coupling and keying shank, said shank being adapted to be slidingly keyed in said socket member.

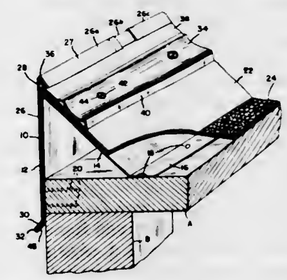
3,100,950
PORTABLE PLANT PROTECTOR
Hans H. A. Heuer, General Delivery, Miami, Fla.
Filed Sept. 6, 1961, Ser. No. 136,267
1 Claim. (Cl. 50—51)

In a plant protector assembly including a pair of horizontally disposed spaced parallel rails supported above a ground surface, a plurality of riders mounted on each rail, each of said riders including a pair of opposed first portions defining axles, second portions each arranged at a right angle with respect to each of said first portions and having one end formed integrally with one end of said first portion, third portions each arranged at a right angle with respect to each of said second portions and having one end formed integrally with one end of said second portion, fourth portions each arranged at a right angle with respect to each of said third portions and having one end formed integrally with one end of said third portion, a fifth portion providing a cross member connecting the other ends of said fourth portions together, and a roller mounted on each axle and rollably engaging the adjacent rail, a U-shaped draw bar having the legs



thereof swivelly connected to the parts of said first portions exteriorly of said rollers, and a flexible cover extending between said rails and having the edges thereof secured to the bights of said draw bars, whereby said cover may be drawn along between said rails to shield plants therebetween or withdrawn to a nested and folded position adjacent one or the other adjacent ends of said rails.

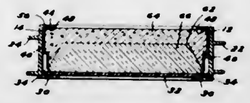
3,100,951
COMBINATION WATER DAM AND GRAVEL STOP
William P. Hickman, 1360 E. Maple Road, Birmingham, Mich.
Filed Jan. 16, 1961, Ser. No. 82,911
5 Claims. (Cl. 50—66)



1. A combination water dam, gravel stop and facia for the edge of a roof deck, comprising a cant secured to the edge of the roof deck and having an inclined surface sloping upwardly and outwardly from the roof deck, roofing material laid over said roof deck having a marginal portion overlying said inclined surface of said cant, a generally upright facia member extending along the edge of the roof deck, said facia member having a downwardly opening channel above said cant, and means for sealing the marginal portion of said roofing material and for holding said facia member in position including an elongated flexible, resilient rocker flashing strip extending along said inclined surface of said cant in overlying relation to the marginal portion of said roofing material, said flashing strip having a longitudinally extending section which is concavo-convex in cross-section with the convex side facing toward the marginal portion of said roofing material, the intermediate longitudinal portion of said concavo-convex section engaging the marginal portion of said roofing material, said flashing strip engaging within the channel of said facia member with an upward pressure along the edge of said flashing strip at one side of the intermediate portion thereof, and clamping means engaging said flashing strip at the opposite side of said intermediate portion and pressing the same toward the marginal portion of said roofing material tending to

straighten the cross-sectional outline of said concavo-convex section and to tensión the same, thereby to increase the pressure of engagement of said edge of said flashing strip within said channel and of the intermediate portion of said concavo-convex section with the marginal portion of said roofing material.

3,100,952
PRECAST PANEL CONSTRUCTION
Trevor W. Hall, Royal Oak, Mich., assignor to Panel Engineering Corporation, Royal Oak, Mich., a corporation of Michigan
Filed May 23, 1960, Ser. No. 31,140
12 Claims. (Cl. 50—413)



11. A prefabricated panel for use in construction of a curtain wall comprising:

an open center frame of a relatively light weight, relatively high expansion co-efficient material,

said frame including two end members secured to two side members and having a front and a rear,

each of said members having an interior surface which faces said open center of said frame,

each of said side members having adjacent its front edge portion a rearwardly disposed groove,

a retainer disposed adjacent said interior surface of each side member,

each retainer having a front edge portion with a groove interengaged with the groove in the side member adjacent thereto,

said interengaged grooves forming joints between the front edge portions of said retainers and side members by which said retainers are frontally held within said frame,

said members having adjacent their rearward portions flanges which project inwardly toward said open center of said frame,

a closure for the rear of said frame which includes a back plate retained within said frame by said flanges,

said retainers having rearward edge portions engaged against said closure and thereby holding said closure against said flanges,

said retainers having adjacent their said front edge portions flanges which project inwardly toward said open center of said frame,

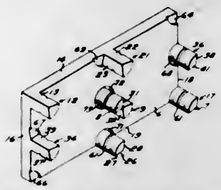
a block of relatively low expansion co-efficient material having edge portions in intimate contact with said retainers and the region of contact including the rearward faces of said flanges on said retainers,

said block having a rearwardly disposed portion engaged against said closure,

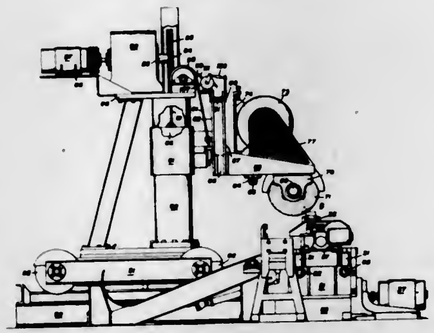
interengaged portions of said grooves being disposed at an oblique angle to the side-member-to-side-member direction of said frame so that said joints are expansible in said direction responsive to differential expansion of said frame and block.

3,100,953
PRECAST BLOCK AND WALL CONSTRUCTION
Delbert H. Johnson, 4344 Rose Lane, Concord, Calif.
Filed Feb. 15, 1960, Ser. No. 8,742
3 Claims. (Cl. 50—424)

1. A building block including a substantially rectangular planar base having a length in excess of the width thereof, a plurality of projections extending generally normal to said base, each of said projections constituting a one-quarter segment of a cylinder, a pair of said projections being disposed with their respective centers of curvature at the center of said base and lying along a diagonal of said base with adjacent sides of the respective projections defining a right angle, a projection disposed at the corners of said base containing said diagonal with the centers of curvature at said corners, and a projection positioned at each edge of said base at the center thereof with the center of curvature being disposed at the respective edge, said latter central edge projections each being oriented relative to said base substantially identically to the corner projection disposed along the same edge as the respective central edge projection.



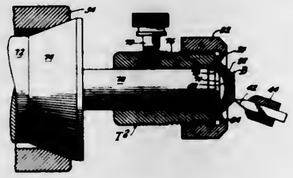
3,100,954
GRINDING MACHINE
Paul Di Lella, 61 Hardwicke Drive, Solvay, N.Y.
Filed Mar. 20, 1962, Ser. No. 181,012
3 Claims. (Cl. 51—165)



1. A grinder comprising a table having clamping means for clamping a work piece in fixed position thereon, means operable to effect reciprocation of said table over a path in a direction lengthwise of the work piece, a carriage mounted for horizontal movement toward and from said table in a direction transversely of said path, a vertically disposed column structure on said carriage, a support slidably mounted on said column structure for vertical movement toward and from the plane of said table, a grinding mount carried by said support above said table and including an arbor journalled for rotation and a grinding wheel mounted on said arbor, a motor operatively connected to said arbor for effecting rotation thereof, said mount having limited vertical movement relative to said support, means yieldingly urging said mount downwardly, a reversible motor connected to said support and operable in forward direction to move said support downwardly for engagement of said grinding wheel with a work piece clamped on said table, and said reversible motor being operable in reverse direction to move said support upwardly, said mount assuming a predetermined position relative to said support upon the pressure between said grinding wheel and work piece reaching a predetermined value, control means connected to said mount for actuation thereby upon the pressure between said wheel and work piece exceeding said predetermined value to energize a power circuit for operation of said reversible motor

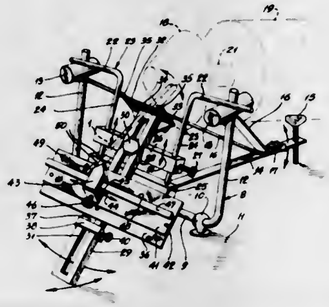
in reverse direction and, upon said pressure falling below said predetermined value, to energize said power circuit for forward operation of said reversible motor.

3,100,955
APPARATUS FOR PRODUCING CONTACT LENSES
Henry J. Kratt, Chicago, Ill., assignor to The Plastic Contact Lens Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1960, Ser. No. 24,473
10 Claims. (Cl. 51—217)



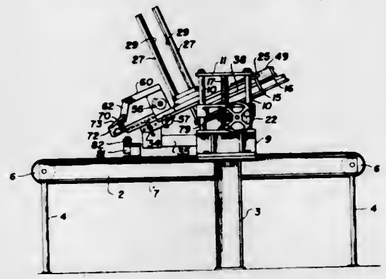
3. Apparatus for producing contact lenses comprising a lens blank holding tool having a rotor that has the edge of its end rounded to contact a spherical base curve of a lens blank with a true circle of contact, an orienting element axially movable relative to said rotor and having means normal to the axis thereof to engage one surface of an orienting flange of the lens blank, said rotor end and said means cooperating to hold the lens blank axis true to the axis of rotation of said rotor while a spherical power curve is formed on said blank opposite said base curve.

3,100,956
DRILL GRINDING APPARATUS
Samuel Niquet, 172 Bates St., New Bedford, Mass.
Filed Jan. 21, 1963, Ser. No. 252,750
6 Claims. (Cl. 51—219)



1. Multiple drill grinding apparatus comprising rotatable abrasive means having a grinding surface presenting a substantially flat transverse operative portion, and drill holding means associated with said abrasive means, said holding means comprising spaced support and pivot means disposed at the level of said operative portion of said grinding surface and on each side thereof, the line connecting said spaced support and pivot means being substantially parallel to said operative portion, a U-shaped support frame including a transverse member, spaced parallel legs and spaced axially aligned pivot members depending from said legs at an angle thereto, said pivot members engaging said support and pivot means for swinging movement with respect to said support and pivot means, a bar carried by said frame and disposed between said legs and longitudinally thereof, multiple drill support means carried by said bar to hold a plurality of drills side by side and in contiguous relationship with the longitudinal axes of said drills inclined to said operative portion of said grinding surface at an angle equal to the cuttng angle of the drill tips and with the tips of said drills in the vicinity of a line joining the axes of said pivot members and offset from said line, whereby, with a cutting lip and associated heel surface of said several drills held in contact with said operative portion of said grinding surface, swinging movement of said frame about said support and pivot means will produce sharpening of said cutting lip and grinding of said heel surface of each of said several drills.

3,100,957
MACHINE FOR EMBOSSING CONTAINER LIDS AND PLACING THEM ON CONTAINERS
William R. King, Blackridge, and John S. Ayers, Scott Township, Allegheny County, Pa., assignors to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 1, 1960, Ser. No. 40,456
14 Claims. (Cl. 53—67)

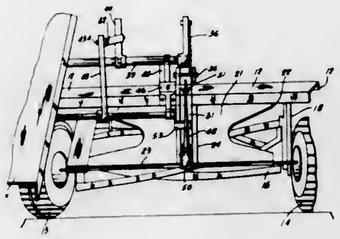


1. Apparatus for embossing container lids and positioning them on containers comprising a magazine for container lids, a pusher movable back and forth under the magazine for removing lids from the bottom of the magazine, an inclined chute having an open center area down which the pusher moves each lid which it removes from the magazine, cooperating rotary embossing die rollers in the open central area of the chute between which each lid is moved by the pusher and between which the pusher moves in pushing the lids down the chute, the die rollers having mating embossing dies projecting from the periphery thereof at one location about the periphery, said rollers being geared to rotate together to bring the mating dies into confronting relation during rotation, a rack connected with the pusher for driving the rollers alternately in one direction and then the other as the pusher moves one direction or the other, the die elements being positioned to be out of confronting relation at all times the pusher is moving between the die rollers, a conveyor for moving containers in succession under the lower end of the chute in the same direction as the can lids are moved by the pusher, a trip for engaging the leading edge of each lid and arresting the motion of the lid at the lower end of the chute, and means controlled by the travel of the container under the chute for moving the trip from such engagement with the leading edge of the lid when the leading top edge of a container is in a position to receive the corresponding edge of the lid whereupon the lid and container move together and the trailing edge of the lid is moved clear of the chute.

3,100,958
LAWN MOWER
Chester Williams, 5651 Carpenter Road, Ypsilanti, Mich.
Filed July 3, 1961, Ser. No. 121,497
3 Claims. (Cl. 56—7)

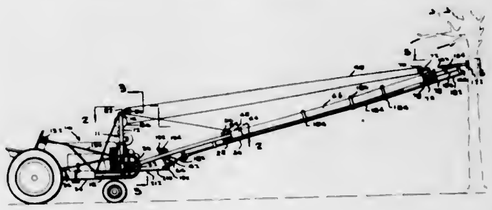
1. The combination with a mower, having a reel, cutting bar, wheels, rollers, spaced tie rods and means for moving

said mower of a plate member having depending bosses for receiving said tie rods to prevent lateral displacement of said plate from said mower, means securing said plate to said tie rods, a channel formed on the top face of said plate, a bolt extending through the webs of said channel, a U-shaped member pivoted at one end on said bolt, and pivoted at the other end to said means for moving said



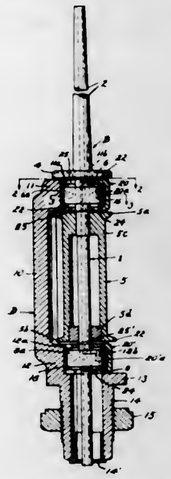
mower, said channel having a rearward extension overhanging said plate, linkage connecting the rear end of said extension to a lever, which is pivoted on said means for moving said mower, said linkage and said lever being arranged to pivot said plate and channel member whereby to rock said cutting bar and said rollers upwardly about the longitudinal axis of said mower.

3,100,959
TREE SHAKER
Morton E. Phelps, % Phelps Mfg. Co. Inc., 715 Thomas St., Little Rock, Ark.
Filed Mar. 31, 1961, Ser. No. 99,921
15 Claims. (Cl. 56—328)



1. A tree shaker comprising a mounting frame, a boom having a pair of arms swingably mounted on a horizontal axis on said frame, and a single arm adjustably positionable lengthwise of said boom, said boom having a lift cable and drive means on said frame, including a winch on the frame, operatively connected to said cable, a clutch operatively connected to said winch, and a brake operatively connected to said winch and operable at the off position of said clutch, and idle at the on position and an intermediate position of said clutch, an oscillating ram on the forward end of said single arm, comprising a quadrilateral linkage having a fixed arm secured to said single arm, forwardly thereof and in the general plane of said boom, a movable arm having a tree-engaging head, a pair of links of unequal effective lengths pivotally connecting said movable arm to said fixed arm, one of said links having an extension on the side of said fixed arm opposite from said movable arm, a cable connected to said extension, a lever pivoted on said boom and engaging said cable, spring means urging said lever rearwardly, said drive means including an eccentric, and means, including a lost motion coupling, connecting said eccentric to said lever.

3,100,960
TEXTILE SPINDLES
Paul G. Pavlovich, Jr., Euclid, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Oct. 10, 1961, Ser. No. 144,269
2 Claims. (Cl. 57—130)

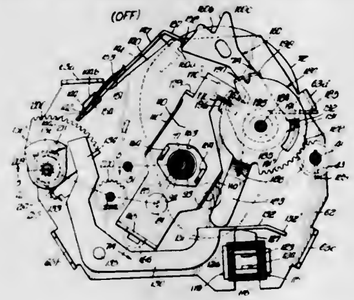


2. A textile spindle comprising a rigid mounting base adapted to be so disposed as to have an upright portion and vertically spaced apart arm portions terminating in generally semi-cylindrical coplanar cavities open in a direction away from the upright portion, a blade assembly including an elongated blade member having two axially spaced apart, self contained and sealed antifriction bearing units thereon, each having a circular rigid outer race and a resilient non-metallic flanged collar radially and axially embracing the race, said collars fitting respective said coplanar cavities, and rigid caps having similar cavities matching the base cavities and adapted to cooperate therewith snugly to embrace the collars radially, the caps having rigid arm portions snugly embracing respective collars axially and radially of the blade assembly, said blade assembly further including a driving whorl on the blade member disposed between the arm portions of the base, the arm portions of the caps being bifurcated to form slots open toward the base, loosely embracing the associated portions of the blade member and extending therebeyond toward the base member.

3,100,961
CLOCK OPERATED ELECTRIC SWITCH AND ALARM BUZZER CONTROL DEVICE
Ronald M. Bassett, Chicago, Ill., assignor to International Register Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 15, 1959, Ser. No. 846,632
12 Claims. (Cl. 58—38)

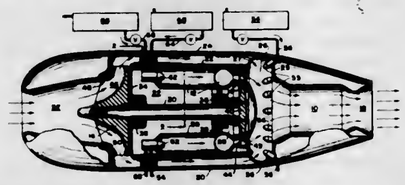
1. A clock controlled switch mechanism for use between an electrical power source and apparatus to be energized thereby comprising:
(*a*) a time driven rotatable member driven by a clock mechanism,
(*b*) a manually time settable rotatable member cooperating with said time driven member,
(*c*) one of said members being capable of shifting movement,
(*d*) cooperating cam surfaces on said members operative to effect a gradual shift of said shiftable member at the preset time which has been set up on said time settable member,

(*e*) a time responsive tripping lever adapted to have pivotal movement imparted thereto by the gradual shifting movement of said shiftabler otatable member,
(*f*) flipper latch means carried by said tripping lever,
(*g*) a rotatable switch control member operative in different positions to close and open an electric switch,
(*h*) a pivot post on which said switch control member is mounted for rotary movement,
(*i*) biasing spring means normally tending to rotate said switch control member in one direction of rotation about said pivot post,
(*j*) a manualy rotatable indexing knob operatively connected to rotate said switch control member in either direction of rotation about said pivot post,
(*k*) and latching shoulder means comprising a plurality of latching shoulders carried by said switch control



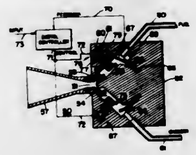
member with which the flipper latch means on said tripping lever is adapted to have releasable latching engagement,
(*l*) said latching shoulders rotating with said switch control member in a plurality of circular paths concentric with said pivot post and at different radii therefrom,
(*m*) said flipper latch means extending substantially radially with respect to said pivot post so as to be capable of having latching engagement with said latching shoulders on said switch control member,
(*n*) certain of said latching shoulders projecting to different latching heights whereby they are released by said flipper latch means at different times as said tripping lever is gradually raised to progressively higher unlatching levels by the gradual shift of said shiftable member.

3,100,962
TURBO-AIR-ROCKET ENGINE
Wolfgang C. Noeggerath, 4625 N. Rio Hondo Parkway, El Monte, Calif.
Filed Oct. 21, 1952, Ser. No. 316,111
2 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A jet propulsion device, comprising:
(*a*) an air compressor adapted to receive and compress ambient air,
(*b*) a gas turbine drivingly connected to the air compressor for operating the latter,
(*c*) a rocket propellant reaction chamber constructed to deliver products of combustion generated therein to the turbine in such manner that the turbine exhaust is a substantially annular stream surrounding the axis of rotation of the turbine,
(*d*) means for delivering rocket propellant to said reaction chamber for reaction therein and delivery to the turbine,
(*e*) a mixing and ignition chamber disposed rearwardly and adjacent the turbine having an annular zone in which ignition and mixing are initiated,
(*f*) an annular channel surrounding the reaction chamber adapted to deliver the compressed air to an annular outer portion of said zone and thence radially inwardly,
(*g*) means for delivering fuel to said mixing and ignition chamber at angularly spaced points therearound for impinging into the direction of discharge of the compressed air into said zone, said annular exhaust stream from said turbine also being directed into said annular zone, whereby fuel and air are mixed and maintained ignited in said zone by the turbine exhaust to provide initial combustion,
(*h*) a combustion chamber disposed rearwardly of the mixing chamber in which the combustion aforesaid is completed,
(*i*) and a thrust nozzle forming a rearwardly directed continuation of the combustion chamber for producing thrust.

3,100,963
CONTROL APPARATUS
Raymond E. Michel, Golden Valley, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 21, 1961, Ser. No. 153,866
10 Claims. (Cl. 60—35.6)

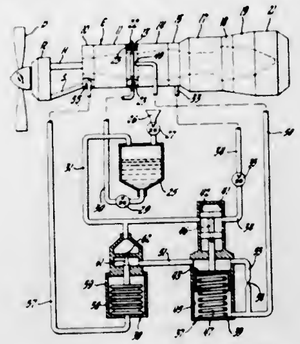


7. A digital reaction control system comprising: a detonation chamber; a plurality of passages each supplying a hypergolic chemical to said chamber; control means positioned within each of said passages, said control means comprising first valve means operable in response to a control signal to allow the chemicals to enter said chamber, and second valve means operable in response to a pressure produced by a detonation of said chemicals to prevent said chemical from entering said chamber; sensing means producing a feedback signal indicative of the operation of said second valve; and means combining an input signal and said feedback signal so as to produce said control signal.

3,100,964
WATER INJECTION SYSTEM FOR A MULTISTAGE COMPRESSOR
Eugene J. Bevers and Robert J. Wente, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,353
7 Claims. (Cl. 60—39.3)

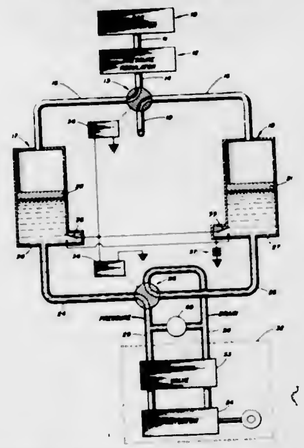
1. A system for injecting a cooling fluid into a multistage compressor comprising, in combination, a closed tank for the fluid, a duct connecting the tank to a stage of the compressor for delivering the fluid thereto, a compressed air delivery conduit connected to the tank for forcing the fluid from the tank, a compressed air supply

conduit connected to a higher pressure stage of the compressor than the said duct, a pressure regulating valve connecting the said conduits, and means responsive to



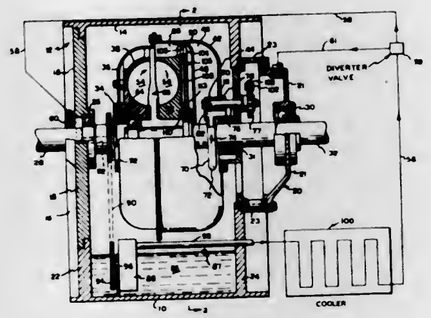
pressure in the first-mentioned stage connected to the regulating valve operative to maintain a predetermined pressure differential between the air in the delivery conduit and the first-mentioned stage.

3,100,965
HYDRAULIC POWER SUPPLY
Charles M. Blackburn, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 29, 1959, Ser. No. 843,326
5 Claims. (Cl. 60—51)



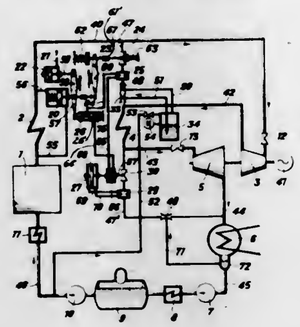
1. A hydraulic power supply for a guided missile, comprising a source of gas under pressure, an electrically operated gas switching valve connected to said source, at least a pair of fluid pressure generating cylinders connected to said gas switching valve, said gas switching valve supplying alternately gas under pressure from said source to one of said cylinders and exhausting alternately gas from the other of said cylinders as the switching valve is operated, said one cylinder receiving gas under pressure being arranged to discharge fluid, said other cylinder exhausting gas being arranged to receive fluid, a disc-shaped displacement piston dividing each of said cylinders into a pair of expansible chambers and slidably disposed therein, the first of said chambers being supplied with gas, the second of said chambers containing fluid, said disc-shaped displacement pistons being subjected alternately to gas under pressure in said first chamber for pressurizing the fluid in said second chamber, a gas switching circuit, a switch included in said circuit and disposed within said first chamber and actuated by the disc-shaped piston therein, a solenoid included in said gas switching circuit for operating said gas switching valve as the switch in said first chamber is actuated by the disc-shaped piston therein, an electrically operated fluid switching valve having a pair of conduits respectively connected to said second chambers of said cylinders, a load pressure line connected to said fluid switching valve, a load drain line connected to said fluid switching valve, said fluid switching valve being arranged to interchange connections from said conduits from said second chambers of said cylinders with said load pressure line and said load drain line so as to maintain said load pressure line connected to the one of said second chambers delivering pressure fluid as the fluid switching valve is operated, a fluid switch circuit, an additional switch included in said fluid switching circuit and disposed within said second chamber and actuated by the disc-shaped piston therein, and an additional solenoid included in said fluid switching circuit for operating the fluid switching valve as the additional switch is actuated by the disc-shaped piston in the second chamber.

3,100,966
FLUID DRIVE
Richard M. Nelden, Birmingham, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,160
8 Claims. (Cl. 60—54)



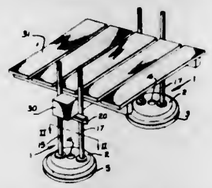
6. In a fluid coupling,
a toroidal work chamber defined by opposed impeller and runner shells,
means for continuously supplying liquid to said work chamber,
casing means connected to said impeller shell and enclosing said runner shell in spaced relation to form a rotatable chamber to hold a rotating ring of liquid,
said rotatable chamber being coaxial to said work chamber and in free liquid communication therewith whereby the level of liquid in said rotatable chamber determines the amount of liquid in said work chamber and the slip in said coupling,
adjustable regulating means for regulating the quantity of liquid in said rotatable ring and thereby the amount of liquid in said work chamber,
declutch passage means extending from an inlet mouth at the peripheral level of said runner to an exhaust opening positioned between said coupling axis and said inlet mouth,
and said exhaust opening being oriented to discharge liquid out of said work chamber and back to said supply means.

3,100,967
STEAM POWER PLANT
Alfred Brunner, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland, a Swiss company
Filed Oct. 11, 1960, Ser. No. 62,035
Claims priority, application Switzerland Oct. 15, 1959
8 Claims. (Cl. 60—73)



1. A steam power plant comprising an evaporator, a superheater, a steam consuming machine, conduit means to conduct steam from the evaporator through the superheater to said machine, a bypass line connected into said conduit means between the superheater and machine, a valve in said bypass line, means to develop a signal representative of the rate of steam flow at a location in said conduit means between the evaporator and the connection of the bypass line into said conduit means, and means responsive to said signal to open said valve upon decline in said rate of steam flow below a specified level.

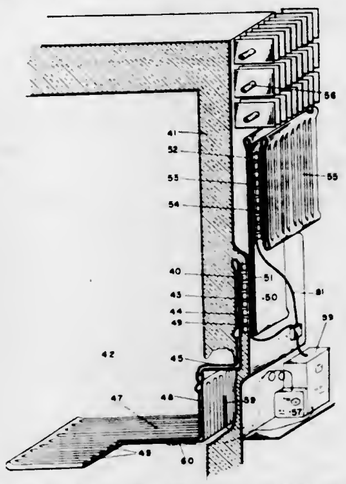
3,100,968
MARINE DOCK
Thomas E. Bourdon, 2533 Cumberland St., Muskegon, Mich.
Filed June 22, 1960, Ser. No. 37,988
3 Claims. (Cl. 61—48)



1. A support for a boat dock and the like, comprising: a base member having a substantial cross sectional area; said base section shaped to include depending flanges extending downwardly therefrom to form a cavity at the underside thereof; a vent in the top of said base member communicating with said cavity; a pair of spaced supporting poles secured to said top of said base member and extending upwardly therefrom; and a bracket removably secured to and extending between said poles a spaced distance from the tops thereof.

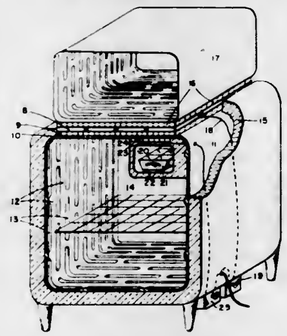
3,100,969
THERMOELECTRIC REFRIGERATION
Thore M. Elfving, 433 Fairfax Ave., San Mateo, Calif.
Filed Aug. 3, 1960, Ser. No. 47,161
11 Claims. (Cl. 62—3)

11. A thermoelectric heat pump comprising a thermocouple assembly having hot and cold junctions, a condenser in heat exchange relationship with the cold junctions of said thermocouple assembly, an evaporator, said condenser and evaporator formed by different portions of a hermetically sealed system partly filled with a volatile liquid, said system including first and second plates



joined directly to one another at distributed contact areas to form a multitude of passages, the condenser portion of said system disposed above the evaporator portion, and means for applying electric energy to said thermocouple assembly.

3,100,970
THERMOELECTRICALLY REFRIGERATED APPARATUS
Thore M. Elfving, 433 Fairfax Ave., San Mateo, Calif.
Filed Mar. 14, 1961, Ser. No. 95,599
24 Claims. (Cl. 62—3)



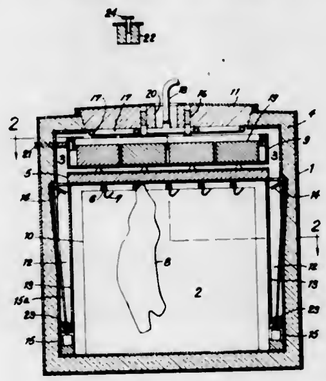
1. A refrigerator comprising a first refrigerating chamber, a second refrigerating chamber of a higher temperature than said first refrigerating chamber, at least a first and at least a second thermocouple assembly, each having hot and cold junctions, a one-way heat transfer system comprising, a double-walled member partly filled with a refrigerant, said double walled member having a heat absorbing evaporator portion and a heat dissipating condenser portion at a higher level than the evaporator portion, said condenser portion being in direct thermal contact with the cold junctions of said second thermocouple assembly, said evaporator being in heat exchange relation to said second refrigerating chamber, the hot junctions of said first thermocouple assembly being in direct thermal contact with said double walled member, the

cold junction side of said first thermocouple assembly being in heat exchange relation with said first refrigerating chamber for cooling the same, means for dissipating heat from the hot junction side of said second thermocouple assembly, and means for supplying said first and second thermocouple assembly with electric energy.

3,100,971
METHOD AND APPARATUS FOR STORING AND SHIPPING PERISHABLE MATERIAL

Willard L. Morrison, Lake Forest, Ill., assignor to Reliquefier Corporation, New York, N.Y., a corporation of New York

Filed Apr. 10, 1961, Ser. No. 101,823
4 Claims. (Cl. 62—64)



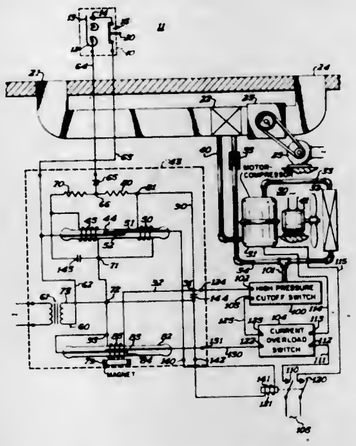
1. The method of storing food which consists in placing a body of frozen food in a frozen food zone, showering such food with liquid nitrogen at atmospheric pressure until the water of composition of the frozen food has reached a predetermined low point, then closing the zone, placing fresh food at temperature in the order of 29 to 35 degrees F. in a fresh food zone, closing that zone, conducting cold gas from the frozen food zone into heat radiating relationship with the fresh food zone, while preventing entrance of the gas into the fresh food zone.

3,100,972
CONTROL APPARATUS

John W. Mobarry, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 14, 1962, Ser. No. 179,693
5 Claims. (Cl. 62—161)

1. In a refrigeration motor compressor control apparatus having an abnormal condition shut down circuit which can be remotely reset for normal operation, space temperature responsive switch means for providing closed circuit when the space temperature reaches a predetermined temperature, a source of power, a reed relay having a first and a second energization winding and a first switch which closes when said first winding is energized and opens when both of said windings are energized, a second reed relay having an energization winding and a second switch which is opened when said last mentioned energization winding is energized, said second switch being biased normally closed, abnormal operating condition responsive switch means having an open circuit upon the presence of an abnormal condition, circuit means including said temperature responsive switch means for connecting a parallel circuit of said first and second windings to said source, shunt circuit means connecting a circuit of said second switch and said abnormal condition switch means in parallel with said second energization winding whereby said space switch means upon closing said first switch is adapted to energize a motor compressor, circuit means connecting the energization winding of said second reed relay in parallel with said second

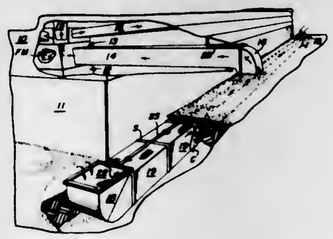


winding whereby upon said abnormal condition switch means opening said motor compressor is de-energized until the circuit of said temperature responsive switch means is opened.

3,100,973
SYSTEM FOR COOLING AIR BY SUBTERRANEAN MEANS

Hans W. Spoerl, 2015 5th Ave. S., Great Falls, Mont.

Filed Apr. 24, 1962, Ser. No. 189,895
4 Claims. (Cl. 62—260)

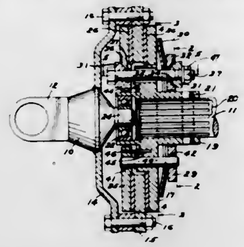


1. In a cooling system for buildings and the like,
(*a*) means to circulate air therein having a forcing chamber through which air is delivered,
(*b*) a cooling air duct communicating with said chamber,
(*c*) means to supply water about the exterior of said cooling duct to cool air passing therethrough,
(*d*) said duct having a plurality of sections,
(*e*) each section having an outwardly extending hook flange,
(*f*) straps having hook flanges interengaged with said hook flanges,
(*g*) said sections having staggered containers open to the passage of water therethrough,
(*h*) moisture retaining means in said containers,
(*i*) perforated piping to supply water over the exterior of said sections,
(*j*) screen means on said duct sections, to receive water from said piping, and
(*k*) absorbent water-spreading material about said cooling duct and adjacent piping.

3,100,974
CLUTCH

Raymond W. Wilson, Washington, and Bruno Brilts, Royal Oak, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Apr. 28, 1961, Ser. No. 106,352
9 Claims. (Cl. 64—30)

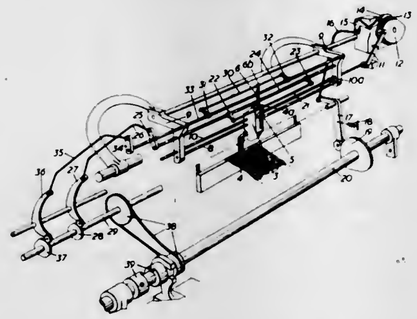


1. An overrunning, torque limiting clutch comprising: a driving shaft, a driving clutch plate fixed thereto, a coaxial driven shaft, a driven clutch plate fixed thereto, a pressure plate, the driving plate being interposed between the pressure plate and the driven plate and the pressure plate being capable of limited rotation about the driven shaft and adapted to press the clutch plates into frictional engagement, means responsive to torque from the driving shaft in one direction for angularly displacing the pressure plate due to frictional drag between the pressure plate and driving plate, means responsive to displacement of the pressure plate for pressing the driving plate, driven plate and pressure plate together, and means for limiting the pressure between the pressure plate, driving plate and driven plate caused by said displacement of the pressure plate.

3,100,975
STRAIGHT BAR KNITTING

Leonard Brown, Nottingham, and Alan Edward Hincklieff, Epperstone, England, assignors to William Cotton Limited

Filed Oct. 27, 1959, Ser. No. 849,091
Claims priority, application Great Britain Oct. 28, 1958
5 Claims. (Cl. 66—96)

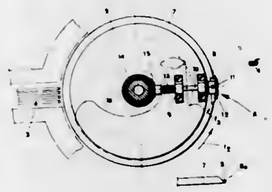


1. In a straight bar knitting machine, in combination, a cable stitch forming apparatus comprising a row of needles; a transfer unit including a supporting means, a first transfer means including a first group of transfer elements, and second transfer means including a second group of transfer elements, said first group of transfer elements registering with a first group of said needles and said second group of transfer elements registering with a second group of said needles in a normal position of said transfer unit, each of said transfer means being movable toward and away from said needles, and said transfer unit being movable with said first and second transfer means along said row of needles; first operating means for moving said transfer unit from said normal position to a shifted position in which said first group of transfer elements registers with said second group of needles, and back to said normal position; second operating means for moving said first transfer means towards and away from said needles for picking up by said first group of transfer elements a group of loops from said first group of needles and for depositing the loops on said second group of needles after a movement of said transfer unit; third operating means for moving said second transfer means toward and away from said needles for picking up by said second group of transfer elements a group of loops from said second group of needles and depositing the loops on said first group of needles after an opposite movement of said transfer unit; and control means operatively connecting said first, second and third operating means for effecting shifting of said transfer unit and loop transfer movements of said transfer means in a timed sequence.

3,100,976
YARN SEVERING DEVICE FOR A CIRCULAR KNITTING MACHINE

Giorgio Billi, Viale Torricelli 23, and Vinicio Luchi, Via Lavilla 179, Galceti-Prato, both of Florence, Italy

Filed Feb. 15, 1961, Ser. No. 89,501
Claims priority, application Italy Feb. 16, 1960
6 Claims. (Cl. 66—145)



1. In a circular knitting machine having a rotatable needle cylinder carrying needles to which yarn is fed and means for withdrawing yarn from the needles, a device for severing yarn withdrawn from the needles, comprising: a stationary cutting edge, a driven wheel having a non-circular cutting edge cooperating with said stationary cutting edge to cut the yarn withdrawn from the needles, and means resiliently urging the wheel axially towards the axis of said cylinder to press the non-circular cutting edge into engagement with the stationary cutting edge.

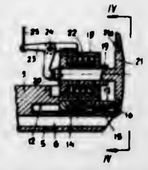
3,100,977
YARN SEVERING DEVICE FOR CIRCULAR KNITTING MACHINES

Giorgio Billi, Viale Torricelli 23, and Vinicio Luchi, Via Lavilla 179, Galceti-Prato, both of Florence, Italy

Filed Feb. 15, 1961, Ser. No. 89,503
Claims priority, application Italy Feb. 15, 1960
3 Claims. (Cl. 66—145)

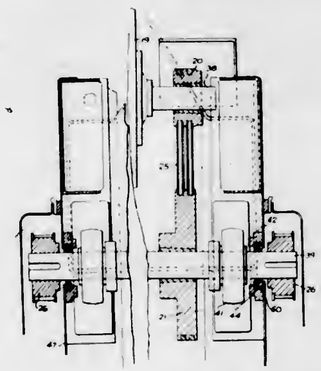
1. A yarn severing device for a circular knitting machine including a rotatable needle cylinder carrying a plurality of needles and raisable guides for yarn fed to the needles, comprising: first and second rotary elements having cooperating circular edges engaging one another to sever yarn extending between a raised yarn guide and the needles, said elements being rotatable in intersecting planes, the second one of said rotary elements including a slightly cupped disc, the plane of rotation of the second

rotary element being substantially normal to the plane of rotation of the first of said rotary elements, a part of the cutting edge on one side of the axis of rotation of the



second rotary element extending beyond the cutting edge of the first element to ensure contact between the two cutting edges.

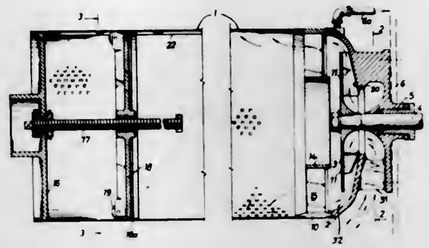
3,100,978
WASHING MACHINES
Edward John Howlett, London, England, assignor to Isaac Braithwaite & Son Engineers Limited
Filed Aug. 15, 1961, Ser. No. 131,975
Claims priority, application Great Britain Aug. 16, 1960
5 Claims. (Cl. 68—140)



1. A washing machine comprising a liquid container having parallel end walls, each wall having a large opening therein, a hinged door carried by each end wall to provide fluid-tight closures for said openings, a perforated rotatable drum with open ends positioned in said container in axial alignment with said openings, two endless flexible elements in the form of closed loops supporting said drum wholly within the areas defined by said loops and means including pulleys for carrying and driving the flexible elements with the drum supported by said elements.

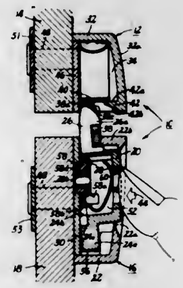
3,100,979
BEAM DYEING MACHINES
Edward Stanway, Ringates, Andrew Grove, Macclesfield, England
Filed Mar. 24, 1961, Ser. No. 98,232
Claims priority, application Great Britain Mar. 29, 1960
14 Claims. (Cl. 68—150)

2. In a beam dyeing machine characterized by a tank adapted to contain dye liquor and a hollow perforated beam adapted to have cloth to be dyed wound on its periphery and rotatably mounted in said tank, said beam having one end closed by an end wall and its other end closed by a housing having an inlet open to receive liquor directly from said tank and an outlet adapted to direct dye liquor longitudinally into said beam, and a motor driven rotor within said housing adapted when rotated to draw dye liquor from the tank through the housing inlet and discharge said liquor into said beam whereby to develop sufficient liquid pressure within the beam that said dye liquor is forced through said beam perforations



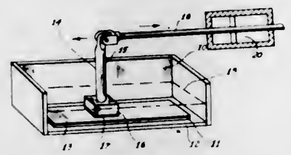
and the cloth back into the tank for recirculation by the rotor without leaving the tank.

3,100,980
LUGGAGE LATCH
John B. Humphries, Stamford, Conn., assignor to The Excelsior Hardware Company, Stamford, Conn.
Filed Oct. 18, 1961, Ser. No. 145,857
5 Claims. (Cl. 70—71)



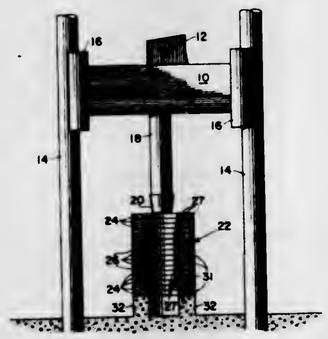
1. A latch for luggage or like containers having a lid and a bottom, said latch comprising, in combination, a bolt, a keeper secured to said lid and adapted to engage said bolt to hold said luggage closed, said keeper having a cavity formed with a protruding shelf, said bolt having a notched prong adapted to fit in said cavity and engage said shelf, a housing secured to said bottom and having a recess in which said bolt is retained with said prong extending from said recess through a first aperture in said housing, said housing having a cam extending therefrom toward said keeper, said cam being positioned to align said keeper cavity with said prong during the closure of said latch, said bolt being movable with respect to said housing to disengage said prong from said shelf, a first spring retained in said cavity and bearing against said cam when said latch is closed to urge said prong of said bolt out of said cavity so that when said prong is disengaged from said shelf, said container automatically opens.

3,100,981
METHOD AND APPARATUS FOR EVALUATING THE RELATIVE ABRASIVENESS OF INKS
Loy S. Engle, Harrington Park, and Hugh J. Dunn, Pines Lake, N.J., and Kenneth A. Bownes, Queens Village, N.Y., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Filed Oct. 6, 1959, Ser. No. 844,660
4 Claims. (Cl. 73—7)



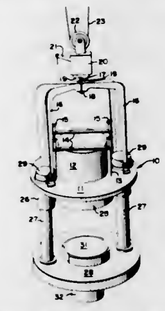
2. Apparatus for testing the abrasiveness of inks comprising a reservoir for holding the ink to be tested, a glass plate mounted within said reservoir having a thin uniform coating of high vacuum evaporated chromium deposited on one surface thereof, a rubbing member reciprocatably mounted within said reservoir, said member having one planar surface covered with a non-abrasive resilient fabric in frictional contact with said chromium coating and means for reciprocating said rubbing member over said chromium coating.

3,100,982
CONTROLLED SHOCK OR IMPACT TESTING FIXTURE
Clarence W. Cutler, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 28, 1960, Ser. No. 79,082
5 Claims. (Cl. 73—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



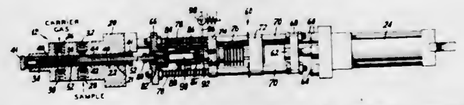
1. Shock testing apparatus for producing shock pattern with separate control of rise time with respect to dwell time for use with a drop tower having a carriage on which a test specimen is mounted for shock testing and guide means for guiding said carriage in free fall when allowed to fall from said tower comprising, a fixed blade extending downward from the underside of said carriage, said blade being tapered at its lower end and having a friction rubbing surface thereabout, a tightly fitting friction scabbard into which said blade enters as said carriage approaches the end of a free fall, said scabbard mounted at the base of said drop tower and a pressure sensing means between said scabbard and the base of said drop tower for recording the shock pattern of impact at the end of a free fall of carriage and test specimen.

3,100,983
DROPABLE SHOCK TESTER
Valmore F. De Vost, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 9, 1961, Ser. No. 143,989
9 Claims. (Cl. 73—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A drop shock tester comprising an anvil, a hollow cylindrical stabilizing member secured to the lower surface of said anvil with the axis thereof normal thereto, a pair of guide members secured to said anvil and having stop members on the upper end portions thereof, a carriage slideably carried by said guide members and moveable from engagement with said stop members into contact with said anvil as the tester is dropped and the anvil strikes a target area, means for supporting a load on said carriage, and means including a bridle secured to said carriage for raising the carriage and anvil to an elevated position prior to a dropping operation.

3,100,984
VAPOR FRACTION ANALYZER
Sterling T. Martin, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Sept. 28, 1959, Ser. No. 842,921
9 Claims. (Cl. 73—23)

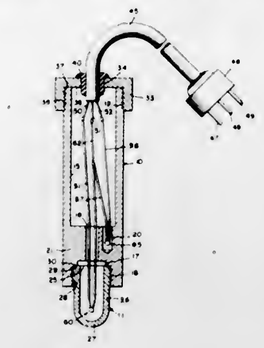


1. In a vapor phase chromatographic analyzer which includes sampling means interposed between a carrier gas passage means and a multi-component fluid sample passage means for transporting a precise volume of a sample fluid from the latter passage means to the former passage means for injection of said volume of sample fluid into a carrier gas stream, the improvement which comprises means for injecting all or a selected amount of said precise volume of sample fluid into the carrier gas stream, which last named means comprises a variable volume chamber containing said precise volume of sample fluid at a first volume setting and means for reducing said volume by a predetermined amount when it is desired to inject sample fluid into the carrier gas stream, the amount of volume reduction equaling the volume of sample fluid injected into the carrier gas stream.

3,100,985
APPARATUS FOR DETERMINING FLUID CHARACTERISTICS
Arthur N. Wells, P.O. Box 696, Belmont, Calif.
Filed June 27, 1960, Ser. No. 38,869
8 Claims. (Cl. 73—27)

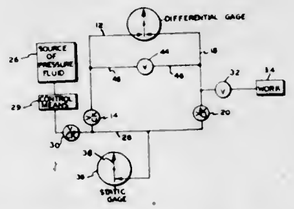
1. Apparatus for determining fluid characteristics comprising a body means including first and second por-

tions, said first and second portions being formed of metallic and non-metallic portions respectively which provide boundary layer films of different characteristics when in the presence of a body of fluid, a first temperature-sensitive impedance means operatively associated



with said first body portion and a second temperature-sensitive impedance means operatively connected with said second body portion, and measuring means connected with said impedance means for measuring the relative impedance thereof.

3,100,986
LEAKAGE INDICATOR
Louis Starr, Oak Park, Allan L. Kaplan, Detroit, Myron L. Greenberg, Pontiac, and Lewis J. Cox, Drayton Plains, Mich., assignors to Starr-Kap Engineering Company, Detroit, Mich., a corporation of Michigan
Filed July 8, 1960, Ser. No. 41,595
13 Claims. (Cl. 73—40)



11. In a leakage detection system,
a fluid pressure differential indicator having two sides,
a source of pressurized fluid,
conduit means connected to supply pressurized fluid from said source to each side of said indicator,
a conduit connected to one side of said indicator to admit pressurized fluid to work to be tested,
check valve means in said conduit means preventing reverse flow from each side of said indicator and from the work back to said means to said source,
and a separate valved conduit connected directly across the two sides of said differential indicator.

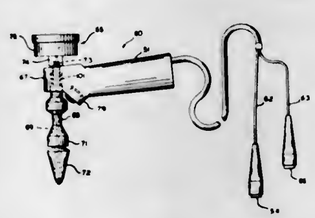
3,100,987
METHOD OF AND APPARATUS FOR ULTRASONICALLY TESTING BUTT WELDS
Hans Bincer, Renfrew, Scotland, assignor to Babcock & Wilcox Limited, London, England, a British company
Filed Sept. 15, 1959, Ser. No. 840,119
Claims priority, application Great Britain Sept. 19, 1958
10 Claims. (Cl. 73—67.7)

5. A device for ultrasonically testing a butt weld in a workpiece comprising a probe head which includes a vibration transmitting body, a vibration receiving body secured to said transmitting body, means for acoustically insulating one body from the other, each of said bodies having a workpiece contacting face surface and an oppositely disposed top surface, said top surface of each of said bodies being disposed at an angle to the plane of its respective contact surface, a plurality of contact testing transducers disposed on each of said top surfaces, each of said bodies at one end thereof being formed with a



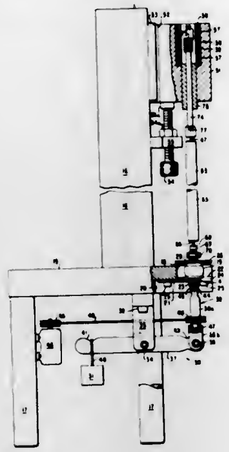
rebate, the rebate of each body having a base defined by a plurality of mutually angularly disposed facets, and a fault finding transducer disposed on each of said facets, said fault finding transducers being arranged to direct and receive ultrasonic vibrations through various areas of the workpiece surface, said contact testing transducers being arranged to direct and receive ultrasonic vibrations to and from the same said areas of the workpiece surface to test the contact between said workpiece contacting face surface and said workpiece.

3,100,988
APPARATUS FOR MEASURING COMPRESSION OF INTERNAL COMBUSTION ENGINES
Ralph Mansfield, Chicago, Ill., assignor to Auto-Test, Incorporated, Chicago, Ill., a corporation of Illinois
Filed July 9, 1956, Ser. No. 596,761
8 Claims. (Cl. 73—116)



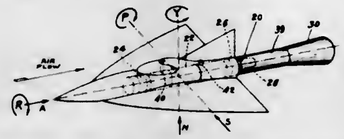
1. Apparatus of the class described for simultaneously cranking an internal combustion engine and measuring the compression in a chamber thereof, said apparatus comprising in combination: measuring means including a pressure sensitive gauge, a tube connecting said gauge with an engine combustion chamber, a resilient bushing supported at one end of said tube for effecting a seal against the escape of gases from a combustion chamber when the gauge is in communication therewith, a manually releaseably valve disposed in said tube for trapping pressurized gases within said tube and gauge, a handle extending angularly from said tube and forming a means of guiding the same, switch means supported by said handle and including a housing having a pair of electrical leads extending therefrom for placing an engine starter in circuit with a source of electrical power, a switch actuator for closing said switch means, said switch actuator being actuated by movement of said handle relative to said tube, whereby when said measuring means is operatively positioned in relation to a combustion chamber opening, and said bushing effects a seal therewith, said switch actuator simultaneously actuates said switch means to close a circuit to crank an engine for a length of time sufficient to obtain a reading on the gauge.

3,100,989
BEARING PRELOAD TESTER
William A. Jones, Hingham, Mass., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed July 19, 1960, Ser. No. 43,777
7 Claims. (Cl. 73—140)



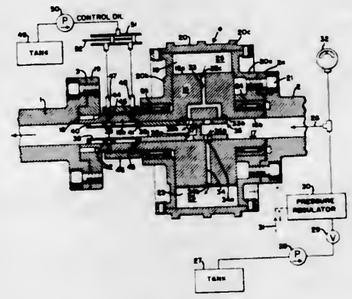
1. A testing device adapted for determining the axial preload of bearing assemblies of the kind comprising a shaft member rotatably mounted in bearings supported by a housing member, said testing device comprising, in combination; means for supporting the bearing assembly, means for applying an axial displacing load to a first member of the bearing assembly, means including a linear motion transducer having a movable element for measuring the relative axial displacement of the members of the bearing assembly, and elongated connecting means extending along the axis of said first member for transmitting the axial displacement of the bearing assembly to said transducer, said connecting means including at least one transversely flexible portion of relatively short length and being relatively stiff over the remaining length thereof, said connecting means being secured to said movable element at one end thereof and adapted for connection to said first member of the bearing assembly at the other end thereof.

3,100,990
TWO-PLANE BALANCE
John Dimeff, San Jose, Calif., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Aug. 2, 1960, Ser. No. 47,122
12 Claims. (Cl. 73—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A temperature compensated force measuring device in which substantially all contraction and expansion of elements due to temperature changes is along the longitudinal axis of the device, comprising, in combination, a hollow force transmitting element; a restraining element at each end of said force transmitting element; a plurality of flexure means at either end of said force transmitting element lying in planes at each of its ends substantially perpendicular to the longitudinal axis of the force transmitting element and connecting said force transmitting element and said restraining elements, said planes being the planes in which applied forces are measured; force sensing means on said flexure means; and a ground support member supported concentrically of said hollow force transmitting element out of contact therewith and securely attached to each of said restraining elements, said ground support member constructed for attachment to a support; whereby as a result of said construction in which all flexure elements through which applied forces are measured are located in two parallel planes at either end of the force transmitting member substantially perpendicular to the mutual longitudinal axis of the force transmitting member and the concentrically arranged, fixed ground support member and serve as connections between these members, axial expansion and contraction due to temperature changes can be readily compensated.

3,100,991
REVERSIBLE HYDRAULIC TORQUE APPLIER
Eugene E. Shipley, Middleton, Mass., assignor to General Electric Company, a corporation of New York
Filed Oct. 30, 1961, Ser. No. 148,415
2 Claims. (Cl. 73—162)

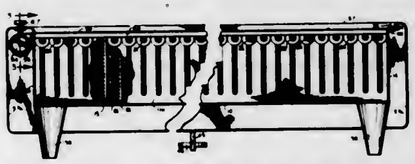


1. In a rotatable hydraulic torque-applier for applying torque to the gear members of a locked gear train while the gear members are rotating, the combination of:
a rotor defining a bore hole along the axis thereof and having a plurality of circumferentially spaced radially extending paddle members,
a rotatable housing disposed around said rotor and having a plurality of circumferentially spaced paddle members defining together with said rotor paddle members first and second series of alternating circumferentially spaced chambers between said respective rotor and housing paddle members,
a source of fluid under pressure connected to said rotor bore hole,
first conduit means connected between each of said first series of chambers and the bore hole and terminating on the radially inner end at ports defined at two axially spaced locations in the bore hole,
second conduit means of the same radial length as said first conduit means and connected between each of said second series of chambers, and the bore hole and terminating on the radially inner end at ports defined by the bore hole between said first axially spaced conduit ports,
axially slidable reversing valve means disposed in the bore hole and defining two axially spaced sets of ports cooperating with said first and second conduit ports, said reversing valve being movable to first and second positions for selectively connecting either said first or second series of chambers to said fluid pressure

source while draining the other series of chambers through the bore hole,

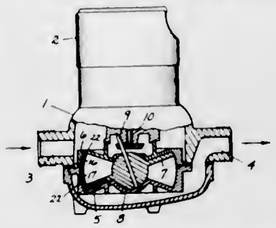
and means for axially shifting the position of said reversing valve means while the members rotate, whereby torque may be applied between rotor and housing in either direction.

3,100,992
MEANS FOR PREPARING MATTRESS PROFILE CHART
Perry J. Davis, R.R. 2, near Noblesville, Ind.
Filed Sept. 15, 1960, Ser. No. 56,274
11 Claims. (Cl. 73—172)



1. In a device for indicating weight distribution of a person for determining a mattress construction; a plurality of parallel, aligned horizontally disposed tubes; resilient means supporting said tubes; a rod longitudinally slidably carried in each of said tubes; a vertical back-up wall across common ends of said rods; means engaging said rods for shifting them in said tubes toward said back-up wall; and means carried by said back-up wall engaging said rods when said rods are shifted toward the back-up wall for recording positions of said tubes.

3,100,993
WATER METER
Russell W. Wetjen, Buffalo, N.Y., assignor to Buffalo Meter Company, Incorporated, Buffalo, N.Y., a corporation of New York
Filed May 3, 1960, Ser. No. 26,488
2 Claims. (Cl. 73—258)



1. In a nutating piston water meter, a measuring chamber having upper and lower parts, a nutating disc piston in the chamber, a radially extending thrust roller carried by said disc and having a head extending beyond the edge of the disc, said upper and lower parts having aligned arcuate slots receiving the head of the roller with sides of the slots on opposite sides of the head, a straight hole drilled in each of the upper and lower parts with the hole in the lower part adjacent one side of the slot in the lower part and with the hole in the upper part adjacent the corresponding side of the slot in the upper part, the major portion of the holes being outside said slots and each of said holes having an intersection with the side of the slot to which it is adjacent, said intersections being of width less than the diameter of the holes, and cylindrical inserts of non-metallic bearing material in said holes with surfaces projecting into the slots through the intersections of the holes with the sides of the slots to provide thrust bearing surfaces for the head of the roller.

3,100,994
PULSE-ECHO GAUGING SYSTEM
Miguel C. Junger, Cambridge, Mass., assignor to Acoustica Associates, Inc., Los Angeles, Calif., a corporation of New York
Filed Aug. 5, 1960, Ser. No. 47,877
4 Claims. (Cl. 73—290)

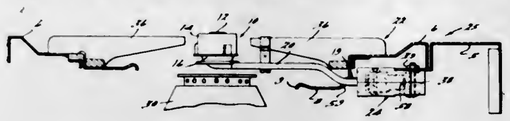


1. In a system for echo ranging from a reference region to a liquid surface, first and second elongated tubular conductors of elastic wave energy disposed to extend from said reference region through said surface, means acoustically coupled to said first conductor to establish elastic wave vibrations therein in a radial mode having axial symmetry and propagating axially along said conductor between said reference point and said surface, and electromechanical transducer means acoustically coupled to said second conductor adapted to respond to similar vibrations propagating in said second conductor, the ratio t/D between the maximum wall thickness "t" and the mean diameter "D" of each conductor being of the order of 5 percent.

3. In combination, a container for a liquid, said container having a horizontal cross section which is nonuniform with respect to vertical position in said container, an elongated tubular conductor of elastic wave energy disposed to extend from a reference point substantially vertically to a region near the bottom of said container, and means acoustically coupled to said conductor to establish elastic wave vibrations therein in a radial mode having axial symmetry and propagating axially along said conductor between said reference point and said region, the ratio t/D between the maximum wall thickness "t" and the mean diameter "D" of said conductor being of the order of 5 percent, the wall thickness "t" of said conductor being varied with respect to axial position therein to provide thinner conductor wall sections in regions of larger horizontal cross section of said container so that equal times of propagation of said waves therein will correspond to equal cross-sectional volumes of said container.

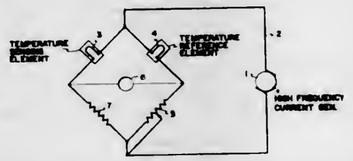
3,100,995
TEMPERATURE SENSER ASSEMBLY
Gary F. Woodward, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., Ann Arbor, Mich., a corporation of Michigan
Filed Jan. 26, 1962, Ser. No. 169,066
7 Claims. (Cl. 73—343)

7. A temperature senser assembly for sensing the temperature of a utensil in heat transfer relationship with a surface heater, a spider for supporting said utensil having a plurality of circumferentially spaced arms defining a central opening, senser means having outwardly projecting conduit means adapted to be inserted through said central opening and locate said senser means concentrically with respect to said central opening for intimate heat transfer contact with the underside of said utensil, terminal means on said conduit means adapted to electrically connect with a releasable plug-in action to terminal means associated with means affected by said senser



means to temperature control means, and hanger means comprising a looped upper portion adapted to slidingly engage one of said spider arms and an outwardly projecting arm carrying said conduit for positively but removably supporting said senser means relative to said surface heater.

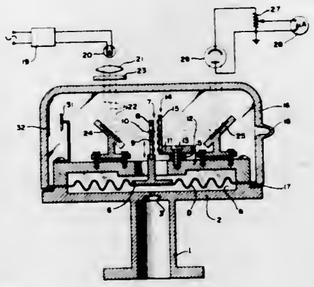
3,100,996
TEMPERATURE MEASURING INSTRUMENT
Leland H. S. Roblee, Jr., Metuchen, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,129
2 Claims. (Cl. 73—362)



1. An instrument for measuring rapidly fluctuating temperatures comprising, in combination, a temperature sensing means consisting of a single electrical conductor exposed to the fluctuating temperature medium, the electrical resistance of said conductor changing with temperature, a high frequency electrical current generator supplying an alternating current connected in series with said conductor, wherein the frequency of said alternating current supplied to said conductor is in the range of 10 to 10,000 megacycles per second, the path of travel of said current over said conductor being substantially confined to the surface of said conductor, and a means responsive to measure the changes in electrical resistance of said temperature sensing means.

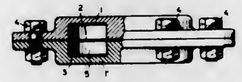
3,100,997
DIAPHRAGM VACUUM GAUGE
Albert Lorenz, Hanau am Main, Germany, assignor to W. C. Heraeus G.m.b.H., Hanau am Main, Germany, a corporation of Germany
Filed Aug. 7, 1961, Ser. No. 129,895
Claims priority, application Germany Aug. 18, 1960
2 Claims. (Cl. 73—388)

1. A diaphragm vacuum gauge comprising a cup-shaped supporting base having an aperture and adapted to be connected to a vessel the pressure in which is to be measured, a diaphragm secured to the rim of said base and with said base enclosing a chamber adapted to communicate through said aperture with the inside of said vessel, a supporting member mounted on said base outside of said chamber, a screen mounted in a fixed position on said supporting member, a second screen rigidly connected to said diaphragm so as to be movable therewith and extending vertically to said diaphragm and parallel to said fixed screen so as to be movable parallel thereto, each of said screens having a plurality of alternating opaque and transparent areas, said opaque areas of one of said screens adapted in one position of said movable screen to be disposed in positions different from the positions of the opaque areas of the other screen so as completely to cover the transparent areas of the other screen, while in another position of said movable screen said opaque areas of both screens are disposed in corresponding positions so as to permit a maximum amount of light to pass through said screens, a glass cover secured to said base and com-



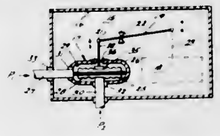
pletely enclosing said screens and forming an evacuated chamber, a constant light source and optical means mounted in a fixed position outside of said glass cover and adapted to project light beams through said cover and through said transparent areas of said screens, and means also mounted outside of said cover for measuring the light intensity of said beams passing through said screens and then again through said cover.

3,100,998
INDICATOR FOR PRESSURE WAVE AMPLITUDES
Ludvík Waniak, Kunratice, near Prague, and Karel Klíma and Jiří Vaněk, Prague, Czechoslovakia, assignors to Československá akademie věd, Prague, Czechoslovakia
Filed Jan. 2, 1962, Ser. No. 163,731
4 Claims. (Cl. 73—388)



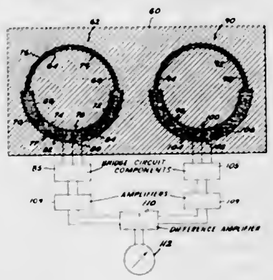
1. An indicator of amplitudes of pressure waves comprising in combination two plate-shaped members contacting each other substantially along their borders and light-tightly enclosing a chamber; at least one of said plate-shaped members being resiliently responsive to changes of pressure arising outside said chamber; means detachably securing said plate-shaped members in contacting position; a sheet-like member covered with photographic emulsion and extending within said chamber intermediate said plate-shaped members; a projection extending substantially centrally from at least the resilient plate-shaped member, said projection holding the center portion of the sheetlike member in contact with the other plate-shaped member and adapted to exert pressure upon said center portion when the resilient plate-shaped member is bulged by an outside pressure wave inwardly into the chamber; whereby after removing the sheetlike member from the chamber and developing and fixing the photographic emulsion the arising contrast of opacity on the compressed central portion and on the remaining portion of the emulsion measurably indicates the amplitude of the received pressure wave.

3,100,999
RAPID RESPONSE PRESSURE INSTRUMENT
John H. Andresen, Jr., Greenwood Lake, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Filed May 22, 1959, Ser. No. 815,224
12 Claims. (Cl. 73—407)



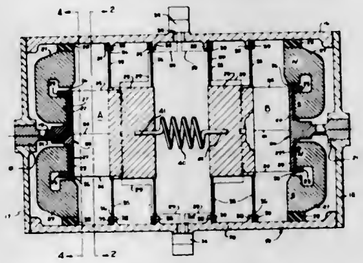
1. A pressure instrument of the character described for pressure measurement in excess of that surrounding said instrument, comprising an instrument housing, a diaphragm capsule means, a case surrounding said capsule means, a tube arranged to apply a gas pressure source to the case interior, a member extending from said capsule means through an aperture in said case to transmit displacements of said capsule means in response to pressure variations of said source, means exterior of said case coupled to said member for translating its displacements, and orifice means at said case aperture about said member permitting ready motion of the member through said case; said case, capsule, member and translating means being contained within said instrument housing; said instrument housing being pneumatically connected to the interior of said case through said orifice means; the volume of said case being substantially smaller than the volume of said instrument housing, said instrument housing being sufficiently sealed to serve as a reservoir for gas from said source under static conditions.

3,101,000
INTEGRATING LINEAR ACCELEROMETER
Sidney Lees, Newton, Mass.
(16 Eliot St., Cambridge, Mass.)
Filed Nov. 7, 1958, Ser. No. 772,582
4 Claims. (Cl. 73—503)



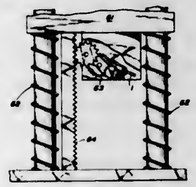
1. An integrating accelerometer for measuring changes in linear velocity comprising a closed and continuous passage, a duct interconnecting two separated points of the passage, said duct having a portion which is of substantially greater cross sectional area than the passage, a pair of thin and flexible diaphragms isolating at least a part of the enlarged portion of the duct from the other part of the duct and the passage, a Newtonian liquid filling the passage and the portion of the duct in communication with it, a second Newtonian liquid of different density filling the isolated portion of the duct, and a signal generator operatively connected to the enlarged portion of the duct and producing a signal which is a function of the displacement of the second Newtonian liquid in response to a change in velocity of the case.

3,101,001
DIGITAL FORCE TRANSDUCER
Norman J. Appleton, Plainview, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,830
13 Claims. (Cl. 73—503)



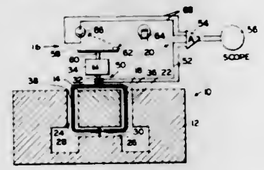
1. A transducer of the character described for determining forces applied thereto along a sensing axis, comprising a housing, torsional oscillation means supported in said housing and energized for continuous torsional oscillation about said sensing axis, a mass supported within said housing for response to a force along said sensing axis, and means coupling said mass to said torsional oscillation means to restrain displacement of said mass and to convert said forces into corresponding changes in the frequency of the said torsional oscillations, a second torsional oscillation means supported in coaxial relation with the first of said torsional oscillation means, and a second mass means coupled to said second torsional oscillation means subject to oscillation about the sensing axis.

3,101,002
DECELEROMETER
Bernard van Zyl, Orlando, Fla., and Philip A. Studer, Silver Spring, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 13, 1961, Ser. No. 152,109
4 Claims. (Cl. 73—514)



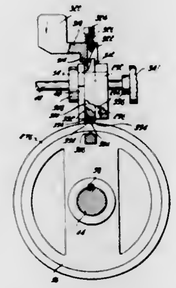
1. In a force sensing and timing apparatus,
a base,
a pair of supports carried by said base,
a mass slidably mounted on each of said supports,
a spring carried by each support of said pair of supports in engagement with said mass and the base for yieldably maintaining the mass in an initial suspended position,
a first toothed member mounted on the base,
a second toothed member movably mounted on the mass and cooperating with said first toothed member,
a clock mechanism mounted on the mass and windable by movement of the second toothed member during movement of the mass from said initial position in response to the force sensed thereby,
said clock mechanism including an escapement device, and
means operatively connected to said escapement device for selectively starting and stopping the escapement device.

3,101,003
POLAR ACCELEROMETER
Sidney Lees, 544 Walnut St., Newton, Mass.
Filed Jan. 25, 1960, Ser. No. 4,497
11 Claims. (Cl. 73—517)



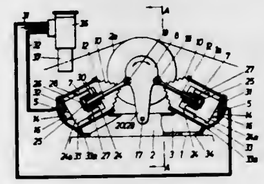
10. In a polar accelerometer, field establishing means including an armature and another member defining a gap of predetermined width throughout its length, a flexible support for the armature enabling said armature to move in response to acceleration of the accelerometer toward said another member to effect variation in the width along the length of the gap, said flexible support returning said armature to a predetermined reference position in the absence of acceleration, means responsive to the field established in said gap for providing a signal which is a function of said variations in gap width, and means for measuring the magnitude of the latter signal.

3,101,004
UNIDIRECTIONAL DRIVE MECHANISM
George E. Valentine and Joseph H. Eubanks, Schuylkill Haven, Pa., assignors to Thermo Dynamics Corporation, Schuylkill Haven, Pa., a corporation of Pennsylvania
Original application Sept. 1, 1955, Ser. No. 532,078, now Patent No. 2,932,166, dated Apr. 12, 1960. Divided and this application Aug. 19, 1959, Ser. No. 834,822
6 Claims. (Cl. 74—148)



1. Mechanism for converting reciprocatory movement to unidirectional rotary movement comprising: a support; a wheel with an annular axially projecting flange journalled on said support; a clutch member journalled on said support coaxial with said wheel; a clutch dog having a lateral recess at one end with upper and lower gripping jaws fitted over the wheel flange and carried by said clutch member; means on said clutch member adapted to coact with said dog when said clutch member is moved in one direction to tilt said dog so the dog jaws grip said wheel flange and to coact with said dog when said clutch member is moved in the other direction to maintain said dog in a position wherein said jaws cannot grip the wheel flange; adjustable means carried by said dog movable to a position whereby said dog will not tilt and grip said flange when moved in said one direction; and means operatively connected to oscillate said clutch member.

3,101,005
BELT-ALIGNING STRUCTURE
Walter Mittag, Heidenheim (Brenz), Germany, assignor to J. M. Voith Gesellschaft mit beschrankter Haftung, Heidenheim (Brenz), Germany
Filed Mar. 22, 1961, Ser. No. 97,525
Claims priority, application Germany Mar. 26, 1960
11 Claims. (Cl. 74—241)



1. An arrangement for correcting the lateral deviation of an endless belt and comprising a frame, a guide roller for said belt, means for pivotally journaling one end of said guide roller, an upright arm whose lower end is pivotally mounted on said frame and having a bearing housing at its upper end journaling the other end of said guide roller, a pair of fluid pressure motors pivotally mounted on said frame and symmetrically positioned on opposite sides of said arm with respect to the direction of the belt over said guide roller, each of said motors having a rectilinearly moveable actuating rod pivotally connected to said arm near the upper end thereof and actuated by the fluid pressure to push said arm about its pivot, said rods forming an angle of from 30° to less than 90° with said arm when said arm is in its normal vertical position, and means for selectively actuating said fluid pressure motors in response to the lateral deviation of said belt.

3,101,006
DRILL MOUNTING
Ewald H. Kurt, Phillipsburg, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 13, 1960, Ser. No. 62,361
2 Claims. (Cl. 74—424.8)

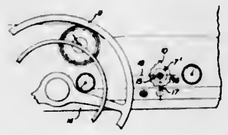


1. A mounting for a rock drill of the percussive type having a drill rod extending therefrom, comprising a guide shell slidingly supporting said drill, a centralizer for the drill rod slidingly supported by the guide shell, and means cooperative with said guide shell to advance said drill and said centralizer simultaneously at different rates of speed with respect to each other and the guide including a feed screw having two threads of different pitch one long and the other short engaging the drill and the centralizer respectively, and means to rotate said feed screw.

3,101,007
KNOB ARRANGEMENT, PARTICULARLY FOR MOTOR VEHICLES
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Jan. 13, 1958, Ser. No. 708,676
Claims priority, application Germany Jan. 19, 1957
5 Claims. (Cl. 74—553)

1. An arrangement in a motor vehicle for actuating a shiftable change speed transmission especially the range selector for automatic transmissions of motor vehicles, comprising an essentially circular shifting knob means rotatable about a predetermined axis of rotation and pro-

vided with unilateral peripheral mark means which may be manually sensed by the driver of the vehicle to indicate the adjusted angular position of said knob means, a non-rotatable and rigid supporting sleeve coaxial with said knob means, means for supporting said knob means on and at one end of said sleeve and for restricting movement of the knob means relative to said sleeve exclusively to rotation about said axis, said knob means having peripheral grasping surface portions on all sides of said axis and at substantially the same distance therefrom except at said mark means and extending outwardly therefrom radially beyond the outer surface of said sleeve and a substantial distance axially of said knob means to be firmly graspable by one hand of the driver for rotating said knob means, resiliently biased detent means con-



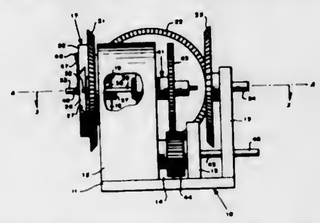
nected to said knob means and movable therewith, said detent means and said sleeve being so constructed and arranged and relatively cooperating to hold the shifting knob means in predetermined different positions about said axis, connecting means connected to said shifting knob means and extending through said sleeve and including a mechanical structure movable to different positions corresponding to said predetermined angular positions of the knob means for operating the change speed transmission to select a speed range thereof corresponding to a selected position of said shifting knob means, the axis of rotation of the knob means extending generally in the longitudinal direction of the vehicle, said knob means presenting a generally smooth essentially circular outer surface transversely of said axis and facing the position normally occupied by a vehicle driver.

3,101,008

COMPUTING APPARATUS

Zavan Narzakian, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Filed Nov. 28, 1961, Ser. No. 155,510
3 Claims. (Cl. 74—600)
(Granted under Title 35, U.S. Code (1952), sec. 266)



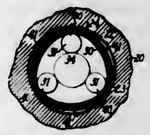
1. A computing apparatus for resolving a vector into rectangular components, comprising: a rigid support member, a resolver wheel axially connected to said support member for rotation relative thereto, output means operatively connected to said resolver wheel for sliding along a rectilinear slot radially disposed in said wheel, stop means fixed to said wheel for limiting the travel of said output means along said slot, bearing input means operatively connected to said resolver wheel for rotating said wheel in accordance with the vector direction, first rack means fixed to said output means and positioned along the length of said slot, first gear means axially connected to said wheel for rotation relative thereto and drivingly connected to said first rack means, second gear means coaxially connected to said first gear means and rotatable therewith, third gear means coaxial with said resolver wheel and having a hub threadingly connected to said support member, second rack means drivingly connected at one end to said second gear means and coaxially inserted at the other end thereof in one end of said hub for sliding and rotating relative thereto, adjusting means coaxially and threadingly inserted in the other end of said hub for limiting the insertion of said second rack means, magnitude input means drivingly connected to said third gear means for rotating said third gear means thereby axially moving said third gear means along the threaded connection thereof in accordance with the vector length, and force-exerting means operatively connected between said output means and said resolver wheel for slidably urging the insertion end of said second rack means against the insertion end of said adjusting means; whereby the distances of said output means from any two normal axes passing through the resolver wheel axis is proportional to the rectangular components of the vector input signals.

3,101,009

DIFFERENTIAL CONTROL

C. Walton Musser, Palos Verdes Estates, Calif., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed Nov. 1, 1961, Ser. No. 149,455
14 Claims. (Cl. 74—640)



1. In a differential control, a first member having a set of circular teeth, a second member telescoping with the first member and having a set of teeth, said second member being deflectable and having its teeth in contact with the teeth on the first member at a plurality of circumferentially spaced points with intermediate points at which the teeth are out of contact and out of mesh, a first race on the surface of the second member remote from the first member and deflectable to conform to the second member, planetary balls engaging in the first race on the side remote from the second member at spaced points corresponding to the points at which the teeth are in contact, a second race of circular form engaging the balls on the side remote from the first race, said second race having a plurality of separate race portions which engage different portions of said balls, respectively, and means for independently driving one of said second race portions with respect to another second race portion.

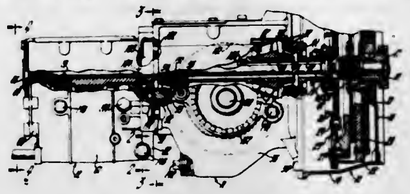
3,101,010

DRIVE ASSEMBLY

George Popovich, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 1, 1959, Ser. No. 843,681
20 Claims. (Cl. 74—700)

1. In a transmission and differential assembly, a housing structure having a differential chamber and a transmission chamber and a dividing wall, a drive shaft extending through said dividing wall, bearing means mounted on said dividing wall and rotatably supporting said drive shaft, an oil port in said dividing wall at the normal common oil level in said differential and transmission chambers connecting said chambers, a gear in one of said chambers operating partially submerged in oil and throwing oil directly against said dividing wall, a passage in said dividing wall located to receive oil thrown by said



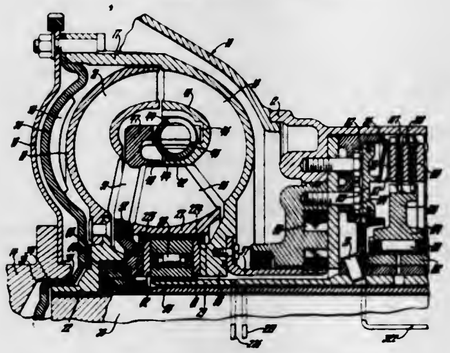
gear and extending to the other chamber to deliver oil from said one to said other chamber to circulate the oil in said chambers.

3,101,011

TRANSMISSION

Robert M. Tuck and James J. Mooney, Jr., Indianapolis, and Mark E. Fisher, Carmel, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 25, 1957, Ser. No. 698,620
30 Claims. (Cl. 74—732)



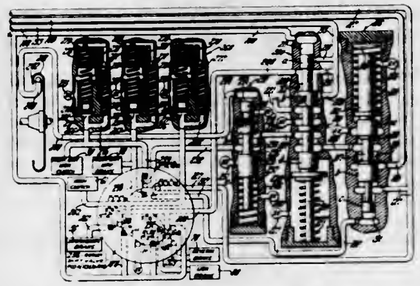
1. In an automatic transmission; an input member; an output member; drive means including a first drive providing two-way torque transmission having first fluid operated means operative for engaging said first drive, a second drive providing only one-way torque transmission having second fluid operated means operative for engaging said second drive, and a third drive providing torque transmission having fluid operated means operative for engaging said third drive; each of said drives connecting said input member to said output member to drive said output member in the same direction; said first and second drives having the same speed ratio and said third drive having a higher speed ratio; a source of fluid under pressure; valve means for connecting said source to said first and second fluid operated means to engage and disengage said first and second drives and being operative in a first position for controlling the supply of fluid to said first and second fluid operated means for disengaging said first and second drives and being operative in a second position for controlling the supply of fluid to said first and second fluid operated means for engaging said first drive and including time delay means operative for controlling the supply of fluid to said second fluid operated means for engaging said second drive a predetermined time after engagement of said first drive and being operative in a third position for controlling the supply of fluid to said first and second fluid actuated means to disengage said first drive and to engage said second drive; and means for controlling the supply of fluid to said third drive for engaging and disengaging said third drive operative only when said valve means is in said third position to control the supply of fluid to said third fluid operated means to engage said third drive.

3,101,012

TRANSMISSION

Howard W. Christenson and William G. Livezey, Indianapolis, and William E. Schilke, Brownsburg, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 27, 1957, Ser. No. 661,781
20 Claims. (Cl. 74—752)



1. In a transmission assembly, a first gear unit providing a plurality of ratio drives, a second gear unit providing a plurality of ratio drives, connected in series with said first unit, control means to selectively engage a ratio drive in said first unit and a ratio drive in said second unit to provide a plurality of combination ratio drives normally transmitting the full power applied to said first unit, means responsive to a predetermined value of torque being transmitted by said units operatively connected to said control means to partially disengage the drive ratio engaged in said first unit to continue to transmit torque and to limit the torque transmitted to a predetermined maximum safe value to prevent damage to the transmission assembly.

2. In a transmission assembly, multiratio transmission drive train means having multiratio gearing and a plurality of groups of fluid actuated ratio friction engaging devices each having a plurality of said devices operative for providing each of a plurality of drive train ratios on the engagement of at least two of said ratio engaging devices one in each group, a source of fluid under pressure, means to control the pressure of the fluid from said source to provide a low and a high fluid pressure, valve means to control the supply of fluid from said source in each ratio position to engage two of said fluid actuated ratio engaging devices to provide each drive ratio, control means effective only during the engaging movement of one of said ratio engaging devices to insure disengagement of another of said ratio engaging devices operative in each drive train ratio, said control means being effective when said one ratio engaging device is engaged to engage said other ratio engaging device, and means to modify the action of said control means to effect disengagement and engagement of said other ratio engaging device when the engaging pressure at said one ratio engaging device is changed between said low pressure and said high pressure of said source.

3,101,013

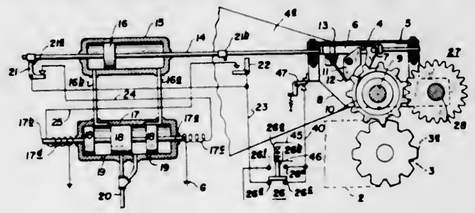
INDEXING APPARATUS FOR MARKING DEVICES AND THE LIKE

John S. Ayers, Scott Township, Allegheny County, and Alvin M. Brown, Penn Township, Allegheny County, Pa., assignors to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 26, 1959, Ser. No. 848,740
5 Claims. (Cl. 74—818)

1. An indexing apparatus comprising an indexing gear, a pawl mechanism movable between two positions en-

gaging the indexing gear in one direction of movement only to rotate the gear incrementally, a fluid motor including a reciprocating piston and a rod, the rod extending beyond the motor and connected to the pawl mechanism for imparting rectilinear motion thereto, a fluid slide valve having a reciprocating slide element therein, armatures connected to the slide element for movement therewith and extending beyond the valve at opposite ends of the slide element, conduits flow-connecting the fluid slide valve with the motor for introducing fluid from the valve to operate the motor piston selectively from one position to another whereby the motor piston rod is reciprocated, solenoid coils connected in parallel and coupled magnetically to each of the armatures, a source of current connected to each of the solenoid coils, a switch connected in series with each of the solenoid coils and the source of current, both switches being normally open and positioned for tripping alternately by travel of the pawl mechanism such that the coils are energized alternately to move the slide element of the valve for controlled movement of the motor piston by fluid ported from the valve selectively on both sides of the piston, a relay with a contactor connected in series between the current source and the switches and with a coil for operating the con-



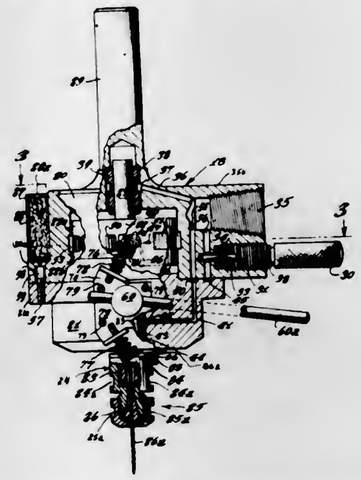
tactor to close the circuit from the source to the switches in one position and to open the circuit in another position, a manually adjustable switch with a plurality of contacts and a contactor selectively movable to any one of the contacts, a rotary switch with a contactor operatively connected to the indexing gear for rotation and including a plurality of contacts corresponding to the contacts of the selector switch, the corresponding contacts of the rotary switch and the selector switch being electrically connected, the electrical source being connected serially to both the contactor of the selector switch and the contactor of the rotary switch whereby a closed circuit is formed joining the source to the selector switch contactor and one of its contacts to a corresponding contact of the rotary switch and its contactor back to the source, and the relay coil being in series connection with the source and the selector switch contactor whereby the coil is energized when corresponding contacts of the selector switch and the rotary switch are contacted by the contactors of such switches to move the relay contactor to the other position to open the circuit from the source to the switches connected to the solenoid coils for stopping the action of the valve and motor and the rotation of the indexing gear.

3,101,014
ULTRA-HIGH-SPEED PNEUMATICALLY DRIVEN MACHINE TOOLS, SUCH AS DRILLS AND THE LIKE

Henry H. G. Rowe, 4 Southard St., Baldwin, N.Y., and Ulrich M. Geissler, 211 Sportsman Ave., Freeport, N.Y.

Filed Oct. 2, 1961, Ser. No. 142,341
21 Claims. (Cl. 77—33.5)

12. In a motor having a chamber connected with a source of fluid, a turbine movable in said chamber, a plurality of fluid inlets in said chamber each directing the fluid against said turbine, one of said fluid inlets directing the fluid against the turbine to rotate the same and at least another of said plurality of fluid inlets directing the

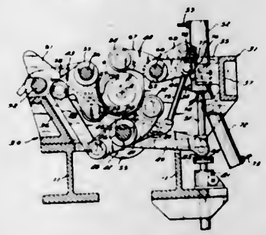


fluid against the turbine to move the same in another direction, and a fluid outlet defined in said chamber and communicating with the fluid of said fluid inlets to simultaneously exhaust the fluid from said plurality of inlets.

3,101,015
MANDREL BAR STEADIER

James W. Schuetz, Pittsburgh, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Filed Dec. 7, 1960, Ser. No. 74,265
2 Claims. (Cl. 80—11)

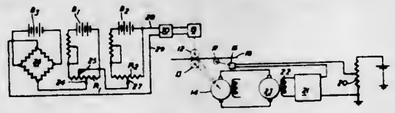


1. Apparatus for supporting an elongated generally cylindrical member having an axis so its axis substantially coincides with a pass line of a metal working machine, said apparatus comprising a frame which is stationary relatively to said pass line; at least three rollers which are rotatable about axes which are essentially equiangularly spaced about essentially equidistantly spaced from, and essentially parallel to said pass line when said apparatus operates to support the elongated member; a separate supporting member rotatably supporting each of said rollers independently of the other rollers, each of said supporting members being pivotally mounted on said frame about an individual pivot axis which is essentially parallel to said pass line and separate from the pivot axes about which are pivotally mounted supporting members for the other rollers, said pivot axes being essentially equiangularly spaced about and essentially equidistantly spaced from said pass line and fixed relative to each other, and the distance between the pivot axis and the axis of rotation of the roller on each supporting member being essentially equal to that on all other supporting members; and linkage means connecting all of said supporting members to pivotally move them in the same angular direction essentially in unison and essentially the same angular amount so all said rollers move to various positions toward said pass line while their axes are essentially equiangularly spaced about and essentially equidistantly spaced from said pass line, one of said supporting members being connected to said linkage means by means permitting movement of said supporting member relatively to said linkage means in one direction independently of the other supporting members so that said independently movable supporting member and the roller supported thereby can be pivotally moved away from said pass line independently of said other supporting members to permit an elongated member to be laterally inserted into or removed from the space between the other rollers.

3,101,016
ROLLING MILLS

Hedley Gill, Sheffield, England, assignor to The British Iron and Steel Research Association

Filed Feb. 25, 1960, Ser. No. 10,977
Claims priority, application Great Britain Feb. 26, 1959
2 Claims. (Cl. 80—35)

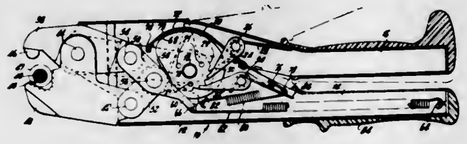


1. A multi-stand rolling mill comprising a plurality of stands, each stand having a pair of opposing rolls arranged to receive a strip of material at the nip therebetween and in contact therewith, driving means connected to each pair of said rolls for driving each of said rolls in opposite directions from one another, a gauge control system controlling the roll setting of at least one stand preceding a last stand of said plurality of stands to maintain the thickness of a strip of material leaving said one stand at substantially a constant value, a speed control system connected to said driving means for controlling the speed of the rolls of said one stand and responsive to the speed of the strip of material leaving said one stand for maintaining a constant speed of the material leaving said one stand.

3,101,017
MULTIPLE STROKE TOOL

Bruce M. Malkin, Stamford, Walter Reischer, South Norwalk, and Lloyd A. Buchalter, Ridgefield, Conn., assignors to Burndy Corporation, a corporation of New York

Filed Dec. 29, 1959, Ser. No. 862,652
6 Claims. (Cl. 81—15)

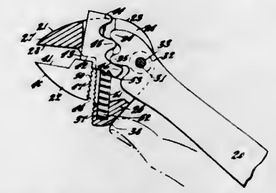


6. A compression tool comprising a jaw assembly including a pair of jaws one of which is movable from a closed to an open position with respect to the other jaw; a rotating cam assembly coupled to said jaws to cause said movable jaw to approach said other jaw when said cam assembly is rotated; means to bias said movable jaw in the open position; and damping means to dampen the rotation of said cam assembly when said movable jaw moves from the closed to opened position.

3,101,018
CLAW-LEVER ACTUATED SLIDABLE SIDE JAW WRENCH

Alfred F. Andersen, Box 181, Rte. 1, Glen Mills, Pa.

Filed Nov. 22, 1960, Ser. No. 71,022
3 Claims. (Cl. 81—127)

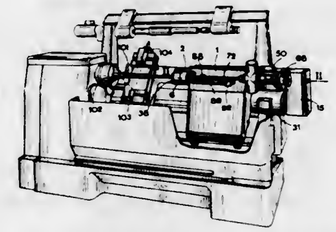


1. An adjustable wrench comprising a handle, a jaw member pivotally mounted on said handle having a gripping face, a second jaw member slidably mounted on said pivotal member having a gripping face opposed to the other member face, means including tooth extensions on the handle and on the second member for moving one member face relative to the other face to receive a nut, spring means for moving said faces into gripping relation, serrations coacting between said pivotal member and said second member which serrations are forced together during engagement and forced apart during adjustment, the tooth extensions on the handle progressively increasing in radial length and the tooth extensions on the second jaw member progressively decreasing in radial length for continuity of operation at all nut sizes within the range of the wrench.

3,101,019
LATHE TAILSTOCK DEVICE

Armand Marcel Le Lan, Vanves, France, assignor to H. Ernault-Batignolles S.A., Paris, France, a company of France

Filed May 19, 1958, Ser. No. 736,224
Claims priority, application France May 20, 1957
3 Claims. (Cl. 82—2.5)



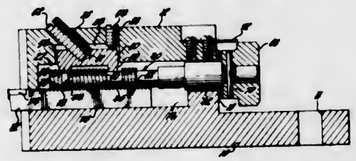
1. In a machine tool having a head stock provided with a rotary chuck for holding a work piece and a tool slide structure, a tail stock including a rotary and axially movable hollow spindle adapted to receive said work piece, a gripping device carried by said spindle and including radially movable work-engaging members, and means for operating said gripping device into and out of operative position, the improvement comprising fluid-operated means to move said spindle lengthwise toward and away from said chuck, a valve mechanism including a movable valve actuating element for controlling the flow of fluid toward and from said fluid operated means, a stop member

mounted on said spindle, a rotatable and axially movable shaft operatively connected with said valve actuating element for axial movement therewith, a plurality of axially and circumferentially spaced abutment members on said shaft, and means to rotate said shaft so as to move said abutment members into successive alignment with said stop member to thereby establish predetermined limits of advance movement of said spindle and consequently of said gripping device toward said chuck.

3,101,020
CUTTING TOOL ADJUSTMENT ASSEMBLY

Edwin D. Ditto, Ann Arbor, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 30, 1960, Ser. No. 52,817
3 Claims. (Cl. 82—36)

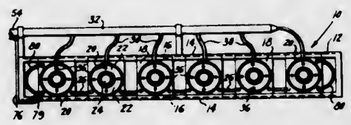


1. A tool block and assembly comprising a base plate, a cutting tool cavity provided in said base plate, a cover plate, an adjusting screw cavity provided in said cover plate, a clamping block cavity provided in said cover plate and aligned with said cutting tool cavity and said adjusting screw cavity, a cutting tool slidably supported in said cutting tool cavity, thread means provided on said cutting tool, an adjusting screw rotatably supported adjacent said cutting tool and extending into said adjusting screw cavity, thread means provided on said adjusting screw and being cooperably engaged with said thread means on said cutting tool, a plurality of circumferential grooves provided on said adjusting screw, a clamping block slidably supported in said clamping block cavity, lug means provided on said clamping block and engageable with said grooves, first clamping means to force said clamping block downwardly into locking engagement with said adjusting screw and said cutting tool, and a second clamping means forcing said clamping block in engagement with one wall of said clamping block cavity.

3,101,021
DOUGHNUT CUTTERS

Kirby R. Johnson, Monroe, La., assignor to Gustave Miller, Washington, D.C.

Filed May 26, 1960, Ser. No. 31,894
1 Claim. (Cl. 83—99)

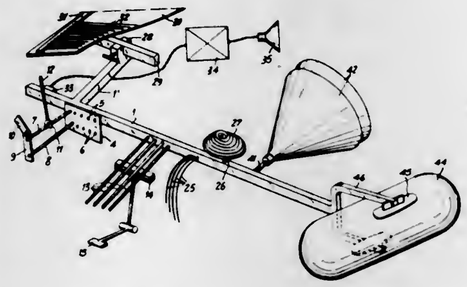


A dough cutter device comprising an elongate generally rectangular frame, said frame comprising two elongate parallel sides provided with longitudinal channels facing toward each other and end members securing the ends of said elongate sides together, a single row of dough cutter units, each cutter unit having two opposite edge portions slidably retained within said channels, flexible tether means securing said units together for slidable movement within said channels of said frame between abutting relationship and maximum spaced apart relationship, handle means on the opposite endmost units for moving all said units between abutting relationship and maximum spaced apart relationship within said frame, a valve means, flexible conduit means connecting said valve means to each said cutter unit, and conduit means connecting said valve means to a source of suction, whereby said frame may be manipulated, with said units moved to abutting relationship, to press said cutter units into a sheet of dough to cut dough portions with a minimum of waste dough therebetween, and then said valve means, actuated to connect said units to the source of suction, effects a holding suction on the cut dough portions in the cutter units while the frame is being moved to a desired location, the endmost cutter unit handles being manipulated to spread the units to their maximum spaced apart relationship, and at the desired location, the valve means, actuated to cut off the source of suction, exposes the cut dough portions to non-holding pressure and releases the cut dough portions from the cutter units to the desired location in maximum spaced apart relationship.

3,101,022
COMPOUND MUSICAL INSTRUMENT

François Pierre Maurice Baschet, 11 Rue J. de Beauvais, Paris 5, France

Filed Mar. 11, 1958, Ser. No. 720,685
Claims priority, application France Mar. 12, 1957
4 Claims. (Cl. 84—404)



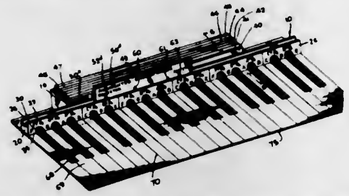
1. A musical instrument comprising a metal carrier bar, a plurality of generators of tuned vibrations composed of metallic rods one end of which is rigidly connected to said carrier bar so as to have a node of vibration at the connecting point thereof, said generators when set in vibratory motion imparting into said carrier bar vibrations corresponding to the tuned frequency thereof, non-tuned vibratory means rigidly connected to said carrier bar, said non-tuned vibratory means being set in vibratory motion by the tuned vibrations being transmitted along the carrier bar from the tuned generators so that the vibrations of the non-tuned vibratory means are imparted into said carrier bar to produce additional vibrations of the tuned frequency, said carrier bar having a mass such that it is incapable of undergoing any substantial shifting in space under the action of the vibrations being imparted thereto by said generators, radiating means engaging said carrier bar for transforming the vibrations into sound and radiating same into the atmosphere, and means for imparting vibrations to said generators of tuned vibrations.

3,101,023
MUSIC CHORD FINDER

Andrew J. Weis, 137 Summit Ave., Mount Vernon, N.Y.

Filed Dec. 7, 1961, Ser. No. 157,662
1 Claim. (Cl. 84—482)

Apparatus for teaching piano playing comprising a flat, rigid, rectangular sheet marked on the top surface thereof with a series of differently colored areas representing positions of keys of a piano keyboard, said sheet having a closed guide slot at each end thereof rearwardly of the colored areas, a tray device supported on and removably fixed to the top surface of the sheet behind said marked areas, said device consisting of an elongated vertically disposed rail having a groove along the top surface thereof for receiving and supporting a slide releasably, a box-like member integral with said rail at the rear thereof and centrally thereof, said member having end walls and a rear wall, the rail constituting the front wall thereof, said member being open at the top to receive and removably store slides for selective and individual display in the groove of the rail, the top groove

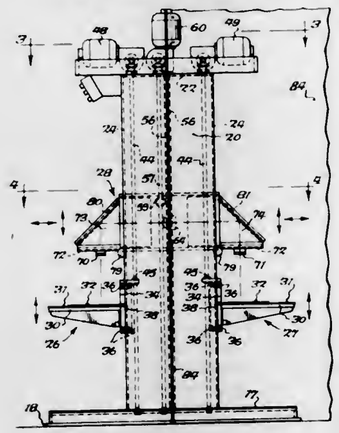


of said rail adapted to support a single slide, the front surface of said rail being divided into a series of differently colored areas representing positions of keys on the keyboard, said slides each bearing spaced indicators corresponding in position to notes of chords, said indicators being spaced so as to locate notes of major, minor, augmented and diminished chords, chord inversions and chord extensions on the keyboard on the sheet, and projections depending from the bottom of said rail and extending through the slots in the sheet for removably interlocking said tray device in operative position on the sheet.

3,101,024
ALL-PURPOSE PHOTOGRAPHIC MECHANICAL REPRODUCTION CAMERA

William C. Huebner, Mamaroneck, N.Y., assignor to Lanston Industries, Incorporated, Philadelphia, Pa., a corporation of Virginia

Filed Oct. 5, 1959, Ser. No. 844,514
10 Claims. (Cl. 88—24)

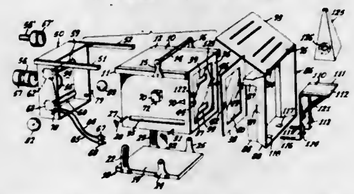


1. A camera including an upright frame having a middle portion, a copyholder and a film holder mounted on the opposite sides of said frame, a lens carrier mounted on said middle portion of said frame and having parts extending over said holders, means on said lens carrier for conducting light in horizontal and vertical direction from one holder to another, means for guiding said holders for movement toward and from said lens carrier and including guide tracks mounted on said frame, a carriage mounted on said frame and guided for vertical movement on said track, and cooperating parts on at least one of said holders and said carriage for removably mounting said one holder on said frame.

3,101,025
COMBINED OPTICAL REPRODUCER AND PROJECTOR

Alexander Rosenfeld, 3345 Blair Drive, Hollywood 28, Calif.

Filed Dec. 9, 1960, Ser. No. 74,840
1 Claim. (Cl. 88—24)

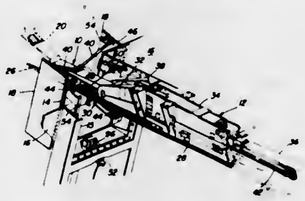


A combined image reproducer, tracer, and projector comprising a housing having front aperture means adapted to receive rays from an object to be reproduced and having image reproducing means therein, said housing having a transparent panel at the back in a position to have reproduced thereon an image transmitted through said image producing means, means for attaching paper or the like to said panel whereby said image may be traced on the paper, said housing being provided with first illumination means in back of said panel whereby the image on said panel may be reprojected through said image producing means onto a screen or the like, said housing, including a telescoping front part carrying said image producing means, and second illumination means, said housing being configurated to provide space therein to have three dimensional objects placed therein, said telescoping front part and said second illumination means providing for focusing of said image producing means and adjusting said illumination means whereby an image of such three dimensional object can be projected, said first and second illumination means being selectively operable, said second illumination means comprising at least one lamp, said transparent panel having at least one cutout aligned with the second illumination means to prevent reflection from said transparent means of illumination from said lamp directed onto said image producing means.

3,101,026
RETRACTABLE SPANNING RAIL AND BLAST DOOR ARRANGEMENT

Melvin O. Jacobson, Coon Rapids, and Bertram J. Matson and Palmer G. Wermager, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

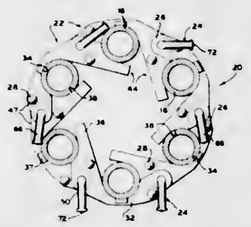
Filed June 21, 1961, Ser. No. 119,259
7 Claims. (Cl. 89—1.7)



1. In a missile launcher system of the type having a spaced loader and launcher equipped with alignable missile supporting rails, a retractable spanning rail and blast door

arrangement comprising an elongated spanning rail for spanning the space between said loader and launcher rails, means to slidingly support the spanning rail, a mounting frame, a pair of blast doors pivotally mounted in said frame for safeguarding a missile on said loader from said launcher, a hydraulic piston having a piston rod, a link pivotally connected to one end of the spanning rail and to said piston rod, connecting means joining the other end of the spanning rail and the blast doors, and control means, said control means including a fluid metering valve, a servo valve in fluid communication with the metering valve and the hydraulic piston, a cam track carried by and movable with said piston rod, piston means disposed within said servo valve for controlling the flow of fluid to and from the hydraulic piston as the piston means moves from an open position to a closed position, a roller carried by said piston means engageable with the cam track for moving the piston means to and from said positions, said servo and metering valves cooperating to control the flow of fluid into the hydraulic piston thereby to control the rate of speed at which the hydraulic piston moves the spanning rail through its support.

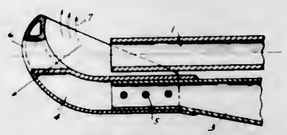
3,101,027
QUICK-RELEASE, LINK-TYPE CLAMP FOR MULTIPLE SHAFT CLUSTERS
John E. Brogan, Lenox, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Aug. 2, 1961, Ser. No. 128,906
7 Claims. (Cl. 89—12)



1. A clamp for holding a plurality of tubes rigidly together in a circular cluster, the clamp including a plurality of links equal to the number of the tubes, each of said links being provided with a jaw having a tang and a tail section, means for joining said links to form an articulate belt wrappable around the cluster and for joining the terminal ones of said links in said belt to complete the clamp, and a plurality of vises formed by the operational cooperation of said tang on each of said jaws with said tail section of said jaw in an adjacent one of said links in said belt, said vises being arranged to open for respectively receiving the tubes when said belt is linearly disposed and to close around the respective ones of the tubes when said belt is wrapped around the cluster.

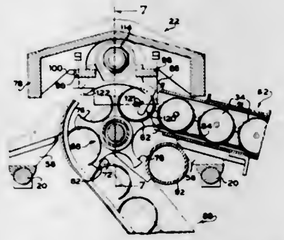
3. In a gun, a plurality of barrels mounted at the breech ends to a rotary mount to form a circular cluster, a clamp mountable on said barrels from the side center of said cluster for rigidly holding said barrels against relative movement during rotation of said cluster, said clamp including a plurality of links equal to the number of said barrels, each of said links being provided with a jaw having a tang and a tail section, means for joining said links to form an articulate belt wrappable around the cluster and for joining the terminal ones of said links in said belt to complete said clamp, and a plurality of vises formed by the operational cooperation of said tang on each of said jaws with said tail section of said jaw in an adjacent one of said links in said belt, said vises being arranged to open for respectively receiving said barrels when said belt is linearly disposed and to close around the respective ones of said barrels when said belt is wrapped around said cluster to complete said clamp.

3,101,028
DEVICE FOR GUNS ON COMBAT VEHICLES
Sven Erik Berge, Stockholm, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a Swedish company
Filed July 6, 1961, Ser. No. 122,206
2 Claims. (Cl. 89—14)



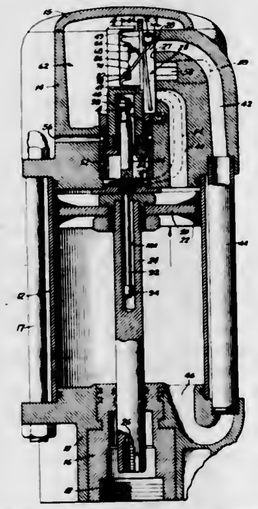
1. A self-propelled weapon carrier comprising a gun mounted on the carrier and having a gun barrel protruding from and beyond the body of the carrier, and a rigid frame structure secured to the carrier body extending parallel to the protruding portion of the gun barrel spaced apart therefrom, said frame structure having its terminal portion curved upwardly in front of the muzzle of the barrel, said upwardly turned portion including a circular aperture aligned with the center axis of the bore of the barrel and having a diameter greater than the caliber of the gun, said frame structure protecting the gun barrel against damage by collision with external obstructions and said upwardly turned portion of the frame structure deflecting the gases propelled from the barrel upon firing of the gun so as to neutralize at least partly the recoil movement of the carrier and to increase visibility in the environment of the gun barrel after firing thereof.

3,101,029
FEEDING MECHANISM FOR DRUM-TYPE FIREARM
Joseph L. Johnston, Hartland, Wis., and Anders G. Petterson, Fraser, Mich., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Nov. 4, 1960, Ser. No. 67,445
5 Claims. (Cl. 89—33)



1. In a machine gun including a rotatable drum provided with a plurality of chambers successively indexable at positions relative to the central vertical plane of the gun, the positions including a six o'clock position which coincides with the central vertical plane of the gun at the lower inner section therewith and a one o'clock and an eleven o'clock position disposed above the six o'clock position equidistantly from and on opposite sides of such plane, a feeding mechanism including a housing which is symmetrical in transversal cross-section with an opening in the top to provide easy access to the interior thereof, a cover removably mounted to said housing for covering the opening, sprocket means rotatingly disposed in said housing and coupled to said drum for rotation therewith, said sprocket means being adapted to draw a cartridge belt into said housing and to index the cartridges in the belt in alignment with the chambers indexed at the one o'clock and eleven o'clock positions, and a rammer slidingly disposed in said cover for contact with the bases of the cartridges indexed by said means at the one o'clock and eleven o'clock positions for a stepped transfer from the cartridge belt into said chambers in such positions.

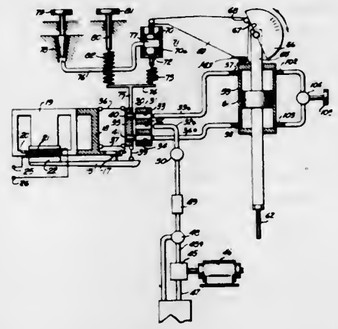
3,101,030
VALVE FOR PNEUMATIC MOTORS
Philip L. Hyatt, Bryan, and Wilbert G. Kautz, West Unity, Ohio, assignors to The Aro Corporation, a corporation of Ohio
Filed Sept. 1, 1961, Ser. No. 135,577
7 Claims. (Cl. 91—28)



1. In a valve for reciprocating pneumatic motors, a head for the motor, a pressure chamber therein, a single valve cylinder in said head, a valve plunger entering said cylinder and having a head thereon within said cylinder of greater area than said valve plunger to provide differential areas for operating said valve plunger, a lost motion connection from the pneumatic motor to said valve plunger, a ported valve plate within said pressure chamber having main ports communicating with opposite ends of the pneumatic motor and an exhaust port, said valve plate having a pilot port communicating with said valve cylinder and a pilot exhaust port, a main valve and a pilot valve slidable on said valve plate, said valve plunger being operatively connected with said valves for shifting them over the surface of said valve plate, the operative connection being such that both said main valve and said pilot valve may move laterally relative to said surface, the operative connection for said main valve including a lost motion connection, and biasing means operable to retain both of said valves adjacent said surface of said valve plate when there is no pressure in said pressure chamber.

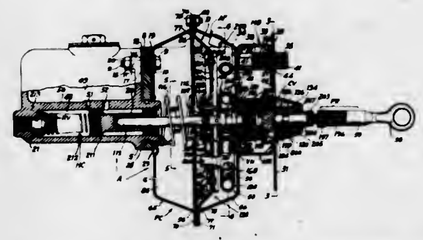
3,101,031
ELECTRO-HYDRAULIC ACTUATOR SYSTEM
Harry E. Crossley, Jr., Topsfield, Mass., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Continuation of application Ser. No. 554,896, Dec. 22, 1955. This application Sept. 8, 1960, Ser. No. 56,628
11 Claims. (Cl. 91—364)

1. An electro-hydraulic actuator system comprising a housing, a pivotally supported beam in said housing, means within said housing defining a magnetic field, a coil carried by said beam and positioned in said magnetic field, means for supplying a direct current input signal to said coil so as to exert a force on said beam corresponding to said input signal, a control valve positioned within said housing and having a movable element connected to said beam for controlling fluid flow from a valve inlet to a valve outlet, a source of fluid for supplying fluid to said valve inlet at relatively high pressure, a cylinder positioned within said housing, a piston slidably mounted in said cylinder and connected to an output member, means connecting said valve outlet and said cylinder,



a proportional band adjusting plate connected to the upper end of said piston and having a cam surface adjustably positionable with respect to the line of motion of said piston, connecting link means including a cam follower which is biased into engagement with said cam surface, dashpot means connecting said link means and said movable element of said control valve, thereby to apply a force to said beam in opposition to said input signal, said feedback force being variable by adjustment of the position of said proportional band plate with respect to said piston and said dashpot means controlling the rate at which the output member is reset in response to an abrupt change in said input signal.

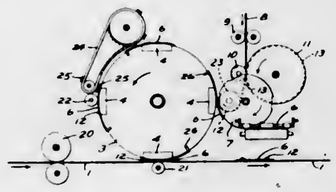
3,101,032
BOOSTER-TYPE SERVOMOTOR FOR BRAKE SYSTEMS
Glenn T. Randol, 2nd Ave. and Paull St., Box 275, Mountain Lake Park, Md.
Filed Sept. 19, 1957, Ser. No. 684,946
23 Claims. (Cl. 91—378)



1. A pressure fluid operated servomotor including a casing in which a movable power assembly is actuatable by a pressure differential on opposite sides thereof, said power assembly dividing the interior of said casing into a constant pressure chamber and a variable pressure chamber, a source of pressure different from atmosphere, and an operator-operated member having a normally released position, the improvement which comprises: an element movable to perform work under influence in

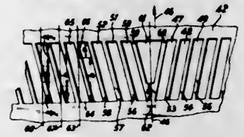
part of power-actuation, movement of said element being opposed by a normally preloaded spring; a control valve having at least two principal cooperating elements adapted to have operative follow-up association with said power assembly to control the same, said valve elements being relatively displaceable from normal "off" position wherein said servomotor chambers are interconnected to balance pressures therein to inactivate said servomotor, to operating "on" position wherein said servomotor chambers are isolated to enable establishment of differential pressures therein to activate said servomotor as a function of the reaction from said work-performing element; a fluid connection between said control valve and said variable pressure chamber via said power assembly; spring means including a normally preloaded spring operably disposed in said variable pressure chamber to react between said casing and one of said valve elements actuated directly by said operator member, said last-mentioned spring being characterized by progressively increasing reaction on said operator member in accordance with the distance said power assembly moves; operating mechanism mounted in part on said power assembly to interconnect said spring means and one valve element for movement as a unit; and normally spaced engageable portions disposed respectively on said one valve element and said power assembly to define the said relative displacement of said valve elements, said portions being engageable to effect "straight-through" operation of said power assembly and work-performing element from said operator member in cooperation with or independently of an energized status of said servomotor.

3,101,033
APPARATUS FOR MAKING CARRIER BAGS
David V. Bonsor, Little Stocks, Aldbury, near Tring, England, assignor to Interstate Bag Company, Inc., Walden, N.Y., a corporation of Virginia
Filed Mar. 7, 1961, Ser. No. 116,900
Claims priority, application Great Britain Mar. 7, 1960
7 Claims. (Cl. 93—8)



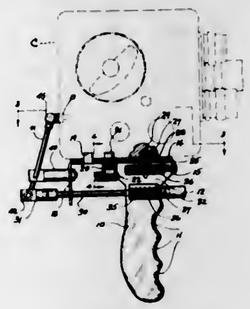
1. In an apparatus for making handled bags, means providing for a traveling paper web destined to form the body of the bags and upon which handles and securing patches are to be deposited and adhesively secured thereto at spaced intervals, a revoluble, handle forming drum operatively disposed with respect to the traveling web, a patch receiving station on said drum, means for feeding thereto cut patches which may bear thereon glue for subsequent engagement with the handle legs, and means for retaining them thereon, a handle cord receiving station upon said drum axially removed from said patch receiving station and operatively disposed with respect thereto, means for feeding cut lengths of cord to said cord receiving station and for retaining same in place opposite said patch receiving station, a handle forming die on said drum, means for actuating same to form the cord lengths into handles with the legs of each handle projected over upon a patch whereby, upon continued rotation of said drum, said handle and patch are deposited as a unit upon said web with the handle legs between the web and the patch.

3,101,034
APPARATUS FOR PRINTING AN ORIGINAL ON TO A COPYING PAPER
Werner Salger, Hamburg, Germany, assignor to Lumoprint Zindler KG, Hamburg, Germany
Filed Sept. 1, 1960, Ser. No. 53,539
Claims priority, application Germany Sept. 23, 1959
3 Claims. (Cl. 95—77.5)



1. An apparatus for printing an original on to copying paper comprising a housing, a printing device arranged in the housing, inlet means in a housing wall for feeding the original to the printing device, outlet means in a housing wall for discharging the original and the copying paper from the printing device, the latter being provided with an exposure light source which is arranged in the housing, a feeding mechanism comprising a roller arranged at a clearance in front of the light source between the inlet and outlet means and adapted to convey the original and the copying paper from the inlet means to the outlet means, a printing plate arranged between the light source and the feeding mechanism in the housing having a curved section complementarily conforming to and adjacent to said roller and in which the feeding mechanism is guided in order to lead the original and the copying paper past the printing plate, one end of said plate being pivotally mounted to said housing and means biasing the other end of the plate to urge the plate against the roller, said printing plate being provided with apertures formed in said curved section which, in relation to the direction of feed of the original and the printing paper are so arranged that each point of the papers is subjected to the influence of the light source over an equally long period and/or to an equal extent, a driving means driving the feeding mechanism roller and connecting means to connect at least one light source.

3,101,035
CAMERA ATTACHMENT
John B. Williams, 1420 4th Ave., Seattle, Wash.
Filed Sept. 16, 1960, Ser. No. 56,384
1 Claim. (Cl. 95—86)



A holding and a starting mechanism for a camera of the character described having a starting button at the back side thereof and having an internally threaded socket directed upwardly into its bottom surface for reception of a camera mounting screw; said mechanism comprising a handle of pistol grip formation, having a head portion with a flat top surface, a camera mounting plate secured flatly on said top surface and extending rearwardly from the handle and terminating at that end in a downturned flange, a spring biased push rod extending slidably through the handle adjacent its head portion for limited endwise movement with its rear end portion extending slidably through the downturned flange of said camera mounting plate and its forward end portion extending from the handle for finger actuation of said rod, a stub shaft rigidly mounted in and extending rearwardly from said flange at a point above the push rod, a lever pivotally supported at a point between its ends by said stub shaft with its lower end pivotally connected with the rear end of said push rod and having its upper end disposed in position to act against said starting button for camera operation; said camera mounting plate having an opening therein in its forward portion and formed at one side edge with an upturned ear for engaging the camera at one side, and at its opposite side edge pivotally mounts a releasable latch for engaging the camera opposite said upturned ear to coact therewith for retaining the position of the camera on the mounting plate, and a handle attaching screw rotatably fixed in the head portion of the handle and extended upwardly therefrom through said plate opening and threaded into said threaded socket of the bottom surface of the camera for fixed securement of the holding and starting mechanism to the bottom of the camera.

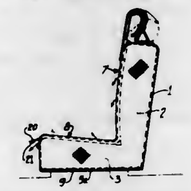
3,101,036
DISPOSABLE CARTRIDGE FOR USE IN A PHOTOCOPY MACHINE
John W. Carlson, Chicago, Ill., assignor to Speed-O-Print Business Machines Corporation, a corporation of Illinois
Filed June 8, 1960, Ser. No. 34,752
5 Claims. (Cl. 95—89)



1. A disposable cartridge construction for containing a fluid for use in a photocopy machine, which comprises an outer carton having an elongated opening in one side thereof extending along the major portion of the length of said side, a removable tab spanning said opening transversely thereof, an inner flexible container disposed within said carton and adapted to contain a fluid, and a tubular extension on said flexible container normally disposed in juxtaposition to said tab in parallel, substantially co-extensive, adjacent relation to said opening and held within said container by said tab, but adapted to pass through said opening upon removal of said tab, and through which the fluid is adapted to flow from said container.

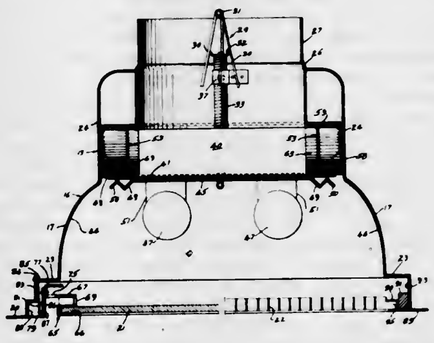
3,101,037
DETACHABLE VENTILATING SEAT COVER FOR AUTOMOBILE SEATS
Don A. Taylor, 216 Mill St., Box 4, Wadsworth, Ohio
Filed May 29, 1961, Ser. No. 113,535
13 Claims. (Cl. 98—2)

1. A seat cover of flexible material having an upright crown portion with a top wall and front and rear walls depending from the front and rear, respectively, of the top wall, said crown portion being open at the bottom and adapted for detachably snugly accommodating interiorly the top portion of a cushioned seat back of an automobile seat with the top wall of the crown portion overlying the top edge of the seat back, a relatively stiff elongated hood, disposed on top of the top wall of the crown portion, said hood extending endwise of the hood from the outboard edge of the crown portion in the inboard direction for the major portion of the length of the crown portion, said hood having a top wall in overlying spaced relation to the top wall of the crown portion and having front and rear walls depending from the front and rear of the hood top wall and connected at their lower margins to the crown portion for supporting the hood on the top edge of the seat back when the cover is installed on a seat back, said top wall of the crown portion having passage means connected with the interior of the hood for admitting air from the hood to the rear face of the front wall of the crown portion at locations along the length of the hood, ventilating cushion means at the rear face of the front wall of the crown portion



providing downwardly directed air conducting passage means for receiving and conducting air from the passage means of the top wall of the crown, said front wall having air discharge passage means therein for discharging air from said air conducting passage means at the forward face of the front wall of the crown portion, said hood being open at its outboard end and obstructed at its inboard end, an air scoop connected to the hood and having an open inner end discharging into the outboard end thereof and having an outer portion extending in the outboard direction from, and beyond, the outboard end of the hood, and said outer portion having a forward face for deflecting air striking said face in the inboard direction along the scoop into the hood.

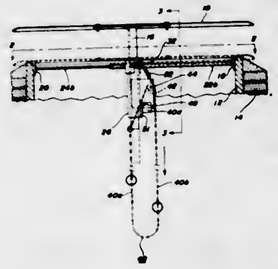
3,101,038
AIR AND LIGHT DISTRIBUTOR UNIT
Lee A. Archer, Wheaton, Ill., assignor to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey
Filed Aug. 3, 1959, Ser. No. 831,282
8 Claims. (Cl. 98—40)



1. In combination with a ceiling of a space to be illuminated and ventilated, a false ceiling spaced below said ceiling, an air and light distributor unit in said false ceiling comprising a troffer light housing having upwardly and inwardly extending inner side wall portions forming a light trough above the level of said false ceiling, a reflector extending along said housing along the upper margins of said inner wall portions and having edge portions

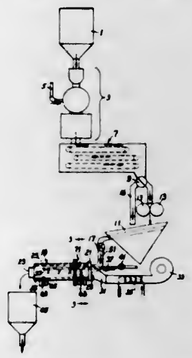
spaced inwardly from said inner wall portions to form downwardly opening air passageways, elongated fluorescent tubes extending along said housing beneath said reflector, a plenum chamber above said reflector, an air inlet leading into said plenum chamber from the top thereof at substantially the transverse center of said plenum chamber, a plurality of vertically extending vanes extending across said air passageways, the vanes on opposite sides of the transverse center of said plenum chamber being inclined in opposite directions towards the opposite ends of said plenum chamber and reducing the endwise velocity components of the air and directing the air for discharge downwardly through said air passageways in a generally straight downwardly direction, and parallel baffles extending vertically along the inner sides of the central vanes of said oppositely inclined vanes and deflecting the stream of air entering said plenum chamber and restricting the stream of air bouncing from the bottom of said plenum chamber, to prevent the conversion of the static head of air into a velocity head.

3,101,039
FLUE CAPS FOR CHIMNEYS AND THE LIKE
William R. Duchene, Hixon, Tenn., and Hal C. Shook, Kensington, Ga., assignors to Research, Incorporated, Chattanooga, Tenn., a corporation of Tennessee
Filed Dec. 19, 1960, Ser. No. 76,589
5 Claims. (Cl. 98—59)



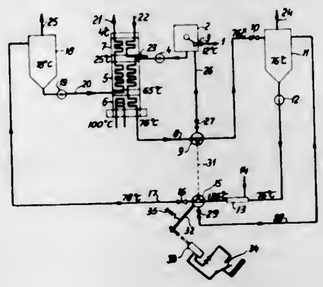
1. A flue cap and adjustable damper for chimneys and the like comprising, in combination, a cap member of size and configuration corresponding substantially to that of a flue opening and being adapted normally to seat against the top edge of the flue and provide a closure cap therefor, means mounting said cap member for limited elevating movement from a flue-capping position to various flue-dampering positions comprising a center post depending from the central portion of the cap member, spaced attaching brackets adapted to be engaged with the top edge of the flue lining at opposite sides thereof, parallelly disposed telescoping members interconnecting said brackets and adapted when extended to secure said brackets to said lining edge, means securing said telescoping members in such extended position, cross head means extending transversely between said telescoping members and being supported thereby, a vertically disposed center-post guide means affixed to and depending downwardly from said cross head means in which said center post has sliding bearing, means carried by said guide means for releasably securing the center post to the guide means in any desired position of elevation with respect thereto, and means for centering said guide means and center post and thereby the flue cap with respect to said flue including oversize holes in the cross head means through which said telescoping members extend whereby said cross head means is movable longitudinally along said telescoping members and is also shiftable a limited amount transversely thereof, and means carried by said cross head means for securing said means to said telescoping members in a predetermined position such as in turn to center the guide means and center post with respect to the flue.

3,101,040
APPARATUS FOR MANUFACTURING STABLE PELLETED FOODS
George T. Lanz, Kirkwood, Mo., assignor to Ralston Purina Company, St. Louis, Mo., a corporation of Missouri
Original application July 15, 1957, Ser. No. 671,782. Divided and this application June 26, 1958, Ser. No. 744,736
13 Claims. (Cl. 99—235)



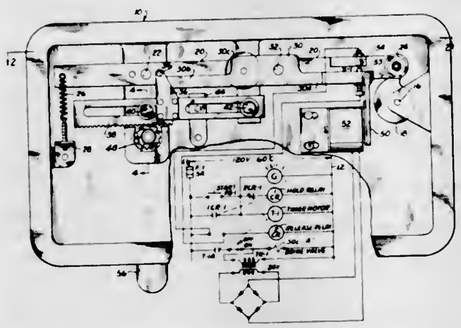
12. Food preparing apparatus comprising means adapted to form pellets from the food and including heating means for said pellets, means for dropping said pellets in the form of a relatively thin curtain, an enclosing chamber surrounding said curtain, spray nozzles connected with said chamber for spraying liquid fat on the curtain as the pellets fall through said chamber, and means for receiving said pellets from the chamber after their fall through the chamber.

3,101,041
APPARATUS FOR HEAT TREATMENT OF LIQUIDS, SUCH AS MILK, FRUIT JUICES AND THE LIKE
Bengt H. Hallström, Lund, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 11, 1960, Ser. No. 14,438
Claims priority, application Sweden Mar. 17, 1959
2 Claims. (Cl. 99—251)



1. In an apparatus for heat treating a liquid, the combination of a closed tank for deaerating and deodorizing the liquid, a liquid supply pipe leading to the tank, a pre-heater through which the liquid is fed to said supply pipe, the tank having an evacuation outlet for maintaining subatmospheric pressure in the tank, a steam-admixing device, a pump for delivering liquid from the tank to said device for direct heating of the liquid, a pipe line leading from said device for conveying the heated liquid to further processing, a three-way valve in said pipe line, a return pipe connecting the valve to the tank, whereby said valve is operable in a first position to direct liquid through said pipe line from the steam-admixing device and in a second position to direct liquid from said device back to the tank, a pressure-reducing throttle device in the return flow path formed by said valve and return pipe and operable to effect a sudden reduction in the pressure on said liquid and thereby release steam therefrom, whereby said steam is removed through said evacuation outlet of the closed tank, a receiving vat for the liquid to be treated, said pre-heater forming a heated path through which the vat is connected to said liquid supply pipe leading to the tank, a second three-way valve located in said liquid supply pipe, and a return pipe leading from said second valve to the vat, whereby said second valve is operable in a first position to direct liquid from the pre-heater to the tank and in a second position to direct liquid from the pre-heater back to the vat, and an operative connection between said two valves whereby they are movable simultaneously from their first to their second positions.

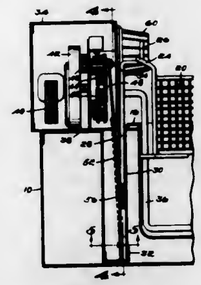
3,101,042
PROPORTIONING DEVICE
Paul F. Good, Lutherville, Md., assignor to Speedco, Inc., Baltimore, Md., a corporation of Maryland
Filed Mar. 15, 1962, Ser. No. 179,972
5 Claims. (Cl. 99—256)



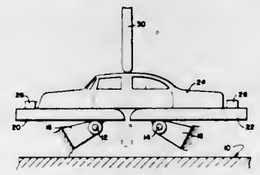
1. A proportioning device comprising movable means adapted to be actuated in response to the amount of a given substance, a primary beam having a fixed pivot point and a free end movably engaging said movable means, a secondary beam pivotally joined to said primary beam and having a free end adjacent said movable means, stop pin means for engaging said secondary beam at a point where the distance between the free ends of the primary and secondary beams caused by movement of said movable means represents a proportional increase over the amount of said given substance upon the addition of a substance to said given substance for making-up said proportional increase, and means for stopping such making-up upon the closing of the distance between said free ends.

3,101,043
COOKING MACHINE
George H. Bushway, S. Road, Rye Beach, N.H.
Filed June 22, 1961, Ser. No. 118,964
2 Claims. (Cl. 99—407)

1. A cooking machine comprising a base member, a cooking tank removably supported thereon, a foraminous basket removably disposed within the tank, means providing a vertically extending guideway carried by the base member, a box comprising a unit independent of and removably supported on the base member, power operated means carried by said box and including an electric motor and a member disposed to slide vertically on the guideway for lifting the basket, an electric heating unit carried by the box in position extending downwardly into the tank beneath the basket, an electric power cable to the motor and heating unit extending into the box, and control means for the motor and heating unit carried by the box, the box together with the heating unit and control and power means being removable from the base member as a unit and permitting thorough washing and cleaning of the base member independently of the electric power cable, control means and motor.



3,101,044
METHOD OF CONVERTING AUTOMOBILE BODIES TO A COMPACT FORM FOR TRANSPORT AS SCRAP
Rudolf H. Schlidt and Fritz K. Pauli, both of 3306 Panorama Drive SE., Huntsville, Ala.
Filed May 18, 1961, Ser. No. 111,102
4 Claims. (Cl. 100—42)



1. A method of converting an automobile body into a compact form for transport as scrap which comprises the steps of applying generally opposing forces to the central portion of said body and the opposite end portions thereof of an amount sufficient to cause said body to bend and compact generally along a plane extending transversely through the central portion thereof and subsequently applying to the bent body forces sufficient to move and compact the portions of the body on each side of said transversely extending plane into adjacency and substantial coextension with each other.

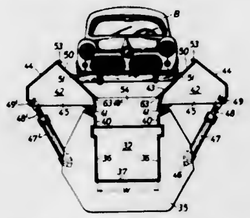
3,101,045
CHARGING BOX FOR A MACHINE FOR OPERATING ON METAL OR SIMILAR SCRAP
Fritz van Endert, Dusseldorf-Oberkassel, Germany, assignor to Waldemar Lindemann, Dusseldorf, Germany
Filed Sept. 19, 1960, Ser. No. 56,759
Claims priority, application Germany Dec. 31, 1959
4 Claims. (Cl. 100—233)

1. A charging device for a machine for operating on oversized metal scrap or the like comprising in combination

(*a*) an elongated receptacle open at both ends and having a bottom wall, a pair of opposed upright side walls longitudinally adjoining said bottom wall and a top opening between the upper edges of said side walls;

(*b*) a reciprocable ram entering said receptacle through one of its open ends and pushing material out of said receptacle through the other open end into said operating machine;

(*c*) a pair of cooperating compacting jaws adapted to operate on metal scarp; each jaw extending longitudinally substantially the full length of said receptacle outside thereof and hinged to the upper edge of one of said side walls for a swinging movement between a first or receiving position adapted to support scrap exceeding in size the width of the opening and a second or final operating position;



(*d*) a working face on each jaw; said working faces in said first position diverging away from said top opening to form a support for scrap exceeding in size the width of said opening and to be compacted by the jaws when the same swing towards each other into said second position, and in said second or final operating position converging away from said top opening to confine at any level a clearance smaller than the width of said opening to compact the scrap to a size smaller than that of said opening; thereby permitting the operated on metal scrap to fall freely and unaided into the receptacle when released by the jaws and to have clearance with said side walls for movement by said ram along said receptacle.

(*e*) an actuating means for said reciprocable ram and and for said swingable jaws.

3,101,046

MACHINE FOR PRINTING ADDRESSES INCLUDING MEANS FOR SELECTING THE LINES TO BE STAMPED OFF DIFFERENT PRINTING PLATES

Ivo Spiazzi, Milan, Italy, assignor to Fabbrica Italiana Macchine Aziendali, Milan, Italy, a company of Italy

Filed Aug. 2, 1960, Ser. No. 47,028
Claims priority, application Italy Aug. 4, 1959
11 Claims. (Cl. 101—57)



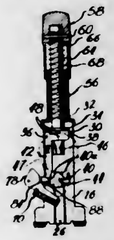
6. In an address-printing machine operating with printing plates which are successively movable into a printing position, and each of which carries a plurality of lines, a plurality of separate pads, each of which is aligned with and is selectively movable into operative position relative to one line of a plate when the plate is disposed in said printing position, means urging each pad toward said plate and into operative position to effect printing of the associated line of said plate, a rotatable shaft, a series of identical cams secured on said shaft in angularly shifted positions relative to one another, each of said cams being operatively connected to one of said pads, said cams being operative upon rotation of said shaft to successively move operative pads away from said plate and out of operative positions at predetermined angular positions of said shaft.

3,101,047

STAMPING DEVICE

Samuel M. Weissman, Chicago, Ill., assignor to Bankers & Merchants, Inc., Chicago, Ill., a corporation of Illinois

Filed Apr. 14, 1961, Ser. No. 103,076
5 Claims. (Cl. 101—103)



1. In a marking device having a frame means, reciprocally movable holder means movable between a position of use and a non-operative position guided in the course of movement thereof by said frame means, marking means supportably mounted in said holder means, manually operable actuating means connected to said holder means for moving said marking means into an operative position of use, means connected to said actuating means for biasing said marking means into a non-operative position, the improvement comprising inking means pivotally mounted on said frame means, cam surface means mounted on said inking means and disposed in the path of said holder means when said marking means is moving into an operative position of use whereby said holder means engages said cam surface means, pivotally moving said inking means from the path of said holder and marking means during a portion of said holder means movement; projecting tongue means connected to said inking means adapted to engage a parallel surface portion of said holder means in face-to-face, frictional engagement whereby said inking means may pivotally move relative to said holder means upon initial movement of said holder means and prior to engagement of said holder means with said cam surface means of said inking means.

3,101,048

HAND STAMPS

Carl E. Carlsen, 867 3rd Ave., New York, N.Y.

Filed Nov. 30, 1960, Ser. No. 72,667
1 Claim. (Cl. 101—125)



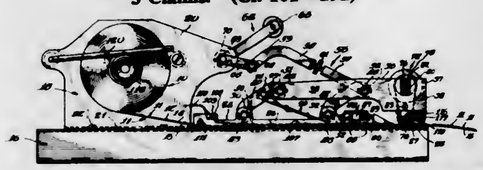
An invention comprising two semi-cylindrical members, the inner member being formed with openings adapted to receive studs integral with the outer member for securing said members together, a handle attached to a bridge fixedly connected to said inner member, a stencil, the inner member having each side extended, whereby to prevent said stencil from being shifted, the inner member being at one end formed with reduced edges, a rubber band connected to a stencil and passing over said reduced edges, and a hook formed on said bridge and adapted to engage said rubber band, the outer member being formed with perforations and an ink storage pad secured between said inner and outer members, a printing pad attached upon the outside of the outer perforated member and being folded over the latter, said pad extending outside of the outer cylinder to prevent the latter from touching the stencil, said outer member being formed with two arms, a removable pin received by said arms and engaging the stencil at one end of these, a thin metal strip secured to the other end of said stencil, said metal strip being formed with eyelets adapted to receive said stretched rubber band and holding the stencil under tension.

3,101,049

PRINTING DEVICE FOR PRINTING STICKERS ON A CONTINUOUS ROLL

Charles B. Huppert, 1336 W. Birchwood Ave., Chicago, Ill.

Filed Nov. 6, 1961, Ser. No. 150,332
3 Claims. (Cl. 101—292)



1. A printing machine for imprinting labels adhesively and removably secured on a continuous roll of tape, said machine comprising a base, a guide member secured on said base and through which said tape is advanced, a reciprocating unit supported on said base, said reciprocating unit comprising an upper frame member and a pair of front legs and a pair of rear legs secured to said upper frame member for supporting same, with the lower ends of said legs pivotally supported on said base, a printing unit removably supported at the forward end of said upper frame member, crank means connected to said reciprocating unit and adapted when rotated to reciprocate said unit, a finger secured adjacent the rear end of said reciprocating unit and adapted to extend into said guide member and engage the tape when said reciprocating member is moved forwardly to advance said tape through said guide member, a stationary inking member supported on said base above said guide member and engaged by said printing unit on the return movement of said reciprocating unit.

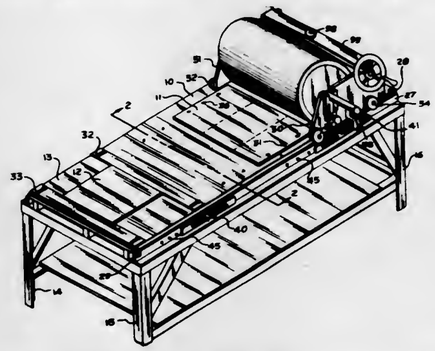
3,101,050

FLAT PLATE PRINTING APPARATUS HAVING ACCURATE REGISTER

John J. Schaefer and Hugh B. Patrick, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Nov. 22, 1960, Ser. No. 71,002
8 Claims. (Cl. 101—252)

1. A printing apparatus comprising in combination, a flat table having a first portion adapted to support a flat inked plate and a second portion adapted to support a flat article to be printed, a plate registering means and an article registering means for establishing initial register lines transversely of said plate and of said article respectively, first and second carriage register means supported upon said table and cooperating with said plate registering means and said article registering means respectively, a carriage mounted upon said table for movement therealong, carriage-positioning means for releasably connecting said carriage to a selected one of said first and second carriage register means, a shafted printing roll removably mounted upon said carriage and having an axle projecting from each end thereof, means for selectively lifting and lowering said roll with respect to said table and including cradles mounted in said carriage and supporting the respective axle portions of said roll, roll-indexing means



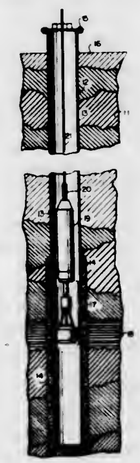
carried by one of said cradles and adapted to connect said roll rigidly to said carriage while in a first position and to permit said roll to rotate with respect to said carriage while in a second and disconnecting position, said roll-indexing means while in said first position serving to establish an initial register line lengthwise of said roll and in correlation to the initial register lines of said plate and said article, and means for moving said roll-indexing means to said disconnecting position thereof, thereby to permit said roll to rotate with respect to said carriage during the printing movement of said carriage along said plate and said article.

3,101,051

APPARATUS FOR INITIATING FRACTURES IN EARTH FORMATIONS

Bruce Gilbert, Dallas, Tex., assignor to The Western Company of North America, a corporation of Delaware

Filed July 31, 1957, Ser. No. 675,424
6 Claims. (Cl. 102—20)



3. A fracture initiation gun assembly adapted to be lowered into a well bore hole which assembly comprises

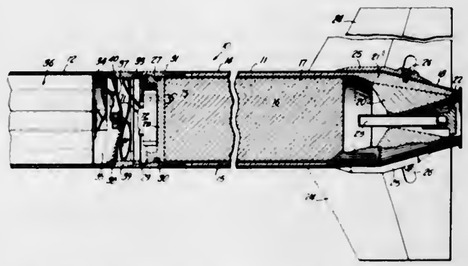
a charge container and a plurality of shaped explosive charges, said charge container being provided with two charge blocks each containing three charge chambers, said charge blocks being disposed back to back in said charge container with the charge chambers of said blocks facing in opposite directions, the axes of the terminal charge chambers in each of said charge blocks making an angle of 8° with the axis of the central charge chamber in said block, said shaped explosive charges being disposed in said charge chambers with the shaped charges in one charge block faced to fire in one direction and the charges in the other charge block faced to fire in the opposite direction and a stand-off space between the shaped charges and the perimeter of the main charge container.

3,101,052
ROCKET

Roland C. Webster, Annandale, Walter Cameron Roberts, Jr., Alexandria, and Millard Lee Rice, Annandale, Va., assignors to Atlantic Research Corporation, Fairfax County, Va., a corporation of Virginia

Filed Aug. 30, 1960, Ser. No. 52,989
10 Claims. (Cl. 102—49)



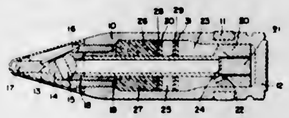


1. A rocket vehicle for transporting a payload to high altitude and expelling the payload from the rocket vehicle, comprising an elongated tubular case having a rocket motor section in the trailing end thereof and a parachute section adjacent the leading end thereof, a nose cone having a rearwardly opening payload housing chamber therein bounded at the rear of the nose cone by an axially elongated annular outer wall portion of the nose cone and a transverse payload base plate forming a rear closure for the payload housing chamber, means interconnecting the outer wall portion of the nose cone with said base plate, said rocket motor section including an outer cylindrical shell and a rocket motor housed therein having an elongated end-burning propellant grain and a transverse head closure at the forward end of the rocket motor section fixed to said shell, said parachute section including an outer cylindrical tubular wall conforming to the diameter of said shell and aligned therewith defining with said head closure a forwardly opening cylindrical chamber, a forward closure for said parachute section normally secured to said outer cylindrical wall by frangible connector means and a folded parachute and a surrounding inner cylindrical sleeve formed of axially split sections slidably fitted with said outer cylindrical wall, an axially movable piston member slidably interfitted with the inner surface of said outer cylindrical wall between said sleeve and said head closure spaced from the latter to define a pressure chamber therebetween, coupling means connecting said payload base plate with said forward closure and said forward closure with said parachute, gas generating means for producing pressure within said pressure chamber to axially force the piston forwardly against said parachute and said sleeve and force the latter against said forward closure to break said frangible connector means and expel the sleeve and folded parachute and forward closure through the forward end of said cylindrical chamber, and a lanyard interconnecting said piston with said fixed closure for limiting expulsion movement of said piston to a limit position near the forward end of said parachute section and having a length to accommodate movement of said piston to said limit position.

3,101,053
COMBINATION FRAGMENTATION STRUCTURAL INCENDIARY DAMAGE PROJECTILE

Thomas Stevenson, Huntingdon Valley, and James J. Caven, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed June 8, 1960, Ser. No. 34,846
2 Claims. (Cl. 102—57)
(Granted under Title 35, U.S. Code (1952), sec. 266)

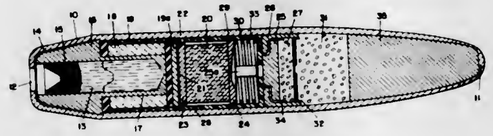


1. In a projectile of the type for firing incendiary material and metal slugs in as narrow a cone of dispersion as about 19° and including a projectile body, an impact responsive nose and fuze in said projectile, an incendiary material, solid slugs to be fired with said incendiary material in said projectile body, said nose fuze firing said incendiary material after said nose fuze has been blown off, the combination therewith of the improvement for enhancing the probability of bringing down an enemy aircraft with body fragments having a narrowed cone of dispersion thereof while retaining the aforesaid slugs and incendiary material in a narrow cone of dispersion, said improvement including a base detonating charge, a body bursting charge in front of said base detonating charge and in back of said slugs and incendiary material, an axial imperforate hollow metal tube extending from adjacent said nose fuze through said slugs, incendiary material and said body bursting charge for firing said base detonating charge by a long flame from said nose fuze, said tube having an enlarged rear end fitting within said projectile body and enclosing said base detonating charge, the projectile body enclosing the enlarged rear end of said tube fitted therein and a substantial length of said projectile body being thicker than the portion of the body around said slugs, incendiary material and a substantial length of said body bursting charge whereby said enlarged rear end of said tube and the thick body wall portion reinforce said base detonator against radial outward rupture, flame passageways inclined radially outward and forward from said base detonator, through said enlarged rear end of said tube to a rear face of said body bursting charge, the projectile body thickness tapering gradually from an intermediate portion of said body bursting charge in front of said enlarged end of said tube to a substantially uniform reduced thickness throughout substantially all of said incendiary material, most of the length occupied by said slugs, and a substantial length of said body bursting charge, whereby on actuation of said nose fuze a flame passes through said tube to ignite said base detonator in advance of igniting said body bursting charge and incendiary material, the rear face of said body bursting charge being ignited and a shock wave and pressure flame front will propel said slugs, incendiary material, and body fragments in a controlled forward direction.

3,101,054
ELECTRICALLY INITIATED SPOTTER TRACER BULLET

Thomas Stevenson, Huntingdon Valley, and Winston W. Cavell, Philadelphia, Pa., and William A. Dischert, Merchantville, N.J., assignors to the United States of America as represented by the Secretary of the Army

Filed Oct. 5, 1960, Ser. No. 60,758
7 Claims. (Cl. 102—60)
(Granted under Title 35, U.S. Code (1952), sec. 266)

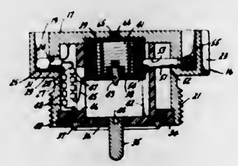


7. A projectile having a piezoelectric crystal in the rear portion thereof, a rear wall of said projectile being permeable to heat and pressure from a propelling charge, said piezoelectric crystal surrounding an opening into which such heat and pressure may enter, means for securing said crystal adjacent said rear wall, an electric condenser charged by said crystal, electrical connections between said crystal and condenser, a spotter composition in front of said condenser, means for firing said spotter composition on discharge of said condenser, said means including a switch wherein one contact thereof is closed on reduction in velocity of said projectile, and means in the connections between the crystal and condenser to allow current to flow for charging the condenser and for precluding the condenser being discharged through the crystal in response to a forward movement of the condenser bodily.

3,101,055
DISPOSABLE BOMB ARMING DEVICE

William K. Kuntz and George E. Souviner, Indianapolis, Ind., assignors to the United States of America as represented by the Secretary of the Navy

Filed Feb. 28, 1962, Ser. No. 176,461
5 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

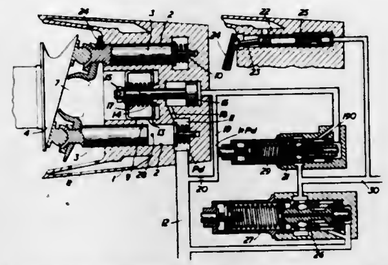


1. A disposable bomb arming unit compirsing:
(*a*) a casing having a cavity in one end and a circular channel in the other end,
(*b*) an electrically insulated base plate closing said cavity,
(*c*) a first electrical conductor attached to said base plate,
(*d*) a second electrical conductor slidably mounted within said cavity,
(*e*) a flexible arming cable having one end connected to said second electrical conductor and having a portion of its length stowable in said circular channel, and
(*f*) means engaging said flexible arming cable for separating said first electrical conductor from said second electrical conductor when said flexible arming cable is stowed in said circular channel.

3,101,056
RECIPROCATING PUMPS

Bertram Anthony Peaster, Codsall, England, assignor to Integral Limited, Wolverhampton, Staffordshire, England, a British company

Filed July 7, 1961, Ser. No. 122,480
Claims priority, application Great Britain July 18, 1960
3 Claims. (Cl. 103—37)



1. A hydraulic pump having variable liquid delivery, comprising, in combination, a plurality of parallel-connected pump cylinders having inlet and outlet openings for said liquid and plungers reciprocable in said cylinders, servo means for controlling the liquid delivery of the pump, a first conduit connecting one side of said servo means to the delivery pressure of the pump, a second conduit connecting the other side of said servo means to restricted flow of said liquid, thus producing a hydraulic pressure difference across said servo means, means for biasing said servo means in aiding relationship to said restricted flow, a control valve operatively connected to said second conduit, means for biasing said control valve against said restricted flow, the pump outlet being controlled by movements of said control valve in proportion to the hydraulic pressure of said restricted flow, and valve means controlled by movements of said servo means for throttling the effective area of said pump cylinder inlets in inverse proportion to said pressure difference, whereby said liquid delivery is regulated in response to the flow requirements of the system supplied by the pump, one of said cylinders having a bleed hole communicating with the liquid inlet of the pump, whereby said servo means is adapted to operate when the pump is off-loaded.

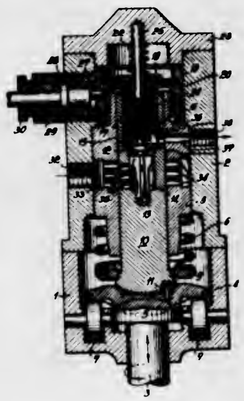
3,101,057
INJECTION PUMP

Joachim Heiser, Bernhausen, Kreis Esslingen, Wurttemberg, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Dec. 5, 1961, Ser. No. 157,081
Claims priority, application Germany Dec. 10, 1960
7 Claims. (Cl. 103—37)

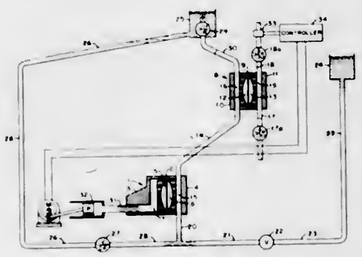
1. In an injection pump, in combination, a cylinder having a pumping chamber therein; piston means in said cylinder adapted to reciprocate therein along pressure and suction strokes; inlet passage means leading to said pumping chamber; discharge passage means leading from said pumping chamber; control means connected to said piston means for movement therewith and cooperating with said inlet and discharge passage means for opening said inlet passage means during each suction stroke of said piston means and for closing said inlet passage means during each pressure stroke of said piston means, said control means opening said discharge passage means during each pressure stroke of said piston means and closing said discharge passage means during each suction stroke of said piston means, said control means being capable of preventing leakage of fuel back to said inlet passage means during the pressure strokes of said piston means when the pump operates at relatively high speeds but under certain operating conditions, as when the pump is used with a relatively light fuel or when the parts be-

come worn, being incapable of preventing leakage of fuel back to said inlet passage means during pressure strokes of said piston means when the pump operates at relatively slow speeds; and valve means carried by said control means for movement therewith and located in the path of flow of fuel from said inlet passage means to said pumping chamber for preventing fuel from leaking back to said inlet passage means during pressure strokes



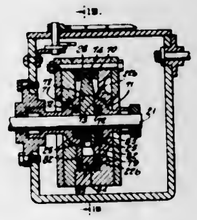
of said piston means at relatively slow speeds of operation of the pump, said valve means, because of its inertia, being incapable of maintaining the pumping chamber closed off from said inlet passage means during the entire pressure strokes of said piston means when the pump operates at relatively high speeds, whereby said control means and said valve means cooperate to prevent leakage back to said inlet passage means during all speeds of operation of the pump.

3,101,058
DIAPHRAGM PUMPING SYSTEM
William H. Carr, Jr., Oak Ridge, Tenn., and Edward R. Dobyns, Cocoa Beach, Fla., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 16, 1961, Ser. No. 117,760
3 Claims. (Cl. 103—38)



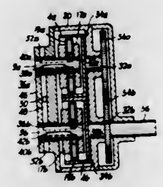
1. In a diaphragm pumping system, the combination of a first pump head defining an internal cavity; a pumping diaphragm adapted to oscillate within said cavity; a second pump head defining a cavity having a volume greater than the volume of the cavity in said first pump head; a driving diaphragm adapted to oscillate with the cavity of said second pump head; an intermediate coupling system provided with a pressure relief valve and adapted to hydraulically couple one side of the diaphragm of said second pump head to one side of the diaphragm of said first pump head; a reciprocating pump hydraulically coupled to the other side of the diaphragm of said second pum head, said reciprocating pump having a variable displacement, the normal displacement of said pump being equal to and the maximum displacement being greater than the volume of said cavity of said first pump head; flow detection means adapted to monitor the rate of flow output from said diaphragm; means responsive to said flow detection means to temporarily increase the displacement of said reciprocating pump from its normal displacement to a greater displacement whenever the flow output from said pumping diaphragm falls below its full capacity; a fluid reservoir; a conduit communicating with said reservoir and said intermediate coupling system; and a one-way valve located in said conduit allowing fluid flow only in the direction toward said intermediate coupling system.

3,101,059
FLUID PUMP OR MOTOR
Elmer W. Easter, 827 Summit St., Coraopolis, Pa.
Filed June 30, 1959, Ser. No. 824,104
14 Claims. (Cl. 103—142)



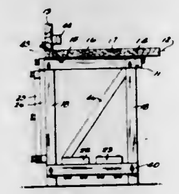
1. In a rotary fluid flow device comprising an inner casing with a spherical inner working surface; an outer casing embracing the inner working surface and bearing opposed interior side walls; a spherical wall rotatable about the axis of an annular pumping volume and bearing a spherical outer working surface spaced from and opposed to the inner working surface, said outer working surface being radially outside said inner working surface, said annular pumping volume being defined by the inner and outer working surfaces and the side walls; an annular flange in the pumping volume spanning the space between the spherical working surfaces and thereby dividing the pumping volume into first and second pumping spaces; opposed gripper surfaces defining vane gaps in the flange; at least three transverse vanes extending between the flange and the side walls, thereby dividing the first and second pumping spaces into charge chambers, each vane having upper and lower faces conforming respectively to the outer working surface and the inner working surface, at least one vane connected in driving relation to the peripheral wall; means for rotating the flange about its axis together with the vanes and peripheral wall, with the axes of the pumping volume and the flange diverging from the center of the spherical inner working surface, thereby changing the volume of each charge chamber, and duct means for introducing fluid from a fluid supply into the charge chambers during the increase in volume thereof and for removing fluid to a fluid discharge from the charge chambers during the decrease in volume thereof, the improvement comprising non-rotating interior side walls; vanes rotatable during the rotation of the flange, said vanes rotating about an instantaneous vane axis extending through the center of the spherical inner working surface, and said vanes having spherical upper and lower faces of the radius of curvature respectively of the outer working surface and the inner working surface, and side faces adapted to make sliding surface contact with the side walls whereby rotary motion of the vane relative to the side walls about the vane axis is substantially prevented.

3,101,060
VARIABLE DISPLACEMENT PISTON MACHINE
Gustaf Erik Björklund, Svedenborsgatan 2, Stockholm, Sweden
Filed Jan. 31, 1961, Ser. No. 86,051
Claims priority, application Sweden Feb. 4, 1960
9 Claims. (Cl. 103—161)



1. Machine adapted to operate as a pump, compressor or motor comprising a casing having a plurality of units disposed therein; each unit including a centrally disposed pintle valve having a pressure side and a suction side, a cylinder block surrounding said pintle valve and rotatable with respect thereto, reciprocable piston means mounted in said cylinder block providing working chambers in said cylinder block during rotation thereof, a ring surrounding said cylinder block and being engaged by said piston means, said ring being adapted to rotate about an axis disposed eccentrically with respect to the axis of said pintle valve for reciprocation of the piston means with respect to said cylinder block through the pressure and exhaust positions; means provided in said casing for supporting said pintle valve and ring of each unit, and means to operatively connect said units to drive said ring and cylinder block thereof in rotation through said piston means so that said ring is the driving or driven member, the pintle valves of said units being disposed parallel to each other, the rings of said units being in operative engagement with each other at their high pressure positions to balance the pressure forces of the piston means thereon.

3,101,061
PICNIC TABLE AND WORKBENCH CONVERSION
Donald F. Amend, 18645 Pleasant St., Brookfield, Wis.
Filed Jan. 4, 1961, Ser. No. 80,658
1 Claim. (Cl. 108—11)



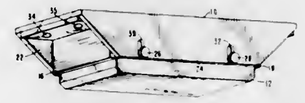
In a picnic table adapted for conversion to a work bench, a plurality of longitudinally extending planks forming the top of the table, a longitudinal strip underlying and fastened to a top plank adjacent one side of the top of the table and in spaced relation to said top plank, the top plank adjacent to said first mentioned top plank having a pair of oblique bores, the first mentioned top plank when reversed and placed on its side edge abutting said adjacent plank having oblique bores registering with the bores in the adjacent plank, and bolt means for the bores to releasably retain the first mentioned top plank as a bench back with strip forming a tool rack in the bench form.

3,101,062
FOLDING TABLE AND BENCH CONSTRUCTIONS
Claude G. Kanzelberger, Two Rivers, Wis., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Filed Sept. 18, 1961, Ser. No. 138,750
12 Claims. (Cl. 108—37)



1. A foldable table-top assembly comprising two top members, hinge means pivotally interconnecting one end of each of said top members for holding said members in horizontal end-to-end relation when the assembly is open and in vertical parallel relation when the assembly is closed, a wall pocket to receive said top members when the assembly is closed, means carried at the other end of one of said top members for pivotally connecting said other end in said wall pocket, means for raising said top members a certain distance upwardly attendant to the folding thereof into said wall pocket, and locking means mounted in said wall pocket in the upper part thereof and positioned to receive said hinge means when said top members are raised said distance and thereby retain said top members in the closed position in said wall pocket.

3,101,063
CUSHIONED SKID
Thomas P. Wharton, Washington, D.C., assignor, by mesne assignments, to Packaging Consultants, Inc., a corporation of the District of Columbia
Filed Nov. 9, 1960, Ser. No. 68,174
2 Claims. (Cl. 108—55)

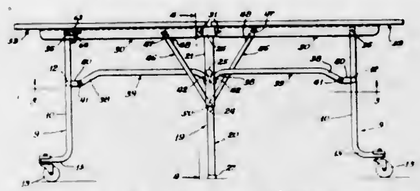


1. A cushioned cargo device including a container in which goods may be placed, a plurality of cushioning skids attached to the container to absorb shock and prevent damage to lading disposed therein, each skid including a substantially U-shaped main frame having a central portion attached to the container and two slotted side portions extending substantially perpendicular to the central portion, a foot member having bolt-like members attached thereto and extending therefrom, said foot member being disposed with the space lying between said side portions of said U-shaped main frame, said bolt-like members extending through the slots of said side portions of said U-shaped main frame, a piece of resilient material disposed under compression between the central portion of said U-shaped main frame and said foot member, and a pair of end plates attached to the U-shaped main frame at the ends thereof whereby said piece of resilient material is encased within the space defined by the U-shaped main frame and the foot member.

3,101,064
FOLDING TABLE CONSTRUCTION

Claude G. Kanzelberger and Roy E. Kanitz, both of Two Rivers, Wis., assignors to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin

Filed July 31, 1961, Ser. No. 128,034
14 Claims. (Cl. 108—113)

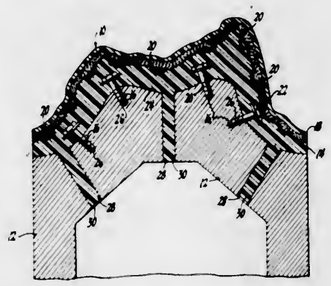


1. A transversely folding table movable between open and closed positions and comprising a unitary supporting structure comprising a pair of table top supports adapted to extend horizontally in end-to-end relation when the table is in its open position, a center leg frame pivotally connected at its top to the adjacent ends of said table top supports, a pair of end leg frames pivotally connected at their tops to the respective table top supports adjacent their remote ends, a pair of stretcher bars each pivotally connected to said center leg frame and to one of said end leg frames at points equally spaced from said table top supports, and means for equalizing the movement of said leg frames relative to said table top supports on movement between open and closed positions, and a pair of table top section removably secured to the respective table top supports.

3,101,065
REINFORCED PLASTIC DIE

Edward R. Kalis, Dearborn, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 16, 1958, Ser. No. 742,362
6 Claims. (Cl. 113—49)

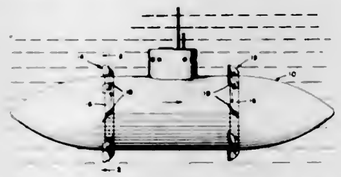


6. A reinforced plastic die for stamping sheet metal panels, said die comprising a substantially flat metal base member, a quantity of a hardened filled resin having gravel dispersed therethrough bonded to said base member, a plurality of spaced anchor members extending from said base member into said resin, said filled resin containing approximately 25% to 40% by weight of hardenable resin, 10% to 20% by weight of a metal powder, 40% to 60% by weight of hydraulic cement and sufficient hardener for said resin, a thin layer of fiber glass cloth adhering to the surface of said hardened filled resin-stone mixture opposite said base member, said fiber glass cloth being impregnated with a hardened mixture containing about 50% to 75% by weight of epoxy resin, 10% to 30% by weight of silica flour and sufficient hardener for said resin, a plurality of spaced bridge chaplets located at the interface of said die body and said laminate, and a lamellar overlay of filled hardened resin bonded to said impregnated fiber glass cloth layer opposite said plastic layer.

3,101,066
SUBMARINE HYDRODYNAMIC CONTROL SYSTEM

Frederick R. Haselton, 9110 Ewing Drive, Bethesda, Md.

Filed July 14, 1961, Ser. No. 124,236
6 Claims. (Cl. 114—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A submarine vehicle for operation in a fluid medium comprising, a neutrally buoyant cylindrical body for said vehicle, a pair of spaced peripheral propulsion units mounted for rotation around said body, pitch adjustable blades radially and pivotally mounted on said propulsion units, and means operatively connected to said blades for collectively and cyclically adjusting the pitch of said blades for maneuvering said vehicle in six degrees of freedom.

3,101,067
ANCHOR SECURING DEVICE

Edward W. Brydon, 1341 Steavebank Road N., Port Credit, Toronto, Canada

Filed July 21, 1961, Ser. No. 125,726
Claims priority, application Canada July 11, 1961
12 Claims. (Cl. 114—210)



1. A device for securing an anchor of the type having an elongated shank, attaching means adjacent one end of said shank, and a crown and a pair of flukes rigidly secured together and rotatable about an axis adjacent the other end of said shank and transverse thereto, the crown having a bearing surface portion, said device comprising: first means engageable with the bearing surface portion of the crown of such an anchor and adapted to constitute a fulcrum therefor; second means adapted to be spaced apart a predetermined distance from said first means, for engaging the attaching means of such an anchor and applying a turning moment thereto whereby the crown is adapted to move from a first free position to a second locking position; and third means having a predetermined height adapted to be positioned intermediate said first and second means and adapted to limit the movement of the flukes of such an anchor.

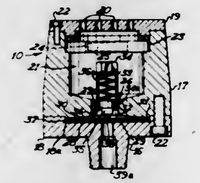
3,101,068
LOW GAS PRESSURE ALARM

Nathan Kenneth Jensen, Minneapolis, Minn., assignor to Medic-Made, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed June 16, 1961, Ser. No. 117,611
9 Claims. (Cl. 116—70)

1. A device for detecting and indicating decrease of gas pressure in a gas supply below a desired level, said device

comprising a housing having forward and rear ends and having a gas outlet in said rear end, said housing including a forward end wall with a gas inlet therethrough and means adapted for attaching said inlet to the gas supply, a partition structure between said outlet and said forward end wall and spaced from said forward end wall to define an internal chamber therebetween, said partition structure being disposed at the rear side of said chamber and having a recess in the center thereof, said partition structure defining a forwardly facing and generally annular disc-supporting surface having an inner periphery adjacent said recess and having an outer periphery, said outer periphery lying in a common plane and said inner periphery being disposed slightly rearwardly of said outer periphery, a forwardly facing valve seat element in the recess and being slidable forwardly and rearwardly therein, a stop in the recess limiting forward movement of said element, spring means continuously urging said element forwardly toward said stop and toward said chamber, said partition



structure having an aperture therein communicating between said chamber and said gas outlet, a resilient disc in said chamber and having an outer periphery lying against the outer periphery of said disc-supporting surface and said disc also having a central portion in spaced relation with said forward wall and with said partition structure, the spacing between the central portion of the disc and said disc-supporting surface being sufficiently small as to permit resilient flexing of the disc into engagement with said surface without exceeding the elastic limits of the disc, the outer periphery of the disc being sealed to the housing to prevent gas flow past the disc outer periphery, the disc having a central aperture aligned with said valve seat element, said valve seat element and said disc having aligned seating portions around the periphery of said central aperture and engageable with each other in gas-sealing relation when the disc is flexed under the influence of high gas pressure at the inlet, and gas flow detecting and indicating means in said outlet.

3,101,069
SHOCK SENSOR

William J. Reich, Jr., St. Albans, and Charles Ward, Westbury, N.Y., assignors to American Bosch Arma Corporation, a corporation of New York

Continuation of abandoned application Ser. No. 47,167, Aug. 3, 1960. This application Apr. 25, 1962, Ser. No. 193,037
4 Claims. (Cl. 116—114)

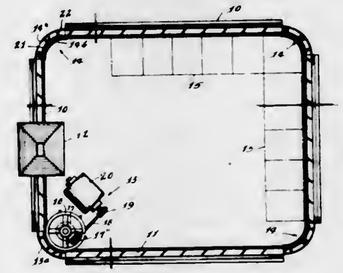


1. In a device of the character described for indicating that excessive shock along a given axis has been experienced, a base, a plurality of frangible reeds extending perpendicularly to said axis, made of similar material and section but unequal in length, and each secured at one end to said base, a plurality of unequal masses attached to the free ends of said reeds, said reeds being disposed so as to be frangible by said masses in response to acceleration of said base along said axis, said masses being attached to said reeds in graduated sequence such that the products of the reed length and the mass weight are equal for each combination of reed and mass, whereby the resonant frequencies of the resultant reed and mass combinations are made different while the minimum accelerations along said axis for which said reeds break are made substantially the same.

3,101,070
POULTRY FEEDER HAVING A BAND TYPE CONVEYOR

Nat Cordis, Crown Farms, Silver Lake, Wis.

Filed Apr. 6, 1960, Ser. No. 20,312
12 Claims. (Cl. 119—52)

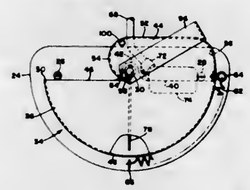


1. In a poultry feeding apparatus, the combination of an open-topped trough means and corners providing an endless circuit, said trough means having bottom and side walls, flexible endless conveyor means extending along said circuit, means for introducing feed into said trough means, said conveyor means being flat and relatively thin and running adjacent one of said walls, feed engaging portions on said conveyor arranged in planes transverse to the path of travel of said conveyor, a holddown mounted in said trough means substantially coextensive with said corner and colinear with a segment of said conveyor passing through said corner, said holddown including an arcuate flange member arranged in a plane parallel to the normal plane of travel of said conveyor in traversing the corner and entering an adjacent flight of trough, said member being engageable by said feed engaging portions when said conveyor rises in said trough.

3,101,071
ANIMAL WATERER

Norman V. Frye, Rte. 4, Davenport, Iowa

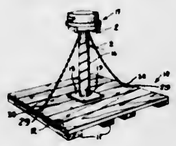
Filed Mar. 13, 1962, Ser. No. 179,396
11 Claims. (Cl. 119—78)



1. An animal waterer, comprising: a horizontal shaft having front and rear ends and including means at its rear end for the mounting thereof on and to project forwardly from a support; a container carried by the shaft for forward axial removal therefrom and for rocking to dump and release positions at opposite sides of a central position, said container having front and rear walls respectively adjacent to the front and rear ends of the shaft and radial to the shaft axis and having major portions thereof below said axis, and said container having a bot-

tom joined to and generally coextensive with said major portions to define first and second container parts respectively at diametrically opposite sides of the shaft, said first part having an open top for animal access to water therein in the central position of the container and said bottom being so shaped in said first part that when the container is rocked in the direction causing the first part to move down and the second part up it achieves said dump position and water is discharged therefrom, said rear wall having an upper marginal edge bordering said second part and said container having roof means overlying said second part and spaced both above and forwardly of said rear wall edge to provide respectively a rear opening and an upper slot radial to the shaft; means for connecting the container to a source of water supply, including a conduit entering the second part via said opening and closely adjacent to the shaft, a float within the second part and dimensioned to pass through said opening, and means connecting the float to the inlet to normally maintain a water level in the container below said marginal edge, said slot being dimensioned to accommodate the conduit when the container is rocked to its dump position and said float, in the central position of the container, being normally downwardly out of register with said rear opening; stop means engaging the container and normally confining rocking thereof between its central and dump position, said stop means being disengageable from the container upon forward movement thereof on the shaft to enable rocking of said container in the opposite direction to its release position for achieving register between the float and said rear opening whereby the container is completely forwardly removable from the shaft relative to the shaft, conduit and float; means releasably holding the container against forward movement on the shaft; means biasing the container to its central position and into engagement with the stop; and means on the container for receiving a rocking force for movement thereof to said dump position.

3,101,072
HOG OILER
Louis A. Smith, R.R. 1, Denver, Ind.
Filed Apr. 10, 1961, Ser. No. 101,952
4 Claims. (Cl. 119—157)



1. Animal rubbing apparatus comprising a horizontally extending base, a support extending upwardly from said base and acting as an oil reservoir, means for maintaining the oil within said reservoir at a constant level, a chain secured adjacent one end to said base, a weight secured to the other end of said chain and hanging thereon in said reservoir, said chain being sufficiently long that its other end is submerged within the oil in said reservoir whereby an animal rubbing or forcing against said chain tends to draw the other end of the chain upwardly and to cause the oil about the other end of the chain to run down the chain toward the base, said support having slots formed therein through which said chains extend, said slots terminating at their lower ends in thickened bearing portions upon which said chains bear, and a helical element secured to the outside of said support, the adjacent convolutions of said helical element being spaced from one another to spread oil over the surface of said support.

3,101,073
MECHANICAL PENCIL
Charles E. Baird, 500 Coronado Court, Paducah, Ky.
Filed Dec. 22, 1961, Ser. No. 161,605
5 Claims. (Cl. 120—11)



1. A mechanical pencil comprising a tubular barrel having lower and upper ends, said barrel having a main axial bore extending to said lower end and a reduced diameter axial bore extending from said upper end to the main bore, a tubular tip threaded into the lower end of the main bore, said tip having an axial bore smaller in diameter than said main bore, a tubular split spring lead holder sliding in the tip bore and having a lateral annular flange on its upper end, a coil spring circumposed on the lead holder and compressed between said lateral flange and the tip, a pusher block engaged non-rotatably and slidably in the main barrel bore and engaged with the upper end of the lead holder, a push rod engaged slidably and rotatably in the main barrel bore, a feeding and retracting screw supported within said push rod and threaded through said pusher block, said push rod having a reduced diameter knob on its upper end extending through said reduced diameter barrel bore and reaching beyond the upper end of the barrel, the upper end of main portion of the push rod and said knob defining a shoulder, and laterally inwardly spring-pressed catch means adapted to engage behind said shoulder in a downwardly extended position of the push rod wherein a lead engaged in the lead holder is extended out of the tip to use position.

3,101,074
MARKING PENCIL
Walter B. Spatz, 11182 Sunset Blvd., Los Angeles 49, Calif.
Filed Apr. 19, 1960, Ser. No. 23,173
13 Claims. (Cl. 120—20)



10. In a marking pencil: a barrel; means for supporting a pencil core in said barrel against substantial rotation relative to said barrel while permitting the core to move axially of said barrel; a cap; means mounting said cap on said barrel for rotation and for longitudinal movement on said barrel without rotation between a forward position and a maximum rearward position thereon; sharpening means positioned within and rotatable with said cap relative to said barrel to sharpen the core when said cap is in said rearward position; means within said barrel for feeding the core forwardly of said barrel to locate the forward end portion of the pencil core externally of the barrel and in said sharpening means; releasable latch means for preventing said feeding means from moving said core forwardly in said barrel; said cap being shiftable by manual force to said maximum rearward position and against said latch means to release the same; said mounting means embodying means permitting said cap to be shifted by said feeding means from said maximum rearward position to said forward position to allow reengagement of said latch means when said manual force on said cap is removed.

3,101,075
CLIP FOR WRITING INSTRUMENTS AND THE LIKE
Frank T. Johmann, 49 Hampton Drive, Berkeley Heights, N.J.
Filed June 16, 1960, Ser. No. 36,658
5 Claims. (Cl. 120—42.03)



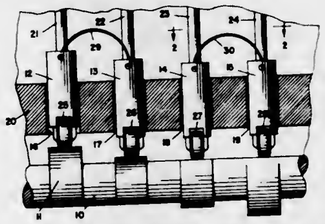
1. A writing instrument having a tip-actuated retractable writing point and a pushbutton actuated retractable clip comprising in combination, a tubular barrel having upper and lower ends, a longitudinally movable hood projecting through the lower end of said barrel, a cartridge unit including a ballpoint, said unit being longitudinally movable within said barrel between a point protracted position wherein said ballpoint extends through said hood and a point retracted position wherein said ballpoint is concealed within said hood, said barrel proximate said upper end being formed with a longitudinally extending recess, a pocket clip unit carried by said barrel including a downwardly extending clip portion, a transversely extending intermediate portion integral with said clip portion, and an upwardly extending pushbutton portion integral with said intermediate portion, guide means carried within said barrel engageable with said pocket clip unit, a helical coil compression spring disposed between said clip unit and said cartridge unit, said spring urging said pushbutton portion to an extended position projecting through said upper end of said barrel while urging said clip portion to a retracted position wherein said clip portion is within said recess whereby said clip portion is substantially flush with said barrel, said spring also urging said cartridge unit towards said point protracted position, and a retraction-protraction mechanism operable to obtain said cartridge unit in a point retracted position against the pressure of said spring upon pressing said hood and ballpoint into contact with a rigid surface and then releasing from said contact, said retraction-protraction mechanism being operable to allow said cartridge unit to be urged to its point protracted position by said spring upon a subsequent pressing of said hood and ballpoint into contact with a rigid surface and then releasing from said contact, said pushbutton portion being longitudinally movable against the urging of said spring into sliding contact with said guide means upon the application of downward force to said pushbutton portion whereby said clip portion is urged to a protracted position wherein said clip portion is projected from said recess, said pushbutton portion being moved to said extended position and said clip portion being moved to said retracted position by said spring upon the release of said downward force.

3,101,076
ROTARY VANE-TYPE INTERNAL COMBUSTION MOTOR
Rodolfo Stephens-Castaneda, Av. del Taller 92–8, Mexico City, Mexico
Filed Apr. 24, 1961, Ser. No. 105,010
3 Claims. (Cl. 123—16)



1. A radial vane-type internal combustion motor comprising a main ring housing, end plates connected to the sides of the main housing, a vane rotor having an axial shaft journalled in said end plates and eccentrically disposed in said main housing, said rotor having longitudinally-extending cylindrical socket recesses, angularly adjustable vane sockets operable in said socket recesses, radially adjustable vanes in said angularly adjustable vane sockets of the rotor having wiping contact with the inner surface of the housing, slot means provided in the inner surface of the main housing and in the end plates at the opposite sides thereof to provide an explosion chamber within the housing surface, said cylindrical vane socket rotor having vane spaces in which the vanes are adjusted, passageway means in one end plate for supplying gas mixture to the inner end of the vane spaces whereby the gas mixture will be acted upon by the vanes, passage way means in the opposite end plate for delivering the gas mixture by the inward movement of the vanes from the vane spaces to the opposite side of the rotor and to the housing removed from the explosion chamber, said rotor having slots in its periphery into which the gaseous mixture from the main ring housing chamber is compressed, means within the explosion chamber of the chamber for igniting the compressed gas mixture as it is delivered from the rotor slots thereto, and spaced pin and slot means extending between the vanes and the end plates for working the vanes radially in their spaces in the cylindrical vane sockets toward and from the inner periphery of the main housing.

3,101,077
ROLLER TAPPET CONSTRAINING DEVICE
John H. Engle, 1044 Maple St., Santa Monica, Calif.
Filed June 21, 1962, Ser. No. 204,268
6 Claims. (Cl. 123—90)



4. In an internal combustion engine including a cam shaft having cam surfaces, a plurality of roller tappets riding on said cam surfaces operating push rods, and an engine block having bores receiving and guiding vertical

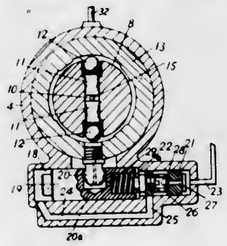
movement of said roller tappets, constraining devices for preventing rotation of said roller tappets in said bores during vertical movements of said roller tappets, each of said constraining devices comprising: a single integral curved strip of resilient material having elongated slots extending inwardly from opposite ends and terminating short of the mid-point of said strip to define pairs of legs at each end of said strip, each leg terminating in a laterally outwardly directed pin, said roller tappets having open upper cylindrical ends from which said push rods extend, each cylindrical end including diametrically opposite transverse openings adapted to receive oppositely directed pins in a loose fit from one of said pairs of legs, the next adjacent roller tappet receiving the pins of the other pair of said pairs of legs in a loose fit so that said curved strip is arched between two adjacent roller tappets, the push rods associated therewith passing upwardly through said slots in said curved strip, successive adjacent pairs of roller tappets being similarly provided with integral curved strips so that each curved strip constrains two roller tappets from rotational movement within their bores.

3,101,078

LIQUID FUEL PUMPS

Fraser Mackie Evans, Uxbridge, Middlesex, England, assignor to C.A.V. Limited, London, England

Filed Apr. 13, 1962, Ser. No. 188,616
Claims priority, application Great Britain Apr. 25, 1961
5 Claims. (Cl. 123—139)



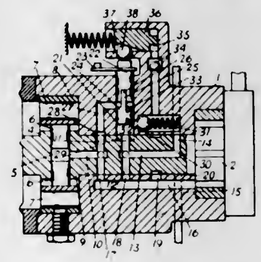
1. For use in supplying liquid fuel to injection nozzles in communication respectively with the cylinders of a multi-cylinder internal combustion engine, a liquid fuel pump comprising in combination a hollow body part which is provided with a plurality of ports adapted to be connected respectively to the injection nozzles, a cylindrical distributor rotatably mounted in said hollow body part, and adapted to be driven by the engine, a head rigidly united with one end of said distributor, and provided with a transversely extending bore, at least one plunger slidably mounted in said bore, liquid fuel feed means which is adapted to be operated by the engine, and from which liquid fuel is intermittently feedable, during rotation of said distributor, through a part the latter to said bore for causing said plunger to move outwardly, an annular cam which surrounds said head, and which serves to impart inward movements to said plunger, during rotation of said head with said distributor, for delivering fuel through said distributor to said ports in turn, a stepped cylindrical chamber which is situated parallel with a tangent to said annular cam, and which has two coaxial parts, one of said coaxial parts being wider than the other, a fluid operable piston slidably accommodated in the wider part of said chamber, means interconnecting said annular cam and said piston so that movement of the latter causes angular movement of said annular cam to vary the timing of the delivery of fuel by said plunger to said ports, a cylindrical valve member slidably accommodated in the narrower part of said chamber, said narrower part being provided with an outwardly extending port which is controllable by said valve member, a compression spring disposed between, and acting on, said piston and said valve member, a supply passage through which fuel from said feed means is admissible to the narrower end of said chamber for acting on said valve member, and a second passage which communicates at its opposite ends respectively with the wider end of said chamber and the outer end of the last mentioned port, and through which liquid under pressure is admissible to, and dischargeable from, the wider end of said chamber under the control of said valve member, the latter having associated therewith a third passage from which liquid under pressure can flow through said second passage to the wider end of said chamber when said valve member is moved in one direction by a rise in the liquid fuel pressure in said supply passage, and said piston being movable towards the narrower part of said chamber by the liquid under pressure admitted to the wider end of said chamber, and having formed therein a fourth passage through which liquid under pressure can flow from said second passage when said valve member is returned to its initial position by said compression spring following a fall of the pressure in said supply passage.

3,101,079

LIQUID FUEL PUMPS FOR INTERNAL COMBUSTION ENGINES

Fraser Mackie Evans, Uxbridge, Middlesex, England, assignor to C.A.V. Limited, London, England

Filed Apr. 13, 1962, Ser. No. 188,615
Claims priority, application Great Britain Apr. 17, 1961
7 Claims. (Cl. 123—140)



1. For use with a multi-cylinder internal combustion engine provided with a plurality of fuel injection nozzles in communication respectively with the cylinders of the engine, a liquid fuel injection pump comprising in combination a hollow body part, a cylindrical distributor mounted in a complementary portion of said hollow body part, and adapted to be rotated by the engine, a head which is rigidly united with one end of said distributor so as to be rotatable therewith, and which is provided with a transverse bore, at least one plunger slidably mounted in said transverse bore, an annular cam surrounding said head for imparting radially inward movements to said plunger during rotation of said head, a first series of angularly spaced radial passages formed in said distributor, an axial passage which is formed in said distributor, and which establishes communication between said first series of radial passages and the transverse bore in said head, a second series of angularly spaced radial passages formed in said distributor, a radial discharge passage formed in said distributor, another passage which is formed longitudinally in said distributor, and through which said second series of radial passages are communicatable with said radial discharge passage, a plurality of angularly spaced discharge ports formed in said hollow body part at positions in which said discharge passage registers in turn with said discharge ports during rotation of said distributor, said discharge ports being adapted for connection respectively to the fuel injection nozzles of

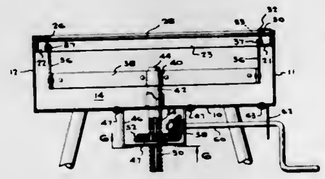
the engine, a cylindrical chamber which at one end communicates with said first series of angularly spaced radial passages, and at the other end communicates with said second series of angularly spaced radial passages, a pair of fuel inlet ports in said hollow body part at positions in which, during rotation of said distributor, one of said fuel inlet ports registers in turn with said first series of angularly spaced radial passages, and the other of said fuel inlet ports registers in turn with said second series of angularly spaced radial passages, means for feeding fuel to said pair of fuel inlet ports, spill passage in the wall of said cylindrical chamber, an axially movable shuttle in said cylindrical chamber, means for adjusting said shuttle angularly about its axis, means for limiting axial movement of said shuttle towards the end of said cylindrical chamber in communication with said first series of angularly spaced radial passages, and means for adjusting said shuttle axially, said shuttle having in at least one end thereof a slot shaped so that angular adjustment of said shuttle will determine at what axial position said shuttle will uncover said spill passage, and the arrangement being such that fuel fed to said second series of angularly spaced radial passages will be delivered through said discharge passage to said discharge ports in turn by displacement of said shuttle in response to fuel fed by inward movements of said plunger to the first mentioned end of said cylindrical chamber.

3,101,080

OUTDOOR GRILL

Alton G. Lorbacher, 306 E. Peace Place, Raleigh, N.C.

Filed July 29, 1960, Ser. No. 46,142
6 Claims. (Cl. 126—25)



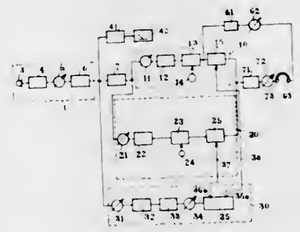
3. A cooking grill comprising, a rectangular box open at the top, a rectangular open frame fitting said box for vertical translation therewithin, said frame comprising side and end channel elements, both said end elements and a first side element opening downwardly, the second side element opening upwardly, there being a series of equally-spaced bores through the inner wall of said first side element and a series of equally-spaced notches in the top edge of the inner wall of said second side element, each said notch being opposite a respective one of said bores, a plurality of grill rods each having one end inserted into a respective one of said bores and its other end resting in a corresponding one of said notches and with its ends in substantially abutting relation with the outer walls of said side elements, respectively, an elongated cover bar connected at its ends to the corresponding ends of said second side element, for pivotal movement about an axis parallel with said bar and second side element, from a first position extending over and across the contiguous ends of all said rods to secure each in its respective notch, to a second position simultaneously freeing all said rods for lifting from said second side element and removal from said frame, said cover bar being at least as wide as said second side element and, when in its said first position, completely covering the upwardly-open channel of said second side element, a pair of brackets each fixed with and depending from the central portion of a respective one of said side elements, within said box, a normally horizontal beam secured at its ends to and interconnecting the distal lower ends of said brackets, a lift rod extending upwardly and slidably through an opening in the bottom of said box and engaging said beam centrally thereof to support said frame, and manually-operable means carried by the lower surface of the bottom of said box and engaging said lift rod, to vertically adjust said frame in and relatively to said box.

3,101,081

APPARATUS FOR THE CONDITIONING OF THE AUDITORY LATERALIZATION

Alfred Ange Auguste Tomatis, Paris, France, assignor to Societe Civile d'Etudes et de Brevets Mota, Paris, France

Filed Feb. 15, 1961, Ser. No. 89,484
Claims priority, application France Feb. 15, 1960
6 Claims. (Cl. 128—1)

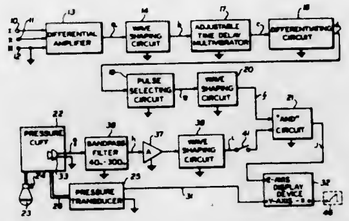


1. An apparatus for restoring the correct operation of a failing directive ear of a subject comprising an input stage for converting acoustic signals into electric signals, a first and a second output stage for converting the electric signals into acoustic signals, each of these output stages being associated to one of the ears of the subject, a first and a second channel connected in parallel between the input stage and the output stages, each of these channels comprising a filter and a gate controlling the opening and the closing thereof, the filter of the second channel determining an attenuation of the signals transmitted relating to the signals transmitted by the filter of the first channel, the input of the first output stage, associated with the directive ear of the subject, being connected to the output of the filter of the first channel, before the gate of said channel, whereas the input of the second output stage, associated to the ear opposite the directive ear, is connected to both outputs of the two channels, the apparatus comprising, in addition, an auxiliary channel connected to the output of the input stage, said auxiliary channel comprising triggering means for producing two control voltages applied, respectively, to the gates of the first and of the second channel, these control voltages being selected in such a manner that, in the absence of an acoustic signal of an intensity higher than a predetermined threshold, the first channel is the only one unblocked, so that both ears of the subject are subjected to the same auditive excitation transmitted through the filter of the first channel, and, upon the application of an acoustic signal, of an intensity higher than said threshold, to the input stage, the first channel is blocked while the second channel is unblocked, so that the auditive excitation of the opposite ear is attenuated, since the output stage associated therewith is then series connected with the filter in the second channel.

3,101,082
APPARATUS FOR MEASURING SYSTOLIC AND DIASTOLIC BLOOD PRESSURES

Stephen N. Steen, New York, N.Y., and Frank L. Grissman, Neptune, N.J., assignors to St. Barnabas Hospital for Chronic Diseases, New York, N.Y., a corporation of New York

Filed Jan. 31, 1961, Ser. No. 86,097
9 Claims. (Cl. 128—2.05)



1. A sphygmomanometer comprising an inflatable cuff for encircling a portion of the human body, means for selectably inflating said cuff for occluding an arterial vessel, an electromechanical pressure transducer coupled to the pressure circuit of said cuff for producing an electrical signal as a function of cuff pressure, an electromechanical auscultatory transducer for monitoring the sounds of arterial flow past the cuff and producing an electrical signal responsive thereto, electrode means for detecting the electrical potentials associated with the contractions of the heart muscles, a comparison circuit coupled to both said electrode means and said auscultatory transducer for producing an output signal only when a signal from said auscultatory transducer occurs a predetermined interval after a signal from said electrode means, and indicating means coupled to both said pressure transducer and said comparison circuit for indicating the cuff pressure when a signal is produced by the comparison circuit.

3,101,083
HEART-LUNG DEVICE

Edward Sidney Hyman, 2233 St. Charles Ave., New Orleans, La.

Filed Jan. 11, 1956, Ser. No. 558,506
7 Claims. (Cl. 128—214)



5. An economical disposable heart and lung device adapted to be discarded after once being used, said device comprising a hollow body provided with downwardly inclined upwardly open troughs attached at the inner surface of the body wall and defining a curved descending path from the upper toward the lower end of the body thereby preventing channeling and short circuiting of blood directly through the body, and means carried by the body for simultaneously supplying blood into said body from the major vein entering the heart and returning the blood processed in said body to a selected artery, thereby obviating the dangers of reusing equipment that has contained blood.

3,101,084
SYRINGE

Clark H. Hamilton, 707 Whitley, Whittier, Calif.

Filed May 8, 1962, Ser. No. 193,093
7 Claims. (Cl. 128—218)



5. In a measuring and discharge syringe of very small volumetric capacity:

(A) a needle and volumetric barrel reservoir assembly comprising:

(*a*) a tubular needle having a sharp point at its free end;

(B) a plunger precisely fitted in said needle and slidable therein;

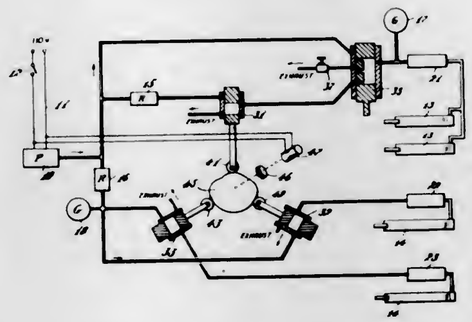
(C) guide and support means for said plunger and said needle;

(D) and volume indicating means incorporated in the syringe for indicating the volume displacement in said needle by said plunger.

3,101,085
ALTERNATING TOURNIQUET SYSTEM

William P. Murphy, Jr., Miami, Fla., assignor to Cordis Corporation, Miami, Fla., a corporation of Florida

Filed June 8, 1961, Ser. No. 115,629
6 Claims. (Cl. 128—325)

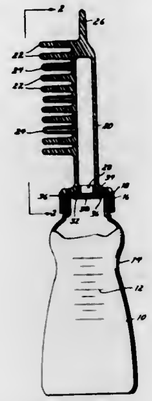


1. An alternating tourniquet system comprising: a source of air pressure; a pair of pneumatic arm tourniquets; a first pneumatic leg tourniquet; a second pneumatic leg tourniquet; valve means having a first state in which the arm tourniquets and the first of the leg tourniquets are connected to said source and said second leg tourniquet is vented to the atmosphere, a second state in which both leg tourniquets are connected to said source and the arm tourniquets are vented, and a third state in which the arm tourniquets and said second leg tourniquet are connected to said source and said first leg tourniquet is vented; and motor means for driving said valve means successively from one state to another in rotation at a predetermined rate.

3,101,086
COMBINED DISPENSER AND COMB

Salvatore S. Di Vito, 2905 S. 19th St., Philadelphia, Pa.

Filed Sept. 25, 1961, Ser. No. 140,608
2 Claims. (Cl. 132—114)

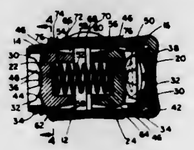


1. An adjustable liquid dispenser and comb comprising an elongated, flexible container,
an externally threaded neck of reduced diameter integral with one end of said container and defining a mouth therefor,
a comb including a hollow shank having one end thereof closed and pointed,
teeth integral with said shank,
at least some of said teeth hollow and open at their inner and outer ends,
an internally threaded collar at the other open end of said shank and engageable with said neck,
a cylindrical flange depending from said other end of said shank into said neck,
said cylindrical flange being offset outwardly of said other end of said shank and coacting therewith to form a seat of a diameter greater than the inside diameter of said shank,
a flexible plug including a cylindrical portion tightly insertable in said other end of said shank,
and a disc integral with said cylindrical portion and tightly insertable in said cylindrical flange into abutment with said seat, there being an orifice of a predetermined size in said disc to control the flow of liquid from said container into said shank and out through said hollow teeth.

3,101,087
CONTACT LENS CONTAINER

Richard Watson, 522 S. 50th St., Omaha, Nebr.

Filed July 14, 1960, Ser. No. 42,807
4 Claims. (Cl. 134—143)

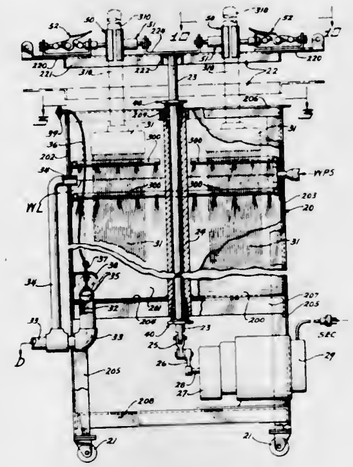


1. An contact lens container comprising a hollow body, said body having opposite annular ends opening upon the interior of said body, two valves disposed in said body in positions for sealing said annular end portions of said body and movable to open positions for permitting liquid from the interior of said body to flow past said valves out into said annular ends of said body to be received by contact lenses in said annular ends of said body, caps removably attached to the opposite ends of said body for closing said ends, the shape of the interior of each cap and the shape of the adjacent surface of the respective adjacent valves being such as to receive a contact lens therebetween, and means for urging said valves into closed positions to block liquid from the interior of said body from passing to the said annular end portions, said body having means on the interior thereof for cooperating with said valves to make possible said blocking at times when said valves are in said closed positions, so that a contact lens may be placed in that respective end without fluid leakage from that end, and means operable from the exterior of said body for causing each valve to be moved to an open position at such time as the respective cap has been at least partially placed on the respective end of said body.

3,101,088
MOP WASHING MACHINES

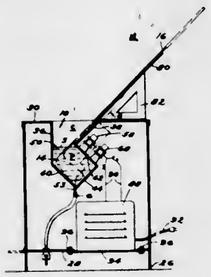
Walter F. Gray, 540 Woodlawn, Ypsilanti, Mich.

Filed Apr. 3, 1962, Ser. No. 184,873
8 Claims. (Cl. 134—151)



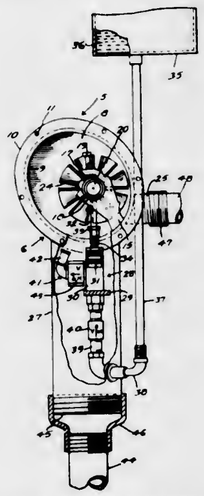
1. In a mop washing machine for stranded cord type mops,
a tank element including water inlet means at the upper portion thereof, a drainage sump in the bottom thereof, a sump valve, and an overflow means establishing a suitable water level in said tank, a mop activator platform above said tank, means supporting and vertically reciprocating said mop activator platform,
quickly releasable mop holding assemblies carried by said mop activator platform holding said mops in a vertical position with the strands thereof depending in said tank for churning in the water therein responsive to the vertical reciprocation of said mop activator platform,
each said mop holding assembly including a fixed and a toggle mop clamp element releasably engaging and holding a mop at a selected elevation in respect to said mop activator platform.

3,101,089
GOLF CLUB CLEANING MACHINE
James A. Brown and Otto E. Pennell, Jr., Detroit, Mich., and Stanley E. Jacke, Ridgefield, Conn., assignors to Oakland Metal Fabricators, Inc., Warren, Mich., a corporation of Michigan
Filed Dec. 19, 1961, Ser. No. 160,478
8 Claims. (Cl. 134—186)



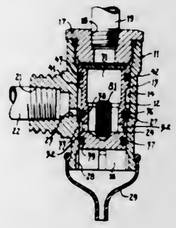
1. In a golf club cleaning machine, a tank for receiving the heads of the golf clubs to be cleaned, said tank being shaped to provide a chute portion opening downwardly into a radiation reflecting pocket, said pocket having a downward facing wall portion opposite which club heads received downwardly through the chute and disposed in the pocket are positioned, said pocket having a second wall portion disposed opposite the said downwardly facing wall portion to position the clubs in the pocket, and acoustic wave generator means mounted on a wall portion of the pocket, other than said second wall portion, which faces in the direction of a golf club head positioned in the pocket to generate and direct acoustic waves in a cleaning solution in the pocket toward the golf club head.

3,101,090
CHEMICAL INJECTING APPARATUS
Melvin L. Carden, Amarillo, Tex., assignor, by direct and mesne assignments, to Carden Equipment Company, Inc., Amarillo, Tex., a corporation of Texas
Filed Dec. 11, 1961, Ser. No. 158,214
1 Claim. (Cl. 137—99)



A mixing chamber having a substantially horizontally arranged liquid inlet and a downwardly opening liquid outlet, said outlet being substantially larger than said inlet, a rotatable vaned turbine wheel horizontally mounted in said chamber with the axis of rotation of said wheel transverse to and slightly above said liquid inlet whereby liquid entering said chamber from said inlet impinges on the vanes of said turbine wheel to rotate the wheel, a chemical feeder mounted below said chamber, said feeder having a discharge port disposed in the liquid outlet, said discharge port extending upwardly toward and terminating beneath the turbine wheel, and means connecting the feeder to said wheel for operating said feeder on rotation of said turbine wheel, said turbine wheel vanes being spaced from the inlet and outlet such that the entering liquid is deflected by the vanes to mix with a chemical being discharged upwardly from said discharge port into the falling liquid before the liquid passes through said outlet.

3,101,091
MOISTURE EJECTION VALVE
Forrest O. E. Schultz, Owosso, Mich., assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 31, 1958, Ser. No. 725,397
12 Claims. (Cl. 137—204)

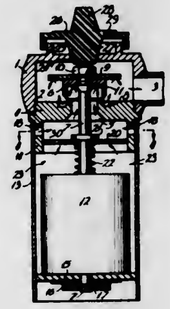


8. In a moisture ejecting device for a compressed air system, in combination, a cylinder having spaced portions adapted to open to a source of compressed air and to the atmosphere, respectively, a carriage member supported in said cylinder for sliding movement, passage means formed in said carriage and communicating with said cylinder, said carriage member forming an ejection chamber above said passage means and communicating through a lower portion with said passage means, said cylinder having an intermediate portion forming an annular seat, said carriage member normally being disposed with said passage means at one side of said seat to receive liquid and air, said carriage member being movable through a position in which said passage means is sealed from said source and the atmosphere and to a position to dispose said passage means at the other side of said seat to discharge liquid and air from said chamber to the atmosphere, and means for moving said carriage member.

3,101,092
VACUUM COMPENSATOR VALVE FOR MILKING MACHINES
Thomas Leslie Seaborne, corner Lygon St. and Brunswick Road, East Brunswick, Victoria, Australia
Filed May 10, 1960, Ser. No. 28,040
Claims priority, application Australia May 20, 1959
7 Claims. (Cl. 137—270)

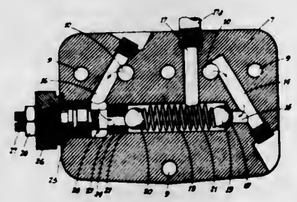
1. A vacuum compensator valve for milking machines comprising a head casing having a chamber with an outlet for connection to a vacuum system, an air admission passage in the base of said head casing, a preloaded valve in said chamber urged to normally close said passage, a vertical stem supporting said valve, a reaction member on the upper end of the stem acted on by the inrushing air when the valve is opened and constituting secondary

valve lifting means, a depending annular flange on said casing supporting an outer skirt, both the flange and the skirt having coregistering slots for air admission to the interior of said flange, and a disc connected to said valve and slidably engaging the inner surface of said annular flange, said disc and flange defining a second chamber



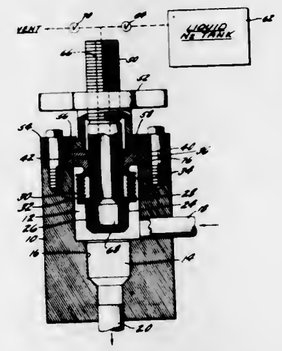
below said first chamber and whose interior is vented by said slots, said disc being beneath said slots and having its underside exposed to atmospheric pressure, whereby said disc is influenced by the drop in air pressure in said second chamber when the valve is opened and is lifted by atmospheric pressure to constitute tertiary valve lifting means.

3,101,093
PRESSURE LIMITING VALVE
John A. White, Jr., and Rex W. Vaughan, Gilroy, Calif., assignors to Be-Ge Manufacturing Co., Gilroy, Calif., a corporation of California
Filed Dec. 26, 1961, Ser. No. 161,953
5 Claims. (Cl. 137—316)



5. A pressure limiting valve comprising a body having a passage therethrough adapted to be interposed in a high-pressure fluid line, an enclosed chamber in the body offset from the passage, a bypass leading from the passage intermediate its ends to one end of the chamber, a plunger slidable in the chamber beyond said one end thereof, a passage in the plunger leading from the periphery thereof in communication with the bypass to a termination at the inner end of the plunger, a valve seat in the plunger about said end of the passage, a ball valve normally engaging the seat, a loaded compression spring in the chamber bearing at one end against and holding the valve closed, a stop in the chamber engaging the other end of the spring, a bushing mounted in the body in axial alinement with the plunger and projecting outwardly from said one end of the chamber, the outer end portion of the plunger being slidably engaged in the inner end portion of the bushing, and an adjustable set screw threaded into the bushing from the outer end thereof in axial alinement with the plunger and contacting the outer end of the same.

3,101,094
HIGH TEMPERATURE VALVE
Robert D. McKenzie, East Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 11, 1961, Ser. No. 158,397
1 Claim. (Cl. 137—340)

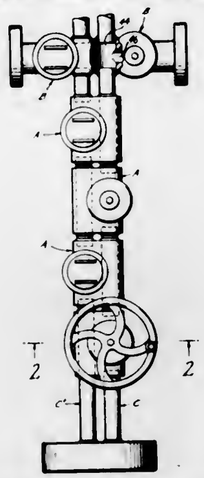


A valve adapted to provide a fluid-tight seal at elevated temperatures and under high vacuum conditions comprising a body, a tapered bore in said body forming a relatively hard metal valve seat having a hardness of the order of steel, a movable valve element of frustoconical shape engageable with said seat and having a tapered sidewall portion shaped to generally conform to said seat, a fluid tight bellows connecting said body and element, said valve element being formed of a relatively soft metal having a hardness of the order of copper, said latter metal having a higher coefficient of expansion and a higher thermal conductivity than the metal valve seat, a chamber in said valve element including a passage connected thereto, a source of cryogenic fluid, means for conducting said fluid to said passage and said chamber to shrink said element at a rate relatively greater than the adjacent seat, means for moving said valve element into engagement with said seat, means for venting said passage and chamber whereby after engagement with said seat the said valve element expands at the operating temperature of the valve to form an interference fit with said seat and the soft metal wall of said element readily conforms to the contour of said seat.

3,101,095
TUBING SLEEVE VALVE
Barney A. Ellers, Houston, and John Helenberg, La Porte, Tex., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Aug. 11, 1960, Ser. No. 49,026
4 Claims. (Cl. 137—594)

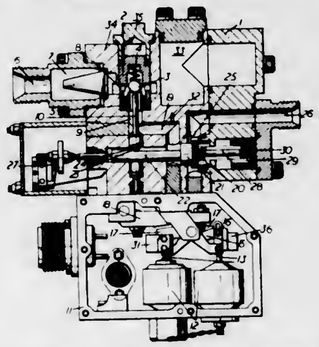
1. A master wellhead dual valve unit for two parallel strings of tubing comprising a valve housing provided with an internal chamber, two sets of aligned openings communicating with said chamber, one set of aligned openings forming inlet and outlet ports, the outer end of each inlet and outlet port adapted to receive the end of a string of tubing, the inner ends of the inlet and outlet ports terminating in a pair of opposed annular seat pockets, an opening in said chamber the axis of which is normal to the axis of the inlet and outlet ports and generally intersects the axis of the inlet and outlet ports, a pair of valve seats in said seat pockets, reciprocating valve mechanism in said chamber insertable through the opening and cooperating with said valve seats, bonnet means closing the opening, valve operating means attached to said valve mechanism

and sealingly extending through said bonnet, the other set of openings spaced from the inlet and outlet ports



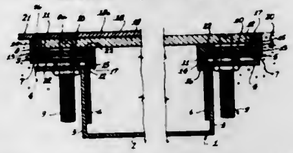
and valve mechanism sufficiently to receive an uncontrolled string of tubing.

3,101,096
FLUID SHUT-OFF VALVES
Archibald Goodman Frazer-Nash, 84 Kingston Hill, Kingston-upon-Thames, England
Filed Oct. 13, 1960, Ser. No. 62,359
Claims priority, application Great Britain Oct. 16, 1959
11 Claims. (Cl. 137—628)



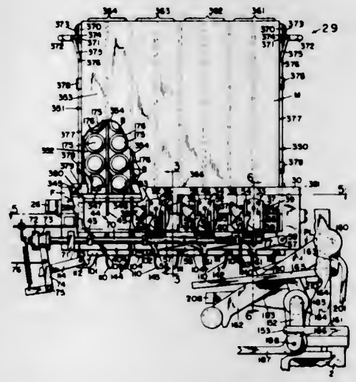
1. A fluid shut-off valve comprising a housing defining a fluid inlet passage and a fluid outlet passage, an annular valve seat between said passages, a valve closure member, spring means normally holding said closure member on said seat and a valve opening mechanism for moving said closure member off said seat against the action of said spring, said opening mechanism comprising solenoid means, first connecting means operatively connecting said solenoid means to said closure member whereby operation of said solenoid means partially opens said valve and a servo-mechanism actuated by the pressure of fluid admitted through said partially opened valve for augmenting the movement of said closure member, said servo-mechanism comprising a cylinder forming a part of said outlet passage, a piston in said cylinder, said piston being mounted to normally obstruct and close said outlet passage but to move automatically to a passage opening position in response to the pressure of fluid admitted through said valve to said passage upon movement of said closure member from said seat by operation of said solenoid means, and second connecting means operatively connecting said piston and closure member to move said closure member farther from its seat as said piston is moved to its passage opening position.

3,101,097
CLOSURE MOUNTING MEANS FOR UNDERFLOOR WIRING DUCTS
Thomas W. Murray, 357 Cortleigh Blvd., Toronto, Ontario, Canada
Filed May 25, 1962, Ser. No. 197,715
3 Claims. (Cl. 138—92)



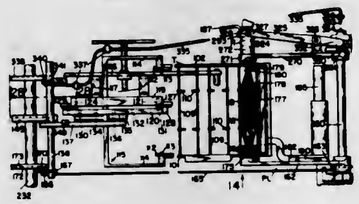
1. A closure mounting means for underfloor wiring ducts which comprises a strip having opposed side faces, opposed longitudinal edges, and a flange adjoining each said edge, one of said flanges extending angularly from and continuous to one of said side faces and the other of said flanges extending angularly from and contiguous to the other one of said side faces, each said flange being substantially coextensive in length with said strip, each said flange having a planar edge surface in substantially parallel spaced relation to the adjoining one of said side faces, one of said flange edge surfaces being spaced from the adjoining one of said side faces a greater distance than the other of said flange edge surfaces is spaced from the adjoining one of said side faces whereby one of said flanges is of greater height than the other of said flanges, and means forming a generally horizontal supporting surface for said strip, said strip having a first position on said supporting surface wherein one of said side surfaces of said strip is seated thereon and a second position on said supporting surface wherein the other of said side surfaces of said strip is seated thereon whereby in said first position said flange of lesser height projects above said supporting surface and in said second position said flange of greater height projects above said supporting surface.

3,101,098
WEFT REPLENISHING LOOM
Oscar V. Payne, Greenfield, N.H., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Feb. 6, 1961, Ser. No. 87,237
27 Claims. (Cl. 139—232)



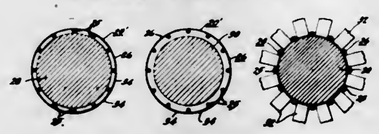
1. In a multicolor weft replenishing loom, a stationary frame to receive bobbins having different weft characteristics, a reserve bobbin holder above said frame and including a plurality of magazines, and supported by the frame, each having provision for holding a group of wefts distinctive from wefts in the other magazines, a bobbin outlet on the frame for each magazine, detachable locking means to hold the bobbin holder in fixed position on the frame to retain the magazine in register with their respective outlets, the detachable locking means enabling the bobbin holder and its magazines to be removed and be replaced by a similar bobbin holder and its magazines registered with their respective outlets, and means movable on the frame having a pocket for each outlet to receive bobbins from the outlets and advance them toward a position from which they can be transferred into a shuttle.

3,101,099
WEFT BUNCH REMOVER
Oscar V. Payne, Greenfield, N.H., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Original application Feb. 6, 1961, Ser. No. 87,237. Divided and this application Dec. 21, 1961, Ser. No. 161,025
11 Claims. (Cl. 139—247)



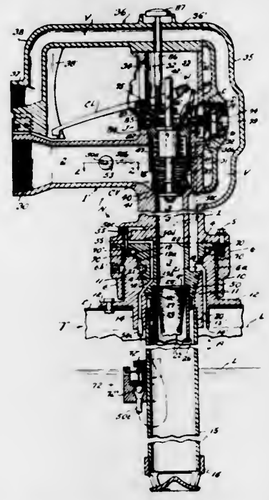
1. In a weft replenishing loom having a tray movable to present a bobbin with a weft bunch on the tip thereof to a given position and having a bobbin transferrer arm to move the bobbin into a shuttle, a rockable transport lever to grip and move a bobbin downwardly from said given position into position for transfer by said drum, and weft bunch remover means operatively connected to and moving simultaneously with the lever and aligned with the bobbin being moved by the lever and having provision for surrounding the bobbin tip and then moving axially away from the tip to remove the bunch from the tip during movement of the lever downwardly and before said arm engages the bobbin.

3,101,100
ELECTRON TUBE GRID AND METHOD OF MAKING
Harold J. Albrecht, Livingston, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 362
5 Claims. (Cl. 140—71.5)



1. The method of making a wire wound plural side rod cylindrical electron tube grid comprising the steps of laying down a plurality of side rods each extending along a cylindrical winding mandrel of given size in a uniformly spaced parallel array therearound, winding a plurality of turns of a lateral wire around and upon said side rods, fixing said lateral wire to said side rods at their contacting points, removing the assembly of said side rods and lateral wire from said winding mandrel and disposing it around a forming mandrel having a size less than said given size, compressing said assembly radially inward with a forming tool contacting only the portions of said lateral wire which are between said side rods into contact with said forming mandrel so that the inwardly facing sides of portions of said lateral wire between said side rods are contiguous with the cylindrical surface defined by the inwardly facing sides of said side rods.

3,101,101
SYSTEM AND MECHANISM FOR DISPENSING FLUIDS
Walter S. Gearhart, Clearfield, and James W. Hammond, Emporium, Pa., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed July 31, 1961, Ser. No. 127,973
7 Claims. (Cl. 141—207)

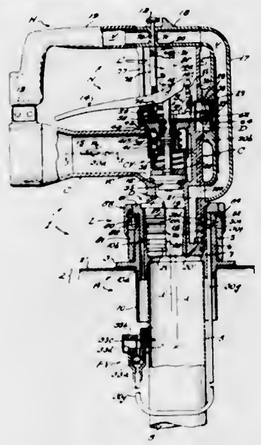


1. A liquid dispensing nozzle unit comprising a body formed with an inlet passage and an outlet passage, said passages intercommunicating via a valve chamber, a self closing valve movable in the valve chamber between a closed position and at least two open positions, a manually operable control lever pivotally connected to the valve, and two fulcrum members for the lever, one of the fulcrum members being movable into and out of a position enabling it to contact with and establish a pivotal support for the lever, spring means connected to said one fulcrum member for biasing it into fulcrum-establishing position, means connected to said one fulcrum member and operating thereon as a function of admission of liquid under a predetermined pressure to the inlet passage to move it out of said position and render the lever inoperable to open the valve, the other fulcrum member being arranged to enable only a predetermined limited maximum opening movement of the valve.

3,101,102
CLOSED PRESSURE SYSTEM FOR DISPENSING FLUIDS
Walter S. Gearhart, Clearfield, and James W. Hammond, Emporium, Pa., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed July 6, 1961, Ser. No. 123,385
15 Claims. (Cl. 141—209)

1. A liquid dispensing system comprising, a nozzle having inlet and outlet passages joined through a valve cham-

ber, a self closing control valve in the chamber, manually operable means connected and arranged for opening the control valve, a spring loaded latch mechanism acting to hold the control valve in an open position, a fluid motor having a pressure chamber and displacement member movable therein and operatingly arranged to trip the latch mechanism, means forming a motor-operating liquid passage having an inlet communicating with a space within the nozzle inlet passage containing incoming liquid to be



dispensed and lying upstream from the control valve and an outlet connected to the motor pressure chamber, a branch outlet passage connected to enable diversion and spilling of liquid which would otherwise become effective in the motor pressure chamber, a normally open valve in the branch passage, and signal means connected to close the normally open valve and thereby cause operating movement of said displacement member to trip the latch mechanism.

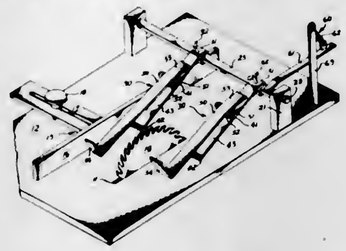
3,101,103
CHAIN SAW SPUR ATTACHMENT
Henry Ricci, 1908 Charles St., Seattle, Wash.
Filed Jan. 29, 1960, Ser. No. 5,399
3 Claims. (Cl. 143—32)



1. In combination, a chain saw having an elongated bar about which a cutting chain travels, and spur means mounted in said bar and providing a pair of pivoted spurs spring urged to swing from a retracted position within the confines of the bar to kerf-wall piercing positions extending outwardly from opposite sides of said bar, the swing axis of each of said spurs being longitudinal of said bar.

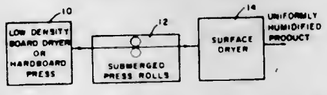
3,101,104
SAFETY DEVICE FOR SAWS
Robert Leo Sullivan, Nutley, N.J., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed Mar. 29, 1961, Ser. No. 99,109
14 Claims. (Cl. 143—159)

1. An anti-kickback device for table saws comprising upright standards, a shaft rotatably mounted on said standards, a first arm fixedly mounted on said shaft, the end of said arm opposite said shaft having means for engaging a piece of material, a second arm rotatably mounted to the upper surface of said first arm and ex-



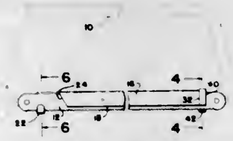
tending outwardly of said first arm, means for fixing the maximum amount of upward rotation of said second arm with respect to said first arm, means for biasing said arms downwardly.

3,101,105
HUMIDIFICATION OF WOOD FIBER SHEETS
Basil O. Stewart, Kenmore, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Filed Mar. 14, 1960, Ser. No. 14,851
6 Claims. (Cl. 144—327)



1. The method of increasing, under controlled conditions, the moisture content of a substantially dry manufactured wood fiber sheet comprising the steps of roll pressing a substantially dry manufactured wood fiber sheet while submerged in water and under pressure sufficient to lessen the thickness thereof not substantially exceeding the elastic limit thereof, and maintaining the said sheet submerged in water immediately after removal from said roll pressing for a period of time sufficient to permit suction of water into the interstices of said sheet.

3,101,106
DEPTH STOP FOR SAW BLADES
Nicholas V. Casson, 175 Murray Ave., Yonkers 4, N.Y.
Filed Jan. 15, 1962, Ser. No. 166,093
1 Claim. (Cl. 145—35)



A depth of cut stop for hack saw blades comprising, in combination,

(*a*) a channel shaped body having two sides which fit down on both sides of a hack saw blade, said body having one of said sides contain a cut-away portion at one end,

(*b*) a blade retaining hook extending downwards from the end of said side of said body disposed across from the cut-away portion,

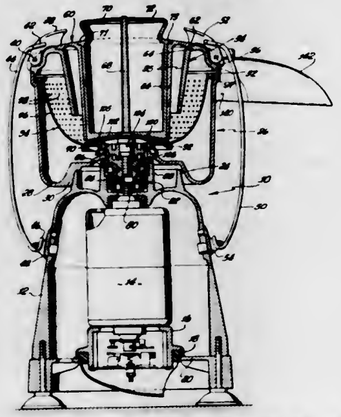
(*c*) a spring arm fixed to the end portion of said body opposite said blade retaining hook, said spring arm being flexed towards said body,

(*d*) a blade lock fixed to said spring arm and having a top guide member extending over said body and slidably

contacting the top of said body, a release button portion at the end of said top guide member terminating beyond said body, and a blade retaining member extending beneath said body, the depression of said release button portion moving said blade retaining member outward beneath said body said body containing an aperture beneath said blade lock, and

(*e*) fastening means extending through said spring arm and said blade lock entering said aperture in said body.

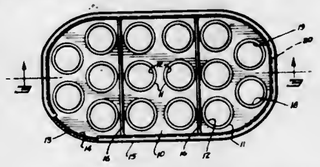
3,101,107
FRUIT AND VEGETABLE JUICE EXTRACTOR
Armand L. A. Posener, La Habra, and Austin E. Elmore, South Pasadena, Calif., assignors to Kitchen Master Appliance, Inc., Los Angeles, Calif., a corporation of California
Continuation of application Ser. No. 698,455, Nov. 25, 1957. This application Mar. 26, 1962, Ser. No. 183,995
4 Claims. (Cl. 146—76)



1. In a juice extractor, in combination: a base, an open topped bowl mounted on the base and provided with a centrally apertured bottom; a removable comminuting element rotatably mounted on the base above the bottom of the bowl and concentric therewith; a strainer basket rotatably mounted on the base and provided with a perforated side wall extending curvilinearly upwardly and outwardly from a location adjacent the comminuting element periphery; an annular cover member removably supported on the upper part of the bowl and provided with a downwardly extending sleeve spaced inwardly of the perforated side wall; a feed tube removably supported on the upper part of the cover and provided with a downwardly extending generally cylindrical side wall spaced inwardly from said sleeve and terminating immediately above said comminuting element and concentric therewith, the tube having vertically disposed partition means dividing the interior into separated food supply channels; manually actuable toggle means for removably retaining the cover and, selectively, the feed tube in fixed assembled relation with the base; and means for rotating the comminuting element and basket.

3,101,108
TUBE RETAINER
Robert C. Ingoldt, Chippewa Falls, Wis.
(N71, W17127 Antler Drive, Menomonee Falls, Wis.)
Filed May 31, 1960, Ser. No. 32,851
2 Claims. (Cl. 150—1.5)

1. A tube retainer for use with golf club receiving tubes and a golf bag having golf club separating members extending across its mouth, said golf club tube retainer comprising a plate of elastic material substantially equivalent in elasticity with a 1/8 inch thickness of 60 durometer rubber; said plate having holes therein of a diameter slightly less than the external diameter of golf club receiving tubes; the holes in said plate of elastic material being so positioned that the golf club separating members of the golf bag may extend in substantially straight lines between rows of holes therein, a block of said holes symmetrically arranged in the center of said plate and a reduced number of holes at each end there-



of; the number of holes at one end being equal to the number of holes at the other end; said center block of holes occupying approximately the center 1/3 of the plate and each end group of holes occupying an end 1/3 of said plate on opposite ends of the center block of holes, the holes at the end extremities of the plate being displaced inward and offset with respect to the other holes in said plate.

3,101,109
PROTECTIVE CONTAINERS
Edwin Lawrence Hawley, Herne Bay, and Desire Gonda, Sittingbourne, England, assignors to E.P.S. (Research & Development) Ltd., Sittingbourne, England, a British company
Filed June 29, 1961, Ser. No. 120,548
10 Claims. (Cl. 150—52)



1. A protective container for substantially enclosing an object, said container having the general shape of said object and comprising a sheet of flexible material, said sheet material including a layer of flexible plastic-impregnated fibrous material and a barrier layer of moisture-vapor resistant material laminated to the first said layer, means defining a container access opening having opposed edge portions, and a fastener for closing said access opening along its full length, said fastener comprising a pair of oppositely disposed fastener strips of flexible plastic material extending respectively along said opposed edge portions of the access opening, each of said fastener strips having longitudinally extending male and female elements adapted for moisture-vapor resistant interlocking engagement connection with said male and female elements of the other of said strips whereby said fastener is manually openable and closable, flexible and moisture-vapor resistant attachment means attaching said fastener strips to the respective of said opposed edge portions of the access opening, and means providing moisture-vapor resistant securement together of said fastener strips at each of the respectively opposite ends of said fastener.

3,101,110
HEAT-REFLECTIVE TIRE
Le Roy J. Vandenberg, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Nov. 3, 1961, Ser. No. 149,932
13 Claims. (Cl. 152—357)

1. A vehicle tire adapted for use in an environment where it is subject to high temperatures, the said tire

comprising a carcass and tread the entire outer surface of which is covered with an integral heat-reflective layer of an elastomer containing finely-divided flake-like particles



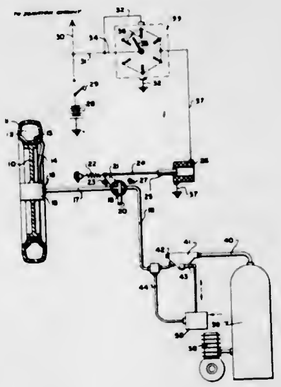
of heat-reflective material dispersed throughout the layer in sufficient quantity that the tire appears to have a continuous surface of the said material.

3,101,111

TIRE PRESSURE CONTROL DEVICE

Armin Drechsel, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Jan. 3, 1961, Ser. No. 80,451
Claims priority, application Germany Jan. 5, 1960
10 Claims. (Cl. 152—416)



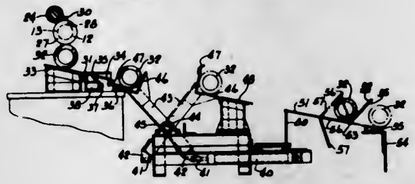
1. A tire pressure control installation for vehicles, especially motor vehicles provided with a relatively stationary part, comprising rotating wheel means provided with tire means thereon, pressure means at said vehicle effectively providing a source of a pneumatic medium under predetermined pressure, connecting means selectively providing a communication between the inside of said tire means and said pressure means or the atmosphere including control valve means within said connecting means, means for automatically operating said control valve means to effectively connect the inside of said tire means periodically with said pressure means for relatively short periods of time and with said atmosphere during the remaining time including timer-switch means, electrically operated actuating means for actuating said control means, means for operating said timer-switch means during operation of said vehicle and energizing circuit means for said actuating means including contact means selectively and periodically operated by said timer means.

3,101,112

SPRING COILING MACHINE STRIPPER INTERLOCK

Isaac M. Chambers, O'Hara Township, Allegheny County, Pa., assignor to Henry Miller Spring and Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 23, 1961, Ser. No. 84,296
7 Claims. (Cl. 153—67)



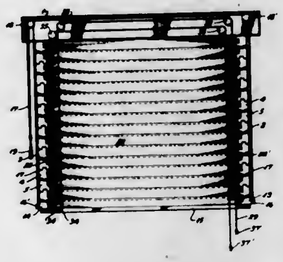
1. A spring winding machine having a rotary chuck with an open chuck socket, a stripping plate supported from said machine and spaced from said chuck and having a mandrel clearance opening aligned with said chuck socket, a rotatable mandrel supported on said machine to slide axially and advance through the opening in said stripping plate and into said open chuck socket to be rotated thereby for winding a spring on said mandrel, servomotor means connected for reciprocating said mandrel to advance the latter through said stripping plate opening and into said open chuck socket for winding a spring thereon and for retracting said mandrel to strip the spring therefrom, a discharge plate below said stripping plate for receiving the springs stripped from said mandrel, switch means connected with said discharge plate and actuated by a discharged spring passing along said discharge plate, and circuit means completed by said switch means to initiate the operation of said servomeans and thereby control the advancing movement of said mandrel.

3,101,113

VENETIAN BLIND

Alfred M. H. Kim, 1249 W. 6th St., Los Angeles 17, Calif.

Filed June 12, 1959, Ser. No. 819,917
4 Claims. (Cl. 160—168)



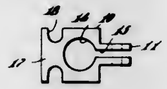
1. A Venetian blind structure comprising a housing, a pair of laterally spaced folding units secured to and depending from said housing, each of said units comprising a plurality of hinge members successively pivotally connected and foldable in accordion fashion, a plurality of elongated slats extending between said folding units, each of said slats having an arm projecting from each end thereof, means on each of said hinge members rotatably supporting an arm of one of said slats whereby said slats are rotatable between a vertical closed position and a horizontal open position, a clamping member mounted on each of said slats displaced from the longitudinal axis of said arms, and an actuating cord removably clamped to the clamping member of each slat for actuating the slats between said vertical and horizontal positions whereby one or any desired number of selected slats may be unclamped from said cord and thereby be unaffected by actuation of said cord.

3,101,114

HEAT SINK

Leonhard Katz, Woburn, Mass., assignor to Astro Dynamics, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Feb. 1, 1961, Ser. No. 86,533
2 Claims. (Cl. 165—67)



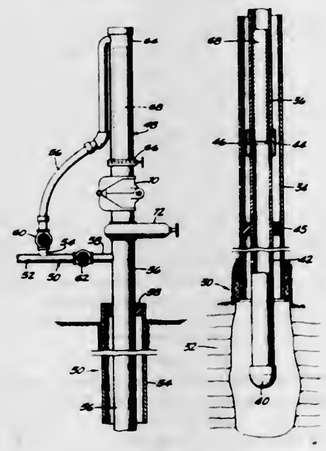
1. For dissipating heat from a transistor or the like, a heat sink comprising a one-piece block of substantially uniform thickness having a flat horizontal plate bottom to seat on a heat dissipator for transferring heat thereto and having a cylindrical opening extending vertically therethrough from top to bottom to receive a transistor therein, said block being split vertically along one entire side of said vertical opening to form two arms each extending about half way around the opening, said arms being spaced apart at said one side and having ears integral therewith, said block having on the other side of said opening an extension away from said arms, said extension having a mounting device to attach said block to said dissipator so that said arms are free throughout substantially their entire length to be sprung apart to permit insertion and removal of the transistor with respect to said opening while the block is mounted on said dissipator.

3,101,115

WELL TREATING METHOD AND APPARATUS

Mathew B. Riordan, Jr., La Habra, Calif., assignor to BJ Service, Inc., Long Beach, Calif., a corporation of Delaware

Filed Oct. 16, 1956, Ser. No. 616,223
21 Claims. (Cl. 166—42)



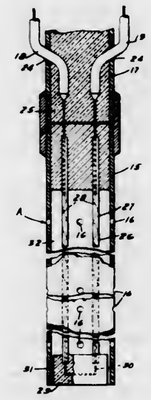
1. The method of introducing fluid under pressure into earth formation into or through which a well has been drilled comprising: pumping fluid through the well into said formation from the earth surface; disposing a material below said surface and adjacent said formation capable of gas generation within the well; and inducing the generation of gas by said material responsive to and during said surface pumping to increase the pressure acting on the fluid and force the same into said earth formation.

3,101,116

BOTTOM HOLE JET HEATER

Samuel Spitz, Los Angeles, Calif., assignor to Electronic Oil Well Heater, Inc., Los Angeles, Calif., a corporation of Nevada

Filed Apr. 4, 1961, Ser. No. 100,620
1 Claim. (Cl. 166—60)



As an article of manufacture, a heater for an oil well comprising: a tubular member having a plurality of circumferentially spaced longitudinally extending rows of openings in its wall and defining an elongate heating chamber; a closure of insulating material at the uppermost end of said tubular member; a U-shaped heater extending through said chamber with its ends supported in said closure, and its bridging portion positioned adjacent the lowermost end of said chamber; means of insulating material supported by said heater bridging portion cooperating with the adjacent wall of the tubular member at this end to define a restricted inlet opening to the interior of said chamber; and lead-in electric conductors at the uppermost end of said tubular member connected with the ends of said heater, said wall openings and inlet opening being so proportioned as to effective total areas as to cause, upon energization of said heater, relatively cool oil well fluid to be drawn through said inlet opening and ejected as hot jet streams through the wall openings.

3,101,117

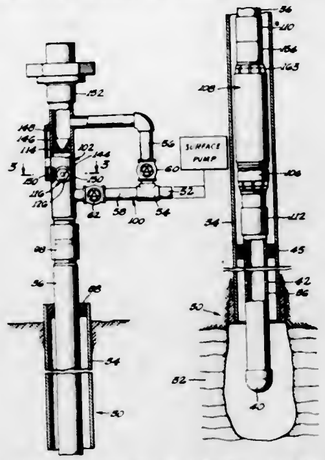
WELL TREATING METHOD AND APPARATUS

Lyle B. Scott, South Gate, and Mathew B. Riordan, La Habra, Calif., assignors to BJ Service, Inc., Long Beach, Calif., a corporation of Delaware

Continuation of abandoned application Ser. No. 616,333, Oct. 16, 1956. This application June 19, 1961, Ser. No. 120,872
30 Claims. (Cl. 166—67)

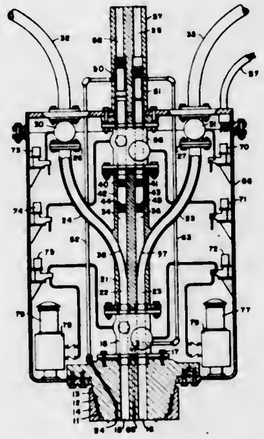
1. Fluid injection apparatus for a well comprising, surface pumping means operable to pump fluid into the well, means for isolating a zone in said well into which isolated zone fluid is to be pumped, a container adapted to be lowered in said well, an ignitable material within said container capable upon ignition of generating gas within said well, means for releasing gas from said con-

tainer to mingle with fluid in the well and fluid actuated means for effecting ignition of said material down in said



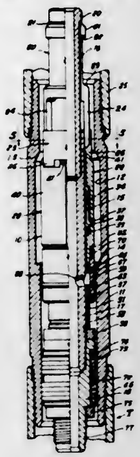
well responsive to operation of said surface pumping means.

3,101,118
Y-BRANCHED WELLHEAD ASSEMBLY
Frederick H. Culver, McAllen, and John A. Haeber, Edward B. Lagucki, and Raymond F. Perner, Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware
Filed Aug. 17, 1959, Ser. No. 834,095
14 Claims. (Cl. 166—75)



1. A wellhead system adapted to be arranged at the top of a well casing extending into the ground and traversing at least one producing formation, said assembly including first conduit means adapted to extend vertically from said well casing and curved conduit means branching from said vertically-extending conduit means, second conduit means in said wellhead system in communication between the interior of the well and the space outside thereof, said first and second conduit means being adapted to be in communication with each other within the well whereby a circulation path through the wellhead system and to and from said well may be established, and means for closing off the vertically-extending conduit means to maintain a full-opening path through said curved conduit means.

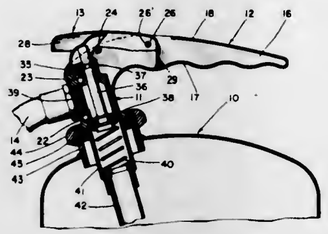
3,101,119
ANCHORING AND SEALING DEVICE
George C. Dickens, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed July 22, 1960, Ser. No. 44,739
13 Claims. (Cl. 166—206)



1. A device for releasably anchoring well tools at a selected level within a well flow conductor including: a mandrel; a locator key expansibly mounted upon the mandrel; resilient means urging said locator key radially outwardly of the mandrel, said locator key having an upper surface inclined outwardly and downwardly of the longitudinal axis of he mandrel and a stop surface disposed below the upper surface and extending substantially normal to the longitudinal axis of the mandrel; retractor means longitudinally slidably mounted on the mandrel and engageable with an external surface on the key when the locator key is in retracted position and said retractor means is in an upper position on the mandrel for holding the locator key in retracted position, the retractor means being moved out of such engagement with said locator key to free the key for outward movement when said retractor means is moved downwardly from said upper position to a lower position on the mandrel, said retractor means having means engageable with internal surfaces of a well flow conductor for causing said retractor means to assume said lower position upon upward movement of said mandrel in a well flow conductor; and locking means mounted for limited longitudinal movement on said mandrel between an upper inoperative position wherein said locking means does not engage said locator key and a lower operative position wherein said locking means is disposed between said mandrel and said locator key to prevent inward movement of said locator key from expanded position, said locking means being movable from said upper position to said lower position when said locator key is in expanded position relative to the mandrel.

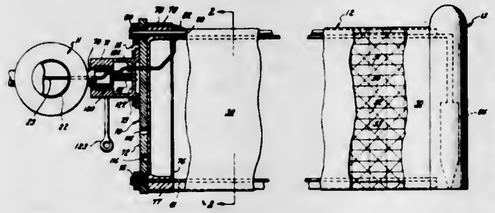
3,101,120
FIRE EXTINGUISHER HEAD ASSEMBLY
Charles K. Huthsing, Jr., 1685 Shermer Road, Northbrook, Ill.
Filed Aug. 5, 1960, Ser. No. 47,779
7 Claims. (Cl. 169—31)

1. In a fire extinguisher designed for manual carrying by an operator thereof: a tank; a head body coupled to said tank; a valve stem extending from said head body; spring means in said head body biasing said stem to its extended position; an elongated hand gripping member having one end rigidly coupled to said head body, said member extending laterally away from said head body to its other end, and said member being designed to be retained



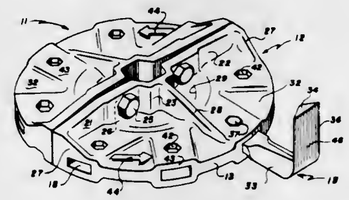
and gripped by a hand of the operator; and, a lever pivotably connected and protruding above the upper portion of said member intermediate said one end and said other end and positioned for actuation of said valve stem by the thumb of an operator's hand gripping said member.

3,101,121
ROTARY WING DEVICE AND METHOD FOR OPERATING SAME
Richard H. MacNeal, La Canada, Calif., assignor to Computer Engineering Associates, Inc., Pasadena, Calif., a corporation of California
Filed Aug. 19, 1960, Ser. No. 50,632
5 Claims. (Cl. 170—160.12)



4. In a rotary wing device, a plurality of elongated wings each having a hub end and a top end at opposite ends of its elongate extent, hub means connected to the hub end of each wing for rotatably mounting the wings for rotation of the wings and the hub means about an axis of rotation substantially normal to the elongate extent of the wings with the wings extending radially outwardly from such axis of rotation and spaced from each other about such axis of rotation, flexible gas-impermeable first and second sheets spaced from each other and defining the exterior surfaces of each wing and also defining a gas-impermeable space within the wing between the first and second sheets extending the length and width of the wing, a plurality of flexible chord brace members disposed within each wing and extending between the first and second sheets of the wing, means for connecting the chord brace members to the first sheet and to the second sheet, the extent of the chord brace members between the first and second sheets lying in a plane transverse and normal to the elongate extent of the wing and the chord brace members being spaced from each other in a direction extending between the elongate edges of the wing, the chord brace members being comprised of plural pairs of substantially coplanar oppositely inclined crossed chord brace members with the ends of each such pair of chord brace members which are connected to the same sheet of the wing being spaced from each other a less amount than the ends of the same pair of chord brace members connected one to the first sheet and the other to the second sheet so that expanding gas pressure in the gas-impermeable space within the wing results in tensioning both the chord brace members and the portion of each of the first and second sheets extending between the ends of each pair of crossed chord brace members attached to that sheet, the extent of the pairs of crossed chord brace members between the first and second sheets of each wing varying as they are spaced from the elongate edges of the wing to define an airfoil configuration of the first and second sheets in a plane normal to the elongate extent of the wing responsive to linear erection of the chord brace members, and means for supplying gas to the gas-impermeable space within each wing.

3,101,122
CULTIVATOR TOOL HOLDER
Mayes R. Robinson, Gilroy, Calif. (P.O. Box 45, San Martin, Calif.)
Filed Mar. 28, 1960, Ser. No. 18,077
6 Claims. (Cl. 172—556)

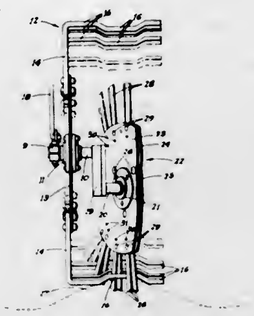


1. A ground cultivator tool holding disc, comprising; a pair of identical semicircular webs adapted to be secured together to form such disc, said webs being adapted to be joined together in coplanar relationship around a polygonal shaft whose axis is normal to the plane of such webs and coaxial of such disc; diametral edges of said webs being in opposition on a diameter of such disc and each formed with an axial recess to conform to a substantially semiperipheral portion of such shaft; each of said webs having a front face and a back face, on the front of each web a flange which is coextensive of the diametral edge including such recess, the opposed edges and flanges of said webs forming a lenticular opening therebetween which extends across such disc whereby such webs and flanges are in contact only peripherally of such disc; each of said flanges being formed with a bolt hole therethru at about its diametral third points; a radial rib buttressing each flange medially thereof; a peripherally extending gusset continuous with each flange end; and a plurality of rectangular tool sockets formed in said webs and equally spaced peripherally of such disc.

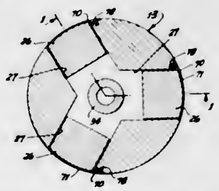
3,101,123
PLANT THINNING IMPLEMENT
Lewis Wallace Schmidt, Rio Vista, Calif., assignor to Blackwelder Manufacturing Co., Rio Vista, Calif., a corporation of California
Filed Aug. 22, 1960, Ser. No. 51,001
6 Claims. (Cl. 172—556)

3. A thinning implement, for row-crop plants, comprising an above-ground draft structure; a plant thinning rotor journaled on the draft structure with its axis diagonal to the crop row and including circumferentially spaced thinning blades, and a plant shielding rotor journaled on the draft structure to one side of the thinning rotor and including a plurality of circumferentially spaced plant engaging shoes projecting laterally across the crop row

and successively bearing down on longitudinally spaced plants to be retained as the implement advances; the bottom blades of the thinning rotor projecting between adjacent ones of the plant engaging shoes.

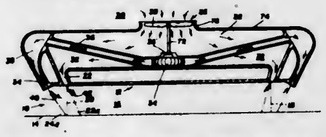


3,101,124
ROTARY EXPANSIBLE DRILL BITS
Archer W. Kammerer, 800 N. Raymond Ave., Fullerton, Calif.
Filed Apr. 19, 1960, Ser. No. 23,304
6 Claims. (Cl. 175—290)



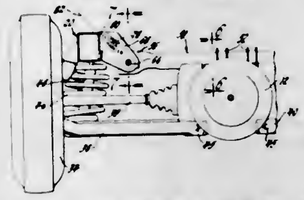
1. In a rotary well drilling bit: a body; normally retracted cutter means mounted on said body for expansion laterally outwardly of said body and subsequent retraction laterally inwardly of said body; means for expanding said cutter means laterally outwardly; and a retainer for resisting outward expansion of said cutter means from its normally retracted position on said body, said retainer including an inner flange secured to said body, a web integral with said flange, and an outer flange integral with said web and extending transversely of said body and cutter means and overlying only partially in a transverse direction and being releasably engageable with said cutter means, said outer flange being displaced by said cutter means from the path of lateral outward movement of said cutter means when sufficient expanding force is applied to said cutter means.

3,101,125
GROUND EFFECT MACHINE
Ernst J. De Ridder, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed July 27, 1960, Ser. No. 45,647
8 Claims. (Cl. 180—7)



1. In combination: a ground effect machine having a lifting area above a cooperating ground surface to define an air cushion between said area and surface; a downwardly directed relatively low pressure annular air jet along the periphery of said air cushion directed downwardly at a relatively large angle to a horizontal plane; a downwardly and inwardly directed relatively high pressure annular jet around said low pressure air jet at a relatively small angle to said horizontal plane to aid in sealing said air cushion under said lifting area; a low pressure air fan receiving air at atmospheric pressure and supplying low pressure air to a low pressure plenum chamber, said low pressure plenum chamber supplying said low pressure air to said low pressure air jet; and a high pressure air fan receiving air from said low pressure plenum chamber and supplying high pressure air to said high pressure air jet.

3,101,126
VEHICLE POWER TRANSMISSION UNIT MOUNTING
Lewis E. Herr, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 13, 1960, Ser. No. 75,538
4 Claims. (Cl. 180—64)

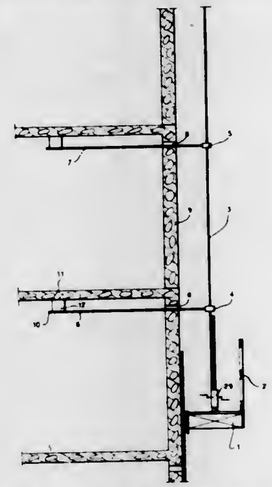


1. In a motor vehicle having a frame and a power package unit comprising an engine resiliently mounted at one end of said vehicle to said vehicle frame and an axle unit resiliently mounted at the other end of said vehicle to said frame and means solidly interconnecting said engine and said axle unit whereby said engine and said axle unit constitute a unit power package, said axle unit resilient mounting means comprising a support bar extending laterally of and secured to said axle unit, a pair of static support tension springs respectively secured to the opposite ends of said bar and extending to and connected with said vehicle frame and providing the entire static support for said axle unit, a pair of mounting brackets secured to said frame and extending parallel to and adjacent said static support springs, a pair of rubber mounting assemblies respectively secured to said mounting brackets and the respective ends of said support bar adjacent the points of attachment of the static support springs to said support bar and providing only dynamic force-absorbing means for resisting only dynamic forces transmitted between said vehicle frame and said axle unit.

3,101,127
SUPPORTING DEVICE FOR A WORKING PLATFORM
Edouard Fougea, Neuilly, France, assignor to Constructions Edmond Coignet, Neuilly, France, a corporation of France
Filed June 7, 1961, Ser. No. 115,510
Claims priority, application France July 20, 1960
7 Claims. (Cl. 182—147)

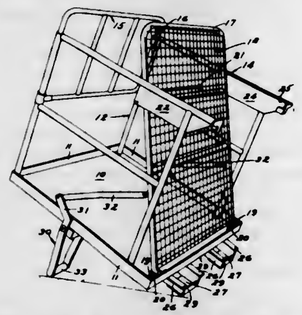
1. A suspended scaffold intended to be moved outside and against the wall of a building, said wall having a series of orifices therein disposed uniformly over the whole surface of said wall, said suspended scaffold comprising a plurality of horizontal supporting brackets each positioned in one of said orifices, a working platform, means for suspending said working platform from said supporting brackets, said suspension means comprising a plurality of guiding masts each of which is attached to said working platform, said suspension means further

comprising slotted guide means at the outer end portion of each supporting bracket for receiving therein one of said masts, each of said masts having a length equal to at least the interval between two adjacent supporting brackets so that, in its operative condition, each guiding mast always engages in the slotted guide means of at least two supporting brackets to permit vertical sliding movement of said working platform, said platform being moved



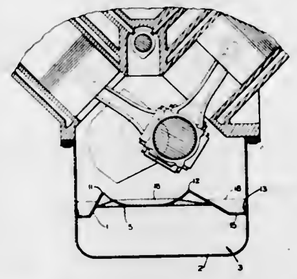
in either vertical direction by disengaging those of said supporting brackets which are located adjacent to the working platform, at least one winch with a cable having one of its extremities fixed to said winch and its other extremity fixed to said working platform, a pulley associated with each winch, and means for supporting said pulley upon at least one of said horizontal supporting brackets, said pulley returning the cable.

3,101,128
PERSONNEL PLATFORM FOR FORK LIFT
Jack L. Dane, Plymouth, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 31, 1962, Ser. No. 199,194
4 Claims. (Cl. 182—222)



1. A platform for mounting on the lifting forks of a fork lift, said platform having a flat base, means on the underside of the base forming a pair of parallel elements for receiving the tines of the lifting forks, said elements projecting beyond an edge of the base and each element having a portion adapted to lie behind the heel of a tine to prevent fortuitous disengagement of the platform from the tines, support means projecting downwardly from the base to support the platform with the base inclined at a substantial angle to a supporting surface, said inclination of the base being sufficient, and said portions being low enough to permit entrance and withdrawal of the tines from the elements when the portion of the base above the free ends of the tines is raised substantially above the tines to tilt the base, the platform having a railing about its periphery and a section of the railing adjacent the tine-entering side of the base being swingable inwardly above the platform.

3,101,129
OIL CONTROL BAFFLE
Richard E. Hulten, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 28, 1961, Ser. No. 134,346
2 Claims. (Cl. 184—106)

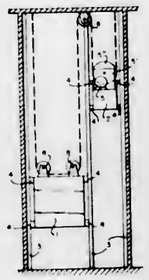


1. In an internal combustion engine having a frame, a crankshaft rotatably mounted in the lower portion of said frame, said crankshaft provided with a plurality of crankthrows and counterweights, a shallow oil pan having a relatively shallow sump region in the rear portion thereof and being sealingly mounted at the periphery to close the lower portion of said frame and extending beneath said crankshaft, a metered quantity of oil in said pan sufficient to satisfy the maximum requirements of said engine and being of a volume greater than said sump, the improvement comprising a baffle means mounted between said crankshaft and pan, said baffle means including a level longitudinal central portion having upwardly curved edges, said central portion being configured so as to allow minimum clearance for said crankthrows and counterweights, trough means joined to the longitudinal edges of said central portion and abutting the sides of said pan, said trough means being inclined toward the center of said baffle from the opposite ends thereof, drain holes located in said trough means at the lowermost point thereof, and damming means extending across said longitudinal central portion between the upwardly curved edges and forward of said drain holes, said damming means being of a height sufficient to prevent the forward flow of oil in said central portion whereby the static oil level in said pan is permitted to rise above the lower extremities of said crankshaft in a region rearward of said damming means.

3,101,130
ELEVATOR SYSTEM IN WHICH DRIVE MECHANISM IS MOUNTED UPON THE COUNTERWEIGHT
Edoardo Giuseppe Bianca, Zollikon, near Zurich, Switzerland, assignor to Silopark S.A., St. Moritz, Switzerland, a Swiss firm
Filed Oct. 6, 1961, Ser. No. 143,328
Claims priority, application Austria Oct. 12, 1960
5 Claims. (Cl. 187—20)

1. A lift arrangement with cable suspension and counterweight balancing, characterised in that the lift

drive assembly, consisting of motor, gearing, brake, drive pulley and the associated accessories is united with the lift counter-weight and forms a part thereof, the drive



pulley at the same time carrying out the double function of the cable drive and of a suspension pulley of the counter-weight.

3,101,131

HYDRAULIC PNEUMATIC SHOCK ABSORBER

Christian Marie Lucien Louis Bourcier de Carbon, Neuilly-sur-Seine, France, and John E. Heckethorn, Dyersburg, Tenn.; said Heckethorn assignor, by mesne assignments, to said Bourcier de Carbon, Neuilly-sur-Seine, France

Filed Nov. 7, 1960, Ser. No. 67,784
6 Claims. (Cl. 188—88)



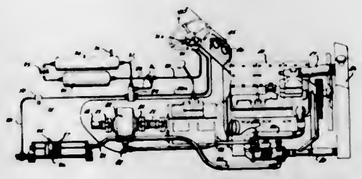
1. A direct acting telescoping cylinder-and-piston shock absorber, comprising a cylinder enclosing a working chamber containing a damping liquid; a working piston disposed for reciprocation in said damping liquid within said chamber and having a piston rod fixedly secured thereto and extending through a packed opening in one end of said cylinder, valved openings in the piston for the controlled passage of damping liquid from one side of the piston to the other upon reciprocation of the piston in the cylinder; means for attaching the remote ends of the cylinder and piston rod respectively to the members the relative movement of which is to be damped; a quantity of gas under pressure disposed within the cylinder at the end thereof remote from the packed end of the cylinder through which the piston rod extends; a floating piston disposed within said cylinder and having a peripheral sealing means contacting the inner walls of the cylinder, said floating piston serving to separate the damping liquid from the gas under pressure, and adapted to be forced outwardly against the pressure of the gas by the liquid displaced by the entrance into the chamber of successive portions of the working piston rod upon the compression stroke of the shock absorber, the sealing means for the floating piston comprising an O-ring of elastomeric material and of circular section seated within a peripheral groove in the floating piston and snugly contacting the bottom of the groove and the walls of the cylinder, the width of the groove being of a predetermined dimension greater than the width of the O-ring section, whereby upon movement of the working piston and the consequent movement of the floating piston in either direction, the O-ring will be subject to rolling movement before it begins to slide along the surface of the cylinder walls, the length of said rolling movement bearing the same ratio to the length of movement of the working piston and that of the said two members, as the ratio of the cross-sectional area of the piston rod to that of the working piston.

3,101,132

HYDRODYNAMIC RETARDER SAFETY SYSTEM

Edward J. Herbenar, Detroit, Mich., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Sept. 22, 1960, Ser. No. 57,652
8 Claims. (Cl. 188—90)



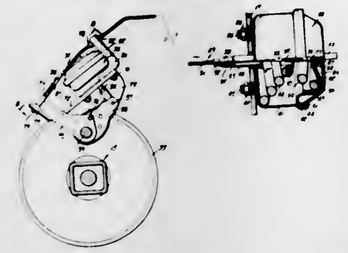
1. In combination in a safety braking system for vehicles, a shaft, a hydrodynamic brake associated with said shaft for retarding the rotation thereof, a closed brake fluid circulating system including an inlet conduit for conducting fluid into said brake and an outlet conduit providing fluid release from said brake, means connecting said conduits into a closed circulating system, means for rapidly introducing brake fluid into said system at a predetermined adjustable high yielding pressure or withdrawing the fluid while maintaining confinement of the fluid, said means including a closed reservoir connected to one of said conduits and holding a confined displaceable volume of braking fluid sufficient to energize said brake upon movement of said fluid into said one conduit, a source of air under pressure, an air pressure reservoir connected to said source by a check valve permitting flow from said source to said air pressure reservoir only, normally closed manual valve means connecting said air pressure reservoir to said closed brake fluid reservoir to apply the air pressure in said air pressure reservoir to said closed reservoir and manually operable to connect said air pressure reservoir to said closed reservoir to move said displaceable volume of fluid into said one conduit to apply said hydrodynamic brake, and automatic safety means actuated by loss of pressure at said source for directly connecting said air pressure reservoir to said brake fluid reservoir to thereby apply the pressure in said air pressure reservoir to said volume displacing means to force the fluid into the circulating system to energize said brake, said last named means including a bypass valve in the connection between said manual valve means and said closed brake fluid reservoir.

3,101,133

SAFETY BRAKE MECHANISM

Bryan E. House, Birmingham, and James C. Cumming, Detroit, Mich., assignors to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania

Filed Nov. 21, 1958, Ser. No. 775,617
2 Claims. (Cl. 188—170)



1. In an automatic safety braking system for a vehicle having an axle supported by ground engaging wheels and equipped with a source of fluid pressure, a service brake mechanism at a vehicle wheel adapted to be controlled by the driver in normal vehicle operation comprising a brake assembly having a rotatable actuator shaft, support means mounting a fluid pressure motor on the axle adjacent said wheel, and means operatively connecting said motor with said actuator shaft, means for automatically operating said service brake mechanism to apply the service brakes to decrease vehicle speed when said fluid pressure decreases below a certain value comprising a casing adapted to be mounted on the vehicle containing a fluid tight pressure chamber and a spring chamber containing spring means, said chambers being separated by member displaceable in response to pressure changes in said fluid pressure chamber, a conduit connection between said fluid pressure chamber and said source, a mechanical linkage connected between said member and said actuator shaft comprising an actuating lever secured to said actuator shaft and a flexible cable slidably mounted on a bracket rigid with said motor support, said cable being operatively connected at one end to said member and having a slide connection with said lever at its opposite end, said arrangement being such that when said source fluid pressure exceeds said certain value said member holds said spring means compressed and said mechanical linkage inoperable but when said source fluid pressure falls below said value said compressed spring means expands to pull said cable to actuate said linkage to rotate said actuator shaft to apply said service brake mechanism, said slide connection of said cable to said lever comprising a fitting on the cable slidable in an aperture in said lever and an abutment on the cable end drawn tight with the lever when the cable is pulled to brake applied condition, and manual means for displacing said abutment to slacken the cable and release the automatically applied brakes for removal of the stopped vehicle to a place of safety and repair.

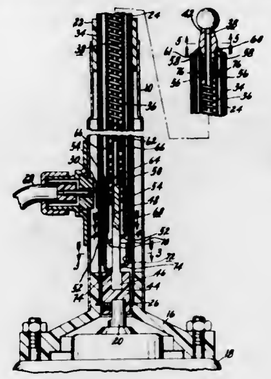
3,101,134

POWER OPERATED ANTENNA

Herbert E. Winkelmann, Sr., Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 27, 1960, Ser. No. 45,566
10 Claims. (Cl. 189—26)

1. A power operated antenna including, a stationary outer tubular antenna section, a plurality of electrically connected movable antenna sections telescopically arranged within the outer section and restrained against rotation relative thereto, said plurality of movable antenna sections being extensible beyond and retractable into the outer section, reversible motor means, a lead screw telescopically arranged between two of said movable antenna sections and drivingly connected with said motor means, and a driver on each of said movable antenna sections selectively engageable with and disengageable from said lead screw for extending and retracting said movable antenna sections upon rotation of said lead screw in opposite directions.

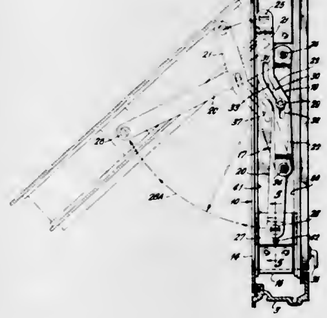


3,101,135

WINDOW STRUCTURE

Harry B. Neal, Atlanta, and John C. Klinger, Jr., Decatur, Ga., assignors to Amarlite Corporation, a corporation of Delaware

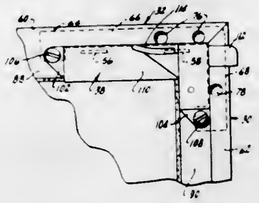
Filed Sept. 14, 1960, Ser. No. 56,029
5 Claims. (Cl. 189—66)



1. A window structure comprising a pair of spaced apart opposed window frame side members, a pair of spaced apart opposed window sash members, one of said sash members being located adjacent one of said frame members, and the other of said sash members being located adjacent the other frame member, and a pair of linkage assemblies, one of said linkage assemblies being located between one of said window frame members and the adjacent window sash member, and the other of said linkage assemblies being located between the other window frame member and the adjacent window sash member, each linkage assembly including two links located in substantially parallel crossed relation to each other, one of said links having one end pivotally connected to the window frame side member with which it is associated and the opposite end pivotally connected to the adjacent window sash member, and the other of said

links having one end pivotally connected to the window frame side member with which it is associated, and the other end pivotally and slideably connected to the adjacent window sash member, said linkage assemblies supporting said window sash members for movement inwardly and outwardly with respect to said window frame members.

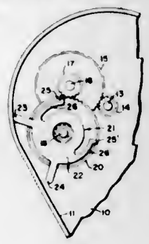
3,101,136
SASH CONSTRUCTION FOR A SLIDING WINDOW
Steve A. Spretnjak, Elkhart, Ind., assignor to Excel Corporation, Elkhart, Ind., a corporation of Indiana
Filed Dec. 12, 1960, Ser. No. 75,255
3 Claims. (Cl. 189—76)



1. The combination comprising a vertically slidable window sash including spaced apart parallel stiles joined together at their top and bottom ends by, respectively, a top rail and a bottom rail; the stiles and top rail being channel sections having spaced apart walls joined together by a web; a hollow tongue projecting from each of said webs and extending longitudinally of its respective stile and top rail; a pair of corner brackets provided to join the top rail to the stiles; each of said corner brackets comprising an L-shaped member having one leg received in, and secured to, the portion of the top rail tongue adjacent to an end thereof and a second leg received in, and secured to, the end portion of the stile tongue adjacent thereto; each of said legs having a tab at its outer end and spaced therefrom by a wall portion to a position adjacent one wall of, respectively the top rail and stile; each of the tabs having an opening therethrough; the aforesaid adjacent walls of the top rail and stile each having an opening in registry with the respective openings in the tabs; a pair of locks each having openings in registry with a pair of the top rail and stile openings; and threaded fastening means extending through the lock openings and threadingly engaging the tab openings to thereby secure each lock to the sash.

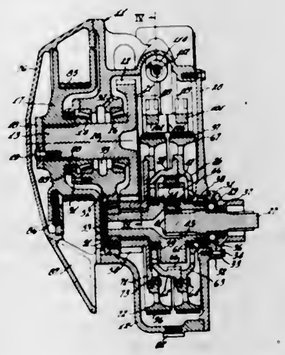
3,101,137
MEANS FOR EFFECTING UNIDIRECTIONAL ROTATION
Albert E. De Barba, Wolcott, Conn., assignor to Consolidated Electronics Industries Corp., Waterbury, Conn., a corporation of Delaware
Filed Jan. 11, 1961, Ser. No. 82,027
5 Claims. (Cl. 192—4)

1. Apparatus for insuring uni-directional rotation of an electric motor having bi-directional starting and running characteristics, comprising a first gear mounted for rotation and driven by said motor, a second gear mounted for rotation and driven by said motor, stopping means adapted to be rotatably driven by said first gear by slipping frictional contact therewith, said stopping means including a driving support portion positioned in frictionally contacting relation with said first gear and an engaging portion, said engaging portion including an elongated flexible cantilever arm having means at the distal end thereof adapted to engage at least one tooth of said second gear to block rotation thereof when said first gear and said stopping means are driven in an undesired direction through said frictional contact of said drive support portion with said first gear, said elongated flexible cantilever arm being operative to impart reliable resilient reversing rebound to said second gear, and means cooperating with



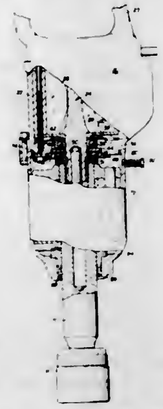
said stopping means to limit the rotation of said stopping means when said first gear and said stopping means are driven in a desired direction.

3,101,138
CABLE CONTROL UNIT
Joseph J. Wochner, Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 17, 1961, Ser. No. 103,456
14 Claims. (Cl. 192—4)



6. A cable control unit comprising: an enclosed housing having a pair of spaced walls, a cable drum on the outside of said housing, an output shaft secured to said drum for rotation therewith and having a portion extending through one of said walls into the interior of said housing, bearing means supporting said output shaft and drum in said one wall for rotation relative thereto on a first axis, a first gear secured coaxially to said portion of said output shaft for rotation therewith, an input shaft rotatably supported in said other wall of said housing on a second axis parallel to said first axis and having an end disposed within said housing, a second gear rotatably mounted within said housing on said second axis in constant meshing relation with said first gear, a friction holding brake within said housing on said second gear, epicyclic gearing rotatably supported within said housing including a sun gear element, a ring gear element, a carrier element and planet gears, a first of said elements being connected for rotation with said input shaft, a second of said elements being connected for rotation with said second gear, and a friction brake within said housing on the third of said elements operative upon engagement thereof to stop rotation of said third element relative to said housing.

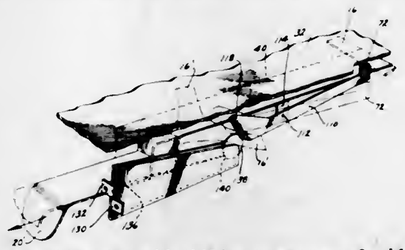
3,101,139
IMPACT TOOL
Nicholas Architect, 5728 SE. 18th, Portland, Oreg.
Filed Sept. 20, 1960, Ser. No. 57,238
2 Claims. (Cl. 192—113)



1. An impact tool comprising an impact clutch mechanism, a motor for driving said mechanism, said motor comprising a cylindrical housing and a rotor rotatably mounted within said housing coaxially thereof, said motor housing having an integral wall at one end thereof, a shaft connected to said rotor and extending through said wall, said wall having an opening concentric of said shaft defining a bearing race, a ball bearing mounted in said race and supporting said shaft, the outer surface of said wall having a groove therein defining an annular step about said opening, a cup shaped bearing cage seated in said groove, a sealing means positioned between the side wall of said cage and the side wall of said step providing an oil tight seal, said cage having a bottom wall extending at right angles to the axis of said shaft and having an opening for receiving said shaft, sealing means positioned between said shaft and said cage providing an oil tight seal therebetween, a tubular housing enclosing said clutch mechanism, said clutch housing including a mounting portion telescopically surrounding said one end of said housing, means operatively arranged between said clutch housing and said motor housing to provide an air and oil tight seal therebetween, said clutch mechanism having an output shaft extending outwardly of said clutch housing, and means to provide an oil tight seal between said output shaft and said clutch housing, said clutch housing being oil filled.

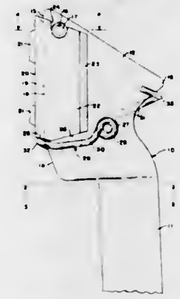
3,101,140
MANUAL DISPENSER
John H. Whitman, Grandville, Mich., assignor to Applied Arts Corporation, Grand Rapids, Mich., a corporation of Michigan
Filed Oct. 23, 1961, Ser. No. 146,756
2 Claims. (Cl. 194—71)

1. An article dispensing mechanism comprising: a shifting dispensing means capable of engaging and moving an article from a storage position to a dispensing position; a movable element adjacent said dispensing means and biased to one position and including a portion forming a stop means in the shifting path of said dispensing means and thereby normally preventing shifting of said dispensing means when said element is biased to said one position; said element also including a second portion forming a pilfer-preventing stop means in the path of an article to be dispensed and normally preventing dispensing movement of said article when said element is in said one position; said element being movable against the bias from said one position to a second position wherein said stop means in the shifting path of said dispensing means is moved out of said shifting path, and said pilfer preventing stop means is moved of the path of an article to be dispensed; coin receiving means capable of retaining a coin between said dispensing means and said element in



such a position that with shifting movement of said shifting dispensing means, the peripheral edge of said coin acts as a cam between said dispensing means and said element to cause said element to be cammed from said one position to said second position to both allow dispensing movement of said shifting means and move said article stop to an inactive position.

3,101,141
REMOVABLE TYPE AND TYPE BAR ASSEMBLY
Floyd H. Canny, Syracuse, N.Y., assignor to SCM Corporation, a corporation of New York
Filed Jan. 18, 1960, Ser. No. 3,179
5 Claims. (Cl. 197—36)

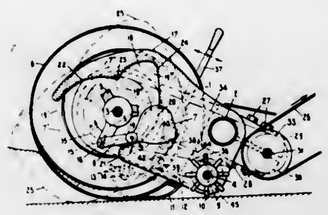


1. A type bar assembly for typewriting machines having detachable type comprising, in combination, a type bar member having a shank and an outer striking head shaped to provide a type-aligning edge, a protruding type-locating abutment fixed on said striking head adjacent the end of said edge remote from said shank, a type element mounted on said head abutting said edge and having portions flanking the opposite faces of said striking head, the end of said element remote from said type bar member shank having a locating portion for detachable engagement with said abutment and the other end of said element having a beveled surface, and spring means secured to said member and biased to urge said type element toward engagement with said member by cooperative engagement with said surface.

3,101,142
LOADING OR DIGGING DEVICE
Cornelis Doyer, 6A Wladimirlaands, Bussum, Netherlands
Filed Dec. 27, 1961, Ser. No. 162,348
3 Claims. (Cl. 198—9)

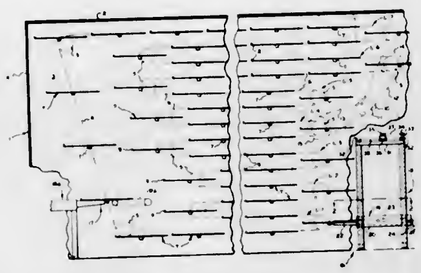
1. A loading and digging device comprising a frame, a rotatable member carried in said frame, driving means

connected to rotate said member, at least one bucket pivotally connected to said member, spring means tending to swing said bucket about its pivot in the direction of rotation of said member and adapted to extend the bucket radially of said member, a cam follower secured to said bucket, a cam guide cooperating with said follower and having a portion arranged to swing said bucket during



part of its travel path about its pivot against the action of said spring means and then to release said bucket for acceleration by the spring to drive the bucket into material to be loaded, and an abutment on said cam guide positioned to suddenly retard the movement of said bucket in another part of its travel whereby to throw out material contained in said bucket.

3,101,143
DOUGH PROCESSING APPARATUS
Peter H. Valentyne and Dale H. Hoag, Saginaw, Mich., assignors to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
Filed Apr. 10, 1961, Ser. No. 101,940
7 Claims. (Cl. 198—24)



1. Apparatus for processing dough products or the like comprising a housing; endless conveyor means; means mounting said conveyor means in said housing for movement in a continuous path having a plurality of spaced superposed loops from a loading station to a discharge station and thence back to said loading station; a plurality of separate, product supporting trays mounted on said conveyor means for movement therewith; first product transfer means at said loading station for loading products on successive trays; second product transfer means at said discharge station for removing products from said trays; means for driving said conveyor means; means for driving each of said transfer means; and means operatively connected at least to one of said transfer means for shifting the latter to a position adjacent any one of the ends of a number of said loops of said path, whereby to vary the length of said path between said stations.

ERRATUM

For Class 198—84 see:
Patent No. 3,101,475

3,101,144
TROUGHING ROLLER ASSEMBLY
Roy F. Lo Presti, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 27, 1958, Ser. No. 769,944
3 Claims. (Cl. 198—192)



1. A flexible connecting assembly for joining the abutting ends of a pair of shafts or the like about a common pivot point including a first member adapted to be received upon the end of a first shaft, said member having a downwardly extending arm, securing means for joining the member to the first shaft, a second member adapted to be received upon the end of a second shaft, said second member having an upwardly projecting arm, securing means for joining said second member to the second shaft, said arms meeting at a common pivot point located between the central axis of the abutting shafts, and means for pivotally connecting the intersecting arms at the common pivot point.

3,101,145
CABLE-SUPPORTED BELT CONVEYOR
Eino A. Koski and Howard A. Wilmeth, Silver City, N. Mex., assignors to Kennecott Copper Corporation, New York, N.Y., a corporation of New York
Filed Mar. 28, 1962, Ser. No. 183,125
4 Claims. (Cl. 198—203)

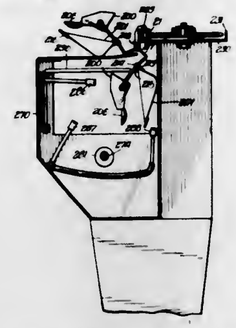


1. In a cable-supported, endless, belt conveyor having a plurality of endless cables arranged to support a single endless conveyor belt and to drive it by reason of mutual frictional contact, a drive pulley assembly around which both cables and belt are trained, said assembly comprising a drive shaft; drive sheaves for the respective cables, said sheaves being rigidly secured to said shaft so as to rotate therewith; and supporting pulleys for the conveyor belt, said pulleys being rotatably mounted on said shaft so as to idle as the belt travels.

3,101,146
WASHING MECHANISM FOR EGG SEPARATING APPARATUS
Charles H. Willsey, 1717 E. 37th St., Topeka, Kans.
Original application Oct. 2, 1956, Ser. No. 613,498, now Patent No. 2,966,184, dated Dec. 27, 1960. Divided and this application Oct. 6, 1960, Ser. No. 60,871
6 Claims. (Cl. 198—229)

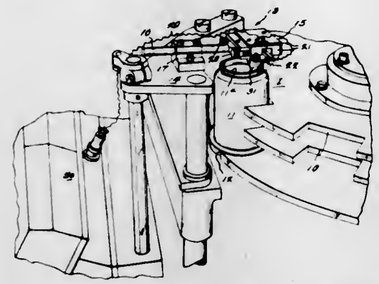
1. In an egg separating apparatus wherein a plurality of egg contents receiving devices are carried on a traveling conveyor, said devices comprising a pair of pan members pivotally mounted for swinging movement between a generally horizontal contents receiving position extending outboard of the conveyor and a contents dumping position extending downwardly of the conveyor, means forming a washing compartment below the conveyor in the path of movement of the pan members which are carried in downwardly extending relation thereon, a pair of cylindrical brushes rotatably mounted on horizontal axes in said compartment, means for rotating said brushes, means

for guiding one of said depending pan members between said rotating brushes, a plurality of laterally spaced spray nozzles mounted in said compartment beyond said brushes, means for guiding said downwardly extending pan members through the spray area of said nozzles,



means for supplying a cleaning fluid to said brushes and said nozzles, a valve controlling the flow of the cleaning fluid, and a pivoted operating arm on said valve which projects into the path of said pan members so as to operate said valve upon passage of said pan members.

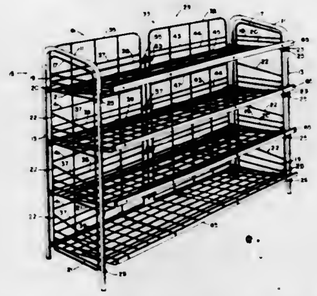
3,101,147
GLASS CONTAINER INSPECTING APPARATUS
William L. Fry, Lafayette, and Albert F. Uhlig, Oakland, Calif., assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 17, 1961, Ser. No. 110,763
7 Claims. (Cl. 209—72)



1. In apparatus for inspecting the sealing surface of a glass container for irregular surface formations, a phonograph-type transducer having a needle for sliding contact with said surface, means for rotating said surface with the needle in contact therewith, yielding means for maintaining such contact, rejection mechanism actuating means comprising an amplifier connected to said transducer, a centering cone adjacent the needle, said cone insertible into the container just in advance of contact between the needle and sealing surface and rollingly engaging only a minor segment of a surface of the container to insure proper contact between the needle and sealing surface.

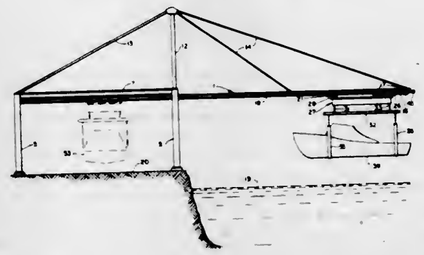
3,101,148
COLLAPSIBLE DISPLAY RACK
James William Brown, Memphis, Tenn., assignor to National Manufacturing Company, Memphis, Tenn., a corporation of Tennessee
Filed Jan. 23, 1961, Ser. No. 84,037
4 Claims. (Cl. 211—148)

3. In a display rack, a pair of opposite end supports at the outer ends of said rack, portions connected to and projecting inwardly from said end supports, a rear closure comprising a pair of rear panels, each said panel at its outer edge having a plurality of outwardly extending, vertically spaced means respectively hingedly engaged with said portions, hinging said rear panels respectively to said end supports, means hinging said rear panels together for unfolding and folding to and from extended substantially coplanar relationship, from and to folded relationship, one said rear panel including a plurality



of limit means inwardly extending beyond said hinge means and overlapping the other said panel limiting unfolding of said rear closure beyond said coplanar relation of said rear panels, and a plurality of shelves detachably mounted in said rack with said closure in coplanar extended condition, said shelves limiting swinging movement of said end panels relative to said rear closure, and limiting folding of said closure away from said coplanar relation.

3,101,149
BOAT LAUNCHING APPARATUS
George P. Hurst, 719 Northampton Ave., Palo Alto, Calif.
Filed June 30, 1961, Ser. No. 121,084
8 Claims. (Cl. 212—20)



1. Apparatus for launching a boat from the land into the water at the shore line, comprising: a pair of elongated, generally horizontal tracks, one of the end portions of one of said tracks extending in parallel, closely adjacent relation to one of the end portions of the other of said tracks over the water and the other end portions of said tracks extending in parallel, spaced relation over the land, an intermediate portion of said other track diverging between said one end portion and said other end portion from said one track, an elongated, boat-supporting carriage, first means suspended from said one track for movement longitudinally of said one track and swivelly connected with one end of said carriage supporting said one end of said carriage for relative movement between said one end of said carriage and said first means about a vertical axis during said movement of said first means longitudinally of said one track, second means suspended from said other track of said pair for

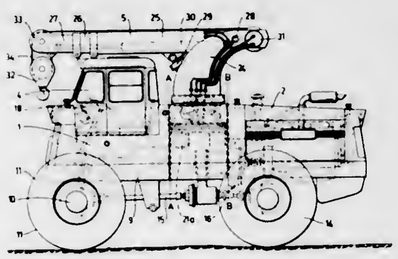
movement longitudinally of said other track and swivelly connected with the other end of said carriage supporting said other end of said carriage for relative movement between said other end of said carriage and said second means about a vertical axis during said movement of said second means longitudinally of said other track whereby said carriage will be automatically moved from a first position suspended from and extending longitudinally of said one end portions to a second position extending transversely of and suspended from said other end portions of said track upon moving said carriage while suspended on said pair of tracks by said first means and said second means from said first position to said second position, releasable locking means respectively on said carriage and on said first means for locking them together upon movement of said carriage to said second position whereby said first means and said carriage will be held against said swivelling movement relative to each other when said carriage is in said second position.

3,101,150

TRACTOR SHOVEL MACHINE ADAPTED TO BE COMBINED WITH A DETACHABLE CRANE OR PULL SHOVEL UNIT

Karl Arvid Janson, Landskrona, and Gunnar Fredrik Sundberg, Solna, Sweden, assignors to Aktiebolaget Landsverk, Landskrona, Sweden, a corporation of Sweden

Filed Dec. 6, 1960, Ser. No. 74,188
Claims priority, application Sweden Dec. 17, 1959
4 Claims. (Cl. 212—38)



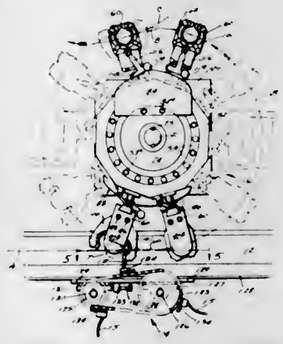
3. In a load handling vehicle, a rear section, a front section and an intermediate section between said rear section and said front section, means for detachably clamping said section together to form a single unit, load handling means mounted on said intermediate section, said load handling means comprising a support projecting from the upper side of said intermediate section, said support being rotatably mounted about a vertical shaft, an engine for imparting a rotary movement to said support, a load handling arm pivoted to the upper end of said support so as to be swingable about a horizontal axis, load carrying means connected to the free end of said load handling arm said load handling means comprising a crane arm mounted in said load handling arm means for extending said crane in the longitudinal direction thereof, a pulley at the free end of said crane arm, a block with a crane hook hanging under said pulley and a lifting cable running from a fix point on said crane arm, through said block, over said pulley and to a lifting engine mounted at the pivoted end of said load handling arm, an engine in said rear section for driving said vehicle, driving wheels mounted underneath said rear section, clutch means for connecting said engine to said rear driving wheels, said clutch means serving for connecting said engine to a forwardly projecting shaft, an extension shaft connected at one end thereof to the free end of said horizontal shaft, driving wheels mounted underneath said front section, means connecting the other end of said extension shaft to said front driving wheels and steering means in said front section for rotating said driving wheels of said front section about a vertical axis.

3,101,151

UNIVERSAL AUTOMATIC WARE LOADING MACHINE

Carl W. Schreiber, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Original application Oct. 8, 1959, Ser. No. 845,262, now Patent No. 3,100,051, dated Aug. 6, 1963. Divided and this application Oct. 20, 1960, Ser. No. 63,819
4 Claims. (Cl. 214—1)



3. In combination, a horizontal conveyor adapted to receive articles of ware in hot condition from a forming machine and move them in a straight line path at a constant speed, a rotary, multiple-chuck burn-off machine carrying its chucks at a constant speed, the linear speed of the chucks being less than the speed of the ware on the conveyor, a rotary ware transfer apparatus having a plurality of ware pick-up mechanisms adapted to travel in registry over the straight line path of the ware on the conveyor at a ware receiving station and in registry with the path of the chucks at a subsequent ware delivery station, drive means for moving the ware pick-up mechanisms in synchronism with the movement of the chucks, the ware pick-up mechanisms each traveling at the same linear speed as the chucks, said drive means comprising a turret on the ware transfer apparatus mounting the ware pick-up mechanisms, a vertical shaft about which said turret is mounted for rotation, a driving connection from the burn-off machine, a clutch means for drivably connecting said driving connection and said turret and constructed and arranged to provide position synchronization of the ware pick-up mechanisms and the burn-off machine chucks whenever the turret is being driven, a ware retarding means operable in the straight line path of the ware on the conveyor for intercepting ware thereon prior to their entering the ware receiving station for reducing the linear speed of the ware, and a synchronized drive means operated by the last-mentioned drive means and connected for operating said ware retarding means to move the latter at the same linear speed and in synchronism with said ware pick-up mechanisms.

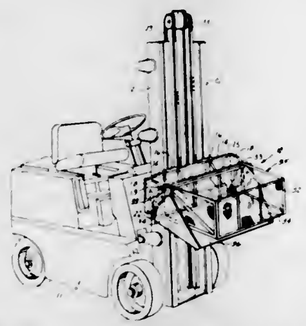
3,101,152

MATERIAL HANDLING DEVICE

Milton P. Whitmore, Tampa, and Lucio Maddalena, Orlando, Fla., assignors to Clark Equipment Company, Buchanan, Mich., a corporation of Michigan

Filed Jan. 22, 1960, Ser. No. 4,146
9 Claims. (Cl. 214—307)

8. For use with a vehicle, a material handling device comprising a support assembly adapted to be attached to the vehicle, a container, a bottom for said container pivotal between open and closed positions, means pivotally connecting said bottom to said container, means for supporting said container from said support assembly, said connecting means and said pivot means comprising a common member, intermediate support means cooperable



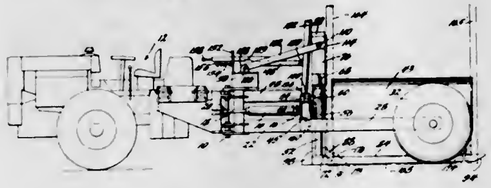
with said first support means for maintaining said container in a given position during opening movement of said bottom, and means for actuating said bottom between its open and closed positions and being disposable in straddling relation to said maintaining means.

3,101,153

FORK LIFT DEVICE

Holcombe M. Verdery, Jr., P.O. Box 157, Harlem, Ga.

Filed Sept. 12, 1960, Ser. No. 55,286
11 Claims. (Cl. 214—700)



11. A lift and transport unit having a truck frame including a pair of spaced-apart, rearwardly-extending beams, a pair of wheels, one each being supported upon each of the said beams, and a laterally-extending beam located forwardly of said rearwardly-extending beams; a forklift frame arranged generally vertically between the rearwardly-extending beams, having load-bearing tines extending reawardly and a pair of upwardly extending guide rods, means slidably receiving said rods and pivoted on a horizontal axis on said laterally extending beam, means to raise the fork-lift frame in its slide mounting and means extending from a forward portion of the truck frame to an upper portion of the fork-lift frame constraining a portion of the fork-lift frame to movement forwardly and downwardly as the fork-lift frame is raised.

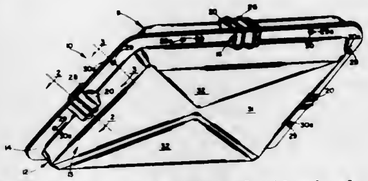
3,101,154

MODULAR CONTAINER AND RETAINING MEANS

John D. Herdering, Van Nuys, Calif., assignor to North American Aviation, Inc.

Filed Nov. 9, 1960, Ser. No. 68,238
5 Claims. (Cl. 220—4)

2. A container assembly comprising a pair of identical container halves, each said container half including a body portion having a marginal flange with an abuttable surface, a plurality of cleats upon said flange and including a corner extending in a direction opposite said flange abuttable surface, each said cleat having a first side extending outward at an angle and away from said flange and a re-entrant second side attached substantially normal to said first side so as to define said corner with said first side and terminating substantially at an edge of said flange, said cleat abutting, mating with, and secured



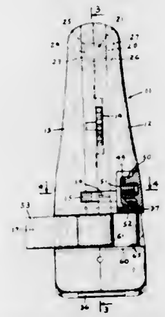
to a similar cleat upon the other of said pair of container halves, mutually engageable detent means upon said flanges to register the relative positions of said container halves and a spring wire retainer disposed around said mated cleats and over said corners thereof in substantial conformity with the external contour of said mated cleats.

3,101,155

COMPACT HOUSING

Philip N. Lehr, Huntington, and Joseph A. Idank, Richmond Hill, N.Y., assignors to Dictograph Products, Inc., Jamaica, N.Y., a corporation of Delaware

Filed Mar. 14, 1961, Ser. No. 95,586
3 Claims. (Cl. 220—4)



1. A housing, comprising a first shell containing at least one key in an inside portion thereof, a second shell containing both a pin in a first inside portion thereof and a joining plate with a threaded hole therein on a second inside portion thereof, an attachment plate for joining said first and said second shells to form a closed housing, said attachment plate being notched along its edge in the shape of said key to be retained by said key against said first shell, said attachment plate having a spring plate thereon with a first drilled portion in said spring plate for placement around said pin, said attachment plate further having a second drilled portion therein in substantial alignment with said threaded hole of said joining plate thereby to receive a threaded member to secure said attachment plate to said joining plate.

3,101,156

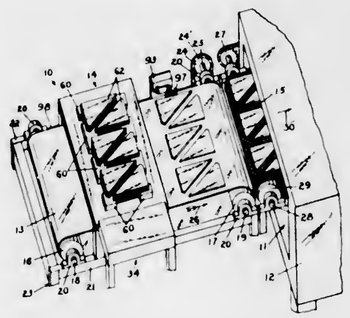
METHOD AND APPARATUS FOR FEEDING FLAT SHEETS ONTO A MOVING CONVEYOR

Frank J. Carson and Herbert A. Leflet, Jr., Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Mar. 11, 1960, Ser. No. 14,400
1 Claim. (Cl. 221—93)

An apparatus for dispensing sheets comprising, in combination, a pair of stationary plates positioned one above

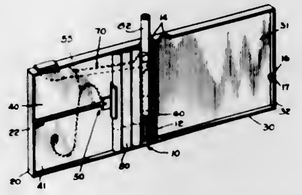
the other, a plurality of pockets in each of said stationary plates, each of the pockets in the lower of said stationary plates being of substantially identical configuration to a corresponding pocket in the upper of said stationary plates and offset therefrom, guide blocks on said upper plate for locating a plurality of sheets in vertical alignment with each other in individual stacks and directing the sheets into the pockets of said top stationary plate, said sheets and said pockets being triangular-shaped, said triangular-shaped pockets in both said upper and lower stationary plates being arranged in complementary pairs, a diagonal rib formed in each stationary plate to space the hypotenuse edges of the two adjacent pockets of each complementary pair from each other, a pair of ledges on said bottom stationary plate along adjacent sides of each pocket, said



ledges being defined by the offset of the pockets in said bottom stationary plate from the pockets in said top stationary plate, said ledges supporting the sheets directed through said pockets in said top stationary plate by said guide means, and ejection means including a movable plate interposed between said pair of stationary plates for periodically carrying the bottom sheet of each said stack into alignment with a pocket in said bottom plate whereby said bottom sheets pass through the pocket, said movable plate including two independently movable sections, one of said sections ejecting sheets resting on the ledges adjacent one pocket of each of said plurality of pairs of pockets in said bottom stationary plate and the other movable section ejecting sheets resting on the ledges adjacent the other pocket of each of said plurality of pairs of pockets in said bottom stationary member.

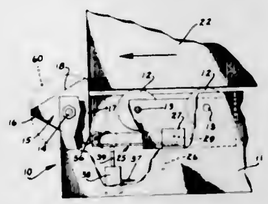
3,101,157
CIGARETTE DISPENSER
George F. Russell, 13144 Huston St., Sherman Oaks, Calif.
Filed Feb. 8, 1960, Ser. No. 7,437
9 Claims. (Cl. 221—227)

1. In a cigarette case adapted to hold a plurality of cigarettes and having means for yieldably urging said cigarettes toward one end of said case, a top above said cigarettes having a cigarette delivery port positioned therein at said one end, an ejector movable to eject a cigarette through said port, and an elongated ejector actuating means to control movement of said ejector, the provision of: a rear wall and thin divider wall means placed in close proximity to said rear wall wherein said rear wall is provided with raised and recessed areas formed integrally therein to provide cavities between said rear wall and divider wall means to contain substantial portions of the ejector and elongated ejector actuating means, one of said cavities loosely receiving the elongated ejector actuating means, one of said raised areas providing a bearing surface against which the actuating means is rockably fulcrumed, said thin divider wall means including two coplanar divider walls having parallel edges spaced apart to form therebetween a horizontal slot substantially traversing the length of said thin divider wall means; said means for yieldably urging cigarettes toward one end of said case comprising a follower slidably mounted in said horizontal slot for lateral movement relative to said case to



advance said cigarettes toward said one end; and a thin rod spring positioned within one of said cavities between said rear wall and divider wall means and having one end attached to said follower, the other end attached to said rear wall, said spring being of such length that it forms a generally horizontal block S-shape when the follower is in a fully extended position and involutes upon itself within the said one cavity forming the general shape of a script S when the follower is moved to a cocked position.

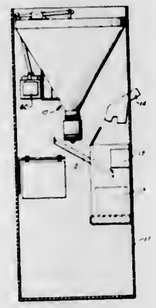
3,101,158
CONVEYOR AND A CASE RELEASE APPARATUS
John C. Baxter, Grand Rapids, Mich., assignor to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed June 6, 1960, Ser. No. 34,109
5 Claims. (Cl. 221—295)



1. A case release adapted to be used with a conveyor where cases are gravity fed comprising: a conveyor; case release means adapted to be positioned at the terminus of said conveyor, said release means including a many sided release member rotatably mounted on a shaft at the end of the conveyor, each side of said release member having a portion forming a stop surface and a portion forming a trip lever engaging surface, trip lever means disposed on said conveyor and movable into and out of contact with said trip lever engaging surface; switch means associated with said trip lever means and resilient contact means engaging said trip lever engaging surface and said switch means, presence of a case on said conveyor engaging said release member and actuating said switch by overcoming said resilient contact member, said resilient contact means opening said switch if a case is absent from said conveyor, release of said trip means allowing rotation of said release member and passage of a case thereover and presenting another stop surface to a following case before the trailing edge of said first released case passes into the arc of

rotation of said release member, said trip means movable to prevent further rotation of said release member.

3,101,159
PARTICULATE MATERIAL DISPENSER
Charles F. Fletcher, Oklahoma City, Okla., assignor to Flinco, Inc., Oklahoma City, Okla., a corporation of Oklahoma
Filed Nov. 14, 1960, Ser. No. 68,764
2 Claims. (Cl. 222—70)



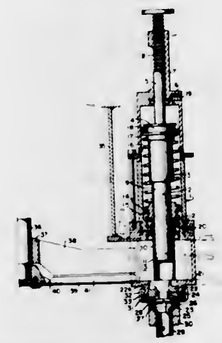
1. Apparatus for dispensing particulate material comprising an open-ended, vertically extending funnel-shaped hopper for retaining a supply of particulate material, said hopper being circular in horizontal cross section and having its side walls sloping downwardly and inwardly toward its lower end at an angle of from 30 degrees to 50 degrees from the vertical; an externally threaded tubular discharge spout having its upper end extending into the lower end of said hopper so that its outer surface is conterminous with the inner surface of said hopper, whereby a peripheral ledge is formed by the walls of said tubular discharge spout adjacent the lower end of said hopper; a tubular sleeve coaxially threaded on said discharge spout for adjustable vertical movement thereon, said sleeve having a portion extending below the lower end of said discharge spout; a set screw threaded through said sleeve and frictionally engaging said discharge spout for locking said sleeve in its adjusted position on said spout; a cross member extending across the top of said hopper from one side, through the vertical axis, to the other side thereof; a vertical shaft extending through said cross member and coaxially through said hopper, said discharge spout and said sleeve; a compression spring coaxially mounted on said shaft and abutting said cross member whereby said spring is placed in compression when said shaft is moving upwardly with respect to said cross member; a conical valve of a size to effect closure of said sleeve mounted on the lower end of said shaft below said sleeve and being axially adjustable thereon; a generally disc-shaped valve of a size to mate with said ledge mounted on said shaft and spaced axially along said shaft from said conical valve a distance greater than the distance from the lower end of said sleeve to said ledge, said disc-shaped valve being axially adjustable on said shaft; means vertically actuating said shaft against the bias of said compression spring whereby when said shaft is vertically actuated said conical valve closes the opening at the lower end of said tubular sleeve and said disc-shaped valve is lifted above said ledge to permit the particulate material in said hopper to flow into said discharge spout and sleeve; and timing means connected to said actuating means for controlling the duration of the vertical actuation imparted to said shaft by said actuating means.

3,101,160
AEROSOL ATOMIZER AND ITS REFILL CONTAINER
Bernard Thomas Emile Picot, Paris, France, assignor to Parfums Christian Dior
Filed Mar. 28, 1961, Ser. No. 98,971
Claims priority, application France Jan. 18, 1961
1 Claim. (Cl. 222—183)



A refill container for an aerosol atomizer comprising a protective sheathing provided with a substantially flat base and an axial orifice at its top, a vessel in said sheathing for the liquid to be atomized and for a gas under pressure above said liquid, valve means provided on the top of said vessel emerging through said axial orifice at the top of said sheathing, a diffuser head connected to said valve means, and the protective sheathing having a flange formed internally at its top, around said axial orifice, said valve means having a corresponding shape so as to be fitted from beneath in said flange, vent holes being provided in said flange for permitting the escape of gas in case of accidental breakage of said vessel.

3,101,161
BATCHING APPARATUS FOR LIQUID OR PLASTIC SUBSTANCES
Nemo Sixten Mauritz Ivarson, Johanneshov, Sweden, assignor to Kooperativa Forbundet Ekonomisk Forening, Stockholm, Sweden, a joint-stock company of Sweden
Filed June 5, 1961, Ser. No. 114,833
Claims priority, application Sweden June 8, 1960
3 Claims. (Cl. 222—235)



1. An apparatus for batching liquid or plastic substances of the type comprising a cylinder which encloses an axially disposed piston for portioning out through one cylinder end a substance which is fed in continuously via a side inlet at said cylinder end, a sleeve tightly enclosing the piston but axially displaceable relative the same, which sleeve upon the beginning of the batching operation, with the sleeve end adjacent the working end of the piston being substantially in level with said working end when the piston is in its retracted position prior to the

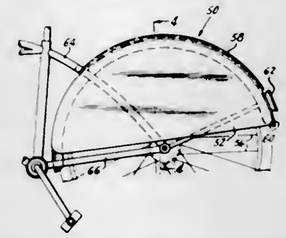
beginning of the power stroke, and with the cylinder space between the piston end and a check valve disposed in the cylinder end being filled with substance, is displaced from its starting position into a position of sealingly shielding the inlet, the piston being adapted in connection therewith to be displaced for pressing out the substance included in said space through the check valve and thereafter to be returned together with the sleeve to the starting position for carrying out another batching operation, a helical spring enclosing the piston abuts with one end against a stop on the piston and with its other end against a stop on the sleeve, so that when the spring is free from tension the sleeve projects beyond the piston by a distance sufficient for said shielding, said sleeve being adapted by compression of the spring to be pressed from its shielding position back against an intermediate stop on the piston for preparing another batching operation, said piston then being separately fixed in its end position wherein the outer end of the sleeve is substantially in level with the piston end, and during the continued back-pressing movement to take the piston then separately released along into its starting position.

3,101,162
FOLDABLE CLOTHES HANGER
Helen Woods, 217 Main St., Northampton, Mass.
Substituted for abandoned application Ser. No. 453,472, Sept. 1, 1954. This application May 19, 1960, Ser. No. 37,014
4 Claims. (Cl. 223—94)



1. As a new article of manufacture, a clothes hanger adapted when not in use to be folded and comprising a pair of elongated juxtapositioned one-piece arms of U-shaped cross section, consisting of comparatively wide bottom walls and side walls of materially less height than the bottom walls are wide, adapted to assume an unfolded position wherein they extend outwards in opposite directions, and constructed and arranged so that one of them is slightly wider than the other and has the inner ends of its side walls disposed outwards of, and in lapped relation with, the inner ends of the side walls of said other arm, a pivot pin having the ends thereof extending through registering holes in the lapped inner ends of the side walls of said arms and serving to connect said arms so that they are capable of being swung towards and away from one another into and out of a folded position wherein the narrower arm is in completely nested relation with the wider arm, and a normally upstanding hook disposed between the arms, consisting of a hook part and a depending shank part, provided at the lower end of its shank part with an eye in encircling relation with the central portion of the pivot pin in order that it is free to swing laterally relatively to the arms, and adapted when the arms are in their folded position to fit between said arms, said eye being materially greater in diameter than the pivot pin in order that the hook may be turned back and forth between an operative position wherein its hook part is in parallel relation with the side walls of the arms and an inoperative position wherein its hook part extends substantially at right angles to the side walls and, hence, permits the hook as a whole to fit substantially flatly between, and be completely housed by, the arms when the latter are in their folded position, said wider arm having on the inner end of its bottom wall an integral coplanar extension which when the arms are in their unfolded position abuts directly against the inner end of the bottom wall of the narrower arm and forms a stop for preventing said arms from being swung past their unfolded position.

3,101,163
BICYCLE SADDLE BAG CARRIER AND SPOKE PROTECTOR
Robert D. Huber, Lima, Ohio, assignor to Gustave Miller, Washington, D.C.
Filed May 15, 1961, Ser. No. 109,892
2 Claims. (Cl. 224—32)

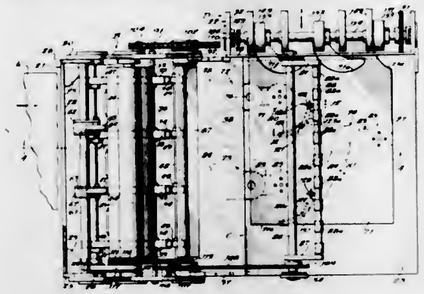


1. For use in self-securing readily detachable combination with a bicycle rear wheel supported on an axle through the apices of a pair of forwardly extending bicycle V-frame members and a mudguard secured at its forward portion to and between both pairs of legs of said pair of forwardly extending V-frame members, said mudguard extending in a rearward curve upwardly and then downwardly over the wheel from said V-frame members; a saddle bag carrier and rear bicycle wheel spoke protector comprising a pair of parallel depending rigid sheet member shields and a rigid bridge member rigidly connected to the upper edges of said shields thereby providing a rigid unitary device, said bridge being complementary to the top of the mudguard from the upper leg of each V-frame member to a point at least adjacent to the rear end of said mudguard, the upper edges of said rigid parallel shields extending in a curve from substantially the rear end of said mudguard to adjacent to the forward end of said mudguard, both ends of said curve being connected by a substantially straight bottom edge, said bridge being arranged to be attachably and detachably supported by said mudguard with the center of gravity of said spoke protector substantially below the high point of the curvature of said mudguard edge to thereby maintain said protector on said mudguard free of any securement means, whereby a saddle bag or the like may be supported on said bridge and rest against said shields free from spoke contact.

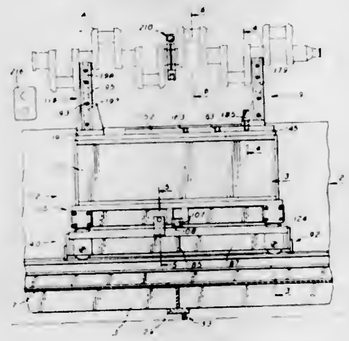
3,101,164
METHOD OF AND APPARATUS FOR CUTTING AND FEEDING WRAPPERS FOR MAGAZINES
Otho Klle, Homewood, and Bernard J. Golbeck, Crystal Lake, Ill., assignors to R. R. Donnelley & Sons Company, a corporation of Delaware
Filed May 17, 1960, Ser. No. 29,697
14 Claims. (Cl. 225—2)

9. The method of cutting and feeding wrappers for magazines which comprises the steps of: continuously withdrawing a paper web from a supply roll in a first linear path; forming transverse scores in the moving web at regular intervals to define a continuous series of connected wrapper lengths extending lengthwise of the web; severing the moving web progressively on said scores to provide individual wrappers; moving said wrappers seriatim in a translatory, closed path through an arc of about 90° from said first path into a second path at right angles to the first path; subjecting each wrapper to suction during its travel in said translatory path to maintain its angular orientation with respect to said paths; moving each individual wrapper momentarily along said second path at

a speed greater than that of the succeeding moving wrappers to provide a succession of individual, spaced wrappers; and continuously moving said succession of spaced wrappers serially to a wrapping station.

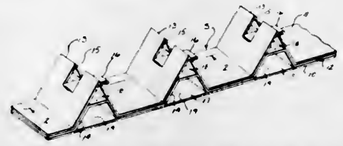


3,101,165
METHOD AND APPARATUS FOR HEAT-TREATING
Charles G. Barkley and John R. Beesley, Fostoria, Ohio, assignors to Atlas Crankshaft Corporation, Columbus, Ind., a corporation of Indiana
Filed May 13, 1960, Ser. No. 28,913
4 Claims. (Cl. 266—4)



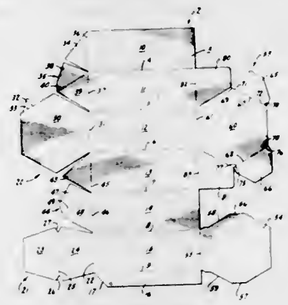
1. Apparatus for heat treating a crankshaft having a plurality of main bearings and at least one connecting rod bearing, comprising a base, heat treating means mounted at the rear of the base and including a heating and quenching head projecting forwardly over the base, said head including a fixed half and movable half pivotally mounted on said fixed half and adapted to concentrically receive a connecting rod bearing therebetween, means for supporting a crankshaft comprising a lower carriage mounted on said base for movement parallel to the front of the base, an upper carriage mounted on said lower carriage for movement forwardly and rearwardly of said base, supporting means mounted on said upper carriage for rotatably supporting main bearings of the crankshaft, said upper carriage being movable rearwardly of the base to move a connecting rod bearing toward said head, said lower carriage having stop means for limiting the rearward movement of said upper carriage substantially to a position where a vertical plane through the axis of the main bearings passes through the center of said halves, and an insulating stop pin mounted in one of said halves and the crankshaft being adapted to be rotated in said supporting means to engage the connecting rod bearing with said stop pin and thereby center the connecting rod bearing within said halves.

3,101,166
COLLAPSIBLE PACKAGING STRIP
Lloyd D. Van Antwerpen, Milwaukee, Wis., assignor to Vanant Company, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 22, 1962, Ser. No. 218,623
4 Claims. (Cl. 229—14)



1. A collapsible wrap-around packaging strip comprising an outer base ply, an inner ply and an intermediate ply, means securing the plies together, said intermediate and inner plies being provided with equidistantly spaced transversely extending nested peaks with the peaks normally extending outwardly from the base strip and said base strip being normally flat, and said base strip including stretches between the peaks with the stretches weakened transversely to permit the folding thereof upon itself to bring about the collapsing of the peaks with the peaks and plies lying in substantial parallelism.

3,101,167
AUTOMATIC BOTTOM HEXAGONAL CARTON
John M. Styler, Mundelein, Ill., assignor, by mesne assignments, to Potlatch Forests, Inc., a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 78,373
2 Claims. (Cl. 229—41)



1. An automatic bottom hexagonal carton completely erectable quickly and solely by a single application of oppositely directed compressive forces on the fold edges of said carton when in a collapsed condition, said carton, in its collapsed condition, including

six side panels joined one to the other along crease lines between adjacent panels and means for securing the two most remote panels to one another,

a bottom flap flexibly secured to the bottom edge of a first side panel,

said bottom flap being creased at its mid-portion whereby it may be folded back upon itself,

said bottom flap having a width at its mid-portion larger than the length of the flexible connection between said bottom flap and its associated side panel, the edges of said bottom flap thereby diverging from the bottom edge of said first side panel to the crease at its mid-portion, and then coverging from the crease at its mid-portion to the free edge,

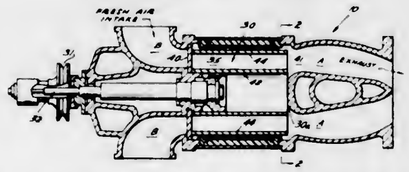
a pair of notches at the ends of the crease in the mid-portion of said bottom flap,

a bottom dust flap flexibly secured to the bottom edge of another side panel,
the side panels to which the bottom flap and bottom dust flap are secured, and consequently said flaps, overlying one another in a collapsed condition,
said bottom dust flap lying against that portion of the folded bottom flap between the crease and its free end when in a collapsed condition.
said bottom dust flap overlying substantially the entire bottom area to thereby provide a double layer bottom,
said bottom dust flap further including
a locking tab projecting outward from a side of the bottom dust flap along a crease line which is coextensive with said bottom dust flap side,
the means for securing the two most remote end panels to one another being a glue flap extending along the exposed edge of one of said end panels,
said locking tab lying in the plane of the bottom dust flap in a collapsed condition but perpendicular thereto in an erected condition,
said locking tab underlying the glue flap in an erected condition,
and means for securing the bottom flap and bottom dust flap to one another in the overlapping area between said flaps whereby the bottom flap, as it unfolds during the application of opening forces to the collapsed container, pulls the bottom dust flap into position.

3,101,168
AERODYNAMIC WAVE MACHINE FORMED ROTOR BLADES TO MINIMIZE THERMAL STRESS

Max Berchtold, Kusnacht, Switzerland, assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed June 15, 1961, Ser. No. 117,199
8 Claims. (Cl. 230—69)



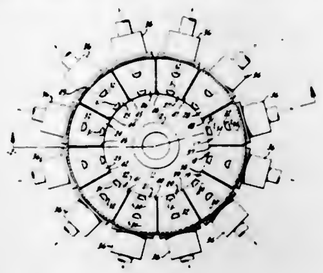
1. A rotor for a wave machine comprising a circular shaft, a cylindrical shroud surrounding said shaft, a plurality of blades each positioned substantially in a radial direction between said shaft and said shroud, opposite axial edges of each of said blades being secured to the outer surface and the inner surface of said shaft and said shroud respectively, a first radial edge of each of said blades being curved in a direction away from a radial line extending between said shaft and said shroud, the radial blade edge opposite said curved edge being substantially straight, the radius of curvature of said blade gradually and smoothly increasing between said curved and said straight radial edges.

3,101,169
HIGH VACUUM CHAMBER

Hugh R. Smith, Jr., Oakland, Calif., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

Filed Nov. 9, 1959, Ser. No. 851,878
7 Claims. (Cl. 230—101)

1. An improved vacuum chamber comprising a plurality of vacuum pumps disposed about a closed path and having inlet apertures the outline structures of which being in contiguous array defining a wall of said chamber, and additional walls engaging the outline structures of said pump inlets at the ends thereof for completing

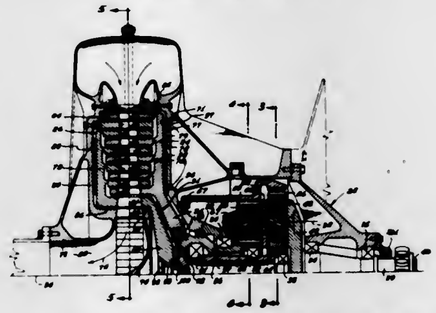


enclosure of said chamber which is thus surrounded by said pumps and adapted to be maintained at a vacuum even during evolution of gas within the chamber.

3,101,170
RADIAL DYNAMIC MACHINES INCLUDING CENTRIPETAL COMPRESSORS AND CENTRIFUGAL TURBINES

Vladimir H. Pavlecka, Pacific Palisades, Calif., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed June 8, 1955, Ser. No. 513,947
20 Claims. (Cl. 230—124)



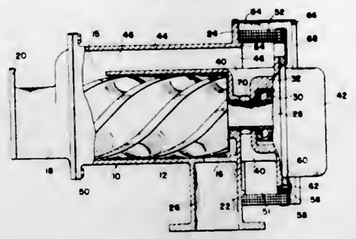
1. A contra-rotatable centripetal flow compressor for compressing an elastic fluid, said compressor comprising a first rotor having a plurality of centripetal flow compression stages rotatable in one direction, a second rotor having a plurality of centripetal flow compression stages rotatable in the direction opposite to the direction of rotation of said first rotor, at least some of the stages of the first rotor interleaving some of the stages of the second rotor, and at least one stationary vector-adjusting stage positioned between the outermost, or the first, rotatable compression stage of said compressor and the next succeeding, or the second, rotatable stage of said compressor, all of said stages defining a single, radial centripetal flow channel of said compressor, said channel lying in a single, transverse plane, perpendicular to the axis of rotation of said first and second rotors.

3,101,171
AXIAL FLOW COMPRESSOR

Grover D. Fraser, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 27, 1961, Ser. No. 91,942
5 Claims. (Cl. 230—143)

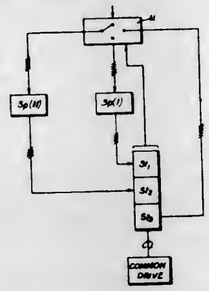
1. A rotary gas compressor in which gas is compressed in an axial direction parallel to the rotary axis of the compressor and discharged in a heated condition from the compressor, said compressor comprising: a gas compressing rotor, said rotor adapted to receive gas, compress the gas axially as it rotates and discharge the gas in a heated condition caused by its compression; a casing surrounding said rotor; an outlet in said casing adjacent one end of the rotor for discharging compressed and heated gas from the rotor; an inlet in said casing for admitting intake gas to said rotor; said casing including an end wall located adjacent said outlet where it is heated by the compressed gas being discharged through said outlet; said rotor having a shaft at said one end extending through said end wall in gas sealing relationship; lubricated bearing means rotatably supporting said shaft and being spaced from the outer face of said end wall; and intake gas conduit means having one end connected to said inlet for conducting intake gas to said inlet and being partly formed by said outside face of said casing end wall to cause the intake gas to pass in heat exchange relationship with said end wall whereby said end wall is cooled by said intake gas and said end wall is separated and insulated from said bearing means by a current of intake gas to prevent said bearing means from being overheated.



3,101,172
APPARATUS FOR PUNCHING A PLURALITY OF CODE COMBINATIONS SIMULTANEOUSLY

Hans Ferdinand Mayer, Munich-Solln, and Fritz Butzke, Beierbrunn-Buchenhain, near Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin, Germany, a German company

Filed Mar. 7, 1960, Ser. No. 13,032
Claims priority, application Germany Mar. 16, 1959
17 Claims. (Cl. 234—42)

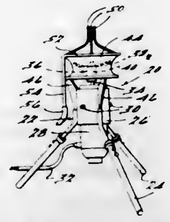


1. Perforating apparatus comprising a storage means, n sets of punches, means for actuating the n sets of punches simultaneously, switching means and means for applying n code combinations successively to a common input of the switching means, wherein the switching means is conditioned to apply $n-1$ of the code combinations to said storage means and apply the nth code combination to the nth one of said sets of punches so that the nth set of punches is conditioned to represent the code combination applied thereto, and wherein said storage means is adapted to condition $n-1$ of the said sets of punches so that each set represents one of the code combinations.

3,101,173
FOUNTAIN DEVICE

Richard H. Jennings, 1129 Ferdon, Ann Arbor, Mich.

Filed Mar. 1, 1961, Ser. No. 92,639
11 Claims. (Cl. 239—23)

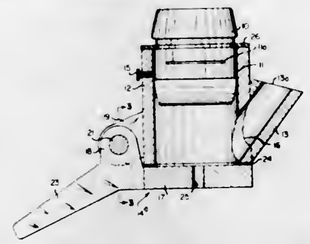


1. In an apparatus for creating a compound fountain including a base fountain and an upstanding fountain, the combination comprising impeller means adapted to be immersed in a liquid and disposed adjacent to the surface thereof, said impeller means including a plurality of blades thereon having at least a portion thereof angularly pitched relative to the plane of rotation of said impeller means and adapted to deflect the liquid upwardly in a substantially solid sheet above the surface of the liquid in response to rotation of said impeller means, guide means encircling said impeller means and formed with an opening in the base and top thereof for directing the flow of liquid upwardly toward the surface of the liquid, nozzle means projecting above the surface of the liquid in a position above said impeller means for discharging a substantially solid stream of liquid therefrom, submersible motor means for rotating said impeller means, conduit means disposed in communication with said nozzle means for supplying a pressurized liquid thereto, and supporting means for maintaining said impeller means and said nozzle means in appropriate position relative to the surface of the body liquid.

3,101,174
WATER FOUNTAIN UNIT FOR ATTACHMENT TO A WATER FAUCET

Pratt R. Loveland, 2579 Woodley Road, Columbus 24, Ohio

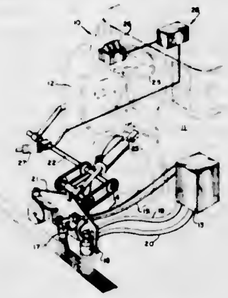
Filed May 24, 1962, Ser. No. 197,436
2 Claims. (Cl. 239—27)



1. A water fountain unit attachable to a water faucet having a terminal end comprising an elongated tubular body having first and second open ends and adapted to axially receive the terminal end of the faucet through said first end, means carried by said body for cooperatively engaging the faucet and maintaining the unit in operative relationship therewith, sealing means attached to said body at said first end and being engageable with the faucet forming a water impervious seal therewith, an

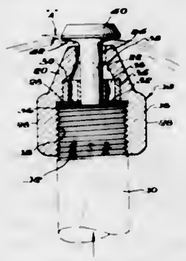
elongated, open ended tubular spout attached to said body and communicating interiority thereof, said spout extending ou.wardly and upwardly from said body, and a manually-operated valve member pivotally mounted exteriorly on said body for substantially closing said second end and causing a flow of water through said spout including a plate adapted to sealingly engage said second end, said plate being pivotally supported on the external wall of said body for swinging in a vertical plane with .he center of gravity thereof eccentric to said pivot support whereby gravity will normally maintain said plate out of engagement with said second end.

3,101,175
ROAD STRIPING MACHINE WITH ELECTRONIC SIGHT
Carl F. Brown, Jr., Huntingdon, Pa., assignor to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Filed Sept. 23, 1959, Ser. No. 841,868
7 Claims. (Cl. 239—150)



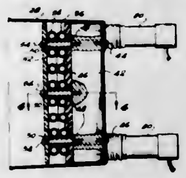
3. A road striping machine comprising a steerable vehicle, means on said vehicle for applying a band of paint on the roadway supporting the vehicle, a television camera carried by the vehicle and directed towards the roadway adjacent the vehicle to thereby receive an image of a band on the roadway, and a television receiver positioned on said vehicle to be viewed by the driver thereof, said television camera and television receiver being parts of a closed television circuit, said television receiver having guide means on the screen thereof, whereby said vehicle may be steered to accurately repaint a band on the roadway.

3,101,176
SPRINKLER DEVICE
Herbert C. Goss, 1932 Woodside Road, Glenshaw, Pa.
Filed Apr. 9, 1962, Ser. No. 186,613
2 Claims. (Cl. 239—524)



2. A water sprinkling device comprising coupling means for securing said device to a water source, means providing an outlet orifice for a flow of water from said source, an annular abutment surface spaced closely adjacent said outlet orifice and at an angle of substantially 78° to the direction of water flow to provide an impingement obstacle to said flow which is thereby divided into a fine mist upon striking thereagainst, a generally cylindrical stem for supporting said abutment surface and extending substantially parallel with said water flow, the surface of said cylindrical stem communicating with said annular abutment surface through a 3/64 inch radius, and the diameter of the abutment surface being in the range of 2.5 to 3 times the diameter of the stem.

3,101,177
TUBULAR LIGHT GRID ASSEMBLY
Robert C. Loomis, Anaheim, and William R. Drumm, Inglewood, Calif., assignors to Econolite Corporation, Los Angeles, Calif., a corporation of California
Filed Apr. 20, 1961, Ser. No. 104,423
3 Claims. (Cl. 240—11.4)

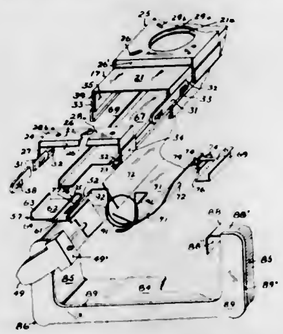


1. A tubular grid assembly, comprising: a reflector housing adapted to be easily installed in a mounting, said housing including a reflective back wall, enclosing reflective side walls, and an open face in front of said back wall; a first tubing bent to form a first grid having a plurality of parallel lines of tubing in a plane; a second tubing bent to form a second grid similar to said first gird; and support meanse for mounting said first grid in a plane substantially parallel to said back wall and at a predetermined distance before said back wall, and mounting said second grid with respective lines of tubing directly aligned before and contiguous to corresponding line of tubing of said first grid, within said housing whereby said housing generally focuses light from said first and second grids out said open face, said support means including a relatively thin block disposed crosswise to said parallel lines of tubing of said first and second grids, a resilient cushion positioned on a normally forward surface of said block for supporting said parallel lines of tubing of said first grid and of said second grid directly aligned before and contiguous to said first grid, a cleat bar, said cushion and cleat bar having respective cushioning and clamping surfaces substantially matching said forward surface of said block, means for clamping said cleat bar against said parallel lines of tubing of said second grid firmly in series with said parallel lines of tubing of said first grid against said cushion, and means for establishing clamping force maintained against said parallel lines of tubing of said first and second grids to a predetermined amount.

3,101,178
ELECTRIC LIGHTING FIXTURE
Orval G. Young, 3691 Mission St., South San Francisco 10, Calif.
Filed June 30, 1960, Ser. No. 39,878
3 Claims. (Cl. 240—51.11)

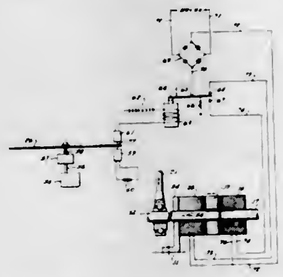
1. In a support means for an overhead lighting fixture having an elongated lamp-carrying base element of channel cross-section arranged for its support above a space to be illuminated and having transversely spaced and mutually parallel flange portions thereof depending fixedly therefrom, a hanger member of channel cross-section

having transversely spaced and mutually parallel flange portions thereof depending fixedly therefrom, means for fixedly mounting said hanger member on and below an overhead support structure and for receiving the flanges of said base element between the hanger member flanges in transversely opposed relation thereto, with said depending and opposed flanges providing mutually regis-



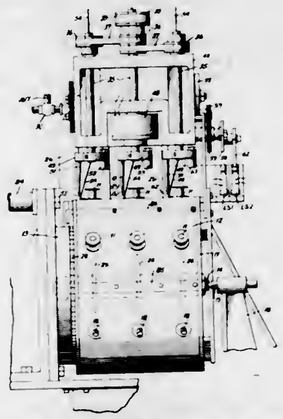
tering and uniform dovetail grooves, extending thereinto and therealong from the opposed flange faces, and a complementary flange-connecting keying member releasably engaging and directly cooperative within and between the opposed and registered said flange grooves to directly and positively support the base element from the hanger member thereat.

3,101,179
CONTROL SYSTEM FOR BALL WINDING MACHINE
William Harris, Los Angeles, Calif., assignor to W. J. Voit Rubber Corporation, a corporation of California
Filed Oct. 7, 1960, Ser. No. 61,160
1 Claim. (Cl. 242—3)



A control system for an apparatus suitable for winding a cord on a spherical body by continuously rotating said body solely around a first axis during variable duration pause periods and simultaneously rotating said body around said first axis and a second axis during variable duration wind periods, said system including first means, including a first motor, for rotating said body around said second axis only during said wind periods, and stopping the rotation of said body around said second axis during said pause periods; second means, including a second motor, for continuously rotating said body around said first axis during said wind and pause periods; electrically operated clutch and brake means between said first motor and said first means for connecting and disconnecting said first motor to and from said first means with the aid of said clutch means, relay means for energizing said clutch means and de-energizing said brake means for the duration of said wind periods and then de-energizing said clutch means and energizing said brake means for the duration of said pause periods, and a control circuit connected to said relay means for alternately energizing and de-energizing said relay means, said control circuit including a disc having a plurality of apertures and opaque sectors between said apertures all located around a circular axis on said disc, said apertures and said sectors having different dimensions along the length of said arcuate axis, means for rotating said disc at a substantially constant angular velocity, and a source of light and a photoelectric element on the opposite sides of said disc, said photoelectric element being connected to and alternately energizing and de-energizing said relay for variable periods of time, said variable periods of time corresponding to the variable duration periods of said pause and wind periods, whereby said control system produces a substantially random distribution of turns of said cord on said spherical body.

3,101,180
COIL WINDING APPARATUS
John Sadorf, Fox Lake, Ill., assignor to George Stevens Manufacturing, Inc., Chicago, Ill., a corporation of Illinois
Filed May 29, 1961, Ser. No. 113,337
17 Claims. (Cl. 242—9)

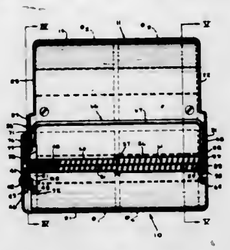


1. Coil winding apparatus comprising a support, a plurality of groups of bobbin mounting elements on the support to hold bobbins to be wound thereon, each group of mounting elements comprising a plurality of elements arranged side by said in a row, a plurality of winder heads arranged side by side in a row and registering respectively with the elements of one of said groups, each of the winder heads being rotatable about an axis aligned with the axis of the bobbin with which it registers and wire guiding means to lay wire on the bobbin as the head rotates, and means to move the support and the winder heads bodily relative to each other in a direction transverse to said rows to bring the winder heads into registration with a different group of elements.

3,101,181
TOILET TISSUE STORAGE AND DISPENSER
Charles M. Clelland, 1923 Seminole St., Kalamazoo Township, Kalamazoo County, Mich., and Lewis C. Aldrich, Jr., 121 W. Kelsy St., Three Rivers, Mich.
Filed Oct. 9, 1961, Ser. No. 143,907
6 Claims. (Cl. 242—55.3)

1. A toilet tissue storing and dispensing device, comprising: a casing; elongated spindle means supported within said casing, the spindle means being sufficiently long to hold a plurality of rolls of toilet tissue within said

casing with the cores of said rolls being longitudinally aligned, said spindle means including a plurality of spindles which are movable into telescoping relation, each spindle being adapted to hold a roll of toilet tissue;



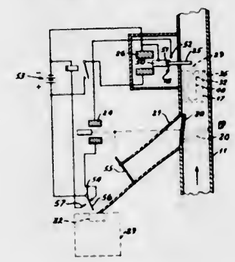
means for moving said spindles into telescoping relation; means for moving a roll from one spindle to another as they are thus telescoped, and means for moving said spindles into their extended positions with respect to each other.

3,101,182

AUTOMATIC EJECTOR FOR PNEUMATIC TUBE SYSTEMS

Gerhard Todt, Cliffside Park, N.J., and William R. Bernhardt, Long Island City, N.Y., assignors to Airmatic Systems Corporation, Rochelle Park, N.J., a corporation of Delaware

Filed Apr. 13, 1960, Ser. No. 22,053
12 Claims. (Cl. 243—1)



1. In a pneumatic tube transport system, the combination of a pneumatic tube leading to a receiving station, at least one carrier arranged to be transported through said tube to said receiving station, said tube having a carrier stopping abutment to be selectively inserted in the path of the carrier, said carrier having a member to be ejected therefrom when the latter reaches the said receiving station, and means on the carrier adapted to engage said abutment for automatically ejecting said member from the carrier without removal of the carrier from the system.

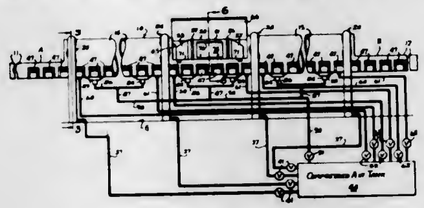
3,101,183

PNEUMATIC DISPATCH SYSTEM

Walter F. Hunter, 1265 Mary Dale Lane, Rock Hill, S.C.

Continuation of application Ser. No. 70,590, Nov. 21, 1960, which in turn is a continuation of application Ser. No. 844,958, Oct. 7, 1959, which in turn is a substitute for abandoned application Ser. No. 274,545, Mar. 3, 1952. This application Mar. 20, 1962, Ser. No. 181,517
2 Claims. (Cl. 243—3)

1. In an elongated transportation tube, at least one container adapted to fit in said tube and to move longitudinally thereof, at least one row of rollers positioned in the lower or upper portion of said tube and on which said container is adapted to ride during movement thereof along said tube, a series of spaced gate assemblies interposed in said tube, a movable gate in each gate assembly, selectively controlled means for admitting fluid under pressure into said transportation tube at points adjacent opposite sides of each of said gate assemblies, selectively controlled fluid pressure means for selectively closing and opening said gates, each gate being so arranged as to interrupt the flow of compressed air through said transportation tube at that particular point when the gate is in closed



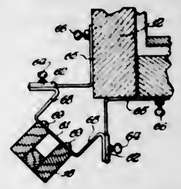
position, a plurality of longitudinally spaced braking blocks carried by said tube and normally assuming inoperative positions out of the path of travel of the container within said tube, and manually controlled fluid pressure operated means for moving said braking blocks into the path of travel of said carrier for stopping movement thereof.

3,101,184

MULTI-STORY MASON'S CORNER POLE AND ACCESSORIES THEREFOR

Malcolm H. Allen, Geneva, Henry A. Balinski, Roselle, and Corbin E. Garton, Geneva, Ill., S. Eugene Hubbard, Niles, Mich., and Irwin D. Olson, Lombard, Ill., assignors to Structural Clay Products Research Foundation

Filed Jan. 8, 1959, Ser. No. 785,997
4 Claims. (Cl. 248—222)



2. For use with a corner pole adapted to be suspended from one end portion in a vertical position adjacent the intersecting walls of salient and reentrant corners of buildings, a base aligning mechanism comprising a bracket adapted to be secured to the lower end portion of said pole and having generally parallel legs lying in a horizontal plane, attachment means on said bracket for securing the same detachably to said pole with said legs straddling the pole, a pair of feet having end portions and supported individually on said legs for adjustment along the axes of the legs and horizontally relative to said pole and toward and away from the intersecting walls to dispose the end portions at different distance from said pole, said end portions of said feet having flat surfaces adapted for abutting engagement with intersecting walls at salient and reentrant corners and lying in vertical planes intersecting each other at an angle of 90 degrees and the longitudinal axes of said legs at 45 degrees.

3,101,185

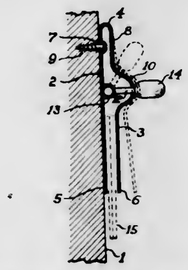
PANTS HANGER

Edwin P. Gustafson, 64 Washington St., Forestville, Conn.

Filed July 13, 1962, Ser. No. 209,711
2 Claims. (Cl. 248—316)

1. In combination with a vertical flat surface, a pants hanger formed of a folded sheet of resilient material and

comprising a base plate secured to said vertical surface and having its lower portion adapted as a stationary jaw; a front plate, having its upper end joined to the upper end of said base plate by means of a resilient connecting portion which permits the swinging of said front plate from its normal, open position toward said base plate into its closed position as a result of pressure applied on said front plate, said front plate having its lower portion adapted as a movable jaw cooperating with the said stationary jaw in clamping and holding the cuffs of a pair of trousers when said front plate is in its closed position, said front plate having at its middle portion a cam surface with a slot; an operating lever pivotally connected



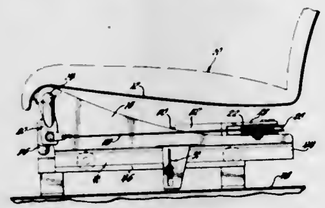
to said base plate and extending through said slot of the cam surface, said lever being free to swing from its open position, located at one end of said slot, to its closed position, located at the other end of said slot, and back; a knob secured to the free end of said lever and being adapted to engage said cam surface when said lever is in its closed position, forcing said front plate to move into its closed position and thereby causing clamping of the cuffs of a pair of trousers between said jaws, said knob being adapted to release said cam surface when said lever is moved into its open position, permitting said front plate to return to its normal open position, thereby causing the release of said cuffs.

3,101,186

VEHICLE SEAT CONSTRUCTION

Wolbert De Haan, Farmington, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 5, 1961, Ser. No. 143,172
4 Claims. (Cl. 248—378)



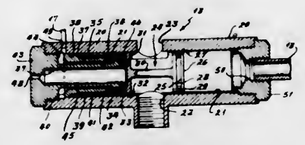
1. In combination with an automobile seat comprising spaced support brackets for said seat fixedly secured to the floor of the automobile, hinge connections between said supports and the front edge of said seat to permit pivotal movement of said seat thereabout, a plurality of cable supports spaced from and located rearwardly of said hinge connections, an elastic tension cable having its ends fixed to said seat adjacent the front edge thereof and spaced from said hinge connections, said cable extending around said cable supports to resiliently oppose movement of said seat about said hinge connections in one direction.

3,101,187

FLUID PRESSURE OPERATED PISTON VALVE

Phillip B. Campbell, Redlands, Calif., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware

Filed Sept. 12, 1960, Ser. No. 55,245
4 Claims. (Cl. 251—63)



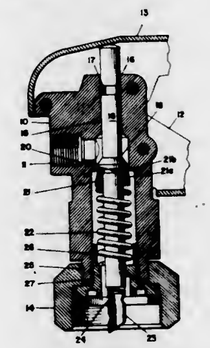
1. A compressor unloading valve comprising a housing having a bore therein, axially aligned exhaust and unloading ports intersecting said bore near the mid-portion thereof, piston means slidable in said bore, opposed ends on said piston means having different end areas, expansible chambers in said bore adjacent said ends, control ports connected with said chambers, a deformable sleeve loosely mounted on said piston means, and a reduced portion on said piston means between said sleeve and one of said ends, said piston means being movable to position said reduced portion in alignment with said exhaust and unloading ports to open communication therebetween when the pressures in said chambers are subustantially equal, and said piston means being movable to position said sleeve in sealing engagement between said exhaust and unloading ports to close communication therebetween in response only to a predetermined fluid pressure differential between said chambers.

3,101,188

FIRE EXTINGUISHER HEAD COUPLING ASSEMBLY AND ASSOCIATED PLUNGER UNIT

Milford E. Newmiller, Mount Prospect, Arthur Rodgers, Northbrook, and Arnold Selan, Arlington Heights, Ill., assignors to The Fireguard Corporation, a corporation of Illinois

Filed May 23, 1960, Ser. No. 31,037
3 Claims. (Cl. 251—148)



1. In a fire extinguisher head assembly designed for coupling to a tank and including a discharge passage adapted to communicate with said tank, the combination comprising: a plunger assembly designed for sliding movement in said head assembly; valve means carried by said plunger assembly; an annular member of given diameter extending from and integrally formed with the lower end of said head assembly; annular spring retaining means including an inner upper portion threadingly coupled within said annular extension member, said inner upper portion including spring retaining means having a

decreased diameter portion; spring means carried by said decreased diameter portion and positioned to bias said valve means towards its seated position in said head assembly; said spring retaining means having a lower outer portion disposed beyond the free end of said annular member, said lower outer portion having a diameter greater than said given diameter; an annular sealing member carried by said lower outer portion for sealing cooperation with the free end of said annular member; and, a nut carried by said lower outer portion, said nut having an upper axial portion thereof protruding radially inwardly over said lower outer portion of said spring retaining means such that said free end and sealing member are radially interposed between said upper axial portion of said nut and said inner upper portion of said spring retaining means.

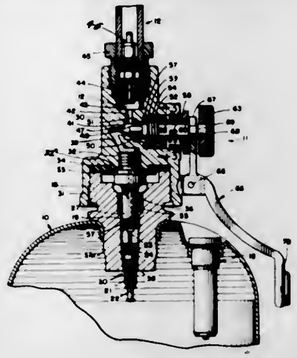
3,101,189
VALVE
Fritz Alter, Pistaqua Heights, McHenry, Ill.
Filed Jan. 17, 1962, Ser. No. 166,752
6 Claims. (Cl. 251—187)



1. A valve comprising a valve body defining a passageway extending therethrough, said passageway having at opposite ends an inlet port and an outlet port, a wall of said valve body defining an opening of generally rectangular cross-section extending laterally into said passageway, the wall of said passageway adjacent said opening defining a guideway extending from said opening inwardly of the walls of said passageway and generally normal to the longitudinal axis of said passageway, said guideway terminating at its inner end in a groove extending partially around said passageway, a gate including a resilient plug of generally rectangular cross-sectional configuration and a plate carried by said plug, said gate being mounted in said valve body for movement through said opening into and out of seating engagement with said groove, said plug being disposed adjacent said inlet port and having a leading edge seatable within said groove and a trailing edge opposite said leading edge, said plug being secured to said plate at a point adjacent the leading edge of said plug and plate with the trailing portion of said plug being slidable on said plate, and means for causing sliding movement of said trailing edge in a direction toward said leading edge so as to place said plug in compression and cause deformation thereof within said groove, thereby providing a fluid-tight engagement between the walls of said groove and said plug.

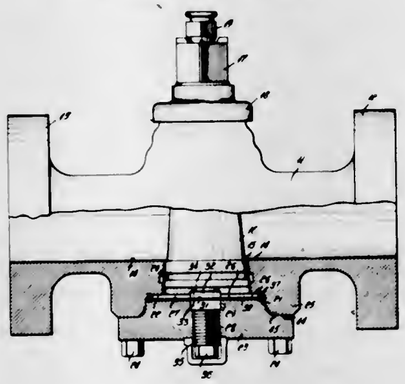
3,101,190
MANUALLY OPERABLE CONTROL VALVE
William L. Lindgren, Sycamore, Ill., assignor to Turner Corporation, a corporation of Illinois
Filed Nov. 25, 1957, Ser. No. 698,728
3 Claims. (Cl. 251—221)

1. A control valve, comprising, a valve body having a fluid passage therein and a valve seat in the passage, a valve stem movable in the valve body toward and away from the valve seat to close and open the passage, a sleeve axially movable and non-rotatable in the valve body, said valve stem having an intermediate portion extending through the sleeve and threaded therein, means providing a first abutment in the valve body limiting movement of the sleeve toward the valve seat, means providing a second abutment in the valve body limiting movement of the sleeve away from the valve seat, a spring urging the sleeve toward the first abutment, one end of the stem projecting outwardly from the valve body and having a manual adjusting knob frictionally held on the end of the stem for threadably adjusting the stem in the sleeve, means forming an annular shoulder on the valve stem outwardly of said second abutment, said valve body



having an apertured lug forming a pivot axis, and a trigger lever having a midportion apertured to form a pivot axis and a bifurcated end portion, and a pivot pin through said lug in said mid-portion of said trigger lever at said pivot axes, said bifurcated portion of said trigger lever embracing the stem, said annular shoulder being integral with said stem and projecting axially with respect to said knob for engagement with said trigger lever, said bifurcated end portion engaging the annular shoulder to quickly shift the valve stem and sleeve in opposition to the spring without bearing against the knob.

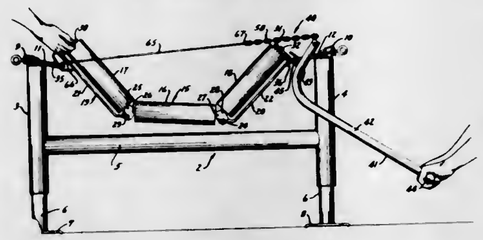
3,101,191
FLUID PRESSURE TIGHT JOINT
Adolph Wolfensperger, Orinda, Calif., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 9, 1959, Ser. No. 858,499
3 Claims. (Cl. 251—309)



2. In a plug valve assembly characterized by a body having a through passage for line fluid and a plug seating bore intersecting said passage, a ported plug rotatably mounted in said bore and adapted to turn to open or close

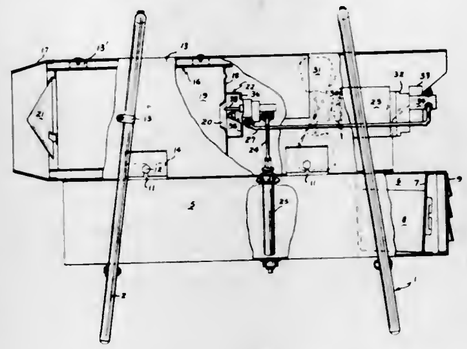
said passage, an operating stem for said plug extending through said body at one end of the bore, a cover removably secured over the other end of said bore, and a flexible metal diaphragm extending over said cover within the bore, the improvement which comprises means providing a pressure tight joint between the cover and body comprising a body shoulder in said bore facing the cover, said shoulder and cover having axially spaced surfaces in the assembly, opposed annular recesses in the shoulder and cover surfaces and disposed radially outwardly of the opening of said bore at said shoulder, said flexible metal diaphragm extending over said cover recess, a solid hard metal ring of uniform cross section having its opposite sides disposed with radially confined interfit in said shoulder recess and upon said diaphragm in said cover recess and axially disposed between said cover and shoulder whereby said diaphragm is deflected into said cover recess and is there clamped between said ring and the cover, means for drawing said cover tight upon said body to axially compress said ring with the longitudinally opposite sides of said ring tight against the bottom of the shoulder recess and against the deflected diaphragm in the cover recess, and coacting annular faces on the body and cover distinct from said cover and body shoulder surfaces abutting to stop movement of the cover toward the body and prevent application of excessive axial pressure on said ring, said ring being axially confined between said cover and body shoulder with sufficient pressure to provide an operative fluid tight metal to metal seal when said faces abut.

3,101,192
TOOL FOR INSTALLING TROUGHING ROLLER ASSEMBLIES
Mary L. Stinson, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed June 24, 1960, Ser. No. 38,522
6 Claims. (Cl. 254—77)



6. A tool for drawing the ropes of a rope sideframe conveyor toward one another to facilitate installation and removal of equipment therebetween, said tool comprising a rigid lever member having minor and major legs joined at an angle to one another, a flexible connecting element swingable about the free end of the minor leg, and when the tool is in use, extending outwardly therefrom in a direction opposite to the direction in which said major leg extends from said junction of the two legs, rope engaging structure secured to the minor leg, said rope engaging structure being located a substantial distance inwardly from the free end of the minor leg and facing outwardly of said minor leg in a direction opposite to that in which said major leg extends, said rope engaging structure, when in engagement with a rope sideframe, providing a pivot of rotation for the lever member which enables the lever member to rest upon, and pivot about, a first rope sideframe in a plane transverse of and generally perpendicular thereto, the inner end of said connecting element being secured to the minor leg and the outer end terminating in structure engageable with a second rope sideframe, whereby, upon application of a turning force to the free end of the major leg to put tension on said flexible member, the rope sideframes are drawn toward one another.

3,101,193
PORTABLE HEATER
Harold E. Varvel, Dayton, Ohio, assignor to Master Vibrator Company, Dayton, Ohio, a corporation of Ohio
Filed May 5, 1961, Ser. No. 108,060
5 Claims. (Cl. 263—19)

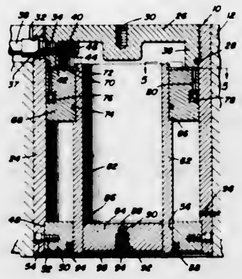


1. A portable space heater comprising, means defining an enclosure open at opposite ends, means defining a combustion chamber positioned within said enclosure to provide an air passage thereabout, said chamber having limited access and discharge openings at opposite ends, a burner housing unit covering said access opening and in communication with said chamber, igniter means in said housing adjacent said access opening, a fuel tank connected with said enclosure means having a fuel delivery line connected in said burner housing unit, suction means connected in said burner housing unit operative to draw fuel thereto from said tank through said fuel delivery line and convert it to an atomized condition for discharge from said housing unit into said chamber and past said igniter means, and pressure means in said enclosure upstream of said burner housing unit and separate from said suction means accelerating the discharge of atomized and ignited fuel from said housing to said chamber.

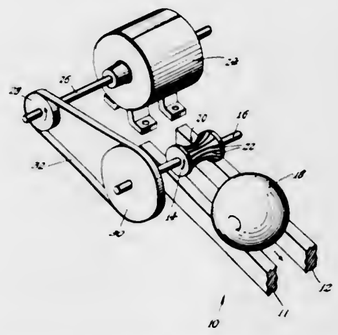
3,101,194
PNEUMATIC SPRING
William E. Hennells, Sr., Ann Arbor, Mich., assignor to W. E. Hennells Co., Inc., Belleville, Mich., a corporation of Michigan
Filed Sept. 11, 1961, Ser. No. 139,328
9 Claims. (Cl. 267—1)

9. A self-contained pneumatic spring comprising a tubular member having one closed end, a piston slidably disposed within said tubular member, a piston rod connected to the piston and extending outwardly through the open end of the tubular member, said tubular member having a bearing plate in the open end thereof for slidably receiving the piston rod for guiding the movement thereof and limiting the outward movement of the piston, said piston rod being in the form of an enlarged hollow member having a closed end and an open end communicating through the piston with the air chamber defined between the piston and said closed end of said tubular member, one of said closed ends being at the bottom of said pneumatic spring and having an outwardly opening, spring-urged pressure relief check valve therein communicating with said air chamber for relieving pressure

in excess of a predetermined value therefrom and also discharging foreign matter therefrom; and a valve mounted on said tubular member adjacent to the closed end thereof for admitting air under pressure into said air chamber.



3,101,195
BOWLING BALL IMPELLER
Joseph Szost, % Bowleroo, 2424 Black Rock Turnpike, Fairfield, Conn.
Filed July 14, 1960, Ser. No. 42,790
4 Claims. (Cl. 273—49)



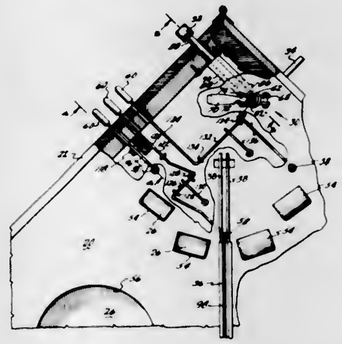
1. High speed means for imparting added velocity and sliding spin to a rolling, returning bowling ball, thereby to cause it to be more rapidly impelled during its return to the bowling position, comprising in combination a hard-surfaced return track section for balls, along which the balls roll and on which they may readily slip, said return track section being devoid of bends or angular deviations from a straight path; means disposed above said track and engageable with balls rolling along the track in a given direction, causing said balls to rapidly slip on the track with a forward spin while continuing travel thereon in said direction, said means imparting said forward spin to the balls in the same direction as and beyond the rate of turning of the balls prior to engagement by said means, said spin and slippage continuing for an interval after disengagement of the balls by said means, and said means comprising a roller and a shaft carrying the roller for turning about a fixed axis, said roller and shaft being disposed above said track and the roller being arranged to engage along an appreciable arc uppermost portions of the balls passing along the track and under the roller, said roller having a concave anti-slip surface engageable with a large surface of the balls and the latter being under compression between the track and roller during such engagement; and means comprising a motor, driving said roller at a fast rotary speed greater than half the motor speed and in a direction of turning which is opposite to the direction of turning of the balls approaching the roller, for imparting said fast forward spin to the balls to cause the latter to slip on the track while at the same time pushing the balls forward.

3,101,196
BOWLER'S POSTURE CORRECTIVE APPARATUS
Thomas J. Ferrara, 2121 S. Redell Ave., Monrovia, Calif.
Filed Sept. 18, 1961, Ser. No. 138,901
8 Claims. (Cl. 273—54)



1. Bowler's posture corrective apparatus comprising a member engageable over a bowler's shoulder on the non-delivery side of his body opposite from the delivery side from which a bowling ball is delivered, an elongated flexible extension having a predetermined length connected to the shoulder engageable member, and means engageable at the waist of the bowler on the said non-delivery side with which the extension is engageable, whereby the predetermined length of the extension restrains the non-delivery shoulder from undesirable upward movement during delivery of the ball.

3,101,197
BASEBALL GAME DEVICE
George A. Schulz, 881 West Blvd., Hartford 5, Conn.
Filed Aug. 30, 1961, Ser. No. 135,037
25 Claims. (Cl. 273—89)



1. A game device comprising a panel having a generally horizontal playing surface; a batting mechanism operable by one player for striking at balls passing over a given area of said panel; and a ball pitching device operable by another player for delivering balls over said given area, said ball pitching device including a chute fixed relative to said panel and inclined downwardly toward said batting mechanism, a pair of transversely spaced guides positioned at the lower end of said chute so as to form a continuation thereof, said guides being fixed at their rear ends relative to said chute, and means operable by said another player for moving the forward ends of said guides relative to said chute to control the direction of a ball passing therefrom and over said given area.

3,101,198
AUTOMATICALLY SCORING DART BOARD
James E. Williams, 9 Tod Road, Norwalk, Conn.
Filed Oct. 4, 1961, Ser. No. 142,941
8 Claims. (Cl. 273—102.2)

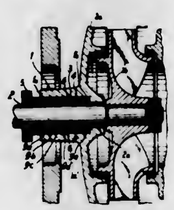


1. A target and missile game in which the missiles do not pass through the target comprising in combination,

(*a*) a target having two spaced conductive layers the first being resiliently mounted and capable of being bent in momentarily when struck by a missile, and

(*b*) missiles provided with conductive tips, the adjacent portion thereto being nonconductive, the entire length of the conductive tip being less than the normal spacing between the conductive layers of the target, means to prevent the nonconductive adjacent portion from passing through the target whereby contact is made between the layers through the conductive tip when the missile bends in the first layer on striking and contact is broken when the first layer returns to its normal position.

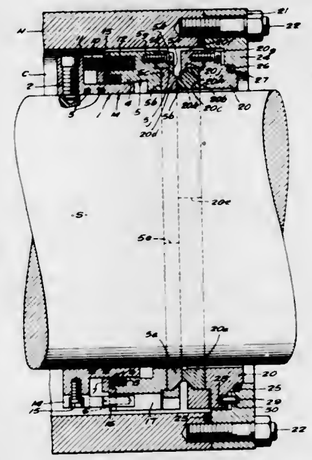
3,101,199
FLUID ASSEMBLIES AND SEALING INSERTS THEREFOR
Robert Hartnagel, Frankenthal, Pfalz, Germany, assignor to Klein, Schanzlin & Becker Aktiengesellschaft Frankenthal, Pfalz, Germany
Filed Jan. 30, 1961, Ser. No. 85,570
11 Claims. (Cl. 277—9)



1. A fluid-sealing insert for stuffing boxes and the like, particularly for sealing the shafts of centrifugal pumps, said insert comprising, in combination, a rigid ring having an end face and comprising retaining means projecting from said end face; and soft packing means adjacent to said end face, said retaining means connecting said packing means with said ring and preventing displacement of said packing means axially away from said ring when said packing means is subjected to forces tending to pull said packing means away from said ring in a direction generally parallel to the axis of said ring, and said packing means extending axially beyond said retaining means.

3,101,200
SECTIONAL MECHANICAL SEAL ASSEMBLY
Herbert E. Tracy, Alhambra, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 23, 1961, Ser. No. 112,036
9 Claims. (Cl. 277—93)

1. A mechanical seal assembly comprising: a housing having a seal chamber therein, a shaft extending through said chamber, and means for preventing the flow of fluid through said chamber along said shaft including a sealing ring carried by said shaft and having a radially disposed sealing face, a sealing ring carried by said housing and having a radially disposed sealing face opposed to the sealing face of the first-mentioned sealing ring, each of said sealing rings being divided into ring sectors having longitudinally extended end faces, and means for loading said sectors towards one another to effect coengagement of said end sealing faces, said means for loading said



sectors toward one another including a circumferentially extended support, circumferentially disposed means engageable with the respective ring sectors and cooperating with the latter to urge said sectors towards one another upon movement of said circumferentially disposed means relatively towards said circumferentially extended support, and means interconnecting said circumferentially extended support and said circumferentially disposed means for moving the same relatively one toward the other.

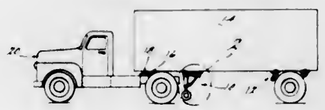
3,101,201
SKI BINDING
Raymond L. Hall, Caldwell, N.J., assignor to Ski-Dek Corporation, Caldwell, N.J., a corporation of Delaware
Filed Nov. 14, 1961, Ser. No. 152,304
3 Claims. (Cl. 280—11.35)



1. A ski binding for attaching a ski to the boot of a skier comprising a front abutment on the ski having a rearward projection for clamping engagement with the toe of the boot, a ski plate having depending ribs contacting the ski and fastened thereto to provide a central bridge and side flanges spaced from the ski, a heel clamp having a base plate mounted to slide on said ski plate and having grooves at its edges cooperating with the side flanges of the ski plate, a clamping jaw having one end pivotally connected to the sliding member and an abutment at its free end shaped to conform to the contour of the heel of the boot, a pulley mounted to rotate on the member below the clamping jaw, a spring acting between the member and pivoted jaw for rocking the jaw upwardly with respect to the plate, a cable connected to the jaw intermediate its ends and extending around the pulley and forwardly under the plate to a position for-

wardly of the toe clamp, and manually operable means for pulling the cable forwardly whereby to move the slide forwardly until the free end of the clamping jaw engages the heel of the boot to clamp the boot between the jaw and toe clamp and between the jaw and ski plate.

3,101,202
TRAILER WHEEL SUSPENSION AND LANDING GEAR REMOVABLE AS A UNIT
Keith W. Tantlinger, Grosse Pointe Shores, and Robert G. Flagan, Grosse Pointe Park, Mich., assignors to Fruehauf Trailer Company, Detroit, Mich., a corporation of Michigan
Filed Nov. 27, 1961, Ser. No. 154,986
5 Claims. (Cl. 280—30)



5. In combination with a shipping container, a suspension system for conditioning the shipping trailer for highway travel comprising

a landing gear

having

a pair of legs

depending downwardly for the support of a pair of ground-engaging wheels,

a pair of struts

pivotally secured to said legs, respectively,

a pair of longitudinally spaced clamps

on each of said legs and struts, respectively, for removably securing the landing gear to the shipping apparatus at a desired longitudinal position,

a wheel suspension

having

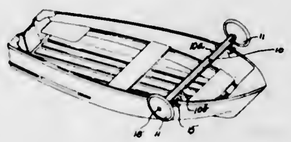
a plurality of clamps

for removably securing said suspension to the shipping apparatus, and

a pair of pins

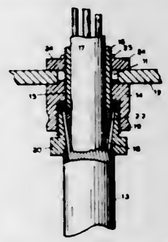
extending between and releasably engageable with said landing gear and wheel suspension for coupling said landing gear to said wheel suspension, the strut portions of said landing gear being foldable to a laterally extending position to facilitate positioning of said landing gear and wheel suspension in juxtaposed nested relation.

3,101,203
WHEELING ATTACHMENT FOR BOATS
Jerry W. Raymond, 1102 Cresent, Wenatchee, Wash.
Filed Feb. 23, 1962, Ser. No. 175,883
5 Claims. (Cl. 280—35)



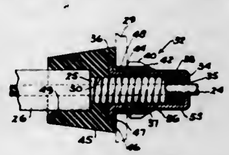
1. A wheeling attachment for a boat, comprising a cross-axle with wheel mounting spindles extending from its opposite ends, wheels mounted on said spindles and axle attaching plates fixed to opposite end portions of said cross-axle; each of said attaching plates comprises two hingedly joined sections, one of which is applied transversely of and flatly against a flange of the corresponding end portion of said cross-axle and the other section is adapted to be adjusted to flatly engage against a sidewall surface of the boat, and means for its securement thereto for the functional mounting of the cross-axle.

3,101,204
CABLE GLAND
George Montague Pratley, % Messrs. Pratley Manufacturing & Engineering Co. (Proprietary) Limited, Jackson St., Factoria, Krugersdorp, Republic of South Africa
Filed May 9, 1960, Ser. No. 27,616
Claims priority, application Republic of South Africa May 22, 1959
3 Claims. (Cl. 285—149)



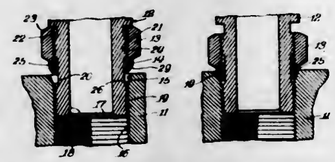
1. An electrical cable gland for mounting an armored cable in a mounting hole on a box, comprising in combination, a gland housing member having a smaller internal cylindrical surface separated by a shoulder area from a larger internal cylindrical cavity surface each surface being threaded, a tapered bush and a complementary substantially cylindrical internally coned nut having threads mating with those of said cylindrical cavity surface to thereby receive the tapered bush and armored cable internally in a position for clamping the cable armoring between the bush and coned nut, a screwed nipple of substantially cylindrical configuration with outer threads mating into the smaller cylindrical surface of the gland housing to extend beyond the shoulder and abut the tapered bush thereby regulating its position in the housing to accommodate armoring of various thicknesses, and a nut positionable upon the nipple to clamp the box to the housing member with the nipple extending through the mounting hole and thereby holding the nipple in position abutting the bush.

3,101,205
ANCHOR STRUCTURE FOR BRAKE CABLES AND THE LIKE
Norman R. Benham, 19339 Bretton Drive, Detroit, Mich.
Filed Aug. 25, 1958, Ser. No. 756,820
6 Claims. (Cl. 285—162)



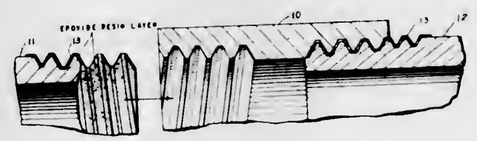
1. Anchor structure for brake cables and the like having an external sheathing, said anchor structure comprising, means forming a thimble having generally rigid side walls lying generally on a cylindrical surface, said thimble being adapted to slidably receive and engage sheathing on cable inserted thereinto, said thimble having at one end an opening through which cable may pass and having at its other end an outwardly turned flange, a body of resiliently distortable material fixed to the exterior of said thimble, said body of material having two longitudinally spaced apart enlargements with an intermediate portion of reduced diameter forming a groove adapted to fit in an opening of predetermined size, said flange being imbedded in one of said enlargements and the cylindrical wall of said thimble providing a generally rigid internal support for the other enlargement, the first mentioned enlargement having a generally radial shoulder adjacent said groove, said other enlargement having an alternate circumferential series of ribs and grooves so that said other enlargement can be resiliently compressed generally to said diameter for passing through an opening, said other enlargement having one end surface disposed toward said one end of said thimble angled relatively mildly to the longitudinal extent of said thimble to facilitate compression of said other enlargement as it is forced through an opening, the other end surface of the other enlargement being relatively abruptly angled to said longitudinal extent to facilitate anchoring said structure within the opening, said shoulder and other end surface being yieldably engageable against opposite faces of a member to which said structure is secured to facilitate securing said structure to members having different thicknes es, said first enlargement having a longitudinal opening therein aligned with the thimble interior, the latter said opening being dimensioned so that the walls defining the same frictionally engage the sheathing of cable inserted into said structure for securing the structure and sheathing together.

3,101,206
ROTATIONALLY ADJUSTABLE FITTING WITH EXTRUSION RESISTING SEAL
George E. Franck, Riverside, Ill., assignor to Imperial-Eastman Corporation, a corporation of Illinois
Filed Sept. 11, 1959, Ser. No. 839,436
5 Claims. (Cl. 285—220)



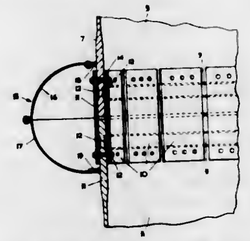
1. A fitting for use with a conventional port means having an annular outwardly widening cam surface and a threaded bore opening into said cam surface, the fitting being adapted to be sealingly secured to the port means in any one of a plurality of rotational positions relative to the axis of the port means, said fitting comprising: a body member having an inner end, a bore extending through said body member and opening through said inner end, an exteriorly threaded inner portion adapted to be threadedly secured to said port means in the threaded bore thereof, an exteriorly cylindrical intermediate portion extending coaxially outwardly from said inner portion and having an outer diameter no greater than the root diameter of said threaded inner portion, and an outer portion extending coaxially outwardly from said intermediate portion and exteriorly threaded similar to said inner portion; a nut having an interiorly threaded outer portion threadedly secured to said outer portion of the body member, and an inner annular deformable portion extending coaxially inwardly from said outer portion of the nut and circumjacent said cylindrical intermediate portion of the body member, said deformable portion being forcibly engageable with the cam surface of the port means to effect a high pressure seal of the nut to the port means, the deformable portion being deflected inwardly by its engagement with the cam surface, the undeflected inner diameter of said deformable portion being greater than said outer diameter of the intermediate portion of the body member to define an annular space therebetween, and the longitudinal extent of said deformable portion being such that when said deformable portion is deflected inwardly by said cam surface of the port, it substantially encloses said annular space; while remaining slightly spaced therefrom and a resilient seal in said space having an uncompressed volume substantially greater than the space enclosed by said deformable portion of the nut when it is so deflected inwardly and whereby the seal provides a high pressure seal of the nut to the body member when the deformable portion is so deflected, said seal being formed of a seal material having extrusion resisting physical characteristics such as those of nylon precluding substantial extrusion thereof to between the threaded outer portions of the body and nut.

3,101,207
PROCESS FOR THE PRODUCTION OF GAS-TIGHT TUBE CONNECTIONS
Werther Pavel, Hilden, Rhineland, and Rudolf Köhler, Dusseldorf, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany
Filed July 23, 1959, Ser. No. 828,963
Claims priority, application Germany July 26, 1958
17 Claims. (Cl. 285—291)



14. A gas-tight and readily separable threaded tube connection comprising threaded tubes having on the threads of at least one of said tubes an adherent hardened layer of a fluent form synthetic polymerized resin which hardens to a hardness of 50 to 1000 kg./cm.^{2} without giving off volatile components, said hardened layer having been hardened after application to said threads and prior to joining, to a hardness sufficient to permit ready joining and separating of said threaded connections, while maintaining sufficient elasticity of said resin to make said threaded connections gas-tight.

3,101,208
COUPLING WITH PLURAL LUG IN SLOT HOLDING MEANS AND EXTERNAL SEALING SHELL
Frank Clifford and Charles Milburn White, Darlington, England, assignors to Whessoe Limited, Darlington, England
Filed Dec. 7, 1959, Ser. No. 857,728
6 Claims. (Cl. 285—363)



1. A pressure vessel comprising two separable parts having aligned walls which define a pair of registering mouths, the wall of each part of the vessel including adjacent its mouth a thickened portion having recesses

formed in its internal and external surfaces, the thickness of said wall at the bottoms of said recesses remaining substantially equal to that of those portions of said wall beyond said thickened portion, the recesses in the two portions being positioned opposite each other and extending in a generally circumferential direction, a plurality of pairs of cleats, the cleats of each pair being disposed one inside and the other outside the vessel, each cleat being formed with two projections engaging respectively in said recesses in the two parts of the vessel, a plurality of tie members which pass with clearance through the vessel walls and draw the pairs of cleats together, said cleats and tie members securing the walls of said two parts together against forces acting in a direction perpendicular to the plane of the mouths and forming a joint between the two parts of said vessel, said joint being so fluid pervious as to be subject to the same pressure on both inside and out, and a fluid tight sealing shell made of relatively thin flexible material which extends across and seals said joint, said sealing shell having its concave face toward the vessel wall and its opposite edges sealed fluid tight to said vessel parts along lines lying on opposite sides of said joint, the maximum transverse dimension of said sealing shell being substantially smaller than that of said mouths.

3,101,209
COLLAPSIBLE TUBING WITH INTEGRAL CLAMP

Irving Nels Jorgenson, Grosse Pointe, Mich., assignor to The Wiremold Company, West Hartford, Conn., a corporation of Connecticut

Filed Sept. 30, 1959, Ser. No. 843,446
5 Claims. (Cl. 285—403)



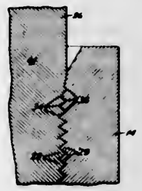
1. In combination with collapsible tubing comprised of a helically wound flexible strip and a helically wound metal strip with the edges of the metal strip reversely bent to clamp the adjacent edges of the flexible strip thereby interlocking said strips, clamping means integral with the tubing and constituted from said metal strip, said clamping means comprising tabs bent radially outward from the metal strip adjacent the end and adjacent the start, respectively, of the end convolution of the metal strip, at least one of said tabs being formed as a folded-over and out-turned end of said end convolution, and means maintaining one end of said end convolution in overlapping relation to the next convolution of the metal strip.

3,101,210
VALVE STEM CONNECTION

Cecil M. Johnson, Marshalltown, Iowa, assignor to Fisher Governor Company, Marshalltown, Iowa, a corporation of Iowa

Filed Mar. 27, 1961, Ser. No. 98,648
2 Claims. (Cl. 287—125)

1. In combination, an externally threaded valve stem member and a valve member having a threaded recess adapted to be detachably connected to said valve stem member, said valve stem member having first threads thereon having a variable root diameter along a portion thereof, with a first line passing through the bottom of each thread root lying at an acute angle of about ten degrees with respect to the longitudinal axis of said valve stem member and other threads having a constant root diameter such that a second line passing through the bottom of each thread root is parallel to the longitudinal axis of said valve stem member, said valve member having first threads and other threads in said recess, each having a constant root diameter, said other threads in said recess having a constant thread diameter, with a line passing through each thread root on said valve member



being substantially parallel to said second line, and with a line passing through the outer edge of each first thread on said valve member substantially coinciding with said first line, said first threads of each member engaging one another, said other threads of each member engaging one another, and said first threads of said valve member being truncated, whereby the load bearing characteristics of the connection between the valve stem member and valve member are materially increased.

3,101,211
LIFTING TOOL

Logan L. Jones, Monte Caucaso 1320–B, Mexico City 10, Mexico

Filed Apr. 3, 1961, Ser. No. 100,353
6 Claims. (Cl. 294—16)



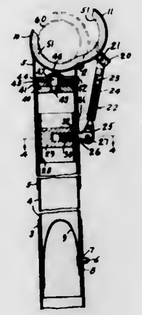
5. A lifting tool for the lifting of a bottle having a beaded neck, comprising a collar adapted to fit over the beaded neck of an upstanding bottle below the bead thereof, a lifting member rigidly secured to and extending radially from said collar in substantially the plane thereof, a hand grip member having hand-conforming contour mounted thereon to be grasped in lifting the lifting tool, the axis of said hand grip member being disposed at an acute angle to the axis of said lifting member to permit the hand grip member to be held substantially horizontally upon tilting of the lifting member under load of said bottle, a catch pivotally carried by the lifting member adjacent said collar to extend in the plane of the collar radially inwardly thereof for engaging under the bead of a said bottle and for maintaining the collar opposite of said catch under said bead to engage the same, and a releasing member directed toward said handle and readily engageable by the thumb of a hand of the operator grasping said hand grip member, said releasing member upon being actuated moving the catch member away from said collar to permit clearance of the bead by the said catch and said collar.

3,101,212
DEVICE FOR REMOVING AND INSTALLING TUBULAR LAMPS

Harold T. Cater, Los Angeles, and Lloyd O. Waibel, Van Nuys, Calif.

Filed Feb. 23, 1962, Ser. No. 175,162
3 Claims. (Cl. 294—20)

1. A device for removing and installing tubular lamps, including: a tubular pole formed in sections, a fixed jaw and a movable jaw hinged together, the fixed jaw transversely secured to one end of one tubular section, means rotatively securing a second tubular section to the first tubular section, the second tubular section provided with a cam slot and the first tubular section provided with a

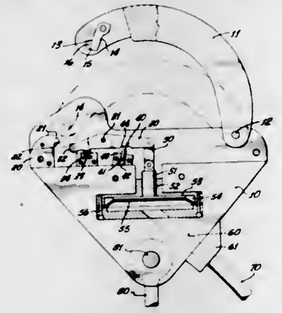


longitudinal slot and linkage means between the movable jaw and passed through the cam slot and the longitudinal slot whereby when one tubular section is rotated relative to the other tubular section, the linkage means opens and closes the movable jaw.

3,101,213
AUTOMATIC RELEASE HOOK

Edwin C. Elsner, Pasadena, Calif., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan

Filed Feb. 29, 1960, Ser. No. 11,845
3 Claims. (Cl. 294—83)

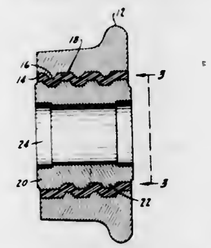


1. An automatic release structure adapted to interconnect cargo and cargo suspension means wherein lowering of said cargo onto a supporting structure effects separation of said cargo and cargo suspension means; comprising in combination a hook mechanism including a body portion, an arm pivotally secured to said body portion and adapted to be connected to said cargo suspension means, latching means interconnected between said arm and body portion, means forming a chamber carried by said body portion, a member carried within said chamber and movable in response to pressure therein, linkage means connecting said movable member and said latching means whereby pressurizing of said chamber energizes said latching means to release said arm from said body portion and allow pivoting thereof away from said body portion, to thereby release said cargo suspension means connected to said hook mechanism and adapted to carry said cargo, a container of pressure medium adapted to be disposed on the opposite side of said cargo from said hook mechanism, wherein said container is disposed between said cargo and said supporting structure when said cargo is landed, and a pressure medium conduit connected between said container and said chamber and in pressure actuating communication with said movable member, said container being responsive to the weight of the cargo on landing of the cargo to effect pressurization of said chamber through said conduit and pressure actuation of said movable member.

3,101,214
INSULATED FLANGED WHEEL

Henry H. Talboys, deceased, late of Milwaukee, Wis., by Doris Chisholm Talboys, executrix, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis.

Filed June 2, 1961, Ser. No. 114,560
2 Claims. (Cl. 295—1)



1. An insulated wheel for use on railroad track or the like including a cylindrical metal rim having a generally continuous flange around its outer periphery and an enlarged internal bore, a metal hub positioned within the bore and having an outer diameter less than the diameter of the bore, the outer surface of the hub and the inner surface of the rim having generally equally and axially spaced circumferentially extending lugs, the outer diameter of the lugs on the hub surface being less than the inner diameter of the lugs on the rim surface, the lugs on the hub surface and the lugs on the rim surface being staggered and spaced, relative to each other, such that the cavity between the inner surface of the rim and the outer surface of the hub has a generally constant radial thickness throughout, generally circumferentially spaced axially extending grooves in the outer surface of the hub and the inner surface of the rim, said axially extending grooves being in radial alignment, and a generally rigid plastic annulus filling the cavity between the rim and hub and providing an interlock therebetween.

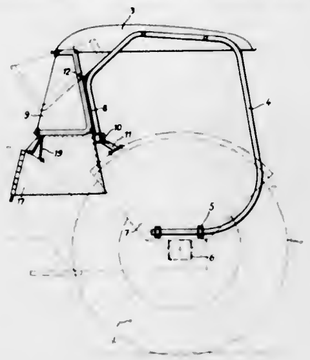
3,101,215
RESILIENT SUPPORTS FOR VEHICLE ROOFS

Georg Fritzmeier, Jun., Grosshelfendorf, near Munich, Germany, assignor to Georg Fritzmeier, Grosshelfendorf, near Munich, Germany

Filed Aug. 20, 1959, Ser. No. 835,056
Claims priority, application Germany Aug. 21, 1958
6 Claims. (Cl. 296—102)

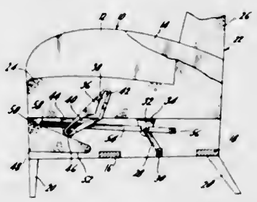
1. In a vehicle, in combination, support means; a roof member spaced from and located over said support means; a pair of elongated springy rods respectively located at opposite sides of the vehicle, said rods having lower end portions respectively fixed to said support means, intermediate portions extending upwardly from said portions, and upper portions respectively fixed to said roof member for carrying the latter, said rods being free to viblate at all parts except said lower end portions thereof; a pair of struts fixed to support means and extending therefrom upwardly toward said upper portions of said rods, respectively, said struts having respectively upper end portions located adjacent said upper portions of said rods; and a pair of sleeves respectively fixed to said upper free

end portions of said struts, each sleeve having a layer of resilient material located in its interior, and said upper portions of said rods respectively being surrounded by and extending with clearance through said layers of



resilient material so that when excessively large forces act on said rods the upper portions of the latter will engage the layers of resilient material to transfer the forces through the sleeves to said struts.

3,101,216
MULTIPLE POSITION RECLINING CHAIR
Fridtjof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Oct. 31, 1960, Ser. No. 66,336
3 Claims. (Cl. 297—88)



1. A multiple position reclining chair comprising a support frame, a body-supporting unit including a seat and back-rest, front and rear guide means mounting said body-supporting unit on the support frame for movement through a first motion phase from an upright sitting position to an intermediate tilted position and then through a second motion phase from said intermediate tilted position to a fully-tilted position, a leg-rest, means mounting said leg-rest on the forward portion of said seat for movement between a retracted position beneath said seat and an extended position forwardly of said seat, a leg-rest actuating link pivotally mounted on the support frame and operatively connected to said leg-rest, said rear guide means comprising a rear guide link pivotally connected to the seat and pivotally mounted on said support frame at a point forwardly of and beneath the pivotal mount of the actuating link, said body-supporting unit being moved rearwardly by both the front and rear guide means during the first motion phase with the rear guide link turning rearwardly about its pivotal mount on the support frame, the actuating link raising the leg-rest to its extended position during the first motion phase as the leg-rest is carried rearwardly with the seat relative to the pivotal mount of the actuating member, means halting movement of the rear guide link at the intermediate position whereby the body-supporting unit turns about the pivotal connection between the seat and the stationary rear guide link during a second motion phase, the pivotal mount of the actuating link on the support frame being so located that the pivotal connection between the rear guide link and the seat is moved rearwardly by the rear guide link into substantial registry with the pivotal mount of the actuating link at the intermediate position whereby the seat and the actuating link turn about concentric centers of rotation during the second motion phase and the leg-rest is maintained in its extended position without further movement relative to the seat.

3,101,217
RESILIENT CUSHION UNIT
Roy Requa, 5801 Federal Blvd., Denver, Colo.
Filed Nov. 30, 1961, Ser. No. 156,099
4 Claims. (Cl. 297—397)



1. A resilient cushion unit comprising an initially-flat, substantially-rectangular member of homogeneous, pliable and resilient material having a thickness approximately half that of the unit between parallel major surface areas of like width approximating the length of said unit, said major surface areas being coterminous at one end of the member and of unequal lengths determined by an inclined plane through the thickness and at the other end of the member, a fold at the transverse median line of the shorter of the major surface areas effective to contactingly register the half portions thereof, and an adhesive bond uniting the confronting surface area half portions.

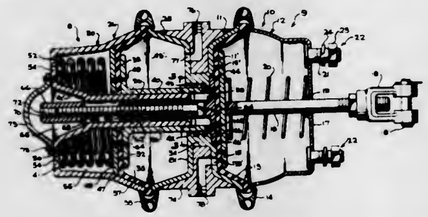
3,101,218
MULTIPLE SEATING
Walter P. Baermann, Waynesville, N.C., assignor to Prestige Furniture Corporation, Newton, N.C., a corporation
Filed Feb. 23, 1961, Ser. No. 91,017
15 Claims. (Cl. 297—455)



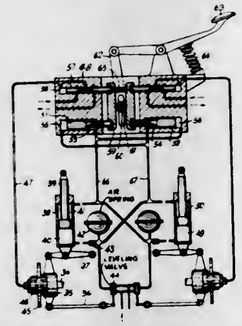
1. The method of making multiple seating which comprises forming a single seat structure having opposite sides and a back with a hollow space in said back, cutting said structure vertically at a point located substantially equidistant from the sides to form two end sections each having a side and a back and having opposing openings in said back and connecting said sections together at said openings by a back section.

3,101,219
SAFETY BRAKE
Dan B. Herrera, % Stratovalve and Engineering Co., 2544 E. 52nd St., Cudahy, Calif.
Filed Feb. 21, 1961, Ser. No. 90,797
13 Claims. (Cl. 303—6)

1. A brake mechanism comprising a housing, means forming an aperture at one end of said housing, a diaphragm mounted in said housing, a reciprocable member associated with said diaphragm and mounted for axial movement in said housing axially of said diaphragm, said reciprocable member being movable in response to axial motion of said diaphragm, a fixed hollow guide member mounted in said housing coaxially of said diaphragm, said reciprocable member being mounted for slidable movement on said guide member, means receiving an end of said reciprocable member in said aperture for motion of said end of said last named member exteriorly of said housing, means positioned in said housing on one side of said disphragm and normally biasing said diaphragm in a direction to urge said reciprocable member toward said aperture at said one end of said housing, means for introducing fluid pressure in said housing against the other side of said diaphragm, a screw extending into said hollow guide member and mounted for movement with respect to said reciprocable member along the axis of said diaphragm, an engagement member mounted on said screw, means carried on said reciprocable member for engaging said engagement member, and means including a manually operable member to produce axial motion of said screw.

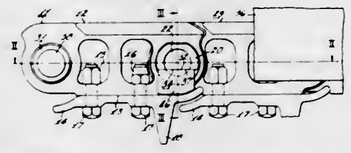


3,101,220
AUTOMATIC BRAKING PRESSURE PROPORTIONER FOR VEHICLES
Fritz Alexander Wettstein, Goteborg, Sweden, assignor to Aktiebolaget Volvo, Goteborg, Sweden
Filed Dec. 4, 1961, Ser. No. 156,794
Claims priority, application Sweden Dec. 7, 1960
4 Claims. (Cl. 303—22)



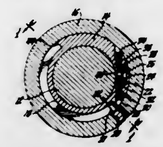
1. A brake and suspension system of a wheeled vehicle responsive to the load on the ground wheels comprising, in combination, a hydro-pneumatic differential piston spring on each wheel, said piston having two counteracting piston areas of different sizes and defining a larger differential piston chamber and a smaller differential piston chamber, respectively; the larger piston chamber of a spring on one side of the vehicle communicating with the smaller piston chamber of a second, similar spring on the other side of the vehicle and the smaller piston chamber of said spring on said one side of the vehicle communicating with the larger piston chamber of said second spring on said other side of the vehicle; and a braking device including braking means on each wheel operated by a fluid under pressure; means to control the braking action of the system and comprising for each wheel a member adapted to be actuated by the pressure of the differential piston spring and a member to be actuated by the braking pressure of said fluid; a balancing device comprising a lever the ends of which being in contact with said spring pressure actuated member and said braking pressure actuated member, respectively; an actuating means for adjusting the lever ratio of said balancing lever; and a braking pressure control member adapted to be acted upon by said balancing device; said spring pressure actuated member consisting of a differential piston having counteracting piston areas the diameter ratio of which equals the diameter ratio of the differential piston spring of the appertaining wheel; the larger piston chambers of the spring pressure-actuated member and of the differential piston spring communicating with each other; whereas their smaller piston chambers also communicate with each other.

3,101,221
MASTER LINK FOR ENDLESS TRACK
John S. Waddell, Rochester, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed June 27, 1961, Ser. No. 119,890
9 Claims. (Cl. 305—54)



1. A master link for a pin and bushing type endless track comprising: a pair of transversely spaced side bars each having a rail surface at its upper side and a shoe mounting surface at its lower side, walls defining a pin bore at one end of each of said side bars, a pin having its opposite ends mounted in said bores, respectively, a ground engaging shoe releasably secured to said lower side of said side bars independently of said pin, and cooperating abutment surfaces formed on said shoe and pin, respectively, preventing endwise and rotational movement of said pin relative to said shoe and side bars.

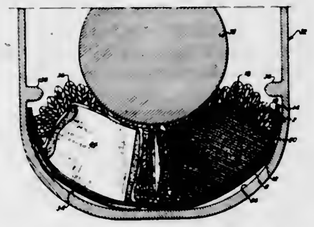
3,101,222
BEARING ASSEMBLY
John C. McEwen, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 2, 1962, Ser. No. 170,672
8 Claims. (Cl. 308—58)



4. In a bearing assembly, a cylindrical plain bearing for rotatably supporting a journal, means for rotatably supporting said bearing, a semi-circumferential groove in the surface of said bearing adjacent said support, a boss on said support projecting into said groove, registered bores in said bearing and said support for receiving a

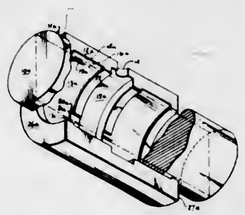
locking pin to limit relative movement therebetween, a recess in the bearing surface contacting said journal, a bearing rotating element in said recess, resilient means in said recess for contact with said element, and means for biasing said element into mutual contact with said journal and said resilient means so that rotation of said journal frictionally locks said element between said journal surface and said resilient means to rotate said bearing relative to said support.

3,101,223
JOURNAL LUBRICATOR
Lamson Carmer Robinson, Manchester, Ga., assignor to Callaway Mills Company, La Grange, Ga., a corporation of Georgia
Filed Nov. 14, 1961, Ser. No. 152,313
4 Claims. (Cl. 308—87)



2. In a lubricated journal box containing a journal and having lower wall portions curved upwardly on opposite sides of a vertical plane containing the axis of the journal: the improvement which comprises a lubricator having a base platform and lubricant reservoir unit of generally rectangular configuration supported by and extending upwardly substantial distances along said wall portions of said box, said unit including a lower layer of abrasion resistant, lubricant absorbing dense woven cotton fabric having its lower surface made up predominantly of warp threads extending in planes approximately at right angles to the axis of the journal, an upper layer of open mesh lubricant absorbing cotton fabric secured at its edges to said lower layer by overedge stitching, an intermediate layer of polyurethane foam between said upper and lower layers; a lubricant absorbing fabric casing secured to and contacting said upper layer of said base unit, said casing extending upwardly from said upper layer to define at least one pocket; and a compressible and expandable core of acrylonitrile synthetic rubber in said pocket for pressing said casing against the journal.

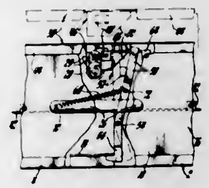
3,101,224
HIGH LOAD HYDROSTATIC BEARING
Clarence R. Adams, Kirkland, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,574
16 Claims. (Cl. 308—122)



1. A high load hydrostatic bearing comprising the combination of:

(*a*) a first body,
(*b*) a second body rotatably mounted about its principal axis in said first body and adapted to receive a heavy load,
(*c*) said bodies having complementary bearing surfaces,
(*d*) said complementary bearing surfaces defining a first annulus, said bearing surfaces of said first annulus having a constant radial clearance,
(*e*) means for supplying fluid under pressure to said first annulus in an axial direction of said second body,
(*f*) said complementary bearing surfaces defining a second annulus, said second annulus adapted to receive fluid under pressure from said first annulus,
(*g*) one of said annuli comprising two portions,
(*h*) differential pressure generating means, said differential pressure generating means comprising a part of the bearing surface defining one of said portions for generating a higher pressure in one of said portions relative to the other portion for supporting the load and for maintaining the bearing surfaces that define at least one of said annuli concentric while under load, and
(*i*) said differential pressure generating means being primarily responsive to the axial movement of said fluid from said fluid supply means for generating said higher pressure.

3,101,225
RADIOTELEPHONE CABINET
Herbert M. Penningroth, Hales Corners, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 27, 1960, Ser. No. 39,021
3 Claims. (Cl. 312—222)

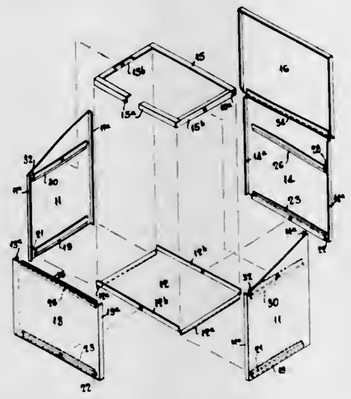


1. A cabinet for electronic equipment comprising a base plate; a separate four-sided box adapted to seat on said base plate; a separate cover plate for closing the top of the box; and latch means for securing the box to the two said plates including a keeper secured to said base plate, a lever pivoted on the front panel of said box having a bolt portion for engaging said keeper and a leg portion extending toward the cover, a cam plate secured to said cover and positioned to engage the lever arm for moving said bolt portion into engagement with said keeper when the cover is placed on the box, a second keeper mounted on said cam plate, and a key-operated swinging bolt on said front panel adapted to latchingly engage said second keeper.

3,101,226
KNOCKDOWN METALLIC RECEPTACLES
Oscar B. Cochran, Jr., Durham, Conn., assignor to Venture Products, Inc., Middletown, Conn., a corporation of Connecticut
Filed May 5, 1961, Ser. No. 126,737
9 Claims. (Cl. 312—257)

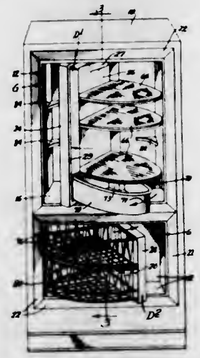
6. A knockdown receptacle comprising a pair of vertically disposed side panels, a horizontally disposed polygonal bottom panel having two edges thereof telescopically mounted in contracted position respectively upon the lower portions of said side panels, at least one other vertically disposed side panel, the lower portion

of said other side panel being telescopically mounted in contracted position upon another edge of said polygonal bottom panel, and a second horizontally disposed polygonal panel having its edges telescopically mounted in contracted positions respectively upon the upper portions



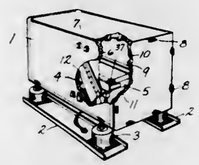
of said side panels, each of said telescopic mounts being vertically extensible and releasable whereby the receptacle may be knocked down by successively lifting said polygonal second panel, said other side wall, and said polygonal bottom panel in the order named.

3,101,227
REFRIGERATOR CONSTRUCTION
Merlin L. Pugh, Minneapolis, Minn., assignor, by mesne assignments, to Studebaker Corporation, South Bend, Ind., a corporation of Michigan
Filed Aug. 1, 1960, Ser. No. 46,793
4 Claims. (Cl. 312—300)



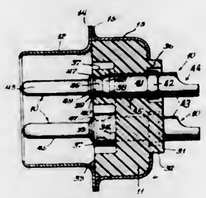
1. In a refrigerator construction, a cabinet having an opening in one wall thereof, a door centrally pivoted on a vertical axis in said opening, said axis being spaced inwardly from said door, half-circle shelves and article retainers carried by said door and movable therewith, said door, shelves and article retainers having extremities formed substantially on a radius from the pivotal axis of said door, brackets for said article retainers having upper and lower perforated ears, said brackets being located adjacent the outer edges of the door, said article retainers being of quarter-cylinder shape, and having downwardly extending studs to enter said perforated ears to pivot said article retainers to said door adjacent the outer edges thereof, said article retainers being swingable to extended positions relative to said door in its open position, the spacing of said axis inwardly of said door being such that said shelves project substantially halfway from said cabinet when said door is open.

3,101,228
MOUNTING SYSTEM
Edward J. Olowinski, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Aug. 8, 1961, Ser. No. 130,171
10 Claims. (Cl. 312—352)



9. A mounting system comprising an acoustical enclosure having sound attenuating walls blocking external sounds from the interior of the enclosure, means within the enclosure for supporting equipment to be protected, vibration isolating means for supporting the enclosure comprising a soft spring means proportioned to isolate low frequency vibrations, a base, a load carrying connection from one end of the spring means to the base, a load carrying connection from the other end of the spring to the enclosure, said last mentioned connection including an elastomeric section, and snubbing means including elastomeric parts respectively connected to the base and to the enclosure and spaced from each other during the normal excursion of the enclosure relative to the base during vibration and coming into contact with each other to limit the larger excursion of the enclosure relative to the base during shock.

3,101,229
ELECTRICAL CONNECTORS
Robert S. Yopp, Riverside, Ill., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed Oct. 7, 1960, Ser. No. 61,184
6 Claims. (Cl. 339—59)



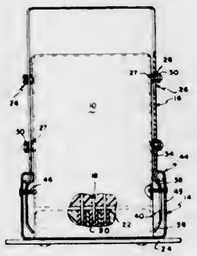
5. In an electrical connector, a dielectric body consisting of an integral molding of relatively firm plastic insulating material with a plurality of generally parallel contact cavities extending therethrough; with each cavity in the dielectric body including separate, individual contact retaining means consisting of a restricted expansible collar in said cavity; in combination with metallic contacts carried in the aforesaid cavities of said dielectric body, with each of said contacts including a mounting shank fitted within a cavity, with a terminal of each contact extending rearwardly from said mounting shank and a tele-

scoping slide portion extending forwardly therefrom; each of said contacts having an indentation between the mounting shank and the telescoping slide portion, with the restricted collar of a cavity snugly engaging the indentation of each of said contacts to firmly secure the individual contacts against normal axial forces, but with angularly disposed cam surfaces on said contacts to expand the collars thereof and individually release the contacts in response to overload axial thrust thereupon.

3,101,230
LOCKING AND EXTRACTING MEANS FOR CAN-ENCLOSED UNITS

Ewald Bausch, Morristown, and Robert Wighton, Morris Plains, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force

Filed June 26, 1961, Ser. No. 119,752
7 Claims. (Cl. 339—91)

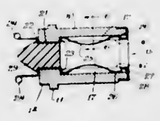


1. A device for removably mounting a hold-down or protective cover for electrical elements to a mounting pad on electrical apparatus and latching same in place comprising an open end housing member having at least two opposing side walls which are substantially flat and parallel, latching means consisting of a U-shaped member mounted between said mounting pad and a panel member of said electrical apparatus, said latching means having opposing side members extending away from said panel member for latching and securing said housing member to said mounting pad, means in the form of a U-shaped handle attached to opposing flat side walls of said housing member for inserting and removing said housing member, said handle having means thereon for operating said latching means to permit insertion and removal of said housing member.

3,101,231
ELECTRICAL CONNECTORS

Curt W. Klostermann, Chicago, Ill., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware

Filed Nov. 4, 1960, Ser. No. 67,260
4 Claims. (Cl. 339—176)

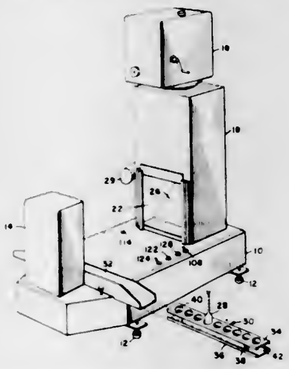


4. In an electrical connector, in combination, a body member having at least one slide surface adapted to engage a mating connector; together with a plurality of connector contacts each consisting of a single, preformed length of metallic wire of circular cross section throughout its length and having a mounting shank secured in said body, with terminal portions on each of said contacts extending from the body of the connector and with each contact having a blade adapted to engage another contact and consisting of an elongated bowed portion of the wire received within a relatively deep, narrow, tapered channel in the slide surface of the aforesaid body member, with the contact bow having its opposite ends seated at the bottom of said channel and centered between divergent walls thereof; with the central portion of the blade intermediate the ends thereof smoothly curved in a convex contour with respect to said body and with its central portion extending at least partially out of the tapered contact channel and projecting beyond the slide surface of the aforesaid body.

3,101,232
PHOTOGRAPHIC RECORDING APPARATUS

Thomas J. McLarnon, San Rafael, John B. Stark, Lafayette, and Charles O. Sutton, Alameda, Calif., assignors, by direct and mesne assignments, to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York

Filed Mar. 23, 1960, Ser. No. 17,183
5 Claims. (Cl. 346—107)



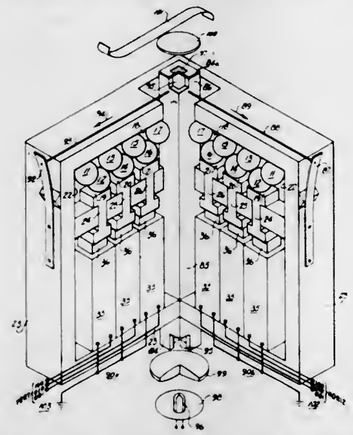
1. In a fluid sample inspection system a photographic recording device comprising a recording camera, a support, an illuminating light source carried by said support and disposed to project light into the camera, guide means on said support adjacent said light source, tray means movable in said guide means and formed to hold means containing a fluid sample, means to advance the tray means and fluid sample carried by same in stepwise fashion relative to the support and circuit means responsive to each stepwise advance of the tray means to energize the camera to record photographically objects illuminated by the light source.

3,101,233
BINARY CODE ACTUATED ALPHANUMERIC SYMBOL PRESENTATION APPARATUS

Joseph T. McNaney, 8548 Boulder Drive, La Mesa, Calif.

Filed Apr. 13, 1961, Ser. No. 102,709
20 Claims. (Cl. 346—107)

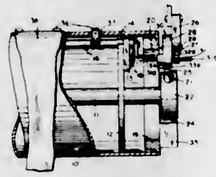
1. Apparatus for converting binary code input functions to decimalized output functions comprising: a lever; a lever support means in relation to which decimalized output functions will be imparted to said lever; a reference bearing means; means intermediate said lever and said reference bearing means for deriving a decimalized function substantially proportional to the value of binary code input functions and adapted to impart a decimalized output function to said lever; the last stated means including a plurality of individual bearings resting one against the other in a nonconnective zig-zag formation and selectively resting against surface members on opposite sides of said zig-zag formation, and means for applying binary code input functions to predetermined surface members to thereby alter said zig-zag formation intermediate said reference bearing means and said lever and impart a decimalized function to said lever.



3,101,234
SHEET CLAMPING AND UNCLAMPING MECHANISM

Ernest V. Canamero, Brooklyn, N.Y., assignor to the United States of America as represented by the Secretary of the Army

Filed Apr. 3, 1962, Ser. No. 184,866
3 Claims. (Cl. 346—138)



1. In a facsimile machine of the rotary drum kind, the combination of a drum rotatable about an axial shaft; means for facilitating the mounting of copy sheet on said drum and for removing of copy sheet from said drum comprising; means within said drum and radially spaced from said axial shaft for supporting a longitudinal shaft in parallel alignment with said axial drum shaft, paper clamping means affixed to and spaced along said longitudinal shaft and adapted to protrude through openings in the periphery of said drum provided therefor, an actuator arm affixed to one end of said longitudinal shaft and rotatable therewith, a first tension means operatively associated with said actuator arm for maintaining said longitudinal shaft in position such that said copy sheet is clamped to the periphery of said drum when said drum is rotating, an annulus including a radial slot terminating said drum and axially spaced from said longitudinal shaft supporting means and said actuator arm, said slot being disposed opposite said actuator arm, a drum motor switch, a pawl pivotally mounted within the perimeter of said annulus but axially spaced therefrom, said pawl having an elongated end section within said perimeter terminating in a protruding longitudinal member; a second tension means operatively associated with said pawl and protruding longitudinal member to lock said pawl and protruding longitudinal member against pivotal rotation while said drum is rotating; a switch actuating means coaxial with said drum shaft and including peripheral extending means for simultaneously actuating the other end of said pawl and energizing said switch such that said pawl and protruding longitudinal member is free of said slot and said motor switch is ON when said switch actuating means is in one position, said pawl and protruding longitudinal member then being locked by said second tension means against pivotal movement while said drum is rotating and said actuator arm being maintained by said first tensioned means in position such that the paper clamping means are in a clamped or closed position, and simultaneously actuating said elongated end section of said pawl such that said elongated end section is in contact with said radial slot and said motor switch is OFF when said switch actuating means is in a second position, and said second longitudinal protruding member then actuates said actuator arm through said radial slot whereby said drum is locked against rotation and said actuator arm is rotatably displaced from its normal tensioned position to rotate said longitudinal shaft so that said paper clamping means are in the open or unclamped position.

CHEMICAL

3,101,235
PROCESS OF PREPARING SOLUTIONS OF COUPLING COMPONENTS OF THE ICE COLOR SERIES

Lüdwig Orthner, Frankfurt am Main, Karl Horst, Hofheim, Taunus, Alfred Scharf, Frankfurt am Main, Werner Kirst, Offenbach am Main, and Josef Oxé and Richard Gross, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,110
Claims priority, application Germany Sept. 15, 1959
9 Claims. (Cl. 8—44)

2. In the method of preparing solutions of coupling components of ice colors the step which comprises admixing to the solution of the coupling component (*a*) a condensation product of about 0.1 to about 0.5 part by weight of halides of high molecular carboxylic acids and 1 part by weight of a partially decomposed protein having a degree of decomposition which corresponds to a formal index of from 7 to 10 and (*b*) surface active urethanes of the general formula

R—O—CO—NR'—X—Y

wherein R stands for an alkyl radical containing 6 to 13 carbon atoms, R' stands for an alkyl radical containing 8 to 9 carbon atoms, X represents an alkylene radical containing 1 to 3 carbon atoms and Y represents a member selected from the group consisting of a carboxylic acid, a sulfonic acid and an alkali metal salt and an ammonium salt of these two acid groups.

3,101,236
TEXTILE TREATING

Victor S. Salvin, Charlotte, N.C., Basil S. Sprague, Berkeley Heights, N.J., and Fred Fortess, Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Original application Dec. 2, 1954, Ser. No. 472,758, now Patent No. 2,982,597, dated May 2, 1961. Divided and this application July 18, 1960, Ser. No. 43,285
14 Claims. (Cl. 8—59)

1. Process for the treatment of textile material, which comprises dyeing a textile material comprising fibers of cellulose acetate having an actyl value of at least 59%, calculated as combined acetic acid, with a dispersed cel-

lulose acetate dye of the "high temperature slow dyeing type," and heat-treating the resulting dyed textile material for improving the wash fastness of the dyed material.

3,101,237
PROCESS FOR THE RETANNING OF MINERAL-TANNED LEATHERS

Wolfhard Luck, Cologne-Stammheim, and Gustav Mauthe, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 7, 1961, Ser. No. 93,863
Claims priority, application Germany Mar. 9, 1960
11 Claims. (Cl. 8—94.21)

1. A process for the retanning of mineral-tanned leathers which comprises treating such leathers with water-soluble to water-dispersible compounds which are formed by substituting the phenolic hydroxyl groups of a member selected from the group consisting of a polyhydric phenol, a polyphenol, and a novolak by a radical selected from the group consisting of (*a*) a radical of the formula:

$$-O-(R-O-)_x-\overset{O}{\overset{\|}{C}}-R'-(-\overset{O}{\overset{\|}{C}}-O-Me)_y$$

per se, and (*b*) a radical of the formula:

$$-O-(R-O-)_x-\overset{O}{\overset{\|}{C}}-R'-(-\overset{O}{\overset{\|}{C}}-O-Me)_y$$

together with one additional radical selected from the group consisting of:

$$-O-(R-O-)_xH \text{ and } -O-(R-O-)_x-\overset{O}{\overset{\|}{C}}-R''$$

wherein R stands for a member selected from the group consisting of an aliphatic radical of 2–5 carbon atoms and a phenyl-substituted derivative of an aliphatic radical of 2–5 carbon atoms, and R′ and R″ represent a member selected from the group consisting of an aliphatic radical of up to 20 carbon atoms and a phenyl group, *x* is a whole number between 1 and 10, y is a number from 1–2, and Me is a member selected from the group consisting of an alkali metal and an ammonium group.

3,101,238
FAT LIQUORING WITH REACTION PRODUCT OF EPOXIDIZED ESTERS AND POLYBASIC INORGANIC ACIDS

Jürgen Plapper, Dusseldorf, and Gerhard Dieckelmann, Dusseldorf-Holthausen, Germany, assignors to Böhme Fettchemie G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed June 7, 1961, Ser. No. 115,332
Claims priority, application Germany June 11, 1960
14 Claims. (Cl. 8—94.23)

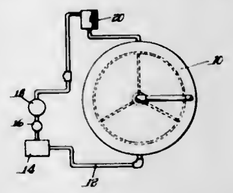
1. The method of fat liquoring fur skins and leather, which comprises contacting said skins and leather with an aqueous fat-liquor composition comprising the reaction product of epoxidized esters of higher fatty acids and alcohols with polybasic inorganic acids.

3,101,239
DRY CLEANING

Paul V. Warren, Clarendon Hills, and Martin B. Mathews and Ernestine Hirschhorn, Chicago, Ill., assignors to R. R. Street & Co., Inc., Chicago, Ill., a corporation of Illinois

Filed Oct. 7, 1953, Ser. No. 384,644
2 Claims. (Cl. 8—142)

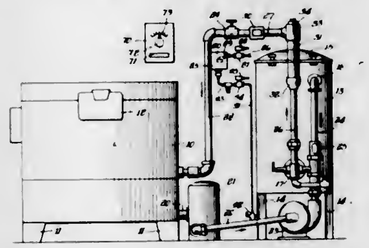
2. In the dry cleaning of soiled fabrics, the steps which comprise cleaning successive batches of said fabrics with a continuously circulating filtered water-immiscible dry cleaning liquid organic solvent containing (*a*) from about 1.5% to about 3% of an oil-soluble dry cleaning water-emulsifying detergent selected from the group consisting of sulfate and sulfonate detergents containing an alkyl group of at least 8 carbon atoms, and (*b*) from about 0.2% to about 0.4% of water so finely emulsified in said organic solvent as to form a substantially clear homogeneous emulsion, said emulsion having an electrical conductivity between about 50 and about 100×10^{-7} mhos, measuring the electrical conductivity of said filtered emulsion and, when said electrical conductivity drops below said lower aforesaid value, measuring the detergent content of said filtered emulsion, adjusting said detergent content to restore it to within the aforesaid values, and adding water in the requisite amounts to restore the electrical conductivity of said filtered emulsion to within the aforesaid values.



3,101,240
DRY CLEANING

Martin B. Mathews, 5718 Drexel Blvd., Chicago, Ill.

Filed June 29, 1953, Ser. No. 364,844
8 Claims. (Cl. 8—142)

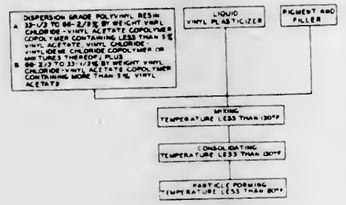


1. In the dry cleaning of fabrics by the "two-bath" method in a system which includes a washer adapted to hold fabrics to be dry cleaned, a filter, conduits interconnecting the washer and filter and a pump for circulating through the washer, filter and conduits a water-immiscible organic dry cleaning solvent which is activated by small proportions of an oil-soluble non-volatile dry cleaning detergent and water so finely dispersed as to form a substantially clear homogeneous "solution," the steps which include placing the fabrics to be dry cleaned in the washer, circulating the said "solution" therethrough and continuously through said filter whereby to remove soil from said fabrics and whereby, upon initial contact of said fabrics with said "solution" a portion of the water in said "solution" is absorbed by said fabrics, and, promptly upon said absorption occurring, automatically admitting water into contact with said "solution" to effect at least a substantial replenishment of said initially absorbed water, said automatic admission of water being effected in response to a change in the electrical conductivity of said "solution" caused by said absorption of water from said fabrics by reason of the initial contact thereof by said "solution," the electrical conductivity of said "solution" during the washing cycle being maintained within the range of from about 10 to 120×10^{-7} mhos.

3,101,241
METHOD OF PREPARING PARTICLES OF THERMOPLASTIC COMPOSITION

Allan W. McKee, Jr., Millersville, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Nov. 3, 1960, Ser. No. 66,910
3 Claims. (Cl. 18—47.5)

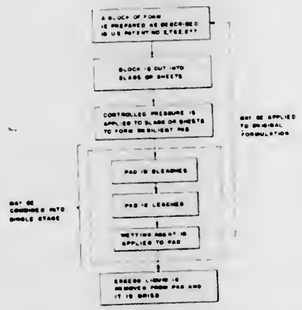


1. A method of forming particles of plastic mix, which particles are both compressible and cohesive, comprising mixing, in relative proportions, 100 parts by weight of powdered resin obtained by dispersion polymerization, from 33⅓%–66⅔% by weight of said powdered resin consisting of a member selected from the group consisting of copolymers of vinyl chloride and vinyl acetate containing less than about 5% by weight vinyl acetate, copolymers of vinyl chloride and vinylidene chloride and mixtures thereof and from 66⅔%–33⅓% by weight of said powdered resin consisting of a member selected from the group consisting of copolymers of vinyl chloride and vinyl acetate containing more than about 5% by weight vinyl acetate and mixtures thereof, from 20–50 parts by weight of liquid vinyl plasticizer, and from 0–150 parts by weight of inert pigment and filler, said mixing being done at a temperature less than about 130° F., to form agglomerates of unfused resin, plasticizer, pigment, and filler, consolidating said agglomerates without fusing said resin component at a temperature less than about 130° F. to form a sheet of consolidated mix and disintegrating said sheet into particles of a desired degree of fineness while maintaining said particles and sheet at a temperature less than about 80° F.

3,101,242
PROCESS OF MAKING FLEXIBLE ABSORBENT MATERIAL

James M. Jackson, Jr., Akron, Ohio, assignor to The V. L. Smithers Manufacturing Company, Kent, Ohio, a corporation of Ohio

Filed Feb. 1, 1961, Ser. No. 86,501
12 Claims. (Cl. 18—47.5)

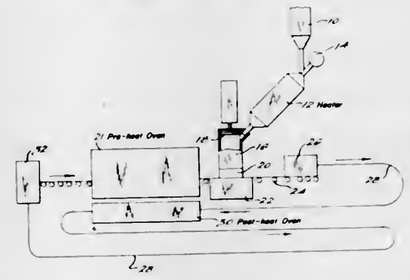


1. The method of making a flexible foam pad, comprising the steps of preparing a mass of synthetic frangible resinous foam having a density of 0.3 to 1.4 pounds per cubic foot and containing a wetting agent, cutting a slab from the mass, rendering said slab flexible and resilient solely by applying pressure to the top and bottom surfaces of the slab in an amount to partially crush the slab, and neutralizing said slab.

3,101,243
PRE-HEAT PROCESS FOR MOLDING CORK BLOCKS

Richard H. Hawkes, Norfolk, Va., assignor to Sheller Manufacturing Corporation, Detroit, Mich., a corporation of Indiana

Filed Sept. 25, 1959, Ser. No. 842,282
5 Claims. (Cl. 18—48)

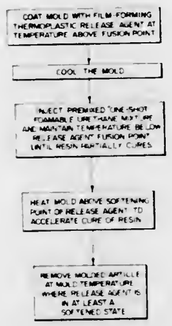


1. The method of molding cork composition blocks comprising mixing granulated cork with a thermosettable binder, pre-heating said mixture while agitating the same to a temperature at which the binder will become permanently infusible when maintained at said temperature for a predetermined time period, pre-heating a mold to substantially said temperature, placing said heated mixture in said heated mold, compressing said mixture in said mold before said predetermined time period has elapsed and heating the said mold and mixture so as to maintain substantially said temperature for said predetermined time period.

3,101,244
METHOD FOR MOLDING ARTICLES

Bruce Gardner Hood and Ralph S. Hood, Marblehead, Mass., and Robert A. Gardella, Dover, N.H., assignors, by direct and mesne assignments, to Davidson Rubber Company, Inc., Dover, N.H., a corporation of New Hampshire

Filed Oct. 21, 1960, Ser. No. 63,965
4 Claims. (Cl. 18—48)



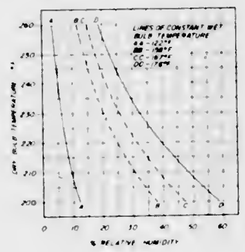
1. A method for molding articles from thermo-setting resins which resins during curing are initially extremely active and adherent to mold surfaces, but become progressively less active and non-adherent as the cure progresses; said method including the steps of: determining

the preferred temperature range for the cure of said resin; selecting a thermoplastic film forming material with a fusion point substantially within said range; applying a continuous film of said thermoplastic material to the surface of a mold; introducing said resin in the uncured state into said mold with the temperature of said mold being at a first temperature within said range but below the melting point of said thermoplastic material; maintaining said mold at a temperature below said fusion point until said resin has partially cured and de-activated sufficiently not to adhere to said mold; thereafter elevating the temperature of said mold to a second temperature within said range but at least as high as the fusion point of said thermoplastic material; whereby the cure is accelerated and said thermoplastic material is melted; maintaining said mold at said second temperature until said cure is substantially complete; and withdrawing said cured resin from said mold while maintaining said second temperature.

3,101,245
PRODUCTION OF POLYACRYLONITRILE FIBERS

Yoshimasa Fujita, Takeshi Okazaki, and Keijiro Kuratani, all of Saidaiji City, Japan, assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Aug. 18, 1960, Ser. No. 50,440
1 Claim. (Cl. 18—54)



The method of improving the quality of filamentary material which has been previously hot-stretched and which is comprised essentially of an acrylonitrile polymer, said method consisting in drying the said filamentary material in gelled state under correlated conditions of temperature and humidity, the temperature (dry bulb) being within the range of from about 200° F. to 260° F., the minimum and maximum percentages of relative humidity for a particular dry-bulb temperature being those falling between the lines A—A and D—D of the graph shown in the accompanying drawing, and the said drying under the said temperature and humidity conditions being continued until substantially all of the water has been evolved from the said filamentary material and its structure has collapsed; thereafter immersing said filamentary material in a reducing liquid having a pH below 7.0; and thereafter treating the resulting filamentary material in a relaxed state in an atmosphere of steam at an elevated temperature ranging from 105° C. to 160° C.

3,101,246
RECOVERY AND SEPARATION OF LITHIUM VALUES FROM SALVAGE SOLUTIONS

David L. Hansford, Houston, Tex., and Edward W. Raabe, Cincinnati, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

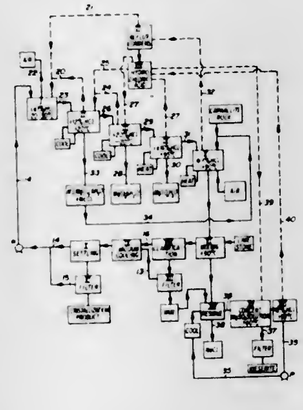
Filed Oct. 14, 1960, Ser. No. 62,824
5 Claims. (Cl. 23—25)

5. A method for the recovery of lithium values from an aqueous basic solution which comprises reacting said values with a phosphate salt soluble in said solution, forming an aqueous slurry of the resultant aqueous insoluble lithium phosphate, contacting said slurry with an organic cation exchange resin in the acid form until said slurry has been clarified, and thereafter recovering lithium values from said resin.

3,101,247
PROCESS FOR TREATING CARNALLITE BEARING MATERIALS

Fritz Serowy, Berlin-Friedrichshagen, Germany, assignor to Deutsche Akademie der Wissenschaften zu Berlin, Berlin-Adlershof, Germany

Filed June 11, 1959, Ser. No. 819,630
Claims priority, application Germany June 13, 1958
4 Claims. (Cl. 23—39)



1. A cyclic process for the treatment of a carnallite-bearing material for the recovery of KCl and other mineral salts therefrom without formation of a liquor which must be disposed of, which comprises mixing in a first zone said carnallite-bearing material with a dilute $MgCl_2$-containing HCl solution of about 1% HCl produced in a previous step in the cycle and treating it at a temperature of about 90° C., whereby a solution is produced containing KCl, NaCl, $MgCl_2$, and $MgSO_4$; neutralizing small amounts of HCl in said last-mentioned solution by an equivalent amount of alkaline material, removing from said neutralized solution residual solids and mud; thereafter crystallizing the main amount of KCl by a cooling operation and removing the crystals in pure form from said solution, thus leaving behind a mother liquor containing $MgCl_2$, $MgSO_4$, NaCl and residual KCl; passing said mother liquor to a second zone wherein said liquor is stirred with HCl to a concentration of about 1% HCl in solution at a temperature of about 20–30° C.; precipitating from said mother liquor in a third zone carnallite and NaCl by treatment with approximately 12–15% HCl solution at a temperature of about 20° C., leaving $MgSO_4$ in solution; removing said carnallite and NaCl for retreatment together with new carnallite-bearing material; cooling in a fourth zone said $MgSO_4$-containing solution to a temperature below 20° C. and increasing the HCl content to about 20–30%, thereby precipitating pure $MgCl_2.6H_2O$ and removing the crystals from the solution; heating the last-mentioned solution in a fifth zone to a temperature of about 95° C. and evaporating the HCl content to about 16%, whereby $MgSO_4.H_2O$ is precipitated, removing the same from the solution for recovery and using the solution from the above-defined step-wise separation of salts for treating in said first zone

fresh carnallite-bearing material thereby closing the cycle, while recovering KCl, NaCl, $MgCl_2.6H_2O$ and

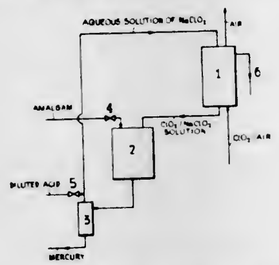
$$MgSO_4.H_2O$$

from the respective zones in said separate operations.

3,101,248
PROCESS FOR THE MANUFACTURE OF ALKALI METAL CHLORITES AND ALKALINE EARTH METAL CHLORITES

Rudolf Hirschberg and Helmut Hund, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Filed Nov. 28, 1960, Ser. No. 71,900
Claims priority, application Germany Jan. 10, 1958
6 Claims. (Cl. 23—85)

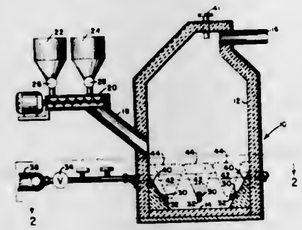


1. In the process for the manufacture of metal chlorites by the reduction of aqueous chlorine dioxide solutions by contacting them with a reducing agent selected from the group consisting of alkali metal amalgams and alkaline earth metal amalgams, the improvement which comprises adding a dilute inorganic acid selected from the group consisting of nitric, hydrochloric, and sulfuric acids to the aqueous chlorine dioxide solution at a temperature between 0° C. and 40° C. in such a quantity that the pH value is maintained between about 7.0 and about 9.0 said dilute acid having a normality between 0.1 and 5.0.

3,101,249
CHLORINATION APPARATUS AND PROCESS

John C. Priscu, Las Vegas, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Filed Oct. 26, 1959, Ser. No. 848,633
6 Claims. (Cl. 23—87)



1. The method of chlorinating a metal oxide-bearing material in an upstanding furnace shell, penetrated by gas inlets spaced thereabout adjacent its base, a materials feed inlet disposed above said gas inlets and a gas take-off outlet adjacent the top, which comprises: progressively feeding a comminuted admixture of said material and a solid carbonaceous reductant through said materials feed inlet into said furnace shell to form therein a bed of said admixture of substantial depth, supplying chlorine gas to said bed through said gas inlets in a direction initially generally downwardly and inwardly with respect to said bed and adjacent the base thereof, while maintaining said bed at elevated temperature at which said components react to evolve said metal chloride in gaseous form, and while withdrawing product gases from the interior of said furnace shell through said outlet, and so regulating the feed rate of said admixture as to maintain said bed at substantially constant depth, and also so regulating the supply of said chlorine gas as to form individual columns in said bed of upwardly rising particles of said admixture suspended in upwardly flowing chlorine and product gases, the eruptions of which columns from the upper surface of said bed are spaced apart from the sidewall of said furnace shell and from each other.

3,101,250
PROCESS FOR SORPTION OF BROMIDE ION ON ANION EXCHANGE RESINS

Leland Clarence Schoenbeck, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 10, 1961, Ser. No. 151,429
9 Claims. (Cl. 23—87)

1. A process for the sorption of bromide ion from an aqueous solution thereof, said aqueous solution being selected from the group consisting of aqueous hydrobromic acid, neutral and acid aqueous bromide-containing brine, by ion exchange, in which process said solution is contacted with an anion exchange material having fixed cationic sites and, in association therewith, polybromochloride ions of the formula $BrXCl^-$ in which polybromochloride ion X is selected from the group consisting of Cl, Br and mixtures thereof, at least one of said Cl groups of said polybromochloride ions being replaced by Br.

3,101,251
PROCESS FOR PRODUCING MOLECULAR SIEVES

Peter A. Howell, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 15, 1960, Ser. No. 2,576
23 Claims. (Cl. 23—113)

1. An improved method for producing zeolite A which comprises the steps of: providing a starting compound consisting of non-kaolinitic alumino-silicate mineral, having in the composition thereof SiO_2 and Al_2O_3 in a molar ratio between 1 and 13, in admixture with an alkali metal hydroxide, fusing said admixture at a temperature between 330 and 370° C., forming with said fused admixture an aqueous reactant mixture having in the aggregate oxides of Al, Si and Na, and H_2O defined in terms of oxide mole ratios about as follows:

$$Na_2O/SiO_2=1.0–3.0$$
$$SiO_2/Al_2O_3=0.5–1.3$$
$$H_2O/Na_2O=35–200$$

maintaining said reactant mixture at a temperature within the range of 20 to 120° C. until crystals of zeolite A form, thereafter separating the crystals from the mixture and activating said crystals to remove at least a part of the water of hydration.

3,101,252
MOLYBDENUM DISULFIDE TREATING PROCESS

Wilbur J. Tschudi, Burgettstown, and Joseph Madera, Hickory, Pa., assignors to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 8, 1960, Ser. No. 47,942
5 Claims. (Cl. 23—134)

1. The method of reducing the silica content of a molybdenum disulfide powder comprising the steps of

providing a finely particulated oily molybdenum disulfide powder containing at least 0.5% of an oily substance which will wet the molybdenum disulfide particles, leaching said oily powder with an aqueous solution containing from about 3% to about 50% hydrofluoric acid, and extracting said oily powder from said aqueous solution.

3,101,253
PROCESS FOR THE MANUFACTURE OF CHLORINE DIOXIDE

Rudolf Hirschberg, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft, vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed July 20, 1960, Ser. No. 43,982
Claims priority, application Germany Aug. 7, 1959
5 Claims. (Cl. 23—152)

1. In a process for the manufacture of chlorine dioxide by reducing a compound of the group consisting of alkali metal and alkaline earth metal chlorates with hydrochloric acid in an aqueous solution, the improvement which consists in carrying out the reaction at a temperature in the range from 0 to 100° C., and in the presence of a catalyst of the group consisting of Mn^{+2} ions in an amount between about 0.5 and about 1.5 g. per liter of solution, Ag^{+} ions in an amount between about 0.02 and about 0.3 g. per liter of solution, and combinations thereof.

3,101,254
PRODUCTION OF SILICA FREE HYDROGEN FLUORIDE

George L. Cunningham, Allentown, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Mar. 16, 1961, Ser. No. 96,086
2 Claims. (Cl. 23—153)

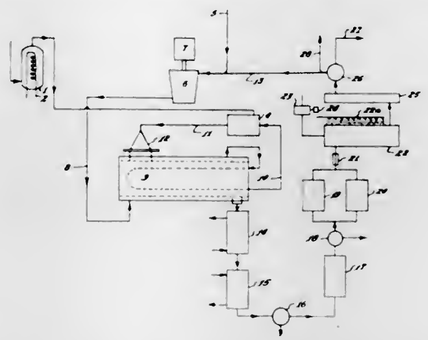
1. In production of substantially pure hydrogen fluoride the steps of: combining alkali metal fluoride and ammonium bifluoride in aqueous solution, stirring for two hours at 25° C., filtering to remove alkali metal bifluoride as a solid from the solution, evaporating the filtrate to concentrate it with respect to alkali metal bifluoride, cooling to 25° for the purpose of crystallizing additional alkali metal bifluoride, stirring for two hours at 25° C., filtering to remove alkali metal bifluoride as a solid from the solution, evaporating the filtrate to concentrate it with respect to alkali metal bifluoride, cooling to 25° for the purpose of crystallizing additional alkali metal bifluoride, stirring for two hours, filtering to remove alkali metal bifluoride as a solid, heating said alkali metal bifluoride to 300–450°, thereby liberating silica-free hydrogen fluoride and recovering said hydrogen fluoride as a gas.

3,101,255
MANUFACTURE OF NITROGEN TETROXIDE

Dugald M. Carr, Milford, and Theodore D. Striggles, Cincinnati, Ohio, assignors to The Chemical and Industrial Corp., Cincinnati, Ohio, a corporation of Ohio

Filed Feb. 27, 1957, Ser. No. 642,897
11 Claims. (Cl. 23—162)

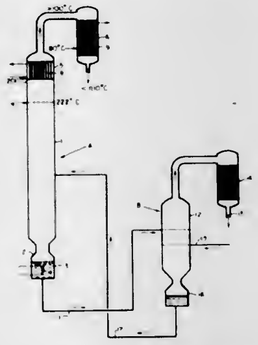
1. A process for the manufacture of nitrogen tetroxide which comprises catalytically reacting substantially stoichiometric proportions of ammonia and oxygen in the presence of nitrogen, there being present a slight excess of ammonia to form gases consisting essentially of nitric oxide, nitrogen and water vapor, cooling the said gases and extracting substantially all of the said water vapor therefrom, thereafter reacting the nitric oxide therein with substantially stoichiometric proportions of oxygen to form nitrogen dioxide, and immediately cooling the said gases to cause said nitrogen dioxide to polymerize to nitrogen tetroxide and to condense the said nitrogen tetroxide to a liquid, and separating the said liquid from the remainder of said gases.



3,101,256
SEPARATION OF HYDROGEN ISOTOPES

Karl Erik O. Holmberg, Stockholm, Sweden, assignor to Quartz & Silice S.A., Paris, France, a corporation of France

Filed Aug. 28, 1958, Ser. No. 757,841
5 Claims. (Cl. 23—204)

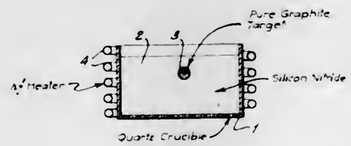


4. The method of producing heavy water comprising fractionating pyridinium chloride containing both PyHCl and PyDCl by flowing liquid pyridinium chloride downwardly in a fractionating column while passing vapors of pyridinium chloride upwardly in said column, whereby the upwardly flowing vapors become increasingly depleted of PyDCl at the top of said column and said downwardly flowing liquid becomes increasingly enriched in PyDCl at the bottom of said column, adding water vapor containing both H_2O and HDO to said pyridinium chloride vapors relatively depleted of PyDCl to effect an exchange reaction whereby hydrogen in said vapors is exchanged for deuterium and said water vapor is depleted of HDO, condensing said pyridinium chloride vapors at the top of said column to produce additional liquid pyridinium chloride, separating said liquid pyridinium chloride from said water vapor depleted of HDO and flowing said liquid pyridinium chloride downwardly in said column, contacting pyridinium chloride relatively enriched with PyDCl with water containing H_2O to effect an exchange reaction whereby H_2O is converted to HDO to produce water enriched in HDO, and recovering said water enriched in HDO.

3,101,257
PREPARATION OF HIGH PURITY SILICON BY DECOMPOSITION OF SILICON NITRIDE POWDER HAVING A GRAPHITE TARGET BURIED THEREIN

Lawrence M. Hagen, Nashua, N.H., and Walter F. Leverton, Weston, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Aug. 17, 1959, Ser. No. 834,361
4 Claims. (Cl. 23—223.5)



1. The method of preparing high purity silicon of semiconductor grade, which comprises heating by induction a body of silicon nitride powder having a graphite target buried in the interior thereof below the surface, to a temperature between about 1600° C. and about 1700° C., then crushing the product and subjecting the crushed product to the same heating, repeatedly until substantially all of the silicon nitride has been decomposed into silicon.

3,101,258
SPRAY CALCINATION REACTOR

Benjamin M. Johnson, Kennewick, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed June 14, 1961, Ser. No. 117,243
7 Claims. (Cl. 23—277)

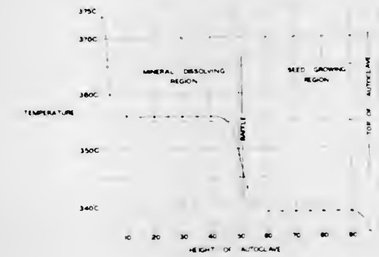


1. A spray calcination reactor comprising an outer shell, an inner shell in coaxial relation with the outer shell, the said inner shell defining an inner reaction chamber and the said inner shell and outer shell together defining a single annular outer reaction chamber, heating means in intimate association with the inner shell through a substantial portion of its length, means adjacent the top of the reactor for spraying downwardly and unobstructedly into the inner shell, an impelling gas line and a fluid carrying line in communication with the means for spraying, the said inner chamber and the said annular outer chamber being separated from each other along the greater portion of their lengths by the inner shell and in communication with each other through open regions, an upper open region adjacent the upper end of the inner shell and a lower open region adjacent the lower end of the inner shell, and a solids product recovery outlet through the outer shell, coaxial with and directly beneath the inner shell and opposite the said means for spraying.

3,101,259
METHOD OF CONTROLLING DEPOSITION OF CRYSTALLINE MATERIAL FROM SOLUTION ON A SEED BY USE OF A TEMPERATURE PROFILE CURVE

Charles B. Sawyer, Cleveland Heights, Ohio, assignor to Sawyer Research Products, Inc., Eastlake, Ohio, a corporation of Ohio

Filed Mar. 27, 1959, Ser. No. 802,479
6 Claims. (Cl. 23—301)

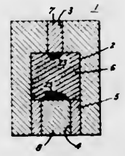


1. In the method of growing a crystal within a seed-growing chamber by a nutrient solution inter-exchanged with a communicating supply chamber; the steps of forming an isolated zone simultaneously extending through both chambers free of contact with the walls thereof, applying heat to such supply chamber while radiating heat from such seed-growing chamber to induce independent circulation of the solution in each chamber, exchanging the solution from each chamber to the other in an unchannelized flow, simultaneously passing thermal-sensing means through such zone to determine the temperatures at a plurality of points therein to determine a temperature profile in said chambers free of thermal influence of such walls of the chambers, and varying such application of heat to the supply chamber in accordance with the temperature profile data so obtained to provide conditions in such chambers conducive to desired crystal growth.

3,101,260
DIAMOND TOOL

James E. Cheney, St. Clair Shores, Mich., assignor to General Electric Company, a corporation of New York

Filed Aug. 9, 1957, Ser. No. 677,403
2 Claims. (Cl. 51—293)



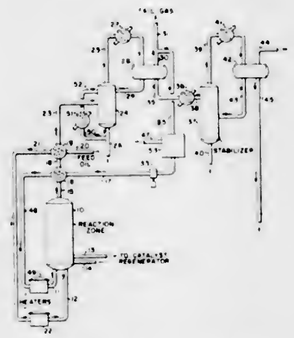
1. The method of producing diamond tools which comprises, placing a quantity of graphite centrally in the bore of an electrical and thermal insulating high pressure transmitting material cylinder, inserting a catalytic metal plug in said bore on each side of and adjacent the said centrally located graphite with the side surface thereof contacting the bore of said cylinder, subjecting said plug, graphite, and cylinder to high pressures in the approximate range of 50,000–110,000 atmospheres and high temperatures in the range of 1200–3000° C., maintaining said pressures and temperatures for a period of two to three minutes to cause diamond crystal formation only on the portion of said plugs adjacent said graphite while maintaining the remaining portions of said plug free from diamond growth thereon, reducing the temperature and pressure, removing said plugs with the diamond formation

thereon from said cylinder, shaping said diamond formation to a cutting configuration, and mounting said plugs in tool holders by means of portion of said plug maintained free of diamond growth.

3,101,261
PROCESS FOR THE RECOVERY OF HYDROGEN FROM HYDROCARBON GAS STREAMS

Charles W. Skarstrom, Montvale, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 12, 1960, Ser. No. 21,702
15 Claims. (Cl. 55—58)

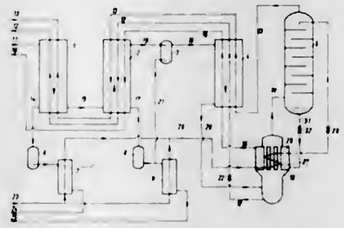


1. A process for the separation of a gas comprising hydrogen from a gaseous mixture stream comprising hydrocarbons, utilizing two adsorbent beds each of which is characterized by having a one end and an other end, said process comprising the steps of flowing a feed stream of gaseous mixture including hydrogen and hydrocarbons from one end to the other end through a first bed of an adsorbent initially relatively free of said hydrocarbons at a preselected initial relatively high pressure and in a positive flow direction in an initial cycle, said adsorbent being preferentially selective for said hydrocarbons; discharging a gaseous stream comprising hydrogen from said first bed as a primary effluent; segregating a portion of said primary effluent as a product stream and withdrawing the same; passing the remainder of said primary effluent in reverse flow from the other end to the one end through a second bed of adsorbent at a relatively low pressure, which adsorbent is relatively saturated with said hydrocarbons as compared to said first bed at the start of said initial cycle, whereby as said initial cycle continues, said first bed becomes relatively saturated with hydrocarbons progressively from said one end toward said other end, and whereby said second bed becomes relatively freed from said hydrocarbons from said other end toward said one end; continuing said initial cycle for a time period less than that required to secure saturation of said first bed at said other end and that required to secure freedom from said hydrocarbons of said second bed at said one end; thereafter introducing said feed stream into said one end of said second bed in positive flow direction at said initial relatively high pressure; discharging a gaseous stream from said other end of said second bed as a primary effluent; segregating a portion of said last named primary effluent as a product stream and withdrawing the same; passing the remainder of said last named primary effluent in reverse flow from said other end to said one end through said first bed of adsorbent at said relatively low pressure, and thereafter cyclically continuing the operation wherein per each cycle the volume of said primary effluent passed in reverse flow through said first and through said second bed of adsorbent is greater than the volume of feed passed through each of said beds in said positive flow direction.

3,101,262
METHOD AND APPARATUS FOR AVOIDING NITRIC OXIDE-CONTAINING DEPOSITS IN GAS DECOMPOSING PLANTS

Friedrich Rottmayr, Pullach, near Munich, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a corporation of Germany

Filed Dec. 2, 1960, Ser. No. 73,291
Claims priority, application Germany Dec. 5, 1959
4 Claims. (Cl. 62—23)



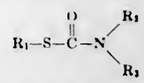
1. Method for avoiding nitric oxide-containing deposits in gas decomposing plants, particularly coke oven gas decomposing plants for the production of hydrogen gas where from the pre-purified gases containing only low-boiling constituents including aliphatic hydrocarbons and carbon monoxide these constituents are separated by condensation in at least two series-connected heat-exchangers arranged at different temperature levels, characterized in that the separated liquids separately collected from each heat-exchanger are conducted in apparatus units separate from said heat-exchangers to be evaporated by indirect heat-exchange with high pressure nitrogen flowing in countercurrent to them, nitrogen being used in a known way after expansion as a liquid washing medium in a wash column in order to wash out the last traces of undesired impurities from the hydrogen gas to be produced.

3,101,263
HERBICIDAL METHOD

Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Filed Apr. 20, 1959, Ser. No. 807,344
7 Claims. (Cl. 71—2.3)

1. The method of combating weeds comprising applying a phytotoxic amount to the soil of a compound:



wherein R_1 is a cycloalkyl radical and wherein R_2 and R_3 are selected from the same and different lower alkyl radicals and the unsubstituted allyl radical.

3,101,264
METHOD OF DELAYING BUD-BREAK IN FRUIT TREES

William I. Boyd, North Brookfield, Mass., Henry J. Eavis, Winchester, Va., and Panos L. Poulos, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 1, 1960, Ser. No. 66,401
2 Claims. (Cl. 71—2.7)

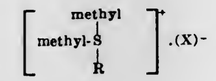
1. Method for delaying bud-break in fruit trees, said method comprising coating the dormant buds of said trees, after the buds have formed but before the buds have reached the vegetative stage, with tetramethylthiuram disulfide in an inert liquid carrier.

3,101,265
METHOD FOR PREVENTING UNDESIRED PLANT GROWTH

Edgar J. Smutny, San Francisco, and Samuel B. Soloway, Linda C. Dowding, and Johannes Van Overbeek, Modesto, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 6, 1961, Ser. No. 93,372
9 Claims. (Cl. 71—2.7)

1. A method for preventing undesired growth of a plant, which comprises bringing that portion of the plant whose further growth is unwanted into contact with an effective amount of a sulfonium salt of the formula:



wherein R represents alkyl of from 1 to 2 carbon atoms and X represents an anion of the group consisting of the acid sulfate ion, HSO_4^-; its esters $R^0SO_4^-$ wherein R^0 contains up to 10 carbon atoms and is a member of the group consisting of alkyl, aryl, and aralkyl, and such hydrocarbon radicals substituted by from one to a plurality of substituents of the group consisting of halogen and nitro; the chlorate ion; the perchlorate ion; the thiocyanate ion; the nitrate ion; the phosphate ion, PO_4^{-3}; its partial esters, $R^0PO_4^{-2}$ and $R^0R^0PO_4^-$ wherein R^0 has the aforesaid meaning; the acid phosphate ions, $H_2PO_4^-$ and HPO_4^{-2}; the cyanide ion, the borate ions, BO_2^-, BO_3^- and $B_4O_7^{-2}$; the carbonate ion; the bicarbonate ion; the chromate ion; the permanganate ion; the arsenate ions, AsO_3^-, $As_2O_7^{-4}$, $H_2AsO_4^-$; the arsenite ions; the carbamate ion; alkane sulfonyl radicals of up to 10 carbon atoms and aryl hydrocarbon sulfonyl radicals of up to 10 carbon atoms; carboxylic acid anions, $(R^0—C(O)—)^-$ wherein R^0 has the aforesaid meaning.

3,101,266
DEALLERGENIZATION AND DETOXIFICATION OF CASTOR BEAN POMACE

Joseph R. Spies, Arlington, Va., Emery J. Coulson, Takoma Park, Md., and Percy A. Wells, Abington, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Sept. 13, 1960, Ser. No. 55,809
7 Claims. (Cl. 71—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)

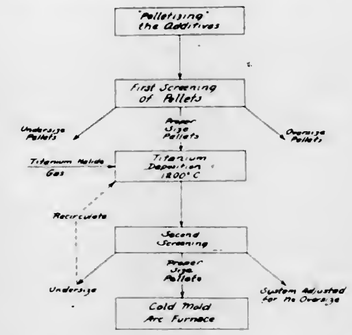
1. A process comprising combining castor bean pomace, water, and calcium hydroxide to give a mixture having a pH in the range of about 9.5 to about 12.5, and heating the alkaline mixture at about 120° C. to 100° C. for a time interval of about eight to sixty minutes to inactivate the castor bean allergen and destroy the toxic components in the pomace.

3,101,267
METHOD OF ALLOYING TITANIUM

Edward J. Dunn, 4 Warner Lane, Thomaston, Conn.

Filed Jan. 28, 1959, Ser. No. 789,758
1 Claim. (Cl. 75—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A method for producing alloys of titanium comprising the steps of pelletizing the additives, screening the additive pellets to obtain pellets of a uniform size and composition, heating said pellets to a halide decomposing temperature in a titanium halide atmosphere to deposit titanium metal thereon, screening the composite pellets to obtain pellets of a selected size and composition, and melting said composite pellets of said selected size and

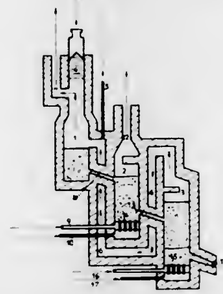


composition, in a cold mold arc furnace to obtain the desired titanium alloy.

3,101,268
CONTINUOUS PROCESS FOR REDUCING IRON ORES

François Eschard, Croissy-sur-Seine, France, assignor to Iustitut Francais du Petrole des Carburants et Lubrifiants, Paris, France

Filed June 23, 1960, Ser. No. 38,289
Claims priority, application France June 26, 1959
7 Claims. (Cl. 75—40)



1. A continuous process for reducing iron ores in the liquid state by means of reducing gases, comprising at least one step of a first stage, of bubbling reducing gases through molten iron ores having a ratio of the number of oxygen atoms combined with iron to the number of iron atoms in the range of from 1.0 to 1.2, fed with smelted crude iron ore at a substantially constant rate of the iron contained therein; at least one step of a second stage of bubbling oxygen and reducing gases, the major part of which consists of methane, through fused iron, fed with said molten iron ores at the same substantially constant rate of the iron contained therein, the molar ratio of oxygen to methane being at most 1.1; and withdrawing liquid iron at said constant rate.

3,101,269
MAGNESIUM BASE ALLOYS

Edward Frederick Emley, Manchester, England, assignor to Magnesium Elektron Limited, Manchester, England

Filed Oct. 9, 1961, Ser. No. 143,839
Claims priority, application Great Britain Oct. 18, 1960
16 Claims. (Cl. 75—168)

1. A wrought magnesium alloy consisting of the following parts by weight:

Zr	0.1–1%.
H	At least 22 cc. per 100 g. alloy.
Mn	0–0.3%.
R.E.	0–3.0%.
Th	0–3.0%.
Be	0–0.01%.
Mg	Remainder.

the rare earth metals and thorium together not exceeding 4.0%, the hydrogen content being at least 80 cc. per gram zirconium content, and the microstructure of the alloy



being characterised in that the distribution of the precipitate does not change in the neighborhood of the grain boundaries.

3,101,270
PHOTOPOLYMERIZATION OF UNSATURATED ORGANIC COMPOUNDS BY MEANS OF RADIATION SENSITIVE IRON COMPOUNDS AS PHOTOINITIATORS

Helene D. Evans, Endwell, and Fritz W. H. Mueller, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,882
17 Claims. (Cl. 96—115)

2. A process of producing a polymeric photographic image which comprises exposing to a pattern of actinic radiations, a photographic element comprising a support, carrying a layer comprising a photographic hydrophilic colloid carrier material having dispersed therein at least one ethylenically unsaturated monomer containing the terminal grouping $CH_2=C<$ which is activated by direct attachment to a negative group, and a light sensitive ferric salt of an aliphatic acid, to form imagewise quantities of activated iron salt in the exposed layer; contacting the exposed layer, with water and a per compound containing an O—O— grouping, to effect polymerization of the monomer in proportion to the amount of activated ferric salt; removing the residual monomer, thereby leaving a polymeric photographic image, the density of which corresponds to the intensity of the exposing radiation pattern.

ERRATUM

For Class 99—78 see:
Patent No. 3,100,909

3,101,271
PROCESS FOR PRESERVING TOMATOES AND THE LIKE

Clifford V. Croall, 624 Coyote Road, San Jose, Calif.

No Drawing. Filed Feb. 13, 1961, Ser. No. 88,619
4 Claims. (Cl. 99—154)

1. The process of preserving the natural red color, flavor, and other physical characteristics of fresh, ripe tomatoes and preparing them for use that comprises the steps of: maintaining said fresh, ripe tomatoes for at least six weeks time in a brine solution of approximately 1.04% SO_2 and 0.52% hydrous lime at atmospheric room temperature, thereafter removing said tomatoes from said brine solution and then soaking them for approximately five consecutive twenty-four hour days in a 0.6% solution of H_2O_2 at atmospheric room temperature changing said solution to a fresh solution of the H_2O_2 each twenty four hours.

3,101,272
PROCESS FOR IMPROVING STRUCTURAL MEMBERS AND IMPROVED STRUCTURAL MEMBERS

Glenn W. Setzer, Johnson City, Tenn.
(21 3rd St., Bristol, Tenn.)

Filed Aug. 4, 1959, Ser. No. 831,670
3 Claims. (Cl. 117—7)



1. A process for improving load-bearing metal structural members comprising, applying molten metal along a portion of the member normally acting in tension under load, and allowing the applied metal to cool and shrink to draw the portion of the member to which said molten metal has been applied into compression and hold it compressed.

3,101,273
BINDING COMPOSITION FOR FLOCK AND PROCESS FOR FLOCKING A TEXTILE FABRIC

Kuno Wagner, Richard Schwaebel, and Wilhelm Graulich, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 6, 1957, Ser. No. 694,751
Claims priority, application Germany Nov. 30, 1956
16 Claims. (Cl. 117—33)

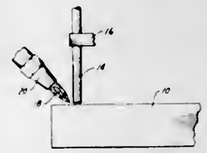
1. As a novel binding agent for adhering a fibrous flock to a textile surface, a composition consisting essentially of a major amount of a latex of a water-insoluble film-forming polymer of a monomer containing a terminal vinyl group, and a minor amount of an N-methylol-polyether prepared by the acid etherification of a poly-N-methylol compound and a monomeric aliphatic polyhydric alcohol.

2. In a process for fluffing a textile surface by coating the latter with a fibrous flock, the improvement comprising employing as the adhesive for said flock the composition of claim 1.

3,101,274
PROCESS OF APPLYING WEAR RESISTANT METAL COATINGS

John M. Beyerstedt, West Allis, and Helmer E. Erickson and Henry H. Talboys, Milwaukee, Wis., assignors to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 23, 1958, Ser. No. 743,808
1 Claim. (Cl. 117—46)



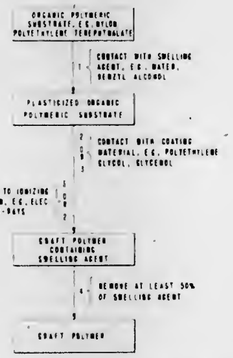
A process for applying a wear resistant metal layer to a relatively high carbon content base metal without excessively increasing the carbon content of the base metal, including the steps of providing a relatively low carbon steel tube surrounding a plurality of abrasive resistant particles, initially carburizing the tube to add a predetermined amount of carbon thereto consistant with the desired hardness of the wear resistant layer, adjusting a heat

source to a generally neutral condition so that carbon will not be added to the base metal in any appreciable quantity therefrom, setting the temperature of the heat source to a sufficiently low value, relative to the melting point of the steel tube and the tube's carbon content, so that when the tube is melted on the base metal the thus formed layer, will have a viscosity such that the abrasive resistant particles will stay in suspension and will not sink to the bottom of the metal layer, applying the neutral heat source and carburized tube to the base metal for a period of time so that the steel will melt and be sufficiently liquid to form a matrix layer on the base metal of sufficient viscosity, during its liquid condition, to hold the particles in suspension, and removing the heat source and allowing the matrix to solidify with the particles distributed therein.

3,101,275
PROCESS OF COATING A SHAPED SWOLLEN POLYMER SUBSTRATE AND TREATING WITH IONIZING RADIATION

Theodore Cairns, Greenville, and Boynton Graham and David Tanner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 15, 1957, Ser. No. 659,227
23 Claims. (Cl. 117—47)



1. In a process of coating, by means of ionizing radiation, a swollen normally-solid organic polymer substrate with a chemically-distinct coating material which is not a swelling agent for said polymer substrate, the improvement which comprises (1) swelling the polymer substrate prior to irradiation by incorporating therein about 3–50% by weight, based on the weight of said substrate, of a non-polymerizable normally-liquid swelling agent, said swelling agent being (*a*) chemically distinguishable from the substrate polymer, the monomeric species of the polymer and the material of the coating, and (*b*) compatible with and capable of causing the substrate polymer to swell at least 10% by volume, and (2) removing at least about 50% of the swelling agent from the polymer substrate after the coating is affixed thereto.

3,101,276
PROCESS FOR GRAFTING POLYMERS TO CELLULOSE SUBSTRATES

Robert William Hendricks, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

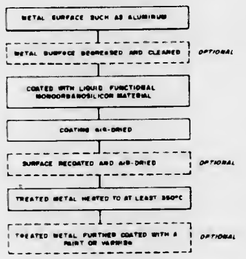
No Drawing. Filed July 8, 1957, Ser. No. 670,369
9 Claims. (Cl. 117—56)

1. In the process of forming polymers on regenerated cellulose film wherein the surface of cellulose film is subjected to ionizing radiation and an ethylenically unsaturated monomer is applied to the surface of the film and is polymerized in situ as a result of the action of said ionizing radiation, the improvement which comprises swelling the regenerated cellulose film by incorporating therein at least 15% by weight, based on the weight of film, of a water-soluble non-polymerizable swelling agent for cellulose, and thereafter subjecting the surface of the resulting swollen film to said ionizing radiation.

3,101,277
METHOD OF RENDERING METALLIC SURFACES CORROSION RESISTANT

Heinz Eder, Gauting, near Munich, and Siegfried Bloeck, Furth, Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

Filed Apr. 27, 1959, Ser. No. 808,899
Claims priority, application Germany Apr. 30, 1958
9 Claims. (Cl. 117—132)



1. The method of imparting corrosion resistance to metallic surfaces selected from the group consisting of aluminum, copper, nickel and magnesium consisting essentially of coating the surface of the metal with an organosilicon composition selected from the group consisting of at least one silane of the formula

$$R_nH_mSi(OR')_{4-n-m}$$

and siloxanes of the unit formula

$$R_nH_mSi(OR')_{4-n-m-x}O_{x/2}$$

wherein each R is selected from the group consisting of monovalent hydrocarbon radicals free of aliphatic unsaturation and halogenated monovalent hydrocarbon radicals free of aliphatic unsaturation, each R' is selected from the group consisting of hydrogen atom and alkyl radicals, m has an average value of 0 to 1 inclusive, n has an average value of .9 to 1.2 inclusive and x has an average value of from 1 to 2 inclusive, the sum of $n+m+x$ being less than 4, and thereafter heating the coated metal to a temperature of 350° C. to 600° C. until the organosilicon coating is cured.

3,101,278
FLAME PROOFING OF CELLULOSIC MATERIALS

George M. Wagner, Lewiston, and Paul E. Hoch, Youngstown, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,388
19 Claims. (Cl. 117—137)

1. A process for preparing a flame retardant cellulosic material which comprises impregnating the cellulosic material with an aqueous resin solution of a tetrakis(α-hydroxyorgano)phosphonium chloride compound, a water-soluble cyclic nitrogen-containing compound selected from the group consisting of triazines and dimethylol cyclic alkylene ureas, a nitrogen-containing salt of a strong inorganic acid, and a sulfite compound capable of combining with an aldehyde, whereby polymerization of the phosphonium compound, the cyclic nitrogen-containing com-

pound and the nitrogen-containing salt is effected, and there is formed an aldehyde which is prevented from accelerating the polymerization by combination of the aldehyde with the sulfite, and, thereafter, drying and curing the thus-impregnated cellulosic material.

3,101,279
FLAME PROOFING OF CELLULOSIC MATERIALS

George M. Wagner, Lewiston, and Paul E. Hoch, Youngstown, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

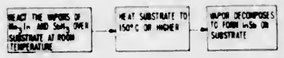
No Drawing. Filed Nov. 21, 1960, Ser. No. 70,389
17 Claims. (Cl. 117—137)

1. A process for preparing a flame retardant cellulosic material which comprises impregnating the cellulosic material with an aqueous resin solution of tetrakis(α-hydroxyorgano)phosphonium chloride compound, a water-soluble cyclic nitrogen-containing compound selected from the group consisting of triazines and dimethylol cyclic alkylene ureas, a strong acid salt of a material selected from the group consisting of magnesium, zinc, and tertiary amines, and a sulfite compound capable of combining with an aldehyde, whereby polymerization of the phosphonium compound, the cyclic nitrogen-containing compound and the strong acid salt is effected and there is formed an aldehyde which is prevented from accelerating the polymerization by combination of the aldehyde with the sulfite, and, thereafter, drying and curing the thus-impregnated cellulosic material.

3,101,280
METHOD OF PREPARING INDIUM ANTIMONIDE FILMS

Benjamin C. Harrison, Edmonton, Alberta, Canada, and Edwin H. Tompkins, Berwyn, Ill., assignors, by mesne assignments, to International Business Machines Corporation, Endicott, N.Y., a corporation

Filed Apr. 5, 1961, Ser. No. 100,969
4 Claims. (Cl. 117—201)



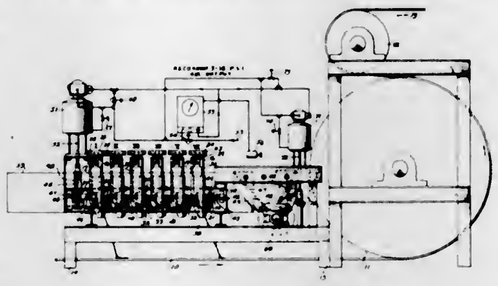
1. The method of forming semiconductive films on a substrate placed in an evacuated chamber comprising the steps of, reacting vapors of trimethylindium and stibine over said substrate at room temperature and at a pressure of about 2 mm. to form a coating on said substrate and heating said substrate to a temperature in the range of 150° C. for decomposing said coating to form an indium antimonide film on said substrate.

3,101,281
MEANS FOR APPLYING SLATE GRANULES TO SHINGLES

William M. Bowen III, Paoli, Pa., assignor to Certain-teed Products Corporation, Ardmore, Pa., a corporation of Maryland

Filed Oct. 27, 1960, Ser. No. 65,371
7 Claims. (Cl. 118—7)

5. A machine for applying slate granules to a moving strip of shingle material comprising a supply hopper for the granules, a hopper opening adapted to discharge granules onto the moving strip, a gate controlling said opening, an adjustable stop for controlling the degree of gate opening, means responsive to changes in the speed of strip movement adapted to adjust the position of the stop in relation to the speed, and means for opening the gate to the degree permitted by the position of said stop, the degree of gate opening being such as to permit discharge of approximately the same quantity of the slate granules

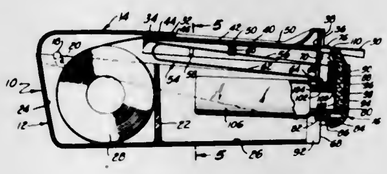


per unit of strip length regardless of the speed of strip movement.

3,101,282
POSTAGE STAMP DISPENSER

Robert B. Glassco, Arcadia, and Burnie M. Craig, Pasadena, Calif., assignors to Bert M. Morris Co., Los Angeles, Calif., a corporation of California

Filed July 6, 1959, Ser. No. 825,053
4 Claims. (Cl. 118—40)



1. In a device for dispensing stamps from a strip coiled into a roll and coated with a water soluble adhesive on one side, the combination of: a housing including two housing members and provided with a chamber therein for the roll, one of said housing members being provided therein with a passageway for the strip which has an inlet end in communication with said chamber and an outlet end extending through said one housing member to the exterior of said housing at one end thereof; pivot means interconnecting said housing members at the opposite end of said housing; spring means engaging said housing members and biasing same apart; and moistening means carried by said housing at said one end thereof for moistening the adhesive coated side of the strip as it is moved from said outlet end of said passageway, said moistening means including locking means engageable with said housing members for limiting movement of said housing members apart under the influence of said spring means, said one housing member having a hole therein at said one end of said housing and the other of said housing members having a slot therein at said one end of said housing and registering with said hole, said locking means on said moistening means being disposed in said hole and said slot.

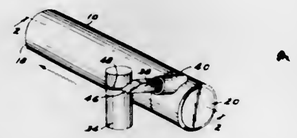
3,101,283
INKING DEVICE

Eugene G. Brown, 14906 Prevost, Detroit, Mich.

Filed Jan. 18, 1961, Ser. No. 83,528
1 Claim. (Cl. 118—268)

An inking device for mounting in a typewriter or the like machine having a ribbon inking roller comprising: an ink cartridge, a wick tube on the cartridge opening thereinto at one end and projecting laterally from the cartridge, a wick in the tube having one end immersed in ink in the cartridge and the other end projecting beyond the outer end of the tube, said wick being wedge-shaped at its outer

end to provide a surface portion for tangentially engaging the ribbon inking roller, said surface portion being of wedge shape diverging from a point at the extreme end of the wick rearward along the wick toward the end of the tube whereby the band width of ink applied to the

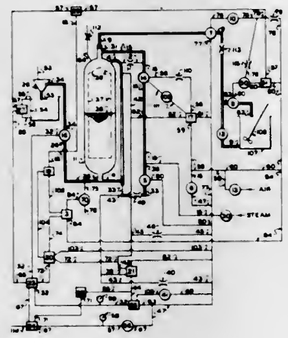


roller may be varied by shifting such surface portion tangentially relative to the surface of the roller to increase or decrease the area of contact between the wick and roller, and means for supporting the wick for shiftable movement tangentially of the roller to vary the band width of ink applied to the roller.

3,101,284
IMPROVED METHOD FOR CONTINUOUS HEATING OF LIQUIDS

Oliver R. Etheridge, Decatur, Ill., assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

Filed Feb. 2, 1959, Ser. No. 790,487
16 Claims. (Cl. 127—69)

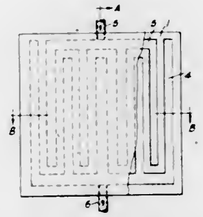


1. The method for instantaneously heating a liquid and then heating every portion of it uniformly for a selected time at a selected temperature that comprises the steps of (1) establishing in series a mixing zone, a baffle zone and a detention zone of variable height below the baffle zone; (2) in said mixing zone, turbulently mixing a condensable vapor and said liquid under conditions to condense at least a major proportion of the vapor to form a mixed stream; (3) in said baffle zone, receiving said mixed stream and flowing it downwardly to said detention zone while decreasing the mixed stream flow velocity and distributing the flow over the cross section of said detention zone; (4) in said detention zone, receiving the mixed stream from said baffle zone, temporarily retaining it as a relatively quiescent volume and establishing a selected liquid level thereof; (5) maintaining the selected liquid level by modulating the rate of withdrawing the liquid from the bottom of the detention zone in response to the head of liquid in the detention zone; and (6) in response to the pressure in said baffle zone regulating the pressure of the condensable vapor delivered to said mixing zone to maintain the selected temperature in said detention zone.

3,101,285
FUEL CELLS

Anthony Desmond Shand Tantram and Bryan Sidney Harris, Dorking, England, assignors to National Research Development Corporation, London, England, a British corporation

Filed Mar. 27, 1961, Ser. No. 98,441
Claims priority, application Great Britain Apr. 1, 1960
10 Claims. (Cl. 136—120)



1. An electrode for a fuel cell comprising a support member in the form of a thin flate plate, at least one face of the support member being shaped to define two sets of grooves, one set for supplying fresh gas and the other set for removal of spent gas, the two sets of grooves being interleaved, a porous layer of electrode material attached to the said face and means for supplying fresh gas to one set of grooves and means for exhausting spent gas from the other set of grooves.

3,101,286
PHOSPHATE COMPOSITION AND METHOD FOR COATING METALLIC SURFACES

Earl R. Reinhold, Levittown, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Pennsylvania

Filed Nov. 16, 1960, Ser. No. 69,737
10 Claims. (Cl. 148—6.15)



1. An aqueous solution for coating a continuous hot-dipped, zinc-coated, ferrous surface the coating-producing ingredients of which consist essentially of about 0.5% to 2.5% phosphate ion, a metal ion selected from the group consisting of the zinc ion and the manganese ion in a proportion at least sufficient to form dihydrogen phosphate with said phosphate ion, 0.01 to 0.4% nickel ion, at least one oxidizing ion selected from the group consisting of the nitrate ion and the nitrite ion in a concentration of about 0.2 to 1% nitrate ion and 0.0002% to 0.008% nitrite ion, and a titanium containing ion in a proportion sufficient to produce at least 0.009% soluble titanium.

3,101,287
CONDITIONING TREATMENT FOR METAL SURFACES

Leo P. Curtin, Cranbury, N.J.; Leo V. Curtin, executor of said Leo P. Curtin, deceased

No Drawing. Filed Jan. 3, 1961, Ser. No. 80,048
1 Claim. (Cl. 148—6.16)

A process for the application of bonding coats of the trivalent chromium type to a metal selected from the class consisting of magnesium, aluminum, zinc, ferrous metals and their alloys which comprises the following sequence of steps: (1) cleaning the surface of the metal with a hot, alkaline solution followed by a water rinse, (2) wetting the metal surface with an aqueous conditioning solution at a temperature of from about 20° C. to about 95° C. for a time from about one-quarter minute to about five minutes, said conditioning solution consisting essentially of from about 0.3 percent to about 10.0 percent of an orthophosphoric acid compound selected from the class consisting of dihydrogen phosphates of di- and trivalent metals at least as high as iron in the electromotive series, ammonium dihydrogen phosphate and free phosphoric acid and from about 0.02 percent to about 0.10 percent of a compound comprising in the molecule an open-chain hydrocarbon radical of from about 7 to about 21 carbon atoms and a polyoxyethylene chain of at least 2 oxyethylene groups, (3) without rinsing off the conditioning solution, wetting the metal surface with a hexavalent chromium bonding coat solution containing a reducing agent for said hexavalent chromium,, and (4) heating the metal carrying a film of bonding coat solution on its surface to a temperature above 100° C. to bring about drying and reduction of the hexavalent chromium with formation of the trivalent chromium bonding coat.

3,101,288
EXPLOSIVE COMPOSITION

David L. Coursen, Newark, Del., and Frank A. Loving, Wenonah, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 18, 1957, Ser. No. 653,533
3 Claims. (Cl. 149—21)

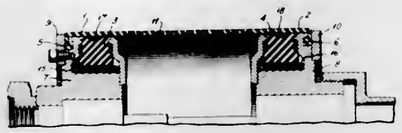
1. A gelatin dynamite composition comprising about from 20 to 80% by weight of nitroglycerin, about from 0.5 to 6% by weight of nitrocellulose, about from 10 to 70% by weight of an inorganic oxidizing salt, and about from 0.25 to 4% by weight of the entire composition of a water and nitroglycerin insoluble polymerized thermosetting resin selected from the group consisting of urea-formaldehyde and phenol-formaldehyde resins in the form of thin-walled, hollow, spherical balloons, said balloons having a bulk density of less than about 0.3 gram/cc. and a diameter between 2 and 360 microns, said gelatin dynamite composition having a bulk density of greater than 1.

3,101,289
METHOD OF MAKING EXPANSIBLE TUBULAR DIAPHRAGMS FOR TIRE BUILDING DRUMS

Dario Giletta and Antonio Pacciarini, Milan, Italy, assignors to Pirelli S.p.A., Milan, Italy

Filed Apr. 20, 1960, Ser. No. 23,482
Claims priority, application Italy Apr. 24, 1959
6 Claims. (Cl. 156—133)

1. A process for building up a tubular diaphragm which is elastically expansible in the radial direction from a predetermined minimum diameter to a predetermined maximum diameter which comprises disposing a first sheet of uncured rubber about a cylindrical body having a diameter not greater than said minimum diameter, increasing the diameter of the cylindrical body to said maximum diameter, winding about said first sheet of uncured rubber a sheet of a rubberized weftless fabric whose threads are inextensible and parallel to one another and to the axis of the cylindrical body, spirally winding about the central zone of said fabric a cord formed of one or more extensible rubber threads covered with a braid of inextensible material, subjecting said cord to a tension



stress corresponding to the stress which will be imparted to it whenever the diaphragm is brought to its maximum diameter, applying over said cord a second sheet of uncured rubber and then an elastic sheath, bringing the cylindrical body to its original diameter, and vulcanizing the assembly.

3,101,290
METHOD OF JOINING THE ENDS OF A MULTI-PLY LAMINATED BELT

Francis Victor Frederic Paul, Paris, France, assignor to Societe Anonyme dite: Pneumatiques & Caoutchous Manufacture Kleber Colombes, Place Valmy, Colombes, Seine, France

Original application Apr. 1, 1957, Ser. No. 649,665. Divided and this application Mar. 17, 1958, Ser. No. 725,462
Claims priority, application France May 31, 1956
2 Claims. (Cl. 156—137)



1. The method of forming an endless belt by joining the ends of a multi-ply laminated belt formed from a plurality of plies including a reinforced ply defined by a plurality of separate flexible longitudinal armature units embedded in a mass of bonding compound which comprises the steps of removing the plies other than said reinforced ply from said reinforced ply over substantially equal longitudinal lengths at each of said ends of the laminated belt to be joined, cutting the thus uncovered end portions of said reinforced ply into complementary internestable sawtooth configurations with each side of a sawtooth comprising an equal number of equally displaced free end portions of said armature units with at least two adjacent armature units of equal length at each sawtooth apex and at least two adjacent armature units in each valley between adjacent apices, internesting the sawteeth of the two ends of said belt with an apex of one end being received in a valley of the other end, replacing the removed plies upon said internested ends and bonding and curing the resultant assembly.

3,101,291
ARTIFICIAL CHRISTMAS TREES

Michael J. Lalick, 3700 W. 97th St., Evergreen Park, Ill.

Filed Aug. 12, 1960, Ser. No. 49,242
5 Claims. (Cl. 161—24)

1. In an artificial tree having a plurality of metallic tree branches, a metallic tree trunk, and means for mounting said branches upon said tree trunk comprising, metallic collars which are selectively affixed in axial spaced relation upon the tree trunk which axial spacing becomes progressively less in the direction of the lower end of the tree, said collars each having integral lugs which are adapted to removably receive a metallic tree branch, said



lugs each being manually bendable about a bend line to vary the angle of the lug relative to the axis of the tree trunk.

3,101,292
METHODS FOR MAKING BONDED NON-WOVEN FIBROUS PRODUCTS AND THE PRODUCTS OBTAINED

Benjamin B. Kine, Elkins Park, and Nathaniel A. Matlin, Levittown, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed May 20, 1960, Ser. No. 30,448
9 Claims. (Cl. 161—227)

1. As an article of manufacture, a non-woven fibrous product in which the fibers are distributed in random array, the fibers of which consist of fibers selected from the group consisting of cellulosic fibers, polyamide fibers, vinyl resin fibers, and polyester fibers, fibers in the product being bonded together by a binder, substantially uniformly distributed through the body of the product, consisting essentially of a water-insoluble copolymer, having an apparent second order transition temperature of not over 30° C., of copolymerizable monoethylenically unsaturated molecules comprising 3 to 50% by weight of monomer molecules selected from the group consisting of methacrylyl dicyandiamide and acrylyl dicyandiamide in which the acrylyl group has the formula

$$H_2C{=}CHC(=O)-$$

and the methacrylyl group has the formula

$$H_2C{=}C(CH_3)C(=O)-$$

and at least 50% by weight of at least one monomer selected from the group consisting of styrene, chlorostyrene, p-methylstyrene, vinyl chloride, vinyl acetate, acrylamide, methacrylamide, acrylonitrile, methacrylonitrile, esters of acrylic acid, and esters of methacrylic acid, said polymer being cured to an infusible condition in which it is also insoluble in organic solvents, said product being substantially resistant to laundering and dry-cleaning, the amount of binder being from 20 to 200% of the weight of fibers in the product.

3,101,293
CONTROLLED RELEASE COMPOSITIONS AND THEIR PREPARATION

William E. Gaunt, Shaker Heights, and Robert P. Tansey, Hudson, Ohio, assignors to Strong Cobb Arner Inc., Cleveland, Ohio, a corporation of New York

No Drawing. Filed Apr. 28, 1961, Ser. No. 106,152
12 Claims. (Cl. 167—82)

1. A process for preparing a controlled release composition which regulates the rate of release of a therapeutic agent into alimentary fluids varying in pH from the acidity of gastric juice to the alkalinity of intestinal fluids which comprises combining a solution of an acid-resistant alkali-susceptible material in a non-polar/polar solvent mixture containing at least about 50% non-polar solvent with a separate solution of an alkali-resistant acid-susceptible material in the same solvent mixture, incorporating a therapeutic agent into one of said solutions prior to combining the solutions, removing solvent from the gel structure which forms and breaking the dried gel into particles, whereby each gel particle has the therapeutic agent substantially uniformly dispersed therethrough in discrete form.

3,101,294
PROCESS FOR FORMING A WEB OF SYNTHETIC FIBERS

Anton Fridrich Fridrichsen, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 17, 1959, Ser. No. 860,110
5 Claims. (Cl. 162—146)

1. In the process for forming a non-woven, fusion bonded, composite sheet from synthetic polymer staple fiber and fibrid binding agent, said polymer being selected from the group consisting of poly(hexamethylene adipamide), polycaproamide, polyethylene terephthalate, copolymers containing hexamethylene adipamide and caproamide units, and copolymers containing ethylene terephthalate and ethylene isophthalate units, by concomitantly depositing an aqueous slurry of a mixture of said staple fiber and at least 10% by weight of fibrid binding agent to form a sheet, drying, and thereafter heat calendering the sheet to increase the bonding action of the fibrid binding agent upon the staple fibers; the improvement for providing a stronger and more uniform sheet without destructive coalescense of the fibrous character of the fibrid binding agent and staple fibers wherein said calendering is conducted (*a*) upon said sheet while containing an initial amount of at least 10% by weight of water and (*b*) at a temperature at least 20° C. below the melting point of the lowest melting polymeric component in the sheet, and between about 105° C. and about 140° C., and at a nip pressure of at least 5 pounds per inch.

3,101,295
PICKING AND GINNING AID

Frederick T. Lense, Mauldin, S.C., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 5, 1961, Ser. No. 136,170
15 Claims. (Cl. 117—139.5)

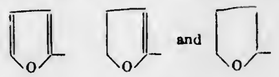
1. The method in the conditioning of raw cotton fibers, which comprises subjecting the seed cotton fibers, prior to ginning, to a uniform application of 0.05 to 10 wt. percent, based on the weight of the raw cotton fibers, of a C_{13} to C_{32}, branched chain, monohydric, primary alcohol, wherein said alcohol is a liquid at all temperatures between 40° and 115° F.

3,101,296
SYNERGISTIC INSECTICIDAL COMPOSITION

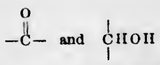
Mortimer T. Harvey, South Orange, N.J., assignor to Harvel Research Corporation, a corporation of New Jersey

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,551
9 Claims. (Cl. 167—24)

1. In an insecticidal composition, in combination (*a*) insecticidal material selected from the group consisting of the pyrethrins, rotenones and halogenated hydrocarbons and (*b*) a synergist compound comprising a completely saturated carbon chain having a terminal radical at each end thereof, one of said terminal radicals being selected from the group consisting of the three rings:



and the other terminal radical being selected from the group consisting of the aforesaid three rings and alkyl, said carbon chain including as a part thereof intermediate said terminal radicals a radical selected from the group consisting of



which intermediate radical is separated from the terminal radical when the terminal radical is one of the aforesaid three rings by the group $—CH_2—CH_2—$ forming a part of said carbon chain and which intermediate radical is attached directly to the terminal radical when the terminal radical is the said alkyl group.

3,101,297
DIAPER WASHING COMPOSITION

Joseph Hack, Baltimore, Md., assignor to Sir Properties, Inc., a corporation of Maryland

No Drawing. Filed May 15, 1961, Ser. No. 109,876
3 Claims. (Cl. 167—30)

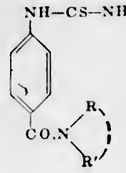
1. The process of making an anti-bacterial washing composition which comprises mixing a first solution of approximately 9% of a bleaching component, .7% of a cationic stabilizing component for neomycin sulphate, .6% of N,N,N',N' tetrakis (2-hydroxy propyl) diamino dioleate methosulphate and 89% water, mixing a second solution of 2% tetra-potassium pyrophosphate and 98% water, combining the two solutions into a composition of 65.5% by weight of the first and 24.4% by weight of the second in the final volume, and adding to the combined solutions an n-alkyl dimethyl benzyl ammonium chloride in an amount of approximately 10% by weight of the final volume.

3,101,298
CHEMOTHERAPEUTIC AGENTS AND PROCESSES FOR THEIR PRODUCTION

André Girard, Paris, France, assignor, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

Filed May 7, 1959, Ser. No. 811,742
Claims priority, application France June 6, 1958
14 Claims. (Cl. 167—65)

1. Amide derivatives of ω-(p-carboxy-phenyl)-dithiobiuret having the structural formula



3,101,299
SILICA-GEL POWDER TABLET COMPOSITIONS

Marcel Ferrand, Lyon, France, assignor to Societe Parisienne d'Expansion Chimique S.P.E.C.I.A., Paris, France, a French body corporate

No Drawing. Filed Oct. 30, 1961, Ser. No. 148,743
Claims priority, application France Nov. 17, 1960
3 Claims. (Cl. 167—82)

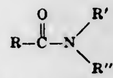
2. A composition for tableting comprising a powdered composition containing a pharmaceutically active substance, a diluent therefor and at most 0.1% by weight of silica gel in the form of microfine powder.

3,101,300
CLEAR MINERAL OIL IN WATER EMULSION FOR HAIR APPLICATION

Bernard Siegal, Berkeley Heights, Rita M. Petgrave, Wayne, and Paul Thau, Westfield, N.J., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,769
8 Claims. (Cl. 167—87)

1. A clear transparent gel composition consisting essentially of, by weight: (*a*) from about 15% to about 30% of mineral oil; (*b*) from about 40% to about 70% of water; (*c*) from about 5% to about 12% of a higher fatty acid alkylolamide having the following generic formula:



wherein R is a fatty acid residue containing from about 9 to about 13 carbon atoms, R' is a member selected from the group consisting of hydrogen and a lower alkyl monohydric radical having from 1 to 4 carbon atoms, and R'' is a lower alkyl monohydric radical having from 1 to 4 carbon atoms; (*d*) from about 6% to about 20% of a non-ionic ether containing surfactant having the generic formula:

$$RO(C_2H_4O)_nH$$

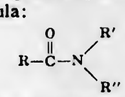
wherein R is an aliphatic radical containing from about 8 to about 18 carbon atoms selected from the group consisting of said non-ionic ether containing surfactant wherein (*n*) is an integer having a value of from about 10 to about 18, and a mixture of said ether surfactant wherein (*n*) varies from 2 to about 30 for each member of the mixture with the average value for (*n*), based on the weight of the ether employed, being from about 10 to about 18 and (*e*) from about 2% to about 4% of lanolin alcohols.

3,101,301
TRANSPARENT WATER AND MINERAL OIL GELS AS HAIR CONDITIONERS

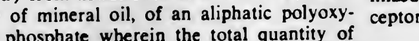
Bernard Siegal, Berkeley Heights, N.J., and Rita M. Petgrave, New York, N.Y., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 11, 1962, Ser. No. 194,201
13 Claims. (Cl. 167—87)

1. A clear transparent gel composition comprising by weight: (*a*) from about 10% to about 35% of mineral oil; (*b*) from about 50% to about 85% of water; (c) from about 10% to about 60%, based on the quantity of mineral oil, of a higher fatty acid alkylolamide having the following formula:



wherein R is a fatty acid residue containing from about 9 to about 13 carbon atoms, R' is a member selected from the group consisting of hydrogen and a lower alkyl monohydric radical having from 1 to 4 carbon atoms, and R'' is a lower alkyl monohydric radical having from 1 to 4 carbon atoms; (*d*) from about 10% to about 60%, based on the quantity of mineral oil, of an aliphatic polyoxyalkylene glycol phosphate wherein the total quantity of said amide and said phosphate is about 40% to about 80%, based on the quantity of mineral oil and wherein the said phosphate has the following formula:



wherein R is an aliphatic radical having from about 8 to about 18 carbon atoms, *n'* is an integer having a value of 2 to about 15 and *n* is an integer having a value of 1 to 3 and (*e*) from about 15% to about 30% based on the sum total quantity of said amide and said phosphate, of lanolin alcohols.

3,101,302
PURIFICATION AND RECOVERY OF FUNGAL AMYLASES

George E. Inglett, Clarendon Hills, Ill., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware

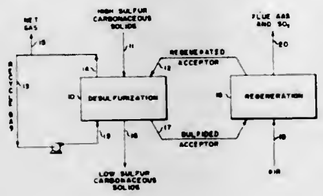
No Drawing. Filed Nov. 30, 1960, Ser. No. 75,640
2 Claims. (Cl. 195—66)

1. A process for the purification and recovery of fungal amylase preparations obtained from an organism selected from the group consisting of members of the Aspergillus genus and members of the Rhizopus genus which comprises the following steps: first, mixing such preparations in aqueous medium with a clay mineral; second, adding a water miscible organic solvent selected from the group consisting of acetone, ethanol and 2-propanol in amount sufficient to precipitate the starch hydrolyzing enzymes on the clay mineral in water soluble form; third, separating the resultant clay mineral-enzyme mixture from the liquid; the ratio of solvent to water being between 1:1 and 2:1.

3,101,303
PROCESS FOR REGENERATING MANGANESE OXIDE ACCEPTORS FOR HYDROGEN SULFIDE

James D. Batchelor, Springfield, Va., and George P. Curran and Everett Gorin, Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Continuation of application Ser. No. 715,136, Feb. 13, 1958. This application Apr. 29, 1960, Ser. No. 26,927
7 Claims. (Cl. 202—31)

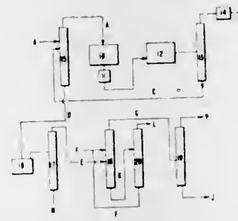


1. In a process employing solid acceptors containing manganese oxide for absorbing hydrogen sulfide at temperatures above about 1100° F. to form manganese sulfide, followed by oxidizing the manganese sulfide to manganese oxide by reaction with oxygen, wherein undesired higher oxides of manganese are formed, in said last-mentioned step the improvement which minimizes formation of said higher oxides, comprising controllably oxidizing only about 85 to 98 percent of the sulfide sulfur in said sulfided acceptors so as to maintain about 2 to 15 percent of the manganese in the form of MnS, whereby a major portion of the manganese is in the form of MnO and formation of higher oxides of manganese is minimized, and recovering the thus-treated regenerated acceptors for reuse under H_2S-absorbing conditions.

3,101,304
DISTILLATION PROCESS FOR FLUOROCARBONS

Herbert Albert Wiist, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 28, 1960, Ser. No. 25,362
17 Claims. (Cl. 202—39.5)



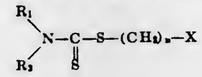
1. A process for separating volatile perfluorocarbons of one to five carbon atoms from close boiling and azeotrope forming fluorocarbons of one to five carbon atoms containing, in addition to fluorine, elements selected from the class consisting of hydrogen, chlorine and bromine, by extractive distillation in the presence of a compound, liquid at distillation conditions and selected from the class consisting of benzene, alkyl benzenes, chlorinated aliphatic hydrocarbons, chlorinated benzenes and chlorinated alkyl benzenes.

3,101,305
ACID COPPER PLATING BATH

Emil Roth and Gregor Michael, Bielefeld, Germany, assignors to Riedel & Co., Bielefeld, Germany, a German firm

No Drawing. Filed Mar. 12, 1958, Ser. No. 720,824
Claims priority, application Germany Mar. 16, 1957
6 Claims. (Cl. 204—52)

1. An acid copper plating bath for producing smooth and levelled copper coatings of high brilliancy, said bath containing, as brightening agent, a basic brightening agent selected from the group consisting of dithiocarbamic acid compounds of the formula



wherein

R_1 and R_2 are members selected from the group consisting of hydrogen, aliphatic, and aromatic residues,
X is a member selected from the group consisting of the hydroxyl group, the carboxyl group, the sulfonic acid group, and the carboxylic acid ester group, and
n is an integer between 1 and 10,

and heterocyclic nitrogen-containing compounds, at least

one of the carbon-linked hydrogen atoms of said heterocyclic compounds being substituted by the

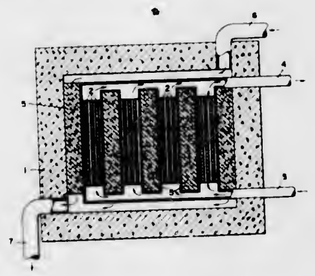
$$-S-(CH_2)_n-X$$

group, X and *n* in said group representing the same members and numbers as indicated above, and between about 0.001 g./l. and about 0.5 g./l. of a levelling agent consisting of an acid-soluble condensation product of thiourea, an aliphatic aldehyde component consisting of formaldehyde, and a compound having at least two amino groups in its molecule.

3,101,306
RETICULATED POLYVINYL CHLORIDE AND METHOD OF MAKING SAME
Constant Georges Wippler, Epinay-sur-Orge, France, assignor to Compagnie de Saint-Gobain, Paris, France
No Drawing. Filed Mar. 24, 1958, Ser. No. 723,142
Claims priority, application France Apr. 11, 1957
17 Claims. (Cl. 204—154)

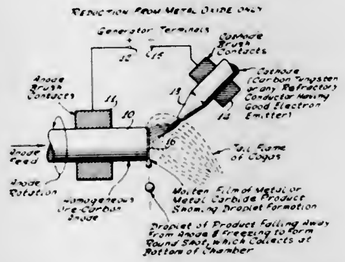
1. The method of preparing uncolored reticulated polyvinyl chloride, which comprises mixing polyvinyl chloride with a non-polymerizable organic solvent, which swells the polyvinyl chloride and which forms peroxide groups spontaneously upon contact with air, and subjecting such mixture to the action of high energy ionizing radiation in the presence of an oxygen-containing gas until at least 5% reticulation has occurred.

3,101,307
UTILIZATION OF PROTON RECOIL ENERGY IN NEUTRON IRRADIATED VAPOR PHASE ORGANIC REACTIONS
Frank T. Barr, Summit, and Thomas A. Reiter, Chatham, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 773,956
8 Claims. (Cl. 204—154.2)



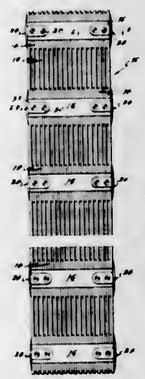
1. A vapor phase hydrocarbon conversion process wherein organic materials are converted by absorption of energy from recoil protons which comprises maintaining in a reaction zone solid hydrogen bearing fibers having a diameter in the range of 0.5–20 microns, a true density in the range of 0.5 to 2 grams per centimeter^3, and a ratio of hydrogen nuclei to other nuclei greater than 0.9, said fibers occupying in the range of 1 to 80% of the free volume of said reaction zone, exposing said reaction zone to irradiation by fast neutrons having an average energy above 100 e.v., the average fast neutron flux in said reaction zone being in the range of 10^9 to 10^{16} neutrons per centimeter^2 per second, passing said vaporous organic material through said reaction zone so irradiated wherein the density of said organic material during conversion is less than 0.5 gram per centimeter^3, removing irradiated vapors from said reaction zone and recovering product therefrom.

3,101,308
PROCESS FOR REDUCTION OF ORES TO METALS, ALLOYS, INTERSTITIAL AND INTERMETALLIC COMPOUNDS
Charles Sheer, Teaneck, N.J., Samuel Korman, Hewlett, N.Y., and James O. Gibson, New Providence, N.J., assignors to Sheer-Korman Associates, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 11, 1960, Ser. No. 61,870
7 Claims. (Cl. 204—164)



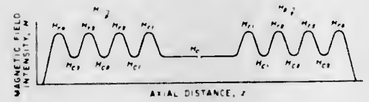
1. A process of reducing an oxide ore which comprises forming an anode of carbon and a stoichemical quantity of ore to produce the metal product desired, maintaining a hierarc between a cathode and said anode, while limiting the temperature of the anode face at the arc crater to a point between the boiling point and the melting point of the metal product, whereby the said metal product accumulates in molten form upon the face of the anode until it drips off, while the other products are carried into the arc as vapors.

3,101,309
FASTENER FOR AN ASSEMBLY OF PLATES
Edward F. Groh, Naperville, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 25, 1962, Ser. No. 168,854
3 Claims. (Cl. 204—193.2)



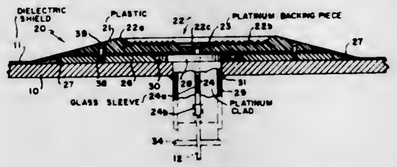
1. In an assembly comprising parallel plates having a plurality of registered keyways opening in side edges of the plates, spacers located between successive plates and provided with keyways in register with the keyways in the plates, and keys inserted in the keyways, the keyways being undercut to keep the keys from moving laterally out of the keyways, the combination with the outermost plates and the keys, of a plurality of spacing retainers removably attached one to each end of each of said keys, each of said spacing retainers having a convex body portion and a convex terminal portion at right angles thereto, said terminal portion being extended in the plane of the end of the key into overlapping relationship with the outermost plate, each of said convex portions being extended outwardly from the key and being convex in sections taken longitudinally of the assembly.

3,101,310
MAGNETIC END CLOSURES FOR PLASMA CONFINING AND HEATING DEVICES
Richard F. Post, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Feb. 1, 1962, Ser. No. 172,053
9 Claims. (Cl. 204—193.2)



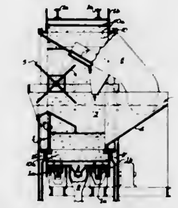
1. In an open-ended device for the magnetic confinement and heating of plasma to high kinetic temperatures and having at least means for establishing in an evacuated space a reaction zone defined by a magnetic confinement field region for nuclear reactions between the constituents of gaseous plasma therein, the improvement comprising means including a plurality of solenoids spaced in generally coaxial parallel alignment and disposed in each of the opposite end regions of said reaction zone for generating therein an axially symmetric magnetic field having a plurality of axially spaced nodal reflector field regions of increased magnetic intensity terminally bounding said reaction zone and defining a plurality of charged particle trapping cells of lesser intensity interposed between said reflector field regions, said solenoids being spaced so that the nodal fields generated thereby are successively spaced to be at least about the mean free path distance of interparticle collisions in said charged particle trapping cells whereby the probability that particles escaping axially from the reaction zone through the innermost reflector field regions will successively penetrate all of said reflector field regions is low, and more effective confinement of the plasma is attained.

3,101,311
ENERGIZED ANODE ASSEMBLY
Herman S. Preiser, Springfield, and Frank E. Cook, Arlington, Va., and Boris H. Tytell, Mattapan, Mass., assignors to Chemionics Engineering Laboratories, Inc., a corporation of North Carolina
Original application Dec. 28, 1956, Ser. No. 631,377, now Patent No. 2,910,419, dated Oct. 27, 1959. Divided and this application May 29, 1959, Ser. No. 817,009
8 Claims. (Cl. 204—196)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An integral anode assembly for use in impressed current cathodic protection systems for underwater protection of the hulls of ships and the like comprising, an inert anode, said anode being formed of a platinum disc of foil thickness, said disc having a grid like surface on the face thereof to facilitate the release of gaseous products of electrolysis, a streamline holder for the anode, said holder being formed of dielectric, anticorrosive, chemically resistant plastic resin and having a cavity in one surface thereof for reception of the anode, means interconnecting said anode, said holder and said hull, said means comprising means for anchoring the anode disc within the cavity of the holder with one major surface of the disc exposed to ambient sea water, said anode holder being provided with a hole extending through the thickness thereof whereby electrical contact can be made between the under surface of the platinum disc and the current source of the cathodic protection system and means for insulatedly attaching the holder to the hull.

3,101,312
DRUM SINK SEPARATORS
Franz Brinkmann, Dortmund, Germany, assignor to SKB Schuechtermann & Kremer-Baum Aktiengesellschaft fuer Aufbereitung, a corporation of Germany
Filed Apr. 28, 1959, Ser. No. 809,520
Claims priority, application Germany Nov. 23, 1957
10 Claims. (Cl. 209—172)



1. A drum sink separator for separating solids by means of a heavy liquid, which comprises a rotatable drum means, said drum means having a central charging opening defined in one side and a central overflow opening in the other side, scoop means disposed on the inside peripheral wall of said drum means and rotatable therewith, a stationary charging weir means adjacent and extending from said central charging opening and a stationary overflow weir means adjacent and extending from said central overflow opening, at least a portion of at least one of said weir means extending axially outwardly from the corresponding central opening of said drum means, the entirety of the lower portion of said rotatable drum means continuously defining a common trough zone with both said weir means extending from the central openings, and means for continuously removing the separated solids portion from the remainder of the charged material.

3,101,313
HYDRO CYCLONE
Maurice D. Woodruff, Springfield, Ohio, assignor to The Bauer Brothers Co., Springfield, Ohio, a corporation of Ohio
Filed Apr. 1, 1959, Ser. No. 803,435
5 Claims. (Cl. 209—211)



3. A hydrocyclonic device for separating a liquid suspension of solids into accepted and rejected fractions, including a shell providing a separating chamber having an inlet for tangential admission of a liquid suspension, a nozzle having a through opening mounted to project in

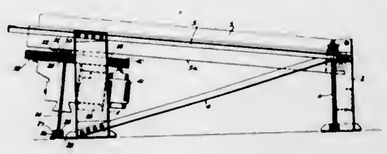
said chamber and define an opening therefrom adjacent said tangential inlet for discharge of accepted fractions, said nozzle being in spaced relation to the chamber wall, means defining an opening from said chamber at its opposite end for discharge of rejected fractions, said chamber, nozzle and means defining the tangential inlet to said chamber being so arranged that on tangential admission of a liquid suspension a swirling flow thereof is produced adjacent the chamber wall to carry rejected fractions through the opening at said opposite end of said chamber and accepted fractions to and through said nozzle and means on said nozzle adjacent the inlet thereto in said chamber providing an external lateral projection to inhibit flow of dirt rich fractions through said nozzle under the influence of eddy currents consequent to delivery of the suspension through said tangential inlet.

3,101,314
SCREEN DECK CONSTRUCTION
Louis W. Johnson, 3440 Franklin Blvd., Eugene, Oreg.
Filed Sept. 21, 1961, Ser. No. 139,785
8 Claims. (Cl. 209—319)



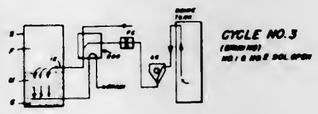
2. In a vibrating screen apparatus, a screen deck including a frame supporting a screening means on which the material to be screened is deposited, said screening means including at least two juxtaposed sections of screen each extending longitudinally of the deck frame substantially coextensively therewith, said sections having downwardly projecting portions on the inner margins thereof, an elongate longitudinally extending member disposed below the level of the screen section and fixedly secured at least at its ends and several intermediate points to said frame and providing an upwardly facing longitudinal groove, said portions projecting downwardly into said groove, clamping means engaging the top surfaces of said margins and being connected to said member at a plurality of places including at least several places intermediate the ends of said member for clamping said margins against portions of said member adjacent said groove, and means connected to each of the outer margins of the sections and applying tension to said sections independently of one another.

3,101,315
GYRATING SCREEN
Robert A. Denovan, Dalkeith, Ontario, Canada, assignor to Denovan Ltd., Dalkeith, Ontario, Canada, a corporation of Canada
Filed Oct. 24, 1960, Ser. No. 64,374
2 Claims. (Cl. 209—332)



1. A gyrating screen machine comprising, a base, an inclined screen body having a screening surface, a head end, and a discharge end, means located wholly below said body for imparting gyratory movement thereto, comprising a driven shaft, a balance wheel fixed to said shaft, a crank on said balance wheel and a drive bearing connecting said crank to said body, said drive bearing constituting a support for said head end, a supporting frame comprising a pair of posts at each end of said body, said movement imparting means being carried by said pair of posts at said head end, a pair of stabilizing struts for said head end, each extending substantially perpendicularly downward from said body, each said strut having a lower end and an upper end, a seat for the lower end of each said strut, mounted on said base, a seat for the upper end of each said strut, mounted on said body, a resilient cushion carried by each said end of each said strut, a cushion being interposed between one said strut end and one said seat for each strut, said seat for said lower end of each said supporting strut being adjustable relatively to said base to vary the angularity of each said strut relatively to said base, said supporting frame being wholly located below said top screening surface whereby said surface is unobstructed, a main counterweight carried by said balance wheel, a compensating counterweight mounted for revolution about the axis of said shaft and having a smaller circumference of revolution than that of said main counterweight, and gear means connected to said shaft for driving said compensating counterweight in a direction opposite to the direction of rotation of said shaft and main counterweight.

3,101,316
PROCESS OF TREATING WATER
Donald Rose, Dayton, Ohio, assignor of one-half to Ronald D. Baker, Dayton, Ohio
Filed Sept. 12, 1960, Ser. No. 55,239
6 Claims. (Cl. 210—35)



1. The process of ion exchange using an ion exchange high capacity resin mineral bed with a freeboard head of water thereabove with an inlet above the freeboard and an outlet below the mineral bed which comprises the steps of (*a*) passing water through said inlet and freeboard spaced and down through said bed during the service phase and withdrawing the treated water after treatment thereof from said outlet to a point of use; reconditioning said bed by (*b*) backwashing upwardly by introducing water at the outlet below the bed and withdrawing same through said inlet to a point of disposal at a rate so as to expand the mineral bed about forty percentum without removal of mineral through said inlet, (*c*) introducing a regenerate solution above said bed and below said freeboard space and withdrawing the resultant regenerate solution from said outlet below the bed to a point of disposal, (*d*) slow rinsing said bed by introducing water above said bed and below said freeboard and (*e*) fast rinsing by introducing water at said inlet and withdrawing from said outlet below the bed to a point of disposal at a rate about twice the backwash rate of flow whereby to remove regenerate solution pockets left in the mineral and freeboard space and to remove any turbidity and iron deposits and to repack said mineral bed whereupon a subsequent service phase will provide conditioned water without traces of regenerate solution and iron deposit in case of iron bearing waters being treated.

3,101,317
COAGULATION PROCESS
James E. Starry, Western Springs, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed July 1, 1959, Ser. No. 824,188
5 Claims. (Cl. 210—52)

1. The process of clarifying waters which contain suspended solids which comprises the steps of:

(A) Treating such waters under floc forming conditions with small incremental dosages of an inorganic coagulant from the group consisting of alum and water soluble salts of iron until the minimum dosage is determined for producing a visible fine floc which does not readily settle, and

(B) Thereafter continuously treating said waters with the minimum dosage of inorganic coagulant determined in step (A) and with at least 2 parts per million of an alkali metal aluminate whereby a dense, rapidly settling floc is formed and,

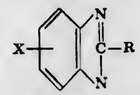
(C) Subsequently separating the water so treated from the settled floc.

3,101,318
METHOD AND COMPOSITION FOR REMOVING DETERGENTS AND OTHER CONTAMINANTS FROM LAUNDRY WASTES
Herbert M. Watson and Samuel B. Moseman, both of 2311 N. Front St., Harrisburg, Pa.
No Drawing. Filed Apr. 10, 1961, Ser. No. 101,637
15 Claims. (Cl. 210—59)

1. A composition for removal of detergent from laundry wastes from water consisting essentially of about 15 to 50% carbon, about 5 to 25% aluminum sulfate, about 5 to 25% sulfamic acid, and from about 40 to 75% diatomite.

3,101,319
METHOD FOR CONTROLLING THE GROWTH OF BIOLOGICAL ORGANISMS IN WATER
Charanjit Rai, Chicago, Edward A. Tehle, Jr., Brookfield, and Clarence K. Kambara, Chicago, Ill., assignors to Dearborn Chemical Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Mar. 30, 1959, Ser. No. 802,662
6 Claims. (Cl. 210—62)

1. The method of treating water to inhibit the growth of algae therein which comprises adding to the water, in concentration of 0.5 to 25 parts per million, a compound having the formula $Me(Z)_n$ wherein Me is a metal selected for the group consisting of copper, nickel, and cobalt, *n* is an integer of at least 2 and not more than 4, and Z is a substituted benzimidazole containing the following grouping:

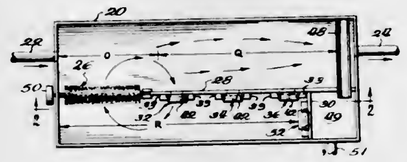


wherein R is selected for the group consisting of hydrogen atoms and alkyl groups containing 1 to 3 carbon atoms, and X is selected from the group consisting of hydrogen atoms, halogen atoms, and alkyl groups containing 1 to 3 carbon atoms, and maintaining in said water an amount of said compound sufficient to reduce the content of biological organisms therein.

3,101,320
CONDITIONING CYANIDE COMPOUNDS
Leslie E. Lancy, Ellwood City, Pa., assignor to Lancy Laboratories, Inc., Zelienople, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 11, 1961, Ser. No. 81,921
9 Claims. (Cl. 210—62)

1. A procedure for conditioning waste containing cyanide compounds and at least iron cyanide which comprises while maintaining an alkalinity of the waste, chlorinating the waste and converting the iron cyanide into an intermediate iron cyanide product, and completing the chlorination of the intermediate iron cyanide into a nontoxic iron compound by maintaining an excess of free chlorine of at least about .5 of a gram per liter and a temperature of at least about 160° F. until the chlorination is completed.

3,101,321
OXYGENATION APPARATUS
Robert J. Austin, Crete, Ill., and James F. Grutsch, Hammond, and Russell C. Mallatt, Crown Point, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Dec. 30, 1959, Ser. No. 862,948
5 Claims. (Cl. 210—151)

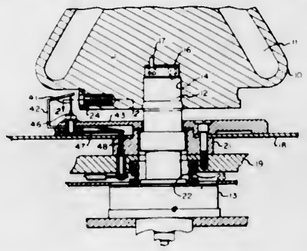


1. An apparatus for oxygenating liquid which comprises an elongated liquid-retaining cell; an inlet for introducing liquid to be treated into said cell; an outlet for withdrawing treated liquid from said cell; means for maintaining a liquid level within said cell; a first compartment and a second compartment in said cell; a vertical partition extending the length of said cell and separating said compartments, said vertical partition having an upper edge which is above said liquid level for a substantial portion of its length and which is below said liquid level for another portion of its length; rotatable aeration brush means positioned horizontally above that portion of the upper edge of said vertical partition which is below said liquid level, the radius of said brush means extending partially below the liquid level of said cell; the rotational axis of said brush means being substantially in alignment with said vertical partition whereby the rotation of said brush means impels air into liquid adjacent said vertical partition and causes liquid in said cell to move in the direction of rotation from one of said compartments to the other of said compartments over said partition; a plurality of gates mounted in said vertical partition, each of said gates including a plurality of vertically spaced openings communicating said first compartment with said second compartment and a slide member having a plurality of vertically spaced openings, said slide member being capable of being raised and lowered with respect to said openings in said partition to provide varying horizontal flow paths between said first compartment and said second compartment; means for rotating said brush means to introduce air into liquid in said cell and to circulate liquid between said compartments; skimmer means positioned near the outlet of said cell to collect floating material from the surface of liquid within said cell and to discharge therefrom collected material; sump means positioned near said cell outlet to receive material discharged from said skimmer means; means for withdrawing said material from said sump; and means for diverting at least a portion of said material in said sump to liquid in said cell.

3,101,322
CENTRIFUGE APPARATUS
Richard Clifford Stallman, San Carlos, and Edvard Martin Pedersen, Palo Alto, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Aug. 3, 1960, Ser. No. 47,271
2 Claims. (Cl. 233—24)

1. A high speed centrifuge apparatus comprising a rotor, means for driving the rotor, a radially extending

well formed in the lower portion of said rotor, a pin housing mounted in said well, said housing including a bore of first diameter having a shoulder at its outer end to form an opening of a reduced diameter, a pin slidably received in said housing, said pin having a first portion of reduced diameter projecting radially outwardly through said opening, a body portion slidably received in the bore and forming a shoulder with said first portion, the inner end of said housing being spaced from the bottom of said well, a head portion at the inner end of said body portion and having a diameter less than the diameter of the rotor well and greater than the housing



bore diameter whereby movement of the pin radially outwardly within the bore is initially limited by abutment of the head portion against the inner end of the pin housing, a neck portion formed in the body portion adjacent the head to provide less resistance to rupture by tension than the remaining portion of said pin as to fail under tension created by centrifugal forces so that the neck portion controls the tension failure, upon rupture of the pin under centrifugal forces the outward movement of the pin is limited by abutment of the pin shoulder against the housing shoulder, and means responsive to rupture of said neck portion for controlling said driving means.

3,101,323
COMPOSITIONS IMPARTING ANTISTATIC PROPERTIES TO FIBERS AND METHOD OF MAKING SAME

Luigi Merlo and Giovanni Vitelli, Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,117
Claims priority, application Italy Mar. 29, 1956
3 Claims. (Cl. 252—8.9)

1. A composition capable of preventing the development of static electric charges in yarns made from natural and synthetic textile fibers when applied to said fibers at a ratio of about 0.5 to 1.0 percent by weight, said composition consisting of a homogeneous mixture of 10 to 25 parts of a liquid condensation product of ethylene oxide and lauryl alcohol, and 60 to 40 parts of a liquid condensation product of ethylene oxide and of glycerol, homogeneously mixed with a polyglycol, said polyglycol being polymerized ethylene oxide having an average molecular weight of about 200, said condensation products each being formed with a molar predominance of ethylene oxide, the molar ratio in said condensation products being not greater than about 8.36 mols of ethylene oxide to one mol of the other ingredient, the said polyglycol comprising 30 to 35 parts of the mixture.

3,101,324
LIQUID DETERGENT COMPOSITION

Harold Eugene Wixon, Jersey City, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 12, 1960, Ser. No. 75,114
8 Claims. (Cl. 252—138)

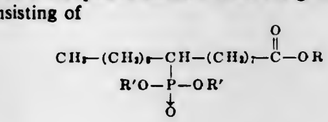
1. An improved liquid detergent composition consisting essentially of about 5 to 25% by weight of alkali metal alkyl mononuclear aryl sulfonate detergent having an alkyl group of 8 to 15 carbon atoms and 10 to 50% by weight of a potassium polyphosphate selected from the group consisting of pyrophosphate and tripolyphosphate, the total content of organic detergent and potassium polyphosphate being a maximum of about 55% by weight, and having a saturated aliphatic monohydric alcohol of 2 to 3 carbon atoms in an amount from about ½ to 15% by weight of the composition, the balance being substantially water in admixture therewith sufficient to form a liquid composition pourable in homogeneous form.

3,101,325
TRIALKYL 9(10)-PHOSPHONOSTEARATES AS PLASTICIZERS FOR VINYL CHLORIDE POLYMERS

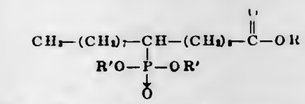
Daniel Swern and Richard Sasin, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application May 19, 1959, Ser. No. 814,357, now Patent No. 2,988,558, dated June 13, 1961. Divided and this application Apr. 28, 1960, Ser. No. 35,858
6 Claims. (Cl. 260—30.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A flexible composition comprising polymerized vinyl chloride and, as a plasticizer therefor, about 35% by weight of a compound selected from the group of formulas consisting of



and



wherein R and R′ are alkyl radicals containing 1 to 8 carbon atoms.

3,101,326
POLYSULFIDE POLYMER CONTAINING STYRENE OXIDE AS AN ODOR MASKER, AND MIXTURE THEREOF WITH AN EPOXY RESIN

Lewis Montesano, Upper Montclair, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 15, 1961, Ser. No. 131,497
5 Claims. (Cl. 260—43)

1. A composition of matter comprising a liquid organic polysulfide polymer formed by reaction of an inorganic alkaline polysulfide and an alkaline hydrosulfide mixture with at least one organic compound having at least two carbon-attached negative radical substituents capable of

4. A composition of matter in accordance with claim 1 wherein there is present a polyepoxide formed by the reaction between a diphenol and epichlorohydrin.

5. A composition of matter in accordance with claim 4 wherein said polyepoxide is a polyglycidyl ether of a phenolformaldehyde condensation product and contains approximately 1 gram mole of epoxy group per 178 grams.

3,101,327
POLYMERIZATION OF 1-OLEFINS IN THE PRESENCE OF AN ALLYL HALIDE

Harold D. Lyons, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 8, 1958, Ser. No. 765,934
8 Claims. (Cl. 260—88.2)

1. In a process for polymerizing aliphatic 1-olefins containing 2 to 8 carbon atoms wherein the 1-olefin is contacted in a reaction zone with a catalyst which forms on mixing (1) an alkylaluminum compound containing up to 15 carbon atoms in each alkyl group and up to 40 carbon atoms per molecule and selected from the group consisting of trialkylaluminum compounds and alkylaluminum halides, and (2) a titanium halide, at a temperature in the range of 100 to 500° F. and a pressure sufficient to maintain the reaction mixture in the liquid phase, the improvement which comprises adding to said reaction zone 0.01 to 10 mols of allyl halide per mol of said alkylaluminum compound and titanium halide.

3,101,328
POLYMERIZATION OF OLEFINS AND CATALYSTS THEREFOR

James T. Edmonds, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 23, 1955, Ser. No. 496,340
6 Claims. (Cl. 260—93.7)

1. A method for polymerizing an aliphatic 1-olefin having up to and including 8 carbon atoms per molecule which comprises contacting said olefin with a catalyst which forms on mixing components consisting essentially of ethyl bromide, magnesium, aluminum and titanium tetrachloride, the ratio of the amounts of the components in said catalyst being in the range of from 0.02 to 50 mols of said ethyl bromide per mol of said titanium tetrachloride and from 0.02 to 50 mols of said magnesium and aluminum per mol of said titanium tetrachloride.

3,101,329
METHOD OF FORMING FINE POLYETHYLENE POWDERS

Francis M. Sweeney, East Hempfield, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 26, 1962, Ser. No. 229,254
5 Claims. (Cl. 260—94.9)

1. A method for converting solid polymers of ethylene into a powder which comprises mixing a low molecular weight ethylene polymer in particulate form in a liquid condensation product of ethylene oxide and propylene glycol, heating to a temperature sufficiently high to melt the resin but below the thermal degradation point of the condensation product, agitating the melted resin and condensation product to form a liquid-liquid dispersion, rapidly cooling the dispersion to solidify the dispersed resin droplets and recovering the solidified droplets from the dispersion.

3,101,330
PROCESS FOR PREPARING METHYLOL STARCH PROPIONAMIDE

Eugene F. Paschall, Orland Park, and Frederick D. Thayer, Jr., Western Springs, Ill., and William H. Minkema, Fanwood, N.J., assignors to Corn Products Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 19, 1959, Ser. No. 814,133
7 Claims. (Cl. 260—233.3)

1. A process for preparing methylol starch propionamide, in which the methylol group is attached to the amide nitrogen, and which contains some free hydroxyl groups per anhydroglucose residue of starch, which comprises reacting starch and acrylamide in an aqueous alkaline medium and treating the resultant product with formaldehyde in an aqueous alkaline medium at a pH of 7 to 11.

3,101,331
PREPARATION OF LACTAMS

Albin F. Turbak, New Providence, and Herbert K. Wiese, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 14, 1961, Ser. No. 116,935
6 Claims. (Cl. 260—239.3)

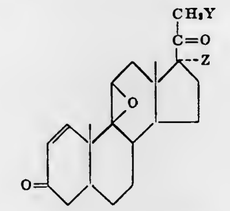
1. Process for making lactams which comprises contacting an oxime with sulfur trioxide complexed with an organic substance selected from the group consisting of phosphoryl-containing compounds and sulfur trioxide-stable ethers for a sufficient time to rearrange the oxime, hydrolyzing the rearranged oxime and thereafter recovering the lactam product.

3,101,332
9α-HALO-Δ¹-STEROIDS OF THE PREGNANE SERIES

Josef Fried, New Brunswick, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Feb. 21, 1955, Ser. No. 489,769
16 Claims. (Cl. 260—239.55)

6. A steroid of the formula



wherein Z is selected from the group consisting of hydrogen and α-hydroxy; and Y is selected from the group consisting of hydrogen, hydroxy, and lower alkanoyloxy.

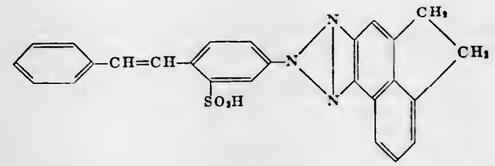
3,101,333
STILBYL-ACENAPHTHENOTRIAZOLE BRIGHTENERS

Dennis Arthur William Adams, Leeds, and Asim Kumar Sarkar, Adel, England, assignors to Hickson & Welch Limited, Castleford, England, a British company

No Drawing. Filed Aug. 4, 1960, Ser. No. 47,399
Claims priority, application Great Britain Oct. 9, 1956
4 Claims. (Cl. 260—240)

1. 2 - (4'' - styryl - 3'' - sulphophenyl) (acenaphtheno-6′:7′-4:5)-1:2:3-triazole.

2. A compound selected from the group consisting of (1) a compound of the formula



and (2) a water-soluble salt of said compound selected from the group consisting of alkali metal, ammonium, lower alkylamine and lower alkanolamine salts.

3,101,334
PROCESS FOR THE POLYMERISATION OF CYANOGEN CHLORIDE

Adolf von Friedrich, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 2, 1960, Ser. No. 66,690
Claims priority, application Germany Nov. 12, 1959
6 Claims. (Cl. 260—248)

1. In the process for the polymerization of cyanogen chloride in the liquid phase under pressure and at elevated temperature in the presence of catalyst to thereby form cyanuric chloride as main product the improvement of using as catalyst tungstic acid.

3,101,335
DIUREIDOTRIAZINES AND PROCESS FOR MAKING

Francis L. Scott, Elkins Park, Pa., and Herbert Q. Smith, Trenton, N.J., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 1, 1960, Ser. No. 11,998
4 Claims. (Cl. 260—249.8)

1. 6-hydroxy-2,4-diureido-1,3,5-triazine.

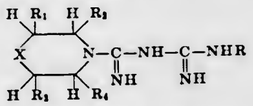
2. The process of heating at a temperature between about 140° and 250° C. a solid mixture of a polyamino-1,3,5-triazine containing at least two primary amino groups attached to carbon atoms in the triazine ring and a nitrogen compound taken from the group of urea and biuret, extracting the reaction product with water, adding additional nitrogen compound to the water-insoluble residue and further heating the mixture at 140° to 250° C. whereby an increased yield of a diureidotriazine product is formed.

3,101,336
HETEROCYCLIC SUBSTITUTED BIGUANIDES AND CYANOGUANIDINES

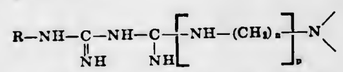
John William James, Langley, and Leslie Frederick Wiggins, Wargrave, England, assignors to Aspro-Nicholas Limited, London, England, a British company

No Drawing. Filed Jan. 28, 1959, Ser. No. 789,522
Claims priority, application Great Britain Feb. 3, 1958
11 Claims. (Cl. 260—268)

1. A member selected from the group consisting of compounds having the formula:



wherein R is a phenyl radical substituted by a radical selected from the group consisting of hydrogen, alkyl radicals having from 1 to 4 carbon atoms, alkoxy radicals having from 1 to 4 carbon atoms, nitro and halogen radicals; X is a radical selected from the group consisting of oxygen, $R_5—N<$ and



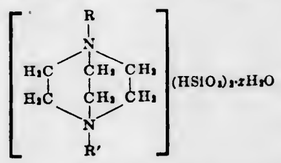
R_1, R_2, R_3 and R_4 are radicals each selected from the group consisting of hydrogen and alkyl radicals having from 1 to 4 carbon atoms; R_5 is an alkyl radical having from 1 to 4 carbon atoms; n is an integer of from 2 to 6 and p is an integer selected from the group consisting of 0 and 1.

3,101,337
1,4-DIALKYL-1,4-DIAZONIABICYCLO [2.2.2] OCTANE DI (DISILICATE)

George T. Kerr, Cherry Hill Township, Camden County, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed June 29, 1962, Ser. No. 206,187
7 Claims. (Cl. 260—268)

2. A composition characterized by the formula:



where R and R′ are alkyl radicals having from 1 to 5 carbon atoms and x is a number from 0 to 4.

3,101,338
HYDROXYDIALKYLAMINOALKYLAMINOISOQUINOLINES AND RELATED COMPOUNDS

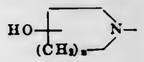
Richard A. Robinson, Evanston, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 6, 1962, Ser. No. 221,896
12 Claims. (Cl. 260—268)

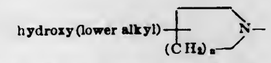
1. A compound of the formula

Q—NH—Alk—NRR′

wherein Q is selected from the group consisting of isoquinolyl, 5-methoxy-1-isoquinolyl, and 7-chloro-1-isoquinolyl; Alk is lower alkylene containing 2 to 5 carbon atoms; and —NRR′ is selected from the group consisting of (lower alkyl)(hydroxy lower alkyl)amino, hydroxy(lower alkyl)piperazinyl,



and



wherein n is a positive integer less than 3.

3. 5 - {3 - [N - (2 - hydroxyethyl)ethylamino]propylamino}isoquinoline.

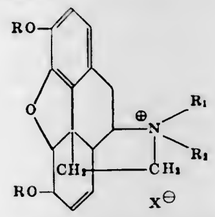
10. 5 - {3 - [4 - (2 - hydroxyethyl) - 1 - piperazinyl] propylamino}isoquinoline.

3,101,339
QUATERNARY SALTS OF NORMORPHINE AND ITS ACYLATED DERIVATIVES

Karl Zeile and Kurt Freter, Ingelheim, Germany, assignors to C. H. Boehringer Sohn, Ingelheim (Rhine), Germany, a partnership

No Drawing. Filed Oct. 26, 1959, Ser. No. 858,556
Claims priority, application Germany Oct. 30, 1958
5 Claims. (Cl. 260—285)

1. N-substituted normorphinium compounds having the structural formula



wherein

R is selected from the group consisting of hydrogen and lower alkanoyl,

R_1 and R_2 are selected from the group consisting of propyl, allyl and propargyl, and

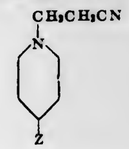
X is selected from the group consisting of chlorine, bromine and iodine.

3,101,340
4-TERTIARY-BUTYL-, 4-DIPHENYLMETHYL-, AND 4-DIPHENYLHYDROXYMETHYL - PIPERIDINOPROPIONITRILES

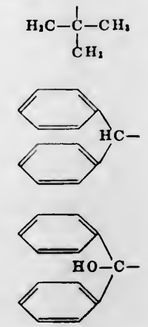
Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 18, 1960, Ser. No. 43,328
4 Claims. (Cl. 260—293)

1. A compound of the formula



wherein Z represents a member of the group consisting of radicals of the formulas

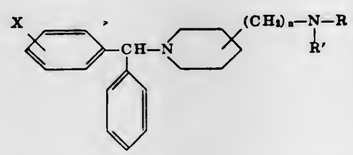


3,101,341
1-BENZHYDRYL SUBSTITUTED 4-(AMINOMETHYL)PIPERIDINES AND 4-(AMIDOMETHYL)PIPERIDINES

John W. Cusic, Skokie, and Ernest Le Von, Morton Grove, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 5, 1961, Ser. No. 100,827
10 Claims. (Cl. 260—293)

1. A compound of the formula



wherein X is selected from the group consisting of hydrogen, methyl, and halogen; R is selected from the group consisting of hydrogen and methyl; R′ is selected from the group consisting of hydrogen, lower alkyl, and lower alkanoyl; and n is an integer between 0 and 1 inclusive.

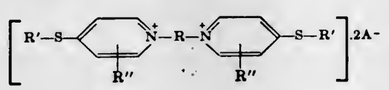
4. 1-benzhydryl-3-aminomethylpiperidine.

3,101,342
DIQUATERNARY BIS-[4-ALKYLTHIO-PYRIDYL-(1)]-ALKANES

Klaus Thomas and Dietrich Jerchel, Biberach an der Riss, Germany, assignors to Dr. Karl Thomae G.m.b.H., Biberach an der Riss, Germany, a corporation of Germany

No Drawing. Filed May 9, 1961, Ser. No. 108,770
Claims priority, application Germany May 14, 1960
8 Claims. (Cl. 260—294.8)

1. Diquaternary compounds of the formula



wherein

R is alkylene of 1 to 10 carbon atoms,

R′ is selected from the group consisting of straight or branched chain alkyl of 1 to 16 carbon atoms and alkenyl of 3 carbon atoms,

R″ is selected from the group consisting of hydrogen and methyl, and

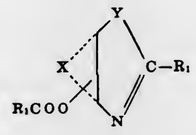
A is the anion of an acid selected from the group consisting of hydrohalic acids and p-toluene sulfonic acid.

3,101,343
PROCESS FOR PREPARATION OF CERTAIN ARYLATED HYDROXYBENZOAZOLES

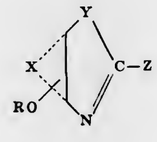
Charles A. Clark, Binghamton, N.Y., Norman J. Doorenbos, Glen Burnie, Md., and Lester Horwitz, Kansas City, Mo., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 9, 1957, Ser. No. 633,198
2 Claims. (Cl. 260—304)

1. A process of preparing an azole characterized by the following formula:



wherein X represents the atoms necessary to complete an aromatic ring system, Y represents a member of the group consisting of an oxygen atom, a sulfur atom, a selenium atom and an imino group, R_1 represents the residue of an acid anhydride, which comprises heating at a temperature ranging from 220° C. to 280° C., an azole characterized by the following formula:



wherein X and Y have the values given above, Z is a substituent other than hydrogen and R is a member selected from the group consisting of alkyl and aryl group in a melt of mixture of sodium hydroxide and potassium hydroxide, said melt containing an alkali metal sulfide as a reducing agent and reacting the ortho-substituted aminophenol thus obtained with an acid anhydride.

2. A process of preparing 2-methyl-6-acetoxybenzothiazole which comprises heating 2-amino-6-methoxybenzothiazole in a melt of mixture of equal parts of potassium hydroxide and sodium hydroxide, said melt containing sodium sulfide as a reducing agent, dissolving the melt in water, reacting the solution of 2-amino-5-hydroxythiophenol thus obtained with acetic anhydride, separating the resulting diacetate and refluxing it with acetic anhydride.

3,101,344
PROCESS FOR PREPARING TETRACYANO-1,4-DITHIIN

Robert D. Vest, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 28, 1961, Ser. No. 92,140
16 Claims. (Cl. 260—327)

1. In the preparation of tetracyano-1,4-dithiin, the steps which comprise (1) contacting, at a temperature not greater than about 75° C., a salt of the group consisting of the alkali metal and tetra (1–2 carbon alkyl) ammonium salts of cyanodithioformic acid with an oxidizing agent of the group consisting of chlorine, bromine, thionyl chloride and sulfuryl chloride in an essentially anhydrous liquid organic solvent in which the salt of cyanodithioformic acid is stable and (2) subsequently, within about one hour, separating tetracyano-1,4-dithiin from the solvent.

3,101,345
2-HYDROXYMETHYL-8-HYDROXY-1,4-BENZODIOXANE

Günther Schmidt, Biberach an der Riss, Germany, assignor to Dr. Karl Thomae G.m.b.H., Biberach an der Riss, Germany, a corporation of Germany

No Drawing. Filed Apr. 18, 1961, Ser. No. 103,729
Claims priority, application Germany Apr. 29, 1960
7 Claims. (Cl. 260—340.3)

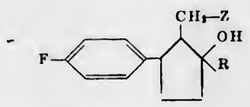
1. 2-hydroxymethyl-8-hydroxy-1,4-benzodioxane.

3,101,346
5-(p-FLUOROPHENYL) - 2 - HYDROXYCYCLOPENTANE(ACETIC ACIDS/ETHANOLS), LACTONES AND ESTERS THEREOF, AND INTERMEDIATES THERETO

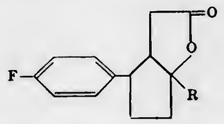
Edward A. Brown, Wilmette, and Leland J. Chinn, Morton Grove, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 19, 1961, Ser. No. 160,659
7 Claims. (Cl. 260—343.3)

1. A compound selected from the group consisting of compounds having the formula



and compounds having the formula



in which formulas Z represents a member of the group consisting of radicals having the formulas

—COOH and —COO-lower alkyl

and R represents a member of the group consisting of hydrogen and the methyl radical.

3,101,347
2,3-DIHYDROXY-CYCLODODEC-1-ENE-1-CARBOXYLIC ACID-γ-LACTONE

Pierre Lafont, Lyon, Rhone, and Yannik Bonnet, Tassin-la-Demi-Lune, Rhone, France, assignors to Rhone-Poulenc S.A., Paris, France, a French body corporate

No Drawing. Filed Jan. 18, 1962, Ser. No. 167,172
Claims priority, application France Jan. 20, 1961
1 Claim. (Cl. 260—343.3)

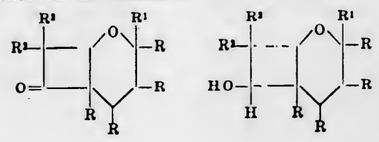
A member of the class consisting of the γ-lactone of 2,3-dihydroxy-cyclododec-1-ene-1-carboxylic acid and its alkali metal derivatives.

3,101,348
PRODUCTS OF THE REACTION OF DIALKYL KETENES WITH DIHYDROPYRANS

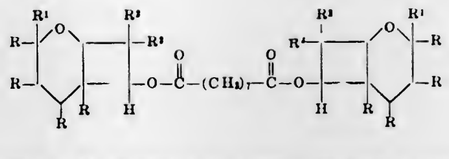
James C. Martin, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 26, 1960, Ser. No. 52,029
9 Claims. (Cl. 260—345.2)

9. A compound selected from the group consisting of compounds of the formulae:



and



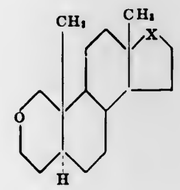
wherein R is a member of the group consisting of hydrogen and alkyl groups of from 1 to 4 carbon atoms; R^1 is a member of the group consisting of hydrogen, —CHO, and —OR; and R^2 is a member of the group consisting of alkyl groups of from 1 to 4 carbon atoms and alkylene radicals which, together with the carbon atom of the four-member ring to which they are attached, form a saturated carbocyclic ring of 5 to 6 carbon atoms.

3,101,349
OPTIONALLY 17-ALKYLATED 17-OXYGENATED-2-OXAANDROSTANES AND INTERMEDIATES

Raphael Pappo, Skokie, and Christopher Jung, Morton Grove, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 7, 1962, Ser. No. 193,008
7 Claims. (Cl. 260—345.2)

1. A compound of the structural formula



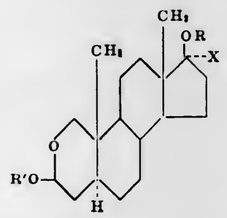
wherein X is selected from the group consisting of carbonyl, β-hydroxymethylene, and α-(lower alkyl)-β-hydroxymethylene radicals.

3,101,350
OPTIONALLY 17-ALKYLATED 2-OXA-5α-ANDROSTANE-3β,17β-DIOLS, ETHERS AND ESTERS THEREOF

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 14, 1962, Ser. No. 223,827
12 Claims. (Cl. 260—345.2)

1. A compound of the structural formula



wherein R is selected from the group consisting of hydrogen and lower alkanoyl radicals, R′ is selected from the group consisting of hydrogen, lower alkyl, and lower alkanoyl radicals, and X is selected from the group consisting of hydrogen and lower alkyl radicals.

3,101,351
DIALKYL PROGESTERONES AND PROCESS THEREFOR

Robert P. Graber and Martin B. Meyers, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Sept. 29, 1960, Ser. No. 59,198
5 Claims. (Cl. 260—397.4)

1. A process or simultaneously dialkylating a 5α,6α-oxido-16 pregnen-20-one steroid compound comprising reacting said steroid compound with an alkyl metal halide having the formula $R'M_gX$, where R′ is an alkyl group having from 1 to 8 carbon atoms and X is a halogen atom in the presencee of a cuprous halide.

3,101,352
6α-BROMO ANDROSTANE DERIVATIVES

Howard J. Ringold, Octavio Mancera, George Rosenkranz, and John Edwards, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Original application Feb. 13, 1959, Ser. No. 792,990, now Patent No. 3,019,239, dated Jan. 30, 1962. Divided and this application Mar. 1, 1961, Ser. No. 99,660
Claims priority, application Mexico Feb. 14, 1958
6 Claims. (Cl. 260—397.4)

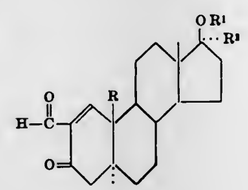
1. 17α-methyl-6α-bromo-19-nor-testosterone.
5. 17α-ethinyl-6α-bromo-19-nor-testosterone.

3,101,353
2-FORMYL-Δ′-ANDROSTENES AND $\Delta^{1,4}$-ANDROSTADIENES

Albert Bowers and John Edwards, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed July 19, 1961, Ser. No. 125,107
18 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



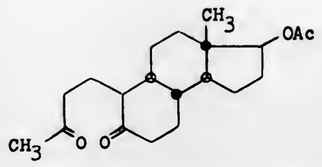
wherein R is selected from the group consisting of hydrogen and methyl; R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; and R^2 is selected from the group consisting of hydrogen, an alkyl, an alkenyl, and an alkinyl group each containing less than 8 carbon atoms.

3,101,354
PROCESS FOR THE PREPARATION OF 19-NOR-TESTOSTERONE AND COMPOUNDS USED IN THIS PROCESS

Gerard Nominé, Noisy-le-Sec, Daniel Bertin, Montrouge, Jean Tessier, Paris, André Pierdet, Noisy-le-Sec, and Robert Bucourt, Villiers le Bel, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

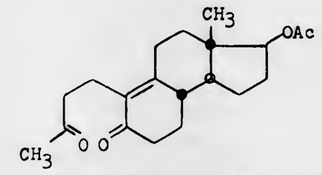
No Drawing. Filed Nov. 13, 1961, Ser. No. 152,045
Claims priority, application France Nov. 16, 1960
13 Claims. (Cl. 260—397.4)

1. 3-methyl-7-oxo-8 - (3′-oxobutyl) - 3,4 - [3′-acyloxy-cyclopentano-(2′,1′)] - decahydronaphthalene compounds of the formula:

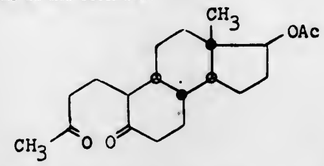


wherein Ac represents the acyl radical of an organic hydrocarbon carboxylic acid having from 1 to 18 carbon atoms selected from the group consisting of alkanoic acids, alkenoic acids, cycloalkyl-alkanoic acids, arylalkanoic acids, cycloalkyl carboxylic acids and phenyl carboxylic acids.

3. A process for the preparation of a 19-nor-testosterone compound selected from the group consisting of optically active 19-nor-testosterone, racemic 19-nor-testosterone, and their esters with organic hydrocarbon carboxylic acids having from 1 to 18 carbon atoms selected from the group consisting of alkanoic acids, alkenoic acids, cycloalkyl-alkanoic acids, arylalkanoic acids, cycloalkyl carboxylic acids and phenyl carboxylic acids, which comprise the steps of hydrogenating a $\Delta^{8(9)}$-3-methyl-7-oxo-8-(3′-oxobutyl)-3,4-[3′-acyloxy-cyclopentano-(2′,1′)] - octahydronaphthalene compound of the formula:



wherein Ac represents the acyl radical of an organic hydrocarbon carboxylic acid having from 1 to 18 carbon atoms selected from the group consisting of alkanoic acids, alkenoic acids, cycloalkyl-alkanoic acids, arylalkanoic acids, cycloalkyl carboxylic acids and phenyl carboxylic acids, with hydrogen in the presence of a palladized catalyst in a neutral to basic reaction media, reacting the resulting 3-methyl - 7 - oxo - 8 - (3′-oxobutyl)-3,4-[3′-acyloxy-cyclopentano-(2′,1′)] - decahydronaphthalene compounds of the formula:



wherein Ac has the previously assigned meaning with a dehydrating agent selected from the group consisting of alkali metal lower alkanolates and hydrochloric acid, and recovering said 19-nor-testosterone compound.

3,101,355
PROCESS FOR 3-KETO-$\Delta^{4,6}$ STEROIDS

Albert Bowers, Esteban Volkov, and Hector Martinez, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Mar. 1, 1962, Ser. No. 176,823
Claims priority, application Mexico Aug. 8, 1961
10 Claims. (Cl. 260—397.4)

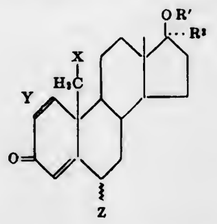
1. A process for the production of 3-keto-$\Delta^{4,6}$-steriods selected from the group consisting of the androstane and pregnane series which comprises treating a 3-enol ether-$\Delta^{3,5}$-steroid with a benzoquinone with an oxidation potential of less than —0.75, in a solvent inert to the reagent and in the presence of a catalytic amount of acid to form the corresponding 3-keto-$\Delta^{4,6}$-steroid.

3,101,356
19-HALO ANDROSTENES

Albert Bowers, Mexico City, Mexico, assignor to Syntex Corporation, Panama, Panama, a corporation of Panama

No Drawing. Filed June 12, 1962, Ser. No. 201,799
Claims priority, application Mexico Mar. 13, 1962
23 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



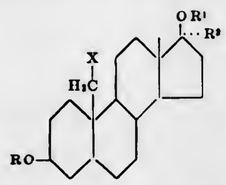
wherein R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; R^2 is a member of the group consisting of hydrogen, lower alkyl, lower alkenyl and lower alkinyl; Z is selected from the group consisting of hydrogen, α-methyl, β-methyl, α-chlorine, β-chlorine, α-fluorine and β-fluorine; Y is a member of the group consisting of a double bond and a saturated linkage between C–1 and C–2; and X is selected from the group consisting of fluorine and chlorine.

3,101,357
19-HALO ANDROSTENES

Albert Bowers, Mexico City, Mexico, assignor to Syntex Corporation, Panama, Panama, a corporation of Panama

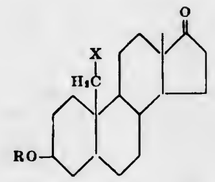
No Drawing. Filed June 12, 1962, Ser. No. 201,803
Claims priority, application Mexico Mar. 9, 1962
12 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



wherein R and R^1 are selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; R^2 is selected from the group consisting of hydrogen, lower alkyl, lower alkenyl and lower alkinyl; and X is a member of the group consisting of fluorine and chlorine.

10. A compound of the following formula:



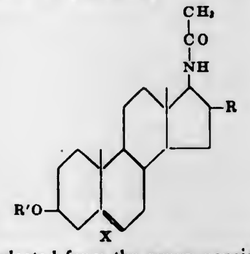
wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms; and X is a member of the group consisting of fluorine and chlorine.

3,101,358
17β-ACETAMINO-STEROIDS

Pietro De Ruggieri, Carlo Ferrari, and Carmelo Gandolfi, Milan, Italy, assignors to Ormoneterapia Richter S.p.A., Milan Italy, a corporation of Italy

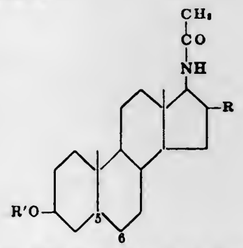
No Drawing. Filed Jan. 17, 1962, Ser. No. 166,953
Claims priority, application Italy Oct. 11, 1960
11 Claims. (Cl. 260—397.5)

1. A compound of the formula

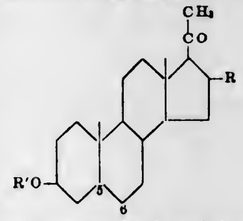


wherein X is selected from the group consisting of single and double bonds, R is a member selected from the group consisting of an α-methyl and a β-methyl group and R^1 is a member selected from the group consisting of hydrogen and an acyl radical derived from a lower alkanoic acid.

8. A process for the preparation of a compound having the general formula



wherein the bond between the 5- and 6-carbon atoms is selected from the group consisting of a single bond and a double bond, R is selected from the group consisting of hydrogen, an α-methyl group and a β-methyl group and R′ is selected from the group consisting of hydrogen and an acetyl radical, comprising reacting with anhydrous hydrazoic acid a compound having the general formula



wherein the bond between the 5- and 6-carbon atoms is selected from the group consisting of a single bond and a double bond, and R and R′ have the same meaning as above.

3,101,359
PROCESS FOR PREPARING 16α-METHYL-5β-ANDROSTANE-3,11,17-TRIONE AND NOVEL INTERMEDIATE THEREIN

Georges Muller, Nogent-sur-Marne, and Jacques Martel, Bondy, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Feb. 1, 1961, Ser. No. 86,320
Claims priority, application France Feb. 9, 1960
3 Claims. (Cl. 260—397.45)

1. 16α-methyl-5β-androstane-3α,17β-diol-11-one.

3,101,360
PROCESS FOR PRODUCING BIS(AROMATIC HYDROCARBON)IRON COMPOUNDS

Leo Parts, Buffalo, N.Y., and Roy L. Pruett, Charleston, and William R. Myers, Dunbar, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 29, 1958, Ser. No. 770,306
12 Claims. (Cl. 260—439)

1. A process for the production of stable bis(aromatic hydrocarbon) iron complex haloaluminates which comprises reacting the following:

(1) at least one aromatic hydrocarbon compound selected from the group consisting of benzene, lower alkyl-substituted benzenes, diphenyl, terphenyl, quaterphenyl, lower alkylphenyl-substituted benzenes, phenyl lower alkyl-substituted benzenes and lower alkylene-substituted benzenes with

(2) an iron tetracarbonyl dihalide wherein said halide is at least one member selected from the group consisting of chlorine, bromine and iodine, and with

(3) an aluminum halide wherein said halide is at least one member selected from the group consisting of fluorine, chlorine, bromine and iodine.

3,101,361
CATALYTIC PREPARATION OF CHLOROSILOXANES IN POLAR SOLVENTS

Paul L. Brown, Saginaw, and James Franklin Hyde, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Jan. 5, 1961, Ser. No. 80,749
1 Claim. (Cl. 260—448.2)

1. The method which comprises interacting (A) a silicon compound containing per molecule at least one silicon atom having attached thereto at least one halogen atom, and no more than two organic radicals selected from the group consisting of hydrocarbon radicals, halogeno-aromatic monovalent hydrocarbon radicals and fluorinated aliphatic monovalent hydrocarbon radicals, any remaining valences of said silicon atom being satisfied by substituents selected from the group consisting of silicon-bonded oxygen atoms and hydrogen atoms, any other silicon atoms in said compound having their valences satisfied by substituents selected from the group consisting of silicon-bonded oxygen atoms, hydrogen atoms, monovalent hydrocarbon radicals, halogenoaromatic monovalent hydrocarbon radicals and fluorinated aliphatic monovalent hydrocarbon radicals, with (B) an organosiloxane containing per silicon atom an average of from about two or three monovalent substituents selected from the group consisting of hydrogen atoms, hydrocarbon radicals, halogenoaromatic hydrocarbon radicals and fluorinated aliphatic hydrocarbon radicals, any siloxane (B) which has two of said monovalent substituents attached to each silicon atom containing at least four such silicon atoms, any remaining silicon valences being satisfied by silicon-bonded oxygen atoms, in contact with (C) a catalyst selected from the group consisting of aliphatic hydrocarbon amines containing per molecule less than 10 carbon atoms, salts of hydrogen halides and said aliphatic hydrocarbon amines, salts of monocarboxylic acids and aliphatic hydrocarbon amines, said salts containing less than 10 carbon atoms per molecule, aromatic amines, salts of monocarboxylic acids and aromatic amines, salts of hydrogen halides and aromatic amines, ammonium halides, ammonium carboxylates, amides and alkali metal halides and (D) an inert organic solvent other than (C) which has a static dielectric constant greater than about 4, whereby a halogen atom from a molecule of A replaces an oxygen atom attached to a silicon atom in a molecule of B and the remainder of said A molecule attaches to the free oxygen bond in the remainder of the original B molecule.

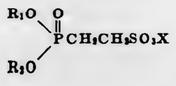
3,101,362
DIALKYL BETA SULFOETHANEPHOSPHONATE ALKALI METAL SALTS AND PROCESS FOR PRODUCTION

Kurt Schimmelschmidt and Walter Denk, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed July 11, 1958, Ser. No. 747,846
Claims priority, application Germany July 17, 1957
8 Claims. (Cl. 260—461)

1. A process for the manufacture of wetting agents which are also effective in the alkaline region, which comprises reacting vinylphosphonic acid esters of alcohols selected from the group consisting of saturated and unsaturated alcohols containing 8–10 carbon atoms by heating said esters to 70–120° C. with alkali bisulfites in aqueous solution in the presence of oxygen yielding compounds in a quantity of between 0.5 and 5%, referred to the quantity of ester used, and selected from the group consisting of alkali metal persulfates, alkali metal perborates, alkali metal percarbonates and ammonium persulfate.

8. A compound of the formula



where R_1 and R_2 are alkyl radicals having 8–10 carbon atoms and X is an alkali metal ion.

3,101,363
PROCESS FOR PRODUCING TRIS(2-BUTOXYETHYL)PHOSPHITE

Charles F. Baranauckas, Niagara Falls, and James J. Hodan, Tonawanda, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Aug. 4, 1960, Ser. No. 47,362
7 Claims. (Cl. 260—461)

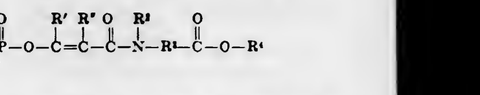
1. The method of preparing tris(2-butoxyethyl) phosphite which comprises transesterifying triaryl phosphite with 2-butoxyethanol in the presence of catalytic amount of a basic catalyst.

3,101,364
BETA CARBAMYLVINYL PHOSPHATE NEUTRAL TRIESTERS

Loyal F. Ward, Jr., and Alan R. Stiles, Modesto, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 26, 1961, Ser. No. 119,290
5 Claims. (Cl. 260—461)

1. As a novel compound, a phosphorus ester of the formula:



wherein R and R^4 each is a member of the group consisting of non-acetylenic lower hydrocarbon and non-acetylenic mono-substituted lower hydrocarbon wherein said substituent is selected from the group consisting of middle halogen, nitro, cyano and amino, R′ and R″ each is a member of the group consisting of hydrogen, middle halogen and R, R^2 is a member of the group consisting of hydrogen and R, R^3 is lower alkylene, each of said R, R′ R″, R^2 and R^4 groups containing from 1 to 10 carbon atoms.

3,101,365
PREPARATION OF TETRACYANOETHYLENE BY REACTING CYANOCARBON SULFIDES WITH METAL CYANIDES, FOLLOWED BY OXIDATION

Robert D. Vest, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 4, 1960, Ser. No. 60,297
4 Claims. (Cl. 260—465.8)

1. A process of preparing tetracyanoethylene which comprises (*a*) reacting a heterocyclic cyanosulfide of the group consisting of tetracyano-1,4-dithiin, p-dithiino-[c]-isothiazole-3,5,6-tricarbonitrile, 4,5-dicyano-1,3-dithiole-$\Delta^{2,e}$-malononitrile and 3-cyano-[1,3]-dithiolo-[4,5-c]-isothiazole-$\Delta^{5,e}$-malononitrile with a compound of the group consisting of alkali metal cyanides and alkaline earth metal cyanides and (*b*) treating the reaction product from step (*a*) with an oxidizing agent, steps (*a*) and (*b*) being conducted in a substantially inert liquid medium which is at least a partial solvent for the reactants and tetracyanoethylene, said medium being composed of at least one aliphatically saturated organic compound which consists of carbon, hydrogen bonded to carbon, and at least one additional element of the group consisting of oxygen, sulfur and nitrogen.

3,101,366
IMPROVED PROCESS FOR ESTERIFYING TEREPHTHALIC ACID WITH ETHYLENE OXIDE

Alexander A. Vaitekunas and Harold G. Weinreb, New Haven, Conn., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Mar. 22, 1961, Ser. No. 97,453
7 Claims. (Cl. 260—475)

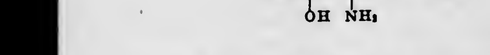
1. In the production of bis-hydroxyethyl terephthalate by the direct esterification of terephthalic acid with ethylene oxide in the presence of an aqueous medium, the process comprising providing a suspension of terephthalic acid in 1.5 to 4 times its weight of an aqueous solution of an alkali metal terephthalate at a temperature of 105° to 120° C., said solution containing 1.5 to 2.5 moles of alkali metal ion per liter, gradually adding in five to fifteen minutes to said suspension during agitation 1.35 to 1.85 moles of ethylene oxide per mole of terephthalic acid, continuing the agitation at said temperature for a total period of not over 60 minutes, and recovering the bis-ester from said solution.

3,101,367
α-AMINO-β-HYDROXYCARBOXYLIC ACID AMIDES

Gustav Ehrhart, Bad Soden, Taunus, Ingeborg Hennig, Kelkheim, Taunus, Karl Schmitt and Ernst Lindner, Frankfurt am Main, and Heinrich Ott, Eppstein, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Aug. 4, 1959, Ser. No. 831,488
Claims priority, application Germany Aug. 16, 1958
6 Claims. (Cl. 260—501)

1. A compound selected from the group consisting of alpha-amino-beta-hydroxy-carboxylic acid amides of the formula



wherein R represents an alkyl radical containing from four to seven carbon atoms and containing a tertiary carbon atom linked to the nitrogen atom, and addition salts of such compounds with physiologically compatible acids.

3,101,368
PROCESS FOR THE PREPARATION OF CYCLIC DICARBOXYLIC ACIDS

Walter Schenk, Heidelberg, Germany, assignor to Henkel & Cie. G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Dec. 28, 1956, Ser. No. 631,058
Claims priority, application Germany Jan. 3, 1956
10 Claims. (Cl. 260—515)

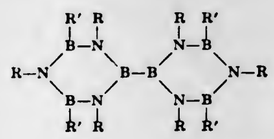
1. A process for preparing symmetrical aromatic dicarboxylic acids which comprises the steps of forming a starting salt of a non-symmetrical aromatic carboxylic acid by reacting a material selected from the group consisting of non-symmetrical aromatic carboxylic acids and their anhydrides with a material selected from the group consisting of a mixture of different alkali metal hydroxides, carbonates and oxalates said mixture containing from about 10 to 70% of a sodium compound, heating said formed alkali metal salts in the presence of a catalyst containing a metal selected from the group consisting of cadmium, zinc and bivalent iron, in an inert atmosphere and at a temperature between 340° C. and a temperature at which the starting salts will substantially decompose, whereby said starting salts are converted into the corresponding salts of the symmetrical aromatic carboxylic acid to be prepared, and liberating the free symmetrical aromatic dicarboxylic acid from the product mixture by acidification.

3,101,369
NEW BORAZOLE COMPOSITIONS

Robert J. Brotherton, Fullerton, and Allen L. McCloskey, Orange, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Aug. 28, 1961, Ser. No. 134,107
5 Claims. (Cl. 260—551)

1. Boron-boron bonded diborazoles having the formula



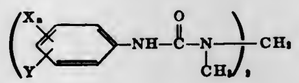
where R and R′ are selected from the group consisting of alkyls of from 1 to 6 carbon atoms and phenyl.

3,101,370
1,1′-METHYLENE-(1-METHYL-3-PHENYL)-UREAS

James B. Buchanan, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,490
1 Claim. (Cl. 260—553)

A 1,1′-methylenebis(1-methyl-3-arylurea) of the formula



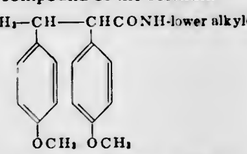
wherein X is selected from the group consisting of hydrogen, halogen and alkyl of less than 5 carbon atoms, Y is selected from the group consisting of hydrogen, halogen, nitro and alkyl of less than 5 carbon atoms, and *n* is a whole number less than 3.

3,101,371
2,3-BIS(p-METHOXYPHENYL)-N-DIALKYLAMINOALKYLPENTANAMIDES

Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 2, 1962, Ser. No. 163,893
4 Claims. (Cl. 260—559)

1. A compound of the formula



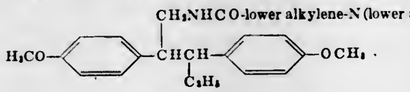
wherein the lower alkylene radical called for separates the groups attached thereto by more than 1 carbon atom.

3,101,372
ω-DIALKYLAMINO-N-[2,3-BIS(p-METHOXYPHENYL)PENTYL]ALKANAMIDES AND INTERMEDIATES

Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 9, 1962, Ser. No. 165,225
6 Claims. (Cl. 260—562)

1. A compound of the formula

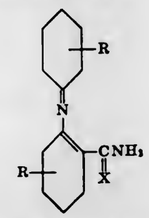


3,101,373
AMINOACID AMIDES

Arthur F. McKay, Beaconsfield, Quebec, and Ctirad Podesva and Edward James Tarlton, Montreal, Quebec, Canada, assignors to Monsanto Canada Limited, LaSalle, Quebec, Canada

Filed Dec. 15, 1961, Ser. No. 159,585
12 Claims. (Cl. 260—567)

1. A compound of the formula



wherein R in each ring is selected from the group consisting of a hydrogen and a lower alkyl group and X is selected from the group consisting of O and S.

3. Cyclohexylidene 2 - thiocarbamylcyclohex - 1 - enylamine.

3,101,374
POLYOXYALKYLENE SURFACE ACTIVE AGENTS HAVING HETERIC POLYOXYETHYLENE SOLUBILIZING CHAINS

John T. Patton, Jr., Wyandotte, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Aug. 19, 1958, Ser. No. 755,852
11 Claims. (Cl. 260—584)

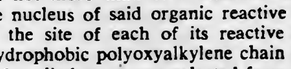
1. A surface active mixture of conjugated polyoxyalkylene compounds, said compounds consisting of the nucleus of an organic reactive hydrogen compound having from 1 to 6 reactive hydrogen atoms and being selected from the group consisting of mono- and polyhydric alkanols having up to 6 carbon atoms per molecule, alkyl ethers of alkanols having up to 6 carbon atoms per molecule, primary alkylamines having up to 6 carbon atoms per molecule, secondary dialkylamines having up to 6 carbon atoms per molecule, alkylene polyamines having up to 6 carbon atoms per molecule, piperazine, carbon-substituted methylpiperazines, alkane amides having up to 6 carbon atoms per molecule, N-alkyl alkane amides having up to 6 carbon atoms per molecule, benzenesulfonamide, N-ethylbenzenesulfonamide, N-propylethanesulfonamide, and mono- and polycarboxylic alkanoic acids having up to 6 carbon atoms per molecule, a hydrophobic polyoxyalkylene chain having an average oxygen/carbon atom ratio of not more than 0.40 attached at one end thereof to the nucleus of said organic reactive hydrogen compound at the site of each of its reactive hydrogen atoms, said hydrophobic polyoxyalkylene chain consisting of polymers of oxalkylene groups selected from the group consisting of oxypropylene, oxybutylene, oxyamylene, oxystyrene, mixtures of said oxyalkylene groups with each other and mixtures of said oxyalkylene groups with oxyethylene groups, the molecular weight of said organic reactive hydrogen compound and attached hydrophobic polyoxyalkylene chains being in the range of at least about 400–900 and up to about 25,000, and a heteric hydrophilic polyoxyethylene chain attached to the other end of each of said hydrophibic polyoxyalkylene chains, said heteric hydrophilic polyoxyethylene chain consisting essentially of 95–40 weight percent of oxyethylene groups and 5–60 weight percent of higher molecular weight oxyalkylene groups selected from the group consisting of oxypropylene, oxybutylene, oxystyrene and mixtures thereof, said heteric hydrophilic polyoxyethylene chain having an average oxygen/carbon atom ratio of greater than 0.40 and the weight of said heteric hydrophilic polyoxyethylene chain being such as to constitute from 5–90 weight percent of the mixture of compounds.

3,101,375
PRODUCTION OF UNSATURATED KETONES

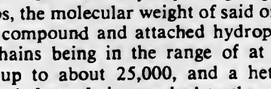
Henry Peter Crocker, Hornsea, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed July 14, 1960, Ser. No. 42,754
Claims priority, application Great Britain Aug. 21, 1959
2 Claims. (Cl. 260—595)

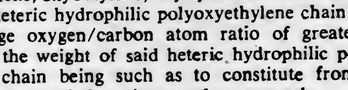
1. A process of producing an unsaturated ketone having the formula:



which comprises heating at an elevated temperature in the range of about 100° to 250° C. an allyl acetoacetate having the formula:



in contact with an aluminum compound having the formula



wherein R^1 and R^2 are each selected from the group consisting of alkyl groups of 1 to 2 carbon atoms and hydrogen atoms, R_3 is an alkyl group of 1 to 2 carbon atoms, R^4 and R^5 are each selected from the group consisting of alkyl groups of 1 to 2 carbon atoms and alkoxy groups of which the alkyl part has 1 to 2 carbon atoms, R^6 is an alkyl group of not more than 5 carbon atoms and *n* is one of the integers 1 and 2.

3,101,376
REACTIONS OF ORGANO BORANES

Stanley J. Brois, Westfield, and Alfred J. Rutkowski, Colonia, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 30, 1962, Ser. No. 191,292
7 Claims. (Cl. 260—606.5)

1. A process which comprises reacting an organo boron compound having the following formula



wherein each R represents a hydrocarbyl radical selected from the group consisting of alkyl, cycloalkyl, alkaryl and arylalkyl radicals, with a paraffin having from 1 to 30 carbon atoms at a temperature between 200 to 450° C. and for a time sufficient to displace at least one of said hydrocarbyl radicals with a hydrocarbyl radical having the same carbon skeletal structure as said paraffin.

3,101,377
SULFONE DERIVATIVES OF MERCAPTO-HALOETHYLENE

Henry Bluestone, University Heights, and Russell M. Bimber, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,329
12 Claims. (Cl. 260—607)

1. Tetrakis-(2-hydroxyethylthio)ethylene.
3. Tetrakis(2-chloroethylthio)ethylene.
5. 1 - (2 - chloroethylsulfinyl) - 1,2,2 - (2 - chloroethylsulfonyl)ethylene.

3,101,378
POLYHYDROXY NITRO COMPOUNDS

Gustave B. Linden, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Dec. 12, 1956, Ser. No. 628,950
12 Claims. (Cl. 260—635)

1. A compound selected from the group consisting of 5,5,5-trinitro-1,2-pentanediol; 5,5-dinitro-1,2-hexanediol; 5,5-dinitro-1,2-octanediol; 5-nitro-1,2-pentanediol, and 5-nitro-5-methyl-1,2-hexanediol.

3,101,379
SYNTHESIS OF HEXANITROETHANE

John A. Gallaghan, Ben Lomond, and Wilmer L. Reed, Palo Alto, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

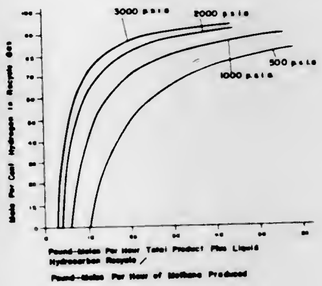
No Drawing. Filed Jan. 4, 1961, Ser. No. 80,693
8 Claims. (Cl. 260—644)

1. The process of making hexanitroethane which comprises the steps of suspending dipotassium trinitropropionaldehyde in a liquid which is a solvent for hexanitroethane, selected from the group consisting of methylene chloride and chlorform, adding a nitrating mix selected from the group consisting of nitric acid, fuming nitric acid, nitric acid in combination with sulphuric acid, fuming nitric acid in combination with sulphuric acid, nitric acid in combination with fuming sulphuric acid, and fuming nitric acid in combination with fuming sulphuric acid to said suspension, maintaining said mixture substantially below room temperature during nitration, and after the nitration reaction is substantially complete, recovering hexanitroethane from said mixture.

3,101,380
CONTROL OF HYDROGEN CONCENTRATION IN RECYCLE HYDROGEN STREAMS IN THE HYDRODEALKYLATION PROCESS

Oscar H. Hariu, Philadelphia, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 31, 1960, Ser. No. 66,120
5 Claims. (Cl. 260—672)



1. In a hydrodealkylation process wherein alkylated aromatic hydrocarbons are subjected in a conversion zone to conditions of elevated temperatures and pressures in the presence of hydrogen to produce an effluent stream containing dealkylated aromatics, methane and other normally gaseous saturated hydrocarbons together with unconverted hydrocarbons and unconsumed hydrogen and wherein at least a portion of the unconsumed hydrogen is separated from the effluent and recycled to the conversion zone, the improvement which comprises carrying out the separation of the unconsumed hydrogen from the liquid effluent hydrocarbons in a separation zone in the presence of a substantially methane-free liquid hydrocarbon recycle stream recycled to the separation zone, controlling the concentration of hydrogen in the recycle hydrogen stream to said conversion zone without purging said recycle hydrogen stream, by controlling the amount of said liquid hydrocarbon recycle stream in accordance with the amount of total product from the process, the amount of methane produced by the process and the pressure employed in said separation zone in accordance with FIGURE 5 of the drawings.

3,101,381
PROCESS FOR THE SEPARATION OF HYDROCARBONS

Warren Nesmith Baxter, Orange, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

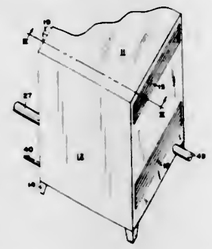
No Drawing. Filed June 5, 1961, Ser. No. 114,635
8 Claims. (Cl. 260—677)

1. In the separation of olefinic hydrocarbons from fluid hydocarbon mixtures containing such which also contain an acetylenic hydrocarbon of the general formula RC≡CH where R is from the class consisting of hydrogen and hydrocarbon radicals, comprising passing said fluid hydrocarbon mixture through an aqueous solution of silver salt selected from the class consisting of silver fluoborate, silver fluosilicate and mixtures thereof, and thereafter regenerating the silver salt solution and recovering the olefinic hydrocarbons, the step of removing silver acetylides of said acetylenes by reacting at least part of the regenerated solution at a temperature of at least 100° C. with nitric acid in the presence of a non-oxidizing mineral acid selected from the class consisting of hydrogen fluoride and fluoboric acid, the concentration of said mineral non-oxidizing acid being from 1 to 10 molar.

3,101,382
GAS AND LIQUID CONTACT APPARATUS

William T. Lyons, Dewitt, and Bruno P. Morabito, Liverpool, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Jan. 14, 1960, Ser. No. 2,493
2 Claims. (Cl. 261—24)



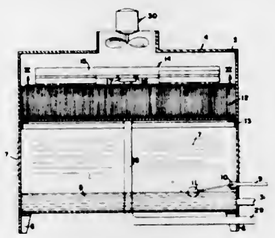
1. In a multi-stage cooling tower, the combination of a casing having an upper air inlet, a lower air inlet, and an air outlet respectively spaced therein, a packing in said casing having a first cooling stage comprising a plurality of staggered tiers positioned below said upper inlet and a second cooling stage vertically spaced from the first cooling stage comprising a plurality of staggered tiers positioned above said lower inlet, said first stage overlying said second stage, the stages forming a generally V-shaped configuration opening toward the air outlet, tiers adjacent the air outlet being spaced farther apart than tiers adjacent the inlets, means for providing movement of air into said inlets, through said tiers and out of said outlet, said outlet being placed in the casing between said stages, means for supplying liquid onto said first cooling stage, the bottom surface of each tier of the first cooling stage being generally horizontally disposed so that liquid passing through the first cooling stage is uniformly discharged from the bottom surface of each tier, and means below said second cooling stage for collecting liquid, said packing having vertical passages therein so constructed that liquid flows through the first cooling stage in parallel flow relationship with the air passing therethrough, drains onto the top of the second cooling stage and flows through the second cooling stage in counterflow relationship with the air passing therethrough.

3,101,383
GAS AND LIQUID CONTACT APPARATUS

James H. Paris, Kirkville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Jan. 14, 1960, Ser. No. 2,517
4 Claims. (Cl. 261—24)

1. In a gas and liquid contact apparatus, the combination of a casing, a packing in said casing, means for passing an air stream through said packing, and means for distributing water over said packing comprising a liquid distributing tube arranged above the packing and having an elongated continuous slot in the bottom thereof and extending substantially the length of the tube, means for rotatably mounting said tube above said packing, first lip means for directing a part of the water discharged from the slot downwardly in a sheet-like formation, and second lip means placed outwardly from the first lip means on said tube for directing the remainder of the liquid discharged from the slot at an angle to the plane of said first sheet-like formation whereby discharge of liquid through



said second lip means rotates said tube, and flexible baffle means substantially coextensive with said second lip means and affixed to the trailing edge of said tube for minimizing the splashing of water from said packing and for adjusting the speed of rotation of said tube.

3,101,384
TUYERE ARRANGEMENT

Paul Metz, Dudelange, Luxembourg, assignor to Acieries Reunies de Burbach-Eich-Dudelange, Societe Anonyme, Luxembourg, Luxembourg

Filed May 1, 1961, Ser. No. 106,911
Claims priority, application Luxembourg May 18, 1960
5 Claims. (Cl. 266—41)

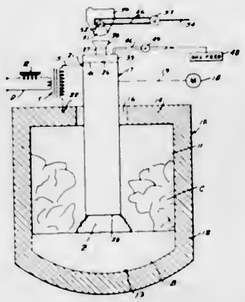
1. Metallurgical refining apparatus comprising an outer member formed from two substantially concentric cylinders joined together at terminal portions thereof, a cooling medium carried between said cylinders, an intermediate substantially cylindrical member carried concentrically within said outer member and contacting at an outer terminal portion thereof an inner terminal portion of the inner one of said two concentric cylinders, and an abrasion and corrosion-proof tuyere member carried concentrically within and positioned against and supported by said intermediate cylindrical member.

ELECTRICAL

3,101,385
METHOD AND MEANS FOR ELECTRIC MELTING

Charles G. Robinson, Sterling, Ill., assignor to Northwestern Steel and Wire Company, Sterling, Ill., a corporation of Illinois

Filed Apr. 11, 1960, Ser. No. 21,265
2 Claims. (Cl. 13—33)



1. The method of operating an electric melting furnace which includes the steps of

generating an electric arc zone at an elevated temperature by energizing a circuit including the contents of the furnace and an electrode,

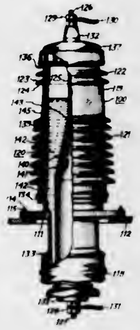
injecting a stream of monatomic gas at increased pressure into the electric arc zone through the electrode so that the monatomic gas molecules collide with the electrons in the arc zone to substantially increase the temperature of the arc zone,

and gravitationally injecting materials to be melted through said electrode independently of said stream of monatomic gas and into said arc zone.

3,101,386
REDUCED HEIGHT ELECTRICAL INSULATING BUSHING WITH SIGHT GLASS

Edward F. Cronin, Lenox, Donald L. Johnston, Pittsfield, and Robert H. Delisle, North Adams, Mass., assignors to General Electric Company, a corporation of New York

Filed Oct. 9, 1961, Ser. No. 143,767
6 Claims. (Cl. 174—11)

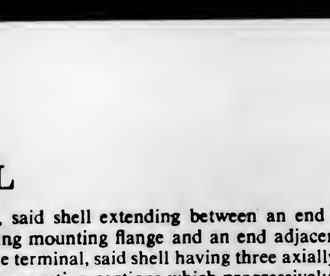


5. A reduced height oil-filled electrical bushing having a composite insulating shell for an axially extending central conductor, said shell extending between an end adjacent a conducting mounting flange and an end adjacent a conducting line terminal, said shell having three axially aligned circular cross section portions which progressively increase in axial length from the shortest which is adjacent the line terminal end to the longest which is adjacent the mounting flange end, said shortest and longest end portions consisting of opaque insulating material, the intermediate portion of intermediate length consisting of transparent material having a smooth outer surface for facilitating visual inspection of oil level, the longest portion having a plurality of axially spaced integral flanges extending radially outwardly therefrom, the shortest portion having at least one integral flange extending radially outwardly therefrom, said flanges each having a reverse contour drip-causing edge on the underside thereof, said composite insulating shell having wet and dry outside surface insulation strength which is substantially equal to the corresponding insulation strength of a conventional shell of the same dimensions and configuration but consisting entirely of said opaque insulating material.

3,101,387
INSULATED SEAL FOR A ROD MOVABLE IN A WALL

Theodore G. Mihran, Schenectady, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 5, 1959, Ser. No. 797,825
8 Claims. (Cl. 174—18)

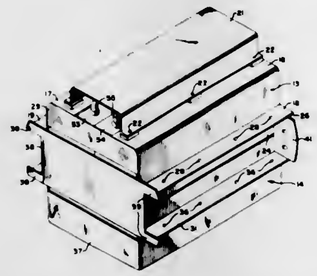


1. An electrically insulated seal between a metallic rod and a metallic chamber wall where a fluid pressure differential exists at opposite faces of said wall, and said rod passes through and moves in said wall, which comprises said wall having a passage therethrough from face to face, said rod being movable in said passage and passing through said wall with a close clearance, said wall at one end of said passage having therein an endless rabbet that faces outwardly of and opens into the passage, an endless, apertured element of resilient, electrically insulating material disposed in said rabbet, encircling said rod, tightly engaging the rod periphery and the peripheral wall of said rabbet while free of pressure therein in a face to face direction, fully spacing said rod from direct contact with said passage periphery, and sealing the passage against movement of fluid through it along said rod, and electrically insulating means secured to said wall and, extending over said rabbet, for confining said element in said rabbet, and limiting transverse movement of the shaft to prevent direct contact of said rod with said wall.

3,101,388
MINE CASE AND INSTRUMENT MOUNTING SYSTEM

Charles C. Vogt, Bethesda, and Howard W. Semon, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

Original application Feb. 6, 1953, Ser. No. 335,614, now Patent No. 2,947,249, dated Aug. 2, 1960. Divided and this application Feb. 29, 1960, Ser. No. 11,933
3 Claims. (Cl. 174—59)
(Granted under Title 35, U.S. Code (1952), sec. 266)

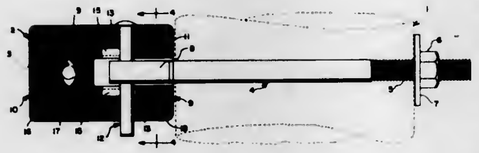


1. In combination with a mine casing having means for removeably securing an instrument housing, said instrument housing having an upper compartment and a lower compartment for housing electrical components, each of said compartments having top and bottom portions, an end plate secured at each end of the top portion of said upper compartment, and an end plate secured at each end to the bottom portion of said lower compartment, fastening means removeably securing said housing to said mine casing, said top portion of said upper compartment being provided with electrical terminals therein, and a channel shaped member being removeably secured to the top of the upper compartment over said electrical terminals whereby a passage for connections to the electrical components is provided.

3,101,389
DIVIDED ELECTRICAL INSULATOR

Arthur C. Bennett, P.O. Box 86, Rhome, Tex.

Filed June 13, 1962, Ser. No. 202,234
4 Claims. (Cl. 174—156)

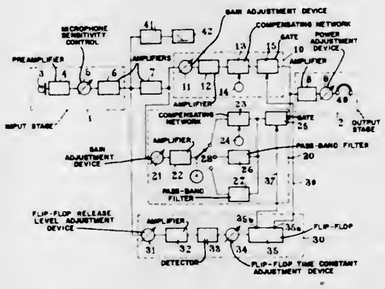


1. An electrical insulator for attachment of a power line to one side of a pole comprising, in combination with a bolt having dimensions whereby it is adapted to be passed thru an opening therefor extending transversely thru a pole, said bolt having a threaded end portion and having a hole extending transversely thru one of its ends, an elongated first clamping element having a longitudinal bore beginning at one of its ends and having longitudinal slots in opposite sides thereof communicating with said bore, the first clamping element being received on the bolt with said one of the ends of the bolt inserted in said bore, a bifurcated second clamping element received on an end portion of the first clamping element opposite said one of its ends, the second clamping element having opposite side portions embracing the first clamping element and being arranged concentrically and coaxially relative thereto, a pin arranged transversely of the bolt and extending thru said hole, and thru aligned openings therefor in the opposite side portions of the second clamping element and the longitudinal slots of the first clamping element whereby the first and second clamping elements are connected to the bolt for axial adjustment relative to each other, the second clamping element having a transverse groove extending between its opposite side portions for engagement by an electrical conductor and the first clamping element having a transverse groove in its adjacent end portion in opposing relation to said first mentioned groove, and a nut on the threaded end portion of the bolt whereby the first and second clamping elements are adapted to be advanced relative to each other upon tightening the nut.

3,101,390
APPARATUS FOR AUDIO-VOCAL CONDITIONING

Jean Paul Maille, Paris, France, assignor to Societe Civile d'Etudes et de Brevets Mota, Paris, France

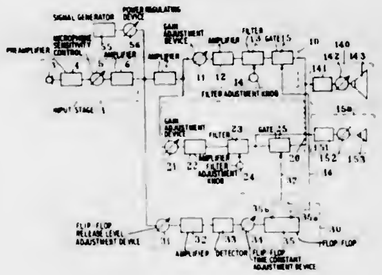
Filed June 8, 1960, Ser. No. 34,761
Claims priority, application France Feb. 15, 1960
8 Claims. (Cl. 179—1)



1. An apparatus permitting the audio-vocal conditioning of a subject by subjecting the subject's auditory system to an exercise which comprises an input stage for converting the acoustic signals into electric signals, an output stage for converting the electric signals into acoustic signals applied to the subject's ear, a first channel and another channel connected in parallel between said input stage and said output stage, said first channel comprising a compensating network of which the response curve over the audio frequency spectrum corresponds to a first predetermined spectrum defining a first way of hearing, and a gate controlling the opening and closing of said first channel, said other channel comprising a compensating network of which the response curve over the audio frequency spectrum corresponds to a second predetermined spectrum which defines a second way of hearing, and another gate controlling the opening and closing of said other channel, said apparatus comprising an auxiliary channel connected to the output of said input stage, said auxiliary channel comprising a monostable multivibrator generating a first and a second control voltage applied to the gates of said first and other channels respectively, each of said control voltages having either a first value at which it opens the gate responsive thereto, or another value at which it closes said gate, said first and second control voltages having respectively the first and second values in the inoperative condition of said multivibrator whereby the first channel is released and the second channel is blocked, said auxiliary channel also comprising means for defining a predetermined threshold beyond which signals appearing at the output of said input stage

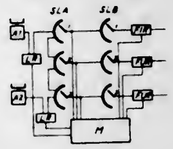
are applied to the multivibrator, whereby when a signal having an amplitude greater than said threshold is applied to said multivibrator the latter becomes operative so that the first and second control voltages assume respectively said first and second values, thus blocking the first channel and releasing said second channel.

3,101,391
APPARATUS FOR THE ACOUSTIC-AMBIENCE CONDITIONING OF A MEDIUM
Alfred Ange Auguste Tomatis, Paris, France, assignor to Societe Civile d'Etudes et de Brevets Mota, Paris, France
Filed Feb. 15, 1961, Ser. No. 89,512
Claims priority, application France Feb. 15, 1960
7 Claims. (Cl. 179—1)



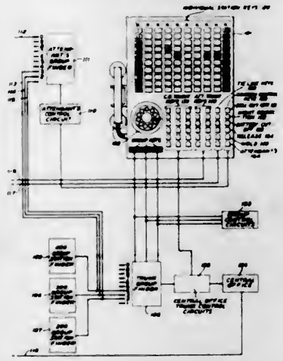
1. An apparatus for the acoustic ambience conditioning of a medium, comprising a first input stage for transforming the acoustic signals present in said medium into electric signals, an electric-signal generator corresponding to the background noise and operating continuously, two channels connected in parallel, the outputs of the generator and of the input stage being connected to one another at the common input of these two channels, the first channel comprising a filter having a first response curve and a gate controlling the opening and closing of said channel, the second channel including a filter presenting a second response curve and a gate controlling the opening and closing of said second channel, a first output stage comprising means for transforming the electric signals into acoustic signals, the outputs of said two channels being connected to one another, at the input of said first output stage, a second output stage comprising means for converting the electric signals into acoustic signals, the output of the filter of said second channel being connected directly to the input of the second output stage, the apparatus being provided, in addition, with an auxiliary channel connected at the output of the input stage, said auxiliary channel comprising triggering means generating two control voltages applied, respectively to the gates of said first and said second channels, these control voltages being selected in such a manner that, in the absence of an acoustic signal of an intensity higher than a predetermined threshold, applied to the input stage, the first channel will be the only one to be unblocked, whereby the medium is placed in a first state of acoustic ambience wherein the input signals derived from a generator and from said input stage are transmitted to said first and said second output stages, respectively, via the filters of the first and second channels and that, when an acoustic signal of an intensity higher than said threshold is applied to the input stage, said first channel will thus be blocked, whereas said second channel will be unblocked, in such a manner that the input signals will then be transmitted to the two output stages, after having been modified, in the same way, by the only filter of the second channel.

3,101,392
TELEPHONE SYSTEM
Karl Gunnar Brunberg, Segeltorp, and Bernard Lillsunde, Hagersten, Sweden, and John Sture Lindenhäll, Galion, Ohio, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Feb. 12, 1959, Ser. No. 792,801
Claims priority, application Sweden Feb. 14, 1958
7 Claims. (Cl. 179—22)



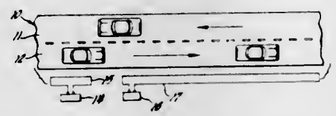
1. An automatic telephone system comprising, in combination, selecting stages including crossbar switches having contact bridges being self-locking in contact closing condition independently of the termination of a speech connection thereto and restorable into open condition by changing a potential supplied to the bridges, test-wires associated with each of the bridges and indicating by their potential condition the busy and idle state respectively of the respective bridge, a marker, including means for identifying a calling line, means supplying a potential to bridges marked idle by the respective test-wires for restoring all the idle bridges not restored previously to said open condition, means for selecting one of the idle bridges in each stage, and means for setting up a connection to a called line through said selected bridges.

3,101,393
CORDLESS TYPE SWITCHBOARD
Arnold B. Desnoes, Massapequa, Dick P. Fullerton, New York, and Philip D. Shea, Manhasset, N.Y., assignors to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed May 17, 1961, Ser. No. 110,826
9 Claims. (Cl. 179—27)



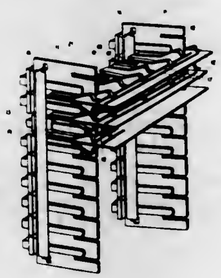
1. A private branch exchange telephone system comprising, in combination, a control panel, a plurality of extension stations, a first bank of manually operable illuminatable keys on said control panel each corresponding to a respective one of a first plurality of groups of said stations, a second bank of manually operable illuminatable keys on said control panel each corresponding to a respective one of a second plurality of groups of said stations, each of said second groups comprising a single respective station from each of said first groups, and means responsive to the momentary operation of a key in said first bank followed by the operation of a key in said second bank for completing a connection between said control panel and a single respective one of said stations.

3,101,394
HIGHWAY INFORMER KEYING SYSTEM
Clark E. Quinn, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 6,055
4 Claims. (Cl. 179—82)



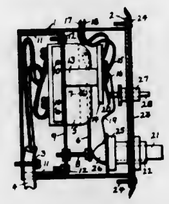
1. In a system for transmitting information to a vehicle which is moving in a given direction along a predetermined course, message signal transmitting means positioned adjacent one portion of said course for continuously transmitting a message signal containing the desired information, trigger signal transmitting means positioned adjacent a portion of said course immediately preceding said one portion for transmitting a trigger signal, vehicle-mounted receiving means for receiving said message signal when the vehicle is on said one portion of said course and for receiving said trigger signal when said vehicle is on said preceding portion of said course, signal utilization means connected to said receiving means for responding to said message signal, gating means connected between said receiving means and said utilization means, and control means connected to said receiving means and being responsive to said trigger signal to operate said gating means.

3,101,395
CORDLESS SWITCHBOARD
Erik Isidor Engqvist, Hagersten, and John Helge Willy Adenstedt, Johanneshov, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed May 14, 1959, Ser. No. 813,178
Claims priority, application Sweden May 23, 1958
4 Claims. (Cl. 179—99)



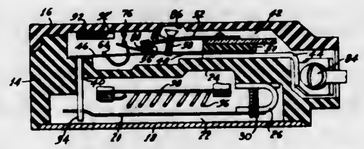
1. A cordless manual switchboard for connecting local lines to trunk lines and local lines in pairs comprising, calling signal means for each local line, a plurality of push buttons for each local line, locking means releasably securing a single one of said push buttons in a depressed position and simultaneously releasing another depressed push button in response to manual actuation thereof, said one of said push buttons in said depressed position connecting said calling signal means to the respective local line.

3,101,396
PLURAL SWITCH COMBINATION CONTROL FOR ENTRANCE LIGHT AND BELL HAVING PNEUMATIC DELAY MEANS FOR OPENING THE ENTRANCE LIGHT SWITCH
William P. Kennedy, 304 Freyer Drive, Marietta, Ga.
Filed Dec. 10, 1959, Ser. No. 858,802
2 Claims. (Cl. 200—34)



1. A combination control mechanism having control means to cause an electrically powered entrance bell circuit switch to open or close, said switch having flexible arm contact means normally open, said control means also causing a separate electrically powered entrance light circuit switch to open or close, said light circuit switch having a switch operating arm spring biased toward a closed switch position, said control means comprising a pushable, sliding, manually operated plunger normally held in a first retracted position, said plunger having attached thereto a protuberant, air containing, compressible, manually exhaustible and self-expanding diaphragm, said diaphragm when in expanded condition holding said switch operating arm in the open switch position, said plunger when manually pushed to a second position being effective to close said flexible arm contact means of said bell circuit switch whereby said bell circuit is energized, and to compress and exhaust said diaphragm, said plunger allowing said flexible arm contact means to open and withdrawing said compressed diaphragm from contact with said light circuit switch operating arm as said plunger returns to the first retracted position when said manual pressure is discontinued, whereby said bell circuit switch is opened and said light circuit switch operating arm moves to a closed switch position and remains in said closed switch position until said diaphragm has self-expanded to its normally protuberant condition thereby moving said switch operating arm back to the open switch position.

3,101,397
THERMAL OVERLOAD RELAY
Alexander R. Norden, New York, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed Nov. 9, 1960, Ser. No. 68,233
20 Claims. (Cl. 200—122)



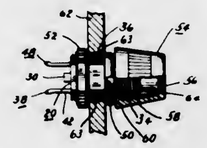
1. A thermal overload relay for an electric circuit, comprising a companion pair of separable contacts, operating mechanism therefor including togle linkage and an operating device comprising a thermal element responsive to a

predetermined thermal overload to over-toggle said linkage and open said contacts, and an ambient temperature compensating thermal element separate from but cooperating with said operating mechanism to control at least one over-toggle point of said linkage, said compensating element being physically separate from and separated from said operating mechanism at the instant following over-toggle of said linkage.

3,101,398
FUSE HOLDERS FOR ELECTRIC CIRCUITS

Angelo Urani, St. Louis, Mo., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed Nov. 14, 1960, Ser. No. 69,184
4 Claims. (Cl. 200—129)



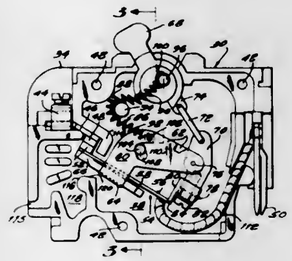
4. In a panel-mounted holder for electric fuses, a body portion that has one end thereof dimensioned to telescope through an opening in a panel and that has the other end thereof adapted to be disposed outwardly of said opening in said panel, fuse-receiving terminals carried by said body portion, a groove in the exterior of said body portion intermediate said one and said other end of said body portion, and a non-metallic and deformable resilient member disposed partially within and held by said groove, said resilient member extending outwardly beyond the periphery of said one end of said body portion to engage the opening-defining portions of said panel, said resilient member responding to stresses thereon to deform and form a water-tight seal between said body portion and said opening-defining portions of said panel, said resilient member constituting a positioning shoulder for said body portion and being adapted to serve as the sole positioning shoulder for said body portion, and a surface on said body portion intermediate said groove and said one end of said body portion that is adapted to receive a stiff fastener and which can hold said fastener at different distances from said groove, whereby said holder for electric fuses can be mounted on panels of different thicknesses, said fastener and said surface coacting with said resilient member to hold said body portion in assembled relation with said panel, said fastener engaging said surface on said body portion and holding said resilient member in stressed and deformed condition adjacent said opening in said panel whenever said device is mounted on a panel.

3,101,399
CIRCUIT BREAKERS

Paul M. Christensen, West Orange, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware

Original application Aug. 19, 1953, Ser. No. 375,114, now Patent No. 2,876,308, dated Mar. 3, 1959. Divided and this application Dec. 5, 1958, Ser. No. 784,013
10 Claims. (Cl. 200—168)

1. In a circuit breaker having a casing having opposing side walls in which the circuit breaker mechanism is housed; a terminal member having a contact portion projecting from said casing, and means mounting said terminal member for disposition of said projecting portion at opposite sides, respectively, of the central plane parallel to the opposing side walls of said casing, said terminal having a mounting portion and said casing having means for pivotally mounting said mounting portion for limited



swing from one side of said central plane to the other between said side walls.

3,101,400
HARDENING COIL AND METHOD OF HEAT TREATMENT OF TOOTHED METAL STRIPS

Nicholas Gagliardi, Brooklyn, N.Y., assignor to Induction Heating Corporation, Brooklyn, N.Y., a corporation of New York

Filed Feb. 23, 1961, Ser. No. 91,143
7 Claims. (Cl. 219—10.43)

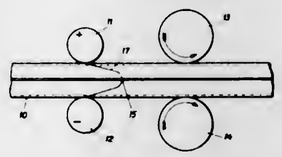


1. The method of heat treating the teeth alone of a toothed object such as carding wire, which comprises establishing a high frequency electro-magnetic field between a linear work coil and a return conductor, drawing said object through said coil, and holding the body of the object in contact with said return conductor and with the teeth extending into said electro-magnetic field during drawing of said wire through said coil.

3,101,401
METHOD FOR THE MANUFACTURE OF HOLLOW BODIES

Gustav Schlotterer, 11 Sybelstrasse, Dusseldorf, Germany

Filed July 23, 1958, Ser. No. 750,344
Claims priority, application Switzerland July 25, 1957
2 Claims. (Cl. 219—67)

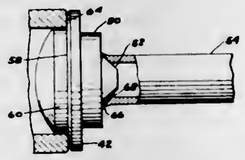


1. A method of producing a closed profile hollow member from endless band material, comprising the steps of continuously deforming said band material during transport thereof to a profile having at least two oppositely arranged substantially flat parallel sides, and two substantially semi-circular sides connected with each other by respective ones of said two flat sides, said flat sides constituting a major portion of said profile, one of said semi-circular sides being formed by respective longitudinal edge portions of said band material, said edge portions of said band material when forming said one semi-circular side closing a gap therebetween, applying an electrical welding current to said band material at oppositely situated first locations of said flat sides thereof adjacent said one semi-circular side, to thereby heat said respective edge portions by passage of said electrical current therethrough and over said closed gap, subsequently subjecting said one semi-circular side to pressure at a second location spaced from said first locations in the direction of transport of said band material when said respective edge portions are heated to rigidly join said edge portions with each other and form a seam at said closed gap, and transporting said band material with a speed from said first locations to said second location so as to direct said flow of electrical current over said closed gap at a third location intermediate said first and second locations respectively and longitudinally spaced therefrom to concentrate said flow of current at said closed gap, whereby said band material is completely closed at said one semi-circular side.

3,101,402
PUSH ROD STRUCTURE AND METHOD OF MANUFACTURE

Stanley Gondek, Detroit, Mich., assignor to Bundy Tubing Company, Detroit, Mich., a corporation of Michigan

Original application Feb. 12, 1960, Ser. No. 8,331, now Patent No. 3,050,045, dated Aug. 21, 1962. Divided and this application Feb. 28, 1961, Ser. No. 92,279
3 Claims. (Cl. 219—107)



1. The method of forming a push rod having a flange adjacent one end to provide a seat for a coil spring which comprises, providing a tube having an end portion forming a seat, providing an element having portions lying generally on a cylindrical surface and extending between a bearing surface at one end of the element and a fixed flange, one face of said flange forming said spring seat and the opposite face thereof forming a pressure seat, said element having a curved surface adjacent the end opposite said bearing surface, providing a hollow electrode having an end face, engaging said hollow electrode around said portions of said element while leaving said bearing surface free of contact with said electrode, aligning said hollow electrode substantially co-axially with the tube seat, utilizing said hollow electrode as a holder for said element and thereby aligning said element substantially co-axially with said tube seat, engaging said curved surface against said tube seat and while leaving said bearing surface free of contact with said hollow electrode and while continuing to use said hollow electrode as an aligning holder for said element, forcibly engaging said end face of said hollow electrode substantially axially against said pressure seat on said flange and thereby applying longitudinal force urging said curved surface against said tube seat, and while continuing to supply said force, heating the interengaged seat and curved surface to form a fused metal connection therebetween.

3,101,403
METHOD OF JOINING CARBON

John G. Lewis and Harold A. Ohlgren, Ann Arbor, Mich., assignors, by mesne assignments, to American Metal Products Company, Detroit, Mich., a corporation of Michigan

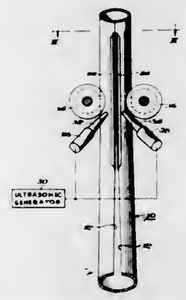
No Drawing. Filed Dec. 28, 1959, Ser. No. 862,075
13 Claims. (Cl. 219—117)

9. The method of bonding carbon surfaces to each other which comprises placing said surfaces together in a non-reactive atmosphere; bringing into the proximity of said surfaces a welding rod made of a metal selected from the metals of group IV–A, group V–A, and group VI–A of the periodic table of the elements; and striking an electric arc between said rod and said carbon for a period of time sufficient to melt said metal and cause said metal to penetrate a substantial distance into said carbon surfaces.

3,101,404
WELDING METHOD EMPLOYING ULTRASONIC ENERGY

Joseph M. Hill, 8016 Marmion Drive, Pittsburgh 37, Pa.

Filed Jan. 29, 1962, Ser. No. 169,268
7 Claims. (Cl. 219—128)



1. The method of welding comprising the steps of heating two adjacent metal edges to a welding temperature while bringing said edges close enough together to permit the two to weld together, and inducing ultrasonic vibrations in at least one of said edges whereby a weld will be formed at the edges without the formation of a substantial bead.

3,101,405
OVERLAY ELECTRODE

Wayne L. Wilcox, Havertown, Pa., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed July 24, 1961, Ser. No. 126,015
2 Claims. (Cl. 219—146)

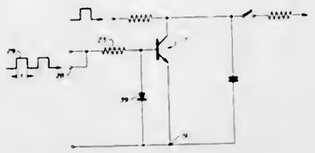


1. An electric arc welding electrode for overlay deposition of type 316 or 317 stainless steel containing 0.08% carbon maximum on plain carbon or low alloy steel, which consists of an envelope of low carbon plain carbon steel making up from 24 to 37 percent of the total metallic content of the electrode and a core of powdered metal within the envelope making up the following proportions of the total metallic content of the electrode:

	Percent
Ferrochrome, 70% chromium	41 to 43
Nickel	18 to 24
Ferromolybdenum, 60% molybdenum	4 to 8

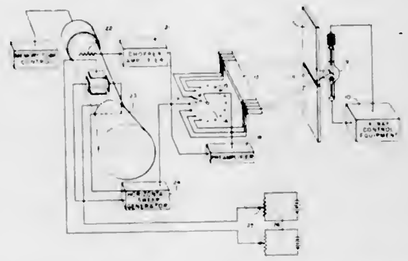
the electrode having a nitrogen content of 0.10 maximum.

3,101,406
ELECTRONIC INTEGRATING CIRCUIT
Rudolph H. Engelmann, Castro Valley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 2, 1960, Ser. No. 33,602
4 Claims. (Cl. 235—183)



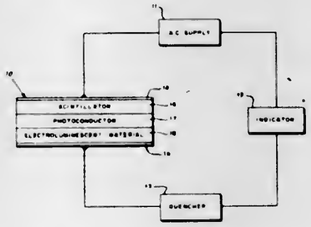
2. In an electronic integrating circuit the combination comprising a transistor having a base, a collector and an emitter, a capacitor connected between said emitter and said collector, means for selectively applying a voltage pulse to said capacitor to charge it to an initial voltage, means for biasing said base with operating voltage, current dividing means comprising a diode of the same semiconductor crystalline material as said transistor connected between said base and said emitter and oriented to permit current to flow from said base to said emitter, signal input terminal means including a first terminal coupled to said base and a second terminal coupled to the juncture between said capacitor and emitter for receiving a signal to be integrated subsequent to termination of said voltage pulse, whereby the charge remaining on said capacitor after a given time interval is indicative of the integral thereover of said signal.

3,101,407
FLUOROSCOPE SYSTEM UTILIZING AN IMAGE STORAGE TUBE
John Daniel Shipman, Jr., Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 9, 1959, Ser. No. 805,351
2 Claims. (Cl. 250—71.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a system for presenting a fluoroscopic presentation of a subject adapted to be irradiated which comprises a radiation source arranged to emit radiation across a space in which a subject to be irradiated is positioned for examination, means for confining said source of radiation emitted across said space to a thin fan-like beam in a plane perpendicular to a plane through said source, a radiation detector means positioned in alignment with said beam in the same plane with said radiation source and adapted to receive incident radiation, said radiation detector means comprising a plurality of aligned crystals adapted to effect translation of said incident radiation into corresponding light pulses, means positioned in optical alignment with said crystals for receiving said light pulses and translating light into electrical signals in proportion to said incident radiation, each of said signals being directed to separate contacts of a switch means, an image presentation storage tube, said tube comprising an electron intensity control grid and vertical and horizontal beam deflection plates controlled by vertical and horizontal sync generators, means for scanning said separate contacts and feeding said electrical signals to said grid of said memory tube, said signals controlling the intensity of the electron beam of the memory tube, means for simultaneously moving the radiation source and detector means in planes parallel to each other across the space in which the subject is adapted to be placed and means for controlling said vertical and horizontal sync generators as said radiation source and detector means are moved across said subject.

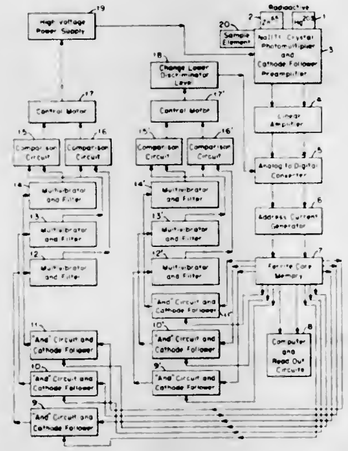
3,101,408
IONIZING RADIATION DETECTOR OF THE SCINTILLATION PHOTOCONDUCTIVE TYPE
John W. Taylor, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 18, 1961, Ser. No. 83,596
6 Claims. (Cl. 250—71.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for detecting and indicating ionizing radiation comprising, in combination: a normally non-conductive detecting head having scintillation, photoconductive, and electroluminescent materials disposed between a pair of conducting plates; an alternating current supply; an indicator responsive to current flow; a quencher adapted to stop current flow therethrough at a predetermined value; and an electrical conductor means connecting said detecting head, said alternating current supply, said indicator and said quencher in series to form a closed circuit; whereby said detecting head conducts a current through said circuit when it is subjected to ionizing radiation.

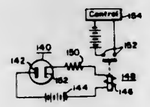
3,101,409
DRIFT CONTROL IN AN ANALYTICAL GAMMA RAY SPECTROMETER
Lloyd E. Fite, Bryan, Tex., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 3, 1962, Ser. No. 192,295
4 Claims. (Cl. 250—71.5)

1. In a multi-channel pulse height analyzer for analyzing the gamma ray spectrum of a neutron bombarded sample element, including a gamma ray detector coupled to said sample element and to a photomultiplier provided with a high voltage supply, said photomultiplier being couplied to a cathode follower, preamplifier, linear amplifier, analog to digital converter, address current generator, ferrite core memory, and a computer, the improvement comprising means for automatically and continuously adjusting the overall drift of said analyzer due to fluctuations in line voltage, high voltage supply, and photomultiplier and amplifier gain, said means comprising a first source of radioactive reference pulses coupled to said gamma ray detector for providing a first reference photopeak in one of the lower channels of said analyzer, a second source of radioactive reference pulses coupled to said gamma ray detector for providing a second reference photopeak in one of the upper channels of said analyzer, first means coupled to said ferrite core memory for monitoring said one lower channel and each channel above and below said one lower channel for any drift which may occur in these lower channels, means coupled to said first monitoring means and responsive to any drift upward or downward of said first reference photopeak in said lower channels for automatically changing



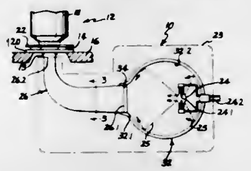
the lower discriminator level in said analog to digital converter to thereby maintain said first reference photopeak in said one lower channel, second means coupled to said ferrite core memory for monitoring said one upper channel and each channel above and below said one upper channel for any drift which may occur in these upper channels, and means coupled to said second monitoring means and responsive to any drift upward or downward of said second reference photopeak in said upper channels for automatically adjusting the high voltage supply to said photomultiplier to thereby maintain said second reference photopeak in said one upper channel.

3,101,410
THERMIONIC RADIATION COUNTER
Stanley L. Ruby, Glenshaw, Kuan-han Sun, Pittsburgh, and Ted Fahrner, Whitehall Borough, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 20, 1958, Ser. No. 756,238
18 Claims. (Cl. 250—83.1)



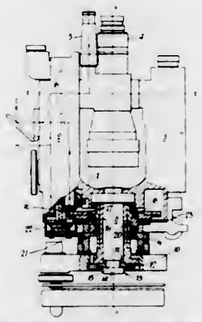
18. A radiation detector comprising an enclosed housing having an anode and a thermionic cathode spacedly juxtaposed therewithin, a radiation-responsive material thermally coupled to said cathode which causes said cathode to be heated and thermionically to emit electrons upon impingement of said material with external radiation, and indicating means coupled to said anode and said cathode.

3,101,411
LIGHT CONDUCTING DEVICE TO TRANSMIT ULTRA-VIOLET RADIATION FOR SPECIMEN FLUORESCENCE UNDER A MICROSCOPE
Oscar W. Richards, North Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed May 17, 1960, Ser. No. 29,609
3 Claims. (Cl. 250—83.3)



1. Apparatus for irradiating a specimen to be examined by fluorescence microscopy, said apparatus comprising a source of ultraviolet radiation, a radiation-transmitting device embodying a multiplicity of radiation-conducting fibers assembled in spaced side-by-side relation within a radiation-insulating matrix, said device having one end disposed for receiving radiation from said source within said fibers and having its other end disposed for directing radiation transmitted therethrough upon that portion of said specimen to be examined microscopically, radiation-integrating means disposed in surrounding relation to said source and to said radiation-receiving end of said device for directing substantially all radiation from said source upon said radiation-receiving end at diverse angles, and filter means disposed in sequence with said device for permitting transmission of ultraviolet radiation only.

3,101,412
SPORE GROWTH PREVENTION IN OPTICAL INSTRUMENTS
Peter Douglas Scott-Maxwell, York, England, assignor to Cooke, Troughton & Simms Limited, York, England, a British company
Filed Aug. 5, 1957, Ser. No. 676,252
Claims priority, application Great Britain Aug. 10, 1956
2 Claims. (Cl. 250—106)



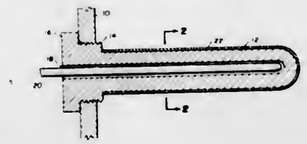
1. An optical instrument comprising a body, at least one optical element in said body, a first wall portion of said body defining therein at least one optical passage operatively associated with said element, a second wall portion of said body defining therein a restricted passage through which air enters and leaves said body, said restricted passage having a cross-section which is small compared to the size of said optical element, said restricted passage being connected to but removed from said optical passage, and a source of beta radiation on said second wall portion for radiating spore inhibiting

beta rays across said restricted passage whereby spores are irradiated prior to entering said optical path, said source having a strength depending on the size of said passage and independent of the size of said optical element.

3,101,413
CORROSION TEST PROBE AND METHOD

Edward Schaschl and Robert L. Littler, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Nov. 16, 1959, Ser. No. 853,050
3 Claims. (Cl. 250—106)

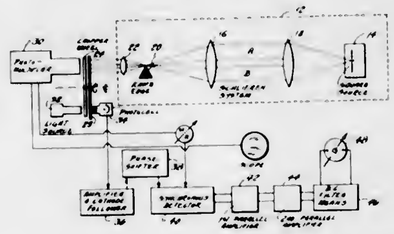


1. A corrosion-test probe comprising an elongated, hollow support means closed at one end, a radioactive coating of a corrodible material on the outer surface of said support means, and means within said hollow portion of said support means to detect the radioactive emanations from said corrodible material.

3,101,414
AERODYNAMIC DENSITY METER USING PHOTOSENSITIVE SCHLIEREN OPTICAL SYSTEM

Wallis R. Grabowsky, San Pedro, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Sept. 28, 1961, Ser. No. 141,554
7 Claims. (Cl. 250—218)

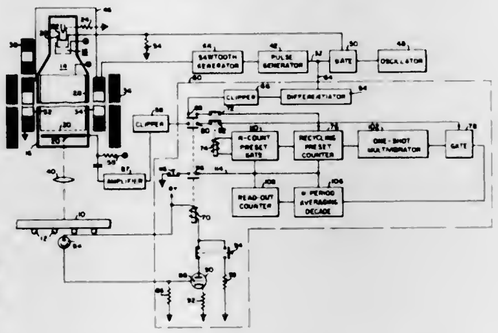


1. An instrument for the measurement of density differences in a medium exposed to an aerodynamic flow comprising, in combination: schlieren optical means for projecting a collimated beam of light through said medium; means for dividing said light beam into two parts and for interrupting each part alternately; means for producing an electrical output signal proportional to light intensity, said light beam being directed at said signal-producing means to provide an electrical output comprising a pulsating D.C. signal every second pulse of which is proportional to the intensity of the same part of said light beam, alternate pulses being derived from different parts of said light beam; means for obtaining an A.C. signal having a characteristic proportional to a characteristic of said pulsating D.C. signal; narrow-bandwidth means for passing said A.C. signal and eliminating frequencies other than a narrow band including said A.C. signal, thereby eliminating the spectrum of noise signals outside said narrow band; means for separating said A.C. signal into individual components, each corresponding to the output associated with a different one of the parts of said light beam, said components comprising steady D.C. signals; and means for obtaining and indicating the difference between said steady D.C. signals.

3,101,415
RADIANT ENERGY SENSITIVE NON-CONTACTING DIMENSIONAL GAGE

Rudolph Steven Libenschek, Pittsburgh, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 10, 1960, Ser. No. 14,057
11 Claims. (Cl. 250—219)

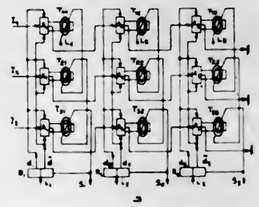


1. Apparatus for measuring the edge-to-edge dimension of an article having a different light intensity than the background surrounding it comprising, in combination, an electron-optics device having a photosensitive signal plate therein, means for focusing an image of the article to be measured on the signal plate, means for scanning said signal plate with an electron beam along a line extending substantially parallel to the dimension being measured, means for modulating said electron beam whereby the electron beam will be interrupted at spaced intervals as it scans across the signal plate to produce a pulsed output signal in which the number of pulses of amplitude determined by the light intensity of said article is proportional to the dimension being measured, and circuit apparatus for counting said output pulses.

3,101,416
MAGNETIC CORE SWITCHING SYSTEMS

Claude Marie Edmond Masson, Paris, France, assignor to Societe d'Electronique et d'Automatisme, Courbevole, France

Filed July 22, 1958, Ser. No. 750,226
Claims priority, application France July 24, 1957
5 Claims. (Cl. 307—88)



3. A magnetic core matrix store comprising, in combination, a plurality of magnetic core switches arranged in a plurality of rows and columns, each switch comprising two magnetic cores each having an input winding, a transfer winding and an output winding, an output for each switch in which the two output windings of the switch are connected in series opposition, all of the switch outputs of the columns being in series relation, individual

digit registers controlled by said column outputs respectively, each register having an output connection energizing one set of input windings on the switches which control the register and also having a complementary output connection energizing the other set of input windings of said switches, separate transfer circuits connecting in series circuit relation the transfer windings of the switches in said rows respectively, and separate sources of intermittent pulses of different timing for energizing said transfer circuits respectively.

3,101,417
MAGNETIC CORE DEVICE

William C. Elmore, Swarthmore, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Continuation of application Ser. No. 323,828, Dec. 3, 1952. This application June 2, 1961, Ser. No. 116,651
35 Claims. (Cl. 307—88)



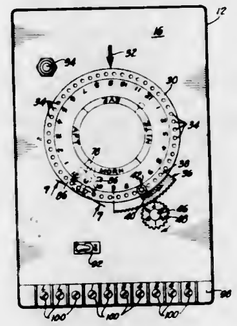
14. Binary counter means comprising a first terminal and a second terminal, magnetic material capable of assuming alternate magnetic remanent states forming a first magnetic flux path means and a second magnetic flux path means, a first tapped winding means adapted to energize said first magnetic flux path means, a second tapped winding means adapted to energize said second magnetic flux path means, a first capacitor means connected in series with said first tapped winding means, the said series connection of said first tapped winding means and said first capacitor means being connected between said first terminal and said second terminal, a second capacitor means connected in series with said second tapped winding means, the said series connection of said second tapped winding means and said second capacitor means being connected between said first terminal and said second terminal, a first impedance path connected to the tap of said first tapped winding means and across said first capacitor means to one of said first and second terminals, a second impedance path connected to the tap of said second tapped winding means and across said second capacitor means to one of said first and second terminals, and a signal input means connected to one of said first and second terminals.

3,101,418
ELECTRIC PROGRAMMER

Charles D. Gould, Los Angeles, Calif., assignor to Richdel, Inc., North Hollywood, Calif., a corporation of California

Filed Aug. 14, 1961, Ser. No. 131,322
2 Claims. (Cl. 307—141)

1. An electrical programmer which includes:
mounting means, clock motor means supported by said mounting means, a gear disc connected to said clock motor means so as to be rotated thereby, a gear segment attached to the periphery of said gear disc;
a shaft rotatably mounted on said mounting means, another gear mounted on said shaft so as to be engaged by said gear segment during rotation of said gear disc in order to intermittently turn said shaft;
means mounted on said shaft for periodic actuation of a first switch, a first switch mounted on said mounting means, said first switch including an actuating arm arranged to be actuated by said switch actuating means during rotation of said shaft;
rotary distribution switch means having a distribution terminal coacting with a plurality of circuit terminals, one of said distribu.ion terminals and a plurality of circuit terminals being secured to said shaft so as to rotate therewith, said coacting parts being secured to said mounting means;
a pin affixed to said gear disc, a star wheel attached to said mounting means for rotation with respect thereto, said star wheel being intermittently rotated by said pin as said gear disc rotates, a second switch mounted upon said mounting means, actuating means on said star wheel to actuate said second switch so that said second switch is actuated during one rotation of said gear disc and is non-actuated during another rotation of said gear disc;
electrical transformer means;



a terminal board including a ground connection and a plurality of individual circuit connections and terminals for supplying power to said programmer;
a first electrical conductor connected to one of said terminals for supplying power and to both said clock motor and said electrical transformer, a second electrical conductor connected to another of said terminals for supplying power and to both said first switch and said clock motor, a further electrical conductor connected to said first switch and to said transformer, an electrical conductor connected to said transformer and to said ground terminal;
a further electrical conductor serially connecting said transformer, said second switch, and said distribution terminal of said rotary distribution switch;
still further electrical conductors connecting said plurality of circuit terminals on said rotary distribution switch with said terminals on said terminal board.

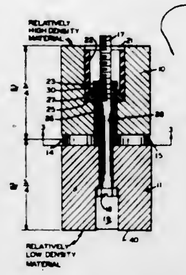
3,101,419
ELECTROMECHANICAL TRANSDUCER SYSTEM

Stanley R. Rich, Hartford, Conn., assignor, by mesne assignments, to Acoustica Associates, Inc., Los Angeles, Calif., a corporation of New York

Original application Aug. 27, 1956, Ser. No. 606,478, now Patent No. 2,947,889, dated Aug. 2, 1960. Divided and this application Apr. 21, 1960, Ser. No. 23,805
19 Claims. (Cl. 310—8.3)

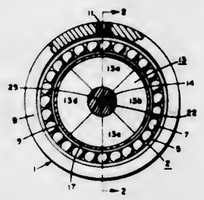
1. An electromechanical transducer system comprising electromechanical transducer means sandwiched between two pieces of solid materials which have relatively dissimilar densities and constituting with said pieces a mechanical vibrator, and means to apply to said system a static compressive stress in opposition to any instantaneous negative stress produced in said system during vibration at an energy level sufficiently great to produce an instantaneous negative stress large enough to disrupt

the acoustic bond between said transducer means and one of said pieces in the absence of said static compressive stress, said vibrator being dimensioned to vibrate



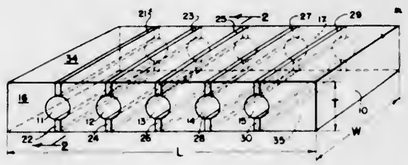
substantially as a longitudinally resonant vibrator in the direction of a line through said pieces and said transducer means.

3,101,420
DISTORTED BEARING PIEZOELECTRIC VOLTAGE SOURCE
George H. Hufferd, Lyndhurst, Robert H. Josephson, Cleveland Heights, and Alfred L. W. Williams, Cleveland, Ohio, assignors to Clevite Corporation, a corporation of Ohio
Filed Nov. 6, 1961, Ser. No. 150,534
19 Claims. (Cl. 310—8.7)



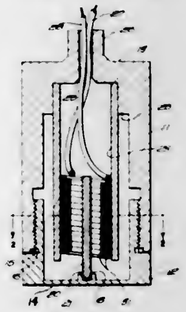
1. A piezoelectric voltage source comprising, in combination: a radial bearing including a first and a second bearing race having a common axis and adapted for relative rotation, said first race being distorted out-of-round and said second race being distortable out-of-round relative to said axis; and piezoelectric element means mounted in load transmitting engagement with said distortable second race whereby upon relative rotation between said races a load, established by distorting said second race, is applied to said piezoelectric element means to generate a voltage.

3,101,421
ELASTIC WAVE VIBRATOR
Harry W. Kompanek, Santa Barbara, Calif., assignor to Acoustica Associates, Inc., Mineola, N.Y., a corporation of New York
Filed July 6, 1959, Ser. No. 825,143
28 Claims. (Cl. 310—9.6)



6. Electromechanical vibrator comprising a body of solid material intended for resonant vibration in a prescribed direction having a plurality of perforations passing completely through said body from one side to the opposite side thereof, each of which is located directly in the path of vibrations in said body and is directed transversely to the direction of vibration at a plurality of locations throughout a resonant section of said body, whereby simultaneously to reduce the mass and increase the compliance of said body substantially uniformly throughout.

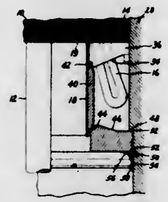
3,101,422
ELECTROMECHANICAL TRANSDUCER APPARATUS
Donald R. Church, Los Angeles, Calif., and James Da Rold, Glen Oaks, N.Y., assignors to Aconstica Associates, Inc., Plainview, N.Y., a corporation of New York
Filed Feb. 9, 1960, Ser. No. 7,576
4 Claims. (Cl. 310—26)



1. Electromechanical transducer apparatus, particularly adapted for operation at elevated temperatures and pressures, comprising a hermetically sealable rigid housing of magnetically permeable material having only first and second parts detachably connected together, said first part including an integral diaphragm portion forming one end wall of said housing, an elongated magnetostrictive transducer element made of a material which is operable in the temperature range of 1000° F. mounted at one end on the interior side of said diaphragm and having its other end free and extending therefrom into the space in said housing, a tubular magnetic shielding element mounted at one end on the inner surface of a wall of said second housing part opposite said diaphragm and having its other end free and extending therefrom toward said diaphragm a distance sufficient to surround the major portion of said transducer element, the inner diameter dimensions of said shielding element being greater than the outer dimensions of said transducer element, and a coil of wire having an internal diameter larger than said outer dimensions supported within said shielding element and extending along the major portion of the length of said transducer element in cooperative relation with said transducer element for the interchange therewith of electrical oscillations and mechanical vibrations, whereby the mating of said first and second parts provides a complete housing for said apparatus and locates said transducer element within but out of contact with said coil and said shielding element.

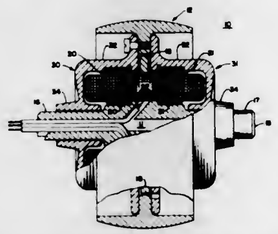
3,101,423
DYNAMOELECTRIC MACHINE
Albert W. Brunot, Swampscott, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 12, 1958, Ser. No. 779,978
1 Claim. (Cl. 310—86)

A motor comprising a stator core enclosed in a frame and a rotor positioned in the bore of the stator, coils having end turns protruding outwardly from the stator, a cylindrical can on the stator and rotor surfaces forming an air gap therebetween, a clamping ring attached to each end of the stator for supporting the laminations, a firs. tubular member having its inner surface fixed in fluid-tight relationship with the stator can and including one end in firm engagement with said clamping ring, a cylindrical ring having a shoulder coacting with the other end of said tubular member and positioned between said member and the frame and thereby defining a cavity enclosing the end turns in a dead air space, a groove formed in the inner surface of said stator frame for receiving the outer surface of the cylindrical ring, a retaining member fitted



in the internal wall of the stator frame and arranged for contact with the exposed portion of said cylindrical ring for holding the latter in a predetermined position, and a second tubular member having a diameter greater than said first tubular member having its peripheral surface in engagement with the stator frame and an edge thereof in contact with the cylindrical ring, and means sealing said second tubular member with the stator frame, thereby providing a construction capable of withstanding the hydraulic forces imposed on the inner cylindrical surfaces of the can on the stator inner surface while simultaneously preventing leakage of water into the stator portion housing the coils.

3,101,424
CONTROL APPARATUS
Stephen L. Burgwin, Clearwater, and Carl Green, Pinellas County, Fla., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 9, 1960, Ser. No. 34,947
16 Claims. (Cl. 310—217)



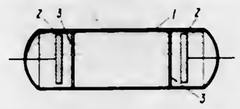
1. In control apparatus: the combination of a hollow cylindrically shaped housing member having means at one end thereof extending radially inwardly a substantial amount so as to prevent the insertion of a circular object having a diameter substantially the same as the inner diameter of said housing, said housing being further characterized by having a circular lip on the other end thereof extending radially inwardly, the diameter of said lip being less than the inner diameter of said housing, and an internal circumferential groove having a diameter greater than the inner diameter of said housing substantially immediately adjacent to said lip, the diameters of said lip and said groove being characterized so that the dimension from a point on the periphery of said groove to a point on the periphery of said lip 180° circumferentially spaced therefrom is at least substantially the same as the inner diameter of said housing; a plurality of split ring laminations having an outer diameter substantially the same as the inner diameter of said housing positioned within said housing; and means for maintaining said laminations in rigid assembled relationship with said housing.

3,101,425
WINDING FOR AXIAL AIR GAP MACHINES
Georges Moressée, Neuilly-sur-Seine, and Robert Déchet, Boulogne-sur-Seine, France, assignors to Normacem S.A., Paris, France, a body corporate of France
Filed Apr. 26, 1960, Ser. No. 24,792
Claims priority, application France May 2, 1959
3 Claims. (Cl. 310—268)



2. In an axial air gap machine having a rotor and a stator, said rotor being spaced from said stator by a planar air gap and consisting of a disk-type armature including an insulating supporting disk having armature winding coil sides on both sides thereof, the improvement wherein said coil sides are relatively thin in the direction normal to the surface of the disk and have a relatively great width, each of said coil sides containing at least one longitudinal slot therein dividing the coil side into two narrower sections electrically connected in parallel whereby Foucault currents in the coil sides and the corresponding eddy current losses created thereby are reduced.

3,101,426
ELECTRICAL DISCHARGE TUBE
Kazuo Takayama and Seiji Ohara, both of Tokyo, Japan, assignors to Nippon Telegraph and Telephone Public Corporation, Tokyo, Japan, a public corporation of Japan
Filed June 14, 1961, Ser. No. 117,139
2 Claims. (Cl. 313—152)

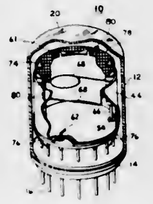


1. An electrical discharge tube wherein a grid for preventing oscillations is provided in the vicinity of the boundary between the space charge region and the plasma region, which grid has a floating potential and is movable.

3,101,427
GASEOUS COLD CATHODE INDICATOR GLOW TUBE
John H. McCauley, Elizabeth, and Steven Gavurnik, Gladstone, N.J., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Continuation of application Ser. No. 765,147, Oct. 3, 1958. This application May 18, 1960, Ser. No. 30,712
10 Claims. (Cl. 313—188)

1. A gaseous cold cathode indicator glow tube including an envelope filled with a gas at a pressure to sustain cathode glow, a stem at one portion of said envelope including a plurality of electrically conductive pins extending therethrough, a pair of spaced-apart support posts

within said envelope, a viewing window at another portion of said envelope, a stack of cathode glow electrodes mounted on said pair of spaced-apart support posts and facing said viewing window, said cathode electrodes being in the form of indicator characters oriented substantially parallel to each other and insulated from each other in said stack, a cup-shaped anode electrode in said envelope said cup-shaped anode having an apertured side wall, a lead extending from each cathode through the apertured

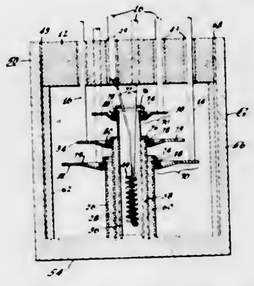


wall of said anode along the length of the cup and the stack of cathode electrodes to one of said conductive pins, and including a plate portion positioned at the bottom of said stack of cathode electrodes, means securing said support posts to said plate portion of said anode, and a support assembly for said electrodes, said support assembly comprising a plurality of insulating disks secured together by reinforcing members coupled to a plurality of said conductive pins in said stem, said support assembly supporting said stack of cathodes.

3,101,428
ELECTRON DISCHARGE TUBE AND ITS METHOD OF FABRICATION

William F. Griffin, Summit, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed July 1, 1960, Ser. No. 40,264
13 Claims. (Cl. 313—252)



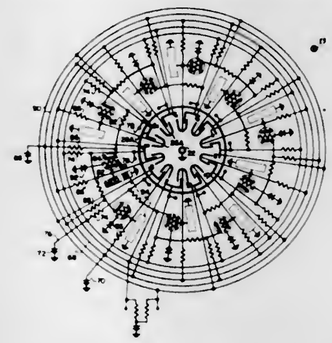
11. An electron tube assembly comprising an electrode and an annular support member having a centrally disposed opening defined by a portion of said support member, an end of said electrode being engaged with said portion, and an aperture through said annulus allowing flow of brazing material from one surface of said annulus through said aperture and into contact with said electrode.

3,101,429
METHOD AND MEANS FOR MODULATING A MAGNETRON BEAM TUBE

Earl D. Ayers, Auburn, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Continuation of abandoned application Ser. No. 412,229, Feb. 24, 1954. This application June 8, 1959, Ser. No. 818,972
25 Claims. (Cl. 315—30)

20. A modulation system including an electron beam tube having a cathode, a target electrode spaced from said cathode and adapted to receive an electron beam and produce an output signal therefrom, a first spade electrode associated with said target electrode and adapted to form and hold an electron beam on said associated target electrode, the space between said cathode and said target defining a current flow path, an electrode outside of said current flow path for modulating the current flow in said current flow path, and means providing a longi-

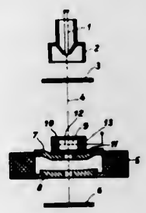


tudinal magnetic field in said tube, said magnetic field and electric fields within said tube co-acting to control the flow of an electron beam therein and causing said beam to tend to move in a characteristic direction known as the leading direction, said last-mentioned electrode being oriented on the side of said electron beam and said current flow path representing the lagging direction of the beam so that the tendency of the beam is to move away from said electrode.

3,101,430
COMPENSATING LENS

Otto Scherzer, Darmstadt-Eberstadt, and Karl Heinz Steigerwald, Heidenheim an der Brenz, Wurttemberg, Germany, assignors to Carl Zeiss, Heidenheim an der Brenz, Wurttemberg, Germany

Filed Aug. 16, 1960, Ser. No. 49,981
Claims priority, application Germany Aug. 22, 1959
8 Claims. (Cl. 315—31)

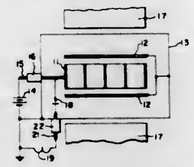


1. Apparatus for compensating for the apertural defect of an electron optical lens of rotational symmetry which is free of space charge, comprising a corrective lens, said corrective lens being positioned near the principal plane of said electron optical lens, said corrective lens comprising a first and second ring electrode positioned in parallel planes perpendicular to the axis of the beam, a netting clamped between said ring electrodes and insulated therefrom, and means for biasing each of said ring electrodes to induce a charge distribution on said netting varying with the distance from the center of the netting, the total charge so induced on the netting traversed by the beam being so slight that no disturbing lens effect of the individual netting meshes occurs.

3,101,431
SPUTTER ION PROTECTIVE APPARATUS

Robert L. Jepsen, Los Altos, and Arthur B. Francis, Sunnyvale, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California

Filed May 29, 1961, Ser. No. 113,258
8 Claims. (Cl. 315—35)

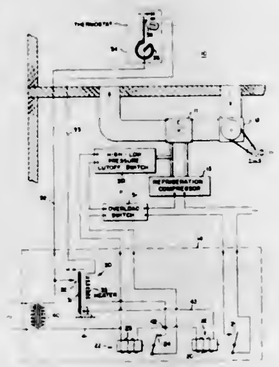


1. A cold cathode vacuum discharge apparatus comprising an anode electrode, a cathode electrode electrically insulated and spaced from said anode electrode, said anode and cathode electrodes providing a primary electron discharge path, additional electrode means for providing an auxiliary electron discharge path, said additional electrode means including a hollow cylindrical electrode, a rod electrode extending within said hollow cylindrical electrode, and said hollow cylindrical electrode and said rod electrode form said auxiliary electron discharge path, a vacuum envelope enclosing said anode, cathode, and additional electrodes, and conductor terminal means for connecting said glow discharge device to a plurality of separate circuits outside of said envelope wherein the current drawn by said primary discharge path may be isolated from the current drawn by said auxiliary discharge path.

3,101,432
CONTROL APPARATUS

Frederick G. Adams, Wayzata, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Aug. 3, 1959, Ser. No. 831,386
4 Claims. (Cl. 317—13)

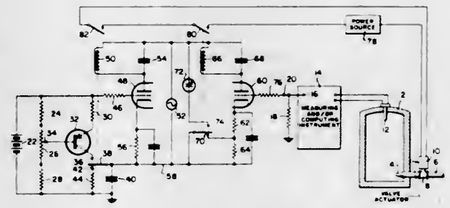


1. In a control circuit for controlling the energization of air conditioning apparatus, first relay means having an energization winding and a normally closed switch controlled by said winding, second relay means having an energization winding and being adapted to control the air conditioning apparatus, time delay means having a first circuit which closes after a predetermined period of energization of a winding of said time delay means, a source of power, electrical circuit means connecting said first and second mentioned energization windings and said first circuit in series to said source of power, condition responsive switch means, said condition responsive switch means opening upon the presence of an abnormal condition, electrical means connecting said normally closed switch and said condition responsive switch means in series to shunt said energization winding of said first relay means so that upon the presence of an abnormal condition said shunt circuit is broken to place said energization winding of said first relay means in series with said energization winding of said second relay means, said energization winding of said first relay means having a high impedance thereby reducing the current to a predetermined low value to cause said second relay means to de-energize said conditioning apparatus, space temperature responsive switch means, and electrical circuit means connecting said temperature responsive switch means, said winding of said time delay means, and said energization winding of said first relay means in a series circuit to said source of power to maintain energization of said first relay means, said last mentioned circuit not providing sufficient energization of said time delay means so that said time delay means subsequently has an open first circuit, said temperature responsive switch means providing a means to open said last mentioned series circuit to de-energize said first relay means to re-establish normal operation of the control circuit.

3,101,433
CONTROL APPARATUS

Robert L. Miller, Hatboro, and Rudolph J. Wolf, Jr., Roslyn, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 31, 1958, Ser. No. 784,143
14 Claims. (Cl. 317—149)



6. A time proportioning control apparatus comprising, in combination, means for generating a linear sawtooth wave voltage signal, a current control device, means for applying a control signal to said current control device, means for applying said sawtooth wave signal as bias to said current control device for cyclic comparison with said control signal whereby to control the flow of current through said control device on a time cycle determined by the repetition rate of said sawtooth signal and for a proportionate time during each cycle determined by the relative magnitude of said control signal, and output operation control means responsive to the current flow through said current control means.

3,101,434
LATCHING MECHANISM FOR ELECTRO-RESPONSIVE RELAY

Hector Kitscha, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Dec. 17, 1958, Ser. No. 780,998
9 Claims. (Cl. 317—187)

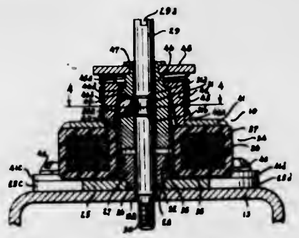
1. A latching device comprising:
(*a*) a movable member having a normal position and another position displaced from said normal position into which said member may be locked;

(*b*) and latching means for automatically locking said movable member when moved to said other position to prevent return thereof to said normal position until it is released comprising:

(*c*) a member provided with an aperture therethrough and at least one side of said aperture having a surface at an angle to the direction of movement of said movable member so that the opposite sides of said aperture converge in one direction and diverge in the opposite direction;

(*d*) a ball carriage partly within said aperture and having a hole therethrough for accommodating said movable member for free movement relative to said ball carriage and being provided with at least one ball confining opening between said movable member and said angular surface and a ball rotatably accommodated in said opening having a diameter greater than the thickness of the wall adjacent said opening;

(*e*) resilient means biasing said ball carriage in said one direction;



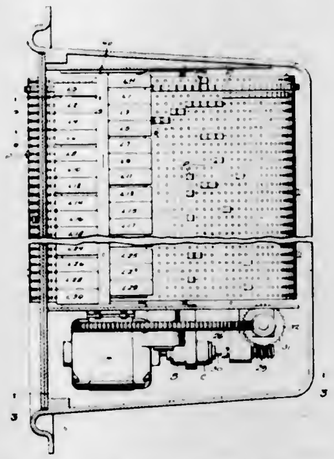
(*f*) a recess in said movable member freely accommodating a portion of said ball when said movable member is in said normal position thereby to prevent wedging of said ball between said angular surface and said movable member and prevent locking of said movable member until the latter has been moved a predetermined distance into said other position;

(*g*) means for moving said movable member to said other position whereby a side of said recess bears against said ball to move said ball and said ball carriage against the force of said resilient means until said ball is provided with enough space to be forced out of said recess and is wedged between said angular surface and a portion of said movable member adjacent said recess thereby to lock said movable member in said other position and to prevent return thereof to said normal position;

(*h*) and electroresponsive means for moving said ball carriage against the force of said resilient means to release said movable member for return back to its normal position.

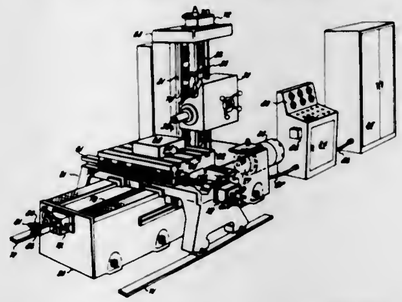
3,101,435
PROGRAM CONTROLLER
Elmer S. Welch, Thiensville, and James S. Roberts, Milwaukee, Wis., assignors, by mesne assignments, to Milwaukee Chaplet & Mfg. Company, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 9, 1959, Ser. No. 845,480
12 Claims. (Cl. 318—162)

8. In a program controller, a rotatable drum carrying a multiplicity of pins arranged in spaced, parallel, circumferential rows, said pins also being alignable in an axial direction, an electrical control circuit, a control element mounted adjacent said drum and in said circuit for each of said circumferential rows and actuated by the pins therein, one circumferential row of pins and its associated control element constituting stepping means for controlling step-by-step rotation of said drum, drive means for rotating said drum and including a continuously running electric motor in said circuit and also including an electrically operated brake and clutch in said circuit and driven by said motor, said brake and clutch being alternately operable to stop and start rotation of said drum, a settable interval timer in said circuit for



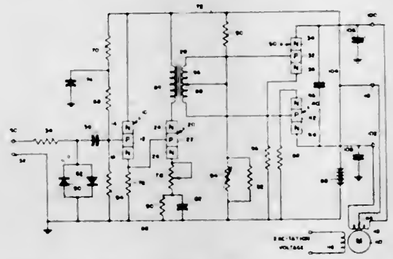
determining the length of time during which said stepping means control element is operative to stop drum rotation, and a manually settable selector switch in said circuit for selecting the other control elements to be placed in the circuit for actuation by their respective pins when the latter are in axial alignment with a pin in said one circumferential row.

3,101,436
NUMERICALLY CONTROLLED POSITIONING SYSTEM
George W. Younkin, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed Apr. 28, 1960, Ser. No. 25,454
19 Claims. (Cl. 318—162)



1. In an automatic machine for moving a working tool in either direction along one axis and for moving a material support in either direction along a second axis, the combination comprising means for commanding said tool and said material support to move to a programmed location, said commands being in the form of signals indicating distances measured along each of said axes, means disposed along each of said axes for detecting the differences between the physical locations of said tool and said support and the programmed location, means responsive to the detection of a substantial variation between the differences along each of said axes for driving said machine along only one of said axes until there is substantially the same difference along each of said axes, and means responsive to the detection of substantially the same difference along each of said axes for driving said machine along both of said axes simultaneously.

3,101,437
SERVO POWER AMPLIFIER
Harry R. Photinos, San Diego, Calif., assignor to The Ryan Aeronautical Co., San Diego, Calif.
Filed July 1, 1960, Ser. No. 40,299
1 Claim. (Cl. 318—207)



A non-feedback servo power amplifier, comprising:

a transistor connected in a constant-current common-emitter configuration, whereby said transistor has a relatively high effective resistance;

means for applying an input signal to said transistor;

a transformer having a low inductance primary winding and a secondary winding;

means for applying the output from said transistor to said primary winding, whereby the signals across said transistor and said primary have a stable substantially 90 degree phase difference as the ratio of said resistance to the inductive reactance increases, said stability being inherent and not requiring negative feedback;

a push-pull amplifier;

means for causing said secondary to drive said push-pull amplifier;

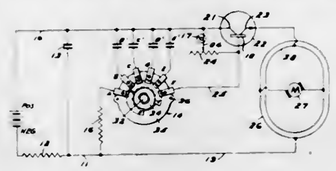
a servo motor having a first winding and a center-tapped second winding;

means for applying a first driving signal to said first winding of said motor, said first driving signal being in phase with said input signal;

means for applying a second driving signal to said second winding of said motor, said second driving signal being obtained from said push-pull amplifier, whereby the second driving signal is substantially 90 degrees out of phase with said first driving signal, and may cause said motor to rotate in either direction in accordance with said input signal.

3,101,438
MODEL TRAIN ELECTRICAL MOTOR CONTROL SYSTEM
William A. McCall, West Bloomfield Township, Oakland County, Pontiac, Mich. (987 Oakland Ave., Birmingham, Mich.)
Filed May 1, 1961, Ser. No. 106,751
3 Claims. (Cl. 318—400)

1. An electric motor coasting system comprising an electric motor, a negative D.C. lead connected to one side of said motor, a transistor disposed in said negative lead with its collector connected to said lead and its emitter connected to said motor side, a positive D.C. lead connected to the other side of said motor, a multiple selector switch disposed ahead of said transistor having a secondary terminal connected to said transistor base and a primary terminal connected to said positive D.C. lead; a cross resistance disposed between said switch primary terminal and said positive D.C. lead, cross capacitance disposed between said positive and negative D.C. leads ahead of said switch, a line resistance in said positive lead ahead of said line capacitance; said cross capacitance, and line resistance smoothing out the D.C. current flow to prevent current leakage due to residual A.C. wave undulations; said switch having multiple tertiary terminals between said primary and secondary terminals, a rotor on said switch, a primary sector on said rotor in constant contact with said primary terminal, a secondary sector on said rotor in constant contact with said secondary terminal, tertiary lines between said tertiary terminals and said negative D.C. lead, capacitors disposed in said tertiary lines; said rotor and sectors being capable of selective connecting said tertiary terminals with either said primary terminal or said secondary terminal so as to charge said capacitors independent of said motor circuit when connected with said primary terminal and to add stored capacity to said secondary terminal and motor circuit when in contact with said secondary terminal, a shunt circuit between said transistor base and said negative D.C. lead ahead of said transistor, a potentiometer in said shunt circuit for controlling base function for controlling current to said motor to regulate motor speed, and a resistance filament pilot light in said shunt circuit between said potentiometer and said negative D.C. lead to vary transistor current surge via damping resistance; said switch secondary sector being capable of transferring stored capacitance past said shunt circuit potentiometer with said potentiometer at zero to activate said transistor base to effect diminishing current flow through said transistor to diminishingly supply current to said motor to effect gradual slowing down of said motor speed.



3,101,439
CONTROL CIRCUITS FOR STATIC INVERTERS
Manfred Lillenstein, Rolling Hills, and Daniel F. Schaefer, Long Beach, Calif., assignors to American Electronics, Inc., Fullerton, Calif., a corporation of California
Filed Oct. 20, 1961, Ser. No. 146,654
6 Claims. (Cl. 321—45)

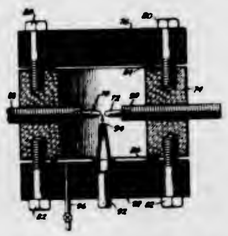
1. In a system for producing an alternating current output and which includes: generating means for producing a pair of oppositely phased gate signals, and first and second main switching devices coupled to said generating means to be sequentially actuated by said oppositely phased gate signals in a succession of recurrent operating cycles, the combination of: a transformer including a primary winding having first and second sides respectively connected to said first and second main switching devices, said primary winding further having a center tap and first and second intermediate taps disposed on opposite sides of said center tap, said transformer further including a secondary winding across which an alternating current secondary voltage is produced, potential supplying means connected to said center tap on said primary winding for introducing an exciting potential thereto, circuit means coupled to said transformer

for deriving a regulating signal representative of the amplitude of said alternating current secondary voltage, first and second auxiliary switching devices connected respectively to said first and second main switching devices and to said first and second intermediate taps on said primary winding, and a control circuit coupled to



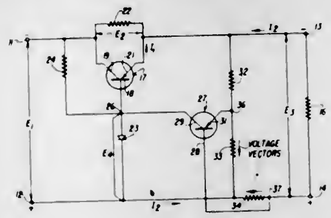
said circuit means and to said first and second auxiliary switching devices for enabling said first and second auxiliary switching devices to be sequentially conductive at points in successive half cycles of said alternating current voltage as determined by said regulating signal effectively to connect said first and second main switching devices to said first and second intermediate taps.

3,101,440
VOLTAGE REGULATOR FOR HIGH VOLTAGE POWER SUPPLIES
Harold C. Early, Ann Arbor, Mich., assignor to Meredith Publishing Company, Des Moines, Iowa, a corporation of Iowa
Original application July 1, 1957, Ser. No. 669,187, now Patent No. 2,981,883, dated Apr. 25, 1961. Divided and this application June 13, 1960, Ser. No. 35,762
6 Claims. (Cl. 323—16)



1. In a high voltage power supply system of the type having a D.C. output of 1,000 volts or more from a pair of output terminals connected to the output of the high voltage power supply and a load connected to said output terminals, the improvement of a voltage regulating circuit connected to said output terminals comprising a pair of spaced apart electrodes defining a spark gap therebetween and adapted to break down at a voltage less than the unregulated power supply voltage at said terminals, to provide continuous sampling of said unregulated power supply voltage, a fluid source including a nozzle for supplying a continuous fluid stream to said gap to extinguish the sparks thereacross at a desired repetition rate to thereby maintain the D.C. power supply voltage to said load at a closely regulated value, said nozzle being operatively positioned adjacent said electrodes and connected to said fluid source for causing said fludi stream to be continuously blown through said gap and a pressure vessel forming a sealed enclosure for said pair of spaced apart electrodes and said nozzle for enabling said voltage regulator to be operated at pressures above atmospheric pressure.

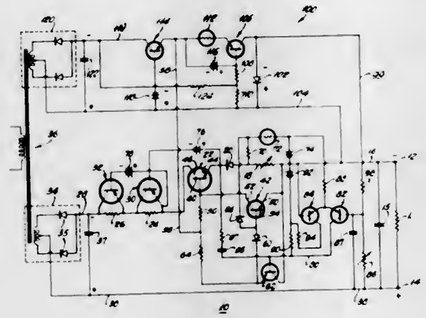
3,101,441
TRANSISTOR VOLTAGE REGULATOR
Arnet A. Curry, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 4, 1958, Ser. No. 752,899
5 Claims. (Cl. 323—22)



1. A direct current voltage regulator including in combination, input supply terminals, output terminals for connection to a load, a control transistor connected between said input and said output terminals, a Zener diode for supplying a reference voltage, said control transistor being coupled to said Zener diode and operative to apply current to one of said output terminals substantially to eliminate changes in voltage across the load in response to a detected difference between the output voltage and the reference voltage supplied by the voltage drop across said Zener diode, a switching transistor having base, emitter and collector electrodes, said collector electrode being coupled to one side of said Zener diode, and first and second resistors connected in series between said base and emitter electrodes of said switching transistor and producing a resultant voltage to normally bias off said switching transistor, said first resistor being coupled across said output terminals and having a first voltage developed thereacross which varies directly with the output voltage, said second resistor being coupled to one of said output terminals and having a second voltage developed thereacross which varies directly with the output current applied to the load, said second voltage being of opposite polarity to said first voltage and exceeding said first voltage upon the occurrence of a simultaneous decrease in output voltage and increase in output current to provide a resultant bias voltage which renders said switching transistor conducting, said switching transistor reducing the voltage across said Zener diode to cut off said control transistor.

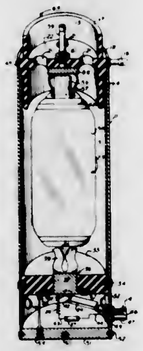
3,101,442
TRANSISTORIZED DIRECT-VOLTAGE REGULATED POWER SUPPLY
Arthur M. Darbie, South Plainfield, Charles W. Harrison, Millington, and Donald J. Tighe, Millburn, N.J., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Dec. 15, 1959, Ser. No. 859,633
11 Claims. (Cl. 323—22)

1. A voltage regulating circuit having improved internal power dissipation characteristics, said circuit comprising an input direct-voltage terminal, a plurality of voltage dropping resistors connected in series therewith, an output lead, a main regulating transistor connected between said resistors and said lead, a feedback amplifier connected between said output lead and said main transistor and controlling it to keep the voltage on said lead constant at a set value, a plurality of auxiliary transistors connected to variably bypass current around respective ones of said resistors, and means interconnecting said auxiliary transistors and said main transistor to turn a first of said auxiliary transistors on when the voltage drop across said main transistor drops below a given value and to turn a second of said auxiliary transistors on when the voltage



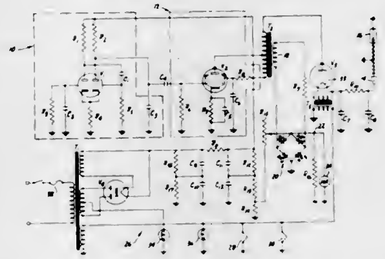
drop across said first auxiliary transistor drops below a certain value, whereby the power dissipated in said main and auxiliary transistors is substantially reduced below the maximum power input.

3,101,443
CAPACITANCE VOLTAGE DIVIDER
Morton J. Fried, 3879 Madeira Way, Livermore, Calif.
Filed Nov. 6, 1961, Ser. No. 150,380
9 Claims. (Cl. 323—74)



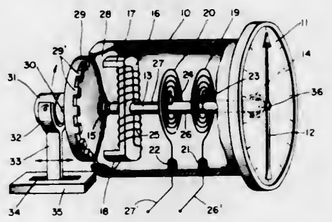
1. In a capacitance voltage divider the combination comprising a rigid metal cylindrical housing, a high voltage vacuum capacitor having a high voltage terminal and a low voltage terminal axially mounted within said housing, an input terminal electrically connected to the high voltage terminal of said capacitor and extending exteriorly of said housing, insulating material disposed between said housing and said capacitor, a low inductance capacitor mounted within said housing electrically connected at one of its sides to the low voltage terminal of said vacuum capacitor and having a capacitance value at least an order of magnitude greater than said vacuum capacitor, an output terminal extending exteriorly of said housing and electrically connected to the low voltage terminal of said vacuum capacitor, a ground terminal affixed to said housing and in electrical contact therewith, the other side of said low inductance capacitor electrically connected to said ground terminal, and end members secured at either end of said housing.

3,101,444
ELECTRONIC PRESSURE MEASURING MEANS FOR INTERNAL COMBUSTION ENGINES RESPONSIVE TO PRESSURE CAUSED SPARK GAP RESISTANCE CHANGE
Paul De Kuzmik, deceased, late of Miami, Fla., by John R. Montgomery, executor, Room 1150, 209 S. La Salle St., Chicago 4, Ill.
Filed June 30, 1959, Ser. No. 824,037
3 Claims. (Cl. 324—33)



1. A device for measuring cylinder pressure in an internal combustion engine or the like having an ignition system which includes a spark plug comprising a primary power generating means adapted for connection to a conventional A.C. source of supply, an electronic oscillator capable of generating a signal, means connecting said primary power source and said electronic oscillator, means connected to said oscillator for amplifying the voltage of said signal to a value sufficient to bridge the gap of the spark plug, rectifying means for converting the signal into direct current, means for applying the resultant direct current to the ignition system such as the spark plug, separate means connected to said voltage amplifying means for stepping down the voltage generated thereby, rectifying means connected to said last mentioned means for converting the signal to direct current and measuring the signal voltage direct current produced by the step-down means, the measuring means being calibrated directly in conventional pressure measuring units.

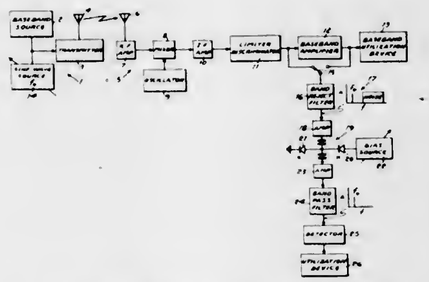
3,101,445
ELECTRICAL MEASURING INSTRUMENT WITH A CONSTANT SPEED MOTOR INDUCTIVELY DRIVING A SPRING BIASED ENERGIZED ARMATURE
Irvin L. Glerum, Canoga Park, Calif., assignor to W. C. Dillon & Company, Inc., a corporation of California
Filed Jan. 11, 1961, Ser. No. 82,087
7 Claims. (Cl. 324—139)



6. An electrical measuring instrument comprising: a magnetic body; means for rotating said magnetic body; a casing structure; an armature member mounted for rotation within said casing structure in a position in flux coupling relationship to said magnetic body; biasing means comprising at least two hair springs secured between said armature member and said casing in opposed relationship to bias said armature member to an initial po-

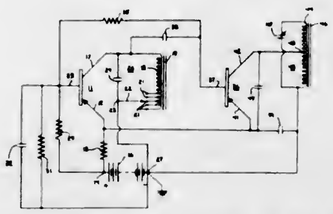
sition; a coil wound about said armature member and having its ends connected, respectively, to the ends of said hair springs; a pair of input leads passing into said casing structure and connecting to the other ends of said hair springs to pass input electrical energy to said coil for generating flux in said armature member whereby a torque is exerted on said armature member by said rotating magnetic body to swing said armature member through an angle against said biasing means, said angle being a function of the value of said input electrical energy; and means for indicating the degree of rotation of said armature member.

3,101,446
SIGNAL TO NOISE RATIO INDICATOR
Walter L. Glomb, Clifton, and Donald R. Campbell, Nutley, N.J., and John H. Kressman, Easton, Pa., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Sept. 2, 1960, Ser. No. 53,764
20 Claims. (Cl. 325—67)



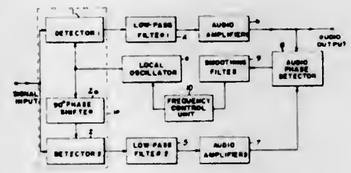
1. A circuit to indicate the signal-to-noise ratio of a signal in the presence of noise, said signal including a sine wave, comprising means responsive to the composite sum of said sine wave and said noise to produce a resultant signal including said sine wave compressed in amplitude proportional to the amplitude of said noise, and means coupled to said responsive means to detect the amplitude of said compressed sine wave.

3,101,447
MODULATED OSCILLATOR CIRCUIT
Frank P. Smith, Amber, Pa., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware
Filed Nov. 10, 1960, Ser. No. 68,456
4 Claims. (Cl. 325—105)



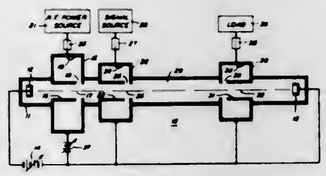
1. An electronic circuit comprising: a first semi-conductor device coupled to a source of electrical energy; a tuned circuit and output means coupled to said device; a second semi-conductor device coupled to a source of electrical energy and having emitter and base elements and coupled to said first device as an emitter follower to provide a feedback path for said first device to form a first oscillator; a tuned circuit and feedback means coupled to said second device to form a second oscillator; and a coupling between said output means and a base element of said second device whereby said second oscillator is modulated by said first oscillator.

3,101,448
SYNCHRONOUS DETECTOR SYSTEM
John P. Costas, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1954, Ser. No. 477,169
2 Claims. (Cl. 329—50)



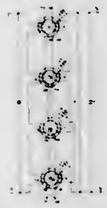
1. In a system of communication in which the sidebands of a resultant wave formed by modulating in amplitude a carrier wave by a modulating wave are transmitted and in which said modulating wave is recovered by heterodyning said transmitted wave with a locally generated wave in phase with said carrier wave and deriving from the heterodyned output said modulating wave, means for maintaining said locally generated wave in phase with said carrier wave comprising means for deriving a wave in phase quadrature to said locally generated wave, means for mixing said phase quadrature wave with said resultant wave, means for deriving from the mixed output a wave repesenting the modulating component of said resultant wave, the amplitude and phase of said modulating component with respect to the amplitude and phase of the modulating component derived by heterodyning said resultant wave with said locally generated wave varying in accordance with the departure in phase of said locally generated wave from the phase of said carrier wave, means for combining said derived modulating components to obtain an output whose polarity and magnitude varies respectively in accordance with the direction and magnitude of the departure of the phase of said locally generated wave with respect to the phase of said carrier wave, means responsive to the polarity of output of said combining means to vary the phase of said locally generated wave in inverse direction to the direction of departure of said carrier wave causing said polarity thereby maintaining said locally generated wave in phase with said carrier wave.

3,101,449
PARAMETRIC ELECTRON BEAM DEVICES
Arthur Ashkin, Bernardsville, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 20, 1958, Ser. No. 736,639
10 Claims. (Cl. 330—4.7)



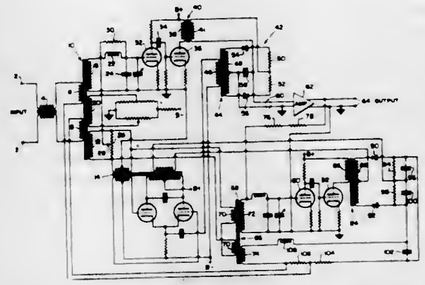
1. A high frequency electron discharge device comprising an evacuated envelope, means including an electron gun for forming and projecting an electron beam along an extended path within said envelope, means positioned along said path for modulating said beam with high level radio-frequency energy at a predetermined fundamental frequency and at harmonic frequencies thereof, means disposed along said path for introducing signal energy to be amplified in coupling relation with said beam, said signal energy having a frequency higher than said predetermined frequency, and means disposed along said path for abstracting the amplified signal energy from said beam.

3,101,450
AMPLIFIER COMPRISING TIME DEPENDENT REACTORS
Hidetoshi Takahashi, Eiichi Goto, and Shintaro Oshima, all of Tokyo, Japan, assignors to Kokusai Denshin Denwa Co., Ltd., Tokyo, Japan, a company of Japan
Filed Sept. 23, 1960, Ser. No. 58,010
Claims priority, application Japan Mar. 30, 1955
11 Claims. (Cl. 330—7)



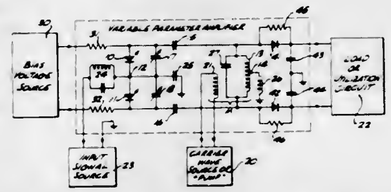
1. An amplifying device comprising an input circuit, an output circuit, a first, second, third and fourth non-linear reactances, an A.C. power supply circuit for supplying an A.C. signal of frequency F, a first resonant circuit tuned to a frequency substantially equal to f and coupled to said input circuit, a second resonant circuit tuned to a frequency substantially equal to $F-f$, said output circuit being connected to at least one of said resonant circuits, a D.C. bias power supply circuit, each of said circuits having multiple transformer windings therein, said first and second resonant circuits and said A.C. power supply circuit and said D.C. bias power supply circuit being coupled with said four non-linear reactances through said transformer windings, the coupling of said circuits to said first non-linear reactance all being of one polarity, the couplings of said first and second resonant circuits to said second non-linear reactance being of said one polarity and the coupling of said A.C. power supply and said D.C. bias power supply circuits to said second non-linear reactance being of a polarity opposite to said one polarity, the coupling of said first resonant circuit and said A.C. power supply circuit to said third non-linear reactance being of said one polarity and the coupling of said second resonant circuit and said D.C. bias power supply circuit to said third non-linear reactance being of said opposite polarity, and the coupling of said first resonant circuit and said D.C. bias power supply circuit to said fourth non-linear reactance being of one polarity and the coupling of said second resonant circuit and said A.C. power supply circuit to said fourth non-linear reactance being of said opposite polarity, said four non-linear reactances having substantially the same characteristics and the resonant frequency of said resonant circuits being determined by the value of said four non-linear reactances, said first and second resonant circuits being electrically decoupled from each other and substantially no A.C. power being transmitted therebetween when an A.C. power signal is applied to the circuit, means for applying an A.C. signal of frequency F to said A.C. power supply circuit and means for applying a D.C. signal to said D.C. power supply circuit, and means for applying a modulated signal input with a carrier frequency f to said first resonant circuit, whereby parametric oscillations are generated in said resonant circuits for producing an amplified output.

3,101,451
DIRECT CURRENT AMPLIFIER SYSTEM WITH FEEDBACK CONTROLLED HIGH IMPEDANCE INPUT CIRCUIT
John P. Burgarella, Sudbury, and Donald S. Oliver, Acton, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 17, 1958, Ser. No. 767,987
6 Claims. (Cl. 330—10)



1. A direct current amplifier system comprising, in combination, an input circuit, a magnetic converter, an alternating current amplifier, said input circuit being coupled inductively only through said converter to said alternating current amplifier, a synchronous demodulator coupled to demodulate the output of said alternating current amplifier to produce a system output signal, a feedback circui. responsive to said output signal, said feedback circuit including a second-magnetic converter, a second alternating current amplifier and a second synchronous demodulator, said second synchronous demodulator being coupled inductively only to the output of said second alternating current amplifier, and means connecting the output of said second demodulator in feedback relation to said input circuit whereby to provide a feedback controlled high impedance input circuit without conductive coupling between said input circuit and the output of the direct current amplifier.

3,101,452
VOLTAGE-VARIABLE CAPACITOR BRIDGE AMPLIFIER
Don R. Holcomb and David B. Leeson, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 30, 1955, Ser. No. 823,879
1 Claim. (Cl. 330—10)



A dielectric amplifier circuit comprising a pair of diodes having a capacitance proportional to the potential applied thereacross and being connected in series and poled in the same direction, a center-tapped first inductor coupled across said series-connected diodes through coupling capacitors, a pair of balancing capacitors coupled in series across said diodes, a carrier wave source coupled to said first inductor, an input signal source, a parallel resonant circuit tuned to the frequency of said

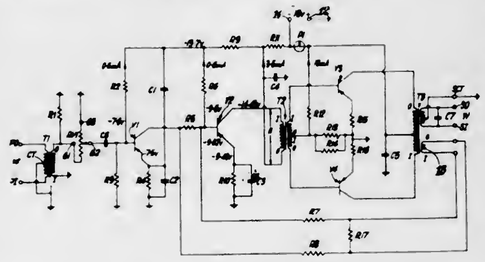
carrier wave and connected from one side of said input signal source to the junction of said diodes, a second inductor connected from the other side of said input signal source to the tap on said first inductor, a bypass capacitor connected from the junction of said diodes to the junction between said second inductor and said input signal source and resonant with said second inductor at the frequency of said carrier wave, a source of a bias potential coupled to said diodes through isolating elements, a tuning capacitor connected across said first inductor and resonant therewith at the frequency of said carrier wave, a load, a first unilaterally conductive device connected between one end of said first inductor and one end of said load, a second unilaterally conductive device connected between the other end of said first inductor and the other end of said load, first and second resistors individually shunting said first and second devices respectively, a first filter capacitor connected from one end of said load to the junction of said second inductor and said input signal source, and a second filter capacitor connected from the other end of said load to the junction of said second inductor and said input signal source.

3,101,453

TRANSISTOR AMPLIFIERS WITH PROTECTIVE CIRCUIT MEANS

Arthur Ian Forbes Simpson and William Alexander Cawthra, both of London, England, assignors to Modern Telephones (Great Britain) Limited, London, England, a British company

Filed Jan. 21, 1958, Ser. No. 710,232
Claims priority, application Great Britain Jan. 21, 1957
2 Claims. (Cl. 330—22)



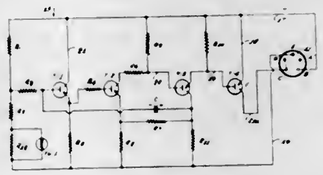
1. A multi-stage transistor amplifier comprising first and second transistor amplifier stages with coupling means for feeding signals amplified by the first stage to the second stage for further amplification, said first stage having such gain that the output signal from the first stage for a peak input signal is of greater amplitude than the maximum continuous input signal which can be handled by said second stage due to the power dissipation limits of said second stage but within the peak handling capacity of said second stage for amplification without appreciable distortion, a power supply for supplying operating potential to said first and second stages, a protective circuit including a resistance element having a positive temperature coefficient of resistance connected in series between the output of said second stage and said power supply for protecting said second stage against any input signal of a given amplitude having a duration exceeding the permissible duration for such a signal due to the dissipation limits of said second stage, said protective circuit further including a capacitor connected in series with said resistance element across said power supply, whereby said capacitor provides a substantially constant operating potential to said second stage during signal peaks of short duration when said second stage tends to draw a large current, and said resistance element operates to reduce the operating potential on said second stage when the current drawn thereby exceeds a predetermind value for a predetermined period.

3,101,454

TRANSISTOR R-C OSCILLATOR

John K. Gossland, Altadena, Calif., assignor to Technical Oil Tool Corporation, Los Angeles, Calif., a corporation of California

Filed July 11, 1960, Ser. No. 42,055
12 Claims. (Cl. 331—111)



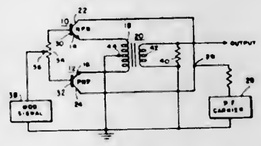
1. In a flasher circuit, oscillator means comprising: a voltage divider; a first transistor connected in an emitter follower circuit and having an input and an output; means connecting a point on said voltage divider to the input of said emitter follower circuit for biasing the same; a second transistor connected in a common emitter amplifier circuit and having an input and an output; means connecting the output of said emitter follower circuit to the input of said common emitter amplifier circuit; a third transistor connected in a common collector amplifier circuit and having an input, a driver output, and a control output; means connecting the output of said common emitter amplifier circuit to the input of said common collector amplifier circuit; and means including a capacitor connecting the control output of said common collector amplifier circuit to the input of said emitter follower circuit whereby oscillation occurs and a signal in the driver output of said common collector amplifier circuit is varied at a periodic rate.

3,101,455

CARRIER-SUPPRESSED MODULATOR

Dale P. Masher, Los Altos, Calif., assignor to the United States of America as represented by the Secretary of the Army

Filed Nov. 18, 1960, Ser. No. 70,360
5 Claims. (Cl. 332—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)



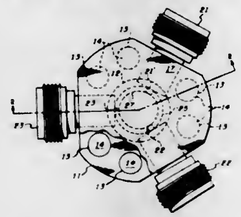
1. A modulating circuit comprising a pair of semi-conductor devices of opposite conductivity type each having emitter, collector and base electrodes, said collector electrodes being directly connected in common, an inductor serially connected between said emitter electrodes and including a center-tap, an input circuit connected between said center-tap and said common collector electrode connection to provide a first input signal in phase between said collector electrodes, a second input circuit connected between said center-tap and said base electrodes for providing a second input signal of the same phase therebetween, and means including a load resistor coupled to said inductor for deriving an output signal.

3,101,456

FREQUENCY SELECTIVE GYROMAGNETIC DIPLEXER FOR COUPLING TWO LINES, EACH HAVING INDIVIDUAL FREQUENCY, WITH A COMMON LINE

Julian Brown, Jr., and John G. Clark, Clearwater, Fla., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Dec. 14, 1961, Ser. No. 159,222
3 Claims. (Cl. 333—1.1)



1. Apparatus for diplexing electromagnetic waves at first and second different frequencies comprising,

a plurality of electromagnetic wave transmission lines lying in a common plane and joined in a common junction,

means for coupling electromagnetic waves at said first and second frequencies to said junction,

a magnetically polarizable material capable of exhibiting gyromagnetic properties at said first and second frequencies disposed within said common junction,

a source of unidirectional magnetic flux for magnetizing said gyromagnetic material to a state of magnetization so that the gyromagnetic resonance frequency of the magnetized material is intermediate said first and second frequencies,

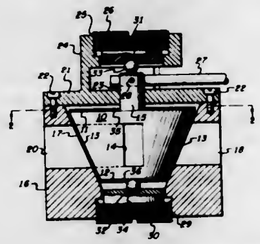
the field strength of said magnetic flux being proportioned with respect to said first and second frequencies and the characteristics of said gyromagnetic material to cause said electromagnetic waves at said two frequencies to couple from first and second ones of said transmission lines through said junction and substantially exclusively to a third one of said transmission lines when said magnetic flux is directed in a first direction and to cause said electromagnetic waves at said two frequencies to couple from one of said transmission lines through said junction and substantially exclusively to respective ones of said transmission lines when said magnetic flux is directed in an opposite direction.

3,101,457

ROTARY WAVEGUIDE SWITCH

Julius W. Gebhardt, Fresh Meadows, Joseph Henry Ettinger, Flushing, and John H. Rittenhouse, Syosset, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Sept. 28, 1960, Ser. No. 59,000
5 Claims. (Cl. 333—7)



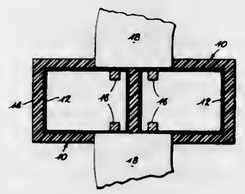
5. A rotary waveguide switch for selectively connecting waveguide channels comprising the combination of a stator member having said waveguide channels disposed therein and having a frusto-conically shaped cavity portion therein, said waveguide channels extending outwardly from said cavity portion and each having an end opening thereon, a rotor member rotatably positioned substantially coaxially within said stator cavity and having a frusto-conical shape similar to that of the cavity portion of said stator member, a waveguide channel extending transversely through said rotor member for substantial registration with different ones of said stator waveguide channels when said rotor is rotated to different angular positions, and axially-adjustable rotor supporting means disposed at opposite ends of said cavity portion for supporting said rotor member in a rotatable, axially non-yielding manner within said cavity portion, whereby the axial position of the rotor member within said cavity portion of said stator member may be varied by adjustment of said supporting means thereby to vary the separation between the conical surfaces of the rotor and stator members and to maintain a desired separation in a non-yielding manner.

3,101,458

FERRITE PHASE SHIFTER HAVING CASING-SUPPORTED THIN-FOIL WAVEGUIDE, WITH MAGNETISING POLE PIECES PENETRATING THE CASING

John Chandler, Jr., Dallas, Lester C. Holly, Irving, and John Lee Vilbig, Jr., Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Aug. 4, 1958, Ser. No. 752,933
4 Claims. (Cl. 333—24.2)



4. Microwave switching apparatus comprising:

(*a*) a section of waveguide composed of thin conductive foil means supported on the interior surface of a hollow casing of nonconductive and nonmagnetic material,

(*b*) the casing having transversely-opposed relieved areas,

(*c*) flux-responsive phase-shifting material positioned within the waveguide between the relieved areas,

(*d*) and selectively-reversible magnet flux producing means having pole pieces extending into the relieved areas of the casing and engaging the foil means adjacent the phase-shifting material.

3,101,459

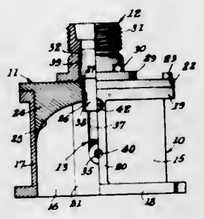
WAVE GUIDE COAXIAL ADAPTER

John S. Overholser, Los Angeles, Calif., assignor to Tamar Electronics, Inc., Gardena, Calif., a corporation of California

Filed Aug. 9, 1960, Ser. No. 48,378
8 Claims. (Cl. 333—33)

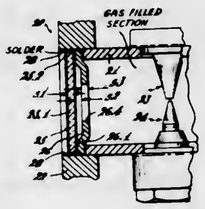
1. A wave guide coaxial adapter comprising a rectangular body having a cavity therein defined by parallel upper and lower walls and narrower side walls, a wave reflector element closing an end of said body and having a concave wave-reflecting face that is disposed in said cavity, and a pickup probe extending through said re-

flecting element and face between and parallel to the mentioned upper and lower walls, said probe having a



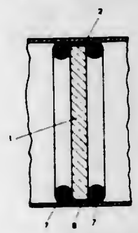
bent end directed toward one of said latter walls, and means to secure said end of said latter wall.

3,101,460
HERMETICALLY SEALED WAVEGUIDE WINDOW WITH NON-SPUTTERING IRIS
Richard M. Walker, Roxbury, and William P. Toorks, Beverly, Mass., assignors to Microwave Associates, Inc., Burlington, Mass., a corporation of Massachusetts
Filed May 7, 1957, Ser. No. 657,585
4 Claims. (Cl. 333—98)



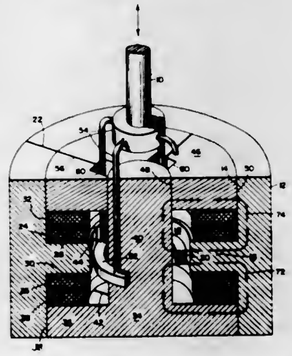
1. In waveguide apparatus, a sealing window device comprising, in combination: a metallic waveguide portion made essentially of metal chosen for its electrical conductivity properties; a metallic iris component located within said waveguide portion and having a wave controlling iris opening, said iris component being made essentially of a second different metal which substantially will not sputter onto dielectric window material in close proximity thereto in the presence of an electric discharge across said iris opening; a hermetic sealing component having dielectric window means framed in a frame metal chosen for its dielectric-to-metal sealing properties located adjacent the outer side of said iris component relative to the interior of said waveguide portion, the frame aperture of said frame metal being everywhere larger than said iris opening and non-resonant at the intended frequency of operation of said apparatus and located so that all points on the periphery of said iris opening confront substantially only the dielectric material of said window means, said dielectric window means and said iris component in the vicinity of said iris opening being both substantially planar and parallel to each other, one of said components being bent along a line substantially parallel to its periphery and having its periphery directed from said line toward the other element, said iris component and the frame metal of said sealing component being peripherally in contact with each other, said frame metal being hermetically sealed to said waveguide portion by a totally metallic seal, and said dielectric window means being located less than one-quarter wavelength in said waveguide portion of electromagnetic wave energy at said frequency of operation from said iris element.

3,101,461
VACUUM TIGHT WAVEGUIDE TRANSMISSION WINDOW HAVING MEANS GUARDING WINDOW EDGES FROM ELECTRIC STRESS
Georges Henry-Bezy, Gerard Kantorowiez, and Pierre Palluel, Paris, France, assignors to Compagnie de Telegraphie Sans Fil, Paris, France
Filed Dec. 22, 1959, Ser. No. 861,334
Claims priority, application France Jan. 5, 1959
16 Claims. (Cl. 333—98)



6. In an output wave guide for a high power microwave tube, a window of insulating vacuum-tight material located across said guide and brazed in a vacuum-tight manner along its periphery to the walls thereof, and a pair of metallic guard rings of essentially circular cross-section placed within said wave guide in electrical contact with the walls thereof on either side of said window and substantially in contact with the respective faces thereof.

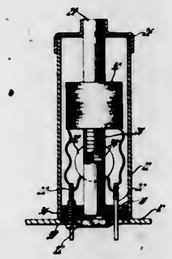
3,101,462
LINEAR MOTION, SIGNAL-PRODUCING, MAGNETIC TRANSDUCER
Edward L. Swainson, Newtonville, Mass., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Aug. 25, 1961, Ser. No. 133,848
4 Claims. (Cl. 336—75)



1. A linear motion transducer comprising, in combination, a cylindrical magnetic core structure defining therein a pair of axially-spaced toroidal flux paths closed with a common annular air gap, said core structure further defining a pair of annular coil slots each positioned within one of said closed toroidal flux paths and a stationary return leg interior to said air gap, primary coil means arranged for energization to establish flows of magnetic flux within said paths in aiding relation across said air gap, a pair of secondary coils each lying in one of said coil slots and connected in series-opposed relation for generating output voltages, and a non-magnetic conductive ring armature arranged in said air gap and exterior to said return leg and extending normally to the major axis

of said core structure, an armature-positioning shaft positioned exterior to said flux paths, and means for connecting said armature-positioning shaft to said ring armature for movement therewith, said ring armature being movable with said armature-positioning shaft along said axis to vary the flux linkages of said secondary coils with said primary coil means and thus control the relative values of said output voltages in response to the axial position of said ring armature.

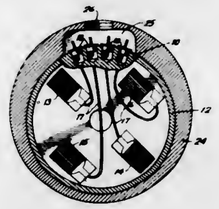
3,101,463
SHIELDED ELECTRICAL COIL ASSEMBLY
Herbert M. Penningroth, Hales Corners, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 777,423
4 Claims. (Cl. 336—87)



1. In combination with an electrical chassis having two sides defining an opening and being adapted to support electrical conductors on one side thereof; a tubular shield can disposed on the other side of the chassis over said opening and being open at both ends, the lower end of the can including a pair of oppositely disposed integral tabs extending through the chassis and bent over to permanently secure the can to the chassis, a removable coil assembly comprising a support base disposed within the lower end of the can and formed of insulating material defining a central opening, a plurality of terminal pins supported by and extending through the base, a tubular coil form open at both ends, a core movably mounted within the coil form, the coil form having a lower end extending into the central opening and secured to the base whereby the core is accessible through the central opening in the base, a coil disposed on the coil form and electrically connected with the terminal pins, and a shield cover including a peripheral flange surrounding the upper end of the can and defining a central opening surrounded by an annular flange, the upper end of the coil form mating with and secured to the annular flange whereby the core is accessible through the central opening in the cover and the peripheral flange of the cover forms a grasping portion for removal of the coil assembly from the can, and fastening means operatively connected with the base for securing it to the chassis.

3,101,464
LOAD CELL
Gerald A. Hebert, Chicago, Ill., assignor, by mesne assignments, to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 29, 1960, Ser. No. 52,717
2 Claims. (Cl. 338—5)

1. A load cell comprising a cupped base having a flat bottom and an annular upstanding side wall, a flat metal disc of uniform thickness fitting into the side wall and sealed thereagainst, annular supporting means engaging the bottom of the base and the periphery of the disc and holding the disc spaced from the base bottom, a central projection on the outer side of the disc to receive a force



to be measured and apply it to the outer surface of the disc at the central portion thereof, and strain measuring means secured to the inner surface of the disc and lying in the space between the disc and the base bottom.

3,101,465
INDEFINITELY LONG POTENTIOMETER
Paul Luger, Seattle, Wash., assignor to Seattle University, Seattle, Wash.
Filed Apr. 21, 1960, Ser. No. 23,816
14 Claims. (Cl. 338—128)

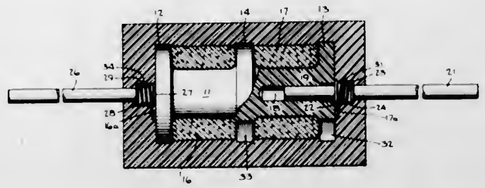


1. In combination, in a resistance circuit network, two terminal means, a circuit including switch means comprising a switch member having a pair of electrically insulated power contacts, a pair of resistance device contacts electrically permanently connected together and a pair of switch contacts electrically permanently connected together, said power contacts, resistance device contacts and switch contacts being electrically insulated from each other, a resistance element electrically permanently connected with one end to said resistance device contacts, a switching means including ganged first and second movable contact means respectively connected to said pair of power contacts, said first movable contact capable of selectively engaging one of said switch contacts and one of said resistance device contacts, while simultaneously said second movable contact is capable of selectively engaging the other one of said resistance device contacts and the other one of said switch contacts, and means including the other end of said resistance element and one of said switch contacts for electrically interconnecting said two power contacts and said two terminal means, respectively.

3,101,466
WOUND RESISTOR
John C. Armstrong, Denville, N.J., assignor to Consolidated Electronics Industries Corp., New York, N.Y., a corporation of Delaware
Filed Dec. 6, 1960, Ser. No. 74,063
2 Claims. (Cl. 338—273)

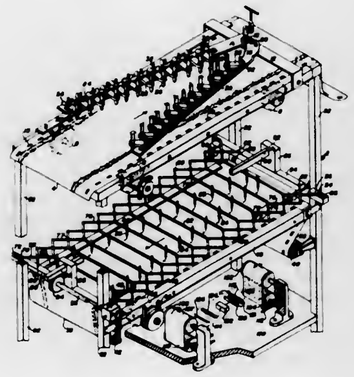
1. A wire wound resistor comprising a generally cylindrical bobbin; a pair of conductive, rod-like end terminals inserted into opposite ends of said bobbin, each of said terminals having a pair of integral, radially extending, axially spaced flanges adjacent to said bobbin; a resistive element comprising resistance wire wound around said bobbin with end portions of said wire wound around said

rod-like terminals in the regions thereof between the respective pairs of flanges; means covering said end portions of said wire to grip the same mechanically and to hold the same in firm electrical contact wtih said terminals, said means comprising solder covering said end portions and adherently affixed to the surface of said terminals in said regions, said solder being limited to said regions and



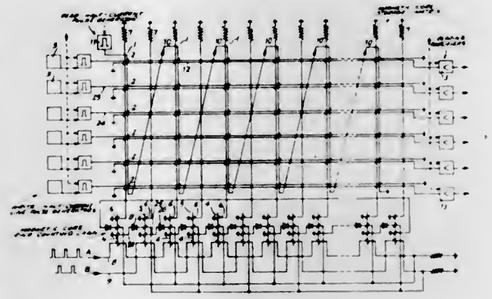
not extending away from said bobbin beyond the outermost of said flanges, whereby the surfaces of said rod-like terminals beyond said outermost flanges are substantially free of solder; and insulating encapsulating material surrounding said wire and the portions of said terminals adjacent to said bobbin and including both of said flanges of each of said terminals and a portion of each of said terminals beyond said outermost flanges.

3,101,467
SEISMIC RECORD PICKER
Thomas A. Garrity, Jr., Caracas, Venezuela, and Ronald R. Proctor, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 19, 1958, Ser. No. 781,537
9 Claims. (Cl. 340—15.5)



1. In a device for translating seismographic wave data into formation cross-sectional data, the elements comprising means for moving a strip of paper along a straight path, a plurality of electrically-actuated elements supported in spaced relationship opposite said path, means for supporting said elements including a pair of pantographs the corresponding ends of which are fixed to prevent longitudinal movement thereof and the other corresponding ends of which are fastened to an element movable longitudinally of said path, a series of rigid rods mounted between opposite pivot points of said pantographs, said electrically-actuated elements being mounted on said rods.

3,101,468
ARRANGEMENT FOR THE STORING OF BINARY INFORMATIONS, ARRIVING IN SERIES OR SERIES-PARALLEL, IN A STORAGE CHAIN OR A STORAGE MATRIX
Robert Piloty, Stuttgart-Kaltental, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,390
Claims priority, application Germany Sept. 21, 1957
4 Claims. (Cl. 340—174)

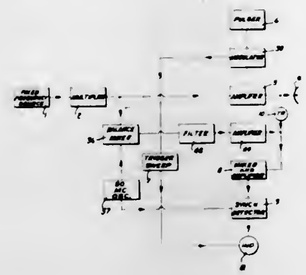


1. A magnetic storage matrix comprising a plurality of magnetic storage cores arranged in rows and columns, a ring counting chain having successive stages thereof coupled to corresponding columns of said storage cores each said stage being operative to inductively couple first and second half-signal currents of an opposite polarity to said corresponding column of storage cores when a count condition is stepped respectively into and out of said stage, a separate line wire threading each said row of cores, means coupled to said line wires for selectively supplying half-signal write-in currents thereto in synchronism with and in the same magnetic sense as said second half-signal column currents supplied by said counting chain stages for writing information in parallel into cores in selected columns of said matrix, a common read wire threading all of said storage cores in the same magnetic sense, and means for selectively supplying half-signal read currents to said common wire in synchronism with and in the same magnetic sense as said first half-signal column currents supplied by said counting chain stages for reading information in parallel out of selected columns of said matrix.

3,101,469
PHASE COHERENT RADAR SYSTEM
Russell H. Varian, Cupertino, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California
Filed May 28, 1953, Ser. No. 357,965
10 Claims. (Cl. 343—9)

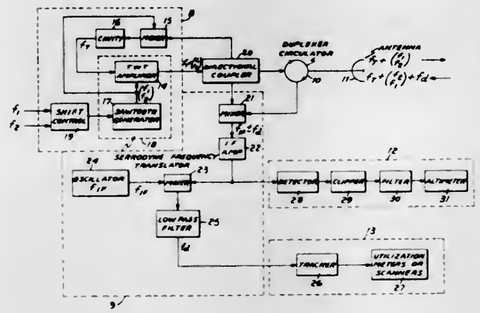
1. A radar system for detecting objects comprising transmitter means for transmitting a phase coherent pulse signal at carrier frequency, said signal being coherent over a multiplicity of transmitted pulses, a local oscillator, a balanced mixer connected for mixing the carrier signal from said transmitter means with the output for said local oscillator to produce two frequencies which are each displaced a fixed amount from the original carrier frequency thereby enhancing the signal-to-noise ratio, receiver means for receiving reflected signals from targets and for mixing said return signals with the output of said balanced mixer, and amplifying said mixed signals, means for detecting the amplified signals, and a multiple object indicator connected for receiving such signals and

indicating range information and a quantitative measurement of the relative velocity of the objects viewed with



respect to the transmitting station on differing axes respectively.

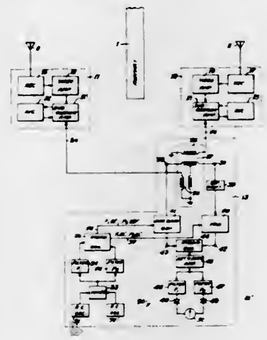
3,101,470
DOPPLER RADAR
Malcolm C. Vosburgh, Montclair, and Joseph Murgio, Clifton, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 10, 1959, Ser. No. 805,459
13 Claims. (Cl. 343—9)



1. A Doppler radar system for use on board a vehicle to determine the movement of said vehicle relative a reradiating element comprising a source of continuous wave signals at a given frequency, means to convert the signals of said source to continuous wave signals of first and second frequencies sequentially, means to transmit said sequential first and second frequency signals, means to receive the reradiated first and second frequency signals from said element, means for mixing said received reradiated first and second signals with the output of said converting means to obtain a mixture of signals carrying the velocity and range information of said vehicle relative said reradiating element.

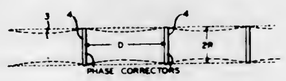
3,101,471
RADIO DIRECTION INDICATOR
Gus Stavis, Ossining, N.Y., assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 4, 1950, Ser. No. 142,370
4 Claims. (Cl. 343—16)

1. An indicating system for indicating the position of a craft at a relatively fixed station in response to electrical pulses received from said craft at spaced points at said relatively fixed station, comprising a pair of spaced receiving antennas, a translator means for deriving from said received pulses at each antenna, wave energies of a frequency such that a half wave thereof is at least equal to said antenna spacing and phased with respect to each other dependent upon the time of reception of said antennas, combining means comprising means for deriving



waves equal to a vector sum and a vector difference of the wave energy from said translator means and a phase shifter for one of the combined derived waves to produce a ninety degree phase shift thereof, to derive different waves therefrom, means for differently modulating said different waves and means responsive to said different modulated waves to produce a directive indication of the location of said craft.

3,101,472
TRANSMISSION OF ELECTROMAGNETIC WAVE BEAMS
Georg Johann Ernst Goubau, Eatontown, N.J., assignor to Beam Guidance, Inc., New York, N.Y., a corporation of New York
Filed Nov. 21, 1958, Ser. No. 775,402
40 Claims. (Cl. 343—100)

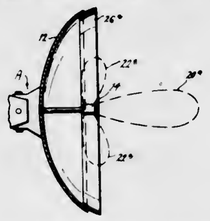


34. In a method of transmitting electromagnetic waves, the steps of launching substantially planar electromagnetic wave fronts progressing into one predetermined direction, and forming a substantially cylindrical electromagnetic wave beam by repeatedly enforcing a predetermined cross-sectional phase distribution at successive cross sections along the path of said wave fronts at intervals determined at a given wave length by the areas of said wave fronts.

3,101,473
PARABOLIC REFLECTOR WITH RIM OF ABSORBING MATERIAL TO ATTENUATE SIDE LOBES
Joseph A. Fenlon, Jr., University City, Mo., assignor to McDonnell Aircraft Corporation, St. Louis, Mo., a corporation of Maryland
Filed Apr. 14, 1960, Ser. No. 22,210
2 Claims. (Cl. 343—760)

1. For use with an aircraft radar set having a scope, an antenna comprising a substantially round parabolic concave reflector having a forwardly extending central axis and a peripheral edge, a radiator element, means securing said radiator element to said reflector and forward-

ly of said peripheral edge of said reflector on said axis, said radiator in combination with said reflector being capable of producing a forward energy lobe orientated on the axis of said reflector and side lobe energy orientated adjacent to the peripheral edge of said reflector and extending generally radially of said axis, an elongated arcuate strip of radiation absorbing material curved substantially the same degree as said peripheral edge, said strip having an axially inner edge portion telescopically received within the peripheral edge of said reflector, means fixedly securing said edge portion of said strip to the peripheral edge of said reflector, said strip being flared in relation to said axis so that said edge portion fits flush against and parallel to the peripheral edge of said reflector, the remainder of said strip flaring radially outwardly and



axially forwrdly from said reflector so as to be in radial alignment with said radiator whereby the side energy lobe passes through said strip and is attenuated thereby, said strip attenuating said side lobe energy to a degree whereby when said forward energy lobe and said side lobe energy are reflected from an airborne target and earth respectively, images of substantially the same brightness are produced on said scope, universal joint means connected to said reflector and adapted to be secured to a support, said universal joint means permitting said reflector, radiator and absorbing strip of material to be moved as a unit in any direction relative to the base whereby the absorbing strip of material is always in the path of said side lobe energy and never in the path of said forward energy lobe.

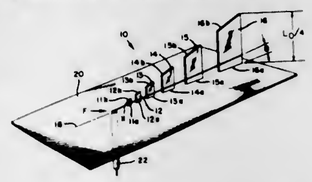
3,101,474

LOG PERIODIC TYPE ANTENNA MOUNTED ON GROUND PLANE AND FED BY TAPERED FEED

Arthur F. Wickersham, Jr., Sunnyvale, and Ross L. Bell, San Jose, Calif., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Nov. 25, 1960, Ser. No. 71,675
3 Claims. (Cl. 343—792.5)

2. A broadband antenna comprising a planar conducting surface, a plurality of parallel spaced conducting elements arranged in a row in a first plane extending normal to said surface, said elements being electrically connected to said surface, the linear dimensions and spacings of said elements increasing in a direction from one end of the row to the other end, and a coaxial line having an outer conductor and an inner conductor, said outer conductor being electrically connected to said surface, said



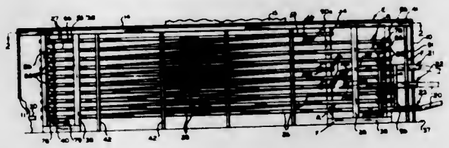
inner conductor having an extension parallel to said first plane and spaced from and electromagnetically coupled to said elements, the spacing between said extension of the inner conductor and said surface increasing in a direction from said one end of the row to the other.

3,101,475

BREAD HANDLING APPARATUS

Conrad W. Petersen, Wallace W. Wittenberger, and John M. St. John, Saginaw, Mich., assignors to Baker Perkins Inc., Saginaw, Mich., a corporation of New York

Filed Jan. 30, 1959, Ser. No. 790,240
8 Claims. (Cl. 198—84)



5. In bread and bun product processing apparatus; a treating enclosure; first conveyor means within said enclosure providing a circuit of travel and including a sinuous stack of traveling runs connected one to another by traveling runs to provide a sinuous conveyor; and second conveyor means for delivering the product to and removing it from said circuit of travel; said second conveyor means including a delivery conveyor extending adjacent one of said runs, a discharging conveyor extending adjacent another run remote from said one of said runs, and at least one other product handling conveyor having a run traveling in substantially a plane extending adjacent a run between said one of said runs and said another run so that the length of travel of the product in said enclosure can be varied.

DESIGNS

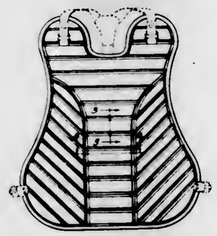
AUGUST 20, 1963

196,032

CHEST PROTECTOR

Frederick W. Glahe, La Grange, Ill., assignor to Wilson Athletic Goods Mfg. Co., Inc., River Grove, Ill., a corporation of Delaware

Filed July 13, 1962, Ser. No. 70,920
Term of patent 14 years
(Cl. D3—26)

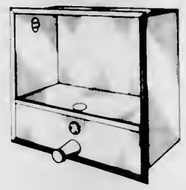


196,033

RECESSED SOAP DISPENSER UNIT

William S. Louchheim, Beverly Hills, and Donald A. Gerds, Manhattan Beach, Calif., assignors to Bobrick Manufacturing Corporation, Los Angeles, Calif., a corporation of Delaware

Filed Aug. 1, 1960, Ser. No. 61,591
Term of patent 14 years
(Cl. D4—3)

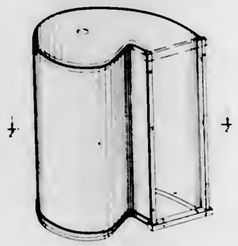


196,034

SHOWER STALL

George Dewey Swan, Stanwick Road, Cos Cob, Conn.

Filed Mar. 29, 1962, Ser. No. 69,494
Term of patent 14 years
(Cl. D4—3)

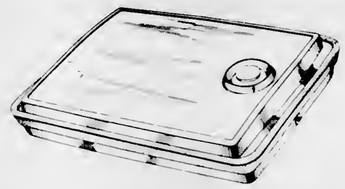


196,035

HOUSING FOR A CARPET SWEEPER

Howard A. Anderson, Pittsburgh, Pa., assignor to Bissell Inc., Grand Rapids, Mich., a corporation of Michigan

Filed Sept. 21, 1962, Ser. No. 71,808
Term of patent 14 years
(Cl. D9—2)



196,036

DRAWER PULL

Norman D. Louis, Los Angeles, Calif., assignor to Ajax Hardware Manufacturing Corp., City of Industry, Calif., a corporation of California

Filed Sept. 4, 1962, Ser. No. 71,547
Term of patent 14 years
(Cl. D10—8)

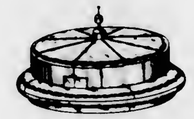


196,037

PREFABRICATED BUILDING

Samuel L. De Lisa, 3318 W. Marquette Road, Chicago, Ill.

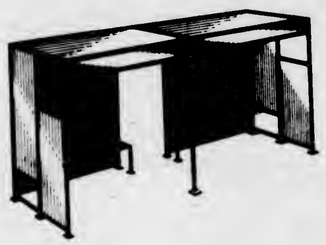
Filed July 21, 1961, Ser. No. 66,018
Term of patent 7 years
(Cl. D13—1)



196,038
BUILDING
Robert F. Rodriguez, St. Louis, Mo., assignor to Smaks International, Inc., Prairie Village, Kans., a corporation of Kansas
Filed Dec. 26, 1961, Ser. No. 68,046
Term of patent 3½ years
(Cl. D13—1)



196,039
BUS STOP SHELTER
Peter R. Hollaender, 2206 Raeburn Drive, Cincinnati, Ohio
Filed Aug. 31, 1962, Ser. No. 71,514
Term of patent 14 years
(Cl. D13—1)



196,040
HANDRAIL BRACKET
John R. Morgan, Chicago, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Nov. 2, 1961, Ser. No. 67,359
Term of patent 14 years
(Cl. D13—7)



196,041
AUTOMOBILE DISK WHEEL
Paul D. Fadow, % The Budd Co., 12141 Charlevoix Ave., Warren, Mich.
Filed June 27, 1962, Ser. No. 70,703
Term of patent 14 years
(Cl. D14—30)



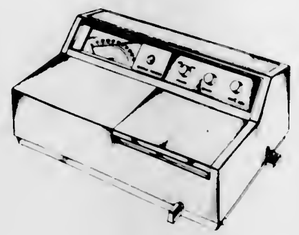
196,042
AUTOMOBILE DISK WHEEL
Paul D. Fadow, % The Budd Co., 12141 Charlevoix Ave., Warren, Mich.
Filed June 27, 1962, Ser. No. 70,704
Term of patent 14 years
(Cl. D14—30)



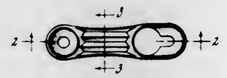
196,043
COMBINED STEP AND STOOL
Norvin J. Wehner, Kansas City, Mo., assignor to Cramer Posture Chair Company, Inc., Kansas City, Kans., a corporation of Missouri
Filed Jan. 23, 1963, Ser. No. 73,287
Term of patent 14 years
(Cl. D15—8)



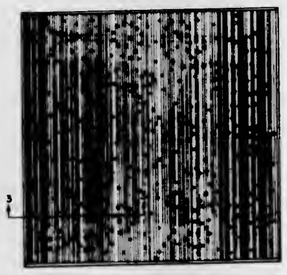
196,044
FLUOROMETER
David J. Malk, La Mirada, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed May 10, 1962, Ser. No. 70,068
Term of patent 14 years
(Cl. D16—2)



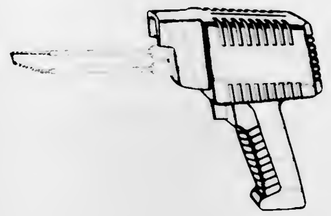
196,045
FOOTWEAR CLOSURE
Duncan E. Slade, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 20, 1961, Ser. No. 67,990
Term of patent 7 years
(Cl. D17—3)



196,046
CEILING TILE
Hobart Woodward, 5512 S. 10th Ave., Minneapolis, Minn.
Filed Feb. 12, 1963, Ser. No. 73,524
Term of patent 14 years
(Cl. D18—2)



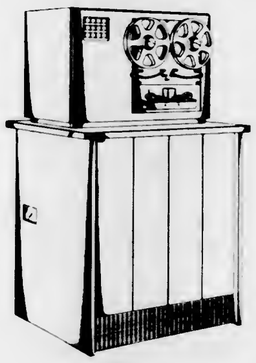
196,047
SOLDER GUN
Alfred W. Madl, Milwaukee, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 28, 1961, Ser. No. 65,741
Term of patent 14 years
(Cl. D26—1)



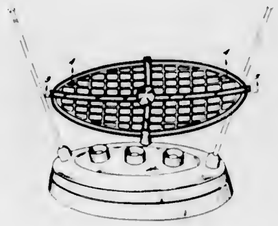
196,048
COMBINED ELECTRIC SOLDERING AND BRAZING MACHINE
Edwin C. Kolterman, Boulder, Colo., assignor to Poudre Products Co., Inc., Fort Collins, Colo., a corporation of Colorado
Filed July 3, 1961, Ser. No. 65,800
Term of patent 3½ years
(Cl. D26—1)



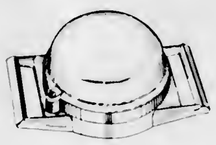
196,049
PAPER TAPE UNIT
Robert H. Eytel, Blue Bell, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 17, 1962, Ser. No. 71,710
Term of patent 7 years
(Cl. D26—5)



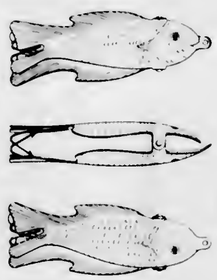
196,050
TELEVISION ANTENNA
Edward Finkel and Matthew A. Lafer, Brooklyn, N.Y., assignors to JFD Electronics Corporation, Brooklyn, N.Y., a corporation of New York
Filed Aug. 31, 1962, Ser. No. 71,510
Term of patent 14 years
(Cl. D26—14)



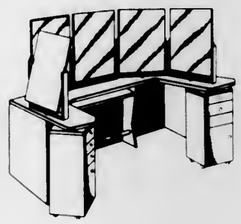
196,051
JUNCTION HEAD FOR THE SPEAKER POSTS OF OUTDOOR MOTION PICTURE THEATRES
Samuel M. Reed, Rte. 1, Box 561, Golden, Colo.
Filed Jan. 28, 1963, Ser. No. 73,338
Term of patent 14 years
(Cl. D28—1)



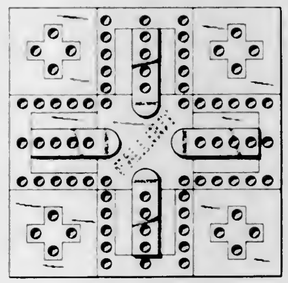
196,052
FISH LURE
Serge Krivicky, 920 Wilder Ave., Montreal, Quebec, Canada
Filed Feb. 11, 1963, Ser. No. 73,511
Term of patent 14 years
(Cl. D31—4)



196,053
VANITY
Bertha E. Rowell, 902 W. Santa Barbara Blvd., Los Angeles, Calif.
Filed Aug. 26, 1960, Ser. No. 61,910
Term of patent 14 years
(Cl. D33—6)



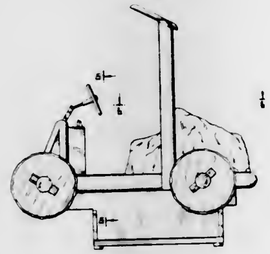
196,054
GAME BOARD
Betty J. Holt, 2450 Woodland Ave., Duluth, Minn.
Filed Jan. 18, 1962, Ser. No. 68,364
Term of patent 14 years
(Cl. D34—5)



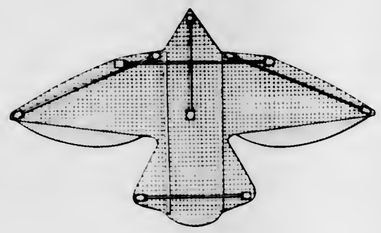
196,055
GAME BOARD
Carolyn R. Swacker, Frances C. Swacker, and Ruth L. Swacker, all of 120 Bluebonnet Drive, Findlay, Ohio
Filed Aug. 14, 1962, Ser. No. 71,281
Term of patent 14 years
(Cl. D34—5)



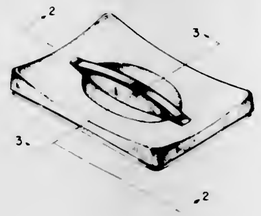
196,056
COIN-OPERATED AMUSEMENT DEVICE
Calvin N. Herzog, 58—15 205th St., Bayside, N.Y.
Filed Nov. 8, 1962, Ser. No. 72,430
Term of patent 14 years
(Cl. D34—5)



196,057
KITE
Harold A. Levine, 165 Dwight St., New Haven, Conn.
Filed Mar. 28, 1962, Ser. No. 69,460
Term of patent 14 years
(Cl. D34—15)



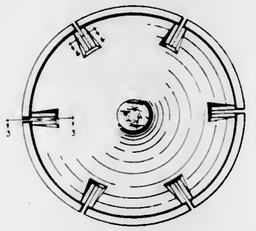
196,058
CANISTER COVER OR THE LIKE
Norman S. Curtis, Indianapolis, Ind., assignor to Harper J. Ransburg Co. Inc., Indianapolis, Ind., a corporation of Indiana
Filed Feb. 7, 1962, Ser. No. 68,706
Term of patent 14 years
(Cl. D44—6)



196,059
PLATE OR SIMILAR ARTICLE
Tony Jack Edwards, Petaluma, Calif., assignor to Technical Porcelain and Chinaware Co., El Cerrito, Calif., a partnership
Filed Mar. 12, 1963, Ser. No. 73,939
Term of patent 14 years
(Cl. D44—15)



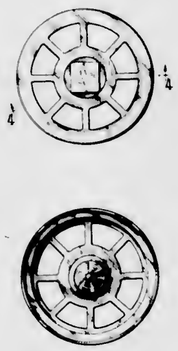
196,060
HEAD UNIT FOR A PEDESTAL TYPE HOLDER FOR CULINARY IMPLEMENTS
Robert A. Eckersberg and James L. Hvale, Chicago, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 15, 1962, Ser. No. 68,847
Term of patent 14 years
(Cl. D44—29)



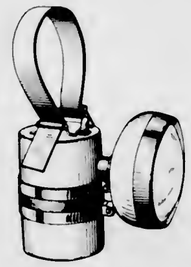
196,061
COMBINED CAN PUNCH AND BOTTLE OPENER
William Ernest Harwell, 311 Touraine Road, Grosse Pointe Farms, Mich.
Filed Aug. 30, 1962, Ser. No. 71,506
Term of patent 14 years
(Cl. D44—29)



196,062
CAN PUNCH
Raymond W. Barton, % Mead Johnson & Co., Evansville, Ind.
Filed Dec. 21, 1962, Ser. No. 72,922
Term of patent 14 years
(Cl. D44—29)



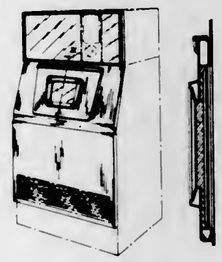
196,063
UNDERWATER ELECTRIC LANTERN
Harold J. Anderson, 28 E. Dartmouth Road, Kansas City, Mo.
Filed Oct. 16, 1961, Ser. No. 67,077
Term of patent 14 years
(Cl. D48—24)



196,064
CIGARETTE LIGHTER
Stanley H. Newman, 19 E. 70th St., New York, N.Y.
Filed Dec. 5, 1960, Ser. No. 63,122
Term of patent 14 years
(Cl. D48—27)



196,065
DRY CLEANING MACHINE
Charles E. Lee, Bellville, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Mar. 6, 1962, Ser. No. 69,104
Term of patent 14 years
(Cl. D49—1)

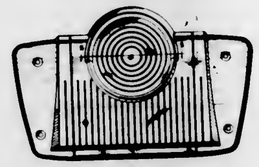


196,066
COMBINATION STORAGE CONTAINER AND HOLDER FOR SUPPORTING A CLOTHESLINE
Walter Hesener, Chalet Le Pin, Vesenaz-Geneva, Switzerland
Filed Apr. 2, 1962, Ser. No. 69,549
Claims priority, application Switzerland Nov. 23, 1961
Term of patent 14 years
(Cl. D49—1)

196,067
COMBINED TISSUE DISPENSER AND ACCESSORY TRAY
Esther Epstein, 5151 Buffalo, Apt. 24, Los Angeles, Calif.
Filed Oct. 8, 1962, Ser. No. 72,028
Term of patent 14 years
(Cl. D52—2)



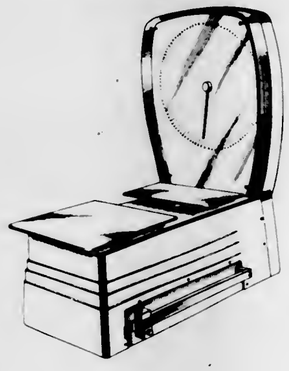
196,068
MODULAR INSTRUMENT PANEL FOR A BOAT OR THE LIKE
Richard J. McFadyen, Upper Montclair, N.J., assignor, by mesne assignments, to Aqua Meter Instrument Corporation, Roseland, N.J., a corporation of New Jersey
Filed Sept. 27, 1961, Ser. No. 66,884
Term of patent 14 years
(Cl. D52—6)



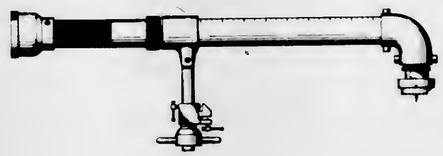
196,069
SLIDE RULER
Alex Augustin, Sparrowbush, N.Y.
(Gardner St., Port Jervis, N.Y.)
Filed Jan. 24, 1963, Ser. No. 73,304
Term of patent 7 years
(Cl. D52—6)



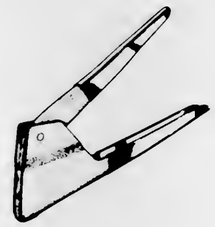
196,070
SCALE
John H. Landvater and Riley C. Maness, Jr., both of 1015 Howard St., Greensboro, N.C.
Filed Nov. 24, 1961, Ser. No. 67,674
Term of patent 14 years
(Cl. D52—10)



196,071
COMBINED CUTTING AND DRILLING RIGHT ANGLE DRIVE AND SUPPORT FOR POWER TOOLS
Bobby L. Terry, 843 Zachry Drive, San Antonio, Tex.
Filed Mar. 7, 1962, Ser. No. 69,117
Term of patent 14 years
(Cl. D54—4)



196,072
RIVET SETTING TOOL
Rudolph M. Babel, Pawtucket, R.I., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Aug. 14, 1962, Ser. No. 71,276
Term of patent 14 years
(Cl. D54—10)



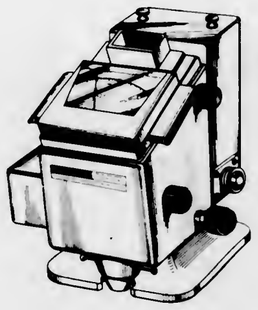
196,073
PIPE BENDING TOOL
Heinrich H. Frank, Elyria, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio, a corporation of Ohio
Filed Dec. 18, 1961, Ser. No. 67,927
Term of patent 14 years
(Cl. D54—13)



196,074
TERMINAL WIRING TOOL
Melvin T. Collier, 1346 11th St., Denver, Colo.
Filed Jan. 17, 1963, Ser. No. 73,215
Term of patent 14 years
(Cl. D54—13)



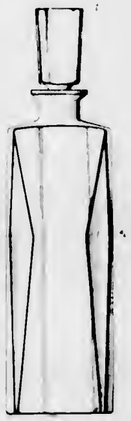
196,075
OPTICAL DENSITY MEASURING INSTRUMENT
Victor Italiano, 213 Leroy St., Binghamton, N.Y.
Filed May 23, 1962, Ser. No. 70,249
Term of patent 14 years
(Cl. D57—1)



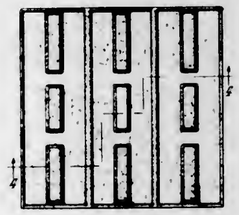
196,076
BOTTLE
Martin Schnur, Shorthills, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Dec. 6, 1962, Ser. No. 72,742
Term of patent 14 years
(Cl. D58—6)

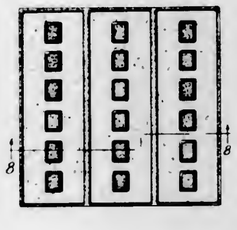


196,077
DECANTER
Walter T. Heintze, New Canaan, Conn., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1962, Ser. No. 72,899
Term of patent 14 years
(Cl. D58—6)



196,078
EGG CASE SEPARATOR SHEET
Harry E. Lambert, Gary, Ind., assignor to Packaging Corporation of America, Dover, Del., a corporation of Delaware
Continuation of design applications Ser. Nos. 59,881 and 59,882, Mar. 28, 1960. This application June 6, 1962, Ser. No. 70,556
Term of patent 14 years
(Cl. D58—13)

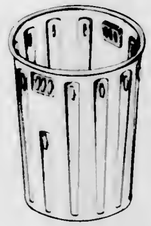




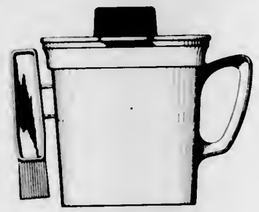
196,079
TRASH CONTAINER
Robert E. Marsh, Los Alamitos, Calif., assignor to Engineered Plastics Container Company, Inc., Anaheim, Calif., a corporation of California
Filed Sept. 17, 1962, Ser. No. 71,713
Term of patent 7 years
(Cl. D58—17)



196,080
TRASH RECEPTACLE
Robert E. Marsh, Los Alamitos, Calif., assignor to Engineered Plastics Container Company, Inc., Anaheim, Calif., a corporation of California
Filed Sept. 17, 1962, Ser. No. 71,715
Term of patent 7 years
(Cl. D58—17)



196,081
COMBINED COVERED PASTE JAR AND APPLICATOR BRUSH
Robert F. Bateman, Brighton, and John P. Capezzuto, Cambridge, Mass., assignors to The Carter's Ink Company, Cambridge, Mass., a corporation of Massachusetts
Filed Nov. 20, 1962, Ser. No. 72,549
Term of patent 14 years
(Cl. D58—17)



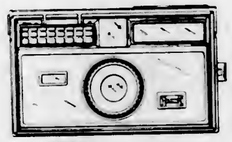
196,082
CAP FOR CONTAINERS
Morton B. Stull, Boonton, N.J. (% Stull Engraving Co., 221–223 Banta Ave., Garfield, N.J.)
Filed July 12, 1962, Ser. No. 70,927
Term of patent 14 years
(Cl. D58—26)



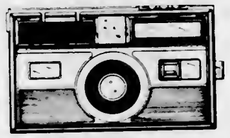
196,083
FLASH HOLDER
David E. Hansen, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 10, 1963, Ser. No. 73,122
Term of patent 14 years
(Cl. D61—1)



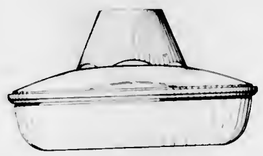
196,084
PHOTOGRAPHIC CAMERA
Frank A. Zagara, Pittsford, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 14, 1963, Ser. No. 73,570
Term of patent 14 years
(Cl. D61—1)



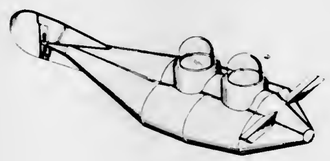
196,085
PHOTOGRAPHIC CAMERA
Frank A. Zagara, Pittsford, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 14, 1963, Ser. No. 73,571
Term of patent 14 years
(Cl. D61—1)



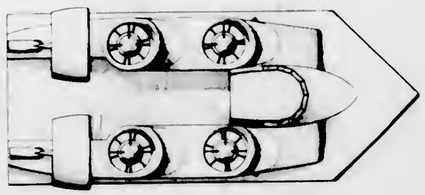
196,086
HUMIDIFIER
Edward M. Stolarz, New York, N.Y., assignor to Walton Laboratories, Inc., Irvington, N.J., a corporation of New Jersey
Filed Sept. 14, 1961, Ser. No. 66,780
Term of patent 14 years
(Cl. D62—4)



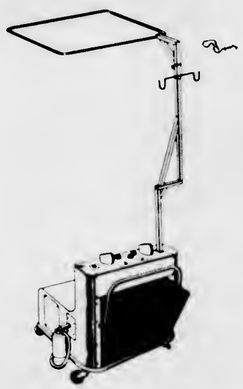
196,087
SUBMARINE
Edmond Armstrong, Torrance, Calif., assignor to American Submarine Company, Cleveland, Ohio, a corporation of California
Filed Oct. 6, 1961, Ser. No. 66,987
Term of patent 14 years
(Cl. D71—1)



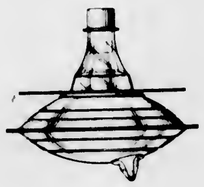
196,088
GROUND EFFECT VEHICLE
Paul C. Emmons, Buffalo, and Donald C. Wright, Tonawanda, N.Y., assignors to Bell Aerospace Corporation, Wheatfield, N.Y.
Filed Jan. 30, 1963, Ser. No. 73,378
Term of patent 14 years
(Cl. D71—1)



196,089
COMBINED OXYGEN TENT FRAME AND GAS CONTROL UNIT
Frederick George Croasdaile, London, England, assignor to Oxygenaire (London) Limited, London, England, a company of Great Britain
Filed Dec. 6, 1960, Ser. No. 63,127
Claims priority, application Great Britain June 8, 1960
Term of patent 14 years
(Cl. D83—1)



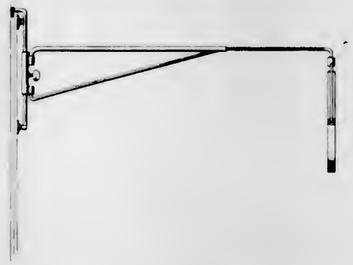
196,090
DISPOSABLE FORMULA CONTAINER FOR INFANT FEEDING
Raymond W. Barton, Donald E. Dailey, and Anton F. Eilers, all of Evansville, Ind., assignors to Mead Johnson & Company, a corporation of Indiana
Filed Oct. 25, 1961, Ser. No. 67,255
Term of patent 14 years
(Cl. D83—1)



196,091
SYRINGE
Hans Evers, Sodertalje, and Hermann Westphal, Eskilstuna, Sweden, assignors to Sjuco Aktiebolag, Goteborg, Sweden, a corporation of Sweden
Filed Oct. 30, 1962, Ser. No. 72,334
Term of patent 14 years
(Cl. D83—12)



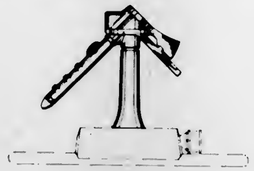
196,092
WALL MOUNTED COSMETIC MIRROR
Shirley Tager, 3932 Stevely Ave., Los Angeles, Calif.
Filed Oct. 23, 1961, Ser. No. 67,230
Term of patent 14 years
(Cl. D86—10)



196,093
CHOPPER FOR NUTS OR THE LIKE
Efrem M. Ostrowsky, Highland Park, Ill., assignor to Nibot Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 16, 1963, Ser. No. 73,200
Term of patent 14 years
(Cl. D89—1)



196,094
LAWN SPRINKLER
Graham Fee and William E. Portz, Geneva, Ohio, assignors to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 6, 1962, Ser. No. 72,409
Term of patent 14 years
(Cl. D91—1)



196,095
FAUCET HANDLE
Stephen A. Young, Monticello, Ind. (Flora, Ind.)
Filed Oct. 16, 1961, Ser. No. 67,075
Term of patent 14 years
(Cl. D91—3)



LIST OF DESIGN PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 20TH DAY OF AUGUST, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Louis, Norman D. 196,036.

American Submarine Co.: *See*—
Armstrong, Edmond. 196,087.

Amerock Corp.: *See*—
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Anderson, Harold J. Underwater electric lantern. 196,063, 8–20–63, Cl. D48—24.

Anderson, Howard A., to Bissell Inc. Housing for a carpet sweeper. 196,035, 8–20–63, Cl. D9—2.

Aqua Meter Instrument Corp.: *See*—
McFadyen, Richard J. 196,068.

Armstrong, Edmond, to American Submarine Co. Submarine. 196,087, 8–20–63, Cl. D71—1.

Augustin, Alex. Slide ruler. 196,069, 8–20–63, Cl. D52—6.

Babel, Rudolph M., to United Shoe Machinery Corp. Rivet setting tool. 196,072, 8–20–63, Cl. D54—10.

Barton, Raymond W. Can punch. 196,062, 8–20–63, Cl. D44—29.

Barton, Raymond W., D. E. Dailey, and A. F. Ellers, to Mead Johnson & Co. Disposable formula container for infant feeding. 196,090, 8–20–63, Cl. D83—1.

Bateman, Robert F., and J. P. Capezzuto, to The Carter's Ink Co. Combined covered paste jar and application brush. 196,081, 8–20–63, Cl. D58—17.

Beckman Instruments, Inc.: *See*—
Malk, David J. 196,044.

Bell Aerospace Corp.: *See*—
Emmons, Paul C., and Wright. 196,088.

Bissell Inc.: *See*—
Anderson, Howard A. 196,035.

Bobrick Mfg. Corp.: *See*—
Louchheim, William S., and Gerds. 196,033.

Capezzuto, John P.: *See*—
Bateman, Robert F., and Capezzuto. 196,081.

Carter's Ink Co., The: *See*—
Bateman, Robert F., and Capezzuto. 196,081.

Celanese Corp. of America: *See*—
Schnur, Martin. 196,076.

Collier, Melvin T. Terminal wiring tool. 196,074, 8–20–63, Cl. D54—13.

Cramer Posture Chair Co., Inc.: *See*—
Wehner, Norvin J. 196,043.

Croasdaile, Frederick G., to Oxygenaire (London) Ltd. Combined oxygen tent frame and gas control unit. 196,089, 8–20–63, Cl. D83—1.

Curtis, Norman S., to Harper J. Ransburg Co., Inc. Canister cover or the like. 196,058, 8–20–63, Cl. D44—6.

Dailey, Donald E.: *See*—
Barton, Raymond W., Dailey, and Ellers. 196,090.

De Lisa, Samuel L. Prefabricated building. 196,037, 8–20–63, Cl. D13—1.

Eastman Kodak Co.: *See*—
Hansen, David E. 196,083.
Zagara, Frank A. 196,084.
Zagara, Frank A. 196,085.

Eckersberg, Robert A., and J. L. Hvale, to Ekco Products Co. Head unit for a pedestal type holder for culinary implements. 196,060, 8–20–63, Cl. D44—29.

Edwards, Tony J., to Technical Porcelain and Chinaware Co. Plate or similar article. 196,059, 8–20–63, Cl. D44—15.

Ellers, Anton F.: *See*—
Barton, Raymond W., Dailey, and Ellers. 196,090.

Ekco Products Co.: *See*—
Eckersberg, Robert A., and Hvale. 196,060.

Emmons, Paul C., and D. C. Wright, to Bell Aerospace Corp. Ground effect vehicle. 196,088, 8–20–63, Cl. D71—1.

Engineered Plastics Container Co., Inc.: *See*—
Marsh, Robert E. 196,079.
Marsh, Robert E. 196,080.

Epstein, Esther. Combined tissue dispenser and accessory tray. 196,067, 8–20–63, Cl. D52—2.

Evers, Hans, and H. Westphal, to Sjuco Aktiebolag. Syringe. 196,091, 8–20–63, Cl. D83—12.

Eytel, Robert H., to Sperry Rand Corp. Paper tape unit. 196,049, 8–20–63, Cl. D26—5.

Fadow, Paul D. Automobile disk wheel. 196,041, 8–20–63, Cl. D14—30.

Fadow, Paul D. Automobile disk wheel. 196,042, 8–20–63, Cl. D14—30.

Fee, Graham, and W. E. Portz, to True Temper Corp. Lawn sprinkler. 196,094, 8–20–63, Cl. D91—1.

Finkel, Edward and M. A. Lafer, to JFD Electronics Corp. Television antenna. 196,050, 8–20–63, Cl. D26—14.

Frank, Heinrich H., to The Ridge Tool Co. Pipe bending tool. 196,073, 8–20–63, Cl. D54—13.

Gerds, Donald A.: *See*—
Louchheim, William S., and Gerds. 196,033.

Glahe, Frederick W., to Wilson Athletic Goods Mfg. Co., Inc. Chest protector. 196,032, 8–20–63, Cl. D3—26.

Hansen, David E., to Eastman Kodak Co. Flash holder. 196,083, 8–20–63, Cl. D61—1.

Harwell, William E. Combined can punch and bottle opener. 196,061, 8–20–63, Cl. D44—29.

Heintze, Walter T., to Schenley Industries, Inc. Decanter. 196,077, 8–20–63, Cl. D58—6.

Herzog, Calvin N. Coin-operated amusement device. 196,056, 8–20–63, Cl. D34—5.

Hesener, Walter. Combination storage container and holder for supporting a clothesline. 196,066, 8–20–63, Cl. D49—1.

Hollaender, Peter R. Bus stop shelter. 196,039, 8–20–63, Cl. D13—1.

Holt, Betty J. Game board. 196,054, 8–20–63, Cl. D34—5.

Hvale, James L.: *See*—
Eckersberg, Robert A., and Hvale. 196,060.

Italiano, Victor. Optical density measuring instrument. 196,075, 8–20–63, Cl. D57—1.

JFD Electronics Corp.: *See*—
Finkel, Edward, and Lafer. 196,050.

Kolterman, Edwin C., to Poudre Products Co., Inc. Combined electric soldering and brazing machine. 196,048, 8–20–63, Cl. D26—1.

Krivicky, Serge. Fish lure. 196,052, 8–20–63, Cl. D31—4.

Lafer, Matthew A.: *See*—
Finkel, Edward, and Lafer. 196,050.

Lambert, Harry E., to Packaging Corp. of America. Egg case separator sheet. 196,078, 8–20–63, Cl. D58—13.

Landvater, John H., and R. C. Maness, Jr. Scale. 196,070, 8–20–63, Cl. D52—10.

Lee, Charles E., to Westinghouse Electric Corp. Dry cleaning machine. 196,065, 8–20–63, Cl. D49—1.

Levine, Harold A. Kite. 196,057, 8–20–63, Cl. D34—15.

Louchheim, William S., and D. A. Gerds, to Bobrick Mfg. Corp. Recessed soap dispenser unit. 196,033, 8–20–63, Cl. D4—3.

Louis, Norman D., to Ajax Hardware Mfg. Corp. Drawer pull. 196,036, 8–20–63, Cl. D10—8.

Madl, Alfred W., to John Oster Mfg. Co. Solder gun. 196,047, 8–20–63, Cl. D26—1.

Malk, David J., to Beckman Instruments, Inc. Fluorometer. 196,044, 8–20–63, Cl. D16—2.

Maness, Riley C., Jr.: *See*—
Landvater, John H., and Maness. 196,070.

Marsh, Robert E., to Engineered Plastics Container Co., Inc. Trash container. 196,079, 8–20–63, Cl. D58—17.

Marsh, Robert E., to Engineered Plastics Container Co., Inc. Trash receptacle. 196,080, 8–20–63, Cl. D58—17.

McFadyen, Richard J., to Aqua Meter Instrument Corp. Modular instrument panel for a boat or the like. 196,068, 8–20–63, Cl. D52—6.

Mead Johnson & Co.: *See*—
Barton, Raymond W., Dailey, and Ellers. 196,090.

Morgan, John R., to Amerock Corp. Handrail bracket. 196,040, 8–20–63, Cl. D13—7.

Newman, Stanley H. Cigarette lighter. 196,064, 8–20–63, Cl. D48—27.

Nibot Corp.: *See*—
Ostrowsky, Efrem M. 196,093.

Oster, John, Mfg. Co.: *See*—
Madl, Alfred W. 196,047.

Ostrowsky, Efrem M., to Nibot Corp. Chopper for nuts or the like. 196,093, 8–20–63, Cl. D89—1.

Oxygenaire (London) Ltd.: *See*—
Croasdaile, Frederick G. 196,089.

Packaging Corp. of America: *See*—
Lambert, Harry E. 196,078.

Portz, William E.: *See*—
Fee, Graham, and Portz. 196,094.

Poudre Products Co., Inc.: *See*—
Kolterman, Edwin C. 196,048.

Ransburg, Harper J., Co., Inc.: *See*—
Curtis, Norman S. 196,058.

Reed, Samuel M. Junction head for the speaker posts of outdoor motion picture theatres. 196,051, 8–20–63, Cl. D28—1.

Ridge Tool Co., The: *See*—
Frank, Heinrich H. 196,073.

Rodriguez, Robert F., to Smaks International, Inc. Building. 196,038, 8–20–63, Cl. D13—1.

Rowell, Bertha E. Vanity. 196,053, 8–20–63, Cl. D33—6.

Schenley Industries, Inc.: *See*—
Heintze, Walter T. 196,077.

Schnur, Martin, to Celanese Corp. of America. Bottle. 196,076, 8–20–63, Cl. D58—6.

Sjuco Aktiebolag: *See*—
Evers, Hans, and Westphal. 196,091.

Slade, Duncan E., to United States Rubber Co. Footwear closure. 196,045, 8–20–63, Cl. D17—3.

Smaks International, Inc.: *See*—
Rodriguez, Robert F. 196,038.

Sperry Rand Corp.: *See*—
Eytel, Robert H. 196,049.

Stolarz, Edward M., to Walton Laboratories, Inc. Humidifier. 196,086, 8–20–63, Cl. D62—4.

Stull, Morton B. Cap for containers. 196,082, 8–20–63, Cl. D58—26.

Swacker, Carolyn R., F. C., and R. L. Game board. 196,055, 8–20–63, Cl. D34—5.

Swacker, Frances C.: *See*—
Swacker, Carolyn R., F. C., and R. L. 196,055.

Swacker, Ruth L.: *See*—
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Swan, George D. Shower stall. 196,034, 8–20–63, Cl. D4—3.
Tager, Shirley. Wall mounted cosmetic mirror. 196,092, 8–20–63, Cl. D86—10.
Technical Porcelain and Chinaware Co.: *See*—
Edwards, Tony J. 196,059.
Terry, Bobby L. Combined cutting and drilling right angle drive and support for power tools. 196,071, 8–20–63, Cl. D54—4.
True Temper Corp.: *See*—
Fee, Graham, and Portz. 196,094.
United Shoe Machinery Corp.: *See*—
Babel, Rudolph M. 196,072.
United States Rubber Co.: *See*—
Slade, Duncan E. 196,045.
Walton Laboratories, Inc.: *See*—
Stolarz, Edward M. 196,086.
Wehner, Norvin J., to Cramer Posture Chair Co., Inc. Combined step and stool. 196,043, 8–20–63, Cl. D15—8.
Westinghouse Electric Corp.: *See*—
Lee, Charles E. 196,065.
Westphal, Hermann: *See*—
Evers, Hans, and Westphal. 196,091.
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Glabe, Frederick W. 196,032.
Woodward, Hobart. Ceiling tile. 196,046, 8–20–63, Cl. D18—2.
Wright, Paul C.: *See*—
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Young, Stephen A. Faucet handle. 196,095, 8–20–63, Cl. D91—3.
Zagara, Frank A., to Eastman Kodak Co. Photographic camera. 196,084, 8–20–63, Cl. D61—1.
Zagara, Frank A., to Eastman Kodak Co. Photographic camera. 196,085, 8–20–63, Cl. D61—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 20TH DAY OF AUGUST, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Eilers, Barney A., and Helenberg. 3,101,095.
Acieries Reunies de Burbach-Eich-Dudelange, Societe Anonyme: *See*—
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Church, Donald R., and Da Rold. 3,101,422.
Junger, Miguel C. 3,100,994.
Kompanek, Harry W. 3,101,421.
Rich, Stanley R. 3,101,419.
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Adams, Dennis A. W., and A. K. Sarker, to Hickson & Welch Ltd. Stilbyl-acenaphthenotriazole brighteners. 3,101,333, 8–20–63, Cl. 260—240.
Adams, Frederick G., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,101,432, 8–20–63, Cl. 317—13.
Adenstedt, John H. W.: *See*—
Engqvist, Erik I., and Adenstedt. 3,101,395.
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Linden, Gustave B. 3,101,378.
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Elsner, Edwin C. 3,101,213.
Airmatic Systems Corp.: *See*—
Todt, Gerhard, and Bernhardt. 3,101,182.
Albrecht, Harold J., to Radio Corp. of America. Electron tube grid and method of making. 3,101,100, 8–20–63, Cl. 140—71.5.
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Andresen, John H., Jr., to Kollsman Instrument Corp. Rapid response pressure instrument. 3,100,999, 8–20–63, Cl. 73—407.
Angelica, Nicholas J., to United States of America, Army. Eccentric eyepiece for a firearm rear sight. 3,100,936, 8–20–63, Cl. 33—58.
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Architect, Nicholas. Impact tool. 3,101,139, 8–20–63, Cl. 192—113.
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Ayers, John S.: *See*—
King, William R., and Ayers. 3,100,957.
Ayers, John S., and A. M. Brown, to Jas. H., Matthews & Co. Indexing apparatus for marking devices and the like. 3,101,013, 8–20–63, Cl. 74—818.
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Barkley, Charles G., and J. R. Beesley, to Atlas Crankshaft Corp. Method and apparatus for heat-treating. 3,101,165, 8–20–63, Cl. 266—4.
Barnes, La Mar P. Removal tool-pin and socket electrical connectors. 3,100,931, 8–20–63, Cl. 29—203.
Barr, Frank T., and T. A. Reiter, to Esso Research and Engineering Co. Utilization of proton recoil energy in neutron irradiated, vapor phase organic reactions. 3,101,307, 8–20–63, Cl. 204—154.2.
Baschet, Francois P. M. Compound musical instrument. 3,101,022, 8–20–63, Cl. 84—404.
Bassett, Ronald M., to International Register Co. Clock operated electric switch and alarm buzzer control device. 3,100,961, 8–20–63, Cl. 58—38.
Batchelor, James D., G. P. Curran, and E. Gorin, to Consolidation Coal Co. Process for regenerating manganese oxide acceptors for hydrogen sulfide. 3,101,303, 8–20–63, Cl. 202—31.
Bauer Brothers Co., The: *See*—
Woodruff, Maurice D. 3,101,313.
Bausch, Ewald, and R. Wighton, to United States of America, Air Force. Locking and extracting means for can-enclosed units. 3,101,230, 8–20–63, Cl. 339—91.
Baxter, John C., to The Rapids-Standard Co., Inc. Conveyor and a case release apparatus. 3,101,158, 8–20–63, Cl. 221—295.
Baxter, Warren N., to E. I. du Pont de Nemours and Co. Process for the separation of hydrocarbons. 3,101,381, 8–20–63, Cl. 260—677.
Be-Ge Mfg. Co.: *See*—
White, John A., Jr., and Vaughan. 3,101,093.
Beam Guidance, Inc.: *See*—
Goubau, Georg J. E. 3,101,472.
Beckman Instruments, Inc.: *See*—
Stallman, Richard C., and Pedersen. 3,101,322.
Beesley, John R.: *See*—
Barkley, Charles G., and Beesley. 3,101,165.
Bell, Ross L.: *See*—
Wickersham, Arthur F., Jr., and Bell. 3,101,474.
Bell Telephone Laboratories, Inc.: *See*—
Ashkin, Arthur. 3,101,449.
Montesano, Lewis. 3,101,326.
Benham, Norman R. Anchor structure for brake cables and the like. 3,101,205, 8–20–63, Cl. 285—162.
Bennett, Arthur C. Divided electrical insulator. 3,101,389, 8–20–63, Cl. 174—156.

Berchtold, Max, to I-T-E Circuit Breaker Co. Aerodynamic wave machine formed rotor blades to minimize thermal stress. 3,101,168, 8–20–63, Cl. 230—69.

Berge, Sven E., to Bofors, Aktiebolaget. Device for guns on combat vehicles. 3,101,028, 8–20–63, Cl. 89—14.

Bernhardt, William R.: *See*—
Todt, Gerhard, and Bernhardt. 3,101,182.

Bernotas, Ralph J., to General Motors Corp. Scraper bowl. 3,100,945, 8–20–63, Cl. 37—129.

Bertin, Daniel: *See*—
Nomine, Gerard, Bertin, Tessier, Pierdet, and Bucourt. 3,101,354.

Bevers, Eugene J., and R. J. Weute, to General Motors Corp. Water injection system for a multistage compressor. 3,100,904, 8–20–63, Cl. 60—39.3.

Beyerstedt, John M., H. E. Erickson, and H. H. Talboys, to Nordberg Mfg. Co. Process of applying wear resistant metal coatings. 3,101,274, 8–20–63, Cl. 117—46.

Bianca, Edoardo G., to Silopark S.A. Elevator system in which drive mechanism is mounted upon the counterweight. 3,101,130, 8–20–63, Cl. 187—20.

Billi, Giorgio, and V. Luchi. Yarn severing device for a circular knitting machine. 3,100,976, 8–20–63, Cl. 66—145.

Billi, Giorgio, and V. Luchi. Yarn severing device for circular knitting machines. 3,100,977, 8–20–63, Cl. 66—145.

Bimber, Russell M.: *See*—
Bluestone, Henry, and Bimber. 3,101,377.

Bincer, Haus, to Babcock & Wilcox Ltd. Method of and apparatus for ultrasonically testing butt welds. 3,100,987, 8–20–63, Cl. 73—67.7.

Bjorklund, Gustaf E. Variable displacement piston machine. 3,101,060, 8–20–63, Cl. 103—161.

Blackburn, Charles M., to United States of America, Navy. Hydraulic power supply. 3,100,965, 8–20–63, Cl. 60—51.

Blaiklock, William J., and C. S. Reasby, to United States of America, Army. Gage for coupling members. 3,100,939, 8–20–63, Cl. 33—174.

Blaw-Knox Co.: *See*—
Schuetz, James W. 3,101,015.

Blockwelder Mfg. Co.: *See*—
Schmidt, Lewis W. 3,101,123.

Bloeck, Siegfried: *See*—
Eder, Heiuz, and Bloeck. 3,101,277.

Bluestone, Henry, and R. M. Bimber, to Diamond Alkali Co. Sulfone derivatives of mercaptohaloethylene. 3,101,377, 8–20–63, Cl. 260—607.

Blyth, John W.: *See*—
Godcharles, Charles A., Blyth, Jacobson, and Gabrielson. 3,100,942.

Bock, Willy, E. Mutschler, and F. Schreiber, to SWF-Spezialfabrik Für Autozubehör Gustav Rau G.m.b.H. Windshield washing pump with switch for windshield wiper motor for motor vehicles. 3,100,906, 8–20–63, Cl. 15—250.02.

Boehringer, C. H., Sohn: *See*—
Zelle, Karl, and Freter. 3,101,339.

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Bofors, Aktiebolaget: *See*—
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Böhme Fettchemie G.m.b.H.: *See*—
Plapper, Jürgen, and Dieckelmann. 3,101,238.

Bonnet, Yannik: *See*—
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Bonsor, David V., to Interstate Bag Co., Inc. Apparatus for making carrier bags. 3,101,033, 8–20–63, Cl. 93—8.

Borg-Warner Corp.: *See*—
Tracy, Herbert E. 3,101,200.

Bosch, Robert, G.m.b.H.: *See*—
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Bourcier de Carbon, Christian M. L. L., and J. E. Heckethorn; said Heckethorn assor. to said Bourcier de Carbon. Hydraulic pneumatic shock absorber. 3,101,131, 8–20–63, Cl. 188—88.

Bourdon, Thomas E. Marine dock. 3,100,968, 8–20–63, Cl. 61—48.

Bowen, William M., III, to Certain-Teed Products Corp. Means for applying slate granules to shingles. 3,101,281, 8–20–63, Cl. 118—7.

Bowers, Albert, to Syntex Corp. 19-halo androstenes. 3,101,356, 8–20–63, Cl. 260—397.4.

Bowers, Albert, to Syntex Corp. 19-halo androstenes. 3,101,357, 8–20–63, Cl. 260—397.4.

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Bowers, Albert, and J. Edwards, to Syntex Corp. 2-formyl-Δ^1-androstenes and $\Delta^{1,4}$-androstadienes. 3,101,353, 8–20–63, Cl. 260—397.4.

Bowers, Albert, E. Volkov, and H. Martinez, to Syntex Corp. Process for 3-keto-$\Delta^{4,6}$-steroids. 3,101,355, 8–20–63, Cl. 260—397.4.

Bownes, Kenneth A.: *See*—
Engle, Loy S., Dunn, and Bownes. 3,100,981.

Boyd, William L., H. J. Eavis, and P. L. Poulos, to E. I. du Pont de Nemours and Co. Method of delaying budbreak in fruit trees. 3,101,264, 8–20–63, Cl. 71—2.7.

Braithwaite, Isaac, & Son Engineers Ltd.: *See*—
Howlett, Edward J. 3,100,978.

Brenneman, Clifford D. Animated figure toy. 3,100,949, 8–20–63, Cl. 40—241.

Britts, Bruno: *See*—
Wilson, Raymond W., and Britts. 3,100,974.

Brinkmann, Franz, to SKF Schuechtermann & Kremer-Baum Aktiengesellschaft Fuer Aufbereitung. Drum sink separators. 3,101,312, 8–20–63, Cl. 209—172.

Bristol-Myers Co.: *See*—
Siegal, Bernard, and Petgrave. 3,101,301.
Siegal, Bernard, Petgrave, and Thau. 3,101,300.

British Iron and Steel Research Association, The: *See*—
Gill, Hedley. 3,101,016.

Brogan, John E., to United States of America, Army. Quick release, link-type clamp for multiple shaft clusters. 3,101,027, 8–20–63, Cl. 89—12.

Brois, Stanley J., and A. J. Rutkowski, to Esso Research and Engineering Co. Reactions of organo boranes. 3,101,376, 8–20–63, Cl. 260—606.5.

Brotherton, Robert J., and A. L. McCloskey, to United States Borax & Chemical Corp. New borazole compositions. 3,101,369, 8–20–63, Cl. 260—551.

Brown, Alvin M.: *See*—
Ayers, John S., and Brown. 3,101,013.

Brown, Carl F., Jr., to Wald Industries, Inc. Road striping machine with electronic sight. 3,101,175, 8–20–63, Cl. 239—150.

Brown, Edward A., and L. J. Chinn, to G. D. Searle & Co. 5-(p-fluorophenyl)-2-hydroxycyclopentane(acetic acids/ethanols), lactones and esters thereof, and intermediates thereto. 3,101,346, 8–20–63, Cl. 260—343.3.

Brown, Eugene G. Inking device. 3,101,283, 8–20–63, Cl. 118—268.

Brown, James A., O. E. Pennell, Jr., and S. E. Jacke, to Oakland Metal Fabricators, Inc. Golf club cleaning machine. 3,101,089, 8–20–63, Cl. 134—186.

Brown, James W., to National Mfg. Co. Collapsible display rack. 3,101,148, 8–20–63, Cl. 211—148.

Brown, Julian, Jr., and J. G. Clark, to Sperry Rand Corp. Frequency selective gyromagnetic diplexer for coupling two lines, each having individual frequency, with a common line. 3,101,456, 8–20–63, Cl. 333—1.1.

Brown, Leonard, and A. E. Hinckliff, to William Cotton Ltd. Straight bar knitting. 3,100,975, 8–20–63, Cl. 66—96.

Brown, Paul L., and J. F. Hyde, to Dow Corning Corp. Catalytic preparation of chlorosiloxanes in polar solvents. 3,101,361, 8–20–63, Cl. 260—448.2.

Brunberg, Karl G., B. Lillsunde, and J. S. Lindenhall, to Telefonaktiebolaget L M Ericsson. Telephone system. 3,101,392, 8–20–63, Cl. 179—22.

Brunner, Alfred, to Societe Anonyme Sulzer Freres. Steam power plant. 3,100,967, 8–20–63, Cl. 60—73.

Brunot, Albert W., to General Electric Co. Dynamoelectric machine. 3,101,423, 8–20–63, Cl. 310—86.

Bryand, Edward T., to Metal-Tech, Inc. Honeycomb openwork. 3,100,928, 8–20–63, Cl. 29—121.

Brydon, Edward W. Anchor securing device. 3,101,067, 8–20–63, Cl. 114—210.

Buchalter, Lloyd A.: *See*—
Malkin, Bruce M., Reischer, and Buchalter. 3,101,017.

Buchanan, James B., to E. I. du Pont de Nemours and Co. 1,1'-methylene-(1-methyl-3-phenyl)-ureas. 3,101,370, 8–20–63, Cl. 260—553.

Bucourt, Robert: *See*—
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Buffalo Meter Co., Inc.: *See*—
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Bundy Tubing Co.: *See*—
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Burch, Archie E. Tape measure. 3,100,937, 8–20–63, Cl. 33—137.

Burgarella, John P., and D. S. Oliver, to Minneapolis-Honeywell Regulator Co. Direct current amplifier system with feedback controlled high impedance input circuit. 3,101,451, 8–20–63, Cl. 330—10.

Burgwin, Stephen L., and C. Green, to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,101,424, 8–20–63, Cl. 310—217.

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Burnistou, Raymond J., to The Thomas & Betts Co. Unitary sheet metal tie-clip. 3,100,922, 8–20–63, Cl. 24—73.

Burroughs Corp.: *See*—
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Elmore, William C. 3,101,417.
McCauley, John H., and Gavurnik. 3,101,427.

Bushway, George H. Cooking machine. 3,101,043, 8–20–63, Cl. 99—407.

Butzke, Fritz: *See*—
Mayer, Hans F., and Butzke. 3,101,172.

C.A.V. Ltd.: *See*—
Evans, Fraser M. 3,101,078.
Evans, Fraser M. 3,101,079.

Cairns, Theodore, B. Graham, and D. Tanner, to E. I. du Pont de Nemours and Co. Process of coating a shaped swollen polymer substrate and treating with ionizing radiation. 3,101,275, 8–20–63, Cl. 117—47.

Callaway Mills Co.: *See*—
Robinson, Lamson C. 3,101,223.

Campbell, Donald R.: *See*—
Glomb, Walter L., Campbell, and Kressman. 3,101,446.

Campbell, Phillip B., to Wagner Electric Corp. Fluid pressure operated piston valve. 3,101,187, 8–20–63, Cl. 251—63.

Canamero, Ernest V., to United States of America, Army. Sheet clamping and unclamping mechanism. 3,101,234, 8–20–63, Cl. 346—138.

Canny, Floyd H., to SCM Corp. Removable type and type bar assembly. 3,101,141, 8–20–63, Cl. 197—36.

Carden Equipment Co., Inc.: *See*—
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Carden, Melvin L., to Carden Equipment Co., Inc. Chemical injecting apparatus. 3,101,090, 8–20–63, Cl. 137—99.

Carlsen, Carl E. Hand stamps. 3,101,048, 8–20–63, Cl. 101—125.

Carlson, John W., to Speed-O-Print Business Machines Corp. Disposable cartridge for use in a photocopy machine. 3,101,036, 8–20–63, Cl. 95—89.

Carr, Dugald M., and T. D. Striggles, to The Chemical and Industrial Corp. Manufacture of nitrogen tetroxide. 3,101,255, 8–20–63, Cl. 23—162.

Carr, William H., Jr., and E. R. Dobyns, to United States of America, Atomic Energy Commission. Diaphragm pumping system. 3,101,058, 8–20–63, Cl. 102—38.

Carrier Corp.: *See*—
Lyons, William T., and Morabito. 3,101,382.
Paris, James H. 3,101,383.

Carson, Frank J., and H. A. Leflet, Jr., to Libbey-Owens-Ford Glass Co. Method and apparatus for feeding flat sheets onto a moving conveyor. 3,101,156, 8–20–63, Cl. 221—93.

Casson, Nicholas V. Depth stop for saw blades. 3,101,106, 8–20–63, Cl. 145—35.

Cater, Harold T., and L. O. Waibel. Device for removing and installing tubular lamps. 3,101,212, 8–20–63, Cl. 294—20.

Cavell, Winston W.: *See*—
Stevenson, Thomas, Cavell, and Dischert. 3,101,054.

Caven, James J.: *See*—
Stevenson, Thomas, and Caven. 3,101,053.

Cawthra, William A.: *See*—
Simpson, Arthur I. F., and Cawthra. 3,101,453.

Celanese Corp. of America: *See*—
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Certain-Teed Products Corp.: *See*—
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Ceskoslovenska akademie ved: *See*—
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Chambers, Isaac M., to Henry Miller Spring and Mfg. Co. Spring coiling machine stripper interlock. 3,101,112, 8–20–63, Cl. 153—67.

Chandler, John, Jr., L. C. Holly, and J. L. Vilbig, Jr., to Texas Instruments Inc. Ferrite phase shifter having casing-supported thin-foil waveguide, with magnetising pole pieces penetrating the casing. 3,101,458, 8–20–63, Cl. 333—24.2.

Chemical and Industrial Corp., The: *See*—
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Chemionica Engineering Laboratories, Inc.: *See*—
Preiser, Herman S., Cook, and Tytell. 3,101,311.

Cheney, James E., to General Electric Co. Diamond tool. 3,101,260, 8–20–63, Cl. 51—293.

Chinn, Leland J.: *See*—
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Christensen, Paul M., to Federal Pacific Electric Co. Circuit breakers. 3,101,399, 8–20–63, Cl. 200—168.

Christenson, Howard W., W. G. Livesey, and W. E. Schilke, to General Motors Corp. Transmission. 3,101,012, 8–20–63, Cl. 74—752.

Church, Donald R., and J. Da Rold, to Acoustica Associates, Inc. Electromechanical transducer apparatus. 3,101,422, 8–20–63, Cl. 310—26.

Clark, Charles A., N. J. Doorenbos, and L. Horwitz, to General Aniline & Film Corp. Process for preparation of certain arylated hydroxybenzoazoles. 3,101,343, 8–20–63, Cl. 260—304.

Clark Equipment Co.: *See*—
Whitmore, Milton P., and Maddalena. 3,101,152.

Clark, John G.: *See*—
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Clelland, Charles M., and L. C. Aldrich, Jr. Toilet tissue storage and dispenser. 3,101,181, 8–20–63, Cl. 242—55.3.

Clevite Corp.: *See*—
Hufferd, George H., Josephson, and Williams. 3,101,420.

Clifford, Frank, and C. M. White, to Wheatoe Ltd. Coupling with plural lug in slot holding means and external sealing shell. 3,101,208, 8–20–63, Cl. 285—363.

Cochran, Oscar B., Jr., to Venture Products, Inc. Knockdown metallic receptacles. 3,101,226, 8–20–63, Cl. 312—257.

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Cook, Frank E.: *See*—
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Cooke, Troughton & Simms Ltd.: *See*—
Scott-Maxwell, Peter D. 3,101,412.

Cordis Corp.: *See*—
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Cordis, Nat. Poultry feeder having a band type conveyor. 3,101,070, 8–20–63, Cl. 119—52.

Corn Products Co.: *See*—
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Paschall, Eugene F., Thayer, and Minkema. 3,101,330.

Costas, John P., to General Electric Co. Synchronous detector system. 3,101,448, 8–20–63, Cl. 329—50.

Cotton, William, Ltd.: *See*—
Brown, Leonard, and Hinckliefl. 3,100,975.

Coulson, Emery J.: *See*—
Spies, Joseph R., Coulson, and Wells. 3,101,266.

Coursen, David L., and F. A. Loving, to E. I. du Pont de Nemours and Co. Explosive composition. 3,101,288, 8–20–63, Cl. 149—21.

Coverley, Harold E., to General Motors Corp. Seal for sliding door. 3,100,918, 8–20–63, Cl. 20—19.

Cox, Lewis J.: *See*—
Starr, Louis, Kaplan, Greenberg, and Cox. 3,100,986.

Craig, Burnie M.: *See*—
Glasseo, Robert B., and Craig. 3,101,282.

Croall, Clifford V. Process for preserving tomatoes and the like. 3,101,271, 8–20–63, Cl. 99—154.

Crocker, Henry P., to The Distillers Co. Ltd. Production of unsaturated ketones. 3,101,375, 8–20–63, Cl. 260—595.

Crompton & Knowles Corp.: *See*—
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Payne, Oscar V. 3,101,099.

Cronin, Edward F., D. L. Johnston, and R. H. Delisle, to General Electric Co. Reduced height electrical insulating bushing with sight glass. 3,101,386, 8–20–63, Cl. 174—11.

Crossley, Harry E., Jr., to Robertshaw-Fulton Controls Co. Electro-hydraulic actuator system. 3,101,031, 8–20–63, Cl. 91—364.

Culver, Frederick H., J. A. Haeber, E. B. Lagucki, and R. F. Perner, to Shell Oil Co. Y-branched wellhead assembly. 3,101,118, 8–20–63, Cl. 166—75.

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House, Bryan E., and Cumming. 3,101,133.

Cunningham, George L., to W. R. Grace & Co. Production of silica free hydrogen fluoride. 3,101,254, 8–20–63, Cl. 23—153.

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Curry, Arnet A., to Motorola, Inc. Transistor voltage regulator. 3,101,441, 8–20–63, Cl. 323—22.

Curtin Leo P., deceased; L. V. Curtin, executor. Conditioning treatment for metal surfaces. 3,101,287, 8–20–63, Cl. 148—6.16.

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Gearhart, Walter S., and Hammond. 3,101,102.
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Cusic, John W., and E. Le Von, to G. D. Searle & Co. 1-benzhydryl substituted 4-(aminomethyl) piperidines and 4-(amidomethyl) piperidines. 3,101,341, 8–20–63, Cl. 260—293.

Cutler, Clarence W., to United States of America, Navy. Controlled shock or impact testing fixture. 3,100,982, 8–20–63, Cl. 73—12.

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Kitscha, Hector. 3,101,434.

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Drechsel, Armin. 3,101,111.
Nallinger, Friedrich K. H. 3,101,007.

Dane, Jack L., to Ford Motor Co. Personnel platform for fork lift. 3,101,128, 8–20–63, Cl. 182—222.

Darbie, Arthur M., C. W. Harrison, and D. J. Tighe, to Hewlett-Packard Co. Transistorized direct-voltage regulated power supply. 3,101,442, 8–20–63, Cl. 323—22.

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Davis, Perry J. Means for preparing mattress profile chart. 3,100,932, 8–20–63, Cl. 73—172.

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De Barba, Albert E., to Consolidated Electronics Industries Corp. Means for effecting undirectional rotation. 3,101,137, 8–20–63, Cl. 192—4.

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De Haan, Wolbert, to General Motors Corp. Vehicle seat construction. 3,101,186, 8–20–63, Cl. 248—378.

De Kuzmik, Paul, deceased (by J. R. Montgomery). Electronic pressure measuring means for internal combustion engines responsive to pressure caused spark gap resistance charge. 3,101,444, 8–20–63, Cl. 324—33.

Delisle, Robert H.: *See*—
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De Matteo, Adolph J., to Farrel-Birmingham Co., Inc. Multiple injection molding apparatus. 3,100,913, 8–20–63, Cl. 18—20.

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Denovan, Robert A. 3,101,315.

Denovan, Robert A., to Denovan Ltd. Gyrating screen. 3,101,315, 8–20–63, Cl. 209—332.

De Ridder, Ernst J., to Reynolds Metals Co. Ground effect machine. 3,101,125, 8–20–63, Cl. 180—7.

De Ruggieri, Pietro, C. Ferrari, and C. Gandolfi, to Ormoneterapia Richter S.p.A. 17β-acetamino-steroids. 3,101,358, 8–20–63, Cl. 260—397.5.

Desnoes, Arnold B., D. P. Fullerton, and P. D. Shea, to American Telephone and Telegraph Co. Cordless type switchboard. 3,101,393, 8–20–63, Cl. 179—27.

Deutsche Akademie der Wissenschaften Zu Berlin: *See*—
Serowy, Fritz. 3,101,247.

De Vost, Valmore F., to United States of America, Navy. Dropable shock tester. 3,100,983, 8–20–63, Cl. 73—12.

Diamond Alkali Co.: *See*—
Bluestone, Henry, and Bimber. 3,101,377.

Dickens, George C., to Otis Engineering Corp. Anchoring and sealing device. 3,101,119, 8–20–63, Cl. 166—206.

Dictograph Products, Inc.: *See*—
Lehr, Philip N., and Idank. 3,101,155.

Dieckelmann, Gerhard: *See*—
Plapper, Jürgen, and Dieckelmann. 3,101,238.

Di Lella, Paul. Grinding machine. 3,100,954, 8–20–63, Cl. 51—165.

Dillon, W. C., & Co., Inc.: *See*—
Glerum, Irvin L. 3,101,445.

Dimeff, John, to United States of America, National Aeronautics and Space Administration. Two-plane balance. 3,100,990, 8–20–63, Cl. 73—147.

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Stevenson, Thomas, Cavell, and Dischert. 3,101,054.

Distillers Co. Ltd., The: *See*—
Crocker, Henry P. 3,101,375.

Ditto, Edwin D., to General Motors Corp. Cutting tool adjustment assembly. 3,101,020, 8–20–63, Cl. 82—36.

Di Vito, Salvatore S. Combined dispenser and comb. 3,101,086, 8–20–63, Cl. 132—114.

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Hirschberg, Rudolf, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process for the manufacture of chlorine dioxide. 3,101,253, 8–20–63, Cl. 23—152.

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Warren, Paul V., Mathews, and Hirschhorn. 3,101,239.

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Hood, Bruce G. and R. S., and R. A. Gardella, to Davidson Rubber Co., Inc. Method for molding articles. 3,101,244, 8–20–63, Cl. 18—48.

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Howell, Peter A., to Union Carbide Corp. Process for producing molecular sieves. 3,101,251, 8–20–63, Cl. 23—113.

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Huebner, William C., to Lanston Industries, Inc. All-purpose photographic mechanical reproduction camera. 3,101,024, 8–20–63, Cl. 88—24.

Hufferd, George H., R. H. Josephson, and A. L. W. Williams, to Clevite Corp. Distorted bearing piezoelectric voltage source. 3,101,420, 8–20–63, Cl. 310—8.7.

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Humphries, John B., to The Excelsoir Hardware Co. Luggage latch. 3,100,980, 8–20–63, Cl. 70—71.

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Hurst, George P. Boat launching apparatus. 3,101,149, 8–20–63, Cl. 212—20.

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Inglett, George E., to Corn Products Co. Purification and recovery of fungal amylases. 3,101,302, 8–20–63, Cl. 195—66.

Ingoldt, Robert C. Tube retainer. 3,101,108, 8–20–63, Cl. 150—1.5.

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International Register Co.: *See*—
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International Standard Electric Corp.: *See*—
Piloty, Robert. 3,101,468.
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International Telephone and Telegraph Corp.: *See*—
Glomb, Walter L., Campbell, and Kressman. 3,101,446.
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Jacobson, Melvin O., B. J. Matson, and P. G. Wermager, to United States of America, Navy. Retractable spanning rail and blast door arrangement. 3,101,026, 8–20–63, Cl. 89—1.7.

James, John W., and L. F. Wiggins, to Aspro-Nicholas Ltd. Heterocyclic substituted biguanides and cyanoguanidines. 3,101,336, 8–20–63, Cl. 260—268.

Jansou, Karl A., and G. F. Sundberg, to Aktiebolaget Landsverk. Tractor shovel machine adapted to be combined with a detachable crane or pull shovel unit. 3,101,150, 8–20–68, Cl. 212—38.

Jennings, Richard H. Fountain device. 3,101,173, 8–20–63, Cl. 239—23.

Jensen, Nathan K., to Medic-Made, Inc. Low gas pressure alarm. 3,101,068, 8–20–63, Cl. 116—70.

Jepsen, Robert L., and A. B. Francis, to Varlan Associates. Sputter ion protective apparatus. 3,101,431, 8–20–63, Cl. 315—35.

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Johnson, Benjamin M., to United States of America, Atomic Energy Commission. Spray calcination reactor. 3,101,258, 8–20–63, Cl. 23—277.

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Johnson, Daniel P.: *See*—
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Johnson, Delbert H. Precast block and wall construction. 3,100,953, 8–20–63, Cl. 50—424.

Johnson, Kirby R., to G. Miller. Doughnut cutters. 3,101,021, 8–20–63, Cl. 83—99.

Johnson, Louis W. Screen deck construction. 3,101,314, 8–20–63, Cl. 209—319.

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Johnston, Joseph L., and A. G. Petterson, to United States of America, Army. Feeding mechanism for drum-type firearm. 3,101,029, 8–20–63, Cl. 89—33.

Jonasson, Axel V., to Reed Mfg. Co. Pipe cutter. 3,100,934, 8–20–63, Cl. 30—102.

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Jorgenson, Irving N., to The Wiremold Co. Collapsible tubing with integral clamp. 3,101,209, 8–20–63, Cl. 285—403.

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Junger, Miguel C., to Acoustica Associates, Inc. Pulse-echo gauging system. 3,100,994, 8–20–63, Cl. 73—290.

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Kanzelberger, Claude G., and R. E. Kanitz, to Hamilton Mfg. Co. Folding table construction. 3,101,064, 8–20–63, Cl. 108—113.

Kaplan, Allan L.: *See*—
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Kennedy, William P. Plural switch combination control for entrance light and bell having pneumatic delay means for opening the entrance light switch. 3,101,396, 8–20–63, Cl. 200—34.

Kerr, George T., to Socony Mobil Oil Co., Inc. 1,4-dialkyl-1,4-diazoniabicyclo[2.2.2]octane di(distillicate). 3,101,337, 8–20–63, Cl. 260—268.

Khanbegian, Harry N., to United States of America, Army. Hood over-all. 3,100,896, 8–20–63, Cl. 2—5.

Kile, Otho, and B. J. Golbeck, to R. R. Donnelley & Sons Co. Method of and apparatus for cutting and feeding wrappers for magazines. 3,101,164, 8–20–63, Cl. 225—2.

Kim, Alfred M. H. Venetian blind. 3,100,113, 8–20–63, Cl. 160—168.

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King, William B., and J. S. Ayers, to Jas. H. Matthews & Co. Machine for embossing container lids and placing them on containers. 3,100,957, 8–20–63, Cl. 53—67.

Kirst, Werner: *See*—
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Kompanek, Harry W., to Acoustica Associates, Inc. Elastic wave vibrator. 3,101,421, 8–20–63, Cl. 310—9.6.

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Koski, Eino A., and H. A. Wilmeth, to Kennecott Copper Corp. Cable-supported belt conveyor. 3,101,145, 8–20–63, Cl. 198—203.

Kratt, Henry J., to The Plastic Contact Lens Co. Apparatus for producing contact lenses. 3,100,955, 8–20–63, Cl. 51—217.

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Lancy, Leslie E., to Lancy Laboratories, Inc. Conditioning cyanide compounds. 3,101,320, 8–20–63, Cl. 210—62.

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Lanz, George T., to Ralston Purina Co. Apparatus for manufacturing stable pelleted foods. 3,101,040, 8–20–63, Cl. 99—235.

Leafe, Percy S. H., to Needle Industries Ltd. Tool for the ripping of seams and like purposes. 3,100,935, 8–20–63, Cl. 30—294

Lees, Sidney. Integrating linear accelerometer. 3,101,000, 8–20–63, Cl. 73—503.

Lees, Sidney. Polar accelerometer. 3,101,003, 8–20–63, Cl. 73—517.

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Lehr, Philip N., and J. A. Idank, to Dictograph Products, Inc. Compact housing. 3,101,155. 8–20–63, Cl. 220—4.

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Lillenstein, Manfred, and D. F. Schaefer, to American Electronics, Inc. Control circuits for static inverters. 3,101,439, 8–20–63, Cl. 321—45.

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Lindenhall, John S.: *See*—
Brunberg, Karl G., Lillsunde, and Lindenhall. 3,101,392.

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Christenson, Howard W., Livezey, and Schilke. 3,101,-012.

Lloyd, Edward C., D. P. Johnson, and U. O. Hutton, to United States of America, Commerce. Dual-wedge high-pressure apparatus. 3,100,912, 8–20–63, Cl. 18—16.

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Gallaghan, John A., and Reed. 3,101,379.

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Lo Presti, Roy F., to Goodman Mfg. Co. Troughing roller assembly. 3,101,144, 8–20–63, Cl. 198—192.

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Billi, Giorgio, and Luchi. 3,100,977.

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Luger, Paul, to Seattle University. Indefinitely long potentiometer. 3,101,465, 8–20–63, Cl. 338—128.

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Lyons, Harold D., to Phillips Petroleum Co. Polymerization of 1-olefins in the presence of an allyl halide. 3,101,327, 8–20–63, Cl. 260—88.2.

Lyons, William T., and B. P. Morabito, to Carrier Corp. Gas and liquid contact apparatus. 3,101,382, 8–20–63, Cl. 261—24.

MacNeal, Richard H., to Computer Engineering Associates, Inc. Rotary wing device and method for operating same. 3,101,121, 8–20–63, Cl. 170—160.12.

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Magnavox Co., The: *See*—
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Mallie, Jean P., to Societe Civile d'Etudes et de Brevets Mota. Apparatus for audio-vocal conditioning. 3,101,390, 8–20–63, Cl. 179—1.

Malkin, Bruce M., W. Reischer, and L. A. Buchalter, to Burndy Corp. Multiple stroke tool. 3,101,017, 8–20–63, Cl. 81—15.

Mallatt, Russell C.: *See*—
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Mansfield, Ralph, to Auto-Test, Inc. Apparatus for measuring compression of internal combustion engines. 3,100,-988, 8–20–63, Cl. 73—116.

Marie, Claude, and R. Thierry, to Societe a Responsabilite Limitee Doittau Produits Metallurgie. Hot tops for ingot molds. 3,100,921, 8–20–63, Cl. 22—147.

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Martin, James C., to Eastman Kodak Co. Products of the reaction of dialkyl ketenes with dihydropyrans. 3,101,-348, 8–20–63, Cl. 260—345.2.

Martin, Lawrence L., to Consolidated Thermoplastics Co. Apparatus for the explosion treatment of a plastic container. 3,100,910, 8–20–63, Cl. 18—1.

Martin, Sterling T., to Union Carbide Corp. Vapor fraction analyzer. 3,100,984, 8–20–63, Cl. 73—23.

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Mathews, Martin B. Dry cleaning. 3,101,240, 8–20–63, Cl. 8—142.

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King, William R., and Ayers. 3,100,957.

Mauthe, Gustav: *See*—
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Mayer, Hans F., and F. Butzke, to Siemens & Halske Aktiengesellschaft. Apparatus for punching a plurality of code combinations simultaneously. 3,101,172, 8–20–63, Cl. 234—42.

McCall, William A. Model train electrical motor control system. 3,101,438, 8–20–63, Cl. 318—400.

McCauley, John H., and S. Gavurnik, to Burroughs Corp. Gaseous cold cathode indicator glow tube. 3,101,427, 8–20–63, Cl. 313—188.

McCloskey, Allen L.: *See*—
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McDonnell Aircraft Corp.: *See*—
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McEwen, John C., to General Motors Corp. Bearing assembly. 3 101,222, 8–20–63, Cl. 308—58.

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McKay, Arthur F., C. Podesva, and E. J. Tarlton, to Monsanto Canada Ltd. Aminoacid amides. 3,101,373, 8–20–63, Cl. 260—567.

McKee, Allan W., Jr., to Armstrong Cork Co. Method of preparing particles of thermoplastic composition. 3,101,-241, 8–20–63, Cl. 18—47.5.

McKenzie, Robert D., to United Aircraft Corp. High temperature valve. 3,101,094, 8–20–63, Cl. 137—340.

McKinney, Michael J. Combination wall storage sliding doors and frame. 3,100,916, 8–20–63, Cl. 20—19.

McLarnon, Thomas J., J. B. Stark, and C. O. Sutton, to Foremost Dairies, Inc. Photographic recording apparatus. 3,101,232, 8–20–63, Cl. 346—107.

McNaney, Joseph T. Binary code actuated alphanumeric symbol presentation apparatus. 3,101,233, 8–20–63, Cl. 346—107.

Medic-Made, Inc.: *See*—
Jensen, Nathan K. 3,101,068.

Meredith Publishing Co.: *See*—
Early, Harold C. 3,101,440.

Merlo, Luigi, and G. Vitelli, to Montecatini Societa General per l'Industria Mineraria e Chimica. Compositions imparting antistatic properties to fibers and method of making same. 3,101,323, 8–20–63, Cl. 252—8.9.

Messenger, Charles B.: *See*—
Swanberg, Harry W. and E. W. 3,100,946.

Messinger, Lester H., to E. I. du Pont de Nemours and Co. Apparatus for compressional finishing of fabrics. 3,100,-925, 8–20–63 Cl. 26—18.6.

Metal-Tech, Inc.: *See*—
Bryand, Edward T. 3,100,928.

Metz, Paul, to Acieries Reunies de Burbach-Eich-Dudelange, Societe Anonyme. Tuyere arrangement. 3,101,384, 8–20–63, Cl. 266—41.

Meyer, William. Calculating divider. 3,100,938, 8–20–63, Cl. 33—149.

Meyers, Martin B.: *See*—
Graber, Robert P., and Meyers. 3,101,351.

Michael, Gregor: *See*—
Roth, Emil, and Michael. 3,101,305.

Michel, Raymond E., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,100,963, 8–20–63, Cl. 60—35.6.

Microwave Associates, Inc.: *See*—
Walker, Richard M., and Toorks. 3,101,460.

Midland-Ross Corp.: *See*—
Schultz, Forrest O. E. 3,101,091.

Mihran, Theodore G., to United States of America, Navy. Insulated seal for a rod movable in a wall. 3,101,387, 8–20–63, Cl. 174—18.

Miller, Gustave: *See*—
Huber, Robert D. 3,101,163.
Johnson, Kirby R. 3,101,021.

Miller, Henry, Spring and Mfg. Co.: *See*—
Chambers, Isaac M. 3,101,112.

Miller, Robert L., and R. J. Wolf, Jr., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,101,433, 8–20–63, Cl. 317—149.

Milnes, Alfred H., to Cooke & Co. Pneumatic stripping of carding engines. 3,100,914, 8–20–63, Cl. 19—109.

Milwaukee Chaplet & Mfg. Co., Inc.: *See*—
Welch, Elmer S., and Roberts. 3,101,435.

Minkema, William H.: *See*—
Paschall, Eugene F., Thayer, and Minkema. 3,101,330.

Minneapolis-Honeywell Regulator Co.: *See*—
Adams, Frederick G. 3,101,432.
Burgarella, John P., and Oliver. 3,101,451.
Burgwin, Stephen L., and Green. 3,101,424.
Michel, Raymond E. 3,100,963.
Miller, Robert L., and Wolf. 3,101,433.
Mobarry, John W. 3,100,972.

Minnesota Rubber Co.: *See*—
Stocking, Hobart L. 3,100,904.

Mittag, Walter, to J. M. Voith, Gesellschaft mit beschrankter Haftung. Belt-aligning structure. 3,101,005, 8–20–63, Cl. 74—241.

Mobarry, John W., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,100,972, 8–20–63, Cl. 62—161.

Modern Telephones (Great Britain) Ltd.: *See*—
Simpson, Arthur I. F., and Cawthra. 3,101,453.

Monsanto Canada Ltd.: *See*—
McKay, Arthur F., Podesva, and Tarlton. 3,101,373.

Montecatini Societa General per l'Industria Mineraria e Chimica: *See*—
Merlo, Luigi, and Vitelli. 3,101,323.

Montesano, Lewis, to Bell Telephone Laboratories, Inc. Polysulfide polymer containing styrene oxide as an odor masker, and mixture thereof with an epoxy resin. 3,101,326, 8–20–63, Cl. 260—43.

Montgomery, John R.: *See*—
De Kuzmik, Paul. 3,101,444.

Mooney, James J., Jr.: *See*—
Tuck, Robert M., Mooney, and Fisher. 3,101,011.

Moore, James R. Infant's shoe tree. 3,100,901, 8–20–63, Cl. 12—114.2.

Morabito, Bruno P.: *See*—
Lyons, William T., and Morabito. 3,101,382.

Moressée, Georges, and R. Déchet, to Normacem S.A. Winding for axial air gap machines. 3,101,425, 8–20–63, Cl. 310—268.

Morris, Bert M., Co.: *See*—
Glassco, Robert B., and Craig. 3,101,282.

Morrison, Willard L., to Reliqueñer Corp. Method and apparatus for storing and shipping perishable material. 3,100,-971, 8–20–63, Cl. 62—64.

Moseman, Samuel B.: *See*—
Watson, Herbert M., and Moseman. 3,101,318.

Motorola, Inc.: *See*—
Curry, Arnet A. 3,101,441.

Mueller, Fritz W. H.: *See*—
Evans, Helene D., and Mueller. 3,101,270.

Muller, Georges, and J. Martel, to Roussel-UCLAF S.A. Process for preparing 16α-methyl-5β-androstane-3,11,17-trione and novel intermediate therein. 3,101,359, 8–20–63, Cl. 260—397.45.

Murgio, Joseph: *See*—
Vosburgh, Malcolm C., and Murgio. 3,101,470.

Murphy, William P., Jr., to Cordis Corp. Alternating tourniquet system. 3,101,085, 8–20–63, Cl. 128—325.

Murray, Thomas W. Closure mounting means for underfloor wiring ducts. 3,101,097, 8–20–63, Cl. 138—92.

Muskegon Piston Ring Co.: *See*—
Nisper, Kenneth J. 3,100,929.

Musser, C. Walton, to United Shoe Machinery Corp. Differential control. 3,101,009, 8–20–63, Cl. 74—640.

Mutschler, Erich: *See*—
Bock, Willy, Mutschler, and Schreiber. 3,100,906.

Myers, William R.: *See*—
Parts, Leo, Pruett, and Myers. 3,101,360.

Nalco Chemical Co.: *See*—
Starry, James E. 3,101,317.

Nallinger, Friedrich K. H., to Daimler-Benz Aktiengesellschaft. Knob arrangement, particularly for motor vehicles. 3,101,-007, 8–20–63, Cl. 74—553.

Narzakian, Zavan, to United States of America, Navy. Computing apparatus. 3,101,008, 8–20–63, Cl. 74—600.

National Gypsum Co.: *See*—
Stewart, Basil O. 3,101,105.

National Mfg. Co.: *See*—
Brown, James W. 3,101,148.

National Research Development Corp.: *See*—
Tantram, Anthony D. S., and Harris. 3,101,285.

Neal, Harry B., and J. C. Klinger, Jr., to Amarlite Corp. Window structure. 3,101,135, 8–20–63, Cl. 189—66.

Needle Industries Ltd.: *See*—
Leafe, Percy S. H. 3,100,935.

Nelden, Richard M., to American Radiator & Standard Sanitary Corp. Fluid drive. 3,100,966, 8–20–63, Cl. 60—54.

Newmiller, Milford E., A. Rodgers, and A. Selan, to The Fireguard Corp. Fire extinguisher head coupling assembly and associated plunger unit. 3,101,188, 8–20–63, Cl. 251—148.

Nihlen, Arvid C. K., and R. M. Wallace, to Baldwin-Lima-Hamilton Corp. Heat exchanger tubing manufacture. 3,100,930, 8–20–63, Cl. 29—157.3.

Nippon Telegraph and Telephone Public Corp.: *See*—
Takayama, Kazuo, and Ohara. 3,101,426.

Niquet, Samuel. Drill grinding apparatus. 3,100,956, 8–20–63, Cl. 51—219.

Nisper, Kenneth J., to Muskegon Piston Ring Co. Lock joint sealing ring. 3,100,929, 8–20–63, Cl. 29—156.6.

Noeggerath, Wolfgang C. Turbo-air-rocket engine. 3,100,962, 8–20–63, Cl. 60—35.6.

Nomine, Gerard, D. Bertin, J. Tessier, A. Pierdet, and R. Bucourt, to Roussel-UCLAF, S.A. Process for the preparation of 19-nor-testosterone and compounds used in this process. 3,101,354, 8–20–63, Cl. 260—397.4.

Nordberg Mfg. Co.: *See*—
Beyerstedt, John M., Erickson, and Talboys. 3,101,274.
Talboys, Henry H. 3,101,214.

Norden, Alexander R., to Federal Pacific Electric Co. Thermal overload relay. 3,101,397, 8–20–63, Cl. 200—122.

Normacem S.A.: *See*—
Moressée, Georges, and Déchet. 3,101,425.

North American Aviation, Inc.: *See*—
Herdering, John D. 3,101,154.

Northrop Corp.: *See*—
Jones, William A. 3,100,989.
Swainson, Edward L. 3,101,462.

Northwestern Steel and Wire Co.: *See*—
Robinson, Charles G. 3,101,385.

Oakland Metal Fabricators, Inc.: *See*—
Brown, James A., Pennell, and Jacke. 3,101,089.

Ohara, Seiji: *See*—
Takayama, Kazuo, and Ohara. 3,101,426.

Ohlgren, Harold A.: *See*—
Lewis, John G., and Ohlgren. 3,101,403.

Okazaki, Takeshi: *See*—
Fujita, Yoshimasa, Okazaki, and Kuratani. 3,101,245.

Olin Mathieson Chemical Corp.: *See*—
Fried, Josef. 3,101,332.

Oliver, Donald S.: *See*—
Burgarella, John P., and Oliver. 3,101,451.

Olowinski, Edward J., to Lord Mfg. Co. Mounting system. 3,101,228, 8–20–63, Cl. 312—352.

Olson, Irwin D.: *See*—
Allen, Malcolm H., Balinski, Garton, Hubbard, and Olson. 3,101,184.

Ormonoterapia Richter S.p.A.: *See*—
De Ruggieri, Pietro, Ferrari, and Gandolfi. 3,101,358.

Orthner, Ludwig, K. Horst, A. Scharf, W. Kirst, J. Oxé, and R. Gross, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process for preparing solutions of coupling components of the ice color series. 3,101,235, 8–20–63, Cl. 8—44.

Oshima, Shintaro: *See*—
Takahashi, Hidetoshi, Goto, and Oshima. 3,101,450.

Otis Engineering Corp.: *See*—
Dickens, George C. 3,101,119.

Ott, Heinrich: *See*—
Ehrhart, Gustav, Hennig, Schmitt, Lindner, and Ott. 3,101,367.

Overholser, John S., to Tamar Electronics, Inc. Wave guide coaxial adapter. 3,101,459, 8–20–63, Cl. 333—33.

Owens-Illinois Glass Co.: *See*—
Fry, William L., and Uhlig. 3,101,147.
Schreiber, Carl W. 3,101,151.

Oxé, Josef: *See*—
Orthner, Ludwig, Horst, Scharf, Kirst, Oxé, and Gross. 3,101,235.

Pacciarini, Antonio: *See*—
Giletta, Dario, and Pacciarini. 3,101,289.

Packaging and Converting Co., Inc.: *See*—
Wharton, Thomas P. 3,101,063.

Palluel, Pierre: *See*—
Henry-Bezy, Georges, Kantorowiez, and Palluel. 3,101,-461.

Panel Engineering Corp.: *See*—
Hall, Trevor W. 3,100,952.

Pappo, Raphael, to G. D. Searle & Co. Optionally 17-alkylated 2-oxa-5α-androstane-3β,11β-diols, ethers and esters thereof. 3,101,350, 8–20–63, Cl. 260—345.2.

Pappo, Raphael, and C. Jung, to G. D. Searle & Co. Optionally 17-alkylated 17-oxygenated-2-oxaandrostanes and intermediates. 3,101,349, 8–20–63, Cl. 260—345.2.

Parfums Christian Dior: *See*—
Picot, Bernard T. E. 3,101,160.

Paris, James H., to Carrier Corp. Gas and liquid contact apparatus. 3,101,383, 8–20–63, Cl. 261—24.

Parts, Leo, R. L. Pruett, and W. R. Myers, to Union Carbide Corp. Preparation of organo-iron compounds. 3,101,-360, 8–20–63, Cl. 260—439.

Paschall, Eugene F., F. D. Thayer, Jr., and W. H. Minkema, to Corn Products Co. Process for preparing methylol starch propionamide. 3,101,330, 8–20–63, Cl. 260—233.3.

Patton, John T., Jr., to Wyandotte Chemicals Corp. Polyoxyalkylene surface active agents having heteric polyoxyethylene solubilizing chains. 3,101,374, 8–20–63, Cl. 260—584.

Paul, Francis V. F., to Societe anonyme dite: Pneumatiques & Caoutchous Manufacture Kleber Colombes. Method of joining the ends of a multi-ply laminated belt. 3,101,-290, 8–20–63, Cl. 156—137.

Paull, Fritz K.: *See*—
Schlidt, Rudolf H., and Paull. 3,101,044.

Pavel, Werther, and R. Kohler, to Henkel & Cie, G.m.b.H. Process for the production of gas-tight tube connections. 3,101,207, 8–20–63, Cl. 285—291.

Pavlecka, Vladimir H., to American Machine & Foundry Co. Radial dynamic machines including centripetal compressors and centrifugal turbines. 3,101,170, 8–20–63, Cl. 230—124.

Pavlovich, Paul G., Jr., to Curtiss-Wright Corp. Textile spindles. 3,100,960, 8–20–63, Cl. 57—130.

Payne, Oscar V., to Crompton & Knowles Corp. Weft replenishing loom. 3,101,098, 8–20–63, Cl. 139—232.

Payne, Oscar V., to Crompton & Knowles Corp. Weft bunch remover. 3,101,099, 8–20–63, Cl. 139—247.

Peaster, Bertram A., to Integral Ltd. Reciprocating pumps. 3,101,056, 8–20–63, Cl. 103—37.

Pedersen, Edvard M.: *See*—
Stallman, Richard C., to Pedersen. 3,101,322.

Pennell, Otto E., Jr.: *See*—
Brown, James A., Pennell, and Jacke. 3,101,089.

Penningroth, Herbert M., to General Motors Corp. Radiotelephone cabinet. 3,101,225, 8–20–63, Cl. 312—222.

Penningroth, Herbert M., to General Motors Corp. Shielded electrical coil assembly. 3,101,463, 8–20–63, Cl. 336—87.

Pennington, Kermit M., and R. D. Swanson. Walk-in stairwell closet. 3,100,915, 8–20–63, Cl. 20—.5.

Pennsalt Chemicals Corp.: *See*—
Scott, Francis L., and Smith. 3,101,335.

Perner, Raymond F.: *See*—
Culver, Frederick H., Haeber, Lagucki, and Perner. 3,101,118.

Petersen, Conrad W., W. W. Wittenberger, and J. M. St. John, to Baker Perkins Inc. Bread handling apparatus. 3,101,-475, 8–20–63, Cl. 198—84.

Petgrave, Rita M.: *See*—
Siegal, Bernard, and Petgrave. 3,101,301.
Siegal, Bernard, Petgrave, and Thau. 3,101,300.

Petterson, Andres G.: *See*—
Johnston, Joseph L., and Petterson. 3,101,029.

Phelps, Morton E. Tree shaker. 3,100,959, 8–20–63, Cl. 56—328.

Phillips Petroleum Co.: *See*—
Edmonds, James T. 3,101,328.
Lyons, Harold D. 3,101,327.

Photinos, Harry R., to The Ryan Aeronautical Co. Servo power amplifier. 3,101,437, 8–20–63, Cl. 318—207.

Picot, Bernard T. E., to Parfums Christian Dior. Aerosol atomizer and its refill container. 3,101,160, 8–20–63, Cl. 222—183.

Pierdet, André: *See*—
Nomine, Gerard, Bertin, Tessier, Pierdet, and Bucourt. 3,101,354.

Piloty, Robert, to International Standard Electric Corp. Arrangement for the storing of binary informations, arriving in series or series-parallel, in a storage chain or a storage matrix. 3,101,468, 8–20–63, Cl. 340—174.

Pipkin, Boyace H. Paper clip dispenser. 3,100,932, 8–20–63, Cl. 29—212.

Pirelli S.p.A.: *See*—
Glietta, Dario, and Pacciarini. 3,101,289.

Plapper, Jürgen, and G. Dieckelmann, to Böhme Fettchemie G.m.b.H. Fat liquoring with reaction product of epoxidised esters and polybasic inorganic acids. 3,101,238, 8–20–63, Cl. 8—94.23.

Plastic Contact Lens Co., The: *See*—
Kratt, Henry J. 3,100,955.

Pneumatiques & Caoutchous Manufacture Kleber Colombes, Societe anonyme dite: *See*—
Paul, Francis V. F. 3,101,296.

Podesva, Ctirad: *See*—
McKay, Arthur F., Podesva, and Tarlton. 3,101,373.

Pont-A-Mousson, Compagnie de: *See*—
Gerardin, Jean-Jacques. 3,100,920.

Popovich, George, to General Motors Corp. Drive assembly. 3,101,010, 8–20–63, Cl. 74—700.

Posener, Armand L. A., and A. E. Elmore, to Kitchen Master Appliance, Inc. Fruit and vegetable juice extractor. 3,101,107, 8–20–63, Cl. 146—76.

Post, Richard F., to United States of America, Atomic Energy Commission. Magnetic end closures for plasma confining and heating devices. 3,101,310, 8–20–63, Cl. 204—193.2.

Potlatch Forests, Inc.: *See*—
Styler, John M. 3,101,167.

Poulos, Panos L.: *See*—
Boyd, William L., Eavis, and Poulos. 3,101,264.

Pratley, George M. Cable gland. 3,101,204, 8–20–63, Cl. 285—149.

Preiser, Herman S., F. E. Cook, and B. H. Tytell, to Chemionics Engineering Laboratories, Inc. Energized anode assembly. 3,101,311, 8–20–63, Cl. 204—196.

Prestige Furniture Corp.: *See*—
Baermann, Walter P. 3,101,218.

Preston, Glenn W., to General Atronics Corp. Computing device. 3,100,943, 8–20–63, Cl. 35—30.

Priacu, John C., to Titanium Metals Corp. of America. Chlorination apparatus and process. 3,101,249, 8–20–63, Cl. 23—87.

Proctor, Ronald R.: *See*—
Garrity, Thomas A., Jr., and Proctor. 3,101,467.

Pruett, Roy L.: *See*—
Parts, Leo, Pruett, and Myers. 3,101,360.

Pugh, Merlin L., to Studebaker Corp. Refrigerator construction. 3,101,227, 8–20–63, Cl. 312—300.

Pure Oil Co., The: *See*—
Garrity, Thomas A., Jr., and Proctor. 3,101,467.
Schaschl, Edward, and Littler. 3,101,413.

Pyle-National Co., The: *See*—
Archer, Lee A. 3,101,038.

Quartz & Silice S.A.: *See*—
Holmberg, Karl E. O. 3,101,256.

Quinn, Clark E., to General Motors Corp. Highway informer keying system. 3,101,394, 8–20–63, Cl. 179—82.

Raabe, Edward W.: *See*—
Hansford, David L., and Raabe. 3,101,246.

Radio Corp. of America: *See*—
Albrecht, Harold J. 3,101,100.
Griffin, William F. 3,101,428.

Rai, Charanjit, E. A. Teble, Jr., and C. K. Kambara, to Dearborn Chemical Co. Method for controlling the growth of biological organisms in water. 3,101,319, 8–20–63, Cl. 210—62.

Ralston Purina Co.: *See*—
Lanz, George T. 3,101,040.

Randol, Glenn T. Booster-type servomotor for brake systems. 3,101,032, 8–20–63, Cl. 121—41.

Rapids-Standard Co., Inc., The: *See*—
Baxter, John C. 3,101,158.

Raymond, Jerry W. Wheeling attachment for boats. 3,101,203, 8–20–63, Cl. 280—35.

Reasby, Charles S.: *See*—
Blaiklock, William J., and Reasby. 3,100,939.

Reed Mfg. Co.: *See*—
Jonasson, Axel V. 3,100,934.

Reed, Wilmer L.: *See*—
Gallaghan, John A., and Reed. 3,101,379.

Reich, William J., Jr., and C. Ward, to American Bosch Arma Corp. Shock sensor. 3,101,069, 8–20–63, Cl. 116—114.

Reinhold, Earl R., to Amchem Products, Inc. Phosphate composition and method for coating metallic surfaces. 3,101,296, 8–20–63, Cl. 148—6.15.

Reischer, Walter: *See*—
Malkin, Bruce M., Reischer, and Buchalter. 3,101,017.

Reiter, Thomas A.: *See*—
Barr, Frank T., and Reiter. 3,101,307.

Reliquefier Corp.: *See*—
Morrison, Willard L. 3,100,971.

Requa, Roy. Resilient cushion unit. 3,101,217, 8–20–63, Cl. 297—397.

Research, Inc.: *See*—
Duchene, William R., and Shook. 3,101,039.

Reynolds Metals Co.: *See*—
De Ridder, Ernst J. 3,101,125.
Schaefer, John J., and Patrick. 3,101,050.

Rhone-Poulenc S.A.: *See*—
Lafont, Pierre, and Bonnet. 3,101,347.

Ricci, Henry. Chain saw spur attachment. 3,101,103, 8–20–63, Cl. 143—32.

Rice, Millard L.: *See*—
Webster, Roland C., Roberts, and Rice. 3,101,052.

Rich, Stanley R., to Acoustica Associates, Inc. Electromechanical transducer system. 3,101,419, 8–20–63, Cl. 310—8.3.

Richards, Oscar W., to American Optical Co. Light conducting device to transmit ultra-violet radiation for specimen fluorescence under a microscope. 3,101,411, 8–20–63, Cl. 250—83.3.

Richdel, Inc.: *See*—
Gould, Charles D. 3,101,418.

Richmond, Earl B., to The Electric Storage Battery Co. Method of producing expanded fabric-like material. 3,100,926, 8–20–63, Cl. 28—75.

Riedel & Co.: *See*—
Roth, Emil, and Michael. 3,101,305.

Ringold, Howard J., O. Mancera, G. Rosenkranz, and J. Edwards, to Syntex Corp. 6α-bromo androstane derivatives. 3,101,352, 8–20–63, Cl. 260—397.4.

Riordan, Mathew B.: *See*—
Scott, Lyle B., and Riordan. 3,101,117.

Riordan, Mathew B., Jr., to BJ Service, Inc. Well treating method and apparatus. 3,101,115, 8–20–63, Cl. 166—42.

Rittenhouse, John H.: *See*—
Gebhardt, Julius W., Ettinger, and Rittenhouse. 3,101,457.

Roberts, James S.: *See*—
Welch, Elmer S., and Roberts. 3,101,435.

Roberts, Walter C., Jr.: *See*—
Webster, Roland C., Roberts, and Rice. 3,101,052.

Robertshaw-Fulton Controls Co.: *See*—
Crossley, Harry E., Jr. 3,101,031.

Robinson, Charles G., to Northwestern Steel and Wire Co. Method and means for electric melting. 3,101,385, 8–20–63, Cl. 13—33.

Robinson, Lamson C., to Callaway Mills Co. Journal lubricator. 3,101,223, 8–20–63, Cl. 308—87.

Robinson, Mayes R. Cultivator tool holder. 3,101,122, 8–20–63, Cl. 172—556.

Robinson, Richard A., to G. D. Searle & Co. Hydroxydialkylaminoalkylaminoisoquinolines and related compounds. 3,101,338, 8–20–63, Cl. 260—268.

Roblee, Leland H. S., Jr., to Esso Research and Engineering Co. Temperature measuring instrument. 3,100,996, 8–20–63, Cl. 73—362.

Rockwell Mfg. Co.: *See*—
Wolfensperger, Adolph. 3,101,191.

Rockwell-Standard Corp.: *See*—
House, Bryan E., and Cumming. 3,101,133.

Rodgers, Arthur: *See*—
Newmiller, Milford E., Rodgers, and Selan. 3,101,188.

Rohm & Haas Co.: *See*—
Kine, Benjamin B., and Matlin. 3,101,292.

Rorig, Kurt J., to G. D. Searle & Co. 4-tertiary-butyl-, 4-diphenylmethyl, and 4-diphenylhydroxymethyl-, piperidinopropionitriles. 3,101,340, 8–20–63, Cl. 260—293.

Rorig, Kurt J., to G. D. Searle & Co. 2,3-bis(p-methoxyphenyl-N-dialkylaminoalkylpentanamides. 3,101,371, 8–20–63, Cl. 260—559.

Rorig, Kurt J., to G. D. Searle & Co. α-dialkylamino-N-[2,3-bis(p-methoxyphenyl)pentyl] alkanamides and intermediates. 3,101,372, 8–20–63, Cl. 260—562.

Rose, Donald, ½ to R. D. Baker. Process of treating water. 3,101,316, 8–20–63, Cl. 210—35.

Rosenfeld, Alexander. Combined optical reproducer and projector. 3,101,025, 8–20–63, Cl. 88—24.

Rosenkranz, George: *See*—
Ringold, Howard J., Mancera, Rosenkranz, and Edwards. 3,101,352.

Roth, Emil, and G. Michael, to Riedel & Co. Acid copper plating bath. 3,101,305, 8–20–63, Cl. 204—52.

Roto-Dry Corp.: *See*—
Schapiro, Abraham. 3,100,909.

Rottmayr, Friedrich, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Method and apparatus for avoiding nitric oxide-containing deposits in gas decomposing plants. 3,101,262, 8–20–63, Cl. 62—23.

Roussel-UCLAF S.A.: *See*—
Girard, Andre. 3,101,298.
Muller, Georges, and Martel. 3,101,359.
Nomine, Gerard, Bertin, Tessier, Pierdet, and Bucourt. 3,101,354.

Rowe, Henry H. G., and U. M. Geissler. Ultra-high-speed pneumatically driven machine tools, such as drills and the like. 3,101,014, 8–20–63, Cl. 77—33.5.

Ruby, Stanley L., K.-H. Sun, and T. Fahrner, to Westinghouse Electric Corp. Thermionic radiation counter. 3,101,410, 8–20–63, Cl. 250—83.1.

Russell, George F. Cigarette dispenser. 3,101,157, 8–20–63, Cl. 221—227.

Rutkowski, Alfred J.: *See*—
Brois, Stanley J., and Rutkowski. 3,101,376.

Ryan Aeronautical Co., The: *See*—
Photinos, Harry R. 3,101,437.

SCM Corp.: *See*—
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SKB Schuechtermann & Kremer-Baum Aktiengesellschaft Fuer Aufbereitung: *See*—
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Salvin, Victor S., B. S. Sprague, and F. Fortess, to Celanese Corp. of America. Textile treating. 3,101,236, 8–20–63, Cl. 8—59.

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Schmidt, Gunther, to Dr. Karl Thomas G.m.b.H. 2-hydroxymethyl-8-hydroxy-1,4-benzodioxane. 3,101,345, 8–20–63, Cl. 260—340.3.

Schmidt, Lewis W., to Blockwelder Mfg. Co. Plant thinning implement. 3,101,123, 8–20–63, Cl. 172—556.

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Scott, Lyle B., and M. B. Riordan, to BJ Service, Inc. Well treating method and apparatus. 3,101,117, 8–20–63, Cl. 166—67.

Scott-Maxwell, Peter D., to Cooke, Troughton & Simms Ltd. Spore growth prevention in optical instruments. 3,101,412, 8–20–63, Cl. 250—106.

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Spies, Joseph R., E. J. Coulson, and P. A. Wells, to United States of America, Agriculture. Deallergenization and detoxification of castor bean pomace. 3,101,266, 8–20–63, Cl. 71—23.

Spitz, Samuel, to Electronic Oil Well Heater, Inc. Bottom hole jet heater. 3,101,116, 8–20–63, Cl. 166—60.

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Stevenson, Thomas, and J. J. Caven, to United States of America, Army. Combination fragmentation structural incendiary damage projectile. 3,101,053, 8–20–63, Cl. 102—57.

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 20, 1963 Volume 793 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 299,889 (ALADDIN), The Mantle Lamp Company of America (now by change of name Aladdin Industries, Incorporated), Lamp bowls, lamp shades, lamp chimneys, and vases made of glass; **Reg. No. 300,350**, same, Heating and lighting apparatus, parts of and accessories therefor—namely, hydrocarbon lamps, burners, etc.; **Reg. No. 327,217**, same, Electric illuminating lamps; **Reg. No. 418,001** (LOWERATOR), W. J. Gibbs, doing business as Lowerator Manufacturing Co., Apparatus for holding articles or layers of articles capable of being stacked, such as machine or other commercial parts, etc.; **Reg. No. 501,130** (ALADDIN), Aladdin Industries, Inc., Heat-insulated jugs, etc.; **Reg. No. 512,885**, same, The Mantle Lamp Company of America, Heating and lighting apparatus, parts of and accessories therefor; **Reg. No. 512,886**, same; **Reg. No. 519,062** (ALADDIN AND DESIGN), same, Aladdin Industries, Incorporated, Electric illuminating lamps; **Reg. No. 522,969** (ALADDIN), same; **Reg. No. 522,990**, same; **Reg. No. 526,525** (ALADDIN AND DESIGN), same, Heating and lighting apparatus, etc.; **Reg. No. 526,526** (ALADDIN ETC.), same, filed Jan. 30, 1963, D.C., S.D.N.Y., Doc. 63/305, *Aladdin Industries, Inc.* v. *Gilbert Adams et al.* Consent judgment; trademarks held valid and infringed; defendants enjoined Apr. 16, 1963.

Reg. No. 300,350. (See Reg. No. 299,889.)

Reg. No. 366,053 (BURROUGH'S BEEFEATER AND DESIGN), James Burrough Limited, Gin; **Reg. No. 678,006** (BEEFEATER), same; **Reg. No. 678,610** (DESIGN OF MAN), same, filed Dec. 13, 1962, D.C., N.D. Calif. (San Francisco), Doc. 41175, *James Burrough Ltd. et al.* v. *Newcomb Hotels Inc. et al.* Injunction granted Apr. 9, 1963.

Reg. No. 327,217. (See Reg. No. 299,889.)

Reg. No. 402,254 (EXECUTONE), Executone, Inc., Amplified voice type of inter-communicating equipment comprising interoffice telephone communication apparatus, etc.; **Reg. No. 427,810**, same; **Reg. No. 678,355**, same, Socket wrenches, relay adjusting tools, and relay burnishing tools; **Reg. No. 680,655**, same, Clamps for holding hospital call signals and brackets for mounting antenna equipment; **Reg. No. 682,812**, same, Amplified voice type of inter-communication equipment comprising interoffice telephone apparatus, etc.; **Reg. No. 683,296**, same, Instruction manuals for the installation and repair of electronic and sound equipment and trade newsletter, concerning the communication field; **Reg. No. 691,602**, same, Phonograph record players and tape players, filed May 15, 1961, D.C., S.D.N.Y., Doc. 61/1757, *Executone, Inc.* v. *International Business Machines, Inc.* Stipulation and order of dismissal Apr. 12, 1963.

Reg. No. 418,001. (See Reg. No. 299,889.)

Reg. No. 427,810. (See Reg. No. 402,254.)

Reg. No. 501,130. (See Reg. No. 299,889.)

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	17,022
Date of oldest new application	Oct. 22, 1962
Date of oldest amended application	Oct. 16, 1962

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 8, 12, 13, 14, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 41, 42, 43, 44	10-22-62	10-16-62
(II) H. E. KASCHUB, Classes 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 16, 18, 22, 27, 37, 38, 40, 45, 46, 47, 48, 49, 50, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	12-3-62	11-13-62
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Applications filed during the month of June 1963—2,026

Registrations Issued	426—No. 754,814 to No. 755,239
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 510,519 (HOOVER), The Hoover Company, Electrical domestic and commercial suction cleaners and parts therefor; **Reg. No. 604,676**, same, Dirt collecting bags; **Reg. No. 652,995** (HOOVER AND DESIGN), same, Suction cleaners and parts therefor, etc.; **Reg. No. 668,176**, same, Dirt collecting and filtering bags, filed May 3, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–513–TC, *Hoover Company* v. *San Marino Vacuum Co.*

Reg. No. 511,922 (BRISTOL AND DESIGN), Bristol Seamless Ring Company, Finger rings; **Reg. No. 511,923**, same; **Reg. No. 511,924** (BRISTOL RING), same, filed Apr. 30, 1963, D.C. S.D.N.Y., Doc. 63/1244, *Bristol Seamless Ring Corp.* v. *Bristo Jewelry Mfg. Co.*

Reg. No. 511,923. (See Reg. No. 511,922.)

Reg. No. 511,924. (See Reg. No. 511,922.)

Reg. No. 512,885. (See Reg. No. 299,889.)

Reg. No. 512,886. (See Reg. No. 299,889.)

Reg. No. 515,062. (See Reg. No. 299,889.)

Reg. No. 522,999. (See Reg. No. 299,889.)

Reg. No. 522,900. (See Reg. No. 299,889.)

Reg. No. 526,825. (See Reg. No. 299,889.)

Reg. No. 526,826. (See Reg. No. 299,889.)

Reg. No. 604,676. (See Reg. No. 510,519.)

Reg. No. 617,131 (VOLKSWAGEN), Volkswagenwerk G.m.b.H., Vehicles—namely, automobiles and trucks, etc.; **Reg. No. 631,649** (VW AND DESIGN), same; **Reg. No. 652,995** (VW), same, filed Dec. 27, 1962, D.C., E.D. Va. (Alexandria), Doc. 2835, *Volkswagenwerk Aktiengesellschaft* v. *Vee & Grant, Inc. et al.* Stipulation and order enjoining defendants Apr. 5, 1963.

Reg. No. 626,955 (HITCHCOCK, ALFORD & CO. HITCHCOCK-VILLE, CONN.), The Hitchcock Chair Company, Dining, lounge, and occasional chairs and mirrors; **Reg. No. 628,622** (SURETY), The May Department Stores Company, Pillows; **Reg. No. 676,977** (HITCHCOCK, ALFORD & CO. HITCHCOCK-VILLE, CONN.), The Hitchcock Chair Company, Dining, lounge, and occasional chairs, tables, etc., filed Oct. 18, 1962, D.C. Mass. (Boston), Doc. 62–798–C, *The Hitchcock Chair Company* v. *Albert M. Look & Son, Inc.* Decree refusing cancellation of above trademarks (notice May 8, 1963).

Reg. No. 631,649. (See Reg. No. 617,131.)

Reg. No. 633,622. (See Reg. No. 626,955.)

Reg. No. 652,126 (LULL-A-BABE), Lull-A-Babe, Inc., Nursing bottles and nipples; **Reg. No. 727,533** (DESIGN OF NURSING BOTTLE), The Pyramid Rubber Company, Nursing bottles, filed Apr. 10, 1963, D.C., S.D.N.Y., Doc. 63/1021, *Dunhill International, Inc.* v. *Lull-A-Babe, Inc.*

Reg. No. 652,995. (See Reg. No. 510,519.)

Reg. No. 653,695. (See Reg. No. 617,131.)

Reg. No. 668,176. (See Reg. No. 510,519.)

Reg. No. 676,977. (See Reg. No. 626,955.)

Reg. No. 678,066. (See Reg. No. 308,053.)

Reg. No. 678,610. (See Reg. No. 308,053.)

Reg. No. 678,555. (See Reg. No. 402,254.)

Reg. No. 680,655. (See Reg. No. 402,254.)

Reg. No. 682,812. (See Reg. No. 402,254.)

Reg. No. 683,296. (See Reg. No. 402,254.)

Reg. No. 691,692. (See Reg. No. 402,254.)

Reg. No. 727,533. (See Reg. No. 652,126.)

PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES [1]

In accordance with paragraph 8 of the Procedure for the Selection of Recommended International Non-Proprietary Names for Pharmaceutical Preparations,[2] notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Non-Proprietary Names.

Comments on, or formal objections to the proposed names may be forwarded by any person to the Pharmaceuticals Unit of the World Health Organization within four months of the date of their publication in *WHO Chronicle*.

The inclusion of a name in the lists of proposed international non-proprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
aceclidinum aceclindine	3-quinuclidinol acetate
acetiaminum acetiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl) formamide *O,S*-diacetate
acetryptinum acetryptine	3-(2-aminoethyl)indol-5-yl methyl ketone
acetylcysteinum acetylcysteine	*N*-acetylcysteine
acidum clofenamicum clofenamic acid	*N*-(2,3-dichlorophenyl)anthranilic acid
acidum flufenamicum flufenamic acid	*N*-(α,α,α-trifluoro-*m*-tolyl)anthranilic acid
acidum fusidicum fusidic acid	an antibiotic substance obtained from cultures of *fusidium*, or the same substance produced by any other means
acidum fyticum fytic acid	phytic acid
acidum iotalamicum iotalamic acid	5-acetamido-2,4,6-triiodo-*N*-methylisophthalamic acid
acidum kainicum kainic acid	2-carboxy-4-isopropenyl-3-pyrrolidineacetic acid
acidum mefenamicum mefenamic acid	*N*-2,3-xylylanthranilic acid
acidum nalidixicum nalidixic acid	1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid
acrisorcinum acrisorcin	9-aminoacridine compound with 4-hexylresorcinol
alazani triclofenas alazanine triclofenate	3-ethyl-2-[3-(3-ethyl-2-benzothiazolinylidene)propenyl]benzothiazolium 2,4,5-trichlorophenoxide compound with 2,4,5-trichlorophenol
albutoinum albutoin	3-allyl-5-isobutyl-2-thiohydantoin
aloxiprinum aloxiprin	basic aluminium acetylsalicylate complex
altizidum altizide	3-[(allylthio)methyl]-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine - 7 - sulfonamide, 1,1-dioxide
ambomycinum ambomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
amfepramonum amfepramone	2-(diethylamino)propiophenone
ampicillinum ampicillin	(−)-6-(2 - amino - 2 - phenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0] heptane-2-carboxylic acid
ampyriminum ampyrimine	2,4,7-triamino-5-phenylpyrimido[4,5-*d*]pyrimidine
anazolenum natricum sodium anazolene	4-[(4-anilino-5-sulfo-1-naphthyl)azo]-5-hydroxy-2,7-naphthalenedisulfonic acid, trisodium salt
anilamatum anilamate	methylcarbamate of salicylanilide
argipressinum argipressin	8-argininevasopressin
argiprestocinum argiprestocin	8-argininеoxytocin
azotomycinum azotomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
batilolum batilol	3-(octadecyloxy)-1,2-propanediol
benfotiaminum benfotiamine	*N*-[(r-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl)formamide *S*-benzoate *O*-phosphate
bentiaminum bentiamine	*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto-1-methyl-1-butenyl)formamide *O,S*-dibenzoate
benzaronum benzarone	2-ethyl-3-benzofuranyl *p*-hydroxyphenyl ketone
benzbromaronum benzbromarone	3,5-dibromo-4-hydroxyphenyl-2-ethyl-3-benzofuranyl ketone
benziloniі bromidum benzilonium bromide	1,1-diethyl-3-hydroxypyrrolidinium bromide benzilate
benzodepum benzodepa	benzyl[bis(1-aziridinyl)phosphinyl]carbamate
benzquinamidum benzquinamide	*N,N*-diethyl-1,3,4,6,7,11b - hexahydro-2-hydroxy - 9,10 - dimethoxy-2*H*-benzo[*a*]quinolizine-3-carboxamide acetate
betahistinum betahistine	2-[(2-methylamino)ethyl]pyridine

[1] Other lists of proposed international non-proprietary names can be found in *Chron. Wld Hlth Org.* 1953, *7*, 299; 1954, *8*, 216, 318; 1956, *10*, 28; 1957, *11*, 231; 1958, *12*, 102; 1959, *13*, 105, 152; 1960, *14*, 168, 244; 1961, *15*, 314, 320; 1962, *16*, 385.
Lists of recommended international non-proprietary names were published in *Chron. Wld Hlth Org.* 1955, *9*, 185; 1959, *13*, 106; 1962, *16*, 101, 111.

[2] *Off. Rec. Wld Hlth Org. 60*, 3 and 55 (resolution EB15.R7).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
betanidinum betanidine	1-benzyl-2,3-dimethylguanidine
betoxycainum betoxycaine	2-[2-(diethylamino)ethoxy]ethyl 3-amino-4-butoxybenzoate
bisacodylum bisacodyl	4,4′-(2-pyridylmethylene)diphenol diacetate
bisbentiaminum bisbentiamine	*N,N′*-[dithiobis[2-(2-hydroxyethyl) - 1 - methylvinylene]]bis[*N*[(4-amino-2-methyl-5-pyrimidinyl)methyl]formamide]
bolasteronum bolasterone	7α,17-dimethyltestosterone
bromacrylidum bromacrylide	*N*[(3-bromopropionamido)methyl]acrylamide
bufenadrinum bufenadrine	2-(o-tert-butyl-α-phenylbenzyloxy)-*N,N*-dimethylethylamine
butaperazinum butaperazine	1-[10-[3-(4-methyl-1-piperazinyl)propyl]phenothiasin-2-yl]-1-butanone
butaverinum butaverine	butyl-3-(3-phenyl-1-piperidyl)propionate
butizidum butizide	3-isobutyl-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide
butopiprinum butopiprine	2-butoxyethyl-α-phenyl-2-piperidineacetate
carbazocronii natricum sulfonas carbazocrome sodium sulfonate	sodium 5,6-dihydro-1-methyl-5,6-dioxoindoline-3-sulfonate-5-semicarbazone
carsalamum carsalam	2*H*-1,3-benzoxazine-2,4(3*H*)-dione
clefamidum clefamide	2,2-dichloro-*N*-2-hydroxyethyl-*N*-[*p*-(*p*-nitrophenoxy)benzyl]acetamide
clobenztropinum clobenztropine	3-(*p*-chloro-α-phenylbenzyloxy)-tropane
clodacainum clodacaine	2′-chloro-2-[(2-diethylaminoethyl)ethylamino]acetanilid
clodantoinum clodantoin	5-(1-ethylpentyl)-3-(trichloromethylthio)hydantoin
clofenamidum clofenamide	4-chloro-*m*-benzenedisulfonamide
clofibratum clofibrate	ethyl 2-(*p*-chlorophenoxy)-2-methylpropionate
clopamidum clopamide	4-chloro-*N*-(*cis*-2,6-dimethylpiperidino)-3-sulfamoylbensamide
cloralum betainum cloral betaine	chloral hydrate compound with betaine
clonitratum clonitrate	3-chloro-1,2-propanediol dinitrate
cloramfenicoli pantotenas cloramfenicol pantotenate	chloramphenicol complex with calcium pantothenate
clorindionum clorindione	2-(*p*-chlorophenyl)1,3-indandione
cloxacillinum cloxacillin	6-[3-(o-chlorophenyl)-5-methyl-4-isoxazolecarboxamido]-3,3-dimethyl - 7 - oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
colecalciferolum colecalciferol	cholecalciferol
coumetarolum coumetarol	4,4′-dihydroxy-3,3′-(2-methoxyethylidene) dicoumarin
cyamemazinum cyamemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine-2-carbonitrile
cyclarbamatum cyclarbamate	1,1-cyclopentanedimethanol dicarbanilate
cycloguanili embonas cycloguanil embonate	4,6-diamino-1-(*p*-chlorophenyl)-1,2-dihydro - 2,2 - dimethyl-*s*-triazine compound (2:1) with 4,4′-methylenebis[3-hydroxy-2-naphthoic acid]
cyclomenolum cyclomenol	2-cyclohexyl-3,5-xylenol
cyclovalonum cyclovalone	2,6-divanillylidenecyclohexanone
desipraminum desipramine	10,11-dihydro-5-(3-methylaminopropyl)-5*H*-dibenz[*b,f*]azepine
dexoxadrolum dexoxadrol	(+)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
diclofenamidum diclofenamide	4,5-dichloro-*m*-benzenedisulfonamide
dietroxinum dietroxine	5,5-diethyldihydro-2*H*-1,3-oxazine-2,4(3*H*)-dione
difenidolum difenidol	α,α-diphenyl-1-piperidinebutanol
dimefadanum dimefadane	*N,N*-dimethyl-3-phenyl-1-indanamine
dimetindenum dimetindene	2-(1-[2-(2-dimethylaminoethyl)inden-3-yl]ethyl)pyridine
dioxadrolum dioxadrol	2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
dipyridamolum dipyridamole	2,2′,2″,2‴-[(4,8 - dipiperidinopyrimido[5,4-*d*]pyrimidine - 2,6 - diyl)dinitrilo]tetraethanol
doxapramum doxapram	1-ethyl-4-(2-morpholinoethyl)-3,3-diphenyl-2-pyrrolidinone
drostanolonum drostanolone	17β-hydroxy-2α-methyl-5α-androstan-3-one
duazomycinum duazomycin	an antibiotic substance obtained from cultures of *streptomyces cmbofaciens*, or the same substance produced by any other means
efoxatum efoxate	ethyl[(4-oxo-2-phenyl-4*H*-1-benzopyran-7-yl)oxy]acetate
epitizidum epitizide	6-chloro-3,4-dihydro-3-[[(2,2,2 - trifluoroethyl)thio]methyl]-2*H*-1,2,4-bensothiadiazine-7-sulfonamide, 1,1-dioxide

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
ethylestrenolum ethylestrenol	17α-ethyl-19-nor-pregn-4-en-17-ol
eritrityli tetranitras eritrityl tetranitrate	erythritol tetranitrate
etoxazenum etoxazene	4-[(p-ethoxyphenyl)azo]-*m*-phenylenediamine
etymemazinum etymemazine	10-(3-dimethylamino-2-methylpropyl)-2-ethylphenothiazine
etynodioli acetas etynodiol acetate	19 nor-17α-pregn-4-en-20-yne-3β,17-diol, diacetate
felypressinum felypressin	2-(phenylalanine)-8-lysinevasopressin
fenbenicillinum fenbenicillin	3,3-dimethyl-7-oxo-6-(2-phenoxy-2-phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
fencarbamidum fencarbamide	*S*-2-diethylaminoethyl diphenylthiocarbamate
fenyripolum fenyripol	α-(2-pyrimidinylaminomethyl)benzyl alcohol
fluanisonum fluanisone	4′-fluoro-4-[4-(o-methoxyphenyl)-1-piperazinyl]butyrophenone
flumetasonum flumetasone	6α,9-difluoro-11β,17,21-trihydroxy-16α-methylpregna-1,4-diene-3,20-dione
fluorouracilum fluorouracil	5-fluorouracil
fluperolonum fluperolone	9-fluoro-11β,17,21-trihydroxy-21-methylpregna-1,4-diene-3,20-dione 21 acetate
fluprednisolonum fluprednisolone	6α-fluoro-11β,17,21-trihydroxypregna-1,4-diene-3,20-dione
flurotylum flurotyl	bis(2,2,2-trifluoroethyl) ether
furalazinum furalazine	3-amino-6-[2(5-nitro-2-furyl)vinyl]-*as*-triazine
furazolidonum furazolidone	3[(5-nitrofurfurylidene)amino]-2-oxazolidinone
galantaminum galantamine	1,2,3,4,6,7,7a,11c-octahydro-9-methoxy-2-methylbenzofuro[4,3,2-*efg*][2]benzazocin-6-ol
glucaloxum glucalox	glycerol complex with aluminium hydroxide
glypinamidum glypinamide	1-(*p*-chlorophenylsulfonyl)-3-(hexahydro-1*H*-azepin-1-yl)urea
hexadilinum hexadiline	2-(2,2-dicyclohexyl vinyl)piperidine
hexamidinum hexamidine	4,4′-(hexamethylenedioxy)dibenzamidine
hexopyrronii bromidum hexopyrronium bromide	1,1-dimethylpyrrolidinium bromide-α-phenylcyclohexane glycolate
indometacinum indometacin	1-(p-chlorobenzoyl)-5-methoxy-2-methylindole-3-acetic acid
iprocloxidum iprocloxide	*p*-chlorophenoxyacetic acid 2-isopropylhydrazide
isoetarinum isoetarine	α-(1-isopropylaminopropyl)protocatechuyl alcohol
itramini tosylas [1] itramin tosylate	2-aminoethanol nitrate(ester)*p*-toluenesulfonate
lefopyrrolum lefopyrrole	1-[o-[2-(diethylamino)ethoxy]phenyl]-2-methyl-5-phenylpyrrole
levoglutamidum levoglutamide	glutamine
levoxadrolum levoxadrol	(−)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
lincomycinum lincomycin	an antibiotic substance obtained from cultures of *streptomyces lincolnensis*, or the same substance produced by any other means
lucimycinum lucimycin	an antibiotic substance obtained from cultures of *streptomyces lucensis*, or the same substance produced by any other means
lynestrenolum lynestrenol	19-nor-17α-prega-4-en-20-yn-17-ol
lypressinum lypressin	8-lysinevasopressin
mecloxaminum mecloxamine	2-[(*p*-chloro-α-methyl-α-phenylbenzyl)oxy]-*N,N*-dimethylpropylamine
mecysteinum mecysteine	cysteine, methyl ester
megestrolum megestrol	17-hydroxy-6-methylpregna-4,6-diene-3,20-dione
melengestrolum melengestrol	17-hydroxy-6-methyl-16-methylenepregna-4,6-diene-3,20-dione
menotrophinum menotrophin	human menopausal gonadotrophin
meraleinum natricum sodium meralein	o-[6-hydroxy-5-(hydroxymercuri)-2,7-diiodo-3-oxo-3*H*-xanthen - 9 - yl]benzenesulfonic acid, sodium salt
metacyclinum metacycline	4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a - pentahydroxy-6-methyl-ene-1,11-dioxo-2-naphthacenecarboxamide
meturedepum meturedepa	[bis(2,2-dimethyl-1-aziridinyl)phosphinyl]carbamic acid ethyl ester
metyraponum metyrapone	2-methyl-1,2-di-3-pyridyl-1-propanone
molinazonum molinazone	3-morpholino-1,2,3-benzotriazin-4(3*H*)-one

[1] Itramin is the proposed International Non-proprietary Name for the substance having the chemical name "aminoethyl nitrate" (prop. I.N.N. list 1).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
morinamidum morinamide	N-(morpholinomethyl)pyrazinecarboxamide
nafcillinum nafcillin	6-(2-ethoxy-1-naphthamido)-3,3-dimethyl-7-oxo-4-thia - 1 - azabicyclo[3.2.0]heptane-2-carboxylic acid
naloxonum naloxone	12-allyl-7,7a,8,9 - tetrahydro-3,7a-dihydroxy-4a*H*-8,9c-iminoethanophenanthro[4,5-*bcd*]furan-5(6*H*)-one
natrii bitionolas sodium bitionolate	disodium 2,2′-thiobis(4,6-dichlorophenoxide)
natrii etasulfas sodium etasulfate	2-ethylhexyl sodium sulfate
natrii metrizoas sodium metrizoate	sodium 3-acetamido-2,4,6-triiodo-5-*N*-methylacetamidobenzoate
natrii radio-iodidum (^{131}I) sodium radio-iodide (^{131}I)	
natrii timerfonas sodium timerfonate	ethyl[(p-sulfophenyl)thio]mercury, sodium salt
niclosamidum niclosamide	2′,5-dichloro-4′-nitrosalicylanilide
nonapyriminum nonapyrimine	4-nonylamino-7*H*-pyrrolo[2,3-d]pyrimidine
noretynodrelum noretynodrel	17-hydroxy-17α-pregn-5(10)-en-20-yn-3-one
octotiaminum octotiamine	8-[[2-[*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]formamido]-1-(2-hydroxyethyl)propenyl]dithio]-6-mercaptooctanoic acid, methyl ester acetate
ortetaminum ortetamine	α,α-dimethylphenethylamine
oxazepamum oxazepam	7-chloro-1,3-dihydro-3-hydroxy-5-phenyl-2*H*-1,4-benzodiazepin-2-one
oxetacainum oxetacaine	2,2′-(2-hydroxyethylimino)bis[*N*-(α,α-dimethylphenethyl)-*N*-methylacetamide]
oxomemazinum oxomemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine,5,5-dioxide
oxonazinum oxonazine	N^3,N^3-diallylmelamine N^3-oxide
oxybutyninum oxybutynin	4-diethylamino-2-butynyl α-phenylcyclohexaneglycolate
oxyclipinum oxyclipine	1-methyl-3-piperidyl α-phenylcyclohexaneglycolate
oxyfenamatum oxyfenamate	β-ethyl-β-hydroxyphenethyl carbamate
oxymetazolinum oxymetazoline	6-*tert*-butyl-3-(2-imidazolin-2-ylmethyl)-2,4-dimethylphenol
oxypendylum oxypendyl	4-[3-(10*H*-pyrido[3,2-b][1,4]benzothiazin-10-yl)propyl]-1-piperazineethanol
oxypyrronii bromidum oxypyrronium bromide	2-(2-hydroxyethyl)-1,1-dimethylpyrrolidinium bromide α-phenylcyclohexaneglycolate
oxytocinum oxytocin	oxytocin
pargylinum pargyline	*N*-methyl-*N*-2-propynylbenzylamine
paxamatum paxamate	4-biphenylyl methylcarbamate
pentabamatum pentabamate	3-methyl-2,4-pentanediol dicarbamate
pentalamidum pentalamide	o-(pentyloxy)benzamide
periciasinum periciazine	10-[3-(4-hydroxypiperidino) propyl] phenothiazine-2-carbonitrile
picloxydinum picloxydine	1,1′-[1,4-piperazinediylbis(imidocarbonyl)]bis[3-(p-chlorophenyl)guanidine]
pimetinum pimetine	4-benzyl-1-(2-dimethylaminoethyl)piperidine
poldini methylsulfas poldine methylsulfate	1-methyl-2-pyrrolidinemethanol benzilate
prednisolamatum prednisolamate	11β,17,21-trihydroxypregna-1,4-diene-3,20-dione 21-*N*,*N*-diethylglycine ester
prednylidenum prednylidene	11β,17,21-trihydroxy-16-methylenepregna-1,4-diene-3,20-dione
propetandrolum propetandrol	19-nor-17α-pregn-4-ene-3β,17-diol 3-propionate
propicillinum propicillin	3,3-dimethyl-7-oxo - 6 - (2 - phenoxybutyramido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
prosultiaminum prosultiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-[4-hydroxy-1-methyl-2-(propyldithio)-1-butenyl]formamide
pyrrocainum pyrrocaine	1-pyrrolidineacetanilide
quingestronum quingestrone	3-(cyclopentyloxy)pregna-3,5-dien-20-one
radio-aurum (^{198}Au)-colloidale radio-gold (^{198}Au) colloidal	
radiocyanocobalaminum (^{60}Co) radiocyanocobalamin (^{60}Co)	
radiotolpovidonum radiotolpovidone	ω-(p-iodo-^{131}I-benzyl)-2-(2-oxo-1-pyrrolidinyl)ethamer
renytolinum renytoline	α-fluoren-9-ylidene-p-toluamidine
rifamycinum rifamycin	antibiotic substane obtained from cultures of *streptomyces mediterranei* or the same substance produced by any other means
sparsomycinum sparsomycin	an antibiotic substance obtained from cultures of *streptomyces sparsogenes*, or the same substance produced by any other means
sparteinum sparteine	sparteine

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
spectinomycinum spectinomycin	an antibiotic substance obtained from cultures of *streptomyces spectabilis*, or the same substance produced by any other means
stilbasii iodidum stilbazium iodide	1-ethyl-2,6-bis(p-1-pyrrolidinylstyryl)pyridinium iodide
streptoniazidum streptoniazid	isonicotinic acid hydrazide, hydrazone with streptomycin
sucraloxum sucralox	sucrose complex with aluminium hydroxide
sultiamum sultiame	benzenesulfonamide,p-(tetrahydro-2*H*-1,2-thiazin-2yl)-*S*,*S*-dioxide
teclozanum teclozan	*N*,*N*′-(p-phenylenedimethylene)bis[2,2-dichloro-*N*-(2-ethoxyethyl)acetamide]
tiabendazolum tiabendazole	2-(4-thiazolyl)benzimidazole
tiemondii iodidum tiemonium iodide	4-[3-hydroxy-3-phenyl-3-(2-thienyl)propyl]-4-methylmorpholinium iodide
tifenamilum tifenamil	*S*-(2-diethylamino)ethyl diphenylthioacetate
tolpropaminum tolpropamine	*N*,*N*-dimethyl-3-phenyl-3-(p-tolyl)propylamine
tolpyrramidum tolpyrramide	*N*-p-tolylsulfonyl-1-pyrrolidinecarboxamide
triclofosum triclofos	2,2,2-trichloroethyl dihydrogen phosphate
trimetamidum trimetamide	*N*-(2-amino-6-methyl-3-pyridylmethyl)-3,4,5-trimethoxybenzamide
trimipraminum trimipramine	10,11-dihydro-5-(3-dimethylamino-2-methylpropyl)-5H-dibenz[*b*,*f*]azepine
trometamolum trometamol	2-amino-2-(hydroxymethyl)-1,3-propanediol
troxonii tosylas troxonium tosylate	triethyl(2-hydroxyethyl)ammonium p-toluenesulfonate 3,4,5-trimethoxybenzoate
troxypyrronii tosylas troxypyrronium tosylate	1-ethyl-1-(2-hydroxyethyl)pyrrolidinium p-toluenesulfonate 3,4,5-trimethoxybenzoate
tyloxapolum tyloxapol	polymer of p-(1,1,3,3-tetramethylbutyl)phenol with ethylene glycol and formaldehyde
uramustinum uramustine	5-[bis(2-chloroethyl)amino]uracil
uredepum uredepa	ethyl[bis(1-aziridinyl)phosphinyl]carbamate
vincristinum vincristine	an alkaloid obtained from *vinca rosea*
vinleurosinum vinleurosine	an alkaloid obtained from *vinca rosea*
vinrosidinum vinrosidine	an alkaloid obtained from *vinca rosea*
virgimycinum virgimycin	an antibiotic substance obtained from cultures of *streptomyces virginiae*, or the same substance produced by any other means
NOTE: aminophenazonum aminophenazone	amidopyrinum replaces amidopyrine (*Chron. Wld Hlth Org.* 1956, *10*, 28)
ergocalciferolum ergocalciferol	calciferolum replaces calciferol (*Chron. Wld Hlth Org.* 1956, *10*, 28)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 137,690. A/S Filia, Copenhagen, Denmark. Filed Feb. 12, 1962.

Filia

Owner of Danish Reg. No. 2028/1961, dated Jan. 27, 1962.

For Artists' Modeling Wax.

First use Aug. 1, 1951; in commerce April 1959.

SN 138,217. Mitsubishi Rayon Co., Ltd., Chuo-ku, Tokyo, Japan. Filed Feb. 19, 1962.

SHINKOLITE

Owner of Japanese Reg. No. 535,466, dated Apr. 11, 1959; and U.S. Reg. No. 594,048.

For Synthetic Resin Sheets, Tubes, and Rods.

SN 154,431. Ouren Seed Company, Council Bluffs, Iowa. Filed Oct. 3, 1962.

OSCO

Owner of Reg. Nos. 742,512, 742,513, and 743,932.

For Seeds, Including Lawn Seed, Alfalfa Seed, Clover Seed, Grass Seed, and Sunflower Seed.

First use during 1915.

SN 154,878. Bextic Inc., Natick, Mass. Filed Oct. 10, 1962.

BEXTIC

For Plastic Sheet.

First use Sept. 26, 1962.

SN 156,107. S. B. Foot Tanning Company, Red Wing, Minn. Filed Oct. 29, 1962.

MUSTANÖ

For Tanned Leather Material.

First use Sept. 18, 1962.

SN 161,549. North American Nutria Associates, Atlanta, Tex. Filed Jan. 28, 1963. COLLECTIVE MARK.

NANA

For Raw Nutria Pelts and Nutria Dressed Pelts.

First use May 1, 1959.

Class 2—Receptacles

SN 129,108. Bill Rivers Trailers, Inc., Jacksonville, Fla. Filed Oct. 3, 1961.

BR ZERO BOX

Applicant disclaims any exclusive rights in the word "Box" apart from the mark as shown in the drawing. Owner of Reg. No. 741,977.

For Insulated Containers Constructed of Either Aluminum, Steel, or Fibre Glass or a Combination of All Three, for the Storage of All Types of Food and Drink, Size and Capacity Ranging Between 2 and 2000 Cubic Feet.

First use July 1, 1961.

SN 135,245. American Can Company, New York, N.Y. Filed Jan. 2, 1962.

MIRAGUARD SAFETY RIM

Applicant disclaims the words "Safety Rim" apart from the mark as shown.

For Metal Cans.

First use on or about Dec. 2, 1961.

SN 139,871. Loma Industries, Fort Worth, Tex. Filed Mar. 14, 1962.

LOMAWARE

For Plastic Molded Goods, Specifically Waste Baskets, Trash Cans, Bushel Baskets, Clothes Hampers, Picnic Baskets, Garbage Cans, Baby Bathtubs, Utility Pails, Ice Buckets, Storage Bins, Bread Baskets, Bread Boxes, Bowl Sets, Colanders, Tissue Dispensers, and Magazine Racks.

First use July 1955.

SN 142,150. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 12, 1962.

REVELATION

Owner of Reg. Nos. 575,184 and 705,133.

For Vacuum Bottles, Jugs and Chests, Jug and Chest Coolers, Vacuum Bottle Fillers, Ice Boxes, Lunch Boxes, Lunch Kits, and Insulated Camp Jugs.

First use Jan. 15, 1953, on tackle boxes.

SN 142,351. Frank Warner Corporation, Minneapolis, Minn., assignee of Plastison Corporation, Minneapolis, Minn. Filed Apr. 16, 1962.

POLY-BOY

For Plastic Drums for Confining Liquids.

First use July 1, 1961.

SN 142,560. Rubbermaid Incorporated, Wooster, Ohio. Filed Apr. 18, 1962.



Owner of Reg. Nos. 726,892 and 735,088.
For Kitchen and Household Articles Made of Rubber Composition, Rubber-Like Composition, Plastic Composition or Such Compositions Combined With Metal—Namely, Vegetable Bins, Waste Baskets, Buckets, Pails, Refuse Containers, Laundry Baskets, Juice Decanters, and Battery Box Cases.
First use Oct. 26, 1960.

SN 143,810. Donray Products Co., Cleveland, Ohio. Filed May 4, 1962.

FOAMVELOPES

For Pre-Formed Cushion Packaging Containers Made of Expanded Plastic Material for Packaging Delicate Objects.
First use on or about Nov. 1, 1961.

SN 146,286. Foster Grant Co., Inc., Leominster, Mass. Filed June 6, 1962.

FG

For Plastic Drinking Cups and Plastic Jugs.
First use on or about Apr. 18, 1962.

SN 150,941. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Aug. 10, 1962.

SPRITE

For Insulated Containers in the Form of Jugs and Chests.
First use Mar. 20, 1962.

SN 154,080. Inland Container Corporation, Indianapolis, Ind. Filed Sept. 27, 1962.

ECONO-GAL

For Liquid Dispensing Containers Consisting of a Fibreboard Outer Container and a Flexible Liquid-Tight Inner Container.
First use Apr. 10, 1962.

SN 154,198. Don Baxter, Inc., Glendale, Calif. Filed Oct. 1, 1962.

VACOJET

For Vials for Pharmaceuticals.
First use Jan. 31, 1962.

SN 154,878. Bextic Inc., Natick, Mass. Filed Oct. 10, 1962.

BEXTIC

For Molded Plastic Packages and Packages Formed From Sheet Plastic Material.
First use Sept. 26, 1962.

SN 156,031. Jerome Y. Russell, d.b.a. Multi-Purpose Fixture Company, Terre Haute, Ind. Filed Oct. 26, 1962.

QUITON

For Cartons for Use Primarily in Packing Books.
First use Aug. 6, 1962.

SN 158,515. Diamond National Corporation, New York, N.Y. Filed Dec. 5, 1962.

HI-V

For Egg Cartons.
First use Aug. 12, 1961.

SN 158,655. Romar Tissue Mills, Incorporated, Hardwick, Mass., assignee of Rutland Plastics, Inc., Rutland, Vt. Filed Dec. 6, 1962.

HANDY-HANK

For Paper Tissue Container and Dispenser Sold With Paper Tissues Therein.
First use Aug. 21, 1951.

SN 159,415. National Tube & Reel Corporation, Paterson, N.J. Filed Dec. 19, 1962.

FIBERLITE

For Textile Reels, That Is, Reels on Which Textile Material Is Wound.
First use June 26, 1962.

SN 159,416. National Tube & Reel Corporation, Paterson, N.J. Filed Dec. 19, 1962.

RIGILITE

For Textile Reels, That Is, Reels on Which Textile Material Is Wound.
First use Nov. 28, 1961.

SN 159,487. Gordon Cartons, Inc., Baltimore, Md. Filed Dec. 20, 1962.

GARDRAN

For Collapsible Tray Cartons.
First use Dec. 10, 1962.

SN 159,671. Action Bag & Envelope Co., Inc., Brooklyn, N.Y. Filed Dec. 26, 1962.

STA-TRIM

For Plastic Bags.
First use Feb. 25, 1959.

SN 159,672. Action Bag & Envelope Co., Inc., Brooklyn, N.Y. Filed Dec. 26, 1962.

STA-BAND

For Plastic Bags.
First use Feb. 25, 1959.

SN 159,862. American Can Company, New York, N.Y. Filed Dec. 28, 1962.

MIRATAB

For Metal Cans and Components Thereof.
First use on or about Apr. 9, 1962.

SN 159,928. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Dec. 28, 1962.

SENDRITE

For Envelope Type Bags.
First use Dec. 12, 1962.

SN 159,981. Acme Lite Products Co., Inc., Congers, N.Y. Filed Dec. 31, 1962.

GRO-LITE

For Planters for Ornamental Plants, Fruits, and Vegetables.
First use Jan. 18, 1962.
Subj. to Intf. with SN 142,406.

SN 160,883. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Jan. 17, 1963.

HUSKI PAK

For Paper Sacks.
First use on or about Oct. 30, 1962.

SN 162,812. Vision Wrap, Inc., Skokie, Ill. Filed Feb. 7, 1963.

REDI-RAK

For Transparent Plastic Bags.
First use during January 1963.

SN 162,888. United States Rubber Company, New York, N.Y. Filed Feb. 8, 1963.

UNIROYAL

For Industrial Containers of Rubber Coated Fabric in Various Sizes.
First use Aug. 29, 1962.

Class 4 — Abrasives and Polishing Materials

SN 159,158. General Foods Corporation, White Plains, N.Y. Filed Dec. 14, 1962.



For Soap-Impregnated Steel Wool Scouring Pad.
First use Oct. 16, 1962.

SN 160,319. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Jan. 7, 1963.

X-OL

Owner of Reg. No. 402,001.
For Wax Polish for Linoleum, Wood Floors, Rubber Tile, Furniture, and the Like.
First use on or about Nov. 1, 1934.

SN 163,599. Bay State Abrasive Products Company, Westboro, Mass. Filed Feb. 28, 1963.

MINUTE-MAN SERIES



The word "Series" is hereby expressly disclaimed as a part of applicant's mark.
For Diamond and Other Abrasive Blades, Wheels and Discs, and Back-Up Pads for Same.
First use Feb. 25, 1963.
Subj. to Intf. with SN 158,626.

SN 165,623. Revere Copper and Brass Incorporated, New York, N.Y. Filed Mar. 28, 1963.



The word "Ware" is disclaimed apart from the mark. The portrait is fanciful. Owner of Reg. Nos. 266,871, 726,644, and others.
For Preparation for Cleaning and Polishing Metal, Porcelain, Ceramic Tile, and Baked Enamel Surfaces.
First use Jan. 14, 1963.

SN 165,698. National Grinding Wheel Company, Inc., North Tonawanda, N.Y. Filed Mar. 29, 1963.

FRONTIER

For Grinding Wheels, Abrasive Rubbing Bricks, Abrasive Segmental Wheels, Abrasive Cut-Off Wheels, and Abrasive Diamond Wheels.
First use on or about May 27, 1958, on grinding wheels.

SN 165,779. J. I. Holcomb Manufacturing Company, Inc., Indianapolis, Ind. Filed Apr. 1, 1963.

ELITE

For Floor Wax.
First use Mar. 26, 1963.

SN 168,626. Norton Company, Worcester, Mass. Filed May 10, 1963.



• MINUTE MAN •

For Grinding Wheels.
First use Feb. 21, 1963.
Subj. to Intf. with SN 163,599.

Class 5 — Adhesives

SN 156,636. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Nov. 5, 1962.

SUNWELD

For Polymerizing Adhesive.
First use Dec. 13, 1951.

Class 6 — Chemicals and Chemical Compositions

SN 133,152. Humble Oil & Refining Company, Houston, Tex. Filed Dec. 1, 1961.

ISOPAR

For Fluid Hydrocarbon Solvents of Petroleum Origin for General Use in the Industrial Arts.
First use on Sept. 12, 1961.

SN 142,328. Madison Chemical Corporation, Maywood, Ill. Filed Apr. 16, 1962.

STERILOID

For Disinfectant-Deodorant-Absorbent Preparation for Hospital and Industrial Use.
First use Nov. 9, 1959.

SN 147,181. Associated Brands, Inc., Brooklyn, N.Y. Filed June 19, 1962.

OZON

Owner of Reg. Nos. 426,967 and 743,570.
For Room Deodorant and Air Sanitizing Preparation.
First use 1951.

SN 149,087. Hyland Laboratories, Los Angeles, Calif. Filed July 16, 1962.

HCG-TEST

Owner of Reg. Nos. 691,476, 713,350, and others.
For Diagnostic Reagent for Use in the Laborntory To Determine Pregnancy.
First use Mar. 21, 1961.

SN 152,174. Utility Chemical Company, Paterson, N.J. Filed Aug. 29, 1962.

ALGEATE

For Algaecide for Controlling Algae in Water Pools.
First use on or about June 9, 1950.

SN 152,895. Hercules Powder Company, Wilmington, Del. Filed Sept. 11, 1962.

HERTOXIN

For Insecticide Formulations Containing Toxaphene and Toxaphene Concentrate for the Manufacture of Such Insecticide Formulations.
First use Aug. 16, 1962.

SN 156,739. R. O. Hull & Company, Inc., Cleveland, Ohio. Filed Nov. 6, 1962.

PREPALLOY

For Granular Acid Fluoride Salt Useable as a Replacement for Liquid Hydrofluoric Acid in the Preparation of Acidic Metal Treating Solutions.
First use June 29, 1962.

SN 157,184. The American Agricultural Chemical Company, New York, N.Y. Filed Nov. 14, 1962.



For Chemical Composition for Destroying Crabgrass.
First use Apr. 23, 1962.

SN 158,470. Patek & Co., San Francisco, Calif. Filed Dec. 4, 1962.

LUBRA-SOFT

For Softener in Powdered Form for Providing Softness in Fabrics and Eliminating Static on the Flatwork Ironer.
First use Feb. 16, 1960.

SN 158,503. American Fluoride Corporation, New York, N.Y. Filed Dec. 5, 1962.

FLUO PYRE

For Roach Powder.
First use Jan. 2, 1927.

SN 163,126. Consolidated Testing Laboratories, Inc., New Hyde Park, N.Y. Filed Feb. 20, 1963.

RAYDENE

For X-Ray and Photographic Fixers and Developers.
First use in at least November 1959.

SN 163,179. Special Chemicals Corporation, Ossining, N.Y. Filed Feb. 20, 1963.

TARNISHEX

For Chemical Compositions That Impart Tarnish Resistance to Metals.
First use Sept. 19, 1956.

SN 163,359. The C. P. Hall Company of Illinois, Chicago, Ill. Filed Feb. 25, 1963.

HALLCOMID

For Substituted Fatty Acid Amides.
First use on or about Mar. 1, 1961.

SN 163,448. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Feb. 25, 1963.

PRIMAZIN

For Dyestuffs.
First use July 15, 1907; in commerce Dec. 10, 1962.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 163,544. HMH Publishing Co., Inc., Chicago, Ill. Filed Feb. 27, 1963.

VIP

For Ash Trays.
First use on or about Nov. 30, 1962.

SN 165,600. Dan Kasoff Inc., New York, N.Y. Filed Mar. 28, 1963.

Florenza

For Ash Trays, Cigarette Lighters, Cigarette Containers, Match Boxes Made Out of Non-Precious Metal.
First use Feb. 20, 1956.

Class 11 — Inks and Inking Materials

SN 128,814. Franklin Ribbon & Carbon Co., Inc., Brooklyn, N.Y. Filed Sept. 28, 1961.

KLEENERTYPE BRAND

For Carbon Paper, Carbon Ribbons, Correction Paper for Typing Errors and Inked Typewriter Ribbons.
First use Sept. 1, 1930.

SN 150,784. Interchemical Corporation, New York, N.Y. Filed Aug. 8, 1962.

MULTIFLEX

For Printing Inks.
First use on or about July 23, 1962.

Class 12 — Construction Materials

SN 139,365. J. C. Whitlam Manufacturing Co., Inc., Wadsworth, Ohio. Filed Mar. 7, 1962.

TAPE-UNYTE

For Pipe Joint Compound.
First use on or about Feb. 9, 1962.

SN 145,468. Metropolitan Roofing Supplies Company, Inc., New York, N.Y. Filed May 25, 1962.

BESKOTE

Owner of Reg. No. 256,464.
For Coal Tar and Asphalt, Flashings, Slate, Tarred and Asphalt Roofing, Waterproofing Cement, Protective Coatings for Sealing or Hardening Walls and Floors and Pavements, Construction Sealants and Patching Materials, and Floor and Pavement Resurfacers.
First use Jan. 1, 1924.

SN 147,318. Simpson Timber Company, Seattle, Wash. Filed June 20, 1962.

SPACEMAKER

For Structural Compartmenting Units—Namely, Movable Partitions.
First use Apr. 30, 1962.

SN 148,004. Byerlyte Corporation, Cleveland, Ohio. Filed June 29, 1962.

PAVICRAX

Owner of Reg. No. 747,478.
For Elastic Compound for Filling Small Cracks in Asphaltic and Concrete Pavements.
First use Apr. 17, 1962.

SN 148,005. Byerlyte Corporation, Cleveland, Ohio. Filed June 29, 1962.

PAVIPATCH

Owner of Reg. No. 747,478.
For Composition for Repairing Asphalt and Concrete Pavements.
First use Apr. 17, 1962.

SN 149,324. Renrock, Incorporated, West Point, Miss., by change of name from Renicker Sales and Service, Inc., West Point, Miss. Filed July 18, 1962.

RENROCK

For Paving Material for Highways and Roads Comprising a Mixture of Aggregate, Mineral Filler, and Binding Agent.
First use May 22, 1962.

SN 150,912. Architectural Glass Products, Inc., Miami, Fla. Filed Aug. 10, 1962.

LODRA

For Entrance Doors and Frames.
First use Dec. 15, 1961.

SN 152,863. Yxhults Stenhuggeri AB, Hallabrottet, Sweden. Filed Sept. 10, 1962.



Owner of Swedish Reg. No. 103,368, dated July 20, 1962.
For Building Materials—Namely, Natural Quarried Stone, Porous Cast Artificial Stone, Portland Cement, Construction Lime for Use in Mortar and Plaster, Mortar and Plaster in Either Wet or Dry State, Gypsum, Gravel Aggregate for Concrete, Ceramic or Cement Pipe, Prefabricated Buildings for Mounting on a Building Site, Bricks, Fiberboard, and Plates of Asbestos Cement for Wall Covering.

SN 153,781. International Pipe and Ceramics Corporation, East Orange, N.J., by merger from Lock Joint Pipe Company, East Orange, N.J. Filed Sept. 24, 1962.



For Reinforced Concrete Pipes and Plastic Pipes.
First use Jan. 26, 1962, on reinforced concrete pipes.

SN 155,097. Owens-Corning Fiberglas Corporation, Toledo, Ohio. Filed Oct. 12, 1962.

FRICTION FIT

For Thermal and Acoustical Insulation for Buildings in the Form of Mats or Blankets of Fibrous Material.
First use April 1961.

SN 156,523. The Ruberoid Co., New York, N.Y. Filed Nov. 2, 1962.

T/NA 200

For Plastic-Asbestos Roofing-Membrane.
First use Mar. 7, 1962.

SN 156,524. The Ruberoid Co., New York, N.Y. Filed Nov. 2, 1962.

T/NA 100

For Heat, Weather and Chemical Insulating Materials—Namely, Multi-Purpose Insulation Jacketing, and Finishing Tape.
First use Oct. 26, 1961.

SN 156,912. Supradur Manufacturing Corporation, Windgap, Pa. Filed Nov. 8, 1962.



The mark is lined for red but no claim is made to a particular color as a part of the mark.
For Siding Shingles.
First use January 1949.

SN 158,602. The Cleveland Fabricating Company, Inc., Cleveland, Ohio. Filed Dec. 6, 1962.

SKY-VUE

For Fibrous Wall and Roof Insulation, in the Form of Vapor Barrier Backed Rolls or Batts.
First use Nov. 27, 1962.

SN 158,625. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Dec. 6, 1962.

H-W HARMIX CU

The letters "CU" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 310,762, 707,973, and others.
For Unconsolidated Refractory Mixes.
First use May 3, 1962.

SN 158,626. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Dec. 6, 1962.

H-W HARMIX FE

The letters "FE" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 310,762, 707,973, and others.
For Unconsolidated Refractory Mixes.
First use May 3, 1962.

SN 158,687. Dantani Plywood Co. Ltd., Kokura, Japan. Filed Dec. 7, 1962.

DANLITE

For Plywood.
First use Apr. 7, 1960; in commerce May 1, 1960.

SN 158,841. Modular Components Corporation, Chula Vista, Calif. Filed Dec. 10, 1962.



The words "Bathroom" and "Modular Components" are disclaimed apart from the mark as shown.
For Fully Factory Fabricated Unitized Bathrooms, Molded of Fiberglass With Wood Studded Exterior.
First use on or about Apr. 16, 1962.

SN 161,121. Unistrut Corporation, Wayne, Mich. Filed Jan. 21, 1963.

ATSPAR

For Metallic Construction Members, Telescoping and Perforated Tubing, and Fittings and Connections Therefor, Adapted To Serve as Framing and Supporting Means for Temporary and Permanent Construction of Buildings and Other Structures—Namely, Ceiling, Wall and Roofing Panels, Racks, Scaffolding, Ladders, Rails, Shelving, Benches, Signs and Billboards, Awnings, Fences and the Like.
First use Jan. 8, 1963.

SN 163,460. Armstrong Cork Company, Lancaster, Pa. Filed Feb. 26, 1963.

F/A

For Liquid Synthetic Resin Containing Composition Used as Roofing.
First use July 12, 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 155,193. Punch-Lok Company, Chicago, Ill. Filed Oct. 15, 1962.

PUNCH-LOK

For Clamps for Hoses and Conduits and the Like, and Nipples and Fittings for Use With Said Clamps.
First use on or about Oct. 14, 1940.

SN 157,692. General Mills, Inc., Minneapolis, Minn. Filed Nov. 21, 1962.

TWIN STAR

Owner of Reg. No. 675,960.
For Cookware.
First use at least as early as Nov. 24, 1960.

SN 158,256. Leetronics, Inc., Brooklyn, N.Y. Filed Nov. 30, 1962.

LEE

For Springs.
First use Jan. 21, 1917.

SN 158,431. Arthur Cox & Sons, Incorporated, Pasadena, Calif. Filed Dec. 4, 1962.



For Sliding Door and Folding Door Hardware.
First use Oct. 10, 1962.

SN 158,949. Amoe Notion Corp., New York, N.Y. Filed Dec. 12, 1962.

SAF/LINE

Owner of Reg. No. 540,546.
For Zippers.
First use Feb. 6, 1950.

SN 159,164. Burton Klemp Corporation, Kenosha, Wis. Filed Dec. 14, 1962.



For Dairy Equipment Fittings.
First use on or about Nov. 5, 1959.

SN 159,304. Textron, Inc., Los Angeles, Calif. Filed Dec. 17, 1962.

METROPOLITAN

For Bathroom Fixtures Such as Soap Holders, Tumbler and Brush Holders, Paper Holders, Hooks, Towel Bars and the Like.
First use Feb. 1, 1936.

SN 159,488. Gra-Mar Products Co., Grand Rapids, Mich. Filed Dec. 20, 1962.



For Supports for Bar Soap and the Like.
First use Mar. 6, 1962.

SN 159,627. Textile Marking Machine Co., Inc., Syracuse, N.Y. Filed Dec. 21, 1962.

TAG-O-LECTRIC

Owner of Reg. Nos. 603,614 and 715,420.
For Staples Used in Stapling Machines.
First use Oct. 29, 1951.

Class 15—Oils and Greases

SN 162,161. Humble Oil & Refining Company, Houston, Tex. Filed Feb. 6, 1963.

PARVAN

For Petroleum Waxes.
First use at least as early as Sept. 21, 1962.

SN 162,481. The Pure Oil Company, Palatine, Ill. Filed Feb. 11, 1963.

CITATION

For Lubricating Oil.
First use on or about Jan. 23, 1963.

Class 16—Protective and Decorative Coatings

SN 137,690. A/S Filia, Copenhagen, Denmark. Filed Feb. 12, 1962.



Owner of Danish Reg. No. 2028/1961, dated Jan. 27, 1962.
For Water and Oil Colors and Other Artists' Colors.
First use Aug. 1, 1951; in commerce April 1959.

Class 17—Tobacco Products

SN 137,960. Tur Sucesores, S.A., Zaragoza, Spain. Filed Feb. 14, 1962.

C & T

Owner of U.S. Reg. No. 622,408.
For Licorice Extract To Be Used as an Ingredient of Chewing Tobacco, Smoking Tobacco, Cigars, Cigarettes and Snuff.
First use on or about Jan. 1, 1897; in commerce on or about Jan. 1, 1897.

SN 159,997. Philip Morris Incorporated, New York, N.Y. Filed Dec. 31, 1962.

CHARCRONIZED

For Filters for Cigarettes Sold Incorporated as Part of the Cigarettes.
First use Dec. 21, 1962.

SN 164,698. Cavalla Limited, Salt River, Cape, South Africa. Filed Mar. 15, 1963.

COURTLEIGH

Owner of South African Reg. No. R61/2036, dated Nov. 28, 1961.
For Tobacco, Manufactured or Unmanufactured.

Class 18 — Medicines and Pharmaceutical Preparations

SN 151,390. Beecham Research Laboratories Limited, Brentford, Middlesex, England. Filed Aug. 17, 1962.

METHOVET

Priority claimed under Sec. 44(d) on British Reg. No. 831,929, dated Mar. 13, 1962.
For Pharmaceutical Preparations and Substances for Veterinary Use.

SN 158,907. First Texas Pharmaceuticals, Inc., Dallas, Tex. Filed Dec. 11, 1962.

EYE-SED

For Astringent Used in Some Common Types of Blepharitis, Especially Conjunctivitis or Commonly Known as Pink Eye.
First use Nov. 15, 1962.

SN 159,258. Frederick S. Mayer, d.b.a. Mayer Laboratories, San Rafael, Calif. Filed Dec. 14, 1962.

MENTROL

For Tablet for Relief of Menstrual Pain, Cramps, Mild Tension, and Headache.
First use Oct. 19, 1962.

SN 161,199. Pharmacosmetics, Inc., Great Neck, N.Y. Filed Jan. 22, 1963.

MIRADERM

For Preparation for the Topical Treatment of Acne.
First use June 28, 1962.

SN 164,860. Lucky Tiger Manufacturing Company, Kansas City, Mo. Filed Mar. 18, 1963.

MEDI-EASE

Owner of Reg. Nos. 356,346, 733,680, and 731,065.
For Pile Ointment.
First use Feb. 27, 1963.

SN 164,978. Key Pharmaceuticals, Inc., Miami, Fla. Filed Mar. 19, 1963.

FORMULA NO. 515

No claim is made to the exclusive right to use of the notations "Formula" and "No." apart from the mark as shown.
For Multi-Vitamin and Mineral Dietary Supplement.
First use Feb. 8, 1963.

SN 165,082. Provident Pharmaceuticals, Incorporated, Chattanooga, Tenn. Filed Mar. 20, 1963.

ESTROTAB

For Ethical Pharmaceutical Preparation in Tablet Form for Estrogen Replacement Therapy for Use in Menopausal Syndrome, Senile Vaginitis, Kraurosis Vulvae, and Pruritis Vulvae.
First use Feb. 12, 1963.

SN 165,434. R & M Laboratories, Inc. of Ga., Avondale Estates, Ga. Filed Mar. 26, 1963.

THROTO-CEPTIC

For Mouth and Throat Antiseptic, Astringent, and Prophylactic.
First use July 1, 1926.

SN 165,765. Geigy Chemical Corporation, Ardsley, N.Y. Filed Apr. 1, 1963.

MELAMPOL

For Antidepressant Preparation.
First use Mar. 19, 1963.

Class 19 — Vehicles

SN 128,110. Societe Anonyme des Automobiles Peugeot, Paris, France. Filed Sept. 18, 1961.

403

Owner of French Reg. No. 490,380, dated Sept. 2, 1950 (Seine); Natl. Inst. No. 150,218.
For Motor Vehicles of All Types—Namely, Automobiles, Trucks, Buses, Motor Coaches, Truck Tractors and Trailers, Spare Parts Therefor and Parts Thereof.
First use May 9, 1955; in commerce December 1957.

SN 142,128. Outboard Marine Corporation, Waukegan, Ill. Filed Apr. 12, 1962.

TRUCKSTER

Owner of Reg. Nos. 571,449, 716,391, and others.
For Light-Weight Wheeled Motor Vehicles.
First use on or about Nov. 12, 1951.

SN 142,268. British Trailer Company Limited, Manchester, England. Filed Apr. 16, 1962.

FOUR-IN-LINE

Owner of British Reg. No. B814,541, dated Dec. 12, 1960.
For Semi-Trailers, Being Vehicles for Passenger or Goods Carrying.

SN 144,218. Aerol Co., Inc., Los Angeles, Calif. Filed May 10, 1962.

AER-ROLL

Owner of Reg. Nos. 550,016, 638,338, and 710,905.
For Tire-Mounting Wheels for Vehicles.
First use Sept. 13, 1960.

SN 145,866. Margarete Steiff GMBH, Giengen (Brenz), Wurttemberg, Germany. Filed May 31, 1962.

STEIFF

For Baby Carriages Including Perambulators, Coaches and Strollers, and Mechanical Scooters.
First use 1892; in commerce 1898.

SN 148,729. Hartford Manufacturing Co. Inc., Hartford, Wis. Filed July 10, 1962.

Scamper

For Automotive Wheeled Land Vehicle—Namely, Light-Duty Trucks and Small Passenger Cars.
First use June 11, 1962.

SN 152,632. The Safe-T-Lign Corporation, Bethany, Okla. Filed Sept. 6, 1962.

SAFE-T-LIGN

For Idler Arm Assemblies, Idler Arm Repair Kits, Combination Idler Arm Sleeve Bearings, Idler Arm Brackets Assemblies, Ball Joint Assemblies, Ball Joint Repair Kits, and Ball Joint Adaptor Plate Kits for Automotive Vehicles.
First use Apr. 15, 1957.

SN 153,826. Steed-Pollak Manufacturing Company, Inc., Fitzgerald, Ga. Filed Sept. 24, 1962.

LI'L BEAVER

For Travel, Camping, and Vacation Trailers.
First use Jan. 29, 1962.

SN 158,795. Cooltainer Corporation, Dover, Del. Filed Dec. 10, 1962.

COOLTAINER

For Truck Trailers.
First use Oct. 18, 1962.

SN 161,941. Baldwin-Montrose Chemical Company, Incorporated, Philadelphia, Pa. Filed Feb. 4, 1963.

STARBRITE

For Floor Mats for Automobiles.
First use Nov. 9, 1962.

SN 161,942. Baldwin-Montrose Chemical Company, Incorporated, Philadelphia, Pa. Filed Feb. 4, 1963.

STARFOAM

For Floor Mats for Automobiles.
First use Nov. 9, 1962.

SN 161,943. Baldwin-Montrose Chemical Company, Incorporated, Philadelphia, Pa. Filed Feb. 4, 1963.

PYRON-22

For Floor Mats for Automobiles.
First use Nov. 9, 1962.

SN 164,670. United States Mobile Homes, Inc., Henderson, N.C. Filed Mar. 14, 1963.

PARKWAY

For House Trailers.
First use July 10, 1962.

SN 164,798. Beech Aircraft Corporation, Wichita, Kans. Filed Mar. 18, 1963.

BEECHCRAFT

Owner of Reg. No. 418,379.
For Airplanes and Parts Therefor.
First use Jan. 18, 1963; January 1933 as to "Beechcraft" in lower case lettering.

SN 165,020. Beech Aircraft Corporation, Wichita, Kans. Filed Mar. 20, 1963.

Beechcraft

MUSKETEER

Owner of Reg. No. 418,379.
For Airplanes and Parts Therefor.
First use July 18, 1962.

SN 165,047. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Mar. 20, 1963.

DUPLEX

Owner of Reg. No. 720,682.
For Steel Disk Wheels and Rims for Vehicles.
First use Feb. 22, 1963.

SN 165,496. Century Boat Company, Manistee, Mich. Filed Mar. 27, 1963.

CENTURY

For Skiffs, Runabouts, and Cruisers.
First use Oct. 20, 1949.

Class 20 — Linoleum and Oiled Cloth

SN 156,029. The Ruberoid Co., New York, N.Y. Filed Oct. 26, 1962.

STONEGLOW

For Vinyl-Asbestos Floor Tile.
First use Oct. 5, 1962.

SN 156,929. American Biltrite Rubber Co. Inc., Trenton, N.J. Filed Nov. 9, 1962.

Amtico
TEXTURETTE

Owner of Reg. Nos. 385,013 and 731,771.
For Vinyl Flooring.
First use Mar. 17, 1961.

SN 159,760. Multicolor Gravure Corporation, Florence, Mass. Filed Dec. 26, 1962.

STYLE-TEX

For Decorative Vinyl Wall Covering Comprising Paper or Cloth Laminated or Coated With Plastic.
First use Dec. 4, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 144,234. Compagnie Generale d'Electro-Ceramique, Paris, France. Filed May 10, 1962.

SPIRELEC

Owner of French Reg. No. 479,586, dated Apr. 3, 1959 (Seine); Natl. Inst. No. 123,821.
For Insulators and Insulating Pieces for Lines and Electric as Well as Electronic Apparatus.

SN 144,235. Compagnie Generale d'Electro-Ceramique, Paris, France. Filed May 10, 1962.

DURELCER

Owner of French Reg. No. 444,799, dated July 16, 1954 (Seine); Natl. Inst. No. 39,965.
For Ceramic Materials Having High Mechanical Resistance and Possessing Good Electrical Characteristics Such as Utilized in the Art of Line and Equipment Insulators.

SN 144,728. Ideal Industries, Inc., Sycamore, Ill. Filed May 16, 1962.

THERMO-STRIP

For Electrical Thermal Wire Strippers.
First use Mar. 10, 1961.

SN 145,595. Perfect Automatic Egg-Timer and Manufacturing Company, Chicago, Ill. Filed May 28, 1962.

Perfect AUTOMAT

The word "Automatic" is disclaimed apart from the mark as shown. Owner of Reg. No. 397,383.
For Automatic Time-Controlled Egg Boilers.
First use on or about Jan. 1, 1917.

SN 146,015. Cerametal Industries Limited, Streetsville, Ontario, Canada. Filed June 4, 1962.

ELECTRAMIC

Owner of Canadian Reg. No. 116,471, dated Dec. 31, 1959.
For Radiant Glass Spaceheaters, Radiant Ceramic Spaceheaters, Electric Heating Elements—Namely, Electrical Resistant Circuits Embedded in Porcelain Cement Secured to Heat Emissive Surfaces.

SN 146,336. United Co-Operatives, Inc., Alliance, Ohio. Filed June 6, 1962.

IMPERIAL

For Electric Fence Controllers.
First use on or about Apr. 3, 1958.

SN 146,486. Infrared Industries, Inc., Waltham, Mass. Filed June 8, 1962.

INFRA-EYE

For Electromagnetic Detector Apparatus—Namely, Electromagnetic Radiation Detectors and Cells; Amplifiers, Including Solid-State Relay Devices; Switches; and Housings for the Same.
First use in or about April 1961.

SN 146,487. Infrared Industries, Inc., Waltham, Mass. Filed June 8, 1962.

INFRASCAN

For Electromagnetic-Radiation Detection and Control Apparatus, Including Detectors, Amplifiers and Associated Optical Equipment and Housings for the Same.
First use in or about January 1961.

SN 146,953. Zenith Radio Corporation, Chicago, Ill. Filed June 14, 1962.

ZENITH

For Electron Beam Parametric Amplifiers.
First use at least as early as Apr. 3, 1962.

SN 148,351. Avnet Electronics Corp., Westbury, N.Y. Filed July 5, 1962.

AVNET

For Electrical and Electronic Parts and Components Comprising Electrical Connectors, Semiconductors, Capacitors, Transformers, Switches, Relays, Tubes, and Circuit Breakers.
First use Aug. 1, 1958.

SN 148,426. Sanborn Company, Waltham, Mass. Filed July 5, 1962.

fifo

For Electronic Amplifiers.
First use May 10, 1961.

SN 160,142. Stephens Industries, Inc., Kansas City, Mo. Filed Jan. 3, 1963.

TICKET MINDER

For Ticket Collecting Devices for Use With Electrical Cash Registers.
First use Nov. 9, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 141,572. James H. Bridgins, d.b.a. Uncle Jim's Sales Company, Springfield, Pa. Filed Apr. 5, 1962.

UNCLE JIM'S

For Disposable Polyethylene Gloves for Use in Cleaning Big Game Carcasses and Game Fish.
First use Mar. 17, 1962.

SN 142,514. Ideal Toy Corporation, Hollis, N.Y. Filed Apr. 18, 1962.

ROBOT COMMANDO

No claim of exclusive right is made to the word "Robot" for the goods recited except as appears in connection with the mark.
For Motorized Remote Control Mechanical Toy on Wheels Having Movable Arms, Eyes, and a Missile Firing Apparatus.
First use July 6, 1961.

SN 145,866. Margarete Steiff GMBH, Giengen (Brenz), Wurttemberg, Germany. Filed May 31, 1962.

STEIFF

For Toys—Namely, Stuffed Animals, Riding Animals, Caricatures, Character Dolls, Kites, Rockers, Saddles, Skittles, Puppets, Rattles, Balls, Scooters, Balloons, Model Aircraft.
First use 1892; in commerce 1898.

SN 151,452. Wilson Sporting Goods Co., River Grove, Ill. Filed Aug. 17, 1962.

X-31

For Golf Clubs.
First use Oct. 5, 1961.

SN 155,410. Giant Plastics Corp., New York, N.Y. Filed Oct. 18, 1962.

GIANT (P)

For Plastic Toys.
First use Sept. 1, 1962.

SN 155,653. Rotoki Corporation, Livonia, Mich. Filed Oct. 22, 1962.

ROTOKI

For Kites and Parts Thereof.
First use Apr. 2, 1959.
Subj. to Intf. with SN 151,083.

SN 155,976. Donald F. Duncan, Incorporated, Evanston, Ill. Filed Oct. 26, 1962.

IMPERIAL

Owner of Reg. No. 609,514.
For Toy of the Paddle Ball Type.
First use Sept. 24, 1962.

SN 156,908. Sekur-All Corporation, Los Angeles, Calif. Filed Nov. 8, 1962.

SUPER JUNIOR

Owner of Reg. No. 737,331.
For Plastic Roller Skates.
First use on or about Feb. 1, 1962.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 142,856. Precision Flexopress Corporation, Cincinnati, Ohio. Filed Apr. 23, 1962.

PRECISION

For Forming, Shaving, Blanking, Stamping, Punching, and Cutting Presses.
First use on or about Jan. 2, 1952.

SN 147,085. Britt Tech Corporation, Britt, Iowa. Filed June 18, 1962.

KLEEN KING LIQUID BRUSH

For High Pressure Spray Type Liquid Cleaning Machines.
First use September 1960.

SN 147,086. Britt Tech Corporation, Britt, Iowa. Filed June 18, 1962.

LIQUID BRUSH

For High Pressure Spray Type Liquid Cleaning Machines.
First use September 1960.

SN 147,087. Britt Tech Corporation, Britt, Iowa. Filed June 18, 1962.

KLEEN KING

For High Pressure Spray Type Liquid Cleaning Machines.
First use September 1960.

SN 149,131. Stefan Reichsthaler, d.b.a. Audion Elektro, Amsterdam, Netherlands. Filed July 16, 1962.

SEALBOY

Owner of Dutch Reg. No. 131,466, dated July 19, 1958.
For Machines for Sealing Plastic Bags.
First use May 8, 1948; in commerce Aug. 4, 1958.

SN 149,132. Stefan Reichsthaler, d.b.a. Audion Elektro, Amsterdam, Netherlands. Filed July 16, 1962.

SEALMASTER

Owner of Dutch Reg. No. 136,080, dated Jan. 4, 1960.
For Machines for Sealing Plastic Bags.
First use Nov. 27, 1959; in commerce Dec. 11, 1959.

SN 149,766. Powered Pipe, Incorporated, Chicago, Ill. Filed July 25, 1962.

POWERED PIPE

The word "Pipe" is disclaimed apart from the mark as shown without, however, disclaiming any common law rights.
For Equipment for Loading and Unloading Fluids From Ships or the Like.
First use Sept. 18, 1957.

SN 150,376. Walker Manufacturing Company, Racine, Wis. Filed Aug. 1, 1962.

WALKER

For Parts and Accessories for Use on or in Connection With Road Vehicles and Internal Combustion Engines Including Jacks, Lifting Devices, Wheel Dollies, Axle Stands, Axle Supports and Parts Thereof, and Exhaust System Parts Including Mufflers, Tail Pipes, Exhaust Pipes, Tail Pipe Spouts, Exhaust Elbows, Extensions, Deflectors, Clamps, Brackets, Hangers, Bushings, Grommets, and Insulators; and Cold Chisels, Wrenches, and Sump Pumps.
First use 1908 on jacks, lifting devices, wheel dollies, axle stands, axle supports, and parts thereof.

SN 151,254. Railex Corporation, Ozone Park, N.Y. Filed Aug. 15, 1962.

DISPATCHER-MATIC

For Conveyors for Delivering Articles, Especially Articles of Wearing Apparel.
First use Mar. 15, 1962.

SN 152,302. The Harriman Manufacturing Company, Chattanooga, Tenn. Filed Aug. 31, 1962.



Owner of Reg. No. 135,411 and others.
For Agricultural Implements—Namely, Ground Engaging Cultivator Sweeps.
First use July 26, 1962.

SN 152,862. Yxhults Stenhuggeri AB, Hallabrottet, Sweden. Filed Sept. 10, 1962.



Owner of Swedish Reg. No. 103,368, dated July 20, 1962.
For Hand Tools for Treating Wood, Concrete, Lightweight Concrete, and Brick—Namely, Saws, Planers, Axes, Drills, and Scrapers and Groovers for Use in Masonry Work and Wood Working.

SN 154,641. Siemens Electrogeräte Aktiengesellschaft, Munich, Germany. Filed Oct. 5, 1962.



The mark consists of an "SE" monogram. Owner of German Reg. Nos. 269,209, dated Aug. 8, 1921, and 715,739, dated July 11, 1958.
For Juice and Milk Centrifuges, Juice Extractors, Dough Kneaders, Grating and Slicing Devices, Electric Grinders for Coffee, Spice and Food, Electric Meal and Vegetable Cutters, Electric Cleaning and Sanding Machines, Electric Dry Shavers and Electric Heated Calender Rollers.

SN 155,192. Punch-Lok Company, Chicago, Ill. Filed Oct. 15, 1962.

PUNCH-LOK

For Manually-Operated Tools for Applying Clamps to Hoses and Conduits and the Like, Tool Kits and Parts Therefor, Mallets, Clamp Cutters, and Power-Operated Machines for Applying Said Clamps.
First use on or about Oct. 14, 1940.

SN 157,556. Riccar Sewing Machine Co. Ltd., Kanda, Chiyoda-ku, Tokyo, Japan. Filed Nov. 19, 1962.



For Sewing Machines, Sewing Machine Component Parts, Sewing Machine Cabinets and Tables, Sewing Machine Portable Carrying Cases.
First use at least as early as July 26, 1949; in commerce at least as early as October 1960.

SN 157,578. Top Sewing Supply Corporation, New York, N.Y. Filed Nov. 19, 1962.

TOP

For Bobbins, Hooks, and Cases for Sewing Machines.
First use Oct. 15, 1962.

SN 157,579. Unity Machine and Tool Corp., Philadelphia, Pa. Filed Nov. 19, 1962.

UNITY

For Industrial and Family Sewing Machine Parts Including Presser Feet, Bobbin Cases, Special Attachments, and Accessories.
First use on or about Mar. 1, 1947.

SN 157,638. Outboard Marine Corporation, Waukegan, Ill. Filed Nov. 20, 1962.



For Marine Propulsion Units and Parts and Accessories Therefor.
First use Apr. 25, 1961.

SN 157,722. Oneida Ltd., Oneida, N.Y. Filed Nov. 21, 1962.

SUTTON PLACE

For Stainless Steel Flat Tableware.
First use Oct. 25, 1962.

SN 157,740. The Union Fork and Hoe Company, Columbus, Ohio. Filed Nov. 21, 1962.

RIDGEBACK

Owner of Reg. No. 354,050.
For Hand-Operated Lawn and Garden Tools—Namely, Shovels, Rakes, Forks, Hoes, Hooks, and Cultivators.
First use Oct. 26, 1962.

SN 157,753. The American Well Works, Aurora, Ill. Filed Nov. 23, 1962.

AMWELL

For Tank Mixers for Mixing Dry Materials With Liquid.
First use June 1957.

SN 158,210. Albin Manufacturing Co., Seattle, Wash. Filed Nov. 30, 1962.

RITZ

For Log Handling Machinery, Including Log Grapples and Tag Lines.
First use Apr. 24, 1957.

SN 158,285. The Tait Manufacturing Company, Dayton, Ohio. Filed Nov. 30, 1962.

FALCON

For Deep and Shallow Well Pumps and Parts Therefor.
First use Oct. 31, 1962.

SN 158,317. Brown Machine Company, Beaverton, Mich. Filed Dec. 3, 1962.



For Rotary Vacuum Forming Machines, Forming and Trimming Machines, Temperature Control Units, Polishing Roll Units, Continuous Vacuum Forming Machines, and Accessory Equipment in the Plastics Field.
First use February 1956.

SN 158,389. Sonic Engineering Corporation, Norwalk, Conn. Filed Dec. 3, 1962.

ECONOSONIC

Owner of Reg. No. 678,852.
For Machines for Homogenizing, Emulsifying, Dispersing, Mixing and the Like Utilizing Hydraulically Actuated Vibrating Element.
First use in about May 1959.

SN 158,962. Daffin Corporation, Minneapolis, Minn. Filed Dec. 12, 1962.



For Storage and Conveying Apparatus.
First use August 1962.

SN 158,964. Ex-Cell-O Corporation, Detroit, Mich. Filed Dec. 12, 1962.

FLAME SEAL

For Packaging Equipment Machinery.
First use Sept. 25, 1962.

SN 159,130. Tester Corporation, Iron River, Wis. Filed Dec. 13, 1962.



For Portable Band Saw.
First use Nov. 2, 1962.

SN 159,177. Trico Fuse Mfg. Co., Milwaukee, Wis. Filed Dec. 14, 1962.



Owner of Reg. No. 399,308.
For Lubricating Devices in the Nature of Oil Cups for Machine Bearings.
First use Jan. 14, 1933.

SN 159,382. Cherry-Burrell Corporation, Cedar Rapids, Iowa. Filed Dec. 19, 1962.

ARO-VAC

For Processing Equipment for Vacuum Treatment of Fluid Products.
First use Oct. 26, 1956.

SN 159,780. Sanford Industries, Inc., Pompano Beach, Fla. Filed Dec. 26, 1962.

ROLL-A-MASTER

For Truss Fabricating Machines.
First use Nov. 2, 1962.

SN 160,012. Schmieg Industries, Inc., Detroit, Mich. Filed Dec. 31, 1962.

CENTRI-SWIRL

Owner of Reg. No. 367,948.
For Sewage Treatment Plants.
First use at least as early as December 1962.

SN 160,130. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Jan. 3, 1963.

DIAL-A-POWER

For Electric Drills, Saws, and Sanders.
First use Sept. 24, 1962.

SN 160,655. P & H Tube Corporation, Bossier City, La. Filed Jan. 14, 1963.

ZIPPY

Owner of Reg. No. 654,413.
For Muffler Repair and Replacement Kits, Resonator Pipes, Tail Pipes, Tail Pipe Hangers, Strap Clamps, Pipe Reducers and Connectors, Slip Joints, Elbows, Scavenger Pipes and Parts and Accessories Therefor.
First use January 1959.

SN 160,831. Bolton-Emerson, Inc., Lawrence, Mass. Filed Jan. 17, 1963.

AERO-SWEEP

For Paper Mill Showers.
First use Nov. 28, 1962.

SN 160,832. Bolton-Emerson, Inc., Lawrence, Mass. Filed Jan. 17, 1963.

EMERTUF

For Truncated Conical Refiner Plugs.
First use Jan. 29, 1962.

SN 160,833. Bolton-Emerson, Inc., Lawrence, Mass. Filed Jan. 17, 1963.

HYDRO-TRUSS

For Shell Fillings for Jordan Engines.
First use Oct. 14, 1936.

SN 160,895. Salina Manufacturing Company, Inc., Salina, Kans. Filed Jan. 17, 1963.

For Flour Mill Equipment, Such as Feeders, Conveying Systems and Other Material Handling Accessories.
First use April 1958.

SN 160,896. Salina Manufacturing Company, Inc., Salina, Kans. Filed Jan. 17, 1963.

•AEROLOCK•

For Feeders for Pneumatic Conveyor Systems.
First use August 1962.

SN 160,898. Swisher Mower & Machine Co., Inc., Warrensburg, Mo. Filed Jan. 17, 1963.

Ride King

For Gasoline Powered Lawn Mowers.
First use in May 1956.

SN 161,009. Crescent Dental Manufacturing Company, Chicago, Ill. Filed Jan. 21, 1963.

The Crescent WIG-L-BUG

Owner of Reg. Nos. 379,462 and 739,983.
For Electrically Operated Devices of Varying Sizes Adapted for Use in Mixing, Pulverizing, Grinding, Crushing, Diluting, Blending, Emulsifying and Amalgamating Dry, Liquid Granular, Comminuted, Solid or Semi-Solid Materials, Dental Alloys and Emulsions and Used in Industrial Research, Educational, Metallurgical, Chemical, Dental, Medical and Pharmaceutical Applications, Adapters Used on Said Devices and Comprising Closable Mixing Containers Having Clamping Means Thereon.
First use Dec. 20, 1949.

SN 161,290. Supreme Products Corporation, Chicago, Ill. Filed Jan. 23, 1963.

VERSATAPPER

For Drill Press Attachments.
First use July 15, 1960.

SN 161,563. Saco-Lowell Shops, Chicago, Ill. Filed Jan. 28, 1963.

SPINOMATIC

For Textile Machinery—Namely, Spinning Frames.
First use Nov. 30, 1962.

SN 161,764. Gilson Bros. Co., Plymouth, Wis. Filed Jan. 31, 1963.

CORPORAL

For Rotary Tillers.
First use Feb. 6, 1959.

SN 161,914. Syrall Manufacturing Company, Inc., Syracuse, N.Y. Filed Feb. 1, 1963.

SAMCO

For Machinery—Namely, Bottle and Glass Crushers and Metal Can Squeezers and Crushers.
First use Apr. 28, 1961.

SN 163,409. Royal McBee Corporation, New York, N.Y. Filed Feb. 25, 1963.

EMPEROR

For Typewriting Machines and Parts Thereof.
First use Feb. 14, 1963.

Class 25—Locks and Safes

SN 155,702. Continental Instruments Corporation, Lynbrook, N.Y. Filed Oct. 23, 1962.

CYPHER

For Electric and Electronic Locks and Latching Devices With and Without Associated Alarms.
First use Sept. 22, 1961.

Class 26—Measuring and Scientific Appliances

SN 77,359. Coors Porcelain Company, Golden, Colo. Filed July 9, 1959.

COORS SILLIMANITE (MULLITE)

Applicant disclaims the words "Sillimanite" and "Mullite" apart from the mark as shown. Owner of Reg. Nos. 370,009 and 526,054.
For Laboratory Porcelain Ware Consisting of Refractory Tubes and Vessels, Sampling Tubes, Pyrometer Tubes, Combustion Tubes, Crucibles, Combustion Boats, Evaporating Dishes, Casseroles, and Chemical Porcelain Ware.
First use June 10, 1938.

SN 130,404. American Bosch Arma Corporation, Garden City, N.Y. Filed Oct. 23, 1961.

DigiTracer

For Electrostatic Tape Recorder and Reader.
First use Apr. 26, 1961.

SN 132,577. Omega Dynamics Corporation, Pasadena, Calif. Filed Nov. 22, 1961.

The mark consists of the Greek letter Omega, and the English letter "D."
For Measuring and Scientific Appliances, Including, but not Limited to, Sensors and Gauges for Measuring and/or Detecting Physical Phenomena Such as Pressure, Force, Acceleration, Vibration, and Displacement; Indicators for Converting Responses of Sensors and/or Gauges to Signals Which Are Useful in Reading Out the Magnitude of the Phenomena Measured and/or Detected; Shock Wave Generators; Dead Weight Testers; and Photometers.
First use Mar. 2, 1961, on sensors for measuring pressure.

SN 136,421. Business Research and Engineering Corporation, Ardmore, Pa., assignee of American Research Company, Princeton, N.J. Filed Jan. 24, 1962.

SOURCE PUNCH

Applicant disclaims the word "Punch."
For Data Processing Device To Punch Holes in Tabulating Cards and Card Sets.
First use Apr. 21, 1961.

SN 142,851. Picker X-Ray Corporation Waite Manufacturing Division, Inc., Cleveland, Ohio. Filed Apr. 23, 1962.

FERROSCOPE

For Magnetic Inspection Apparatus for Detecting Defects in Articles.
First use July 15, 1940.

SN 143,155. Mohr Lino-Saw Company, Skokie, Ill. Filed Apr. 26, 1962.

AUTOPOSITOR

For Automatic Positioning Mechanisms for Slug Linecasting Machines.
First use Feb. 19, 1962.

SN 145,866. Margarete Steiff GMBH, Giengen (Brens), Wurttemberg, Germany. Filed May 31, 1962.

STEIFF

For Model Aircraft for Technical Purposes.
First use 1892; in commerce 1898.

SN 149,233. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed July 17, 1962.

STUDIO ONE

For Camera Lights.
First use on or about Oct. 1, 1961.

SN 154,126. The A. Lietz Company, San Francisco, Calif. Filed Sept. 28, 1962.

JUMBO

For Ellipse Templates Used in Technical Illustrating To Show Round Objects in Perspective.
First use Sept. 13, 1962.

SN 154,642. Siemens Electrogeräte Aktiengesellschaft, Munich, Germany. Filed Oct. 5, 1962.

The mark consists of an "SE" monogram. Owner of German Reg. Nos. 269,209, dated Aug. 8, 1921, and 715,739, dated July 11, 1958.
For Thermally Operating Switches and Regulators.

SN 155,049. Crosfield Electronics Limited, London, England. Filed Oct. 12, 1962.

INKATRON

Owner of British Reg. No. 793,490, dated July 20, 1959.
For Apparatus for Use in Measuring the Ink Density of Printed Material and for Automatically Controlling the Supply of Ink in Printing Presses and Parts of the Aforesaid Goods.

SN 158,570. Skasol Incorporated, San Francisco, Calif. Filed Dec. 5, 1962.

CHEMPORTIONER

For Apparatus for Feeding and Measuring Chemicals Used in Water Cooling Systems.
First use May 9, 1962.

Class 27 — Horological Instruments

SN 149,869. People's Jewelry Company, Inc., Toledo, Ohio. Filed July 26, 1962.

HENRI DARREAUX

The name "Henri Darreaux" is fictitious.
For Watches.
First use June 10, 1958.

Class 28 — Jewelry and Precious-Metal Ware

SN 141,534. Lossau & Kramer, Inc., Chicago, Ill. Filed Apr. 4, 1962.

FashionCraft

For Rings, Charm Bracelets, Charms, Pendants, Neck Chains, and Crosses.
First use 1934.

SN 141,659. Joseph Teig, New York, N.Y. Filed Apr. 5, 1962.



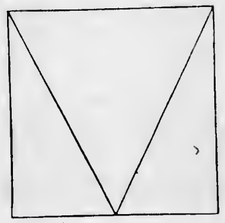
For Gold Rings.
First use Mar. 29, 1962.

SN 142,025. Gordon Erickson Co., Minneapolis, Minn. Filed Apr. 11, 1962.

GE

For Jewelry and Precious-Metal Ware Including Rings, Bracelets, Brooches, and Charms.
First use June 1, 1945.

SN 145,106. Miller and Veit, Inc., New York, N.Y. Filed May 21, 1962.



For Diamond Rings.
First use January 1962.

SN 146,585. College Seal and Crest Company, Cambridge, Mass. Filed June 11, 1962.



For Jewelry and Novelty Items Made Wholly or in Part of, or Plated With, Gold or Silver or Alloys of Gold or Silver—Namely, Rings, Fobs, Charms, Pins, Keys, Badges, Guards, Brooches, Lapel Buttons, Medals and Trophies, Lockets, Bracelets, Compacts, Pendants, Earrings, Neck Chains, Watch Bracelets, Jewel and Pill Boxes, and Letter Openers; Cuff Links, Tie Clips, Tie Tacks, Key Rings and Chains, Buckles; Sterling Silver Flatware and Hollowware, Each With or Without College and School Seals and Crests, Fraternal and Civic Emblems, Fraternity and Sorority Emblems, Military Insignia and Devices, Organizational and Commercial Insignia or Greek Letter Insignia.
First use 1910 on rings, fobs, and charms.

SN 146,857. Isaac Zahler, d.b.a. Original Creations Co., New York, N.Y. Filed June 13, 1962.



The term "14K" is hereby disclaimed.
For Ladies' and Gents' Fine Jewelry, Consisting of Ladies' Charm Bracelets, Watch Bracelets, Chokers; Gents' Watch Attachments With and Without Cases, Key Chains.
First use June 11, 1962.

SN 148,050. Lutz & Weiss G.m.b.H., Pforzheim, Germany. Filed June 29, 1962.



Owner of German Reg. No. 152,686, filed Dec. 18, 1911.
For Bangles, Key Chains, Necklets, Prayer Beads, Bracelets, Jewelry Clips, Jewelry Mountings, Finger Rings, Rosaries, Wristwatch Straps, Novelties, Coasters, Flatware and Hollowware, All Made of Silver.

SN 148,209. Manhattan Platinum Products, Inc., New York, N.Y. Filed July 2, 1962.



For Jewelry—Namely, Pendants, Pins, Bracelets, and Watch Bands.
First use June 27, 1962.

SN 148,334. Speidel Corporation, Providence, R.I. Filed July 3, 1962.

DIAMOND LIL

No claim is made to the word "Diamond" apart from the remainder of the mark.
For Watch Bracelets.
First use May 18, 1962.

SN 148,400. Lutz & Weiss G.m.b.H., Pforzheim, Germany. Filed July 5, 1962.



Owner of German Reg. No. 609,664, dated July 26, 1951.
For Candy and Cereal Dishes, Coasters, Flatware, and Hollowware, All Made of Silver.

SN 148,576. Friedrich Bischoff, Pforzheim, Germany. Filed July 9, 1962.



Owner of German Reg. No. 607,178, dated May 12, 1951.
For Bangles, Brooches, Necklaces, Bracelets, and Clasps for Jewelry.

SN 149,564. Golden Jewels, Ltd., New York, N.Y. Filed July 23, 1962.



For Jewelry for Personal Adornment.
First use June 15, 1962.

SN 149,599. Royal of Pittsburgh, Inc., Pittsburgh, Pa. Filed July 23, 1962.



The term "Originals" is disclaimed. The name "André Pierre" does not identify a particular living individual, and is wholly fictitious.
For Jewelry.
First use June 1962.

SN 155,460. Wefferling Berry & Company, Incorporated, Newark, N.J. Filed Oct. 18, 1962.



For Jewelry—Namely, Finger Rings, Pins, Lapel Buttons, Charms, Cuff Links, Crosses, Neck Chains, Tie Slides, Tie Tacks, Brooches, and Bracelets.
First use 1925 on finger rings, pins, lapel buttons, charms, and cuff links.

Class 30 — Crockery, Earthenware, and Porcelain

SN 114,798. Shenango China, Inc., New Castle, Pa. Filed S.R. Mar. 2, 1961; Am. P.R. Dec. 6, 1961.

APOLLO

For China Dinnerware.
First use Jan. 16, 1958.

SN 134,568. Shenango China, Inc., New Castle, Pa. Filed Dec. 22, 1961.

COUNTRY KITCHEN

For China Dinnerware.
First use Nov. 2, 1961.

Class 31 — Filters and Refrigerators

SN 149,589. Norton Company, Worcester, Mass. Filed July 23, 1962.

ZEOLON

For Crystalline Zeolites Being Molecular Sieves for Catalytic, Ion Exchange and Gas Separation Uses.
First use on or about Mar. 13, 1962.

SN 155,788. Display Fixtures, Inc., St. Paul, Minn. Filed Oct. 24, 1962.

Thermo-Glide

For Refrigerator Display Doors.
First use Sept. 17, 1962.

SN 157,170. Turbomatic, Inc., Minneapolis, Minn. Filed Nov. 13, 1962.

Softo-matic

For Water Conditioning, Purifying, and Softening Apparatus.
First use Oct. 12, 1962.

Class 32 — Furniture and Upholstery

SN 149,400. W. H. Mead, d.b.a. Pressteel Company, El Monte, Calif. Filed July 19, 1962.

Cleanline

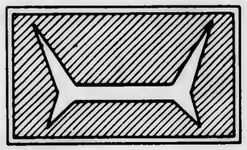
For Work Benches and Laboratory Tables.
First use June 22, 1962.

SN 152,061. The Hill Corporation, Trenton, N.J., assignee of C. V. Hill & Company, Inc., Trenton, N.J. Filed Aug. 28, 1962.

HILL

Owner of Reg. No. 349,479.
For Non-Refrigerated Store Fixtures, Including Shelving, Display Racks, Dump Tables, and Dry Vegetable Stands.
First use June 26, 1962.

SN 152,062. The Hill Corporation, Trenton, N.J., assignee of C. V. Hill & Company, Inc., Trenton, N.J. Filed Aug. 28, 1962.



The drawing is shaded to indicate contrast of appearance between the background and the design and is not intended to indicate any specific color.
For Non-Refrigerated Store Fixtures, Including Shelving, Display Racks, Dump Tables, and Dry Vegetable Stands.
First use June 26, 1962.

SN 156,233. Kenlin Enterprises, Inc., Highland Park, Ill. Filed Oct. 30, 1962.

ADJUSTO-RAIL

For Bed Rail Equipped With Positionable Hooks.
First use Sept. 21, 1962.

SN 166,112. The Mead Corporation, Dayton, Ohio. Filed Apr. 4, 1963.

SPRING-ROLL

Owner of Reg. No. 719,987.
For Flexible Plastic Shelving for Display Purposes, Display Stands, and Merchandisers—Namely, Display Devices in Which the Displayed Items Are Automatically Repositioned or the Supply Thereof Renewed and for Component Parts Thereof.
First use May 18, 1959, on shelving.

SN 166,242. Aireloom Bedding Company, Alhambra, Calif. Filed Apr. 8, 1963.

BRIDAL SUITE

For Mattresses and Box Springs.
First use Feb. 1, 1963.

SN 166,880. Globe Feather & Down Co., Chicago, Ill. Filed Apr. 9, 1963.

ALLER-DOWN

For Pillows.
First use Oct. 24, 1962.

SN 166,588. Eclipse Sleep Products, Inc., Brooklyn, N.Y. Filed Apr. 11, 1963.

UNIQUILT

For Mattresses.
First use Apr. 21, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 103,538. Calumet & Hecla, Inc., Allen Park, Mich. Filed Aug. 29, 1960.

LOKTFIN

For Finned Tubing.
First use July 29, 1960.

SN 103,539. Calumet & Hecla, Inc., Allen Park, Mich. Filed Aug. 29, 1960.

LOKFIN

For Finned Tubing.
First use July 29, 1960.

SN 157,858. G. E. Smith, Inc., Pittsburgh, Pa. Filed Nov. 23, 1962.

DYNA-THERM

For Exothermic Hot Tops, Exothermic Mold Boards, Exothermic Powders, and Hot Topping Compounds.
First use February 1962.

SN 158,788. Radiant Baseboard Panels, Incorporated, Newington, Conn. Filed Dec. 7, 1962.

RADIANT-RAY

Owner of Reg. Nos. 605,274, 723,864, and 725,294.
For Residential and Commercial Boilers and Accessories and Parts Therefor.
First use May 1962.

SN 158,864. Specialloy, Inc., Chicago, Ill. Filed Dec. 10, 1962.

ALU-VERLAY

For Flux Protective Cover for Molten Metallic Bath.
First use Nov. 20, 1962.

SN 159,077. The McKay Company, Pittsburgh, Pa. Filed Dec. 13, 1962.

OCT

For Welding Electrodes.
First use May 28, 1962.

SN 159,157. Framo Electronics, Inc., Red Bank, N.J. Filed Dec. 14, 1962.

mist-Aid

For Steam and Vapor Generators Operated by Electricity.
First use Feb. 15, 1962.

SN 159,440. Union Carbide Corporation, New York, N.Y. Filed Dec. 19, 1962.

MULTIMET

Owner of Reg. No. 423,980.
For Electrodes for Electric Welding.
First use on or about Nov. 27, 1962.

SN 159,575. General Dynamics Corporation, New York, N.Y. Filed Dec. 21, 1962.

STARFIRE

For Oxygen and Acetylene Welding, Cutting, and Brazing Equipment.
First use Dec. 3, 1962.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 160,484. The B. F. Goodrich Company, Akron, Ohio. Filed Jan. 10, 1963.

TWINLINE

For Automobile Tires.
First use Dec. 15, 1962.

SN 161,049. The B. F. Goodrich Company, Akron, Ohio. Filed Jan. 21, 1963.

FLEXSYN

For Tread Compound in New Pneumatic Tires.
First use Jan. 2, 1963.

SN 161,050. The B. F. Goodrich Company, Akron, Ohio. Filed Jan. 21, 1963.

TRAXSYN

For Tread Compound in New Pneumatic Tires.
First use Jan. 2, 1963.

SN 161,051. The B. F. Goodrich Company, Akron, Ohio. Filed Jan. 21, 1963.

PERMAFLEX

For Tread Compound in New Pneumatic Tires.
First use Jan. 2, 1963.

SN 161,052. The B. F. Goodrich Company, Akron, Ohio. Filed Jan. 21, 1963.

DURA-MILE

For Tread Compound in New Pneumatic Tires.
First use Jan. 2, 1963.

Class 36 — Musical Instruments and Supplies

SN 135,150. The Omega Electronics Corporation, Phoenix, Ariz. Filed Jan. 8, 1962.

omega

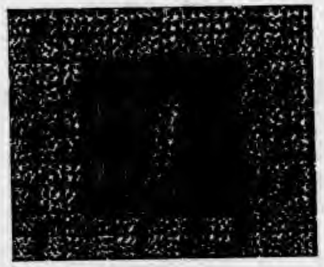
For Stereophonic Audio Amplifiers.
First use Sept. 16, 1961.

SN 135,491. Coral Records, Inc., New York, N.Y. Filed Jan. 10, 1962.

ELECTRO-SONIC

For Mechanically Grooved Phonograph Records.
First use Nov. 27, 1961.

SN 147,909. The Ferrodynamics Corporation, Lodi, N.J. Filed June 28, 1962.



The drawing is lined for red on the wrapper with a background design in yellow on yellow.
For Magnetic Sound Recording Tapes and Films.
First use May 1, 1962.

SN 149,802. Ad Lib Records Inc., New York, N.Y. Filed July 26, 1962.

ROUND SOUND

For Phonograph Records, Record Albums, and Packaged Records.
First use June 18, 1962.

SN 151,341. Lesmann Corporation, West Allis, Wis. Filed Aug. 16, 1962.

LESMANN

For Electronic Musical Instruments Such as Electric Organs, Combination Accordions and Electric Organs and Reverberation Amplifiers.
First use June 22, 1959.

SN 169,679. Aeolian Corporation, East Rochester, N.Y. Filed May 27, 1963.

AMPICO

Owner of Reg. No. 700,535.
For Perforated Music Sheets, Commonly Known as Piano Rolls for Mechanical Player Pianos.
First use on or about Apr. 2, 1963.

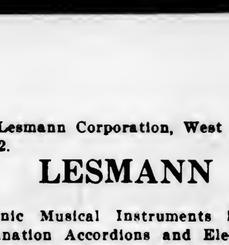
Class 37 — Paper and Stationery

SN 99,787. Reynolds Metals Company, Richmond, Va. Filed June 27, 1960

DESIGNS FOR GIVING

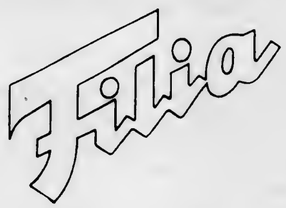
For Decorative Wrapping Material Comprising a Laminate of Paper and Aluminum Foil.
First use on or about Oct. 23, 1958.

SN 119,449. The Executive Desk Diary, Ltd., New York, N.Y. Filed May 4, 1961.



For Desk Diary, Appointment Book, Identification and Place Marker for Books, and the Like.
First use Oct. 15, 1959.

SN 137,690. A/S Filia, Copenhagen, Denmark. Filed Feb. 12, 1962.



Owner of Danish Reg. No. 2028/1961, dated Jan. 27, 1962.
For Crayons and Pastels, Pencils, Pens, Cardboard and Drawing Paper, Painting and Sketch Books.
First use Aug. 1, 1951; in commerce April 1959.

SN 158,455. Kenart Sales Co., New York, N.Y. Filed Dec. 4, 1962.



For Ball Point Pens.
First use Oct. 1, 1959.

SN 165,601. Dan Kasoff Inc., New York, N.Y. Filed Mar. 28, 1963.



For Pens and Pencils, Metal Paper Weights, Combined Pencil and Telephone Dialer, Pencil and Magnifier Made of Non-Precious Metals.
First use Feb. 20, 1956.

Class 38 — Prints and Publications

SN 156,488. David Cole Gordon, New York, N.Y. Filed Nov. 2, 1962.



the
occasional
CRUSADER

For Periodic Publication—Namely, a Pamphlet.
First use Aug. 27, 1962.

SN 159,059. Warner Press, Inc., Anderson, Ind., by change of name from Gospel Trumpet Company, Anderson, Ind. Filed Dec. 13, 1962.

FAITHFUL GREETINGS

For Greeting Cards.
First use Jan. 1, 1957.

SN 159,060. Warner Press, Inc., Anderson, Ind., by change of name from Gospel Trumpet Company, Anderson, Ind. Filed Dec. 13, 1962.

GLAD TIDINGS

For Greeting Cards.
First use Sept. 1, 1957.

SN 159,336. The Committee on Christian Education of the Orthodox Presbyterian Church, Inc., Philadelphia, Pa. Filed Dec. 18, 1962.

THE MARK

For Magazine Published Monthly.
First use Oct. 16, 1962.

SN 159,369. Whitney Communications Corporation, New York, N.Y. Filed Dec. 18, 1962.

ENVIRONMENT

For Magazine.
First use Sept. 21, 1962.

Class 39 — Clothing

SN 123,846. Sport Specialty Shoemakers Company, St. Louis, Mo., by assignment and change of name from Sport Specialty Shoemakers, Inc., St. Louis, Mo. Filed July 12, 1961.



For Women's Shoes.
First use June 8, 1961.

SN 128,365. O'Brien Manufacturing Co., Temple, Tex. Filed Sept. 21, 1961.

SADDLE CHAMP

For Western Styled Trousers for Men and Boys of the Jean Type To Be Made of Cotton Duck, Denim and Other Material Commonly Used in This Type of Trousers.
First use June 29, 1961.

SN 129,885. Silver Knit Hosiery Mills, Inc., High Point, N.C. Filed Oct. 13, 1961.

PIMA PREPSTER

No claim is made to the word "Pima" apart from the mark shown in the drawing.
For Hosiery for Men, Boys, and Women.
First use Aug. 1, 1961.

SN 129,886. Silver Knit Hosiery Mills, Inc., High Point, N.C. Filed Oct. 13, 1961.

PIMA PRO

No claim is made to the word "Pima" apart from the mark shown in the drawing.
For Hosiery for Men and Boys.
First use Oct. 9, 1961.

SN 130,715. Richard B. Mindlin, d.b.a. Coach House, Kansas City, Mo. Filed Oct. 26, 1961.



For Women's and Misses' Clothing—Namely, Skirts, Sweaters, Blouses, Shirts, Dresses, Swim Wear, Shorts, Slacks, Coats, Suits, Rain Wear, Scarves, Collars, Socks, Hosiery, and Belts.
First use Mar. 3, 1955.

SN 132,918. Hat Corporation of America, Norwalk, Conn. Filed Nov. 28, 1961.

HYDROSET

For Men's Hats.
First use Oct. 18, 1961.

SN 133,092. Schiller Bros., Inc., New York, N.Y. Filed Nov. 30, 1961.

PETTI-TWIST

Owner of Reg. No. 686,338.
For Petticoats.
First use Nov. 24, 1961.

SN 138,337. Torch Rubber Company, Inc., New York, N.Y. Filed Feb. 20, 1962.



Owner of Reg. No. 722,616.
For Men's Golf Over-Shoes and Rubbers.
First use Feb. 16, 1962.

SN 139,167. The Villager, Inc., Philadelphia, Pa. Filed Mar. 5, 1962.

PHILADELPHIAN COLLAR

The word "Collar" is disclaimed apart from the mark as shown.
For Collars for Blouses.
First use Dec. 1, 1960.

SN 140,189. Societe A Responsabilite Limitee Dite: Christian Dior, Paris, France. Filed Mar. 19, 1962.

BOHAN

"Bohan" is the name of a designer whose consent to register the mark is of record. Owner of French Reg. No. 497,751, dated July 13, 1961 (Seine); Natl. Inst. No. 168,191.
For Junior Misses', Misses', and Ladies' Coats, Dresses, Gowns for Outerwear, Suits, Jackets, Boleros, Evening Capes, Sport Ensembles Made Up of Blouses, Vests, and Skirts; Shawls and Scarfs; and Sweaters; Coats, Jackets, Capes, Stoles, Scarfs, Muffs and Collars All Made of Fur; Underwear; Stockings; Gloves, Shoes, and Hats for Ladies.

SN 140,814. Arkwright, Incorporated, New York, N.Y. Filed Mar. 27, 1962.

WARWICK

For Men's and Boys' Sweaters, Underwear, Dress Shirts, Pajamas, and Bathing Trunks, and Sport Shirts.
First use Feb. 10, 1954.

SN 141,063. Glamorise Foundations, Inc., New York, N.Y. Filed Mar. 29, 1962.

SINCERELY YOURS

For Girdles, Brassieres, Corsets, and Corselets.
First use June 23, 1961.

SN 141,960. Mabs, Inc., d.b.a. Lancer of California, Los Angeles, Calif. Filed Apr. 10, 1962.

LANCER
CALIFORNIAN

The drawing is lined for gold. No claim is made to the designation "Californian" apart from the mark shown in the drawing. Owner of Reg. No. 583,618.
For Men's and Boys' Dress and Sport Shirts.
First use Apr. 3, 1962.

SN 142,490. Ace Manufacturing Company, Inc., San Antonio, Tex. Filed Apr. 18, 1962.

ACETRONAUT
spAce
cap

No registration rights are claimed for the word "Cap" apart from the mark as shown; however, the applicant waives none of its common law rights in the mark as shown or any feature thereof.
For Caps for Men and Women.
First use Mar. 29, 1962.

SN 142,491. Ace Manufacturing Company, Inc., San Antonio, Tex. Filed Apr. 18, 1962.

ACEtronaut

For Caps for Men and Women.
First use Mar. 29, 1962.

SN 143,250. Maxon Shirt Corporation, Greenville, S.C. Filed Apr. 27, 1962.

YMF
YOUNG MEN'S FASHIONS

No registration rights are claimed for the words "Young Men's Fashions" apart from the mark shown in the drawing.
For Young Men's Shirts.
First use Apr. 2, 1962.

SN 144,823. The Enro Shirt Company, Inc., Louisville, Ky. Filed May 17, 1962.

MERCEDES

For Men's Shirts, Pajamas, Ladies' Blouses.
First use Feb. 15, 1962.

SN 145,410. A. Sagner's Son, Frederick, Md. Filed May 24, 1962.

LADY NORTH

"Lady North" is not known to be the name of any particular living individual. Owner of Reg. Nos. 560,918 and 709,093.
For Ladies' Jackets, Coats, Suits, Slacks.
First use Sept. 30, 1960.

SN 150,015. J. Capps & Sons, Ltd., Jacksonville, Ill. Filed July 30, 1962.

BEECHER HALL

For Men's Suits.
First use July 9, 1962.

SN 151,853. United States Rubber Company, New York, N.Y. Filed Aug. 24, 1962.

RAYNSTER

Owner of Reg. No. 114,398.
For Outer Rainwear and Outer Waterproof Industrial Wearing Apparel.
First use July 13, 1916.

SN 151,929. Thomas La Maida, Inc., Cleveland, Ohio. Filed Aug. 27, 1962.

"CAP OF REMEMBRANCE"

The word "Cap" is disclaimed apart from the mark as shown. Owner of Reg. No. 566,649.
For Graduation Cap.
First use Mar. 3, 1952.

SN 155,654. Rudin & Roth, Inc., New York, N.Y. Filed Oct. 22, 1962.

SWEAT-SHIRT-SOCK

For Socks.
First use Oct. 10, 1962.

SN 155,916. Grey-Wood Knitwear Industries, Inc., New York, N.Y. Filed Oct. 25, 1962.

Grey-Wood

For Women's Sweaters.
First use Sept. 13, 1961.

SN 156,040. Wembley, Inc., New Orleans, La. Filed Oct. 26, 1962.

SUAVAIR

For Sets Consisting of a Necktie, Handkerchief, and Tie Tack.
First use July 15, 1962.

SN 156,260. Avon Shoe Co., Inc., New York, N.Y. Filed Oct. 31, 1962.

HAY-LOWS

Owner of Reg. Nos. 556,671 and 571,010.
For Women's Shoes.
First use Aug. 10, 1962.

SN 156,303. Izod, Ltd., New York, N.Y. Filed Oct. 31, 1962.

CONSCIENCE CORNER

For Men's Clothing Covering Sports Shirts, Slacks, Shorts, Swim Trunks, Socks, Jackets, and Sweaters.
First use Oct. 22, 1962.

SN 157,198. Beebe Rubber Company, Nashua, N.H. Filed Nov. 14, 1962.

BEE CORE

Owner of Reg. Nos. 375,903, 593,285, and others.
For Shoe Heels of Rubber and Rubberous Compositions and Having Embedded Attaching Elements.
First use on or about May 11, 1962.

SN 157,597. Joe Brand, Inc., Laredo, Tex. Filed Nov. 20, 1962.

BRANTON Shop

For Men's and Boys' Wearing Apparel—Namely, Suits, Sport Coats, Slacks, Top Coats, Vests, Jackets, Dress Shirts, Sport Shirts, and Neckties.
First use Aug. 8, 1962.

SN 157,605. Davidson-Bigelow, Incorporated, New York, N.Y. Filed Nov. 20, 1962.

SNEAKER PALS

For Hosiery for Children.
First use Sept. 26, 1962.

SN 157,657. Washington Manufacturing Company, Inc., Nashville, Tenn. Filed Nov. 20, 1962.

GOLD STAR

Owner of Reg. No. 236,936.
For Men's and Boys' Shirts, Shorts, Pants, Slacks, Pajamas, Overalls, Dungarees, Coats and Jackets; Ladies' and Girls' Skirts, Blouses, Jackets, Dungarees, Shorts, Pants and Slacks.
First use September 1926.

SN 157,874. Aileen, Inc., New York, N.Y. Filed Nov. 26, 1962.

aileen
girl

The drawing is lined for red and gray. Owner of Reg. No. 651,225.
For Misses', Junior Misses', Girls', and Infants' Sports Wear—Namely, Shorts, Pants, Shirts, Dresses, Blouse Tops, Jackets, Sweaters, Slacks, Blouses, and Beach Wear.
First use Aug. 27, 1962.

SN 158,849. Oneita Knitting Mills, New York, N.Y. Filed Dec. 10, 1962.

ROYAL KLAD

For Underwear.
First use Dec. 5, 1960.

SN 159,123. Fred Segal, d.b.a. Fred Segal Men's Store, Los Angeles, Calif. Filed Dec. 13, 1962.



For Men's Trousers.
First use September 1962.

SN 161,888. Kroywen Coats, Inc., New York, N.Y. Filed Feb. 1, 1963.

Kroywen

Owner of Reg. No. 396,682.
For Ladies' and Misses' Coats, Suits, and Jackets.
First use Dec. 19, 1941.

SN 161,907. Samuel Solomon, Inc., Brooklyn, N.Y. Filed Feb. 1, 1963.

FLY-ETT

For Wearing Apparel—Namely, Coats.
First use Jan. 3, 1963.

SN 162,533. Carlyle Shirt Co., Inc., New York, N.Y. Filed Feb. 12, 1963.

CARNELLA

For Men's and Boys' Shirts.
First use Feb. 1, 1963.

SN 162,534. Childers Hosiery Mill, Inc., Hildebran, N.C. Filed Feb. 12, 1963.

FOLK DANCE

For Hosiery.
First use Feb. 11, 1963.

SN 162,665. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

DOLCETA

Priority claimed under Sec. 44(d) on French Reg. No. 508,296, dated Oct. 11, 1962 (Paris); Natl. Inst. No. 192,862.
For Clothing for Men, Women, and Children—Namely, Robes, Two-Piece Suits, Coats, Underwear, Cardigans, Vests, and Waist Coats, Including Boots, Shoes, and Slippers.

SN 162,668. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

Dolceta

Priority claimed under Sec. 44(d) on French Reg. No. 508,297, dated Oct. 11, 1962 (Paris); Natl. Inst. No. 192,863.
For Clothing for Men, Women, and Children—Namely, Robes, Two-Piece Suits, Coats, Underwear, Cardigans, Vests, and Waist Coats, Including Boots, Shoes, and Slippers.

SN 162,731. Freeman Shoe Corporation, d.b.a. Freeman Shoe Corp., Beloit, Wis. Filed Feb. 14, 1963.

FREEMAN Preps

Owner of Reg. Nos. 296,637, 723,143, and others.
For Men's Shoes Constructed of Leather, Rubber, Fabric or Combinations Thereof.
First use on or about Sept. 8, 1962.

SN 162,989. Southland Manufacturing Co., Inc., Wilmington, N.C. Filed Feb. 18, 1963.

Southport

Owner of Reg. No. 401,666.
For Men's and Boys' Outer Shirts, Pajamas, Underwear, and Shorts.
First use 1931.

SN 163,172. R.F.R. Associates, Inc., New York, N.Y. Filed Feb. 20, 1963.

CRAZY HORSE

For Ladies' Outerwear—Namely, Sweaters, Shirts, Blouses, Jackets, Two Piece Suits, Dresses, Pants, Shorts, Skirts, and Culottes.
First use Feb. 8, 1963.

SN 163,208. Amway Sales Corporation, Ada, Mich. Filed Feb. 21, 1963.

TABLEAU

For Clothing—Namely, Hosiery.
First use on or about Feb. 13, 1963.

SN 163,236. Joseph W. Henschel, d.b.a. Henschel Manufacturing Company, St. Louis, Mo. Filed Feb. 21, 1963.

GAME HUNTER

For Men's and Boys' Hats and Caps.
First use Jan. 29, 1963.

SN 163,272. Frank Plastino, d.b.a. Frank's Hat Co., New York, N.Y. Filed Feb. 21, 1963.

SPORT GUARD

For Head Protecting Head Gear, Including a Removable Head Protecting Shell and for the Shell.
First use on or about Mar. 19, 1962.

SN 163,590. Thomson Company, Thomson, Ga. Filed Feb. 27, 1963.

SLATS

For Men's Slacks.
First use Feb. 19, 1963.

SN 163,618. Edison Brothers Stores Inc., St. Louis, Mo. Filed Feb. 28, 1963.

FOOTWISERS

For Women's Shoes.
First use Feb. 18, 1963.

SN 163,658. Penobscot Shoe Company, Boston, Mass. Filed Feb. 28, 1963.

UNIMOC

For Moccasins.
First use Feb. 22, 1963.

SN 163,940. Garan, Incorporated, New York, N.Y. Filed Mar. 5, 1963.

HILLSDALE

For Men's and Boys' Sportshirts.
First use Feb. 1, 1963.

SN 163,945. Hygrade Mfg. Corp., New York, N.Y. Filed Mar. 5, 1963.

OVERBROOK

For Raincoats, Topcoats, Suburban Coats, Jackets, Parkas, and Pants and Trousers.
First use Jan. 10, 1963.

SN 163,946. Hygrade Mfg. Corp., New York, N.Y. Filed Mar. 5, 1963.

CHANNEL CROSSING

For Raincoats, Topcoats, Suburban Coats, Jackets, Parkas, and Pants and Trousers.
First use Jan. 10, 1963.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 148,485. Deering Milliken, Inc., New York, N.Y. Filed July 6, 1962.

TORERO

For Textile Fabrics Made of Wool, Cotton, and Synthetic Fibers and Combinations Thereof.
First use June 9, 1962.

SN 152,696. William Heller, Inc., New York, N.Y. Filed Sept. 7, 1962.

COTTONELLA

For Cotton Knit Piece Goods or Fabric.
First use Aug. 29, 1962.

SN 155,445. Societe Rhodiaceta, Paris, France. Filed Oct. 18, 1962.

DROPGAL

Owner of French Reg. No. 488,886, dated May 25, 1960 (Paris); Natl. Inst. No. 145,163.
For Textile Fabrics Used for Making Dresses, Robes, Suits, Coats, Underwear, Shirts, and the Like, and Bed and Table Covers.

SN 157,048. Beaunit Corporation, New York, N.Y. Filed Nov. 13, 1962.

Beau sure
THE INSURED NYLON TRICOT

No claim is made to the words "Nylon Tricot" apart from the mark as shown. Owner of Reg. Nos. 407,099, 706,378, and others.
For Tricot Fabrics Containing Substantial Amounts of Nylon.
First use on or about Sept. 26, 1962.

SN 158,457. M. Lowenstein & Sons, Inc., New York, N.Y. Filed Dec. 4, 1962.

PLUIE DE PARIS

"Pluie de Paris" in English means "Paris rain."
For Textile Piece Goods of Cotton and Synthetic Fibres and Mixtures Thereof for Making Articles of Wearing Apparel, Including Blouses, Dresses, Shirts, Skirts, and the Like.
First use Oct. 3, 1962.

SN 162,386. Wall Trends, Inc., Brooklyn, N.Y. Filed Feb. 8, 1963.

SCENE-O-RAMA

For Decorative Wall Coverings Consisting of Strips or Panels of Printed Canvas Cloth.
First use July 1956.

SN 162,526. Bayside Net & Twine Co., Inc., Port Isabel, Tex. Filed Feb. 12, 1963.

NYTEX

For Fish Netting Made From Cotton and Other Natural and Synthetic Yarns.
First use May 7, 1962.

SN 162,543. Elias Wilf Corporation, Baltimore, Md. Filed Feb. 12, 1963.

ROOM-MATES

For Draperies, Bedspreads, and Slipcovers.
First use Oct. 5, 1962.

SN 162,624. Samuel Bauer & Sons, Inc., New York, N.Y. Filed Feb. 13, 1963.

SEW-BEST

For Fabrics in the Piece Made of Cotton, Silk, Wool, and Synthetic Fibers and Blends Thereof.
First use June 1935.

SN 162,636. Fieldcrest Mills, Inc., Spray, N.C. Filed Feb. 13, 1963.

Sultana

For Textile Rugs and Carpeting.
First use Jan. 24, 1963.

SN 162,652. J. J. Newberry Co., New York, N.Y. Filed Feb. 13, 1963.

LADY SUZAN

For Towels and Wash Cloths, Sheets and Pillow Cases, Pillow Ticks, Pillow Covers, Mattress Covers, and Pads and Blankets.
First use Nov. 16, 1962.

SN 162,672. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

RHONELLA

Priority claimed under Sec. 44(d) on French Reg. No. 509,322, dated Nov. 22, 1962 (Paris); Natl. Inst. No. 195,124.
For Textile Fabrics of Synthetic Fibers in the Piece.

SN 162,675. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

RHONELLO

Priority claimed under Sec. 44(d) on French Reg. No. 509,323, dated Nov. 22, 1962 (Paris); Natl. Inst. No. 195,125.
For Textile Fabrics of Synthetic Fibers in the Piece.

SN 162,678. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

RHONELLY

Priority claimed under Sec. 44(d) on French Reg. No. 509,324, dated Nov. 22, 1962 (Paris); Natl. Inst. No. 195,126.
For Textile Fabrics of Synthetic Fibers in the Piece.

Class 43 — Thread and Yarn

SN 162,430. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 11, 1963.

SLR

For Synthetic Yarn.
First use Dec. 13, 1962.

SN 162,667. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

DOLCETA

Priority claimed under Sec. 44(d) on French Reg. No. 508,296, dated Oct. 11, 1962 (Paris); Natl. Inst. No. 192,862.
For Threads and Yarns of Synthetic Fibers.

SN 162,670. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.



Priority claimed under Sec. 44(d) on French Reg. No. 508,297, dated Oct. 11, 1962 (Paris); Natl. Inst. No. 192,863.
For Threads and Yarns of Synthetic Fibers.

SN 162,673. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

RHONELLA

Priority claimed under Sec. 44(d) on French Reg. No. 509,322, dated Nov. 22, 1962 (Paris); Natl. Inst. No. 195,124.
For Threads and Yarns of Synthetic Fibers.

SN 162,676. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

RHONELLO

Priority claimed under Sec. 44(d) on French Reg. No. 509,323, dated Nov. 22, 1962 (Paris); Natl. Inst. No. 195,125.
For Threads and Yarns of Synthetic Fibers.

SN 162,679. Societe Rhodiaceta, Paris, France. Filed Feb. 13, 1963.

RHONELLY

Priority claimed under Sec. 44(d) on French Reg. No. 509,324, dated Nov. 22, 1962 (Paris); Natl. Inst. No. 195,126.
For Threads and Yarns of Synthetic Fibers.

Class 44 — Dental, Medical, and Surgical Appliances

SN 134,662. Nedmac, Inc., Minneapolis, Minn. Filed Dec. 26, 1961.

AMPLATZ

For Injectors for Use With X-Ray and Other Radiological Equipment.
First use Nov. 1, 1960.

SN 136,094. Weleda A.G. (Weleda Co. Ltd.), Arlesheim, Switzerland. Filed Jan. 18, 1962.

WELEDA

Priority claimed under Sec. 44(d) on Swiss Reg. No. 188,337, dated Oct. 16, 1961. Owner of U.S. Reg. No. 205,563.
For Instruments and Apparatus for Physical Therapy—Namely, Magneto-Therapy and Colour-Therapy.

SN 149,031. A.T.I. Industries, Los Angeles, Calif. Filed July 16, 1962.

ADVANCE TRENDS

For Medical and Dental Instrument Cleaners of the Type Employing Ultrasonically Agitated Fluid Baths and Medical Therapy Apparatus of the Type Employing Ultrasonic and Electrical Stimulation.
First use June 28, 1961.

SN 157,590. The Birtcher Corporation, Los Angeles, Calif. Filed Oct. 17, 1962.



For Medical Equipment—Namely, Electro Surgical Devices, Ultrasonic Therapy Units, Short Wave Diathermy Units, and Electrocardiographs.
First use Nov. 21, 1957, on ultrasonic therapy units.

SN 165,903. Creative Craft Co., Inc., Dania, Fla. Filed Apr. 2, 1963.

BOT-L-STA

For Baby Bottle Holder.
First use July 20, 1962.

SN 166,205. Magnetic Medical & Dental Products, Inc., Boston, Mass. Filed Apr. 5, 1963.

TEXT BOOK

For Hypodermic Needles.
First use Mar. 27, 1963.

SN 166,206. Magnetic Medical & Dental Products, Inc., Boston, Mass. Filed Apr. 5, 1963.

RAPID SORB

For Hypodermic Needles.
First use Mar. 27, 1963.

SN 166,611. Henry P. Boos Dental Laboratories, Inc., Minneapolis, Minn. Filed Apr. 12, 1963.

DUPLI-DENT

For Dentures.
First use Mar. 27, 1963.

SN 166,632. Florida Manufacturing Corporation, Daytona Beach, Fla. Filed Apr. 12, 1963.

DISKARDS

For Disposable Cervical Traction Halters.
First use Sept. 13, 1961.

SN 166,678. The Wooster Brush Company, Wooster, Ohio. Filed Apr. 12, 1963.

MAGIKOMFORT

For Bed Pads.
First use Mar. 22, 1963.

SN 167,085. Barnes-Hind Barium Products Co., Sunnyvale, Calif. Filed Apr. 15, 1963.

Pneumocolon

For Bottle Syringe Assembly for Rectal Administration of Barium or Air Enema.
First use December 1953.

SN 167,248. Ethicon, Inc., Somerville, N.J. Filed Apr. 22, 1963.

MERSILENE

Owner of Reg. Nos. 676,512, 679,695, and 679,696.
For Sutures and Ligatures.
First use Mar. 11, 1963.

SN 167,521. C. R. Bard, Inc., Murray Hill, N.J. Filed Apr. 25, 1963.

BARDEXPAK

Owner of Reg. Nos. 543,922 and 746,727.
For Set of Items Required for Catheterization, Comprising a Catheter, a Drainage Tube and a Drainage Bag, Preassembled and Ready for Use, Together With an Underpad, Towel, Gloves, Rayon Balls, Cleansing Solution, Syringe, Water Packet, and a Tube of Lubricating Aseptic Jelly.
First use Nov. 7, 1962.

SN 167,550. Interstate Prosthetics Corp., New York, N.Y. Filed Apr. 25, 1963.

TUFLON

For Denture Resin and Dentures.
First use Mar. 28, 1963.

Class 45 — Soft Drinks and Carbonated Waters

SN 159,267. National Nugrape Company, Atlanta, Ga. Filed Dec. 17, 1962.

LIMIT-CAL

For Soft Drinks and Extracts, Concentrates, and Syrups for Making the Same.
First use Nov. 28, 1962.

SN 159,268. National Nugrape Company, Atlanta, Ga. Filed Dec. 17, 1962.

SLIM'R

For Soft Drinks and Extracts, Concentrates, and Syrups for Making the Same.
First use Nov. 28, 1962.

SN 159,269. National Nugrape Company, Atlanta, Ga. Filed Dec. 17, 1962.

TRACE-CAL

For Soft Drinks and Extracts, Concentrates, and Syrups for Making the Same.
First use Nov. 28, 1962.

Class 46 — Foods and Ingredients of Foods

SN 130,913. Kentucky Fried Chicken, Inc., Shelbyville, Ky. Filed Oct. 30, 1961.

"it's finger lickin' good"

For Freshly Prepared Chicken and Gravy Packaged and Sold in Retail Trade.
First use April 1952.

SN 146,305. National Dairy Products Corporation, Chicago, Ill. Filed June 6, 1962.

CALORIE WISE

For Jelly, Cheese, and Salad Dressing.
First use Mar. 26, 1962.

SN 150,028. Diamond Crystal Salt Company, St. Clair, Mich. Filed July 30, 1962.

HI-SIX

For Salt for Mixing With Animal Feeds.
First use Aug. 21, 1961.
Subj. to Intf. with SN 154,875.

SN 155,298. Carnation Company, Los Angeles, Calif. Filed Oct. 17, 1962.

CALICO COW

For Non-Carbonated Flavored Milk Drink.
First use Sept. 21, 1962.

SN 155,523. The Procter & Gamble Company, Cincinnati, Ohio. Filed Oct. 19, 1962.

PG-7N

For Vegetable-Derived Shortening.
First use Sept. 5, 1962.

SN 156,218. Calvert, Vavasseur and Company, Inc., New York, N.Y. Filed Oct. 30, 1962.

FLAVOR PRIDE

The term "Flavor" is disclaimed apart from the mark.
For Canned Mushrooms.
First use Oct. 17, 1962.

SN 159,824. Just Born Incorporated, Bethlehem, Pa. Filed Dec. 27, 1962.

HOT TAMALES

For Cinnamon Flavor Candies in Boxes.
First use February 1950.

SN 160,091. J. L. & Paul Burnett, Spartanburg, S.C. Filed Jan. 3, 1963.

PICK O DIXIE

For Fresh and Canned Peaches.
First use June 18, 1962.

SN 163,308. The Arkansas Rice Growers Cooperative Association, Stuttgart, Ark. Filed Feb. 25, 1963.

VELLY NICE

For Rice.
First use June 1, 1960.

SN 163,356. Golden Grain Macaroni Co., San Leandro, Calif. Filed Feb. 25, 1963.

SAFF-A-RONI

Owner of Reg. Nos. 684,182, 739,479, and others.
For Mushroom Sauce and Spaghetti Sauce.
First use Jan. 22, 1963.

SN 163,442. William Underwood Company, Watertown, Mass. Filed Feb. 25, 1963.

UNDERWOOD

Owner of Reg. Nos. 44,765, 691,019, and others.
For Canned Foods—Namely, Deviled Ham, Clams, Sardines, Clam Chowder, and Meat Spread and Canned and Bottled Clam Juice.
First use Apr. 2, 1959, on deviled ham; at least the year 1867 as to a "representation of a devil," pictured in various forms; June 1, 1937, as to the word "Underwood" and representation of a devil, in a different form, on deviled ham.

SN 163,548. Hygrade Food Products Corporation, Detroit, Mich. Filed Feb. 27, 1963.

GRIDIRON

For Frankfurters.
First use July 1962.

SN 163,552. Hygrade Food Products Corporation, Detroit, Mich. Filed Feb. 27, 1963.

BASEBALL

For Frankfurters.
First use July 1962.

SN 163,553. Hygrade Food Products Corporation, Detroit, Mich. Filed Feb. 27, 1963.

FOOTBALL

For Frankfurters.
First use July 1962.

SN 163,641. Mars, Incorporated, Chicago, Ill. Filed Feb. 28, 1963.

KID STUFF

For Candy.
First use Feb. 4, 1963.

SN 163,677. Universal Foods Corporation, Milwaukee, Wis. Filed Feb. 28, 1963.



For Soup Bases.
First use Feb. 15, 1963.

SN 163,678. Universal Foods Corporation, Milwaukee, Wis. Filed Feb. 28, 1963.



For Soup Bases.
First use Feb. 15, 1963.

SN 163,724. Garden Farms, Inc., Las Vegas, Nev. Filed Mar. 1, 1963.

VADAN

For Fresh Vegetables.
First use Jan. 21, 1963.

SN 163,727. Garden Farms, Inc., Las Vegas, Nev. Filed Mar. 1, 1963.

VEGAN

For Fresh Vegetables.
First use Jan. 21, 1963.

SN 163,729. Industrial Abastos, S.A. de C.V. y P.E., Mexico City, Mexico. Filed Mar. 1, 1963.

IDA

For Canned Meats.
First use May 10, 1961; in commerce May 10, 1961.

Class 47 — Wines

SN 130,904. Great Lakes Wine Company, Chicago, Ill. Filed Oct. 30, 1961.

DOMINA

The Latin word "Domina" is properly translated to be "mistress," "wife," and figuratively speaking, "lady."
For Wine.
First use Jan. 26, 1961.

SN 146,486. The Westminster Corporation, Long Island City, N.Y. Filed June 7, 1962.

MINT-HAGG

The Dutch word "Haag" signifies "hedge."
For Fruitwine Specialty.
First use Apr. 28, 1962.

Class 49 — Distilled Alcoholic Liquors

SN 137,975. The British Columbia Distillery Company Limited, New Westminster, British Columbia, Canada. Filed Feb. 15, 1962.

FIVE SCOTS

Owner of Canadian Reg. No. 177, dated Feb. 11, 1926.
For Scotch Whisky.

SN 149,845. The Viking Distillery, Inc., Albany, Ga. Filed July 18, 1962.

PETER MOSKA

The name "Peter Moska" is a fictitious one.
For Vodka.
First use June 22, 1962.

SN 157,151. Schenley Distillers, Inc., d.b.a. Scottish Imports Company, New York, N.Y. Filed Nov. 13, 1962.

SQUARE RIGGER

For Scotch Whisky.
First use Aug. 31, 1962.

SN 157,512. E. Isolabella & Figlio S.p.A., Milan, Italy. Filed Nov. 19, 1962.

ISOLABELLA

Owner of U.S. Reg. Nos. 313,346, 412,316, and 667,184.
For Dessert Liqueurs.
First use in the year 1870; in commerce in the year 1937.

Class 50 — Merchandise Not Otherwise Classified

SN 145,866. Margarete Steiff GMBH, Giengen (Brenz), Wurttemberg, Germany. Filed May 31, 1962.

STEIFF

For Balloons for Advertising and Decorative Purposes.
First use 1892; in commerce 1898.

Class 51 — Cosmetics and Toilet Preparations

SN 127,955. Helena Rubinstein, Inc., New York, N.Y. Filed Sept. 15, 1961.

STIMULOTION

For Facial Mask.
First use Apr. 13, 1961.

SN 152,235. The Noxzema Chemical Company, Baltimore, Md. Filed Aug. 30, 1962.

SOMETHING SPECIAL

For Incidentally Medicated Baby Skin Lotion.
First use Aug. 20, 1962.

SN 152,236. The Noxzema Chemical Company, Baltimore, Md. Filed Aug. 30, 1962.

TIME FOR A CHANGE

For Incidentally Medicated Baby Skin Lotion.
First use Aug. 20, 1962.

SN 152,430. The Noxzema Chemical Company, Baltimore, Md. Filed Sept. 4, 1962.

COVER-MATIC

Owner of Reg. Nos. 404,783, 732,564, and others.
For Pigmented Cream Make-Up.
First use Aug. 17, 1962.

SN 152,431. The Noxzema Chemical Company, Baltimore, Md. Filed Sept. 4, 1962.

COVER-MAGIC

Owner of Reg. Nos. 404,783, 732,564, and others.
For Pigmented Cream Make-Up.
First use Aug. 17, 1962.

SN 152,432. The Noxzema Chemical Company, Baltimore, Md. Filed Sept. 4, 1962.

COVER-MEDIC

Owner of Reg. Nos. 404,783, 732,564, and others.
For Pigmented Cream Make-Up.
First use Aug. 17, 1962.

SN 157,506. The House for Men, Inc., d.b.a. Treasure Island Sales Company, Chicago, Ill. Filed Nov. 19, 1962.

HIS KUDOS

A translation of "Kudos" is "reputation" or "popularity."
Owner of Reg. Nos. 374,854, 672,292, and others.
For Bay Rum.
First use Sept. 1, 1962.

SN 157,788. Robert Alan Franklyn, d.b.a. Robaire Alain, Los Angeles, Calif. Filed Nov. 23, 1962.

JAGUAR

For Perfume and Toilet Water.
First use Nov. 1, 1962.

SN 161,187. Maradel Products, Inc., New York, N.Y. Filed Jan. 22, 1963.

SECOND CHANCE

For Face Creams, Perfume, and Toilet Water.
First use Jan. 7, 1963.

SN 161,891. Lever Brothers Company, New York, N.Y. Filed Feb. 1, 1963.

CARESS

Owner of Reg. Nos. 299,190, 738,793, and others.
For Hand Cream.
First use Oct. 4, 1962.

Class 52 — Detergents and Soaps

SN 132,127. Colgate-Palmolive Company, New York, N.Y. Filed Nov. 16, 1961.

SOAKY

For Children's Fun Bath Having Cleaning Action.
First use Oct. 6, 1961.

SN 143,082. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 25, 1962.

COMMAND

For Liquid Food Grade Acid Cleaner for Dairies, Dairy Farms, Food Plants, Restaurants, Institutions and the Like.
First use Oct. 6, 1961.

SN 155,339. The Procter & Gamble Company, Cincinnati, Ohio. Filed Oct. 17, 1962.

THRILL

Owner of Reg. No. 364,104.
For Sudsing Cleaner, Cleanser, and Detergent, Intended Primarily for Dishwashing.
First use 1934.

SN 155,542. The A. L. Wilson Chemical Company, Kearny, N.J. Filed Oct. 19, 1962.

BonGo

Owner of Reg. Nos. 585,488, 590,427, and 592,035.
For Cleaning Preparation—Namely, a Stain Remover.
First use Sept. 13, 1962.

SN 156,784. Renard A. Pelloni, d.b.a. 3–R Products Co., Valley Stream, N.Y. Filed Oct. 24, 1962.

3-R

For Jewelry and Cultured Pearl Cleaner.
First use Sept. 10, 1962.

SN 161,143. Beau Peep Products, Inc., Danvers, Mass. Filed Jan. 22, 1963.

BEAU PEEP

Owner of Reg. No. 335,303.
For Shoe Cleaner.
First use Dec. 6, 1934.

SN 162,210. Von Schrader Manufacturing Company, Racine, Wis. Filed Feb. 6, 1963.

MAIN-TEEN

Owner of Reg. No. 399,488.
For Dry Cleaning Powder for Rugs.
First use Jan. 28, 1942.

SN 162,498. Simoniz Company, Chicago, Ill. Filed Feb. 4, 1963.

ONE SHOT

For Drain Cleaner.
First use Dec. 18, 1962.

SN 162,865. Purex Corporation, Ltd., Wilmington, Calif. Filed Feb. 15, 1963.

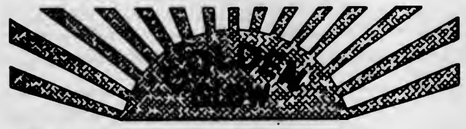
BORZIN

Owner of Reg. No. 403,247.
For Cleaning Compound for the Industrial Cleaning of Metals.
First use in or about August 1939.

SERVICE MARKS

Class 100 — Miscellaneous

SN 120,100. J & J Oven Company, Inc., Philadelphia, Pa. Filed May 16, 1961.



The drawing is lined for orange.
For Retail Pretzel Stand and/or Shop Services.
First use Nov. 20, 1960.

Class 101 — Advertising and Business

SN 147,921. Irwin Green, Brooklyn, N.Y. Filed June 28, 1962.

WALKAD

For Advertising the Goods of Others by Means of Outdoor Advertising Signs.
First use on or about May 17, 1962.

Class 102 — Insurance and Financial

SN 113,250. Pearle Johnson Trentman, Fort Worth, Tex., assignee of Harry C. Trentman, Fort Worth, Tex. Filed Feb. 7, 1961.



For Real Estate Brokerage Services.
First use Jan. 1, 1912.

SN 113,755. National College Program, Inc., New York, N.Y. Filed Feb. 15, 1961.

Y.E.S.

For Promoting Business for Client Banks by Aiding Them To Popularize a Particular Type of Insured Savings Account Service Directed to Parents Saving for Their Children's College Education.
First use Sept. 19, 1960.

SN 156,717. Central American Life Insurance Company, Lubbock, Tex. Filed Nov. 6, 1962.



For Underwriting Insurance.
First use Sept. 6, 1962.

SN 157,547. The W. J. Perryman & Company, Incorporated, Birmingham, Ala. Filed Nov. 19, 1962.



For Computing the Insurance Needs of Others, Such Computations Being Based on Confidential Financial Information Being Submitted by the Client.
First use June 6, 1962.

Class 103 — Construction and Repair

SN 142,162. Watson-Rooter Corporation of America, Van Nuys, Calif. Filed Apr. 12, 1962.



The words "Electric Sewer Clean" are disclaimed apart from the mark.
For Cleaning of, and Removal of Blockage in, Sewer Lines.
First use Mar. 24, 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

754,814. COLORADO CARNATIONS AND DESIGN. Colorado Flower Growers Association, Inc. SN 140,645. COLLECTIVE MARK. Pub. 6–4–63. Filed 3–26–62.

754,815. PORON. Rogers Corporation. SN 141,753. Pub. 6–4–63. Filed 4–6–62.

754,816. FIELD AND DESIGN. Henry Field Seed and Nursery Company. SN 143,358. Pub. 6–4–63. Filed 4–30–62.

754,817. POSY LANE. Henry Field Seed and Nursery Company. SN 143,360. Pub. 6–4–63. Filed 4–30–62.

754,818. BALANCED REVIVO. International Minerals & Chemical Corporation. SN 143,888. Pub. 6–4–63. Filed 5–4–62.

754,819. VAC-U-TRON. Hamilton-Skotch Corporation. SN 154,118. Pub. 6–4–63. Filed 9–28–62.

754,820. DELTA. Sterneo Industries, Inc. SN 154,165. Pub. 6–4–63. Filed 9–28–62.

754,821. FLO-PAK. Safe-T Pacific Company. SN 155,017. Pub. 6–4–63. Filed 10–11–62.

754,822. STONY CREEK. Stony Creek Granite Corporation. SN 155,020. Pub. 6–4–63. Filed 10–11–62.

754,823. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 155,151. Pub. 6–4–63. Filed 10–15–62.

754,824. FLO-RITE. Harry T. Campbell Sons' Corporation. SN 155,232. Pub. 6–4–63. Filed 10–16–62.

754,825. V. Olin Mathieson Chemical Corporation. SN 155,325. Pub. 6–4–63. Filed 10–17–62.

754,826. STAINGLO. Plastic Stained Glass Corp. SN 155,435. Pub. 6–4–63. Filed 10–18–62.

Class 2 — Receptades

754,827. TRIAD. Gates Corporation. SN 139,402. Pub. 6–4–63. Filed 3–8–62.

754,828. POCKET PITCHER AND DESIGN. Mary L. Washburn. SN 139,909. Pub. 6–4–63. Filed 3–14–62.

754,829. KENNEL CASKETS. Kennel Caskets, Inc. SN 140,726. Pub. 6–4–63. Filed 3–26–62.

754,830. LUMA CRATE. Aluma Corporation. SN 141,027. Pub. 6–4–63. Filed 3–29–62.

754,831. VERICON BY BURT AND DESIGN. F. N. Burt Company, Inc. SN 149,165. Pub. 6–4–63. Filed 7–17–62.

754,832. DELTA. Sterneo Industries, Inc. SN 154,166. Pub. 6–4–63. Filed 9–28–62.

754,833. COLD-WAY. Pulp Reproduction Company. SN 154,511. Pub. 6–4–63. Filed 10–4–62.

Class 4 — Abrasives and Polishing Materials

754,834. PUTT-N-POLISH. Armour and Company. SN 140,618. Pub. 6–4–63. Filed 3–26–62.

754,835. RUBB-R-MAGIC. Dura Commodities Corporation. SN 147,713. Pub. 6–4–63. Filed 6–26–62.

754,836. PANGBORNITE. Pangborn Corporation. SN 159,520. Pub. 6–4–63. Filed 12–20–62.

754,837. TUFF-E-NUF. Walter G. Legge Company, Inc. SN 159,993. Pub. 6–4–63. Filed 12–31–62.

Class 5 — Adhesives

754,838. MA DESIGN. Miracle Adhesives Corporation. SN 140,852. Pub. 6–4–63. Filed 3–27–62.

754,839. REVIVO. International Minerals & Chemical Corporation. SN 143,882. Pub. 6–4–63. Filed 5–4–62.

754,840. DON-KOTE. Brumley-Donaldson Company. SN 145,032. Pub. 6–4–63. Filed 5–21–62.

Class 6 — Chemicals and Chemical Compositions

754,841. THERM-OIL. Milwhite Mud Sales Company. SN 137,645. Pub. 6–4–63. Filed 2–9–62.

754,842. HEXO-MER. Merck & Co., Inc. SN 138,729. Pub. 6–4–63. Filed 2–27–62.

754,843. "AMMO-MIST." Universal Blue Print & Supply Co. Inc. SN 142,666. Pub. 6–4–63. Filed 4–19–62.

754,844. CYANACRYL. American Cyanamid Company. SN 142,914. Pub. 6–4–63. Filed 4–24–62.

754,845. BUG-A-BOO. Bug-A-Boo Products Inc. SN 142,922. Pub. 6–4–63. Filed 4–24–62.

754,846. BULL'S EYE. Le Fevre Chemical Company. SN 142,955. Pub. 6–4–63. Filed 4–24–62.

754,847. DIVIDEND. Wyandotte Chemicals Corporation. SN 143,079. Pub. 6–4–63. Filed 4–25–62.

754,848. LANO-CO. Royal Bond, Inc. SN 143,168. Pub. 6–4–63. Filed 4–26–62.

754,849. POSY LANE. Henry Field Seed and Nursery Company. SN 143,861. Pub. 6–4–63. Filed 4–30–62.

754,850. AQUADENE. Stiles-Kem Sales Corporation. SN 143,454. Pub. 6–4–63. Filed 4–30–62.

754,851. TENORAN. Ciba Limited. SN 144,458. Pub. 6–4–63. Filed 5–14–62.

754,852. LANACRON. Ciba Limited. SN 144,459. Pub. 6–4–63. Filed 5–14–62.

754,853. KLEER-KLOR. Tesco Chemicals, Inc. SN 144,559. Pub. 6–4–63. Filed 5–14–62.

754,854. USALEC. Ross & Rowe, Inc. SN 145,611. Pub. 6–4–63. Filed 5–28–62.

754,855. PRAMEX. S. B. Penick & Company. SN 145,962. Pub. 6–4–63. Filed 6–1–62.

754,856. M–601. International Minerals & Chemical Corporation. SN 146,058. Pub. 6–4–63. Filed 6–4–62.

754,857. FUME-STOP. Orkin Exterminating Company, Inc. SN 149,668. Pub. 6–4–63. Filed 7–24–62.

754,858. LEUCOPHOR. Sandos, Inc. SN 149,875. Pub. 6–4–63. Filed 7–26–62.

754,859. LANAFAST. Crompton & Knowles Corporation. SN 150,926. Pub. 6–4–63. Filed 8–10–62.

754,860. CAL-SIZE. Caled Products Company, Inc. SN 151,002. Pub. 6–4–63. Filed 8–13–62.

754,861. DELTA. Sterneo Industries, Inc. SN 154,167. Pub. 6–4–63. Filed 9–28–62.

754,862. BAYLETON. Farbenfabriken Bayer Aktiengesellschaft. SN 154,226. Pub. 6–4–63. Filed 10–1–62.

754,863. YORKTOWN. Marsh Supermarkets, Inc. SN 155,815. Pub. 6–4–63. Filed 10–24–62.

754,864. PROLUCO. Brandhurst Company Limited. SN 156,793. Pub. 6–4–63. Filed 11–7–62.

754,865. TRILUCO. Brandhurst Company Limited. SN 156,794. Pub. 6–4–63. Filed 11–7–62.

Class 7 — Cordage

754,866. ANCHOR DESIGN. St. Egydyer Eisen- und Stahl-Industrie-Gesellschaft. MULTIPLE CLASS (Classes 7, 14, and 23). SN 139,787. Pub. 6–4–63. Filed 3–13–62.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

754,867. REVELATION. Western Auto Supply Company. SN 142,149. Pub. 6–4–63. Filed 4–12–62.

754,868. PRIMALINE. The Ensign-Bickford Company. SN 155,789. Pub. 6–4–63. Filed 10–24–62.

Class 10 — Fertilizers

754,869. UMPH! UNDILUTED MANURE PRODUCTS FROM HENS. Ralph E. Carmack, d.b.a. Rexroyal Farms. SN 143,210. Pub. 6–4–63. Filed 4–27–62.

754,870. EMERALD GREEN AND DESIGN. Stadler Fertilizer Company. SN 148,666. Pub. 6–4–63. Filed 7–9–62.

Class 12 — Construction Materials

754,871. ELECTROCOTE. Season-All Industries, Inc. SN 132,751. Pub. 6–4–63. Filed 11–24–61.

754,872. GEMSTONE. General Minerals Corporation. SN 136,460. Pub. 6–4–63. Filed 1–24–62.

754,873. COMANCHE. Comanche Steel Products, Inc. SN 136,681. Pub. 6–4–63. Filed 1–26–62.

754,874. TERRA-LOSA. Terra-Losa, Inc. SN 139,854. Pub. 6–4–63. Filed 3–7–62.

754,875. FOIL-TITE. Republic Foil, Inc. SN 139,682. Pub. 6–4–63. Filed 3–12–62.

754,876. WILSONITE. Fred A. Wilson Company. SN 140,803. Pub. 6–4–63. Filed 3–26–62.

754,877. MA DESIGN. Miracle Adhesives Corporation. SN 140,853. Pub. 6–4–63. Filed 3–27–62.

754,878. H-BRACE AND DESIGN. H-Brace, Inc. SN 158,538. Pub. 6–4–63. Filed 12–5–62.

754,879. EXKASE. Harbison-Walker Refractories Company. SN 158,623. Pub. 6–4–63. Filed 12–6–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

754,880. CHIEFTAIN. Chieftain Automotive Products Corp. SN 138,088. Pub. 6–4–63. Filed 2–16–62.

754,881. GEM. Crane Co. SN 138,471. Pub. 6–4–63. Filed 2–23–62.

754,882. SPOT GATE. Benjamin Baxter. SN 139,267. Pub. 6–4–63. Filed 3–7–62.

754,883. NEVERLEAK. Nicholas M. Reaves, d.b.a. Neverleak Roof Flange and Metal Co. SN 139,680. Pub. 6–4–63. Filed 3–12–62.

754,884. PLUMBING FIXTURES FASHIONED BY RHEEM AND DESIGN. Rheem Manufacturing Company. SN 140,384. Pub. 6–4–63. Filed 3–21–62.

754,885. RAPIDRIL. Central Screw Company. SN 140,636. Pub. 6–4–63. Filed 3–26–62.

754,886. STARLET. Shepherd Casters, Inc. SN 142,462. Pub. 6–4–63. Filed 4–17–62.

754,887. SWINGFUSER. FMC Corporation. SN 148,612. Pub. 6–4–63. Filed 7–9–62.

754,888. DuPAGE. Du Page Manufacturing Company. SN 148,715. Pub. 6–4–63. Filed 7–10–62.

754,889. FOGMATIC. Abko Corporation. SN 148,836. Pub. 6–4–63. Filed 7–10–62.

754,890. BITE-TIPE. The Aircraft Fitting Company. SN 148,869. Pub. 6–4–63. Filed 7–12–62.

754,891. RITE-FLO. The Colonial Plastics Manufacturing Company. SN 149,050. Pub. 6–4–63. Filed 7–16–62.

754,892. NEUVOGUE. Crane Co. SN 149,053. Pub. 6–4–63. Filed 7–16–62.

754,893. JORDAN. Richards Industries, Inc. SN 149,127. Pub. 6–4–63. Filed 7–16–62.

754,894. LADY NEAT. Lady Neat Corporation, assignee of Frank V. Peres. SN 149,817. Pub. 6–4–63. Filed 7–18–62.

754,895. HUBBELL IT PAYS TO HAVE GOOD CONNECTIONS AND DESIGN. Harvey Hubbell, Incorporated. SN 150,171. Pub. 6–4–63. Filed 7–31–62.

754,896. FLO-STOP. J. Willard Beasley, d.b.a. Middlesex Plumbing Service. SN 150,320. Pub. 6–4–63. Filed 8–2–62.

754,897. HV AND DESIGN. Homestead Valve Manufacturing Company. SN 150,416. Pub. 6–4–63. Filed 8–3–62.

754,898. BALLCENTRIC. Homestead Valve Manufacturing Company. SN 150,417. Pub. 6–4–63. Filed 8–3–62.

754,899. DELTA. Sterneo Industries, Inc. SN 154,168. Pub. 6–4–63. Filed 9–28–62.

Class 14 — Metals and Metal Castings and Forgings

754,866. (See Class 7 for this trademark.)

754,900. AIC. Howe Sound Company. SN 136,878. Pub. 6–4–63. Filed 1–23–62.

754,901. SHELL 400. Precision Metalsmiths, Inc. SN 139,965. Pub. 6–4–63. Filed 3–15–62.

754,902. ANASEAL. Anaconda Aluminum Company. SN 154,193. Pub. 6–4–63. Filed 10–1–62.

754,903. PINNACLE. C. Tennant, Sons & Co., of New York. SN 154,867. Pub. 6–4–63. Filed 10–9–62.

754,904. TENN-CHROME. Tennessee Products & Chemical Corporation. SN 154,868. Pub. 6–4–63. Filed 10–9–62.

Class 15 — Oils and Greases

754,905. PLASTAL. Monroe Chemical Co., Inc. SN 135,876. Pub. 6–4–63. Filed 1–8–62.

754,906. R MIX PRODUCTS AND DESIGN. Armstrong Chemical Products Company. SN 144,439. Pub. 6–4–63. Filed 5–14–62.

754,907. SPRAYTEX. Texaco Inc. SN 147,969. Pub. 6–4–63. Filed 6–28–62.

754,908. SUNAPLEX. Sun Oil Company. SN 154,524. Pub. 6–4–63. Filed 10–4–62.

754,909. MIR-O-ROL. The Standard Oil Company. SN 154,643. Pub. 6–4–63. Filed 10–5–62.

754,910. OCTRON. The Standard Oil Company. SN 154,861. Pub. 6–4–63. Filed 10–9–62.

754,911. CETRON. The Standard Oil Company. SN 154,862. Pub. 6–4–63. Filed 10–9–62.

754,912. SPROCTOR. Beltraction Co. SN 155,043. Pub. 6–4–63. Filed 10–12–62.

754,913. LAMPLIGHTER. Muench-Kreuzer Candle Co., Inc. SN 156,010. Pub. 6–4–63. Filed 10–26–62.

Class 16 — Protective and Decorative Coatings

754,914. BEE-KRETE. Bee Chemical Company. SN 134,088. Pub. 6–4–63. Filed 12–15–61.

754,915. FUSIONTRED. Iowa Paint Manufacturing Company, Inc. SN 136,770. Pub. 6-4-63. Filed 1-29-62.

754,916. RINSHED-MASON. Rinshed-Mason Company. SN 142,739. Pub. 6-4-63. Filed 4-20-62.

754,917. DELTA. Sternco Industries, Inc. SN 154,169. Pub. 6-4-63. Filed 9-28-62.

Class 17—Tobacco Products

754,918. LA FLOR DE GARCIA Y VEGA AND DESIGN. Garcia y Vega, Inc. SN 144,066. Pub. 6-4-63. Filed 5-8-62.

Class 18—Medicines and Pharmaceutical Preparations

754,919. ULTRAVITES. Ultravite Laboratories Limited. SN 142,064. Pub. 6-4-63. Filed 4-11-62.

754,920. KA-MIN. Vitamineral Products Co. SN 146,764. Pub. 6-4-63. Filed 6-12-62.

754,921. SPEROTAB. Testagar & Co., Inc. SN 147,053. Pub. 6-4-63. Filed 6-15-62.

754,922. COLDRIN. Vitamix Pharmaceuticals, Incorporated. SN 150,132. Pub. 6-4-63. Filed 7-30-62.

754,923. BRE-BITS. Eastern States Farmers' Exchange, Incorporated. SN 154,705. Pub. 6-4-63. Filed 10-8-62.

754,924. ARTICULONE. Luly Pharmaceutical Company. SN 156,996. Pub. 6-4-63. Filed 11-9-62.

754,925. MOTIVAN. American Home Products Corporation. SN 157,041. Pub. 6-4-63. Filed 11-13-62.

754,926. VASOCIDIN. Smith, Miller & Patch, Inc. SN 157,161. Pub. 6-4-63. Filed 11-13-62.

754,927. NOVASTAT. Dr. Salsbury's Laboratories. SN 158,026. Pub. 6-4-63. Filed 11-27-62.

754,928. STANAFLUOR PLUS. The Procter & Gamble Company. SN 158,178. Pub. 6-4-63. Filed 11-29-62.

754,929. CETAPHIL. Texas Pharmacal Company. SN 158,400. Pub. 6-4-63. Filed 12-3-62.

754,930. AQUARUB. The Wander Company. SN 158,411. Pub. 6-4-63. Filed 12-3-62.

754,931. NIOSITOL. The Dietene Company. SN 158,610. Pub. 6-4-63. Filed 12-6-62.

754,932. CARBATE. The Upjohn Company. SN 159,306. Pub. 6-4-63. Filed 12-17-62.

754,933. CATTLE-PLUS. Ralston Purina Company. SN 159,611. Pub. 6-4-63. Filed 12-21-62.

754,934. LEDERMIX. American Cyanamid Company. SN 159,677. Pub. 6-4-63. Filed 12-26-62.

754,935. ONYCHO-PHYTEX. Unimed, Inc. SN 160,020. Pub. 6-4-63. Filed 12-31-62.

754,936. ZYMAFLOR. The Upjohn Company. SN 160,024. Pub. 6-4-63. Filed 12-31-62.

Class 19—Vehicles

754,937. TEE BUG. Lester J. Voss, assignee of Tee Bug, Inc. SN 111,821. Pub. 6-4-63. Filed 1-13-61.

754,938. VELOVAP. ABG. SN 123,251. Pub. 6-4-63. Filed 7-3-61.

754,939. DESIGN OF FOUR DOUBLE CIRCLES. Auto Union G.m.b.H. MULTIPLE CLASS (Classes 19 and 23). SN 125,275. Pub. 6-4-63. Filed 8-3-61.

754,940. B DESIGN. Boles-Aero, Inc. SN 130,877. Pub. 6-4-63. Filed 10-30-61.

754,941. ASK YOUR NEIGHBOR HE BOUGHT FROM US. Columbia Motor Sales Co. SN 134,945. Pub. 6-4-63. Filed 1-2-62.

754,942. RIVERSIDE. Montgomery Ward & Co., Incorporated. SN 135,037. Pub. 6-4-63. Filed 1-2-62.

754,943. HAULSTER. Outboard Marine Corporation. SN 135,381. Pub. 6-4-63. Filed 1-8-62.

754,944. MARKO MICRO GROUND. Damm-Rock, Inc. SN 141,263. Pub. 6-4-63. Filed 4-2-62.

754,945. APC AND DESIGN. American Plastics Corporation. SN 141,691. Pub. 6-4-63. Filed 4-6-62.

754,946. V-FIN. Braincon Corporation. SN 143,341. Pub. 6-4-63. Filed 4-30-62.

754,947. RANGER. Standard Cycle Company, Inc. SN 150,113. Pub. 6-4-63. Filed 7-30-62.

754,948. TRAILBREAKER. Nethercutt Industrial Corp. SN 150,590. Pub. 6-4-63. Filed 8-6-62.

754,949. FROSHIELD. Allied Plastics, Inc. SN 160,581. Pub. 6-4-63. Filed 1-14-63.

754,950. PACEMATE AND DESIGN. Pitman Manufacturing Company. SN 160,658. Pub. 6-4-63. Filed 1-14-63.

754,951. DOWTY. Dowty Rotol, Inc. SN 160,759. Pub. 6-4-63. Filed 1-16-63.

754,952. AQUA-LIFT. Glastron Boat Company. SN 161,177. Pub. 6-4-63. Filed 1-22-63.

754,953. DESIGN OF CUP. Michigan Wheel Company. SN 161,267. Pub. 6-4-63. Filed 1-23-63.

754,954. SUPER-CUP X-100. Michigan Wheel Company. SN 161,353. Pub. 6-4-63. Filed 1-24-63.

Class 21—Electrical Apparatus, Machines, and Supplies

754,955. DECASWITCH. The Siegler Corporation. SN 114,974. Pub. 6-4-63. Filed 3-6-61.

754,956. PAECO HP IN A CIRCLE AND DESIGN. Hewlett-Packard Company, assignee of Palo Alto Engineering Company. SN 122,712. Pub. 6-4-63. Filed 6-23-61.

754,957. ERIE AND DESIGN. Erie Resistor Corporation. SN 137,729. Pub. 6-4-63. Filed 2-12-62.

754,958. PJ. Ettco Wire & Cable Corp. SN 137,730. Pub. 6-4-63. Filed 2-12-62.

754,959. CHEM-CARE. Chem-Care Products, Inc. SN 138,160. Pub. 6-4-63. Filed 2-19-62.

754,960. CAVALCADE. Bradley Manufacturing Company. SN 138,764. Pub. 6-4-63. Filed 2-28-62.

754,961. NUVOX. Nuvox Electronics Corp. SN 138,976. Pub. 6-4-63. Filed 3-2-62.

754,962. SYNCHROPOT. Daystrom, Incorporated. SN 139,832. Pub. 6-4-63. Filed 3-14-62.

754,963. FILMATIC. Illinois Tool Works Inc. SN 139,940. Pub. 6-4-63. Filed 3-15-62.

754,964. MONACOR. Monarch Electronics International, Inc. SN 140,473. Pub. 6-4-63. Filed 3-22-62.

754,965. PROGRESS AND DESIGN. Maus & Pfeiffer. SN 142,722. Pub. 6-4-63. Filed 4-20-62.

754,966. TECA AND DESIGN. Teca Corporation. SN 143,689. Pub. 6-4-63. Filed 5-2-62.

754,967. UNIWAVE. Uniwave, Inc. SN 144,206. Pub. 6-4-63. Filed 5-9-62.

754,968. I-T-E AND DESIGN. The I-T-E Circuit Breaker Company. SN 144,388. Pub. 6-4-63. Filed 5-11-62.

754,969. D DAMON AND DESIGN. Damon Engineering, Inc. SN 144,471. Pub. 6-4-63. Filed 5-14-62.

754,970. DOT. H. K. Porter Company, Inc. SN 144,536. Pub. 6-4-63. Filed 5-14-62.

754,971. CALLMITE. Codamite Corporation. SN 150,852. Pub. 6-4-63. Filed 8-9-62.

754,972. VAPOR AND DESIGN. Vapor Corporation. MULTIPLE CLASS (Classes 21 and 23). SN 154,313. Pub. 6-4-63. Filed 10-1-62.

754,973. GOLDEN BREW. Cecilware-Commodore Products Corporation. SN 154,560. Pub. 6-4-63. Filed 10-5-62.

754,974. CADILLAC. Clements Mfg. Co. SN 155,046. Pub. 6-4-63. Filed 10-12-62.

754,975. OPEN HEARTH. S. W. Farber, Inc. SN 156,104. Pub. 6-4-63. Filed 10-29-62.

754,976. POLYKENTHERM. The Okonite Company. SN 159,519. Pub. 6-4-63. Filed 12-20-62.

754,977. STAR ROAMER. Allied Radio Corporation. SN 160,524. Pub. 6-4-63. Filed 1-11-63.

754,978. INSUL 8. Insul-8 Corp. SN 160,946. Pub. 6-4-63. Filed 1-18-63.

754,979. INSULIFE. The Emerson Electric Manufacturing Company. SN 161,029. Pub. 6-4-63. Filed 1-21-63.

754,980. ASTROGUIDE. King Radio Corporation, Inc. SN 161,066. Pub. 6-4-63. Filed 1-21-63.

754,981. LECTRO-TENNA. Spirling Products Co., Inc. SN 161,749. Pub. 6-4-63. Filed 1-30-63.

754,982. CUSTOM KRAFT AND DESIGN. St. Louis Music Supply Company. SN 165,535. Pub. 6-4-63. Filed 3-27-63.

Class 22—Games, Toys, and Sporting Goods

754,983. HUG-A-BYE BABY. Valentine Dolls Inc. SN 130,526. Pub. 6-4-63. Filed 10-23-61.

754,984. BASKET BOWL. J. Chein & Company. SN 139,469. Pub. 6-4-63. Filed 3-9-62.

754,985. WEIGHTLESS MISSILE. Joe Dimatteo, d.b.a. Weightless Missile Co. SN 139,606. Pub. 6-4-63. Filed 3-12-62.

754,986. TINKER ZOO. A. G. Spalding & Bros. Inc. SN 140,398. Pub. 6-4-63. Filed 3-21-62.

754,987. PAUL BUNYAN AND DESIGN. Joseph P. Hennick, d.b.a. Joe Hennick Enterprises. SN 141,300. Pub. 6-4-63. Filed 4-2-62.

754,988. REVELATION. Western Auto Supply Company. SN 142,148. Pub. 6-4-63. Filed 4-12-62.

754,989. HUMPTY DUMPTY. Eureka Specialty Printing Company. SN 142,297. Pub. 6-4-63. Filed 4-16-62.

754,990. U.S. TEENS. U.S. Teens, Inc. SN 143,183. Pub. 6-4-63. Filed 4-26-62.

754,991. MARBLEHEAD AND DESIGN. Marblehead Golf Corp. SN 144,288. Pub. 6-4-63. Filed 5-10-62.

754,992. PAL-O-MINE. Thomas Black & Sons (Greenock) Limited. SN 146,454. Pub. 6-4-63. Filed 6-8-62.

754,993. THE ICELANDIC SLEEPING BAG AND DESIGN. Thomas Black & Sons (Greenock) Limited. SN 146,455. Pub. 6-4-63. Filed 6-8-62.

754,994. ORBIE AND DESIGN. Paradise Manufacturing Company. SN 147,393. Pub. 6-4-63. Filed 6-21-62.

754,995. SURF SHOP AND DESIGN. Jack E. O'Neill, d.b.a. Surf Shop. SN 147,748. Pub. 6-4-63. Filed 6-26-62.

754,996. SPORTS ARENA. Milton Bradley Company. SN 148,354. Pub. 6-4-63. Filed 7-5-62.

754,997. PRO BOWLING. Milton Bradley Company. SN 148,355. Pub. 6-4-63. Filed 7-5-62.

754,998. BIG TOWN. Milton Bradley Company. SN 148,356. Pub. 6-4-63. Filed 7-5-62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

754,866. (See Class 7 for this trademark.)

754,939. (See Class 19 for this trademark.)

754,972. (See Class 21 for this trademark.)

754,999. TRUE TURN. Van-Gorp Manufacturing, Inc. SN 117,066. Pub. 6-4-63. Filed 4-3-61.

755,000. TORNADO. Willys Motors, Inc. SN 123,514. Pub. 6-4-63. Filed 7-6-61.

755,001. GIANT AND DESIGN. Giant Industries. SN 126,222. Pub. 6-4-63. Filed 8-18-61.

755,002. ELLIOTT VIBRATUB FINISHER AND DESIGN. Vibraslide, Inc. SN 130,257. Pub. 6-4-63. Filed 10-18-61.

755,003. DURACUT. Outboard Marine Corporation. SN 140,740. Pub. 6-4-63. Filed 3-26-62.

755,004. STAR LITE AND DESIGN. Borg-Warner Corporation. SN 140,912. Pub. 6-4-63. Filed 3-28-62.

755,005. CYRIL CIRCLIP AND DESIGN. Anderton Springs Limited. SN 141,150. Pub. 6-4-63. Filed 3-30-62.

755,006. DYNACORD. Torpedo Buromaschinen Werke A.G. MULTIPLE CLASS (Classes 23 and 26). SN 143,581. Pub. 6-4-63. Filed 5-1-62.

755,007. UNIFORMER. Albert E. Harold Fair. SN 160,373. Pub. 6-4-63. Filed 1-8-63.

755,008. RELTOOL AND DESIGN. Reltool Corporation. SN 160,392. Pub. 6-4-63. Filed 1-8-63.

755,009. STUART. Fraser's, Inc. SN 161,039. Pub. 6-4-63. Filed 1-21-63.

755,010. FLEXICONE. General Rubber Corporation. SN 161,495. Pub. 6-4-63. Filed 1-28-63.

755,011. HYDYN AND DESIGN. Hydyn Company. SN 161,660. Pub. 6-4-63. Filed 1-28-63.

Class 24—Laundry Appliances and Machines

755,012. ALUMICOTE. Textile Mills Company. SN 136,407. Pub. 6-4-63. Filed 1-23-62.

755,013. REPRESENTATION OF A DIAMOND. Blackstone Corporation. SN 141,801. Pub. 6-4-63. Filed 4-9-62.

Class 25—Locks and Safes

755,014. TYDEN. The Tyden Corporation. SN 146,845. Pub. 6-4-63. Filed 6-13-62.

Class 26—Measuring and Scientific Appliances

755,006. (See Class 23 for this trademark.)

755,015. ROYAL BLUE. Eastman Kodak Company. SN 112,890. Pub. 6-4-63. Filed 2-1-61.

755,016. CONN. C. G. Conn, Ltd. SN 127,322. Pub. 6-4-63. Filed 9-6-61.

755,017. PISTOLASER. Kollsman Instrument Corporation. SN 135,207. Pub. 6-4-63. Filed 1-4-62.

755,018. DAYMARC. Daymarc Corporation. SN 136,962. Pub. 6-4-63. Filed 1-31-62.

755,019. STERLING. Sterling Automotive Manufacturing Co. SN 138,062. Pub. 6-4-63. Filed 2-15-62.

755,020. DIAMOND POWER. Diamond Power Specialty Corporation. SN 139,605. Pub. 6-4-63. Filed 3-12-62.

755,021. F AND DESIGN. Impulsphysik Dr. Ing. Frank Früngel G.m.b.H. SN 143,029. Pub. 6-4-63. Filed 4-25-62.

755,022. TECA AND DESIGN. TECA Corporation. SN 143,690. Pub. 6-4-63. Filed 5-2-62.

755,023. KIFIS. Kollaman Instrument Corporation. SN 143,638. Pub. 6-4-63. Filed 5-2-62.

755,024. THE ASTROLAB. Astrosonics, Inc. SN 145,655. Pub. 6-4-63. Filed 5-29-62.

755,025. DESIGN OF GROTESQUE MAN WITH BEAN HEAD. FMC Corporation. SN 145,819. Pub. 6-4-63. Filed 5-31-62.

755,026. BIOCRAFT. The Lionel Corporation. SN 153,495. Pub. 6-4-63. Filed 9-19-62.

755,027. DELTA. Sternco Industries, Inc. SN 154,170. Pub. 6-4-63. Filed 9-28-62.

755,028. LIONEL. The Lionel Toy Corporation, assignee of The Lionel Corporation. SN 154,736. Pub. 6-4-63. Filed 10-8-62.

755,029. ARRATAR. HollyCam Inc., d.b.a. Hollywood Camera Co. SN 156,411. Pub. 6-4-63. Filed 11-1-62.

755,030. CELION. Minneapolis-Honeywell Regulator Company. SN 156,425. Pub. 6-4-63. Filed 11-1-62.

755,031. LAN-O-TURN. Levi C. Chapiewsky. SN 156,561. Pub. 6-4-63. Filed 11-5-62.

755,032. A AND DESIGN. American Nuclear Corporation. SN 156,849. Pub. 6-4-63. Filed 11-8-62.

755,033. RAY-D-TEC. American Nuclear Corporation. SN 156,850. Pub. 6-4-63. Filed 11-8-62.

755,034. PENOPAC. The Leneta Company. SN 156,890. Pub. 6-4-63. Filed 11-8-62.

755,035. COSA/TRON. CRS Industries Inc. SN 156,939. Pub. 6-4-63. Filed 11-9-62.

755,036. KELVIN-WHITE. The Eastern Company. SN 157,201. Pub. 6-4-63. Filed 11-14-62.

755,037. "AXCELO." Sidney C. Smith, d.b.a. Smythe Engineering. SN 157,573. Pub. 6-4-63. Filed 11-19-62.

Class 27 — Horological Instruments

755,038. METRICTIME. Noble H. Stibolt. SN 126,129. Pub. 6-4-63. Filed 8-16-61.

755,039. CHIEF. Sunbeam Corporation. SN 141,994. Pub. 6-4-63. Filed 4-10-62.

755,040. ULTRADEEP. Benrus Watch Company, Inc. SN 143,789. Pub. 6-4-63. Filed 5-4-62.

755,041. AMERICAN FASHION FIRST. Gruen Industries, Inc., d.b.a. The Gruen Watch Company. SN 154,243. Pub. 6-4-63. Filed 10-1-62.

Class 28 — Jewelry and Precious-Metal Ware

755,042. LUSTIGEM. Florence Lustig Crossman, d.b.a. Florence Lustig. SN 127,758. Pub. 6-4-63. Filed 9-13-61.

755,043. LHO. L. Harris Ogden, Limited. SN 133,399. Pub. 6-4-63. Filed 12-5-61.

755,044. EVERY DAY OF THE WEEK. Morton Marks, d.b.a. Division Sales. SN 139,767. Pub. 6-4-63. Filed 3-13-62.

755,045. G AND DESIGN. Harry Guise, Inc. SN 140,446. Pub. 6-4-63. Filed 3-22-62.

755,046. MR. EXECUTIVE. Ray Curran & Co. SN 141,262. Pub. 6-4-63. Filed 4-2-62.

755,047. 14K IN CROWN DESIGN. Coronet Jewelry Manufacturing Co. SN 144,049. Pub. 6-4-63. Filed 5-8-62.

755,048. MWD AND DESIGN. M & D Wakshlag Corp. SN 144,399. Pub. 6-4-63. Filed 5-11-62.

755,049. RD AND DESIGN. Rogers, Lunt & Bowlen Company. SN 144,645. Pub. 6-4-63. Filed 5-15-62.

755,050. R. Lawrence Reich, d.b.a. Reich Jewelry. SN 145,609. Pub. 6-4-63. Filed 5-28-62.

755,051. CM/J. Cordova Inc., by change of name from Cordova Watch Corporation. SN 146,588. Pub. 6-4-63. Filed 6-11-62.

755,052. KI. Julius Katz, d.b.a. Julius Katz & Son. SN 150,950. Pub. 6-4-63. Filed 8-10-62.

755,053. RY AND DESIGN. Rodman & Yaruss Refining Co. Inc. SN 152,828. Pub. 6-4-63. Filed 9-10-62.

755,054. ENDEARMENT. Morris Rosenbloom & Co., Inc. SN 154,438. Pub. 6-4-63. Filed 10-3-62.

Class 29 — Brooms, Brushes, and Dusters

755,055. MARTI AND DESIGN. Marwin Products. SN 150,087. Pub. 6-4-63. Filed 7-30-62.

755,056. RUBON AND DESIGN. Rubon, Incorporated. SN 154,771. Pub. 6-4-63. Filed 10-8-62.

Class 30 — Crockery, Earthenware, and Porcelain

755,057. S.C.I. LAVENO ITALY AND DESIGN. Società Ceramica Italiana Società per Azioni. SN 108,514. Pub. 6-4-63. Filed 11-15-60.

755,058. PEACOCK. Marion E. Lang, d.b.a. Peacock Enamels. SN 144,076. Pub. 6-4-63. Filed 5-8-62.

755,059. MACALOID. The Inerto Company. SN 144,846. Pub. 6-4-63. Filed 5-17-62.

Class 31 — Filters and Refrigerators

755,060. CRYSTAL PRINCE. A/S Atlas. SN 143,493. Pub. 6-4-63. Filed 5-1-62.

755,061. DELTA. Sternco Industries, Inc. SN 154,171. Pub. 6-4-63. Filed 9-28-62.

755,062. CHD. CHD Pool Equipment, Inc. SN 154,557. Pub. 6-4-63. Filed 10-5-62.

Class 32 — Furniture and Upholstery

755,063. CHEMFOAM. The Englander Company, Inc. SN 103,124. Pub. 6-4-63. Filed 8-22-60.

755,064. KEMFOAM. The Englander Company, Inc. SN 103,125. Pub. 6-4-63. Filed 8-22-60.

755,065. FOAM RUBBER CITY AND DESIGN. Forcite, Inc. SN 126,328. Pub. 6-4-63. Filed 8-21-61.

755,066. EXECUTIVE FURNITURE GUILD OF AMERICA. Executive Furniture Guild of America. SN 133,553. COLLECTIVE MARK. Pub. 6-4-63. Filed 12-7-61.

755,067. GUILD HOUSE. Executive Furniture Guild of America. SN 133,554. COLLECTIVE MARK. Pub. 6-4-63. Filed 12-7-61.

755,068. INSTANT RACK AND DESIGN. Hatfield Industries, Inc., d.b.a. Warehouse Storage Systems Co. SN 138,826. Pub. 6-4-63. Filed 2-28-62.

755,069. MATH-MASTER. Gamco Products, Inc. SN 141,941. Pub. 6-4-63. Filed 4-10-62.

755,070. A SILVER CROSS ETC. AND DESIGN. Dandy Mattress Corporation. SN 155,060. Pub. 6-4-63. Filed 10-12-62.

755,071. GARDEN OF EDEN. Disa Corporation. SN 155,787. Pub. 6-4-63. Filed 10-24-62.

755,072. ALAMBRAX. Oscar M. Stanley Inc. SN 157,414. Pub. 6-4-63. Filed 11-16-62.

755,073. RISE-O-MATIC. Gleitsman's, Inc. SN 158,151. Pub. 6-4-63. Filed 11-29-62.

755,074. GF. The General Fireproofing Company. SN 158,246. Pub. 6-4-63. Filed 11-30-62.

755,075. POSTURE-POISE. Sealy, Incorporated. SN 158,276. Pub. 6-4-63. Filed 11-30-62.

755,076. EPIC. Mullins Manufacturing Corporation. SN 158,362. Pub. 6-4-63. Filed 12-3-62.

755,077. DIANA. Mullins Manufacturing Corporation. SN 158,363. Pub. 6-4-63. Filed 12-3-62.

755,078. REDONDO. Charlton Company, Inc. SN 158,429. Pub. 6-4-63. Filed 12-4-62.

755,079. TWEEN. Oak Hill Company. SN 158,555. Pub. 6-4-63. Filed 12-5-62.

755,080. T DESIGN WITHIN OVAL. Thomasville Furniture Industries, Inc. SN 158,666. Pub. 6-4-63. Filed 12-6-62.

755,081. IRON-A-WAY. Iron-A-Way, Inc. SN 159,498. Pub. 6-4-63. Filed 12-20-62.

755,082. SWEETHEART CHEST. The Lane Company, Inc. SN 159,502. Pub. 6-4-63. Filed 12-20-62.

755,083. STARDUST. Bedding Manufacturers Associates, Inc. SN 159,681. Pub. 6-4-63. Filed 12-26-62.

755,084. V.I.C. Multipurpose Bed Co., Inc. SN 159,761. Pub. 6-4-63. Filed 12-26-62.

Class 33 — Glassware

755,085. BOHEMIA GLASS AND DESIGN. Skloexport, Podnik Zahranicniho Obchodu pro Vyvoz Skla. SN 147,764. Pub. 6-4-63. Filed 6-26-62.

755,086. KOSTA. Aktiebolaget Kosta Glasbruk. SN 149,902. Pub. 6-4-63. Filed 7-27-62.

755,087. KOSTA AND DESIGN. Aktiebolaget Kosta Glasbruk. SN 149,903. Pub. 6-4-63. Filed 7-27-62.

755,088. LIFE OF THE PARTY. Crichton K. Leong, d.b.a. C. K. Leong Co. SN 165,604. Pub. 6-4-63. Filed 3-28-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

755,089. PAYNE. Carrier Corporation. SN 118,956. Pub. 6-4-63. Filed 5-1-61.

755,090. "TRU-EDGE." Brighton Corporation. SN 132,023. Pub. 6-4-63. Filed 11-15-61.

755,091. COZY CANDLE AND DESIGN. J. Ch. Herrmann. SN 147,115. Pub. 6-4-63. Filed 6-18-62.

755,092. DELTA. Sternco Industries, Inc. SN 154,172. Pub. 6-4-63. Filed 9-28-62.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

755,093. PREMIUM DAVIS SENTRY. Western Auto Supply Company. SN 135,412. Pub. 6-4-63. Filed 1-8-62.

755,094. ACTIVATED TRACTION. Tresco Industries, Inc. SN 160,728. Pub. 6-4-63. Filed 1-15-63.

755,095. MOLI-CURE. The Firestone Tire & Rubber Company. SN 160,764. Pub. 6-4-63. Filed 1-16-63.

755,096. MULTI-CURE. The Firestone Tire & Rubber Company. SN 160,765. Pub. 6-4-63. Filed 1-16-63.

Class 36 — Musical Instruments and Supplies

755,097. ASYMMETRICAL STAR DESIGN. Sesac, Inc. SN 114,796. Pub. 6-4-63. Filed 3-2-61.

755,098. ZERO-START. Sanders Associates, Incorporated. SN 121,322. Pub. 6-4-63. Filed 6-2-61.

755,099. VQP AND DESIGN. Verne Q. Powell Flutes, Inc. SN 135,459. Pub. 6-4-63. Filed 1-9-62.

755,100. NARRATOR. Dorsett Electronics, Inc. SN 136,639. Pub. 6-4-63. Filed 1-26-62.

755,101. AUDIO NOTEBOOK. Electronic Futures Inc. SN 140,934. Pub. 6-4-63. Filed 3-28-62.

755,102. H. H. SCOTT AND DESIGN. H. H. Scott, Inc. SN 146,752. Pub. 6-4-63. Filed 6-12-62.

755,103. SCOTT. H. H. Scott, Inc. SN 146,753. Pub. 6-4-63. Filed 6-12-62.

755,104. CUSTOM KRAFT AND DESIGN. St. Louis Music Supply Company. SN 165,534. Pub. 6-4-63. Filed 3-27-63.

Class 37 — Paper and Stationery

755,105. LAUREL. Laurel Cards, Inc. SN 131,051. Pub. 6-4-63. Filed 10-31-61.

755,106. WOODY WOODPECKER. Walter Lantz Productions, Inc. SN 135,013. Pub. 6-4-63. Filed 1-2-62.

755,107. A APPLETON AND DESIGN. The Appleton Coated Paper Company. SN 147,180. Pub. 6-4-63. Filed 6-19-62.

755,108. THE CRAYOLA MAKERS. Binney & Smith Inc. SN 153,858. Pub. 6-4-63. Filed 9-25-62.

Class 38 — Prints and Publications

755,109. BIOGRAPHY. Official Films, Inc. SN 130,940. Pub. 6-4-63. Filed 9-27-61.

755,110. HYDRO-GRAF. Bell & Gossett Company. SN 138,075. Pub. 6-4-63. Filed 2-16-62.

755,111. ABINGDON PRESS. The Board of Publication of the Methodist Church, Inc., d.b.a. Abingdon Press. SN 138,384. Pub. 6-4-63. Filed 2-21-62.

755,112. PIG TALES ETC. AND DESIGN. Thompson Farms Company. SN 139,900. Pub. 6-4-63. Filed 3-14-62.

755,113. THE CONSERVATIVE. Wm. Waddington, Jr., d.b.a. Naconie, assignee of National Conservative League, Inc. SN 140,376. Pub. 6-4-63. Filed 3-21-62.

755,114. CP CONGREGATIONAL PRESS AND DESIGN. Corporation for the National Association of Congregational Christian Churches of the United States. SN 140,611. Pub. 6-4-63. Filed 2-21-62.

755,115. TIME SAVER AND DESIGN. Barnet Bookspan, d.b.a. Educrafts. SN 154,203. Pub. 6-4-63. Filed 10-1-62.

755,116. MEDICAMENTA VERA. Parke, Davis & Company. SN 154,432. Pub. 6-4-63. Filed 10-3-62.

755,117. THE CATHOLIC MARKET. The Catholic Digest Publications, Inc. SN 154,559. Pub. 6-4-63. Filed 10-5-62.

755,118. DELTA. Dell Publishing Co., Inc. SN 154,699. Pub. 6-4-63. Filed 10-8-62.

Class 39 — Clothing

755,119. BETTEE AND DESIGN. Bettee Hosiery Mills, Inc. SN 111,851. Pub. 6-4-63. Filed 1-16-61.

755,120. ROYALIST. Bodner Neckwear Company. SN 121,351. Pub. 6-4-63. Filed 6-5-61.

755,121. WHIRLY-BIRD AND DESIGN. Butler's Shoe Corporation. SN 127,901. Pub. 6-4-63. Filed 9-15-61.

755,122. KEY SIGNATURES. Maidenform, Inc. SN 128,064. Pub. 6-4-63. Filed 9-18-61.

755,123. PETERMAN. D. S. Peterman & Company. SN 137,158. Pub. 6-4-63. Filed 2-2-62.

755,124. POMPADORE. I. B. Kleinert Rubber Company. SN 140,953. Pub. 6-4-63. Filed 3-28-62.

755,125. HI-LOW WITCHERY. Exquisite Form Industries, Inc. SN 141,591. Pub. 6-4-63. Filed 4-5-62.

755,126. LADY LYNNE. Lady Lynne Lingerie, Inc. SN 141,850. Pub. 6-4-63. Filed 4-9-62.

755,127. PEERS OF THE REALM. Weinberg Corporation. SN 141,909. Pub. 6-4-63. Filed 4-9-62.

755,128. TRAMPEZE JUNIORS. Penobscot Shoe Company. SN 142,214. Pub. 6-4-63. Filed 4-13-62.

755,129. SPEEDFIT. Specialty Importers, Inc. SN 149,012. Pub. 6-4-63. Filed 7-13-62.

755,130. ULTRA-TWIST. Kayser-Roth Corporation. SN 149,394. Pub. 6-4-63. Filed 7-19-62.

755,131. CRAMFORD. County Clothes, Inc. SN 149,716. Pub. 6-4-63. Filed 7-25-62.

755,132. THINKING CAPS. Ruth Originals Corp. SN 154,294. Pub. 6-4-63. Filed 10-1-62.

755,133. M'SIEUR SLACKS. Fredrick and Stanley Goldman, assignee of Eagle Clothes, Inc. SN 154,808. Pub. 6-4-63. Filed 10-9-62.

755,134. STATUS AND DESIGN. Lamet International, Incorporated. SN 155,160. Pub. 6-4-63. Filed 10-15-62.

755,135. BOLFELT AND DESIGN. Geo. W. Bollman & Co., Inc. SN 155,367. Pub. 6-4-63. Filed 10-18-62.

755,136. FREOSTAT. Angelica Uniform Company. SN 155,553. Pub. 6-4-63. Filed 10-22-62.

755,137. CHIPPWORTH. Chipp Inc. of New York. SN 155,573. Pub. 6-4-63. Filed 10-22-62.

755,138. PERSUASION. Chappell Allen & Co. Limited. SN 155,690. Pub. 6-4-63. Filed 10-23-62.

755,139. CHARLES KNOX. Hat Corporation of America. SN 155,717. Pub. 6-4-63. Filed 10-23-62.

755,140. ULTIMO. Shelburne Shirt Co. Inc. SN 155,750. Pub. 6-4-63. Filed 10-23-62.

755,141. SAILORS KNOT. Camp and McInnes, Inc. SN 155,968. Pub. 6-4-63. Filed 10-26-62.

755,142. EXCERPT. Maidenform, Inc. SN 156,005. Pub. 6-4-63. Filed 10-26-62.

755,143. SAIL-TRED. Gold Seal Rubber Company. SN 156,115. Pub. 6-4-63. Filed 10-29-62.

755,144. 1290 COLLECTION. Palm Beach Company. SN 156,155. Pub. 6-4-63. Filed 10-29-62.

755,145. LIK-A-DOL. Perfect Bloomer Co. SN 156,162. Pub. 6-4-63. Filed 10-29-62.

755,146. SUMMER SHARK. The Joseph & Feiss Company. SN 156,231. Pub. 6-4-63. Filed 10-30-62.

755,147. SHARK FROST. The Joseph & Feiss Company. SN 156,232. Pub. 6-4-63. Filed 10-30-62.

755,148. FAVOR-FORM. Exquisite Form Industries, Inc. SN 156,734. Pub. 6-4-63. Filed 11-6-62.

755,149. PLAIDEES. Van Raalte Company, Inc. SN 156,916. Pub. 6-4-63. Filed 11-8-62.

Class 41 — Canes, Parasols, and Umbrellas

755,150. HANDI-MATIC. Giant Umbrella Company, Inc. SN 124,186. Pub. 6-4-63. Filed S.R. 7-18-61; Am. P.R. 8-8-62.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

755,151. YANKEE CLIPPER. Crompton Company. SN 144,693. Pub. 6-4-63. Filed 5-16-62.

755,152. 21 JEWEL. Kroywen Coats, Inc. SN 145,376. Pub. 6-4-63. Filed 5-24-62.

755,153. VEL-KNIT AND DESIGN. Beaunit Corporation. SN 157,047. Pub. 6-4-63. Filed 11-13-62.

755,154. BLACK HAWK. Chicopee Mills, Inc. SN 157,070. Pub. 6-4-63. Filed 11-13-62.

755,155. RIVERSTAR. Dan River Mills, Incorporated. SN 157,081. Pub. 6-4-63. Filed 11-13-62.

Class 44 — Dental, Medical, and Surgical Appliances

755,156. ULTRA THIN. Samuel Bonat & Bro., Inc. SN 140,625. Pub. 6-4-63. Filed 3-26-62.

755,157. BALLERINA. Techni Electronics, Inc. SN 143,294. Pub. 6-4-63. Filed 4-27-62.

755,158. CONTESSA. Techni Electronics, Inc. SN 143,295. Pub. 6-4-63. Filed 4-27-62.

755,159. TECA AND DESIGN. TECA Corporation. SN 143,688. Pub. 6-4-63. Filed 5-2-62.

755,160. ROEHR. Roehr Products Company, Inc. SN 158,383. Pub. 6-4-63. Filed 12-3-62.

755,161. VAGAERATOR. Unimed, Inc. SN 158,582. Pub. 6-4-63. Filed 12-5-62.

755,162. CURLER-QUEEN AND DESIGN. Shane Engineering Co. SN 158,741. Pub. 6-4-63. Filed 12-7-62.

Class 45 — Soft Drinks and Carbonated Waters

755,163. ORANJOLA. Herachi N.V. SN 141,948. Pub. 6-4-63. Filed 4-10-62.

755,164. DOUBLE COLA AND DESIGN. Seminole Flavor Company. SN 141,987. Pub. 6-4-63. Filed 4-10-62.

755,165. COUNTRY'S DELIGHT. Certified Grocers of Illinois, Inc. SN 155,970. Pub. 6-4-63. Filed 10-26-62.

Class 46 — Foods and Ingredients of Foods

755,166. LIVE. Kathy Godfrey McCann, d.b.a. American United Co. SN 126,367. Pub. 6-4-63. Filed 8-21-61.

755,167. NODAWAY VALLEY. Nodaway Valley Foods, Inc. SN 132,705. Pub. 6-4-63. Filed 11-24-61.

755,168. GOLDEN MAID. Jack Sisler, Inc. SN 136,597. Pub. 6-4-63. Filed 1-25-62.

755,169. SEMINOLE BEE. Cal T. Albritton, Inc. SN 137,483. Pub. 6-4-63. Filed 2-8-62.

755,170. EVE'S CHOICE. The Duradean Co., Inc. SN 139,837. Pub. 6-4-63. Filed 3-14-62.

755,171. BORDEN'S. The Borden Company. SN 140,226. Pub. 6-4-63. Filed 3-20-62.

755,172. AMERICAN FARE. Armour and Company. SN 140,319. Pub. 6-4-63. Filed 3-21-62.

755,173. SOLEA. Francisco Nunez Fernandez. SN 141,283. Pub. 6-4-63. Filed 4-2-62.

755,174. AROMAT. Corn Products Company. SN 143,600. Pub. 6-4-63. Filed 5-2-62.

755,175. SUN-PAT. H. S. Whiteside & Co. Limited. SN 147,877. Pub. 6-4-63. Filed 6-27-62.

755,176. ADAM & ANN'S AND DESIGN. Adam & Ann Amistadi. SN 150,494. Pub. 6-4-63. Filed 8-6-62.

755,177. COCONUT TEASE. Continental Baking Company. SN 150,527. Pub. 6-4-63. Filed 8-6-62.

755,178. THIN-FLO. Joe Lowe Corporation. SN 150,572. Pub. 6-4-63. Filed 8-6-62.

755,179. CAP'N JOHN'S AND DESIGN. The Great Atlantic & Pacific Tea Company, Inc. SN 150,842. Pub. 6-4-63. Filed 8-9-62.

755,180. DELTA. Sternco Industries, Inc. SN 154,174. Pub. 6-4-63. Filed 9-28-62.

755,181. FULMEAL. Plus Poultry, Inc. SN 155,740. Pub. 6-4-63. Filed 10-23-62.

755,182. PEPPY. Plus Poultry, Inc. SN 155,741. Pub. 6-4-63. Filed 10-23-62.

755,183. VITA-PRO. Pure Milk Association. SN 155,743. Pub. 6-4-63. Filed 10-23-62.

755,184. COUNT OFF. General Foods Corporation. SN 155,982. Pub. 6-4-63. Filed 10-26-62.

755,185. OAK BROOK FARM. Fruit Cake Bakers of America, Inc. SN 156,393. Pub. 6-4-63. Filed 11-1-62.

755,186. HUNTINGTON FARMS. Fruit Cake Bakers of America, Inc. SN 156,394. Pub. 6-4-63. Filed 11-1-62.

755,187. SPAM. Geo. A. Hormel & Company. SN 158,538. Pub. 6-4-63. Filed 12-5-62.

Class 47 — Wines

755,188. MAITRE D'. Regina Grape Products Co. SN 156,661. Pub. 6-4-63. Filed 11-5-62.

Class 48 — Malt Beverages and Liquors

755,189. EL TORO. Metropolis Brewery of N.J., Inc., d.b.a. Banner Brewing Co. SN 142,523. Pub. 6-4-63. Filed 4-18-62.

755,190. OLD DOMINION. Metropolis Brewery of N.J., Inc., d.b.a. Old Dominion Beverage Co. SN 142,532. Pub. 6-4-63. Filed 4-18-62.

755,191. HORTON. Metropolis Brewery of N.J., Inc. SN 142,534. Pub. 6-4-63. Filed 4-18-62.

755,192. SPEARMAN. The Spearman Brewing Company, d.b.a. Sewanee Brewing Co. SN 143,059. Pub. 6-4-63. Filed 4-25-62.

755,193. EHRET'S EXTRA. Metropolis Brewery of N.J., Inc. SN 143,651. Pub. 6-4-63. Filed 5-2-62.

Class 49 — Distilled Alcoholic Liquors

755,194. GLEN MIST. Savermo Limited. SN 155,844. Pub. 6-4-63. Filed 10-24-62.

755,195. GEORGIA CRACKER. The Viking Distillery, Inc. SN 155,851. Pub. 6-4-63. Filed 10-24-62.

755,196. GEORGIA PEACH. The Viking Distillery, Inc. SN 155,853. Pub. 6-4-63. Filed 10-24-62.

755,197. GEORGIA BOY. The Viking Distillery, Inc. SN 155,854. Pub. 6-4-63. Filed 10-24-62.

755,198. TWO NATURALS AND DESIGN. Glenmore Distilleries Company, d.b.a. Two Naturals Distilling Company. SN 156,874. Pub. 6-4-63. Filed 11-8-62.

Class 50 — Merchandise Not Otherwise Classified

755,199. THE WORLD OF SENSATION. Superior Plastics Inc. SN 132,881. Pub. 6-4-63. Filed 11-27-61.

755,200. PRAIRIE ART. Clyde Hood, d.b.a. Prairie Art Co. SN 138,863. Pub. 6-4-63. Filed 3-1-62.

755,201. DEKA-STIX. Safe-T Pacific Company, by change of name from Safe-T Pacific Baking Company. SN 139,241. Pub. 6-4-63. Filed 3-6-62.

755,202. VUNATOMY. Warner-Lambert Pharmaceutical Company. SN 154,076. Pub. 6-4-63. Filed 9-27-62.

755,203. DIKOTE. Polychrome Corporation. SN 154,624. Pub. 6-4-63. Filed 10-5-62.

755,204. SOWTEL. Jasper Devore. SN 154,701. Pub. 6-4-63. Filed 10-8-62.

Class 51 — Cosmetics and Toilet Preparations

755,205. DE-O-DEAR. Edward M. Spitz, d.b.a. Glamour Puss Cat Products. SN 140,771. Pub. 6-4-63. Filed 3-26-62.

755,206. MACALOID. The Inerto Company. SN 144,847. Pub. 6-4-63. Filed 5-17-62.

755,207. YAR. Russell L. Bastress, d.b.a. The Clarion Dental Products Co. SN 154,685. Pub. 6-4-63. Filed 10-8-62.

755,208. PRETTY PAT. Merle Norman Cosmetics, Inc. SN 154,754. Pub. 6-4-63. Filed 10-8-62.

755,209. CANIBELLE. Robert Alan Franklyn, d.b.a. Robaire Alain. SN 154,815. Pub. 6-4-63. Filed 10-9-62.

755,210. CANIBAL. Robert Alan Franklyn, d.b.a. Robaire Alain. SN 154,816. Pub. 6-4-63. Filed 10-9-62.

755,211. FP AND DESIGN. Foods Plus, Inc. SN 155,058. Pub. 6-4-63. Filed 10-12-62.

755,212. ALTIGA. Sea Trading Associates, Inc. SN 155,106. Pub. 6-4-63. Filed 10-12-62.

755,213. FIRST CHOICE. Associated Brands, Inc. SN 155,228. Pub. 6-4-63. Filed 10-16-62.

755,214. BETWEEN. Lever Brothers Company. SN 155,265. Pub. 6-4-63. Filed 10-16-62.

755,215. DIALOGUE. Bourjois, Inc. SN 155,683. Pub. 6-4-63. Filed 10-23-62.

755,216. REGENCY. Helene Curtis Industries, Inc. SN 156,278. Pub. 6-4-63. Filed 10-31-62.

Class 52 — Detergents and Soaps

755,217. KIRBY. The Scott & Fetzer Company. SN 138,543. Pub. 6-4-63. Filed 2-23-62.

755,218. CYCLO. Estes Corporation. SN 142,294. Pub. 6-4-63. Filed 4-16-62.

755,219. CAMKLEEN. The Cambridge Tile Manufacturing Company. SN 143,209. Pub. 6-4-63. Filed 4-27-62.

755,220. GOODRICH 745. E. R. Goodrich, d.b.a. Goodrich Maintenance Supply Company. SN 156,487. Pub. 6-4-63. Filed 11-2-62.

755,221. AEROWAX. American Home Products Corporation. SN 156,543. Pub. 6-4-63. Filed 11-5-62.

Service Marks

Class 100 — Miscellaneous

755,222. ACTON AND DESIGN. Acton Laboratories, Inc. SN 144,585. Pub. 6-4-63. Filed 5-15-62.

755,223. MW MUNCH WAGON. Munch Wagons Inc. SN 144,634. Pub. 6-4-63. Filed 5-15-62.

755,224. M AND DESIGN. F. W. Moulthrop & Associates. SN 148,214. Pub. 6-4-63. Filed 7-2-62.

755,225. VALLE'S WITH A CROWNED V. Valle's Steak House. SN 154,539. Pub. 6-4-63. Filed 10-4-62.

755,226. SHERATON MOTOR INN ETC. AND DESIGN. Sheraton Corporation of America. SN 155,846. Pub. 6-4-63. Filed 10-24-62.

Class 101 — Advertising and Business

755,227. GAMA SEAL. Gas Appliance Manufacturers Association. SN 141,522. Pub. 6-4-63. Filed 4-4-62.

755,228. OE. Consultants & Designers, Inc. SN 144,808. Pub. 6-4-63. Filed 5-17-62.

755,229. SCIENTECH. Ernst J. Neugroschl. SN 148,746. Pub. 6-4-63. Filed 7-10-62.

Class 102 — Insurance and Financial

755,230. MR. HAPPY EL PASO AND FANCIFUL MALE FIGURE. El Paso National Bank. SN 133,141. Pub. 6-4-63. Filed 12-1-61.

755,231. QUAKER CITY LIFE INSURANCE COMPANY AND DESIGN. Quaker City Life Insurance Company. SN 140,289. Pub. 6-4-63. Filed 3-20-62.

755,232. VAL-U-VAC. Continental Assurance Company. SN 144,462. Pub. 6-4-63. Filed 5-14-62.

755,233. VAL-U-VAC AND DESIGN. Continental Assurance Company. SN 144,601. Pub. 6-4-63. Filed 5-15-62.

755,234. KEMPER CARE. Lumbermens Mutual Casualty Company. SN 155,422. Pub. 6-4-63. Filed 10-18-62.

755,235. NATIONAL OLD LINE INSURANCE COMPANY AND DESIGN. National Old Line Insurance Company. SN 156,143. Pub. 6-4-63. Filed 10-29-62.

755,236. NATIONAL OLD LINE INSURANCE COMPANY IHOP AND DESIGN. National Old Line Insurance Company. SN 156,144. Pub. 6-4-63. Filed 10-29-62.

Class 103 — Construction and Repair

755,237. MR. WIREWELL AND DESIGN. Electrical Contractors Association. SN 139,608. COLLECTIVE MARK. Pub. 6-4-63. Filed 3-12-62.

755,238. FEC/D.A. Foster Equipment Corporation. SN 147,726. Pub. 6-4-63. Filed 6-26-62.

Class 105 — Transportation and Storage

755,239. WORLD GLOBE DESIGN. International Customs Service, Inc. SN 149,652. Pub. 6-4-63. Filed 7-24-62.

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167,848. DIAMOND. Cl. 9. 5–1–23.
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169,436. KONSET. Cl. 12. 6–19–23.
169,451. ENTERPRISE. Cl. 16. 6–19–23.
169,577. SIXINALL AND DESIGN. Cl. 4. 6–26–23.
169,762. PLANTATION CIRCLES ETC. AND DESIGN. Cl. 46. 7–3–23.
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171,080. AMERICAN COPPER PRODUCTS CORP. AND DESIGN. Cl. 21. 7–31–23.
171,241. GOLD-MAID. Cl. 39. 7–31–23.
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171,835. D'OR ELEGANTE. Cl. 46. 8–7–23.
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172,245. DESIGN OF BOY HOLDING A SLATE. Cl. 15. 8–28–23.
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173,102. QUINISAL. Cl. 18. 9–18–23.
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173,741. PIEDIGROTTA. Cl. 46. 10–2–23.
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306,397. "KLINGERIT–1000." Cl. 35. 9–19–33.
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647,643. TILT 'N TOTE. Cl. 2.
647,647. LIQUID KITTEN AND DESIGN. Cl. 4.
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647,717. PINK VELVET. Cl. 18.
647,718. WESTERN TOUCH. Cl. 18.
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New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

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151,229. MOHAWK MILLS AND DESIGN. Cl. 39. J. H. Semel & Co. 1–24–22. New Cert. Sec. 7(c) to Rockower Brothers, Inc., Philadelphia, Pa.
321,775. WELLS-GARDNER. Cl. 21. Wells-Gardner & Company. 2–12–35. New Cert. Sec. 7(c) to Wells-Gardner Electronics Corporation, Chicago, Ill.
607,419. FOREMOST. Cl. 52. Delta Chemical Company. 6–14–55. New Cert. Sec. 7(c) to Delta Chemical Corporation, Memphis, Tenn.
632,087. THERMOPRUF. Cl. 13. The Carroll Chain Company. 8–7–56. New Cert. Sec. 7(c) to S. G. Taylor Chain Company, Inc., Hammond, Ind.
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655,667. FOREMOST. Cl. 6. Delta Chemical Company. 12–17–57. New Cert. Sec. 7(c) to Delta Chemical Corporation, Memphis, Tenn.
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Effervescent Products, Inc.
Amistadi, Adam & Ann, Dover, Ohio. 755,176, pub. 6–4–63. Cl. 46.
Anaconda Aluminum Co., Louisville, Ky. 754,902, pub. 6–4–63. Cl. 14.
Anderton Springs Ltd., Bingley, England. 755,005, pub. 6–4–63. Cl. 23.
Angelica Uniform Co., St. Louis, Mo. 755,136, pub. 6–4–63. Cl. 39.
Appleton Coated Paper Co., The, Appleton, Wis. 755,107, pub. 6–4–63. Cl. 37.
Armour and Co., Chicago, Ill. 754,834, pub. 6–4–63. Cl. 4.
Armour and Co., Chicago, Ill. 755,172, pub. 6–4–63. Cl. 46.
Armstrong Chemical Products Co., Chicago, Ill. 754,906, pub. 6–4–63. Cl. 15.
Art-O-Rama, Inc., New Rochelle, N.Y. 647,708, canc. Cl. 16.
Ashland Oil & Refining Co.: *See*—
National Refining Co., The.
Associated Brands, Inc., Brooklyn, N.Y. 755,213, pub. 6–4–63. Cl. 51.
Astrosonics, Inc., Syosset, N.Y. 755,024, pub. 6–4–63. Cl. 26.
Atlantic Steel Co., Atlanta, Ga. 171,801, ren. 8–20–63. Cl. 13.
Auto Union G.m.b.H., Ingolstadt, Germany. 754,939, pub. 6–4–63. Classes 19 and 23.
Babcock Radio Engineering, Inc., Van Nuys, Calif. 647,758, canc. Cl. 21.
Banner Brewing Co.: *See*—
Metropolis Brewery of N.J., Inc.
Banner-Whitehill Corp., Indianapolis, Ind. 647,820, canc. Cl. 32.
Barrett Chemical Co.: *See*—
Garson, Henry G.
Bastress, Russell L., d.b.a. The Clarion Dental Products Co., Clarion, Pa. 755,207, pub. 6–4–63. Cl. 51.
Bauer, Eddie, Seattle, Wash. 403,693, ren. 8–20–63. Cl. 39.
Baxter, Benjamin, Fowler, Calif. 754,882, pub. 6–4–63. Cl. 13.
Beau Brummel Co., Omaha, Nebr. 647,869, canc. Cl. 39.
Beaunit Corp., New York, N.Y. 755,153, pub. 6–4–63. Cl. 42.
Beazley, J. Willard, d.b.a. Middlesex Plumbing Service, Saluda, Va. 754,896, pub. 6–4–63. Cl. 13.
Bedding Mfrs. Associates, Inc., Philadelphia, Pa. 755,083, pub. 6–4–63. Cl. 32.
Bee Chemical Co., Lansing, Ill. 754,914, pub. 6–4–63. Cl. 16.
Bell & Gossett Co., Morton Grove, Ill. 755,110, pub. 6–4–63. Cl. 38.
Beltraction Co., Chicago, Ill. 754,912, pub. 6–4–63. Cl. 15.
Benrus Watch Co., Inc., New York, N.Y. 755,040, pub. 6–4–63. Cl. 27.
Better Products Laboratories, Inc., Miami, Fla. 647,979, canc. Cl. 51.
Big Alert, Inc., Los Angeles, Calif., to Interstate Precision Products Corp., Anaheim, Calif. 647,794, canc. Cl. 26.
Binney & Smith Inc., New York, N.Y. 755,108, pub. 6–4–63. Cl. 37.
Black, Thomas, & Sons (Greenock) Ltd., Port Glasgow, Scotland. 754,992–3, pub. 6–4–63. Cl. 22.
Blackstone Corp., Jamestown, N.Y. 755,013, pub. 6–4–63. Cl. 24.
Board of Publication of The Methodist Church, Inc., The, d.b.a. Abingdon Press, Nashville, Tenn. 755,111, pub. 6–4–63. Cl. 38.
Bodner Neckwear Co., Philadelphia, Pa. 755,120, pub. 6–4–63. Cl. 39.
Boles-Aero, Inc., Burbank, Calif. 754,940, pub. 6–4–63. Cl. 19.
Bollman, Geo. W., & Co., Inc., Adamstown, Pa. 755,135, pub. 6–4–63. Cl. 39.
Bolta Products Sales, Inc., to The General Tire & Rubber Co., Lawrence, Mass. 647,966, canc. Cl. 50.
Bonat, Samuel, & Bro., Inc., Paterson, N.J. 647,997, canc. Cl. 52.
Bonat, Samuel, & Bro., Inc., West Paterson, N.J. 755,156, pub. 6–4–63. Cl. 44.
Bookspan, Barnet, d.b.a. Educrafts, Detroit, Mich. 755,115, pub. 6–4–63. Cl. 38.
Borden Co., The, New York, N.Y. 755,171, pub. 6–4–63. Cl. 46.
Borg-Warner Corp., Chicago, Ill. 755,004, pub. 6–4–63. Cl. 23.
Bourjois, Inc., New York, N.Y. 755,215, pub. 6–4–63. Cl. 51.
Bovinine Co., The, Jersey City, N.J., to American Home Products Corp., New York, N.Y. 402,118, ren. 8–20–63. Cl. 18.
Bradley Mfg. Co., Chicago, Ill. 754,960, pub. 6–4–63. Cl. 21.
Bradley, Milton, Co., Springfield, Mass. 754,996–8, pub. 6–4–63. Cl. 22.
Braincon Corp., Marion, Mass. 754,946, pub. 6–4–63. Cl. 19.
Brandburst Co. Ltd., London, England. 754,864–5, pub. 6–4–63. Cl. 6.
Brennan-McNally Mfg. Corp., Rochester, N.Y. 647,838, canc. Cl. 34.
Brighton Corp., Cincinnati, Ohio. 755,090, pub. 6–4–63. Cl. 34.
British American Metals Co., Inc., to Phelps Dodge Copper Products Corp., New York, N.Y. 167,803, ren. 8–20–63. Cl. 13.
Brooks Rotameter Co., Lansdale, Pa. 647,798, canc. Cl. 26.
Brown Shoe Co., Inc., St. Louis, Mo. 176,970, ren. 8–20–63. Cl. 39.
Brumley-Donaldson Co., Huntington Park, Calif. 754,840, pub. 6–4–63. Cl. 5.
Bryant Chemical Corp., North Quincy, Mass. 647,988, canc. Cl. 52.
Bug-A-Boo Products Inc., Wichita, Kans. 754,845, pub. 6–4–63. Cl. 6.
Burkhardt, F. T., Inc.: *See*—
Burkhardt, Frederic T.
Burkhardt, Frederic T., to F. T. Burkhardt, Inc., Holyoke, Mass. 401,753, ren. 8–20–63. Cl. 37.
Burlington Industries, Inc.: *See*—
Sarfert Hosiery Mills, Inc.
Stamper & Kaiser.
Burt, F. N., Co., Inc., Buffalo, N.Y. 754,831, pub. 6–4–63. Cl. 2.
Buster Brown Textiles, Inc.: *See*—
United Hosiery Mills Corp.
Butler's Shoe Corp., Atlanta, Ga. 755,121, pub. 6–4–63. Cl. 39.
C & A Products Co., Oklahoma City, Okla. 647,968, canc. Cl. 50.
CHD Pool Equipment, Inc., South El Monte, Calif. 755,062. pub. 6–4–63. Cl. 31.

CRS Industries Inc., Philadelphia, Pa. 755,035, pub. 6–4–63. Cl. 26.
Caled Products Co., Inc., Brentwood, Md. 754,860, pub. 6–4–63. Cl. 6.
California Citrus Processors: *See*—
Wurgaft, R. B.
Cambridge Tile Mfg. Co., The, Cincinnati, Ohio. 755,219, pub. 6–4–63. Cl. 52.
Camp and McInnes, Inc., Reading, Pa. 755,141, pub. 6–4–63. Cl. 39.
Campbell, Harry T., Sons' Corp., Towson, Md. 754,824, pub. 6–4–63. Cl. 1.
Carmack, Ralph E., d.b.a. Rexroyal Farms Uhrichsville, Ohio. 754,869, pub. 6–4–63. Cl. 10.
Carney Products Corp., Los Angeles, Calif. 647,937, canc. Cl. 46.
Carrier Corp., Syracuse, N.Y. 755,089, pub. 6–4–63. Cl. 34.
Carroll Chain Co., The, to S. G. Taylor Chain Co., Inc., Hammond, Ind. 632,087, new cert. Cl. 13.
Carroll Chain Co., The, to S. G. Taylor Chain Co., Inc., Hammond, Ind. 688,993, new cert. Cl. 13.
Catholic Digest Publications, Inc., The, St. Paul, Minn. 755,117, pub. 6–4–63. Cl. 38.
Cecilware-Commodore Products Corp., Long Island City, N.Y. 754,978, pub. 6–4–63. Cl. 21.
Cel-U-Dex Corp., Brooklyn, N.Y. 647,849, canc. Cl. 37.
Central Screw Co., Chicago, Ill. 754,885, pub. 6–4–63. Cl. 13.
Centrifugal Casting Co., Long Beach, Calif. 648,013, canc. Cl. 14.
Certain-Teed Products Corp., Ardmore, Pa. 401,960. Cl. 12.
Certified Grocers of Illinois, Inc., Chicago, Ill. 755,165, pub. 6–4–63. Cl. 45.
Certified Paper Converting Co., Bell, Calif. 647,679, canc. Cl. 7.
Chapiewsky, Levi C., Bangor, Wis. 755,031, pub. 6–4–63. Cl. 26.
Charlton Co., Inc., Fitchburg, Mass. 755,078, pub. 6–4–63. Cl. 32.
Chein, J., & Co., Burlington, N.J. 754,984, pub. 6–4–63. Cl. 22.
Chem-Care Products, Inc., Glendale, Calif. 754,959, pub. 6–4–63. Cl. 21.
Chemisches Laboratorium am Heiligengeistfeld G.m.b.H., Hamburg, Germany. 647,729–30, canc. Cl. 18.
Chicopee Mills, Inc., New York, N.Y. 755,154, pub. 6–4–63. Cl. 42.
Chieftain Automotive Products Corp., New York, N.Y. 754,880, pub. 6–4–63. Cl. 13.
Chipp Inc. of New York, New York, N.Y. 755,137, pub. 6–4–63. Cl. 39.
Ciba Ltd., Basel, Switzerland. 754,851–2, pub. 6–4–63. Cl. 6.
Clarion Dental Products Co., The: *See*—
Bastress, Russell L.
Clark, Margo, Houston, Tex. 647,974, canc. Cl. 51.
Clements Mfg. Co., Chicago, Ill. 754,974, pub. 6–4–63. Cl. 21.
Codamite Corp., Anaheim, Calif. 754,971, pub. 6–4–63. Cl. 21.
Colonial Plastics Mfg. Co., The, Cleveland, Ohio. 754,891, pub. 6–4–63. Cl. 13.
Colorado Builders' Supply Co., The, Denver, Colo. 647,684, canc. Cl. 9.
Colorado Flower Growers Association, Inc., Denver, Colo. 754,814, pub. 6–4–63. Cl. 1.
Columbia Motor Sales Co., Cincinnati, Ohio. 754,941, pub. 6–4–63. Cl. 19.
Comanche Steel Products, Inc., San Antonio, Tex. 754,873, pub. 6–4–63. Cl. 12.
Comet Rice Mills, Houston, Tex. 647,955, canc. Cl. 46.
Conn, C. G., Ltd., Elkhart, Ind. 755,016, pub. 6–4–63. Cl. 26.
Consultants & Designers, Inc., New York, N.Y. 755,228, pub. 6–4–63. Cl. 101.
Continental Assurance Co., Chicago, Ill. 755,232–3, pub. 6–4–63. Cl. 102.
Continental Baking Co., Rye, N.Y. 755,177, pub. 6–4–63. Cl. 46.
Cordova Inc., from Cordova Watch Corp., New York, N.Y. 755,051, pub. 6–4–63. Cl. 28.
Cordova Watch Corp.: *See*—
Cordova Inc.
Corn Products Co., New York, N.Y. 755,174, pub. 6–4–63. Cl. 46.
Coronet Jewelry Mfg. Co., New York, N.Y. 755,047, pub. 6–4–63. Cl. 28.
Corp. for the National Association of Congregational Christian Churches of the United States, Milwaukee, Wis. 755,114, pub. 6–4–63. Cl. 38.
Coulson, Chas. H., d.b.a. Coulson Heel Co., to Coulson Heel Co. Inc., Hanover, Pa. 170,731, ren. 8–20–63. Cl. 39.
Coulson Heel Co.: *See*—
Coulson, Chas. H.
Coulson Heel Co. Inc.: *See*—
Coulson, Chas. H.
County Clothes, Inc., Levittown, N.Y. 755,131, pub. 6–4–63. Cl. 39.
Craddock Furniture Corp., Evansville, Ind. 647,830, canc. Cl. 32.
Crane Co., Chicago, Ill. 754,881, pub. 6–4–63. Cl. 13.
Crane Co., Johnstown, Pa. 754,892, pub. 6–4–63. Cl. 13.
Crompton Co., New York, N.Y. 755,161, pub. 6–4–63. Cl. 42.
Crompton & Knowles Corp., Worcester, Mass. 754,859, pub. 6–4–63. Cl. 6.
Crossman, Florence L., d.b.a. Florence Lustig Bay Harbor Islands, Miami Beach, Fla. 755,042, pub. 6–4–63. Cl. 28.
Curran, Ray, & Co., Providence, R.I. 755,046, pub. 6–4–63. Cl. 28.
Curtis, Helene, Industries, Inc., Chicago, Ill. 755,216, pub. 6–4–63. Cl. 51.
Damm-Rock, Inc., Kansas City, Mo. 754,944, pub. 6–4–63. Cl. 19.
Damon Engineering, Inc., Needham Heights, Mass. 754,969, pub. 6–4–63. Cl. 21.
Dandy Mattress Corp., Brooklyn, N.Y. 755,070, pub. 6–4–63. Cl. 32.
Danmal Creations: *See*—
Malachuk, Daniel.
Dan River Mills, Inc., Danville, Va. 755,155, pub. 6–4–63. Cl. 42.
Daymarc Corp., Waltham, Mass. 755,018, pub. 6–4–63. Cl. 26.
Daystrom, Inc., Murray Hill, N.J. 754,962, pub. 6–4–63. Cl. 21.
Dell Publishing Co., Inc., New York, N.Y. 755,118, pub. 6–4–63. Cl. 38.
Delta Chemical Co., to Delta Chemical Corp., Memphis, Tenn. 607,419, new cert. Cl. 52.
Delta Chemical Co., to Delta Chemical Corp., Memphis, Tenn. 655,126, new cert. Cl. 4.
Delta Chemical Co., to Delta Chemical Corp., Memphis, Tenn. 655,667, new cert. Cl. 6.
Delta Chemical Corp.: *See*—
Delta Chemical Co.
Detrex Chemical Industries, Inc., Detroit, Mich. 647,775, canc. Cl. 23.
DeVane, Harvey M., Oxnard, Calif. 648,014, canc. Cl. 19.
Devore, Jasper, Arkansas City, Kans. 755,204, pub. 6–4–63. Cl. 50.
Diamond Match Co., The, Chicago, Ill., to Diamond National Corp., New York, N.Y. 167,347–8, ren. 8–20–63. Cl. 9.
Diamond National Corp.: *See*—
Diamond Match Co., The.
Diamond Power Specialty Corp., Lancaster, Ohio. 755,020, pub. 6–4–63. Cl. 26.
Dietene Co., The, Minneapolis, Minn. 754,931, pub. 6–4–63. Cl. 18.
Dimatteo, Joe, d.b.a. Weightless Missile Co., Downey, Calif. 754,985, pub. 6–4–63. Cl. 22.
Disa Corp., New York, N.Y. 755,071, pub. 6–4–63. Cl. 32.
Division Sales: *See*—
Marks, Morton.
Doan Mfg. Corp., Cleveland, Ohio. 647,740, canc. Cl. 19.
Dorsett Electronics, Inc., Norman, Okla. 755,100, pub. 6–4–63. Cl. 36.
Dowty Rotol, Inc., Arlington, Va. 754,951, pub. 6–4–63. Cl. 19.
Dupage Mfg. Co., Downers Grove, Ill. 754,888, pub. 6–4–63. Cl. 13.
Dutra, John F., d.b.a. Galtra Mfg. Co., to Francisco S. Seringa, d.b.a. Galtra Mfg. Co., Fall River, Mass. 169,577, ren. 8–20–63. Cl. 4.
Dura Commodities Corp., New York, N.Y. 754,835, pub. 6–4–63. Cl. 4.
Duradean Co., Inc., The, Beverly Hills, Calif. 755,170, pub. 6–4–63. Cl. 46.
Eagle Clothes, Inc.: *See*—
Goldman, Fredrick and Stanley.
Eastern Co., The, Naugatuck, Conn. 755,036, pub. 6–4–63. Cl. 26.
Eastern States Farmers' Exchange, Inc., West Springfield, Mass. 754,923, pub. 6–4–63. Cl. 18.
Eastman Kodak Co., Rochester, N.Y. 755,015, pub. 6–4–63. Cl. 26.
Educrafts: *See*—
Bookspan, Barnet.
Effervescent Products, Inc., to Ames Co., Inc., Elkhart, Ind. 401,312, ren. 8–20–63. Cl. 18.
Ekco Products Co., Chicago, Ill. 647,696, canc. Cl. 13.
Electrical Contractors Association, Milwaukee, Wis. 755,237, pub. 6–4–63. Cl. 10d.
Electronic Futures Inc., New Haven, Conn. 755,101, pub. 6–4–63. Cl. 36.
El Paso National Bank, El Paso, Tex. 755,230, pub. 6–4–63. Cl. 102.
Emerson Electric Mfg. Co., The, St. Louis, Mo. 754,979, pub. 6–4–63. Cl. 21.
Englander Co., Inc., The, Chicago, Ill. 755,063–4, pub. 6–4–63. Cl. 32.
Ensign-Bickford Co., The, Simsbury, Conn. 754,868, pub. 6–4–63. Cl. 9.
Enterprise Paint Mfg. Co., Chicago, Ill. 169,451, ren. 8–20–63. Cl. 16.
Erie Resistor Corp., Erie, Pa. 754,957, pub. 6–4–63. Cl. 21.
Estes Corp., Oakland, Calif. 755,218, pub. 6–4–63. Cl. 52.
Ettco Wire & Cable Corp., Brooklyn, N.Y. 754,958, pub. 6–4–63. Cl. 21.
Eureka Specialty Printing Co., Scranton, Pa. 754,989, pub. 6–4–63. Cl. 22.
Executive Furniture Guild of America, Grand Rapids, Mich. 755,066–7, pub. 6–4–63. Cl. 32.
Exquisite Form Industries, Inc., New York, N.Y. 755,125, pub. 6–4–63. Cl. 39.
Exquisite Form Industries, Inc., New York, N.Y. 755,148, pub. 6–4–63. Cl. 39.
FMC Corp., Chicago, Ill. 754,887, pub. 6–4–63. Cl. 13.
FMC Corp., San Jose, Calif. 755,025, pub. 6–4–63. Cl. 26.
Faberge, Inc.: *See*—
Rubin, Samuel.
Fair, Albert E. H., Brookline, Mass. 755,007, pub. 6–4–63. Cl. 23.
Fairlane, Inc., Atlanta, Ga. 647,954, canc. Cl. 46.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 754,862, pub. 6–4–63. Cl. 6.
Farber, S. W., Inc., New York, N.Y. 754,975, pub. 6–4–63. Cl. 21.
Fernandes, Francisco N., Seville, Spain. 755,178, pub. 6–4–63. Cl. 46.
Field, Henry, Seed and Nursery Co., Shenandoah, Iowa. 754,816–17, pub. 6–4–63. Cl. 1.

Field, Henry, Seed and Nursery Co., Shenandoah, Iowa. 754,849, pub. 6–4–63. Cl. 6.
Field, Marshall, & Co., Chicago, Ill., to Fieldcrest Mills, Inc., Spray, N.C. 169,991, ren. 8–20–63. Cl. 42.
Fieldcrest Mills, Inc.: *See*—
Field, Marshall, & Co.
Firestone Tire & Rubber Co., The, Akron, Ohio. 755,095–6, pub. 6–4–63. Cl. 35.
Flint, Eaton, and Co., Decatur, Ill. 642,014, canc. Cl. 18.
Float-in-Es Co., Los Angeles, Calif. 647,822, canc. Cl. 32.
Flocker, John, and Co., Pittsburgh, Pa. 647,914, canc. Cl. 42.
Food Machinery and Chemical Corp., New York, N.Y. 647,652, canc. Cl. 6.
Foods Plus, Inc., New York, N.Y. 755,211, pub. 6–4–63. Cl. 51.
Forcite, Inc., College Point, N.Y. 755,065, pub. 6–4–63. Cl. 32.
Ford Motor Co., Dearborn, Mich. 647,733, canc. Cl. 19.
Foster Equipment Corp., Merrifield, Va. 755,238, pub. 6–4–63. Cl. 108.
Franklyn, Robert A., d.b.a. Robaire Alain, Los Angeles, Calif. 755,209–10, pub. 6–4–63. Cl. 51.
Fraser's, Inc., New York, N.Y. 755,009, pub. 6–4–63. Cl. 23.
Fruit Cake Bakers of America, Inc., Chicago, Ill. 755,185–6, pub. 6–4–63. Cl. 46.
Galtra Mfg. Co.: *See*—
Dutra, John F.
Gamco Products, Inc., Big Spring, Tex. 755,069, pub. 6–4–63. Cl. 32.
Garcia y Vega, Inc., New York, N.Y. 754,918, pub. 6–4–63. Cl. 17.
Garson, Henry G., d.b.a. Barrett Chemical Co., Philadelphia, Pa. 647,719, canc. Cl. 18.
Gas Appliance Manufacturers Association, New York, N.Y. 755,227, pub. 6–4–63. Cl. 101.
Gates Corp., Costa Mesa, Calif. 754,827, pub. 6–4–63. Cl. 2.
General Aniline & Film Corp., New York, N.Y. 647,857, canc. Cl. 38.
General Dynamics Corp. (Convair Division), San Diego, Calif. 647,736, canc. Cl. 19.
General Fireproofing Co., The, Youngstown, Ohio. 755,074, pub. 6–4–63. Cl. 32.
General Foods Corp., White Plains, N.Y. 755,184, pub. 6–4–63. Cl. 46.
General Minerals Corp., Denver, Colo. 754,872, pub. 6–4–63. Cl. 12.
General Rubber Corp., Tenafly, N.J. 755,010, pub. 6–4–63. Cl. 28.
General Tire & Rubber Co., The: *See*—
Bolta Products Sales, Inc.
Georgia Kaolin Co., Elizabeth, N.J. 400,967, ren. 8–20–63. Cl. 16.
Georgia Kaolin Co., Elizabeth, N.J. 401,042, ren. 8–20–63. Cl. 16.
Gettee Hosiery Mills, Inc., San Mateo, Calif. 755,119, pub. 6–4–63. Cl. 39.
Giant Industries, Pico Rivera, Calif. 755,001, pub. 6–4–63. Cl. 23.
Giant Umbrella Co., Inc., New York, N.Y. 755,150, pub. 6–4–63. Cl. 41.
Gibbs Underwear Co., Philadelphia, Pa. 647,896, canc. Cl. 39.
Glamour Puss Cat Products: *See*—
Spitz, Edward M.
Glastron Boat Co., Austin, Tex. 754,952, pub. 6–4–63. Cl. 19.
Gleitsman's, Inc., Long Island City, N.Y. 755,073, pub. 6–4–63. Cl. 32.
Glenmore Distilleries Co., d.b.a. Two Naturals Distilling Co., Owensboro, Ky. 755,198, pub. 6–4–63. Cl. 49.
Goldberg, Samuel A., to A. J. Leff Co., Chicago, Ill. 171,241, ren. 8–20–63. Cl. 39.
Goldberg, Samuel A., to A. J. Leff Co., Chicago, Ill. 401,998, ren. 8–20–63. Cl. 39.
Goldman, Fredrick and Stanley, from Eagle Clothes, Inc., New York, N.Y. 755,133, pub. 6–4–63. Cl. 39.
Gold Seal Rubber Co., Boston, Mass. 755,143, pub. 6–4–63. Cl. 39.
Goodrich, E. R., d.b.a. Goodrich Maintenance Supply Co., Oklahoma City, Okla. 755,220, pub. 6–4–63. Cl. 52.
Goodrich Maintenance Supply Co.: *See*—
Goodrich, E. R.
Grand Specialties Co., Chicago, Ill. 400,864, ren. 8–20–63. Cl. 23.
Great Atlantic & Pacific Tea Co., Inc., The, New York, N.Y. 755,179, pub. 6–4–63. Cl. 46.
Gruen Industries, Inc., d.b.a. The Gruen Watch Co., New York, N.Y. 755,041, pub. 6–4–63. Cl. 27.
Gruen Watch Co., The: *See*—
Gruen Industries, Inc.
Gubelin International Corp., Mount Kisco, N.Y. 647,751, canc. Cl. 21.
Guest Television & Radio, Inc., New York, N.Y. 647,752, canc. Cl. 21.
Guise, Harry, Inc., New York, N.Y. 755,045, pub. 6–4–63. Cl. 28.
Hamilton-Skotch Corp., Hamilton, Ohio. 754,819, pub. 6–4–63. Cl. 1.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 754,879, pub. 6–4–63. Cl. 12.
Harrison Candy Co.: *See*—
Harrison, Clyde J.
Harrison, Clyde J., d.b.a. Harrison Candy Co., Covington, Ky. 647,930, canc. Cl. 46.
Harts Mountain Products Corp., New York, N.Y. 754,828, pub. 6–4–63. Cl. 1.
Hat Corp. of America, Norwalk, Conn. 755,139, pub. 6–4–63. Cl. 39.
Hatfield Industries, Inc., d.b.a. Warehouse Storage Systems Co., Hatfield, Pa. 755,068, pub. 6–4–63. Cl. 32.
H-Brace, Inc., Miami, Fla. 754,878, pub. 6–4–63. Cl. 12.
Hennick, Joe, Enterprises: *See*—
Hennick, Joseph P.
Hennick, Joseph P., d.b.a. Joe Hennick Enterprises, Ashland, Oreg. 754,987, pub. 6–4–63. Cl. 22.
Herrmann, J. Ch., Nurnberg, Germany. 755,091, pub. 6–4–63. Cl. 34.
Herschi N.V., Hoensbroek, Netherlands. 755,163, pub. 6–4–63. Cl. 45.
Hewlett-Packard Co., from Palo Alto Engineering Co., Palo Alto, Calif. 754,956, pub. 6–4–63. Cl. 21.
High Standard Mfg. Corp., The, Hamden, Conn. 647,685, canc. Cl. 9.
Hillfe Emblems: *See*—
Mallckson, David L.
Hollycam Inc., d.b.a. Hollywood Camera Co., Hollywood, Calif. 755,029, pub. 6–4–63. Cl. 26.
Hollywood Camera Co.: *See*—
Hollycam Inc.
Hollywood-Maxwell Co., Los Angeles, Calif. 647,899, canc. Cl. 39.
Homestead Valve Mfg. Co., Coraopolis, Pa. 754,897–8, pub. 6–4–63. Cl. 13.
Hood, Clyde, d.b.a. Prairie Art Co., Decatur, Ill. 755,200, pub. 6–4–63. Cl. 50.
Hormel, Geo. A., & Co., Austin, Minn. 755,187, pub. 6–4–63. Cl. 46.
Howe Sound Co., New York, N.Y. 754,900, pub. 6–4–63. Cl. 14.
Hubbell, Harvey, Inc., Bridgeport, Conn. 754,895, pub. 6–4–63. Cl. 13.
Hudnut, Richard: *See*—
Standard Laboratories, Inc.
Humble Oil & Refining Co.: *See*—
Standard Oil Co. (Inc. in New Jersey).
Hydyn Co., Cleveland, Ohio. 755,011, pub. 6–4–63. Cl. 23.
Hygienol Co., Inc., New Rochelle, N.Y. 402,439, ren. 8–20–63. Cl. 29.
I-T-E Circuit Breaker Co., The, Philadelphia, Pa. 754,968, pub. 6–4–63. Cl. 21.
Ideal Pharmacal Co., Waterbury, Conn. 647,727, canc. Cl. 18.
Illinois Tool Works Inc., Chicago, Ill. 754,963, pub. 6–4–63. Cl. 21.
Impulsphysik Dr. Ing. Frank Frungel G.m.b.H., Hamburg-Rissen, Germany. 755,021, pub. 6–4–63. Cl. 26.
Inerto Co., The, San Francisco, Calif. 755,059, pub. 6–4–63. Cl. 30.
Inerto Co., The, San Francisco, Calif. 755,206, pub. 6–4–63. Cl. 51.
Insul-8 Corp., San Carlos, Calif. 754,978, pub. 6–4–63. Cl. 21.
Integra A.G. Zurich Industrietechnische Gesellschaft, Zurich, Switzerland. 647,793, canc. Cl. 26.
International Customs Service, Inc., Los Angeles, Calif. 755,239, pub. 6–4–63. Cl. 105.
International Latex Corp., Dover, Del. 647,898, canc. Cl. 39.
International Minerals & Chemical Corp., Skokie, Ill. 754,818, pub. 6–4–63. Cl. 1.
International Minerals & Chemical Corp., Skokie, Ill. 754,839, pub. 6–4–63. Cl. 5.
International Minerals & Chemical Corp., Skokie, Ill. 754,856, pub. 6–4–63. Cl. 6.
International Resources Engineering and Exploration Group, Washington, D.C. 647,999, canc. Cl. 100.
Interstate Precision Products Corp.: *See*—
Big Alert, Inc.
Iowa Paint Mfg. Co., Inc., Des Moines, Iowa. 754,915, pub. 6–4–63. Cl. 16.
Iron-A-Way, Inc., Peoria, Ill. 755,081, pub. 6–4–63. Cl. 32.
Johnson, Clyde L., Wisconsin Rapids, Wis. 647,826, canc. Cl. 32.
Joseph & Feiss Co., The, Cleveland, Ohio. 755,146–7, pub. 6–4–63. Cl. 39.
Kahn's, E., Sons Co., The, Cincinnati, Ohio. 177,158, ren. 8–20–63. Cl. 46.
Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich. 647,852, canc. Cl. 37.
Katz, Julius, d.b.a. Julius Katz & Son, New York, N.Y. 755,052, pub. 6–4–63. Cl. 28.
Katz, Julius, & Son: *See*—
Katz, Julius.
Kayser-Roth Corp., New York, N.Y. 755,130, pub. 6–4–63. Cl. 39.
Kennel Caskets, Inc., Massapequa Park, N.Y. 754,829, pub. 6–4–63. Cl. 2.
Kimble Glass Co., Vineland, N.J., to Owens-Illinois Glass Co., Toledo, Ohio. 399,812–13, ren. 8–20–63. Cl. 33.
King Radio Corp., Inc., Olathe, Kans. 754,980, pub. 6–4–63. Cl. 21.
Kleinert, I. B., Rubber Co., New York, N.Y. 755,124, pub. 6–4–63. Cl. 39.
Klinger, Richard, Gumpoldskirchin, Austria-Hungary. 50,978, canc. Cl. 35.
Knickerbocker Products Co.: *See*—
Master Vibrator Co.
Kollsman Instrument Corp., Elmhurst, N.Y. 755,017, pub. 6–4–63. Cl. 26.
Kollsman Instrument Corp., Elmhurst, N.Y. 755,023, pub. 6–4–63. Cl. 26.
Kress, S. H., and Co., New York, N.Y. 647,810, canc. Cl. 29.
Kroywen Coats, Inc., New York, N.Y. 755,152, pub. 6–4–63. Cl. 42.
Lady Lynne Lingerie, Inc., New York, N.Y. 755,126, pub. 6–4–63. Cl. 39.

Lady Neat Corp., from Frank V. Perez, Miami, Fla. 754,894, pub. 6–4–63. Cl. 13.
Lamet International, Inc., New York, N.Y. 755,134, pub. 6–4–63. Cl. 39.
Lane Co., Inc., The, Altavista, Va. 755,082, pub. 6–4–63. Cl. 32.
Lang, Marion E., d.b.a. Peacock Enamels, Needham, Mass. 755,058, pub. 6–4–63. Cl. 30.
Larson, Sherwood L., Ogallala, Nebr. 647,717–18, canc. Cl. 18.
Laurel Cards, Inc., Waukegan, Ill. 755,105–6, pub. 6–4–63. Cl. 37.
Le Fevre Chemical Co., Oklahoma City, Okla. 754,846, pub. 6–4–63. Cl. 6.
Leff, A. J., Co.: *See*— Goldberg, Samuel A.
Legge, Walter G., Co., Inc., New York, N.Y. 754,837, pub. 6–4–63. Cl. 4.
Leneta Co., The, Ho-Ho-Kus, N.J. 755,084, pub. 6–4–63. Cl. 26.
Leong, C. K., Co.: *See*— Leong, Crichton K.
Leong, Crichton K., d.b.a. C. K. Leong Co., Los Angeles, Calif. 755,088, pub. 6–4–63. Cl. 33.
Lever Brothers Co., New York, N.Y. 755,214, pub. 6–4–63. Cl. 51.
Lindsey-Robinson & Co., Inc., Roanoke, Va. 647,935, canc. Cl. 46.
Lionel Corp., The, Hillside, N.J. 755,026, pub. 6–4–63. Cl. 26.
Lionel Corp., The: *See*— Lionel Toy Corp., The.
Lionel Toy Corp., The, Wilmington, Del., from The Lionel Corp., New York, N.Y. 755,028, pub. 6–4–63. Cl. 26.
Lowe, Joe, Corp., New York, N.Y. 755,178, pub. 6–4–63. Cl. 46.
Lowrance, John W., to Mello-Glo Co., of Boston, Mass., Boston, Mass., to Marguerite Corbiere, Weston, Mass. 172,561, ren. 8–20–63. Cl. 51.
Luly Pharmaceutical Co., St. Louis, Mo. 754,924, pub. 6–4–63. Cl. 18.
Lumbermens Mutual Casualty Co., Chicago, Ill. 755,234, pub. 6–4–63. Cl. 102.
Lustig, Florence: *See*— Crossman, Florence L.
M.D. Maternities, Inc., New York, N.Y. 647,871, canc. Cl. 39.
M & D Wakshlag Corp., New York, N.Y. 755,048, pub. 6–4–63. Cl. 28.
M. & T. Chemicals Inc.: *See*— United Chromium Inc.
Maidenform, Inc., New York, N.Y. 755,122, pub. 6–4–63. Cl. 39.
Maidenform, Inc., New York, N.Y. 755,142, pub. 6–4–63. Cl. 39.
Maid-Rite Wire Products Corp., New York, N.Y. 647,907, canc. Cl. 40.
Malachuk, Daniel, d.b.a. Danmal Creations, Plainfield, N.J. 647,806, canc. Cl. 28.
Malickson, David L., d.b.a. Hilife Emblems, Bala-Cynwyd, Pa. 647,681, canc. Cl. 8.
Mangas, James E., Manitou, Colo. 647,927, canc. Cl. 44.
Marblehead Golf Corp., Sarasota, Fla. 754,991, pub. 6–4–63. Cl. 22.
Marguerite Corbiere: *See*— Lowrance, John W.
Marks, Morton, d.b.a. Division Sales, Chicago, Ill. 755,044, pub. 6–2–63. Cl. 28.
Marsh Supermarkets, Inc., Yorktown, Ind. 754,863, pub. 6–4–63. Cl. 6.
Martin-Senour Co., The, Chicago, Ill. 647,711, canc. Cl. 16.
Marvella Pearls, Inc., New York, N.Y. 647,807, canc. Cl. 28.
Marwin Products, Jefferson, Tex. 755,055, pub. 6–4–63. Cl. 29.
Master Vibrator Co., d.b.a. Knickerbocker Products Co., Dayton, Ohio. 647,773, canc. Cl. 23.
Master Vibrator Co., d.b.a. Knickerbocker Products Co., Dayton, Ohio. 647,839, canc. Cl. 34.
Mauz & Pfeiffer, Stuttgart-Botnang, Germany. 754,965, pub. 6–4–63. Cl. 21.
May Department Stores Co., The, New York, N.Y., Los Angeles, Calif., Denver, Colo., St. Louis, Mo., Akron and Cleveland, Ohio, and Baltimore, Md. 342,445, canc. Cl. 39.
McCann, Kathy G., d.b.a. American United Co., Hartford, Conn. 755,166, pub. 6–4–63. Cl. 46.
Meat Industry Suppliers, Inc., Chicago, Ill. 647,951, canc. Cl. 46.
Mello-Glo Co., of Boston, Mass.: *See*— Lowrance, John W.
Merck & Co., New York, N.Y., to Merck & Co., Inc., Rahway, N.J. 173,102, ren. 8–20–63. Cl. 18.
Merck & Co., Inc.: *See*— Merck & Co.
Merck & Co., Inc., Rahway, N.J. 754,842, pub. 6–4–63. Cl. 6.
Metaiglas Laboratories, Inc., Madison, Wis. 647,647, canc. Cl. 4.
Metro Dyestuff Corp., West Warwick, R.I. 647,657–64, canc. Cl. 6.
Metropolis Brewery of N.J., Inc., d.b.a. Banner Brewing Co., Trenton, N.J. 755,189, pub. 6–4–63. Cl. 48.
Metropolis Brewery of N.J., Inc., d.b.a. Old Dominion Beverage Co., Trenton, N.J. 755,190, pub. 6–4–63. Cl. 48.
Metropolis Brewery of N.J., Inc., Trenton, N.J. 755,191, pub. 6–4–63. Cl. 48.
Metropolis Brewery of N.J., Inc., Trenton, N.J. 755,193, pub. 6–4–63. Cl. 48.
Michaud, A., Co.: *See*— Michaud, Abner.
Michaud, Abner, d.b.a. A. Michaud Co., to A. Michaud Co., Philadelphia, Pa. 647,933, canc. Cl. 46.
Michigan Wheel Co., Grand Rapids, Mich. 754,953–4, pub. 6–4–63. Cl. 19.
Middlesex Plumbing Service: *See*— Beasley, J. Willard.
Miles Laboratories, Inc.: *See*— Takamine Laboratory, Inc.
Milkmaid Inc., New York, N.Y. 647,986, canc. Cl. 51.
Milwhite Mud Sales Co., Houston, Tex. 754,841, pub. 6–4–63. Cl. 6.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 755,030, pub. 6–4–63. Cl. 26.
Minnesota Mining and Mfg. Co.: *See*— Wollensak Optical Co.
Miracle Adhesives Corp., Bellmore, N.Y. 754,838, pub. 6–4–63. Cl. 5.
Miracle Adhesives Corp., Bellmore, N.Y. 754,877, pub. 6–4–63. Cl. 12.
Mitchell, Robert L., Norman, Okla. 648,004, canc. Cl. 101.
Monarch Electronics International, Inc., North Hollywood, Calif. 754,964, pub. 6–4–63. Cl. 21.
Monroe Chemical Co., Inc., Hilton, N.Y. 754,905, pub. 6–4–63. Cl. 15.
Montgomery Ward & Co., Inc., Chicago, Ill. 754,942, pub. 6–4–63. Cl. 19.
Morris, Philip, & Co. Ltd., to Philip Morris Inc., New York, N.Y. 173,131, ren. 8–20–63. Cl. 17.
Morris, Philip, Inc.: *See*— Morris, Philip, & Co. Ltd.
Moulthrop, F. W., & Associates, Oakland, Calif. 755,224, pub. 6–4–63. Cl. 100.
Muench-Kreuzer Candle Co., Inc., Syracuse, N.Y. 754,913, pub. 6–4–63. Cl. 15.
Mullins Mfg. Corp., Warren, Ohio. 755,076–7, pub. 6–4–63. Cl. 32.
Multipurpose Bed Co., Inc., Los Angeles, Calif. 755,084, pub. 6–4–63. Cl. 32.
Munch Wagons Inc., Philadelphia, Pa. 755,223, pub. 6–4–63. Cl. 100.
Mutascio, Joseph, d.b.a. Prosperity California Wines, to Prosperity California Wines, Inc., New York, N.Y. 402,009, ren. 8–20–63. Cl. 47.
Naconie: *See*— Waddington, Wm., Jr.
National Conservative League, Inc.: *See*— Waddington, Wm., Jr.
National Dairy Products Corp.: *See*— Schaefer, Max O.
National Old Line Insurance Co., Little Rock, Ark. 755,235–6, pub. 6–4–63. Cl. 102.
National Refining Co., The, Cleveland, Ohio, to Ashland Oil & Refining Co., Ashland, Ky. 172,245, ren. 8–20–63. Cl. 15.
Nethercutt Industrial Corp., Sylmar, Calif. 754,948, pub. 6–4–63. Cl. 19.
Neugroschl, Ernst J. 755,229, pub. 6–4–63. Cl. 101.
Neverleak Roof Flange and Metal Co.: *See*— Reaves, Nicholas M.
Nodaway Valley Foods, Inc., Corning, Iowa. 755,167, pub. 6–4–63. Cl. 46.
Norman, Merle, Cosmetics, Inc., Los Angeles, Calif. 755,208, pub. 6–4–63. Cl. 51.
Novo Industrial Corp.: *See*— United Specialties Co., The.
Nue-Line Sales Mfg. Corp., Los Angeles, Calif. 647,643, canc. Cl. 2.
Nuvox Electronics Corp., New York, N.Y. 754,961, pub. 6–4–63. Cl. 21.
Oak Hill Co., Fitchburg, Mass. 755,079, pub. 6–4–63. Cl. 32.
Official Films, Inc., New York, N.Y. 755,109, pub. 6–4–63. Cl. 38.
Ogden, L. Harris, Ltd., Atlanta, Ga. 755,043, pub. 6–4–63. Cl. 28.
Okonite Co., The, Passaic, N.J. 754,976, pub. 6–4–63. Cl. 21.
Old Dominion Beverage Co.: *See*— Metropolis Brewery of N.J. Inc.
Olin Mathieson Chemical Corp., New York, N.Y. 647,987, canc. Cl. 51.
Olin Mathieson Chemical Corp., New York, N.Y. 754,825, pub. 6–4–63. Cl. 1.
O'Neill, Jack E., d.b.a. Surf Shop, Santa Cruz, Calif. 754,995, pub. 6–4–63. Cl. 22.
Orkin Exterminating Co., Inc., Atlanta, Ga. 754,857, pub. 6–4–63. Cl. 6.
Outboard Marine Corp., Waukegan, Ill. 754,943, pub. 6–4–63. Cl. 19.
Outboard Marine Corp., Waukegan, Ill. 755,003, pub. 6–4–63. Cl. 23.
Owens-Illinois Glass Co.: *See*— Kimble Glass Co.
Palm Beach Co., Cincinnati, Ohio. 755,144, pub. 6–4–63. Cl. 39.
Palo Alto Engineering Co.: *See*— Hewlett-Packard Co.
Pangborn Corp., Hagerstown, Md. 754,836, pub. 6–4–63. Cl. 4.
Paradise Mfg. Co., Los Angeles, Calif. 754,994, pub. 6–4–63. Cl. 22.
Parke, Davis & Co., Detroit, Mich. 401,418, ren. 8–20–63. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 755,116, pub. 6–4–63. Cl. 38.
Pastene & Co., Inc.: *See*— Pastene, P., & Co. Inc.
Pastene, P., & Co. Inc., Boston, Mass., to Pastene & Co., Inc., New York, N.Y. 173,741, ren. 8–20–63. Cl. 46.
Peacock Enamels: *See*— Lang, Marion E.

Penick, S. B., & Co., New York, N.Y. 754,855, pub. 6–4–63. Cl. 6.
Pennsylvania Industrial Chemical Corp., Clairton, Pa. 403,763, ren. 8–20–63. Cl. 1.
Penobscot Shoe Co., Boston, Mass. 755,128, pub. 6–4–63. Cl. 39.
Perez, Frank V.: *See*— Lady Neat Corp.
Perfect Bloomer Co., Brooklyn, N.Y. 755,145, pub. 6–4–63. Cl. 39.
Perkin-Elmer Corp., The, Norwalk, Conn. 647,800, canc. Cl. 26.
Peterman, D. S., & Co., York, Pa. 755,123, pub. 6–4–63. Cl. 39.
Phelps Dodge Copper Products Corp.: *See*— British American Metals Co., Inc. American Copper Products Corp.
Pierce, S. S. Co., Boston, Mass. 176,189, ren. 8–20–63. Cl. 17.
Pitman Mfg. Co., Grandview, Mo. 754,950, pub. 6–4–63. Cl. 19.
Plastic Stained Glass Corp., New York, N.Y. 754,826, pub. 6–4–63. Cl. 1.
Plus Poultry, Inc., Siloam Springs, Ark. 755,181–2, pub. 6–4–63. Cl. 46.
Polychrome Corp., Yonkers, N.Y. 755,203, pub. 6–4–63. Cl. 50.
Porter, H. K., Co., Inc., Pittsburgh, Pa. 754,970, pub. 6–4–63. Cl. 21.
Powell, Verne Q., Flutes, Inc., Boston, Mass. 755,099, pub. 6–4–63. Cl. 36
Prairie Art Co.: *See*— Hood, Clyde.
Precision Metalsmiths, Inc., Cleveland, Ohio. 754,901, pub. 6–4–63. Cl. 14.
Prince, H. M., Textiles Inc., New York, N.Y. 647,912, canc. Cl. 42.
Procter & Gamble Co., The, Cincinnati, Ohio. 754,928, pub. 6–4–63. Cl. 18.
Prosperity California Wines: *See*— Mutascio, Joseph.
Prosperity California Wines, Inc.: *See*— Mutascio, Joseph.
Pulp Reproduction Co., Milwaukee, Wis. 754,833, pub. 6–4–63. Cl. 2.
Pure Milk Association, Chicago, Ill. 755,183, pub. 6–4–63. Cl. 46.
Quaker City Life Insurance Co., Philadelphia, Pa. 755,231, pub. 6–4–63. Cl. 102.
Quebec Metallurgical Industries Ltd., Ottawa, Ontario, Canada. 647,697, canc. Cl. 14.
Raffetto, G. B., Inc., New York, N.Y. 169,762, ren. 8–20–63. Cl. 46.
Ralston Purina Co., St. Louis, Mo. 754,933, pub. 6–4–63. Cl. 18.
Reaves, Nicholas M., d.b.a. Neverleak Roof Flange and Metal Co., Memphis, Tenn. 754,883, pub. 6–4–63. Cl. 13.
Regina Grape Products Co., Etiwanda, Calif. 755,188, pub. 6–4–63. Cl. 47.
Reich Jewelry: *See*— Reich, Lawrence.
Reich, Lawrence, d.b.a. Reich Jewelry, Detroit, Mich. 755,050, pub. 6–4–63. Cl. 28.
Reitool Corp., Milwaukee, Wis. 755,008, pub. 6–4–63. Cl. 23.
Republic Foil, Inc., Danbury, Conn. 754,875, pub. 6–4–63. Cl. 12.
Rexroyal Farms: *See*— Carmack, Ralph E.
Reynolds Industries, Inc., Santa Monica, Calif. 647,909, canc. Cl. 40.
Roehr Products Co., Inc., DeLand, Fla. 755,160, pub. 6–4–63. Cl. 44.
Rich, Klinger Aktiengesellschaft, Gumpoldskirchen, near Vienna, Austria. 306,397, canc. Cl. 35.
Rich, Klinger Gesellschaft mit beschrankter Haftung, Gumpoldskirchen, Austria. 288,705, canc. Cl. 35.
Richards Industries, Inc., Cincinnati, Ohio. 754,893, pub. 6–4–63. Cl. 13.
Richardson, Roy L., Hollywood, Fla. 647,759, canc. Cl. 21.
Rinshed-Mason Co., Detroit, Mich. 754,916, pub. 6–4–63. Cl. 16.
Rockford Textile Mills, Inc., McMinnville, Tenn. 647,881, canc. Cl. 39.
Rockower Brothers, Inc.: *See*— Semel, J. H., & Co.
Rocky Mountain Corp., The, Denver, Colo. 648,019, canc. Cl. 51.
Rodman & Yaruss Refining Co. Inc., New York, N.Y. 755,053, pub. 6–4–63. Cl. 28.
Rogers Corp., Rogers, Conn. 754,815, pub. 6–4–63. Cl. 1.
Rogers, Lunt & Bowlen Co., Greenfield, Mass. 755,049, pub. 6–4–63. Cl. 28.
Rosenbloom, Morris, & Co., Inc., Rochester, N.Y. 755,054, pub. 6–4–63. Cl. 28.
Ross & Rowe, Inc., Fort Lauderdale, Fla. 754,854, pub. 6–4–63. Cl. 6.
Royal Bond, Inc., St. Louis, Mo. 754,848, pub. 6–4–63. Cl. 6.
Rubin, Samuel, to Faberge, Inc., New York, N.Y. 403,207, ren. 8–20–63. Cl. 51.
Rubon, Inc., Independence, Mo. 755,056, pub. 6–4–63. Cl. 29.
Ruth Originals Corp., Hendersonville, N.Y. 755,132, pub. 6–4–63. Cl. 39.
S.M.A. Corp., Chicago, Ill., to American Home Products Corp., New York, N.Y. 404,146, ren. 8–20–63. Cl. 18.
Safe-T Pacific Baking Co.: *See*— Safe-T Pacific Co.
Safe-T Pacific Co., Redwood City, Calif. 754,821, pub. 6–4–63. Cl. 1.
Safe-T Pacific Co., from Safe-T Pacific Baking Co., Redwood City, Calif. 755,201, pub. 6–4–63. Cl. 50.
St. Egydyer Eisen- und Stahl-Industrie-Gesellschaft, Vienna, Austria. 754,866, pub. 6–4–63. (Consolidated certificate, Classes 7, 14, and 23.)
St. Louis Music Supply Co., St. Louis, Mo. 754,982, pub. 6–4–63. Cl. 21.
St. Louis Music Supply Co., St. Louis, Mo. 755,104, pub. 6–4–63. Cl. 36.
Sales Affiliates, Inc., New York, N.Y. 647,978, canc. Cl. 51.
Salsbury's, Dr., Laboratories, Charles City, Iowa. 754,927, pub. 6–4–63. Cl. 18.
Sanders Associates, Inc., Nashua, N.H. 755,098, pub. 6–4–63. Cl. 36.
Sandoz, Inc., New York, N.Y. 754,858, pub. 6–4–63. Cl. 6.
Sarfert Hosiery Mills, Inc., Philadelphia, Pa., to Burlington Industries, Inc., Greensboro, N.C. 404,723, ren. 8–20–63. Cl. 39.
Savermo Ltd., London, England. 755,194, pub. 6–4–63. Cl. 49.
Schaefer, Max O., d.b.a. Velveeta Cheese Co., to Velveeta Cheese Co., Inc., of Monroe, N.Y., Monroe, N.Y., to National Dairy Products Corp., Chicago, Ill. 176,615, ren. 8–20–63. Cl. 46.
Schenley Import Corp., to Schenley Industries Inc., New York, N.Y. 402,526, ren. 8–20–63. Cl. 47.
Schenley Industries Inc.: *See*— Schenley Import Corp.
Sclafani, Gus, to Gus Sclafani Corp., Stamford, Conn. 401,243, ren. 8–20–63. Cl. 46.
Sclafani, Gus, Corp.: *See*— Sclafani, Gus.
Scott & Fetzer Co., The, Cleveland, Ohio. 755,217, pub. 6–4–63. Cl. 52.
Scott, H. H., Inc., Maynard, Mass. 755,102–3, pub. 6–4–63. Cl. 36.
Scully Signal Co., Melrose, Mass. 647,690, canc. Cl. 13.
Sea Trading Associates, Inc., New York, N.Y. 755,212, pub. 6–4–63. Cl. 51.
Sealy, Inc., Chicago, Ill. 755,075, pub. 6–4–63. Cl. 32.
Season-All Industries, Inc., Indiana, Pa. 754,871, pub. 6–4–63. Cl. 12.
Seaway Publishing Co., San Francisco, Calif. 647,860, canc. Cl. 38.
Semel, J. H., & Co., to Rockower Brothers, Inc., Philadelphia, Pa. 53,870, new cert. Cl. 39.
Semel, J. H., & Co., to Rockower Brothers, Inc., Philadelphia, Pa. 151,229, new cert. Cl. 39.
Seminole Flavor Co., Chattanooga, Tenn. 755,164, pub. 6–4–63. Cl. 45.
Sequoia Process Corp., Redwood City, Calif. 647,750, canc. Cl. 21.
Seringa, Francisco S.: *See*— Dutra, John F.
Sesac, Inc., New York, N.Y. 755,097, pub. 6–4–63. Cl. 36.
Sewanee Brewing Co.: *See*— Spearman Brewing Co., The.
Shahmoon Industries, Inc.: *See*— Warren Foundry and Machine Co.
Shane Engineering Co., Los Angeles, Calif. 755,162, pub. 6–4–63. Cl. 44.
Shattuck, Frank G., Co., New York, N.Y. 171,335, ren. 8–20–63. Cl. 46.
Shelburne Shirt Co. Inc., New York, N.Y. 755,140, pub. 6–4–63. Cl. 39.
Shepherd Casters, Inc., Benton Harbor, Mich. 754,886, pub. 6–4–63. Cl. 13.
Sheraton Corp. of America, Boston, Mass. 755,226, pub. 6–4–63. Cl. 100.
Siegler Corp., The, New York, N.Y. 754,955, pub. 6–4–63. Cl. 21.
Simpson, Wm., Sons & Co., Inc., New York, N.Y. 647,911, canc. Cl. 42.
Sisler, Jack, Inc., Exeter, Calif. 755,168, pub. 6–4–63. Cl. 46.
Skloexport, Podnik Zahranicniho Obchodu pro Vyvoz Skla, Prague, Czechoslovakia. 755,085, pub. 6–4–63. Cl. 33.
Smart Style Hat Co., New York, N.Y. 647,880, canc. Cl. 39.
Smith, Miller & Patch, Inc., New York, N.Y. 754,926, pub. 6–4–63. Cl. 18.
Smith, Sidney C., d.b.a. Smythe Engineering, Chandler, Ind. 755,037, pub. 6–4–63. Cl. 26.
Smythe Engineering: *See*— Smith, Sidney C.
Societa Ceramica Italiana Societa per Azioni, Laveno, Varese, Italy. 755,057, pub. 6–4–63. Cl. 30.
Southern Nitrogen Co., Inc., Savannah, Ga. 647,688, canc. Cl. 10.
Southland Industries, Inc., Vicksburg, Miss. 647,737, canc. Cl. 19.
Spalding, A. G., & Bros. Inc., Evanston, Ill. 754,986, pub. 6–4–63. Cl. 22.
Spearman Brewing Co., The, d.b.a. Sewanee Brewing Co., Pensacola, Fla. 755,192, pub. 6–4–63. Cl. 48.
Specialty Importers, Inc., Scarsdale, N.Y. 755,129, pub. 6–4–63. Cl. 39.
Spinnerin Yarn Co., Inc., to Spinnerin Yarn Co., Inc., New York, N.Y. 404,130, ren. 8–20–63. Cl. 43.
Spirittine Chemical Co., Inc., Wilmington, N.C. 647,676, canc. Cl. 6.
Spirling Products Co., Inc., Hicksville, N.Y. 754,981, pub. 6–4–63. Cl. 21.
Spitz, Edward M., d.b.a. Glamour Puss Cat Products, Los Angeles, Calif. 755,205, pub. 6–4–63. Cl. 51.
Stadler Fertilizer Co., Cleveland, Ohio. 754,870, pub. 6–4–63. Cl. 10.
Stamper & Kaiser, New York, N.Y., to Burlington Industries, Inc., Greensboro, N.C. 174,273, ren. 8–20–63. Cl. 39.

Standard Cycle Co., Inc., Chicago, Ill. 754,947, pub. 6–4–63. Cl. 19.
Standard Development Co. of Wilmington, Del.: *See*— Standard Oil Co. (Inc. in New Jersey).
Standard Laboratories, Inc., Los Angeles, Calif., to Richard Hudnut, Morris Plains, N.J. 169,867, ren. 8–20–63. Cl. 51.
Standard Oil Co. (Inc. in New Jersey), to Standard Development Co., of Wilmington, Del., Bayonne, N.J., to Humble Oil & Refining Co., Houston, Tex. 167,852, ren. 8–20–63. Cl. 50.
Standard Oil Co., The, Cleveland, Ohio. 647,701, canc. Cl. 15.
Standard Oil Co., The, Cleveland, Ohio. 754,909–11, pub. 6–4–63. Cl. 15.
Stanley, Oscar M., Inc., New York, N.Y. 755,072, pub. 6–4–63. Cl. 32.
Sterling Automotive Mfg. Co., Elk Grove Village, Ill. 755,019, pub. 6–4–63. Cl. 26.
Sternco Industries, Inc., Allendale, N.J. 754,820, pub. 6–4–63. Cl. 1.
Sternco Industries, Inc., Allendale, N.J. 754,832, pub. 6–4–63. Cl. 2.
Sternco Industries, Inc., Allendale, N.J. 754,861, pub. 6–4–63. Cl. 6.
Sternco Industries, Inc., Allendale, N.J. 754,899, pub. 6–4–63. Cl. 13.
Sternco Industries, Inc., Allendale, N.J. 754,917, pub. 6–4–63. Cl. 16.
Sternco Industries, Inc., Allendale, N.J. 755,027, pub. 6–4–63. Cl. 26.
Sternco Industries, Inc., Allendale, N.J. 755,061, pub. 6–4–63. Cl. 31.
Sternco Industries, Inc., Allendale, N.J. 755,092, pub. 6–4–63. Cl. 34.
Sternco Industries, Inc., Allendale, N.J. 755,180, pub. 6–4–63. Cl. 46.
Stiboit, Noble H., Matteson, Ill. 755,038, pub. 6–4–63. Cl. 27.
Stiles-Kem Sales Corp., Waukegan, Ill. 754,850, pub. 6–4–63. Cl. 6.
Stony Creek Granite Corp., Providence, R.I. 754,822, pub. 6–4–63. Cl. 1.
Street, E. R., & Co., Inc., Chicago, Ill. 402,012, ren. 8–20–63. Cl. 52.
Sullivan Co., The, to The Sullivan Co., Memphis, Tenn. 169,436, ren. 8–20–63. Cl. 12.
Sun Oil Co., Philadelphia, Pa. 754,908, pub. 6–4–63. Cl. 15.
Sunbeam Corp., Chicago, Ill. 755,039, pub. 6–4–63. Cl. 27.
Superb Glove Co., The, Johnstown, N.Y. 647,868, canc. Cl. 39.
Superior Industries, Inc., Dallas, Tex. 647,815, canc. Cl. 31.
Superior Plastics Inc., Chicago, Ill. 755,199, pub. 6–4–63. Cl. 50.
Surf Shop: *See*— O'Neill, Jack E.
Takamine Laboratory, Inc., Clifton, N.J., to Miles Laboratories, Inc., Elkhart, Ind. 172,650, ren. 8–20–63. Cl. 6.
Tanimex Corp., New York, N.Y. 647,669, canc. Cl. 6.
Taylor, S. G., Chain Co., Inc.: *See*— Carroll Chain Co., The.
Teca Corp., White Plains, N.Y. 754,966, pub. 6–4–63. Cl. 21.
Teca Corp., White Plains, N.Y. 755,022, pub. 6–4–63. Cl. 26.
Teca Corp., White Plains, N.Y. 755,159, pub. 6–4–63. Cl. 44.
Techni Electronics, Inc., Orange, N.J. 755,157–8, pub. 6–4–63. Cl. 44.
Tee Bug, Inc.: *See*— Voss, Lester J.
Tennant, C., Sons & Co. of New York, N.Y., New York, N.Y. 754,903, pub. 6–4–63. Cl. 14.
Tennessee Products & Chemical Corp., Nashville, Tenn. 754,904, pub. 6–4–63. Cl. 14.
Terra-Losa, Inc., Miami, Fla. 754,874, pub. 6–4–63. Cl. 12.
Tesco Chemicals, Inc., Atlanta, Ga. 754,853, pub. 6–4–63. Cl. 6.
Testager & Co., Inc., Detroit, Mich. 754,921, pub. 6–4–63. Cl. 18.
Texaco Inc., New York, N.Y. 754,907, pub. 6–4–63. Cl. 15.
Texas Pharmacal Co., San Antonio, Tex. 754,929, pub. 6–4–63. Cl. 18.
Textile Mills Co., Chicago, Ill. 755,012, pub. 6–4–63. Cl. 24.
Thera-Ped Products, Inc., New York, N.Y. 647,723, canc. Cl. 18.
Thomasville Furniture Industries, Inc., Thomasville, N.C. 755,080, pub. 6–4–63. Cl. 32.
Thompson Farms Co., Chicago, Ill. 755,112, pub. 6–4–63. Cl. 38.
Torpedo Buromaschinen Werke A.G., Frankfurt am Main-Rodelheim, Germany. 755,006, pub. 6–4–63. (Consolidated certificate, Classes 23 and 26.)
Townie Lingerie, New York, N.Y. 647,873, canc. Cl. 39.
Transvox Corp., The, New York, N.Y. 647,748, canc. Cl. 21.
Tresco Industries, Inc., Tuckahoe, N.Y. 755,094, pub. 6–4–63. Cl. 35.
Turner & Seymour Mfg. Co., The, Torrington, Conn. 173,922, ren. 8–20–63. Cl. 23.
Tyden Corp., The, Hastings, Mich. 755,014, pub. 6–4–63. Cl. 25.
Two Naturals Distilling Co.: *See*— Glenmore Distilleries Co.
Ultravite Laboratories Ltd., Downsview, Ontario, Canada. 754,919, pub. 6–4–63. Cl. 18.
Unimed, Inc., Morristown, N.J. 754,935, pub. 6–4–63. Cl. 18.
Unimed, Inc., Morristown, N.J. 755,161, pub. 6–4–63. Cl. 44.
Universal Blue Print & Supply Co. Inc., Houston, Tex. 754,843, pub. 6–4–63. Cl. 6.
United Chromium, Inc., to M & T Chemicals Inc., New York, N.Y. 401,904, ren. 8–20–63. Cl. 6.
United Hosiery Mills Corp., Chattanooga, Tenn., to Buster Brown Textiles, Inc., Wilmington, Del. 177,563, ren. 8–20–63. Cl. 39.
United Specialties Co., The, to Novo Industrial Corp., Chicago, Ill. 403,945, ren. 8–20–63. Cl. 23.
U.S. Teens, Inc., New York, N.Y. 754,990, pub. 6–4–63. Cl. 22.
Uniwave, Inc., Farmingdale, N.Y. 754,967, pub. 6–4–63. Cl. 21.
Upjohn Co., The, Kalamazoo, Mich. 754,932, pub. 6–4–63. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 754,936, pub. 6–4–63. Cl. 18.
Valentine Dolls Inc., New York, N.Y. 754,983, pub. 6–4–63. Cl. 22.
Valle's Steak House, Portland, Maine. 755,225, pub. 6–4–63. Cl. 100.
Van Corp. Mfg. Inc., Pella, Iowa. 754,999, pub. 6–4–63. Cl. 23.
Van Ess Laboratories, Inc., Chicago, Ill., to American Home Products Corp., New York, N.Y. 174,214, ren. 8–20–63. Cl. 18.
Van Raalte Co., Inc., New York, N.Y. 755,149, pub. 6–4–63. Cl. 39.
Vapor Corp., Chicago, Ill. 754,972, pub. 6–4–63. (Consolidated certificate, Classes 21 and 23.)
Velveeta Cheese Co.: *See*— Schaefer, Max O.
Velveeta Cheese Co., Inc.: *See*— Schaefer, Max O.
Velveray Corp., New York, N.Y. 648,008, canc. Cl. 106.
Vibraslide, Inc., Binghamton, N.Y. 755,002, pub. 6–4–63. Cl. 23.
Viking Distillery, Inc., The, Albany, Ga. 755,195–7, pub. 6–4–63. Cl. 49.
Vitamineral Products Co., Peoria, Ill. 754,920, pub. 6–4–63. Cl. 18.
Vitamix Pharmaceuticals, Inc., Philadelphia, Pa. 754,922, pub. 6–4–63. Cl. 18.
Voss, Lester J., from Tee Bug, Inc., Houston, Tex. 754,937, pub. 6–4–63. Cl. 19.
Waddington, Wm., Jr. d.b.a. Naconie, from National Conservative League, Inc., Chicago, Ill. 755,113, pub. 6–4–63. Cl. 38.
Wander Co., The, Chicago, Ill. 754,930, pub. 6–4–63. Cl. 18.
Warehouse Storage Systems Co.: *See*— Hatfield Industries, Inc.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 755,202, pub. 6–4–63. Cl. 50.
Warren Foundry and Machine Co., Phillipsburg, N.J., to Shahmoon Industries, Inc., New York, N.Y. 171,801, ren. 8–20–63. Cl. 13.
Washburn, Mary L., Orlando, Fla. 754,828, pub. 6–4–63. Cl. 2.
Weightless Missile Co.: *See*— Dimatteo, Joe.
Weinberg Corp., Chicago, Ill. 755,127, pub. 6–4–63. Cl. 39.
Wells-Gardner & Co., to Wells-Gardner Electronics Corp., Chicago, Ill. 321,775, new cert. Cl. 21.
Wells-Gardner Electronics Corp.: *See*— Wells-Gardner & Co.
Western Auto Supply Co., Kansas City, Mo. 754,867, pub. 6–4–63. Cl. 9.
Western Auto Supply Co., Kansas City, Mo. 754,988, pub. 6–4–63. Cl. 22.
Western Auto Supply Co., Kansas City, Mo. 755,093, pub. 6–4–63. Cl. 35.
Whiteside, H. S., & Co. Ltd., Camberwell, London, England. 755,175, pub. 6–4–63. Cl. 46.
Williams, Irving, Co., Dayton, Nev. 647,939, canc. Cl. 46.
Willys Motors, Inc., Toledo, Ohio. 755,000, pub. 6–4–63. Cl. 23.
Wilson, Fred A., Co., Lathrup Village, Mich. 754,876, pub. 6–4–63. Cl. 12.
Wollensak Optical Co., Rochester, N.Y., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 401,467, ren. 8–20–63. Cl. 26.
Wood Treating Chemicals Co., to Wood Treating Chemicals Co., St. Louis, Mo. 402,842, ren. 8–20–63. Cl. 6.
Wurgaft, R. B., d.b.a. California Citrus Processors, Anaheim, Calif. 647,928, canc. Cl. 45.
Wyandotte Chemicals Corp., Wyandotte, Mich. 754,847, pub. 6–4–63. Cl. 6.
Zenith Radio Corp., to Zenith Radio Corp., Chicago, Ill. 403,892, ren. 8–20–63. Cl. 36.
Zip Sloops Inc., Clinton, Conn. 647,734, canc. Cl. 19.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
August 27, 1963 Volume 793 Number 4

PATENTS
NOTICES

Board of Appeals Decisions Rendered in the Month of July 1963

Examiner affirmed	344
Examiner affirmed in part	73
Examiner reversed	93
Total	510

DEPARTMENT OF COMMERCE—PATENT OFFICE

Rules of Practice in Patent Cases

[37 CFR Part 1]

Furnishing by Applicant of Information Pertinent to Claimed Invention

Notice is hereby given that the United States Patent Office proposes to amend one of its rules relating to patents. The amendment is proposed pursuant to the authority contained in Title 35 U.S.C. section 6.

All persons who desire to present their views, objections, recommendations or suggestions in connection with the proposed amendment are invited to do so on or before October 1, 1963, on which day a hearing will be held at 10:00 a.m., in Room 3886B of the Department of Commerce Building. All persons wishing to be heard orally are requested to notify the Commissioner of Patents of their intended appearance.

The proposed amendment will permit the Office to require of applicants for patent the furnishing of information concerning the published art, known to them and believed by them to be significantly pertinent to their inventions. The purpose is to make available to examiners in the Patent Office the results of a search made by applicant or his representative, if such search was made. It is believed that the examiner's job of making an investigation of the available prior art can be more thorough if such information is available. It is also believed that the presumption of validity attaching to patents will be more meaningful and stronger.

The text of the proposed amendment is as follows—

Section 1.104 (Patent Rule 104) is proposed to be amended by adding the paragraph (c) to read as follows:

§ 1.104 *Nature of examination; examiner's action.*

* * * * * * *

(c) The applicant must list in a separate statement accompanying the application, the published art (including patents, foreign and domestic) known to him at the time of the application, and believed by the applicant to be significantly pertinent to the claimed invention. If no such art is known to the applicant, this should be expressly asserted. This statement shall not be considered to be a representation that a search has been made, or that no better art than that listed exists. The applicant may at his option, state whether or not a search has been made. If such statement does not accompany the application, the examiner may require the filing of such statement before action is made.

The time and manner of taking effect is as follows: The amendment shall take effect thirty days after publication in the Federal Register, and shall apply only to applications filed after that date. In all other applications pending on the effective date, a similar statement may be placed in the record, at the applicant's option.

Dated: July 11, 1963.

[SEAL] DAVID L. LADD,
Commissioner of Patents.

Approved:

J. HERBERT HOLLOMON,
Assistant Secretary of Commerce for Science and Technology.

[F.R. Doc. 63–7778; Filed, July 23, 1963; 8:52 a.m.]

Published in 28 F.R. 7513, July 24, 1963

DEPARTMENT OF COMMERCE—PATENT OFFICE

Rules of Practice in Patent Cases

[37 CFR Part 1]

Furnishing by Applicant of Information as to Assistance Received in Preparation and/or Prosecution of Application, When no Attorney or Agent is of Record

Notice is hereby given that the United States Patent Office proposes to amend one of its rules relating to patents. The amendments are proposed pursuant to the authority contained in Title 35 U.S.C. section 6.

All persons who desire to submit written data, views, arguments or suggestions for consideration in connection with the proposed amendment, are invited to forward the same to the Commissioner of Patents, Washington 25, D.C. on or before October 15, 1963. An oral hearing will not be scheduled.

The purpose of the amendment to § 1.33 (Rule 33) is to aid the Commissioner in performing the duty, inherent in the authority granted by 35 U.S.C. 31, of ensuring that applicants have proper assistance in the preparation and prosecution of their applications. Experience has shown that applicants often seek assistance from persons who are not registered to practice before the Patent Office, without knowing that such person cannot sign amendments or other papers to be presented to the Office during the prosecution of the application. Frequently abandonment of the application has resulted because of the time lag involved in having papers prepared by such persons for the applicant's signature, both because the applicant does not always understand the absolute necessity for prompt action, and because he may be unavailable at that time. Hence, it seems desirable for

New Applications Received During June 1963

Patents	6,771
Designs	423
Plant Patents	10
Reissues	80
Total	7,284

Issue

Patents	794—No.	3,101,476 to No.	3,102,269, incl.
Designs	70—No.	196,096 to No.	196,165, incl.
Plant Patents	2—No.	2,275 to No.	2,276, incl.
Reissues	3—No.	25,436 to No.	25,438, incl.
Total	869		

the protection of those applicants who may have been induced to employ non-registered persons to require disclosure of that information, so that they may be advised of the risks involved and of the possible loss of valuable rights.

The text of the proposed amendment is as follows:

Section 1.33 of Title 37 CFR (Patent Rule 33) is amended by designating the present paragraph as paragraph (a) and by adding thereto the following new paragraph (b):

§ 1.33 *Correspondence when no attorney or agent.*

* * * * * * * *

(b) An applicant who is not represented by a registered attorney or agent may be required to state whether he received assistance in the preparation or prosecution of his application, for which any compensation or consideration was given, and if so, to disclose the name or names of the person or persons providing assistance.

[SEAL] DAVID L. LADD,
Commissioner of Patents.

Approved: July 25, 1963.

J. H. HOLLOMON,
Assistant Secretary of Commerce for Science and Technology.

[F.R. Doc. 63-8041; Filed, July 30, 1963; 8:58 a.m.]
Published at 28 F.R. 7788, July 31, 1963

Patent Office Academy

The Patent Office Academy is now ready to accept applications from non-government employees for training at the next session, which will begin on or about January 1, 1964. The curriculum comprises about 100 hours of lecture time and about 250 hours of seminar-type classroom work. The lectures and classroom work together provide comprehensive coverage of examining practice and procedure. Applications should be submitted not later than 60 days prior to January 1, 1964.

The following schedule of fees for the training course has been established.

	Non-Patent Office Government Employees	Non-Government Employees
(1) Lectures only	$100.00	$125.00
(2) Lectures plus classroom instruction	$350.00	$425.00

EDWIN L. REYNOLDS,
First Assistant Commissioner.

Dedication

2,744,958.—*Ellsworth A. Hosmer*, Kenwood, Calif. CARRIER TELEPHONE SYSTEM. Patent dated May 8, 1956. Dedication filed July 5, 1963, by the assignee, *Lenkurt Electric Co., Inc.*

Hereby dedicates to the public the full term of said patent.

Patents Available for Licensing or Sale

3,071,214. Composite Tubular Support, Particularly Tubular Pole. Josef Steinbichler, Wien II, Austria. Correspondence to Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,095,129. Car Top Trunk Luggage Carrier. Ralph W. Kerr, Bowman, N. Dak.

3,096,042. Jet Sustained and Propelled Aircraft. F. G. Prieto, San Salvador, El Salvador. Correspondence to: Eugene E. Stevens, 5010 Edgemoor Lane, Washington, D.C. 20014.

3,096,536. Retractable Ball Caster. Nicholas A. Rabelos, Atlanta, Ga. Correspondence to: Mr. Stewart Robinson, Roll-Lok Corporation, 225 Fulton Federal Bldg., Atlanta 3, Ga.

Des. 195,075. Motor Scooter. Jim May, 12110 S.E. Pine St., Portland, Oreg.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 2,837,517, M. E. Herr, 9,11β-epoxy-17-alkyltestosterones, decided Dec. 14, 1962, Interference No. 90,523, claims 1 and 2.

Patent No. 2,843,555, C. A. Berridge, Room temperature curing organopolysiloxane, decided June 21, 1963, Interference No. 90,944, claims 1, 2, 3, 4, 5, 6, 7 and 8.

Patent No. 2,928,840, S. L. Shapiro and L. Freedman, 3-(o-substituted phenyl) oxazolidinediones and process therefor, decided July 2, 1963, Interference No. 92,042, claim 12.

Patent No. 2,929,180, F. Abrams and J. C. Walters, Method of forming a sales package, decided Jan. 23, 1963, Interference No. 91,314, claims 1 and 2.

Patent No. 2,932,178, A. Armstrong and M. D. Ulich, Air conditioning apparatus, decided Jan. 30, 1963, Interference No. 91,359, claims 1, 4 and 6.

Patent No. 2,936,047, G. F. Quayle, Lift truck, decided June 4, 1963, Interference No. 92,408, claims 1 and 2.

Patent No. 2,943,248, O. W. Ritchey, Digital to analogue servosystem, decided June 21, 1963, Interference No. 92,122, claims 1, 2 and 3.

Patent No. 2,961,577, J. B. Thomas, H. T. Williams and J. W. Drenning, Electrostatic precipitators, decided Mar. 4, 1963, Interference No. 92,466, claim 4.

Patent No. 2,961,577, J. B. Thomas, H. T. Williams and J. W. Drenning, Electrostatic precipitators, decided Mar. 4, 1963, Interference No. 92,467, claim 15.

Patent No. 2,965,702, W. J. Shanahan, R. F. Vetter and E. I. Sacks, Television, decided Mar. 18, 1963, Interference No. 92,085, claim 1.

Patent No. 2,972,895, A. Wilson, Vibrating means for screens and the like, decided Apr. 2, 1963, Interference No. 92,798, claims 1, 2 and 3.

Patent No. 3,011,033, M. E. Belicka and A. P. Cawl, Cordwinders, decided June 18, 1963, Interference No. 93,170, claims 1, 2, 5, 6, 7 and 8.

Patent No. 3,025,167, J. P. Butler, Food package, decided Apr. 2, 1963, Interference No. 93,146, claim 4.

Patent No. 3,034,223, D. W. Lynch, Clothes drying machine, decided Mar. 22, 1963, Interference No. 93,155, claims 1, 2, 3, 4, 5, 7, 8 and 9.

Classification Order No. 353

The following transfer is hereby ordered to take effect on Monday, July 8, 1963:

From Division 93 to Group 320
Class 140, WIREWORKING

H. B. WHITMORE,
Superintendent, Examining Corps.

Trademark Rules of Practice of the Patent Office

The Trademark Rules of Practice of the Patent Office (edition of March 1963, which also contains forms and the Trademark Act of 1946), is now available and may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., at a cost of 45 cents.

Disclaimer

2,900,577.—*Albert E. Feinberg*, Chicago, Ill. BALLAST AND LIGHTING SYSTEM FOR FLUORESCENT LAMPS. Patent dated Aug. 18, 1959. Disclaimer filed May 24, 1963, by the assignee, *Advance Transformer Co.*

Hereby enters this disclaimer to claims 1, 2 and 3 of said patent.

PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES[1]

In accordance with paragraph 8 of the Procedure for the Selection of Recommended International Non-Proprietary Names for Pharmaceutical Preparations,[2] notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Non-Proprietary Names.

Comments on, or formal objections to the proposed names may be forwarded by any person to the Pharmaceuticals Unit of the World Health Organization within four months of the date of their publication in *WHO Chronicle*.

The inclusion of a name in the lists of proposed international non-proprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
acecilidinum acecilindine	3-quinuclidinol acetate
acetiaminum acetiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl) formamide *O,S*-diacetate
acetryptinum acetryptine	3-(2-aminoethyl)indol-5-yl methyl ketone
acetylcysteinum acetylcysteine	*N*-acetylcysteine
acidum clofenamicum clofenamic acid	*N*-(2,3-dichlorophenyl)anthranilic acid
acidum flufenamicum flufenamic acid	*N*-(α,α,α-trifluoro-*m*-tolyl)anthranilic acid
acidum fusidicum fusidic acid	an antibiotic substance obtained from cultures of *fusidium*, or the same substance produced by any other means
acidum fyticum fytic acid	phytic acid
acidum iotalamicum iotalamic acid	5-acetamido-2,4,6-triiodo-*N*-methylisophthalamic acid
acidum kainicum kainic acid	2-carboxy-4-isopropenyl-3-pyrrolidineacetic acid
acidum mefenamicum mefenamic acid	*N*-2,3-xylylanthranilic acid
acidum nalidixicum nalidixic acid	1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid
acrisorcinum acrisorcin	9-aminoacridine compound with 4-hexylresorcinol
alazani triclofenas alazanine triclofenate	3-ethyl-2-[3-(3-ethyl-2-benzothiazolinylidene)propenyl]benzothiazolium 2,4,5-trichlorophenoxide compound with 2,4,5-trichlorophenol
albutoinum albutoin	3-allyl-5-isobutyl-2-thiohydantoin
aloxiprinum aloxiprin	basic aluminium acetylsalicylate complex
altizidum altizide	3-[(allylthio)methyl]-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine - 7 - sulfonamide, 1,1-dioxide
ambomycinum ambomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
amfepramonum amfepramone	2-(diethylamino)propiophenone
ampicillinum ampicillin	(−)-6-(2 - amino - 2 - phenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
ampyriminum ampyrimine	2,4,7-triamino-5-phenylpyrimido[4,5-*d*]pyrimidine
anazolenum natricum sodium anazolene	4-[(4-anilino-5-sulfo-1-naphthyl)azo]-5-hydroxy-2,7-naphthalenedisulfonic acid, trisodium salt
anilamatum anilamate	methylcarbamate of salicylanilide
argipressinum argipressin	8-arginine vasopressin
argiprestocinum argiprestocin	8-arginine oxytocin
azotomycinum azotomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
batilolum batilol	3-(octadecyloxy)-1,2-propanediol
benfotiaminum benfotiamine	*N*-[(r-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl)formamide *S*-benzoate *O*-phosphate
bentiaminum bentiamine	*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto-1-methyl-1-butenyl)formamide *O,S*-dibenzoate
benzaronum benzarone	2-ethyl-3-benzofuranyl *p*-hydroxyphenyl ketone
benzbromaronum benzbromarone	3,5-dibromo-4-hydroxyphenyl-2-ethyl-3-benzofuranyl ketone
benzilonii bromidum benzilonium bromide	1,1-diethyl-3-hydroxypyrrolidinium bromide benzilate
benzodepum benzodepa	benzyl[bis(1-aziridinyl)phosphinyl]carbamate
benzquinamidum benzquinamide	*N,N*-diethyl-1,3,4,6,7,11b - hexahydro-2-hydroxy - 9,10 - dimethoxy-2*H*-benzo[*a*]quinolizine-3-carboxamide acetate
betahistinum betahistine	2-[(2-methylamino)ethyl]pyridine

[1] Other lists of proposed international non-proprietary names can be found in *Chron. Wld Hlth Org.* 1953, 7, 299; 1954, 8, 216, 313; 1956, *10*, 28; 1957, *11*, 231; 1958, *12*, 102; 1959, *13*, 105, 152; 1960, *14*, 168, 244; 1961, *15*, 314, 320; 1962, *16*, 385.

Lists of recommended international non-proprietary names were published in *Chron. Wld Hlth Org.* 1955, *9*, 185; 1959 *13*, 106; 1962, *16*, 101, 111.

[2] *Off. Rec. Wld Hlth Org. 60*, 3 and 55 (resolution EB15.R7).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
betanidinum betanidine	1-benzyl-2,3-dimethylguanidine
betoxycainum betoxycaine	2-[2-(diethylamino)ethoxy]ethyl 3-amino-4-butoxybenzoate
bisacodylum bisacodyl	4,4′-(2-pyridylmethylene)diphenol diacetate
bisbentiaminum bisbentiamine	*N,N′*-[dithiobis[2-(2-hydroxyethyl) - 1 - methylvinylene]]bis[*N*[(4-amino-2-methyl-5-pyrimidinyl)methyl]formamide]
bolasteronum bolasterone	7α,17-dimethyltestosterone
bromacrylidum bromacrylide	*N*[(3-bromopropionamido)methyl]acrylamide
bufenadrinum bufenadrine	2-(o-tert-butyl-α-phenylbenzyloxy)-*N,N*-dimethylethylamine
butaperazinum butaperazine	1-[10-[3-(4-methyl-1-piperazinyl)propyl]phenothiazin-2-yl]-1-butanone
butaverinum butaverine	butyl 8-(3-phenyl-1-piperidyl)propionate
butizidum butizide	3-isobutyl-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide
butopiprinum butopiprine	2-butoxyethyl-α-phenyl-2-piperidineacetate
carbazocronii natricum sulfonas carbazocrome sodium sulfonate	sodium 5,6-dihydro-1-methyl-5,6-dioxoindoline-3-sulfonate-5-semicarbazone
carsalamum carsalam	2*H*-1,3-benzoxazine-2,4(3*H*)-dione
clefamidum clefamide	2,2-dichloro-*N*-2-hydroxyethyl-*N*-[*p*-(*p*-nitrophenoxy)benzyl]acetamide
clobenztropinum clobenztropine	3-(*p*-chloro-α-phenylbenzyloxy)-tropane
clodacainum clodacaine	2′-chloro-2-[(2-diethylaminoethyl)ethylamino]acetanilid
clodantoinum clodantoin	5-(1-ethylpentyl)-3-(trichloromethylthio)hydantoin
clofenamidum clofenamide	4-chloro-*m*-benzenedisulfonamide
clofibratum clofibrate	ethyl 2-(*p*-chlorophenoxy)-2-methylpropionate
clopamidum clopamide	4-chloro-*N*-(*cis*-2,6-dimethylpiperidino)-3-sulfamoylbenzamide
cloralum betainum cloral betaine	chloral hydrate compound with betaine
clonitratum clonitrate	3-chloro-1,2-propanediol dinitrate
cloramfenicoli pantotenas cloramfenicol pantotenate	chloramphenicol complex with calcium pantothenate
clorindionum clorindione	2-(*p*-chlorophenyl)1,3-indandione
cloxacillinum cloxacillin	6-[3-(o-chlorophenyl)-5-methyl-4-isoxazolecarboxamido]-3,3-dimethyl - 7 - oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
colecalciferolum colecalciferol	cholecalciferol
coumetarolum coumetarol	4,4′-dihydroxy-3,3′-(2-methoxyethylidene) dicoumarin
cyamemazinum cyamemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine-2-carbonitrile
cyclarbamatum cyclarbamate	1,1-cyclopentanedimethanol dicarbanilate
cycloguanil embonas cycloguanil embonate	4,6-diamino-1-(*p*-chlorophenyl)-1,2-dihydro - 2,2 - dimethyl-*s*-triazine compound (2:1) with 4,4′-methylenebis[3-hydroxy-2-naphthoic acid]
cyclomenolum cyclomenol	2-cyclohexyl-3,5-xylenol
cyclovalonum cyclovalone	2,6-divanillylidenecyclohexanone
desipraminum desipramine	10,11-dihydro-5-(3-methylaminopropyl)-5*H*-dibenz[*b,f*]azepine
dexoxadrolum dexoxadrol	(+)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
diclofenamidum diclofenamide	4,5-dichloro-*m*-benzenedisulfonamide
dietroxinum dietroxine	5,5-diethyldihydro-2*H*-1,3-oxazine-2,4(3*H*)-dione
difenidolum difenidol	α,α-diphenyl-1-piperidinebutanol
dimefadanum dimefadane	*N,N*-dimethyl-3-phenyl-1-indanamine
dimetindenum dimetindene	2-(1-[2-(2-dimethylaminoethyl)inden-3-yl]ethyl)pyridine
dioxadrolum dioxadrol	2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
dipyridamolum dipyridamole	2,2′,2″,2‴-[(4,8 - dipiperidinopyrimido[5,4-*d*]pyrimidine - 2,6 - diyl)dinitrilo]tetraethanol
doxapramum doxapram	1-ethyl-4-(2-morpholinoethyl)-3,3-diphenyl-2-pyrrolidinone
drostanolunum drostanolone	17β-hydroxy-2α-methyl-5α-androstan-3-one
duazomycinum duazomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
efloxatum efloxate	ethyl[(4-oxo-2-phenyl-4*H*-1-benzopyran-7-yl)oxy]acetate
epitizidum epitizide	6-chloro-3,4-dihydro-3-[[(2,2,2 - trifluoroethyl)thio]methyl]-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
ethylestrenolum ethylestrenol	17α-ethyl-19-nor-pregn-4-en-17-ol
eritrityli tetranitras eritrityl tetranitrate	erythritol tetranitrate
etoxazenum etoxazene	4-[(*p*-ethoxyphenyl)azo]-*m*-phenylenediamine
etymemazinum etymemazine	10-(3-dimethylamino-2-methylpropyl)-2-ethylphenothiazine
etynodioli acetas etynodiol acetate	19 nor-17α-pregn-4-en-20-yne-3β,17-diol, diacetate
felypressinum felypressin	2-(phenylalanine)-8-lysinevasopressin
fenbenicillinum fenbenicillin	3,3-dimethyl-7-oxo-6-(2-phenoxy-2-phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
fencarbamidum fencarbamide	*S*-2-diethylaminoethyl diphenylthiocarbamate
fenyripolum fenyripol	α-(2-pyrimidinylaminomethyl)benzyl alcohol
fluanisonum fluanisone	4′-fluoro-4-[4-(o-methoxyphenyl)-1-piperazinyl]butyrophenone
flumetasonum flumetasone	6α,9-difluoro-11β,17,21-trihydroxy-16α-methylpregna-1,4-diene-3,20-dione
fluorouracilum fluorouracil	5-fluorouracil
fluperolonum fluperolone	9-fluoro-11β,17,21-trihydroxy-21-methylpregna-1,4-diene-3,20-dione 21 acetate
fluprednisolonum fluprednisolone	6α-fluoro-11β,17,21-trihydroxypregna-1,4-diene-3,20-dione
flurotylum flurotyl	bis(2,2,2-trifluoroethyl) ether
furalazinum furalazine	3-amino-6-[2(5-nitro-2-furyl)vinyl]-*as*-triazine
furazolidonum furazolidone	3[(5-nitrofurfurylidene)amino]-2-oxazolidinone
galantaminum galantamine	1,2,3,4,6,7,7a,11c-octahydro-9-methoxy-2-methylbenzofuro[4,3,2-*efg*][2]benzazocin-6-ol
glucaloxum glucalox	glycerol complex with aluminium hydroxide
glypinamidum glypinamide	1-(*p*-chlorophenylsulfonyl)-3-(hexahydro-1*H*-azepin-1-yl)urea
hexadilinum hexadiline	2-(2,2-dicyclohexyl vinyl)piperidine
hexamidinum hexamidine	4,4′-(hexamethylenedioxy)dibenzamidine
hexopyrronii bromidum hexopyrronium bromide	1,1-dimethylpyrrolidinium bromide-α-phenylcyclohexane glycolate
indometacinum indometacin	1-(p-chlorobenzoyl)-5-methoxy-2-methylindole-3-acetic acid
iprocloxidum iprocloxide	*p*-chlorophenoxyacetic acid 2-isopropylhydrazide
isoetarinum isoetarine	α-(1-isopropylaminopropyl)protocatechuyl alcohol
itramini tosylas [1] itramin tosylate	2-aminoethanol nitrate(ester) *p*-toluenesulfonate
lefopyrrolum lefopyrrole	1-[o-[2-(diethylamino)ethoxy]phenyl]-2-methyl-5-phenylpyrrole
levoglutamidum levoglutamide	glutamine
levoxadrolum levoxadrol	(−)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
lincomycinum lincomycin	an antibiotic substance obtained from cultures of *streptomyces lincolnensis*, or the same substance produced by any other means
lucimycinum lucimycin	an antibiotic substance obtained from cultures of *streptomyces lucensis*, or the same substance produced by any other means
lynestrenolum lynestrenol	19-nor-17α-pregn-4-en-20-yn-17-ol
lypressinum lypressin	8-lysinevasopressin
mecloxaminum mecloxamine	2-[(*p*-chloro-α-methyl-α-phenylbenzyl)oxy]-*N,N*-dimethylpropylamine
mecysteinum mecysteine	cysteine, methyl ester
megestrolum megestrol	17-hydroxy-6-methylpregna-4,6-diene-3,20-dione
melengestrolum melengestrol	17-hydroxy-6-methyl-16-methylenepregna-4,6-diene-3,20-dione
menotrophinum menotrophin	human menopausal gonadotrophin
meraleinum natricum sodium meralein	*o*-[6-hydroxy-5-(hydroxymercuri)-2,7-diiodo-3-oxo-3*H*-xanthen - 9 - yl]benzenesulfonic acid, sodium salt
metacyclinum metacycline	4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a - pentahydroxy-6-methylene-1,11-dioxo-2-naphthacenecarboxamide
meturedepum meturedepa	[bis(2,2-dimethyl-1-aziridinyl)phosphinyl]carbamic acid ethyl ester
metyraponum metyrapone	2-methyl-1,2-di-3-pyridyl-1-propanone
molinazonum molinazone	3-morpholino-1,2,3-benzotriazin-4(3*H*)-one

[1] Itramin is the proposed International Non-proprietary Name for the substance having the chemical name "aminoethyl nitrate" (prop. I.N.N. list 1).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
morinamidum morinamide	N-(morpholinomethyl)pyrazinecarboxamide
nafcillinum nafcillin	6-(2-ethoxy-1-naphthamido)-3,3-dimethyl-7-oxo-4-thia - 1 - azabicyclo[3.2.0]heptane-2-carboxylic acid
naloxonum naloxone	12-allyl-7,7a,8,9 - tetrahydro-8,7a-dihydroxy-4a*H*-8,9c-iminoethanophenanthro[4,5-*bcd*]furan-5(6*H*)-one
natrii bitionolas sodium bitionolate	disodium 2,2′-thiobis(4,6-dichlorophenoxide)
natrii etasulfas sodium etasulfate	2-ethylhexyl sodium sulfate
natrii metrizoas sodium metrizoate	sodium 3-acetamido-2,4,6-triiodo-5-*N*-methylacetamidobenzoate
natrii radio-iodidum (^{131}I) sodium radio-iodide (^{131}I)	
natrii timerfonas sodium timerfonate	ethyl[(*p*-sulfophenyl)thio]mercury, sodium salt
niclosamidum niclosamide	2′,5-dichloro-4′-nitrosalicylanilide
nonapyriminum nonapyrimine	4-nonylamino-7*H*-pyrrolo[2,3-d]pyrimidine
noretynodrelum noretynodrel	17-hydroxy-17*a*-pregn-5(10)-en-20-yn-3-one
octotiaminum octotiamine	8-[[2-[*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]formamido]-1-(2-hydroxyethyl)propenyl]dithio]-6-mercaptooctanoic acid, methyl ester acetate
ortetaminum ortetamine	o,*a*-dimethylphenethylamine
oxazepamum oxazepam	7-chloro-1,3-dihydro-3-hydroxy-5-phenyl-2*H*-1,4-benzodiazepin-2-one
oxetacainum oxetacaine	2,2′-(2-hydroxyethylimino)bis[*N*-(*a*,*a*-dimethylphenethyl)-*N*-methylacetamide]
oxomemazinum oxomemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine,5,5-dioxide
oxonazinum oxonazine	N^2,N^2-diallylmelamine N^2-oxide
oxybutyninum oxybutynin	4-diethylamino-2-butynyl *a*-phenylcyclohexaneglycolate
oxyclipinum oxyclipine	1-methyl-3-piperidyl *a*-phenylcyclohexaneglycolate
oxyfenamatum oxyfenamate	*β*-ethyl-*β*-hydroxyphenethyl carbamate
oxymetazolinum oxymetazoline	6-*tert*-butyl-3-(2-imidazolin-2-ylmethyl)-2,4-dimethylphenol
oxypendylum oxypendyl	4-[3-(10*H*-pyrido[3,2-b][1,4]benzothiazin-10-yl)propyl]-1-piperazineethanol
oxypyrronii bromidum oxypyrronium bromide	2-(2-hydroxyethyl)-1,1-dimethylpyrrolidinium bromide *a*-phenylcyclohexaneglycolate
oxytocinum oxytocin	oxytocin
pargylinum pargyline	*N*-methyl-*N*-2-propynylbenzylamine
paxamatum paxamate	4-biphenylyl methylcarbamate
pentabamatum pentabamate	3-methyl-2,4-pentanediol dicarbamate
pentalamidum pentalamide	o-(pentyloxy)benzamide
periciazinum periciazine	10-[3-(4-hydroxypiperidino) propyl] phenothiazine-2-carbonitrile
picloxydinum picloxydine	1,1′-[1,4-piperazinediylbis(imidocarbonyl)]bis[3-(*p*-chlorophenyl)guanidine]
pimetinum pimetine	4-benzyl-1-(2-dimethylaminoethyl)piperidine
poldini methylsulfas poldine methylsulfate	1-methyl-2-pyrrolidinemethanol benzilate
prednisolamatum prednisolamate	11*β*,17,21-trihydroxypregna-1,4-diene-3,20-dione 21-*N*,*N*-diethylglycine ester
prednylidenum prednylidene	11*β*,17,21-trihydroxy-16-methylenepregna-1,4-diene-3,20-dione
propetandrolum propetandrol	19-nor-17*a*-pregn-4-ene-3*β*,17-diol 3-propionate
propicillinum propicillin	3,3-dimethyl-7-oxo - 6 - (2 - phenoxybutyramido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
prosultiaminum prosultiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-[4-hydroxy-1-methyl-2-(propyldithio)-1-butenyl]formamide
pyrrocainum pyrrocaine	1-pyrrolidineacetanilide
quingestronum quingestrone	3-(cyclopentyloxy)pregna-3,5-dien-20-one
radio-aurum (^{198}Au)-colloidale radio-gold (^{198}Au) colloidal	
radiocyanocobalaminum (^{60}Co) radiocyanocobalamin (^{60}Co)	
radiotolpovidonum radiotolpovidone	*ω*-(*p*-iodo-^{131}I-benzyl)-2-(2-oxo-1-pyrrolidinyl)ethamer
renytolinum renytoline	*a*-fluoren-9-ylidene-*p*-toluamidine
rifamycinum rifamycin	antibiotic substane obtained from cultures of *streptomyces mediterranei* or the same substance produced by any other means
sparsomycinum sparsomycin	an antibiotic substance obtained from cultures of *streptomyces sparsogenes*, or the same substance produced by any other means
sparteinum sparteine	sparteine

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
spectinomycinum spectinomycin	an antibiotic substance obtained from cultures of *streptomyces spectabilis*, or the same substance produced by any other means
stilbazii iodidum stilbazium iodide	1-ethyl-2,6-bis(*p*-1-pyrrolidinylstyryl)pyridinium iodide
streptoniazidum streptoniazid	isonicotinic acid hydrazide, hydrazone with streptomycin
sucraloxum sucralox	sucrose complex with aluminium hydroxide
sultiamum sultiame	benzenesulfonamide,*p*-(tetrahydro-2*H*-1,2-thiazin-2yl)-*S*,*S*-dioxide
teclozanum teclozan	*N*,*N*′-(*p*-phenylenedimethylene)bis[2,2-dichloro-*N*-(2-ethoxyethyl)acetamide]
tiabendazolum tiabendazole	2-(4-thiazolyl)benzimidazole
tiemondii iodidum tiemonium iodide	4-[3-hydroxy-3-phenyl-3-(2-thienyl)propyl]-4-methylmorpholinium iodide
tifenamilum tifenamil	*S*-(2-diethylamino)ethyl diphenylthioacetate
tolpropaminum tolpropamine	*N*,*N*-dimethyl-3-phenyl-3-(*p*-tolyl)propylamine
tolpyrramidum tolpyrramide	*N*-*p*-tolylsulfonyl-1-pyrrolidinecarboxamide
triclofosum triclofos	2,2,2-trichloroethyl dihydrogen phosphate
trimetamidum trimetamide	*N*-(2-amino-6-methyl-3-pyridylmethyl)-3,4,5-trimethoxybenzamide
trimipraminum trimipramine	10,11-dihydro-5-(3-dimethylamino-2-methylpropyl)-SH-dibenz[*b*,*f*]azepine
trometamolum trometamol	2-amino-2-(hydroxymethyl)-1,3-propanediol
troxonii tosylas troxonium tosylate	triethyl(2-hydroxyethyl)ammonium *p*-toluenesulfonate 3,4,5-trimethoxybenzoate
troxypyrrolii tosylas troxypyrrolium tosylate	1-ethyl-1-(2-hydroxyethyl)pyrrolidinium *p*-toluenesulfonate 3,4,5-trimethoxybenzoate
tyloxapolum tyloxapol	polymer of *p*-(1,1,3,3-tetramethylbutyl)phenol with ethylene glycol and formaldehyde
uramustinum uramustine	5-[bis(2-chloroethyl)amino]uracil
uredepum uredepa	ethyl[bis(1-aziridinyl)phosphinyl]carbamate
vincristinum vincristine	an alkaloid obtained from *vinca rosea*
vinleurosinum vinleurosine	an alkaloid obtained from *vinca rosea*
vinrosidinum vinrosidine	an alkaloid obtained from *vinca rosea*
virgimycinum virgimycin	an antibiotic substance obtained from cultures of *streptomyces virginiae*, or the same substance produced by any other means
NOTE:	
aminophenazonum aminophenazone	amidopyrinum replaces amidopyrine (*Chron. Wld Hlth Org.* 1956, *10*, 28)
ergocalciferolum ergocalciferol	calciferolum replaces calciferol (*Chron. Wld Hlth Org.* 1956, *10*, 28)

PATENT EXAMINING CORPS

H. B. WHITMORE, Superintendent

PATENT EXAMINING OPERATIONS AND GROUPS	Oldest Application	
	New	Amended
CHEMICAL EXAMINING OPERATION—P. E. MANGAN, Director.		
GENERAL CHEMISTRY, GROUP 110—R. L. CAMPBELL, Supervisory Examiner Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries.	11-17-61	11-13-61
GENERAL ORGANIC CHEMISTRY, GROUP 120—I. MARCUS, Supervisory Examiner Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids.	3-12-62	3-8-62
PETROLEUM CHEMISTRY, GROUP 130—J. S. BAILEY, Supervisory Examiner Hydrocarbons; Halogenated Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices; Organic Chemistry (Part) e.g.: Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhydrides; Acid Halides.	2-13-62	10-2-61
HIGH POLYMER CHEMISTRY, GROUP 140—M. STERMAN, Supervisory Examiner Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins: Reclaiming; Pore-Forming.	7-14-61	7-21-61
COMPOSITIONS AND MOLDING, GROUP 150—L. H. GASTON, Supervisory Examiner Compositions (Part) e.g.: Coating; Molding; Adhesive Compositions; Abrading; Liquid Purification or Separation; Gas Separation; Special Utility; Molding Processes.	12-18-61	1-4-62
COATING AND LAMINATING, GROUP 160—J. REBOLD, Supervisory Examiner Coating: Processes, Apparatus and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Ornamentation; Adhesive Bonding; Special Manufactures.	12-4-61	1-2-62
SPECIALIZED CHEMICAL ARTS AND INDUSTRIES, GROUP 170—W. B. KNIGHT, Supervisory Examiner Bleaching and Dyeing; Fertilizers; Foods; Fermentation; Photography; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Metallurgical Apparatus; Gas, Heating and Illuminating; Cleaning Processes; Liquid Purification; Thermolytic Distillation; Preserving.	12-12-61	10-20-61
CHEMICAL ENGINEERING, GROUP 180—G. D. MITCHELL, Supervisory Examiner Gas, Liquid and Solid Separation; Centrifugal Bowl Separators; Gas and Liquid Contact Apparatus; Distillation; Drying; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	1-12-62	1-12-62
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
POWER, GROUP 210—M. L. LEVY, Supervisory Examiner Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art.	11-21-61	8-31-61
SECURITY, GROUP 220—S. BOYD, Supervisory Examiner Ordnance, Firearms and Ammunition; Radar, Sonar, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	12-29-61	1-3-62
INFORMATION TRANSMISSION, GROUP 230—S. W. CAPELLI, Supervisory Examiner Communications; Multiplexing Techniques; Facsimile and Related Art.	1-2-62	1-10-62
INFORMATION STORAGE AND RETRIEVAL, GROUP 240—W. W. BURNS, Supervisory Examiner Data Processing, Computation and Conversion; Storage Devices and Related Art.	10-24-61	10-26-61
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—B. G. MILLER, Supervisory Examiner Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks.	12-11-61	12-18-61
RADIATION AND INSTRUMENTS, GROUP 260—F. M. STRADER, Supervisory Examiner Optics; Radiant Energy; Measuring.	11-21-61	11-6-61
ELEMENTS, GROUP 270—E. J. SAX, Supervisory Examiner Conductors; Switches; Miscellaneous.	11-29-61	11-14-61

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1963

Total number of pending applications (excluding Designs)	201, 171
Total number of Design applications pending	6, 105
Total number of applications awaiting action (excluding Designs)	117, 610
Total number of Design applications awaiting action	2. 336
Date of oldest new application awaiting action	July 14, 1961
Date of oldest amended application awaiting action	July 21, 1961

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during **August 1963**, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*

Patents	Numbers 2,405,107 to 2,406,732, inclusive
Plant Patent	Number 709

PATENT EXAMINING OPERATIONS AND GROUPS (Continued)	Oldest Application	
	New	Amended
MECHANICAL ENGINEERING EXAMINING OPERATION—R. A. WAHL, Director.		
MATERIAL OR ARTICLE HANDLING AND DISPENSING, GROUP 310—A. BERLIN, Supervisory Examiner... Material or Article Handling and Dispensing; Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Fluid Sprinkling and Fire Extinguishers; Coin Handling and Check Controlled Apparatus; Classifying and Assorting Solids.	3-15-62	3-13-62
METAL AND PLASTICS WORKING, GROUP 320—N. BERGER, Supervisory Examiner..... Metal Bending, Drawing, Extruding, Forging, Rolling; Sheet Metal Working; Wireworking; Chain, Staple, Horseshoe Making; Metal Founding; Wire Fabrics; Plastic Working Apparatus; Plastic Block, Earthenware Apparatus.	1-24-62	1-29-62
MANUFACTURING AND ASSEMBLING MISCELLANEOUS ARTICLES, GROUP 330—A. M. HORTON, Supervisory Examiner..... Special Article Making; Assembling, Tool and Implement Making; and Metal Working.	3-15-62	2-15-62
MACHINE TOOLS, MECHANISMS AND ELEMENTS, GROUP 340—F. H. BRONAUGH, Supervisory Examiner. Machine Tools for Shaping or Dividing Involving Cutting or Breaking; Machine Elements Including Power Transmission Components, Work and Tool Holders.	2-7-62	2-7-62
HARDWARE, TOOLS AND JOINTS, GROUP 350—T. J. HICKEY, Supervisory Examiner..... Miscellaneous Hardware; Tools; Joints; Cutlery; Locks; Fasteners; Rod Pipe and Electrical Connectors; Buckles; Buttons, Clasps, Etc.; Pushing and Pulling.	2-9-62	2-7-62
FLUID HANDLING, GROUP 360—E. PAUL, Supervisory Examiner..... Fluid Handling; Valves; Pipes and Tubular Conduits; Fluent Material Handling; Lubrication; Baths, Closets and Sinks; Joint Packing.	3-15-62	4-2-62
POWER PLANTS, MOTORS AND PUMPS, GROUP 370—C. F. GAREAU, Supervisory Examiner..... Power Plants, Combustion Power Plants, Expansible Chamber Motors, Rotary Motors and Rotary Expansible Chamber Motors, Expansible Chamber Devices and Internal Combustion Engines, Pumps and Pump Regulation.	3-23-62	4-13-62
HEATING, COOLING AND VENTILATING, GROUP 380—P. L. PATRICK, Supervisory Examiner..... Furnaces, Liquid Heaters and Vaporizers, Burners, Heat Exchange, Automatic Temperature and Humidity Regulation, Refrigeration, Ventilation, and Illumination.	2-9-62	1-17-62
GENERAL ENGINEERING AND INDUSTRIAL ARTS EXAMINING OPERATION—J. A. MANIAN, Director.		
AGRICULTURE, GROUP 410—A. RUEGG, Supervisory Examiner..... Animal Husbandry; Butchering; Fishing, Trapping and Vermin Destroying; Plant Husbandry; Tobacco, Earth Working.	6-14-62	7-13-62
CIVIL ENGINEERING, GROUP 420—B. BENDETT, Supervisory Examiner..... Building Structures; Bridges, Closures; Closure Operators; Safes; Earth Engineering; Drilling; Mining.	1-12-62	1-9-62
PHYSICS, GROUP 430—R. L. EVANS, Supervisory Examiner..... Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	3-7-62	3-9-62
TEXTILES AND APPAREL, GROUP 440—R. C. MADER, Supervisory Examiner..... Textiles; Winding and Reeling; Tying Strands; Apparel; Boot and Shoe Making; Sewing Machines.	4-2-62	4-23-62
TRANSPORTATION, GROUP 450—P. ARNOLD, Supervisory Examiner..... Railways and Rolling Stock; Brakes; Land Vehicles; Aeronautics; Ships.	4-2-62	4-11-62
FURNITURE AND RECEPTACLES, GROUP 460—W. S. COLE, Supervisory Examiner..... Furniture; Supports; Cabinet Structures; Receptacles; Baggage.	6-1-62	6-22-62
PRINTING, STATIONERY AND MATERIAL TREATMENT, GROUP 470—L. W. VARNER, Supervisory Examiner..... Printing; Typewriters; Stationery; Material Treatment.	4-2-62	4-4-62
PERSONAL TREATMENT, ADORNMENT AND AMUSEMENTS, GROUP 480—L. R. PRINCE, Supervisory Examiner..... Surgery; Dentistry; Artificial Body Members; Toiletry; Amusement Devices; Jewelry; Mechanical Guns; Projectors.	4-3-62	4-17-62
DESIGNS, GROUP 490—J. A. MANIAN, Supervisory Examiner..... Industrial Arts; Household, Personal and Fine Arts.	2-5-63	2-1-63
(CLASSIFICATION) GORECKI, G. A.—ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.		
91. KENT, A. P. (acting).....		
92. GAUSS, H.....		
93. PURDY, W. F. (acting).....	7-2-62	6-1-62
94. BERLOWITZ, W., Motors, Fluid.....	8-8-62	10-15-62
95. ANGEL, C. D. (REZNEK, J., acting).....		

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE MILLER INTERNATIONAL CO.

No. 6860. Decided February 13, 1963

[50 CCPA —; 312 F.2d 819; 136 USPQ 445]

1. TRADEMARK—REGISTRABILITY—PICTORIAL SYMBOLS AND DEVICES.

"It is noted that the only statutory test of what constitutes a trademark is whether the word, name, symbol, or device or *any combination* thereof which makes up the trademark *identifies* the goods to which it is applied and *distinguishes* such goods from those manufactured and sold by others. Pictorial symbo's and devices * * * can and do function as trademarks and are entitled to be registered if they otherwise meet the terms and conditions of the Lanham Act."

2. SAME—SAME—COMPOSITE MARK—CONSIDERATION OF MARK AS A WHOLE.

In considering the registrability, for phonograph records, of appellant's mark consisting of the disclaimed words, "STEREO-FIDELITY," two stylized speakers with a line representing a stylized sound wave between them, and an arbitrary hyperbola which gives vertical dimension to the design, *Held* that "Inspection of the composite mark * * * shows that the words 'STEREO-FIDELITY' are an integral part of it"; that "Thus, except by close inspection and careful dissection, it is not possible to separate the words from the whole mark as a separately identifiable entity"; that "We do not agree with the Trademark Trial and Appeal Board that such a composite mark 'is dominated by the merely descriptive word feature thereof'"; and that "We think the mark as a whole is, in fact, capable of identifying and distinguishing appellant's goods from those manufactured or sold by others."

APPEAL from the Patent Office. Serial No. 56,565.

REVERSED.

Caesar & Revise, *A. D. Caesar* (*Alan H. Bernstein* of counsel) for appellant.

Clarence W. Moore for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

Appellant seeks registration of its trademark for phonograph records. Use since April 1958 is alleged. This mark as shown in the drawing of the application [1] is as follows:



Applicant has disclaimed any right to the words "STEREO-FIDELITY" apart from the mark as shown. As can be seen, the remaining portions consist of two stylized speakers with a line

[1] Ser. No. 56,565, filed Aug. 4, 1958.

representing a stylized sound wave between them and an arbitrary hyperbola which gives vertical dimension to the design.

In affirming the decision of the Examiner refusing registration, the Trademark Trial and Appeal Board (130 USPQ 369), stated:

Registration has been refused on the ground that the mark is dominated by the merely descriptive word feature thereof, and that the mark is therefore incapable of distinguishing the applicant's goods in commerce.

* * * * * * *

On the record presented, it is concluded that the design feature of applicant's composite mark serves only as background material for the dominant descriptive wording "STEREO-FIDELITY," and that the disclaimer of such wording cannot, therefore, overcome the provision of section 2(e) of the statute which prohibits the registration of a merely descriptive mark. See *Radiator Specialty Company* v. *Sure-Rite Products Company*, 89 USPQ 430 (Comr., 1951) and cases cited therein.

Registration was denied under section 2(e) of the Lanham Act (15 U.S.C. 1052(e)) which reads:

SEC. 2. Trademarks registrable on the Principal Register; * * *

No trademark by which the goods of the applicant may be distinguished from the goods of others shall be refused registration on the principal register on account of its nature unless it—

* * * * * * *

(e) consists of a mark which (1) when applied to the goods of the applicant is merely descriptive or deceptively misdescriptive of them, * * *.

Section 45 of the Lanham Act (15 U.S.C. 1127), states in part:

* * * * * * *

The term "Trademark" includes any word, name, symbol, or device or any combination thereof adopted and used by a manufacturer or merchant to identify his goods and distinguish them from those manufactured or sold by others.

* * * * * * *

The only question here is whether the composite mark *as a whole* is a trademark capable of identifying applicant's goods and distinguishing them from the goods of others.

[1] It is noted that the only statutory test of what constitutes a trademark is whether the word, name, symbol, or device or *any combination* thereof which makes up the trademark *identifies* the goods to which it is applied and *distinguishes* such goods from those manufactured and sold by others. Pictorial symbols and devices, such as those present in the mark in issue, can and do function as trademarks and are entitled to be registered if they otherwise meet the terms and conditions of the Lanham Act. See *In re Kotzin*, 47 CCPA 852, 276 F.2d 411, 125 USPQ 347.

[2] Inspection of the composite mark here in issue shows that the words "STEREO-FIDELITY" are an integral part of it. Thus, except by close inspection and careful dissection, it is not possible to separate the words from the whole mark as a separately identifiable entity. We do not agree with the Trademark Trial and Appeal Board that such a composite mark "is dominated by the merely descriptive word feature thereof." We think the mark as a whole is, in fact, capable of identifying and distinguishing appellant's goods from those manufactured or sold by others.

Our attention has been directed to numerous prior decisions which are urged upon us as supporting the decision of the Trademark Trial and Appeal Board. We have carefully considered these cases but as we have had occasion to observe many times in the past, prior decisions in trademark cases are of little help in deciding cases involving different marks and different facts. Each case must be decided on its own facts and issues. *Jerry Finn* v. *Cooper's Incorporated*, 48 CCPA 1132, 292 F.2d 555, 130 USPQ 269.

The decision of the Trademark Trial and Appeal Board is therefore reversed.

REVERSED.

WORLEY, *Chief Judge* (dissenting):

I am unable to find any reversible error in the Board's reasoning or conclusion.[1] I would, therefore, affirm.

[1] 130 USPQ 369.

U.S. Court of Customs and Patent Appeals

IVAR JEPSON *v.* ROBERT E. COLEMAN, JR., AND CALVIN D. MACCRACKEN

No. 6919. Decided March 13, 1963

[50 CCPA —; 314 F.2d 533; 136 USPQ 647]

1. INTERFERENCE—PATENT AND APPLICATION—RIGHT TO MAKE—APPLICATION MUST CLEARLY SUPPORT COUNTS.

"When one copies claims from a patent for the purpose of instituting interference proceedings, in order to be successful, that person's application must clearly support those counts. * * * There must be no doubt that an applicant discloses each and every limitation of the claims and all doubts must be resolved against the copier. * * * It is not a question whether one skilled in the art *might* be able to construct the patentee's device from the teachings of the disclosure of the application. Rather, it is a question whether the application necessarily discloses that particular device. * * *."

APPEAL from the Patent Office. Interference No. 88,406.

REVERSED.

George R. Clark, *Mason*, *Kolehmainen*, *Rathburn & Wyss*, *Walther E. Wyss* for appellant.

G. Kendall Parmelee, *Curtis*, *Morris & Safford* for appellee.

Before WORLEY, *Chief Judge*, and MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Patent Interferences which awarded priority of invention to senior party Coleman et al. in Interference No. 88,406. That interference involves an application Serial No. 309,416, filed September 13, 1952 by the senior party, Coleman et al. and a Patent 2,753,435, granted July 3, 1956, upon an application Serial No. 425,192, filed April 23, 1954 by the junior party, Jepson.

The interference involves five counts which correspond to claims 1 through 5 of Jepson's patent. Counts 1 and 2 read:

1. A thermal blanket comprising two fabric members united by a plurality of spaced parallel stitchings thereby to define a plurality of parallel passageways between said fabric members, a pair of flexible headers extending along one end of said blanket and generally perpendicular to said passageways, a plurality of flexible tubes of U-shape, having the legs of the U disposed in said passageways and one leg of each U being connected to one of said headers, while the other leg of each U is connected to the other header, whereby all of said tubes are connected in parallel, and means for circulating a fluid medium through said headers and tubes.

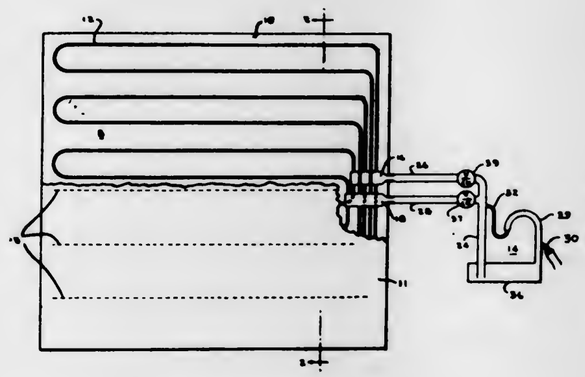
2. A thermal blanket comprising a fabric having a plurality of parallel passageways defined therein, a pair of flexible headers extending along one end of said blanket and generally perpendicular to said passageways, a plurality of flexible tubes of U-shape, having the legs of each U disposed in said passageways and one leg of each U being connected to one of said headers, while the other

leg of each U is connected to the other header, whereby all of said tubes are connected in parallel, means for circulating a fluid medium through said headers and tubes, and control means for controlling the temperature of said blanket.

Counts 3 and 5 correspond generally to count 1. However, count 3 further specifies that the means for circulating the fluid is connected to the headers at a point midway between the ends thereof and recites "control means for controlling the temperature of said blanket." Count 5 specifies that the means for controlling the temperature of the blanket is responsive to the temperature of the fluid in one of the headers. Count 4 corresponds to count 2 but also has the additional limitation that the means for controlling the temperature of the blanket is responsive to the temperature of the fluid in one of the headers.

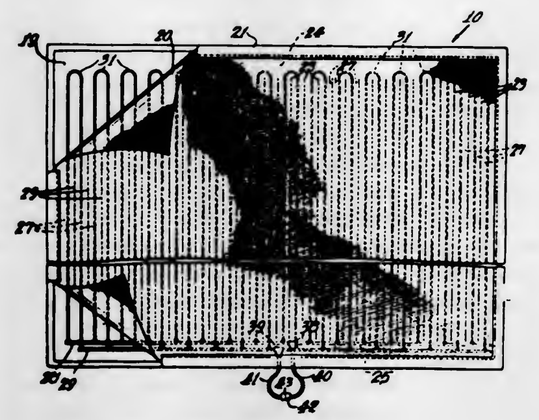
The five counts are specific to a thermal blanket containing a plurality of small flexible U-shaped fluid carrying tubes in a plurality of parallel passageways located in the blanket. A pair of flexible headers extend along one end of said blanket and are generally perpendicular to said passageways. One leg of each U-shape tube is connected to one of said headers while the other leg is connected to the other header. In operation, warm liquid is circulated through the U-shaped tubes by means of the headers, one header acting as an inlet header and the other header serving as an outlet header for the circulating liquid.

The Coleman et al. application describes a thermal blanket one embodiment of which is shown in FIGURE 1 of the Coleman et al. application, set forth below:



This figure shows a thermal blanket 8 including a pair of fabric layers 10 and 11 sewed together along the outside edges and along spaced lines 13 to provide channels for holding flexible tubing. The parallel rows of stitchings 13 continue out closely adjacent to one end of the blanket for holding the bight of each U-shaped tube in position between the fabric layers. To provide a uniform temperature throughout the area of the blanket, tubes 12 are connected in parallel between inlet and outlet headers 16 and 18. The header units 16 and 18 are located midway of the blanket's end and are connected to the inlet and outlet tubes 26 and 28 for heat exchange fluid.

The Jepson patent shows and describes a thermal blanket as specified in the counts before us and as shown in Jepson's FIGURE 2 set forth below:



Appellees, Coleman et al., do not contend that the construction shown in their FIGURE 1 supports the counts. However, they contend that, when their FIGURE 1 is considered with other relevant portions of the specification, the application of Coleman et al. as filed clearly discloses an alternative way of constructing the blanket to provide uniform temperature across the blanket, which alternative way supports the counts. They take the position that, in this alternate construction, a pair of flexible header tubes of large diameter are substituted for the small headers 16 and 18 and for the connecting portions of the various U-shaped tubing circuits which extend along the edge of the blanket to the compact headers or junction units 16 and 18.

The Board found that appellees did have the right to make counts 1–5. It held that appellees' FIGURE 1, when considered with the paragraph beginning at page 5, lines 9 et seq. of appellees' application establishes that appellees disclose two ways of making the blanket. That paragraph is as follows:

It has been found preferable to use small diameter tubing throughout the entire blanket and to connect this tubing to small compact headers or junction units 16, 18 rather than having large diameter header tubes extend along the edge of the blanket. The reason for this is that if long header tubes are used, they must be large enough in diameter to carry the liquid for substantially all of the circuits 12 without appreciable pressure drop. On the other hand, tubing of the required diameter is very likely to kink and materially reduce or even completely cut off the flow of liquid if made flexible enough to conform to folds and the like in the blanket. The header units 16, 18 can be very compact assemblies, fully rigid to obviate kinking and yet extending over no more than one or two square inches of blanket surface area.

Priority of invention was accordingly awarded to appellees.

Appellant, in urging reversal of the Board's decision, contends that the above paragraph in the Coleman et al. application, which appellant alleges as the "critical paragraph," is only a criticism of prior art structures. He further contends that the five counts involved in the interference are limited to features not mentioned in the "critical paragraph."

We are faced with one issue here. Appellees stated it very concisely in their brief wherein they said:

> The only question raised in this forum is the correctness of the Board of Patent Interferences decision that senior party Coleman and MacCracken is entitled to make the claims which are the Counts of the Interference.

[1] When one copies claims from a patent for the purpose of instituting interference proceedings, in order to be successful, that person's application must clearly support those counts. See *Brand* v. *Thomas*, 25 CCPA 1053, 96 F.2d 301, 37 USPQ 505; *Crome* v. *Morrogh*, 44 CCPA 704, 239 F.2d 390, 112 USPQ 49. There must be no doubt that an applicant discloses each and every limitation of the claims and all doubts must be resolved against the copier. See *Louis H. Segall* v. *Marion W. Sims et al.*, 47 CCPA 886, 276 F.2d 661, 125 USPQ 394. It is not a question whether one skilled in the art *might* be able to construct the patentee's device from the teachings of the disclosure of the application. Rather, it is a question whether the application necessarily discloses that particular device. See *Crome* v. *Morrogh*, supra.

Here appellant's device as claimed has certain limitations which must be found in the disclosure of appellees' application if appellees are to prevail. That disclosure must teach that the blanket, among other features, has (1) a plurality of passageways; (2) a pair of flexible headers; (3) the headers in (2) extending along one end of the blanket and being generally perpendicular to the passageways in (1); (4) a plurality of flexible tubes of U-shape; (5) legs of the U disposed in the plurality of passageways; (6) one leg of the U connected to one of said flexible headers; (7) the other leg of the U connected to the other flexible header; (8) all tubes connected in parallel.

Unquestionably appellees in their specification accurately and concisely disclose each and every feature of their preferred embodiment and in the so-called "critical paragraph" herein quoted, they negatively disclose a different blanket than described as their preferred embodiment. That different blanket *may or may not* have all the features of appellant's device. Certainly it could, but is that sufficient to satisfy the law on this subject? We think not.

Appellees bring our attention to many other parts of their specification as being significant but they fail to point to any specific language which directly supports the counts in issue other than the "critical paragraph." It is true that immediately prior to that paragraph they describe in great detail the embodiment represented by their FIGURE 1 but in the "critical paragraph" they affirmatively teach nothing. Even if we were to agree, merely arguendo, that that paragraph in its negative way teaches an embodiment like appellant's device, that would not come within the principles that we have heretofore set forth governing a situation such as this one. Appellees want us to assume that one skilled in this art with the teachings of their other embodiment and the language of the "critical paragraph" before him would *necessarily* construct appellant's blanket. We cannot agree with their position.

Let us analyze this "critical paragraph" a bit more closely. Appellees say "It has been found preferable to use small diameter tubing * * * and to connect this tubing to small compact headers or junction units 16, 18 rather than having large diameter header tubes extend along the edge of the blanket. * * *" What edge? Appellees say it must be the same edge where 16 and 18 are positioned. If so, why did not appellees tie it down to that edge rather than use language which does not preclude the headers being disposed along an edge parallel to the tubes 26 and 28 from their pump? Where is the clear language teaching that the headers are perpendicular to the passageways; that one leg of the U is connected to one of said headers and the other leg to the other header in the same manner as described and shown in appellant's FIGURE 2; and that all tubes are connected in parallel. Where is the clear language in appellees' application that teaches those features? We cannot find it.

Certainly appellees would not say that they teach the blanket of the counts in the same clear language that they teach their preferred embodiment. None of the figures of appellees' application nor any of the claims ever presented in their application teach an embodiment that even distantly resembles appellant's embodiment.

We believe that the Board erred in concluding that appellees taught the structure recited in the counts on the basis of appellees' FIGURE 1 when considered with the negatively couched "critical paragraph." In our opinion the Board reached its conclusion on the basis of speculation rather than by applying the proper rule that, in order for appellees to prevail, their teachings of appellant's device as claimed in the counts in issue must clearly cover each limitation of the counts.

Appellees argue strenuously that since their application emphasizes the necessity for uniform heating across the entire blanket, this factor indicates that their application teaches appellant's embodiment. Appellees refer in particular to the portion of their specification which reads:

> Furthermore, instead of the six tubing circuits shown in the drawing, twenty or more such circuits may be used to distribute the heat more uniformly.
>
> The loops of tubing 12 are connected between a pair of header units 16, 18, one of which (16) constitutes an input header and the other of which (18) constitutes a return header. The arrangement is such that heated liquid will enter the blanket through the input header 16, flow through the various loops of tubing 12 in parallel, and flow out through the header 18. This parallel flow arrangement has the advantage that it equalizes the heating effect across the blanket, and also reduces the pressure drop or resistance to liquid flow in the tubing 12, as compared with a series path through a single tube looped back and forth across the entire blanket.

That portion refers to appellees' FIGURE 1. Since appellees thus obtain the uniform temperature discussed in their FIGURE 1 construction which is their admittedly preferred embodiment and which does not fall within the terms of the counts, we are unable to see how appellees' teaching with respect to uniform temperature constitutes an indication that their preferred construction should be modified to provide the particular construction of the counts.

Appellant has argued before us that appellees further fail to disclose the limitation in count 3 of "means connected to said headers at a point midway between the ends thereof for circulating a fluid medium between the headers and tubes." That argument was denied consideration on the merits by the Board because it was not raised in the motion to dissolve which appellant filed. This action by the Board requires no review by us in view of our finding with respect to other limitations in the counts.

We do not believe that appellees have fulfilled the requirements of the law in the premises; therefore we reverse the decision of the Board.

REVERSED.

RICH, *J.*, did not sit or participate in decision.

U.S. Court of Customs and Patent Appeals

IN RE RUSSELL H. MCCULLOUGH

No. 6918. Decided March 14, 1963

[50 CCPA —; 314 F.2d 570; 136 USPQ 657]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"MOTION PICTURE PROJECTION APPARATUS."

The refusal by the Board of Appeals of the claims in an application entitled "Motion Picture Projection Apparatus," as unpatentable over the prior art, is reversed.

APPEAL from the Patent Office. Serial No. 452,323.

REVERSED.

Kenyon & Kenyon, Ralph L. Chappell for appellant.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from a decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claims 20–23, the only remaining claims of appellant's application Serial No. 452,323, filed August 26, 1954 for MOTION PICTURE PROJECTION APPARATUS.

Claims 20 and 21, representative of the appealed claims, read:

20. In a theatre installation provided with a projection booth adjacent the rear of the theatre and a panoramic screen adjacent the front of the theatre and having a central portion and curved end portions, apparatus for projecting a composite image onto said screen derived from three separate films each containing one component of the composite image, said apparatus comprising a group of three projectors disposed in said booth, said projectors carrying the respective films and being symmetrically arranged with respect to said screen, the center projector casting an image component directly onto the central portion of said screen, and reflectors disposed cooperatively with respect to the side projectors to cast the image components therefrom along intersecting paths onto the respective end portions of said screen, whereby the optical distance between each of said end portions and the related side projector exceeds that between the central portion of the screen and the center projector, said side projectors having long focus lens systems producing a relatively great depth of focus, thereby avoiding image distortion on said curved side portions of said screen.

21. In a theatre installation provided with a projection booth adjacent the rear of the theatre and a panoramic screen adjacent the front of the theatre and having a center portion and curved end portions, apparatus for projecting a composite image on said screen derived from three separate films each containing one component of the composite image comprising a first projector oriented to cast an image in a central path directly onto the center portion of said screen, second and third projectors disposed on either side of said first projector, the projectors all being disposed in said booth, and reflectors disposed in cooperative relation to said second and third projectors with respect to said curved end portions of the screen to cast image components thereon in intersecting paths, whereby the optical distance between each of said end portions and the associated projector exceeds that between said center portion and said first projector, said second and third projectors including long focus optical systems providing a relatively great depth of focus.

Claim 22 is specific to the "reflectors disposed adjacent the opposing sides of the theatre cooperatively with respect to said side projectors." Claim 23 is specific to the "reflectors mounted adjacent the opposing sides of the booth cooperatively with respect to said side projectors."

The references relied on by the Examiner and the Board are:

Proctor, 1,666,304, April 17, 1928.
Waller et al., 2,280,206, April 21, 1942.

Société (France), 385,423, March 16, 1908.
Rousseau (France), 657,324, January 15, 1929.

Appellant's application relates to a projector-screen arrangement which employs three motion picture projectors. These projectors simultaneously project an image onto a horizontally-elongated screen which is spaced from the projectors so as to define a spectator area between the projectors and the screen. The screen has a central portion which is substantially at a right angle to the spectator area, and end portions that are usually concave. The three projectors are provided with films taken simultaneously. Thus when the images projected on the screen are placed side by side, a panoramic view results. Appellant's three motion picture projectors are grouped together in a projection booth at the rear of the theatre. The central projector is focused on the center of the screen while the two side projectors are directed at two reflecting mirrors which are placed either at the sides of the projection booth or at the sides of the theatre. The two reflecting mirrors cast the image components from the two side projectors along intersecting paths onto the respective end portions of the screen. Appellant also employs a long focus lens system [1] in each of the two side projectors. Appellant in his brief points out that "The long focus lens systems used in connection with the increased optical distance [made possible by the reflectors] provided a relatively great depth of focus [2] for the concave ends or wings of the screen. This eliminated distortion since, with the greater depth of focus, everything projected on the concave screen could be kept in focus."

The Waller et al. patent discloses a motion picture theatre comprising in combination a projection screen having a substantially spherical surface covering substantially the entire vision of a spectator and four projectors arranged to project images against contiguous areas covering substantially the entire surface of the screen. This arrangement provides three dimensional visual effect.

The Proctor patent discloses an apparatus for projecting a relatively long section of ticker tape quotations, panoramic views, sport results etc., on a flat screen. The projecting apparatus consists of a central projector and two side projectors. The projectors are so arranged to produce an effect similar to one large projector. The central projector casts an image directly on the central portion of the screen while each of the side projectors direct an image upon a first mirror angularly disposed so as to further direct the image on a second movable mirror angularly disposed to the first mirror. The images from the side projectors are thereupon directed along intersecting paths so as to be cast on opposite end portions of the screen. This results in a projection of a continuous progression when a single tape is drawn through the three projectors. For example, stock quotations are simultaneously cast on a screen in such a way as to allow for relative comparison in respect to the quotations immediately preceding or following the quotation projected by the central projector.

The Rousseau patent describes a motion picture apparatus which projects a picture on a preferably curved screen. The patentee uses

[1] As we understand from the application, a long focus lens system is one that employs a lens of long focal length. Focal length is defined in Funk & Wagnall's New Standard Dictionary (1931) as "the distance from the optical center of a lens or mirror to the point where the rays converge."

[2] Appellant in his application has defined "depth of focus" of the lens as the amount by which the distance between the exit pupil of a lens and the plane occupied by the screen can be changed without causing the diameter of the circle of confusion to exceed an acceptable value, "circle of confusion" being the term applied to the circular blurred image of a point-object formed by a lens at a position displaced from the focal point of the lens.

a multiple lens system in taking the picture on a single film and in projecting it. The picture is projected simultaneously by a plurality of projector systems, each projector system projecting a different portion of the film. The central portion of the picture can be projected by a central projector system using an appropriate lens with the two side portions of the picture being projected by two side projector systems which employ reflecting prisms, lenses and mirrors. The patentee teaches that the lens in each of the three projector systems have the same focal length. The patentee's motion picture apparatus permits close spacing between the projector systems and the screen.

The Société patent discloses a system of a central and two side projectors for projecting a composite image on a curved screen. The three projectors can be so oriented that the center projector projects directly on the center of the screen and the two side projectors, by means of reflectors, project images on the curved end portions of the screen.

In rejecting the appealed claims the Examiner took the position that the utilization of a reflector system in the Waller et al. theatre arrangement in such a way that the projectors could be located close together and still obtain the same angularly crossed projection beams was obvious in view of the Rousseau or Proctor patents, both of which teach the use of projecting beams outwardly near the projectors and reflecting the beams in angularly crossed relation to opposite sides of the screen. The Examiner additionally rejected the appealed claims over Rousseau in view of either Waller et al. or Société. His position is that the arrangement of the projector lenses of Rousseau with the axes of the side lenses pointed outwardly and the reflectors to direct the beams in crossed relationship is the equivalent of the arrangement of projectors recited in the appealed claims except for the use of separate films for separate projectors. The Examiner however considered the use of separate film for the several parts of the picture to be projected as obvious in view of Waller et al. or Société both of which show that it is conventional to project a composite image from separate strips of film.

The Board affirmed the Examiner's rejections of claims 20–23 over the prior art, particularly when using Waller et al. as the basic reference in view of Proctor. The Board stated:

> * * * Proctor would provide an obvious suggestion to one skilled in the art, of modifying Waller et al. by providing reflectors, disposed adjacent the opposing sides of the theatre or of the projection booth, which may be substantially as wide as the screen or theatre, and cooperative with the side projectors, thereby increasing the optical distance between the side panels and related projector.

It is evident that the principles of optics involved in appellant's invention are well known to those skilled in this art as stated in appellant's specification:

> It is known in the science of optics that the amount by which the distance between the exit pupil of a lens and the plane occupied by the screen can be changed without causing the diameter of the "circle of confusion" to exceed an acceptable value characterizes the depth of focus of the lens. The "circle of confusion" is the term applied to the circular blurred image of a point-object formed by a lens at a position displaced from the focal point of the lens.
>
> Thus, the fact that every point on the curved end portion of the screen does not lie precisely in the focal plane of the lens system is not material where the displaced points fall within the depth of focus of the system. In the event a lens of long focal length is utilized in a projector at an extended distance from the screen, the relatively great depth of focus of the optical system is such that the image on the curved screen surface will appear uniformly in focus without the need for special lens-correction expedients.

The question then arises whether appellant has invented a projection-screen arrangement wherein these principles of optics are applied in a useful, novel and unobvious manner. We believe insofar as the record shows appellant has achieved this goal.

We find nothing in the references per se or in a combination of them which teaches or suggests the basic concept of appellant's invention which is to use mirrors to lengthen the optical distance for the two side projectors together with the use of long focus lens systems for the purpose of increasing the depth of focus. None of the references per se or in combination teach so using mirrors to lengthen the optical distance so as to permit the use of a long focus lens system which will provide a greater depth of focus. The use of this concept permits an arrangement which is both economical and expedient insofar as the projection booth and the seating arrangements are concerned, while at the same time, allowing satisfactory focusing to be obtained under almost all theatre conditions. It is obvious from the record that some theatres are so constructed that a combination such as disclosed by appellant would be a very economical solution of the problems involved in adjusting a theatre to the innovation of panoramic viewing. Waller et al. show three projectors[3] each directed to a different portion of the semi-circular screen but there is no teaching of the use of mirrors to secure long optical distance when that is found necessary to properly adapt the theatre for panoramic viewing. In fact, it appears that the Waller et al. plan might be limited in use to a theatre constructed particularly for that arrangement.

Proctor teaches the use of three projectors together with the use of mirrors but does not teach that the mirrors are used for the ultimate purpose of permitting the use of long focus lens systems with increased depth of focus.

Rousseau says that:

> Standard motion picture projectors require for a wide screen a considerable distance between projector and screen since the lens permits projection only at a small angle. A possibility to increase this ang'e for producing a projection of larger surface in spite of the small distance from the projector may frequently be advantageous; this applies particularly to playhouses when a background of animated scenery is to be produced by motion picture projection; the scene is actually wide, and the distance between the backdrop and a projector, necessarily placed behind the curtain, so as to be hidden from the spectator, is much smaller than that which in customary movie theaters separates the projector from the screen.

Appellant's concept and arrangement implementing it is nowhere found or suggested in this patent. We place the Société reference in this same category.

The solicitor calls our attention to three statements of the Examiner which he says demonstrate the correctness of the Examiner's rejections and the Board's decision. We will examine these statements. First the solicitor states:

> the Examiner has correctly stated that "the claims make no reference to the relative focal length between center projector and side projectors." This is indicated by the claim language itself, as well as by appellant's failure to challenge that statement. Hence, a prior art teaching of three projectors, each projector having a lens of identical "long focal length" would satisfy the "long focus" limitation of the claims.

This observation does not contravene the fact that appellant has taught the art to use mirrors in order to permit use of long focus lens

[3] The fourth projector shown for vertical viewing is not significant to this discussion.

system. It should be remembered that appellant's invention involves a combination of elements and we find the patentability resides in this combination, not in any one element of the invention.

Second, the solicitor states:

The Examiner considered the matter of focal length of the projector lenses to be a matter of choice * * * and stated that "any skilled worker in the art would select a lens of sufficient focal length to give proper focus on the screen" * * *.

We are sure this is true but then comes the question which appellant has answered with this combination—if one wants to use a lens of "long focal length," how is this accomplished where space is a problem?

The third statement reads:

The Examiner further noted that "it is customary in theater projection to use *comparatively long* focal length lenses on the projector, so the use of long focal length lenses by applicant is considered only a conventional and customary expedient in theater projection" * * *.

Again we find no fault with the Examiner's statement but it does not meet the issue which has been presented to us, i.e. is the teaching of an arrangement which includes the use of "comparatively long focal length lenses" under certain restricted circumstances patentable?

We must admit that claim 23, which places each reflector in the projection booth in close proximity to its related outside projector as in a modified form of the invention shown on one of the application drawings, rather minimizes the significance of appellant's concept of the necessity of securing longer optical distance by the use of mirrors. We assume appellant achieved the desired depth of focus in the embodiment recited in claim 23 and yet he does it without extending the optical distance by any appreciable amount beyond that which would have occurred by directing the rays of the outside projectors directly to the screen without the use of mirrors. Nevertheless, appellant has taught the art the use of mirrors when needed in combination with the other elements. [1] We therefore reverse the decision of the Board.

REVERSED.

RICH, *J.* (concurring):

I am afflicted with a gnawing distrust of the application of the optical theories in this case by appellant and by the majority. I concur in the result because I believe an adequate practical disclosure has been made of an operative projection system having the advantages claimed for it.

It is not customary in patent cases to require an applicant either to know and disclose the underlying theory of his invention or to hold him to an expressed erroneous theory. *Eames* v. *Andrews*, 122 U.S. 40; Robinson on Patents, § 485; *In re Modine*, 19 CCPA 1058, 57 F.2d 355, 13 USPQ 88. In principle the same would generally be true of an erroneous application of theory, I think.

This case involves a sort of chicken-and-egg situation. The acknowledged prior art set-up utilizing a wide screen with curved ends entailed, appellant says in his specification, putting the side projectors at the sides of the theater so they could shoot axially at the curved screen end sections. This put them *closer* to the screen than the center projector in the booth and if the end section pictures were to be the same size as the center section picture the focal length of the side projection lenses would obviously have to be shorter than that of the

center projector lens.[1] The shorter throw of the side projectors gave their projected images a shorter depth of focus (relative to that of the center projector). But due to the screen curvature, a greater depth of focus was *desirable*. (Whether *necessary* would depend on theater size and screen curvature.) This could be achieved only by moving the projectors further from the screen and, of necessity, using longer focal length lenses, so as to retain the same picture size while doing so.

Appellant increased the distance by projecting along a dog-leg, using a mirror at the bend. While some references show the use of mirrors and dog-leg projection, the purposes were different. The main reason why appellant did this seems to have been to get all of the projectors in the projection booth at the back of the theater and simultaneously to eliminate projectors at the side so as not to cut down the size of the audience, without losing *axial* projection to the ends of the screen. The application says:

Attainment of *this* object *automatically permits the use of long-focus lenses* providing a relatively deep field of focus at the screen, whereby to provide sharpness on the concave screen portions. [My emphasis.]

As to using "long focus" lenses, all claims state that the *side* projectors use long focus lens systems. This does not impress me as anything remarkable. In picture projection the focal length of the lens used is determined by two factors: (1) the size of the picture desired on the screen and (2) the distance of the projector from the screen. Appellant's specification states, with respect to the center projector, which shoots straight at the center of the screen in a conventional manner, "The longest possible focus projection lens may be used by this projector." A little thought will show the statement to be meaningless. Once the picture *size* is determined, the focal length of this lens will be fixed by the size of the theater and the distance from its screen to the projection booth, so there is *only one possible focal length*. Whatever it is, if the side projectors are shooting along dog-legs of greater total length than the throw of the center projector, the focal lengths of their lenses will necessarily be *longer* than that of the center projector. As the application says, "so the focal length of the projection lens for the [side] projector 6 is even greater than in the case of the [center] projector 7."

"Long," with respect to the focal length of lenses, is, in any event, a relative term. The specification gives us no focal length of any lens. About all we know in this case is that the applicant says his center projector will have the "longest possible" focal length and that the focal length of the side projector lenses will be longer. And all of the focal lengths will be determined by theater size.

The novelty here, it seems to me, is the dog-leg-with-mirror projection from the booth into curved screen ends, preferably axially thereof, for the purpose of getting clear end pictures, or at least *clearer* pictures than when the side projectors shoot straight from the theater side walls axially of the curved screen ends.

Claim 23 defines an arrangement where there is not likely to be much of an advantage, a sort of de minimis application of the appellant's scheme. How much longer the throw of the side projectors will be through the use of the mirrors will depend entirely on how big the projection booth is. (The booth is in the claim and the mir-

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[1] At a given distance from a screen, the shorter the focal length of the lens the larger the picture will be. Also, with a lens of given focal length, the closer to the screen the projector is the smaller the picture will be. A picture gets larger as the porjector is moved away from the screen and if the picture is to be kept the same size the lens must be of longer focal length as the projector is moved away and shorter focal length as the projector is moved closer. These are some of the simple optical facts involved in this case.

rors are in the booth.) As shown in the drawing, the optical distance for the side projectors is about 7% greater than that for the center projector, as compared with an increase of about 50% in the other embodiment where the mirrors are on the theater walls. Slight though the advantage may be, I do not see any reason to deny appellant this claim.

I agree to the reversal of the rejection.

WORLEY, *Chief Judge* (dissenting):

I am unable to see where appellant has done anything to earn a patent.

In effect, the majority concludes that the principles of optics relied on by appellant are not expressly taught by the references. It seems to me, however, that those principles, so clearly illustrated in the concurring opinion, would necessarily be basic knowledge to one of ordinary skill in this particular art.

It seems to me that the problem cannot be approached on the theory that those skilled in the art would know *only* what they read in the references; they are presumed to know at least the elementary principles of optics as they relate to motion picture projection. I would affirm.

U.S. Court of Customs and Patent Appeals

MORTON FOODS, INC. *v.* THE FRITO COMPANY

No. 6936. Decided March 20, 1963

[50 CCPA —; 314 F.2d 822; 137 USPQ 58]

TRADEMARK—OPPOSITION—DAMAGE TO OPPOSER—LANHAM ACT, SECTION 13.

[1] The procedural advantages which accrue to the owner of a registered mark *Held* not to constitute, as a matter of law, such damage to the defendant in an infringement action as to support an opposition brought under section 13 of the Lanham Act.

APPEAL from the Patent Office. Opposition No. 41,186.

AFFIRMED.

Melvin R. Jenney, James P. Burns, Burns, Doane, Benedict, Swecker & Mathis, Kenway, Jenney & Hildreth for appellant.

Gerrit P. Groen, Byron, Hume, Groen & Clement for appellee.

Before RICH, *Acting Chief Judge*, and MARTIN, SMITH, and ALMOND, Jr., *Associate Judges*

SMITH, *J.*, delivered the opinion of the court:

Appellant's opposition to appellee's application for registration of its trademark "CHEE-TOS" [1] was dismissed by the Trademark Trial and Appeal Board on appellee's motion which raises the sole issue in this case: Does appellant's Notice of Opposition, as a matter of law, state a claim upon which the requested relief can be granted?

[1] Application Ser. No. 107,432, filed Oct. 31, 1960 for a "cheese flavored corn product in puffed form." The mark is shown in the specimen filed with the application as:

Chee-tos

The specific allegation in the Notice of Opposition which is pertinent to this issue is:

> 5. In view of the infringement action against opposer, based in part on the unregistered trademark "CHEE-TOS," [sic] opposer believes it would be damaged by the registration of such mark by reason of the advantages that would accrue to applicant as plaintiff in the infringement suit by having a Federal trademark registration for "CHEE-TOS," [sic] such advantages, among others, being set forth in the Trademark Act of July 6, 1946, Sections 33(a) and 39; 15 USC 1115(a) and 1121.

The pending infringement action referred to in the above-quoted allegation is Civil Action 9292, *The Frito Company* v. *Morton Foods, Inc.*, U.S.D.C., W.D. Oklahoma, now pending on appeal to the Court of Appeals, 10th Circuit.

Thus, the issue here stated more precisely is: Whether the specified procedural advantages which accrue to the owner of a registered mark, constitute, as a matter of law, such "damage" to the defendant in an infringement action as to support an opposition brought under Sec. 13 of the Lanham Act (15 U.S.C. 1063)? [2]

While we may agree with appellant that granting of a registration of the trademark in issue may give applicant some tactical advantage in the other litigation between the parties, we do not agree that this constitutes "damage" to appellant in the sense contemplated by Sec. 13 of the Lanham Act (15 U.S.C. 1063).

[1] The precise question to be determined in the pending civil litigation between the parties here appears to be whether opposer has the right to use "chip-O's" in the manner it is now being used. Thus, opposer is in effect here arguing that its right to use its mark in commerce would be impaired by giving applicant an alleged tactical advantage in pending litigation which seeks to determine whether opposer has such a right to use. Merely because applicant in the pending infringement action seeks an adjudication as to the legal rights of the parties in connection with the marks there involved, it cannot be said that such advantages as may be gained by applicant from the granting of a registration here will constitute "damage" to the opposer in the sense of Sec. 13 of the Lanham Act, supra.

The decision of the Trademark Trial and Appeal Board lists a number of its own prior decisions and prior decisions of the Commissioner of Patents [3] as support for its holding that such facts as are alleged here by opposer do not constitute a showing of damage within the meaning of Sec. 13 of the Lanham Act, supra. We have reviewed these decisions and agree with this result.

The decision of the Trademark Trial and Appeal Board is therefore affirmed.

AFFIRMED.

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[2] In so stating the issue we have not overlooked the averment in the Notice of Opposition in which opposer has alleged that:

> 8. The Frito Company, applicant here, has filed an opposition against Morton Foods, Inc., Opposition No. 40,887, to oppose the registration to Morton Foods of the trademark "chip-O's." In said opposition The Frito Company has alleged ownership of a family of trademarks ending in OS and TOS, including among others the trademark "CHEE-TOS." [sic]

We do not think that this allegation states any cause of action of which cognizance can properly be taken in the present proceeding. Registration of its mark gives appellee no rights in any other mark. Appellee's filing of a trademark opposition involving appellant's application to register its mark does not constitute "damage" to opposer as will be seen from our opinion.

[3] E.g., *Brown & Bigelow* v. *The International Silver Company*, 86 USPQ 460 (Commr., 1950) and *Condé Nast Publications, Inc.* v. *Swann*, 127 USPQ 85 (TT & A Bd., 1960).

U.S. Court of Customs and Patent Appeals

IN RE THE POLLAK STEEL COMPANY

No. 6937. Decided March 13, 1963

[50 CCPA —; 314 F.2d 566; 136 USPQ 651]

1. TRADEMARK—REGISTRABILITY—SUPPLEMENTAL REGISTER.

Held that the principles stated in *In re The Deister Concentrator Company, Inc.*, 48 CCPA 952, are applicable to an application for registration on the Supplemental Register.

2. SAME—SAME—SAME—LANHAM ACT, SECTION 23.

With respect to appellant's argument that its mark, consisting of a reflective coating covering the top few inches of the post, is capable of distinguishing its goods, metal fence posts, *Held* that the "evidence, if accepted, certainly shows that to be the fact *as of this time* and the reflective tops may be considered to have a de facto 'secondary meaning'"; that "If and when others exercise the right, which we hold they possess, to put reflective tops on steel fence posts by coating them uniformly with reflective material in the form of glass beads in a clear binder (a very common material nowadays), the 'mark' will no longer be capable of distinguishing appellant's goods from those of others"; and that "Capability of distinguishing, within the meaning of section 23 of the Lanham Act, 15 U.S.C. 1091, is a matter which must be viewed in the light of future possibility."

3. SAME—SAME—SAME—FUNCTIONAL FEATURE OF GOODS.

"* * *, it is argued that appellant's motivation or intent in adopting the mark as shown by the facts of record was to select an indication of origin in accordance with the common practice of the trade. We would give weight to the argument if that were all it had done, as by applying another distinctive color with no functional significance. But here we must agree with the Board that function is the 'immediate aim'."

APPEAL from the Patent Office. Serial No. 91,837.

AFFIRMED.

Burton Perlman, Paxton & Seasongood for appellant.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before RICH, *Acting Chief Judge*, and MARTIN, SMITH and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court:

This appeal is from the decision of the Patent Office Trademark Trial and Appeal Board, 131 USPQ 482, affirming the Examiner's ex parte refusal of appellant's application to register its mark on the Supplemental Register, Ser. No. 91,837, filed February 29, 1960.

The Board, in its opinion initially deciding this case on October 19, 1961, relied on our decision in *In re The Deister Concentrator Company, Inc.*, 48 CCPA 952, 289 F.2d 496, 129 USPQ 314. Our opinion in that case, handed down February 21, 1961, was first published, due to a petition for rehearing which delayed publication, on June 2, 1961, which was after appellant here had filed its brief in the appeal to the Board. Appellant requested the Board to reconsider and fully argued the relevancy of what we said in the *Deister* case. The Board did reconsider and reaffirmed its original decision on December 8, 1961.

In our *Deister* opinion we pointed out that, in line with consistent decisions of the United States Supreme Court and other courts, nothing which the public has or would have a right to copy, in the absence of valid patent or copyright protection, can be the subject of a valid trademark registration and that this is so irrespective of public acceptance of the subject matter sought to be registered as an indication of source. We pointed out that this is a fundamental

principle of the law of trademark ownership which is outside the provisions of the trademark statute (the Lanham Act), to which the provisions of that statute are subservient. We also pointed out that the principle applies without regard to the effort or money expended in an attempt to create trademark rights in something which the public has or will have the right to copy.

[1] While the application herein is one for registration on the Supplemental Register, the principles stated in the *Deister* case are as applicable thereto as they were to the application here involved to register on the Principal Register. Section 23 of the Lanham Act, 15 U.S.C. 1091, which governs registration on the Supplemental Register, permits registration only of marks "capable of distinguishing applicant's goods or services." How such capability must be judged is dealt with hereinafter.

Since the nature of the goods is of vital importance to the decision in this case we will describe them first, before describing the "mark."

The Goods

Appellant seeks to register a mark for "metal fence posts." The record contains descriptive literature in which this merchandise is referred to as CREST LITE STUDTEE STEEL DRIVE REFLECTORIZED FENCE POST. "CREST LITE" is featured as a trademark and the remainder of the phrase appears to be descriptive. The posts are of steel and have a T-shaped cross section with studs down the flat top of the T to keep fence wire in place. The posts are designed to be driven into the ground. The advertisements feature the "Exclusive Reflectorized top" or "the *exclusive* Reflectorized Crest." This is further explained in one advertising piece as follows: "AT NIGHT 60,000 minute glass beads per square inch, embedded in clear weather resistant alkyd resin, pick up and reflect tractor, truck or automobile headlights. Each CREST LITE lives up to its name along driveway, field or highway. * * * Every post a night guide and distinctive mark for your property." Pictures showing road and driveway boundaries marked by shining fence post tops illustrate the text. So much for the goods.

The Mark

The drawing of the mark sought to be registered shows the top portion of a "studtee" fence post, the uppermost few inches of which is denoted, by brackets and wording, as having "Reflective Coating." (The drawing is reproduced in the published Board opinion, 131 USPQ at page 483.)

The application states, "The trademark is used by applying it directly to the goods and five drawing reproductions showing the mark as actually used are presented herewith." The Patent Office brief says that the "drawing reproductions" are colored and show "the reflective top of the post as gray and the rest of the post as green."

The application contains this descriptive paragraph:

> The mark consists of a coating, which can reflect a directed beam of artificial light, applied to a metal [sic] fence post, the coating being in the form of a design extending between a substantially straight boundary line normal to the axial length of the post a short distance below the top of the post, and the top of the post, as indicated in the accompanying drawing.

Appellant's arguments have made much of this "design." To get it into realistic perspective at the outset, we state that all the "design" amounts to is a solid coating of reflective coating material, without

regard to color, covering a few inches of the top of the post. The application is rather vague as to how much of the top is thus coated, specifying only "a short distance." Evidence, together with the application drawing, indicates that, in practice, about 3½ inches of the top is coated.

There are references in the Examiner's final rejection and Examiner's Statement, in the Board opinion, and in appellant's brief to a disclaimer, apparently a part of the application as amended, shown in the record, however, only as "Insert B[1]," which insert has not been included though appellant relies on it. The Solicitor's brief has helpfully stated that the disclaimer, consistently with the statements about it which are of record, is shown by the Patent Office records to read as follows:

> Applicant disclaims the reflective coating applied to the metal fence post except in the design shown in the accompanying drawing.

At first blush it would appear to be somewhat enigmatic that the mark *consists* of a reflective coating covering the top few inches of the post, which reflective coating is disclaimed "except in the design shown," which design resides in the solid coating of the top few inches of the post. It looks as though the mark sought to be registered is disclaimed. But since appellant's counsel obviously could not so intend, we will turn to the arguments which attempt to make a case for registration out of the above and other facts, with a view to developing what is left of the mark after giving effect to the disclaimer.

Appellant has introduced the affidavit of an officer and 12 affidavits from dealers and users. Several advertisements are identified by the officer. The main burden of the other affidavits, which have a certain family resemblance indicative of common origin, is that in the fence post business it had become customary to identify the producers by color on the tops of the posts. The most specific illustrative statement on this point is the following:

> It is well known to those acquainted with fence posts that a post having a band at the top red in color is a product of the Inland Steel Company. A post with a silver band at the top is the product of the Colorado Fuel & Iron Corp. Those with a gold band are produced by Calument [sic] Steel.

The background picture, therefore, is that the origin of fence posts of this type is indicated to those who deal in and use them by the color of the tops. Appellant decided to identify the source of its posts, we are told, by putting a reflective coating at the top. As its vice president states:

> We felt by the same token, that the trade and the public would recognize our posts as the product of a particular source because we use the same design, though in a manner specifically different from the usage by our competitors.
>
> Moreover, we have taken pains to teach the public that when a reflective coating is applied in the design consisting of a band at the top of the post, it identifies a post of our manufacture.

The last paragraph is borne out by the advertisements, each of which concludes with this announcement:

> CREST LITE *and the reflective band at the top of a fence post are the trademarks of The Pollak Steel Company.*

The users' affidavits, as might be expected, all conclude with statements typified by the following:

> Thus, when I now see a post with a reflective "top" I assume that it is a Pollak Steel product.

We accept this evidence at face value. The question in this case, however, is whether such consumer assumptions are of any legal significance.

The Rejection

The Examiner said in his Statement that registration was refused on the ground that the band of reflective material "is inherently functional in character and use and therefore lacks capacity to distinguish the applicant's goods." With some perspicacity he observed:

> Counsel's argument, however carefully presented, appears to be an attempt to "weave" the case to registration by first claiming an analogy between a functional coated band applied to fence posts, and specific colored bands of no utility used on the same goods, in order to show precedent in the trade, but to disassociate the functional coating from the design to avoid a rejection based on its utilitarian purpose. As far as the Examiner is concerned, color marks are not analogous to and form no precedent for allowance here.[1]

The Board, in affirming, said:

> It is obvious from the facts adduced herein that the reflective coating utilized by applicant is inherently functional and that its placement at the uppermost portion of the post conforms to the commonly accepted practice of applying reflecting indicia to road signs and boundary markers for safety and protection purposes. Any device, the immediate aim of which is to serve a functional mission, cannot be granted the legal protection a registration achieves. * * * [citing the *Deister* case].

This Appeal

[2] In this court appellant appears to be pursuing the same arguments it made below. First, it says the mark is capable of distinguishing its goods. The evidence, if accepted, certainly shows that to be the fact *as of this time* and the reflective tops may be considered to have a de facto "secondary meaning." However, we disposed of that fact as of no legal significance under circumstances similar to those here in the *Deister* case. If and when others exercise the right, which we hold they possess, to put reflective tops on steel fence posts by coating them uniformly with reflective material in the form of glass beads in a clear binder (a very common material nowadays), the "mark" will no longer be capable of distinguishing appellant's goods from those of others. Capability of distinguishing, within the meaning of section 23 of the Lanham Act, 15 U.S.C. 1091, is a matter which must be viewed in the light of future possibility.

[3] Secondly, it is argued that appellant's motivation or intent in adopting the mark as shown by the facts of record was to select an indication of origin in accordance with the common practice of the trade. We would give weight to the argument if that were all it had done, as by applying another distinctive color with no functional significance. But here we must agree with the Board that function is the "immediate aim." Accepting appellant's intent, there was clearly an additional motive. One might almost say that appellant's officers had a "flash of genius," but they did not reckon with legal consequences.

On the matter of making advertising expenditures under a wrong theory of the legal situation, see our recent opinion in *Weiss Noodle Company* v. *Golden Cracknel and Specialty Company*, 48 CCPA 1004, 290 F.2d 845, 129 USPQ 411. This will dispose of the third

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[1] We do not know the sense in which the Examiner used the term "weave," but it appears appropriate to this case. Webster's New Collegiate Dictionary, 2d ed., gives two relevant meanings:

> 2. To fabricate by or as by interlacing; as, to *weave* a plot. * * * v.i. * * * 3. To move from side to side repeatedly; to move in a devious and intricate course; as, to *weave* through a crowd.

argument, that appellant's advertising expenditures have created a public consciousness that the reflective top indicates origin as shown by the affidavits.

Finally, appellant comes back to the argument that its mark is a distinctive design to which it has exclusive rights. We quote the argument:

> Appellant's design is non-functional, even though applied at the top of the post. Reflective coating can readily be applied in other designs at the top of the post. It can be applied in a series of horizontal stripes. It can be applied in a series of vertical stripes. It can be applied in inclined stripes. It can be applied in a plurality of broken lines. Circles and curves may be employed as well as straight lines. Appellant is not attempting to eliminate freedom to copy the functional feature, the reflective coating, nor is appellant attempting to eliminate the freedom to place the functional reflective coating at the top of the post. Appellant seeks registration only for the reflective coating in the non-functional design shown.

Here we have an explanation of what appellant intends the meaning of its disclaimer to be, namely, we alone may coat the top solidly while others are free to use special designs.

Here we have appellant's admission that reflective coating on the top of a fence post *is functional.*

Here we have the ultimate contention that all appellant relies on for registrability in this case is the distinctiveness of its "*design.*" The short answer is that there is no design. While the argument recites a number of possible *arbitrary* designs, appellant's own design is chimerical. The Solicitor's brief contains a very practical answer to this argument, of which we approve, and which occurred to us independently, as follows:

> In this case, a simple method of applying the functional reflective coating to the functionally designed metal post is to suspend the post top-downwards and dip it into the coating supply. This method of coating will inevitably produce the coating design shown in appellant's drawing. To permit appellant to assert trademark rights in its alleged mark would clearly have the effect of unjustifiably giving appellant a perpetual monopoly on the simplest and cheapest use of a simple process of applying a functional reflective coating to a functionally designed metal fence post.

If there is anything further to be said on the legal aspects of the case, we feel it has been said in the cases above cited and in the authorities therein relied on.

The decision of the Board is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE LOVEL R. SIMMONS AND JAMES T. MOND, JR.

No. 6949. Decided March 13, 1963

[50 CCPA —; 314 F.2d 555; 136 USPQ 655]

1. PATENTABILITY—OBVIOUSNESS—REFERENCES—LACK OF REFERENCE SHOWING KNOWLEDGE OF ART.

"Appellants' counsel was rather insistent in argument that there must be a reference of record to support the assertion that common control of several hydraulic devices simultaneously is known in the art and says in his brief that in the absence of such a reference 'the Court has no authority to assume that it would have been obvious, and consequently must hold it to be unobvious.' In the instant case we hardly think a reference is required to support the Patent Office position on what one of ordinary skill in the art would know on this subject, bearing in mind that most of us ride daily in automobiles wherein four brakes are hydraulically actuated simultaneously by the pressure of one foot. While the public generally may not be familiar with the mechanism by which this is accomplished, certainly all automotive mechanics are."

2. SAME—PARTICULAR SUBJECT MATTER—"TRACTOR WITH SELECTIVELY APPLIABLE WEIGHT TRANSFER FOR TRACTION WHEELS THEREOF AND A TRACTION-WHEEL-DRIVING DIFFERENTIAL WITH LOCK-UP SELECTIVELY APPLIABLE CONCURRENTLY WITH APPLICATION OF WEIGHT TRANSFER."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Tractor With Selectively Appliable Weight Transfer for Traction Wheels Thereof and a Traction-Wheel-Driving Differential With Lock-Up Selectively Appliable Concurrently With Application of Weight Transfer" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 673,835.

AFFIRMED.

Olson, Trexler, Wolters & Bushnell, Robert M. Wolters, Charles L. Sturtevant for appellants.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before RICH, *Acting Chief Judge*, and MARTIN, SMITH, and ALMOND, JR., *Associate Judges*

RICH, *J.*, delivered the opinion of the court:

This appeal is from the decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claims 1–9 in application Ser. No. 673,835, filed July 24, 1957, for "Tractor With selectively Appliable Weight Transfer for Traction Wheels Thereof and a Traction-Wheel-Driving Differential With Lock-Up Selectively Appliable Concurrently With Application of Weight Transfer."

The sole issue is obviousness in view of prior art under 35 U.S.C. 103.

Appellants' invention is the combination of a tractor, an earth-hauling vehicle towed thereby, and cooperative mechanisms for limiting the tendency of one or the other of the tractor's rear driving wheels to spin due to insufficient traction. One such mechanism is an hudraulically-operated, inclined, extensible hydraulic strut, attached at its lower end to the rear of the tractor frame, the upper end being attached to the front of the earth-hauling vehicle's frame at a point considerably higher than the point of attachment of the strut to the tractor. The introduction of pressurized fluid into the cylinder of the strut drives a piston-like plunger rearward and upward, thereby tending to release some of the weight from the front wheels of the earth-hauling vehicle. The weight released from the front wheels of the towed vehicle is transferred in part to its rear wheels and in part to the rear wheels of the tractor, thereby increasing the traction of the latter wheels. This mechanism and associated structures, which we need not further describe, are designated as "weight transferring hitch means" in claim 1, infra. An hydraulic hose line connects the cylinder of the strut to a tractor-engine-activated pump and hydraulic fluid source. Fluid flow to the cylinder is controlled by a valve operated through mechanical linkages by the operator of the tractor.

Appellant's second tractor-wheel-spin-limiting mechanism amounts to a known differential lock-up,[1] two forms of which are disclosed,

[1] A differential is a mechanism used in the rear axles of most automobiles, tractors, etc., for transferring torque from a drive shaft to the driven vehicle wheels. The gearing in a differential is such that independent motion of the driven vehicle wheels is possible. One disadvantage of such a device is that if one driven wheel encounters a slippery surface and begins to spin, negligible torque will be delivered to the other driven wheel, thereby rendering ineffective for driving purposes the application of torque to the other wheel. A differential lock-up overcomes this disadvantage by prohibiting independent motion of the driven wheels. In effect, it disables the differential, joining the two wheels rigidly as though they were fixed on a rigid axle.

one manually operable and the other hydraulically operable by means of a hydraulic ram. The latter form of differential lock-up is shown as connected, through a secondary hydraulic hose line and a manually operable differential lock-up control valve, to the first mentioned hydraulic hose line. The position of the control valve (i.e., whether open or closed) determines whether or not the differential lock-up will be activated simultaneously with the "weight transferring hitch means." [2]

Claim 1, which, for the purposes of this appeal, is admitted to be indistinguishable from claim 9, reads as follows:

1. In a tractor vehicle adapted for propelling a second vehicle articulately coupled thereto and adapted to receive traction-improving weight from the second vehicle, tractor-supporting traction type propelling elements engaged with the ground at spaced-apart positions thereon, weight transferring hitch means connectable with the second vehicle to establish the articulate coupling of the tractor vehicle thereto and energizable to transfer weight from the second vehicle onto the propelling elements in different relative amounts depending upon the attitude of the tractor vehicle such as relative to the verticle [sic] or to the hitch means, a selective lock-up type differential through which propelling force is differentially transmittable to the propelling elements during non-lock-up and independently transmittable to such elements during lock-up, control means for selectively energizing or deenergizing the weight transferring means, and means for selectively effecting lock-up or non-lock-up of the differential concurrently with energization of the weight-transferring means.

Claims 2–8 are more specific than claims 1 and 9 in that they are directed to a device wherein differential lock-up occurs *under the control of* the means for controlling the activation of the weight transfer mechanism. The patentability of claim 5 and dependent claims 6 and 7 is urged on the basis of the recitations therein that the "differential control means" is "*settable* for operation under control of the weight transferring control means" (our emphasis) thereby more explicitly including the differential lock-up control valve in the claims. Inasmuch as claim 4 includes a similar recitation, we have grouped this claim with claims 5–7.

The references relied on are:

Simmons, 2,459,098, Jan. 11, 1949.
Mayer et al., 1,212,795, Jan. 16, 1917.
Miller, 1,142,831, June 15, 1915.

A discussion of the content of these references is unnecessary in view of the following statements in appellants' brief:

The Simmons Patent No. 2,459,098, discloses a weight-transferring hitch structure 12 identical with that of the present application, and the hydraulic circuit and controls for the hitch structure of the patent and of this application are identical excepting for the tap into the hose line 75 shown in FIG. 3 of this application to enable the differential lock-up mechanism of such FIG. 3 to operate in response to and under control of the operation of the weight-transferring hitch.

The Mayer Patent No. 1,212,795 and the Miller Patent No. 1,142,831 disclose differentials capable of being locked up, and it can be assumed for the purpose of the ensuing argument that these two lock-up differentials are identical with the present applicants' lock-up differential.

The Patent Office position is that all of the claims are unpatentable because it would be obvious to substitute a lock-up differential of the type shown by either Miller or Mayer et al. for the differential disclosed by Simmons and to actuate both the lock-up and hydraulic strut together by a common hydraulic control.

[2] Appellant considers such simultaneous activation desirable because if conditions under which the tractor is operated are so adverse that a transfer of weight to the rear wheels of the tractor would not prohibit one or the other of the tractor wheels from spinning, a momentary hesitation in the activation of the differential lock-up would result in the tractor losing some of its forward momentum.

With respect to broad claims 1 and 9, all that appellants have recited in these claims is the mere addition of a differential lock-up to the weight shifting device disclosed in the Simmons patent. In view of the well known nature and attributes of a differential lock-up, such an addition to the Simmons structure would be obvious if wheel-spinning were encountered therein or if, for any other reason, use of a differential lock-up appeared to be desirable.

Claims 2–8, as previously noted, recite a specific cooperative relationship between the differential lock-up and the weight transferring mechanism, wherein the latter is *controlled by* the former so that both mechanisms may be operated together through actuation, by the operator, of a single manual control.

The Board stated on request for reconsideration:

The idea of using a single control to actuate two branches or two stages of an apparatus is quite common in various arts. We found no patentability in the substitution of a lock-up type of differential for the differential disclosed by Simmons. In such a substitution, we find no further patentability in the concept of actuating the differential lock-up and the weight transfer mechanism through a common control.

We find a similar statement concerning the common use of a single hydraulic pump to actuate different fluid operated parts of a vehicle in the first action on the case by the Examiner. Neither in the record, nor in appellants' brief here, do we find any statements by appellants controverting this allegation by the Patent Office concerning the state of the art. We feel the Board was entirely justified in holding that one skilled in the art, desiring to add a differential lock-up to the device of the Simmons patent, would know of the prior practice of simultaneously operating various mechanisms through a common control and that it would be obvious for him to connect a fluid operated differential lock-up to the hydraulic hose line of Simmons already used therein to drive the weight transferring mechanism.

[1] Appellants' counsel was rather insistent in argument that there must be a reference of record to support the assertion that common control of several hydraulic devices simultaneously is known in the art and says in his brief that in the absence of such a reference "the Court has no authority to assume that it would have been obvious, and consequently must hold it to be unobvious." In the instant case we hardly think a reference is required to support the Patent Office position on what one of ordinary skill in the art would know on this subject, bearing in mind that most of us ride daily in automobiles wherein four brakes are hydraulically actuated simultaneously by the pressure of one foot. While the public generally may not be familiar with the mechanism by which this is accomplished, certainly all automotive mechanics are.

The sole remaining question is the patentable significance of the inclusion in claims 4–7 of the recitations directed to the differential lock-up control valve. We cannot see wherein the use of a control or cut-off valve in one branch of a multiple branch hydraulic fluid control line produces any unexpected results or would be an unobvious expedient.

[2] The decision of the Board is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,422,774, G. O. Conner, Die set, **filed** May 3, 1963, D.C. Conn. (New Haven), Doc. 9801, *Lempco Products, Inc. et al.* v. *The Producto Machine Co.*

2,466,643, S. H. Magio, Apparatus for heat sealing thermoplastic strips about elastic elements; **2,490,451**, same, Method of making a thermoplastic cover; **2,768,107**, same, Thermoplastic sheet material provided with tubular edging and method of applying said edging; **2,944,550**, same, Thermoplastic garments; **2,957,792**, same, Method of heat sealing edge bindings around openings in hollow thermoplastic bodies; **2,985,221**, same, Apparatus for forming and heat sealing tubular edgings to thermoplastic sheet material, **filed** May 7, 1963, D.C., S.D.N.Y., Doc. 63/1312, *Sidney H. Magid* v. *Dunlee Corporation.*

2,490,451. (See 2,466,643.)

2,563,794, Rickes and Wood, Vitamin B–12; **2,703,302**, same, Vitamin B–12—active composition and process of preparing same, **filed** Apr. 16, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63–C–416, *Merck & Co., Inc.* v. *Darby Drug Co., Inc. et al.* **Same, filed** Apr. 2, 1963, D.C.N.J. (Newark), Doc. 270–62, *Merck & Co., Inc.* v. *Chase Chemical Company, Inc.*

2,651,423, Rose and Osojnak, Apparatus for loading bulk material into a ship's hold, C.C.A., 4th Cir., Doc. 8654, *Heyl & Patterson, Incorporated, Appellant and Cross-Appellee* v. *McDowell Company, Incorporated et al., Appellees and Cross-Appellants.* Decree affirming in part and reversing in part decree of District Court May 14, 1963.

2,655,480, J. G. Spitzer et al., Lather producing composition, **filed** May 7, 1963, D.C. Del. (Wilmington), Doc. 2668, *Carter Products, Inc. et al.* v. *The Gillette Company et al.*

2,674,068, Eves and Lundstrom, Bevel edging machines, **filed** Aug. 16, 1962, D.C., E.D. Okla. (Muskogee), Doc. 5211, *American Optical Company* v. *Coburn Precision Manufacturing Co. et al.* Stipulation of dismissal (notice May 9, 1963).

2,678,348, R. C. Ballard, Color television interlacing system, **filed** Sept. 8, 1961, D.C. Del. (Wilmington), Doc. 2369, *Philco Corporation* v. *Radio Corporation of America.*

2,696,295, J. C. Berry, Sock package, C.C.A. 4th Cir., Doc. 8816, *Berry Brothers Corporation* v. *Sigmon Hosiery Manufacturing Company.* Decree of District Court affirmed May 3, 1963.

2,703,802. (See 2,563,794.)

2,743,319, L. Thompson et al., Scanning mechanism for magnetic tape recorders; **2,750,449**, same, Long playing magnetic tape recorder; **2,826,642**, Lyon and Thompson, Eraser for magnetically recorded bulk tape in roll form; **2,845,495**, W. H. Lyon, Long playing tape recording apparatus; **2,856,463**, same, Rotary magnetic transducer means having yieldable heads, **filed** June 6, 1960, D.C.N.J. (Newark), Doc. 506/60, *The Soundscriber Corp.* v. *Ampex Corporation et al.* Stipulation and order of dismissal entered May 5, 1963.

2,750,449. (See 2,743,319.)

2,768,107. (See 2,466,643.)

2,768,994, R. N. MacDonald, Polyoxymethylenes, **filed** Apr. 12, 1963, D.C. Del. (Wilmington), Doc. 2323, *E. I. du Pont de Nemours & Co.* v. *Celanese Corporation of America.* Stipulation of dismissal May 3, 1963.

2,801,613, G. Gigli, Lead gripping means for lead holders, **filed** Sept. 24, 1962, D.C.N.J. (Newark), Doc. 760/62, *L. & C. Hardtmuth, Inc.* v. *Charvoz-Roos Corporation.* Consent judgment; patent held infringed (notice Sept. 24, 1963).

2,803,105, Stoddard and Seem, Apparatus for processing textile yarns; **2,803,106**, same, Methods of processing textile yarns; **2,803,109**, Yarns, C.C.A. 4th Cir., Doc. 8684, *Leesona Corporation* v. *Cotwool Manufacturing Corporation et al.* Decree of District Court affirmed Mar. 19, 1963.

2,803,106. (See 2,803,105.)

2,803,109. (See 2,803,105.)

2,810,277, G. Billi, Circular machinery for manufacture of smooth mesh and net mesh stockings; **2,872,796**, R. Peel, Jack selection mechanism for circular knitting machines, **filed** Apr. 25, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 29536, *Singer-Fidelity, Inc.* v. *Roy D. Faigenbaum.* Cause dismissed (notice May 3, 1963).

2,826,642. (See 2,743,319.)

2,828,194, Hopkins and Easley, Etching, **filed** May 2, 1963, D.C., S.D. Tex. (Houston), Doc. 63–H–304, *The Dow Chemical Co.* v. *Rogers-Art Engraving Co. et al.*

2,845,495. (See 2,743,319.)

2,856,463. (See 2,743,319.)

2,867,325, G. Hires, Filter apparatus; **2,867,326**, same, **filed** May 7, 1963, D.C., E.D. Mich. (Detroit), Doc. 23846, *Gene Hires et al.* v. *American Laundry Machinery Industries Division of McGraw-Edison Company (Inc.).*

2,867,326. (See 2,867,325.)

2,872,796. (See 2,810,277.)

2,919,693, H. M. Ross, Mouthpiece, **filed** May 2, 1962, D.C., W.D. Wis. (Madison), Doc. 3554, *Harold M. Ross* v. *Madison Dental Co.* Stipulation of dismissal Apr. 25, 1963.

2,919,990, H. G. Podlesak et al., Method of continuously producing packaged units, **filed** May 15, 1963, D.C., E.D. Wis. (Milwaukee), Doc. 63–C–113, *National Dairy Products Corporation* v. *Safeway Stores, Inc.* **Same**, Doc. 63–C–114, *National Dairy Products Corporation* v. *Frigo Brothers Cheese Corporation.* **Same**, Doc. 63–C–115, *National Dairy Products Corporation* v. *Frank Ryser Wisconsin Company.* **Same**, Doc. 63–C–116, *National Dairy Products Corporation* v. *L. D. Schreiber & Co., Inc.* **Same**, Doc. 63–C–117, *National Dairy Products Corporation* v. *Concord Cheese Corporation.*

2,920,634, L. Malin, Umbrella ferrule, **filed** Oct. 11, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 61/3578, *Louis Malin* v. *Finkel Umbrella Frame Company.* Stipulation and order of discontinuance May 23, 1963.

2,944,550. (See 2,466,643.)

2,950,793, W. G. Axtell, Luggage case; **Des. 185,511**, J. M. Powell et al., same, **filed** Apr. 30, 1963, D.C., S.D. Calif. (Los Angeles), Doc. 63–497–JWC, *Shwayder Brothers, Inc.* v. *Reliable Luggage, Inc. et al.*

2,957,792. (See 2,466,643.)

2,985,221. (See 2,466,643.)

2,988,848, J. H. Lemelson, Noisemaking toys, **filed** May 3, 1963, D.C., E.D.N.Y. (Brooklyn), Doc. 63c–509, *Jerome H. Lemelson* v. *A. J. Renzi Plastics Corp.*

2,996,417, B. A. Wilson, Luminous ceiling panel, **2,996,609**, same, Sheet panel, **filed** Aug. 6, 1962, D.C. Mass. (Boston), Doc. 62–586–S, *Wilson Research Corporation* v. *Piolite Plastics Corporation.*

2,996,609. (See 2,996,417.)

3,004,813, H. L. Shivek, Dispensing apparatus, **filed** May 14, 1963, D.C. Mass. (Boston), Doc. 63–429–J, *Serv-O-Lift Corporation* v. *Pinsley, Bellinger and Trilling, Inc.*

3,017,843, R. M. Loomis et al., Lading separating means, **filed** Aug. 29, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1659, *Union Asbestos & Rubber Co.* v. *Evans Products Co.* Motion to dismiss sustained; complaint dismissed Mar. 3, 1963.

3,049,853, H. T. Horner, Rotary power mower, **filed** May 8, 1963, D.C., E.D. Wis. (Milwaukee), Doc. 63–C–109, *Toro Manufacturing Corporation* v. *Jacobson Manufacturing Company.*

3,062,167, C. H. Bennett, Trim attachment for power boats, **filed** Jan. 14, 1963, D.C., E.D. Mich. (Detroit), Doc. 23408, *Charles H. Bennett* v. *Glass Pool, Inc.* Stipulation and consent judgment and injunction filed and entered May 2, 1963.

3,074,143, B. R. Smith, Method of making metalized ceramic bodies, **filed** May 15, 1963, D.C.R.I. (Providence), Doc. 3125, *Mitronics, Inc.* v. *Metalized Ceramics Corporation et al.*

Des. 185,511. (See 2,950,793.)

Des. 190,789, I. I. Levis, Hand mirror, **filed** Dec. 17, 1962, D.C., E.D. Mo. (St. Louis), Doc. 62c420(3), *Irene I. Levis* v. *Scruggs Vandervoort-Barney, Inc.* Patent held valid; defendant enjoined May 6, 1963.

REISSUES

AUGUST 27, 1963

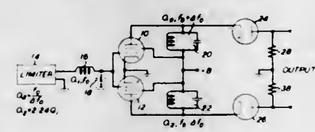
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,436
FREQUENCY MODULATED BALANCED DISCRIMINATOR

Norman E. Chasek, Stamford, Conn., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Original No. 2,984,791, dated May 16, 1961, Ser. No. 786,949, Jan. 15, 1959. Application for reissue May 2, 1963, Ser. No. 278,526

2 Claims. (Cl. 329—141)



1. In a receiver for frequency modulated waves, a discriminator comprising first and second amplifying means, each having an output circuit and at least a control element, means interconnecting said control elements to form a common input path, a first resonant input circuit having a quality Q_1 and tuned to the carrier frequency f_0 of the incoming frequency modulated waves in said common input circuit, individual resonant circuits connected in the output circuits of said first and second amplifying means, respectively, and tuned to frequencies other than f_0, said other frequencies differing from f_0 by a quantity Δf_0 and having equal qualities Q_2 equal to

$$\left[\frac{2f_0}{\Delta f_0}\right]$$

$$\frac{f_0}{\Delta f_0}$$

the quality of said input resonant circuit Q_1 being of the order of one-half the quality of Q_2.

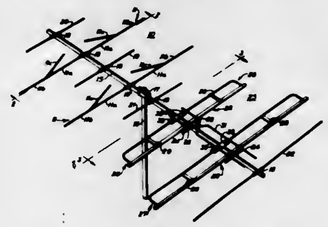
25,437
TELEVISION ANTENNA HAVING MULTI-BAND ELEMENTS

Warner H. Anderson, McClenansboro, Ill., assignor, by mesne assignments, to Channel Master Corporation, Ellenville, N.Y., a corporation of New York

Original No. 2,980,912, dated Apr. 18, 1961, Ser. No. 503,275, Apr. 22, 1955. Application for reissue Sept. 18, 1962, Ser. No. 224,586

8 Claims. (Cl. 343—802)

7. A very-high-frequency television antenna for the low frequency band and the high frequency band comprising a plurality of horizontal active dipole antenna elements, means for connecting each said element to a signal transmission line, each said element being effective in both said low and high frequency bands, at least one parasitic antenna element comprising two oppositely extending elongated electrically interconnected arms disposed horizontally on respective sides of the axis of said antenna and spaced along said axis from one of said active dipole antenna elements, each said arm having a substantially straight conductive branch section joined conductively with it at a portion of said arm intermediate the ends thereof corresponding to a minimum voltage



point in the high frequency band and extending in a generally vertical plane at an angle of approximately 160° from the outer portion of said arm, said branch sections being shorter than said arms and terminating short of the vertical projection of the inner end of said arms, said arms cooperating with said branch sections to form a low frequency parasitic antenna element, and said branch sections forming high band parasitic elements in conjunction with the outer portion of the respective arms to which they are joined.

25,438
PROCESS FOR THE GROWING AND ROOTING OF PLANTS IN A SYNTHETIC SOIL

Florian N. Nelson, P.O. Box 124, Vicksburg, Miss.

No Drawing. Original No. 2,891,355, dated June 23, 1959, Ser. No. 679,759, Aug. 22, 1957. Application for reissue June 13, 1961, Ser. No. 120,122

7 Claims. (Cl. 47—58)

1. The method of growing plants by chemical agricultural process which consists in preparing shredded cellular expanded polystyrene by adding to a bushel of said polystyrene one-half gallon of a solution containing plant nutrients and several drops of a surface tension lowering detergent, in drying the shredded cellular expanded polystyrene during approximately 24 hours, in placing the roots of the plant to be grown into a quantity of shredded cellular polystyrene, adding the said prepared shredded cellular expanded polystyrene in the proportion of 7:1 and in adding water approximately to the extent of ¾ of the volume occupied by the shredded cellular polystyrene.

PLANT PATENTS

GRANTED AUGUST 27, 1963

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,275
CLIMBING ROSE PLANT
Wilfred F. Kittle, Pittsburgh, Pa., assignor to Lincoln Nursery Company, Penn Hill, Pa., a partnership
Filed Jan. 23, 1962, Ser. No. 168,292
1 Claim. (Cl. Plt.—5)

A new and distinct variety of climbing rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of large double flowers having imbricated petals and a pronounced June shrub rose fragrance and a distinctive rich pink general color tonality and heavy canes; main stems, branches and rachis completely free of pointed prickles.

2,276
ALMOND TREE
Edna L. Paxman, Rte. 1, Box 32, Ripon, Calif.
Filed July 21, 1961, Ser. No. 125,883
1 Claim. (Cl. Plt.—30)

A new and distinct variety of almond tree, as illustrated and described, characterized as to novelty by nuts whose kernels are relatively small, averaging 35 to an ounce; nuts borne on short spurs, hang well on the tree, and are well distributed thereon; soft shell nuts which are easy to harvest, hull, and crack; and nuts with a better seal than the Nonpareil but in harvest substantially with or slightly later than the same.

PATENTS

GRANTED AUGUST 27, 1963

GENERAL AND MECHANICAL

3,101,476
FASTENER DRIVING APPARATUS
Oscar A. Wandel, Mundelein, Ill., assignor to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 11, 1961, Ser. No. 137,313
1 Claim. (Cl. 1—44.4)



A fastener driving apparatus comprising a cylinder, nosepiece structure closing the lower end of said cylinder and including a guiding portion, a piston assembly slidably mounted in said cylinder to provide a driving stroke and a return stroke, said piston assembly including a piston sleeve provided with an upwardly extending shoulder, a retaining plate slidably mounted on said shoulder, and a cap member threadedly mounted in the upper end of said piston sleeve spaced from said retaining plate to form a recess intermediate said retaining plate and said cap member, said retaining plate having an opening communicating with said recess; a driver blade mounted for sliding movement relative to said guiding portion and provided with a T-shaped head positioned in said recess, said blade extending through said opening, a first resilient washer positioned between said T-shaped head and said retaining plate; and a second resilient washer positioned between said T-shaped head and said cap member whereby said piston is cushioned by the engagement of said blade with a fastener and by the engagement of said piston assembly with stop means when said piston assembly is moved toward a workpiece.

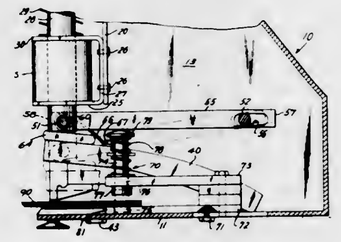
3,101,477
DISPENSER AND APPLICATOR FOR THUMB TACKS
Joe A. Leniz, % Leniz Tool Mfg. Co., Inc., P.O. Box 2445, Reno, Nev.
Filed Nov. 17, 1961, Ser. No. 153,157
7 Claims. (Cl. 1—46)

1. A dispenser and applicator for thumb tacks comprising a housing having a storage compartment including channels for slidably receiving the stems of thumb tacks, at least one of said channels terminating at its forward end in a delivery channel, said housing including a dispensing slot communicating with the delivery channel and having a discharge end remote from the delivery channel, at least one of said channels in the housing terminating at its forward end in a return channel, said return channel having a forward end portion inclined towards the dispensing slot, the forward end portion of said return channel being communicated with the dispensing slot longitudinally outwardly of the point of communication between the forward end portion of the delivery channel and the dispensing slot, said housing including a top slot overlying the dispensing slot, a slide slidably mounted in the slot overlying the dispensing



slot whereby the slide may engage tacks and move them forwardly in the dispensing slot, and resilient tongue means mounted in said dispensing slot intermediate the point of communication of the delivery channel therewith and the point of communication of the return channel therewith thereby restricting flow of tacks from the delivery channel into the dispensing slot and providing free return of tacks from the dispensing slot into the return channel.

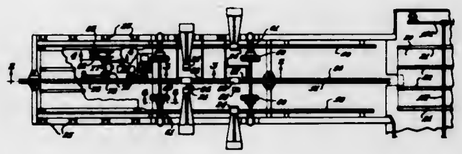
3,101,478
MULTIPLE FASTENER DEVICE
James J. Oussani, 777 5th Ave., Brooklyn, N.Y.
Filed Aug. 2, 1961, Ser. No. 128,826
4 Claims. (Cl. 1—120)



1. A powerized stapler and punch device comprising a housing having a base portion, a plurality of stapler members mounted side by side on said base portion, at least one said stapler member being laterally adjustably mounted relative to the other said member, an electrical impeller member mounted on said housing having a depending, vertically shiftable plunger, a laterally extending cross bar carried by said plunger operably connected to said stapler members, a laterally disposed support rod having its ends fixed to the side walls of said housing, to be in parallel spaced relation to said cross bar, a driver lever pivotally secured at one end to said plunger and having at its other end a longitudinal slot portion within which said support rod is slidably and pivotally received, and an independent punch device longitudinally and laterally adjustably secured to said base, said punch including a driver head portion disposed beneath and in contact

with said driver lever at a point intermediate the ends thereof.

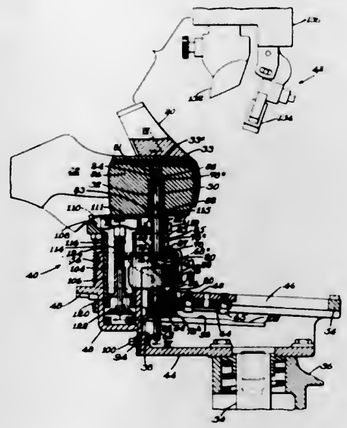
3,101,479
APPARATUS AND SYSTEM FOR THE CONTINUOUS PRODUCTION OF HOGSHEADS AND THE LIKE
Harry Guthrie Bell, Jacob Douglas Gay, Jr., and Keith Gilmore Shaffer, Paris, Ky., assignors to Gay-Bell Corporation, Paris, Ky., a corporation of Kentucky
Filed June 1, 1956, Ser. No. 588,726
2 Claims. (Cl. 1—125)



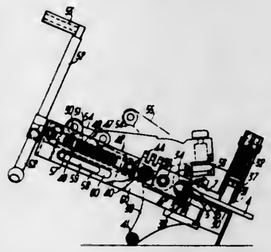
1. A system for assembling hogsheads which comprises: a first feeding station, a first stapling section for stapling the hoops and hoops-and-liners to the hogshead panels, first conveyor means to move panels from said first feeding station through said first stapling section, first saw means to form staves in said panels, and first additional means to receive panels from said conveyor means and convey them through said first saw means; a second feeding station, a second stapling section for stapling hoops and hoops-and-liners to other hogshead panels, second conveyor means to move said other panels from said second feeding station through said second stapling section, second saw means to form staves in said other panels, and second additional means to receive said other panels from said second conveyor means and convey them through said second saw means; upper support means to receive panels from said first saw means, lower support means to receive said other panels from said second saw means, said support means being positioned one above the other, a receiving station common to both support means, and means to push the panels from said support means one by one onto said receiving station; said push means comprising a pair of elongated cylinders, a piston rod reciprocable in each said cylinder, valve means for each said cylinder whereby to direct fluid pressure to either end thereof, a shoe on each said rod, said upper and lower support means having depressed areas to permit said shoes to pass over whereby to engage panels supported on the undepressed portions of said support means; and a control circuit including each of said valve means and so arranged that the valve means cannot be manipulated to cause simultaneous pushing movement of said shoes.

3,101,480
HEEL ATTACHING MACHINES
Chester E. Rogers, Jr., Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Oct. 2, 1961, Ser. No. 142,170
19 Claims. (Cl. 1—335)

1. In a heel attaching machine, a jack into cooperation with which a last bearing a shoe is moved and comprising two last supporting members which are moved by the last and one of which has a passage, a driver movable in the passage of said one member, means for retaining one of the members against movement relative to the other during movement of the other, means for freeing the retained member for movement and for retaining during this time the other member against movement, and means for securing the last supporting member which has a passage in either of two different angular operating positions with relation to the other supporting member.

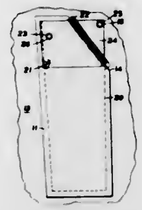


3,101,481
BELT-FASTENING MACHINES
Leslie A. Neale, Sheffield, England, assignor to Hayden-Nilos Limited, Sheffield, England, a British company
Filed Jan. 25, 1962, Ser. No. 168,737
Claims priority, application Great Britain Feb. 8, 1961
6 Claims. (Cl. 1—342)



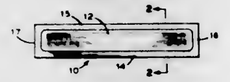
1. A belt-fastening machine for the application of fasteners to the end of a continuous belt, comprising U-shaped members with at least two registering pairs of holes in their limbs and at least one U-shaped hook with pointed lengths to pass through the pairs of holes in turn and the interposed thickness of the belt, the machine comprising a jaw unit, a jaw lever, a transverse pivot for the lever, a pressing cheek mounted on one end of the lever located on one side of said U-shaped member for pressing said U-shaped hook through said pairs of holes and belt, means for rocking said jaw lever, a block located in the jaw unit and longitudinally slidable towards and away from a position on the opposite side of said U-shaped member, said block having at least one pair of recesses in the side of the blocking facing the cheek to receive the two points of said U-shaped hook pressed by the cheek through the pairs of holes and the belt upon pivoting the jaw lever in one direction and means for sliding said recessed block parallel to said belt, after said jaw lever has been pivoted to press said U-shaped hook through said pairs of holes and belt, to bend the points of the hook in a direction parallel with said belt.

3,101,482
LINER FOR POCKETS
Frances O. Rahjes, Agra, Kans.
Filed July 14, 1961, Ser. No. 124,167
2 Claims. (Cl. 2—247)



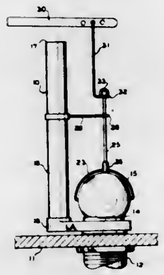
1. In a "patch pocket" of a garment, the "patch pocket" having a top portion, a long side, a bottom and a shorter side attached to the garment, the top being attached from the long side for a short distance leaving a slanted opening from the termination of the top to the termination of the shorter side, a passageway formed in the "patch pocket" adjacent the top and near the long side, a first attaching snap attached to the garment adjacent the opening, a liner arranged and constructed to fit inside said "patch pocket" and comprising; a grease and acid-resistant pliable material cut and formed to present a front and a back portion, the front and back being folded and forming a first long side, the front and back being joined and forming a second shorter side opposite the first side, a bottom formed by joining the front and back portions, said front portion having an extended front flap portion so arranged and constructed as to be folded outwardly thence back upon itself, the fold thus formed being at an angle corresponding to the angle of the opening in the "patch pocket," said back portion being substantially rectangularly shaped whence the front flap is folded a triangularly shaped upper corner of the back portion is exposed, a second attaching snap being affixed to the outer side of the triangularly exposed upper corner, a third snap means attached to the outer face to coincide with the passageway in the "patch pocket" and a fourth snap means attached to the outer front face on the front flap whereby when the liner is inserted into the "patch pocket" the liner will lie flat therein and the triangular shaped upper corner is attached to the garment by engaging first and second snap means and the front flap is placed outside the "patch pocket" and folded there on the third and fourth snap means are engaged through the formed passageway the "patch pocket" with liner in place thence presenting for use a grease and acid-resistant pocket.

3,101,483
GARMENT STIFFENER
Ronald Boser, Huntington, and William L. Chalfin, Brooklyn, N.Y., assignors to Regina Enterprises, Inc., New York, N.Y., a corporation of New York
Filed Dec. 5, 1960, Ser. No. 73,870
3 Claims. (Cl. 2—260)



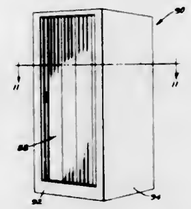
1. A garment stiffener comprising an elongated stiffener element, a covering for said stiffener element comprising a pair of thin thermoplastic resin strips respectively on opposite sides of said stiffener element, said resin strips having peripheral marginal portions projecting beyond the peripheral edges of said stiffener element, a pair of thermoplastic resilient foam cushioning strips over and enclosing said resin strips, the opposed marginal edges of said resin and foam strips being heat sealed together continuously about the perimeter of said stiffener element, to enclose said stiffener element.

3,101,484
BALL-AND-SEAT VALVES
George W. Oakes, R.F.D. 1, Byron, Ga.
Filed Apr. 4, 1960, Ser. No. 19,627
3 Claims. (Cl. 4—57)



1. A flush valve comprising a valve-seat member having an upwardly directed face; a substantially spherical ball for disposition on the seat member, the ball being provided with axially aligned bearings at opposite poles; a substantially semicircular yoke piece having inwardly directed end members in said bearings for mounting the ball for free rotation about its own axis within the yoke piece; a lift rod free to rotate and wobble about a generally vertical axis and mounted fast on the yoke piece and in the general plane thereof, and perpendicular to the ball axis, and slightly offset from the equatorial plane of the ball, so as to tend to induce the ball to turn on its own axis upon initial contact of the face and ball when the latter is lowered.

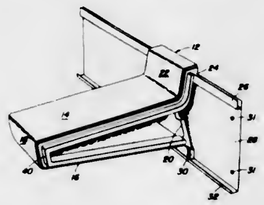
3,101,485
SHOWER CURTAIN AND INSTALLATION THEREFOR
David Kirshenbaum, 15 Hemalin Road, Cranston, R.I.
Filed Jan. 24, 1961, Ser. No. 84,711
4 Claims. (Cl. 4—146)



2. In a shower of the stall type having a base, a front wall, rear wall, a first side wall and a second side wall, a shower fixture secured to said first side wall, an opening formed in said front wall and defining an entranceway to the stall shower, a pair of vertically spaced trackways, linear sections of each trackway mounted on said front wall on opposite sides of said entranceway, both said trackways having continuous portions joined to said

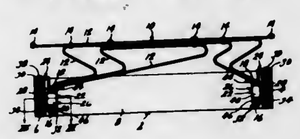
linear sections defined by a short arcuate section that spans the intersecting area between said front wall and said second side wall and a second linear section secured to said second side wall, the second linear section of each trackway being disposed in a plane that is perpendicular to a plane in which the first linear section is disposed, and a flexible curtain mounted for slidable movement in said trackways, said flexible curtain including a plurality of flexible panels interconnected in edge-to-edge snug fitting relation, said flexible curtain being movable from a first position on said front wall wherein said entranceway is covered to a second position adjacent said second side wall wherein access through said entranceway is provided, the width of said curtain being substantially as wide as said entranceway.

3,101,486
LAVATORY FIXTURE
James A. Tiller, Louisville, Ky., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 23, 1962, Ser. No. 181,906
13 Claims. (Cl. 4—170)



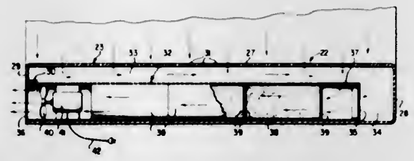
1. A wall mounted counter, comprising a plurality of structural members having interlocking configurations on either side, said members each having a generally horizontal surface suitable as a counter top, said structural members being arranged adjacent to one another so that the said generally horizontal surfaces define a continuous counter top, means for interlocking adjacent structural members against relative vertical movement and means formed integral with each of said structural members for supporting the weight thereof on the side of a substantially vertical wall.

3,101,487
MOUNTING BRACKET FOR FURNITURE SPRINGS
Robert O. Isaacs, Joplin, Mo., assignor to Flex-O-Lators, Inc., Carthage, Mo., a corporation of Missouri
Filed July 26, 1961, Ser. No. 126,957
8 Claims. (Cl. 5—254)



1. In combination, a furniture frame having a pair of generally parallel rails, a spring unit extending across said frame and constituting resilient elongated members and having downwardly extending terminal portions respectively adjacent the confronting faces of said rails, and a bracket attaching each of said terminal portions to the adjacent frame rail, said bracket comprising a body member attached to said rail and having a vertical leg overlying the inner face of said rail, and a clamp member disposed adjacent and parallel to said vertical leg and attached thereto, said terminal spring portion being clamped between said vertical leg and said clamp member.

3,101,488
AIR PURIFYING AND VENTILATING MEANS FOR BEDS
David Meade Peebles, 2912 Cortland Place NW., Washington, D.C.
Filed July 10, 1961, Ser. No. 123,046
2 Claims. (Cl. 5—347)



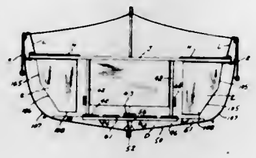
1. An air purifying and ventilating device for invalid beds and the like comprising an outer casing for disposition upon the bed mattress beneath the bedclothing and having a perforated wall, an inner casing disposed within the outer casing and spaced from said perforated wall and having a perforated portion, at least one air purifying cartridge removably mounted in the inner casing, and a fan disposed within the inner casing to draw air through the outer and inner casings and said cartridge.

3,101,489
PLASTIC BOAT CONSTRUCTION
Walter R. Chance, Falls Church, Va., assignor to Continental Copper & Steel Industries, Inc. (Welin Davit and Boat Division), New York, N.Y., a corporation of Delaware
Filed Feb. 17, 1959, Ser. No. 793,721
16 Claims. (Cl. 9—3)



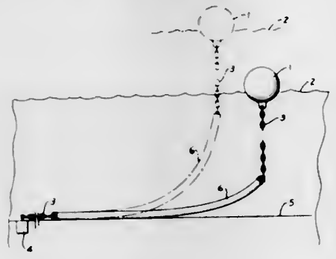
1. An all plastic lifeboat construction, said construction consisting of integrally joined laminated resin covered multiple sheets, and said construction having side hull sections independently molded of a plurality of independent glass fiber woven resin impregnated sheets and joined together at the boat keel said side sections being provided with elongated multiple ply plastic impregnated benches and thwarts extending transversely across and between upper parts of the side hull sections of the hull integrally joined to the upper parts and said multiple sheets forming the hull having substantially integral and transversely extending portions forming the walls of interior tank constructions and said benches.

3,101,490
LIFEBOAT CONSTRUCTION
Henry C. Jacobi, Manasquan, N.J., assignor to Continental Copper & Steel Industries, Inc., Welin Davit and Boat Division, New York, N.Y., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,668
8 Claims. (Cl. 9—3)



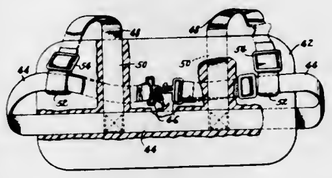
1. A lifeboat construction comprising a hull having an inside, an outside, a bow, a stern, sides and a bottom, mountings inside of said hull at said bow and said stern for lifeboat release gear, a gunwale structure with an inwardly extending horizontal flange portion, a plurality of spaced, inwardly extending hull bracket members fixed to the sides of said hull adjacent to, and below, said gunwale structure, a plurality of spaced, transversely extending, vertical reinforcement angles fixed to the bottom of said hull, and a removable and replaceable interior including a lower subassembly and an upper subassembly, said lower subassembly including a plurality of longitudinally extending floor boards restable on said reinforcement angles and a plurality of upwardly extending side column members having bottoms fixed to said floor boards, and said upper subassembly including side benches, each having a bottom and a top, a plurality of transverse thwarts, each having two ends, the ends of said thwarts being fixed to the bottom of said side benches, a thwart bracket member fixed to, and extending outwardly from, each end of said thwarts, and a plurality of spaced, oblique bracket members, each having an outwardly extending lower flange, an outwardly extending upper flange and an oblique center portion connecting said lower and upper flanges, said lower flanges being fixed to the top of said side benches, bolt means to detachably connect the upper flanges of said oblique bracket members to said inwardly extending horizontal flange portion of said gunwale structure and bolt means to detachably connect said thwart bracket members to said hull bracket members.

3,101,491
MOORING DEVICE
Eric A. Salo, 15898 Via Pinale, San Lorenzo, Calif.
Filed Sept. 28, 1961, Ser. No. 141,439
7 Claims. (Cl. 9—8)



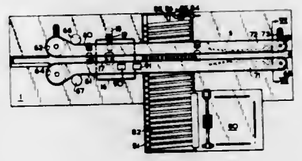
1. In a device moored in a body of water comprising a floating member on the surface of said body of water, an anchor at the bottom of said body of water, and a mooring chain connecting said floating member to said anchor, with said chain having a generally vertical portion extending downwardly from said floating member, a generally horizontal portion extending from said anchor along the bottom of said body of water, and a now-rigid dip section consisting of chain links connecting said generally vertical and horizontal portions, the improvement comprising resilient means embracing said chain at locations adjacent said generally vertical and horizontal portions thereof and extending substantially along the full length of said dip section for maintaining said dip section chain links against endwise compaction.

3,101,492
SWIMMING AID
Arthur E. Martin, 17 Atlantic Ave., Cohasset, Mass.
Filed Apr. 28, 1961, Ser. No. 106,267
2 Claims. (Cl. 9—339)



1. A swimming aid, comprising a buoyant plastic body, a pair of shoulder straps secured to the body, said shoulder straps each comprising an attaching portion which extends through the foam body near the bottom and encircles and snugly grips the upper portion of the body, and a chest strap extending transversely of the body and being secured to each shoulder strap at the foam body.

3,101,493
BOOK COVER-APPLYING MACHINE
Jørgen Valdemar Carstens, 22 Anettevej, Brabrand, Denmark
Filed May 23, 1961, Ser. No. 112,012
Claims priority, application Denmark May 24, 1960
12 Claims. (Cl. 11—4)



1. A machine for applying covers to books, comprising a

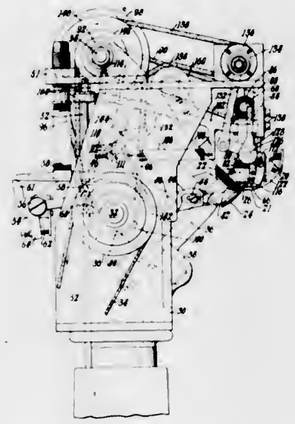
continuously working book feeding device for uninterrupted feeding of books with any interspacing and with the books positioned in the vertical plane with their spines facing downwards,

a cover feeding device for feeding horizontally disposed covers one by one to a pressure station located under the book feeding device,

a presser device having an at least vertically movable surface for pressing the cover fed against the overhead-disposed book, when said book is located in a pre-determined position,

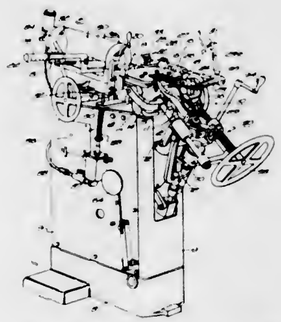
and controlling means being independent of the book feeding device, for controlling the cover feeding device and the presser device, respectively, which controlling means are arranged for being actuated by the books advanced by the book feeding device.

3,101,494
INSEAM TRIMMING MACHINES
Milton H. Roske, Boxford, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Apr. 25, 1962, Ser. No. 190,155
12 Claims. (Cl. 12—4.4)



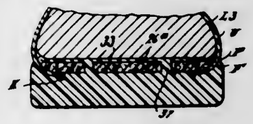
1. In an inseam trimming machine, a trimming cutter having a trimming edge, means for reciprocating said cutter transversely of the inseam, and means on the cutter for imparting a reciprocating rubbing and beating action to a workpiece being trimmed by the edge of said cutter.

3,101,495
TOE LASTING OF SHOES
Evald O. Peterson, Lynnfield Center, Mass., assignor to Compo Shoe Machinery Corporation, Waltham, Mass., a corporation of Delaware
Filed Dec. 22, 1961, Ser. No. 161,662
21 Claims. (Cl. 12—12.4)



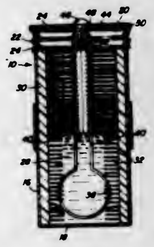
1. Apparatus for lasting the toes of shoe uppers each mounted upon a graded last, comprising a machine frame carrying means for supporting a last, a wiper assembly carrying wiping means for drawing upper materials smoothly about the toes of lasts and movable on said frame heightwise in relation to the toe ends of lasts supported on said frame, motive means operated by fluid pressure and connected to power movement of said wiper assembly in relation to said frame, means for admitting pressurized gaseous fluid to said motive means to power upward movement of said wiper assembly in relation to said frame by said motive means, hydraulic stopping means including a cylinder and piston assembly filled with a substantially incompressible liquid, a reservoir for the liquid, normally-open valve means communicating the liquid in said stopping means with said reservoir, and means responsive to heightwise orientations of predetermined portions of lasts supported on said frame closing said valve means and thereby stopping upward movement of the wiper assembly when said wiper assembly is in predetermined relationship to the toe ends of the lasts for the lasting of the uppers about the toes.

3,101,496
METHOD OF MAKING FOOTWEAR HAVING WATER-IMPERVIOUS OUTER SOLES
George H. Bingham, Jr., Westminster, and Otto Y. Olsson, Taneytown, Md., assignors to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Filed May 12, 1961, Ser. No. 109,656
4 Claims. (Cl. 12—142)



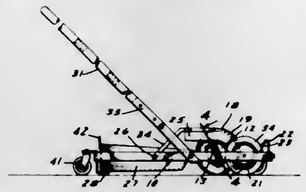
1. That method of making shoes which comprises as steps: providing an upper, so attaching a lasting cord to the marginal portion of the upper by means of thread loops that the lasting cord contacts the outer surface of the lower margin of the upper above the extreme lower edge of the latter; assembling the upper with a last; pulling the lasting cord thereby drawing the lasting margin of the upper in over and into close contact with the bottom of the last while leaving the entire thickness of the lasting cord exposed at the undersurface of the lasted-in margin; and so attaching an outer sole to said lasted margin that the lasting cord is completely embedded in the substance of the outer sole.

3,101,497
GOLF BALL SCRUBBER
Peter P. Derkocz, 706 Hazard Road, Palmerton, Pa.
Filed Feb. 20, 1962, Ser. No. 174,532
3 Claims. (Cl. 15—21)



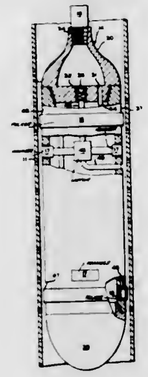
3. A golf ball scrubber comprising a cleanser container having a ball receiving opening therein, a cap means selectively sealing said opening, means for releasably retaining a golf ball in a manner so as to enable a vertical and rotational movement of the golf ball within the container upon a movement of the cap means, said golf ball retaining means consisting of a resilient open ring adapted to resiliently retain a golf ball therein, said open ring being affixed to the cap means by elongated rod-like means projecting centrally through the container, said rod-like means extending from the open ring to the inner face of the cap means, and an inwardly projecting scrubbing means within the container engaged by the golf ball upon the movement thereof for effecting the desired cleaning.

3,101,498
SWEEPER
Nick G. Davlantes, 7844 Gazette Ave., Canoga Park, Calif.
Filed Oct. 4, 1961, Ser. No. 142,831
6 Claims. (Cl. 15—79)



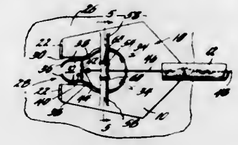
1. A sweeper, comprising: a frame; ground engaging support wheels operatively supporting said frame; a cylindrical rotatable brush supported by said frame; means at one end of said brush for engaging one of said support wheels for rotating said brush; a yieldingly mounted hood including a curved portion normally positioned in close proximity to the brush periphery and movable away from the periphery of said brush when excess material gets between said brush and said hood; and a debris collector pivotally supported by said frame.

3,101,499
PIPE CLEANER
Bill E. Greenfield, Odessa, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 27, 1959, Ser. No. 816,129
4 Claims. (Cl. 15—104.07)



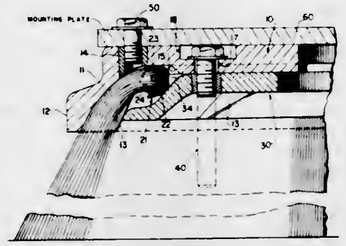
1. A pipe cleaner comprising a body, a hammer carried by said body, pneumatic power means carried by said body to operate said hammer, means to position said cleaner in a pipe comprising means for supporting said body and supplying pressure fluid thereto to actuate said power means comprising a supporting tube attached to said body, packer means attached to said body actuated by pneumatic pressure to close the annular space between said body and the pipe surrounding said hammer, first conduit means for supplying pressure fluid to said packer means, second conduit means for supplying pressure fluid to said power means, means in said body to discharge exhaust fluid from said power means to the space surrounding said hammer closed by said packer means, and means in said body to discharge fluid from said space.

3,101,500
MOPPING DEVICE HAVING GRAPPLE MEANS FOR DISPOSAL OF SWAB
Nicholas Paolantonio, P.O. Box 391, Shelter Island Heights, Long Island, N.Y.
Filed July 2, 1962, Ser. No. 206,802
14 Claims. (Cl. 15—118)



14. A mop for utilizing disposable swabs of paper or the like, comprising a working head having a slot, with an enlarged inner portion, opening through an edge of the head, a hollow tube mounted on the upper side of said head, a handle extending transversely of said tube, a leaf spring secured in said slot, and having terminal, inwardly directed ends, spaced apart in their normal position of rest, flexible tie means connecting said ends for moving said ends toward each other against the bias of said leaf spring, a cable attached to said tie means and passing through said tube, and a finger grasp on said cable, adjacent said handle.

3,101,501
ROTARY BROOM FOR STREET SWEEPER
John P. Horton, 79 Old Fort Road, Bernardsville, N.J.; George E. Berry, Spring Run Lane, Martinsville, N.J.; and John E. Stirling, 1041 Wychwood Road, Westfield, N.J.
Filed Mar. 6, 1961, Ser. No. 93,558
7 Claims. (Cl. 15—180)

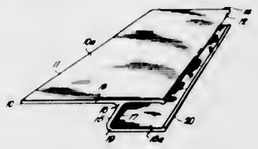


1. A rotary broom for street sweepers, comprising a brush back having a downwardly extending flange, clamping means underlying said back, means releasably holding said clamping means to said back, an easily removable annular section of brush material having an inner portion of continuous brush material clamped between said back and said clamping means and having other portions thereof passing through the space between said flange and said clamping means and extending downwardly from the periphery of said flange, and means associated with said flange and said clamping means and extending into said other portions of the brush material vertically supporting it in the peripheral region of said flange.

3,101,502
FEATHEREDGE
Alex A. Levy, Kansas City, Mo., assignor to Goldblatt Tool Company, Kansas City, Mo., a corporation of Missouri
Filed July 10, 1961, Ser. No. 122,867
1 Claim. (Cl. 15—235.4)

A featheredge comprising an elongate substantially flat first plate member having a pair of substantially parallel

and straight line opposed longitudinal edges, one of said first plate member edges comprising the working edge thereof, a second plate member having a pair of substantially parallel and straight line longitudinal edges connected by one of said edges to said first plate member intermediate the longitudinal edges of said first plate member and along a line extending substantially parallel thereto, the connection between the first and second members positioned closer to the nonworking edge of the former than the working edge thereof, the connection between the first and second members faired on the acute angle side thereof, said second plate member in transverse cross section inclined from the normal to said first plate member in a direction toward the working edge of said first plate member, the inclination of the second plate member relative to the first plate member forming an acute angle between 75° and 35° toward the working edge of said first plate member, an elongate, substantially flat third plate member having a pair of substantially parallel and straight line longitudinal edges connected at one longitudinal edge thereof to said second plate member in such manner as to extend substantially



parallel to said first plate member, the connection between the second and third members faired both exteriorly and interiorly thereof, the direction of extension of said third plate member carrying it over the obtuse angle formed between the first and second plate members, the width of said third plate member less than half the width of the first plate member and the adjacent longitudinal edges of the first and third plate members substantially opposed to one another, the substantially opposed longitudinal edges of the first and third plate members rounded off with respect to one another, the entire zone enclosed within the first, second and third members, in the gripping portion of the tool, not greater than the gripping area of an average worker's hand, said zone enclosed within said members sufficiently small that it may fit within the grasp of the average worker's hand in such manner that the worker's thumb may abut against the nonworking edge of the first member and his fingers simultaneously manipulate the working edge thereof by directly contacting the face of the said first member between the second member and the working edge of the first member at a position substantially equidistant between the second member and said working edge.

3,101,503
DEVICE FOR CLEANING BAKING TINS

Herbert Wiechmann, 19 Liethwisch, Hamburg-Lokstedt 1, Germany

Filed July 25, 1961, Ser. No. 126,576
Claims priority, application Germany July 25, 1960
2 Claims. (Cl. 15—236)

1. A scraper for cleaning baking tins and the like, comprising a support of square section adapted to be presented to the baking tin at an acute angle, a pair of scraper sheets secured to two adjacent faces of said support so that an angle is formed between said sheets, a clamping member of angle section covering the major length of the adjacent edges of said scraper sheets, and threaded fasteners for securing said sheets and member of angle section to said support, said sheets being of parallelogrammatic shape with one of their edges forming an acute angle with the lower parallel edges thereof, said edges meeting along one corner of said supporting mem-

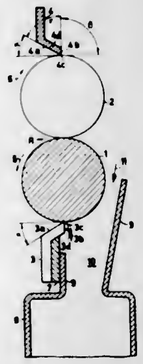


ber of square section, said sheets extending in planes on a compound angle with respect to one another and beyond said adjacent faces of said support to which they are secured.

3,101,504
CLEANING DEVICE FOR YARN CARRYING ROTARY CYLINDERS OF TEXTILE MACHINES

Hermann Gasser, Zurich, Switzerland, assignor to Luwa AG., Zurich, Switzerland, a corporation of Switzerland

Filed Sept. 12, 1960, Ser. No. 55,392
Claims priority, application Switzerland Sept. 12, 1959
15 Claims. (Cl. 15—256.51)

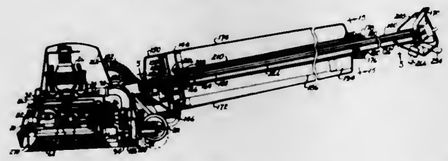


1. A device for cleaning banks of rollers, particularly drafting rolls of textile machines comprising, in combination; at least a pair of cooperating rotatable roller means adapted to pass web in a predetermined direction of travel, cleaner means disposed adjacent each of said roller means and cooperable therewith, each of said cleaner means including a blade portion provided with a pair of converging blade surfaces defining a blade edge normally contacting the periphery of its associated roller means to define a line of contact, one of said converging blade surfaces being oriented at a predetermined inclination on the downstream side of said line of contact relative to said predetermined direction of web travel and with respect to a plane tangent to said associated roller means and taken through said line of contact to define an acute angle, said cleaner means thereby permitting undesirable materials and fibers which are to be removed to initially move between said predetermined inclined downstream side blade surface and its associated roller means, past said blade edge for substantial removal thereof adjacent the other converging blade surface of said blade portion disposed on the upstream side of said line of contact and with respect to said predetermined direction of web travel, whereby said undesirable materials and fibers are removed substantially at only said upstream side of said blade portion.

3,101,505
SURFACE TREATING MACHINE

Michael E. Belicka, Greenwich, Robert J. Kenny, Trumbull, and Longin Rodney, Stamford, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware

Filed July 18, 1961, Ser. No. 124,993
16 Claims. (Cl. 15—320)

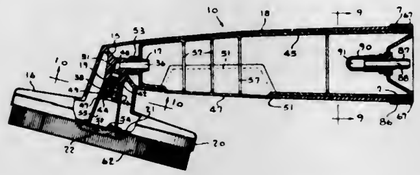


1. In a floor care machine, a frame, an electric motor supported on said frame, rotary surface treating means below said frame and driven by said motor, a manipulating handle pivotally connected to said frame, a cleaning liquid tank removably mounted on said handle, means for conveying liquid from said tank to the floor adjacent to said rotary means, a liquid pick-up suction nozzle depending from said frame, a fan driven by said motor, conduit means for connecting the inlet of said fan to said nozzle, a waste liquid tank interposed in said conduit means and removably mounted on said handle, and means in the last-mentioned tank for separating liquid from the air passing therethrough.

3,101,506
SQUEEZABLE-HANDLE CLEANING DEVICE HAVING BRUSH-SPONGE HEAD

John M. Himes, Hartford, and Ralph F. Garms, Brookfield, Wis., assignors to E. R. Wagner Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 2, 1960, Ser. No. 33,457
3 Claims. (Cl. 15—532)



1. A scrubbing unit comprising, a circular head having a bottom provided with an annular peripheral recess, a circular brush having a bristle retainer seated in said recess, said bottom inwardly of said recess having radially extending downwardly opening passageways, a disc-like sponge cemented to said bottom within the confines of said brush and overlying said passageways, a handle attached to said head, and depressible bladder means within said handle to eject a cleaning fluid into said passageways and onto said sponge, said bottom having at least one straight recess disposed within the confines of said annular peripheral recess, and a straight brush having a bristle retainer seated within said straight recess, there being an opening in said sponge accommodating said straight brush.

3,101,507
DOOR OPERATING ARM AND RAIL

Michael L. Cecala, Franklin Park, Ill., assignor to The Oscar C. Rixson Co., Franklin Park, Ill., a corporation of Illinois

Filed Dec. 21, 1961, Ser. No. 161,212
7 Claims. (Cl. 16—129)

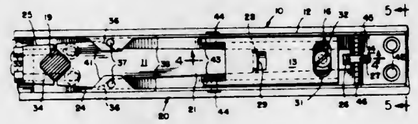
1. A door-operating device for center-hung doors, comprising

a pair of telescopically positionable parts, having contacting pivotal shoulders permitting relative angular adjustment of the parts in their telescopically assembled relationship,

one means for attaching one part to a door,

another means for attaching the other part to a pivot spindle,

the pair of parts being shiftable into operative telescopic



relationship after attachment to the door and spindle, respectively, by the setting of the door on an opposed pivotal mounting,

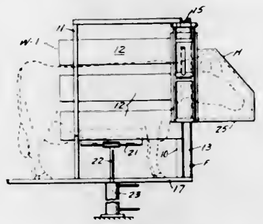
latch means on one of the parts shiftable into and out of position to engage the other part for locking the parts in operative telescopic relationship, and

screw means interposed between the parts in their telescopically assembled relationship for effecting the angular adjustment of the parts relative to each other.

3,101,508
METHOD OF FACILITATING IMMOBILIZATION AND/OR SLAUGHTER OF CATTLE AND OTHER LARGE DOMESTIC ANIMALS

Laurence W. Murphy and Christian D. Macy, Austin, Minn., assignors to Geo. A. Hormel & Company, Austin, Minn., a corporation of Delaware

Filed July 24, 1961, Ser. No. 126,275
8 Claims. (Cl. 17—45)



1. The method of positioning, restraining and supporting large large quadruped animals for slaughter as by kosher slaughter requirements, which consists in positioning the slaughter animal within a stall in predetermined standing position, lifting the body of the animal by application of upward pressure against the belly to an extent to support the torso substantially horizontally and independently of support from the animal's legs surrounding the neck of the animal with an anchored encircling medium, engaging the lower jaw of the animal and forcibly tilting the head of the animal upwardly to expose the throat portion, retaining the head in such tilted position and slaughtering the animal by transversely slashing the carotid artery and jugular vein.

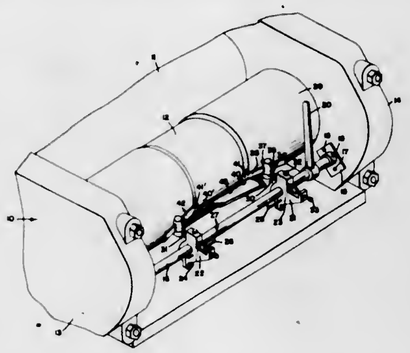
3,101,509
PRODUCTION OF CAMELBACK RIBBON

Theodore C. Melim, Jr., Honolulu, Hawaii, assignor to Melim, Ltd., Honolulu, Hawaii

Filed Oct. 23, 1961, Ser. No. 146,811
5 Claims. (Cl. 18—2)

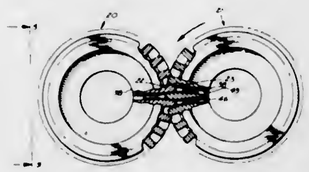
5. An adjustable attachment for a rubber mixing mill for cutting wing die shaped camelback ribbon therefrom comprising, in combination, a rubber mixing mill having

a plurality of rolls, an arbor mounted on said mill parallel to and relatively closely spaced from the terminal roll thereto, a pair of cutting fixtures mounted on said arbor for positioning along said arbor at preselected points, means for holding said fixtures at preselected points, a knife associated with each of said fixtures, each



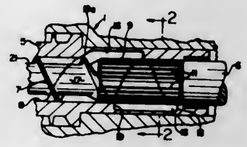
of said fixtures including a knife holder supporting the knives on their associated fixtures oriented toward the surface of said terminal roll, each of said knife holders being operable to position its supported knife toward and away from said terminal roll and at a preselected inclination to the longitudinal axis thereof.

3,101,510
MACHINE FOR FORMING PELLETS AND THE LIKE
Lester M. Packham, Sherman Oaks, Calif., assignor to National Frost Protection Co., Inc., a corporation of California
Filed June 17, 1960, Ser. No. 36,795
2 Claims. (Cl. 18—12)



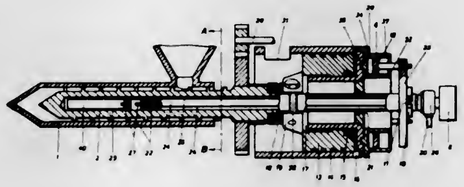
1. In a device of the character described, a pair of cooperating hollow die cylinders mounted for rotation to compress a moldable material between them into pellets, each die cylinder having a series of teeth arranged in herringbone configuration and having a plurality of laterally spaced passageways leading from the valleys between successive teeth to the interior of the hollow die cylinder to effect a plunger action by the teeth of the opposite meshing cylinder, said herringbone configuration of the teeth and of the passageways forcing the material from both sides of a tooth toward the center of the die cylinder as the outer portions of a tooth engage the opposite die cylinder before the mid-portion of that tooth engages and each tooth exerts maximum compression as the next successive tooth is exerting partial compression whereby to seal the moldable material within the compression area, thus providing full load on successive teeth at all times, neutralizing end thrust, eliminating extrusion out of the sides of the teeth, and reducing die cylinder vibration.

3,101,511
EXTRUDER
Eugene E. Heston, Akron, Ohio, assignor to National Rubber Machinery Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 10, 1961, Ser. No. 130,518
6 Claims. (Cl. 18—12)



1. An extruder comprising a cylinder having a feed passage for introduction of plastic and like material; and a feed screw rotatable in said cylinder having a single flight propelling section and a double flight turning section respectively effective, upon rotation of said feed screw, to axially advance material through said cylinder and to turn material in contact therewith; said cylinder having an internal helical channel around said turning section for conducting material turned by said turning section from said feed passage to said propelling section.

3,101,512
SCREW INJECTION MOLDING MACHINE
Herbert Goller, Nurnberg, Germany, assignor to Ankerwerk Gebruder Goller, Nurnberg, Germany
Filed Dec. 2, 1960, Ser. No. 73,364
Claims priority, application Germany Dec. 12, 1959
10 Claims. (Cl. 18—30)

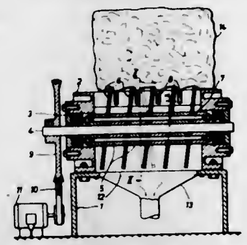


3. A screw injection molding machine comprising a barrel adapted to receive casting material, a hollow screw within said barrel for performing operations on said material comprising plasticizing said material and extruding it from said barrel, means for rotating said screw, means for moving said screw longitudinally, means within said hollow screw for influencing said operations, said screw comprising a hollow shaft having a rear end portion thereof projecting rearwardly beyond said means for moving said screw longitudinally, said end portion being freely accessible in the axial direction thereof, and control means at said accessible rear end portion operatively connected to said means within said hollow screw for controlling said latter means.

3,101,513
BALE RASP
Rudolf Wildbolz, Winterthur, Switzerland, assignor to Rieter Machine Works Ltd., Winterthur, Switzerland, a corporation of Switzerland
Filed Apr. 21, 1961, Ser. No. 104,724
Claims priority, application Switzerland Apr. 29, 1960
3 Claims. (Cl. 19—80)

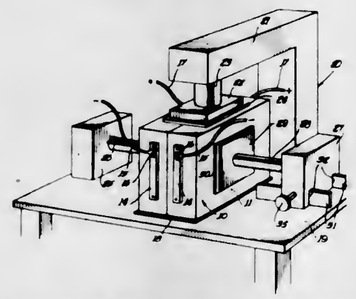
1. A bale rasp for mechanically opening compressed fibre bales, comprising a grate having parallel spaced bars, a rotatable shaft disposed below said grate bars, and a

plurality of saw-tooth discs mounted in slanted position on said shaft for rotation therewith, the peripheral por-



tion of said discs extending between and beyond said bars during an entire revolution of said shaft.

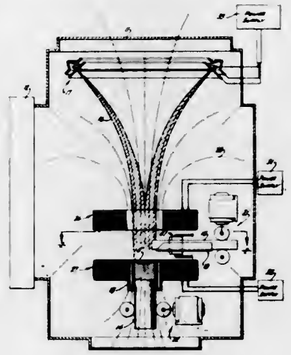
3,101,514
SINTERED POWDER METAL MOLD
Ralph W. Callender, Hinsdale, and Harold R. Biehl, Lake Villa, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 4, 1961, Ser. No. 157,871
3 Claims. (Cl. 22—10)



1. A pressure molding assembly comprising a pair of separable mold members having opposed parting faces, at least one of said mold members including a cavity in its parting face and defining in an assembled position with the faces in adjacent relation a molding chamber, a source of mold material under pressure, said chamber being adapted to be placed into communication with said source of mold material under pressure, each of said mold members being constructed of a sintered powdered metal having a generally porous structure to provide permeability, said powdered metal mold members also having copper metal dispersed throughout said porous structure, said mold members having a high electrical resistivity, and an electrical connector connected to each mold member and being adapted during connection with an electrical source to direct current through said mold members thereby heating the same whereby mold material within said cavity is heated and cured, and gases incident to said curing are released through said porous mold members.

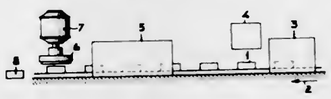
3,101,515
ELECTRON BEAM FURNACE WITH MAGNETICALLY GUIDED AXIAL AND TRANSVERSE BEAMS
Charles W. Hanks, Orinda, Calif., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
Filed June 3, 1960, Ser. No. 33,678
9 Claims. (Cl. 22—57.2)

1. An electron beam furnace comprising a container for molten metal and having an open top with a vertical axis, means establishing a magnetic field symmetrically about said axis with lines of force converging into the open top of said container, a source of electrons disposed above said container, means for accelerating electrons independently of the container and toward same whereby the accelerated electrons are guided into the container by the converging magnetic field, means feeding a metal melt stock laterally toward said container immediately above same and below the source of electrons, an electron gun disposed laterally of the container, means for accelerating



an electron beam from the gun independently of the melt stock transversely into said magnetic field whereby the beam from the gun is magnetically deflected to traverse a curved path in a substantially horizontal plane into impingement with said melt stock above the container and to melt same, means defining a single chamber encompassing at least the top of said container and said electron source and electron gun, and means continuously evacuating said chamber.

3,101,516
CASTING MOLD AND METHOD OF MAKING THE SAME
Pieter Hokkeling, Eindhoven, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed June 9, 1959, Ser. No. 819,172
Claims priority, application Netherlands July 25, 1958
2 Claims. (Cl. 22—193)

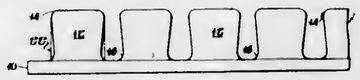


1. A method of manufacturing casting molds having parallel planar surfaces adapted for stacking from sand and synthetic material which comprises filling a model plate with the sand and a heat hardenable synthetic material, heating the model plate containing said material to form the casting mold, and flattening the casting mold after heating and while still in the model plate by scouring.

3,101,517
FASTENER
Marvin Fox, 78 Patton Drive, Yonkers, N.Y., and Neil Fox, 90 Park Terrace E., New York, N.Y.
Filed Nov. 28, 1960, Ser. No. 72,040
8 Claims. (Cl. 24—204)

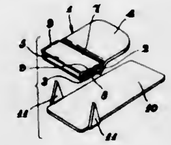
1. A fastener comprising a pair of interlocking surface segments each having a multiplicity of yieldable upstanding bosses at least about 1/16 of an inch in width uniformly spaced from each other along the length and width of the surface to be equidistant from each other, all of said bosses

being of substantially the same height, each said boss being essentially symmetrical with respect to a center axis extending essentially perpendicular to said surface segments, the distance between the center axes of the bosses on one of said segments being substantially equal to the distance between the center axes of the bosses on the other of said segments, the spacing between the heads of the individual bosses on each one of said segments being slightly less than the space occupied by the head of each boss on the other one of said segments, the individual



bosses of each segment having substantially rectilinearly tapered lateral engaging portions with the taper thereof extending substantially uniformly and continuously from the head to the segment thereof with the heads of the individual bosses being enlarged slightly with respect to the shanks of the bosses whereby the boss heads of one segment squeeze past the boss heads of the other segment when the two segments are pressed toward each other to thereby tightly interlock the segments, and the taper of the individual bosses for said segments being substantially identical.

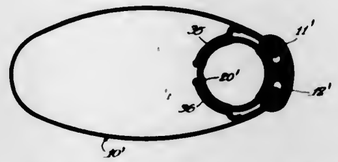
3,101,518
FASTENING DEVICES FOR WEARING APPAREL
Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a British company
Filed Nov. 15, 1960, Ser. No. 69,468
5 Claims. (Cl. 24—227)



1. A fastening device for a garment, comprising a backing plate disposed on one side of the material of said garment and having integral attachment prongs extending through to the other side thereof; and a longitudinal plate member disposed on said garment over the underlying backing plate, said plate member having a tongue-shaped hook portion at one end and an integral hollow, transversely directed, prong enclosing portion at the other end, the attachment prongs of said backing plate extending into said hollow portion through longitudinally directed side openings therein, the tongue-shaped hook portion of said plate member being spaced a distance away from the garment.

3,101,519
DUCT FORMING CORE
Robert E. Smith, Dayton, Ohio, assignor to The Flexicore Co., Inc., Dayton, Ohio, a corporation of New York
Filed Nov. 29, 1961, Ser. No. 155,644
5 Claims. (Cl. 25—128)

1. A core assembly for defining a duct throughout the length of a concrete slab during casting, said core assembly having a length great in comparison to any transverse dimensions thereof, said core assembly including an elongated slotted tubular metal member, said member being straight and long and having a transverse shape which remains uniform throughout the active length thereof and in transverse section defines an area which is almost but not completely surrounded by a section of said member so that said member has a generally tubular shape with a slot extending the full length thereof, a moulding covering said slot and tending to keep said slot closed even though the slot width is increased by deforming said member, an airtight, flexible tube within said member and having the property of lateral expansion in response to fluid pressure, and laterally expandable means disposed over said flexible tube and coupled to said slotted tubular member only at regions adjacent the slot, said air-tight



tube exerting its expansive force directly against the laterally expandable means which in turn exerts force upon slot bordering regions of said tubular slotted member to widen the slot and spread the slotted member, said tubular member having sufficient elasticity to contract and restore the slot to normal width in the absence of any expansive force in said air-tight tube whereby said air-tight tube can have substantially smaller lateral dimensions than said slotted tubular member.

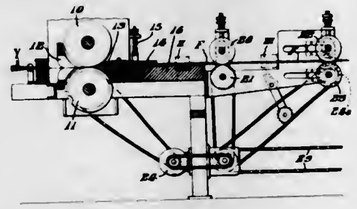
3,101,520
METHOD AND APPARATUS FOR MAKING BRUSHED NONWOVEN FABRIC
William L. George, New Brunswick, and Gerald A. Romanek, East Brunswick, N.J., assignors, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Apr. 6, 1960, Ser. No. 20,369
4 Claims. (Cl. 28—1)

1. A method of continuously making a bonded, brushed nonwoven fabric wherein the surface fibers have been brushed and extend outwardly from the main body of the nonwoven fabric to provide a high degree of softness thereto, which comprises: bonding a layer of overlapping intersecting fibers with a non-migratory binder in a predetermined pattern of from about 120 to about 1100 binder areas per square inch, the average size of said binder areas being at least about 0.00012 square inch and not more than about 0.0028 square inch; continuously passing the bonded nonwoven fabric through a brushing zone; and during said passage continuously brushing said bonded nonwoven fabric across the entire width thereof substantially uniformly in selected predetermined areas to cause the fibers to extend outwardly from the main body of the nonwoven fabric a relatively short distance due to the large number and small size of said binder areas, whereby fabric softness is increased, fiber rupture is minimized, and the strength of the nonwoven fabric is not materially reduced.

4. Apparatus for making a bonded, brushed nonwoven fabric wherein the surface fibers have been brushed and extend outwardly from the main body of the nonwoven

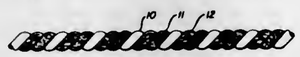
fabric to provide a high degree of softness thereto, which comprises: means for bonding a layer of overlapping intersecting fibers with a non-migratory binder in a predetermined pattern of from about 120 to about 1100 binder areas per square inch, the average size of said binder areas being at least about 0.00012 square inch and not more than about 0.0028 square inch; means for continuously passing the bonded nonwoven fabric through a brushing zone; and means for brushing said bonded nonwoven fabric across the entire width thereof substantially uniformly in selected predetermined areas to cause the fibers to extend outwardly from the main body of the nonwoven fabric a relatively short distance due to the large number and small size of said binder areas, whereby fabric softness is increased, fiber rupture is minimized, and the strength of the nonwoven fabric is not materially reduced.

3,101,521
METHOD OF PRODUCING CRIMPED CONTINUOUS FILAMENT YARN
Abraham J. Rosenstein, New Marlboro, Mass., Nathan Rosenstein, West Hartford, Conn., and Thomas F. Suggs, Gastonia, N.C., assignors to Spunize Co. of America, Inc., Unionville, Conn., a corporation of Connecticut
Filed June 25, 1959, Ser. No. 822,837
10 Claims. (Cl. 28—72)



1. In a method of forming crimped continuous filament yarn, the steps which comprise crimping at least one filament of said yarn without heat-setting at an angle of approximately 180° to the longitudinal axis of said filament, and thereafter subjecting the crimped yarn to a controlled degree of tension, thereby partially drawing out the crimp initially produced while retaining a predetermined crimp in the yarn of substantially uniform value.

3,101,522
THREE-PLY TWEED YARN
Gilman S. Hooper, Bay Village, and Theron G. Finzel, Westlake, Ohio, and Gerald A. McFarren, Wilmington, Del., assignors, by mesne assignments, to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 1, 1960, Ser. No. 72,997
12 Claims. (Cl. 28—74)



1. A three-ply strand of yarns consisting essentially of a color-pigmented artificial yarn, a naturally colored yarn of a fiber-forming poly-α-olefin and a dyeable artificial yarn; said yarns twisted together thereby forming a three-ply strand capable of subsequent dyeing in the piece to a variegated colored textile article.

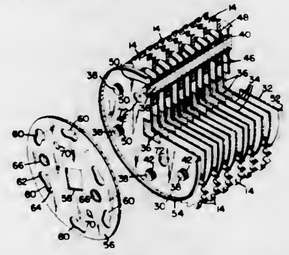
7. A method of making a variegated colored pile fabric comprising twisting three yarns into a three-ply strand consisting essentially of a color-pigmented artificial yarn, a naturally colored yarn of a fiber-forming poly-α-olefin and a dyeable artificial yarn; forming said strand into a pile fabric; and dyeing said fabric in the piece thereby producing a variegated colored pile fabric.

3,101,523
METHOD FOR ATTACHING LEADS TO SMALL SEMICONDUCTOR SURFACES
Harry L. Henneke, Garland, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Mar. 8, 1960, Ser. No. 13,501
10 Claims. (Cl. 29—25.3)



1. A method for producing a mesa semiconductor comprising coating an end of a wire with a composition which protects semiconductor material from being etched, placing the coated end of said wire on a semiconductor element, allowing some of said composition to adhere to a portion of said semiconductor element, and etching said semiconductor element around the area where said wire resides on said semiconductor element, the said area covered by said composition being protected against etching.

3,101,524
CUTTER BUNDLE
John J. Falls, Mack, Ohio, assignor to Aurand Mfg. & Equip. Co., Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 15, 1961, Ser. No. 159,554
4 Claims. (Cl. 29—81)



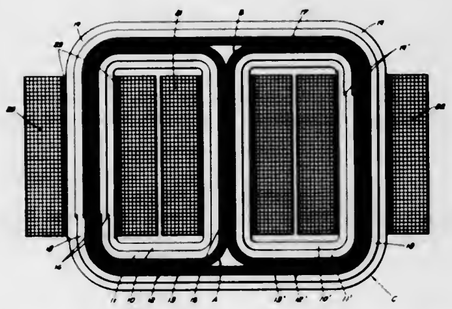
1. A cutter bundle for surface cleaning tools, comprising in combination, a first and a second end plate and a series of intermediate discs, said end plates and discs each having a circular row of transverse apertures substantially equally spaced from the centers of said plates and discs, said end plates each having an outer face, a series of elongate pins each having a head on one end and a locking recess in and across the opposite end thereof, the pins passing through corresponding apertures of the plates and discs, with the heads of the pins abutting the outer face of the first end plate, and the opposite ends of the pins projecting through the second end plate apertures to dispose the locking recesses thereof adjacent to the outer face of said second end plate, cutter elements mounted upon the pins between successive discs and plates, with portions of the cutter elements projecting beyond the discs, a disc-like lock plate adapted to be disposed substantially flatwise upon the outer face of the second end plate, said lock plate being provided with key-hole apertures in number corresponding to the number of pins aforesaid, each key-hole aperture having an enlarged end receptive of the pin diameter when the

lock plate is placed against said face of the second end plate and a reduced end receptive of the locking recess of a pin when the lock plate is rotated relative to the second end plate to bundle lock-up position wherein the pins have locking engagement in the reduced end portions of the key-hole apertures, said end plates and discs having central aligned shaft receiving openings of polygonal contour and said lock plate having a correspondingly contoured central shaft receiving opening so oriented with respect to said key-hole apertures as to assume operative relationship to the plate and disc openings only upon rotation to said lock-up position.

3,101,525
METHOD OF MAKING POLYPHASE TRANSFORMERS

John L. Anderson and James G. Everhart, Zanesville, Ohio, assignors to McGraw-Edison Company, a corporation of Delaware

Original application Apr. 12, 1954, Ser. No. 422,374, now Patent No. 2,946,028, dated July 19, 1960. Divided and this application Mar. 28, 1960, Ser. No. 21,848
5 Claims. (Cl. 29—155.57)



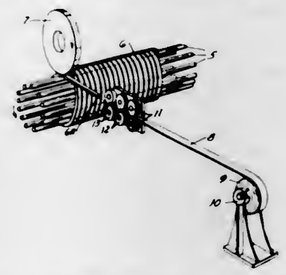
1. The method of constructing a wound strip, three legged, magnetic core comprising the steps of spirally winding magnetic ribbon flatwise to form a first convoluted loop and spirally winding magnetic ribbon flatwise to form a second convoluted loop and retaining a free length of magnetic ribbon extending from at least one of said loops and continuous with the outer convolution of magnetic ribbon of said one of said loops, mounting said loops on a common rotatable member with adjacent sides abutting, and rotating said member to spirally wind said free length of magnetic ribbon into a convoluted loop surrounding said abutting loops in embracing relation thereto.

3,101,526
PROCESS FOR FABRICATING SCREENS

Clarence L. Paullus, Columbus, Ohio, and Willard M. Bollenbach, St. Paul, Minn., assignors, by direct and mesne assignments, to Edward E. Johnson, Incorporated, St. Paul, Minn., a corporation of Minnesota

Filed Feb. 12, 1960, Ser. No. 8,431
3 Claims. (Cl. 29—163.5)

1. A continuous process for making a tubular unit of the class described which comprises, rotating a substantially cylindrical group of longitudinally extending rods about its axis; simultaneously feeding a thin continuous strip of material adapted to be joined by heat fusion to said rods; simultaneously bending longitudinally extending side portions of said strip by a continuous operation to form an open-sided channel having continuous, spaced longitudinally extending side portions; continuously feeding said channel substantially tangentially to said group of rods with both of the open side edges of said side portions in contact with the rods; and continuously, without interrupting the feeding and bending of said strip, securing said side portions of said channel shaped strip at the open side thereof to the exterior surface of said



group of rods by electric welding, while rotating said group of rods as a unit about its axis and advancing it longitudinally to space the convolutions of said channel shaped member along said unit.

3,101,527
FRICTION MATERIAL

Eric W. Weinman, Birmingham, and Adolph M. Ryniak, Hazel Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

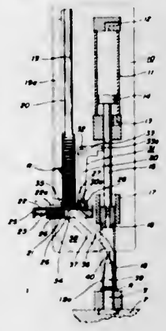
No Drawing. Filed Sept. 2, 1960, Ser. No. 53,605
7 Claims. (Cl. 29—182.5)

1. A lining comprising a compacted and sintered friction material wherein the basic ingredients consist essentially of iron in quantities of at least 50% by weight and graphite in quantities of 10% and above by weight of the friction material, together with an addition agent in quantities sufficient to supply from 2.2% to 22.5% of aluminum by weight of the friction material and consisting of an iron-aluminum alloy wherein aluminum varies from 30% to 70% by weight of the alloy with iron making up the remainder.

3,101,528
DISPENSER FOR RETAINING RINGS

Haus Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York

Filed Nov. 15, 1960, Ser. No. 69,475
5 Claims. (Cl. 29—211)

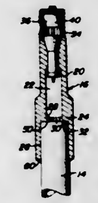


1. A power-operated combination dispenser and applicator for split external spring retaining rings comprising, in combination, an upright frame member, a table member mounted thereon, an generally upright stack rod affixed to the frame member above the table member, a ring-slideway provided on and extending acro s the top surface of the table member beneath the stack rod, the lower end of the stack rod being spaced above the bottom of said slideway a distance approximating the axial thickness of one ring of a column of such rings mounted on the stack rod, a slide mounted for reciprocatory movement in said slideway and operative on its working stroke to push the lowermost ring of the column thereof disposed on the stack rod in sideward direction along the slideway, power means operatively mounted on the frame member above the table member and in generally parallel relation to the stack rod, a tubular plunger coaxial with and reciprocable by said power means in a path traversing that of ring movement, a ring-spreading mandrel disposed below and in coaxial alignment with said plunger and thereby in position to receive the ring moved sidewardly as aforesaid and to be telescoped by said plunger when the latter moves on its downward stroke, and means responsive to plunger travel in upward direction for actuating the slide throughout its working stroke thereby to effect transfer of said lowermost ring to and its positioning on the upper end of the spreading mandrel, whereby said plunger on its return stroke will actuate said ring axially downwardly along said spreading mandrel to effect spreading thereof, said spreading mandrel being positioned with its upper end in line with said slideway whereby the slide is adapted to push said lowermost ring directly onto the mandrel.

3,101,529
METHOD OF REPAIRING A VALVE STEM OR TUBE WITH AN ADAPTER COUPLING

Herbert R. Burrough, 601 W. Main, Antlers, Okla.

Filed Apr. 21, 1961, Ser. No. 104,686
2 Claims. (Cl. 29—401)



1. A method of repairing a tire valve including a tubular stem having a damaged threaded free end portion, a core mounted therein and a cap mounted thereon, said method comprising removing the core and the cap from the stem, then severing the damaged threaded end portion of the stem at a location spaced from said damaged threaded end portion, then mounting an adapter tube having an internal annular rib in its lower end portion, on the stem by telescoping said lower end portion of said adapter tube over the severed end of the stem until said annular rib is in abutment with said severed end, thereby stopping the telescoping operation, then inserting the core in the adapter tube, and then mounting the cap on said adapter tube.

3,101,530
METHOD OF FABRICATING ELONGATED UNDERGROUND CONDUITS

George A. Coscia, Eggertsville, N.Y.

Filed Aug. 29, 1960, Ser. No. 52,540
4 Claims. (Cl. 29—469)

1. A method of economically fabricating an elongated steel conduit of a size in the range of at least 36 inches in diameter comprising, in combination, the step of: providing a plurality of relatively short conduit segments of a length adapted to be transported by rail; delivering the short conduit segments by rail to an off-site location; automatically welding together a plurality of said conduit segments, while maintaining said segments substantially horizontally, at an off-site location into unitary, nonseparable, intermediate conduit segments whose lengths are integer multiples of the length of said short conduit segments, and which intermediate conduit segments are adapted to be transported by motor vehicle; delivering

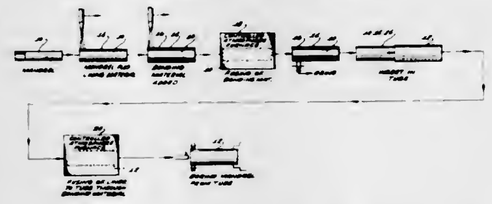


the intermediate conduit segments by motor vehicle to the site where the conduit is to be assembled; placing said intermediate conduit segments in end-to-end axially aligned relationship at their position of use; and then manually welding together the intermediate conduit segments, at the site, to define the elongated conduit.

3,101,531
METHOD OF APPLYING INTERNAL METALLIC LININGS TO TUBES AND THE LIKE

Thomas J. Roseberry, Anaheim, Calif., assignor to Western Gear Corporation, Lynwood, Calif., a corporation of California

Filed Jan. 9, 1961, Ser. No. 81,485
3 Claims. (Cl. 29—474.4)



1. The method of lining a tube, which comprises the steps of:
preparing a cylindrical mandrel having an external diameter less than the internal diameter of the tube,
coating said mandrel with a layer of a metallic lining material having an external diameter slightly less than the internal diameter of the tube,
coating said layer of lining material with a layer of fusion bonding material having an external diameter slightly greater than the internal diameter of the tube,
heating the coated mandrel to a temperature sufficient to fuse said layer of fusion bonding material to said layer of metallic lining material,
machining the coated mandrel to afford the latter with a friction fit in said tube,
press fitting the machined, coated mandrel into the tube,
heating the tube and coated mandrel therein to fuse said layer of fusion bonding material to the inner wall of the tube, and
removing said mandrel from the tube by passing a rotary, metal cutting tool having a diameter less than the external diameter of said layer of lining material axially through the tube.

3,101,532
SELF-LEVELING WELDING RING OF TRIANGULAR CROSS-SECTION

Magnus Christensen, Alliance, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 1, 1957, Ser. No. 675,597
7 Claims. (Cl. 29—483)

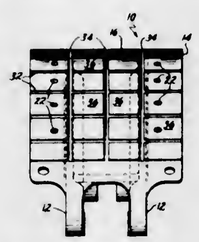
2. A method of butt welding a pair of tubular members in end-to-end relationship comprising the steps of form-

ing a bevel on the ends of the respective tubular members so that when said beveled ends of said tubular members are arranged in substantially end-to-end relationship an outwardly opening V-shaped welding groove is formed therebetween, centering a backing and filler ring of triangular cross section and having an inner diameter substantially equal to the inner diameter of said tubular members and an outer diameter less than the outer diameter of said tubular members to the beveled end of one tube so that the apex of the triangular ring substantially coincides with the inner diameter of the tube with the side of said ring being disposed in abutting relationship to the beveled end of said one tube, centering the beveled end of the other tube onto the other side of said ring, and depositing a molten weld material into said welding groove so as to fuse together the tubular members and said ring positioned therebetween.



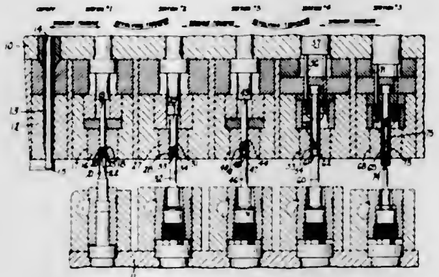
3. In combination, a pair of tubular elements and a preformed weld backing and filler ring providing a solid backing for and inclusion in the root pass in fusion butt welding in end-to-end relation said tubular elements, said tubular elements having beveled ends forming, when arranged in substantially abutting relation, a welding groove having an outwardly opening V-shaped cross section, said ring comprising a bare metal of substantially the same character of the metal of said tubular elements and adapted to fuse with the metal of said tubular elements upon the application of welding heat, said ring comprising an annulus having connecting sides defining a triangle in cross section with the apex of the triangle at the inner periphery of said annulus, the inner diameter of said annulus being substantially equal to the inner diameter of said tubular elements and its outer diameter substantially less than the outer diameter of said tubular elements, said ring engaging said tubular elements with its sides adjacent said apex in substantially abutting relationship with said beveled ends, and means for maintaining said ring in engagement with said tubular elements.

3,101,533
METHOD OF MANUFACTURING BRAKE SHOES
Paul F. Rossbach, Cleveland, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 19, 1958, Ser. No. 762,002
4 Claims. (Cl. 29—552)



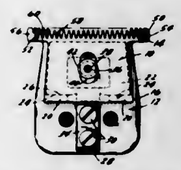
1. The method of manufacturing a metallic brake shoe comprising, first forming a brake shoe blank with an arcuate surface having a plurality of intersecting grooves some of which extend in substantially a first direction and others of which extend in substantially a second direction, thus defining a plurality of areas separated by said grooves throughout substantially the full extent of the arcuate surface and thereafter permanently deforming the areas by displacing a portion of the metal thereof into the grooves adjacent thereto to provide an arcuate bearing surface for the brake shoe.

3,101,534
METHOD OF PRODUCING WRIST PINS OR SIMILAR ARTICLES
Harry R. Lange, Waterbury, Conn., assignor, by mesne assignments, to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed June 30, 1958, Ser. No. 745,549
6 Claims. (Cl. 29—553)



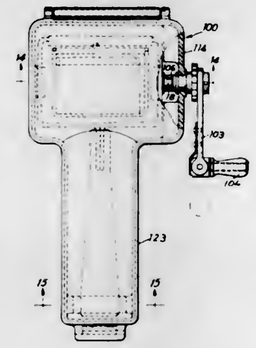
1. The method of making a hollow cylindrical metal article which comprises cutting a workpiece from a length of metal stock, forming a peripheral chamfer at one end of the workpiece and an indentation in said end within the chamfer, then, by the action of a cooperating fixed die and movable punch, applying pressure to both ends of the workpiece while the latter is wholly confined within a die to form a relatively deep cylindrical opening in said indented face by extruding the metal of the workpiece around the punch in a direction toward the open end of the die and opposite that of the movement of the punch, and then turning the workpiece end for end and, by the action of a second die and movable punch, again extruding the metal of the workpiece around a moving punch in a direction toward the die opening and opposite that of the movement of the punch to form a deep opening in the other face of the workpiece, leaving a relatively thin web of material between the bottoms of said openings, and simultaneously indenting the central portion of the face of the web at the bottom of the first formed opening.

3,101,535
BLADE ASSEMBLY WITH LATERAL EXTENSIONS
Matthew G. Andis, Racine, Wis., assignor to Andis Clipper Co., Racine, Wis., a corporation of Wisconsin
Filed Mar. 14, 1962, Ser. No. 179,627
3 Claims. (Cl. 30—29.5)



1. A hair clipper blade set comprising a shear plate, a movable blade, means guiding the movable blade for reciprocation transversely of the shear plate, mutually aligned bars projecting laterally from opposite sides of the shear plate immediately adjacent its forward end, said bars being of limited narrow extent in a direction forwardly and rearwardly of the shear plate, bars projecting oppositely from the forward end of the movable blade and overlying the bars of the shear plate and of correspondingly limited extent in a direction forwardly and rearwardly of the movable blade, said shear plate and movable blade having at their respective forward edges complementary teeth substantially uniformly spaced across the respective forward margins of the shear plate and movable blade and the respective bar extensions thereof, the shear plate and movable blade having complementary bearing surfaces along the bases of said teeth extending rectilinearly from the end of one bar to the end of the other bar, said plate and blade also having complementary bearing surfaces spaced rearwardly from the surfaces first mentioned.

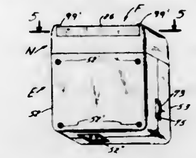
3,101,536
COMBINATION SAFETY RAZOR AND HONING DEVICE
August R. Bringewald, 7 Ingold Drive, Huntington, N.Y.
Filed Dec. 5, 1961, Ser. No. 157,186
9 Claims. (Cl. 30—36)



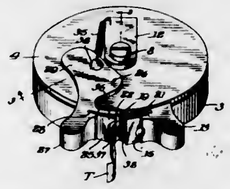
1. In a safety razor the combination of: a head; a blade carrier supported for rotation on a shaft positioned and secured in fixed position within said head; a blade, concavely shaped in its transverse view, mounted and secured on said blade carrier and adapted to be honed in the razor; a stationary honing device, consisting of a lower honing pad and an upper honing pad, both pads pads arranged within said head circular about the axis of rotation of said blade carrier, the lower said honing pad encircled by the upper said honing pad, said honing pads touching each other at their common parting-line, the radius of said parting-line coinciding with the mean radius on which said concave blade is mounted on said blade carrier; and means to rotate said blade, mounted on said blade carrier, between said honing pads.

3,101,537
SHAVER HAVING A REMOVABLE ASSEMBLED SHAVING UNIT
Jacob L. Kleinman, Hotel Kimberly, 74th St. at Broadway, New York, N.Y.
Filed Feb. 27, 1961, Ser. No. 115,275
5 Claims. (Cl. 30—43)

1. A shaver comprising a handle casing having a seat portion, said seat portion carrying thereon a removable base section, said base section carrying a removable spring member and a removable shaving unit, said shaving unit comprising an outer cutter member having a shear face and a bottom portion located opposite said shear face and a movable cooperating cutter member, said spring member having a center portion and a pair of spaced resilient end sections, said shaving unit movable transversely relative to the said base section, holding means on the said spring, said resilient end sections engageable with spaced parts of the said bottom portion of said outer cutter member and the said center portion of said spring member held in position to the said base section by the said holding means for preventing movements of such outer cutter member, longitudinally of such base section, said resilient end sections exerting spring pressure against the said bottom portion for urging said outer cutter member into the said transverse movements during shaving operation, the said base section and said spring member and said shaving unit adapted to be assembled into a unitary structure positionable upon the said seat as such assembled unitary structure and be removed from the said seat as an assembled unitary structure, and means for operating said cutter members for the said shaving purposes.

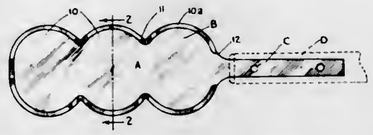


3,101,538
TAPE DISPENSER
Peter J. Dewyer, 315 W. Rockland Road, Libertyville, Ill.
Filed July 20, 1960, Ser. No. 44,051
11 Claims. (Cl. 30—131)



1. In a dispenser structure for pliable tape and the like, the combination of a hollow container for the tape to be dispensed, said container having a discharge opening therein, a relatively stationary cutter carried by said container and arranged to receive tape therefrom, a movable cutter cooperable with said stationary cutter, said movable cutter being movable relative to the stationary cutter about a pair of spaced substantially parallel axes, and an extension on said movable cutter constructed to engage the stationary cutter prior to operative cutting engagement of the movable cutter therewith for guiding the movable cutter into cutting position.

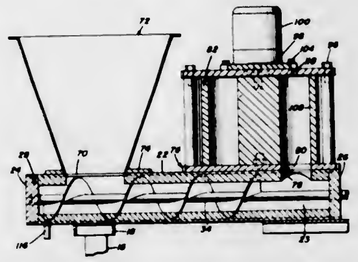
3,101,539
BRANCH TRIMMING TOOL
Morley P. Walters, 85 Front St., Hull, Quebec, Canada
Filed Nov. 29, 1960, Ser. No. 72,505
2 Claims. (Cl. 30—165)



1. A branch trimming tool comprising an elongated rigid flat metal blade of reduced width at one end to

form a tang extending in alinement with the longitudinal axis of the blade, the opposed longitudinal edges of said blade being disposed in parallel relation and formed with a series of relatively long arcuate projections in the same plane as the blade, the adjoining ends of said projections being joined together at an angle of approximately 60° to form a continuous undulating edge which is tapered transversely to form a cutting edge.

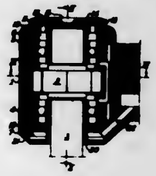
3,101,540
APPARATUS FOR PREPARING CHEESE AND THE LIKE
Visvaldis N. Dzenis, 100 Hawthorne Ave., Bloomfield, N.J.
Filed Nov. 28, 1961, Ser. No. 155,399
5 Claims. (Cl. 31—42)



1. An apparatus for preparing cheese comprising a frame, an auger housing supported on said frame, a pair of opposing turning spiral augers having flights rotatably mounted in said housing, means for driving said augers connected thereto, hopper means mounted on said housing communicating with said housing at one end thereof for feeding mix to said housing, said housing having an outlet at the other end thereof, a compression chamber at said other end of said housing and communicating with said outlet, said spiral augers continuously conveying the mix into the compression chamber for the compression thereof and the subsequent discharge through said outlet, the conveying and compressing action of the augers constituting the sole means for effecting a discharge of the mix through the outlet, a molding die above said housing receiving mix from said outlet, means for moving said molding die, connecting means operatively connecting the last recited means to the molding die, said die comprising a member rotatably mounted on a vertical axis, a plurality of die chambers in said member, said die chambers being successively alignable with the housing outlet for reception of the mix as the die rotates, a base plate mounted on the housing between the compression chamber portion thereof and the die member, said base plate having an aperture therethrough of the same size as and in alignment with said outlet, and an elongated discharge opening spaced from said housing outlet, said die chambers being successively alignable with said discharge opening for the gravitational discharge of the molded cheese therethrough.

3,101,541
HIGH SPEED DENTAL DRILL
Erich Hoffmeister, Biberach (Riss), Germany, assignor to Alois Kaltenbach and Erich Hoffmeister, responsible partners of Kaltenbach and Voight, a kommanditgesellschaft, Biberach (Riss), Germany
Filed Aug. 22, 1960, Ser. No. 51,187
Claims priority, application Germany Sept. 7, 1959
8 Claims. (Cl. 32—27)

1. In high speed contra-angle dental handpieces, the combination including, handle means, cylindrical housing means having front and rear end walls secured to one end of the handle means, gaseous fluid-driven turbine means having hollow shaft means to removably receive a tool therein, gaseous fluid-lubricated anti-friction bearing means to position the turbine means within the housing means, said handle means being provided with means to supply gaseous fluid to the interior of the housing means, said rear wall being provided with annular chamber means, said rear wall being provided with an opening in communication with said annular chamber means and the interior of the housing and also provided with an annular opening in communication with the chamber means and the atmosphere, said front wall being provided with an opening in communication with the interior of the housing means and the atmosphere, and, means to supply coolant fluid to a tool positioned in said shaft means.



3,101,542
NON-VIBRATIONAL DENTAL TOOL
Ferenz H. Fodor, 7463 Melrose Ave., Los Angeles 46, Calif.
Filed Nov. 7, 1960, Ser. No. 67,811
14 Claims. (Cl. 32—27)



11. In a non-vibrational, virtually gearless drilling tool having a body portion provided with a high speed electrical motor drive means contained adjacent one end of said body portion, a drilling tool chuck carried by the other end of said body portion; a shaft journalled in said body portion and extending between said chuck and motor means; and selectively operable clutch means for engaging and disengaging said motor means with said shaft, the provision of: a permanent magnet driving member on a forward end of said shaft and a friction disk axially disaligned with said shaft and associated with said drilling tool chuck to provide common rotation of said disk and chuck, said disk being adapted to be rotatably driven by said permanent magnet driving member.

3,101,543
DENTAL SALIVA EJECTORS
Herbert A. Baughan, 106 E. Main St., Avon Park, Fla.
Filed May 15, 1961, Ser. No. 109,927
4 Claims. (Cl. 32—33)

1. A dental saliva ejector comprising a main suction tube having a hook-like upper portion adapted for engagement over the lower jaw and adapted for extension within the mouth, a suction relief tube paralleling and secured to the main suction tube and substantially coextensive with the hook-like portion thereof and adapted to extend into the mouth and exteriorly of the mouth, a mouth engaging extension on the main suction tube disposed substantially horizontally for location near the floor

of the mouth during use and projecting laterally of the inner side of the hook-like portion and beyond the inner end of the suction relief tube and having a plurality of spaced suction orifices which are circumferentially staggered, a plurality of discs secured to and surrounding



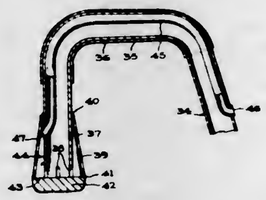
said extension and arranged on opposite sides of said orifices and having notched peripheries spaced radially of said extension and orifices, and a perforated sleeve surrounding and enclosing said extension and discs and communicating with the inner end of the suction relief tube.

3,101,544
DENTAL SALIVA EJECTORS
Herbert A. Baughan, 106 E. Main St., Avon Park, Fla.
Filed June 1, 1961, Ser. No. 114,182
2 Claims. (Cl. 32—33)



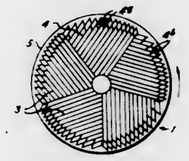
1. A dental saliva ejector comprising a suction tube portion engageable within the mouth and having a lower open end, an enlarged hollow rigid ball element surrounding and enclosing the lower terminal part of the suction tube portion and secured thereto and having its bottom spaced somewhat below said lower open end and having a circumferential row of spaced suction orifices formed through its side wall near the center thereof, a suction relief tube associated with the suction tube portion and having an open end terminating above the top of the ball element and substantially above the lower open end of the suction tube portion, and a perforated upwardly conically tapering rigid sleeve surrounding the suction tube portion and suction relief tube and ball element and having fluid tight engagement therewith and defining a chamber in direct communication with the suction relief tube and said suction orifices of the ball element.

3,101,545
DENTAL SALIVA EJECTORS
Herbert A. Baughan, 106 E. Main St., Avon Park, Fla.
Filed June 1, 1961, Ser. No. 114,183
1 Claim. (Cl. 32—33)



A dental saliva ejector comprising a main suction tube for connection with a suction hose leading to a source of suction pressure and having a hook-like extension engageable over the lower incisor teeth, a depending integral tube extension on the hook-like extension of the main suction tube disposed within the mouth during use inwardly of the lower incisor teeth and terminating near and above the floor of the mouth and having its lower end open, a suction relief tube paralleling the hook-like extension and said depending extension of the main suction tube and fixedly secured to the hook-like extension and having a first open end disposed entirely outside of the mouth during use and a second open end disposed inside of the mouth and directed downwardly and spaced considerably above the lower end of said depending tube extension, a covering of resilient material substantially enclosing said hook-like extension and suction relief tube to prevent direct contact of the hook-like extension with the lower incisor teeth, an upright cylinder of considerably larger diameter than the depending tube extension and surrounding the latter eccentrically and having a closed top wall and an open lower end provided with a plurality of circumferentially spaced transverse slots, the lower end of said cylinder projecting somewhat below the lower end of said depending tube extension, said cylinder top wall having an opening receiving said depending tube extension and fixedly secured thereto in a fluid tight manner, said second open end of the suction relief tube disposed exteriorly of the side wall of said cylinder intermediate the top and bottom thereof, a perforated upstanding sleeve surrounding said cylinder and suction relief tube and having an upper end secured in fluid tight engagement to the cylinder and suction relief tube near and above the second open end of the suction relief tube and below the top wall of the cylinder, the lower end of said sleeve terminating substantially flush with the lower end of said cylinder, said sleeve flaring downwardly to provide a generally annular suction chamber around said cylinder and below said second open end of the suction relief tube, a weighted substantially flat disc element having a top face abutting the lower end of said cylinder and secured near its periphery in a fluid tight manner to the lower end of said sleeve and having a bottom face engageable with the floor of the mouth to depress the mouth tissue underlying the saliva ejector, the top face of said disc element spaced from the lower open end of said depending tube extension.

3,101,546
ROTARY BONE FILE
A G. Thomas, Longview, Tex., assignor of one-half to Tommy Thomas, Longview, Tex.
Filed Sept. 21, 1961, Ser. No. 139,669
7 Claims. (Cl. 32—48)

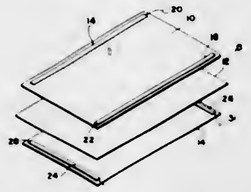


1. A rotary bone file comprising, a mandrel; a disc-like head mounted on one end of the mandrel; a cutting surface on one face of the head comprised of a plurality of sections of blades, the blades in each section being parallel and equally spaced and extending angularly outwardly and terminated at their outer ends with a beveled non-cutting surface; a smooth surface on the other face of the disc, the said beveled surface being spaced from the edge of the head to provide a safety edge whereby the beveled edge and the safety edge are non-cutting so that only the cutting surface of the blades perform the cutting action when the disc is rotated.

3,101,547
APPARATUS FOR DETERMINING THE COORDINATES OF A POINT

James A. Westphal, Owasso, Okla., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

Filed May 31, 1961, Ser. No. 113,919
4 Claims. (Cl. 33—1)

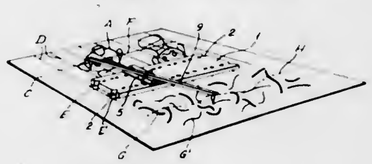


1. An apparatus for determining the coordinates of a point on a two dimensional graph which comprises a first sheet composed of an electrically conductive material, a second sheet composed of an electrically conductive material, and an insulating sheet of greater dimension than said first sheet and said second sheet composed of an electrically non-conductive material, said insulating sheet disposed between said first sheet and said second sheet thereby insulating said first sheet from said second sheet, said first sheet, said second sheet and said insulating sheet disposed parallel to each other, said first sheet having two electrode means positioned in spaced-apart relationship and in contact with said first sheet, said second sheet having two electrode means positioned in spaced-apart relationship and in contact with said second sheet, means for impressing a voltage across the electrode means in contact with said first sheet, means for impressing a voltage across the electrode means in contact with said second sheet, said first sheet and said second sheet having substantially greater electrical resistance than the electrode means in contact therewith, said first sheet and said second sheet positioned in relation to each other such that said electrode means in contact with said first sheet are transverse to said electrode means in contact with said second sheet.

3,101,548
DRAWING INSTRUMENT FOR CODING AND DECODING DRAWINGS

Gilles Morin, 405 Roberge St., Thetford Mines, Quebec, Canada

Filed May 8, 1961, Ser. No. 108,475
7 Claims. (Cl. 33—23)

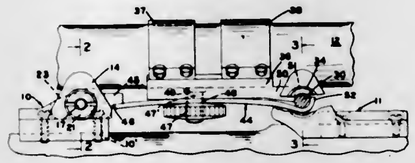


1. A drawing instrument for coding and decoding drawings, comprising a guide plate having a sinous groove made therein, a scriber bar having a downwardly projecting fulcrum pin in engagement with said groove, and movable therein to laterally displace said bar while allowing pivotal movement of said bar with respect to said guide plate, a marking stylus at one end and a tracing stylus at the other end of said scriber bar, and lateral arms secured to said scriber bar in the plane of said fulcrum pin, and downwardly projecting blocks at the outer end of said lateral arms adapted to abut against the side faces of said guide plate to limit the relative pivotal movement of said scriber bar with respect to said guide plate.

3,101,549
GUN TELESCOPE MOUNTING

Leonard N. Plisk, Hilton, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Dec. 22, 1961, Ser. No. 161,583
4 Claims. (Cl. 33—50)

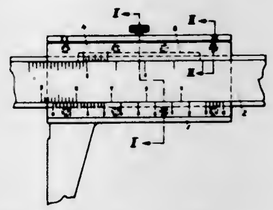


1. A mounting mechanism for a gun sighting telescope, said mechanism including a front and a rear mount fixed to a gun, the front mount comprising a support member which is laterally movably mounted and having a pair of conical surfaces facing each other to form a V shaped seat on which the telescope rests, a cylindrical neck on said member extending between said conical surfaces, means on said rear mount for supporting said telescope, an anchor lug integrally formed on the rear mount so as to extend forwardly thereof along and adjacent to said telescope, a clamp ring base fixedly secured to the telescope between said mounts, a vertical abutment surface formed on the front part of said base in abutting relation to said cylindrical neck, a flat single leaf type of clamping spring seated at the forward end under said cylindrical neck and at the rear end under said lug so as to be initially spaced from said base, and means operatively connected to said base for deflecting the center portion of said spring under spring stress toward said base to clamp the telescope on the mounts.

3,101,550
SLIDE GAUGE

Fritz Helferich, Schaan, Liechtenstein, assignor to Präzisions-Apparatebau Aktiengesellschaft, Vaduz, Liechtenstein, a company organized under the Swiss laws

Filed Dec. 17, 1959, Ser. No. 860,257
Claims priority, application Switzerland Oct. 31, 1959
5 Claims. (Cl. 33—143)



1. A slide gauge comprising; a body having a central planar portion and parallel upstanding edge portions, a guide member extending along the body immediately inside each said edge portion, means extending through the body for adjustably clamping the guide members to the said body, each said guide member having prismatic guide surface means thereon on the side toward the other guide member, a slide member fitting between said guide members and having surfaces along its opposite edges which are complementary to and which engage the said guide surface means, said slide member being slidable in the direction of its length on said guide members, the guide members and slide member being coplanar with respect to the surfaces thereof facing outwardly away from said body, and cooperating scales on said slide member and guide members, the inner surface of said slide member facing the body being spaced from said central portion of the body for at least the larger part of the width of said slide member.

3,101,551
INSTRUMENT FOR MEASURING LINEAR DIMENSIONS

Irvin E. Bryant, Hawthorne, Calif., assignor to The Lufkin Rule Company, Saginaw, Mich., a corporation of Michigan

Filed Apr. 10, 1961, Ser. No. 101,780
8 Claims. (Cl. 33—164)

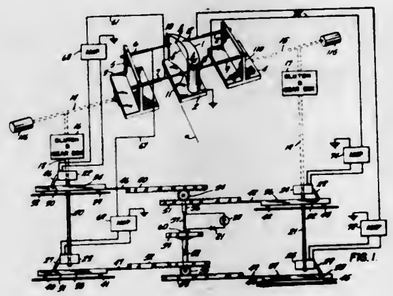


1. A device for measuring linear dimensions comprising a housing, said housing having a bore therethrough and an outwardly projecting feeler element at one end thereof; a spindle extending into said bore, said spindle having an outwardly projecting feeler element at the outer end thereof; and a thimble assembly for axially moving said spindle, said thimble assembly including an axially arranged exteriorly threaded tubular element one end of which is threadably received in said bore in said housing, the inner end portion of said spindle being received in said tubular element, the other end of said tubular element having a frustoconical end surface, and nut means threadably engaging the inner end of said spindle, said nut means having a frustoconical surface complementarily engaging said frustoconical surface of said tubular member for thereby aligning said spindle with respect to said tubular member.

3,101,552
TWIST MEASURING APPARATUS

William S. Tandler, New York, and Morris Grossman, Brooklyn, N.Y., assignors to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 7, 1958, Ser. No. 753,739
4 Claims. (Cl. 33—174)

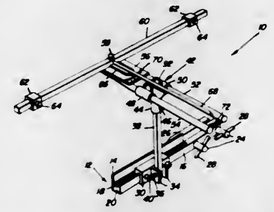


1. Twist measuring apparatus for automatically measuring the twist of a test piece comprising a first pair and a second pair of probes, the probes of each pair being longitudinally aligned with each other and directed in opposite directions, means holding the test piece between the probes of each pair, movable means supporting said pairs of probes laterally of each other, drive means for moving the probe-supporting means to bring the probes into contact with the test piece, four solenoid disconnect mechanisms, each of said solenoid disconnect mechanisms being electrically connected to a different one of said probes, linkages coupling said probe supporting means to said solenoid disconnect mechanisms, said linkages including a clutch and a gear box which magnifies the movement of the probe supporting means, a first and a second pair of movable racks, each rack coupled to a different one of said solenoid disconnect mechanisms, two floating pinion gears, each of said pinion gears enmeshed with one of said pairs of racks, one of said pinion gears supporting a twist tolerance bar and the other one of said pinion gears supporting a twist stylus, electrical indicating means connected between said twist stylus and an electrically conductive portion of said twist tolerance bar to indicate when the twist stylus is resting on said electrically conductive portion of said twist tolerance bar, electrical means connecting each of said probes to a different one of four amplifiers, and each amplifier electrically connected to one of said four solenoid disconnect means, the connections being such that the two solenoid disconnect mechanisms electrically connected to said first pair of probes are mechanically coupled to said first pair of racks, and the two remaining solenoid disconnect mechanisms are electrically coupled to said second pair of probes and are mechanically coupled to said second pair of racks.

3,101,553
PARALLEL GAUGE

Ervin R. Rish, Valdosta, Ga. (1815 8th St., Cayce, S.C.)

Filed May 18, 1961, Ser. No. 111,105
5 Claims. (Cl. 33—203.18)

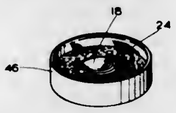


1. A parallel gauge for determining the degree of toe in and toe out of a wheel in relation to the frame upon which it is mounted comprising a support, securing means for attaching the support to the frame, an arm connected to the support, an alignment bar generally normal to said arm, connecting means movably connecting the alignment bar to said arm, indicating means connected to said alignment bar for indicating the degree of toe in and toe out when said bar is aligned with the wheel, said arm being connected to said support by a pivot pin perpendicular to the arm.

3,101,554
ALL-DIRECTION LEVEL

Gerard W. Gottula, Steinauer, Nebr.

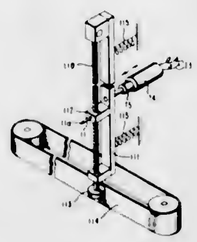
Filed Mar. 9, 1961, Ser. No. 94,519
1 Claim. (Cl. 33—212)



A level comprising: a container the bottom-most parts of which lie in a single plane for holding the container in a level and upright position on a level horizontal surface, said container having an annular sidewall, said container having a bottom, outer edges of which are attached to said sidewall to form a liquid-tight closure, the center portion of said bottom being substantially convex on its

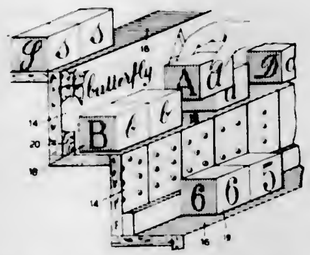
upper side as seen in side elevation, a cover forming a part of said container attached to said sidewall and sealing the upper side of said container, said cover being transparent, marking means on the convex portion of the bottom of said container and in fixed relationship thereto, said marking means marking an annular line visible from the top of said cover, said annular line lying in a plane disposed parallel to and spaced above said first mentioned plane, liquid partially filling said container, the upper surface of said center portion of said bottom in a critical area adjacent said marked line being inclined acutely with respect to the horizontal as seen in side elevation and further being symmetrical about an axis disposed perpendicularly through the center of said center portion of said bottom at times when said level is disposed on an exactly horizontal surface and still further being of a horizontal cross-section substantially of the same shape as said annular marked line, said liquid being disposed at a height normally substantially below the uppermost part of the upper side of said bottom whereby the inner edge of said liquid defines an annular edge visible from the top of said level, said liquid edge being normally sufficiently close to said marked annular line as to facilitate discernment by the operator's eye of the relationship of the marked line and of the liquid edge to determine if the level is on a level surface.

3,101,555
CURVE PLOTTER
Harold A. Armand, 11426 Mullins Drive, William E. Gilchrist, 6927 Carvel Lane, Edwin G. Millis, 5027 Creekbend, and Perry E. Westmoreland, 6231 Grovewood, all of Houston, Tex.
Filed Sept. 27, 1960, Ser. No. 58,755
2 Claims. (Cl. 35—24)



1. Apparatus for forming and displaying a statistical curve from measurement data to show the relative number of readings falling within respective brackets of the measurement range, said apparatus comprising a plurality of threaded lead screws, each being associated with a particular bracket of the measurement range, a threaded nut mounted on each lead screw for movement along said screw when said screw is rotated, the position of each movable nut on its lead screw representing the number of readings in its associated bracket and the positions of the nuts when taken together defining points bearing a coordinate relationship and being representative of the statistical curve, a drive wheel attached to each lead screw, a movable belt for rotating the drive wheels to cause movement of the respective nuts along their respective lead screws, means for normally maintaining said belt out of contact with said drive wheels, and means for causing said belt to contact the appropriate one of said drive wheels for a predetermined time to cause the nut mounted on the lead screw driven by the said one of said drive wheels to move a predetermined unit distance along the said driven lead screw in response to said apparatus receiving an input signal falling within the bracket associated with said driven lead screw.

3,101,556
ALPHABET SET FOR THE PRACTICAL TEACHING OF READING AND WRITING
Sabato Antonio Di Ponte, Via G. Marconi 10, Casalciprano, Italy
Filed Mar. 25, 1960, Ser. No. 17,530
Claims priority, application Italy Mar. 28, 1959
1 Claim. (Cl. 35—35)



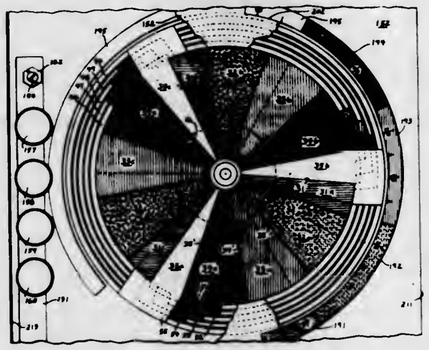
An alphabet set for the practical teaching of reading and writing, comprising a stand having a plurality of steps, each of said steps having vertical and horizontal surfaces, a number of sets of cubes removably supported on the horizontal surfaces of some of said steps, said cubes carrying indicia designating letters, digits, punctuation marks and numerals, said cubes being of lesser height than the vertical surfaces of the steps wherein they are supported, the vertical surfaces of the steps carrying said cubes having strips arranged above the cubes on said steps and which carry indicia corresponding to that on said cubes and other indicia designating preselected words and phrases, whereby said cubes may be arranged on others of said steps in a sequence corresponding to said other indicia, for composing words and phrases, further comprising a spacer strip firmly connected to each of said steps at the intersection of said vertical and said horizontal surfaces for supporting said cubes on said steps in spaced relation with said vertical surfaces, said spacer strips being of lesser heights than said cubes.

3,101,557
MODEL FOR USE IN THE ART OF HAIR STYLING
Lee S. Watlington, 1204 N. Linden, Bloomington, Ill., and Paul S. Campanella, 4925 W. Pinchot, Phoenix 3, Ariz.
Filed Aug. 31, 1962, Ser. No. 220,602
5 Claims. (Cl. 35—59)



1. A model for use in the art of hair styling comprising
(*a*) a simulated head having an area of magnetic attractable material simulating the area of a head covered by hair,
(*b*) a plurality of members each adapted to be placed within said area in various positions with respect to each other to simulate a hair style,
(*c*) and magnetic means carried by each of said members and cooperating with said magnetic attractable material for releasably attaching said members to said simulated head within said area.

3,101,558
APPARATUS FOR DISPLAYING SELECTIVELY CHANGEABLE COLORS
Ronald G. Young, Rockford, Ill., assignor, by mesne assignments, to The Valspar Corporation, Rockford, Ill., a corporation of Delaware
Filed Apr. 28, 1961, Ser. No. 106,330
32 Claims. (Cl. 35—74)



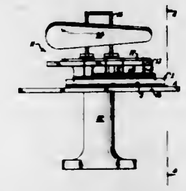
1. A color simulating apparatus comprising a selectively changeable color display screen, said screen including a stack of overlaying color panels having one side of the stack exposed to provide a display area, each color panel having a different color on the face thereof and having a plurality of similar size segments, means connecting the several segments of each panel together in fixed relative relation and with relatively opposite edges of each segment respectively overlapping and underlapping the edges of adjacent segments to form a continuous surface, the segments of the several color panels being interleaved with each other to enable movement of the segments of any selected one of the panels wholly or partially to said one side of the stack when the color panels are moved relative to each other, means for selectively moving the several color panels relative to each other to expose selectively variable portions of the different color panels, and means for turning the several color panels in unison to optically mix the exposed portions of the color panels.

3,101,559
SAFETY SHOE WITH INSTEP GUARD
Roy A. Smith, Red Wing, Minn., assignor to Red Wing Shoe Company, Inc., Red Wing, Minn., a corporation of Minnesota
Filed Oct. 12, 1962, Ser. No. 230,112
3 Claims. (Cl. 36—72)



1. A safety shoe comprising,
(*a*) a base or sole assembly,
(*b*) a relatively flexible upper carried by said base assembly and defining a toe portion and a metatarsal-instep portion,
(*c*) a rigid forwardly converging cap closely overlying said toe portion and supported along its lower edge by said base assembly,
(*d*) a relatively narrow flexible band extending transversely across the rear end only of said toe portion and having its opposite ends secured to said base assembly,
(*e*) the rear edge of said band being stitched to said toe portion in closely spaced relation to the rear edge of said cap,
(*f*) the forward portion of said band being stretched taut over the rear portion only of said forwardly converging cap and restricting movements of said cap with respect to said toe portion and base assembly,
(*g*) a flexible cover element overlying said cap and toe portion and secured along its lower edge to said base assembly,
(*h*) the rear edge of said cover element loosely overlying said band,
(*i*) and a rigid metatarsal-instep shield overlying the metatarsal-instep portion of said upper and conforming substantially to the contour thereof.
(*j*) the forward end portion of said shield being interposed between said band and the rear end portion of said cover element and secured to said rear end portion of said cover element, said forward end portion of said shield overlying and being supported by the intermediate portion of said cap.

3,101,560
PLEAT HOLDING DEVICE FOR USE IN PRESSING
Thomas A. Little, P.O. Box 241, Yanceyville, N.C.
Filed May 2, 1961, Ser. No. 107,106
2 Claims. (Cl. 38—12)



1. A pleating device for use with a garment press having a normally stationary ironing surface for receiving a garment having a pleat to be pressed and a table below said ironing surface; said pleating device comprising, a base frame adapted to be positioned on said table, and a plurality of resilient straps attached at each end thereof to said frame, said straps being longitudinally elastic throughout their entire lengths and being adapted to extend upwardly from said frame, over said ironing surface and said garment to be ironed thereon and thence downwardly to said frame, to exert downward pressure on said garment and hold said pleat in said garment.

3,101,561
HEAT-RESISTANT FLASH CHAMBER COATINGS AND METHOD FOR APPLYING SAME
Hans John Albrecht, West Springfield, Mass., and Frederick E. Allen, Short Beach, Conn., assignors to Casco Products Corporation, Bridgeport, Conn., a corporation of Connecticut
Filed Nov. 17, 1961, Ser. No. 153,137
9 Claims. (Cl. 38—77)

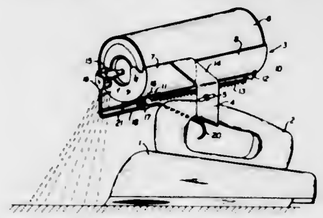
1. The method of coating at least a portion of the flash chamber of a steam iron with a heat-resisting composition which comprises heating a metal oxide composition to

render it molten and spraying onto the surface of said flash chamber said molten metal oxide composition in the form



of a thin heat-resisting surface layer, said metal oxide comprising at least one material selected from the group consisting of aluminum oxide and titanium dioxide.

3,101,562
ATTACHMENT FOR FLAT IRONS
Paul D. Crawford, 9 Bay View Ave., New Rochelle, N.Y.
Filed May 9, 1962, Ser. No. 193,527
4 Claims. (Cl. 38—78)



1. An attachment for flat irons including a handle comprising

two laterally open members telescopically moving into each other,

one of said members having a front base,

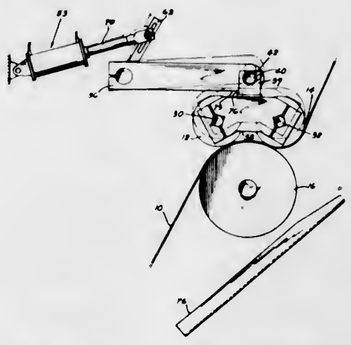
the other of said members having a rear base,

a spring connecting said members and urging the latter into their collapsed position,

said members being adapted to clamp exchangeably a can having a spraying nozzle inserted therein between said respective bases, and

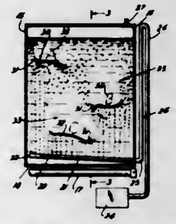
means for releasably securing said members to said handle.

3,101,563
SQUEEZE-ROLL ASSEMBLY
William R. Osban, Gulf Breeze, Fla., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed July 28, 1961, Ser. No. 127,692
10 Claims. (Cl. 68—258)



2. A self-aligning squeeze-roll assembly comprising a primary roll; a squeeze roll yieldably restable against material being squeezed between said squeeze roll and said primary roll; a rigid frame for supporting said squeeze roll with its axis in fixed relation thereto; and an alignment roll mounted on said rigid frame with its axis in fixed relation thereto and parallel to the axis of said squeeze roll, said alignment roll being continuously pressed against an alignment surface; said frame being supported by an arm joined to said rigid frame by a self-aligning bearing to permit alignment of said squeeze roll by said alignment roll relative to said alignment surface.

3,101,564
DISPLAY DEVICE
Henry Kurt Stoessel, 21 W. 45th St., New York 36, N.Y.
Filed Nov. 16, 1960, Ser. No. 69,590
2 Claims. (Cl. 40—106.22)



1. A display device comprising a tank having a rear wall, side walls, and a transparent front wall, a fluid contained in said tank, a source of illumination positioned to direct light within the tank in the path between the bottom and top of said tank, a conduit adjacent the bottom of said tank, said conduit being inclined whereby one end thereof is higher than the other end, a plurality of widthwisely spaced apertures of uniform size formed in said conduit, a source of gas under pressure connected with said other end of said conduit to define a substantially even bubble pattern adjacent the bottom of said tank, baffles in said tank in the form of somewhat inclined transparent strips of substantial length and having edges abutting the front and rear walls of said tank, each said baffle being disposed to collect bubbles impinged against the lower surface thereof and to discharge said collected bubbles at the end portions thereof in concentrated streams, at least one said baffle being positioned in said tank vertically above an end portion of another said baffle so that said upper baffle will collect said concentrated stream discharged from said end portion, and display indicia on said tank being positioned substantially immediately above at least some of said baffles whereby said indicia is framed by said baffles and streams.

3,101,565
FISH HOOK AND GUARD COMBINATION
William Hoder, 2440 Lear Road, Avon, Ohio
Filed July 1, 1960, Ser. No. 40,430
1 Claim. (Cl. 43—43.16)



A fish hook having a shank with a hook portion on one end of the shank, attaching means on the other end of the shank for securing the hook to a line, a guard comprising a single length of wire fixedly secured intermediate its ends to the shank and spaced endwise of the shank between, and in spaced relation endwise of the shank to, the point and attaching means, said guard

extending at substantially right angles to the plane of the hook and equidistantly at opposite sides of said plane, said guard being a minimum length of three times the distance from the point of the hook to the axis of the shank of the hook, and said guard being spaced axially of the shank from the base of the hook portion toward the other end of the shank a distance approximately equal to its own length.

3,101,566
VACUUM CUP HOLDING DEVICE
Benjamin Stiller, Akron, Ohio, assignor to Quikey Manufacturing Co. Inc., Akron, Ohio, a corporation of Ohio
Filed Nov. 30, 1961, Ser. No. 156,049
7 Claims. (Cl. 45—28)



1. A soap holding device of the character described, comprising;

(A) a thin pliable sheet member having opposite substantially parallel faces;

(B) first vacuum cup means including a plurality of separate flared vacuum cups carried by the projecting ends of resilient shank members that project outwardly from one said face whereby said cups are flexibly spaced from one said face;

(C) second vacuum cup means including at least one flared vacuum cup carried by and facing outwardly from said remaining face;

(1) said second vacuum cup means supporting said soap holding device with respect to a surface while said first vacuum cup means supports an object such as soap with respect to said holding device;

(2) said shank members being relatively short in length whereby minimal deflection thereof is present during support of said soap by said vacuum cup means.

3,101,567
VACUUM CUP HOLDING DEVICE HAVING IMPROVED HOLDING MEANS
Benjamin Stiller, Akron, Ohio, assignor to Quikey Manufacturing Co. Inc., Akron, Ohio, a corporation of Ohio
Filed Nov. 30, 1961, Ser. No. 156,108
9 Claims. (Cl. 45—28)



1. A soap holder of the character described, comprising;

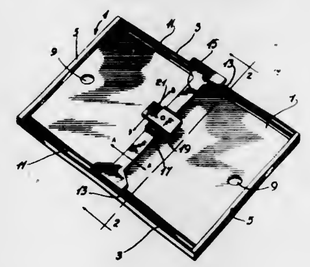
(A) a resilient base of generally flat configuration and having opposed faces;

(B) a first series of suction cups projecting from one said face of said resilient base and adapted to support a bar of soap thereon;

(C) at least one surface adhering suction cup projecting from said remaining face of said resilient base in opposed relationship to said first series of suction cups and adapted to engage a smooth surface and support said holder with respect thereto;

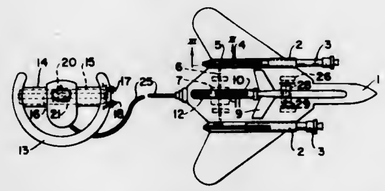
(D) and mechanically actuated means carried by said base between said opposed cups, and being operable to increase the holding power of said surface engaging cup beyond a normal holding power thereof.

3,101,568
PAINTING OR DRAWING IMPLEMENT
Phil Tratt, 3450 Van Horne Ave., Apt. 1, Montreal, Quebec, Canada
Filed May 31, 1961, Ser. No. 113,746
3 Claims. (Cl. 45—131)



1. In combination with an easel for supporting a working surface during execution of artwork thereon by a human operator, an implement comprising: a bridging member spanning said easel; said bridging member being slidable relative to said easel in a direction transverse to the spanwise dimension of said bridging member; a slider supported on said bridging member for travel therealong in said spanwise dimension thereof, and an armrest pivotally mounted on said slider whereon the human arm of said operator is rested yet freely maneuverable over said easel in any combination of linear and angular motions necessitated in executing said artwork by said human arm.

3,101,569
REMOTE ELECTRICALLY CONTROLLED WHEELED TOY
Andrew N. Giardina, Leetsdale, Pa.
Filed May 17, 1960, Ser. No. 29,725
2 Claims. (Cl. 46—244)

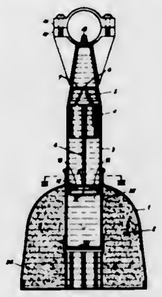


1. A remotely controlled toy airplane comprising, in combination, a toy airplane, mounted on wheels, a reversible electric motor mounted on said airplane for selectively driving said airplane forwardly or rearwardly, a remote control element electrically connected to said motor by a flexible cable and being in the form of a substantially semi-circular steering wheel having a substantially cylindrical casing extending diametrically thereof, stationary dry cell means snugly enclosed in said casing, said airplane including a pair of solenoids and front wheel braking elements operated thereby to obtain steering movements of said airplane, a cylindrical contact element mounted for rolling movement in a confined portion of said casing, electrical contact strips mounted in a wall portion of said casing and cooperable with said rolling contact element in response to rotational movements of said steering wheel in its own plane for selectively energizing said solenoids to effect right and left steering movements of said airplane.

3,101,570
DEVICE FOR HUMIDIFYING AND FERTILIZING THE GROUND

Léonce Lienard, Pepinieres Sainte-Therese, Bazainville, France

Filed June 29, 1961, Ser. No. 120,661
Claims priority, application France May 4, 1961
2 Claims. (Cl. 47—48.5)

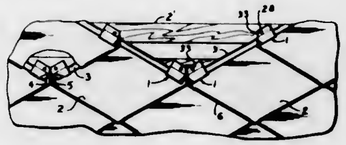


1. A device for humidifying and fertilizing the ground, including a rose and a delivery pipe opening into said rose whereby liquid can pass therebetween, a float located in said pipe involving at its upper part a needle apt to obturate an opening for the liquid flow, provided in a transverse wall in the pipe, said float being secured by its lower part to the upper end of a rod passing freely through another opening for the flow of liquid provided in another transverse wall in the pipe, said rod involving at its lower end a valve which obturates said other opening when the float is in its high position.

3,101,571
UNIVERSAL NAIL TAB FOR LOCK JOINT SHINGLES

George F. Waske, Rte. 2, Parnell, Mo.

Filed Nov. 17, 1960, Ser. No. 69,906
2 Claims. (Cl. 50—249)

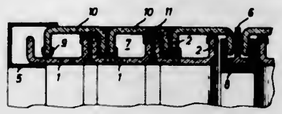


1. In combination, a pair of identical universal assembly nail tabs and a shingle supported thereby, said shingle being of the type having a turned flange presenting a right-hand and a left-hand flange side entrance, said nail tabs each comprising; a sheet material member exhibiting upper and lower edges and side edges, said member having a front and a rear layer extending in substantially parallel and superimposed relation, an upwardly and inwardly turned layer flange connected to each of said layers at respective lower fold lines thereon, said lower fold lines forming said member lower edge, said layer flanges extending longitudinally of said member in parallel spaced relation, said layer flanges being spaced from and cooperating with respective layers to form rear and front elongated troughs respectively receiving said shingle flange at said right-hand and left-hand flange side entrance, means closing one end of said troughs but leaving the other end of said troughs open, and nails extending through said respective nail tabs adjacent said upper edges for supporting said nail tabs.

3,101,572
CONSTRUCTION WITH BUILDING ELEMENTS MADE OF GLASS

Gert Stenger, 1 Beerweg, Munich 25, Germany

Filed Mar. 9, 1959, Ser. No. 798,000
Claims priority, application Germany Mar. 11, 1958
2 Claims. (Cl. 50—267)

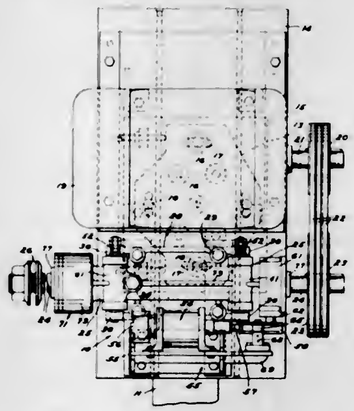


1. A wall or the like providing opposite finished surface structures, each finished surface structure comprising a plurality of elongated frangible channel members having great lengths as compared to their widths arranged in mutually supporting side-by-side relation having outwardly facing main webs with inwardly directed side flanges extending therefrom, resilient substantially T-shaped sealing and anchoring strips coextensively disposed between adjacent side flanges, said T-shaped strips including resilient cross-bar portions, said cross-bar portions of said T-shaped strips resiliently engaging the free edges of adjacent side flanges and extending down the distal surfaces thereof to form pairs of resiliently joined side flanges, said pairs of resiliently joined side flanges of opposite finished surface structures directed inwardly toward each other and anchored in staggered abutting relation adjacent each other by the resilient cross-bar portions of said T-shaped strips bearing upon the main webs of opposite surface structures, and the portions extending down said distal surfaces thereof, such that adjacent staggered pairs of resiliently joined side flanges exert mutually supporting forces on each other to provide a wall structure having hollow portions therein and having a degree of flexure in the lateral plane without establishing side flange breaking stresses.

3,101,573
RECIPROCATORY BUFFING SPINDLE STRUCTURE

Otto Thiel, Detroit, Mich., assignor to Midwest Supply and Manufacturing Company, Ferndale, Mich., a corporation of Michigan

Filed June 17, 1960, Ser. No. 36,962
12 Claims. (Cl. 51—34)

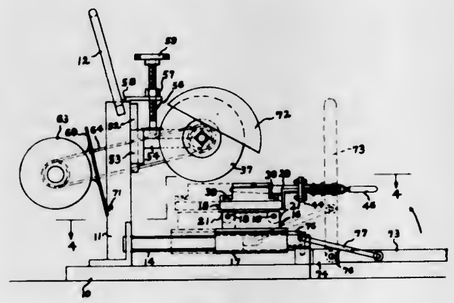


1. Reciprocatory spindle structure for a rotary spindle type tool, comprising a housing having means to journal the spindle of said tool, a fixed support, a yoke journaled on said support on an upright axis, said yoke providing spaced, laterally extending arms between which said spindle housing is disposed for reciprocation in the direction of the axis of said spindle, means journaling said housing between said arms for reciprocatory motion therewith, a prime mover device including a reciprocatory connecting member, a pin and slot connection between said connecting member and said spindle housing to operatively connect the latter to said device for reciprocation thereby, while accommodating slight movement of said housing transversely of the direction of reciprocation, and way means guiding said connecting member for recilinear motion adjacent said pin and slot connection.

3,101,574
COTTON PICKER SPINDLE SHARPENER

Arthur C. West, E. Sunflower Road, Cleveland, Miss.

Filed Aug. 6, 1962, Ser. No. 214,899
8 Claims. (Cl. 51—92)



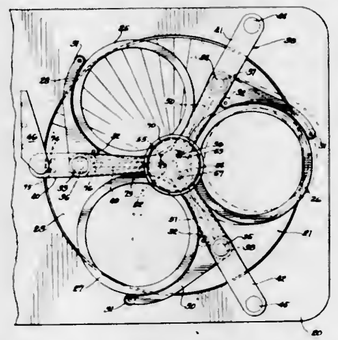
1. A cotton picker spindle sharpener comprising,
(*a*) a holder adapted to receive a spindle to be sharpened and having a tapered recess therein which corresponds generally to the outer surface of the spindle to be sharpened,
(*b*) there being an outwardly opening, longitudinally extending slot in said holder extending from the exterior of the holder to said tapered recess therein in position to expose a longitudinally extending portion of the spindle to be sharpened,
(*c*) means to lock a spindle to be sharpened in said recess to retain the spindle in a predetermined fixed position relative to said holder,
(*d*) a rotary sharpening tool in alignment with said longitudinally extending slot and disposed to make a longitudinally extending cut in a spindle to be sharpened while the spindle is locked within said holder,
(*e*) means holding said sharpening tool and said holder at selected positions relative to each other to place said sharpening tool in longitudinal alignment with said longitudinally extending slot, and
(*f*) means to impart relative movement between said holder and said sharpening tool to thereby make said longitudinally extending cut in a spindle to be sharpened.

3,101,575
AUTOMATIC LAP SENSING AND CORRECTING DEVICE

Eugene A. Schulz, Arlington Heights, Ill., assignor to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois

Filed Mar. 6, 1961, Ser. No. 93,625
21 Claims. (Cl. 51—129)

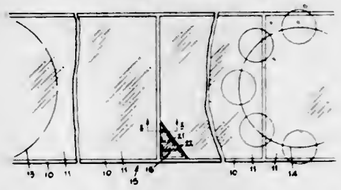
1. In combination, a machine element having a rotatable working surface adapted to produce a predetermined contour upon an article, rotatable means cooperable with said element surface to shape said surface in accordance with the position of said rotatable means on said working surface, means for shifting the position of said shaping means on said working surface to change the shape of said surface, and control means for the shifting means, said control means comprising a sensing head having supports spaced from one another, and adapted to rest on said surface, a probe carried by said head intermediate said radially spaced supports, said probe being movable relative to said head and adapted to contact said working surface, and means operable as a function of the position of said probe relative to said head for operating said shifting means.



3,101,576
GRINDING AND POLISHING GLASS PLATES

Stephen R. Makovic, Rossford, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Aug. 9, 1962, Ser. No. 215,885
4 Claims. (Cl. 51—283)



1. In the grinding and polishing of glass plates in which the plates are embedded in a layer of plaster on the upper surfaces of work tables and passed first beneath a series of grinding runners and then beneath a series of polishing runners, the method which comprises cutting from a glass plate, after grinding but before polishing, cracked or broken glass, removing the plaster from the area resulting from the removal of the cracked or broken glass, inserting in said area a glass replacement sheet of a shape and size conforming substantially to the said area, and adhesively securing the replacement sheet directly to the surface of the work table.

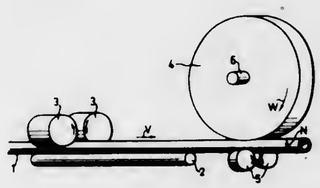
3,101,577
METHODS OF GRINDING OR POLISHING ELONGATED ROTATIONAL BODIES

Oscar Åke Waldemar Skugghall, Jonkoping, Sweden, assignor to Aktiebolaget Nydals Gjuteri och Mekaniska Verkstad, V. Holmgatan, Jonkoping, Sweden

Filed Sept. 10, 1962, Ser. No. 222,492
Claims priority, application Sweden Sept. 18, 1961
2 Claims. (Cl. 51—289)

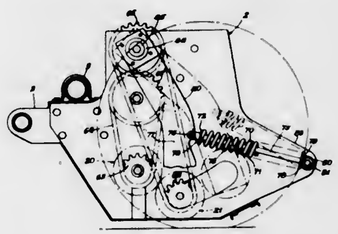
1. A method of finishing the surface of an elongated rotational body, comprising the steps of advancing said

body in the direction of its longitudinal axis and in engagement with an abrasive member while rotating said body on its said axis; moving each part of said abrasive member in momentary contact with said rotational body at a speed which is considerably superior to that by which said body is advanced, and in a direction which is substantially parallel to the longitudinal axis of said



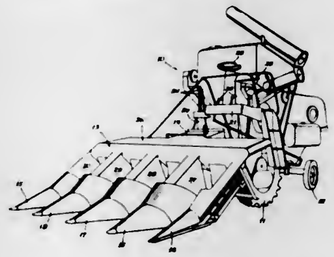
rotational body but which has a component which, as to magnitude and direction, is in substantial agreement with the circumferential speed of said body caused by its rotation; and maintaining the momentary engagement between each part of said rotational body and said abrasive member along a path which is longer than the distance that said body is advanced during each revolution about its longitudinal axis.

3,101,578
HAY CONDITIONING ROLLER MOUNTING
Edward J. Johnston, La Grange Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 28, 1960, Ser. No. 71,990
9 Claims. (Cl. 56—1)



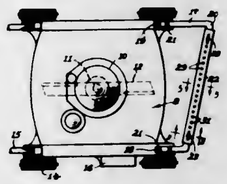
1. In an ambulatory field operatnig crop treating apparatus, a support, the combination of a plurality of cooperatively arranged upper and lower parallel rollers having generally horizontal axis, means fixedly rotatably mounting the upper of said rollers from the support, and means swingably mounting the lower of said rollers in trailing relation to the upper of said rollers for movement about an axis generally parallel to said upper of said rollers forwardly to an operative position of the rollers and rearwardly and upwardly to an inoperative position the axis of said means being disposed above and forwardly of the axis of said lower roll.

3,101,579
CORN PICKER
Elof K. Karlsson, Moline, and Edwin L. Stevens, Rock Island, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 27, 1960, Ser. No. 32,313
7 Claims. (Cl. 56—18)



1. A corn picker for movement along the axis of a row of corn stalks comprising a frame-supporting structure, means on said frame-supporting structure for guiding and feeding standing corn stalks into said picker, a pair of cooperative stalk feeding rolls arranged and constructed to pull said stalks downwardly, a pair of spaced-apart stripper plates disposed above said stalk feeding rolls, and means on said frame-supporting structure coupled to each of said stripper plates for effecting a concomitant and symmetrical displacement of each of said stripper plates with respect to said row axis to adjust the spacing between said stripper plates.

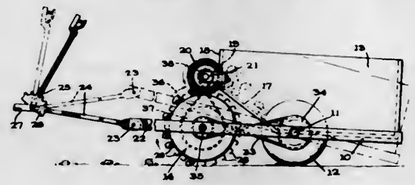
3,101,580
MOWER SAFETY GUARD
Ermen C. Schesser, 2701 Gregory St., Madison, Wis.
Original application June 4, 1957, Ser. No. 663,497, now Patent No. 2,982,079, dated May 2, 1961. Divided and this application July 1, 1960, Ser. No. 40,225
13 Claims. (Cl. 56—25.4)



1. A guard on the front of a mowing machine for use during mowing, said machine having a housing mounted on ground engaging wheels, and a motor on the housing driving a cutter blade operating in a horizontal plane under the housing, the housing having a lateral discharge opening on one side thereof, said guard comprising a generally U-shaped frame disposed in front of and rigid with said housing in a horizontal plane having a short arm and a relatively long arm extending rearwardly and secured to said housing, and a longer transverse portion disposed at an acute angle with respect to the front of said housing inclined toward that side thereof with the discharge opening, a pair of vertical bolts mounted in parallel spaced relationship on opposite sides of the U-frame and extending upwardly therefrom, a horizontal bar disposed over said U-frame in parallel relationship to the transverse portion thereof having holes provided in the opposite ends thereof through which said bolts extend, nuts threading on the bolts above and below the bar for adjusting the same vertically relative to said frame, and rake teeth carried on said bar and adjustable vertically therewith

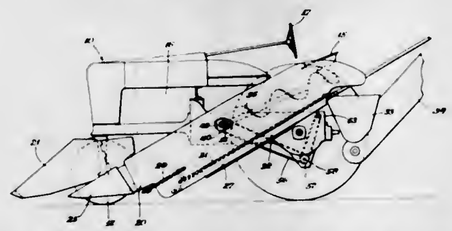
and extending downwardly approximately to ground level and spaced apart substantially equal distances laterally of the transverse portion of said frame, the rake teeth by virtue of the acute angle disposition of the bar with respect to the front of the housing serving to discharge material raked thereby toward that side of said housing with the discharge opening.

3,101,581
MACHINE FOR HARVESTING WASTE COTTON FROM THE GROUND
Hoytte W. Kelso, 840 Wildwood Drive, and George E. Swim, 3608 Rojo Court, both of Corpus Christi, Tex.
Filed May 25, 1962, Ser. No. 197,645
3 Claims. (Cl. 56—28)



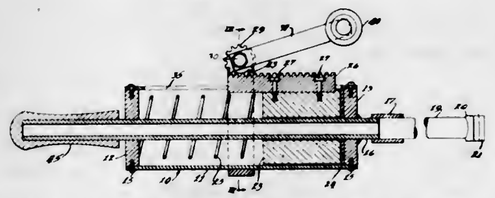
1. A "down" cotton harvesting machine comprising a wheeled frame adapted to be drawn along rows of cotton stalks, a hopper on said frame to receive cotton harvested from the ground, a rotary drum journaled upon said frame near the forward end of the hopper, a rotary brush arranged near the top of said drum, means to rotate said drum oppositely to the direction of movement of the wheeled frame and to rotate said brush oppositely to the direction of rotation of the drum, and a continuous spiral row of cotton impaling elements on said drum in uniformly spaced relation and including parts projecting radially of the drum and anchored thereto, transverse parts spaced from the periphery of the drum and substantially parallel therewith and extending in the direction of rotation of the drum and inwardly radially extending cotton impaling points on said transverse parts facing the periphery of the drum and spaced therefrom, said impaling points being in spaced substantially parallel relation to the radially projecting parts of the cotton impaling elements, whereby only relatively clean cotton free of debris is picked up by the drum and conveyed to said brush, said brush removing the cotton from the impaling elements and casting it into said hopper, said hopper having an opening adjacent said brush.

3,101,582
OPEN END AUGER FEED OVER INCLINED ROLLS
Benjamin M. Hyman, East Moline, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Continuation of application Ser. No. 781,320, Dec. 18, 1958. This application June 13, 1960, Ser. No. 35,843
4 Claims. (Cl. 56—104)



1. A conveyor for corn pickers of the type having upwardly and rearwardly inclined snapping rolls and upwardly and rearwardly inclined husking rolls constituting continuations of said snapping rolls, and said husking rolls having ears of corn delivered thereto from said snapping rolls comprising an auger conveyor positioned above and generally upwardly and rearwardly over said husking rolls and arranged and constructed to feed ears of corn thereover, said auger conveyor being journally mounted at its lower forward end thereof adjacent the lower forward end of said husking rolls, said auger conveyor being non-supported at its upper rearward discharge end, drive means coupled to said auger conveyor through the journal mounting, and said drive means and said journal mounting comprising a hinge mounting about which the auger conveyor may arcuately swing.

3,101,583
LIMB SHAKER
Joseph M. Ferguson, P.O. Box 36, Gonzales, La.
Filed Aug. 31, 1961, Ser. No. 135,187
1 Claim. (Cl. 56—328)



A shaker for shaking fruit and nuts from the limbs of trees comprising a casing having forward and rear end walls, a shaft secured to said forward end wall and projecting forwardly therefrom, a plunger within said casing mounted for movement therealong into engagement with said forward end wall, a spring interposed between said rear end wall and said plunger, means for moving said plunger against said spring and storing up energy therein and releasing said plunger to effect engagement of said plunger with said forward end wall with an impact action, comprising a rack on said plunger guided for movement along said casing and extending outwardly therefrom and retaining said plunger from turning movement with respect to said casing by guiding engagement of said casing, a pinion rotatably journalled on the outside of said casing and meshing with said rack, said pinion having a gap in the teeth thereof for releasing said rack to accommodate the stored-up energy of said spring to engage said plunger with said forward end wall with an impact action, and a saddle extending across the forward end of said shaft and fixed thereto and engageable with the limb of a tree to shake the limb by the impact force of engagement of said plunger with said forward end wall.

3,101,584
IMPLEMENTS FOR LATERALLY DISPLACING CROP LYING ON THE GROUND
Cornelis van der Lely and Ary van der Lely, both of Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited-liability company of the Netherlands
Filed June 3, 1959, Ser. No. 817,803
Claims priority, application Netherlands June 20, 1958
21 Claims. (Cl. 56—377)

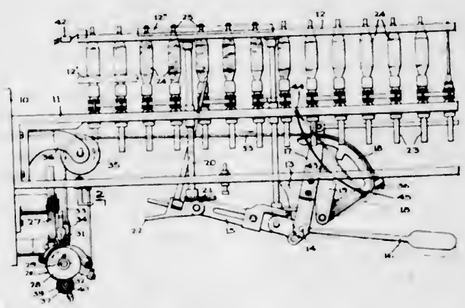
1. An implement adapted for movement in a direction of travel for laterally displacing crop lying on the ground, the implement comprising: a frame beam, a row of rake wheels fastened to said frame beam rearwardly thereof, the frame beam having opposite ends, a supporting ground wheel coupled to said frame beam at one of said ends and forwardly of the row of rake wheels, a second ground wheel coupled to said frame beam for supporting the same and positioned rearwardly of the row of rake

wheels, said ground wheels being supported from said rake beam for rotation about substantially aligned axes,



and means coupled to at least one of the ground wheels for fixedly adjusting the position thereof relative to the corresponding axis.

3,101,585
TIP BUNCH APPLYING MEANS FOR SPINNING FRAMES
Charles J. Andersen and Coy V. Jones, Sr., Greer, S.C., assignors to Southern Machinery Company, Greer, S.C., a corporation of South Carolina
Filed Feb. 5, 1962, Ser. No. 170,904
4 Claims. (Cl. 57—54)



4. In a spinning frame of the movable ring rail type, a builder motion including escapement mechanism operable to allow gradual elevation of the ring rail to a full bobbin position during the normal oscillation of the ring rail for building the bobbins, a time delay limit switch on the spinning frame engaged by the ring rail when the latter reaches said full bobbin position and then actuated by the ring rail and electrical motor means geared directly to the builder motion and driving the same directly for a predetermined time to effect additional elevation of the ring rail to a tip bunch applying position when said motor means is energized by the actuation of said time delay switch by said ring rail.

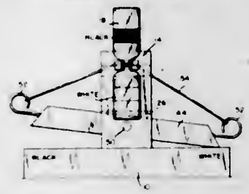
3,101,586
TIMER MECHANISM WITH IMPROVED GEAR MESHING MEANS
Samuel Polonsky, Framingham, and Bartley E. King, Norwood, Mass., assignors to General Electric Company, a corporation of New York
Filed Jan. 26, 1962, Ser. No. 168,967
8 Claims. (Cl. 58—16)

1. A timer mechanism comprising a first gear mounted for rotation, said gear having a plurality of teeth, a second gear having a plurality of teeth, said second gear being mounted for movement into or out of mesh with said first gear, one of the teeth of said second gear being shorter than the tooth adjacent thereto, said shorter tooth being spaced with respect to its adjacent tooth on said second gear so that the distance from the tip of said



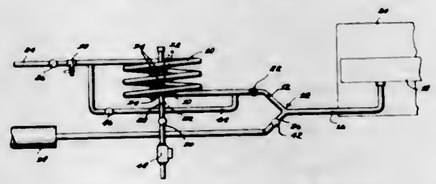
shorter tooth to the tip of its adjacent tooth is less than the distance between the tips of two adjacent gear teeth of said first gear so that when said second gear is moved into contact with said first gear the teeth of said second gear are readily moved into meshing engagement with the teeth of said first gear.

3,101,587
HOURGLASS TIMING DEVICE
Malcolm W. Patrick, Bedford, Ohio
(4040 Lander Road, Chagrin Falls, Ohio)
Filed Feb. 2, 1962, Ser. No. 170,670
1 Claim. (Cl. 58—144)



A timing device comprising:
(*a*) an hourglass,
(*b*) means for rotatably supporting said hourglass comprising a vertical member and a pivot pin received therein, said hourglass being secured to said pin;
(*c*) lever means pivotally mounted on said supporting means, and
(*d*) means comprising a band wrapped around said pivot pin and having opposite ends secured to opposite ends of said lever means whereby rotation of said lever effects rotation of said pin and hourglass.

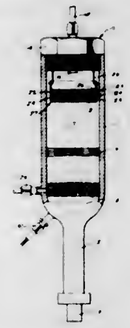
3,101,588
STEAM GENERATING APPARATUS
Willard P. Perry, Trenton, N.J.; The Philadelphia National Bank, Philadelphia, Pa., executor of said Willard P. Perry, deceased
Filed July 16, 1962, Ser. No. 209,917
3 Claims. (Cl. 60—31)



1. In combination with an internal combustion engine having an exhaust manifold for receiving exhaust

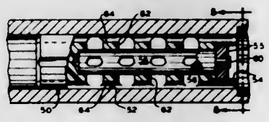
gases from said engine and an exhaust pipe in communication therewith, steam generating apparatus comprising a Y branch connection in communication at the juncture of its two branches with said exhaust pipe, one of said branches being extended rearwardly and having therein a control valve, the second of said branches also extending rearwardly and having therein a check valve to prevent backflow therethrough of exhaust gases, a multiple coil in communication at its inlet end with said second branch and having an outlet pipe provided therein with a control valve, a liquid supply pipe having means for creating and maintaining a liquid pressure therein greater than the fluid pressure in said coil, and said liquid supply pipe also having a plurality of longitudinaly spaced small radial pipes in communication with said coil, said small pipes having therein control valves for admitting limited small quantities of liquid into said coil.

3,101,589
METHOD OF IGNITING ROCKET FUELS
Joseph T. Hamrick, Roanoke, and Leslie C. Rose, Rocky Mount, Va., assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 10, 1958, Ser. No. 772,787
3 Claims. (Cl. 60—35.4)



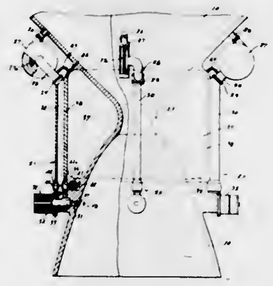
1. A method of initiating decomposition of fuel which comprises:
locating in a reaction chamber an oxidizing agent selected from the group consisting of lead dioxide, potassium permanganate, calcium hypochlorite, molybdic acid, tungstic acid, iodine pentoxide, and sodium chlorite, and
directing into said reaction chamber and in impinging contact with said oxidizing agent a fuel hypergolic with said oxidizing agent, said fuel being selected from the group consisting of hydrazine and unsymmetrical dimethyl hydrazine.

3,101,590
IGNITION SYSTEM FOR SOLID FUEL CHARGES
John P. Hagerty, Box 470, Rte. 8, Tucson, Ariz.
Filed Oct. 24, 1960, Ser. No. 64,354
4 Claims. (Cl. 60—35.6)



4. A rocket engine comprising a generally cylindrical, elongate body of solid fuel, an ignition charge chamber located axially of said body and nearer one end thereof than the other, an igniting charge in said chamber, an end recess in said body adjacent said ignition charge chamber, an insert of solid fuel held in said recess, and means held by said insert for initiating combustion of said igniting charge, wall means forming a combustion chamber in which said body is located adjacent the inner surface thereof, a plurality of grooves extending longitudinally of the body, over a substantial portion of the length thereof, and spaced uniformly around the periphery thereof, said grooves being formed in one of said wall means and said body, and a plurality of connecting passages connecting the ignition chamber with said longitudinal grooves.

3,101,591
VAPOR-GAS INJECTION THRUST VECTOR CONTROL SYSTEM
James C. Wise, Pepper Pike Village, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1961, Ser. No. 98,902
5 Claims. (Cl. 60—35.54)



1. A system adapted to control the attitude of air and space borne vehicles propelled by the thrust produced by exhaust gases generating in a reaction motor and discharging through a gas discharge nozzle having a nozzle throat comprising: an outlet port formed in the nozzle entrance portion for receiving a portion of the hot exhaust gases from the reaction motor, an inlet passage formed in the nozzle wall downstream of the outlet port and downstream of the nozzle throat, first conduit means communicating the outlet port and the inlet passage for delivering exhaust gases to the inlet passage, first valve means for modulating flow through said inlet passage, a housing containing a vaporizable cooling fluid, second conduit means for bypassing a portion of the exhaust gases from the first conduit means for pressurizing the cooling fluid, passage means communicating the first conduit means and the cooling fluid housing, and second valve means normally closing said first conduit means and operatively responsive for opening to the pressure of the bypassed exhaust gases to thereby deliver the cooling fluid for mixture with the exhaust gases to form a cooled mixture of exhaust gases and vaporized fluid that is delivered through the inlet passage into the interior of the gas discharge nozzle in an oblique impinging stream on the primary body of exhaust gases flowing through the nozzle to thereby control the attitude of the vehicle.

3,101,592
CLOSED POWER GENERATING SYSTEM
Anthony E. Robertson, Willoughby, Ohio, and Joseph T. Hamrick, Roanoke, Va., assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 16, 1961, Ser. No. 83,000
3 Claims. (Cl. 60—39.46)

1. A closed power generating system comprising a gaseous oxygen supply means,

a hydrogen generator containing a water reactive chemical capable of evolving hydrogen gas,

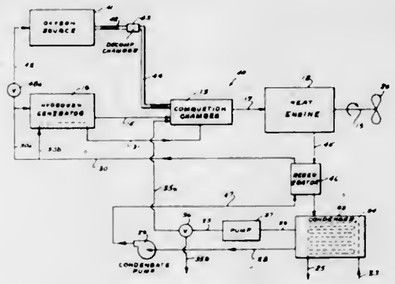
a combustion chamber means having a combustion zone and a cooling zone to cool said combustion chamber means,

means to deliver gaseous oxygen and gaseous hydrogen from said oxygen supply means and said hydrogen generator to said combustion chamber combustion zone,

means to react said gaseous hydrogen and oxygen in said combustion zone to produce superheated steam,

a heat engine connected to said combustion chamber to receive the superheated steam and expand the same to perform useful work,

condensing means receiving and condensing the steam from the heat engine,



means directing one portion of the condensed steam from said condensing means to said combustion chamber cooling zone to cool said combustion chamber means,

means interconnecting said cooling zone and said combustion zone to deliver condensed steam to said combustion zone to provide additional superheated steam,

means directing another portion of the condensed steam from the condensing means to said hydrogen generator and into contact with the water reactive chemical to evolve hydrogen gas, and

means connecting the combustion zone to the condenser to deliver any non-condensibles to said combustion zone to react said non-condensibles and produce superheated steam therefrom.

3,101,593

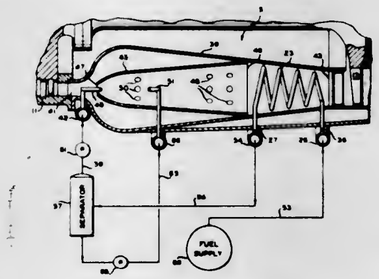
METHOD AND APPARATUS FOR PROVIDING IMPROVED COMBUSTION IN JET ENGINES

Sylvester C. Britton, McGregor, Tex., and Robert M. Schirmer, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Original application May 31, 1955, Ser. No. 511,978, now Patent No. 2,958,189, dated Nov. 1, 1960. Divided and this application July 27, 1960, Ser. No. 45,622

5 Claims. (Cl. 60—39.71)

2. A jet engine which comprises, in combination, a combustion chamber having an air inlet in one end thereof and an exhaust gas outlet in the other end thereof, a flow shield axially positioned within said combustion chamber, said flow shield having a generally frusto-conical shape and being open at the large end thereof to form a flow shield exhaust gas outlet and being open at the small end to form a flow shield air inlet, said flow shield having a plurality of perforations disposed around the surface of said shield, said flow shield exhaust gas outlet being attached to the inner wall of said combustion chamber at a point generally intermediate the air inlet and exhaust gas outlet of said combustion chamber, a first fuel nozzle axially-positioned within said combustion chamber adjacent to said combustion chamber air inlet and positioned so as to direct fuel towards said exhaust gas outlet and so as to be within said air inlet to the combustion chamber and to extend partially through the flow shield air inlet, a second fuel nozzle axially-positioned within said flow shield, said second fuel nozzle being positioned so as to direct fuel towards said flow shield air inlet and positioned generally intermediate the air inlet and exhaust gas outlet of said flow shield, an elongated, tubular fuel cracking means having an inlet and an outlet positioned within said com-



bustion chamber, said cracking means being positioned between said flow shield exhaust gas outlet and said combustion chamber exhaust gas outlet, a liquid-gas separator, a first conduit means for supplying liquid fuel to said cracking means inlet, a second conduit connecting said cracking means outlet to said separator, a third conduit means for supplying liquid fuel from said separator to said second fuel nozzle, and a fourth conduit means for supplying gaseous fuel from said separator to said first fuel nozzle.

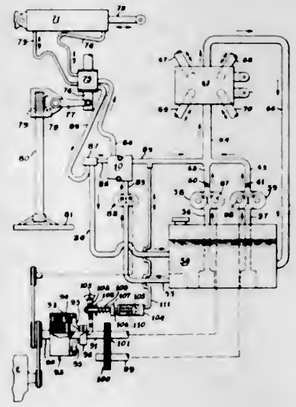
3,101,594

HYDRAULIC SYSTEM INCORPORATING FLOW DIVIDER VALVES

Oscar H. Banker, Bay Village, Ohio, assignor, by mesne assignments, to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan

Original application May 16, 1957, Ser. No. 659,587, now Patent No. 3,024,798, dated Mar. 13, 1962. Divided and this application Dec. 26, 1961, Ser. No. 161,947

8 Claims. (Cl. 60—52)



1. In combination in a pressure fluid system, a drive shaft, first and second control valves, a first pump connected to be driven by the drive shaft, a flow divider interposed between the first pump and the first control valve and having an inlet opening receiving the output from the said first pump, a controlled flow outlet connected to the first valve, and an excess flow outlet; a second pump having an outlet connected to the second valve, a conduit connecting the excess flow to the outlet of the second pump, and means for connecting the second pump to the drive shaft.

3,101,595

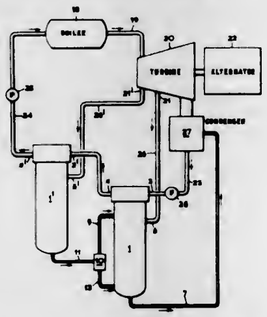
FEED WATER HEATERS

Walter Ernest Peters and Leonard Mills, Rugby, England, assignors to The English Electric Company Limited, London, England, a British company

Filed Feb. 27, 1961, Ser. No. 92,035

Claims priority, application Great Britain Apr. 14, 1960

1 Claim. (Cl. 60—67)



In a bled steam turbine plant having a boiler and a condenser, a multi-stage feed water system comprising in combination: at least two feed water heaters each comprising a casing and a bundle of U-tubes arranged in said casing, wherein said boiler, turbine, condenser and bundles of U-tubes of said feed water heaters are arranged in series with one another in a closed circuit, tapping points at different intermediate pressure zones of said turbine being connected to the upper portions of said casings of said feed water heaters, respectively, the lower portions of said casings being connected in series with one another and with said condenser, a flash box arranged in the connection between the lower portions of successive feed water heater casings, a sealed portion having a bottom arranged in at least one of said casings, a steam pipe connected with each flash box with said sealed portion of its associated feed water heater casing, each of said sealed portion being in restricted communication with the interior of its associated casing, said bundles of tubes passing with their downstream ends through said sealed portion of the associated casing.

3,101,596

COLD-GAS REFRIGERATOR

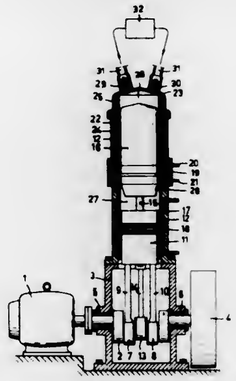
Herre Rinia and Roelf Jan Meijer, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 8, 1961, Ser. No. 115,706

Claims priority, application Netherlands June 27, 1960

7 Claims. (Cl. 62—6)

1. A cold-gas refrigerator having a gaseous working medium therein performing a closed thermodynamic cycle comprising a cold expansion chamber of variable volume and a warmer compression chamber of variable volume, a regenerator communicating with said chambers wherein said gaseous working medium flows cyclically through said chambers and regenerator, a duct leading through the wall of said cold chamber to the exterior thereof, a heat exchanger for extracted cold located a predetermined distance from said cold chamber, said duct connecting to said heat exchanger whereby cold from said cold chamber is supplied to said heat exchanger, and another duct connecting said heat exchanger with said warmer compression chamber of the refrigerator, and



means for preventing the gas flow from said cold compression chamber to said warmer expansion chamber through said heat exchanger.

3,101,597

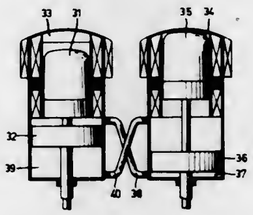
GAS REFRIGERATOR

Albert August Dros, Emmasingel, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 1, 1961, Ser. No. 126,733

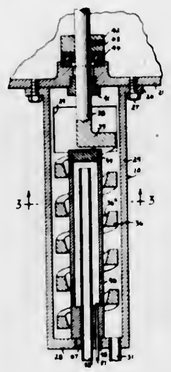
Claims priority, application Netherlands May 9, 1960

2 Claims. (Cl. 62—6)



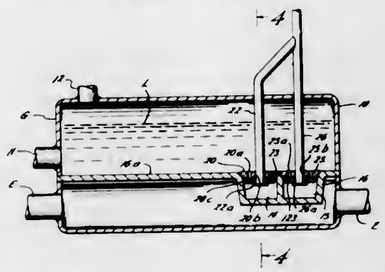
1. A cold gas refrigerator having two cycles comprising two cylinders each having a pair of piston-shaped members mounted for reciprocation therein, one of which is double-acting, the piston-shaped members in one of said cylinders having a predetermined phase difference with the movements of said piston-shaped members in the other of said cylinders, a main working space between the piston-shaped members in each cylinder, an auxiliary working space on the side of said double-acting member remote from said main working space, conduit means connecting the main working space in one of said cylinders to the auxiliary working space in the other of said cylinders, the side of said double-acting piston associated with each of said two cycles remote from said main working spaces in each cylinder functions to vary the volume of said auxiliary working space containing working medium and to force working medium through one of said conduit means to a main working space in another cylinder, said piston operating its compression and expansion stroke in said auxiliary working space substantially in phase with the expansion and compression which takes place in the main working space with which said auxiliary working space is connected through said conduit means.

3,101,598
METHOD AND APPARATUS FOR FREEZING LIQUIDS
Anthony J. Ross, 116 Myrtle Ave., Elmhurst, Ill.
Filed June 24, 1959, Ser. No. 822,516
36 Claims. (Cl. 62—71)



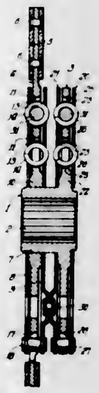
27. A method of freezing a liquid comprising, supplying the liquid to be frozen to an annular refrigerated surface to freeze a layer of progressively increasing thickness on the surface, rotating an ice removing device having a blunt helical ice engaging surface relative to the freezing surface about an axis substantially coaxial with the freezing surface, supporting the ice engaging surface for limited axial movement relative to the freezing surface to allow the ice engaging surface to screw along the frozen layer when the layer contacts the ice removing surface, and yieldably opposing axial movement of the ice engaging surface to progressively increase the pressure on the ice layer in a direction along the freezing surface to break the bond between the layer and the surface.

3,101,599
AIR CONDITIONER
Elvin B. Pippert, Sr., and Harry Miller, Houston, Tex.; said Miller assignor to said Pippert
Filed June 15, 1961, Ser. No. 117,227
1 Claim. (Cl. 62—238)



An air conditioner for use in conjunction with the exhaust gas of an internal combustion engine, comprising an evaporator coil adapted to receive gaseous refrigerant therein, a generator adapted to convert liquid refrigerant into gaseous refrigerant, a heat exchanger for liquefying the gaseous refrigerant, means for conveying the refrigerant to the heat exchanger and then to the evaporator coil, means for expanding the refrigerant into a gaseous form as it enters said evaporator coil, separator means for separating liquid from said gaseous refrigerant discharged from said generator to provide an absorbing liquid, an absorber unit adapted to have the absorbing liquid circulated therethrough for absorbing the gaseous refrigerant from said evaporator, means for returning the refrigerant to said absorber unit from said evaporator coil for absorption by the absorbing liquid, means to direct the absorbing liquid and refrigerant therewith to said generator, and means attaching said generator to an exhaust line of an internal combustion engine for transmitting heat from the exhaust line to said generator, said generator having a pressure chamber therein for receiving successive portions of liquid refrigerant for forming a liquid and vapor mixture, valve means for closing off such mixture in said pressure chamber from the rest of the generator, and outlet tube means connected to said pressure chamber and said separator for the flow of said liquid and vapor mixture from said pressure chamber to said separator when said valve means is closed.

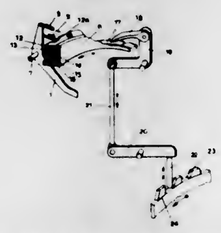
3,101,600
VIBRATION DAMPENERS
Clinton V. Stromberg, Allen Park, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 12, 1962, Ser. No. 172,547
7 Claims. (Cl. 64—27)



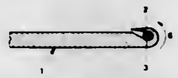
1. A vibration damper assembly comprising a hub having a radially extending annular flange, a first annular member, a plurality of apertures formed in said annular flange and in said annular member coaligned with respect to each other forming a first set of apertures, spring means positioned within said first set of apertures adapted to transmit torque from said first annular member to said flange, a second annular member, a plurality of apertures formed in said second annular member and in said first annular member coaligned with respect to each other forming a second set of apertures and a second spring means positioned within said second set of apertures adapted to transmit torque from said second annular member to said first annular member.

3,101,601
OPERATING MECHANISM FOR THE YARN CARRIERS OF CIRCULAR KNITTING MACHINES
Riccardo Tenconi, Varese, Italy, assignor to Marcella Sessa Moretta, Varese, Italy
Filed Nov. 15, 1960, Ser. No. 69,318
4 Claims. (Cl. 66—138)

1. In a circular knitting machine having a needle cylinder and a plurality of yarn supply stations spaced apart equally around the needle cylinder and each including an equal number of yarn carriers movable between operative and inoperative positions in relation to the needle cylinder; the combination of a set of cam rings mounted for turning coaxially with respect to the needle cylinder, the number of said rings being equal to said number of yarn carriers at each yarn supply station, each of said cam rings being intended to control a corresponding one of the yarn carriers at each of the yarn supply stations, means operatively associated with each of the yarn carriers at each of the yarn supplying stations and being actuated by the outer peripheries of the corresponding cam rings to control the selective disposition of the associated yarn carriers at said operative and inoperative positions of the latter, said outer periphery of each of said cam rings being divided into identically shaped profiled zones of equal length each occupying an angular extent of the related ring equal to the angular spacing between said equally spaced apart yarn supplying stations so that the corresponding yarn carriers at all of said stations are simultaneously and selectively disposed at said operative and inoperative positions, said profiled zones of the cam rings being angularly disposed relative to each other to effect the selective disposition of the yarn carriers at each yarn supplying station in the operative and inoperative positions thereof in accordance with a predetermined control sequence during turning of said set of cam rings through an angular extent equal to said angular spacing between the equally spaced apart stations, so that said control sequence is repeated during successive turnings of said set of cam rings through said angular extent, and means for intermittently turning said set of cam rings to repetitiously effect the movements of the yarn carriers at the yarn supplying stations between their operative and inoperative positions in accordance with said control sequence.



3,101,602
PROCESS FOR FORMING THE FOLDED-BACK BORDER OF PIECES WORKED OF A HIDE OR SKIN AND THE LIKE
Roberto Tosi, Via Guerrazzi 5, Busto Arsizio, Italy
Filed Mar. 29, 1961, Ser. No. 99,092
Claims priority, application Italy Apr. 2, 1960
2 Claims. (Cl. 69—21)



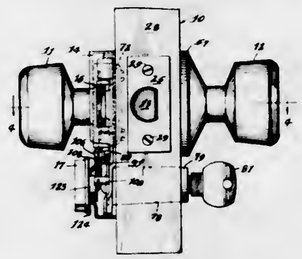
1. A method of forming a reinforced marginal border on a leather piece and the like which comprises beveling one side of a leather piece for a distance inwardly of its marginal edge, placing a reinforcing thread composed of a core of flexible inorganic fibers and a plastic shell encasing said fibers on the beveled surface, heating the thread to render said plastic shell thermoplastic, folding over the beveled portion of the leather strip whereby it constitutes an enclosure having inner surfaces enclosing said reinforcing thread, and applying pressure to the folded-over beveled portion to deform the thermoplastic shell and cause it to adhere to the inner surfaces of said enclosure.

3,101,603
CHAIN DOOR GUARD
Edwin W. North and Carroll V. Spon, Rockford, Ill., assignors to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed June 30, 1961, Ser. No. 121,094
6 Claims. (Cl. 70—93)



6. A chain door guard for attachment to the interior of a pair of relatively movable members such as a door and a door frame to which the door is hingedly mounted with the chain guard adapted to be released by means of a key inserted by an operator at the exterior of the door when the door is opened to an extent permitted by the chain, comprising a slotted slide bracket affixed to the interior of one member and a key-operated locking bracket affixed to the interior of the other member, a chain of a length sufficient to open the door to but a limited extent, said chain having similar and interchangeable locking knobs one secured to each of the opposite ends of the chain with one knob received and slidably but detachably engaged in the slotted slide bracket and the other knob received and detachably engaged in an opening in the locking bracket, a key-operated lock in said locking bracket having a projecting eccentric pin, and a spring-loaded locking bolt in said locking bracket having means for automatically locking and retaining one of said knobs when the latter is inserted into the opening in the locking bracket, means on said locking bolt adapted to receive said eccentric pin so that operation of said lock actuates the locking bolt, said last mentioned knob being released for withdrawal upon insertion and turning of the proper key in the lock to release the locking bolt by said eccentric pin.

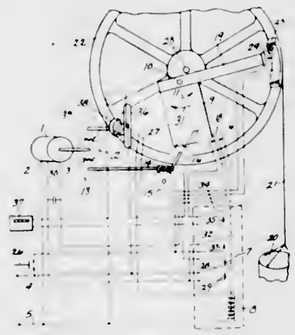
3,101,604
PANIC-PROOF DOOR LOCK
Edwin W. North and Carroll V. Spon, Rockford, Ill., assignors to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 84,002
15 Claims. (Cl. 70—107)



1. In a lock construction, a housing adapted to be mounted in a transverse opening of a door or other closure, a pair of telescoping cam tubes and a sleeve member telescoping over the end of and secured to the inner cam tube and the cam tubes being rotatable relative to

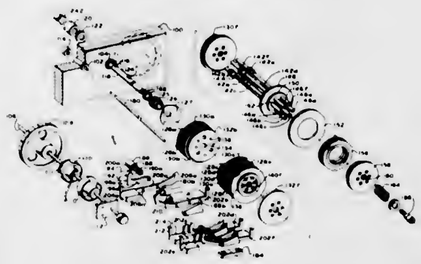
each other, means in said housing and adapted to be rocked by either of said cam tubes, an inner knob secured to said sleeve member, an outer knob secured to the outer cam tube, a latch bolt adapted to be retracted by turning of either knob and rocking of said means, and a lock bolt mechanism on the inner surface of the door including a reciprocable lock bolt, a turn button adapted to only advance said lock bolt to its locked position, and means actuated solely by rotation of the inner knob and said sleeve member to retract both said lock bolt and said latch bolt.

3,101,605
GAS METER PROVER
John D. Adair, Oakland, Calif., assignor to American Meter Company, Incorporated, Philadelphia, Pa., a corporation of Delaware
Filed Aug. 4, 1961, Ser. No. 129,463
3 Claims. (Cl. 73—3)



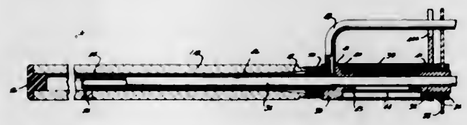
3. Apparatus for obtaining a digital presentation of meter proof in a proving bell test comprising scanning means having a starting position, a scale, means for positioning said scale relative to said starting position in accordance with the position of the proving bell at the end of a test, means for driving the scanning means at the end of a test relative to the proving wheel from said starting position to one end of the scale, means for concurrently driving a pulse generator, and a counter for counting the pulses generated by said generator while the scanning means is moving to said one end of the scale.

3,101,606
PROGRAMMER FOR CHROMATOGRAPHY
Lewis B. Roof, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 20, 1958, Ser. No. 743,330
11 Claims. (Cl. 73—23)



11. The combination comprising a chromatographic column; a sample cell connected to said column; a Wheatstone bridge having one branch disposed in said sample cell; a pair of output terminals on said bridge; means for indicating and recording in bar graph form selected signals appearing at said output terminals; means for connecting said output terminals to said means for indicating including a plurality of parallel-connected attenuators, each said attenuator having an individual switch in series therewith; and a programmer for actuating said individual switches in a predetermined sequence comprising a switch-actuating member for each said switch; a pair of actuating devices for each said member, one device of each of said pairs actuating said member of a corresponding switch to cause said switch to close, a second device of each of said pairs actuating said member to cause said corresponding switch to open independently of said first device, actuating device adjusting means for adjusting the angular position of each of said devices independently to vary the angular relationship between said devices and between said devices and driving means therefor; a chart motor connected to said means for indicating and recording; and a delay relay means actuated in response to said one device of each of said pairs to deenergize said chart motor and to energize said chart motor for a predetermined period of time when each of said switches is opened.

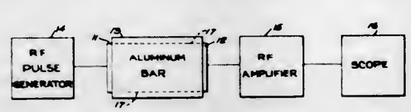
3,101,607
APPARATUS FOR AND METHOD OF TESTING WIND INSTRUMENTS FOR LEAKAGE
Robert B. Taylor and Robert G. Walker, Fort Wayne, Ind., assignors to H. & A. Selmer, Inc., Elkhart, Ind., a corporation of Indiana
Filed June 21, 1961, Ser. No. 118,592
13 Claims. (Cl. 73—40)



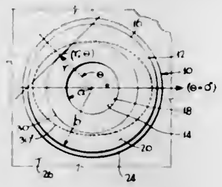
3. In apparatus for testing wind instruments and sections thereof for leakage, a pair of concentric tubes over the outer of which the test piece is telescoped, a sealing seat on said outer tube to receive one end of the test piece, a pair of separate air lines one leading to each of said tubes, means to seal off a portion of the test piece to air from the outer tube, the inner tube extending beyond said means, a plug in the end of the test piece whereby the other portion thereof receives air from the inner tube, and control means to selectively govern air flow through said air lines.

3,101,608
METHOD AND APPARATUS FOR STRESS ANALYSIS
Robert W. Benson, Oak Park, Ill., and Verner J. Raelson, Valparaiso, Ind., assignors to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Filed Feb. 18, 1959, Ser. No. 794,153
7 Claims. (Cl. 73—67.5)

1. In a method for determining the stress in a solid, including residual stress, wherein the extent of change in wave polarization for differently applied stresses is known for such solid, comprising the steps of: orienting a first shear wave transducer to one face of said solid; orienting a second shear wave transducer to the opposite face of said solid in a manner whereby the preferred directions of vibration of said first and second transducers are the same; energizing said first transducer to transmit ultrasonic shear waves through said solid; connecting said second transducer to a voltage indicator; rotating said second transducer until a maximum amplitude signal is received; and measuring the angular excursion of said second transducer required to obtain said maximum signal.



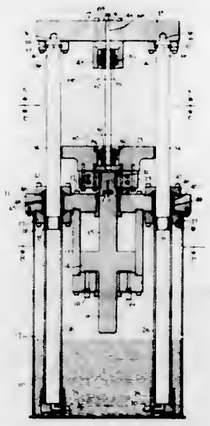
3,101,609
PHOTOELASTIC STRAIN GAUGES
Salomon Redner, Norristown, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 16, 1961, Ser. No. 145,086
3 Claims. (Cl. 73—88)



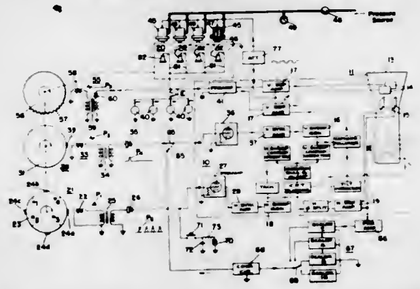
1. The method of producing a photoelastic testpiece having a radially symmetrical biasing pattern of birefringence, which method comprises the steps of:
(*a*) forming from sheet photoelastic material
a flat circular testpiece blank having a concentric aperture,
(*b*) heating the blank
to a temperature within the photoelastic critical temperature range of the material,
(*c*) subjecting the blank
to an outwardly radially directed positive pressure applied at the periphery of the aperture,
(*d*) cooling the blank
below the photoelastic critical temperature range while maintaining application of the radially directed pressure, and
(*e*) thereafter reducing the pressure
whereby a substantially concentric residual pattern of biasing birefringence is exhibited by the testpiece blank in the absence of external loading.

3,101,610
HIGH SPEED UNIVERSAL SETTING TESTING MACHINE
Russell B. Rosander, Wayne, Pa., assignor, by mesne assignments, to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 25, 1959, Ser. No. 801,941
7 Claims. (Cl. 73—93)

2. In a high speed testing machine comprising in combination, a base, a crosshead table rigidly secured on the base, column locking means comprising axially rigid laterally flexible imperforate sleeves secured to said table against endwise axial movement relative thereto, means attached to said crosshead table forming sealed pressure fluid chambers between said crosshead table and the mid-portion of the length of said sleeves, rigid smooth columns slidably guided in said sleeves, and means for supplying pressure fluid to or exhausting fluid from said chambers to lock the sleeves to the columns or to release the columns from the sleeves.

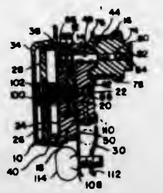


3,101,611
ANALYZER FOR INTERNAL COMBUSTION ENGINES
Alfred E. Traver, Great Neck, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 20, 1960, Ser. No. 44,070
6 Claims. (Cl. 73—116)



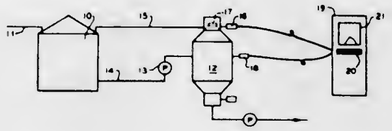
1. A multi-cylinder engine analyzer comprising a cathode-ray oscilloscope having horizontal and vertical deflection circuits each including a sweep generator, a first synchronizing means including structure rotating in synchronism with the crankshaft of said engine and producing an input pulse for triggering the horizontal sweep generator as each piston of said engine in turn passes through a reference position in its cylinder, a second synchronizing means for deriving from a preselected number of the output signals of said horizontal sweep generator an input signal for triggering the vertical sweep generator, said first and second synchronizing means cooperating with said sweep generators to produce a cathode-ray raster whose vertically spaced lines provide time bases each for at least one event occurring during the cycle of the corresponding piston, detector means respectively associated with said cylinders and responsive to said events to produce electrical signals applied to the vertical deflection circuit of said oscilloscope for appearance in the successive lines of the raster in correlation to piston reference position, and means for injecting additional pulses into said horizontal deflection circuit to bring the raster line corresponding with a particular cylinder to a desired position in the raster-line sequence.

3,101,612
FISHING LINE LENGTH AND BOAT SPEED GAGE
John G. Warhol, 14041 Vernon, Oak Park 37, Mich.
Filed May 25, 1959, Ser. No. 815,456
10 Claims. (Cl. 73—187)



1. A measuring device comprising a drive shaft, a drive wheel operatively associated with said drive shaft and a propeller attached to said drive wheel for producing rotation of said drive shaft of a predetermined amount representative of the magnitude of a quantity to be measured, a pair of other coaxial rotatable means, resilient means directly connecting said other rotatable means and said drive shaft for transferring rotation of said drive shaft into relative angular movement between said other rotatable means, and means attached to said other rotatable means for indicating the quantity to be measured as a function of said relative angular movement therebetween.

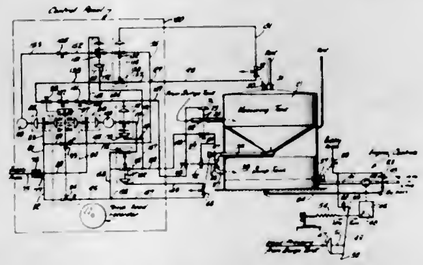
3,101,613
TEMPERATURE CORRECTED VOLUME MEASUREMENT
Louis E. Kuntz, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 3, 1961, Ser. No. 93,268
14 Claims. (Cl. 73—223)



1. A method for metering liquid which comprises transferring a fixed volume of said liquid, recording a nominal value representative of said fixed volume corrected to a reference temperature from a fixed temperature, measuring a temperature representative of the temperature of said volume, automatically producing and recording, responsive to said temperature, a number of electrical pulses representative of the difference between said nominal value and the amount of said volume corrected to said reference temperature.

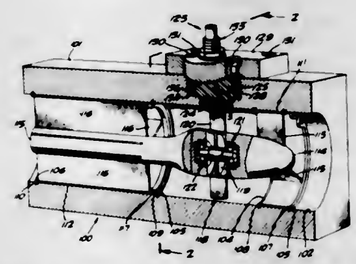
3,101,614
PNEUMATIC CONTROL SYSTEM
Laurence M. Hubby, Bellaire, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 4, 1959, Ser. No. 850,827
6 Claims. (Cl. 73—224)

1. A pneumatic control system for automatic custody transfer of fluids comprising in combination a known volume measuring tank, a fill valve for controlling the introduction of fluid to said measuring tank, a drain valve for controlling the removal of fluid from said measuring tank, pneumatic control means for actuating each of said fill and drain valves, a first pneumatic valve, first fluid level responsive means at the full level of said measuring tank, a second pneumatic valve, second fluid level responsive means at the empty level of said measuring tank, means for actuating said first pneumatic valve in response to said first fluid level responsive means, means for actuating said second pneumatic valve in response to said second fluid level responsive means, a third pneumatic valve actuated by said fill valve when in the closed position, a fourth pneumatic valve actuated by said drain valve when in the closed position, a pneumatic control valve having two positions, pneumatic circuit means for connecting a source of pneumatic pressure to said control valve, a fifth pneumatic valve having a pneumatic actuator therefor, a sixth pneumatic valve having a pneumatic actuator therefor, additional pneumatic circuit means for connecting said control valve to each of said fifth and said sixth pneumatic valves for actuation there-



of alternatively, said additional pneumatic circuits including a connection to each of said pneumatic actuators via said first and second pneumatic valves respectively, pneumatic circuit connections from said control valve via said fifth and sixth pneumatic valves and via said third and fourth pneumatic valves in series with each respectively for carrying pressure to said fill and drain valve pneumatic control means in the alternative, with interlock created by said third and fourth valves, and counting means connected to said control valve for indicating the number of times it is in the position for connecting pneumatic pressure to open said drain valve and deliver a tank of fluid.

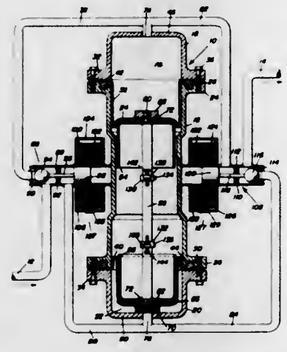
3,101,615
FLOWMETER
Carlo Pavone, North Hollywood, Calif., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Feb. 2, 1960, Ser. No. 6,222
7 Claims. (Cl. 73—231)



1. Apparatus for producing an output signal representative of a rotational movement, said apparatus comprising:
a frame;
a member having at least one radially extending metal projection;
means mounting said member on said framework in a manner to permit rotation of said member indefinitely in one direction about an axis other than that of said projection;
said member being arranged to receive a force that produces rotational movement of said member;

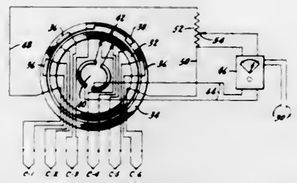
a radio frequency oscillator having a tuned circuit that controls the oscillator frequency including an inductor disposed substantially free of magnetic coupling to any other coil;
a dielectric member extending through said inductor; and
means supporting said inductor in a fixed position relative to said framework to be contiguous to the metal of said projection only upon rotation of said projection-bearing member to one predetermined position, whereby the reactance of said inductor is altered when said projection moves into said one predetermined position, thereby altering the output signal from said oscillator and so indicating rotation of said projection-bearing member.

3,101,616
VOLUMETRIC POSITIVE DISPLACEMENT FLOW METER
Murray J. Klein, 6 Bay Ave., Patchogue, Long Island, N.Y.
Filed May 8, 1959, Ser. No. 812,003
14 Claims. (Cl. 73—263)



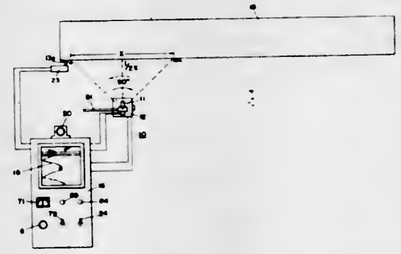
1. A flow meter construction for accurately metering liquid flow comprising a housing having a pair of opposed end walls, a rolling seal diaphragm retained proximate each of said end walls and spaced therefrom, chambers defined between each of said end walls and the diaphragm spaced proximately therefrom, a single acting piston fixed to each of said diaphragms, an unsupported connecting rod connecting said pistons, a single port associated with each chamber, inlet and discharge tubes communicating with each port and separate pressure biased valve means for controlling flow to and from said inlet and discharge tubes, an inlet pipe, each of said inlet tubes being positioned adjacent said inlet pipe, said valve means including an inlet valve seat interposed between each inlet tube and said inlet pipe, an inlet valve member movable between said inlet valve seats, an armature attached to said inlet valve member, a pair of electromagnetic coils, said electromagnetic coils positioned adjacent said armature for positively drawing said armature between two distinct positions, each of said distinct positions causing the inlet valve member carried by the armature to properly rest in an inlet valve seat, a source of electrical energy, switch means electrically interposed between said source and said electromagnetic coils for alternatively connecting said coils to said source, and snap-action control means for operating said switch means in response to reciprocation of said connecting rod, said snap-action control means including adjustable elements carried by said connecting rod, said connecting rod being subjected to reciprocal movement dependent on the flow required from said discharge pipe.

3,101,617
EXHAUST TEMPERATURE DIFFERENTIAL CIRCUIT
Leo T. Brinson, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 20, 1961, Ser. No. 96,737
5 Claims. (Cl. 73—341)



2. A means for temperature testing any one of a plurality of heat sensitive operating points, including a plurality of temperature sensing means, one at each of said operating points for simultaneously sensing the temperature at each point, means for selecting any one of said temperature sensing means, means for averaging the thus sensed temperatures, as they are sensed, from at least all of the non-selected points, and means for comparing the average temperature with the temperature sensed at the selected one point, simultaneously as said temperatures are sensed and averaged.

3,101,618
ROTARY KILN SHELL TEMPERATURE SCANNING SYSTEM
Richard J. Hance, Philadelphia, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 15, 1960, Ser. No. 69,488
5 Claims. (Cl. 73—351)

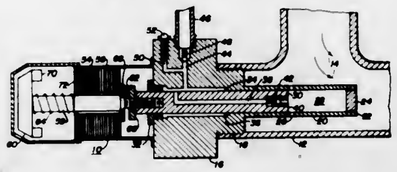


5. In a rotary kiln shell temperature scanning system of the type including a radiant energy detector, measuring and recording means, and alarm means actuated when a hot spot is detected the improvement of means to produce a scanning action between said detector and a portion of the kiln shell comprising a reversible motor drive unit, a pair of limit switches for said drive unit controlling actuation of said unit through an angle of about ninety degrees, a control switch for said drive unit operated by rotation of the kiln to initiate operation of said drive unit during each revolution of the kiln, a second control switch operated by said drive unit for producing an increment of rotation of said drive unit to cause rotation of the detector to view an adjacent area of the kiln, one of said limit switches in said drive unit producing a continuous reverse rotation thereof until stopped by said other limit switch to restore the detector to a starting position, and switch means disconnecting the output of the radiant energy detector from the measuring means during the continuous reverse rotation.

3,101,619
SAMPLING APPARATUS

Wesley L. Hunter, Arlington Heights, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Oct. 24, 1960, Ser. No. 64,373
8 Claims. (Cl. 73—422)

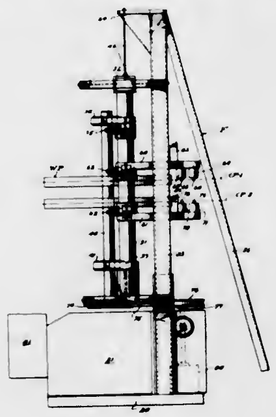


1. A device for sampling fluids in a receptacle comprising a piston housing including a closed-ended tubular portion projecting therefrom, said housing being adapted to mate with an opening in said receptacle so that said tubular portion projects thereinto, a piston slidably supported within said housing having advanced and retracted positions and cooperating with the interior of said tubular portion to form a first cylinder-like enclosure, said piston and piston housing being shaped to form a second enclosure extending therebetween for an axial distance substantially equal to the distance between said advanced and retracted positions of said piston, a port communicating said first enclosure and the exterior of said tubular portion at a point intermediate said advanced and retracted positions of the head of said piston, a passage in said piston communicating said enclosures, a check-valve in said passage for preventing flow toward said first enclosure, a second passage communicating said second enclosure and the exterior of said housing, and means for reciprocating said piston.

3,101,620
BALANCING EQUIPMENT

Richard W. French, Johnsville, Pa., assignor to Tinius Olsen Testing Machine Company, Willow Grove, Pa., a corporation of Pennsylvania

Filed Mar. 23, 1959, Ser. No. 801,313
2 Claims. (Cl. 73—471)

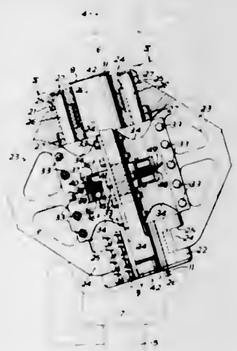


2. In a balancing machine:
an upright frame;
a cradle having means to rotatably mount a workpiece to be balanced, to cradle mounting the workpiece with its axis of rotation extending vertically and the unbalance of the workpiece producing a force for causing the cradle to vibrate;
vertically extending strain rod means connected between said frame and said cradle and suspending the cradle from the frame, the strain rod means permitting said cradle vibration;
first horizontally extending elastic rod means connected between said frame and said cradle adjacent the top thereof respectively on opposite sides of the rotational axis of the workpiece; and
a second horizontally extending elastic rod means connected between said frame and said cradle adjacent the bottom thereof respectively on opposite sides of said rotational axis, said first and second elastic rod means cooperating to confine said cradle vibration to a vertical plane.

3,101,621
RECIPROCATING ENGINES

Thomas Walter Bunyan, 7 Eversley Road, Upper Norwood, London SE. 19, England

Filed Nov. 25, 1960, Ser. No. 71,626
6 Claims. (Cl. 74—60)



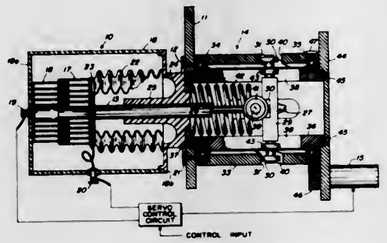
1. An engine comprising: a crankshaft having a crankpin disposed with its axis inclined to the axis of the crankshaft; a plurality of axially opposed cylinder-piston-units disposed in angular distribution about the axis of the crankshaft and each including a reciprocating element movable in the direction generally parallel to the axis of the crankshaft; a plurality of stiff transmission structures in angularly spaced planes extending outwards from and containing the axis of said crankpin; bearings at each end of said crankpin; coupling means connecting the outer ends of the transmission structures with the reciprocating elements of said cylinder-piston-units; means providing articulated connection between at least one of said transmission structures and said bearings with relative movement about an axis generally parallel with the axis of the crankpin; and shear plates flexible in the direction circumferentially of the crankpin, connecting at least said one of said transmission structures with at least one other of said transmission structures permitting relative transverse angular movement between transmission structures.

3,101,622
BALANCED CONTROL CAM FOR A DRIVEN VACUUM VARIABLE CAPACITOR

Vincent J. Grondahl, Hiawatha, and Frederick W. Johnson, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Jan. 15, 1962, Ser. No. 166,110
4 Claims. (Cl. 74—89)

4. In a drive system for setting a device having input linkage working against unidirectional nonlinear biasing force characteristics imposed throughout the range of operational settings by the device; a cylindrical cam member having a first cam contour and a second cam contour, a first cam rider and a second cam rider for following said first and second cam contours, respectively; a guide member rigidly mounted relative to said device and having means for guiding the motion of said first and second cam riders as they are driven by said cam member, said first cam rider being connected to the input linkage of said device for movement of said cam member to change the setting of said device and with the biasing force of said device being exerted through said first cam rider against said first cam contour; resilient means for continually biasing said second cam rider into

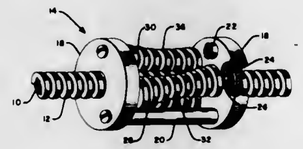


riding contact with said second cam contour for providing a force resultant in said cam member in opposition to a force resultant imposed on said cam member by the biasing force of said device acting through said first cam rider, and wherein, said first and second cam contours are opposite sides of a slot provided in said cylindrical cam member, means is provided for moving said cylindrical cam member, said cylindrical cam member has duplicate slots with a pair of matched upper contours and a pair of matched lower contours; and said first cam rider being a cam yoke for balanced riding along one of said pair of matched contours and said second cam rider also being a cam yoke for balanced riding along the other pair of matched contours as said cylindrical cam member is driven in rotation.

3,101,623
CARRIAGE TRANSLATING DEVICE

Vernon H. Hayes, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 19, 1961, Ser. No. 139,202
6 Claims. (Cl. 74—424.8)

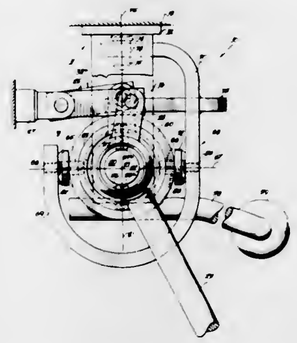


1. In a device of the class described, driving and driven members disposed for relative rotational and longitudinal movement, one of said members having a periphery forming a helical thread, the other of said members comprising a carrier encompassing a predetermined section of said thread, and a plurality of thread-engaging elements rotatably mounted in said carrier about separate axes respectively at an angle to the axis of said one member, said elements being grouped peripherally about said one member and having thread-engaging portions, said thread-engaging portions being contoured for contacting said one member over substantially all of said predetermined section.

3,101,624
MULTIPLE CONTROL MECHANISM

Marcus W. Hagen, Kenosha, Wis., and Don S. Strader, Mount Prospect, Ill., assignors to The Frank G. Hough Co., a corporation of Illinois

Filed Dec. 8, 1961, Ser. No. 158,091
10 Claims. (Cl. 74—471)

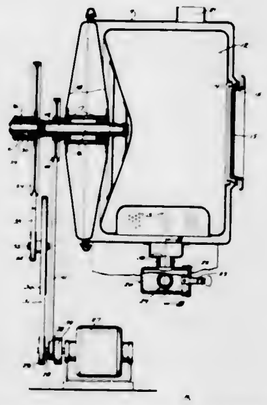


1. In a multiple control mechanism comprising a fixed support including a pair of spaced-apart outwardly extending members, a shaft having a first longitudinal axis fixedly mounted between said members, a hub having a first control arm at one end mounted for relative rotation about said first axis on said shaft, a first pair of aligned and spaced-apart members extending outwardly from said hub and lying on a second axis transverse and intersecting said first axis at a point, a first annular member having an outer peripheral surface and including a control lever connected to said hub by said first pair of aligned members, said control lever having a pivotal movement providing independent or simultaneous rotation of said first annular member about said first and second axes, said peripheral surface comprising an annular recess portion and an annular shoulder portion, said portions being spaced apart from each other, a second pair of spaced-apart and aligned members lying on a third axis transverse and intersecting said first axis at said point, a second annular member including a first pair of opposite aligned transverse apertures, said second annular member being concentrically and rotatably mounted on said peripheral surface substantially against said shoulder portion, a bail member including a U-shaped and an L-shaped portion, a pair of attached spacers at opposite ends of said U-shaped portion, said spacers including a second pair of opposite aligned transverse apertures, said second pair of aligned members extending through said aligned apertures and projecting into said recessed portion to connect said bail member and said second annular member to said first annular member for relative rotation therebetween, said L-shaped portion including a second control arm extending outwardly and having an aperture, means projecting from said support into said latter aperture providing a fourth longitudinal axis which intersects and is transverse to said first axis at said point whereby said bail member is rotatably mounted on said support, said first and second control arms being simultaneously or independently rotatable about said first and fourth axis during pivotal movement of said control lever about said first and second axis.

3,101,625
AUTOMATIC WASHING MACHINE

John F. Horvath, Milwaukee, Wis., assignor to International Duplex Corporation, San Francisco, Calif., a corporation of Delaware

Filed July 6, 1960, Ser. No. 41,180
2 Claims. (Cl. 74—472)



1. A two-speed transmission for a rotatable clothes receiving drum having a drive shaft therefor, in turn driven by a two-speed drive motor having a drive shaft extending therefrom, said transmisison including:

(*a*) a speed responsive clutch mounted coaxially about the drive shaft of said motor;

(*b*) a high-speed drive sheave rotatably mounted about the said motor drive shaft adjacent said speed responsive clutch, said clutch having a driven section secured to said high-speed drive sheave and a drive section secured to said motor drive shaft whereby said high-speed drive sheave may be engaged by said drive section and rotated when said drive section attains a predetermined speed;

(*c*) a low-sped drive sheave fixedly secured to the said motor drive shaft;

(*d*) a high-speed driven sheave fixedly secured to said drum drive shaft;

(*e*) a low-speed driven sheave mounted coaxially about said drum drive shaft;

(*f*) power transmission means connecting said two high-speed sheaves and said two low-speed sheaves;

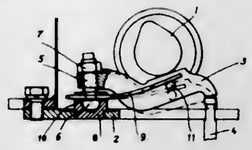
(*g*) and means associated with said low-speed driven sheave permitting the said sheave to engage and turn the said drum drive shaft when the said sheave is rotated by the said low-speed drive sheave and to become disengaged from the said drum shaft when the high-speed driven sheave on the said drum drive shaft is rotated by the high-speed drive sheave on the said motor shaft.

3,101,626
OVERHEAD-CAMSHAFT ROCKER-ARM

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France

Filed Nov. 7, 1960, Ser. No. 67,774
Claims priority, application France Nov. 13, 1959
8 Claims. (Cl. 74—559)

1. A device for the control of valves by an overhead camshaft comprising an intermediate rocker arm having one end that engages the valve and having at its other end a swivel joint constituted of two elements, element one being carried by the rocker arm and the other element forming a support therefor, said device further comprising a spring mounted for engagement with said support forming element and in engagement with said rocker arm at a point intermediate of the length thereof to urge it

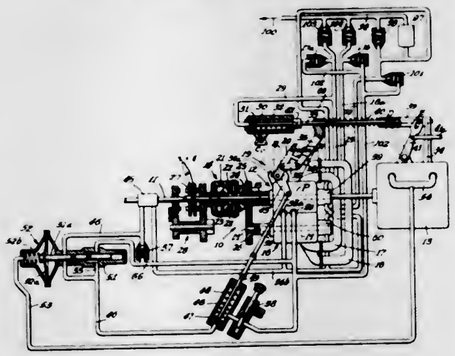


in valve-engaging poistion and ensure the guiding of said rocker arm in operation.

3,101,627
TRANSMISSION SYSTEMS AND CONTROLS THEREFOR

Douglas F. Linsley, Westport, Conn., and Harry J. Miller, Jr., Jericho, N.Y., assignors to Morgan Development Laboratories, Inc., Westport, Conn., a corporation of Delaware

Filed Aug. 17, 1959, Ser. No. 834,269
26 Claims. (Cl. 74—645)



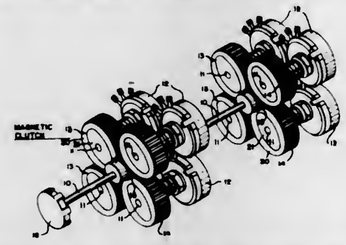
1. A variable speed transmission having an acceleratable and decelerataible prime mover, said transmission including a differential mechanism operably connected to an output shaft and having one side thereof driven by said prime mover and the other side by a hydraulic speed drive unit infinitely variable between limits, said variable speed unit including a hydraulic pump operated by said prime mover and a hydraulic motor operated by said pump and having control means for infinitely varying the output speed of the unit between said limits: the improvement comprising accelerator means for varying the speed of the prime mover; and resiliently yielding means responsive to movement of the accelerator means tending to coordinately and directly advance said control means from its non-driving limit toward its maximum driving limit depending on the extent of movement of the accelerator means.

3,101,628
POTENTIOMETER POSITION CONTROL APPARATUS

Edwin F. Shelley, New Rochelle, N.Y., and George A. Jonas, Bethesda, and Sidney Weiser, Silver Spring, Md., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware

Original application July 2, 1959, Ser. No. 824,611, now Patent No. 3,007,097, dated Oct. 31, 1961. Divided and this application June 6, 1960, Ser. No. 34,133
2 Claims. (Cl. 74—665)

1. Apparatus for angularly positioning any one of a plurality of rotatable control shafts provided to operate a plurality of control devices, comprising a single centrally located drive shaft for positioning the shafts of said control devices, said drive shaft being movable only in rotation, a first set of control devices comprising a plurality of control devices circumferentially located about said drive shaft, a second set of control devices comprising a plurality of control devices circumferentially located about said drive shaft and spaced along said drive shaft from said first set, each of said devices having a rotatable control shaft operatively associated therewith,

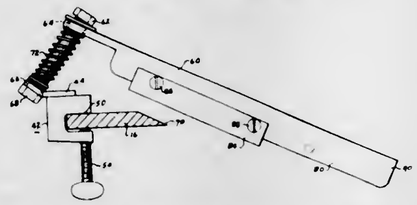


a plurality of electro-magnetically actuated clutches, one for each of said control devices, each of said clutches having a pair of members and each of said clutches being adapted to be individually energized, a member of each of said clutches being securely coupled to the shaft of a control device, and means drivingly connecting a second member of each of said clutches to the said drive shaft, whereby the shaft of any individual control device may be rotatably positioned by individually energizing the clutch associated with that control device.

3,101,629
LAWN MOWER SHARPENING DEVICE

Frederick J. Koelndorfer, 56270 Harman Drive, Mishawaka, Ind.

Filed Feb. 5, 1962, Ser. No. 174,339
3 Claims. (Cl. 76—82.1)



3. A device for sharpening the blades of rotary lawn mowers, comprising a base, a pair of spaced lugs on said base having slots therein for receiving the back edge of the mower blade, screws for securing the blade in said slots, a means secured to said base and extending outwardly therefrom transverse to the blade, an arm pivoted on said last mentioned means and extending transverse of the cutting edge of said blade, and a metal cutting means secured to said arm for engaging and sharpening the cutting edge of said mower blade.

3,101,630
TAPPING OR DRILLING MACHINE POWER TRANSMISSION

Anthony F. Heimerl, Santa Monica, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 19, 1962, Ser. No. 174,131
5 Claims. (Cl. 77—34.4)

1. A machine tool comprising

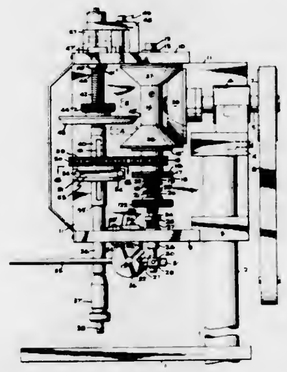
(1) a shaft and a power transmission spool mounted on said shaft,

(*a*) said spool including a pair of spaced cones;

(2) a power transmission cone rotatably mounted between said cones referred to in (*a*) above, on an axis perpendicular to the said shaft, and means to rotate said power transmission cone from a power source;

(3) means to rotatably mount said shaft and means to axially displace said shaft;

(4) a second shaft rotatably mounted adjacent to and along said first-named shaft;



(*a*) a power transmission means from said first named shaft to said second shaft;

(5) a lead screw connected to said second shaft, to axially move said shaft during rotation;

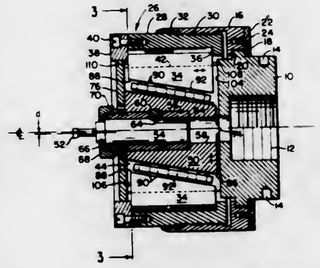
(6) a stop disc mounted on said second shaft and extending between said spaced cones on said spool;

(7) and means to mount a rotating cutting tool at one end of said second shaft.

3,101,631
PRECISION ADJUSTING HEAD FOR MACHINE TOOLS

Joseph F. Huff, Hyde Park, Mass., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California

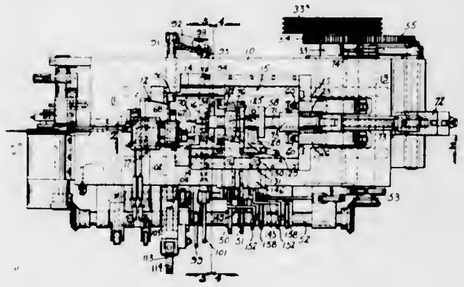
Filed June 19, 1961, Ser. No. 118,059
3 Claims. (Cl. 77—58)



1. For use in a machine tool, means for adjusting the position of a part, comprising, in combination: a body adapted to be mounted on a machine tool, a cam member comprising a ring circumferentially spaced about said body and a pair of cam portions extending inwardly within said ring, a slide adapted to be drivingly connected with a part of the machine tool to be adjusted, an adjustment barrel circumferentially spaced about said body and mounted for rotation thereon, said barrel being threadedly engaged with said ring for adjusting move-

ment of said cam portions parallel to a rectilinear axis lying in a plane, said body including a pair of spaced parallel walls forming a slideway slidably receiving said cam portions in diametrically-opposed relation with respect to said axis, said slide being confined in said slideway between said walls and said cam portions for sliding motion parallel to said plane, said head having means confining said slide to rectilinear motion normal to said axis, said cam portion and said slide being formed with confronting cam surfaces, and a plurality of ball bearings interposed between said confronting cam surfaces with a press-fit to drivingly connect said cam member with said slide for adjustment of the position of said slide in response to rotary movement of said barrel.

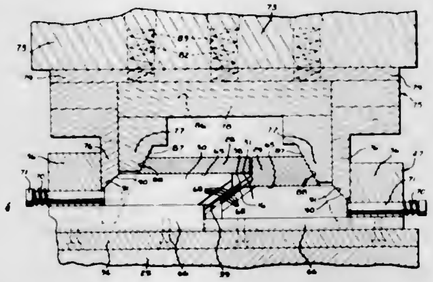
3,101,632
MACHINE FOR FORMING METAL ARTICLES
Herbert L. Hoyt, Waterbury, Conn., assignor, by mesne assignments, to Textron Industries, Inc., a corporation of Delaware
Filed Dec. 9, 1957, Ser. No. 701,490
9 Claims. (Cl. 78—17)



1. Means for reciprocating the gate of a header or like apparatus having a frame upon which the gate is reciprocably mounted and a die on the frame with which cooperates a punch carried by the gate, said means comprising a crank shaft having a pair of spaced crank portions thereon, a double-armed pitman pivoted at its forward end to the gate and having spaced rearwardly extending arms, each of which is engaged with one of said crank portions, and a plunger carrying said punch and slidably mounted on the frame in a position disposed between the arms of the pitman.

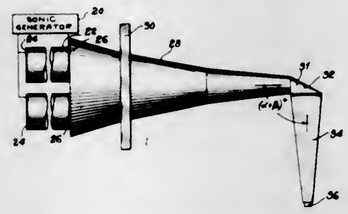
3,101,633
APPARATUS FOR KNURLING ARTICLES
Frank A. Klasek, La Grange Park, Ill., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed July 11, 1961, Ser. No. 123,210
10 Claims. (Cl. 78—45)

4. An apparatus for forming knurls on articles of different thicknesses comprising a support, a pair of jaws mounted on said support for movement toward each other along a predetermined path for clamping the article therebetween, a pair of knurling dies mounted on said support for movement toward each other for knurling the article therebetween, a first member having a pair of cams fixedly secured thereto for actuating said jaws, a second member having a pair of cams fixedly secured thereto for actuating said knurling dies, and means for mounting said first and said second members for movement toward said support along an axis transversely of said path for actuation of said first member and said jaws to clamp the article and for actuation of said second member and said dies to knurl the article, the movement of said first member toward said support being arrested by said jaws



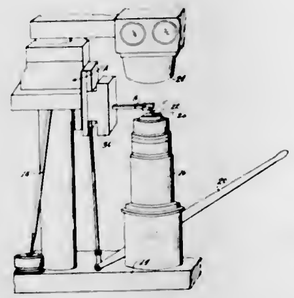
in various positions in accordance with the thickness of the article and said first member serving to limit the movement of said second member to control the height of the knurls being formed on the article.

3,101,634
SONIC WELDER
Jack B. Cooper, Somerville, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Sept. 12, 1960, Ser. No. 55,597
19 Claims. (Cl. 78—82)



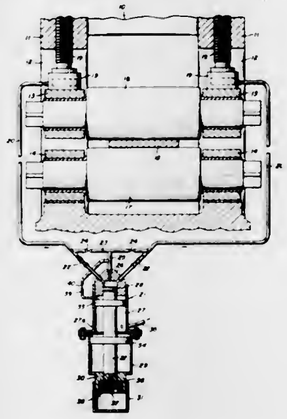
1. A sonic welder comprising a sonic generator; at least one sonic transducer; a first tapered mechanical transformer; said sonic transducer being affixed to said first tapered mechanical transformer at the larger end thereof; said sonic generator being connected to said sonic transducer such that said sonic transducer is vibrated at a sonic rate in compressional mode and propagates a sonic wave; the length of said first tapered mechanical transformer being equal to an integral multiple of a half wave length of said sonic wave; said first tapered mechanical transformer being vibrated in compressional mode at said sonic rate; a reflecting element having a reflecting surface affixed to said first tapered mechanical transformer at the smaller end of said first tapered mechanical transformer; said reflecting surface intersected by and inclined with respect to the longitudinal axis of said first tapered mechanical transformer; a second tapered mechanical transformer affixed at the larger end thereof to said reflecting element to receive the reflected waves therefrom and having a straight longitudinal axis extending between the opposite ends thereof and making an angle of the order of 45° to 120° with the longitudinal axis of said first tapered mechanical transformer where the reflected transverse wave is propagated along the longitudinal axis of said second tapered mechanical transformer; said second tapered mechanical transformer being such that the sonic wave reflected from said reflecting surface is propagated therein is in transverse mode along said longitudinal axis thereof; the length of said second tapered mechanical transformer being an integral multiple of a half wave length of said transverse sonic wave propagated therein.

3,101,635
FINE WIRE BONDING TOOL
Frederick W. Kulicke, Jr., Philadelphia, Pa., assignor to Kulicke and Soffa Manufacturing Company, Fort Washington, Pa., a corporation of Pennsylvania
Filed Nov. 8, 1960, Ser. No. 68,121
6 Claims. (Cl. 78—82)



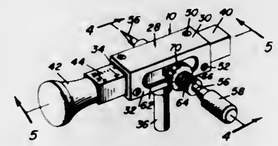
1. A bonding tool for thermocompressively securing fine wire to semiconductor components comprising a frame, a lever arm of rectangular cross-section horizontally extending from said frame and pivotally supported about a horizontal axis therein so that at least one vertical surface of said lever arm will define a reference plane parallel to the plane of pivotal rotation, a block having a rectangular groove therein complementary with said rectangular lever arm and slidably supported thereon so that a vertical face of said block will be a reference parallel to the vertical reference surface of said lever arm, means to clamp said block on said lever arm, a rectangular slot in the vertical reference face of said block disposed at an angle of 45° with the horizontal axis of said lever arm and having an internal wall parallel to the vertical reference face, a bonding needle having longitudinally-extending plane sides rectangularly disposed with respect to each other and complementary with said slot, a flat highly-polished plane facet at one end of said needle intersecting the longitudinal axis and one pair of opposed sides thereof at substantially a 45° angle and disposed perpendicular to the planes of the second pair of opposed sides to form a cuneiform point having an apical edge coextensive with one of the first mentioned pair of sides, a convex cylindrical surface generated on said edge from a radial axis parallel thereto, a second highly polished plane facet at the end of said needle perpendicular to the planes of the first mentioned pair of sides, intersecting one of the second pair of sides at substantially a 45° angle, and cutting across said cylindrical surface, said needle being detachably mounted in said slot with said cuneiform point projecting below the bottom of said block so that a plane bisecting the angle of said cuneiform point is perpendicular to the longitudinaly axis of said lever arm, and a screw in threaded engagement with said block adjacent said slot and having a head abutting against the outwardly facing side of said needle whereby said needle may be easily and rapidly secured within said block in accurately referenced position so that said cylindrical surface will make line contact with wire to be bonded to the semiconductor component, the cuneiform point of said needle defining an arrow for precisely positioning said needle at the point at which the bond is to be made, and the line contact being adapted to be oriented perpendicular to the axis of the wire in two planes without directly touching the semiconductor component.

3,101,636
BREAKER-BLOCK SYSTEM FOR MILL ROLLS
Robert A. Schultz, Penn Hills Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 23, 1960, Ser. No. 57,943
5 Claims. (Cl. 80—57)



1. An overload-relief system for a mill roll comprising hydraulic breaker blocks, one at each end of the roll, subject to the load on the roll, a relief cylinder and piston apart from the roll, said cylinder having a head at each end, pipe connections between the breaker blocks, respectively, and one end of said cylinder, a check valve in each pipe connection preventing back flow from said cylinder to said breaker blocks, the head at the other end of said cylinder having a shear disc on which said piston bears and means securing the rim of the disc to said last-mentioned head.

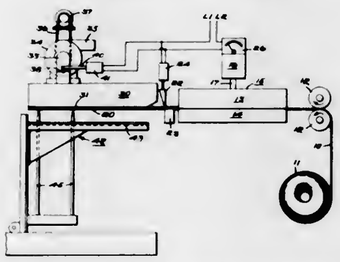
3,101,637
GASKET CUTTING DEVICE
Wilfred Breau, Miami Beach, Fla. (138 NE. 50th Terrace, Miami, Fla.)
Filed June 10, 1960, Ser. No. 35,250
5 Claims. (Cl. 82—24)



5. A cutting tool support for securement to a tool holder on a lathe having a rotatable face plate type chuck, said tool support comprising an elongated tubular guide means adapted for securement to said tool holder with said guide means disposed paralleling said face plate chuck, elongated cross feed slide means slidably disposed within said tubular guide means, adjustable friction bearing means mounted within said guide means snugly and slidably receiving said cross feed slide means for longitudinal reciprocating movement of the latter through said tubular guide means, elongated support means carried by said cross feed slide means adapted to guidingly support an elongated cutter shank for longitudinal reciprocal movement transversely of said cross feed slide means and including adjustable depth gauge means mounted on and for adjustable movement longitudinally of said support means and adapted for engagement by a portion of an abutment supported from said

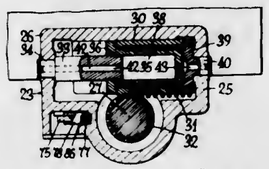
cutter shank for limiting movement of the shank in one direction relative to and laterally of said tubular guide means toward said face plate chuck.

3,101,638
SHEET STACKING MACHINES
Gerald S. Rhicard and Joseph J. Wilson, Staunton, Va., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 29, 1959, Ser. No. 823,703
4 Claims. (Cl. 83—95)



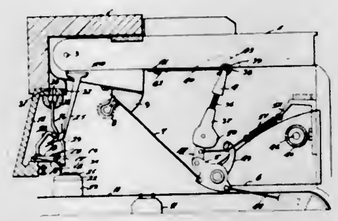
1. In combination with a punch press having means for working on sheet metal stock, and having power driven rolls for passing said stock substantially horizontally through and beyond said press, a suction box having a substantially horizontally extending bottom above the path of the worked-on sheet as it emerges from said press, said bottom having a plurality of spaced-apart perforations extending therethrough, means for applying suction to the interior of said box for causing suction through said perforations to hold a worked-on sheet against said bottom, means between said press and bottom for severing a worked-on sheet from said stock, means for operating said severing means after said sheet is held against said bottom and means for concurrently disabling said suction applying means to permit the severed sheet to fall from said bottom.

3,101,639
AUTOMATIC DIE CLAMPING MECHANISM FOR POWER PRESSES
Robert H. Cederleaf, Tonawanda, N.Y., assignor to Niagara Machine & Tool Works, Buffalo, N.Y.
Filed Sept. 28, 1959, Ser. No. 842,736
6 Claims. (Cl. 83—698)



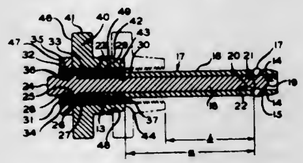
1. Die clamping means comprising a casing, an operating shaft journaled therein, and a clamp member associated with said operating shaft, a rack member guided for reciprocating movement in said casing and a meshing pinion fixed to said operating shaft, said rack member comprising a pair of coaxial, radially spaced sleeve portions, the inner sleeve portion being open at one end and closed at the other to form fluid chambers at opposite sides of said closed end, the outer sleeve portion being fixed to the inner sleeve at the open end of the latter and radially spaced therefrom at the other end to form an annular space, a piston fixed to one end of the casing and projecting into the open end of the inner sleeve portion and an annular piston fixed to the other end of the casing and projecting into said annular space, said pistons having fluid passages therethrough for selectively supplying operating fluid pressure to said fluid chambers to reciprocate said rack member in opposite directions.

3,101,640
STRING DAMPER ASSEMBLY FOR MUSICAL INSTRUMENTS
Lyle M. Hartman, Ohaton, Alberta, Canada
Filed Sept. 6, 1960, Ser. No. 54,311
1 Claim. (Cl. 84—255)



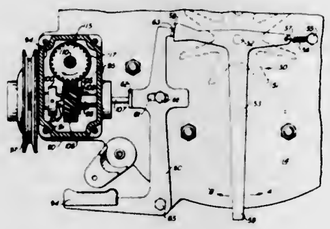
In a musical instrument, the combination of a frame, a depressible note bar pivoted at one end thereof to said frame, a string underlying said note bar, a hammer operatively connected to said note bar and adapted to strike said string when the note bar is depressed, and a string damper assembly comprising a support member having an upper portion secured to said frame and a lower portion, a vertically swingable lever pivoted at one end thereof to the lower portion of said support member above said string, an angle bracket having a vertical arm pivotally connected to the other end of said lever and a horizontal arm, a damper pad carried by the horizontal arm of said angle bracket, said damper pad being respectively engageable with and disengageable from said string when said bracket is lowered and raised by said lever, an upwardly extending bar secured at its lower end to the vertical arm of said angle bracket, a vertically apertured guide carried by the upper portion of said support member and having the upper end portion of said bar slidable therein whereby to guide the raising and lowering movement of said angle bracket and damper pad, a rod-shaped actuator secured to the intermediate portion of said lever and extending upwardly therefrom, a rotatable roller mounted at the upper end of said actuator, a limb secured to the pivoted end portion of said note bar and projecting downwardly therefrom, and a cam provided at the lower end of said limb, said cam being engaged by said roller whereby said actuator may raise said damper pad from said string when said note bar is depressed and whereby the damper pad may return by gravity to its string engaging position when the note bar is released.

3,101,641
ADJUSTABLE BALL PIN
Earl E. Walker, Kirkwood, and Orville C. Miller, Maplewood, Mo., assignors to Carr Lane Manufacturing Co., St. Louis County, Mo., a corporation
Filed Nov. 4, 1960, Ser. No. 67,315
2 Claims. (Cl. 85—5)



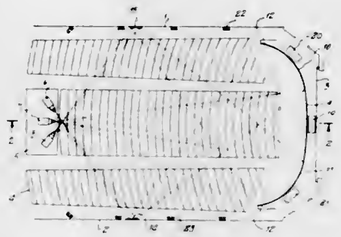
1. An adjustable-length ball pin comprising a tubular stem having a ball aperture at an inner end thereof and a threaded portion at an outer end opposite said inner end and a smooth outer cylindrical surface between the ball aperture and the threaded portion, a ball within the aperture and of such diameter as to project therethrough, a plunger received within the tubular stem having a ball-accommodating cam notch adjacent to its tip, the cam notch including a shallow portion of such depth as to project the ball beyond the outer cylindrical surface and a portion thereadjacent of such depth as to permit the ball to recede inwardly of the cylindrical surface, the plunger further having an annularly enlarged portion adjacent its outer end, said portion having an inward-facing abutment and an outward-facing annular shoulder, further comprising a helical spring compressed between the inward-facing abutment and the outer end of the tubular stem, an externally-threaded sleeve of greater outer diameter than the pin and of greater inner diameter than the annular enlargement of the plunger, the sleeve having at its inner end internal threads engaging the threaded outer end of the pin, and having at its outer end an inward-extending flange terminating in a central bore in which the plunger is accommodated for reciprocation and forming an inwardly-presented annular seat surface against which the annular shoulder is pressed by the spring, further comprising a handle having an axial bore internally threaded to mate with the threads on the external surface of the sleeve, the handle having a boss terminating in an inward-facing annular abutment surface, and means to restrain said handle from inadvertent rotation.

3,101,642
STOP MECHANISM FOR BRAIDING MACHINES
Walter Learned Beckwith, Jr., Warwick, R.I., assignor to Plastic Mold & Engineering Co., East Providence, R.I., a corporation of Rhode Island
Filed Dec. 17, 1962, Ser. No. 245,244
6 Claims. (Cl. 87—18)



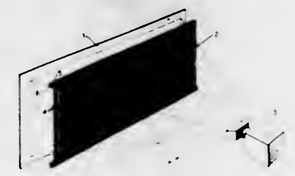
1. A braiding machine having a clutch mechanism consisting of a pulley shaft provided with a drive pulley, a clutch collar, provided with a drive tooth, fastened to said pulley shaft, a drive connecting spiral gear, provided with a plurality of spiral teeth and a driven clutch tooth, freely mounted on said pulley shaft, a main drive shaft, a driven spiral gear provided with a plurality of spiral teeth, means securing said driven spiral gear to said main drive shaft, means attaching a torque work load to said main drive shaft, a clutch rod, means forcing said clutch rod into engagement with said drive connecting spiral gear, whereby said driven clutch tooth engages said drive tooth and the plurality of spiral teeth on said drive connecting spiral gear engage the plurality of spiral teeth on said driven spiral gear, and means releasing said means forcing said clutch rod into engagement with said drive connecting spiral gear, whereby said torque work load through the angle of the "helices" of said plurality of spiral teeth allows relative sliding movement of said drive connecting spiral gear on said pulley shaft with said driven spiral gear and disengagement of said drive clutch tooth from engagement with said driven clutch tooth.

3,101,643
MOSAIC MOTION PICTURE PROJECTION APPARATUS
Russell H. McCullough, Los Angeles, Calif., assignor, by mesne assignments, to Cinemiracle Internation Picture Inc., a corporation of Delaware
Filed Aug. 26, 1954, Ser. No. 452,323
4 Claims. (Cl. 88—16.6)



1. In a theatre installation provided with a projection booth adjacent the rear of the theatre and a panoramic screen adjacent the front of the theatre and having a central portion and curved end portions, apparatus for projecting a composite image onto said screen derived from three separate films each containing one component of the composite image, said apparatus comprising a group of three projectors disposed in said booth, said projectors carrying the respective films and being symmetrically arranged with respect to said screen, the center projector casting an image component directly onto the central portion of said screen, and reflectors disposed cooperatively with respect to the side projectors to cast the image components therefrom along intersecting paths onto the respective end portions of said screen, whereby the optical distance between each of said end portions and the related side projector exceeds that between the central portion of the screen and the center projector, said side projectors having long focus lens systems producing a relatively great dep.h of focus, thereby avoiding image distortion on said curved side portions of said screen.

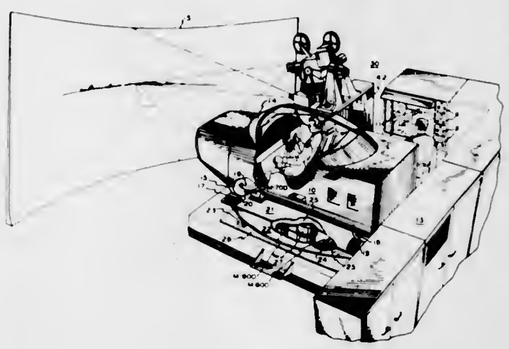
3,101,644
MOTION PICTURE PROJECTOR SYSTEM WITH 3-DIMENSIONAL EFFECT
Miguel Lopez-Henriquez, Caracas, Venezuela
(240 W. 73rd St., New York 23, N.Y.)
Filed Apr. 28, 1958, Ser. No. 732,772
4 Claims. (Cl. 88—16.6)



1. A projection system for projecting motion pictures, comprising a projector, a screen and a stationary grid disposed near said screen and between said projector and screen, said grid comprising a multiplicity of parallel vertically extending narrow strips of light absorbing material, said strips lying substantially in a plane and being separated by spaces of substantially the same width as said strips, said projector comprising film handling means for presenting successive frames of film to be projected, means for illuminating said frames successively and pro-

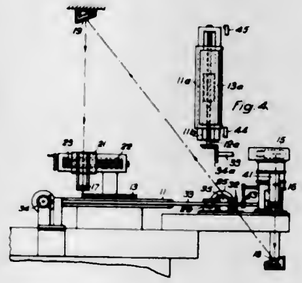
jecting means for simultaneously projecting through said grid and onto said screen a first image of a single picture in an individual frame of said film as viewed from a selected first angle and a second image of the same single picture in said individual frame as viewed from selected second angle different from said first angle, said projecting means comprising two horizontally spaced lens portions receiving light simultaneously from said frame and directing light toward said screen along separate horizontally spaced and angularly converging paths, one of said lens portions being substantially in front of one side portion of said single picture in said individual frame and at a substantial angle to and spaced further from the opposite side portion of said picture and the other of said lens portions being substantially in front of said opposite side portion of said single picture in said individual frame and at a substantial angle to and spaced further from said one side portion of said picture, and reflecting means closely in front of said lens portions for receiving light from said lens portions and directing it horizontally outwardly and then forwardly toward the screen to increase the horizontal distance between said paths as the light leaves the projector, said paths converging substantially at said grid, the light projected by said one lens portion passing through said grid at an angle to produce said first image on a first series of spaced parallel vertical bands of said screen and the light projected by said other lens portion passing through said grid at a different angle to produce said second image on a second series of spaced parallel vertical bands of said screen, said second series of spaced bands substantially filling the spaces on said screen between the bands of said second series, said grid permitting one eye of a viewer to see said first series of bands only and permitting the other eye of said viewer to see said second series of bands only, whereby one eye sees said first image only and the other eye sees said second image only to give an illusion of depth to the picture being viewed.

3,101,645
SIMULATED VIEWPOINT DISPLACEMENT APPARATUS
Harold S. Hemstreet, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Apr. 11, 1955, Ser. No. 500,325
12 Claims. (Cl. 88—24)



1. Apparatus for producing a visible display simulating the appearance of an area as viewed from a selected viewpoint using an object having the appearance of said area as viewed from a reference viewpoint comprising in combination, means for projecting images of said object onto a viewing surface, perpendicularly operating cooperative distorting means, and control means for controlling the operation of said distorting means so that the points of said area as shown in said display are displaced relative to the points of said area as shown in an undistorted display of said area in accordance with their respective distances from the horizon thereof, whereby to alter the apparent perspective of said image in accordance with the displacement of said selected viewpoint from said reference viewpoint.

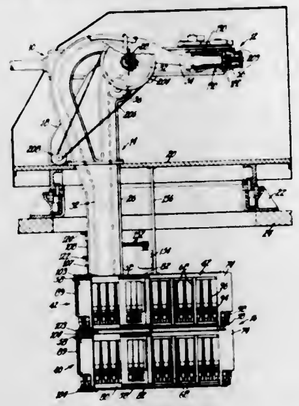
3,101,646
APPARATUS FOR PHOTOGRAPHICALLY FORMING CIRCULAR SCALES FROM LINEAR STRIPS
Edwin Reginald Dymott, Surbiton, and Ronald Graham Chalmers, East Molesey, England, assignors to National Research Corporation, London, England
Filed Oct. 7, 1958, Ser. No. 765,763
Claims priority, application Great Britain Oct. 10, 1957
6 Claims. (Cl. 88—24)



1. Apparatus for forming circular scales from a linear strip by photography comprising: an apertured strip guide; digital means continuously transporting a linear strip over the guide, which strip includes spaced markings representing at least part of the scale to be produced; a rotatable plate carrier having means for supporting a circular photographic plate; toothed gearing and final drive means coupling the digital means and the plate carrier and continuously rotating the plate carrier at a predetermined speed in relation to the linear speed of the strip; means illuminating the guide aperture and the part of the strip over the guide; an optical system positioned to cast an image of the aperture and strip part on the photographic plate at a reduction ratio of at least 20:1, a circular scale being thereby formed, the optical system including a movable projection lens and means for moving the projection lens radially relative to the plate carrier and the axis of rotation of the carrier to enable formation of at least one other circular scale, the width of the illuminated aperture being limited such that any point on the illuminated part of the strip has substantially no motion relative to the motion of the plate carrier.

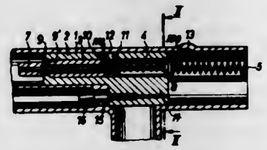
3,101,647
AMMUNITION HANDLING APPARATUS
Chester W. Greene, Lynn, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Apr. 4, 1952, Ser. No. 280,524
14 Claims. (Cl. 89—46)

2. Ammunition handling apparatus comprising a hoist conveyor having a series of shell holders thereon, means for operating said hoist conveyor to bring said holders successively to a loading station, a magazine conveyor movable intermittently to advance shells thereon one at a time to said station, mechanism operable simultaneously with said magazine conveyor for transferring the shell at said station from said magazine conveyor to said hoist conveyor, and controlling means operated by said first-mentioned means at the end of each movement of said hoist conveyor for actuating said magazine conveyor, said controlling means being mounted for movement into



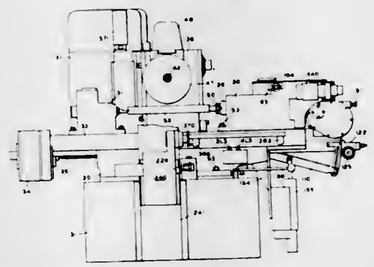
the shell receiving space of the holder at the loading station.

3,101,648
AUTOMATIC FIREARM WITH MEANS FOR MAINTAINING SLOW RATE OF FIRING
Fritz Walther, Wettersteinweg 4, Ulm (Danube), Germany
Filed Jan. 11, 1960, Ser. No. 1,797
Claims priority, application Germany Jan. 14, 1959
5 Claims. (Cl. 89—183)



1. In an automatic firearm having a housing defining a bore, bolt means mounted for reciprocal movement in the bore comprising an outer tubular member slidably engaged in the bore, an inner member having a wall slidably engaged in the outer member, a locking member for alternately locking the inner member to the outer member on one hand and the outer member to the housing on the other, a bore hole in the outer member for receiving the locking member and a corresponding recess in the outer surface of said wall of the inner member, an indentation on the inside of the housing, said indentation being located in the central part of the length of the housing, a stop on the inner member and a counterstop on the outer member, said counterstop being located in front of the stop, the front parts of the walls of said recess and said indentation forming tapered cam surfaces for controlling the locking member, a spring which acts from behind on the outer member, a second spring which acts from behind on the inner member, whereby when the inner and outer members are locked together by the locking member said tapered cam surface on the wall of said recess is located substantially in front of the indentation in the wall of the housing, so that when first the locked inner and outer members move back together from their locked positions the locking member reaches a position underneath the indentation in the housing and thus locks the outer member with the housing while the inner member is freed from the outer member thus allowing the inner member to move back in the housing against the opposition of the second spring until its kinetic energy is expended and it is returned thereby placing the recess in receiving relationship with the locking member, whereupon both the inner and outer members are again locked together and moved forward to their original position.

3,101,649
SPIRAL MILLING MACHINE
Robert W. Nashold, New Richmond, and Herman J. Baldwin and Vincent L. Mitchell, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 19, 1958, Ser. No. 781,747
9 Claims. (Cl. 90—11.5)

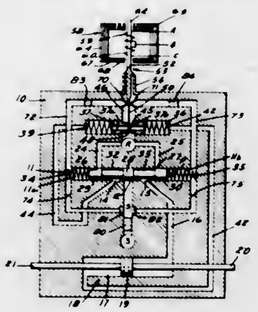


1. In a machine for producing longitudinally extending spiral flutes in a piece of work, said machine having a cutting tool, a spindle for supporting said tool, a work supporting spindle, and means for effecting axial movement of said work supporting spindle relative to said tool supporting spindle, the combination of a first servomechanism including a tracer and a servomotor controlled thereby for rotating said work supporting spindle, a second servomechanism including a tracer and a servomotor controlled thereby for moving said tool supporting spindle toward and from the axis of said work supporting spindle, a cam associated with each of said tracers for controlling the operation of its associated servomotor, and means for moving each cam relative to its associated tracer and in synchronism with the axial movement of said work supporting spindle effected by said moving means to thereby correlate the depth of cut effected by said cutting tool with the rotational position of the work as the latter is moved in the direction of its longitudinal axis by said moving means.

3,101,650
HYDROMECHANICAL RATE DAMPED SERVO SYSTEM
John W. Blanton, Sunland, Calif., assignor, by mesne assignments, to Bell Aerospace Corporation, Buffalo, N.Y., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,177
10 Claims. (Cl. 91—433)

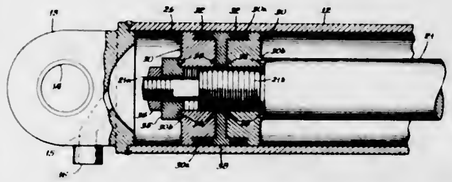
1. In a hydraulic control mechanism: a fluid pressure actuator mechanism adapted to be connected to a device to be actuated, said actuator having a part movable in opposite directions by fluid pressure; power valve means including a movable valve member; yielding means normally balancing said valve member at a neutral position whereat the mechanism is inoperative; feedback means including a feedback cylinder; a feedback piston slidable therein and having a passage therethrough with a restricted orifice therein; oppositely acting yielding means normally positioning said piston in a neutral position; a main pressure supply conduit connected with the power valve means; a conduit connecting said power valve means with one side of said actuator; a conduit connecting the other side of said actuator with one end of the feedback cylinder; a conduit connecting said power valve means

with the other end of said feedback cylinder; a pair of opposed nozzles spaced apart; a conduit connecting said supply conduit with one of said nozzles and having a restricted orifice therein, said conduit also having a connection with one side of said movable valve member downstream of said orifice; a conduit connecting said supply conduit with the other nozzle and having a restricted orifice therein and a connection, downstream of said orifice, with the other side of said movable valve



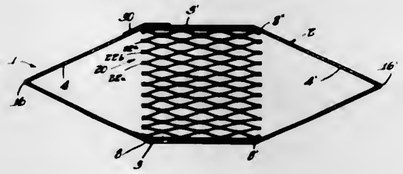
member; a flapper valve having a resilient part operably mounted between the discharge ends of said nozzles and having an operable connection with the feedback piston; and a torque motor for actuating said flapper valve, said flapper valve, when moved toward one of said nozzles causing an unbalancing of the fluid pressure on the power valve member which effects a fluid connection between the pressure supply conduit and power valve, between said power valve and pressure actuator and between said power valve and feedback cylinder.

3,101,651
RECIPROCATING HYDRAULIC MOTOR
Don S. Strader, Mount Prospect, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Sept. 15, 1961, Ser. No. 138,463
13 Claims. (Cl. 92—252)



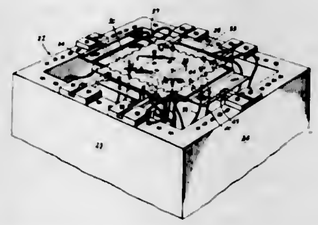
1. A piston assembly for a hydraulic reciprocating motor comprising, a piston rod having a certain diameter, one end portion of said piston rod being formed of a reduced diameter, a piston head formed of a relatively soft bearing metal, said piston head having a hole axially therethrough of a diameter substantially equal to said reduced diameter, a boss formed on each side of said piston head about said hole, each of said bosses having an outer diameter substantially equal to said certain diameter, said piston head carried on said reduced end portion with the boss on one side thereof abutting the side wall of said piston rod which extends radially from reduced end portion to said certain diameter, a load ring having an outer diameter substantially equal to said certain diameter, said load ring carried on said reduced end portion and abutting the boss on the other side of said piston head, and means for maintaining said load ring in tight engagement with said piston head.

3,101,652
METHOD OF MAKING PARTITIONED BOXES
Alan S. Imielinski, Chicago, Ill., assignor to Ivan Lippitz, doing business as Able Container Co., Chicago, Ill.
Filed Nov. 28, 1960, Ser. No. 72,042
2 Claims. (Cl. 93—37)



1. A method of making collapsed expandable partitioned box from a flat unfolded blank having a series of parallel fold lines forming at least two alternate rectangular panels forming opposite sides of a rectangular box and additional non-contiguous panels which, when the ends of the blank are connected together and the contiguous panels are folded into transverse planes along said fold lines, form the remaining sides of the box, said method comprising the steps of: forming a flat, self-sustaining unexpanded partition-forming member which has a width at least in the neighborhood of the width of one of the additional panels and when once expanded stretches into a condition which requires a compresisve force to maintain the same in a flat condition, said partition-forming member providing longitudinally extending open ended cells in its expanded state, anchoring one of the flat sides of said partition-forming member upon said one additional panel with the cells thereof running longitudinally of the panel, folding the panels of said alternate pair of panels in half toward the center of the blank and over the partition-forming member, bringing another additional panel over the opposite flat side of said partition-forming member and anchoring the same thereto and securing any loose unconnected panels of the blank immovably with respect to the contiguous ends thereof to form a folded box structure which can be unfolded into a completed partitioned box by unfolding said folded in half panels to bring the same into spaced parallel relation.

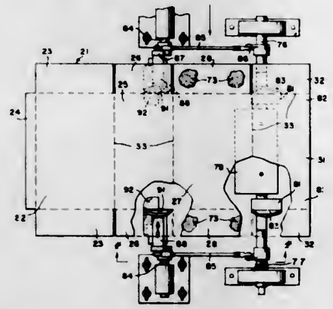
3,101,653
MACHINE FOR FOLDING PAPER BOXES
Edward R. Burden, Rte. 1, Box 56, Wylie, Tex.
Filed Sept. 6, 1960, Ser. No. 54,191
5 Claims. (Cl. 93—49)



1. In an automatic machine for folding paper boxes operable on a blank therefor, the combination of a frame including a hollow enclosure having sides and ends and being open at the top, movable means disposed vertically within the enclosure, centrally thereof, and having an upwardly extending piston rod movable reciprocally relative to the enclosure, a horizontally disposed rectangular bottom plate conforming to the bottom of the box supported on the piston rod for movement therewith, a pair of side plates, and a pair of end plates, conforming to the sides

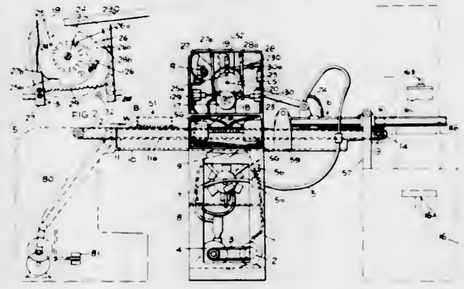
and the ends of the box, connected by spring biased hinges to the corresponding edges of the bottom plate, whereby the side plates and the end plates are normally supported in horizontally outwardly extending positions relative to the bottom plate, and are movable upwardly about the hinges, and means carried by the sides and ends of the enclosure, engageable with the side plates and the end plates, whereby the side plates and the end plates are adapted to be folded upwardly, one after the other, relative to the bottom plate upon downward movement of the bottom plate relative to the enclosure in response to the action of the movable means, means for applying a vacuum to the space between the bottom plate and the bottom of the box, and separate means for applying a vacuum to the spaces between the side plates and the sides of the box, whereby the bottom and sides of the box are positively secured to the bottom plate and the side plates, respectively, a pair of side plate extensions and a pair of end plate extensions, corresponding to inner thicknesses of the sides and ends of the box, connected by spring biased hinges to the longitudinal edges of the side plates and the end plates, respectively, opposite the bottom plate, whereby the side plate extensions and the end plate extensions are normally supported in horizontally outwardly extending positions relative to the side plates and the end plates, and are movable upwardly about their hinges, and driven rotary elements acting on the side plate extensions and the end plate extensions to fold them upon the side plates and the end plates.

3,101,654
CASE FORMER
John E. Ullman, Drexel Hill, Pa., assignor to Huntingdon Industries Incorporated, Bethayres, Pa., a corporation of Pennsylvania
Filed Jan. 17, 1962, Ser. No. 166,798
6 Claims. (Cl. 93—49)



1. A case former which forms the bottom portion of end-opening cases to adapt them for top loading, comprising a loading station having hopper means for holding a stack of flat end-opening case blanks, a glue station having means for applying an adhesive to the bottom flaps of said blanks, a forming station having means for turning the side panels, side flaps, and bottom flaps into set-up position, said forming station including a reciprocable mandrel having a bottom adapted to contact the bottom panel of a flat end-opening case blank when said blank is positioned in the forming station, first turner means mounted on a turner rod for turning the flaps of the inner side panel into set-up position against the mandrel, second turner means mounted on said first turner means and extending at right angles therefrom for turning the inner side panel into set-up position, third turner means mounted on a turner rod for turning the outer side panel and flaps into set-up position, means mounted on said mandrel for moving said second turner means out of the way to provide for passage of the top panel thereby, and fourth turner means for turning the bottom flaps into set-up position, all of said turner means being positioned adjacent the path of mandrel travel, and feed means for feeding the blanks one at a time from loading station to glue station to forming station.

3,101,655
BOX MAKING MACHINES
Albert Henry Williams, Nottingham, England, assignor to Caledex Machine Company Limited
Filed Dec. 22, 1960, Ser. No. 77,550
Claims priority, application Great Britain Dec. 28, 1959
11 Claims. (Cl. 93—54)



1. Apparatus for feeding box and wrapper assemblies, as to a form block wrapping machine, comprising in combination,

a suction conveyor belt carrying spaced box assemblies thereon,

each box assembly including a wrapper having a gummed upper surface and an open stayed box of less area than the wrapper disposed on the wrapper to leave wrapper flaps extending out from the sides of the box,

means for moving said belt with spaced box assemblies thereon in a forward direction in spaced steps of moving and halting, each forward movement being through a distance equal to the spacing of box assemblies on the belt,

reciprocatory transfer means for box assemblies movable over and along said belt from a transfer position where a box assembly is entrained to a forward position beyond the front end of the belt where the box assembly is discharged,

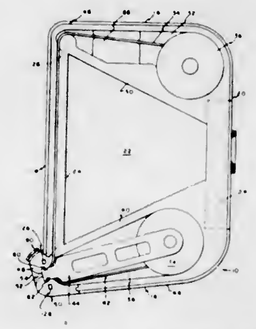
said transfer means including entraining elements engageable with the box and other means for raising and holding up the leading edge flap of the wrapper,

and means for moving said transfer means with an entrained box assembly forward from the transfer position on the belt during at least a part of the transfer movement while the belt is moving forward, and for returning the transfer means to the transfer position to entrain a box assembly while the belt is halted.

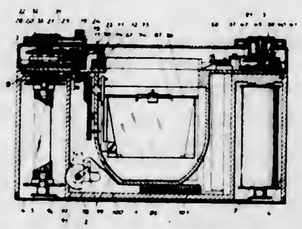
3,101,656
PHOTOGRAPHIC APPARATUS AND PRODUCT
Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed May 23, 1961, Ser. No. 112,073
20 Claims. (Cl. 95—13)

1. Photographic apparatus for exposing and processing successive frames of a photosensive sheet, said apparatus comprising, in combination, a housing; means within said housing for holding supplies of said photosensitive sheet and a second sheet which is superposed with said photosensitive sheet during processing of the latter; means for

photoexposing said photosensitive sheet; means defining an opening in said housing through which said photosensitive and second sheets are movable in superposition; means within said housing for holding a container of fluid, said container including a section through which said photosensitive and second sheets are threaded and having a passage through which said sheets extend in superposition; means for guiding said photosensitive sheet from its supply into exposure position and thence into said section of said container; means for guiding said second sheet from its supply into said section of said container; means within said housing adjacent said opening for mounting said section of said container across said opening with said passage in alignment with said opening; means for engaging portions of said section of said container defining opposite sides of said passage and moving said portions toward one another to close said passage to prevent the movement of air and said fluid therethrough and away from one another to open said passage to permit the movement therethrough of a sandwich comprising said superposed sheets and a layer of said fluid therebetween; and means mounted on the exterior of said housing for movement across said opening between first and second positions, said means being operative in said first position for aiding in the severance of portions of said sandwich projecting from said housing through said opening and being coupled with said means for engaging said portions of said section of said container for urging said portions toward one another during movement of the last-mentioned means into said first position, and relieving said portions for movement apart from one another during movement of said last-mentioned means into said second position thereof.

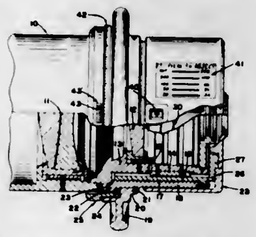


3,101,657
PHOTOGRAPHIC CAMERAS FITTED WITH FOCAL PLANE SHUTTER
Siegfried Böhm, Friedrich Winkler, and Horst Fischer, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden
Filed Sept. 19, 1957, Ser. No. 684,874
15 Claims. (Cl. 95—42)



1. In a photographic camera having a housing, an objective lens in said housing, a film supply spool on one side of the optical axis of said objective lens and a film takeup spool on the other side of said optical axis, said spools being adapted to support a film in the path of the light passing through said objective lens, a focal-plane shutter including a pair of curtains movable across the face of said film, the first of said curtains being an opening curtain and the second of said curtains being a closing curtain, reflex means in said housing movable into and out of said optical axis, the improvement comprising drive gear means positioned adjacent one of said film spools and connected to said shutter, said reflex means, and said film takeup spool for operatively driving said shutter, moving said reflex means and advancing said film, a settable, self-contained timing device in said housing adjacent said other film spool, and connecting means extending between and engageable with said drive gear means and said timing device for engaging said drive gear means in response to the setting of said timing device and preventing the operation of said second curtain after said first curtain has exposed said film, and for releasing said second curtain after a predetermined time in response to the action of said timing device so as to complete the exposure of said film.

3,101,658
FOCUS INDICATING MECHANISM FOR FOCUSABLE PHOTOGRAPHIC OBJECTIVES
John D. Hayes, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed June 23, 1961, Ser. No. 119,211
7 Claims. (Cl. 95—44)

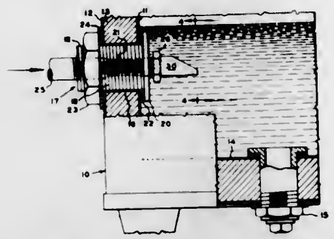


1. A focus indicating mechanism for a photographic objective or the like having in combination a spiral segmental focus indicating mark formed on a cylindrical surface of a focusing member, the segments of said mark being formed so as to be individually identifiable from each other and each segment designating a given subsidiary range of focal distances within a given total range, a window, and means for mounting said window in a viewing position athwart of and over said mark, a segment identification chart whereon the terminal focal distances related to each said segment are given, an angular scale formed on an annular member which is operably connected to rotate with said focusing member, and an index mark carried contiguously to said scale on a stationary part of said objective whereby the identifying segments when referred to said chart reveal the particular subsidiary range of focal distances at which the focusing member is set and the angular scale gives the specific distance within said subsidiary range.

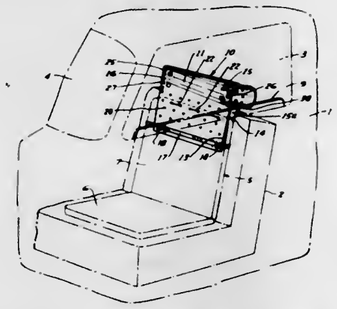
3,101,659
FILM WASHING TANK NOZZLE ASSEMBLY
George Hollands, Franklin Square, N.Y., assignor to Bar-ray Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed June 24, 1960, Ser. No. 38,496
6 Claims. (Cl. 95—97)

2. An algae control unit for a water circulating photographic tank comprising an electrically insulated fitting

mounted through a wall portion of said tank, means on said fitting outside said tank for connecting a source of running water, and distributor nozzle means connected to said fitting in said tank, said last named means including a jet orifice and a deflector portion interposed in the flow path of said jet, said deflector portion of said nozzle consisting essentially of substantially pure metallic copper.

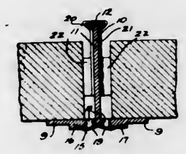


3,101,660
VENTILATING HOOD FOR SEAT CUSHIONS
Don A. Taylor, 216 Mill St., Box 4, Wadsworth, Ohio
Filed Apr. 3, 1961, Ser. No. 100,317
20 Claims. (Cl. 98—2)



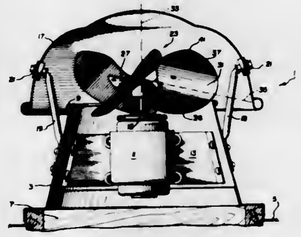
1. A ventilator for a ventilating back cushion for vehicle seat backs and comprising a body having a portion in the form of an elongated inverted channel of sheet material, said channel having a top wall and front and rear walls depending from the top wall and spaced apart from each other and forming between their lower margins passage means for discharging air from the channel into the upper margin of a ventilating back cushion of a vehicle seat along the major portion of the width of the cushion, connecting means depending from the front and rear walls of the channel, respectively, for detachably connecting the channel in the inverted position in an operative relation to the ventilating back cushion wherein the top wall is spaced above the level of the upper edge of the back cushion and the passage means opens downwardly and extends along and in alignment with the major portion of the top margin of the back cushion for discharging air from the passage means of the channel into the cushion through the top edge thereof, said channel having an opening at one end, an air deflector connected to, and supported by, the body at said end of the channel in a position wherein it projects, endwise of the channel, a short distance relative to the length of the channel outwardly from said end of the channel generally endwise of the channel, said deflector having a forward face spaced rearwardly from the front wall of the channel and having its inner end aligned with the channel opening for deflecting air striking said forward face into the channel opening, and obstructing means at the other end of the channel opposite from the opening for obstructing the escape of air through said other end endwise of the channel at least to an extent to cause most of the air deflected into the channel to pass directly through said passage means for entry into the top edge of the cushion.

3,101,661
T-RUNNER
John T. Bibb, Los Angeles, Calif., assignor to Lok-Products Co., Los Angeles, Calif., a corporation of California
Filed July 18, 1961, Ser. No. 124,985
7 Claims. (Cl. 98—31)



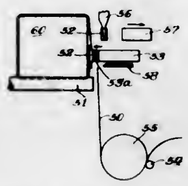
1. For use in a ceiling or the like, a T-runner having a central web and oppositely projecting lateral flanges provided with ports between which said web is disposed at one side of said flanges, the runner having means at the other side of the flanges for providing a slide valve way, and slide valve means reciprocable along said way in engagement with said flanges and having ports movable to and from registry with the ports of the flanges.

3,101,662
ROOF VENTILATOR
Lawrence L. Alldritt, 59 NW. 14th St., Miami 32, Fla.
Filed Sept. 3, 1959, Ser. No. 837,906
8 Claims. (Cl. 98—43)



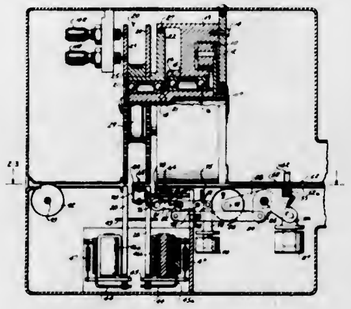
1. In a power driven roof ventilator including a round casing open at its top and bottom and adapted to be mounted with its axis vertical on a roof over an opening therein and terminating upwardly in an upper edge, a rounded, downwardly concavely curved hood fixedly mounted coaxially above the casing and extending laterally outward beyond said upper edge of the casing on all sides of the casing, a fan wheel mounted for rotation beneath the hood coaxially of the casing and including a plurality of outwardly extending propeller fan blades, and power means for rotating the fan wheel about said axis; the improvement comprising the fan blades having an upper portion having an upwardly concave upper surface made up of an infinite number of parallel straight lines one of which passes through the axis of rotation of the fan wheel and is inclined downwardly outwardly at an acute angle to the horizontal and is disposed above said upper edge, at least a portion of the blade extending below said upper edge.

3,101,663
AUTOMATIC BOX STRAPPING MACHINE
Marchand B. Hall, Olympia Fields, Edward Staron, Evergreen Park, and Robert E. Hager, Park Forest, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 14, 1957, Ser. No. 640,263
11 Claims. (Cl. 100—30)



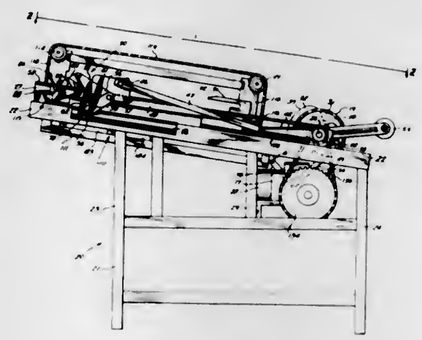
8. The combination in an article strapping machine for binding an article with a binding strap portion, of an anvil mounted at a forming position adjacent to a sealing position, means for feeding seal stock to said anvil when said anvil is in the forming position, means for cutting off a length of the seal stock and forming a channel shaped seal about said anvil, means for moving said anvil between the forming position and the sealing position thereof, means to press and hold the seal against said anvil as the anvil is moved from the forming position to the sealing position, seal deforming means at the sealing position to move the free outer ends of the side walls of the seal inwardly toward each other so that the outer ends are spaced apart a distance less than the width of the binding strap portion whereby to provide a guide subsequently for looping the strap portion about an article with overlapping strap portions extending through the seal, and abutment means positioned at the sealing station to engage the seal after deformation thereof and in cooperation with said seal deforming means to hold and retain the seal at the sealing station when said anvil is returned to the forming position.

3,101,664
PRINTER
Chris A. Christoff, San Gabriel, and John D. Gearheart, Baldwin Park, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Feb. 6, 1961, Ser. No. 87,334
5 Claims. (Cl. 101—93)



2. Printing mechanism comprising the combination of a printing wheel element having first and second axially spaced rows of type characters around the periphery thereof, means for rotating said wheel element, a first impression device for obtaining a printing impression of a selected type character in said first row, a second impression device for obtaining a printing impression of a selected type character in said second row, a first conditioning means for conditioning said first impression device for operation, a second conditioning device for conditioning said second impression device for operation, means for successively advanding a plurality of record medium strips between said wheel element and said impression devices in a direction parallel to the axis of said wheel element, said first conditioning means controlling said advancing means to advance a said strip to a predetermined position relative to said first row of type characters and said second conditioning means controlling said advancing means to advance said record medium to a predetermined position relative to said second row of type characters.

3,101,665
SILK SCREEN PRINTING PRESS
Gardner V. Hall, 1618 75th St., Des Moines, Iowa
Filed Aug. 3, 1961, Ser. No. 129,035
4 Claims. (Cl. 101—123)

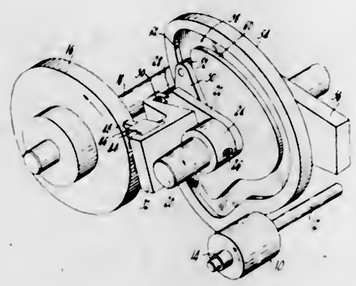


1. A silk screen printing press comprising a main frame, supporting means on said main frame for holding embossed surfaced material to be printed upon, a screen positioned above said supporting means and movably mounted on said frame for up and down movement to and from an operative printing position relative to said material, a first squeegee operatively associated with said screen for moving a fluid therethrough from one side of said screen when the screen is in a printing position, a second squeegee operably associated with said screen for removing fluid from the opposite side of said screen when the screen is in a position away from said material, and means for moving said squeegees in timed relationship to each other so as to act at different times on said screen.

3,101,666
ROTARY PRINTING APPARATUS EMPLOYING STRAIGHT LINE TYPE
Frank W. Sawtelle, Keene, N.H., assignor to Markem Machine Company, Keene, N.H., a corporation of New Hampshire
Filed Mar. 15, 1961, Ser. No. 95,911
10 Claims. (Cl. 101—212)

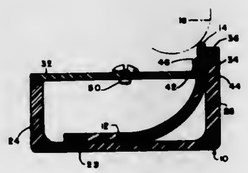
1. Rotary printing apparatus comprising an inking mechanism for supplying ink, a legend determining structure having a straight line surface for receiving ink from said inking mechanism in a manner to define an ink configuration in the form of the legend to be applied in the printing operation, a transfer mechanism for receiving said ink configuration from said legend determining structure for application in the printing operation, a carrier supporting said legend determining structure, means to rotate said carrier in a coordinated manner with said inking mechanism and said transfer mechanism, and means

responsive to said carrier rotating means to cyclically move said legend determining structure between said inking mechanism and said transfer mechanism in a direction parallel to said straight line surface, said legend determining structure being moved by said rotation responsive means relative to said carrier so that the path of



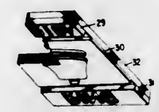
the surface of said legend determining structure as driven by said carrier follows a straight line parallel to said surface as said surface is progressively advanced past said transfer mechanism for transferring an ink configuration from said legend determining structure to said transfer mechanism.

3,101,667
ROLL-ON ENDORSE INK WELL
Martin Siegel, Livonia, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 10, 1961, Ser. No. 81,816
1 Claim. (Cl. 101—364)



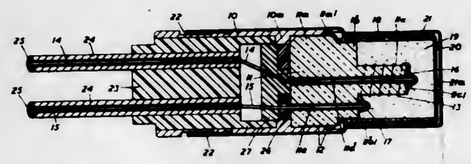
An ink applicator comprising the combination of an ink container of two piece construction having bottom, side and end walls and a separately made top wall cover seated on and sealed to the upper edges of said side and end walls, one of the side walls of the container having an integrally formed upward extension the opposite ends of which terminate inwardly of the container end walls, and a flat wick within said container, said wick extending upwardly along said extension of said side wall backing the wick and having locating openings therein, said cover having an integrally formed upstanding flange along an edge adjacent said one of the side walls and including a recessed portion conforming to three sides of the wick section and receiving the wick and the side wall extension therein, the face of the side wall extension adjacent the recessed portion of the flange of the cover being spaced therefrom to form a constricting passage for the wick encompassed by and passing therebetween, whereby the porosity and capillary action of the wick are decreased and spillage avoided, said cover further having a pair of integrally formed locating pins projecting from the recessed portion thereof through said wick locating openings and engaging said extension of the adjacent side wall of the container to locate and limit displacement of said wick.

3,101,668
PRINTING MEMBERS AND METHOD OF MAKING SAME
Harry R. Leeds, Racine, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.
Filed Mar. 14, 1960, Ser. No. 14,729
8 Claims. (Cl. 101—401.1)



1. A method of making a printing member capable of producing a multicolored imprint in a single operation which comprises filling a plurality of cavities of a multicavity negative mold, each cavity separated from the others by a barrier and carrying the desired printing characters in negative relief, with an ink containing plastisol to a depth whereby the exposed surface of the plastisol is substantially level with the upper portions of said barriers, the plurality of cavities containing a plurality of colors when filled, heating said plastisol to a temperature sufficient to form a gel, superimposing over said plastisol an ink impervious thermoplastic film and heating said plastisol and film to produce a microporous microreticulated resin containing an ink in the pores thereof bonded to said thermoplastic film.

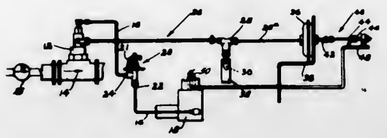
3,101,669
HERMETICALLY SEALED DETONATOR
Derek R. Gatley, Windsor, and Walter L. Abigail, Staines, England, assignors of one-half to Graviner Manufacturing Company Limited, and of one-half to Wilkinson Sword Limited, both of London, England, and both British companies
Filed Sept. 7, 1961, Ser. No. 136,634
Claims priority, application Great Britain Sept. 20, 1960
3 Claims. (Cl. 102—28)



1. An electrically ignitable explosive cartridge comprising a hollow metal body, said body having one end closed, a ceramic insulator mounted within said body, said insulator having an outer peripheral surface which is metallized, said metallized surface being united by solder to said body, said insulator having a portion of reduced cross-sectional area terminating in a metallized end surface which faces said body, said insulator also having a metallized annular surface at the step where the portion of reduced cross-sectional area abuts the remainder of the insulator, an electrical igniting winding, said winding being wound on said portion of reduced cross-sectional area, explosive powder, said powder surrounding said igniting winding, said insulator having first and second holes extending through said insulator, said first hole terminating at said metallized annular surface and said second hole terminating at said metallized end surface, first and second lead wires extending through said first and second holes respectively, said winding having two ends, solder adhering to said metallized annular surface and electrically connecting one winding end to said first lead wire, said solder extending across the first hole to form a seal, and further solder adhering to said metallized end surface and electrically connecting the other end of the

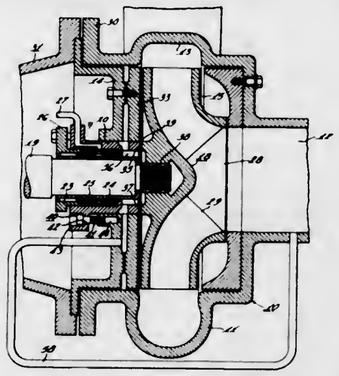
winding to said second lead wire, said further solder extending across the second hole to form a seal.

3,101,670
FLUID-ACTUATED APPARATUS TO CONTROL MOTOR SPEED
Harold J. Olson, Broadway, Raynham, Mass.
Filed June 8, 1961, Ser. No. 115,810
5 Claims. (Cl. 103—17)



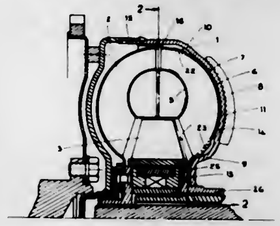
1. Fluid-actuated apparatus to control motor speed comprising a motor, fluid pumping means connected to said motor, fluid flow responsive valve means communicating with said pumping means, vacuum-creating means, a first conduit communicating with said valve means and said vacuum-creating means, a vacuum-operated control member, a second conduit communicating with the latter and with said valve means, governing means for said vacuum-creating means, throttle-control mechanism operably connected to said motor and to said governing means and operably connected to said vacuum-operated member whereby said mechanism is adapted to be actuated by said latter member, a restricting valve connected to said first conduit adapted to regulate the degree of vacuum in said first conduit, and a vacuum breaker communicating with said second conduit and adapted to introduce air into said second conduit, said valve means being responsive to the flow of fluid from said pumping means whereby the degree of vacuum in said first conduit can be controlled by said restricting valve.

3,101,671
ADJUSTABLE SEAL FOR PUMPS
Earle E. Schroeder, Norwood, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 5, 1962, Ser. No. 170,877
2 Claims. (Cl. 103—103)



1. A pump comprising a casing defining a pumping chamber having an inlet and an outlet, a shaft adapted to be connected to a source of power and extending through said casing into the said chamber, an impeller positioned in said chamber; said impeller having a hub connected to said shaft; a stuffing box surrounding said shaft and engaging said casing, the inboard end of said stuffing box being positionable adjacent the hub of said impeller to form a clearance therebetween; adjusting means for moving said stuffing box axially relative said hub to vary the size of said clearance; packing means positioned within said stuffing box and spaced from said hub, a recess area formed in said stuffing box between said inboard end and said packing means and a bypass conduit connecting said recess area to an area of lower pressure.

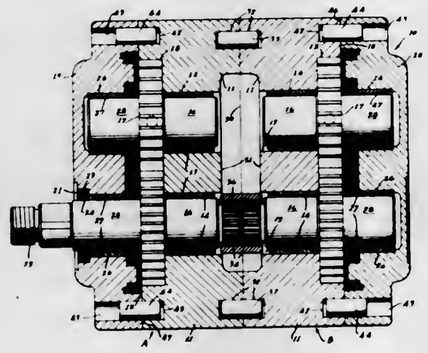
3,101,672
METHODS OF MANUFACTURING HYDRODYNAMIC TORQUE TRANSMITTERS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Apr. 24, 1961, Ser. No. 105,147
Claims priority, application France Apr. 27, 1960
1 Claim. (Cl. 103—115)



An impeller structure for an hydrodynamic device comprising a shell with an inner annular edge portion and an outer axially extending cylindrical edge portion and a toroidal portion extending between said edge portions, pairs of radially spaced outwardly projecting bowed portions in said shell disposed between said toroidal portion and said inner and outer edge portions, respectively, inner and outer casings disposed within said shell with blades extending between said casings, said casings having slots therein, outwardly extending integral lugs on opposite sides of said blades extending through said slots and bonded thereto, said slots being substantially larger in dimension than the dimension of said lugs extending therein, said outer casing having a cylindrical axially extending outer edge portion and an annular inner edge portion corresponding to the edge portions of said shell and mounted in face to face sealed contact therewith and secured thereto, said lugs on said outer side of said blades extending through said outer casing and into said bowed portions, and said toroidal portions of said outer casing and shell being disposed closely contiguous to each other without contacting each other.

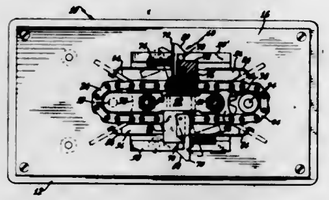
3,101,673
IMPLEMENT AND POWER STEERING PUMP
Hubert M. Clark, Bloomfield Township, and Gilbert H. Drutchas, Detroit, Mich., assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 16, 1961, Ser. No. 117,562
4 Claims. (Cl. 103—126)

1. A pump comprising a casing having a recess in one wall forming a pumping chamber, a cover engaging said one wall and having recess means formed therein for receiving a seal pack axially opposite said pumping chamber, fastening means interconnecting said casing and said cover outwardly of said pumping chamber and said recess means, and a seal pack in said recess means comprising a pressure plate having outer marginal portions overlapping the edges of said pumping chamber and engaging against said one wall of said casing, said pressure plate including inner sealing portions for engaging and sealing against the adjoining side face of rotary fluid displacement means in the pumping chamber, said recess means including an irregularly shaped recess having a generally ovaloidal continuous outer channel, a pair of substantially circular inner channels, a first and a second cross channel extending between each said inner and outer channels and disposed at an angle with respect to each inner channel on the inlet side of the pump, a third cross channel between said inner channels and a fourth cross channel between said third channel and said outer channel, a similarly irregularly shaped backing means in said channels, and a similarly irregularly shaped sealing web of generally J-shaped cross-section in said channels behind said backing means, said sealing web having an outer long leg and an inner short leg, each of said legs having portions engaging and sealing against the wall portions of said cover member



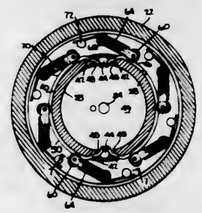
and together therewith forming a pressure pocket, said pressure plate having a back face forming a motion surface, said motive surface being divided by said backing means into a major motive area on the outlet side of the pump and a minor motive area on the inlet side of the pump, said pressure plate having openings extending therethrough communicating inlet pressure into said minor area and discharge pressure into said major area to provide balanced loading of said pressure plate, and means in said cover conducting fluid at pump-generated pressure into the pressure pocket, thereby hydraulically sealing the pressure plate without requiring any mechanical seal pressure on the pack.

3,101,674
MULTIPLE-TUBE PUMP
Edwin C. Weiskopf, Brewster, and Jack Isreeli, Tuckahoe, N.Y., assignors to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Dec. 20, 1960, Ser. No. 77,137
21 Claims. (Cl. 103—149)



1. A pump, comprising a series of flexible resilient tubes disposed laterally of each other for the delivery of a plurality of fluids, another series of flexible resilient tubes disposed laterally of each other for the delivery of a plurality of fluids, means supporting said two series of tubes in spaced relation, and means disposed in the space between said two series of tubes engageable simultaneously with each of said tubes at points intermediate their lengths, respectively, for simultaneously closing the tubes of one series along a common transverse line and for simultaneously closing the tubes of the other series along another common transverse line, said tube engageable means being movable progressively along the lengths of said tubes for progressively closing said tubes and thereby propelling the fluids through their respective tubes for the pumping operation.

3,101,675
PUMP
Jack Isreeli, Tuckahoe, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Apr. 24, 1961, Ser. No. 104,918
6 Claims. (Cl. 103—149)

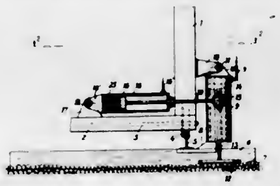


6. A pump, comprising a stationary tube carrying member having a circular outer surface provided with means for supporting a resiliently flexible and compressible pump tube on said outer surface, a resiliently flexible and compressible pump tube supported on said surface, a rotary carrier member provided with a series of pressure applying rollers arranged in a circular row in concentric relation to said circular outer surface and externally of said tube carrying member, said rollers being movable from an inoperative position wherein said rollers are disengaged from said tube to an operative position wherein said rollers engage said tube, and means operatively connected to said rollers and operable for moving said rollers from their disengaged position to their engaged position, said roller moving means having roller engaging parts movable from a position wherein said parts engage said rollers and prevent the latter from engaging said tube to a position wherein said parts are disengaged from said tube to permit engagement of said tube by said rollers, means for moving said roller moving means to and from said positions, an electric motor for rotating said carrier member, and switch means for controlling the operation of said motor under the control of said means for moving said roller moving means, so that the motor is energized when said tube is engaged by said rollers and is deenergized when said rollers are disengaged from said tube.

3,101,676
TRACK LIFTING APPARATUS
Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna I, Austria
Filed May 26, 1959, Ser. No. 815,982
Claims priority, application Austria May 28, 1958
2 Claims. (Cl. 104—7)

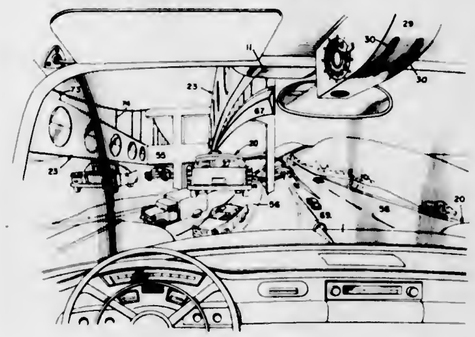
1. A track lifting apparatus mounted on a car frame and comprising, in combination: a jacking means and pivot means supporting the jacking means on the car frame adjacent a rail of the track for laterally pivotal movement of the jacking means from an operative into a rest position removed from the track, the jacking means including a pressure fluid operated cylinder, a laterally extending rail lifting member carried by said cylinder, the rail lifting member being spaced from the pivot means to subtend and support the adjacent rail in the operative

position of the jacking means, a piston with a piston rod slidably guided in said cylinder and a foot piece fixedly



attached to the end of the piston rod extending outwardly from the cylinder.

3,101,677
AUTOMOBILE HANDLING APPARATUS
Eldon E. Ehinger, P.O. Box 43, Centreville, Va.
Filed Dec. 17, 1959, Ser. No. 860,136
20 Claims. (Cl. 104—91)



1. An apparatus for transporting an automobile in elevated relationship to a supporting surface comprising an overhead track assembly, a trolley car longitudinally movably mounted on said track assembly, power means on the trolley car for driving the trolley car along the track assembly at predetermined speed, said trolley car including a longitudinally extending arm thereon, a longitudinally extending tube adapted to be mounted on an automobile or like conveyance for slidably receiving the arm of the trolley car thereby supporting the automobile from the track assembly, and latch means carried by said arm and engageable with the tube for releasably locking the arm within the tube for conveying the automobile on the track assembly with the trolley car providing a propelled unit operable completely independently of the persons in the automobile.

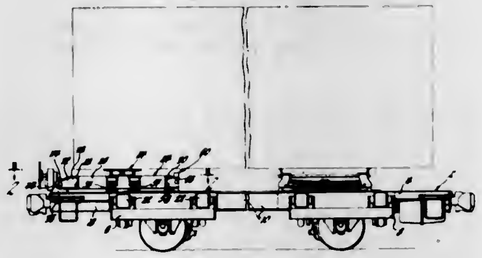
3,101,678
SUSPENSION RAILWAY
Wilhelm Grube, Ringstrasse 44, Wolfenbuttel, Germany
Original application Mar. 19, 1957, Ser. No. 647,060, now Patent No. 2,974,608, dated Mar. 14, 1961. Divided and this application Jan. 10, 1961, Ser. No. 81,792
1 Claim. (Cl. 104—95)

A suspension-railway truck displaceable along an elevated track having an upper and a lower surface, comprising a first wheel support, a plurality of load-bearing wheels journaled to said first wheel support and rollingly engaging said upper surface, parallelogrammatic linkage means pivotally secured to said first wheel support for articulation about a substantially horizontal axis extending transversely to said track, a second wheel support pivotally connected to said linkage means for angular motion about a substantially horizontal axis extending transversely to said track, at least one check wheel journaled to said second wheel support, and means for connecting said linkage means to a load whereby said check wheel is



urged against said lower surface upon deviation of said track from a substantially horizontal position and consequent swinging movement of said second wheel support.

3,101,679
RAILWAY VEHICLE SUSPENSION AND SHOCK ABSORBING MEANS
Michael J. Principe and James C. Richardson, London, Ontario, Canada, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 11, 1961, Ser. No. 82,059
8 Claims. (Cl. 105—368)

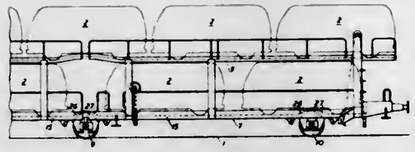


1. In a railway vehicle including an underframe, a secondary suspension thereon for supporting the kingpin end of a highway semi-trailer comprising a frame horizontally disposed above said underframe, a pivotal connection between said frame and underframe supporting one end of said frame on said underframe for movement of said frame about an axis extending transversely of said underframe, spring means mounted on said underframe horizontally and longitudinally spaced from said pivotal connection resiliently supporting said frame on said underframe, and means on said frame adapted to receive the kingpin of a highway semi-trailer and resiliently support the kingpin end thereof.

3,101,680
DOUBLE-DECKER AUTOMOBILE TRANSPORTER RAILROAD CAR END UNIT
Karl Raab, Minden, and Friedrich Burchard, Elze, Hannover, Germany, assignors to Niedersachsische Waggonfabrik Joseph Graaff G.m.b.H., Elze, Hannover, Germany
Filed Feb. 13, 1961, Ser. No. 88,940
6 Claims. (Cl. 105—368)

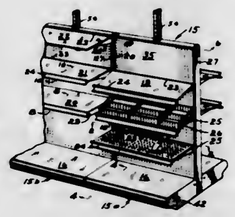
1. An automobile transporter railroad car unit comprising in combination: a car frame structure, single axle trucks resiliently supporting said car frame structure, said single axle trucks each including flanged rail-engaging wheels supporting said car frame structure, a plurality of fixed decks mounted in super-imposed, spaced, parallel relation on said car frame structure, fixed track means mounted on each of said decks and extending the full length longitudinally thereof, said track means rollably

receiving and supporting automobiles thereon, the lower deck and track means thereon being disposed at a level appreciably below the tops of said flanged rail-engaging wheels, openings in said lower deck track means disposed over the wheels of one of said trucks providing clearance for projection of a portion of said flanged wheels therethrough, a pair of track extension links pivotally mounted at opposite sides of each of said openings and at their



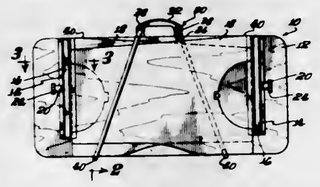
free ends overlappingly engaging directly above each of said flanged truck wheels, resilient means normally biasing said overlapped track extension links upward and clear of each of said flanged wheels and into a humped position, said resilient means yielding under the weight of an automobile passing over said hinged track extension links whereby each pair of said overlapped engaged ends thereof are depressed into engagement with and supported by the rim of each of the flanged truck wheels.

3,101,681
SHELVING ASSEMBLY
Edward C. Streater, Spring Park, Minn., assignor to Streater Industries, Inc., Spring Park, Minn., a corporation of Minnesota
Filed Feb. 17, 1961, Ser. No. 102,908
15 Claims. (Cl. 108—28)



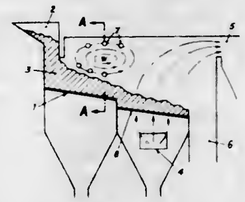
2. A shelf-supporting assembly, comprising a pair of spaced and upright standards to be supported upon a floor and having a plurality of vertically aligned upright slot apertures, a pair of elongate and substantially parallel base arms each adjacent the lower end of a respective standard and extending forwardly therefrom to be supported upon the floor, the rear end of each of said base arms having a plurality of standard-hooking inserts extending through corresponding slot apertures in the adjacent standard and having downwardly opening standard-receiving notches therein to restrain relative movement between the standard and base arm, detachable means rigidly securing said standards and base arms together and including an elongate rigid cross tie extending between said base arms and having at each end thereof a rearwardly extending tab fitting snugly into a slot of the adjacent standard to prevent relative vertical movement between the standard and cross tie, means rigidly and detachably securing said cross tie to each of said base arms and preventing relative movement therebetween, a shelf spaced above said base arms adjacent the standards, and bracket means supporting said shelf and being detachably secured to said standards.

3,101,682
PORTABLE TABLE OR BENCH
Lawrence E. Pugsley, Box 656, R.R. 1, Escondido, Calif.
Filed Jan. 2, 1962, Ser. No. 163,493
5 Claims. (Cl. 108—41)



1. In a collapsible, portable table, the combination of:
(*a*) a top;
(*b*) legs positionable adjacent the lower side of said top when said table is in a collapsed condition, and connectible to the lower side of said top in upright positions to support said top when said table is in an erected condition;
(*c*) means for securing said legs to the lower side of said top when said table is in said erected condition;
(*d*) combined carrying and bracing means engageable with and embracing said top and said legs in carrying relation when said table is in said collapsed condition for carrying said top and said legs, and engageable with said top and said legs in bracing relation when said table is in said erected condition for bracing said legs relative to said top;
(*e*) said combined carrying and bracing means including a handle having a surface engageable with an edge of said top in said collapsed condition of said table and engageable with the lower side of said top in said erected condition of said table;
(*f*) said combined carrying and bracing means including two links respectively having ends respectively pivotally connected to opposite ends of said handle, the other ends of said links comprising oppositely oriented hooks engageable in hooked relation with the opposite edge of said top and with said legs in said collapsed condition of said table, and respectively engageable with said legs in said erected condition of said table; and
(*g*) means for connecting said hooks to said legs, respectively, in said erected condition of said table.

3,101,683
GARBAGE INCINERATORS
André Yonner, Zollikon, Zurich, Switzerland, assignor to L. de Roll S.A., Zurich, Switzerland, a company of Switzerland
Filed Aug. 19, 1958, Ser. No. 756,031
Claims priority, application Switzerland Aug. 23, 1957
1 Claim. (Cl. 110—8)



A garbage incinerator comprising wall means defining a closed incinerator chamber with refuse inlet means at one end and gas discharge means at an opposite end, a predrying grate disposed at an inclination in said incinerator chamber adjacent said refuse inlet means for supporting refuse for drying thereon, the spaced adjacent

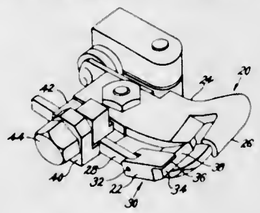
said inlet and above said predrying grate having tendency to collect combustible gases, an incinerator grate disposed on the side of said predrying grate remote from said refuse inlet and slightly below said predrying grate a substantially the same downward inclination to permit gravity advance of refuse from said predrying grate to said incinerator grate, means for directing incinerating gases through said grate, and gas nozzle means above said predrying grate arranged to direct gases into said incinerator chamber in a direction and at a rate to prevent the formation of combustible gases above said predrying grate and to sweep the area above said grate free of such gases.

3,101,684

WELT GUIDE FOR SHOE SEWING MACHINES

Guido J. Barbati, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed June 12, 1962, Ser. No. 201,886
5 Claims. (Cl. 112—52)



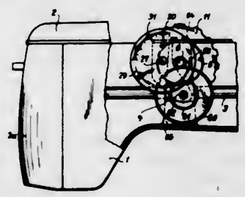
1. A welt guide for an inseam sewing machine provided with an I-shaped channel mounting block, said guide being in the form of a doubled over strip of sheet material, both double over portions being bent in the same direction between their ends into parallel relationship with each other and secured in opposite channels of the I-shaped block and a clamp outside the space between the doubled over portions of the strip and formed in part by a gripping surface on the block extending transversely to the doubled over portions of the strip and in part by a clamp plate acting against the gripping surface of the block, in combination with an edge gage comprising a straight shank secured in the clamp for adjustment toward and from the base of the doubled over strip portions, an abutment having a welt guiding fin along its upper welt engaging edge, and a pivot mounting for the abutment on the shank to enable the abutment to hinge on its pivot mounting when the fin is lifted by a welt passing through the space between the doubled over strip portions.

3,101,685

AUTOMATIC ORNAMENTAL SEWING MACHINE

Fritz Gegauf, Jr., Steckborn, Thurgau, Switzerland, assignor to Fritz Gegauf Aktiengesellschaft Bernina-Nähmaschinenfabrik, Steckborn, Thurgau, Switzerland

Filed Jan. 8, 1962, Ser. No. 164,922
Claims priority, application Switzerland Jan. 12, 1961
5 Claims. (Cl. 112—158)



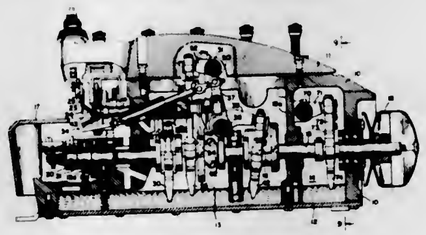
1. In an ornamental sewing machine having a housing and a plurality of rotary control cams for controlling the action of the sewing machine to sew ornamental patterns, a device for indicating the progress of the action of the sewing machine in sewing ornamental patterns comprising a driven shaft on which the control cams are adapted to be mounted, an indicator scale movable relative to said housing and having at least one indicator means thereon corresponding to the pattern to be sewn, a mark fixed with respect to said housing and past which said indicator scale and indicator means thereon is movable, and reduction gear means coupled between said driven shaft and said indicator scale for driving said indicator scale so that one complete indicator means moves past said mark for each complete revolution of said driven shaft, and said reduction gear means reduces the rotation of said indicator shaft to 1/nth the number of revolutions of said driven shaft, where n is a whole number, whereby when the end of said indicator means on said indicator scale reaches said mark, the control cam has completed one revolution and a complete pattern has been sewn.

3,101,686

MACHINE FOR PRODUCING SAFETY STITCH

Robert A. Hayes, Franklin Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 19, 1959, Ser. No. 787,424
12 Claims. (Cl. 112—162)



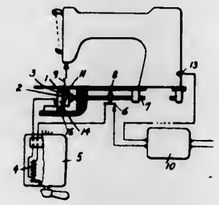
1. In a sewing machine adapted to produce a safety stitch and having a frame with a low lubricant retaining main housing, a work supporting extension projecting from said housing at one end thereof and providing a work supporting surface at its top, a main rotary drive shaft extending longitudinally of said housing and having one end within said extension beneath said work supporting surface, the opposite end of said shaft extending outwardly of said housing and carrying a handwheel and pulley for turning the same, stitch forming devices including a rockable member extending through a wall of said housing and having an arm carrying a plurality of curved needles, complementary stitch forming devices cooperating with one of said needles to form a line of overedge stitches, a looper rod parallel with said drive shaft disposed mainly within said housing but extending outwardly therefrom beneath said work supporting surface and having rigidly connected therewith a four motion looper arranged to cooperate with another of said needles to form a line of through and through two-thread chain stitches spaced from said overedge line of stitches, oscillatable means within said housing cooperating with said looper rod to oscillate the latter about its axis, said rod being reciprocable longitudinally relative to said oscillatable means to impart loop seizing and shedding movements to said looper and being oscillatable about its axis by said oscillatable means to impart needle avoid movements to said looper, and connections from said drive shaft within said housing for rocking said rockable member, for operating said complementary stitch forming devices, for imparting said longitudinal movements to said looper rod and for oscillating said oscillatable means and said rod, all in coordinated relation to form said lines of stitches.

3,101,687

MECHANISM OPERABLE TO DEENERGIZE THE MOTOR OF AN AUTOMATIC EMBROIDERY MACHINE UPON BREAKAGE OF THE UNDERTHREAD

Karl F. Zeltwanger, Cologne-Lindenthal, Germany, assignor to Marco Stickautomaten-Gesellschaft Markscheffel & Co., Hamburg-Wandsbek, Germany

Filed July 24, 1961, Ser. No. 126,150
Claims priority, application Germany Aug. 5, 1960
3 Claims. (Cl. 112—219)



1. Circuit closing mechanism for use with an automatic embroidery machine having stitch forming elements, said mechanism being adapted to de-energize the motor of the machine upon breakage of the underthread, including a rotatable shaft extending horizontally beneath the machine frame, an electrical circuit, a make-and-break switch in said circuit, a cam on said shaft arranged to operate said switch and synchronized with the stitch forming elements of the machine to cause said switch to close said circuit for a brief period during each stitching operation, a rotary hook mounted on said shaft, a pivotally mounted ring adjacent said hook, a bobbin carrier supported for rotative movement in said ring, a bobbin adapted to carry an underthread in said bobbin carrier, said ring having an elongated opening therein adjacent said hook, the underthread being adapted to extend through said opening, said opening being so located with respect to the axis of said shaft as to be adapted to cause the underthread during withdrawal when the stitch is tightened to apply a torque to the bobbin case contrary to the direction of rotation of said hook, a retaining finger comprising a first contact member fixed to said bobbin carrier extending through said opening, an insulated stationary contact carried by said ring extending through said opening at one end thereof, said underthread being adapted normally to bias said first contact member away from said fixed contact in a direction opposite the direction of rotation of said hook, said bobbin carrier frictionally engaging said hook whereby upon breakage of the thread the frictional engagement of said rotary hook with said bobbin carrier moves said bobbin carrier and hence moves said first contact into engagement with said stationary contact to close a circuit adapted to de-energize the motor of the machine.

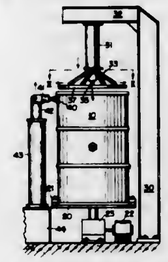
3,101,688

APPARATUS FOR RECONDITIONING DRUMS

Carmine Ralph Negola, 202 Center St., Garwood, N.J., and Philip J. Abrams, 1250 Ocean Parkway, Brooklyn, N.Y.

Filed Sept. 19, 1960, Ser. No. 56,907
3 Claims. (Cl. 113—1)

1. Apparatus for removing a cover from a closed-top drum with a cylindrical body, said cover having a marginal portion turned under a circumferential outer flange of said body and forming a lock seam therewith, comprising pressure means for applying to said cover an axial force tending to urge said cover into said body and including a pressure disk overlying said cover and forming a cylindrical die for radially supporting said flange while bearing radially thereagainst upon upward bending thereof, supporting means for said body, a separating tool of frusto-conical configuration axially displaceable along said body between said marginal portion and said flange and adapted to enter said lock seam to progressively bend said flange outwardly and thence upwardly along said die to open said lock seam, and means for relatively rotating said tool and said body.

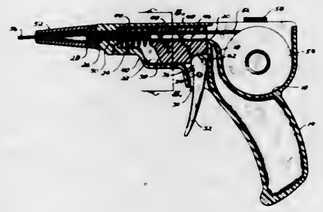


3,101,689

WIRE SOLDER DISPENSING DEVICE

Wayne S. Hammond, Delbert H. Defries, and Ronald E. Kenyon, all of Heron Lake, Minn.

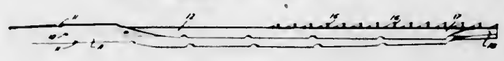
Filed Oct. 17, 1961, Ser. No. 145,570
8 Claims. (Cl. 113—94)



1. In a wire dispensing device,
an enlongated housing having two side walls, a bottom wall and a top wall,
a body portion integral with said housing positioned at one end and extending transversely thereof beyond the sides of said housing,
said body portion having a compartment formed therein extending between opposite ends thereof,
said housing having a longitudinal opening formed therein extending from the other end thereof into said compartment,
a roll of wire adapted to be held in said compartment,
said compartment having a depth such that the top side of said compartment is in substantially the same plane as the top side of said housing,
a handle integral with said housing and said body portion; said handle having a top side also forming the bottom of said compartment, said handle and said housing being in a common plane, said handle extending downwardly from said body portion intermediate its ends,
said opening in said housing being enlarged at its end adjacent said body portion,
a slide element movably positioned in said enlarged opening and having a longitudinal opening formed therein in alignment with said opening in the end of said housing opposite said body portion, said wire adapted to be unrolled through said opening in said slide element and through said opening in said housing,
said slide element comprising top, bottom, front and rear sides, wire engaging means positioned in said opening in said slide element,
said housing having an access opening formed in the bottom side wall adjacent said handle and said body

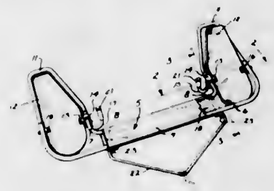
portion and extending into said enlarged opening,
an elongated trigger element positioned in said access opening and pivotally connected to said housing side walls, a lower end portion of said trigger element extending below said housing,
a spring means in said enlarged opening having one end in yieldable engagement with said front side of said slide element and the other end in engagement with the forward wall of said enlarged opening remote from said body portion, the rear side of said slide element held in yieldable engagement with the rearward wall of said enlarged opening adjacent said body portion,
said bottom side of said slide element in slidable contact with the bottom side of said enlarged opening, said top side of said slide element in slidable contact with the top side of said enlarged opening,
said rear side of said slide element having formed therein a shoulder parallel and adjacent to the bottom side of said slide element, said shoulder merging into a rounded shoulder terminating at the bottom side of said slide element, and
said trigger element having a rounded upper end portion adapted to engage said rounded shoulder on said slide element, said lower end portion of said trigger element adapted to be moved toward said handle causing said slide element to move forwardly whereby said wire will be advanced.

3,101,690
AIR DIFFUSERS AND METHODS OF MAKING THE SAME
Cortland N. O'Day, Port Washington, and George J. Sweeney, Manhasset, N.Y. (both of 185 Madison Ave., New York, N.Y.)
Filed Dec. 15, 1959, Ser. No. 859,722
3 Claims. (Cl. 113—116)



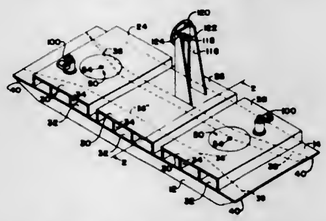
1. A method of making elongated air diffuser elements which comprises providing a strip of metal, punch central bolt holes and edge half holes to be folded inwardly to match the central holes, folding the side edges at right angles to central portion of the strip, die-cutting rectangular openings in the center of the strip and folding up the die-cut portions to form oblique vanes at right angles to the central portion of the strip but extending obliquely across the strip and then finally folding in the side edges to meet at the center of the strip and cover the openings.

3,101,691
UNDERWATER SLED
Peter M. Wendt, Milwaukee, Wis., assignor to Drake Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 20, 1961, Ser. No. 146,470
5 Claims. (Cl. 114—16)



1. In an operator controlled, towed underwater sled the combination comprising: a rigid transverse member; a pair of frames each secured to an end of said transverse member and extending aft therefrom; a pair of elevators each pivotally mounted on a frame and extending aft of the trailing edge of said transverse member, said elevators being spaced to allow the operator to lie between them; control bars pivotally mounted on said frames and secured to said elevators at the pivotal axes of said elevators for common rotation therewith, said control bars having handle portions disposed generally normal to the pivotal axes of the control bars and extending above and below such pivotal axes; and means for attaching a tow rope to said sled.

3,101,692
BOAT AND PROPULSION MEANS THEREFOR
Hal J. Snow, 2610 S. Hillside, Wichita, Kans.
Filed Nov. 14, 1960, Ser. No. 69,166
4 Claims. (Cl. 114—61)



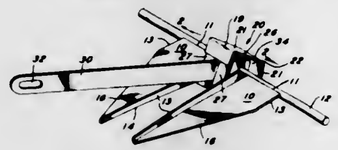
2. A boat comprising, in combination, two elongate hulls, a deck carried by said hulls and extending the length thereof and extending therebetween to space the hulls in mirror image relation, said deck having a bottom surface with said surface between the hulls being planar for the length thereof, said hulls being generally parallel and having opposite outer planar sides parallel to the longitudinal center line of the boat, said hulls having inner adjacent sides contoured to cooperate with said bottom surface of the deck to form an unobstructed venturi passage between said hulls, said inner adjacent hull sides having substantially straight parallel planar portions forming a venturi throat and end portions on the respective hulls in diverging relation extending from the venturi throat to respective ends of the hulls and forming enlarged entry and outlet portions of the venturi passage, and propelling means of cycloidal type having a plurality of depending paddles bodily rotatable about a vertical axis, said propelling means being supported on said deck on the center line of the boat at one of said enlarged portions of said venturi passage adjacent said venturi throat with only the paddles extending below the bottom surface of the deck into said passage for propelling water through said venturi passage and thus propel the boat in operation.

3,101,693
RUDDER CONTROL ARRANGEMENT
Karl Schilling, Schenkendorfstrasse 34, Minden, Westphalia, Germany
Filed July 20, 1960, Ser. No. 44,213
Claims priority, application Germany July 27, 1959
9 Claims. (Cl. 114—163)



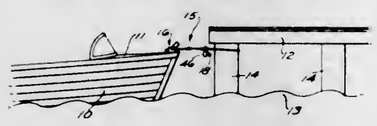
1. A rudder control arrangement, comprising, in combination at least two rudders, each rudder being turnable about an axis, said axes being parallel; and control means connected to each of said rudders for turning said rudders about the respective axes of said rudders from a neutral position through intermediate transverse positions to a terminal transverse position, the angles of attack of said rudders in said transverse positions being substantially different, said rudders defining a gap in a plane passing through the inwardly located edges of said rudders, said gap in said terminal transverse position of said rudders having a width in said plane between said inwardly located edges of said rudders that is substantially less than half the distance between said axes.

3,101,694
ANCHORS
John M. Wood, Jr., Box 394, Island Heights, N.J.
Filed June 5, 1962, Ser. No. 200,179
7 Claims. (Cl. 114—208)



1. In an anchor of the twin fluke type, a stock, a pair of flukes secured along their rear marginal edges to the stock with their inner edges in spaced relation, a crown having a pair of forwardly inclined wall portions and cheek inserts between said flukes, a shank pivotally carried on the stock, said cheek inserts having spaced plates providing a space therebetween for said shank, the front edges of said forwardly inclined wall portions providing stops for said shank, said spaced plates having forwardly disposed flanges extending from said forwardly inclined wall portions in meeting relation on each side of said spaced plates and providing a substantially closed front for said crown, said flanges of said plates having opposite outer side margins, said flukes having their inner edges in meeting relation to said side margins on each side and said flukes extending outwardly therefrom.

3,101,695
DEVICE FOR LOCKING A BOAT AGAINST UNAUTHORIZED USE
Henry W. Honeyman, Jr., 28 Wendell St., Riverside, R.I.
Filed July 18, 1961, Ser. No. 124,860
2 Claims. (Cl. 114—230)



1. A device for securing a boat against unauthorized use comprising a wire, sleeves clamped on the wire at spaced locations, a block having a base providing an undersurface for engagement with a deck or the like, spaced walls extending at generally right angles to said surface forming a slot with a bottom generally parallel to the undersurface for the reception of the wire between said sleeves, holes in said walls transverse of said slot at a location above said bottom greater than the diameter of said wire between said sleeves for the reception of a padlock, said wire additionally having a sleeve adjacent one end and a second block having a hole smaller than said sleeve through which said wire passes, said second block also having a slot in the block of a width for receiving a stretch of said wire adjacent said end whereby the wire may be looped about a pile with the end portion in the slot of said second block, said second block having holes at right angles to its slot for the reception of a second padlock.

3,101,696
POULTRY BREAST COVER DEVICE
Frank J. Lipman, Augusta, Maine, assignor to Samuel Lipman Sons, Augusta, Maine, a corporation of Maine
Filed Mar. 16, 1961, Ser. No. 96,152
5 Claims. (Cl. 119—143)

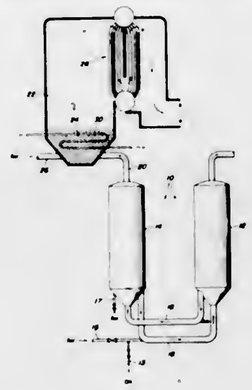


1. A breast cover device for chickens comprising a covering formed of flexible material and being adapted to fit over the breast area of the chicken and underlying the entire sternum area of the chicken, said covering including a front end portion disposed across the front portion of the chicken, an intermediate portion disposed beneath an under portion of the chicken and extending between the legs of the chicken, and a rear portion disposed beneath an under portion of the chicken rearwardly of the legs of the chicken, a first securing member connected with said front portion of the covering and extending about the neck portion of the chicken, a second securing member connected with an intermediate portion of the covering and extending over a top portion of the chicken, and a third securing member connected with said rear portion of the covering and extending about the tail portion of the chicken, whereby the covering is retained in underlying relation to the breast area of the chicken to provide continuous protection for said breast area each of said securing members comprising a band of elastic material such that the device may be secured to different size chickens and further such that the device accommodates growth of a chicken upon which it is mounted.

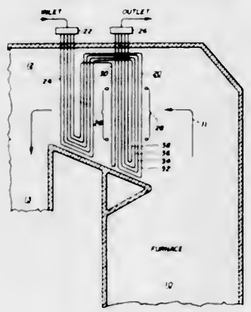
3,101,697
STEAM GENERATION
Arthur T. Hunter, New York, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed May 7, 1956, Ser. No. 583,192
6 Claims. (Cl. 122—4)

1. The method of utilizing the B.t.u. content in the regenerator gases coming from a regenerator of a catalytic cracker and having foreign matter entrained therein comprising passing effluent from the regenerator and at substantially the temperature at which it is discharged from the regenerator upwardly through a bed of particulate material that is at least in part an active catalyst such that the activity of the bed is sufficient to oxidize the oxidizable constituents of the effluent with the particles of this material being substantially heavier than that of the foreign matter entrained in said effluent, maintaining the velocity of flow of the effluent passing through said bed of material within the fluidization range of the bed of material but not below the entrainment velocity of the foreign material so that the foreign material passes

through said bed, oxidizing the oxidizable constituents of the effluent in said bed and passing the hot gases leaving said bed over steam generation surface imparting heat thereto for the generation of steam.

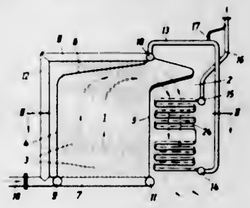


3,101,698
VAPOR HEATER ARRANGEMENT WHICH PROTECTS THE TUBES FROM OVERHEATING AND SOOTBLOWER EROSION
Edward L. Kochey, Jr., Colebrook, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Nov. 29, 1961, Ser. No. 155,783
2 Claims. (Cl. 122—392)



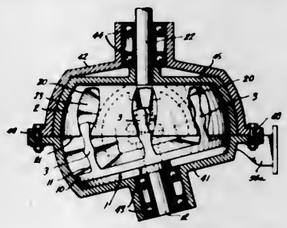
1. In a steam generator the combination of a furnace which acts as a source of hot combustion gases, wall means forming a passage through which the hot combustion gases flow, steam heating means comprising a plurality of independent tubes formed into a rectilinear panel which is parallel to the flow of the hot combustion gases, each of the tubes having a plurality of vertical portions, each of the vertical portions being parallel with one another, and substantially equally spaced from the next adjacent vertical portion, some of the vertical portions being inlets and some being outlets, by means of which steam enters and leaves the steam heating means, respectively, said panel having a first edge closest to the source of hot combustion gases, and a second edge farthest from the source of hot combustion gases, the tubes being positioned in the rectilinear panel such that the vertical portion closest to the source of hot combustion gases and the vertical portion farthest from the source of hot combustion gases are both inlets, and extend along the entire first and second edges of the panel, respectively, and sootblowers positioned downstream and upstream of the rectilinear panel.

3,101,699
HOT WATER BOILER FOR CENTRAL HEATING SYSTEMS
Heinrich Vorkauf, Davoser Strasse 2b, Berlin-Schmargendorf, Germany
Filed Mar. 14, 1961, Ser. No. 95,708
5 Claims. (Cl. 122—407)



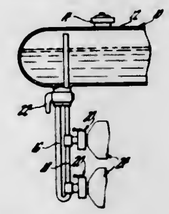
1. In a hot water boiler for a central heating system, a radiation heating surface including first distributing means, first collecting means, and radiation heated water-carrying tubes, said first distributing means being located at the bottom, said first collecting means being located on top of said radiation heating surface and said water-carrying tubes extending from said distributing means through at least part of their lengths in the vertical direction and opening into said collecting means, non-heated by-pass tubes connecting said first collecting means to said first distributing means, a convection heating surface including second distributing means, second collecting means and serpentine tubes connected between said second distributing means and second collecting means, said first distributing means having an inlet end for receiving return water from said heating system, a connection between said first collecting means and said second distributing means, and a discharge means for supplying heated water from said second collecting means to said heating system, said second collecting means being connected solely to said serpentine tubes and said discharge means, and said first distributing means being connected to said discharge means solely through said radiation heating surface and said convection heating surface.

3,101,700
ROTARY COMPRESSOR OR ENGINE
Meredith E. Bowdish, P.O. Box 2011, Anchorage, Alaska
Filed June 14, 1960, Ser. No. 36,079
15 Claims. (Cl. 123—12)



1. In a rotary device of the character described, a pair of rotors mounted in end-to-end relationship for conjoint rotation, their axes of rotation being inclined to one another at an acute angle and their ends having co-operating central portions forming a sliding seal therebetween, the end of one rotor having a series of recesses therein spaced angularly about the central portion thereof and the end of the other rotor having a corresponding series of vanes spaced in similar angular relation about the central portion thereof and each extending operatively into one of the recesses to form a series of chambers between pairs of corresponding vanes and recesses, each of the corresponding vanes and recesses having mutually opposing concavely-shaped walls terminating, in the case of the vane, at the tip portion thereof and in the case of the recess, at the mouth portion thereof, said acute angle being so chosen that the locus generated by the vane tip portion as the rotors are rotated conforms with the contour of the concavely-shaped recess wall, thereby forming a sliding seal between chambers.

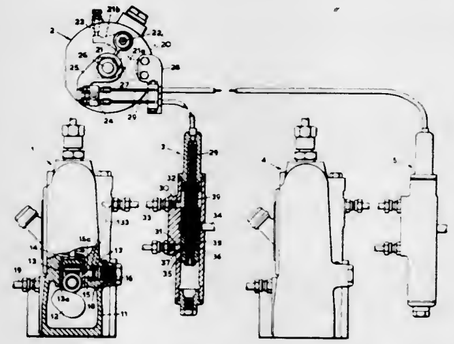
3,101,701
FUEL INJECTION SYSTEM
Vaclav Fuka, 31306 Campbell, Madison Heights, Mich.
Filed Sept. 18, 1961, Ser. No. 138,800
3 Claims. (Cl. 123—136)



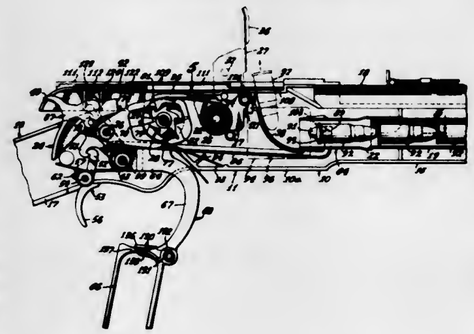
1. A charge forming device for an internal combustion engine comprising a plurality of vertically spaced cylinders, a fuel tank vertically spaced above the uppermost of said cylinders, an individual fuel injector device associated with and adapted to supply fuel to each of said cylinders, and fuel pasage means adapted to supply fuel from said fuel tank to said individual injectors, said fuel conduit means comprising a generally U-shaped conduit having first and second interconnected generally extending downwardly from said fuel tank below the fuel level thereof and communicating below the vertically lowermost cylinder with the second leg portion, said second leg portion being interconnected with said individual cylinder fuel injectors to supply fuel thereto, the upper end of said second leg portion terminating within said fuel tank above the fuel level thereof.

3,101,702
EMERGENCY SHUT-DOWN GEAR FOR MULTI-CYLINDER COMPRESSION IGNITION ENGINES
Cyril Albert Cushing and John Henry William Speaight, Rugby, England, assignors to The English Electric Company Limited, London, England, a British company
Filed Sept. 5, 1961, Ser. No. 135,995
Claims priority, application Great Britain Oct. 27, 1960
2 Claims. (Cl. 123—198)

1. Emergency shut-down gear for a multi-cylinder compression-ignition engine, comprising a source of hydraulic pressure; a single speed-responsive tripping device driven by the engine; at least two fuel-injection pumps driven by said engine and delivering fuel to the cylinders thereof; at least two hydraulic control valves each comprising a valve body having an inlet port, an outlet port, and a drain port, said inlet port being connected to said source of hydraulic pressure, a piston mounted to slide in said body between a first position, in which the inlet port is connected to the outlet port and the drain port is blocked, and a second position, in which the drain port is connected to the outlet port and the inlet port is blocked, and resilient means to bias said piston towards said second position; tension means connecting the piston of each said hydraulic control valve to said tripping device to oppose movement of said piston due to said resilient means; each said fuel-injection pump comprising a spragging pin housing having a bore, a spragging pin slidable in said bore, spring means to bias the spragging pin to lock the fuel pump, and the spragging pin having a surface acted on by the pressure in said bore in the sense to over-ride said spring means; and duct means connecting said bore to the outlet port of a hydraulic control valve, whereby on operation of said tripping device the pistons of said hydraulic control valves move substantially simultaneously under the influence of the resilient means to their second positions, so that said bore of each fuel-injection pump is connected through the outlet port of a hydraulic control valve to the drain port thereof and the spragging pins of said fuel-injection pumps move substantially simultaneously, under the influence of the corresponding spring means, to lock the corresponding fuel-injection pumps, and thus to cause the delivery of fuel to the cylinders of the engine to be terminated substantially simultaneously.



3,101,703
LEVER ACTION TOY GUN WITH SELECTIVE TRIGGER ACTUATOR
John W. Ryan, 11027 Cashmere Drive, Bel Aire, Calif.
Filed Dec. 11, 1959, Ser. No. 858,969
17 Claims. (Cl. 124—2)



12. A lever action toy gun, comprising: a housing simulating a rifle; cap-firing means in said housing and positionable into cocked and cap firing positions, manually operable lever means pivotally mounted on said housing for pivotal movement relative to said housing; means responsive to pivotal movement of said lever means in one direction for positioning said cap-firing means into a cocked position; and means responsive to pivotal movement of said lever means in an opposite direction for

automatically actuating said cap-firing means into a cap firing position for firing a percussive cap.

13. A toy gun, as defined in claim 12, wherein said housing includes a hollow barrel portion extending therefrom; cartridge means slidingly insertable into said barrel portion; releasable cartridge-holding means for retaining said cartridge means longitudinally in said barrel portions; releasing means connected to said lever means and responsive to pivotal movement of said lever means in said one direction for releasing said cartridge holding means; and ejector means in said housing and responsive to actuation of said releasing means for ejecting said cartridge means from said barrel portion and outwardly of said housing.

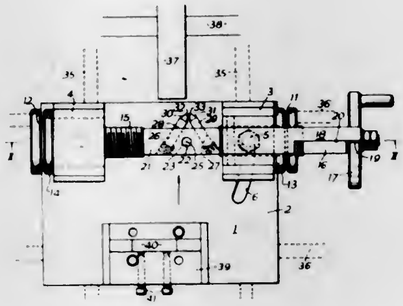
3,101,704
SLINGSHOT
James Richard McCormick, R.R. 1, Allegan, Mich.
Filed Feb. 19, 1962, Ser. No. 173,917
11 Claims. (Cl. 124—20)



1. A slingshot comprising a forked handle, the arms of which have cylindrical bores therethrough adjacent but spaced downwardly from their upper ends the forward ends of said bores being beveled, a pair of elongated tubular elastic members disposed through said bores with their ends projecting forwardly from said arms, conical clutch members disposed in the forwardly projecting ends of said tubular elastic members and having inner portions of less diameter than the bores of said arms and outer portions of substantial length of a diameter substantially exceeding the diameter of the bores, the taper angle of said clutch members being substantially that of said bevels, said clutch members also having inwardly beveled outer ends, the outer ends of said tubular elastic members being in overlapping clutching engagement with said beveled portions of said clutch members and being adhesively secured thereto, a combined fingerpiece and projectile holder of flexible material having openings adjacent the ends thereof, the inner ends of said tubular elastic members being collapsed and looped through said openings with collapsed portions thereof in overlapping relation at the ends of said fingerpiece and projectile holder, the collapsed overlapping portions of said tubular members being clampingly secured together by strips of substantial width wrapped therearound.

3,101,705
METHOD OF CUTTING AND DRESSING A GRINDING WHEEL AND APPARATUS THEREFOR
John Airlie, Glasgow, Scotland, assignor to Carrick Precision Tools Limited, a company of Great Britain
Filed July 12, 1960, Ser. No. 42,431
Claims priority, application Great Britain July 15, 1959
6 Claims. (Cl. 125—11)

2. Apparatus for cutting on a rotating grinding wheel a series of discrete parallel circumferential fins and dressing same comprising a shaft disposed on a mounting to be located adjacent the wheel, a first cutter mounted on said shaft and positioned to cut a fin on the grinding wheel, a pair of second cutters spaced apart the width of a dressed fin mounted on said shaft and positioned to dress said fin, said first and second cutters being mounted on said shaft in axially spaced relationship to extend away therefrom, and means for moving said shaft



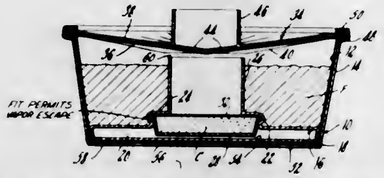
longitudinally relative to the mounting successively to bring said first and second cutters into fin cutting and dressing positions relative to the grinding wheel.

3,101,706
METHOD FOR STONE SPLITTING
Oden Fletcher Pyle, Tyngsboro, Mass., and Wesley E. Nichols, Nashua, N.H., assignors to H. E. Fletcher Co., West Chelmsford, Mass., a corporation of Massachusetts
Filed Aug. 15, 1960, Ser. No. 49,483
2 Claims. (Cl. 125—23)



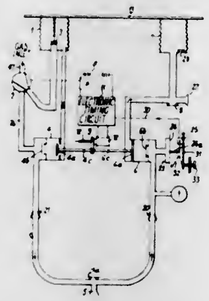
1. In a method of splitting stone, the steps which include forming in a surface of stone a series of spaced-apart cylindrical holes whose centers lie along a desired line of splitting, dropping into each of the holes, with random orientation, a unitary tubular feather body of annular cross sectional shape to provide a plurality of pressure transmitting linings each of which extends substantially continuously around the inner peripheral surface of a respective cylindrical hole in loosely engageable relationship therewith and each of which linings are of an axial length less than the depth of a respective cylindrical hole into which it is dropped, introducing into the holes a plurality of wedge elements having opposed tapering curved wedge surfaces and relieved surfaces extending between the tapering curved surfaces, said tapering curved wedge surfaces being oriented and arranged to exert wedging forces in directions substantially at right angles to the said desired line of splitting, and inserting the opposed tapered wedge surfaces of respective wedge elements into engagement with the annular feather bodies at points below the said surface of the stone, and then subjecting the wedges to successive hammering blows to flow portions of the tubular feathers and to simultaneously drive the wedges downwardly into the tubular feathers and exert forces of cleavage whereby the stone is separated along the said desired line of splitting.

3,101,707
FOOD HEATING DEVICES
Edward C. Ryan, 531 Wellington, Apt. 3, Chicago, Ill., and Raymond E. Reed, Barrington, Ill.
Filed Feb. 18, 1960, Ser. No. 9,595
10 Claims. (Cl. 126—263)



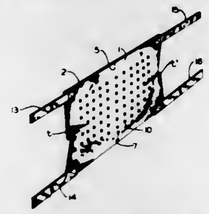
1. For use in the heating of food, the combination of a receptacle for containing the food, a dry chemical composition adapted in the presence of water to react exothermically and to emit steam, said chemical composition being so constituted that said steam is free of adulterants in sufficient quantity to contaminate the food, means for supporting and confining said composition beneath the bottom of the receptacle and for forming a passage for directing steam generated by said composition into said receptacle to heat the food therein by direct exposure to a surface of the food, said passage comprising as a wall thereof a substantial part of the wall area of said receptacle that is in contact with the food so that said wall area is heated by steam flowing through said passage.

3,101,708
ELECTRONIC TIME CYCLED RESPIRATOR
Kenneth R. Perry and Michael C. W. Andrews, Cambridge, England, assignors to Pye Limited, Cambridge, England, a company of Great Britain
Filed Feb. 1, 1960, Ser. No. 5,893
Claims priority, application Great Britain Feb. 6, 1959
16 Claims. (Cl. 128—29)



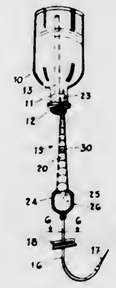
1. An electronic time cycled respirator comprising an inspiratory control valve, an inspiratory bellows, means for feeding gas to the inspiratory bellows and from said inspiratory bellows to the inspiratory control valve, means for feeding gas from the inspiratory control valve to be inhaled by a patient, an expiratory control valve, an expiratory bellows, means for feeding gas exhaled by a patient through the expiratory control valve to the expiratory bellows, means for feeding gas from the expiratory bellows to a gas outlet, an electrically-operated device connected to operate said inspiratory control valve and said expiratory control valve, an electronic timing circuit for controlling the energisation of said electrically-operated device so that energisation of said electrically-operated device acts to close said inspiratory control valve and open said expiratory control valve, means operative to close said expiratory control valve and open said inspiratory control valve when said electrically-operated device is not energised, means for operating said respirator manually when the timing circuit is inoperative and means for rendering the inspiratory bellows ineffective during manual operation.

3,101,709
FACE MASKS
Lou A. Gruenewaelder, 6917 Pershing Ave., University City, Mo.
Filed Apr. 6, 1959, Ser. No. 804,459
9 Claims. (Cl. 128—146)



1. A face mask comprising a flexible sheet-like portion consisting of two substantially rectangular plies, each of which is provided with a layer of thermoplastic synthetic resin on its inner face, said sheet-like portion being provided with a plurality of perforations, and a porous filtering element containing less than 1% by weight of phenyl mercuric acetate and being secured to said body portion and covering said perforations, said body portion being substantially air impervious except at said perforations so that air passing through said body portion will travel through said perforations and filtering element.

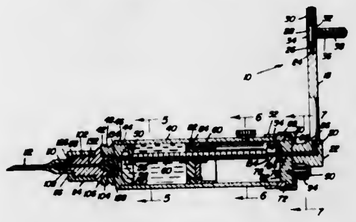
3,101,710
INJECTION SET AND FLOW METER FOR PARENTERAL FLUIDS
Wilbur R. Koehn, 20 Shorewood Drive, Sands Point, Long Island, N.Y.
Filed June 8, 1960, Ser. No. 34,725
6 Claims. (Cl. 128—214)



1. An injection set for parenteral liquids comprising in combination, a container for parenteral liquids, a float type flow meter, an injection needle, tubes connecting the container to the flow meter and the flow meter to the needle, means for controlling the flow to the needle to maintain the flow meter filled with liquid, said flow meter comprising a continuous wall of transparent material forming an annular chamber diverging downwardly from the container toward the needle, said tube for connecting the container to the flow meter being directly connected to the upper small end of the downwardly diverging chamber so that parenteral liquid flows downwardly therethrough a float in said chamber having a specific gravity less than the specific gravity of the liquid,

said float being buoyed up by a force equal to the difference in the weight of the float and liquid displaced and opposed by the drag force of the solution flowing downwardly through the chamber and acting to position the float in equilibrium at a position corresponding to a particular rate of flow, and a calibrated scale in fixed relation to the wall of said chamber to accurately indicate the rate of flow of solution therethrough.

3,101,711
AUTOMATIC HYPODERMIC UNIT
Jack Reitknecht, 475 Franklin D. Roosevelt Drive, New York 2, N.Y.
Filed Dec. 16, 1960, Ser. No. 76,346
12 Claims. (Cl. 128—218)



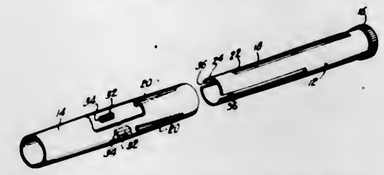
1. A hypodermic comprising a cylinder haying one end sealed and the other end containing an apertured plug adapted to be connected to a needle, a piston reciprocal within the cylinder having a threaded aperture therein, a threaded piston rod radially offset from the axis of the cylinder received in said aperture and rotatable in a sealed bore in said one end, means connected to said one end of said rod for rotating same, said piston rod being axially slidably mounted within said cylinder whereby axial movement of said rod and piston toward said plug will force fluid therethrough, and abutment means cooperating with each end of the threads on said rod limiting axial movement thereof to a predetermined fixed distance.

3,101,712
FOUNTAIN SYRINGE
Atis Strazdins, 128 Lakeview Parade, Primbee via Port Kembla, New South Wales, Australia, and Stanley Chris Stylis, Windang Road, Windang, New South Wales, Australia
Filed June 8, 1962, Ser. No. 201,025
Claims priority, application Australia June 13, 1961
7 Claims. (Cl. 128—218)



1. A fountain syringe comprising a vessel made of elastoplastic material, said vessel including first and second half shells joined together along their mating edges, a tubular member projecting from the second half shell at a point of even distance from its edge and having a central bore in communication with said vessel, means to close the outlet of the tubular member from the bore, the first half shell having a V-shaped circumferential groove adjacent the joined edges of said half shells and opening inwardly toward the second half shell, the outer wall of the groove extending into a flange-like lip, said groove permitting the first half shell to be doformed by the application of pressure thereon into the second half shell and into close contact with the inner surface of the second half shell in its deformed position.

3,101,713
TAMPON APPLICATOR
David O. Sargent, Westfield, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed Feb. 23, 1961, Ser. No. 91,050
11 Claims. (Cl. 128—263)



1. A tampon applicator comprising an outer tube and an inner tube telescopically positioned substantially within said outer tube and longitudinally movable therein, said inner tube being slightly longer than said outer tube, an end of said inner tube extending beyond said outer tube to provide a finger-gripping portion, the opposite end of said inner tube being open to receive a tampon, said inner tube having a longitudinally extending slot in its wall for a portion of its length terminating inwardly of the end of said tube opposite the end providing said finger-gripping portion, and means on said outer tube cooperating with the terminal portion of said slot to check withdrawal of said inner tube from said outer tube when said opposite end of said inner tube has cleared the inner end of a tampon positioned within said applicator.

3,101,714
TAMPON DEVICES
Stanley Penksa, Worcester, N.Y.
Filed July 3, 1962, Ser. No. 207,324
2 Claims. (Cl. 128—285)

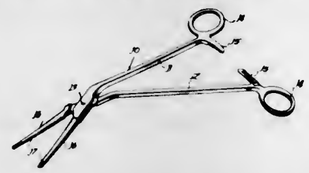


1. A tampon device comprising a substantially cylindrical elongated body of absorbent material adapted to be inserted into the vaginal cavity of the user, a cord of absorbent material secured to one end of said body adapted to extend through the sphincter of the user, and a second substantially cylindrical body of absorbent material of substantially the same diameter as said elongated body having a substantially shorter length than said first-named body slidably mounted on said cord and adapted to be positioned wholly within the sphincter and spaced from the elongated body to provide a space for the accumulation of fluid leaked past the elongated body.

3,101,715
NON-CRUSHING CLAMP
Jacob A. Glassman, Miami Beach, Fla., assignor to V. Mueller & Company, Chicago, Ill., a corporation of Illinois
Filed July 12, 1961, Ser. No. 123,479
5 Claims. (Cl. 128—322)

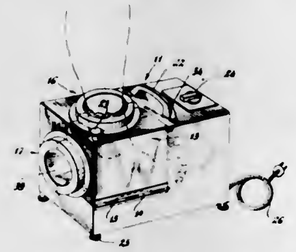
1. A surgical clamp comprising a pair of elongated jaws hingedly connected for pivotal movement towards and away from each other, each of said jaws being longitudinally flexible and providing two parallel rows of teeth defining a single longitudinal groove therebetween, said rows of teeth of the opposing jaws being disposed in opposing relation and the teeth of opposing rows being disposed in staggered relation, said jaws being of increasing thickness and stiffness towards the hinge connection

therefor and being relatively inflexible adjacent said connection, said teeth of said opposing jaws adjacent the hinge connection therefor being spaced apart when said jaws



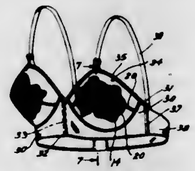
are fully closed, said teeth of said opposing jaws at the opposite ends thereof being interdigitated when said jaws are closed.

3,101,716
CABINET FOR TREATING LIMBS WITH RADIATION
Edward Shelton Cornell, Jr., 9 Winding Lane, Westport, Conn.
Filed Jan. 13, 1961, Ser. No. 82,434
1 Claim. (Cl. 128—375)



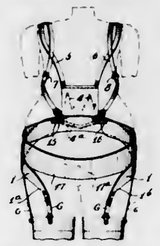
An apparatus for treating limbs with radiation comprising a longitudinal cabinet having confining longitudinal and end walls and being formed of two partible complemental sections with parting edges of which two continuous edges extend in one longitudinal wall and one end wall, respectively; said two continuous edges lying substantially in a plane passing longitudinally through said cabinet when said sections are together; said sections being provided in said parting edges in one longitudinal wall and one end wall respectively with complemental recesses which together define apertures of outlines and sizes conforming to an ankle and wrist, of a foot and hand respectively, when reposing in said cabinet; and radiation means in at least one of said sections.

3,101,717
ORNAMENTAL BREAST CUP AND METHOD OF MAKING
Bernard Korman, 34—35 76th St., Jackson Heights, N.Y.
Filed June 24, 1960, Ser. No. 38,552
8 Claims. (Cl. 128—463)



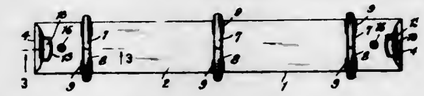
1. The method of fabricating from two complementary flat blanks of fabric, a breast cup for a bust covering garment, which comprises bonding to the outer face of each of the complementary flat blanks of fabric from which the breast cup is to be assembled, ornamental pieces of light fabric contrasting with the outer face of the fabric blanks and then affixing appliqué along the rims of said ornamental pieces by thread stitching gimp along the rims of said ornamental pieces which securely stitches the ornamental pieces to the respective blanks and then stitching the component flat pieces to form the breast cup.

3,101,718
COMBINATION GARTER SUPPORTER AND BACK AND ABDOMEN SUPPORTING MEANS
Paula Blatt Rocker, Cleveland Heights, Ohio (% Nu Vogue Creations, 1426 W. 3rd St., Cleveland, Ohio)
Filed May 5, 1961, Ser. No. 108,123
4 Claims. (Cl. 128—520)



1. A combination garter suspender, back support and abdomen-supporting means, comprising a substantially rectangular back-engaging member adapted to occupy a position in engagement with the lower part of the wearer's spinal column and having longitudinally elastic portions extending downwardly and forwardly from only the lower opposite corner portions of said back-engaging member for engagement about the sides of the thighs of the wearer's body, said portions having free forward ends with garters attached thereto so as to firmly maintain said back-engaging member in effective position, a pair of elastic shoulder-engaging supporting straps each extending upwardly from and having its ends attached to the corresponding upper and lower corners, respectively, of said back-engaging member so as to co-operate in maintaining said back-engaging member in effective position, and an abdomen-supporting band having two ends provided with means of attachment to only the lower part of said back-engaging member and adapted to extend about the hip region and beneath the abdomen of the wearer's body.

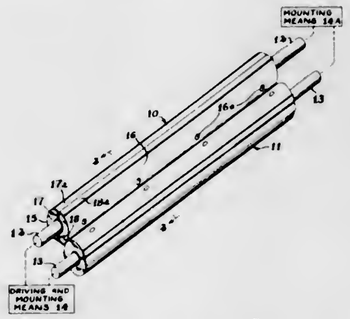
3,101,719
LOOSE LEAF BINDER
Murray Vernon, New York, N.Y., assignor to S. E. & M. Vernon, Inc., New York, N.Y., a corporation of New York
Filed June 21, 1960, Ser. No. 37,775
1 Claim. (Cl. 129—24)



A binder comprising an elongated hood having a convexly curved top wall including depending, resilient side walls and transverse depending end walls, said end walls including a tongue formed from said top wall and terminating at an aperture in said top wall, said top and side walls including intermediate apertures for receiving ring halves therein; a pair of parallel elongated plates extending longitudinally within said hood and including ring halves projecting through said intermediate apertures, said plates including abutting inner edges and outer edges

engaged by and subject to the pressure of said resilient side walls of said hood and normally urging said ring halves apart, said plates including angular flanges at the terminal ends thereof forming grooves diverging from the abutting inner edges and notches opening into the ends of said plates and flanking said grooves; and normally vertical levers pivotally disposed in the aperture in said top wall adjacent the terminal end of said tongue, said levers including an angular lug flanked by spaced lateral side lugs, said angular lug being normally disposed in the lowermost portion of said diverging grooves for preventing angular movement of said plates due to pressure of said resilient side walls, movement of said levers in a horizontal position about the terminal ends of said tongues causing the angular lugs to move into a shallow portion of said diverging grooves and permitting said resilient side walls to open said ring halves.

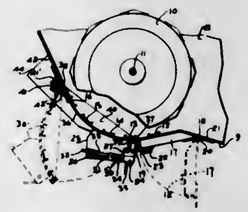
3,101,720
HUSKING ROLL CONSTRUCTION
Elof K. Karlsson, Moline, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 25, 1961, Ser. No. 147,516
3 Claims. (Cl. 130—5)



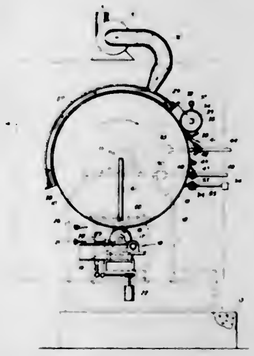
1. For use with a corn picker, a husking roll comprising: a central shaft; a pair of inner members each having outer leg portions of non-aggressive material, and each having a central portion formed to abut said shaft, said inner members being disposed on either side of said shaft; a pair of generally semi-circular outer members, comprised of aggressive material, formed to fit adjacent said inner members; and fastening means for securing said shaft, said inner members and said outer members in an integral husking roll assembly having a generally circular periphery with a pair of V-shaped segments defined by the leg portions of said inner members, the V-shaped segments of non-aggressive material effecting the release of any ears of corn which would otherwise be trapped adjacent said husking roll.

3,101,721
TRAP DOOR FOR CONCAVE CLEANING OF COMBINES
Arnold K. Fuller, R.R. 1, Moscow, Kans.
Filed Mar. 6, 1961, Ser. No. 93,496
4 Claims. (Cl. 130—27)

2. In a combine harvester having a mobile frame including side walls and a bottom wall and a threshing cylinder rotatably supported between said side walls and above said bottom wall and a plurality of circumferentially spaced concave bars secured to the upper side of said bottom wall facing said cylinder and normally positioned adjacent to and longitudinally of said cylinder, the improvement comprising, a safety door and a cleaning door forming portions of said bottom wall, said safety door having a front edge and a rear edge, said safety door front edge being hingedly secured to said frame, said safety door rear edge having a latch member secured thereon, said cleaning door being of concave shape, said cleaning door forming a container for retaining grain therein, said cleaning door supporting a plurality of said concave bars and being flexibly secured to said frame for movement away from said cylinder, said cleaning door having a latch member thereon adapted for engagement with said safety door latch member, securing members secured to said cleaning door, securing members secured to said frame and adapted for mating with said cleaning door securing members when said cleaning door is in closed position, and releasable retaining members for clamping said cleaning door securing members and frame securing members together for retaining said cleaning door in close position whereby said cleaning door may be easily opened for exposing concave bars for cleaning.



3,101,722
DRUM DRYER
Henry B. Merritt, Richmond, Va., and Robert C. Geltz, Darien, and William J. Nellen, Greenwich, Conn., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed July 29, 1960, Ser. No. 46,303
6 Claims. (Cl. 131—136)



1. An apparatus for forming and drying a self-supporting tobacco sheet from a tobacco slurry comprising a revolvable cylindrical drum having a substantially impermeable film forming surface, means for applying a cooling fluid to successive portions of said surface immediately before applying tobacco slurry and means for depositing tobacco slurry in a continuous layer to the precooled moving surface, directed air means for cooling the deposited slurry, internal heating means within said drum for heating said drum surface to evaporate liquid from the deposited slurry to form a continuous self-supporting tobacco sheet and means to remove the sheet from said surface.

3,101,723
FIBROUS CIGARETTE FILTER
Robert B. Seligman and Carroll Toepffer, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Nov. 15, 1960, Ser. No. 69,411
5 Claims. (Cl. 131—208)



1. A filter adapted to be used in conjunction with a smoking article which comprises a fibrous filtering medium, from about 15 to about 50% by weight of said filtering medium of activated carbon superficially dispersed in said filtering medium and a mixture causing adherence between said activated carbon and said filtering medium, said mixture comprising from about 5% to about 20% by weight of said filter and consisting of polyvinyl pyrrolidone having a degree of polymerization between about K15 and K90 and a polyhydric alcohol, the ratio between said polyvinyl pyrrolidone and said polyhydric alcohol in said mixture being between about 1:1 and about 4:1.

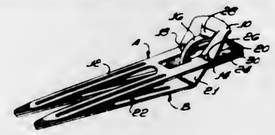
3,101,724
HAIR COLORING APPARATUS
Andrew A. Nizetich, 811½ Oro Terrace, San Pedro, Calif.
Filed Apr. 10, 1961, Ser. No. 101,865
1 Claim. (Cl. 132—9)



Apparatus for use in streaking a strand of human hair in situ on the scalp with streaking chemicals, comprising: a closure member having a generally flat end wall of resilient material formed with a slit that extends inwardly from one of its sides whereby the underside of said end wall may be positioned closely adjacent the scalp and that portion of the strand of hair closely adjacent the scalp may be urged into said slit from said one side of said end wall, said closure member also being formed with a generally vertical portion that extends away from said end wall when said end wall is positioned closely adjacent said scalp; and a tubular body member that is open at both ends, the lower end of said body member removably, telescopically engaging the vertical portion of said closure member in a liquid-tight manner whereafter the sides of said slit are biased into sealing engagement with said strand and said closure member and body member cooperate to prevent streaking chemicals applied to said strand from contact with the remaining portion of hair on said scalp, the upper end of said body member affording means to visually inspect the progress of the strand streaking operation, and the engagement of said strand by said closure member maintaining said tubular member with its longitudinal axis substantially normal to said scalp at the point of attachment of said closure member to said strand.

3,101,725
HAIR CURL CLIP
Kenneth Reiner, Pico Rivera, Calif., assignor to Reiner Industries, Inc., a corporation of California
Filed Dec. 18, 1959, Ser. No. 860,425
8 Claims. (Cl. 132—41)

1. A clamp comprising a pair of superposed elongated members having clamping portions, diverging handle portions and correlated pivot means; one of said members having a resilient integral extension struck from its material and projecting toward said clamping portions into engagement with the other member to exert a force urging the clamping portions toward their closed position and urging the members towards one another in the area of said correlated pivot means, said pivot means including spring means on one of said members extending upwardly therefrom and bearing against the adjacent surface of the other member and resiliently urging said members apart in the said area against the oppositely directed force exerted by said resilient integral extension.



3,101,726
HAIR CURLER
Salvatore J. Catania, 2531 S. 90th St., Omaha, Nebr.
Filed June 30, 1961, Ser. No. 121,161
2 Claims. (Cl. 132—42)



1. A hair curler comprising an elongated comb-like body member formed from resiliently deformable material and of a convexo-concave cross-section adapted to assume a substantially flat condition when flexed, a set of longitudinally extending spaced tooth elements cut in said body member and opening at one end thereof adapted to have strands of hair passed through the spaces therebetween, an elongated plate-like clamp member of transverse convexo-concave shape formed from a resiliently deformable material adapted to assume a substantially flat condition when flexed juxtaposed with its convex surface complemental to the concave surface of said body member for clampingly engaging strands of hair passing through the spaces of the latter, means between said body member and said clamp member at one of the juxtaposed ends thereof pivotally connecting said members for movement toward and away from each other, and means for releasably locking said body and clamp member together comprising an elastic band of a lesser longitudinal extent than said tooth elements anchored at one end to said clamping member adjacent its concave surface and said pivot means, a hole formed in the other end of said band, said hole being releasably engaged on a tooth element of the comb-like body member by stretching said band to span the concavity of the clamping member after the comb-like body and clamping member have been rotated about their longitudinal axes to wind the clamped hair strands thereabout.

3,101,727
TOOTH CLEANING DEVICE
Adolph D. Wiseman, 1075 Baker St., San Francisco, Calif.
Filed Jan. 18, 1961, Ser. No. 83,573
2 Claims. (Cl. 132—93)

1. A tooth cleaning device comprising:
(*a*) a central, disc-like body having flattened opposite

sides adapted to be gripped between the digital pulps of the thumb and forefinger of one hand of a user;

(*b*) a pair of tooth picks integral with said body at one of their ends wholly disposed within the plane of said body and projecting oppositely outwardly of said body from two opposite edges thereof;

(*c*) one pick of said pair having an inner end portion at said disc extending straight outwardly therefrom, an elongated, straight, outer end portion and an intermediate angular gooseneck portion between said inner end portion and said outer end portion integrally joining them and supporting said outer end portion with its longitudinal axis extending at an obtuse angle of approximately 30 to 45 degrees relative to said inner end portion and with the end of said outer end portion that is adjacent to said inner end portion offset to one side of said inner end portion;

(*d*) the outer sides of said outer end portion tapering to a point from the end that is connected with said goose-neck portion;



(*e*) said one pick being of cylindrical cross sectional contour from the end thereof adjacent to said body to the outer pointed end of said outer end portion;

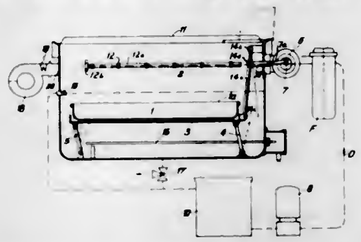
(*f*) the other pick of said pair being elongated and of generally blade-like form having flattened opposite sides, a pointed outer end remote from said body, a relatively sharpened edge and a blunt back edge with said sides extending divergently from said sharpened edge to said back edge;

(*g*) the cross contour of said other pick generally conforming to the outline of the interdental spaces at the gums whereby said other pick will generally fit said spaces with said back edge against the gums to massage the latter upon longitudinal reciprocation of said other pick when it is in one of said spaces;

(*h*) said pair of picks and said body being of plastic material having the characteristics of being readily bendable to any side without breakage thereof and of retaining substantially the bent shape thereof for a substantial length of time whereby said picks may be bent to any side at any point therealong relative to said body and generally toward the latter to enable the user to reach any point along and between the upper and lower teeth and at either side of either row thereof.

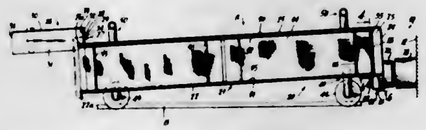
3,101,728
APPARATUS FOR THE CLEANING AND STERILIZATION OF INSTRUMENTS, IN PARTICULAR MEDICAL INSTRUMENTS
Kurt Bröge, Berlin, Germany, assignor to Rud. A. Hartmann Gross-Apparate und Spegealmaschinen G.m.b.H., & Co., Berlin-Rudow, Germany
Filed June 10, 1960, Ser. No. 35,196
6 Claims. (Cl. 134—99)

1. Apparatus for cleaning medical instruments and the like, comprising a housing forming a cleaning chamber, support means in said chamber for holding articles to be cleaned, mounting means in said chamber carrying said support means for reciprocable displacement thereof within said chamber, angularly displaceable nozzle means within said chamber for directing a stream of cleaning fluid under pressure against the articles held by said support means, and drive means for reciprocating said support means relatively to said nozzle means and for angularly displacing said nozzle means in a plane generally transverse to the direction of reciprocation of said support



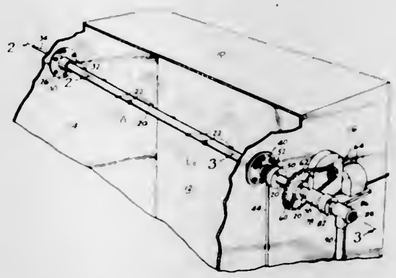
means whereby said stream of fluid sweeps the articles carried by said support means.

3,101,729
INSTRUMENT WASHERS
David Goldman, 480 Park Ave., New York 22, N.Y.
Filed Mar. 7, 1962, Ser. No. 178,529
7 Claims. (Cl. 134—145)



5. An instrument washer comprising a casing having a bottom wall, a top wall, side walls and a rear wall, and being provided with a transverse partition parallel and in spaced relation to the rear wall and formed with perforations, said bottom wall having openings therein between said rear wall and said partition, and a pipe coupling fixed to the casing, a chamber fixed to the under side of the bottom wall of said casing adjacent said rear wall and communicating with said coupling and said openings to allow water received by said coupling to pass to the space between the rear wall and said partition, and a basket having wire mesh walls slidably received in and substantially filling said casing.

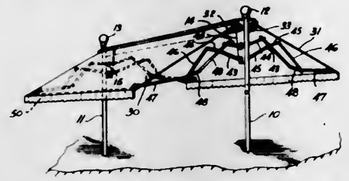
3,101,730
ROTATING FLUID SPRAY APPARATUS FOR WASHING PAPER MACHINE HEAD BOXES
William E. Harris, 1805 NE. Franklin, Camas, Wash., and Robert M. Soden, Rte. 2, Box 691, Washougal, Wash.
Filed June 12, 1961, Ser. No. 116,508
2 Claims. (Cl. 134—167)



1. Fluid spray apparatus for washing paper machine head boxes, comprising a conduit, a plurality of spray

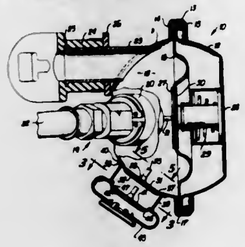
nozzles arranged at spaced intervals along the length of the conduit and communicating therewith, bearing means for mounting the conduit rotatably in a head box above the pond therein, means connecting the conduit to a supply of washing fluid under pressure for ejection through the nozzles onto the interior surfaces of the head box above the pond therein, drive means connected to the conduit for driving it at a predetermined rotational speed, and conduit means communicating with the bearing means for supplying washing and lubricating water to the bearing surfaces.

3,101,731
CANOPY
Vincent Stiglin, 532 51st St., West New York, N.J.
Filed Nov. 8, 1960, Ser. No. 68,049
3 Claims. (Cl. 135—5)



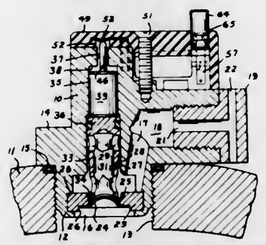
1. A canopy, comprising two vertical posts, a separate flange carried by each post, said flanges extending toward each other and being in alinment, rollers-actuating means carried by one of said flanges, roller-supporting means carried by the other one of said flanges, two angle irons having vertically extending parallel portions and alined horizontal portions, two rollers located on opposite sides of said angle irons, a hood carried by said alined horizontal portions of the angle irons and having bent edges extending over said rollers, said rollers having adjacent ends supported by said roller-actuating means and other adjacent ends carried by said roller-supporting means, two canvases, each canvas having an inner end connected to a separate roller and adapted to be wound thereon and unwound by the roller-actuating means, and four sets of foldable arms, two of said sets having ends pivotally supported upon opposite surfaces of one of said flanges, the other two sets having ends pivotally supported upon opposite surfaces of the other one of said flanges, means connecting other ends of the first mentioned two sets with the outer ends of said canvases at one side, and means connecting other ends of said other two sets with the outer ends of the canvases at the other side.

3,101,732
MOUTHPIECE REGULATOR
Gustav Dalla Valle, Los Angeles, Calif., assignor to Healthways, Los Angeles, Calif., a corporation of California
Filed Dec. 26, 1961, Ser. No. 161,799
2 Claims. (Cl. 137—63)



1. In a mouthpiece regulator of the type having a casing provided with an exhaust port, a circular flap of flexible material overlying the port with the edges of the flap on the outside of the port, and an exhaust diverter tube having an intermediate aperture adapted freely to circumscribe said flap and to be attached to said casing about said exhaust port, the combination therewith of a cup having its flange edges attached to said casing and circumscribing said flap to receive the exhausted gases from said casing, the base of the cup being attached to said diverter tube at its said aperture; said cup having an exhaust port communicating with said diverter tube; and a flap mounted by said cup forming at the exhaust port of said cup a non-return valve normally to prevent return flow into said cup.

3,101,733
EXPLOSIVE VALVE
Thomas J. Lord, Middletown, Ohio, assignor to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed July 14, 1961, Ser. No. 124,033
3 Claims. (Cl. 137—68)

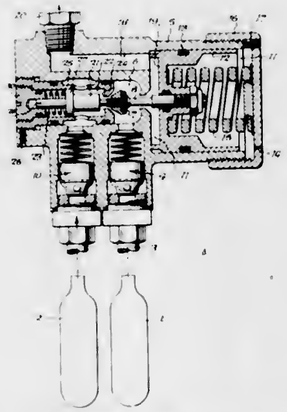


1. A valve adapted for mounting on a pressure vessel or the like and selectively operable for pressure release, including a body formed with a through fluid flow passage having an inlet end adapted to communicate with the pressure source, a mount installed in said body in said passage and having a through opening therein, a side wall of said opening tapering from one diameter on one side of said mount to a larger diameter on the other side thereof, a rupturable disc having a peripheral portion seated on said one side of the mount and a concavo-convex central portion received in said opening, a projectile slidable in said body in aligned relation to said mount on the said other side thereof, said projectile being tubular and having longitudinally spaced apart radial openings and a tip facing the convex surface of said disc, means for driving said projectile into and through said opening in said mount to rupture said disc in the process, and means on the exterior of said projectile complementing the taper in said opening engageable therewith to limit thrust of said projectile into and through said opening and to position said projectile with said longitudinally spaced apart openings therein on respectively opposite sides of said mount.

3,101,734
SOURCE SELECTING PRESSURE REGULATOR
Edward H. Replogle, Buffalo, and Milo R. Simmonds, Williamsville, N.Y., assignors of one-half to Scott Aviation Corporation, Lancaster, N.Y., and one-half to said Replogle
Filed July 25, 1960, Ser. No. 45,020
2 Claims. (Cl. 137—114)

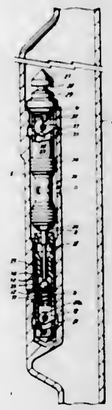
1. A pressure operated automatic selector valve comprising a casing having an elongated passage therein, one end of said passage being enlarged and comprising a balancing chamber, a movable partition mounted within said balancing chamber and dividing it into inner and outer portions sealed from one another by said movable partition, first spring means within said outer portion connected to said movable partition and urging it axially inwardly, the other end of said passage being separated

from said one end by a transverse wall having a central passage therethrough comprising a primary valve seat, a valve stem secured to said movable partition and projecting axially through the central passage in said primary valve seat in spaced relation thereto, a hollow secondary valve casing extending into the other end of said first mentioned passage and adjustably connected thereto for axial adjustment relative to said first mentioned casing, the inner end of said hollow secondary valve casing comprising a secondary valve seat having a port therethrough and receiving therethrough the free end of said valve stem in spaced relation, a secondary valve member axially movable within said secondary casing, secondary valve spring means within said secondary valve casing urging said secondary valve member toward said secondary valve seat so as to close the port therethrough, the space between the inner end of said secondary valve casing and said primary seat comprising a primary valve control chamber and the space between the secondary valve member and the end of said secondary valve casing comprising a secondary control chamber connected to said primary control chamber by means of said port, a primary valve member secured on said stem within said primary chamber, separate primary and secondary conduits extending generally radially through said first mentioned



casing and communicating with said primary control chamber and said secondary control chamber respectively, said primary and secondary conduits adapted to be connected to primary and secondary sources of pressure respectively, a check valve within said primary conduit preventing fluid flow from said primary control chamber, said first mentioned casing being formed with an exhaust passage having one end in communication with the outer periphery of the axially inner portion of said balancing chamber and the other end thereof extending through the outer surface of said first mentioned casing, said first spring means normally urging said movable partition axially inwardly whereby said valve stem moves both said primary and secondary valve members from their respective valve seats so that both said secondary and primary conduits are in communication with said balancing chamber and exhaust passage, said primary valve member normally being spaced axially a greater distance from its valve seat than said secondary valve member is spaced from its valve seat whereby when a predetermined pressure is admitted to said balancing chamber from said primary conduit, said movable partition will move outwardly to compress said first spring means a predetermined distance so as to close said port by the secondary control valve member and permit said primary control valve member to remain spaced from said primary valve seat, said first spring means moving said movable partition and valve stem axially inwardly when the pressure in said balancing chamber drops below said predetermined pressure whereby said valve stem contacts said second valve member and moves it axially away from said port.

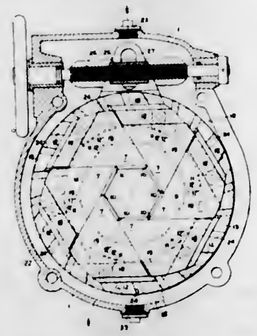
3,101,735
SIDE POCKET MANDREL WITH AN AUTOMATIC VALVE
Norman F. Brown, Longview, Tex., assignor to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 17, 1960, Ser. No. 15,574
7 Claims. (Cl. 137—155)



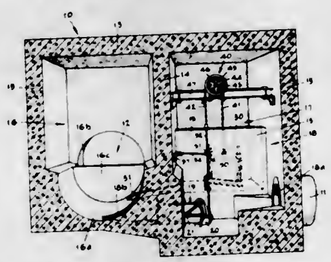
1. A side pocket mandrel valve assembly comprising in combination a tubing mandrel having a side pocket adapted to receive a flow control valve, said pocket having an opening communicating with the exterior of the tubing at one level and an opening through its interior wall communicating with the interior of the tubing at another level; a retrievable flow control valve disposed in said side pocket; and a cutoff valve including a housing having passage means and a valve seat, the housing being removably mounted and located in the side pocket below the flow control valve and in normal operative position coacting with the side pocket so that it provides communication between the two side pocket openings through the housing passage means and valve seat, the housing having tool engaging means to facilitate removal of the cutoff valve housing from the side pocket, a valve-closure member disposed to seat upon said valve seat and close said passage means, a resilient member disposed to urge said valve closure member toward seating position, and a pin disposed to transmit contact pressure from said control valve to said valve closure member to urge said valve closure member away from said valve seat.

3,101,736
DIAPHRAGM REGULATING SLIDER
Emile Egger, Cressier, Switzerland, assignor to Emile Egger & Co. A.G., Cressier, Switzerland
Filed Mar. 3, 1960, Ser. No. 12,595
Claims priority, application Switzerland Mar. 12, 1959
14 Claims. (Cl. 137—242)

1. A diaphragm regulating slider for regulating the flow of liquid, granular, gaseous or similar flowing media, of the type having casing means including wall means forming a flow canal and diaphragm elements displaceable through said wall means into the flow canal in a direction substantially perpendicular to the axis of the flow canal, such diaphragm elements disposed in a common plane and contacting one another only at the edges and adapted for relative sliding motion along one another at the edges, edge portions of such diaphragm elements extending into said flow canal defining a flow and regulating opening of adjustable size free of narrow slit-shaped areas, guiding and driving means for said diaphragm elements in said casing means outside said wall means forming the flow canal, projecting and recessed means in interengaging relationship at relatively displaceable portions of said diaphragm elements and guiding and driving means respectively, free spaces formed in said casing means, each of such recessed means having a uniform profile throughout its longitudinal extension and having opposite ends opening into said free spaces of said casing means and into said flow canal respectively, contaminations collecting in such recessed means being thereby removed from such recessed means into said free spaces and flow canal respectively without hindering relative displacement of said diaphragm elements and said guiding and driving means respectively.

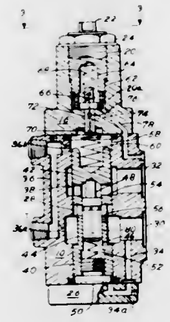


3,101,737
SEWER REGULATOR OPERATING APPARATUS
Chalmers S. Brown, Lima, Ohio, assignor to Brown & Brown, Incorporated, Lima, Ohio, a corporation of Ohio
Filed Apr. 10, 1962, Ser. No. 186,374
3 Claims. (Cl. 137—416)



1. In a sewer regulator having
a movable gate mounted for reciprocal substantially vertical movement to and from open and closed positions to thereby regulate sewer flow,
a movable float responsive to the sewer flow by rising and falling and adapted to rise and fall as sewer flow rises and falls, and
a transmission train in engagement with the float and including a connecting rod in engagement with the gate for operatively connecting the float to the gate to cause the gate to rise and open and allowing it to fall and close as the float falls and rises;
the combination therewith of
a collar about and in engagement with the connecting rod and being movable therewith in a reciprocating path to rise when the connecting rod raises the gate and to fall when the connecting rod lowers the gate; and
a spring arm having
one end fixed against movement relative to the connecting rod and
the other end being free to move and in a position along the path of collar movement to be engaged by the collar as the collar moves through a closing phase of a downward stroke and the beginning phase of a successive upward stroke in its reciprocal movement wherefore the spring arm being first distorted during gate closing exerts bias to urge gate opening.

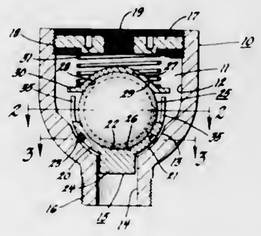
3,101,738
COMBINED SEQUENCE AND CHECK VALVE
Herman Horlacher, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 17, 1961, Ser. No. 103,641
2 Claims. (Cl. 137—489)



1. A sequence and check valve comprising in combination, a valve body having a bore therein and a pair of primary fluid passages for supplying fluid under varying pressure to said valve body bore and for removing fluid under pressure therefrom, a control plunger received in said valve body bore and slidable between a blocked position and an open position for alternately isolating said primary passages from one another and connecting said primary passages to one another respectively in said valve body bore, said control plunger having a bore therein and a pair of spaced fluid ports to connect said control plunger bore to said pair of primary fluid passages respectively, means to produce a bias force tending to hold said control plunger in the blocked position, means defining a pair of control fluid passages in said body operable to connect said valve body bore at each end of said control plunger to one of said primary fluid passages tending to produce balanced opposing hydraulic forces thereon, means to hold the hydraulic force at one end of said plunger substantially at a predetermined fluid pressure level to effect an unbalance of said opposing hydraulic forces, said hydraulic forces when unbalanced overcoming said bias force and shifting said control plunger to the open position, a check plunger received in said control plunger bore and slidable therein between a checked position and an open position, said fluid ports isolated from one another when said check plunger is in said checked position and connected to one another in said control plunger bore when said check plunger is in said open position thereof, and means to produce a bias force on said check plunger tending to hold said check plunger

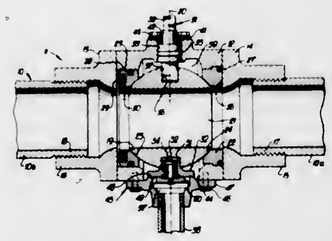
in said checked position, said bias force yieldable when the fluid pressure in said one primary fluid passage is less than the fluid pressure in the other of said primary passages by a predetermined amount whereby said check plunger is shifted to the open position thereof.

3,101,739
PRESSURE RELIEF VALVE
John F. Pribonic, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,302
12 Claims. (Cl. 137—529)



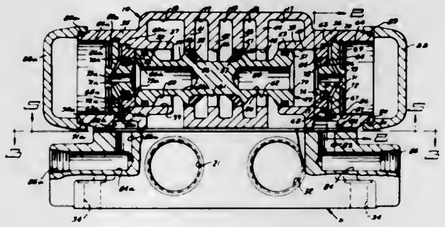
1. A valve, comprising, a body member having a wall surface forming a valve receiving chamber therein and having a fluid flow port extending from the chamber, said chamber having said chamber wall surface adjacent the juncture thereof with the said port formed arcuately and concavely with said port at the axis of the concavity of the said chamber wall surface, a valve member having a first convexly formed wall surface portion conforming with said arcuate concavity of said chamber wall surface disposed in coaxial juxtaposition thereto, an annulus of resilient material positioned between said valve member and said chamber wall surface and seating on each to prevent fluid flow through said port, said valve member having a second wall surface portion spaced from said first wall surface portion and formed with an arcuate concavity therein coaxial with said convexly formed first wall surface portion, a resilient self-supporting body positioned in said concavity in said second wall surface portion, and yieldable means for applying uniformly a force against said self-supporting body for causing said body to bear resiliently against said valve member and to distribute uniformly the sealing pressure applied against said annulus by said valve member.

3,101,740
BALL VALVE STRUCTURE
William A. Ray, North Hollywood, Calif., assignor to General Controls Co., a corporation of California
Filed July 19, 1960, Ser. No. 43,962
1 Claim. (Cl. 137—596)



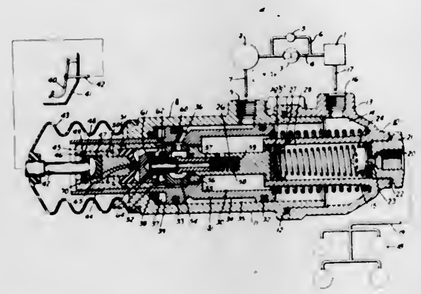
In a ball valve combination: a hollow body having openings at both ends forming an inlet and an outlet; said body also having a lateral opening between its ends; a ball closure in the body and having a through passage registrable with said end body openings; metal seals for closing both the inlet and the outlet when the closure is in closed position; said seals defining a cavity in said body isolated from the inlet and the outlet when the valve is in closed position; a bracket affixed at said lateral opening and having a flat valve seat exposed in the body; there being a port surrounded by the seat; said bracket having passage means placing the port in communication with a vent; a valve plate having a surface engaging the seat; said valve plate and said ball closure having non-circular parts located at the axis of the ball and providing an axially movable coupling therebetween; means confining the valve plate and the ball closure for movement about an axis transverse to the ball closure passage; the valve plate uncovering said port when the ball closure is in closed position and covering said port when said ball closure is moved away from closed position; said valve plate having a non-circular projection of uniform cross-section fitting within a corresponding non-circular recess of said ball closure to establish said coupling; said valve plate having a recess extending inwardly from the end of said projection and provided with an aperture in the bottom thereof; said bracket having a post extending upwardly from said seat and into said projection recess via said aperture; said post having an enlarged head guidingly accommodated in the projection recess; and a compression spring in said projection recess engaging said head and the bottom of said recess for maintaining the valve plate in engagement with the seat independently of the adjusted position of said ball valve along said axis.

3,101,741
PILOT AIR OPERATED VALVE
Walter D. Ludwig, 3865 W. Lincoln Drive, Birmingham, Mich.
Filed Apr. 12, 1961, Ser. No. 120,811
7 Claims. (Cl. 137—625.6)



1. In a valve construction having a valve body detachably mounted on a base, the combination of, an annular end chamber in each end of said valve body; an elongated master spool slidably mounted in said valve body for controlling the flow of fluid through the valve; said master spool having enlarged ends which are slidably mounted in the inner ends of the annular end chambers so as to slidably engage the interior surface thereof; a cushion retainer mounted in the outer end of each of the annular end chambers to enclose the outer ends thereof; a cushion member carried on the inner side of each of said cushion retainers; a cushion transfer element carried on each of said cushions for stopping impact with the master spool when it is shifted from one end of the valve body to the other, for transferring the stopping impact of the master spool to the cushion; and, means for selectively conducting pressure fluid into each of said end chambers for shifting said master spool.

3,101,742
BRAKE BOOSTER CONTROL VALVE MECHANISM
George E. Kellogg, Miamisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 133,402
2 Claims. (Cl. 137—625.25)



1. In a pressure operated power unit, a valve control mechanism, comprising, a housing having a chamber therein, a first wall member dividing said chamber into first and second compartments and having an opening therein for interconnection of the two compartments, said first compartment having a fluid pressure inlet port, a valve carrier slidable in said housing and having a first and second valve element spaced axially thereon and positioned at opposite sides of said first wall member in said first and second compartments respectively, said valve carrier having a passage therein connecting said second compartment with a fluid pressure exhaust port, resilient means biasing said carrier to engage said first valve element on said first wall member to close said opening therein against outflow of pressure fluid from said first compartment with said second valve element being spaced thereby from said first wall member, said housing having a second wall member movable therein axially of said valve carrier, means biasing said second wall member toward said first wall member, diaphragm means in said second compartment between said housing and said second wall member and exposed to fluid pressure in said second compartment to move thereby said second wall member away from said first wall member against the force of said biasing means, and actuated plunger means slidable in said second wall member engageable with said second valve element to close said passage in said valve carrier and move the same thereby to disengage said first valve element from said first wall member and open thereby said opening therein for fluid pressure flow from said first compartment to said second compartment, and resilient means normally biasing said plunger away from said second valve element for interconnection of said second compartment with said exhaust port through said passage in said valve carrier.

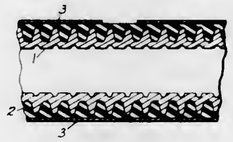
3,101,743
INSIDE REPAIR CLAMP
Howard L. Hoke, Bradford, Pa., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed May 9, 1962, Ser. No. 193,470
15 Claims. (Cl. 138—97)

7. In an inside repair clamp for a pipe joint, the combination of: a middle ring consisting of two complemental sectional halves, a unitary gasket having thickened end portions, a pair of followers with each follower engaging a thickened end of said gasket and bolt and nut assemblies for drawing said followers together, each of said followers comprising a plurality of arcuate sections with each section having an end flange, meeting end flanges of adjacent sections having aligned bolt holes and



bolt and nut assemblies passing through said aligned bolt-holes for securing said follower sections together.

3,101,744
WAVE GUIDE DAMPED AGAINST MECHANICAL VIBRATION BY EXTERIOR VISCOELASTIC AND RIGID LAMINATION
Glenn E. Warnaka, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Feb. 26, 1962, Ser. No. 175,435
2 Claims. (Cl. 138—139)

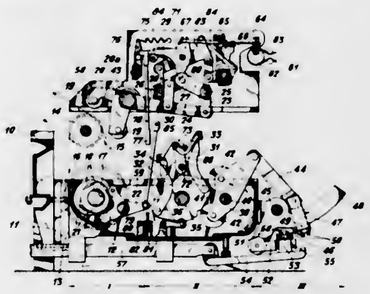


1. A wave guide for conducting radio frequency power comprising a hollow corrugated metal tube, a layer of viscoelastic material having high internal friction and low modulus of elasticity compared to the metal and bonded to the outer surface of the tube, and plates having a high modulus of elasticity compared to the viscoelastic layer and bonded to the outer surface of the viscoelastic layer, said plates being arranged in at least two rows with the plates in each row spaced along the length of the tube and laterally spaced from the plates of an adjacent row and with the plates in one row overlapping the joints between plates of an adjacent row.

3,101,745
DOBBY FOR A WEAVING MACHINE
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Feb. 1, 1961, Ser. No. 86,491
Claims priority, application Switzerland Feb. 12, 1960
4 Claims. (Cl. 139—66)

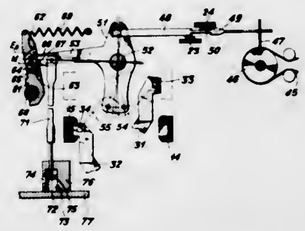
1. A dobby for a weaving machine comprising:
a drive shaft,
cams mounted on said drive shaft,
a lever engageable with said cams for actuation thereby and having a substantially horizontal arm,
lifter rails operatively connected to said arm for reciprocating movement thereby,

lifting blades adapted to be engaged by said lifter rails,
rockable cam elements placed below said lifter rails and movably connected to said lifting blades to be rocked according to the movements of said lifting blades engaged and actuated by said lifter rails,
levers engageable by said cam elements, and
a casing horizontally split into an upper part and into a lower part,
said upper part containing and supporting said lifter rails and said lever which is engageable with said cams mounted on said drive shaft,
said lower part containing and supporting said drive



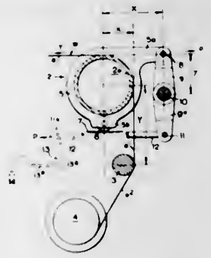
shaft, said rockable cam elements, and said levers engageable by said cam elements,
said lifting blades protruding from said lower casing part into said upper casing part,
said lifter rails and said lever contained in and supported by said upper casing part abuttingly engaging and being readily separable from said lifting blades and from said cams contained in and supported by said lower casing part, and said upper casing part and elements contained therein forming a unit vertically separable as a unit from the lower casing part and elements contained therein.

3,101,746
DOBBY
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Feb. 1, 1961, Ser. No. 86,492
Claims priority, application Switzerland Feb. 12, 1960
7 Claims. (Cl. 139—68)



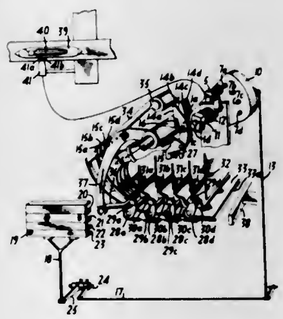
1. In a dobby for selectively actuating the heddle frames of a weaving machine reciprocatingly movable lifter rails, movable lifting blades individually engageable with said rails, and a control mechanism operatively connected to said lifting blades for moving said lifting blades into positions where the blades are engaged or disengaged by said rails, said mechanism including a member rockable between two end positions, movable snap means engaged and adapted to be moved by said member, said snap means including force-accumulating means adapted to be loaded upon movement of said member from one end position to a position half-way between the end positions and to apply the accumulated force to said member when the latter has passed the halfway position for snappingly moving said member towards the second end position, and damping means connected to said member for damping the movement thereof towards the second end position.

3,101,747
WARP TENSIONING DEVICES FOR LOOMS
Thomas Hindle, "Thornlea," Beardwood Brow, Blackburn, Lancashire, England
Filed Feb. 21, 1961, Ser. No. 90,800
Claims priority application Great Britain Feb. 25, 1960
10 Claims. (Cl. 139—109)



1. In combination, in a weaving loom of the kind which comprises a warp beam, warp "let-off" devices, a whip roll whose axis is parallel to that of the warp beam and which is bodily movable in a front-to-rear direction in response to variations in warp tension, and thereby controls the operation of the "let-off," and means for applying tension to the warps extending from the whip roll to the healds of the loom, characterized in having a fixed yarn guide which the yarns contact on their way from the warp beam to the whip roll, said fixed yarn guide being so located relatively to the warp beam and whip roll that the angle between the runs of yarn in approaching and leaving the yarn guide is always less than 180° regardless of the diameter of the yarn mass on the warp beam.

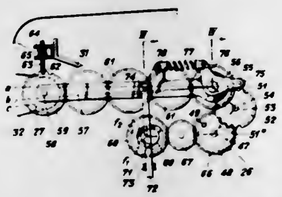
3,101,748
MULTICOLOR WEFT REPLENISHING MEANS
Hans Zollinger, Ruti, Zurich, Switzerland, assignor to Ruti Machinery Works Ltd., formerly Caspar Honegger, Ruti, Zurich, Switzerland
Filed Sept. 9, 1960, Ser. No. 55,091
Claims priority, application Switzerland Sept. 11, 1959
4 Claims. (Cl. 139—232)



1. A preselector for controlling the bobbin-change mechanism in a multicolor automatic loom, said loom

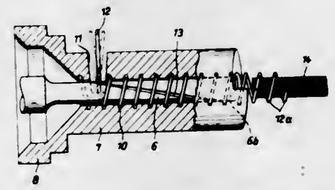
having a multiple shuttle box for receiving a plurality of shuttles and movable to a shuttle working position for each of said shuttles, a bobbin magazine with separated compartments for holding bobbins filled with various colored yarns, flap means for each of the magazine compartments for selectively releasing the lowermost bobbin therein and a shuttle bobbin feeler which initiates a bobbin-change, said preselector comprising: a movable casing coupled to said shuttle box; a plurality of control devices arranged in said casing which correspond in number to that of said plurality of shuttles, said devices being operably connected to said bobbin feeler and to said flap means for releasing a bobbin, each of said control devices comprising a pusher mounted slidably in said casing to extend and retract an end for activating said flap means, a first spring mounted to bias said pusher longitudinally outward to extend said end, a second coil spring mounted to extend linearly in compression with adjacent coils in contact and with oppositely disposed ends pivotally fastened respectively to said pusher and said casing for biasing said pusher oppositely to said first spring and holding said end retracted against the action of said first spring when extending linearly, a pin mounted in said casing and movable normal to the longitudinal axis of said second spring for deflecting said second spring normal to said longitudinal axis for reducing its opposite bias from more to substantially less than the bias of said first spring, a stationary impulse transmitter means mounted adjacent to said casing and operably connected to said bobbin feeler for individually activating said pins, whereby in any position of said casing associated with a shuttle working position of said shuttle box, a pusher associated with the shuttle in the shuttle work position is actuated by the bobbin feeler and an empty shuttle bobbin to activate the flap means for releasing a full bobbin from the associated magazine compartment.

3,101,749
PATTERN CARD MECHANISM FOR A DOBBY
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Feb. 1, 1961, Ser. No. 86,487
Claims priority, application Switzerland Feb. 12, 1960
6 Claims. (Cl. 139—329)



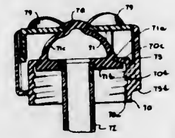
1. A pattern card mechanism for a dobby for selectively actuating the heddle frames in a weaving machine, said mechanism comprising a support arm swingable on a stationary fulcrum, a card cylinder rotatably mounted on the free end of said support arm, a perforated pattern card laid around said cylinder, vertically movable feeler needles having a lower end adapted to rest on an unperforated portion of said pattern card or to penetrate a perforation thereof, drive means operatively connected to said card cylinder for stepwise rotation of said cylinder and advancing said pattern card, means operatively connected to said drive means for periodically swinging said support arm to move said card cylinder out of the way of said feeler needles for permitting rotation of the card cylinder and for swinging said support arm to move said card cylinder toward said needles for permitting scanning of the perforations of said pattern card by said needles, and compensating means operatively connected to said arm and to said card cylinder for rotating the latter in opposite direction to the swing direction of said support arm and through the same angle.

3,101,750
APPARATUS FOR PRODUCING HELICAL COILS
Ernst Pfäffle, Neuffen, Wurttemberg, Germany, assignor to Hans Sickinger, Bloomfield Hills, Mich.
Filed July 5, 1960, Ser. No. 40,656
Claims priority, application Germany July 8, 1959
4 Claims. (Cl. 140—92.3)



4. An apparatus for forming a helical wire coil of metal or other suitable material and feeding the coil into a series of punches on the border of a pack of sheets, a mandrel having a circular cross section and a rear and a front end, means for connecting said rear end to driving means for rotating said mandrel so as to wind a wire thereon from a feeding point near said rear end, means for preventing longitudinal shifting of said mandrel, and a stationary tubular jacket enclosing said mandrel and having a helical groove therein for guiding the wire coil while being wound on said mandrel from said feeding point toward said front end, said mandrel having an uninterrupted surface for longitudinal sliding movement of the wire coil thereon and being formed slightly conically, widening from said feeding point to said front end to an extent which exceeds the resiliency of said wire coil, a longitudinal slot being provided in said mandrel for feeding the front end of said wire from said feeding point into said helical groove and guiding it to said front end of said mandrel during the rotation of the latter, and said jacket having a recess for introducing the wire into said helical groove.

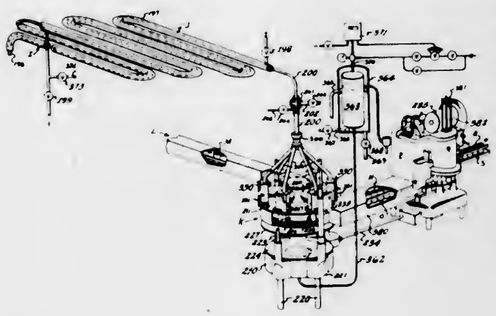
3,101,751
LIQUID DROPPER ASSEMBLY
Gene Ballin, Freeport, N.Y., assignor to Dosamatic Dropper Corporation, Freeport, N.Y., a corporation of New York
Original application Sept. 8, 1959, Ser. No. 838,678, now Patent No. 3,020,938, dated Feb. 13, 1962. Divided and this application Mar. 20, 1961, Ser. No. 96,854
10 Claims. (Cl. 141—24)



1. A liquid dropper assembly comprising a cap for bottles and the like having an outer end with at least a partial central opening and a peripheral wall which has an axis, a resilient compression member mounted on said end over and completely enclosing said opening and having an axially movable portion biased to normal outer portion, said cap and said compression member forming an air-tight compression chamber, an axially extending tube, means mounting said tube for air-tight communication with said compression chamber, a compression limit-

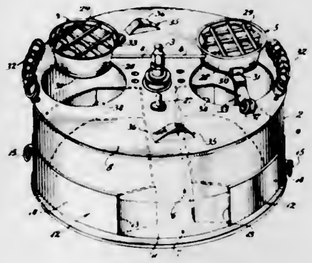
ing member mounted on said axially movable portion of said compression member without said compression chamber and axially movable in unison therewith, a guide member fixed to said cap and positioned and shaped to receive said compression limiting member axially slidably, said guide member being a sleeve located radially outwardly of an extending around said cap peripheral wall, said sleeve having a series of axially extending grooves of different depths with an end wall for selectively engaging said compression limiting member, said compression limiting member having a longitudinally extending finger shaped to extend slidably in a respective groove of said sleeve, said compression member being turnable about said axis, said finger and said groove end walls being cooperatively shaped to vary the distance therebetween depending upon the turned position of said compression member.

3,101,752
ASEPTIC FILLING MACHINE
William McK. Martin, 457 Virginia Ave., San Mateo, Calif.
Filed Aug. 1, 1960, Ser. No. 46,537
12 Claims. (Cl. 141—92)



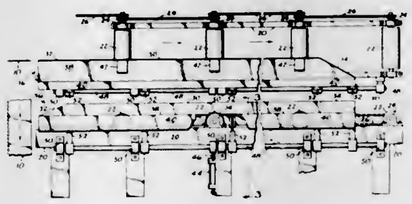
1. A filling machine for an aseptic canning system, including in combination: a stationary housing; a rotating assembly cooperating with said housing to provide an annular can-filling chamber; means for mtaintaining said can-filling chamber in a sterile condition; a can track in said can-filling chamber having a can inlet and a can outlet; an inlet manifold on said assembly; a plurality of radially extending measuring cylinders on said assembly, each with a radially reciprocating piston and an outer end toward and away from which said piston moves. and an inner end; a control valve for each cylinder with a first conduit connected to said cylinder, a second conduit connected to said manifold, a vertical outlet opening; a central chamber enclosing the inner ends of said cylinders; means for filling said central chamber with sterile fluid; means on said rotating assembly for picking up at said can inlet one can and retaining it immediately beneath said vertical outlet opening while impelling said can around said track to said can outlet; and two valve-actuating means for operating said control valve cyclically, comprising (1) means for closing off said second conduit from said first conduit when its associated piston reaches the inner limit of its stroke and immediately thereafter connecting said first conduit to said outlet opening to dispense said mixture, and (2) means for closing off said first conduit from said outlet opening at the radially outer limit of the stroke of its associated piston and immediately thereafter connecting said first conduit to said second conduit.

3,101,753
ASH TRAY
Robert S. Taub, 6145 N. Talman, Chicago, Ill.
Filed June 6, 1961, Ser. No. 115,248
11 Claims. (Cl. 141—248)



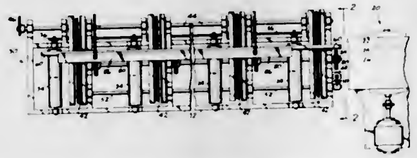
1. In combination, a base, an ash tray mounted for rotation in a horizontal plane above said base, said ash tray including a body portion and a closure plate movable relative to said body portion, means for rotating said ash tray in a closed path of travel in said horizontal plane, a weighted arm projecting from said closure plate and secured thereto in such a manner as to normally hold said closure plate in closed position, and a cam projecting upwardly from said base, said cam being engageable with said weighted arm to automatically move said closure plate into open position at a predetermined point along the closed path of travel of said ash tray.

3,101,754
SAWMILL LUMBER SORTING APPARATUS
Clifford L. Stupfel, Seattle, Wash., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Mar. 28, 1961, Ser. No. 98,850
6 Claims. (Cl. 143—157)



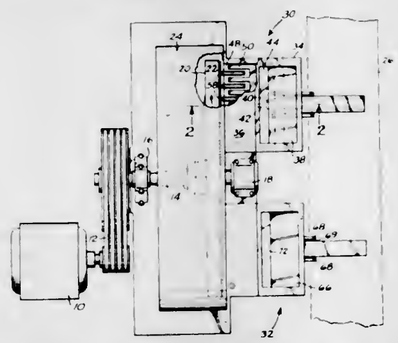
1. Sawmill lumber sorting apparatus comprising offbearing conveyor means adapted to be stationed immediately behind a saw for receiving longitudinally arranged lumber pieces, one of which may be a slabwood piece, elongated divider means arranged in operative position overlying the conveyor means and aligned with the saw and placed with its infeed ened adjacent the saw for entering the saw kerf between the pieces, thereby separating them as they travel along the conveyor means, guide means on the outfeed end of the divider means spaced from the saw a distance greater than the length of lumber to be cut and extending angularly from the divider means to a location beyond one side edge of the conveyor means for guiding the piece on one side of the divider means laterally away from the piece on the other side of the conveyor means, and divider and guide shifting means supporting the divider and guide means for shifting them between said operative position and an inoperative position displaced laterally from the conveyor means.

3,101,755
LUMBER EDGING AND SEPARATING APPARATUS
Clifford L. Stupfel and Elmer H. McClane, Seattle, Wash., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed July 3, 1961, Ser. No. 121,399
4 Claims. (Cl. 143—157)



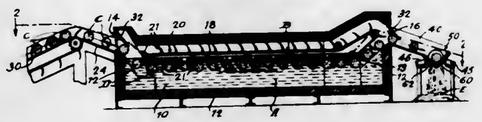
1. The combination of a lumber edger having a plurality of laterally adjustable saws, infeed means for feeding to the edger a rough board having wane along at least one side margin, means secured in a fixed position above the infeed means for establishing a reference line along the said side margin defining an edging to be cut by one of the saws, edge stop means on the infeed means mounted for adjustment laterally with respect to the reference line means for engagement by a longitudinal edge of lumber and defining with the reference line the lateral dimension of wane to be cut from the lumber, a stationary separator secured in a fixed position on the outfeed side of the saws, the stationary separator being aligned with the reference line means, and a laterally movable separator stationed on the outfeed side of the saws and alignable with one of the saws for separating the edging cut thereby from the other side of the lumber piece.

3,101,756
DISC-TYPE WOOD REDUCER WITH MULTIPLE FEED
Dale L. Schubert, Tacoma, Wash., assignor of one-half to Industrial Development Co., Inc., Tacoma, Wash., a corporation of Washington
Filed Apr. 4, 1960, Ser. No. 19,920
7 Claims. (Cl. 144—176)



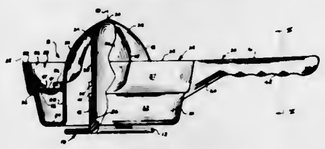
1. A disc-type wood reducer for small pieces of wood comprising a disc-shaped rotor having a face surface, a plurality of knives mounted on the face surface of the rotor, means for driving the rotor, base means adjacent the rotor, a power operated feed ram on the base movable forwardly and rearwardly relative to the face of the disc and having a head for engaging and driving wood pieces against the disc face, feed hopper means for directing wood pieces to the forward end of the ram head when the latter is retracted, a holddown head movable in a direction substantially at right angles to the direction of travel of the feed ram, the holddown head and ram head having forward portions arranged to interleave so that the holddown head is movable toward the base to an inward position wherein the distance between the holddown head and the base is less than the corresponding thickness of the ram head, and means for moving the holddown head toward the base.

3,101,757
APPARATUS AND METHOD OF DEBARKING PULP WOOD UTILIZING LIQUIFIED GASSES
Thomas P. Hanson, 39 Park St., Lennoxville, Quebec, Canada
Filed Apr. 24, 1961, Ser. No. 105,079
13 Claims. (Cl. 144—311)



1. A method of debarking pulpwood comprising the steps of totally immersing said wood within a liquified gas for a sufficient length of time to reduce the bark on said wood to a hard brittle glass-like state and while in said state subjecting said bark to impact shattering said bark clear of said wood.

3,101,758
CITRUS FRUIT JUICER
Lawrence K. Carroll, Joseph H. Messinger, Charles D. Whitcomb, and Earl R. Baxter, all of Fremont, Ohio, assignors to Quikut, Inc., Fremont, Ohio, a corporation of Ohio
Filed Aug. 1, 1960, Ser. No. 46,674
3 Claims. (Cl. 146—3)



1. A citrus fruit juicer comprising:
A. a moldable plastic base member comprising
   1. a lower supporting portion, and
   2. an upper integral pedestal portion;
B. a molded plastic reamer and receptacle member comprising
   1. a dome shaped reamer integral with and projecting upwardly from the center of an annular trough shaped receptacle,
   2. a radially extending handle integral with a side of said trough,
   3. a central shaft portion within and extending downwardly from the apex of said reamer for cooperating with said pedestal portion,
   4. a shoulder bearing means bewteen said shaft and said pedestal portion to permit free relative rotary movement therebetween,
   5. means to restrict free relative axial movement between said members comprising
      (*a*) an interfitting rib element and annular groove element, one located on each said member, and
      (*b*) slits in the wall of one of said pedestal and shaft portions to permit flexing of said wall for engaging and disengaging said interfitting rib and groove elements, and
   6. an inwardly projecting supporting ledge circumferentially of the interior of the outer wall of said annular trough shaped receptacle; and

C. a removable molded plastic seed and pulp strainer insertable in said receptacle comprising an annular trough having:

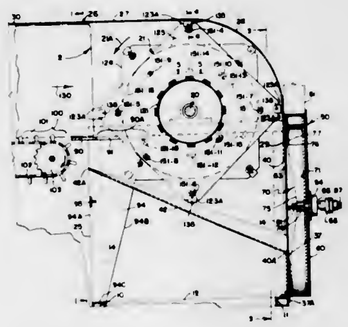
1. an upwardly extending outer wall,
2. a central aperture,
3. an upwardly extending flange around said aperture, and
4. a foraminous bottom,

wherein said strainer is supported in said receptacle on said ledge of said wall of said receptacle with said reamer projecting through and above said aperture with said flange around said aperture in said strainer cooperating with said reamer.

3,101,759
BALE SHREDDER

Leander J. Sterner and Gerald J. Sterner, Winsted, Minn., assignors to Sterner Industries, Inc., Winsted, Minn., a corporation of Minnesota

Filed Nov. 8, 1960, Ser. No. 68,098
4 Claims. (Cl. 146—70.1)



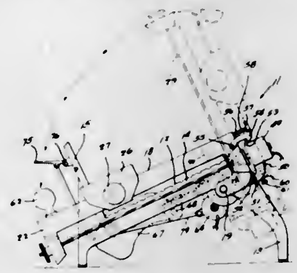
1. A bale shredder comprising a frame, a spool composed of circular end flanges with a cylinder between them, said spool being journalled for rotation on the frame, a housing enclosing said spool, said housing having an inlet chute terminating adjacent the cylinder and below its axis of rotation and an outlet below the spool and polygonal plates mounted on the cylinder at spaced intervals between the end flanges of the cylinder and normal to the axis of the cylinder for rotation therewith, said plates presenting projecting corners forming cutting edges, and cutter teeth mounted at spaced intervals on those surfaces of the end flanges which face the polygonal plates and on the faces of the polygonal plates and on the cylinder.

3,101,760
FOOD SLICING MACHINE

Laurence L. Landauer, Hollywood, Fla. (% American Slicers, 6322 N. Cicero Ave., Chicago 46, Ill.)

Filed Apr. 22, 1960, Ser. No. 24,139
3 Claims. (Cl. 146—138)

1. In a food cutting machine of the character described, an upwardly and laterally inclined trough member having an upper side edge and a lower side edge and front and rear transverse edges, an upwardly extending supporting flange on the lower side edge of said trough member adapted to slidably support a food article on said trough member for horizontal movement thereon, an arm pivoted to said upper side edge of the trough member adjacent one of said transverse edges for rotation in a vertical plane parallel to said transverse edges, depending support means at the opposite ends of said arm, a slender, rod-like rotary cutting blade journaled in said depending support means for rotation on an axis parallel to the arm, an electric motor mounted on the arm outwardly of its pivotal connection to the trough member and being drivingly connected to the blade, said depending support means being

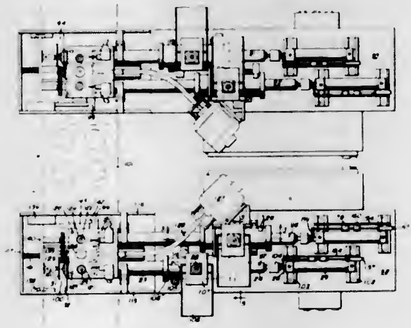


formed and arranged to support said blade for movement in a vertical plane closely adjacent to that of said one transverse edge and for movement downwardly past said one transverse edge responsive to downward rotation of said arm, and a weight member adjustably mounted on said arm and acting to bias said arm downwardly.

3,101,761
APPARATUS FOR FORMING FOOD PORTIONS OF UNIFORM WEIGHT BY VOLUMETRIC MEASUREMENT

Karl Buehler, Lima, and Murray L. Rollins, Albion, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

Filed Feb. 17, 1959, Ser. No. 793,928
9 Claims. (Cl. 146—158)



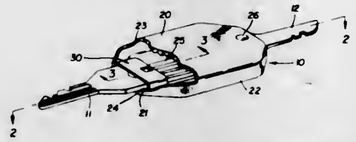
1. Apparatus for forming food portions of uniform weight by volumetric measurement including a vertically disposed hopper receiving pieces of food and a horizontally disposed extrusion cylinder receiving food from the hopper through a discharge opening therein, an extrusion piston in said cylinder, a hollow sleeve receiving said piston for closing the discharge opening from said hopper after pieces of food are deposited in said extrusion cylinder, means for moving said piston intermittently in extrusion direction in said cylinder to collect said food pieces together axially thereof and cause them to move as a unit mass therein of greater volume than the food portion to be formed, a stop plate opposite and spaced from the extrusion end of said cylinder, means connected to said means for moving said piston actuated by movement of said stop plate operative to terminate extrusion movement of said piston moving means and cut-off means controlled by said stop plate for severing the extruded food mass when extrusion movement is intermittently

terminated whereby a plurality of food portions are formed from the unit mass thereof in said cylinder.

3,101,762
KEY CASE

Peter D. Bermingham, Suffield, and Michael Stiller, Akron, Ohio, assignors to Quikey Manufacturing Co. Inc., Akron, Ohio, a corporation of Ohio

Filed Sept. 7, 1961, Ser. No. 136,488
11 Claims. (Cl. 150—40)

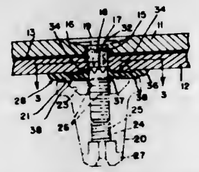


1. A key case of the character described, comprising: a hollow resilient body of thin generally flat configuration; said body including opposed elongate top and bottom walls and opposed elongate side walls; said top and bottom walls being integrally connected to said side walls along the longitudinal edges thereof and defining an elongated shallow cavity within which a key may be received; said body having at least one key receiving opening disposed in longitudinal alignment with one longitudinal end of said elongate cavity; said opening having a height dimension approximating the thickness dimension of said key and further having a width dimension that is slightly smaller than the width dimension of the head portion of said key with said opening being yieldable to permit the head of said key to pass therethrough; and retaining means mechanically interconnecting said key with said body; said retaining means permitting slidable passage of a substantial portion of said head portion through said opening towards projecting position while normally preventing complete removal of said key through said opening.

3,101,763
CLEAT MOUNTING WASHER

Alton Brooks McGehee, Hudson, Mich., assignor to M. & S. Mfg. Co., Hudson, Mich., a corporation of Michigan

Filed June 1, 1959, Ser. No. 817,404
1 Claim. (Cl. 151—35)

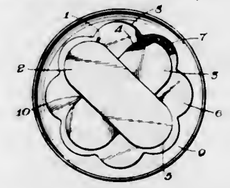


A flexible plastic washer for mounting cleat members to a shoe sole, comprising an annulus of generally flat cross section adapted to surround a projecting sole post at the opening of the annulus, said annulus having sole embedding means on one side thereof in the form of a series of sharpened projecting formations immediately surrounding said opening, said formations tapering from said first named side in the direction toward the axis of said opening and in the direction of its circumference to provide points embeddingly engageable in the sole about the sole post, said annulus having on the same side thereof a series of further circumferentially spaced sharpened formations located substantially radially outwardly of said first formations but still substantially within the outer periphery of the annulus, said annulus having an annular shoulder projecting from the other side thereof in approximate axial register with said first series of formations, and an annular series of radial serrations projecting from said other side in the approximate circumferential zone of said further formations.

3,101,764
TIRE PATCH

Wilhelm Gruber, Munich, Germany, assignor to Stahlgruber Otto Gruber & Co., Munich, Germany, a firm of Germany

Filed Dec. 28, 1961, Ser. No. 162,856
Claims priority, application Germany Jan. 4, 1961
10 Claims. (Cl. 152—367)

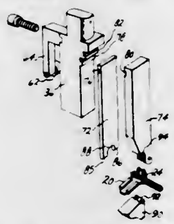


1. A tire patch comprising a reinforcing core consisting of a plurality of layers of rubberized cord threads embedded in rubber and superimposed upon each other so that the cord threads of the individual layers extend at an angle to each other, and at least one rubberized reinforcing layer of fabric having warp and weft threads intimately secured to said reinforcing core and extending beyond the entire area defined by said core.

3,101,765
MACHINE FOR CRIMPING TERMINALS ON WIRES

Hugh W. Batcheller, Newton Highlands, Mass., assignor to Kent Mfg. Corp., Newton, Mass., a corporation of Massachusetts

Filed Aug. 9, 1956, Ser. No. 603,067
2 Claims. (Cl. 153—1)



1. In a machine for crimping the wire-gripping portion of a connector member about a stranded wire which is transverse to the axis of the connector member, a vertically reciprocable plunger carrying crimping and cutting tools in mutual face-to-face contact for operating simultaneously on said wire-gripping portion of a connector member and the wire laid thereon, said cutting tool including means operating to gather and center the strands of said wire immediately before said wire-gripping portion is crimped.

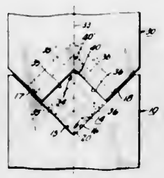
3,101,766
CRIMPING APPARATUS

Edwin Floyd, Jr., Lower Paxton Township, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Continuation of abandoned application Ser. No. 504,029, Apr. 26, 1955. This application Feb. 23, 1962, Ser. No. 175,236
2 Claims. (Cl. 153—1)

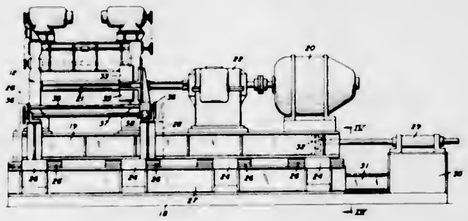
1. A series of dies of different sizes, each die of said series adapted to cooperate with a larger die to form a

dieset to make a crimped connection between a metal ferrule and a conductor, wherein the ferrule is entirely supported by the dieset after completion of the crimping operation, each of said dies having crimping faces terminating in a vertex to form a first angle, said crimping



faces forming a V in cross section, each die of said series having identical angles, but successively shorter crimping faces forming the sides of the angle, each of said dies of the series adapted to nest within said larger die constituted by a longer crimping face.

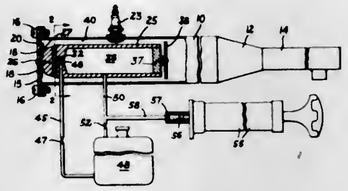
3,101,767
MANUFACTURE OF TIN PLATE
Robert R. Shedd, Fairless Hills, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed June 4, 1959, Ser. No. 818,196
2 Claims. (Cl. 153—92)



1. Apparatus for making metal strip comprising, in combination, a unit effective to apply a surface treatment continuously to strip passing therethrough, traction means spaced from the delivery end thereof for pulling strip continuously through said unit under constant tension, a roller leveller located between said end and said means, effective to flatten the strip while under said tension, means mounting said leveller for movement transversely of the path of the strip, and means responsive to sidewise shifting of an edge of said strip for moving the leveller whereby to maintain it approximately centered relative to the strip despite lateral weaving thereof.

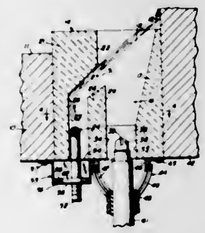
3,101,768
RESONANT INTERMITTENT COMBUSTION DEVICES
Russell R. Curtis, Westfield, Ind., assignor to Curtis Automotive Devices, Inc., Westfield, Ind., a corporation of Ohio
Filed Sept. 15, 1960, Ser. No. 56,229
8 Claims. (Cl. 158—4)

1. In combination with a resonant intermittent combustion device having a combustion chamber opening at one end into an exhaust pipe and having an inlet end including inlet port means and a flow control valve means controlling the inflow of air through said port means providing for air flow therethrough only into said chamber, means forming a carburetion vaporizing member in direct heat exchange relation with said combustion chamber providing for heating of said member as a result of combustion in said chamber, said member including a closed carburetion chamber therein, means forming a passage from said carburetion chamber to said combustion chamber providing for reversing exchange flow of gases therebetween in response to resonant intermittent



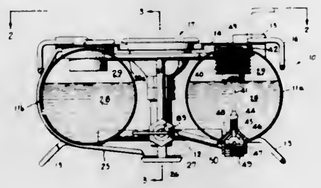
combustion in said combustion chamber, and means supplying liquid fuel into said pasage means for aspiration of the liquid fuel into gas flow moving in either direction through said passage means.

3,101,769
BURNER FOR GASEOUS AND LIQUID FUELS
John Smith Zink, Robert D. Reed, and Hershel Goodnight, Tulsa, Okla., assignors to John Zink Company, Tulsa, Okla., a corporation of Delaware
Filed Sept. 25, 1961, Ser. No. 140,411
3 Claims. (Cl. 158—11)



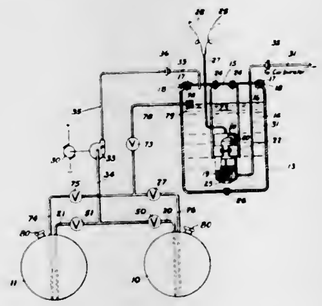
1. A burner and furnace wall assembly comprising, a barrier, said barrier having an elongated opening therethrough, a furnace wall adjacent said opening for absorbing heat radiating from burning fuel, an elongated refractory shroud member filling said opening, end walls on said shroud member, a first longitudinally extending side wall joining said end walls, a second longitudinally extending side wall joining said end walls and having a face confronting the first side wall, said second side wall having a second face spaced a greater distance from the first side wall than said first face, an angularly disposed surface on said second side wall joining the first face with the second face, a partition extending lengthwise within said shroud member joining said end walls and spaced from said second face, said partition having a surface confronting the first side wall, a free edge on said partition spaced from said angular surface, said first face and said surface on said partition and the first side wall forming an elongated cavity within said shroud member, a burner head for discharging liquid fuel in a fan shaped pattern downstream within said cavity and substantially parallel to said furnace wall, an elongated burner head for gaseous fuel mounted between said partition and said second face, said angular surface and the edge on said partition providing a passage extending generally transversely of said shroud member through which burning gaseous fuel is deflected by said angular surface, means controlling the volume of air admitted to the presence of the first burner head, and means controlling the volume of air admitted to the presence of said elongated burner head.

3,101,770
SELF PRESSURIZING LIQUID FUEL BURNING APPARATUS
Isadore N. Vant, 654 Hudson Drive, Santa Clara, Calif.
Filed June 22, 1959, Ser. No. 821,824
16 Claims. (Cl. 158—32)



14. Self-pressurizing liquid fuel burning apparatus comprising a plurality of substantially duplicate tanks for liquid fuel rigidly fixed in predetermined relatively closely spaced relation and intercommunicating respectively adjacent the uppermost and lowermost regions thereof to equalize the level of the liquid fuel in said tanks and the pressure of the vapor in the uppermost regions of said tanks above the level of the liquid fuel therein, a generator rigidly fixed in predetermined relation to said tanks and having an inlet, a burner supported in heat conducting relation to said generator and in heat radiating relation to both said generator and said tanks, means for establishing communication between the inlet side of said generator and the liquid fuel containing lowermost region of said tanks, a valve in said communication means to cut off the flow of liquid fuel to said generator when the pressure in said tanks exceeds a predetermined value, pressure-responsive means operatively associated with a said tank and exposed to the pressure therein, said pressure-responsive means being operatively associated with said valve for operating said valve in response to pressure variations in said tank, and means for maintaining uninterrupted communication between said generator and the space in said tanks above the level of the liquid fuel therein when said burner is operating.

3,101,771
LIQUID FUEL SYSTEM FOR VEHICLES
Donald H. McCuen, Box 354, White Pigeon, Mich.
Filed May 31, 1960, Ser. No. 33,612
1 Claim. (Cl. 158—36.3)



In a fuel system suitable for use with an engine-driven vehicle wherein liquid fuel is carried in a plurality of supply tanks mounted on the vehicle and is pumped under positive pressure to the intake of the charge-forming device of the engine, the combination including:

a plurality of main fuel supply tanks;

a charge-forming device;

a closed auxiliary fuel container;

first pump means of the type permitting the flow of liquid therethrough in either direction when inoperative mounted within said fuel container adapted to deliver fuel under pressure from said container to the intake of said charge-forming device, said first pump means adapted to be submerged in liquid fuel contained in said container;

a first conduit connected between the discharge of said first pump means and the intake of said charge-forming device for conducting fuel from said first pump means to said charge-forming device;

second pump means of the type permitting the flow of liquid therethrough in either direction when inoperative adapted to withdraw fuel from said supply tanks and to deliver the fuel to said fuel container;

second conduit means connected between the intake of said second pump means and each of said tanks for conducting fluid from said tanks to said second pump means;

a third conduit connected between the discharge of said second pump means and said fuel container for conducting fuel from said second pump means to said container, said second conduit means including valve means controlling the flow of fluid between said second pump means and each of said supply tanks whereby fuel may be withdrawn selectively from said plurality of supply tanks and delivered to said fuel container through said second conduit means and said third conduit when said first and second pump means are actuated and through said overflow conduit means and said second conduit means and said third conduit when said first pump means is actuated and said second pump means is nonactuated;

overflow conduit means for liquid fuel communicating at one end with the interior of said fuel container intermediate the top and the bottom walls thereof and at the other end with each of said supply tanks, said point of communication with the interior of said container being disposed horizontally above said supply tanks, said other end of said overflow conduit means terminating at substantially the lowest point in said supply tanks, said overflow conduit means including a flow-restricting means adapted to regulate the rate at which liquid fuel is conveyed between said supply tanks and said fuel container to a value less than the difference between the rate at which said second pump means is capable of delivering liquid fuel to said fuel container and the rate at which fuel is delivered from said container to said charge-forming device;

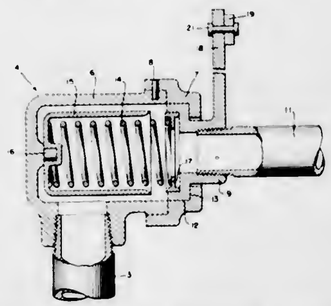
valve means disposed in said overflow conduit means between said container and each of said supply tanks controlling the flow of fuel between said container and each of said supply tanks, overflow of fuel from said fuel container to said plurality of supply tanks being selectably controlled by said valve means; and

power means, separate from the engine to which said charge-forming device furnishes fuel, for actuating said first and second pump means, said first and second pump means adapted to be actuated at the same time to deliver fuel from said supply tanks to said charge-forming device, each of said first and second pump means being of sufficient capacity when actuated alone, with the other of said pump means being inoperative, for delivering fuel from said supply tanks to said charge-forming device.

3,101,772
GAS BURNER AND HIGH TEMPERATURE ROTARY JOINT

John Roger Williams, Ambler, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania

Filed Nov. 2, 1960, Ser. No. 66,840
6 Claims. (Cl. 158—99)

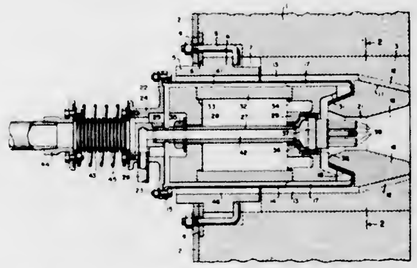


6. Apparatus for movably supporting a burner in a furnace chamber including a tubular support adapted to extend into the chamber, a hollow cylindrical casing on said support with the interior of the casing communicating with the interior of said support, an annular member extending axially from one end of said casing, cooperating surfaces on said casing and member serving to prevent said member from being removed from said casing, a burner carried by said member in a fixed position relative thereto, fuel being adapted to flow through said support, casing and member to said burner, a spring, means to mount said spring in said casing to force said surfaces together and thereby prevent leakage of fuel between them, a radiation shield substantially the length of said spring located in said casing between and spaced from both said casing and spring, means to direct fuel as it flows to said burner between said shield and casing, and means to rotate said member and burner relative to said casing, said last mentioned means being adapted to extend beyond the chamber.

3,101,773
AIR PREHEATING BURNER

Emil Blaha, Cheltenham, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania

Filed Mar. 22, 1960, Ser. No. 16,771
9 Claims. (Cl. 158—109)

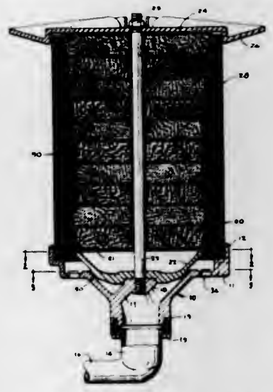


1. In a burner, a hollow cylindrical body, a cylindrical structure in and extending almost all the way through said body and spaced therefrom to form an annular passage, a hollow cylindrical member attached to one end of said body and having an axially extending central passageway therethrough, said structure, body and member being so shaped that one end of said annular passage communicates with the center of said member; means to supply air to said annular passage to flow through the center of said member, means forming a passage for fuel gas extending through said structure coaxial with said member, said means forming said fuel gas passage being spaced from said annular passage, said last mentioned means including means to direct fuel gas axially as a jet into the center of said member, and means to direct hot gases around the exterior of said body.

3,101,774
RADIANT ATMOSPHERIC GAS BURNER

Procter Brevard, Evansville, Ind., assignor, by mesne assignments, to Freeman Burdett Gas Burner Company, Chicago, Ill., a co-partnership

Continuation of application Ser. No. 328,076, Dec. 26, 1952. This application June 2, 1958, Ser. No. 739,433
7 Claims. (Cl. 158—113)



1. An atmospheric gas burner in which the combustion chamber is a narrow, upwardly extending chamber defined by the confronting surfaces of two refractories said surfaces being spaced not substantially more than one inch from each other at any point, the outer face of the inner refractory being slightly concave and the outer refractory being of a heat resistant mesh, said combustion chamber having at its lower extremity means including a gas-air inlet for directing a gas-air mixture adjacent the lower surface of the inner refractory and a secondary air aperture positioned between said gas-air inlet and the outer refractory.

3,101,775
PAINT MASKING SHADE

Paul J. Antich, 32412 Vandover St., St. Clair Shores, Mich.

Filed Apr. 12, 1962, Ser. No. 186,989
6 Claims. (Cl. 160—23)



1. A paint masking shade for a building wall having an opening comprising an elongated upright mounting plate bearing against said wall spanning the upper portion of the opening, a pair of longitudinally spaced mounting blocks within said opening adjustably secured to rear portions of said plate, friction holders projecting outwardly from said blocks operatively engageable with said wall, a horizontally elongated open ended housing mounted upon and along the front portion of said plate and opening downwardly, there being a series of longitudinally spaced apertures formed through said housing, apertured support plates within end portions of said housing, screw means selectively registering with said apertures securing the support plates within said housing providing longitudinal adjustments for said support plates, a roller within said housing including longitudinally aligned journals projected through said support plates, and a flexible shade mounted on said roller normally stored within said housing and projecting downwardly therefrom to register with said building opening, the adjustable securing of said mounting blocks including a forwardly extending elongated channel on said mounting plate, there being a pair of aligned slots formed through said channel, said mounting blocks being guidably and movably mounted within said channel, a stud on each block projected through a corresponding slot, and a hand fastener on each stud frictionally engageable with said channel for securing said blocks in longitudinally adjusted spaced relation.

3,101,776
AIRTIGHT COOLER DOOR

Donald R. Voris, 333 Way Ave., Kirkwood 22, Mo.

Filed July 3, 1961, Ser. No. 121,513
1 Claim. (Cl. 160—40)



In a counterbalanced vertically folding door for a cooler having two side walls, a floor, and a head, comprising an upper and a lower rectangular door element, said two door elements having confronting edge portions hinged together therealong, and suspended from a pair of bearings one of which is mounted on each side wall, a vertically disposed track adjacent each side of the door and attached to the side walls and projecting outwardly beyond the door, a pair of rollers secured to the bottom outside edges of the lower door element and disposed to travel in the track, a rubber seal member secured to the bottom edge of the lower door element cooperative with the floor, a rubber seal member secured to the inside edges of the door elements cooperative with the side walls, a rubber seal secured to the top inner edge of the upper door element cooperative with the head of the cooler, a rubber seal member secured to the upper edge of the lower door element and a cooperative rubber seal member secured to the lower edge of the upper door element to seal the door elements at the hinge line, a track bracket mounted upon the track at the closed hingeline position between the upper and lower door elements, a latching lever mounted upon said track bracket and forcibly engageable against the lower portion of said upper door element to provide sealed engagement of both door elements at said hingeline, a pair of top brackets, one on each side of said door, upon which the upper door element is mounted, a pair of pivot arms upon which said top brackets are suspended, one of said pivot arms being bolted to its cooperative top bracket by a vernier arrangement to provide vertical adjustability of one side of the door in hanging said door to secure a closed sealing arrangement along the sides and bottom of said door, said track having an adjustable section at the bottom thereof, sloping inward to force the door into airtight engagement at the floor.

3,101,777
FOLDING DOOR FOR TELEPHONE BOOTH

Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corp., 1201 Flushing Ave., Brooklyn 37, N.Y.)

Filed Feb. 9, 1961, Ser. No. 88,119
3 Claims. (Cl. 160—206)

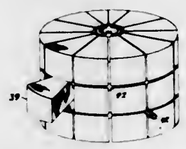


1. A telephone booth including a doorway and a folding door for closing said doorway, means mounting said door for normally folding up and simultaneously swinging into said booth to afford access to the interior of said booth, means guiding said door during opening and closing movements thereof, said guiding means including a horizontally extending stationary guideway and an element normally positioned within said guideway so as to be guided thereby, means mounting said element on said door for movement into and out of said guideway, locking means engaging and positively locking said element in said normal position within said guideway, means operable from the outside of said booth for disengaging said locking means from said element, and resilient means biasing said element for movement out of said guideway upon disengagement of said locking means from said element.

3,101,778
CERAMIC ROTOR FABRICATION

Noel D. Hazzard and John A. Cunningham, Wellsville, N.Y., assignors, by mesne assignments, to Combustion Engineering, Inc., a stock corporation of Delaware

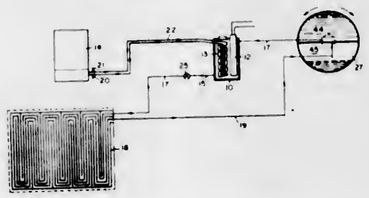
Filed May 13, 1960, Ser. No. 28,980
2 Claims. (Cl. 165—10)



1. A heat absorbent element mass for a rotary regenerative heat exchanger having a rotor carrying the element mass alternately between a heating fluid and a fluid to be heated; said heat absorbent element mass including a plurality of sector shaped blocks of porous ceramic element axially aligned about a central rotor post

to provide a composite annular element; ceramic spacer elements carried by radially adjacent element blocks adapted to simultaneously provide a predetermined lateral spacing between adjacent blocks of element and a predetermined axial spacing between superposed annular banks of element; and resilient fibrous ceramic packing strips carried by the spacer elements adapted to provide a resilient support for the annular banks of element.

3,101,779
TEMPERATURE CONTROL APPARATUS AND INSTALLATIONS
Yat Chuen Yuen, 214A Des Voeux Road, Central, Ground Floor, Hong Kong
Filed July 12, 1960, Ser. No. 42,282
Claims priority, application Great Britain Apr. 7, 1960
2 Claims. (Cl. 165—50)

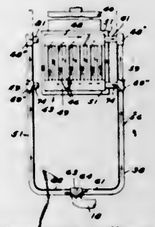


1. A temperature control apparatus comprising a closed fluid circuit having a temperature control fluid therein adapted to be circulated therethrough, the circuit including a heat and cold accumulator having means for selectively heating or cooling said fluid therein, at least one radiator operatively connected with the accumulator in the circuit, means for circulating the fluid through the circuit comprising a rotatably mounted cylindrical container having a diametrical partition dividing the container into two chambers of substantially equal capacity, the axis of rotation of the container being horizontal and lying substantially in the plane of said partition so that the container may be rotated to alternately bring each of the chambers temporarily into a position in which it is located wholly above the level of the other of said chambers, the container being positioned with respect to the remainder of said closed circuit so that when either of said chambers is in uppermost position it is positioned above the level of said remainder of the closed circuit whereby the fluid flows by gravity from the upper chamber through the remainder of the closed circuit and back into the lower chamber, means for rotating the container, air escape means comprising two pipes extending respectively one into the temporarily upper chamber and the other into the temporarily lower chamber, each such pipe having one end open and the other end closed, said closed end being provided with an apertured side wall projecting into the other chamber whereby when the temporarily lower chamber is being filled with fluid air can escape from the lower chamber through the pipe into the temporarily upper chamber, the apertured side wall in the pipe in the temporarily upper chamber being positioned above the highest level of fluid in the temporarily lower chamber, and valve means in each of said pipes for closing the open end of the pipe in the temporarily upper chamber to prevent fluid therein from passing directly through the pipe into the temporarily lower chamber and for opening the open end of the pipe when the temporarily upper chamber has been rotated into lowermost position.

ERRATUM

For Class 165—143 see:
Patent No. 3,101,930

3,101,780
PLATE TYPE BOILER
Clarence C. Smith, Okemos, Mich., assignor to Tranter Manufacturing, Inc., Lansing, Mich., a corporation of Michigan
Filed Feb. 9, 1960, Ser. No. 7,581
7 Claims. (Cl. 165—166)



1. An upright plate type boiler comprising a pair of opposed upright, generally parallel, front and rear fluid circulating panel units spaced transversely from one another, a pair of opposed upright, generally parallel side panel units of a construction generally similar to said front and rear units, said front, rear and side units being arranged about the four sides of a boiler heating space, said panel units each comprising a pair of plates secured together in face-to-face sealed relation and providing therebetween a plurality of upright fluid flow passages and transversely extending, vertically spaced headers in communication with said passages adjacent vertically spaced points of the latter, the respective upper and lower headers of the respective units being in communication with one another, and at least one upright cross-over circulatory unit disposed between the opposed panel units of one of said pairs, said cross-over circulatory unit having a construction similar to said panel units, including vertically spaced headers in communication with one another through upright fluid flow passages, said headers of the cross-over unit being respectively in communication with at least one of said last named opposed panel units at the respective vertically spaced headers of the latter.

3,101,781
MISCIBLE TYPE SLUG METHOD OF RECOVERING CRUDE OIL FROM RESERVOIRS
Carl Connally, Jr., Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Feb. 15, 1960, Ser. No. 8,495
24 Claims. (Cl. 166—9)

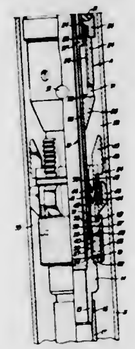
1. In a method of producing oil from a subterranean reservoir provided with at least one injection well and one production well the steps which comprise introducing a liquefied, normally gaseous fluid comprising ammonia into said reservoir through said injection well at a pressure above the vapor pressure of said ammonia at reservoir temperature, thereafter introducing into said reservoir through said injection well a driving fluid at a pressure sufficient to maintain said ammonia above the vapor pressure of ammonia at reservoir temperature and displace said ammonia through said reservoir in the direction of said production well, and withdrawing fluids including said oil from said production well until the effluent flowing therefrom substantially comprises said driving fluid.

3,101,782
REVERSE-FLOW SOLVENT FLOODING METHOD
Le Roy W. Holm, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed June 13, 1960, Ser. No. 35,399
12 Claims. (Cl. 166—9)

8. In the recovery of oil from an oil-containing underground reservoir by the injection of aqueous liquid into

said reservoir through an input well and the concomitant recovery of oil from said reservoir through an output well, the ratio of water-to-oil produced at said output well having reached a value in excess of 2 to 1, the improvement comprising terminating the injection of said aqueous liquid through said input well, injecting into said reservoir through an injection well a slug of fluid soluble in said oil but substantially insoluble in the aqueous liquids in said reservoir, said fluid being additionally characterized as having a viscosity substantially less than that of the oil in said reservoir, thereafter injecting aqueous fluid through said injection well and into said reservoir to drive said slug of fluid toward a producing well, the path of fluid travel through said reservoir from said injection well to said producing well being substantially the same as the path of fluid travel from said input well to said output well, the direction of flow from said injection well to said producing well being substantially opposite to the direction of flow from said input well to said output well, and producing oil from said producing well.

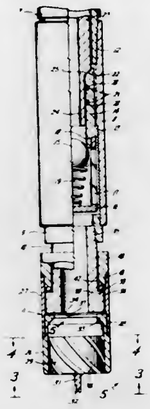
3,101,783
WELL PACKER
Hiram H. Fisher, Jr., and Julian D. Keithahn, Houston, Tex., assignors to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 28, 1960, Ser. No. 65,680
14 Claims. (Cl. 166—130)



1. In well packer apparatus to be set in a well bore: a body; longitudinally spaced first and second abutments surrounding said body; a support sleeve around said body and secured to said first abutment and slidable along said second abutment; normally retracted packing means on said sleeve between said abutments; means on said body engageable with one of said abutments for effecting movement of said abutments toward each other to expand said packing means outwardly; and means operatively associated with said sleeve and body and movable by said body for shifting said sleeve in a direction to maintain said first abutment away from said second abutment to retain said packing means in its retracted position.

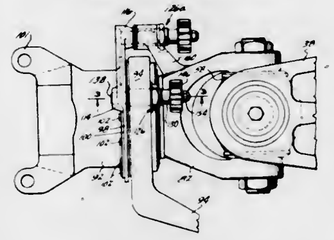
3,101,784
ROTARY WASH SCREEN SETTING COMBINATION AND ROTARY WASHING TOOL THEREFOR
Edward E. Davidson, Houston, Tex., assignor to Howard Smith Company, Houston, Tex., a corporation of Texas
Filed Oct. 16, 1961, Ser. No. 145,273
5 Claims. (Cl. 166—158)

1. In combination, a well screen, a wash pipe extending through said screen for conducting washing fluid through said screen from one end to the other thereof, a check valve closing one end of said screen and releasably and sealingly engaging one end of said wash pipe to receive washing fluid therefrom, and arranged to permit flow from said wash pipe through said check valve and prevent flow in the opposite direction, and a rotary washing tool comprising a rotary bit and means rotatably con-



necting said bit to the check valve to receive fluid therefrom, said bit having fluid passageways longitudinally therethrough with a tangential component whereby flow of fluid therethrough will urge said bit to rotate in one direction with respect to said screen and check valve.

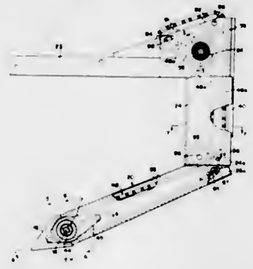
3,101,785
BLADE FOLDING DEVICE
Ray D. Leoni, Hamden, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,376
1 Claim. (Cl. 170—160.12)



In a helicopter, a rotor head, a blade, a blade attaching sleeve, means projecting from said rotor head, said blade attaching sleeve being mounted for rotation on said projecting means, said blade being connected to said sleeve, an annular member mounted on said blade attaching sleeve for rotation, an annular flange fixed to said blade attaching sleeve adjacent said annular member, said annular flange having a first and second radial projection extending outwardly therefrom, each radial projection having a hole located therethrough, first pin means fixed to said annular member, said first pin means having a first pin movable to engage the hole in said first radial projection of said annular flange of the blade attaching sleeve, means for controlling the rotation of said blade attaching sleeve, said control means including a first lever arm extending from said annular member, a second lever arm extending from said means projecting from said rotor head, said second lever arm having its free end adjacent said annular flange, and second pin means fixed to said second lever arm, said

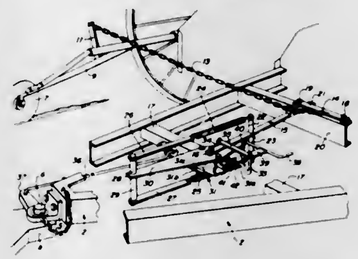
second pin means having a second pin movable to engage the hole in said second radial projection of said annular flange of the sleeve to position it against rotation with relation to said second lever arm at a predetermined angle for folding.

3,101,786
CENTER ENCLOSED DRIVE FOR ROD WEEDER
George Dwight Hunter, Des Moines, and William W. Jackson, Ankeny, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 7, 1961, Ser. No. 115,439
1 Claim. (Cl. 172—44)



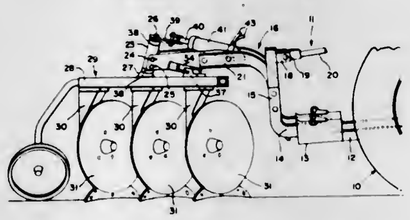
A rod weeder comprising: ground-engaging wheel supported frame means; a plurality of gooseneck pendants fixed to said frame means, each pendant including a downwardly extending rear section and a lower forwardly extending section; a bearing shoe fixed to the forward end of each lower forwardly extending section, a weeder rod extending through all of said bearing shoes; at least one of said pendants being a drive pendant having a generally vertical hollow section, an upper pendant portion, and a lower forwardly extending hollow section; the upper pendant portion comprising a pair of laterally spaced apart plates fixed to the upper portion of said vertical pendant portion, one of said plates having an opening, the other plate supporting a first bearing means in alignment with said opening in said one plate, a sleeve fixed at its inner end to the outer side of said one plate concentric with said opening, a second bearing means carried at the outer end of said sleeve, a shaft journaled in said first and second bearing means and extending outwardly of the outer end of said sleeve, a first sprocket fixed to the outwardly extending end of said shaft, a second sprocket fixed to said shaft between said plates, and a pair of idlers journaled between said plates; said lower forwardly extending hollow section being jointed in its rear portion with the lower portion of said vertical hollow section, the associated shoe receiving spaced apart bearing portions, a rod-driving sprocket fixed nonrotatably to said weeder rod between said spaced apart bearing portions; a drive chain disposed within said drive pendant and having a tension flight and a slack flight, one end of said chain being disposed about said rod-driving sprocket and the other end of said chain being trained over said second sprocket and said idlers; chain guide means disposed at the juncture of said vertical and lower hollow sections, said guide means comprising a first guide engageable by said tension flight, a second guide disposed between said slack flight and said tension flight, said second guide having a stationary narrowed curved guide surface engageable only by the central portion of said slack flight, said guide surface having a radius of curvature in excess of one-half the distance between said first guide and said stationary guide surface; and drive means interconnecting said first sprocket with said ground-engaging wheel means.

3,101,787
MARKER SHIFTING DEVICE FOR AN AGRICULTURAL IMPLEMENT
Carl Thore Marino Hallgren, Norrkoping, and Anders Gustav Lars Alden, Vaderbrunn, Nykoping, Sweden, assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 6, 1961, Ser. No. 150,520
Claims priority, application Sweden Nov. 17, 1960
9 Claims. (Cl. 172—127)



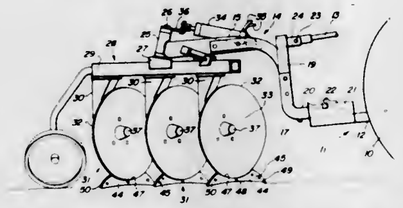
1. A tractor drawn agricultural implement comprising frame means; a pair of markers swingably connected therewith; one of said markers being in a lowered or operative position and the other marker being in a raised or inoperative position when the tractor is driven in a straight line; a flexible member connected to each of said markers; means for swinging said markers into and out of operative position including, a generally fore and aft extending actuating arm pivotally mounted at one end to said frame means and having its other end secured to the generally central portion of said flexible member, a lever pivoted on the frame, means operatively connecting the lever to the tractor for pivoting the lever responsive to turning movement of said tractor, said lever having a part thereon engageable with said actuating arm for movement of said arm between two end positions as the tractor is turned, each end position corresponding to the lowered position of one marker and a raised position of the other marker, and spring means mounted on the frame and operatively connected to said actuating arm so as to continuously urge it into one of its end positions when said tractor is traveling in a straight line.

3,101,788
TWO-WAY DISK PLOW
Marvin D. Jennings, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 2, 1962, Ser. No. 163,746
6 Claims. (Cl. 172—219)



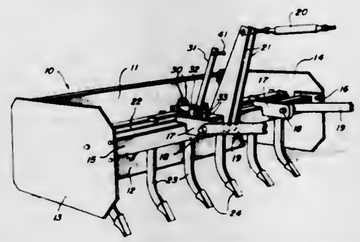
1. In a reversible disk plow, a supporting frame, an elongated disk carrier extending diagonally of the direction of travel and substantially parallel to the ground in the operating position of the carrier, a pivot member affixed to and projecting upwardly from the disk carrier medially of its ends, said pivot member being tilted forwardly in the plane of the carrier and at an angle with respect thereto, and means connecting said pivot member to the supporting frame for lateral swinging of the carrier about the axis of said pivot member between opposite diagonals for right and left-hand plowing.

3,101,789
DISK PLOW ATTACHMENT
Marvin D. Jennings, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 2, 1962, Ser. No. 163,747
5 Claims. (Cl. 172—219)



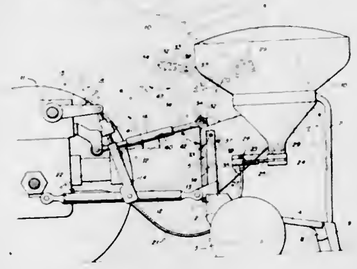
1. In a reversible disk plow having a supporting frame, a disk carrier mounted on the frame on a generally vertical pivot axis for alternate swinging laterally about said axis relative to the supporting frame, an earth-engaging disk rotatably mounted on the carrier for lateral swinging therewith to face opposite diagonals in positions for right and left-hand plowing, and an auxiliary allochiral earth-engaging tool mounted on the carrier having an earth-engaging face disposed below said disk and forming generally a continuation of the lower surface thereof, said auxiliary tool having a relatively short upper edge and a relatively long lower edge disposed diagonally of the direction of travel and terminating in forward and rearward right and left-hand earth penetrating points, said points being alternately disposable forwardly, upon lateral swinging of the carrier and disk for right and left-hand plowing to open a path in the soil below the disk.

3,101,790
SCARIFIER BAR LOCK MECHANISM
Russell E. Rice, Stockton, Calif., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 25, 1961, Ser. No. 112,720
9 Claims. (Cl. 172—317)



1. An earthworking machine having a transverse supporting frame, comprising a tool-carrying bar pivotally mounted on the frame for swinging about a transverse axis and having a plurality of laterally spaced scarifier teeth secured thereto for swinging therewith between an open non-operating position with the teeth extending generally horizontally below the frame and a closed or operating position with the teeth extending generally vertically, a lever having a fulcrum on the frame for forward and rearward swinging and having a generally horizontal arm secured thereto, a link having a pivotal connection at one end to said arm and at the other to the tool bar for transmitting the motion of said lever to the tool bar to swing the latter from said non-operating to said operating position, the pivotal connection of the link to the arm being on a center line between said fulcrum and the pivoted connection of the link to the tool bar in said non-operating position, said link being movable to a position with the pivotal connection thereof to the tool bar disposed between said fulcrum and the pivotal connection of said arm to said link and overcenter with respect thereto to lock the tool-carrying bar in its operating position.

3,101,791
DRIVE INTERRUPTING APPARATUS FOR GRAIN DRILLS AND THE LIKE
Jean Van Londersele, Montataire, France, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 2, 1961, Ser. No. 142,319
Claims priority, application France Oct. 5, 1960
5 Claims. (Cl. 172—445)

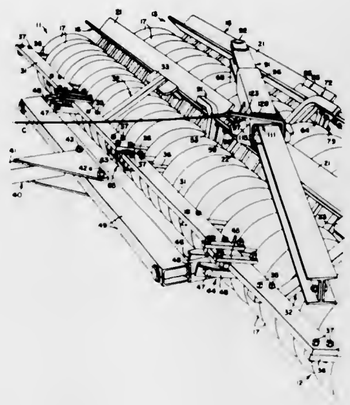


1. In an implement having a driven part and adapted to be mounted on a tractor and transported thereby, hitch means carried by the tractor comprising lower draft links connected to the implement and an upper link vertically spaced above said draft links, an articulated lever pivotally connected at one end to said upper link and pivotally connected to the implement at a location spaced from the connection of the lever to said upper link and vertically spaced above said draft link implement connections, said lever being swingable upon vertical movement of said links and the implement therewith to a raised position, said lever having a part thereon engageable with said driven part to interrupt the operation thereof, said engageable part of the lever being movable out of operative engagement with said driven part upon lowering of said links and the implement therewith to its initial lowered position.

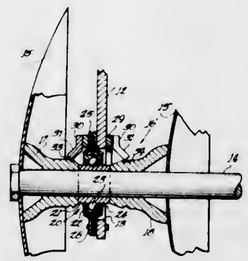
3,101,792
OFFSET DISK HARROW
William R. Frank, Bell, Calif., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Continuation of application Ser. No. 796,363, Mar. 2, 1959. This application Feb. 16, 1962, Ser. No. 176,847
9 Claims. (Cl. 172—596)

1. In a disk harrow, a pair of generally axially aligned disk gangs arranged in substantially end-to-end relation and each constructed and arranged to work substantially the same width of ground, each disk gang including a gange frame, hinge means interconnecting adjacent ends of said gang frames and including a pair of fore-and-aft spaced apertured members on each gang frame, the lower ends of the forward members being disposed above the lower ends of the rear members, said ends being apertured, and hinge pin means extending through the apertures in the associated members to provide a hinge axis that lies in a line extending in a forward and upward direction,

and hitch means connected to the generally central portions of said gang frames and including means accommodating movement of said gang frames about said hinge axis.

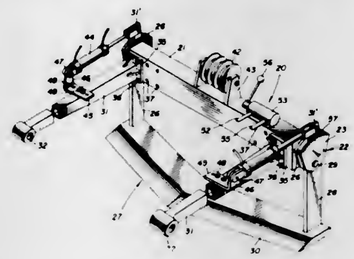


3,101,793
WRAP GUARD FOR HARROWS AND THE LIKE
Daniel M. Brown, Villa Park, and Robert D. Woodworth, Clarendon Hills, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 18, 1961, Ser. No. 159,934
8 Claims. (Cl. 172—609)



1. In combination with a disk harrow or the like having frame means and at least one disk gang mounted for rotation with respect to said frame means, said disk gang comprising a plurality of spaced-apart ground-working tools, spacer means abutting adjacent pairs of said ground-working tools to maintain said tools in their spaced-apart relation, bracket members depending from said frame means and supporting said gang, and bearing means on the spacer means adjacent said bracket members journalling said gang for rotation with respect to said frame means, a wrap guard comprising at least one knife secured to each of said bracket members, said knives having a blade portion positioned adjacent to said bearing means and disposed in cutting relation with respect to the spacer means adjacent said bracket members to protect said bearing means from trash wrapping around said spacer means.

3,101,794
ANGULAR ADJUSTING MEANS FOR A LAND CLEARING IMPLEMENT
William Otto Bechman, Arlington Heights, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Original application Sept. 30, 1959, Ser. No. 843,433, now Patent No. 3,022,836, dated Feb. 27, 1962. Divided and this application Oct. 25, 1961, Ser. No. 147,537
3 Claims. (Cl. 172—698)



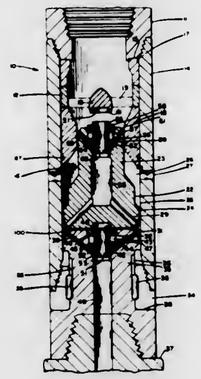
1. An implement including a frame comprising a transverse supporting beam, a pair of draft arms, means adjustably connecting said draft arms to said beam whereby said arms may be moved inwardly and outwardly relative to said beam, a pair of laterally spaced supporting structures connected to said beam, each said structure including spaced plate members connected together and providing a vertical slot, with stops at horizontally spaced ends of said slot, a plow blade disposed below said beam, a pair of laterally spaced upright legs connected to said blade, means pivotally connecting said legs to said supporting structures between said plate members and within said slot whereby said blade may be tilted relative to the ground, means for pivoting said legs including a pair of fluid extensible members, means pivotaly connecting each extensible member to each draft arm, each extensible member including a cylinder, a piston and ram reciprocable within each cylinder, means for directing fluid under pressure to said cylinder on opposite sides of said piston for moving the same, and means pivotally connecting said rams above said slot to the said legs, said stops limiting the pivotal movement of said legs.

3,101,795
HILLSIDE DRILLING EQUIPMENT
Donald W. Raby, 2022 Preston Ave., Los Angeles 26, Calif.
Filed Sept. 8, 1959, Ser. No. 838,549
6 Claims. (Cl. 173—23)

1. In a drilling rig, a generally L-shaped rigid frame structure including a derrick forming the long leg of the L and a base forming the short leg thereof, a pair of wheels mounted on said frame structure in the region of intersection of the derrick and base, said wheels being mounted for rotation on a common axis extending transversely of the derrick and base in a direction normal to each, said frame structure being swingable as a unit about the axis of the wheels so position said derrick horizontally for movement in such position as by towing or pushing, a longitudinally adjustable leg mounted on the base at a point remote from said wheels and intermediate the planes containing the wheels, said leg extending from the base in a direction oppositely to that of the derrick, a boring tool, said base having an open area intermediate said leg and the rotational axis of the wheels adapted to pass the boring tool, tool-rotating means carried by said base for engaging and rotating the boring tool, a motor carried by said base, means operably connecting said motor and said rotatable means, a windlass mounted on said base, a sheave mounted on the outer end portion of said derrick, and a cable passing over said sheave attached at one end to said windlass and adapted to be attached at its other end to the boring tool.

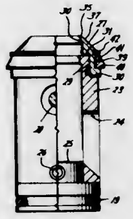


3,101,796
FLUID-DRIVEN PERCUSSION MOTOR
Joe C. Stall and Renic P. Vincent, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 69,046
11 Claims. (Cl. 173—73)



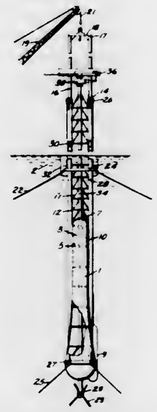
1. A cylindrical sleeve valve comprising a hollow cylindrical member containing a constriction, a housing defining a cylindrical opening in which said valve is axially slidably disposed, said housing containing a conduit for flow of fluid therethrough and through said member, hydraulic means including a piston connected to said member for axially sliding said member, and closure means disposed in the path of fluid flow through said member and shaped to contain a part of said member whereby said valve may be slid to a position where said part is disposed in said closure means and said flow is shut off.

3,101,797
CORE TAKER DEVICES
Emmet F. Brieger, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Apr. 5, 1960, Ser. No. 20,158
8 Claims. (Cl. 175—4)



1. A formation core taking device adapted to be fired from a gun body into earth formations about a well bore and comprising: a tubular body member having a forward, formation cutting end formed between an internal bore and an outer surface, said body member having an external, forwardly facing, annular shoulder spaced rearwardly of said forward cutting end; a ring member slidably received by the forward cutting end of said body member to abut said shoulder and be spaced rearwardly of said forward cutting end, said ring member having an outer diameter greater than the diameter of said body member; and means releasably coupling said ring member to said tubular body member, said coupling means being responsive to forces developed within the well bore after the firing of said tubular body member to uncouple said ring member from said tubular body member thereby permitting said body member to be retrieved from the formations independently of said ring member.

3,101,798
MARINE DRILLING APPARATUS
Wilmer G. Wilson and Charles J. O'Rear, Shreveport, La., assignors to Cities Service Oil Company, New York, N.Y., a corporation of Delaware
Filed July 15, 1958, Ser. No. 748,759
4 Claims. (Cl. 175—8)

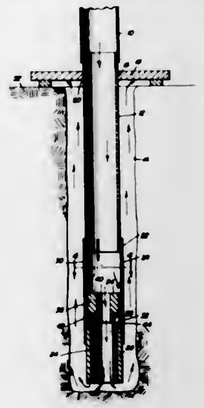


1. Marine drilling apparatus comprising a vessel of controllable buoyancy, means associated with said vessel to control its buoyancy, a plurality of tubular members affixed to said vessel, said members being maintained in vertical and equally distant relationship to each other, said members being of sufficient length to extend above

the surface of the water upon the placing of the vessel at the desired position under the water, said members being closed at their lower ends and open at their upper ends to receive a piston, a plurality of pistons each adapted to be received within the upper end of one of said tubular members in telescopic relationship thereto, said pistons being of sufficient length to permit the attachment or removal of drill string sections when in an extended position, a crosshead rigidly connected to the pistons and adapted to maintain the pistons in vertical fixed relationship to each other and having means attached thereto for supporting a drilling string, pneumatic means associated with the lower section of the tubular members whereby gas may be introduced into or released from said members to raise or lower the pistons, a plurality of anchorage cables being of sufficient length to extend from the marine floor to the upper end of the tubular members, guide means positioned in the lower portion of the submersible vessel, said anchorge cables passing through said guide means; clamping means for securing said anchorage cables to the upper end of the tubular members, said cables being spaced equally distant from each other, a second plurality of anchorage cables extending from the marine floor to the upper end of the tubular members; guide means positioned on the tubular members, said second plurality of anchorage cables passing through said guide means, clamping means for securing said second plurality of anchorage cables to the upper end of the tubular members, said cables being spaced equally distant from each other; a plurality of vibration dampening cables anchored to the marine floor and extending to the upper end of the tubular members, guide means secured to the well conductor below the submersible vessel, said vibration dampening cables passing through said guide means, clamping means for securing said vibration dampening cables to the upper end of the tubular members, at least one vertically positioned well conductor extending from the marine floor through the vessel to above the surface of the water, means to maintain the conductor in parallel fixed relationship to the tubular members and submersible vessel, said conductor terminating at its upper end in means to support drilling equipment, a down the hole shoulder positioned within the well conductor near the marine formation, said shoulder consisting of a body section joining the well casing above and below such shoulder, supporting means integral with the interior of said body section to receive a tubing hanger, said means having at its upper end a flat surface of sufficient width to support a tubing hanger, said means having at its upper end a flat surface of sufficient width to support a tubing hanger, and a tubing hanger positioned on said supporting means.

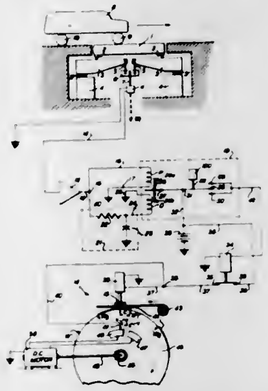
3,101,799
STEAM NOZZLE BORING DEVICE
Paul W. Grabow, Twin Brooks, S. Dak.
Filed Nov. 29, 1960, Ser. No. 72,430
6 Claims. (Cl. 175—422)

1. A drilling device for post holes comprising a vertically elongated hollow cylindrical body for receiving steam under pressure in its upper end and a nozzle assembly at its lower end for discharging steam from said body, said nozzle assembly including an outer sleeve fixed secured to, projecting downwardly from and communicating with said body and an inner sleeve continuously communicating with said body and slidably received in said outer sleeve and in spaced relation thereto for providing an annular steam discharge passage therebetween, cooperating generally horizontally extending surfaces on said outer and inner sleeves movable into engagement with each other for closing flow through said annular passage while limiting downward movement of and retaining said inner sleeve within said outer sleeve, said inner sleeve being of sufficient length to enable its lower end to be selectively retracted into the



outer sleeve and to be projected below the outer sleeve in the lowered position of the inner sleeve.

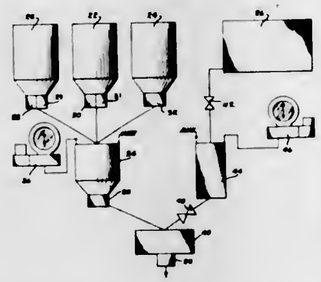
3,101,800
WEIGHING OF MOVING OBJECTS
Seymour H. Raskin, Cincinnati, Ohio, assignor, by mesne assignments, to Railroad Machinery Development Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 4, 1958, Ser. No. 752,731
23 Claims. (Cl. 177—1)



1. In a scale including a displaceable force-receiving member and means mounting said force-receiving member so that it is capable of displacement; the improvement comprising means for generating an electric signal proportional to the displacement of the force-receiving member means electrically connected to said means for generating an electric signal for suppressing high frequency components of said generated electric signal due to sudden changes in the displacement of the force-receiving member, means responsive to the displacement of the force-receiving member for indicating a digitized value of the displacement of the force-receiving member, recorder means for recording said indicated digitized value, means for actuating said recorder means, and means electrically connected to said means for generating an electric signal and said means for suppressing high frequency components of said generated electric signal restraining operation of said recorder-actuating means until the generated

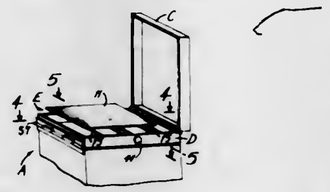
electric signal and the electric signal with the high frequency components suppressed are within a predetermined tolerance from equality.

3,101,801
MATERIALS PROPORTIONING DEVICE
Paul C. Miller, 10300 Sparta Ave., Sparta, Mich.
Filed Jan. 11, 1960, Ser. No. 1,742
13 Claims. (Cl. 177—70)



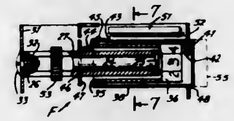
1. In an automatic dosing machine, a source of material; weighing means; valve means for controlling the flow of material from said material source to said weighing means; said weighing means comprising: a material receptacle; a movable member connected to said material receptacle so as to move in accordance with the weight of said material in said receptacle; signal-producing means located adjacent said movable member, said signal-producing means being arranged to become energized when said movable member reaches a predetermined position; means for moving said signal-producing means from a first to a second attitude in response to its first energization, said movement of said signal-producing means being such that said movable member again causes energization of said signal-producing means when the lead weight of said material is added to the weight at which said first energization takes place; means actuated by said signal-producing means for closing said valve means immediately upon occurrence of said first energization; and means operated at a time at which said signal-producing means should be re-energized for checking whether or not said signal-producing means is then energized.

3,101,802
SCALE-WASHING MACHINE COMBINATION
Jacob L. Kleinman, Hotel Kimberly, 74th St. at Broadway, New York, N.Y.
Original application Jan. 3, 1958, Ser. No. 707,027. Divided and this application Jan. 23, 1961, Ser. No. 84,448
5 Claims. (Cl. 177—144)



5. In an apparatus for cleaning laundry or the like, the combination of a body portion comprising a wash tub having a wall provided with an access opening for placing laundry therein and a scale structure for weighing said laundry, means for covering said access opening, said scale structure comprising a weighing mechanism provided with a base portion and a weighing platform, said weighing platform provided with depending vertical arms, said weighing mechanism including a plurality of balancing sections located beneath said platform, said depending arms and said balancing sections cooperating to retain said platform in a normally suspended position above said base, said balancing sections movable transversely to said base portion for urging said platform to move transversely toward said base until equilibrium position is attained when laundry is placed upon said platform.

3,101,803
ADJUSTABLE ILLUMINATED SCALE STRUCTURE
Jacob L. Kleinman, Hotel Kimberly, 74th St. at Broadway, New York, N.Y.
Filed Jan. 3, 1958, Ser. No. 707,027
2 Claims. (Cl. 177—177)

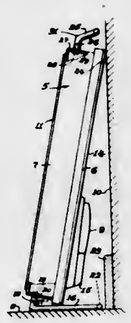


2. A weighing scale comprising a frame and a weighing mechanism including a platform said frame having a bottom portion and side walls and an open top forming a casing, said platform supported by the said mechanism and being substantially coextensive in size with the said opening, counter balancing means, said counter balancing means supported by the said frame and connected to the said platform to balance said platform in a vertically depressed position corresponding to the weight of an object placed upon the said platform, an illuminated weight indicating means, said indicating means operable by the said platform, said indicating means comprising a horizontally extending tubular shaft having a non-circular external periphery rotatably supported by a side wall of said casing, a tubular indicator element, said indicator element having a non-circular internal periphery conforming in shape to the said tubular shaft and mounted upon the said shaft for rotation therewith and for axial adjustment relative thereto and having weight indicia peripherally disposed about the distal end thereof, a cylindrical shield, said shield located about the said indicator element and being slidably non-rotatably supported coaxially of said shaft by an aperture in an opposite wall of said casing and adapted to be moved axially from a retracted position within said casing to an extended partially exposed position exteriorly of said casing, said shield having a window opening and an index and an internal illuminating means located adjacent the said indicia on said indicator element, means for concurrently moving the indicator element axially upon movements of said shield thereby to expose said window opening and said weight indicia exteriorly of said casing when said shield is in extended position, energizing means for said illuminating means including means on said shield for enabling said energizing means when said shield is extended, and drive transmission means connecting said shaft to said platform to rotate said shaft when said platform is depressed.

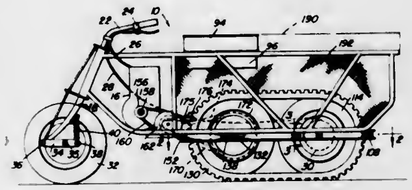
3,101,804
PORTABLE STANDUP TYPE BATHROOM SCALE
Vytant Aleks, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois
Filed May 23, 1960, Ser. No. 31,082
3 Claims. (Cl. 177—239)

1. A portable bathroom scale comprising a supporting base of generally rectangular form, a generally rectangular platform connected in assembled relation to the

base but supported on and movable downwardly with respect thereto in a weighing operation when the base and platform are horizontally disposed for use in weighing with the base resting on a floor, said scale being constructed to be adapted for use only in a horizontal position resting on a floor and to permit its being stood on end on the floor, one end of said scale being its forward end and the other its rearward end in the weighing operation, and a generally U-shaped member of approximately the same width as one end of said base and disposed in a plane at less than a right angle to the plane of the scale and in spaced transverse relationship to one end thereof and having the ends of the arms thereof directed toward and rigidly secured to the end of the base, the cross-portion of the U-shaped member being spaced outwardly from and substantially parallel to the platform and adapted to serve as a lifting and carrying handle, said U-shaped member being adapted to serve as an auxiliary base on which to support the scale when it is stood on end when not in use.

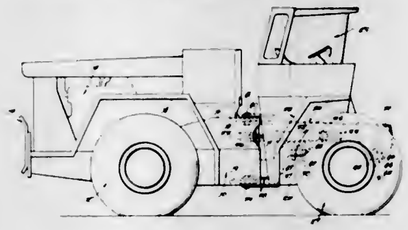


3,101,805
TRACTION BELT CYCLE VEHICLE
Paul E. Tritle, Salt Lake City, Utah, assignor to Mudd-Kat Corporation, a corporation of Utah
Filed Oct. 26, 1961, Ser. No. 147,823
6 Claims. (Cl. 180—9.24)



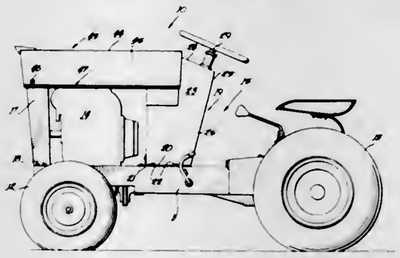
1. A cycle vehicle including a frame, a U-hanger pivotally mounted in said frame, a traction belt, a pair of wheels, means journaling said wheels in tandem relation in said U-hanger, said traction belt extending about said tandem wheels, pivot means pivoting said U-hanger to said frame, said pivot means being located in said U-hanger intermediate said wheel journal means therein, a power wheel journaled in said frame forward of said tandem traction wheels, a power receiving wheel fixed on the forward tandem traction wheel, a cable connecting said power wheel and power receiving wheel, said pivot means being located in said U-hanger relatively close to said journaling means for said rear tandem traction wheel and relatively remote from said journaling means for said forward tandem traction wheel, said cable limiting the pivoting movement of said U-hanger in said frame.

3,101,806
ARTICULATED MOTOR VEHICLE
Karl Salna, Mundelein, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Feb. 9, 1961, Ser. No. 88,114
12 Claims. (Cl. 180—52)



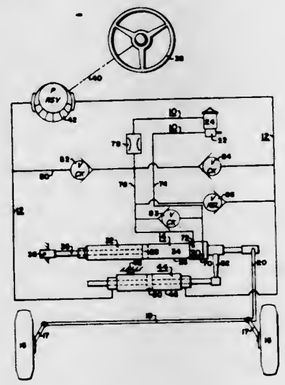
1. In an articulated motor vehicle construction, a first body and frame section carried on a pair of wheels, a second body and frame section carried on a second pair of wheels, a tunnel formed through said first body and frame section, means pivotally interconnecting said first and second body and frame sections for relative pivotal movement about a first axis disposed between said first and second body and frame sections and positioned substantially vertically at the transverse center of said vehicle and about a second axis positioned longitudinally of the vehicle and at the transverse center thereof, said means comprising a L-shaped yoke having a vertical leg and a horizontal leg, said horizontal leg being positioned to extend through said tunnel of said first body and frame section, said horizontal leg having a pair of longitudinally spaced apart outwardly extending members, said first body and frame section having a pair of upwardly extending members carried in said tunnel and positioned one on each side of the axis of rotation of said first pair of wheels, pin means connecting each of said extending members of said horizontal leg to one of said upwardly extending members in said tunnel for pivotal movement of said first body and frame section about said second axis, said vertical leg of said yoke being positioned to depend from said horizontal leg and connected to said second body and frame section for pivoting of said first body and frame section relative to said second body and frame section about said first axis.

3,101,807
TRACTOR HOOD LATCH
Robert H. Witt, Hinsdale, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Aug. 21, 1961, Ser. No. 132,718
3 Claims. (Cl. 180—69)



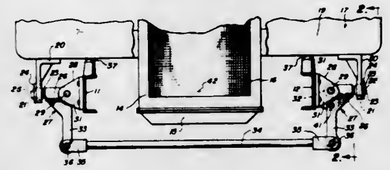
3. In a tractor having a longitudinally extending frame, a vertically extending front support supported on said frame, and a vertically extending rear support on said frame, a hood structure for said tractor comprising an inverted generally U-shaped hood, said hood having depending vertical laterally spaced side walls and an upper wall connected thereto, said hood being open at its rearward end, said side walls being positioned in overlapping relation relative to said supports, means pivotally connecting a forward portion of said hood to said front support for pivotal movement about a horizontal axis whereby said hood may be swung upwardly and downwardly relative to said rear support, latching means for said hood comprising a generally V-shaped bead provided on each of said side walls along their lower edges thereof, said beads being substantially coextensive with said side walls and each bead providing at a rearward portion of the same a V-shaped engageable part, said engageable parts having openings facing inwardly, a pair of latch elements connected to said rearward support and projecting laterally outwardly therefrom, each latch element having a generally V-shaped end portion engaging each engageable part to retain said hood in a closed position, said side walls having a resiliency whereby the lower portions of said side walls may be forced apart by the application of hand pressure by the operator whereby the engageable parts may be disengaged from the latch elements and the hood may be swung to an open position, and whereupon release of said pressure said side walls return to their normal position and said hood may be returned to a closed position whereupon pressure in a downward direction provides for engagement of lower portions of said side walls with said V-shaped latch elements and said side walls are again resiliently spread apart to permit engagement of said latch elements with said engageable parts.

3,101,808
POWER TRANSMISSION
Richard O. Gordon, Ypsilanti, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Filed Mar. 23, 1959, Ser. No. 801,042
8 Claims. (Cl. 180—79.2)



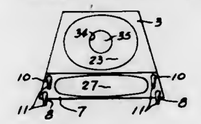
1. A hydraulic power transmission comprising: a power circuit including a reservoir, a hydraulic power source, a fluid motor and a control valve for regulating flow from said power source to said fluid motor; a control circuit including a pump for supplying control fluid to move said control valve thereby directing fluid flow from the power source to the fluid motor; a return line in said power circuit for conducting displacement from said motor to said reservoir; means forming a hydraulic connection between said return line and said control circuit; and means in said return line for maintaining a pressure head on said control circuit through said hydraulic connection for replenishing the control circuit from the return line.

3,101,809
VEHICLE CAB MOUNTING MEANS
Gerald W. Hostetler and Vergil W. Kelley, Fort Wayne, Ind., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 6, 1961, Ser. No. 143,380
15 Claims. (Cl. 180—89)



1. In a motor vehicle having a longitudinal frame and a body, the combination including said frame and body comprising, means for connecting the rearward end of said body to said frame, said means being releasable to disconnect said rearward end of said body from said frame mounting structure operatively interconnecting the forward end of said body to said frame for universal pivotal movement about a single point contained in a vertical plane passing through the longitudinal median line of said frame, and latch means cooperable with said mounting structure for only permitting pivotal movement of said body with respect to said frame about a single, transversely extending, horizontal axis whereby said body is capable of pivoting about said axis when said means connecting the rearward end of said body to said frame are released.

3,101,810
LOUDSPEAKER RESONATOR
Antony Z. Doschek, Crafton, Pa., assignor to Allied Instructional Developments, Inc., Crafton, Pa., a corporation of Pennsylvania
Filed July 8, 1959, Ser. No. 825,737
7 Claims. (Cl. 181—31)

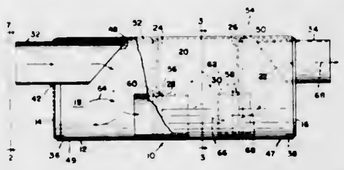


1. A speaker cabinet supported by vibratory isolators and consisting of a polyhedron enclosure formed by not less than six sides joined together, each cabinet side is disposed at an angle other than ninety and one hundred eighty degrees to every other cabinet side, at least two of said sides having openings, a vibratory panel secured to each side having an opening, each of said panels being larger than and covering its opening, one of said vibratory panels being supported in spaced relation from the side to which it is secured to provide an exterior opening for said cabinet around the perimeter of its panel, the other of said panels being perimetrally secured to its side to close the opening therein, at least one of the other of said panels having a speaker opening, and a speaker covering and closing said speaker opening.

3,101,811
MARINE TYPE MUFFLER
Thomas N. Kelly, Detroit, Mich., assignor to Aircraft Precision Products, Inc., Oak Park, Mich., a corporation of Michigan
Original application Oct. 19, 1960, Ser. No. 63,638, now Patent No. 3,080,939, dated Mar. 12, 1963. Divided and this application Dec. 11, 1961, Ser. No. 158,265
4 Claims. (Cl. 181—52)

1. A marine type muffler comprising an elongated tubular housing, separate inner and outer end headers re-

spectively closing the opposite ends of said housing, a pair of transversely extending partitions secured within said housing in longitudinally spaced relation to said end headers and to each other dividing said housing into first and second resonant chambers respectively adjacent said inner and outer end headers and a third resonant chamber between said first and second chambers, an inlet tube extending through said inner end header into said first chamber, said inlet tube being disposed adjacent to the side wall of said tubular housing in laterally offset parallel relation to the longitudinal center line of said housing, an acoustical coupling duct extending through and secured to one of said partitions, a second acoustical coupling duct in spaced axial alignment with said first mentioned duct and extending through and secured to the other of said partitions, said ducts placing said chambers in communication with one another and being disposed in laterally offset parallel relation to the longitudinal center line of said tubular housing at the di-



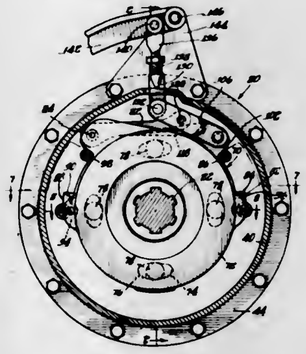
ametrically opposite side of said center line from said inlet tube, the end of said inlet tube within said first chamber lying in a plane inclined radially and axially inwardly relative to said housing at an acute angle to the longitudinal center line of said housing to provide for a uniform flow and expansion of exhaust gases and water into said first chamber, and an outlet tube extending through said outer end header into said second chamber, said outlet tube being in spaced axial alignment with said inlet tube, the end of said outlet tube within said second chamber lying in a plane inclined radially inwardly and axially outwardly relative to said housing at an acute angle to the longitudinal center line of said housing to provide for a smooth flow of exhaust gases and water from said second chamber, the arrangement of said tubes and ducts serving to reduce back pressure in the muffler, the ends of said ducts and the inclined ends of said tubes being open and unobstructed to further reduce back pressure.

3,101,812
CLAMP-ON LUBRICATING APPLIANCE
Roy C. Mercer, Sr., 276 Emmons Blvd., Wyandotte, Mich.
Filed Aug. 25, 1961, Ser. No. 136,140
7 Claims. (Cl. 184—105)



1. A clamp-on lubricating appliance for detachably connecting a pressure lubricating apparatus to one end of the conduit of a wire-in-conduit motion-transmitting device, said appliance comprising a pair of relatively movable jaw carrying arms pivotally connected to one another intermediate their opposite ends for motion of said ends toward and away from one another, a pair of conduit-gripping jaw structures attached to said jaw carrying arms at one end of the appliance, each jaw structure having a recess with a wall sealingly engageable with the conduit end of the motion-transmitting device and also with the motion-transmitting member thereof, one of said jaw structures having a pressure-lubricating fitting thereon adapted to receive a lubricant coupling of the pressure lubricating apparatus, said one jaw structure having a lubricant passageway connecting said fitting to said recess.

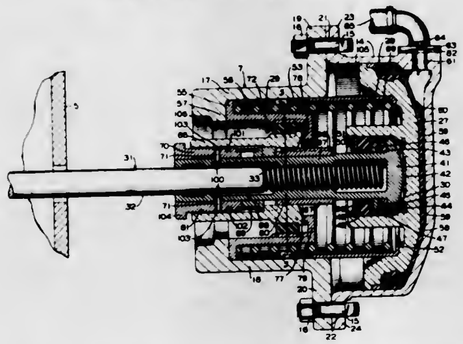
3,101,813
DISC TYPE BRAKE STRUCTURE
Dent Parrett, St. Joseph, Mich., assignor, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Filed Apr. 8, 1960, Ser. No. 21,020
6 Claims. (Cl. 188—73)



2. A brake structure for association with a shaft comprising a pair of friction discs nonrotatably and axially shiftably mounted on said shaft, housing means around said friction discs presenting radially extending braking surface means for cooperative engagement with said friction discs, first and second axially shiftable actuating discs surrounding said shaft between said friction discs, cam means between said actuating discs for spreading said actuating discs upon relative rotation of said actuating discs in predetermined opposite directions for initiating the braking operation, a first link having a first end portion pivotally connected to said first actuating disc at a predetermined first pivot point, said first link normally extending from said pivot point in one direction generally toward and close to and beyond peripheries of said actuating discs, said first link having a second end portion opposite from said first end portion radially spaced from the peripheries of said actuating discs, a second link having a first end portion pivotally connected to said second actuating disc at a second pivot point offset from said first pivot point generally in said one direction circumferentially of said actuating discs, said second link also being pivotally connected to said first link at a point between the opposite end portions of said first link, said outwardly disposed second end portion of said first link being disposed between said first and second pivot points and being connectable to an element adapted to be operated for shifting said second end portion outwardly for rotating and spreading said actuating discs, said actuating discs having a predetermined thickness and outwardly projecting apertured ears of about the same thickness, first and second pivot pins respectively connected to said ears of said first and second actuating discs and pivotally connecting said first and second links to said ears of said first and second actuating discs, said links having a combined thickness greater than a normal space between said actuating discs when the actuating discs are in retracted positions, said pivot pins extending from their associated

ears in opposite directions and over the adjacent actuating discs, said links initially extending diagonally between said pivot pins when said actuating discs are in retracted positions and then moving toward positions substantially perpendicular to said pins when said actuating discs are spread apart during a braking operation.

3,101,814
SLACK ADJUSTING MECHANISM FOR RAILWAY CAR BRAKE APPARATUS
George K. Newell, Penn Township, Westmoreland County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 20, 1961, Ser. No. 160,736
10 Claims. (Cl. 188—203)



1. Slack adjusting mechanism for railway truck brake rigging of the type in which two substantially parallel brake shoe carrying brake beams are operatively connected by means of brake cylinders carried on the brake beams and by the respective pistons and piston rods of said brake cylinders connected to the brake beam opposite to that carrying the brake cylinder, said slack adjusting mechanism for each brake cylinder comprising the combination of:

(*a*) a piston rod having two coaxially related members screw-threadedly connected together, one of said members being coaxially connected to its brake cylinder piston by means of a connection enabling limited universal angular movement of said member with respect to the piston, and the other of said members being connected to a corresponding brake beam by means enabling limited universal angular movement of the other of said members with respect to such brake beam,

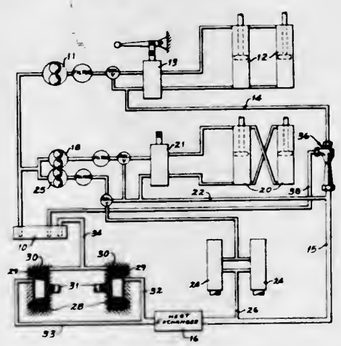
(*b*) an actuator sleeve through which said piston rod extends and being resiliently anchored at one end in coaxial relation to the corresponding brake cylinder so as to have limited universal angular movement with respect thereto, said actuator sleeve having a bore and a coaxial counter bore cooperating to constitute a shoulder therebetween on which a set of ratchet teeth of a chosen radial thickness is formed,

(*c*) a trigger sleeve slidably mounted on said one member of said piston rod for longitudinal movement thereby through said bore and splined to said hollow actuator sleeve for rotation together therewith, said trigger sleeve having adjacent one end thereof a set of ratchet teeth of said chosen radial thickness the apices thereof being accurately offset from the apices of said set of internally extending ratchet teeth,

(*d*) a pawl sleeve slidably mounted on said one member of said piston rod and within said actuator sleeve, said pawl sleeve having on each side thereof a set of ratchet teeth, the set of ratchet teeth on the side thereof adjacent said trigger sleeve having a radial thickness at least twice that of said chosen radial thickness thereby enabling said set of ratchet teeth to at one time fully engage said set of internally extending ratchet teeth on the interior of said actuator sleeve and at another time to be moved out of engagement therewith by movement of said trigger sleeve by said one member of said piston rod in response to excessive travel thereof and its corresponding piston as a result of excessive brake shoe wear, said pawl sleeve being rotatable by said trigger sleeve subsequent to disengagement from said set of internally extending ratchet teeth on the interior of said actuator sleeve, and

(*e*) ratchet means connecting the second set of ratchet teeth on said pawl sleeve to said one member of said one piston rod whereby rotation of said pawl sleeve effects rotation of said member with respect to the other member of said one piston rod through said screw-threaded connection therebetween to lengthen said piston rod as brake shoe wear occurs.

3,101,815
VEHICLE BRAKE COOLING SYSTEM
James W. Thompson, Pekin, and Robert E. Gerber, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed June 29, 1961, Ser. No. 120,681
2 Claims. (Cl. 188—264)



1. A system for cooling the brakes of a vehicle which has a plurality of hydraulically controlled components including a reservoir for hydraulic fluid and individual pumps, fluid motors and controls for said components, a common return line for more than one of said components, means directing fluid from said return line to said brakes, means directing fluid from said brakes to said reservoir, and an ejector operating on pressure in the return line to draw fluid from the reservoir to supplement the return fluid used for cooling the brakes.

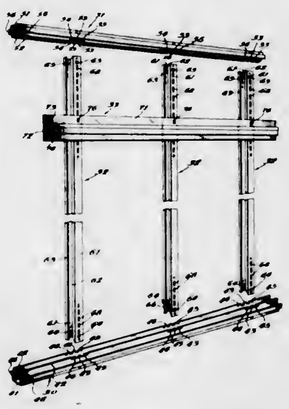
3,101,816
DRILLING AND SERVICING MAST
Charles L. Fox, Fort Worth, Tex., assignor of one-fourth to James A. Wood, Mission, Tex.
Filed May 20, 1960, Ser. No. 30,606
11 Claims. (Cl. 189—15)

5. A mobile, self-contained well drilling and servicing apparatus comprising a trailer, a drilling rig having all of its components including the winch and draw works fixedly mounted on said trailer, a drilling and servicing mast carried by said trailer in a horizontal position above said drilling rig components, means mounting said mast for shifting longitudinally of said trailer while in a horizontal position between a retracted position in which the over-all length of the trailer is a minimum and an advanced position projecting beyond an end of the trailer and in which the over-all length of the trailer is a maxi-

mum, erecting means operable when the mast is in said advanced position for moving said mast between a horizontal position and a vertically extending erected position, said mast having at one side thereof and projecting beyond its lower end a pair of slotted lugs, said trailer having a pair of apertured supports cooperating with said lugs when said mast is in its advanced position, removable pivot means engaged in said slots and apertures and pivoting said mast to said trailer for tilting when moved by said erecting means between said horizontal and erected positions, a second pair of lugs on said mast and projecting beyond the lower end thereof, a second pair of supports on said trailer having recesses therein for receiving and supporting said second pair of lugs when said mast is in said erected position.



3,101,817
WALL PANEL STRUCTURE
John Radek, % Ready Metal Mfg. Co., 4320 S. Knox Ave., Chicago, Ill.
Filed Aug. 11, 1961, Ser. No. 130,836
10 Claims. (Cl. 189—34)



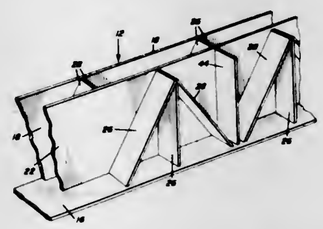
7. In a panel wall structure, in combination: a base channel extending along a floor, said channel having parallel, upright walls defining the sides of a post support; a top channel supported on a ceiling and vertically aligned with said base channel, said top channel having parallel, depending walls; a plurality of upright posts spaced from one another, each post having parallel legs, the lower and upper ends of said posts being seated, respectively, in said base channel and in said top channel with their parallel legs between and abutting said parallel upright and said depending channel walls; opposed integral tabs on the parallel walls of the base channel and associated with each post, each tab having an edge substantially abutting an upright portion of a post, said tabs effectively locking the posts against lateral movement; means securing the upper end of each post in the top channel; a base panel receiving flange on the outside of one of the base channel walls, said flange having a transverse base web and an upright web which extend from a median line between adjacent posts toward both said posts; a top panel receiving flange on the outside of a top channel wall, said top flange being identical with, and opposed to said base flange; a plurality of panels, each panel having upright margins against two adjacent posts and its lower and upper marginal portions seated, respectively, in the panel receiving flanges of the base and top channels, each said panel being supported on the web of the base flange and having its extremities confined between the upright webs and the upright walls; and clip means secured to all of said posts and engaging the upright margins of each panel to secure the panels to the posts.

3,101,818
DEVICES FOR SECURING SPRINGS TO FURNITURE AND OTHER FRAMEWORK
Royston Percival Barley, Southend-on-Sea, England, assignor to No-Sag Spring Company, Detroit, Mich., a corporation of Michigan
Filed Sept. 21, 1960, Ser. No. 57,438
1 Claim. (Cl. 189—35)



A clip for supporting the end of a sinuous spring strip, said clip being made from metal stock bent into U-shape, and an inner facing of another strip of material having low friction properties to minimize squeaking mechanically secured to the inner face of the U portion of the clip by having the ends overlap the side edges and the outer face of the clip at the U portion with the overlapped ends also of U-shape following the U-shape of the outer face of the clip for retaining the inner facing strip fixed to the U portion against lateral and longitudinal movement relative thereto.

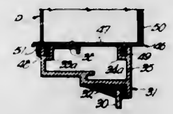
3,101,819
FABRICATED BEAM CONSTRUCTION
Guy C. Shinn, Box 308, Hamilton, Tex.
Filed Mar. 1, 1960, Ser. No. 12,091
8 Claims. (Cl. 189—37)



1. A fabricated beam construction comprising horizontally disposed, vertically spaced planar and substantially parallel top and bottom plates, a pair of planar side plates secured between and to corresponding side edge portions of said top and bottom plates forming a box-like beam, a longitudinally extending planar center web plate

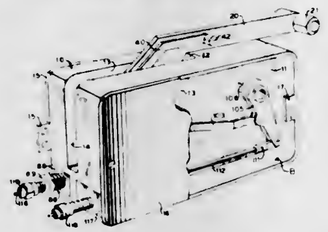
substantially parallel to said side plates and spaced therebetween secured between and to said top and bottom plates forming a double section box beam, and a plurality of upstanding substantially transversely extending and longitudinally spaced baffle plates secured between and to the top and bottom plates and between the center web and the adjacent side plates of each of said beam sections.

3,101,820
WINDOW STRUCTURE FOR PANEL TYPE BUILDINGS
Marvin K. Snyder, Overland Park, and Jon B. Dunnington, Leawood, Kans., assignors to Butler Manufacturing Company, a corporation of Missouri
Filed Mar. 14, 1960, Ser. No. 14,887
2 Claims. (Cl. 189—65)



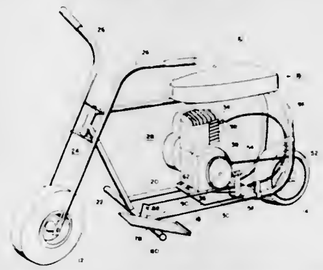
1. In a window-wall assembly, the combination of a window structure, a panel disposed substantially in the same plane as the window structure and having a straight edge, said window structure including a frame having a portion forming an edge on the window structure adjoining said edge of said panel, said portion provided with a pair of parallel outwardly open grooves running lengthwise of said portion and spaced from one another in the direction of thickness of said window structure whereby to cause the open sides of said grooves to confront the adjoining edge of said panel, an adapter member disposed between said panel edge and said frame portion having a pair of spaced parallel ribs disposed within said grooves, means on said adapter engaging said panel, said ribs including recesses therein, and resilient sealing means disposed partially in said recesses but extending outwardly therefrom to engage an inside wall of said groove to provide a seal between each rib and its groove.

3,101,821
MOTOR CONTROL
Nelson R. Henry, Decatur, Ga., assignor, by mesne assignments, to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed Apr. 9, 1958, Ser. No. 727,410
13 Claims. (Cl. 192—.096)



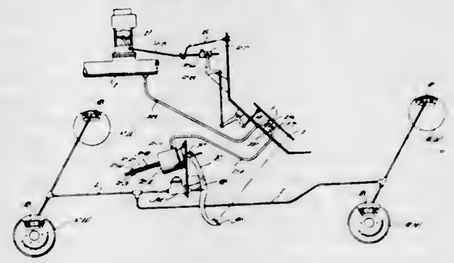
1. A motor control including a housing, separate clutch and throttle control compartments in spaced side by side relationship formed by said housing, clutch control elements and throttle control elements in said clutch and throttle compartments, respectively, a single control lever pivotally mounted in the space between said compartments and means extending from said lever into each of said compartments for the actuation of clutch and throttle control elements therein, said means acting successively to move said clutch control elements and said throttle control elements, means in said space between said compartments to disengage said clutch control elements from said lever to permit control of said throttle control elements independently of said clutch control elements, and means for limiting the actuation of said throttle control elements when said clutch control elements are in a predetermined position.

3,101,822
COMBINED ACCELERATOR AND BRAKE ASSEMBLY FOR VEHICLES
Glen H. Clemens, Fort Wayne, Ind., assignor to Glen H. Clemens, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Feb. 16, 1961, Ser. No. 89,838
6 Claims. (Cl. 192—1)



1. In combination: a prime mover having speed control means movable between high and low speed positions and a rotatable power shaft extending therefrom; clutch means having driving means secured to said shaft and a driven drum coaxially surrounding said driving means; means for transmitting power from said drum; and unitary accelerator and brake means comprising a brake band embracing said drum, said brake band having one end movable between first and second positions thereby respectively to cause said band to disengage and engage said drum, and actuator means movable between first and second positions, said actuator means being coupled to said speed control means for moving the same between said high and low speed position responsive to movement of said actuator means from said first position toward said second position, said actuator means having means thereon which engages said end of said brake band and moves the same to said second position thereof thereby causing the same to engage said drum responsive to movement of said actuator means to said second position thereof.

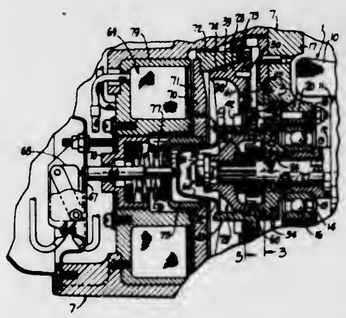
3,101,823
VEHICLE BRAKE OPERATING MEANS
Harry L. Flanagan, Coral Gables, Fla. (7939 Reseda Blvd., Reseda, Calif.)
Filed Oct. 31, 1961, Ser. No. 149,077
12 Claims. (Cl. 192—3)



1. A service brake control means for a motor vehicle having an engine controlled by a throttle valve and having

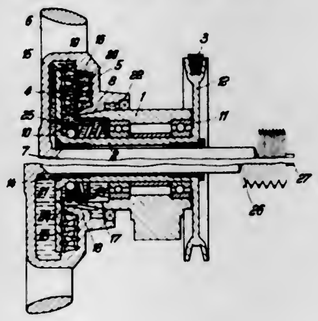
a service brake system including a master cylinder; said control means including a vacuum responsive cylinder having a vacuum responsive reciprocable element operatively connected to the brake system master cylinder, conduit means connecting said vacuum cylinder with a source of vacuum associated with the vehicle engine, and manually operable control means for varying the extent of vacuum imposed on said vacuum responsive cylinder comprising an oscillatable foot pedal operatively connected to the engine throttle valve and a vacuum controlling valve means interposed in said conduit means and operatively associated with said foot pedal; said valve means including port means comprising a pair of cooperating ports which during traverse of said foot pedal through a predetermined portion of its path of movement, are brought into registry with each other to connect the interior of said conduit means with atmosphere with resultant disabling of said conduit means and said vacuum responsive cylinder to actuate the service brake system while said feet pedal is moving within said portion of its path of movement and in which said pair of ports are moved out of registry with each other during traverse of said foot pedal through another portion of its path of movement with resultant actuation of the service brake system by the imposition of vacuum on said vacuum responsive cylinder.

3,101,824
FORCE SENSING DEVICE
Stewart E. Gail, Northfield, Ohio, assignor to Lear Siegler, Inc.
Filed May 12, 1960, Ser. No. 28,660
11 Claims. (Cl. 192—8)



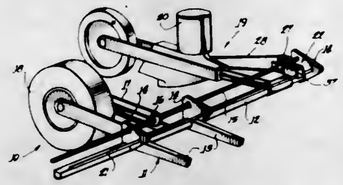
1. In a torque responsive coupling device, a rotatably mounted driving member adapted to develop a torque and having a plurality of circumferentially spaced axially extending recesses therein, a rotatably coaxially mounted torque actuated member having a plurality of circumferentially spaced axially extending recesses therein, said recesses in both said members having open ends and flat bottoms disposed in planes normal to the axis of rotation and having identical lengths terminating in generally radially extending edges and being so located that they form related pairs in which the open ends of said recesses face and overlap each other, means rotatably supporting said driving and torque actuated members and permitting therebetween limited relative axial movement and limited relative rotational movement from a position of maximum overlap of said recesses to a position of minimum overlap of said recesses, means yieldable exerting a predetermined force urging said driving and torque actuated members axially toward each other, and a torque sensing element disposed in each pair of recesses, said element being of a height greater than the total of the depths of said paired recesses and having flat end surfaces adapted to bear against and closely fit the flat bottoms of said paired recesses and sides adapted to clear said generally radially extending edges of said recesses when said element is in a tilted position in said recesses, whereby a torque limit magnitude is established such that when said driving and torque actuated members are disposed with their paired recesses in the position of maximum overlap and the torque sensing elements are disposed therein with their flat ends bearing against the flat bottoms of said recesses, a torque exceeding such predetermined magnitude exerted by said driving member will cause said torque sensing elements to tilt in said recesses, said driving and torque actuated members to rotate relatively to each other to the position of minimum overlap of the recesses of each pair, and said torque actuated member and driving member to move axially relatively away from each other by forces exerted by said tilted torque sensing elements on said members, said forces exceeding the force exerted by said resilient pressure means.

3,101,825
HYDRAULIC CLUTCH
Gerhard Caroli, 8 Mauserstrasse, Stuttgart-Feuerbach, Germany, and Otto Lutz, 53 Bienroder Weg, Braunschweig, Germany
Filed Sept. 9, 1960, Ser. No. 55,006
Claims priority, application Germany Sept. 10, 1959
6 Claims. (Cl. 192—18)



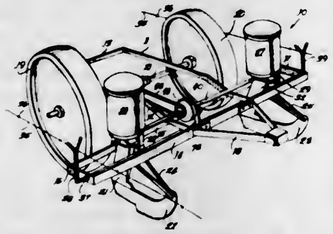
1. A hydraulic clutch device for the transmission of power comprising, in combination: a first rotatable member and a second rotatable member, each rotatable member mounted substantially coaxially with respect to the other and said second member having walls forming a cavity about said first member, said rotatable members having a plurality of mutually opposed interleaved annular protrusions concentric with respect to the axes of said rotatable members, the annular protrusions of said first rotatable member and said second rotatable member being provided with complementary tapered surfaces for frictional engagement of the first rotatable member with the second rotatable member along substantially the entire surfaces of said protrusions, the tapered annular surfaces having a gradient steeper than 1:4; driving means for rotating said first rotatable member; a liquid of high viscosity disposed within said cavity of said second rotatable member and between said rotatable members for actuating rotation of said second rotatable member upon rotation of said first rotatable member; means for axially moving said second rotatable member with its annular protrusions into engagement with the annular protrusions of said first rotatable member; brake means for halting the rotation of said second rotatable member when its annular protrusions are out of engagement with the annular protrusions of said first rotatable member, said brake means comprising a stationary first annular brake member mounted concentrically with respect to the axes of said rotatable members and a second annular brake member integrally connected to said second rotatable member; and spring means for moving said second annular brake member into frictional contact with the said first stationary annular member and for moving said second rotatable member with its annular protrusions out of engagement with the annular protrusions of said first rotatable member.

3,101,826
INTERMITTENT CLUTCH
Marvin D. Jennings, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 18, 1961, Ser. No. 159,931
8 Claims. (Cl. 192—23)



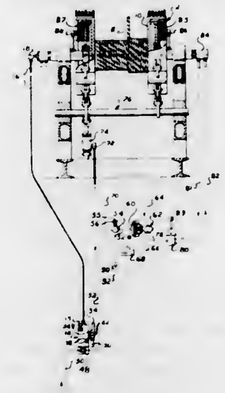
1. In clutch apparatus for planters and the like, a supporting frame, a drive shaft mounted for constant rotation on the frame and having a driving sprocket secured thereto, a housing mounted on and journaling the drive shaft, an intermittently driven sprocket secured to the housing coaxially with said shaft and rotatable with the housing, an idler sprocket mounted for free rotation on the housing, an endless chain operatively connecting said drive sprocket and said idler sprocket, and locking means mounted in said housing and optionally engageable with said endless chain for locking the latter and the housing together as a unit to cause the housing and the intermittently driven sprocket to revolve about the axis of said drive shaft.

3,101,827
HIGH SPEED PLANTER CLUTCH
Carl N. Showalter, Westmont, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 29, 1962, Ser. No. 183,544
6 Claims. (Cl. 192—23)



1. A drive mechanism for transmitting intermittent power comprising:
(*a*) a power transmittal shaft,
(*b*) a ring gear rotatably mounted on said shaft,
(*c*) means for rotating said ring gear,
(*d*) clutch means mounted on said shaft adjacent said ring gear including,
(1) a first arm secured to and extending substantially radially of said shaft,
(2) a pinion rotatably mounted on said arm and engaging said ring gear,
(3) a second arm associated with said first arm and extending substantially radially of said shaft,
(4) said second arm having a pinion rotatably mounted thereon engaging said first arm pinion and adapted to engage said ring gear to transmit the rotary motion of said ring gear to said shaft,
(5) means for engaging said second arm pinion and said ring gear, and
(6) stop means intermittently engageable with said second arm to disengage said second arm pinion from said ring gear and thereby limit the rotation of said shaft to periods of non-engagement of said stop means with said second arm.

3,101,828
SAFETY STOP FOR THE TRAVELING BLOCK OF DRILLING RIGS
John Hart Wilson, % Wilson Manufacturing Co., P.O. Box 1031, Wichita Falls, Tex.
Filed May 9, 1960, Ser. No. 27,655
5 Claims. (Cl. 192—139)



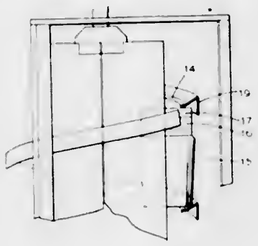
1. A safety stop mechanism for selectively stopping the rotation of a power driven winding drum which is mounted on a shaft, a frame mounting the shaft of said winding drum for rotation in either direction, a fluid actuated clutch mounted on the shaft of said winding drum, a fluid actuated brake mounted on said frame and being connected in braking relation with said winding drum, said safety stop mechanism comprising a gear reduction unit mounted on said frame, means operatively connecting said gear reduction unit in driven relation to the shaft of said winding drum, a shaft extending outwardly from a side of said gear reduction unit, a cam disc mounted on said shaft extending outwardly from said gear reduction unit, a cam of effective, adjustable length of at least 30 degrees of arcuate length operably mounted on said cam disc and being rotatable therewith about the axis of said shaft and in unison therewith, a first valve actuator pivotally mounted on said gear reduction unit, a cam follower mounted on said first valve actuator and being actuated by said cam on said cam disc when said shaft is rotated, a first fluid supply conduit to supply fluid under pressure, a first valve mounted on said gear reduction unit and connected in fluid communication with said first fluid supply conduit, said first valve being operable by said first valve actuator upon movement of said cam, a second valve actuator, said second valve actuator being operable by fluid pressure from said fluid supply conduit, a fluid conduit connecting the outlet of said first valve and said second valve actuator in fluid communication, a second valve, said second valve being connected in actuating relation with said second valve actuator, a second fluid supply conduit con-

nected to said second valve, branch conduits leading from said second valve, one of said branch conduits being connected with the fluid actuated clutch, the other of said branch conduits being connected with the fluid actuated brake, so the fluid actuated clutch and the fluid actuated brake respectively will be actuated simultaneously, but inversely, upon movement of said second valve by said second valve actuator in synchronous relation to the cam actuated first valve to direct fluid from said fluid actuated clutch and to direct fluid under pressure to said fluid actuated brake respectively to stop the rotation of said winding drum.

3,101,829
CONVEYORS, PARTICULARLY FOR USE IN VENDING MACHINES

Dennis Stanley Silver, London, England, assignor to Farrow and Jackson Limited, London, England

Filed Sept. 26, 1961, Ser. No. 140,714
2 Claims. (Cl. 193—12)

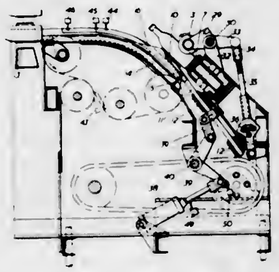


1. A helical rail for use in a conveyor device in which the helical rail is mounted with its axis vertical, said rail comprising, in combination, a helical flange on which the objects to be conveyed rest, and a depending, helical flange extending downwards substantially vertically from the outer periphery of said first-mentioned flange for limiting radially outward movement of the objects by engaging the upper ends of objects resting on the next lower convolution of the helical rail, said two helical flanges include an angle, as viewed in cross-section, which is less than a right angle.

3,101,830
BOTTLE-TRANSFER MECHANISMS

Alexander Hyde Webster, Waltham Cross, Hertfordshire, England, assignor to R. W. Webster & Company Limited, Waltham Cross, England, a British company

Filed Mar. 24, 1961, Ser. No. 98,194
Claims priority, application Great Britain Apr. 7, 1960
10 Claims. (Cl. 198—31)

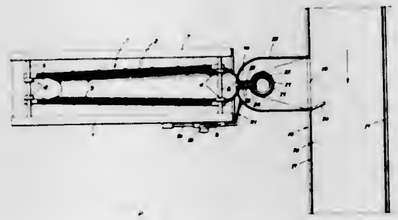


1. Bottle-transfer mechanism comprising a first substantially horizontal conveyor for feeding a line of bottles to said mechanism, a second conveyor for receiving said infed bottles and conveying them to spaced transfer positions, said second conveyor being inclined to the horizontal in a transverse direction, means for tilting bottles from a substantially vertical attitude on said first conveyor to an inclined attitude as the bottles pass from said first conveyor to said second conveyor, means for supporting said bottles in inclined attitudes during their advance on said second conveyor, worm means adjacent to said second conveyor adapted to control the movement and spacing of said bottles on said second conveyor throughout the time the said bottles are being conveyed to, and become located at, said respective transfer positions by said second conveyor, and means for effecting simultaneous transfer from one side of said second conveyor, of all the spaced bottles lined on said second conveyor when they respectively reach the said transfer positions thereon.

3,101,831
PEAR ORIENTING DEVICE

Norman E. Gaddini, Winters, Calif., assignor to Atlas Pacific Engineering Company, a corporation of California

Filed Feb. 27, 1961, Ser. No. 91,991
6 Claims. (Cl. 198—33)



1. A pear orienting device comprising a chute which includes an elongated sling of flexible material and of rounded bottom form in section, and rigid bars extending along and secured to the upper edges of the sling; rigid supporting rails above the bars, pivoted links extending between the rails and bars supporting the chute for longitudinal shaking movement and at a downward slope from one end to the other, and means to impart such shaking movement to the chute; the pears to be oriented being deposited in single-file order into the sling at its upper end. and the bars being disposed in converging relation to each other from the upper to the lower end of the sling whereby the latter is of correspondingly decreased width from its upper to its lower end.

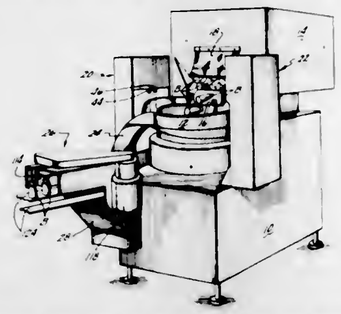
3,101,832
UNSCRAMBLER AND ERECTOR FOR ARTICLES SUCH AS PLASTIC BOTTLES

Charles Wyle, Bloomfield, and Forrest W. Hyde, Avon, Conn., assignors to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware

Filed Apr. 7, 1961, Ser. No. 101,451
4 Claims. (Cl. 198—33)

1. A mechanism for orienting intermingled articles, such as bottles, in end to end relationship, said mechanism comprising a bowl having a spiral track therein leading from its bottom to its top for the articles to climb as a result of bowl vibration, means arranged along the track for engagement with the articles to assure their advance in single file end to end relationship, means capable of directing a force against an article on the track to turn it end for end, a light beam projector, and light beam sensitive actuating means operatively associated

with said force directing means to actuate the same for application of force against an article only as a result of

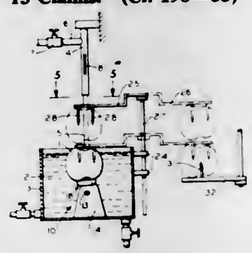


the article advancing along the track in undesired endwise orientation.

3,101,833
ORIENTING APPARATUS AND METHOD FOR ORIENTING WHOLE FRUIT HAVING DEPRESSIONS AT THEIR STEM AND BLOSSOM ENDS

Anthony F. Rodrigues, Los Gatos, and Earl R. Anderson, Campbell, Calif., assignors, by mesne assignments, to Filper Corporation, San Ramon, Calif.

Filed May 3, 1961, Ser. No. 107,451
13 Claims. (Cl. 198—33)



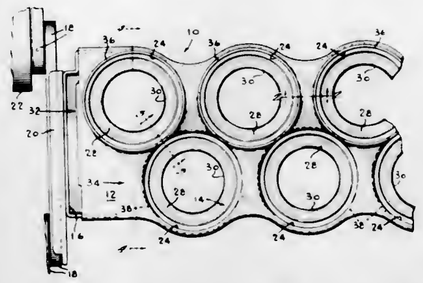
1. The method of orienting a generally spherical buoyant fruit unit having a pair of depressions in its outer surface respectively at its stem and blossom ends, so that the stem-blossom axis on which said depressions are located is vertical, comprising the steps of ejecting a solid stream of liquid vertically downwardly into a body of liquid from a point spaced above the upper level of said body thereby inducing the surface layer of said liquid to flow to said stream at its point of engagement with said body; floating such unit in said body within the influence of the liquid flowing to said point to carry said unit to below and within said stream and to a position in which one depression of said pair thereof is uppermost and substantially coaxial with the vertical axis of said stream, then yieldably holding said one depression substantially on said vertical axis and at the same time moving the lower portion of said unit in which the other depression of said pair is positioned to a position in which said other depression is coaxial with said axis, and then holding said unit stationary for subsequent removal with its stem-blossom axis vertical.

3,101,834
BOTTLE CARRIER CONSTRUCTION FOR BOTTLE WASHER

George L. N. Meyer, Milwaukee, Wis., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin

Filed June 16, 1961, Ser. No. 117,656
1 Claim. (Cl. 198—131)

A bottle carrier for a bottle washing machine comprising, a top sheet member, a bottom sheet member spaced from said top sheet member, a plurality of tie strip members rigidly secured to said top and bottom sheet members to fixedly secure said top and bottom sheet members to each other, said top and bottom sheet members each having two parallel rows of bottle carrying apertures adapted to receive and support two parallel rows of bottles therein, said two rows of apertures in said top sheet member being spaced from each other with

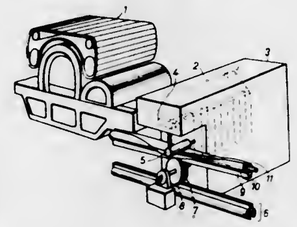


the apertures of one row being offset and nested with respect to the apertures of the other row, said two rows of apertures in said top sheet member being provided with flanged portions extending at right angles to said top sheet, said flanged portions at the apertures of one of said two parallel rows extending in a direction opposite to that of the flange portions at the apertures of the other of said two parallel rows.

3,101,835
APPARATUS FOR TRANSPORTING SLIVERS

Rudolf Wildbolz, Winterthur, Switzerland, assignor to Rieter Machine Works Ltd., Winterthur, Switzerland, a corporation of Switzerland

Filed Apr. 21, 1961, Ser. No. 104,674
Claims priority, application Switzerland Apr. 29, 1960
4 Claims. (Cl. 198—160)



1. In an apparatus for transporting slivers in spinning mills, having reversing rollers, and an endless, hoselike, longitudinally slit conveyor belt forming a loop around said reversing roller: a guide roller placed on one side of said belt, a sliver feeding roller placed opposite said guide roller and forming a nip therewith for receiving and temporarily holding said belt in flattened condition, said feed roller deviating a sliver arriving at an angle to said belt into the travel direction of the belt and pressing the sliver onto said belt.

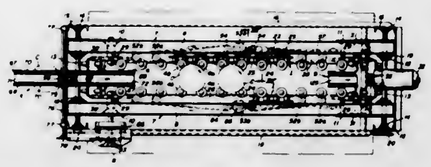
3,101,836
CONVEYOR

Clarence O. Rountree, Jr., Oakland, Calif., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Nov. 9, 1961, Ser. No. 151,290
19 Claims. (Cl. 198—162)

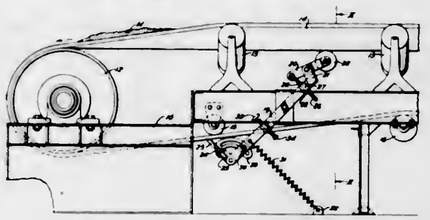
1. A conveyor for moving articles with a rotary motion through a processing apparatus comprising, a pair of lat-

erally spaced endless conveyors having upper runs that are parallel, drive means for operating said conveyors at identical speeds, a plurality of article supporting members at spaced intervals along the length of each of said conveyors, means mounting said members on said conveyors for movement therewith and for rotational movement relative thereto, said supporting members being arranged on said conveyors in successive groups respectively



adapted during movement over said conveyor upper runs to have supporting engagement at circumferentially spaced points with the base of an article to support it in a vertical position over the space between said conveyors, and means for rotating at least one of the supporting members in each of said groups during movement over the said conveyor upper runs to rotate an article supported thereby about a vertical axis extending centrally thereof.

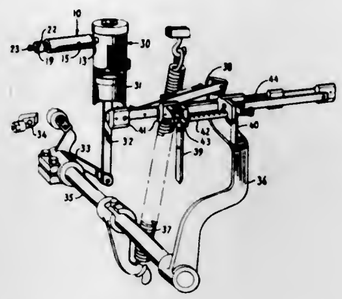
3,101,837
WIPER MECHANISM FOR CONVEYOR BELTS
Robert H. Martin, 302 9th St. S., Virginia, Minn.
Filed May 11, 1961, Ser. No. 109,288
6 Claims. (Cl. 198—230)



1. In a conveyor installation which includes a frame, a conveyor belt, and means movably mounting said belt on said frame, said belt having an upper carrying flight and a lower return flight, the combination therewith of a wiper mechanism comprising a lever pivoted to said frame intermediate said carrying flight and said return flight, a wiper supported by said lever and engaging said belt on its return flight, means supported by said lever and engaging said belt on its carrying flight and a bias operatively connected with said lever to maintain said last-named means in engagement with said belt, whereby the position of said lever is adjusted automatically with varying loads on the belt to maintain substantially uniform pressure of said wiper against said belt.

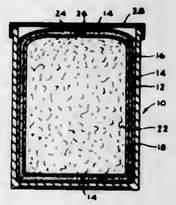
3,101,838
VENT CONTROL
Edward Alphonse Boulay, Concord, N.H.
Filed Dec. 28, 1961, Ser. No. 162,852
8 Claims. (Cl. 199—32)

7. In a slug casting machine, the combination of a composed line delivery slide, power means for moving the slide, and means connected to said power means for arresting the movement of said slide, said arresting means comprising a dashpot and a vent control for said dashpot; said vent control comprising a casing defining a first chamber, a primary vent formed from said first chamber, a second chamber in communication with said first chamber, a secondary vent formed from said second chamber, and a slide valve disposed in said first chamber and a



depending piston from said slide valve and integral therewith disposed in said second chamber.

3,101,839
CONTAINER STRUCTURE
Emmette R. Holman, Palos Verdes Estates, Calif., assignor to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Filed July 17, 1961, Ser. No. 124,696
5 Claims. (Cl. 206—2)

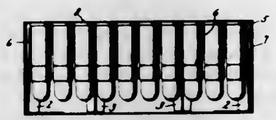


5. A package comprising a drum having an outer substantially rigid wall formed of a material normally subject to corrosion by acidic vapors, an outer liner positioned in said drum contiguous to said outer wall, an inner liner telescoped within said outer liner but spaced therefrom to form a confined barrier zone between said inner and outer liners, said inner and outer liners being formed of a flexible chemically resistant synthetic resin permeable to vapors, a solid powdered chemical material contained in said inner liner and normally emitting acidic vapors corrosive to said outer wall, and which pass through said inner liner and into said barrier zone, and a small amount of a substance distributed in said barrier zone, said substance being in powdered solid form and normally emitting alkaline vapors of a type to react with and inactivate said corrosive acidic vapors passing through said inner liner into said zone, and forming a solid reaction product in said zone, said substance being present in amount of about 4 to about 8 ounces per 125 lbs. of said material.

3,101,840
PACKAGE FOR SMALL ARMS AMMUNITION
Gordon Canning, Jr., Westport, Conn., and Robert E. Clough, Newark, Del., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed May 22, 1961, Ser. No. 111,543
4 Claims. (Cl. 206—3)

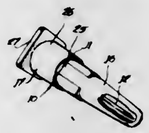
1. A package of small arms ammunition of the type having a cartridge case with a rimmed head at one end and a projectile at the opposite end thereof, said package comprising a support member of tablelike form defined

by a top and by a plurality of legs depending therefrom, a plurality of spaced perforations in said top of sufficient size receiving a cartridge case and supporting said case in suspended fashion with the rimmed head in engagement with the upper face of said top, said legs extending downwardly from said top a greater distance than said suspended cartridges, and means depending from the lower face of said top and cooperating with each of said perforations to limit lateral movement of said suspended cartridges and to prevent physical contact of one cartridge



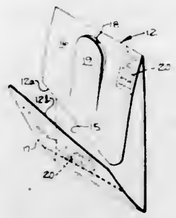
with the other cartridges, and an enclosing tube within which said support member is received, said tube having at least one imperforate planar wall in substantial engagement with the rimmed cartridge heads to limit axial movement of the cartridges in one direction while the rimmed cartridge heads engage the upper face of said top to limit axial movement of the cartridges in the opposite direction, thus providing an ammunition carrying package which substantially eliminates contact of the projectiles with each other or with the walls of the tube.

3,101,841
NEEDLE PACKAGE
Brian E. Baldwin, Evanston, Ill., assignor to Manufacturing Process Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed May 24, 1961, Ser. No. 112,255
6 Claims. (Cl. 206—43)



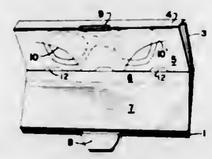
5. A container for hypodermic needles comprising a hollow body open at one end thereof, said body having a sleeve portion of reduced diameter adjacent said open end and having an enlarged intermediate portion adjacent said sleeve portion, said intermediate portion having a plurality of external recesses in the wall thereof, each of said recesses defining a shoulder between the same and said sleeve portion, said intermediate portion between said recess having substantially the same diameter as the outer limits of said shoulder, and a flexible and resilient plastic cap rotatably receiving the sleeve portion of said body and having a skirt extending over and beyond said shoulder, said skirt having edge portions thereof crimped inwardly into said depressions for locking said body and cap together, said skirt in its normal crimped condition defining a non-circular opening smaller than the outer cross sectional dimensions of said shoulder, said crimped edge portions of said skirt being resilient and being capable of flexing outwardly to increase said opening to a size substantially the same size as said shoulder when said body and cap are rotated to cam the crimped edge portions out of said depressions, thereby permitting axial separation of said cap and body, said crimped edge portions also being capable of springing back into their original state after said cap has been separated from said body to prevent replacement of said cap over said shoulder and upon said body.

3,101,842
SOCK DISPLAY PACKAGE
Frank Sydnor, Mount Airy, N.C., assignor to Renfro Hosiery Mills Company, Mount Airy, N.C., a corporation of North Carolina
Filed Dec. 6, 1960, Ser. No. 74,052
6 Claims. (Cl. 206—45.33)



6. A sock supporting member adapted to display in unwrinkled condition the upper portion of a pair of flattened juxtapositioned socks having turned down cuffs, and leg, heel and foot portions, which portions have been folded along an angularly disposed fold line extending through the heel portions so that the leg and foot portions are in juxtaposed alined relation, said supporting member being formed of relatively stiff paperboard material and comprising a rectangular rear panel, a first front panel hingedly connected at one end to one end of said rear panel and disposed in overlying relation to said rear panel, said first front panel being of sufficient dimensions to overlie more than one-half of said rear panel, said first front panel terminating in a free edge at the other end which extends transversely across said rear panel at an obtuse angle to one side edge of said rear panel, said first front panel being adapted to receive the foot portions of the pair of folded socks on the side thereof adjacent said rear panel and the leg portions of the pair of folded socks on the other side thereof with the folded heel portions against said angled free edge throughout their width, a second front panel hingedly connected at one end to the other end of said rear panel and disposed in overlying relation to the remaining portion of said rear panel and a portion including said angled free edge of said first front panel, and a support tab carried by the central portion of said first front panel and extending in a direction away from said angled free edge, said support tab being adapted to support the cuff and leg portion of the lowermost sock in said pair.

3,101,843
SPECTACLE SHIPPING CARTON INSERT
Edward J. Thompson, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Aug. 22, 1960, Ser. No. 50,942
2 Claims. (Cl. 206—46)



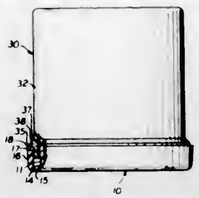
1. An insert for a spectacle shipping carton comprising a single blank of sheet material including parallel folds for providing a rectangular box-like structure comprising a top, bottom, opposed sides and an integral spectacle support member, said spectacle support member extending from an edge of one of said sides and comprising a center support, a base portion and projecting flange means, adjacent said base portion, said base portion disposed adja-

cent one side of the insert, said base cooperating with said flange means spacing said center support between said top and bottom of the insert, and said center support defining two arc shaped slots extending from said base portion and diverging outwardly relative to each other and terminating at a point intermediate of said center support relatively close to the outer edges thereof and adapted to receive the peripheral edge of the spectacle frames.

3,101,844
FILM STRIP PACKAGE

Charles Stowe Myers, Evanston, Ill., assignor to Encyclopaedia Britannica Films Inc., Wilmette, Ill., a corporation of New York

Filed Oct. 2, 1961, Ser. No. 142,063
5 Claims. (Cl. 206—52)



1. Container for an elongated film strip wound spirally upon itself into a coiled tensioned roll, said container comprising a receptacle having a receptacle cylindrical peripheral wall open at the top, a receptacle bottom wall closing the bottom of said receptacle peripheral wall, a receptacle annular flange extending outwardly from the bottom of said receptacle peripheral wall, and a receptacle cylindrical flange connecting with the outer edge of said receptacle annular flange and extending upwardly therefrom concentrically with and to a lesser height than said receptacle peripheral wall, said receptacle peripheral wall being of diameter and height to receive said film strip releasably in end abutment with said receptacle bottom wall with the outer peripheral surface of said roll bearing frictionally against the inner surface of said receptacle peripheral wall and with said roll extending above the top of said receptacle peripheral wall sufficiently to permit the extension portion of the roll to be grasped for removal of the roll from the receptacle, and a cover having a cover peripheral wall open at the bottom, a cover top wall closing the top of said cover peripheral wall, and an annular cover flange extending outwardly from said cover peripheral wall intermediate its ends, said cover being releasably mountable upon said receptacle with said cover peripheral wall extending frictionally slidably into said receptacle cylindrical flange and said cover flange resting upon the top of said receptacle peripheral flange, the bottom edge of said cover peripheral wall being then spaced from said receptacle bottom wall and said cover peripheral wall being radially spaced from said receptacle peripheral wall and said cover top wall being spaced from the top of said cover peripheral wall so as to clear the top of said roll and thereby accommodate said roll.

3,101,845
STRETCHABLE MICA-CONTAINING INSULATING SHEET MATERIALS AND PRODUCTS INSULATED THEREWITH

Charles K. Heasley, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Sept. 26, 1960, Ser. No. 58,276
5 Claims. (Cl. 206—59)

1. A flexible stretchable mica-containing insulating sheet material suitable for hand wrapping around electrical conductors under firm hand pulling, thereby being elongated and conformed intimately to the configuration of the surface being wrapped, to provide a compact void-free insulating covering of very high dielectric strength upon heating while unconfined, said sheet material comprising a thin porous paper-like sheet of finely divided extremely thin mica flakes, a differentially uniformly stretchable reinforcing web superposed upon said paper-

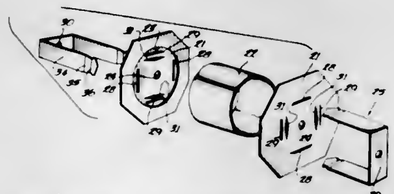


like sheet, and a stable heat-curable stretchable and pliable resin composition essentially completely filling said paper-like sheet and uniting it to said web by firmly adhering to the latter the mica flakes of said paper-like sheet, said sheet material being stretchable under hand pulling to an extent of at least ten percent without rupture of said paper-like sheet.

3,101,846
REEL ASSEMBLY

Stephen L. Elfrid, 641 61st Place, La Grange, Ill.

Filed June 2, 1961, Ser. No. 114,491
10 Claims. (Cl. 206—59)



1. A reel having, in combination, two generally flat heads spanned by a hollow tubular core member and each having first and second pairs of parallel elongated slots angularly spaced around a central axis of the heads and extending circumferentially with respect to such axis, the slots of each pair being disposed on diametrically opposite sides of the axis, a third pair of elongated slots extending parallel to and spaced inwardly from the slots of said first pair on each head, means on each head defining a hole centered on said axis and adapted to receive a shaft to support the reel for rotation about the axis, and two flat elongated fastening members each having a flat central portion extending between said second pair of slots on one of said heads and across said axis and lying against the outer side of the head and end portions extending first through said core member and said first pair of slots in the other head, then laterally along the outer side of the other head, and finally reversely and inwardly through said third pair of slots on the other head to secure the heads and core in assembled relation and to reinforce each head around said hole therein, means on said central portion of each fastening member defining a hole registering with the center hole of the adjacent head, and a cover having angularly spaced connector strips extending radially and inwardly from the peripheries of said heads at angularly spaced points and terminating in tabs bent laterally and inwardly and extending into said slots of said first and second pairs between the outer edges of the slots and the parts of said fastening members in the slots.

3,101,847
PROTECTIVE CUSHION FOR PACKAGING CANS

John Adams Bruce, Tampa, Fla., assignor, by mesne assignments, to Forspads Inc., a corporation

Filed Aug. 3, 1961, Ser. No. 129,031
3 Claims. (Cl. 206—65)

1. A package comprising a plurality of cans, at least two of said cans being disposed in side by side relation,

at least two of said cans being stacked on said first two cans in end to end relation therewith, a cushioning device inserted between the contacting ends of said stacked cans, said cushioning device having a contour conforming to

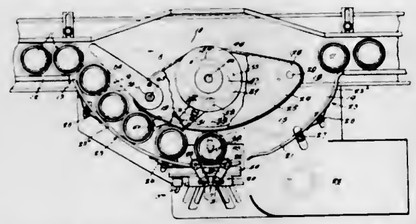


the end faces of the cans, said cushioning device abutting the rims of the cans and adapted to maintaining the covered end faces of the cans free from contamination, and a heat shrunk film encasing the cans and drawing the cans into contact with the cushioning device.

3,101,848
CONTAINER HANDLING APPARATUS

Albert F. Uhlig, Oakland, Calif., assignor to Owens-Illinois Glass Company, a corporation of Ohio

Filed Mar. 15, 1961, Ser. No. 95,975
19 Claims. (Cl. 209—72)

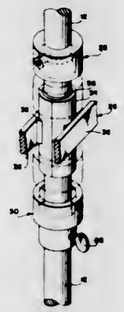


1. Article handling apparatus comprising a generally arcuate horizontal floor extending between inlet and exit ends of the apparatus, there being a testing station between said ends, means for rotatively holding articles upright one at a time at said station, and a single means for both advancing articles in succession along said floor to the station and rotating them while being held at said station.

3,101,849
DISPLAY RACK

Scott G. Osborn, Seattle, Wash.
(3453 74th Place SE., Mercer Island, Wash.)

Filed Mar. 5, 1962, Ser. No. 177,950
3 Claims. (Cl. 211—166)

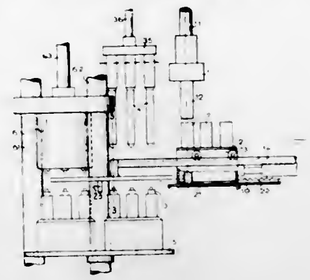


1. For an all purpose display rack: an upright column; sleeve means on said column; bracket means to be received against said sleeve means, said bracket means supporting display arms; and locking collar means for holding said bracket means against said sleeve means and for permitting said sleeve means and bracket means to rotate relative said column.

3,101,850
TELESCOPING OF FLEXIBLE TUBULAR ELEMENTS ON TO MANDREL LIKE SUPPORTING MEMBERS

Albert Quinche, St-Sulpice, Switzerland, assignor, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey

Original application Feb. 7, 1957, Ser. No. 638,792. Divided and this application May 2, 1961, Ser. No. 108,706
13 Claims. (Cl. 214—1)

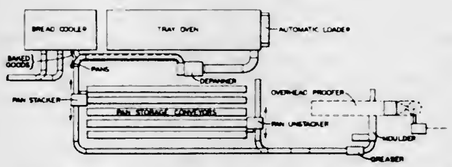


1. An apparatus comprising a support member, a housing defining a cavity supporting a tubular element and means for transferring said element from said housing on to said support member, said transfer means comprising a transfer mandrel of substantially the same diameter as that of said support member, means for axially displacing said transfer mandrel into concentric alignment with said element while the latter is in said cavity and for further axially displacing said mandrel to cause its leading end to coaxially abut an axial extremity of said support member, and means operative while said mandrel and said support member are in coaxial alignment, for sliding said element axially from said mandrel on to said support member.

3,101,851
PAN STACKING AND UNSTACKING SYSTEM

Henry A. Helde, Addison, and Wallace W. Wittenberger, Chicago, Ill., assignors, by mesne assignments, to Baker Perkins, Inc., Saginaw, Mich., a corporation of New York

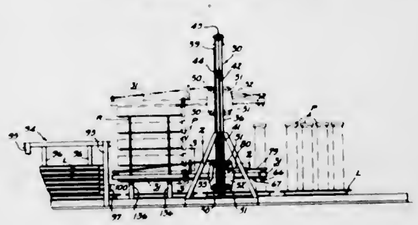
Filed Apr. 22, 1958, Ser. No. 730,177
8 Claims. (Cl. 214—6)



1. In a pan conveying system for stackable baking pans, a continuously moving main conveyor operative to carry forwardly a consecutive series of stackable pans to and beyond a pan control station, first automatic means at the rearward end of said control station positioned in cooperating partially-overlying relation to said main conveyor and operative to sense pans as they are delivered thereto in consecutive series and effect their successive lateral removal from said main conveyor and onto an elevator lift platform, said platform being responsive to lateral pan delivery thereto to move downward one pan height thereby to enable stacking of a pan stack of pre-

determined height thereon, said first means including a discharge conveyor disposed at least one full stack height below said main conveyor and operative to transfer full pan stacks from said elevator lift platform as formed for removal and storage preparatory to re-use, second automatic means positioned forwardly of said first means at the forward end of said control station in cooperating partially-overlying relation to said main conveyor and operative to unstack pans from full stacks and effect their succesive lateral delivery onto said main conveyor forwardly of said first means from an elevator lift platform, said platform being responsive to lateral pan removal therefrom to move upward one pan height thereby to enable unstacking of a pan stack supported thereon, said second means including an inlet conveyor disposed at least one full stack height below said main conveyor and operative to transfer full pan stacks thereto, and sequence control means forwardly of said second means operative to sense the pan supply on said main conveyor forwardly of said pan control station and effect selected initiation and interruption of the operations of said first and second means to maintain a desired rate of delivery of pans of a predetermined type by said main conveyor forwardly of said pan control station.

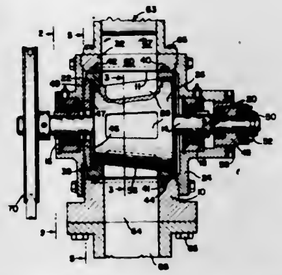
3,101,852
RACK UNLOADER
Frank S. Pearne, Los Angeles, Calif., assignor to Pearne and Lacy Machine Company, Inc., Los Angeles, Calif., a corporation of California
Filed June 14, 1960, Ser. No. 35,956
9 Claims. (Cl. 214—7)



1. Pipe handling apparatus comprising a vertical frame, an elevator vertically reciprocable on said frame, pipe-carrying means on said elevator, said pipe carrying means including internal pipe holding fingers for entering and holding a plurality of parallel, laterally spaced, horizontally aligned pipe, said pipe-carrying means being mounted on said elevator for reciprocating movement in a direction transverse to the vertical path of movement of said elevator, and said pipe-holding fingers being mounted on said pipe-carrying means for rotation about a horizontal axis transverse to said direction of reciprocating movement of the pipe-carrying means, and means for actuating said elevator and said pipe-carrying means to position said pipe-holding fingers in substantial axial alignment with said plurality of pipe and to enter and hold said plurality of pipe, and means for rotating said pipe-holding fingers to rotate the axes of said plurality of pipe through an angle of 90° to vertical positions for deposit on a receiving surface.

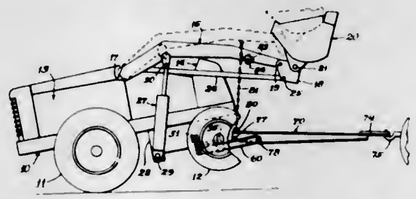
3,101,853
ROTARY VALVE
George Long, Takuzo Tsuchiya, and Allen Hum, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed Jan. 11, 1961, Ser. No. 82,069
10 Claims. (Cl. 214—17)

1. A rotary pressure-lock valve comprising a valve housing provided with a valve chamber having an inlet and an outlet, a valve rotor provided with a tapered valve surface mounted for rotation about an axis within said chamber, and having at least one pocket thereon for receiving material from said inlet and discharging material to said outlet, a liner in said chamber intermediate said rotor and said chamber and having outside dimensions less than said chamber, said liner provided with a conical opening therein encircling and closely fitting the



tapered surface of said rotor, and a yieldable sealing means surrounding each said inlet and said outlet between said liner and said chamber, said sealing means allowing limited radial displacement of said liner relative to the axis of rotation of said rotor to insure close seating engagement between the conical surface of said liner and the tapered surface of said valve and said sealing means also preventing pressure leakage at each of said inlet and said outlet during such displacement.

3,101,854
TRACTOR TOW BAR CONSTRUCTION
Keith W. Kampert, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Aug. 11, 1961, Ser. No. 130,885
21 Claims. (Cl. 214—131)



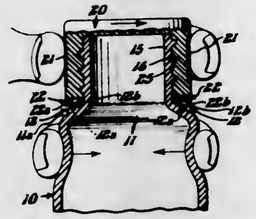
5. A tow bar arrangement for a front end type tractor loader having an operable boom means and a rigid front axle connected to the frame of said tractor for oscillation of said axle about a longitudinal center line of said tractor loader; and said tow bar arrangement comprising, link means secured to the underside of said axle intermediate the ends thereof, means secured to the upper side of said link means at a position spaced longitudinally rearwardly of the connection of said link means to said axle for pivotally connecting said link means to the underside of said tractor for pivotal movement about the axis of oscillation of said axle, said link means further being positioned to extend forwardly of said tractor, a tow bar, means for pivotally connecting said tow bar at a position spaced from the rearward end thereof to the forward end of said link means, a flexible link connectable between the rearward end of said tow bar and said boom of said tractor loader for raising the rearward end of said tow bar above said link means contemporaneously with the raising of the forward end of said tractor above the ground by raising said boom means when the forward end of said tow bar is connected to a towing vehicle, and means on the rearward end of said tow bar cooperating with said link means to prevent the rearward end of said tow bar from moving below said link means when said boom means is lowered to lower said flexible link.

3,101,855
DRINKING STRAW AND CONTAINER
Yat Chuen Yuen, % Ta-Kee Motor Car Co., 214A Des Voeux Road, Central, Ground Floor, Hong Kong
Filed Oct. 25, 1961, Ser. No. 147,598
Claims priority, application Great Britain Dec. 7, 1960
1 Claim. (Cl. 215—1)



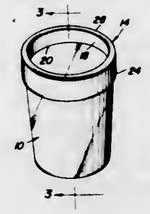
In combination, a beverage bottle filled with liquid, a closure cap for the bottle, and drinking straw means consisting of a length of helically wound plastic strip having successive convolutions normally in closed slidable contact with each other, said straw means having a normal length sufficiently in excess of the distance between the bottom and the top of the bottle so that when the straw means is positioned in the uncapped bottle the lower end of the straw means rests on the bottom of the bottle and a portion of the upper end of the straw means protrudes through the top of the bottle, said straw means upon applying the cap to the bottle being longitudinally compressed to shorten the straw means and cause the convolutions to expand radially into lesser close-fitting engagement with each other and thus provide a leakage space between overlapping edges of the convolutions into which space the liquid seeps to wet said edges so that when the cap is removed the straw means elongates to its normal length and the overlapping edges have a liquid seal between them.

3,101,856
BOTTLE CLOSURE
Daniel S. Whiteman, Jr., Box 25, Prospectville, Pa.
Filed Apr. 18, 1962, Ser. No. 188,450
15 Claims. (Cl. 215—9)



1. A container closure having releasable locking means for preventing a screw-on cap from becoming loosened, said container closure comprising a flexible walled container having an externally threaded neck and a relatively flat-surfaced shoulder portion annularly disposed around the neck; an internally threaded cap to fit over the container neck and engage the threads of the neck, said cap having a bottom annular surface which contacts the surface of the shoulder portion when the cap is fully threaded on the neck; and locking means comprising a protrusion extending from the surface of the shoulder portion and an indentation positioned in the bottom annular surface of the cap whereby said protrusion fits within the indentation when the cap is fully threaded on the neck preventing the loosening of the cap, said locking means being released by an inward flexing of the walls of the container whereby the shoulder portion moves away from the cap dislodging the protrusion from the indentation.

3,101,857
ATTACHMENTS FOR COMMODITY JARS AND GLASSES
Melvin H. Freedman, Stamford, Conn., assignor of fifty percent to Jayme Products, Inc., Jersey City, N.J., a corporation of New Jersey
Filed Jan. 18, 1962, Ser. No. 167,039
4 Claims. (Cl. 215—100)

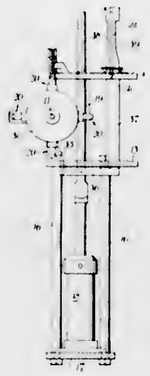


1. In combination, a container having a normally open top mouth portion, and a readily applicable and removable attachment therefor, said attachment having an open-bottom endless groove defining a channel and interior and exterior walls, the upper lip portion of the mouth of said container telescoping into said channel and said walls encompassing upper interior and exterior wall portions of the container, said container comprising a drinking glass having a normally open top constituting a mouth portion, the exterior surface thereof being screw-threaded, the interior of the outer wall of the channel in said attachment being screw-threaded and removably screwed on the aforementioned external screw-threads and separably interconnected but providing a positive connection between the drinking glass and said attachment, the interior surface of the inner wall of said channel being precision-made and having substantially fluid-tight contact with the surface portions of the drinking glass contacted thereby, and the overall exterior surfaces of said attachment being smooth-finished and adapting themselves to feasible use by the user.

3,101,858
RIVET FEEDING APPARATUS
Clifford Edmund Brewer, Parkstone, Dorset, England (19 Upton Road, Fleets Bridge, Poole, Dorset, England)
Filed Jan. 17, 1961, Ser. No. 83,282
Claims priority, application Great Britain Jan. 20, 1960
11 Claims. (Cl. 218—1)

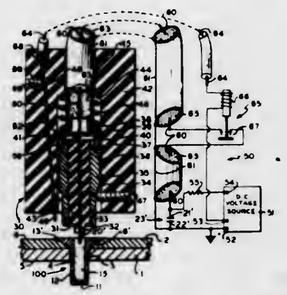
1. Apparatus for setting rivets of the type having a mandrel, said apparatus comprising a plurality of chucks each including a pair of jaws normally spaced apart, a rotor supporting said chucks in angularly spaced relationship, each of said chucks being adapted for receiving the mandrel of one of said rivets between the jaws thereof, means for imparting a step by step motion to said rotor whereby said chucks are moved successively from a feed position at which one of said rivets is fed thereinto, to an operative position and thereafter to a mandrel discharge position, and means synchronized with the means for imparting the step by step motion for clamping the jaws of

said chucks together in the operative position to grip the mandrel of a rivet in the respective jaws while applying



a tension force to said mandrel to remove the mandrel from the rivet to provide a setting of the rivet.

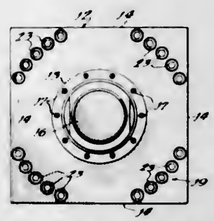
3,101,859
RIVETING BY ELECTRIC DISCHARGE
Robert L. Stoecker, Florham Park, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 15, 1961, Ser. No. 131,610
14 Claims. (Cl. 218—29)



1. The method of riveting with a generally cup-like electrically conductive rivet whose cavity is elongated to extend through a receiving aperture in, to substantially beyond the inner face of, the work and contains matter inert as to chemical explosion but susceptible of electric disruption, which comprises seating the rivet within the aperture and against the work; and creating in the wall of the seated rivet at least principally beyond the work a bulge exerting both transverse and longitudinal continuing force components on the inner rim of the aperture by effecting between a point within and the side surface of the cavity the abrupt discharge of a previously stored quantity of electricity through and disruptive of said matter.

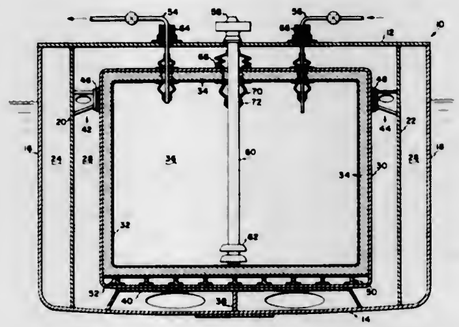
3,101,860
MULTIPLE TIE ROD PISTON AND CYLINDER DEVICE
Francis S. Flick, Oak Park, Ill., assignor to Flick-Reedy Corporation, a corporation of Illinois
Filed Feb. 2, 1961, Ser. No. 86,646
9 Claims. (Cl. 220—3)

1. A piston and cylinder device of relatively large bore, comprising: a circular cylindrical cylinder barrel and a head at each end closing the barrel, said heads having a generally square shape; and a cluster of tie rods in each corner of the heads extending beside the cylinder barrel and holding the heads in assembled relation to the cylinder barrel, each cluster having a plurality of tie rods arranged with their centers each lying on a circle having its



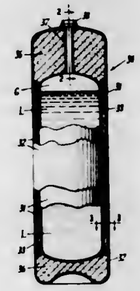
center coincident with the center of the cylinder barrel, individual tie rods in each cluster being spaced apart whereby the distance across the head between adjacent tie rods in adjacent clusters is appreciably less than in a piston and cylinder device employing a single tie rod in place of said cluster.

3,101,861
VESSEL FOR TRANSPORTING LOW TEMPERATURE LIQUIDS
William Mearns III, Maplewood, John R. Peet, Westfield, Fred H. Stracke, Convent Station, and Ingar T. Tobye, Mount Tabor, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Original application Aug. 17, 1960, Ser. No. 50,107. Divided and this application Feb. 2, 1962, Ser. No. 170,554
11 Claims. (Cl. 220—10)



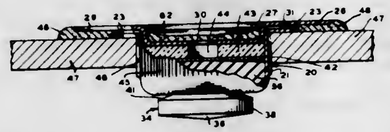
1. A thermally insulated tank structure for containing low temperature liquids, said tank structure being adapted for installation in marine vessels and comprising (1) a first shell member of a material which is subject to at least some reduction in its impact resistance property at the normal low temperature of said liquid, (2) a relatively thin layer of a first thermal insulation material in substantially continuous contact with the inner surface of said first shell member, said first thermal insulation material being at least semi-rigid and applied to said inner surface of said first shell member in block form, (3) a layer of substantial thickness of a second thermal insulation material in substantially continuous contact with the inner surface of said first thermal insulation material, said second thermal insulation material consisting essentially of polyurethane applied to said inner surface of said first insulation material in sprayed form and expanded to a foamed condition by the vapor of a halogenated hydrocarbon, and (4) a second shell member of a plastic, nonmetallic material in substantially continuous contact with the inner surface of said second insulation material, said second shell member defining a low temperature liquid storage volume within its own inner surface.

3,101,862
CONTAINER CONSTRUCTION USING LOAD CARRYING INSULATION
Ladislas C. Matsch, Kenmore, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Jan. 15, 1958, Ser. No. 709,114
8 Claims. (Cl. 220—14)



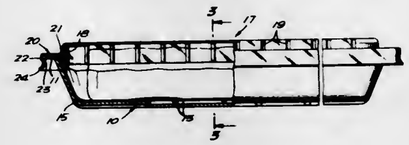
1. A container for storing and thermally insulating material including a pressure-tight casing, a vessel supported vertically within and from said casing, said vessel being spaced inwardly from the casing to define therewith an intervening space surrounding the vessel, said space being gas-tight and under an absolute pressure of ten (10) microns or less of mercury, heat-insulating, elastically yieldable means in said space, at least between the side wall of the vessel and the side wall of the casing, such means comprising a multiple layer insulation of alternating layers of heat-reflecting foils and sheets of fibrous material and providing the principal lateral support for said vessel within said casing.

3,101,863
HERMETIC SEAL VALVE ASSEMBLIES
Curtiss E. Jackson, Sr., 27 Park Lane, Essex Fells, N.J.
Filed Sept. 22, 1961, Ser. No. 140,057
15 Claims. (Cl. 220—44)



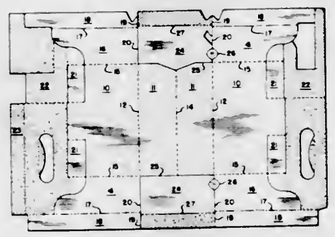
1. A hermetic seal valve assembly comprising a housing having a circular body, an integral flange projecting at right angles to the axis of the body at one end, a closure with an aperture therethrough at the other end, a resilient plug, part within the interior of said housing and part projecting through and beyond said aperture; a thermal barrier overlying said plug within said housing; a cover having a circular body, an integral flange projecting at right angles from an open end thereof and a closure with an aperture therethrough at the other end; said cover resting within said housing and means for heat-sealing said flanges together to form said cover and housing as a unit, said thermal barrier comprising a thin membrane of insulating material having an uninterrupted form and a separate thick washer of thermal insulating material, forming a permanent heat sealing of said valve assembly.

3,101,864
TRANSPARENT SNAP-ON LID FOR MEAT DISPLAY TRAY
Louis S. Glickman, 7611 Lexington Ave., Apt. 8, Los Angeles 46, Calif.
Filed Mar. 9, 1961, Ser. No. 94,479
8 Claims. (Cl. 220—60)



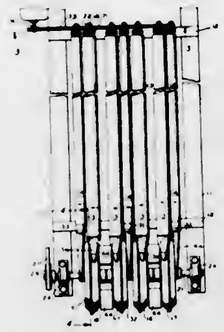
1. A lid for a meat tray having outwardly diverging sidewalls and an outwardly extending lip at the upper edge of the sidewalls made of relatively thin, transparent material, said lid having a peripheral part conformed to have a snap fit with the tray in substantially air-tight relationship, said lid having a first downwardly skirt part normally spaced inwardly from the upper edges of the sidewalls of the tray, an integral flange having a second skirt part extending outwardly and downwardly to fit flush over the lip of the tray with a snap fit and an inner portion integrally connected to the extremity of the first skirt part and having a slant conforming to the inner walls of the tray, the said inner portion forming a trough like fold in the lid inwardly of the said lip.

3,101,865
BOTTLE CARRIER
David Levkoff, 36 Barstow Road, and Henry Samuel Levkoff, 1 Carlton Road, both of Great Neck, N.Y.
Filed Oct. 12, 1960, Ser. No. 62,123
2 Claims. (Cl. 220—113)



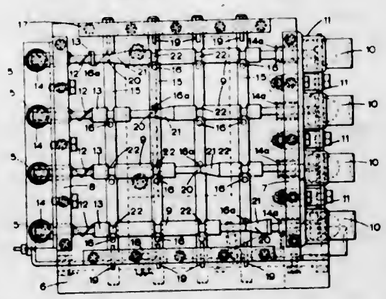
1. In a bottle carrier blank having two side wall panels joined along their bottom edges by a bottom wall panel, each of the side wall panels being provided along each side edge with an end wall panel terminating in an adjacent outboard glue panel, the improvement which comprises a reinforcing partition panel extending between each side edge of the bottom panel and the adjoining bottom edges of the adjacent end wall panels and glue panels, each of the reinforcing partition panels being connected substantially only to the bottom edge of one of the glue panels adjacent thereto and along a line normal to the longitudinal direction of said one of the glue panels, said reinforcing partition panel having an outer portion extending the major portion of the width thereof and aligned with said one of the glue panels, the bottom edge of each glue panel and the bottom edge of the adjoining end wall panel being aligned with one another and with the bottom edge of the adjoining side wall panel.

3,101,866
ENDLESS MECHANISM FOR ARTICLE-BY-ARTICLE DISCHARGE
Earl R. Anderson, 1900 Pollard Road, Campbell, Calif.
Filed Aug. 9, 1961, Ser. No. 130,421
14 Claims. (Cl. 221—93)



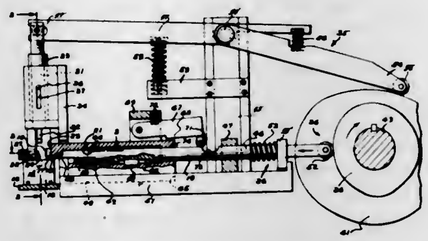
14. An endless article-by-article discharge means for articles such as fruit, comprising a pair of adjacent disks mounted for simultaneous rotation and having opposed surfaces providing an article receiving means therebetween, means for suppling a single file of abutting articles with the discharge end thereof adjacent said article receiving means at a feed zone, means for mounting a plurality of article separating blades between said disks for rotation therewith, said article separating blades being mounted for pivotal movement on each of said disks respectively in alternating fashion, and cam means for controlling movement of said blades including means for causing retrograde or retarded movement of said blades with respect to said disks at said feed zone and for simultaneously projecting the blade while it is being retarded to cause the blade to enter the V opening between the endmost article of said file and the next following article of said file and to retard said following article.

3,101,867
LOCKOUT MECHANISM FOR VENDING MACHINE
Dennis Stanley Silver, London, England, assignor to Farrow and Jackson Limited, London, England
Filed Sept. 26, 1961, Ser. No. 140,713
1 Claim. (Cl. 221—125)



Vending mechanism arranged to control more than one source of supply of goods and including, in combination, as many selector bars as there are sources of supply of goods, said bars being mounted parallel to one another for sliding movement between a normal position and an actuated position and each bar being formed with a cam surface and with a number of grooves, each cam surface having a circular cross section surrounding the associated bar, each groove being a circular groove surrounding the associated bar, said number being one less than the number of selector bars in the mechanism, as many detent rods as there are selector bars, said detent rods being mounted parallel to one another at right angles to said selector bars for sliding movement between a normal position and an actuated position and each detent bar being furnished with as many laterally projecting pins as there are selector members, one pin being engaged by the cam surface on the associated selector bar for movement of the rod by the bar to the actuated position while the remaining pins on the rod enter grooves on the other bars to prevent them from being moved to their actuated positions, a single token-freed means, and means controlled by said token-freed means and by the members constituted by said bars and rods for rendering available the goods in the one of the sources that corresponds to whichever selector member is moved to its selected position.

3,101,868
APPARATUS FOR INSERTING A SUCCESSION OF ARTICLES IN ORIENTED RELATIONSHIP INTO ARTICLE-RECEIVING SEATS IN A CARRIER
Allen F. Glaubke, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 14, 1961, Ser. No. 159,335
7 Claims. (Cl. 221—225)



1. Apparatus for inserting a succession of articles in oriented relationship into article-receiving seats in a carrier, which comprises:

a horizontally movable shelf for receiving and supporting successive articles one at a time, each article in turn being received on an upper surface of said shelf in a properly oriented position relative to an associated article-receiving seat;

a pair of opposed gripping jaws mounted above said shelf for horizontal movement relatively toward and away from each other, said jaws having opposed parallel gripping surfaces initially spaced apart sufficiently to permit reception of each successive article on said shelf between said jaws;

means for effecting relative movement of the said jaws toward each other to grip the article in the properly oriented position, yieldably between the opposed parallel gripping surfaces of said jaws;

means for advancing said shelf with one of said jaws during such relative movement, so that the article remains on said shelf and is gripped between said jaws in vertical alignment above the associated article-receiving seat;

means for retracting said shelf from beneath the gripped article after the article has been properly positioned by said jaws, so that the article is no longer supported by said shelf and is held solely by said jaws a short distance above the associated article-receiving seat in the properly oriented position relative thereto;

means for pushing the gripped article downward from between said jaws, which yield so that the article is inserted by said pushing means into the receiving seat, the opposed parallel gripping surfaces of said jaws maintaining the oriented position of the article until the article has been received in the seat to a depth such that misorientation does not thereafter occur; and

means for returning said shelf and said jaws to their initial positions after each successive article has been inserted into the associated seat in the carrier in preparation for the next inserting operation.

3,101,869
COLLAPSIBLE TUBE HOLDER
Albert S. Baker, 422 S. Oak St., Inglewood 1, Calif.
Filed May 24, 1961, Ser. No. 112,411
4 Claims. (Cl. 222—105)



1. Adjustable means to support a collapsible tube of a size within a given range of sizes comprising

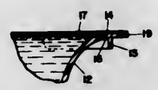
a support having at least one section spaced from said support and an end, said end constituted to support one end of said collapsible tube, said section and said end on one side of said support,

an adhesive upon the opposite side of said support for attaching said support to another object;

a slidable part substantially coplanarly engaging said section and having an end inclined away from said support,

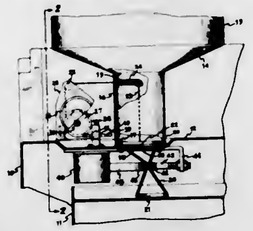
the inclined end of said part having a slot to accept the other end of said collapsible tube and to position it in contact with said support to allow the contents of said collapsible tube to be dispensed upon the application of pressure upon said collapsible tube.

3,101,870
FILM SEALED CONTAINER WITH POURING SPOUT
Thomas E. Betner, Bryn Mawr, Pa., assignor to Plastomatic Corporation, Malvern, Pa., a corporation of Pennsylvania
Filed Oct. 12, 1960, Ser. No. 62,154
4 Claims. (Cl. 222—107)



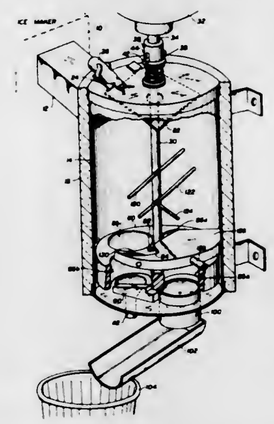
1. A sealed container comprising a plastic body formed at its open end with an integral pouring spout bounded by an integral tear-off flange localized at the spout, and a plastic film overlying the open end of the body and peripherally heat-sealed to said open end thereof except at the spout where it is sealed to the tear-off flange of the spout to provide a sealed closure for the container, the tearing of the flange from the container body opening the spout for pouring out at least part of the container contents, the film remaining intact and peripherally sealed to the tear-off flange of the spout and to the container body for reclosure of the container.

3,101,871
METERING DISPENSER FOR AUTOMATIC WASHERS
Malcolm B. Lucas and Thomas G. Dewees, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 29, 1960, Ser. No. 59,382
9 Claims. (Cl. 222—185)



2. A detergent dispenser for an automatic clothes washing machine comprising a storage hopper having an orifice in its lower portion, a valve guide spaced from and extending upwardly from said orifice, said valve guide being rigidly mounted within said storage hopper, a plug-type metering valve mounted for vertical movement within said valve guide and normally closing said orifice, said valve being capable of metering a predetermined quantity of detergent material through said orifice when raised, a resilient tube extending from said orifice and into said washing machine, means for normally clamping shut said resilient tube, means for raising said valve in order to meter a fixed quantity of detergent material, means thereafter to release the clamping force on said resilient tube whereby the fixed quantity of detergent material is dispensed into said clothes washing machine and said valve falls by gravity to close said orifice.

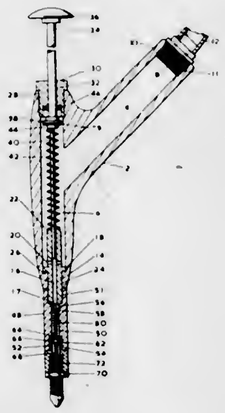
3,101,872
ICE STORING AND DISPENSING MECHANISM FOR BEVERAGE DISPENSING MACHINES AND THE LIKE
Donald L. Dickinson, North Miami, Fla., assignor, by mesne assignments, to Continental Vending Machine Corp., a corporation of Indiana
Filed June 24, 1960, Ser. No. 38,558
2 Claims. (Cl. 222—197)



1. A dispenser for crushed and chipped ice and the like, comprising an ice container, a horizontally disposed dispensing wheel mounted therein for both rotary and

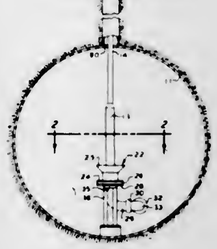
axial movement on a vertical axis, spring means acting upon said dispensing wheel to urge it axially downwardly, a plurality of vertically extending ice measuring cavities formed in said dispensing wheel, said cavities being conically shaped, their upper ends being relatively small and open to receive ice from the ice container, their lower ends being relatively large and open to discharge said ice, web elements formed between said cavities, a discharge opening formed in said ice container below said dispensing wheel, a cam element mounted in said container immediately below said dispensing wheel, means for intermittently rotating the dispensing wheel to register said cavities sequentially with said discharge opening and causing intermittent engagement of said cam means with said web elements, whereby the web elements are caused to ride up upon said cam means to axially raise the dispensing wheel against the spring means and against the ice contents of said container in order to fill the cavity with ice, said dispensing wheel being thrust downwardly by said spring means when the web elements clear the cam means, said cam means, cavities and discharge opening being so oriented that one of said cavities registers with said discharge opening at the time one of said web elements clears the cam means, and stop means being provided below said dispensing wheel to abruptly arrest its downward movement under the influence of said spring means in order to jar the dispensing wheel and dislodge the ice contents of said registering cavity and thereby to drop said contents through said discharge opening.

3,101,873
DISPENSING PUMP WITH HIGH PRESSURE AND LOW PRESSURE PISTONS IN SERIES
Harold L. Hunt, 35 Glenleigh Ave., Bexhill-on-Sea, England
Filed Mar. 14, 1960, Ser. No. 14,751
7 Claims. (Cl. 222—252)



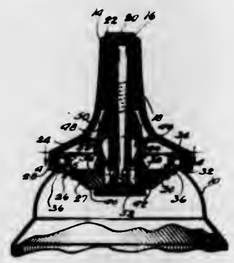
1. A piston-operated pump comprising structure providing a first cylinder of a given diameter and having inner and outer ends, and providing a second cylinder of a materially larger diameter and having inner and outer ends, the cylinders being axially aligned, with the outer end of the first cylinder ending at, and in open communication with, the inner end of the larger second cylinder, said structure providing a fluid inlet into an intermediate portion of the first cylinder, and providing a fluid outlet from the outer end of the second cylinder, first and second pistons effectively disposed in the first and second cylinders, respectively, for forward pumping movement therein, spring means normally maintaining the second piston at the inner end of the second cylinder, the second piston having a central channel therethrough of a diameter smaller than that of the first piston, the first piston having a fully retracted position, within the first cylinder, wherein its front end is at a first location to the rear of the fluid inlet, and having a fully advanced position wherein its front end is at a second location in contact with the second piston when the latter has been moved into its most fully advanced position within the second cylinder, the first piston being of such length that, when it is in its said fully retracted position, an unobstructed portion thereof lies outside of the first cylinder of a length at least equal to the distance between said locations, and a manually operable plunger axially aligned with the first piston to cause movement thereon from its said fully retracted position to its said fully advanced position, the first portion of said movement causing the first piston to pump fluid, of a given quantity per unit travel of the first piston, from the first cylinder into the second cylinder, through said central channel, and thence through the second cylinder and through the outlet, without moving the second cylinder, the remainder of said movement causing the first piston to engage the second piston to seal the inner end of said central channel and to move the second piston to its said most fully advanced position, such movement of the second piston acting to pump fluid through the outlet of a substantially greater quantity per unit of travel of the second piston.

3,101,874
FLOATING SUCTION FOR SUBMERSIBLE PUMP
Edwin E. Reed, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 7, 1960, Ser. No. 61,308
6 Claims. (Cl. 222—385)



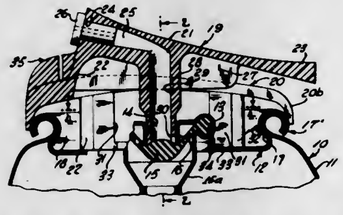
1. Apparatus for recovering liquid from a container comprising, in combination, a funnel-shaped guide supported by an inner surface of the wall of said container, said guide having an opening throughout its length with its axis vertically oriented, the larger diameter end of said guide being open upwardly, a hollow cylindrical sleeve attached to the smaller diameter end of said guide and extending downwardly therefrom, a flange extending around the lower end of said sleeve and having a smaller inner diameter than the inner diameter of said sleeve, a collar within said sleeve and companionable with said flange, a conduit having one end positioned fluid-tight with respect to the lower portion of said flange, the other end of said conduit being a floatable suction end, a swivel operatively connecting the floatable suction end with said one end of said conduit, a pump having its discharge end uppermost and a bottom suction end seated fluid-tight with respect to said collar, a vertically positioned discharge tube leading from the discharge end of said pump to a level above the tank and means for actuating said pump.

3,101,875
VALVE AND DISPENSING APPARATUS FOR PRESSURE CONTAINERS AND THE LIKE
David Daniel Michel, 39 S. La Salle St., Chicago, Ill.
Filed June 4, 1954, Ser. No. 434,470
4 Claims. (Cl. 222—394)



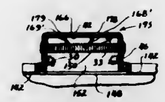
1. A dispensing valve for gas-pressure containers, comprising a manually operable tubular dispensing spout having at its outer end a dispensing opening, having at its inner end a valve head, and having a smoothly cylindrical wall portion intermediate the dispensing opening and head, in combination with a resilient tubular sealing member adapted to mount the dispensing spout within a wall of such container and having a bore of sufficient diameter to encompass and accommodate the cylindrical wall portion, the bore having a protruding integral conmaintain surface contact around some part of the cylindrical wall portion for part of its depth, and adapted to maintain surface contact around some part of the cylindrical wall portion regardless of degree of operation of the spout.

3,101,876
LEVER-ACTUATED DISPENSER FOR PRESSURIZED PACKAGE
John E. Ayres, Mountainside, N.J., assignor to Oil Equipment Laboratories, Inc., Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 14, 1960, Ser. No. 22,157
7 Claims. (Cl. 222—394)



1. In a lever-actuated dispenser cap for a pressurized container having a discharge passageway formed in the top thereof with an annular recess defined by spaced upstanding side walls surrounding said discharge passageway and a valve normally closing said discharge passageway, the improvement which comprises a split, one-piece molded body, said body containing an elongated slot extending diametrically across the top thereof, said slot having an open end extending through one side of the body and being closed at the other end thereof, a lever flexibly hinged to the body at the closed end of the slot and extending rearwardly across the body through said slot, said lever having a discharge passageway formed therein and having a free end extending at least to the open end of the slot, said free end being movable vertically with respect to the body, a valve-actuating plunger carried by the lever in alignment with the discharge passageway in the container, said plunger being hollow and forming a discharge passageway communicating with the discharge passageway in the lever, and means for attaching the body to the container, said means including an arcuately-shaped rib carried by the body and extending downwardly therefrom on opposite sides of the slot and projections formed on said rib, said rib and projections being shaped to fit into the annular recess in the top of the container and to engage with the side walls thereof.

3,101,877
CLOSURE FOR SEALING CONTAINER OUTLET
Anthony F. Driscoll, Middle Village, N.Y., assignor of one-half to Jean E. Masbach, New York, N.Y.
Continuation of application Ser. No. 518,318, June 27, 1955. This application Feb. 9, 1959, Ser. No. 791,903
11 Claims. (Cl. 222—520)

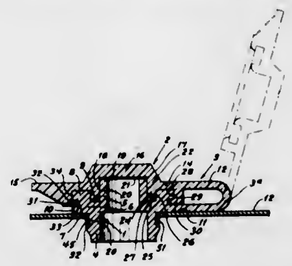


1. In a closure structure of the class wherein a cylindrical hub is attached to a container and the cylindrical hub has a side wall and a top wall with an opening therein, and a cap fits over the hub and has a side wall and a top wall adjacent to the corresponding walls of the hub, and the cap oscillataes on the hub to bring an opening through the cap into register with the opening through the top wall of the hub, and there are cam means on the confronting side walls of the hub and cap including a cam track on one of the walls and a cam follower on the other of said walls with the cam track shaped to pull the top walls together when the openings through the top walls are in register and when they are shifted out of overlapping relation with one another, the intermediate portion of the cam track rising progressively and then running down again between the portions of the track that pull the top walls together, the improvement which comprises a resilient top wall on the hub having an original domed contour across the center portion of the top wall when said top wall of the hub is not distorted by pressure of the cap, the top wall of the cap being flatter than said contour, and the cam track and follower being correlated with the heights of the hub and cap to hold the cap down on the hub with pressure on the portion having the dome-shaped contour and to hold the top wall of the hub distorted to a flatter contour for all positions of the follower along the cam track.

3,101,878
CLOSURE ASSEMBLY FOR CONTAINERS AND PARTS THEREOF
Carl R. Bee, Warren, Ohio, assignor to American Flange & Manufacturing Co. Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 28, 1961, Ser. No. 92,266
2 Claims. (Cl. 222—542)

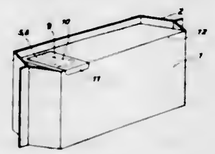
2. In container construction in combination, a container wall formed with an opening therethrough and an integral one-piece closure and dispensing member formed out of yieldable resilient synthetic platic material axially received within said opening, said container wall being formed out of metal and having the metal immediately surrounding said opening formed into a downwardly extending bordering formation, said closing and dispensing member having an annular body part formed with a substantially flat undersurface engaging the outer surface of said container wall and a downwardly extending tubular seating part extending integrally from said undersurface

of said body part and through said container wall opening, said body part and said seating part being formed with a pouring passage extending substantially therethrough, said seating part commencing at said undersurface of said body part as a cylindrical neck of substantial extent extending at right angles to said undersurface, said neck prior to insertion within said opening having a straight uninterrupted exterior surface and the external diameter of said cylindrical neck being constant throughout its extent and being substantially greater than the minimum internal diameter of said bordering formation, said seating part at the immediate lower end of said cylindrical neck having an exterior surface in the form of a downwardly and inwardly inclined frusto-conical portion extending directly from said cylindrical neck, a relatively



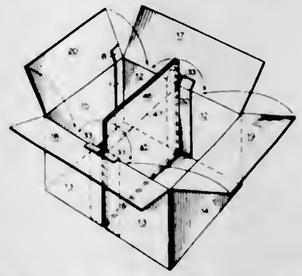
short cylindrical pilot portion extending from the lower smaller end of said frusto-conical portion and terminating in a free end, said pilot portion having a straight uninterrupted exterior surface of constant diameter throughout its extent and said diameter being substantially equal to the minimum internal diameter of said bordering formation, said bordering formation on insertion of said cylindrical neck within said opening being resiliently seated in said cylindrical neck with the material of said neck at the lower end of said bordering formation expanding radially outwardly and acting with said undersurface of said body to axially grip said bordering formation thereby permanently securing said closure and dispensing member within said container wall opening in leakproof engagement therewith.

3,101,879
CONTAINER OF PAPER, CARDBOARD OR LIKE CARTON-FORMING MATERIAL
Günther Meyer-Jagenberg, Dusseldorf-Grafenberg, Germany, assignor to Jagenberg-Werke A.G., Dusseldorf, Germany
Filed Dec. 15, 1961, Ser. No. 159,670
Claims priority, application Germany Jan. 26, 1961
4 Claims. (Cl. 229—7)



1. A closure for liquid-tight container of paper, cardboard, and like carton-forming material, of the type embodying a container wall having an outlet opening therein and inner and outer foil blanks closing said outlet opening, said inner and outer blanks having dimensions greater than the dimensions of the outlet opening, means adhesively securing said blanks to each other in the region of the outlet opening and to the inner and outer surfaces of the wall around said outlet opening for closing said outlet opening, and said inner foil blank being provided with a weakened line located inwardly of the outlet opening for defining an opening flap of lesser dimensions than the dimensions of the outlet opening.

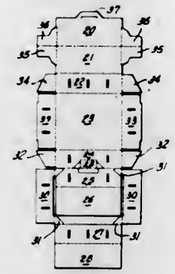
3,101,880
DIVISIBLE CASE
Dale S. Peterson, San Lorenzo, Calif., assignor to Longview Fibre Company, San Francisco, Calif.
Filed July 18, 1960 Ser. No. 43,417
4 Claims. (Cl. 229—15)



1. A divisible rectangular case comprising a single blank of fibreboard cut and folded to provide two pairs of opposed side walls forming the four lateral sides of said case and top and bottom closure flaps extending from the upper and lower edges of each of said side walls, the closure flaps on each pair of opopsed side walls being foldable toward each other to close the upper and lower sides of said case with the flaps on one pair of opposed side walls overlapping the flaps on the other pair of said side walls, a pair of partition blanks in face to face relation extending between the side walls of one pair thereof and intermediate the side walls of the other pair thereof, means securing said pair of blanks to said one pair of side walls, the closure flaps on said one pair of opposed side walls being outermost relative to the inside of the case, the side walls of said one pair each being formed with a slot substantially in register with the plane of division between said pair of partition blanks to enable inserting a knife through the slot in one side wall of said one pair and between said partition blanks for cutting across the closure flaps to the slot formed in the side wall at the other side of said case for thereby dividing said case in a plane disposed between said partition blanks, said means securing said pairs of partition blanks to said one pair of opposed side walls being a pair of coplanar flaps integral with said blanks, respectively, and against the opposedly facing surfaces of said one pair of opposed side walls at opposite sides of said slots formed therein, said coplanar flaps having extensions at their upper ends extending over and secured against the top closure flaps on said one pair of side walls for folding with said last mentioned closure flaps to positions extending angularly outwardly of said case to enable filling said case past said last mentioned flaps free from obstruction by the upper ends of said coplanar flaps.

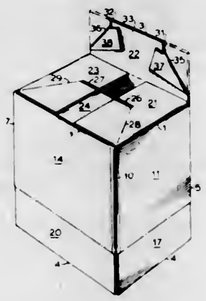
3,101,881
FRESH FRUIT AND VEGETABLE CONTAINER
Walton B. Crane, 1734 Grevelia St., South Pasadena, Calif.
Filed Sept. 20, 1957, Ser. No. 685,118
3 Claims. (Cl. 229—34)

1. A shipping container of one piece of paperboard comprising a double face to face contact bottom, a double front wall glued together in face to face contact, a double face to face contact back wall, triple face to face contact side walls at least partially glued together and an integral lid, the said double bottom comprising an outer panel and an inner liner with a rigid wooden bar between, said rigid bar substantially bisecting the bottom of



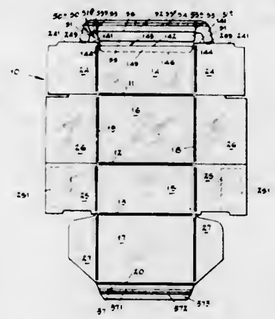
the box, the area of the bottom liner adjacent said bar containing vents, said vents connecting with the atmosphere through apertures in the side walls.

3,101,882
CONTAINER AND CARDBOARD BLANK FOR FORMING SAME
Clarence B. Parker, Long Beach, Calif., assignor to Longview Fibre Company, San Francisco, Calif.
Filed June 23, 1960, Ser. No. 38,296
3 Claims. (Cl. 229—39)



1. A substantially oblong blank of cardboard formed with a plurality of spaced folding creases extending thereacross at right angles to the longitudinal axis thereof defining four side walls of a rectangular container when said blank is folded along said creases and when the ends of the blank are connected, separate folding flaps integral with said blank along one of the longitudinally extending edges of the latter providing four bottom closure flaps adapted to be folded to form the bottom wall of said container when the said ends of said blank are connected, a folding crease formed in said blank parallel with said one of the longitudinally extending edges of said blank about which said flaps are so foldable, said flaps being rectangular in outline and having straight, substantially continuous, aligned outer free edges parallel with said last mentioned folding crease when said blank is flat, one flap of said four thereof being formed with a pair of spaced slots disposed normal to and opening outwardly of the outer free edge thereof, said slots being spaced apart a distance substantially greater than their lengths and extending into said one flap a relatively small distance across said one flap thereby providing an elongated tab between said pair of slots extending longitudinally of said outer edge, said one flap, excepting said tab, being adapted to overlap portions of all of the other three flaps and to be outermost relative to the inside of such container when the blank is folded to form a container, two of said other three flaps being adjacent to said one flap at opposite ends of the latter and foldable along said folding crease toward each other to coplanar relation with their outer free edges adjacent to each other when said flaps are folded to form said bottom wall, said two of said other three flaps being formed with aligned slots opening toward each other outwardly of their said free outer edges when said flaps are folded to form said bottom wall, and said tab being adapted to extend through said slots in said two of said other three flaps when said one flap is in said lapping relation to said last mentioned two of said other flaps to hold said one flap and said two of said other three flaps together.

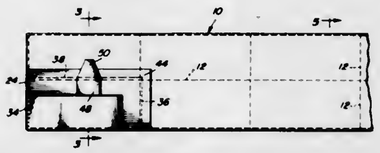
3,101,883
RECLOSABLE CARTON
John L. Gimple, Toledo, Ohio, assignor to Dairypak Butler, Inc., Olmsted Falls, Ohio, a corporation of Ohio
Filed Apr. 21, 1961, Ser. No. 117,249
2 Claims. (Cl. 229—51)



1. In a paperboard carton having a bottom and a therefrom upstanding plurality of side and end walls, one of the mentioned side walls having opposite end flaps in hinged connecting relation thereto and adapted, when the carton is erect, to be in surface to surface contact with the mentioned carton end walls, a closure cover in hinged connection relation with and along an edge of the other of the carton side walls, the cover having a flap along and in hinged connecting relation to one edge of the cover and spaced from and extending parallel to the mentioned hinged connection of the cover and the mentioned other side wall of the carton; the provision of a flap of a substantially M-shape having a body spine portion and end leg portions at opposite ends of the body spine portion and extending from the uppermost edges of the end flaps, the body spine portion being of an elongated shape extending a length substantially equal to the length of the first mentioned carton side wall, the flap having a pair of lineally extending scores by which the leg portions are set off from and are in hinged connecting relation to the mentioned end flaps to thereby support the flap body spine portion in spaced parallel relation to the uppermost edge of the first mentioned carton side wall, the M-shape flap having a second pair of lineally extending scores that are aligned with the lines of hinged connections between the mentioned end flaps and the first mentioned carton side wall and by which the flap body spine portion is set off from the respective end portions, the body spine portion of the flap having a tongue substantially equal in length to the distance between the mentioned second pair of scores and extending from the body spine portion into the space between the end leg portions toward the mentioned uppermost edge of the first mentioned carton side wall and adapted, when the flap is moved on the first mentioned pair of scores, to locate the leg portions thereof in contact with the surfaces of the mentioned end flaps and to support the body

spine portion in a downwardly spaced but parallel relation with the uppermost side edge of the first mentioned carton side wall and in contact with the inside surface thereof to support the tongue extending upward toward the mentioned uppermost side edge of the first mentioned carton side wall, adhesive securing means between and in engagement with the inner surface of the first mentioned carton side wall and the thereto facing surface of the mentioned flap body spine portion to thereby support the body spine portion against movement and the tongue for limited movement relative to the first mentioned carton side wall when the closure flap is inserted between the tongue and the first mentioned side wall of the carton, in which the first mentioned carton side wall has an uppermost re-entrant edge providing a shallow elongated notch extending nearly the entire length of the first mentioned carton side wall and, in addition, has two slits extending inwardly from points on the notch forming re-entrant edge spaced from each other forming therebetween a lip flap on the notch forming re-entrant edge of the first mentioned carton side wall in engagement with the tongue and in an area over which the tongue extends.

3,101,884
CIGARETTE PACK DISPENSING CARTON
Alfred G. Price, Sturgis, S. Dak.
(Fingal, N. Dak.)
Filed Aug. 15, 1961, Ser. No. 131,534
6 Claims. (Cl. 229—51)



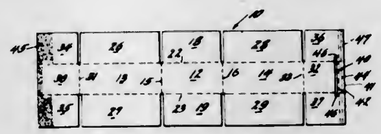
2. A cigarette pack dispensing carton comprising an elongate parallelepiped carton in combination with a multiplicity of parallelepiped cigarette packs, the inside transverse width of said carton between two opposite parallel side walls being slightly greater than one dimension of said cigarette packs whereby said cigarette packs may snugly yet slidably fit therein, a cigarette pack dispensing means in said carton, said dispensing means comprising a rectangular dispensing opening in one of said carton side walls, said opening having its two dimensions slightly greater than the other two dimensions of said cigarette packs to permit one cigarette pack at a time to pass therethrough, and reclosable closure means for said dispensing opening comprising a rectangular closure flap integrally formed from said one side wall, said flap being permanently hinged at one edge to said side wall separable from said side wall all along its other three edges, a flange secured on the outer side of said flap cover, securement means holding said flange and closure flap together, said securement means stopping short of said closure flap edge and the extending edge of said flange providing unsecured areas adjacent said closure flap edge and said flange edge, said unsecured areas adjacent said closure flap edge and said flange edge providing a mouth having jaws frictionally holding said side wall edge in said unsecured areas therebetween when said closure flap is moved to reclosed position, said flange extending over the edge parallel to said hinge edge, a pull tab secured to said flange extending beyond the extending edge thereof, the two opposite edges adjacent said hinged edge being initially secured to said side wall by tear line connections, the edge parallel to said hinge edge being slit away from said side wall, said dispensing opening being located closely adjacent one end wall of said carton, said flange also extending over the initially connected tear line edge more remote from said one end wall.

3,101,885
BURST OPEN CONTAINERS
John E. Walsh, Beverly, Mass., assignor to Safe-Pack Container Co., Minneapolis, Minn., a corporation of Minnesota
Filed Feb. 19, 1962, Ser. No. 173,985
11 Claims. (Cl. 229—51)



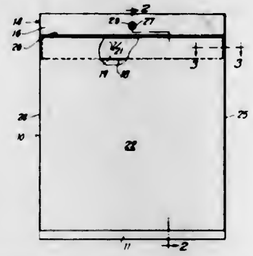
1. A blank for the formation of a container for pressurized contents, said blank having in its surface substantially from edge to edge a line of cleavage weakened for breaking, the breaking resistance of said line varying progressively from end to end, and a reinforcing tape removably secured to the surface of the blank and overlying said breaking line.

3,101,886
CARTON WITH CARRIER HANDLE
Jack A. Ring, San Leandro, Calif., assignor, by mesne assignments, to The Flintkote Company, a corporation of Massachusetts
Filed Sept. 8, 1960, Ser. No. 54,771
1 Claim. (Cl. 229—52)



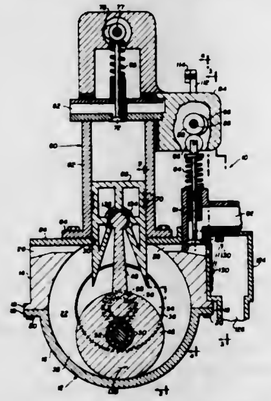
A paperboard carton, comprising a bottom wall, a pair of opposed side walls hinged at opposite sides of said bottom wall, inwardly folded end flaps hinged to opposite ends of said bottom wall and to opposite ends of said side walls, an end panel hinged to each of said side walls at the end thereof opposite said bottom wall, said end panels being partially overlapped and forming the top wall of the carton, inwardly folded flaps hinged at opposite ends of each of said end panels, the overlapping one of said end panels having a relatively narrow elongated slot extending lengthwise of said panel, said overlapping end panel and its folded flaps being glued to the overlapped end panel and its folded flaps throughout their mutually confronting surfaces except along the areas thereof bounded substantially by (1) the end edges of said slot, (2) the outermost edge of said overlapping end panel and (3) the outer elongated edge of said slot, said unglued areas of the overlapping end panel being free to be lifted upwardly from the confronting surface of the overlapped panel to provide a carrying handle for the carton extending from said slot toward the hinged end of said overlapped end panel.

3,101,887
MERCHANDISE PACKAGE AND CONTAINER THEREFOR
Emanuel Kugler, 296 Hungry Harbor Road, Valley Stream, N.Y.
Filed Apr. 18, 1960, Ser. No. 22,880
4 Claims. (Cl. 229—62)



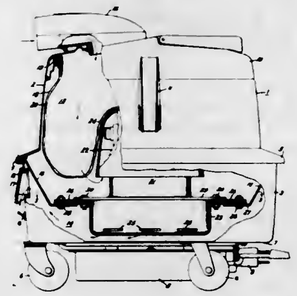
1. A merchandise container comprising a body portion having a gusset closed upper end, an open lower end and a multi-ply hang flap extending upwardly beyond said closed end, said container being constructed from a single strip of material extending upwardly to provide a rear wall of the container body and therebeyond to provide a rear ply of the hang flap, then folded over to define the top of the flap and downwardly to provide a front ply of said flap and therebeyond in front of the rear wall to form a rear fold of the gusset, then folded to provide the lower edge of the gusset, thence upwardly to provide a front fold of the gusset, then folded over to define the upper front edge of the container and then downwardly throughout the length of the front wall of the container body, said gusset extending the width of said container and being positioned between said front and rear walls within said container, the folded strip being secured together along its opposite side edges throughout the length of the container body to provide side seams which include the side edges of the gusset.

3,101,888
COMBINED POSITIVE DISPLACEMENT ENGINE AND POSITIVE DISPLACEMENT ROTARY COMPRESSOR APPARATUS
John Abramopaulos, 24—29 42nd St., Astoria 3, N.Y.
Filed Dec. 16, 1960, Ser. No. 76,193
12 Claims. (Cl. 230—22)



1. In a combined positive displacement engine and compressor, a combustion chamber having a piston movable therein in response to combustion in said chamber, a compression chamber, fluid inlet and outlet means communicating with said compression chamber, compression means directly linearly connected with said piston and movable thereby to compress the fluid in said compression chamber, valve means operable in response to a predetermined fluid pressure to permit the exhaust thereof from said compression chamber, and shunt valve means connected with said compression means for coordinated operation therewith to exhaust fluid from said compression chamber prior to said valve means.

3,101,889
RESILIENT MOUNTING FOR MOTOR AND FAN UNIT
Robert B. Tatge, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 27, 1961, Ser. No. 119,972
2 Claims. (Cl. 230—117)

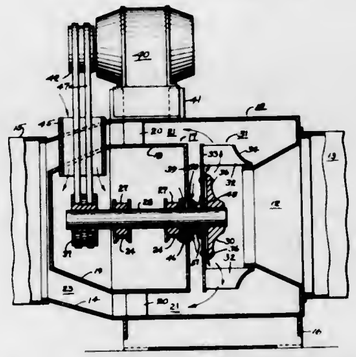


1. A vacuum cleaner comprising an outer casing adapted to be supported on a horizontal surface; a partition within said casing including a laterally extending flange; said casing having an upper suction chamber and an exhaust chamber below said suction chamber separated by said partition; an air inlet communicating with said suction chamber; an air outlet communicating with said exhaust chamber; a motor and fan unit positioned within said casing and extending through an opening defined by said partition flange so as to withdraw air from said suction chamber and discharge it into said exhaust chamber; means for mounting said motor and fan unit in said opening including a flexible resilient generally annular relatively thin supporting wall member; said motor and fan unit including a laterally extending portion positioned above said resilient wall member and overlapping said partition flange so that said flange positively supports said unit in a lowermost position when said unit is deenergized; the sizes of said air inlet and said air outlet and the air moving capacity of said motor and fan unit being so proportioned that during operation said unit is supported above said lowermost position by air pressure; said laterally extending portion of said motor and fan unit having a diameter slightly greater than the diameter of said opening so that a small annular portion of said wall member is under a compressive force perpendicular to the plane of said partition flange when said unit is deenergized; first fastening means securing the radial inner portion of said resilient wall member to said laterally extending portion of said motor and fan unit in air tight relation; and second fastening means securing the radial outer portion of said wall member to said partition flange in air tight relation; said first and second fastening means being radially spaced from one another a distance greater than the thickness of said wall member so that the portion of said resilient wall member located radially inwardly from said second fastening means flexes and moves upwardly above the surface of said partition flange to place said wall member in tension and to position said wall member at an acute angle with respect to said partition flange when said unit is energized.

3,101,890
FANS HAVING RADIAL FLOW ROTORS IN AXIAL FLOW CASINGS

Raymond L. Carlson, Canton, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 29, 1961, Ser. No. 126,377
3 Claims. (Cl. 230—127)



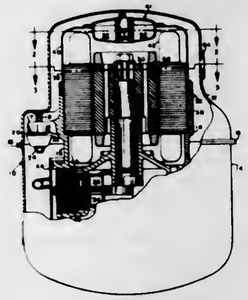
1. In a fan having an outer casing, circular in section, a smaller inner casing, circular in section, within said outer casing and concentric therewith, said inner casing having a closed downstream end wall, and having an upstream end wall having a central opening around the axis of said casings, a radial flow fan rotor having a back plate adjacent to and extending substantially parallel to said upstream wall, said rotor having a front plate spaced from said back plate and having fan blades supported between said plates, a hub attached to said back plate, a shaft attached to said hub and extending through said central opening into said inner casing, bearings in said inner casing around said shaft, and having air supply means extending through said outer casing into said inner casing, the combination therewith of auxiliary fan means for drawing air through said supply means into the interior of said inner casing and said central opening and discharging such air into said fan blades, said auxiliary fan means comprising passages in said hub having air inlets adjacent to said shaft and having air outlets spaced from said shaft larger distances than said inlets are spaced from said shaft, and sealing means for preventing the escape of gas from said rotor through said central opening, said sealing means comprising an annular ring attached to said upstream end wall around said central opening, and having a first portion converging towards said hub and a second annular ring attached to said rotor around said air inlets and having a portion around and spaced from said first portion.

3,101,891
HERMETIC RECIPROCATING COMPRESSOR UNIT

Arne Frank, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed Nov. 28, 1960, Ser. No. 72,152
4 Claims. (Cl. 230—232)

1. A hermetic compressor unit comprising: a casing, a suction gas inlet in said casing, a support body means mounted within said casing for supporting a motor and a compressor, crankshaft means rotatably mounted on said support body means, a motor supported on said support body means for rotatably driving said crankshaft means, said motor including a stator and a rotor disposed within said stator, said rotor being mounted on one end of said crankshaft means for rotation therewith, a reciprocating compressor supported by said support means adjacent to and operatively connected to the end of said crankshaft means remote from said motor, said stator having end turns projecting axially with respect to said crankshaft means beyond said rotor in a direction away from said compressor thereby defining a cavity between said end turns adjacent the end of said rotor remote from said compressor, cover means disposed between said casing and said end turns and between said rotor and said casing for encapsulating said motor in a motor chamber

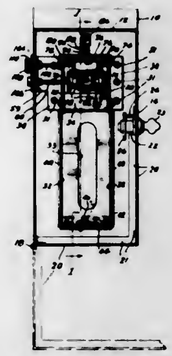


within said casing defined by said cover means and said support body means, a suction gas muffler supported by said cover means and projecting into said cavity between said end turns, means affording fluid communication between said compressor and said motor chamber, and means for sealing the suction side of said compressor from said suction gas inlet except through said suction gas muffler.

3,101,892
BILL-RECEIVING CASH BOXES

Lawrence B. Reese, Jr., Town and Country, Mo., assignor to National Rejectors, Inc., St. Louis, Mo., a corporation of Missouri

Filed Dec. 1, 1960, Ser. No. 73,015
5 Claims. (Cl. 232—1)

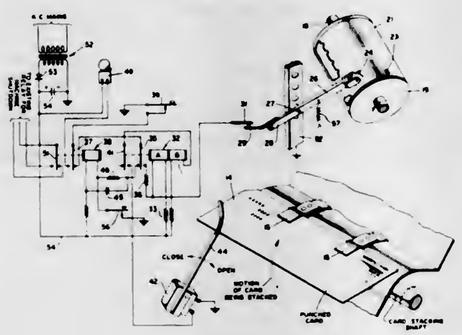


2. In a device that can receive and stack bills, a pair of rollers that discharge bills, and a cash box that receives said bills, one of said rollers having a cylindrical central portion and a pair of radially-extending frusto-conical end portions, the other of said rollers being cylindrical and extending into the space between said frusto-conical end portions of said one roller, said other roller having a portion that is coextensive with said cylindrical central portion of said one roller and that can engage one face of a bill while said cylindrical central portion engages the opposite face of said bill and having the ends thereof immediately adjacent said frusto-conical end portions of said one roller to bend the elongated edges of bills passing between said rollers upwardly at abrupt angles.

3,101,893
KEYPUNCH JAM DETECTOR

Robert Steeneck, New York, N.Y., assignor to The Western Union Telegraph Company, New York, N.Y., a corporation of New York

Filed May 8, 1961, Ser. No. 122,047
10 Claims. (Cl. 234—32)

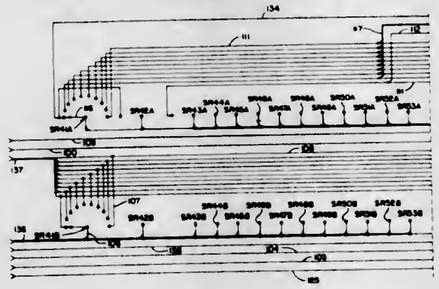


1. Card jam detecting means for a card punch machine comprising card order signal sensing means, card stacking motion sensing means located adjacent the path of card travel at a card stacking position and responsive to card motion into a stacked position, first control means connected and responsive to said order signal sensing means to establish a first circuit condition upon sensing of a card order signal, and connected and responsive to said stacking sensing means to establish a second and alternative circuit condition upon sensing of card motion into a stacked position and second control means connected to and responsive to the circuit condition established by said first control means to sound an alarm upon undue persistence of said first circuit condition.

3,101,894
DATA RECORDING SYSTEM WITH ZERO SUPPRESSION

Frederick L. Smith, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Dec. 15, 1960, Ser. No. 75,986
2 Claims. (Cl. 235—60.38)

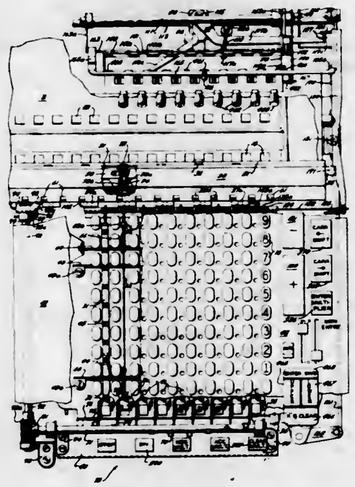


1. In a system for recording data including a plurality of readout switches having contacts representing numerical data, said contacts corresponding to the digits zero to nine inclusive, and a recording mechanism for reading the data set up on the switches in a sequence starting with the highest order readout switch to the lowest order switch, said recording mechanism being operable to punch the data read by the recording mechanism, a circuit for controlling the recording mechanism to suppress the punching of all insignificant zeros read by the recording mechanism comprising a first reading circuit, which includes a normally closed switch and all of the zero contacts of the readout switches, said reading circuit being connected to the recording mechanism for controlling the operation of the recording mechanism to skip the punching of the zero digit read over the circuit and to initiate a reading operation of the next readout switch; a second reading circuit, which includes a normally open switch and all of the zero contacts of the readout switches, said second reading circuit being connected to the recording mechanism for controlling said mechanism to punch a zero digit; a switch-operating member adapted to be energized for opening said normally closed switch in said first reading circuit and closing said normally open switch in said second reading circuit; and a plurality of third reading circuits controlled by the recording mechanism, each circuit comprising a first circuit portion connected between like contacts on said readout switches representing a digit other than zero and the recording mechanism to punch the digit read over said circuit, said first circuit portion having a normally open switch which is closed upon the energization of said switch-operating member, a second circuit portion connected between said like contacts and the switch-operating member for energizing said member upon the reading of a digit other than zero, said second circuit portion including a unilateral conducting device so orientated as to isolate the circuit being read from those circuits not being read, whereby, upon the energization of said switch-operating member, the recording mechanism will punch the digit being read and all zeros subsequently read by the recording mechanism.

3,101,895
DECIMAL POINT MECHANISM

Heinrich Wagemann, West Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware

Filed Feb. 27, 1958, Ser. No. 717,864
19 Claims. (Cl. 235—63)



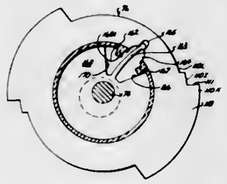
1. In a calculating machine having a fixed frame including a keyboard, a denominationally shiftable carriage carrying an accumulator register, means for shifting said carriage, and denominationally settable tabular

stop means for controlling termination of shifting of said carriage upon movement thereof into the denominational position corresponding to the setting of said stop means; ordinally adjustable decimal point indicating means for said keyboard, adjusting means settable to control selective ordinal adjustment of said indicating means to indicate a decimal point position for said keyboard, setting means for effecting a selective denominational setting of said tabular stop means controlled by the selected ordinal adjustment of said indicating means, and a manually operable control key effective to initiate operation of said carriage shifting means, said settable adjusting means being ineffective to initiate operation of said carriage shifting means.

3,101,896
CALCULATING MACHINE

Milton V. Scozzafava, Arcadia, and Richard E. Busch, La Puente, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed Oct. 30, 1961, Ser. No. 148,625
5 Claims. (Cl. 235—136)

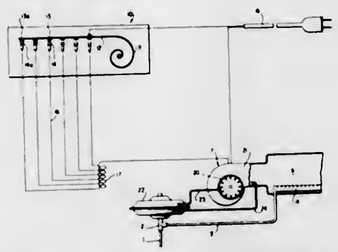


1. In a calculating machine having differential actuators and yieldable means for driving said actuators; an accumulator comprising denominationally arranged register elements, digitizing gears driven by said actuators, crawl tens transfer mechanism entrained with said gears and said register elements, spring means urging each of said register elements into a predetermined relation with a part of said transfer mechanism, said spring means being weaker than said yieldable means, and totaling stops effective to arrest said register elements in zero registering positions.

3,101,897
CONTROL FOR BURNERS

Charles O. Vaughn, Dayton, Tenn., assignor to Suburban Appliance Company, Dayton, Tenn., a corporation of Tennessee

Filed Dec. 29, 1960, Ser. No. 79,266
5 Claims. (Cl. 236—1)

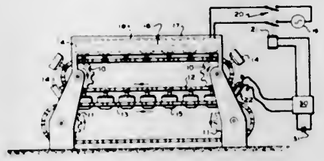


1. A regulating control for a fluid medium which comprises a valve having an inlet port and an outlet port for a fluid medium, a housing, four axially aligned chambers in the housing separated at least in part by pressure-deformable, impervious, flexible walls, means attached to the impervious and flexible walls to maintain a predetermined relative position of the walls with respect to one another, means to equalize fluid pressure in one of the valve ports with the fluid pressure in the two outer chambers of the housing, the outermost flexible walls being in direct fluid communication with said one valve port and subject directly to fluid pressure in said one valve port, said outermost flexible walls being equally distensible when subject to equal pressure differentials, a variable speed blower having an inlet and an outlet, means for varying the speed of the blower and thereby varying the pressure at the inlet and outlet, means for transmitting the negative pressure at the inlet to one of the inner chambers, and means for transmitting the positive pressure at the outlet to the other of the inner chambers, whereby pressure within the inner chambers may be oppositely varied to deform the impervious and flexible walls thereof.

3,101,898
TEMPERATURE MEASUREMENT AND CONTROL

George E. Mader, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 10, 1961, Ser. No. 88,518
4 Claims. (Cl. 236—15)

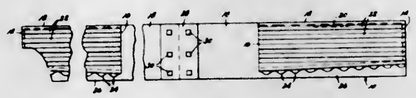


4. Apparatus for heat sealing thermoplastic material comprising means for passing a plurality of spaced thermoplastic units through a sealing zone, means for simultaneously passing through said zone a plurality of separate heat transferring sealing elements in substantially non-heat transferring relation to each other to supply sealing heat to said units, means for controlling the temperature of said sealing elements comprising a temperature averaging unit comprising a body having substantial heat storage capacity and means to measure the temperature of said sealing elements comprising a elements serially with said unit whereby an exchange of heat proportionate with the difference of temperature between said elements and said unit takes place, means for supplying heat to each of said elements and means for controlling said means for supplying heat responsive to said temperature measuring means.

3,101,899
RAILROAD TIE AND RAIL MOUNTING COMBINATION THEREOF

George K. Kocher, 604 Elmira St., White Haven, Pa.

Filed Aug. 22, 1961, Ser. No. 133,190
8 Claims. (Cl. 238—109)

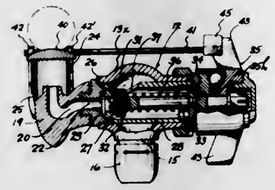


1. In a railroad tie, an elongated hollow box having a cross sectional shape comparable to a conventional tie, said box being made from resin-impregnated fiber glass and having a closed outer end and an open inner end, the upper surface of the box having a recess for the reception of a rail tie plate, longitudinally extending corrugations on the sides of the box, transversely extending corrugations on the bottom of the box, the box having a length equal to about one-third of the length of a conventional tie, a vertically directed strengthening wall made from resin-impregnated fiber glass and molded integrally with the box, said wall extending through the box so as to bisect the box, said wall extending from the closed end of the box through the open end outwardly a distance about half the length of the box, a rib formed integral to the box so as to extend vertically below the box to form a central longitudinal flange thereon, the top of the box and the wall being perpendicular to each other, a second box and strengthening walls of identical construction, and means removably securing the ends of the plate of each box together to form the complete tie.

3,101,900
DRINKING ATTACHMENTS FOR FAUCETS

Thomas Slater, Jr., 14057 32nd Ave. NE., Seattle, Wash.

Filed Feb. 5, 1962, Ser. No. 171,115
2 Claims. (Cl. 239—25)

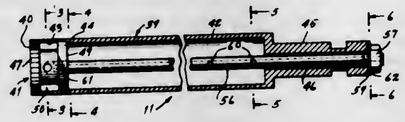


1. A drinking attachment for a water faucet of the character described; said attachment comprising a horizontally disposed housing, formed medially of its ends with a pressure chamber having a side wall inlet adapted for direct connection of the housing chamber with the faucet spout and having a downwardly directed discharge opening, a fitting applied to one end of said horizontally disposed housing formed with a water discharge channel leading from said pressure chamber and directed upwardly at its discharge end, a manually operable valve in said chamber for controlling outflow of water through said channel, a rotatable handle member for controlling said valve, located at the end of said housing opposite its fitting mounting end, a jet protecting sleeve mounted on said fitting in position for the upward discharge of water from said channel therethrough and a protective cap hingedly mounted on said fitting for closing over the upper end of said sleeve and having a handle extended therefrom to a position for its actuation by the hand in grasping the handle of said manually operable valve for its opening.

3,101,901
BLOW-PIPE FOR FABRICATING PLASTIC RESIN ARTICLES

George C. Britten, 311 Bay Drive, Massapequa, N.Y.

Filed Apr. 28, 1961, Ser. No. 106,263
8 Claims. (Cl. 239—132)

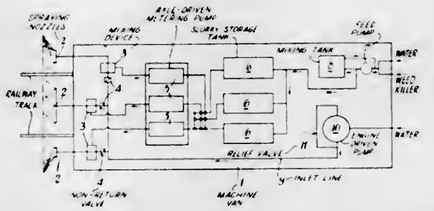


1. A blow-pipe for fabricating hollow articles formed of plastic resin, which blow-pipe comprises a tubular body formed with an open end adapted to carry a charge of plastic resin thereon, a head fitted within the open end of said body, the inner peripheral surface of said body and the outer peripheral surface of said head at said open end being cylindrical and constructed and arranged to provide a plurality of circumferentially spaced restricted openings between said surfaces, said head including a pair of spaced flanges constructed and arranged to provide an annular chamber within said body inward of and in fluid flow communication with said openings, said head having passageway means extending therethrough and in fluid flow communication with said chamber, and means for supplying air under pressure to said passageway means, whereby the air enters said chamber and flows through said openings to blow the charge.

3,101,902
SPRAYING APPARATUS

Cyril John Chamberlain, Godstone, and John Thomas Anning, Horsham, England, assignors to Chipman Chemical Company, Limited, Horsham, England, a British company

Filed July 30, 1962, Ser. No. 213,336
2 Claims. (Cl. 239—173)



1. A railway vehicle adapted for spraying railway tracks with chemical weedkiller, said vehicle essentially comprising in combination:

(*a*) three groups of outlet elements, one group being arranged to spray chemical weedkiller over the width of the track and the other two groups each being arranged to spray chemical weedkiller respectively over the strip on one side of the track;

(*b*) each group of outlet elements being connected through a mixing device to an axle-driven metering pump and

(*c*) each of said metering pumps connected to a mechanically agitated storage tank;

(*d*) means for producing a chemical weedkiller composition in fluid form;

(*e*) said means having a supply line to at least one tank wagon carrying water and

(*f*) a supply line to at least one tank wagon carrying chemical weedkiller concentrate;

(*g*) means for feeding said fluid weedkiller composition to each of said storage tanks;

(*h*) an engine-driven centrifugal pump having a sensitive long stroke relief valve;

(*i*) a supply line from said engine-driven pump to at least one tank wagon carrying water; and

(*j*) a supply line from said engine-driven pump to each of said mixing devices, the arrangement being such that said fluid chemical weedkiller composition drawn from each of said storage tanks by each of said metering pumps is fed respectively into the water supply to each group of outlet elements on the pressure side of said engine-driven pump, hence enabling the quantity and kind of chemical weedkiller dispensed from each group of outlet elements to be varied.

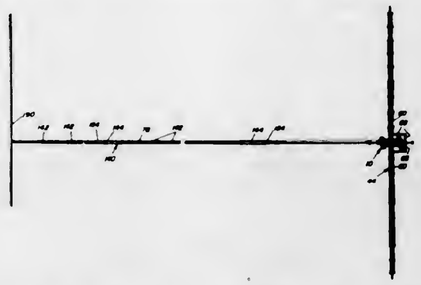
3,101,903
SELF-PROPELLED IRRIGATION TRAILER

Fred F. Hall, Chaseley, N. Dak.

Filed July 10, 1962, Ser. No. 208,890
5 Claims. (Cl. 239—183)

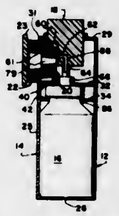
1. An elongated self propelled irrigation vehicle comprising a support frame including ground engaging support wheels, liquid dispensing means on said vehicle

including liquid outlets for dispensing liquid over an area of a predetermined pattern and liquid inlet means, said liquid inlet means comprising a plurality of rigid extendable and retractible telescopingly engaged conduit



sections, at least one of said conduit sections including a pair of elongated side-by-side conduit halves communicated with each other at one pair of remote end portions and telescopingly engaged with the adjacent conduit sections at the other pair of remote end portions.

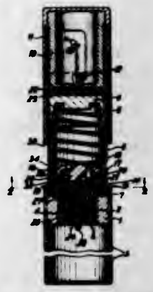
3,101,904
SPRAY APPARATUS
Samuel B. Prussin, Westport, and Herman R. Shepherd, Fairfield, Conn., and Jacob Surks, Elmont, N.Y., assignors to Aerosol Techniques, Inc., a corporation of New York
Filed July 13, 1961, Ser. No. 123,762
11 Claims. (Cl. 239—337)



1. A unitary aerosol dispenser comprising a hollow casing, an aerosol container enclosed within the hollow casing and having a valve means located at one end thereof, means for actuating the valve means actuatable through an opening in the hollow casing, a hollow, collapsible dispensing nozzle communicating at one end thereof with the valve means when the valve means is actuated and extendable at the other end thereof through an opening in the hollow casing, the dispensing nozzle having a first collapsed position in which the end of the dispensing nozzle remote from the valve means is substantially flush with the hollow casing and in which first collapsed position the dispensing nozzle engages the valve actuating means preventing actuation of the valve, and a second extended position in which the end of the dispensing nozzle remote from said valve means extends substantially beyond the hollow casing.

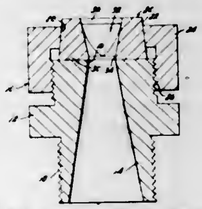
3,101,905
SPRAY DEVICE
Igo Hoenig, Maximilianstr. 6, Schwabach, Germany
Filed May 14, 1962, Ser. No. 194,539
Claims priority, application Germany June 6, 1961
10 Claims. (Cl. 239—357)

1. A spray device comprising air cylinder means, chamber means adapted to carry fluid connected to one end of said air cylinder means and in communication therewith through a communicating fluid passage, movable valve means connected in said air cylinder means to selectively close the communicating fluid passage, a spray orifice provided in the wall of said air cylinder means adjacent said one end, resilient means having passages therein connected in said one end of said air cylinder means adjacent said spray orifice, valve means and communicating fluid passage, piston means disposed for movement in the opposite end to said air cylinder means, second resilient means connecting said piston means and said resilient means, absorbent means connected in the pas-



sages of said resilient means and adapted to absorb fluid from said chamber means, and said resilient means having a portion adapted to be downwardly urged by said piston and second resilient means to move said movable valve means to close said communicating fluid passage as said piston means is moved downwardly in said air cylinder means to provide an atomized spray of fluid from said spray orifice by causing air flow through the passages of said resilient means and release of fluid from said absorbent means.

3,101,906
SPRAY NOZZLE
Carl R. Webber, 370 Kimberly Road, Akron, Ohio
Filed Jan. 11, 1962, Ser. No. 165,486
6 Claims. (Cl. 239—592)

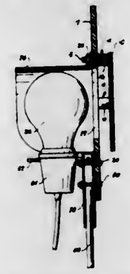


6. A spray nozzle having a body portion with a tapered bore, a one-piece disc, means for securing the disc to the body portion at the small end of the bore, the disc having an opening therethrough in alignment with the bore, the opening being circular adjacent the small end of the bore and of substantially the same diameter, the other end of the opening being in the form of a substantially rectangular slot, the circular and slot portions of the opening being connected by substantially flat portions extending from the sides of the slot to the edges of the circular portion, the substantially flat portions being joined by substantially quarter round fillets of gradually decreasing radius from the circular portion to the slot.

3,101,907
ORNAMENTAL ILLUMINATING DEVICE
Gabriel A. O'Reilly, 3204 NW. 24th St., Oklahoma City, Okla.
Filed June 12, 1961, Ser. No. 116,384
1 Claim. (Cl. 240—10)

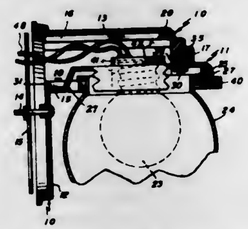
An ornamental illuminating device comprising a composite ornamental effigy including:

(*a*) a first plate constructed of a translucent, light-reflective material;
(*b*) a second plate of larger area than said first plate and having a centrally located aperture of smaller areal size than said first plate extending therethrough;
(*c*) spacer means between said first and second plates for retaining said plates in spaced, parallel relation;
(*d*) an elongated supporting member having first and second ends and attached to said second plate at one of said ends and sharpened to a point at its other end to facilitate supporting the effigy vertically over the ground;
(*e*) a resilient bracket attached to one end of said elongated member;
(*f*) an electric light bulb detachably engaged by said resilient bracket and positioned opposite said aper-



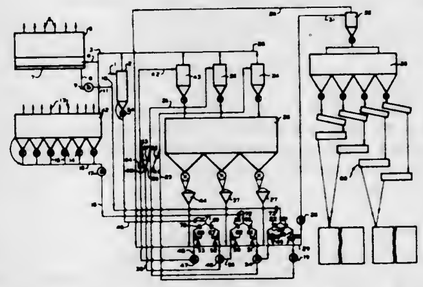
ture on the opposite side of said second plate from said first plate; and
(*g*) a generally U-shaped light shield having open first and second ends and secured to said second plate around said centrally located aperture with the open first end of said shield aligned with said centrally located aperture in said second plate and the open second end of said light shield aligned with said open first end and said centrally located aperture, said light shield partially surrounding said light bulb and directing light from said bulb through said aperture in said second plate for preventing direct illumination of said second plate and further directing light through the open second end of said shield to directly illumina.e the vicinity adjacent said device on the opposite side of said second plate from said first plate.

3,101,908
ELECTRIC LIGHTING FIXTURE AND GLOBE SUPPORT
Kenneth M. Moore, Parkersburg, W. Va., assignor to Union Insulating Company, Parkersburg, W. Va., a corporation of West Virginia
Filed Aug. 2, 1961, Ser. No. 128,786
8 Claims. (Cl. 240—73)



1. An electric lighting fixture comprising a base section having an attaching portion and an integral arm projecting outwardly from said attaching portion, said arm being hollow and having a top wall, a closed outer end wall, side walls with reduced outer portions and a short bottom wall connecting the inner portions of the side walls, said end and bottom walls and the reduced portions of said side walls providing said arm with a downwardly facing opening, a lamp-carrying section closing said opening, the last mentioned section comprising a top wall and a depending annular rim of a size to receive the neck of a globe or shade, the last mentioned top wall abutting the lower edges of the reduced portions of said side walls and the bottom of said end wall of the arm, the lower edge of said rim being disposed substantially in the plane of said bottom wall, a lamp socket disposed centrally in said top wall, interengaged parts on said bottom wall of the arm and the inner portion of said rim to support the inner portion of said lamp-carrying section, and means fastening the outer portion of said lamp-carrying section to the outer portion of said arm to support the outer portion of said lamp-carrying section.

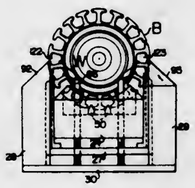
3,101,909
PRESSURE CONTROL IN CYCLIC PNEUMATIC CONVEYOR SYSTEMS
William R. King, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 16, 1961, Ser. No. 145,281
6 Claims. (Cl. 241—25)



1. In the production of furnace carbon black a method for preparing the carbon black for pelleting, comprising, cyclonically separating a gaseous effluent from a carbon black reactor and containing carbon black in suspension, from this treating step separately withdrawing carbon black and a gaseous effluent containing less carbon black in suspension than the first-mentioned gaseous effluent, separating in a bag filtering step the carbon black from the last-mentioned gaseous effluent and venting from the bag filtering step at least a portion of this effluent, pneumatically conveying the bag filtered carbon black to a second cyclonic separating step and therein separating carbon black containing entrained gases from the conveying gases, passing at least a portion of the latter separated conveying gases into said bag filtering step, micropulverizing this last mentioned carbon black containing said entrained gases whereby gases are liberated from the carbon black undergoing pulverizing and whereby the pressure of the liberated gases and micropulverized carbon black increases to a pressure higher than the pressure of the material entering the micropulverizing step, pneumatically conveying micropulverized carbon black and liberated gases to a third cylonic separating step and therein separating this carbon black from the conveying gases, this latter separated carbon black being the product of the operation, returning the separated conveying gases from the third separating step in closed cycle to the micropulverized carbon black and liberated gases pneumatic conveying step whereby pressure in the closed cycle conveying step increases to an undesirably high pressure, withdrawing a portion of the gases carrying carbon black

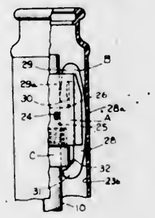
in suspension immediately downstream of the point of juncture of the returned separated conveying gases with the micropulverized carbon black and liberated gases and introducing the withdrawn gases and suspended carbon black into the first mentioned pneumatic conveying step.

3,101,910
WIRE GUIDING HEADS FOR COIL WINDING MACHINES
James R. Turk, Euclid, Ohio, assignor to Vincent K. Smith, Gates Mills, Ohio
Filed June 7, 1961, Ser. No. 115,482
14 Claims. (Cl. 242—13)



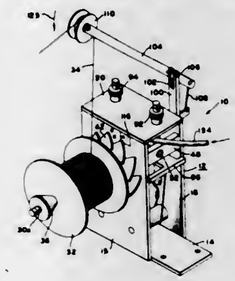
6. In combination, a wire guiding head adapted to guide wire to form coils of wire in an externally slotted body, and a pair of clamping heads adapted to hold such body in position to be wound by said head, said head comprising a plurality of guide surfaces adapted to be selectively positioned adjacent such body for winding coils of wire therein, and stop means mounted for movement with the respective guide surfaces adapted to engage said clamping heads thus to locate said guide surfaces with respect to such slotted body to facilitate the winding of coils therein.

3,101,911
SPINDLE ADAPTER
Robert L. Carroll, Greenville, S.C., and Clarence I. Steinback, Minneapolis, Minn., assignors to Acrometal Products, Inc., Minneapolis, Minn., a corporation
Filed Feb. 20, 1961, Ser. No. 90,295
8 Claims. (Cl. 242—46.6)



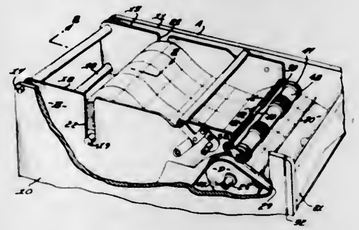
1. A spindle adapter for a bobbin, tube and the like including, a plurality of spaced ribs disposed vertically with respect to the spindle, said ribs bearing on the spindle at a point adjacent one end thereof, a movable cam having an annular bearing surface carried by the spindle upon which the ribs have bearing support adjacent the other end thereof and each of said ribs having a raised outer portion for engaging a bobbin, tube or the like when initially placed upon the ribs, intermediate the point of bearing on the spindle and the bearing surface adjacent the other end thereof, whereby contact of the ribs on the spindle on one end thereof and upon the bearing surface on the other end thereof is maintained when the bobbin, tube or the like is operably positioned upon the spindle.

3,101,912
TENSIONER
Thomas S. Bartlett, Boone, N.C., assignor to International Resistance Company, Philadelphia, Pa.
Filed Aug. 24, 1961, Ser. No. 133,682
13 Claims. (Cl. 242—54)



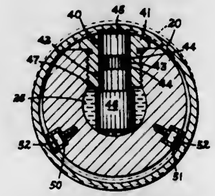
1. A filament tensioner comprising a support, a filament supply spool shaft rotatably mounted on said support, brake means for controlling the speed of rotation of said shaft, means controlled by the filament for operating said brake means, an impulse wheel mounted on said shaft, said impulse wheel having a plurality of blades extending radially therefrom, and means for providing a continuous blast of air against said impulse wheel blades said blast of air impinging on said impulse wheel blades in a direction so as to rotate the impulse wheel and filament supply spool shaft in the direction to unwind the filament from the supply spool.

3,101,913
APPARATUS FOR DISPENSING ROLLED PAPER
Calvin D. Davis, Los Angeles, Calif., assignor of one-fifth to Gary Mohi, Los Angeles, Calif.
Filed Apr. 11, 1961, Ser. No. 102,301
4 Claims. (Cl. 242—55.53)



3. Paper dispensing apparatus, comprising, in combination:
- a drum having a cylindrical surface with longitudinally extending rigid serrations formed thereon;
- a guide roller having a cylindrical surface with circumferentially extending resilient serrations formed thereon;
- support means for rotatably supporting said guide roller and said drum with their axes of rotation parallel to each other, and including spring means operable for biasing said guide roller toward said drum in a direction radial to the drum axis;
- paper guide means for presenting a strip of paper in a direction perpendicular to the axes of said drum and said guide roller and parallel to the engaging surfaces thereof so as to be grasped therebetween, including a paper roll rotatably supported upon an axis precisely parallel to said drum axis in a position such that the angular separation between said guide roller and said paper roll is somewhat more than 95° measured relative to said drum axis, a fixed paper guide extending adjacent said drum from a point near said guide roller to a point nearly in longitudinal alignment between the axes of said paper roll and said drum so that paper drawn from said paper roll is held tightly against said drum surface prior to the point where it is grasped between said drum and guide roller surfaces;
- and drive means for drivingly rotating said drum in a predetermined direction so as to draw the paper from said paper roll.

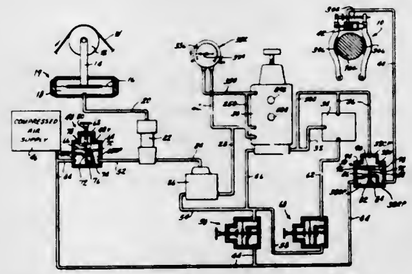
3,101,914
EXPANDING CORE SHAFT
Clermont H. Lorenz, Baldwinsville, and William R. Penrod, Oswego, N.Y., assignors to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed Apr. 11, 1960, Ser. No. 21,528
1 Claim. (Cl. 242—72)



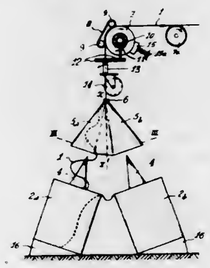
A self-centering expanding core shaft for removably gripping a hollow core, comprising an elongated generally cylindrical body having a diameter less than that of said core to be received thereon and having means defining a hydraulic liquid chamber therein extending through one end thereof and terminating adjacent the opposite end of said body, means in said one end defining a driving cylinder, an operator including a driving piston formed on the inner end thereof received in said cylinder closing one end of said chamber and having an outer driving end threadedly received in said body for liquid displacing movement in said body, a plurality of spaced apart driven piston assemblies arranged in a single row on said body including means defining a radially extending cylinder bore communicating with said fluid chamber, a driven piston for each of said assemblies having a portion forming a seal with said bore and movable outwardly and inwardly in direct proportion to fluid displacing movement of said driving piston, the outer ends of each of said driven pistons being proportioned for direct engagement with the inside surface of said core at longitudinally spaced apart positions upon extending movement thereof, means on said body defining a pair of longitudinally extending grooves spaced substantially at 120° intervals from each other and from said row of piston assemblies and a separate rib fixedly received and supported along the length of each of said grooves having an outer core gripping surface proportioned to engage the inside surface of said core upon said outward movement of said driven pistons providing three point support for said core on said shaft.

3,101,915
APPARATUS FOR CONTROLLING TENSION IN A RUNNING WEB
Charles Aaron, West Caldwell, and Thomas J. Crowe, Mount Fern, N.J., assignors to Cameron Machine Company, Dover, N.J., a corporation of New York
Filed May 23, 1962, Ser. No. 196,957
13 Claims. (Cl. 242—75.43)

1. In apparatus for controlling tension in a running web, a combination comprising a fluid-pressure operated brake coacting with the web in opposition to a force lengthwisely actuating it, a guide member in engagement with the web and movable in response to tension variations therein, and a fluid-pressure system operatively arranged between said guide member and brake for operating the latter; said system comprising a tension-sensing element connected to and constrained to move with said guide member and partially defining a hydraulic chamber in a stationary hydraulic cylinder, a tension-sensing valve, a closed column of liquid interconnecting said chamber and said valve, causing the latter to operate in response to variations in the pressure of liquid in said column to establish proportionally similar variations in the output pressure of said valve, and a ratio valve coacting with said brake to control the latter's operation and coacting with said tension-sensing valve for deriving control of operation of the ratio valve from variations in the output pressure of the tension-sensing valve; said ratio valve comprising diaphragm means, for operating said valve, biased oppositely, on the one hand by the ratio valve's output pressure and on the other hand by a portion of the latter output pressure; and said diaphragm means also being partially under the control of the output pressure of said tension-sensing valve, whereby to operate said ratio valve in proportion to the differential of forces applied to said diaphragm means by said output pressure of the ratio valve and said portion of the latter output pressure.



3,101,916
SYSTEM FOR REELING OUT WIRE AND THE LIKE FROM COILS
Otto Haugwitz, La Celle Saint Cloud, France, assignor to Societe Anonyme Geoffroy-Delore, Paris, France, a company of France
Filed June 2, 1958, Ser. No. 739,356
Claims priority, application France May 31, 1957
2 Claims. (Cl. 242—128)



1. In a system for reeling a wire-like element off a coil, means connected to the element applying a pulling force thereto to draw off loops from the coil generally axially of the coil, recessed guide means for the element beyond the coil, a first rotatable pulley engaged by said element at a point beyond and spaced from said guide means, brake means cooperating with said first pulley for controllably retarding rotation thereof, a second rotatable pulley between the guide means and the first pulley and having

at least one turn of said element trained therearound, a tubular shaft surrounding said element, means attached to said tubular shaft for supporting said second pulley for bodily rotation about an axis generally coinciding with the axis of the element, and gearing means coupled to said first pulley for rotating said supporting means bodily about said element at a predetermined angular rate.

3,101,917
DUCTED ROTOR WITH PRESSURE BALANCING AND LIFT AUGMENTING MEANS

Lyle K. V. Sudrow, Los Angeles, Calif., assignor to Hellpod, Inc., Oceanside, Calif.

Filed Nov. 27, 1961, Ser. No. 155,096
3 Claims. (Cl. 244—23)

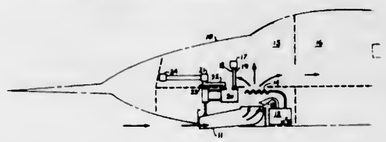


1. A ducted rotor assembly, comprising:
a generally circular duct;
a pair of counter-rotating driven rotors axially rotatably mounted in said duct;
a wide airflow slot through said duct and extending circumferentially around at least a portion of the duct;
said slot having perforate flow controlling panels secured therein; and
the portion of said duct above said slot having a radial cross section of substantially airfoil shape with the leading edge thereof at the outer periphery.

3,101,918
EMERGENCY RAM AIR CABIN PRESSURIZATION SYSTEM

George B. Evelyn and George C. Newell, Seattle, and Marvin D. Peterson, Bellevue, Wash., assignors to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed May 31, 1961, Ser. No. 113,705
6 Claims. (Cl. 244—76)



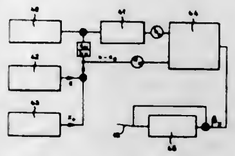
1. An emergency ram air pressurization system for pressurized aircraft operating at high speeds and high altitude comprising a variable area air scoop for ram air, actuator means for said air scoop, means responsive to internal aircraft pressure for controlling said actuator means, variable capacity cooling means for said ram air, and means responsive to ram air pressure for controlling said cooling means, whereby life sustaining air pressure may be maintained in an aircraft undergoing excessive decompression.

3,101,919
STABILIZED CAPTIVE FLYING PLATFORM UNIT

Pierre Jean Madon, Antony, France, assignor to Nord-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France, a joint-stock company of France

Filed Sept. 19, 1962, Ser. No. 224,796
Claims priority, application France Feb. 1, 1962
5 Claims. (Cl. 244—77)

1. A stabilized flying platform unit of the kind having aerodynamic lifting means and being coupled to a base on the ground by a system of at least three parallel metal cables of equal length and not located in the same plane, said platform unit comprising: a rigid base fixed with respect to the ground, the fixing points of said three metal cables on said base and on said platform being respectively in a horizontal plane, thus eliminating three degrees of freedom of said platform, namely an upward translation and a rotation about each of two axes perpendicular to each other in said horizontal plane of the platform; means for detecting displacements corresponding to the

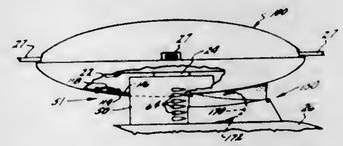


remaining three degrees of freedom of said platform, namely a rotation about an axis perpendicular to said horizontal plane and a translation along two axes perpendicular to each other in said horizontal plane; control surfaces adapted to act respectively in opposition to said three possible displacements; servo-controls acting between each of said control surfaces in dependence on said means for detecting the corresponding displacements, said control surfaces thus acting in opposition to the possible remaining displacements.

3,101,920
BOUNDARY LAYER CONTROL

Evan A. Fradenburgh, Fairfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Jan. 27, 1960, Ser. No. 4,919
13 Claims. (Cl. 244—130)



1. In combination in an aircraft, a fuselage, a pylon positioned over and mounted on said fuselage, a rotor head mounted over said pylon for rotation, an enclosure member extending upwardly from the pylon to a point adjacent said rotor head, means directing a flow of air outwardly along each side of the enclosure member between the rotor head and said pylon, and pump means connected to said directing means for pumping a flow of fluid thereto.

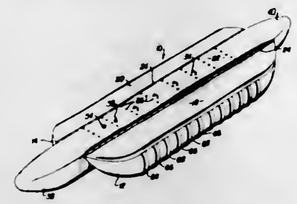
3,101,921
INFLATABLE AND DEFLATABLE EXTERNAL AIRCRAFT FUEL TANK

Martin A. Price, 514 N. Helberta Ave., Redondo Beach, Calif.

Filed Mar. 30, 1962, Ser. No. 183,816
17 Claims. (Cl. 244—135)

1. An aircraft fuel tank which comprises: a supporting structure having means thereon for releasably attaching said fuel tank to an external surface portion of an aircraft; an expandable and contractible fuel cell on said supporting structure, said fuel cell being expandable when fuel is introduced therein and contractible when fuel is withdrawn therefrom; and a motorized sling assembly on said supporting structure which comprises a motor; a shaft interconnected to said motor which is rotatable in one direction when fuel is introduced into said fuel

cell and rotatable in the opposite direction when said motor is periodically energized; and slings which are connected to said shaft and which support said fuel cell,

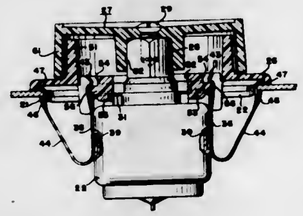


said slings being rolled upon said shaft when said motor is energized to contract said cell to reduce the volume thereof producing a fuel cell which consistently functions as full.

3,101,922
SNAP FASTENER

Floyd O. Moody and Charles W. Eyman, Jr., Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 7, 1962, Ser. No. 178,015
10 Claims. (Cl. 248—27)

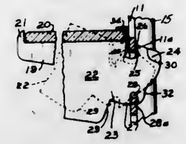


1. In combination:
(*a*) a support provided with an aperture therein,
(*b*) an electrical device and a plate separate therefrom adapted to be supported on said support,
(*c*) a single means for mounting both said device and said plate in assembled relationship on said wall with the plate paralleling same and covering the aperture in the wall,
(*d*) said single means comprising a spring clip having a base and opposed walls forming a substantially U-shaped pocket, arms formed integral with ends of the legs of said opposed walls bent in the direction of the base of said pocket and a finger formed integral with each opposed pocket wall extending outwardly of said base beyond said pocket,
(*e*) said opposed pocket walls, said arms and said fingers having a normal biasing action,
(*f*) said electrical device being wedged between the opposed walls of said clip and clamped thereby within said pocket,
(*g*) the wedging of said device into said pocket shifting opposed walls thereof away from one another to increase the biasing action of said arms in opposite directions and to increase the biasing action of said fingers in a direction toward each other,
(*h*) said arms being sprung into the aperture in said support with their ends interlocked to opposed edges of the aperture for securing said device to the support, and
(*i*) opposed portions on said plate spreading said fingers apart as the plate is brought into engagement therewith for snapping the fingers thereover to secure said plate against said support.

3,101,923
SHELF MOUNTING

Edward C. Streater, Spring Park, Minn., assignor to Streater Industries, Inc., Spring Park, Minn., a corporation of Minnesota

Filed Feb. 17, 1961, Ser. No. 102,909
6 Claims. (Cl. 248—242)

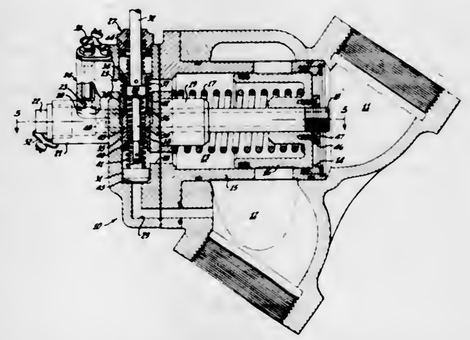


2. A shelf support, comprising an apertured upright standard, an elongate and stiff shelf-supporting member extending transversely outwardly from the standard and having a rear end portion of plate-like shape oriented in an upright position, said member also having a front end, and a body portion between said front end and said rear end portion, the rear end portion having a terminal end shaped for insertion through an aperture of the standard and also having an intermediate portion between the terminal and said body portion, said intermediate portion having a height in excess of the size of the aperture and also having a first notch of substantial width in the upper edge thereof continuously receiving therein a portion of the standard adjacent the aperture and to permit tilting of said member and notch to various oblique positions while the aperture-defining portions of the standard is in the notch, and means adjacent the lower edge of said rear portion and below the notch and defining first and second rearwardly facing abutments spaced from each other in a fore-and-aft direction and selectively engageable with the standard to limit movement of said rear end into the aperture.

3,101,924
SHUT-OFF VALVE FOR METERED FLOWS

William F. Berck, Hayward, Calif., assignor to Ralph N. Brodie Company, San Leandro, Calif., a corporation of California

Filed Dec. 26, 1961, Ser. No. 161,859
18 Claims. (Cl. 251—25)



1. A shut-off valve device for metered flow lines having positions of full-open, closed and an intermediate position of registrable low flow, said valve comprising:
a valve housing having a fluid passage therethrough,
a main valve element disposed in said housing and movable between a closed position and a full-open position, said valve element being closed by move-

ment in a direction opposed to normal fluid flow through said passage,

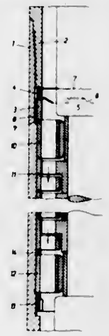
means defining first and second fluid passageways, said first passageway fluidly communicating with said housing passage on the upstream side of said valve element for applying a closing force to said main valve element, said second fluid passageway communicating with said housing passage on the downstream side of said main valve element for relieving said closing force,

means applying a closing bias force to said main valve element,

means including a control valve selectively operable for allowing fluid to pass either through said first passageway or said second passageway, and

means associated with movement of said control valve for securing said main valve element at a fixed, predetermined position intermediate full-open and closed.

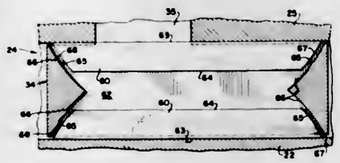
3,101,925
DRILLING TURBINE
Richard Dziallas and Karl Kaufmann, Heidenheim, and Carl Biedendieck, Bentheim, Reg. Bez. Osnabruck, Germany, assignors to J. M. Voith G.m.b.H., Heidenheim, Germany
Filed Jan. 14, 1960, Ser. No. 2,404
Claims priority, application Germany Jan. 17, 1959
6 Claims. (Cl. 253—3)



1. A drilling turbine especially adapted for driving drilling tools for deep drilling operations, said drilling turbine comprising at least two sections, each section having a housing, said housings being connected by interengaging threaded portions thereon, ring means between said housings operable to hold the housings against relative rotation, said ring means comprising a first ring nonrotatably abutting one housing and a second ring axially slidable in the other housing but held against rotation thereon, said rings having interengageable cam surfaces on their adjacent faces, and means carried by the other housing and adjustable for moving said rings toward and away from each other to lock the housings together or to release the housings.

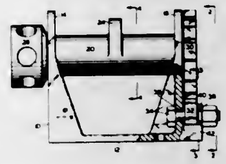
3,101,926
VARIABLE AREA NOZZLE DEVICE
Fritz Weber, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Sept. 1, 1960, Ser. No. 53,546
4 Claims. (Cl. 253—78)

1. A variable area nozzle for controlling the flow of a fluid from an inlet plenum to a point of use, comprising: means defining a passageway having a pair of spaced, substantially parallel walls for directing the fluid from the inlet plenum to the point of use; a plurality of adjustable nozzle vanes rotatably mounted in said passageway for controlling flow therethrough and each having a leading edge and a trailing edge with respect to the direction of fluid flow thereover, each of said vanes also having opposite side edges disposed in adjacent, confronting relation to said walls of said passageway; there being longitudinally extending slots with end walls in each nozzle vane disposed in a plane substantially normal to and



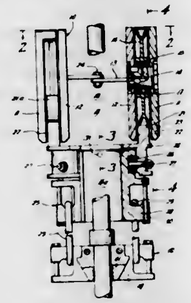
opening through said side edges of the respective vane; blades slidably disposed in and confined in the endwise direction between the end walls of said slots in each nozzle vane; and there being fluid passage means communicating said slots in each nozzle vane inwardly of its respective blades to said passageway at the leading edges of the vanes, whereby said blades in each nozzle vane are urged outwardly by fluid pressure into fluid sealing contact with said walls of said passageway.

3,101,927
LOAD BINDING WINCH
Robert H. Gray, 4420 NE. Maywood Place, Portland, Oreg.
Filed Nov. 21, 1960, Ser. No. 70,744
1 Claim. (Cl. 254—161)



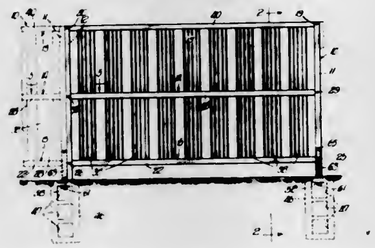
A load binding winch adapted for mounting on a vehicle bed comprising a base adapted to be attached to the vehicle bed, a pair of spaced arms integrally projecting from said base, a winding shaft journaled in said arms, means on said shaft for rotating the same, a ratchet wheel secured to said shaft, a housing on said base having a portion aligned with said ratchet wheel, said housing having a pair of spaced shoulders thereon separated by an opening in the portion aligned with said ratchet wheel, a leaf spring spanning said opening and supported at its ends on said shoulders, a pawl on said base between said leaf spring and said ratchet wheel and having a tooth portion operatively engageable with said ratchet wheel, said pawl being pivotally mounted for movement between a ratchet engaging position and a ratchet release position, a first projection on said pawl extending laterally therefrom and comprising a finger engaging portion for manually pivoting the pawl, a second projection on said pawl extending toward said leaf spring in a direction opposite from said tooth portion, said second projection terminating in an edge portion, said leaf spring being engaged by the edge portion of said pawl, said pawl being positioned operably by said spring either in said ratchet engaging position or said ratchet release position.

3,101,928
TRAVELING BLOCK ASSEMBLY
Norman D. Dyer and Robert L. Franks, Beaumont, Tex., assignors to Dresser Industries Inc., a corporation of Delaware
Filed July 24, 1961, Ser. No. 126,287
10 Claims. (Cl. 254—194)



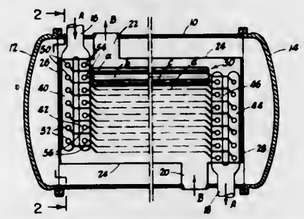
1. An improved traveling block assembly comprising in combination a traveling block, including a housing having a central unobstructed vertical passageway therethrough open at a side of the housing, adapted to receive a substantially vertical pipe by relative sideways movement of the pipe and housing, and at least one sheave disposed in the housing on each of two opposite sides of the opening; a ring carried by a lower end of the housing in fixed relationship therewith, having a lateral opening therein registering with the open side of the housing; and an annular adapter, rotatably supported by the ring, having a vertical opening through a side thereof registerable with the lateral opening in the ring and with the open side of the housing.

3,101,929
FENCE OR CLOSURE STRUCTURE
Christian Dvore, Box 104, McHenry, Ill.
Filed Oct. 31, 1960, Ser. No. 66,196
7 Claims. (Cl. 256—24)



1. A unitary fence or closure section comprising, a pair of spaced apart, vertically extending U-shaped aluminum channel members opening toward each other, a lower aluminum rail member extending horizontally between said channel members adjacent the lower ends thereof and having its ends secured between the spaced flanges of said channel members, an upper aluminum rail member extending horizontally between said vertically extending channel members adjacent the upper ends thereof and having its ends secured between the spaced flanges thereof, an intermediate aluminum rail member extending horizontally between said vertically extending channel members intermediate said upper and lower rail members and having its ends secured between the spaced flanges of said vertically extending channel members, a plurality of longitudinally spaced and vertically extending elongated openings formed in said three rail members, with each series of openings being vertically aligned, a glass fiber panel member extending through each series of openings, and upper and lower horizontally disposed elongated wedge members associated with said upper and lower rail members, respectively, and engageable with the same sides of the upper ends and the lower ends of said panel members, respectively for laterally wedging same against portions of said upper and lower rail members to prevent rattling of said panel members.

3,101,930
TUBULAR HEAT EXCHANGER
André Huet, 48 Ave. du President Wilson, Paris, France
Filed Sept. 8, 1959, Ser. No. 838,485
Claims priority, application France Sept. 10, 1958
1 Claim. (Cl. 165—143)

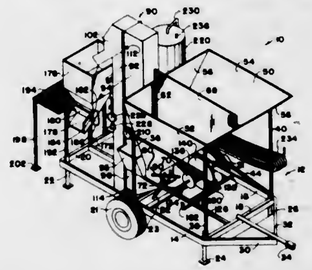


A heat exchanger in which two fluids flow at cross currents and embodying a casing containing a bank of generally horizontal rows of rectilinear tubular elements with the elements in adjacent rows arranged in staggered relation, all the tubular elements of said bank being made up of a pair of concentric tubes joined at their two ends to form an annular space for one fluid, called inner fluid, and a central space through which the other fluid, called outer fluid, flows from the interior of said casing as well as around the exterior of each tube, inlet and outlet headers for the inner fluid arranged vertically at the opposite ends of the bank of tubes and each being bifurcated to provide two parallel branches disposed perpendicularly to the axis of the tube rows and situated in the same vertical plane; vertically spaced pairs of subheaders fixed perpendicularly on the branches of each bifurcate with the subheaders of each pair disposed in horizontally spaced relation at the same height on the one and the other branch, the distance between vertically spaced pairs of subheaders being substantially equal to double the distance between two horizontal tube rows to leave clear the ends of one tube row out of two and the inlet and outlet headers being relatively arranged so as to leave clear the ends of each tube row at opposite ends; bent connections between the subheaders and the tubes of the rows they supply, said tube rows being situated below the related subheaders at the inlet end and above the related sub-headers at the opposite end, said connections being shifted in a vertical direction when passing from a sub-header mounted on one of the branches of the bifurcate to the similar sub-header mounted on the same level on the other branch of the same bifurcate so as to be clear of the odd numbered rows of tubes at one end of the exchanger and of the even numbered rows of tubes at the other end of the exchanger.

3,101,931
PORTABLE BATCH CONCRETE PLANT
Ralph E. Setter, Wichita, Kans., assignor to Universal Pulleys Co., Inc., Wichita, Kans., a corporation of Kansas
Filed Apr. 3, 1961, Ser. No. 100,042
6 Claims. (Cl. 259—154)

1. A portable batch concrete plant comprising, in combination, elongated and generally rectangular frame means mounted for movement on wheel means, four feet

telescopically and adjustably mounted at the corners of said frame means, hitching means secured to an end portion of said frame means for connecting said plant to a pulling vehicle, four upright frame members secured in spaced relation to said one end portion of said frame means, a first hopper secured to and positioned between said upright frame members, said hopper being open at the top and tapered to a narrow neck portion at the bottom thereof, a removable plate extending from said top to said neck portion and separating said hopper into two compartments of different sizes, separate gate means in said neck portion of said hopper for each of said compartments to permit passage of material therethrough, a vertically disposed conveyor housing secured to one side of said hopper and to said frame means, said housing having a lower boot portion positioned to receive material from said hopper and an upper chute portion, the bottom of said boot portion being hingedly mounted to permit emptying of said housing, conveyor means in said housing including two conveyor shafts mounted for rotation in the sides of said conveyor housing, one of said shafts being mounted in the lower end portion of said housing with one end thereof extending through said housing and the other of said shafts being mounted in the upper end portion of said housing, sprockets secured to said shafts to turn therewith, endless chain means received by said sprockets to turn therewith, a plurality of buckets carried by said chain means, another sprocket secured to said one end of said shafts, an engine secured to said frame means, a jack shaft rotatably mounted on said frame means, a sprocket mounted on said jack shaft, chain means connecting said sprocket on said jack shaft with said last-named sprocket on said one of said shafts, a pulley on said jack shaft, belt means connecting said pulley with the drive shaft of said motor so that upon operation of said engine said jack shaft will be rotated to turn said one of said shafts to drive said conveyor means, spaced, upwardly extending supports carried by said other end portion of said frame means between the sides thereof, a generally V-shaped member pivotally mounted in an intermediate portion on said supports and positioned therebetween, the end portions of the arms of said V-shaped member being generally parallel, a second hopper positioned between and pivotally secured to said end portions of said arms of said V-shaped member on one side of the pivotal mounting of said V-shaped member on said supports, said second hopper being shaped in the lower portion thereof to form an outlet chute, a pivotally mounted gate mounted and operable to close said chute of said second hopper, a gate locking pin carried by said second conveyor and positionable in said chute to maintain said gate in the closed position, two leg members secured to said other end portion of said frame means, a platform pivotally mounted in one side portion on said leg members, two pivotally mounted legs secured to the other side portion of said platform and engageable with the ground in operation, a weight responsive cylinder having one end thereof connected to the other end portion of said V-shaped member and to the other side of the pivotal mounting of said V-shaped member on said supports, a flexible wire connecting the other end portion of said cylinder to said frame means, a weight indicating gauge with said cylinder to indicate the weight of materials in said second hopper, cooperating lock out means with said supports and said V-shaped member to relieve said cylinder of the weight of said second hopper during road movement of said plant, a water tank carried by said frame means and mounted with the bottom of said tank above the lower end of said outlet chute, a water conduit connected in one end to an outlet in said bottom of said tank and secured to the bottom surface of said chute of said second conveyor with the other end of said conduit at the end of said chute, said plant being constructed and adapted so that in operation sand and gravel can be placed in said compartments of said first hopper and discharged therefrom in controlled quantities through said gate means in said neck portion thereof and lifted by said conveyor means and delivered through said chute portion of said conveyor housing into said second hopper with said cylinder and gauge indicating the weight of material delivered, and cement can be placed in said second hopper by a worker on said platform until the desired amount of materials are in said second hopper whereupon said gate in said chute of said second hopper can be opened to deliver said sand, gravel and cement to a concrete mixer and water from said tank can be supplied through said conduit to said mixer.



3,101,932
GRADING MACHINE HAVING ROTARY CUTTING DRUMS

Donald E. Wright, Manhattan Beach, Calif., assignor to Western Gear Corporation, Lynwood, Calif., a corporation of California

Filed Jan. 16, 1962, Ser. No. 166,533
6 Claims. (Cl. 262—19)



1. A grading machine comprising:

a vehicle,

a normally horizontal, rotary, cylindrical cutting drum at the front end of said vehicle having its central axis in a plane approximately normal to a longitudinal axis of the vehicle,

a supporting frame on said vehicle including a pair of supporting members straddling the ends of said drum and means supporting the ends of said drum on said supporting members for rotation of the drum on its central axis,

a pair of rotary, conical cutting drums at the ends of said cylindrical drum, respectively, outboard of said supporting members, the large ends of said conical drums being located proximate to said supporting members and the central axes of said conical drums sloping downwardly as the axes approach the small, outer ends of said conical drums,

means rotatably supporting said conical drums on said supporting members for rotation of said conical drums on their central axes, the cutting radii of said drums being approximately tangent along substantially the entire length of each drum to a plane passing below the drums normal to said first plane and the point of tangency of the cutting radius of the large end of each conical drum with said latter plane being proximate to the point of tangency of the cutting radius of the adjacent end of said cylindrical drum with said latter plane, and

means including a rotary power transmission mechanism extending between the large end of each conical drum and the adjacent end of the cylindrical drum for driving said drums in rotation.

3,101,933
CUTTER BIT AND SOCKET CONSTRUCTION

Claude B. Krekeler, Cincinnati, Ohio, assignor to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio

Filed Oct. 14, 1957, Ser. No. 690,112
18 Claims. (Cl. 262—33)



1. In combination a double-ended cutter bit which is substantially rhomboidal in elevation and is characterized by center, gauge-determining ribs and body portions extending beyond said ribs of sufficient length to be engaged in a socket member to prevent tilting of the bit, and a socket member having a perforation therein to receive a body portion of said cutter bit, one wall of said perforation providing an elongated surface for contacting the rear edge of said cutter bit to sustain the thrust of cutting, said socket member having upper abutments for engaging said ribs to establish gauge and ears adapted to lie above said ribs to prevent endwise withdrawal of said bit when said bit is positioned with its rear edge against said abutment face, the perforation in said socket member being configured to permit forward tilting of said bit to the extent of disengaging said ribs from said ears, and means for retaining said bit with its back edge against said abutment surface.

14. In combination, a cutter bit adapted to be engaged directly in a socket member, said cutter bit being substantially rhomboidal in side elevation, characterized by substantially parallel front and rear faces and by side faces, said bit having an elongated body with portions extending both above and below the bit midsection for a sufficient distance that when substantially half of the length of said bit is engaged in a perforation in a socket member conforming at least in part to the side faces thereof, said bit will be held against lateral tilting, said bit having projecting ribs at substantially its midsection of a shape to serve as gauge-determining abutments, and a socket member comprising a body with a perforation therethrough, said perforation having fixed front, rear, and side walls, said rear wall forming an abutment against which the back edge of said bit may rest to sustain the rearward thrusts of cutting, said socket member having abutments adjacent said perforation on which said ribs may rest to determine the projection of said bit from said socket member, and ears overlying the rear ends of said ribs when said bit is positioned with its rear edge against said rear wall to prevent endwise withdrawal of said bit from said perforation, and resilient means permitting disengagement of said ears and said ribs to allow endwise withdrawal of said bit from said perforation.

3,101,934
RESILIENTLY MOUNTED CUTTING TOOL

William N. Poundstone, Morgantown, W. Va., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 31, 1959, Ser. No. 837,088
3 Claims. (Cl. 262—33)

1. In combination a tool holder and a cutting tool,

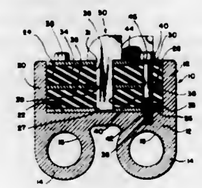
(*a*) said tool holder having a body portion,

(*b*) a recessed opening in said body portion with a bottom wall,

(*c*) deformable clamping material disposed within said recessed opening,

(*d*) said cutting tool having a shank portion and a cutting portion,

(*e*) a tool shank receiving passage formed in said deformable clamping material,



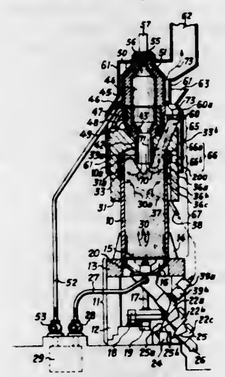
(*f*) said cutting tool shank portion positioned in said passage in spaced relation to said body portion bottom wall,

(*g*) means to retain said deformable clamping material within said recess and to bias said material against said bottom wall whereby said material deforms to abut said cutting tool shank portion and secure said cutting tool within said passage and in spaced relation to said bottom wall in a manner that said tool is insulated from said holder body portion when said tool is secured within said holder.

3,101,935
METHOD AND KILN FOR BURNING CEMENT, LIME, DOLOMITE AND THE LIKE

Erich Zeltner, Zurich, Switzerland, assignor to L. von Roll A.G., Zurich, Switzerland, a corporation of Switzerland

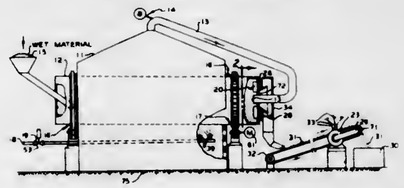
Filed Nov. 28, 1960, Ser. No. 72,092
Claims priority, application Switzerland Dec. 3, 1959
21 Claims. (Cl. 263—29)



1. A method of heat treating a charge such as cement, lime, dolomite and the like, comprising the steps of mixing a quantity of air with a fuel and burning the same to complete combustion to produce hot gases, directing said hot gases with substantially symmetrical infeed into contact with a charge to be heat treated in a heating section of a kiln, distributing said hot gases into substantially at least two hot gas streams, each of which is operable throughout approximately one-half of the cross-section of said kiln to thus uniformly penetrate and heat treat the charge located therein, bypassing a first portion of said hot gases into a duct which does not contain said charge while the remaining major portion of said hot gases freely circulates through said charge for heat treating

thereof, feeding a supply of cooling air through a cooling section of said kiln to contact said charge for heat transfer therewith and toward said hot gases circulating through said charge, then bypassing said cooling air into said duct which does not contain said charge adjacent the upper region of said cooling section at least prior to intimate contact of said cooling air with said hot gases to prevent heat transfer between said cooling air and said hot gases to thereby prevent undesired reduction of the temperature of said hot gases in contact with said charge, said bypassed cooling air and said first portion of said hot gases freely mixing within said duct, then commingling said bypassed cooling air and said first and remaining hot gas portions to produce a fluid mixture of hot gases and air, then causing said fluid mixture to circulate through another portion of a charge in a preheating section of said kiln to raise the temperature of the same in preparedness for a similar heat treating operation.

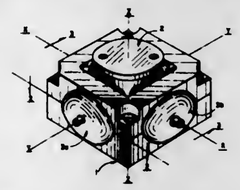
3,101,936
ROTARY DRYER OPERATION UNDER EMERGENCY CONDITIONS
Bruno F. Loewen, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 8, 1960, Ser. No. 47,976
5 Claims. (Cl. 263—34)



4. In an apparatus for drying moist, granular material having a rotatable, horizontally disposed, tubular shell, and heat resistant walls partially enclosing said tubular shell, means for supplying heat to said tubular shell, means for introducing moist granular material into the inlet end thereof, the improvement comprising a reversible motor operatively connected with said shell for rotating same, means for conveying dried material from the outlet end of said shell, discharge means extending from within said shell through the outlet end thereof to said means for conveying, the end of said discharge means in said shell having a dried material inlet opening only facing the normal direction of rotation of said shell for inlet of dried material into said discharge means, means connected with said conveying means and said reversible motor for reversing said motor in response to failure of said conveying means thereby reversing rotation of said tubular shell and terminating entry of dried material into said opening of said discharge means.

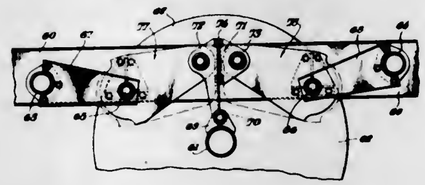
3,101,937
COMBINATION SPRING-PISTON VIBRATION ISOLATOR
William M. Stearns, La Mirada, Calif., assignor to North American Aviation, Inc.
Filed Oct. 25, 1960, Ser. No. 64,882
11 Claims. (Cl. 267—1)

3. A vibration isolator for absorbing vibration between two relatively moving elements comprising load means for mounting a load; a base member encompassing said load means; first, second, third, and fourth resiliently deformable supports, each support being positioned between and intercoupling with said load means and said base member, said first and third supports being oppositely disposed relative to each other and mutually spaced along a first line, said second and fourth supports being adjacent both said first and third supports and being similarly oppositely disposed relative to each other along a second line normal to said first line, each of said supports having a cavity; said load means having first and second mutually independent orificed passages, said first passage interconnecting between and communicating with the cavities of said first and third flexible supports, and said second passage similarly interconnecting between and communicating with the



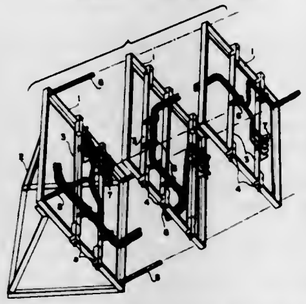
cavities of said second and fourth supports, all said cavities and passages being filled with a relatively incompressible fluid, whereby six degree freedom of motion of the load means along and about three mutually orthogonal axes relative to the base member means is spring-restrained and allowable translational motion of said load means along a first and second axis of said three axes is further subject to fluid damping.

3,101,938
VEHICLE SUSPENSIONS
Archie John Hirst, Leicester, England, assignor to Metalastik Limited, Leicester, England, a British company
Filed Mar. 11, 1960, Ser. No. 14,418
Claims priority, application Great Britain Mar. 17, 1959
6 Claims. (Cl. 267—25)



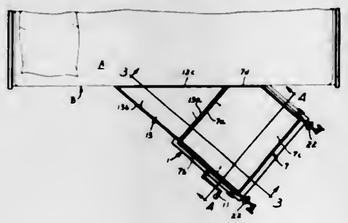
1. A vehicle axle suspension having a maximum stiffness under a designed full bump load condition and a minimum stiffness under a designed tare load condition, the suspension comprising, in combination, a main leaf spring system and an auxiliary spring system, the main leaf spring system having a substantially constant stiffness throughout the deflection range of the axle which substantially constant stiffness is greater than said minimum stiffness, the main leaf spring system supporting the axle casing from a frame of the vehicle, and the auxiliary spring system likewise supporting the axle casing from said frame but having a variable stiffness throughout the deflection range of the axle which, under said tare load condition, is negative so as to reduce the overall stiffness of the suspension to said minimum value, the auxiliary spring system comprising a pair of links extending one on each side of the axle casing generally fore-and-aft of the vehicle, a pivot member at the inner end of each link connecting the link to the axle casing, and a pivot member at the outer end of each link connecting the link to said frame, one at least of said pivot members associated with each link being of rubber and providing, up to a predetermined loading condition greater than tare load, a torsional reaction acting to load the main leaf spring system, said links being disposed horizontally in line under said tare load condition and each being of a length such that, under said tare load condition, when they are horizontally in line, each link is held in lengthwise compression between the axle casing and said frame, whereby the rubber pivot members are compressed lengthwise of the links, and at said full bump load condition the links are in tension, vertical loads on the axle casing above said predetermined load being resisted by the rubber pivot members acting in torsion and by compression thereof lengthwise of the links.

3,101,939
MULTIPLE HARNESS RACK
Alfred G. Richter, Pacoima, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 26, 1960, Ser. No. 31,927
2 Claims. (Cl. 269—40)



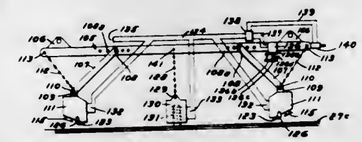
1. An apparatus for fabrication of electrical harness comprising a plurality of quadrilateral frames arranged one above the other, means for adjusting the spacing between said frames, cross members mounted on each frame and attached to opposite sides of said frame, means for adjusting the position of said members relative to said frame and to each other, harness retaining means adjustably positioned along each of said cross members for resiliently holding the main trunk and branches of said harness during the fabrication of said harness, whereby harnesses of various configurations may be readily fabricated on said frames.

3,101,940
PATIENT EXAMINING TABLE
Franklin C. Anderson, 557 Ridge Road, Owatonna, Minn.
Filed Aug. 3, 1961, Ser. No. 129,025
3 Claims. (Cl. 269—322)



1. In a patient examining table, a readily mobile frame structure, a generally rectangular primary table top element mounted on said frame structure for limited raising and lowering movements with respect thereto, a pair of laterally spaced cooperating foot-engaging stirrups carried by said primary top element and projecting forwardly therefrom, a secondary table top element hingedly secured to the rear end portion of said primary top element for swinging movements from a vertically disposed inoperative position at one side of said frame structure to a horizontally disposed operative position wherein it lies in the same plane as and forms an extension of said primary top element, said secondary top element being shaped generally to define a right angle triangle, the base forming side edge of said triangular secondary top element being in substantial engagement with the rear edge of said primary top element, the altitude forming edge portion of said triangular secondary top element being in alignment with the corresponding side of said primary top element, and means for locking said top sections to a bed with the hypotenuse forming edge portion of the triangular secondary top element in abutting relationship with the mattress of said bed, said primary top element being formed at one rear corner to provide an angular side portion which forms an extension of the hypotenuse forming side of said secondary top section.

3,101,941
SHEET MATERIAL SEPARATOR AND HANDLING DEVICE
Adolf C. Reincke, 23335 Clairwood, St. Clair Shores, Mich.
Filed May 31, 1960, Ser. No. 32,669
13 Claims. (Cl. 271—27)

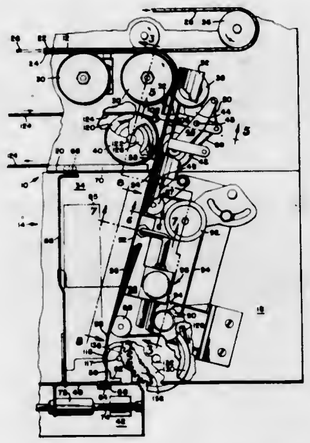


1. A sheet material separating and handling apparatus of the class described, comprising: a supporting means; attaching means for securing said supporting means to a lifting means; a pair of laterally spaced apart arms carried by said supporting means and adapted for movement relative to said supporting means; a gripping means freely pivotally mounted on each of said arms for releasably gripping an opposite pair of edges on the top surface of a flexible sheet of material on a stack of sheet material, whereby when the lifting means lifts said supporting means, said gripping means will pivot relative to said supporting means and said opposite pair of edges will be peeled upwardly to break the adhesion effect between said sheet and the next adjacent sheet; one of said arms being pivotally mounted on said supporting means inwardly from one end thereof, and the other of said arms being pivotally mounted on said supporting means inwardly from the other end thereof; means for limiting the pivotal movements of said arms relative to said supporting means; and, a weight suspended from the medial point of said supporting means for engaging the sheet of material.

3,101,942
PRESSURE VACUUM STACKER
Kenneth F. Zyber, Plymouth, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 29, 1961, Ser. No. 141,839
3 Claims. (Cl. 271—68)

1. In a sheet transporting apparatus in which sheets are fed singly and edgewise along a path of travel, a sheet stacking device comprising an upright wall to form an extension of the path of sheet travel and in part one side of a sheet stacking bin, a second upright wall forming the end of the bin, a movable back-up plate forming the other side of the bin, a hollow head having a side wall member projecting broadside within an opening in said first-mentioned wall and elongated in the direction of sheet travel, said head side wall member having a plurality of air ports, an endless belt member arranged to

travel broadside within said opening over said ports in a direction to move a sheet toward said end wall and having a plurality of ports to establish communication between said head and a sheet, the ports in one of said members being elongated in the direction of sheet travel to overlap adjacent ones of the ports in the other of said members, a valve element in communication with said



head member, said valve element normally in a position connecting said head member to a source of pressurized air and movable to another position to disconnect said head from said source of pressurized air and connect the head to a vacuum source, and a control element operatively connected to effect movement of said valve element to said another position during the travel of the sheet past a point anterior to the bin.

3,101,943
AMUSEMENT RIDE
Norman Bartlett, North Miami Beach, Fla., assignor of one-half to Marjorie Bartlett, North Miami Beach, Fla.
Filed Nov. 1, 1960, Ser. No. 66,644
9 Claims. (Cl. 272—36)



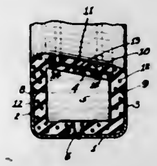
1. In an amusement ride, a support and a passenger carrier adapted to raise and lower relative to said support, means for raising said passenger carrier, and hydraulic force means for controlling lowering movement of said carrier, said hydraulic force means comprising a cylinder and a piston connected for movement toward one end of said cylinder upon raising movement of said carrier and toward the other end upon lowering movement of said carrier, a liquid reservoir, a first conduit therefrom leading to said one end of said cylinder, and a second conduit therefrom leading to said other end of said cylinder, said first conduit having a pair of connections with the interior of said reservoir, one of said connections having a check valve providing free communication into said conduit from said reservoir but preventing retrograde flow, said other connection having a pressure responsive check valve preventing flow from said reservoir to said conduit and permitting flow from said conduit to said reservoir only under a predetermined differential pressure of the order of several atmospheres.

3,101,944
EXERCISE APPARATUS
John Cencig, 706 S. Claremont Ave., Chicago, Ill.
Filed Mar. 2, 1961, Ser. No. 92,888
8 Claims. (Cl. 272—79)



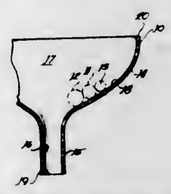
8. Exercise apparatus comprising: means providing a substantially horizontal first slide surface; and a slide member having a second slide surface for frictional movable engagement with said first slide surface, said slide surfaces having preselected coefficients of friction permitting movement therebetween by a person grasping said member while kneeling on said first surface and moving said member selectively toward and away from himself, said movement requiring a substantial force whereby the person substantially exercises a large number of muscles including back, chest, stomach, shoulder and arm muscles.

3,101,945
BALL WHEEL WITH REINFORCED RESILIENT INSERT
Stephen C. Peplin, Lakewood, Ohio, assignor to Lakewood Manufacturing Co., Westlake, Ohio, a corporation of Ohio
Filed Mar. 25, 1959, Ser. No. 801,920
2 Claims. (Cl. 273—49)



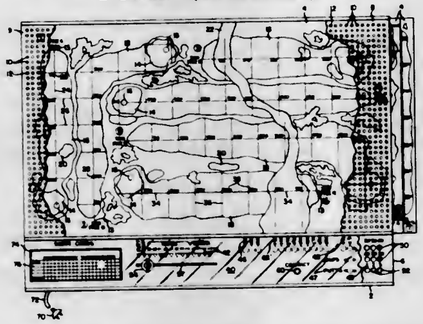
2. In a ball wheel forming an operative part of a bowling ball elevating and return mechanism, a channeled annulus opening inwardly of the annulus and a pneumatic tube secured in the channel opening to provide a continuous annular exposed traction surface for engagement with a bowling ball.

3,101,946
MOVING SURFACE BALL GAME
George H. Ebert, R.R. 2, Lemont, Ill.
Filed Mar. 12, 1962, Ser. No. 178,907
4 Claims. (Cl. 273—113)



1. An amusement device comprising an open-topped funnel-shaped holder having a bowl-shaped upper portion and a tubular lower portion, said lower potrion comprising a handle for said holder and having a cylindrical passage extending axially therethrough and communicating at its upper end with the interior of said bowl-shapped upper portion, said handle being open at its lower end, and a plurality of balls disposed within said holder, at least one of said balls having a diameter smaller than the diameter of said passage and being capable of passing completely therethrough.

3,101,947
GAME APPARATUS WITH ELECTRICALLY OPERATED PLAY SELECTING MEANS
William H. Dzaris, 16 Linda St., South Hadley Falls, Mass.
Filed Oct. 31, 1960, Ser. No. 66,090
1 Claim. (Cl. 273—134)



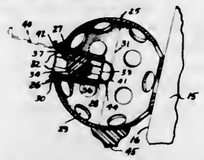
A game apparatus comprising, a transparent playing surface carrying rows of spaced and aligned playing-piece receiving loci therethrough disposed in evenly spaced relationship throughout the length and width thereof, a plurality of inserts bearing indicia representing various distances and bearing delineations of different playing areas, said inserts being selectively disposed in seriatim beneath and in registry with the playing piece receiving loci in said playing surface, a plurality of playing pieces being movable over said playing surface and disposable in the playing-piece receiving loci according to a determination of plays to indicate movements of the respective players, said determination of plays being controlled by an electrically operable control panel containing data delineated thereon pertaining to various plays and penalties and distances, primary and secondary electrically controlled means for effecting a selection of the data on said control panel for indicating particular plays and penalties and distances for the players along said playing surface, said control panel overlying primary and secondary electrical circuits having contacts and indicating means bearing a relationship to the data delineated on said control panel, and said control panel being operable in conjunction with a mechanical system comprising a motor and a plurality of meshed gears driven by said motor, each of said gears carrying contact means adaptable to contact portions of said electrical circuits to complete said circuits wherefore a signal is emitted at said control panel.

3,101,948
GOLF SHOT INDICATING DEVICE FOR GOLF SHOT PRACTICE BALL
James W. Campbell, 151 Lincoln Ave., Rockville Centre, N.Y.
Filed May 19, 1961, Ser. No. 111,205
8 Claims. (Cl. 273—183)

1. In combination with a golf ball, an indicating device disposed within said ball, said device including:

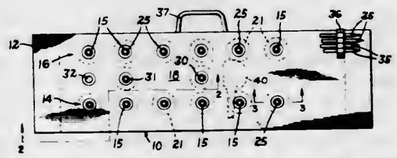
(*a*) a displaceable mass;

(*b*) guide means frictionally retaining said mass, said mass adapted to be axially and transversely displaced relative to a reference position by the impact of a golf club upon said ball, said mass being initially disposed by said guide means diametrically remote from an intended point of impact, thence displaced towards the actual point of impact; and



(*c*) means adapted to indicate said axial and transverse displacement relative to said reference position, said axial displacement being a function of the force of the impact, said transverse displacement being a function of the angular displacement of the golf club at the time of impact relative to the intended point of impact.

3,101,949
GOLF SWING ANALYZER
Thomas F. Williams, Dayton, Ohio, assignor to William Mullins, Dayton, Ohio
Filed Sept. 8, 1959, Ser. No. 838,637
2 Claims. (Cl. 273—186)

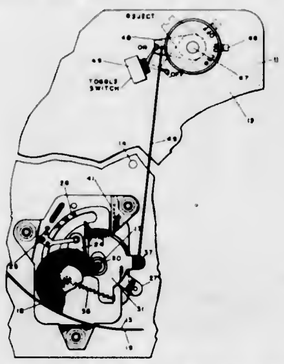


1. A golf swing analyzer for causing recognizable marks to be made on the face of a golf club to assist in determining the characteristics of a golf swing, comprising an elongated base, a plurality of markers arranged in a single inside row longitudinally on said base, additional said markers arranged in another single longitudinal outside row on said base in spaced relation to said inside row defining a swing path therebetween, at least one additional said marker on said base positioned between said inside and outside rows in said path, each of said markers consisting of a short section of elastomeric tubing extending upwardly from said base with a length thereabove proportioned to contact the face of a golf club swung into contact therewith, the markers constituting said inside row each being provided with a removable coated outer surface of a first characteristic color for causing a recognizable mark of said first color to be made on the face of a club swung into contact therewith, the markers constituting said second row each being provided with a removable coated outer surface of a second characteristic color for causing said second color to be made on the face of a club upon contact therewith, and said center marker being provided with a removable coating of a third characteristic color for causing a still different recognizable mark to be made on the face of a club.

3,101,950
FRICTION DRIVE RELEASE FOR PHONOGRAPH TURNTABLES
Emmor V. Schneider, Alliance, Ohio, assignor to The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, a corporation of Delaware
Filed Nov. 4, 1960, Ser. No. 67,316
14 Claims. (Cl. 274—9)

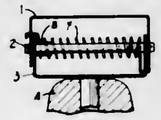
1. A friction drive mechanism, comprising, in combination, a frame, a rotatable drive shaft, a driven wheel

adapted to be driven from said drive shaft, means carrying said drive shaft and said driven wheel on said frame, a drive engagement member acting between said drive shaft and driven wheel to effect drive therebetween, means providing a movable connection between said drive engagement member and said frame in a first path, said first path having a drive portion and a latching portion generally at different angles with an off position of the drive engagement member at one end of the drive portion and an on position at one end of the latching portion, latch means acting between said drive engagement



member and said frame at said latching portion, movement of said drive engagement member from said off to said on position first causing movement on said path drive portion to establish drive engagement from said drive shaft to said idler wheel and second moving on said path latching portion to latch said latch means to hold said drive engaged, and movement of said drive engagement member from said on to said off position first moving on said path latching portion to unlatch said latch means and second moving on said path drive portion to release the drive from said drive shaft to said driven wheel.

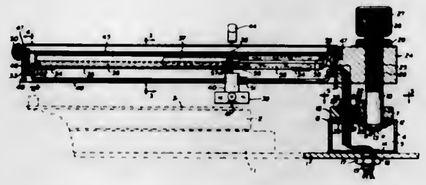
3,101,951
PHONOGRAPH ARMS FOR RECORDING APPARATUS
Marcel Jules Hélène Staar, 4 Ave. Sylviane, Rhode-Saint-Genese, Belgium
Filed Aug. 28, 1961, Ser. No. 134,439
Claims priority, application Belgium Aug. 29, 1960
3 Claims. (Cl. 274—23)



1. In a gramophone, a device for the vertical pivoting of a phonograph arm, the said device comprising a pivoting axle for the arm, a torsion spring wound round the said axle and a sleeve made of material having a low coefficient of fraction and interposed between the torsion spring and the pivoting axle.

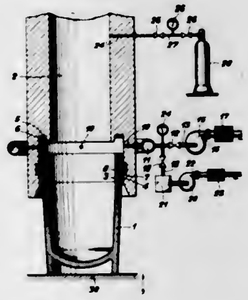
3,101,952
TONE-ARM FOR A PLAY-BACK SOUND REPRODUCER
James E. Godfrey, 150 Lincoln Ave., New Rochelle, N.Y., and Eugene Lesserson, 7 Fernwood St., Wethersfield, Conn.
Filed Feb. 2, 1962, Ser. No. 170,762
3 Claims. (Cl. 274—23)

1. In a tone-arm for a play-back sound reproducer, a pick-up tone-arm having a pick-up stylus adapted to be supported above a record carried by a turn-table, said tone-arm comprising a reservoir supported by carrier means,
said reservoir receiving a liquid,
at least one float disposed in said reservoir and sus-



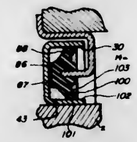
pended in said liquid for substantially radial movement towards the center of said turn-table,
a carriage supported by said float for free movement with said float,
said stylus being carried by said carriage, and
means for selectively moving said stylus between a lowered operative position and a raised inoperative position.

3,101,953
DOUBLE SEAL INCLUDING MEANS FOR INDICATING LEAKS
Ernst Bosshard, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland
Filed Jan. 30, 1961, Ser. No. 85,867
Claims priority, application Switzerland Feb. 4, 1960
3 Claims. (Cl. 277—2)



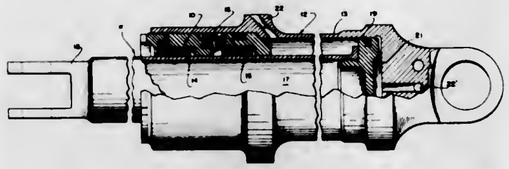
1. In a sealing device for sealing a joint of two telescoped elements movable relatively to each other and separating spaces containing fluids under different pressures, two spaced sealing means defining a chamber between the two elements, one of said sealing means being interposed between the space containing fluid under a relatively high pressure and said chamber, the second of said sealing means being interposed between said chamber and the space containing fluid under a relatively low pressure, said first sealing means being mounted in one element and opposed to a surface of the other element whereby the seal may be made tight upon relative movement of the two elements in one direction and may be opened upon relative movement of the two elements in the opposite direction, said second sealing means being connected to one of said elements and in sliding engagement with the other element thereby affording relative movement of the two elements in opposite directions for opening and closing the first sealing means, and a conduit connecting said chamber to the outside of the device for checking the presence of fluid of the relatively high pressure space in said chamber.

3,101,954
SELF ADJUSTING SEAL
Edwin F. Huddle, Elmwood Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed June 15, 1960, Ser. No. 36,366
9 Claims. (Cl. 277—39)



1. A seal for mounting between relatively rotatable members, comprising inner and outer annular sealing elements, each element comprising a radial wall portion and an annular axially directed flange on the wall portion in radial overlapping relation with the flange of the other element and developing a space therebetween, a disc-like sealing ring of flexible material having center and outer peripheral edges and fixedly mounted at one edge only on the flange of one element and extending radially across said space between the flanges as a barrier against the entry of dirt and the like through said space and developing a dirt pocket, and having its other peripheral axial edge in sliding engagement with the flange of the other element in an area axially displaced from said mounting at said one edge.

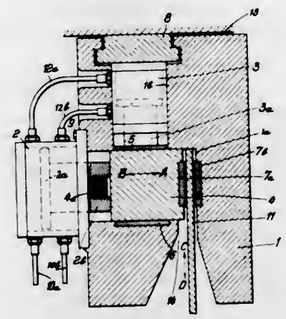
3,101,955
SEAL
Albert M. Olson, Sherman Oaks, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Sept. 28, 1961, Ser. No. 141,342
13 Claims. (Cl. 277—64)



1. A dynamic seal for a high temperature, high pressure cylinder having a movable tubular piston rod and an annular space therebetween adapted to receive a fluid or gas under pressure, comprising: an annular seal ring of metallic material in said annular space and having a radial annular flange adapted to be fixed to said cylinder and a relatively thin annular lip having a close fit with the exterior of the piston rod; a split ring around said lip; a pair of opposed load translating rings, one fore and one aft of said split ring and having conical faces engageable therewith for translating opposed axial loads placed thereagainst into a radial load against said split ring; a spring member juxtaposed to each of said translating rings for placing opposed axial loads thereto; and means for compressing said spring members so as to place opposed axial loads on said load translating means.

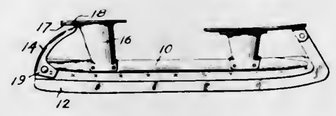
3,101,956
CLAMPING DEVICE FOR CLAMPING A PILE BODY TO A VIBRATORY DEVICE
Ludwig Müller, Heinrich-Heine-Str. 41, Marburg (Lahn), Germany
Filed Jan. 19, 1961, Ser. No. 83,736
Claims priority, application Germany Jan. 26, 1960
7 Claims. (Cl. 279—4)

1. A clamping device for clamping a vibratory device to a pile body to be driven and extracted respectively, said clamping device comprising a support frame, a pair of clamping jaws supported on the frame, one of said jaws being fixedly secured and the other being movable toward and away from said fixed clamping jaw, pressure means coacting with said movable jaw for clamping a pile body between said two jaws and releasing it therefrom, and coupling means supported on said frame, said cou-



pling means including two members movable in opposite directions in a plane transverse of the direction of movement of said movable jaw, one of said members being movable into pressure engagement with the movable jaw for locking the same in clamping position and the other being arranged to coact with a vibratory device for coupling the clamping device to the vibratory device in vibration transmitting engagement.

3,101,957
SKATE GUARD
Gerald M. Snyder, 5870 McLynn Ave., Montreal, Quebec, Canada
Filed Mar. 22, 1961, Ser. No. 97,669
1 Claim. (Cl. 280—11.12)



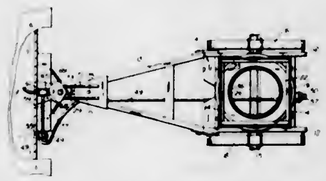
In a tubular ice skate construction comprising an elongated blade disposed on its edge and having fixedly secured thereto and extending substantially the length thereof a tubular support at the upper edge thereof, vertical support means secured to an intermediate portion of said tubular support means, heel-plate means secured to the upper end of said vertical support means and including a rear edge disposed inwardly of the rear terminal end of said blade and tubular support, in combination, a rear blade guard comprising a metal stay overlying the rear terminal end of said blade and including a pair of spaced attaching flanges substantially embracing opposite sides of said tubular support above said blade and fixedly secured thereto, said metal stay curving inwardly from the rear terminal end of said blade beneath said heel-plate means and terminating in a substantially flat plate portion juxtaposed beneath and secured to said heel-plate means and extending rearwardly from the upper end of said vertical support means to which said heel-plate means is secured, said metal stay flaring upwardly and outwardly from said blade and having a substantially U-shaped, horizontal cross-section increased from said blade to said heel-plate means and opening inwardly toward said vertical support means.

3,101,958
CARGO CARRIER
Kenneth J. Gerou, P.O. Box 222, Newberry, Mich.
Filed Nov. 9, 1959, Ser. No. 851,763
6 Claims. (Cl. 280—423)



2. A cargo carrier for use with a wheeled tractor comprising a unitary load carrying platform, a first, forward, wheeled undercarriage, a second, rearward, wheeled undercarriage, fifth wheel structure providing a connection between said platform and said first undercarriage including a pivot means for accommodating pivotal motion of said first undercarriage about a transverse axis relative to said platform, said fifth wheel structure accommodating relative angular motion between the longitudinal center lines of said platform and said first undercarriage, a pivotal connection between said second undercarriage and said platform, said last named pivotal connection accommodating angular movement of said second undercarriage about a transverse axis relative to said platform, said first undercarriage including frame structure comprising longitudinally extending side rails, road engaging wheels suspended at the rearward portion of said side rails, second fifth wheel structure for providing a pivotal connection between the forward portion of said first undercarriage side rail members and a wheeled tractor, said second undercarriage comprising an inner frame structure fixedly secured to said platform, an outer frame structure including side rails disposed on either transverse side of said inner frame structure, the road engaging wheels of said second undercarriage being suspended on said outer frame structure, a pivotal connection between said inner and outer frame structures at a location intermediate the road engaging wheels thereof, and guide means defined in part by said inner frame structure for permtting relative angular motion between said inner and outer frame structures without interference therebetween.

3,101,959
BRAKING ARRANGEMENT FOR A TRAILER DOLLY
Charles Ralph Adams, Ukiah, Calif., assignor to Pierce Trailer & Equipment Company, Portland, Oreg., a corporation of Oregon
Filed May 26, 1961, Ser. No. 112,888
9 Claims. (Cl. 280—432)

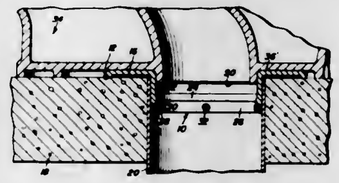


1. Deactivating means for a trailer dolly brake, said brake being at the rotatable connection between a dolly and trailer and being adapted to prevent relative rotation between said trailer dolly and said trailer, said trailer dolly including a drawbar and a coupler for pivotally connecting said drawbar to a leading vehicle, said leading vehicle including a first manual control means for applying and releasing said brake and connecting means operatively connecting said first control means and said brake;

said deactivating means including a second control means effectively interposed between said first control means and said brake for deenergizing said first control means and thereby releasing said brake upon actauting thereof; and

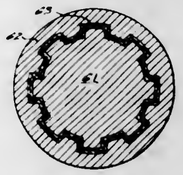
sensing means, including cooperative elements mounted on said drawbar and said vehicle adjacent said coupler, responsive to movement of said drawbar beyond predetermined angular limits relative to said leading vehicle for effecting actuation of said second control means.

3,101,960
CLOSET RING
Ryan R. Danescu, 9645 Brammell, Detroit, Mich.
Filed Dec. 14, 1960, Ser. No. 75,707
1 Claim. (Cl. 285—58)



A seal for securing a commode to a vertical soil pipe having its upper end substantially flush with a floor and having a substantially smooth inner wall, comprising a one-piece closet ring telescoped within the upper end of the soil pipe, the outer surface of said ring being smooth and axially slidable in said pipe with close tolerance, socket head screw members threaded through the lower wall of the closet ring and frictionally gripping the inner wall of the soil pipe, the over-all length of said screw members being no greater than the thickness of that portion of the wall through which they are threaded, said closet ring having an integral radially outwardly extending upper flange peripherally thereabout and a bead on the outer periphery thereof supported on the floor, an annular groove in the lower surface of said flange extending radially inwardly from the bead to said outer surface, a flexible sealing material filling said groove and sealingly engaging said floor, and apertures at peripherally spaced points about the flange for the reception of fastening members utilized to secure the commode to the seal with the commode engaged directly against the flange and the exhaust flange of the commode received within the upper end of the closet ring.

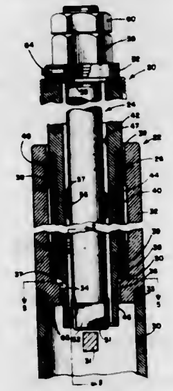
3,101,961
MOLDED BEARINGS HAVING LOW FRICTION MATING SURFACES
Charles S. White, Rte. 3, Box 454-H, Palmdale, Calif.
Original application June 16, 1955, Ser. No. 516,003, now Patent No. 2,885,248, dated May 5, 1959. Divided and this application May 4, 1959, Ser. No. 810,911
7 Claims. (Cl. 287—52)



1. A spline assembly comprising a member having a cylindrical aperture containing lands and grooves forming a spline, a cylindrical member having lands and

grooves on its outer surface with the lands of one member disposed in the grooves of the other member, the grooves and lands being so proportioned as to have a substantial space therebetween and with the lands so related as to prevent relative rotation between the members, and a hard low friction material disposed between said lands within said grooves filling the space therebetween and preventing relative rotary movement between the members.

3,101,962
APPARATUS FOR COUPLING SHAFTS
Erwin J. Nunlist, Rochester, N.Y., assignor to Pfaudler Permutit, Inc., Rochester, N.Y., a corporation of New York
Filed Jan. 16, 1961, Ser. No. 83,081
6 Claims. (Cl. 287—114)



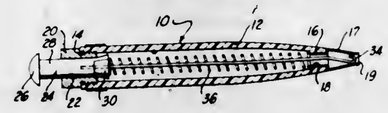
1. A shaft coupling device comprising, in combination, a driven shaft, a driving shaft telescopically fitting into said driven shaft, one of said shafts having a non-circular portion and the other of said shafts having a non-circular opening adapted to receive said non-circular portion, wedge means intermediate said driven and driving shafts adapted for transmitting torque between said shafts, draw bar means engaging substantially opposite ends of said shafts for compressing said wedge means to transmit torque and for maintaining said non-circular portion in said non-circular opening.

3,101,963
KNOTTER HOOK FOR BALERS
Herbert D. Sullivan and Bobby Lynn Bledsoe, Memphis, Tenn., and Charles G. Barfield, West Memphis, Ark., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 17, 1961, Ser. No. 103,543
7 Claims. (Cl. 289—11)



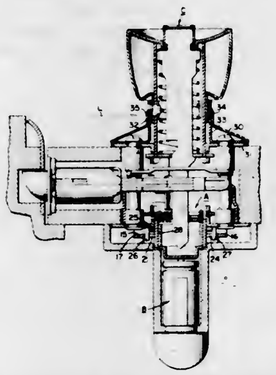
1. A knotter hook for tying a knot in a pair of twine ends comprising a shank, a hook projecting laterally from one end of said shank, said hook having a top surface, a heel portion and a toe portion, a slot formed in said hook, opening in its top surface, and extending laterally of said shank from a position adjacent the outer end of the toe portion to and through said heel portion, said slot being chamfered along its lateral intersection with said top surface, and a jaw mounted within said slot and hinged in the heel portion of said hook to swing down over the top of the toe portion of said hook, said jaw having a chisel edge on its underside adapted to cooperate with the chamfered slot in said hook to prevent unwarranted stripping or pulling out of the twine ends when the knot is stripped from the hook.

3,101,964
FISHHOOK HOLDER
Marshall Reaser, 18739 E. Milton Drive, Glendora, Calif.
Filed Mar. 6, 1961, Ser. No. 93,788
4 Claims. (Cl. 289—17)



1. In a fishhook holder, the combination of: an elongated hollow housing having a large opening at one end thereof and a smaller orifice at the other end; a longitudinal fishhook receiving means extending through said housing including a longitudinal rod terminating at one end thereof in a hook located adjacent the small orifice end of said housing, said hook being smaller than said small orifice and movable therethrough from a retracted position within said housing to an extended position exterior of said small orifice end of said housing, and said rod having a lateral bend therein in the plane of said hook and away from the opening of said hook to position said hook to one side of the axis of said housing when said hook is extended therefrom; an actuating means extending into said housing adjacent the large opening therein and engageable with said longitudinal rod for longitudinally moving said rod between positions wherein said hook is located within said housing and wherein said hook is located exterior of said housing; and a biasing means for urging said actuating means in a direction so as to retract said hook into said hollow housing.

3,101,965
LOCK ASSEMBLY
Vincent Muttart, Downey, Calif., assignor to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Original application July 23, 1957, Ser. No. 673,591, now Patent No. 2,976,072, dated Mar. 21, 1961. Divided and this application Nov. 3, 1960, Ser. No. 70,870
2 Claims. (Cl. 292—357)



2. In a cylindrical lock assembly adapted to be mounted in a hole bored transversely through a door, said as-

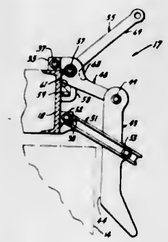
sembly including a base having an escutcheon seat and an escutcheon plate resiliently retained by said seat in alignment over said hole by a snap-on fit of said plate over said seat, quick demounting means for said escutcheon plate comprising a cutout formed in said escutcheon plate providing a keeper shoulder on said escutcheon plate, said shoulder being directed toward said base, an abutment lug on said base, said keeper shoulder lying, in the mounted position of said plate on said seat, in proximate, axially aligned, outwardly spaced relation to said lug whereby a prying tool inserted between said shoulder and lug and operated to shift said shoulder away from said lug, will shift said escutcheon plate outwardly away from said base to demount said plate from said base.

3,101,966
LAMP TUBE HANDLING DEVICE
John H. Thomas and Frank Laurence Gillespie, both of P.O. Box 595, Fremont, Calif.
Filed May 24, 1961, Ser. No. 112,332
3 Claims. (Cl. 294—20)



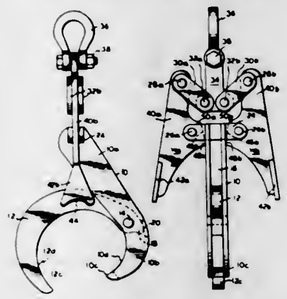
1. A lamp tube handling device comprising, a pair of pivotally attached jaws and resilient lining means carried thereby arranged for pivotal closed movement upon a lamp tube and pivotal opening movement therefrom, an elongated handle secured to one of said jaws, an elongated actuating rod carried by said handle for longitudinal reciprocation, a leverage assembly connecting said rod to the other jaw for pivotal opening and closing of said jaws upon respective reciprocation of said rod to and from said jaws and composed of a bell crank having a mid portion offset from said actuating rod axis and pivotally supported by said handle and a pair of arms, one of said arms being pivotally attached to said rod, and a link pivotally connecting the other arm to said other jaw, said bell crank and link being constructed to move to an over center stopped position upon movement of said jaws to closed position and being irreversible from closed position by opening force applied to the jaws but being reversible upon longitudinal displacement of said rod.

3,101,967
GUIDES FOR CARGO HOISTING EQUIPMENT
David J. Wyrough, Maple Heights, Ohio, assignor to National Castings Company, a corporation of Ohio
Filed June 16, 1960, Ser. No. 36,535
18 Claims. (Cl. 294—67)



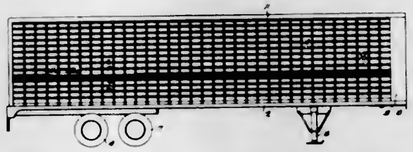
1. A guide device for facilitating the coupling of a cargo-hoisting implement with a load article comprising: support means adapted for attachment of the device to the implement; a vertically elongate guide member for engaging said article; and spaced collateral upper and lower link means supporting said member swingably with respect to the support means, spaced portions of each link means pivotally connected with the support means and the member along separate pivot axes; said member being swingable on said link means from a lateral position to an overhead position in relation to the support means.

3,101,968
GRAPPLES
Kenneth L. Cianchette and John S. Russell, Pittsfield, Maine, assignors to Cianbro Mfg. Corp., Pittsfield, Maine, a corporation of Maine
Filed Sept. 12, 1962, Ser. No. 223,140
8 Claims. (Cl. 294—104)



1. A pipe grab of the character described comprising pivotally connected hook and claw members, said hook member having a substantially straightway extending body portion merging at its lower end into a laterally curved portion terminating in a gripping point, the claw member being substantially sickle-shaped and arranged with its opening downwardly disposed and being pivoted at its one end to the hook member at approximately the junction of its body and curved lower end portion and terminating at its other end in a gripping point and being biased by gravity to a normal position in which its said gripping point is spaced from the gripping point of the hook member a distance less than the diameter of the pipe to be grappled, a hoist-line operatively connected to the upper end of the hook member, a vertically extensible and contractible linkage system interposed between said hoist-line and said hook member, and means responsive to extension of said linkage system for imparting downward stabilizing pressure on a pipe engaged between the hook and claw members at points which are spaced to opposite sides of the operating plane of said members.

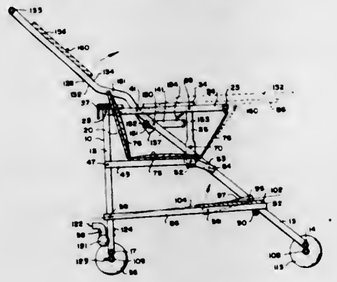
3,101,969
TRUCK TRAILER DECKING MOUNTING MEANS
James E. Fleming, Russellville, Tex., assignor of one-half to Thomas Boyce, Nashville, Tenn.
Filed Dec. 26, 1961, Ser. No. 162,113
5 Claims. (Cl. 296—24)



1. Means for mounting and dismounting decking on the inside faces of the vertical side walls of a truck trailer, comprising, in combination, trough-shaped first members

mounted on the inside surface of each side wall of the trailer and running substantially parallel to the trailer floor, a rectangular decking of slightly lesser width than the inside width of the trailer for mounting therein having parallel longitudinal edges and parallel end edges, and trough engaging members fixed to the under side of said decking along each longitudinal edge thereof and extending outwardly thereof and parallel thereto adapted to engage and disengage said first trough members whereby to suspend said decking above the level of said trailer floor, at least one of said trough engaging members pivotally mounted on the underside of said decking, and means on the underside of said decking operative to pivot the pivotable trough engaging member from a nonengaging position at substantial right angles to said decking underside to an engaging position substantially parallel to said decking underside and extending laterally beyond the edge thereof.

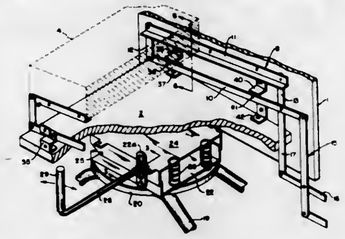
3,101,970
CHAIR UNIT FOR CHILDREN
Israel Karmel, 3945 Puget Drive, Vancouver, British Columbia, Canada
Filed Mar. 27, 1961, Ser. No. 98,582
10 Claims. (Cl. 297—119)



1. A chair unit for children comprising a seat section, legs connected to and supporting said section, wheels carried by the legs upon which the unit rides, a support carrying a tray and swingably mounted on the seat section movable from a horizontal position with the tray near and in front of the seat section to an inclined upright position relative to said seat section to become a handle by means of which the unit may be moved about on said wheels thereby converting the unit into a stroller, means for retaining the tray support in the horizontal position, and locking means for releasably and rigidly locking the support in the inclined upright position relative to the seat section to prevent said support from swinging to the horizontal position when the stroller is being moved by means of the support.

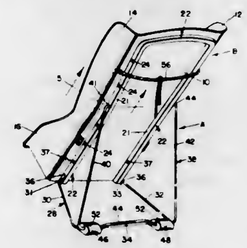
3,101,971
SWIVELED ROCKING CHAIR
Edward L. Hampton, Louisville, Ky., assignor to Middletown Manufacturing Company, Middletown, Ky., a corporation of Kentucky
Filed Aug. 28, 1961, Ser. No. 134,405
3 Claims. (Cl. 297—259)

1. Hardware means for movably mounting a seat member on a chair having a pair of horizontally-spaced vertically-arranged side panel frame and a lower cross brace frame interconnecting the side panel frames and providing a horizontally level plane of reference, comprising: a forwardly-rearwardly extending stationary metal frame bracket; a similarly extending relatively elevated metal seat bracket; means mounting the seat bracket on the frame bracket for limited relative rearward-forward movement; and side bracket means for mounting the stationary frame bracket on the side panel frames of the chair, said means including a vertical metal side bracket not only having spaced upper and lower portions which are adapted to engage and to be secured to said side panel frames, but also having an intermediate portion bent to provide an outwardly displaced seat which extends adjacent to



said stationary frame bracket and which is secured thereto at a predetermined point, said side bracket being operative, when secured to said side panel frame, to engage a horizontal surface of said chair frame at said plane of reference and to hold said predetermined point at a predetermined elevation above said plane of reference.

3,101,972
SUPPORT STANDS
Clayton A. Laughlin, Minneapolis, Minn., assignor to Infanseat Company, Eldora, Iowa, a corporation of Iowa
Continuation of application Ser. No. 43,493, July 18, 1960. This application June 7, 1962, Ser. No. 200,685
12 Claims. (Cl. 297—377)



1. A baby carrier comprising:
a back with lower and upper connector means on the rear thereof providing at the lower part of the back means for pivotal connection to a support and providing at the portion of the back thereabove a plurality of transversely aligned pairs of lateral sockets spaced apart along the length of the back for selective adjustable connection to a support, and
a bottom connected to the back extending forwardly therefrom a substantial distance compared to the length of the back of the carrier,
said baby carrier further comprising a support including:
a base member having means thereon for making tension-taking pivotal connection with the lower connector means on the back of the carrier,
a brace member comprising a U-shaped frame of resilient rod-like material having side arms and a cross piece connecting one end thereof,
means pivotally connecting the cross piece of the U-shaped frame with the base member in tension taking relationship, and
said frame having laterally extending pins formed at the other end of the arms thereof adapted selectively to engage the lateral sockets of the upper connector means on the back of the carrier,

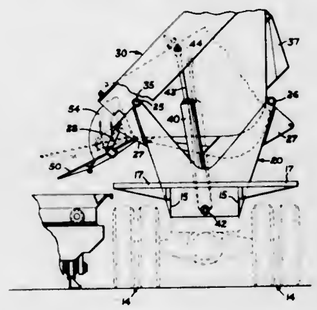
the length of the back of the carrier being as great as the combined lengths of the base and brace.

3,101,973
HEADREST
John S. Toth, 309 Mariellen Ave., Mishawaka, Ind.
Filed Dec. 4, 1961, Ser. No. 156,656
6 Claims. (Cl. 297—391)



1. A headrest comprising an elongated rigid support including a lower portion adapted to be disposed against the forward side of a back rest of a seat and an upper portion forwardly offset relative to said lower portion and adapted to be disposed above the back rest, said upper portion including transversely spaced elements extending longitudinally of the frame, an elongated piece of flexible material, and means connecting the ends of said material piece to said transversely spaced elements to support the piece loosely therebetween to provide a sling extending from the plane of said upper portion toward the plane of said lower portion and adapted to be engaged by the back of the head of the user.

3,101,974
DUMP TRUCK
Haney M. Robertson and James E. Ingle, Tell City, Ind., assignors to Maxon Construction Company, Inc., Dayton, Ohio, a corporation of Ohio
Filed Jan. 9, 1961, Ser. No. 81,563
4 Claims. (Cl. 298—17.6)



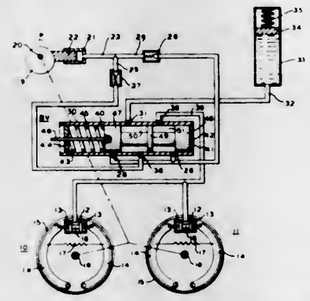
1. A dumping body comprising a rectangular bed adapted for mounting on a chassis with its longer dimension extending front to back of said chassis and its shorter dimension centered on said chassis, a load-carrying dump bucket of generally symmetrical configuration about a vertical plane extending longitudinally through its center and along the longer dimension of said bed, opposed upwardly and divergently extending sides on said bucket extending angularly with respect to said central plane of said bucket, front and rear end walls on said bucket connected to said sides and projecting upwardly above said sides, at least one of said sides terminating in a lip extending essentially the full length thereof and located substantially below the top of said end walls, a gate hinged to said bucket adjacent said lip and extending the full length of said lip and projecting upward therefrom in the load-carrying position of said bucket, means forming an upward extension from the other of said sides to at least the top of said end walls, said sides and said end walls together with said gate and said extension forming means defining a load-carrying enclosure which has a depth along its said central plane of more than one-half the width of said bucket at its greatest width dimension adjacent its top, mounting means for said bucket positioning it on said bed with its said central plane centered with respect to said bed in load-carrying position, pivot means included in said mounting means and attached to said bucket defining a pivot axis extending parallel to and spaced above said lip and located substantially closer to said lip than to said central plane of said bucket, said pivot axis being above the center of gravity of said bucket when said bucket is in its load-carrying position with a load therein, power dumping means acting on said bucket for causing pivotal movement thereof about said pivot axis to cause said lip to move downwardly and inwardly and to cause the center of gravity of the loaded bucket to remain near to said central plane until after the material begins to discharge over said lip, and means for opening said gate during dumping motion of said bucket to carry material discharged over said lip outwardly over said gate beyond the side of said bed.

3,101,975
WHEEL AND HUB CAP
Virgil H. Peoples, Marysville, Ohio, assignor to The O. M. Scott & Sons Company, Marysville, Ohio, a corporation of Ohio
Filed Mar. 30, 1959, Ser. No. 802,948
8 Claims. (Cl. 301—37)



5. For use as a hub closure, a cap of non-metallic resilient material including an annular rim; at least three snap fasteners of composite construction, each comprising a split tubular shell of resilient metal with a core of non-metallic resilient material, disposed in circumferentially equally spaced relationship on the inner side of said cap radially inward of said rim; a reinforcing means of resilient non-metallic material connecting between each pin fastener, the main body of the cap and a portion of said rim immediately adjacent the pin fastener; the tubular shell of each said composite pin fastener comprising a hollow protuberance terminating at one end in an enlargement to provide an external annular shoulder, a base portion integral with said protuberance at its other end and anchored securely in said reinforcing means; said protuberance being longitudinally split into a plurality of portions from said one end to adjacent the joinder of said protuberance with said base portion; and said reinforcing means is an integral part of said non-metallic resilient material and covers said base portion and provides the center core which fills, and engages the interior surface of said protuberance.

3,101,976
HYDRAULIC BRAKE SYSTEMS
John G. Knowles, 992 Huntingdon Pike, Huntingdon Valley, Pa.
Filed Sept. 19, 1960, Ser. No. 56,775
7 Claims. (Cl. 303—49)

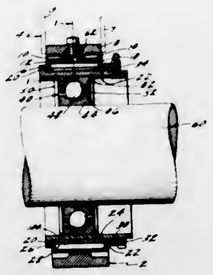


1. Hydraulic brake apparatus for vehicles having wheel brakes and a driving shaft connected to the wheels comprising fluid pressure responsive brake operating members for the wheels, a storage reservoir for brake fluid under pressure, a pump having a driving portion actuated by said shaft, a control valve having a housing, a first fluid connection between said reservoir and said control valve housing, a second fluid connection for the passage of fluid therethrough in either direction between said control valve housing and said brake operating members, a supply fluid connection from said control valve housing to said pump having a non-return valve therein, a delivery fluid connection from said pump to said control valve housing having a non-return valve therein, and a valve member in said housing and forming part of said control valve having portions establishing communication at one position between said second fluid connection and said supply fluid connection and establishing communication between said delivery fluid connection and said first fluid connection for the return of fluid to said reservoir through said first fluid connection, and at another position establishing communication between said first fluid connection and said supply fluid connection and between said delivery fluid connection and said second fluid connection for brake application.

3,101,977
HYDRAULIC TRACK TENSIONING MEANS
John H. Hyler, Peoria, Ill., and Ernst W. Spannhake, Butler, N.J., assignors to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Original application Mar. 7, 1958, Ser. No. 719,838, now Patent No. 2,998,998, dated Sept. 5, 1961. Divided and this application Oct. 25, 1960, Ser. No. 64,926
7 Claims. (Cl. 305—10)

1. A track laying vehicle comprising: wheels; resilient tires on the wheels; at least one flexible band track tightly engaging at least two wheels; fluid pressure operated means to maintain tension in the track; a source of fluid under pressure; a conduit having a connection with the source; a second conduit for the discharge of spent fluid; a third conduit connected with the fluid pressure operated means; a fluid pressure responsive fluid conducting element having passages and an operating position in which the passages connect the first and third conduits and a second operating position in which the passages connect the first and third conduits and a second operating position in which the passages connect the first and third conduits and a second

(3) means connecting said second annular means to the open end of the U-shaped first annular resilient member,



(4) said last named connecting means providing a detachable connection between the second annular means and first annular resilient member,

(5) said annular chamber containing fluid,

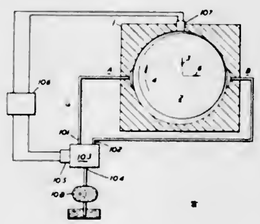
(6) said annular chamber being continuous so that the fluid can flow around the chamber.

3,101,980

HYDRODYNAMIC BEARING ASSEMBLY

Phil Prince Love, Wembley, England, assignor to The Glacier Metal Company Limited, Wembley, England, a company of Great Britain

Filed Sept. 27, 1961, Ser. No. 141,168
Claims priority, application Great Britain Oct. 6, 1960
11 Claims. (Cl. 308—122)



1. A hydrodynamic bearing assembly comprising a journal subject to a main load and supported in a sleeve bearing such that when rotating under load the journal is eccentric in the bearing and the induced hydrodynamic oil wedge supports the load, and controllable means capable of applying to the journal an auxiliary load in a direction having a substantial radial component acting at right angles to the direction of action of the main load.

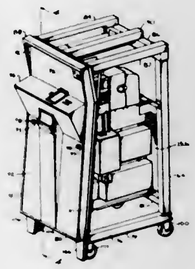
3,101,981

MONEY-HANDLING DEVICES

William J. McCally, St. Louis County, Mo., assignor, by mesne assignments, to National Rejectors, Inc., St. Louis, Mo., a corporation of Missouri

Filed Apr. 3, 1961, Ser. No. 100,297
5 Claims. (Cl. 312—222)

5. An enclosure for a money-handling device which comprises a housing that has an opening in one side thereof, a removable closure for said opening, locking members that are disposed adjacent the opposite sides of said removable closure, latches that are disposed adjacent the opposite sides of said removable closure and are mounted on elongated rods, each of said latches having a generally V-shaped portion which accommodates one of said elongated rods and having an offset portion that projects outwardly from said elongated rod and having a wide portion that projects inwardly from said elongated rod, and brackets which are secured to said removable



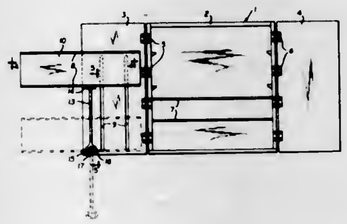
closure and that rotatably support threaded rods and that slidably support blocks with recesses therein, said threaded rods being rotatable relative to said blocks to cause said blocks to slide relative to said brackets, said recesses in said blocks receiving said wide portions of said latches and responding to sliding movement of said blocks relative to said brackets to move said wide portions of said latches and thereby rotate said elongated rods and said latches to move said offset portions of said latches into or out of horizontal registry with said locking members.

3,101,982

CABINET WITH SHIFTABLE SHELVES

Kurt J. Dosmar, 230 W. 79th St., New York 24, N.Y.

Filed Nov. 14, 1958, Ser. No. 773,869
3 Claims. (Cl. 312—223)



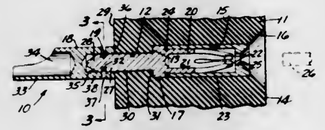
1. A cabinet or the like comprising a top wall, a bottom wall, two oppositely disposed side walls and at least one front door hingedly secured to the front end of one of said side walls, at least one first shelf disposed in and secured to the lower portion of said cabinet, and at least one second shelf non-disengageably secured to the inner face of said door for vertical sliding movement and received in the upper portion of said cabinet in the closed position of said door and movable to its lower position only upon opening said door for at least 180°, means associated with the inner face of and disposed within said door and accessible from the inside of said door, causing the movement of said second shelf from its upper position to a lower position substantially to the level of said first shelf, and means retaining said second shelf in its lower position, thereby disposing both shelves at a height within reach of a normal person, said door having at least two panels spaced apart from each other, the inner panel of said door having at least one vertically disposed groove, a guide member vertically slidable between said panels and within said door, and a connecting member connecting said guide member with said second shelf, and said guide member disposed between the panels of said door having forwardly projecting members sliding in additional grooves of the inner panel of said door, in order to provide a safe guidance for moving said second shelf to the level of said first shelf.

3,101,983

MOUNTED CONNECTOR COMPONENT

Arden D. Van Horssen, Minneapolis, Minn., assignor to Nu-Line Industries, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed Jan. 4, 1962, Ser. No. 164,285
5 Claims. (Cl. 339—59)



1. A removable electrical connector component to be assembled with an apertured insert,

comprising a conductive contact part having a front end with contact means thereon and also having a rear end with an elongate rearwardly extending shank to extend through the aperture of the insert, said shank being transversely grooved at opposite sides thereof, said contact part also having a rearwardly facing shoulder engageable with the insert adjacent the aperture therein,

a conductive retainer part having a rear end with wire terminal means thereon and also having a front end with a peripheral wall defining a shank-receiving socket slidably receiving the grooved shank in tight-fitting relation,

the front end of the retainer part having slots through the wall at opposite sides of the socket in alignment with the grooved sides of the shank, the front end of the retainer part also having a front face engaging the insert adjacent the aperture,

and a generally U-shaped spring wire having generally parallel ends lying in said slots and in the grooved sides of the shank and preventing relative forward and rearward movement between the contact and retainer parts, said wire also having an intermediate portion lying against a peripheral portion of the retainer part,

and said retainer part having a probe-receiving groove extending in a fore-and-aft direction beneath the intermediate portion of said wire to permit a probe to be inserted beneath the wire for removing the wire and thereby permitting separation of the retainer and contact parts from each other and from the insert.

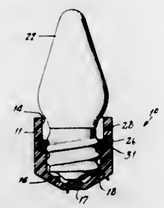
3,101,984

PUSH TOGETHER, SCREW APART CONNECTOR

Gerhard Wieckmann, Long Island City, N.Y., assignor to Gilbert Manufacturing Company, Inc., Long Island City, N.Y., a corporation of New York

Filed Apr. 7, 1959, Ser. No. 804,630
11 Claims. (Cl. 339—69)

10. A connector for detachably joining a co-acting mating threaded member comprising a body portion having an unthreaded cylindrical surface for telescopic assembly with said threaded member, spaced apart supporting surfaces circumferentially carried on said cylindrical surface and substantially at right angles thereto, one of said supporting surfaces being of a greater height than the other, and flexible sealing means carried on said cylindrical surface between said supporting surfaces and protruding therefrom for sealingly clamping the threaded surface of said threaded member when said threaded



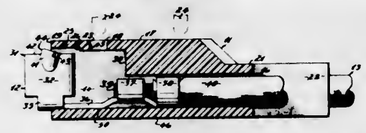
member is operatively telescopically assembled relative to said connector, said supporting surfaces limiting longitudinal deformation of said flexible means in the longitudinal direction toward said larger surface more than in the opposite direction so that in response to longitudinal movement in the opposite direction said flexible means deforms and securely clamps the thread of said threaded member whereby said threaded member can be readily removed in the opposite direction only by a conventional unthreading operation.

3,101,985

ELECTRICAL CONNECTOR

Sigmund J. Skony, Cincinnati, Ohio, assignor to Van Products, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Feb. 23, 1961, Ser. No. 91,182
6 Claims. (Cl. 339—192)



4. An electrical connector device comprising, an integral connector block having opposed top and bottom walls and forward and rearward ends, said block having at least one longitudinal passageway extending therethrough from said forward end to said rearward end and a transverse hole in said top wall communicating with said passageway, a shoulder in said passageway located rearwardly of said transverse hole, a connector clip disposed in said passageway, said connector clip comprising a conductive socket abutting said shoulder and having an axis aligned with the center of each said transverse hole, said socket being adapted to receive a terminal pin projecting through said hole, and a projection on one edge of said socket projecting into said hole to secure said clip in said passageway.

3,101,986

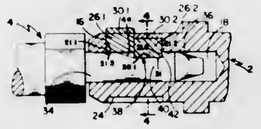
SELF-LOCKING PLUG AND JACK TYPE ELECTRICAL CONNECTOR

Frank Lyman, Jr., Cambridge, Mass., assignor to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed June 10, 1960, Ser. No. 35,170
3 Claims. (Cl. 339—255)

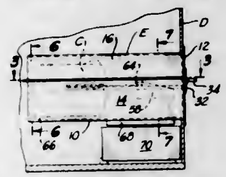
1. A self-locking plug and jack assembly comprising: a jack unit having a sleeve at an end, said sleeve having a

portion of smaller outer diameter spaced from the open end thereof, and said sleeve having a chordal segmental notch in said smaller diameter portion which extends within the hollow inner space of the sleeve; a pair of keys of chordal segmental configuration disposed in said sleeve notch in side-by-side relation, said keys being adapted to extend within the hollow inner space of said sleeve; a cylindrical plug adapted to fit within the sleeve, said plug having a chordally segmental notch which is spaced from the end of the plug and which is adapted to receive one of said keys, said notch extending transversely of the plug axis and smoothly intersecting the peripheral surface of the plug at either side of the notch; and a pair



of split-rings fitted around the smaller diameter portion of the sleeve and around respective keys for biasing said keys normally to extend within the hollow inner space of said sleeve; whereby, when the plug is inserted within the sleeve with the notches aligned, said one key will be biased into the plug notch for locking the plug and jack unit together and the other key will be biased against the plug for holding the plug and sleeve in electrical contact and whereby, when the plug is rotated in the sleeve, the peripheral surface of the plug at the side of said notch will wedge said one key from within the hollow inner space of the sleeve for permitting separation of the plug and jack unit.

3,101,987
DRIVE-YOURSELF MOTOR VEHICLE CONTRACT AND KEY RECOVERY DEVICE
Walter C. Sanders, 3924 La Hacienda Drive, San Bernardino, Calif.
Filed Feb. 23, 1961, Ser. No. 91,257
2 Claims. (Cl. 346—20)



1. A device of the class described, comprising: a cabinet; a container secured against one wall of said cabinet; a time clock in said cabinet; tray supporting guides in said container; a tray movable on said guides into and out of operative position with said time clock; means for preventing complete withdrawal of said tray; a time card adapted to contain a vehicle lease and key detachably associated with said tray; said time card having laterally extending ears; a card seat formed in said tray conforming to and supporting the outer end of said card for insuring inward movement of said card to said clock; a card storing container below said tray and guides; and mechanism initially permitting inward movement of said card on said tray but automatically resisting rearward movement of said card on said tray and forcing same into said container, said mechanism including ramps, over which said time-card ears pass upon said inward movement of said card, said ears preventing outward movement of said card when said tray is moved backwardly.

CHEMICAL

3,101,988
PROCESS FOR THE DYEING OF POLYMERIC SYNTHETIC MATERIAL AND MATERIAL DYED THEREWITH
Werner Bossard, Riehen, near Basel, and Jacques Voltz and François Favre, Basel, Switzerland, assignors to J. R. Geigy A.G., Basel, Switzerland
No Drawing. Filed Dec. 1, 1955, Ser. No. 550,477
Claims priority, application Switzerland Dec. 15, 1954
16 Claims. (Cl. 8—41)

8. Polyacrylonitrile containing at least 50% of acrylonitrile, colored by compounds which have the structure:

$$\left[R-\overset{+}{N}\!\!<\!\!\!>\!\!A-N=N-B-(Y)_n\right]X^-$$

in which A is the remainder of an aromatic ring system, in which aromatic ring system the quaternary nitrogen is an integral part of a heterocyclic ring to which not more than one other ring is fused in the case where the said heterocyclic ring is fused to any other ring of said aromatic ring system, in which all rings between the quaternised nitrogen and the azo bridge which are not fused to the heterocyclic ring are linked in a continuous chain of conjugation, and through which aromatic ring system the said quaternary nitrogen is conjugated with the azo group, R is a non-aromatic organic radical, B is a carbocyclic aromatic radical of less than three rings, Y is an unionized substituent whose bond to an aromatic ring has a dipole moment greater than 1.00 Debye unit with the negative end of said dipole at the ring, said substituents being conjugated with the azo bridge, *n* is a positive integer less than 3 and X^- is an anion.

3,101,989
PROCESS FOR IMPROVING THE AFFINITY FOR DYES OF SHAPED POLYOLEFINE ARTICLES
Daniel Cesar Toureille, Lyon, France, assignor to Societe Rhodiaceta, Paris, France, a body corporate of France
No Drawing. Filed July 6, 1960, Ser. No. 41,026
Claims priority, application France July 9, 1959
7 Claims. (Cl. 8—55)

1. A process for the treatment of shaped aliphatic polyolefine articles to increase their affinity for dyes which comprises contacting the said shaped articles first with a bath containing, per litre, 25 to 55 grams of alkali metal bichromate and 100–250 cc. of concentrated sulphuric acid, for 5 to 120 minutes, and then with an acid bath containing a reducing agent, the temperature of each bath being at least 80° C.

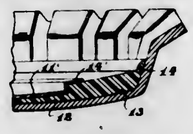
3,101,990
PROCESS OF DRAWING FILAMENTARY STRUCTURES
Harold H. Heighton, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 13, 1960, Ser. No. 64,678
5 Claims. (Cl. 18—48)

5. A rapid hot draw process for a multi-filament yarn of synthetic fiber-forming polyester which comprises passing a previously undrawn yarn of the polyester over feed and draw rolls, heating the yarn under low tension and without significant drawing as it passes between the said rolls by slip contacting it with a curved convex surface maintained at a temperature substantially equal in effect to the second-order transition temperature of the polyester, and then drawing the yarn at a temperature between the second-order transition temperature and 45° C. above by passing the yarn over a snubbing pin and draw roll.

3,101,991
PRODUCTION OF POLYVINYL FORMAL SHAPED ARTICLES
Osamu Fukushima, Hirotoshi Kurashige, and Kigen Kawai, Kurashiki City, Japan, assignors to Kurashiki Rayon Co., Ltd., Kurashiki-shi, Japan, a corporation of Japan
Filed Jan. 17, 1961, Ser. No. 83,136
Claims priority, application Japan Jan. 21, 1960
8 Claims. (Cl. 18—54)

1. A process for producing shaped articles of improved characteristics from polyvinyl formal which comprises extruding a solution of at least one polymer selected from the group consisting of polyvinyl formal and derivatives thereof containing basic nitrogen, said solution being a solution of said polymer in a mixture of water and at least one member of the group consisting of a water-soluble cyclic ether and a water-soluble monohydric alcohol, and subjecting said polymer to oxidation in a single step with an oxidizing agent effective to oxidize the 1,2 glycol bonds in said polymer, said oxidizing agent being selected from the group consisting of periodic acid, periodic acid salts, tetraacetic acid, tetraacetic acid salts, hydrogen peroxide and pervanadic acid.

3,101,992
METHOD FOR MAKING CAPS
Giles B. Cooke and William C. Rainer, Baltimore, Md., assignors to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York
Filed Dec. 28, 1953, Ser. No. 400,747
1 Claim. (Cl. 18—59)



The method which comprises stamping out discs of a solid plastic composition comprising a thermoplastic vinyl chloride resin and dicyclohexyl phthalate as a plasticizer therefor and simultaneously freely positioning the same consecutively in heated closure shells, superposing a second layer of a solid plastic composition comprising a thermoplastic vinyl chloride resin and dicyclohexyl phthalate as a plasticizer therefor on the base layer, said second layer being of less area than the base layer, and thereafter subjecting said plurality of superposed layers in the form of discs while the shells containing the same are still heated by means of a stepped molding die to form a plastic liner having a central recess and a surrounding thickened deformable sealing area having a coating on the walls of the recess in said plastic liner, said coating extending into overlying relation with the marginal surface of the thickened portion of the liner surrounding said recess.

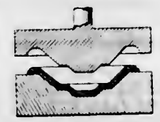
3,101,993
METHODS OF AND APPARATUS FOR MAKING DOLLS' HEADS WITH ROTATING DOLLS' EYES
David Cohn, Pound Ridge, N.Y., assignor to Model Plastic Corporation, White Plains, N.Y., a corporation of New York
Filed Jan. 4, 1960, Ser. No. 397
10 Claims. (Cl. 18—59)

1. Apparatus for making a doll's head comprising complementary rear and front doll's head mold sections, a pair of members slidably and removably mounted on said front mold section, and having heads at their rear ends, formed with front convex surfaces meeting the inner surface of said front mold section along outlines defining doll's eye openings, and also having opposed, horizontally aligned means on the head of each of said members projecting outwardly therefrom to form doll's eye axle receiving openings, said members also having



shanks slidably passing through passages in said front mold section, and means to blow mold heated thermoplastic material against the inner surfaces of said mold sections and around said heads of said members and horizontally aligned means, to form a doll's head with doll's eye openings and sockets around said members, surrounding the eye openings, with openings in said sockets to receive axles of dolls' eyes inserted into said sockets.

3,101,994
METHOD OF MOLDING SYNTHETIC RESIN PRODUCTS
Ludwig Hartmann, Weinheim an der Bergstrasse, Germany, assignor to Pellon Corporation, New York, N.Y., a corporation of New York
Filed June 20, 1958, Ser. No. 743,310
Claims priority, application Germany Oct. 12, 1957
1 Claim. (Cl. 18—61)

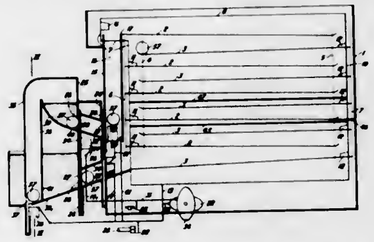


In the method for molding articles by injection molding, in which an injection moldable resin is injected into a mold cavity in flowable condition, the improvement which comprises positioning a non-woven design-carrying textile fiber fleece in the mold at least adjacent the surface thereof prior to the injection, and thereafter injecting the resin, to thereby form an integral one-piece molded article having said fleece embedded adjacent the surface thereof, said fleece having a thickness of between about 0.01–6 mm., possessing about 20–60% thermo-bonding fibers, self-cemetitiously thermo-bonded at their compression induced contact points, 10–80% non-thermo-bonding fibers, in which at least 40% by weight of the total fibers in said fleece substantially consist of synthetic fibers, in which at least 85% by weight of the total fibers have a fiber length of about 10–70 mm., in which said interstitial absorption capacity is at least 40% per dry weight of said impregnant resin, said thermo-bonding fibers in said fleece having a temperature of destructive flowability above the highest temperature reached in said molding at the highest molding pressure, and in which said fleece has been compressed while thermo-bonding at a ratio of fleece thickness to applied compression thickness of about 30:1 to 80:1.

3,101,995
CONTINUOUS TREATMENT OF FOOD CONTAINERS

Max Beauvais, Moulin de Montreuil, St. Georges Motel, Eure, France

Filed Jan. 19, 1961, Ser. No. 99,329
Claims priority, application France Sept. 28, 1960
19 Claims. (Cl. 21—78)

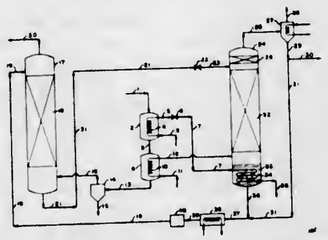


1. A system for continuously treating articles in a treating enclosure, said articles being similarly shaped rigid bodies which are displaceable in-line one by another over supporting surfaces, which system comprises a plurality of vertically-spaced surfaces extending across the enclosure in overlapping relationship, each of said surfaces having opposite ends adapted respectively for the input of said articles thereto and the output of said articles therefrom and the output end of each overlying surface being disposed above but spaced horizontally from the input end of the immediately underlying surface such that said articles are able to drop one by one off an output end of one surface on to the adjacent input end of an immediately underlying surface whereby said surfaces define a zigzag path for the in-line flow of said articles down and through the enclosure along the path; means for serially introducing untreated articles and withdrawing treated articles into and out of the enclosure at upper and lower ends respectively of the path; and reciprocable feed control means positioned adjacent opposite ends of the surfaces and selectively displaceable for respectively preventing and permitting the fall of an article off one surface on to the underlying surface thereby to control the flow of articles along the path.

3,101,996
PROCESS FOR REMOVAL OF ACID GAS FROM GAS STREAMS

Sidney A. Bresler, New York, and Arthur W. Francis, Yonkers, N.Y., assignors to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 29, 1961, Ser. No. 99,293
6 Claims. (Cl. 23—2)



1. In a process for removing a weakly acidic gas component from a hot gas stream which comprises scrubbing said gas stream with a liquid alkaline absorbent for acidic gas component selected from the group consisting of aqueous solutions of alkanol amines and alkali carbonates, heating and steam stripping the resulting laden absorbent solution to separate dissolved acidic gas component as volatilized off-gas and thereby regenerate said absorbent solution, and recycling said regenerated absorbent solution to said gas scrubbing, the improvement which comprises partially cooling said hot gas stream prior to said scrubbing step by heat exchange with liquid water in a first steam generation means, whereby a first stream of process steam is generated, further cooling said hot gas stream prior to said scrubbing step by heat exchange with liquid water in a second steam generation means, whereby a second stream of process steam is generated, condensing said first stream of process steam by indirect heat exchange with said absorbent solution in said heating and stripping step, and injecting said second stream of process steam into said absorbent solution in said heating and stripping step.

3,101,997
CHLORODIFLUOROAMINE AND A PROCESS FOR ITS PREPARATION

Jeremiah P. Freeman and Robert C. Petry, Huntsville, Ala., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,561
3 Claims. (Cl. 23—14)

1. Chlorodifluoroamine, $ClNF_2$.

2. A process for the preparation of chlorodifluoroamine which comprises reacting difluoroamine with boron trichloride at a temperature of from about −35° C. to about 25° C. and recovering the chlorodifluoroamine so formed.

3,101,998
METHOD OF TREATING RADIOACTIVE WASTES

Thomas H. Milliken, Jr., Moylan, Jack H. Krause, Media, and Joseph J. Donovan, Swarthmore, Pa., assignors to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Sept. 19, 1958, Ser. No. 761,924
5 Claims. (Cl. 23—25)

1. The process for the separation of adsorbable radioactive cesium and strontium from fission reaction nitrate waste liquors containing the same and substantially greater bulk amounts of normally adsorbable non-radioactive ions, such process comprising treating such a liquor with an additive comprising at least one of the compounds selected from the group consisting of the alkali-free isopropylates of aluminum and zirconium, and the alkali-free oxycarbonate of zirconium, thereby forming with said additive a sol including said normally adsorbable non-radioactive ions, whereby said non-radioactive ions in said sol have no appreciable affinity for adsorption sites on hydrogen ion exchange material; contacting said treated liquor with hydrogen ion exchange material and adsorbing by said contact substantially all of said radioactive cesium and strontium; and separating said contacted ion exchange material containing adsorbed radioactive cesium and strontium.

3,101,999
LOW TEMPERATURE DEFLUORINATION OF PHOSPHATE MATERIAL

Thomas J. Malley and Harry F. Cosway, Stamford, and Sydney A. Giddings, Darien, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 13, 1961, Ser. No. 82,383
3 Claims. (Cl. 23—108)

1. In an improved process for preparing phosphatic animal feed supplement of high nutritional availability the improvement which comprises: heat treating triple superphosphate containing more than 1% fluorine at a temperature between about 1050° F. and 1300° F. for a time sufficient to effect the reduction of the fluorine content of said triple superphosphate to less than about 0.26%, calcining the latter defluorinated triple superphosphate product at a temperature of from about 1800° F. to about 2000° F. in the presence of an alkaline material selected from the group consisting of alkali metal carbonates, alkaline earth carbonates, alkaline earth oxides and mixtures thereof, for from about five to sixty minutes, and thereafter recovering nutritionally available animal feed phosphates of low fluorine content.

3,102,000
PRODUCTION OF ANIMAL FEED SUPPLEMENT OF LOW FLUORINE CONTENT

Thomas J. Malley, Stamford, Darwin F. De Lapp, New Canaan, Sydney A. Giddings, Darien, and Harry F. Cosway, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

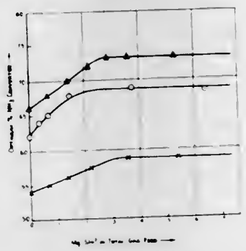
No Drawing. Filed Jan. 13, 1961, Ser. No. 82,384
6 Claims. (Cl. 23—108)

1. In an improved process for preparing phosphatic animal feed supplement of low fluorine content and of high nutritional availability the improvement which consists essentially in: heat treating triple superphosphate containing more than one percent fluorine at a temperature between 1050° F. and 1350° F. for a time sufficient to effect the reduction of the fluorine content of said triple superphosphate to less than about 0.26 percent; hydrolyzing the so-calcined mixture in the presence of a hydrolyzing agent selected from the group consisting of steam under superatmospheric pressure and hot water at a temperature between about 60° C. and 95° C.; and recovering a phosphatic animal feed consisting essentially of mixed soluble calcium orthophosphates of low fluorine content and of high nutritional availability.

3,102,001
PROCESS FOR THE PRODUCTION OF HYDROCYANIC ACID

Thomas David Parkhill, Billingham, and John Peter Hodson Shaw, Widnes, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Jan. 29, 1960, Ser. No. 5,557
Claims priority, application Great Britain Feb. 18, 1959
5 Claims. (Cl. 23—151)



1. In a process for the manufacture of hydrocyanic acid by reaction of a mixture consisting essentially of ammonia, a hydrocarbon and oxygen by passing the mixture in the vapour phase over a catalyst for the formation of hydrocyanic acid selected from the group consisting of platinum metal and platinum metal alloys at a high temperature, the improvement which comprises adding to the reactants a volatile sulphur-containing material in such amount that the said reactants contain 1–500 mg. of sulphur per m^3 and adjusting the oxygen content of the said reactants for maximum conversion of ammonia and hydrocarbons to hydrocyanic acid, whereby an increased conversion of ammonia and hydrocarbon to hydrocyanic acid is obtained.

3,102,002
FERROMAGNETIC MATERIALS PREPARED FROM LANTHANONS AND TRANSITION METALS

William E. Wallace, Pittsburgh, Pa., Kurt Nassau, Springfield, N.J., and Leonard V. Cherry, Pittsburgh, Pa., assignors to University of Pittsburgh, Pittsburgh, Pa.

Filed Mar. 25, 1960, Ser. No. 17,571
2 Claims. (Cl. 23—204)

1. As compositions of matter, inorganic compounds with magnetic properties having the general formula AMn_6 wherein A is an element selected from the group consisting of holmium, dysprosium, neodymium, gadolinium and yttrium.

2. As compositions of matter, inorganic compounds with magnetic properties having the general formula AMn_2 wherein A is an element selected from the group consisting of dysprosium, holmium, neodymium, gadolinium and yttrium.

3,102,003
SEPARATION OF GASES OF DISSOCIATED AMMONIA

Joseph T. Kummer, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

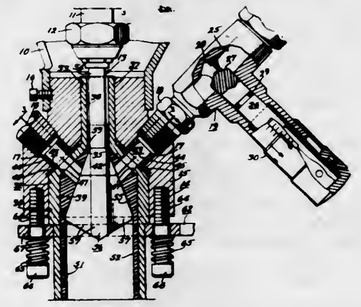
No Drawing. Filed Aug. 15, 1960, Ser. No. 49,420
3 Claims. (Cl. 23—210)

2. A process for separating hydrogen gas from dissociated ammonia comprising the steps of dissociating ammonia, cooling the dissociated ammonia gases to less than 100° F., compressing the cool gases, charging the compressed gases into a pressure zone containing an activated charcoal bed maintained at a pressure of about 100 p.s.i.g., and after a time interval of at least 10 seconds releasing gas from said pressure zone at a point distant from the charging inlet until the pressure in said pressure zone is reduced to a range between 2 to 20 p.s.i.g. at the bed, collecting the gas released during the pressure reduction, and vacuumizing the charcoal bed to thereby reactivate it.

3,102,004
MIXING AND DISPENSING APPARATUS

Joseph John Grintz, Bristol Road, Churchville, Pa.

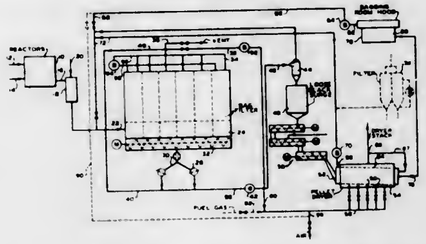
Filed Aug. 5, 1959, Ser. No. 831,905
8 Claims. (Cl. 23—252)



1. Apparatus for mixing and dispensing urethane products comprising a dispensing head having a bore therein, a hollow rotary valve element mounted in said bore, a discharge nozzle at one end of said hollow valve connected to the bore thereof, passages in said head, apertures in said hollow rotary valve operable in one position to register with said passages and in another position to pass out of registry with said passages, metering devices connected to at least two of said passages, said metering devices consisting of gate valves having a straight-line bore and a gate operable to intercept the bore of the valve and throttle the flow of material there-

through, shutoff valves controlling the flow of material to said passages, containers containing pressurized ingredients for said urethane product connected to said shut-off valve whereby upon opening of the latter valves and upon registry of said apertures with said passages, said ingredients flow into the interior of said rotary valve element, and an agitator rotatable coaxially within said valve and having a head mounted in said valve operable upon rotation of said agitator to effect a mixture of ingredients in the bore of said hollow rotary valve.

3,102,005
METHOD AND APPARATUS FOR WET PELLETING CARBON BLACK
Robert F. Dye, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 19, 1961, Ser. No. 118,014
6 Claims. (Cl. 23—314)



4. A process for making carbon black and wet pelleting same comprising subjecting a hydrocarbon feed to partial combustion and pyrolysis to form a gaseous stream containing carbon black, passing said stream thru a carbon black recovery system including a bag filter to separately recover loose black and off-gas; passing the loose black to a wet pelletizer to form wet pellets; passing the wet pellets thru a gas fired rotary drum dryer to dry said pellets; passing off-gas from said bag filter to said dryer and burning same therein with about 5 to 10 volume percent of excess air, whereby the resulting combustion gas contains less O_2 than required to form an explosive mixture when admixed with aforesaid stream; passing resulting combustion gas thru the drum of said dryer in contact with carbon black therein whereby carbon black dust is entrained in said combustion gas; and passing the effluent gas from said drum, containing entrained carbon black, into said bag filter in admixture with said stream to recover the carbon black therefrom.

3,102,006
METHOD AND APPARATUS FOR TREATING WEB MATERIALS
Samuel Cohn, New York, Eugene Cohn, Great Neck, and Frank Catallo, Elmont, N.Y., assignors to Samcoe Holding Corporation, Woodside, N.Y., a corporation of New York
Filed Nov. 14, 1958, Ser. No. 773,864
4 Claims. (Cl. 34—23)

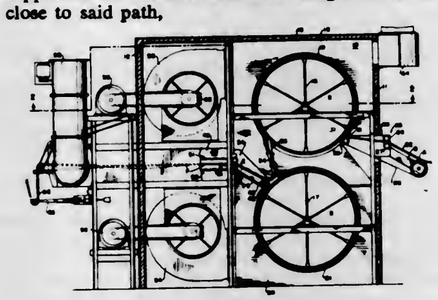
3. The method of drying and treating flexible web materials, which comprises

(*a*) feeding the material toward a pressurized treating zone at a first predetermined speed,

(*b*) forcibly advancing the material into the pressurized zone by directing high velocity air streams, toward the web material and in the direction of its advancement, across the width of the material,

(*c*) mechanically engaging and effectively fully supporting one surface of the thus advanced web material across its width, while maintaining the material within the zone relaxed and free of lengthwise tension, and conveying the material through said zone at a second predetermined and slower speed along a predetermined path,

(*d*) directing a large plurality of closely spaced, high velocity discrete air streams toward the other surface only of the web material during the conveying thereof through said zone, said air streams being directed generally perpendicular to said other surface of the supported web material and emanating from sources close to said path,

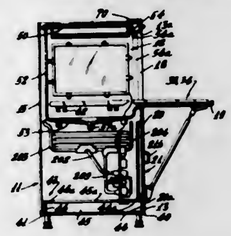


(*e*) said web material being advanced past successive high velocity air streams in said zone, whereby the material is repetitively, continually, and forcibly fluttered and rearranged, and

(*f*) conveying the dried and treated web material away from said pressurized treating zone,

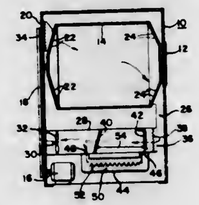
(*g*) the pressure within said zone, created by the combined effects of the velocity, spacing, and disposition of said air streams and the size and configuration of said zone, being such relative to ambient as to impart substantial resistance to the entry of the web material into said zone.

3,102,007
DRYING APPARATUS EMPLOYING RADIANT PANEL HEATERS
David Goldman, 73 E. 130th St., New York, N.Y.
Filed May 25, 1960, Ser. No. 31,602
7 Claims. (Cl. 34—48)



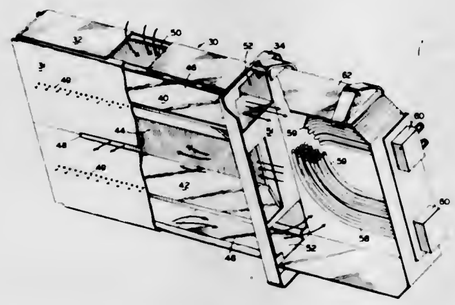
1. In a drier, in combination, a cabinet having a front wall and side walls, and upper, lower and rear ends, a front door on said front wall, a heating chamber in the cabinet having walls spaced parallel to and inwardly from said walls and ends of the cabinet, and including a bottom wall formed with a drainage opening, and a front wall having a door opening closed by the front door of the cabinet, radiant heating elements in at least two walls of said heating chamber, said elements each including a frame and a cushioned, tempered glass panel having an electro-conductive film serving as a heating element on its rear surface in said frame, an electro-magnetic switch mounted within said cabinet, a circuit for each heating element through the electro-magnetic switch to one phase of the electrical power supply line, an "On" and "Off" switch mounted within the cabinet, and an energizing circuit for the electro-magnetic switch from the electrical power supply line through the operating coil of the electromagnetic switch and the "On" and "Off" switch.

3,102,008
DOMESTIC APPLIANCE
Nelson J. Pansing, Brookville, and George B. Long and James L. Miller, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,772
16 Claims. (Cl. 34—79)



1. In combination; a clothes dryer including an outer cabinet; a tumbling drum rotatable in said outer cabinet; said tumbling drum having air inlet means and outlet means; a blower for circulating heated air through said drum from said inlet means to said outlet means; an air discharge duct communicating with said outlet means and including means forming a lint burning zone and an air control zone downstream from said lint burning zone; said lint burning zone including a lint collecting means and a lint burning means, a damper in said duct in said air control zone for permitting air flow through said duct; means for effecting operation of said damper; a catalyst housing associated with said air control zone and having a greater resistance to air flow than said duct; said housing having an inlet aperture connected to said duct between said damper and said lint collecting means and an outlet aperture connected to said duct on the opposite side of said damper from said inlet aperture; and means for concurrently actuating said damper to direct air to said housing and energizing said lint burning means to burn said lint.

3,102,009
APPARATUS FOR THERMAL TREATMENT OF METAL
William A. Bloun, Whiteland, Ind., assignor to General Electric Company, a corporation of New York
Filed Mar. 28, 1960, Ser. No. 17,960
10 Claims. (Cl. 34—159)



1. A jet cooling unit of the type described comprising a housing adapted to be removably supported alongside a path of movement of strip material, a motor driven high pressure rise fan supported on said housing and having an inlet and an outlet, the housing being provided with a plenum chamber connected in flow communication with the fan outlet, said plenum chamber having a generally flat face adapted to be disposed substantially parallel to the path of strip movement, orifice means for the high velocity discharge of atmosphere from the plenum chamber substantially at right angles toward a next adjacent strip path, said orifice means including an elongated narrow slot extending laterally of the strip path and a plurality of orifices disposed on opposite sides of the slot with the orifices on each side of the slot being arranged substantially in a row extending parallel to the slot, the housing further being provided with enclosed suction chambers spaced apart on opposite sides of the orifice means and longitudinally thereof in the direction of strip movement past the unit, said suction chambers being connected in flow communication with the fan inlet to pull spent atmosphere from the surface of the strip for recirculation, and heat exchanger means disposed within the housing and in the path of movement of atmosphere through the housing.

3,102,010
DURABLE ROTATIVE ABRASIVE STRUCTURE AND METHOD OF MAKING THE SAME
Arthur Haswell Lang, Egan Township, Dakota County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Apr. 10, 1958, Ser. No. 727,520
4 Claims. (Cl. 51—297)

1. A heavy duty rotative abrasive wheel structure comprising an annulus of radially disposed uniformly positioned flap sections of abrasive sheet material retained together at the radially inner ends thereof, said flap sections being ensheathed in and penetrated by a thin flexible highly-adherent centrifugally-stable polymerized binder film or coating, said film or coating imparting durability, improved wear resistance and increased abrading life to said structure, the composition of said film or coating being further characterized by presenting a tenacious surface slip-resistant and at least slightly tacky to the sliding touch when formed per se in a continuous smooth-surfaced film or body.

3,102,011
TUMBLING CHIPS
Kenneth P. Bellinger, Ellington, Conn., assignor to Conversion Chemical Corporation, Rockville, Conn., a corporation of Connecticut
Filed Dec. 21, 1959, Ser. No. 860,967
7 Claims. (Cl. 51—298)

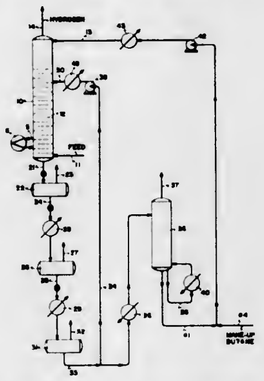


1. A solid molded lightweight tumbling chip consisting essentially of 40–70 percent by weight of abrasive material, 1.5–15.0 percent by weight of glass fibers and 20–55 percent by weight of thermosetting resin, said fibers and abrasive material being substantially uniformly dispersed throughout said tumbling chip and bonded by said thermosetting resin, and said chip being of elongated configuration with a tapered end portion adapted to enter into apertures in a workpiece and being characterized by presenting uniform, substantially smooth abrasive surfaces during the working life thereof.

3,102,012
PROCESS FOR PURIFICATION OF HYDROGEN

Edward J. Dowd, New Providence, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 27, 1959, Ser. No. 829,621
8 Claims. (Cl. 55—23)



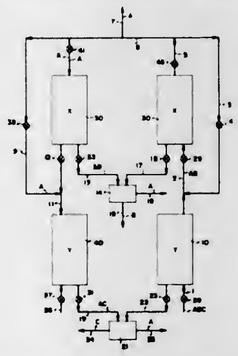
1. A method for separating hydrogen and methane in a gaseous mixture containing mainly hydrogen and methane which comprises feeding the gaseous mixture into an absorption zone, passing the mixture upwardly countercurrent to a liquid C_4 to C_5 hydrocarbon absorbent at an absorbent to feed ratio of between about 0.5 to 2.0 moles of absorbent per mole of feed, said absorption zone being at a temperature of −110° to −200° F. and under a pressure of 50 to 1000 p.s.i.a., correlating the temperature, pressure and absorbent/feed ratio within the ranges specified so that the gaseous stream withdrawn from the upper part of said absorption zone contains at least 99 mole percent hydrogen, withdrawing said absorbent containing methane from the bottom of said absorption zone, reducing the pressure on said withdrawn absorbent, flashing a minor part of the methane from said withdrawn absorbent, at substantially the temperature of the absorption zone, separating a fuel gas containing mostly methane from the partially depressured absorbent, further reducing the pressure on the partially depressured absorbent liquid, discharging the depressured absorbent liquid into a flashing zone, withdrawing a gaseous stream containing at least 99 mole percent methane overhead from said flashing zone, withdrawing absorbent liquid containing residual methane from said flashing zone, compressing and cooling and recycling a portion of the last mentioned liquid to the middle of the absorption zone, stripping the residual methane from the remainder of the said absorbent liquid at a temperature which is higher than that of said absorption zone, cooling the stripped absorbent to −110° to −200° F. and recycling the cooled, stripped absorbent to the upper part of the absorption zone.

3,102,013
HEATLESS FRACTIONATION UTILIZING ZONES IN SERIES AND PARALLEL

Charles W. Skarstrom, Montvale, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 2, 1960, Ser. No. 47,035
4 Claims. (Cl. 55—31)

1. A method of fractionating a gaseous mixture of at least two components consisting essentially of the steps of flowing a feed stream of said gaseous mixture at a preselected initial relatively high pressure and in an initial positive flow direction through a first fixed bed of a first adsorbent, selective for at least one component of said mixture, for a first cycle time period less than that required for said bed to come to equilibrium with said first component, discharging the unadsorbed portion of said feed stream as a first primary effluent stream, flowing said first primary effluent at said preselected initial relatively high pressure and in initial positive flow direction through a second fixed bed of a second adsorbent, selective for at least a second component of said mixture, for a first cycle time period less than that required for said second bed to come to equilibrium with said second component, discharging the unadsorbed portion of said feed stream as a second primary effluent, interrupting flow of said feed stream at the end of said first cycle, and reducing said initial pressure on said first bed at the inlet end, desorbing said first component from said first bed at a reduced pressure and discharging said desorbed first component from said first bed in a flow direction opposite to that of said feed stream of gaseous material for a second cycle time period, during said second time period flowing at least a portion of said second primary effluent through said first bed in a flow direction of said desorbed first component and discharging said portion of second primary effluent from said first bed together with said de-



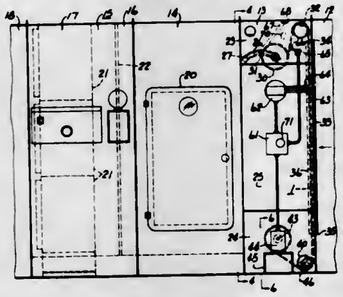
sorbed component as a secondary effluent stream, desorbing said second component from said second bed at a reduced pressure, and discharging said desorbed second component from said second bed in a flow direction opposite to that of said feed stream of gaseous material, for a second cycle time period during said second time period, flowing at least another portion of said second primary effluent stream through said second bed in the flow direction of said desorbed second component, and discharging said portion of said second primary effluent portion from said second bed together with said desorbed component as a second secondary effluent stream, said time periods being each of such short duration that the heats of adsorption and desorption are substantially balanced within said beds, and that substantially the sole transfer of heat to and from the gas occurs in said beds, thereby eliminating the need for the transfer of heat externally with respect to said beds, adjusting said cycle periods for a duration adapted to develop an oscillating concentration gradient of said components in said beds which remains in the beds during both the adsorption and desorption cycle and imparting oscillatory movement to said front substantially within the limits of said beds.

3,102,014
AIR FILTER CURTAIN

Paul W. Aitkenhead, Ross Township, Allegheny County, Pa., assignor to Electro-Air Cleaner Company, Inc., McKees Rocks, Pa., a corporation of Pennsylvania

Filed May 3, 1961, Ser. No. 113,588
3 Claims. (Cl. 55—271)

1. A filter curtain of fine glass fibers to be drawn across a passage through which the air to be cleaned travels in one direction which curtain consists of a mat made of a plurality of layers of glass fibers extending generally longitudinal, each layer being defined by the relatively straight glass fibers lying in a criss cross pattern forming an acute angle with each other, the major portion of the glass fibers being arcuate and dispersed in all directions to interconnect the criss cross pattern defining the adjacent layers of the mat, the defined layers of glass fibers becoming progressively closer together from the air entry side of the mat to the air discharge side of the mat to provide a progressive increase in the density of the glass fibers through the mat, a frame encircling the passage, guide means supported by said frame to channel the curtain as it passes across the passage, a transversely disposed sta-

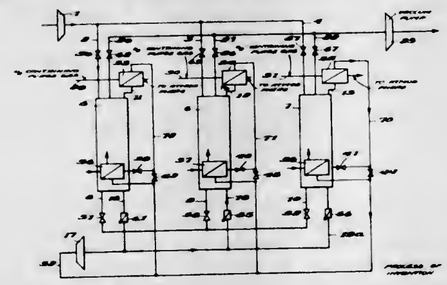


tionary cornering tube mounted on said frame at each end of said guide means to maintain the alignment of the curtain as it passes over the tubes upon entering and leaving said guide means, a supply and take-up adjacent said tubes, and motor means for actuating said take-up, control means to energize said motor, a rotatably supported toothed wheel mounted on a shaft carried by bearings on a support secured in one cornering tube, said tube having a slot and the teeth of said wheel extending through said slot to engage the curtain moving over said cornering tube, a cam on said wheel shaft, a cam switch on said support operated by said cam to function in a circuit of said control means as a measure of the movement of said curtain.

3,102,015
PRODUCTION OF SO_2 AND O_2 CONTAINING GASES SUITABLE FOR THE PRODUCTION OF ELEMENTAL SULFUR

Wilhelm Thumm, Frankfurt am Main, and Rudolf Becker, Munich-Solln, Germany, assignors to Gesellschaft für Linde's Eismaschinen A.G., Hollriegelskreuth, near Munich, Germany

Filed Feb. 19, 1960, Ser. No. 9,737
Claims priority, application Germany Mar. 6, 1957
3 Claims. (Cl. 62—12)

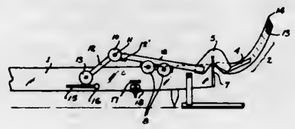


1. In a process for the production of an SO_2 and O_2 containing gas mixture suitable for the production of elemental sulfur by reduction of the SO_2 contained therein from dilute SO_2 containing gases containing less than 30% of SO_2, the steps which comprise compressing the dilute SO_2 containing gas mixture; leading said gas mixture in a first switching period of operation in one direction through a first regenerator to cool the gas mixture and to condense out the SO_2 therefrom, leading the resulting cold SO_2-free gas through a second regenerator to cool this regenerator, cooling an O_2 containing gas in counter-current heat exchange with said cold SO_2-free gas, expanding the cold O_2 containing gas and leading it through a third regenerator to evaporate the SO_2 condensed in a foregoing switching period of operation; leading the dilute SO_2 containing gas mixture in a second switching period of operation in one direction through the second regenerator to cool the gas mixture and to condense out the SO_2 therefrom, leading the cold SO_2-free gas through the third regenerator to cool this regenerator, cooling an O_2 containing gas in counter-current heat exchange with said cold SO_2-free gas, expanding the cold O_2 containing gas and leading it through the first regenerator to evaporate the SO_2 condensed in the foregoing switching period of operation; leading the dilute SO_2 containing gas mixture in a third switching period of operation in one direction through the third regenerator to cool the gas mixture and to condense out the SO_2 therefrom, leading the cold SO_2-free gas through the first regenerator to cool this regenerator, cooling an O_2 containing gas in counter-current heat exchange with said cold SO_2-free gas, expanding the cold O_2 containing gas and leading it through the second regenerator to evaporate the SO_2 condensed in the foregoing switching period of operation; the cold SO_2 free gas and the expanded cold O_2 containing gas in each switching period being passed through the respective regenerators indicated in a direction opposite to that in which the dilute SO_2 containing gas had been led through such respective regenerators in the foregoing switching periods and the quantity of O_2 containing gas employed in each switching period of operation to evaporate the SO_2 condensed in the foregoing switching period of operation being such to produce directly a gas containing about 30–80% of SO_2 and about 8 to 15% of O_2.

3,102,016
GLASS BENDING METHOD

Arthur F. Donovan, Sandwich East, Ontario, Henri T. Jacquot, Windsor, Ontario, and Ronald E. Richardson, Oshawa, Ontario, Canada, assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Original application Dec. 7, 1956, Ser. No. 626,946, now Patent No. 2,961,801, dated Nov. 29, 1960. Divided and this application Apr. 4, 1960, Ser. No. 19,868
4 Claims. (Cl. 65—107)



1. In a method of bending glass sheets comprising subjecting a glass sheet to be bent to glass softening temperature to heat-soften the sheet and applying a bending force to a portion of the heat-softened sheet to bend said portion into a curved orientation, the steps of initially employing a maximum net force biasing said sheet portion towards said curved orientation, and, when said sheet portion attains a position part way towards said curved orientation, suddenly reducing the net force applied thereto to a smaller net force biasing said sheet portion toward said curved orientation.

3,102,017
PROCESS FOR ADDITIONAL CORN-EAR GROWTH

Robert A. Shurter, Jr., and David O. Howe, Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Aug. 31, 1960, Ser. No. 53,073
4 Claims. (Cl. 71—2.1)

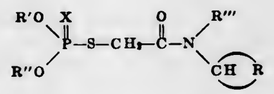
1. A process for the inducement of the development of additional ears of corn per stalk, which comprises applying gibberellic acid compounds to the uppermost several female reproductive organs of the corn stalk during the period commencing with the emergence of identifiable ear-shoots to the time of pollination, and at a rate sufficient to induce the development of additional ears of corn.

3,102,018
HERBICIDAL METHOD

John P. Chupp, Kirkwood, and Angelo John Speziale, Creve Coeur, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 18, 1960, Ser. No. 70,116
5 Claims. (Cl. 71—2.3)

1. The method of inhibiting the germination of preemergent growth of plants which comprises treating the plant growing medium with a herbicidal amount of an S-(N-cycloalkylcarbamoylmethyl) phosphorothioate of the structure



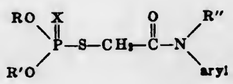
wherein R′ and R″ are selected from the group consisting of alkyl and alkoxyalkyl radicals containing from 1 to 4 carbon atoms, wherein X is a chalkogen of atomic weight less than 40, wherein R‴ is selected from the group consisting of hydrogen and aliphatic hydrocarbon radicals containing from 1 to 4 carbon atoms, and wherein R is a divalent alkylene radical containing from 4 to 10 carbon atoms and having from 4 to 6 carbon atoms in a continuous chain between the valence bonds.

3,102,019
METHOD FOR INHIBITING GERMINATION AND PREEMERGENT GROWTH OF PLANTS USING S(N-ARYL, N-ALIPHATIC CARBAMOYLMETHYL) PHOSPHOROTHIATE TRIESTERS

Angelo John Speziale, Creve Coeur, and John P. Chupp, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 16, 1961, Ser. No. 131,724
7 Claims. (Cl. 71—2.6)

1. The method of inhibiting the germination and preemergent growth of plants which comprises treating the plant growing medium with at least one phosphorothioate of the formula



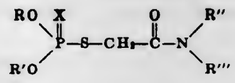
wherein R and R′ contain from 1 to 4 carbon atoms and are selected from the group consisting of alkyl and alkoxyalkyl radicals, wherein X is a chalkogen of atomic weight less than 40, wherein R″ is an aliphatic hydrocarbon radical containing 1 to 3 carbon atoms, and wherein "aryl" means an aromatic hydrocarbon radical containing from 6 to 12 carbon atoms.

3,102,020
METHOD FOR INHIBITING GRASS SEED GERMINATION WITH CARBAMOYLMETHYL PHOSPHOROTHIOATES

Angelo John Speziale and John P. Chupp, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 8, 1960, Ser. No. 67,885
9 Claims. (Cl. 71—2.7)

1. The method of inhibiting the germination and preemergent growth of plants in contact with soil which comprises treating said soil with from 0.5 to 50 pounds per acre of a carbamoyl phosphorothioate of the structure



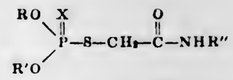
wherein R and R′ are straight chain alkyl radicals containing 2 to 3 carbon atoms, wherein X is a chalkogen of atomic weight less than 40, and wherein R″ and R‴ are alk-2-enyl hydrocarbon radicals containing 3 to 5 carbon atoms.

3,102,021
HERBICIDAL METHOD

Angelo John Speziale and John P. Chupp, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 8, 1960, Ser. No. 67,908
6 Claims. (Cl. 71—2.7)

1. The method of inhibiting the germination of and preemergent growth of plants which comprises treating the plant growing medium with a plant growth inhibiting amount of phosphorothioate of the structure



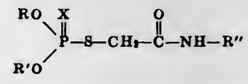
wherein R and R′ are selected from the group consisting of alkyl and alkoxyalkyl radicals containing from 1 to 4 carbon atoms, wherein X is a chalkogen of atomic weight less than 40, and wherein R″ is a higher alkyl radical containing 7 to 14 carbon atoms and having a carbon atom chain length of at least 6 carbon atoms.

3,102,022
HERBICIDAL METHOD

John P. Chupp and Angelo John Speziale, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 8, 1960, Ser. No. 67,932
4 Claims. (Cl. 71—2.7)

1. The method of selectively inhibiting the germination and preemergent growth of plants in contact with soil which comprises treating said soil with an N-alkenylcarbamoylmethyl phosphorothioate of the structure



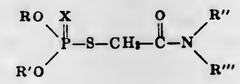
wherein R and R′ are selected from the group consisting of alkyl and alkoxyalkyl radicals containing from 1 to 4 carbon atoms, wherein X is a chalkogen of atomic weight less than 40, wherein R″ contains from 3 to 5 carbon atoms and is selected from the group consisting of alkenyl, chlorine substituted alkenyl and bromine substituted alkenyl, the primary carbon atom of said R″ containing two hydrogen substituents.

3,102,023
HERBICIDAL METHOD

Angelo John Speziale and John P. Chupp, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 9, 1960, Ser. No. 68,160
7 Claims. (Cl. 71—2.7)

1. The method of inhibiting the germination and preemergent growth of plants in contact with soil which comprises treating said soil with a herbicidal amount of a phosphorothioate of the structure



wherein R, R′, R″ and R‴ are selected from the group consisting of alkyl and alkoxyalkyl radicals containing from 1 to 4 carbon atoms and wherein X is a chalkogen of atomic weight less than 40.

3,102,024
METALLIC POWDER COMPOSITION

Alfred P. Knapp, Jackson Heights, N.Y., assignor to Knapp Mills Incorporated, Long Island City, N.Y., a corporation of New York

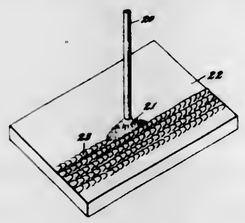
No Drawing. Filed Apr. 30, 1958, Ser. No. 731,896
3 Claims. (Cl. 75—.5)

1. A putty-like structured metallic sealing material having a hand pressure responsive pliancy adapting it to be hand pressure-shaped into place to intercept injurious radiation and consisting only of fine, protective ray-absorbing metal powder particles worked and reshaped and reformed together under pressure, said particles being largely compacted and agglomerated together and joined at metal-to-metal contact areas into a plastic entirely metallic structure of aggregates of various groupings of particles of shapes determined by said working with a spreading and flattening of individual metal-to-metal contacts between portions of the surfaces of the said particles developing metal-to-metal adherence at said contacts and a corresponding pliancy and a uniform composition with an overall density of the plastic metal structure of 70% to 95% of the density of the metal of the particles and forming a continuous barrier seal against radiation blocked by the metal of said particles.

3,102,025
OVERLAY WELDING ELECTRODE

Wayne L. Wilcox, Havertown, Pa., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Dec. 23, 1960, Ser. No. 78,054
2 Claims. (Cl. 75—128)



1. An electric arc welding electrode for overlay deposition of type 316 and type 317 stainless steel, which consists of a wire having the following analysis in percentage by weight:

Carbon	0.04 maximum.
Manganese	1.5 to 2.4.
Silicon	1.00 maximum.
Sulphur	0.025 maximum.
Phosphorus	Do.
Chromium	30.0 to 32.0.
Nickel	15.0 to 17.0.
Molybdenum	4.0 to 5.0.
Nitrogen	0.10 maximum.
Iron	Balance.

3,102,026
ELECTROPHOTOGRAPHIC REFLEX AND CONTACT PRINTING

Kenneth Archibald Metcalfe, Graymore, South Australia, Robert John Wright, Hectorville, South Australia, John Frederick McNeil, Unley Park, South Australia, and Donald Jolly, Linden Park, South Australia, Australia, assignors to The Commonwealth of Australia as represented by the Secretary of the Department of Supply, Melbourne, Victoria, Australia

Filed Dec. 22, 1958, Ser. No. 781,999
Claims priority, application Australia Dec. 24, 1957
1 Claim. (Cl. 96—1)

A method of making a xerographic reflex copy from a master which comprises applying a film of cadmium oxide to a light transmitting substrate to form a conductive backing, applying a uniform layer of selenium thin enough to be translucent and about 1.5 microns to said conductive backing, electrostatically charging the surface of the said layer, exposing the said master to light through the said selenium and backing with the latter in contact with the said master to render areas which are light-struck more conductive than the other areas whereby to bleed away the charge selctively to form an image, developing the image with a liquid developer comprising a pigment which has been precoated with a control and fixing agent and suspended in a carrier liquid having an electrical resistivity of at least about 10^{10} ohm-centimeter and a dielectric constant less than 3, and transferring the image so developed while wet to a transfer-receiving base.

3,102,027
DIRECT POSITIVE DYE BLEACH PROCESS AND MEROCYANINE COMPOSITION THEREFOR

Robert H. Sprague, Cleveland, Harry L. Fichter, Jr., Lakewood, and J. George Fidelman, Cleveland, Ohio, assignors to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

Filed Aug. 19, 1960, Ser. No. 50,696
27 Claims. (Cl. 96—47)



EFFECT OF LIGHT OF THE PRIMARY COLORS

14. A direct positive photographic process which comprises preparing a composition consisting of a mixture of merocyanine dyes and at least one sensitizing agent for said dyes selected from the group consisting of organic halogen compounds in which at least three halogen atoms are attached to a single carbon atom, said sensitizing agent being present in at least a sensitizing amount, dispersing said composition in a photochemically inert carrier; coating said dispersion on a solid substrate; and exposing the supported coating to light of a suitable color, matched to the merocyanine dyes in the mixture, thereby obtaining a

direct positive image by bleaching out of said merocyanine dyes.

15. The process of claim 14 wherein the exposure is effected by light falling on the back of the sensitive layer, the face of which is in contact with a subject to be copied.

3,102,028
PHOTOGRAPHIC ELEMENT HAVING A STRIPPING OR ANTIHALATION LAYER COMPRISING A RESINOUS CARBOXY ESTER-LACTONE

Louis M. Minsk, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 16, 1961, Ser. No. 145,436
2 Claims. (Cl. 96—83)

1. A photographic element comprising a transparent, flexible support having at least one light-sensitive layer on one side and a non-sensitive backing layer on the other side comprising a resinous mixed ester-lactone containing $-COOC_nH_{2n}COOH$ groups, $-COOC_nH_{2n}COOR$ groups, —COOH groups and —COOR groups attached directly to the carbon chain of the said lactone, wherein *n* and R of said groups are as defined below and wherein the total free carboxyl groups present are equivalent to from 4.0–6.0 mls. of N NaOH/gram of the said lactone, which is the product obtained by heating to at least 60° C. in the presence of a mineral acid, a mixture comprising (1) from 15–30% by weight of an interpolymer of a vinyl organic acid ester and an unsaturated α,β-dicarboxylic acid compound from the group consisting of maleic acid, citraconic acid, dimethylmaleic acid and anhydrides and alkyl esters of 1–4 carbon atoms thereof, fumaric acid, mesaconic acid, dimethylfumaric acid and alkyl esters of 1–4 carbon atoms thereof, (2) from 35–65% by weight of a monohydric hydroxy acid of the formula

$$C_nH_{2n}(OH)(COOH)_x$$

wherein *n* is an integer of from 1–5 and *x* is an integer of from 1–2 and (3) from 10–45% by weight of an alkanol of the formula R—OH wherein R represents a member from the group consisting of an alkyl group of from 1–12 carbon atoms, a phenylalkyl group wherein the said alkyl group contains from 1–4 carbon atoms and a tolylalkyl group wherein the said alkyl group contains from 1–4 carbon atoms.

3,102,029
PRINT-OUT PROCESS WITH ARYL AMINE AND POLYPHENYLMETHANE CARBINOLS

Harry L. Fichter, Jr., Lakewood, and William P. Hamilton, Cleveland, Ohio, assignors to Horizons Incorporated, a corporation of New Jersey

No Drawing. Filed June 23, 1961, Ser. No. 119,037
9 Claims. (Cl. 96—90)

1. In a non-silver, direct print-out photosensitive composition comprising a mixture of

(*a*) at least one photolytically active organic halogen-containing hydrocarbon compound selected from the group consisting of organic halogen containing compounds which release halogen free radicals when exposed to a proper dose of radiant energy and which are represented by the general formula

$$ACX_3$$

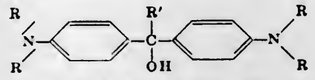
wherein A is selected from the group consisting of H, Cl, Br, I, alkyl, aryl; and each X is selected from the group consisting of Cl, Br and I and

(*b*) at least one aryl amine represented by the formula

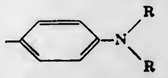
$$R—\underset{\displaystyle Z}{\overset{}{N}}—Y$$

wherein R is an aromatic nucleus selected from the group consisting of phenyl, naphthyl and anthracyl; and Y and Z are each selected from the group consisting of alkyl, aryl, aralkyl, halogen and hydrogen the improvement which comprises including therein to enhance the sensitivity of the composition,

(*c*) at least one carbinol base of a dye selected from the group consisting of diphenylmethane dyes and triphenylmethane dyes represented by the general formula



wherein each R is selected from the group consisting of H, alkyl, aralkyl and aryl and R′ represents a member selected from the group consisting of H, phenyl and



wherein R has the same meaning as above, and there being between 0.5 and 5 parts by weight of arylamine for each part by weight of organic halogen compound present in the composition and between 0.001 and 10 parts by weight of carbinol base for each part by weight of organic halogen compound present in the composition.

9. A process for producing a direct print-out image which comprises exposing a photosensitive mixture as defined in claim 1 to radiant energy.

3,102,030
LIGHT SENSITIZED POLYAMIDE BODY AND METHOD OF MAKING THE SAME

Hans Hoerner, Munich-Unterhaching, Germany (Augusta Anlage 63, Mannheim, Germany)

No Drawing. Filed Mar. 9, 1960, Ser. No. 13,729
Claims priority, application Germany Mar. 23, 1959
7 Claims. (Cl. 96—93)

1. A light sensitized synthetic polyamide body having chromic acid diffused into surface portions thereof.

3,102,031
HIGH PROTEIN FOOD GRANULES

Robert V. MacAllister, Clinton, Iowa, and Thomas P. Finucane, Hartsdale, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 5, 1962, Ser. No. 177,252
7 Claims. (Cl. 99—14)

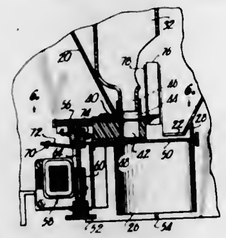
1. A high protein food product which when cooked has a flavor and chewy texture simulating the eating quality of meat, said product comprising irregularly shaped, substantially dry, discrete granules capable of adsorbing water, said granules comprising essentially vitalized gluten and defatted soybean flour, and also incorporating a meat-like flavoring material, said gluten serving not only as a source of protein but also as a binder and providing the quality of chewiness in the cooked granules, said granules when cooked in the presence of water developing a flavor and chewy texture characteristic of cooked meat; and said granules being storable at room temperatures in conventional containers.

3,102,032
METHOD OF MIXING CORN AND SALT IN POPCORN MACHINES

William G. Lippert, Kansas City, Mo., assignor to Manley, Inc., Kansas City, Mo., a corporation of Missouri

Original application Sept. 29, 1958, Ser. No. 763,935, now Patent No. 2,948,438, dated Aug. 9, 1960. Divided and this application June 16, 1960, Ser. No. 36,589
5 Claims. (Cl. 99—80)

1. The method of charging the ingredients corn and salt into a cooking area which is at an elevated temperature from separate sources of supply of said ingredients positioned above said area and communicable therewith through a holding region of predetermined volume disposed between said sources and said area, said method comprising the steps of filling a zone of predetermined volume and position above said region with one of said ingredients from the respective source of supply thereof;



introducing the remaining ingredient from the respective source into said region, permitting the ingredient in said zone to gravitate into said region so that the admixture of ingredients therein substantially fills the holding region; and subsequently permitting the admixture to gravitate into said cooking area from said region while closing off said region from said zone and the source of said remaining ingredient and cooking said ingredients.

3,102,033
FLAVORING COMPOSITION AND METHOD OF PREPARING THE SAME

Simon S. Jackel, Highland Park, Ill., assignor to Vico Products Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Aug. 30, 1961, Ser. No. 134,861
8 Claims. (Cl. 99—90)

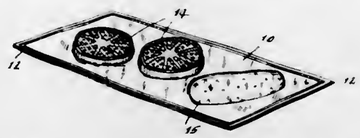
1. A method of preparing a dry, stable flavoring material useful for imparting desirable flavoring and aromatic characteristics to chemically leavened bakery products and to yeast leavened bakery products which have been subjected to shortened or modified fermentation procedures, comprising fermenting an aqueous nutrient medium containing, by weight, from 15% to 25% active bakers' yeast solids, from 4% to 8% of a yeast-fermentable saccharide, and a source of lactose sufficient in amount to provide an amount of lactose in the medium substantially equivalent to that which would be contained in from about 4% to about 6%, by weight, of nonfat milk solids, said fermentation being carried out at a temperature of from 80° F. to 100° F. for from 4 to 16 hours, inactivating the microorganisms in the medium to halt fermentation of the mass, and drying the inactivated fermented mass to obtain a dry flavoring material which is stable for a prolonged period over a wide range of temperatures when packaged in an air-tight container.

3,102,034
METHOD OF PACKAGING PROCESSED PICKLES AND TOMATOES

Herman Weinberg, Evanston, Ill., assignor to The Manhattan Pickle Co., Inc., Chicago, Ill., a corporation of Illinois

Filed Aug. 22, 1961, Ser. No. 133,154
2 Claims. (Cl. 99—171)

1. A method of preparing a package containing a product selected from the group consisting of processed pickles and tomatoes comprising the steps of placing the processed product substantially free from adhering processing fluids into a container formed of a transparent, flexible packaging film substantially impervious to gas and moisture, exhausting air and other gases from the container and sealing the container whereby the contents of the container will be vacuumized and the normal pressure of the atmospheric air surrounding the container will cause the inner surfaces of the container immediately adjacent to said product to collapse about the product to thereby compartmentalize said product in the package and to substantially prevent movement of the product within said container, the remainder of the inner surfaces of the film

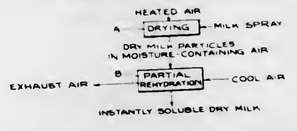


being brought into pressure contact and forming substantially flattened areas surrounding the product to thereby facilitate handling and packing of the package and to substantially prevent the migration in the package of any residual processing fluids that may be released by the encased processed product, said product in said package remaining crisp and fresh and said package retaining a clear and wholesome appearance for a prolonged period.

3,102,035
PROCESS FOR PRODUCING INSTANTLY SOLUBLE NONFAT DRY MILK

Charles A. Sanna, Menomonie, Wis., assignor to Sanna Dairies, Inc., Madison, Wis., a corporation of Wisconsin

Filed Feb. 27, 1961, Ser. No. 92,039
3 Claims. (Cl. 99—203)



1. A continuous process for directly producing an instantly soluble, nonfat dry milk in powdered form from skim milk, said process comprising the steps of:

drying a spray of skim milk droplets having a moisture content between about 50% to 75% with heated air having a temperature ranging between about 280° F. and 450° F. so as to produce a mixture of milk particles dispersed in moisture-containing air, the said milk particles having a moisture content between about 1½% to 3½%;

partially rehydrating and agglomerating the milk particles by partially cooling the mixture of dry milk particles dispersed in moisture-containing air so as to cause the re-transfer of some of the moisture from the moisture-containing air to the milk particles such that the milk particles so treated exhibit a moisture content between about 2½% to 4½; and

separating the partially rehydrated particles from the air containing the remaining moisture.

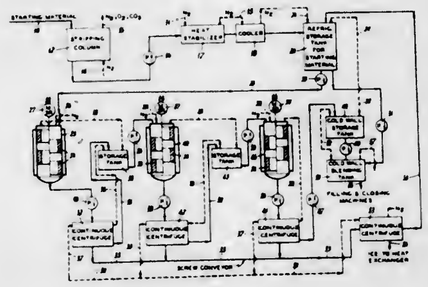
3,102,036
FREEZE CONCENTRATION PROCESS

Paul L. Smith, Orlando, Fla., assignor to Union Carbide Corporation, a corporation of New York

Filed July 20, 1960, Ser. No. 44,091
4 Claims. (Cl. 99—205)

1. A process for the concentration of a solution of heat-sensitive material in a solvent comprising: subjecting said solution to a stripping operation wherein a substantially inert gas is passed through said solution so as to preferentially displace substantially all the oxygen present in said solution; decreasing the temperature of said solution to at least the freezing point of the solvent

of said solution; and removing frozen solvent from the resulting concentrated solution, while continuously maintaining said solution in a nonoxidizing atmosphere after said stripping operation.



3,102,037
REFRACTORY CEMENT COMPOSITION

Robert F. Kimpel, Azusa, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed Dec. 16, 1957, Ser. No. 703,215
6 Claims. (Cl. 106—57)

1. A cement composition consisting essentially of a mixture of from about 25 to about 35 percent finely divided zirconium oxide; from about 25 to about 38 percent aluminum oxide bubble aggregate; from about 3 to about 4 percent sodium silicofluoride; with the balance being sodium silicate and water.

3,102,038
PROTECTIVE COATING

John R. Fisher, Jr., Dayton, Ohio, assignor to Industrial Metal Protectives, Inc., Dayton, Ohio, a corporation of Delaware

No Drawing. Filed Oct. 22, 1959, Ser. No. 847,910
4 Claims. (Cl. 106—84)

1. A temporary water-removable and water-soluble, protective and stop-off coating for application to the surface of a metal member to protect such surface from scratching and other marring in handling, shipment, subsequent fabrication and assembly, consisting essentially of a liquid admixture for liquid application to said surface of an aqueous soluble alkali metal silicate in water solution, said silicate having an alkali metal oxide to silicon dioxide ratio of between 1:2 to 1:3 and a specific gravity in the range of 1.3 to 1.4, an inorganic metal salt pigment selected from the group consisting of chromates and dichromates of zinc, lead, sodium, and potassium, and mixtures thereof, present in said admixture in an amount between 0.45% and about 1.9% based on the total weight of said admixture, and an inert and insoluble filler material dispersed in said admixture.

3,102,039
COLOR RESTORING CONCRETE BODY

Hermann Manecke, Bremen, Germany, assignor to Klockner-Werke Aktiengesellschaft

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,354
Claims priority, application Germany Nov. 6, 1957
10 Claims. (Cl. 106—97)

1. As part of a road covering, a solid concrete body consisting essentially of a minor proportion of a substantially white hydraulic cement and of a major proportion of substantially white aggregate more than half of said aggregate having a particle size of at least about 1 mm. and an effective fraction thereof having a particle size of at least 3 mm., said concrete body including as an essential constituent thereof and finely distributed therethrough titanium dioxide in an amount equal to between 2.4% and 6% of the combined aggregate and cement dry solids of said concrete body, whereby upon exposure of said concrete body to moist atmospheric conditions, a titanium dioxide suspension will be formed covering the free surface of said concrete body including any foreign matter adhering thereto, and whereby due to said titanium dioxide covering, the white color of said concrete body will be preserved.

3,102,040
PARAFFIN WAX COMPOSITIONS

Malcolm S. Williams, El Cerrito, and Richard C. Fox, San Rafael, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,803
7 Claims. (Cl. 106—270)

1. A paraffin wax composition consisting essentially of from 0.03% to 0.1% by weight of a Fischer-Tropsch wax having an average molecular weight in the range of about 750 to 1000, and the balance of said paraffin wax composition consisting essentially of a petroleum refined paraffin wax having an average melting point in the range of 125° to 155° F. AMP.

3,102,041
PROCESS OF PRODUCING CARBON ELECTRODES

Ove Helgessön Sandberg, Oddernes pr., Kristiansand, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway

No Drawing. Filed Feb. 5, 1960, Ser. No. 6,837
Claims priority, application Norway Feb. 23, 1959
3 Claims. (Cl. 106—284)

1. A paste for use in self-baking electrodes consisting essentially of coarse calcined coke, such coarse coke ranging in size from about 0.2 mm. to 15 mm. and having a major proportion by weight of a diameter in excess of 2.5 mm., coal tar pitch as a liquid binder, between 2% and 20% of fine uncalcined coke comprising at least 2% volatile matter and having a major proportion by weight of a diameter of less than 1 mm. and sufficient fine calcined coke having major proportion by weight of a diameter of less than 1 mm. to bring the aggregate of the fine coke up to between 25% and 40% of the whole.

3,102,042
TEXTILE FINISHING

Alexander F. Gortvai, Utica, N.Y., and Emile J. Monfils, New Bedford, Mass., assignors to United Merchants and Manufacturers, Inc., New York, N.Y., a corporation of Delaware

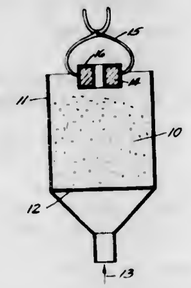
No Drawing. Filed Sept. 2, 1958, Ser. No. 758,587
3 Claims. (Cl. 117—7)

3. Method of applying a permanent finish comprising a glass-like appearance to bright viscose rayon woven and knitted fabrics having a denier of at least 300, which comprises the steps of running such fabrics through a treating solution comprising about 21% by weight concentration of urea formaldehyde, and from about 3% to about 5% by weight concentration of zinc nitrate, squeezing the goods thus treated to remove excess treating solution, and subsequently drying the treated goods at a temperature of about 160° F. and passing the dried goods through a tenter frame heated to temperatures within about 305° F. to 325° F. at a speed of about 45 yards per minute, and finally washing the treated, dried, and tentered goods at about 160° F. for about 10 minutes.

3,102,043
EPOXY RESINOUS COATING COMPOSITION AND FLUIDIZED BED COATING METHOD

Arthur S. Winthrop, Los Angeles, Calif., and Thaddeus J. Skotnicki, White Bear Lake, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 833,125
5 Claims. (Cl. 117—21)



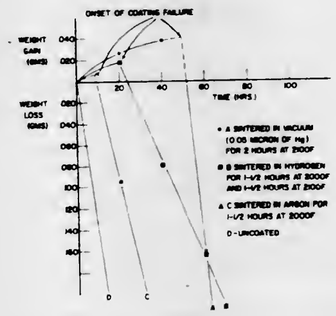
1. As a new article of manufacture: bulk quantities of small, discrete, normally-solid and brittle, storable and yet rapidly thermosetting, modified epoxy resin particles having a size within the range of about 40 to 325 mesh, said particles being suitable for application by suspension coating techniques to heated workpieces to provide a fused well bonded smooth coating thereon, and being stable at room temperature and non-fusible at temperatures as high as about 140° F. sustained for up to about three weeks but being temporarily fusible to form a smooth mass at temperatures on the order of 300° F. with a flowout factor of at least about 1¼ inches and no more than 5 inches, and further being capable of gelling to a non-flowable state at least within about 7 minutes after being heated at 300° F., and capable of advancing to a cured infusible state within about 10 minutes after being heated at 300° F., each of said particles comprising a fusible interreactive blend of a 1,2-epoxy resin averaging more than one 1,2-epoxy group per molecule with a melting point above 140° F. and a latent room-temperature-solid heat-activatable epoxy-reactive acid anhydride hardening agent, and including sufficient latent amine-type heat-activatable catalytic accelerator to substantially effect interreaction between said epoxy resin and said latent hardening agent within 10 minutes at 300° F., and sufficient flow-inhibiting filler, up to 60% by weight of the total composition of said particles, to limit the flowout factor of said composition within the range of at least about 1¼ inches up to no more than 5 inches.

3,102,044
APPLYING PROTECTIVE COATING FROM POWDERED MATERIAL UTILIZING HIGH TEMPERATURE AND LOW PRESSURE

A. David Joseph, South Windsor, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Sept. 12, 1960, Ser. No. 55,358
17 Claims. (Cl. 117—22)

1. In a method of protecting metal and alloy pieces against decomposition by contacting the pieces with finely divided particles of a member selected from the group consisting of refractory metals, alloys, oxides, and mixtures thereof, and sintering by heating, at a temperature of 1800° to 3500° F., the improvement which comprises

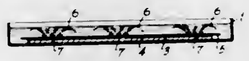


conducting the sintering operation at an absolute pressure of less than 1 micron of mercury.

3,102,045
PRODUCTION OF PATTERNS ON CLOTH OR SIMILAR SUBSTANCES

Kenneth Archibald Metcalfe, Graymore, South Australia, and Robert John Wright, Hectorville, South Australia, Australia, assignors to The Commonwealth of Australia, care of the Secretary, Department of Supply, Melbourne, Australia

Filed June 25, 1958, Ser. No. 744,588
3 Claims. (Cl. 117—37)



1. The method of producing printed patterns on cloth comprising applying an electrostatic pattern to a photo conductor surface on a control member, placing one side of the cloth on to the control member so that the electrostatic pattern extends through the cloth, applying liquid developer directly to the other side of the cloth as it is subjected to the electrostatic pattern of the control member, and subsequently removing the cloth from the control member.

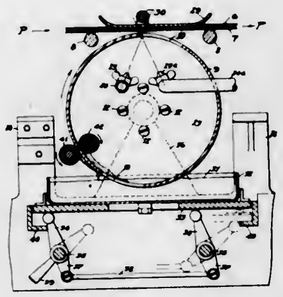
3,102,046
MANUFACTURE OF PRESSURE-SEALING ENVELOPES, BAGS, AND THE LIKE

Donald H. Bushey, Shrewsbury, Mass., assignor to United States Envelope Company, Springfield, Mass., a corporation of Maine

Filed May 11, 1959, Ser. No. 812,340
10 Claims. (Cl. 117—38)

1. In the manufacture of pressure sealing envelopes, bags or other containers, wherein uniform continuous film-forming coatings of rubber latex are produced on selected areas of advancing container material by air pressure spraying of a liquid latex-containing mixture including a volatile anti-coagulant for the latex through wide open mask apertures corresponding substantially in size and shape to the material areas destined to be latex coated, the improvement which consists in moving the so-apertured mask, synchronously with the material's advance, such that it intercepts all of the so-sprayed liquid mixture except the portions which pass through said apertures onto said selected areas, and using said mask's movement to recurrently pass said mask and its intercepted spray through a body of wetting liquid which is miscible

with said spray and devoid of any coagulative effect upon latex, whereby to maintain said mask and the spray there-



on in a condition of such wetness as to prevent any appreciable coagulation on said mask of the rubber latex content of said intercepted spray.

3,102,047
PROCESSES FOR PRODUCTION OF LOW PERMEABILITY CARBON
Herbert Lawrence Rivington, London, England, assignor to The General Electric Company Limited, London, England
No Drawing. Filed June 16, 1959, Ser. No. 820,572
Claims priority, application Great Britain June 23, 1958
5 Claims. (Cl. 117—46)

1. A process for the production of low permeability carbon from carbon of substantially higher permeability, comprising impregnating the carbon whose permeability is to be reduced with a liquid consisting essentially of up to five percent of furfuryl alcohol, up to ten percent of a cellulose plastic and the remainder furfural and the whole of which is carbonizable, polymerizing the furfural by heating the impregnated carbon to a temperature in the range of 275° C. to 310° C. over a period of four hours, under a pressure of at least 800 pounds per square inch and in the absence of a catalyst, and heating the thus impregnated carbon to a sufficiently high temperature to effect carbonization of the impregnant.

3,102,048
MAGNETIC FILMS
Burton E. Gran and James O. Holmen, St. Louis Park, and Richard J. Prosen, Edina, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,847
6 Claims. (Cl. 117—61)



1. A method for producing a thin magnetic film possessing the property of rotatable anisotropy, said method comprising thoroughly outgassing a non magnetic substrate, producing an absorbed layer of oxygen on said substrate, maintaining said substrate at a temperature below 350° C. and in a vacuum of about 10^{-6} mm. of mercury pressure, evaporating a nickel-iron alloy having a composition such that a deposit will be produced consisting of from about 77% up to about 83% nickel, balance iron onto said substrate to form a film greater than 2700 A. thickness, said film being predominently metal and having on the surface thereof an oxide layer.

3,102,049
PROCESS OF COATING THE EXTERIOR SURFACE OF A FLUORESCENT LAMP ENVELOPE WITH SILICONE RESINS
Robert F. Quirk, Danvers, Mass., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
No Drawing. Filed Mar. 16, 1960, Ser. No. 15,268
3 Claims. (Cl. 117—94)

1. A process for coating the external surface of an electric discharge lamp, the steps comprising: forming a composition consisting of a solvent, dimethylpolysiloxane and a partially alkoxylated silicone resin, said dimethylpolysiloxane and said silicone resin each comprising between .05% and .4% by volume of said composition and coating the external surface of the lamps by rolling at least one complete revolution in said composition.

3,102,050
METHOD OF COATING PARTICULATED RESINOUS MATERIAL BY POLYMERIZATION TECHNIQUE
Peter J. Canterino, Bartlesville, Okla., and Lon T. Smith, Lake Jackson, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Apr. 21, 1960, Ser. No. 23,629
8 Claims. (Cl. 117—100)

1. The method for producing a free-flowing composition which comprises:

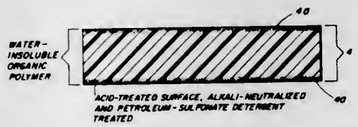
producing a fine granular polyethylene having a density of 0.94 to 1.00 gm. per cc. and a particle size of up to 40 mesh;

applying to said granular polyethylene directly without intermediate chemical treatment, a liquid monomer and a polymerization catalyst therefor, the amount of said monomer used being in the range between about 1 and about 100 weight percent based on said polyethylene;

subjecting the resulting monomer wet high surface area form of polyethylene to polymerization conditions for such monomer, in the absence of a diluent, without stirring; and

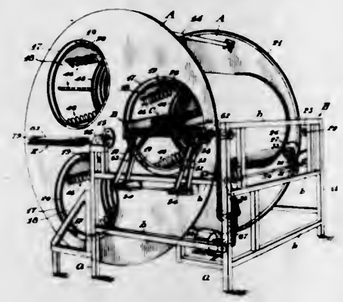
recovering said free-flowing composition directly as the result of said method.

3,102,051
PROCESS FOR MAKING A MOISTURE SENSING ELEMENT FOR DRY CLEANING AND ARTICLE
Edwin B. Michaels, Stamford, Conn., and Morris U. Cohen, Brooklyn, N.Y.
Original application May 28, 1956, Ser. No. 587,620. Divided and this application June 23, 1960, Ser. No. 38,251
7 Claims. (Cl. 117—213)



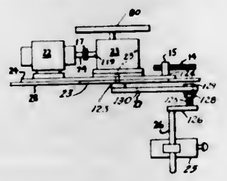
6. A process for the preparation of an integral, ionic surface-modified dielectric water insoluble organic material which comprise the steps of: subjecting said organic dielectric to surface chemical modification with sufficient acid selected from the group consisting of chlorosulfonic acid, sulfuric acid, monochloracetic acid and phosphoric acid for a time sufficient to insure a resistance of not more than about 100 megohms per square and not less than about 0.02 megohm per square, removing all excess acid by washing with ether and then with water, thereafter washing with dilute alkali, then washing the so-washed element with water, and subjecting the element to the action of a petroleum sulfonate detergent in a hydrophobic solvent.

3,102,052
TUMBLING MACHINE
Virgil E. Ackles, 841 E. 4th St., Los Angeles, Calif.
Filed Mar. 10, 1961, Ser. No. 94,843
10 Claims. (Cl. 118—19)



6. In a machine for applying granular edible substances to the surfaces of doughnuts and similar products, a plurality of open ended cylindrical drums, a normally stationary support for said drums embodying end plates having opposed circular openings to which the open ends of said drums are presented and having an axis around which the support is turnable, means revolubly supporting the ends of said drums on said end plates, a framework on which said support is turnably mounted around its axis, said drums extending in parallel relation to each other around the axis of said support, means for manually turning said support around its axis to selectively dispose either of said drums at a determined station, power driven means releasably engageable with the drum located at the station for rotating the drum to tumble products therein in the presence of a granular substance to be adhered thereto, a spiral track in each of said drums for advancing the products therein toward an open end thereof constituting a discharge end, an endless conveyor having a portion thereof bodily moveable in and out of the discharge end of the stationed drum, deflectors in said drums adjacent the discharge ends thereof for directing products advanced therein by said spiral track onto said conveyor when extended into the stationed drum, means mounted on said frame-work for vertically swinging said conveyor into or out of said drum when said support is at rest, powered means for driving said conveyor engageable therewith when in its uppermost position and disengageable therefrom when out of its uppermost position.

3,102,053
AUTOMATIC PAINTING MACHINE
Robert B. Way, 1503 Chelsea Ave., and Carl D. Hersey, 3107 Marvin Ave., both of Erie, Pa.
Filed Aug. 16, 1960, Ser. No. 50,003
15 Claims. (Cl. 118—301)

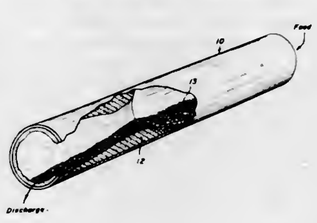


2. A painting machine comprising a frame, a motor means slidably supported on said frame, axle means on said motor means extending therefrom, a connecting rod connected to said axle means and oscillatable thereby about an axis, a mask, means supporting said mask on said machine, said mask having a curved surface for receiving an article to be painted, adjusting means on said machine to slidably move said motor means on said frame to bring said connecting rod into a line passing through the center of curvature of said curved surface, a swinging arm, said swinging arm being connected to said connecting rod and disposed at an angle thereto and swingable about the axis of said connecting rod, said swinging arm having a slot therein, a bolt in said slot, a bracket supported on said bolt, said mask being removable and said motor means being slidable to bring said connecting rod to the center of said curvature, a hinge member extending from said bracket parallel to said connecting rod, and means on said hinge member to support a paint gun, said bolt being supported in said slot and adjusted therein to adjust the distance of said hinge member from said mask.

3,102,054
CEREAL STARCHES AND PROCESS
George C. Harris, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 27, 1960, Ser. No. 78,270
11 Claims. (Cl. 127—69)

1. Process of removing the undersirable taste from cereal starches so that it does not reappear which comprises contacting the starch with an alcohol and aqueous ammonia, and separating the starch from the alcohol and aqueous ammonia.

3,102,055
METHOD OF CLEANING ROTARY KILNS
Mark R. Faigen, Verona, and Thomas L. Myron, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 27, 1961, Ser. No. 91,872
4 Claims. (Cl. 134—5)



1. A method of cleaning a deposit of hematite crystals and silicate from a rotary kiln used to agglomerate fluxed iron ore fines comprising feeding to the kiln coarse stone selected from the group consisting of limestone, dolomite and silicious stone and being of a size range of 1 inch to ¼ inch, said stone having a chemical and mineralogical make-up to which the material of the deposit adheres preferentially over adhering to the kiln wall, and heating the kiln to a temperature of 2300 to 2650° F.

3,102,056
SURFACE FINISHING AND CLEANING APPARATUS AND METHOD
Ruben O. Peterson, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 6, 1958, Ser. No. 765,454
30 Claims. (Cl. 134—9)

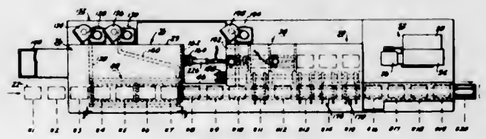
1. Surface treating a plurality of adjacent substantially parallel elongated articles while traveling longi-

tudinally in a generally straight horizontal path by vertically displacing such articles relative to each other at longitudinally spaced regions while traveling in such generally straight path as aforesaid to expose different



portions of article peripheries unobstructed by other of the articles, and simultaneously subjecting such exposed portions to surface conditioning means in each such region.

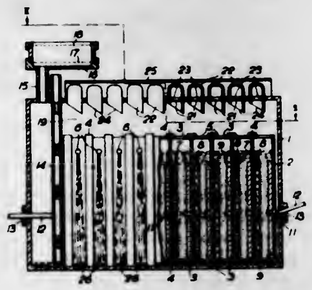
3,102,057
METHOD OF POWER WASHING ARTICLES
Emil Umbricht, Jackson, and Dewey Evans, Belleville, Mich., assignors to Ajem Laboratories, Detroit, Mich.
Original application Dec. 20, 1954, Ser. No. 476,138, now Patent No. 2,918,071, dated Dec. 22, 1959. Divided and this application Oct. 16, 1958, Ser. No. 773,128
8 Claims. (Cl. 134—23)



1. The method of power washing articles having openings comprising the steps of transferring the articles along a path uniformly spaced one behind another through a series of uniformly spaced stations with intermittent motion occurring during alternate first and second time periods, in a first period of which every article along said path is simultaneously transferred ahead from one station to the next and during a second period of which every article along said path remains in a station, directing high pressure streams of cleaning fluid at predetermined respective areas of an article as the article remains stationary in a predetermined station along said path, and simultaneously during said second time periods revolving a plurality of the articles in a plurality of adjacent stations while retaining them in their respective stations, and directing at them as they revolve high-pressure streams of cleaning fluid.

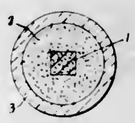
3,102,058
INERT VOLTAIC BATTERIES
Kenneth Jones, Dundee, Scotland, assignor to Burndept Limited, London, England, a British company
Filed Feb. 2, 1960, Ser. No. 6,324
Claims priority, application Great Britain Feb. 10, 1959
2 Claims. (Cl. 136—90)

2. An inert dry battery for activation by immersion in salt water in a substantially upright position comprising a generally closed battery container including a top having a vent therein and a bottom, a plurality of cell containers within said battery container each having a wide opening at its upper end spaced below the top of said battery container and having an overflow opening a little below its upper end, a duct extending from above the top of the battery container down to a point within the battery container outside said cell containers and below the level of the overflow openings in said cell containers, said duct serving as an inlet for water when the battery is first immersed and subsequently as an outlet for excess gas and liquid, a plurality of elements within each cell container which when salt water is added to the container, constitute therein a voltaic cell and also generate gas, a porous membrane across said vent which when dry permits the passage of gas but when wet prevents the passage of gas, a water repellent barrier to permit the passage of gas located outside said membrane to prevent access of water to the membrane from outside the battery container when the battery is immersed, said membrane thus becoming wet after the battery is immersed only when the battery container fills sufficiently for water to reach the membrane from the inside of the battery container and thereafter preventing the escape of gas through the vent and the pressure of the gas generated by the access of the water



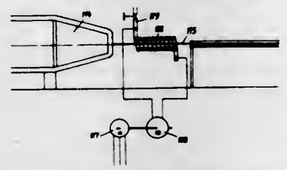
to said elements then causing liquid and gas to be discharged through said duct until the level of liquid in the cell containers falls to the level of the overflow opening and the level of the liquid in the battery container falls to the level of the point down to which said duct extends, a plurality of thimbles of porous material with one for each cell container and traversing the top of the battery container to come into contact with the water outside the battery when immersed, the lower end of each thimble being sloped at an angle and having its lower end located above the wide opening in the upper end of the respective cell container, connections electrically interconnecting the several cells without permitting the passage of liquid from one cell container to another, and end connections from the battery leading to the outside of the battery.

3,102,059
CATALYTIC DEVICE FOR ELECTRIC ACCUMULATORS
Harold Martin Harmer, Brentwood, Essex, England, assignor to Miranda Corporation, New York, N.Y., a corporation of New Mexico
Filed Feb. 20, 1961, Ser. No. 90,275
9 Claims. (Cl. 136—181)



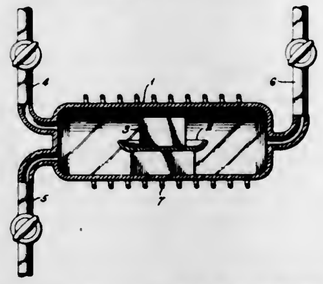
1. A catalytic device for use with an electrolytic cell having therein plates immersed in an electrolyte with an air space above the plates and electrolyte, a capsule in the air space, a catalyst within the capsule, the capsule being composed of a ceramic material having a pore size such that the passage of liquid is resisted but the passage of oxygen and hydrogen and of steam and water vapor is permitted, the ceramic material being treated with a water repellent substance.

3,102,060
METHOD FOR THE MECHANICAL TWISTING OF COLD-FORMED PROFILE STEELS
Hans Schoch, Zurich, and Eugen Wyss, Adliswil, near Zurich, Switzerland, assignors to Ernst Schoch Actiengesellschaft, Basel, Switzerland
Filed Dec. 14, 1959, Ser. No. 859,530
Claims priority, application Austria Dec. 15, 1958
6 Claims. (Cl. 148—12)



1. In a method of mechanically twisting workpieces consisting of cold-drawn profile steel having a carbon content below 0.25%, such as concrete reinforcement wires of less than 5 millimeters diameter, the steps of first uniformly heating the cold-drawn workpiece to a temperature of between 360° C. and 450° C. while moving it lengthwise through said high temperature zone, cooling said workpiece to room temperature while continuing its lengthwise movement, and twisting said workpiece to a helical permanent pitch a plurality of times while at said room temperature.

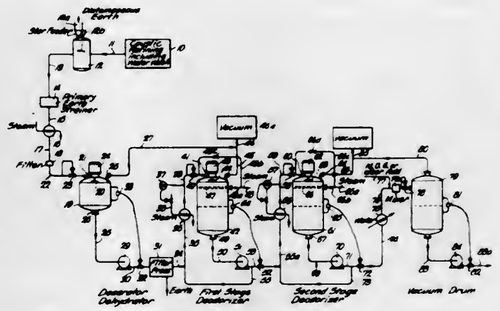
3,102,061
METHOD FOR THERMALLY ETCHING SILICON SURFACES
Jay W. Thornhill, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 653
2 Claims. (Cl. 156—17)



1. A method of etching solid silicon which comprises locating the silicon to be etched in a gaseous mixture containing less than about 20% oxygen and the remainder gases which are unreactive with silicon, reducing the pressure of said gaseous mixture to less than 10^{-3} mm. of mercury, heating the silicon to a temperature of about 1150° C., maintaining said pressure and temperature for approximately ten hours, and then introducing an inert gas to the gaseous mixture to thereby raise the pressure of the gaseous mixture to atmospheric pressure.

3,102,062
APPARATUS FOR CONTINUOUS EDIBLE OIL FINISHING
Ward A. Graham, Kansas City, Mo., and Orlando Webb, Jr., Prairie Village, Kans., assignors to Stratford Engineering Corporation, Kansas City, Mo., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 17,846
2 Claims. (Cl. 159—3)

1. Apparatus for stripping liquids comprising, in combination, a flow line, said flow line communicating to a vessel defining a zone of reduced pressure, a reduced orifice spray device in said vessel zone of reduced pressure connected to said flow line operable to disperse said liquid in finely divided particles therein, a liquid level control on said vessel, a vacuum line from said vessel above said spray device therein, a liquid withdrawal line from the lower portion of said vessel, a re-



cycle line passing from said withdrawal line to said flow line communicating to said spray device, a back pressure valve on said flow line comunicating to said spray device down stream of the recycle line connection therewith, a control valve on said withdrawal line past said recycle line connection actuated by said liquid level control, and pump means on said withdrawal line between the recycle line connection and the vessel.

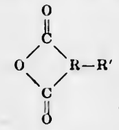
3,102,063
ASBESTOS FIBER BEATER SATURATION USING VERY SMALL INORGANIC PARTICLES
Leonard N. Ray, Jr., East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 9, 1961, Ser. No. 88,002
5 Claims. (Cl. 162—155)

1. In the method of making a beater saturated sheet wherein the rubber content of a synthetic rubber latex is smoothly and evenly deposited on the surface of chrysotile asbestos fibers, and forming a sheet from the resulting rubber coated fibers, the improved step of pre-treating said asbestos fibers to prevent coagulation of said synthetic rubber latex and to cause said smooth and even deposition of said rubber on said fibers consisting of adding to the slurry of asbestos fibers prior to the addition of the synthetic rubber latex an additive comprising a treating mass consisting of from about 4 to 150% by weight based on the dry weight of the fibers of water-insoluble, inorganic particles, at least 72% by weight of said particles having a maximum size of 1 micron, while maintaining gentle agitation in the slurry, said particles being selected from the group consisting of silica, clay, titanium dioxide, diatomaceous earth, silicates and mixtures thereof.

3,102,064
NOVEL PAPER SIZING PROCESS
Otto B. Wurzburg, Whitehouse Station, and Emil D. Mazzarella, Plainfield, N.J., assignors to National Starch and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 8, 1961, Ser. No. 136,741
7 Claims. (Cl. 162—158)

1. The method of sizing paper which comprises the step of intimately dispersing within the wet pulp, prior to the ultimate conversion of said pulp into a dry web, a

sizing agent which comprises a cyclic dicarboxylic acid anhydride corresponding to the structural formula



wherein R is selected from the class consisting of dimethylene and trimethylene radicals and wherein R′ is a hydrophobic group containing more than five carbon atoms and is selected from the class consisting of alkyl, alkenyl, aralkyl, and aralkenyl groups.

3,102,065
METHOD AND COMPOSITION FOR DISPERSING OF PITCH

John F. Thurlow, Gorham, Maine, assignor to Virginia Chemicals & Smelting Company, a corporation of Maine

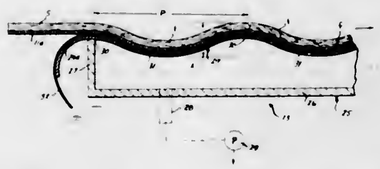
No Drawing. Filed Mar. 22, 1961, Ser. No. 97,468
11 Claims. (Cl. 162—175)

1. A method for dispersing pitch within pulp comprising dissolving in water a solution consisting of cationic starch 25 to 75%, glycerol monostearate 5 to 15% and kerosene 20 to 50% and adding said solution to said pulp at the rate of 2 ounces to 10 pounds of said starch, glycerol monostearate and kerosene per ton of pulp.

3,102,066
WEB FORMING METHOD AND APPARATUS

Edgar J. Justus, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Mar. 9, 1961, Ser. No. 94,586
14 Claims. (Cl. 162—209)



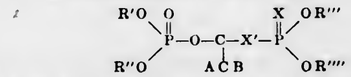
3. In a Fourdrinier type papermaking machine having a forming wire providing an active forming run, the improvement which comprises a support for the active run of said forming wire having an undulating contour effective to create a series of upright impulses to the wire as it advances along said active run.

3,102,067
VINYL PHOSPHATES

Joseph W. Baker, Kirkwood, Mo., and George A. Saul, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 20, 1960, Ser. No. 37,067
18 Claims. (Cl. 167—22)

1. Vinyl phosphates of the structure



wherein R′, R″, R‴, and R⁗ are aliphatic radicals containing 1 to 5 carbon atoms selected from the group consisting of alkyl, alkoxyalkyl, and chloroalkyl, wherein X and X′ are chalkogens of atomic weight less than 40, and wherein A and B are selected from the group consisting of hydrogen, lower alkyl, and halogen of atomic number from 9 to 35.

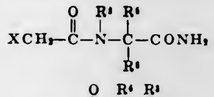
9. The method for protection of plants against insect attack which comprises applying to the plant an insecticidal amount of at least one compound of claim 1.

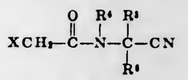
3,102,068
METHOD OF CONTROLLING BACTERIAL DISEASES OF FRUIT TREES

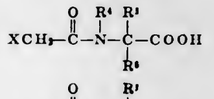
Nathan E. Tolbert, Okemos, Mich., assignor to Michigan State University of Agriculture and Applied Science, a Michigan nonprofit corporation

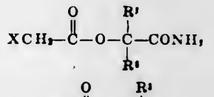
No Drawing. Filed Oct. 10, 1961, Ser. No. 144,073
7 Claims. (Cl. 167—22)

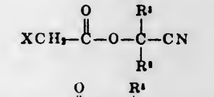
3. A method of controlling bacterial diseases of fruit trees which comprises applying to said trees a compound selected from the group consisting of compounds of the following generic formulae:

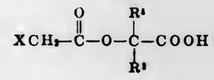
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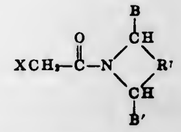
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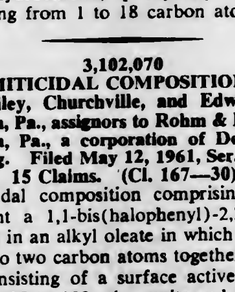
where X is selected from the group consisting of bromine and iodine; R^4 and R^5 individually are selected from the group consisting of hydrogen and akyl of from 1 to 4 carbon atoms; R^6 is selected from the group consisting of alkyl of from 1 to about 8 carbon atoms, alkylthioalkyl of from 2 to about 5 carbon atoms; aryl; and aralkyl of from 7 to about 13 carbon atoms; R^7 is selected from the group consisting of a single bond and an alkylene radical of from 2 to about 6 carbon atoms; B is selected from the group consisting of carboxamido, cyano, and carboxy, and B′ is selected from the group consisting of hydrogen, carboxamido, cyano, and carboxy.

3,102,069
METHOD OF DESTROYING PLANT HARMFUL MICROORGANISMS

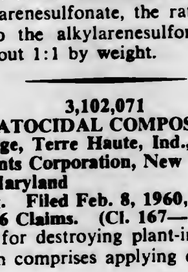
Henderikus Obias Huisman, Jan Hendrik Uhlenbroek, and Martinus Johannes Koopmans, all of Van Houtenlaan, Weesp, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application June 11, 1956, Ser. No. 590,404, now Patent No. 3,014,837, dated Dec. 26, 1961. Divided and this application Mar. 6, 1961, Ser. No. 93,299
19 Claims. (Cl. 167—30)

1. A method of destroying bacteria and fungi harmful to plants comprising contacting the plants with a nonphytotoxic fungicidally and bactericidally active compound selected from the group consisting of compounds having the following structural formula:



wherein R_1 represents a substituent selected from the group consisting of H and acyl,



wherein Y represents a member of the class consisting of H and the nitro radical,



and

wherein acyl in all of said formula represents the acyl residue of a monocarboxylic acid selected from the group consisting of saturated aliphatic hydrocarbon, olefinically unsaturated hydrocarbon, phenylalkyl and naphthoic acids containing from 1 to 18 carbon atoms.

3,102,070
MITICIDAL COMPOSITIONS

Gerard C. Riley, Churchville, and Edward A. Nolan, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed May 12, 1961, Ser. No. 109,505
15 Claims. (Cl. 167—30)

1. A miticidal composition comprising as an active miticidal agent a 1,1-bis(halophenyl)-2,2,2-trichloroethanol dissolved in an alkyl oleate in which the alkyl group contains one to two carbon atoms together with emulsifying agents consisting of a surface active ethylene oxide adduct having 15 to 100 ether units and a surface active oil-soluble alkylarenesulfonate, the ratio of the ethylene oxide adduct to the alkylarenesulfonate varying from about 3:1 to about 1:1 by weight.

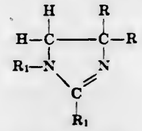
3,102,071
NEMATOCIDAL COMPOSITIONS

Edward B. Hodge, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,109
6 Claims. (Cl. 167—33)

1. A process for destroying plant-infesting nematodes in the soil which comprises applying directly on the soil

a compound represented by the following general formula:



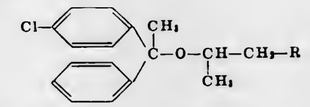
wherein R is a member selected from the group consisting of hydrogen and lower alkyl radicals and R_1 is alkyl.

3,102,072
HYPNOTIC COMPOSITION COMPRISING BARBITURIC ACID DERIVATIVES AND N,N-DISUBSTITUTED - β - AMINOISOPROPYL-(P-CHLORO-α-METHYL-BENZHYDRYL)-ETHERS

Herbert Arnold, Bielefeld, Engelbert Kühas, Gadderbaum, and Norbert Brock, Verentrup, über Bielefeld, Germany, assignors to Asta-Werke Aktiengesellschaft, Brackwede, Westphalia, Germany, a corporation of Germany

No Drawing. Filed Mar. 22, 1962, Ser. No. 181,808
Claims priority, application Germany May 30, 1959
8 Claims. (Cl. 167—52)

1. A novel hypnotic composition comprising, a 5,5-disubstituted barbituric acid derivative and a compound selected from the group consisting of a N,N-disubstituted β-amino-isopropyl-(p-chloro-α-methyl-benzhydryl) - ether of the general formula



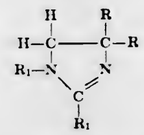
wherein R is a member selected from the group consisting of dimethylamino, diethylamino, piperidino, and morpholino,
and non-toxic acid addition salts thereof, and a pharmaceutically acceptable carrier.

3,102,073
IMIDAZOLINE ANTHELMINTIC COMPOSITIONS AND METHOD OF USING SAME

Edward B. Hodge, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed Feb. 3, 1961, Ser. No. 86,849
24 Claims. (Cl. 167—53)

1. An anthelmintic feed composition comprising animal feed and containing as an essential active ingredient small but effective amounts of a nematocidal imidazoline having the formula



wherein R is a member selected from the group consisting of hydrogen and lower alkyl radicals and R_1 is alkyl.

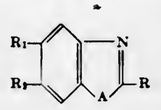
3,102,074
ANTHELMINTIC COMPOSITIONS AND METHOD OF EMPLOYING SAME

Horace D. Brown, Plainfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 1, 1961, Ser. No. 92,451
11 Claims. (Cl. 167—53)

1. A composition useful in the treatment of helminthiasis that comprises a solid orally ignestible nutrient

carrier having uniformly distributed therein as an anthelmintic agent a compound of the formula



wherein A is selected from the class consisting of oxygen and sulfur, R_1 and R_2 are each selected from the class consisting of hydrogen, lower alkyl, lower alkoxy, lower alkylthio, phenoxy and phenylthio groups, and wherein R_1 and R_2 taken together represent the 1,4-butadienyl radical, and R is selected from the class consisting of thienyl, pyrryl and furyl radicals.

3,102,075

TABLETING PROCESS

Ruth Millard, Baltimore, Md., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed Feb. 1, 1961, Ser. No. 86,314
4 Claims. (Cl. 167—57)

1. Process for the production of granular effervescent compositions having improved tableting properties, which comprises forming a mixture of a member of the group consisting of a granular alkali metal carbonate and granular alkali metal bicarbonate with a granular non-toxic organic acid, wetting said mixture with from 0.05 to 0.15 percent by weight of water based on the total batch weight, and then combining said wetted mixture with a lubricated dry mixture of a non-toxic organic acid containing an amino acid and a member of the group consisting of the granular alkali metal carbonate and the granular alkali metal bicarbonate, said mixture which is wetted comprising from 5 to 15 percent by weight of the total combined effervescent composition.

3,102,076

THERMYCETIN AND METHOD FOR PREPARATION

Brinton M. Miller, Middletown, and Irving Putter, Martinsville, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

Filed Apr. 12, 1962, Ser. No. 188,611
11 Claims. (Cl. 167—65)

1. A member of the group consisting of thermycetin and its salts, said thermycetin being characterized by the following properties:

a. crystallizing in the form of white platelets melting at about 152–154° C. uncorrected with decomposition on the hot stage,

b. soluble in aqueous alkaline solutions, organic bases, dioxane, glacial acetic acid, and formamide; partly soluble in methanol, acetone, ethyl acetate, butanol, amyl acetate, and methyl isobutyl ketone; and insoluble in water, petroleum ether, and benzene,

c. gives a positive color test with Tollen's reagent and with dinitrophenylhydrazine,

d. infrared absorption spectrum having characteristic peaks at the following wave lengths expressed in microns: 2.9–4.0 (broad), 6.01, 6.12, 6.28, 6.46 (shoulder), 6.52, 6.82, 7.02, 7.57, 7.75, 7.97, 8.16, 8.30 (shoulder), 8.55, 8.79, 9.06 (shoulder), 9.66, 10.07, 10.37, 10.92, 11.14, 11.75, 12.80, 13.44, (broad), and 4.3,

e. containing the elements carbon, hydrogen, nitrogen, and oxygen and having the molecular formula $C_{11}H_{13}N_4O_9$, and

f. characteristic ultraviolet absorption spectrums and molecular extinction coefficients, respectively of

$3030_{max.}$ A., $E^{1\%}_{1cm.}=1178$, $2790_{inf.}$ A., $E^{1\%}_{1cm.}=999$, $2330_{max.}$ A., $E^{1\%}_{1cm.}=574$

in 0.1 N hydrochloric acid;

3020 A., $E^{1\%}_{1cm.}=944$, 2730 A., $E^{1\%}_{1cm.}=890$, 2240 A., $E^{1\%}_{1cm.}=697$

in 0.1 M pH 7.0 phosphate buffer; and

2570 A., $E^{1\%}_{1cm.}=1420$

after 1 hour in 0.1 N sodium hydroxide.

8. The process which comprises growing Streptomyces NRRL 2824 under aerobic conditions in a nutrient medium containing soybean meal, dextrose and distillers' solubles, and recovering thermycetin from the resulting fermentation broth.

3,102,077

PREPARATION OF INSULIN CONTAINING 2.75 TO 8 PERCENT ZINC CONTENT

Henry Marinus Christensen, Frederiksborgvej 107, Roskilde, Denmark

Filed Oct. 27, 1960, Ser. No. 65,408
Claims priority, application Denmark Aug. 19, 1953
11 Claims. (Cl. 167—75)

1. A process for the production of crystalline zinc-insulin compounds having a content of monovalent anion selected from the group consisting of chloride, bromide and acetate corresponding stoichiometrically to two gram atoms of heavy metal less than the total amount of gram atoms of said heavy metal present in said metal-insulin compound per mole thereof, which process comprises reacting insulin with the salt of said monovalent anion and a heavy metal selected from the group consisting of zinc, calcium, manganese, cobalt, magnesium, iron, nickel and cadmium in a solvent for said salt, said solvent being chemically inert to insulin and to the formed metal-insulin compound and being selected from the group consisting of anhydrous lower alkyl alcohols, aqueous mixtures of lower alkyl alcohols, anhydrous lower aralkyl alcohols, unsubstituted and lower alkyl-substituted phenols, anhydrous pyridines, aqueous pyridine mixtures alone and in mixture with ammonia-ammonium chloride, lower mono- and di-basic fatty acids and mixtures of said fatty acids with water alone and together with an admixture of ammonia-ammonium chloride, the content of water in said mixtures with lower alkyl alcohols, with pyridines and with said fatty acids, respectively, being less than 85% by volume.

3,102,078

WATER-DISPERSIBLE VITAMIN PREPARATIONS

Charles D. Robeson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 13, 1961, Ser. No. 82,378
11 Claims. (Cl. 167—81)

1. A water-soluble preparation comprising a water-insoluble, fat-soluble vitamin composition at a concentration in a range from about one to about three parts by weight and a vitamin E-active, polyoxyethylene glycol ester of a tocopheryl ester of succinic acid wherein the polyoxyethylene glycol moiety of the ester has a molecular weight in a range from about 600 to about 6000, the concentration of said ester being in a range from about seven to about nine parts by weight.

3,102,079

METHOD FOR MANUFACTURING XANTHOSINE BY FERMENTATION

Shukuo Kinoshita, Tokyo, Kiyoshi Nakayama, Sagamihara-shi, and Takeo Suzuki and Zenroku Sato, Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed Aug. 2, 1961, Ser. No. 128,696
Claims priority, application Japan Nov. 21, 1960
4 Claims. (Cl. 195—42)

1. A method of producing xanthosine which comprises (*a*) culturing at a temperature of from 20° to 40° C. a guanine requiring strain of *Aerobacter aerogenes* in a culture medium comprising carbon source, nitrogen source, inorganic salt and from about 30 to about 100 milligrams per liter of guanine, (*b*) maintaining the pH of the medium within the range of from 5 to 8 and (*c*) accumulating xanthosine in said medium.

3,102,080

METHOD OF PRODUCING 1,4-DIENE-3-KETOSTEROIDS

Gerhard Raspe and Klaus Kieslich, Berlin-Charlottenburg, Erich Oliver, Berlin-Friedenau, Rudolf Muller, Berlin-Lankwitz, and Brigitte Wagner, Berlin-Halensee, Germany, assignors to Schering A.G., Berlin, Germany

No Drawing. Filed May 2, 1961, Ser. No. 107,029
Claims priority, application Germany May 20, 1960
27 Claims. (Cl. 195—51)

1. The method of producing 1,4-pregnadiene-11β,17α,21-triol-3,20-dione, which comprises treating 4-pregnene-11β,17α-21-triol-3,20-dione with a material selected from the group consisting of a *Bacillus lentus* MB 284 culture and the enzymes isolated therefrom.

3,102,081

ENZYME PRECIPITATION PROCESS

James W. Faucett, Wyckoff, Walter W. Windish, Paterson, and Richard A. De Senna, Ridgewood, N.J., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,664
6 Claims. (Cl. 195—68)

1. A process for the recovery of an enzyme system from a water extract of same which comprises the steps of contacting said water extract with a slurry of a finely divided salt of an acid selected from the group consisting of monobasic and polybasic monomeric aliphatic carboxylic acids of from 2 to 6 carbon atoms in a water miscible low molecular weight aliphatic oxygen containing compound in which both said enzyme system and said salt are substantially insoluble and recovering a water soluble coprecipitated enzyme system therefrom.

3,102,082

APPARATUS AND METHOD FOR CULTURING MICRO-ORGANISMS

John H. Brewer, 425 Oak Lane, Towson 4, Md.

Filed July 17, 1961, Ser. No. 124,575
12 Claims. (Cl. 195—139)



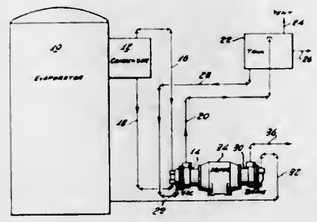
1. Apparatus for use in culturing microorganisms comprising means providing a casing impermeable to culture media and the microorganisms to be cultured, partition means separating the interior of said casing into separate culturing compartments, and culture media disposed inside said casing in said separate compartments, said partition means including a portion having interstices and pores in communication with the culture media in both compartments of a size and arrangement so that the microorganisms to be cultured will slowly grow and diffuse therethrough but so as to prevent the free flow of the culture media therethrough.

3,102,083

PUMPING MEANS FOR DISTILLATION UNIT

Harold E. Adams, South Norwalk, Conn., assignor to Nash Engineering Company, South Norwalk, Conn., a corporation of Connecticut

Filed Apr. 20, 1960, Ser. No. 23,552
8 Claims. (Cl. 202—52)



6. A method of operating an evaporator for the distillation of water from brine and in which the distillate is collected in a condenser and the brine is exposed to high temperatures and vacuum comprising, continuously withdrawing distillate from said condenser, simultaneously continuously withdrawing vapors and gases from said condenser, combining said distillate and said vapors and gases, and subjecting said vapors and gases to compression to condense said vapors, and compress said gases, and thereafter raising the pressure of said combined distillate, compressed gases and condensed vapors and discharging them at such increased pressure.

3,102,084

JET PLATING METHOD OF MANUFACTURE OF MICRO-ALLOY SEMICONDUCTOR DEVICES

Thomas J. Manns, Glenside, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 8, 1960, Ser. No. 41,497
4 Claims. (Cl. 204—15)

1. In the manufacture of micro-alloy semiconductor devices involving jet plating of at least one cadmium element onto a semiconductor blank and also involving application of heat to form at least one diode junction which tends to be degraded by later baking or operation at high temperatures, the improvement which consists in conducting said jet plating with a cadmium plating solution containing in solution a predetermined small quantity of copper effective substantially to prevent degradation of the diode junction.

3,102,085

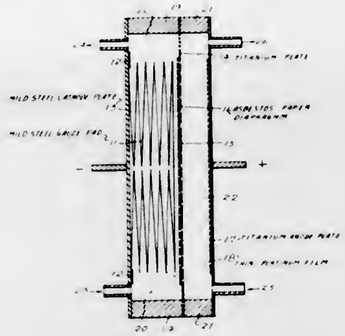
TREATMENT OF BRINE SOLUTIONS

George Ernest Edwards and Norman James LePage, Widnes, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed June 18, 1959, Ser. No. 821,279
Claims priority, application Great Britain June 27, 1958
35 Claims. (Cl. 204—128)

1. A process for the purification of brine containing free and available chlorine and for the recovery of said chlorine which comprises the steps of flowing said brine through a cathode compartment of an electrolytic diaphragm cell having an anode which is substantially unattacked by chlorine and chlorinated brine and a cathode which is substantially unattacked by chlorinated brine,

applying to said electrodes an electromotive force sufficient to cause current to pass between the anode and the cathode, thereby electrolytically converting free and available chlorine in said brine to the ionic state at the



cathode, said electromotive force being sufficient to cause evolution of free chlorine at the anode but insufficient to cause any substantial hydrogen discharge at the cathode and collecting free chlorine gas evolved at the anode.

3,102,086

METHOD OF IMPROVING THE CORROSION RESISTANCE OF TITANIUM METALS

Joseph Bernard Cotton, Sutton Coldfield, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed July 17, 1958, Ser. No. 749,052
Claims priority, application Great Britain July 26, 1957
4 Claims. (Cl. 204—147)

1. A method of reducing the rate of corrosion of a structure of a metal selected from the group consisting of titanium and titanium base alloys having anodic polarization properties comparable to those of titanium, said structure being in contact with a liquid medium corrosive thereto and comprising a member of the group consisting of sulphuric, phosphoric, hydrochloric, oxalic and formic acids, said method comprising immersing a conductive material selected from the group consisting of carbon and metals of the platinum group in said liquid at a point remote from said metal structure, and electrically-connecting said structure and said material so that direct current passes between the structure and said material and through the liquid medium to increase the potential of the structure to a value at which a protective film is maintained on the surface of said structure by anodic polarization, said potential being not substantially in excess of the minimum value required to maintain said film on the surface of said structure.

3,102,087

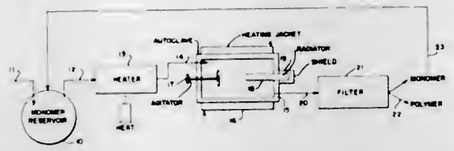
POLYMERIZATION BY GAMMA RAYS AND NOVEL PRODUCTS PRODUCED THEREBY

Michel Andre Jobard, Paris, France, assignor to Compagnie de Saint-Gobain, Paris, France

Filed Jan. 31, 1956, Ser. No. 562,547
Claims priority, application France Feb. 3, 1955
7 Claims. (Cl. 204—163)

1. The continuous method of making polyvinyl chloride that comprises flowing liquid vinyl chloride in bulk, at a rate of about 4 liters per hour, into, through, and out of a zone irradiated by gamma rays of about 32 curies at a temperature of about 62° C., separating monomer from polymer outside the zone, and returning the monomer to the said zone.

5. The continuous method of making polychlorofluoroethylene that comprises flowing monomeric polychlorofluoroethylene containing about 0.1% benzoyl peroxide catalyst into, through, and out of a zone irradiated by gamma rays of polymerizing intensity at a temperature



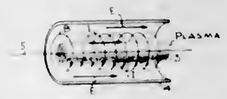
not substantially over 62° C. and at a rate providing a residence in the zone of about 4 hours, separating monomer from polymer outside the zone, and again irradiating the separated monomer under similar conditions.

3,102,088

APPARATUS FOR HEATING GASEOUS MATERIALS

Milton U. Clauser, Rolling Hills, Rudolf X. Meyer, Pacific Palisades, and Richard H. Huddlestone and Burton D. Fried, Los Angeles, Calif., assignors, by mesne assignments, to Space Technology Laboratories, Inc., El Segundo, Calif., a corporation of Delaware

Filed Dec. 12, 1958, Ser. No. 780,156
11 Claims. (Cl. 204—193.2)



1. Gas heating apparatus comprising: a pair of electrically charged cylindrical capacitor plates coaxially arranged one inside the other, said plates having aligned orifices therethrough located substantially equidistantly from their ends; a current discharge tube including an open-ended cylindrically-shaped body member enclosed by a first electrode at one end and having an annular second electrode mounted on the other end, said discharge tube being disposed between said capacitor plates and mounted to said outer plate in such a manner that the open annular electrode end of said tube is in alignment with the orifice of said outer plate; means for injecting an ionized gas of known characteristics through said outer plate orifice and into said discharge tube; and triggered switch means coupled to said means and to said capacitor plates, said switch means being operable to discharge said capacitor plates through said discharge tube, whereby a pinch effect is produced by which high kinetic energies are imparted to the ionized gas particles.

3,102,089

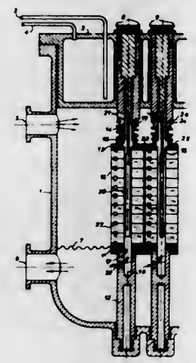
ASSEMBLY OF SOLID MODERATOR ELEMENTS FOR HIGH TEMPERATURE NUCLEAR REACTORS SUBJECTED TO ACCELERATIONS

Gilbert Mission, Bagneux, and Henri Meullen, Courbevoie, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France

Filed Nov. 28, 1960, Ser. No. 72,049
Claims priority, application France Dec. 4, 1959
2 Claims. (Cl. 204—193.2)

1. An assembly of solid moderator elements for high temperature nuclear reactors subjected to accelerations and to substantial inclinations to the vertical which comprises a reactor casing, a plurality of parallel independent ceramic moderator columns in said casing, each of said columns comprising a stack of blocks and including an

axial channel for receiving fuel elements and for circulation of a cooling fluid therein, each of said columns being spaced from adjacent ones of said columns for free lateral and radial extension and means for axial expansion for each of said columns including resilient guide means, comprising terminal members disposed at one end of each of said columns, support members for said



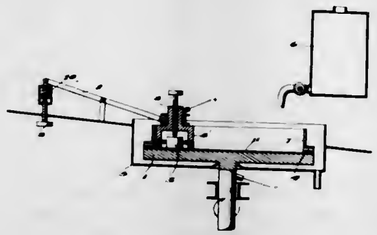
terminal members connected to said casing, tubular terminal members disposed at the other end of each of said columns, a sleeve in each of said tubular terminal members connected to said casing, said tubular members being longitudinally movable with respect to said sleeves, spaced shoulders on each of said tubular members and the associated one of said sleeves and a helical spring seated between said shoulders.

3,102,090

SYSTEM AND UNIVERSAL APPARATUS FOR THE COMPLETE PREPARING OF METALLOGRAPHIC SAMPLES

Alberto Bassi, Carlo Corsetti, Franco Mantega, and Giovanni Perona, all of Segrate, Italy, assignors to Centro Informazioni Studi Esperienze S.r.l., Segrate, Milan, Italy

Filed Dec. 13, 1960, Ser. No. 75,498
Claims priority, application Italy Aug. 11, 1960
5 Claims. (Cl. 204—217)



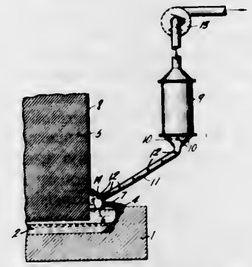
1. Apparatus for carrying out electrolytic cleaning and anodic etching of metallographic samples comprising a horizontal circular plate mounted for rotation around a vertical axis, means for rotating the plate; a fabric covering on said plate, means for rotatably holding the sample in contact with said fabric adjacent the periphery of said plate, means for rotating said last named means, means for supplying liquid on to said plate and means for supplying electric current to said plate and said means for holding a sample.

3,102,091

AUTOMATIC ARRANGEMENT FOR MAINTAINING COMBUSTION IN GAS BURNERS FOR USE WITH ALUMINUM FURNACES

Birger L. Ydstie, Blommenholm, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway

Filed Mar. 9, 1961, Ser. No. 94,470
Claims priority, application Norway Apr. 6, 1960
4 Claims. (Cl. 204—247)



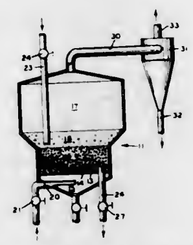
1. An aluminum smelting furnace comprising a furnace pot, an electrode entering such pot, a gas collecting duct around the lower portion of the electrode for collecting gases evolved during smelting, a tar fume burner positioned at a point remote from said electrode to prevent overheating and baking of the electrode by the heat generated in such burner while burning tar fumes and combustible gases evolved during smelting, a pipe between the gas collecting duct and the tar fume burner for conducting the gases evolved during smelting away from the gas collecting duct to the tar fume burner, a plurality of holes of substantially smaller diameter than the pipe and spaced apart from each other along the entire length thereof, said holes permitting entry of limited amounts of air into the pipe for causing spontaneous combustion of a limited portion of the gases passing in the vicinity of each hole accompanied by propagation of a flame, the spacing of said holes being sufficiently close to cause successive spontaneous combustions and flame propagations along the entire length of the pipe from the end adjacent the gas collecting duct to the end adjacent the tar fume burner whereby ignition of the tar fume burner is maintained automatically during operation of the furnace.

3,102,092

FLUIDIZED BED CLASSIFIER

Thomas D. Heath and Leonard Aconsky, Westport, Conn., assignors to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed June 1, 1961, Ser. No. 114,234
9 Claims. (Cl. 209—140)



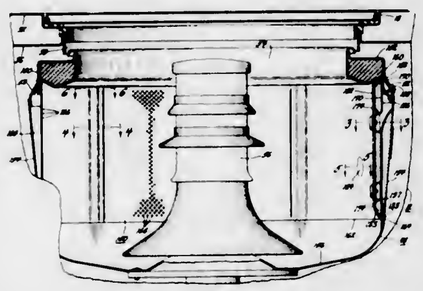
1. A process for separating a mass of particulate solids of mixed sizes into a first fraction consisting essentially of particles smaller than a preselected size of separation and a second fraction consisting essentially of particles larger than said preselected size of separation, which

comprises establishing a fluidized bed of particles from said mass of particulate solids with a fluidizing gas rising through the bed maintained at a shallow depth relative to a substantial height of a freeboard zone above it, controlling the rate of gas flow through the bed so that the gas velocity is great enough to project from said bed into the freeboard zone particles of an intermediate size significantly larger than said preselected size of separation, maintaining in the freeboard zone a relatively lower upward gas velocity sufficient only for sustaining and carrying away particles substantially not greater than said size of separation while said projected larger intermediate size particles losing their momentum in the upper portion of said freeboard zone fall back into the fluidized bed through an intermediate zone constituting the transition between the freeboard zone and the relatively constricted fluidized bed, with said intermediate size particles returning to the bed; continuously supplying said particulate solids to said fluidized bed, continuously removing from said freeboard zone the particles comprising the first fraction suspended in the fluidizing gas, continuously removing from said fluidized bed the particles comprising said second fraction including said projected and returned intermediate particle size, and controlling the effective top lovel of said bed in the fluidized state so as to maintain said level at an elevation substantially constant at the interface between said bed and said intermediate zone.

3,102,093
DRY CLEANING APPLIANCE

Marvin O. Ross, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Apr. 26, 1962, Ser. No. 190,386
1 Claim. (Cl. 210—382)

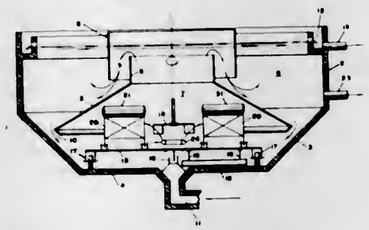


In combination, a spin basket having a container portion and means forming an access opening smaller than said container portion, said container portion being defined by a bottom wall means and a radially outwardly bowed generally vertical container sidewall having an inwardly directed rib, said container sidewall having a plurality of outflow ports circumferentially arranged around an upper portion thereof, means for rotating said spin basket in a centrifuging operation, and a clothes guard spaced from said container sidewall and coextensive therewith to form an annular chamber communicating with said outflow ports, said clothes guard comprising a generally cylindrical, perforated metallic sheet having juxtaposed coextensive terminal portions on opposite sides of said rib and having upper and lower edges, said upper edge engaging said container sidewall above said outflow ports and said lower edge engaging said container sidewall below said outflow ports, said terminal portions including juxtaposed radially inwardly depressed notches, an elongated, plastic spacer bracket fitting completely over said terminal portions, means for fastening said spacer bracket to said terminal portions at each of said notches in a manner to hold said terminal portions in fixed relationship to each other, said spacer bracket including a peripheral sidewall portion outboard of said notches snugly engaging said metallic sheet to prevent by-passing of solvent at this point, said peripheral sidewall portion of said bracket having a reentry portion at one end thereof partially enveloping said rib in a manner to locate said clothes guard relative to said spin basket, and means including a tab fastened to said clothes guard at one end thereof and engaging said container sidewall at the other end thereof to space the upper edge of said clothes guard from said container sidewall in the vicinity of said outflow ports and a bolt extending through one of said outflow ports into engagement with said tab to secure said clothes guard in said spin basket.

3,102,094
APPARATUS FOR REMOVING SETTLED SOLIDS FROM LIQUID TREATING BASINS

Christian O. Schmid and Artur J. Fischer, Frankfurt am Main, Germany, assignors to Infilco Incorporated, Tucson, Ariz., a corporation of Delaware

Filed June 5, 1961, Ser. No. 114,860
4 Claims. (Cl. 210—528)



1. In an apparatus for the treatment of liquids containing solids, including a basin having a bottom and an upstanding wall, and means in said basin causing a liquid motion having a circumferential component in horizontal planes about the basin axis in the lower portion of said basin, an improved device for removing from the bottom of said basin deposited solids which are not removed by the kinetic energy of said liquid motion, said device comprising support means supported from said bottom in said lower portion and rotatable about the axis of said basin, a baffle plate mounted on said support means and extending upwardly therefrom in the path of, and subjected to, the kinetic energy of said liquid motion to rotate said support means about said axis, and means suspended from said support means for removing solids from said bottom to a point of disposal, said means for removing solids extending partly across and in proximity to said basin bottom.

3,102,095
METAL WORKING COMPOSITIONS

Alfred R. Lange, Brielle, N.J., assignor to Sulflo, Inc., Elizabeth, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 11, 1960, Ser. No. 61,833
1 Claim. (Cl. 252—31)

A cutting oil comprising 1–30% by weight of finely divided particles of sulfur and 0.2–10% by weight of finely divided particles of a completely halogenated polyethylene resin selected from the group consisting of polytetrafluoroethylene resin and polytrifluorochloroethylene resin dispersed in a mineral oil base of 100–1200 SUS viscosity, said mineral oil being present in a major proportion and said resin being present in a quantity equaling about 5–30% of the weight of the sulfur.

3,102,096
LUBRICATING OIL CONTAINING ZINC CARBOXYLATE-COORDINATED ZINC DITHIOPHOSPHATES

Edwin M. Nygaard and Edward A. Oberright, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Dec. 20, 1960, Ser. No. 76,998
8 Claims. (Cl. 252—32.7)

1. As a new composition of matter, a zinc carboxylate-coordinated zinc dithiophosphate salt composed of approximately one mol proportion of zinc carboxylate per mol proportion of zinc dithiophosphate, said coordinated salt being prepared by the method which comprises (1) forming a reaction mixture of one mol proportion of (A) a zinc dithiophosphate salt of the formula

$$[(RO)_2P(=S)-S]_2Zn$$

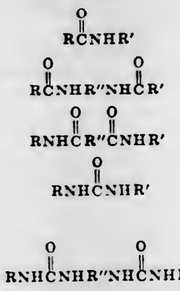
where R is a hydrocarbon radical selected from the group consisting of (*a*) aryl radicals, (*b*) alkyl-substituted aryl radicals having from one to 5 alkyl radicals substituted on the aryl nucleus thereof, each of said alkyl radicals having from one up to about 20 carbon atoms and (*c*) alkyl radicals containing from 5 to about 20 carbon atoms in which the carbon atom adjacent to the carbon atom attached to the oxygen atom in said formula is completely substituted with alkyl groups, (B) at least one mol proportion of a zinc salt of a carboxylic acid selected from the group consisting of (*a*) aliphatic carboxylic acids having from one to about 20 aliphatic carbon atoms and (*b*) aryl carboxylic acids and (*c*) alkyl-substituted aryl carboxylic acids having from one up to 5 alkyl groups substituted on the aryl nucleus thereof, each of said alkyl groups containing from one to about 20 carbon atoms, (C) water and (D) a hydrocarbon solvent; (2) heating the reaction mixture to remove the water therefrom by distillation; and (3) filtering the reaction mixture to obtain a solvent solution of the zinc carboxylate-coordinated zinc dithiophosphate salt.

3,102,097
LUBRICANT GREASE

Arthur C. Borg, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Jan. 25, 1961, Ser. No. 84,748
7 Claims. (Cl. 252—49.9)

1. A lubricant grease comprising an oleaginous lubricant vehicle thickened to grease consistency with an arylcarbamyl compound melting above about 250° F., which compound is selected from the group consisting of



and



wherein R and R′ represent radicals containing no more than 12 cyclic carbon atoms, which radicals are selected from the group consisting of aryl, alkyl aryl, substituted aryl, and substituted alkyl aryl radicals, and R″ represents a divalent radical containing no more than 12 cyclic carbon atoms, which radical is selected from the group consisting of arylene, alkyl arylene, substituted arylene, and substituted alkyl arylene radicals, and a small amount, effective to decrease the ASTM penetration, of trimethylol propane phosphite.

3,102,098
LUBRICATING COMPOSITIONS COMPRISING ESTERS OF TRICARBOXY ACIDS

Stephen J. Metro, Scotch Plains, and Alfred H. Matuszak, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 1, 1959, Ser. No. 810,249
9 Claims. (Cl. 252—56)

1. A lubricating oil composition comprising a major amount of a synthetic ester lubricating oil prepared by complete esterification of a dicarboxylic acid and a minor load-carrying amount of a C_2 to C_{20} alkyl partial ester of a C_6 to C_7 tricarboxy aliphatic acid.

3,102,099
METHOD OF MANUFACTURING MONOCRYSTALLINE BODIES

Andreas Leopoldus Stuijts, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 4, 1958, Ser. No. 739,694
Claims priority, application Netherlands June 22, 1957
4 Claims. (Cl. 252—62.5)

1. A method of making a single crystal from a homogeneous melt comprising the steps, directing a narrow flow of a cool gas at a portion of the surface of a homogeneous melt of a ferromagnetic oxidic compound from which a single crystal is to be formed and a flux while slowly cooling the melt to lower the temperature of said surface portion slightly below that of the remainder of the surface of the melt and thereby form a crystal solely in and from the melt, and removing the thus-formed crystal from the melt.

3,102,100
PROCESS FOR EMULSIFICATION AND DEMULSIFICATION BY SURFACTANTS AND THE RECOVERY THEREOF

Harold L. Greenwald, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

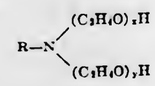
No Drawing. Filed Sept. 15, 1958, Ser. No. 760,935
2 Claims. (Cl. 252—303)

1. A cyclic process for emulsifying an oil-water system and reusing the emulsifying agent in the process, which comprises the steps of emulsifying an oil under alkaline conditions by the addition of a pH-sensitive surfactant and water thereto, said surfactant being selected from the class consisting of:

(*a*) the ethylene oxide adducts of a range of amines represented by the formula $C_{11-24}H_{23-49}NH_2$ where the number of ethylene oxide units is from 5 to 50 per amine;

(*b*) $C_{11-24}H_{23-49}NH(C_2H_4O)_nSO_4Na$ where $n=3$ to 50; and

(*c*)



in which R is a dehydroabietyl group and $x+y=15$ to 50,

and subsequently breaking the emulsion by addition of an acidic substance so as to make the oil-water system acidic to thereby concentrate the surfactant in a bulk phase, and recycling said bulk phase in said process so as to emulsify more oil as aforesaid.

3,102,101
DEODORANT COMPOSITIONS AND THE METHODS OF USE

Harold Kenneth Hawley, Woodlawn, and Thomas Bently Laycock, Jr., Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed June 6, 1961, Ser. No. 115,074
8 Claims. (Cl. 252—305)

1. A pressurized deodorant composition comprising from about 0.3% to about 15% by weight of the composition of a deodorant hydrocarbon containing from 12 to 18 carbon atoms, said hydrocarbon containing not more than about four branched chains having from about one to about two carbon atoms, and said hydrocarbon being selected from the group consisting of aliphatic unsaturated hydrocarbons containing from one to three multi-bond carbon to carbon linkages, aliphatic saturated hydrocarbons, and mixtures thereof, the balance being an aerosol propellant capable of providing a pressure from about 30 pounds per square inch absolute to about 115 pounds per square inch absolute in the aerosol container under conditions of normal use.

3,102,102
PRESSURE-SENSITIVE COMPOSITION COMPRISING A RUBBER, A TACKIFYING RESIN, A POLYAMINE, AND A PEROXIDE

Charles L. Weidner, Cranbury, and Winifred C. Collins, New Brunswick, N.J., assignors, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 22, 1954, Ser. No. 477,132
18 Claims. (Cl. 260—4)

1. A normally tacky and pressure-sensitive adhesive composition, having improved hold characteristics which comprises a rubber selected from the group consisting of natural rubber and the rubber copolymers of butadiene and styrene, a compatible tackifying resin, and a minor amount of hold improving compounds, one of which is present in amount approximately one-hundredth of one percent to five percent by weight of the composition and is a compound selected from the group consisting of compounds of the formula:

$$NH_2RNH_2$$

wherein R is a radical having from one to eighteen carbon atoms selected from the group of straight saturated unsubstituted hydrocarbon chains, straight saturated substituted hydrocarbon chains, unsubstituted imino-hydrocarbon chains, and acid salts of said compounds,

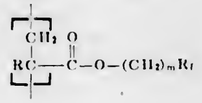
and the other of which is present in amount approximately 0.5 to 6% by weight of the composition, and is a compound selected from the group consisting of organic and inorganic peroxides.

3,102,103
PERFLUOROALKYL ACRYLATE POLYMERS AND PROCESS OF PRODUCING A LATEX THEREOF

Arthur H. Ahlbrecht, Dellwood, and Samuel Smith, Roseville, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 677,229, Aug. 9, 1957. This application Apr. 23, 1963, Ser. No. 274,920
8 Claims. (Cl. 260—29.6)

1. Polymers having a skeletal chain containing recurring perfluoroalkyl acrylate ester units represented by the formula:



wherein R is a member of the group consisting of hydrogen and the methyl radical, R_f is a perfluoroalkyl radical having from 3 to 12 carbon atoms and m is an integer from 3 to 12.

3,102,104
VULCANIZATION OF BUTYL RUBBER WITH A METHYLENE-BRIDGED TRIPHENOLDIMETHANOL

George H. Brice, Glen Rock, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,881
4 Claims. (Cl. 260—43)

1. A method of vulcanizing which comprises reacting 100 parts by weight of an elastomeric copolymer of a major proportion of isoolefin containing from 4 to 7 carbon atoms and a minor proportion of conjugated diolefin containing from 4 to 8 carbon atoms copolymerizable therewith, with from about 3 to about 16 parts by weight of a curing agent consisting essentially of 2,6 - bis - (2-hydroxy - 3 - hydroxymethyl - 5 - tert - butylbenzyl) - 4-tert - butylphenol at a temperature in the range from about 125° to about 200° C. for a period of from 2 minutes to 8 hours.

3,102,105
POLYESTER OF (a) A DI-ALCOHOL CONTAINING A POLYCHLORINATED DIPHENYL RADICAL AND (b) A DICARBOXYLIC ACID

Georges Collardeau, Maurice Jean Reymermier, and Jean Robin, Lyon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Filed Nov. 5, 1958, Ser. No. 771,968
Claims priority, application France Nov. 12, 1957
6 Claims. (Cl. 260—45.4)

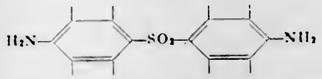
1. As a new substance, a polyester of (*a*) a di-alcohol having the formula HO—R′—O—R—O—R′—OH, where R represents a divalent radical of a polychlorinated diphenyl containing at least 6 and up to 8 chlorine atoms and R′ is a divalent saturated aliphatic hydrocarbon radical having from 2 to 3 carbon atoms, and (*b*) a dicarboxylic acid selected from the group consisting of saturated aliphatic dicarboxylic acids, mono-olefinic aliphatic dicarboxylic acids and aromatic dicarboxylic acids.

3,102,106
STABILIZED POLYOXYMETHYLENES

John Francis Regan, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 8, 1960, Ser. No. 74,484
6 Claims. (Cl. 260—45.9)

1. A composition having an outstanding odor stability comprising polyoxymethylene having a number average molecular weight of at least 15,000 and 0.01 to 10% weight of said polyoxymethylene of a sulfone having the formula:



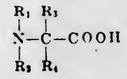
wherein each of the carbon atoms on the 2, 3, 5, and 6 position on each ring structure is bonded to a member of the group selected from the class consisting of hydrogen, alkyl groups of from 1–10 carbon atoms, aryl groups of from 6–10 carbon atoms, alkoxy groups of from 1–10 carbon atoms, phenoxy, alkaneoyl groups of from 1–6 carbon atoms, halogen, amino, nitrile, and combinations thereof.

3,102,107
STABILIZATION OF POLYPROPYLENE WITH NICKEL SALTS OF AMINO ACIDS

Mary Lou Soeder, Newark, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 10, 1960, Ser. No. 61,368
5 Claims. (Cl. 260—45.75)

1. A stereoregular polymer of an α-olefin having from 3 to 6 carbon atoms containing as a light stabilizer therefor a small amount of a nickel salt of an α-aminocarboxylic acid having the formula



wherein R_1 and R_2 are radicals selected from the group consisting of hydrogen, hydrocarbon and carboxyalkyl radicals, R_3 and R_4 are radicals selected from the group consisting of hydrogen and hydrocarbon radicals, and R_1 and R_3 can together comprise a hydrocarbon radical cyclically connecting the nitrogen atom and the α-carbon atom of the formula.

3,102,108
UREA-FORMALDEHYDE PHARMACEUTICAL COMPOSITIONS

Albert Aebl, Lucerne, and Paul Giger, Wolhusen, Lucerne, Switzerland, assignors to Ed. Geistlich Sohne A.G. fur Chemische Industrie, Wolhusen, Lucerne, Switzerland, a body corporate of Switzerland

No Drawing. Filed Oct. 19, 1959, Ser. No. 847,095
Claims priority, application Switzerland Oct. 20, 1958
3 Claims. (Cl. 260—69)

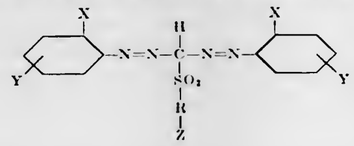
1. A process for the production of a bactericidal urea-formaldehyde condensation product comprising condensing urea with formaldehyde in the proportion of 2–3 mols of formaldehyde for each mol of urea in aqueous solution at a pH between 3 and 4 to form a solution of a water-soluble pre-condensate, adjusting the pH of such solution to a pH greater than 7, adding a further quantity of urea sufficient to bring the overall ratio of formaldehyde to urea to between 1.25 and 2.0 and spray-drying the resultant mixture in an atmosphere maintained at a temperature of 180°–200° C. to form said product having a solubility in water at 20° C. of 0.05–0.5% weight/volume.

3,102,109
AZO DYES

Willy Steinemann, Basel, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed July 12, 1960, Ser. No. 42,244
Claims priority, application Switzerland July 17, 1959
6 Claims. (Cl. 260—146)

1. Metallized azo complex dyes selected from the group consisting of copper, nickel and cobalt complex dyes which in metal-free form are of the formula



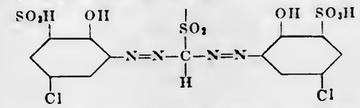
wherein

X is a member selected from the group consisting of hydroxy and carboxy,

Y is a member selected from the group consisting of hydro, chloro, nitro, sulfonic acid, tertiary butyl, carbethoxyamino, sulfonic acid amide, sulfonic acid methylamide, sulfonic acid isopropylamide, sulfonic acid amylamide, sulfonic acid phenylamide, sulfonic acid cyclohexylamide, sulfonic acid hydroxyethylamide, sulfonic acid hydroxy butylamide, sulfonic acid methoxy ethylamide, sulfonic acid methoxy propylamide, sulfonic acid sulfamido phenylamide, sulfonic acid carboxy phenylamide, sulfonic acid dimethylamide, sulfonic acid dimethylaminopropylamide, and sulfonic acid morpholide,

R is a member selected from the group consisting of phenyl, methylbenzenesulfaminophenyl, dimethylaminosulfaminophenyl, methylsulfaminophenyl, acetaminophenyl, methoxyphenyl, ethoxyphenyl, methylphenyl, chlorophenyl, benzoylaminophenyl, oxazolidonylphenyl, pyrrolidonylphenyl, carboxyphenyl, carbethoxyaminonaphthalene, acetaminonaphthalene, dimethylaminosulfaminonaphthalene, naphthalene sulfonic acid, methylsulfaminonaphthalene, methyl, n-butyl, and cyclohexyl,

and Z is a member selected from the group consisting of hydrogen and the radical



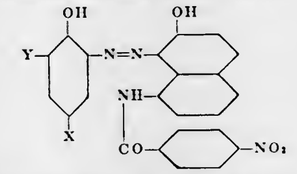
Z being said aforementioned radical only where R is 1-acetaminonaphthalene.

3,102,110
CHROMIUM-CONTAINING AZO DYESTUFFS

Guido Schetty, Basel, Switzerland, assignor to J. R. Geigy A.G., Basel, Switzerland

No Drawing. Filed July 14, 1961, Ser. No. 124,024
Claims priority, application Switzerland July 15, 1960
6 Claims. (Cl. 260—151)

1. A complex chromium compound containing one atom of chromium bound in complex union with two monoazo dyestuff molecules of the formula



wherein

X is a member selected from the group consisting of $-SO_2CH_3$, $-SO_2C_2H_5$, $-SO_2NH_2$, $-SO_2NHCH_3$, $SO_2N(CH_3)_2$, $-COCH_3$, $-COC_2H_5$,



—CHO, —CONHCH$_3$, and



and

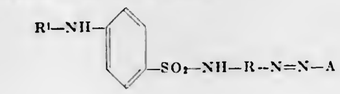
Y is a member selected from the group consisting of —H, —CH$_3$ and —Cl.

3,102,111
AZO SULFONAMIDE DERIVATIVES

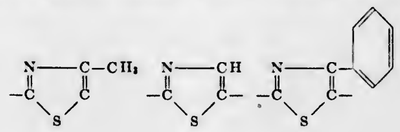
György Csermely, Budapest, György Lugosi, Felsogod, and Endre Jeney and Tibor Zsolnai, Debrecen, Hungary, assignors to Chinoin Gyogyszer- es Vegyeszeti Termekek Gyara RT., Budapest, Hungary

No Drawing. Filed Aug. 9, 1960, Ser. No. 48,349
Claims priority, application Hungary Aug. 17, 1959
6 Claims. (Cl. 260—154)

1. Compounds of the formula

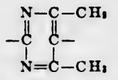


wherein R^1 is selected from a member of the group consisting of hydrogen atom and acetyl group, R is a member of the group consisting of the following residues





or



and A is a member of the group consisting of a phenyl, p-methylphenyl, p-ethoxyphenyl, p-chlorophenyl and α-napthyl.

3,102,112
MODIFICATION OF CELLULOSE WITH EPOXYPROPYL AMINE COMPOUNDS

Mary E. Carter, Philadelphia, and Leland B. Ticknor, Media, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,433
8 Claims. (Cl. 260—212)

1. An improved cellulosic product formed by the reaction of a cellulose material with a compound selected from the group consisting of di-(epoxypropyl) amine and tri-(epoxypropyl) amine.

3. A method for preparing an improved cellulosic product which comprises saturating a cellulosic material with an aqueous solution of a compound selected from the group consisting of di-(epoxypropyl) amine and tri-(epoxypropyl) amine, said solution having a pH of at least 6, and allowing the resulting reaction to proceed to completion.

3,102,113
UNORIENTED PARTICULATE DEAE-CELLULOSE ION EXCHANGE MATERIAL

Alan Humphrey Raper, Gerrards Cross, and Arthur Ronald Lockwood, Darlington, England, assignors to Glaxo Group Limited, Greenford, England, a British company

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,712
Claims priority, application Great Britain Oct. 26, 1959
4 Claims. (Cl. 260—231)

1. An ion-exchange material consisting of discrete particles not larger than 10 British Standard mesh of unoriented diethylaminoethylated cellulose having an ion-exchange capacity of from 0.1 to 2.0 meq./g., dry weight, said unoriented cellulose being a monofilament of 1,000 to 60,000 denier prepared by slow extrusion of sodium xanthate cellulose without tension into an acid bath.

3,102,114
POLYOXYETHYLENE DERIVATIVES OF ESTERS OF SUCROSE WITH LONG-CHAIN FATTY ACIDS

Saburo Komori, 56 Aza-Ogaito, Hirakata, and Mitsuo Okahara, 753–62 Hata, Neyagawa, both of Osaka, Japan

No Drawing. Filed Apr. 3, 1961, Ser. No. 100,001
15 Claims. (Cl. 260—234)

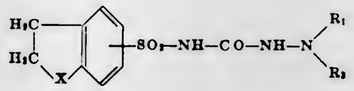
1. Polyoxyalkylene-adduct of a sucrose fatty acid ester, of which the fatty acid acyl group contains between 8 and 22 carbon atoms, and of which the polyoxyalkylene moiety is a member selected from the class consisting of polyoxyethylene and polyoxypropylene.

3,102,115
SULFONYLUREA COMPOUNDS

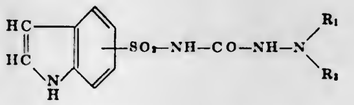
Hermann Breuer and Hans Hoehn, Regensburg, Germany, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 20, 1962, Ser. No. 218,155
Claims priority, application Germany Apr. 11, 1962
11 Claims. (Cl. 260—239)

1. A compound selected from the group consisting of sulfonylureas of the formula



and



wherein X is a member of the group consisting of CH_2, NCO(lower alkyl), NH, O, and S; R_1 and R_2 each represents a member of the group consisting of lower alkyl, hydroxy-lower alkyl and phenyl-lower alkyl; and R_1 and R_2 together represent a member of the group consisting of tetramethylene, pentamethylene, hexamethylene, oxatetramethylene, oxapentamethylene, oxahexamethylene, azatetramethylene, azapentamethylene, azahexamethylene, thiatetramethylene, thiapentamethylene and thiahexamethylene,

and physiologically acceptable acid addition salts of said sulfonylureas.

6. 1-(5-indansulfonyl)-3-(1-hexahydroazepinyl)urea.

3,102,116
PROCESS FOR THE PURIFICATION OF 7-CHLORO-1-METHYL-5-PHENYL-1,4-3H-BENZODIAZEPIN-2(1H)-ONE

George Chase, Hawthorne, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 12, 1962, Ser. No. 179,189
7 Claims. (Cl. 260—239.3)

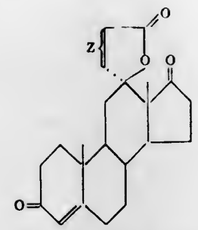
1. A process which comprises
treating crude 7-chloro-1-methyl-5-phenyl-1,4-3H-benzodiazepin-2(1H)-one with dilute hydrochloric acid:
separating the resulting insoluble material;
treating the resulting liquor with a mineral acid selected from the group consisting of nitric acid and sulfuric acid;
isolating the resulting insoluble material and mixing same in the presence of a lower alkanol with a base;
heating the resulting mixture to a temperature sufficient to effect complete conversion;
permitting the resulting solution to cool; and
separating the purified 7-chloro-1-methyl-5-phenyl-1,4-3H-benzodiazepin-2(1H)-one.

3,102,117
STEROIDAL LACTONES

Otto Halpern, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

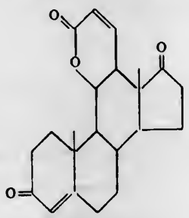
No Drawing. Filed Feb. 10, 1961, Ser. No. 88,258
14 Claims. (Cl. 260—239.57)

1. A compound of the following formula:



wherein Z is selected from the group consisting of a double bond and a saturated linkage.

4. A compound of the following formula:

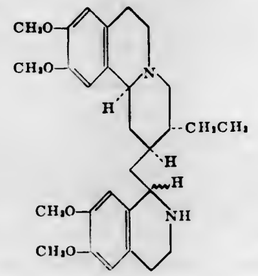


3,102,118
PROCESS FOR PRODUCING EMETINE AND ANALOGUES THEREOF

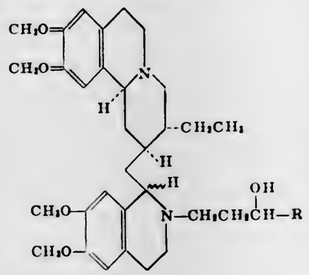
Dennis Edward Clark, Chalfont St. Peter, and Alexander Crawford Ritchie, Harrow, England, and Thomas Walker, Worli, Bombay, India, assignors to Glaxo Group Limited, Greenford, Middlesex, England, a British company

No Drawing. Filed Mar. 16, 1962, Ser. No. 180,346
Claims priority, application Great Britain Mar. 17, 1961
8 Claims. (Cl. 260—288)

1. A process for the preparation of a compound of the formula



in which a compound of the formula



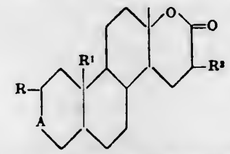
where R is alkyl of 1–3 carbon atoms, is subjected to oxidation with an alkali metal alkoxide in the presence of a ketone stable in the presence of alkali.

3,102,119
2 AND/OR 16 - AMINOMETHYLENE - 13,17 - SECO-ANDROSTAN-13α-OL17-OIC(13-17)LACTONES

Lawrence H. Knox and Fred A. Kincl, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed May 31, 1961, Ser. No. 113,641
14 Claims. (Cl. 260—294.3)

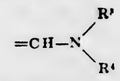
1. A compound of the following formula:



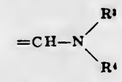
wherein A is selected from the group consisting of >C=O and



wherein R^5 is selected from the group consisting of hydrogen and hydrocarbon carboxylic acyl of less than 12 carbon atoms; R and R^2 are each selected from the group consisting of two hydrogen atoms and the grouping



wherein R^3 and R^4 are selected from the group consisting of hydrogen, lower alkyl, aryl, and aralkyl of up to 8 carbon atoms and R^3 and R^4 together with the nitrogen form a heterocyclic ring selected from the group consisting of piperidine, morpholine, piperazine and pyrrolidine and at least one of R and R^2 is



and R^1 is selected from the group consisting of hydrogen and methyl.

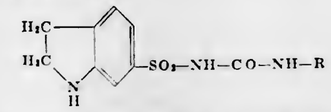
2. 2,16 - bis - piperidinomethylene - 13,17 - secoandrostan-13α-ol-3-one-17-oic(13-17)lactone.

3,102,120
METHOD FOR PRODUCTION OF INDOLINE-6-SULFONYLUREAS

Hermann Breuer and Hans Höhn, Regensburg, Germany, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

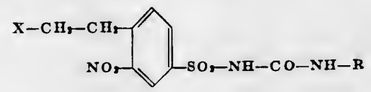
No Drawing. Filed May 29, 1962, Ser. No. 198,461
Claims priority, application Germany June 29, 1961
7 Claims. (Cl. 260—319)

1. A process for the production of indoline-6-sulfonylureas of the formula



wherein R represents a member of the group consisting of lower alkyl, lower alkenyl, naphthyl, phenyl, halophenyl, lower alkoxyphenyl, lower alkyphenyl, phenyl-lower alkyl, halophenyl-lower alkyl, lower alkoxyphenyl-lower alkyl, lower alkylphenyl-lower alkyl, cycloalkyl of 4 to 6 carbon atoms, cycloalkyl-lower alkyl wherein said cycloalkyl has 4 to 6 carbon atoms, lower alkoxy-lower alkyl and lower alkylthio-lower alkyl, which comprises reducing at

a temperature below about room temperature the nitro group of a compound of the formula



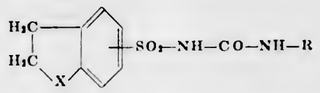
wherein X represents halogen and R has the same meaning as above, and cyclizing the resulting 4-amino derivative by heating at a temperature of about 100° C. in the presence of an acid binding agent.

3,102,121
NOVEL CUMARANSULFONYLUREAS AND 2,3-DIHYDROTHIONAPHTHENESULFONYLUREAS

Hermann Breuer and Hans Höhn, Regensburg, Germany, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

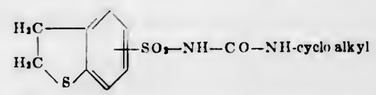
No Drawing. Filed Nov. 19, 1962, Ser. No. 238,767
Claims priority, application Germany June 29, 1961
11 Claims. (Cl. 260—330.5)

1. A compound selected from the group consisting of sulfonylureas having the formula



wherein X is a member of the group consisting of oxygen and sulfur and R is a member of the group consisting of lower alkyl, lower alkenyl, cycloalkyl of 4 to 6 carbon atoms, cycloalkyl-lower alkyl, said cycloalkyl having 4 to 6 carbon atoms, lower alkoxy-lower alkyl, lower alkylthio-lower alkyl, R^1-phenyl, R^1-phenyl-lower alkyl, wherein R^1 is a member of the group consisting of hydrogen, halo, lower alkyl and lower alkoxy, and alkali metal and alkaline earth metal salts thereof.

7. A compound of the formula



the cycloalkyl having 4 to 6 carbon atoms.

3,102,122
PROCESS OF PREPARING GRISEOFULVIC ACID

Thomas Walker, Wembley, England, assignor to Glaxo Group Limited, Greenford, England, a British company

No Drawing. Filed Dec. 6, 1960, Ser. No. 73,972
Claims priority, application Great Britain Dec. 9, 1959
7 Claims. (Cl. 260—346.2)

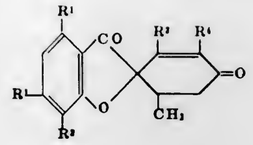
1. A process for the production of griseofulvic acid which comprises the step of hydrolysing griseofulvin by reaction with an aqueous strong acid in the presence of an alkanoic acid having from 1 to 5 carbon atoms.

3,102,123
ANALOGUES OF GRISEOFULVIN AND PROCESS BY WHICH THEY ARE PREPARED

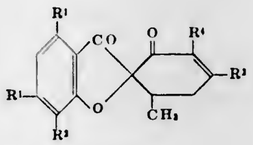
Victor Malcolm Clark, Cambridge, Thomas Walker, Wembley, and Godfrey Basil Webb, Greenford, England, assignors to Glaxo Group Limited, Greenford, England, a British company

No Drawing. Filed May 1, 1961, Ser. No. 106,544
Claims priority, application Great Britain May 4, 1960
15 Claims. (Cl. 260—346.2)

1. A compound selected from the group consisting of



and



wherein R^1 is lower alkoxy, R^2 is halo, R^3 is selected from the group consisting of chloro and bromo and R^4 is selected from the group consisting of hydrogen, lower alkyl, lower alkenyl, benzyl, chloro and bromo.

3,102,124
PREPARATION OF 2,3-DICYANO-5,6-DICHLORO-BENZOQUINONE

Peter W. D. Mitchell, Mount Royal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 27, 1961, Ser. No. 105,864
1 Claim. (Cl. 260—396)

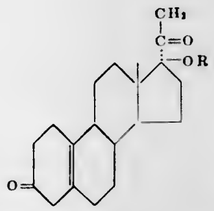
A method of preparing 2,3-dicyano-5,6-dichlorobenzoquinone which comprises the steps of dispersing 2,3-dicyano-5,6-dichlorohydroquinone in a two phase mixture comprising a lower alkanol, aqueous hydrochloric acid, and an aromatic hydrocarbon solvent, agitating the resulting mixture with an excess of lead dioxide, separating the liquid phases from the solids, and recovering 2,3-dicyano-5,6-dichlorobenzoquinone from the non-aqueous phase.

3,102,125
$\Delta^{5(10)}$-PREGNENE COMPOUNDS

Fred A. Kincl and Mercedes Velasco, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Feb. 21, 1962, Ser. No. 174,681
Claims priority, application Mexico Sept. 26, 1961
11 Claims. (Cl. 260—397.4)

6. A compound of the following formula:



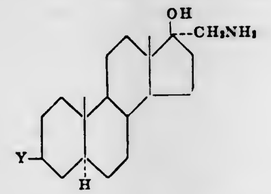
wherein R is a hydrocarbon carboxylic acyl group containing up to 12 carbon atoms.

3,102,126
17-AMINOMETHYL ANDROSTANES

Pierre Crabbé, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Mar. 1, 1962, Ser. No. 176,771
Claims priority, application Mexico Nov. 17, 1961
21 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



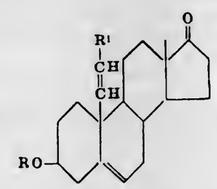
wherein Y is selected from the group consisting of keto, β-hydroxy and β-hydrocarbon carboxylic acyloxy of less than 12 carbon atoms.

3,102,127
19-METHYLENE-ANDROSTANE DERIVATIVES

Albert Bowers, Mexico City, Mexico, assignor to Syntex Corporation, Panama, Panama, a corporation of Panama

No Drawing. Filed June 12, 1962, Ser. No. 201,763
20 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms and R^1 is a member of the group consisting of hydrogen and a lower alkyl group.

3,102,128
MIXED ESTERS AND PROCESS FOR THEIR PREPARATION

Karl Hennig and Gustav Lietz, Dusseldorf-Holthausen, and Günter Meinhard, Dusseldorf, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed July 31, 1961, Ser. No. 127,894
Claims priority, application Germany Aug. 8, 1960
5 Claims. (Cl. 167—63)

1. A process for the preparation of mixed esters of a pentaerythrite di-fatty acid ester wherein the fatty acids have 12 to 30 carbon atoms and a citric acid di-fatty alcohol ester wherein the fatty alcohols have 12 to 30 carbon atoms which comprises reacting a fatty alcohol having 12 to 30 carbon atoms with aqueous citric acid to form a citric acid di-fatty alcohol ester, reacting the latter with a pentaerythrite di-fatty acid ester wherein the fatty acids have 12 to 30 carbon atoms in a molar ratio of about 1:1 to form a mixed ester of citric acid di-fatty alcohol ester and pentaerythrite di-fatty acid ester and recovering the latter.

3,102,129
PROCESS FOR PRODUCING MONOGLYCERIDES OF FATTY ACIDS

Hermann Birnbaum and Joseph Lederer, Pittsburgh, Pa., assignors to Hachmeister-Incorporated, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed May 19, 1961, Ser. No. 111,183
5 Claims. (Cl. 260—410.7)

1. In a recycling process for preparing monoglyceride esters of fatty acids, the steps comprising (*a*) reacting one part of substantially anhydrous glycerol with from one to three parts of a polyglyceride of a fatty acid in the presence of from 0.1% to 2%, based on the weight of the glycerol, of anhydrous alkali, the mixture being heated rapidly to a temperature of from 475° F. to 525° F., (*b*) holding the mixture at this temperature for at least 15 minutes to obtain a high proportion of monoglyceride, (*c*) acidifying the reaction product to a pH of below 7 by adding an excess of concentrated phosphoric acid to convert the alkali to the alkali metal acid phosphate, (*d*) cooling the reaction mixture rapidly to a temperature of from 200° F. to 350° F. to minimize reversion of the monoglyceride, (*e*) stripping free glycerol from the mixture, (*f*) vacuum distilling the reaction product while acidified to recover a high proportion of the monoglyceride therefrom, without appreciable reversion during distillation, (*g*) removing by mechanical separations substantially all of the alkali metal acid phosphate salt from the residue of the vacuum distillation, (*h*) recycling the treated residue to the reaction step (*a*) to be combined with added fatty acid polyglyceride and the whole to be reacted with additional glycerol and alkali metal catalyst with substantially equal efficiency of conversion to monoglyceride.

3,102,130
PREPARATION OF PHOSPHOROTHIOATE ESTERS FROM BENZYL ALCOHOL AND PHOSPHORUS PENTASULFIDE

Allen F. Millikan, Crystal Lake, and Gifford W. Crosby, River Forest, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Sept. 23, 1957, Ser. No. 685,390
4 Claims. (Cl. 260—461)

1. A method of preparing phosphorothioate ester compositions having a high sulfur-to-phosphorus ratio which comprises mixing benzyl alcohol and phosphorus pentasulfide in a mol ratio not less than about 4/1 at a temperature of 20–130° C. sufficient to induce reaction, said reaction being exothermic and being allowed to proceed until substantially complete, as evidenced by cessation of evolution of heat, then heating the reaction product to about 80° C. for at least 72 hours before settling, allowing the reaction products to settle into two liquid phases, and recovering the upper phase consisting of phosphorothioate esters, soluble in oil, having a sulfur-to-phosphorus atomic ratio in excess of 9/1 and an acid equivalent per atom of phosphorus of less than 0.5.

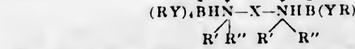
3,102,131
AMINE SALTS OF TETRA-COVALENT BORON COMPOUNDS

Edwin C. Knowles, Poughkeepsie, N.Y., and Edward L. Kay, Akron, Ohio, assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 17, 1961, Ser. No. 83,175
16 Claims. (Cl. 260—462)

1. Amine salts of tetra-covalent boron compounds:

and



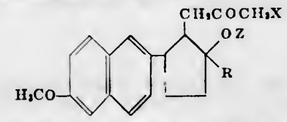
wherein Y is selected from the group consisting of oxygen and sulfur, X is an aliphatic hydrocarbylene radical containing 2 to 10 carbon atoms, R is a hydrocarbyl radical containing 1 to 24 carbon atoms, R' is selected from the group consisting of aliphatic hydrocarbyl and halogen substituted aliphatic hydrocarbyl radical containing one to about 30 carbon atoms and R'' and R''' are selected from the group consisting of hydrogen and aliphatic hydrocarbyl radical containing 1 to 24 carbon atoms.

3,102,132
ESTERS OF BENZYLOXYCARBONYLAMINOCYANOACETIC ACID AND PROCESS
Noel F. Albertson, East Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 6, 1961, Ser. No. 87,067
1 Claim. (Cl. 260—465)

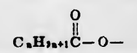
Ethyl benzyloxycarbonylaminocyanoacetate.

3,102,133
1-[5-(6-METHOXY-2-NAPHTHYL)-2-OXYCYCLOPENTYL]-2-PROPANONE DERIVATIVES
Leland J. Chinn, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 11, 1961, Ser. No. 158,527
8 Claims. (Cl. 260—488)

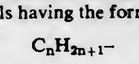
1. A compound of the formula



wherein X represents a member of the group consisting of hydrogen, hydroxyl, halogen, and radicals having the formula



Z represents a member of the group consisting of hydrogen and radicals having the formula



and R represents a member of the group consisting of hydrogen and radicals having the formula

$$C_nH_{2n+1}-$$

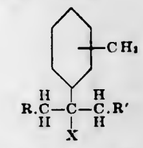
n being a positive integer less than 8.

3,102,134
PREPARATION OF MENTHENYL ESTERS AND ETHERS
Joseph P. Bain and Robert L. Webb, Jacksonville, Fla., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Sept. 14, 1961, Ser. No. 137,999
5 Claims. (Cl. 260—489)

1. The process for producing esters and ethers of 3-p-menthene-5-ol which comprises chlorinating 3-p-menthene by treating the same with not more than about an equimolecular quantity of elemental chlorine and subjecting resulting chlorinated material to a replacement reaction by heating the same with an alkali metal compound selected from the class consisting of alkali metal salts of carboxylic acids and alkali metal alcoholates under substantially anhydrous conditions.

3,102,135
PRODUCTION OF BENZOIC ACIDS AND 1-(CARBOXYPHENYL)-INDANE CARBOXYLIC ACIDS
John C. Petropoulos, South Norwalk, Conn., and Richard K. Madison, Murray Hill, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 10, 1961, Ser. No. 144,048
6 Claims. (Cl. 260—515)

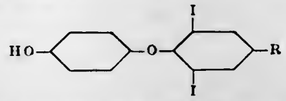
1. A method of producing a 1-(carboxyphenyl)-indanoic acid which comprises passing an oxygen containing gas at a temperature of about 40° C. to 180° C. through a mixture containing a polyvalent metal oxidation catalyst and a compound of the formula:



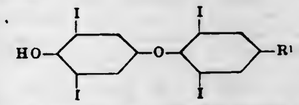
in which R and R' are members of the group consisting of hydrogen and alkyl radicals of 1 to 5 carbon atoms and R and R' together contain not more than 5 carbon atoms and X is a member of the group consisting of hydrogen and the hydroxyl radical until a substantial portion of said compound has been oxidized to a corresponding alpha-hydroxyalkyl benzoic acid, dissolving the latter benzoic acid in dilute aqueous mineral acid, and refluxing the resulting solution and recovering a 1-(carboxyphenyl)-indanoic acid so obtained.

3,102,136
PROCESS OF PREPARING DIIODINATED ANALOGS OF THYRONINE
Robert I. Meltzer, Rockaway, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
No Drawing. Filed June 24, 1959, Ser. No. 822,430
7 Claims. (Cl. 260—519)

1. A method of preparing diiodinated analog of thyronine of the formula:



wherein R is a member selected from the group consisting of carboxyl and radicals of the formula —A—COOH where A is a member selected from the group consisting of alkylene and mono-amino substituted alkylene containing 1 to 3 carbon atoms in the alkylene chain, which comprises reacting tetraiodinated analogs of thyronine of the formula:

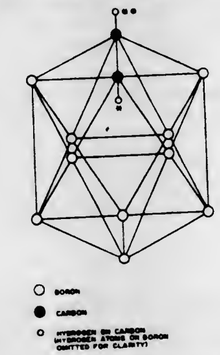


wherein R^1 is a member selected from the group consisting of carboxyl and radicals of the formula —A^1—COOH where A^1 is a member selected from the group consisting of alkylene, mono-amino substituted alkylene and mono-carboxylic-acylamino substituted alkylene containing 1 to 3 carbon atoms in the alkylene chain with a mixture of a hydrohalic acid selected from the group consisting of hydriodic and hydrobromic acid with an acid selected from the group consisting of hypophosphorous acid and phosphorous acid in an amount in excess of one reductive equivalent in the reduction of iodine to iodide ion per mol of said tetraiodinated analog of thyronine while employing a reaction temperature of 90° to about 150° C. from about 3 to about 20 hours.

3,102,137
PURIFICATION OF TEREPHTHALIC ACID
Robert H. Wise and Delbert H. Meyer, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed June 1, 1959, Ser. No. 817,072
8 Claims. (Cl. 260—525)

1. The process for the purification of crude terephthalic acid obtained from the oxidation of xylene containing p-xylene by catalytic liquid phase oxidation employing air as the oxidant and acetic acid as the reaction medium which comprises dissolving said crude acid in an aqueous solution containing alkali metal ions selected from the class consisting of sodium and potassium ions to form an aqueous solution of alkali metal terephthalate containing from 90 to 100% of its saturation at a temperature of from 25 to 100° C., treating said solution of crude terephthalic acid with an alkali metal hypohalite selected from the class consisting of sodium and potassium hypohalites at a temperature above 60° C. in an amount corresponding to 1 to 40 parts of active halogen per 100 parts of terephthalic acid equivalent by weight in solution, adding to the resulting solution a highly ionizable water-soluble alkali metal salt selected from the class consisting of sodium and potassium chlorides wherein the alkali metal thereof corresponds to the alkali metal of the alkali metal terephthalate in an amount to saturate said solution at a temperature in the range of from 20 to 30° C., thereafter cooling this solution to 20 to 30° C. to crystallize the alkali terephthalate, separating said alkali terephthalate from the mother liquor, washing the recovered solids with a saturated aqueous solution of said highly ionizable salt, redissolving the washed alkali terephthalate in water in an amount to obtain a solution containing 90 to 100% of its saturation at 20 to 80° C., thereafter acidifying the solution to a pH of from about 1.0 to 2.0 at 25 to 100° C., cooling the acidified solution to 20 to 30° C., and recovering the regenerated purified and decolorized terephthalic acid.

3,102,138
ORGANOBORON CARBOXYLIC ACID HALIDES AND THEIR PREPARATION
John W. Ager, Jr., Buffalo, and Joyce A. Reid, Tonawanda, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Nov. 6, 1959, Ser. No. 851,470
14 Claims. (Cl. 260—544)



1. Organoboron carboxylic acid halides having a structural formula of the type shown in the accompanying drawing selected from the class consisting of organoboron monocarboxylic acid halides and organoboron dicarboxylic acid halides, the organoboron monocarboxylic acid halides being of the class $RR'B_{10}H_8(CR''CR''')$ wherein R and R' are each selected from the class consisting of hydrogen and an alkyl radical containing 1 to 5 carbon atoms and wherein R'' and R''' are each selected from the class consisting of hydrogen, an alkyl radical, a monoalkenyl hydrocarbon radical, —COX and —R_1COX wherein R_1 is a bivalent saturated hydrocarbon radical containing 1 to 7 carbon atoms and X is halogen, the total number of carbon atoms in R'' and R''', taken together, not exceeding eight, and the organoboron dicarboxylic acid halides being of the class $RR'B_{10}H_8R^*R^{**}$ wherein R and R' have their previous significance and wherein R* and R** are each selected from the group consisting of —COX and —R_2COX wherein R_2 is a bivalent saturated hydrocarbon radical, the total number of carbon atoms in R* and R**, taken together, being at least 4 and not more than 8.

3,102,139
OXIDATION PROCESS FOR PREPARING CARBOXYLIC ACID ANHYDRIDES
Francis E. Lawlor, Wyndmoor, and Milton Braid, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed May 8, 1958, Ser. No. 733,821
11 Claims. (Cl. 260—546)

1. A method which comprises contacting a fluorine compound of the formula

RCXYZ

where R represents a perhalogenated alkyl radical of from one to four carbon atoms wherein each carbon atom is substituted by halogen atoms selected from the class consisting of Cl and F, provided that no more than one Cl atom is attached to any single carbon atom; X is selected from the class consisting of H, Br, Cl and F; anl Y and Z are selected from the class consisting of Br, Cl and I; with from about 2 to about 6 moles of sulphur trioxide per mole of said fluorine compound in the substantial absence of mineral acid; hydrolizing the resulting reaction product with up to about one-half mole of water per mole of sulphur trioxide; and isolating from the resulting hydrolyzed reaction product an anhydride of the formula

$$(RCO)_2O$$

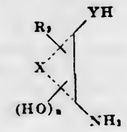
where R is as defined hereinabove.

3,102,140
QUATERNARY AMMONIUM SUPEROXIDE COMPOUNDS AND THEIR PREPARATION
Joseph S. Hashman, Evans City, and Jackie C. Renforth, Valencia, Pa., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 27, 1961, Ser. No. 92,090
6 Claims. (Cl. 260—567.6)

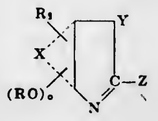
1. A tetraalkylammonium superoxide of the formula R_4NO_2 where R is a lower alkyl group.

3,102,141
PROCESS FOR THE PREPARATION OF SUBSTITUTED AMINOPHENOLS
Charles A. Clark, Binghamton, N.Y., Norman J. Doorenbos, Glen Burnie, Md., and Lester Horwitz, Bronx, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 24, 1959, Ser. No. 835,453
6 Claims. (Cl. 260—575)

1. A process of preparing a substituted aminophenol of the following general formula:



wherein X represents the carbon and hydrogen atoms necessary to complete an aromatic nucleus selected from the group consisting of the benzene and naphthalene nuclei; R_2 is a member of the group consisting of a hydrogen atom, a lower alkyl group and a phenyl group; n is a positive integer ranging from 1 to 2; and Y represents a member selected from the group consisting of a sulfur atom and a selenium atom, which comprises heating at a temperature ranging from 220° C. to 280° C. in a melted fusion mixture of sodium hydroxide and potassium hydroxide, a heterocyclic compound of the following general formula:



wherein X, Y, R_2 and n have the values given above, Z is a member of the group consisting of bromine and chlorine atoms and alkyl, aryl, amino, hydroxy, mercapto, thioalkyl and thioaryl groups and R is an alkyl group, said fusion mixture containing an alkali metal sulfide as a reducing agent.

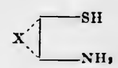
3,102,142

PREPARATION OF AMINOTHIOLS AND AMINOSELENOLS BY IMPROVED ALKALI FUSION AND THEIR DERIVATIVES

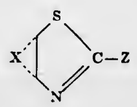
Lester Horwitz, Bronx, and Charles A. Clark, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 1, 1959, Ser. No. 810,210
7 Claims. (Cl. 260—578)

1. A process of preparing a compound of the following general formula:



wherein X represents the carbon and hydrogen atoms necessary to complete an aromatic ring system selected from the group consisting of a benzene nucleus, methyl-substituted benzene nucleus, a dimethyl-substituted benzene nucleus, a phenyl-substituted benzene nucleus and a naphthalene nucleus; which comprises fusing at atmospheric pressure in an open vessel and for a period ranging from 3 to 30 minutes, a heterocyclic compound of the following general formula:



wherein X has the values given above and Z represents a substituent selected from the group consisting of halide atoms and hydroxy, amino, alkylamino, arylamino, mercapto, thioaryl and thioalkyl; in a melted fusion mixture consisting essentially of sodium hydroxide, potassium hydroxide and an alkali metal sulfide, said mixture having a fusion temperature ranging from 220° C. to 280° C., the amount of potassium hydroxide ranging from 20 to 60 mol percent, the amount of sodium hydroxide ranging from 40 to 80 mol percent, the amount of alkali metal sulfide ranging from 2% to 20% of anhydrous alkali metal sulfide based on the total weight of the alkali fusion mixture.

3,102,143

INSECTICIDAL COMPOSITIONS OF MATTER AND METHOD OF PREPARATION THEREFOR

John P. Luvisi, Park Ridge, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,218
8 Claims. (Cl. 260—578)

1. A compound selected from the group consisting of chloro substituted conjugated alkadienic and chloro substituted conjugated cycloalkadienic derivatives of an alkyl aromatic compound having a nuclear substituent selected from the group consisting of nitro, amino, alkoxy and hydroxy radicals, the cycloalkadiene derivative having a methylene bridge between the cycloalkadiene ring and the aromatic ring.

3,102,144

METHYLATED DERIVATIVES OF HYDRAZINE

David Horvitz, Hyattsville, Md., assignor, by mesne assignments, to FMC Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 15, 1954, Ser. No. 456,317
1 Claim. (Cl. 260—583)

The method of producing methylated compounds of hydrazine which comprises reacting hydrazinium acid sulphate with an equivalent amount of a hydrazine in which there are not more than two substituent groups, each being methyl in the presence of water to form the neutral salt, reacting this solution with a methylating sulphate at a temperature of 60 to 85° C., filtering the solution, contacting the filtrate with a slurry of caustic alkali in water and distilling therefrom a product containing methylated hydrazines.

3,102,145

INTERMEDIATE IN THE PREPARATION OF 19-NOR-PROGESTERONE

Gérard Nominé, Noisy-le-Sec, Robert Bucourt, Clichy-sous-Bois, and Jean Tessier, Paris, France, assignors to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed June 21, 1962, Ser. No. 204,036
Claims priority, application France June 28, 1961
1 Claim. (Cl. 260—586)

4,5-seco-19-nor-pregnan-3,5,20-trione.

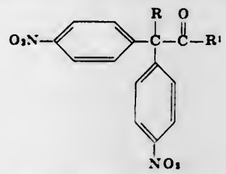
3,102,146

α,α-BIS(p-AMINOPHENYL)-LOWER-ALKANONES

Jerome Korman, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Dec. 21, 1956, Ser. No. 629,781
5 Claims. (Cl. 260—590)

1. A compound having the following general structural formula:



wherein R and R^1 are lower-alkyl radicals, the sum of the carbon atoms in said radicals being from two to six, inclusive.

3,102,147

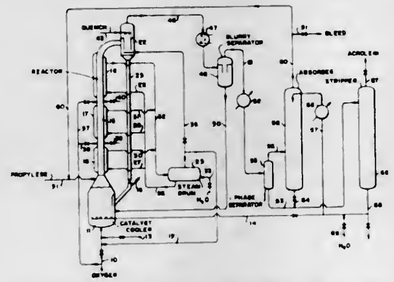
OXIDATION OF OLEFINS TO UNSATURATED ALDEHYDES AND KETONES

Ava J. Johnson, Piedmont, Calif., assignor to Shell Oil Company, a corporation of Delaware

Filed Nov. 2, 1959, Ser. No. 850,477
5 Claims. (Cl. 260—604)

1. In the process for the production of alpha,beta-unsaturated aldehydes and ketones wherein a preferred

suspension of a heavy metal-containing oxidation catalyst selected from the group consisting of oxygen containing compounds of molybdenum, tellurium oxide in combination with an oxide of a group VI metal, copper oxide in combination with a metal of the palladium-platinum group and copper in combination with silica gel, in a molecular oxygen-containing gas and an olefinic hydrocarbon having from three to four carbon atoms are passed concurrently and upwardly through an elongated externally cooled reaction zone of restricted cross-sectional area at unsaturated aldehyde and ketone forming conditions of temperature in the range of from about 250 to about 750° C., and at a space velocity sufficiently high to maintain said catalyst in suspended state throughout its passage through said reaction zone, and alpha,beta-unsaturated aldehydes and ketones and catalyst are separated from the effluence from said reaction zone, the



steps of passing said catalyst separated from said reaction zone effluence while still at an elevated temperature into a catalyst cooling zone of enlarged cross-sectional area which is in open communication with said reaction zone, bringing liquid water and a continuous stream of molecular oxygen-containing gas into direct contact with said catalyst in said catalyst cooling zone, thereby generating steam in said catalyst cooling zone while forming a catalyst-containing gaseous effluence from said catalyst cooling zone consisting essentially of molecular oxygen-containing gas, steam and entrained suspended catalyst, passing said suspended catalyst-containing gaseous effluence from said catalyst cooling zone into and through said reaction zone, and introducing said olefinic hydrocarbon into said suspended catalyst-containing gaseous effluence emanating from said catalyst cooling zone substantially at the inlet of said reaction zone.

3,102,148

ALKYL XYLYL SULFONES

John Robert Campbell, St. Louis, and Roger E. Hatton, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 8, 1960, Ser. No. 41,485
7 Claims. (Cl. 260—607)

1. An alkyl xylyl sulfone wherein the alkyl group has from 8 to 14 carbon atoms.

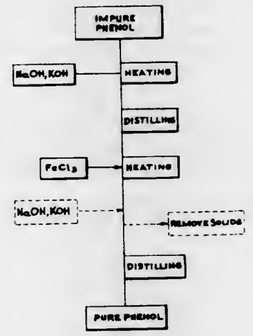
3,102,149

PURIFICATION OF PHENOL

Sydney E. Barry, St. Laurent, Quebec, Canada, assignor, by mesne assignments, to Shawinigan Chemicals Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed Dec. 7, 1959, Ser. No. 857,561
7 Claims. (Cl. 260—621)

3. A process for the purification of phenol derived from cumene by oxidation followed by cleavage of the resultant hydroperoxide, and containing colour-forming impurities, consisting of heating the impure phenol with a substance selected from the group consisting of the hydroxides of sodium and potassium at a concentration of 0.025 to 0.25 pound moles per thousand pounds of phenol for a period of sixteen to forty-eight hours at a temperature of 95° to 170° C., distilling the phenol from the resultant mixture, heating the phenol distillate with 0.1 to 1.0% ferric chloride by weight for fourteen days to eight hours at temperatures between the melting point of the



phenol and 80° C., adding about three moles of an alkali selected from the group consisting of the hydroxides of sodium and potassium per mole of chloride, removing the solids thus precipitated, and distilling substantially anhydrous purified phenol from the mixture of phenol and ferric chloride, the water content of said mixture being less than 1.0% by weight.

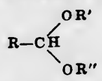
3,102,150

PROCESS FOR HYDROGENATING CARBONYL COMPOUNDS

Edward Allen Hunter and Clyde Lee Aldridge, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Feb. 19, 1960, Ser. No. 9,682
7 Claims. (Cl. 260—632)

1. The process for hydrogenating an aldehydic compound selected from the group consisting of aldehydes of the formula R—CHO, R being a member of the group consisting of alkyl and alkenyl radicals of 1 to 20 carbon atoms and acetals of the formula



wherein R is a member of the group consisting of alkyl and alkenyl radicals of 1 to 20 carbon atoms and R′ and R″ are alkyl radicals of at least one carbon atom to the corresponding saturated alcohols which comprises contacting said aldehydic compounds with hydrogen in the presence of a hydrogenation catalyst and in the further presence of a cation exchange resin in its hydrogen form in amounts of about 0.01 to 20 parts of said resin per part of hydrogenation catalyst.

3,102,151

PROCESS FOR THE DEALKYLATION OF ALKYL NAPHTHALENE

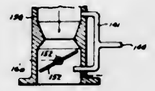
Robert G. Haldeman, South Norwalk, and George Castellion, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 13, 1958, Ser. No. 741,732
4 Claims. (Cl. 260—672)

1. A process for preparing a substantially sulfur-free naphthalene suitable for ready conversion to phthalic

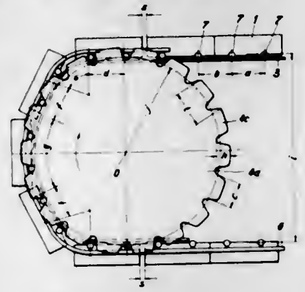
anhydride, which comprises hydrogenating and hydrodesulfurizing an alkyl naphthalene containing fraction containing at least 0.10% sulfur, in the presence of a hydrogen containing gas and in the presence of a hydrodesulfurization catalyst capable of functioning both to catalyze the hydrogenation and desulfurization and to form an intermediate sulfur-free partially hydrogenated alkyl naphthalene containing fraction and thereafter dehydrogenating and dealkylating said fraction in the presence of a dehydrogenation-dealkylation catalyst whereby a substantially sulfur-free naphthalene is obtained.

3,102,152
FUEL-HANDLING DEVICES
Edgar R. Schneider, St. Louis, Mo., assignor to Fuel Controls Corporation, Manchester, Mo., a corporation of Missouri
Filed Nov. 1, 1961, Ser. No. 149,444
17 Claims. (Cl. 261—41)



1. A fuel-handling device that can introduce fuel under pressure into an air stream and that comprises a housing, an inlet for said housing that is adapted to receive pressurized fuel, an outlet for said housing that is connectable to the passage through which said air stream passes, a recess in said housing that is intermediate said inlet and said outlet of said housing, a flexible diaphragm that is exposed to the pressure on fuel in said recess and that is adapted to be flexed by said pressure, said flexible diaphragm constituting a flexible closure for said recess, a seat intermediate said inlet for said housing and said recess, a valve member that is movable into engagement with said seat to prevent flow of fuel from said inlet for said housing to said recess and that is movable out of engagement with said seat to permit flow of fuel from said inlet for said housing to said recess, a second seat intermediate said recess and said outlet for said housing, a second valve member that is movable into engagement with said second seat to prevent flow of fuel from said recess to said outlet for said housing and that is movable out of engagement with said second seat to permit flow of fuel from said recess to said outlet for said housing, a second recess in said housing that is connectable to said passage, a second flexible diaphragm that has one surface thereof exposed to the pressure in said second recess and that has the opposite surface thereof exposed to the pressure in said passage, said second flexible diaphragm constituting a flexible closure for said second recess, a member that is movable by said second flexible diaphragm and that can cause movement of the first said valve member relative to the first said seat, a spring biasing said second flexible diaphragm to move said movable member to cause the first said valve member to engage the first said seat and thereby prevent the flow of fuel from said inlet for said housing to the first said recess, said pressure in said passage being adapted to cause said second flexible diaphragm to overcome the bias of said spring and to move in a predetermined direction to move said movable member and thereby permit the first said valve member to move away from the first said seat and thereby permit fuel to flow from said inlet for said housing to the first said recess, a lever that is movable in one direction to move said second flexible diaphragm in said predetermined direction to move said movable member and thereby permit the first said valve member to move away from the first said seat and thereby permit fuel to flow from said inlet for said housing to the first said recess and that is movable in the opposite direction to permit said second flexible diaphragm to move oppositely to said predetermined direction, a lost-motion connection between said second flexible diaphragm and said lever that enables said pressure in said passage to cause movement of said second flexible diaphragm in said predetermined direction even though said lever has not moved, said second valve member and the first said flexible diaphragm being connected together for conjoint movement, a second lever that is movable in a certain direction to move said second valve member away from said second seat and to move the first said flexible diaphragm and thereby force a quantity of fuel to move past said second valve member and past said second seat to said outlet for said housing, a connection between said levers whereby the first said lever will move in said one direction whenever said second lever is moved in said certain direction, said second valve member being a frusto-conical metering rod, an idling passage that by-passes the first said recess and the first said seat, and an adjustable idling screw in said idling passage, the flexing of the first said flexible diaphragm by said pressure on said fuel in the first said recess tending to minimize pulsations of the fuel issuing from said outlet for said housing.

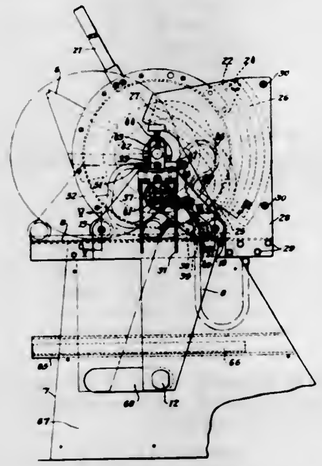
3,102,153
SINTERING APPARATUS
Jürg Stieler and Dietrich Münch, Frankfurt am Main, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Filed Sept. 24, 1962, Ser. No. 225,708
Claims priority, application Germany May 2, 1958
4 Claims. (Cl. 266—21)



1. In a sintering apparatus having tracks forming upper and lower reaches between spaced sprockets, pans movable on said tracks in pushing and abutting relationship, and teeth on said sprockets for engaging at least two spaced thrust members on each pan for moving said pans between the upper and lower reaches of the tracks, the improvement comprising a straight horizontal extension of each track reach outwardly beyond the vertical center line of each sprocket for a distance equal to the distance between the thrust members on one pan, a first curved guide rail portion joined to each horizontal extension and having a radius less than that of its respective sprocket, and a second guide rail portion connected to said first guide rail portion at a point offset from the horizontal plane through the sprocket.

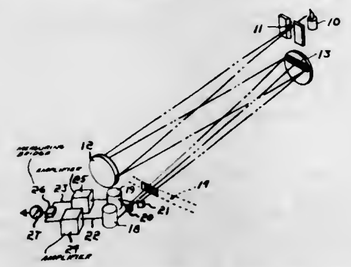
ELECTRICAL

3,102,154
ELECTRIC ARC FURNACES
Robert Charles Renton, Sydenham, London, England, assignor to Shaw Process Development Corp., Port Washington, N.Y., a corporation of New York
Filed Dec. 14, 1959, Ser. No. 859,429
Claims priority, application Great Britain Dec. 16, 1958
10 Claims. (Cl. 13—10)



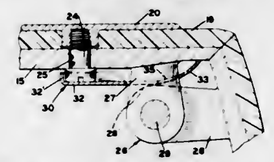
1. An electric arc furnace installation comprising a furnace including a pouring orifice defining a lip, a carriage supporting said furnace rotatable about a horizontal axis, guide rails guiding said carriage along a horizontal path transverse of said turning axis, and carriage control means displacing said carriage on said guide rails so that the lip of the pouring orifice during tilting of the furnace for pouring moves along a path perpendicular in reference to said guide rails.

3,102,155
BACKGROUND COMPENSATION FOR SPECTROMETERS USED IN QUANTITATIVE SPECTRO-CHEMICAL STUDIES
Bert L. Vallee, Brookline, Mass., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Feb. 16, 1955, Ser. No. 488,584
4 Claims. (Cl. 88—14)



1. In a multi-channel flame spectrometer for use in quantitative, spectro-chemical studies of a sample containing a plurality of chemical elements and having a slit through which a beam of heterogeneous light resulting from the excitation of the sample is directed to a dispersing device which provides a display of spectral frequencies in a focal curve, the combination of an isolator located with respect to said display to isolate a characteristic frequency of a selected one of the chemical elements present in the sample but including background radiations and establishing a first source of light energy, an isolator located with respect to said display in a zone exclusive of frequencies characteristic of any element in the sample and establishing a second source of light energy, receiving means for the light energy from said sources and operable to convert separately the light energy from each source to electrical energy as a measure of radiations present, and indicating means employing said electrical energies to effect an instantaneous and continuous reading representing the isolated frequency of the selected element less the background radiations actually present.

3,102,156
COMBINATION TEMPLE "NO-DROP" BRAKE AND SCREW GUARD
Martin J. O'Dea, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,420
2 Claims. (Cl. 88—53)

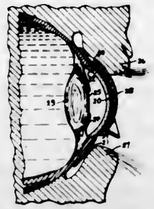


1. An ophthalmic frame comprising a lens mounting rim wherein an ophthalmic lens is secured, a plate extending sidewardly from and fixed to the temporal portion of said rim, a demountable browpiece secured upon said plate by a screw extending through the plate and having a head thereon seated against said plate, a temple hinge having a stationary part anchored to said plate adjacent to said screw and having a pivoted part fixed to a temple, the pivoted part being positioned externally of the outer faces of the stationary part and having a circular periphery on the ends of the pivoted part, a frictional brake member formed from flat spring material and seated at one end against said plate and at the other end against the head of said screw, the midportion of the brake member having an opening fitted around the stationary hinge part, whereby said member is held in operative position, the sides of the brake member adjacent to said opening being in contact with said circular periphery under spring pressure to act as a frictional brake against the circularly peripheral part of the temple hinge whereby said member primarily acts as a brake against motion of said temple and secondarily acts as a guard to prevent loosening of said screw member.

3,102,157
CORNEAL CONTACT LENS HAVING STOP FLANGE ENGAGED BY EYELIDS
Elmer L. Gamber, 2339 N. 51st, Seattle, Wash.
Filed Jan. 2, 1959, Ser. No. 784,541
3 Claims. (Cl. 88—54.5)

1. A corneal contact lens comprising a concavo-convex lens formed of light transmitting material having

a marginal size smaller than the limbus portion of the eye and larger than the maximum iris opening thereof, said lens having an elongated downwardly facing stop flange with rounded ends and rounded outer edges projecting substantially normal to the convex side of the lens along the lower edge thereof, said stop flange being



downwardly arched to conform to the upper surface of the lower eyelid and projecting forwardly approximately the width of said upper surface to thereby prevent rotation of the lens by engagement of the stop flange with the lower eyelid when urged thereagainst by the upper eyelid.

3,102,158
MICROSCOPE OBJECTIVE
Paul L. Ruben, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Aug. 25, 1961, Ser. No. 133,819
4 Claims. (Cl. 88—57)



1. An optical system for a microscope or the like having a substantially zero total Petzval sum and zero astigmatism, a numerical aperture of substantially 0.65 and a magnification factor of substantially 40×, said objective comprising a series of successive optically aligned lens elements which are designated by the letters A to H, the A lens being nearest to the object under observation, lens elements A, B and C being positive meniscus singlets, lens elements D and E together forming a negative meniscus doublet, elements F and G being positive meniscus singlets, and lens element H being of negative power, all singlets except the rearmost being concave toward said object, the focal lengths of said elements being designated successively F_A' to F_H', f designating the equivalent focus of said system, the numerical values thereof being given in the table herebelow,

$$15.0f<F_A'<18.0f$$
$$2.8f<F_B'<3.4f$$
$$2.4f<F_C'<2.9f$$
$$1.07f<-F_D'<1.26f$$
$$1.40f<F_E'<1.7f$$
$$1.0f<F_F'<1.2f$$
$$.88f<F_G'<1.06f$$
$$1.5f<-F_H'<1.8f$$

the range of numerical values of the lens thicknesses which are designated t_1 to t_8, being given in the table herebelow,

$$.53f<t_1<.65f$$
$$.34f<t_2<.42f$$
$$.38f<t_3<.45f$$
$$.20f<t_4<.25f$$
$$.52f<t_5<.63f$$
$$.78f<t_6<.94f$$
$$.85f<t_7<1.03f$$
$$.39f<t_8<.49f$$

the range of numerical values of the lens spacings which are designated S_1 to S_7, being given in the table herebelow,

$$.074f<S_1<.091f$$
$$.018f<S_2<.021f$$
$$.018f<S_3<.021f$$
$$.018f<S_4<.021f$$
$$.053f<S_5<.064f$$
$$1.13f<S_6<1.39f$$
$$1.19f<S_7<1.45f$$

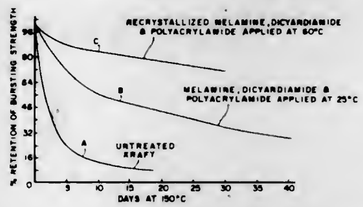
the range of numerical values of the refractive index of the lens materials of the successive elements A to H being given in the table herebelow,

$$1.615<n_D(A)<1.625$$
$$1.615<n_D(B)<1.625$$
$$1.612<n_D(C)<1.622$$
$$1.740<n_D(D)<1.760$$
$$1.615<n_D(E)<1.625$$
$$1.612<n_D(F)<1.622$$
$$1.616<n_D(G)<1.626$$
$$1.612<n_D(H)<1.622$$

the range of numerical values of the Abbe number for the lens materials of the successive elements A to H being given in the table herebelow,

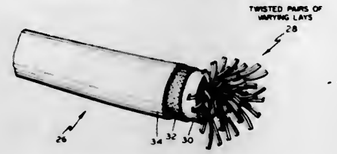
$$58.0<v(A)<62.0$$
$$58.0<v(B)<62.0$$
$$52.0<v(C)<57.0$$
$$25.0<v(D)<30.0$$
$$58.0<v(E)<62.0$$
$$52.0<v(F)<57.0$$
$$34.0<v(G)<38.0$$
$$52.0<v(H)<57.0$$

3,102,159
TREATED CELLULOSIC MATERIAL AND ELECTRICAL APPARATUS EMBODYING THE SAME
James G. Ford, Hickory Township, Mercer County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1962, Ser. No. 182,029
5 Claims. (Cl. 174—17)



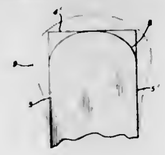
1. An improved sheet cellulosic product having increased stability and resistance to thermal deterioration, and particularly adapted for use as electrical insulation in electrical apparatus, the sheet cellulosic product comprising cellulosic fibers in sheet form, the sheet having uniformly distributed throughout its interstices from about 0.5% to about 5% by weight based on the weight of the cellulosic fibers of a mixture of melamine and dicyandiamide, the proportions being 5 to 1 parts of dicyandiamide and 1 to 4 parts of melamine, and from about 0.1% to about 1% by weight based on the weight of the cellulosic fibers of polyacrylamide.

3,102,160
TELEPHONE CABLE CONSTRUCTION
John B. Cook, Hamden, and William T. Fraser, Woodbridge, Conn., assignors to The Whitney Blake Company, New Haven, Conn.
Filed Dec. 22, 1961, Ser. No. 161,595
7 Claims. (Cl. 174—105)



1. A communication cable comprising in combination an outer moisture-impervious jacket, an intermediate shield, and an inner plurality of electrical conductors conjointly insulated in pairs so that longitudinal stresses will be shared equally by the conductors of each pair, said paired conductors being twisted with lengths of lay different from integral multiples of the lengths of lay of other paired conductors within the cable to minimize electrical coupling between paired conductors, the twist lay utilizing identical lengths of wire in each pair to minimize resistance unbalance and pair-to-pair capacitance unbalance, the insulation on said paired conductors comprising flexible dielectric material having two or more identifying colors on each pair of conductors so that both a conductor pair and each conductor of the pair are identifiable relative to the other conductor pairs in said cable by stripping a relatively short length of said jacket from said cable.

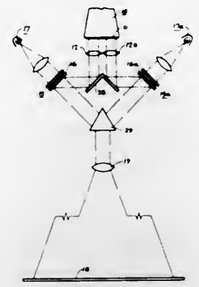
3,102,161
PREVENTION OF CORONA DISCHARGE
Gordon Raisbeck, Bernards Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 11, 1960, Ser. No. 21,402
2 Claims. (Cl. 174—127)



1. An extended conductor, for carrying electric power at high voltage, having a cross section composed of two plane parallel longer sides and two similar outwardly convex curved shorter sides, each of said shorter sides conforming to a single arch of a cycloid curve between adjacent cusps, said curve being tangent at said cusps to said plane longer sides, respectively.

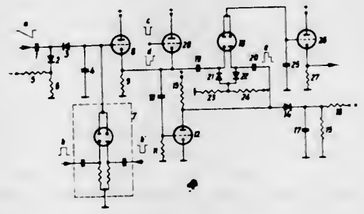
3,102,162
IMAGE PROJECTION SYSTEM
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,323
8 Claims. (Cl. 178—6.6)

1. The combination comprising: a photoconductive sheet; means for producing a uniform electrical charge on said sheet; means for causing light to convert said uniform electrical charge to a charge pattern; means for converting said charge pattern on said photoconductive



sheet to a pattern of light and dark areas; and means for projecting said light and dark areas on said photoconductive sheet onto a viewing screen.

3,102,163
CIRCUIT ARRANGEMENT FOR PRODUCING A CONTROL VOLTAGE FOR AUTOMATIC CONTROL OF ELECTRIC SIGNALS
Emil Sennhenn, Darmstadt-Arheilgen, Germany, assignor to Fernseh G.m.b.H., Darmstadt, Germany
Filed Jan. 28, 1960, Ser. No. 5,278
Claims priority, application Germany Jan. 28, 1959
14 Claims. (Cl. 178—7.2)

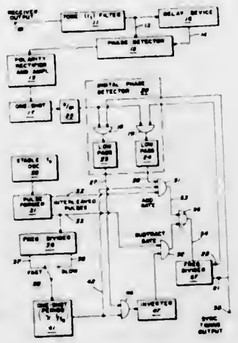


1. An arrangement for producing a control voltage suitable for regulating the automatic control of the amplification of periodically recurrent electrical signals of varying amplitudes, comprising, in combination, peak rectifier means adapted to receive the periodically recurrent electrical signals of varying amplitudes and furnishing intermediate voltage pulses at the frequency of the recurrent periods during which said electrical signals occur and corresponding in amplitude to the peak amplitude values of said electrical signals during said periods; sampler circuit means for periodically sampling the amplitudes of said intermediate voltage pulses during predetermined brief sampling periods close to the ends of consecutive ones of said recurrent periods, respectively; keying means for keying the amplitudes of said intermediate voltage pulses to a predetermined value immediately after each sampling period; and circuit means for deriving from the sampled amplitude values of said intermediate voltage pulses a control voltage and including voltage level control means for keeping the amplitude of the control voltage thus obtained during one of said recurrent time periods substantially constant through the next following one of said recurrent time periods, respectively.

3,102,164
SYNCHRONIZING PULSE CONTROL CIRCUIT

Ernest F. Rolz, Burbank, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Dec. 23, 1960, Ser. No. 78,103
7 Claims. (Cl. 178—69.5)



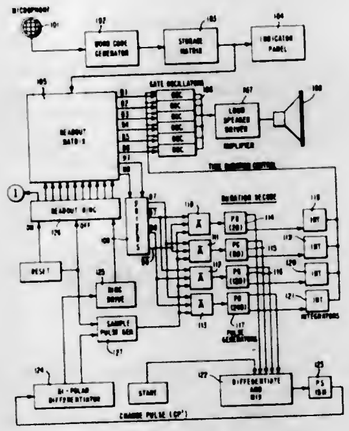
1. A system for synchronizing a local wave to input pulses which can be unstable comprising, a local oscillator source having first and second interleaved pulsed output means, a subtract "and" gate connected to the first output means of said source, and an add "and" gate connected to the second output means of said source, a frequency divider, a phase detector receiving said input pulses and an output of said frequency divider, said phase detector having first and second low-pass output means, the first low-pass output means of the phase detector connected to the subtract gate to enable it under synchronized and a first condition, means for connecting said second low-pass output means of the phase detector to said "add" gate to enable it only under second conditions, a second pulse source providing pulses having a low rate compared to said oscillator source and having a duration of the order of a period of said oscillator source, and connected to said "and" gate to enable it, said second pulse source connected to said subtract gate to disable it, and means for coupling the outputs of said add and subtract gates to said frequency divider, and the frequency divider producing a synchronized local wave.

3,102,165
SPEECH SYNTHESIS SYSTEM

Genung L. Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 21, 1961, Ser. No. 160,995
6 Claims. (Cl. 179—1)

1. A speech synthesizer for reproducing a sound from a digital code, said digital code including bits specifying the frequencies present in said sound and bits specifying the time duration of said sound, said system comprising a plurality of gated oscillators, each of said gated oscillators producing an output of a different one of the frequencies present in said sound, an audio transducer, the outputs of said oscillators being connected to drive said audio transducer, each of said oscillators producing an output in response to the presence of two gating inputs to the oscillator, a readout matrix specifying the frequencies present in said sound and the time duration of said sound, one gating input to each of said oscillators being connected to said readout matrix whereby a particular oscillator is enabled when said digital code contains a bit specifying that frequency, means for decoding said time duration bits, means responsive to said last named decoding means for generating a gate of the

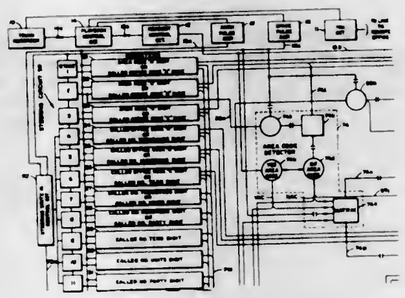


specified time duration, said last named gate being connected to the second gating input of all of said oscillators.

3,102,166
TOLL TICKETING TELEPHONE SYSTEM

William H. Berch, Penfield, and Milton A. Clement, Rochester, N.Y., Robert K. Kaye, Medford Lakes, N.J., and John William Newitt, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Aug. 28, 1959, Ser. No. 836,752
33 Claims. (Cl. 179—7.1)

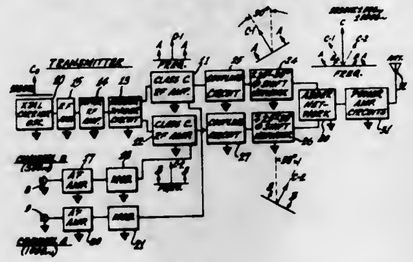


1. In a toll ticketing telephone system, a source of first pulses, a source of second pulses, a pulse-operated steering circuit having a plurality of steps including a predetermined step and adapted to respond to pulses from said first and second pulse sources, means for controlling said steering circuit to advance from one step to the next successive step in response to the receipt of each pulse from said first pulse source only if at least one pulse is received from said second pulse source between successive pulses from said first pulse source, and means responsive to the receipt of two successive pulses from said first pulse source without an intervening pulse from said second pulse source for controlling said steering circuit to advance directly to said predetermined step, irrespective of the number of steps that would otherwise be required to advance to said predetermined step.

3,102,167
PHASE-SHIFTED DOUBLE-SIDEBAND TWO-CHANNEL A.M. COMMUNICATIONS SYSTEM

Loy E. Barton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,025
19 Claims. (Cl. 179—15)

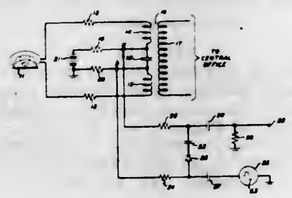


2. A signal communications system for two-channel stereophonic amplitude-modulated signal transmission and reception and compatible for monophonic signal reception comprising, means for generating and transmitting a composite two-channel amplitude-modulated carrier signal with a first set of upper and lower sidebands shifted plus 25° to 30° therefrom for one modulation channel and with a second set of upper and lower sidebands shifted therefrom minus 25° to 30° for the other modulation channel, the total angle between channel sidebands being substantially 50° to 60°, and means for receiving and decoding from said signal two separate modulation components including a signal-frequency phase-locked exalted-carrier oscillator and an automatic-frequency-control circuit therefor responsive to the phase differential of the received-carrier and the exalted-carrier signals.

3,102,168
SUPERVISORY CIRCUITS FOR TELEPHONE SUBSCRIBER'S LINE

Frank P. Cirone, Dover, and Terrell N. Lowry, Boonton, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 24, 1959, Ser. No. 861,911
22 Claims. (Cl. 179—18)

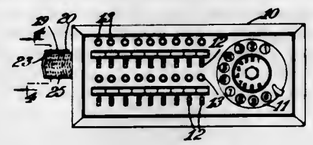


1. A circuit for supervising changes-in-condition in a subscriber subset loop of a telephone system comprising in combination a subset loop including a telephone subset, a source of direct current for energizing said subset, and first and second equal impedances on opposite sides of said loop connecting said source to said subset; a serial arrangement including a Zener diode and a capacitor; means connecting said serial arrangement to said first and said second impedances; means for interrogating said serial arrangement connected thereto to determine the conduction state of said serial arrangement; and output means connected to said serial arrangement and responsive to the determination of the conduction state thereof.

3,102,169
LOUDSPEAKING TELEPHONES

Edgar Ivens and Arthur Ian Forbes Simpson, London, England, assignors to Modern Telephones (Great Britain) Limited, London, England, a British company

Filed Dec. 14, 1959, Ser. No. 859,405
5 Claims. (Cl. 179—100)

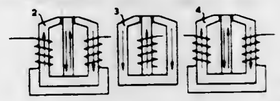


1. A loudspeaking telephone comprising a cabinet having front and rear walls and end walls with an opening in the front wall near one end thereof and an opening in the rear wall of substantially the same size as the opening in the front wall, a single loudspeaker mounted in the cabinet behind said opening in the front wall, a handset with a transmitter and a receiver, a microphone on the outside of an end wall of the cabinet at the opposite end to the loudspeaker, a housing at said end wall for said microphone, and a cradle-rest for said handset mounted on a support associated with said microphone housing, said support being adapted for movement in conjunction with the use of said cradle-rest.

3,102,170
DEVICE FOR SELECTIVELY ERASING TWO OR MORE ADJACENT MAGNETIC TRACKS OF A MAGNETIC TAPE

Cornelis de Koning, Eindhoven, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware

Filed Feb. 10, 1960, Ser. No. 7,891
Claims priority, application Netherlands Feb. 12, 1959
2 Claims. (Cl. 179—100.2)



1. A device for selectively erasing a plurality of signal tracks arranged adjacent to each other on a magnetic tape by means of a plurality of erasing heads, the gaps of the heads being aligned in a direction transverse to the tape, each head being coupled to a separate associated track, each head having three magnetic legs including two outer legs and one inner leg and windings coupled to selected legs, the windings on one head being wound on the two outer legs only and the windings on an adjacent head being wound on the inner leg only, the magnetic flux in the two outer legs of said one head being in the opposite directions while the magnetic flux in the two outer legs of the adjacent head is in the same direction.

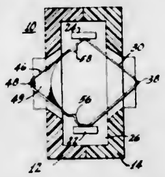
3,102,171
MONOPHONIC-STEREOPHONIC PHONOGRAPH CARTRIDGE

David E. Laux, Oaklyn, N.J., assignor to Radio Corporation of America, a Delaware corporation

Filed Oct. 31, 1958, Ser. No. 770,958
5 Claims. (Cl. 179—100.41)

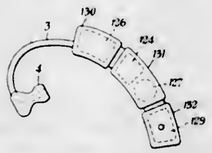
2. In a phonograph pickup, means providing a pair of lar cross-section, means for supporting each of said transducing elements to permit slippage between the supporting means and the transducing elements in the direction of the greater of the cross-sectional dimensions on a cross section taken perpendicular to the longitudinal axis of

said transducing elements, said transducing elements being supported so that the longitudinal axes thereof are parallel and the major surfaces thereof lie in vertical planes when the pickup is in the record playing position, a first yoke member having a pair of divergent legs the ends of which are connected to respective ones of said transducing elements to transmit vibrations thereo, said first yoke member adapted to flex to increase and decrease the angle of divergence between said legs, a first stylus for playing a first type of phonograph records coupled to said first yoke member, a second yoke member having a pair of



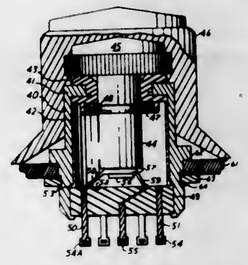
divergent legs the ends of which are connected to respective ones of said transducing elements to transmit vibrations thereto, said second yoke member being substantially more resistant to flexure of a type tending to change the angle of divergence between the legs thereof than said first yoke member, means providing decoupling elements for the legs of said second yoke member to permit said transducing elements to move independently of said second yoke member, and a second stylus for playing a second type of phonograph record coupled to said second yoke member.

3,102,172
HEARING AID
Michael Cohen, Middlesex, England, assignor to Ardente Acoustic Laboratories Limited, London, England, a company of Great Britain
Filed Nov. 12, 1959, Ser. No. 852,441
Claims priority, application Great Britain Nov. 12, 1958
19 Claims. (Cl. 179—107)



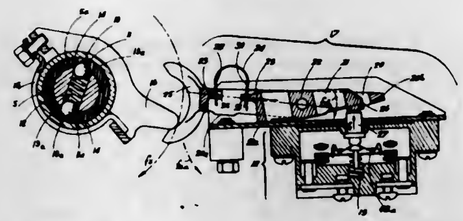
1. A hearing aid of the air-conduction type, comprising at least two casings, a microphone in a first of the casings, a receiver in a second of the casings, a sound-conducting tube connected at one end to the receiver, an earplug adapted to fit into the ear of the user connected to the other end of the tube to receive sound from the receiver, means coupling the casings together to form an assembly of casings shaped to be disposed wholly on one side of the head and at least partly in the rearward part of the space between the pinna and the side of the head of the user, said coupling means including a first rigid coupling member rigidly secured to the first casing, a second rigid coupling member rigidly secured to the second casing and a compliable block disposed between the first and second members to preclude contact between them and said coupling means holding the first and second casings apart but preventing them from being accidentally pulled further apart whilst at the same time preventing them from being pushed into contact with one another, said block serving to resist mechanical feedback from one casing to the other, an amplifier in the assembly of casings and electrical connections between the amplifier and the microphone and receiver, said connections including flexible conductors extending through said block between the first and second casings.

3,102,173
ELECTRICAL CONTROLS
Neil Damon, Sudbury, Mass. (Tingley Drive, Cumberland, R.I.)
Filed Dec. 12, 1958, Ser. No. 779,934
2 Claims. (Cl. 200—11)



2. A rotary switch comprising a hollow cylindrical housing, said housing at its upper end having a collar secured thereto, said collar having a central aperture therein, a control shaft, a knob united to one end of said control shaft, said knob including a depending skirt enclosing a substantial portion of said housing, said shaft extending through said central aperture into said housing, a contact assembly in said housing, said assembly being keyed to the free end of said control shaft, an insulative disc closing the lower end of said housing, an electrically conductive ring secured on the interior surface of said disc, a plurality of electrical contacts in said housing concentric with said ring, said electrical contacts being embedded in said disc, each of said contacts having a recess therein, said contact assembly including a first arm riding upon said ring and a second arm adapted to bear upon said electrical contacts, said second arm being provided with means adapted to cooperate with the recesses in said contacts whereby said second arm and said contacts function as detents, means on said disc providing exterior electrical connection to said ring and said contacts, said housing providing an external abutment extending beyond the portion of the housing below the abutment to provide an external face immediately below the depending skirt, and means on the lower end of said housing for clamping an interposed member against the external face of said abutment.

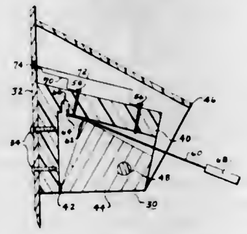
3,102,174
SWITCH OF THE SCREW SELECTOR TYPE
Jacques Baudet, Suresnes, Seine, France, assignor to La Telemecanique Electrique, Nanterre, France, a joint-stock company of France
Filed Dec. 19, 1961, Ser. No. 160,471
Claims priority, application France Dec. 23, 1960
9 Claims. (Cl. 200—33)



1. A screw type selector for the operation and control of a moving device having a to-and-fro movement comprising

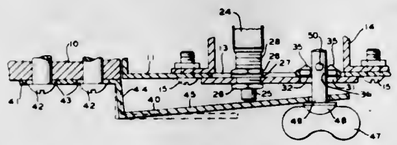
a frame,
a fixed screw fast with said frame,
a transmission coupled to the moving device,
a rotating shaft in said transmission,
a sleeve screwing on said fixed screw and sliding on said rotating shaft,
arms mounted on said sleeve and adapted to follow a helical path which is a function of the length of travel of the moving device,
a double action rocker device in the path of said arms adapted to be actuated by said arms,
two pivoted levers of unequal lengths in said rocker device,
a micro-switch in operative relationship with said pivoted levers positioned to be actuated by one of said levers and having a snap-action blade,
and a U-spring in said rocker device adapted when actuated to cause, by its own action, the abrupt displacement of said micro-switch.

3,102,175
WATER SOFTENER SALT LEVEL INDICATOR SWITCH
Edward Eichenberger, Jr., 756 E. John St., Nappanee, Ind.
Filed Oct. 24, 1960, Ser. No. 64,561
8 Claims. (Cl. 200—61.05)



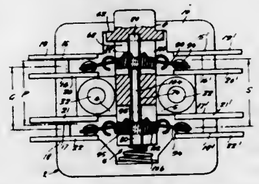
3. A salt level indicator switch for a salt dissolving tank, comprising a base of non-conducting material, a leaf spring, means holding one end of said spring adjacent said base, contacts mounted on said base for contacting said spring, means mounted on one end of said spring for actuating said switch, and a cover on said switch, said cover having an opening to permit brine to reach the spring and the contacts and connect them electrically.

3,102,176
SAFETY DOOR SWITCH
Michael H. Pelosi, Jr., Broomall, and George J. Maleno, Jr., Philadelphia, Pa., assignors to CRS Industries Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 25, 1961, Ser. No. 84,947
9 Claims. (Cl. 200—61.62)



1. A safety door switch for use with a wall and an access member mounted in said wall for access through said wall comprising an electric switch fixedly mounted with respect to said wall and having a movable actuating portion with its outer terminus at an outer location for one condition and at an inner location for another condition, a lever member having a mounting portion mounted on said access member, said lever member having a main arm portion connected to said mounting portion, said main arm portion extending in front of said actuating portion, said mounting portion retaining said main arm portion in spaced relation to said outer terminus for said one condition, the spacing between said main arm portion and said terminus providing a safety clearance for said one condition, said main arm portion being resiliently movable to a position to engage said terminus and being further movable in the same direction for movement of said movable actuating portion to said inner location for said other condition, and a locking device carried by said wall for retaining said main arm portion deflected and engaged with said movable actuating portion and with said actuating portion at said inner location.

3,102,177
ELECTRICAL SWITCHES
William Riddell, Whitley Bay, Northumberland, England, assignor to Burgess Products Company Limited, Hinckley, England
Filed Aug. 1, 1960, Ser. No. 46,705
Claims priority, application Great Britain Aug. 28, 1959
13 Claims. (Cl. 200—67)



1. An electric switch comprising two switch mechanisms ganged together for joint operation each mechanism having at least two fixed contacts, the corresponding fixed contacts of said mechanisms being arranged in superposed relation, each switch mechanism having a one pair of opposed pivotally movable contact arms operatively connected for movement into engagement with and disengagement from said fixed contacts, a common actuator for said pivotally movable contact arms engaging said arms at the ends remote from said contacts, the distance between the corresponding pivots of said arms in the direction of movement of said common actuator differing slightly from the distance between the corresponding superposed fixed contacts, at least one over-center tension member connecting each said pair of opposed movable contact arms and a linking member extending between two corresponding tension members of said two mechanisms and engaging each said tension member at a medial point, said linking member being movable independently and lightly displacing said tension members where linked at said medial point, the distance between said corresponding tension members differing slight at said medial point from the distance between said pivots in the same sense that said pivots are displaced from the distance between the corresponding contacts.

3,102,178
FUSE TUBE CONSTRUCTION
Raymond J. Bronikowski, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,604
8 Claims. (Cl. 200—120)

8. In a drop out fuse cutout the combination of, gas evolving expulsion fuse tubular means having a fuse link therewithin, said fuse link having a rupturable portion intermediate the ends thereof, spaced apart terminal means affixed to said tubular means and electrically con-

nected to said ends of said fuse link, closure means for one end of said tubular means, whereby gas expelled from the open other end of said tubular means incident to rupture of said fuse link results in a recoil force on said tubular means, electrically conductive sleeve means having an internal diameter no greater than that of said tubular means disposed within said tubular means and surrounding said fuse link and being spaced axially of said tubular means from said rupturable portion, said elec-



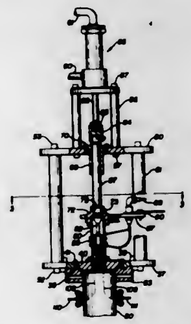
trically conductive sleeve means being normally electrically isolated from said spaced apart terminal means, said electrically conductive sleeve means decreasing the area of said tubular means available to evolve gases and shortening the arc created upon rupture of said fuse link and a substantial portion of the voltage of said arc occurring between said conductive means and a severed portion of said fuse link adjacent said rupturable portion, thereby facilitating arc interruption and decreasing said recoil force.

3,102,179
LIQUID CONTACT SWITCH
Robert Hermeyer, Hammerstr. 56, Berlin-Zehlendorf, Germany
Filed July 11, 1958, Ser. No. 748,061
Claims priority, application Germany Aug. 9, 1957
4 Claims. (Cl. 200—122)



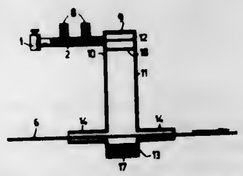
1. A remote control switch comprising a housing of insulating material, a first and a second chamber in said housing, said first chamber having a greater volume than said second chamber, a quantity of gas in each of said chambers, said gas being filled at a pressure greater than atmospheric pressure, a substantially straight, narrow capillary bore communicating with said chambers, an electric heating device in said first chamber, at least two electrical contacts extending into said bore, a switching mercury column for the contacts in said bore normally positioned in suspended state and serving as a bridge for the contacts, gas pressure of the second chamber serving as a cushion for the mercury and serving rapidly to return the mercury to its normal position after the heating device is de-energized.

3,102,180
APPARATUS FOR MAKING ELECTRON TUBES
Jack A. McCullough, Los Altos, and William R. Stuart, San Carlos, Calif., assignors to Eitel-McCullough, Inc., San Carlos, Calif., a corporation of California
Original application Dec. 5, 1957, Ser. No. 700,853, now Patent No. 2,996,347, dated Aug. 15, 1961. Divided and this application Sept. 29, 1960, Ser. No. 59,265
6 Claims. (Cl. 219—9.5)



1. Apparatus for making pressure seals, said apparatus comprising a base member having an exhaust aperture therethrough, said member having a circular recess on one side thereof into which said aperture opens, sealing ring means in the side wall of said recess, a cylinder coaxial with said recess, said cylinder having one end receivable in said recess in sliding contact with said sealing ring means, a closure member for the other end of said cylinder, said closure member having a recess in which said other end of the cylinder is received, sealing ring means in the side wall of said recess in the closure member, the last mentioned sealing ring means being in contact with said cylinder over a greater area than the area of contact between the cylinder and the first mentioned sealing ring means, means for moving said closure member toward and away from said base member, and a ceramic ram projecting from said closure member toward said base member inside said cylinder.

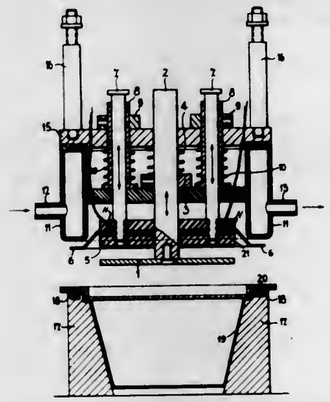
3,102,181
HIGH-FREQUENCY HEATING FURNACES OPERATING WITH VERY HIGH FREQUENCIES
Jan Verstraten, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,235
Claims priority, application Netherlands May 1, 1959
12 Claims. (Cl. 219—10.55)



6. A high frequency furnace comprising a high frequency generator and a wave guide system, said wave

guide system comprising first, second and third wall portions defining an enclosure having an open end, said first wall portion having a parabolic shape and said second and third wall portions forming two parallel boundary surfaces at right angles to said wall of parabolic shape, wave energy radiating means arranged at the focal line of said parabolic wall, means for coupling said generator to said radiating means, means for supporting objects to be heated at said open end of said enclosure, and shield means enclosing said support means adjacent the open end of said waveguide system.

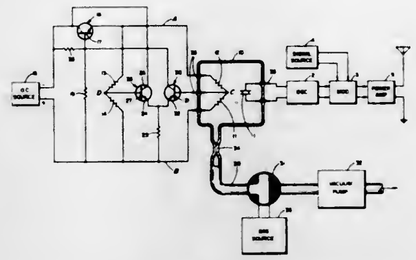
3,102,182
HEAT-CONTACT PLASTIC WELDING DEVICE
Heinz Oelze and Franz Hartleib, Wiesbaden-Biebrich, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
Filed Apr. 4, 1961, Ser. No. 100,688
Claims priority, application Germany Apr. 8, 1960
3 Claims. (Cl. 219—19)



1. A heat-contact welding apparatus for welding layers of thermoplastic materials comprising, in combination, mounting means, pressing and cooling means secured to said mounting means, a piston slidably received through said mounting means and said pressing and cooling means, said piston being adapted for limited linear reciprocal movement and biased in a downward direction, a holding element secured to one end of said piston, adjustable supporting means transversely arranged and slidably received with respect to said mounting means and said pressing and cooling means, said supporting means being adapted for limited linear movement and biased in a downward direction, a heat-conductive welding element secured to one end of said adjustable supporting means, heating means in contact with said heat-conductive welding element, and a heat insulating base receivably arranged with respect to said heat-conductive welding element.

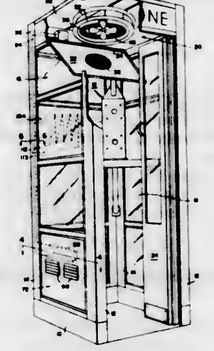
3,102,183
ABSOLUTE TEMPERATURE CONTROL
John E. R. Harrison, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 16, 1960, Ser. No. 76,363
3 Claims. (Cl. 219—20)

1. In combination, an oscillator, said oscillator having a frequency determining element the natural frequency of which is a function of temperature, means for maintaining constant the temperature of said element consisting of an evacuated envelope enclosing said element, a heating wire in said envelope, a four-sided balanced bridge, one branch of said bridge comprising said heating wire, a source of heating power, and an amplifier device with a continuously and smoothly variable impedance coupled



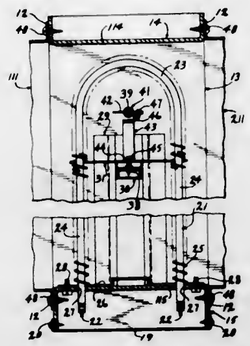
in circuit between said source and one diagonal of said bridge, said amplifier having a control circuit coupled across the other diagonal of said bridge and responsive to continuous voltage changes to smoothly regulate the flow of heating current through said amplifier to said bridge.

3,102,184
TELEPHONE BOOTH HEATING MEANS
Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corp., 1201 Flushing Ave., Brooklyn 37, N.Y.)
Filed Jan. 5, 1960, Ser. No. 546
4 Claims. (Cl. 219—34)



1. An outdoor telephone booth comprising a plurality of corner posts, upright wall panels extending between said corner posts, and a plurality of electrical resistance heating means, each of said heating means being housed by said panels between the outer and inner surfaces thereof and operable for heating the interior of said outdoor telephone booth, said heating means being located at various elevations throughout the height of said telephone booth, one of said wall panels including laterally spaced inner and outer plate members, one of said heating means extending between said plate members, first passageway means in said outer plate member providing communication between the exterior of the telephone booth and the space between said plate members, and second passageway means in said inner plate member providing communication between the space between said plate members and the interior of the booth.

3,102,185
DUCT HEATER ASSEMBLY
Robert L. Boyd and John F. Volker, Pittsburgh, Pa., assignors to Edwin L. Wiegand Company, Pittsburgh, Pa.
Filed Mar. 31, 1960, Ser. No. 18,979
4 Claims. (Cl. 219—34)



1. An electric heating assembly for use in a duct work system, comprising a housing adapted to be mounted within the duct work system whereby air flowing through the system enters said housing at one place and exhausts from said housing at a spaced place, a plurality of hair-pin type electric heating elements mounted within said housing, each having a pair of legs extending transversely to the line of air flow therethrough, and thermal cut-out means for interrupting flow of electrical energy to said heating elements when a predetermined temperature is reached in said housing, said cut-out means including a heat sensing element located between opposed sides of the legs of at least certain of said hair-pin heating elements.

3,102,186
ELECTRIC BLANKETS
Leonard Charles Owers, Colbury, near Totton, England, assignor to Dreamland Electrical Appliances Limited, a Brit.sh company
Filed June 15, 1961, Ser. No. 117,388
Claims priority, application Great Britain July 8, 1960
3 Claims. (Cl. 219—46)



1. An electrically heated blanket comprising two inner resilient, readily compressible pads of synthetic plastics material, a heating element consisting of conductor wire laid in reversing lines spaced in substantially parallel relationship and interposed between and embedded in said two pads of material so as to be held against substantial shifting relative thereto, and two outer layers of fabric covering respectively the outer surfaces of said inner pads, said inner pads being bonded together and to the fibres of the outer fabric covering layers by welding along lines disposed between the lines of the conducting wire.

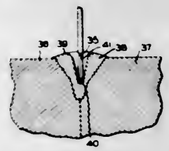
3,102,187
APPARATUS FOR WELDING PIPES
George A. Coscia, 48 Park Circle, Eggertsville, N.Y.
Filed Nov. 14, 1960, Ser. No. 69,025
14 Claims. (Cl. 219—60)

1. Apparatus for welding pipe comprising annular supporting means to extend around a pipe at a joint between two pipe sections, a carriage carried by the supporting means and held thereby against the pipe, power means on the carriage to move it around the pipe in registration with the joint, a welding gun carried by the carriage including a nozzle aligned with the joint between the pipe sections, means to feed a welding rod through the nozzle,



an electrical connection to the gun to supply welding current to the welding rod, a guide roller on the carriage engageable with the joint between the pipe sections, and an electrical connection to the guide roller to connect the pipe to the source of welding current through the guide roller.

3,102,188
WELDING METHOD
Kenneth L. Wills, Portland, Oreg., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Aug. 12, 1959, Ser. No. 833,331
5 Claims. (Cl. 219—74)

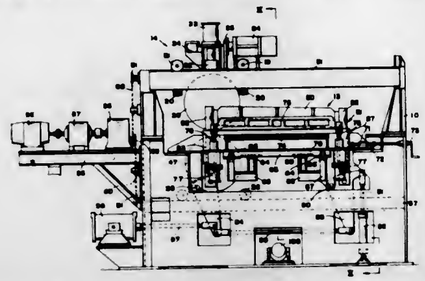


1. In the method of gas shielded arc welding of aluminum and aluminum alloys wherein an arc is established between an electrode and the workpiece, filler metal is fed into said arc and an inert gaseous shielding medium is simultaneously fed to shield the arc and weld pool, the improvement comprising providing a gas shield by passing a stream of inert gas selected from the group consisting of argon, helium and mixtures thereof longitudinally of said filler metal electrode in the direction of said arc and closely surrounding said electrode, said inert gas containing from about 0.05 to 3% chlorine by volume and wherein the rate of flow of said gas stream ranges from about 0.035 to 12 cubic feet per hour, and simultaneously therewith passing a gas stream comprising a mixture of argon gas and helium gas in the same direction as said first mentioned stream and surrounding said first mentioned stream.

3,102,189
STRIP WELDING APPARATUS
Raymond C. Jones, Lyndhurst Village, and Foster R. Woodward, Warren, Ohio, assignors to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed May 21, 1959, Ser. No. 814,767
2 Claims. (Cl. 219—82)

1. Apparatus for joining strip in general end-to-end relation comprising a unitary assembly of a base having a strip passage therethrough, welding means mounted on said base intermediate the strip entry and exit ends thereof and movable transversely across said passage whereby

strip end portions may be welded together, a shear mounted on the entry end of said base and operative to trim the tail end of a strip length lying in said passage, and a movable strip clamp mounted on the exit end of said base and operative to advance said strip length through a predetermined controlled distance to move the

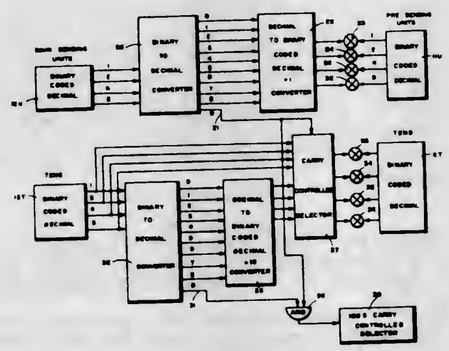


trimmed tail end thereof from the shear to the welding means, said movable strip clamp comprising an upstanding frame pivotally mounted at its bottom end on the bottom end portion of said base and carrying a strip clamp at its upper free end, and a fluid-pressure actuator for swinging said frame through a predetermined arc of movement.

3,102,190
METHOD OF WELDING GALVANIZED STEEL
André Chapleur and Bernard Schoeps, both of Strasbourg, Bas-Rhin, France, assignors to Forges de Strasbourg, Paris, France, a company of France
No Drawing. Filed May 22, 1961, Ser. No. 111,481
Claims priority, application France July 12, 1960
7 Claims. (Cl. 219—117)

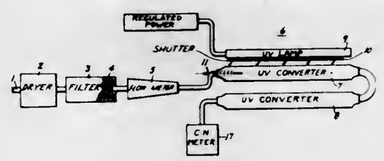
1. In a process of electrically welding galvanized steel the step of first bonding to the work surface an adherent layer of pulverulent high-conductivity metal and then passing an electric welding electrode in contact with said layer to weld the work.

3,102,191
SEQUENCE VERIFICATION APPARATUS
Anton Chiapuzio, Jr., Downey, and Glenn H. Shaw, East Whittier, Calif., assignors to North American Aviation, Inc.
Filed Feb. 26, 1958, Ser. No. 717,713
8 Claims. (Cl. 235—61.7)



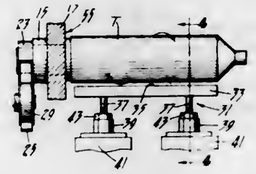
1. Sequence verification apparatus comprising first and second sensing means for respectively reading first and second binary coded decimal numbers, first converter means responsive to said first sensing means for converting said first number to a verification number in decimal form which differs from said first number by a predetermined number, second converter means responsive to said first converter means for converting said verification number to binary coded decimal form, and comparison means coupled with said second sensing means and said second converter means for manifesting quantitative coincidence of said second and verification numbers.

3,102,192
METHOD AND APPARATUS FOR DETECTING ORGANIC VAPORS AND GASES
George F. Skala, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Sept. 30, 1960, Ser. No. 59,719
4 Claims. (Cl. 250—43.5)



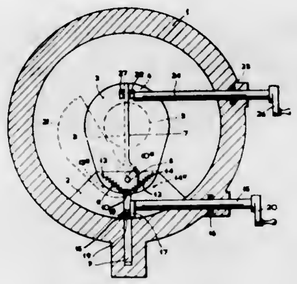
1. The method of detecting the presence of a hydrocarbon gas or vapor in a gas stream which comprises filtering the gas stream to remove ambient airborne particles, converting the hydrocarbon gas or vapor to airborne particles by the combined reaction of ultraviolet radiation in the presence of mercury, and measuring the concentration of the particles.

3,102,193
APPARATUS FOR TREATING ALL SURFACES OF A THERMOPLASTIC TUBE WITH CORONA DISCHARGE
William Leonard Dobens, Nashua, N.H., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed May 21, 1959, Ser. No. 814,916
5 Claims. (Cl. 250—49.5)



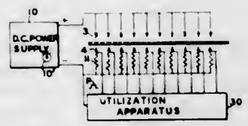
1. An apparatus for treating the surfaces of thermoplastic tubes to render the same receptive to and retentive of surface coatings, which comprises a conductive mandrel for receiving individual tubes and dimensioned to have a snug sliding fit in the tubes to be treated, an axially immovable elongate smooth surfaced electrode bar extending parallel to and longitudinally of the mandrel and an adjacent surface element of the mandrel, and spaced a slight distance from the mandrel surface and from the surface of a tube placed thereon, means for indexing said conductive mandrel and tube thereon to said electrode bar, means for impressing a voltage drop between said bar and said mandrel sufficient to generate a corona discharge therebetween simultaneously along the full length of the bar, and means to rotate said mandrel together with said tube while the corona discharge is being generated.

3,102,194
SHUTTER FOR ELECTRON MICROSCOPES
Simon Lourens van den Broek and Hendricus Cornelus Johanna Marien, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 3, 1959, Ser. No. 837,800
Claims priority, application Netherlands Sept. 13, 1958
5 Claims. (Cl. 250—49.5)



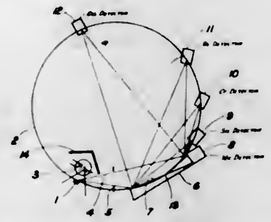
1. An electron microscope comprising an evacuated chamber in which a beam of charged particles travels toward a receiving area, and a shutter for intercepting at least a portion of the beam of charged particles before reaching the receiving area, said shutter comprising two blades each of which intercepts a portion of the beam of charged particles travelling toward the receiving area, each of said blades being rotatable about an axis remote from the beam of charged particles, and means for rotating said blades in the path of said beam to open and close the shutter including a tension spring connected to one blade and a separate tension spring connected to the other blade, a movable member coupled to the ends of the springs remote from each shutter blade, means to move the movable member from outside the chamber whereby the blades can be selectively rotated into a closed and open position, and lock means operable from outside the chamber for preventing rotation of one of the blades while the other blade is rotated.

3,102,195
PICKUP MEANS FOR PUNCHED DATA
Karl F. Frank, Garden City, N.Y., assignor to Micro Balancing, Incorporated, a subsidiary of Giannini Scientific Corporation, Garden City Park, N.Y.
Filed Jan. 16, 1961, Ser. No. 82,930
2 Claims. (Cl. 250—49.5)



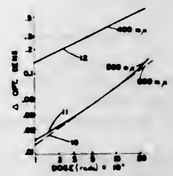
1. Pickup means for punched cards comprising a pair of conductive members having sharp points, said points being spaced sufficiently to pass a punched card between said points without mechanical contact, and a source of high voltage connected to said points, means to insulate said points from ground sufficiently to prevent any electrode discharge except directly between said points, said voltage being adjusted to cause a corona discharge solely between said points in the absence of said card material.

3,102,196
X-RAY SPECTROGRAPH
Joshua Ladell, Flushing, and Nathan Spielberg, Hartsdale, N.Y., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,674
6 Claims. (Cl. 250—51.5)



1. An X-ray spectrograph for determining the constituent element of a material comprising means to excite a specimen of the material to produce characteristic X-rays, a plurality of detectors, and a stationary focussing diffracting crystal positioned to intercept and diffract the characteristic X-rays emanating from said specimen, said crystal being deformed to diffract and focus radiation of each of a plurality of wave-lengths to one of a plurality of reciprocal lattice points of the crystal, and a plurality of detectors each of which is located at a reciprocal lattice point on the focussing circle of said crystal.

3,102,197
RADIATION DOSIMETRY AND PLASTICS COMPOSITIONS THEREFOR
Mario A. Acitelli, Oakfield, and Gerald E. Blair, Pittsford, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Dec. 12, 1960, Ser. No. 75,142
5 Claims. (Cl. 250—83)

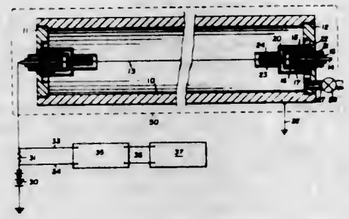


1. Method of radiation dosimetry comprising the step of subjecting a body of a transparent organic plastic containing an organic dye throughout its mass to radiation, and the step of measuring the change in optical density produced by exposure to high energy radiation of the body of a transparent organic plastic containng an organic dye distributed throughout its mass, said plastic being a copolymer of allyl methacrylate and diethylene glycol bis allyl carbonate, and said dye being cobalt naphthenate.

3,102,198
SENSITIVE LOW VOLTAGE PROPORTIONAL COUNTER FOR NEUTRON DETECTION CONTAINING He^3 AT SUPERATMOSPHERIC PRESSURE
Tom W. Bonner, Houston, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Nov. 16, 1961, Ser. No. 155,881
11 Claims. (Cl. 250—83.1)

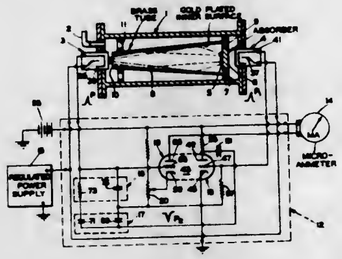
1. A radiation detector of the proportional counter type comprising a pressure-tight closed container pervious to transmission therethrough of neutrons in the thermal and

epithermal energy regions, an electrode extending through said container in spaced relation with the enclosing walls and insulated therefrom, a detector gas within said container of composition and pressure characterized by its high sensitivity to neutrons in the thermal and epithermal regions and its insensitivity to gamma rays, said gas consisting substantially exclusively of high purity helium-3



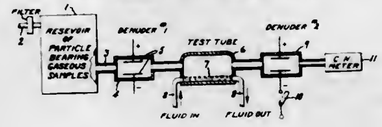
at a superatmospheric pressure of the order of from about two atmospheres absolute to about twenty atmospheres absolute, providing a cross section of about 5000 barns for the (n, p) type of reaction at thermal energy, and circuit connections extending to said electrode and to said container for application thereto of a direct current potential of the order of about 800 to about 3000 volts.

3,102,199
MEANS FOR MEASURING AIR DENSITY AND ALTITUDE AT PREVAILING LEVEL OF FLIGHT OF AN AIRCRAFT
George V. Zito, Northvale, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 14, 1959, Ser. No. 786,867
4 Claims. (Cl. 250—83.3)



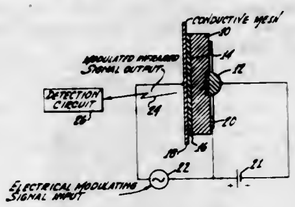
1. The combination comprising an enclosure, means for supplying sampled ambient atmospheric air to within the enclosure, a radium impregnated member positioned within said enclosure, said radium impregnated member to emit alpha, beta and gamma particles in a fixed ratio for passage through sampled atmospheric air within the enclosure, first and second counters adapted to provide electrical pulses in response to the particles emitted from said member and passing through the air within the enclosure, said particles being partially absorbed by the air in proportion to the density thereof, the first of said counters being responsive to alpha, beta and gamma particles, said first counter being positioned in said enclosure in spaced relation to said radium impregnated member and at one side thereof, the second of said counters being responsive to gamma particles, said second counter being positioned in said enclosure in spaced relation to said radium impregnated member and at another side thereof, means between said member and said second counter to prevent the passage of alpha and beta particles to said second counter, means to scatter radiated particles from said member through the air in said enclosure and toward said first counter, a pulse inverter connected to one of said counters for inverting the pulses therefrom, integrating means connected to the other of said counters and to said inverter for providing a D.C. potential corresponding to the pulse difference from said counters, current control means operatively associated with said integrating means and controlled by said D.C. potential, means for measuring electric current, an indicator means operated by said current measuring means, means operatively connecting said control means to said current measuring means for causing operation of the current measuring means and thereby the indicator means as a function of the density of the air in said enclosure.

3,102,200
PENETRATING RADIATION MEASUREMENT BY IONIZATION OF A PARTICLE BEARING AEROSOL
Theodore A. Rich, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 29, 1959, Ser. No. 816,947
9 Claims. (Cl. 250—83.3)



1. In a radiation measuring instrument, the combination comprising means to provide a gaseous sample containing uncharged aerosol particles only, means to subject the uncharged aerosol particle bearing gaseous sample to ionizing radiation to charge a fraction of the aerosol particles therein, and means responsive to both charged and uncharged aerosol particles to determine the fraction of aerosol particles thus charged as an index of the radiation intensity.

3,102,201
SEMICONDUCTOR DEVICE FOR GENERATING MODULATED RADIATION
Rubin Braunstein and Egon E. Loebner, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,523
2 Claims. (Cl. 250—199)



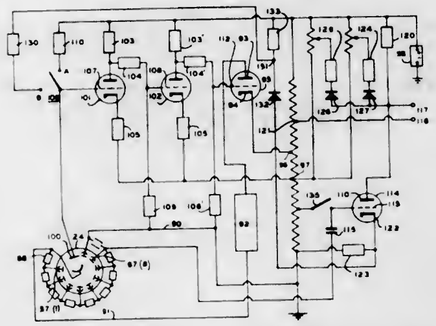
1. In combination, a semiconductor device including a body of semiconductor material with a dot of material alloyed into one surface to form a P-N junction, said device being of the type in which charge carriers recombine in two competing ways at least one of which is radiative, an electrode in ohmic contact with said body on said one surface, a conductive mesh electrode insulated from a second surface of said body, means connected between said first electrode and said dot for continuously injecting charge carriers into said device to thereby cause emission therefrom through said mesh electrode at a frequency characteristic of the radiative recombination of the charge carriers, and means separate from said injecting means for applying a modulating signal between

said first electrode and said mesh electrode for modulating the recombination process competing with said radiative recombination to thereby modulate the emitted radiation.

3,102,202
PHOTOMETRIC INSTRUMENTS

Monroe H. Sweet, Binghamton, N.Y.; Russell P. Easton and First-City National Bank of Binghamton, N.Y., administrators of said Monroe H. Sweet, deceased, assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 12, 1960, Ser. No. 21,827
4 Claims. (Cl. 250—207)

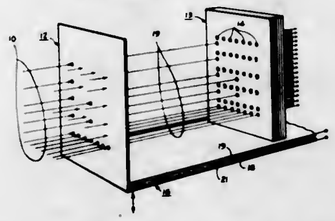


1. A control system for automatically varying the sensitivity of a photomultiplier tube by means of variation of dynode voltage, including an amplifier responsive to variations of the anode current of said multiplier tube, a first control tube associated with said amplifier, the current conductivity of said tube determining the effective dynode potential, impedance means in the anode circuit of said multiplier tube and a circuit including said impedance and a second control tube for varying current flow in said impedance in inverse relation to said dynode potential whereby the effective anode current of said multiplier tube is caused to vary in inverse relation to variation in said dynode voltage.

3,102,203
PHOTOSENSITIVE DATA PROVIDING SYSTEM

Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Apr. 15, 1960, Ser. No. 22,635
2 Claims. (Cl. 250—209)

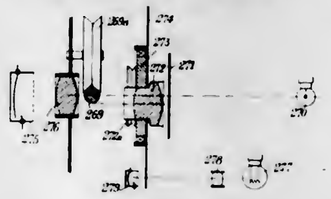


2. The combination comprising: a plurality of N radiation-responsive pickup means each of which comprises a plurality of pickup devices arranged in the form of a matrix of a given pattern, said pickup devices each having output terminals and responsive to incident radiation to generate signals on said output terminals, means for connecting in common output terminals of correspondingly positioned devices of each pickup means, said pickup devices each comprising optical fibers clad with a photoconductive material, said output terminal being connected to spaced points upon said photoconductive material, a plurality of N character masks each of which is individually associated with a particular one of said pickup means and each of which has a distinctive pattern of areas representative of particular information, each of said areas being transparent to incident radiation, each of said distinctive patterns corresponding with a particular portion of said given pattern; means for projecting radiation through transparent areas of each of said character masks towards the associated pickup means; a plurality of N means, each of which is individually associated with a particular character mask and its associated matrix, for positioning the mask and associated matrix in a first or second position relative to each other, said first position being such that the radiation pattern emerging from the mask does not impinge upon the pickup devices of the associated pickup means, said second position being such that the radiation pattern emerging from the mask impinges upon correspondingly positioned pickup devices of the associated pickup means, each of said positioning means being in said first position when unenergized, said positioning means assuming said second position on energization; and means for selectively energizing individual ones of said N positioning means.

3,102,204
PHOTOSENSITIVE APPARATUS FOR MEASURING THE TRANSVERSE DIMENSIONS OF WIRES AND CABLES

Oscar Henri Ingber, 15 Blvd. du General Koenig, Neuilly-sur-Seine, France

Filed May 31, 1960, Ser. No. 32,982
Claims priority, application France May 29, 1959
14 Claims. (Cl. 250—219)

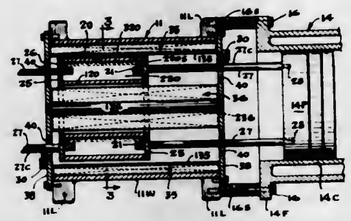


1. An apparatus for measuring the transverse dimension of an object of elongated shape such as a cable, tube wire, tape, comprising in combination an emitter of a radiant beam and a photoelectric receiver for said beam, said object being placed between said emitter and receiver, means for forming from said beam issuing from said emitter at least one narrow luminous zone, said narrow luminous zone and the object to be measured constituting two elements, an optical system for forming the image of one of said elements on the other element, means for producing a periodic relative displacement of the image of one of said elements with respect to the other so as to periodically block the image of one of said elements by means of the other element and therefore periodically break the current delivered by said photoelectric receiver, means for producing an auxiliary reference signal varying in proportion to the relative displacement, in the direction of the measurement, of the image of one of the elements with respect to the other, the means producing said auxiliary signal being driven in synchonism with the means producing the relative displacement of the image of one element in relation to the other, and means for producing from the variation of said auxiliary reference signal during the time period in which said photoelectric current is discontinued, an output voltage giving an indication proportional to the transverse dimension of the measured object.

3,102,205
ENGINE DRIVEN ELECTRICAL GENERATOR

Van P. Combs, 1617 Scribner Road, Penfield, N.Y.

Filed May 11, 1960, Ser. No. 28,482
2 Claims. (Cl. 290—1)

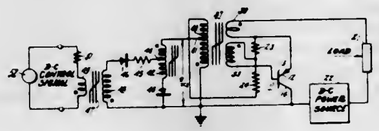


1. In an engine driven electrical generator, an elongated housing, an internal combustion engine including aligned cylinders mounted in opposite ends of the housing, pistons reciprocable in the respective cylinders, an outer unit stationarily mounted adjacent the walls of the housing, a central structure extending longitudinally of the housing, end walls for the housing supporting said central structure, a sleeve-like reciprocable unit within said housing and about said central structure and supported between said pistons for reciprocation therewith, one of said units comprising an armature coil and the other comprising a field unit having a plurality of field magnets radially related with respect to said inner structure and having corresponding magnetic poles correspondingly related to the axis of said housing, and means including said inner structure, said end walls and said housing providing a return path for the flux of said field magnets.

3,102,206
SATURABLE CURRENT TRANSFORMER-TRANSISTOR CIRCUIT

Raymond E. Morgan, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed June 11, 1958, Ser. No. 741,365
10 Claims. (Cl. 307—88)

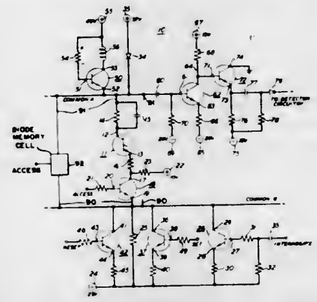


1. A proportional control amplifier for power and converter purposes comprising a switching semiconductor having an input circuit and an output circuit, a saturable core transformer having a first winding and a second winding inductively and regeneratively coupled to the first winding, the first winding being connected in the input circuit of the swiching semiconductor and the second winding being connected in the output circuit of the switching semiconductor, a power source and load connected in the output circuit of the switching semiconductor and a single continuous linearly variable control and resetting signal input circuit means connected to the input circuit of the switching semiconductor through the first winding of the saturable core transformer for controlling the rate of resetting of the saturable core transformer in accordance with the control and resetting signal.

3,102,207
TRANSISTOR MEMORY CIRCUIT

Albert E. Ellis, Jr., New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 11, 1959, Ser. No. 798,745
14 Claims. (Cl. 307—88.5)

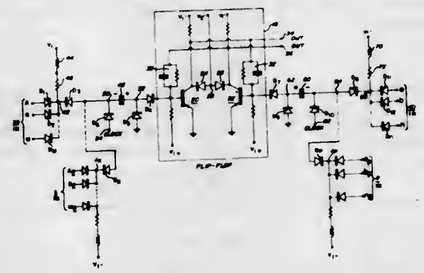


1. A memory circuit comprising a plurality of bistable memory cells connected in parallel each including an input terminal, an output terminal, an access means for selecting predetermined ones of said cells; common set, reset, and interrogating means connected to said input terminals of said cells for providing pulses to selected ones of said cells; common output means including amplifying means connected to said output terminals of all of said cells; and common hold-current-supply means including a first source of potential, unidirectional current means connecting said first source of potential and said output terminals to maintain said output terminals at a potential greater than the potential supplied by said first source, and a transistor amplifier comprising a transistor having base, emitter, and collector electrodes, a second source of potential greater than the potential supplied by said first source, an inductor connecting said collector electrode to said second source, a resistor connecting said base electrode to said second source, and means connecting said emitter electrode to said output terminals whereby the potential at said output terminals is maintained at a value less than the value of the potential supplied by said second source.

3,102,208
RACE-PREVENTING FLIP-FLOP SWITCHES BY TRAILING EDGE OF CLOCK PULSE APPLIED THROUGH CHARGED SERIES CAPACITOR

Roy W. Reach, Jr., Sudbury, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Feb. 17, 1960, Ser. No. 9,268
12 Claims. (Cl. 307—88.5)



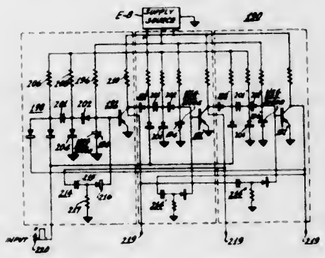
1. In combination with a bistable transistor circuit having a pair of symmetrical input circuits each of which

comprises a junction point and means for gating a plurality of input signals thereto, means for applying a bias potential to said junction point with respect to a reference point, means for receiving spaced pulses of finite duration, capacitive storage means having first and second terminals, means unilaterally conductive in mutually opposite directions for coupling said first terminal to said junction point and to said pulse receiving means respectively, and means unilaterally conductive in mutually opposite directions for coupling said second terminal to said transistor circuit and to said reference point respectively, said means for coupling said first and second terminals to said transistor circuit and to said junction point respectively being oppositely poled, said storage means being adapted to initiate charging thereof upon the arrival of the leading edges of said pulses and to transfer its charge to said transistor circuit upon the arrival of the trailing pulse edges.

3,102,209
TRANSISTOR-NEGATIVE RESISTANCE DIODE SHIFTING AND COUNTING CIRCUITS

Abraham I. Pressman, Philadelphia, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Filed Mar. 29, 1960, Ser. No. 18,426
11 Claims. (Cl. 307—88.5)



2. A shifting circuit comprising a plurality of stages each including a transistor and a tunnel diode connected to apply a base input signal to said transistor, said stages being connected in an ordered arrangement by coupling the transistor of any one stage to the tunnel diode of the succeeding stage in order, means for applying a bias potential to each said tunnel diode sufficient to provide each said tunnel diode with two stable operating states, in one of said states a tunnel diode maintaining its connected transistor in the conducting condition, and in the other of said states a tunnel diode maintaining its connected transistor in the non-conducting condition, means for setting certain of said tunnel diodes in an initial state and at least one of said tunnel diodes in the opposite state, and means for applying successive signals to said circuit, successive ones of said signals operating to shift a stored signal from said one to another of said diodes in succeeding stages.

3,102,210
IMPROVEMENTS IN THE MOUNTING OF ELECTROMAGNETIC TRANSDUCER ELEMENTS

Jacques Dory and Jean-Jacques Renaut, Meaux, France, assignors to Realisations Ultrasoniques, Meaux, France, a corporation of France

Filed Sept. 28, 1959, Ser. No. 842,943
Claims priority, application France Sept. 27, 1958
5 Claims. (Cl. 310—26)

1. A transducer for transducing electrical energy into compression wave energy comprising a block of material adapted for transmitting compression wave energy to a medium in contact therewith and having a plurality of cavities, a plurality of members threaded into said cavities and having respective external recesses and

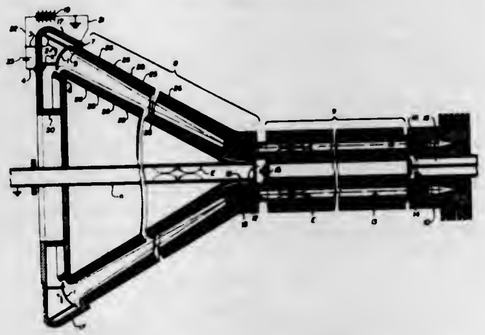


a plurality of laminated magnetostrictive bars having ends respectively inserted into said recesses.

3,102,211
ADIABATIC BEAM CONDENSER METHOD AND APPARATUS

Peter A. Sturrock, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Filed Aug. 19, 1959, Ser. No. 834,724
7 Claims. (Cl. 313—84)



3. A charged particle beam condenser apparatus including, means for decreasing the cross sectional area of a stream of charged particles by at least a factor of 10 over a length of beam travel in excess of one focusing wavelength, said means for decreasing the beam cross sectional area including means for directing an increasing beam focusing force onto the particles of the beam, and the focusing force being progressively increased as the cross section of the beam is decreased whereby the beam may be condensed to a relatively high current density without introducing excessive perturbations therein.

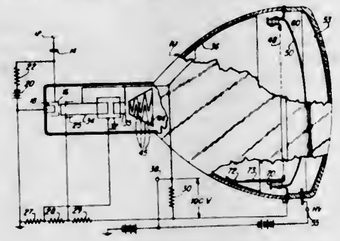
3,102,212
CATHODE RAY TUBE WITH LOW VELOCITY DEFLECTION AND POST DEFLECTION BEAM ACCELERATION

Kurt Schlesinger, Fayetteville, N.Y., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Continuation of application Ser. No. 601,204, July 31, 1956. This application Apr. 24, 1959, Ser. No. 808,846
6 Claims. (Cl. 315—12)

1. A cathode ray tube including in combination a viewing screen adapted to be maintained at a relatively high potential, an anode adapted to be maintained at a relatively low fixed potential, an electron beam source constructed to direct a beam through said anode so that the beam impinges upon said viewing screen, deflecting means for scanning said beam across said viewing screen, a composite apertured electrode separating the high and low potential spaces through which the beam passes, said

electrode comprising a conductive portion facing said viewing screen and an insulating coating on said conductor portion facing the low potential space and having a layer with high secondary electron emissive properties, a conducting grid maintained at said fixed low potential of said anode in said low potential space adjacent said insulating coating, said emissive layer of said electrode being adapted to emit electrons to said conducting grid as the beam passes through said apertured electrode so

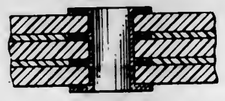


that said layer assumes said fixed low potential, means for maintaining said conductive portion of said electrode at a potential slightly below that of said conducting grid, so that the potential on said conductive portion of said apertured electrode is below that assumed by said emissive layer to provide a negative potential gradient from said layer to said conductive portion which forms a barrier to the flow of secondarily emitted electrons from said apertured electrode to said viewing screen.

3,102,213
MULTIPLANAR PRINTED CIRCUITS AND METHODS FOR THEIR MANUFACTURE

Donald E. Bedson, Flushing, Salvatore A. Di Nuzzo, Mineola, and Anthony C. Suleski, Bronx, N.Y., assignors to Hazeltine Research, Inc., a corporation of Illinois

Filed May 13, 1960, Ser. No. 28,892
12 Claims. (Cl. 317—101)



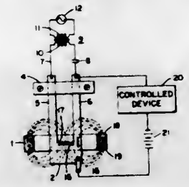
10. A multiplanar printed circuit board consisting of a stack of insulative sheets having desired conductor configurations adhered thereto and having continuously plated-through holes which electrically interconnect the conductor configurations existing at the various planes of the composite board.

3,102,214
RESONANT REED RELAY

Koho Ozone, Webster, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Feb. 2, 1959, Ser. No. 790,750
4 Claims. (Cl. 317—147)

1. A resonant reed relay comprising a metallic reed having a natural resonant frequency, said reed having a slot in one end thereof; means for providing a magnetic field; means for applying signals across said slotted end to thereby cause signal currents to flow through said reed; means for supporting said reed in said magnetic field so that signal currents in said reed are substantially perpendicular to said field to thereby cause said reed to vibrate when said signal currents are of a frequency equal to said resonant frequency; a D.C. current path including a contact and said reed and means for supporting said contact a distance from said reed such that said reed will make with said contact when said reed is deflected during vibration to thereby complete said D.C. current path, said contact supporting means being positioned with relation to

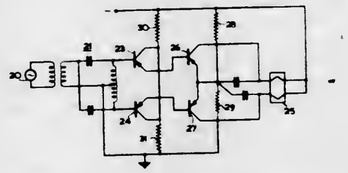


said reed such that the D.C. current path formed within said reed upon said contact making with said reed will link the lines of flux of said magnetic field in such a manner as to exert no net force upon said reed.

3,102,215
VARIABLE INPUT-IMPEDANCE CIRCUIT ARRANGEMENT

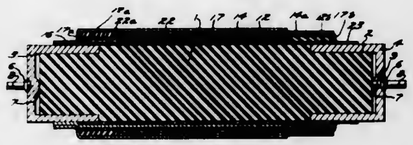
Johannes Ensink, Hilversum, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Original application July 20, 1956, Ser. No. 599,163, now Patent No. 2,952,783, dated Sept. 13, 1960. Divided and this application Apr. 12, 1960, Ser. No. 48,795
2 Claims. (Cl. 317—148.5)



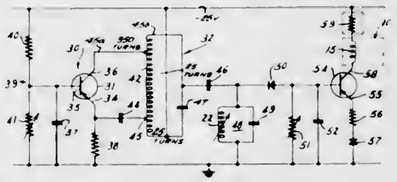
1. A circuit arrangement comprising first and second transistors each having emitter, collector and base electrodes and an emitter-collector current amplification factor substantially equal to unity, a source of electrical oscillations, a resonant selective network having an internal input resistance viewed from the emitter and base electrodes of said first and second transistors of a value between the values of the input impedance of said first and second transistors when the collector impedance of said first and second transistors is zero and when said collector impedance is substantially infinity, said selective network being interposed between said source of oscillations and the base electrodes of said first and second transistors, said selective network comprising two portions each tuned to a different frequency, one portion being coupled to the base of said first transistor, the second portion being coupled to the base of said second transistor, said source of oscillations containing frequencies to which said selective network is tuned, and an impedance coupled in common in the collector electrode circuits of said first and second transistors, said first and second oscillations having an amplitude producing a substantially zero collector-emitter voltage simultaneously in said first and second transistors when the amplitude of said first and second oscillations is a maximum whereby said input impedance of said first and second transistors varies to provide selective variable damping of both portions of said selective network, said damping being a maximum when said oscillation amplitude is a maximum and the initial magnitude ratio of said first and second oscillations is maintained.

3,102,216
METALLIZED CAPACITOR
George P. McGraw, Jr., Downers Grove, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,664
1 Claim. (Cl. 317—242)



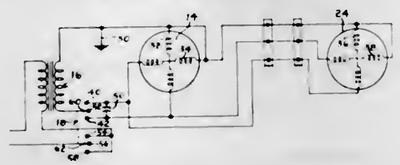
A metallized capacitor comprising, a concentric cylindrical dielectric core member, a metal cap secured to each end of said core member, a first coating of dielectric material encircling the peripheral surface of said core member and portions of said metal caps and having a pair of spaced peripheral edges, a first coating of metal electrode encircling said first coating of dielectric material, said first coating of metal electrode terminating axially inward from one of said peripheral edges of said first coating of dielectric material and extending axially beyond the other of said peripheral edges into encircling engagement with one of said metal caps, said first coating of dielectric material insulating a substantial portion of said first coating of metal electrode from said dielectric core member to reduce current leakage through said core member between said first coating of metal electrode and the other of said metal caps, a second coating of dielectric material encircling said first coating of metal electrode and extending axially toward the ends of said core member in encircling relationship with respect to portions of said metal caps, and a second coating of metal electrode encircling said second coating of dielectric material, said second coating of metal electrode extending axially into encircling engagement with the other of said metal caps and being insulated from said one of said metal caps and said first coating of metal electrode by said coatings of dielectric material, said coatings of dielectric material, and metal electrode each forming a continuous closed band.

3,102,217
MECHANICALLY REBALANCED CONDITION CONTROL SERVOSYSTEM
Clark V. Bullen, Rockford, Ill., assignor to Barber-Coleman Company, Rockford, Ill., a corporation of Illinois
Filed Feb. 1, 1960, Ser. No. 5,889
6 Claims. (Cl. 318—28)



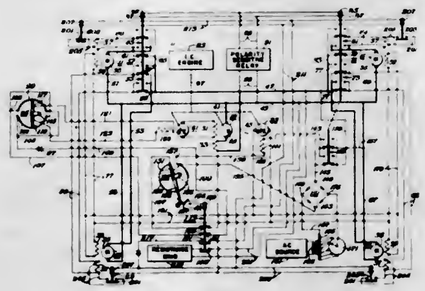
4. A force-to-current transducer comprising, in combination, a fulcrumed lever balanced by application thereto of a condition-responsive input force and an electromagnetic counterforce, an electromagnetic means coupled with said lever and energized by a D.-C. excitation current for producing said counterforce, means for producing said excitation current including, a transistor oscillator operating at a relatively high frequency, inductive and capacitive elements connected in parallel and energized by said oscillator, means for varying the inductance of said inductive element in response to movement of said lever so that the impedance of said parallel-connected elements is dependent upon the position of said lever, rectifier means coupled to said elements for producing a signal varying in magnitude as the amplitude of the A.-C. signal appearing across said parallel-connected elements, and transistor means responsive to said rectifier signal for producing said D.-C. excitation current varying in magnitude as a function of said rectifier signal.

3,102,218
PLURAL MOTOR REMOTE CONTROL SYSTEM
Paul A. Dicke, New Bremen, Ohio, assignor to Crown Controls Corporation, a corporation of Ohio
Filed June 30, 1960, Ser. No. 39,840
10 Claims. (Cl. 318—41)



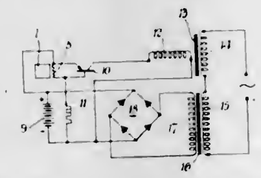
1. A control mechanism for a remotely mounted motor, comprising in combination: a housing; a proximal electric motor in the housing, said proximal motor being connected in parallel with the remotely mounted motor; a source of electrical energy; a switch mechanism driven by the proximal motor, said switch mechanism having three positions; namely a forward position, a reverse position and an open position; and means for actuating the switch mechanism into any one of the three positions; said means including a cam follower actuating the switch mechanism into the various positions and a cam member having two concentric cam surfaces, one of which has a larger radius than the other, and a diagonal cam surface for connecting adjacent ends of the concentric cam surfaces, the cam follower when contacting one of the concentric cam surfaces connecting the motors to the source of electrical energy to drive the cam follower toward the diagonal cam surface to thereby actuate the switch mechanism into the open position to stop rotation of both motors.

3,102,219
MOTOR CONTROL SYSTEM FOR ELECTRICALLY POWERED VEHICLES
Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.
Filed Jan. 22, 1962, Ser. No. 167,782
8 Claims. (Cl. 318—145)



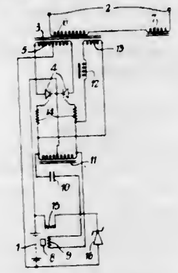
5. A control system for an electrically powered self-propelled vehicle comprising in combination: an internal combustion engine; a differential compound direct current generator having a series field, a shunt field and output terminals; a generator exciter having a field winding; a motor exciter having a field winding; means mechanically coupling said generator and exciters to said engine; a plurality of electric wheel motors of the direct current cumulative compound type, each having a shunt field, a series field, and input terminals; a pair of main conductor terminals; means connecting said generator output terminals and the respective input terminals of said motors in parallel to said main conductor terminals; relay actuated contact means for reversing the polarity of the series fields of said motors; polarity sensing means for actuating said contact means to reverse said motor series fields responsive to a change of voltage polarity at said main conductor terminals; means for supplying direct current voltage of selectable polarity and magnitude to said generator exciter field winding; means for supplying a direct current voltage of predetermined magnitude in series with said motor exciter field winding; means for supplying the voltage at said main conductor terminals through a relay actuated reversing switch in series with said voltage of predetermined magnitude and in bucking relation thereto; means associated with said polarity sensing means for actuating said reversing switch responsive to a change of polarity at said main conductor terminals; a dynamic braking controller including a variable resistance connected in series with said motor exciter field winding and having an off position; a dynamic braking relay having first and second normally closed contacts, and first and second normally open contacts; conductors connecting said first normally closed contact in shunt with said variable resistance; conductors connecting said second normally closed contact in series with said generator exciter field excitation supply; a series field reducing relay associated with each said motor and having a normally open contact and energizing means; conductor means connecting said last mentioned normally open contact in shunt with the major portion of the turns of the respective motor series field; conductor means connecting said first normally open contact in series with said series field reducing relay energizing means; a dynamic braking resistance grid; conductor means connecting said second normally open contact in series with said resistance grid across said main conductor terminals; energizing means for said dynamic braking relay; and switch means operative responsive to movement of said dynamic braking controller from its off position for closing the circuit of said dynamic braking relay energizing means.

3,102,220
SECONDARY BATTERY CATALYST DEVICE WITH TEMPERATURE RESPONSIVE MEANS
Harold Martin Harmer, Brentwood, England, assignor to Miranda Corporation, New York, N.Y., a corporation of New Mexico
Filed Nov. 16, 1960, Ser. No. 69,636
Claims priority, application Great Britain Nov. 18, 1959
10 Claims. (Cl. 320—36)



1. In an apparatus for controlling the charging current supplied to wet electrical storage cell means and responsive to substantial gassing incident to overcharging thereof when said apparatus is placed in control'ing relationship to a charging circuit supplying said charging current to the cell means, a catalytic device disposed in use adjacent the cell to facilitate the recombination into water of gaseous hydrogen and oxygen formed by substantial electrolysis of the aqueous electrolyte during the charging cycle of the cell, said catalytic device being responsive to a rise in temperature in response to an increase in the rate of hydrogen and oxygen recombination, and means adjacent to and in heat exchange relation with said catalytic device for detecting a change in the temperature of the catalytic device and responding to said temperature change to control the charging current in the charging circuit.

3,102,221
REGULATION OF THE CHARGING OF SECONDARY CELLS USING A TEMPERATURE SENSITIVE ELEMENT IN HEAT EXCHANGE RELATIONSHIP WITH A CATALYTIC DEVICE
Harold Martin Harmer, Brentwood, England, assignor to Miranda Corporation, New York, N.Y., a corporation of New Mexico
Filed Mar. 20, 1961, Ser. No. 96,751
Claims priority, application Great Britain Mar. 24, 1960
3 Claims. (Cl. 320—36)



1. An apparatus for regulating the charging rate of a storage cell unit, and attachable to at least one cell thereof to complete a charging circuit, comprising a charging circuit, including an alternating current source and gated diode rectifiers therein for supplying a direct charging current to the storage cell unit, and a control circuit comprising a circuit in inductive relationship to said alternating current source disposed through resistors between the gates of said diodes, a center-tapped inductance across said resistors, and a resistance-capacitance circuit containing a temperature-sensitive resistor disposed across said center-tapped inductance, whereby a difference in phase angle exists between the signal in the resistance-capacitance portion of the circuit and the signal in the diode rectifier portion of the circuit, and wherein less current flows in the charging circuit during a greater difference of the two said phase angles, and wherein a higher temperature in said resistor causes a relatively greater difference in said phase angles, and wherein the said temperature-sensitive resistor is placed in a heat-exchange relationship with a catalytic device adapted to facilitate the exothermic recombination reaction of hydrogen and oxygen into water.

3,102,222
REGULATION OF THE CHARGING OF SECONDARY BATTERIES USING A MEANS RESPONSIVE TO THE TEMPERATURE OF A CATALYTIC DEVICE
Harold Martin Harmer, Brentwood, England, assignor to Miranda Corporation, New York, N.Y., a corportaion of New Mexico
Filed June 1, 1961, Ser. No. 114,203
Claims priority, application Great Britain June 9, 1960
3 Claims. (Cl. 320—36)

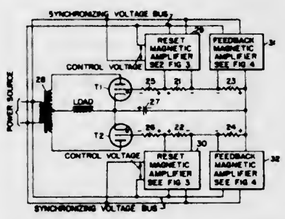
1. An apparatus for supplying a controlled electrical charging current to an aqueous electrolyte electrical stor-

age unit and for preventing the charging rate of the electrical current from substantially exceeding a charging rate which could cause substantial electrolysis of the electrolyte at various temperatures at which the said electrical storage unit is operable comprising, in combination, a charging circuit for the said electrical storage unit thereof, a catalytic device for catalyzing the exothermic recombination into water of the hydrogen and oxygen produced by the electrolysis of the electrolyte in



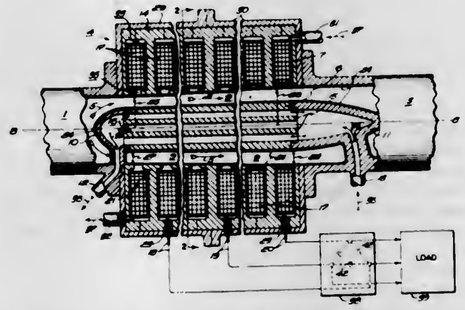
the said electrical storage unit, said catalytic device in use being disposed in an operative gas-detecting relationship with the said electrical storage unit and being thermally responsive to the rate of recombination of the hydrogen and oxygen produced by the electrolysis of the electrolyte, and temperature-responsive switch means in the said charging circuit for detecting the temperature of the said catalytic device and for interrupting current flow through the said charging circuit when said catalytic device reaches a predetermined temperature.

3,102,223
HALF FREQUENCY POWER SUPPLY FOR VIBRATING MACHINES
James H. Burnett, Pasadena, Calif., assignor to Electrons, Incorporated, Newark, N.J.
Filed July 5, 1960, Ser. No. 40,929
13 Claims. (Cl. 321—38)



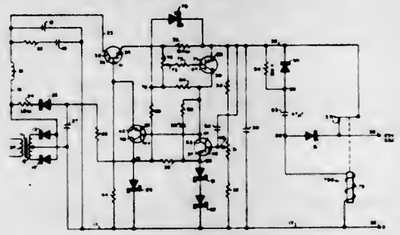
11. A frequency dividing circuit comprising; a single phase source of alternating current; a pair of gatable discharge devices each having an anode, a cathode, and a gating electrode, said cathodes being electrically connected commonly, an input transformer having a primary winding electrically connected across said alternating current source and having a center-tapped secondary winding, each of the extreme opposite terminals of which are electrically connected to each of said anodes of said discharge devices; a load impedance electrically connected from the center-tap of sid secondary winding to the common acthode connection of said discharge devices; a first pair of resistive elements one end of each being electrically connected to the gating electrodes of said respective discharge devices; a second pair of resistive elements one end of each being electrically connected to the other end of each of said respective first pair of resistive elements and the other end of each of said second pairs being electrically connected commonly; a source of D.C. potential, the positive pole of which is electrically connected to said common cathode terminal, and the negative pole of which is electrically connected to said other end of said commonly connected second pair of resistive elements; a first pair of magnetic amplifiers each having an input electrically connected to the source of alternating current and each having an output electrically connected across a respective one of said first pair of resistive elements for providing a voltage thereacross to gate said pair of discharge devices at any point during every successive half cycle when said respective discharge devices have positive-going pulses applied to their anodes; a second pair of magnetic amplifiers each having an input electrically connected to the source of alternating current and each comprising a feedback means electrically connected to its respective inputs and having an output each of which is electrically connected across a respective one of said second pair of resistive elements for providing a voltage thereacross in opposition to said voltage provided by said first pair of magnetic amplifiers to cancel said voltages on every alternate cycle of said source as governed by said feedback means, thereby providing an output across said load impedance having a frequency equal to one-half the frequency of said alternating current source.

3,102,224
MAGNETOHYDRODYNAMIC A.C. GENERATOR
Paul F. Maeder, Rumford, R.I., assignor of one-half to Paul Levinger, Providence, R.I.
Filed Feb. 17, 1960, Ser. No. 9,325
5 Claims. (Cl. 322—47)



1. Apparatus for generating electricity, comprising a stator assembly having concentric inner and outer core members of magnetic material spaced to form a substantially annular and linearly extending fluid flow passageway therebetween and including distributed polyphase-connected electrical winding means for developing a polyphase magnetic field having flux lines extending substantially radially across said passageway and having a substantially sinusoidal field intensity distribution travelling substantially linearly in one axial directon along said passageway at a predetermined velocity, means forcing high-temperature ionized conductive gaseous fluid through said passageway in said one direction at a velocity higher than said predetermined velocity, refractory insulating material lining said passageway and fully separating the high-temperature ionized fluid in said passageway from said stator assembly, said annular passageway providing substantially circular paths transverse to the axis of said passageway for electrical currents induced in said ionized gaseous fluid to circulate angularly about said axis in substantially normal relation to the radial flux lines, said electrical winding means being disposed to have polyphase electrical currents induced therein by the magnetic fields produced by said currents induced in said ionized gaseous fluid, means having electrical reactance characteristics connected in circuit with said winding means and controlling power output characteristics of said winding means, said stator assembly further having coolant passages therethrough independently of said annular passageway for conducting coolant fluid therethrough and preserving the temperatures of said core members, windings and refractory material at less than the high temperatures of said ionized gaseous fluid, and means delivering fluid at less than said high temperatures to said coolant passages, whereby polyphase alternating current electrical signals produced by said winding means provides self-excitation for developing said field and overcomes the power losses in said stator assembly and the reactance means and provide net electrical output for supply to a load.

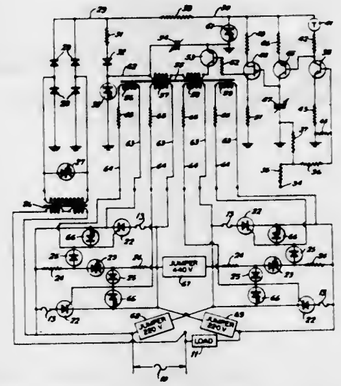
3,102,225
TRANSISTOR POWER SUPPLY CIRCUIT
Charles R. Kenny, Purdys Station, and Joseph Reed, New Rochelle, N.Y., assignors to General Precision, Inc., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 59,997
2 Claims. (Cl. 323—22)



2. A regulated power supply comprising, supply means generating a direct current and having two terminals, a load having two terminals, one terminal of said load being directly connected to one terminal of said supply means, a series control transistor having an emitter-collector path connected at one end to the other terminal of said supply means, said series control transistor having a base terminal, a current-sensing resistor having one terminal connected to the other end of said emitter-collector path and having a second terminal, a transistor having its base connected to sense the potential of said second terminal relative to said one terminal of the supply means and having a collector terminal, emitter follower transistor means connecting said collector terminal to said series control transistor base for increasing the resistance of said emitter-collector path in proportion to said potential, a current-limiting transistor having its emitter and base connected across said current-sensing resistor to sense the potential drop thereacross and thereby to sense said emitter-collector path current, said current-limiting transistor having its collector connected to said collector terminal whereby connection is made through said emitter follower transistor means to said series control transistor base for increasing the resistance of said emitter-collector path in proportion to said emitter-collector path current above a selected current value, an electromagnetic relay having a coil and normally open contacts, said coil being connected to a capacitor and to said one terminal of the load, the other end of said capacitor being connected through a unilaterally conductive diode to said second terminal, a high resistance resistor shunting said diode, said contacts being connected to said second terminal and to a rectifying diode, the other terminal of said rectifying diode being connected to the junction of said coil and said capacitor, and a connection from the other terminal of said load to the junction between said contacts and said rectifying diode.

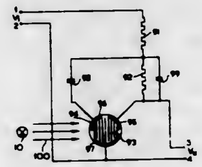
3,102,226
POWER CONTROL CIRCUIT
Henry S. Borkovitz, Chicago, Ill., assignor, by mesne assignments, to Fostoria Corporation, Fostoria, Ohio, a corporation of Ohio
Filed Sept. 18, 1961, Ser. No. 138,885
2 Claims. (Cl. 323—22)

2. A power control circuit comprising an electrical valve having current conductive electrodes and a control electrode, connections to the current conductive electrodes to impress a pulsating voltage thereacross, the valve becoming conductive when a predetermined voltage is applied to the control electrode and a voltage of a predetermined value is impressed across the current conducting electrodes and becoming non-conducting when the voltage across the current conducting electrodes is less than the predetermined value, a voltage limiting device connected across the current conducting electrodes and becoming conductive when the voltage thereacross exceeds



a higher predetermined value, an impedance in series with the voltage limiting device, and a connection from one side of the impedance to the control electrode, a transformer having a primary winding and a secondary winding connected to the control electrode to apply a firing voltage thereto, a capacitor and a second electrical valve in series with the primary winding, means to supply a direct voltage to the primary winding circuit to charge the capacitor and supply anode voltage to the second valve, and means to supply a signal voltage to the second valve to cause it to conduct.

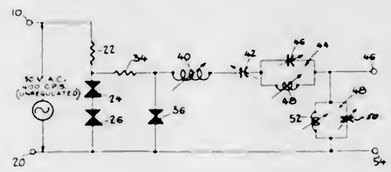
3,102,227
ARRANGEMENT FOR DERIVING AN ADJUSTABLE PARTIAL VOLTAGE FROM AN ELECTRIC SIGNAL VOLTAGE
Nico Arie de Gier, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 28, 1958, Ser. No. 718,322
Claims priority, application Netherlands Mar. 9, 1957
15 Claims. (Cl. 323—64)



1. A circuit arrangement comprising a source of time varying intelligence signal voltage, first and second impedance elements connected in series circuit arrangement, at least one of said impedance elements comprising a photosensitive impedance, means for impinging radiations upon said photosensitive impedance, means for varying the intensity of radiations impinging on said photosen-

sitive impedance independently of said source of intelligence signal thereby varying the impedance value of the said photosensitive impedance, means for aplying said time varying intelligence signal voltage across said series circuit arrangement, and means for deriving an output voltage from one of said impedances, said output voltage having a magnitude relatively less than that of said signal voltage and varying in a predetermined relationship with the impedance value of said photosensitive impedance.

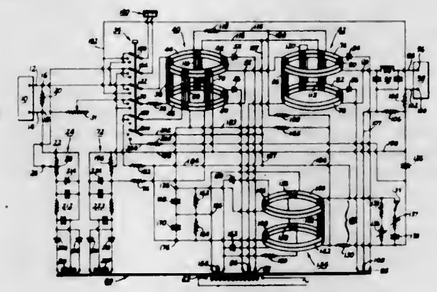
3,102,228
ALTERNATING CURRENT VOLTAGE REFERENCE
John J. Werth, Paramus, N.J., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 12, 1958, Ser. No. 734,578
1 Claim. (Cl. 323—66)



An alternating current voltage reference device comprising a source of unregulated alternating current voltage, a clipping circuit network connected to said voltage source and comprising a parallel circuit having two branches, one of said two parallel circuit branches including a pair of double anode zener diodes to provide a modified square wave voltage output, the other of said two parallel circuit branches including a double anode zener diode to convert said modified square wave voltage output into a square wave voltage output, and a filter circuit connected across the last mentioned diode to attenuate the harmonic frequencies of said square wave voltage output, said filter circuit including a series circuit tuned to the fundamental frequency of the square wave and having a first inductance and a capacitor connected in series with a first blocking circuit comprising a second inductance and a first variable capacitor connected in parallel and tuned to the third harmonic of said square wave voltage output, a pair of output terminals in said filter circuit, and a second blocking circuit connected electrically between said output terminals and comprising a third inductance and a second variable capacitor connected in parallel and tuned to the fundamental frequency of said square wave voltage output.

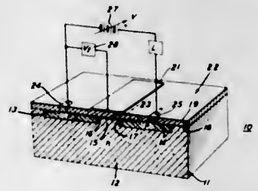
3,102,229
INDUSTRIAL PROCESS CONTROL APPARATUS EMPLOYING MAGNETIC AMPLIFICATION
Horace E. Darling, North Attleboro, Mass., assignor to The Foxboro Company, Foxboro, Mass.
Filed Mar. 26, 1958, Ser. No. 724,056
10 Claims. (Cl. 323—89)

1. Magnetic amplification apparatus for use in industrial process control systems and the like, comprising, in combination, first and second magnetic amplifiers connected together in a cascaded arrangement, each of said amplifiers comprising saturable core means defining a pair of flux paths, input winding means for each of said magnetic amplifiers and coupled to the corresponding pair of flux paths, output winding means for each of said magnetic amplifiers and coupled to the corresponding pair of flux paths, means coupling the output winding means of one of said magnetic amplifiers to the input winding means of the other of said magnetic amplifiers, and stabilizing means comprising A.-C. coupling means arranged to link together the respective core means of said first



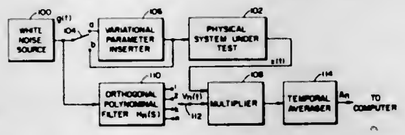
and second magnetic amplifiers so as to tend to delay the passage of a signal therethrough.

3,102,230
ELECTRIC FIELD CONTROLLED SEMICONDUCTOR DEVICE
Dawon Kahng, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 31, 1960, Ser. No. 32,801
6 Claims. (Cl. 323—94)



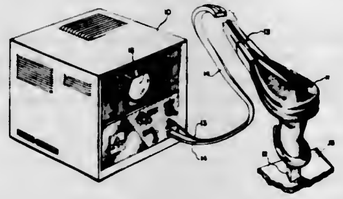
1. In combination, a semiconductor wafer including at least a first and third region of one conductivity type separated by a second region of the opposite conductivity type and defining respectively a first and second p-n junction, said first and second p-n junctions intersecting a major surface of the wafer, a dielectric coating over at least said major surface, means for impressing a voltage across said first and second p-n junctions, means for impressing an electric field across said dielectric in a direction to encompass both said dielectric and said semiconductor wafer, said electric field being particularly characterized in that it is responsive to variations in the voltage across said first and second p-n junctions.

3,102,231
WHITE NOISE FAULT DETECTION SYSTEM
Alfred A. Wolf, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Apr. 19, 1961, Ser. No. 104,097
4 Claims. (Cl. 324—57)



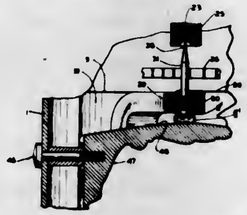
1. Apparatus comprising a white noise source, correlating means for producing a voltage output therefrom having a magnitude and polarity manifesting the correlation which exists over a given period of time between first and second inputs applied thereto, transmission means including a system under test coupled between said white noise source and said correlating means for applying white noise from said source modified in accordance with the transmission characteristics of said system under test as a first input to said correlating means, an orthogonal polynomial filter coupled to said white noise source for producing a given plurality of separate statistically independent outputs, and means for successively applying each of said filter outputs as a second input to said correlating means for a given period of time.

3,102,232
MICROWAVE ELECTRICAL THICKNESS COMPARATOR UTILIZING A WAVEGUIDE PROBE
James D. Leonard, Columbus, and George T. Stropki, Gahanna, Ohio, assignors to North American Aviation, Inc.
Filed June 17, 1960, Ser. No. 36,790
7 Claims. (Cl. 324—58.5)



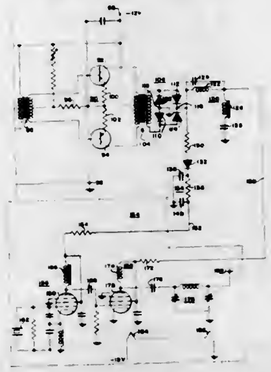
7. A microwave electrical thickness comparator consisting of: oscilloscope presentation means, backward wave oscillator means developing a frequency-swept output signal, cavity frequency meter means absorbing a portion of said backward wave oscillator means output signal, and waveguide probe means operatively connected to said cavity means to receive and radiate the unabsorbed portion of said backward wave oscillator means output signal, said waveguide probe means containing a microwave-sensitive crystal means which is operatively connected to said oscilloscope presentation means and which detects a condition caused by microwave energy radiated from and reflected into said probe means.

3,102,233
GALVANOMETER WITH DISCRETE LIQUID GLOBULE DAMPING MEANS
Wilson A. Charbonneaux, Dayton, Ohio, assignor to WacLine, Inc., Dayton, Ohio, a corporation of Ohio
Filed July 14, 1961, Ser. No. 124,048
14 Claims. (Cl. 324—125)



1. A galvanometer of the type described, said galvanometer comprising a magnet creating a magnetic field, a movable electrical coil rotatably mounted in said magnetic field for rotation when energized and having a central aperture, a core mounted within the aperture of said coil, and a discrete liquid globule located along the axis of rotation of the movable coil and being operatively interposed between the movable coil and said core for damping the movement of the coil when said coil is electrically energized.

3,102,234
PLATE MODULATED HYBRID TRANSMITTER WITH TUBE POTENTIALS DERIVED FROM TRANSISTOR STAGES
Robert M. Eisenberg, Rockville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Aug. 5, 1960, Ser. No. 47,643
1 Claim. (Cl. 325—104)

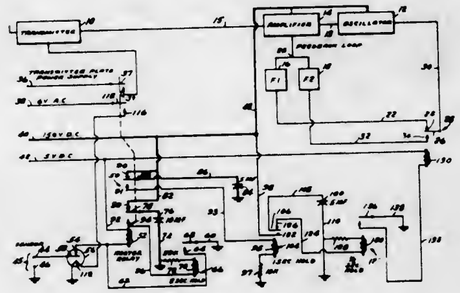


A transmitter comprising a modulator, a first oscillator connected to the modulator for producing a sub-carrier, a first amplifier connected to the modulator and arranged to modulate the sub-carrier with an audio signal, a second amplifier connected to the output of the modulator, means to demodulate the output of the second amplifier, said modulator, first oscillator, first amplifier and second amplifier comprising electron discharge devices, all said electron discharge devices being transistors, a low voltage source connected to supply the transistors of the modulator, the first oscillator, the first amplifier and the second amplifier, a third amplifier including an electron tube having an anode which is connected to the output of said demodulator means, and a second oscillator for producing a carrier connected to the third amplifier, said second oscillator including an electron tube having a plate, and a rectifier and a filter connected from said demodulator means to supply the plate voltage of the tube in the second oscillator, whereby said demodulator means provides the modulating and supply voltages for the electron tubes and said low voltage source constitutes the sole source of electrical supply.

3,102,235
AUTOMATIC RADIO WARNING SYSTEM
Wilbur Jackson, P.O. Box 286, Chatsworth, Ga.
Filed Oct. 2, 1961, Ser. No. 142,119
8 Claims. (Cl. 325—163)

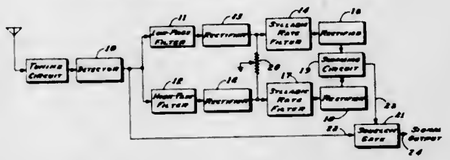
1. In a condition-responsive signalling system, a radio transmitter link and a normally open power supply circuit therefor, a condition sensor including a pair of contacts, and tone signal generator means for modulating the transmitter, said generator means including first and second alternatively closable tone control circuits and an identifiable tone producing device in at least the first of said tone control circuits, a tone control relay actuatable between first and second states for alternatively closing said first and second tone control circuits upon energization and de-energiaztion of a winding thereof, a master relay including a winding, relay power supply circuit means, a cycle-initiating circuit connecting said sensor and

the master relay for closing the relay power supply circuit means through the master relay winding upon closure of the sensor contacts whereby to energize the winding of the master relay and close the same, contact means on said



master relay for closing the transmitter power supply circuit upon closure of the master relay, and slave relay means for cyclically closing and opening the relay power supply circuit means through the winding of the tone control relay in response to closure of the master relay.

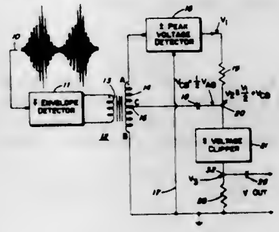
3,102,236
SQUELCH CIRCUIT CONTROLLED BY DEMODULATED VOICE SIGNAL
Donald L. Eichenberger and Edgar O. Schoenike, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 5, 1960, Ser. No. 27,069
6 Claims. (Cl. 325—478)



1. In a radio receiving system having a demodulator, a switching control circuit having first and second syllabic rate detectors, first and second filter circuits coupling said demodulator to the inputs of said first and second syllabic rate detectors respectively, said first filter circuit having a frequency band-pass characteristic for passing signal and noise normally having a greater signal-to-noise ratio than that passed by said second filter circuit, a switching circuit, means for applying the difference in the voltages derived from the outputs of said first and second syllabic rate detectors to said switching circuit, and said switching circuit operating in response to the ratio of the output voltage of said first syllabic rate filter to the output voltage of said second syllabic rate filter exceeding a predetermined value.

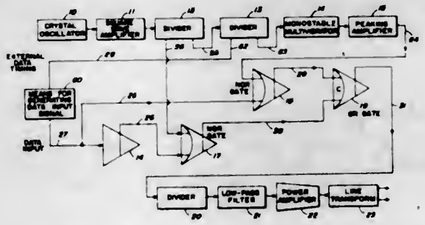
3,102,237
PROPORTIONAL NOISE LIMITER
William S. Elliott, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 10, 1961, Ser. No. 88,512
5 Claims. (Cl. 325—482)

1. In combination with an amplitude modulation detector of the type providing a direct-current voltage output of predetermined polarity, means for improving the signal plus noise-to-noise ratio of said detector output in the presence of noise amplitude perturbations thereon; comprising means for converting said detector output signal to an alternating-current signal with respect to a fixed reference potential, peak voltage detecting means receiving said alternating-current signal and developing therefrom a direct-current reference potential with amplitude proportional to the amplitude of those peaks of said alternating current signal having a polarity opposite that of said predetermined polarity means for combining like predetermined portions of the magnitudes of each of said direct-current reference and alternating-current volt-



ages, voltage clipping means associated with said voltage combining means and being adapted to block passage therethrough of those portions of said combined voltage with magnitudes in exces of and with polarity opposite that of said fixed reference potential, and an output terminal connected to said voltage clipping means whereby the voltage developed at said output terminal is proportional to the output from said amplitude detector with predetermined portions of said noise amplitude perturbations removed therefrom.

3,102,238
ENCODER WITH ONE FREQUENCY INDICATING ONE BINARY LOGIC STATE AND ANOTHER FREQUENCY INDICATING OTHER STATE
Lynn R. Bosen, Costa Mesa, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Nov. 13, 1961, Ser. No. 151,700
9 Claims. (Cl. 328—27)



1. Means for generating an encoded bit synchronized signal comprising first signal generating means for producing a first square wave signal having a frequency f_1, second signal generating means for producing a second signal having a frequency

$$\frac{f_1}{2}$$

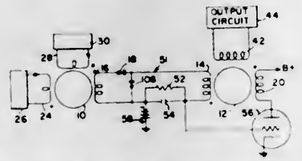
and also a pulsating output signal having a repetition rate of

$$\frac{f_1}{2}$$

and being phase locked with said second signal, means for generating a two-level data signal wherein a first level represents a space and the second level represents a mark, means for bit synchronizing said two-level data signal with said second signal, first gating means responsive to said pulsating output signal and the two-level data

signal to reproduce those pulses of said pulsating signals which occur coincidentally only with a given level of said two-level data signal, other circuit means including second gating means responsive to the said first square wave signal and said two-level data input signal to produce a square wave output signal, having a frequency f_1, coincidentally only with the occurrence of the other level of said two-level data signal, third gating means constructed to respond to the output signals of said first and second gating means to produce a resultant signal comprised of the combined output signals of said first and second gating means, said first and second signal generating means and the two-level data generating means being constructed to produce output signals having phase relationships resulting in the voltage level at the end of each bit interval of said resultant signal being of the same value as the voltage level occurring at the beginning of the next succeeding bit.

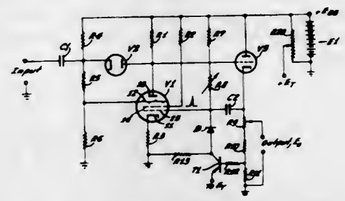
3,102,239
COUNTER EMPLOYING QUANTIZING CORE TO SATURATE COUNTING CORE IN DISCRETE STEPS TO EFFECT COUNTDOWN
Tung Chang Chen, Villanova, and Robert A. Tracy, West Chester, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Continuation of application Ser. No. 498,257, Mar. 31, 1955. This application Aug. 28, 1962, Ser. No. 221,399
27 Claims. (Cl. 328—40)



1. A binary magnetic core and a multi-stable magnetic core having n stable states of remanence wherein its first and nth states are its retentivity states, an output winding on said binary core and an input winding on said multi-stable core, a unidirectional transfer loop coupling such windings of said cores to effectuate the stepping of said multi-stable core into discrete reproducible states of magnetic storage upon the switching of said binary core from one remanent state to its other remanent state, a capacitor coupled in series circuit in said transfer loop, a resistor in parallel with said capacitor, and means responsive to a high potential at said resistor for resetting said multi-stable core whereby it is automatically reset upon reaching that retentivity point opposite to its initial retentivity point.

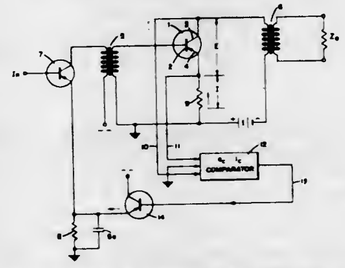
3,102,240
CATHODE-COUPLED PHANTASTRON SWEEP CIRCUIT HAVING TRANSISTOR MEANS FOR PROVIDING CONTROLLABLE PREMATURE SWEEP TERMINATION WITHOUT "BOTTOMING"
James R. Cornell, Alondra, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Feb. 4, 1959, Ser. No. 791,149
3 Claims. (Cl. 328—184)

1. A cathode-coupled phantastron sweep circuit comprising a cathode-coupled phantastron for generating a sweep in response to an applied input signal, and controllable amplitude-sensitive means for prematurely terminating the sweep of said phantastron at an adjustable predetermined time without "bottoming"; said phantastron comprising an electron tube having elements including a plate, a cathode, a control grid, a screen grid, and a suppressor grid, and circuit means coupled to the elements of said electron tube for providing cathode-coupled phantastron operation, said circuit means including an impedance connected in the cathode circuit of said electron tube and feedback means including an integrating capacitor coupled between said plate and said control grid; said amplitude-sensitive controllable means comprising at least one transistor, first circuit means coupling the input of said transistor to said phantastron so as to be responsive to the sweep generated thereby, second circuit



means coupling the output of said transistor to one of the control and suppressor grids of said electron tube, and third circuit means coupled to said transistor to cause said transistor to remain non-conducting until the sweep of said phantastron arrives at a predetermined potential, whereupon said transistor will conduct to cause a signal to be applied to one of the control and suppressor grids so as to reset said phantastron without "bottoming."

3,102,241
OVERLOAD CONTROL SYSTEM FOR TRANSISTOR AMPLIFIERS
Norman J. Johnstone, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Continuation of application Ser. No. 661,777, May 27, 1957. This application Jan. 21, 1960, Ser. No. 4,166
11 Claims. (Cl. 330—22)



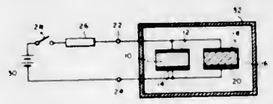
3. In combination, a transistor amplifier connected between a load circuit and a driver circuit, said driver circuit having a biasing circuit, means for respectively sampling the signal current through and the signal voltage across said transistor, means for comparing the instantaneous values of said two signals, and a feedback circuit between the comparing means and the bias circuit of said driver for applying the instantaneous values of combined signal voltages to said biasing circuit.

3,102,242
OSCILLATOR WITH ELECTROLUMINESCENT AND PHOTOCONDUCTIVE ELEMENTS
John Matarese, Bronx, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Original application May 1, 1957, Ser. No. 656,338, now Patent No. 2,898,556, dated Aug. 4, 1959. Divided and this application Apr. 16, 1959, Ser. No. 810,205
2 Claims. (Cl. 331—107)

1. An electroluminescent device comprising
(*a*) a hollow opaque enclosure containing

(*b*) an electroluminescent layer provided with first and second opposite faces respectively coated with first and second electrically conductive films,

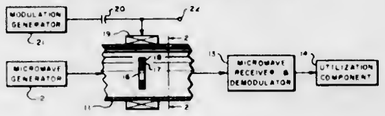
(*c*) a photoconductive layer provided with first and second faces respectively coated with third and fourth electrically conductive films positioned adjacent said electroluminescent layer, said electroluminescent layer being isolated from incident radiation by said opaque enclosure and said photoconductive layer receiving radiation only from said electroluminescent layer,



(*d*) means electrically coupling said first and third films to a first terminal, and

(*e*) means electrically coupling said second and fourth films to a second terminal, said electroluminescent layer emitting light in response to a voltage applied across said first and second terminals when said photoconductive layer has a high impedance and not emitting light when said photoconductive layer has a low impedance, the impedance of said photoconductive layer being determined by the light emitted by said electroluminescent layer.

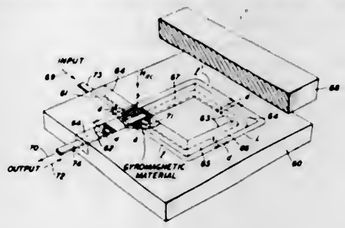
3,102,243
MICROWAVE MODULATOR
John F. Zaleski, Pleasantville, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed July 15, 1960, Ser. No. 43,106
11 Claims. (Cl. 332—51)



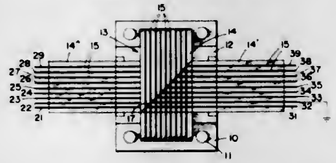
1. A microwave modulator comprising a resonant ring structure including a metal ring member and an adjoining microwave ferrite ring member, said resonant ring structure being electrically resonant at a selected microwave frequency, means for generating an alternating magnetic space field having a selected lower frequency less than said selected microwave frequency, said resonant ring structure being immersed in said alternating magnetic space field, means generating and propagating electromagnetic field energy at approximately said selected microwave frequency, said resonant ring structure being immersed in said electromagnetic field energy, the plane of said resonant ring structure being normal to the direction of propagation of said electromagnetic field energy, whereby the electromagnetic field energy propagated past the resonant ring structure is modulated at a rate which is a function of said selected lower frequency.

3,102,244
NONRECIPROCAL WAVE TRANSMISSION COMPONENTS
Harold Seidel, Fanwood, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 11, 1961, Ser. No. 82,090
20 Claims. (Cl. 333—24.2)

1. A nonreciprocal wave transmission component comprising a two-conductor transmission line, at least one of said conductors forming a loop of electrical length β, said one conductor crossing itself at an angle α, such that $\alpha=(2n+1)\pi-\beta$, n being an integer, an element of magnetically polarizable material exhibiting gyromagnetic effects over the operating frequency range of said component located between opposite ends of said loop at said crossover point, and means for biasing said element in a direction substantially normal to the plane of said loop.

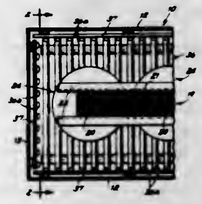


3,102,245
ELECTRICAL TRANSFORMER
Harry W. Lawson, Jr., Avon, N.Y., assignor to Caledonia Electronics and Transformer Corporation, Caledonia, N.Y., a corporation of New York
Filed Aug. 3, 1959, Ser. No. 831,340
1 Claim. (Cl. 336—84)



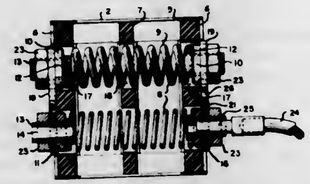
An electrical transformer comprising an iron core, a single ribbon of flexible electrically insulating plastic wound upon itself in a spiral of a plurality of convolutions about said core to form the coil of the transformer, said ribbon having embedded therein in electrically-insulated relation a plurality of flat electrical conductors that are disposed lengthwise of said ribbon and that are laterally spaced from each other, at least one of said conductors constituting the primary of the transformer, at least another of said conductors constituting the secondary of the transformer, and at least one conductor intervening between the primary and secondary conductors being grounded to form a shield between the primary and the secondary.

3,102,246
NOISE REDUCING MEANS FOR TRANSFORMER
Charles C. Honey, Bridgeville, Lawrence R. Toothman, Houston, and Kenneth C. Stewart, Bridgeville, Pa., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Dec. 17, 1958, Ser. No. 781,163
17 Claims. (Cl. 336—100)



1. In an electrical transformer having a tank, liquid dielectric within said tank, a gas cushion within said tank above said liquid dielectric, a magnetic core immersed in said dielectric, an electrical winding immersed in said dielectric and linked with said core, means for resiliently supporting said core and for mechanically decoupling said core from said tank, and means including at least one hollow compliant element open at least on one end and immersed in said dielectric between said core and the walls of said tank for increasing the effective compressibility of said liquid dielectric, said hollow compliant element containing gas and being surrounded by said liquid dielectric and having said open end and the interior of said hollow element in communication with said gas cushion, the mechanical resistance and the stiffness constant of said compliant element being such as to tune said compliant element for resonance at the frequency of the vibratory forces originating in said core and to result in said compliant element shunting a portion of the vibratory forces originating in said core and transmitted by said liquid dielectric tending to drive the bottom and side walls of said tank.

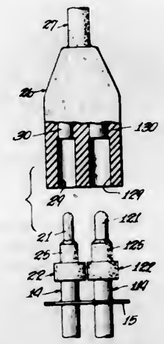
3,102,247
RESISTOR
Clarence F. Mittelstadt, Sewickley, Pa., assignor to Mosebach Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 3, 1961, Ser. No. 121,465
9 Claims. (Cl. 338—97)



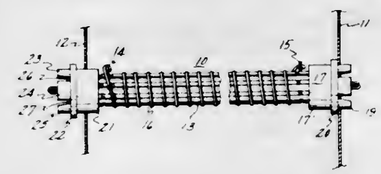
1. A resistor comprising supporting means including spaced apart members of non-conducting material, said members having openings therein, an elongated resistance element having a body of coil form, the end portions of the resistance element entering said openings, and means mounting the resistance element to the supporting means, the end portions of the resistance element and the means mounting the resistance element to the supporting means having openings extending completely therethrough generally in the direction of the length of the resistance element to permit air circulation therethrough.

3,102,248
ELECTRIC HEATER ASSEMBLY
Sidney J. Temple, Pittsburgh, Pa., assignor to Edwin L. Wiegand Company, Pittsburgh, Pa.
Filed Feb. 7, 1961, Ser. No. 87,673
1 Claim. (Cl. 338—274)

In an electrical heating element having a metallic sheath with an electrical resistance element within and electrically insulated from said sheath and a terminal pin electrically connected to said resistance element and having a threaded end projecting outwardly of an end of said sheath, the improvement comprising a waterproof separable electrical connection between said terminal and a power conductor, including a metal plug, a rubber sleeve molded to and about one end surface and the adjacent end portion of said plug, the other end surface and adjacent end portion being uncovered, said sleeve having an axial opening in that portion covering said one end surface of said plug and aligned with an axial threaded opening extending from said one end surface inwardly of said plug, said plug opening threadedly receiving the threaded end of said terminal pin and being longer than such end so that when said plug is screwed home on said terminal pin, the rubber covering said plug one end surface is compressed between the latter and the adjoining end of said sheath to seal such sheath end, a metal socket electrically connected to said power conductor having an axial opening frictionally receiving the uncovered portion of said plug, a receptacle of rubber molded around said socket with the opening into the latter uncovered and passing said plug to and from connected relation with said socket, said sleeve having a shoulder which abuts and seals against an end surface of said receptacle when said plug is electrically received within said socket.



3,102,249
HEATING UNIT MOUNTING MEANS
Albert E. Schulz, Fairfield, and George J. Reisch, Shelton, Conn., assignors to General Electric Company, a corporation of New York
Filed Mar. 31, 1961, Ser. No. 99,900
10 Claims. (Cl. 338—316)

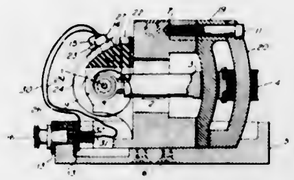


1. In an electric heater having first and second spaced substantially fixed support members with apertures therein, a resistance support core, means to mount said core between said first and second support members comprising a first end cap received on one end of said core and a second end cap received on the other end of said core, said first end cap having a portion extending through the aperture of said first support member and having a flange abutting the surface of said first support member surrounding the aperture, said second end cap having a portion extending through the aperture of said second support member, said portion of said second end cap being smaller than the aperture formed in said second support member so that said portion of said end cap may be freely inserted into the aperture formed in said second member, said portion being large enough to prevent substantial transverse movement of said second end cap with respect to said second support member, and means cooperating with said second cap for urging said core and said first end cap longitudinally toward said first support so that the flange of said first end cap is resiliently held against the surface of said first support member.

3,102,250
VIBRATION PICKUP

Gerald K. Reen, Orange, and Thomas C. Warner, Jr., West Haven, Conn., assignors to Textron Electronics, Inc., Providence, R.I., a corporation of Delaware

Filed July 29, 1959, Ser. No. 830,223
5 Claims. (Cl. 340—17)

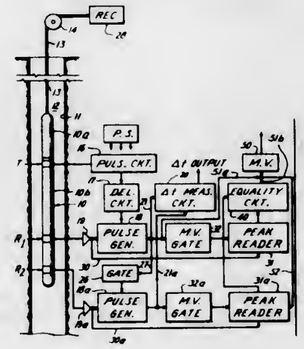


1. A vibration pickup of the seismic velocity type having a seismic suspension comprising a moving arm assembly, support means on which the assembly is pivoted, and two permanent magnets, each having a free end which faces the free end of the other magnet, which magnets are carried on opposite sides of the support means in combination with two pole pieces, each being arranged in direct juxtaposition to the free ends of the magnets without the intervention of the other pole piece thereby forming two air gaps, one being between the two pole pieces and the free end of one magnet, and the other between the two pole pieces and the free end of the other magnet, these parts forming a magnetic circuit with each pole piece providing a separate magnetic flux path in that circuit, an electrical signal coil on said moving arm assembly surrounding one of the pole pieces and a damping coil also on the said moving arm assembly but surrounding the other pole piece.

3,102,251
ACOUSTIC LOGGING APPARATUS

Robert B. Blizard, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed Oct. 30, 1959, Ser. No. 849,890
12 Claims. (Cl. 340—18)

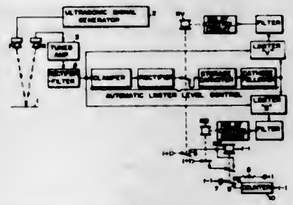


1. A method of well logging which comprises probing with acoustic pulses segments of constant length along a bore by periodically causing an emission of an acoustic signal at first locations along the bore and sensing the arrival of the accoustic pulse at second and third locations along the bore at a fixed distance from one another and from said first locations, developing signals representative of acoustic pulses arriving at said second and third locations, developing decay functions of peak amplitude values of said developed signals at said second and third locations, and deriving indications of the time interval between the time at which a peak amplitude occurs at the second location and the time at which the value of the decay functions are equal.

3,102,252
ULTRASONIC VEHICLE DETECTOR

Norman A. Bolton, Scottsville, N.Y., assignor to General Signal Corporation, a corporation of New York

Filed July 28, 1960, Ser. No. 45,980
11 Claims. (Cl. 340—38)

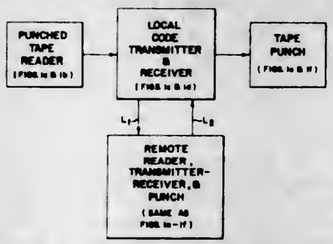


1. In a system for detecting the presence of a vehicle as it moves along a selected path and passes through a detection zone the combination comprising, transmitting means including a transducer for directing a zone-defining beam of energy across a path which impinges upon each vehicle as it moves through said zone but impinges instead when no vehicle is present upon a fixed reflecting surface more distant than said vehicle, receiving means including transducer means being positioned and directed to receive reflections of said beam alternatively from each vehicle and from said fixed surface, said receiving means producing an output having at least one distinctive characteristic thereof varying in accordance with the amplitude of the reflected energy received by said receiving means, and detection means being governed according to said distinctive characteristic of said output of said receiving means and being controlled to a distinctive condition indicative of the presence of a vehicle in said zone only when said distinctive characteristic has the value it assumes when said amplitude of said reflected energy is in excess of that normally received from said fixed reflecting surface when no vehicle is present.

3,102,253
CODED-INFORMATION TRANSLATING SYSTEM

Edwin O. Blodgett, Rochester, N.Y., assignor to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware

Filed July 2, 1958, Ser. No. 746,254
21 Claims. (Cl. 340—146.1)

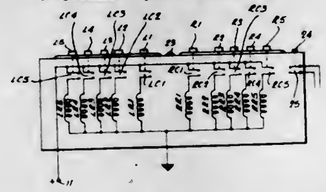


1. A coded-information translating system comprising, means for utilizing binary-coded representations of individual ones of plural information items, means for supplying to said utilizing means for use thereby information items each individually represented in binary-coded form and of maximum number which may require the use of substantially all of the possible permutations and combinations of the total number of binary code bits available in the code preselected for translation of all information, first means for counting the number of supplied information items having a preselected type of code parity, second means for counting the number of utilized information items having said preselected type of parity, and means for providing a continuing comparison of the counts of said first and second counting means to indicate lack of identity of code-form parity of the information items supplied by said supply means with those utilized by said utilizing means.

3,102,254
APPARATUS FOR MINIMIZING CODING ERRORS

Maurice M. Levy, Ottawa, Ontario, Canada, assignor to Her Majesty the Queen in the Right of Canada as represented by the Postmaster General, Ottawa, Ontario, Canada

Filed Mar. 17, 1960, Ser. No. 15,721
9 Claims. (Cl. 340—146.1)



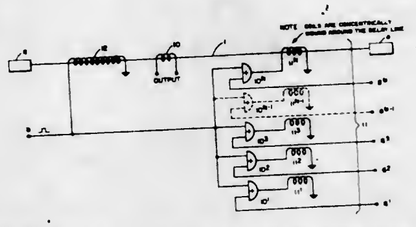
1. Apparatus comprising means for generating binary signals including a pluraity of individually operable members, a matrix having two series of elements, first switching means operated by said binary members for connecting an energization source to each one of the first series of said elements exclusively, the element so connected corresponding uniquely to the combination of operated binary members, second switching means operable by said binary members for connecting an energization source to each one of the second series of said elements exclusively, the element so connected corresponding uniquely to the combination of operated binary members, each matrix element of said first series being associated with each matrix element of said second series in a selected one of two different manners, and indicating means connected to said matrix elements for distinguishing between energization by said first and second switching means of a combination of said elements associated with each other in the first of said manners and energization by said first and second switching means of a combination of each elements associated with each other in the second of said manners, the combinations of matrix elements being so chosen that for each combination in which said elements are associated with each other in said first manner, there is an associated group of combinations of matrix elements in which said elements are associated with each other in said second manner, said associated group including every combination of matrix elements that corresponds to a combination of operated binary members differing only in respect of a single said member from the combination of operated binary members corresponding to the last-mentioned matrix element combination the elements of which are associated with each other in the said first manner.

3,102,255
INHIBITOR CIRCUIT

Robert C. Curry and Carl B. Shook, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed July 12, 1960, Ser. No. 42,317
8 Claims. (Cl. 340—146.2)

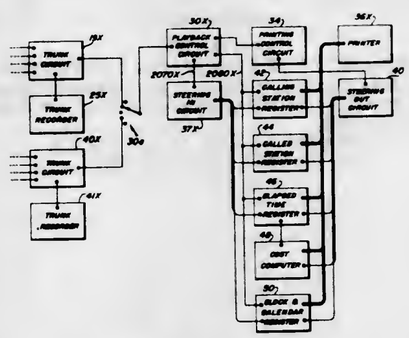
1. A comparator comprising an elongated body of material capable of transmitting therealong an impulse produced therein, first input coupling means comprising N input devices located at a first given point, each of said devices being capable of producing an impulse of a given magnitude in response to the application of an electrical pulse of a given magnitude, second input coupling means comprising an input device located at a second given point, said input device being capable of producing an impulse N times said given impulse magnitude in response to the application of an electrical pulse of said given magnitude, an output device located equidistant from said first and second fixed points for producing an electrical pulse in response to the passage of an impulse and means for applying electrical pulses to said input device and said N input devices.



3,102,256
TOLL TICKETING READ-OUT PRINTING SYSTEM

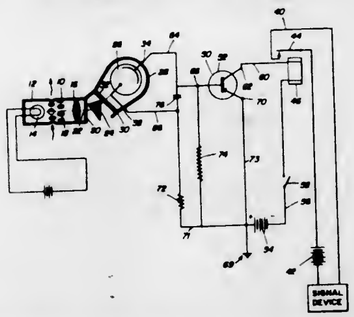
Gerald R. Paul, Webster, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Aug. 27, 1957, Ser. No. 680,565
9 Claims. (Cl. 340—172.5)



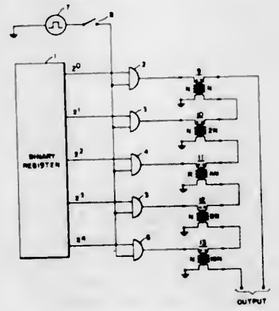
9. In a data handling system, a plurality of registers each adapted to store data, a data utilizing means for receiving the entered data, means connecting said data utilizing means to said registers, a counting chain including a plurality of controlled conduction devices, means for rendering said controlled conduction devices conductive in sequence, a plurality of first means each connected to a selected one of said controlled conduction devices and responsive to the conductive condition of the related controlled conduction device for supplying a read signal, means connecting each of said first means to one of said registers so that the read signal operates the related register to transfer the data stored therein to the data utilizing means, and second means connected to at least some of said selected ones of said controlled conduction devices and responsive to the conductive condition of the related controlled conduction device for operating said data utilizing means to perform a control operation.

3,102,257
GAS WARNING DEVICE
John M. Miller, Blytheville, Ark.
Filed July 21, 1958, Ser. No. 749,816
6 Claims. (Cl. 340—237)



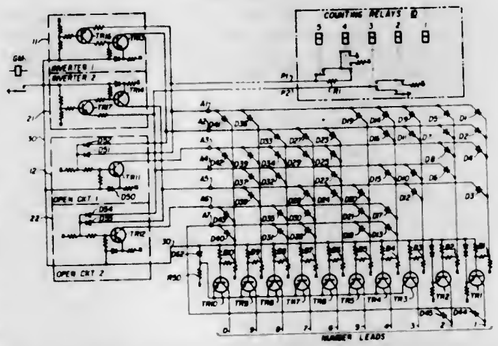
2. A gas detection and warning device comprising a gas analysis chamber device having a source of visible light radiations of a predetermined wave length and a lens system including a collimating element, a slit and a light dispersing element producing a light spectrum; an optical filter operatively connected with the chamber device to restrictively pass only that part of the light spectrum at said predetermined wave length which is absorbed by a single predetermined gas in the presence of the gas chamber device; a light sensitive element having output terminals and operative to produce an electrical current only in response to said part of the light passed by the filter; means including a switch for controlling a signal; and amplifying means connected with said light sensitive element output terminals and said signal controlling means to actuate said switch when current flows from said light sensitive element.

3,102,258
BINARY CODE TO ANALOG CONVERTER
Robert C. Curry, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 845,672
3 Claims. (Cl. 340—347)



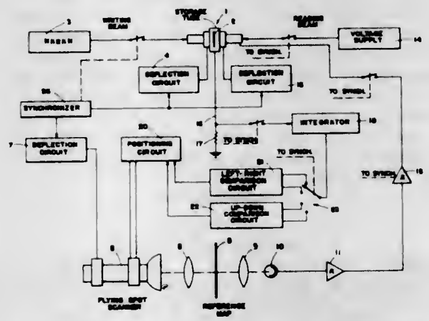
3. In a converter for converting a N bit binary code in which each bit of the code is either a "0" or a "1" to an analog representation, N transformers individually corresponding to the bits of said code, each of said transformers having a primary winding and a secondary winding with the number of turns on the secondary winding being related to the number of turns on the primary winding in the ratio of the decimal value of the corresponding bit of said code to one, means for permanently connecting all said secondary winding in series aiding relationship, pulse generating means, and means coupled to said pulse generating means for simultaneously applying equal valued pulses to the primary windings of the transformers corresponding to "1" bits in response to a pulse from said pulse generating means.

3,102,259
CODE CONVERSION ARRANGEMENT
Robert C. Totz, Belvidere, Ill., assignor, by mesne assignments, to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Aug. 24, 1960, Ser. No. 51,635
12 Claims. (Cl. 340—347)



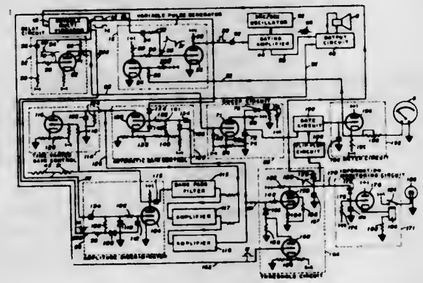
1. A code converting arrangement for converting coded digital signals received from a source over a signal conductor, the source comprising an arrangement for selectively applying one of at least three signal conditions to the signal conductor; said code converting arrangement comprising a matrix of diode-connected conductors having input terminals receptive only to a given one of said conditions and output terminals, each of said conditions which may be applied to the signal conductor being individually associated with one of the input terminals, circuit means coupling the signal conductor to said input terminals to respond to the signal condition on the signal conductor and supply said given condition signal to the corresponding individual input terminal, to thereby apply a given condition through the matrix to predetermined ones of the output terminals.

3,102,260
APPARATUS FOR COMPARING MAPS
Joseph B. Mihelich, Inglewood, Calif., assignor to North American Aviation, Inc.
Filed Nov. 3, 1951, Ser. No. 254,764
10 Claims. (Cl. 343—5)



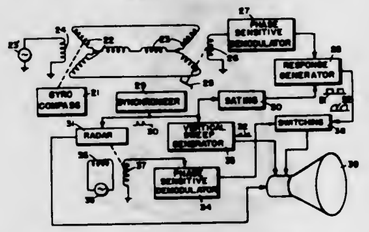
1. In combination with a radar device, means connected with said radar for storing in terms of electric charge signals produced by said radar; a reference map; means operatively connected with said reference map for producing an electric charge proportional to information inscribed on said map; and means operatively connected with said lastly mentioned means and said storing means for comparing said electric charges and producing a voltage proportional to the difference therebetween.

3,102,261
SONIC ALTIMETER
James A. Wippert, Burbank, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,514
12 Claims. (Cl. 343—5)



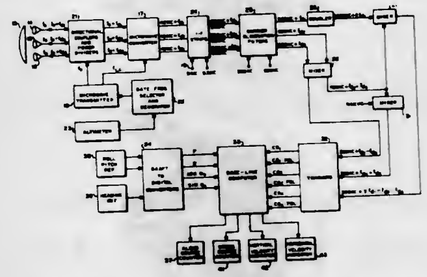
1. An echo distance-measuring device comprising:
means for successively transmitting bursts of traveling wave energy;
detecting means for detecting an echo of each said burst;
indicating means for manifesting distance;
time-measuring means responsive to each transmitted burst and its echo for setting said indicating means in accordance with the duration of the echo interval between the transmission of each burst and detection of the echo thereof;
and means for controlling the duration of each said burst in accordance with the duration of the preceding echo interval as indicated on said indicating means;
said detecting means including: a transducer for converting said echo into an electrical echo signal, amplifier means for amplifying said electrical echo signal, automatic gain control means for regulating the gain of said amplifier means in accordance with the signal strength received by said amplifier means, and means for reducing the gain of said amplifier means during the transmission of a burst of traveling wave energy.

3,102,262
LEAD COLLISION TRACK AND SCAN SYSTEM
Rulon G. Shelley, Downey, Calif., assignor to North American Aviation, Inc.
Filed Feb. 1, 1957, Ser. No. 637,729
12 Claims. (Cl. 343—7)



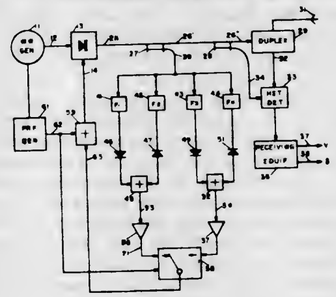
1. Tracking apparatus comprising means for deriving the range of a moving target relative to an attacking aircraft and the target bearing, means for deriving the lead collision angle of said aircraft relative to said target as a function of target range, and means for presenting said angle for comparison with said bearing at varying ranges.

3,102,263
DOPPLER RADAR SYSTEM
Maurice A. Meyer, Natick, Mass., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Sept. 10, 1956, Ser. No. 610,444
26 Claims. (Cl. 343—8)



1. In a Doppler radar system apparatus comprising, a source of coherently generated high frequency transmitted and local oscillator signals, means for pulsing said transmitted signal to provide high frequency energy pulses separated by intervals substantially equal to the duration of said pulses, means for radiating a plurality of pencil beams of high frequency in response to and of the same frequency as said pulses, means for receiving the energy from each beam returned from a scattering surface, and means for mixing the returned energy from each beam with said local oscillator signal.

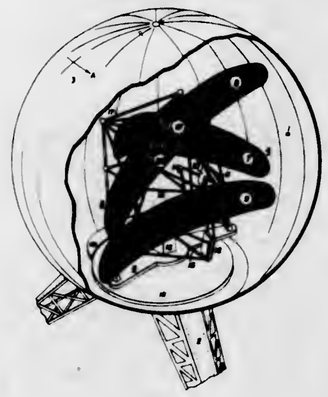
3,102,264
HYBRID PULSE-CONTINUOUS WAVE DOPPLER RADIO NAVIGATION SYSTEM
Robert A. Flower, White Plains, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Dec. 22, 1961, Ser. No. 161,509
12 Claims. (Cl. 343—9)



8. A Doppler radio navigator comprising, a microwave oscillator, control means for periodically varying the frequency of the oscillator output from a first to a second value, means responsive to said varying oscillator output for alternately driving the microwave oscillator output to a first and a second predetermined frequency, duplexing means for connecting the microwave oscillator output to an antenna and for connecting the received reflected energy from said antenna to a mixing means, means for

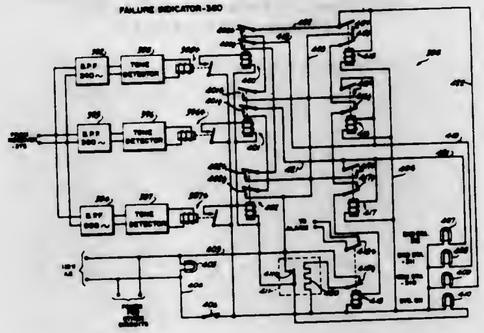
connecting the microwave oscillator output to said mixing means, and a Doppler receiver responsive to the output from said mixing means for providing the velocity of the antenna along its ground track and drift angle thereof.

3,102,265
NEW AERIAL SYSTEM RADIATING SEVERAL BEAMS
Jean R. Moreau and Roger S. Alfandari, Paris, France, assignors to Compagnie Francaise Thomson-Houston, Paris, France
Filed Jan. 4, 1960, Ser. No. 181
Claims priority, application France Jan. 14, 1959
3 Claims. (Cl. 343—100)



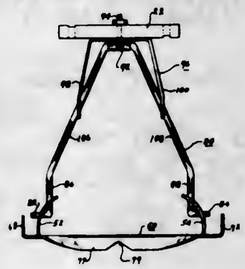
1. An arrangement for communicating electromagnetic waves with a first and second polarization separated 90° from one another comprising a first and second electromagnetic wave reflector, each of said reflectors having a major and a minor axis, means for mounting said reflectors in a cross position such that their major axes make a given angle with respect to one another, each of said reflectors having a plurality of parallel electromagnetic wave reflecting elements at least where the reflectors overlap one another, the elements of one reflector being perpendicular to the elements of the other reflector, a first waveguide horn associated with said first reflector, a second waveguide horn associated with said second reflector, each of said horns having major and minor horn axes, said major axis of each horn being positioned parallel to the minor axis of the associated reflector, said given angle being different from 90° such that electromagnetic waves communicated between one horn and its associated reflector are not perpendicular to the electromagnetic waves communicated between the other horn and its associated reflector, means for rotating the polarization of electromagnetic waves associated with said first horn such that the resulting electromagnetic waves are polarized parallel to the elements of said first reflector, means for rotating the polarization of electromagnetic waves associated with said second horn such that the resulting electromagnetic waves are parallel to the elements of said second reflector, a third electromagnetic wave reflector having a major and minor axis, a third horn associated with said third reflector and having a major and minor horn axis, said major axis of said third horn being parallel to the minor axis of said third reflector, said major axis of said third reflector positioned to be parallel to the line bisecting the major axes of said first and second electromagnetic wave reflectors, and means for angularly rotating said feeds and associated reflectors about a common axis.

3,102,266
RADIO LOCATION SYSTEM
Robert C. Wilson, Iowa City, Iowa, and Robert J. Puchaty, Tulsa, Okla., assignors to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Original applications Dec. 10, 1956, Ser. No. 627,398, now Patent No. 3,019,435, dated Jan. 30, 1962, and Ser. No. 800,845, filed Mar. 20, 1959. Divided and this application Apr. 21, 1960, Ser. No. 23,676
7 Claims. (Cl. 343—105)



5. In a transmission system of the hyperbolic type, at least three spaced apart transmitting stations radiating signals of different frequency, means for receiving all of said signals at a common point, means responsive to the received signals for controlling the operation of a plurality of relays, a plurality of indicating devices and a system failure indicator, said relays being connected in a relay matrix circuit for controlling the actuation of said devices and said indicator in such manner that operational failure of any of said stations renders said indicator effective and also renders effective one of said devices to identify the station at which the failure occurred, time delay means for preventing said indicator and said one indicating device from being rendered effective unless said failure exists for a predetermined period, means for maintaining said indicator and said one device effective following said predetermined period even though the station which failed resumes operation, and manually operated reset means in said circuit for rendering the indicator and said one device ineffective and for resetting the circuit to permit indications concerning subsequent failures.

3,102,267
PIVOTED SNAP LOCK TO SPACE ANTENNA FROM REFLECTOR
Irvine H. Bouchard, 1212 High St., South Bend, Ind.
Filed July 13, 1961, Ser. No. 123,732
6 Claims. (Cl. 343—881)



1. An antenna comprising a front element having a pair of spaced cross members, a reflector assembly, a pair of

fixtures connected at one end to said cross members and at the other end to said assembly, each fixture including a relatively flat base, ears adjacent the end of said base for securing said base to the reflector assembly, two forwardly extending arcuately shaped projections spaced laterally on said base near the ends thereof, each having a slot in the forward end and a hole spaced inwardly from said slot and edges tapered toward said slot, a generally V-shaped resilient member having an outwardly extending projection at each end pivotally seated in the hole of the respective extension, a means pivotally connecting said V-shaped member to said cross member of said front element, and a U-shaped bracket facing the same direction as said V-shaped member having a slot in the end and edges tapered toward said slot.

3,102,268
SPIRAL WOUND ANTENNA WITH CONTROLLED SPACING FOR IMPEDANCE MATCHING
William H. Foley, New Boston, Mass., assignor, by mesne assignments, to Brunswick-Union Inc., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,371
2 Claims. (Cl. 343—895)

1. A radio frequency antenna which is adapted to be connected to a radio frequency transmission line having a predetermined characteristic impedance, said antenna comprising: a core of dielectric material having first and second bare wire strands encircling said core in helical fashion to form an antenna having a length-diameter ratio which is chosen to achieve said predetermined characteristic impedance approximately, said first and second strands being wound about said core in opposite directions to cross each other and make contact at the crossing points to form finite spaces between said strands, said antenna being improved by selecting for each of the wound strands a particular pitch angle within a range of pitch angles that effect the resistance component of the impedance of said antenna, said resistance component changing from a larger value for the smallest pitch angle in said range to a smaller value for the largest pitch angle in said range, whereby said predetermined characteristic



impedance is achieved precisely by the selection of said particular pitch angle.

3,102,269
PROCESS FOR THE MANUFACTURE OF HYDROCYANIC ACID
John Benjamin Warren, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed July 17, 1961, Ser. No. 124,332
7 Claims. (Cl. 23—151)

1. A process for the manufacture of hydrocyanic acid comprising: pretreating a catalyst in massive form and of a foraminate structure containing at least about 50% by weight platinum metal by passing through it at a high temperature for at least one hour a mixture of ammonia, hydrocarbon, oxygen and volatile sulfur-containing material in an amount equivalent to about 2–200 mg. S/m.³ of the mixture and thereafter passing through said catalyst at high temperature a mixture consisting essentially of ammonia, hydrocarbon and oxygen.

DESIGNS

AUGUST 27, 1963

196,096
RAIN CAPE
Vernon D. Griffith and John Bruns, Wichita, Kans., assignors of one-half to Fred E. Bonner and Ben Bonner, jointly, both of Wichita, Kans.
Filed Oct. 16, 1961, Ser. No. 67,078
Term of patent 3½ years
(Cl. D3—3)



196,097
BLOUSE
John Barile, Holliswood, N.Y., assignor to Andrea Blouse & Sportswear Company, New York, N.Y., a corporation of New York
Filed Jan. 30, 1963, Ser. No. 73,373
Term of patent 3½ years
(Cl. D3—25)



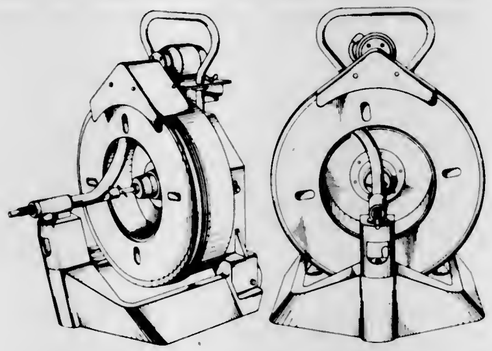
196,098
HANGING HOLDER FOR BATH AND TOILET ARTICLES
Ann Faust, 643 E. 83rd St., Chicago, Ill.
Filed Dec. 22, 1961, Ser. No. 68,037
Term of patent 14 years
(Cl. D4—3)



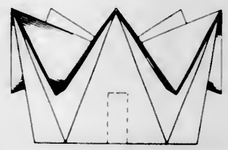
196,099
RING BINDER OR THE LIKE
William J. Sibley, South Hadley, Mass., assignor to National Blank Book Company, Holyoke, Mass., a corporation of Massachusetts
Filed Feb. 3, 1961, Ser. No. 63,815
Term of patent 14 years
(Cl. D6—1)



196,100
SEWER CLEANER
Charles J. O'Neill, Mendota, Ill., assignor to Conco Engineering Works, Inc., Mendota, Ill., a corporation of Illinois
Filed Aug. 22, 1961, Ser. No. 66,454
Term of patent 14 years
(Cl. D9—2)



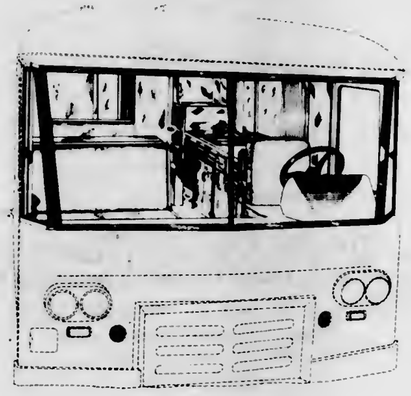
196,101
BUILDING
John P. Bittner, 9 Linden St., Brattleboro, Vt.
Filed July 19, 1961, Ser. No. 65,980
Term of patent 14 years
(Cl. D13—1)



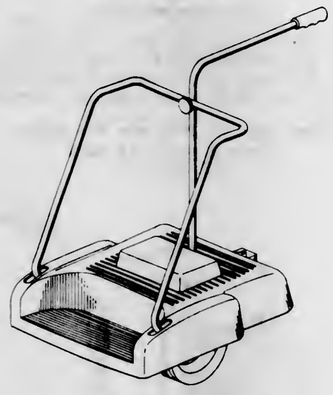
196,102
DRIVE-IN RESTAURANT OR THE LIKE
Bernard W. Bowman, 2928 S. MacArthur, Springfield, Ill.
Filed May 23, 1962, Ser. No. 70,250
Term of patent 14 years
(Cl. D13—1)



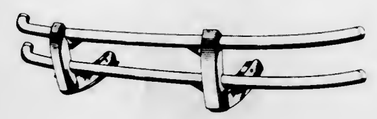
196,103
VEHICLE
Cyril B. Rogers, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Feb. 26, 1962, Ser. No. 68,981
Term of patent 14 years
(Cl. D14—3)



196,104
GOLF BAG CART
William J. Babcock, Lafayette, Calif., and Jack R. Goodrich, Minoa, N.Y., assignors to Babcock Mfg. Co., Oakland, Calif., a corporation of California
Filed July 3, 1962, Ser. No. 70,783
Term of patent 14 years
(Cl. D14—3)



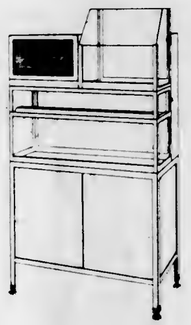
196,105
BUMPER
Lucien Peras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed July 6, 1961, Ser. No. 65,825
Claims priority, application France Jan. 16, 1961
Term of patent 14 years
(Cl. D14—6)



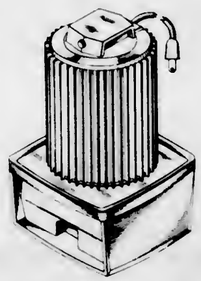
196,106
CHAIR
Robert L. Buscher, 2249 Roth St., Madison, Wis.
Filed May 1, 1961, Ser. No. 64,977
Term of patent 14 years
(Cl. D15—1)



196,107
CABINET, AQUARIUM AND ANIMAL CAGE UNIT FOR BIOLOGY CLASSROOMS OR THE LIKE
Maurice M. Schur, Skokie, Neil S. Schur, Highland Park, and Robert C. Le Sueur, River Forest, Ill., assignors to Jewel Aquarium Co., Inc., a corporation of Illinois
Filed June 6, 1962, Ser. No. 70,436
Term of patent 14 years
(Cl. D16—2)



196,108
HOUSEHOLD STILL FOR DRINKING WATER AND THE LIKE
Gary A. Gerber, Bridgeport, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Jan. 28, 1963, Ser. No. 73,335
Term of patent 14 years
(Cl. D16—2)



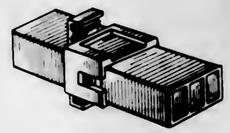
196,109
SHOE BUCKLE
Charles E. Weller, 77 Puritan Drive, Warwick, R.I.
Filed Apr. 19, 1962, Ser. No. 69,776
Term of patent 14 years
(Cl. D17—1)



196,110
TABLE KNIFE
Gert Holbek, Lyngby, Copenhagen, and Jørgen Dahlerup, Copenhagen, Denmark, assignors to Georg Jensens Solvsmedie A/S, Copenhagen, Denmark
Filed Aug. 24, 1962, Ser. No. 71,447
Claims priority, application Denmark Feb. 26, 1962
Term of patent 14 years
(Cl. D22—3)



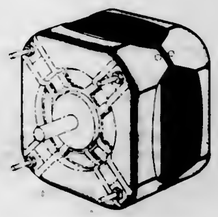
196,111
ELECTRICAL CONNECTOR HOUSING
John H. Krehbiel, Downers Grove, Ill., assignor to Molex Products Company, Brookfield, Ill., a corporation of Illinois
Filed July 14, 1961, Ser. No. 65,922
Term of patent 14 years
(Cl. D26—1)



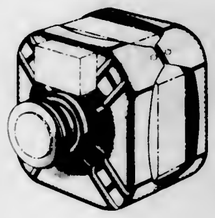
196,112
SCREW-ON CAP CONNECTOR
Harold H. Esser, Chicago, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill, a corporation of Delaware
Filed July 11, 1962, Ser. No No 70,882
Term of patent 14 years
(Cl. D26—1)



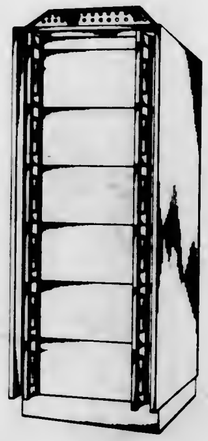
196,113
DYNAMOELECTRIC MACHINE
Charles W. Otto and John E. Hennessy, De Kalb, Ill., assignors to General Electric Company, a corporation of New York
Filed Sept. 26, 1961, Ser. No. 66,868
Term of patent 14 years
(Cl. D26—5)



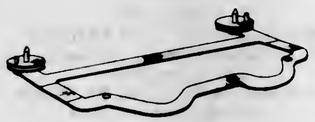
196,114
DYNAMOELECTRIC MACHINE
Charles W. Otto and John E. Hennessy, De Kalb, Ill., assignors to General Electric Company, a corporation of New York
Filed Sept. 26, 1961, Ser. No. 66,869
Term of patent 14 years
(Cl. D26—5)



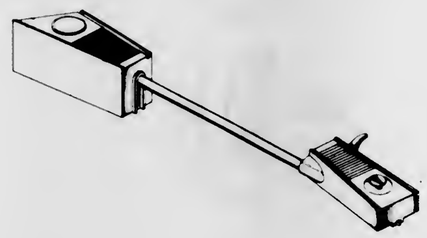
196,115
CABINET FOR ELECTRONIC EQUIPMENT AND THE LIKE
Bernie B. Berry, Jr., Indianapolis, Ind., assignor to Vent-Rak, Inc., Indianapolis, Ind., a corporation of Indiana
Filed Apr. 24, 1962, Ser. No. 69,830
Term of patent 14 years
(Cl. D26—5)



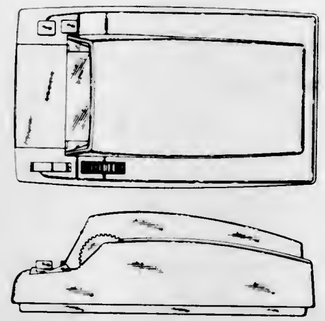
196,116
REEL ADAPTER FOR A MAGNETIC TAPE RECORDER
Fred Burhorn Kirk, Denver, Colo., assignor to Roberts Electronics, Inc., Los Angeles, Calif., a corporation of California
Filed Apr. 6, 1962, Ser. No. 69,611
Term of patent 14 years
(Cl. D26—14)



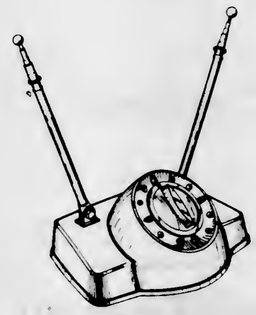
196,117
PHONOGRAPH TONE ARM
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Aug. 27, 1962, Ser. No. 71,471
Term of patent 14 years
(Cl. D26—14)



196,118
AUTOMATIC TELEPHONE DIALER
Ernst A. Eriksson, Lexington, Mass., assignor to Perini Electronic Corporation, San Mateo, Calif., a corporation of California
Filed Nov. 23, 1962, Ser. No. 72,589
Term of patent 14 years
(Cl. D26—14)



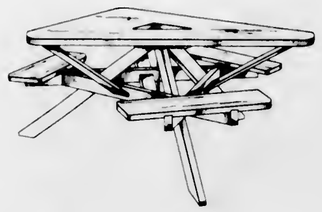
196,119
INDOOR TELEVISION ANTENNA
Marvin P. Middlemark, 99—05 63rd Drive, Rego Park, N.Y.
Filed Mar. 14, 1963, Ser. No. 73,975
Term of patent 14 years
(Cl. D26—14)



196,120
FLOWER VASE OR SIMILAR ARTICLE
Nathan W. Roop, Columbus, Ohio, assignor to Columbus Plastic Products Inc., Columbus, Ohio, a corporation of Ohio
Filed Apr. 23, 1962, Ser. No. 69,819
Term of patent 14 years
(Cl. D29—28)



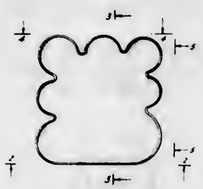
196,121
COMBINED TABLE AND SEATING UNIT
Henry Soszynski, 274 King St., Hanson, Mass.
Filed Feb. 19, 1963, Ser. No. 73,630
Term of patent 14 years
(Cl. D33—14)



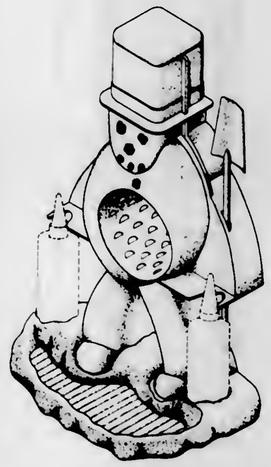
196,122
GAME SPINNER
Herbert R. Wells and Mary M. Wells, both of 14509 Hayward, Whittier, Calif.
Filed Mar. 13, 1963, Ser. No. 73,962
Term of patent 14 years
(Cl. D34—5)



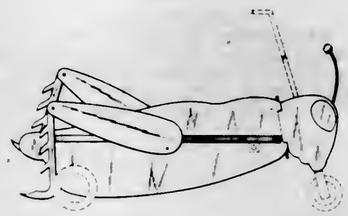
196,123
MAH JONG COIN HOLDER TRAY
Sally F. Raphael, 128 N. Craig St., Pittsburgh, Pa.
Filed Mar. 12, 1963, Ser. No. 73,929
Term of patent 14 years
(Cl. D34—13)



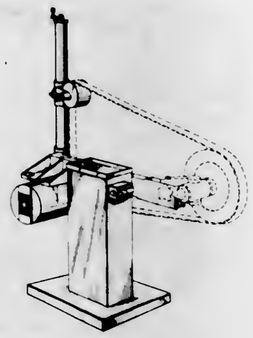
196,124
TOY FIGURE
Nicholas T. Argiro, 780 Riverside Drive, New York, N.Y.
Filed May 3, 1961, Ser. No. 65,011
Term of patent 7 years
(Cl. D34—15)



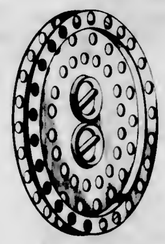
196,125
PEDAL DRIVEN TOY VEHICLE
Robert L. Hanna, 1326 N. Manhattan Ave., Manhattan, Kans.
Filed May 14, 1962, Ser. No. 70,106
Term of patent 14 years
(Cl. D34—15)



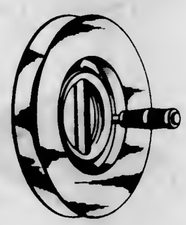
196,126
BELT ABRADER
Phillip J. Robischung, Kalamazoo, Mich., assignor to Hammond Machinery Builders, Inc., Kalamazoo, Mich., a corporation of Michigan
Filed Feb. 26, 1962, Ser. No. 68,957
Term of patent 14 years
(Cl. D37—1)



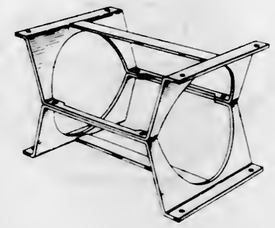
196,127
KITE REEL
Henry Allen Wilson, 1000 Eldorado Ave., Clearwater Beach, Fla.
Filed Oct. 23, 1962, Ser. No. 72,234
Term of patent 14 years
(Cl. D41—1)



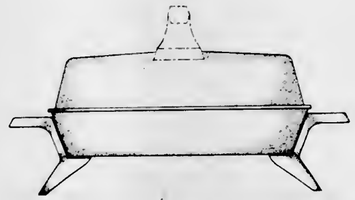
196,128
KITE REEL
Henry Allen Wilson, 1000 Eldorado Ave., Clearwater Beach, Fla.
Filed Oct. 23, 1962, Ser. No. 72,235
Term of patent 14 years
(Cl. D41—1)



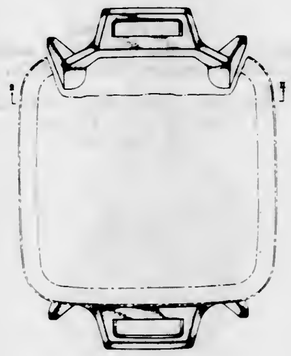
196,129
STOWAGE RACK
John L. Torresen, Grimes Hill, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 16, 1962, Ser. No. 72,521
Term of patent 14 years
(Cl. D41—1)



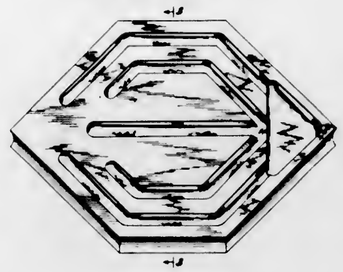
196,130
COMBINED FRY PAN AND LID THEREFOR
Frederick W. Becker, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Jan. 21, 1963, Ser. No. 73,239
Term of patent 14 years
(Cl. D44—1)



196,131
COOKING VESSEL OR THE LIKE
Frederick W. Becker, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Jan. 21, 1963, Ser. No. 73,240
Term of patent 14 years
(Cl. D44—1)



196,132
CARVING BOARD
Emil S. Polk, Eastchester, N.Y.
(6 North St., Mount Vernon, N.Y.)
Filed Apr. 15, 1963, Ser. No. 74,449
Term of patent 14 years
(Cl. D44—1)



196,133
LEG UNIT FOR KITCHEN UTENSILS
John Clark Brown, 372 Highland Ave.,
Upper Montclair, N.J.
Filed July 6, 1962, Ser. No. 70,821
Term of patent 14 years
(Cl. D44—29)



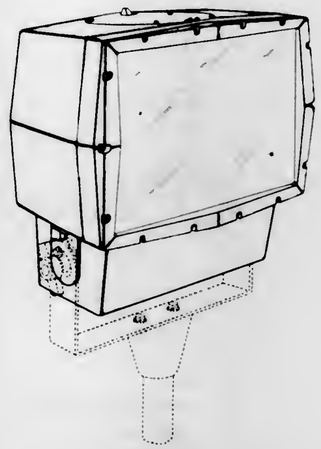
196,134
BUTTER SPREADER OR THE LIKE
Erwin C. Faber, Long Beach, Calif., assignor of one-half to Alfred I. Stubbs, Long Beach, Calif.
Filed Aug. 13, 1962, Ser. No. 71,239
Term of patent 14 years
(Cl. D44—29)



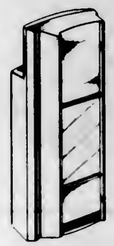
196,135
FINGER RING
John L. Hazelquist, Garden City, Mich., assignor to Traub Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed Feb. 4, 1963, Ser. No. 73,413
Term of patent 14 years
(Cl. D45—10)



196,136
FLOODLIGHT
Byron R. Thoman, Liverpool, Richard H. Chapman, Syracuse, and Arthur J. Pulos, Fayetteville, N.Y., assignors to Crouse-Hinds Company, Syracuse, N.Y., a corporation of New York
Filed Jan. 23, 1962, Ser. No. 68,490
Term of patent 14 years
(Cl. D48—20)



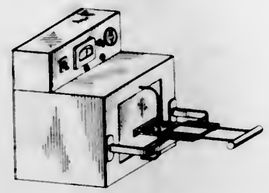
196,137
ULTRA-VIOLET LAMP OR SIMILAR ARTICLE
Frederick Gordon Mackay, Tarzana, Calif., assignor to Ultra-Violet Products, Inc., San Gabriel, Calif., a corporation of California
Filed Sept. 17, 1962, Ser. No. 71,729
Term of patent 14 years
(Cl. D48—20)



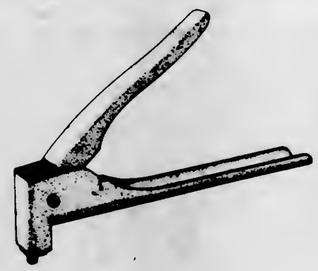
196,138
MATCH BOX
William I. Kreisner, 145 Concord Ave., Oceanside, N.Y.
Filed Apr. 26, 1961, Ser. No. 64,912
Term of patent 14 years
(Cl. D48—29)



196,139
OPHTHALMIC LENS HARDENING APPARATUS
Stanley Kirk, Levittown, N.Y., assignor to Kirk Optical Lens Co., Inc., Bronx, N.Y., a corporation of New York
Filed May 15, 1962, Ser. No. 70,141
Term of patent 14 years
(Cl. D54—8)



196,140
RIVET SETTING TOOL
George Pickford, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Aug. 2, 1962, Ser. No. 71,150
Term of patent 14 years
(Cl. D54—10)



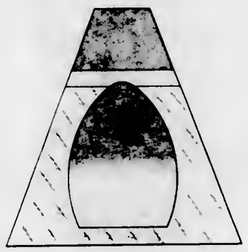
196,141
TABLESPOON
Gert Holbek, Lyngby, Copenhagen, and Jørgen Dahlerup, Copenhagen, Denmark, assignors to Georg Jensens Solvsmedie A/S, Copenhagen, Denmark
Filed Aug. 24, 1962, Ser. No. 71,448
Claims priority, application Denmark Feb. 26, 1962
Term of patent 14 years
(Cl. D54—12)



196,142
CLAMP FOR AN OPERATING TABLE SIDE RAIL AND THE LIKE
Fred K. Storm, Allen St., Glendale, Calif., and Eldridge H. Smiley, 9529 Marshall St., Rosemead, Calif.
Filed May 24, 1962, Ser. No. 70,272
Term of patent 14 years
(Cl. D54—13)



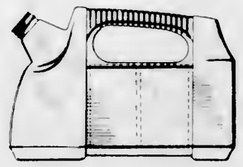
196,143
FLEXIBLE PACKAGE FOR CONDIMENTS OR THE LIKE
Eugene J. Kane, Nutley, and Ethel R. McEwan, Teaneck, N.J., assignors to Thomas J. Lipton, Inc., Hoboken, N.J., a corporation of Delaware
Filed June 25, 1962, Ser. No. 70,670
Term of patent 14 years
(Cl. D58—2)



196,144
JUG
Eugene H. Endress, 631 E. Walnut St., Evansville, Ind.
Filed May 23, 1962, Ser. No. 70,242
Term of patent 14 years
(Cl. D58—5)



196,145
JUG
John Patrick Kinsley, Newark, Del., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Jan. 2, 1963, Ser. No. 73,037
Term of patent 14 years
(Cl. D58—5)



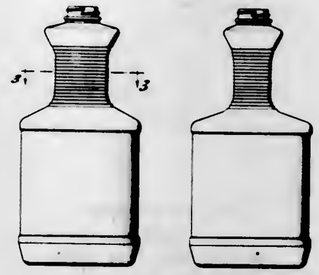
196,146
JUG
Carlos Alberto Guimarnes Lello, Vila Nova de Gaia, Portugal, assignor to Sociedade dos Vinhos Borges & Irmao S.A.R.L., Vila Nova de Gaia, Portugal
Filed Feb. 25, 1963, Ser. No. 73,712
Claims priority, application Portugal Aug. 24, 1962
Term of patent 14 years
(Cl. D58—5)



196,147
BOTTLE
Gary Arthur Gerber, Bridgeport, Conn., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Jan. 28, 1963, Ser. No. 73,336
Term of patent 14 years
(Cl. D58—6)



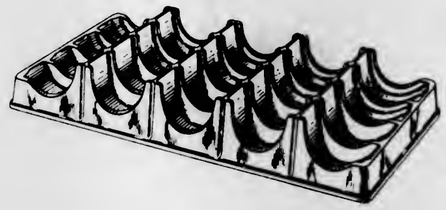
196,148
CARAFE
Alfred D. Sterges, Los Angeles, Calif., assignor to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Continuation of design application Ser. No. 60,607, May 16, 1960. This application Oct. 16, 1961, Ser. No. 67,074
Term of patent 14 years
(Cl. D58—8)



196,149
BOTTLE
Robert H. Knies, Manheim Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed July 9, 1962, Ser. No. 70,836
Term of patent 14 years
(Cl. D58—8)



196,150
PACKAGING TRAY FOR COOKIES OR THE LIKE
Hugh R. Weiss, Montclair, N.J., assignor to The Pantasote Company, Passaic, N.J., a corporation of New Jersey
Filed Nov. 19, 1962, Ser. No. 72,539
Term of patent 14 years
(Cl. D58—11)



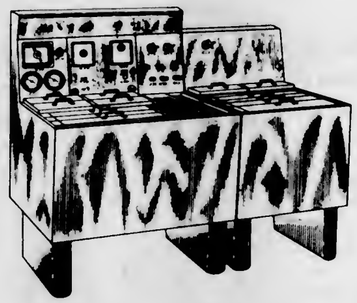
196,151
COMBINED BASKET AND PACKAGING CONTAINER THEREFOR
Julian Hyman, The Bungalow, 1 Park Road, Broughton Park, Manchester, England
Filed May 29, 1962, Ser. No. 70,338
Term of patent 14 years
(Cl. D58—17)



196,152
WALLPAPER PANEL
Fred R. Kazenwadel, Saddle River, N.J., and George K. Birge, New York, N.Y., assignors to George K. Birge Co., Inc., New York, N.Y.
Filed May 8, 1962, Ser. No. 70,029
Term of patent 3½ years
(Cl. D59—10)



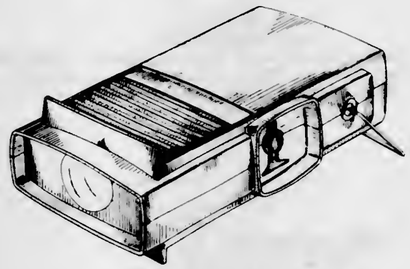
196,153
COLOR PHOTOGRAPH PROCESSING UNIT
Harold G. Bergstrom, New Rochelle, N.Y., assignor to Charles Beseler Company, Orange, N.J., a partnership
Filed Jan. 10, 1962, Ser. No. 68,255
Term of patent 14 years
(Cl. D61—1)



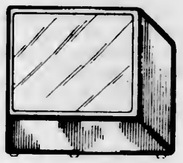
196,154
TAPE SPLICER OR THE LIKE
Herman D. Post, Great Neck, and Edward Perper, Brooklyn, N.Y., assignors to Robins Industries Corp., Flushing, N.Y.
Filed May 2, 1962, Ser. No. 69,949
Term of patent 14 years
(Cl. D61—1)



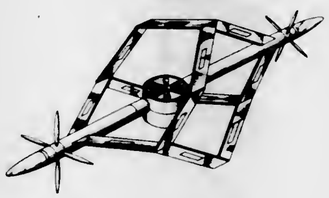
196,155
SLIDE PROJECTOR
Paul A. Hoogesteger, Brighton, and Jacob W. Patia, Rochester, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Nov. 28, 1962, Ser. No. 72,635
Term of patent 14 years
(Cl. D61—1)



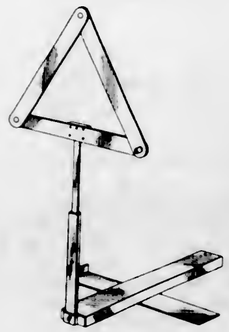
196,156
FILM VIEWER
Clarence S. McClellan, Los Angeles, Calif. (1237 5th St., Santa Monica, Calif.)
Filed Apr. 9, 1963, Ser. No. 74,358
Term of patent 14 years
(Cl. D61—1)



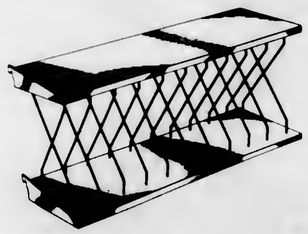
196,157
AIRCRAFT
Frank A. Petry, 1615 Armacost Ave., Los Angeles, Calif.
Filed Mar. 5, 1962, Ser. No. 69,086
Term of patent 14 years
(Cl. D71—1)



196,158
TRAFFIC MARKER
Anthony Romano, 3974 Jackdaw, San Diego, Calif.
Filed Feb. 25, 1963, Ser. No. 73,707
Term of patent 14 years
(Cl. D72—1)



196,159
FILING SHELF
Preston Nagelkirk, Zeeland, Mich., assignor to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan
Filed Nov. 16, 1961, Ser. No. 67,560
Term of patent 14 years
(Cl. D74—9)



196,160
COMBINED MERCHANDISING AND DISPLAY STAND
Lawrence Willard Patterson, 1415 W. 5th St., Santa Ana, Calif.
Filed Aug. 10, 1961, Ser. No. 66,296
Term of patent 14 years
(Cl. D80—9)



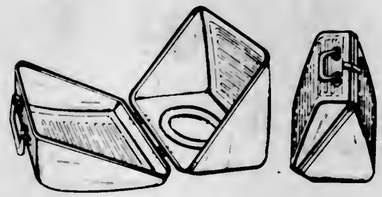
196,161
COUNTER PRESSURE COOKER
Edward J. Nelson, Omaha, Nebr., assignor to Ballantyne Instruments and Electronics, Inc., Omaha, Nebr., a corporation of Delaware
Filed Sept. 14, 1962, Ser. No. 71,687
Term of patent 14 years
(Cl. D81—10)



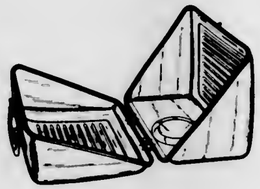
196,162
HEMORRHOIDAL LIGATOR
Clifford L. Randolph, 840 Harcourt, Grosse Pointe Park, Mich.
Filed July 19, 1962, Ser. No. 70,987
Term of patent 14 years
(Cl. D83—12)



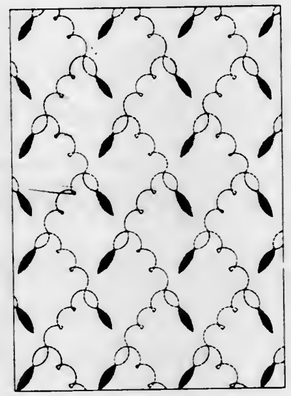
196,163
CARRYING CASE
Sidney Platt, Highland Park, Ill., assignor to Platt Luggage, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 19, 1961, Ser. No. 66,760
Term of patent 14 years
(Cl. D87—5)



196,164
CARRYING CASE
Sidney Platt, Highland Park, Ill., assignor to Platt Luggage, Inc., Chicago, Ill., a corporation of Illinois
Original design application Sept. 19, 1961, Ser. No. 66,760. Divided and this application Oct. 24, 1962, Ser. No. 72,243
Term of patent 14 years
(Cl. D87—5)



196,165
TEXTILE FABRIC OR SIMILAR ARTICLE
Charles M. Sachs, 1 Horizon House, Horizon Road, Fort Lee, N.J.
Filed Mar. 20, 1963, Ser. No. 74,062
Term of patent 14 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 27TH DAY OF AUGUST, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Anderson, Warner H., to Channel Master Corp. Television antenna having multi-band elements. Re. 25,437, 8–27–63, Cl. 343—802.

Bell Telephone Laboratories Inc.: *See*—
Chasek, Norman E. Re. 25,436.

Channel Master Corp.: *See*—
Anderson, Warner H. Re. 25,437.

Chasek, Norman E., to Bell Telephone Laboratories Inc. Frequency modulated balanced discriminator. Re. 25,436, 8–27–63, Cl. 329—141.

Nelson, Florian N. Process for the growing and rooting of plants in a synthetic soil. Re. 25,438, 8–27–63, Cl. 47—58.

LIST OF PLANT PATENTEES

Kittle, Wilfred F., to Lincoln Nursery Co. Climbing rose plant. 2,275, 8–27–63, Cl. 5.

Lincoln Nursery Co.: *See*—
Kittle, Wilfred F. 2,275.

Paxman, Edna L. Almond tree. 2,276, 8–27–63, Cl. 30.

LIST OF DESIGN PATENTEES

American Machine & Foundry Co.: *See*—
Gerber, Gary A. 196,108.
Gerber, Gary A. 196,147.

Andrea Blouse & Sportswear Co.: *See*—
Barile, John. 196,097.

Argiro, Nicholas T. Toy figure. 196,124, 8–27–63, Cl. D34—15.

Armstrong Cork Co.: *See*—
Knies, Robert H. 196,149.

Babcock Mfg. Co.: *See*—
Babcock, William J., and Goodrich. 196,104.

Babcock, William J., and J. R. Goodrich, to Babcock Mfg. Co. Golf bag cart. 196,104, 8–27–63, Cl. D14—3.

Ballantyne Instruments and Electronics, Inc.: *See*—
Nelson, Edward J. 196,161.

Barile, John, to Andrea Blouse & Sportswear Co. Blouse. 196,097, 8–27–63, Cl. D3—25.

Bausch & Lomb Inc.: *See*—
Hoogesteger, Paul A., and Patla. 196,155.

Becker, Frederick W., to Westinghouse Electric Corp. Combined fry pan and lid therefor. 196,130, 8–27–63, Cl. D44—1.

Becker, Frederick W., to Westinghouse Electric Corp. Cooking vessel or the like. 196,131, 8–27–63, Cl. D44—1.

Bell Telephone Laboratories, Inc.: *See*—
Torresen, John L. 196,129.

Berry, Bernie B., Jr., to Vent-Rak, Inc. Cabinet for electronic equipment and the like. 196,115, 8–27–63, Cl. D26—5.

Bergstrom, Harold G., to Charles Beseler Co. Color photograph processing unit. 196,153, 8–27–63, Cl. D61—1.

Beseler, Charles, Co.: *See*—
Bergstrom, Harold G. 196,153.

Birge, George K.: *See*—
Kazenwadel, Fred R., and Birge. 196,152.

Birge, George K., Co., Inc.: *See*—
Kazenwadel, Fred R., and Birge. 196,152.

Bittner, John P. Building. 196,101, 8–27–63, Cl. D13—1.

Boldt, Melvin H., to Zenith Radio Corp. Phonograph tone arm. 196,117, 8–27–63, Cl. D26—14.

Bonner, Ben: *See*—
Griffith, Vernon D., and Bruns. 196,096.

Bonner, Fred E.: *See*—
Griffith, Vernon D., and Bruns. 196,096.

Bowman, Bernard W. Drive-in restaurant or the like. 196,102, 8–27–63, Cl. D13—1.

Brown, John C. Leg unit for kitchen utensils. 196,133, 8–27–63, Cl. D44—29.

Bruns, John: *See*—
Griffith, Vernon D., and Bruns. 196,096.

Buscher, Robert L. Chair. 196,106, 8–27–63, Cl. D15—1.

Celanese Corp. of America: *See*—
Kinsley, John P. 196,145.

Clark Equipment Co.: *See*—
Rogers, Cyril B. 196,103.

Columbus Plastic Products Inc.: *See*—
Roop, Nathan W. 196,120.

Conco Engineering Works, Inc.: *See*—
O'Neill, Charles J. 196,100.

Crouse-Hinds Co.: *See*—
Thoman, Byron R., Chapman, and Pulos. 196,136.

Dahlerup, Jorgen: *See*—
Holbek, Gert, and Dahlerup. 196,110.
Holbek, Gert, and Dahlerup. 196,141.

Endress, Eugene H. Jug. 196,144, 8–27–63, Cl. D58—5.

Eriksson, Ernst A., to Perini Electronic Corp. Automatic telephone dialer. 196,118, 8–27–63, Cl. D26—14.

Esser, Harold H., to Ideal Industries, Inc. Screw-on cap connector. 196,112, 8–27–63, Cl. D26—1.

Faber, Erwin C., ½ to A. I. Stubbs. Butter spreader or the like. 196,134, 8–27–63, Cl. D44—29.

Faust, Ann. Hanging holder for bath and toilet articles. 196,098, 8–27–63, Cl. D4—3.

General Electric Co.: *See*—
Otto, Charles W., and Hennessy. 196,113.
Otto, Charles W., and Hennessy. 196,114.

Gerber, Gary A., to American Machine & Foundry Co. Household still for drinking water and the like. 196,108, 8–27–63, Cl. D16—2.

Gerber, Gary A., to American Machine & Foundry Co. Bottle. 196,147, 8–27–63, Cl. D58—6.

Goodrich, Jack R.: *See*—
Babcock, William J., and Goodrich. 196,104.

Griffith, Vernon D., and J. Bruns, ½ to F. E. and B. Bonner. Rain cape. 196,096, 8–27–63, Cl. D3—3.

Hammond Machinery Builders, Inc.: *See*—
Robischung, Phillip J. 196,126.

Hanna, Robert L. Pedal driven toy vehicle. 196,125, 8–27–63, Cl. D34—15.

Hazelquist, John L., to Traub Mfg. Co. Finger ring. 196,135, 8–27–63, Cl. D45—10.

Hennessy, John E.: *See*—
Otto, Charles W., and Hennessy. 196,113.
Otto, Charles W., and Hennessy. 196,114.

Holbek, Gert, and J. Dahlerup, to Georg Jensens Solvsmedie A/S. Table knife. 196,110, 8–27–63, Cl. D22—3.

Holbek, Gert, and J. Dahlerup, to Georg Jensens, Solvsmedie A/S. Tablespoon. 196,141, 8–27–63, Cl. D54—12.

Hoogesteger, Paul A., and J. W. Patla, to Bausch & Lomb Inc. Slide projector. 196,155, 8–27–63, Cl. D61—1.

Hyman, Julian. Combined basket and packaging container therefor. 196,151, 8–27–63, Cl. D58—17.

Ideal Industries, Inc.: *See*—
Esser, Harold H. 196,112.

Jensens, Georg, Solvsmedie A/S: *See*—
Holbek, Gert, and Dahlerup. 196,110.
Holbek, Gert, and Dahlerup. 196,141.

Jewel Aquarium Co., Inc.: *See*—
Schur, Maurice M., Schur, and Le Sueur. 196,107.

Kane, Eugene J., and E. R. McEwan, to Thomas J. Lipton Inc. Flexible package for condiments or the like. 196,143, 8–27–63, Cl. D58—2.

Kazenwadel, Fred R., and G. K. Birge, to George K. Birge Co., Inc. Wallpaper panel. 196,152, 8–27–63, Cl. D59—10.

Kinsley, John P., to Celanese Corp. of America. Jug. 196,145, 8–27–63, Cl. D58—5.

Kirk, Fred B., to Roberts Electronics, Inc. Reel adapter for a magnetic tape recorder. 196,116, 8–27–63, Cl. D26—14.

Kirk Optical Lens Co., Inc.: *See*—
Kirk, Stanley. 196,139.

Kirk, Stanley, to Kirk Optical Lens Co., Inc. Ophthalmic lens hardening apparatus. 196,139, 8–27–63, Cl. D54—8.

Knies, Robert H., to Armstrong Cork Co. Bottle. 196,149, 8–27–63, Cl. D58—8.

Krehbiel, John H., to Molex Products Co. Electrical connector housing. 196,111, 8–27–63, Cl. D26—1.

Kreisner, William I. Match box. 196,138, 8–27–63, Cl. D48—29.

Lello, Carlos A. G., to Sociedade dos Vinhos Borges & Irmao S.A.R.L. Jug. 196,146, 8–27–63, Cl. D58—5.

Le Sueur, Robert C.: *See*—
Schur, Maurice M. and N. S., and Le Sueur. 196,107.

Lipton, Thomas J., Inc.: *See*—
Kane, Eugene J., and McEwan. 196,143.

Mackay, Frederick G., to Ultra-Violet Products, Inc. Ultra-violet lamp or similar article. 196,137, 8–27–63, Cl. D48—20.

McClellan, Clarence S. Film viewer. 196,156, 8–27–63, Cl. D61—1.

McEwan, Ethel R.: *See* Kane, Eugene J., and McEwan. 196,143.

Middlemark, Marvin P. Indoor television antenna. 196,119, 8–27–63, Cl. D26—14.

Miller, Herman, Inc.: *See* Nagelkirk, Preston. 196,159.

Molex Products Co.: *See* Krehbiel, John H. 196,111.

Nagelkirk, Preston, to Herman Miller, Inc. Filing shelf. 196,159, 8–27–63, Cl. D74—9.

National Blank Book Co.: *See* Sibley, William J. 196,099.

Nelson, Edward J., to Ballantyne Instruments and Electronics, Inc. Counter pressure cooker. 196,161, 8–27–63, Cl. D61—10.

O'Neill, Charles J., to Conco Engineering Works, Inc. Sewer cleaner. 196,100, 8–27–63, Cl. D9—2.

Otto, Charles W., and J. E. Hennessy, to General Electric Co. Dynamoelectric machine. 196,113, 8–27–63, Cl. D26—5.

Otto, Charles W., and J. E. Hennessy, to General Electric Co. Dynamoelectric machine. 196,114, 8–27–63, Cl. D26—5.

Pantasote Co., The: *See* Weiss, Hugh R. 196,150.

Patla, Jacob W.: *See* Hoogesteger, Paul A., and Patla. 196,155.

Patterson, Lawrence W. Combined merchandising and display stand. 196,160, 8–27–63, Cl. D80—9.

Peras, Lucien, to Regie Nationale des Usines Renault. Bumper. 196,105, 8–27–63, Cl. D14—6.

Perini Electronic Corp.: *See* Eriksson, Ernst A. 196,118.

Perper, Edward: *See* Post, Herman D., and Perper. 196,154.

Petry, Frank A. Aircraft. 196,157, 8–27–63, Cl. D71—1.

Pickford, George, to United Shoe Machinery Corp. Rivet setting tool. 196,140, 8–27–63, Cl. D54—10.

Platt Luggage, Inc.: *See* Platt, Sidney. 196,163.
Platt, Sidney. 196,164.

Platt, Sidney, to Platt Luggage, Inc. Carrying case. 196,163, 8–27–63, Cl. D87—5.

Platt, Sidney, to Platt Luggage, Inc. Carrying case. 196,164, 8–27–63, Cl. D87—5.

Polk, Emil S. Carving board. 196,132, 8–27–63, Cl. D44—1.

Post, Herman D., and E. Perper, to Robins Industries Corp. Tape splicer or the like. 196,154, 8–27–63, Cl. D61—1.

Purex Corp., Ltd.: *See* Sterges, Alfred D. 196,148.

Randolph, Clifford L. Hemorrhoidal ligator. 196,162, 8–27–63, Cl. D83—12.

Raphael, Sally F. Mah jong coin holder tray. 196,123, 8–27–63, Cl. D84—13.

Regie Nationale des Usines Renault: *See* Peras, Lucien. 196,105.

Roberts Electronics, Inc.: *See* Kirk, Fred B. 196,116.

Robins Industries Corp.: *See* Post, Herman D., and Perper. 196,154.

Robischung, Phillip J., to Hammond Machinery Builders, Inc. Belt abrader. 196,126, 8–27–63, Cl. D37—1.

Rogers, Cyril B., to Clark Equipment Co. Vehicle. 196,106, 8–27–63, Cl. D14—8.

Romano, Anthony. Traffic marker. 196,158, 8–27–63, Cl. D72—1.

Roop, Nathan W., to Columbus Plastic Products Inc. Flower vase or similar article. 196,120, 8–27–63, Cl. D29—28.

Sachs, Charles M. Textile fabric or similar article. 196,165, 8–27–63, Cl. D92—1.

Schur, Maurice M. and N. S., and R. C. Le Sueur, to Jewel Aquarium Co., Inc. Cabinet, aquarium and animal cage unit for biology classrooms or the like. 196,107, 8–27–63, Cl. D16—2.

Schur, Neil S.: *See* Schur, Maurice M. and N. S., and Le Sueur. 196,107.

Sibley, William J., to National Blank Book Co. Ring binder or the like. 196,099, 8–27–63, Cl. D6—1.

Smiley, Eldridge H.: *See* Storm, Fred K., and Smiley. 196,142.

Sociedade dos Vinhos Borges & Irmao S.A.R.L.: *See* Lello, Carlos A. G. 196,146.

Sosnyaski, Henry. Combined table and seating unit. 196,121, 8–27–63, Cl. D33—14.

Sterges, Alfred D., to Purex Corp., Ltd. Carafe. 196,148, 8–27–63, Cl. D58—8.

Storm, Fred K., and E. H. Smiley. Clamp for an operating table side rail and the like. 196,142, 8–27–63, Cl. D64—13.

Stubbs, Alfred I.: *See* Faber, Erwin C. 196,134.

Thoman, Byron R., R. H. Chapman, and A. J. Pulos, to Crouse-Hinds Co. Floodlight. 196,136, 8–27–63, Cl. D48—20.

Torresen, John L., to Bell Telephone Laboratories, Inc. Stowage rack. 196,129, 8–27–63, Cl. D41—1.

Traub Mfg. Co.: *See* Haselquist, John L. 196,135.

Ultra-Violet Products, Inc.: *See* Mackay, Frederick G. 196,137.

United Shoe Machinery Corp.: *See* Pickford, George. 196,140.

Vent-Rak, Inc.: *See* Berry, Bernie B., Jr. 196,115.

Weiss, Hugh R., to The Pantasote Co. Packaging tray for cookies or the like. 196,150, 8–27–63, Cl. D58—11.

Weller, Charles E. Shoe buckle. 196,109, 8–27–63, Cl. D17—1.

Wells, Herbert R. and M. M. Game spinner. 196,122, 8–27–63, Cl. D34—5.

Wells, Mary M.: *See* Wells, Herbert R. and M. M. 196,122.

Westinghouse Electric Corp.: *See* Becker, Frederick W. 196,130.
Becker, Frederick W. 196,131.

Wilson, Henry A. Kite reel. 196,127, 8–27–63, Cl. D41—1.

Wilson, Henry A. Kite reel. 196,128, 8–27–63, Cl. D41—1.

Zenith Radio Corp.: *See* Boldt, Melvin H. 196,117.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 27TH DAY OF AUGUST, 1963

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See* Eisenberg, Robert M. 3,102,234.
Werth, John J. 3,102,228.

AMP Inc.: *See* Floyd, Edwin, Jr. 3,101,766.

Aaron, Charles, and T. J. Crowe, to Cameron Machine Co. Apparatus for controlling tension in a running web. 3,101,915, 8–27–63, Cl. 242—75.43.

Abigail, Walter L.: *See* Gatley, Derkek R., and Abigail. 3,101,669.

Able Container Co., The: *See* Imielinski, Alan S. 3,101,652.

Abramopaulos, John. Combined positive displacement engine and positive displacement rotary compressor apparatus. 3,101,888, 8–27–63, Cl. 230—22.

Abrams, Philip J.: *See* Negola, Carmine R., and Abrams. 3,101,688.

Acitelli, Mario A., and G. E. Blair, to Bausch & Lomb Inc. Radiation dosimetry and plastic compositions therefor. 3,102,197, 8–27–63, Cl. 250—83.

Ackles, Virgil E. Tumbling machine. 2,102,052, 8–27–63, Cl. 118—19.

Acme Steel Co.: *See* Hall, Marchand B., Staron, and Hager. 3,101,663.

Aconsky, Leonard: *See* Heath, Thomas D., and Aconsky. 3,102,092.

Acrometal Products, Inc.: *See* Carroll, Robert L., and Steinback. 3,101,911.

Adair, John D., to American Meter Co., Inc. Gas meter prover. 3,101,605, 8–27–63, Cl. 73—3.

Adams, Charles R., to Pierce Trailer & Equipment Co. Braking arrangement for a trailer dolly. 3,101,959, 8–27–63, Cl. 280—432.

Adams, Harold E., to Nash Engineering Co. Pumping means for distillation unit. 3,102,083, 8–27–63, Cl. 202—52.

Aebi, Albert, and P. Giger, to Geistlich, Ed., Sohne A.G. fur Chemische Industrie. Urea-formaldehyde pharmaceutical compositions. 3,102,108, 8–27–63, Cl. 260—69.

Aerojet General Corp.: *See* Kimpel, Robert F. 3,102,037.

Aerosol Techniques, Inc.: *See* Prussin, Samuel B., Shepherd, and Surks. 3,101,904.

Ager, John W., Jr., and J. A. Reid, to Olin Mathieson Chemical Corp. Organoboron carboxylic acid halides and their preparation. 3,102,138, 8–27–63, Cl. 260—544.

Ahlbrecht, Arthur H., and S. Smith, to Minnesota Mining and Mfg. Co. Perfluoroalkyl acrylate polymers and process of prodncing a latex thereof. 3,102,103, 8–27–63, Cl. 260—29.6.

Airlie, John, to Carrick Precision Tools, Ltd. Method of cutting and dressing a grinding wheel and apparatus therefor. 3,101,705, 8–27–63, Cl. 125—11.

Air Products and Chemicals, Inc.: *See* Milliken, Thomas H., Jr., Krause, and Donovan. 3,101,998.

Air Reduction Co., Inc.: *See* Stoecker, Robert L. 3,101,859.

Aircraft Precision Products, Inc.: *See* Kelly, Thomas N. 3,101,811.

Aitkenhead, Paul W., to Electro-Air Cleaner Co., Inc. Air filter curtain. 3,102,014, 8–27–63, Cl. 55—271.

Ajem Laboratories: *See* Umbricht, Emil, and Evans. 3,102,057.

Albertson, Noel F., to Sterling Drug Inc. Esters of benzyloxycarbonylaminocyanoacetic acid and process. 3,102,132, 8–27–63. Cl. 260—465.

Albrecht, Hans J., and F. E. Allen, to Casco Products Corp. Heat-resistant flash chamber coatings and method for applying same. 3,101,561. 8–27–63, Cl. 38—77.

Alden, Anders G. L.: *See* Hallgren, Carl T. M., and Alden. 3,101,787.

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Anderson, Earl R. Endless mechanism for article-by-article discharge. 3,101,866, 8–27–63, Cl. 221—93.

Anderson, Franklin C. Patient examining table. 3,101,940, 8–27–63, Cl. 269—322.

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Andis, Matthew G., to Andis Clipper Co. Blade assembly with lateral extensions. 3,101,535, 8–27–63, Cl. 30—29.5.

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Armstrong Cork Co.: *See* Ray, Leonard N., Jr. 3,102,063.

Arnold, Herbert, E. Kuhas, and N. Brock, to Asta-Werke Aktiengesellschaft. Hypnotic composition comprising barbituric acid derivatives, and N,N-disubstituted-β-aminoisopropyl-(P-chloro-α-methyl-benzhydryl)-ethers. 3,102,072, 8–27–63, Cl. 167—52.

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Barton, Loy E., to Radio Corp. of America. Phase-shifted double-sideband two-channel A.M. communications system. 3 102,167, 8–27–63, Cl. 179—15.

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Beauvais, Max. Continuous treatment of food containers. 3,101,995, 8–27–63, Cl. 21—78.

Bechman, William O., to International Harvester Co. Angular adjusting means for a land clearing implement. 3,101,794, 8–27–63, Cl. 172—698.

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Benson, Robert W., and V. J. Raelson, to Armour Research Foundation of Illinois Institute of Technology. Method and apparatus for stress analysis. 3,101,608, 8–27–63, Cl. 73—67.5.

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Brown, Chalmers S., to Brown & Brown, Inc. Sewer regulator operating apparatus. 3,101,737, 8–27–63, Cl. 137—416.

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Freedman, Melvin H., 50% to Jayme Products, Inc. Attachments for commodity jars and glasses. 3,101,857, 8–27–63, Cl. 215—100.

Freeman Burdett Gas Burner Co.: *See*—
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Freeman, Jeremiah P., and R. C. Petry, to Rohm & Haas Co. Chlorodifluoroamine and a process for its preparation. 3,101,997, 8–27–63, Cl. 23—14.

French, Richard W., to Tinius Olsen Testing Machine Co. Balancing equipment. 3,101,620, 8–27–63, Cl. 73—471.

Fried, Burton D.: *See*—
Clauser, Milton U., Meyer, Huddlestone, and Fried. 3,102,088.

Fuel Controls Corp.: *See*—
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Fuka, Vaclav. Fuel injection system. 3,101,701, 8–27–63, Cl. 123—136.

Fukushima, Osamu, H. Kurashige, and K. Kawai, to Kurashiki Rayon Co., Ltd. Production of polyvinyl formal shaped articles. 3,101,991, 8–27–63, Cl. 18—54.

Fuller, Arnold K. Trap door for concave cleaning of combines. 3,101,721, 8–27–63, Cl. 130—27.

Gadini, Norman E., to Atlas Pacific Engineering Co. Pear orienting device. 3,101,831, 8–27–63, Cl. 198—33.

Gail, Stewart E., to Lear Siegler, Inc. Force sensing device. 3,101,824, 8–27–63, Cl. 192—8.

Gamber, Elmer L. Corneal contact lens having stop flange engaged by eyelids. 3,102,157, 8–27–63, Cl. 88—54.5.

Garms, Ralph F.: *See*—
Himes, John M., and Garms. 3,101,506.

Garrett Corp., The: *See*—
Weber, Fritz. 3,101,926.

Gasser, Hermann, to Luwa AG. Cleaning device for yarn carrying rotary cylinders of textile machines. 3,101,504, 8–27–63, Cl. 15—256.51.

Gatley, Derkek R., and W. L. Abigail, ½ to Graviner Mfg. Co. Ltd. and ½ to Wilkinson Sword Ltd. Hermetically sealed detonator. 3,101,669, 8–27–63, Cl. 102—28.

Gay-Bell Corp.: *See*—
Bell, Harry G., Gay, and Shaffer. 3,101,479.

Gay, Jacob D., Jr.: *See*—
Bell, Harry G., Gay, and Shaffer. 3,101,479.

Gearheart, John D.: *See*—
Christoff, Chris A., and Gearheart. 3,101,664.

Gegauf, Fritz, Jr., to Fritz Gegauf, Aktiengesellschaft Bernina-Nahmaschinenfabrik. Automatic ornamental sewing machine. 3,101,685, 8–27–63, Cl. 112—158.

Gegauf, Fritz, Aktiengesellschaft Bernina-Nahmaschinenfabrik: *See*—
Gegauf, Fritz, Jr. 3,101,685.

Geigy, J. R., A.G.: *See*—
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Schetty, Guido. 3,102,110.

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Geitz, Robert C.: *See*—
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Horwitz, Lester, and Clark. 3,102,142.
Sweet, Monroe H. 3,102,202.

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Polonsky, Samuel, and King. 3,101,586.
Rich, Theodore A. 3,102,200.
Schulz, Albert E., and Reisch. 3,102,249.
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General Mills, Inc.: *See*—
Long, George, Tsuchiya, and Hum. 3,101,853.

General Motors Corp.: *See*—
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Moody, Floyd O., and Eyman. 3,101,922.
Pansing, Nelson J., Long, and Miller. 3,102,008.
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Ross, Marvin O. 3,102,093.
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Hemstreet, Harold S. 3,101,645.
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George, William L., and G. A. Romanek, to Johnson & Johnson. Method and apparatus for making brushed nonwoven fabric. 3,101,520, 8–27–63, Cl. 28—1.

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Thompson, James W., and Gerber. 3,101,815.

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Malley, Thomas J., Cosway, and Giddings. 3,101,999.
Malley, Thomas J., De Lapp, Giddings, and Cosway. 3,102,000.

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Gilbert Mfg. Co., Inc.: *See*—
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Gilchrist, William E.: *See*—
Armand, Harold A., Gilchrist, Millis, and Westmoreland. 3,101,555.

Gillespie, Frank L.: *See*—
Thomas, John H., and Gillespie. 3,101,966.

Gimple, John L., to Dairypak Butler, Inc. Reclosable carton. 3,101,883, 8–27–63, Cl. 229—51.

Glacier Metal Co. Ltd., The: *See*—
Love, Phil P. 3,101,980.

Glassman, Jacob A., to V. Mueller & Co. Non-crushing clamp. 3,101,715, 8–27–63, Cl. 128—322.

Glaubke, Allen F., to Western Electric Co., Inc. Apparatus for inserting a succession of articles in oriented relationship into article-receiving sents in a carrier. 3,101,868, 8–27–63, Cl. 221—225.

Glaxo Group Ltd.: *See*—
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Clark, Victor M., Walker, and Webb. 3,102,123.
Raper, Alan H., and Lockwood. 3,102,113.
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Glickman, Louis S. Transpaient snap-on lid for meat display tray. 3,101,864, 8–27–63, Cl. 220—60.

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Godfrey, James E., and E. Lesserson. Tone-arm for a playback sound reproducer. 3,101,952, 8–27–63, Cl. 274—23.

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Goldblatt Tool Co.: *See*—
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Goldman, David. Instrument washers. 3,101,729, 8–27–63, Cl. 134—145.

Goldman, David. Drying apparatus employing radiant panel heaters. 3,102,007, 8–27–63, Cl. 34—48.

Goller, Herbert, to Ankerwerk Gebruder Goller. Screw injection molding machine. 3,101,512, 8–27–63, Cl. 18—30.

Gordon, Richard O., to Vickers Inc. Power transmission. 3,101,808, 8–27–63, Cl. 180—79.2.

Gortvai, Alexander F., and E. J. Monfils, to United Merchants and Manufacturers, Inc. Textile finishing. 3,102,042, 8–27–63, Cl. 117—7.

Gottula, Gerard W. All-direction level. 3,101,554, 8–27–63, Cl. 33—212.

Graaff, Joseph, Niedersaechsiche Waggonfabrik, G.m.b.H.: *See*—
Raab, Karl, and Burchard. 3,101,680.

Grabow, Paul W. Steam nozzle boring device. 3,101,799, 8–27–63, Cl. 175—422.

Graham, Ward A., and O. Webb, Jr., to Stratford Engineering Corp. Apparatus for continuous edible oil finishing. 3,102,062, 8–27–63, Cl. 159—3.

Gran, Burton E., J. O. Holmen, and R. J. Prosen, to Minneapolis-Honeywell Regulator Co. Magnetic films. 3,102,048, 8–27–63, Cl. 117—61.

Graviner Mfg. Co. Ltd.: *See*—
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Gray, Robert H. Load binding winch. 3,101,927, 8–27–63, Cl. 254—161.

Greene, Chester W., to United Shoe Machinery Corp. Ammunition handling apparatus. 3,101,647, 8–27–63, Cl. 89—46.

Greenfield, Bill E., to Phillips Petroleum Co. Pipe cleaner. 3,101,499, 8–27–63, Cl. 15—104.7.

Greenwald, Harold L., to Rohm & Haas Co. Process for emulsification and demulsification by surfactants and the recovery thereof. 3,102,100, 8–27–63, Cl. 252—303.

Grintz, Joseph J. Mixing and dispensing apparatus. 3,102,004, 8–27–63, Cl. 23—252.

Grondahl, Vincent J., and F. W. Johnson, to Collins Radio Co. Balanced control cam for a driven vacuum variable capacitor. 3,101,622, 8–27–63, Cl. 74—89.

Grossman, Morris: *See*—
Tandler, William S., and Grossman. 3,101,552.

Grube, Wilhelm. Suspension railway. 3,101,678, 8–27–63, Cl. 104—95.

Gruber, Wilhelm, to Stahlgruber Otto Gruber & Co. Tire patch. 3,101,764, 8–27–63, Cl. 152—367.

Gruenewaelder, Lou A. Face masks. 3,101,709, 8–27–63, Cl. 128—146.

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Hachmeister-Inc.: *See*—
Birnbaum, Hermann, and Lederer. 3,102,129.

Hagen, Marcus W., and D. S. Strader, to The Frank G. Hough Co. Multiple control mechanism. 3,101,624, 8–27–63, Cl. 74—471.

Hager, Robert E.: *See*—
Hall, Marchand B., Staron, and Hager. 3,101,663.

Hagerty, John P. Ignition system for solid fuel charges. 3,101,590, 8–27–63, Cl. 60—35.6.

Haldeman, Robert G., and G. Castellion, to American Cyanamid Co. Process for the dealkylation of alkyl naphthalene. 3,102,151, 8–27–63, Cl. 260—672.

Hall, Fred F. Self-propelled irrigation trailer. 3,101,903, 8–27–63, Cl 239—163.

Hall, Gardner V. Silk screen printing press. 3,101,665, 8–27–63, Cl. 101—128.

Hall, Marchand B., E. Staron, and R. E. Hager, to Acme Steel Co. Automatic box strapping machine. 3,101,663, 8–27–63, Cl. 100—30.

Hallgren, Carl T. M., and A. G. L. Alden, to International Harvester Co. Marker shifting device for an agricultural implement. 3,101,787, 8–27–63, Cl. 172—127.

Halpern Otto, to Syntex Corp. Steroidal lactones. 3,102,117, 8–27–63, Cl. 260—239.57.

Hamilton, William P.: *See*—
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Hammond, Wayne S., D. H. Defries, and R. E. Kenyon. Wire solder dispensing device. 3,101,689, 8–27–63, Cl. 113—94.

Hampton, Edward L., to Middletown Mfg. Co. Swiveled rocking chair. 3,101,971, 8–27–63, Cl. 297—259.

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Hamrick, Joseph T., and L. C. Rose, to Thompson Ramo Wooldridge Inc. Method of igniting rocket fuels. 3,101,589, 8–27–63, Cl. 60—35.4.

Hance, Richard J., to Leeds and Northrup Co. Rotary kiln shell temperature scanning system. 3,101,618, 8–27–63, Cl. 73—351.

Hanks, Charles W., to Stauffer Chemical Co. Electron beam furnace with magnetically guided axial and transverse beams. 3,101,515, 8–27–63, Cl. 22—57.2.

Hanson, Thomas P. Apparatus and method of debarking pulp wood utilizing liquified gasses. 3,101,757, 8–27–63, Cl. 144—311.

Harmer Harold M., to Miranda Corp. Catalytic devices for electric accumulators. 3,102,059, 8–27–63, Cl. 136—181.

Harmer, Harold M., to Miranda Corp. Secondary battery catalyst device with temperature responsive means. 3,102,-220, 8–27–63, Cl. 320—36.

Harmer, Harold M., to Miranda Corp. Regulation of the charging of secondary cells using a temperature sensitive element in heat exchange relationship with a catalytic device. 3,102,221, 8–27–63, Cl. 320—36.

Harmer, Harold M., to Miranda Corp. Regulation of the charging of secondary batteries using a means responsive to the temperature of a catalytic device. 3,102,222, 8–27–63, Cl. 320—36.

Harris, George C., to Hercules Powder Co. Cereal starches and process. 3,102,054, 8–27–63, Cl. 127—69.

Harris, William E., and R. M. Soden. Rotating fluid spray apparatus for washing paper machine head boxes. 3,101,-730, 8–27–63, Cl. 134—167.

Harrison, John E. R., to General Dynamics Corp. Absolute temperature control. 3,102,183, 8–27–63, Cl. 219—20.

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Hartman, Lyle M. String damper assembly for musical instruments. 3,101,640, 8–27–63, Cl. 84—255.

Hartmann, Ludwig, to Pellon Corp. Method of molding synthetic resin products. 3,101,994, 8–27–63, Cl. 18—61.

Hartmann, Rud. A., Gross-Apparate und Spegeal-maschinen G.m.b.H., & Co.: *See*—
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Hashman, Joseph S., and J. C. Renforth, to Callery Chemical Co. Quaternary ammonium superoxide compounds and their preparation. 3,102,140, 8–27–63, Cl. 260—567.6.

Hatton, Roger E.: *See*—
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Haugwitz, Otto, to Geoffroy-Delore, Societe Anonyme. System for reeling out wire and the like from coils. 3,101,916, 8–27–63, Cl. 242—128.

Hawley, Harold K., and T. B. Laycock, Jr., to The Procter & Gamble Co. Deodorant compositions and the methods of use. 3,102,101, 8–27–63, Cl. 252—305.

Hayden-Nilos Ltd.: *See*—
Neale, Leslie A. 3,101,481.

Hayes, John D., to Bausch & Lomb Inc. Focus indicating mechanism for focusable photographic objectives. 3,101,-658, 8–27–63, Cl. 95—44.

Hayes, Robert A., to Union Special Machine Co. Machine for producing safety stitch. 3,101,686, 8–27–63, Cl. 112—162.

Hayes, Vernon H., to Sperry Rand Corp. Carriage translating device. 3,101,623, 8–27–63, Cl. 74—424.8.

Hazeltine Research, Inc.: *See*—
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Hazzard, Noel D., and J. A. Cunningham, to Combustion Engineering, Inc. Ceramic rotor fabrication. 3,101,778, 8–27–63, Cl. 165—10.

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Dalla Valle, Gustav. 3,101,732.

Heasley, Charles K., to Minnesota Mining and Mfg. Co. Stretchable mica-containing insulating sheet materials and products insulated therewith. 3,101,845, 8–27–63, Cl. 206—59.

Heath, Thomas D., and L. Aconsky, to Dorr-Oliver Inc. Fluidized bed classifier. 3,102,092, 8–27–63, Cl. 209—140.

Heide, Henry A., and W. W. Wittenberger, to Baker Perkins, Inc. Pan stacking and unstacking system. 3,101,851, 8–27–63, Cl. 214—6.

Heighton, Harold H., to E. I. du Pont de Nemours and Co. Process of drawing filamentary structures. 3,101,990, 8–27–63, Cl. 18—48.

Heimerl, Anthony F., to Statham Instruments, Inc. Tapping or drilling machine power transmission. 3,101,630, 8–27–63, Cl. 77—34.4.

Helferich, Fritz, to Prazisions-Apparatebau Aktiengesellschaft. Slide gauge. 3,101,550, 8–27–63, Cl. 33—143.

Helipod, Inc.: *See*—
Sudrow, Lyle K. V. 3,101,917.

Hemstreet, Harold S., to General Precision Inc. Simulated viewpoint displacement apparatus. 3,101,645, 8–27–63, Cl. 88—24.

Henneke, Harry L., to Texas Instruments Inc. Method for attaching leads to small semiconductor surfaces. 3,101,523, 8–27–63, Cl 29—25.3.

Hennig, Karl, G. Lietz, and G. Meinhard, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Mixed esters and process for their preparation. 3,102,128, 8–27–63, Cl. 260—410.6.

Henry, Nelson R., to McCulloch Corp. Motor control. 3,101,821, 8–27–63, Cl. 192—.096.

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Hermeyer, Robert. Liquid contact switch. 3,102,179, 8–27–63, Cl. 200—122.

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Way, Robert B., and Hersey. 3,102,053.

Heston, Eugene E., to National Rubber Machinery Co. Extruder. 3,101,511, 8–27–63, Cl. 18—12.

Himes, John M., and R. F. Garms, to E. R. Wagner Mfg. Co. Squeezable-handle cleaning device having brush-sponge head. 3,101,506, 8–27–63, Cl. 15—532.

Hindle, Thomas. Warp tensioning devices for looms. 3,101,-747, 8–27–63, Cl. 139—109.

Hirst, Archie J., to Metalastik Ltd. Vehicle suspensions. 3,101,938, 8–27–63, Cl. 267—25.

Hoder, William. Fish hook and guard combination. 3,101,-565, 8–27–63, Cl. 43—43.16.

Hodge, Edward B., to Commercial Solvents Corp. Imidazoline anthelmintic compositions and method of using same. 3,102,073, 8–27–63, Cl. 167—58.

Hodge, Edward B., to Commercial Solvents Corp. Nematocidal compositions. 3,102,071, 8–27–63, Cl. 167—33.

Hoehn, Hans: *See*—
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Hoenig, Igo. Spray device. 3,101,905, 8–27–63, Cl. 239—357.

Hoerner, Hans. Light sensitized polyamide body and method of making the same. 3,102,030, 8–27–63, Cl. 96—93.

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Hoffmeister, Erich, to A. Kaltenbach and E. Hoffmeister, responsible partners of Kaltenbach and Voight, a Kommanditgesellschaft. High speed dental drill. 3,101,541, 8–27–63, Cl. 32—27.

Höhn, Hans: *See*—
Breuer, Hermann, and Höhn. 3,102,120.
Breuer, Hermann, and Höhn. 3,102,121.

Hoke, Howard L., to Dresser Industries, Inc. Inside repair clamp. 3,101,743, 8–27–63, Cl. 138—97.

Hokkeling, Pieter, to North American Philips Co., Inc. Casting mold and method of making the same. 3,101,516, 8–27–63, Cl. 22—193.

Hollands, George, to Bar-ray Products, Inc. Film washing tank nozzle assembly. 3,101,659, 8–27–63, Cl. 95—97.

Holm, Le Roy W., to The Pure Oil Co. Reverse-flow solvent flooding method. 3,101,782, 8–27–63, Cl. 166—9.

Holman, Emmette R., to Purex Corp., Ltd. Container structure. 3,101,839, 8–27–63, Cl. 206—2.

Holmen, James O.: *See*—
Gran, Burton E., Holmen, and Prosen. 3,102,048.

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Honey, Charles C., L. R. Toothman, and K. C. Stewart, to McGraw-Edison Co. Noise reducing means for transformer. 3,102,246, 8–27–63, Cl. 336—100.

Honeyman, Henry W., Jr. Device for locking a boat against unauthorized use. 3,101,695, 8–27–63, Cl. 114—230.
Hooper, Gilman S., T. G. Finzel, and G. A. McFarren, to Hercules Powder Co. Three-ply tweed yarn. 3,101,522, 8–27–63, Cl. 28—74.
Horizons Inc.: *See*—
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Sprague, Robert H., Fichter, and Fidelman. 3,102,027.
Horlacher, Herman, to The Cincinnati Milling Machine Co. Combined sequence and check valve. 3,101,738, 8–27–63, Cl. 137—489.
Hormel, Geo. A., & Co.: *See*—
Murphy, Laurence W., and Macy. 3,101,508.
Horton, John P., G. E. Berry, and J. E. Stirling. Rotary broom for street sweeper. 3,101,501, 8–27–63, Cl. 15—180.
Horvath, John F., to International Duplex Corp. Automatic washing machine. 3,101,625, 8–27–63, Cl. 74—472.
Horvitz, David, to FMC Corp. Methylated derivatives of hydrazine. 3,102,144, 8–27–63, Cl. 260—583.
Horwitz, Lester: *See*—
Clark, Charles A., Doorenbos, and Horwitz. 3,102,141.
Horwitz, Lester, and C. A. Clark, to General Aniline & Film Corp. Preparation of aminothiols and aminoselenols by improved alkali fusion and their derivatives. 3,102,142, 8–27–63, Cl. 260—578.
Hostetler, Gerald W., and V. W. Kelley, to International Harvester Co. Vehicle cab mounting means. 3,101,809, 8–27–63, Cl. 180—89.
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Strader, Don S. 3,101,651.
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Hoyt, Herbert L., to Textron Industries, Inc. Machine for forming metal articles. 3,101,632, 8–27–63, Cl. 78—17.
Hubby, Laurence M., to Texaco Inc. Pneumatic control system. 3,101,614, 8–27–63, Cl. 73—224.
Huddle, Edwin F., to International Harvester Co. Self adjusting seal. 3,101,954, 8–27–63, Cl. 277—39.
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Clauser, Milton U., Meyer, Huddlestone, and Fried. 3,102,088.
Huet, Andre. Tubular heat exchanger. 3,101,930, 8–27–63, Cl. 165—143.
Huff, Joseph F., to Northrop Corp. Precision adjusting head for machine tools. 3,101,631, 8–27–63, Cl. 77—58.
Huisman, Henderikus O., J. H. Uhlenbroek, and M. J. Koopmans, to North American Philips Co., Inc. Method of destroying plant harmful microorganisms. 3,102,069, 8–27–63, Cl. 167—30.
Hum, Allen: *See*—
Long, George, Tsuchiya, and Hum. 3,101,853.
Hunt, Harold L. Dispensing pump with high pressure and low pressure pistons in series. 3,101,873, 8–27–63, Cl. 222—252.
Hunter, Arthur T., to Combustion Engineering, Inc. Steam generation. 3,101,697, 8–27–63, Cl. 122—4.
Hunter, Edward A., and C. L. Aldridge, to Esso Research and Engineering Co. Process for hydrogenating carbonyl compounds. 3,102,150, 8–27–63, Cl. 260—632.
Hunter, George D., and W. W. Jackson, to Deere & Co. Center enclosed drive for rod weeder. 3,101,786, 8–27–63, Cl. 172—44.
Hunter, Wesley L., to The Pure Oil Co. Sampling apparatus. 3,101,619, 8–27–63, Cl. 73—422.
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Hyde, Forrest W.: *See*—
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Hyler, John H., and E. W. Spannhake, to Le Tourneau-Westinghouse Co. Hydraulic track tensioning means. 3,101,977, 8–27–63, Cl. 305—10.
Hyman, Benjamin M., to International Harvester Co. Open end auger feed over inclined rolls. 3,101,582, 8–27–63, Cl. 56—104.
Imielinski, Alan S., to I. Lippitz, an individual, d.b.a. The Able Container Co. Method of making partitioned boxes. 3,101,652, 8–27–63, Cl. 93—37.
Imperial Chemical Industries Ltd.: *See*—
Cotton, Joseph B. 3,102,086.
Edwards, George E., and Le Page. 3,102,085.
Parkhill, Thomas D., and Shaw. 3,102,001.
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Independent Lock Co.: *See*—
Muttart, Vincent. 3,101,965.
Industrial Development Co., Inc.: *See*—
Schubert, Dale L. 3,101,756.
Industrial Metal Protectives, Inc.: *See*—
Fisher, John R., Jr. 3,102,038.
Infanseat Co.: *See*—
Laughlin, Clayton A. 3,101,972.
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Schmid, Christian O., and Fischer. 3,102,094.
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Metro, Stephen J., and A. H. Matuszak, to Esso Research and Engineering Co. Lubricating compositions comprising esters of tricarboxy acids. 3,102,098, 8–27–63, Cl. 252—56.

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Quirk, Robert F., to Sylvania Electric Products, Inc. Process of coating the exterior surface of a fluorescent lamp envelope with silicone resins. 3,102,049, 8–27–63, Cl. 117—94.
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Streater, Edward C., to Streater Industries, Inc. Shelving assembly. 3,101,681, 8–27–63, Cl. 108—28.

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Stupfel, Clifford L., and E. H. McClane, to Crown Zellerbach Corp. Lumber edging and separating apparatus. 3,101,755, 8–27–63, Cl. 143—157.

Sturrock, Peter A., to Varian Associates. Adiabatic beam condenser method and apparatus. 3,102,211, 8–27–63, Cl. 313—84.

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Tatge, Robert B., to General Electric Co. Resilient mounting for motor and fan unit. 3,101,889, 8–27–63. Cl. 230—117.

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Tenconi, Riccardo, to M. S. Moretta. Operating mechanism for the yarn carriers of circular knitting machines. 3,101,601, 8–27–63, Cl. 66—138.

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Van der Lely, Cornelis and A., to C. van der Lely N.V. Implements for laterally displacing crop lying on the ground. 3,101,584, 8–27–63, Cl. 56—377.

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

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TRADEMARKS

NOTICES

Trademark Rules of Practice of the Patent Office

The Trademark Rules of Practice of the Patent Office (edition of March 1963, which also contains forms and the Trademark Act of 1946), is now available and may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., at a cost of 45 cents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 337,404 (POLAROID), Sheet Polarizer Co., Inc., Composite material comprising suspensions of crystalline particles in a light-transmitting medium adapted to be used in connection with optical devices such as microscope eyepieces, etc.; **Reg. No. 388,047**, same, Polaroid Corporation, Small cases adapted to contain filters, eyeglasses, and similar articles; **Reg. No. 388,251**, same, Glass sheets and laminations of glass sheets; **Reg. No. 388,721**, same, Stereoscopic viewers and the like; **Reg. No. 388,722**, same, Electric lamps; **Reg. No. 391,449**, same, Hand tools in the nature of pliers; **Reg. No. 394,030**, same, Transparent organic plastic material in the form of sheets or blocks; **Reg. No. 396,917**, same, Printing inks; **Reg. No. 399,122**, same, Lacquers and lacquer thinners; **Reg. No. 399,329**, same, Viewing devices—namely, filters, lenses, eyeglasses, and goggles; **Reg. No. 404,054** (DESIGN OF TWO CIRCLES), same, Transparent organic plastic composition material in the form of sheets or blocks; **Reg. No. 422,100** (POLAROID), same, Photographic processing tanks, squeegees, and printing rolls for photographic use; **Reg. No. 423,776**, same, Sodium chloride, etc.; **Reg. No. 426,802**, same, Instruction manuals and publications; **Reg. No. 540,179**, same, Photographic cameras, photographic camera shutters, exposure meters, etc.; **Reg. No. 579,986**, same, Intermittent photographic instruction manuals and publications and photographic prints and enlargements; **Reg. No. 588,350**, same, X-ray film cassettes and X-ray film processors; **Reg. No. 604,829**, same, Interocular calculators; **Reg. No. 605,134**, same, Three-dimensional projection accessories, etc.; **Reg. No. 607,263**, same, Camera cases, exposure meter cases and master compartment cases; **Reg. No. 606,297**, same, Electronic flash adapter cords; **Reg. No. 621,256**, same, Photographic lens shades; **Reg. No. 670,584**, same, Sheets of optically anisotropic plastics, resins or gums, and more specifically fractional wave retardation sheets of the said materials; **Reg. No. 689,866**, same, Adhesively coated backings for photographic prints, etc.; **Reg. No. 730,072**, same, Apparatus for providing a light pulse (wink-lights), batteries, bulbs, etc.; **Reg. No. 737,706**, same, Dyes and developing agents, fixing agents, etc.; **Reg. No. 738,699**, same, Safety helmets; **Reg. No. 741,953**, same, Timepieces and, more particularly, clocks, filed May 9, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c816, *Polaroid Corporation* v. *Lear Siegler, Inc.*

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1963

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 17,022
Date of oldest new application ..... Oct. 22, 1962
Date of oldest amended application ..... Oct. 16, 1962

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
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PROPOSED INTERNATIONAL NON-PROPRIETARY NAMES[1]

In accordance with paragraph 8 of the Procedure for the Selection of Recommended International Non-Proprietary Names for Pharmaceutical Preparations,[2] notice is hereby given that the following names are under consideration by the World Health Organization as Proposed International Non-Proprietary Names.

Comments on, or formal objections to the proposed names may be forwarded by any person to the Pharmaceuticals Unit of the World Health Organization within four months of the date of their publication in *WHO Chronicle*.

The inclusion of a name in the lists of proposed international non-proprietary names does not imply any recommendation for the use of the substance in medicine or pharmacy.

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
aceclidinum aceclidine	3-quinuclidinol acetate
acetiaminum acetiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl) formamide *O,S*-diacetate
acetryptinum acetryptine	3-(2-aminoethyl)indol-5-yl methyl ketone
acetylcysteinum acetylcysteine	*N*-acetylcysteine
acidum clofenamicum clofenamic acid	*N*-(2,3-dichlorophenyl)anthranilic acid
acidum flufenamicum flufenamic acid	*N*-(α,α,α-trifluoro-*m*-tolyl)anthranilic acid
acidum fusidicum fusidic acid	an antibiotic substance obtained from cultures of *fusidium*, or the same substance produced by any other means
acidum fyticum fytic acid	phytic acid
acidum iotalamicum iotalamic acid	5-acetamido-2,4,6-triiodo-*N*-methylisophthalamic acid
acidum kainicum kainic acid	2-carboxy-4-isopropenyl-3-pyrrolidineacetic acid
acidum mefenamicum mefenamic acid	*N*-2,3-xylylanthranilic acid
acidum nalidixicum nalidixic acid	1-ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid
acrisorcinum acrisorcin	9-aminoacridine compound with 4-hexylresorcinol
alazani triclofenas alazanine triclofenate	3-ethyl-2-[3-(3-ethyl-2-benzothiazo linylidene)propenyl]benzothiazolium 2,4,5-trichlorophenoxide compound with 2,4,5-trichlorophenol
albutoinum albutoin	3-allyl-5-isobutyl-2-thiohydantoin
aloxiprinum aloxiprin	basic aluminium acetylsalicylate complex
altizidum altizide	3-[(allylthio)methyl]-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine - 7 - sulfonamide, 1,1-dioxide
ambomycinum ambomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
amfepramonum amfepramone	2-(diethylamino)propiophenone
ampicillinum ampicillin	(−)-6-(2 - amino - 2 - phenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0] heptane-2-carboxylic acid
ampyriminum ampyrimine	2,4,7-triamino-5-phenylpyrimido[4,5-*d*]pyrimidine
anazolenum natricum sodium anazolene	4-[(4-anilino-5-sulfo-1-naphthyl)azo]-5-hydroxy-2,7-naphthalenedisulfonic acid, trisodium salt
anilamatum anilamate	methylcarbamate of salicylanilide
argipressinum argipressin	8-argininevasopressin
argiprestocinum argiprestocin	8-argininеoxytocin
azotomycinum azotomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
batilolum batilol	3-(octadecyloxy)-1,2-propanediol
benfotiaminum benfotiamine	*N*-[(r-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto - 1 - methyl-1-butenyl)formamide *S*-benzoate *O*-phosphate
bentiaminum bentiamine	*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]-*N*-(4-hydroxy-2-mercapto-1-methyl-1-butenyl)formamide *O,S*-dibenzoate
benzaronum benzarone	2-ethyl-3-benzofuranyl *p*-hydroxyphenyl ketone
benzbromaronum benzbromarone	3,5-dibromo-4-hydroxyphenyl-2-ethyl-3-benzofuranyl ketone
benzilonii bromidum benzilonium bromide	1,1-diethyl-3-hydroxypyrrolidinium bromide benzilate
bensodepum bensodepa	bensyl[bis(1-aziridinyl)phosphinyl]carbamate
benzquinamidum benzquinamide	*N,N*-diethyl-1,3,4,6,7,11b - hexahydro-2-hydroxy - 9,10 - dimethoxy-2*H*-benzo[*a*]quinolizine-3-carboxamide acetate
betahistinum betahistine	2-[(2-methylamino)ethyl]pyridine

[1] Other lists of proposed international non-proprietary names can be found in *Chron. Wld Hlth Org.* 1953, *7*, 299; 1954, *8*, 216, 313; 1956, *10*, 28; 1957, *11*, 231; 1958, *12*, 102; 1959, *13*, 105, 152; 1960, *14*, 168, 244; 1961, *15*, 314, 320; 1962, *16*, 385.

Lists of recommended international non-proprietary names were published in *Chron. Wld Hlth Org.* 1955, *9*, 185; 1959, *13*, 106; 1962, *16*, 101, 111.

[2] *Off. Rec. Wld Hlth Org.* *60*, 8 and 55 (resolution EB15.R7).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
betanidinum betanidine	1-benzyl-2,3-dimethylguanidine
betoxycainum betoxycaine	2-[2-(diethylamino)ethoxy]ethyl 3-amino-4-butoxybenzoate
bisacodylum bisacodyl	4,4′-(2-pyridylmethylene)diphenol diacetate
bisbentiaminum bisbentiamine	*N,N′*-[dithiobis[2-(2-hydroxyethyl) - 1 - methylvinylene]]bis[*N*[(4-amino-2-methyl-5-pyrimidinyl)methyl]formamide]
bolasteronum bolasterone	7α,17-dimethyltestosterone
bromacrylidum bromacrylide	*N*[(3-bromopropionamido)methyl]acrylamide
bufenadrinum bufenadrine	2-(*o*-tert-butyl-α-phenylbenzyloxy)-*N,N*-dimethylethylamine
butaperazinum butaperazine	1-[10-[3-(4-methyl-1-piperazinyl)propyl]phenothiazin-2-yl]-1-butanone
butaverinum butaverine	butyl-3-(3-phenyl-1-piperidyl)propionate
butizidum butizide	3-isobutyl-6-chloro-3,4-dihydro-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide
butopiprinum butopiprine	2-butoxyethyl-α-phenyl-2-piperidineacetate
carbazocronii natricum sulfonas carbazocrome sodium sulfonate	sodium 5,6-dihydro-1-methyl-5,6-dioxoindoline-3-sulfonate-5-semicarbazone
carsalamum carsalam	2*H*-1,3-benzoxazine-2,4(3*H*)-dione
clefamidum clefamide	2,2-dichloro-*N*-2-hydroxyethyl-*N*-[*p*-(*p*-nitrophenoxy)benzyl]acetamide
clobenztropinum clobenztropine	3-(*p*-chloro-α-phenylbenzyloxy)-tropane
clodacainum clodacaine	2′-chloro-2-[(2-diethylaminoethyl)ethylamino]acetanilid
clodantoinum clodantoin	5-(1-ethylpentyl)-3-(trichloromethylthio)hydantoin
clofenamidum clofenamide	4-chloro-*m*-benzenedisulfonamide
clofibratum clofibrate	ethyl 2-(*p*-chlorophenoxy)-2-methylpropionate
clopamidum clopamide	4-chloro-*N*-(*cis*-2,6-dimethylpiperidino)-3-sulfamoylbenzamide
cloralum betainum cloral betaine	chloral hydrate compound with betaine
clonitratum clonitrate	3-chloro-1,2-propanediol dinitrate
cloramfenicoli pantotenas cloramfenicol pantotenate	chloramphenicol complex with calcium pantothenate
clorindionum clorindione	2-(*p*-chlorophenyl)1,3-indandione
cloxacillinum cloxacillin	6-[3-(*o*-chlorophenyl)-5-methyl-4-isoxazolecarboxamido]-3,3-dimethyl - 7 - oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
colecalciferolum colecalciferol	cholecalciferol
coumetarolum coumetarol	4,4′-dihydroxy-3,3′-(2-methoxyethylidene) dicoumarin
cyamemazinum cyamemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine-2-carbonitrile
cyclarbamatum cyclarbamate	1,1-cyclopentanedimethanol dicarbanilate
cycloguanili embonas cycloguanil embonate	4,6-diamino-1-(*p*-chlorophenyl)-1,2-dihydro - 2,2 - dimethyl-*s*-triazine compound (2:1) with 4,4′-methylenebis[3-hydroxy-2-naphthoic acid]
cyclomenolum cyclomenol	2-cyclohexyl-3,5-xylenol
cyclovalonum cyclovalone	2,6-divanillylidenecyclohexanone
desipraminum desipramine	10,11-dihydro-5-(3-methylaminopropyl)-5*H*-dibenz[*b,f*]azepine
dexoxadrolum dexoxadrol	(+)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
diclofenamidum diclofenamide	4,5-dichloro-*m*-benzenedisulfonamide
dietroxinum dietroxine	5,5-diethyldihydro-2*H*-1,3-oxazine-2,4(3*H*)-dione
difenidolum difenidol	α,α-diphenyl-1-piperidinebutanol
dimefadanum dimefadane	*N,N*-dimethyl-3-phenyl-1-indanamine
dimetindenum dimetindene	2-(1-[2-(2-dimethylaminoethyl)inden-3-yl]ethyl)pyridine
dioxadrolum dioxadrol	2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
dipyridamolum dipyridamole	2,2′,2″,2‴-[(4,8 - dipiperidinopyrimido[5,4-*d*]pyrimidine - 2,6 - diyl)dinitrilo]tetraethanol
doxapramum doxapram	1-ethyl-4-(2-morpholinoethyl)-3,3-diphenyl-2-pyrrolidinone
drostanolonum drostanolone	17β-hydroxy-2α-methyl-5α-androstan-3-one
duazomycinum duazomycin	an antibiotic substance obtained from cultures of *streptomyces ambofaciens*, or the same substance produced by any other means
efloxatum efloxate	ethyl[(4-oxo-2-phenyl-4*H*-1-benzopyran-7-yl)oxy]acetate
epitizidum epitizide	6-chloro-3,4-dihydro-3-[[(2,2,2 - trifluoroethyl)thio]methyl]-2*H*-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
ethylestrenolum ethylestrenol	17α-ethyl-19-nor-pregn-4-en-17-ol
eritrityli tetranitras eritrityl tetranitrate	erythritol tetranitrate
etoxazenum etoxazene	4-[(p-ethoxyphenyl)azo]-*m*-phenylenediamine
etymemazinum etymemazine	10-(3-dimethylamino-2-methylpropyl)-2-ethylphenothiazine
etynodioli acetas etynodiol acetate	19 nor-17α-pregn-4-en-20-yne-3β,17-diol, diacetate
felypressinum felypressin	2-(phenylalanine)-8-lysinevasopressin
fenbenicillinum fenbenicillin	3,3-dimethyl-7-oxo-6-(2-phenoxy-2-phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
fencarbamidum fencarbamide	*S*-2-diethylaminoethyl diphenylthiocarbamate
fenyripolum fenyripol	α-(2-pyrimidinylaminomethyl)benzyl alcohol
fluanisonum fluanisone	4′-fluoro-4-[4-(*o*-methoxyphenyl)-1-piperazinyl]butyrophenone
flumetasonum flumetasone	6α,9-difluoro-11β,17,21-trihydroxy-16α-methylpregna-1,4-diene-3,20-dione
fluorouracilum fluorouracil	5-fluorouracil
fluperolonum fluperolone	9-fluoro-11β,17,21-trihydroxy-21-methylpregna-1,4-diene-3,20-dione 21 acetate
flupredniselonum flupredniselone	6α-fluoro-11β,17,21-trihydroxypregna-1,4-diene-3,20-dione
flurotylum flurotyl	bis(2,2,2-trifluoroethyl) ether
furalazinum furalazine	3-amino-6-[2(5-nitro-2-furyl)vinyl]-*as*-triazine
furazolidonum furazolidone	3[(5-nitrofurfurylidene)amino]-2-oxazolidinone
galantaminum galantamine	1,2,3,4,6,7,7a,11c-octahydro-9-methoxy-2-methylbenzofuro[4,3,2-*efg*][2]benzazocin-6-ol
glucaloxum glucalox	glycerol complex with aluminium hydroxide
glypinamidum glypinamide	1-(*p*-chlorophenylsulfonyl)-3-(hexahydro-1*H*-azepin-1-yl)urea
hexadilinum hexadiline	2-(2,2-dicyclohexyl vinyl)piperidine
hexamidinum hexamidine	4,4′-(hexamethylenedioxy)dibenzamidine
hexopyrronii bromidum hexopyrronium bromide	1,1-dimethylpyrrolidinium bromide-α-phenylcyclohexane glycolate
indometacinum indometacin	1-(p-chlorobenzoyl)-5-methoxy-2-methylindole-3-acetic acid
iproclozidum iproclozide	*p*-chlorophenoxyacetic acid 2-isopropylhydrazide
isoetarinum isoetarine	α-(1-isopropylaminopropyl)protocatechuyl alcohol
itramini tosylas [1] itramin tosylate	2-aminoethanol nitrate(ester)*p*-toluenesulfonate
lefopyrrolum lefopyrrole	1-[o-[2-(diethylamino)ethoxy]phenyl]-2-methyl-5-phenylpyrrole
levoglutamidum levoglutamide	glutamine
levoxadrolum levoxadrol	(−)-2-(2,2-diphenyl-1,3-dioxolan-4-yl)piperidine
lincomycinum lincomycin	an antibiotic substance obtained from cultures of *streptomyces lincolnensis*, or the same substance produced by any other means
lucimycinum lucimycin	an antibiotic substance obtained from cultures of *streptomyces lucensis*, or the same substance produced by any other means
lynestrenolum lyneatrenol	19-nor-17α-pregn-4-en-20-yn-17-ol
lypressinum lypressin	8-lysinevasopressin
mecloxaminum mecloxamine	2-[(*p*-chloro-α-methyl-α-phenylbenzyl)oxy]-*N,N*-dimethylpropylamine
mecysteinum mecysteine	cysteine, methyl ester
megestrolum megestrol	17-hydroxy-6-methylpregna-4,6-diene-3,20-dione
melengestrolum melengestrol	17-hydroxy-6-methyl-16-methylenepregna-4,6-diene-3,20-dione
menotrophinum menotrophin	human menopausal gonadotrophin
meraleinum natricum sodium meralein	o-[6-hydroxy-5-(hydroxymercuri)-2,7-diiodo-3-oxo-3*H*-xanthen - 9 - yl]benzenesulfonic acid, sodium salt
metacyclinum metacycline	4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a - pentahydroxy-6-methylene-1,11-dioxo-2-naphthacenecarboxamide
meturedepum meturedepa	[bis(2,2-dimethyl-1-aziridinyl)phosphinyl]carbamic acid ethyl ester
metyraponum metyrapone	2-methyl-1,2-di-3-pyridyl-1-propanone
molinazonum molinazone	3-morpholino-1,2,3-benzotriazin-4(3*H*)-one

[1] Itramin is the proposed International Non-proprietary Name for the substance having the chemical name "aminoethyl nitrate" (prop. I.N.N. list 1).

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
morinamidum morinamide	N-(morpholinomethyl)pyrazinecarboxamide
nafcillinum nafcillin	6-(2-ethoxy-1-naphthamido)-3,3-dimethyl-7-oxo-4-thia - 1 - azabicyclo[3.2.0]heptane-2-carboxylic acid
naloxonum naloxone	12-allyl-7,7a,8,9 - tetrahydro-8,7a-dihydroxy-4a*H*-8,9c-iminoethanophenanthro[4,5-*bcd*]furan-5(6*H*)-one
natrii bitionolas sodium bitionolate	disodium 2,2′-thiobis(4,6-dichlorophenoxide)
natrii etasulfas sodium etasulfate	2-ethylhexyl sodium sulfate
natrii metrizoas sodium metrizoate	sodium 3-acetamido-2,4,6-triiodo-5-*N*-methylacetamidobenzoate
natrii radio-iodidum (^{131}I) sodium radio-iodide (^{131}I)	
natrii timerfonas sodium timerfonate	ethyl[(*p*-sulfophenyl)thio]mercury, sodium salt
niclosamidum niclosamide	2′,5-dichloro-4′-nitrosalicylanilide
nonapyriminum nonapyrimine	4-nonylamino-7*H*-pyrrolo[2,3-d]pyrimidine
noretynodrelum noretynodrel	17-hydroxy-17α-pregn-5(10)-en-20-yn-3-one
octotiaminum octotiamine	8-[[2-[*N*-[(4-amino-2-methyl - 5 - pyrimidinyl)methyl]formamido]-1-(2-hydroxyethyl) propenyl]dithio]-6-mercaptooctanoic acid, methyl ester acetate
ortetaminum ortetamine	o,α-dimethylphenethylamine
oxazepamum oxazepam	7-chloro-1,3-dihydro-3-hydroxy-5-phenyl-2*H*-1,4-benzodiazepin-2-one
oxetacainum oxetacaine	2,2′-(2-hydroxyethylimino)bis[*N*-(α,α-dimethylphenethyl)-*N*-methylacetamide]
oxomemazinum oxomemazine	10-[3-(dimethylamino)-2-methylpropyl]phenothiazine,5,5-dioxide
oxonazinum oxonazine	N^3,N^3-diallylmelamine N^3-oxide
oxybutyninum oxybutynin	4-diethylamino-2-butynyl α-phenylcyclohexaneglycolate
oxyclipinum oxyclipine	1-methyl-3-piperidyl α-phenylcyclohexaneglycolate
oxyfenamatum oxyfenamate	β-ethyl-β-hydroxyphenethyl carbamate
oxymetazolinum oxymetazoline	6-*tert*-butyl-3-(2-imidazolin-2-ylmethyl)-2,4-dimethylphenol
oxypendylum oxypendyl	4-[3-(10*H*-pyrido[3,2-b][1,4]benzothiazin-10-yl)propyl]-1-piperazineethanol
oxypyrronii bromidum oxypyrronium bromide	2-(2-hydroxyethyl)-1,1-dimethylpyrrolidinium bromide α-phenylcyclohexaneglycolate
oxytocinum oxytocin	oxytocin
pargylinum pargyline	*N*-methyl-*N*-2-propynylbenzylamine
paxamatum paxamate	4-biphenylyl methylcarbamate
pentabamatum pentabamate	3-methyl-2,4-pentanediol dicarbamate
pentalamidum pentalamide	o-(pentyloxy)benzamide
periciazinum periciazine	10-[3-(4-hydroxypiperidino) propyl] phenothiazine-2-carbonitrile
picloxydinum picloxydine	1,1′-[1,4-piperazinediylbis(imidocarbonyl)]bis[3-(*p*-chlorophenyl)guanidine]
pimetinum pimetine	4-benzyl-1-(2-dimethylaminoethyl)piperidine
poldini methylsulfas poldine methylsulfate	1-methyl-2-pyrrolidinemethanol benzilate
prednisolamatum prednisolamate	11β,17,21-trihydroxypregna-1,4-diene-3,20-dione 21-*N*,*N*-diethylglycine ester
prednylidenum prednylidene	11β,17,21-trihydroxy-16-methylenepregna-1,4-diene-3,20-dione
propetandrolum propetandrol	19-nor-17α-pregn-4-ene-3β,17-diol 3-propionate
propicillinum propicillin	3,3-dimethyl-7-oxo - 6 - (2 - phenoxybutyramido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid
prosultiaminum prosultiamine	*N*-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-*N*-[4-hydroxy-1-methyl-2-(propyldithio)-1-butenyl]formamide
pyrrocainum pyrrocaine	1-pyrrolidineacetanilide
quingestronum quingestrone	3-(cyclopentyloxy)pregna-3,5-dien-20-one
radio-aurum (^{198}Au)-colloidale radio-gold (^{198}Au) colloidal	
radiocyanocobalaminum (^{60}Co) radiocyanocobalamin (^{60}Co)	
radiotolpovidonum radiotolpovidone	ω-(*p*-iodo-^{131}I-benzyl)-2-(2-oxo-1-pyrrolidinyl)ethamer
renytolinum renytoline	α-fluoren-9-ylidene-*p*-toluamidine
rifamycinum rifamycin	antibiotic substane obtained from cultures of *streptomyces mediterranei* or the same substance produced by any other means
sparsomycinum sparsomycin	an antibiotic substance obtained from cultures of *streptomyces sparsogenes*, or the same substance produced by any other means
sparteinum sparteine	sparteine

PROPOSED INTERNATIONAL NON-PROPRIETARY NAME (*Latin, English*)	CHEMICAL NAME OR DESCRIPTION
spectinomycinum spectinomycin	an antibiotic substance obtained from cultures of *streptomyces spectabilis*, or the same substance produced by any other means
stilbazii iodidum stilbazium iodide	1-ethyl-2,6-bis(*p*-1-pyrrolidinylstyryl)pyridinium iodide
streptoniazidum streptoniazid	isonicotinic acid hydrazide, hydrazone with streptomycin
sucraloxum sucralox	sucrose complex with aluminium hydroxide
sultiamum sultiame	benzenesulfonamide,*p*-(tetrahydro-2*H*-1,2-thiazin-2yl)-*S*,*S*-dioxide
teclozanum teclozan	*N*,*N*′-(*p*-phenylenedimethylene)bis[2,2-dichloro-*N*-(2-ethoxyethyl)acetamide]
tiabendazolum tiabendazole	2-(4-thiazolyl)benzimidazole
tiemondii iodidum tiemonium iodide	4-[3-hydroxy-3-phenyl-3-(2-thienyl)propyl]-4-methylmorpholinium iodide
tifenamilum tifenamil	*S*-(2-diethylamino)ethyl diphenylthioacetate
tolpropaminum tolpropamine	*N*,*N*-dimethyl-3-phenyl-3-(*p*-tolyl)propylamine
tolpyrramidum tolpyrramide	*N*-*p*-tolylsulfonyl-1-pyrrolidinecarboxamide
triclofosum triclofos	2,2,2-trichloroethyl dihydrogen phosphate
trimetamidum trimetamide	*N*-(2-amino-6-methyl-3-pyridylmethyl)-3,4,5-trimethoxybenzamide
trimipraminum trimipramine	10,11-dihydro-5-(3-dimethylamino-2-methylpropyl)-5H-dibenz[*b*,*f*]azepine
trometamolum trometamol	2-amino-2-(hydroxymethyl)-1,3-propanediol
troxonii tosylas troxonium tosylate	triethyl(2-hydroxyethyl)ammonium *p*-toluenesulfonate 3,4,5-trimethoxybenzoate
troxypyrrolii tosylas troxypyrrolium tosylate	1-ethyl-1-(2-hydroxyethyl)pyrrolidinium *p*-toluenesulfonate 3,4,5-trimethoxybenzoate
tyloxapolum tyloxapol	polymer of *p*-(1,1,3,3-tetramethylbutyl)phenol with ethylene glycol and formaldehyde
uramustinum uramustine	5-[bis(2-chloroethyl)amino]uracil
uredepum uredepa	ethyl[bis(1-aziridinyl)phosphinyl]carbamate
vincristinum vincristine	an alkaloid obtained from *vinca rosea*
vinleurosinum vinleurosine	an alkaloid obtained from *vinca rosea*
vinrosidinum vinrosidine	an alkaloid obtained from *vinca rosea*
virgimycinum virgimycin	an antibiotic substance obtained from cultures of *streptomyces virginiae*, or the same substance produced by any other means

NOTE:

aminophenazonum
aminophenazone
replaces amidopyrinum
amidopyrine
(*Chron. Wld Hlth Org.* 1956, *10*, 28)

ergocalciferolum
ergocalciferol
replaces calciferolum
calciferol
(*Chron. Wld Hlth Org.* 1956, *10*, 28)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 119,691. Fiber Industries, Inc., New York, N.Y. Filed May 10, 1961.

THE FIBER THAT KEEPS ITS PROMISE

For Synthetic Fibers.
First use Dec. 15, 1960.

SN 144,490. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed May 14, 1962.



Applicant disclaims the words "Paper" and "Demopolis, Alabama" apart from the mark as shown. The drawing is lined to indicate the color green. Owner of Reg. Nos. 598,348, 731,334, and others.
For Paper Pulp.
First use Apr. 2, 1962.

SN 144,742. Koppers Company, Inc., Pittsburgh, Pa. Filed May 16, 1962.

FLEXIPHEN

For Synthetic Resins—Namely, Wax Phenols.
First use July 27, 1961.

SN 161,958. William H. Coburn, Hampton Falls, N.H. Filed Feb. 4, 1963.

BLUE CHIP FARM

For Sheep and Horses.
First use in or about May 1953 on sheep.

SN 162,089. S. B. Foot Tanning Company, Red Wing, Minn. Filed Feb. 5, 1963.

ORONOCO

For Leather.
First use December 1938.

SN 162,397. Donald B. Alexander, d.b.a. Auburn Plastic Engineering, Chicago, Ill. Filed Feb. 11, 1963.

DURELENE

For Plastic Tubing.
First use Jan. 22, 1963.

SN 162,429. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 11, 1963.

KODAK

Owner of Reg. Nos. 396,976 and 580,750.
For Sheeting of Polypropylene and Cellulosic Composition in Roll or Sheet Form.
First use March 1950.

SN 162,761. The Masland Duraleather Company, Philadelphia, Pa. Filed Feb. 14, 1963.

Neopoint

For Flexible Plastic Coated Sheet Material Used as a Substitute for Leather.
First use Jan. 11, 1963.

SN 166,877. Madison Research & Development Corporation, Madison, N.J. Filed Apr. 17, 1963.

FiBak

For Random Fiber Reinforcing Backing or Facing Layers for Carpeting and the Like.
First use Sept. 15, 1960.

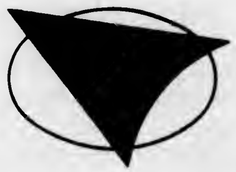
Class 2—Receptacles

SN 146,073. The Lau Blower Company, Dayton, Ohio. Filed June 4, 1962.



The drawing is lined for red, but color is not claimed as part of the mark.
For Drums and Tanks, and Covers Therefor, Made of Plastic Material.
First use May 10, 1962.

SN 152,908. Northwest Paper Corporation, Burlingame, Calif. Filed Sept. 11, 1962.



For Kraft Paper Bags, Polyethylene Bags, Polystyrene Cups, Paper Cartons and Other Packaging Containers.
First use on or about Apr. 1, 1962.

SN 153,696. Sonoco Products Company, Hartsville, S.C. Filed Sept. 21, 1962.

DUROLENE

Owner of Reg. Nos. 590,969, 704,812, and others.
For Wound Paper Tubes Adapted To Receive and Carry Windings of Sheet Material.
First use Mar. 20, 1956.

SN 162,957. Keyes Fibre Company, Waterville, Maine. Filed Feb. 18, 1963.

FUL-VUE

Owner of Reg. No. 369,878.
For Packaging Trays of Molded Pulp.
First use June 1961.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 161,745. Sears, Roebuck and Co., Chicago, Ill. Filed Jan. 30, 1963.

PROFILE

For Luggage.
First use on or about Sept. 27, 1962.

SN 161,932. Petco, Toledo, Ohio. Filed Feb. 1, 1963.

PETCO

For Pet Supplies—Namely, Pet Collars and Pet Toys.
First use November 1961.

Class 4 — Abrasives and Polishing Materials

SN 122,432. The Drackett Company, Cincinnati, Ohio. Filed June 20, 1961.

WHEN THE GLOW STARTS TO GO

For Preparation for Cleaning and Polishing Copper and Silver.
First use June 1961.

SN 133,083. Plasticon Chemicals, Inc., New York, N.Y. Filed Nov. 30, 1961.

PLASTICON

For Preparation for Cleaning and Polishing Surfaces and Applying a Protective Film Thereto.
First use during August 1960.

SN 148,200. A. Kimball Ltd., Toronto, Ontario, Canada. Filed July 2, 1962.

KIP

Priority claimed under Sec. 44(d) on Canadian application filed May 8, 1962; Reg. No. 130,787, dated Apr. 26, 1963.
For Shoe Polishing Preparations.

SN 153,572. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,690 and 739,324.
For Grinding Wheels and Materials for Making Grinding Wheels.

Class 6 — Chemicals and Chemical Compositions

SN 60,287. Ferndale Surgical, Inc., Ferndale, Mich., by change of name from The J. F. Hartz Company, Ferndale, Mich. Filed Oct. 8, 1958.

DETACHOL

For Preparation for the Removal of Adhesive Plaster From Human Skin.
First use Feb. 1, 1937.

SN 127,904. Chemical Enterprises, Inc., Shreveport, La. Filed Sept. 15, 1961.



The drawing is lined to indicate red.
For Ethylene Glycol and Permanent Anti-Freeze.
First use Oct. 1, 1957.

SN 129,289. Pacific Petrochemicals, Inc., Santa Fe Springs, Calif. Filed Oct. 5, 1961.

Petrochem

For Rust and Corrosion Inhibitors for Metals, Welding Spatter Inhibitors.
First use October 1959; in July 1959 in a different form.

SN 131,998. W. A. Scholten's Chemische Fabrieken N.V., Foxhol, Netherlands. Filed Nov. 14, 1961.

GLUCITOL

Owner of Dutch Reg. No. 77,776, dated May 27, 1942.
For Polyhydric Alcohols Obtained by Hydration of Mono and Polysaccharides, for Use as Solvent, Hygroscopic Agent, Softening Agent, Plasticizer, as Starting Product for the Preparation of Vitamin C as Raw Material for the Synthetic Resin, Spirits, and Foodstuffs Industry.

SN 132,562. Ralph L. Leaderbrand, d.b.a. Electrified Water Company, Shreveport, La. Filed Nov. 22, 1961.



For Distilled Water.
First use March 1956.

SN 146,236. Universal Oil Products Company, Des Plaines, Ill. Filed June 5, 1962.

UOP 688

For Rubber Antiozonant.
First use May 25, 1962.

SN 149,269. Crane Industries, Inc., St. Louis, Mo. Filed July 18, 1962.

ENZYMAide

For Chemical Composition Used as a Sewage Liquidizer and a Chemical Preparation for Use in Liquefying Solids in Grease Traps.
First use June 1, 1956.

SN 150,309. Aluminum Company of America, Pittsburgh, Pa. Filed Aug. 2, 1962.

HYDRAL

For Alumina Hydrate.
First use Sept. 27, 1961.

SN 150,710. Minerals & Chemicals Philipp Corporation, Menlo Park, N.J. Filed Aug. 7, 1962.

CHEM CARB

For Calcium Carbonate.
First use July 24, 1962.

SN 154,664. Colgate-Palmolive Company, New York, N.Y. Filed Oct. 4, 1962.

BARRIER

For Insect Repellent.
First use July 23, 1962.

SN 155,343. Lakeland Grocery Co., Hopkins, Minn., assignee of Red Owl Stores, Inc., d.b.a. H. A. Marr Grocery Co., Hopkins, Minn. Filed Oct. 17, 1962.

LAUNDREX

For Bleach.
First use Oct. 15, 1937.

SN 155,716. Formulabs, Incorporated, Escondido, Calif. Filed Oct. 23, 1962.

FORMULABS

Owner of Reg. No. 706,582.
For Dyes, Stains, and Compositions Including Dyes and Stains, Used for Marking, Coloring and Striping Industrial Products Including but not Limited to Coated Wires.
First use May 7, 1952.

SN 156,006. Martens Chemical Corp., College Point, N.Y. Filed Oct. 26, 1962.

JEN-R-8

For Chemical Compound Which Is Added to Laundry Rinses in Order To Expel the Residual Chlorine From the Fabrics and Also To Render Soluble the Insoluble Soaps and Metallic Salts Which Remain in the Water.
First use May 17, 1962.

SN 156,396. The Fuller Brush Company, East Hartford, Conn. Filed Nov. 1, 1962.



Owner of Reg. Nos. 704,384, 722,687, and 726,591.
For Air Deodorant.
First use at least as early as March 1962.

SN 157,277. B. T. Babbitt, Inc., New York, N.Y. Filed Nov. 15, 1962.



Owner of Reg. Nos. 392,176, 726,631, and others.
For Household Compositions—Namely, Laundry Starch in Liquid and Spray Forms, Fabric Finishes, and Ironing Aids.
First use on or about July 1, 1961.

SN 158,104. Solutek Corporation, d.b.a. A.A. X-Ray Solutions Co., Roxbury, Mass. Filed Nov. 28, 1962.

SOLUMAT

For X-Ray Developer-Replenisher Solutions.
First use on or before Feb. 9, 1962.

SN 158,802. Dumas Milner Corporation, Jackson, Miss. Filed Dec. 10, 1962.

SEA AIR

For Laundry Disinfectant.
First use Nov. 19, 1962.

SN 159,430. Sandoz, Inc., New York, N.Y. Filed Dec. 19, 1962.

RESOLIN

Owner of Reg. No. 289,137.
For Chemical Surface Active Agents for Industrial Use; Dyes, Dyestuffs, and Lakes Suitable for Dyeing Purposes.
First use June 20, 1931, on dyestuffs.

SN 159,921. The Sherwin-Williams Company, Cleveland, Ohio. Filed Dec. 28, 1962.

LINOPOL

For Linseed Oil Emulsion.
First use Dec. 14, 1962.

SN 160,194. Luckie Magic Corporation, Miami, Fla. Filed Jan. 4, 1963.

LUCKIE-MACK

Owner of Reg. 738,878.
For Insecticide for Killing Roaches, Water Bugs, Ants, and Mice.
First use on Aug. 30, 1962.

SN 163,627. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 28, 1963.

IRGANOX

Owner of Reg. No. 617,671.
For Antioxidant.
First use Feb. 18, 1963.

SN 164,073. J. P. Stevens & Company, Inc., New York, N.Y. Filed Mar. 6, 1963.

PDC

For Chemical Assistant in Dyeing Textile Fibers.
First use Sept. 24, 1962.

Class 10 — Fertilizers

SN 95,061. The Cotton Producers Association, Inc., Atlanta, Ga. Filed Apr. 14, 1960.

THRIFTY WILLY

For Plant Food.
First use at least as early as Jan. 2, 1959.

SN 146,720. Goldthwaite's Texas Toro Company, Fort Worth, Tex. Filed June 12, 1962.

TOPCO

For Plant Food and Fertilizer.
First use Apr. 20, 1962.

SN 147,860. Solar Nitrogen Chemicals, Inc., Cleveland, Ohio. Filed June 27, 1962.

N-ERGIZE

The drawing is lined for green but no claim is made for color.
For Nitrogen Solutions for Use as Fertilizer.
First use about Apr. 26, 1962.

SN 161,473. Clover Chemical Company, Pittsburgh, Pa. Filed Jan. 28, 1963.

FERTI-SPRAY

For Fertilizer in Dehydrated, Concentrated Water Soluble Powder Form, and in Liquid Form.
First use Oct. 23, 1962.

Class 11 — Inks and Inking Materials

SN 149,244. Anders Chemical Company, East Rutherford, N.J. Filed July 18, 1962.

ANDOFLEX

Owner of Reg. Nos. 435,089 and 631,120.
For Emulsion Printing Compositions.
First use Jan. 1, 1960; Feb. 1, 1946, as to the prefix "Ando."

SN 149,245. Anders Chemical Company, East Rutherford, N.J. Filed July 18, 1962.

ANDOKOTE

Owner of Reg. Nos. 435,089 and 631,120.
For Emulsion Printing Compositions.
First use Jan. 1, 1959; Feb. 1, 1946, as to the prefix "Ando."

Class 12 — Construction Materials

SN 135,161. Agalite Bronson Co., Oakland, Calif. Filed Jan. 4, 1962.

AIR-LITE

For Glass Sliding Doors and Glass Shower Stall Units and Components Thereof.
First use about November 1956 on glass sliding doors.

SN 141,026. Alton Box Board Company, Alton, Ill. Filed Mar. 29, 1962.

VISTA/PANEL

The word "Panel" is disclaimed apart from the mark as shown.
For Structural Panels for Use in Interior and Exterior Walls of Buildings.
First use Mar. 6, 1962.

SN 146,687. The Trenton Corporation, Ann Arbor, Mich. Filed June 11, 1962.

MONO-PLY

For Wrapper Adapted To Form a Protective Covering for Underground Pipe Lines.
First use Apr. 6, 1951.

SN 147,320. Simpson Timber Company, Seattle, Wash. Filed June 20, 1962.

TRELLIS

For Reconstituted Wood Boards.
First use Feb. 21, 1961.

SN 151,500. Martin-Marietta Corporation, Baltimore, Md. Filed Aug. 20, 1962.

GUN STASET

Owner of Reg. Nos. 518,506 and 746,434.
For Furnace Lining Compound, Predominantly of Refractory Magnesite.
First use on or about Aug. 10, 1961.

SN 153,464. Des Moines Concrete Products Co., West Des Moines, Iowa. Filed Sept. 19, 1962.

DEMCO KWIKRETE

For Pre-Mixed Concrete.
First use Aug. 23, 1962.

SN 153,475. Benjamin Foster Company, Philadelphia, Pa. Filed Sept. 19, 1962.

LAG-FAB

For Open Weave Glass Cloth Used as a Reinforcing Membrane With Coatings or Adhesives for Thermal Insulation.
First use Aug. 10, 1962.

SN 157,863. Terox Corporation of America, Franklin Park, Ill. Filed Nov. 23, 1962.

TEROXIUM

Owner of Reg. Nos. 626,761 and 655,417.
For Plastic Joint Filler for Use With Molded Resin Members Simulating Stone.
First use Dec. 18, 1956.

SN 161,957. William H. Coburn, Hampton Falls, N.H. Filed Feb. 4, 1963.

BLUE CHIP FARM

For Lumber.
First use in or about November 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 137,893. Henry E. Cannon, d.b.a. Cannon & Company, San Francisco, Calif. Filed Feb. 14, 1962.

OCTOPUS

For Hose Units Featuring Multi-Branch Liquid Discharge Heads Having Branches in Flexible Tube Form.
First use Nov. 14, 1958.

SN 146,438. Alfred Zaffini, d.b.a. Scaf-Jak Manufacturing Co., Needham, Mass. Filed June 7, 1962.

SCAF-JAK

For Low Level Scaffolding Jack.
First use on or about Nov. 24, 1961.

SN 146,610. Flo-Lok, Inc., Houston, Tex. Filed June 11, 1962.

FLo-LoK

For Valves, Particularly Flow Control Valves for Instrumentation and Laboratory Use.
First use July 3, 1961.

SN 146,827. Jordan Industries, Inc., Miami, Fla. Filed June 13, 1962.

jordan INDUSTRIES, INC.

For Wood Screw Anchors, Aluminum Expansion Anchors, Expansion Shields, and Toggle Bolts.
First use May 26, 1956.

SN 148,009. Champlain Metals Ltd., Montreal, Canada. Filed June 29, 1962.

VARIVANE

Priority claimed under Sec. 44(d) on Canadian application filed Dec. 29, 1961; Reg. No. 127,796, dated Aug. 31, 1962.
For Fully Automatic Shutters Designed To Control the Temperature of Internal Combustion Engines.

SN 150,037. Elkay Manufacturing Company, Broadview, Ill. Filed July 30, 1962.



For Sinks.
First use Jan. 11, 1962.

SN 150,111. Southwestern Plastic Pipe Company, Mineral Wells, Tex. Filed July 30, 1962.

JET ROD

For Pipe.
First use June 25, 1962.

SN 151,637. Heli-Coil Corporation, Danbury, Conn. Filed Aug. 2, 1962.

HELI-COIL

Owner of Reg. Nos. 399,390, 707,897, and others.
For Screw Thread Inserts Loaded in Plastic Strips for Magazine Feeding.
First use Jan. 24, 1962.

SN 153,214. Rain Jet Corporation, Burbank, Calif. Filed Sept. 14, 1962.

SHOWER OF DIAMONDS

For Devices for Producing Ornamental Water Fountains.
First use May 25, 1961.

SN 153,862. Carson Manufacturing Company, Pittsburgh, Pa. Filed Sept. 25, 1962.

Carson GlasGards

For Removable Metal Protector for the Bowl of a Glass Decanter or Vessel Used for Brewing Coffee.
First use July 24, 1962.

SN 154,363. Metallschlauchfabrik A.G. (Fabrique de Tuyaux Metalliques Flexibles S.A.), Lucerne, Switzerland. Filed Oct. 2, 1962.

BOA-DUO

Priority claimed under Sec. 44(d) on Swiss Reg. No. 192,077, dated May 25, 1962. Owner of U.S. Reg. No. 670,112.
For Metallic Pipes.

SN 154,472. Robert J. Clark, Dolton, Ill. Filed Oct. 4, 1962.

FANCI-FRI

For Food Shapers for Retaining Liquid Foodstuffs for Cooking.
First use Aug. 10, 1962.

SN 160,064. Mission-West Manufacturing Company, Los Angeles, Calif. Filed Jan. 2, 1963.

SANIWARE

For Toilets, Valves, Couplings, Waste Tanks, Water Supply Tanks, Pumps and Pressure Caps, as Used in Sanitary Waste Disposal Systems.
First use Oct. 1, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 138,641. Pennsylvania Steel Corporation, Detroit, Mich. Filed Feb. 26, 1962.

DZ

For Tool Steel, Bar Steel, Metal Castings, and Forgings.
First use Oct. 22, 1948.

SN 143,746. Latrobe Steel Company, Latrobe, Pa. Filed May 8, 1962.

DYNACUT

For High Speed Steel Billets.
First use Mar. 19, 1962.

SN 151,275. Union Carbide Corporation, New York, N.Y. Filed Aug. 15, 1962.

UNION CARBIDE

Owner of Reg. Nos. 676,173, 700,302, and 704,122.
For Intermetallic Composites in the Form of Bars, Rods, Billets and the Like for Industrial Use.
First use July 24, 1962.

SN 152,627. The Polymer Corporation, Reading, Pa. Filed Sept. 6, 1962.

POLYMET

For Plastic Filled Sintered Metal, Particularly for High Temperature Bearing Uses.
First use May 18, 1962.

SN 153,573. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,690 and 739,324.
For Cast Iron and Cast Metal Elements Produced by Die Casting, Press Casting, and Gravity Die Casting.

SN 153,620. Cerro Corporation, New York, N.Y. Filed Sept. 21, 1962.



The drawing is lined for red and blue but no claim is made to color.
For Copper Tubing.
First use October 1949.

SN 159,508. Lukens Steel Company, Coatesville, Pa. Filed Dec. 20, 1962.

LUKENS LT-75

Owner of Reg. Nos. 605,018 and 683,135.
For Various Steel Products—Namely, Clad Steel, Stainless Clad Steel, Carbon and Alloy Plate, and Steel Plate Shapes.
First use May 14, 1962.

SN 159,551. American Nickeloid Company, Peru, Ill. Filed Dec. 14, 1962.

KOTE-ALUME

For Colored Aluminum Sheets.
First use on or about Nov. 21, 1962.

SN 160,958. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Jan. 18, 1963.

MALLORY

For Nonferrous Metals, Nonferrous Alloys, and Nonferrous Sintered Metal Compositions.
First use during the year 1917.

Class 15—Oils and Greases

SN 153,574. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,690 and 739,324.
For Industrial Oils and Greases.

SN 154,464. Sol H. Berlin, d.b.a. Lewseal Company, San Fernando, Calif. Filed Oct. 4, 1962.



Applicant disclaims the representation of an automobile automatic transmission in association with the trademark.
For Liquid Substance for Sealing and Stopping Leaks in Automobile Automatic Transmissions.
First use June 1, 1962.

SN 156,123. Jet-Aer Corporation, Paterson, N.J. Filed Oct. 29, 1962.

BUST RUST

For Penetrating Oil in Aerosol Spray Can.
First use May 20, 1956.

Class 16—Protective and Decorative Coatings

SN 133,885. The Martin-Senour Company, Chicago, Ill. Filed Dec. 12, 1961.



The drawing is lined for the respective colors blue, green and magenta (red) but no claim is made to color as a feature of the mark.
For Automotive Finishes in the Nature of Enamels, Lacquers, Acrylic Enamels, and Specialty Finishes.
First use Aug. 10, 1961.

SN 137,881. The Sherwin-Williams Company, Cleveland, Ohio. Filed Feb. 6, 1962.

SHER-LITE

For Stain for Finishing Wood Furniture and Wall Paneling.
First use Jan. 25, 1962.

SN 146,639. Magnolia Paper Co., Houston, Tex. Filed June 11, 1962.

BEAM

For Acrylic Type Polymer Gloss Finish for Floors.
First use Apr. 9, 1962.

SN 160,121. Magna Corporation, Anaheim, Calif. Filed Jan. 8, 1963.



For Protective and Decorative Coatings—Namely, Paints.
First use Mar. 5, 1962.

SN 160,530. Barker Chemical Company, Chicago, Ill. Filed Jan. 11, 1963.

10-06

For Lacquer Thinner.
First use 1933.

SN 161,193. The O'Brien Corporation, South Bend, Ind. Filed Jan. 22, 1963.

POISE

For Paint, Varnish, and Enamel.
First use Sept. 14, 1961.

SN 161,195. The O'Brien Corporation, South Bend, Ind. Filed Jan. 22, 1963.

"MIRA-PLATE"

For Paint.
First use Sept. 6, 1961.

Class 17—Tobacco Products

SN 154,040. Liggett & Myers Tobacco Company, New York, N.Y. Filed Sept. 27, 1962.

CHESTER KING

Applicant disclaims the term "King" apart from the mark as shown. Owner of Reg. Nos. 128,430, 695,189, and others.
For Cigarettes.
First use Sept. 14, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 134,390. Hobart Laboratories, Inc., Chicago, Ill. Filed Dec. 20, 1961.

TRANDOLOR

For Medical Preparation Principally for the Relief of Headache, Muscular Aches, Arthritis and Rheumatism, Menstrual Cramps, Colds, and Non-Organic Nervousness.
First use Sept. 5, 1961.

SN 144,863. Merck & Co. Inc., Rahway, N.J. Filed May 17, 1962.

ProDecadron

Owner of Reg. Nos. 673,426 and 718,844.
For Medicinal Preparation for Use in the Treatment of Diseases Affecting the Respiratory Tract.
First use Feb. 23, 1962.

SN 152,873. Advance Brands, Inc., Chicago, Ill. Filed Sept. 11, 1962.

DINERS AID

For Enzyme Tablets.
First use July 11, 1962.

SN 153,999. The Upjohn Company, Kalamazoo, Mich. Filed Sept. 26, 1962.

MEDRATE

For Steroid Preparation for Hormone Deficiencies.
First use July 13, 1962.

SN 154,453. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Oct. 3, 1962.

UTILIN

Owner of Reg. No. 409,088.
For Digestant Aid.
First use Sept. 20, 1962.

SN 160,885. Organon Inc., West Orange, N.J. Filed Jan. 17, 1963.

OXYPART

For Oxytoxic Preparation.
First use Dec. 21, 1962.

SN 160,918. Chicago Pharmacal Company, Chicago, Ill. Filed Jan. 18, 1963.

DIGESTALIN

For Medicinal Preparation Used for Aiding Digestion and Assimilation of Food.
First use Apr. 25, 1951.

SN 161,014. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

JEFRON

For Hematinic Iron Preparation.
First use Sept. 8, 1959.

SN 161,015. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

TOLDEX

For Anti-Inflammatory, Antihistaminic-Sedative Agents for the Treatment of Inflammatory and Allergic Disorders.
First use May 15, 1961.

SN 161,016. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

BACTROVET

For Antibacterial for Animal Use.
First use Dec. 29, 1959.

SN 161,017. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

ROPAD

For Analgesic and Anti-Inflammatory Agent.
First use Nov. 7, 1960.

SN 161,019. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

PHENOXENE

For Product for Treatment of All Types of Parkinson's Disease.
First use May 14, 1959.

SN 161,023. The Dow Chemical Company, Midland, Mich. Filed Jan. 21, 1963.

STERICON

For Biologicals for the Prevention and Treatment of Hog Cholera.
First use Apr. 12, 1962.

SN 161,417. Norden Laboratories, Inc., Lincoln, Nebr. Filed Jan. 25, 1963.

LEPTOVAC-P

For Vaccine for Immunization of Healthy Cattle and Swine Against Leptospira Pomona Infection, Used in Veterinary Medicine.
First use March 1962.

SN 161,454. Arco Pharmaceuticals, Inc., South Ozone Park, N.Y. Filed Jan. 28, 1963.

SPANTUSS

For Cold and Cough Liquid Medication.
First use Oct. 31, 1962.

SN 161,557. The Purdue Frederick Company, Yonkers, N.Y. Filed Jan. 28, 1963.

SENNAQUINONE

For Laxative Preparation.
First use Jan. 21, 1963.

SN 161,804. Merck & Co., Inc., Rahway, N.J. Filed Jan. 31, 1963.

TURBINAIRE

For Medicinal Aerosol Preparation for Intranasal Use.
First use Jan. 7, 1963.

SN 162,001. Marion Laboratories, Inc., Kansas City, Mo. Filed Feb. 4, 1963.

PAVABID

For Vascular Relaxant and Antispasmodic.
First use Dec. 20, 1962.

SN 162,010. Norden Laboratories, Inc., Lincoln, Nebr. Filed Feb. 4, 1963.

CYTOBIN

For Pharmaceutical Product for the Treatment of Thyroid Deficiency and Weight Control Used in Veterinary Medicine.
First use June 1962.

SN 162,254. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 4, 1963.

TELFRION

For Anti-Inflammatory Preparation.
First use Aug. 27, 1962.

SN 162,294. G. D. Searle & Co., Skokie, Ill. Filed Feb. 7, 1963.

EDULEN

For Pharmaceutical Preparations Containing Steroid Hormones.
First use Jan. 18, 1963.

SN 162,314. The Wander Company, Chicago, Ill. Filed Feb. 7, 1963.

SULFUNO

For Antibacterial Sulfonamide.
First use Feb. 1, 1963.

SN 162,621. Nelson Baker & Company, Elizabeth, N.J. Filed Feb. 13, 1963.

DENT-AID

For Anti-Thumb Sucking and Nail Biting Preparation.
First use Feb. 6, 1963.

SN 162,635. Erwin-James Co., Inc., Brick Town, N.J. Filed Feb. 13, 1963.

ERGKATAL

For Calmative Sedative Preparation.
First use Jan. 21, 1963.

SN 162,894. American Home Products Corporation, New York, N.Y. Filed Feb. 18, 1963.

ELZOTA

For Steroid Enzyme Preparation.
First use Jan. 31, 1963.

SN 162,900. Bell-Mack Laboratories, Inc., Morristown, N.J. Filed Feb. 18, 1963.

MENSARETS

For Medicinal Preparation in Tablet and Capsule Form Used for the Relief of Common Premenstrual Symptoms, Such as Backaches, Headaches, Nervousness, Etc.
First use July 8, 1955.

SN 163,598. Axentie T. Babienco, San Diego, Calif. Filed Feb. 28, 1963.

Renalgen

For Preparation for the Treatment of Essential Hypertension, Cystitis, Pyelitis, and Pyelonephritis (Nephrosis).
First use 1946.
Subj. to Intf. with SN 169,959.

SN 166,248. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Apr. 8, 1963.

PIPERONE

For Tablets Containing Piperazine Hexahydrate Used as a Pinworm Remedy.
First use December 1953.

SN 169,959. Meyer Laboratories, Inc., Detroit, Mich. Filed May 29, 1963.

RENALGIN

For Pharmaceutical Preparation for Use as a Urinary Antiseptic and Analgesic.
First use Aug. 8, 1962.
Subj. to Intf. with SN 163,598.

Class 19—Vehicles

SN 135,059. Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France. Filed Jan. 2, 1962.

JUNIOR

Priority claimed under Sec. 44(d) on French Reg. No. 497,609, dated July 5, 1961 (Seine); Natl. Inst. No. 167,853.
For Aircraft, Especially Jet-Propelled Aircraft; Airplanes; Rotarywing Aircraft; Helicopters; Autogiros; Seaplanes; Missiles; Hydroplanes; Flying Boats; and the Structural Parts of the Foregoing.

SN 143,338. Wallace K. Bench, d.b.a. W. K. Bench Co., El Monte, Calif. Filed Apr. 30, 1962.

DOLLY PARK-ER

Applicant disclaims any exclusive right to the word "Dolly" apart from the mark as shown.
For Motorized Wheels for Off-the-Road Powering of Trailers.
First use April 1961.

SN 148,204. The Lake Auto Radiator Mfg. Co., Cleveland, Ohio. Filed July 2, 1962.

LAKE

For Radiator Cores for Vehicles, Engines, and Industrial Equipment.
First use September 1925.

SN 165,545. Thermel Incorporated, Franklin Park, Ill. Filed Mar. 27, 1963.

THERMAWIPER

For Vehicular Windshield Wipers and Parts Thereof.
First use Mar. 17, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 122,466. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

H.H.SCOTT

Owner of Reg. Nos. 730,718, 785,234, and others.
For Amplifiers, Including Direct-Current, Differential, Multichannel, Audio, Video, Audio-High-Fidelity, Stereophonic, Radio-Frequency and Broad-Band Amplifiers, Preamplifiers and Power Amplifiers, and Parts Thereof, and Consoles and Housings Therefor; Radio-Wave Receiving Apparatus Including Amplitude-Modulation, Phase- and Frequency-Modulation Tuners and Parts Thereof, Single and Multi-Channel and Multiplex Circuits, Radio-Amplifying Circuits Adapted for Receiving Radio Broadcast and Television-Band Transmissions, Converters, Antennas and Transmission Lines; Radio-Wave Broadcasting, Rebroadcasting and Relay Equipment, Including Radio-Frequency Generating Apparatus and Oscillators and Parts Thereof; Recording and Reproducing Amplifier Equipment and Parts Thereof Including Phonograph Record and Magnetic Tape Recording and Reproducing Equipment; Phonograph Disc Records; Loudspeakers and Cabinets Therefor; Turntable Apparatus Including Phonograph Record Players, Pickups and Arms; Noise Suppressors; Electric Filters, Networks, Attenuators, Equalizers; and Electromechanical and Electroacoustical Transducers.
First use in or about 1951.

SN 130,488. Electronic Controls Incorporated, Stamford, Conn. Filed Oct. 23, 1961.

T-BAR

For Data Processing and Control Switches and Relays.
First use December 1960.

SN 134,849. Standard Radio Corporation, Shibuya-ku, Tokyo, Japan. Filed Dec. 28, 1961.

SR

Owner of Japanese Reg. No. 458,647, dated Jan. 20, 1955.
For Radios and Transceivers.
First use Feb. 18, 1954, on radios; in commerce May 28, 1955.

SN 147,409. Southwestern Drug Corporation, Dallas, Tex. Filed June 21, 1962.

LYNDA LYNN

"Lynda Lynn" is the name of a fictitious person.
For Electric Blankets.
First use May 15, 1962.

SN 149,782. Superior Cable Corporation, Hickory, N.C. Filed July 25, 1962.

CELL-O-AIR DIELECTRIC

The descriptive word "Dielectric" is disclaimed apart from the mark as a whole.
For Cellular Plastic Insulating Material.
First use Apr. 16, 1962.

SN 153,575. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,690 and 739,324.
For Electrical Batteries and Accumulators.

Class 22—Games, Toys, and Sporting Goods

SN 135,931. Wilson Sporting Goods Co., River Grove, Ill. Filed Jan. 16, 1962.

WILSON MULTI-POWERED

For Golf Clubs.
First use on or about Feb. 14, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 114,695. Gilman Engineering and Mfg. Co., Janesville, Wis. Filed Mar. 1, 1961.

TRANSFERLINE

For Assembly Machines, and Index Tables and Parts Therefor.
First use May 13, 1958.

SN 135,032. The Charles W. Meldram Company, Inc., New York, N.Y. Filed Jan. 2, 1962.

LO LIFT

Applicant disclaims any exclusive rights to the term "Lift" except as shown in the drawing.
For Hydraulic Pallet Hand Trucks.
First use May 29, 1961.

SN 143,746. Latrobe Steel Company, Latrobe, Pa. Filed May 3, 1962.

DYNACUT

For Cutting Tools.
First use Mar. 19, 1962.

SN 146,019. Clipper Manufacturing Company, Kansas City, Mo. Filed June 4, 1962.

DIA SET R.D.D.

For Cutting Blades for Masonry Saws.
First use May 17, 1962.

SN 146,416. The Producto Machine Company, Bridgeport, Conn. Filed June 7, 1962.

VERSA BLOW

The word "Blow" is disclaimed apart from the mark as shown.
For Blow Molding Apparatus.
First use Jan. 19, 1962.

SN 147,411. Stewart-Warner Corporation, Chicago, Ill. Filed June 21, 1962.

TRANSORT

For Apparatus and Component Parts Therefor To Selectively Sort Items To Be Delivered to Varying Destination Points in Response to Destination Codes Associated With Each Item.
First use at least as early as Apr. 27, 1962.

SN 148,070. C. O. Öberg & Co:s Aktiebolag, Eskilstuna, Sweden. Filed June 29, 1962.

ÖBERG SWEDEN

Owner of Swedish Reg. No. 102,707, dated May 11, 1962; and U.S. Reg. Nos. 169,287, 299,277, and others.
For Files and Rasps of All Types, Including Rotary Files and Rasps, Handles and Holders for Files and Rasps.

SN 149,094. Rose G. Kruger, d.b.a. Kruger Products, Detroit, Mich. Filed July 16, 1962.

MIRA-TWIRL

For Paint Brush and Roller Cover Cleaning Tools.
First use on or about May 4, 1962.

SN 150,495. Ateliers de Poclain Societe de Constructions Industrielles Battaille & Fils, Le Plessis-Belleville, France. Filed Aug. 6, 1962.

POCLAIN

Priority claimed under Sec. 44(d) on French Reg. No. 621, dated Mar. 2, 1962 (Senlis); Natl. Inst. No. 181,296.
For Earth Moving and Construction Equipment—Namely, Power Shovels, Cranes, Hoppers, Drills, Levelers, Scrapers, Loaders, Diggers, and Parts Thereof.

SN 153,576. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,690 and 739,324.
For Machine Parts—Namely, Bearing Assemblies and Components Thereof, Couplings, Axle Boxes, Wheel Sets, Axles, Hubs, and Hand-Made or Machined Metal Machine Elements; Injection Pumps, Gas and Liquid Feed Pumps; Feeding Devices for Use With Rivets, Pins, Bolts and Nuts; Braking and Steering Devices for Vehicles and Components Thereof; Sleeves and Nuts; Machines for Manufacturing Bearings and Component Parts Thereof; Grinding Machines, Polishing Trommels, Sorting Machines, Lathes, Pressing Machines, Polishing Frames, Grinding Spindles, Honing Machines, Lapping Machines, Riveting Machines, Assembly Pressing Devices and Rivet Insertion Devices; Printing Machines for Cardboard; Textile Machines and Components—Namely, Spinning and Twisting Spindles, Bearing Assemblies Therefor, Top Rolls With Pivot and Saddle Guidings, Stretching Devices for Spinning Machines, Pivots for Top Rolls, Tightener Rollers, Roller Pivots, Eccentric Rollers, False Twist Spindles, and Overdamping Spindles; Machines for Casting Metal; Machines for Cleaning Metal Parts and Bearings.

SN 154,466. B. H. Bunn Company, Chicago, Ill. Filed Oct. 4, 1962.



For Package Tying Machines.
First use Sept. 24, 1962.

SN 154,781. Swingline Inc Long Island City, N.Y. Filed Oct. 8, 1962.

Swingline 333

Owner of Reg. No. 665,038 and others.
For Stapling Machines.
First use Sept. 24, 1962; Jan. 2, 1937, as to "Swingline."

SN 155,059. DBA Products Co., Inc., Deerfield, Ill. Filed Oct. 12, 1962.

BALLMASTER

For Automatic Bowling Ball Cleaning and Polishing Machines.
First use July 27, 1962.

SN 155,997. Irvington Machine Works, Inc., Portland, Oreg. Filed Oct. 26, 1962.

MINI-WINCH

For Gasoline-Engine-Propelled Portable Winch.
First use March 1962.

SN 157,913. Lambert Incorporated, Dayton, Ohio. Filed Nov. 26, 1962.

KLONDIKE

For Rotary Snow Plows.
First use Oct. 15, 1962.

SN 158,126. American Saw & Mfg. Company, Springfield, Mass. Filed Nov. 29, 1962.

Wonder-Band

For Saw Blades for Hack Saws, Band Saws and the Like.
First use Nov. 19, 1962.

SN 158,250. Milo Harding Company, Monterey Park, Calif. Filed Nov. 30, 1962.

GLIDE-A-PRINT

For Duplicating Machines.
First use in February 1962.

SN 158,821. Cullman Wheel Co., Chicago, Ill. Filed Dec. 3, 1962.

CULL-FLEX

For Shaft Couplings.
First use June 19, 1962.

SN 158,505. American Research & Development Company, San Angelo, Tex. Filed Dec. 5, 1962.

ARADCO

For Shoe Making Machinery.
First use Apr. 1, 1960.

SN 159,835. Mercury International Insurance Underwriters, Los Angeles, Calif. Filed Dec. 27, 1962.

TRAVLSERVICE

For Insurance Policy Dispensing Machines.
First use Jan. 3, 1962.

SN 159,932. Acra-Plant, Inc., Newton, Kans. Filed Dec. 31, 1962.

ACRA-PLANT

For Furrow-Opening Shoes for Seed Planting Implements.
First use May 2, 1962.

SN 160,013. Schmieg Industries, Inc., Detroit, Mich. Filed Dec. 31, 1962.

CENTRI-PUMP PAK

Owner of Reg. No. 367,948.
For Underground Sewage Pumping Stations.
First use at least as early as October 1962.

SN 160,151. American Optical Company, Southbridge, Mass. Filed Jan. 4, 1963.

PIXIE

For Ophthalmic Frame Processing Machinery.
First use May 6, 1962.

SN 160,321. Ram Tool Corporation, Chicago, Ill. Filed Jan. 7, 1963.

LEEWOOD

For Garden Tools.
First use Sept. 23, 1962.

SN 160,390. The Murray Company of Texas, Inc., d.b.a. Boston Gear Works, North Quincy, Mass. Filed Jan. 8, 1963.

BOS-TOP

For Conveyor Chains.
First use Dec. 18, 1962.

SN 160,604. Commonwealth Plastics Corp., Leominster, Mass. Filed Jan. 14, 1963.

PENCILMATE

For Pencil Sharpeners and Erasers.
First use Dec. 12, 1962.

SN 161,358. Mixermobile Manufacturers, Inc., Portland, Oreg. Filed Jan. 24, 1963.

For Vehicle Mounted Bulk Material Handling and Loading Apparatus.
First use March 1948.

SN 161,515. Lee Hunter, d.b.a. Hunter Engineering Company, St. Louis, Mo. Filed Jan. 28, 1963.

LIFT-A-LINE

For Service Lift Racks for Vehicles.
First use Nov. 9, 1962.

SN 161,552. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Jan. 28, 1963.

HY-FER-SET

For Tube Coupling Ferrule Presetting Tool.
First use Aug. 14, 1961.

SN 161,586. American Can Company, New York, N.Y. Filed Jan. 29, 1963.

U-SEAL

For Carton Making Machinery.
First use Feb. 6, 1962.

SN 161,702. Gilson Bros. Co., Plymouth, Wis. Filed Jan. 30, 1963.

SENATOR

For Rotary Tillers.
First use Jan. 3, 1961.

Class 25 — Locks and Safes

SN 148,516. Eagle Lock Corporation, Terryville, Conn. Filed May 1, 1962.

SUPR-SECURTY

For Tumbler Locks for Meters, Drawers, Cash Receptacles and the Like.
First use Feb. 20, 1961.

SN 152,518. Metallurgica Marcante, Thiene, Vicenza, Italy. Filed Sept. 5, 1962.

EURAMATIC

Owner of Italian Reg. No. 159,187, dated May 15, 1962.
For Locks With Automatic Spring Latch Operation.

Class 26 — Measuring and Scientific Appliances

SN 146,283. F & M Scientific Corporation, near Avondale, Pa. Filed June 6, 1962.

F & M

For Analytical Instruments and Accessories—Namely, Gas Chromatographs, Gas Chromatograph Sample Injectors, Gas Chromatograph Sampling Valves, Gas Chromatograph Columns, Septums and Detectors for Gas Chromatographs, Analytical Combustion Chambers, Temperature Controllers, and Parts Thereof.
First use in May 1959 on gas chromatographs.

SN 158,577. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,691 and 739,824.
For Measuring Devices for Measuring Internal and External Dimensions, Pairing Measuring Devices, Measuring Devices for Measuring Concentricity, Tolerance Measuring Devices, Linear Measuring Devices, Face Measuring Devices, Angle Measuring Devices, Ball Measuring Devices, Optical Testing and Measuring Devices, Parallel Measuring Devices, Circle Tolerance Gauges, Thread Gauges, Micrometer Gauges, Pneumatic Measuring Devices, Leveling Gauges, Dividing Devices for Circle Graduations, Machines for Testing Industrial Oils and Greases, and Test Stands.

SN 154,420. Kugler Fonderie et Robinetterie S.A., Geneva, Switzerland. Filed Oct. 3, 1962.

KUGLOSTAT

Owner of Swiss Reg. No. 124,330, dated Mar. 19, 1948; and U.S. Reg. No. 722,181.
For Cock Faucet Articles, Especially Thermostatic Mixers, Mixers, Apparatuses or Systems for Regulating Water, Gas and Steam.

Class 27 — Horological Instruments

SN 147,709. Di Vincenzo & Arienti Watch Case Corporation, Brooklyn, N.Y. Filed June 26, 1962.

D & A

For Watch Cases.
First use December 1944.

SN 159,903. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

MINIFIX

Owner of Swiss Reg. No. 175,472, dated May 19, 1959.
For Timepieces and Separate Parts Thereof.

SN 159,904. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

ELASTOR

Owner of Swiss Reg. No. 172,952, dated Nov. 13, 1958.
For Shock Absorbing Bearings for Timepieces.

SN 159,905. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

SYNTAFLEX

Owner of Swiss Reg. No. 172,953, dated Nov. 13, 1958.
For Shock-Absorbing Bearings for Timepieces.

SN 159,906. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

SATELLOR

Owner of Swiss Reg. No. 183,769, dated Dec. 2, 1960.
For Timepieces and Separate Parts Thereof.

SN 159,908. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

SPIROTOR

Owner of Swiss Reg. No. 181,666, dated May 28, 1960.
For Timepieces and Separate Parts Thereof.

SN 159,909. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

KIF TRIOR

Owner of Swiss Reg. No. 171,166, dated June 27, 1958.
For Shock-Absorbing Bearings for Timepieces.

SN 159,910. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

ULTRAFLEX

Owner of Swiss Reg. No. 172,954, dated Nov. 13, 1958.
For Shock-Absorbing Bearings for Timepieces.

SN 159,911. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

FIXMOBIL

Owner of Swiss Reg. No. 171,165, dated June 27, 1958.
For Combined In-Settings (Hole-Jewel and Cap-Jewel) for Timepieces.

SN 159,912. Parechoc S.A., Le Sentier, Vaud, Switzerland. Filed Dec. 28, 1962.

Flector

Owner of Swiss Reg. No. 166,338, dated July 13, 1957.
For Shock-Absorbing Bearings for Timepieces.

Class 28 — Jewelry and Precious-Metal Ware

SN 134,119. The International Association of Lions Clubs, Chicago, Ill. Filed Dec. 15, 1961.



Owner of Reg. Nos. 384,746, 642,444, and others.
For Jewelry—Namely, Rings, Cuff Links, Watch Bands, Tie Clasps, Belt Buckles.
First use Oct. 7, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 156,397. The Fuller Brush Company, East Hartford, Conn. Filed Nov. 1, 1962.



Owner of Reg. Nos. 704,384, 722,687, and 726,591.
For Hair Brush and Clothes Brush.
First use at least as early of May 1961.

SN 159,328. American Home Products Corporation, New York, N.Y. Filed Dec. 18, 1962.

SHINING WEDGE

For Applicator for Shoe Polish.
First use Dec. 8, 1962.

SN 160,249. Sears, Roebuck and Co., Chicago, Ill. Filed Dec. 10, 1962.

MAGNA-MAGIC

For Dust Mops.
First use July 11, 1962.

Class 31 — Filters and Refrigerators

SN 154,202. Berns O Matic Corporation, Rochester, N.Y. Filed Oct. 1, 1962.

BERNZ O MATIC

Owner of Reg. Nos. 587,281 and 593,884.
For Refrigerators.
First use Mar. 1, 1961.

SN 157,665. Compagnie Electro-Mecanique, Paris, France. Filed Sept. 18, 1962.

"SCAMATIC"

Priority claimed under Sec. 44(d) on French Reg. No. 505,119, dated May 18, 1962 (Seine); Natl. Inst. No. 185,064.
For Filters for Any Industrial Applications.

SN 157,701. Hussmann Refrigerator Co., St. Louis, Mo. Filed Nov. 21, 1962.

HUSSMETIC

For Condensing Units for Refrigeration and Air Conditioning Systems.
First use Sept. 13, 1962.

Class 32 — Furniture and Upholstery

SN 160,995. Beaunetics, Incorporated, d.b.a. Beaunetics, Kansas City, Mo. Filed Jan. 21, 1963.

BEAUNETIC

For Pillows.
First use Nov. 27, 1962.

SN 166,985. Eclipse Sleep Products, Inc., Brooklyn, N.Y. Filed Apr. 18, 1963.

SANI-GARD

For Mattresses, Box Springs, and Upholstered Goods.
First use Apr. 11, 1963.

SN 167,121. Creative Products Company of America, Pittsburgh, Pa. Filed Apr. 19, 1963.

Colr ✻ Trennd

For Cabinets and Counters.
First use Jan. 4, 1963.

SN 167,234. Drexel Enterprises, Inc., Drexel, N.C. Filed Apr. 22, 1963.

ESPERANTO

For Living Room, Dining Room, and Bedroom Furniture, Including Dressers, Chests, Beds, Mirrors, Tables, Chairs, Screens, Buffets, and Commodes.
First use Apr. 9, 1963.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 153,095. Felix J. Mattson, Anaheim, Calif. Filed Sept. 13, 1962.



For Toilet-Bowl Ventilator.
First use June 10, 1962.

SN 153,578. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Sept. 20, 1962.

FAG

Owner of German Reg. No. 757,967, dated Feb. 6, 1962; and U.S. Reg. Nos. 596,690 and 739,824.
For Fuel Oil Burners and Components Therefor; and Furnaces for Iron and Metal Castings.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 139,208. The Goodyear Tire & Rubber Co., Akron, Ohio. Filed Mar. 6, 1962.

Tufsyn

For Synthetic Rubber for Use in the Manufacture of Tire Treads, Tires, Belting.
First use Feb. 6, 1962.

Class 36 — Musical Instruments and Supplies

SN 134,849. Standard Radio Corporation, Shibuya-ku, Tokyo, Japan. Filed Dec. 28, 1961.



Owner of Japanese Reg. No. 458,647, dated Jan. 20, 1955.
For Tape Recorders and Phonographs.
First use in commerce May 16, 1961, on tape recorders.

SN 155,026. Teachers Partner, Inc., Boston, Mass. Filed Oct. 11, 1962.

Teachers Partner

For Audio and Visual Teaching Aids, More Particularly Phonograph Records and Sheet Music Sold as a Set.
First use Apr. 10, 1962.

SN 161,592. The Command Company, Clayton, Mo. Filed Jan. 29, 1963.

CHORD-COMMANDER

For Keyboard Fingering Indicator.
First use Dec. 17, 1962.

SN 169,057. Playskool Manufacturing Company, Chicago, Ill. Filed May 16, 1963.

PLAYSKOOL

Owner of Reg. Nos. 241,844, 296,101, and 513,311.
For Phonograph Records.
First use on or about May 31, 1962.

Class 37 — Paper and Stationery

SN 146,765. Wespak, Incorporated, Teaneck, N.J. Filed June 12, 1962.

WESPAK

For Article Display Cards.
First use Jan. 25, 1960.

SN 152,861. Yxhults Stenhuggeri AB, Hallabrottet, Sweden. Filed Sept. 10, 1962.



Owner of Swedish Reg. No. 103,868, dated July 20, 1962.
For Wall Coverings, Specifically Wallpaper of All Types.

SN 156,493. Robert F. Haynes, Jr., Wheaton City, Md. Filed Nov. 2, 1962.

Assembulator

For Device for Holding Paper Sheets and Including a Vertical Series of Equally Spaced Pegs Which Receive Strips of Paper Having Corresponding Punched Holes.
First use May 15, 1961.

SN 157,244. Ronkonkoma Wall Paper Corporation, Ronkonkoma, N.Y. Filed Nov. 14, 1962.

Muralia

For Wall Paper.
First use December 1919.

SN 158,180. Rising Paper Company, Housatonic, Mass. Filed Nov. 29, 1962.

TANGLEWOOD

For Bond, Writing, Text, Cover, Wedding, Bristol, and Index Paper.
First use Apr. 30, 1962.

SN 158,925. The Northwest Paper Company, Cloquet, Minn. Filed Dec. 11, 1962.

NORTHWEST VELOPAQUE

Owner of Reg. Nos. 608,000 and 614,846.
For Paper—Namely, Text and Cover Paper.
First use December 1953.

SN 159,214. Robert I. Deland, d.b.a. Deland Check Co., Visalia, Calif. Filed Dec. 17, 1962.

DUCOPY

For Checkbooks.
First use July 11, 1962.

SN 159,552. Albert G. Barnes, Mountville, Pa. Filed Dec. 21, 1962.

ECON-O-BAND

Owner of Reg. No. 676,993.
For Ready Pasted Paper Borders for Decorative Uses, Including Use With Wall Paper, Painted Walls, and Paneling.
First use Feb. 8, 1962.

SN 159,961. The Carter's Ink Company, Cambridge, Mass. Filed Dec. 31, 1962.

CARTERFAX

For Thermal Copy Paper.
First use Sept. 5, 1962.

SN 160,055. David Kahn, Inc., North Bergen, N.J. Filed Jan. 2, 1963.

TRI-VALUE

For Writing Instruments—Namely, Pens.
First use Dec. 6, 1962.

SN 160,305. Lakeside Central Company, Chicago, Ill. Filed Jan. 7, 1963.

PADMASTER

For Writing Tablets, Notebooks, Composition Books, Blank Spelling Books, Music Books, Drawing Books, Stenographic Notebooks, Memorandum Books, Fillers, Filler Pads for Use With Loose Leaf Books, Typewriter Paper and Second Sheets, Both Padded and Not Padded, Scratch Pads, Pads, Index Cards, Index Guides, Art Paper, Packages of Note Sheets and/or Envelopes and Boxed Stationery Containing Writing Paper and Envelopes.
First use Oct. 29, 1962.

Class 38 — Prints and Publications

SN 104,254. Warner Press, Inc., Anderson, Ind., by change of name from Gospel Trumpet Company, Anderson, Ind. Filed Sept. 12, 1960.

"Christian Art" LINE

The word "Line" is disclaimed apart from the mark as shown.
For Church Bulletins; Attendance and Promotion Certificates; Choir Certificates; Greeting Card and Letter Enclosure; Award Cards; Calling Cards and Pictures; Postcards; Printed Bookmarks; and Souvenir Tags.
First use Jan. 18, 1945.

SN 134,128. The International Association of Lions Clubs, Chicago, Ill. Filed Dec. 15, 1961.



Owner of Reg. Nos. 384,746, 642,444, and others.
For Club Publications of Various Kinds Issued Periodically.
First use Oct. 7, 1961.

SN 139,044. The Crowell-Collier Publishing Company, New York, N.Y. Filed Mar. 5, 1962.

COLLIER BOOKS

Applicant does not claim any exclusive right to use the word "Books." Owner of Reg. No. 55,055.
For Books.
First use Nov. 1, 1961.

SN 145,957. National Boating Association, Inc., Chattanooga, Tenn. Filed June 1, 1962.

NATIONAL nba BOATING *Magazine*

The right to the words "National Boating Magazine" is disclaimed apart from the mark as shown.
For Magazine.
First use May 25, 1962.

SN 148,523. Patterson Publishing Company, Chicago, Ill. Filed July 6, 1962.

HOSPITALITY

For Magazines in the Nature of Trade Publications for the Food and Lodging Industries.
First use on or about June 15, 1962.

SN 148,710. C-E-I-R, Inc., Washington, D.C. Filed July 10, 1962.

A R B

For Television Audience Measurement Reports.
First use May 1958.

SN 148,781. American Artists Group, Inc., New York, N.Y. Filed July 11, 1962.

Elegancy

Owner of Reg. No. 666,901.
For Greeting Cards, Christmas Cards, and Greeting and Christmas Card Box Assortments.
First use Mar. 1, 1960.

SN 149,771. G. Reis & Bro. Inc., New York, N.Y. Filed July 25, 1962.

HELIOTEXTIL

For Woven Labels.
First use May 10, 1962.

SN 152,735. American Artists Group, Inc., New York, N.Y. Filed Sept. 10, 1962.

American Artists

Owner of Reg. Nos. 643,278 and 731,158.
For Greeting Cards, Christmas Cards, and Greeting and Christmas Card Box Assortments.
First use Mar. 26, 1935.

SN 153,944. Educational Developmental Laboratories, Inc., Huntington, N.Y. Filed Sept. 26, 1962.

EDL

For Educational Printed Material Including Books and Teachers' Guides.
First use in or about 1953.

SN 156,627. The Lighthouse Tabernacle, Inc., Indianapolis, Ind. Filed Nov. 5, 1962.



For Publication of Monthly Church Newsletter.
First use 1956.

SN 157,771. Clissold Publishing Co., Chicago, Ill. Filed Nov. 23, 1962.

the HOTEL /MOTOR HOTEL Monthly

Owner of Reg. No. 699,448.
For Magazine.
First use Oct. 1, 1962; in August 1893 as to the words "The Hotel Monthly."

SN 158,215. Atlas Supply Company, Newark, N.J. Filed Nov. 30, 1962.

ATLAS BULLETIN

For House Organ Published Monthly, Devoted to the Promotion of Tires, Batteries and Automobile Accessories and the Servicing Thereof, and Distributed to Oil Company Service Stations Throughout the United States.
First use Mar. 1, 1933.

SN 158,241. Electrographic Corporation, New York, N.Y. Filed Nov. 30, 1962.

THE R O P COLOR NEWSLETTER

The mark is lined for red, yellow, and blue. Owner of Reg. No. 678,131.
For Periodical Bulletin for Disseminating News Relating to Color Printing in Newspapers.
First use at least as early as October 1962.

SN 169,057. Playskool Manufacturing Company, Chicago, Ill. Filed May 16, 1963.

PLAYSKOOL

Owner of Reg. Nos. 241,344, 296,101, and 513,311.
For Printed and Pictorial Material Used in Association With Phonograph Records.
First use on or about May 31, 1962.

Class 39 — Clothing

SN 99,240. Red Raven Rubber Company, Newark, N.J. Filed June 17, 1960.

ROYTEX

For Waterproof Pants for Babies.
First use Aug. 16, 1959.

SN 115,257. Rosecrest, Inc., Boston, Mass. Filed Mar. 9, 1961.

RONDU

For Synthetic Fabric Made Into Women's Wearing Apparel Such as Skirts, Shirts, Blouses, Coats, and Jackets.
First use Dec. 27, 1960.

SN 141,694. Aris Gloves, Inc., New York, N.Y. Filed Apr. 6, 1962.

NYLO-FIT

For Ladies' Fabric Gloves.
First use Jan. 7, 1962.

SN 143,207. Bond Stores, Incorporated, New York, N.Y. Filed Apr. 27, 1962.



For Men's Suits.
First use June 15, 1961.

SN 143,208. Bond Stores, Incorporated, New York, N.Y. Filed Apr. 27, 1962.



For Men's Suits.
First use June 15, 1961.

SN 144,423. John Smedley, Limited, Cromford, near Matlock, England. Filed May 11, 1962.



Owner of British Reg. No. 532,948, dated June 28, 1932; and U.S. Reg. No. 20,906.
For Knitted and Woven Articles of Clothing—Namely, Men's Vests, Pants, Drawers, Union Suits, Body Belts and Shirts; and Women's Vestees, Panties, Pantalettes, Combinations and Shirts.

SN 144,995. Horace Small Manufacturing Company, Nashville, Tenn. Filed May 18, 1962.

CAPITOL

For Policemen's and Industrial Uniforms.
First use 1944.

SN 146,721. Hairnet Corporation of America, New York, N.Y. Filed June 12, 1962.

MIRACLE

For Hairnets.
First use May 12, 1962.

SN 147,408. Southwestern Drug Corporation, Dallas, Tex. Filed June 21, 1962.

LYNDA LYNN

"Lynda Lynn" is the name of a fictitious person.
For Ladies' Hosiery.
First use Mar. 1, 1962.

SN 149,671. Peters Sportswear Co., Inc., Philadelphia, Pa. Filed July 24, 1962.

PETERS

Whaler

For Men's, Women's, and Children's Jackets.
First use on or about July 13, 1962; Oct. 9, 1961, as to the mark "Whaler" in another display.

SN 151,324. Ideal Shoe Company, Philadelphia, Pa. Filed Aug. 16, 1962.

Tudor
Lord

For Shoes.
First use Jan. 15, 1962.

SN 153,802. Novis Denne Co-Ordinates, Incorporated, Scottsdale, Ariz. Filed Sept. 24, 1962.

Novis Denne

For Women's and Misses' Ready-to-Wear and Sports Wear—Namely, Shirts, Shorts, Capri Pants, Skirts, Jackets, Dresses, and Coats.
First use in October 1958.

SN 153,803. Novis Denne Co-Ordinates, Incorporated, Scottsdale, Ariz. Filed Sept. 24, 1962.

OKITIA CLOTH

The word "Cloth" is disclaimed apart from the mark as shown.
For Cotton Cloth Made Up Into Women's and Misses' Ready-to-Wear and Sports Wear—Namely, Shirts, Shorts, Capri Pants, Skirts, Jackets, Dresses, and Coats.
First use October 1958.

SN 153,935. Camp and McInnes, Inc., Reading, Pa. Filed Sept. 26, 1962.

CAMP CROCHET KNIT

Applicant disclaims the exclusive right to the use of the words "Crochet Knit" apart from the mark as shown. Owner of Reg. Nos. 407,497, 416,586, and 546,019.
For Men's Hosiery.
First use Apr. 30, 1962.

SN 155,063. Garland Knitting Mills, Jamaica Plain, Mass. Filed Oct. 12, 1962.

DOWNYSPUN

Owner of Reg. No. 659,082.
For Women's Skirts, Sweaters, and Slacks.
First use May 1, 1948.

SN 156,407. Albert René Biotteau-Guery, Saint-Pierre-Montlimart, Maine-et-Loire, France. Filed Nov. 1, 1962.

ERAM

Owner of French Reg. No. 2,948, dated Oct. 2, 1961 (Angers); Natl. Inst. No. 172,195.
For Shoes.

SN 156,767. Rose Brothers, Inc., New York, N.Y. Filed Nov. 6, 1962.

MELFORD

For Men's Suits, Slacks, and Sport Coats.
First use Aug. 13, 1962.

SN 157,594. A. S. Beck Shoe Corporation, New York, N.Y. Filed Nov. 20, 1962.

Beck
SHOE SALON INTERNATIONALE

The expression "Shoe Salon Internationale" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 365,306 and 693,556, and others.
For Shoes for Men and Women.
First use Sept. 11, 1962; December 1920 as to the word "Beck."

SN 158,978. Jane Holly, Inc., New York, N.Y. Filed Dec. 12, 1962.

JANE HOLLY

The name "Jane Holly" is fanciful. Owner of Reg. No. 406,509.
For Women's and Misses' Blouses.
First use January 1940.

SN 160,288. Hagemeister-Lert, Inc., San Francisco, Calif. Filed Jan. 7, 1963.



For Ski Clothes—Namely, Sweaters, Caps, Ski Gloves, Ski Boots, and After-Ski Boots.
First use Aug. 17, 1962.

SN 162,427. Dunhill Tailored Clothes, Inc., New York, N.Y. Filed Feb. 11, 1963.

DUNHILL TAILORS

Applicant claims use of the mark provided, however, that when applicant makes any use of "Dunhill Tailors" on the goods, the word "Tailors" shall always be horizontally juxtaposed to "Dunhill" and shall always be in the same form, font, style, size and color and as prominent as "Dunhill," and provided further that applicant shall not use "Dunhill Tailors" in lowercase type.
For Men's Suits, Overcoats, and Haberdashery—Namely, Shirts, Ties, Socks, and Underwear.
First use Sept. 3, 1923, on men's suits.
Subj. to concurrent use proceeding with Alfred Dunhill of London Inc.

SN 162,692. Bay Trail Shoe Co., Inc., South Weymouth, Mass. Filed Feb. 14, 1963.

HOBAMOCS

For Men's Shoes.
First use Jan. 14, 1963.

SN 162,740. Genesco Inc., Nashville, Tenn. Filed Feb. 14, 1963.

MERELY MARVELOUS

For Brassieres and Girdles.
First use Jan. 2, 1963.

SN 162,741. Genesco Inc., Nashville, Tenn. Filed Feb. 14, 1963.

TENDRESSE

For Brassieres and Girdles.
First use June 4, 1962.

SN 162,742. Genesco Inc., Nashville, Tenn. Filed Feb. 14, 1963.

FIGURE FAIR

For Brassieres and Girdles.
First use Jan. 18, 1963.

SN 162,745. Genesco Inc., Nashville, Tenn. Filed Feb. 14, 1963.

VOLA

For Brassieres and Girdles.
First use Jan. 2, 1963.

SN 162,903. Bossong Hosiery Mills, Inc., Asheboro, N.C. Filed Feb. 18, 1963.

TEEN DOLLS

For Nylon Seamless Hosiery.
First use Feb. 1, 1963.

SN 163,406. Reliance Manufacturing Company, New York, N.Y. Filed Feb. 25, 1963.

WIND N' WEATHER

Owner of Reg. No. 588,711.
For Men's, Women's, and Children's Wearing Apparel—Namely, Shirts, Skirts, Jackets, Coats, Raincoats, Mackinaws, Slacks, Slack Suits, Shorts, Overalls, Dungarees, Scarfs, Hats, Caps, Neckties, Apparel Belts, Gloves, Socks, Stockings, Shoes, Bathing Suits, Robes, Pajamas, Undershirts and Undershorts.
First use Mar. 27, 1953.

SN 164,440. Hill Bros. Co., d.b.a. Hill Brothers Company, Hudson, Mass. Filed Mar. 12, 1963.

HILL

For Men's Shoes.
First use Nov. 17, 1962; 1919 as to the mark "Hill" in a different display.

Class 40—Fancy Goods, Furnishings, and Notions

SN 160,404. Borland Industrial Corporation, New York, N.Y. Filed Jan. 9, 1963.

B-I-C

For Zipper Tapes.
First use Oct. 1, 1962.

SN 160,925. Derell, Inc., Los Angeles, Calif. Filed Jan. 18, 1963.

Miss Tress

For Wigs Made From Natural Human Hair and Synthetic Filaments.
First use Nov. 23, 1962.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 149,529. Charles Bloom, Inc., New York, N.Y. Filed July 23, 1962.

YOUNG IN HEART

For Drapery Fabrics.
First use Apr. 18, 1962.

SN 158,219. Beacon Manufacturing Company, Swannanoa, N.C. Filed Nov. 30, 1962.

PERMANAP

For Blankets Having a Special Nap Finish.
First use Nov. 9, 1962.

SN 162,848. Mainzer Minton Co., Inc., New York, N.Y. Filed Feb. 15, 1963.

BAMCO

For Fabrics for Pockets, Waist Bands, and Pants Linings.
First use Dec. 15, 1962.

Class 44—Dental, Medical, and Surgical Appliances

SN 140,498. Technical Associates and Distributors, Inc., Washington, D.C. Filed Mar. 22, 1962.

TAD

For Dental Mirrors and Holders, Oxygen Dispensers, Electronic Vaporizers, and Nasal Vaporizers.
First use Mar. 1, 1962.

SN 144,899. Theratron Corporation, St. Paul, Minn. Filed May 17, 1962.

THERABATH

For Portable Metal Tank Electric Tub in Plastic Grid and Cover for Therapeutic Heat Immersion Treatment of Hand, Wrist, Elbow, Foot, and Ankle.
First use Jan. 26, 1962.

SN 157,912. Laboratories for Applied Biology Limited, London, England. Filed June 6, 1963.

TEMPHLEX

Owner of British Reg. No. 825,518, dated Sept. 21, 1961.
For Arch Supports for Use With Footwear.

SN 164,907. Simmons Company, New York, N.Y. Filed Mar. 18, 1963.

CONTOUR-FLEX

For Operating Tables and Parts Therefor.
First use Aug. 17, 1962.

SN 165,444. Master-Touch Dental Service Corp., New York, N.Y. Filed Mar. 26, 1963.

MASTRON

For Synthetic Resin Materials for Use in the Manufacture of Artificial Dentures.
First use Jan. 3, 1960.

SN 165,650. Wilmot Castle Company, Rochester, N.Y. Filed Mar. 28, 1963.

ORTHOMATIC

For Surgical Sterilizers and Parts Thereof, Sold as a Unit.
First use on or about June 30, 1960.

SN 166,171. J. A. Deknatel & Son, Inc., Queens Village, N.Y. Filed Apr. 5, 1963.

TEVCOTTON

For Surgical Sutures.
First use Mar. 11, 1963.

SN 166,172. J. A. Deknatel & Son, Inc., Queens Village, N.Y. Filed Apr. 5, 1963.

TEVSILK

For Surgical Sutures.
First use Mar. 11, 1963.

SN 166,173. J. A. Deknatel & Son, Inc., Queens Village, N.Y. Filed Apr. 5, 1963.

TEVPOLY

For Surgical Sutures.
First use Mar. 11, 1963.

SN 166,174. J. A. Deknatel & Son, Inc., Queens Village, N.Y. Filed Apr. 5, 1963.

TEVNYL

For Surgical Sutures.
First use Mar. 11, 1963.

SN 166,175. J. A. Deknatel & Son, Inc., Queens Village, N.Y. Filed Apr. 5, 1963.

TEVPOLYPRO

For Surgical Sutures.
First use Mar. 11, 1963.

SN 167,518. American Home Products Corporation, New York, N.Y. Filed Apr. 25, 1963.

SPRAY-O-MIZER

Owner of Reg. No. 542,065.
For Flexible Spray and Dropper Bottle for Use With Medicines.
First use Jan. 17, 1950.

SN 167,645. Medical Electronics and Research Corporation, Camden, N.J. Filed Apr. 26, 1963.

MERCOR

For Dental Articulator and Attachments Therefor.
First use Oct. 25, 1962.

SN 167,792. Astra Pharmaceutical Products, Inc., Worcester, Mass. Filed Apr. 30, 1963.

ASTRA

Owner of Reg. Nos. 351,065, 680,064, and others.
For Aspirating Type Cartridge Syringes.
First use Mar. 14, 1963.

Class 46—Foods and Ingredients of Foods

SN 121,219. Ore-Ida Foods, Inc., Ontario, Oreg. Filed June 1, 1961.

TATER CRUNCHIES

No claim is made to the word "Tater."
For Frozen Prepared Potatoes.
First use May 19, 1961.

SN 133,289. Manhattan Coffee Company, St. Louis, Mo. Filed Dec. 4, 1961.

Manhattan

Owner of Reg. Nos. 337,520 and 538,836.
For Spices.
First use Oct. 9, 1961.

SN 134,427. Bud Antle, Incorporated, Salinas, Calif. Filed Dec. 21, 1961.

ANCO OF CALIFORNIA

The term "of California" is disclaimed apart from the mark as shown. Owner of Reg. No. 613,266.
For Fresh Vegetables and Fruits.
First use as early as March 1959.

SN 134,646. Henry Kermin, d.b.a. Kermin Food Products Company, and Kermin Food Products Co., Los Angeles, Calif. Filed Dec. 26, 1961.

KERMIN'S

For Frozen Food Products—Namely, Beef Pie; Chicken Pie; Turkey Pie; Tuna Pie; Chicken Tacos; Beef Enchiladas With Fried Beans; Chili Con Carne With Beans; Spaghetti With Meat Balls and Sauce; Macaroni and Cheese; Chicken and Rice; Lima Beans and Ham in Sauce; Chicken and Noodles; Beef Stew; Beef Tacos; and Frozen Dessert Pies.
First use March 1943.

SN 139,411. The Isaly Dairy Company, Youngstown, Ohio. Filed Mar. 8, 1962.

ISALY'S Vita-Hi 2%

No claim is made to the words "2% butterfat" apart from the mark as shown. Owner of Reg. Nos. 552,655, 581,488, and 654,277.
For Fluid Low-Fat Milk Product.
First use Apr. 15, 1960.

SN 140,533. The Chun King Corporation, Duluth, Minn. Filed Mar. 23, 1962.



The English translation of the Chinese characters shown in the drawing is "Chun King." The drawing is lined for red, but no claim is made as to color. Owner of Reg. Nos. 422,687, 716,565, and others.
For Tea.
First use on or about Jan. 2, 1962.

SN 140,757. Ramo, Inc., d.b.a. Peanut Products Company, Omaha, Nebr. Filed Mar. 26, 1962.



The representation of the peanut, the words "Brand" and "Sweet 'n' Salty" are disclaimed apart from the mark as shown. Owner of Reg. No. 363,278.
For Shelled Peanuts.
First use Dec. 15, 1961; Jan. 2, 1988, as to the name "Buster" and feature of the peanut.

SN 145,588. Oldenburger Brotfabrik M. u. C. Brokat, Oldenburg, Germany. Filed May 28, 1962.



The wording "Eiersandtorte So Gut Wie Hausgemacht" is hereby disclaimed apart from the mark as shown. Such wording may be translated into English as "eggcake as good as homemade." Priority claimed under Sec. 44(d) on German application filed Jan. 9, 1962; Reg. No. 758,425, dated Feb. 17, 1962.
For Bakery Goods—Namely, Bread and Cake.

SN 145,996. American Dairy Queen Corporation, Moline, Ill. Filed June 4, 1962.



Owner of Reg. No. 728,894.
For Ice Cream and Frozen Confections in Cone, Cup, Bar, and Package Form.
First use Jan. 2, 1962.

SN 150,102. Red Owl Stores, Inc., Hopkins, Minn. Filed July 30, 1962.

MIXO

For Shortening, Both of a Vegetable Nature and of an Animal-Vegetable Nature.
First use Sept. 25, 1940.

SN 150,152. S. Bolivar Coffee Co. Inc., Coral Gables, Fla. Filed July 31, 1962.

CAFE LA TACITA

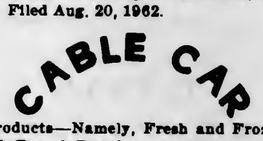
No claim of exclusive right is made to the Spanish word "Cafe" meaning "coffee." The English translation of "Cafe La Tacita" is "a small cup of coffee."
For Ground Coffee.
First use Apr. 24, 1961.

SN 150,160. Centro Distributing Company, Peoria, Ill. Filed July 31, 1962.



The words "Del Centro" are translated from the Spanish to mean "of the middle."
For Bakery Products—Namely, Cookies, Crackers, Wafers, Fig Bars, and Sandwich Cremes.
First use June 26, 1962.

SN 151,499. William B. Markey & Associates, Inc., San Francisco, Calif. Filed Aug. 20, 1962.



For Food Products—Namely, Fresh and Frozen Crab Meat and Sour Dough French Bread.
First use Mar. 1, 1961.

SN 154,787. Whitfield Pickle Company, Inc., Montgomery, Ala. Filed Oct. 8, 1962.

"THE PICKLE WITH THE PERFECT PUCKER"

For Pickles.
First use March 1962.

SN 155,136. Consolidated Foods Corporation, Glendale, Calif. Filed Oct. 15, 1962.

LO-BAC

Owner of Reg. No. 549,608.
For Dehydrated Condiment Vegetables.
First use on or about Aug. 31, 1962.

SN 155,309. Foremost Dairies, Inc., San Francisco, Calif. Filed Oct. 17, 1962.

HAWAIIAN HARVEST SALAD

Applicant disclaims any exclusive right to the word "Salad" apart from the mark shown in the drawing. Owner of Reg. No. 741,701.
For Creamed Cottage Cheese.
First use July 25, 1962.

SN 161,176. General Foods Corporation, White Plains, N.Y. Filed Jan. 22, 1963.

RIGHT TIME

Owner of Reg. No. 736,132.
For Tea.
First use Jan. 8, 1963.

SN 162,847. Lucky Stores, Inc., San Leandro, Calif. Filed Feb. 15, 1963.



For Fresh Meats, Smoked Meats, Luncheon Meats, Fresh Dressed Poultry, Fresh Dressed Rabbits, and Cheese.
First use 1947.

SN 163,971. The Southwest Flour & Feed Company, Glendale, Ariz. Filed Mar. 5, 1963.

HORSETALK

For Horse Feed.
First use Sept. 1, 1961.

SN 163,972. The Southwest Flour & Feed Company, Glendale, Ariz. Filed Mar. 5, 1963.



The drawing is lined for red.
For Livestock and Poultry Feeds, Particularly Bacteria Nutrient Ration, Colt Pellets, Calf Builder Ration, Range Ration, Horse Feed, Dog Food, Dairy Feed and Poultry Conditioning Ration.
First use Jan. 15, 1924.

SN 163,973. The Southwest Flour & Feed Company, Glendale, Ariz. Filed Mar. 5, 1963.

RUM-BAC

For Cattle Feed Ration for Ruminant Livestock Nutrition.
First use Oct. 7, 1952.

SN 163,974. The Southwest Flour & Feed Company, Glendale, Ariz. Filed Mar. 5, 1963.

"CALF BLOSSOM"

For Starter and Creep Feed for Cattle.
First use Sept. 1, 1954.

SN 164,157. Pace Fish Co., Brownsville, Tex. Filed Mar. 7, 1963.

PACER

For Frozen Red Snapper Fish.
First use Dec. 28, 1962.

SN 164,274. Southern Packing Co., Inc., Baltimore, Md. Filed Mar. 8, 1963.

ORCHARD PRIZE

Owner of Reg. No. 689,992.
For Apple Butter, Frozen Fruit—Namely, Peaches, Fruit and Berry Sauces, Apple Juice, Pie Fillings, Cake Fillings, Doughnut Fillings, and Vinegar.
First use Sept. 22, 1952.

SN 164,308. Balanced Foods, Inc., New York, N.Y. Filed Mar. 11, 1963.

BALANCED

For Food Products—Namely, Chewing Gum and Candies Including Mints.
First use Dec. 19, 1962.

SN 164,434. General Baking Company, New York, N.Y. Filed Mar. 12, 1963.

BOND

Owner of Reg. Nos. 159,878, 696,530, and others.
For Bread, Rolls, Cake, Pastry, Cookies, Doughnuts, Potato Chips, Pretzels, Bread Crumbs, Stuffing Mix, Cake Mixes, and Pies.
First use on or about June 1, 1915.

SN 164,490. Safeway Stores, Incorporated, Oakland, Calif. Filed Mar. 11, 1963.

STONEHEDGE FARM

For Bread.
First use Mar. 7, 1963.

SN 164,527. International Refining and Packaging Corp., Bayonne, N.J. Filed Mar. 13, 1963.

JADE

For Shortening Comprising a Fully Hydrogenated Blend of Pure Vegetable Oils.
First use May 5, 1960.

SN 164,528. International Refining and Packaging Corp., Bayonne, N.J. Filed Mar. 13, 1963.

GARNET

For Hydrogenated All Vegetable Shortening Containing Mono- and Di-Glycerides.
First use May 5, 1960.

SN 164,529. International Refining and Packaging Corp., Bayonne, N.J. Filed Mar. 13, 1963.

RUBY

For Shortening Comprising Vegetable Oils and Meat Fats, Refined, Hydrogenated, Deodorized, and Homogenized With Added Oxygen Interceptor.
First use June 17, 1960.

SN 164,531. International Refining and Packaging Corp., Bayonne, N.J. Filed Mar. 13, 1963.

ONYX

For Shortening Comprising Hydrogenated, Deodorized, and Homogenized Pure Lards With Oxygen Interceptors Added.
First use May 31, 1960.

SN 164,636. Lubbock Packing Company, Lubbock, Tex. Filed Mar. 14, 1963.

FARM PAC

For Corned Meats, Fresh Meats, Luncheon Meats, Smoked Meats, Frankfurters, Pork Brains, Fresh Pork Sausage, and Lard.
First use at least as early as 1947.

SN 170,672. The Quaker Oats Company, Chicago, Ill. Filed June 10, 1963.

PUSS'N BOOTS PAMPER

Owner of Rég. Nos. 322,305 and 377,344.
For Pet Food—Namely, Cat Food.
First use June 21, 1962; Sept. 23, 1934, as to "Puss'n Boots"; at least as early as 1949 as to "Pampa."

Class 47—Wines

SN 134,571. Societe Anonyme Plat & Cie, Macon, Saone-et-Loire, France. Filed Dec. 22, 1961.



Applicant claims no exclusive rights in "Wine" and the numeral "1959." Owner of U.S. Reg. No. 739,131.
For Wines.
First use 1959; 1894 as to "Wine of the Monks."

SN 153,182. Mackenzie and Company, Los Angeles, Calif. Filed Sept. 14, 1962.

kalani

In the Hawaiian language "Kalani" means "the heaven."
For Fruit Flavored Wine.
First use Mar. 28, 1962.

Class 48—Malt Beverages and Liquors

SN 159,838. Monsieur Henri Wines, Ltd., Brooklyn, N.Y. Filed Dec. 27, 1962.

OKARU

For Sake.
First use Nov. 30, 1962.

Class 49—Distilled Alcoholic Liquors

SN 150,048. Federal Liquors Ltd., Cambridge, Mass. Filed July 30, 1962.

SANDY SCOT

The name "Sandy Scot" is a fictitious one.
For Scotch Whisky.
First use during January 1959; July 1958 as to "Sandy Scott."

SN 151,685. Mr. Boston Distiller Inc., Boston, Mass. Filed Aug. 22, 1962.

GLEN GUARD

For Scotch Whisky.
First use June 27, 1962.

SN 152,614. Mr. Boston Distiller Inc., d.b.a. Essex Importers and Distillers Ltd., Boston, Mass. Filed Sept. 6, 1962.

COUNTRY TIME

For Whiskey.
First use July 26, 1962.

SN 154,745. Muir, Mackenzie & Company Limited, Glasgow, Scotland. Filed Oct. 8, 1962.

HIGH
COMMISSIONER

For Whisky.
First use 1934; in commerce Sept. 3, 1962.

Class 50—Merchandise Not Otherwise Classified

SN 129,491. William C. House, d.b.a. House's House Products, White Plains, N. Y. Filed Oct. 9, 1961.

SAFETY-GRIP

For Pot Holders.
First use Mar. 10, 1956.

SN 136,902. High Temperature Materials, Inc., Boston (Brighton), Mass. Filed Jan. 30, 1962.

BORALLOY

For Pyrolytic Boron Nitride.
First use on or about Oct. 4, 1961.

SN 148,750. Paragon Art and Linen Co. Incorporated, New York, N.Y. Filed July 10, 1962.



The black rectangular background upon which the word "Paragon" is displayed forms no part of the mark.
For Christmas Ornamental Decorations.
First use Dec. 24, 1958; Jan. 19, 1929, as to "Paragon."

SN 158,474. James H. Petter, New York, N.Y. Filed Dec. 4, 1962.



For Metal Scarecrow for Frightening Birds.
First use Feb. 9, 1954.

SN 159,865. Bemis Bro. Bag Company, Minneapolis, Minn. Filed Dec. 28, 1962.

SANA-ROLL

For Polyethylene Liners.
First use Oct. 4, 1961.

Class 51—Cosmetics and Toilet Preparations

SN 119,451. Guillemette Rochaid, Paris, France. Filed May 4, 1961.

MADAME X

Owner of French Reg. Nos. 439,193 and 473,480.
For Creams, Lipsticks, Rouges, Perfumes, Colognes, Toilet Waters, Lotions, Powders, Bath Oil, Mineral and Milk Baths, and Reducing Jelly.

SN 132,187. Rich Products Co., Inc., Boston, Mass. Filed Nov. 16, 1961.

SUN 'N TAN

For Cosmetic Composition Impregnated on a Paper Tissue Designed for Use in Suntanning.
First use July 16, 1958.

SN 134,449. Murray Frank and Associates, Chicago, Ill. Filed Dec. 21, 1961.

Ver-Lin

For Hair-Conditioning Liquid—Namely, a Protein Treatment.
First use Mar. 10, 1961.

SN 138,796. McRay's Company, Inc., d.b.a. Lester Sandahl Co., Des Moines, Iowa. Filed Feb. 28, 1962.

Sandahl's Trainee

For Hair Tonic.
First use Aug. 28, 1961.

SN 145,893. Ter-Mor, Inc., New York, N.Y. Filed May 31, 1962.

PINK PASSION

For Perfume, Toilet Water, Cologne, Sachet, Cream Sachet, and Dusting Powder.
First use May 10, 1962.

SN 146,347. Avon Products, Inc., New York, N.Y. Filed June 7, 1962.

AVONOL

Owner of Reg. No. 641,533.
For Tooth Paste.
First use May 24, 1962.

SN 152,701. Jean de Jean Products, Inc., Miami, Fla. Filed Sept. 7, 1962.

Jean de Jean

The term "Jean de Jean" is not the name of any known living individual.
For Perfumes, Colognes, Personal Deodorant, Facial Creams, After Shaving Lotion, Hair Oils and Creams, Baby Oil.
First use 1950.

SN 154,092. Magdeleine Benois, Lausanne, Switzerland. Filed Sept. 28, 1962.

dinalon

Owner of Swiss Reg. No. 188,315, dated Oct. 17, 1961.
For Nail Hardener.

SN 158,087. Philip Morris Incorporated, New York, N.Y. Filed Nov. 28, 1962.

PERSONNA

Owner of Reg. Nos. 337,664 and 436,340.
For Shave Lather and After Shave Lotion.
First use Oct. 30, 1962.

SN 160,574. Alberto-Culver Company, Melrose Park, Ill. Filed Jan. 14, 1963.

K-FLUOR

For Fluoride Toothpaste.
First use Dec. 18, 1962.

SN 160,878. The Mennen Company, Morristown, N.J. Filed Jan. 17, 1963.

T.H.I.

For Personal Deodorant.
First use Jan. 7, 1963.

SN 161,148. Clairol Incorporated, New York, N.Y. Filed Jan. 22, 1963.

WHITE LIGHTENING

Owner of Reg. No. 683,018.
For Powder Hair Bleach.
First use Jan. 24, 1962.

SN 161,149. Clairol Incorporated, New York, N.Y. Filed Jan. 22, 1963.

SPEED FROSTING

For Powder Hair Bleach.
First use Jan. 24, 1962.

SN 161,219. Elizabeth Walters Cosmetic Company, Modesto, Calif. Filed Jan. 22, 1963.

Elizabeth E W Walters

The name "Elizabeth Walters" does not refer to a particular living individual.

For Cosmetics—Namely, Cleansing Creams, Night Creams, Facial Oils, Facial Toning Liquids, Facial Masks, Powder, Rouge, Eye Shadow, Lipstick, Mascara, Eyebrow Pencil, Hand Cream, Deodorant, Cologne; and Men's After Shave Lotion, Powder, and Cologne.

First use in 1943.

SN 161,264. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed Jan. 23, 1963.

ON-THE-SPOT

For Blemish Cream.
First use Jan. 8, 1963.

SN 161,548. Nee-Lon Products Company, Inc., Waltham, Mass. Filed Jan. 28, 1963.



For Breath Spray.
First use Dec. 8, 1962.

SN 161,769. Cetylite Industries, Inc., Long Island City, N.Y. Filed Jan. 31, 1963.

PROTEXIN

For Oral Spray Breath Freshener.
First use Jan. 7, 1963.

SN 161,919. Trylon Products Corporation, Chicago, Ill. Filed Feb. 1, 1963.

TRYSIL

For Hair Control Spray.
First use April 1960.

SN 161,934. Alberto-Culver Company, Melrose Park, Ill. Filed Feb. 4, 1963.

DRI-RITE

For Deodorant and Antiperspirant.
First use Jan. 17, 1963.

SN 161,935. Alberto-Culver Company, Melrose Park, Ill. Filed Feb. 4, 1963.

ANONYMOUS

For Deodorant and Antiperspirant.
First use Jan. 17, 1963.

SN 162,222. American Home Products Corporation, New York, N.Y. Filed Feb. 7, 1963.

PRINCESS EVE

Owner of Reg. Nos. 570,645 and 573,273.
For Personal Deodorants and Depilatories.
First use Dec. 7, 1951.

SN 162,485. Ray Drug Company, Inc., Oakland, Calif. Filed Feb. 11, 1963.

CHAPERONE

For Anti-Perspirant.
First use Jan. 30, 1963.

Class 52 — Detergents and Soaps

SN 135,339. Drew Chemical Corporation, New York, N.Y. Filed Jan. 8, 1962.

EGGLOW

For Detergent-Sanitizer for Washing Eggs, Poultry Houses, and Poultry House Equipment.
First use Aug. 17, 1960.

SN 144,606. The Drackett Company, Cincinnati, Ohio. Filed May 15, 1962.

OK-100-15

For Disinfectant-Deodorant Incorporated as an Ingredient in Acid Type Cleaning Compounds.
First use Jan. 19, 1962.

SN 151,096. W. W. Stewart Company, East St. Louis, Ill. Filed Aug. 13, 1962.

WHISK-AWAY

For Rust Remover, Silver Cleaner, Oven Spray Cleaner, and Oven and Barbecue Grill Cleaner.
First use Nov. 16, 1954, on rust remover.

SN 155,985. Graymills Corporation, Chicago, Ill. Filed Oct. 26, 1962.

TRANS-CLENE

For Solvent for Cleaning Metal, Particularly Automobile Transmissions.
First use July 1960.

SN 156,102. Ethicon, Inc., d.b.a. Arbrook, Division of Ethicon, Inc., Bridgewater Township, N.J. Filed Oct. 29, 1962.

ARBROOK

For Skin Cleanser.
First use Oct. 5, 1962.

SN 158,327. The Diversey Corporation, Chicago, Ill. Filed Dec. 3, 1962.

DIVERJET

Owner of Reg. Nos. 224,577, 705,069, and others.
For Liquid Aircraft Cleaner.
First use Nov. 14, 1962.

SN 158,668. T. E. Wilson, Chicago, Ill. Filed Dec. 6, 1962.

BIKE

For All Purpose Waterless Cleaner.
First use Nov. 8, 1962.

SN 162,191. Purex Corporation, Ltd., d.b.a. Turco Products, Inc., Wilmington, Calif. Filed Feb. 6, 1963.

SMUT-GO

For Aluminum Deoxidizing and Smut Removing Compound.
First use Feb. 22, 1958.

SN 162,228. Colgate-Palmolive Company, New York, N.Y. Filed Feb. 7, 1963.

CRY BABY

For Hair Shampoo.
First use Nov. 5, 1962.

SN 163,436. Vitamix Pharmaceuticals Incorporated, Philadelphia, Pa. Filed Feb. 25, 1963.

OPTAC

For Cleaning Solution for Contact Lenses and Artificial Eyes.
First use Feb. 7, 1963.

SERVICE MARKS

Class 100 — Miscellaneous

SN 135,433. Consultants & Designers, Inc., New York, N.Y. Filed Jan. 9, 1962.

CD

For Technical Services to Industry—Namely, Consultation and Advice in the Fields of Product Design, Installation and Operation of Office and Material Handling Systems, Research and Analysis of Marketing Systems.
First use Mar. 20, 1950.

SN 153,614. Applied Polytechnic Research Corporation Inc., Annapolis, Md. Filed Sept. 21, 1962.

APPLIED POLYTECHNIC RESEARCH CORPORATION

For Applied and Pure Research, Scientific Investigations, Developments, Experimentations, Laboratory Work, Design, Manufacture, Assembly of Prototypes, of Products, Their Parts and Accessories in Various Branches of Science Engineering and Other Polytechnic Undertaking, and Also for Research, Development, Production and Consulting Services in the Fields of Electronics, Chemistry, Biochemistry, Thermodynamics, Fluid Dynamics, Heat Transfer, Physics, Acoustics, Optics, Kinematics, Nuclear Engineering and Physics, Engineering Materials, Oceanographic Instrumentation and Equipment, Medical Instrumentation, Outer Space Exploration, Vehicles and Human Factors.
First use Mar. 1, 1962.

SN 156,079. Comress, Inc., Washington, D.C. Filed Oct. 29, 1962.

SCERT

For Evaluation of Electronic Data Processing Machines, Programs and Systems.
First use Aug. 1, 1962.

Class 101 — Advertising and Business

SN 89,174. Cash Card International Club, Inc., Falls Church, Va., assignee, by mesne assignments, of Cashcard, Ramona, Calif. Filed Jan. 18, 1960.

CASHCARD

For Promoting the Sale of the Goods and Services of Others Through an Advertising Program, Encouraging Cash Purchases.
First use Nov. 16, 1959.

SN 96,559. Banco Corporation, Ltd., San Francisco, Calif. Filed May 6, 1960.

BANCO

Owner of Reg. No. 260,944.
For Printing Business Documents and Forms for Others.
First use in or about July 1923.

SN 128,946. Automotive Warehouse Distributor, Inc., Denver, Colo. Filed Oct. 2, 1961.

Wonstop

Owner of Reg. No. 731,426.
For Automotive Parts Distribution Services.
First use Jan. 20, 1961.

SN 145,380. Liberty Distributors, Philadelphia, Pa. Filed May 24, 1962. COLLECTIVE MARK.

TRUSTWORTHY

Owner of Reg. Nos. 702,790 and 702,845.
For Retail Hardware and Household Appliance Store Services.
First use in October 1959.

SN 147,954. Peggy Parker Placement Service, Inc., St. Paul, Minn. Filed June 28, 1962.

PEGGY PARKER

The mark "Peggy Parker" is a fictitious name, and is not intended as the name of any living individual.
For Employment Placement Services.
First use September 1958.

SN 153,129. Super Valu Stores, Inc., Hopkins, Minn. Filed Sept. 18, 1962.

SUPER VALU

Owner of Reg. Nos. 625,537, 646,916, and others.
For Grocery Store Services.
First use 1942.

SN 153,130. Super Valu Stores, Inc., Hopkins, Minn. Filed Sept. 18, 1962.



Owner of Reg. Nos. 625,537, 646,916, and others.
For Grocery Store Services.
First use 1942.

SN 155,663. Statistical Tabulating Corporation, Chicago, Ill. Filed Oct. 22, 1962.



For Preparing Punched Data Cards, Analyzing Data on Such Cards, Bookkeeping and Accounting Services, Typing and Stenographic Services, Operation of Business Machines, Including Key Punch Machines, Calculating Machines and Comptometers, and Supplying Temporary Help for Clerical Work.
First use May 10, 1962.

Class 102 — Insurance and Financial

SN 145,471. National Union Agency, Poplar Bluff, Mo. Filed May 25, 1962.

SENIOR POLICY

For Insurance Agency Services—Namely, Planning and Selling Life Insurance Policies and Placing Same With Insurers.
First use November 1958.

Class 103 — Construction and Repair

SN 135,846. Trackside Gasoline Stations, Inc., Gulfport, Miss., assignee of Trackside Gasoline Stations, Gulfport, Miss. Filed Jan. 15, 1962.



The drawing is lined for red and blue.
For Motor Vehicle Service Station Services—Namely, Lubrication, Oil Testing and Changing, Battery Testing and Charging, Water Testing and Replenishing, Glass Cleaning, and Minor Repairing.
First use January 1958.

SN 146,418. Rock Island Lumber Company, St. Paul, Minn. Filed June 7, 1962.

Gold Shield

For Services in the Construction and Repair of Houses, Garages, and Other Such Buildings.
First use Apr. 16, 1961.

SN 146,419. Rock Island Lumber Company, St. Paul, Minn. Filed June 7, 1962.



For Services in the Construction and Repair of Houses, Garages, and Other Such Buildings.
First use Apr. 16, 1961.

Class 104 — Communication

SN 127,161. WTSP Inc., St. Petersburg, Fla. Filed Sept. 1, 1961.

SWINGIN' GENTLEMEN

For Title of a Radio Program—Namely, Entertainment in the Form of a Disc Jockey Show.
First use Apr. 20, 1960.

Class 106 — Material Treatment

SN 136,422. Arde-Portland, Inc., South Portland, Maine. Filed Jan. 24, 1962.

ARDEFORM

For Strengthening Metallic Pressure Vessels by Stretching.
First use on or about Dec. 1, 1959.

SN 142,242. Alston Studios, Inc., East Weymouth, Mass. Filed Apr. 16, 1962.

DYTRONIC

For Photography Retouching Service.
First use Mar. 2, 1962.

Class 107 — Education and Entertainment

SN 145,472. David L. Nichols, Washington, D.C. Filed May 25, 1962.

A NICHOLS WORTH OF NEWS WITH DAVE NICHOLS

For Title of a Television News Program.
First use 1952.

COLLECTIVE MEMBERSHIP MARKS

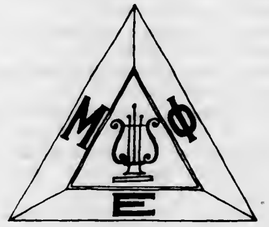
Class 200

SN 134,123. The International Association of Lions Clubs, Chicago, Ill. Filed Dec. 15, 1961.



Owner of Reg. Nos. 384,746, 642,444, and others.
For Indicating Membership in the Applicant Association.
First use Oct. 5, 1961.

SN 145,109. Mu Phi Epsilon, Lincoln, Nebr. Filed May 21, 1962.



For Indicating Membership in Applicant's Sorority.
First use in 1903.

CERTIFICATION MARKS

Class A — Goods

SN 138,058. Arnold, Schwinn & Co., Chicago, Ill. Filed Feb. 15, 1962.



The mark indicates that the goods have been made in accordance with specifications approved by the applicant and that the materials and workmanship embodied therein have been inspected by applicant and approved as meeting specific standards established by the applicant. The drawing is lined for red and blue.
For Bicycle Parts and Accessories and Products Useable in the Maintenance and Repair of Bicycles.
First use Apr. 1, 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

755,240. TERITAL. Società Rhodiatoce S.p.A. CONSOLIDATED CERTIFICATE. SN 140,873, pub. 6–4–63, filed 3–27–62, Cl. 1; SN 140,874, pub. 12–4–62, filed 3–27–62, Cl. 39; SN 140,875, pub. 6–4–63, filed 3–27–62, Cl. 42.

755,241. PENNINGTON ETC. AND DESIGN. Pennington Grain & Seed, Inc. SN 141,357. Pub. 6–11–63. Filed 4–2–62.

755,242. REC-STONE. Rec-Stone Corporation. SN 141,882. Pub. 6–11–63. Filed 4–9–62.

755,243. TRAK-LESS. Glaskyd Incorporated. SN 148,807. Pub. 6–11–63. Filed 7–11–62.

755,244. KOPOX. Koppers Company, Inc. SN 149,093. Pub. 6–11–63. Filed 7–16–62.

755,245. TICOR. Ticonderoga Chemical Corp. SN 149,139. Pub. 6–11–63. Filed 7–16–62.

755,246. JAPANESE CHARACTER FOR "MITSUI." Mitsui & Co. Ltd. SN 149,865. Pub. 6–11–63. Filed 7–26–62.

755,247. CORFAM. E. I. du Pont de Nemours and Company. SN 152,117. Pub. 6–11–63. Filed 8–29–62.

755,248. DORZAN. E. I. du Pont de Nemours and Company. SN 152,120. Pub. 6–11–63. Filed 8–29–62.

755,249. PROCEL. Celanese Corporation of America. SN 155,779. Pub. 6–11–63. Filed 10–24–62.

755,250. PORKY. Irving Tanning Company. SN 155,998. Pub. 6–11–63. Filed 10–26–62.

755,251. TIGERTAN. Albert Trostel & Sons Company. SN 156,191. Pub. 6–11–63. Filed 10–29–62.

755,252. PENDEX. Celanese Corporation of America. SN 156,372. Pub. 6–11–63. Filed 11–1–62.

755,253. GRONDEX. Celanese Corporation of America. SN 156,373. Pub. 6–11–63. Filed 11–1–62.

755,254. GRONDAR. Celanese Corporation of America. SN 156,374. Pub. 6–11–63. Filed 11–1–62.

755,255. PENDAR. Celanese Corporation of America. SN 156,375. Pub. 6–11–63. Filed 11–1–62.

755,256. GARD-N-GLASS. Velsicol Chemical Corporation. SN 156,535. Pub. 6–11–63. Filed 11–2–62.

Class 2 — Receptacles

755,257. DOWPAC AND DESIGN. The Dow Chemical Company. SN 142,024. Pub. 6–11–63. Filed 4–11–62.

755,258. TUFFY AND DESIGN. American Can Company. SN 145,751. Pub. 6–11–63. Filed 5–31–62.

755,259. RAY-LUCENT. Dundick Tool Works, Inc. SN 147,810. Pub. 6–11–63. Filed 6–27–62.

755,260. KIDDY-PROOF. Abraham H. Kantrow. SN 149,745. Pub. 6–11–63. Filed 7–25–62.

755,261. UTILITRAY. Antone M. Christensen, d.b.a. Lortone. SN 149,919. Pub. 6–11–63. Filed 7–27–62.

755,262. TI AND DESIGN. Thompson Industries, Inc. SN 153,606. Pub. 6–11–63. Filed 9–20–62.

755,263. DELPAK. Delaware Barrel and Drum Company, Inc. SN 153,628. Pub. 5–14–63. Filed 9–21–62.

755,264. BUN HUT. Rainbow Wood Products, Inc. SN 153,680. Pub. 6–11–63. Filed 9–21–62.

755,265. RUBBERMAID MEANS BETTER MADE. Rubbermaid Incorporated. SN 153,896. Pub. 6–11–63. Filed 9–25–62.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

755,266. FLEETWOOD. General Sewing Corp. SN 156,485. Pub. 6–11–63. Filed 11–2–62.

755,267. CARDINAL. C. F. Rumpp & Sons Incorporated. SN 156,828. Pub. 6–11–63. Filed 11–7–62.

Class 4 — Abrasives and Polishing Materials

755,268. SUPER CEROXYLON. F. A. Putnam Mfg. Co., Inc. SN 129,038. Pub. 6–11–63. Filed 10–2–61.

755,269. SAIT. SAIT—Societa Abravisi Industriali, S.p.A. SN 152,530. Pub. 6–11–63. Filed 9–5–62.

755,270. ALCHEM. Alphonso L. Shackelford, d.b.a. The Alchem Company. SN 157,986. Pub. 6–11–63. Filed 11–26–62.

755,271. LORA. Arol Chemical Products Company. SN 160,993. Pub. 6–11–63. Filed 1–21–63.

755,272. FANCIFUL GEOMETRIC DESIGN. Chicago Wheel & Manufacturing Co. SN 161,005. Pub. 6–11–63. Filed 1–21–63.

755,273. TYCRO. Minnesota Mining and Manufacturing Company. SN 161,080. Pub. 6–11–63. Filed 1–21–63.

Class 5 — Adhesives

755,274. EVERCEL. Sekisui Chemical Company, Ltd. of Japan. SN 119,239. Pub. 6–12–62. Filed 5–3–61.

755,275. ARNAVBOND. Arnav Shoe Corporation, by change of name from Intercontinental Development Corporation. SN 143,829. Pub. 6–11–63. Filed 5–4–62.

755,276. SCOTCH-MOUNT. Minnesota Mining and Manufacturing Company. SN 144,173. Pub. 6–11–63. Filed 5–9–62.

Class 6 — Chemicals and Chemical Compositions

755,277. STERLING BRINE CRYSTALS. International Salt Company. SN 122,932. Pub. 6–11–63. Filed 6–27–61.

755,278. REPEL-O-FILM. Baum's Castorine Co., Inc. SN 139,192. Pub. 6–11–63. Filed 3–6–62.

755,279. ALGAM. Stiles-Kem Sales Corporation. SN 143,455. Pub. 6–11–63. Filed 4–30–62.

755,280. ALKIL. Stiles-Kem Sales Corporation. SN 143,456. Pub. 6–11–63. Filed 4–30–62.

755,281. DRIONE. FMC Corporation. SN 144,706. Pub. 6–11–63. Filed 5–16–62.

755,282. SENEGALIN. Adolf Radeck, Chemische Fabrik. SN 144,881. Pub. 6–11–63. Filed 5–17–62.

755,283. IDEALIN. Adolf Radeck, Chemische Fabrik. SN 144,882. Pub. 6–11–63. Filed 5–17–62.

755,284. TRAGANTINE. Adolf Radeck, Chemische Fabrik. SN 144,883. Pub. 6–11–63. Filed 5–17–62.

755,285. HYDROTHOL. Pennsalt Chemicals Corporation. SN 147,145. Pub. 6–11–63. Filed 6–18–62.

755,286. CADMATE. R. T. Vanderbilt Company, Inc. SN 147,872. Pub. 6–11–63. Filed 6–27–62.

755,287. NARAMYCIN AND JAPANESE CHARACTERS. Tanabe Seiyaku Co. Ltd. SN 149,226. Pub. 6–11–63. Filed 7–17–62.

755,288. RUTEX WITHIN R DESIGN. A. E. Staley Manufacturing Company. SN 151,370. Pub. 6–11–63. Filed 8–16–62.

755,289. BILLUPS. Billups Western Petroleum Company. SN 152,199. Pub. 6–11–63. Filed 8–30–62.

755,290. LAMBAST. Monsanto Chemical Company. SN 152,145. Pub. 6–11–63. Filed 8–29–62.

755,291. PREPUERIN. The Wellcome Foundation, Ltd. SN 152,548. Pub. 6–11–63. Filed 9–5–62.

755,292. REPELIT. Loumac Chemical Company. SN 153,300. Pub. 6–11–63. Filed 9–17–62.

755,293. UNIGAS AND FLAME DESIGN. Union Oil Company of California. SN 153,838. Pub. 6–11–63. Filed 9–24–62.

755,294. HERITAGE HOUSE AND DESIGN. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 154,158. Pub. 4–16–63. Filed 9–28–62.

755,295. U.S. BORAX. United States Borax & Chemical Corporation. SN 156,196. Pub. 6–11–63. Filed 10–29–62.

755,296. NSEW NORTHWESTERN AND DESIGN. The Northwestern Chemical Company. SN 156,898. Pub. 6–11–63. Filed 11–8–62.

755,297. FOMADE. R. T. Vanderbilt Company, Inc. SN 157,742. Pub. 6–11–63. Filed 11–21–62.

Class 7 — Cordage

755,298. POT O'GOLD. International Minerals & Chemical Corporation. SN 157,378. Pub. 6–11–63. Filed 11–16–62.

755,299. MEGALON. The Hi-Flier Manufacturing Co. SN 158,074. Pub. 6–11–63. Filed 11–28–62.

Class 8 — Smokers' Articles, Not Including Tobacco Products

755,300. SUNDAY COB. Buescher's Industries, Inc. SN 158,683. Pub. 6–11–63. Filed 12–7–62.

755,301. PLAYBOY. HMH Publishing Co., Inc. SN 160,485. Pub. 6–11–63. Filed 1–10–63.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

755,302. THE FRONTIER AND DESIGN. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 152,206. Pub. 6–11–63. Filed 8–30–62.

755,303. EZXS W AND DESIGN. Olin Mathieson Chemical Corporation. SN 152,237. Pub. 6–11–63. Filed 8–30–62.

755,304. LEADER W AND DESIGN. Olin Mathieson Chemical Corporation. SN 152,238. Pub. 6–11–63. Filed 8–30–62.

755,305. WINCHESTER W AND DESIGN. Olin Mathieson Chemical Corporation. SN 152,239. Pub. 6–11–63. Filed 8–30–62.

755,306. SPATTERPRUF W AND DESIGN. Olin Mathieson Chemical Corporation. SN 153,204. Pub. 6–11–63. Filed 9–14–62.

Class 10 — Fertilizers

755,307. GREENFIELD. Eli Lilly and Company. SN 123,111. Pub. 8–27–62. Filed 6–29–61.

755,308. HORTCO. Hortco, Inc. SN 147,469. Pub. 6–11–63. Filed 6–21–62.

755,309. GENTLE TIGER AND DESIGN. Stadler Fertilizer Company. SN 148,667. Pub. 6–11–63. Filed 7–9–62.

755,310. HUMI-CITE. South Texas Soil Conditioner Service, Inc. SN 154,066. Pub. 6–11–63. Filed 9–27–62.

755,311. SIX-PLUS. Green & Reedy Fertilizer, Inc. SN 154,115. Pub. 6–11–63. Filed 9–28–62.

Class 12 — Construction Materials

755,312. DUREEN. West Virginia Pulp and Paper Company. SN 107,893. Pub. 10–24–61. Filed 11–4–60.

755,313. DUREL. Caradco Incorporated, assignee of Durel Incorporated, d.b.a. Durel, Inc. SN 108,297. Pub. 10–24–61. Filed 11–14–60.

755,314. APEC BRILLIANTS AND DESIGN. American Porcelain Enamel Company. SN 112,100. Pub. 6–11–63. Filed 1–19–61.

755,315. STYROFLOAT. The Dow Chemical Company. SN 128,978. Pub. 6–11–63. Filed 10–2–61.

755,316. NUKEM ELASTIK. Nukem Products Corporation. SN 130,231. Pub. 6–11–63. Filed 10–18–61.

755,317. WIND-TAB. Globe Roofing Products Co. Inc. SN 142,313. Pub. 6–11–63. Filed 4–16–62.

755,318. DURA-NU. Security Renovating, Inc. SN 142,974. Pub. 6–11–63. Filed 4–24–62.

755,319. W WHEELING TILE CO. AND DESIGN. Wheeling Tile Company. SN 143,897. Pub. 6–11–63. Filed 5–4–62.

755,320. LAB. Alvin Products, Inc. MULTIPLE CLASS (Classes 12, 14, and 50). SN 149,516. Pub. 6–11–63. Filed 7–23–62.

755,321. FIBERLIC. MacAndrews and Forbes Company. SN 150,428. Pub. 8–12–63. Filed 8–3–62.

755,322. UNARCO. Unarco Industries, Inc., by change of name from Union Asbestos & Rubber Company. SN 153,842. Pub. 6–11–63. Filed 9–17–62.

755,323. PERMA-THRUST. Austin Flooring Company. SN 153,543. Pub. 6–11–63. Filed 9–20–62.

755,324. SPIN-GLAS. Johns-Manville Corporation. SN 153,830. Pub. 6–11–63. Filed 12–10–62.

755,325. M.C. Modular Components Corporation. SN 153,842. Pub. 6–11–63. Filed 12–10–62.

755,326. SOUNDIKE. Johns-Manville Corporation. SN 153,913. Pub. 6–11–63. Filed 12–11–62.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

755,327. RONSON. Ronson Corporation. SN 146,105. Pub. 6–11–63. Filed 6–4–62.

755,328. "CHEF'S PRIDE" AND DESIGN. Allied Metal Spinning Corp. SN 152,963. Pub. 6–11–63. Filed 9–12–62.

755,329. QUISINE AND DESIGN. Quisine, Inc. SN 153,813. Pub. 6–11–63. Filed 9–24–62.

755,330. YORK. Hoover Ball and Bearing Company. SN 153,957. Pub. 6–11–63. Filed 9–26–62.

755,331. NEWPORT. Hoover Ball and Bearing Company. SN 153,958. Pub. 6–11–63. Filed 9–26–62.

Class 14 — Metals and Metal Castings and Forgings

755,320. (See Class 12 for this trademark.)

755,332. TIMALLOY. Harsco Corporation. SN 128,735. Pub. 8–7–62. Filed 9–27–61.

Class 15—Oils and Greases

755,333. VITASUL. The Vigzol Oil Company Limited. SN 141,895. Pub. 6–11–63. Filed 3–8–63.

755,334. TWIN TRACTION. Studebaker Corporation. SN 150,288. Pub. 6–11–63. Filed 8–1–62.

Class 16—Protective and Decorative Coatings

755,335. CATAPONIC DEVELOPMENT. Marshall L. Magee, d.b.a. Magee Chemical Company. SN 114,495. Pub. 6–11–63. Filed 2–27–61.

755,336. FLECTO AND DESIGN. The Flecto Company, Inc. SN 134,110. Pub. 6–11–63. Filed 12–15–61.

755,337. FUSIONKOTE. Iowa Paint Manufacturing Company, Inc. SN 136,769. Pub. 6–11–63. Filed 1–29–62.

755,338. DESOGUARD. De Soto Chemical Coatings, Inc. SN 139,047. Pub. 6–11–63. Filed 3–5–62.

755,339. VARMOR AND DESIGN. Pratt & Lambert-Inc. SN 139,676. Pub. 6–11–63. Filed 3–12–62.

755,340. RIL-SNO. The Charles, Inc., d.b.a. The Ril-Sno Products Co. SN 154,951. Pub. 6–11–63. Filed 10–11–62.

Class 17—Tobacco Products

755,341. CARLTON. The American Tobacco Company. SN 144,305. Pub. 6–11–63. Filed 5–11–62.

755,342. SLENDORITA. United Whelan Corporation. SN 151,854. Pub. 6–11–63. Filed 8–24–62.

755,343. CANADA HOUSE. Lane Limited. SN 159,508. Pub. 6–11–63. Filed 12–20–62.

755,344. CONCORD. Philip Morris Incorporated. SN 159,998. Pub. 6–11–63. Filed 12–31–62.

Class 18—Medicines and Pharmaceutical Preparations

755,345. S.U.R. Collins Chemical Corp. SN 116,977. Pub. 6–11–63. Filed 4–3–61.

755,346. BABY-BIO. Nutri-Bio Corporation. SN 125,886. Pub. 6–11–63. Filed 8–11–61.

755,347. PERMA-COCKTAIL. Commercial Solvents Corporation. SN 127,886. Pub. 6–11–63. Filed 9–7–61.

755,348. FE–80. Textron Inc. SN 130,519. Pub. 6–11–63. Filed 10–23–61.

755,349. CHOCOLATE SOLDIERS. Drug Development Corporation. SN 140,541. Pub. 6–11–63. Filed 3–23–62.

755,350. THERAFFIN. Theratron Corporation. SN 142,992. Pub. 6–11–63. Filed 4–23–62.

755,351. S2. R. W. MacDicken, d.b.a. Nephron Company. SN 145,384. Pub. 6–11–63. Filed 5–24–62.

755,352. ADD-A-ZYME BRAND. Add-A-Zyme, Inc. SN 146,442. Pub. 6–11–63. Filed 6–8–62.

755,353. FEBRO-GESIC. First Texas Pharmaceuticals, Inc. SN 152,215. Pub. 6–11–63. Filed 8–30–62.

755,354. ALCO-WIPE. Will Ross, Inc. SN 153,894. Pub. 6–11–63. Filed 9–25–62.

755,355. PRESANTIN. Dr. Karl Thomae, G.m.b.H., assignee of Geigy Chemical Corporation. SN 154,413. Pub. 6–11–63. Filed 10–3–62.

755,356. MENTHO-FOAM. The Wander Company. SN 159,790. Pub. 6–11–63. Filed 12–26–62.

755,357. HEXASIL CREAM. Baimm Pharmacal Corp. SN 159,944. Pub. 6–11–63. Filed 12–31–62.

755,358. CHOLICAPS. Buffington's Incorporated. SN 159,952. Pub. 6–11–63. Filed 12–31–62.

755,359. B-FIVE-C. Winn-Michaels Pharmaceuticals, Inc. SN 160,241. Pub. 6–11–63. Filed 1–4–63.

755,360. PERELAX. Philadelphia Laboratories, Inc. SN 160,312. Pub. 6–11–63. Filed 1–7–63.

Class 19—Vehicles

755,361. BMH AND DESIGN. Bonded Mobile Homes. SN 136,532. Pub. 6–11–63. Filed 1–25–62.

755,362. ZIP-R-LUFF. Manchester Yacht Sails, Inc. SN 139,416. Pub. 6–11–63. Filed 3–8–62.

755,363. KLIPPAN AND DESIGN. Klippan Gesellschaft mit beschrankter Haftung. SN 149,574. Pub. 6–11–63. Filed 7–28–62.

755,364. PIASECKI AND DESIGN. Piasecki Aircraft Corporation. SN 152,917. Pub. 6–11–63. Filed 9–11–62.

755,365. ANDREWS. Aluminum Truck Bodies, Inc. SN 153,715. Pub. 6–11–63. Filed 9–24–62.

755,366. PAPOOSE. Scotsman Manufacturing Co., Inc. SN 159,362. Pub. 6–11–63. Filed 12–18–62.

755,367. DESIGN OF SPLIT CIRCLE. General Motors Corporation. SN 159,718. Pub. 6–11–63. Filed 12–26–62.

755,368. TRIDENT. Merriman Bros., Inc. SN 159,897. Pub. 6–11–63. Filed 12–28–62.

755,369. STABILAIRE. Western Unit Corporation. SN 160,027. Pub 6–11–63. Filed 12–31–62.

755,370. LITE CLOUD AND DESIGN. Bo-Dar, Inc. SN 160,088. Pub. 6–11–63. Filed 1–3–63.

755,371. VEE-BALLOON. Goodyear Aircraft Corporation. SN 160,112. Pub. 6–11–63. Filed 1–3–63.

755,372. FLOMATIC. Jeffrey-Allan Industries, Incorporated. SN 160,186. Pub. 6–11–63. Filed 1–4–63.

755,373. TOUCH-N-FLO. Jeffrey-Allan Industries, Incorporated. SN 160,187. Pub. 6–11–63. Filed 1–4–63.

755,374. STING RAY. General Motors Corporation. SN 161,880. Pub. 6–11–63. Filed 2–1–63.

Class 21—Electrical Apparatus, Machines, and Supplies

755,375. DECATROL. Lear Siegler, Inc., by change of name from The Siegler Corporation. SN 114,975. Pub. 6–11–63. Filed 3–6–61.

755,376. TI. Texas Instruments Incorporated. SN 117,558. Pub. 6–11–63. Filed 4–10–61.

755,377. ZETA-MICA. The Macallen Company, Inc. SN 125,931. Pub 4–23–63. Filed 8–14–61.

755,378. TAPE-SLIDE. Kentron Hawaii, Limited. SN 126,453. Pub. 6–11–63. Filed 8–22–61.

755,379. LINE COMMANDER AND DESIGN. William D. Tarrant, d.b.a. Tarrant Electric Machinery Company. SN 132,201. Pub. 4–30–63. Filed 11–16–61.

755,380. SPECTRA VOX. Stanley S. Cramer, d.b.a. S.S.C. Laboratory. SN 145,678. Pub. 6–11–63. Filed 5–29–62.

755,381. TOHWALITE. Tohwa Electric Co., Ltd. MULTIPLE CLASS (Classes 21 and 26). SN 146,125. Pub. 6–11–63. Filed 6–4–62.

755,382. UNIVERSAL HI-HAT. Litecraft Manufacturing Corp. SN 146,632. Pub. 6–11–63. Filed 6–11–62.

755,383. TOSARI. Federal Employees' Distributing Company. SN 148,882. Pub. 6–11–63. Filed 7–12–62.

755,384. HYTEK. Electro-Optical Systems, Inc. SN 149,725. Pub. 6–11–63. Filed 7–25–62.

755,385. MH AND DESIGN. Magic Hostess Corporation. SN 149,755. Pub. 6–11–63. Filed 7–25–62.

755,386. WIRE NUT AND DESIGN. Ideal Industries, Inc. SN 150,345. Pub. 6–11–63. Filed 8–2–62.

755,387. LITHONIA. Lithonia Lighting, Inc. SN 150,423. Pub. 6–11–63. Filed 8–3–62.

755,388. BD BUSTRIBUTION. The I-T-E Circuit Breaker Company. SN 151,323. Pub. 6–11–63. Filed 8–16–62.

755,389. ANSA FONE AND DESIGN. Ansa Fone Corp. SN 151,462. Pub. 6–11–63. Filed 8–20–62.

755,390. LONDALE. Zephyr Radio Company, Ltd., assignee of Eastern Associates, Ltd. SN 151,808. Pub. 6–11–63. Filed 8–24–62.

755,391. BILLUPS. Billups Western Petroleum Company. SN 152,200. Pub. 6–11–63. Filed 8–30–62.

755,392. I-LINE. Square D Company. SN 159,539. Pub. 6–11–63. Filed 12–20–62.

755,393. ISO-MATCH. Telesystem Services Corporation. SN 159,623. Pub. 6–11–63. Filed 12–21–62.

755,394. VERSA-GRIP. Anderson Electric Corporation. CONSOLIDATED CERTIFICATE. SN 160,592, pub. 6–4–63, filed 1–14–63, Cl. 21; SN 160,593, pub. 6–4–63, filed 1–14–63, Cl. 23.

755,395. TRU-BREW. Segey Surplus Sales, Inc., d.b.a. Melward Industries. SN 161,871. Pub. 6–11–63. Filed 2–1–63.

755,396. IMPAC. New Haven Wire & Cable, Inc. SN 161,898. Pub. 6–11–63. Filed 2–1–63.

755,397. EPCO. Exchange Parts Company of Fort Worth. SN 161,981. Pub. 6–11–63. Filed 2–4–63.

755,398. GEOMETRIC DESIGN. Radio Shack Corporation. SN 162,355. Pub. 6–11–63. Filed 2–8–63.

Class 22—Games, Toys, and Sporting Goods

755,399. DESIGN-A-PLANE. Pyro Plastics Corporation. SN 106,345. Pub. 6–11–63. Filed 10–13–60.

755,400. RAPALA. Rapala. SN 111,550. Pub. 6–11–63. Filed 1–9–61.

755,401. SCOTTS 'KEEPDRYE' AND DESIGN. Scotts "Keepdrye" Dartboard Co. Ltd. SN 131,080. Pub. 6–11–63. Filed 10–31–61.

755,402. FORGE PRESS. Rainbow Crafts, Inc. SN 140,181. Pub. 6–11–63. Filed 3–19–62.

755,403. BRIDGE CORPORATION OF AMERICA AND DESIGN. Bridge Corporation of America. SN 140,229. Pub. 6–11–63. Filed 3–20–62.

755,404. SPACESHIP. Mag-Powr Games, Inc. SN 140,274. Pub. 6–11–63. Filed 3–20–62.

755,405. MONOLOOP M AND DESIGN. Monoloop Products, Inc. SN 140,714. Pub. 6–11–63. Filed 3–26–62.

755,406. BILGO AND DESIGN. Dr. Med. Dent. Hugo Batt. SN 141,272. Pub. 6–11–63. Filed 4–2–62.

755,407. DAR-TAC-TOE. Ralph K. Daugherty. SN 148,367. Pub. 6–11–63. Filed 7–5–62.

755,408. BABY K. S. S. Kresge Company. SN 148,397. Pub. 6–11–63. Filed 7–5–62.

755,409. DIAMOND RAY. Lester M. Davis, d.b.a. Les Davis Fishing Tackle Co. SN 148,605. Pub. 6–11–63. Filed 7–9–62.

755,410. MISCELLANEOUS DESIGN. Milton Bradley Company. SN 148,874. Pub. 6–11–63. Filed 7–12–62.

755,411. TOSARI. Federal Employees' Distributing Company. SN 148,883. Pub. 6–11–63. Filed 7–12–62.

755,412. WEBER W AND FISH DESIGN. Weber Tackle Company. SN 154,002. Pub. 6–11–63. Filed 9–26–62.

755,413. PENNSY PINKIE. The General Tire & Rubber Company. SN 154,022. Pub. 6–11–63. Filed 9–27–62.

755,414. TAG AND DESIGN. Transco Adult Games, Inc. SN 154,179. Pub. 6–11–63. Filed 9–28–62.

755,415. RITA. Writing Toys Corporation. SN 154,187. Pub. 6–11–63. Filed 9–28–62.

755,416. FLY-WAY. Pulp Reproduction Company. SN 154,512. Pub. 6–11–63. Filed 10–4–62.

755,417. PAR PUTT. Cartex Corporation. SN 154,950. Pub. 6–11–63. Filed 10–11–62.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

755,394. CONSOLIDATED CERTIFICATE. See Class 21.

755,418. HIVOPAK. General Dynamics Corporation. SN 137,620. Pub. 6–11–63. Filed 2–9–62.

755,419. FILASOL. Roberto Escursell-Prat. SN 146,415. Pub. 6–11–63. Filed 6–7–62.

755,420. URAFCO. Universal Roll-A-Form Corporation. SN 147,054. Pub. 6–11–63. Filed 6–15–62.

755,421. CAR DESIGN. Marion Lee Thompson, d.b.a. Mickey Thompson Enterprises. SN 149,611. Pub. 6–11–63. Filed 7–23–62.

755,422. SHUR-LUBE. The Diversey Corporation. SN 149,721. Pub. 6–11–63. Filed 7–25–62.

755,423. FABCEL LEV-L. Fabreeka Products Company. SN 149,831. Pub. 6–11–63. Filed 7–26–62.

755,424. HERITAGE HOUSE. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 151,783. Pub. 6–11–63. Filed 8–23–62.

755,425. HERITAGE HOUSE AND DESIGN. Heritage House Products, Inc., assignee of Seaboard Seed Co., Inc. SN 151,785. Pub. 6–11–63. Filed 8–23–62.

755,426. EMBLEM DESIGN. Crown Controls Corporation. SN 152,049. Pub. 6–11–63. Filed 8–28–62.

755,427. JO-LO. Joe Lowe Corporation. SN 152,318. Pub. 6–11–63. Filed 8–31–62.

755,428. MILBAND AND DESIGN. The Henry G. Thompson & Son Company. SN 152,464. Pub. 6–11–63. Filed 9–4–62.

755,429. WHIRLIMET. Buehler Ltd. SN 152,562. Pub. 6–11–63. Filed 9–6–62.

755,430. H & G WITHIN REPRESENTATION OF A TREE. H & G Tool Company. SN 152,790. Pub. 6–11–63. Filed 9–10–62.

755,431. FUTURA. Tuthill Pump Company. SN 152,935. Pub. 6–11–63. Filed 9–11–62.

755,432. RIGID-REFLEX. The Cincinnati Shaper Co. SN 152,979. Pub. 6–11–63. Filed 9–12–62.

755,433. FRONTIER. Oneida Ltd. SN 153,207. Pub. 6–11–63. Filed 9–14–62.

755,434. TI DESIGN. Thompson Industries, Inc. SN 153,337. Pub. 6–11–63. Filed 9–17–62.

755,435. CUSTOM. Bissell Inc. SN 153,450. Pub. 6–11–63. Filed 9–19–62.

755,436. 400. Bissell Inc. SN 153,451. Pub. 6–11–63. Filed 9–19–62.

755,437. AMERICAN. Bissell Inc. SN 153,452. Pub. 6–11–63. Filed 9–19–62.

755,438. MOTIVAIR. Modernair Corporation. SN 153,969. Pub. 4–30–63. Filed 9–26–62.

755,439. FREIGHTRITE. Addressograph-Multigraph Corporation. SN 155,039. Pub. 6–11–63. Filed 10–12–62.

755,440. NOMAD. The Tait Manufacturing Company. SN 158,873. Pub. 6–11–63. Filed 12–10–62.

755,441. FASTGUN. H. D. Hudson Manufacturing Company. SN 158,910. Pub. 6–11–63. Filed 12–11–62.

755,442. NAMCO. North American Manufacturing Company. SN 159,109. Pub. 6–11–63. Filed 12–13–62.

755,443. ITW. Illinois Tool Works Inc. SN 159,893. Pub. 6–11–63. Filed 12–28–62.

755,444. CARVALLOY. Charles D. Briddell, Incorporated, d.b.a. Chas. D. Briddell, Inc. SN 161,848. Pub. 6–11–63. Filed 2–1–63.

755,445. GREAT LAKES AND DESIGN. Great Lakes Stamp & Mfg. Co., Inc. SN 162,944. Pub. 6–11–63. Filed 2–18–63.

Class 26—Measuring and Scientific Appliances

755,381. (See Class 21 for this trademark.)

755,446. FUJISTAT. Fuji Photo Film Co., Ltd. SN 87,421. Pub. 7–11–61. Filed 12–16–59.

755,447. ACTOMATIC. Laboratory Furniture Company, Inc. SN 140,956. Pub. 4-9-63. Filed 3-28-62.

755,448. DUROBROM. Devolite Corporation. SN 146,797. Pub. 6-11-63. Filed 6-13-62.

755,449. PRECIBOR. Shandon Scientific Company Limited. SN 148,759. Pub. 6-11-63. Filed 7-10-62.

755,450. BEARMATIC. Bear Manufacturing Company. SN 151,119. Pub. 6-11-63. Filed 8-14-62.

755,451. SHELL. Shell Oil Company. SN 152,008. Pub. 6-11-63. Filed 8-27-62.

755,452. CHEMIQUIP AND DESIGN. Julian A. Lipman, d.b.a. Chemiquip Company. SN 152,590. Pub. 6-11-63. Filed 9-6-62.

755,453. WEAVER. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,036. Pub. 6-11-63. Filed 9-12-62.

755,454. WEAVER MOUNTS AND DESIGN. William R. Weaver, d.b.a. W. R. Weaver Co. SN 153,040. Pub. 6-11-63. Filed 9-12-62.

755,455. WEBBER. The L. S. Starrett Company. SN 153,698. Pub. 6-11-63. Filed 9-21-62.

755,456. TWINPROBER. Picker X-Ray Corporation. SN 157,837. Pub. 6-11-63. Filed 11-23-62.

755,457. FRONTIER AND DESIGN. Frontier Development, Inc. SN 157,894. Pub. 6-11-63. Filed 11-26-62.

755,458. NUCLEAR DATA DESIGN. Nuclear Data, Inc. SN 158,169. Pub. 6-11-63. Filed 11-29-62.

755,459. NIKE. Isis Incorporated. SN 158,204. Pub. 6-11-63. Filed 11-29-62.

Class 27 — Horological Instruments

755,460. HAWTHORNE. Hawthorne Watch Co., Inc. SN 152,403. Pub. 6-11-63. Filed 9-4-62.

Class 28 — Jewelry and Precious-Metal Ware

755,461. MISCELLANEOUS DESIGN. Stanley J. Prokop, Sr., d.b.a. Stanley Prokop, Jeweler. SN 147,397. Pub. 6-4-63. Filed 6-21-62.

755,462. MJ. Monterey Jewelers Inc. SN 150,883. Pub. 6-11-63. Filed 8-9-62.

755,463. D 14K DESIGN. Phil S. Khalaf, d.b.a. De-Cor Jewelry Co. SN 150,953. Pub. 6-11-63. Filed 8-10-62.

755,464. ATTACHE. Ray Curran & Co. SN 153,258. Pub. 6-11-63. Filed 9-17-62.

755,465. DOUBLE C DESIGN. Allan L. Seltzer, d.b.a. Chatham Creations. SN 153,987. Pub. 6-11-63. Filed 9-26-62.

755,466. AS. Albert Sher. SN 153,988. Pub. 6-11-63. Filed 9-26-62.

755,467. MIDNIGHT STAR. J. R. Wood & Sons, Inc. SN 154,316. Pub. 6-11-63. Filed 10-1-62.

755,468. TRESURA. National Bellas Hess, Inc. SN 154,364. Pub. 6-11-63. Filed 10-2-62.

755,469. STRONGITE. The Strongite Co. SN 154,383. Pub. 6-11-63. Filed 10-2-62.

755,470. K WITHIN A CIRCLE DESIGN. Kiwanis International. SN 154,605. Pub. 6-11-63. Filed 10-5-62.

Class 29 — Brooms, Brushes, and Dusters

755,471. TUSH. International Process and Product Development Corporation. SN 138,614. Pub. 4-9-63. Filed 2-26-62.

755,472. SURPRIZE. Michael R. McDanal, d.b.a. Surprize Soapy Sponge. SN 149,755. Pub. 6-11-63. Filed 7-25-62.

Class 30 — Crockery, Earthenware, and Porcelain

755,473. CARILLON AND DESIGN. Vita Craft Corporation. SN 152,480. Pub. 6-11-63. Filed 9-4-62.

Class 31 — Filters and Refrigerators

755,474. FILTERITE. Industrial Products Company, Inc. SN 151,329. Pub. 6-11-63. Filed 8-16-62.

755,475. DRICO. Drico Industrial Corporation. SN 151,401. Pub. 6-11-63. Filed 8-17-62.

755,476. HAWS. Haws Drinking Faucet Company. SN 160,289. Pub. 6-11-63. Filed 1-7-63.

Class 32 — Furniture and Upholstery

755,477. KINET AND DESIGN. Joan B. Zindell. SN 158,491. Pub. 6-11-63. Filed 12-4-62.

755,478. H AND DESIGN. Haydock Caster Company. SN 159,727. Pub. 6-11-63. Filed 12-26-62.

Class 33 — Glassware

755,479. IMPERIAL AMERICAN HANDCRAFTED AND MAP DESIGN. Imperial Glass Corporation. SN 151,756. Pub. 6-11-63. Filed 8-23-62.

755,480. LUMINARC AND DESIGN. Verrerie Cristallerie d'Arques, G. Durand & Cie. SN 161,582. Pub. 6-11-63. Filed 1-24-63.

755,481. GOLDEN SHELL. Anchor Hocking Glass Corporation. SN 164,300. Pub. 6-11-63. Filed 3-11-63.

Class 34 — Heating, Lighting, and Ventilating Apparatus

755,482. AIRMASTER AND DESIGN. Arthur E. Mapes, d.b.a. E. Mapes Co. SN 151,418. Pub. 6-11-63. Filed 8-17-62.

755,483. SHELL. Shell Oil Company. SN 152,009. Pub. 6-11-63. Filed 8-27-62.

755,484. ALASKA. Washington Stove Works. SN 152,986. Pub. 6-11-63. Filed 9-11-62.

755,485. PROGRAMMER. Sears, Roebuck and Co. SN 153,688. Pub. 6-11-63. Filed 9-21-62.

755,486. PROTEC-U-LITE. Joseph Christophill. SN 153,864. Pub. 6-11-63. Filed 9-25-62.

755,487. MICRO-WIRE AND DESIGN. Hobart Brothers Company. SN 165,101. Pub. 6-11-63. Filed 3-14-63.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

755,488. TRIANGULAR DESIGNS. The Dayton Tire & Rubber Company. SN 122,430. Pub. 4-23-63. Filed 6-20-61.

755,489. TRACTION WEDGE AND DESIGN. The Goodyear Tire & Rubber Company. SN 155,181. Pub. 6-11-63. Filed 1-3-62.

755,490. BILLUPS. Billups Western Petroleum Company. SN 152,201. Pub. 6-11-63. Filed 8-30-62.

755,491. UNARCO. Unarco Industries, Inc., by change of name from Union Asbestos & Rubber Company. SN 153,343. Pub. 6-11-63. Filed 9-17-62.

755,492. PLASBESTOS. Croton Compound Corporation. SN 153,386. Pub. 6-11-63. Filed 9-18-62.

755,493. CORDOVAN. Cordovan Associates, Incorporated. SN 159,045. Pub. 6-11-63. Filed 12-13-62.

755,494. STATION MASTER. The Gates Rubber Company. SN 159,646. Pub. 6-11-63. Filed 12-24-62.

755,495. WAGON MASTER. The Gates Rubber Company. SN 159,647. Pub. 6-11-63. Filed 12-24-62.

755,496. JET MASTER. The Gates Rubber Company. SN 159,648. Pub. 6-11-63. Filed 12-24-62.

755,497. PUMP MASTER. The Gates Rubber Company. SN 159,649. Pub. 6-11-63. Filed 12-24-62.

755,498. MICRO-V. The Gates Rubber Company. SN 159,888. Pub. 6-11-63. Filed 12-28-62.

755,499. WHITE MAGIC 50. White Stores, Inc. SN 160,084. Pub. 6-11-63. Filed 1-2-63.

755,500. DURATUBE. The Goodyear Tire & Rubber Company. SN 160,113. Pub. 6-11-63. Filed 1-3-63.

755,501. MILEATHON. The Goodyear Tire & Rubber Company. SN 160,114. Pub. 6-11-63. Filed 1-3-63.

755,502. RED STREAK. The Goodyear Tire & Rubber Company. SN 160,420. Pub. 6-11-63. Filed 1-9-63.

755,503. RONTHANE. Ronthor Reiss Corporation. SN 160,805. Pub. 6-11-63. Filed 1-16-63.

755,504. POWER-WEDGE. Dayco Corporation. SN 161,477. Pub. 6-11-63. Filed 1-28-63.

755,505. SOF-T. The Goodyear Tire & Rubber Company. SN 161,601. Pub. 6-11-63. Filed 1-29-63.

755,506. NYROD. The Goodyear Tire & Rubber Company. SN 161,602. Pub. 6-11-63. Filed 1-29-63.

755,507. FLEXTRA. The Goodyear Tire & Rubber Company. SN 161,606. Pub. 6-11-63. Filed 1-29-63.

755,508. SPORT SPECIAL. United States Rubber Company. SN 161,924. Pub. 6-11-63. Filed 2-1-63.

755,509. MOLYTHANE. Sealcraft Corporation. SN 162,293. Pub. 6-11-63. Filed 2-7-63.

755,510. GREEN STRIPE. The Gates Rubber Company. SN 162,437. Pub. 6-11-63. Filed 2-11-63.

755,511. NYLATUF. The Polymer Corporation. SN 162,559. Pub. 6-11-63. Filed 2-13-63.

Class 36 — Musical Instruments and Supplies

755,512. MICRO TOUCH. Zenith Radio Corporation. SN 146,858. Pub. 6-11-63. Filed 6-13-62.

755,513. STATESIDE. The Gramophone Company Limited. SN 149,842. Pub. 6-11-63. Filed 7-26-62.

755,514. ERNST RIEDL. Worldwide Musical Instrument Co. Inc. SN 151,282. Pub. 6-11-63. Filed 8-15-62.

755,515. SONATA. Emenee Industries, Inc. SN 164,228. Pub. 6-11-63. Filed 3-8-63.

755,516. RIVOLI. Sonola Accordion Company, Inc. SN 164,567. Pub. 6-11-63. Filed 3-13-63.

755,517. LEHOFF AND DESIGN. Levi H. Zerr, Jr., d.b.a. Lehoff Associates. SN 165,976. Pub. 6-11-63. Filed 4-2-63.

Class 37 — Paper and Stationery

755,518. ROL-IT-ON. Diagraph-Bradley Industries, Inc. SN 116,887. Pub. 6-11-63. Filed 3-24-61.

755,519. FTC FINGER TIP CONTROL AND DESIGN. Visible File Corp. SN 127,290. Pub. 6-11-63. Filed 9-5-61.

755,520. POLLY-COAT. The Polly Coat Book Cover Co. SN 128,848. Pub. 6-11-63. Filed 9-28-61.

755,521. THE WORLD'S MOST WANTED PENS. The Parker Pen Company. SN 138,226. Pub. 6-11-63. Filed 2-19-62.

755,522. DUPLIFACTOR. Bridge Corporation of America. SN 140,086. Pub. 6-11-63. Filed 3-19-62.

755,523. MANNITHERM. John A. Manning Paper Co. Inc. SN 143,847. Pub. 6-11-63. Filed 5-4-62.

755,524. UNISCRIPT AND DESIGN. Uniscript, Inc. SN 148,249. Pub. 6-11-63. Filed 7-2-62.

755,525. LINWEAVE MILANO. United States Envelope Company. SN 151,700. Pub. 6-11-63. Filed 8-22-62.

755,526. SOPHISTIGIFT. Harry and David. SN 153,565. Pub. 6-11-63. Filed 9-20-62.

755,527. EXPLORER. Minnesota and Ontario Paper Company. SN 154,616. Pub. 6-11-63. Filed 10-5-62.

755,528. BIPLEX. A. W. Faber-Castell Pencil Co. Inc. SN 154,812. Pub. 6-11-63. Filed 10-9-62.

755,529. DURA-FLUTE. Brown Products, Inc. SN 154,882. Pub. 6-11-63. Filed 10-10-62.

755,530. FREIGHTRITE. Addressograph-Multigraph Corporation. SN 155,040. Pub. 6-11-63. Filed 10-12-62.

755,531. KANGAROO. Duro Pen Company, Inc. SN 155,139. Pub. 6-11-63. Filed 10-15-62.

755,532. STEELKRAFT. Tension Envelope Corporation of Kansas City. SN 155,208. Pub. 6-11-63. Filed 10-15-62.

755,533. TWIS-SNAP T AND DESIGN. Albert L. Jamison, d.b.a. A.J. Art & Design. SN 155,259. Pub. 6-11-63. Filed 10-16-62.

755,534. GRAND WAY. The Grand Union Company. SN 155,411. Pub. 6-11-63. Filed 10-18-62.

Class 38 — Prints and Publications

755,535. HELPFUL HINTS BY HARRIET. John F. Murray Advertising Agency, Incorporated. SN 128,913. Pub. 6-11-63. Filed 9-29-61.

755,536. INSTANT LETTERING AND DESIGN. Arthur Brown & Bro., Inc. SN 133,444. Pub. 6-11-63. Filed 12-6-61.

755,537. THE NEW WONDER WORLD CULTURAL LIBRARY. The Parents' Magazine's Education Press, Inc. SN 133,983. Pub. 6-11-63. Filed 12-13-61.

755,538. LRI AND DESIGN. Leadership Resources, Inc. SN 136,569. Pub. 6-11-63. Filed 1-25-62.

755,539. BNA SERVICES LABOR REPORT. The Bureau of National Affairs, Inc. SN 136,876. Pub. 6-11-63. Filed 1-30-62.

755,540. BNA'S CONSTRUCTION LABOR REPORT. The Bureau of National Affairs, Inc. SN 136,877. Pub. 6-11-63. Filed 1-30-62.

755,541. FRONTIERS OF AMERICA. Childrens Press, Inc. SN 138,163. Pub. 6-11-63. Filed 2-19-62.

755,542. COUNTDOWN. E. James Ball, d.b.a. Lifetronics Research. SN 138,378. Pub. 6-11-63. Filed 2-21-62.

755,543. HI-MINE. Youth Associates Company. SN 139,716. Pub. 6-11-63. Filed 3-12-62.

755,544. THE INTERSTATE I. Interstate Vending Company. SN 140,457. Pub. 6-11-63. Filed 3-22-62.

755,545. HOBBY BOOKS AND DESIGN. Fernand & Spertus Publishers, Inc. SN 142,420. Pub. 6-11-63. Filed 4-17-62.

755,546. BIG AND LITTLE JOURNEYS AND DESIGN. Colpitts Tourist Company, Inc. SN 142,928. Pub. 6-11-63. Filed 4-24-62.

755,547. DEWEY DECIMAL CLASSIFICATION, ADDITIONS, NOTES AND DECISIONS. Forest Press, Inc. SN 144,161. Pub. 6-11-63. Filed 5-9-62.

755,548. DEWEY DECIMAL CLASSIFICATION. Forest Press, Inc. SN 144,162. Pub. 6-11-63. Filed 5-9-62.

755,549. THE TROPICAL GARDENER. Alex D. Hawkes, d.b.a. The Tropical Gardener. SN 146,376. Pub. 6-11-63. Filed 6-7-62.

755,550. COLOR-STIK. Charles Beseler Company. SN 146,876. Pub. 6-11-63. Filed 6-14-62.

755,551. SALLIE HAYDEN'S. Hayden Flour Mills. SN 149,462. Pub. 6-11-63. Filed 7-20-62.

755,552. WESTERN GUEST. Western Hotels Company, by change of name and assignment from Western Hotels, Inc. SN 150,660. Pub. 6-11-63. Filed 8-6-62.

755,553. INTERNATIONAL RESCUER. International Rescue and First Aid Association, Inc. SN 154,321. Pub. 6-11-63. Filed 9-12-62.

755,554. PERSPECTIVE ON IDEAS AND THE ARTS. Gale Broadcasting Co., Inc. SN 155,119. Pub. 6-11-63. Filed 10-11-62.

755,555. FERTILE ACRES. South Dakota Fertilizer Association. SN 155,659. Pub. 6-11-63. Filed 10-22-62.

755,556. FULL CIRCLE. Allstate Insurance Company. SN 155,872. Pub. 6-11-63. Filed 10-25-62.

755,557. CAROLYN CLARKE. American Home Products Corporation. SN 155,878. Pub. 6-11-63. Filed 10-25-62.

755,558. AP WIREPHOTO. The Associated Press. SN 155,883. Pub. 6-11-63. Filed 10-25-62.

755,559. DOCUFORM. Documentation, Incorporated. SN 156,096. Pub. 6-11-63. Filed 10-29-62.

755,560. DESIGN OF BLACK CAT. Elite Stamp Service. SN 156,282. Pub. 6-11-63. Filed 10-31-62.

755,561. WATSON'S WIZARD OF ODDS. William A. Watson. SN 156,698. Pub. 6-11-63. Filed 11-5-62.

755,562. QUICK RELEASE. Avdel, Inc. SN 156,712. Pub. 6-11-63. Filed 11-6-62.

755,563. AMERYKA-ECHO. Ameryka-Echo, Incorporated. SN 156,931. Pub. 6-11-63. Filed 11-9-62.

755,564. AP. The Associated Press. SN 163,922. Pub. 6-11-63. Filed 3-5-63.

Class 39 — Clothing

755,240. CONSOLIDATED CERTIFICATE. See Class 1.

755,565. ROBBIE BEE. Bender Glick Sportswear Mfg. Co., d.b.a. Bender-Glick. SN 105,852. Pub. 12-5-61. Filed 10-6-60.

755,566. LADY BREWSTER LB AND DESIGN. Brewster Shirt Corporation. SN 138,151. Pub. 6-11-63. Filed 2-19-62.

755,567. BREEZE-BREAKER. P. H. Hanes Knitting Company. SN 146,188. Pub. 6-11-63. Filed 6-5-62.

755,568. POLO TROPHY. Finger, Rabiner & Jontow Inc. SN 149,177. Pub. 6-11-63. Filed 7-17-62.

755,569. JET ZIP. Perfect Knit Togs, Inc., assignee of Perfect Knit & Woven Togs. SN 149,958. Pub. 6-11-63. Filed 7-27-62.

755,570. GREEN THUMB. Edmont Inc. SN 150,032. Pub. 6-11-63. Filed 7-30-62.

755,571. AT HOME. Delightform Foundations, Inc. SN 150,328. Pub. 6-11-63. Filed 8-2-62.

755,572. RIB O'RAMA. Plymouth Hosiery Mills, Inc. SN 150,968. Pub. 6-11-63. Filed 8-10-62.

755,573. DIMONELLI. Sam Diamond Knitting Mills, Inc. SN 151,025. Pub. 6-11-63. Filed 8-13-62.

755,574. LEONARDO STRASSI. Colfax Industries. SN 151,126. Pub. 6-11-63. Filed 8-14-62.

755,575. CLOUD BURST. Wales Manufacturing Company. SN 151,378. Pub. 6-11-63. Filed 8-16-62.

755,576. MIST-ER WALES. Wales Manufacturing Company. SN 151,380. Pub. 6-11-63. Filed 8-16-62.

755,577. MAGIC QUARTER. Dorson-Fleisher Inc. SN 152,771. Pub. 6-11-63. Filed 9-10-62.

755,578. MURTAG AND TAG DESIGN. G. C. Murphy Company. SN 152,818. Pub. 6-11-63. Filed 9-10-62.

755,579. LOCKER LOOP. Rob Roy Company, Inc. SN 153,118. Pub. 6-11-63. Filed 9-13-62.

755,580. VEST-RAINT. Melrose Hospital Uniform Co., Inc. SN 153,188. Pub. 6-11-63. Filed 9-14-62.

755,581. BRENDON HALL. Ben Wiener & Hoffman, Inc. SN 153,358. Pub. 6-11-63. Filed 9-17-62.

755,582. MANSLACK. Fit-Rite Pants Company, Inc. SN 153,395. Pub. 6-11-63. Filed 9-18-62.

755,583. FEATHERIB. D'Orsay Mills, Inc. SN 153,556. Pub. 6-11-63. Filed 9-20-62.

755,584. THE MINNIE BY LILLY. Lilly Pulitzer, Inc. SN 157,552. Pub. 6-11-63. Filed 11-19-62.

755,585. THE SNEAKY PETE BY LILLY. Lilly Pulitzer, Inc. SN 157,553. Pub. 6-11-63. Filed 11-19-62.

755,586. SPAN "C." Tru Balance Corsets, Inc. SN 157,591. Pub. 6-11-63. Filed 11-20-62.

755,587. GLAMAZONS. Leon's Fashions, Inc. SN 157,628. Pub. 6-11-63. Filed 11-20-62.

755,588. PETTI TARDS. Modern Globe, Inc. SN 157,920. Pub. 6-11-63. Filed 11-26-62.

755,589. SERENADE. International Latex Corporation. SN 158,162. Pub. 6-11-63. Filed 11-29-62.

755,590. INTIMO. Maidenform, Inc. SN 158,261. Pub. 6-11-63. Filed 11-30-62.

Class 40 — Fancy Goods, Furnishings, and Notions

755,591. SECOR-BAC. Secor Manufacturing Co., Inc. SN 144,891. Pub. 6-11-63. Filed 5-17-62.

755,592. SPESCO. Specialty Sales Company. SN 162,302. Pub. 6-11-63. Filed 2-7-63.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

755,240. CONSOLIDATED CERTIFICATE. See Class 1.

755,593. PERMA-FLUFF. Whiting Manufacturing Company, Inc. SN 158,034. Pub. 6-11-63. Filed 11-27-62.

Class 43 — Thread and Yarn

755,594. BUCARONI. Glen Raven Cotton Mills, Inc. SN 157,791. Pub. 6-11-63. Filed 11-23-62.

755,595. SPANDELLE. The Firestone Tire & Rubber Company. SN 158,061. Pub. 6-11-63. Filed 11-28-62.

Class 44 — Dental, Medical, and Surgical Appliances

755,596. CERVISCOPE. Axel E. Strauch, assignee of Clauss B. Strauch, d.b.a. Cerviscope Company. SN 125,627. Pub. 10-23-62. Filed 8-8-61.

755,597. VENUS. Techni Electronics, Inc. SN 145,003. Pub. 6-11-63. Filed 5-18-62.

755,598. FAIRLON. Fairhope Fabrics, Inc. SN 150,164. Pub. 6-11-63. Filed 7-31-62.

755,599. INTRA-VEL HOLDER. Beverley C. Hollingshead, d.b.a. B. C. Hollingshead Company. SN 150,250. Pub. 6-11-63. Filed 8-1-62.

755,600. ASEPTEX. Minnesota Mining and Manufacturing Company. SN 150,585. Pub. 2-19-63. Filed 8-6-62.

755,601. BEAUTY WAND. Younger Each Day, Inc. SN 155,952. Pub. 6-11-63. Filed 10-25-62.

755,602. LU-TEX. C. De Witt Lukens Co. SN 158,798. Pub. 6-11-63. Filed 12-10-62.

755,603. DORCATE AND DESIGN. The L. D. Caulk Company. SN 159,559. Pub. 6-11-63. Filed 12-21-62.

755,604. JELCONE AND DESIGN. The L. D. Caulk Company. SN 159,561. Pub. 6-11-63. Filed 12-21-62.

755,605. COLOSTOCAP. John F. Greer Company. SN 159,724. Pub. 6-11-63. Filed 12-26-62.

755,606. LA SUE-E AND DESIGN. Susana A. Figueroa. SN 160,104. Pub. 6-11-63. Filed 1-3-63.

Class 45 — Soft Drinks and Carbonated Waters

755,607. BELFRUT. "Belfrut" Gesellschaft mit beschrankter Haftung, by change of name from Firma Belfrut Allgäu-Oberland-Getränke G.m.b.H. SN 142,309. Pub. 6-11-63. Filed 4-16-62.

755,608. ABC AND REPRESENTATION OF A DANCING USHER CLICKING HIS HEELS. ABC Vending Corporation, d.b.a. ABC Vending Corp. SN 156,926. Pub. 6-11-63. Filed 11-9-62.

Class 46 — Foods and Ingredients of Foods

755,609. REPRESENTATION OF A CUP OF COFFEE. Franck Industria Nazionale del Succedanei al Caffe S.p.A. SN 106,084. Pub. 6-11-63. Filed 10-10-60.

755,610. TOMA-RICO. Libby, McNeill & Libby. SN 113,538. Pub. 6-11-63. Filed 2-13-61.

755,611. CAPTAIN BLIGH'S GALLEY BREAD. Christian & Snyder Bakery Service. SN 114,684. Pub. 6-11-63. Filed 3-1-61.

755,612. KEVO-ETTS. Golden Valley Brands, Inc., assignee, by mesne assignments, of M. Elizabeth Bartlett and Charles Martin, co-executrix and co-executor for the estate of George Maurice Bartlett, deceased, d.b.a. G. M. Bartlett Kevo Company. SN 118,042. Pub. 6-11-63. Filed 4-18-61.

755,613. SILO GUARD AND DESIGN. International Stock Food Corporation. SN 118,694. Pub. 6-11-63. Filed 4-26-61.

755,614. TAKEDA AND DESIGN. Takeda Chemical Industries, Ltd. SN 123,780. Pub. 6-11-63. Filed 7-11-61.

755,615. SENECA AND DESIGN. Seneca Grape Juice Corporation. SN 126,614. Pub. 6-11-63. Filed 8-24-61.

755,616. OLD MILL AND DESIGN. Crowley's Milk Company, Inc. SN 127,205. Pub. 6-11-63. Filed 9-5-61.

755,617. T & C AND DESIGN. Town and Country Food Company, Inc. SN 130,393. Pub. 6-11-63. Filed 10-20-61.

755,618. EL REY. Caribe Food Products, Inc. SN 132,214. Pub. 6-11-63. Filed 11-15-61.

755,619. NOW & LATER. Phoenix Candy Co., Inc. SN 138,809. Pub. 6-11-63. Filed 2-28-62.

755,620. CRISPINS. Snack Products, Inc., d.b.a. House of Snacks Co. SN 139,429. Pub. 6-11-63. Filed 3-8-62.

755,621. CHAMPION WHIP. General Foods Corporation. SN 142,069. Pub. 4-23-63. Filed 4-9-62.

755,622. SALA-TONE. Marjorie W. Chilstrom, d.b.a. Vital Food Company of California. SN 143,345. Pub. 6-11-63. Filed 4-30-62.

755,623. SALA-DIET. Marjorie W. Chilstrom, d.b.a. Vital Food Company of California. SN 143,346. Pub. 6-11-63. Filed 4-30-62.

755,624. AFRICAN QUEEN. Gotaas Export Corporation. SN 143,734. Pub. 6-11-63. Filed 5-3-62.

755,625. BARGREEN'S. Bargreen Coffee & Restaurant Equipment Co., Inc., d.b.a. Bargreen Coffee Co. SN 145,512. Pub. 6-11-63. Filed 5-28-62.

755,626. FL AND DESIGN. Frito-Lay, Inc. SN 145,540. Pub. 6-11-63. Filed 5-28-62.

755,627. THOMPSON HONOR DAIRY. Thompson's Dairy, Inc. SN 146,939. Pub. 6-11-63. Filed 6-14-62.

755,628. THOMPSON HONOR DAIRY AND DESIGN. Thompson's Dairy, Inc. SN 146,940. Pub. 6-11-63. Filed 6-14-62.

755,629. T AND DESIGN. Thompson's Dairy, Inc. SN 146,941. Pub. 6-11-63. Filed 6-14-62.

755,630. MR. AND MRS. DIET. Mr. & Mrs. Diet, Inc. SN 147,186. Pub. 6-11-63. Filed 6-18-62.

755,631. COFFEE DELIGHT. Rod's Food Products, Inc., d.b.a. Rod's Food Products. SN 147,400. Pub. 6-11-63. Filed 6-21-62.

755,632. HENRI'S AND DESIGN. Henri's Food Products Company, Inc. SN 148,307. Pub. 6-11-63. Filed 7-3-62.

755,633. YE OLDE OAK AND DESIGN. Robt. R. & R. W. Smith Limited. SN 148,430. Pub. 6-11-63. Filed 7-5-62.

755,634. MORSE'S. Ferry-Morse Seed Co. SN 148,804. Pub. 6-11-63. Filed 7-11-62.

755,635. CAPTAIN COMET AND DESIGN. Comet Rice Mills, Inc. SN 149,363. Pub. 6-11-63. Filed 7-19-62.

755,636. CHEESE WHISPERS. Reese Finer Foods, Inc. SN 149,598. Pub. 6-11-63. Filed 7-23-62.

755,637. AUNT JANE'S. Aunt Jane's Foods, Incorporated. SN 150,314. Pub. 6-11-63. Filed 8-2-62.

755,638. SOUPEEN WITH VITAMINS. "Sanopharm" Chem. Pharm. Präparate Gesellschaft m.b.H. SN 150,623. Pub. 6-11-63. Filed 8-6-62.

755,639. REPRESENTATION OF A DOG AND DESIGN. Allied Mills, Inc. SN 150,909. Pub. 6-11-63. Filed 8-10-62.

755,640. RIB DELIGHT. Chicken Delight, Inc. SN 151,297. Pub. 6-11-63. Filed 8-16-62.

755,641. REPRESENTATION OF EDELWEISS FLOWER. Eszet Kakao- und Schokoladefabrik Staengel & Ziller. SN 152,389. Pub. 6-11-63. Filed 9-4-62.

755,642. VEGE-MATZO. The B. Manischewitz Company. SN 153,786. Pub. 6-11-63. Filed 9-24-62.

755,643. TONILLONE. Parke, Davis & Company. SN 153,808. Pub. 6-11-63. Filed 9-24-62.

755,644. PIZZA-RONI. Capitol Food Corporation. SN 155,889. Pub. 5-14-63. Filed 10-25-62.

755,645. VALLEY FORGE. Community Shops, Inc., d.b.a. Community Bakeries. SN 156,379. Pub. 6-11-63. Filed 11-1-62.

755,646. SORBAGRAN. Meat Industry Suppliers, Inc. SN 156,422. Pub. 6-11-63. Filed 11-1-62.

755,647. YORK. Becharas Brothers Coffee Company. SN 156,554. Pub. 6-11-63. Filed 11-5-62.

755,648. GOLDEN BOY. Suburban Foods, Inc. SN 156,772. Pub. 6-11-63. Filed 11-6-62.

755,649. GREEN STAR. Weis Markets, Inc. SN 156,918. Pub. 6-11-63. Filed 11-8-62.

755,650. SUNSET RIDGE. E. J. Brach & Sons. SN 157,279. Pub. 6-11-63. Filed 11-15-62.

755,651. HONG KONG. The Chun King Corporation. SN 157,464. Pub. 6-11-63. Filed 11-19-62.

755,652. DIXIE LIVING. Besco Products Company, Inc. SN 158,596. Pub. 6-11-63. Filed 12-4-62.

755,653. MAESTRO. House of Herbs, Inc. SN 158,710. Pub. 6-11-63. Filed 12-7-62.

Class 47 — Wines

755,654. REMY DUPONT. Monsieur Henri Wines, Ltd. SN 127,028. Pub. 6-11-63. Filed 8-31-61.

Class 49 — Distilled Alcoholic Liquors

755,655. MAD WORLD. Barton Distilling Company. SN 153,925. Pub. 6-11-63. Filed 9-26-62.

755,656. MAGNA CARTA. Joseph E. Seagram & Sons, Inc. SN 157,153. Pub. 6-11-63. Filed 11-13-62.

Class 50 — Merchandise Not Otherwise Classified

755,320. (See Class 12 for this trademark.)

755,657. SQUARMOUNT. J & S Graphics, Inc. SN 135,137. Pub. 4-23-63. Filed 1-3-62.

755,658. FUN-DIAL. Magellan Sounds Corporation. SN 140,368. Pub. 6-11-63. Filed 3-21-62.

755,659. PS. Carry-Pack Corporation. SN 152,760. Pub. 6–11–63. Filed 9–10–62.

755,660. CAS-COT. Cas-Craft, Inc. SN 152,976. Pub. 6–11–63. Filed 9–12–62.

755,661. ROTOTAG. Dalton Supplies Limited. SN 154,570. Pub. 6–11–63. Filed 10–5–62.

755,662. CELL-O-SIPS. Harry E. Davis, d.b.a. Cell-O-Core Co. SN 155,239. Pub. 6–11–63. Filed 10–16–62.

755,663. SOS. Visual Communications, Inc. SN 155,456. Pub. 6–11–63. Filed 10–18–62.

Class 51 — Cosmetics and Toilet Preparations

755,664. FRIVOLE. Robert Richemond. SN 52,240. Pub. 6–11–63. Filed 5–23–58.

755,665. POLA. Suzuki-Shinobu Sohonsha Company, Limited. SN 98,167. Pub. 6–11–63. Filed 5–31–60.

755,666. POLA DESIGN. Suzuki-Shinobu Sohonsha Company, Limited. SN 98,168. Pub. 6–11–63. Filed 5–31–60.

755,667. SANTA'S SECRET SHOP. Rich's, Inc. SN 118,813. Pub. 6–11–63. Filed 4–27–61.

755,668. GROOM AND CLEAN. Chesebrough-Pond's Inc. SN 128,655. Pub. 6–11–63. Filed 9–26–61.

755,669. KRISTOL AND DESIGN. Kristol Products, Inc. SN 129,214. Pub. 6–11–63. Filed 10–4–61.

755,670. SWEET MYSTERY. Marguerite St. Pierre, Inc. SN 130,508. Pub. 6–11–63. Filed 10–23–61.

755,671. WALTER SCOTTS' AND DESIGN. Walter Scott, Inc. SN 139,340. Pub. 6–11–63. Filed 3–7–62.

755,672. OXYMINT. Gee Sales Company, Inc. SN 141,942. Pub. 6–11–63. Filed 4–10–62.

755,673. PRINTIL. Societe L'Oreal. SN 147,510. Pub. 6–11–63. Filed 6–22–62.

755,674. MAGIC COLOR. Lehn & Fink Products Corporation. SN 151,415. Pub. 6–11–63. Filed 8–17–62.

755,675. POLISHED LOOK. Scandia Cosmetics Corp. SN 155,280. Pub. 6–11–63. Filed 10–16–62.

755,676. CITATION AND DESIGN. The Mennen Company. SN 156,894. Pub. 6–11–63. Filed 11–8–62.

Class 52 — Detergents and Soaps

755,677. SPARK. Platt and Smillie Chemicals, Inc. SN 136,394. Pub. 6–11–63. Filed 1–23–62.

755,678. TANKAIRE. The Drackett Company. SN 145,066. Pub. 6–11–63. Filed 5–21–62.

755,679. WALTER SCOTTS' AND DESIGN. Walter Scott, Inc. SN 152,922. Pub. 6–11–63. Filed 9–11–62.

755,680. SQUIRTY. American Home Products Corporation. SN 157,042. Pub. 6–11–63. Filed 11–13–62.

755,681. SO FAST. Southland Paint Co., Inc. SN 157,162. Pub. 6–11–63. Filed 11–13–62.

755,682. CLEAN TOUCH. Roux Laboratories, Inc. SN 157,331. Pub. 6–11–63. Filed 11–15–62.

Service Marks

Class 100 — Miscellaneous

755,683. OT DESIGN. Optics Technology, Inc. SN 126,377. Pub. 6–11–63. Filed 8–21–61.

755,684. LA ZARAGOZANA. Desde 1830 Restaurant y Bar, S.A. SN 127,976. Pub. 6–11–63. Filed 9–8–61.

755,685. CONTINENTAL SECURITY GUARDS AND DESIGN. Arizona State Guard and Detective Agency. SN 136,326. Pub. 6–11–63. Filed 1–8–62.

755,686. COSMIC. Cosmic, Inc. SN 140,242. Pub. 6–11–63. Filed 8–20–62.

755,687. ADL. Arthur D. Little, Inc. SN 143,645. Pub. 6–11–63. Filed 5–2–62.

755,688. AVITROL. Phillips Petroleum Company. SN 144,879. Pub. 6–11–63. Filed 5–17–62.

755,689. LUCE PRESS CLIPPING AND DESIGN. Luce Press Clipping Bureau. SN 147,478. Pub. 6–11–63. Filed 6–22–62.

755,690. DUNKIE . DUNKIN' DONUTS AND DESIGN. Dunkin' Donuts of America, Inc. SN 148,609. Pub. 6–11–63. Filed 7–9–62.

Class 101 — Advertising and Business

755,691. COCK-A-DOODLE-DOO. Cock-A-Doodle-Doo, Inc. SN 141,253. Pub. 6–11–63. Filed 4–2–62.

755,692. G-E-X AND DESIGN. National Bellas Hess, Inc. SN 144,265. Pub. 6–11–63. Filed 5–10–62.

755,693. HELPING HANDS IN YOUR HOME AND DESIGN. The Suburban Homemaking & Maternity Agency, Inc. SN 146,427. Pub. 6–11–63. Filed 6–7–62.

Class 102 — Insurance and Financial

755,694. BANKERS TITLE GUARANTY COMPANY AND DESIGN. Bankers Title Guaranty Company. SN 136,337. Pub. 6–11–63. Filed 1–23–62.

755,695. FINANCIAL HOUSE AND DESIGN. Interstate Securities Company. SN 139,103. Pub. 6–11–63. Filed 3–5–62.

755,696. EPOCH. Harris Trust and Savings Bank. SN 143,955. Pub. 6–11–63. Filed 5–7–62.

755,697. TAG-A-BAG. Tag-A-Bag Company. SN 146,232. Pub. 6–11–63. Filed 6–5–62.

755,698. FIDELITY LIFE ASSOCIATION. Fidelity Life Association, a Mutual Legal Reserve Company. SN 147,461. Pub. 6–11–63. Filed 6–22–62.

755,699. KEY MAN IN YOUR FUTURE ETC. AND DESIGN. North Carolina Mutual Life Insurance Company. SN 149,666. Pub. 6–11–63. Filed 7–24–62.

Class 103 — Construction and Repair

755,700. BLUE HAVEN. Blue Haven Pools. SN 136,105. Pub. 6–11–63. Filed 1–19–62.

755,701. UNITED DELCO AND DESIGN. General Motors Corporation. SN 154,021. Pub. 6–11–63. Filed 9–27–62.

Class 104 — Communication

755,702. G DESIGN. Gilmore Broadcasting Corporation. SN 152,575. Pub. 6–11–63. Filed 9–6–62.

755,703. ABC AND DESIGN. American Broadcasting-Paramount Theatres, Inc. SN 156,354. Pub. 6–11–63. Filed 11–1–62.

Class 105 — Transportation and Storage

755,704. MAYFLOWER TOURS. Richard Joyce Smith, William J. Kirk, and Harry W. Dorigan, trustees of The New York, New Haven and Hartford Railroad Company. SN 140,588. Pub. 6–11–63. Filed S.R. 3–23–62; Am. P.R. 11–5–62.

755,705. PILGRIM TOURS. Richard Joyce Smith, William J. Kirk, and Harry W. Dorigan, trustees of The New York, New Haven and Hartford Railroad Company. SN 140,589. Pub. 6–11–63. Filed S.R. 3–23–62; Am. P.R. 11–5–62.

755,706. PMI AND DESIGN. Parking Management, Inc. SN 153,508. Pub. 6–11–63. Filed 9–19–62.

Class 106 — Material Treatment

755,707. COBOND. Graniteville Company. SN 128,999. Pub. 6–11–63. Filed 10–2–61.

755,708. PERMA-NEW. Permaflim, Inc. SN 134,898. Pub. 6–11–63. Filed 12–29–61.

755,709. RCS AND DESIGN. Rapid Copy Service, Inc. SN 143,868. Pub. 6–11–63. Filed 5–4–62.

Class 107 — Education and Entertainment

755,710. THE FELLOWSHIP HOUR. The Moody Bible Institute of Chicago. SN 143,654. Pub. 6–11–63. Filed 5–2–62.

Collective Membership Mark

Class 200

755,711. LAMBDA CHI ALPHA ORDER OF MERIT AND CROSS DESIGN. Lambda Chi Alpha Fraternity Incorporated. SN 106,727. Pub. 6–11–63. Filed 10–19–60.

Certification Mark

Class A — Goods

755,712. DALMATIAN. Sage Export. SN 152,093. Pub. 6–11–63. Filed 8–28–62.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

755,713. Surpass Leather Company, Philadelphia, Pa. SN 136,303. Filed P.R. 1–22–62; Am. S.R. 6–17–63.

AJMAL

The Arabic word "Ajmal" means "beautiful."
For Leather.
First use Sept. 27, 1961.

755,714. Druid Hill Park Seed Corp., Baltimore, Md. SN 151,789. Filed P.R. 8–23–62; Am. S.R. 6–18–63.

LAWN PATCH

For Combination Grass Seed and Soil Conditioner.
First use Feb. 28, 1953.

Class 6 — Chemicals and Chemical Compositions

755,715. Trade Paper Co., Inc., New York, N.Y. SN 141,004. Filed P.R. 3–28–62; Am. S.R. 5–15–63.

EDGE-LOK

For Preparation To Be Applied as an Aerosol Spray to the Edges of Cut-to-Pattern Piles of Fabrics To Prevent Unraveling.
First use Apr. 27, 1961.

755,716. West Chemical Products, Inc., Long Island City, N.Y. SN 147,876. Filed P.R. 6–27–62; Am. S.R. 6–28–63.

KLEEN-KIT

For Package Containing Disinfectants, Deodorants, Cleaning Preparations, Plastic Pump, and a Cotton Swab.
First use June 5, 1962.

Class 11 — Inks and Inking Materials

755,717. Mason Marking Systems Corporation, Norfolk, Va. SN 150,797. Filed P.R. 8–8–62; Am. S.R. 6–25–63.

BLACKMARK

For Ink.
First use on or about June 7, 1962.

Class 22 — Games, Toys, and Sporting Goods

755,718. Louis Marx & Company, Inc., New York, N.Y. SN 131,877. Filed P.R. 11–6–61; Am. S.R. 6–18–63.

TRAIN 'N TURNPIKE

For Toys Simulating a Railroad and a Highway With Traffic.
First use Oct. 6, 1961.

Class 38 — Prints and Publications

755,719. Putman Publishing Company, Chicago, Ill. SN 125,163. Filed P.R. 8–1–61; Am. S.R. 6–17–63.

INDUSTRIAL CRYOGENICS

For Magazine Which Is Also Bound Separately for Distribution Apart From the Magazine as a Separate Magazine.
First use June 8, 1961.

755,720. International Trade Club of Chicago, Chicago, Ill. SN 135,361. Filed P.R. 1–8–62; Am. S.R. 6–14–63.

INTERNATIONAL TRADE NEWS

For Monthly Newsletter.
First use Sept. 29, 1961.

755,721. Hitchcock Publishing Company, Wheaton, Ill. SN 147,737. Filed P.R. 6–26–62; Am. S.R. 6–17–63.

QUALITY CONTROL AND RELIABILITY

For Trade Magazine.
First use June 12, 1962.

755,722. Joseph R. Slevin, Washington, D.C. SN 150,723. Filed P.R. 8-7-62; Am. S.R. 6-19-63.

WASHINGTON BOND REPORT

For Newsletter Published at Regular Intervals.
First use June 15, 1962.

Class 45 — Soft Drinks and Carbonated Waters

755,723. Hanover Club Beverage Co., West Hanover, Mass. SN 98,062. Filed P.R. 5-31-60; Am. S.R. 3-4-63.



The lining of the drawing represents the color red.
For Carbonated Soft Drinks.
First use July 1948.

Class 46 — Foods and Ingredients of Foods

755,724. The Capital City Products Company, Columbus, Ohio. SN 140,384. Filed P.R. 8-21-62; Am. S.R. 5-9-63.

STA-BLAND

For Pure Vegetable Oil.
First use Mar. 13, 1962.

Class 47 — Wines

755,725. E. & J. Gallo Winery, Modesto, Calif. SN 159,342. Filed P.R. 12-18-62; Am. S.R. 6-24-63.



The mark consists of the conformation of a decanter used as the container for the goods.
For Wines.
First use October 1961.

755,726. Priv. Fabbrica Maraschino Excelsior Girolamo Luxardo S.p.A., Torreglia, Padova, Italy. SN 159,858.



Filed P.R. 12-18-62; Am. S.R. 6-25-63.
The mark consists of a conformation of a bottle of special configuration used as the container for the goods.
For Wines.
First use 1956; in commerce 1956.

Class 51 — Cosmetics and Toilet Preparations

755,727. Wolts-Prodotti di Bellezza S.R.L., Milan, Italy. SN 129,072. Filed P.R. 10-2-61; Am. S.R. 10-31-62.

"Woltz"

PRODOTTI DI BELLEZZA

The translation of "Prodotti di Bellezza" is "beauty products." Owner of Italian Reg. No. 69,581, dated June 26, 1946.
For Nail Enamels and Lacquers and Lipsticks.

755,728. Roux Laboratories, Inc., New York, N.Y. SN 151,265. Filed P.R. 8-15-62; Am. S.R. 6-21-63.

PAMPERED PEARL

For Hair Coloring Preparations in the Nature of a Rinse.
First use June 12, 1962.

Class 52 — Detergents and Soaps

755,729. The Procter & Gamble Company, Cincinnati, Ohio. SN 162,785. Filed 2-14-63.

PULSO

For Sudsing Cleaner, Cleanser, and Detergent.
First use Dec. 31, 1962.

Service Marks

Class 100 — Miscellaneous

755,730. Joseph Shaw Chalfant, Louisville, Ky. SN 133,761. Filed P.R. 12-11-61; Am. S.R. 6-14-63.

Broiling Makes the Difference

For Restaurant Services.
First use Aug. 11, 1961.

755,731. Joseph Shaw Chalfant, Louisville, Ky. SN 133,762. Filed P.R. 12-11-61; Am. S.R. 6-18-63.

BURGER BROIL

For Restaurant Services.
First use Aug. 11, 1961.

Class 103 — Construction and Repair

755,732. Arlen, Inc., Portland, Oreg. SN 146,001. Filed P.R. 6-4-62; Am. S.R. 3-1-63.

Arlens

For Repairing, Servicing, and Maintaining Electric Shavers and Electric Current Converters Therefor, Hair Clippers, Cigarette Lighters, and Cutlery, All Manufactured by Others.
First use Oct. 1, 1950.

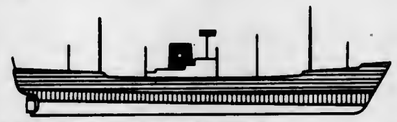
Class 105 — Transportation and Storage

755,733. Maritz, Inc., St. Louis, Mo. SN 123,020. Filed P.R. 6-28-61; Am. S.R. 11-14-62.

PLEASURE HOLIDAYS

For Travel Agency Services.
First use Mar. 15, 1961.

755,734. Dampskibsselskabet af 1912 A/S and A/S Dampskibsselskabet Svendborg (joint owners), Copenhagen, Denmark. SN 139,185. Filed P.R. 2-21-62; Am. S.R. 6-7-63.



The drawing is lined for blue and red.
For Transportation of Passengers and Freight by Surface Ships.
First use May 22, 1956; in commerce May 22, 1956.

TRADEMARK REGISTRATIONS RENEWED

165,949. GUMMITE. Cl. 1. 3-27-23.
166,235. EMPEROR. Cl. 23. 3-27-23.
166,466. MEADOW BLEACH. Cl. 42. 4-3-23.
167,126. UNCLE WILLIAM. Cl. 46. 4-24-23.
167,512. MOLDITE. Cl. 1. 5-1-23.
167,748. KENTUCKY ACE AND DESIGN. Cl. 12. 5-8-23.
168,676. DESIGN OF HORSESHOE AND DIAMOND FIGURE. Cl. 3. 5-29-23.
169,655. E. R. SQUIBB & SONS AND DESIGN. Cl. 18. 6-26-23.
170,097. NOX-I-DENE. Cl. 51. 7-10-23.
170,622. AGRINITE. Cl. 10. 7-17-23.
170,655. WORTHMORE. Cl. 46. 7-17-23.
170,800. SUPER. Cl. 46. 7-24-23.
170,801. SUPER-LOAF-. Cl. 46. 7-24-23.
170,938. SUPERBRED. Cl. 46. 7-24-23.
172,347. FREEZE-EM PICKLE AND DESIGN. Cl. 46. 8-28-23.
172,579. FREEZE-EM. Cl. 6. 9-11-23.
172,712. STANOLIND. Cl. 6. 9-11-23.
172,878. DESIGN OF A LEAF. Cl. 51. 9-11-23.
173,697. "KING-O'WINTER." Cl. 39. 10-2-23.
173,938. ANACONDA. Cl. 13. 10-2-23.
174,160. PREMIX. Cl. 23. 10-9-23.
174,880. POLAR. Cl. 30. 10-23-23.
174,889. CLASPET. Cl. 28. 10-23-23.
175,024. ANACONDA AND DESIGN. Cl. 13. 10-30-23.
175,025. ANACONDA AND DESIGN. Cl. 21. 10-30-23.
175,109. ANACONDA. Cl. 21. 10-30-23.
175,290. EAGLE AND DESIGN. Cl. 23. 11-6-23.
175,348. INLAND COPPER ALLOY AND DESIGN. Cl. 14. 11-6-23.
175,424. DESIGN PORTRAIT OF JOHN DAVEY. Cl. 6. 11-6-23.
175,564. D-ZERTA. Cl. 46. 11-6-23.
175,588. RE-NU-LAC. Cl. 16. 11-6-23.
176,309. CRIMSON HEAT. Cl. 6. 11-20-23.
176,654. PUSSYFEET. Cl. 13. 11-27-23.
177,019. COUNTESS. Cl. 46. 12-11-23.
177,170. BABY. Cl. 46. 12-11-23.
177,582. POINTER BRAND AND DESIGN. Cl. 39. 12-18-23.
400,069. PASTA DI LUSSO. Cl. 46. 2-16-43.
401,070. WHITE LIGHTNING. Cl. 39. 4-20-43.
401,456. DIAMALLOY AND DESIGN. Cl. 23. 5-18-43.
401,457. DIAMOND AND DESIGN. Cl. 23. 5-18-43.
401,561. HYMARK. Cl. 37. 5-25-43.
402,113. X-L AND DESIGN. Cl. 35. 6-29-43.
402,325. HELM'S ROB-A-SAN. Cl. 18. 7-13-43.
402,326. GAMESTER. Cl. 42. 7-13-43.
402,354. FASTAX. Cl. 26. 7-13-43.
402,398. B AND DESIGN. Cl. 13. 7-20-43.
402,580. FIREYE. Cl. 21. 8-3-43.
402,666. BLUE BOY. Cl. 46. 8-10-43.
402,779. HIGALON HIGALON AND DESIGN. Cl. 18. 8-10-43.
402,934. O SOLE MIO. Cl. 46. 8-24-43.
403,530. UTIL-A-TOOL. Cl. 23. 9-28-43.
403,647. FLYING COLORS AND DESIGN. Cl. 46. 10-5-43.
403,800. TRICHOTINE. Cl. 6. 10-19-43.
404,272. ZUGRA. Cl. 42. 11-16-43.
404,300. ST. MARK. Cl. 47. 11-16-43.
404,308. O'LITE. Cl. 16. 11-16-43.
404,560. KEY BRAND. Cl. 6. 12-7-43.
404,574. FOOT HIGH AND DESIGN. Cl. 46. 12-7-43.
404,668. SURE WINNER. Cl. 46. 12-14-43.
404,747. ADDRESSOLOY. Cl. 14. 12-21-43.

TRADEMARK REGISTRATIONS CANCELED

Section 8

629,053. WINDOW-MATIC. Cl. 23. 6-19-56.
631,825. NIP-MOCA INJUNS ETC. AND DESIGN. Cl. 39. 7-31-56.

The following registrations issued July 9, 1957

648,020. DESIGN OF GROTESQUE MAN. Cl. 1.
648,024. WA-XTRA. Cl. 2.
648,025. TRI-TEX. Cl. 2.
648,026. GARB-A-MATIC. Cl. 2.
648,027. PRESTO-PURSE. Cl. 3.
648,028. PIGGY BACK. Cl. 3.
648,031. MIRRETTE. Cl. 4.
648,035. TEKSTRIP. Cl. 5.
648,042. SKOTCH KOOLER. Cl. 6.
648,048. FLY BYE. Cl. 6.
648,053. BLAUTOL. Cl. 6.
648,060. SANDCHEM. Cl. 6.
648,070. AIR-SPARE. Cl. 13.
648,076. SANITIFIC. Cl. 13.

648,096. BARELASTIC. Cl. 16.
648,099. MAGIC MINERAL. Cl. 16.
648,103. INVINCINITE. Cl. 16.
648,105. GEN. 715. Cl. 16.
648,108. MAR-CAS-ITE. Cl. 16.
648,116. SOOTH-ETTS. Cl. 18.
648,121. PRESCRIPTION 1500. Cl. 18.
648,128. SMART AND DESIGN. Cl. 18.
648,134. VI-FUNK VITASPHERES. Cl. 18.
648,135. VI-FLAN. Cl. 18.
648,138. EAGLE BRAND AND DESIGN. Cl. 19.
648,140. BERMUDA. Cl. 19.
648,142. EMPIRE. Cl. 19.
648,144. SCAT CRAFT. Cl. 19.
648,146. PANTOBASE. Cl. 19.
648,148. CONTOUR TWIN. Cl. 19.
648,150. THE TIME LIGHTER. Cl. 21.
648,153. REMTRON. Cl. 21.
648,156. PERMASHUNT. Cl. 21.
648,163. PINON AND DESIGN. Cl. 21.
648,178. UF-X AND DESIGN. Cl. 21.
648,180. GRIP-SAVER TUBES. Cl. 22.
648,182. THE ADVENTURES OF RIN-TIN-TIN. Cl. 22.
648,185. NODDY. Cl. 22.
648,187. MINNESOTAN. Cl. 22.
648,188. "BAR-FLY." Cl. 22.
648,191. VARICOMP. Cl. 22.
648,192. CROWN JEWEL AND DESIGN. Cl. 22.
648,196. "RIB-KING." Cl. 23.
648,199. CHARLESCRAFT. Cl. 23.
648,200. "AMERE." Cl. 23.
648,203. SM SHOPMASTER AND DESIGN. Cl. 23.
648,205. WINDO-ZIPPER. Cl. 23.
648,208. MIEHLE LITHOPRINT. Cl. 23.
648,215. BRIGHT STAR. Cl. 23.
648,243. V-LINE. Cl. 26.
648,244. PROJECT O SPOT AND DESIGN. Cl. 26.
648,248. NORTHWESTER. Cl. 27.
648,251. MIAMI. Cl. 27.
648,254. E-Z. Cl. 28.
648,255. PEE-WEE. Cl. 28.
648,256. RITE-FIT. Cl. 28.
648,258. LEADING BAND. Cl. 28.
648,262. COLDMAKER. Cl. 31.
648,265. FIN FARE. Cl. 31.
648,268. ZEDBED. Cl. 32.
648,270. SHARPE. Cl. 32.
648,275. LONGFELLOW. Cl. 33.
648,278. "JET-FLO" AND DESIGN. Cl. 34.
648,284. FIVE STAR. Cl. 35.
648,289. RURAL RHYTHM. Cl. 36.
648,291. MOHAWK. Cl. 36.
648,297. TV SCOPE AND DESIGN. Cl. 38.
648,298. LAUGHING WORLD AND DESIGN. Cl. 38.
648,300. SUPER-PAC. Cl. 38.
648,308. CHRISTMAS FANTASIA. Cl. 38.
648,309. MONITOR. Cl. 38.
648,311. MYRA LEE. Cl. 39.
648,312. "ANGEL KISS." Cl. 39.
648,313. POSTURE GUIDE AND DESIGN. Cl. 39.
648,318. CRAFTSHIRE. Cl. 39.
648,320. SUMMIT SPORTWEAR ETC. AND DESIGN. Cl. 39.
648,322. POODLE HUG-ME-TIGHT. Cl. 39.
648,326. TOWNE DEB. Cl. 39.
648,332. MR. WONDERFUL AND DESIGN. Cl. 39.
648,336. MAGICLOSE. Cl. 39.
648,344. AMERICAN DEB. Cl. 39.
648,347. EGYPTIENNE DRESS LINE. Cl. 42.
648,349. BEAUTY SHEER. Cl. 42.
648,350. MARIANNE MILLS. Cl. 42.
648,351. SHEER-GLO. Cl. 42.
648,352. BLENDWELL ETC. AND DESIGN. Cl. 42.
648,353. TRIPLE-TWIST WEVE. Cl. 42.
648,354. CUDDLIE. Cl. 42.
648,359. NEWLON. Cl. 43.
648,371. FOREMOST F AND DESIGN. Cl. 45.
648,374. DOLLY KAY'S. Cl. 46.
648,377. SANCAL. Cl. 46.
648,382. CABANA STICKS. Cl. 46.
648,389. SPEEDMASTER AND DESIGN. Cl. 50.
648,391. STEELITE. Cl. 50.
648,402. WINGED CAMERA SERVICE AND DESIGN. Cl. 100.
648,408. DURATONE. Cl. 106.
648,409. PICTO AND DESIGN. Cl. 107.
648,410. S AND DESIGN. Cl. 107.
648,411. WILL'S RANGERS AND DESIGN. Cl. 200.
648,412. LIBERTY SEAL OF APPROVAL AND DESIGN. Cl. A.
648,414. REPRESENTATION OF HAND AND PLUG OF TURF. Cl. 1.
648,415. JIFFY WRAP COIN SCOOP AND DESIGN. Cl. 2.
648,416. MRS. STEWART'S AND DESIGN. Cl. 2.
648,417. NEEDHAM AND DESIGN. Cl. 2.
648,419. DOLL-E-MEALTIME. Cl. 22.
648,422. DOIL-EASE. Cl. 37.
648,425. ENGRAVA-PRINT. Cl. 38.
648,430. PRO PHYLACTIC PANT. Cl. 39.
648,431. SMARTCAPS. Cl. 39.
648,433. FOAM CUSHON. Cl. 42.
648,434. CROSBY'S. Cl. 45.
648,438. TOOTHTABS AND DESIGN. Cl. 51.
648,440. KITCHEN KIT. Cl. 52.
648,442. MRS. STEWART'S AND DESIGN. Cl. 52.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

167,194. EVERGREEN BRAND. Cl. 46. 4–24–23. Carl Marty and Company. The Borden Company, New York, N.Y. Amended: In the statement, column 2, lines 7 through 9 are deleted, and the drawing is amended to appear:

EVERGREEN BRAND

226,587. BOSTITCH. Cl. 18. 4–12–27. Boston Wire Stitcher Company. Bostitch, Inc., East Greenwich, R.I. Amended to appear:

BOSTITCH

650,570. REPRESENTATION OF SOLDIER. Cl. 39. 8–20–57. J. P. Smith Shoe Company. E. E. Taylor Corporation, Augusta and Freeport, Maine. Amended: In the statement, column 2, line 1, before "shoes" *men's* is inserted.

724,066. KIWI. Cl. 4. 11–21–61. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Amended: In the statement, column 2, line 1, "shoeshine preparation" is deleted and *a spray shine for polishing shoes and other leather goods* is inserted.

747,722. REDEEMA. Cl. 51. 4–2–63. Maradel Products Inc., New York, N.Y. Corrected: In the statement, column 2, lines 1 and 2, "to reduce wrinkles" should be deleted.

748,079. 600. Cl. 21. 4–16–63. George Cohen Sons and Company Limited, London, England. Corrected: In the statement, column 2, lines 1 through 4, the description of goods should be deleted and *switchgear, switchboards, distribution boards; electric motors; electric starters for internal combustion engines; electric traffic signals; electric welding machinery; transformers, circuit breakers, rectifiers, converters, condensers, alternators, frequency changing apparatus and insulated cable wire, all being electric; electric welding apparatus, electro-plating apparatus; apparatus for generating electric current; and bearings (being parts of electrical machines)* should be inserted.

749,176. TUFFLEX. Cl. 42. 5–7–63. Wood Conversion Company, St. Paul, Minn. Amended: In the statement, column 2, line 4 is deleted and *Owner of Reg. Nos. 500,283, 504,595, 504,963 and 510,039.* is inserted.

INDEX OF REGISTRANTS

AUGUST 27, 1963

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A.J. Art & Design: *See*— Jamison, Albert L.
ABC Vending Corp., d.b.a. ABC Vending Corp., Long Island City, N.Y. 755,608, pub. 6–11–63. Cl. 45.
Add-A-Zyme, Inc., Wheaton, Minn. 755,352, pub. 6–11–63. Cl. 18.
Addressograph-Multigraph Corp., Cleveland, Ohio. 755,439, pub. 6–11–63. Cl. 23.
Addressograph-Multigraph Corp., Cleveland, Ohio. 755,530, pub. 6–11–63. Cl. 37.
Addressograph-Multigraph Corp., Cleveland, Ohio. 404,747, ren. 8–27–63. Cl. 14.
Adler, Matthew M., Inc. San Francisco, Calif. 648,326, canc. Cl. 39.
Agfa Aktiengesellschaft fur Photofabrikation, Leverkusen-Bayerwerk, Germany. 648,058, canc. Cl. 6.
Alchem Co., The: *See*— Shackelford, Alphonso L.
Allied Metal Spinning Corp., New York, N.Y. 755,328, pub. 6–11–63. Cl. 18.
Allied Mills, Inc., Chicago, Ill. 755,639, pub. 6–11–63. Cl. 46.
Allstate Insurance Co., Skokie, Ill. 755,556, pub. 6–11–63. Cl. 38.
Alpen Co., The, St. Louis, Mo., to American Home Products Corp., New York, N.Y. 176,309, ren. 8–27–63. Cl. 6.
Aluminum Truck Bodies, Inc., St. Louis, Mo. 755,365, pub. 6–11–63. Cl. 19.
Alvin Products, Inc., Worcester, Mass. 755,320, pub. 6–11–63. (Consolidated certificate, Classes 12, 14, and 50.)
Amerex Trading Corp., New York, N.Y. 648,200, canc. Cl. 28.
American Agricultural Chemical Co., The, to The American Agricultural Chemical Co., New York, N.Y. 170,622, ren. 8–27–63. Cl. 10.
American Binder Co., Inc., The, Brooklyn, N.Y. 648,150, canc. Cl. 21.
American Broadcasting-Paramount Theatres, Inc., New York, N.Y. 755,703, pub. 6–11–63. Cl. 104.
American Can Co., New York, N.Y. 755,258, pub. 6–11–63. Cl. 2.
American Cellulose & Chemical Mfg. Co., Ltd., The, to Celanese Corp. of America, New York, N.Y. 167,512, ren. 8–27–63. Cl. 1.
American Home Products Corp., New York, N.Y. 755,557, pub. 6–11–63. Cl. 38.
American Home Products Corp., New York, N.Y. 755,680, pub. 6–11–63. Cl. 52.
American Home Products Corp.: *See*— Alpen Co., The.
American Metal Specialties Corp., Hatboro, Pa. 648,419, canc. Cl. 22.
American Porcelain Enamel Co., Muskegon, Mich. 755,314, pub. 6–11–63. Cl. 12.
American Tobacco Co., The, New York, N.Y. 755,841, pub. 6–11–63. Cl. 17.
Amerika-Echo, Inc., Chicago, Ill. 755,563, pub. 6–11–63. Cl. 38.
Anaconda Co., The: *See*— Anaconda Copper Mining Co.
Anaconda Copper Mining Co. to The Anaconda Co., New York, N.Y. 173,938, ren. 8–27–63. Cl. 13.
Anaconda Copper Mining Co. to The Anaconda Co., New York, N.Y. 175,024–5, ren. 8–27–63. Cl. 13.
Anaconda Copper Mining Co. to The Anaconda Co., New York, N.Y. 175,109, ren. 8–20–63. Cl. 21.
Anchor Hocking Glass Corp., Lancaster, Ohio. 755,481, pub. 6–11–63. Cl. 33.
Anchor Rubber Products, Inc., Cleveland, Ohio. 648,148, canc. Cl. 19.
Anderson, Albert F., Minneapolis, Minn. 648,070, canc. Cl. 18.
Anderson Electric Corp., Leeds, Ala. 755,394, pub. 6–4–63. (Consolidated certificate, Classes 21 and 23.)
Ansa Fone Corp., Inglewood, Calif. 755,389, pub. 6–11–63. Cl. 21.
Arizona State Guard and Detective Agency, Phoenix, Ariz. 755,685, pub. 6–11–63. Cl. 100.
Arlen, Inc., Portland, Oreg. 755,732. Cl. 103.
Arnav Shoe Corp., from Intercontinental Development Corp., Little Ferry, N.J. 755,275, pub. 6–11–63. Cl. 5.
Arol Chemical Products Co., Jersey City, N.J. 755,271, pub. 6–11–63. Cl. 4.
Arteraft Mills, Inc., Darby, Pa. 648,312, canc. Cl. 39.
Associated Press, The, New York, N.Y. 755,564, pub. 6–11–63. Cl. 38.
Associated Press, The, New York, N.Y. 755,558, pub. 6–11–63. Cl. 38.
Aunt Jane's Foods, Inc., Dearborn, Mich. 755,637, pub. 6–11–63. Cl. 46.
Austin Flooring Co., Chicago, Ill. 755,323, pub. 6–11–63. Cl. 12.
Avdel, Inc., Burbank, Calif. 755,562, pub. 6–11–63. Cl. 38.
Babbitt, B. T., Inc., New York, N.Y. 648,440, canc. Cl. 52.
Bacon, Eleanor, Hollywood, Calif. 648,322, canc. Cl. 39.
Baimm Pharmacal Corp., New York, N.Y. 755,357, pub. 6–11–63. Cl. 18.
Ball, E. James, d.b.a. Lifetronics Research, Rancho Santa Fe, Calif. 755,542, pub. 6–11–63. Cl. 38.
Bankers Title Guaranty Co., Sacramento, Calif. 755,694, pub. 6–11–63. Cl. 102.
Barbera, Edward, to Barbera Packing Corp., Lodi, Calif. 402,934, ren. 8–27–63. Cl. 46.
Barbera Packing Corp.: *See*— Barbera, Edward.
Bargreen Coffee Co.: *See*— Bargreen Coffee & Restaurant Equipment Co., Inc.
Bargreen Coffee & Restaurant Equipment Co., Inc., d.b.a. Bargreen Coffee Co., Everett, Wash. 755,625, pub. 6–11–63. Cl. 46.
Barker, Moore & Mein Co., Philadelphia, Pa. 648,048, canc. Cl. 6.
Bartlett, G. M., Kevo Co.: *See*— Golden Valley Brands, Inc.
Bartlett, George M.: *See*— Golden Valley Brands, Inc.
Bartlett, M. Elizabeth: *See*— Golden Valley Brands, Inc.
Barton Distilling Co., Chicago, Ill. 755,655, pub. 6–11–63. Cl. 49.
Batt, Dr. Med. Dent. Hugo, Bern, Switzerland. 755,406, pub. 6–11–63. Cl. 22.
Bauman, Walter O., d.b.a. U.S. Watch Repair Co., West Orange, N.J. 648,251, canc. Cl. 27.
Baum's Castorine Co., Inc., Rome, N.Y. 755,278, pub. 6–11–63. Cl. 6.
Beacon Looms Inc., New York, N.Y. 648,351, canc. Cl. 42.
Bear Mfg. Co., Rock Island, Ill. 755,450, pub. 6–11–63. Cl. 26.
Becharas Brothers Coffee Co., Detroit, Mich. 755,647, pub 6–11–63. Cl. 46.
Beck, A. C., Mfr.: *See*— Beck, Albin C.
Beck, Albin C., d.b.a. A. C. Beck, Mfr., Minneapolis, Minn. 648,187, canc. Cl. 22.
Bedford Shirt Corp., New York, N.Y. 648,332, canc. Cl. 39.
"Belfrut" Gesellschaft mit beschrankter Haftung, from Firma Belfrut Allgau-Oberland-Getranke G.m.b.H., Wangen, Allgau, Germany. 755,607, pub. 6–11–63. Cl. 45.
Bemis Bro. Bag Co., Minneapolis, Minn. 648,035, canc. Cl. 5.
Bender Glick Sportswear Mfg. Co., d.b.a. Bender-Glick, Chicago, Ill. 755,565. Cl. 39.
Bender-Glick: *See*— Bender Glick Sportswear Mfg. Co.
Berch Silk Co. Inc., New York, N.Y. 648,352, canc. Cl. 42.
Berkshire Hathaway, Inc., Providence, R.I. 648,349, canc. Cl. 42.
Bernhardt, Adolph C., Jr., d.b.a. Coin Scoop Co., to The Coin Scoop Co., a partnership composed of G. E. Green and C. W. Lehardy, Baltimore, Md. 648,415, canc. Cl. 2.
Besco Products Co., Inc., Zebulon, Ga. 755,652, pub. 6–11–63. Cl. 46.
Beseler, Charles, Co., East Orange, N.J. 755,550, pub. 6–11–63. Cl. 38.
Billings & Spencer Co., The, Hartford, Conn., to Crescent Niagara Corp., Buffalo, N.Y. 402,398, ren. 8–27–63. Cl. 13.
Billups Western Petroleum Co., Hammond, La. 755,490, pub. 6–11–63. Cl. 35.
Billups Western Petroleum Co., Hammond, La. 755,289, pub. 6–11–63. Cl. 6.
Billups Western Petroleum Co., Hammond, La. 755,391, pub. 6–11–63. Cl. 21.
Bissell Inc., Grand Rapids, Mich. 755,435–7, pub. 6–11–63. Cl. 23.
Blue Haven Pools, North Hollywood, Calif. 755,700, pub. 6–11–63. Cl. 103.
Blum & Bergeron, to L. Blum, d.b.a. Blum & Bergeron, Houma, La. 177,170, ren. 8–27–63. Cl. 46.
Blum, Leopold: *See*— Blum & Bergeron.
Bo-Dar, Inc., Des Moines, Iowa. 755,370, pub. 6–22–63. Cl. 19.
Bonded Mobile Homes, New Albany, Ind. 755,361, pub. 6–11–63. Cl. 19.
Bonner, Howard T., d.b.a. Bonner Specialties, Los Angeles, Calif. 648,191, canc. Cl. 22.
Bonner Specialties: *See*— Bonner, Howard T.
Borden Co., The: *See*— Marty, Carl, and Co.
Boston Wire Stitcher Co. Bostitch, Inc., East Greenwich, R.I. 226,587. Am. 7(d). Cl. 13.
Brach, E. J., & Sons, Chicago, Ill. 755,650, pub. 6–11–63. Cl. 46.
Bradley, Milton, Co., Springfield, Mass. 755,410, pub. 6–11–63. Cl. 22.
Brewster Shirt Corp., New York, N.Y. 755,566, pub. 6–11–63. Cl. 39.
Briddell, Chas. D., Inc.: *See*— Briddell, Charles D., Inc.
Briddell, Charles D., Inc., d.b.a. Chas. D. Briddell, Inc., Crisfield, Md. 755,444, pub. 6–11–63. Cl. 23.

Bridge Corp. of America, Los Angeles, Calif. 755,403, pub. 6–11–63. Cl. 22.
Bridge Corp. of America, Los Angeles, Calif. 755,522, pub. 6–11–63. Cl. 37.
Brooks, A. N., Ltd., Chicago, Ill. 648,192, canc. Cl. 22.
Brother Sewing Machine Corp. of Pennsylvania, Philadelphia, Pa. 629,053, canc. Cl. 23.
Brown, Arthur, & Bro., Inc., New York, N.Y. 755,536, pub. 6–11–63. Cl. 38.
Brown, Herbert R., Jr.: *See*—
Fin Fare Products Co.
Brown Products, Inc., Nashua, N.H. 755,529, pub. 6–11–63. Cl. 37.
Bruner-Ritter, Inc., New York, N.Y. 648,255, canc. Cl. 28.
Buehler Ltd., Evanston, Ill. 755,429, pub. 6–11–63. Cl. 23.
Buescher's Industries, Inc., Washington, Mo. 755,300, pub. 6–11–63. Cl. 8.
Buffington's Inc., Worcester, Mass. 755,358, pub. 6–11–63. Cl. 18.
Bureau of National Affairs, Inc., The, Washington, D.C. 755,539–40, pub. 6–11–63. Cl. 38.
Burlington Industries, Inc.: *See*—
Ely & Walker Dry Goods Co.
Stirn, L. & E., Inc.
Wyman, Partridge & Co.
Burman, C. N., Co., Paterson, N.J. 648,163, canc. Cl. 21.
Burns, Jabez, & Sons, to Jabez Burns & Sons, Inc., New York, N.Y. 174,160, ren. 8–27–63. Cl. 23.
Burns, Jabez, & Sons, Inc.: *See*—
Burns, Jabez, & Sons.
Cahn, Bernard, Co., Inc., New York, N.Y. 648,028, canc. Cl. 3.
California Wine Sales, Inc., to Guild Wine Co., Lodi, Calif. 404,300, ren. 8–27–63. Cl. 47.
Capex Co., Inc., Evanston, Ill. 648,391, canc. Cl. 50.
Capital City Products Co., The, Columbus, Ohio. 755,724. Cl. 46.
Capitol Food Corp., San Fernando, Calif. 755,644, pub. 5–14–63. Cl. 46.
Caradco Inc., from Durel Inc., d.b.a. Durel, Inc., Dubuque, Iowa. 755,313, pub. 10–24–61. Cl. 12.
Caribe Food Products, Inc., Albuquerque, N. Mex. 755,618, pub. 6–11–63. Cl. 46.
Carry-Pack Corp., Schiller Park, Ill. 755,659, pub. 6–11–63. Cl. 50.
Carter Corp., Morrisville, Pa. 755,417, pub. 6–11–63. Cl. 22.
Cas-Craft, Inc., Knightstown, Ind. 755,660, pub. 6–11–63. Cl. 50.
Caulk, L. D., Co., The, Milford, Del. 755,603–4, pub. 6–11–63. Cl. 41.
Celanese Corp. of America, New York, N.Y. 755,252–5, pub. 6–11–63. Cl. 1.
Celanese Corp. of America, New York, N.Y. 755,249, pub. 6–11–63. Cl. 1.
Celanese Corp. of America: *See*—
American Cellulose & Chemical Mfg. Co. Ltd., The.
Certified Metal Products, Inc., Chicago, Ill. 648,389, canc. Cl. 50.
Cerviscope Co.: *See*—
Strauch, Axel E.
Chalfant, Joseph S., Louisville, Ky. 755,730–1. Cl. 100.
Charles, Inc., The, d.b.a. The Ril-Sno Products Co., Wichita Falls, Tex. 755,340, pub. 6–11–63. Cl. 16.
Charmfit of Hollywood, Inc., Los Angeles, Calif. 648,336, canc. Cl. 39.
Chatham Creations: *See*—
Seltzer, Allan L.
Chemiquip Co.: *See*—
Lipman, Julian A.
Chesebrough-Pond's Inc., New York, N.Y. 755,668, pub. 6–11–63. Cl. 51.
Chester Cable Corp., Chester, N.Y. 648,173, canc. Cl. 21.
Chicago Wheel & Mfg. Co., Chicago, Ill. 755,272, pub. 6–11–63. Cl. 4.
Chicken Delight, Inc., Rock Island, Ill. 755,640, pub. 6–11–63. Cl. 46.
Childrens Press, Inc., Chicago, Ill. 755,541, pub. 6–11–63. Cl. 38.
Chilstrom, Marjorie W., d.b.a. Vital Food Co. of California, Los Angeles, Calif. 755,622–3, pub. 6–11–63. Cl. 46.
Christensen, Antone M., d.b.a. Lortone, Seattle, Wash. 755,261, pub. 6–11–63. Cl. 2.
Christian & Snyder Bakery Service, Oakland, Calif. 755,611, pub. 6–11–63. Cl. 46.
Christophill, Joseph, Chicago, Ill. 755,486, pub. 6–11–63. Cl. 34.
Chun King Corp., The, Duluth, Minn. 755,651, pub. 6–11–63. Cl. 46
Cincinnati Shaper Co., The, Cincinnati, Ohio. 755,432, pub. 6–11–63. Cl. 23.
Cities Service Research and Development Co., New York, N.Y. 648,060, canc. Cl. 6.
Cock-A-Doodle-Doo, Inc., Cedar Rapids, Iowa. 755,691, pub. 6–11–63. Cl. 101.
Cohen, George, Sons and Co. Ltd., London, England. 748,079, cor. Cl. 21.
Cohn-Hall-Marx Co., to United Merchants and Mfrs., Inc., New York, N.Y. 402,326, ren. 8–27–63. Cl. 42.
Coin Scoop Co., The: *See*—
Bernhardt, Adolph C., Jr.
Coldmaker Products Co.: *See*—
Simpson, Arthur A.
Colfax Industries, Clifton, N.J. 755,574, pub. 6–11–63. Cl. 39.
Collins & Aikman Corp., New York, N.Y. 648,433, canc. Cl. 42.
Collins Chemical Corp., North Miami, Fla. 755,345, pub. 6–11–63. Cl. 18.
Colpitts Tourist Co., Inc., Boston, Mass. 755,546, pub. 6–11–63. Cl. 38.
Colt's Patent Fire Arms Mfg. Co., Inc., Hartford, Conn. 755,302, pub. 6–11–63. Cl. 9.
Combustion Control Corp., to Electronics Corp. of America, Cambridge, Mass. 402,580, ren. 8–27–63. Cl. 21.
Comet Rice Mills, Inc., Houston, Tex. 755,635, pub. 6–11–63. Cl. 46.
Community Bakeries: *See*—
Community Shops Inc.
Community Shops Inc., d.b.a. Community Bakeries, Chicago, Ill. 755 645, pub. 6–11–63. Cl. 46.
Commercial Solvents Corp., New York, N.Y. 755,347, pub. 6–11–63. Cl. 18.
Compagnie General D'Electricite, Paris, France. 165,949, ren. 8–27–63. Cl. 1.
Consolidated Foods Corp.: *See*—
Marshall Canning Co.
Cordovan Associates, Inc., Dayton, Ohio. 755,493, pub. 6–11–63. Cl. 35.
Cosmic, Inc., Washington, D.C. 755,686, pub. 6–11–63. Cl. 100.
Coty, Inc., New York, N.Y. 172,878, ren. 8–27–63. Cl. 51.
Craftshire Sports, Inc., New York, N.Y. 648,318, canc. Cl. 39.
Cramer, Stanley S., d.b.a. S.S.C. Laboratory, Ikeechobee, Fla. 755,380, pub. 6–11–63. Cl. 21.
Creed, Charles D., Jr.: *See*—
Helm, Ray P.
Crescent Niagara Corp.: *See*—
Billings & Spencer Co., The.
Crosby Fruit Products Co., La Habra, Calif. 648,484, canc. Cl. 45.
Croton Compound Corp., New York, N.Y. 755,492, pub. 6–11–63. Cl. 35.
Crowley's Milk Co., Inc., Binghamton, N.Y. 755,616, pub. 6–11–63. Cl. 46.
Crown Controls Corp., New Bremen, Ohio. 755,426, pub. 6–11–63. Cl. 23.
Curran, Ray, & Co., Providence, R.I. 755,464, pub. 6–11–63. Cl. 28.
Curtice-Burns, Inc.: *See*—
Haxton Canning Co., Inc.
Dalton Supplies Ltd., Nettlebed, Henley-On-Thames, England. 755,661, pub. 6–11–63. Cl. 50.
Dampskibsselskabet AF 1912 A/S, and A/S Dampskibsselskabet Svendborg, Copenhagen K, Denmark. 755,734. Cl. 105.
Dash, Irene, Greeting Card Co., Inc., New York, N.Y. 648,308, canc. Cl. 38.
Daugherty, Ralph K., San Jose, Calif. 755,407, pub. 6–11–63. Cl. 22.
Davey Tree Expert Co., The, Kent, Ohio. 175,424, ren. 8–27–63. Cl. 6.
Davis, Harry E., d.b.a. Cell-O-Core Co., Akron, Ohio. 755,662, pub. 6–11–63. Cl. 50.
Davis, Les, Fishing Tackle Co.: *See*—
Davis, Lester M.
Davis, Lester M., d.b.a Les Davis Fishing Tackle Co., Tacoma, Wash. 755,409, pub. 6–11–63. Cl. 22.
Dayco Corp., Dayton, Ohio. 755,504, pub. 6–11–63. Cl. 35.
Dayton Tire & Rubber Co., The, Dayton, Ohio. 755,488, pub. 8–28–62. Cl. 35.
De-Cor Jewelry Co.: *See*—
Khalaf, Phil S.
Delaware Barrel and Drum Co., Inc., Wilmington, Del. 755,268, pub. 5–14–63. Cl. 2.
Delightform Foundations, Inc., Easton, Pa. 755,571, pub. 6–11–63. Cl. 39.
Desde 1830 Restaurant y Bar, S.A., Havana, Cuba. 755,684, pub. 6–11–63. Cl. 100.
Desoto Chemical Coatings, Inc., Chicago, Ill. 755,338, pub. 6–11–63. Cl. 16.
Devoe & Raynolds Co., Inc.: *See*—
Peaslee-Gaulbert Co.
Devolite Corp., New York, N.Y. 755,448, pub. 6–11–63. Cl. 26.
Diagraph-Bradley Industries, Inc., Herrin, Ill. 755,518, pub. 6–11–63. Cl. 37.
Diamond Calk and Horseshoe Co., to Diamond Tool and Horseshoe Co., Duluth, Minn. 168,676, ren. 8–27–63. Cl. 3.
Diamond Calk Horseshoe Co., to Diamond Tool and Horseshoe Co., Duluth, Minn. 401,456–7, ren. 8–27–63. Cl. 23.
Diamond, Sam, Knitting Mills, Inc., Chicago, Ill. 755,573, pub. 6–11–63. Cl. 39.
Diamond Tool and Horseshoe Co.: *See*—
Diamond Calk and Horseshoe Co.
Diamond Calk Horseshoe Co.
Diversey Corp., The, Chicago, Ill. 755,422, pub. 6–11–63. Cl. 23.
Dixon, Joseph, Crucible Co., Jersey City, N.J. 648,099, canc. Cl. 16.
Documentation, Inc., Bethesda, Md. 755,559, pub. 6–11–63. Cl. 38.
Dorigan, Harry W.: *See*—
Smith, Richard Joyce, William J. Kirk, and Harry W. Dorigan.
D'Orsay Mills, Inc., Reading, Pa. 755,583, pub. 6–11–63. Cl. 39.
Dorson-Fleisher Inc., Manchester, N.H. 755,577, pub. 6–11–63. Cl. 39.
Dow Chemical Co., The, Midland, Mich. 755,257, pub. 6–11–63. Cl. 2.
Dow Chemical Co., The, Midland, Mich. 755,315, pub. 6–11–63. Cl. 12.
Drackett Co., The, Cincinnati, Ohio. 755,678, pub. 6–11–63. Cl. 52.
Drico Industrial Corp., Passaic, N.J. 755,475, pub. 6–11–63. Cl. 31.

Drug Development Corp., Brooklyn, N.Y. 755,349, pub. 6–11–63. Cl. 18.
Druid Hill Park Seed Corp., Baltimore, Md. 755,714. Cl. 1.
Dunkick Tool Works, Inc., Chicago, Ill. 755,259, pub. 6–11–63. Cl. 2.
Dunkin' Donuts of America, Inc., Quincy, Mass. 755,690, pub. 6–11–63. Cl. 100.
Du Pont de Nemours and Co., Wilmington, Del. 755,247–8, pub. 6–11–63. Cl. 1.
Durel, Inc.: *See*—
Caradco Inc.
Duro Pen Co., Inc., New York, N.Y. 755,531, pub. 6–11–63. Cl. 37.
Eastern Associates, Ltd.: *See*—
Zephyr Radio Co., Ltd.
Edmont Inc., Coshocton, Ohio. 755,570, pub. 6–11–63. Cl. 39.
Eisenstadt Mfg. Co., St. Louis, Mo. 174,889, ren. 8–27–63. Cl. 28.
Electronics Corp. of America: *See*—
Combustion Control Corp.
Electro-Optical Systems, Inc., Pasadena, Calif. 755,384, pub. 6–11–63. Cl. 21.
Elite Stamp Service, Victoria, British Columbia, Canada. 755,560, pub. 6–11–63. Cl. 38.
Ely & Walker Dry Goods Co., d.b.a. Lincoln Knit Goods Mills, St. Louis, Mo., to Burlington Industries, Inc., Greensboro, N.C. 173,697, ren. 8–27–63. Cl. 39.
Emenee Industries, Inc., New York, N.Y. 755,515, pub. 6–11–63. Cl. 36.
Empire Boats, Inc., Frankfort, N.Y. 648,142, canc. Cl. 19.
Espey Surplus Sales, Inc., d.b.a. Melward Industries, Chicago, Ill. 755,395, pub. 6–11–63. Cl. 21.
Esset Kakao- und Schokoladefabrik Staengel & Ziller, Stuttgart-Unterturkheim, Germany. 755,641, pub. 6–11–63. Cl. 46.
Ever Ready Label Corp., Belleville, N.J. 648,300, canc. Cl. 38.
Excelsior Leather Washer Mfg. Co., Rockford, Ill. 402,113, ren. 8–27–63. Cl. 35.
Exchange Parts Co. of Fort Worth, Fort Worth, Tex. 755,397, pub. 6–11–63. Cl. 21.
Exquisite Furs, Inc., New York, N.Y. 648,344, canc. Cl. 39.
FMC Corp., New York, N.Y. 755,281, pub. 6–11–63. Cl. 6.
Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 755,528, pub. 6–11–63. Cl. 37.
Fabreeka Products Co., Boston, Mass. 755,423, pub. 6–11–63. Cl. 28.
Fairhope Fabrics, Inc., Fall River, Mass. 755,598, pub. 6–11–63. Cl. 44.
Fair Lawn Finishing Co., Fair Lawn, N.J. 648,408, canc. Cl. 106.
Federal Employees' Distributing Co., Los Angeles, Calif. 755,383, pub. 6–11–63. Cl. 21.
Federal Employees' Distributing Co., Los Angeles, Calif. 755,411, pub. 6–11–63. Cl. 22.
Felton Chemical Co., Inc., Brooklyn, N.Y. 404,560, ren. 8–27–63. Cl. 6.
Fernand & Spertus Publishers, Inc., New York, N.Y. 755,545, pub. 6–11–63. Cl. 38.
Ferry-Morse Seed Co., Mountain View, Calif. 755,634, pub. 6–11–63. Cl. 46.
Fesler, Mary E., Montgomery, Ala., to The Fesler Co., Inc., Kenilworth, N.J. 403,800, ren. 8–27–63. Cl. 6.
Fesler Co., Inc., The: *See*—
Fesler, Mary E.
Fidelity Life Association, A Mutual Legal Reserve Co., Fulton, Ill. 755,698, pub. 6–11–63. Cl. 102.
Figueroa, Susana A., New York, N.Y. 755,606, pub. 6–11–63. Cl. 44.
Fin Fare Products Co., San Bernardino, Calif., to Herbert R. Brown, Jr., Riverside, Calif. 648,265, canc. Cl. 31.
Finger, Rabiner & Jontow Inc., New York, N.Y. 755,568, pub. 6–11–63. Cl. 39.
Firestone Tire & Rubber Co., The, Akron, Ohio. 755,595, pub. 6–11–63. Cl. 43.
Firma Belfrut Aligau-Oberland-Getrank G.m.b.H.: *See*—
"Belfrut" Gesellschaft mit beschrankter Haftung.
First Texas Pharmaceuticals, Inc., Dallas, Tex. 755,353, pub. 6–11–63. Cl. 18.
Fit-Rite Pants Co., Inc., New York, N.Y. 755,582, pub. 6–11–63. Cl. 39.
Fitzsimmons Stores, Ltd., d.b.a. Smart & Final Iris, Los Angeles, Calif. 648,128, canc. Cl. 18.
Flecto Co., Inc., The, Berkeley, Calif. 755,336, pub. 6–11–63. Cl. 16.
Ford, Luther, Products Co., d.b.a. Luther Ford & Co., Minneapolis, Minn. 648,416, canc. Cl. 2.
Ford, Luther, Products Co., d.b.a. Luther Ford & Co., Minneapolis, Minn. 648,442, canc. Cl. 52.
Ford, Luther, & Co.: *See*—
Ford, Luther, Products Co.
Ford Motor Co., Dearborn, Mich. 648,140, canc. Cl. 19.
Forest Press, Inc., Essex County, N.Y. 755,547–8, pub. 6–11–63. Cl. 38.
Foremost Dairies, Inc., San Francisco, Calif. 648,371, canc. Cl. 45.
Franck Industria Nazionale dei Succedanei al Caffe S.p.A., Milan, Italy. 755,609, pub. 6–11–63. Cl. 46.
Frito-Lay, Inc., Dallas, Tex. 755,626, pub. 6–11–63. Cl. 46.
Frontier Development, Inc., Des Moines, Iowa. 755,457, pub. 6–11–63. Cl. 26.
Fuji Photo Film Co., Ltd., Ashigarakamigun, Kanagawa, Japan. 755,446, pub. 7–11–61. Cl. 26.
Fuller, D. B., & Co., Inc., New York, N.Y. 648,354, canc. Cl. 42.
Gale Broadcasting Co., Inc., Chicago, Ill. 755,554, pub. 6–11–63. Cl. 38.
Gallo, E. & J., Winery, Modesto, Calif. 755,725. Cl. 47.
Garreau & Co., Inc., Newport, R.I. 648,256, canc. Cl. 28.
Gates Rubber Co., The, Denver, Colo. 755,494–8, pub. 6–11–63. Cl. 35.
Gates Rubber Co., The, Denver, Colo. 755,510, pub. 6–11–63. Cl. 35.
Gee Sales Co., Inc., Chicago, Ill. 755,672, pub. 6–11–63. Cl. 51.
Geigy Chemical Corp.: *See*—
Thomae, Dr. Karl, G.m.b.H.
General American Transportation Corp., Chicago, Ill. 648,105, canc. Cl. 16.
General Dynamics Corp., San Diego, Calif. 755,418, pub. 6–11–63. Cl. 23.
General Foods Corp.: *See*—
Genesee Pure Food Co., The.
General Foods Corp., White Plains, N.Y. 755,621, pub. 4–23–63. Cl. 46.
General Motors Corp., Detroit, Mich. 755,367, pub. 6–11–63. Cl. 19.
General Motors Corp. Detroit, Mich. 755,374, pub. 6–11–63. Cl. 19.
General Motors Corp., Detroit, Mich. 755,701, pub. 6–11–63. Cl. 103.
General Paint Corp. of Canada Ltd., Vancouver, British Columbia, Canada. 648,103, canc. Cl. 16.
General Tire & Rubber Co., The, Akron, Ohio. 755,413, pub. 6–11–63. Cl. 22.
General Sewing Corp., New York, N.Y. 755,266, pub. 6–11–63. Cl. 3.
Genesee Pure Food Co., The, Le Roy, N.Y., to General Foods Corp., White Plains, N.Y. 175,564, ren. 8–27–63. Cl. 46.
Gilmore Broadcasting Corp., Joplin, Mo. 755,702, pub. 6–11–63. Cl. 104.
Glaser & Glaser, Inc., Los Angeles, Calif. 648,254, canc. Cl. 28.
Glaskyd Inc., Perryburg, Ohio. 755,243, pub. 6–11–63. Cl. 1.
Glen Raven Cotton Mills, Inc., Glen Raven, N.C. 755,594, pub. 6–11–63. Cl. 43.
Globe Roofing Products Co., Inc., Whiting, Ind. 755,317, pub. 6–11–63. Cl. 12.
Golden Valley Brands, Inc., Beverly Hills, Calif., from M. Elizabeth Bartlett and Charles Martin, co-executrix and co-executor for the estate of George M. Bartlett, deceased, d.b.a. G. M. Bartlett Kevo Co., Azusa, Calif. 755,612, pub. 6–11–63. Cl. 46.
Goodyear Aircraft Corp., Akron, Ohio. 755,371, pub. 6–11–63. Cl. 19.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 755,489, pub. 6–11–63. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 755,500–2, pub. 6–11–63. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 755,505–7, pub. 6–11–63. Cl. 35.
Gotaas Export Corp., New York, N.Y. 755,624, pub. 6–11–63. Cl. 46.
Gramophone Co. Ltd., The, Hayes, Middlesex, England. 755,513, pub. 6–11–63. Cl. 36.
Grand Union Co., The, East Paterson, N.J. 755,534, pub. 6–11–63. Cl. 37.
Graniteville Co., Graniteville, S.C. 755,707, pub. 6–11–63. Cl. 106.
Graphics, J & S, Inc., Chicago, Ill. 755,657, pub. 4–23–63. Cl. 50.
Great Lakes Stamp & Mfg. Co., Inc., Chicago, Ill. 755,445, pub. 6–11–63. Cl. 23.
Green, G. Edward: *See*—
Bernhardt, Adolph C., Jr.
Green & Reedy Fertilizer, Inc., Franklinton, La. 755,811, pub. 6–11–63. Cl. 10.
Greer, John F., Co., Oakland, Calif. 755,605, pub. 6–11–63. Cl. 44.
Gross, Wm. H., Chemical Co., San Antonio, to Wm. H. Gross Chemical Co., Austin, Tex. 170,097, ren. 8–27–63. Cl. 51.
Guild Wine Co.: *See*—
California Wine Sales, Inc.
H & G Tool Co., Warren, Mich. 755,430, pub. 6–11–63. Cl. 23.
HMH Publishing Co., Inc., Chicago, Ill. 755,301, pub. 6–11–63. Cl. 8.
Hall, Summit, Turf Farm, Inc., Gaithersburg, Md. 648,414, canc. Cl. 1.
Hamilton Metal Products Co., The, to Hamilton-Skotch Corp., Hamilton, Ohio. 648,042, canc. Cl. 6.
Hamilton-Skotch Corp.: *See*—
Hamilton Metal Products Co.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 755,567, pub. 6–11–63. Cl. 39.
Hanover Club Beverage Co., West Hanover, Mass. 755,723. Cl. 45.
Harris Trust and Savings Bank, Chicago, Ill. 755,696, pub. 6–11–63. Cl. 102.
Harper, I. W., Distilling Co.: *See*—
Schenley Distillers, Inc.
Harry And David, Medford, Oreg. 755,526, pub. 6–11–63. Cl. 37.
Harsco Corp., Harrisburg, Pa. 755,332, pub. 8–7–62. Cl. 14.
Hawkes, Alex D., d.b.a. The Tropical Gardener, Miami, Fla. 755,549, pub. 6–11–63. Cl. 38.
Hawkins, Luty, Mount Vernon, Ill. 648,024, canc. Cl. 2.
Haws Drinking Faucet Co., Berkeley, Calif. 755,476, pub. 6–11–63. Cl. 31.
Hawthorne Watch Co., Inc., Los Angeles, Calif. 755,460, pub. 6–11–63. Cl. 27.
Haxton Canning Co., Inc., Oakfield, to Curtice-Burns, Inc., Rochester, N.Y. 402,666, ren. 8–27–63. Cl. 46.
Haxton, James L., Port Chester, N.Y. 648,297, canc. Cl. 38.
Hayden Flour Mills, Tempe, Ariz. 755,551, pub. 6–11–63. Cl. 38.

Haydock Caster Co., Morton Grove, Ill. 755,478, pub. 6–11–63. Cl. 32.
Heller, B., & Co., Chicago, Ill. 172,347, ren. 8–27–63. Cl. 46.
Heller, B., & Co., Chicago, Ill. 172,579, ren. 8–27–63. Cl. 6.
Helm Co., The: *See*—
Helm, Ray P.
Helm, R. P., Co.: *See*—
Helm, Ray P.
Helm, Ray P., d.b.a. The Helm Co., to C. D. Creed, Jr., d.b.a. R. P. Helm Co., Benton Harbor, Mich. 402,325, ren. 8–27–63. Cl. 18.
Henri's Food Products Co., Inc., Milwaukee, Wis. 755,632, pub. 6–11–63. Cl. 46.
Heritage House Products, Inc., from Seaboard Seed Co., Inc., Pittsburgh, Pa. 755,294, pub. 4–16–63. Cl. 6.
Heritage House Products, Inc., from Seaboard Seed Co., Inc., Pittsburgh, Pa. 755,424–5, pub. 6–11–63. Cl. 23.
Hi-Fier Mfg. Co., The, Decatur, Ill. 755,299, pub. 6–11–63. Cl. 7.
Hitchcock Publishing Co., Wheaton, Ill. 755,721. Cl. 38.
Hobart Brothers Co., Troy, Ohio. 755,487, pub. 6–11–63. Cl. 34.
Hogue, F. H.: *See*—
Hogue, F. H., Co.
Hogue, F. H., Co., d.b.a. F. H. Hogue and Kent Washington, to F. H. Hogue, Jr., Yuma, Ariz. 404,574, ren. 8–27–63. Cl. 46.
Hogue, F. H., Jr.: *See*—
Hogue, F. H., Co.
Hollingshead, B. C., Co.: *See*—
Hollingshead, Beverley C.
Hollingshead, Beverley C., d.b.a. B. C. Hollingshead Co., Toronto, Ontario, Canada. 755,599, pub. 6–11–63. Cl. 44.
Hoover Ball and Bearing Co., Saline, Mich. 755,330–1, pub. 6–11–63. Cl. 13.
Hortco, Inc., Westbury, N.Y. 755,308, pub. 6–11–63. Cl. 10.
House of Herbs, Inc., Salisbury, Conn. 755,653, pub. 6–11–63. Cl. 46.
House of Snacks Co.: *See*—
Snack Products, Inc.
Hudson, H. D., Mfg. Co., Minneapolis, Minn. 755,441, pub. 6–11–63. Cl. 23.
Hyman, L., & Sons Corp.: *See*—
Hyman, L., & Sons.
Hyman, L., & Sons, to L. Hyman & Sons Corp., New York, N.Y. 401,561, ren. 8–27–63. Cl. 37.
I-T-E Circuit Breaker Co., The, Philadelphia, Pa. 755,388, pub. 6–11–63. Cl. 21.
Ideal Industries, Inc., Sycamore, Ill. 755,386, pub. 6–11–63. Cl. 21.
Ideas Inc., Baltimore, Md. 648,188, canc. Cl. 22.
Illinois Tool Works Inc., Chicago, Ill. 755,443, pub. 6–11–63. Cl. 23.
Imperial Glass Corp., Bellaire, Ohio. 755,479, pub. 6–11–63. Cl. 33.
Industrial Products Co., Inc., Timonium, Baltimore County, Md. 755,474, pub. 6–11–63. Cl. 31.
Inland Steel Co., Chicago, Ill. 175,348, ren. 8–27–63. Cl. 14.
Intercontinental Development Corp.: *See*—
Arnav Shoe Corp.
International Latex Corp., Dover, Del. 755,589, pub. 6–11–63. Cl. 39.
International Minerals & Chemical Corp., Skokie, Ill. 755,298, pub. 6–11–63. Cl. 7.
International Process and Product Development Corp., New York, N.Y. 755,471, pub. 4–9–63. Cl. 26.
International Rescue and First Aid Association Inc., Alexandria, Va. 755,553, pub. 6–11–63. Cl. 38.
International Salt Co., Clarks Summit, Pa. 755,277, pub. 6–11–63. Cl. 6.
International Stock Food Corp., Waverly, N.Y. 755,613, pub. 6–11–63. Cl. 46.
International Trade Club of Chicago, Chicago, Ill. 755,720. Cl. 38.
Interstate Securities Co., Kansas City, Mo. 755,695, pub. 6–11–63. Cl. 102.
Interstate Vending Co., Chicago, Ill. 755,544, pub. 6–11–63. Cl. 38.
Iowa Paint Mfg. Co., Inc., Des Moines, Iowa. 755,337, pub. 6–11–63. Cl. 16.
Isis Inc., York, Pa. 755,459, pub. 6–11–63. Cl. 26.
Jamison, Albert L., d.b.a. A.J. Art & Design, Whittier, Calif. 755,533, pub. 6–11–63. Cl. 37.
Jeffrey-Allan Industries, Inc., Chicago, Ill. 755,372–3, pub. 6–11–63. Cl. 19.
Johns-Manville, Corp., New York, N.Y. 755,324, pub. 6–11–63. Cl. 12.
Johns-Manville, Corp., New York, N.Y. 755,326, pub. 6–11–63. Cl. 12.
Kantrow, Abraham H., Flushing, N.Y. 755,260, pub. 6–11–63. Cl. 2.
Kay-Kay Ltd.: *See*—
Knit-King Corp.
Kentron Hawaii, Ltd., Honolulu, Hawaii. 755,378, pub. 6–11–63. Cl. 21.
Khalaf, Phil S., d.b.a. De-Cor Jewelry Co., New York, N.Y. 755,468, pub. 6–11–63. Cl. 28.
King, L. C., Mfg. Co.: *See*—
Lockwood, King, Co.
Kirk, William J.: *See*—
Smith, Richard Joyce, William J. Kirk, and Harry W. Dorigan.
Kiwanis International, Chicago, Ill. 755,470, pub. 6–11–63. Cl. 28.
Kiwi Polish Co. Proprietary Ltd., The, Richmond, near Melbourne, Victoria, Australia. 724,066. Am. 7(d). Cl. 4.
Klippan Gesellschaft mit beschrankter Haftung, Hamburg-Garstedt, Germany. 755,363, pub. 6–11–63. Cl. 19.
Knit-King Corp., from Kay-Kay Ltd., New York, N.Y. 648,196, canc. Cl. 28.
Knox Co., The, to The Knox Co., Los Angeles, Calif. 402,779, ren. 8–27–63. Cl. 18.
Knoxville Glove Co., Knoxville, Tenn. 401,070, ren. 8–27–63. Cl. 39.
Koppers Co., Inc., Pittsburgh, Pa. 755,244, pub. 6–11–63. Cl. 1.
Kresge, S. S., Co., Detroit, Mich. 755,408, pub. 6–11–63. Cl. 22.
Kristol Products, Inc., Brooklyn, N.Y. 755,669, pub. 6–11–63. Cl. 51.
Laboratory Furniture Co., Inc., Mineola, N.Y. 755,447, pub. 4–9–63. Cl. 26.
Lambda Chi Alpha Fraternity Inc., Indianapolis, Ind. 755,711, pub. 6–11–63. Cl. 200.
Lane Ltd., New York, N.Y. 755,343, pub. 6–11–63. Cl. 17.
Laughing World Publishing Co., Montreal, Quebec, Canada. 648,298, canc. Cl. 38.
Leadership Resources, Inc., Washington, D.C. 755,538, pub. 6–11–63. Cl. 38.
Lean, Irving, & Co., Washington, D.C. 648,425, ren. 8–27–63. Cl. 38.
Lebardy, Charles W.: *See*—
Bernhardt, Adolph C., Jr.
Lehn & Fink Products Corp., Bloomfield, N.J. 755,674, pub. 6–11–63. Cl. 51.
Leon's Fashions, Inc., Waco, Tex. 755,587, pub. 6–11–63. Cl. 39.
Levin, Charles, & Co., d.b.a. Charlescraft Products, Chicago, Ill. 648,199, canc. Cl. 28.
Libby, McNeill & Libby, Chicago, Ill. 755,610, pub. 6–11–63. Cl. 46.
Liberty Distributors Group, Philadelphia, Pa. 648,412, canc. Cl. A.
Lifetronics Research: *See*—
Ball, E. James.
Lilly, Eli, and Co., Indianapolis, Ind. 755,307, pub. 8–27–62. Cl. 10.
Lincoln Knit Goods Mills: *See*—
Ely & Walker Dry Goods Co.
Lipman, Julian A., d.b.a. Chemiquip Co., New York, N.Y. 755,452, pub. 6–11–63. Cl. 26.
Litecraft Mfg. Corp., Passaic, N.J. 755,882, pub. 6–11–63. Cl. 21.
Lithonia Lighting, Inc., Conyers, Ga. 755,387, pub. 6–11–63. Cl. 21.
Little, Arthur D., Inc., Cambridge, Mass. 755,687, pub. 6–11–63. Cl. 100.
Lockwood, King, Co., to The L. C. King Mfg. Co., Bristol, Tenn. 177,532, ren. 8–27–63. Cl. 39.
Logan Monument & Fuel Co., Goshen, Ind. 648,026, canc. Cl. 2.
Lortone: *See*—
Christensen, Antone M.
Loumac Chemical Co., Chattanooga, Tenn. 755,292, pub. 6–11–63. Cl. 6.
Lowe, Joe, Corp., New York, N.Y. 755,427, pub. 6–11–63. Cl. 28.
Luce Press Clipping Bureau, Topeka, Kans. 755,689, pub. 6–11–63. Cl. 100.
Lukens, C. DeWitt, Co., St. Louis, Mo. 755,602, pub. 6–11–63. Cl. 44.
Macallen Co., Inc., The, Newmarket, N.H. 755,377, pub. 4–23–63. Cl. 21.
MacAndrews and Forbes Co., Camden, N.J. 755,321, pub. 3–12–63. Cl. 12.
MacDicken, R. W., d.b.a. Nephron Co., Tacoma, Wash. 755,351, pub. 6–11–63. Cl. 18.
Magee Chemical Co.: *See*—
Magee, Marshall L.
Magee, Marshall L., d.b.a. Magee Chemical Co., Bensenville, Ill. 755,335, pub. 6–11–63. Cl. 16.
Magellan Sounds Corp., New York, N.Y. 755,658, pub. 6–11–63. Cl. 50.
Magic Hostess Corp., Kansas City, Mo. 755,385, pub. 6–11–63. Cl. 21.
Mag-Powr Games, Inc., Sausalito, Calif. 755,404, pub. 6–11–63. Cl. 22.
Maidenform, Inc., New York, N.Y. 755,590, pub. 6–11–63. Cl. 39.
Manchester Yacht Sails, Inc., Dartmouth, Mass. 755,862, pub. 6–11–63. Cl. 19.
Manischewitz, B., Co., The, Newark, N.J. 755,642, pub. 6–11–63. Cl. 46.
Manning, John A., Paper Co. Inc., Troy, N.Y. 755,528, pub. 6–11–63. Cl. 37.
Mapes, E., Co.: *See*—
Mapes, Arthur E.
Mapes, Arthur E., d.b.a. E. Mapes Co., Norcatur, Kans. 755,482, pub. 6–11–63. Cl. 34.
Maradel Products Inc., New York, N.Y. 747,722, cor. Cl. 51.
Marianne Mills, Inc., The, Lansdale, Pa. 648,350, canc. Cl. 42.
Marits, Inc., St. Louis, Mo. 755,733. Cl. 105.
Marshall Canning Co., Marshalltown, Iowa, to Consolidated Foods Corp., Chicago, Ill. 167,126, ren. 8–27–63. Cl. 46.
Martin, Charles: *See*—
Golden Valley Brands, Inc.
Martin-Senour Co., The, Chicago, Ill. 648,108, canc. Cl. 16.
Marty, Carl, and Co. The Borden Co., New York, N.Y. 167,194. Am. 7(d). Cl. 46.
Marx, Louis, Co., Inc., New York, N.Y. 755,718. Cl. 22.
Mason Marking Systems Corp., Norfolk, Va. 755,717. Cl. 11.
McDanal, Michael R., d.b.a. Surprize Soapy Sponge, Denver, Colo. 755,472, pub. 6–11–63. Cl. 29.
Meat Industry Suppliers, Inc., Northfield, Ill. 755,646, pub. 6–11–63. Cl. 46.
Melrose Hospital Uniform Co., Inc., Brooklyn, N.Y. 755,580, pub. 6–11–63. Cl. 39.

Melward Industries: *See*—
Eagey Surplus Sales, Inc.
Mennen Co., The, Morristown, N.J. 755,676, pub. 6–11–63. Cl. 51.
Merriman Bros., Inc., Boston, Mass. 755,368, pub. 6–11–63. Cl. 19.
Methuen International Mills, Methuen, Mass. 648,353, canc. Cl. 42.
Miehle Printing Press & Mfg. Co., to Miehle-Goss-Dexter, Inc., Chicago, Ill. 648,208, canc. Cl. 23.
Miehle-Goss-Dexter, Inc.: *See*—
Miehle Printing Press & Mfg. Co.
Millers Falls Co., Greenfield, Mass. 648,243, canc. Cl. 26.
Milwaukee Lace Paper Co., Milwaukee, Wis. 648,422, canc. Cl. 37.
Minnesota and Ontario Paper Co., Minneapolis, Minn. 755,527, pub. 6–11–63. Cl. 37.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 755,273, pub. 6–11–63. Cl. 4.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 755,600, pub. 2–19–63. Cl. 44.
Minnesota Mining and Mfg. Co.: *See*—
Western Electric Co., Inc.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 755,276, pub. 6–11–63. Cl. 5.
Mr. & Mrs. Diet, Inc., Cincinnati, Ohio. 755,630, pub. 6–11–63. Cl. 46.
Mitsui & Co. Ltd., Minato-ku, Tokyo, Japan. 755,246, pub. 6–11–63. Cl. 1.
Modern Globe, Inc., Pawtucket, R.I. 755,588, pub. 6–11–63. Cl. 39.
Modernair Corp., San Leandro, Calif. 755,438, pub. 4–30–63. Cl. 23.
Modular Components Corp., Chula Vista, Calif. 755,325, pub. 6–11–63. Cl. 12.
Monitor Publishing Co., Dallas, Tex. 648,309, canc. Cl. 38.
Monoloop Products, Inc., Detroit, Mich. 755,405, pub. 6–11–63. Cl. 22.
Monsanto Chemical Co., St. Louis, Mo. 755,290, pub. 6–11–63. Cl. 6.
Monsieur Henri Wines, Ltd., Brooklyn, N.Y. 755,654, pub. 6–11–63. Cl. 47.
Monterey Jewelers Inc., New York, N.Y. 755,462, pub. 6–11–63. Cl. 28.
Moody Bible Institute of Chicago, Ill., The, Chicago, Ill. 755,710, pub. 6–11–63. Cl. 107.
Mount Vernon Mills, Inc., Baltimore, Md. 648,359, canc. Cl. 43.
Morris, Philip, Inc., New York, N.Y. 755,344, pub. 6–11–63. Cl. 17.
Murphy, G. C., Co., McKeesport, Pa. 755,578, pub. 6–11–63. Cl. 39.
Murray, John F., Advertising Agency, Inc., New York, N.Y. 755,535, pub. 6–11–63. Cl. 38.
National Bellas Hess, Inc., North Kansas City, Mo. 755,468, pub. 6–11–63. Cl. 28.
National Bellas Hess, Inc., North Kansas City, Mo. 755,692, pub. 6–11–63. Cl. 101.
National Shoes, Inc., New York, N.Y. 648,313, canc. Cl. 39.
Needham Mfg. Co. Inc., Needham Heights, Mass. 648,417, canc. Cl. 2.
Nephron Co.: *See*—
MacDicken, R. W.
New Haven Wire & Cable, Inc., New Haven, Ind. 755,396, pub. 6–11–63. Cl. 21.
Nicholson File Co., Providence, R.I. 175,290, ren. 8–27–63. Cl. 23.
North American Mfg. Co., Sioux City, Iowa. 755,442, pub. 6–11–63. Cl. 23.
North Carolina Mutual Life Insurance Co., Durham, N.C. 755,699, pub. 6–11–63. Cl. 102.
Northwestern Chemical Co., The, West Chicago, Ill. 755,296, pub. 6–11–63. Cl. 6.
Nuclear Data, Inc., Madison, Wis. 755,458, pub. 6–11–63. Cl. 26.
Nukem Products Corp., Buffalo, N.Y. 755,316, pub. 6–11–63. Cl. 12.
Nutone, Inc., Cincinnati, Ohio. 648,278, canc. Cl. 34.
Nutri-Bio Corp., Beverly Hills, Calif. 755,346, pub. 6–11–63. Cl. 18.
O'Brien Corp., The: *See*—
O'Brien Varnish Co.
O'Brien Varnish Co., to The O'Brien Corp., South Bend, Ind. 404,308, ren. 8–27–63. Cl. 16.
Olin Mathieson Chemical Corp.: *See*—
Squibb, E. R., & Sons.
Olin Mathieson Chemical Corp., East Alton, Ill. 755,303–6, pub. 6–11–63. Cl. 9.
O'Neal, Jimmie P., Arcadia, Calif. 648,289, canc. Cl. 36.
Oneida Ltd., Oneida, N.Y. 755,433, pub. 6–11–63. Cl. 23.
Optics Technology, Inc., Belmont, Calif. 755,683, pub. 6–11–63. Cl. 100.
Orlando Macine Co.: *See*—
White, Beatrice O.
Palmyra Hosiery Mills, Inc., Albany, Ga. 648,311, canc. Cl. 39.
Parents' Magazine's Education Press, Inc., The, New York, N.Y. 755,537, pub. 6–11–63. Cl. 38.
Parke, Davis & Co., Detroit, Mich. 755,643, pub. 6–11–63. Cl. 46.
Parker Brothers, Inc., Salem, Mass. 648,185, canc. Cl. 22.
Parker Pen Co., The, Janesville, Wis. 755,521, pub. 6–11–63. Cl. 37.
Parking Management, Inc., Washington, D.C. 755,706, pub. 6–11–63. Cl. 105.
Peaslee-Gaulbert Co., Louisville, Ky., to Devoe & Raynolds Co., Inc., New York, N.Y. 175,588, ren. 8–27–63. Cl. 16.
Pecora Paint Co., Inc., Philadelphia, Pa. 648,096, canc. Cl. 16.
Peerless Pipe & Foundry Co., Inc., Anniston, Ala. 648,076, canc. Cl. 13.
Pennington Grain & Seed, Inc., Madison, Ga. 755,241, pub. 6–11–63. Cl. 1.
Pennsalt Chemicals Corp., Philadelphia, Pa. 755,285, pub. 6–11–63. Cl. 6.
Perfect Knit Togs, Inc., from Perfect Knit & Woven Togs, New York, N.Y. 755,569, pub. 6–11–63. Cl. 39.
Perfect Knit & Woven Togs: *See*—
Perfect Knit Togs, Inc.
Permafilm, Inc., New York, N.Y. 755,706, pub. 6–11–63. Cl. 106.
Philadelphia Laboratories, Inc., Philadelphia, Pa. 755,360, pub. 6–11–63. Cl. 18.
Phillips Petroleum Co., Bartlesville, Okla. 648,020, canc. Cl. 1.
Phillips Petroleum Co., Bartlesville, Okla. 755,688, pub. 6–11–63. Cl. 100.
Phoenix Candy Co., Inc., Brooklyn, N.Y. 755,619, pub. 6–11–63. Cl. 46.
Phoenix Pie Co., Phoenix, Ariz. 648,374, canc. Cl. 46.
Piasecki Aircraft Corp., Philadelphia, Pa. 755,364, pub. 6–11–63. Cl. 19.
Platt and Smillie Chemicals, Inc., St. Louis, Mo. 755,677, pub. 6–11–63. Cl. 52.
Picker X-Ray Corp., White Plains, N.Y. 755,456, pub. 6–11–63. Cl. 26.
Plymouth Hosiery Mills, Inc., Thomasville, N.C. 755,572, pub. 6–11–63. Cl. 39.
Polly Coat Book Cover Co., The, Baltimore, Md. 755,520, pub. 6–11–63. Cl. 37.
Polymer Corp., The, Reading, Pa. 755,511, pub. 6–11–63. Cl. 35.
Pratt & Lambert Inc., Buffalo, N.Y. 755,339, pub. 6–11–63. Cl. 16.
Priv. Fabbrica Maraschino Excelsior Girolamo Luxardo S.p.A., Torreglia (Padova), Italy. 755,726. Cl. 47.
Procter & Gamble Co., The, Cincinnati, Ohio. 755,729. Cl. 52.
Projection Optics Co., Inc., Rochester, N.Y. 648,244, canc. Cl. 26.
Prokop, Stanley J., Sr., d.b.a. Stanley Prokop Jeweler, Alliance, Nebr. 755,461, pub. 6–4–63. Cl. 28.
Prokop, Stanley, Jeweler: *See*—
Prokop, Stanley J., Sr.
Pulitzer, Lilly, Inc., Palm Beach, Fla. 755,584–5, pub. 6–11–63. Cl. 39.
Pulp Reproduction Co., Milwaukee, Wis. 755,416, pub. 6–11–63. Cl. 22.
Putman Publishing Co., Chicago, Ill. 755,719. Cl. 38.
Putnam, F. A., Mfg. Co., Inc., Keene, N.H. 755,268, pub. 6–11–63. Cl. 4.
Pyro Plastics Corp., Union, N.J. 755,399, pub. 6–11–63. Cl. 22.
Quisine, Inc., Torrington, Conn. 755,329, pub. 6–11–63. Cl. 13.
Radeck, Adolf, Chemische Fabrik, Treuchtlingen, Bavaria, Germany. 755,282–4, pub. 6–11–63. Cl. 6.
Radio Shack Corp., Boston, Mass. 755,398, pub. 6–11–63. Cl. 21.
Rainbow Crafts, Inc., Cincinnati, Ohio. 755,402, pub. 6–11–63. Cl. 22.
Rainbow Wood Products, Inc., New York, N.Y. 755,264, pub. 6–11–63. Cl. 2.
Rapala, Minneapolis, Minn. 755,400, pub. 6–11–63. Cl. 22.
Rapid Copy Service, Inc., Chicago, Ill. 755,709, pub. 6–11–63. Cl. 106.
Rec-Stone Corp., Montreal, Quebec, Canada. 755,242, pub. 6–11–63. Cl. 1.
Reed Development Corp., McLean, Va. 648,402, canc. Cl. 100.
Reese Finer Foods, Inc., Chicago, Ill. 755,636, pub. 6–11–63. Cl. 46.
Reiss, Ronthor, Corp., New York, N.Y. 755,503, pub. 6–11–63. Cl. 35.
Rene-Craft Products: *See*—
Wagener, Owen F.
Richemond, Robert, New York, N.Y. 755,664, pub. 6–11–63. Cl. 51.
Rich's, Inc., Atlanta, Ga. 755,667, pub. 6–11–63. Cl. 51.
Ril-Sno Products Co., The: *See*—
Charles, Inc., The.
Roberto Escursell-Prat, Barcelona, Spain. 755,419, pub. 6–11–63. Cl. 23.
Rod's Food Products: *See*—
Rod's Food Products, Inc.
Rod's Food Products, Inc., d.b.a. Rod's Food Products, Los Angeles, Calif. 755,631, pub. 6–11–63. Cl. 46.
Ronson Corp., Woodbridge, N.J. 755,327, pub. 6–11–63. Cl. 13.
Ross, Will, Inc., Milwaukee, Wis. 755,354, pub. 6–11–63. Cl. 18.
Roux Laboratories, Inc., New York, N.Y. 755,682, pub. 6–11–63. Cl. 52.
Roux Laboratories, Inc., New York, N.Y. 755,728. Cl. 51.
Roy, Rob, Co., Inc., New York, N.Y. 755,579, pub. 6–11–63. Cl. 39.
Rubbermaid Inc., Wooster, Ohio. 755,265, pub. 6–11–63. Cl. 2.
Rumpp, C. F., & Sons Inc., Philadelphia, Pa. 755,267, pub. 6–11–63. Cl. 3.
SAIT-Societa Abravisi Industriali, S.p.A., Turin, Italy. 755,269, pub. 6–11–63. Cl. 4.
S.S.C. Laboratory: *See*—
Cramer, Stanley S.
S. & S. Associates, Inc., New York, N.Y. 648,291, canc. Cl. 36.
S and W Fine Foods, Inc.: *See*—
United States Products Corp.

Sage Export, Belgrade, Yugoslavia. 755,712, pub. 6–11–63. Cl. A.
St. Pierre, Marguerite, Inc., Watertown, Mass. 755,670, pub. 6–11–63. Cl. 51.
Salk, Murray, Inc., Brighton, Mass. 648,430, canc. Cl. 39.
Sancal Co., Inc., Mamaroneck, N.Y. 648,377, canc. Cl. 46.
"Sanopharm" Chem. Pharm. Praparate Gesellschaft m.b.H., Vienna, Austria. 755,638, pub. 6–11–63. Cl. 46.
Scandia Cosmetics Corp., New York, N.Y. 755,675, pub. 6–11–63. Cl. 51.
Schenley Distillers, Inc., d.b.a. I. W. Harper Distilling Co., New York, N.Y. 648,275, canc. Cl. 33.
Schuman Co., The, Beverly Hills, Calif. 403,647, ren. 8–20–63. Cl. 46.
Schuman Co., The, Beverly Hills, Calif. 404,668, ren. 8–27–63. Cl. 46.
Scotsman Mfg. Co., Inc., Gardena, Calif. 755,366, pub. 6–11–63. Cl. 19.
Scott, Walter, Inc., Miami, Fla. 755,671, pub. 6–11–63. Cl. 51.
Scott, Walter, Inc., Miami, Fla. 755,679, pub. 6–11–63. Cl. 52.
Scotts "Keepdrye" Dartboard Co. Ltd., Laindon, England. 755,401, pub. 6–11–63. Cl. 22.
Screen Gems, Inc., New York, N.Y. 648,182, canc. Cl. 22.
Seaboard Seed Co., Inc.: *See*—
Heritage House Products, Inc.
Seagram, Joseph E., & Sons, Inc., New York, N.Y. 755,656, pub. 6–11–63. Cl. 49.
Sealcraft Corp., Salt Lake City, Utah. 755,509, pub. 6–11–63. Cl. 35.
Sears, Roebuck and Co., Chicago, Ill. 755,485, pub. 6–11–63. Cl. 34.
Secor Mfg. Co., Inc., New York, N.Y. 755,591, pub. 6–11–63. Cl. 40.
Security Renovating, Inc., Hicksville, N.Y. 755,318, pub. 6–11–63. Cl. 12.
Seiyaku, Tanabe, Co. Ltd., Higashi-ku, Osaka, Japan. 755,287, pub. 6–11–63. Cl. 6.
Sekisui Chemical Co., Ltd. of Japan, Osaka, Japan. 755,274, pub. 6–12–62. Cl. 5.
Seltzer, Allan L., d.b.a. Chatham Creations, Providence, R.I. 755,465, pub. 6–11–63. Cl. 28.
Seneca Grape Juice Corp., Dundee, N.Y. 755,615, pub. 6–11–63. Cl. 46.
Shackelford, Alphonso L., d.b.a. The Alchem Co., San Antonio, Tex. 755,270, pub. 6–11–63. Cl. 4.
Shandon Scientific Co. Ltd., London, England. 755,449, pub. 6–11–63. Cl. 26.
Sharpe, W. F., Inc., Minneapolis, Minn. 648,270, canc. Cl. 32.
Shell Oil Co., New York, N.Y. 755,451, pub. 6–11–63. Cl. 26.
Shell Oil Co., New York, N.Y. 755,483, pub. 6–11–63. Cl. 34.
Sher, Albert, Boston, Mass. 755,466, pub. 6–11–63. Cl. 28.
Shopmaster, Inc., Minneapolis, Minn. 648,203, canc. Cl. 23.
Siegler Corp., The: *See*—
Siegler, Lear, Inc.
Siegler, Lear, Inc., from The Siegler Corp., New York, N.Y. 755,375, pub. 6–11–63. Cl. 21.
Simpson, Arthur A., d.b.a. Coldmaker Products Co., New Orleans, La. 648,262, canc. Cl. 31.
Simpson, Wm., Sons & Co., Inc., New York, N.Y. 648,347, canc. Cl. 42.
Sievin, Joseph R., Washington, D.C. 755,722. Cl. 38.
Smallman, I., & Sons Co., New York, N.Y. 648,027, canc. Cl. 3.
Smart & Final Iris: *See*—
Fitzsimmons Stores, Ltd.
Smartcaps, Inc., New York, to B. Wood, Forest Hills, N.Y. 648,431, canc. Cl. 39.
Smith, J. P., Shoe Co. E. E. Taylor Corp., Augusta and Freeport, Maine. 650,570. Am. 7(d). Cl. 39.
Smith, Richard Joyce, William J. Kirk, and Harry W. Dorigan, trustees of The New York, New Haven and Hartford Railroad Co., New Haven, Conn. 755,704–5, pub. 6–11–63. Cl. 105.
Smith, Robt. R. & R. W., Ltd., London, England. 755,633, pub. 6–11–63. Cl. 46.
Snack Products, Inc., d.b.a. House of Snacks Co., Downers Grove, Ill. 755,620, pub. 6–11–63. Cl. 46.
Societa Rhodiatoc S.p.A., Milan, Italy. 755,240, pub. 6–4–63. (Consolidated certificate, Classes 1, 39, and 42.)
Societe L'Oreal, Paris, France. 755,673, pub. 6–11–63. Cl. 51.
Sonola Accordion Co., Inc., Hoboken, N.J. 755,516, pub. 6–11–63. Cl. 36.
Sooth-Etts, Glendale, Calif. 648,116, canc. Cl. 18.
South Dakota Fertilizer Association, Sioux Falls, S. Dak. 755,555, pub. 6–11–63. Cl. 38.
South Texas Soil Conditioner Service, Inc., Eagle Pass, Tex. 755,310, pub. 6–11–63. Cl. 10.
Southern Coal & Coke Co., The, Cincinnati, Ohio, to Southern Coal & Coke Co., Inc., Tazewell, Va. 167,748, ren. 8–27–63. Cl. 12.
Southland Paint Co., Inc., Gainesville, Tex. 755,681, pub. 6–11–63. Cl. 52.
Specialty Sales Co., Atlanta, Ga. 755,592, pub. 6–11–63. Cl. 40.
Sperry Rand Corp., New York, N.Y. 648,153, canc. Cl. 21.
Square D Co., Park Ridge, Ill. 755,392, pub. 6–11–63. Cl. 21.
Squibb, E. R., & Sons, to Olin Mathieson Chemical Corp., New York, N.Y. 169,655, ren. 8–27–63. Cl. 18.
Stadler Fertilizer Co., Cleveland, Ohio. 755,309, pub. 6–11–63. Cl. 10.
Staley, A. E. Mfg. Co., Decatur, Ill. 755,288, pub. 6–11–63. Cl. 6.
Standard Oil Co., Chicago, Ill. 172,712, ren. 8–27–63. Cl. 6.
Starrett, L. S., Co., The, Athol, Mass. 755,455, pub. 6–11–63. Cl. 26.
Steel, W., & Co. Ltd., London, England. 648,268, canc. Cl. 32.
Stiles-Kem Sales Corp., Waukegan, Ill. 755,279–80, pub. 6–11–63. Cl. 6.
Stirn, L. & E., Inc. New York, N.Y., to Burlington Industries, Inc., Greensboro, N.C. 404,272, ren. 8–27–63. Cl. 42.
Strauch, Axel E., from Clauss B. Strauch, d.b.a. Cerviscope Co., Hazel Green, Wis. 755,596, pub. 10–23–62. Cl. 44.
Strongite Co., The, New York, N.Y. 755,469, pub. 6–11–63. Cl. 28.
Stroukoff Aircraft Corp., West Trenton, N.J. 648,146, canc. Cl. 19.
Studebaker Corp., South Bend, Ind. 755,334, pub. 6–11–63. Cl. 15.
Suburban Foods, Inc., Newark, N.J. 755,648, pub. 6–11–63. Cl. 46.
Suburban Homemaking & Maternity Agency, The, Hempstead, N.Y. 755,693, pub. 6–11–63. Cl. 101.
Summit Sportwear Co., Boston, Mass. 648,320, canc. Cl. 39.
Surpass Leather Co., Philadelphia, Pa. 755,713. Cl. 1.
Surprize Soapy Sponge: *See*—
McDanal, Michael R.
Sutcliffe, Speakman and Co., Ltd., Leigh, England. 166,-235, ren. 8–27–63. Cl. 23.
Sutherland, John, Productions, Inc. 648,410, canc. Cl. 107.
Suzuki-Shinobu Sohonsha Co., Ltd., Shizuoka-shi, Shizuoka-ken, Japan. 755,665–6, pub. 6–11–63. Cl. 51.
Tag-A-Bag Co., Washington, D.C. 755,697, pub. 6–11–63. Cl. 102.
Tait Mfg. Co., The, Dayton, Ohio. 755,440, pub. 6–11–63. Cl. 23.
Takeda Chemical Industries, Ltd., Higashi-ku, Osaka, Japan. 755,614, pub. 6–11–63. Cl. 46.
Tanning, Irving, Co., Boston, Mass. 755,250, pub. 6–11–63. Cl. 1.
Tarrant Electric Machinery Co.: *See*—
Tarrant, William D.
Tarrant, William D., d.b.a. Tarrant Electric Machinery Co., Wichita, Kans. 755,379, pub. 4–30–63. Cl. 21.
Taylor, E. E., Corp.: *See*—
Smith, J. P., Shoe Co.
Techni Electronics, Inc., Orange, N.J. 755,597, pub. 6–11–63. Cl. 44.
Telesystem Services Corp., Glenside, Pa. 755,393, pub. 6–11–63. Cl. 21.
Templeton, Kenly & Co., Broadview, Ill. 403,530, ren. 8–27–63. Cl. 23.
Tension Envelope Corp. of Kansas City, Kansas City, Mo. 755,532, pub. 6–11–63. Cl. 37.
Texas Instruments Inc., Dallas, Tex. 755,376, pub. 6–11–63. Cl. 23.
Textron Inc., Providence, R.I. 755,348, pub. 6–11–63. Cl. 16.
Theratron Corp., St. Paul, Minn. 755,350, pub. 6–11–63. Cl. 18.
Thomae, Dr. Karl, G.m.b.H., Biberach and der Riss, Germany, from Geigy Chemical Corp., Ardsley, N.Y. 755,355, pub. 6–11–63. Cl. 18.
Thomas & Co., Inc., Seattle, Wash. 648,248, canc. Cl. 27.
Thompson, Henry G., & Son Co., The, New Haven, Conn. 755,428, pub. 6–11–63. Cl. 23.
Thompson Industries, Inc., Phoenix, Ariz. 755,262, pub. 6–11–63. Cl. 2.
Thompson Industries, Inc., Phoenix, Ariz. 755,484, pub. 6–11–63. Cl. 23.
Thompson, Marion L., d.b.a. Mickey Thompson Enterprises, Long Beach, Calif. 755,421, pub. 6–11–63. Cl. 23.
Thompson, Mickey, Enterprises: *See*—
Thompson, Marion L.
Thompson's Dairy, Inc., Washington, D.C. 755,627–9, pub. 6–11–63. Cl. 46.
Ticonderoga Chemical Corp., Leominster, Mass. 755,245, pub. 6–11–63. Cl. 1.
Tixerant, Georges L., Slough, England. 648,081, canc. Cl. 4.
Tohwa Electric Co., Ltd., Shinagawa-ku, Tokyo, Japan. 755,-381, pub. 6–11–63. (Consolidated certificate, Classes 21 and 26.)
Toothtab Co., The, Blue Springs, Mo. 648,438, canc. Cl. 51.
Town and Country Food Co., Inc., Fort Wayne, Ind. 755,-617, pub. 6–11–63. Cl. 46.
Trade Paper Co., Inc., New York, N.Y. 755,715. Cl. 6.
Traffic Builders, Inc., San Francisco, Calif. 648,409, canc. Cl. 107.
Transco Adult Games, Inc., New York, N.Y. 755,414, pub. 6–11–63. Cl. 22.
Transquip Corp., Chicago, Ill. 648,156, canc. Cl. 21.
Tri-State Plastic Molding Co., Inc., Henderson, Ky. 648,025, canc. Cl. 2.
Tropical Gardener, The: *See*—
Hawkes, Alex D.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 755,251, pub. 6–11–63. Cl. 1.
Tru Balance Corsets, Inc., New York, N.Y. 755,586, pub. 6–11–63. Cl. 39.
Turner & Seymour Mfg. Co., The, Torrington, Conn. 176,654, ren. 8–27–63. Cl. 13.
Tuthill Pump Co., Chicago, Ill. 755,431, pub. 6–11–63. Cl. 23.
U.A.S. Corp.: *See*—
United Aircraft Supply Corp.
Unarco Industries, Inc., from Union Asbestos & Rubber Co., Chicago, Ill. 755,322, pub. 6–11–63. Cl. 12.
Unarco Industries, Inc., from Union Asbestos & Rubber Co., Chicago, Ill. 755,491, pub. 6–11–63. Cl. 35.
Union Asbestos & Rubber Co.: *See*—
Unarco Industries, Inc.

Union Oil Co. of California, Los Angeles, Calif. 755,293, pub. 6–11–63. Cl. 6.
Uniscript, Inc., Wichita, Kans. 755,524, pub. 6–11–63. Cl. 37.
United Aircraft Supply Corp., d.b.a. U.A.S. Corp., Chicago, Ill. 648,180, canc. Cl. 22.
United Merchants and Mfrs., Inc.: *See*—
Cohn-Hall-Marx Co.
United States Borax & Chemical Corp., Los Angeles, Calif. 755,295, pub. 6–11–63. Cl. 6.
United States Envelope Co., Springfield, Mass. 755,525, pub. 6–11–63. Cl. 37.
United States Products Corp., Ltd.: *See*—
United States Products Corp.
United States Products Corp., San Jose, to S and W Fine Foods, Inc., San Francisco, Calif. 170,655, ren. 8–27–63. Cl. 46.
United States Products Corp., San Francisco, to United States Products Corp., Ltd., San Jose, Calif. 177,019, ren. 8–27–63. Cl. 46.
United States Rubber Co., New York, N.Y. 648,284, canc. Cl. 35.
United States Rubber Co., New York, N.Y. 755,508, pub. 6–11–63. Cl. 35.
U.S. Tool & Mfg. Co., Chicago, Ill. 648,138, canc. Cl. 19.
U.S. Vitamin Corp., New York, N.Y. 648,134–5, canc. Cl. 18.
U.S. Watch Repair Co.: *See*—
Bauman, Walter O.
United Whelan Corp., Brooklyn, N.Y. 755,342, pub. 6–11–63. Cl. 17.
Universal Roll-A-Form Corp., Royal Oak, Mich. 755,420, pub. 6–11–63. Cl. 23.
Vanderbilt, R. T., Co., Inc., New York, N.Y. 755,286, pub. 6–11–63. Cl. 6.
Vanderbilt, R. T., Co., Inc., New York, N.Y. 755,297, pub. 6–11–63. Cl. 6.
Velsicol Chemical Corp., Chicago, Ill. 755,256, pub. 6–11–63. Cl. 1.
Verrerie Cristallerla d'Arques, G. Durand & Cie, Arques, Pas-de-Calais, France. 755,480, pub. 6–11–63. Cl. 33.
Vigzol Oil Co. Ltd., The, London, England. 755,333, pub. 6–11–63. Cl. 15.
Visible File Corp., New York, N.Y. 755,519, pub. 6–11–63. Cl. 37.
Visual Communications, Inc., New York, N.Y. 755,663, pub. 6–11–63. Cl. 50.
Vita Craft Corp., Kansas City, Mo. 755,473, pub. 6–11–63. Cl. 30.
Vital Food Co. of California: *See*—
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W. & H. Jewelry Co., Providence, R.I. 648,258, canc. Cl. 28.
Wagener, Owen F., d.b.a. Rene-Craft Products, Wilmette, Ill. 648,205, canc. Cl. 23.
Wales Mfg. Co., Boston, Mass. 755,575–6, pub. 6–11–63. Cl. 39.
Wallace Silversmiths, Inc., Wallingford, Conn. 648,215, canc. Cl. 23.
Wander Co., The, Chicago, Ill. 755,356, pub. 6–11–63. Cl. 18.
Ward Baking Co., New York, N.Y. 170,800–1, ren. 8–27–63. Cl. 46.
Ward Baking Co., New York, N.Y. 170,938, ren. 8–27–63. Cl. 46.
Watson, William A., Tampa, Fla. 755,561, pub. 6–11–63. Cl. 38.
Weaver, W. R., Co.: *See*—
Weaver, William R.
Weaver, William R., d.b.a. W. R. Weaver Co., El Paso, Tex. 755,453–4, pub. 6–11–63. Cl. 26.
Weber Tackle Co., Stevens Point, Wis. 755,412, pub. 6–11–63. Cl. 22.
Weis Markets, Inc., Sunbury, Pa. 755,649, pub. 6–11–63. Cl. 46.
Well-Built Shoe Co., Inc., Milford, Mass. 631,825, canc. Cl. 39.
Wellcome Foundation, Ltd., The, London, England. 755,291, pub. 6–11–63. Cl. 6.
West Chemical Products, Inc., Long Island City, N.Y. 755,716. Cl. 6.
West Coast Macaroni Mfg. Co., Inc., Oakland, Calif. 400,069, ren. 8–27–63. Cl. 46.
Western Electric Co., Inc., New York, N.Y., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 402,354, ren. 8–27–63. Cl. 26.
Western Hotels Co., from Western Hotels, Inc., Seattle, Wash. 755,552, pub. 6–11–63. Cl. 38.
Western Hotels, Inc.: *See*—
Western Hotels Co.
Western Unit Corp., City of Industry, Calif. 755,369, pub. 6–11–63. Cl. 19.
West Virginia Pulp and Paper Co., New York, N.Y. 755,312, pub. 10–24–61. Cl. 12.
Wheeling Tile Co., Wheeling, W. Va. 755,319, pub. 6–11–63. Cl. 12.
White, Bennie O., d.b.a. Orlando Marine Co., Orlando, Fla. 648,144, canc. Cl. 19.
Whiting Mfg. Co., Inc., Cincinnati, Ohio. 755,593, pub. 6–11–63. Cl. 42.
Whitman, Stephen F., & Son, Inc., Philadelphia, Pa. 648,382, canc. Cl. 46.
Wiener, Ben, & Hoffman, Inc., New York, N.Y. 755,581, pub. 6–11–63. Cl. 39.
Willbanks, Harold A., Fairbanks, Alaska. 648,411, canc. Cl. 200.
Williams-Davis Co., Inc., Washington, Ind. 648,121, canc. Cl. 18.
Winn-Michaels Pharmaceuticals, Inc., Evansville, Ind. 755,359, pub. 6–11–63. Cl. 18.
Woltz-Prodotti Di Bellezza S.R.L., Milan, Italy. 755,727. Cl. 51.
Wood, Barnet: *See*—
Smartcaps, Inc.
Wood Conversion Co., St. Paul, Minn. 749,176. Am. 7(d). Cl. 42.
Wood, J. R., & Sons, Inc., New York, N.Y. 755,467, pub. 6–11–63. Cl. 28.
Worldwide Musical Instrument Co. Inc., New York, N.Y. 755,514, pub. 6–11–63. Cl. 36.
White Stores, Inc., Wichita Falls, Tex. 755,499, pub. 6–11–63. Cl. 35.
Washington Stove Works, Everett, Wash. 755,484, pub. 6–11–63. Cl. 34.
Writing Toys Corp., St. Paul, Minn. 755,415, pub. 6–11–63. Cl. 22.
Wyman, Partridge & Co., Minneapolis, Minn., to Burlington Industries, Inc., Greensboro, N.C. 174,880, ren. 8–27–63. Cl. 39.
York Street Flax Spinning Co., Inc.: *See*—
York Street Flax Spinning Co., Ltd.
York Street Flax Spinning Co., Ltd., Belfast, Ireland, to York Street Flax Spinning Co. Inc., New York, N.Y. 166,466, ren. 8–27–63. Cl. 42.
Youth Associates Co., Minneapolis, Minn. 755,543, pub. 6–11–63. Cl. 38.
Younger Each Day, Inc., New York, N.Y. 755,601, pub. 6–11–63. Cl. 44..
Zenith Radio Corp., Chicago, Ill. 755,512, pub. 6–11–63. Cl. 36.
Zephyr Radio Co., Ltd., San Anselmo, from Eastern Associates, Ltd., San Francisco, Calif. 755,390, pub. 6–11–63. Cl. 21.
Zerr, Levi H., Jr., d.b.a. Lehoff Associates, Parkesburg, Pa. 755,517, pub. 6–11–63. Cl. 36.
Zindell, Joan B., Ann Arbor, Mich. 755,477, pub. 6–11–63. Cl. 32.

U.S. GOVERNMENT PRINTING OFFICE: 0—1963

OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

JULY & AUG.

VOL. 792-793

1963

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